

中华学习机

紫金Ⅱ系列

APPLE Ⅱ

朱国江 编著
孙建隆



图形技巧

东南出版社

中华学习机图形技巧

朱国江 孙建隆 编著

东南出版社

(京) 新登字 046 号

内 容 简 介

本书深入浅出地介绍了中华学习机在图形处理方面的各种技巧,种类繁多,应有尽有。不仅包括常规的图形处理技术,还包括图象处理的特殊技巧,既有特色,又有创新,并给出一个通用性好,实用性强的多功能图形管理软件,附有全部程序清单、使用说明和图形资料。

本书与《中华学习机编程技巧》(气象出版社,1988年2月出版),《中华学习机数据处理》(气象出版社,1989年12月出版),《中华学习机汉字软件》(气象出版社,1990年2月出版),《中华学习机图形管理》(气象出版社,1991年2月出版)等成系列书。以国家教育委员会指定推广的优秀国产机型——CEC-I 中华学习机为选型机,并完全适用 APPLE-II 兼容机、紫金-II 系列机。

本书适用于从事微机应用、管理人员和广大青少年及微机爱好者自学,也可作为各种类型培训班的教学参考书。

中华学习机图形技巧

朱国江 孙建隆编著

责任编辑 黄丽荣

* * *

气象出版社出版

(北京西郊白石桥路16号)

国防科工委印刷厂印刷

新华书店总店科技发行所发行 全国各地新华书店经销

* * *

开本: 787×1092 1/32 印张: 14.75 字数: 327千字

1991年12月第一版 1991年12月第一次印刷

印数: 1—5500 定价: 7.50元

ISBN 7-5029-0673-8/TP·0027

前 言

计算机图形学以其强大的生命力，正在许多领域得到日益广泛的普及和应用。特别是对于变化万千、神奇莫测的动画和计算机游戏，更能吸引广大青少年，除了可以娱乐、激发灵感、增强思维、丰富想像外，一个更重要的原因是由于自身参加而得到精神上和艺术上的享受，但这并不能使他们感到满足，富有想像力和创造力的广大青少年朋友，更希望通过学习、思考、模仿和创造，亲自动手设计出更多更好的图形变换和游戏程序来。为了帮助大家了解和学习图形处理的技术，我们编写了这本小册子，试图引导大家提高对图形变换和计算机游戏的感性认识和兴趣，了解和学习计算机图形学的基本语言和有关算法，生成各种画面的技巧和方法，以及掌握设计图形和游戏的原理、过程和方法等。目的是抛砖引玉，以便把这方面的教育工作推向更高层次。

为使本书适用于更多读者，本书编写中力求照顾不同对象。对于只想玩游戏的读者来说，只要阅读本书第十一章内容，并把第十一章和附录的程序清单和图形资料送入计算机即可，因为这对于不熟悉程序设计和游戏原理制作的读者来说是适合的，把软件作为一个游戏程序来看，只要对照使用说明就可以了。对于已经掌握中华学习机或 APPLE-Ⅱ 微机系统的基础知识，并初步掌握了 BASIC 语言和 6502 汇编语言的读者来说，本书是学习和借鉴的有用参考。而对于广大青少年计算机教师、课外辅导员以及从事计算机图形学研究和有志于游戏软件开发的设计人员来说，本书提供了一个实

用工具软件，希望给予扩展、充实和提高。

本书资料主要来自作者多年编程和教学实践，同时吸收了国内外的先进经验，也选用了一些书籍和杂志上发表的优秀文章，并经作者组织、加工、提炼和改造。全书着重介绍中华学习机在图形处理方面的各种技巧，种类繁多，应有尽有。不仅包括常规的图形处理技术，也包括图象处理的特殊技巧，既有特色，又有创新。巧妙地利用图象压缩存贮技术、16K RAM 卡，解决了处理多幅图形中华学习机内存不足困难。运用多页联动、分页显示、图形剪辑、图象合成等技术，为图形处理提供了新路子。灵活修改指针，采用反复搬家的方法，解决了程序区和图形存贮、显示页面不相兼容的矛盾。选用 STC 汉字系统，用机器语言控制，解决了工具软件包可以同时 在 APPLE-Ⅰ、紫金-Ⅰ 系列机、中华学习机上通用和汉化问题。而书中提供的各种状态下的清屏技巧，使图形画面更加丰富多采。各种图形处理技巧，均可以直接引用或移植，从而为您的图形软件增辉添色。

由于编者水平有限，缺点、错误在所难免，敬请读者批评指正。

编者 1989 年 11 月

目 录

前 言

一、中华学习机显示页结构	(1)
1. 文本	(1)
2. 低分辨率图形	(2)
3. 高分辨率图形	(6)
4. 屏幕位置与缓冲区地址对应关系计算	(8)
二、低分辨率图形第二页的使用	(17)
1. 原理分析	(17)
2. 应用实例	(21)
三、图形技巧原理分析 (一)	(25)
1. 左右翻身	(25)
2. 上下颠倒	(33)
3. 左右绕卷	(41)
4. 上下绕卷	(46)
四、图形技巧原理分析 (二)	(52)
1. 多幅合成	(52)
2. 镜象复制	(57)
3. 成倍翻番	(64)
4. 局部放大	(74)
5. 整幅缩小	(82)
五、图形技巧原理分析 (三)	(91)
1. 高分辨率作图页画面的搬移	(91)
2. 高分辨图形画面的清除	(95)
3. 高分辨率图形的反相显示	(98)
4. 高分辨率图形的合成与分解	(102)

六、图形技巧原理分析 (四)	(108)
1. 高分辨率图形的分页显示	(108)
2. 高分辨率图形的合并显示	(117)
七、图形技巧原理分析 (五)	(128)
1. 双幅图形或文字的联动显示	(128)
2. 三幅画面的联动显示	(131)
3. 五幅图形的联动显示	(134)
八、文本、汉字、图形的清屏技巧	(139)
1. 文本状态	(139)
2. 高分辨率图形	(143)
3. 汉字状态	(149)
4. 机器语言编制	(154)
九、游戏中的键盘操作控制	(163)
1. BASIC 程序控制实例	(165)
2. 机器语言程序控制实例	(168)
3. BASIC 程序和机器语言程序配合控制	(174)
十、游戏和教学程序的编制	(179)
1. 特点和内容	(179)
2. 常用技术	(182)
3. 几个实例	(199)
十一、多功能图形管理软件包	(206)
1. 功能简介	(206)
2. 主要特点	(207)
3. 使用方法	(208)
4. 几点说明	(213)
5. 程序清单	(213)
附录 9 幅图形资料	(249)
1. C1	(249)
2. C2	(272)

3. C3	(295)
4. G1	(319)
5. G2	(342)
6. X	(366)
7. ML2	(390)
8. TLY	(414)
9. TLY2	(438)

一、中华学习机显示页结构

本章详细介绍了中华学习机文本状态、低分辨率图形状态和高分辨率图形状态的显示页结构。它们是各种图形技巧的基础。弄清楚各状态的显示页结构，就可以设计出各种图形处理的程序来。

1. 文 本

打开中华学习机电源，屏幕上立即显示出“ZHONG HUA XUE XI JI”等字样，如图1.0所示。这就是中华学习机的西文文本状态。当你从键盘上敲入程序 P1 时可以看到，敲入的字符和数字在屏幕上一一显示出来，同时有一个

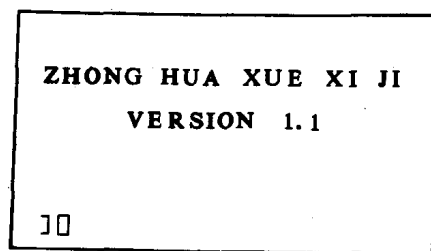


图 1.0 中华学习机西文文本状态

称为游标的闪烁的方块指示着下一个显示位置，游标依次向右移，满一行则自动向下行最左端移动，如果敲入回车 (RE-

TURN) 键, 则跳过一行指在最左端。

P1:

```
10 REM *** POKE THE HORIZONTAL  
   POSITION ***  
20 HOME  
30 FOR I = 0 TO 255  
40 POKE 1024 + I, I  
50 NEXT I  
60 END
```

从屏幕上看, 字符位置是依次排列的。那么放置字符代码的地址是否也依次排列呢? 运行一下 P1 程序, 仔细观察屏幕上的变化, 可以发现屏幕水平 24 行不是按地址顺序依次排列的, 而是分成第 1 行至第 8 行、第 9 行至第 16 行、第 17 行至第 24 行三部分。第一部分是依次排列。这就是说第 1 行显示完后接着显示第 9 行, 再接着显示第 17 行, 然后回到第 2 行, 第 10 行, 第 18 行……。这种方式叫折叠显示数据在存储器中的存储方式。中华学习机显示方式的基址分配都是采用这种方法, 见图 1.1。

文本显示区的存贮地址是 \$ 400—\$ 7FF (第 1 页) 和 \$ 800—\$ BFF (第 2 页, 通常不用)。仔细地计算一下, 可以发现文本区是 $24 \times 40 = 960$ 个地址, 而 \$ 400—\$ 7FF 共有 1024 个地址, 多出了 64 个地址, 这 64 个地址显示区没有用, 它分配给了 I/O 接口插座用。

2. 低分辨率图形

同文本显示页结构一样。\$ 400—\$ 7FF 这段地址区除了作文本显示缓冲区外, 它也作为低分辨率图形的显示缓冲区地址。不同的是, 低分辨率图形方式显示 48×40 个色块阵

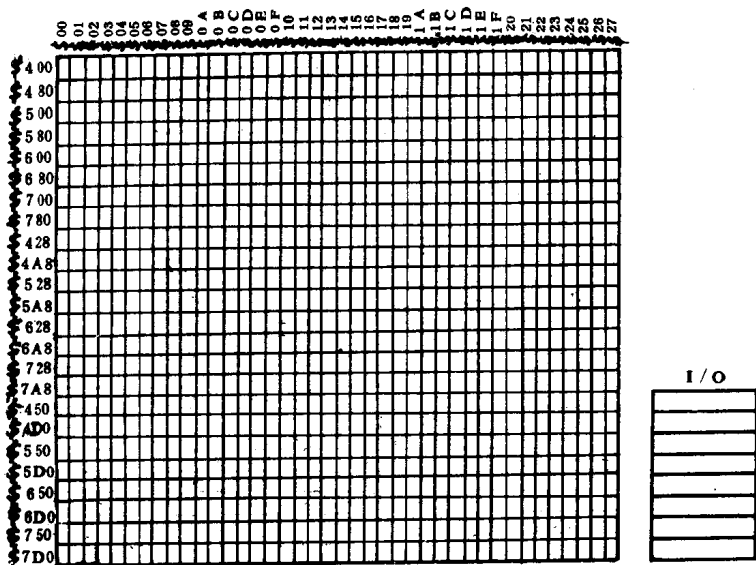


图 1.1 文本显示页面结构图

列，每个色块占一个字符宽度和半个字符高度的位置。因此，每个字节表示两个色块，一个在上，一个在下。结构图见图 1.2。

在 BASIC 状态下，键入程序 P2，运行后屏幕上出现由低分辨率色块组成的汉字“欢迎”二字。画面可以有 16 种颜色。低分辨率色块的颜色是由其对应地址的内容决定的，每个字节中，低 4 位设置上面色块的颜色，高 4 位设置下面色块的颜色，4 位二进制数值可示 16 种不同的颜色，见表 1。

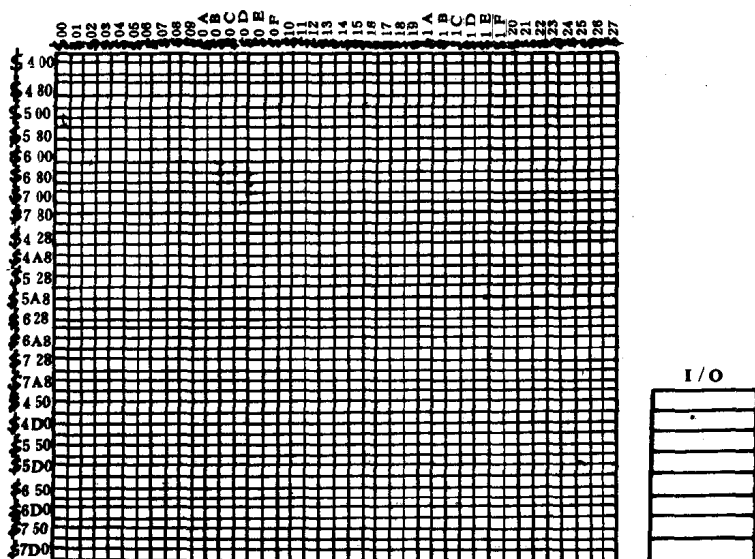


图 1.2 低分辨率图形页面结构图

表 1 低分辨率图形彩色码

十 进 制	十 六 进 制	颜 色
0	\$ 0	黑
1	\$ 1	深红
2	\$ 2	深蓝
3	\$ 3	紫
4	\$ 4	灰 1
5	\$ 5	蓝
6	\$ 6	浅蓝
7	\$ 7	深橙
8	\$ 8	棕
9	\$ 9	橙
10	\$ A	灰 2
11	\$ B	深红
12	\$ C	绿
13	\$ D	浅橙
14	\$ E	浅绿
15	\$ F	白

P2;

```
10 GR : COLOR= 15
20 FOR I = 1 TO 21
30 READ A,B,C
40 VLIN A,B AT C
50 NEXT I
60 FOR J = 1 TO 17
70 READ A,B,C
80 HLIN A,B AT C
90 NEXT J
100 FOR K = 1 TO 13
110 READ A,B
120 PLOT A,B
130 NEXT K
140 DATA 11,15,8,11,15,10,10,13,1
      2,11,13,16,13,15,14,12,16,24,
      12,15,26,11,17,28,12,15,30,22
      ,27,2,22,27,4,22,27,6,22,27,8
      ,22,27,13,22,27,18
150 DATA 22,27,23,22,27,26,22,27,
      28,22,27,30,22,27,32,22,27,34
      ,13,16,11,26,30,10,26,30,12
160 DATA 23,31,17,3,5,27,9,11,27,
      14,16,27,19,21,27,24,26,27,34
      ,37,27,34,37,24,34,37,22
170 DATA 29,31,22,24,25,22,19,21,
      22,9,11,22,9,11,24,9,11,8,17,
      9,16,10,17,12,17,13,16,15,16,
      16,17,24,10,23,12,16,26,21,26
      ,21,23
```

中断程序 P2 的运行, 返回文本状态, 可以看到画面上出现许多反白②字形, 这是怎么一回事呢? 查看一下反白②的 ASCII 代码, 发现, 原来低分辨率时的空白 (黑色, \$00) 与文本显示反白②字形编码相同。也就是说, 同一数据存入同样的显示缓冲区地址, 在不同的显示状态下所见到的屏幕显示是不同的。

3. 高分辨率图形

高分辨率图形显示页结构也与文本区类似, 见图 1.3。但是文本区状态每个字形占用一个地址单元字节, 而高分辨率状态每个字形却要占用 8 个地址单元字节。也就是说, 图 1.3 中每一个方格包含了 8 条水平扫描线, 而每条水平扫描线由 7 个点组成, 所以整个屏幕就有 $(8 \times 24) \times (7 \times 40) = 192 \times 280$ 个点。高分辨率图形显示是以屏幕上某点对应于缓冲

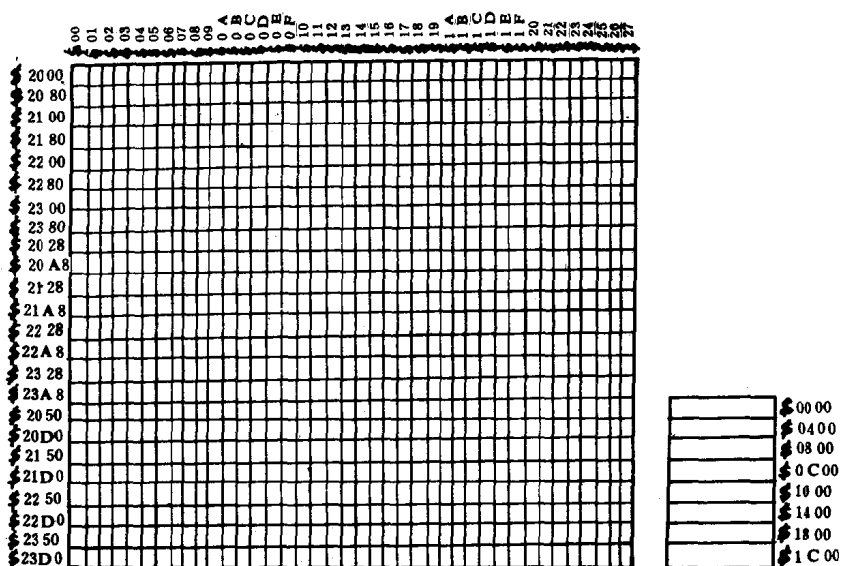


图 1.3 高分辨率图形显示页结构图

地址单元字节中的某一位来作图的, 见图 1.4。地址单元中的数据有 8 位, 分别对应每条线的一个点后还多一位, 这一位

就用来作颜色控制用。数据位的最低位决定相邻 7 点中最左边一点的显示，而最高位选择颜色。高分辨率图形的颜色结构可用图 1.5 表示。

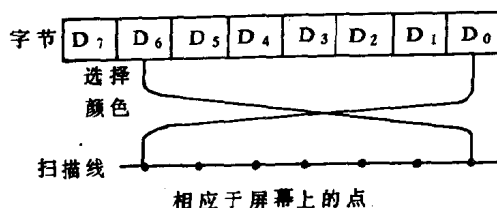


图 1.4 数据位与显示点的对应关系

最高位	6 ~ 0 位							颜色	十六进制值
0	0	0	0	0	0	0	0	黑	\$00
1	0	0	0	0	0	0	0	黑	\$80
0	1	1	1	1	1	1	1	白	\$7F
1	1	1	1	1	1	1	1	白	\$FF
0	1	0	1	0	1	0	1	紫色	\$55
1	1	0	1	0	1	0	1	蓝色	\$D5
0	0	1	0	1	0	1	0	绿色	\$2A
1	0	1	0	1	0	1	0	橙色	\$AA

图 1.5 高分辨率图形颜色结构图

从图 1.5 可知，如果连续两值为 1，则为白色；如果是非连续的奇数位置的点，当最高位为 1 时点为橙色，为 0 时点为绿色；如果是偶数位置的点（包含 0），当最高位为 1 时点为蓝色，为 0 时点为紫红色。例如十六进制数 \$D3 (211)，为 11010011，颜色为蓝和白色。运行程序 P3，可以看到屏幕左上角是白蓝方块。

高分辨率图形显示缓冲区地址也有 2 页，第一页为 \$ 2000—\$ 3FFF，第二页为 \$ 4000—\$ 5FFF。图 1.3 中每一小方格包含 8 条扫描线，表格最左边的数字是代表每一方格内最上面一条扫描线的地址，如果要求出其它扫描线所对应的地址则可用表格最右边的 8 个数字来相加即可。例如，要求出第三行方格最下边一条线的起始地址，则为 \$ 2100 + \$ 1C00 = \$ 3D00。所以当你键入 HGR: POKE 15616, 255 便可在第 3 行方格最低线（第 24 条扫描线）的左端看到一段白线（7 个连续的白点）。

P3:

```
10 HGR
20 FOR I = 0 TO 7
30 POKE 8192 + I * 1024, 211
40 NEXT I
50 END
```

4. 屏幕位置与缓冲区地址对应关系计算

通过上面介绍，我们知道屏幕上某点的位置与缓冲区地址顺序不是一一对应的。那么如何来计算它们的对应关系呢？我们用 A 来表示缓冲区地址单元，用直角坐标 (X, Y) 表示屏幕上某点的位置，将坐标原点 (0, 0) 表示屏幕左上角的位置，则从图 1.3 可知原点的地址为 8192。由于水平方向每个点的位置是连续的，因此水平方向的地址只要用 8192 加上 X 坐标即可。至于垂直方向的关系就很复杂了。我们已经知道屏幕分成三部分：第 1—8 行；第 9—16 行；第 17—24 行；而高分辨每一行又包含 8 条扫描线。因此显示的顺序是

这样的：显示第一条扫描线后接下来显示第二部分第一条扫描线，再接着显示第三部分第一条扫描线，然后回到第一部分显示第九条扫描线……依次下去，直至显完。请键入程序 P4，运行一下看看，是不是这样。

P4:

```

10 HGR : POKE - 16302,0
20 FOR I = 0 TO 8191
30 POKE 8192 + I,255
40 NEXT I
50 END

```

按照图 1.3，每一部分内每行之间的地址相差 128，而每行内每条扫描线的地址相差 1024；第二部分各行又比第一部分各行多 40；第三部分各行又比第二部分各行多 40。仔细分析一下，找出其中的规律，我们发现可以用取模的方法来列出屏幕位置与缓冲区地址的关系式：

$$\begin{aligned}
 A = & 8192 + \text{INT}(Y/64) * 40 \\
 & + (\text{INT}(Y/8) - \text{INT}(Y/64) \\
 & * 8) * 128 + (Y - \text{INT}(Y/8) \\
 & \times 8) * 1024 + X
 \end{aligned} \tag{1.1}$$

因此，只要知道屏幕位置的 (X, Y) 坐标值，即可用式 (1.1) 求出其对应的地址单元。应当指出，在高分辨率作图时，用式 (1.1) 计算地址速度很慢，常改用机器语言编程来计算基地址。为了便于说明原理，我们将式 (1.1) 改写成 INTEGER BASIC 形式：

$$\begin{aligned}
 A = & 8192 + (Y/64) * 40 \\
 & + [(Y/8)\text{MOD}8] * 128 \\
 & + (Y \text{ MOD } 8) * 1024 \\
 & + X
 \end{aligned} \tag{1.2}$$

式 (1.2) 中, 第一项是高分辨率图形的起始地址, 第二、第三项是将图 1.3 中每一方格上面第一条扫描线的屏幕垂直坐标值, 换算成对应的缓冲区地址, 第四项是将方格内扫描线与第一扫描线的地址差距算出, 最后一项是水平位置。也就是水平的地址距离。

现在, 我们用机器语言来编程。假设要计算的 Y 坐标值存放于零页单元 \$00 中, (\$14, \$15) 分别存放对应地址的低位及高位。\$01 单元作为暂存中间值单元。式 (1.2) 中第一项 $8192 = \$2000$, 也就是计算出的高位地址要加上 \$20, 第二项是将 Y 坐标除以 64 之后再乘以 40, 用机器语言实现即右移 (LSR) 6 次之后再分别左移 (ASL) 5 次和 3 次然后相加, 第三项是将 Y 除以 8 后再取 8 的余数乘上 128, 用机器语言实现即右移 3 次之后再 AND # \$07, 然后左移 7 次, 高位要暂存于高位地址单元, 第四项是 Y 取 8 的模后再乘以 1024, 用机器语言实现即 AND # \$07 然后左移 10 次, 同样高位要暂存于高位地址单元。第五项是将计算出的低位地址直接加上水平距离即可, 下面的机器语言未加这一项。整个程序解释如下:

汇编语言	标志位	字节内容	注释
LDA \$00	X	A B C D E F G H	A 计算第二项
LSR	H	0 A B C D E F G	A
LSR	G	0 0 A B C D E F	A
LSR	F	0 0 0 A B C D E	A
LSR	E	0 0 0 0 A B C D	A 右移 6 次

LSR	D	0	0	0	0	0	A	B	C	A	
LSR	C	0	0	0	0	0	0	A	B	A	
STA \$14	C	0	0	0	0	0	0	A	B	\$14 暂存	
ASL	0	0	0	0	0	0	A	B	0	A	
ASL	0	0	0	0	0	A	B	0	0	A	
ASL	0	0	0	0	A	B	0	0	0	A	
ASL	0	0	0	A	B	0	0	0	0	A	
ASL	0	0	A	B	0	0	0	0	0	A	
ASL \$14	0	0	0	0	0	0	A	B	0	\$14	
ASL \$14	0	0	0	0	0	A	B	0	0	\$14	
ASL \$14	0	0	0	0	A	B	0	0	0	\$14	
ORA \$14	0	0	A	B	A	B	0	0	0	A	
STA \$14	0	0	A	B	A	B	0	0	0	\$14 暂存	
LDA \$00	0	A	B	C	D	E	F	G	H	A	
LSR	H	0	A	B	C	D	E	F	G	A	
LSR	G	0	0	A	B	C	D	E	F	A	
LSR	F	0	0	0	A	B	C	D	E	A	
AND # \$07	F	0	0	0	0	0	C	D	E	A	
ASL	0	0	0	0	0	C	D	E	0	A	
ASL	0	0	0	0	C	D	E	0	0	A	
ASL	0	0	0	C	D	E	0	0	0	A	
ASL	0	0	C	D	E	0	0	0	0	A	

分别左移
5次和3
次并相加

计算第三
项, 右移
3次, 取
模, 再左
移7次,
高位移入
\$15单
元中暂
存, 低位

ASL	0	C	D	E	0	0	0	0	0	A
ASL	C	D	E	0	0	0	0	0	0	A
ROL \$15	X	X	X	X	X	X	X	X	C	\$15
ASL	D	E	0	0	0	0	0	0	0	A
ROL \$15	X	X	X	X	X	X	X	C	D	\$15
ORA \$14	X	E	A	B	A	B	0	0	0	A
STA \$14	X	E	A	B	A	B	0	0	0	\$14
LDA \$00	X	A	B	C	D	E	F	G	H	A
AND # \$07	X	0	0	0	0	0	F	G	H	A
ASL	0	0	0	0	0	F	G	H	0	A
ASL	0	0	0	0	F	G	H	0	0	A
ASL	0	0	0	F	G	H	0	0	0	A
ASL	0	0	F	G	H	0	0	0	0	A
ASL	0	F	G	H	0	0	0	0	0	A
ASL	F	G	H	0	0	0	0	0	0	A
ROL \$01	X	X	X	X	X	X	X	X	F	\$01
ASL	G	H	0	0	0	0	0	0	0	A
ROL \$01	X	X	X	X	X	X	X	F	G	\$01
ASL	H	0	0	0	0	0	0	0	0	A
ROL \$01	X	X	X	X	X	X	F	G	g	\$01
ASL	0	0	0	0	0	0	0	0	0	A
ROL \$01	X	0	0	0	0	F	G	H	0	\$01

移入 \$14
单元相加
后, 存于
\$14 单
元

计算第四
项取模

左移 10
次, 高位
暂存于
\$01 单
元中

ASL	0	0	0	0	0	0	0	0	0	A
ROL \$01	X	X	X	X	F	G	H	0	0	\$01
LDA \$01	X	X	X	X	F	G	H	0	0	A
AND # \$1F	X	0	0	0	F	G	H	0	0	A
STA \$01	X	0	0	0	F	G	H	0	0	\$01
LDA \$5	X	X	X	X	X	X	X	C	D	A
AND # \$03	X	0	0	0	0	0	0	C	D	A
ORA \$15	X	0	0	0	F	G	H	C	D	A
AND # \$03	X	0	0	0	0	0	0	C	D	A
ORA \$15	X	0	0	0	F	G	H	C	D	A
ORA # \$20	X	0	0	1	F	G	H	C	D	A
STA \$15	X	0	0	1	F	G	H	C	D	A
RTS										

将暂存的
\$01 单
元, \$15
单元内容
整理后,
再加上第
一项起始
地址即得
到高位地
址存于
\$15 单
元中

结 束

上述编程方法繁琐, 实用中不宜采用。我们可以用一些技巧, 只要结果相同就行。请看下面这个程序。

汇编语言	标志位	字节内容
LDA \$00	X	A B C D E F G H A
ASL	A	B C D E F G H 0 A
ASL	B	C D E F G H 0 0 A
AND # \$1C	B	0 0 0 F G H 0 0 A
STA \$15	B	0 0 0 F G H 0 0 \$15

LDA \$ 00	B	A	B	C	D	E	F	G	H	A
ROR	H	B	A	B	C	D	E	F	G	A
ROR	G	H	B	A	B	C	D	E	F	A
ROR	F	G	H	B	A	B	C	D	E	A
ROR	E	F	G	H	B	A	B	C	D	A
AND # \$ 03	E	0	0	0	0	0	0	C	D	A
ORA \$ 15	E	0	0	0	F	G	H	C	D	A
ORA # \$ 24	E	0	0	1	F	G	H	C	D	A
STA \$ 15	E	0	0	1	F	G	H	C	D	\$ 15 高位
LDA \$ 00	E	A	B	C	D	E	F	G	H	A
ROR	H	E	A	B	C	D	E	F	G	A
AND # \$ E0	H	E	A	B	0	0	0	0	0	A
STA \$ 14	H	E	A	B	0	0	0	0	0	\$ 14
ROR	0	H	E	A	B	0	0	0	0	A
ROR	0	0	H	E	A	B	0	0	0	A
AND # \$ 18	0	0	0	0	A	B	0	0	0	A
ORA \$ 14	0	E	A	B	A	B	0	0	0	A
STA \$ 14	0	E	A	B	A	B	0	0	0	\$ 14 低位
RTS										结 束

可见，结果完全一样，但程序却短小、紧凑。

在中华学习机的 BASIC 解释程序中，也有一个计算地址的子程序，它的入口地址为 \$F411，计算出的地址放于 \$25

和 \$ 26 单元中。调用时，将需计算的坐标值送 A 累加器，然后调用子程序，从 \$ 25, \$ 26 单元中取出对应地址。程序 P5 为调用的实例，程序 P6 则为调用上面介绍的子程序的例子。本书介绍的图形技巧中，特别是关于高分辨图形处理方法中，凡是涉及到屏幕上点的位置与显示缓冲区地址关系时，将用到这两个例子。

P5:

8000-	A9 20	LDA	##\$20
8002-	85 E6	STA	\$E6
8004-	A2 00	LDX	##\$00
8006-	8A	TXA	
8007-	48	PHA	
8008-	20 11 F4	JSR	\$F411
800B-	68	PLA	
800C-	AA	TAX	
800D-	A5 26	LDA	\$26
800F-	9D 00 81	STA	\$B100, X
8012-	A5 27	LDA	\$27
8014-	9D 00 82	STA	\$B200, X
8017-	E8	INX	
8018-	E0 C0	CPX	##\$C0
801A-	D0 EA	BNE	\$B006
801C-	60	RTS	

P6:

8000-	A5 11	LDA	\$11
8002-	0A	ASL	
8003-	0A	ASL	
8004-	29 1C	AND	##\$1C
8006-	85 15	STA	\$15
8008-	A5 11	LDA	\$11
800A-	6A	ROR	
800B-	6A	ROR	
800C-	6A	ROR	
800D-	6A	ROR	
800E-	29 03	AND	##\$03

8010-	05 15	ORA	\$15
8012-	09 20	ORA	#\$20
8014-	85 15	STA	\$15
8016-	A5 11	LDA	\$11
8018-	6A	ROR	
8019-	29 E0	AND	#\$E0
801B-	85 14	STA	\$14
801D-	6A	ROR	
801E-	6A	ROR	
801F-	29 18	AND	#\$18
8021-	05 14	ORA	\$14
8023-	85 14	STA	\$14
8025-	60	RTS	
8026-	A0 00	LDY	#\$00
8028-	84 11	STY	\$11
802A-	20 00 B0	JSR	\$8000
802D-	A5 14	LDA	\$14
802F-	99 00 B1	STA	\$8100, Y
8032-	A5 15	LDA	\$15
8034-	99 00 B2	STA	\$8200, Y
8037-	C8	INY	
8038-	C0 C0	CPY	#\$C0
803A-	D0 EC	BNE	\$8028
803C-	60	RTS	

二、低分辨率图形第二页的使用

本章介绍低分辨率图形第二页的使用，其目的是使读者能够熟悉 BASIC 源程序在内存中的存放形式和系统内部用的一些向量指针的用途。读者在掌握了这些知识以后，就可以利用向量指针更好地组织自己的源程序，并可以交替使用低分辨率图形的两页，使之产生较好的画面效果。此外，这个方法也可以应用到部分软汉字系统中。有的软汉字系统（如 STC2.0）将源程序放置在高分辨率第二页，这样图形显示就只能使用第一页了，用改变向量指针使源程序搬家，避开第二页的方法，就又可以使用两页图形了。

本章在介绍了使用低分辨率图形第二页的方法后，又介绍了两个使用实例，以便于读者学习应用。

1. 原理分析

在用低分辨率图形显示画面时，通常只用第一页，而第二页是不使用的。因为第二页的缓冲区地址与 BASIC 源程序存贮地址相同，如果不采取特殊处理，就会破坏源程序。那么怎样才能做到既能使用第二页而又不破坏 BASIC 源程序呢？要解决这个问题，需要先了解源程序在机内的存放形式和向量指针。

BASIC 程序在编程和调试中，其内部结构会不断的变化，为了准确地描述这些变化，系统在 0 页中专门设置了一些向

量指针，其中：

\$ 67、\$ 68 为 BASIC 源程序的起始地址。初始化值为 \$ 801，亦即表示源程序从 \$ 801 开始向上存放。

\$ 69、\$ 6A 为变量表首地址。初始化值为 \$ 803，该地址随源程序的长度改变而变化。

\$ 6B、\$ 6C 为数组表首地址。初始化值为 \$ 803，数组表跟在变量表之后，如果没有变量，则数组表直接接在源程序之后。数组表地址也随着源程序和变量表的变化而改变。

\$ 6D、\$ 6E 为数组表尾地址。初始化值为 \$ 803，由于数组表的结构长度不是固定的，它随数组的类型和维数不同而不同。因此数组表除有着首地址指针外，还必须有尾地址指针。

\$ AF、\$ B0 为源程序尾地址。初始化值为 \$ 803，以后随用户程序的改变而变化。尾指针改变时将对后边的变量和数组表指针做整体移动。

请键入 P7 程序，运行一下：

P7:

```
10 A = 10
20 PRINT A
30 END
```

然后敲命令 CALL-151 进入监控，再敲 800. 81F ↵，即可看到屏幕上显示出：

0800—00	0A	08	0A	00	41	D0	31
0808—30	00	11	08	14	00	BA	41
0810—00	17	08	1E	00	80	00	00
0818—00	41	00	84	20	00	00	00

这时看一下指针，敲入 67. 6E ↵

0067—01

0068—08 19 08 20 08 20 08

再看 AF. B0 ✓

00AF—18

00B0—08

可见几个指针的值都改变了。如果这时再敲入 NEW 命令（回到 BASIC 状态敲），指针又都改变了。

明白了上述指针的作用后，我们就可以将源程序的存放地址避开低分辨率第二页了。方法很简单，在 BASIC 状态下敲入下列三个命令就行了：

] POKE 104, 12 ✓

] POKE 3072, 0 ✓

] NEW ✓

这样，输入的源程序就从 \$C01 开始存放，低分辨率第二页使用时就不会与源程序冲突了。但要真正使用低分辨率第二页，还必须正确使用屏幕软开关来进行（见表 2.1）

表 2.1

	第 一 页	第 二 页
全 文 本	-16303 -16300	-16303 -16299
低 分 辨 率 全 图 形	-16304 -16302 -16300 -16298	-16304 -16302 -16299 -16298
低分辨率图 形及回行文 本 混 合	-16304 -16301 -16300 -16298	-16304 -16301 -16299 -16298

要注意的是，屏幕软开关进入后不消除原有的图案或字符。要想清屏，可用下列程序：

```
10 FOR I=2048 TO 3071
20 POKE I, 0
30 NEXT I
40 END
```

通过屏幕软开关的设置，我们可将两页图形交替显示，增加了屏幕显示的多样化。

上述命令，我们也可以使用，P8 为机器语言子程序，P9 为 BASIC 程序。

```
P8: 0300- A9 01      LDA  ##01
      0302- 85 67      STA  $67
      0304- A9 0C      LDA  ##0C
      0306- 85 68      STA  $68
      0308- 85 6A      STA  $6A
      030A- 85 6C      STA  $6C
      030C- 85 6E      STA  $6E
      030E- 85 B0      STA  $B0
      0310- A9 03      LDA  ##03
      0312- 85 69      STA  $69
      0314- 85 6B      STA  $6B
      0316- 85 6D      STA  $6D
      0318- 85 AF      STA  $AF
      031A- A9 00      LDA  ##00
      031C- 8D 00 0C    STA  $0C00
      031F- 60          RTS
```

P9:

```
10 POKE 103,1: POKE 104,12
20 POKE 105,3: POKE 106,12
30 POKE 107,3: POKE 108,12
40 POKE 109,3: POKE 110,12
50 POKE 175,3: POKE 176,12
60 POKE 3072,0
70 END
```


2. 应用实例

下面，我们给出两个应用实例：

实例 1，低分辨率两页图形交替显示。在运行此程序前需先运行 P9 程序改指针，然后再调入此程序运行，就可以看到两页画面交替显示。

```
100 TEXT : HOME : GR
110 DATA 1,3,36,38,2,37
120 DATA 1,21
130 DATA 11,15,8,11,15,10,10,13,
    12,11,13,16,13,15,14,12,16,24

140 DATA 12,15,26,11,17,28,12,15
    ,30,22,27,2,22,27,4,22,27,6
150 DATA 22,27,8,22,27,13,22,27,
    18
160 DATA 22,27,23,22,27,26,22,27
    ,28
170 DATA 22,27,30,22,27,32,22,27
    ,34
180 DATA 2,17
190 DATA 13,16,11,26,30,10,26,30
    ,12
200 DATA 23,31,17,3,5,27,9,11,27

210 DATA 14,16,27,19,21,27,24,26
    ,27
220 DATA 34,37,27,34,37,24,34,37
    ,22
230 DATA 29,31,22,24,25,22,19,21
    ,22,9,11,22,9,11,24
240 DATA 3,13
250 DATA 9,11,8,17,9,16,10,17
260 DATA 12,17,13,16,15,16,16,17

270 DATA 24,10,23,12,16,26,21,26
    ,21,23
280 FOR I = 0 TO 39
290 COLOR= 15
300 HLIN 0,39 AT I
```

```

310 NEXT I
320 COLOR= 7
330 FOR I = 1 TO 4
340 READ A
350 FOR J = 1 TO 39 STEP 2
360 PLOT J,A
370 NEXT J,I
380 FOR I = 1 TO 2
390 READ A
400 FOR J = 2 TO 38 STEP 4
410 PLOT J,A
420 NEXT J,I
430 A$ = "800<400.7FFM N D823G"
440 FOR I = 1 TO LEN (A$): POKE
    511 + I, ASC ( MID$ (A$,I,1))
    + 128: NEXT I
450 POKE 72,0: CALL - 144
460 FOR P = 0 TO 2000: NEXT P
470 GR
480 COLOR= 4
490 READ N,M
500 IF N < > 1 THEN 550
510 FOR I = 1 TO M
520 READ A,B,C
530 VLIN A,B AT C
540 NEXT I
550 READ N,M
560 IF N < > 2 THEN 610
570 FOR J = 1 TO M
580 READ A,B,C
590 HLIN A,B AT C
600 NEXT J
610 READ N,M
620 IF N < > 3 THEN 670
630 FOR K = 1 TO M
640 READ A,B
650 PLOT A,B
660 NEXT K
670 FOR P = 1 TO 2000: NEXT P
680 X = 0
690 POKE - 16299,0: FOR P = 1 TO
    2000: NEXT P
700 POKE - 16300,0: FOR P = 1 TO
    2000: NEXT P
710 X = X + 1: IF X < 3 THEN 690
720 TEXT : END

```

实例 2, STC2.0 系统下使用高分辨率第二页作图。

这是“多功能图形管理软件包”的主菜单(ZCD)程序。由于 STC2.0 系统将源程序从 \$ 4001 开始存放, 占用了高分辨率作图第二页, 因此, 我们在“软件包”中采取了改指针的办法, 在需要使用高分辨率第二页作图时, 就调用“GZZ”子程序改变源程序存放地址, 不用时再恢复。

“GZZ”子程序中, \$ 8370—\$ 8389 为改变系统向量指针, \$ 838A—\$ 839F 则为在机器语言中使用 BASIC 命令程序, 实际上是根据“ZCD”程序中选择的某一项(X 值)功能而执行“RUNPX”命令。

由于 BASIC 程序容易读懂, 这里就不再说明了。

```
10 REM ZS
20 D$ = CHR$(4)
30 HCOLOR= 0: FOR I = 140 TO 8 STEP - 1: HPLLOT I, I TO 279
  - 1, I TO 279 - I, 191 - I TO 1, 191 - I TO 1, I: NEXT I
40 K = 3: GOSUB 160

50 UTAB 2: HTAB 4: PRINT "多功能图形管理软件包"
60 UTAB 4: HTAB 2: PRINT "A.左右翻身 B.左右移动 C.左右绕卷"
70 UTAB 5: HTAB 2: PRINT "D.上下颠倒 E.上下移动 F.上下绕卷"
80 UTAB 6: HTAB 2: PRINT "G.分页显示 H.动画显示 I.翻卷显示"
90 UTAB 7: HTAB 2: PRINT "J.局部放大 K.成倍翻番 L.镜象复制"
100 UTAB 8: HTAB 2: PRINT "M.多幅联动 N.多幅合成 O.剪辑编辑"
"

110 UTAB 10: HTAB 6: PRINT "请选择(A-O),按P结束:"
120 X = PEEK ( - 16384)
130 IF X = 208 THEN POKE - 16368, 0: K = 0: GOSUB 160: CALL
5576: NEW : END
```

```

140 IF X < 193 OR X > 288 THEN 120
145 POKE 3848,0: POKE 33649,9: POKE 33653,15: POKE 33694,20
8
150 POKE 33695,X: CALL 33648
160 HCOLOR= K: HPLLOT 0,0 TO 279,0 TO 279,191 TO 0,191 TO 0,
0: RETURN

```

```

B370-   A9 09           LDA   #$09
B372-   85 67           STA   $67
B374-   A9 0F           LDA   #$0F
B376-   85 68           STA   $68
B378-   85 6A           STA   $6A
B37A-   85 6C           STA   $6C
B37C-   85 6E           STA   $6E
B37E-   85 B0           STA   $B0
B380-   A9 03           LDA   #$03
B382-   85 69           STA   $69
B384-   85 6B           STA   $6B
B386-   85 6D           STA   $6D
B388-   85 AF           STA   $AF
B38A-   A2 00           LDX   #$00
B38C-   BD 9B 83       LDA   $B39B,X
B38F-   9D 00 02       STA   $0200,X
B392-   EB             INX
B393-   E0 06           CPX   #$06
B395-   D0 F5           BNE   $B38C
B397-   20 CD 9F       JSR   $9FCD
B39A-   60             RTS

```

```

B39B- D2 D5 CE D0 B0
B3A0- 8D

```

三、图形技巧原理分析（一）

从本章开始，我们将陆续介绍中华学习机在高分辨率图形处理方面的各种技巧。这些技巧在计算机辅助教学、图形管理辅助设计、游戏或智力软件开发以及办公室自动化等课件设计中，都有着不同程度的应用。我们的出发点，是从原理上详细剖析每种图形技巧的设计思想，以便读者在掌握了这些原理、方法和技巧以后，可以根据实际需要加以引用和改进，从而设计出更多更好的图形软件来。

本章介绍最简单的也是最常见的 4 种图形技巧。即从设计原理上介绍如何将一幅已有图形翻个身（左右翻身）；将原有图象倒置显示（上下颠倒）；用键盘控制将图象左右移动，并水平绕卷；以及将图象上下移动并垂直绕卷。

所有这些技巧以及我们将要介绍的其它图形技巧，都可以为读者直接引用，而图形或画面可以任意选择，为你所用，既可以是实际工作中欲处理的信息，也可以是读者精心绘制的得意之作。

1. 左右翻身

子程序 P10 可以实现图形的左右翻身。它的编制思路是这样的：对一幅画面来说，要使它左右翻身，也就是左右对换，那么可以将图形分成左右两半，将对应左边图形的数据与对应右边图形的数据对换一下。但是前面介绍过，图形数

据与屏幕上显示点的对应关系正好是相反的，见图 1.4。因此，仅仅对换一下是不行的，还需将图形数据中各位对换一下（最高位除外，为什么？）。我们来分析 P10：

\$ 8000—\$ 8017 计算各行的首地址，将高位地址存放于 \$ 8200 开始的单元中，低位地址存放于 \$ 8100 开始的单元中，以便于直接查表取地址。

\$ 8018—\$ 801B 将图形右边的 Y 值暂存于 \$ 0A 单元中。

\$ 801C—\$ 802F 查表，取各行首地址存放于 \$ 06、\$ 07（存第一页）和 \$ 08、\$ 09（存第二页）。

\$ 8030—\$ 8036 取第二页图形左边的数据，暂存于 \$ FF 单元，并将最高位左移至标志位压栈保存。

\$ 8037—\$ 8049 完成数据位的转换。最高位弹出后复位。

\$ 804A—\$ 8051 将转换后的数据位送第一页右边，形成对换。

\$ 8052—\$ 8058 判整列是否对换完，未完继续。

\$ 8059—\$ 8060 完，再判各列是否对换完，未完继续，完结束。

这里再详细介绍一下数据位的转换。

标志位 字节内容

LDA (\$ 08), Y

X	A	B	C	D	E	F	G	H
---	---	---	---	---	---	---	---	---

 A

STA \$FF	X	A	B	C	D	E	F	G	H	\$FF
ASL \$FF	A	B	C	D	E	F	G	H	0	\$FF
PHP	A	N	V		B	D	I	Z	C	P
LDA # \$00	A	0	0	0	0	0	0	0	0	A
STA \$0B	A	0	0	0	0	0	0	0	0	\$0B
ASL \$FF	B	C	D	E	F	G	H	0	0	\$FF
ROR \$FE	X	B	X	X	X	X	X	X	X	\$FE
INC \$0B	X	0	0	0	0	0	0	0	1	\$0B
LDA \$0B	X	0	0	0	0	0	0	0	1	A
	Z									
CMP # \$07	0	0	0	0	0	0	0	0	1	A
BNE \$803B										
(Z=0 转)	C									
ASL \$FF	C	D	E	F	G	H	0	0	0	\$FF
ROR \$FE	X	C	B	X	X	X	X	X	X	\$FE
INC \$0B	X	0	0	0	0	0	0	1	0	\$0B
LDA \$0N	X	0	0	0	0	0	0	1	0	A
	Z									
CMP # \$07	0	0	0	0	0	0	0	1	0	A
BNE \$803B										
(Z=0 转)	C									
ASL \$FF	D	E	F	G	H	0	0	0	0	\$FF
ROR \$FE	X	D	C	B	X	X	X	X	X	\$FE

INC \$0B

X

0	0	0	0	0	0	0	1	1
---	---	---	---	---	---	---	---	---

 \$0B

LDA \$0B

X

0	0	0	0	0	0	0	1	1
---	---	---	---	---	---	---	---	---

 A

Z

CMP # \$07

0

0	0	0	0	0	0	0	1	1
---	---	---	---	---	---	---	---	---

 A

BNE \$803B

(Z=0 转)

ASL \$FF

E

F	G	H	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---

 \$FF

ROR \$FE

X

E	D	C	B	X	X	X	X
---	---	---	---	---	---	---	---

 \$FE

INC \$0B

X

0	0	0	0	0	1	0	0
---	---	---	---	---	---	---	---

 \$0B

LDA \$0B

X

0	0	0	0	0	1	0	0
---	---	---	---	---	---	---	---

 A

CMP # \$07

0

0	0	0	0	0	1	0	0
---	---	---	---	---	---	---	---

 A

BNE \$803B

C

(Z=0 转)

ASL \$FF

F

G	H	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---

 \$FF

ROR \$FE

X

F	E	D	C	B	X	X	X
---	---	---	---	---	---	---	---

 \$FE

INC \$0B

X

0	0	0	0	0	1	0	1
---	---	---	---	---	---	---	---

 \$0B

LDA \$0B

X

0	0	0	0	0	1	0	1
---	---	---	---	---	---	---	---

 A

Z

CMP # \$07

0

0	0	0	0	0	1	0	1
---	---	---	---	---	---	---	---

 A

BNE \$803B

(Z=0 转)

ASL \$FF

G

H	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---

 \$FF

ROR \$FE	X	G	F	E	D	C	B	X	X	\$FE
INC \$0B	X	0	0	0	0	0	1	1	0	\$0B
LDA \$0B	X	0	0	0	0	0	1	1	0	A
	Z									
CMP # \$07	0	0	0	0	0	0	1	1	0	A
BNE \$803B										
(Z=0 转)										
ASL \$FF	H	0	0	0	0	0	0	0	0	\$FF
ROR \$FE	X	H	G	F	E	D	C	B	X	\$FE
INC \$0B	X	0	0	0	0	0	1	1	1	\$0B
LDA \$0B	X	0	0	0	0	0	1	1	1	A
	Z									
CMP # \$07	1	0	0	0	0	0	1	1	1	A
BNE \$803B	C									
(Z=1 不转)										
PLP	A								A	P
ROR \$FE	X	A	H	G	F	E	D	C	B	\$FE
TYA										
PHA										
LDY \$0A										
LDA \$FE		A	H	G	F	E	D	C	B	A

STA (\$06), Y

比较两者结果，正好换了一换，而最高位没变。

程序 P10 是将第二页图形翻身转到第一页上，而程序 P11 则是在第一页上左右翻身的，程序编制结构不同，但原理是相同的。请读者根据 P10 的分析，来对照 P11，自行分析，这里就不再赘述了。

P10:

8000-	A2 00	LDX	#\$00
8002-	8A	TXA	
8003-	4B	PHA	
8004-	20 11 F4	JSR	\$F411
8007-	6B	PLA	
8008-	AA	TAX	
8009-	A5 26	LDA	\$26
800B-	9D 00 81	STA	\$B100,X
800E-	A5 27	LDA	\$27
8010-	9D 00 82	STA	\$B200,X
8013-	E8	INX	
8014-	E0 C0	CPX	#\$C0
8016-	D0 EA	BNE	\$8002
8018-	A9 27	LDA	#\$27
801A-	85 0A	STA	\$0A
801C-	A0 00	LDY	#\$00
801E-	A2 00	LDX	#\$00
8020-	BD 00 81	LDA	\$B100,X
8023-	85 06	STA	\$06
8025-	85 08	STA	\$08
8027-	BD 00 82	LDA	\$B200,X
802A-	85 07	STA	\$07
802C-	69 20	ADC	#\$20
802E-	85 09	STA	\$09
8030-	B1 08	LDA	(\$08),Y
8032-	85 FF	STA	\$\$FF
8034-	06 FF	ASL	\$\$FF
8036-	0B	PHP	
8037-	A9 00	LDA	#\$00

8039-	85 0B	STA	\$0B
803B-	06 FF	ASL	\$FF
803D-	66 FE	ROR	\$FE
803F-	E6 0B	INC	\$0B
8041-	A5 0B	LDA	\$0B
8043-	C9 07	CMP	##07
8045-	D0 F4	BNE	\$803B
8047-	28	PLP	
8048-	66 FE	ROR	\$FE
804A-	98	TYA	
804B-	4B	PHA	
804C-	A4 0A	LDY	\$0A
804E-	A5 FE	LDA	\$FE
8050-	91 06	STA	(\$06),Y
8052-	68	PLA	
8053-	A8	TAY	
8054-	E8	INX	
8055-	E0 C0	CPX	##C0
8057-	D0 C7	BNE	\$8020
8059-	C6 0A	DEC	\$0A
805B-	C8	INY	
805C-	C0 28	CPY	##28
805E-	D0 BE	BNE	\$801E
8060-	60	RTS	

P11:

8000-	A9 00	LDA	##00
8002-	85 06	STA	\$06
8004-	20 11 F4	JSR	\$F411
8007-	A0 00	LDY	##00
8009-	B1 26	LDA	(\$26),Y
800B-	20 38 80	JSR	\$8038
800E-	A5 07	LDA	\$07
8010-	4B	PHA	
8011-	98	TYA	
8012-	AA	TAX	
8013-	8E 1A 80	STX	\$801A
8016-	A9 27	LDA	##27
8018-	38	SEC	
8019-	E9 13	SBC	##13
801B-	AB	TAY	

801C-	B1 26	LDA	(\$26),Y
801E-	20 38 80	JSR	\$8038
8021-	68	PLA	
8022-	91 26	STA	(\$26),Y
8024-	8A	TXA	
8025-	A8	TAY	
8026-	A5 07	LDA	\$07
8028-	91 26	STA	(\$26),Y
802A-	CB	INY	
802B-	C0 14	CPY	##14
802D-	D0 DA	BNE	\$8009
802F-	E6 06	INC	\$06
8031-	A5 06	LDA	\$06
8033-	C9 C0	CMP	##C0
8035-	D0 CB	BNE	\$8002
8037-	60	RTS	
803B-	86 09	STX	\$09
803A-	2A	ROL	
803B-	26 07	ROL	\$07
803D-	6A	ROR	
803E-	A2 07	LDX	##07
8040-	6A	ROR	
8041-	26 07	ROL	\$07
8043-	CA	DEX	
8044-	E0 00	CPX	##00
8046-	F0 03	BEQ	\$804B
8048-	4C 40 80	JMP	\$8040
804B-	A6 09	LDX	\$09
804D-	60	RTS	

演示 P10 或 P11, 可用程序 P12:

```

10 D$ = CHR$ (4)
20 PRINT D$"BLOAD P10 "
30 INPUT "ENTER PICT NAME: ";K$
40 PRINT D$"BLOAD"K$",A$4000"
50 POKE - 16304,0: POKE - 16302
   ,0: POKE - 16300,0: POKE -
   16297,0
60 CALL 32768

```

运行实例，见图 3.1 (a)、(b)。

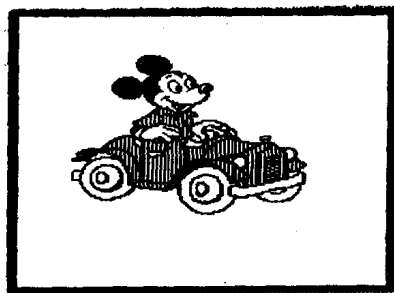


图 3.1 (a) 原图象

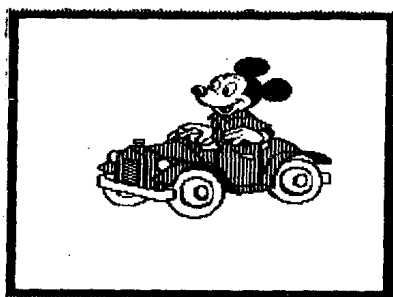


图 3.1 (b) 翻身后的图象

2. 上下颠倒

要使图象上下颠倒，可将图象分为上、下两半，然后进行对换，对换时需要用到中间单元，用以暂存数据，一般利用堆栈比较方便。程序 P13 就是这样编制的，这里简单的解说一下其原理。

- \$ 8000—\$ 800B 屏幕软开关, 选择高分辨率图形第一页整幅。
- \$ 800C—\$ 8018 取图形上边第一行首地址, 高位存入 \$ 05 单元, 低位存入 \$ 04 单元。
- \$ 8019—\$ 8027 取图形下边最末行首地址, 高位存入 \$ 07 单元, 低位存入 \$ 06 单元。
- \$ 8028—\$ 802B 取 # \$ 08 (每一方格有 8 条扫描线) 放入 \$ 0B 单元。
- \$ 802C—\$ 8030 取图形第一行数据压栈暂存。
- \$ 8031—\$ 8034 将图形最末一行数据送至图形第一行。
- \$ 8035—\$ 8037 由栈弹出, 送至图形最末一行, 实现上下对换。
- \$ 8038—\$ 803C 逐列交换, 并判断一行交换完否, 未完继续交换。
- \$ 803D—\$ 804A 因为每一方格内 (参见图 1.3) 行与行之间差 # \$ 0400, 所以图形上下两部分的高位地址分别加 04 和减 04, 得到第二行和倒数第二行地址, 以此类推, 直至 8 行交换完毕。
- \$ 8048—\$ 804E 判断 8 行交换完否, 未完继续。
- \$ 804F—\$ 8053 8 行交换完, 再取下一 8 行, 进行交换, 并判断是否全部交换完, 未完继续。
- \$ 8054 完, 结束, 整个图形上下颠倒了。

\$ 8058—\$ 808F 存放各方格的首地址数据，供程序依次查表取地址，共有 48 个数据即 # \$ 30。

演示程序 P13，可用程序 P14：

```
10 D$ = CHR$ (4)
20 PRINT D$"BLOADPIC1,A$2000"
25 PRINT D$"BLOAD P13"
30 CALL 32768
40 FOR I = 1 TO 2000: NEXT
50 CALL 32768
60 FOR I = 1 TO 2000: NEXT
70 TEXT : END
```

将“左右翻身”和“上下颠倒”子程序合在一起，并加上键盘控制，是挺有趣的。这里再提供一个程序 P15，它的编制方法与上面介绍的又不同，但原理是相同的。这里粗略地解说一下：

\$ 8000—\$ 8041 置显示状态并计算各行首地址，存放在 \$ 8100 单元（存低位）和 \$ 8200 单元（存高位）开始的诸单元中。

\$ 8042—\$ 804D 键盘控制，按 Y 键，图形左右翻身，按 X 键，图形上下颠倒，按 E 键结束。

\$ 804E—\$ 80AB 左右翻身。

\$ 80AC—\$ 80F2 上下颠到。

\$ 80F3—\$ 80F7 按 E 键结束。

P13:

8000-	8D 50 C0	STA	\$C050
8003-	8D 52 C0	STA	\$C052
8006-	8D 54 C0	STA	\$C054
8009-	8D 57 C0	STA	\$C057
800C-	A2 00	LDX	#\$00
800E-	BD 58 80	LDA	\$B058, X
8011-	85 05	STA	\$05
8013-	E8	INX	
8014-	BD 58 80	LDA	\$B058, X
8017-	85 04	STA	\$04
8019-	E8	INX	
801A-	BD 58 80	LDA	\$B058, X
801D-	18	CLC	
801E-	69 1C	ADC	##1C
8020-	85 07	STA	\$07
8022-	E8	INX	
8023-	BD 58 80	LDA	\$B058, X
8026-	85 06	STA	\$06
8028-	A9 08	LDA	##08
802A-	85 08	STA	\$08
802C-	A0 00	LDY	##00
802E-	B1 04	LDA	(\$04), Y
8030-	48	PHA	
8031-	B1 06	LDA	(\$06), Y
8033-	71 04	STA	(\$04), Y
8035-	68	PLA	
8036-	91 06	STA	(\$06), Y
8038-	C8	INY	
8039-	C0 28	CPY	##28
803B-	D0 F1	BNE	\$B02E
803D-	A5 05	LDA	\$05
803F-	18	CLC	
8040-	69 04	ADC	##04
8042-	85 05	STA	\$05
8044-	A5 07	LDA	\$07
8046-	38	SEC	
8047-	E9 04	SBC	##04
8049-	85 07	STA	\$07
804B-	C6 08	DEC	\$08
804D-	D0 DD	BNE	\$B02C
804F-	E8	INX	
8050-	E0 30	CPX	##30
8052-	D0 BA	BNE	\$B00E
8054-	60	RTS	

P15:

B000-	AD 50 C0	LDA	\$C050
B003-	AD 52 C0	LDA	\$C052
B006-	AD 54 C0	LDA	\$C054
B009-	AD 57 C0	LDA	\$C057
B00C-	A0 00	LDY	##00
B00E-	84 0A	STY	\$0A
B010-	84 0C	STY	\$0C
B012-	A0 B1	LDY	##81
B014-	84 0B	STY	\$0B
B016-	C8	INY	
B017-	84 0D	STY	\$0D
B019-	A0 BF	LDY	##BF
B01B-	98	TYA	
B01C-	0A	ASL	
B01D-	0A	ASL	
B01E-	29 1C	AND	##1C
B020-	85 15	STA	\$15
B022-	98	TYA	
B023-	6A	ROR	
B024-	6A	ROR	
B025-	6A	ROR	
B026-	6A	ROR	
B027-	29 03	AND	##03
B029-	05 15	ORA	\$15
B02B-	09 20	ORA	##20
B02D-	91 0C	STA	(\$0C),Y
B02F-	98	TYA	
B030-	6A	ROR	
B031-	29 E0	AND	##E0
B033-	85 14	STA	\$14
B035-	6A	ROR	
B036-	6A	ROR	
B037-	29 18	AND	##18
B039-	05 14	ORA	\$14
B03B-	91 0A	STA	(\$0A),Y
B03D-	88	DEY	
B03E-	C0 FF	CPY	##FF
B040-	D0 D9	BNE	\$B01B
B042-	2C 00 C0	BIT	\$C000
B045-	10 FB	BPL	\$B042
B047-	AD 00 C0	LDA	\$C000

804A-	C9 D9	CMP	##D9
804C-	D0 5E	BNE	\$80AC
804E-	2C 10 C0	BIT	\$C010
8051-	A0 00	LDY	##00
8053-	84 11	STY	\$11
8055-	A4 11	LDY	\$11
8057-	B9 00 B1	LDA	\$B100,Y
805A-	85 14	STA	\$14
805C-	B9 00 B2	LDA	\$B200,Y
805F-	85 15	STA	\$15
8061-	A2 27	LDX	##27
8063-	84 0E	STX	\$0E
8065-	A0 00	LDY	##00
8067-	A2 13	LDX	##13
8069-	84 0A	STY	\$0A
806B-	A4 0A	LDY	\$0A
806D-	B1 14	LDA	(\$14),Y
806F-	85 0B	STA	\$0B
8071-	85 0C	STA	\$0C
8073-	A4 0E	LDY	\$0E
8075-	B1 14	LDA	(\$14),Y
8077-	85 0D	STA	\$0D
8079-	85 0F	STA	\$0F
807B-	A0 0B	LDY	##0B
807D-	06 0B	ASL	\$0B
807F-	6A	ROR	
8080-	8B	DEY	
8081-	D0 FA	BNE	\$B07D
8083-	06 0C	ASL	\$0C
8085-	6A	ROR	
8086-	A4 0E	LDY	\$0E
8088-	91 14	STA	(\$14),Y
808A-	A0 0B	LDY	##0B
808C-	06 0D	ASL	\$0D
808E-	6A	ROR	
808F-	8B	DEY	
8090-	D0 FA	BNE	\$B08C
8092-	06 0F	ASL	\$0F
8094-	6A	ROR	
8095-	A4 0A	LDY	\$0A
8097-	91 14	STA	(\$14),Y
8099-	C6 0E	DEC	\$0E
809B-	E6 0A	INC	\$0A

809D-	E4 0E	CPX	\$0E
809F-	D0 CA	BNE	\$806B
80A1-	E6 11	INC	\$11
80A3-	A2 C0	LDX	##C0
80A5-	E4 11	CPX	\$11
80A7-	D0 AC	BNE	\$8055
80A9-	4C 42 80	JMP	\$8042
80AC-	C9 DB	CMP	##DB
80AE-	D0 43	BNE	\$80F3
80B0-	2C 10 C0	BIT	\$C010
80B3-	A2 60	LDX	##60
80B5-	A0 00	LDY	##00
80B7-	84 11	STY	\$11
80B9-	A0 BF	LDY	##BF
80BB-	84 12	STY	\$12
80BD-	A4 11	LDY	\$11
80BF-	B9 00 81	LDA	\$8100, Y
80C2-	85 14	STA	\$14
80C4-	B9 00 82	LDA	\$8200, Y
80C7-	85 15	STA	\$15
80C9-	A4 12	LDY	\$12
80CB-	B9 00 81	LDA	\$8100, Y
80CE-	85 16	STA	\$16
80D0-	B9 00 82	LDA	\$8200, Y
80D3-	85 17	STA	\$17
80D5-	A0 00	LDY	##00
80D7-	B1 14	LDA	(\$14), Y
80D9-	85 0A	STA	\$0A
80DB-	B1 16	LDA	(\$16), Y
80DD-	91 14	STA	(\$14), Y
80DF-	A5 0A	LDA	\$0A
80E1-	91 16	STA	(\$16), Y
80E3-	C8	INY	
80E4-	C0 28	CPY	##28
80E6-	D0 EF	BNE	\$80D7
80E8-	E6 11	INC	\$11
80EA-	C6 12	DEC	\$12
80EC-	E4 11	CPX	\$11
80EE-	D0 CD	BNE	\$80BD
80F0-	4C 42 80	JMP	\$8042
80F3-	C9 C5	CMP	##C5
80F5-	D0 F9	BNE	\$80F0
80F7-	60	RTS	

演示程序 P15，用程序 P16：

```
10 D$ = CHR$(4)
20 PRINT D$"BLOAD P15"
30 INPUT "ENTER PICT NAME: "; K$
40 PRINT "Y-ZYFS X-SXDD E-END"
50 PRINT D$"BLOAD"K$, A$2000
60 CALL 32768
70 TEXT : END
```

运行实例，见图 3.2 (a)、(b)。

POKE1913,33

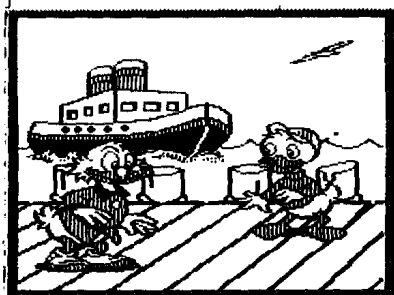


图 3.2 (a) 原图象

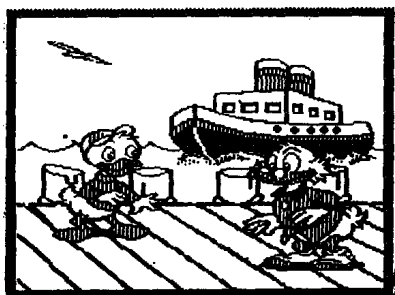


图 3.2 (b) 颠倒了的图象

3. 左右绕卷

程序 P17 可以将一幅图形进行左右绕卷，程序中也加了键盘控制，按 L 键，图象向左移动，并从右边绕回来；按 R 键，图象向右移动并从左边绕回来，按空格键图象暂停移动，按 RETURN 键结束。其工作原理分析如下：

\$ 8000—\$ 800D 取各行首地址，高位存 06 单元，
低位存 07 单元。

\$ 800E—\$ 8010 各行 0 列数据压栈暂存。

\$ 8011—\$ 8015 行减 1，判 0 列是否全部压栈，未
完继续。

\$ 8016—\$ 8021 再取各行首地址，高位存 06 单
元，低位存 07 单元。

\$ 8022—\$ 8025 判是否移到最后一列，未到则往
下继续移，到了则跳转至 \$ 8036。

\$ 8026—\$ 802B 逐列移动。

- \$ 802C—\$ 8030 判各行的这一列移完否未完继续移。
- \$ 8031—\$ 8035 移下一列，并判全部移完否，未完继续移。
- \$ 8036—\$ 8038 最后一列移动后，栈内弹出至最后一列，形成图象的左右绕卷显示。
- \$ 8039—\$ 803D 判全部弹出否，未完继续。
- \$ 803E—\$ 8042 键盘控制，未按键时，图象一直在移动显示。
- \$ 8043—\$ 804E 判是否按空格键，按了则空循环，实现暂停，未按往下再判。

P17:

8000-	A0 00	LDY	##00
8002-	A2 BF	LDX	##BF
8004-	BD 00 81	LDA	\$B100,X
8007-	85 07	STA	\$07
8009-	BD 00 82	LDA	\$B200,X
800C-	85 06	STA	\$06
800E-	B1 06	LDA	(\$06),Y
8010-	48	PHA	
8011-	CA	DEX	
8012-	E0 FF	CPX	##FF
8014-	D0 EE	BNE	\$B004
8016-	A2 00	LDX	##00
8018-	BD 00 81	LDA	\$B100,X
801B-	85 07	STA	\$07
801D-	BD 00 82	LDA	\$B200,X
8020-	85 06	STA	\$06
8022-	C0 27	CPY	##27
8024-	F0 10	BEG	\$B036
8026-	C8	INY	
8027-	B1 06	LDA	(\$06),Y
8029-	88	DEY	
802A-	91 06	STA	(\$06),Y
802C-	EB	INX	
802D-	E0 C0	CPX	##C0

802F-	D0 E7	BNE	\$8018
8031-	C8	INX	
8032-	C0 28	CPY	##28
8034-	D0 E0	BNE	\$8016
8036-	68	PLA	
8037-	91 C6	STA	(\$06),Y
8039-	E8	INX	
803A-	E0 C0	CPX	##C0
803C-	90 DA	BCC	\$8018
803E-	AD 00 C0	LDA	\$C000
8041-	10 BD	BPL	\$8000
8043-	C9 A0	CMP	##A0
8045-	D0 06	BNE	\$804F
8047-	2C 10 C0	BIT	\$C010
804A-	AD 00 C0	LDA	\$C000
804D-	10 FB	BPL	\$804A
804F-	C9 8D	CMP	##8D
8051-	F0 46	BEQ	\$8099
8053-	C9 CC	CMP	##CC
8055-	D0 1F	BNE	\$8076
8057-	A9 00	LDA	##00
8059-	8D 01 80	STA	\$8001
805C-	A9 27	LDA	##27
805E-	8D 23 80	STA	\$8023
8061-	A9 C8	LDA	##C8
8063-	8D 26 80	STA	\$8026
8066-	8D 31 80	STA	\$8031
8069-	A9 88	LDA	##88
806B-	8D 29 80	STA	\$8029
806E-	A9 28	LDA	##28
8070-	8D 33 80	STA	\$8033
8073-	4C 00 80	JMP	\$8000
8076-	C9 D2	CMP	##D2
8078-	D0 1C	BNE	\$8096
807A-	A9 27	LDA	##27
807C-	8D 01 80	STA	\$8001
807F-	A9 00	LDA	##00
8081-	8D 23 80	STA	\$8023
8084-	A9 88	LDA	##88
8086-	8D 26 80	STA	\$8026
8089-	8D 31 80	STA	\$8031
808C-	A9 C8	LDA	##C8
808E-	8D 29 80	STA	\$8029
8091-	A9 FF	LDA	##FF

8093-	8D 33 80	STA	\$B033
8096-	4C 00 80	JMP	\$B000
8099-	2C 10 C0	BIT	\$C010
809C-	60	RTS	
809D-	A9 20	LDA	##20
809F-	85 E6	STA	\$E6
80A1-	A2 00	LDX	##00
80A3-	8A	TXA	
80A4-	48	PHA	
80A5-	20 11 F4	JSR	\$F411
80A8-	68	PLA	
80A9-	AA	TAX	
80AA-	A5 26	LDA	\$26
80AC-	9D 00 82	STA	\$B200, X
80AF-	A5 27	LDA	\$27
80B1-	9D 00 81	STA	\$B100, X
80B4-	EB	INX	
80B5-	E0 C0	CPX	##C0
80B7-	D0 EA	BNE	\$B0A3
80B9-	AD 50 C0	LDA	\$C050
80BC-	AD 52 C0	LDA	\$C052
80BF-	AD 54 C0	LDA	\$C054
80C2-	AD 57 C0	LDA	\$C057
80C5-	4C 00 80	JMP	\$B000

\$ 804F—\$ 8052 判是否按 RETURN 键，是则转
\$ 8099 结束运行，不是再判。

\$ 8053—\$ 8056 判是否按 L 键，未按转 \$ 8076 再
判，按 J 则实现左移绕卷。

\$ 8057—\$ 8075 由于左移绕卷和右移绕卷的方向
不同，因此要先将左移绕卷的有关数
据送有关单元，以实现左移绕卷。

\$ 8076—\$ 8079 判是否按 R 键，未按转 \$ 8096 继
续，按 J 则实现右移绕卷。

\$ 807A—\$ 8098 将右移绕卷的有关数据送有关
单元，实现右移绕卷。

\$ 8099—\$ 809C

清键盘，结束运行。

\$ 809D—\$ 80B8

计算地址，高位、低位分别存放在 \$ 8200 单元和 \$ 8100 单元开始的诸单元中。

\$ 80B9—\$ 80C4

置高分辨率图形显示并转 \$ 8000 运行程序。

演示程序 P17 可用程序 P18 调用：

P18:

```
10 D$ = CHR$ (4)
20 PRINT D$"BLOAD P17"
30 INPUT "ENTER PICT NAME: ";K$
40 PRINT "L-ZYRJ R-YYRJ RETURN-EN
   D"
50. PRINT D$"BLOAD"K$",A$2000
60 CALL 32925
70 TEXT : END
```

运行实例，见图 3.3 (a)、(b)。

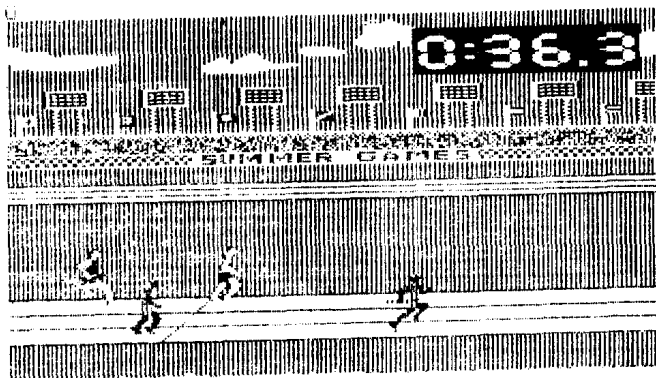


图 3.3 (a) 原图象

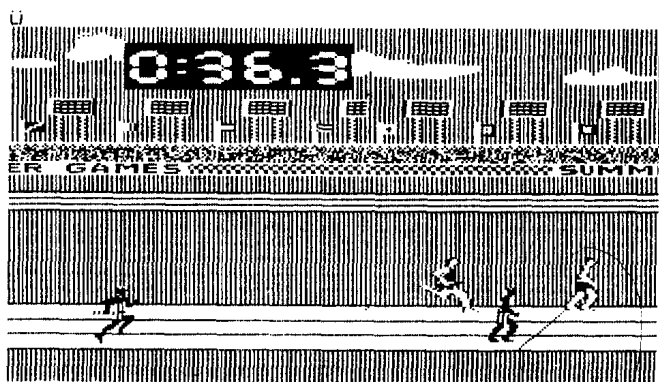


图 3.3 (b) 向左绕卷的图象

4. 上下绕卷

除了图形左右绕卷以外，我们还可以实现图形的上下绕卷。程序 P19 就是实现上下绕卷的一个例子。我们简单分析其原理（以向上绕卷为例）：

\$ 8000—\$ 800B 置高分辨率图形显示并清键盘，
为读下一个数据作好准备。

\$ 800C—\$ 8017 取图象上面一行首地址，高位存
入 \$ 09 单元，低位存入 \$ 08 单元。

\$ 8018—\$ 8022 取下一行首地址，高位放入 \$ 07
单元，低位存入 \$ 06 单元。

\$ 8023—\$ 8026 判断是不是首行绕卷，如不是转
\$ 802F。

\$ 8027—\$ 802E 是首行则将其逐列压栈暂存。

- \$ 802F—\$ 8037 不是首行则由下向上移动一行。
- \$ 8038—\$ 803B 判断是否全部移完，未完继续。
- \$ 803C—\$ 8045 全部移完后，弹出堆栈，形成绕卷。
- \$ 8046—\$ 804E 读键盘，判是否按 J 键，未按键则转 \$ 800C 继续绕卷，按 J 键则再判是否按的空格键，不是空格键转 \$ 8057 再判。
- \$ 804F—\$ 8056 是空格键，则暂停图形绕卷。
- \$ 8057—\$ 805A 判是否按了 RETURN 键，按了则转 \$ 8091 结束，未按则再继续判。
- \$ 802B—\$ 805E 判是否按了 V 键，未按则转 \$ 8076 再判，按了则实现图形上移绕卷。
- \$ 805F—\$ 8075 图形上移绕卷的一些主要数据分别送有关单元。
- \$ 8076—\$ 8079 判是否按了 D 键，未按转 \$ 8009 继续绕卷。
- \$ 807A—\$ 8090 图形下移绕卷的一些主要数据分别送有关单元。
- \$ 8091—\$ 8093 清键盘。
- \$ 8094 结束。
- \$ 8095—\$ 80B4 计算各行首地址。
- 演示程序 P19 用程序 P20。

P19:

8000-	AD 50 C0	LDA	\$C050
8003-	AD 57 C0	LDA	\$C057
8006-	AD 52 C0	LDA	\$C052
8009-	AD 10 C0	LDA	\$C010
800C-	A2 00	LDX	#\$00
800E-	BD 00 B1	LDA	\$B100,X
8011-	B5 08	STA	\$08
8013-	BD 00 B2	LDA	\$B200,X
8016-	B5 09	STA	\$09
8018-	EB	INX	
8019-	BD 00 B1	LDA	\$B100,X
801C-	B5 06	STA	\$06
801E-	BD 00 B2	LDA	\$B200,X
8021-	B5 07	STA	\$07
8023-	E0 01	CPX	#\$01
8025-	D0 08	BNE	\$B02F
8027-	A0 27	LDY	#\$27
8029-	B1 08	LDA	(\$08),Y
802B-	48	FHA	
802C-	B8	DEY	
802D-	10 FA	BPL	\$B029
802F-	A0 27	LDY	#\$27
8031-	B1 06	LDA	(\$06),Y
8033-	91 08	STA	(\$08),Y
8035-	B8	DEY	
8036-	10 F9	BPL	\$B031
8038-	E0 C0	CPX	##C0
803A-	D0 D2	BNE	\$B00E
803C-	A0 00	LDY	##00
803E-	68	PLA	
803F-	91 08	STA	(\$08),Y
8041-	C8	INY	
8042-	C0 28	CPY	##28
8044-	90 F8	BCC	\$B03E
8046-	AD 00 C0	LDA	\$C000
8049-	10 C1	BPL	\$B00C
804B-	C9 A0	CMP	##A0
804D-	D0 08	BNE	\$B057
804F-	2C 10 C0	BIT	\$C010
8052-	AD 00 C0	LDA	\$C000
8055-	10 FB	BFL	\$B052
8057-	C9 8D	CMP	##8D

8059-	F0 36	BEG	\$B091
805B-	C9 D5	CMP	#\$D5
805D-	D0 17	BNE	\$B076
805F-	A9 00	LDA	#\$00
8061-	8D 0D 80	STA	\$B00D
8064-	A9 E8	LDA	#\$E8
8066-	8D 18 80	STA	\$B018
8069-	A9 01	LDA	#\$01
806B-	8D 24 80	STA	\$B024
806E-	A9 C0	LDA	#\$C0
8070-	8D 39 80	STA	\$B039
8073-	4C 09 80	JMP	\$B009
8076-	C9 C4	CMP	#\$C4
8078-	D0 8F	BNE	\$B009
807A-	A9 BF	LDA	#\$BF
807C-	8D 0D 80	STA	\$B00D
807F-	A9 CA	LDA	#\$CA
8081-	8D 18 80	STA	\$B018
8084-	A9 BE	LDA	#\$BE
8086-	8D 24 80	STA	\$B024
8089-	A9 FF	LDA	#\$FF
808B-	8D 39 80	STA	\$B039
808E-	4C 09 80	JMP	\$B009
8091-	2C 10 C0	BIT	\$C010
8094-	60	RTS	
8095-	A9 00	LDA	#\$00
8097-	A0 00	LDY	#\$00
8099-	A2 00	LDX	#\$00
809B-	20 11 F4	JSR	\$F411
809E-	A0 00	LDY	#\$00
80A0-	A5 26	LDA	\$26
80A2-	91 06	STA	(\$06),Y
80A4-	A5 27	LDA	\$27
80A6-	91 08	STA	(\$08),Y
80A8-	EE 96 80	INC	\$B096
80AB-	EE 9F 80	INC	\$B09F
80AE-	C0 BF	CPY	#\$BF
80B0-	90 E3	BCC	\$B095
80B2-	4C 00 80	JMP	\$B000

程序 P20 为演示程序。

P20:

```
10 D$ = CHR$ (4)
20 INPUT "ENTER PICT NAME: "; K$
30 PRINT D$ "BLOADP19"
35 PRINT "U-UP D-DOWN RETURN-END"

40 PRINT D$ "BLOAD"; K$; ",A$2000"
50 POKE 6,0: POKE 7,129: POKE 8,0
   : POKE 9,130
60 POKE 230,32
70 CALL 32917
80 TEXT : END
```

运行实例，见图 3.4 (a)、(b)。

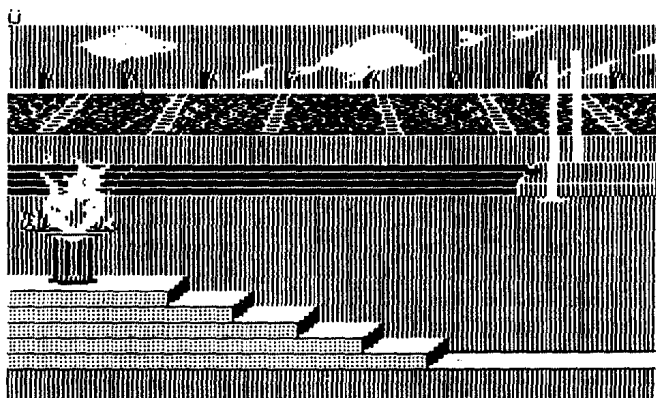


图 3.4 (a) 原图象

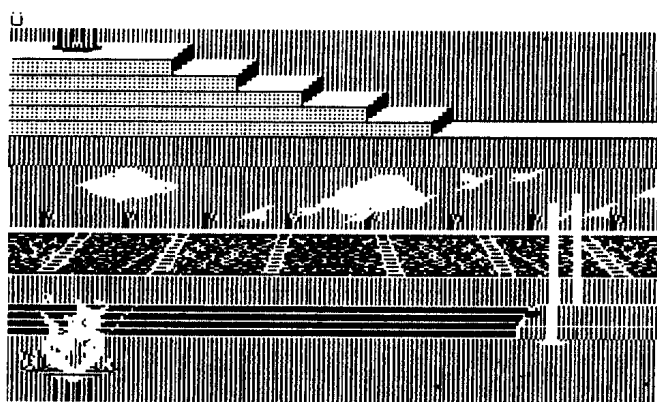


图 3.4 (b) 向上绕卷的图象

四、图形技巧原理分析（二）

本章介绍高分辨图形处理的 5 种技巧，有对单幅图形处理的，也有对多幅图形处理的。在单幅图形处理中，首先介绍局部放大和整幅缩小两种技术，它们在图形编辑中是很有用的，利用这些技巧，可以设计出更为夸张和生动的图形来。此外，还介绍镜象复制和成倍翻番技术，前者可以将一幅画面变成两幅（镜象复制和同相复制）；后者则可以将一幅图象变成两幅，两幅图象变成四幅。这些处理技术，在画面题头设计中十分有用，既可以省去大量的作图时间和坐标设计，又可以使画面更加对称美观。在多幅图形处理中，主要介绍多幅画面的合成技术，它可以将不同画面的一部分图象剪辑下来，按指定坐标显示，这样就可以实现不同的画面重新拼合成一个新的画面，从而可以设计出形形色色，形态各异的各种图形来。

1. 多幅合成

在处理图形时，有时我们需要将多幅图形中的一部分截取出来，拼成另一幅新的图形，程序 P21 和程序 P22 就可以实现这种变换。

程序 P21 由 BASIC 编写，它主要是确定要截取的图形坐标取要拼成的新图坐标，然后调用程序 P22 进行截取并在指定坐标上显示出来。由于 BASIC 程序容易读懂，这里不再说

明。仅对程序 P22 作些说明。

\$ 8000—\$ 8017 计算各行首地址。

\$ 8018—\$ 8026 取要截取图形的左上角坐标 Y 值 (存在 \$ 07 单元中) 对应的地址低位放入 \$ 0A 单元, 高位地址放入 \$ 0B 单元。

\$ 8027—\$ 8032 取要拼成的新图的指定坐标 (Y 值存在 \$ 01 单元中) 对应的地址低位放入 \$ 0C 单元, 高位放入 \$ 0D 单元。

\$ 8033—\$ 8036 取要截取图形的左上角坐标 X 值 (存在 \$ 06 单元中) 放入 \$ 0E 单元。

\$ 8037—\$ 803A 取要拼成的新图的指定坐标 X 值 (存在 \$ 00 单元中) 放入 \$ 0F 单元。

\$ 803B—\$ 8042 取要截取图形的数据, 放入要拼成的新图的指定坐标对应的地址单元中。

\$ 8043—\$ 8052 比较一行是否取完或即要截取的部分是否取完 (要截取图形的右下角坐标 Y 值存在 \$ 08 单元中), 未取完继续。

\$ 8053—\$ 8062 取完的话, 则取下一行, 并判是否整幅图形取完或是要截取的部分是否取完 (要截取图形的右下角坐标 X 值存在 \$ 09 单元中), 未取完继续。

\$ 8063

取完则结束。

P21:

```
10 D$ = CHR$ (4)
20 HGR
30 PRINT D$"BLOADP22"
40 FOR I = 1 TO 4
50 PRINT "ENTER PICT-"I"NAME:";: INPUT K$
60 PRINT D$"BLOAD"K$",A$4000"
70 IF I = 1 THEN A = 0:B = 0:C =
   0:D = 0:E = 19:F = 95
80 IF I = 2 THEN A = 19:B = 0:C =
   19:D = 0:E = 40:F = 95
90 IF I = 3 THEN A = 0:B = 95:C =
   0:D = 95:E = 19:F = 192
100 IF I = 4 THEN A = 19:B = 95:C
   = 19:D = 95:E = 40:F = 192
110 POKE 0,A: POKE 1,B: POKE 6,C:
   POKE 7,D: POKE 8,E: POKE 9,F

120 POKE 230,32: CALL 32768
130 NEXT : POKE - 16302,0
140 FOR I = 1 TO 5000: NEXT I
150 TEXT : END
```

P22:

8000-	A0 00	LDY	#\$00
8002-	9B	TYA	
8003-	4B	PHA	
8004-	20 11 F4	JSR	\$F411
8007-	6B	PLA	
8008-	AB	TAY	
8009-	A5 26	LDA	\$26
800B-	99 00 81	STA	\$B100,Y
800E-	A5 27	LDA	\$27
8010-	99 00 82	STA	\$B200,Y
8013-	CB	INY	
8014-	C0 C0	CPY	#\$C0
8016-	D0 EA	BNE	\$B002
8018-	A4 07	LDY	\$07

801A-	B9 00 81	LDA	\$B100,Y
801D-	B5 0A	STA	\$0A
801F-	B9 00 82	LDA	\$B200,Y
8022-	18	CLC	
8023-	69 20	ADC	##20
8025-	B5 0B	STA	\$0B
8027-	A4 01	LDY	\$01
8029-	B9 00 81	LDA	\$B100,Y
802C-	B5 0C	STA	\$0C
802E-	B9 00 82	LDA	\$B200,Y
8031-	B5 0D	STA	\$0D
8033-	A5 06	LDA	\$06
8035-	B5 0E	STA	\$0E
8037-	A5 00	LDA	\$00
8039-	B5 0F	STA	\$0F
803B-	A4 0E	LDY	\$0E
803D-	B1 0A	LDA	(\$0A),Y
803F-	A4 0F	LDY	\$0F
8041-	91 0C	STA	(\$0C),Y
8043-	E6 0F	INC	\$0F
8045-	A5 0F	LDA	\$0F
8047-	C9 28	CMP	##28
8049-	F0 08	BEQ	\$B053
804B-	E6 0E	INC	\$0E
804D-	A5 0E	LDA	\$0E
804F-	C5 08	CMF	\$08
8051-	D0 E8	BNE	\$B03B
8053-	E6 01	INC	\$01
8055-	A5 01	LDA	\$01
8057-	C9 C0	CMP	##C0
8059-	F0 08	BEQ	\$B063
805B-	E6 07	INC	\$07
805D-	A5 07	LDA	\$07
805F-	C5 C9	CMF	\$09
8061-	D0 B5	BNE	\$B018
8063-	60	RTS	

运行实例，见图 4.1(a)、(b)。

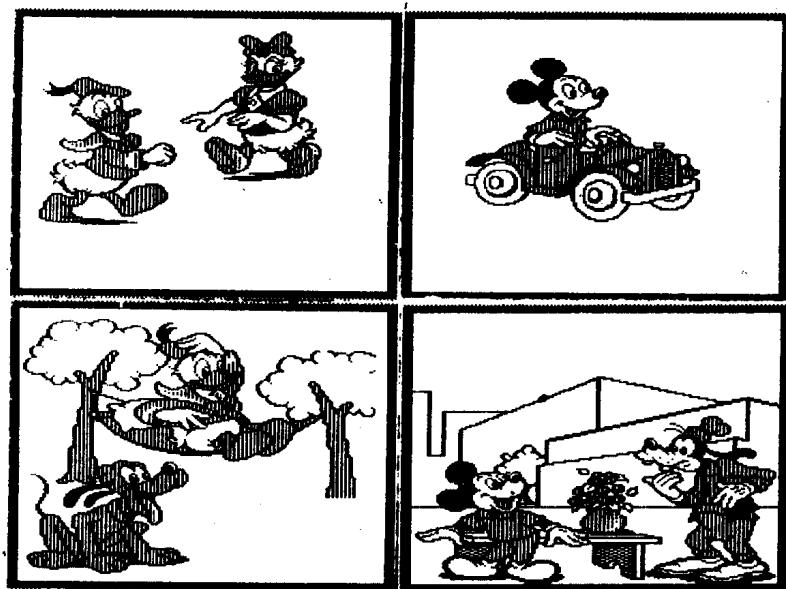


图 4.1(a) 四个画面上的图形

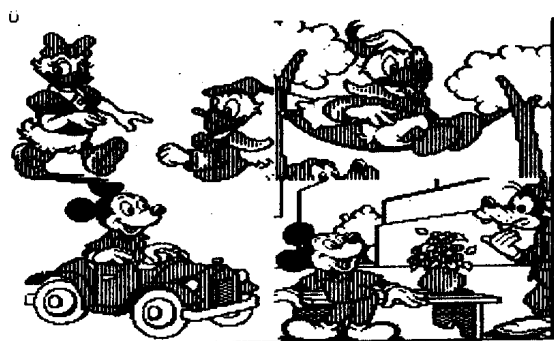


图 4.1(b) 合成后的图形

2. 镜象复制

将显示在屏幕上的一幅画面，左半页的图象翻身后显示在右半页，就象照镜子一样，称之为镜象复制。程序 P23 是实现镜象复制的一个机器语言子程序，现在我们来分析一下原理。

\$ 8000—\$ 800B 选高分辨率第一页图形整幅显示。

\$ 800C—\$ 800E 调子程序设置初值，将左半页首地址 (\$ 2000) 放在 \$ 08、\$ 09 单元，将右半页首地址 (\$ 2014) 放在 \$ 0A、\$ 0B 单元，\$ 07、\$ 0E、\$ 0D 为中间暂存单元，\$ 0C 为计数单元。

\$ 800F—\$ 8011 调复制子程序复制图象第一部分 (图象分三部分显示，参见“显示结构”一节)。

\$ 8012—\$ 801D 将图象第二部分左半页首地址 \$ 2028 放在 \$ 08、\$ 09 单元，右半页首地址 \$ 203C 放在 \$ 0A、\$ 0B 单元，其余单元作用同上。

\$ 801E—\$ 8020 调复制子程序复制图象第二部分。

\$ 8021—\$ 802C 将图象第三部分左半页首地址 \$ 2050 放在 \$ 08、\$ 09 单元，右半页首地址 \$ 2064 放在 \$ 0A、\$ 0B 单元，其余单元作用同上。

\$ 802D—\$ 802F 调复制子程序复制图象第三部

分。

- \$ 8030 结束。
- \$ 8031—\$ 80B9 复制子程序。
- \$ 8031—\$ 8036 取左半页第一行第一条扫描线 0 列图象数据。
- \$ 8037—\$ 8056 移位处理（翻身）后送右半页第一行第一条扫描线末列。
- \$ 8057—\$ 805E 左半页列数加 1，右半页列数减 1，并判第一条扫描线复制完否，未完转 \$ 8035 继续。
- \$ 805F—\$ 806B 取下一扫描线首地址高位分别送 \$ 09、\$ 0B 单元，并判高位是否大于等于 # \$ 40，如小于则说明 1 行未复制完，转 \$ 8031 继续复制。
- \$ 806C—\$ 8073 由于高位地址每两行相同，因此用计数单元 \$ 0C 计数，并判断是否大于等于 2，若大于等于 2 则转 \$ 808B 进行高位加 1。
- \$ 8074—\$ 808A 若小于 2，则因第 2 行首地址高位与第 1 相同，而低位相差 # \$ 80，因此高位不变，低位加 # \$ 80 后分别放入 \$ 08、\$ 0A 单元，再转 \$ 8031，继续复制第 2 行。
- \$ 808B—\$ 80A2 高位加 1 后再转 \$ 8031 继续复制 3—8 行，并判 8 行（即图象三部分之一）是否复制完，未完继续。
- \$ 80A3—\$ 80B9 完，重新设置初值，并返回。

P23:

8000-	2C 50 C0	BIT	\$C050
8003-	2C 52 C0	BIT	\$C052
8006-	2C 54 C0	BIT	\$C054
8009-	2C 57 C0	BIT	\$C057
800C-	20 A3 80	JSR	\$80A3
800F-	20 31 80	JSR	\$8031
8012-	A9 28	LDA	##28
8014-	85 08	STA	\$08
8016-	85 07	STA	\$07
8018-	A9 3C	LDA	##3C
801A-	85 0A	STA	\$0A
801C-	85 0D	STA	\$0D
801E-	20 31 80	JSR	\$8031
8021-	A9 50	LDA	##50
8023-	85 08	STA	\$08
8025-	85 07	STA	\$07
8027-	A9 64	LDA	##64
8029-	85 0A	STA	\$0A
802B-	85 0D	STA	\$0D
802D-	20 31 80	JSR	\$8031
8030-	60	RTS	
8031-	A0 00	LDY	##00
8033-	A2 13	LDX	##13
8035-	B1 08	LDA	(\$08),Y
8037-	85 0F	STA	\$0F
8039-	06 0F	ASL	\$0F
803B-	08	PHP	
803C-	A9 00	LDA	##00
803E-	85 06	STA	\$06
8040-	06 0F	ASL	\$0F
8042-	66 10	ROR	\$10
8044-	E6 06	INC	\$06
8046-	A5 06	LDA	\$06
8048-	C9 07	CMP	##07
804A-	D0 F4	BNE	\$8040
804C-	28	PLP	
804D-	66 10	ROR	\$10
804F-	98	TYA	
8050-	48	PHA	
8051-	8A	TXA	
8052-	A8	TAY	

8053-	A5 10	LDA	\$10
8055-	91 0A	STA	(\$0A),Y
8057-	68	PLA	
8058-	A8	TAY	
8059-	CA	DEX	
805A-	C8	INY	
805B-	C0 14	CPY	##14
805D-	D0 D6	BNE	\$8035
805F-	A5 09	LDA	\$09
8061-	18	CLC	
8062-	69 04	ADC	##04
8064-	85 09	STA	\$09
8066-	85 0B	STA	\$0B
8068-	C9 40	CMP	##40
806A-	90 C5	BCC	\$8031
806C-	E6 0C	INC	\$0C
806E-	A5 0C	LDA	\$0C
8070-	C9 02	CMP	##02
8072-	F0 17	BEQ	\$808B
8074-	A5 0B	LDA	\$0B
8076-	18	CLC	
8077-	69 80	ADC	##80
8079-	85 0B	STA	\$0B
807B-	A5 0A	LDA	\$0A
807D-	18	CLC	
807E-	69 80	ADC	##80
8080-	85 0A	STA	\$0A
8082-	A5 0E	LDA	\$0E
8084-	85 09	STA	\$09
8086-	85 0B	STA	\$0B
8088-	4C 31 80	JMP	\$8031
808B-	A0 00	LDY	##00
808D-	84 0C	STY	\$0C
808F-	A5 07	LDA	\$07
8091-	85 0B	STA	\$0B
8093-	A5 0D	LDA	\$0D
8095-	85 0A	STA	\$0A
8097-	E6 0E	INC	\$0E
8099-	A5 0E	LDA	\$0E
809B-	85 09	STA	\$09
809D-	85 0B	STA	\$0B
809F-	C9 24	CMP	##24
80A1-	90 8E	BCC	\$8031

80A3-	A9 00	LDA	##00
80A5-	85 0C	STA	\$0C
80A7-	85 08	STA	\$08
80A9-	85 07	STA	\$07
80AB-	A9 20	LDA	##20
80AD-	85 0E	STA	\$0E
80AF-	85 09	STA	\$09
80B1-	85 0B	STA	\$0B
80B3-	A9 14	LDA	##14
80B5-	85 0A	STA	\$0A
80B7-	85 0D	STA	\$0D
80B9-	60	RTS	

程序 P23 是镜象复制，这里再介绍一个同相复制程序 P24。原理基本相同，只是在同相复制时，不需将数据移位处理，而是直接送往右半页对应的地址单元即可，因此程序相应也简单些。这里就不再详细分析了。

调用演示程序 P23、P24 时，要注意将要处理的图形放在左半页，而不能超过半页，因为超过半页的部分将被复制后的图形覆盖。演示很简单，将图形调入第一页后，再调子程序，在 BASIC 状态下打入命令 CALL32768，回车即可。在监控状态，则打入命令 * 8000G，回车即可。

P24:

8000-	2C 50 C0	BIT	\$C050
8003-	2C 52 C0	BIT	\$C052
8006-	2C 54 C0	BIT	\$C054
8009-	2C 57 C0	BIT	\$C057
800C-	20 80 80	JSR	\$8080
800F-	20 31 80	JSR	\$8031
8012-	A9 28	LDA	##28
8014-	85 08	STA	\$08
8016-	85 07	STA	\$07
8018-	A9 3C	LDA	##3C
801A-	85 0A	STA	\$0A
801C-	85 0D	STA	\$0D
801E-	20 31 80	JSR	\$8031
8021-	A9 50	LDA	##50
8023-	85 0B	STA	\$0B

8025-	85 07	STA	\$07
8027-	A9 64	LDA	##64
8029-	85 0A	STA	\$0A
802B-	85 0D	STA	\$0D
802D-	20 31 80	JSR	\$B031
8030-	60	RTS	
8031-	A0 00	LDY	##00
8033-	B1 0B	LDA	(\$0B),Y
8035-	91 0A	STA	(\$0A),Y
8037-	C8	INY	
8038-	C0 14	CPY	##14
803A-	D0 F7	BNE	\$B033
803C-	A5 09	LDA	\$09
803E-	18	CLC	
803F-	69 04	ADC	##04
8041-	85 09	STA	\$09
8043-	85 0B	STA	\$0B
8045-	C9 40	CMF	##40
8047-	90 EB	BCC	\$B031
8049-	E6 0C	INC	\$0C
804B-	A5 0C	LDA	\$0C
804D-	C9 02	CMF	##02
804F-	F0 17	BEQ	\$B06B
8051-	A5 0B	LDA	\$0B
8053-	18	CLC	
8054-	69 80	ADC	##80
8056-	85 0B	STA	\$0B
8058-	A5 0A	LDA	\$0A
805A-	18	CLC	
805B-	69 80	ADC	##80
805D-	85 0A	STA	\$0A
805F-	A5 0E	LDA	\$0E
8061-	85 09	STA	\$09
8063-	85 0B	STA	\$0B
8065-	4C 31 80	JMP	\$B031
8068-	A0 00	LDY	##00
806A-	84 0C	STY	\$0C
806C-	A5 07	LDA	\$07
806E-	85 0B	STA	\$0B
8070-	A5 0D	LDA	\$0D
8072-	85 0A	STA	\$0A
8074-	E6 0E	INC	\$0E

8076-	A5 0E	LDA	\$0E
8078-	85 09	STA	\$09
807A-	85 0B	STA	\$0B
807C-	C9 24	CMP	#\$24
807E-	90 B1	BCC	\$B031
8080-	A9 00	LDA	#\$00
8082-	85 0C	STA	\$0C
8084-	85 08	STA	\$08
8086-	85 07	STA	\$07
8088-	A9 20	LDA	#\$20
808A-	85 0E	STA	\$0E
808C-	85 09	STA	\$09
808E-	85 0B	STA	\$0B
8090-	A9 14	LDA	#\$14
8092-	85 0A	STA	\$0A
8094-	85 0D	STA	\$0D
8096-	60	RTS	

运行实例，见图 4.2(a)、(b)、(c)。



图 4.2(a) 原图象

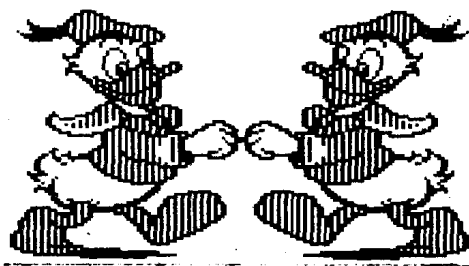


图 4.2(b) 镜象复制

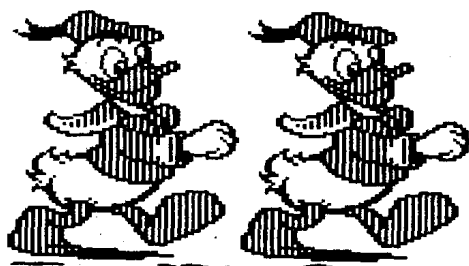


图 4.2(c) 同相复制

3. 成倍翻番

程序 P25 可以将一幅图形变成左右翻身的两幅缩小的图形，也可以将两幅图形变成四幅，这就叫成倍翻番。不过，由于图象压缩的缘故，对于复杂的图形翻番后会变形，不宜使用，而对一些简单的图形翻番后则别有情趣。

我们分析一下程序 P25 的原理：

\$ 8000—\$ 8017 计算地址。

- \$ 8018—\$ 802E 分别取第一页和第二页首地址放入 \$ F9、\$ FA 和 \$ 06、\$ 07 单元中，\$ 08 单元保留变址 Y 值。
- \$ 802F—\$ 8037 取第二页两列数据分别存于 \$ 0B 和 \$ 0A 单元中。
- \$ 8038—\$ 8039 将 Y 值压栈保存，空出 Y 寄存器作计数用。
- \$ 803A—\$ 806B 将图象数据处理，进行 Y 方向压缩后送入第一页左半页（下面将详细分析）。
- \$ 806C—\$ 8084 将图象翻身后送入第一页右半页。
- \$ 8085—\$ 8090 判断整幅图形处理完否，未完继续处理。
- \$ 8091—\$ 80AC 处理完后，在第一页得到的是两幅 Y 方向压缩的图形。将这两幅图形数据移至第二页缓冲区。
- \$ 80AD—\$ 80B2 调 \$ F3E2 (HGR) 清屏并显示第一页，置全屏幕显示。
- \$ 80B3—\$ 80D0 分别取第二页前两行图象数据迭加后存入 \$ 0B 单元。进行 X 方向图象压缩。
- \$ 80DC—\$ 80ED 取第一页首地址分别放入 \$ FE、\$ FF 单元，将压缩后的数据送往第一页显示。
- \$ \$ 80EE—\$ 80FB 判整幅图象是否处理完，未完转 \$ 80B9 继续。

\$ 80FC

处理完结束。

P25;

8000-	A2 00	LDX	##00
8002-	8A	TXA	
8003-	4B	PHA	
8004-	20 11 F4	JSR	\$F411
8007-	6B	PLA	
8008-	AA	TAX	
8009-	A5 26	LDA	\$26
800B-	9D 00 B1	STA	\$B100,X
800E-	A5 27	LDA	\$27
8010-	9D 00 B2	STA	\$B200,X
8013-	E8	INX	
8014-	E0 C0	CPX	##C0
8016-	D0 EA	BNE	\$8002
8018-	A2 00	LDX	##00
801A-	A0 00	LDY	##00
801C-	84 0B	STY	\$0B
801E-	BD 00 B1	LDA	\$B100,X
8021-	B5 06	STA	\$06
8023-	B5 F9	STA	\$F9
8025-	BD 00 B2	LDA	\$B200,X
8028-	B5 FA	STA	\$FA
802A-	1B	CLC	
802B-	69 20	ADC	##20
802D-	B5 07	STA	\$07
802F-	B1 06	LDA	(\$06),Y
8031-	B5 0B	STA	\$0B
8033-	C8	INY	
8034-	B1 06	LDA	(\$06),Y
8036-	B5 0A	STA	\$0A
8038-	9B	TYA	
8039-	4B	PHA	
803A-	A0 00	LDY	##00
803C-	C8	INY	
803D-	46 0B	LSR	\$0B
803F-	66 FD	ROR	\$FD
8041-	46 0B	LSR	\$0B
8043-	66 FE	ROR	\$FE
8045-	C0 03	CPY	##03
8047-	D0 F3	BNE	\$B03C
8049-	A0 00	LDY	##00

804B-	46 0B	LSR	\$0B
804D-	66 FD	ROR	\$FD
804F-	46 0A	LSR	\$0A
8051-	66 FE	ROR	\$FE
8053-	C8	INY	
8054-	46 0A	LSR	\$0A
8056-	66 FD	ROR	\$FD
8058-	46 0A	LSR	\$0A
805A-	66 FE	ROR	\$FE
805C-	C0 03	CPY	#\$03
805E-	D0 F3	BNE	\$B053
8060-	66 FD	ROR	\$FD
8062-	66 FE	ROR	\$FE
8064-	A5 FD	LDA	\$FD
8066-	05 FE	ORA	\$FE
8068-	A4 0B	LDY	\$0B
806A-	91 F9	STA	(\$F9), Y
806C-	0A	ASL	
806D-	0B	PHP	
806E-	A0 00	LDY	#\$00
8070-	0A	ASL	
8071-	66 FF	ROR	\$FF
8073-	C8	INY	
8074-	C0 07	CPY	#\$07
8076-	D0 F8	BNE	\$B070
8078-	2B	PLP	
8079-	66 FF	ROR	\$FF
807B-	A9 27	LDA	#\$27
807D-	38	SEC	
807E-	E5 0B	SBC	\$0B
8080-	A8	TAY	
8081-	A5 FF	LDA	\$FF
8083-	91 F9	STA	(\$F9), Y
8085-	6B	PLA	
8086-	A8	TAY	
8087-	C8	INY	
8088-	E6 0B	INC	\$0B
808A-	C0 2B	CPY	#\$2B
808C-	D0 A1	BNE	\$B02F
808E-	EB	INX	
808F-	E0 C0	CPX	#\$C0
8091-	D0 B7	BNE	\$B01A
8093-	A9 00	LDA	#\$00

8095-	AB	TAY	
8096-	85 3C	STA	\$3C
8098-	85 42	STA	\$42
809A-	A9 20	LDA	#\$20
809C-	85 3D	STA	\$3D
809E-	A9 FF	LDA	##FF
80A0-	85 3E	STA	\$3E
80A2-	A9 3F	LDA	##3F
80A4-	85 3F	STA	\$3F
80A6-	A9 40	LDA	##40
80A8-	85 43	STA	\$43
80AA-	20 2C FE	JSR	\$FE2C
80AD-	20 E2 F3	JSR	\$F3E2
80B0-	AD 52 C0	LDA	\$C052
80B3-	A9 00	LDA	##00
80B5-	85 0A	STA	\$0A
80B7-	A2 00	LDX	##00
80B9-	A0 00	LDY	##00
80BB-	BD 00 B1	LDA	\$B100,X
80BE-	85 06	STA	\$06
80C0-	BD 00 82	LDA	\$B200,X
80C3-	18	CLC	
80C4-	69 20	ADC	##20
80C6-	85 07	STA	\$07
80C8-	E8	INX	
80C9-	BD 00 B1	LDA	\$B100,X
80CC-	85 08	STA	\$08
80CE-	BD 00 82	LDA	\$B200,X
80D1-	18	CLC	
80D2-	69 20	ADC	##20
80D4-	85 09	STA	\$09
80D6-	B1 06	LDA	(\$06),Y
80D8-	11 08	ORA	(\$08),Y
80DA-	85 0B	STA	\$0B
80DC-	8A	TXA	
80DD-	4B	PHA	
80DE-	A6 0A	LDX	\$0A
80E0-	BD 00 B1	LDA	\$B100,X
80E3-	85 FE	STA	##FE
80E5-	BD 00 82	LDA	\$B200,X
80E8-	85 FF	STA	##FF
80EA-	A5 0B	LDA	\$0B
80EC-	91 FE	STA	(\$FE),Y

80EE--	6B	PLA	
80EF--	AA	TAX	
80F0--	CB	INY	
80F1--	C0 2B	CPY	##2B
80F3--	D0 E1	BNE	\$80D6
80F5--	E8	INX	
80F6--	E6 0A	INC	\$0A
80F8--	E0 C0	CPX	##C0
80FA--	D0 BD	BNE	\$80B9
80FC--	60	RTS	

我们再来分析 \$803A—\$806B 这段程序是怎样将图形压缩的。我们假设 \$0B、\$0A 单元的内容分别为

D ₇								D ₀ D ₇								D ₀							
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P								

由数据与对应点的关系我们知道 D₇ 位是选择颜色的，与显示点无关，而 \$0B、\$0A 单元中的数据与点的对应关系如图 4.3(a)。要使图象压缩而又不失真，应将邻近的两点相迭加，也就是图 4.3 中 J、K、L、M、N、O、P、B、C、D、E、F、G、H 分别相加，下面我们来看程序是如何实现的。

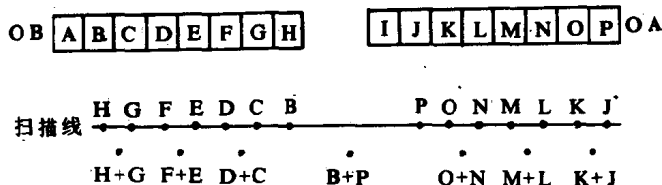


图 4.3(a)

803A LDY # \$00 (Y=0)

--

A	B	C	D	E	F	G	H
---	---	---	---	---	---	---	---

 0B

803C INY (Y=1)

--

I	J	K	L	M	N	O	P
---	---	---	---	---	---	---	---

 0A

803D LSR \$0B

H	0	A	B	C	D	E	F	G		0B
---	---	---	---	---	---	---	---	---	--	----

803F ROR \$FD

	H									FD
--	---	--	--	--	--	--	--	--	--	----

8041 LSR \$0B

G	0	0	A	B	C	D	E	F		0B
---	---	---	---	---	---	---	---	---	--	----

8043 ROR \$FE

	G									FE
--	---	--	--	--	--	--	--	--	--	----

8045 CPY # \$03 (Y=3)

8047 BNE \$803C (Z=0 转)

803C INY (Y=2)

803D LSR \$0B

F	0	0	0	A	B	C	D	E		0B
---	---	---	---	---	---	---	---	---	--	----

803F ROR \$FD

	F	H								FD
--	---	---	--	--	--	--	--	--	--	----

8041 LSR \$0B

E	0	0	0	0	A	B	C	D		0B
---	---	---	---	---	---	---	---	---	--	----

8043 ROR \$FE

	E	G								FE
--	---	---	--	--	--	--	--	--	--	----

8045 CPY # \$03 (Y=3)

8047 BNE \$803C (Z=0 转)

803C INY (Y=3)

803D LSR \$0B

D	0	0	0	0	0	A	B	C		0B
---	---	---	---	---	---	---	---	---	--	----

803F ROR \$FD

--

D	F	H					
---	---	---	--	--	--	--	--

 FD

8041 LSR \$0B

C

0	0	0	0	0	0	0	A	B
---	---	---	---	---	---	---	---	---

 0B

8043 ROR \$FE

--

C	E	G					
---	---	---	--	--	--	--	--

 FE

8045 CPY # \$03 (Y=3)

8047 BNE \$803C (Z=0 转)

8049 LDY # \$00 (Y=0)

804B LSR \$0B

B

0	0	0	0	0	0	0	0	A
---	---	---	---	---	---	---	---	---

 0B

804D ROR \$FD

--

B	D	F	H				
---	---	---	---	--	--	--	--

 FD

804F LSR \$0A

P

0	I	J	K	L	M	N	0
---	---	---	---	---	---	---	---

 0A

8051 ROR \$FE

--

P	C	E	G				
---	---	---	---	--	--	--	--

 FE

8053 INY (Y=1)

8054 LSR \$0A

0

0	0	I	J	K	L	M	N
---	---	---	---	---	---	---	---

 0A

8056 ROR \$FD

--

0	B	D	F	H			
---	---	---	---	---	--	--	--

 FD

8058 LSR \$0A

N

0	0	0	I	J	K	L	M
---	---	---	---	---	---	---	---

 0A

805A ROR \$FE

	N	P	C	E	G				FE
--	---	---	---	---	---	--	--	--	----

805C CPY # \$ 03 (Y=3)

805E BNE \$ 8053 (Z=0 转)

8053 INY (Y=2)

8054 LSR \$ 0A

M	0	0	0	0	I	J	K	L	0A
---	---	---	---	---	---	---	---	---	----

8056 ROR \$ FD

	M	0	B	D	F	H			FD
--	---	---	---	---	---	---	--	--	----

8058 LSR \$ 0A

L	0	0	0	0	0	I	J	L	0A
---	---	---	---	---	---	---	---	---	----

805A ROR \$ FE

	L	N	P	C	E	G			FE
--	---	---	---	---	---	---	--	--	----

805C CPY # \$ 03 (Y-3)

805E BNE \$ 8053 (Z=0 转)

8053 INY (Y=3)

8054 LSR \$ 0A

K	0	0	0	0	0	0	I	J	0A
---	---	---	---	---	---	---	---	---	----

8056 ROR \$ FD

	K	M	0	B	D	F	H		FD
--	---	---	---	---	---	---	---	--	----

8058 LSR \$ 0A

J	0	0	0	0	0	0	0	I	0A
---	---	---	---	---	---	---	---	---	----

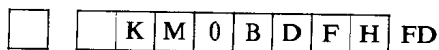
805A ROR \$ FE

	J	L	N	P	C	E	G		FE
--	---	---	---	---	---	---	---	--	----

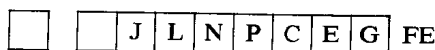
805C CPY # \$ 03 (Y-3)

805E BNE \$ 8053 (Z=0 转)

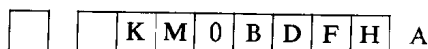
8060 ROR \$FD



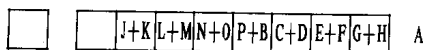
8062 ROR \$FE



8064 LDA ~\$FD



8066 ORA \$FE



至此，程序实现了迭加压缩的任务。演示程序 P25，可用程序 P26 来调用。

P26:

```

10 D$ = CHR$(4)
20 HGR2
30 PRINT D$"BLOAD P25"
40 PRINT D$"BLOAD PIC1,A$4000"
50 POKE 230,32
60 CALL 32768
70 FOR I = 1 TO 2000: NEXT
80 TEXT : END

```

运行实例，见图 4.3 (b)、(c)。

南京大学

图 4.3 (b) 原图象

南京大学学大京南

图 4.3 (c) 翻番后的图象

4. 局部放大

在进行高分辨率图形编辑时，局部放大是常用的一种图形技巧。这里介绍的一个局部放大子程序 P27，它可以将图形 X, Y 方向均扩大一倍。由于画面的限制，被放大图形的坐标 ($0 \leq X \leq 20$)，($0 \leq Y < 96$) 不能太大，否则程序不能正常运行。

原理分析如下：

\$ 8000—\$ 800B 选高分辨率第一页图形整幅显示。

\$ 800C—\$ 800F \$ 05 单元为计算第一页首地址用。

\$ 8010—\$ 8015 \$ 08 单元存放图形放大后送往每行诸列的 Y 值，\$ 09 单元存放原图形每行诸列的 X 值。

\$ 8016—\$ 8035 计算第一页前两行首地址，分别存放于 \$ 06、\$ 07 和 \$ 0A、\$ 08 单元。

\$ 8036—\$ 8045 计算第二页被放大图形的地址

\$ 8046—\$ 804B 取被放大图形的数据存放于

\$ 04 单元。

\$ 804C—\$ 8066 将数据进行放大处理,下面将详细剖析。

\$ 8067—\$ 8075 处理后的数据送第一页放大显示。

\$ 8076—\$ 8080 判断一行处理完否,未完转\$ 8046 继续。

\$ 8081—\$ 808B 一行处理完,行加 1,再判整幅是否处理完,未完转\$ 8018 继续。

\$ 808C 处理完结束。

P27:

8000-	2C 50 C0	BIT	\$C050
8003-	2C 52 C0	BIT	\$C052
8006-	2C 54 C0	BIT	\$C054
8009-	2C 57 C0	BIT	\$C057
800C-	A9 00	LDA	#\$00
800E-	85 05	STA	\$05
8010-	A9 00	LDA	#\$00
8012-	85 08	STA	\$08
8014-	85 09	STA	\$09
8016-	A9 20	LDA	#\$20
8018-	85 E6	STA	\$E6
801A-	A5 05	LDA	\$05
801C-	20 11 F4	JSR	\$F411
801F-	A5 26	LDA	\$26
8021-	85 06	STA	\$06
8023-	A5 27	LDA	\$27
8025-	85 07	STA	\$07
8027-	E6 05	INC	\$05
8029-	A5 05	LDA	\$05
802B-	20 11 F4	JSR	\$F411
802E-	A5 26	LDA	\$26
8030-	85 0A	STA	\$0A
8032-	A5 27	LDA	\$27
8034-	85 0B	STA	\$0B
8036-	A9 40	LDA	#\$40
8038-	85 E6	STA	\$E6

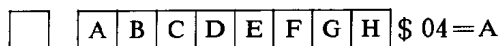
803A-	A5 01	LDA	\$01
803C-	20 11 F4	JSR	\$F411
803F-	18	CLC	
8040-	A5 26	LDA	\$26
8042-	65 00	ADC	\$00
8044-	85 26	STA	\$26
8046-	A4 09	LDY	\$09
8048-	B1 26	LDA	(\$26),Y
804A-	85 04	STA	\$04
804C-	A2 00	LDX	##00
804E-	A0 04	LDY	##04
8050-	A5 04	LDA	\$04
8052-	4A	LSR	
8053-	76 02	ROR	\$02,X
8055-	46 04	LSR	\$04
8057-	76 02	ROR	\$02,X
8059-	88	DEY	
805A-	D0 F4	BNE	\$B050
805C-	E8	INX	
805D-	E0 02	CPX	##02
805F-	D0 ED	BNE	\$B04E
8061-	06 02	ASL	\$02
8063-	26 03	ROL	\$03
8065-	66 02	ROR	\$02
8067-	A4 08	LDY	\$08
8069-	A5 02	LDA	\$02
806B-	91 06	STA	(\$06),Y
806D-	91 0A	STA	(\$0A),Y
806F-	C8	INY	
8070-	A5 03	LDA	\$03
8072-	91 06	STA	(\$06),Y
8074-	91 0A	STA	(\$0A),Y
8076-	E6 09	INC	\$09
8078-	E6 08	INC	\$08
807A-	E6 08	INC	\$08
807C-	A5 08	LDA	\$08
807E-	C9 28	CMF	##28
8080-	D0 C4	BNE	\$B046
8082-	E6 01	INC	\$01
8084-	E6 05	INC	\$05
8086-	A5 05	LDA	\$05
8088-	C9 C0	CMF	##C0
808A-	D0 84	BNE	\$B010
808C-	60	RTS	

现在我们来分析 \$ 804C—\$ 8066 程序是怎样将图形数据放大的。

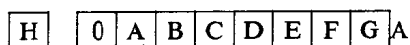
804C LDX # \$ 00 (X=0)

804E LDY # \$ 04 (Y=4)

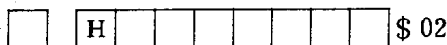
8050 LDA \$ 04



8052 LSR



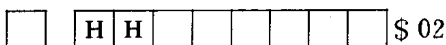
8053 ROR \$ 02, X



8055 LSR \$ 04



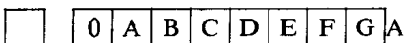
8057 ROR \$ 02, X



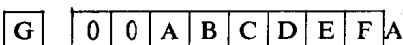
8059 DEY (Y-1=3)

805A BNE \$ 8050 (Z=0 转)

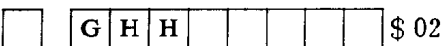
8050 LDA \$ 04



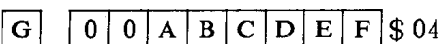
8052 LSR



8053 ROR \$ 02, X



8055 LSR \$ 04



8057 ROR \$ 02, X

	G	G	H	H				
--	---	---	---	---	--	--	--	--

 \$ 02
8059 DEY (Y-1=2)
805A BNE \$ 8050 (Z=0 转)
8050 LDA \$ 04

	0	0	A	B	C	D	E	F
--	---	---	---	---	---	---	---	---

 A
8052 LSR

F	0	0	0	A	B	C	D	E
---	---	---	---	---	---	---	---	---

 A
8053 ROR \$ 02, X

	F	G	G	H	H			
--	---	---	---	---	---	--	--	--

 \$ 02
8055 LSR \$ 04

F	0	0	0	A	B	C	D	E
---	---	---	---	---	---	---	---	---

 \$ 04
8057 ROR \$ 02, X

	F	F	G	G	H	H		
--	---	---	---	---	---	---	--	--

 \$ 02
8059 DEY (Y-1=1)
805A BNE \$ 8050 (Z=0 转)
8050 LDA \$ 04

	0	0	0	A	B	C	D	E
--	---	---	---	---	---	---	---	---

 A
8052 LSR

E	0	0	0	0	A	B	C	D
---	---	---	---	---	---	---	---	---

 A
8053 ROR \$ 02, X

	E	F	F	G	G	H	H	
--	---	---	---	---	---	---	---	--

 \$ 02
8055 LSR \$ 04

E	0	0	0	0	A	B	C	D
---	---	---	---	---	---	---	---	---

 \$ 04
8057 ROR \$ 02, X

	E	E	F	F	G	G	H	H	\$ 02
--	---	---	---	---	---	---	---	---	-------

8059 DEY (Y-1=0)

805A BNE \$ 8050 (Z=0 转)

805C INX (X+1=1)

805D CPX # \$ 02 (X-2)

805F BNE \$ 804E (Z=0 转)

804E LDY # \$ 04

8050 LDA \$ 04

	0	0	0	0	A	B	C	D	A
--	---	---	---	---	---	---	---	---	---

8052 LSR

D	0	0	0	0	0	A	B	C	A
---	---	---	---	---	---	---	---	---	---

8053 ROR \$ 02, X

	D								\$ 03
--	---	--	--	--	--	--	--	--	-------

8055 LSR \$ 04

D	0	0	0	0	0	A	B	C	\$ 04
---	---	---	---	---	---	---	---	---	-------

8057 ROR \$ 02, X

	D	D							\$ 03
--	---	---	--	--	--	--	--	--	-------

8059 DEY (Y-1=3)

805A BNE \$ 8050 (Z=0 转)

8050 LDA \$ 04

	0	0	0	0	0	A	B	C	A
--	---	---	---	---	---	---	---	---	---

8052 LSR

C	0	0	0	0	0	0	A	B	A
---	---	---	---	---	---	---	---	---	---

8053 ROR \$ 02, X

	C	P	D						\$ 03
--	---	---	---	--	--	--	--	--	-------

8055 LSR \$04

C

0	0	0	0	0	0	0	A	B
---	---	---	---	---	---	---	---	---

 \$04

8057 ROR \$02, X

--

C	C	D	D				
---	---	---	---	--	--	--	--

 \$03

8059 DEY (Y-1=2)

805A BNE \$8050 (Z=0 转)

8050 LDA \$04

--

0	0	0	0	0	0	0	A	B	A
---	---	---	---	---	---	---	---	---	---

8052 LSR

B

0	0	0	0	0	0	0	0	A	A
---	---	---	---	---	---	---	---	---	---

8053 ROR \$02, X

--

B	C	C	D	D			
---	---	---	---	---	--	--	--

 \$03

8055 LSR \$04

B

0	0	0	0	0	0	0	0	A
---	---	---	---	---	---	---	---	---

 \$04

8057 ROR \$02, X

--

B	B	C	C	D	D		
---	---	---	---	---	---	--	--

 \$03

8059 DEY (Y-1=1)

805A BNE \$8050 (Z=0 转)

8050 LDA \$04

--

0	0	0	0	0	0	0	0	A	A
---	---	---	---	---	---	---	---	---	---

8052 LSR

A

0	0	0	0	0	0	0	0	0	A
---	---	---	---	---	---	---	---	---	---

8053 ROR \$02, X

--

A	B	B	C	C	D	D	
---	---	---	---	---	---	---	--

 \$03

8055 LSR \$04

A	0	0	0	0	0	0	0	0	0	\$ 04
---	---	---	---	---	---	---	---	---	---	-------

8057 ROR \$ 02, X

	A	A	B	B	C	C	D	D	\$ 03
--	---	---	---	---	---	---	---	---	-------

8059 DEY (Y-1=0)

805A BNE \$ 8050 (Z=0 转)

805C INX (X+1=2)

805D CPX # \$ 02 (X-02)

805F BNE \$ 804E (Z=0 转)

8061 ASL \$ 02

E	E	F	F	G	G	H	H	0	\$ 02
---	---	---	---	---	---	---	---	---	-------

8063 ROL \$ 03

A	A	B	B	C	C	D	D	E	\$ 03
---	---	---	---	---	---	---	---	---	-------

8065 ROR \$ 02

0	A	E	F	F	G	G	H	H	\$ 02
---	---	---	---	---	---	---	---	---	-------

经过程序处理，原图形数据（占一字节）变为两字节。我们再看看数据与显示点的关系，见图 4. 4 (a)，由图可见，图形确实放大了。

原数据	A B C D E F G H	
对应显示点	H G F E D C B	
放大后数据	A B B C C D D E	A E F F G G H H
对应显示点	E D D C C B B	H H G G F F E

图 4. 4 (a)

演示程序·P27 时，将要处理的图形调入第二页，将 \$ 00，

\$01 单元放入要放大图形的左上角 X, Y 坐标值, 然后调 P27 程序运行即可, 见 P28 程序。

P28:

```
10 D$ = CHR$ (4)
20 PRINT D$"BLOADP27"
30 PRINT D$"BLOADPIC1,A$4000"
40 POKE 0,0: POKE 1,0
50 CALL 32768
60 FOR I = 1 TO 3000: NEXT
70 TEXT : END
```

运行实例, 见图 4.4 (b)、(c)。



图 4.4 (b) 原图象



图 4.4 (c) 放大后的图象

5. 整幅缩小

在进行高分辨率图形编辑时,除了将图形局部放大外,还可以将图形缩小,这也是一个很有用的图形技巧。程序 P29 就是一个能将第二页图形整幅缩小的子程序。现在,我们分析其原理:

- \$ 8000—\$ 800B 选高分辨率第一页图形整幅显示。
- \$ 800C—\$ 8013 \$ 08 单元为计算第二页各行首地址用, \$ 0C 单元存放每行诸列的 X 值。
- \$ 8014—\$ 8033 计算第二页前两行首地址, 分别存放于 \$ 06、\$ 07 和 \$ 0A、\$ 0B 单元。
- \$ 8034—\$ 8040 \$ 00、\$ 01 单元分别存放缩小后的图形放置位置左上角的 X 坐标和 Y 坐标值。计算放置位置左上角的行地址 (第一页)。\$ 0D 单元为 X 坐标增值用。
- \$ 8041—\$ 8053 进行纵向压缩每两行各列图形数据迭加后分别存于 \$ 02、\$ 03 单元中, \$ 0C 单元内容加 2, 为下一次准备。
- \$ 8054—\$ 807F 进行横向压缩 (下面详细剖析), 压缩后的图形数据按照放置位置左上角的坐标地址存放并显示。
- \$ 8080—\$ 8087 判各列压缩完否, 未完转 \$ 8043 继续。
- \$ 8088—\$ 8094 列压缩完再判行压缩完否, 未完转 \$ 8010 继续。
- \$ 8095 完, 结束。

P29:

B000-	2C 50 C0	BIT	\$C050
B003-	2C 52 C0	BIT	\$C052
B006-	2C 54 C0	BIT	\$C054
B009-	2C 57 C0	BIT	\$C057
B00C-	A9 00	LDA	#\$00
B00E-	85 08	STA	\$08
B010-	A9 00	LDA	#\$00
B012-	85 0C	STA	\$0C
B014-	A9 40	LDA	#\$40
B016-	85 E6	STA	\$E6
B018-	A5 08	LDA	\$08
B01A-	20 11 F4	JSR	\$F411
B01D-	A5 26	LDA	\$26
B01F-	85 06	STA	\$06
B021-	A5 27	LDA	\$27
B023-	85 07	STA	\$07
B025-	E6 08	INC	\$08
B027-	A5 08	LDA	\$08
B029-	20 11 F4	JSR	\$F411
B02C-	A5 26	LDA	\$26
B02E-	85 0A	STA	\$0A
B030-	A5 27	LDA	\$27
B032-	85 0B	STA	\$0B
B034-	A9 20	LDA	#\$20
B036-	85 E6	STA	\$E6
B038-	A5 01	LDA	\$01
B03A-	20 11 F4	JSR	\$F411
B03D-	A5 00	LDA	\$00
B03F-	85 0D	STA	\$0D
B041-	A4 0C	LDY	\$0C
B043-	B1 06	LDA	(\$06), Y
B045-	11 0A	ORA	(\$0A), Y
B047-	85 02	STA	\$02
B049-	C8	INY	
B04A-	B1 06	LDA	(\$06), Y
B04C-	11 0A	ORA	(\$0A), Y
B04E-	85 03	STA	\$03
B050-	E6 0C	INC	\$0C
B052-	E6 0C	INC	\$0C
B054-	A0 03	LDY	#\$03
B056-	46 02	LSR	\$02
B058-	66 04	ROR	\$04

805A-	46 02	LSR	\$02
805C-	66 05	ROR	\$05
805E-	88	DEY	
805F-	D0 F5	BNE	\$8056
8061-	46 02	LSR	\$02
8063-	66 04	ROR	\$04
8065-	46 03	LSR	\$03
8067-	66 05	ROR	\$05
8069-	A0 03	LDY	#\$03
806B-	46 03	LSR	\$03
806D-	66 04	ROR	\$04
806F-	46 03	LSR	\$03
8071-	66 05	ROR	\$05
8073-	88	DEY	
8074-	D0 F5	BNE	\$806B
8076-	A5 04	LDA	\$04
8078-	05 05	ORA	\$05
807A-	18	CLC	
807B-	6A	ROR	
807C-	A4 0D	LDY	\$0D
807E-	91 26	STA	(\$26), Y
8080-	E6 0D	INC	\$0D
8082-	A4 0C	LDY	\$0C
8084-	C0 2B	CPY	#\$2B
8086-	D0 BB	BNE	\$8043
8088-	E6 0B	INC	\$0B
808A-	E6 01	INC	\$01
808C-	A5 0B	LDA	\$0B
808E-	C9 C0	CMP	#\$C0
8090-	F0 Q3	BEG	\$8095
8092-	4C 10 80	JMP	\$8010
8095-	60	RTS	

下面我们再详细剖析，横向压缩是如何进行的。设 \$ 02 单元为 ABCDEFGH，\$ 03 单元为 IJKLMNOP。

8054 LDY # \$ 03 (Y=3)

8056 LSR \$ 02

H	0	A	B	C	D	E	F	G	
---	---	---	---	---	---	---	---	---	--

\$ 02

8058 ROR \$ 04

	H								
--	---	--	--	--	--	--	--	--	--

\$ 04

805A LSR \$ 02

G	0	0	A	B	C	D	E	F	
---	---	---	---	---	---	---	---	---	--

\$ 02

805C ROR \$ 05

	G								
--	---	--	--	--	--	--	--	--	--

\$ 05

805E DEY (Y-1=2)

805F BNE \$ 8056 (Z=0 转)

8056 LSR \$ 02

F	0	0	0	A	B	C	D	E	
---	---	---	---	---	---	---	---	---	--

\$ 02

8058 ROR \$ 04

	F	H							
--	---	---	--	--	--	--	--	--	--

\$ 04

805A LSR \$ 02

E	0	0	0	0	A	B	C	D	
---	---	---	---	---	---	---	---	---	--

\$ 02

805C ROR \$ 05

	E	G							
--	---	---	--	--	--	--	--	--	--

\$ 05

805E DEY (Y-1=1)

805F BNE \$ 8056 (Z=0 转)

8056 LSR \$ 02

D	0	0	0	0	0	A	B	C	
---	---	---	---	---	---	---	---	---	--

\$ 02

8058 ROR \$ 04

	D	F	H						
--	---	---	---	--	--	--	--	--	--

\$ 04

805A LSR \$ 02

C	0	0	0	0	0	0	A	B
---	---	---	---	---	---	---	---	---

\$ 02

805C ROR \$ 05

	C	E	G				
--	---	---	---	--	--	--	--

\$ 05

805E DEY (Y-1=0)

805F BNE \$ 8056 (Z=0 转)

8061 LSR \$ 02

B	0	0	0	0	0	0	0	A
---	---	---	---	---	---	---	---	---

\$ 02

8063 ROR \$ 04

	B	D	F	H				
--	---	---	---	---	--	--	--	--

\$ 04

8065 LSR \$ 03

P	0	I	J	K	L	M	N	0
---	---	---	---	---	---	---	---	---

\$ 03

8067 ROR \$ 05

	P	C	E	G				
--	---	---	---	---	--	--	--	--

\$ 05

8069 LDY # \$ 03 (Y=3)

806B LSR \$ 03

0	0	0	I	J	K	L	M	N
---	---	---	---	---	---	---	---	---

\$ 03

806D ROR \$ 04

	0	B	D	F	H			
--	---	---	---	---	---	--	--	--

\$ 04

806F LSR \$ 03

N	0	0	0	I	J	K	L	M
---	---	---	---	---	---	---	---	---

\$ 03

8071 ROR \$ 05

	N	P	C	E	G			
--	---	---	---	---	---	--	--	--

\$ 05

8073 DEY (Y-1=2)

8074 BNE \$ 806B

806B LSR \$ 03

M	0	0	0	0	I	J	K	L
---	---	---	---	---	---	---	---	---

\$ 03

806D ROR \$ 04

	M	0	B	D	F	H		
--	---	---	---	---	---	---	--	--

\$ 04

806F LSR \$ 03

L	0	0	0	0	0	I	J	K
---	---	---	---	---	---	---	---	---

\$ 03

8071 ROR \$ 05

	L	N	P	C	E	G		
--	---	---	---	---	---	---	--	--

\$ 05

8073 DEY (Y=1)

8074 BNE \$ 806B

806B LSR \$ 03

K	0	0	0	0	0	0	I	J
---	---	---	---	---	---	---	---	---

\$ 03

806D ROR \$ 04

	K	M	0	B	D	F	H	
--	---	---	---	---	---	---	---	--

\$ 04

806F LSR \$ 03

J	0	0	0	0	0	0	0	I
---	---	---	---	---	---	---	---	---

\$ 03

8071 ROR \$ 05

	J	L	N	P	C	E	G	
--	---	---	---	---	---	---	---	--

\$ 05

8073 DEY (Y=0)

8074 BNE \$ 806B

8076 LDA \$ 04

	K	M	0	B	D	F	H	A
--	---	---	---	---	---	---	---	---

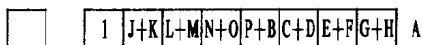
8078 ORA \$ 05

	J+K	L+M	N+0	P+B	C+D	E+I	G+H	A
--	-----	-----	-----	-----	-----	-----	-----	---

807A CLC

1

807B ROR



经过程序处理，原图形两字节数据压缩成 1 字节，数据与显示点的关系见图 4.5 (a)，同样，从图中看出，图形缩小了。

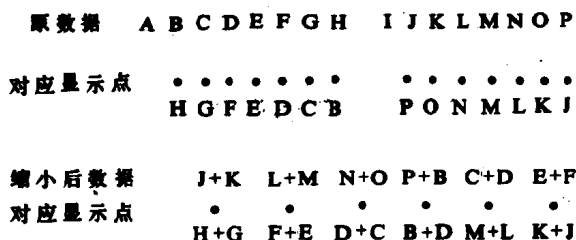


图 4.5(a)

演示程序 P28，将要处理的图形调入第二页，然后将缩小图形放置左上角的 X、Y 坐标值分别放入 \$ 00、\$ 01 单元，然后调程序 P29 即可，见程序 P30。

P30:

```

10 D$ = CHR$(4)
20 PRINT D$"BLOADP29"
30 PRINT D$"BLOADPIC1,A$4000"
40 POKE 0,10: POKE 1,10
50 CALL 32768
60 FOR I = 1 TO 3000: NEXT
70 TEXT : END

```

运行实例，见图 4.5 (b)、(c)。

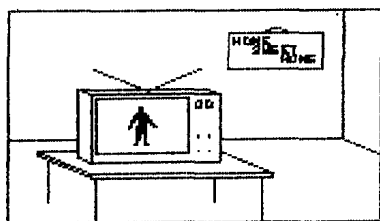


图4.5 (b) 缩小后的图象

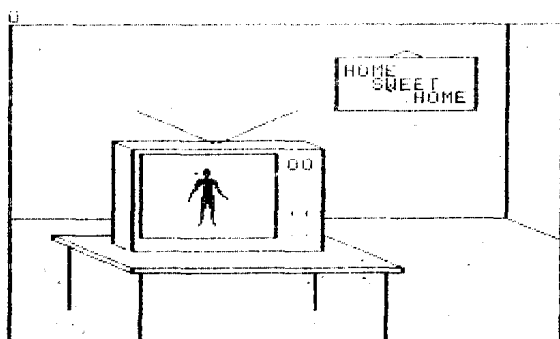


图4.5 (c) 原图象

五、图形技巧原理分析（三）

本章继续介绍图形处理的若干技巧，内容有高分辨作图页画面的搬移（从第 1 页搬至第 2 页，或者相反）；高分辨图形画面的清除（主要指如何用机器编程清除第 1 页或第 2 页画面）；高分辨图形的反相显示（用两种方法处理，使正相图形取反，或者使反相图形变为正相）；高分辨图形的合成与分解（四幅图形合成一幅，一幅图形分解成四幅，或者更多幅图形的合成，一幅图形分解成更多幅等）。

以上 4 种技巧也是图形处理中常用的几个技术。在原理分析中，我们不仅介绍如何用机器语言编程，也用 BASIC 语言编程，而且为了便于控制和方便操作，我们又用两种语言配合使用。在每个技巧说明以后留有习题和参考答案，这样，读者可以有更多的思考 and 发现，只要深入了解各种图形技巧的原理和思路，相信还会编出更简捷更实用的程序来。

1. 高分辨率作图页画面的搬移

在图形处理中，我们有时候要将绘制在高分辨作图第一页的画面搬移至第二页；或者反过来将第二页的画面搬至第一页。通常的方法是在监控下键入：

* 4000<2000·3FFFM ✓ 第一页搬至第二页

* 2000<4000·5FFFM ✓ 第二页搬至第一页

其对应的格式实际上是：

{新图象的首地址} < {原图象首地址}。{原图象末地址} M₁

写成表达式就是：

$$A_{4H} A_{4L} < A_{1H} A_{1L} \cdot A_{2H} A_{2L} M_1$$

A_{4H} 表示新图象首地址的高字节, A_{4L} 表示新图象首地址的低字节, 而 A_{1H} 、 A_{1L} 和 A_{2H} 、 A_{2L} 则分别表示原图象首、末地址对应的高、低字节。

由监控程序中知道：

A_{4H} EQU \$43; A_4 高字节存贮单元

A_{4L} EQU \$42; A_4 低字节存贮单元

A_{1H} EQU \$3D; A_1 高字节存贮单元

A_{1L} EQU \$3C; A_1 低字节存贮单元

A_{2H} EQU \$3F; A_2 高字节存贮单元

A_{2L} EQU \$3E; A_2 低字节存贮单元

因此, 只要在 \$3D、\$3C 中放上被转移图象首地址, 在 \$3F、\$3E 中放上被转移图象的末地址, 在 \$43、\$42 中放上目标图象的首地址 (都是高位在前, 低位在后), 并调用搬家子程序 (其入口地址为 \$FE2C), 则可以实现高分辨作图页面画面的搬移。

(1) 高分辨第 1 页搬至第 2 页, 见程序 GP1。

GP1:

0300-	A0 00	LDY	##00
0302-	A9 00	LDA	##00
0304-	85 3C	STA	\$3C
0306-	A9 20	LDA	##20
0308-	85 3D	STA	\$3D
030A-	A9 FF	LDA	##FF
030C-	85 3E	STA	\$3E
030E-	A9 3F	LDA	##3F
0310-	85 3F	STA	\$3F

0312-	A9 00	LDA	##00
0314-	85 42	STA	\$42
0316-	A9 40	LDA	##40
0318-	85 43	STA	\$43
031A-	20 2C FE	JSR	\$FE2C
031D-	60	RTS	

0300: 初始化 Y=0

0302-0308: (3D) (3C) = 2000

030A-031D: (3F) (3E) = 3FFF

0312-0318: (43) (42) = 4000

031A: 调用搬家子程序

(2) 高分辨第 2 页搬至第 1 页, 只需将程序 GP1 作一些改动:

0307: 40

030F: 5F

0317: 20

(3) 实例

调一幅图象进内存让其在第 1 页显示, 然后将第 1 页的画面搬至高分辨率第 2 页缓冲区, 再在第 2 页显示。见程序 GP14:

```

10 HOME
20 D$ = CHR$(4)
30 PRINT D$;"BLOAD PIC1,A$4000"
40 PRINT D$;"BLOAD GP1"
50 POKE - 16304,0: POKE - 1629
   7,0
60 POKE - 16300,0: POKE - 1630
   2,0
70 FOR I = 1 TO 2000: NEXT I
80 CALL 768
90 POKE - 16299,0
100 FOR I = 1 TO 2000: NEXT I
110 TEXT : HOME : END

```

程序 GP14 中 30 句是调进 PIC1 的图象进内存第 1 页, 40 句调将第 1 页搬至第 2 页的图象处理子程序, 50 和 60 句显示第 1 页图象, 70 句延时, 80 句将高分辨率第一页的图象搬至第 2 页, 90 句显示第 2 页图象, 再延时一段时间结束。

在 BASIC 状态下键入:

] HGR✓, 可以看到 PIC1 画面在第 1 页清除

] HGR2✓, 可以看到 PIC1 画面在第 2 页清除

(4) 习题

编制一个 BASIC 程序, 将 \$ 6000—\$ 7FFF 内的图形, 搬至第 1 页。

参考程序见程序 GP15:

```
GP15 10 HOME
      20 D$ = CHR$(4)
      30 PRINT D$;"BLOAD PIC1,A$2000"
      40 PRINT D$;"BLOAD PIC2,A$6000"
      50 POKE 49232,0: POKE 49239,0
      60 POKE 49234,0: POKE 49236,0
      70 GET A$
      80 X$ = "2000<6000.7FFFM N D823G"

      90 FOR I = 1 TO LEN (X$): POKE
          511 + I, ASC ( MID$(X$,I,1)
            ) + 128: NEXT I
      100 POKE 72,0
      110 CALL - 144
      120 POKE 49236,0
      130 GET A$
      140 HOME : TEXT : END
```

程序 GP15 中 PIC1 和 PIC2 分别为二幅图形的文件名, 通过 20, 30 句分别调进内存 \$ 2000—\$ 3FFF 及 \$ 6000—\$ 7FFF 的单元中, 40 句和 50 句显示 PIC1 图形 (在第 1 页显示), 按任意键后 90—100 句将 \$ 6000—\$ 7FFF 单元的图象信息搬至 \$ 2000—\$ 3FFF 中, 110 句在第 1 页显示 PIC2 图

形，再按任意键结束。

2. 高分辨图形画面的清除

众所周知，在 BASIC 程序中可以用 HOME 指令清屏，也可以用 HGR、HGR2 命令清除屏幕。其中执行 HGR 命令，进入高清晰度图形第一页和文本混合方式，即使屏幕与内存的 \$2000—\$3FFF (8192—16383) 对应起来，同时在屏幕下部留出四行文本方式供文本输出用；而执行 HGR2 命令，则进入高清晰度第二页全屏幕方式，它使屏幕与内存 \$4000—\$5FFF (16384—24575) 对应起来，屏幕上不留文本输出行，全部屏幕都用于图形显示。

在机器语言程序中，可以调用 \$FC58 开始的清屏子程序，将整个屏幕清除干净，并取窗顶。

那么怎样编制机器语言程序，清除高分辨图形第一页或第二页的画面呢？实际上，原理非常简单，因为当屏幕上的点的相应位为“0”时，屏幕上是一个黑点，所以只要将内存 \$2000—\$3FFF、或 \$4000—\$5FFF 的所有单元全部置“0”即可。

这就是说，问题最终归结为编一个程序，将“0”送至 \$2000—\$3FFF（对高分辨率第一页图形页），或将“0”送至 \$4000—\$5FFF（对高分辨率第二页图形页）的每一个单元，这样，相应图形页面的信息全部为“0”，从而使对应页面变成黑色，达到清除屏幕的效果。

\$2000—\$3FFF 和 \$4000—\$5FFF 各有 8191 个存储单元，要达到清屏目的，就要分别送 8191 个“0”，这个数据量还是很大的，若用 BASIC 程序，循环时间长速度慢，故可采用机器语言编制程序，传送 8191 个零的过程可以瞬间完成。

(1) 高分辨图形第一页的清屏，见程序 GP4:

```
GP4 0300-    A2 00          LDX    #$00
      0302-    A9 00          LDA    #$00
      0304-    9D 00 20      STA    $2000,X
      0307-    E8            INX
      0308-    D0 FA          BNE    $0304
      030A-    EE 06 03      INC    $0306
      030D-    AD 06 03      LDA    $0306
      0310-    C9 40          CMF    #$40
      0312-    D0 EE          BNE    $0302
      0314-    60            RTS
```

(2) 高分辨图形第 2 页的清屏

高分辨图形第 2 页的清屏原理同上，只是要将 8191 个“0”送至 \$4000—\$5FFF 的各个单元中，因此只需将程序 GP4 稍加改动，即：

\$ 0306: 40

\$ 0311: 60

(3) 实例

调进两幅图象分别至内存高分辨图形页第 1 页和第 2 页，先显示第 1 页然后清屏，再显示第 2 页再清屏。程序清单见 GP10:

GP10

```
10 D$ = CHR$(4)
20 PRINT D$;"BLOAD GP4"
30 PRINT D$;"BLOAD PIC1,A$2000"
40 PRINT D$;"BLOAD PIC2,A$4000"
50 HGR : POKE - 16302,0
60 CALL 768
70 HGR2 : POKE - 16299,0
80 POKE 774,64: POKE 779,96
90 CALL 768
100 TEXT : END
```

程序 GP10 中，20 句是调高分辨图形第 1 页的清屏子程序，50 句显示第 1 页图象，60 句清第 1 页图象，70 句显示第

2 页图象，80 句为改动清第 1 页图象的指针，使之变成清高分辨第 2 页图象，90 句清第 2 页，最后恢复文本结束。所以本程序也可作分页显示图形用。

(4) 习题

①编制一个机器语言清屏子程序。

②编制一个 BASIC 语言清屏子程序。

请先编好程序并上机运行，然后再看下面的参考答案。

程序 GP11 是一个 BASIC 语言清屏程序：

GP11

```
10 FOR I = 8192 TO 16383
20 POKE I,0
30 NEXT I
40 END
```

程序 GP12 是一个机器语言清屏子程序：

GP12

0300-	A0 00	LDY	##00
0302-	A9 20	LDA	##20
0304-	85 11	STA	\$11
0306-	A9 00	LDA	##00
0308-	85 10	STA	\$10
030A-	91 10	STA	(\$10),Y
030C-	C8	INY	
030D-	D0 F8	BNE	\$0307
030F-	A6 11	LDX	\$11
0311-	E0 3F	CPX	##3F
0313-	F0 05	BEQ	\$031A
0315-	E6 11	INC	\$11
0317-	4C 0A 03	JMP	\$030A
031A-	60	RTS	

程序 GP11 和 GP12 分别清高分辨图形第 2 页和第 1 页，原理十分简单，请读者自行分析。

3. 高分辨率图形的反相显示

图形信息中包含了大量的“0”和“1”，是“1”的显示一个亮点；是“0”的显示一个黑点（同屏幕的底色，看不到）。因此，要使图形能够反相显示，应设法改变原图形的结构，即原来是“1”的要变成“0”，原来是“0”的要变成“1”。

对于任意一个8位二进制数来说，要使它的每一位取反（1变成0，0变成1），通常有两种方法。其一是用\$FF（对应的二进制数为11111111）去减一个8位二进制数，所得差值即为该8位二进制数的反；其二是用\$FF与一个8位二进制数异或（相同出0，不同出1），所得异或的结果即为原8位二进制数的反。

例如，原8位二进制数为10101101，则：

1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1
— 1 0 1 0 1 1 0 1	⊕ 1 0 1 0 1 1 0 1
—	—
0 1 0 1 0 0 1 0	0 1 0 1 0 0 1 0

因此，这两种不同的算法，就是编写图形求反程序的两个不同设计思想，而最终又归结为根据上述思想设计的数据块传送的程序。

(1) 采用异或处理方法的程序，见 GP2：

GP2

0300-	A2 00	LDX	#\$00
0302-	BD 00 20	LDA	\$2000,X
0305-	49 FF	EOR	#\$FF
0307-	9D 00 20	STA	\$2000,X
030A-	EB	INX	
030B-	D0 F5	BNE	\$0302
030D-	EE 04 03	INC	\$0304
0310-	EE 09 03	INC	\$0309
0313-	AD 09 03	LDA	\$0309
0316-	C9 40	CMP	#\$40
0318-	D0 EB	BNE	\$0302
031A-	60	RTS	

程序 GP2 是将存贮在 \$ 2000—\$ 3FFF 单元的图象信息取反。

(2) 采用差值处理方法的程序，见 GP3:

GP3:

0300-	A9 00	LDA	#\$00
0302-	85 00	STA	\$00
0304-	A9 40	LDA	#\$40
0306-	85 01	STA	\$01
0308-	A0 00	LDY	#\$00
030A-	A9 FF	LDA	#\$FF
030C-	F1 00	SBC	(\$00),Y
030E-	91 00	STA	(\$00),Y
0310-	C8	INY	
0311-	D0 F7	BNE	\$030A
0313-	E6 01	INC	\$01
0315-	A5 01	LDA	\$01
0317-	C9 60	CMP	#\$60
0319-	90 EF	BCC	\$030A
031B-	60	RTS	

程序 GP3 是将高分辨第 2 页图形求反。若对第一页图形求反，则只需将 \$ 0305 单元的内容改成 20，\$ 0318 单元的内容改成 40。

(3) 实例

调一幅图形进内存，先显示一个正相图形，然后清屏，再显示一个反相图形。见程序 GP12-1。

GP12-1

```

10 D$ = CHR$(4)
20 PRINT D$;"BLOAD PIC1,A$2000"
30 PRINT D$;"BLOAD GP2"
40 HGR : HCOLOR= 7
50 HOME
60 PRINT D$;"BLOAD PIC1,A$2000"
70 CALL 768
80 HGR : POKE - 16300,0
90 TEXT : HOME : END

```

程序 GP12-1 中的 GP2 就是前面介绍的采用异或方法处理的图象求反机器语言子程序，40 句显示 PIC1 图象，50 句清屏，60 句再次调 PIC1 进内存，70 句将图形进行反相处理，80 句显示反相图形。

(4) 习题

编制一个 BASIC 语言的图象求反程序。

参考答案见程序 GP13:

GP13

```

10 D$ = CHR$(4)
20 PRINT D$;"BLOAD PIC1,A$2000"
30 GOSUB 100
40 HGR : POKE - 16300,0
50 FOR K = 1 TO 2000: NEXT K
60 TEXT : HOME : END
100 FOR I = 4096 TO 8191
110 P = PEEK (I)
120 IF P = 0 OR P = 128 THEN P =
    19
130 P = 127 - P
140 POKE I,P
150 RETURN

```

程序 GP13 中 100—150 句是图形第 1 页取反的子程序，其原理十分简单，即将 \$ 2000—\$ 3FFF 的各单元值取反。40

句是显示反相图形，50 句延时一段时间以便看清反相显示的图形，60 句恢复文本清屏结束。

图形处理实例：

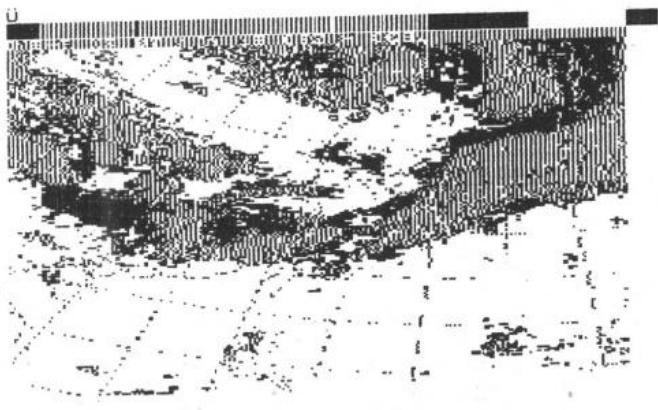


图5.1 (a) 原图象

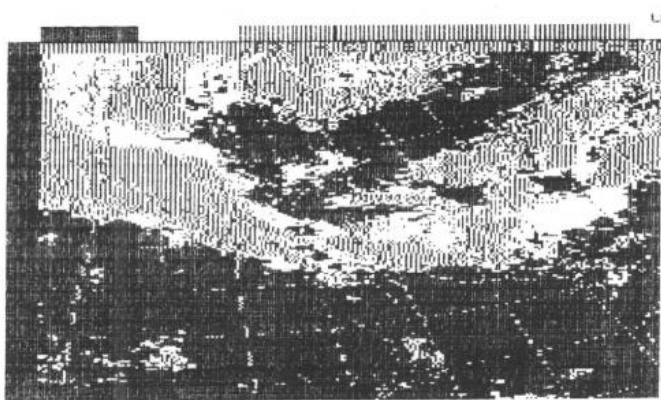


图5.1 (b) 反相显示

4. 高分辨率图形的合成与分解

反复将高分辨图形第 2 页画面中一部分图象剪贴到高分辨图形第 1 页的指定位置上, 就可以实现多幅图形的合成。

存放在 \$ 6000—\$ 6063 单元中的机器语言子程序 (见程序 GP16), 既可以实现上述功能, 也可以把高分辨第 1 页某一范围内的图形, 搬到该页的其它位置上, 酷似搭积木块一样。机器语言子程序存盘备用。

程序 GP17 是一个 BASIC 程序, 执行该程序可以十分方便地一次快速完成四幅图形的合并。程序 GP17 运行后, 首先清屏, 然后调用 200 句开始的子程序, 在高分辨率第 1 页上表演一个画线图形, 接着调用机器语言子程序 GP16 进内存, 再经 50—140 句的循环, 分别调 G1—G4 四幅图形, 每调一幅图形, 执行一次 CALL24576 命令, 按一定坐标剪辑并放在高分辨第 1 页上, 当循环全部完成后, 四幅图形即已合成完毕。经 150 句延迟一段时间后, 执行 160 句, 将四幅合成的图形以文件名 X 存盘, 最后是画线清屏, 程序结束运行。

为方便操作, 程序 GP16, 程序 GP17 以及四幅图形资料 G1—G4, 应放在同一张盘片中。

程序 GP17 变量说明:

- A、B 为要搬移到目的区域的左上角坐标, 前者为 X 方向, 后者为 Y 方向 (下同), 它们存放在 \$ 00 和 \$ 01 单元中, 在程序中用 POKE 0, A; POKE 1, B 设置。

- C、D 为要搬移区域的左上角坐标, 它们分别存放在 \$ 06 和 \$ 07 单元中, 同理用 POKE 6, C; POKE 7, D 设置。

- E、F 为要搬移区域的右下角坐标, 分别存放在 \$ 08 和

\$ 09 单元中, 用 POKE 8, E; POKE 9, F 设置。

• 而在 \$ 10 单元中, 存放的是当前页面值, 当该值为 \$ 00 时, 图象在高分辨率第 1 页图形面内搬移; 当值为 \$ 20 时, 则将高分辨率第 2 页图形, 剪辑到高分辨率第 1 页上去。

• \$ E6 单元中存放的值, 至关重要, 第 1 页图形放 \$ 20, 第 2 页图形放 \$ 40。

若要改动剪贴图形的位置, 可改动变量 A、B、C、D、E、F 之值, 其坐标值对应屏幕位置是:

(\$ 00, \$ 00): 对应屏幕左上角

(\$ 00, \$ C0): 对应屏幕左下角

(\$ 27, \$ 00): 对应屏幕右上角

(\$ 27, \$ C0): 对应屏幕右下角

(\$ 13, \$ 60): 对应屏幕中心位置

因此, 只要改变 A—F 坐标值, 并调整程序 GP17 中的循环语句和控制转向语句, 就可以在一幅屏幕上, 合成 8 幅以至更多幅的图形来。

程序 GP16 清单:

```
6000- A0 00 9B 4B 20 11 F4 6B
600B- AB A5 26 99 00 8E A5 27
6010- 99 00 BF C8 C0 C0 D0 EA
601B- A4 07 B9 00 8E 85 0A B9
6020- 00 8F 1B 65 10 85 0B A4
602B- 01 B9 00 8E 85 0C B9 00
6030- BF 85 0D A5 06 85 0E A5
603B- 00 85 0F A4 0E B1 0A A4
6040- 0F 91 0C E6 0F A5 0F C9
604B- 2B F0 0B E6 0E A5 0E C5
6050- 0B D0 E8 E6 01 A5 01 C9
605B- C0 F0 0B E6 07 A5 07 C5
6060- 09 D0 B5 60
```

*

GP17:

```
2  HOME :A = 7
5  GOSUB 200
10 HGR : HCOLOR= 7
20 D$ = CHR$(4)
30 PRINT D$"BLOAD GP16"
50 FOR I = 1 TO 4
60 PRINT D$"BLOAD G";I;"",A$4000"

70 IF I = 1 THEN A = 0:B = 0:C =
   0:D = 0:E = 19:F = 95
80 IF I = 2 THEN A = 19:B = 0:C =
   19:D = 0:E = 39:F = 95
90 IF I = 3 THEN A = 0:B = 95:C =
   0:D = 95:E = 19:F = 191
100 IF I = 4 THEN A = 19:B = 95:
    C = 19:D = 95:E = 39:F = 191

110 POKE 0,A: POKE 1,B: POKE 6,C
    : POKE 7,D: POKE 8,E: POKE 9
    ,F
120 POKE 16,32: POKE 230,32: POKE
    - 16302,0
130 CALL 24576
140 NEXT I
150 FOR I = 1 TO 5000: NEXT I
160 PRINT D$"BSAVE X,A$2000,L$20
    00"
170 A = 0: GOSUB 210: TEXT : END

200 HGR : POKE - 16302,0
210 HCOLOR= A: FOR I = 0 TO 95: HPLLOT
    0,I TO 141,I: HPLLOT 141,191 -
    I TO 279,191 - I: NEXT I
220 FOR I = 0 TO 95: HPLLOT 0,191
    - I TO 141,191 - I: HPLLOT 1
    41,I TO 279,I: NEXT I
230 RETURN
```

讨论：以上介绍的是将 4 幅不同的画面合成为一幅画面，实际上可以改动程序 GP17 的有关语句，将调进内存的一幅画面，按任意位置、任意大小剪下来，这就是图形的剪辑或分解。

程序 GP18 就是一个实例：

```
4  HGR : POKE - 16302,0
5  HCOLOR= 7: FOR I = 0 TO 95: HPLLOT
    0,I TO 141,I: HPLLOT 141,191 -
    I TO 279,191 - I: NEXT I
10  FOR I = 0 TO 95: HPLLOT 0,191 -
    I TO 141,191 - I: HPLLOT 141,
    I TO 279,I: NEXT I
15  GOSUB 160
20  D$ = CHR$(4)
30  PRINT D$"BLOAD TXJJ1,A$8000"
40  PRINT D$"BLOAD X"
60  FOR I = 1 TO 4
70  IF I = 1 THEN A = 0:B = 0:C =
    0:D = 0:E = 19:F = 95
80  IF I = 2 THEN A = 19:B = 0:C =
    19:D = 0:E = 39:F = 95
90  IF I = 3 THEN A = 0:B = 95:C =
    0:D = 95:E = 19:F = 191
100 IF I = 4 THEN A = 19:B = 95:
    C = 19:D = 95:E = 39:F = 191

110 POKE 0,A: POKE 1,B: POKE 6,C
    : POKE 7,D: POKE 8,E: POKE 9
    ,F
120 POKE 16,32: POKE 230,32: POKE
    - 16302,0
130 CALL 32768
140 NEXT I
145 GOSUB 160
150 FOR I = 1 TO 5000: NEXT I
155 TEXT : HOME : END
160 HCOLOR= 0: HPLLOT 0,95 TO 279
    ,95: HPLLOT 141,0 TO 141,191:
    RETURN
```

程序 GP18 中 TXJJ1, 同程序 GP16, BLOADX 中的 X 为一幅图形的图形名, 运行程序 GP18 后, 首先清屏并进入分辨率第 1 页全屏幕绘图状态 (见第 4 句), 执行 5—10 句用画线的方法巧妙地将屏幕涂满, 调用 160 句画十字线的子程序, 将屏幕分成四个小方块, 30 句调机器语言 TXJJ1 进内存, 50 句调一幅图形进内存, 60—140 句完成将调进内存的图形剪成 4 块, 并分别贴在高分辨第 1 页的相应存贮区, 并显示出来, 再次调用 200 句的画十字线子程序, 使剪下来的 4 块画面分成 4 个部分, 150 句延迟, 155 句恢复文本、清屏、结束。

BASIC 程序中坐标、页面、图形显示也可用机器语言处理, 如:

```
POKE 16, 32      改用  LDA  # $20
                      STA  $10
POKE 230, 32     改用  LDA  # $20
                      STA  $E6
HGR: POKE—16302, 0  改用  LDA  $C050
                      LDA  $C057
                      LDA  $C050
                      LDA  $C054
```

运行图例:



图5.2 (a) 四幅变成一幅

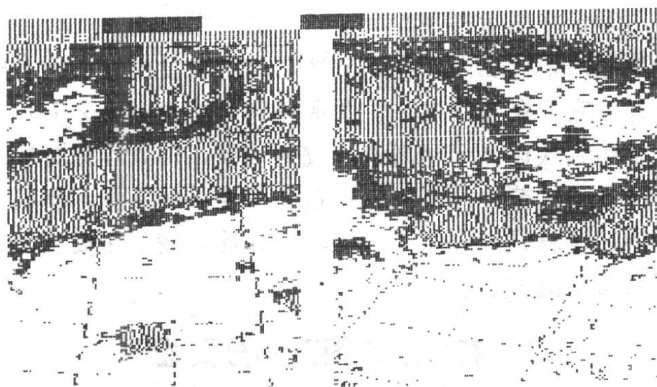


图5.2 (b) 一幅分成四幅

六、图形技巧原理分析（四）

本章介绍两种图形处理技巧：分页显示和合并显示。

分页显示是指用控制屏幕软开关的方法，把存贮在不同显示页面的图形，轮流交替显示。由于处理速度很快，基本上可以克服图形的闪烁和呆滞现象，并且在动画设计中应用甚多，可以达到良好的动画显示效果。

图形合并是指将存贮在不同显示页面的图形，合并到某一个高分辨率存贮区并显示出来，或者反复操作实现多幅画面合并，它们在画面设计、图形编辑等技术中十分有用。

要达到快速显示和高速合成的效果，使人丝毫觉察不到任何变化的细节，没有闪烁不定和不连贯的感觉，解决图形处理的速度就是十分重要的技巧，为此，我们主要介绍用机器语言编程的方法。

1. 高分辨率图形的分页显示

高分辨率图形的分页显示，是指将高分辨率第一页和第二页内的图形轮流显示，即一会儿显示第一页图形，另一会儿显示第二页图形，反复交替实现。

中华学习机提供了几个屏幕软开关，它们的作用是实现在屏幕显示方式的转换。所谓软开关，顾名思义它的确象开关一样，但不是象普通开关那样用机械力或电信号控制通断，而是采用编程软件控制的方式。

这些软开关是：

	地 址	功能
	(16 进制) (10 进制)	
C050	49232 或 -16304	图形显示方式
C051	49233 或 -16303	文本显示方式
C052	49234 或 -16302	全屏幕显示文本或图形
C053	49235 或 -16301	文本图形混合显示
C054	49236 或 -16300	显示高分辨率第一页
C055	49237 或 -16299	显示高分辨率第二页
C056	49238 或 -16298	低分辨率图形方式
C057	49239 或 -16297	高分辨率图形方式

从上表可以看出，八个屏幕软开关好象 8 个按钮开关，每个开关专管一件事，由于它们受软件控制（不是用手按的），所以称作屏幕软开关。

(1) 控制屏幕软开关的方法

在 BASIC 程序中，用软件控制屏幕软开关，通常是利用 POKE 语句或 PEEK 函数，因为它们都可以使指定的地址线上产生一高电位。至于写入什么数或读出什么数，都是无关紧要的。

例如，下列程序段：

```
10 POKE 49232, 0; POKE 49235, 0
```

```
20 POKE 49236, 0; POKE 49239, 0
```

基本上相当于执行一条 HGR 命令。但是和 HGR 命令有差别，因为控制屏幕软开关不清除屏幕，而 HGR 命令则要清除屏幕。

又如，下列程序段：

```
10 P=PEEK (49232); P=PEEK (49234)
```

20 P=PEEK (49236): P=PEEK (49239)

基本上接近于执行一条 HGR 命令，因为它们将屏幕变成了整幅图形方式，也就是说没有留出屏幕下方的 4 个文本行。

在机器语言程序中，用软件控制屏幕软开关，是用 6502 的读或写指令对相应地址进行读和写。例如：

```
LDA $C050
```

```
LDA $C057
```

```
LDA $C052
```

```
LDA $C055
```

将使中华机处于全屏第二页高分辨图示显示方式。

又如，若要转成全屏第一页文本方式显示则应写：

```
LDA $C054
```

```
LDA $C051
```

(2) 用 BASIC 语言编制的分页显示程序

要求在屏幕上出现三角形和四边形交替显示。见程序 GP5:

GP5:

```
10 HGR : HCOLOR= 3
20 HPLLOT 0,0 TO 100,0 TO 100,100 TO
   0,0
30 HGR2 : HCOLOR= 7
40 HPLLOT 100,100 TO 100,180 TO 27
   0,180 TO 270,100 TO 100,100
50 GOTO 10
```

运行 GP5 程序时先清屏幕，在第 1 页上画出一个三角形，然后再清屏幕，在第 2 页上画出一个四边形，执行到 50 句又返回去重复。这样，在屏幕上将出现三角形与四边形交替显示的现象。

这里有一个问题，画面上的图形是通过执行绘图语句画出的，不难想到，如果每个图形都非常复杂，计算它们各点的坐标就会花去较长时间，那么这样两幅图形交替显示的速度将大大地放慢。解决的方法是控制屏幕切换的软开关，使两幅图形均无需重画（即不清除屏幕），从而大大加快交替显示的速度。

具体地说，就是将程序 GP5 从 50 行开始，改写成下面的样子：

```
50 POKE - 16304,0: POKE - 16297
   ,0
60 POKE - 16300,0: POKE - 16302
   ,0
70 POKE - 16299,0
75 POKE - 16300,0
80 GOTO 70
```

这样，前四行（10—40 句）分别在第 1 页和第 2 页上画出三角形和四边形，50 句至 60 句是置屏幕为高分辨率图形第 1 页全屏幕方式，这时第 1 页图形显示出来，执行 70 句时，又设置为第 2 页（其它软开关未变），第 2 页图形显示出来。执行 75 句时，又设置成第 1 页，第 1 页图形再被显示。转回 70 句后，再次变成第 2 页，显示第 2 页图形……。这样就实现了两幅图形的交替显示，由于两幅图形均无需重画，加上不清除屏幕，显示速度太快，以至于无法看清，所以尚需加上两个程序行：

```
72 FOR J=1 TO 2000: NEXT J
78 FOR K=1 TO 2000: NEXT K
```

前已指出，程序 GP5 中的图形是采用绘图语句画出的，这些图形比较简单，如果图形十分复杂，例如高分辨率第 1

页 \$ 2000—\$ 3FFF 和高分辨率第 2 页 \$ 4000—\$ 5FFF 各自占有 8K 字节的图象信息, 如何实现二者的交替显示呢? 方法仍然是采用屏幕软开关控制, 见程序 GP6—1:

GP6—1

```

10 HOME
20 D$ = CHR$ (4)
30 PRINT D$"BLOAD PIC1,A$2000"
40 PRINT D$"BLOAD PIC2,A$4000"
50 POKE 49232,0: POKE 49239,0
60 POKE 49234,0: POKE 49236,0
70 FOR I = 1 TO 2000: NEXT
80 POKE 49237,0
90 FOR I = 1 TO 2000: NEXT
100 GOTO 60

```

程序 GP6—1 中 PIC1 和 PIC2 为两幅画面的图形名称, 可根据实际图形名称选定。70 句和 90 句为控制画面在屏幕上的停留时间, 也可根据实际需要灵活改变。

(3) 用机器语言编制分页显示程序

用机器语言编制分页显示程序, 既简单又方便, 其特点是占用内存少运行速度快。

实例 1, 不断循环的两幅图象分页显示, 见程序 GP6:

0300-	AD 50 C0	LDA	\$ C050	置图形显示方式
0303-	AD 57 C0	LDA	\$ C057	高分辨率
0306-	AD 52 C0	LDA	\$ C052	全屏幕
0309-	AD 54 C0	LDA	\$ C054	第 1 页
030C-	A5 00	LDA	\$ 00	0→A, 延时时间初值
030E-	20 A8 FC	JSR	\$ FCA8	调延迟子程序
0311-	AD 55 C0	LDA	\$ C055	第 2 页
0314-	A5 00	LDA	\$ 00	0→A
0316-	20 A8 FC	JSR	\$ FCAB	调延迟子程序
0319-	20 00 03	JSR	\$ 0300	循环

运行程序 GP6 之前, 可在 BASIC 状态下键入:

```

] BLOAD PIC1, A $ 2000✓
] BLOAD PIC2, A $ 4000✓
] BLOAD GP6✓
] CALL 768✓

```

则屏幕上将交替出现两幅画面的分页显示,若要停止,请按 CTRL-RESET✓.

实例 2, 控制显示次数的分页显示。

程序 GP6, 是一直循环的分页显示, 若要控制显示次数可用程序 GP7:

GP7:

0300-	A2 14	LDX	# \$ 14	循环次数初值
0302-	CA	DEX		x-1→x
0303-	E0 00	CPX	# \$ 00	是 0 吗?
0305-	D0 01	BNE	\$ 0308	不是, 转 \$ 0308
0307-	60	RTS		是, 结束
0308-	AD 50 C0	LDA	\$ C050	
030B-	AD 57 C0	LDA	\$ C057	
030E-	AD 52 C0	LDA	\$ C052	
0311-	AD 54 C0	LDA	\$ C054	
0314-	A5 00	LDA	\$ 00	
0316-	20 AB FC	JSR	\$ FCA8	同程序 GP6
0319-	AD 55 C0	LDA	\$ C055	
031C	A5 00	LDA	\$ 00	
031E-	20 AB FC	JSR	\$ FCAB	
0321-	20 02 03	JSR	\$ 0302	转 \$ 0302
0324-	60	RTS		返回

运行程序 GP7 前, 应将图形分别调进内存高分辨图形存贮区第 1 页和第 2 页, 然后执行 CALL768✓, 在屏幕上看到的是循环显示 10 次的两幅画面, 而最后一次是其中一幅画面停止在屏幕上, 按 CTRL-RESET 结束运行, 返回 BASIC 状

态。

实例 3，自动调图形进内存的分页显示。

盘片中的图形资料，通常有两种方式调进内存：

第一种是直接方式，如：

```
] BLOAD PIC1, A $ 2000✓
```

```
] BLOAD PIC2, A $ 4000✓
```

第二种是 BASIC 程序控制方式，如：

```
10 D$=CHR$(4)
```

```
20 PRINT D$; "BLOAD PIC1, A $ 2000"
```

```
30 PRINT D$; "BLOAD PIC2, A $ 4000"
```

```
40 END
```

其实还可以用机器语言编制程序，将盘片中的图形资料自动调进内存。例如：

```
0331- A2 00          LDX    #$00
0333- BD 42 03      LDA    $0342,X
0336- 9D 00 02      STA    $0200,X
0339- EB           INX
033A- E0 11         CFX    #$11
033C- D0 F5         BNE    $0333
033E- 20 CD 9F      JSR    $9FCD
0341- 60           RTS
0342- C2 CC CF C1 C4 D0
0348- C9 C3 B1 AC C1 A4 B2 B0
0350- B0 B0 BD
```

*

可以将盘片中图形名为 PIC1 的图形，调进内存中 \$2000 开始的单元中。其中 \$0331—\$0341 相当于执行 BLOAD PIC1, A \$ 2000✓ 命令，而从 \$0342 到 \$0352 的 17 个内存单元中，放的是 BLOAD PIC1, A \$ 2000 所对应的键盘字符的 ASCII 码。如 B 键盘字符的 ASCII 码为 \$C2，

(即 RETURN)键盘字符的 ASCII 码为 \$ 8D 等等(关于上述程序的编制原理见机器语言作招呼程序一节)。

现在给出自动调图形 PIC1 和 PIC2 进内存并分页显示的程序, 见 GP8:

GP8:

0300-	20 31 03	JSR	\$0331
0303-	A9 B2	LDA	##B2
0305-	8D 4A 03	STA	\$034A
0308-	A9 B4	LDA	##B4
030A-	8D 4E 03	STA	\$034E
030D-	20 31 03	JSR	\$0331
0310-	AD 50 C0	LDA	\$C050
0313-	AD 57 C0	LDA	\$C057
0316-	AD 52 C0	LDA	\$C052
0319-	AD 54 C0	LDA	\$C054
031C-	A9 FF	LDA	##FF
031E-	20 AB FC	JSR	\$FCAB
0321-	20 AB FC	JSR	\$FCAB
0324-	AD 55 C0	LDA	\$C055
0327-	A9 FF	LDA	##FF
0329-	20 AB FC	JSR	\$FCAB
032C-	4C 19 03	JMP	\$0319
032F-	D0 E8	BNE	\$0319
0331-	A2 00	LDX	##00
0333-	BD 42 03	LDA	\$0342,X
0336-	9D 00 02	STA	\$0200,X
0339-	E8	INX	
033A-	E0 11	CPX	##11
033C-	D0 F5	BNE	\$0333
033E-	20 CD 9F	JSR	\$9FCD
0341-	60	RTS	

0342: C2 CC CF C1 C4 D0 C9 C3 B1 AC
C1 A4 B2 B0 B0 B0 .8D

应该注意的是盘片中应有图形名为 PIC1 和 PIC2 的图形, 并和程序 GP8 存于同一盘片中。然后执行 CALL768/, 即可以看到机器自动调图形进内存, 并分页显示。

实例 4, 三幅图形的分页显示

运行程序 GP9, 可以分页显示三幅图形, 其中调用机器语言子程序 M—L, 是实现分页显示控制的。

GP9:

```
10 D$ = CHR$ (4)
20 PRINT D$"BLOAD Z, A$2000"
30 PRINT D$"BLOAD PIC 1, A$4000"
40 PRINT D$"BLOAD MLW, A$6000"
50 PRINT D$"BLOAD M-L, A$1000"
60 CALL 4096
70 TEXT : HOME : END
```

M—L:

```
1000- 20 82 10 20 02 11 20 75
1008- 10 20 02 11 20 8F 10 20
1010- 82 10 20 0D 11 20 C3 10
1018- 20 75 10 20 02 11 20 8F
1020- 10 20 82 10 20 02 11 20
1028- C3 10 20 75 10 20 0D 11
1030- 20 8F 10 20 82 10 20 F7
1038- 10 20 C3 10 20 75 10 20
1040- F7 10 20 8F 10 20 82 10
1048- 20 0D 11 20 C3 10 20 75
1050- 10 20 F7 10 20 8F 10 20
1058- 82 10 20 F7 10 20 C3 10
1060- 20 75 10 20 0D 11 20 8F
1068- 10 20 82 10 20 02 11 20
1070- C3 10 4C 06 10 AD 54 C0
1078- AD 57 C0 AD 52 C0 AD 50
1080- C0 60 AD 57 C0 AD 55 C0
1088- AD 52 C0 AD 50 C0 60 A9
1090- 0D 85 50 85 60 85 70 85
1098- 80 A9 60 85 61 A9 20 85
10A0- 51 A9 40 85 71 A9 80 85
```



```

10AB- B1 A0 00 B1 70 91 80 B1
10B0- 60 91 70 C8 D0 F5 E6 61
10B8- E6 71 E6 81 A5 71 C9 60
10C0- 90 E7 60 A9 00 85 50 85
10C8- 60 85 70 85 80 A9 60 85
10D0- 61 A9 20 85 51 A9 40 85
10D8- 71 A9 80 85 81 A4 81 B1
10E0- 50 91 60 B1 80 91 50 C8
10E8- D0 F5 E6 51 E6 61 E6 81
10F0- A5 51 C9 40 90 E7 60 A2
10F8- 10 A9 FF 20 A8 FC CA D0
1100- FB 60 A2 02 A9 FF 20 A8
1108- FC CA D0 FB 60 A2 50 A9
1110- FF 20 A8 FC CA D0 FB 60

```

程序 M—L 较长，为节省篇幅，未给出助记符，有兴趣的读者可上机观察并分析其原理。

2. 高分辨率图形的合并显示

图形合并是指将绘制好的若干个图形，或者全部；或者其中几个图形合并到同一作图页面上成为一幅图形。

可以用两种语言编制的程序进行这种合并，BASIC 语言程序和 6502 机器语言程序。前者只适用于少数最简单的图形（如几条直线或少数线段组成的几何图形），因为它们合成的速度慢；后者适用于任何复杂的图形（它们的信息量很大，如占有 8K 存贮空间），并且速度快。我们这里主要介绍用机器语言编制的合并显示程序。

图形合并的原理非常简单，即将高分辨率第 2 页（或第 1 页）上非零单元搬至第 1 页（或第 2 页）的相应位置上。这实际上是内存搬移，或者叫数据块移动。但是这种搬移只对非零单元，而零单元不能搬移。

下面介绍的 4 个程序中的任一程序，都可以将高分辨图

形第 2 页上的图象合并到第 1 页上去。这些程序的设计思想完全一样，即把 \$ 4000—\$ 5FFF 中每一单元的值判断一下，是零不送，不是零，就送至 \$ 2000—\$ 3FFF 中的相对应单元，如 \$ 4003 单元的值不是零，则送至 \$ 2003 单元，余类推。但因寻址方式不同，因而 4 个程序的结构和指令安排上略有差异。

(1) 使用 Y 寄存器的绝对变址

例如，选用取数指令 LDA \$ 4000, Y，其功能是把 4000 + Y 单元中的操作数取出来，送到累加器 A 中。而送数指令 STA \$ 2000, Y，则是将累加器 A 中的内容，送到 2000 + Y 的单元中。

程序清单见 N39：

N39:

0300-	A0 00	LDY	#\$00
0302-	B9 00 40	LDA	\$4000, Y
0305-	F0 03	BEQ	\$030A
0307-	99 00 20	STA	\$2000, Y
030A-	CB	INY	
030B-	D0 F5	BNE	\$0302
030D-	EE 04 03	INC	\$0304
0310-	EE 09 03	INC	\$0309
0313-	AD 09 03	LDA	\$0309
0316-	C9 40	CMP	#\$40
0318-	90 EB	BCC	\$0302
031A-	60	RTS	

程序 N39 取送数指令采用的 Y 寄存器的绝对变址寻址方式，简称绝对 Y 变址。用变址寄存器做计数器用，开始应置“0”。

程序中用了三条条件转移指令：BNE——如果零标志 Z = 0（结果不为零）则转移，否则继续执行下一条指令；BEQ——如果零标志 Z = 1（结果为 0）则转移，否则继续；

BCC——如何进位标志 $C=0$ (进位为零) 则转移, 否则继续。用了一条比较指令 CMP, 它的功能是比较, 即 $A-M$, 如果 $A \geq M$, 表示够减无借位, 则 $C=1$; 如果 $A < M$, 表示不够减有借位, 则 $C=0$ 。在程序中 CMP 指令和 BCC 指令常常配合使用, 并且 CMP 指令在前, BCC 指令在后, 若执行 CMP 指令后 $C=1$, 则执行 BCC 指令时, 不发生转移而执行 BCC 的下一条指令, 反之执行 CMP 指令后 $C=0$, 则在执行 BCC 指令时, 发生分支转移。此外, 程序中还用了二条算术运算指令 INY 和 INC, INY——变址寄存器 Y 内容增 1, 即 $Y+1 \rightarrow Y$; INC——存贮单元内容增 1, 即 $M+1 \rightarrow M$ 。

至此, 程序 N39 中的全部指令功能介绍完毕, 这样, 阅读本程序不会有太多的困难。现在我们将程序的执行情况叙述一下。

首先计数器 Y 置初值, 开始调 \$ 4000, Y 进累加器, 因 $Y=0$, 所以实际上是调 \$ 4000 的内容; 执行 BEQ 指令, 如果 \$ 4000 的内容为 “0” 则转向 \$ 030A; 如果 \$ 4000 的内容不为 “0” (这正是我们需要的), 则送入 \$ 2000 单元中, 经过 BEQ 指令判断后, 不管 \$ 4000 的内容为 “0” 还是非 “0”, 都转向 \$ 030A 执行 INY 指令, 使计数器加 1, 以便再取 \$ 4001 的内容。在 INY 指令之后, 立即安排一条 BNE 指令, 目的是 Y 寄存器中的值, 如果不为 “0”, 则继续循环上去, 一直到 Y 不断计数至 \$ FF 值, 这样, 通过 \$ 0302—\$ 030B 这个循环, 就将 \$ 4000—\$ 40FF 中的非 “0” 值, 送至 \$ 2000—\$ 20FF 的 255 个单元中, 当 Y 再加 1, 则变成 00 时 (1 已经进位), 则转向 \$ 030D, 并使 \$ 0304 单元的值 40 增 1, 变成 41, 同时使 \$ 0309 单元的值增 1, 变成 21。也就是说以后将开始送 \$ 4100 单元的值至 \$ 2100 单元中, 为了判断整个高分辨第 2

页的图象信息是否全部送至第 1 页中,安排了 LDA \$ 0309 指令, \$ 0309 单元存的是第 1 页的高位地址,最多是 3F,所以要和 40 比较,BCC 指令就是为此安排的,如果 C=1,表示第 1 页高位地址为 40 时,转向 \$ 031A 结束;如果 C=0,表示第 1 页高位地址不到 40,则循环上去,转 \$ 0302 继续送数。这样,全部程序执行完毕,就可以将 \$ 4000—\$ 5FFF 单元中所有非“0”值送到 \$ 2000—\$ 3FFF 单元中,实现了两页图形的合并。

为了看到屏幕上两页图形的合并,可以改动程序 N39,即:

```
031A—8D  50  C0    STA  $ C050
031D—8D  52  C0    STA  $ C052
0320—8D  54  C0    STA  $ C054
0323—8D  57  C0    STA  $ C057
0326—60                      RTS
```

最后说一下,在运行程序 N39 之前,必须调两幅图形进内存,即:

```
] BLOAD  PIC1, A $ 2000↓
] BLOAD  PIC2, A $ 4000↓
```

然后在 BASIC 状态下执行 CALL768↓,或在监控状态下执行 300G↓,即可看到两幅合并在一个屏幕上的图象。

讨论:如果要合并的图形有 N 幅,您怎么处理呢?请上机试验,如果成功的话,就实现了多幅图形的合成,这是一个颇有趣味的事,祝您成功。

(2) 采用后变址 (Y) 间接寻址

采用后变址 (Y) 间接寻址方式的取送数指令分别为 LDA (\$ 02), Y 和 STA (\$ 00), Y。它们都是两字节指令,其中

括号内是零页地址，不妨称作 IND。

这种寻址方式是指先对 IND 部分所指出的零页地址作一次间接寻址，得到一个低 8 位地址，再对 $IND+1$ 作一次间接寻址，得到一个高 8 位地址，然后再把这高、低两部分地址合起来做为 16 位的基地址，并以 Y 为变址寄存器进行变址就得到了操作数的有效地址。

例如，取数指令 LDA (\$02)，Y 的机器码为 B1 02，前者为操作码，后者为零页间接地址。若已有变址寄存器 $Y=03$ ，存贮单元 $(02)=00$ ， $(03)=40$ ，为了得到有效地址，先要对 $IND=02$ 单元作第一次间接寻址，得到 $(02)=00$ ，再对 $IND+1=02+1=03$ 单元作第二次间接寻址，得到 $(03)=40$ ，再把 4000 合起来作为基地址，并以 Y 为变址寄存器进行变址计算就得到了操作数的有效地址，即 $4000+03=4003$ 。所以 LDA (\$02)，Y 这条指令的功能就是把 \$4003 地址单元中的数取出来，再送到累加器 A 中。

又如，送数指令 STA (\$00)，Y 的机器码为 91 00，分别为操作码和零页间接地址。若已知 $Y=03$ ， $(00)=00$ ， $(01)=20$ ，则同上分析基地址为 2000，有效地址为 2003。所以 STA (\$00)，Y 这条指令的功能就是把程序计数器 PC 指向 \$2003，并把累加器 A 中的内容送到 \$2003 单元。

因此，顺序执行 LDA (\$02)，Y 和 STA (\$00)，Y 两条指令，就是把 \$4003 单元的值送到 \$2003 单元中（已知条件同上，即 $Y=03$ ， $(02)=00$ ， $(03)=40$ ， $(00)=00$ ， $(01)=20$ ）。

用后变址 (Y) 间接寻址方式编制的图形合并程序，见 N36。

N36:

0300-	A9 00	LDA	# \$ 00	0300—0306: (01) (00) =2000
0302-	85 00	STA	\$ 00	
0304-	A9 20	LDA	# \$ 20	
0306-	85 01	STA	# 01	0308—030E: (03) (02) =4000
0308-	A9 00	LDA	# \$ 00	
030A-	85 02	STA	# 02	
030C-	A9 40	LDA	# \$ 40	0310: Y=0
030E-	85 03	STA	# 03	0312: (4000+Y) →A
0310-	A0 00	LDY	# \$ 00	0314: 结果为0吗? 是的, 转移
0312-	B1 02	LDA	(# 02), Y	0316: 否, (A) → (2000+Y)
0314-	F0 02	BEQ	# 0318	0318: Y+1→Y
0316-	91 00	STA	(\$ 00), Y	0319: 结果为0吗? 否, 转移
0318-	C8	INY		031B: 是的, 高位加1 (第2页)
0319-	D0 F7	BNE	# 0312	031D: 高位加1 (第1页)
031B-	E6 03	INC	\$ 03	031F: ≥40吗?
031D-	E6 01	INC	\$ 01	0321: 否, 转移
031F-	C9 40	CMP	# \$ 40	0323: 是的, 结束
0321-	90 EF	BCC	\$ 0312	
0323-	60	BTC		

程序 N36 的说明, 见程序右边的注释, 简单地看, 程序 N36 分二段: 第一段从 \$ 0300 到 \$ 030F, 这一段主要是地址上的安排, \$ 00, \$ 01 存放第 1 页画面的起始地址 \$ 2000, 低位在前, 高位在后; \$ 02, \$ 03 存放第 2 页画面的起始地址 \$ 4000, 也是低位在前, 高位在后。第二段从 \$ 0310 到 \$ 0323, 这一段绝大多数指令同程序 N39 中 \$ 0300—\$ 031A, 只是取数、送数指令不同, 但作用一样。

讨论: 如果省去 \$ 0300—\$ 030F 这 16 个字节的存贮内容, 而使程序照样正确运行, 可以采用几种方法?

方法①

在监控下键入:

0: 00 20 00 40✓

方法②

在 BASIC 状态下键入:

POKE0, 0: POKE1, 32: POKE2, 0: POKE3, 64✓

当然以上两个方法只是完成地址设置, 而要运行程序 N36, 必须首先调两幅图形分别进内存第 1 页和第 2 页, 然后执行] CALL784✓ 或 * 310G✓

为了看清两幅图形合并, 还应加显示段, 除前面介绍的用机器语言设置软开关方法外, 也可用 BASIC 程序段:

POKE—16304, 0 相当于 STA \$ C050

POKE—16302, 0 相当于 STA \$ C052

POKE—16300, 0 相当于 STA \$ C054

POKE—16297, 0 相当于 STA \$ C057

或者更简单地用两条指令:

HGR: POKE—16302, 0

(3) 用绝对寻址方式

采用绝对寻址方式时, 取数指令用 LDA \$ 4000, 送数指令可采用 STA \$ 2000。这种寻址方式比较简单, 指令的操作数部分给出的是操作数在存贮器中的有效地址, 称为绝对地址, 又称直接地址。例如取数指令 LDA \$ 4000 的机器码为 AD 00 40, 它的作用是把存贮器 4000 地址单元中存放的操作数取出来送到累加器 A, 又如送数指令 STA \$ 2000 的机器码为 8D 00 20, 其作用是将累加器 A 中的内容放置在 \$ 2000 单元中。同时执行这两条指令, 就把 \$ 4000 单元的内容送到 \$ 2000 单元中去。

用绝对寻址方式编制的图形合并程序, 见 N40。

N40:

0300-	AD 00 40	LDA	\$4000
0303-	FO 03	BEQ	\$0308
0305-	8D 00 20	STA	\$2000
0308-	EE 01 03	INC	\$0301
030B-	EE 06 03	INC	\$0306
030E-	AD 06 03	LDA	\$0306
0311-	C9 00	CMP	#\$00
0313-	D0 EB	BNE	\$0300
0315-	EE 02 03	INC	\$0302
0318-	EE 07 03	INC	\$0307
031B-	AD 07 03	LDA	\$0307
031E-	C9 40	CMP	#\$40
0320-	90 DE	BCC	\$0300
0322-	60	RTS	

程序 N40 简要说明：执行第 1 条指令将 \$ 4000 单元的内容调进累加器，经 BEQ 指令判别，若不为“0”，则送入 \$ 2000 单元中；若是“0”不送，使高 2 页和第 1 页的低位地址加 1，只要不为“0”，执行 BNE 指令继续循环，这样一直到计满 FF 为止，然后计数器再加 1（实际上内存单元加 1），变成 00，执行 BNE 指令的下一条指令，使第 2 页和第 1 页的高位地址加 1，只要高位地址未到 40，都转上去（转 \$ 0300）再继续循环，若累加器 A 中的值为 40 时，则结束。本程序的一个特点是，不采用明显的计数器计数方式。

为了检验程序 N40 合并图形，可以编一个 BASIC 程序控制：

```

10 D$ = CHR$(4)
20 PRINT D$"BLOAD PIC 1,A$2000"
30 PRINT D$"BLOAD PIC 2,A$4000"
40 PRINT D$"BLOAD N40,A$300"
50 CALL 768
60 HGR : POKE - 16302,0
70 FOR I = 1 TO 2000: NEXT I
80 TEXT : HOME : END

```

(4) 先变址 (X) 间接寻址

采用先变址 (X) 间接寻址方式的取、送数指令分别为 LDA (\$ 00, X) 和 STA (\$ 02, X), 它们都是两字节指令, 其中括号中的 \$ 00, \$ 02, 均系零页地址, 同前面介绍一样, 称作 IND, 而 X 是指变址寄存器 X。

这种寻址方式是指先以 X 作为变址寄存器和零页基地址 IND 相加 $IND+X$ 。但是这个变址计算所得到的还只是操作数的间接地址, 还必须再经过两次间接寻址, 才能得到有效地址。第一次是对 $IND+X$ 间址得到有效地址低 8 位, 第二次再对 $IND+X+1$ 间址得到有效地址高 8 位。

例如, 取数指令 LDA (\$ 00, X), 其机器码为 A1 00, 若已知变址寄存器 $X=02$, 存贮单元 $(02)=FF$, $(03)=1F$, 则根据先变址 (X) 间接寻址方式的规定, 执行这条指令的操作数地址低 8 位是 $(00+X) = (00+02) = (02) = FF$, 操作数地址高 8 位是 $(00+X+1) = (00+02+1) = 03 = 1F$, 由此最后得到操作数有效地址为: 1FFF。所以指令 LDA (\$ 00, X) 的功能是 1FFF 地址单元中的数取出来送到累加器 A 中。

至于送数指令的寻址原理同取数指令, 但最后的结果有差异, 不是把计算出来的有效地址的内容送到累加器 A 中, 而是把 A 中的内容送入有效地址中。

用先变址 (X) 间接寻址方式编制的图形合并程序见 N41。

N41:

0300-	A9 FF	LDA	#\$FF
0302-	B5 00	STA	\$00
0304-	B5 02	STA	\$02
0306-	A9 1F	LDA	#\$1F
0308-	B5 03	STA	\$03
030A-	A9 3F	LDA	#\$3F

030C-	B5 01	STA	\$01
030E-	E6 00	INC	\$00
0310-	D0 02	BNE	\$0314
0312-	E6 03	INC	\$03
0314-	E6 02	INC	\$02
0316-	D0 02	BNE	\$031A
0318-	E6 01	INC	\$01
031A-	A2 00	LDX	##00
031C-	A1 00	LDA	(\$00,X)
031E-	F0 02	BEQ	\$0322
0320-	B1 02	STA	(\$02,X)
0322-	A9 3F	LDA	##3F
0324-	C5 03	CMP	\$03
0326-	D0 E6	BNE	\$030E
0328-	A9 FF	LDA	##FF
032A-	C5 00	CMP	\$00
032C-	D0 E0	BNE	\$030E
032E-	8D 50 C0	STA	\$C050
0331-	8D 52 C0	STA	\$C052
0334-	8D 54 C0	STA	\$C054
0337-	8D 57 C0	STA	\$C057
033A-	60	RTS	

程序 N41 比较长，易读性也不够好，但所有指令都是我们介绍过的，分析从略。

运行 N41 前，应先调两幅图形进内存，然后执行 CALL768↓，即可看到合并图形。

至此，我们介绍了图形合并的全部程序，事实上，还远远不止这几种，因为不同的程序员设计思想各异，选用寻址方式和指令不同，因而编制出来的程序会形形色色，但总的原理是一样的，即送非“0”值。

最后，再给出一个程序，供有兴趣的读者思考，程序中请注意 ORA 指令，它的功能是存储器同累加器相“或”，结果送累加器，即 $AVM \rightarrow A$ ，这是一条逻辑运算指令，用在图形合并的程序中，什么时候可以，什么时候不行，请用各种画面的图形，多试验几次，从中体会程序的编制原理和应该改

进的地方。见程序 N40-1。

N40-1:

0300-	A9 FF	LDA	#\$FF
0302-	85 06	STA	\$06
0304-	85 08	STA	\$08
0306-	A9 1F	LDA	#\$1F
0308-	85 07	STA	\$07
030A-	A9 3F	LDA	#\$3F
030C-	85 09	STA	\$09
030E-	E6 06	INC	\$06
0310-	D0 02	BNE	\$0314
0312-	E6 07	INC	\$07
0314-	E6 08	INC	\$08
0316-	D0 02	BNE	\$031A
0318-	E6 09	INC	\$09
031A-	A2 00	LDX	#\$00
031C-	A1 06	LDA	(\$06,X)
031E-	01 08	DRA	(\$08,X)
0320-	81 08	STA	(\$08,X)
0322-	A9 3F	LDA	#\$3F
0324-	C5 07	CMP	\$07
0326-	D0 E6	BNE	\$030E
0328-	A9 FF	LDA	#\$FF
032A-	C5 06	CMP	\$06
032C-	D0 E0	BNE	\$030E
032E-	8D 50 C0	STA	\$C050
0331-	8D 52 C0	STA	\$C052
0334-	8D 55 C0	STA	\$C055
0337-	8D 57 C0	STA	\$C057
033A-	60	RTS	

七、图形技巧原理分析（五）

本章介绍多幅图形联动显示的几个实用程序。使文字或图象在屏幕上移动，是编制教学辅助软件或游戏程序中常用的一种技巧。而在高分辨图形显示的一个页面上，实现两幅、三幅、五幅图形或文字的联动显示，不仅画面丰富多采，而且十分有用。例如对一个软件进行文字菜单的说明；对一个游戏程序使用方法的说明；对一节教学课进行系统讲解的说明等等。由于这些文字或教学图形的说明，信息量大，占用内存多，往往一、二个存贮页面不够用，所以解决多幅文字资料和图形画面的联动显示，有特殊意义，且由于显示的连贯性和合理的衔接，叫人感到是一个整体而显得更为自然逼真。

关于联动显示的详细原理分析，我们已在《中华学习机图形管理》一书中已有介绍，此处从略。

1. 双幅图形或文字的联动显示

整个程序分主程序（LD-33，BASIC语言编制）和两个子程序（LD-3，UPDOWN，机器语言编制）两大部份。

机器语言子程序 UPDOWN，存贮在 \$300~\$31D 中，它是计算高分辨图形第一页地址的，键入 POKE 6, 0: POKE 7, 12: POKE 8, 192: POKE 9, 12 后，再执行 CALL 768，即可在 \$0C00~\$0D7F 中，看到高分辨图形页 1 的寻址结

构。

机器语言子程序 LD-3, 是实现两幅图形联在一起运动的程序, 它控制第一页的图形先向上移动显示, 紧跟着第二页图形也随之向上移动, 两幅图形之间没有任何间隙, 然后不断往复。这段机器语言存贮在 \$8000~\$807F 中。

为了方便使用, 用 BASIC 程序 LD-33 实现对全过程的控制, 它既可以把图形资料 (本例是 PIC 1 和 MLW-4) 调进高分辨率第 1 和第 2 页面内, 也实现对第 1 页图形地址的计算和控制两幅画面的联动。

运行方法十分简单, RUN LD-33 即可, 而要停止, 请按 CTRL-RESET。

机器语言子程序 LD-3 是整个程序的主体和核心。其作用如上面亦已指出, 实现两幅画面的联动。其原理简述如下: 把第一页图形的第一行信息压入推栈, 第二行移至第一行显示, 第三行移至第二行显示, 以后逐行向前搬家……, 而第二页的第一行移至第一页的最后一行, 并实现上述推移过程, 当两幅画面全部显示完成后, 原第一页第一行的信息弹出推栈, 并移至第二页的最后一行内存中, 与此同时, 第一页第二行的信息再压入推栈, 以后重复上述过程, 从而实现双幅图形循环联动显示。

主程序: LD-33:

```
10 D$ = CHR$(4)
20 PRINT D$; "BLOAD UPDOWN"
30 PRINT D$; "BLOAD PIC 1,A$2000"

40 PRINT D$; "BLOAD MLW-4,A$4000"

50 POKE 6,0: POKE 7,12: POKE 8,1
   92: POKE 9,12
```

```

60 POKE 230,32
70 CALL 768
80 PRINT D$;"BLOAD LD-3"
90 CALL 32871

```

子程序 1: UPDOWN;

```

0300- A9 C0 A0 00 A2 00 20 11
0308- F4 A0 C0 A5 26 91 06 A5
0310- 27 91 08 EE 01 03 EE 0A
0318- 03 C0 BF 90 E3 60

0300- A9 C0 LDA #$C0
0302- A0 00 LDY #$00
0304- A2 00 LDX #$00
0306- 20 11 F4 JSR $F411
0309- A0 C0 LDY #$C0
030B- A5 26 LDA $26
030D- 91 06 STA ($06),Y
030F- A5 27 LDA $27
0311- 91 08 STA ($08),Y
0313- EE 01 03 INC $0301
0316- EE 0A 03 INC $030A
0319- C0 BF CPY #$BF
031B- 90 E3 BCC $0300
031D- 60 RTS

```

子程序 2: LD-3;

```

8000- A9 00 B5 1F A2 00 BD C0
8008- 0C B5 07 BD 00 0C B5 06
8010- E8 BD C0 0C B5 09 BD 00
8018- 0C B5 08 E0 01 D0 08 A0
8020- 27 B1 06 48 B8 10 FA A0
8028- 27 B1 08 91 06 B8 10 F9
8030- E0 BF D0 D2 A5 08 B5 06
8038- A5 09 B5 07 A6 1F BD C0
8040- 0C 18 69 20 B5 09 BD 00
8048- 0C B5 08 A0 27 B1 08 91
8050- 06 B8 10 F9 A0 00 68 91

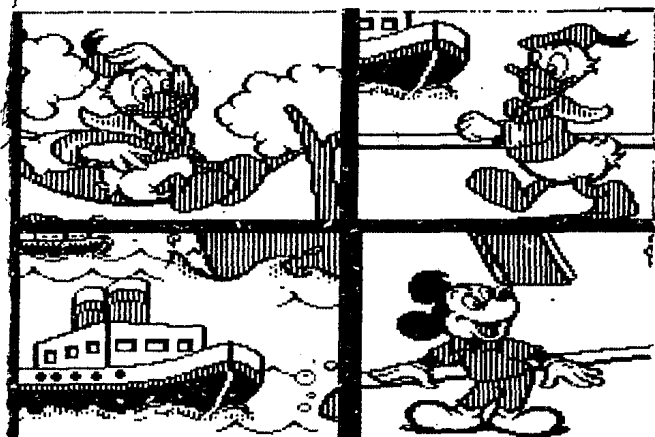
```

```

8058- 08 C8 C0 28 90 F8 E6 1F
8060- A5 1F C9 C0 D0 9E 60 AD
8068- 54 C0 AD 50 C0 AD 57 C0
8070- AD 52 C0 AD 10 C0 20 00
8078- 80 AD 00 C0 10 F5 60 FF

```

联动显示的瞬间画面：



2. 三幅画面的联动显示

运行程序 LD3-1，可以实现调进内存的三幅画面联动显示，其中要调用 LD3 机器语言子程序。LD3 机器语言子程序存贮在 \$ 8000—\$ 82BF 中。三幅画面分别名为 C1, C2, C3，调进内存时，应将它们各自存在 \$ 2000—\$ 3FFF、\$ 4000—\$ 5FFF 和 \$ 6000—\$ 7FFF 中。如果不用程序 LD3-1，也可以在三幅图形调进内存后，在监控状态下键入 8089G✓。

程序 LD3-1 清单：

```

10 REM LD3-1,*80896
20 D$ = CHR$(4)
30 PRINT D$"BLOAD C1,A#2000"
40 PRINT D$"BLOAD C2,A#4000"
50 PRINT D$"BLOAD C3,A#6000"
60 PRINT D$"BLOAD LD3,A#8000"
70 CALL 32905

```

程序 LD3 清单:

```

8000- A9 00 85 1E A9 00 85 1F
8008- A2 00 BD 00 B1 85 07 BD
8010- 00 82 85 06 E8 BD 00 B1
8018- 85 09 BD 00 82 85 08 E0
8020- 01 D0 08 A0 27 B1 06 48
8028- 88 10 FA A0 27 B1 08 91
8030- 06 88 10 F9 E0 BF D0 D2
8038- A5 1E C9 00 D0 08 A9 20
8040- 8D 5A B0 4C 4B 80 A9 40
8048- 8D 5A B0 A5 08 85 06 A5
8050- 09 85 07 A6 1F BD 00 B1
8058- 18 69 20 85 09 BD 00 82
8060- 85 08 A0 27 B1 08 91 06
8068- 88 10 F9 A0 00 68 91 08
8070- C8 C0 28 90 F8 E6 1F A5
8078- 1F C9 C0 D0 BB E6 1E A5
8080- 1E C9 02 D0 01 60 4C 04
8088- 80 4C 00 80 AD 50 C0 AD
8090- 57 C0 AD 52 C0 AD 10 C0
8098- 20 00 B0 AD 00 C0 10 F5
80A0- 60 00 00 00 00 00 00 00
80A8- 00 00 00 00 00 00 00 00
80B0- 00 00 00 00 00 00 00 00
80B8- 00 00 00 00 00 00 00 00
80C0- 00 00 00 00 00 00 00 00
80C8- 00 00 00 00 00 00 00 00
80D0- 00 00 00 00 00 00 00 00
80D8- 00 00 00 00 00 00 00 00
80E0- 00 00 00 00 00 00 00 00
80E8- 00 00 00 00 00 00 00 00
80F0- 00 00 00 00 00 00 00 00
80FB- 00 00 00 00 00 00 00 00
8100- 20 24 28 2C 30 34 38 3C
8108- 20 24 28 2C 30 34 38 3C
8110- 21 25 29 2D 31 35 39 3D
8118- 21 25 29 2D 31 35 39 3D
8120- 22 26 2A 2E 32 36 3A 3E

```


8128-	22	26	2A	2E	32	36	3A	3E
8130-	23	27	2B	2F	33	37	3B	3F
8138-	23	27	2B	2F	33	37	3B	3F
8140-	20	24	2B	2C	30	34	3B	3C
8148-	20	24	2B	2C	30	34	3B	3C
8150-	21	25	29	2D	31	35	39	3D
8158-	21	25	29	2D	31	35	39	3D
8160-	22	26	2A	2E	32	36	3A	3E
8168-	22	26	2A	2E	32	36	3A	3E
8170-	23	27	2B	2F	33	37	3B	3F
8178-	23	27	2B	2F	33	37	3B	3F
8180-	20	24	2B	2C	30	34	3B	3C
8188-	20	24	2B	2C	30	34	3B	3C
8190-	21	25	29	2D	31	35	39	3D
8198-	21	25	29	2D	31	35	39	3D
81A0-	22	26	2A	2E	32	36	3A	3E
81A8-	22	26	2A	2E	32	36	3A	3E
81B0-	23	27	2B	2F	33	37	3B	3F
81B8-	23	27	2B	2F	33	37	3B	3F
81C0-	20	20	20	26	31	3D	43	41
81C8-	54	41	4C	4F	47	20	26	32
81D0-	3D	52	55	4E	20	26	33	3D
81D8-	4C	49	53	54	20	26	34	3D
81E0-	43	41	4C	4C	2D	31	35	31
81E8-	26	35	3D	4B	4F	4D	45	26
81F0-	36	3D	54	52	41	43	45	20
81F8-	26	37	3D	4E	4F	54	52	41
8200-	00	00	00	00	00	00	00	00
8208-	80	80	80	80	80	80	80	80
8210-	00	00	00	00	00	00	00	00
8218-	80	80	80	80	80	80	80	80
8220-	00	00	00	00	00	00	00	00
8228-	80	80	80	80	80	80	80	80
8230-	00	00	00	00	00	00	00	00
8238-	80	80	80	80	80	80	80	80
8240-	28	28	28	28	28	28	28	28
8248-	AB	AB	AB	AB	AB	AB	AB	AB
8250-	28	28	28	28	28	28	28	28
8258-	AB	AB	AB	AB	AB	AB	AB	AB
8260-	28	28	28	28	28	28	28	28
8268-	AB	AB	AB	AB	AB	AB	AB	AB

```

8270- 28 28 28 28 28 28 28 28
8278- A8 A8 A8 A8 A8 A8 A8 A8
8280- 50 50 50 50 50 50 50 50
8288- D0 D0 D0 D0 D0 D0 D0 D0
8290- 50 50 50 50 50 50 50 50
8298- D0 D0 D0 D0 D0 D0 D0 D0
82A0- 50 50 50 50 50 50 50 50
82A8- D0 D0 D0 D0 D0 D0 D0 D0
82B0- 50 50 50 50 50 50 50 50
82B8- D0 D0 D0 D0 D0 D0 D0 D0

```

*

3. 五幅图形的联动显示

众所周知，中华学习机内存容量有限，用它处理图形时，至多只能处理三幅画面。对于一些信息量比较大，内容比较丰富的图形和文字资料来说，常常显得不够用。巧妙地利用中华学习机内的 16K RAM 卡，可以多存两幅图形，此外再在内存中存上三幅图形资料，这样，中华学习机就可以处理五幅图形。

五幅图形的联动显示，由三个程序组成：程序①，实现五幅图形的联动显示；程序②，将两幅图形写入 RAM 卡；程序③，为演示用的 BASIC 程序。

程序①：

```

8000-  A9 00      LDA  #$00
8002-  85 1E      STA  $1E
8004-  A9 00      LDA  #$00
8006-  85 1F      STA  $1F
8008-  A2 00      LDX  #$00
800A-  BD 00 81   LDA  $B100,X

```

800D-	85 07	STA	\$07
800F-	BD 00 82	LDA	\$8200,X
8012-	85 06	STA	\$06
8014-	EB	INX	
8015-	BD 00 81	LDA	\$8100,X
8018-	85 09	STA	\$09
801A-	BD 00 82	LDA	\$8200,X
801D-	85 08	STA	\$08
801F-	E0 01	CPX	##01
8021-	D0 08	BNE	\$802B
8023-	A0 27	LDY	##27
8025-	B1 06	LDA	(\$06),Y
8027-	48	PHA	
8028-	88	DEY	
8029-	10 FA	BPL	\$8025
802B-	A0 27	LDY	##27
802D-	B1 08	LDA	(\$08),Y
802F-	91 06	STA	(\$06),Y
8031-	88	DEY	
8032-	10 F9	BPL	\$802D
8034-	E0 BF	CPX	##BF
8036-	D0 D2	BNE	\$800A
8038-	A5 1E	LDA	\$1E
803A-	C9 00	CMP	##00
803C-	D0 08	BNE	\$8046
803E-	A9 20	LDA	##20
8040-	8D 8F 80	STA	\$808F
8043-	4C 6F 80	JMP	\$806F
8046-	C9 01	CMP	##01
8048-	D0 08	BNE	\$8052
804A-	A9 40	LDA	##40
804C-	8D 8F 80	STA	\$808F
804F-	4C 6F 80	JMP	\$806F
8052-	C9 02	CMP	##02
8054-	D0 0E	BNE	\$8064
8056-	AD 83 C0	LDA	\$C083
8059-	AD 83 C0	LDA	\$C083
805C-	A9 B0	LDA	##B0
805E-	8D 8F 80	STA	\$808F
8061-	4C 6F 80	JMP	\$806F
8064-	AD 8B C0	LDA	\$C08B
8067-	AD 8B C0	LDA	\$C08B

806A-	A9 D0	LDA	##D0
806C-	8D 8F 80	STA	\$80BF
806F-	A5 08	LDA	\$08
8071-	85 06	STA	\$06
8073-	A5 09	LDA	\$09
8075-	85 07	STA	\$07
8077-	A6 1F	LDX	\$1F
8079-	BD 00 81	LDA	\$8100,X
807C-	A4 1E	LDY	\$1E
807E-	C0 03	CPY	##03
8080-	D0 0B	BNE	\$80BD
8082-	C9 30	CMF	##30
8084-	90 07	BCC	\$80BD
8086-	48	PHA	
8087-	A9 A0	LDA	##A0
8089-	8D 8F 80	STA	\$80BF
808C-	68	PLA	
808D-	18	CLC	
808E-	69 A0	ALC	##A0
8090-	85 09	STA	\$09
8092-	BD 00 32	LDA	\$8200,X
8095-	95 08	STA	\$08
8097-	A0 27	LDY	##27
8099-	B1 08	LDA	(\$08),Y
809B-	91 06	STA	(\$06),Y
809D-	88	DEY	
809E-	10 F9	BFL	\$8099
80A0-	A0 00	LDY	##00
80A2-	68	PLA	
80A3-	91 08	STA	(\$08),Y
80A5-	C8	INY	
80A6-	C0 28	CPY	##28
80A8-	90 FB	BCC	\$80A2
80AA-	E6 1F	INC	\$1F
80AC-	A5 1F	LDA	\$1F
80AE-	C9 C0	CMF	##C0
80B0-	D0 0F	BNE	\$80C1
80B2-	E6 1E	INC	\$1E
80B4-	A5 1E	LDA	\$1E
80B6-	C9 04	CMF	##04
80B8-	D0 04	BNE	\$80BE
80BA-	AD 81 C0	LDA	\$C081
80BD-	60	RTS	
80BE-	4C 04 80	JMP	\$8004

80C1-	4C 08 B0	JMP	\$8008
80C4-	A9 20	LDA	##20
80C6-	85 E6	STA	\$E6
80C8-	A2 00	LDX	##00
80CA-	8A	TXA	
80CB-	48	PHA	
80CC-	20 11 F4	JSR	\$F411
80CF-	68	PLA	
80D0-	AA	TAX	
80D1-	A5 26	LDA	\$26
80D3-	9D 00 82	STA	\$8200,X
80D6-	A5 27	LDA	\$27
80D8-	9D 00 81	STA	\$8100,X
80DB-	E8	INX	
80DC-	E0 C0	CPX	##C0
80DE-	D0 EA	BNE	\$80CA
80E0-	AD 54 C0	LDA	\$C054
80E3-	AD 50 C0	LDA	\$C050
80E6-	AD 57 C0	LDA	\$C057
80E9-	AD 52 C0	LDA	\$C052
80EC-	AD 10 C0	LDA	\$C010
80EF-	20 00 80	JSR	\$8000
80F2-	60	RTS	

程序②

8300-	A9 06	LDA	##06
8302-	8D 39 83	STA	\$8339
8305-	8D 58 83	STA	\$8358
8308-	A9 08	LDA	##08
830A-	8D 3B 83	STA	\$833B
830D-	8D 5A 83	STA	\$835A
8310-	4C 23 83	JMP	\$8323
8313-	A9 06	LDA	##06
8315-	8D 3B 83	STA	\$833B
8318-	8D 5A 83	STA	\$835A
831B-	A9 08	LDA	##08
831D-	8D 39 83	STA	\$8339
8320-	8D 58 83	STA	\$8358
8323-	AE 83 C0	LDX	\$C083
8326-	AE 83 C0	LDX	\$C083
8329-	A9 D0	LDA	##D0
832B-	85 07	STA	\$07
832D-	A9 20	LDA	##20
832F-	85 09	STA	\$09

8331-	A9 00	LDA	##00
8333-	85 06	STA	\$06
8335-	85 08	STA	\$08
8337-	A8	TAY	
8338-	B1 06	LDA	(\$06),Y
833A-	91 08	STA	(\$08),Y
833C-	88	DEY	
833D-	D0 F9	BNE	\$8338
833F-	E6 07	INC	\$07
8341-	E6 09	INC	\$09
8343-	A5 09	LDA	\$09
8345-	C9 50	CMF	##50
8347-	D0 EF	BNE	\$8338
8349-	AE 8B C0	LDX	\$C08B
834C-	AE 8B C0	LDX	\$C08B
834F-	A9 D0	LDA	##D0
8351-	85 07	STA	\$07
8353-	A9 50	LDA	##50
8355-	85 09	STA	\$09
8357-	B1 06	LDA	(\$06),Y
8359-	91 08	STA	(\$08),Y
835B-	88	DEY	
835C-	D0 F9	BNE	\$8357
835E-	E6 07	INC	\$07
8360-	E6 09	INC	\$09
8362-	A5 09	LDA	\$09
8364-	C9 60	CMF	##60
8366-	D0 EF	BNE	\$8357
8368-	AD B1 C0	LDA	\$C081
836B-	60	RTS	

程序③

```

10 D$ = CHR$ (4)
20 PRINT D$"BLOADCC1,A$2000"
30 PRINT D$"BLOADRAM1,A$8300"
40 CALL 33555
50 PRINT D$"BLOADCC2,A$2000"
60 PRINT D$"BLOADP30,A$8000"
70 CALL 32964
80 TEXT : HOME : END

```

八、文本、汉字、图形的清屏技巧

本章介绍文本状态、汉字状态、高分辨图形状态下的各种清屏技巧，内容十分丰富。既有 BASIC 语言编制的程序，也有 6502 机器语言编制的程序，共有 40 余种不同的清屏方式。任意选择本章中的任一种类型的清屏技巧，重新移植到您的程序或软件中，将使您的图形软件变得更加生动，丰富多采。它不仅使您的软件别具一格，耳目一新，而且使您的画面形态各异，栩栩如生。

在您掌握了这些清屏技巧的原理后，您完全可以作一些改动和创新，从而设计出更加绚丽多采，五彩缤纷的图案来。

1. 文本状态

这里介绍的是一个表演程序，它可以用多种方式将文本内容清除干净，生动活泼，自然流畅。

程序运行后，屏幕上写满“B”字符，然后，出现问号？此时键入 1、2、3……9、10 数字中的任一数码，就表演一种清屏方式，而要停止运行时，键入 -1 并回车即可。

整个程序采用模块化结构编程，60 句实现总控，由键盘输入的 K 值，决定转向对应的子程序模块，执行完相应的子程序（对应一种清屏方式）后，自动返回总控，再等待键盘输入，选择其它的清屏方式。

程序中采用三种方式擦试屏幕：一是用打印空字符 CHR\$(32) 的方法，将屏幕擦干净；二是用 CALL-868，调用监控子程序，清除当前行（其功能同 ESC-E）；三是调用 CALL-936，它的功能与 HOME 命令相同，也是调监控清屏子程序。

本程序共有 10 种清屏方式：

- 从上到下一行一行清屏（80—130 句）
- 从下到上逐行擦除（140—190 句）
- 从上、下同时向中间清屏（200—250 句）
- 从右到左逐列清除（340—410 句）
- 从左到右逐列清屏（420—490 句）
- 从中间向左、右两边清除（500—550 句）
- 从中间向上、下两边清除（560—610 句）
- 从四个方向向中间清屏（620—680 句）
- 将屏幕分成几部份依次清除（690—760 句）
- 快速将全屏幕清除（260—330 句）

整个程序的运行过程十分有趣。例如键入 6↵，从屏幕中央向左、右两边同时清屏，酷似舞台上拉幕一样；又如键入 9↵，将屏幕分为四个窗格，每格 6 行依次清除，就像拉起了一个百叶窗。

实际上，本程序只要稍加改动每一个清屏子程序中的个别语句，都会有不同方式的清屏。如将 690 句的循环改成 FOR I=5 TO 0 STEP -1，则变成一个向上翻的百叶窗；又如将 620 句的循环改为 FOR I=12 TO 1 STEP -1，则先是抹掉屏幕上半部，然后下半部由中间向左、右分开清屏。

本程序适用中华学习机 CEC-I，中华学习机 CEC-M，紫金-II，紫金-II-A，紫金-II-B，也适用 APPLE-II 及其兼

容机。

但是，应该特别指出的是，本程序不能将高分辨图形擦除。程序清单：

```
10 A$ = CHR$(32)
20 REM FIRST-2
30 FOR I = 1 TO 960: PRINT "B";: NEXT
  I
40 INPUT K
50 IF K = - 1 THEN END
60 ON K GOSUB 80,140,200,340,420,
  500,560,620,690,260
70 GOTO 30
80 FOR I = 1 TO 24
90 VTAB I
100 CALL - 86B
110 FOR X = 1 TO 300: NEXT X
120 NEXT I
130 RETURN
140 FOR I = 24 TO 1 STEP - 1
150 VTAB I
160 CALL - 86B
170 FOR X = 1 TO 300: NEXT X
180 NEXT I
190 RETURN
200 X = 0:Y = 24:P = - 86B
210 X = X + 1:Y = Y - 1
220 VTAB X: CALL P: VTAB Y: CALL
  P
230 IF X = 13 THEN RETURN
240 FOR T = 1 TO 500: NEXT T
250 GOTO 210
260 FOR X = 1 TO 40
270 FOR Y = 1 TO 24
280 HTAB X: VTAB Y
290 CALL - 86B
300 NEXT Y
310 NEXT X
320 PRINT
330 RETURN
```

```

340 A$ = CHR$ (32)
350 FOR X = 40 TO 1 STEP - 1
360 FOR Y = 24 TO 1 STEP - 1
370 HTAB X: VTAB Y
380 PRINT A$;
390 NEXT Y
400 NEXT X
410 RETURN
420 A$ = CHR$ (32)
430 FOR X = 1 TO 40
440 FOR Y = 1 TO 24
450 HTAB X: VTAB Y
460 PRINT A$;
470 NEXT Y
480 NEXT X
490 RETURN
500 FOR I = 1 TO 20
510 X = 20 - I
520 POKE 32,X: POKE 33,(2 * I): CALL
    - 936
530 FOR J = 1 TO 200: NEXT J
540 NEXT I
550 RETURN
560 FOR I = 12 TO 23
570 HTAB I: VTAB I: CALL - 868
580 VTAB (24 - I): CALL - 868
590 FOR J = 1 TO 200: NEXT J
600 NEXT I
610 RETURN
620 FOR I = 1 TO 12: POKE 35,I: CALL
    - 936
630 POKE 34,(24 - I): CALL, - 936

640 POKE 35,24: POKE 34,0: POKE 3
    3,I: POKE 32,(I - 1): CALL -
    936
650 POKE 32,(40 - (2 * I - 1)): CALL
    - 936: POKE 32,0: POKE 33,40

```

```

660 FOR J = 1 TO 80: NEXT J
670 NEXT I
680 HOME : RETURN
690 HTAB 1: FOR I = 0 TO 5
700 VTAB I + 1: CALL - 868
710 VTAB I + 7: CALL - 868
720 VTAB I + 13: CALL - 868
730 VTAB I + 19: CALL - 868
740 FOR J = 1 TO 200: NEXT J
750 NEXT I
760 RETURN

```

2. 高分辨率图形

高分辨率图形的清屏方法较多，这里介绍的是一个较为新颖有趣的清屏程序，它可以将高分辨率图形用多种方式清除干净，随意选择本程序提供的任意几种清屏技巧，重新组织程序，将使您的图形软件别具一格，耳目一新。

为使高分辨图形的清屏更加多样生动，使图形或教学软件表演更加丰富多采，使多个画面间的连接和转换更加自然流畅，单一的清屏命令显得单调和泛味，本程序巧妙地利用 H PLOT 等语句，用控制循环的方法，或者改变循环变量的初值、终值、步长；或者变化绘图语句的格式和参数；或者两者兼而有之并采用几重循环及条件判断语句，从而提供 18 种不同方式的清屏模式，形态各异，栩栩如生。

整个程序采用模块化结构编程，由于采用总控的方式，其操作显得特别简单。程序运行后，迅速显示一幅图形（例如原先存于磁盘中的图形 PIC 1），然后键入 1, 2, 3, ……17, 18 中的任一个数字，就表演一种清屏方式，而要停止运行，键入数字 0 并回车。

当画面被一种方式的子程序清屏后，由于程序中自动控

制，原先的画面又迅速地显示出来，等待键盘的其它数字输入，接着再表演一种清屏方式，这里的自动控制，实际上用了图象搬家的技巧。

本程序共有 18 种不同方式的清屏：

- 从上到下
- 从下到上
- 从右到左
- 从左到右
- 从中间向左、右两边
- 从两边向中间
- 从中间向上、下
- 从上、下同时向中间
- 从四角向中间
- 从中间向四角
- 从上到下拉百叶窗
- 从左到右拉百叶窗
- 从左上、右下同时反方向
- 从左上、右下到中间，然后从右上、左下向中间
- 从左到右，从上到下双向拉百叶窗
- 从左到右，从上到下变化图案
- 从左到右暗条纹
- 从右到左暗条纹

例如键入 6↵，从左、右两边向中间清屏，酷似演戏中闭幕一样；又如键入 11↵，好像从上到下拉起了一个百叶窗。

实际上，本程序只要稍加改动每一个子程序中的个别语句，还可以有不少清屏方式，读者可以反复试验有关循环语句的初、终值或改变步长，将会发现许多妙趣横生的清屏技

巧。

本程序同样适用于中华学习机 CEC-I, CEC-M, 紫金-II 系列机, 也适用于 APPLE-II 及其兼容机。

程序清单:

```
10 HGR : POKE - 16302,0
20 D$ = CHR$ (4)
30 PRINT D$;"BLOAD PIC 1"
40 INPUT "X= ";X
50 IF X = 0 THEN TEXT : HOME : END

60 ON X GOSUB 100,200,300,400,50
   0,600,700,800,900,1000,1100,
   1200,1300,1400,1500,1600,170
   0,1800
70 GOTO 10
100 FOR I = 1 TO 500: NEXT
110 HCOLOR= 3: FOR I = 0 TO 190
120 HPLLOT 0,I TO 279,I: NEXT
130 HCOLOR= 0
140 FOR I = 1 TO 500: NEXT : TEXT
   : HOME : RETURN
200 HCOLOR= 3: FOR I = 190 TO 0 STEP
   - 2: HPLLOT 0,I TO 279,I: NEXT
   : HCOLOR= 0
210 FOR I = 1 TO 500: NEXT : TEXT
   : HOME : RETURN
300 FOR I = 1 TO 500: NEXT

310 HCOLOR= 3: FOR I = 279 TO 0 STEP
   - 1
320 HPLDT I,0 TO I,190: NEXT
330 HCOLOR= 0
340 FOR I = 1 TO 500: NEXT : TEXT
   : HOME : RETURN
400 HCOLOR= 3: FOR I = 140 TO 0 STEP
   - 1
410 HCOLOR= 3: FOR I = 0 TO 279:
   HPLLOT I,0 TO I,190: NEXT : HCOLOR= 0
420 FOR I = 1 TO 500: NEXT : TEXT
```

```

      : HOME : RETURN
500  FOR I = 1 TO 500: NEXT
510  HCOLOR= 3: FOR I = 140 TO 0 STEP
      - 1
520  HPLLOT I,0 TO I,190: HPLLOT 27
      9 - I,0 TO 279 - I,190: NEXT

530  HCOLOR= 0
540  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
600  HCOLOR= 3: FOR I = 0 TO 140:
      HPLLOT I,0 TO I,190: HPLLOT 2
      79 - I,0 TO 279 - I,190: NEXT
      : HCOLOR= 0

610  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
700  FOR I = 1 TO 500: NEXT
710  HCOLOR= 3: FOR I = 0 TO 95
720  HPLLOT 0,95 - I TO 279,95 - I
      : HPLLOT 0,95 + I TO 279,95 +
      I: NEXT
730  HCOLOR= 0
740  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
800  FOR I = 1 TO 500: NEXT
810  HCOLOR= 3: FOR I = 0 TO 95
820  HPLLOT 0,I TO 279,I: HPLLOT 0,
      190 - I TO 279,190 - I: NEXT

830  HCOLOR= 0
840  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
900  HCOLOR= 3: FOR I = 0 TO 140:
      HPLLOT I,I TO 279 - I,I TO 2
      79 - I,190 - I TO I,190 - I TO
      I,I: NEXT : HCOLOR= 0
910  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1000 HCOLOR= 3: FOR I = 140 TO 0
      STEP - 1: HPLLOT I,I TO 279
      - I,I TO 279 - I,190 - I TO
      I,190 - I TO I,I: NEXT : HCOLOR=
      0

```

```

1010  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1100  HCOLOR= 3: FOR I = 0 TO 32
1110  FOR J = 0 TO 160 STEP 32
1120  IF J = 160 THEN J = J - 1
1130  HPLOT 0,I + J TO 279,I + J
1140  NEXT J: NEXT I
1150  HCOLOR= 0
1160  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1200  HCOLOR= 3: FOR I = 0 TO 35
1210  FOR J = 0 TO 245 STEP 35
1220  IF J = 245 THEN J = J - 1
1230  HPLOT I + J,0 TO I + J,191
1240  NEXT J: NEXT I
1250  HCOLOR= 0
1260  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1300  HCOLOR= 3: FOR I = 0 TO 191

1310  HPLOT 0,I TO 140,I
1320  HPLOT 141,191 - I TO 279,19
1330  NEXT I: HCOLOR= 0
1340  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1400  HCOLOR= 3: FOR I = 0 TO 95

1410  HPLOT 0,I TO 140,I
1420  HPLOT 141,191 - I TO 279,19
1430  NEXT I
1440  FOR I = 0 TO 95
1450  HPLOT 0,191 - I TO 141,191 -
1460  HPLOT 141,I TO 279,I
1470  NEXT I: HCOLOR= 0
1480  FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1500  HCOLOR= 3: FOR I = 0 TO 17
1510  FOR J = 0 TO 245 STEP 35
1520  IF J = 245 THEN J = J - 1
1530  HPLOT I + J,0 TO I + J,191
1540  NEXT J: NEXT I

```

```

1550 FOR I = 0 TO 16
1560 FOR J = 0 TO 160 STEP 32
1570 IF J = 160 THEN J = J - 1
1580 HPLOT 0,I + J TO 279,I + J
1585 NEXT J: NEXT I
1590 HCOLOR= 0
1595 FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1600 HCOLOR= 3: FOR I = 0 TO 35
1605 FOR J = 0 TO 255 STEP 35
1610 IF J > 244 THEN J = 244
1620 HPLOT I + J,0 TO I + J,191
1630 HPLOT I + J,0 TO I + J,191
1640 HCOLOR= 0:K = J - INT (J /
      35) * 3
1650 IF K > = 160 THEN K = 159
1660 IF I > 32 AND K > = 159 THEN
      1680 /
1670 HPLOT 0,I + K TO 279,I + K
1680 HCOLOR= 3
1690 NEXT J: NEXT I
1692 HPLOT 0,0 TO 0,191 TO 279,1
      91
1694 FOR I = 1 TO 5500: NEXT : TEXT
      : HOME : RETURN
1700 HCOLOR= 0: FOR I = 0 TO 35
1710 FOR J = 0 TO 245 STEP 35
1720 IF J = 245 THEN J = J - 1
1730 HPLOT I + J,0 TO I + J,191
1740 NEXT J: NEXT I
1750 HCOLOR= 0
1760 FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN
1800 HCOLOR= 0: FOR I = 35 TO 0 STEP
      - 1
1810 FOR J = 245 TO 0 STEP - 35
      .
1820 IF J = 245 THEN J = J - 1
1830 HPLOT I + J,0 TO I + J,191
1840 NEXT J: NEXT I
1850 HCOLOR= 0
1860 FOR I = 1 TO 500: NEXT : TEXT
      : HOME : RETURN

```


3. 汉字状态

中华学习机中文状态的显示方式为高分辨图象方式，显示区使用高分辨第 2 页，因此，仍可以用高分辨绘图语句对文字或图形进行清屏。

本程序在设计思想、结构组织上和高分辨率图形清屏技巧程序十分相近，但有几点不同，其中最主要的是：

- 本程序一开始就确定了 X 和 Y 的坐标，它们分别是中文状态下水平方向和垂直方向坐标终值的一半，这样的最初设置，是为程序中各子程序坐标计算提供方便，从而使程序简捷，不需要每调用一次子程序，就设置一次 X、Y 值。

- 本程序也完全适用高分辨图形清屏，只要改动 X 和 Y 的坐标值，即取 $X=139$ ， $Y=95$ ，因而本程序通用性好。

- 本程序特意安排了 HCOLOR 语句，这为彩色显示器或彩色电视机的用户提供方便，用彩色线条或彩色图案清屏，使人感到色彩丰富，清晰动人，富有吸引力，而且清屏后也可以作为高分辨图形的彩色背景色。

- 本程序提供了 12 种图案清屏，设计水平较高，具有一定的艺术色彩和感应力，而且巧妙地改动各子程序中少数语句（主要是循环变量和步长），又会产生全新的美丽图案，别具一格，风采照人。

关于程序的说明以及那 12 种图案，这里均未解释，请将程序敲入机器并运行，您一定会感到满意。

最后说及一点，在引用本程序中任一清屏子程序加到您的软件中时，不要忘记在程序开始时加进 HGR2 语句，否则，HPLOT 等语句失效；同时，也不应忘记对 X、Y 坐标的置数。

清单:

```
10 HGR2 :X = 135:Y = 93: HCOLOR=
   3
20 D$ = CHR$ (4)
30 PRINT D$;"BLOAD MAP,A#4000"
40 K$ = "2000<4000.5FFFM N D823B"

50 FOR I = 1 TO LEN (K$): POKE
   511 + I, ASC ( MID$ (K$,I,1)
   ) + 128: NEXT I: POKE 72,0
60 CALL - 144
70 INPUT "K=";K
90 IF K = 0 THEN TEXT : HOME : END

90 ON K GOSUB 130,230,310,380,48
   0,580,630,670,780,840,890,94
   0
100 GOSUB 1010: CALL - 144
110 POKE - 16304,0: POKE - 162
   97,0: POKE - 16302,0: POKE
   - 16299,0
120 GOTO 70
130 FOR I = 0 TO X STEP 2
140 HPLLOT X + I,0 TO X - I,2 * Y

150 IF I > Y THEN 170
160 HPLLOT 2 * X,I + Y TO 0,Y - I
   : NEXT I
170 NEXT I
180 FOR I = 0 TO X STEP 2
190 HPLLOT 2 * X - I,2 * Y TO I,0

200 IF I > Y THEN 220
210 HPLLOT 2 * X,I TO 0,2 * Y - I
```

```

220 NEXT I: RETURN
230 FOR I = 0 TO X STEP 3
240 HPLOT X + I,0 TO X - I,2 * Y

250 IF I > Y THEN 270
260 HPLOT 2 * X,I + Y TO 0,Y - I

270 HPLOT 2 * X - I,2 * Y TO 1,0

280 IF I > Y THEN 300
290 HPLOT 2 * X,I TO 0,2 * Y - I

300 NEXT I: RETURN
310 FOR I = 0 TO X STEP 3
320 HPLOT X,0 TO X - I,Y TO X,2 *
    Y TO X + I,Y TO X,0
330 NEXT I: HCOLOR= 2
340 FOR I = 0 TO Y STEP 3
350 HPLOT 0,Y - I TO X,0 TO 2 *
    X,Y - I
360 HPLOT 0,I + Y TO X,2 * Y TO
    2 * X,I + Y
370 NEXT I: RETURN
380 FOR I = Y TO 0 STEP - 2
390 HPLOT 0,Y TO X,Y - I TO 2 *
    X,Y
400 HPLOT 0,Y TO X,Y + I TO 2 *
    X,Y

410 NEXT I: HCOLOR= 3
420 FOR I = Y TO 0 STEP - 2
430 HPLOT X - I,0 TO 0,Y - I
440 HPLOT X + I,0 TO 2 * X,Y - I

450 HPLOT X - I,2 * Y TO 0,Y + I

460 HPLOT X + I,2 * Y TO 2 * X,Y
    + I
470 NEXT I: RETURN
480 FOR I = 0 TO Y
490 HPLOT 0,Y TO X,Y - I TO 2 *
    X,Y

```

```

500 HPLOT 0,Y TO X,Y + I TO 2 *
    X,Y
510 NEXT I: HCOLOR= 3
520 FOR I = 0 TO Y
530 HPLOT X - I,0 TO 0,Y - I
540 HPLOT X + I,0 TO 2 * X,Y - I.

550 HPLOT X - I,2 * Y TO 0,Y + I

560 HPLOT X + I,2 * Y TO 2 * X,Y
    + I
570 NEXT I: RETURN
580 FOR I = X TO 0 STEP - 1
590 C = (2 * X - I) * Y / X
600 HPLOT 0,0 TO I,C TO 2 * X,2 *
    Y.
610 HPLOT 0,0 TO 2 * X - I,2 * Y
    - C TO 2 * X,2 * Y
620 NEXT I: RETURN
630 FOR I = X TO 0 STEP - 1
640 C = Y * I / X
650 HPLOT I,C TO 2 * X - I,C TO
    2 * X - I,2 * Y - C TO I,2 *
    Y - C TO I,C
660 NEXT I: RETURN
670 FOR I = X TO 0 STEP - 1
680 C = (2 * X - I) * Y / X
690 HCOLOR= 3
700 HPLOT 2 * X,2 * Y TO I,C
710 HCOLOR= 1
720 HPLOT 0,0 TO 2 * X - I,2 * Y
    - C
730 HCOLOR= 5
740 HPLOT 2 * X - I,2 * Y - I *
    Y / X TO 2 * X,0
750 HCOLOR= 6
760 HPLOT 0,2 * Y TO I,I * Y / X

770 NEXT I: RETURN
780 HCOLOR= 3
790 FOR I = 0 TO X STEP 5
800 C = (2 * X - I) * Y / X
810 HPLOT 0,0 TO 2 * X - I,2 * Y
    - C TO 2 * X,2 * Y

```

```

820 HPLOT 0,0 TO I,C TO 2 * X,2 *
    Y
830 NEXT I: RETURN
840 FOR I = 0 TO 125: C = INT (I
    / 2): HCOLOR= 1
850 HPLOT 0,C TO 45,I TO 91,C TO
    X,I TO 182,C TO 227,I TO 2 *
    X,C
860 HCOLOR= 3
870 HPLOT 0,2 * Y TO 0,2 * Y - I
    TO 45,2 * Y - C TO 91,2 * Y
    - I TO X,2 * Y - C TO 182,2
    * Y - I TO 227,2 * Y - C TO
    2 * X,2 * Y - I TO 2 * X,2 *
    Y
880 NEXT I: RETURN
890 FOR I = 125 TO 0 STEP - 2: C
    = INT (I / 2): HCOLOR= 1
900 HPLOT 0,C TO 45,I TO 91,C TO
    X,I TO 182,C TO 227,I TO 2 *
    X,C
910 HCOLOR= 3
920 HPLOT 0,2 * Y TO 0,2 * Y - I
    TO 45,2 * Y - C TO 91,2 * Y
    - I TO X,2 * Y - C TO 182,2
    * Y - I TO 227,2 * Y - C TO
    2 * X,2 * Y - I TO 2 * X,2 *
    Y
930 NEXT I: RETURN
940 FOR I = 68 TO 0 STEP - 2
950 A = X + I: B = X - I: C = I * Y
    / X
960 HPLOT A,C TO 2 * X - I,C TO
    2 * X - I,Y - C TO A,Y - C TO
    A,C
970 HPLOT I,C TO B,C TO B,Y - C TO
    I,Y - C TO I,C
980 HPLOT I,Y + C TO B,Y + C TO
    B,2 * Y - C TO I,2 * Y - C TO
    I,Y + C
990 HPLOT A,Y + C TO 2 * X - I,Y
    + C TO 2 * X - I,2 * Y - C TO
    A,2 * Y - C TO A,Y + C

```

```

1000 NEXT I: RETURN
1010 K$ = "4000<2000.3FFFM N D823
    G"
1020 FOR I = 1 TO LEN (K$): POKE
    511 + I, ASC ( MID$ (K$,I,1)
    ) + 128: NEXT I: POKE 72,0
1030 RETURN
1

```

U

4. 机器语言编制

(1) 窗口式显示与清屏

程序 P31 是一窗口式显示与清屏子程序，运行后，可将第二页的图形在第一页以窗口形式逐渐扩大显示，也可将第一页图形以窗口形式逐渐清掉。这就使图形显示具有趣味性和多样化。

原理分析如下：

- | | |
|--------------------|---|
| \$ 8000—\$ 8025 | 计算地址子程序。 |
| \$ 8026—\$ 804A | 窗口显示或清屏子程序。 |
| 其中 \$ 8026—\$ 802C | 调计算地址子程序计算各行地址。 |
| \$ 802D—\$ 803B | 将计算后的地址低位存入 \$ 00 单元，高位存入 \$ 01 单元，且高位加 20 取第二页高位地址放回 \$ 15 单元。 |
| \$ 803C—\$ 803F | 调第二页图形数据至第一页显示。 |
| \$ 8040—\$ 8044 | 判断本行显示完否，未完转 \$ 803C 继续。 |
| \$ 8045—\$ 8049 | 行显示完，加 1 显下一行，并判断幅是否显示完，未完转 \$ 8028 继续。 |
| \$ 804A | 整幅显示完后返回。 |
| \$ 804B—\$ 80FF | 主控程序。 |

B000-	A5 11	LDA	\$11
B002-	0A	ASL	
B003-	0A	ASL	
B004-	29 1C	AND	##1C
B006-	85 15	STA	\$15
B008-	A5 11	LDA	\$11
B00A-	6A	ROR	
B00B-	6A	ROR	
B00C-	6A	ROR	
B00D-	6A	ROR	
B00E-	29 03	AND	##03
B010-	05 15	ORA	\$15
B012-	09 20	ORA	##20
B014-	85 15	STA	\$15
B016-	A5 11	LDA	\$11
B018-	6A	ROR	
B019-	29 E0	AND	##E0
B01B-	85 14	STA	\$14
B01D-	6A	ROR	
B01E-	6A	ROR	
B01F-	29 18	AND	##18
B021-	05 14	ORA	\$14
B023-	85 14	STA	\$14
B025-	60	RTS	
B026-	A2 00	LDX	##00
B028-	86 11	STX	\$11
B02A-	20 00 80.	JSR	\$B000
B02D-	A0 00	LDY	##00
B02F-	A5 14	LDA	\$14
B031-	85 00	STA	\$00
B033-	A5 15	LDA	\$15
B035-	85 01	STA	\$01
B037-	18	CLC	
B038-	69 20	ADC	##20
B03A-	85 15	STA	\$15
B03C-	B1 14	LDA	(\$14),Y
B03E-	91 00	STA	(\$00),Y
B040-	C8	INY	
B041-	C0 28	CPY	##28
B043-	90 F7	BCC	##B03C

B045-	E8	INX	
B046-	E0 C0	CPX	##C0
B048-	90 DE	BCC	\$B02B
B04A-	60	RTS	
B04B-	A9 5A	LDA	##5A
B04D-	85 02	STA	\$02
B04F-	8D 27 80	STA	\$B027
B052-	A9 66	LDA	##66
B054-	85 03	STA	\$03
B056-	8D 47 80	STA	\$B047
B059-	A9 12	LDA	##12
B05B-	85 04	STA	\$04
B05D-	8D 2E 80	STA	\$B02E
B060-	A9 16	LDA	##16
B062-	85 05	STA	\$05
B064-	8D 42 80	STA	\$B042
B067-	20 26 80	JSR	\$B026
B06A-	A2 00	LDX	##00
B06C-	86 06	STX	\$06
B06E-	A5 04	LDA	\$04
B070-	18	CLC	
B071-	69 FF	ADC	##FF
B073-	8D 2E 80	STA	\$B02E
B076-	8D 42 80	STA	\$B042
B079-	20 26 80	JSR	\$B026
B07C-	A5 05	LDA	\$05
B07E-	8D 2E 80	STA	\$B02E
B081-	8D 42 80	STA	\$B042
B084-	20 26 80	JSR	\$B026
B087-	C6 04	DEC	\$04
B089-	E6 05	INC	\$05
B08B-	A5 04	LDA	\$04
B08D-	8D 2E 80	STA	\$B02E
B090-	A5 05	LDA	\$05
B092-	8D 42 80	STA	\$B042
B095-	A5 02	LDA	\$02
B097-	8D 47 80	STA	\$B047
B09A-	69 FA	ADC	##FA
B09C-	85 02	STA	\$02
B09E-	8D 27 80	STA	\$B027
B0A1-	20 26 80	JSR	\$B026

80A4-	A5 03	LDA	\$03
80A6-	8D 27 80	STA	\$8027
80A9-	69 04	ADC	##04
80AB-	85 03	STA	\$03
80AD-	8D 47 80	STA	\$8047
80B0-	20 26 80	JSR	\$8026
80B3-	A5 02	LDA	\$02
80B5-	8D 27 80	STA	\$8027
80B8-	A9 FF	LDA	##FF
80BA-	20 A8 FC	JSR	\$FCA8
80BD-	A6 06	LDX	\$06
80BF-	E8	INX	
80C0-	E0 12	CPX	##12
80C2-	90 A8	BCC	\$806C
80C4-	8D 50 C0	STA	\$C050
80C7-	8D 52 C0	STA	\$C052
80CA-	8D 54 C0	STA	\$C054
80CD-	8D 57 C0	STA	\$C057
80D0-	AD 00 C0	LDA	\$C000
80D3-	C9 C1	CMF	##C1
80D5-	D0 10	BNE	\$80E7
80D7-	2C 10 C0	BIT	\$C010
80DA-	A9 B1	LDA	##B1
80DC-	8D 3C 80	STA	\$803C
80DF-	A9 14	LDA	##14
80E1-	8D 3D 80	STA	\$803D
80E4-	4C 4B 80	JMP	\$804B
80E7-	C9 C2	CMF	##C2
80E9-	D0 10	BNE	\$80FB
80EB-	2C 10 C0	BIT	\$C010
80EE-	A9 A9	LDA	##A9
80F0-	8D 3C 80	STA	\$803C
80F3-	A9 00	LDA	##00
80F5-	8D 3D 80	STA	\$803D
80F8-	4C 4B 80	JMP	\$804B
80FB-	C9 C5	CMF	##C5
80FD-	D0 D1	BNE	\$80D0
80FF-	60	RTS	

- \$ 804B—\$ 8069 将# \$ 5A、# \$ 66、# \$ 12、# \$ 16
存入 \$ 02, \$ 03, \$ 04, \$ 05 单元, 并
分别送往 \$ 8027, \$ 8047, \$ 802E,
\$ 8042 单元, 调显示子程序在第一页
显示窗口坐标为 (18, 90) — (22,
90), (18, 102) — (22, 102) 的部分
图形。
- \$ 806A—\$ 806D 将 \$ 06 单元作为计数单元。
- \$ 806E—\$ 807B 向左每次显示一列(第一次为(17,
90) — (17, 102))。
- \$ 807C—\$ 8086 向右每次显示一列(第一次为重复
(22, 90) — (22, 102))。
- \$ 8087—\$ 80A3 向上每次显示 5 条扫描线(第一次
为 (17, 85) — (23, 85), (17, 90) —
(23, 90))。
- \$ 80A4—\$ 80B2 向下每次显示 5 条扫描线 (第一
次为 (17, 102) — (23, 102), (17,
107) — (23, 107))。
- \$ 80B3—\$ 80B7 将 \$ 02 单元内容送 \$ 8027, 为下
一次显示作准备。
- \$ 80B8—\$ 80BC 延时, 为使窗口式显示较为清楚的
观察到。改变 \$ 80B9 的值, 可改变显示
速度。
- \$ 80BD—\$ 80C3 分 18 次显示, 判是否全部显示
完, 未完转 \$ 806C 继续。
- \$ 80C4—\$ 80FF 键盘控制程序。
- \$ 80C4—\$ 80CF 选第一页高分辨率全屏幕显示。

\$ 80D0—\$ 80D6 读键盘, 判是否按了 A 键, 不是转 \$ 80E7。

\$ 80D7—\$ 80E6 是按 A 键则清键盘, 将 LDA (\$ 14), Y。指令送 \$ 803C、\$ 803D 单元, 转 \$ 804B 执行窗口式显示。

\$ 80E7—\$ 80EA 再判是否按了 B 键, 不是转 \$ 80FB。

\$ 80EB—\$ 80FA 是按 B 键则清键盘, 将 LDA # \$ 00 指令送 \$ 803C, # 803D 单元, 转 \$ 804B 执行窗口式清屏。

\$ 80FB—\$ 80FE 再判是否按了 E 键, 不是转 \$ 80D0 重续键盘。

\$ 80FF 是按了 E 键, 则结束运行。

演示 P31 很方便, 只要将图形调入第二页, 在监控状态下打入命令 * 80C4G , 然后可分别按 A、B、E 键。在 BASIC 状态下, 则只要打入命令 CALL32964 , 然后再分别按 A、B、E 键。

(2) 3 种不同的清屏技巧

这里提出的两个程序, 可以实现高分辨图形的三种清屏方式。程序①采用 BASIC 语言编写, 程序②采用机器语言编写。

程序①:

```

5  GOSUB 100
10 POKE - 16304,0
20 POKE - 16297,0
30 POKE - 16302,0
40 POKE - 16300,0
45 FOR J = 1 TO 50: NEXT J
50 CALL 24576: GOSUB 100
52 CALL 24647: GOSUB 100
54 CALL 24712
56 FOR I = 1 TO 1000: NEXT I
60 TEXT : HOME : END
100 D$ = CHR$(4)
110 PRINT D$"BLOADP2-1,A$2000"
140 RETURN

```

上述程序首先将存于盘片的图形资料 P2-1 调进内存中的第一页，然后用 4 个软开关将图形在第一页画面上全屏幕显示出来，经 45 句延迟一段时间后，调用机器语言清屏子程序，将画面从左到右清除（执行 CALL 24576），从上到下清除（执行 CALL 24647），从上到下用一个粗线条清除（执行 CALL 24712），最后恢复文本清除屏幕结束。

程序②：

```

6000- A0 00 A2 BF A9 00 85 06
6008- A5 06 0A 0A 29 1C 85 15
6010- A5 06 6A 6A 6A 6A 29 03
6018- 05 15 09 20 85 15 A5 06
6020- 6A 29 E0 85 14 6A 6A 29
6028- 18 05 14 85 14 A9 00 91
6030- 14 18 A9 01 65 06 85 06
6038- CA D0 CD A9 FF 20 AB FC
6040- C8 98 C9 27 D0 BC 60 A9
6048- 00 85 06 0A 0A 29 1C 85
6050- 15 A5 06 6A 6A 6A 6A 29
6058- 03 05 15 09 20 85 15 A5
6060- 06 6A 29 E0 85 14 6A 6A
6068- 29 18 05 14 85 14 A9 00
6070- A0 27 91 14 88 D0 FB A9

```

```

6078- 5F 20 A8 FC 18 A9 01 65
6080- 06 85 06 C9 BF D0 C4 60
6088- A9 00 85 07 48 A9 FF 85
6090- 06 20 AA 60 A9 AF 20 A8
6098- FC A9 00 85 06 68 85 07
60A0- 20 AA 60 A5 07 C9 C0 D0
60A8- E3 60 A2 08 A5 07 0A 0A
60B0- 29 1C 85 15 A5 07 6A 6A
60B8- 6A 6A 29 03 05 15 09 20
60C0- B5 15 A5 07 6A 29 E0 85
60C8- 14 6A 6A 29 18 05 14 85
60D0- 14 A5 06 A0 27 91 14 88
60D8- D0 FB 18 A5 07 69 01 85
60E0- 07 CA D0 C8 60

```

程序②先用文件名 GFBLQP 存入磁盘，其首地址为 \$ 6000，尾地址是 \$ 6100，本程序通过 CALL 指令调用实现上述三种清屏方式。这个机器语言实际上是由三段机器语言子程序组成的：

\$ 6000 — \$ 6046 为从左到右清屏。

\$ 6047 — \$ 6087 为从上到下清屏。

\$ 6088 — \$ 60E4 为从上到下带粗线条清屏。

两个程序的运行方法如下：

首先调程序②进内存，BLOAD GFBLQP √。

然后运行程序①。



图 8.1 P2-1 图象



图 8.2 从左到右清屏瞬间图象



图 8.3 从上到下清屏瞬间图象



图 8.4 从上到下带粗线条清屏

九、游戏中的键盘操作控制

在游戏程序或软件的设计中，常常要求能够灵活控制单个图象的移动；或者使运动目标的移动方向受使用者操纵，从而产生更加逼真的动画效果，是一件颇有情趣的事情。这种静止图象的运动和动态目标的变化，可以通过键盘进行。

例如，我们常选择 K、M、J、I 四个键来控制运动方向，这是因为它们在键盘上的相对位置正好构成东（向右）、南（向下）、西（向左）、北（仙希四个方向，这样处理既便于记忆，又便于操作。如果按下四个键中的任一个时，静止图象或运动目标就向相应方向移动，那么，就实现了对它们的实时控制。

中华学习机有一个专用内存单元 \$C000 (49152 或 -16384)，称键盘内存单元，用来存放键盘输入的信息，当该单元的最高位为“1”时，表示已有键按过，剩下的 7 位就是刚按过键所对应的 ASCII 码，这就是说，当按下键盘中任意一个按键时，该单元就取出键入的字符，此时，该单元的功能即已完成。为了接受下一次键盘上按键的输入，必须使键入 \$C000 单元中最高位置零，因此，中华学习机还另设了一个专用地址单元 \$C010 (49168 或 -16368)，专门用来清除键盘输入的选通脉冲，方法是使用语句：

POKE 49168, 0
或 POKE -16368, 0

其作用是在内存单元 49168 (—16368) 中存入 0 这个数而产生清除作用。执行该语句后，键盘内存单元中的选通位被清除，只留下小于 128 的信息码，以便接受下一次的按键输入。

上述两个单元 \$C000 和 \$C010，常简称为读键盘和清键盘。

在 BASIC 语言编制程序时，常常用下面两个语句配合使用，如：

```
10 P=PEEK (—16384) —128
```

```
20 POKE —16368, 0
```

其中 $P = \text{PEEK}(-16384) - 128$ ，是为了去掉键盘数据字节最高的“1”，得到 ASCII 码的十制数。

K、M、J、I 四个键相应的 ASCII 码（注意是键盘字符 ASCII 码，不是屏幕字符 ASCII 码）为：

东 (E, RIGHT)	K	\$CB (203)
--------------	---	------------

南 (S, DOWN)	M	\$CD (205)
-------------	---	------------

西 (W, LEFT)	J	\$CA (202)
-------------	---	------------

北 (N, UP)	I	\$C9 (201)
-----------	---	------------

必须注意，上述数字包含了最高位（选通位）“1”，表示“已按过键盘”这个信息，后 7 位才是字符的 ASCII 码，因此，真正的信息码应减去 128：

东 $203 - 128 = 75$

南 $205 - 128 = 77$

西 $202 - 128 = 74$

北 $201 - 128 = 73$

有了以上知识后，就不难设计动态方向控制的程序了。

1. BASIC 程序控制实例

(1) 简单的屏幕作图 (程序 H-2)

H-2:

```
10 REM MOVE
20 HGR2 : HCOLOR= 7
30 X = 141:Y = 80
40 HPLOT X,Y
50 POKE - 16368,0
60 P = PEEK ( - 16384) - 128
70 IF P = 74 THEN 130
80 IF P = 75 THEN 150
90 IF P = 73 THEN 170
100 IF P = 77 THEN 190
110 IF P = 76 THEN TEXT : HOME
    : END
120 GOTO 60
130 X = X - 2: IF X < 0 THEN X =
    255
140 GOTO 40
150 X = X + 2: IF X > 255 THEN X =
    0
160 GOTO 40
170 Y = Y - 1: IF Y < 0 THEN Y =
    100
180 GOTO 40
190 Y = Y + 1: IF Y > 190 THEN Y =
    10
200 GOTO 40
```

运行程序 H-2 后, 首先清屏并在高分辨第 2 页作图页上位于 $X=141, Y=80$ 处画一点, 50 句清键盘, 60 句读键盘, 当按下除 K、M、J、I、L 五个键以外的任一键时, 屏幕上画的一点没有反应, 即执行 120 句转向 60 句重读键盘, 所以 120 句是为防止按错键设置的。

键入 K、M、J、I 中任一字符, 都可以在屏幕上画线, 例如键入 M 键时, 执行 100 句并转向 190 句, 使 Y 坐标值加

1, 表示向下移一步, 只要 Y 值不超过 190 返回 40 句画一点, 加上原来的一点即成一线, 然后执行 50 句清键盘, 等待其它键输入。其它 K、J、I 键的键入同理。

其中:

```
IF X<0 THEN X=255
```

```
IF X>255 THEN X=0
```

```
IF Y<0 THEN Y=100
```

```
IF Y>190 THEN Y=10
```

4 个语句是为防止画线超过右、左、上、下边界的屏幕范围而设置的。

若按 L 键 (它对应的 10 进制 ASCII 码 76), 则恢复文本 (TEXT), 清屏 (HOME), 结束 (END)。

可以看出, 本程序是对一个点 (静止的点, 初始位置 $X=141$, $Y=80$) 实现控制, 由于未清屏, 所以给出了该点运动的轨迹, 从而实现在屏幕上给出简单图形。我们在《中华学习机汉字软件》一书中 (气象出版社出版, 1989 年 12 月) 介绍的全屏幕作图软件, 就是基于本程序的设计原理制作的。

(2) 控制一幅图象的移动 (程序 H-6)

H-6:

```
10 HGR2 : GOSUB 200
20 X = 141:Y = 80
30 HCOLOR= 3: GOSUB 270
40 POKE - 16368,0
50 P = PEEK ( - 16384) - 128
60 IF P = 74 THEN 120
70 IF P = 75 THEN 140
80 IF P = 73 THEN 160
90 IF P = 77 THEN 180
100 IF P = 76 THEN TEXT : HOME
    : END
110 GOTO 50
120 HCOLOR= 0: GOSUB 270:X = X -
```

```

10: IF X < 31 THEN X = 248
130 GOTO 30
140 HCOLOR= 0: GOSUB 270: X = X +
10: IF X > 248 THEN X = 31
150 GOTO 30
160 HCOLOR= 0: GOSUB 270: Y = Y -
10: IF Y < 20 THEN Y = 160
170 GOTO 30
180 HCOLOR= 0: GOSUB 270: Y = Y +
10: IF Y > 160 THEN Y = 20
190 GOTO 30
200 DIM A(16), B(16)
210 FOR I = 0 TO 16
220 READ A(I), B(I)
230 B(I) = - B(I) / 1.22
240 NEXT I
250 RETURN
260 DATA -3,7,10,24,30,16,13,18,
4,0,14,-6,6,-13,0,-4,-14,-13
,-22,-39,-20,-7,-7,3,-11,7,-
12,9,-11,10,-9,10,-3,7
270 HPLOT X + A(0), Y + B(0)
280 FOR K = 1 TO 16
290 HPLOT TO X + A(K), Y + B(K)
300 NEXT K
310 RETURN

```

]

运行程序 H-6 后，可以用 K、M、J、I 四个按键，对画在屏幕上的一只小鸟，进行上、下、左、右 4 个方向的控制，从而使原来静止的小鸟，能“自由飞翔”，生动有趣，栩栩如生。

飞鸟的图形全部由一段一段直线组成的，它们的数据放在 260 句的 DATA 语句中。图形的制作过程十分简单，在方格纸上画一只小鸟，然后读取每段直线的坐标，再放入 DATA 语句中，坐标值 X、Y 用逗号隔开。注意小鸟的起点坐标和终点坐标是一致的，就像一笔画出一只鸟一样。

程序中 200—240 句,安排了两个一维数组 A, B, 用循环的方法读取飞鸟各瞬时坐标的数据值, 并放在 A (I), B (I) 中。计算机画飞鸟时, 只需在循环语句中取出每一段直线的端点, 用绘图语句 H PLOT 来画线, 即可快速地画出飞鸟的图形 (见 270—300 句)。

为了控制小鸟的飞行, 我们仍采用类似程序 H-2 的方法, 读者可对照程序 H-2, H-6 对比分析, 不难看出原理和主要语句安排十分相同。但分析中应注意一个最主要的差别, 即每次按键后首先清原图象, 再调画小鸟图形子程序 (前者用 HCOLOR=0, 后者用 GOSUB 270, 两者配合抹除原图象), 然后改变起始坐标值, 并判断是否超过边界, 若未超过转向 30 句, 重新设置颜色指令 (如 HCOLOR=3), 再调 270 句开始的画鸟子程序, 这样会在一个新的坐标位置上出现小鸟, 好象飞过了一段距离一样。

当小鸟飞过一段距离后, 执行 40 句清键盘, 为下次按键输入做好准备, 执行 50 句读键盘, 再进行类似上述操作, 按不同的键, 小鸟即改变飞行方向, 由于不需要按回车键, 各种方向的控制十分迅速, 因此, 通过快速按键, 小鸟飞行方向不断改变, 十分自由。而要结束游戏, 按一下“L”键即可。

2. 机器语言程序控制实例

机器语言对游戏程序的键盘操作控制仍然要用到中华学习机的两个内存单元, 即 \$C000 和 \$C010, 其指令是:

```
AD 00 C0    LDA $C000    ; 读键盘
A9 00        LAD # $00    ; 清键盘
8D 10 C0     STA $C010
```

下面介绍两个实例，图象均采用造型表方法，并需用机器语言编制的程序调用造型表，再加键盘操作控制。

(1) 对画面进行暂停、继续、退出操作控制

程序共分三个部分：

- \$ 6000—\$ 6073；一辆小汽车画面造型数据
- \$ 300—\$ 32B；调用造型表的机器语言程序
- \$ 32C—\$ 350；实行暂停、继续、退出控制

关于调用造型表的机器语言程序，我们已在《中华学习机图形管理》一书中作了详细介绍，此处从略，图形造型的原理请看《中华学习机数据处理》有关章节，这里仅就键盘操作控制部分 \$ 32C—\$ 350 作一分析。

032C-	AD 00 C0	LDA	\$ C000	读键盘
032F-	C9 9B	CMP	# \$ 9B	是 ESC 键吗
0331-	D0 01	BNE	\$ 0334	否，转 \$ 0334
0333-	60	RTS		是，结束
0334-	C9 8D	CMP	# \$ BD	是 RETURN 键吗？
0336-	F0 0E	DEQ	\$ 0346	是，转 \$ 0346
0338-	C9 A0	CMP	# \$ A0	否，是 space 键吗？
033A-	D0 0A	BNE	\$ 0346	否，转 \$ 0346
033C-	A9 00	LDA	# \$ 00	是 space 键，0→A
033E-	8D 10 C0	STA	\$ C010	清键盘
0341-	AD 00 C0	LDA	\$ C000	读键盘
0344-	10 FB	BPL	\$ 0341	是其它键，转 \$ 0341
0346-	A9 00	LDA	# \$ 00	0→A
0348-	8D 10 C0	BTA	\$ C010	清键盘
034B-	20 00 03	JSR	\$ 0300	调造型表
034E-	4C 2C 03	JMP	\$ 032C	转键盘控制子程序

调用造型表机器语言程序为：

0300- 20 E2 F3 JSR \$ F3E2 启动第 1 页高分辨率

0303-	A9 00	LDA	# \$ 00	存放造型表首地址(E9)(E8)=6000
0305-	85 E8	STA	\$ E8	存放造型表首地址(E9)(E8)=6000
0307-	A9 60	LDA	# \$ 60	存放造型表首地址(E9)(E8)=6000
0309-	85 E9	STA	\$ E9	存放造型表首地址(E9)(E8)=6000
030B-	A2 03	LDX	# \$ 03	取颜色代码 03
030D-	20 F0 F6	JSR	\$ F6F0	取颜色代码 03
0310-	A9 03	LDA	# \$ 03	放大值放在 \$ E7 中
0312-	85 E7	-STA	\$ E7	放大值放在 \$ E7 中
0314-	A2 01	LDX	# \$ 01	调 1 个造型
0316-	20 30 F7	JSR	\$ F730	调 1 个造型
0319-	A2 80	LDX	# \$ 80	横坐标低位→X,横坐标高位→Y,纵坐标→A,调子程序
031B	A0 00	LDY	# \$ 00	横坐标低位→X,横坐标高位→Y,纵坐标→A,调子程序
031D-	A9 32	LDA	# \$ 32	横坐标低位→X,横坐标高位→Y,纵坐标→A,调子程序
031F-	20 11 F4	JSR	\$ F411	横坐标低位→X,横坐标高位→Y,纵坐标→A,调子程序
0322-	A6 1A	LDX	\$ 1A	造型显示,造型末地址低位→X,造型末地址高位→Y,旋转值→A,清除造型
0324-	A4 1B	LDY	\$ 1B	造型显示,造型末地址低位→X,造型末地址高位→Y,旋转值→A,清除造型
0326-	A9 00	LDA	# \$ 00	造型显示,造型末地址低位→X,造型末地址高位→Y,旋转值→A,清除造型
0328-	20 5D F6	JSR	\$ F65D	造型显示,造型末地址低位→X,造型末地址高位→Y,旋转值→A,清除造型
032B-	60	RTS		结束

汽车造型数据:

```
6000- 01 00 05 00 00 41 38 20
6008- 25 2C 2D 65 0C 0C 0C 2D
6010- 2D 2D 2D 2D 15 15 AD 2D
6018- 2D 15 2D 2D 2E 2E 3E 3E
6020- BF 37 3F 3C 1C 24 1C 3F
6028- 17 17 36 3F 3F 3F F7 27
6030- 3F E4 1C 3F 17 3E 3F 2D
6038- 25 6D 15 F6 3F 07 20 64
6040- 2D 04 20 05 28 28 2D 2D
6048- 2D 35 35 35 3F 3F 3F 24
6050- 34 36 3F 3F 3F 4A 49 92
6058- 3A 2D 4E 49 49 20 64 2D
6060- B6 1E 7F 49 09 2C 25 3C
6068- 2C 2D 2D 3C 3F 3F EF 3F
6070- 3F 27 2D 00
*
```

运行方法:] CALL812 / 或 * 32CG /

程序运行后, 在屏幕上出现一个不断出现, 不断清除的小汽车画面, 按 SPACE (空格键), 画面暂停不再闪动; 按 RETURN (回车键), 画面继续闪动; 按 ESC (ESCAPE) 键退出。

(2) 对画面进行上移、下移、退出控制

画面仍采用汽车造型 (同上, \$ 6000—\$ 6073)。调用造型表的机器语言程序, 见 \$ 0300—\$ 032B, 这段程序和对画面进行暂停、继续、退出的调用造型表程序十分相似, 但有两处改动, 一是 0300—20 E2 F3 JSR \$ F3E2, 改为 0300—20 DB F3 JSR \$ F3D8, 前者启动高分辨率第 1 页作图显示页, 后者启动高分辨率第 2 页作图显示页; 二是 031D—A9 32 LDA # \$ 32, 改为 031D—A5 04 LDA \$ 04, 前者将显示造型的纵坐标值 32 放入累加器 A 中, 后者则是将零页单元 \$ 04

中的值放入累加器 A 中,故本程序应先在 \$ 04 单元中置一初值,所以这样处理,是为了和 \$ 032C—\$ 0356 程序相匹配,对 \$ 04 单元进行加、减控制。键盘控制程序放在 \$ 032C—\$ 0356 单元中。请见程序 H-7。

现将 \$ 032C—\$ 0356 内存作一解释:

032C-	AD 00 C0	LDA	\$ C000	读键盘
032F-	C9 9B	CMP	# \$ 9B	是 ESC 键?
0331-	D0 01	BNE	\$ 0334	否, 转 \$ 0334
0333-	60	RTS		是 ESC 键, 结束
0334-	C9 D5	CMP	# \$ D5	是 U 键吗?
0336-	F0 10	BEQ	\$ 0348	是, 转 \$ 0348
0338-	C9 C4	CMP	# \$ C4	否, 是 D 键?
033A-	D0 10	BNE	\$ 034C	不是 D 键, 转 \$ 034C
033C-	A9 00	LDA	# \$ 00	是 D 键 00→A
033E-	8D 10 C0	STA	\$ C010	清键盘
0341-	E6 04	INC	\$ 04	(04) 加 1
0343-	E6 04	INC	\$ 04	(04) 加 1
0345-	4C 51 03	JMP	\$ 0351	转调造型子程序
0348-	C6 04	DEC	\$ 04	(04) 减 1
034A-	C6 04	DEC	04	(04) 减 1
034C-	A9 00	LDA	# \$ 00	00→A
034E	8D 10 C0	STA	\$ C010	清键盘
0351-	20 00 03	JSR	\$ 0300	调造型表子程序
0354-	4C 2C 03	JMP	\$ 032C	转控制

\$ 032C—\$ 0356 程序中, 首先读键盘, 判断是否是 ESC 键; 若是, 结束。这就是说进入本程序段后, 若要停止运行按 ESC 键即可。若不是 ESC 键, 则转向 \$ 0334, 判断是不是 U 键, (U 是 UP 向上的简称, 其 ASCII 码为 \$ D5), 若是 U 键转 \$ 0348, 执行两次 DEC 指令, 使纵坐标减二步, 即图形向上移动二步; 若不是 U 键, 执行 CMP # \$ C4, 再判断是不是 D 键, 不是 D 键转 \$ 034C, 清键盘、调造型、再进入控制程

序中；是D键，清键盘后，执行两次INC\$04指令，使纵坐标加二步，图形下移二步，然后转\$0351，调造型、转控制（D是DOWN向下的简称，其ASCII码为\$4C）。

```

H-7: 0300- 20 D8 F3      JSR  $F3DB
      0303- A9 00      LDA  #$00
      0305- 85 E8      STA  $E8
      0307- A9 60      LDA  $$60
      0309- 85 E9      STA  $E9
      030B- A2 03      LDX  $$03
      030D- 20 F0 F6    JSR  $F6F0
      0310- A9 01      LDA  $$01
      0312- 85 E7      STA  $E7
      0314- A2 01      LDX  $$01
      0316- 20 30 F7    JSR  $F730
      0319- A2 80      LDX  $$80
      031B- A0 00      LDY  #$00
      031D- A5 04      LDA  $04
      031F- 20 11 F4    JSR  $F411
      0322- A6 1A      LDX  $1A
      0324- A4 1B      LDY  $1B
      0326- A9 00      LDA  #$00
      0328- 20 5D F6    JSR  $F65D
      032B- 60          RTS
      032C- AD 00 C0    LDA  $C000
      032F- C9 9B      CMP  $$9B
      0331- D0 01      BNE  $0334
      0333- 60          RTS
      0334- C9 D5      CMP  $$D5
      0336- F0 10      BEQ  $0348
      033B- C9 C4      CMP  $$C4
      033A- D0 10      BNE  $034C
      033C- A9 00      LDA  #$00
      033E- BD 10 C0    STA  $C010
      0341- E6 04      INC  $04
      0343- E6 04      INC  $04
      0345- 4C 51 03    JMP  $0351
      0348- C6 04      DEC  $04
      034A- C6 04      DEC  $04
      034C- A9 00      LDA  #$00
      034E- BD 10 C0    STA  $C010
      0351- 20 00 03    JSR  $0300
  
```

小汽车造型可用 BSAVE G2A06, A \$ 6000, L \$ 74 存盘备用, 程序 H-7 可用 BSAVE H-7, A \$ 300, L \$ 57 存盘备用。

程序运行方法如下:

I BLOAD G2A06 ✓

I BLOAD H-7 ✓

I CALL 812 ✓

在程序运行后, 如果不按任何键, 将在屏幕上看到一个不断闪动的汽车(停在某一位置上), 按 U 键, 小汽车向上移动二步, 不断按 U 键小汽车连续向上运动; 按 D 键, 小汽车向下移动二步, 不断按 D 键, 小汽车向下运动, 若要停止运行按 ESC 键即可。

3. BASIC 程序和机器语言程序配合控制

在前面几节中, 我们介绍的对图象的控制, 无论是用绘图语句作的图形; 或者是用造型表作的图形, 都还是静止图形, 那么对运动目标(或运动着的图象), 是否也可以用键盘控制呢? 回答是肯定的, 请看实例。这里采用两种语言编程: BASIC 和 6502 机器语言。

图形上下移动显示、清屏及控制

下面这个程序具有四种功能:

- ①图形向上移动显示
- ②图形向下移动显示
- ③图形向上移动清屏
- ④图形向下移动清屏

所有这些功能都是在 BASIC 程序中, 安排 CALL 指令, 调用机器语言子程序来完成的。

BASIC 程序 (YDXSQP):

```

5  PR# 3: PRINT : CALL 43089
10 D$ = CHR$ (4)
15 HOME : PRINT CHR$ (18)
20 PRINT D$"BLOAD YDXSQP0"
30 INPUT "输入函数文件名: "K$
50 PRINT "1-向上移动显示"
60 PRINT "2-向下移动显示"
70 PRINT "3-向上移动清屏"
80 PRINT "4-向下移动清屏"
90 PRINT "请输入1-4, 输入0结束: "
92 FOR I = 1 TO 2000: NEXT
93 PRINT D$"BLOAD"K$,A$4000
95 X = PEEK ( - 16384)
100 IF X = 176 THEN POKE - 16368,0: HOME : TEXT : END
110 IF X < 176 OR X > 180 THEN 95
115 N = X - 176: POKE - 16368,0
118 HCOLR= 3: POKE - 16302,0: POKE - 16300,
    0: POKE - 16304,0: POKE - 16297
    ,0
120 ON N GOTO 200,220,240,260
200 CALL 24643
210 GOTO 95
220 CALL 24681
230 GOTO 95
240 CALL 24636
250 GOTO 95
260 CALL 24674
270 GOTO 95

```

机器语言子程序 (YDXSQPQ):

```

6000- A0 00 B1 FB 91 F9 C8 C0
600B- 28 D0 F7 60 BD C0 60 85
6010- FA BD 88 61 85 F9 60 BD
601B- 88 61 85 FB BD C0 60 85
6020- FC 60 BD 88 61 85 FB BD
602B- C0 60 18 69 20 85 FC 60
6030- A0 00 A9 00 91 FB C8 C0
603B- 28 D0 F7 60 A9 01 85 F7
6040- 4C 47 60 A9 00 85 F7 A9
604B- E6 BD B1 60 A9 E8 BD 8A
6050- 60 A9 00 85 FD 85 FE A9
605B- C0 85 FF A9 BF 85 F8 4C
6060- 85 60 A9 01 85 F7 4C 6D
606B- 60 A9 00 85 F7 A9 C0 85
6070- FD 85 FE A9 FF 85 FF A9

```

6078-	CA	8D	8A	60	A9	C6	8D	B1
6080-	60	A9	00	85	F8	A6	FE	20
6088-	0C	60	CA	20	17	60	20	00
6090-	60	E4	F8	D0	F2	A5	F7	C9
6098-	01	D0	06	20	30	60	4C	B1
60A0-	60	A5	FB	85	F9	A5	FC	85
60A8-	FA	A6	FD	20	22	60	20	00
60B0-	60	C6	FD	A5	FD	C5	FF	D0
60B8-	CC	60	00	00	00	00	00	00
60C0-	20	24	28	2C	30	34	38	3C
60C8-	20	24	28	2C	30	34	38	3C
60D0-	21	25	29	2D	31	35	39	3D
60D8-	21	25	29	2D	31	35	39	3D
60E0-	22	26	2A	2E	32	36	3A	3E
60E8-	22	26	2A	2E	32	36	3A	3E
60F0-	23	27	2B	2F	33	37	3B	3F
60F8-	23	27	2B	2F	33	37	3B	3F
6100-	20	24	28	2C	30	34	38	3C
6108-	20	24	28	2C	30	34	38	3C
6110-	21	25	29	2D	31	35	39	3D
6118-	21	25	29	2D	31	35	39	3D
6120-	22	26	2A	2E	32	36	3A	3E
6128-	22	26	2A	2E	32	36	3A	3E
6130-	23	27	2B	2F	33	37	3B	3F
6138-	23	27	2B	2F	33	37	3B	3F
6140-	20	24	28	2C	30	34	38	3C
6148-	20	24	28	2C	30	34	38	3C
6150-	21	25	29	2D	31	35	39	3D
6158-	21	25	29	2D	31	35	39	3D
6160-	22	26	2A	2E	32	36	3A	3E
6168-	22	26	2A	2E	32	36	3A	3E
6170-	23	27	2B	2F	33	37	3B	3F
6178-	23	27	2B	2F	33	37	3B	3F
6180-	00	00	00	00	00	00	00	00
6188-	00	00	00	00	00	00	00	00
6190-	80	80	80	80	80	80	80	80
6198-	00	00	00	00	00	00	00	00
61A0-	80	80	80	80	80	80	80	80
61A8-	00	00	00	00	00	00	00	00
61B0-	80	80	80	80	80	80	80	80
61B8-	00	00	00	00	00	00	00	00
61C0-	80	80	80	80	80	80	80	80
61C8-	28	28	28	28	28	28	28	28
61D0-	A8	A8	A8	A8	A8	A8	A8	A8
61D8-	28	28	28	28	28	28	28	28
61E0-	A8	A8	A8	A8	A8	A8	A8	A8
61E8-	28	28	28	28	28	28	28	28
61F0-	A8	A8	A8	A8	A8	A8	A8	A8
61F8-	28	28	28	28	28	28	28	28
6200-	A8	A8	A8	A8	A8	A8	A8	A8
6208-	50	50	50	50	50	50	50	50
6210-	D0	D0	D0	D0	D0	D0	D0	D0
6218-	50	50	50	50	50	50	50	50
6220-	D0	D0	D0	D0	D0	D0	D0	D0
6228-	50	50	50	50	50	50	50	50
6230-	D0	D0	D0	D0	D0	D0	D0	D0
6238-	50	50	50	50	50	50	50	50
6240-	D0	D0	D0	D0	D0	D0	D0	D0

全部程序的运行方法如下：

-] RUN YDXSQP ✓
- 输入图形文件名：如 PIC 1 ✓
- 根据中文提示键入 1—4 数字中任一个，如键入 1（不要回车），图形向上边移动边显示，在图形全部显示后，再按任一数字键执行其它操作，如此时键入 3，则图形一面向下移动一面清屏。而要结束运行键入 0 即可。

图 9.1 是移动显示中的一个瞬时画面。



图 9.1 移动显示中的一个瞬时画面

图 9.2 是调进内存的原图象

关于图形上、下移动显示的原理分析，详见《中华学习机图形管理》一书，此处省略。



图 9.2 调进内存的原图象

十、游戏和教学程序的编制

富有吸引力的游戏和教学程序，常常引起广大青少年（包括成年人）的很大兴趣，这是因为它们能展现色彩缤纷美丽漂亮的图案，产生生动有趣形态逼真的动画形象，能够灵活控制变化万千的动态背景，配合优美动听效果精良的音乐和音响，加上屏幕窗口字幕翻卷的必要说明，真可谓图文并茂、声图并茂。

那么，这些程序是如何编写的？富有想象力和创造力的青少年朋友，一定会提出这样的问题，而且还希望通过学习，亲手上机编制出更多更好更富有情趣的游戏和教学程序来。

一个游戏和教学程序的设计，并不是一件轻而易举的事。它要求设计者有清晰的设计思想和对各种细节的综合考虑，要有严格的程序设计训练基础，要有一定的文学、艺术、美学的功底，还要有丰富的教学实践和经验。我们这里介绍的一些游戏和教学程序，都是比较简单和一般的，目的是抛砖引玉，希望由此引起更多的游戏设计者的兴趣，产生更好的具有独创的软件来。

1. 特点和内容

（1）图形显示和动画

形象地展示游戏的现场状况和教学的实际环境，例如飞机炸坦克，必须有飞行着的飞机、移动的坦克，飞机投弹后，

空中应有炸弹下落的图形，炸弹爆炸时最好还应显示爆炸的火光，如果再伴以发出的声响，则更能渲染环境。图形可以用绘图语句作出，也可以造型的方法制作，最理想的方法是用各种现成的、成熟的绘图工具软件绘图，并涂上相应的色彩。如果再用图形剪辑技术，则可以把许多画面点缀得更加艳丽多采，千姿百态。可以用各种动画技术，如坐标转换、分页显示、背景移动、预移图序等方法，形象逼真地模仿客观实体的活动过程。

(2) 音乐和声响

增添欢乐的气氛和情趣，例如“星球大战”中若没有“嗖嗖”的炮击声，“赛车”中若没有“呜呜”的汽车飞驰声，“唐老鸭历险记”中若没有“啊哦”的叫喊声，奔腾的大海中若没有波浪的撞击声，……，其游戏的吸引力就会逊色得多。如能在软件的适当部位，配以优美动听的音乐，则更能渲染环境，同时给人们以一种美的享受，增加欢乐的气氛。音乐程序可以调用机器语言发音子程序，配上音阶和节拍的数值，音响可以调用 \$C030 开始的机器语言子程序，并改变 Y 暂存器中的值来实现。而名为“MAGIC VOICE”的软件，则可以产生不同音响的组合。

(3) 变化和控制便于游戏者与游戏程序沟通对话的通道，这种通道可以是键盘，也可以是游戏杆，或者程序中提示，让操纵者输入反馈的信息。对键盘输入的查询，可以用 INPUT 语句（等待用户输入，但要回车），GET 语句（等待用户输入，立即执行不显示，但不用回车），或者访问中华学习机专用内存单元（读键盘 \$C000，清键盘 \$C010）。也可以通过控制游戏按钮（地址为 \$C061，\$C062）和游戏摇杆（地址为 \$C064，\$C065）对控制对象进行诸如上、下、左、右操纵，这样字

宙飞船才可以在空中迫击,赛车才可以在高速公路上奔驰,军舰才可以在大海中遨游。变化是指图形的变化,背景的变化,若再伴以色彩丰富的颜色,那就更加明快和鲜艳。图形和背景的变化可以通过特殊图象处理,例如让图形卷动、翻身、移动,叠加等方法实现。

(4) 提示和说明

便于游戏者运行和操作,对一个普通的游戏者来说,我们不能要求读懂一个游戏程序,或者看完一份游戏说明书后再去运行程序。故对于一个好的游戏程序来说,应在运行过程中给用户一些必要的提示和说明。例如,运行一开始,在屏幕上给出一个菜单,告之这是什么游戏,如何玩法等。为考虑到多数对象,提示和说明最好用中文,越简洁越好。提示可以用 PRINT 语句,特别重要的信息,可在 PRINT 语句之前,加一个 FLASH 命令,使信息输出呈闪烁状态,闪烁之后用 NORMAL 指令返回正常。说明性语句可以在图形和文本混合状态进行,也可以用全屏幕显示,如伴以屏幕窗口字幕翻卷的技术,则更为形象直观。

(5) 反馈和思考

促进深化教学目标,获得新知识,这在教学程序中十分必要,如学生回答某一问题后,给予成绩或评语。学生回答后再向学生提供反馈信息,提问—回答—反馈的教学过程有助于学生围绕教学目标思考,并加深认识和记忆。如果教学程序的编制,能够和教师上课一样,通过讲授、演示、举例、提问等多种环节,既生动活泼,又富于启发性,那软件的效果就会更好。

2. 常用技术

(1) 软件题头

运行一个游戏或教学软件时，一经开机就显示一个题头，说明软件名称，作者姓名，完成时间。如取名为 HELLO 的招呼程序：

```
10 PRINT CHR$ <4> "BLOADGZZ"  
20 HCOLOR=3: FOR I=0 TO 10: HPLLOT I, I TO 279-I, I TO 27  
9-I, 190-I TO I, 190-I TO I, I: NEXT I: HCOLLR=0  
30 VTAB 3: HTAB 4: RPINT "多功能图形管理软件包"  
40 VTAB 6: HTAB 10: PRINT "孙建隆 朱国江"  
50 VTAB 7: HTAB 10: PRINT "李汝谅 王召民"  
60 VTAB 10: HTAB 9: PRINT "一九八八年十月"  
70 FOR I =1 TO 2000: NEXT I  
80 PRINT CHR$ <13>+ CHR$ <4> "RUNZS"
```

HELLO 程序中，10 句为一个修改指针的机器语言子程序，为用 STC 汉字系统，并使该程序自带字库，不需 DOS 3.3 引导，而适用中华学习机、APPLE- I 兼容机、紫金- I 系列机设置的。20 句画一个题框，30 句显示软件名称，40 句显示作者姓名，60 句显示软件完成时间，70 句延迟一段时间，以便看清上述内容，80 句调另一个名为 ZS 的程序，起到承先启后的作用，由 DOS 命令自行引导，无需人的干预。

(2) 功能选择

设计好的软件究竟有些什么功能，以及怎样选择这些功能，以便操作者使用，可以编一个程序，取名 ZS：

```
10 REM ZS  
20 D$ = CHR$ <4>
```

```

30 HCOLOR = 0; FOR I = 140 TO 0 STEP -1; HPLLOT I, I TO 279 - I, I TO 279
  - I, 191 - I TO I, 191 - I TO I, I; NEXT I
40   K=3; GOSUB 160
50   VTAB 2; HTAB 4; PRINT "多功能图形管理软件包"
60   VTAB 4; HTAB 2; PRINT "A. 左右翻身 B. 左右移动 C. 左右绕卷"
70   VTAB 5; HTAB 2; PRINT "D. 上下颠倒 E. 上下移动 F. 上下绕卷"
80   VTAB 6; HTAB 2; PRINT "G. 分页显示 H. 动画显示 I. 翻卷显示"
90   VTAB 7; HTAB 2; PRINT "J. 局部放大 K. 成倍翻番 L. 镜象复制"
100  VTAB 8; HTAB 2; PRINT "M. 多幅联动 N. 多幅合成 O. 剪辑编辑"
110  VTAB 10; HTAB 6; PRINT "请选择 (A-O), 按 p 结束:";
120  X = PEEK <-16384>
130  IF X = 208 THEN POKE -16368, 0; K=0; GOSUB 160; CALL 5576;
  NEW : END
140  IF X <193 OR X > 208 THEN 120
145  POKE 3848, 0; POKE 33649, 9; POKE 33653, 15; POKE 33694, 20 8
150  POKE 33695, X; CALL 33648
160  HCOLOR = K; HPLLOT 0, 0 TO 279, 0 TO 279, 191 TO 0, 191 TO 0,
  0; RETURN

```

程序 ZS 是由 HELLO 程序的最后一句 80 句自行调入内存并自动运行的。运行后由 30 句用画图语句表演一个图案清屏 (此时 HCOLOR=0)，接着执行 40 句转 160 句子程序，画出一矩形题框，返回后执行 50 句显示软件名称，然后用 VTAB、HTAB 语句定位打印五行功能介绍，指明本软件共有左右翻身、左右移动、剪辑合成……，15 项功能，使操作者一目了然，知道这是一个关于图形管理的软件包，功能齐全。110 句显示功能选择，指明按 A, B, C, ……，N, O 中任一个字母键，就可以执行一种操作，如按 A 键，会表演图形左右翻身，按 H 键可以进行动画显示等等，并指出按 P 键结束运行。

120 句是读键盘，等待操作者输入，如果此时按下 P 键 (对应的键盘字符 ASCII 码为 \$D0，即 10 进制的 208)，则满

足 130 句条件清键盘 (POKE-16368, 0), 然后 K=0, 转 160 句调清屏子程序, 将屏幕清除干净 (:K=0 ∴HCOLOR=K=0), 返回后执行 CALL5576 (STC 系统下清光标), 执行 NEW 命令, 此时内存中已不再有程序存在, 最后执行 END 结束。

如果在执行 120 句后, 操作者按了除 A, B, C, …… , N, O 以外的任何字母键, 则满足 140 句条件再返回 120 句, 等待重新输入, 所以 140 句是为防止按错键而设置的。

如果在执行 120 句后, 操作者按了 A, B, C, …… , N, O 等 15 个字母中的任一字母按键, 则程序自动调相应字母的程序进内存。并开始对应该字母名的功能进行新的操作, 如按 A, 则机器自动调左右翻身的显示程序, 表演给观众看。

至于 145—150 句的几个 POKE 指令, 是改动指针而安排的, 此处说明从略。

(3) 操作提示

提示是指告诉操作者如何运行游戏或软件的简要说明。由于一个教学软件或一个管理软件常常由许多模块组成, 各模块又是相互独立的, 运行的内容和方法各别, 因此, 最好每一个模块都应安排简要的文字说明, 中文、英语均可, 越简洁愈好。如多功能图形管理软件包中有 15 个功能模块, 若希望进行左右翻身的图形处理, 可在程序 ZS 中按 A 键, 则软件转入一个叫 PA 的程序:

```
5 REM PA
7 POKE - 16368,0
10 D$ = CHR$ (4)
15 HCOLOR= 0: FOR I = 0 TO 191: HPLLOT
    0,I TO 279,I: NEXT I
20 PRINT D$"BLOAD JGCU"
30 INPUT "ENTER PICT NAME: ";K$
40 PRINT "Y-RUN E-BACK"
```

```

50 PRINT D$"BLOAD"K$",A$2000
60 CALL 32768
70 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211: CALL 33648

```

程序 PA 中 30 句和 40 句都是操作提示，前者告诉操作者输入一个图形名 (ENTER PICT NAME)，此时操作者可输入存在盘片中的任意一幅高分辨图形，如 G1 并回车；后者提示操作者如何执行程序，即按 Y 键运行，按 E 键结束。

当机器接收到名为 G1 的图形名后，会自动将 G1 赋给字符串 K\$，而在执行 50 句时，会将 G1 图形从盘片中调进内存，并放置在 \$ 2000 开始的高分辨率第 1 页显示区。然后执行 CALL32768 命令，即执行 20 句中名为 JGCU 的图象左右翻身的机器语言程序，将调进内存的图象左、右翻了一个身，这里的 32768 即 \$ 6000，它是 JGCU 程序的入口地址。最后执行 70 句，返回总控，即返回到 ZS 功能选择的主程序，以便进行其它功能的操作。

一些特别需要用户注意的提示内容，可以在 PRINT 语句之前加一个 FLASH 命令，这样可使其后的输出呈闪烁状态。闪烁输出的 PRINT 之后，应加 NORMAL 命令，使其后的输出返回正常显示状态。如希望输出闪烁的“P-END”，可用程序段：

```

200 FLASH
210 PRINT "P-END"
220 NORMAL

```

有时，为了让用户对提示内容看的更清楚些，比如较长的输出显示内容，可用 SPEED= 语句，以放慢显示速度。

如下列程序段：

```

10  SPEED= 0
20  PRINT "What is the highest mou-
    ntain in the world?"
25  FOR I = 1 TO 3
30  INPUT "Please answer!";K$
40  IF K$ < > "EVEREST" THEN 60
45  IF I = 1 THEN PRINT "You goti
    t the first try!": GOTO 80
50  PRINT "That's night!": GOTO 80

60  PRINT "No,try again!"
70  NEXT I
75  PRINT "No,Mount Everest is the
    worlds highest mountain"
80  SPEED= 255: PRINT "Bye!": END

```

SPEED=的格式是: 行号 SPEED=算术表达式,该语句的功能是用来设定输出输入设置和内存交换信息的速度的。SPEED=0, 时速度最慢; SPEED=255 时, 速度最快。

本程序运行后, 首先以最慢的速度显示一个问题, “世界上最高的山是什么?”, 然后循环开始, 并显示“请回答!”, 若学生没有回答正确, 则转向 60 句提示“错了, 再试一次”, 又进入循环, 若三次都回答不对, 则执行 75 句显示正确答案“珠穆朗玛峰是世界最高峰”, 最后快速显示“再见”结束。若学生第一次回答“EVEREST”, 则显示“你第一次就对了!”的提示并转 80 句结束。若学生不是第一次回答对, 但没有超过三次回答对了, 则计算机给出“对了!”的评语。

(4) 总控安排

一个游戏或教学程序中, 如果在开始安排了总控, 那么人们在操纵机器、支配程序、选择功能方面, 就有了更多的灵活和方便。由于总控常常要人的干预, 因此, 控制的信息愈简单愈好, 例如要求用户输入 1, 2, 3, …… , 或 A, B, C, …… , YES, NO, …… 等信息, 可以用 ON/GOTO、ON/GOSUB、

字符串函数 LEFT \$, RIGHT \$, MID \$, ASC , VAL 等方法实现。

例如, 您编制了一个 BASIC 语言学习辅导软件, 学习内容:

- 1) 打印语句 (PRINT)
 - 2) 赋值语句 (LET)
 - 3) 输入语句 (INPUT, GET)
 - 4) 读数语句 (READ)
 - 5) 置数语句 (DATA)
 - 6) 转向语句 (IF/THEN, GOTO)
 - 7) 循环语句 (FOR/NEXT)
 - 8) 子程序 (GOSUB/RETURN)
 - 9) 字符串 (A \$, RIGHT \$...)
 - 10) 数组和下标变量 (A (1), B (2, 3))
 - 11) 扩展 BASIC 语句 (ON/THEN, IF/GOSUB)
 - 12) 文件管理 (OPEN, CLOSE, WRITE, ...)
- 那么, 您可以编制一段程序来实现总控:

```
10 PRINT "1. 打印语句"  
20 PRINT "2. 赋值语句"  
30 PRINT "3. 输入语句"  
40 PRINT "4. 读数语句"  
50 PRINT "5. 置数语句"  
60 PRINT "6. 转向语句"  
70 PRINT "7. 循环语句"  
80 PRINT "8. 子程序"  
90 PRINT "9. 字符串"  
100 PRINT "10. 数组及下标变量"
```

```

110 PRINT "11. 扩展BASIC语句"
120 PRINT "12. 文件管理"
130 INPUT "请选择1-13";X

140 ON X GOTO 1000,2000,3000,4000,5000,
      6000,7000,8000,9000,10000,11000,12
      900,13000
150 GOTO 130
1000 GOSUB 1010:GOTO 130
2000 GOSUB 2010:GOTO 130
:
:
12000 GOSUB 12100:GOTO 130
13000 END
1010 REM SUB-(1)
:
:
1900 RETURN
2010 REM SUB-(2)
:
:
2900 RETURN
:
:
12100 REM SUB-(12)
:
:
12900 RETURN

```

说明：10—130 句是一个菜单，告诉使用者选用学习那一项内容，并告之他们按那一个数字键。130—150 句实现总控，其中 ON/GOTO 是一种控制转向语句，通常也称开关语句，它的功能像一个多路开关，从而适合于对多种情况的处理。X=1，转向 1000 句，X=2，转向 2000 句，……等等。当 X<0 或者 X>13 时，相当于控制转向语句不存在，而执行下一句，即 150 句，又返回总控。因此，150 句在这里起了一个防止出

错的作用，即使操纵者按错了键，程序也不会中断而能正确运行(返回去等待用户重新输入)。这个程序中的 1000, 2000, ……，13000 分别为 13 个程序段（具有某种独立功能）的首行号，在此从略。

对于以上程序，我们也可以用 A, B, C, ……，M, N 等 13 个字母代替 1, 2, ……，13 数字，程序改动如下：

```

      ⋮
130  INPUT "请输入A-N:";C$
      ⋮
140  ON ASC(C$)-64 GOTO 1000,2000,
      3000,4000,5000,6000,7000,8000
      9000,10000,11000,12000,13000
150  GOTO 130
      ⋮
      ⋮

```

(5) 出错处理

在编制和调试游戏或数学软件中，应安排防止程序可能出错的语句或简单程序段，以保证程序的可靠运行。出错的情况是多种多样的，例如，使用者按错了键；图形画面超出屏幕界外；不能正确返回总控；做除法时除数为“0”；求阶乘时用了负数和小数等等。现在我们来看几个实例。

①对信息的查询

在程序中，为了实现人机对话，常常需要用户输入某些信息，而要求用户的回答都比较简单，例如 YES, NO, 或 0, 1, 2, ……，不大需要较长的字符串或多于两位的数字。在这种情况下，对于字符串输入，经常使用 LEFT\$ 函数。

比如程序段：

```

5 PRINT "DO YOU WISH TO CONTINUE?"
10 INPUT "YES OR NO: ";K$
20 IF LEFT$(K$,1) = "Y" THEN 100
   0
30 IF LEFT$(K$,1) = "N" THEN 200
   0
40 GOTO 10

```

这个程序的 100, 200 分别为两个程序段的首行号, 它们分别具有某种独立功能, 此处从略。

在 20 和 30 句中, 我们使用了 LEFT\$ 函数。这样, 只要用户对 INPUT 的回答中首字符是“Y”, 就当 YES 处理, 而转向 100 句去; 同样, 只要对 INPUT 回答中首字符是“N”, 则当 NO 处理, 转 200 句。换句话说, 回答“NO”和回答“NOT”以及回答“N”的效果一样, 使程序输入有更大的灵活性。如果有人误把“YES”记成了“YIS”, 机器也会当“YES”处理, 防止了错误。

同时, 40 句的安排也有防止用户按错键或输入不正确信息的防错功能, 当用户按的第一个字符不是“Y”或“N”时, 程序通过 40 句转向 10 句, 等待用户重新输入。

② 限定输入信息的处理

有些软件, 对用户响应的处理, 是限定用户输入某些信息, 当用户误用限定信息以外的字符或数字时, 要提醒用户重新输入。例如程序段:

```

10 INPUT "1,2,3,4: ";X
20 IF X < 1 OR X > 4 THEN PRINT
   "INPUT DATA ERROR!"; GOTO 10
30 ON X GOSUB 100,200,300,400
40 GOTO 10

100 REM SUB(1)
   :
   :
   :
190 RETURN
   :
   :
   :

```

```

400 REM SUB(4)
:
:
490 RETURN

```

这个程序的 20 句，就是防止用户按错数字键而安排的，它不仅指出“INTER DATA ERROR!”的信息，而且正确返回总控，让用户重新输入。30 句中选用了 ON/GOSUB 语句，比 ON/GOTO 语句更为简炼，可以省去不少 GOSUB，GOTO 语句，因为 ON/GOSUB 语句具有记住返回位置的功能。40 句仅有返回总返的功能，不具备防止出错的作用，这和前面几个程序是有区别的。

③防止计算结果可能出错的方法

程序出错时，计算机能够显示错误的性质，指出错误的行号，并中断运行等待用户处理。这不仅反映了计算机作为“电脑”的本领，而且也体现了 BASIC 语言能够实现“人机对话”的特点。

程序运行中发生的错误是各种各样的。有些错误则是致命性的，无法补救，只有修改程序重新调试。但有些错误则是可以补救的，例如我们事先预料程序可能出错，且这种错误并不影响下面程序的计算，而我们往往又不希望中断程序的运行，而由机器自动处理错误并继续工作，这时我们可以使用出错转移语句 ONERR GOTO 语句。请看实例：

求 $Y = 1 / (I - 40) / (I - 60)$

$I = 1, 2, 3, \dots, 79, 80$

可用程序来实现：

```

10 ONERR GOTO 70
20 FOR I = 1 TO 80
30 Y = 1 / (I - 20) / (I - 40) / (
   I - 60)
40 PRINT I; "----"; Y
50 NEXT I

```

```

60 END
70 GOTO 50

```

本题中，当 $I=20, 40, 60$ 时， $Y \rightarrow \infty$ ，计算机发生溢出而出错。作如上处理后（即 10 句和 70 句），则程序继续执行，不断给出结果而不会停机待命。

又如，求任意数 N 的阶乘， N 不能是负数和小数，程序可以这样安排：

```

10 CLEAR
20 F = 1
30 INPUT "N="; N
40 IF N < 0 OR N < > INT (N) THEN
    90
45 IF N = 999 THEN END
50 FOR I = 1 TO N
60 F = F * I
70 NEXT I
80 PRINT N; "="; F; GOTO 10
90 PRINT "N="; N; "IS DATA ERROR!";
    GOTO 10

```

说明：40 句就是判断输入数据正误的语句，这样，当用户输入小于零或不是整数时，转向 90 句，并指出数据错误而正确返回，要求用户重新输入。

④更为灵活的防错措施

编制一个英文的菜单 (CATALOG)，有八项功能选择，由用户输入希望完成的功能代号 1 到 8，程序如下：

```

10 REM CATALOG
20 PRINT "1. ADD A RECORD"
30 PRINT "2. DELETE A RECORD"
40 PRINT "3. CHANGE A RECORD"
50 PRINT "4. MERGE A RECORD"
60 PRINT "5. SORT RECORD"
70 PRINT "6. SEARCHING RECORD"
80 PRINT "7. DISPLAY A RECORD"
90 PRINT "8. LIST THE FILE"
100 PRINT
110 INPUT K$
120 IF K$ = "0" THEN END
130 MO = VAL (K$)
140 IF MO < 1 OR MO > 8 THEN 110
150 ON MO GOSUB 200,400,600,800,1
    000,1200,1400,1600
160 GOTO 110

```

这里的 140 句是防止程序乱跑 (BOMB PROOFING)。上述 8 种功能是用数字 1 到 8 来响应的, 若用户按错数字键, 则程序会发生“爆炸”, 所以安排了“防爆”措施。增加了是否在 1 到 8 以内的逻辑检查, 如果出错, 则自动返回重新输入。程序中选用了 VAL 函数, 它的功能是把给定的字符串型量转换为相应的数型量。因此, 当选入的数字在 1 到 8 之间时, 可以正确转向相应的程序段; 小于 1 或大于 8 返回重输入; 而当送入任何一个英文字母时, 则当“0”处理, 因而防错措施更为灵活。

⑤防止图形超出屏幕边界

在游戏程序和图形处理软件中, 常常要有用户对程序进行控制, 例如用某些键改变飞行着的小鸟的方向和速度; 用另外一些键操纵飞机、坦克开炮; 选定某键射击飞机坦克等等。这样, 游戏程序才富有情趣, 起到培养智力, 训练敏捷的作用。但用户并不知道怎样控制, 也不知道运动的目标是否超出屏幕, 因此有必要安排一些措施, 使图形不会超出界外, 以保证游戏连续进行。

众所周知, 中华学习机在低分辨率图形和文本混合工作状态时, 屏幕坐标 $X=0-39$, $Y=0-39$; 而在高分辨率第二页工作状态时, 屏幕坐标 $X=0-279$, $Y=0-192$; 对于高分辨第一页工作状态, 屏幕坐标 $X=0-279$, $Y=0-160$ 。因此, 图形移动范围不能超过各自工作状态的坐标值极限。

现在, 我们举一个随机目标的模拟实例。假定屏幕的某一区域 ($X=20-39$, $Y=20-39$) 是一个沿海的海域, 敌人的潜艇经常在这个海域中出没, 它时而浮上水面, 又不时潜

入海中，并且潜艇的位置是随机的，如何在屏幕上来模拟这个随机目标的位置呢？

首先产生一个随机位置，设为潜艇舰首的位置，然后在位置上画出潜艇，表示它浮出水面。当然，在这以后，还应抹去原有位置的潜艇形象，表示沉入水下。我们自然容易想到用随机函数 RND 来产生随机数。但它只能产生 0 到 1 的随机数，为此应将它变成 20 到 39 范围内的随机数。例如使用：

$$X = 20 + \text{INT}(\text{RND}(1) * 20)$$

$$Y = 20 + \text{INT}(\text{RND}(1) * 10)$$

可以得到用作 X 轴和 Y 轴的随机坐标。显然，这样处理后 X, Y 值满足题意对海域的要求。

如果考虑到 (X, Y) 将是潜艇的首部，潜艇长度设有 5 个单位长度，则为使潜艇不超出所给范围，X 的最大值为：

$$X_{\max} = 39 - 5 = 34$$

同理，如潜艇高度占用了 2 个单元长度，Y 的最小值应为：

$$Y_{\min} = 20 + 2 = 22$$

这样，最后的随机坐标应为：

$$X = 20 + \text{INT}(\text{RND}(1) * 16)$$

$$Y = 20 + \text{INT}(\text{RND}(1) * 8)$$

有了这个随机坐标，潜艇随机位置的模拟就容易了。即先画出海域范围，然后按随机坐标画出潜艇，以后再抹去潜艇使之下沉，再按随机坐标画出潜艇，表示浮出海面，如此反复可得随机目标的模拟。请看程序：

```

10 REM : SUBMARINE
20 GR : HOME
30 COLOR= 15
40 VLIN 20,39 AT 20
50 VLIN 20,39 AT 39
60 HLIN 20,39 AT 20
70 HLIN 20,39 AT 39
80 X = 20 + INT ( RND (1) * 16)
90 Y = 20 + INT ( RND (1) * 8)
100 GOSUB 200
110 FOR I = 0 TO 20
120 NEXT I
130 COLOR= 0
140 GOSUB 200
150 COLOR= 15
160 GOTO 80
200 PLOT X,Y: PLOT X + 1,Y: PLOT
    X + 2,Y: PLOT X + 3,Y
210 PLOT X + 1,Y - 1: PLOT X + 2,
    Y - 1: PLOT X + 2,Y - 2
220 RETURN

```

说明：20 句置低分辨率图形状态并清文本窗。40—70 句画出海域。80—90 句确定随机坐标。100 句调画潜艇的子程序。110—120 句延时一段时间。130—140 句抹去潜艇。150 句重新设置颜色，经 160 句转 80 句又重新产生一个新坐标，反复进行潜艇不断改变位置时显时没。200—210 句为画潜艇的图形语句。

防止超出屏幕的处理方法，不止这些，请参看游戏程序中键盘操作控制一章，如程序 H-2，H-6 都是很好的实例。

(6) 打印控制

在编制报表、图书检索、文献登录、工资清单、库存盘点等各种实用程序中，打印格式的控制十分重要，如果设计正确，则打印出来的报表既美观大方，又便于存档。在科研和教学工作中，广大科技工作者或教师，常常需要翻阅大量的图书、文献、资料，并且要作摘录，这些工作可以编制一个简单的程序来实现，而新的文献资料只要随时加进去即可，然后存盘备查，既方便又简单。

现在,我们举一个文献登录的程序,这个程序实用性好,通用性强,只要改变 DATA 语句的存贮内容,就可以为其它实用目的所选用,而无需改动整个程序,有时候只要改变少数存贮变量即可。

本程序中 110 句开辟数组,并选用 6 个下标变量,让它们分别代表编号 (A\$),文献名称 (B\$),作者姓名 (C\$),出版社 (D\$),出版时间 (E\$),第几期 (F\$)。显然,若将它们分别代表编号,书名,作者,出版社,出版时间,价格,则本程序就变成一个图书登录的程序,可见灵活性很大。若按实际需要也可增减变量数目,如增加一个 G\$ (100),让它代表字数等等,十分方便。如果文章成图书很多,例如有图书 2000 册,则只要在字符串变量 A\$, B\$, …… , F\$ 后面的括号内写上 2000 或更多即可。

本程序信息的读入采用 160 句读语句,而反复读入则采用 GOTO 语句 (见 190 句),中间安排了一个 170 句 ONERR GOTO 200,这很巧妙,这样,每次新增加的内容 (放在 300 句以后 DATA 语句中),都不妨碍程序的正确执行,因为只要不超过 100 篇文章,都能正确记录和打印。这样做虽然速度慢一点,但省去了用 FOR/NEXT 语句关于终值的选择。当然,若改成 155 FOR I=1 TO 1000, 190 NEXT I 并保留 160, 170, 180 句则更好,速度可以加快。

打印控制安排在 180 句,请特别注意的是 TAB 函数的定位,第一次可以选用超过 34 的格式,如本例中 TAB (37),而第二次超过 34 时,应减去 34,如本例中 TAB (11),实际上是 TAB (45),等等。

另外还应注意的是,150 句中 POKE 2043,100 的安排,这是确定一行输出中打印最多的字符为 100 个 (注意一个汉字

占两个字符位置), 没有这一句, 打印将发生很大错误。选用 POKE1915, 5, 是选用行与行之间的间距, 这样行间距适当, 文字清晰。

POKE 1695, 5 中的 5 是指按 5 号字体打印, 若改为 PIKE1659, 1, 则按 1 号字体打印, 所以本程序既可以用 5 号字体打印, 也可用 1 号字体打印, 程序控制灵活方便。

最后再说一下 DATA 语句的安排, 每一个 DATA 语句, 按编号, 文献名称, 作者姓名, 出版社, 出版时间, 第几期等 6 项顺序填写, 而各项之间用 “,” 隔开, 最后一项后面千万不要再用 “,”。

本程序运行后, 除在屏幕上显示各文献信息外, 还能自动接通打印机 (见 120 句), 而在全部文献显示并打印完, 又能自动关机 (关打印机, 见 200 句), 为实用打印输出提供了方便。若不需要打印输出, 可删去 120 句, 150 句, 200 句, 并将 170 句 ONERR GOTO 200 改为 170 ONERR GOTO 210。

程序清单:

```
10 REM 软件报文献登录程序
20 DIM A$ (100), B$ (100), C$ (100), D$ (100), E$ (100),
F$ (100)
30 POKE 1659, 2
40 PRINT TAB (21); "软件报文献登录"
50 PRINT ; PRINT ; "-----"
60 POKE 1659, 5; POKE 1915, 5; POKE 2043, 100
70 READ A$, B$, C$, D$, E$, F$
80 ONERR GOTO 120
90 PRINT TAB (2); A$; TAB (5); B$; TAB (33); C$; TAB (37); D
$; TAB (11); E$; TAB (23); F$
100 GOTO 70
120 POKE 1659, 0
130 TEXT ; HOME ; END
```

- 140 DATA 1, 文中状态的清屏技巧, 朱国江 孙建隆, 软件报, 1989. 1. 14, 第 2 期
- 150 DATA 2, 高分辨图形的清屏技巧, 朱国江, 软件报, 1989. 4. 22, 第 16 期
- 160 DATA 3, 中华学习机全屏幕绘图软件, 朱国江 马 力 孙建隆, 软件报, 1989. 4. 29, 第 17 期
- 170 DATA 4, 多幅图形合成, 朱国江 孙建隆, 软件报, 1989. 5. 13, 第 19 期
- 180 DATA 5, 用中华学习机打印课程表, 孙建隆 朱国江, 软件报, 1989. 6. 3, 第 22 期
- 190 DATA 6, 多功能图形管理软件包, 孙建隆 朱国江 李汝凉 王召民, 软件报, 1989. 8. 12, 第 32 期
- 200 DATA 7, 顺序文件处理程序, 朱国江 孙建隆, 软件报, 1989. 9. 9, 第 36 期
- 210 DATA 8, 中华学习机随机文件处理程序, 朱国江 孙建隆, 软件报, 1989. 9. 23, 第 38 期
- 220 DATA 9, 多幅图形联动显示, 孙建隆 朱国江, 软件报, 1989. 10. 7, 第 40 期
- 400 PRINT ; PRINT ; "-----"
- 410 RETURN

软件报文献登录

-
- | | | | |
|---|--------------|-------------|-----------------------|
| 1 | 文本状态的清屏技巧 | 朱国江 孙建隆 | 软件报1989. 1. 14 第 2 期 |
| 2 | 高分辨图形的清屏技巧 | 朱国江 | 软件报1989. 4. 22 第 16 期 |
| 3 | 中华学习机全屏幕绘图软件 | 朱国江 马 力 孙建隆 | 软件报1989. 4. 29 第 17 期 |
| 4 | 多幅图形合成 | 朱国江 孙建隆 | 软件报1989. 5. 13 第 19 期 |
| 5 | 用中华学习机打印课程表 | 孙建隆 朱国江 | 软件报1989. 6. 3 第 22 期 |

- | | | | | |
|---|-------------------|------------|------------|---------------------|
| 6 | 多功能图形管理软件包 | 孙建隆
李汝琼 | 朱国江
王召民 | 软件报1989. 8. 12 第32期 |
| 7 | 顺序文件处理程序 | 朱国江 | 孙建隆 | 软件报1989. 9. 9 第36期 |
| 8 | 中华学习机随机文
件处理程序 | 朱国江 | 孙建隆 | 软件报1989. 9. 23 第38期 |
| 9 | 多幅图形联动显示 | 孙建隆 | 朱国江 | 软件报1989. 10. 7 第40期 |

3. 几个实例

(1) 神炮手

程序 H-5, 既是一个游戏程序, 又是一个教学程序。程序运行后, 可产生一个模拟的大炮和随骸机目标, 操纵者根据目测输入一定角度 ($>0^\circ$, $<90^\circ$) 后, 炮弹的轨迹在屏幕上显示, 模拟抛物线运动, 如果没有击中目标, 可以再变换角度重新射击, 但最多 5 次, 若一次没有击中, 则表明炮手水平太低, 失败了; 若输入的发射角正好, 击中目标后既有爆炸时的火花, 又发出爆炸的声响, 并且最后还发出庆祝胜利的音乐。本程序集游戏、教学、智力测验、图形、动画、音响和音乐于一体, 十分有趣。

程序 H-5:

```

10 HGR : HCOLOR= 3: HPLOT 0,140 TO
   279,140
20 HOME : VTAB 21
30 HPLOT 0,139 TO 4,139
40 HPLOT 2,138 TO 3,138 TO 3,137
   TO 2,137
50 HPLOT 4,136 TO 5,135
60 I = INT ( RND (1) * 240 + 10)
   : HPLOT I - 2,139 TO I + 2,1
   39: HPLOT I - 1,138 TO I + 1

```

```

,138
70 INPUT "DEG =?( > 0, < 90)";D:
   IF D < 0 OR D > 90 THEN 70
80 V = 50:G = 9.8:T = 0
90 D = D * (3.14 / 180)
100 T = T + 0.1:X = V * COS (D) *
    T
110 Y = V * SIN (D) * T - 0.5 *
    G * T ^ 2
120 H$PLOT X,140 - Y: FOR J = 1 TO
    100: NEXT J: H$PLOT X,140 - Y:
    H$COLOR= 3
130 IF 140 - Y < 140 THEN 100
140 H$COLOR= 0: H$PLOT X,140
150 P = P + 1: IF ABS (X - I) >
    5 AND P < 5 THEN 70
160 IF ABS (I - X) > 5 THEN PRINT
    "YOU LOSE!": GOTO 190
170 H$COLOR= 3: H$PLOT I - 8,130 TO
    I - 3,137: H$PLOT I + 8,130 TO
    I + 3,137: H$PLOT I,130 TO I,
    136
180 PRINT "GOOD!": FOR I = 1 TO
    30:K = PEEK (49200): NEXT I

190 INPUT "TRY AGAIN?";A$: IF A$
    < > "N" THEN RUN
200 X = 139:Y = 95: H$COLOR= 3: POKE
    - 16302,0
210 FOR I = 0 TO X STEP 3
220 H$PLOT X,0 TO X - I,Y TO X,2 *
    Y TO X + I,Y TO X,0
230 NEXT I: H$COLOR= 2
240 FOR I = 0 TO Y STEP 3
250 H$PLOT 0,Y - I TO X,0 TO 2 *
    X,Y - I
260 H$PLOT 0,I + Y TO X,2 * Y TO
    2 * X,I + Y
270 NEXT I: FOR I = 1 TO 1000: NEXT
    I
280 REM SING
290 DIM P(60),D(60)
300 DATA 173,48,192,136,208,5,2
    06,1,3,240,9
310 DATA 202,208,245,174,0,3,76,
    2,3,96,0,0

```

```

320 FOR N = 770 TO 792
330 READ Y
340 POKE N,Y
350 NEXT N
360 DATA 152,171,152,128,114,128
    ,96,114,128,152
370 DATA 128,128,114,96,85,76,85
    ,96,114,96
380 DATA 128,152,128,128,0,152,1
    28,114,96,85
390 DATA 76,85,96,114,128,171,15
    2,128,152,171
400 DATA 192,228,192
410 DATA 60,60,60,60,60,60,60,60
    ,30,30
420 DATA 240,60,120,120,60,60,60
    ,60,60,60
430 DATA 30,30,240,120,60,120,24
    0,120,120,60
440 DATA 60,60,60,120,120,120,60
    ,60,60,60
450 DATA 30,30,240
460 FOR C = 1 TO 43
470 READ P(C)
480 NEXT C
490 FOR C = 1 TO 43
500 READ D(C)
510 NEXT C
520 FOR C = 1 TO 43
530 POKE 768,P(C)
540 POKE 769,D(C)
550 CALL 770
560 NEXT C
570 TEXT : HOME : END

```

(2) 局部清屏

机器语言子程序 DOWN-6, 可以完成屏幕上的画面整幅或局部向下移动, 巧妙地用 BASIC 程序控制, 可以变换更多形式。如先移去屏幕左半部图形, 再移去屏幕右半部图形; 将屏幕自然分成 4 部分, 每次移去屏幕的 1/4 部分图形; 移

去屏幕上任意一部分图形等等。

程序 DOWN-6:

8017-	20 6D 80	JSR	\$B06D
801A-	A5 01	LDA	\$01
801C-	85 0A	STA	\$0A
801E-	A6 01	LDX	\$01
8020-	E8	INX	
8021-	20 60 80	JSR	\$B060
8024-	CA	DEX	
8025-	BD 00 94	LDA	\$9400,X
8028-	85 08	STA	\$08
802A-	BD 00 95	LDA	\$9500,X
802D-	85 09	STA	\$09
802F-	B1 06	LDA	(\$06),Y
8031-	91 08	STA	(\$08),Y
8033-	C8	INX	
8034-	C4 02	CPY	\$02
8036-	D0 F7	BNE	\$B02F
8038-	E8	INX	
8039-	E8	INX	
803A-	E4 03	CPX	\$03
803C-	D0 E3	BNE	\$B021
803E-	8D 30 C0	STA	\$C030
8041-	CA	DEX	
8042-	A4 00	LDY	\$00
8044-	BD 00 94	LDA	\$9400,X
8047-	85 08	STA	\$08
8049-	BD 00 95	LDA	\$9500,X
804C-	85 09	STA	\$09
804E-	A9 00	LDA	#\$00
8050-	91 08	STA	(\$08),Y
8052-	C8	INX	
8053-	C4 02	CPY	\$02
8055-	D0 F9	BNE	\$B050
8057-	E6 0A	INC	\$0A
8059-	A5 03	LDA	\$03
805B-	C5 0A	CMP	\$0A
805D-	D0 BF	BNE	\$B01E
805F-	60	RTS	
8060-	A4 00	LDY	\$00
8062-	BD 00 94	LDA	\$9400,X
8065-	85 06	STA	\$06

8067-	BD 00 95	LDA	\$9500,X
806A-	85 07	STA	\$07
806C-	60	RTS	
806D-	A9 C0	LDA	##C0
806F-	20 11 F4	JSR	\$F411
8072-	A2 FF	LDX	##FF
8074-	A5 26	LDA	\$26
8076-	9D 00 94	STA	\$9400,X
8079-	A5 27	LDA	\$27
807B-	9D 00 95	STA	\$9500,X
807E-	EE 6E 80	INC	\$806E
8081-	DE 73 80	DEC	\$8073
8084-	E0 00	CPX	##00
8086-	D0 E5	BNE	\$806D
8088-	60	RTS	

程序 DOWN-8 可以将调进第 2 页的图形整幅向下移动清除。

```

10 REM DOWN-8
20 D$ = CHR$(4)
30 PRINT D$;"BLOAD DOWN-6,A$B017"
   "
40 PRINT D$;"BLOAD PIC 1,,A$4000"
   "
50 POKE - 16304,0
60 POKE - 16297,0
70 POKE - 16302,0
80 POKE - 16299,0
90 FOR I = 1 TO 6000: NEXT
100 POKE 230,64
110 POKE 0,0: POKE 1,0: POKE 2,4
    0: POKE 3,192
120 CALL 32791
130 FOR I = 1 TO 3000: NEXT
140 TEXT : END

```

程序 DOWN-7 可以将调进第 2 页的图形 PIC1, 分成 4 部分分别移走 (下移)。

```

10 REM DOWN-7
20 D$ = CHR$ (4)
30 PRINT D$;"BLOAD DOWN-6,A$8017
"
40 PRINT D$;"BLOAD PIC 1,,A$4000
"
50 POKE - 16304,0
60 POKE - 16297,0
70 POKE - 16302,0
80 POKE - 16299,0
90 FOR I = 1 TO 6000: NEXT
100 POKE 230,64
110 POKE 0,0: POKE 1,0: POKE 2,2
    0: POKE 3,91
120 CALL 32791
130 FOR I = 1 TO 3000: NEXT
140 POKE 0,20: POKE 1,0: POKE 2,
    40: POKE 3,91
150 CALL 32791
160 FOR I = 1 TO 3000: NEXT
170 POKE 0,0: POKE 1,91: POKE 2,
    20: POKE 3,192
180 CALL 32791
190 FOR I = 1 TO 3000: NEXT
200 POKE 0,20: POKE 1,91: POKE 2
    ,40: POKE 3,192
210 CALL 32791
220 FOR I = 1 TO 3000: NEXT
230 TEXT : END

```

程序 DOWN-3 可以将第 2 页的图形 PIC 1 和第 1 页的图形 AAAAA, 分左、右两部分分别清算。

```

10 REM DOWN-3
20 D$ = CHR$ (4)
30 PRINT D$;"BLOAD DOWN-6,A$8017
"
40 PRINT D$;"BLOAD PIC 1,,A$4000
"
45 PRINT D$;"BLOAD AAAAA,,A$2000
"
50 POKE - 16304,0
60 POKE - 16297,0

```



```

70 POKE - 16302,0
80 POKE - 16299,0
90 FOR I = 1 TO 6000: NEXT
100 POKE 230,64
110 POKE 0,0: POKE 1,0: POKE 2,2
    0: POKE 3,192
120 CALL 32791
130 FOR I = 1 TO 6000: NEXT
140 POKE 0,20: POKE 1,0: POKE 2,
    40: POKE 3,192
150 CALL 32791
170 POKE - 16304,0
180 POKE - 16297,0
190 POKE - 16302,0
200 POKE - 16300,0
210 FOR I = 1 TO 6000: NEXT
220 POKE 230,32
230 POKE 0,0: POKE 1,0: POKE 2,2
    0: POKE 3,192
240 CALL 32791
250 FOR I = 1 TO 6000: NEXT
260 POKE 0,20: POKE 1,0: POKE 2,
    40: POKE 3,192
270 CALL 32791
280 FOR I = 1 TO 1000: NEXT
290 TEXT : END

```

1

十一、多功能图形管理软件包

1. 功能简介

本软件包为在中华学习机上开发的通用型多功能图形管理软件。在图形处理上，有新的特色和创新，它不仅包括常规的图形处理技术，而且还包括图象处理的特殊技巧。巧妙地利用图象压缩存贮技术、16K RAM 语言卡，解决了处理多幅图形中华学习机内存不足的困难；运用多页联动、分页显示、图形剪辑、图象合成等技术，为图形处理提供了新方法；灵活修改指针，采用反覆搬家方法，解决了程序区和图形存贮、显示页面不相兼容的矛盾；选用 STC 汉字系统，用机器语言控制，解决了本软件包可以同时用 APPLE- II、紫金- II 系列机，中华学习机上通用和汉化问题；而软件包中提供的 18 种高分辨率图形清屏技巧，使图形画面更加丰富多采。

该软件包可以对调进内存的一幅或多幅图形，进行 15 种操作：

- A. 左右翻身 B. 左右移动 C. 左右绕卷
- D. 上下颠倒 E. 上下移动 F. 上下绕卷
- G. 分页显示 H. 动画显示 I. 翻卷显示
- J. 局部放大 K. 成倍翻番 L. 镜象复制
- M. 多幅联动 N. 多幅合成 O. 剪辑编辑

2. 主要特点

(1) 模块化结构编程

BASIC 语言和 6502 机器语言配合使用, 总控灵活, 各种操作有机结合。

(2) 友好的人机界面

有中文操作说明, 简单的英语提示, 操作方便, 可以任意显示、处理任一幅画面, 选用任一功能。

(3) 移植性好独立性强

可以将本软件包的任一图形处理功能, 或任一种清屏技巧, 直接移植, 从而使您的图形软件增辉添色。

(4) 通用性好适用性强

只要掌握本软件包的设计原理、结构组织、方法技巧, 就可以在计算机辅助教学、图形处理辅助设计、游戏软件开发和办公室自动化方面得到应用。

(5) 适用机型多

本软件包可以在紫金-I 系列机、APPLE-I 兼容机及中华学习机上通用运行, 而不需要重新输入中文, 自带字库。

(6) 有图形编辑、剪辑功能

灵活操作, 有机结合几种功能, 可以设计出各种形式、神态各异、新颖多采、生动活泼的多种图形来。

特别应该指出的, 它可以完全成为您的一个图形管理工具软件, 只要删去本软件包提供的 9 个图形资料, 换上您的得意之作, 并重新以本软件包命名的图形名存贮, 而不要改动软件包原有的 20 个 BASIC 程序。

3. 使用方法

(1) 运行环境

中华学习机 CEC-I, APPLE-II 及其兼容机, 紫金-II 系列机; 一台软盘驱动器; 单色或彩色监视器, 中华机可以为黑白或彩色电视机。

(2) 启动

- 将本软件磁盘 (1 个, 12 个 6502 机器语言程序, 20 个 BASIC 程序, 9 幅图形资料) 插入驱动器中, 关好盖门;

- 打开显示器 (或电视机) 电源;

- 打开主机电源;

软件将自动进入计算机, 并出现本软件包题头 (软件名称, 作者, 研制时间)。

稍等片刻, 出现本软件包 15 种中文提示的功能菜单, 供选择。

(3) 操作说明

根据菜单, 可选择 1 至 15 种任意一个功能进行演示, 可以不按 1—15 顺序交叉运行, 也可以对某一功能操作多次反复进行。

当某一功能出现 “ENTER PICTURE NAME:” 提示时, 您可以输入本软件包中已经存有的 9 幅图形中的任意一幅, 它们的名字是: C1, C2, C3, G1, G2, X, MLZ, TLY, TLY2。

当您需要对自己的图形进行管理时, 您可以先删去以上各图形后, 再存入您的图形, 而新存入的图形名称, 最好与删去的图形名一致。如: DELETE C1 ✓ (删去原软件包中 C1 图形)

BSAVE C1, A \$ 2000, L \$ 2000 ✓ (存新图, 在第一页)

由于本软件包连带字库的程序共有 61 个, 基本上占满一个盘片, 因此盘的正面已不能再存贮新的资料, 除非如上方法删去。若要利用盘的反面存贮图形, 应在 BASIC 程序中加控制提示。

(4) 操作方法

①左右翻身

按 A 键(不要回车, 下同), 屏幕上首先出现由上向下的清屏, 然后出现“ENTER PICT NAME:”的提示, 此时输入一个图形名如 CI 并 ✓, 图形 CI 调入内存, 按 Y 键运行, 重复按 Y 键图形不断左右翻身, 而要结束运行按 E 键, 此时出现从中间向四角清屏, 然后返回主菜单(15 种功能选择的中文菜单)。

②左右移动

按 B 键, 出现由上到下拉百叶窗清屏, 然后输入一个图形名(上述 9 幅图形中的任一幅) ✓, 根据 1——LEFT, 2——RIGHT, 3——BACK, 按数字键 1、2 分别一列一列左移或右移, 连续按键 1 或 2, 不断移动, 交叉按 1 或 2, 或左或右移动。结束运行按 3, 清屏后返回主菜单。

③左右绕卷

按 C 键, 出现由下向上清屏, 输入一个图形后, 不停地从右向左绕卷, 按空格键暂停, 再按空格键则一列一列地由右向左绕卷。若暂停后按任意键, 又恢复连续绕卷。按 RETURN 键则返回主菜单。

④上下颠倒

按 D 键, 出现从中间同时向上、向下清屏, 输入一个图

形，按 X 键图形颠倒，再按一次 X 键，图形恢复正常，不断重复按 X 键，一会颠倒，一会正常。按 E 键返回主菜单。

⑤上下移动

按 E 键，出现从四角向中间清屏，出现输入图形的提示和操作方法：1——UP（即向上移动），2——DOWN（即向下移动），3——END（即返回菜单），图形名为软件包中已有的。

⑥上下绕卷

按 F 键，出现左面从左上到下，右面从右下到上，同时清屏。输入一个图形后，图形会不停地绕卷，按 D 键向下，按 U 键向上，按空格键暂停，再按一次空格又运行，按 RETURN 键返回。

⑦分页显示

按 G 键，出现从上到下、从下到上同时向中间清屏，然后出现一幅画面，画面下有一光标，按 1, 2, 3 中任一数字，显示一幅图象，共三幅，然后自动返回。本功能不要从键盘上输入图形名，程序中自动调进三幅图形资料。

⑧动画显示

按 H 键后，出现暗条纹间隔清屏，紧接着调图象进内存，然后出现一个不断眨眼的熊猫图象，动画显示片刻后返回菜单。

⑨翻卷显示

按 I 键后，先出现一个唐老鸭的图形，等一会儿出现米老鼠坐汽车的图形，接着是翻卷显示，就像翻小人书一样，共显示 4 次，最后自动返回主菜单。整个过程从开始到结束全部自动进行。

⑩局部放大

按 J 键后出现由左向右的拉幕清屏,然后出现“ENTER PICT NAME:”信息,此时输入一个图形名,如 TLY(唐老鸭)↵,屏幕上立即出现一个小唐老鸭图象,占屏幕的1/8。

注意此时在屏幕的左上角出现一个闪动的“┐”符号,按 I、J、K、M 4 个键中的任一按键,使符号“┐”向上,向左,向右,向下移动,直至移动被处理的图象(如 TLY)的合适位置,(表明局部放大的起始位置)按下“ESC”键,此时符号“┐”变成“┘”,同理,按 I、J、K、M 相应键,至图象另一位置(局部放大的终止位置),再次按一下“ESC”键,至此,被局部放大的图象坐标被接受。

当屏幕出现 A,B=__ 的提示时,要求输入水平方向放大系数 A,垂直方向放大系数 B,如输入 2,2↵(即表示放大两倍),然后出现 X,Y=__ 提示,可输入 X、Y 方向的坐标,如 20,10↵,则屏幕上逐渐出现放大后的图象。应该注意的是, A,B,X,Y 之值不应太大,否则超过屏幕而使程序无法运行。

当全部图象(局部放大后的图象)显示完成后,出现 DO YOU WANT SAVE? (Y/N)信息,意即提示是否需要存盘,存按 Y,反之按 N。若是存盘,在键入 Y 后,出现 ENTER PICT NAME:提示,此时应键入存盘的文件名,如 PPP↵,若不存盘,在按 N 后,会自动返回菜单。

①成倍翻番

按 K 键后出现向左移动的暗条纹清屏,出现输入文件名信息,此时如键入 TLY2↵,屏幕上显示唐老鸭对称图形,然后出现 4 个细长的唐老鸭图形,又一次出现 2 个图形、4 个图形共交替出现 3 次,最后出现的是 4 个在垂直方向上压缩了的图形,再返回主菜单。

②镜象复制

按 L 键后出现的是另一种方式的清屏,从中间向两边。清屏后提示输入一个图形名,如 G2↙,此时出现两个熊猫图象。注意 G2↙是原图象,它是一只熊猫,经程序处理后,变成 2 个熊猫,好像从镜子里看到一样,这就是镜象复制。显示一段时间后,返回菜单。

⑬多幅联动

按 M 键后出现从右至左的拉幕清屏,稍等片刻后,屏幕上先是出现一幅静止图象,然后是画面开始移动,当上述画面移动时,紧接着又是一幅画面从屏幕下部出现,跟着第一幅画面联在一起运动,而当第二幅图象移动到一定位置时,屏幕下方又出现另一幅不同的画面,这样,就构成了 3 幅画面的联动显示。利用压缩存贮技术,和 16K RAM 语言卡,可以在有限内存的中华学习机中,联动显示 5 幅不同的画面,为计算机辅助教学提供了新的显示手段。本软件在 3 幅联动显示后,自动返回菜单。

⑭多幅合成

按 N 键后,出现左上向下、右下向上至中间,左下向上、右上向下至中间的分段清屏,然后看到的是 4 幅(每幅占屏幕 1/4)画面合成,延迟一段时间返回菜单。

请注意学习和理解本功能图象合成技术,改动一些坐标范围,可以构成更多幅不同画面的合成,别有一番情趣。

⑮剪辑编辑

按 O 键后出现由左向右的暗条纹清屏,然后根据提示输入一个图形名,如 MLZ(米老鼠)↙,然后出现“ ”进入剪辑状态,按 I、J、K、M 和 ESC 键(同局部放大功能),自动剪辑图形中的一部分(不放大, A=B=1, X=Y=0),剪辑完成后,出现 C—— INVERSE(反相), D—— DOWN(向下), L—— LEFT

(左移),E——BACK(返回)的提示,按说明进行操作,从而把图象编辑至屏幕的任意位置上。而在操作过程中,按空格键会暂停。

4. 几点说明

①本软件包可以作为一个游戏软件,这对不熟悉的程序设计的读者来说是适合的。即对于只想玩游戏的读者来说,他们只要对照使用说明,就可以了。

②对于已经掌握中华学习机基础知识,初步具备 BASIC 语言和 6502 汇编语言的读者来说,本软件包的设计原则、常用技术、表现手法、原理技巧,是学习和借鉴的有用参考。

③对于青少年计算机教师、课外辅导员以及有志于图形处理及游戏程序设计的人员来说,本软件包提供了一个工具软件,并希望给予扩展和充实。

5. 程序清单

多功能图形管理软件包共包含 12 个机器语言子程序,20 个 BASIC 程序,9 幅图形资料,装满 1 个盘片,本软件是在 STC 2.0 系统下开发的。下面是源程序清单:

HELLO 程序是一题头,显示软件名称、软件制作者和制作日期。

ZS 程序是汉字显示的主菜单,按照提示可选择各项图形功能。

GZZ 程序是改指针程序,它将 BASIC 程序重新放置,其原理见第二章。

其他图形功能程序原理请分别参阅第三—九章,这里就不再分析了。

HELLO 软件包题头清单:

```
10 PRINT CHR$(4)"BLOADGZZ"  
20 HCOLOR= 3: FOR I = 0 TO 10: HPLLOT I,I TO 279 - I,I TO 27  
9 - I,190 - I TO I,190 - I TO I,I: NEXT I: HCOLOR= 0  
30 VTAB 3: HTAB 4: PRINT "多功能图形管理软件包."  
40 VTAB 6: HTAB 10: PRINT "孙建隆 朱国江."  
50 VTAB 7: HTAB 10: PRINT "李汝凉 王召民."  
60 VTAB 10: HTAB 9: PRINT "一九八八年十月."  
70 FOR I = 1 TO 2000: NEXT I  
80 PRINT CHR$(13) + CHR$(4)"RUNZS"
```

ZS 软件包汉字主菜单:

```
10 REM ZS  
20 D$ = CHR$(4)  
30 HCOLOR= 0: FOR I = 140 TO 0 STEP - 1: HPLLOT I,I TO 279  
- I,I TO 279 - I,191 - I TO I,191 - I TO I,I: NEXT I  
40 K = 3: GOSUB 160  
50 VTAB 2: HTAB 4: PRINT "多功能图形管理软件包."  
60 VTAB 4: HTAB 2: PRINT "A.左右翻身 B.左右移动 C.左右绕卷."  
70 VTAB 5: HTAB 2: PRINT "D.上下颠倒 E.上下移动 F.上下绕卷."  
80 VTAB 6: HTAB 2: PRINT "G.分页显示 H.动画显示 I.翻卷显示."  
90 VTAB 7: HTAB 2: PRINT "J.局部放大 K.成倍翻番 L.镜象复制."  
100 VTAB 8: HTAB 2: PRINT "M.多幅联动 N.多幅合成 O.剪辑编辑"  
110 VTAB 10: HTAB 6: PRINT "请选择(A-O),按P结束:"  
120 X = PEEK( - 16384)  
130 IF X = 208 THEN POKE - 16368,0: K = 0: GOSUB 160: CALL  
5576: NEW: END  
140 IF X < 193 OR X > 208 THEN 120
```

```

145 POKE 3848,0: POKE 33649,9: POKE 33653,15: POKE 33694,20
8
150 POKE 33695,X: CALL 33648
160 HCOLOR= X: HPLOT 0,0 TO 279,0 TO 279,191 TO 0,191 TO 0,
0: RETURN

```

GZZ 改指针程序清单:

```

8370- A9 09 LDA #$09
8372- 85 67 STA $67
8374- A9 0F LDA #$0F
8376- 85 68 STA $68
8378- 85 6A STA $6A
837A- 85 6C STA $6C
837C- 85 6E STA $6E
837E- 85 B0 STA $B0
8380- A9 03 LDA #$03
8382- 85 69 STA $69
8384- 85 6B STA $6B
8386- 85 6D STA $6D
8388- 85 AF STA $AF
838A- A2 00 LDX #$00
838C- 8D 9B 83 LDA $B39B,X
838F- 9D 00 02 STA $0200,X
8392- EB INX
8393- E0 06 CPX #$06
8395- D0 F5 BNE $B38C
8397- 20 CD 9F JSR $9FCD
839A- 60 RTS
839B- D2 ???
839C- D5 CE CMP $CE,X
839E- D0 B0 BNE $B350
83A0- 8D 00 00 STA $0000
83A3- 00 BRK
83A4- 00 BRK
83A5- 00 BRK

```

PA 左右翻身:

```

5 REM PA
7 POKE - 16368,0
10 D$ = CHR$(4)
15 HCOLOR= 0: FOR I = 0 TO
191: HPLOT 0,I TO 279,

```

```

      I: NEXT I
20  PRINT D$"BLOAD JGCU"
30  INPUT "ENTER PICT NAME:
      ";K$
40  PRINT "Y-RUN  E-BACK"
50  PRINT D$"BLOAD"K$",A$20
      00
60  CALL 32768
70  POKE 16384,0: POKE 3364
      9,1: POKE 33653,64: POKE
      33694,218: POKE 33695,
      211: CALL 33648

```

```

8000-   AD 50 C0      LDA    $C050
8003-   AD 52 C0      LDA    $C052
8006-   AD 54 C0      LDA    $C054
8009-   AD 57 C0      LDA    $C057
800C-   A0 00          LDY    #$00
800E-   84 3A          STY    $3A
8010-   84 3C          STY    $3C
8012-   A0 40          LDY    #$40
8014-   84 3B          STY    $3B
8016-   C8            INY
8017-   84 3D          STY    $3D
8019-   A0 BF          LDY    #$BF
801B-   98            TYA
801C-   0A            ASL
801D-   0A            ASL
801E-   29 1C          AND     #$1C
8020-   85 15          STA     $15
8022-   98            TYA
8023-   6A            ROR
8024-   6A            ROR
8025-   6A            ROR
8026-   6A            ROR
8027-   29 03          AND     #$03
8029-   05 15          ORA     $15
802B-   09 20          ORA     #$20
802D-   91 3C          STA     ($3C),Y
802F-   98            TYA
8030-   6A            ROR
8031-   29 E0          AND     #$E0
8033-   85 14          STA     $14

```

8035-	6A	ROR	
8036-	6A	ROR	
8037-	29 18	AND	##18
8039-	05 14	ORA	\$14
803B-	91 3A	STA	(\$3A),Y
803D-	88	DEY	
803E-	C0 FF	CPY	##FF
8040-	D0 D9	BNE	\$801B
8042-	2C 00 C0	BIT	\$C000
8045-	10 FB	BPL	\$8042
8047-	AD 00 C0	LDA	\$C000
804A-	C9 C4	CMP	##C4
804C-	D0 3C	BNE	\$808A
804E-	A0 28	LDY	##28
8050-	88	DEY	
8051-	B9 00 20	LDA	\$2000,Y
8054-	99 00 42	STA	\$4200,Y
8057-	98	TYA	
8058-	D0 F6	BNE	\$8050
805A-	A2 01	LDX	##01
805C-	BD 00 40	LDA	\$4000,X
805F-	85 14	STA	\$14
8061-	BD 00 41	LDA	\$4100,X
8064-	85 15	STA	\$15
8066-	A0 28	LDY	##28
8068-	88	DEY	
8069-	B1 14	LDA	(\$14),Y
806B-	85 3A	STA	\$3A
806D-	B9 00 42	LDA	\$4200,Y
8070-	91 14	STA	(\$14),Y
8072-	A5 3A	LDA	\$3A
8074-	99 00 42	STA	\$4200,Y
8077-	98	TYA	
8078-	D0 EE	BNE	\$8068
807A-	8A	TXA	
807B-	F0 0A	BEQ	\$80B7
807D-	E8	INX	
807E-	E0 C0	CPX	##C0
8080-	D0 DA	BNE	\$805C
8082-	A2 00	LDX	##00
8084-	4C 5C 80	JMP	\$805C
8087-	4C 42 80	JMP	\$8042
808A-	C9 CC	CMP	##CC
808C-	D0 28	BNE	\$80B6

808E-	A2 C0	LDX	##C0
8090-	CA	DEX	
8091-	BD 00 40	LDA	\$4000, X
8094-	B5 14	STA	\$14
8096-	BD 00 41	LDA	\$4100, X
8099-	B5 15	STA	\$15
809B-	A0 00	LDY	##00
809D-	B1 14	LDA	(\$14), Y
809F-	B5 3A	STA	\$3A
80A1-	CB	INY	
80A2-	B1 14	LDA	(\$14), Y
80A4-	8B	DEY	
80A5-	91 14	STA	(\$14), Y
80A7-	CB	INY	
80A8-	C0 27	CPY	##27
80AA-	D0 F5	BNE	\$80A1
80AC-	A5 3A	LDA	\$3A
80AE-	91 14	STA	(\$14), Y
80B0-	8A	TXA	
80B1-	D0 DD	BNE	\$8090
80B3-	4C 42 80	JMP	\$8042
80B6-	2C 10 C0	BIT	\$C010
80B9-	C9 D9	CMP	##D9
80BB-	D0 5B	BNE	\$811B
80BD-	A0 00	LDY	##00
80BF-	84 11	STY	\$11
80C1-	A4 11	LDY	\$11
80C3-	B9 00 40	LDA	\$4000, Y
80C6-	B5 14	STA	\$14
80C8-	B9 00 41	LDA	\$4100, Y
80CB-	B5 15	STA	\$15
80CD-	A2 27	LDX	##27
80CF-	86 3E	STX	\$3E
80D1-	A0 00	LDY	##00
80D3-	A2 13	LDX	##13
80D5-	B4 3A	STY	\$3A
80D7-	A4 3A	LDY	\$3A
80D9-	B1 14	LDA	(\$14), Y
80DB-	B5 3B	STA	\$3B
80DD-	B5 3C	STA	\$3C
80DF-	A4 3E	LDY	\$3E
80E1-	B1 14	LDA	(\$14), Y
80E3-	B5 3D	STA	\$3D
80E5-	B5 3F	STA	\$3F

80E7-	A0 08	LDY	##08
80E9-	06 3B	ASL	\$3B
*LLL			
80EB-	6A	ROR	
80EC-	8B	DEY	
80ED-	D0 FA	BNE	\$80E9
80EF-	06 3C	ASL	\$3C
80F1-	6A	ROR	
80F2-	A4 3E	LDY	\$3E
80F4-	91 14	STA	(\$14),Y
80F6-	A0 08	LDY	##08
80FB-	06 3D	ASL	\$3D
80FA-	6A	ROR	
80FB-	8B	DEY	
80FC-	D0 FA	BNE	\$80FB
80FE-	06 3F	ASL	\$3F
8100-	6A	ROR	
8101-	A4 3A	LDY	\$3A
8103-	91 14	STA	(\$14),Y
8105-	C6 3E	DEC	\$3E
8107-	E6 3A	INC	\$3A
8109-	E4 3E	CPX	\$3E
810B-	D0 CA	BNE	\$80D7
810D-	E6 11	INC	\$11
810F-	A2 C0	LDX	##C0
8111-	E4 11	CPX	\$11
8113-	D0 AC	BNE	\$80C1
8115-	4C 42 80	JMP	\$8042
8118-	C9 D8	CMP	##D8
811A-	D0 40	BNE	\$815C
811C-	A2 60	LDX	##60
811E-	A0 00	LDY	##00
8120-	B4 11	STY	\$11
8122-	A0 BF	LDY	##BF
8124-	B4 12	STY	\$12
8126-	A4 11	LDY	\$11
8128-	B9 00 40	LDA	\$4000,Y
812B-	85 14	STA	\$14
812D-	B9 00 41	LDA	\$4100,Y
8130-	85 15	STA	\$15
8132-	A4 12	LDY	\$12
8134-	B9 00 40	LDA	\$4000,Y
8137-	85 16	STA	\$16
8139-	B9 00 41	LDA	\$4100,Y

813C-	85 17	STA	\$17
813E-	A0 00	LDY	#\$00
8140-	B1 14	LDA	(\$14),Y
8142-	85 3A	STA	\$3A
8144-	B1 16	LDA	(\$16),Y
8146-	91 14	STA	(\$14),Y
8148-	A5 3A	LDA	\$3A
814A-	91 16	STA	(\$16),Y
814C-	C8	INY	
814D-	C0 28	CPY	##28
814F-	D0 EF	BNE	\$8140
8151-	E6 11	INC	\$11
8153-	C6 12	DEC	\$12
8155-	E4 11	CPX	\$11
8157-	D0 CD	BNE	\$8126
8159-	4C 42 80	JMP	\$8042
815C-	C9 C3	CMP	##C3
815E-	D0 2A	BNE	\$818A
8160-	A0 20	LDY	##20
*L			
8162-	A2 40	LDX	##40
8164-	AD 00 20	LDA	\$2000
8167-	0A	ASL	
8168-	49 FF	EOR	##FF
816A-	6A	ROR	
816B-	8D 00 20	STA	\$2000
816E-	EE 65 81	INC	\$8165
8171-	EE 6C 81	INC	\$816C
8174-	D0 EE	BNE	\$8164
8176-	EE 66 81	INC	\$8166
8179-	EE 6D 81	INC	\$816D
817C-	EC 66 81	CPX	\$8166
817F-	D0 E3	BNE	\$8164
8181-	8C 66 81	STY	\$8166
8184-	8C 6D 81	STY	\$816D
8187-	4C 42 80	JMP	\$8042
818A-	C9 C5	CMP	##C5
818C-	D0 F9	BNE	\$8187
818E-	60	RTS	

PB 左右移动:

```

5 REM PB
7 POKE - 16368,0
10 D$ = CHR$(4)
15 HCOLOR= 0: FOR I = 0 TO

```



```

32: FOR J = 0 TO 160 STEP
32: IF J = 160 THEN J =
J - 1
17 HPLLOT 0,I + J TO 279,I +
J: NEXT J: NEXT I
20 PRINT D$"BLOOD ZY"
30 INPUT "ENTER PICT NAME:
";K$
50 PRINT "1-LEFT 2-RIGHT 3
-BACK"
93 PRINT D$"BLOOD"K$",A$20
00
95 X = PEEK ( - 16384)
100 IF X = 179 THEN POKE
- 16368,0: GOTO 300
110 IF X < 177 OR X > 179 THEN 95
115 N = X - 176: POKE - 16
368,0
120 ON N GOTO 200,220
200 CALL 32831
210 GOTO 95
220 CALL 32862
230 GOTO 95
300 POKE 16384,0: POKE 336
49,1: POKE 33653,64: POKE
33694,218: POKE 33695,
211: CALL 33648

```

B000-	A0 00	LDY	#\$00
B002-	A2 BF	LDX	##BF
B004-	BD 00 81	LDA	\$8100,X
B007-	85 07	STA	\$07
B009-	BD 00 82	LDA	\$8200,X
B00C-	85 06	STA	\$06
B00E-	B1 06	LDA	(\$06),Y
B010-	48	PHA	
B011-	CA	DEX	
B012-	E0 FF	CPX	##FF
B014-	D0 EE	BNE	\$8004
B016-	A2 00	LDX	##00
B018-	BD 00 81	LDA	\$8100,X
B01B-	85 07	STA	\$07
B01D-	BD 00 82	LDA	\$8200,X

8020-	85 06	STA	\$06
8022-	C0 27	CPY	##27
8024-	F0 10	BEQ	\$B036
8026-	C8	INY	
8027-	B1 06	LDA	(\$06),Y
8029-	88	DEY	
802A-	91 06	STA	(\$06),Y
802C-	E8	INX	
802D-	E0 C0	CPX	##C0
802F-	D0 E7	BNE	\$B018
8031-	C8	INY	
8032-	C0 28	CPY	##28
8034-	D0 E0	BNE	\$B016
8036-	68	PLA	
8037-	91 06	STA	(\$06),Y
8039-	E8	INX	
803A-	E0 C0	CPX	##C0
803C-	90 DA	BCC	\$B018
803E-	60	RTS	
803F-	A9 00	LDA	##00
8041-	BD 01 80	STA	\$B001
8044-	A9 27	LDA	##27
8046-	BD 23 80	STA	\$B023
8049-	A9 C8	LDA	##C8
804B-	BD 26 80	STA	\$B026
804E-	BD 31 80	STA	\$B031
8051-	A9 88	LDA	##88
8053-	BD 29 80	STA	\$B029
8056-	A9 28	LDA	##28
8058-	BD 33 80	STA	\$B033
805B-	4C 7A 80	JMP	\$B07A
805E-	A9 27	LDA	##27
8060-	BD 01 80	STA	\$B001
8063-	A9 00	LDA	##00
8065-	BD 23 80	STA	\$B023
8068-	A9 88	LDA	##88
806A-	BD 26 80	STA	\$B026
806D-	BD 31 80	STA	\$B031
8070-	A9 C8	LDA	##C8
8072-	BD 29 80	STA	\$B029
8075-	A9 FF	LDA	##FF
8077-	BD 33 80	STA	\$B033
807A-	A9 20	LDA	##20
807C-	85 E6	STA	\$E6

807E-	A2 00	LDX	##00
8080-	8A	TXA	
8081-	48	PHA	
8082-	20 11 F4	JSR	\$F411
8085-	68	PLA	
8086-	AA	TAX	
8087-	A5 26	LDA	\$26
8089-	9D 00 82	STA	\$B200,X
808C-	A5 27	LDA	\$27
808E-	9D 00 81	STA	\$B100,X
8091-	E8	INX	
8092-	E0 C0	CPX	##C0
8094-	D0 EA	BNE	\$B0B0
8096-	4C 00 80	JMP	\$B000

PC 左右绕卷:

```

5  REM PC
8  POKE - 16368,0
10 D$ = CHR$ (4)
20 HCOLOR= 0: FOR I = 191 TO
   0 STEP - 1: HPL0T 0,I
   TO 279,I: NEXT I
25  INPUT "ENTER PICT NAME:
   ";K$
30  PRINT D$"BLOAD ZYRJ"
40  PRINT D$"BLOAD";K$;"",A$
   2000"
70  CALL 32933
80  POKE 16384,0: POKE 3364
   9,1: POKE 33653,64: POKE
   33694,218: POKE 33695,
   211: CALL 33648

```

8000-	A0 00	LDY	##00
8002-	A2 BF	LDX	##BF
8004-	BD 00 81	LDA	\$B100,X
8007-	B5 07	STA	\$07
8009-	BD 00 82	LDA	\$B200,X
800C-	B5 06	STA	\$06
800E-	B1 06	LDA	(\$06),Y
8010-	48	PHA	
8011-	CA	DEX	
8012-	E0 FF	CPX	##FF
8014-	D0 EE	BNE	\$B004
8016-	A2 00	LDX	##00

8018-	BD 00 81	LDA	\$8100,X
801B-	85 07	STA	\$07
801D-	BD 00 82	LDA	\$8200,X
8020-	85 06	STA	\$06
8022-	C0 27	CPY	##27
8024-	F0 10	BEQ	\$8036
8026-	CB	INY	
8027-	B1 06	LDA	(\$06),Y
8029-	88	DEY	
802A-	91 06	STA	(\$06),Y
802C-	EB	INX	
802D-	E0 C0	CPX	##C0
802F-	D0 E7	BNE	\$8018
8031-	CB	INY	
8032-	C0 28	CPY	##28
8034-	D0 E0	BNE	\$8016
8036-	68	PLA	
8037-	91 06	STA	(\$06),Y
8039-	EB	INX	
803A-	E0 C0	CPX	##C0
803C-	90 DA	BCC	\$8018
803E-	EA	NOP	
803F-	EA	NOP	
8040-	EA	NOP	
8041-	EA	NOP	
8042-	EA	NOP	
8043-	EA	NOP	
8044-	EA	NOP	
8045-	EA	NOP	
8046-	AD 00 C0	LDA	\$C000
8049-	10 B5	BPL	\$8000
804B-	C9 A0	CMF	##A0
804D-	D0 08	BNE	\$8057
804F-	2C 10 C0	BIT	\$C010
8052-	AD 00 C0	LDA	\$C000
8055-	10 FB	BPL	\$8052
8057-	C9 8D	CMF	##8D
8059-	F0 46	BEQ	\$80A1
805B-	C9 CC	CMF	##CC
805D-	D0 1F	BNE	\$807E
805F-	A9 00	LDA	##00
8061-	8D 01 80	STA	\$8001
8064-	A9 27	LDA	##27
8066-	8D 23 80	STA	\$8023

8069-	A9 C8	LDA	##C8
806B-	8D 26 80	STA	\$B026
806E-	8D 31 80	STA	\$B031
8071-	A9 88	LDA	##88
8073-	8D 29 80	STA	\$B029
8076-	A9 28	LDA	##28
8078-	8D 33 80	STA	\$B033
807B-	4C 00 80	JMP	\$B000
807E-	C9 D2	CMP	##D2
8080-	D0 1C	BNE	\$B09E
8082-	A9 27	LDA	##27
8084-	8D 01 80	STA	\$B001
8087-	A9 00	LDA	##00
8089-	8D 23 80	STA	\$B023
808C-	A9 88	LDA	##88
808E-	8D 26 80	STA	\$B026
8091-	8D 31 80	STA	\$B031
8094-	A9 C8	LDA	##C8
8096-	8D 29 80	STA	\$B029
8099-	A9 FF	LDA	##FF
809B-	8D 33 80	STA	\$B033
809E-	4C 00 80	JMP	\$B000
80A1-	2C 10 C0	BIT	\$C010
80A4-	60	RTS	
80A5-	A9 20	LDA	##20
80A7-	85 E6	STA	\$E6
80A9-	A2 00	LDX	##00
80AB-	8A	TXA	
80AC-	48	PHA	
80AD-	20 11 F4	JSR	\$F411
80B0-	68	PLA	
80B1-	AA	TAX	
80B2-	A5 26	LDA	\$26
80B4-	9D 00 82	STA	\$B200,X
80B7-	A5 27	LDA	\$27
80B9-	9D 00 81	STA	\$B100,X
80BC-	E8	INX	
80BD-	E0 C0	CPX	##C0
80BF-	D0 EA	BNE	\$B0AB
80C1-	4C 00 80	JMP	\$B000

PD 上下颠倒:

```

5 REM PD
7 POKE - 16368,0
10 D$ = CHR$ (4)

```

```

15 HCOLOR= 0: FOR I = 0 TO
   95: HPLLOT 0,95 - I TO
   279,95 - I: HPLLOT 0,96
   + I TO 279,96 + 1: NEXT

20 PRINT D$"BLOAD JGCU"
30 INPUT "ENTER PICT NAME:
   ";K$
40 PRINT "X-RUN E-BACK"
50 PRINT D$"BLOAD"K$",A$20
   00
60 CALL 32768
70 POKE 16384,0: POKE 3364
   9,1: POKE 33653,64: POKE
   33694,218: POKE 33695,
   211: CALL 33648
PE 上下移动:
5 REM PE
7 POKE - 16368,0
10 D$ = CHR$ (4)
15 HCOLOR= 0: FOR I = 0 TO
   141: HPLLOT I,I TO 279 -
   I,I TO 279 - I,191 - I
   TO I,191 - I TO I,I: NEXT I
20 PRINT D$"BLOAD YDXSQPO"

30 INPUT "ENTER PICT NAME:
   ";K$
50 PRINT "1-UP 2-DOWN 3-
   END"
93 PRINT D$"BLOAD"K$",A$40
   00
95 X = PEEK ( - 16384)
100 IF X = 179 THEN POKE
   - 16368,0: GOTO 300
110 IF X < 177 OR X > 179 THEN 95
115 N = X - 176: POKE - 16
   368,0
120 ON N GOTO 200,220
200 CALL 32849
210 GOTO 95
220 CALL 32880
230 GOTO 95
300 POKE 16384,0: POKE 336

```

49,1: POKE 33653,64: POKE
 33694,218: POKE 33695,
 211: CALL 33648

8000-	A9 00	LDA	##00
8002-	85 1F	STA	\$1F
8004-	A2 00	LDX	##00
8006-	BD 00 81	LDA	\$B100,X
8009-	85 07	STA	\$07
800B-	BD 00 82	LDA	\$B200,X
800E-	85 06	STA	\$06
8010-	E8	INX	
8011-	BD 00 81	LDA	\$B100,X
8014-	85 09	STA	\$09
8016-	BD 00 82	LDA	\$B200,X
8019-	85 08	STA	\$08
801B-	20 45 80	JSR	\$B045
801E-	E0 BF	CPX	##BF
8020-	D0 E4	BNE	\$B006
8022-	A5 08	LDA	\$08
8024-	85 06	STA	\$06
8026-	A5 09	LDA	\$09
8028-	85 07	STA	\$07
802A-	A6 1F	LDX	\$1F
802C-	BD 00 81	LDA	\$B100,X
802F-	18	CLC	
8030-	69 20	ADC	##20
8032-	85 09	STA	\$09
8034-	BD 00 82	LDA	\$B200,X
8037-	85 08	STA	\$08
8039-	20 45 80	JSR	\$B045
803C-	E6 1F	INC	\$1F
803E-	A5 1F	LDA	\$1F
8040-	C9 C0	CMP	##C0
8042-	D0 C0	BNE	\$B004
8044-	60	RTS	
8045-	A0 00	LDY	##00
8047-	B1 08	LDA	(\$08),Y
8049-	91 06	STA	(\$06),Y
804B-	C8	INY	
804C-	C0 28	CPY	##28
804E-	D0 F7	BNE	\$B047
8050-	60	RTS	
8051-	A9 00	LDA	##00

8053-	8D 01 80	STA	\$B001
8056-	8D 05 80	STA	\$B005
8059-	A9 E8	LDA	##E8
805B-	8D 10 80	STA	\$B010
805E-	A9 BF	LDA	##BF
8060-	8D 1F 80	STA	\$B01F
8063-	A9 E6	LDA	##E6
8065-	8D 3C 80	STA	\$B03C
8068-	A9 C0	LDA	##C0
806A-	8D 41 80	STA	\$B041
806D-	4C 8C 80	JMP	\$B08C
8070-	A9 BF	LDA	##BF
8072-	8D 01 80	STA	\$B001
8075-	8D 05 80	STA	\$B005
8078-	A9 CA	LDA	##CA
807A-	8D 10 80	STA	\$B010
807D-	A9 00	LDA	##00
807F-	8D 1F 80	STA	\$B01F
8082-	A9 C6	LDA	##C6
8084-	8D 3C 80	STA	\$B03C
8087-	A9 FF	LDA	##FF
8089-	8D 41 80	STA	\$B041
808C-	A9 20	LDA	##20
808E-	85 E6	STA	\$E6
8090-	A2 00	LDX	##00
8092-	8A	TXA	
8093-	48	PHA	
8094-	20 11 F4	JSR	\$F411
8097-	68	PLA	
8098-	AA	TAX	
8099-	A5 26	LDA	\$26
809B-	9D 00 82	STA	\$B200,X
809E-	A5 27	LDA	\$27
80A0-	9D 00 81	STA	\$B100,X
80A3-	E8	INX	
80A4-	E0 C0	CPX	##C0
80A6-	D0 EA	BNE	\$B092.
80AB-	4C 00 80	JMP	\$B000

PF 上下绕卷:

```

5 REM PF
8 POKE - 16368,0
10 D$ = CHR$(4)
20 HCOLOR= 0: FOR I = 0 TO
    191: HPL0T 0,I TO 141,

```



```

      I: HPILOT 141,191 - I TO
      279,191 - I: NEXT I
25  INPUT "ENTER PICT NAME:
      ";K$
30  PRINT D$"BLOADSX"
40  PRINT D$"BLOAD";K$; ",A$
      2000"
50  POKE 6,0: POKE 7,129: POKE
      8,0: POKE 9,130
60  POKE 230,32
70  CALL 32917
80  POKE 16384,0: POKE 3364
      9,1: POKE 33653,64: POKE
      33694,218: POKE 33695,
      211: CALL 33648

```

```

8000-    AD 50 C0      LDA    $C050
8003-    AD 57 C0      LDA    $C057
8006-    AD 52 C0      LDA    $C052
8009-    AD 10 C0      LDA    $C010
800C-    A2 00        LDX    #$00
800E-    BD 00 81      LDA    $B100,X
8011-    85 08        STA    $08
8013-    BD 00 82      LDA    $B200,X
8016-    85 09        STA    $09
8018-    E8           INX
8019-    BD 00 81      LDA    $B100,X
801C-    85 06        STA    $06
801E-    BD 00 82      LDA    $B200,X
8021-    85 07        STA    $07
8023-    E0 01        CPX    #$01
8025-    D0 08        BNE    $B02F
8027-    A0 27        LDY    #$27
8029-    B1 08        LDA    ($08),Y
802B-    48           PHA
802C-    88           DEY
802D-    10 FA        BPL    $B029
802F-    A0 27        LDY    #$27
8031-    B1 06        LDA    ($06),Y
8033-    91 08        STA    ($08),Y
8035-    88           DEY
8036-    10 F9        BPL    $B031
8038-    E0 C0        CPX    #$C0
803A-    D0 D2        BNE    $B00E

```

803C-	A0 00	LDY	##00
803E-	68	PLA	
803F-	91 08	STA	(\$08),Y
8041-	C8	INY	
8042-	C0 28	CPY	##28
8044-	90 F8	BCC	\$803E
8046-	AD 00 C0	LDA	\$C000
8049-	10 C1	BPL	\$800C
804B-	C9 A0	CMP	##A0
804D-	D0 08	BNE	\$8057
804F-	2C 10 C0	BIT	\$C010
8052-	AD 00 C0	LDA	\$C000
8055-	10 FB	BPL	\$8052
8057-	C9 8D	CMP	##8D
8059-	F0 36	BEQ	\$8091
805B-	C9 D5	CMP	##D5
805D-	D0 17	BNE	\$8076
805F-	A9 00	LDA	##00
8061-	8D 0D 80	STA	\$800D
8064-	A9 E8	LDA	##E8
8066-	8D 18 80	STA	\$8018
8069-	A9 01	LDA	##01
806B-	8D 24 80	STA	\$8024
806E-	A9 C0	LDA	##C0
8070-	8D 39 80	STA	\$8039
8073-	4C 09 80	JMP	\$8009
8076-	C9 C4	CMP	##C4
8078-	D0 8F	BNE	\$8009
807A-	A9 BF	LDA	##BF
807C-	8D 0D 80	STA	\$800D
807F-	A9 CA	LDA	##CA
8081-	8D 18 80	STA	\$8018
8084-	A9 BE	LDA	##BE
8086-	8D 24 80	STA	\$8024
8089-	A9 FF	LDA	##FF
808B-	8D 39 80	STA	\$8039
808E-	4C 09 80	JMP	\$8009
8091-	2C 10 C0	BIT	\$C010
8094-	60	RTS	
8095-	A9 00	LDA	##00
8097-	A0 00	LDY	##00
8099-	A2 00	LDX	##00
809B-	20 f1 F4	JSR	\$F411
809E-	A0 00	LDY	##00
80A0-	A5 26	LDA	\$26

```

80A2-   91 06           STA   ($06),Y
80A4-   A5 27           LDA   $27
80A6-   91 08           STA   ($08),Y
80AB-   EE 96 80        INC   $8096
80AB-   EE 9F 80        INC   $809F
80AE-   C0 BF           CPY   #$BF
80B0-   90 E3           BCC   $8095
80B2-   4C 00 80        JMP   $8000

```

PG 分页显示:

5 REM PG

10 D\$ = CHR\$ (4): POKE - 16368,0

15 HCOLOR= 0: FOR I = 0 TO 95: HPLLOT
0,I TO 279,I: HPLLOT 0,191 - I
TO 279,191 - I: NEXT I

20 PRINT D\$;"BLOAD C1,A\$2000"

25 PRINT D\$;"BLOAD C2,A\$4000"

30 PRINT D\$;"BLOAD C3,A\$6000"

40 POKE 49232,0

50 POKE 49239,0

60 POKE 49234,0

70 POKE 49236,0

80 GET A\$

90 POKE 49237,0

100 GET A\$

110 X\$ = "2000<6000.7FFFFM N D8236"

120 FOR I = 1 TO LEN (X\$): POKE
511 + I, ASC (MID\$ (X\$,I,1))
+ 128: NEXT I: POKE 72,0

130 CALL - 144

140 POKE 49236,0

150 GET A\$

210 POKE 16384,0: POKE 33649,1: POKE
33653,64: POKE 33694,218: POKE
33695,211: CALL 33648

PH 动画显示:

2 REM PH

3 POKE - 16368,0

4 HCOLOR= 0: FOR I = 0 TO 35: FOR
J = 0 TO 245 STEP 35: IF J =
245 THEN J = J - 1

5 HPLLOT I + J,0 TO I + J,191: NEXT
J: NEXT I

8 GOSUB 100

```

10 POKE - 16304,0
20 POKE - 16297,0
30 POKE - 16302,0
35 N = 0
40 POKE - 16300,0
42 IF N = 8 THEN 150
45 FOR J = 1 TO 50: NEXT J
50 POKE - 16299,0
53 FOR P = 1 TO 50: NEXT P
55 N = N + 1
60 GOTO 40
100 D$ = CHR$ (4)
110 PRINT D$"BLOAD G1,A$4000"
120 PRINT D$"BLOAD G2,A$2000"
140 RETURN
150 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211: CALL 33648
PI 翻卷显示:
10 REM FYQS2
15 POKE - 16368,0
20 D$ = CHR$ (4)
30 PRINT D$"BLOAD C1,A$2000"
40 PRINT D$"BLOAD C2,A$4000"
50 PRINT D$"BLOAD FYQS,A$8000"
60 POKE - 16297,0: POKE - 16302
    ,0: POKE - 16304,0: POKE -
    16300,0
70 FOR I = 1 TO 3000: NEXT
80 K$ = "6000<2000.3FFFM N DB236"
90 FOR I = 1 TO LEN (K$): POKE 5
    11 + I, ASC ( MID$ ( K$,I,1) ) +
    128: NEXT I: POKE 72,0
100 CALL - 144
110 CALL 32768
120 K$ = "4000<6000.7FFFM N DB236"

130 FOR I = 1 TO LEN (K$): POKE
    511 + I, ASC ( MID$ ( K$,I,1) )
    + 128: NEXT I: POKE 72,0
140 CALL - 144
150 N = N + 1: IF N = 4 THEN 170
160 GOTO 80
170 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE

```

33695,211: CALL 33648

8000-	4C 29 80	JMP	\$8029
8003-	A5 11	LDA	\$11
8005-	0A	ASL	
8006-	0A	ASL	
8007-	29 1C	AND	##1C
8009-	85 15	STA	\$15
800B-	A5 11	LDA	\$11
800D-	6A	ROR	
800E-	6A	ROR	
800F-	6A	ROR	
8010-	6A	ROR	
8011-	29 03	AND	##03
8013-	05 15	ORA	\$15
8015-	09 20	ORA	##20
8017-	85 15	STA	\$15
8019-	A5 11	LDA	\$11
801B-	6A	ROR	
801C-	29 E0	AND	##E0
801E-	85 14	STA	\$14
8020-	6A	ROR	
8021-	6A	ROR	
8022-	29 18	AND	##18
8024-	05 14	ORA	\$14
8026-	85 14	STA	\$14
8028-	60	RTS	
8029-	A0 00	LDY	##00
802B-	84 A2	STY	\$A2
802D-	84 02	STY	\$02
802F-	A2 BF	LDX	##BF
8031-	86 11	STX	\$11
8033-	A2 03	LDX	##03
8035-	20 03 80	JSR	\$8003
8038-	A5 14	LDA	\$14
803A-	85 00	STA	\$00
803C-	A5 15	LDA	\$15
803E-	69 20	ADC	##20
8040-	85 01	STA	\$01
8042-	B1 00	LDA	(\$00),Y
8044-	91 14	STA	(\$14),Y
8046-	E8	INX	
8047-	C6 11	DEC	\$11
8049-	E0 05	CPX	##05
804B-	90 E8	BCC	\$8035

804D-	88	DEY	
804E-	A2 00	LDX	##00
8050-	C0 FF	CPY	##FF
8052-	90 E1	BCC	\$8035
8054-	E6 02	INC	\$02
8056-	A4 02	LDY	\$02
8058-	A9 FF	LDA	##FF
805A-	C5 11	CMP	\$11
805C-	D0 D1	BNE	\$802F
805E-	A2 BF	LDX	##BF
8060-	86 11	STX	\$11
8062-	86 02	STX	\$02
8064-	A2 03	LDX	##03
8066-	A5 02	LDA	\$02
8068-	38	SEC	
8069-	E9 05	SBC	##05
806B-	18	CLC	
806C-	86 03	STX	\$03
806E-	65 03	ADC	\$03
8070-	85 02	STA	\$02
8072-	A0 27	LDY	##27
8074-	20 03 80	JSR	\$8003
8077-	A5 14	LDA	\$14
8079-	85 00	STA	\$00
807B-	A5 15	LDA	\$15
807D-	69 20	ADC	##20
807F-	85 01	STA	\$01
8081-	B1 00	LDA	(\$00),Y
8083-	91 14	STA	(\$14),Y
8085-	E8	INX	
8086-	C6 11	DEC	\$11
8088-	E0 05	CPX	##05
808A-	90 EB	BCC	\$8074
808C-	88	DEY	
808D-	A5 11	LDA	\$11
808F-	C9 FF	CMP	##FF
8091-	A2 00	LDX	##00
8093-	90 DF	BCC	\$8074
8095-	A6 02	LDX	\$02
8097-	86 11	STX	\$11
8099-	A2 00	LDX	##00
809B-	A5 02	LDA	\$02
809D-	C9 FF	CMP	##FF
809F-	D0 C5	BNE	\$8066
80A1-	60	RTS	

80A2-	11 A2	DRA	(\$A2),Y
80A4-	00	BRK	
80A5-	D0 C0	BNE	\$8067
80A7-	60	RTS	

PJ 局部放大:

```

5  REM ZT(PJ)
8  S = 32768: X = 0: Y = 0: POKE - 1
   6368,0
10  HCOLOR= 0: FOR I = 0 TO 279: HPLLOT
    I,0 TO I,191: NEXT I
15  POKE 230,64
20  FOR I = 0 TO 9: READ A: POKE S
    + I,A: NEXT
30  DATA 1,0,4,0,45,245,27,54,6,0
35  INPUT "ENTER PICT NAME:";K$
37  PRINT CHR$(4)"BLOAD";K$;"",A$
    4000"
38  POKE - 16297,0: POKE - 16299
    ,0: POKE - 16302,0: POKE -
    16304,0
40  HCOLOR= 3: ROT= 0: SCALE= 1: POKE
    232,0: POKE 233,128
50  K = PEEK ( - 16384): IF K > 12
    8 THEN 70
60  XDRAW 1 AT X,Y: FOR T = 1 TO 1
    5: NEXT T
65  XDRAW 1 AT X,Y: GOTO 50
70  POKE - 16368,0: IF K < > 155
    THEN 90
80  D = D + 1: X(D) = X: Y(D) = Y: IF
    D = 2 THEN 110
85  X = X + 3: Y = Y + 3: ROT= 32
90  X = X + (K = 203) - (K = 202)
95  Y = Y + (K = 205) - (K = 201)
100 GOTO 50
110 POKE - 16300,0: D = 0: X = 0: Y
    = 0: ROT= 0
120 VTAB 11: INPUT "A,B=";A,B
130 INPUT "X,Y=";X,Y: XX = X
134 Y$ = "2000<4000.5FFFM N DB23G"

136 FOR I = 1 TO LEN (Y$): POKE
    511 + I, ASC ( MID$ (Y$,I,1))
    + 128: NEXT I: POKE 72,0
138 CALL - 144

```

```

140 DIM A(A * B * 2)
150 FOR I = 1 TO INT (B + 0.99)
160 IF A < = 1 THEN 200
170 FOR J = 1 TO INT (A + 0.99) -
    1
180 N = N + 1:A(N) = 5 + 2 * D
190 NEXT J
200 N = N + 1:A(N) = 6:D = NOT D
210 NEXT I:S = S + 4
220 FOR I = 1 TO N STEP 2
230 POKE S,A(I + 1) * 8 + A(I):S =
    S + 1
240 NEXT I: POKE S,0
250 POKE 230,32: HGR2
260 N = INT (X(1) / 7):C = X(1) -
    N * 7
270 FOR I = Y(1) TO Y(2)
280 F = INT (I / 8):G = INT (F /
    8):H = F - 8 * G:K = I - F *
    8
290 S = 8192 + 1024 * K + 128 * H +
    40 * G + N:J = X(1)
300 IF C = 0 THEN 330
310 R = PEEK (S) / 2 ^ C
320 FOR D = C TO 6: GOTO 340
330 R = PEEK (S): FOR D = 0 TO 6
340 M = INT (R / 2):P = R - M * 2
    :R = M
350 IF J > X(2) THEN X = XX: GOTO
    390
360 IF P = 1 THEN DRAW 1 AT X,Y
370 J = J + 1:X = X + A: NEXT D
380 S = S + 1: GOTO 330
390 Y = Y + B: NEXT I
392 FOR I = 1 TO 5000: NEXT I: HGR
    : POKE - 16302,0
394 POKE - 16368,0
396 PRINT "DO YOU WANT SAVE?(Y/N)
    "
398 X = PEEK (- 16384)
400 POKE - 16368,0: IF X = 217 THEN
    408
402 IF X < 128 THEN 398
405 GOTO 410
408 INPUT "ENTER PICT NAME: ";K$

```



```

409 PRINT CHR$(4)"BSAVE";K$;"",A
    $4000,L$2000"
410 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211: CALL 33648
PK  成倍翻番:
5  REM PK
10 D$ = CHR$(4): POKE - 16368,0

15 HCOLOR= 0: FOR I = 35 TO 0 STEP
    - 1: FOR J = 245 TO 0 STEP -
    35: IF J = 245 AND I = 35 THEN
    J = J - 1
17 HPLOT I + J,0 TO I + J,191: NEXT
    J: NEXT I
18 INPUT "ENTER PICT NAME:";K$
20 PRINT D$"BLOAD";K$;"",A$4000"
30 PRINT D$"BLOAD XS1"
40 POKE 230,32
50 CALL 32768
60 GOSUB 300
70 GOSUB 360
80 CALL - 144
90 PRINT D$"BLOAD XS2"
100 CALL 32768
110 GOSUB 300
120 GOSUB 360
130 CALL - 144
140 PRINT D$"BLOAD XS3"
150 HGR : POKE - 16302,0
160 CALL 32768
170 POKE - 16300,0
180 FOR I = 1 TO 2000: NEXT I
190 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211: CALL 33648
300 FOR K = 1 TO 3
310 POKE - 16297,0: POKE - 1630
    2,0: POKE - 16304,0: POKE -
    16300,0
320 FOR I = 1 TO 2000: NEXT I
330 POKE - 16299,0
340 FOR I = 1 TO 2000: NEXT I
350 NEXT K: RETURN
360 X$ = "4000<2000.3FFFFM N D8236"

```

```

370  FOR I = 1 TO LEN (X$): POKE
      511 + I, ASC ( MID$ (X$,I,1))
      + 128: NEXT I: POKE 72,0: RETURN

```

B000-	A2 00	LDX	##00
B002-	BA	TXA	
B003-	48	PHA	
B004-	20 11 F4	JSR	\$F411
B007-	68	PLA	
B008-	AA	TAX	
B009-	A5 26	LDA	\$26
B00E-	9D 00 81	STA	\$B100, X
B00E-	A5 27	LDA	\$27
B010-	9D 00 82	STA	\$B200, X
B013-	E8	INX	
B014-	E0 C0	CPX	##C0
B016-	D0 EA	BNE	\$B002
B018-	A9 27	LDA	##27
B01A-	85 0A	STA	\$0A
B01C-	A0 00	LDY	##00
B01E-	A2 00	LDX	##00
B020-	BD 00 81	LDA	\$B100, X
B023-	85 06	STA	\$06
B025-	85 08	STA	\$08
B027-	BD 00 82	LDA	\$B200, X
B02A-	85 07	STA	\$07
B02C-	69 20	ADC	##20
B02E-	85 09	STA	\$09
B030-	B1 08	LDA	(\$08), Y
B032-	85 FF	STA	\$FF
B034-	06 FF	ASL	\$FF
B036-	08	PHP	
B037-	A9 00	LDA	##00
B039-	85 0B	STA	\$0B
B03B-	06 FF	ASL	\$FF
B03D-	66 FE	ROR	\$FE
B03F-	E6 0B	INC	\$0B
B041-	A5 0B	LDA	\$0B
B043-	C9 07	CMP	##07
B045-	D0 F4	BNE	\$B03B
B047-	28	PLP	
B048-	66 FE	ROR	\$FE
B04A-	98	TYA	
B04B-	48	PHA	

804C-	A4 0A	LDY	\$0A
804E-	A5 FE	LDA	\$FE
8050-	91 06	STA	(\$06),Y
8052-	6B	PLA	
8053-	A8	TAY	
8054-	EB	INX	
8055-	E0 C0	CPX	##C0
8057-	D0 C7	BNE	\$8020
8059-	C6 0A	DEC	\$0A
805B-	CB	INY	
805D-	C0 28	CPY	##28
805E-	D0 BE	BNE	\$801E
8060-	60	RTS	
8000-	A2 00	LDX	##00
8002-	8A	TXA	
8003-	48	PHA	
8004-	20 11 F4	JSR	\$F411
8007-	6B	PLA	
8008-	AA	TAX	
8009-	A5 26	LDA	\$26
800B-	9D 00 81	STA	\$8100,X
800E-	A5 27	LDA	\$27
8010-	9D 00 82	STA	\$8200,X
8013-	EB	INX	
8014-	E0 C0	CPX	##C0
8016-	D0 EA	BNE	\$8002
8018-	A2 00	LDX	##00
801A-	A0 00	LDY	##00
801C-	84 FD	STY	\$FD
801E-	84 FE	STY	\$FE
8020-	84 08	STY	\$08
8022-	BD 00 81	LDA	\$8100,X
8025-	85 06	STA	\$06
8027-	85 F9	STA	\$F9
8029-	BD 00 82	LDA	\$8200,X
802C-	85 FA	STA	\$FA
802E-	18	CLC	
802F-	69 20	ADC	##20
8031-	85 07	STA	\$07
8033-	B1 06	LDA	(\$06),Y
8035-	85 0B	STA	\$0B
8037-	CB	INY	
8038-	B1 06	LDA	(\$06),Y
803A-	85 0A	STA	\$0A
803C-	A9 00	LDA	##00

803E-	85 09	STA	\$09
8040-	E6 09	INC	\$09
8042-	46 0B	LSR	\$0B
8044-	66 FD	ROR	\$FD
8046-	46 0B	LSR	\$0B
8048-	66 FE	ROR	\$FE
804A-	A5 09	LDA	\$09
804C-	C9 03	CMP	#\$03
804E-	D0 F0	BNE	\$B040
8050-	A9 00	LDA	#\$00
8052-	85 09	STA	\$09
8054-	46 0B	LSR	\$0B
8056-	66 FD	ROR	\$FD
8058-	46 0A	LSR	\$0A
805A-	66 FE	ROR	\$FE
805C-	E6 09	INC	\$09
805E-	46 0A	LSR	\$0A
8060-	66 FD	ROR	\$FD
8062-	46 0A	LSR	\$0A
8064-	66 FE	ROR	\$FE
8066-	A5 09	LDA	\$09
8068-	C9 03	CMP	#\$03
806A-	D0 F0	BNE	\$B05C
806C-	66 FD	ROR	\$FD
806E-	66 FE	ROR	\$FE
8070-	98	TYA	
8071-	48	PHA	
8072-	A5 FD	LDA	\$FD
8074-	05 FE	ORA	\$FE
8076-	A4 0B	LDY	\$0B
8078-	91 F9	STA	(\$F9),Y
807A-	0A	ASL	
807B-	0B	PHP	
807C-	0A	ASL	
807D-	66 FF	ROR	\$FF
807F-	0A	ASL	
8080-	66 FF	ROR	\$FF
8082-	0A	ASL	
8083-	66 FF	ROR	\$FF
8085-	0A	ASL	
8086-	66 FF	ROR	\$FF
8088-	0A	ASL	
8089-	66 FF	ROR	\$FF
808B-	0A	ASL	
808C-	66 FF	ROR	\$FF

808E-	0A	ASL	
808F-	66 FF	ROR	\$FF
8091-	28	PLP	
8092-	66 FF	ROR	\$FF
8094-	A9 27	LDA	#\$27
8096-	38	SEC	
8097-	E5 08	SBC	\$08
8099-	AB	TAY	
809A-	A5 FF	LDA	\$FF
809C-	91 F9	STA	(\$F9),Y
809E-	68	PLA	
809F-	AB	TAY	
80A0-	CB	INY	
80A1-	E6 08	INC	\$08
80A3-	C0 28	CPY	#\$28
80A5-	D0 BC	BNE	\$B033
80A7-	EB	INX	
80A8-	E0 C0	CPX	#\$C0
80AA-	D0 01	BNE	\$B0AD
80AC-	60	RTS	
80AD-	4C 1A 80	JMP	\$B01A
8000-	A2 00	LDX	#\$00
8002-	8A	TXA	
8003-	48	PHA	
8004-	20 11 F4	JSR	\$F411
8007-	68	PLA	
8008-	AA	TAX	
8009-	A5 26	LDA	\$26
800B-	9D 00 B1	STA	\$B100,X
800E-	A5 27	LDA	\$27
8010-	9D 00 B2	STA	\$B200,X
8013-	EB	INX	
8014-	E0 C0	CPX	#\$C0
8016-	D0 EA	BNE	\$B002
8018-	A9 00	LDA	#\$00
801A-	B5 0A	STA	\$0A
801C-	A2 00	LDX	#\$00
801E-	A0 00	LDY	#\$00
8020-	BD 00 B1	LDA	\$B100,X
8023-	B5 06	STA	\$06
8025-	BD 00 B2	LDA	\$B200,X
8028-	18	CLC	
8029-	69 20	ADC	#\$20
802B-	B5 07	STA	\$07
802D-	E8	INX	

```

802E-   BD 00 B1   LDA   $B100,X
8031-   85 08     STA   $08
8033-   BD 00 B2   LDA   $B200,X
8036-   18        CLC
8037-   69 20     ADC   #$20
8039-   85 09     STA   $09
803B-   B1 06     LDA   ($06),Y
803D-   11 08     ORA   ($08),Y
803F-   85 0B     STA   $0B
8041-   8A        TXA
8042-   48        PHA
8043-   A6 0A     LDX   $0A
8045-   BD 00 B1   LDA   $B100,X
8048-   85 FE     STA   $FE
804A-   BD 00 B2   LDA   $B200,X
804D-   85 FF     STA   $FF
804F-   A5 0B     LDA   $0B
8051-   91 FE     STA   ($FE),Y
8053-   68        PLA
8054-   AA        TAX
8055-   C8        INY
8056-   C0 2B     CPY   #$2B
8058-   D0 E1     BNE   $B03B
805A-   E8        INX
805B-   E6 0A     INC   $0A
805D-   E0 C0     CPX   #$C0
805F-   D0 BD     BNE   $B01E
8061-   60        RTS

```

PL 镜像复制:

```

10 REM PL
20 POKE - 16368,0
30 HCOLOR= 0: FOR I = 141 TO 0 STEP
   - 1
40 HFPLOT I,0 TO I,191: HFPLOT 279 -
   I,0 TO 279 - I,191: NEXT I
50 D$ = CHR$(4)
55 PRINT D$"BLOAD XS2,A$B000"
60 INPUT "ENTER PICT NAME: ";K$
70 PRINT D$"BLOAD";K$;"",A$4000"
80 CALL 32768
90 FOR J = 1 TO 2000: NEXT J
100 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211
110 CALL 33648

```

PM 多幅联动:

```

10 REM PM
15 POKE - 16368,0
20 D$ = CHR$ (4)
25 HCOLOR= 0: FOR I = 279 TO 0 STEP
    - 1: HPLDT I,0 TO I,191: NEXT
    I
30 PRINT D$"BLOAD LD3,A$8000"
40 PRINT D$"BLOAD C2,A$4000"
50 PRINT D$"BLOAD C1,A$2000"
60 PRINT D$"BLOAD C3,A$6000"
70 CALL 32905
80 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211: CALL 33648

```

8000-	A9 00	LDA	#\$00
8002-	85 1E	STA	\$1E
8004-	A9 00	LDA	#\$00
8006-	85 1F	STA	\$1F
8008-	A2 00	LDX	#\$00
800A-	BD 00 81	LDA	\$8100,X
800D-	85 07	STA	\$07
800F-	BD 00 82	LDA	\$8200,X
8012-	85 06	STA	\$06
8014-	E8	INX	
8015-	BD 00 81	LDA	\$8100,X
8018-	85 09	STA	\$09
801A-	BD 00 82	LDA	\$8200,X
801D-	85 08	STA	\$08
801F-	E0 01	CPX	#\$01
8021-	D0 08	BNE	\$802B
8023-	A0 27	LDY	#\$27
8025-	B1 06	LDA	(\$06),Y
8027-	48	PHA	
8028-	88	DEY	
8029-	10 FA	BPL	\$8025
802B-	A0 27	LDY	#\$27
802D-	B1 08	LDA	(\$08),Y
802F-	91 06	STA	(\$06),Y
8031-	88	DEY	
8032-	10 F9	BPL	\$802D
8034-	E0 BF	CPX	#\$BF
8036-	D0 D2	BNE	\$800A

8038-	A5 1E	LDA	\$1E
803A-	C9 00	CMP	#\$00
803C-	D0 08	BNE	\$8046
803E-	A9 20	LDA	#\$20
8040-	8D 5A 80	STA	\$805A
8043-	4C 4B 80	JMP	\$804B
8046-	A9 40	LDA	#\$40
8048-	8D 5A 80	STA	\$805A
804B-	A5 08	LDA	\$08
804D-	85 06	STA	\$06
804F-	A5 09	LDA	\$09
8051-	85 07	STA	\$07
8053-	A6 1F	LDX	\$1F
8055-	BD 00 81	LDA	\$B100,X
8058-	18	CLC	
8059-	69 20	ADC	#\$20
805B-	85 09	STA	\$09
805D-	BD 00 82	LDA	\$B200,X
8060-	85 08	STA	\$08
8062-	A0 27	LDY	#\$27
8064-	B1 08	LDA	(\$08),Y
8066-	91 06	STA	(\$06),Y
8068-	88	DEY	
8069-	10 F9	BPL	\$8064
806B-	A0 00	LDY	#\$00
806D-	68	PLA	
806E-	91 08	STA	(\$08),Y
8070-	C8	INY	
8071-	C0 28	CPY	#\$28
8073-	90 F8	BCC	\$806D
8075-	E6 1F	INC	\$1F
8077-	A5 1F	LDA	\$1F
8079-	C9 C0	CMP	#\$C0
807B-	D0 8B	BNE	\$800B
807D-	E6 1E	INC	\$1E
807F-	A5 1E	LDA	\$1E
8081-	C9 02	CMP	#\$02
8083-	D0 01	BNE	\$8086
8085-	60	RTS	
8086-	4C 04 80	JMP	\$8004
8089-	4C 00 80	JMP	\$8000
808C-	AD 50 C0	LDA	\$C050
808F-	AD 57 C0	LDA	\$C057
8092-	AD 52 C0	LDA	\$C052
8095-	AD 10 C0	LDA	\$C010

8098-	20 00 80	JSR	\$B000
809B-	AD 00 C0	LDA	\$C000
809E-	10 F5	BPL	\$B095
80A0-	60	RTS	

PN 多幅合成:

```

5  HCOLOR= 0: FOR I = 0 TO 95: HPLOT
    0,I TO 141,I: HPLOT 141,191 -
    I TO 279,191 - I: NEXT I
10  FOR I = 0 TO 95: HPLOT 0,191 -
    I TO 141,191 - I: HPLOT 141,I
    TO 279,I: NEXT I
15  POKE - 16368,0
20  D$ = CHR$(4)
30  PRINT D$"BLOAD TXJJ1,A$B000"
50  PRINT D$"BLOAD X"
60  FOR I = 1 TO 4
70  IF I = 1 THEN A = 0:B = 0:C =
    0:D = 0:E = 19:F = 95
80  IF I = 2 THEN A = 19:B = 0:C =
    19:D = 0:E = 39:F = 95
90  IF I = 3 THEN A = 0:B = 95:C =
    0:D = 95:E = 19:F = 191
100 IF I = 4 THEN A = 19:B = 95:C
    = 19:D = 95:E = 39:F = 191
110 POKE 0,A: POKE 1,B: POKE 6,C:
    POKE 7,D: POKE 8,E: POKE 9,F

120 POKE 16,32: POKE 230,32: POKE
    - 16302,0
130 CALL 32768
140 NEXT I
150 FOR I = 1 TO 5000: NEXT I
180 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211
190 CALL 33648

8000-  A0 00      LDY  #$00
8002-  98        TYA
8003-  4B        PHA
8004-  20 11 F4   JSR  $F411
8007-  6B        PLA
8008-  AB        TAY
8009-  A5 26     LDA  $26
800B-  99 00 8E   STA  $8E00,Y

```

800E-	A5 27	LDA	\$27
8010-	99 00 BF	STA	\$8F00,Y
8013-	CB	INY	
8014-	C0 C0	CPY	#\$C0
8016-	D0 EA	BNE	\$8002
8018-	A4 07	LDY	\$07
801A-	B9 00 BE	LDA	\$8E00,Y
801D-	85 0A	STA	\$0A
801F-	B9 00 BF	LDA	\$8F00,Y
8022-	18	CLC	
8023-	65 10	ADC	\$10
8025-	85 0B	STA	\$0B
8027-	A4 01	LDY	\$01
8029-	B9 00 BE	LDA	\$8E00,Y
802C-	85 0C	STA	\$0C
802E-	B9 00 BF	LDA	\$8F00,Y
8031-	85 0D	STA	\$0D
8033-	A5 06	LDA	\$06
8035-	85 0E	STA	\$0E
8037-	A5 00	LDA	\$00
8039-	85 0F	STA	\$0F
803B-	A4 0E	LDY	\$0E
803D-	B1 0A	LDA	(\$0A),Y
803F-	A4 0F	LDY	\$0F
8041-	91 0C	STA	(\$0C),Y
8043-	E6 0F	INC	\$0F
8045-	A5 0F	LDA	\$0F
8047-	C9 2B	CMP	#\$2B
8049-	F0 0B	BEQ	\$8053
804B-	E6 0E	INC	\$0E
804D-	A5 0E	LDA	\$0E
804F-	C5 0B	CMP	\$0B
8051-	D0 EB	BNE	\$803B
8053-	E6 01	INC	\$01
8055-	A5 01	LDA	\$01
8057-	C9 C0	CMP	#\$C0
8059-	F0 0B	BEQ	\$8063
805B-	E6 07	INC	\$07
805D-	A5 07	LDA	\$07
805F-	C5 09	CMP	\$09
8061-	D0 B5	BNE	\$801B
8063-	60	RTS	

PU 剪辑编辑:

5 REM ZU(P0)

```

8 S = 32768: X = 0: Y = 0: POKE - 1
  6368,0
10 HCOLOR= 0: FOR I = 0 TO 35: FOR
  J = 0 TO 245 STEP 35: IF J =
  245 THEN J = J - 1
12 H$PLOT I + J,0 TO I + J,191: NEXT
  J: NEXT I
15 POKE 230,64
20 FOR I = 0 TO 9: READ A: POKE S
  + I,A: NEXT
30 DATA 1,0,4,0,45,245,27,54,6,0
35 INPUT "ENTER PICT NAME:";K$
37 PRINT CHR$(4)"BLOAD";K$; ",A$
  4000"
38 POKE - 16297,0: POKE - 16299
  ,0: POKE - 16302,0: POKE -
  16304,0
40 HCOLOR= 3: ROT= 0: SCALE= 1: POKE
  232,0: POKE 233,128
50 K = PEEK ( - 16384): IF K > 12
  8 THEN 70
60 XDRAW 1 AT X,Y: FOR T = 1 TO 1
  5: NEXT T
65 XDRAW 1 AT X,Y: GOTO 50
70 POKE - 16368,0: IF K < > 155
  THEN 90
80 D = D + 1: X(D) = X: Y(D) = Y: IF
  D = 2 THEN 110
85 X = X + 3: Y = Y + 3: ROT= 32
90 X = X + (K = 203) - (K = 202)
95 Y = Y + (K = 205) - (K = 201)
100 GOTO 50
110 D = 0: X = 0: Y = 0: ROT= 0: A =
  1: B = 1
120 GOSUB 420: CALL - 144
140 DIM A(A * B * 2)
150 FOR I = 1 TO INT (B + 0.99)
160 IF A < = 1 THEN 200
170 FOR J = 1 TO INT (A + 0.99) -
  1
180 N = N + 1: A(N) = 5 + 2 * D
190 NEXT J
200 N = N + 1: A(N) = 6: D = NOT D

```

```

210 NEXT I:S = S + 4
220 FOR I = 1 TO N STEP 2
230 POKE S,A(I + 1) * 8 + A(I):S =
    S + 1
240 NEXT I: POKE S,0
250 POKE 230,32: HGR2
260 N = INT (X(1) / 7):C = X(1) -
    N * 7
270 FOR I = Y(1) TO Y(2)
280 F = INT (I / 8):G = INT (F /
    8):H = F - 8 * G:K = I - F *
    8
290 S = 8192 + 1024 * K + 128 * H +
    40 * G + N:J = X(1)
300 IF C = 0 THEN 330
310 R = PEEK (S) / 2 ^ C
320 FOR D = C TO 6: GOTO 340
330 R = PEEK (S): FOR D = 0 TO 6
340 M = INT (R / 2):P = R - M * 2
    :R = M
350 IF J > X(2) THEN X = XX: GOTO
    390
360 IF P = 1 THEN DRAW 1 AT X,Y
370 J = J + 1:X = X + A: NEXT D
380 S = S + 1: GOTO 330
390 Y = Y + B: NEXT I
392 FOR I = 1 TO 5000: NEXT I: HGR
    : POKE - 16302,0
394 POKE - 16368,0
396 PRINT CHR$(4)"BLOAD JGCU"
397 PRINT "C-INVERSE D-DOWN L-LEF
    T E-BACK"
400 X = PEEK ( - 16384)
402 IF X < 128 THEN 400
403 GOSUB 420: CALL - 144
405 CALL 32768
410 POKE 16384,0: POKE 33649,1: POKE
    33653,64: POKE 33694,218: POKE
    33695,211: CALL 33648
420 Y$ = "2000<4000.5FFFFM N D823G"

430 FOR I = 1 TO LEN (Y$): POKE
    511 + I, ASC ( MID$ (Y$,I,1))
    + 128: NEXT I: POKE 72,0: RETURN

```

附录 9 幅图形资料

1. C1

```

2000- A8 D5 AA D5 AA D5 AA D5
200B- AA D5 AA D5 AA D5 AA D5
2010- AA D5 AA D5 AA D5 AA D5
201B- AA D5 AA D5 BA 00 00 00
2020- 00 00 00 00 00 00 00 00
202B- 88 FC FF FF FF E7 DC A9
2030- 95 FE FF FF FF F8 FF F3
203B- B9 FE FF 8F 9F F3 FF FF
2040- FF FF FF 9F 88 00 00 00
204B- 00 00 00 00 00 00 00 00
2050- 88 FC FF 8F 80 80 80 80
205B- 80 E0 FF FF FF FF FF FF
2060- FF FF FF FF FF FF FF FF
206B- FF FF FF 9F 88 00 00 00
2070- 00 00 00 00 00 00 00 00
207B- 00 00 00 00 00 00 00 00
2080- 88 FC FF FF FF FF FF FF
208B- FF FF FF FF FF FF FF FF
2090- FF FF FF FF FF FF FF FF
209B- FF FF FF 9F 88 00 00 00
20A0- 00 00 00 00 00 00 00 00
20AB- 88 FC FF FF FF FF 9F AB
20B0- C5 FF FF FF FF FF F0 FF
20B8- BF 80 80 80 FC EF F9 FF
20C0- FF FF FF 9F 88 00 00 00
20CB- 00 00 00 00 00 00 00 00
20D0- 88 FC FF FF FF FF FF FF
20DB- FF FF FF FF FF FF FF FF
20E0- FF FF FF FF FF FF FF FF
20EB- FF FF FF 9F 88 00 00 00
20F0- 00 00 00 00 00 00 00 00
20FB- 00 00 00 00 00 00 00 00
2100- 88 FC FF FF FF FF FF FF
210B- FF FF FF FF FF FF FF FF
2110- BF C4 FF D1 F2 FF FF FF
    
```

```

2118- FF FF FF 9F B8 00 00 00
2120- 00 00 00 00 00 00 00 00
2128- 88 FC FF FF FC D7 EA A9
2130- C5 C8 FF E1 FF FF A7 D1
2138- F8 FC FF FF FF F9 F8 FF
2140- FF FF FF 9F B8 00 00 00
2148- 00 00 00 00 00 00 00 00
2150- 88 FC FF FF FF FF FF FF
2158- FF FF FF FF FF FF FF FF
2160- FF FF FF FF FF FF FF FF
2168- FF FF FF 9F B8 00 00 00
2170- 00 00 00 00 00 00 00 00
2178- 00 00 00 00 00 00 00 00
2180- 88 FC FF FF FF FF FF FF
2188- FF FF FF FF FF FF FF FF
2190- FF C4 B8 D5 CA FF FF FF
2198- FF FF FF 9F B8 00 00 00
21A0- 00 00 00 00 00 00 00 00
21A8- 88 FC FF FF FF FF A7 D5
21B0- AA 97 FF BF FC FF 9F D5
21B8- A8 C3 FF BF D4 A8 E2 FF
21C0- FF FF FF 9F B8 00 00 00
21C8- 00 00 00 00 00 00 00 00
21D0- 88 FC FF FF FF FF FF FF
21D8- FF FF FF FF FF FF FF FF
21E0- FF FF FF FF FF FF FF FF
21E8- FF FF FF 9F B8 00 00 00
21F0- 00 00 00 00 00 00 00 00
21F8- 00 00 00 00 00 00 00 00
2200- 88 FC FF FF FF FF FF FF
2208- FF FF FF FF FF FF FF FF
2210- BF E3 EE 9F FE FC FF FF
2218- FF FF FF 9F B8 00 00 00
2220- 00 00 00 00 00 00 00 00
2228- 88 FC FF CF FF FF A9 D5
2230- AA 80 FE FF FF FF FF C7
2238- A2 FC FF FF A9 D4 FC FF
2240- FF FF FF 9F B8 00 00 00
2248- 00 00 00 00 00 00 00 00
2250- 88 FC FF FF FF FF FF FF
2258- FF FF FF FF FF FF FF FF
2260- FF FF FF FF FF FF FF FF
2268- FF FF FF 9F B8 00 00 00
2270- 00 00 00 00 00 00 00 00
2278- 00 00 00 00 00 00 00 00

```

```

2280- 88 FC FF FF FF FF FF FF
2288- FF FF FF FF FF FF FF FF
2290- BF AA D1 8A F9 FF FF FF
2298- FF FF FF 9F 8B 00 00 00
22A0- 00 00 00 00 00 00 00 00
22A8- 88 FC FF 8F F8 FF FF FF
22B0- 8F FF FF FF FF FF FF FF
22B8- FF FF FF FF FF FF FF FF
22C0- FF FF FF 9F 8B 00 00 00
22C8- 00 00 00 00 00 00 00 00
22D0- 88 FC FF FF FF FF FF FF
22D8- FF FF FF FF FF FF FF FF
22E0- FF FF FF FF FF FF FF FF
22E8- FF FF FF 9F 8B 00 00 00
22F0- 00 00 00 00 00 00 00 00
22F8- 00 00 00 00 00 00 00 00
2300- 88 FC DF 87 B0 D5 82 D4
2308- 8A FF FF FF FF FF FF FF
2310- 8F E5 81 9E 8A FF FF FF
2318- FF FF FF 9F 8B 00 00 00
2320- 00 00 00 00 00 00 00 00
2328- 88 FC FF A3 F1 A9 B0 AA
2330- B9 AA D5 CA FF FF FF FF
2338- FF FF FF FF FF FF FF FF
2340- FF FF FF 9F 8B 00 00 00
2348- 00 00 00 00 00 00 00 00
2350- 00 00 00 00 00 00 00 00
2358- 00 00 00 00 00 00 00 00
2360- 00 00 00 00 00 00 00 00
2368- 00 00 00 00 00 00 00 00
2370- 00 00 00 00 00 00 00 00
2378- 00 00 00 00 00 00 00 00
2380- 88 FC FF FF DF F9 EF 8B
2388- F3 FF FF FF FF FF FF E7
2390- 8F 9B 87 C5 AA E4 FF FF
2398- FF FF FF 9F 8B 00 00 00
23A0- 00 00 00 00 00 00 00 00
23A8- 88 FC 9F AA 95 FF FF FF
23B0- D1 AA F1 FF FF FF FF FF
23B8- FF FF FF FF FF FF FF FF
23C0- FF FF FF 9F 8B 00 00 00
23C8- 00 00 00 00 00 00 00 00
23D0- 00 00 00 00 00 00 00 00
23D8- 00 00 00 00 00 00 00 00

```

```

23E0- 00 00 00 00 00 00 00 00
23E8- 00 00 00 00 00 00 00 00
23F0- 00 00 00 00 00 00 00 00
23F8- 00 00 00 00 00 00 00 00
2400- 88 80 80 80 80 80 80 80
2408- 80 80 80 80 80 80 80 80
2410- 80 80 80 80 80 80 80 80
2418- 80 80 80 80 88 00 00 00
2420- 00 00 00 00 00 00 00 00
2428- 88 FC FF FF FF 8F B1 AB
2430- 95 FF FF FF 9F 9E FC F9
2438- CC F7 DF 8F 9E C3 FF FF
2440- FF FF FF 9F 88 00 00 00

2448- 00 00 00 00 00 00 00 00
2450- 88 FC FF FF FF 8F 80 80
2458- FB FF FF FF FF FF FF FF
2460- FF FF FF FF FF FF FF FF
2468- FF FF FF 9F 88 00 00 00
2470- 00 00 00 00 00 00 00 00
2478- 00 00 00 00 00 00 00 00
2480- 88 FC FF FF FF FF FF FF
2488- FF FF FF FF FF FF FF FF
2490- FF FF FF FF FF FF FF FF
2498- FF FF FF 9F 88 00 00 00
24A0- 00 00 00 00 00 00 00 00
24A8- 88 FC FF FF FF FF 8F A3
24B0- E5 FF FF FF FF FF FF FF
24B8- FF 80 80 F8 FF FF FC FF
24C0- FF FF FF 9F 88 00 00 00
24C8- 00 00 00 00 00 00 00 00
24D0- 88 FC FF FF FF FF FF FF
24D8- FF FF FF FF FF FF FF FF
24E0- FF FF FF FF FF FF FF FF
24E8- FF FF FF 9F 88 00 00 00
24F0- 00 00 00 00 00 00 00 00
24F8- 00 00 00 00 00 00 00 00
2500- 88 FC FF FF FF FF FF FF
2508- FF FF FF FF FF FF FF FF
2510- 9F 95 FE D4 F2 FF FF FF
2518- FF FF FF 9F 88 00 00 00
2520- 00 00 00 00 00 00 00 00
2528- 88 FC FF FF BC D5 FA A9
2530- C5 C8 BF 8C FF FF A7 D1
2538- E2 C0 F3 FF DF C1 F3 FF

```


2540- FF FF FF 9F 88 00 00 00
 2548- 00 00 00 00 00 00 00 00
 2550- 88 FC FF FF FF FF FF FF
 2558- FF FF FF FF FF FF FF FF
 2560- FF FF FF FF FF FF FF FF
 2568- FF FF FF 9F 88 00 00 00
 2570- 00 00 00 00 00 00 00 00
 2578- 00 00 00 00 00 00 00 00
 2580- 88 FC FF FF FF FF FF FF
 2588- FF FF FF FF FF FF FF FF
 2590- FF D4 A8 D0 CA FF FF FF
 2598- FF FF FF 9F 88 00 00 00
 25A0- 00 00 00 00 00 00 00 00
 25A8- 88 FC FF FF FF FF A3 D5
 25B0- EA 97 FF FF FC FF BF D4
 25B8- A8 E7 FF FF 94 AA F2 FF
 25C0- FF FF FF 9F 88 00 00 00
 25C8- 00 00 00 00 00 00 00 00
 25D0- 88 FC FF FF FF FF FF FF
 25D8- FF FF FF FF FF FF FF FF
 25E0- FF FF FF FF FF FF FF FF
 25E8- FF FF FF 9F 88 00 00 00
 25F0- 00 00 00 00 00 00 00 00
 25F8- 00 00 00 00 00 00 00 00
 2600- 88 FC FF FF FF FF FF FF
 2608- FF FF FF FF FF FF FF FF
 2610- FF B0 EE C3 9F FE FF FF
 2618- FF FF FF 9F 88 00 00 00
 2620- 00 00 00 00 00 00 00 00
 2628- 88 FC FF CF FF FF A3 D5
 2630- AA E5 FF FF FF FF FF 9F
 2638- 82 FF FF 87 AB D5 FC FF
 2640- FF FF FF 9F 88 00 00 00
 2648- 00 00 00 00 00 00 00 00
 2650- 88 FC FF FF FF FF FF FF
 2658- FF FF FF FF FF FF FF FF
 2660- FF FF FF FF FF FF FF FF
 2668- FF FF FF 9F 88 00 00 00
 2670- 00 00 00 00 00 00 00 00
 2678- 00 00 00 00 00 00 00 00
 2680- 88 FC FF FF FF 87 FE FF
 2688- FF FF FF FF FF FF FF FF
 2690- FF 80 D5 8A FC FF FF FF
 2698- FF FF FF 9F 88 00 00 00

26A0- 00 00 00 00 00 00 00 00
 26A8- 88 FC FF EF F8 FF FF FF
 26B0- C7 FF 81 FE FF FF FF FF
 26B8- FF FF FF FF FF FF FF FF
 26C0- FF FF FF 9F 88 00 00 00
 26C8- 00 00 00 00 00 00 00 00
 26D0- 88 80 80 80 80 80 80 80
 26D8- 80 80 80 80 80 80 80 80
 26E0- 80 80 80 80 80 80 80 80
 26E8- 80 80 80 80 88 00 00 00
 26F0- 00 00 00 00 00 00 00 00
 26F8- 00 00 00 00 00 00 00 00
 2700- 88 FC BF 80 80 D4 80 D0
 2708- AA FE FF FF FF FF FF FF
 2710- A7 F1 FC C7 AA FE FF FF
 2718- FF FF FF 9F 88 00 00 00
 2720- 00 00 00 00 00 00 00 00
 2728- 88 FC FF A9 85 AB FE A0
 2730- B1 AA D5 CA FF FF FF FF
 2738- FF FF FF FF FF FF FF FF
 2740- FF FF FF 9F 88 00 00 00
 2748- 00 00 00 00 00 00 00 00
 2750- 00 00 00 00 00 00 00 00
 2758- 00 00 00 00 00 00 00 00
 2760- 00 00 00 00 00 00 00 00
 2768- 00 00 00 00 00 00 00 00
 2770- 00 00 00 00 00 00 00 00
 2778- 00 00 00 00 00 00 00 00
 2780- 88 FC FF FF 9F F8 F7 FB
 2788- F2 FF FF FF FF FF FF F3
 2790- 9F F8 83 94 8A F1 FF FF
 2798- FF FF FF 9F 88 00 00 00
 27A0- 00 00 00 00 00 00 00 00
 27AB- 88 FC CF AA 95 FF FF FF
 27B0- D3 AA FC FF FF FF FF FF
 27B8- FF FF FF FF FF FF FF FF
 27C0- FF FF FF 9F 88 00 00 00
 27C8- 00 00 00 00 00 00 00 00
 27D0- 00 00 00 00 00 00 00 00
 27D8- 00 00 00 00 00 00 00 00
 27E0- 00 00 00 00 00 00 00 00
 27E8- 00 00 00 00 00 00 00 00
 27F0- 00 00 00 00 00 00 00 00
 27F8- 00 00 00 00 00 00 00 00

2800- 88 80 80 80 80 80 80 80
 2808- 80 80 80 80 80 80 80 80
 2810- 80 80 80 80 80 80 80 80
 2818- 80 80 80 80 88 00 00 00
 2820- 00 00 00 00 00 00 00 00
 2828- 88 FC FF FF FF 9F 85 AA
 2830- 85 FF FF FF CF C3 F9 F9
 2838- F1 FB EF FF 9D 93 FF FF
 2840- FF FF FF 9F 88 00 00 00
 2848- 00 00 00 00 00 00 00 00
 2850- 88 FC FF FF FF FF FF FF
 2858- FF FF FF FF FF FF FF FF
 2860- FF FF FF FF FF FF FF FF
 2868- FF FF FF 9F 88 00 00 00
 2870- 00 00 00 00 00 00 00 00
 2878- 00 00 00 00 00 00 00 00
 2880- 88 FC FF FF FF FF FF FF
 2888- FF FF FF FF FF FF FF FF
 2890- FF FF FF FF FF FF FF FF
 2898- FF FF FF 9F 88 00 00 00
 28A0- 00 00 00 00 00 00 00 00
 28A8- 88 FC FF FF FF FF A3 BE
 28B0- E0 F8 FF FF FF FF FF FF
 28B8- FF 8C C0 FF FF 9F FE FF
 28C0- FF FF FF 9F 88 00 00 00
 28C8- 00 00 00 00 00 00 00 00
 28D0- 88 FC FF FF FF FF FF FF
 28D8- FF FF FF FF FF FF FF FF
 28E0- FF FF FF FF FF FF FF FF
 28E8- FF FF FF 9F 88 00 00 00
 28F0- 00 00 00 00 00 00 00 00
 28F8- 00 00 00 00 00 00 00 00
 2900- 88 FC FF FF FF FF FF FF
 2908- FF FF FF FF FF FF FF FF
 2910- 9F D5 FC D4 F2 FF FF FF
 2918- FF FF FF 9F 88 00 00 00
 2920- 00 00 00 00 00 00 00 00
 2928- 88 FC FF FF F9 D5 BF A0
 2930- 95 E0 9F BF FE FF A7 D1
 2938- 8A C8 BF DF BD 88 E7 FF
 2940- FF FF FF 9F 88 00 00 00
 2948- 00 00 00 00 00 00 00 00
 2950- 88 FC FF FF FF FF FF FF
 2958- FF FF FF FF FF FF FF FF

```

2960- FF FF FF FF FF FF FF FF
2968- FF FF FF 9F 88 00 00 00
2970- 00 00 00 00 00 00 00 00
2978- 00 00 00 00 00 00 00 00
2980- 88 FC FF FF FF FF FF FF
2988- FF FF FF FF FF FF FF FF
2990- FF 84 88 C7 E2 FF FF FF
2998- FF FF FF 9F 88 00 00 00
29A0- 00 00 00 00 00 00 00 00
29A8- 88 FC FF FF F3 FF A8 D5
29B0- EA 97 FF F7 FC FF FF D4
29B8- A2 E7 FF FF C1 CA F2 FF
29C0- FF FF FF 9F 88 00 00 00
29C8- 00 00 00 00 00 00 00 00
29D0- 88 FC FF FF FF FF FF FF
29D8- FF FF FF FF FF FF FF FF
29E0- FF FF FF FF FF FF FF FF
29E8- FF FF FF 9F 88 00 00 00
29F0- 00 00 00 00 00 00 00 00
29F8- 00 00 00 00 00 00 00 00
2A00- 88 FC FF FF FF FF FF FF
2A08- FF FF FF FF FF FF FF FF
2A10- FF D3 EE D9 FF FC FF FF
2A18- FF FF FF 9F 88 00 00 00
2A20- 00 00 00 00 00 00 00 00
2A28- 88 FC FF 9B FF FF A7 D5
2A30- AA E5 FF FF FF FF FF BF
2A38- E0 8F 80 80 A0 95 FE FF
2A40- FF FF FF 9F 88 00 00 00
2A48- 00 00 00 00 00 00 00 00
2A50- 88 FC FF FF FF FF FF FF
2A58- FF FF FF FF FF FF FF FF
2A60- FF FF FF FF FF FF FF FF
2A68- FF FF FF 9F 88 00 00 00
2A70- 00 00 00 00 00 00 00 00
2A78- 00 00 00 00 00 00 00 00
2A80- 88 FC FF FF FF D1 F8 FF
2A88- FF FF FF FF FF FF FF FF
2A90- FF A9 D0 A2 FE FF FF FF
2A98- FF FF FF 9F 88 00 00 00
2AA0- 00 00 00 00 00 00 00 00
2AA8- 88 FC FF FF F1 FF FF FF
2AB0- E3 8F D4 F8 FF FF FF FF
2AB8- FF FF FF FF FF FF FF FF

```

2AC0- FF FF FF 9F 88 00 00 00
 2AC8- 00 00 00 00 00 00 00 00
 2AD0- 88 80 80 80 80 80 80 80
 2AD8- 80 80 80 80 80 80 80 80
 2AE0- 80 80 80 80 80 80 80 80
 2AE8- 80 80 80 80 88 00 00 00
 2AF0- 00 00 00 00 00 00 00 00
 2AF8- 00 00 00 00 00 00 00 00
 2B00- 88 FC FF 80 E0 94 80 C0
 2B08- AA FE FF FF FF FF FF FF
 2B10- A7 B1 FC D3 AA FC FF FF
 2B18- FF FF FF 9F 88 00 00 00
 2B20- 00 00 00 00 00 00 00 00
 2B28- 88 FC FF A9 95 AA FE A7
 2B30- 85 AA D5 E2 FF FF FF FF
 2B38- FF FF FF FF FF FF FF FF
 2B40- FF FF FF 9F 88 00 00 00
 2B48- 00 00 00 00 00 00 00 00
 2B50- 00 00 00 00 00 00 00 00
 2B58- 00 00 00 00 00 00 00 00
 2B60- 00 00 00 00 00 00 00 00
 2B68- 00 00 00 00 00 00 00 00
 2B70- 00 00 00 00 00 00 00 00
 2B78- 00 00 00 00 00 00 00 00
 2B80- 88 FC FF FF BF FF F7 F7
 2B88- F0 FF FF FF FF FF FF F9
 2B90- 9F F0 B1 B4 80 F9 FF FF
 2B98- FF FF FF 9F 88 00 00 00
 2BA0- 00 00 00 00 00 00 00 00
 2BAB- 88 FC CF AA 95 FF FF FF
 2BB0- D3 8A FF FF FF FF FF FF
 2BB8- FF FF FF FF FF FF FF FF
 2BC0- FF FF FF 9F 88 00 00 00
 2BC8- 00 00 00 00 00 00 00 00
 2BD0- 00 00 00 00 00 00 00 00
 2BDB- 00 00 00 00 00 00 00 00
 2BE0- 00 00 00 00 00 00 00 00
 2BEB- 00 00 00 00 00 00 00 00
 2BF0- 00 00 00 00 00 00 00 00
 2BFB- 00 00 00 00 00 00 00 00
 2C00- 88 80 80 80 80 80 80 80
 2C08- 80 80 80 80 80 80 80 80
 2C10- 80 80 80 80 80 80 80 80
 2C18- 80 80 80 80 88 00 00 00

```

2C20- 00 00 00 00 00 00 00 00
2C28- 88 FC FF FF FF BF D0 AA
2C30- 85 FF FF FF 9F F8 F9 FC
2C38- BC FB C3 FF 9F B8 FE FF
2C40- FF FF FF 9F B8 00 00 00
2C48- 00 00 00 00 00 00 00 00
2C50- 88 FC FF FF FF FF FF FF
2C58- FF FF FF FF FF FF FF FF
2C60- FF FF FF FF FF FF FF FF
2C68- FF FF FF 9F B8 00 00 00
2C70- 00 00 00 00 00 00 00 00
2C78- 00 00 00 00 00 00 00 00
2C80- 88 FC FF FF FF FF FF FF
2C88- FF FF FF FF FF FF FF FF
2C90- FF FF FF FF FF FF FF FF
2C98- FF FF FF 9F B8 00 00 00
2CA0- 00 00 00 00 00 00 00 00
2CA8- 88 FC FF FF FF FF A9 FC
2CB0- 88 E2 FF FF FF FF FF FF
2CB8- FF FC FF FF FF B7 FE FF
2CC0- FF FF FF 9F B8 00 00 00
2CC8- 00 00 00 00 00 00 00 00
2CD0- 88 FC FF FF FF FF FF FF
2CD8- FF FF FF FF FF FF FF FF
2CE0- FF FF FF FF FF FF FF FF
2CE8- FF FF FF 9F B8 00 00 00
2CF0- 00 00 00 00 00 00 00 00
2CF8- 00 00 00 00 00 00 00 00
2D00- 88 FC FF FF FF FF FF FF
2D08- FF FF FF FF FF FF FF FF
2D10- 9F D5 B8 D4 F2 FF FF FF
2D18- FF FF FF 9F B8 00 00 00
2D20- 00 00 00 00 00 00 00 00
2D28- 88 FC FF FF E3 FF 8F 85
2D30- 95 F1 C7 E7 FC FF A7 C5
2D38- 8A 8A 9B E0 99 AA CE FF
2D40- FF FF FF 9F B8 00 00 00
2D48- 00 00 00 00 00 00 00 00
2D50- 88 FC FF FF FF FF FF FF
2D58- FF FF FF FF FF FF FF FF
2D60- FF FF FF FF FF FF FF FF
2D68- FF FF FF 9F B8 00 00 00
2D70- 00 00 00 00 00 00 00 00
2D78- 00 00 00 00 00 00 00 00

```

```

2D80- 88 FC FF FF FF FF FF FF
2D88- FF FF FF FF FF FF FF FF
2D90- FF F1 C0 9F E0 FF FF FF
2D98- FF FF FF 9F 88 00 00 00
2DA0- 00 00 00 00 00 00 00 00
2DAB- 88 FC FF FF F9 BE AA D1
2DB0- EA 97 FC B8 FE FF FF D1
2DB8- A2 E7 FF FF C7 CA F2 FF
2DC0- FF FF FF 9F 88 00 00 00
2DC8- 00 00 00 00 00 00 00 00
2DD0- 88 FC FF FF FF FF FF FF
2DD8- FF FF FF FF FF FF FF FF
2DE0- FF FF FF FF FF FF FF FF
2DE8- FF FF FF 9F 88 00 00 00
2DF0- 00 00 00 00 00 00 00 00
2DF8- 00 00 00 00 00 00 00 00
2E00- 88 FC FF FF FF FF FF FF
2E08- FF FF FF FF FF FF FF FF
2E10- FF 93 EE D1 9F FE FF FF
2E18- FF FF FF 9F 88 00 00 00
2E20- 00 00 00 00 00 00 00 00
2E28- 88 FC FF 83 FE FF 8F D5
2E30- AA E5 FF FF FF FF FF FF
2E38- FF FF 81 80 80 C0 FF FF
2E40- FF FF FF 9F 88 00 00 00
2E48- 00 00 00 00 00 00 00 00
2E50- 88 FC FF FF FF FF FF FF
2E58- FF FF FF FF FF FF FF FF
2E60- FF FF FF FF FF FF FF FF
2E68- FF FF FF 9F 88 00 00 00
2E70- 00 00 00 00 00 00 00 00
2E78- 00 00 00 00 00 00 00 00
2E80- 88 FC FF FF FF D4 E2 FF
2E88- FF FF FF FF FF FF FF FF
2E90- FF 83 85 88 FF FF FF FF
2E98- FF FF FF 9F 88 00 00 00
2EA0- 00 00 00 00 00 00 00 00
2EA8- 88 FC FF FF F3 FF FF FF
2EB0- F1 A3 D5 F2 FF FF FF FF
2EB8- FF FF FF FF FF FF FF FF
2EC0- FF FF FF 9F 88 00 00 00
2EC8- 00 00 00 00 00 00 00 00
2ED0- 88 80 80 80 80 80 80 80
2ED8- 80 80 80 80 80 80 80 80

```

```

2EE0- 80 80 80 80 80 80 80 80
2EEB- 80 80 80 80 88 00 00 00
2EF0- 00 00 00 00 00 00 00 00
2EFB- 00 00 00 00 00 00 00 00
2F00- 88 FC FF 83 FC 91 F6 8C
2F08- 8A FF FF FF FF FF FF FF
2F10- A7 D9 F9 D1 AA F1 FF FF
2F18- FF FF FF 9F 88 00 00 00
2F20- 00 00 00 00 00 00 00 00
2F28- 88 FC FF AB D5 8A FF 8F
2F30- C5 AA D5 F2 FF FF FF FF
2F38- FF FF FF FF FF FF FF FF
2F40- FF FF FF 9F 88 00 00 00
2F48- 00 00 00 00 00 00 00 00
2F50- 00 00 00 00 00 00 00 00
2F58- 00 00 00 00 00 00 00 00
2F60- 00 00 00 00 00 00 00 00
2F68- 00 00 00 00 00 00 00 00
2F70- 00 00 00 00 00 00 00 00
2F78- 00 00 00 00 00 00 00 00
2F80- 88 FC FF FF FF FC F7 F1
2F88- F0 E3 FF FF FF FF FF FC
2F90- 8F F0 80 D0 8A FC FF FF
2F98- FF FF FF 9F 88 00 00 00
2FA0- 00 00 00 00 00 00 00 00
2FAB- 88 FC CF AA 95 FE FF FF
2FB0- C7 E2 FF FF FF FF FF FF
2FB8- FF FF FF FF FF FF FF FF
2FC0- FF FF FF 9F 88 00 00 00
2FC8- 00 00 00 00 00 00 00 00
2FD0- 00 00 00 00 00 00 00 00
2FDB- 00 00 00 00 00 00 00 00
2FE0- 00 00 00 00 00 00 00 00
2FEB- 00 00 00 00 00 00 00 00
2FF0- 00 00 00 00 00 00 00 00
2FFB- 00 00 00 00 00 00 00 00
3000- 88 80 80 80 80 80 80 80
3008- 80 80 80 80 80 80 80 80
3010- 80 80 80 80 80 80 80 80
3018- 80 80 80 80 88 00 00 00
3020- 00 00 00 00 00 00 00 00
3028- 88 FC FF FF FF FF C4 AA
3030- 91 FF FF FF FF FF BC FE
3038- 81 BC 80 FF 8F BC FE FF

```



```

3040- FF FF FF 9F 88 00 00 00
3048- 00 00 00 00 00 00 00 00
3050- 88 FC FF FF FF FF FF FF
3058- FF FF FF FF FF FF FF FF
3060- FF FF FF FF FF FF FF FF
3068- FF FF FF 9F 88 00 00 00
3070- 00 00 00 00 00 00 00 00
3078- 00 00 00 00 00 00 00 00
3080- 88 FC FF FF FF FF FF FF
3088- FF FF FF FF FF FF FF FF
3090- FF FF FF FF FF FF FF FF
3098- FF FF FF 9F 88 00 00 00
30A0- 00 00 00 00 00 00 00 00
30A8- 88 FC FF FF FF FF AB F9
30B0- C3 CA FF FF FF FF BF F0
30B8- FF F9 FF FF FF 87 FC FF
30C0- FF FF FF 9F 88 00 00 00
30C8- 00 00 00 00 00 00 00 00
30D0- 88 FC FF FF FF FF FF FF
30D8- FF FF FF FF FF FF FF FF
30E0- FF FF FF FF FF FF FF FF
30E8- FF FF FF 9F 88 00 00 00
30F0- 00 00 00 00 00 00 00 00
30F8- 00 00 00 00 00 00 00 00
3100- 88 FC FF FF FF FF FF FF
3108- FF FF FF FF FF FF FF FF
3110- BF D4 B2 D5 F8 FF FF FF
3118- FF FF FF 9F 88 00 00 00

3120- 00 00 00 00 00 00 00 00
3128- 88 FC FF FF 8F FE A0 D5
3130- 90 81 F2 9F FC FF A7 C5
3138- BA AA B0 E0 C0 AA CA FF
3140- FF FF FF 9F 88 00 00 00
3148- 00 00 00 00 00 00 00 00
3150- 88 FC FF FF FF FF FF FF
3158- FF FF FF FF FF FF FF FF
3160- FF FF FF FF FF FF FF FF
3168- FF FF FF 9F 88 00 00 00
3170- 00 00 00 00 00 00 00 00
3178- 00 00 00 00 00 00 00 00
3180- 88 FC FF FF FF FF FF FF
3188- FF FF FF FF FF FF FF FF
3190- FF F3 ED 88 CF FD FF FF
3198- FF FF FF 9F 88 00 00 00

```

```

31A0- 00 00 00 00 00 00 00 00
31A8- 88 FC FF BF 9A 86 AA D1
31B0- EA 97 80 8E FF FF FF D3
31B8- A2 E7 FF FF C7 C2 F2 FF
31C0- FF FF FF 9F 88 00 00 00
31C8- 00 00 00 00 00 00 00 00
31D0- 88 FC FF FF FF FF FF FF
31D8- FF FF FF FF FF FF FF FF
31E0- FF FF FF FF FF FF FF FF
31E8- FF FF FF 9F 88 00 00 00
31F0- 00 00 00 00 00 00 00 00
31F8- 00 00 00 00 00 00 00 00
3200- 88 FC FF FF FF FF FF FF
3208- FF FF FF FF FF FF FF FF
3210- FF 93 E8 E1 98 FF FF FF
3218- FF FF FF 9F 88 00 00 00
3220- 00 00 00 00 00 00 00 00
3228- 88 FC FF E7 F7 FF BF D4
3230- AA F1 FF FF FF FF FF FF
3238- 87 80 80 80 80 F8 FF FF
3240- FF FF FF 9F 88 00 00 00
3248- 00 00 00 00 00 00 00 00
3250- 88 FC FF FF FF FF FF FF
3258- FF FF FF FF FF FF FF FF
3260- FF FF FF FF FF FF FF FF
3268- FF FF FF 9F 88 00 00 00
3270- 00 00 00 00 00 00 00 00
3278- 00 00 00 00 00 00 00 00
3280- 88 FC FF FD BF D4 8A FF
3288- FF FF FF FF FF FF FF FF
3290- FF BF D4 82 FE FF FF FF
3298- FF FF FF 9F 88 00 00 00
32A0- 00 00 00 00 00 00 00 00
32A8- 88 FC FF FF E3 FC FE BF
32B0- F8 A9 D5 F2 FF FF FF FF
32B8- FF FF FF FF FF FF FF FF
32C0- FF FF FF 9F 88 00 00 00
32C8- 00 00 00 00 00 00 00 00
32D0- 88 80 80 80 80 80 80 80
32D8- 80 80 80 80 80 80 80 80
32E0- 80 80 80 80 80 80 80 80
32E8- 80 80 80 80 88 00 00 00
32F0- 00 00 00 00 00 00 00 00
32FB- 00 00 00 00 00 00 00 00

```

```

3300- 88 FC FF FF FF C3 FB ED
3308- E1 FF FF FF FF FF FF FF
3310- A1 E0 F9 D4 AA E5 FF FF
3318- FF FF FF 9F 88 00 00 00
3320- 00 00 00 00 00 00 00 00
3328- 88 FC BF AA D1 CA FF 9F
3330- C5 AA D5 F8 FF FF FF FF
3338- FF FF FF FF FF FF FF FF
3340- FF FF FF 9F 88 00 00 00
3348- 00 00 00 00 00 00 00 00
3350- 00 00 00 00 00 00 00 00
3358- 00 00 00 00 00 00 00 00
3360- 00 00 00 00 00 00 00 00
3368- 00 00 00 00 00 00 00 00
3370- 00 00 00 00 00 00 00 00
3378- 00 00 00 00 00 00 00 00
3380- 88 FC FF FF FF FB F7 B6
3388- E4 CB FF FF FF FF 9F FE
3390- 83 80 80 D4 AA FE FF FF
3398- FF FF FF 9F 88 00 00 00
33A0- 00 00 00 00 00 00 00 00
33A8- 88 FC CF AA D5 FC FF FF
33B0- 8F FB FF FF FF FF FF FF
33B8- FF FF FF FF FF FF FF FF
33C0- FF FF FF 9F 88 00 00 00
33C8- 00 00 00 00 00 00 00 00
33D0- 00 00 00 00 00 00 00 00
33D8- 00 00 00 00 00 00 00 00
33E0- 00 00 00 00 00 00 00 00
33E8- 00 00 00 00 00 00 00 00
33F0- 00 00 00 00 00 00 00 00
33F8- 00 00 00 00 00 00 00 00
3400- 88 FC FF FF FF FF FF FF
3408- FF FF FF FF FF FF FF FF
3410- FF FF FF FF FF FF FF FF
3418- FF FF FF 9F 88 00 00 00
3420- 00 00 00 00 00 00 00 00
3428- 88 FC FF FF FF FF 91 AA
3430- 94 FF FF FF FF BF CE FF
3438- 9F 9F 80 FE CF B9 FE FF
3440- FF FF FF 9F 88 00 00 00
3448- 00 00 00 00 00 00 00 00
3450- 88 FC FF FF FF FF FF FF
3458- FF FF FF FF FF FF FF FF

```

```

3460- FF FF FF FF FF FF FF FF
346B- FF FF FF 9F 88 00 00 00
3470- 00 00 00 00 00 00 00 00
347B- 00 00 00 00 00 00 00 00
3480- 88 FC FF FF FF FF FF FF
348B- FF FF FF FF FF FF FF FF
3490- FF FF FF 9F FE FF FF FF
349B- FF FF FF 9F 88 00 00 00
34A0- 00 00 00 00 00 00 00 00
34AB- 88 FC FF FF FB 9F AA E1
34B0- C7 CA FF FF FF FF 9F C5
34BB- FF F9 FF FF FF E3 FF FF
34C0- FF FF FF 9F 88 00 00 00
34CB- 00 00 00 00 00 00 00 00
34D0- 88 FC FF FF FF FF FF FF
34DB- FF FF FF FF FF FF FF FF
34E0- FF FF FF FF FF FF FF FF
34EB- FF FF FF 9F 88 00 00 00
34F0- 00 00 00 00 00 00 00 00
34FB- 00 00 00 00 00 00 00 00
3500- 88 FC FF FF FF FF FF FF
350B- FF FF FF FF FF FF FF FF
3510- FF 94 82 D1 F8 FF FF FF
351B- FF FF FF 9F 88 00 00 00
3520- 00 00 00 00 00 00 00 00
352B- 88 FC FF FF FF 80 A6 D5
3530- 82 DC F8 FF FC FF 8F 95
353B- AA 8A C6 8F C4 AA CE FF
3540- FF FF FF 9F 88 00 00 00
354B- 00 00 00 00 00 00 00 00
3550- 88 FC FF FF FF FF FF FF
355B- FF FF FF FF FF FF FF FF
3560- FF FF FF FF FF FF FF FF

356B- FF FF FF 9F 88 00 00 00
3570- 00 00 00 00 00 00 00 00
357B- 00 00 00 00 00 00 00 00
3580- 88 FC FF FF FF FF FF FF
358B- FF FF FF FF FF FF FF FF
3590- FF C3 BF F7 9F F8 FF FF
359B- FF FF FF 9F 88 00 00 00
35A0- 00 00 00 00 00 00 00 00
35AB- 88 FC FF 9F E3 80 AA C5
35B0- AA 97 FB E0 FF FF FF 83
35BB- AB F3 FF FF A7 D0 F2 FF

```

```

35C0- FF FF FF 9F 8B 00 00 00
35C8- 00 00 00 00 00 00 00 00
35D0- 8B FC FF FF FF FF FF FF
35D8- FF FF FF FF FF FF FF FF
35E0- FF FF FF FF FF FF FF FF
35E8- FF FF FF 9F 8B 00 00 00
35F0- 00 00 00 00 00 00 00 00
35F8- 00 00 00 00 00 00 00 00
3600- 8B FC FF FF FF FF FF FF
3608- FF FF FF FF FF FF FF FF
3610- FF 89 C5 83 C1 FF FF FF
3618- FF FF FF 9F 8B 00 00 00
3620- 00 00 00 00 00 00 00 00
3628- 8B FC FF CF FB FF FF C1
3630- AA FC FF FF FF FF FF BF
3638- 80 80 80 F0 FF FF FF FF
3640- FF FF FF 9F 8B 00 00 0C
3648- 00 00 00 00 00 00 00 00
3650- 8B FC FF FF FF FF FF FF
3658- FF FF FF FF FF FF FF FF
3660- FF FF FF FF FF FF FF FF
3668- FF FF FF 9F 8B 00 00 00
3670- 00 00 00 00 00 00 00 00
3678- 00 00 00 00 00 00 00 00
3680- 8B FC FF F9 9F D5 AA F0
3688- FF FF FF FF FF FF FF FF
3690- FF 81 80 E0 FC FF FF FF
3698- FF FF FF 9F 8B 00 00 00
36A0- 00 00 00 00 00 00 00 00
36A8- 8B FC FF FF C7 81 FB 8F
36B0- FE A9 D5 E2 FF FF FF FF
36B8- FF FF FF FF FF FF FF FF
36C0- FF FF FF 9F 8B 00 00 00
36C8- 00 00 00 00 00 00 00 00
36D0- AB D5 AA D5 AA D5 AA D5
36D8- AA D5 AA D5 AA D5 AA D5
36E0- AA D5 AA D5 AA D5 AA D5
36E8- AA D5 AA D5 8A 00 00 00
36F0- 00 00 00 00 00 00 00 00
36F8- 00 00 00 00 00 00 00 00
3700- 8B FC FF FF FF E7 FB FF
3708- FB FF FF FF FF FF FF BF
3710- A0 98 B3 D4 AA E5 FF FF
3718- FF FF FF 9F 8B 00 00 00

```

```

3720- 00 00 00 00 00 00 00 00
3728- 88 FC BF AA D1 E2 FF BF
3730- C4 AA 95 FE FF FF FF FF
3738- FF FF FF FF FF FF FF FF
3740- FF FF FF 9F 88 00 00 00
3748- 00 00 00 00 00 00 00 00
3750- 00 00 00 00 00 00 00 00
3758- 00 00 00 00 00 00 00 00
3760- 00 00 00 00 00 00 00 00
3768- 00 00 00 00 00 00 00 00
3770- 00 00 00 00 00 00 00 00
3778- 00 00 00 00 00 00 00 00
3780- 88 FC FF FF BF FE F7 B4
3788- 81 CA FF FF FF BF C0 BF
3790- 98 FC 87 84 A0 FE FF FF
3798- FF FF FF 9F 88 00 00 00
37A0- 00 00 00 00 00 00 00 00
37A8- 88 FC CF AA 81 E0 FF FF
37B0- FF FF FF FF FF FF FF FF
37B8- FF FF FF FF FF FF FF FF
37C0- FF FF FF 9F 88 00 00 00
37C8- 00 00 00 00 00 00 00 00
37D0- 00 00 00 00 00 00 00 00
37D8- 00 00 00 00 00 00 00 00
37E0- 00 00 00 00 00 00 00 00
37E8- 00 00 00 00 00 00 00 00
37F0- 00 00 00 00 00 00 00 00
37F8- 00 00 00 00 00 00 00 00
3800- 88 FC FF FF FF FF FF FF
3808- FF FF FF FF FF FF FF FF
3810- FF FF FF FF FF FF FF FF
3818- FF FF FF 9F 88 00 00 00
3820- 00 00 00 00 00 00 00 00
3828- 88 FC FF FF FF FF C7 B0
3830- 95 FF FF FF FF BF E6 FF
3838- DF 87 80 F8 E7 BB FB FF
3840- FF FF FF 9F 88 00 00 00
3848- 00 00 00 00 00 00 00 00
3850- 88 FC FF FF FF FF FF FF
3858- FF FF FF FF FF FF FF FF
3860- FF FF FF FF FF FF FF FF
3868- FF FF FF 9F 88 00 00 00
3870- 00 00 00 00 00 00 00 00
3878- 00 00 00 00 00 00 00 00

```

3880- 88 FC FF FF FF FF FF FF
 3888- FF FF FF FF FF FF FF FF
 3890- FF FF FF C7 F8 FF FF FF
 3898- FF FF FF 9F 88 00 00 00
 38A0- 00 00 00 00 00 00 00 00
 38AB- 88 FC FF FF F1 C3 AA 85
 38B0- 90 CA FF FF FF FF 8F 94
 38B8- FF F3 FF FF FF F1 FF FF
 38C0- FF FF FF 9F 88 00 00 00
 38C8- 00 00 00 00 00 00 00 00
 38D0- 88 FC FF FF FF FF FF FF
 38D8- FF FF FF FF FF FF FF FF
 38E0- FF FF FF FF FF FF FF FF
 38E8- FF FF FF 9F 88 00 00 00
 38F0- 00 00 00 00 00 00 00 00
 38FB- 00 00 00 00 00 00 00 00
 3900- 88 FC FF FF FF FF FF FF
 3908- FF FF FF FF FF FF FF FF
 3910- FF D1 88 94 F2 FF FF FF
 3918- FF FF FF 9F 88 00 00 00
 3920- 00 00 00 00 00 00 00 00
 3928- 88 FC FF FF FF FF A7 D5
 3930- AA 97 FE EF F9 FF 9F 95
 3938- EA C9 FF 9F C5 AA CA FF
 3940- FF FF FF 9F 88 00 00 00
 3948- 00 00 00 00 00 00 00 00
 3950- 88 FC FF FF FF FF FF FF
 3958- FF FF FF FF FF FF FF FF
 3960- FF FF FF FF FF FF FF FF
 3968- FF FF FF 9F 88 00 00 00
 3970- 00 00 00 00 00 00 00 00
 3978- 00 00 00 00 00 00 00 00
 3980- 88 FC FF FF FF FF FF FF
 3988- FF FF FF FF FF FF FF FF
 3990- FF B3 9F 8C 9F F9 FF FF
 3998- FF FF FF 9F 88 00 00 00

 39A0- 00 00 00 00 00 00 00 00
 39AB- 88 FC FF CF E7 BD AA 95
 39B0- AB 97 F8 FF FF FF FF D3
 39B8- AB F3 FF FF A7 D5 F2 FF
 39C0- FF FF FF 9F 88 00 00 00
 39C8- 00 00 00 00 00 00 00 00
 39D0- 88 FC FF FF FF FF FF FF
 39DB- FF FF FF FF FF FF FF FF

```

39E0- FF FF FF FF FF FF FF FF
39E8- FF FF FF 9F 88 00 00 00
39F0- 00 00 00 00 00 00 00 00
39F8- 00 00 00 00 00 00 00 00
3A00- 88 FC FF FF FF FF FF FF
3A08- FF FF FF FF FF FF FF FF
3A10- FF A3 95 A0 E4 FF FF FF
3A18- FF FF FF 9F 88 00 00 00
3A20- 00 00 00 00 00 00 00 00
3A28- 88 FC FF BF FB FF FF 9F
3A30- 80 FE FF FF FF FF FF FF
3A38- BF 80 F0 FF FF FF FF FF
3A40- FF FF FF 9F 88 00 00 00
3A48- 00 00 00 00 00 00 00 00
3A50- 88 FC FF FF FF FF FF FF
3A58- FF FF FF FF FF FF FF FF
3A60- FF FF FF FF FF FF FF FF
3A68- FF FF FF 9F 88 00 00 00
3A70- 00 00 00 00 00 00 00 00
3A78- 00 00 00 00 00 00 00 00
3A80- 88 FC FF E3 87 D5 AA 85
3A88- F8 FF FF FF FF FF FF FF
3A90- BF 94 F3 F3 FC FF FF FF
3A98- FF FF FF 9F 88 00 00 00
3AA0- 00 00 00 00 00 00 00 00
3AA8- 88 FC FF FF 8F AB FC 80
3AB0- FF A8 D5 CA FF FF FF FF
3AB8- FF FF FF FF FF FF FF FF
3AC0- FF FF FF 9F 88 00 00 00
3AC8- 00 00 00 00 00 00 00 00
3AD0- 80 80 80 80 80 80 80 80
3AD8- 80 80 80 80 80 80 80 80
3AE0- 80 80 80 80 80 80 80 80
3AE8- 80 80 80 80 80 00 00 00
3AF0- 00 00 00 00 00 00 00 00
3AF8- 00 00 00 00 00 00 00 00
3B00- 88 FC FF FF FF F3 9F BE
3B08- F3 FF FF FF FF FF FF 9F
3B10- A6 E0 86 D5 AA E5 FF FF
3B18- FF FF FF 9F 88 00 00 00
3B20- 00 00 00 00 00 00 00 00
3B28- 88 FC BF AA 85 F8 FF FF
3B30- D4 AA 95 FF FF FF FF FF
3B38- FF FF FF FF FF FF FF FF

```



```

3B40- FF FF FF 9F 88 00 00 00
3B48- 00 00 00 00 00 00 00 00
3B50- 00 00 00 00 00 00 00 00
3B58- 00 00 00 00 00 00 00 00
3B60- 00 00 00 00 00 00 00 00
3B68- 00 00 00 00 00 00 00 00
3B70- 00 00 00 00 00 00 00 00
3B78- 00 00 00 00 00 00 00 00
3B80- 88 FC FF FF BF F0 EF A0
3B88- 95 E2 FF FF FF 87 FF 8F
3B90- CE FF BF F0 8F FE FF FF
3B98- FF FF FF 9F 88 00 00 00
3BA0- 00 00 00 00 00 00 00 00
3BA8- 88 FC 9F AA D5 8A 80 FC
3BB0- FF FF FF FF FF FF FF FF
3BB8- FF FF FF FF FF FF FF FF
3BC0- FF FF FF 9F 88 00 00 00
3BC8- 00 00 00 00 00 00 00 00
3BD0- 00 00 00 00 00 00 00 00
3BD8- 00 00 00 00 00 00 00 00
3BE0- 00 00 00 00 00 00 00 00
3BE8- 00 00 00 00 00 00 00 00
3BF0- 00 00 00 00 00 00 00 00
3BF8- 00 00 00 00 00 00 00 00
3C00- 88 FC FF FF FF FF FF FF
3C08- FF FF FF FF FF FF FF FF
3C10- FF FF FF FF FF FF FF FF
3C18- FF FF FF 9F 88 00 00 00
3C20- 00 00 00 00 00 00 00 00
3C28- 88 FC FF FF FF FF 8F AA
3C30- 95 FF FF FF FF BF F6 FF
3C38- 9F 80 80 E0 F1 9F FB FF
3C40- FF FF FF 9F 88 00 00 00
3C48- 00 00 00 00 00 00 00 00
3C50- 88 FC FF FF FF FF FF FF
3C58- FF FF FF FF FF FF FF FF
3C60- FF FF FF FF FF FF FF FF
3C68- FF FF FF 9F 88 00 00 00
3C70- 00 00 00 00 00 00 00 00
3C78- 00 00 00 00 00 00 00 00
3C80- 88 FC FF FF FF FF FF FF
3C88- FF FF FF FF FF FF FF FF
3C90- FF F1 FF D3 F2 FF FF FF
3C98- FF FF FF 9F 88 00 00 00

```

```

3CA0- 00 00 00 00 00 00 00 00
3CAB- 88 FC FF FF 8C DC AA A1
3CB0- D1 C8 FF FF FF FF A7 94
3CB8- FE C1 FF FF 8F 80 FE FF
3CC0- FF FF FF 9F 88 00 00 00
3CC8- 00 00 00 00 00 00 00 00
3CD0- 88 FC FF FF FF FF FF FF
3CD8- FF FF FF FF FF FF FF FF
3CE0- FF FF FF FF FF FF FF FF
3CE8- FF FF FF 9F 88 00 00 00
3CF0- 00 00 00 00 00 00 00 00
3CF8- 00 00 00 00 00 00 00 00
3D00- 88 FC FF FF FF FF FF FF
3D08- FF FF FF FF FF FF FF FF
3D10- FF D1 88 D5 E2 FF FF FF
3D18- FF FF FF 9F 88 00 00 00
3D20- 00 00 00 00 00 00 00 00
3D28- 88 FC FF FF FF FF A7 D5
3D30- AA 97 FF DF F9 FF 9F D5
3D38- E8 C9 FF 9F D5 A8 C2 FF
3D40- FF FF FF 9F 88 00 00 00
3D48- 00 00 00 00 00 00 00 00
3D50- 88 FC FF FF FF FF FF FF
3D58- FF FF FF FF FF FF FF FF
3D60- FF FF FF FF FF FF FF FF
3D68- FF FF FF 9F 88 00 00 00
3D70- 00 00 00 00 00 00 00 00
3D78- 00 00 00 00 00 00 00 00
3D80- 88 FC FF FF FF FF FF FF
3D88- FF FF FF FF FF FF FF FF
3D90- FF 81 DE C3 DD F9 FF FF
3D98- FF FF FF 9F 88 00 00 00
3DA0- 00 00 00 00 00 00 00 00
3DAB- 88 FC FF CF 9F FF A8 D5
3DB0- 82 DD FC FF FF FF FF D3
3DB8- E2 F9 FF FF 83 D5 F8 FF
3DC0- FF FF FF 9F 88 00 00 00
3DC8- 00 00 00 00 00 00 00 00
3DD0- 88 FC FF FF FF FF FF FF
3DD8- FF FF FF FF FF FF FF FF
3DE0- FF FF FF FF FF FF FF FF
3DE8- FF FF FF 9F 88 00 00 00
3DF0- 00 00 00 00 00 00 00 00
3DF8- 00 00 00 00 00 00 00 00

```

```

3E00- 88 FC FF FF FF FF FF FF
3E08- FF FF FF FF FF FF FF FF
3E10- FF 80 D4 AA F0 FF FF FF
3E18- FF FF FF 9F 88 00 00 00
3E20- 00 00 00 00 00 00 00 00
3E28- 88 FC FF DF F9 FF FF FF
3E30- 9F FF FF FF FF FF FF FF
3E38- FF FF FF FF FF FF FF FF
3E40- FF FF FF 9F 88 00 00 00
3E48- 00 00 00 00 00 00 00 00
3E50- 88 FC FF FF FF FF FF FF
3E58- FF FF FF FF FF FF FF FF
3E60- FF FF FF FF FF FF FF FF
3E68- FF FF FF 9F 88 00 00 00
3E70- 00 00 00 00 00 00 00 00
3E78- 00 00 00 00 00 00 00 00
3E80- 88 FC FF 83 80 D5 AA D5
3E88- E2 FF FF FF FF FF FF FF
3E90- 9F C5 F9 F8 E0 FF FF FF
3E98- FF FF FF 9F 88 00 00 00
3EA0- 00 00 00 00 00 00 00 00
3EAB- 88 FC FF 87 BC AB 80 AB
3EB0- BC AA D5 CA FF FF FF FF
3EB8- FF FF FF FF FF FF FF FF
3EC0- FF FF FF 9F 88 00 00 00
3EC8- 00 00 00 00 00 00 00 00
3ED0- 80 80 80 80 80 80 80 80
3ED8- 80 80 80 80 80 80 80 80
3EE0- 80 80 80 80 80 80 80 80
3EE8- 80 80 80 80 80 00 00 00
3EF0- 00 00 00 00 00 00 00 00
3EF8- 00 00 00 00 00 00 00 00
3F00- 88 FC FF FF FF F3 EF BD
3F08- F3 FF FF FF FF FF FF CF
3F10- A7 E0 8E D5 AA E4 FF FF
3F18- FF FF FF 9F 88 00 00 00
3F20- 00 00 00 00 00 00 00 00
3F28- 88 FC BF AA 95 FF FF FF
3F30- D4 AA C5 FF FF FF FF FF
3F38- FF FF FF FF FF FF FF FF
3F40- FF FF FF 9F 88 00 00 00
3F48- 00 00 00 00 00 00 00 00
3F50- 00 00 00 00 00 00 00 00
3F58- 00 00 00 00 00 00 00 00

```

```

3F60- 00 00 00 00 00 00 00 00
3F68- 00 00 00 00 00 00 00 00
3F70- 00 00 00 00 00 00 00 00
3F78- 00 00 00 00 00 00 00 00
3F80- 88 FC FF FF BF F3 EF A0
3F88- C5 F8 FF FF FF F3 FF E7
3F90- E7 FD FF E3 9F FE FF FF
3F98- FF FF FF 9F 88 00 00 00
3FA0- 00 00 00 00 00 00 00 00
3FA8- 88 FC FF A0 D5 80 80 80
3FB0- 80 FF FF FF FF FF FF FF
3FB8- FF FF FF FF FF FF FF FF
3FC0- FF FF FF 9F 88 00 00 00
3FC8- 00 00 00 00 00 00 00 00
3FD0- 00 00 00 00 00 00 00 00
3FDB- 00 00 00 00 00 00 00 00
3FE0- 00 00 00 00 00 00 00 00
3FE8- 00 00 00 00 00 00 00 00
3FF0- 00 00 00 00 00 00 00 00
3FF8- 00 00 00 00 00 00 00 00

```

2. C2

```

2000- A8 D5 AA D5 AA D5 AA D5
2008- AA D5 AA D5 AA D5 AA D5
2010- AA D5 AA D5 AA D5 AA D5
2018- AA D5 AA D5 BA 00 00 00
2020- 00 00 00 00 00 00 00 00
2028- 88 FC FF FF FF E7 DC A9
2030- 95 FE FF FF FF F8 FF F3
2038- B9 FE FF 8F 9F F3 FF FF
2040- FF FF FF 9F 88 00 00 00
2048- 00 00 00 00 00 00 00 00
2050- 88 FC FF 8F 80 80 80 80
2058- 80 E0 FF FF FF FF FF FF
2060- FF FF FF FF FF FF FF FF
2068- FF FF FF 9F 88 00 00 00
2070- 00 00 00 00 00 00 00 00
2078- 00 00 00 00 00 00 00 00
2080- 88 FC FF FF FF FF FF FF
2088- FF FF FF FF FF FF FF FF
2090- FF FF FF FF FF FF FF FF
2098- FF FF FF 9F 88 00 00 00
20A0- 00 00 00 00 00 00 00 00
20A8- 88 FC FF FF FF FF 9F AB

```

```

20B0- C5 FF FF FF FF FF F0 FF
20B8- BF 80 80 80 FC EF F9 FF
20C0- FF FF FF 9F 88 00 00 00
20C8- 00 00 00 00 00 00 00 00
20D0- 88 FC FF FF FF FF FF FF
20D8- FF FF FF FF FF FF FF FF
20E0- FF FF FF FF FF FF FF FF
20E8- FF FF FF 9F 88 00 00 00
20F0- 00 00 00 00 00 00 00 00
20F8- 00 00 00 00 00 00 00 00
2100- 88 FC FF FF FF FF FF FF
2108- FF FF FF FF FF FF FF FF
2110- BF C4 FF D1 F2 FF FF FF
2118- FF FF FF 9F 88 00 00 00
2120- 00 00 00 00 00 00 00 00
2128- 88 FC FF FF FC D7 EA A9
2130- C5 C8 FE E1 FF FF A7 D1
2138- F8 FC FF FF FF F9 F8 FF
2140- FF FF FF 9F 88 00 00 00
2148- 00 00 00 00 00 00 00 00
2150- 88 FC FF FF FF FF FF FF
2158- FF FF FF FF FF FF FF FF
2160- FF FF FF FF FF FF FF FF
2168- FF FF FF 9F 88 00 00 00
2170- 00 00 00 00 00 00 00 00
2178- 00 00 00 00 00 00 00 00
2180- 88 FC FF FF FF FF FF FF
2188- FF FF FF FF FF FF FF FF
2190- FF C4 88 D5 CA FF FF FF
2198- FF FF FF 9F 88 00 00 00
21A0- 00 00 00 00 00 00 00 00
21A8- 88 FC FF FF FF FF A7 D5
21B0- AA 97 FF BF FC FF 9F D5
21B8- A8 C3 FF BF D4 A8 E2 FF
21C0- FF FF FF 9F 88 00 00 00
21C8- 00 00 00 00 00 00 00 00
21D0- 88 FC FF FF FF FF FF FF
21D8- FF FF FF FF FF FF FF FF
21E0- FF FF FF FF FF FF FF FF
21E8- FF FF FF 9F 88 00 00 00
21F0- 00 00 00 00 00 00 00 00
21F8- 00 00 00 00 00 00 00 00
2200- 88 FC FF FF FF FF FF FF
2208- FF FF FF FF FF FF FF FF

```

```

2210- BF E3 EE 9F FE FC FF FF
2218- FF FF FF 9F 88 00 00 00
2220- 00 00 00 00 00 00 00 00
2228- 88 FC FF CF FF FF A9 D5
2230- AA 80 FE FF FF FF FF C7
2238- A2 FC FF FF A9 D4 FC FF
2240- FF FF FF 9F 88 00 00 00
2248- 00 00 00 00 00 00 00 00
2250- 88 FC FF FF FF FF FF FF
2258- FF FF FF FF FF FF FF FF
2260- FF FF FF FF FF FF FF FF
2268- FF FF FF 9F 88 00 00 00
2270- 00 00 00 00 00 00 00 00
2278- 00 00 00 00 00 00 00 00
2280- 88 FC FF FF FF FF FF FF
2288- FF FF FF FF FF FF FF FF
2290- BF AA D1 8A F9 FF FF FF
2298- FF FF FF 9F 88 00 00 00
22A0- 00 00 00 00 00 00 00 00
22A8- 88 FC FF 8F F8 FF FF FF
22B0- 8F FF FF FF FF FF FF FF
22B8- FF FF FF FF FF FF FF FF
22C0- FF FF FF 9F 88 00 00 00
22C8- 00 00 00 00 00 00 00 00
22D0- 88 FC FF FF FF FF FF FF
22D8- FF FF FF FF FF FF FF FF
22E0- FF FF FF FF FF FF FF FF
22E8- FF FF FF 9F 88 00 00 00
22F0- 00 00 00 00 00 00 00 00
22F8- 00 00 00 00 00 00 00 00
2300- 88 FC DF 87 80 D5 82 D4
2308- 8A FF FF FF FF FF FF FF
2310- 8F E5 81 9E 8A FF FF FF
2318- FF FF FF 9F 88 00 00 00
2320- 00 00 00 00 00 00 00 00
2328- 88 FC FF A3 F1 A9 80 AA
2330- B9 AA D5 CA FF FF FF FF
2338- FF FF FF FF FF FF FF FF
2340- FF FF FF 9F 88 00 00 00
2348- 00 00 00 00 00 00 00 00
2350- 00 00 00 00 00 00 00 00
2358- 00 00 00 00 00 00 00 00
2360- 00 00 00 00 00 00 00 00
2368- 00 00 00 00 00 00 00 00

```

2370- 00 00 00 00 00 00 00 00
 2378- 00 00 00 00 00 00 00 00
 2380- 88 FC FF FF DF F9 EF BB
 2388- F3 FF FF FF FF FF FF E7
 2390- 8F 98 87 C5 AA E4 FF FF
 2398- FF FF FF 9F 88 00 00 00
 23A0- 00 00 00 00 00 00 00 00
 23A8- 88 FC 9F AA 95 FF FF FF
 23B0- D1 AA F1 FF FF FF FF FF
 23B8- FF FF FF FF FF FF FF FF
 23C0- FF FF FF 9F 88 00 00 00
 23C8- 00 00 00 00 00 00 00 00
 23D0- 00 00 00 00 00 00 00 00
 23D8- 00 00 00 00 00 00 00 00
 23E0- 00 00 00 00 00 00 00 00
 23E8- 00 00 00 00 00 00 00 00
 23F0- 00 00 00 00 00 00 00 00
 23F8- 00 00 00 00 00 00 00 00
 2400- 88 80 80 80 80 80 80 80
 2408- 80 80 80 80 80 80 80 80
 2410- 80 80 80 80 80 80 80 80
 2418- 80 80 80 80 88 00 00 00
 2420- 00 00 00 00 00 00 00 00
 2428- 88 FC FF FF FF 8F B1 AB
 2430- 95 FF FF 9F 9E FC F9
 2438- CC F7 DF BF 9E C3 FF FF
 2440- FF FF FF 9F 88 00 00 00
 2448- 00 00 00 00 00 00 00 00
 2450- 88 FC FF FF FF 8F 80 80
 2458- F8 FF FF FF FF FF FF FF
 2460- FF FF FF FF FF FF FF FF
 2468- FF FF FF 9F 88 00 00 00
 2470- 00 00 00 00 00 00 00 00
 2478- 00 00 00 00 00 00 00 00
 2480- 88 FC FF FF FF FF FF FF
 2488- FF FF FF FF FF FF FF FF
 2490- FF FF FF FF FF FF FF FF
 2498- FF FF FF 9F 88 00 00 00
 24A0- 00 00 00 00 00 00 00 00
 24A8- 88 FC FF FF FF FF 8F A3
 24B0- E5 FF FF FF FF FF FF FF
 24B8- FF 80 80 F8 FF FF FC FF
 24C0- FF FF FF 9F 88 00 00 00
 24C8- 00 00 00 00 00 00 00 00
 24D0- 88 FC FF FF FF FF FF FF

24D8- FF FF FF FF FF FF FF FF
 24E0- FF FF FF FF FF FF FF FF
 24E8- FF FF FF 9F 8B 00 00 00
 24F0- 00 00 00 00 00 00 00 00
 24F8- 00 00 00 00 00 00 00 00
 2500- 8B FC FF FF FF FF FF FF
 2508- FF FF FF FF FF FF FF FF
 2510- 9F 95 FE D4 F2 FF FF FF
 2518- FF FF FF 9F 8B 00 00 00
 2520- 00 00 00 00 00 00 00 00
 2528- 8B FC FF FF BC D5 FA A9
 2530- C5 C8 BF 8C FF FF A7 D1
 2538- E2 C0 F3 FF DF C1 F3 FF
 2540- FF FF FF 9F 8B 00 00 00
 2548- 00 00 00 00 00 00 00 00
 2550- 8B FC FF FF FF FF FF FF
 2558- FF FF FF FF FF FF FF FF
 2560- FF FF FF FF FF FF FF FF
 2568- FF FF FF 9F 8B 00 00 00
 2570- 00 00 00 00 00 00 00 00
 2578- 00 00 00 00 00 00 00 00
 2580- 8B FC FF FF FF FF FF FF
 2588- FF FF FF FF FF FF FF FF
 2590- FF D4 AB D0 CA FF FF FF
 2598- FF FF FF 9F 8B 00 00 00
 25A0- 00 00 00 00 00 00 00 00
 25AB- 8B FC FF FF FF FF A3 D5
 25B0- EA 97 FF FF FC FF BF D4
 25B8- AB E7 FF FF 94 AA F2 FF
 25C0- FF FF FF 9F 8B 00 00 00
 25C8- 00 00 00 00 00 00 00 00
 25D0- 8B FC FF FF FF FF FF FF
 25D8- FF FF FF FF FF FF FF FF
 25E0- FF FF FF FF FF FF FF FF
 25E8- FF FF FF 9F 8B 00 00 00
 25F0- 00 00 00 00 00 00 00 00
 25F8- 00 00 00 00 00 00 00 00
 2600- 8B FC FF FF FF FF FF FF
 2608- FF FF FF FF FF FF FF FF
 2610- FF B0 EE C3 9F FE FF FF
 2618- FF FF FF 9F 8B 00 00 00
 2620- 00 00 00 00 00 00 00 00
 2628- 8B FC FF CF FF FF A3 D5
 2630- AA E5 FF FF FF FF FF 9F


```

2638- 82 FF FF 87 A8 D5 FC FF
2640- FF FF FF 9F 88 00 00 00
2648- 00 00 00 00 00 00 00 00
2650- 88 FC FF FF FF FF FF FF
2658- FF FF FF FF FF FF FF FF
2660- FF FF FF FF FF FF FF FF
2668- FF FF FF 9F 88 00 00 00
2670- 00 00 00 00 00 00 00 00
2678- 00 00 00 00 00 00 00 00
2680- 88 FC FF FF FF 87 FE FF
2688- FF FF FF FF FF FF FF FF
2690- FF 80 D5 8A FC FF FF FF
2698- FF FF FF 9F 88 00 00 00
26A0- 00 00 00 00 00 00 00 00
26A8- 88 FC FF EF F8 FF FF FF
26B0- C7 FF 81 FE FF FF FF FF
26B8- FF FF FF FF FF FF FF FF
26C0- FF FF FF 9F 88 00 00 00
26C8- 00 00 00 00 00 00 00 00
26D0- 88 80 80 80 80 80 80 80
26D8- 80 80 80 80 80 80 80 80
26E0- 80 80 80 80 80 80 80 80
26E8- 80 80 80 80 88 00 00 00
26F0- 00 00 00 00 00 00 00 00
26F8- 00 00 00 00 00 00 00 00
2700- 88 FC BF 80 80 D4 80 D0
2708- AA FE FF FF FF FF FF FF
2710- A7 F1 FC C7 AA FE FF FF
2718- FF FF FF 9F 88 00 00 00
2720- 00 00 00 00 00 00 00 00
2728- 88 FC FF A9 85 A8 FE A0
2730- B1 AA D5 CA FF FF FF FF
2738- FF FF FF FF FF FF FF FF
2740- FF FF FF 9F 88 00 00 00
2748- 00 00 00 00 00 00 00 00
2750- 00 00 00 00 00 00 00 00
2758- 00 00 00 00 00 00 00 00
2760- 00 00 00 00 00 00 00 00
2768- 00 00 00 00 00 00 00 00
2770- 00 00 00 00 00 00 00 00
2778- 00 00 00 00 00 00 00 00
2780- 88 FC FF FF 9F F8 F7 FB
2788- F2 FF FF FF FF FF FF F3
2790- 9F F8 83 94 8A F1 FF FF

```

```

2798- FF FF FF 9F 88 00 00 00
27A0- 00 00 00 00 00 00 00 00
27A8- 88 FC CF AA 95 FF FF FF
27B0- D3 AA FC FF FF FF FF FF
27B8- FF FF FF FF FF FF FF FF
27C0- FF FF FF 9F 88 00 00 00
27C8- 00 00 00 00 00 00 00 00
27D0- 00 00 00 00 00 00 00 00
27D8- 00 00 00 00 00 00 00 00
27E0- 00 00 00 00 00 00 00 00
27E8- 00 00 00 00 00 00 00 00
27F0- 00 00 00 00 00 00 00 00
27F8- 00 00 00 00 00 00 00 00
2800- 88 80 80 80 80 80 80 80
2808- 80 80 80 80 80 80 80 80
2810- 80 80 80 80 80 80 80 80
2818- 80 80 80 80 88 00 00 00
2820- 00 00 00 00 00 00 00 00
2828- 88 FC FF FF FF 9F 85 AA
2830- 85 FF FF FF CF C3 F9 F9
2838- F1 FB EF FF 9D 93 FF FF
2840- FF FF FF 9F 88 00 00 00
2848- 00 00 00 00 00 00 00 00
2850- 88 FC FF FF FF FF FF FF
2858- FF FF FF FF FF FF FF FF
2860- FF FF FF FF FF FF FF FF
2868- FF FF FF 9F 88 00 00 00
2870- 00 00 00 00 00 00 00 00
2878- 00 00 00 00 00 00 00 00
2880- 88 FC FF FF FF FF FF FF
2888- FF FF FF FF FF FF FF FF
2890- FF FF FF FF FF FF FF FF
2898- FF FF FF 9F 88 00 00 00
28A0- 00 00 00 00 00 00 00 00
28A8- 88 FC FF FF FF FF A3 BE
28B0- E0 FB FF FF FF FF FF FF
28B8- FF 8C C0 FF FF 9F FE FF
28C0- FF FF FF 9F 88 00 00 00
28C8- 00 00 00 00 00 00 00 00
28D0- 88 FC FF FF FF FF FF FF
28D8- FF FF FF FF FF FF FF FF
28E0- FF FF FF FF FF FF FF FF
28E8- FF FF FF 9F 88 00 00 00
28F0- 00 00 00 00 00 00 00 00

```

```

28F8- 00 00 00 00 00 00 00 00
2900- 88 FC FF FF FF FF FF FF
2908- FF FF FF FF FF FF FF FF
2910- 9F D5 FC D4 F2 FF FF FF
2918- FF FF FF 9F 88 00 00 00
2920- 00 00 00 00 00 00 00 00
2928- 88 FC FF FF F9 D5 BF A0
2930- 95 E0 9F BF FE FF A7 D1
2938- 8A C8 8F DF BD 88 E7 FF
2940- FF FF FF 9F 88 00 00 00
2948- 00 00 00 00 00 00 00 00
2950- 88 FC FF FF FF FF FF FF
2958- FF FF FF FF FF FF FF FF
2960- FF FF FF FF FF FF FF FF
2968- FF FF FF 9F 88 00 00 00
2970- 00 00 00 00 00 00 00 00
2978- 00 00 00 00 00 00 00 00
2980- 88 FC FF FF FF FF FF FF
2988- FF FF FF FF FF FF FF FF
2990- FF 84 88 C7 E2 FF FF FF
2998- FF FF FF 9F 88 00 00 00
29A0- 00 00 00 00 00 00 00 00
29A8- 88 FC FF FF F3 FF AB D5
29B0- EA 97 FF F7 FC FF FF D4
29B8- A2 E7 FF FF C1 CA F2 FF
29C0- FF FF FF 9F 88 00 00 00
29C8- 00 00 00 00 00 00 00 00
29D0- 88 FC FF FF FF FF FF FF
29D8- FF FF FF FF FF FF FF FF
29E0- FF FF FF FF FF FF FF FF
29E8- FF FF FF 9F 88 00 00 00
29F0- 00 00 00 00 00 00 00 00
29F8- 00 00 00 00 00 00 00 00
2A00- 88 FC FF FF FF FF FF FF
2A08- FF FF FF FF FF FF FF FF
2A10- FF D3 EE D9 FF FC FF FF
2A18- FF FF FF 9F 88 00 00 00
2A20- 00 00 00 00 00 00 00 00
2A28- 88 FC FF 9B FF FF A7 D5
2A30- AA E5 FF FF FF FF FF BF
2A38- E0 BF 80 80 A0 95 FE FF
2A40- FF FF FF 9F 88 00 00 00
2A48- 00 00 00 00 00 00 00 00
2A50- 88 FC FF FF FF FF FF FF

```

```

2A5B- FF FF FF FF FF FF FF FF
2A60- FF FF FF FF FF FF FF FF
2A68- FF FF FF 9F 88 00 00 00
2A70- 00 00 00 00 00 00 00 00
2A78- 00 00 00 00 00 00 00 00
2A80- 88 FC FF FF FF D1 F8 FF
2A88- FF FF FF FF FF FF FF FF
2A90- FF A9 D0 A2 FE FF FF FF
2A98- FF FF FF 9F 88 00 00 00
2AA0- 00 00 00 00 00 00 00 00
2AAB- 88 FC FF FF F1 FF FF FF
2AB0- E3 8F D4 F8 FF FF FF FF
2AB8- FF FF FF FF FF FF FF FF
2AC0- FF FF FF 9F 88 00 00 00
2ACB- 00 00 00 00 00 00 00 00
2AD0- 88 80 80 80 80 80 80 80
2ADB- 80 80 80 80 80 80 80 80
2AE0- 80 80 80 80 80 80 80 80
2AEB- 80 80 80 80 88 00 00 00
2AF0- 00 00 00 00 00 00 00 00
2AF8- 00 00 00 00 00 00 00 00
2B00- 88 FC FF 80 E0 94 80 C0
2B08- AA FE FF FF FF FF FF FF
2B10- A7 B1 FC D3 AA FC FF FF
2B1B- FF FF FF 9F 88 00 00 00
2B20- 00 00 00 00 00 00 00 00
2B28- 88 FC FF A9 95 AA FE A7
2B30- 85 AA D5 E2 FF FF FF FF
2B38- FF FF FF FF FF FF FF FF
2B40- FF FF FF 9F 88 00 00 00
2B48- 00 00 00 00 00 00 00 00
2B50- 00 00 00 00 00 00 00 00
2B58- 00 00 00 00 00 00 00 00
2B60- 00 00 00 00 00 00 00 00
2B68- 00 00 00 00 00 00 00 00
2B70- 00 00 00 00 00 00 00 00
2B78- 00 00 00 00 00 00 00 00
2B80- 88 FC FF FF BF FF F7 F7
2B88- F0 FF FF FF FF FF FF F9
2B90- 9F F0 B1 B4 80 F9 FF FF
2B98- FF FF FF 9F 88 00 00 00
2BA0- 00 00 00 00 00 00 00 00
2BAB- 88 FC CF AA 95 FF FF FF
2BB0- D3 8A FF FF FF FF FF FF

```

2B88- FF FF FF FF FF FF FF FF
 2BC0- FF FF FF 9F 88 00 00 00
 2BC8- 00 00 00 00 00 00 00 00
 2BD0- 00 00 00 00 00 00 00 00
 2BD8- 00 00 00 00 00 00 00 00
 2BE0- 00 00 00 00 00 00 00 00
 2BE8- 00 00 00 00 00 00 00 00
 2BF0- 00 00 00 00 00 00 00 00
 2BF8- 00 00 00 00 00 00 00 00
 2C00- 88 80 80 80 80 80 80 80
 2C08- 80 80 80 80 80 80 80 80
 2C10- 80 80 80 80 80 80 80 80
 2C18- 80 80 80 80 88 00 00 00
 2C20- 00 00 00 00 00 00 00 00
 2C28- 88 FC FF FF FF BF D0 AA
 2C30- 85 FF FF FF 9F FB F9 FC
 2C38- BC FB C3 FF 9F 88 FE FF
 2C40- FF FF FF 9F 88 00 00 00
 2C48- 00 00 00 00 00 00 00 00
 2C50- 88 FC FF FF FF FF FF FF
 2C58- FF FF FF FF FF FF FF FF
 2C60- FF FF FF FF FF FF FF FF
 2C68- FF FF FF 9F 88 00 00 00
 2C70- 00 00 00 00 00 00 00 00
 2C78- 00 00 00 00 00 00 00 00
 2C80- 88 FC FF FF FF FF FF FF
 2C88- FF FF FF FF FF FF FF FF
 2C90- FF FF FF FF FF FF FF FF
 2C98- FF FF FF 9F 88 00 00 00
 2CA0- 00 00 00 00 00 00 00 00
 2CAB- 88 FC FF FF FF FF A9 FC
 2CB0- 88 E2 FF FF FF FF FF FF
 2CB8- FF FC FF FF FF B7 FE FF
 2CC0- FF FF FF 9F 88 00 00 00
 2CC8- 00 00 00 00 00 00 00 00
 2CD0- 88 FC FF FF FF FF FF FF
 2CD8- FF FF FF FF FF FF FF FF
 2CE0- FF FF FF FF FF FF FF FF
 2CE8- FF FF FF 9F 88 00 00 00
 2CF0- 00 00 00 00 00 00 00 00
 2CF8- 00 00 00 00 00 00 00 00
 2D00- 88 FC FF FF FF FF FF FF
 2D08- FF FF FF FF FF FF FF FF
 2D10- 9F D5 88 D4 F2 FF FF FF

```

2D18- FF FF FF 9F 88 00 00 00
2D20- 00 00 00 00 00 00 00 00
2D28- 88 FC FF FF E3 FF 8F 85
2D30- 95 F1 C7 E7 FC FF A7 C5
2D38- 8A 8A 9B E0 99 AA CE FF
2D40- FF FF FF 9F 88 00 00 00
2D48- 00 00 00 00 00 00 00 00
2D50- 88 FC FF FF FF FF FF FF
2D58- FF FF FF FF FF FF FF FF
2D60- FF FF FF FF FF FF FF FF
2D68- FF FF FF 9F 88 00 00 00
2D70- 00 00 00 00 00 00 00 00
2D78- 00 00 00 00 00 00 00 00
2D80- 88 FC FF FF FF FF FF FF
2D88- FF FF FF FF FF FF FF FF
2D90- FF F1 C0 9F E0 FF FF FF
2D98- FF FF FF 9F 88 00 00 00
2DA0- 00 00 00 00 00 00 00 00
2DA8- 88 FC FF FF F9 BE AA D1
2DB0- EA 97 FC 8B FE FF FF D1
2DB8- A2 E7 FF FF C7 CA F2 FF
2DC0- FF FF FF 9F 88 00 00 00
2DC8- 00 00 00 00 00 00 00 00
2DD0- 88 FC FF FF FF FF FF FF
2DD8- FF FF FF FF FF FF FF FF
2DE0- FF FF FF FF FF FF FF FF
2DE8- FF FF FF 9F 88 00 00 00
2DF0- 00 00 00 00 00 00 00 00
2DF8- 00 00 00 00 00 00 00 00
2E00- 88 FC FF FF FF FF FF FF
2E08- FF FF FF FF FF FF FF FF
2E10- FF 93 EE D1 9F FE FF FF
2E18- FF FF FF 9F 88 00 00 00
2E20- 00 00 00 00 00 00 00 00
2E28- 88 FC FF 83 FE FF 8F D5
2E30- AA E5 FF FF FF FF FF FF
2E38- FF FF 81 80 80 C0 FF FF
2E40- FF FF FF 9F 88 00 00 00
2E48- 00 00 00 00 00 00 00 00
2E50- 88 FC FF FF FF FF FF FF
2E58- FF FF FF FF FF FF FF FF
2E60- FF FF FF FF FF FF FF FF
2E68- FF FF FF 9F 88 00 00 00
2E70- 00 00 00 00 00 00 00 00

```

```

2E78- 00 00 00 00 00 00 00 00
2E80- 88 FC FF FF FF D4 E2 FF
2E88- FF FF FF FF FF FF FF FF
2E90- FF 83 85 88 FF FF FF FF
2E98- FF FF FF 9F 88 00 00 00
2EA0- 00 00 00 00 00 00 00 00
2EAB- 88 FC FF FF F3 FF FF FF
2EB0- F1 A3 D5 F2 FF FF FF FF
2EB8- FF FF FF FF FF FF FF FF
2EC0- FF FF FF 9F 88 00 00 00
2EC8- 00 00 00 00 00 00 00 00
2ED0- 88 80 80 80 80 80 80 80
2ED8- 80 80 80 80 80 80 80 80
2EE0- 80 80 80 80 80 80 80 80
2EE8- 80 80 80 80 88 00 00 00
2EF0- 00 00 00 00 00 00 00 00
2EF8- 00 00 00 00 00 00 00 00
2F00- 88 FC FF 83 FC 91 F6 BC
2F08- 8A FF FF FF FF FF FF FF
2F10- A7 D9 F9 D1 AA F1 FF FF
2F18- FF FF FF 9F 88 00 00 00
2F20- 00 00 00 00 00 00 00 00
2F28- 88 FC FF A8 D5 8A FF 8F
2F30- C5 AA D5 F2 FF FF FF FF
2F38- FF FF FF FF FF FF FF FF
2F40- FF FF FF 9F 88 00 00 00
2F48- 00 00 00 00 00 00 00 00
2F50- 00 00 00 00 00 00 00 00
2F58- 00 00 00 00 00 00 00 00
2F60- 00 00 00 00 00 00 00 00
2F68- 00 00 00 00 00 00 00 00
2F70- 00 00 00 00 00 00 00 00
2F78- 00 00 00 00 00 00 00 00
2F80- 88 FC FF FF FF FC F7 F1
2F88- F0 E3 FF FF FF FF FF FC
2F90- 8F F0 80 D0 8A FC FF FF
2F98- FF FF FF 9F 88 00 00 00
2FA0- 00 00 00 00 00 00 00 00
2FAB- 88 FC CF AA 95 FE FF FF
2FB0- C7 E2 FF FF FF FF FF FF
2FB8- FF FF FF FF FF FF FF FF
2FC0- FF FF FF 9F 88 00 00 00
2FC8- 00 00 00 00 00 00 00 00
2FDO- 00 00 00 00 00 00 00 00

```

```

2FDB- 00 00 00 00 00 00 00 00
2FE0- 00 00 00 00 00 00 00 00
2FEB- 00 00 00 00 00 00 00 00
2FF0- 00 00 00 00 00 00 00 00
2FFB- 00 00 00 00 00 00 00 00
3000- 8B 80 80 80 80 80 80 80
300B- 80 80 80 80 80 80 80 80
3010- 80 80 80 80 80 80 80 80
301B- 80 80 80 80 8B 00 00 00
3020- 00 00 00 00 00 00 00 00
302B- 8B FC FF FF FF FF C4 AA
3030- 91 FF FF FF FF FF BC FE
303B- B1 BC 80 FF 8F BC FE FF
3040- FF FF FF 9F 8B 00 00 00
304B- 00 00 00 00 00 00 00 00
3050- 8B FC FF FF FF FF FF FF
305B- FF FF FF FF FF FF FF FF
3060- FF FF FF FF FF FF FF FF
306B- FF FF FF 9F 8B 00 00 00
3070- 00 00 00 00 00 00 00 00
307B- 00 00 00 00 00 00 00 00
3080- 8B FC FF FF FF FF FF FF
308B- FF FF FF FF FF FF FF FF
3090- FF FF FF FF FF FF FF FF
309B- FF FF FF 9F 8B 00 00 00
30A0- 00 00 00 00 00 00 00 00
30AB- 8B FC FF FF FF FF AB F9
30B0- C3 CA FF FF FF FF BF F0
30BB- FF F9 FF FF FF 87 FC FF
30C0- FF FF FF 9F 8B 00 00 00
30CB- 00 00 00 00 00 00 00 00
30D0- 8B FC FF FF FF FF FF FF
30DB- FF FF FF FF FF FF FF FF
30E0- FF FF FF FF FF FF FF FF
30EB- FF FF FF 9F 8B 00 00 00
30F0- 00 00 00 00 00 00 00 00
30FB- 00 00 00 00 00 00 00 00
3100- 8B FC FF FF FF FF FF FF
310B- FF FF FF FF FF FF FF FF
3110- BF D4 82 D5 FB FF FF FF
311B- FF FF FF 9F 8B 00 00 00
3120- 00 00 00 00 00 00 00 00
312B- 8B FC FF FF 8F FE A0 D5
3130- 90 B1 F2 9F FC FF A7 C5

```



```

3138- BA AA B0 E0 C0 AA CA FF
3140- FF FF FF 9F 88 00 00 00
3148- 00 00 00 00 00 00 00 00
3150- 88 FC FF FF FF FF FF FF
3158- FF FF FF FF FF FF FF FF
3160- FF FF FF FF FF FF FF FF
3168- FF FF FF 9F 88 00 00 00
3170- 00 00 00 00 00 00 00 00
3178- 00 00 00 00 00 00 00 00
3180- 88 FC FF FF FF FF FF FF
3188- FF FF FF FF FF FF FF FF
3190- FF F3 ED 88 CF FD FF FF
3198- FF FF FF 9F 88 00 00 00
31A0- 00 00 00 00 00 00 00 00
31A8- 88 FC FF BF 9A 86 AA D1
31B0- EA 97 80 8E FF FF FF D3
31B8- A2 E7 FF FF C7 C2 F2 FF
31C0- FF FF FF 9F 88 00 00 00
31C8- 00 00 00 00 00 00 00 00
31D0- 88 FC FF FF FF FF FF FF
31D8- FF FF FF FF FF FF FF FF
31E0- FF FF FF FF FF FF FF FF
31E8- FF FF FF 9F 88 00 00 00
31F0- 00 00 00 00 00 00 00 00
31F8- 00 00 00 00 00 00 00 00
3200- 88 FC FF FF FF FF FF FF
3208- FF FF FF FF FF FF FF FF
3210- FF 93 E8 E1 98 FF FF FF
3218- FF FF FF 9F 88 00 00 00
3220- 00 00 00 00 00 00 00 00
3228- 88 FC FF E7 F7 FF BF D4
3230- AA F1 FF FF FF FF FF FF
3238- 87 80 80 80 B0 F8 FF FF
3240- FF FF FF 9F 88 00 00 00
3248- 00 00 00 00 00 00 00 00
3250- 88 FC FF FF FF FF FF FF
3258- FF FF FF FF FF FF FF FF
3260- FF FF FF FF FF FF FF FF
3268- FF FF FF 9F 88 00 00 00
3270- 00 00 00 00 00 00 00 00
3278- 00 00 00 00 00 00 00 00
3280- 88 FC FF FD BF D4 8A FF
3288- FF FF FF FF FF FF FF FF
3290- FF BF D4 82 FE FF FF FF

```

```

3298- FF FF FF 9F 88 00 00 00
32A0- 00 00 00 00 00 00 00 00
32A8- 88 FC FF FF E3 FC FE BF
32B0- FB A9 D5 F2 FF FF FF FF
32B8- FF FF FF FF FF FF FF FF
32C0- FF FF FF 9F 88 00 00 00
32C8- 00 00 00 00 00 00 00 00
32D0- 88 80 80 80 80 80 80 80
32D8- 80 80 80 80 80 80 80 80
32E0- 80 80 80 80 80 80 80 80
32E8- 80 80 80 80 88 00 00 00
32F0- 00 00 00 00 00 00 00 00
32F8- 00 00 00 00 00 00 00 00
3300- 88 FC FF FF FF C3 FB ED
3308- E1 FF FF FF FF FF FF FF
3310- A1 E0 F9 D4 AA E5 FF FF
3318- FF FF FF 9F 88 00 00 00
3320- 00 00 00 00 00 00 00 00
3328- 88 FC BF AA D1 CA FF 9F
3330- C5 AA D5 F8 FF FF FF FF
3338- FF FF FF FF FF FF FF FF
3340- FF FF FF 9F 88 00 00 00
3348- 00 00 00 00 00 00 00 00
3350- 00 00 00 00 00 00 00 00
3358- 00 00 00 00 00 00 00 00
3360- 00 00 00 00 00 00 00 00
3368- 00 00 00 00 00 00 00 00
3370- 00 00 00 00 00 00 00 00
3378- 00 00 00 00 00 00 00 00
3380- 88 FC FF FF FF FB F7 B6
3388- E4 C8 FF FF FF FF 9F FE
3390- 83 80 80 D4 AA FE FF FF
3398- FF FF FF 9F 88 00 00 00
33A0- 00 00 00 00 00 00 00 00
33A8- 88 FC CF AA D5 FC FF FF
33B0- 8F F8 FF FF FF FF FF FF
33B8- FF FF FF FF FF FF FF FF
33C0- FF FF FF 9F 88 00 00 00
33C8- 00 00 00 00 00 00 00 00
33D0- 00 00 00 00 00 00 00 00
33D8- 00 00 00 00 00 00 00 00
33E0- 00 00 00 00 00 00 00 00
33E8- 00 00 00 00 00 00 00 00
33F0- 00 00 00 00 00 00 00 00

```

```

33FB- 00 00 00 00 00 00 00 00
3400- 8B FC FF FF FF FF FF FF
3408- FF FF FF FF FF FF FF FF
3410- FF FF FF FF FF FF FF FF
3418- FF FF FF 9F 8B 00 00 00
3420- 00 00 00 00 00 00 00 00
3428- 8B FC FF FF FF FF 91 AA
3430- 94 FF FF FF FF BF CE FF
3438- 9F 9F 80 FE CF B9 FE FF
3440- FF FF FF 9F 8B 00 00 00
3448- 00 00 00 00 00 00 00 00
3450- 8B FC FF FF FF FF FF FF
3458- FF FF FF FF FF FF FF FF
3460- FF FF FF FF FF FF FF FF
3468- FF FF FF 9F 8B 00 00 00
3470- 00 00 00 00 00 00 00 00
3478- 00 00 00 00 00 00 00 00
3480- 8B FC FF FF FF FF FF FF
3488- FF FF FF FF FF FF FF FF
3490- FF FF FF 9F FE FF FF FF
3498- FF FF FF 9F 8B 00 00 00
34A0- 00 00 00 00 00 00 00 00
34A8- 8B FC FF FF FB 9F AA E1
34B0- C7 CA FF FF FF FF 9F C5
34B8- FF F9 FF FF FF E3 FF FF
34C0- FF FF FF 9F 8B 00 00 00
34C8- 00 00 00 00 00 00 00 00
34D0- 8B FC FF FF FF FF FF FF
34D8- FF FF FF FF FF FF FF FF
34E0- FF FF FF FF FF FF FF FF
34E8- FF FF FF 9F 8B 00 00 00
34F0- 00 00 00 00 00 00 00 00
34F8- 00 00 00 00 00 00 00 00
3500- 8B FC FF FF FF FF FF FF
3508- FF FF FF FF FF FF FF FF
3510- FF 94 82 D1 F8 FF FF FF
3518- FF FF FF 9F 8B 00 00 00
3520- 00 00 00 00 00 00 00 00
3528- 8B FC FF FF FF 80 A6 D5
3530- 82 DC F8 FF FC FF 8F 95
3538- AA BA C6 8F C4 AA CE FF
3540- FF FF FF 9F 8B 00 00 00
3548- 00 00 00 00 00 00 00 00
3550- 8B FC FF FF FF FF FF FF

```

```

3558- FF FF FF FF FF FF FF FF
3560- FF FF FF FF FF FF FF FF

3568- FF FF FF 9F 8B 00 00 00
3570- 00 00 00 00 00 00 00 00
3578- 00 00 00 00 00 00 00 00
3580- 8B FC FF FF FF FF FF FF
3588- FF FF FF FF FF FF FF FF
3590- FF C3 BF F7 9F FB FF FF
3598- FF FF FF 9F 8B 00 00 00
35A0- 00 00 00 00 00 00 00 00
35A8- 8B FC FF 9F E3 B0 AA C5
35B0- AA 97 FB E0 FF FF FF B3
35B8- A8 F3 FF FF A7 D0 F2 FF
35C0- FF FF FF 9F 8B 00 00 00
35C8- 00 00 00 00 00 00 00 00
35D0- 8B FC FF FF FF FF FF FF
35D8- FF FF FF FF FF FF FF FF
35E0- FF FF FF FF FF FF FF FF
35E8- FF FF FF 9F 8B 00 00 00
35F0- 00 00 00 00 00 00 00 00
35F8- 00 00 00 00 00 00 00 00
3600- 8B FC FF FF FF FF FF FF
3608- FF FF FF FF FF FF FF FF
3610- FF 89 C5 B3 C1 FF FF FF
3618- FF FF FF 9F 8B 00 00 00
3620- 00 00 00 00 00 00 00 00
3628- 8B FC FF CF FB FF FF C1
3630- AA FC FF FF FF FF FF BF
3638- B0 B0 B0 F0 FF FF FF FF
3640- FF FF FF 9F 8B 00 00 00
3648- 00 00 00 00 00 00 00 00
3650- 8B FC FF FF FF FF FF FF
3658- FF FF FF FF FF FF FF FF
3660- FF FF FF FF FF FF FF FF
3668- FF FF FF 9F 8B 00 00 00
3670- 00 00 00 00 00 00 00 00
3678- 00 00 00 00 00 00 00 00
3680- 8B FC FF F9 9F D5 AA F0
3688- FF FF FF FF FF FF FF FF
3690- FF B1 B0 E0 FC FF FF FF
3698- FF FF FF 9F 8B 00 00 00
36A0- 00 00 00 00 00 00 00 00
36A8- 8B FC FF FF C7 B1 FB BF
36B0- FE A9 D5 E2 FF FF FF FF

```

```

36B8- FF FF FF FF FF FF FF FF
36C0- FF FF FF 9F 8B 00 00 00
36C8- 00 00 00 00 00 00 00 00
36D0- A8 D5 AA D5 AA D5 AA D5
36D8- AA D5 AA D5 AA D5 AA D5
36E0- AA D5 AA D5 AA D5 AA D5
36E8- AA D5 AA D5 8A 00 00 00
36F0- 00 00 00 00 00 00 00 00
36F8- 00 00 00 00 00 00 00 00
3700- 8B FC FF FF FF E7 FB FF
3708- FB FF FF FF FF FF FF BF
3710- A0 9B B3 D4 AA E5 FF FF
3718- FF FF FF 9F 8B 00 00 00
3720- 00 00 00 00 00 00 00 00
3728- 8B FC BF AA D1 E2 FF BF
3730- C4 AA 95 FE FF FF FF FF
3738- FF FF FF FF FF FF FF FF
3740- FF FF FF 9F 8B 00 00 00
3748- 00 00 00 00 00 00 00 00
3750- 00 00 00 00 00 00 00 00
3758- 00 00 00 00 00 00 00 00
3760- 00 00 00 00 00 00 00 00
3768- 00 00 00 00 00 00 00 00
3770- 00 00 00 00 00 00 00 00
3778- 00 00 00 00 00 00 00 00
3780- 8B FC FF FF BF FE F7 B4
3788- B1 CA FF FF FF BF C0 BF
3790- 9B FC B7 B4 A0 FE FF FF
3798- FF FF FF 9F 8B 00 00 00
37A0- 00 00 00 00 00 00 00 00
37A8- 8B FC CF AA B1 E0 FF FF
37B0- FF FF FF FF FF FF FF FF
37B8- FF FF FF FF FF FF FF FF
37C0- FF FF FF 9F 8B 00 00 00
37C8- 00 00 00 00 00 00 00 00
37D0- 00 00 00 00 00 00 00 00
37D8- 00 00 00 00 00 00 00 00
37E0- 00 00 00 00 00 00 00 00
37E8- 00 00 00 00 00 00 00 00
37F0- 00 00 00 00 00 00 00 00
37F8- 00 00 00 00 00 00 00 00
3800- 8B FC FF FF FF FF FF FF
3808- FF FF FF FF FF FF FF FF
3810- FF FF FF FF FF FF FF FF

```

```

3818- FF FF FF 9F 88 00 00 00
3820- 00 00 00 00 00 00 00 00
3828- 88 FC FF FF FF FF C7 80
3830- 95 FF FF FF FF BF E6 FF
3838- DF 87 80 F8 E7 BB FB FF
3840- FF FF FF 9F 88 00 00 00
3848- 00 00 00 00 00 00 00 00
3850- 88 FC FF FF FF FF FF FF
3858- FF FF FF FF FF FF FF FF
3860- FF FF FF FF FF FF FF FF
3868- FF FF FF 9F 88 00 00 00
3870- 00 00 00 00 00 00 00 00
3878- 00 00 00 00 00 00 00 00
3880- 88 FC FF FF FF FF FF FF
3888- FF FF FF FF FF FF FF FF
3890- FF FF FF C7 F8 FF FF FF
3898- FF FF FF 9F 88 00 00 00
38A0- 00 00 00 00 00 00 00 00
38A8- 88 FC FF FF F1 C3 AA 85
38B0- 90 CA FF FF FF FF 8F 94
38B8- FF F3 FF FF FF F1 FF FF
38C0- FF FF FF 9F 88 00 00 00
38C8- 00 00 00 00 00 00 00 00
38D0- 88 FC FF FF FF FF FF FF
38D8- FF FF FF FF FF FF FF FF
38E0- FF FF FF FF FF FF FF FF
38E8- FF FF FF 9F 88 00 00 00
38F0- 00 00 00 00 00 00 00 00
38F8- 00 00 00 00 00 00 00 00
3900- 88 FC FF FF FF FF FF FF
3908- FF FF FF FF FF FF FF FF
3910- FF D1 88 94 F2 FF FF FF
3918- FF FF FF 9F 88 00 00 00
3920- 00 00 00 00 00 00 00 00
3928- 88 FC FF FF FF FF A7 D5
3930- AA 97 FE EF F9 FF 9F 95
3938- EA C9 FF 9F C5 AA CA FF
3940- FF FF FF 9F 88 00 00 00
3948- 00 00 00 00 00 00 00 00
3950- 88 FC FF FF FF FF FF FF
3958- FF FF FF FF FF FF FF FF
3960- FF FF FF FF FF FF FF FF
3968- FF FF FF 9F 88 00 00 00
3970- 00 00 00 00 00 00 00 00

```

```

3978- 00 00 00 00 00 00 00 00
3980- 88 FC FF FF FF FF FF FF
3988- FF FF FF FF FF FF FF FF
3990- FF B3 9F 8C 9F F9 FF FF
3998- FF FF FF 9F 88 00 00 00
39A0- 00 00 00 00 00 00 00 00
39A8- 88 FC FF CF E7 BD AA 95

39B0- AB 97 FB FF FF FF FF D3
39B8- AB F3 FF FF A7 D5 F2 FF
39C0- FF FF FF 9F 88 00 00 00
39C8- 00 00 00 00 00 00 00 00
39D0- 88 FC FF FF FF FF FF FF
39D8- FF FF FF FF FF FF FF FF
39E0- FF FF FF FF FF FF FF FF
39E8- FF FF FF 9F 88 00 00 00
39F0- 00 00 00 00 00 00 00 00
39F8- 00 00 00 00 00 00 00 00
3A00- 88 FC FF FF FF FF FF FF
3A08- FF FF FF FF FF FF FF FF
3A10- FF A3 95 A0 E4 FF FF FF
3A18- FF FF FF 9F 88 00 00 00
3A20- 00 00 00 00 00 00 00 00
3A28- 88 FC FF BF FB FF FF 9F
3A30- 80 FE FF FF FF FF FF FF
3A38- BF 80 F0 FF FF FF FF FF
3A40- FF FF FF 9F 88 00 00 00
3A48- 00 00 00 00 00 00 00 00
3A50- 88 FC FF FF FF FF FF FF
3A58- FF FF FF FF FF FF FF FF
3A60- FF FF FF FF FF FF FF FF
3A68- FF FF FF 9F 88 00 00 00
3A70- 00 00 00 00 00 00 00 00
3A78- 00 00 00 00 00 00 00 00
3A80- 88 FC FF E3 87 D5 AA 85
3A88- FB FF FF FF FF FF FF FF
3A90- BF 94 F3 F3 FC FF FF FF
3A98- FF FF FF 9F 88 00 00 00
3AA0- 00 00 00 00 00 00 00 00
3AA8- 88 FC FF FF BF AB FC 60
3AB0- FF AB D5 CA FF FF FF FF
3AB8- FF FF FF FF FF FF FF FF
3AC0- FF FF FF 9F 88 00 00 00
3AC8- 00 00 00 00 00 00 00 00
3AD0- 80 80 80 80 80 80 80 80

```

3AD8-	80	80	80	80	80	80	80	80
3AE0-	80	80	80	80	80	80	80	80
3AEB-	80	80	80	80	80	00	00	00
3AF0-	00	00	00	00	00	00	00	00
3AF8-	00	00	00	00	00	00	00	00
3B00-	88	FC	FF	FF	FF	F3	9F	BE
3B08-	F3	FF	FF	FF	FF	FF	FF	9F
3B10-	A6	E0	86	D5	AA	E5	FF	FF
3B18-	FF	FF	FF	9F	88	00	00	00
3B20-	00	00	00	00	00	00	00	00
3B28-	88	FC	BF	AA	85	F8	FF	FF
3B30-	D4	AA	95	FF	FF	FF	FF	FF
3B38-	FF	FF	FF	FF	FF	FF	FF	FF
3B40-	FF	FF	FF	9F	88	00	00	00
3B48-	00	00	00	00	00	00	00	00
3B50-	00	00	00	00	00	00	00	00
3B58-	00	00	00	00	00	00	00	00
3B60-	00	00	00	00	00	00	00	00
3B68-	00	00	00	00	00	00	00	00
3B70-	00	00	00	00	00	00	00	00
3B78-	00	00	00	00	00	00	00	00
3B80-	88	FC	FF	FF	BF	F0	EF	A0
3B88-	95	E2	FF	FF	FF	87	FF	8F
3B90-	CE	FF	BF	F0	8F	FE	FF	FF
3B98-	FF	FF	FF	9F	88	00	00	00
3BA0-	00	00	00	00	00	00	00	00
3BA8-	88	FC	9F	AA	D5	8A	80	FC
3BB0-	FF	FF	FF	FF	FF	FF	FF	FF
3BB8-	FF	FF	FF	FF	FF	FF	FF	FF
3BC0-	FF	FF	FF	9F	88	00	00	00
3BC8-	00	00	00	00	00	00	00	00
3BD0-	00	00	00	00	00	00	00	00
3BD8-	00	00	00	00	00	00	00	00
3BE0-	00	00	00	00	00	00	00	00
3BE8-	00	00	00	00	00	00	00	00
3BF0-	00	00	00	00	00	00	00	00
3BF8-	00	00	00	00	00	00	00	00
3C00-	88	FC	FF	FF	FF	FF	FF	FF
3C08-	FF	FF	FF	FF	FF	FF	FF	FF
3C10-	FF	FF	FF	FF	FF	FF	FF	FF
3C18-	FF	FF	FF	9F	88	00	00	00
3C20-	00	00	00	00	00	00	00	00
3C28-	88	FC	FF	FF	FF	FF	8F	AA
3C30-	95	FF	FF	FF	FF	BF	F6	FF


```

3C3B- 9F 80 80 E0 F1 9F F8 FF
3C40- FF FF FF 9F 88 00 00 00
3C48- 00 00 00 00 00 00 00 00
3C50- 88 FC FF FF FF FF FF FF
3C58- FF FF FF FF FF FF FF FF
3C60- FF FF FF FF FF FF FF FF
3C68- FF FF FF 9F 88 00 00 00
3C70- 00 00 00 00 00 00 00 00
3C78- 00 00 00 00 00 00 00 00
3C80- 88 FC FF FF FF FF FF FF
3C88- FF FF FF FF FF FF FF FF
3C90- FF F1 FF D3 F2 FF FF FF
3C98- FF FF FF 9F 88 00 00 00
3CA0- 00 00 00 00 00 00 00 00
3CAB- 88 FC FF FF 8C DC AA A1
3CB0- D1 C8 FF FF FF FF A7 94
3CB8- FE C1 FF FF BF 80 FE FF
3CC0- FF FF FF 9F 88 00 00 00
3CC8- 00 00 00 00 00 00 00 00
3CD0- 88 FC FF FF FF FF FF FF
3CD8- FF FF FF FF FF FF FF FF
3CE0- FF FF FF FF FF FF FF FF
3CE8- FF FF FF 9F 88 00 00 00
3CF0- 00 00 00 00 00 00 00 00
3CF8- 00 00 00 00 00 00 00 00
3D00- 88 FC FF FF FF FF FF FF
3D08- FF FF FF FF FF FF FF FF
3D10- FF D1 88 D5 E2 FF FF FF
3D18- FF FF FF 9F 88 00 00 00
3D20- 00 00 00 00 00 00 00 00
3D28- 88 FC FF FF FF FF A7 D5
3D30- AA 97 FF DF F9 FF 9F D5
3D38- E8 C9 FF 9F D5 A8 C2 FF
3D40- FF FF FF 9F 88 00 00 00
3D48- 00 00 00 00 00 00 00 00
3D50- 88 FC FF FF FF FF FF FF
3D58- FF FF FF FF FF FF FF FF
3D60- FF FF FF FF FF FF FF FF
3D68- FF FF FF 9F 88 00 00 00
3D70- 00 00 00 00 00 00 00 00
3D78- 00 00 00 00 00 00 00 00
3D80- 88 FC FF FF FF FF FF FF
3D88- FF FF FF FF FF FF FF FF
3D90- FF 81 DE C3 DD F9 FF FF

```

```

3D98- FF FF FF 9F 8B 00 00 00
3DA0- 00 00 00 00 00 00 00 00
3DAB- 8B FC FF CF 9F FF AB D5
3DB0- 82 DD FC FF FF FF FF D3
3DB8- E2 F9 FF FF 83 D5 F8 FF
3DC0- FF FF FF 9F 8B 00 00 00
3DCB- 00 00 00 00 00 00 00 00
3DD0- 8B FC FF FF FF FF FF FF
3DD8- FF FF FF FF FF FF FF FF
3DE0- FF FF FF FF FF FF FF FF
3DEB- FF FF FF 9F 8B 00 00 00
3DF0- 00 00 00 00 00 00 00 00
3DFB- 00 00 00 00 00 00 00 00
3E00- 8B FC FF FF FF FF FF FF
3E0B- FF FF FF FF FF FF FF FF
3E10- FF 80 D4 AA F0 FF FF FF
3E1B- FF FF FF 9F 8B 00 00 00
3E20- 00 00 00 00 00 00 00 00
3E2B- 8B FC FF DF F9 FF FF FF
3E30- 9F FF FF FF FF FF FF FF
3E3B- FF FF FF FF FF FF FF FF
3E40- FF FF FF 9F 8B 00 00 00
3E4B- 00 00 00 00 00 00 00 00
3E50- 8B FC FF FF FF FF FF FF
3E5B- FF FF FF FF FF FF FF FF
3E60- FF FF FF FF FF FF FF FF
3E6B- FF FF FF 9F 8B 00 00 00
3E70- 00 00 00 00 00 00 00 00
3E7B- 00 00 00 00 00 00 00 00
3E80- 8B FC FF 83 80 D5 AA D5
3E8B- E2 FF FF FF FF FF FF FF
3E90- 9F C5 F9 F8 E0 FF FF FF
3E9B- FF FF FF 9F 8B 00 00 00
3EA0- 00 00 00 00 00 00 00 00
3EAB- 8B FC FF 87 BC AB 80 AB
3EB0- BC AA D5 CA FF FF FF FF
3EBB- FF FF FF FF FF FF FF FF
3EC0- FF FF FF 9F 8B 00 00 00
3ECB- 00 00 00 00 00 00 00 00
3ED0- 80 80 80 80 80 80 80 80
3EDB- 80 80 80 80 80 80 80 80
3EE0- 80 80 80 80 80 80 80 80
3EEB- 80 80 80 80 80 00 00 00
3EF0- 00 00 00 00 00 00 00 00

```

```

3EF8- 00 00 00 00 00 00 00 00
3F00- 88 FC FF FF FF F3 EF BD
3F08- F3 FF FF FF FF FF FF CF
3F10- A7 E0 8E D5 AA E4 FF FF
3F18- FF FF FF 9F 88 00 00 00
3F20- 00 00 00 00 00 00 00 00
3F28- 88 FC BF AA 95 FF FF FF
3F30- D4 AA C5 FF FF FF FF FF
3F38- FF FF FF FF FF FF FF FF
3F40- FF FF FF 9F 88 00 00 00
3F48- 00 00 00 00 00 00 00 00
3F50- 00 00 00 00 00 00 00 00
3F58- 00 00 00 00 00 00 00 00
3F60- 00 00 00 00 00 00 00 00
3F68- 00 00 00 00 00 00 00 00
3F70- 00 00 00 00 00 00 00 00
3F78- 00 00 00 00 00 00 00 00
3F80- 88 FC FF FF BF F3 EF A0
3F88- C5 F8 FF FF FF F3 FF E7
3F90- E7 FD FF E3 9F FE FF FF
3F98- FF FF FF 9F 88 00 00 00
3FA0- 00 00 00 00 00 00 00 00
3FAB- 88 FC FF A0 D5 B0 B0 B0
3FB0- B0 FF FF FF FF FF FF FF
3FB8- FF FF FF FF FF FF FF FF
3FC0- FF FF FF 9F 88 00 00 00
3FC8- 00 00 00 00 00 00 00 00
3FD0- 00 00 00 00 00 00 00 00
3FD8- 00 00 00 00 00 00 00 00
3FE0- 00 00 00 00 00 00 00 00
3FE8- 00 00 00 00 00 00 00 00
3FF0- 00 00 00 00 00 00 00 00
3FF8- 00 00 00 00 00 00 00 00

```

3. C3

```

2000- A8 D5 AA D5 AA D5 AA D5
2008- AA D5 AA D5 AA D5 AA D5
2010- AA D5 AA D5 AA D5 AA D5
2018- AA D5 AA D5 8A 00 00 00
2020- 00 00 00 00 00 00 00 00
2028- 88 FC FF FF FF E7 DC A9
2030- 95 FE FF FF FF F8 FF F3
2038- B9 FE FF 8F 9F F3 FF FF
2040- FF FF FF 9F 88 00 00 00
2048- 00 00 00 00 00 00 00 00

```

```

2050- 88 FC FF 8F 80 80 80 80
2058- 80 E0 FF FF FF FF FF FF
2060- FF FF FF FF FF FF FF FF
2068- FF FF FF 9F 88 00 00 00
2070- 00 00 00 00 00 00 00 00
2078- 00 00 00 00 00 00 00 00
2080- 88 FC FF FF FF FF FF FF
2088- FF FF FF FF FF FF FF FF
2090- FF FF FF FF FF FF FF FF
2098- FF FF FF 9F 88 00 00 00
20A0- 00 00 00 00 00 00 00 00
20A8- 88 FC FF FF FF FF 9F AB
20B0- C5 FF FF FF FF FF F0 FF
20B8- BF 80 80 80 FC EF F9 FF
20C0- FF FF FF 9F 88 00 00 00
20C8- 00 00 00 00 00 00 00 00
20D0- 88 FC FF FF FF FF FF FF
20D8- FF FF FF FF FF FF FF FF
20E0- FF FF FF FF FF FF FF FF
20E8- FF FF FF 9F 88 00 00 00
20F0- 00 00 00 00 00 00 00 00
20F8- 00 00 00 00 00 00 00 00
2100- 88 FC FF FF FF FF FF FF
2108- FF FF FF FF FF FF FF FF
2110- BF C4 FF D1 F2 FF FF FF
2118- FF FF FF 9F 88 00 00 00
2120- 00 00 00 00 00 00 00 00
2128- 88 FC FF FF FC D7 EA A9
2130- C5 C8 FF E1 FF FF A7 D1
2138- F8 FC FF FF FF F9 F8 FF
2140- FF FF FF 9F 88 00 00 00
2148- 00 00 00 00 00 00 00 00
2150- 88 FC FF FF FF FF FF FF
2158- FF FF FF FF FF FF FF FF
2160- FF FF FF FF FF FF FF FF
2168- FF FF FF 9F 88 00 00 00
2170- 00 00 00 00 00 00 00 00
2178- 00 00 00 00 00 00 00 00
2180- 88 FC FF FF FF FF FF FF
2188- FF FF FF FF FF FF FF FF
2190- FF C4 88 D5 CA FF FF FF
2198- FF FF FF 9F 88 00 00 00
21A0- 00 00 00 00 00 00 00 00
21A8- 88 FC FF FF FF FF A7 D5

```

21B0- AA 97 FF BF FC FF 9F D5
 21B8- AB C3 FF BF D4 AB E2 FF
 21C0- FF FF FF 9F 88 00 00 00
 21C8- 00 00 00 00 00 00 00 00
 21D0- 88 FC FF FF FF FF FF FF
 21D8- FF FF FF FF FF FF FF FF
 21E0- FF FF FF FF FF FF FF FF
 21E8- FF FF FF 9F 88 00 00 00
 21F0- 00 00 00 00 00 00 00 00
 21F8- 00 00 00 00 00 00 00 00
 2200- 88 FC FF FF FF FF FF FF
 2208- FF FF FF FF FF FF FF FF
 2210- BF E3 EE 9F FE FC FF FF
 2218- FF FF FF 9F 88 00 00 00
 2220- 00 00 00 00 00 00 00 00
 2228- 88 FC FF CF FF FF A9 D5
 2230- AA 80 FE FF FF FF FF C7
 2238- A2 FC FF FF A9 D4 FC FF
 2240- FF FF FF 9F 88 00 00 00
 2248- 00 00 00 00 00 00 00 00
 2250- 88 FC FF FF FF FF FF FF
 2258- FF FF FF FF FF FF FF FF
 2260- FF FF FF FF FF FF FF FF
 2268- FF FF FF 9F 88 00 00 00
 2270- 00 00 00 00 00 00 00 00
 2278- 00 00 00 00 00 00 00 00
 2280- 88 FC FF FF FF FF FF FF
 2288- FF FF FF FF FF FF FF FF
 2290- BF AA D1 8A F9 FF FF FF
 2298- FF FF FF 9F 88 00 00 00
 22A0- 00 00 00 00 00 00 00 00
 22A8- 88 FC FF 8F F8 FF FF FF
 22B0- 8F FF FF FF FF FF FF FF
 22B8- FF FF FF FF FF FF FF FF
 22C0- FF FF FF 9F 88 00 00 00
 22C8- 00 00 00 00 00 00 00 00
 22D0- 88 FC FF FF FF FF FF FF
 22D8- FF FF FF FF FF FF FF FF
 22E0- FF FF FF FF FF FF FF FF
 22E8- FF FF FF 9F 88 00 00 00
 22F0- 00 00 00 00 00 00 00 00
 22F8- 00 00 00 00 00 00 00 00
 2300- 88 FC DF 87 80 D5 82 D4
 2308- 8A FF FF FF FF FF FF FF

```

2310- 8F E5 81 9E 8A FF FF FF
2318- FF FF FF 9F 88 00 00 00
2320- 00 00 00 00 00 00 00 00
2328- 88 FC FF A3 F1 A9 80 AA
2330- B9 AA D5 CA FF FF FF FF
2338- FF FF FF FF FF FF FF FF
2340- FF FF FF 9F 88 00 00 00
2348- 00 00 00 00 00 00 00 00
2350- 00 00 00 00 00 00 00 00
2358- 00 00 00 00 00 00 00 00
2360- 00 00 00 00 00 00 00 00
2368- 00 00 00 00 00 00 00 00
2370- 00 00 00 00 00 00 00 00
2378- 00 00 00 00 00 00 00 00
2380- 88 FC FF FF DF F9 EF 8B
2388- F3 FF FF FF FF FF FF E7
2390- 8F 98 87 C5 AA E4 FF FF
2398- FF FF FF 9F 88 00 00 00
23A0- 00 00 00 00 00 00 00 00
23A8- 88 FC 9F AA 95 FF FF FF
23B0- D1 AA F1 FF FF FF FF FF
23B8- FF FF FF FF FF FF FF FF
23C0- FF FF FF 9F 88 00 00 00
23C8- 00 00 00 00 00 00 00 00
23D0- 00 00 00 00 00 00 00 00
23D8- 00 00 00 00 00 00 00 00
23E0- 00 00 00 00 00 00 00 00
23E8- 00 00 00 00 00 00 00 00
23F0- 00 00 00 00 00 00 00 00
23F8- 00 00 00 00 00 00 00 00
2400- 88 80 80 80 80 80 80 80
2408- 80 80 80 80 80 80 80 80
2410- 80 80 80 80 80 80 80 80
2418- 80 80 80 80 88 00 00 00
2420- 00 00 00 00 00 00 00 00
2428- 88 FC FF FF FF 8F B1 A8
2430- 95 FF FF FF 9F 9E FC F9
2438- CC F7 DF BF 9E C3 FF FF
2440- FF FF FF 9F 88 00 00 00
2448- 00 00 00 00 00 00 00 00
2450- 88 FC FF FF FF 8F 80 80
2458- F8 FF FF FF FF FF FF FF
2460- FF FF FF FF FF FF FF FF
2468- FF FF FF 9F 88 00 00 00

```

```

2470- 00 00 00 00 00 00 00 00
2478- 00 00 00 00 00 00 00 00
2480- 88 FC FF FF FF FF FF FF
2488- FF FF FF FF FF FF FF FF
2490- FF FF FF FF FF FF FF FF
2498- FF FF FF 9F 88 00 00 00
24A0- 00 00 00 00 00 00 00 00
24A8- 88 FC FF FF FF FF 8F A3
24B0- E5 FF FF FF FF FF FF FF
24B8- FF 80 80 FB FF FF FC FF
24C0- FF FF FF 9F 88 00 00 00
24C8- 00 00 00 00 00 00 00 00
24D0- 88 FC FF FF FF FF FF FF
24D8- FF FF FF FF FF FF FF FF
24E0- FF FF FF FF FF FF FF FF
24E8- FF FF FF 9F 88 00 00 00
24F0- 00 00 00 00 00 00 00 00
24F8- 00 00 00 00 00 00 00 00
2500- 88 FC FF FF FF FF FF FF
2508- FF FF FF FF FF FF FF FF
2510- 9F 95 FE D4 F2 FF FF FF
2518- FF FF FF 9F 88 00 00 00
2520- 00 00 00 00 00 00 00 00
2528- 88 FC FF FF BC D5 FA A9
2530- C5 CB BF 8C FF FF A7 D1
2538- E2 C0 F3 FF DF C1 F3 FF
2540- FF FF FF 9F 88 00 00 00
2548- 00 00 00 00 00 00 00 00
2550- 88 FC FF FF FF FF FF FF
2558- FF FF FF FF FF FF FF FF
2560- FF FF FF FF FF FF FF FF
2568- FF FF FF 9F 88 00 00 00
2570- 00 00 00 00 00 00 00 00
2578- 00 00 00 00 00 00 00 00
2580- 88 FC FF FF FF FF FF FF
2588- FF FF FF FF FF FF FF FF
2590- FF D4 AB D0 CA FF FF FF
2598- FF FF FF 9F 88 00 00 00
25A0- 00 00 00 00 00 00 00 00
25A8- 88 FC FF FF FF FF A3 D5
25B0- EA 97 FF FF FC FF BF D4
25B8- AB E7 FF FF 94 AA F2 FF
25C0- FF FF FF 9F 88 00 00 00
25C8- 00 00 00 00 00 00 00 00

```

```

25D0- 8B FC FF FF FF FF FF FF
25D8- FF FF FF FF FF FF FF FF
25E0- FF FF FF FF FF FF FF FF
25E8- FF FF FF 9F 8B 00 00 00
25F0- 00 00 00 00 00 00 00 00
25F8- 00 00 00 00 00 00 00 00
2600- 8B FC FF FF FF FF FF FF
2608- FF FF FF FF FF FF FF FF
2610- FF B0 EE C3 9F FE FF FF
2618- FF FF FF 9F 8B 00 00 00
2620- 00 00 00 00 00 00 00 00
2628- 8B FC FF CF FF FF A3 D5
2630- AA E5 FF FF FF FF FF 9F
2638- 82 FF FF 87 AB D5 FC FF
2640- FF FF FF 9F 8B 00 00 00
2648- 00 00 00 00 00 00 00 00
2650- 8B FC FF FF FF FF FF FF
2658- FF FF FF FF FF FF FF FF
2660- FF FF FF FF FF FF FF FF
2668- FF FF FF 9F 8B 00 00 00
2670- 00 00 00 00 00 00 00 00
2678- 00 00 00 00 00 00 00 00
2680- 8B FC FF FF FF 87 FE FF
2688- FF FF FF FF FF FF FF FF
2690- FF B0 D5 8A FC FF FF FF
2698- FF FF FF 9F 8B 00 00 00
26A0- 00 00 00 00 00 00 00 00
26A8- 8B FC FF EF F8 FF FF FF
26B0- C7 FF 81 FE FF FF FF FF
26B8- FF FF FF FF FF FF FF FF
26C0- FF FF FF 9F 8B 00 00 00
26C8- 00 00 00 00 00 00 00 00
26D0- 8B 80 80 80 80 80 80 80
26D8- 80 80 80 80 80 80 80 80
26E0- 80 80 80 80 80 80 80 80
26E8- 80 80 80 80 8B 00 00 00
26F0- 00 00 00 00 00 00 00 00
26F8- 00 00 00 00 00 00 00 00
2700- 8B FC BF 80 80 D4 80 D0
2708- AA FE FF FF FF FF FF FF
2710- A7 F1 FC C7 AA FE FF FF
2718- FF FF FF 9F 8B 00 00 00
2720- 00 00 00 00 00 00 00 00
2728- 8B FC FF A9 B5 AB FE A0

```



```

2730- B1 AA D5 CA FF FF FF FF
2738- FF FF FF FF FF FF FF FF
2740- FF FF FF 9F 88 00 00 00
2748- 00 00 00 00 00 00 00 00
2750- 00 00 00 00 00 00 00 00
2758- 00 00 00 00 00 00 00 00
2760- 00 00 00 00 00 00 00 00
2768- 00 00 00 00 00 00 00 00
2770- 00 00 00 00 00 00 00 00
2778- 00 00 00 00 00 00 00 00
2780- 88 FC FF FF 9F F8 F7 FB
2788- F2 FF FF FF FF FF FF F3
2790- 9F F8 83 94 8A F1 FF FF
2798- FF FF FF 9F 88 00 00 00
27A0- 00 00 00 00 00 00 00 00
27AB- 88 FC CF AA 95 FF FF FF
27B0- D3 AA FC FF FF FF FF FF
27B8- FF FF FF FF FF FF FF FF
27C0- FF FF FF 9F 88 00 00 00
27C8- 00 00 00 00 00 00 00 00
27D0- 00 00 00 00 00 00 00 00
27D8- 00 00 00 00 00 00 00 00
27E0- 00 00 00 00 00 00 00 00
27EB- 00 00 00 00 00 00 00 00
27F0- 00 00 00 00 00 00 00 00
27F8- 00 00 00 00 00 00 00 00
2800- 88 80 80 80 80 80 80 80
2808- 80 80 80 80 80 80 80 80
2810- 80 80 80 80 80 80 80 80
2818- 80 80 80 80 88 00 00 00
2820- 00 00 00 00 00 00 00 00
2828- 88 FC FF FF FF 9F B5 AA
2830- 85 FF FF FF CF C3 F9 F9
2838- F1 FB EF FF 9D 93 FF FF
2840- FF FF FF 9F 88 00 00 00
2848- 00 00 00 00 00 00 00 00
2850- 88 FC FF FF FF FF FF FF
2858- FF FF FF FF FF FF FF FF
2860- FF FF FF FF FF FF FF FF
2868- FF FF FF 9F 88 00 00 00
2870- 00 00 00 00 00 00 00 00
2878- 00 00 00 00 00 00 00 00
2880- 88 FC FF FF FF FF FF FF
2888- FF FF FF FF FF FF FF FF

```

```

2890- FF FF FF FF FF FF FF FF
2898- FF FF FF 9F 88 00 00 00
28A0- 00 00 00 00 00 00 00 00
28A8- 88 FC FF FF FF FF A3 8E
28B0- E0 F8 FF FF FF FF FF FF
28B8- FF 8C C0 FF FF 9F FE FF
28C0- FF FF FF 9F 88 00 00 00
28C8- 00 00 00 00 00 00 00 00
28D0- 88 FC FF FF FF FF FF FF
28D8- FF FF FF FF FF FF FF FF
28E0- FF FF FF FF FF FF FF FF
28E8- FF FF FF 9F 88 00 00 00
28F0- 00 00 00 00 00 00 00 00
28F8- 00 00 00 00 00 00 00 00
2900- 88 FC FF FF FF FF FF FF
2908- FF FF FF FF FF FF FF FF
2910- 9F D5 FC D4 F2 FF FF FF
2918- FF FF FF 9F 88 00 00 00
2920- 00 00 00 00 00 00 00 00
2928- 88 FC FF FF F9 D5 BF A0
2930- 95 E0 9F BF FE FF A7 D1
2938- 8A C8 BF DF BD 8B E7 FF
2940- FF FF FF 9F 88 00 00 00
2948- 00 00 00 00 00 00 00 00
2950- 88 FC FF FF FF FF FF FF
2958- FF FF FF FF FF FF FF FF
2960- FF FF FF FF FF FF FF FF
2968- FF FF FF 9F 88 00 00 00
2970- 00 00 00 00 00 00 00 00
2978- 00 00 00 00 00 00 00 00
2980- 88 FC FF FF FF FF FF FF
2988- FF FF FF FF FF FF FF FF
2990- FF 84 88 C7 E2 FF FF FF
2998- FF FF FF 9F 88 00 00 00
29A0- 00 00 00 00 00 00 00 00
29A8- 88 FC FF FF F3 FF AB D5
29B0- EA 97 FF F7 FC FF FF D4
29B8- A2 E7 FF FF C1 CA F2 FF
29C0- FF FF FF 9F 88 00 00 00
29C8- 00 00 00 00 00 00 00 00
29D0- 88 FC FF FF FF FF FF FF
29D8- FF FF FF FF FF FF FF FF
29E0- FF FF FF FF FF FF FF FF
29E8- FF FF FF 9F 88 00 00 00

```

```

29F0- 00 00 00 00 00 00 00 00
29F8- 00 00 00 00 00 00 00 00
2A00- 8B FC FF FF FF FF FF FF
2A08- FF FF FF FF FF FF FF FF
2A10- FF D3 EE D9 FF FC FF FF
2A18- FF FF FF 9F 8B 00 00 00
2A20- 00 00 00 00 00 00 00 00
2A28- 8B FC FF 9B FF FF A7 D5
2A30- AA E5 FF FF FF FF FF BF
2A38- E0 BF 80 80 A0 95 FE FF
2A40- FF FF FF 9F 8B 00 00 00
2A48- 00 00 00 00 00 00 00 00
2A50- 8B FC FF FF FF FF FF FF
2A58- FF FF FF FF FF FF FF FF
2A60- FF FF FF FF FF FF FF FF
2A68- FF FF FF 9F 8B 00 00 00
2A70- 00 00 00 00 00 00 00 00
2A78- 00 00 00 00 00 00 00 00
2A80- 8B FC FF FF FF D1 FB FF
2A88- FF FF FF FF FF FF FF FF
2A90- FF A9 D0 A2 FE FF FF FF
2A98- FF FF FF 9F 8B 00 00 00
2AA0- 00 00 00 00 00 00 00 00
2AAB- 8B FC FF FF F1 FF FF FF
2AB0- E3 BF D4 F8 FF FF FF FF
2AB8- FF FF FF FF FF FF FF FF
2AC0- FF FF FF 9F 8B 00 00 00
2AC8- 00 00 00 00 00 00 00 00

2AD0- 8B 80 80 80 80 80 80 80
2ADB- 80 80 80 80 80 80 80 80
2AE0- 80 80 80 80 80 80 80 80
2AE8- 80 80 80 80 8B 00 00 00
2AF0- 00 00 00 00 00 00 00 00
2AF8- 00 00 00 00 00 00 00 00
2B00- 8B FC FF 80 E0 94 80 C0
2B08- AA FE FF FF FF FF FF FF
2B10- A7 B1 FC D3 AA FC FF FF
2B18- FF FF FF 9F 8B 00 00 00
2B20- 00 00 00 00 00 00 00 00
2B28- 8B FC FF A9 95 AA FE A7
2B30- 85 AA D5 E2 FF FF FF FF
2B38- FF FF FF FF FF FF FF FF
2B40- FF FF FF 9F 8B 00 00 00
2B48- 00 00 00 00 00 00 00 00

```

```

2B50- 00 00 00 00 00 00 00 00
2B58- 00 00 00 00 00 00 00 00
2B60- 00 00 00 00 00 00 00 00
2B68- 00 00 00 00 00 00 00 00
2B70- 00 00 00 00 00 00 00 00
2B78- 00 00 00 00 00 00 00 00
2B80- 88 FC FF FF BF FF F7 F7
2B88- F0 FF FF FF FF FF FF F9
2B90- 9F F0 81 84 B0 F9 FF FF
2B98- FF FF FF 9F 88 00 00 00
2BA0- 00 00 00 00 00 00 00 00
2BA8- 88 FC CF AA 95 FF FF FF
2BB0- D3 8A FF FF FF FF FF FF
2BB8- FF FF FF FF FF FF FF FF
2BC0- FF FF FF 9F 88 00 00 00
2BC8- 00 00 00 00 00 00 00 00
2BD0- 00 00 00 00 00 00 00 00
2BD8- 00 00 00 00 00 00 00 00
2BE0- 00 00 00 00 00 00 00 00
2BE8- 00 00 00 00 00 00 00 00
2BF0- 00 00 00 00 00 00 00 00
2BF8- 00 00 00 00 00 00 00 00
2C00- 88 80 80 80 80 80 80 80
2C08- 80 80 80 80 80 80 80 80
2C10- 80 80 80 80 80 80 80 80
2C18- 80 80 80 80 88 00 00 00
2C20- 00 00 00 00 00 00 00 00
2C28- 88 FC FF FF FF BF D0 AA
2C30- 85 FF FF FF 9F F8 F9 FC
2C38- BC F8 C3 FF 9F 88 FE FF
2C40- FF FF FF 9F 88 00 00 00
2C48- 00 00 00 00 00 00 00 00
2C50- 88 FC FF FF FF FF FF FF
2C58- FF FF FF FF FF FF FF FF
2C60- FF FF FF FF FF FF FF FF
2C68- FF FF FF 9F 88 00 00 00
2C70- 00 00 00 00 00 00 00 00
2C78- 00 00 00 00 00 00 00 00
2C80- 88 FC FF FF FF FF FF FF
2C88- FF FF FF FF FF FF FF FF
2C90- FF FF FF FF FF FF FF FF
2C98- FF FF FF 9F 88 00 00 00
2CA0- 00 00 00 00 00 00 00 00
2CAB- 88 FC FF FF FF FF A9 FC

```

```

2CB0- 88 E2 FF FF FF FF FF FF
2CB8- FF FC FF FF FF B7 FE FF
2CC0- FF FF FF 9F 88 00 00 00
2CC8- 00 00 00 00 00 00 00 00
2CD0- 88 FC FF FF FF FF FF FF
2CD8- FF FF FF FF FF FF FF FF
2CE0- FF FF FF FF FF FF FF FF
2CE8- FF FF FF 9F 88 00 00 00
2CF0- 00 00 00 00 00 00 00 00
2CF8- 00 00 00 00 00 00 00 00
2D00- 88 FC FF FF FF FF FF FF
2D08- FF FF FF FF FF FF FF FF
2D10- 9F D5 88 D4 F2 FF FF FF
2D18- FF FF FF 9F 88 00 00 00
2D20- 00 00 00 00 00 00 00 00
2D28- 88 FC FF FF E3 FF 8F 85
2D30- 95 F1 C7 E7 FC FF A7 C5
2D38- 8A 8A 9B E0 99 AA CE FF
2D40- FF FF FF 9F 88 00 00 00
2D48- 00 00 00 00 00 00 00 00
2D50- 88 FC FF FF FF FF FF FF
2D58- FF FF FF FF FF FF FF FF
2D60- FF FF FF FF FF FF FF FF
2D68- FF FF FF 9F 88 00 00 00
2D70- 00 00 00 00 00 00 00 00
2D78- 00 00 00 00 00 00 00 00
2D80- 88 FC FF FF FF FF FF FF
2D88- FF FF FF FF FF FF FF FF
2D90- FF F1 C0 9F E0 FF FF FF
2D98- FF FF FF 9F 88 00 00 00
2DA0- 00 00 00 00 00 00 00 00
2DAB- 88 FC FF FF F9 BE AA D1
2DB0- EA 97 FC 88 FE FF FF D1
2DB8- A2 E7 FF FF C7 CA F2 FF
2DC0- FF FF FF 9F 88 00 00 00
2DC8- 00 00 00 00 00 00 00 00
2DD0- 88 FC FF FF FF FF FF FF
2DD8- FF FF FF FF FF FF FF FF
2DE0- FF FF FF FF FF FF FF FF
2DE8- FF FF FF 9F 88 00 00 00
2DF0- 00 00 00 00 00 00 00 00
2DF8- 00 00 00 00 00 00 00 00
2E00- 88 FC FF FF FF FF FF FF
2E08- FF FF FF FF FF FF FF FF

```

```

2E10- FF 93 EE D1 9F FE FF FF
2E18- FF FF FF 9F 8B 00 00 00
2E20- 00 00 00 00 00 00 00 00
2E28- 8B FC FF 83 FE FF 8F D5
2E30- AA E5 FF FF FF FF FF FF
2E38- FF FF B1 80 80 C0 FF FF
2E40- FF FF FF 9F 8B 00 00 00
2E48- 00 00 00 00 00 00 00 00
2E50- 8B FC FF FF FF FF FF FF
2E58- FF FF FF FF FF FF FF FF
2E60- FF FF FF FF FF FF FF FF
2E68- FF FF FF 9F 8B 00 00 00
2E70- 00 00 00 00 00 00 00 00
2E78- 00 00 00 00 00 00 00 00
2E80- 8B FC FF FF FF D4 E2 FF
2E88- FF FF FF FF FF FF FF FF
2E90- FF 83 85 88 FF FF FF FF
2E98- FF FF FF 9F 8B 00 00 00
2EA0- 00 00 00 00 00 00 00 00
2EA8- 8B FC FF FF F3 FF FF FF
2EB0- F1 A3 D5 F2 FF FF FF FF
2EB8- FF FF FF FF FF FF FF FF
2EC0- FF FF FF 9F 8B 00 00 00
2EC8- 00 00 00 00 00 00 00 00
2ED0- 8B 80 80 80 80 80 80 80
2ED8- 80 80 80 80 80 80 80 80
2EE0- 80 80 80 80 80 80 80 80
2EE8- 80 80 80 80 8B 00 00 00
2EF0- 00 00 00 00 00 00 00 00
2EF8- 00 00 00 00 00 00 00 00
2F00- 8B FC FF 83 FC 91 F6 8C
2F08- 8A FF FF FF FF FF FF FF
2F10- A7 D9 F9 D1 AA F1 FF FF
2F18- FF FF FF 9F 8B 00 00 00
2F20- 00 00 00 00 00 00 00 00
2F28- 8B FC FF A8 D5 8A FF 8F
2F30- C5 AA D5 F2 FF FF FF FF
2F38- FF FF FF FF FF FF FF FF
2F40- FF FF FF 9F 8B 00 00 00
2F48- 00 00 00 00 00 00 00 00
2F50- 00 00 00 00 00 00 00 00
2F58- 00 00 00 00 00 00 00 00
2F60- 00 00 00 00 00 00 00 00
2F68- 00 00 00 00 00 00 00 00

```

```

2F70~ 00 00 00 00 00 00 00 00
2F78~ 00 00 00 00 00 00 00 00
2F80~ 88 FC FF FF FF FC F7 F1
2F88~ F0 E3 FF FF FF FF FF FC
2F90~ 8F F0 80 D0 8A FC FF FF
2F98~ FF FF FF 9F 88 00 00 00
2FA0~ 00 00 00 00 00 00 00 00
2FAB~ 88 FC CF AA 95 FE FF FF
2F80~ C7 E2 FF FF FF FF FF FF
2FB8~ FF FF FF FF FF FF FF FF
2FC0~ FF FF FF 9F 88 00 00 00
2FC8~ 00 00 00 00 00 00 00 00
2FD0~ 00 00 00 00 00 00 00 00
2FDB~ 00 00 00 00 00 00 00 00
2FE0~ 00 00 00 00 00 00 00 00
2FEB~ 00 00 00 00 00 00 00 00
2FF0~ 00 00 00 00 00 00 00 00
2FF8~ 00 00 00 00 00 00 00 00
3000~ 88 80 80 80 80 80 80 80
3008~ 80 80 80 80 80 80 80 80
3010~ 80 80 80 80 80 80 80 80
3018~ 80 80 80 80 88 00 00 00
3020~ 00 00 00 00 00 00 00 00
3028~ 88 FC FF FF FF FF C4 AA
3030~ 91 FF FF FF FF FF BC FE
3038~ B1 BC 80 FF 8F BC FE FF
3040~ FF FF FF 9F 88 00 00 00
3048~ 00 00 00 00 00 00 00 00
3050~ 88 FC FF FF FF FF FF FF
3058~ FF FF FF FF FF FF FF FF
3060~ FF FF FF FF FF FF FF FF
3068~ FF FF FF 9F 88 00 00 00
3070~ 00 00 00 00 00 00 00 00
3078~ 00 00 00 00 00 00 00 00
3080~ 88 FC FF FF FF FF FF FF
3088~ FF FF FF FF FF FF FF FF
3090~ FF FF FF FF FF FF FF FF
3098~ FF FF FF 9F 88 00 00 00
30A0~ 00 00 00 00 00 00 00 00
30AB~ 88 FC FF FF FF FF AB F9
30B0~ C3 CA FF FF FF FF BF F0
30BB~ FF F9 FF FF FF 87 FC FF
30C0~ FF FF FF 9F 88 00 00 00
30CB~ 00 00 00 00 00 00 00 00

```

```

30D0- 88 FC FF FF FF FF FF FF
30DB- FF FF FF FF FF FF FF FF
30E0- FF FF FF FF FF FF FF FF
30EB- FF FF FF 9F 88 00 00 00
30F0- 00 00 00 00 00 00 00 00
30FB- 00 00 00 00 00 00 00 00
3100- 88 FC FF FF FF FF FF FF
310B- FF FF FF FF FF FF FF FF
3110- BF D4 82 D5 F8 FF FF FF
311B- FF FF FF 9F 88 00 00 00
3120- 00 00 00 00 00 00 00 00
312B- 88 FC FF FF 8F FE A0 D5
3130- 90 81 F2 9F FC FF A7 C5
313B- BA AA B0 E0 C0 AA CA FF
3140- FF FF FF 9F 88 00 00 00
314B- 00 00 00 00 00 00 00 00
3150- 88 FC FF FF FF FF FF FF
315B- FF FF FF FF FF FF FF FF
3160- FF FF FF FF FF FF FF FF
316B- FF FF FF 9F 88 00 00 00
3170- 00 00 00 00 00 00 00 00
317B- 00 00 00 00 00 00 00 00
3180- 88 FC FF FF FF FF FF FF
318B- FF FF FF FF FF FF FF FF
3190- FF F3 ED 88 CF FD FF FF
319B- FF FF FF 9F 88 00 00 00
31A0- 00 00 00 00 00 00 00 00
31AB- 88 FC FF BF 9A 86 AA D1
31B0- EA 97 80 8E FF FF FF D3
31BB- A2 E7 FF FF C7 C2 F2 FF
31C0- FF FF FF 9F 88 00 00 00
31CB- 00 00 00 00 00 00 00 00
31D0- 88 FC FF FF FF FF FF FF
31DB- FF FF FF FF FF FF FF FF
31E0- FF FF FF FF FF FF FF FF
31EB- FF FF FF 9F 88 00 00 00
31F0- 00 00 00 00 00 00 00 00
31FB- 00 00 00 00 00 00 00 00
3200- 88 FC FF FF FF FF FF FF
320B- FF FF FF FF FF FF FF FF
3210- FF 93 E8 E1 98 FF FF FF
321B- FF FF FF 9F 88 00 00 00
3220- 00 00 00 00 00 00 00 00
322B- 88 FC FF E7 F7 FF BF D4

```



```

3230- AA F1 FF FF FF FF FF FF
3238- 87 80 80 80 80 F8 FF FF
3240- FF FF FF 9F 88 00 00 00
3248- 00 00 00 00 00 00 00 00
3250- 88 FC FF FF FF FF FF FF
3258- FF FF FF FF FF FF FF FF
3260- FF FF FF FF FF FF FF FF
3268- FF FF FF 9F 88 00 00 00
3270- 00 00 00 00 00 00 00 00
3278- 00 00 00 00 00 00 00 00
3280- 88 FC FF FD BF D4 8A FF
3288- FF FF FF FF FF FF FF FF
3290- FF BF D4 82 FE FF FF FF
3298- FF FF FF 9F 88 00 00 00
32A0- 00 00 00 00 00 00 00 00
32A8- 88 FC FF FF E3 FC FE BF
32B0- FB A9 D5 F2 FF FF FF FF
32B8- FF FF FF FF FF FF FF FF
32C0- FF FF FF 9F 88 00 00 00
32C8- 00 00 00 00 00 00 00 00
32D0- 88 80 80 80 80 80 80 80
32D8- 80 80 80 80 80 80 80 80
32E0- 80 80 80 80 80 80 80 80
32E8- 80 80 80 80 88 00 00 00
32F0- 00 00 00 00 00 00 00 00
32F8- 00 00 00 00 00 00 00 00
3300- 88 FC FF FF FF C3 FB ED
3308- E1 FF FF FF FF FF FF FF
3310- A1 E0 F9 D4 AA E5 FF FF
3318- FF FF FF 9F 88 00 00 00
3320- 00 00 00 00 00 00 00 00
3328- 88 FC BF AA D1 CA FF 9F
3330- C5 AA D5 FB FF FF FF FF
3338- FF FF FF FF FF FF FF FF
3340- FF FF FF 9F 88 00 00 00
3348- 00 00 00 00 00 00 00 00
3350- 00 00 00 00 00 00 00 00
3358- 00 00 00 00 00 00 00 00
3360- 00 00 00 00 00 00 00 00
3368- 00 00 00 00 00 00 00 00
3370- 00 00 00 00 00 00 00 00
3378- 00 00 00 00 00 00 00 00
3380- 88 FC FF FF FF FB F7 B6
3388- E4 C8 FF FF FF FF 9F FE

```

```

3390- 83 80 80 D4 AA FE FF FF
3398- FF FF FF 9F 88 00 00 00
33A0- 00 00 00 00 00 00 00 00
33A8- 88 FC CF AA D5 FC FF FF
33B0- 8F F8 FF FF FF FF FF FF
33B8- FF FF FF FF FF FF FF FF
33C0- FF FF FF 9F 88 00 00 00
33C8- 00 00 00 00 00 00 00 00
33D0- 00 00 00 00 00 00 00 00
33D8- 00 00 00 00 00 00 00 00
33E0- 00 00 00 00 00 00 00 00
33E8- 00 00 00 00 00 00 00 00
33F0- 00 00 00 00 00 00 00 00
33F8- 00 00 00 00 00 00 00 00
3400- 88 FC FF FF FF FF FF FF
3408- FF FF FF FF FF FF FF FF
3410- FF FF FF FF FF FF FF FF
3418- FF FF FF 9F 88 00 00 00
3420- 00 00 00 00 00 00 00 00
3428- 88 FC FF FF FF FF 91 AA
3430- 94 FF FF FF FF BF CE FF
3438- 9F 9F 80 FE CF B9 FE FF
3440- FF FF FF 9F 88 00 00 00
3448- 00 00 00 00 00 00 00 00
3450- 88 FC FF FF FF FF FF FF
3458- FF FF FF FF FF FF FF FF
3460- FF FF FF FF FF FF FF FF
3468- FF FF FF 9F 88 00 00 00
3470- 00 00 00 00 00 00 00 00
3478- 00 00 00 00 00 00 00 00
3480- 88 FC FF FF FF FF FF FF
3488- FF FF FF FF FF FF FF FF
3490- FF FF FF 9F FE FF FF FF
3498- FF FF FF 9F 88 00 00 00
34A0- 00 00 00 00 00 00 00 00
34AB- 88 FC FF FF FB 9F AA E1
34B0- C7 CA FF FF FF FF 9F C5
34B8- FF F9 FF FF FF E3 FF FF
34C0- FF FF FF 9F 88 00 00 00
34C8- 00 00 00 00 00 00 00 00
34D0- 88 FC FF FF FF FF FF FF
34D8- FF FF FF FF FF FF FF FF
34E0- FF FF FF FF FF FF FF FF
34E8- FF FF FF 9F 88 00 00 00

```

```

34F0- 00 00 00 00 00 00 00 00
34F8- 00 00 00 00 00 00 00 00
3500- 88 FC FF FF FF FF FF FF
3508- FF FF FF FF FF FF FF FF
3510- FF 94 82 D1 F8 FF FF FF
3518- FF FF FF 9F 88 00 00 00
3520- 00 00 00 00 00 00 00 00
3528- 88 FC FF FF FF 80 A6 D5
3530- 82 DC F8 FF FC FF 8F 95
3538- AA 8A C6 8F C4 AA CE FF
3540- FF FF FF 9F 88 00 00 00
3548- 00 00 00 00 00 00 00 00
3550- 88 FC FF FF FF FF FF FF
3558- FF FF FF FF FF FF FF FF
3560- FF FF FF FF FF FF FF FF
3568- FF FF FF 9F 88 00 00 00
3570- 00 00 00 00 00 00 00 00
3578- 00 00 00 00 00 00 00 00
3580- 88 FC FF FF FF FF FF FF
3588- FF FF FF FF FF FF FF FF
3590- FF C3 BF F7 9F F8 FF FF
3598- FF FF FF 9F 88 00 00 00
35A0- 00 00 00 00 00 00 00 00
35A8- 88 FC FF 9F E3 80 AA C5
35B0- AA 97 F8 E0 FF FF FF 83
35B8- A8 F3 FF FF A7 D0 F2 FF
35C0- FF FF FF 9F 88 00 00 00
35C8- 00 00 00 00 00 00 00 00
35D0- 88 FC FF FF FF FF FF FF
35D8- FF FF FF FF FF FF FF FF
35E0- FF FF FF FF FF FF FF FF
35E8- FF FF FF 9F 88 00 00 00
35F0- 00 00 00 00 00 00 00 00
35F8- 00 00 00 00 00 00 00 00
3600- 88 FC FF FF FF FF FF FF
3608- FF FF FF FF FF FF FF FF
3610- FF 89 C5 83 C1 FF FF FF
3618- FF FF FF 9F 88 00 00 00
3620- 00 00 00 00 00 00 00 00
3628- 88 FC FF CF FB FF FF C1
3630- AA FC FF FF FF FF FF BF
3638- 80 80 80 F0 FF FF FF FF
3640- FF FF FF 9F 88 00 00 00
3648- 00 00 00 00 00 00 00 00

```

```

3650- 88 FC FF FF FF FF FF FF
3658- FF FF FF FF FF FF FF FF
3660- FF FF FF FF FF FF FF FF
3668- FF FF FF 9F 88 00 00 00
3670- 00 00 00 00 00 00 00 00
3678- 00 00 00 00 00 00 00 00
3680- 88 FC FF F9 9F D5 AA F0
3688- FF FF FF FF FF FF FF FF
3690- FF 81 80 E0 FC FF FF FF
3698- FF FF FF 9F 88 00 00 00
36A0- 00 00 00 00 00 00 00 00
36A8- 88 FC FF FF C7 81 FB BF
36B0- FE A9 D5 E2 FF FF FF FF
36B8- FF FF FF FF FF FF FF FF
36C0- FF FF FF 9F 88 00 00 00
36C8- 00 00 00 00 00 00 00 00
36D0- AB D5 AA D5 AA D5 AA D5
36D8- AA D5 AA D5 AA D5 AA D5
36E0- AA D5 AA D5 AA D5 AA D5
36E8- AA D5 AA D5 8A 00 00 00
36F0- 00 00 00 00 00 00 00 00
36F8- 00 00 00 00 00 00 00 00
3700- 88 FC FF FF FF FF E7 FB FF
3708- F8 FF FF FF FF FF FF BF
3710- A0 98 B3 D4 AA E5 FF FF
3718- FF FF FF 9F 88 00 00 00
3720- 00 00 00 00 00 00 00 00
3728- 88 FC BF AA D1 E2 FF BF
3730- C4 AA 95 FE FF FF FF FF
3738- FF FF FF FF FF FF FF FF
3740- FF FF FF 9F 88 00 00 00
3748- 00 00 00 00 00 00 00 00
3750- 00 00 00 00 00 00 00 00
3758- 00 00 00 00 00 00 00 00
3760- 00 00 00 00 00 00 00 00
3768- 00 00 00 00 00 00 00 00
3770- 00 00 00 00 00 00 00 00
3778- 00 00 00 00 00 00 00 00
3780- 88 FC FF FF BF FE F7 84
3788- 81 CA FF FF FF BF C0 BF
3790- 98 FC 87 84 A0 FE FF FF
3798- FF FF FF 9F 88 00 00 00
37A0- 00 00 00 00 00 00 00 00
37AB- 88 FC CF AA 81 E0 FF FF

```

```

37B0- FF FF FF FF FF FF FF FF
37B8- FF FF FF FF FF FF FF FF
37C0- FF FF FF 9F 88 00 00 00
37C8- 00 00 00 00 00 00 00 00
37D0- 00 00 00 00 00 00 00 00
37D8- 00 00 00 00 00 00 00 00
37E0- 00 00 00 00 00 00 00 00
37E8- 00 00 00 00 00 00 00 00
37F0- 00 00 00 00 00 00 00 00
37F8- 00 00 00 00 00 00 00 00
3800- 88 FC FF FF FF FF FF FF
3808- FF FF FF FF FF FF FF FF
3810- FF FF FF FF FF FF FF FF
3818- FF FF FF 9F 88 00 00 00
3820- 00 00 00 00 00 00 00 00
3828- 88 FC FF FF FF FF C7 80
3830- 95 FF FF FF FF BF E6 FF
3838- DF 87 80 F8 E7 BB FB FF
3840- FF FF FF 9F 88 00 00 00
3848- 00 00 00 00 00 00 00 00
3850- 88 FC FF FF FF FF FF FF
3858- FF FF FF FF FF FF FF FF
3860- FF FF FF FF FF FF FF FF
3868- FF FF FF 9F 88 00 00 00
3870- 00 00 00 00 00 00 00 00
3878- 00 00 00 00 00 00 00 00
3880- 88 FC FF FF FF FF FF FF
3888- FF FF FF FF FF FF FF FF
3890- FF FF FF C7 F8 FF FF FF
3898- FF FF FF 9F 88 00 00 00
38A0- 00 00 00 00 00 00 00 00
38AB- 88 FC FF FF F1 C3 AA 85
38B0- 90 CA FF FF FF FF 8F 94
38B8- FF F3 FF FF FF F1 FF FF
38C0- FF FF FF 9F 88 00 00 00
38C8- 00 00 00 00 00 00 00 00
38D0- 88 FC FF FF FF FF FF FF
38D8- FF FF FF FF FF FF FF FF
38E0- FF FF FF FF FF FF FF FF
38E8- FF FF FF 9F 88 00 00 00
38F0- 00 00 00 00 00 00 00 00
38F8- 00 00 00 00 00 00 00 00
3900- 88 FC FF FF FF FF FF FF
3908- FF FF FF FF FF FF FF FF

```

```

3910- FF D1 88 94 F2 FF FF FF
3918- FF FF FF 9F 88 00 00 00
3920- 00 00 00 00 00 00 00 00
3928- 88 FC FF FF FF FF A7 D5
3930- AA 97 FE EF F9 FF 9F 95
3938- EA C9 FF 9F C5 AA CA FF
3940- FF FF FF 9F 88 00 00 00
3948- 00 00 00 00 00 00 00 00
3950- 88 FC FF FF FF FF FF FF
3958- FF FF FF FF FF FF FF FF
3960- FF FF FF FF FF FF FF FF
3968- FF FF FF 9F 88 00 00 00
3970- 00 00 00 00 00 00 00 00
3978- 00 00 00 00 00 00 00 00
3980- 88 FC FF FF FF FF FF FF
3988- FF FF FF FF FF FF FF FF
3990- FF B3 9F 8C 9F B8 00 00
3998- FF FF FF 9F 88 00 00 00
39A0- 00 00 00 00 00 00 00 00
39A8- 88 FC FF CF E7 BD AA 95
39B0- A8 97 F8 FF FF FF FF D3
39B8- A8 F3 FF FF A7 D5 F2 FF
39C0- FF FF FF 9F 88 00 00 00
39C8- 00 00 00 00 00 00 00 00
39D0- 88 FC FF FF FF FF FF FF
39D8- FF FF FF FF FF FF FF FF
39E0- FF FF FF FF FF FF FF FF
39E8- FF FF FF 9F 88 00 00 00
39F0- 00 00 00 00 00 00 00 00
39F8- 00 00 00 00 00 00 00 00
3A00- 88 FC FF FF FF FF FF FF
3A08- FF FF FF FF FF FF FF FF
3A10- FF A3 95 A0 E4 FF FF FF
3A18- FF FF FF 9F 88 00 00 00
3A20- 00 00 00 00 00 00 00 00
3A28- 88 FC FF BF FB FF FF 9F
3A30- 80 FE FF FF FF FF FF FF
3A38- BF 80 F0 FF FF FF FF FF
3A40- FF FF FF 9F 88 00 00 00
3A48- 00 00 00 00 00 00 00 00
3A50- 88 FC FF FF FF FF FF FF
3A58- FF FF FF FF FF FF FF FF
3A60- FF FF FF FF FF FF FF FF
3A68- FF FF FF 9F 88 00 00 00

```

```

3A70- 00 00 00 00 00 00 00 00
3A78- 00 00 00 00 00 00 00 00
3A80- 88 FC FF E3 87 D5 AA 85
3A88- F8 FF FF FF FF FF FF FF
3A90- BF 94 F3 F3 FC FF FF FF
3A98- FF FF FF 9F 88 00 00 00
3AA0- 00 00 00 00 00 00 00 00
3AA8- 88 FC FF FF 8F A8 FC 80
3AB0- FF A8 D5 CA FF FF FF FF
3AB8- FF FF FF FF FF FF FF FF
3AC0- FF FF FF 9F 88 00 00 00
3AC8- 00 00 00 00 00 00 00 00
3AD0- 80 80 80 80 80 80 80 80
3ADB- 80 80 80 80 80 80 80 80
3AE0- 80 80 80 80 80 80 80 80
3AEB- 80 80 80 80 80 00 00 00
3AF0- 00 00 00 00 00 00 00 00
3AF8- 00 00 00 00 00 00 00 00
3B00- 88 FC FF FF FF F3 9F BE
3B08- F3 FF FF FF FF FF FF 9F
3B10- A6 E0 86 D5 AA E5 FF FF
3B18- FF FF FF 9F 88 00 00 00
3B20- 00 00 00 00 00 00 00 00
3B28- 88 FC BF AA 85 F8 FF FF
3B30- D4 AA 95 FF FF FF FF FF
3B38- FF FF FF FF FF FF FF FF
3B40- FF FF FF 9F 88 00 00 00
3B48- 00 00 00 00 00 00 00 00
3B50- 00 00 00 00 00 00 00 00
3B58- 00 00 00 00 00 00 00 00
3B60- 00 00 00 00 00 00 00 00
3B68- 00 00 00 00 00 00 00 00
3B70- 00 00 00 00 00 00 00 00
3B78- 00 00 00 00 00 00 00 00
3B80- 88 FC FF FF BF F0 EF A0
3B88- 95 E2 FF FF FF 87 FF 8F
3B90- CE FF BF F0 8F FE FF FF
3B98- FF FF FF 9F 88 00 00 00
3BA0- 00 00 00 00 00 00 00 00
3BA8- 88 FC 9F AA D5 8A 80 FC
3BB0- FF FF FF FF FF FF FF FF
3BB8- FF FF FF FF FF FF FF FF
3BC0- FF FF FF 9F 88 00 00 00
3BC8- 00 00 00 00 00 00 00 00

```

```

3BD0- 00 00 00 00 00 00 00 00
3BD8- 00 00 00 00 00 00 00 00
3BE0- 00 00 00 00 00 00 00 00
3BE8- 00 00 00 00 00 00 00 00
3BF0- 00 00 00 00 00 00 00 00
3BF8- 00 00 00 00 00 00 00 00
3C00- 88 FC FF FF FF FF FF FF
3C08- FF FF FF FF FF FF FF FF
3C10- FF FF FF FF FF FF FF FF
3C18- FF FF FF 9F 88 00 00 00
3C20- 00 00 00 00 00 00 00 00
3C28- 88 FC FF FF FF FF 8F AA
3C30- 95 FF FF FF FF BF F6 FF
3C38- 9F 80 80 E0 F1 9F F8 FF
3C40- FF FF FF 9F 88 00 00 00
3C48- 00 00 00 00 00 00 00 00
3C50- 88 FC FF FF FF FF FF FF
3C58- FF FF FF FF FF FF FF FF
3C60- FF FF FF FF FF FF FF FF
3C68- FF FF FF 9F 88 00 00 00
3C70- 00 00 00 00 00 00 00 00
3C78- 00 00 00 00 00 00 00 00
3C80- 88 FC FF FF FF FF FF FF
3C88- FF FF FF FF FF FF FF FF
3C90- FF F1 FF D3 F2 FF FF FF
3C98- FF FF FF 9F 88 00 00 00
3CA0- 00 00 00 00 00 00 00 00
3CA8- 88 FC FF FF 8C DC AA A1
3CB0- D1 C8 FF FF FF FF A7 94
3CB8- FE C1 FF FF BF 80 FE FF
3CC0- FF FF FF 9F 88 00 00 00
3CC8- 00 00 00 00 00 00 00 00
3CD0- 88 FC FF FF FF FF FF FF
3CD8- FF FF FF FF FF FF FF FF
3CE0- FF FF FF FF FF FF FF FF
3CE8- FF FF FF 9F 88 00 00 00
3CF0- 00 00 00 00 00 00 00 00
3CF8- 00 00 00 00 00 00 00 00
3D00- 88 FC FF FF FF FF FF FF
3D08- FF FF FF FF FF FF FF FF
3D10- FF D1 88 D5 E2 FF FF FF
3D18- FF FF FF 9F 88 00 00 00
3D20- 00 00 00 00 00 00 00 00
3D28- 88 FC FF FF FF FF A7 D5

```



```

3D30- AA 97 FF DF F9 FF 9F D5
3D38- E8 C9 FF 9F D5 A8 C2 FF
3D40- FF FF FF 9F 88 00 00 00
3D48- 00 00 00 00 00 00 00 00
3D50- 88 FC FF FF FF FF FF FF
3D58- FF FF FF FF FF FF FF FF
3D60- FF FF FF FF FF FF FF FF
3D68- FF FF FF 9F 88 00 00 00
3D70- 00 00 00 00 00 00 00 00
3D78- 00 00 00 00 00 00 00 00
3D80- 88 FC FF FF FF FF FF FF
3D88- FF FF FF FF FF FF FF FF
3D90- FF B1 DE C3 DD F9 FF FF
3D98- FF FF FF 9F 88 00 00 00
3DA0- 00 00 00 00 00 00 00 00
3DA8- 88 FC FF CF 9F FF A8 D5
3DB0- 82 DD FC FF FF FF FF D3
3DB8- E2 F9 FF FF 83 D5 F8 FF
3DC0- FF FF FF 9F 88 00 00 00
3DC8- 00 00 00 00 00 00 00 00
3DD0- 88 FC FF FF FF FF FF FF
3DD8- FF FF FF FF FF FF FF FF
3DE0- FF FF FF FF FF FF FF FF
3DE8- FF FF FF 9F 88 00 00 00
3DF0- 00 00 00 00 00 00 00 00
3DF8- 00 00 00 00 00 00 00 00
3E00- 88 FC FF FF FF FF FF FF
3E08- FF FF FF FF FF FF FF FF
3E10- FF 80 D4 AA F0 FF FF FF
3E18- FF FF FF 9F 88 00 00 00
3E20- 00 00 00 00 00 00 00 00
3E28- 88 FC FF DF F9 FF FF FF
3E30- 9F FF FF FF FF FF FF FF
3E38- FF FF FF FF FF FF FF FF
3E40- FF FF FF 9F 88 00 00 00
3E48- 00 00 00 00 00 00 00 00
3E50- 88 FC FF FF FF FF FF FF
3E58- FF FF FF FF FF FF FF FF
3E60- FF FF FF FF FF FF FF FF
3E68- FF FF FF 9F 88 00 00 00
3E70- 00 00 00 00 00 00 00 00
3E78- 00 00 00 00 00 00 00 00
3E80- 88 FC FF 83 80 D5 AA D5
3E88- E2 FF FF FF FF FF FF FF

```

```

3E90- 9F C5 F9 F8 E0 FF FF FF
3E9B- FF FF FF 9F 88 00 00 00
3EA0- 00 00 00 00 00 00 00 00
3EAB- B8 FC FF 87 BC AB 80 AB
3EB0- BC AA D5 CA FF FF FF FF
3EBB- FF FF FF FF FF FF FF FF
3EC0- FF FF FF 9F 88 00 00 00
3ECB- 00 00 00 00 00 00 00 00
3ED0- 80 80 80 80 80 80 80 80
3EDB- 80 80 80 80 80 80 80 80
3EE0- 80 80 80 80 80 80 80 80
3EEB- 80 80 80 80 80 00 00 00
3EF0- 00 00 00 00 00 00 00 00
3EFB- 00 00 00 00 00 00 00 00
3F00- B8 FC FF FF FF F3 EF BD
3F0B- F3 FF FF FF FF FF FF CF
3F10- A7 E0 8E D5 AA E4 FF FF
3F1B- FF FF FF 9F 88 00 00 00
3F20- 00 00 00 00 00 00 00 00
3F2B- B8 FC BF AA 95 FF FF FF
3F30- D4 AA C5 FF FF FF FF FF
3F3B- FF FF FF FF FF FF FF FF
3F40- FF FF FF 9F 88 00 00 00
3F4B- 00 00 00 00 00 00 00 00
3F50- 00 00 00 00 00 00 00 00
3F5B- 00 00 00 00 00 00 00 00
3F60- 00 00 00 00 00 00 00 00
3F6B- 00 00 00 00 00 00 00 00
3F70- 00 00 00 00 00 00 00 00
3F7B- 00 00 00 00 00 00 00 00
3F80- B8 FC FF FF BF F3 EF A0
3F8B- C5 F8 FF FF FF F3 FF E7
3F90- E7 FD FF E3 9F FE FF FF
3F9B- FF FF FF 9F 88 00 00 00
3FA0- 00 00 00 00 00 00 00 00
3FAB- B8 FC FF A0 D5 80 80 80
3FB0- 80 FF FF FF FF FF FF FF
3FBB- FF FF FF FF FF FF FF FF
3FC0- FF FF FF 9F 88 00 00 00
3FCB- 00 00 00 00 00 00 00 00
3FD0- 00 00 00 00 00 00 00 00
3FDB- 00 00 00 00 00 00 00 00
3FE0- 00 00 00 00 00 00 00 00
3FEB- 00 00 00 00 00 00 00 00

```

```

3FF0- 00 00 00 00 00 00 00 00
3FF8- 00 00 00 00 00 00 00 00
2000- 00 00 00 00 00 00 00 00
2008- 00 00 00 00 00 00 00 00
2010- 00 00 00 00 00 00 00 00
2018- 00 00 00 00 00 00 00 00
2020- 00 00 00 00 00 00 00 00
2028- 00 00 00 00 00 00 00 00
2030- 00 00 00 7C 7F 7F 81 80

```

4. G1

```

2038- 80 80 80 80 80 80 80 80
2040- 80 80 80 00 00 00 00 00
2048- 00 00 00 00 00 00 00 00
2050- 00 00 00 00 00 00 00 00
2058- 00 00 00 00 60 7F 7F 1F
2060- 80 80 80 80 80 80 80 80
2068- 80 80 78 BF FB 7F 7F 7F
2070- 7F 00 00 00 00 00 00 00
2078- 00 00 00 00 00 00 00 00
2080- 00 00 00 00 00 00 00 00
2088- 00 00 00 00 00 00 00 00
2090- 00 00 00 00 00 00 00 00
2098- 00 00 00 00 00 00 00 00
20A0- 00 00 00 00 00 00 00 00
20A8- 00 00 00 00 00 00 00 00
20B0- 00 00 00 00 00 81 80 80
20B8- 80 80 80 80 80 80 80 80
20C0- 80 80 80 80 00 00 00 00
20C8- 00 00 00 00 00 00 00 00
20D0- 80 80 80 00 00 00 00 00
20D8- 00 00 00 00 00 00 80 80
20E0- 80 60 07 80 80 78 80 80
20E8- 80 84 7F 7F 7F 7F 7F 7F
20F0- 7F 7F 7F 9F 80 80 00 80
20F8- 00 00 00 00 00 00 00 00
2100- 00 00 00 00 00 00 00 00
2108- 00 00 00 00 00 00 00 00
2110- 00 00 00 00 00 00 60 7F
2118- 7F 07 00 00 00 00 00 00
2120- 00 00 00 00 00 00 00 00
2128- 00 00 00 00 00 00 00 00
2130- 00 00 00 00 00 9C 80 80
2138- 80 80 80 80 80 80 80 80
2140- 80 80 80 88 80 00 00 00

```

214B- 00 00 00 00 00 00 00 00
 2150- 80 80 80 80 00 00 00 00
 215B- 00 00 00 00 00 00 00 90
 2160- 81 78 01 80 7E 80 80 DB
 216B- 00 78 7F 7F 7F 7F 7F 7F
 2170- 7F 7F 7F 80 80 80 00 80
 217B- 00 00 00 00 00 00 00 00
 2180- 00 00 00 00 00 00 00 00
 218B- 00 00 00 00 00 00 00 00
 2190- 00 00 00 00 40 7F 7F 7F
 219B- 7F 7F 7F 01 00 00 00 00
 21A0- 00 00 00 00 00 00 00 00
 21AB- 00 00 00 00 00 00 00 00
 21B0- 00 00 00 40 81 80 80 80
 21BB- 80 80 80 80 80 80 80 80
 21C0- 80 80 80 80 80 81 00 00
 21CB- 00 00 00 00 00 00 00 00
 21D0- 00 00 00 00 00 00 00 00
 21DB- 00 00 00 00 00 00 00 00
 21E0- 00 78 7F 5B ED 00 00 00
 21EB- 00 7F 7F 7F 7F 7F 7F 7F
 21F0- 7F 1F 80 80 80 00 00 00
 21FB- 00 00 00 00 00 00 00 00
 2200- 00 00 00 00 00 00 00 00
 220B- 00 00 00 00 00 00 00 00
 2210- 00 00 00 00 7F 7F 7F 7F
 221B- 7F 7F 7F 1F 00 00 00 00
 2220- 00 00 00 00 00 00 00 00
 222B- 00 00 00 00 00 00 00 00
 2230- 00 00 00 60 7F 7F 7F 01
 223B- 80 80 80 80 00 80 80 80
 2240- 80 80 80 80 03 00 00 00
 224B- 00 00 00 00 00 00 00 00
 2250- 00 00 00 00 00 00 00 00
 225B- 00 00 00 00 00 00 00 3E
 2260- 7E 7F 7F 7F 0F 00 00 00
 226B- 00 70 7F 7F 7F 7F 7F 7F
 2270- 01 80 80 80 80 00 00 00
 227B- 00 00 00 00 00 00 00 00
 2280- 00 00 00 00 00 00 00 00
 228B- 00 00 00 00 78 7F 7F 0F
 2290- 00 80 80 8A 7E 7F 7F 7F
 229B- 7F 7F 7F 7F 01 00 00 00

```

22A0- 00 00 00 00 00 00 00 00
22A8- 00 00 00 00 00 00 00 00
22B0- 00 00 00 70 7F 7F 7F 3F
22B8- 80 60 7F 7F 7F 7F 03 80
22C0- 80 80 80 E0 01 00 00 80
22C8- 00 00 00 00 00 00 00 00
22D0- 00 00 00 00 00 00 00 00
22D8- 00 00 00 00 00 70 7F 7F
22E0- 7F 7F 7F 7F 1F 00 00 00
22E8- 00 00 60 7F 7F 07 00 00
22F0- 00 00 00 00 00 00 00 00
22F8- 00 00 00 00 00 00 00 00
2300- 00 00 00 00 00 00 00 00
2308- 00 00 00 7E 7F 7F 7F 7F
2310- AA 80 80 80 F0 7F 7F 7F
2318- 7F 7F 7F 7F 01 00 00 00
2320- 00 00 00 00 00 00 00 00
2328- 00 00 00 00 00 00 00 00
2330- 00 00 80 70 7F 7F 7F 7F
2338- 01 70 7F 7F 7F 7F 7F 80
2340- 80 80 80 80 80 80 80 80
2348- 80 00 00 00 00 00 00 00
2350- 00 00 00 00 00 00 00 00
2358- 00 00 00 00 7C 7F 3F 00
2360- 70 7F 7F 7F 00 00 00 00
2368- 00 00 00 00 00 00 00 00
2370- 00 00 00 00 00 00 00 00
2378- 00 00 00 00 00 00 00 00
2380- 00 00 00 00 00 00 00 00
2388- 00 00 40 7F 7F 7F 7F 21
2390- 80 80 80 80 80 80 80 80
2398- 7E 7F 7F 3F 00 00 00 00
23A0- 00 00 00 00 00 00 00 00
23A8- 00 00 00 00 00 00 00 00
23B0- 00 00 00 40 7F 7F 7F 7F
23B8- 80 80 78 7F 7F 7F 3F 80
23C0- 80 80 C0 40 80 80 80 80
23C8- 00 00 00 00 00 00 00 00
23D0- 00 00 00 00 00 00 00 00
23D8- 00 00 00 00 00 00 00 00
23E0- 00 00 00 00 00 00 00 00
23E8- 00 00 00 00 00 00 00 00
23F0- 00 00 00 00 00 00 00 00

```

23F8- 00 00 00 00 00 00 00 00
 2400- 00 00 00 00 00 00 00 00
 2408- 00 00 00 00 00 00 00 00
 2410- 00 00 00 00 00 00 00 00
 2418- 00 00 00 00 00 00 00 00
 2420- 00 00 00 00 00 00 00 00
 2428- 00 00 00 00 00 00 00 00
 2430- 00 00 00 78 7F 7F 81 80
 2438- 80 80 80 80 80 80 80 80
 2440- 80 80 8E 00 00 00 00 00
 2448- 00 00 00 00 00 00 00 00
 2450- 00 00 00 00 00 00 00 00
 2458- 00 00 00 00 00 7F 7F 0F
 2460- 80 80 80 80 80 80 80 80
 2468- 80 80 78 7F 78 7F 7F 7F
 2470- 7F 01 00 00 00 00 00 00
 2478- 00 00 00 00 00 00 00 00
 2480- 00 00 00 00 00 00 00 00
 2488- 00 00 00 00 00 00 00 00
 2490- 00 00 00 00 00 00 00 00
 2498- 00 00 00 00 00 00 00 00
 24A0- 00 00 00 00 00 00 00 00
 24A8- 00 00 00 00 00 00 00 00
 24B0- 00 00 00 00 A0 80 80 80
 24B8- 80 80 80 80 80 80 80 80
 24C0- 80 80 80 80 00 00 00 00
 24C8- 00 00 00 00 00 00 00 00
 24D0- 80 80 80 00 00 00 00 00
 24D8- 00 00 00 00 00 00 94 80
 24E0- 80 7C 0F 80 80 78 80 80
 24E8- 80 61 7F 7F 7F 7F 7F 7F
 24F0- 7F 7F 7F 87 80 80 00 80
 24F8- 00 00 00 00 00 00 00 00
 2500- 00 00 00 00 00 00 00 00
 2508- 00 00 00 00 00 00 00 00
 2510- 00 00 00 00 00 00 78 7F
 2518- 7F 0F 00 00 00 00 00 00
 2520- 00 00 00 00 00 00 00 00
 2528- 00 00 00 00 00 00 00 00
 2530- 00 00 00 00 BE 80 80 80
 2538- 80 80 80 80 80 80 80 80
 2540- 80 80 80 80 00 00 00 00
 2548- 00 00 00 00 00 00 00 00

2550-	80	80	80	00	00	00	00	00
2558-	00	00	00	00	00	00	00	70
2560-	80	80	80	80	3C	80	80	EA
2568-	00	7F	7F	7F	7F	7F	7F	7F
2570-	7F	7F	BF	80	80	80	00	80
2578-	00	00	00	00	00	00	00	00
2580-	00	00	00	00	00	00	00	00
2588-	00	00	00	00	00	00	00	00
2590-	00	00	00	00	60	7F	7F	7F
2598-	7F	7F	7F	01	00	00	00	00
25A0-	00	00	00	00	00	00	00	00
25A8-	00	00	00	00	00	00	00	00
25B0-	00	00	00	80	83	7F	81	80
25B8-	80	80	80	80	80	80	80	80
25C0-	80	80	80	80	80	00	00	00
25C8-	00	00	00	00	00	00	00	00
25D0-	00	00	00	00	00	00	00	00
25D8-	00	00	00	00	00	00	00	00
25E0-	00	7C	7F	3F	00	00	00	00
25E8-	00	7C	7F	7F	7F	7F	7F	7F
25F0-	7F	9F	80	80	80	00	00	00
25F8-	00	00	00	00	00	00	00	00
2600-	00	00	00	00	00	00	00	00
2608-	00	00	00	00	00	00	00	00
2610-	00	00	00	00	7E	7F	7F	7F
2618-	7F	7F	7F	3F	00	00	00	00
2620-	00	00	00	00	00	00	00	00
2628-	00	00	00	00	00	00	00	00
2630-	00	00	00	60	7F	7F	7F	03
2638-	80	80	80	80	00	80	80	80
2640-	80	80	80	80	80	00	00	00
2648-	00	00	00	00	00	00	00	00
2650-	00	00	00	00	00	00	00	00
2658-	00	00	00	00	00	00	40	7F
2660-	7F	7F	7F	7F	0F	00	00	00
2668-	00	78	7F	7F	7F	7F	7F	7F
2670-	00	80	80	80	00	00	00	00
2678-	00	00	00	00	00	00	00	00
2680-	00	00	00	00	00	00	00	00
2688-	00	00	00	00	7C	7F	7F	0F
2690-	80	80	88	90	7E	7F	7F	7F
2698-	7F	7F	7F	7F	01	00	00	00
26A0-	00	00	00	00	00	00	00	00

26A8-	00	00	00	00	00	00	00	00
26B0-	00	00	00	70	7F	7F	7F	3F
26B8-	80	60	7F	7F	7F	7F	07	80
26C0-	80	80	80	80	80	00	80	80
26C8-	00	00	00	00	00	00	00	00
26D0-	00	00	00	00	00	00	00	00
26D8-	00	00	00	00	00	70	7F	7F
26E0-	7F	7F	7F	7F	0F	00	00	00
26E8-	00	00	60	7F	3F	00	00	00
26F0-	00	00	00	00	00	00	00	00
26F8-	00	00	00	00	00	00	00	00
2700-	00	00	00	00	00	00	00	00
2708-	00	00	00	7E	7F	7F	7F	1F
2710-	C2	80	80	80	E0	7F	7F	7F
2718-	7F	7F	7F	7F	01	00	00	00
2720-	00	00	00	00	00	00	00	00
2728-	00	00	00	00	00	00	00	00
2730-	00	00	80	70	7F	7F	7F	7F
2738-	01	60	7F	7F	7F	7F	7F	80
2740-	80	80	80	8B	80	80	80	80
2748-	80	00	00	00	00	00	00	00
2750-	00	00	00	00	00	00	00	00
2758-	00	00	00	00	7C	7F	1F	00
2760-	60	7F	7F	0F	00	00	00	00
2768-	00	00	00	00	00	00	00	00
2770-	00	00	00	00	00	00	00	00
2778-	00	00	00	00	00	00	00	00
2780-	00	00	00	00	00	00	00	00
2788-	00	00	00	7F	7F	7F	7F	83
2790-	80	80	80	80	80	80	80	80
2798-	6C	7F	7F	1F	00	00	00	00
27A0-	00	00	00	00	00	00	00	00
27A8-	00	00	00	00	00	00	00	00
27B0-	00	00	00	80	7F	7F	7F	7F
27B8-	80	80	70	7F	7F	7F	1F	80
27C0-	80	80	80	E2	81	80	80	80
27C8-	80	00	00	00	00	00	00	00
27D0-	00	00	00	00	00	00	00	00
27D8-	00	00	00	00	00	00	00	00
27E0-	00	00	00	00	00	00	00	00
27E8-	00	00	00	00	00	00	00	00
27F0-	00	00	00	00	00	00	00	00
27F8-	00	00	00	00	00	00	00	00

2800-	00	00	00	00	00	00	00	00
2808-	00	00	00	00	00	00	00	00
2810-	00	00	00	00	00	00	00	00
2818-	00	00	00	00	00	00	00	00
2820-	00	00	00	00	00	00	00	00
2828-	00	00	00	00	00	00	00	00
2830-	00	00	00	70	7F	7F	81	80
2838-	80	80	80	80	80	80	80	80
2840-	80	80	86	00	00	00	00	00
2848-	00	00	00	00	00	00	00	00
2850-	00	00	00	00	00	00	00	00
2858-	00	00	00	00	00	7F	7F	07
2860-	80	80	80	80	80	80	80	80
2868-	80	E0	78	7F	7D	7F	7F	7F
2870-	7F	02	00	00	00	00	00	00
2878-	00	00	00	00	00	00	00	00
2880-	00	00	00	00	00	00	00	00
2888-	00	00	00	00	00	00	00	00
2890-	00	00	00	00	00	00	00	00
2898-	00	00	00	00	00	00	00	00
28A0-	00	00	00	00	00	00	00	00
28A8-	00	00	00	00	00	00	00	00
28B0-	00	00	00	00	A0	80	80	80
28B8-	80	80	80	80	80	80	80	80
28C0-	80	80	80	88	80	00	00	00
28C8-	00	00	00	00	00	00	00	00
28D0-	80	80	80	00	00	00	00	00
28DB-	00	00	00	00	00	00	90	80
28E0-	80	7E	1F	80	80	3C	80	80
28E8-	A0	70	7F	7F	7F	7F	7F	7F
28F0-	7F	7F	7F	87	80	80	00	80
28F8-	00	00	00	00	00	00	00	00
2900-	00	00	00	00	00	00	00	00
2908-	00	00	00	00	00	00	00	00
2910-	00	00	00	00	00	40	7F	7F
2918-	7F	7F	00	00	00	00	00	00
2920-	00	00	00	00	00	00	00	00
2928-	00	00	00	00	00	00	00	00
2930-	00	00	00	00	86	80	80	80
2938-	80	80	80	80	80	80	80	80
2940-	80	80	80	D0	00	00	00	00
2948-	00	00	00	00	00	00	00	00
2950-	80	80	80	00	00	00	00	00

2958-	00	00	00	00	00	00	00	00
2960-	A4	80	80	80	80	80	A0	80
2968-	00	7F	7F	7F	7F	7F	7F	7F
2970-	7F	7F	8F	80	80	80	00	80
2978-	00	00	00	00	00	00	00	00
2980-	00	00	00	00	00	00	00	00
2988-	00	00	00	00	00	00	00	00
2990-	00	00	00	00	78	7F	7F	7F
2998-	7F	7F	7F	07	00	00	00	00
29A0-	00	00	00	00	00	00	00	00
29A8-	00	00	00	00	00	00	00	00
29B0-	00	00	00	80	63	7F	07	80
29B8-	80	80	80	80	80	80	80	80
29C0-	80	80	80	C0	01	00	00	00
29C8-	00	00	00	00	00	00	00	00
29D0-	00	00	00	00	00	00	00	00
29D8-	00	00	00	00	00	00	00	00
29E0-	40	7F	7F	7F	00	00	00	00
29E8-	00	7F	7F	7F	7F	7F	7F	7F
29F0-	7F	80	80	80	80	00	00	00
29F8-	00	00	00	00	00	00	00	00
2A00-	00	00	00	00	00	00	00	00
2A08-	00	00	00	00	00	00	00	00
2A10-	00	00	00	80	7F	7F	7F	7F
2A18-	7F	7F	7F	3F	00	00	00	00
2A20-	00	00	00	00	00	00	00	00
2A28-	00	00	00	00	00	00	00	00
2A30-	00	00	00	70	7F	7F	7F	03
2A38-	80	80	80	E0	0D	80	80	80
2A40-	80	80	80	80	03	00	00	00
2A48-	00	00	00	00	00	00	00	00
2A50-	00	00	00	00	00	00	00	00
2A58-	00	00	00	00	00	00	70	7F
2A60-	7F	7F	7F	7F	1F	00	00	00
2A68-	00	70	7F	7F	7F	7F	7F	1F
2A70-	00	80	80	80	00	00	00	00
2A78-	00	00	00	00	00	00	00	00
2A80-	00	00	00	00	00	00	00	00
2A88-	00	00	00	00	7F	7F	7F	1F
2A90-	80	80	80	93	7E	7F	7F	7F
2A98-	7F	7F	7F	7F	00	00	00	00
2AA0-	00	00	00	00	00	00	00	00
2AAB-	00	00	00	00	00	00	00	00

2AB0-	00	00	00	78	7F	7F	7F	7F
2AB8-	80	60	7F	7F	7F	7F	0F	80
2AC0-	80	80	80	80	80	00	80	80
2AC8-	00	00	00	00	00	00	00	00
2AD0-	00	00	00	00	00	00	00	00
2ADB-	00	00	00	00	00	78	7F	7F
2AE0-	7F	7F	7F	7F	0F	00	00	00
2AEB-	00	00	00	00	00	00	00	00
2AF0-	00	00	00	00	00	00	00	00
2AFB-	00	00	00	00	00	00	00	00
2B00-	00	00	00	00	00	00	00	00
2B08-	00	00	00	7E	7F	7F	7F	1F
2B10-	8C	80	80	80	E0	7F	7F	7F
2B18-	7F	7F	7F	7F	01	00	00	00
2B20-	00	00	00	00	00	00	00	00
2B28-	00	00	00	00	00	00	00	00
2B30-	00	00	00	70	7F	7F	7F	7F
2B38-	80	60	7F	7F	7F	7F	7F	80
2B40-	80	80	80	80	80	80	80	80
2B48-	80	00	00	00	00	00	00	00
2B50-	00	00	00	00	00	00	00	00
2B58-	00	00	00	00	78	7F	0F	00
2B60-	40	7F	7F	03	00	00	00	00
2B68-	00	00	00	00	00	00	00	00
2B70-	00	00	00	00	00	00	00	00
2B78-	00	00	00	00	00	00	00	00
2B80-	00	00	00	00	00	00	00	00
2B88-	00	00	00	7F	7F	7F	7F	80
2B90-	80	80	80	80	80	80	80	80
2B98-	80	7E	7F	07	00	00	00	00
2BA0-	00	00	00	00	00	00	00	00
2BAB-	00	00	00	00	00	00	00	00
2BB0-	00	00	00	80	7E	7F	7F	7F
2BB8-	80	80	40	7F	7F	7F	0F	80
2BC0-	80	80	80	C6	81	80	80	18
2BC8-	80	00	00	00	00	00	00	00
2BD0-	00	00	00	00	00	00	00	00
2BDB-	00	00	00	00	00	00	00	00
2BE0-	00	00	00	00	00	00	00	00
2BEB-	00	00	00	00	00	00	00	00
2BF0-	00	00	00	00	00	00	00	00
2BFB-	00	00	00	00	00	00	00	00
2C00-	00	00	00	00	00	00	00	00

2C08-	00	00	00	00	00	00	00	00
2C10-	00	00	00	00	00	00	00	00
2C18-	00	00	00	00	00	00	00	00
2C20-	00	00	00	00	00	00	00	00
2C28-	00	00	00	00	00	00	00	00
2C30-	00	00	00	60	7F	1D	81	80
2C38-	80	80	80	80	80	80	80	80
2C40-	80	80	80	80	00	00	00	00
2C48-	00	00	00	00	00	00	00	00
2C50-	00	00	00	00	00	00	00	00
2C58-	00	00	00	00	00	03	7E	03
2C60-	80	80	80	80	80	80	80	80
2C68-	80	A0	7C	7F	7F	7F	7F	7F
2C70-	7F	07	3F	00	00	00	00	00
2C78-	00	00	00	00	00	00	00	00
2C80-	00	00	00	00	00	00	00	00
2C88-	00	00	00	00	00	00	00	00
2C90-	00	00	00	00	00	00	00	00
2C98-	00	00	00	00	00	00	00	00
2CA0-	00	00	00	00	00	00	00	00
2CAB-	00	00	00	00	00	00	00	00
2CB0-	00	00	00	00	98	80	80	80
2CB8-	80	80	80	80	80	80	80	80
2CC0-	80	80	80	80	80	00	00	00
2CC8-	00	00	00	00	00	00	00	00
2CD0-	80	80	80	00	00	00	00	00
2CD8-	00	00	00	00	00	00	C0	80
2CE0-	80	7F	1F	80	80	1E	80	80
2CE8-	C0	7B	7F	7F	7F	7F	7F	7F
2CF0-	7F	7F	7F	83	80	80	00	80
2CF8-	00	00	00	00	00	00	00	00
2D00-	00	00	00	00	00	00	00	00
2D08-	00	00	00	00	00	00	00	00
2D10-	00	00	00	00	00	60	7F	7F
2D18-	7F	7F	01	00	00	00	00	00
2D20-	00	00	00	00	00	00	00	00
2D28-	00	00	00	00	00	00	00	00
2D30-	00	00	00	40	81	80	80	80
2D38-	80	80	80	80	80	80	80	80
2D40-	80	80	80	C0	80	00	00	00
2D48-	00	00	00	00	00	00	00	00
2D50-	80	80	80	00	00	00	00	00
2D58-	00	00	00	00	00	00	00	00

2D60-	A3	82	80	80	80	80	E0	80
2D68-	00	7E	7F	7F	7F	7F	7F	7F
2D70-	7F	7F	87	80	80	80	00	80
2D78-	00	00	00	00	00	00	00	00
2D80-	00	00	00	00	00	00	00	00
2D88-	00	00	00	00	00	00	00	00
2D90-	00	00	00	00	7C	7F	7F	7F
2D98-	7F	7F	7F	0F	00	00	00	00
2DA0-	00	00	00	00	00	00	00	00
2DAB-	00	00	00	00	00	00	00	00
2DB0-	00	00	00	40	7E	7F	07	80
2DB8-	80	80	80	80	80	80	80	80
2DC0-	80	80	80	80	03	00	00	00
2DC8-	00	00	00	00	00	00	00	00
2DD0-	00	00	00	00	00	00	00	00
2DD8-	00	00	00	00	00	00	00	00
2DE0-	60	7F	7F	7F	01	00	00	00
2DE8-	00	7E	7F	7F	7F	7F	7F	7F
2DF0-	3F	80	80	80	80	00	00	00
2DF8-	00	00	00	00	00	00	00	00
2E00-	00	00	00	00	00	00	00	00
2E08-	00	00	00	00	00	00	00	00
2E10-	00	00	80	80	7F	7F	7F	7F
2E18-	7F	7F	7F	7F	00	00	00	00
2E20-	00	00	00	00	00	00	00	00
2E28-	00	00	00	00	00	00	00	00
2E30-	00	00	00	70	7F	7F	7F	03
2E38-	80	80	80	7F	7F	01	80	80
2E40-	80	80	80	C0	03	00	00	00
2E48-	00	00	00	00	00	00	00	00
2E50-	00	00	00	00	00	00	00	00
2E58-	00	00	00	00	00	00	7C	7F
2E60-	7F	7F	7F	7F	0F	00	00	00
2E68-	00	40	7F	7F	7F	7F	7F	03
2E70-	00	80	80	80	00	00	00	00
2E78-	00	00	00	00	00	00	00	00
2E80-	00	00	00	00	00	00	00	00
2E88-	00	00	00	40	7F	7F	7F	3F
2E90-	80	80	B2	B3	7F	7F	7F	7F
2E98-	7F	7F	7F	7F	01	00	00	00
2EA0-	00	00	00	00	00	00	00	00
2EAB-	00	00	00	00	00	00	00	00
2EB0-	00	00	80	78	7F	7F	7F	7F

2EB8-	80	70	7F	7F	7F	7F	1F	80
2EC0-	80	80	80	E0	01	80	80	80
2EC8-	00	00	00	00	00	00	00	00
2ED0-	00	00	00	00	00	00	00	00
2ED8-	00	00	00	00	40	79	7F	7F
2EE0-	7E	7F	7F	7F	0F	00	00	00
2EE8-	00	00	00	00	00	00	00	00
2EF0-	00	00	00	00	00	00	00	00
2EF8-	00	00	00	00	00	00	00	00
2F00-	00	00	00	00	00	00	00	00
2F08-	00	00	00	7E	7F	7F	7F	3F
2F10-	88	80	80	80	C0	7F	7F	7F
2F18-	7F	7F	7F	7F	01	00	00	00
2F20-	00	00	00	00	00	00	00	00
2F28-	00	00	00	00	00	00	00	00
2F30-	00	00	00	70	7F	7F	7F	7F
2F38-	80	60	7F	7F	7F	7F	7F	80
2F40-	80	80	80	A0	80	80	80	80
2F48-	80	00	00	00	00	00	00	00
2F50-	00	00	00	00	00	00	00	00
2F58-	00	00	00	00	50	48	01	00
2F60-	00	78	05	00	00	00	00	00
2F68-	00	00	00	00	00	00	00	00
2F70-	00	00	00	00	00	00	00	00
2F78-	00	00	00	00	00	00	00	00
2F80-	00	00	00	00	00	00	00	00
2F88-	00	00	00	7F	7F	7F	1F	80
2F90-	80	80	80	80	80	80	80	80
2F98-	80	7E	7F	03	00	00	00	00
2FA0-	00	00	00	00	00	00	00	00
2FAB-	00	00	00	00	00	00	00	00
2FB0-	00	00	80	80	7F	7F	7F	7F
2FBB-	80	80	80	7C	7F	7F	07	80
2FC0-	80	80	D0	82	80	80	78	7C
2FC8-	80	00	00	00	00	00	00	00
2FD0-	00	00	00	00	00	00	00	00
2FDB-	00	00	00	00	00	00	00	00
2FE0-	00	00	00	00	00	00	00	00
2FEB-	00	00	00	00	00	00	00	00
2FF0-	00	00	00	00	00	00	00	00
2FFB-	00	00	00	00	00	00	00	00
3000-	00	00	00	00	00	00	00	00
300B-	00	00	00	00	00	00	00	00

3010- 00 00 00 00 00 00 00 00
 3018- 00 00 00 00 00 00 00 00
 3020- 00 00 00 00 00 00 00 00
 3028- 00 00 00 00 00 00 00 00
 3030- 00 00 00 00 7E BF 80 80
 3038- 80 80 80 80 80 80 80 80
 3040- 80 80 90 80 00 00 00 00
 3048- 00 00 00 00 00 00 00 00
 3050- 00 00 00 00 00 00 00 00
 3058- 00 00 00 00 00 80 81 80
 3060- 80 80 80 80 80 80 80 80
 3068- 80 80 78 7F 7F 7F 7F 7F
 3070- 7F 67 7F 00 00 00 00 00
 3078- 00 00 00 00 00 00 00 00
 3080- 00 00 00 00 00 00 00 00
 3088- 00 00 00 00 00 00 00 00
 3090- 00 00 00 00 00 00 00 00
 3098- 00 00 00 00 00 00 00 00
 30A0- 00 00 00 00 00 00 00 00
 30AB- 00 00 00 00 00 00 00 00
 30B0- 00 00 00 00 80 80 80 80
 30B8- 80 80 80 80 80 80 80 80
 30C0- 80 80 80 82 00 00 00 00
 30C8- 00 00 00 00 00 00 00 00
 30D0- 80 80 80 80 00 00 00 00
 30D8- 00 00 00 00 00 00 80 82
 30E0- 80 7E 1F 80 80 0F 80 80
 30E8- 9A 78 7F 7F 7F 7F 7F 7F
 30F0- 7F 7F 7F 83 80 80 00 80
 30F8- 00 00 00 00 00 00 00 00
 3100- 00 00 00 00 00 00 00 00
 3108- 00 00 00 00 00 00 00 00
 3110- 00 00 00 00 00 78 7F 7F
 3118- 7F 7F 03 00 00 00 00 00
 3120- 00 00 00 00 00 00 00 00
 3128- 00 00 00 00 00 00 00 00
 3130- 00 00 00 40 81 80 80 80
 3138- 80 80 80 80 80 80 80 80
 3140- 80 80 80 E0 80 00 00 00
 3148- 00 00 00 00 00 00 00 00
 3150- 80 80 80 00 00 00 00 00
 3158- 00 00 00 00 00 00 00 00
 3160- 80 80 80 80 80 80 80 03

316B- 00 7F 7F 7F 7F 7F 7F 7F
 3170- 7F 7F 87 80 80 80 00 80
 317B- 00 00 00 00 00 00 00 00
 3180- 00 00 00 00 00 00 00 00
 318B- 00 00 00 00 00 00 00 00
 3190- 00 00 00 00 00 7C 7F 7F
 319B- 7F 7F 7F 1F 00 00 00 00
 31A0- 00 00 00 00 00 00 00 00
 31AB- 00 00 00 00 00 00 00 00
 31B0- 00 00 00 80 7E 7F 0F 80
 31B8- 80 80 80 80 80 80 80 80
 31C0- 80 80 80 C0 80 00 00 00
 31CB- 00 00 00 00 00 00 00 00
 31D0- 00 00 00 00 00 00 00 00
 31DB- 00 00 00 00 00 00 00 00
 31E0- 70 7F 7F 7F 03 00 00 00
 31EB- 00 7E 7F 7F 7F 7F 7F 7F
 31F0- 1F 80 80 80 80 00 00 00
 31FB- 00 00 00 00 00 00 00 00
 3200- 00 00 00 00 00 00 00 00
 320B- 00 00 00 00 00 00 00 00
 3210- 00 00 80 80 7F 7F 7F 7F
 321B- 7F 7F 7F 7F 00 00 00 00
 3220- 00 00 00 00 00 00 00 00
 322B- 00 00 00 00 00 00 00 00
 3230- 00 00 00 70 7F 7F 7F 07
 323B- 80 80 7C 7F 7F 07 80 80
 3240- 80 80 80 80 82 00 00 00
 324B- 00 00 00 00 00 00 00 00
 3250- 00 00 00 00 00 00 00 00
 325B- 00 00 00 00 00 00 7E 7F
 3260- 7F 7F 7F 7F 1F 00 00 00
 326B- 00 40 7F 7F 7F 7F 03 00
 3270- 00 00 80 80 00 00 00 00
 327B- 00 00 00 00 00 00 00 00
 3280- 00 00 00 00 00 00 00 00
 328B- 00 00 00 70 7F 7F 7F 3F
 3290- 80 81 82 F4 7B 7F 7F 7F
 329B- 7F 7F 7F 7F 01 00 00 00
 32A0- 00 00 00 00 00 00 00 00
 32AB- 00 00 00 00 00 00 00 00
 32B0- 00 00 80 7B 7F 7F 7F 7F
 32BB- 80 70 7F 7F 7F 7F 1F 80


```

32C0- 80 80 80 C0 01 80 80 80
32C8- 00 00 00 00 00 00 00 00
32D0- 00 00 00 00 00 00 00 00
32D8- 00 00 00 00 7B 7F 7F 1F
32E0- 7C 7F 7F 7F 0F 00 00 00
32E8- 00 00 00 00 00 00 00 00
32F0- 00 00 00 00 00 00 00 00
32F8- 00 00 00 00 00 00 00 00
3300- 00 00 00 00 00 00 00 00
3308- 00 00 40 7F 7F 7F 7F 4F
3310- 80 80 80 80 80 7C 7F 7F
3318- 7F 7F 7F 7F 01 00 00 00
3320- 00 00 00 00 00 00 00 00
3328- 00 00 00 00 00 00 00 00
3330- 00 00 00 60 7F 7F 7F 7F
3338- 80 40 7F 7F 7F 7F 7F 80
3340- 80 80 80 80 80 80 80 80
3348- 80 00 00 00 00 00 00 00
3350- 00 00 00 00 00 00 00 00
3358- 00 00 00 00 00 00 00 00
3360- 00 00 00 00 00 00 00 00
3368- 00 00 00 00 00 00 00 00
3370- 00 00 00 00 00 00 00 00
3378- 00 00 00 00 00 00 00 00
3380- 00 00 00 00 00 00 00 00
3388- 00 00 00 7F 7F 7F 37 82
3390- 80 80 80 80 80 80 80 80
3398- 80 7E 7F 00 00 00 00 00
33A0- 00 00 00 00 00 00 00 00
33A8- 00 00 00 00 00 00 00 00
33B0- 00 00 00 80 7E 7F 7F 7F
33B8- 80 80 80 60 7F 7F 01 80
33C0- 80 80 80 83 80 80 7F 7E
33C8- 07 00 00 00 00 00 00 00
33D0- 00 00 00 00 00 00 00 00
33D8- 00 00 00 00 00 00 00 00
33E0- 00 00 00 00 00 00 00 00
33E8- 00 00 00 00 00 00 00 00
33F0- 00 00 00 00 00 00 00 00
33F8- 00 00 00 00 00 00 00 00
3400- 00 00 00 00 00 00 00 00
3408- 00 00 00 00 00 00 00 00
3410- 00 00 00 00 00 00 00 00

```

3418-	00	00	00	00	00	00	00	00
3420-	00	00	00	00	00	00	00	00
3428-	00	00	00	00	00	00	00	00
3430-	00	00	00	00	02	8C	80	80
3438-	80	80	80	80	80	80	80	80
3440-	80	80	80	80	00	00	00	00
3448-	00	00	00	00	00	00	00	00
3450-	00	00	00	00	00	00	00	00
3458-	00	00	00	00	00	C0	B4	80
3460-	80	80	80	80	80	80	80	80
3468-	80	80	7C	7F	7F	7F	7F	7F
3470-	7F	7F	7F	29	03	00	00	00
3478-	00	00	00	00	00	00	00	00
3480-	00	00	00	00	00	00	00	00
3488-	00	00	00	00	00	00	00	00
3490-	00	00	00	00	00	00	00	00
3498-	00	00	00	00	00	00	00	00
34A0-	00	00	00	00	00	00	00	00
34AB-	00	00	00	00	00	00	00	00
34B0-	00	00	00	00	90	80	80	80
34B8-	80	80	80	80	80	80	80	80
34C0-	80	80	80	80	00	00	00	00
34C8-	00	00	00	00	00	00	00	00
34D0-	80	80	80	80	00	00	00	00
34D8-	00	00	00	00	00	00	40	83
34E0-	80	7E	3F	80	40	07	80	80
34E8-	9C	7C	7F	7F	7F	7F	7F	7F
34F0-	7F	7F	F6	81	80	80	00	80
34F8-	00	00	00	00	00	00	00	00
3500-	00	00	00	00	00	00	00	00
3508-	00	00	00	00	00	00	00	00
3510-	00	00	00	00	00	7C	7F	7F
3518-	7F	7F	0F	00	00	00	00	00
3520-	00	00	00	00	00	00	00	00
3528-	00	00	00	00	00	00	00	00
3530-	00	00	00	40	81	80	80	80
3538-	80	80	80	80	80	80	80	80
3540-	80	80	80	80	80	00	00	00
3548-	00	00	00	00	00	00	00	00
3550-	80	80	80	00	00	00	00	00
3558-	00	00	00	00	00	00	00	00
3560-	80	C9	80	80	80	C0	85	00
3568-	00	78	7F	7F	7F	7F	7F	7F

3570- 7F 7F 83 80 80 80 00 80
 3578- 00 00 00 00 00 00 00 00
 3580- 00 00 00 00 00 00 00 00
 3588- 00 00 00 00 00 00 00 00
 3590- 00 00 00 00 7C 7F 7F 7F
 3598- 7F 7F 7F 1F 00 00 00 00
 35A0- 00 00 00 00 00 00 00 00
 35AB- 00 00 00 00 00 00 00 00
 35B0- 00 00 00 40 7F 7F 1F 80
 35B8- 80 80 80 80 80 80 80 80
 35C0- 80 80 80 80 80 00 00 00
 35C8- 00 00 00 00 00 00 00 00
 35D0- 00 00 00 00 00 00 00 00
 35D8- 00 00 00 00 00 00 00 00
 35E0- 78 7F 7F 7F 07 00 00 00
 35E8- 00 7E 7F 7F 7F 7F 7F 7F
 35F0- 0F 80 80 80 80 00 00 00
 35FB- 00 00 00 00 00 00 00 00
 3600- 00 00 00 00 00 00 00 00
 3608- 00 00 00 00 00 60 7F 00
 3610- 00 80 80 80 7F 7F 7F 7F
 3618- 7F 7F 7F 7F 00 00 00 00
 3620- 00 00 00 00 00 00 00 00
 3628- 00 00 00 00 00 00 00 00
 3630- 00 00 00 70 7F 7F 7F 0F
 3638- 80 80 7E 7F 7F 3F 80 80
 3640- 80 80 80 80 80 00 00 00
 3648- 00 00 00 00 00 00 00 00
 3650- 00 00 00 00 00 00 00 00
 3658- 00 00 00 00 00 00 7F 7F
 3660- 7F 7F 7F 7F 1F 00 00 00
 3668- 00 00 7F 7F 7F 7F 00 00
 3670- 00 00 80 80 00 00 00 00
 3678- 00 00 00 00 00 00 00 00
 3680- 00 00 00 00 00 00 00 00
 3688- 00 00 00 78 7F 7F 7F 3F
 3690- 80 A3 80 E0 7B 7F 7F 7F
 3698- 7F 7F 7F 7F 00 00 00 00
 36A0- 00 00 00 00 00 00 00 00
 36AB- 00 00 00 00 00 00 00 00
 36B0- 00 00 80 78 7F 7F 7F 7F
 36B8- 01 70 7F 7F 7F 7F 3F 80
 36C0- 80 80 80 80 80 80 80 80

```

36C8- 80 00 00 00 00 00 00 00
36D0- 00 00 00 00 00 00 00 00
36D8- 00 00 00 00 7C 7F 7F 03
36E0- 7C 7F 7F 7F 07 00 00 00
36E8- 00 00 00 00 00 00 00 00
36F0- 00 00 00 00 00 00 00 00
36F8- 00 00 00 00 00 00 00 00
3700- 00 00 00 00 00 00 00 00
3708- 00 00 40 7F 7F 7F 7F 03
3710- 81 80 80 80 80 7C 77 7E
3718- 7F 7F 7F 7F 01 00 00 00
3720- 00 00 00 00 00 00 00 00
3728- 00 00 00 00 00 00 00 00
3730- 00 00 00 60 7F 7F 7F 7F
3738- 80 40 7F 7F 7F 7F 7F 80
3740- 80 80 80 80 80 80 80 80
3748- 80 00 00 00 00 00 00 00
3750- 00 00 00 00 00 00 00 00
3758- 00 00 00 00 00 00 00 00
3760- 00 00 00 00 00 00 00 00
3768- 00 00 00 00 00 00 00 00
3770- 00 00 00 00 00 00 00 00
3778- 00 00 00 00 00 00 00 00
3780- 00 00 00 00 00 00 00 00
3788- 00 00 00 7F 7F 7F 07 80
3790- 80 80 80 80 80 80 80 80
3798- 80 7C 3F 00 00 00 00 00
37A0- 00 00 00 00 00 00 00 00
37A8- 00 00 00 00 00 00 00 00
37B0- 00 00 00 80 7C 7F 7F 7F
37B8- 80 80 80 80 7E 3F 80 80
37C0- 80 80 80 83 BA 60 7F 7F
37C8- 0F 00 00 00 00 00 00 00
37D0- 00 00 00 00 00 00 00 00
37D8- 00 00 00 00 00 00 00 00
37E0- 00 00 00 00 00 00 00 00
37E8- 00 00 00 00 00 00 00 00
37F0- 00 00 00 00 00 00 00 00
37F8- 00 00 00 00 00 00 00 00
3800- 00 00 00 00 00 00 00 00
3808- 00 00 00 00 00 00 00 00
3810- 00 00 00 00 00 00 00 00
3818- 00 00 00 00 00 00 00 00

```

```

3820- 00 00 00 00 00 00 00 00
3828- 00 00 00 00 00 00 00 00
3830- 00 00 00 00 40 8F 80 80
3838- 80 80 80 80 80 80 80 80
3840- 80 80 90 81 00 00 00 00
3848- 00 00 00 00 00 00 00 00
3850- 80 80 80 00 00 00 00 00
3858- 00 00 00 00 00 80 82 80
3860- 80 80 80 80 80 80 80 80
3868- 80 80 7E 7F 7F 7F 7F 7F
3870- 7F 7F 7F 7F 87 00 00 00
3878- 00 00 00 00 00 00 00 00
3880- 00 00 00 00 00 00 00 00
3888- 00 00 00 00 00 00 00 00
3890- 00 00 00 00 00 00 00 60
3898- 0F 00 00 00 00 00 00 00
38A0- 00 00 00 00 00 00 00 00
38A8- 00 00 00 00 00 00 00 00
38B0- 00 00 00 00 98 80 80 80
38B8- 80 80 80 80 80 80 80 80
38C0- 80 80 80 88 00 00 00 00
38C8- 00 00 00 00 00 00 00 00
38D0- 80 80 80 80 00 00 00 00
38D8- 00 00 00 00 00 00 40 A3
38E0- 80 7E 1F 80 60 03 80 80
38E8- 8C 78 7F 7F 7F 7F 7F 7F
38F0- 7F 1F 80 80 80 80 00 80
38F8- 00 00 00 00 00 00 00 00
3900- 00 00 00 00 00 00 00 00
3908- 00 00 00 00 00 00 00 00
3910- 00 00 00 00 00 7C 7F 7F
3918- 7F 7F 0F 00 00 00 00 00
3920- 00 00 00 00 00 00 00 00
3928- 00 00 00 00 00 00 00 00
3930- 00 00 00 40 81 80 80 80
3938- 80 80 80 80 80 80 80 80
3940- 80 80 80 F0 01 00 00 00
3948- 00 00 00 00 00 00 00 00
3950- 80 80 00 00 00 00 00 00
3958- 00 00 00 00 00 00 00 00
3960- 00 80 80 80 80 82 85 00
3968- 00 7F 7F 7F 7F 7F 7F 7F
3970- 7F 7F 81 80 80 80 00 00

```

```

397B- 00 00 00 00 00 00 00 00
3980- 00 00 00 00 00 00 00 00
398B- 00 00 00 00 00 00 00 00
3990- 00 00 00 00 7F 7F 7F 7F
399B- 7F 7F 7F 1F 00 00 00 00
39A0- 00 00 00 00 00 00 00 00
39AB- 00 00 00 00 00 00 00 00
39B0- 00 00 00 40 7F 7F 3F 80
39BB- 80 80 80 80 80 80 80 80
39C0- 80 80 80 80 03 00 00 00
39CB- 00 00 00 00 00 00 00 00
39D0- 00 00 00 00 00 00 00 00
39DB- 00 00 00 00 00 00 00 00
39E0- 7C 7F 7F 7F 07 00 00 00
39EB- 00 7E 7F 7F 7F 7F 7F 7F
39F0- 0F 80 80 80 80 00 00 00
39FB- 00 00 00 00 00 00 00 00
3A00- 00 00 00 00 00 00 00 00
3A0B- 00 00 00 00 40 7F 7F 00
3A10- 00 80 80 80 7F 7F 7F 7F
3A1B- 7F 7F 7F 7F 01 00 00 00
3A20- 00 00 00 00 00 00 00 00
3A2B- 00 00 00 00 00 00 00 00
3A30- 00 00 00 70 7F 7F 7F 0F
3A3B- 80 80 7F 7F 7F 7F 80 80
3A40- 80 80 80 C0 81 00 00 00
3A4B- 00 00 00 00 00 00 00 00
3A50- 00 00 00 00 00 00 00 00
3A5B- 00 00 00 00 00 40 7F 7F
3A60- 7F 7F 7F 7F 1F 00 00 00
3A6B- 00 00 7E 7F 7F 3F 00 00
3A70- 00 00 80 00 00 00 00 00
3A7B- 00 00 00 00 00 00 00 00
3A80- 00 00 00 00 00 00 00 00
3A8B- 00 00 00 78 7F 7F 7F 3F
3A90- 80 84 80 80 78 7F 7F 7F
3A9B- 7F 7F 7F 7F 01 00 00 00
3AA0- 00 00 00 00 00 00 00 00
3AAB- 00 00 00 00 00 00 00 00
3AB0- 00 00 80 78 7F 7F 7F 7F
3ABB- 01 70 7F 7F 7F 7F 3F 80
3AC0- 80 80 80 80 80 80 80 80
3ACB- 80 00 00 00 00 00 00 00

```

```

3AD0- 00 00 00 00 00 00 00 00
3ADB- 00 00 00 00 7E 7F 7F 01
3AE0- 7C 7F 7F 7F 03 00 00 00
3AEB- 00 00 00 00 00 00 00 00
3AF0- 00 00 00 00 00 00 00 00
3AF8- 00 00 00 00 00 00 00 00
3B00- 00 00 00 00 00 00 00 00
3B08- 00 00 40 7F 7F 7F 7F 0B
3B10- 80 80 80 80 80 80 80 0B
3B18- 7F 7F 7F 3F 00 00 00 00
3B20- 00 00 00 00 00 00 00 00
3B28- 00 00 00 00 00 00 00 00
3B30- 00 00 00 60 7F 7F 7F 7F
3B38- 80 80 7F 7F 7F 7F 3F 80
3B40- 80 80 80 81 80 80 80 80
3B48- 80 00 00 00 00 00 00 00
3B50- 00 00 00 00 00 00 00 00
3B58- 00 00 00 00 00 00 00 00
3B60- 00 00 00 00 00 00 00 00
3B68- 00 00 00 00 00 00 00 00
3B70- 00 00 00 00 00 00 00 00
3B78- 00 00 00 00 00 00 00 00
3B80- 00 00 00 00 00 00 00 00
3B88- 00 00 00 7E 7F 7F 13 80
3B90- 80 80 80 80 80 80 80 80
3B98- 80 58 05 00 00 00 00 00
3BA0- 00 00 00 00 00 00 00 00
3BAB- 00 00 00 00 00 00 00 00
3BB0- 00 00 00 00 78 7F 7F 3F
3BB8- 80 80 80 80 80 80 80 80
3BC0- 80 80 70 C7 BE 7B 7F 7F
3BC8- 0F 00 00 00 00 00 00 00
3BD0- 00 00 00 00 00 00 00 00
3BD8- 00 00 00 00 00 00 00 00
3BE0- 00 00 00 00 00 00 00 00
3BE8- 00 00 00 00 00 00 00 00
3BF0- 00 00 00 00 00 00 00 00
3BF8- 00 00 00 00 00 00 00 00
3C00- 00 00 00 00 00 00 00 00
3C08- 00 00 00 00 00 00 00 00
3C10- 00 00 00 00 00 00 00 00
3C18- 00 00 00 00 00 00 00 00
3C20- 00 00 00 00 00 00 00 00

```

```

3C2B- 00 00 00 00 00 00 00 00
3C30- 00 00 00 00 00 9F 80 80
3C38- 80 80 80 80 80 80 80 80
3C40- 80 80 80 80 80 00 00 00
3C48- 00 00 00 00 00 00 00 00
3C50- 80 80 80 00 00 00 00 00
3C58- 00 00 00 00 00 80 81 80
3C60- 80 80 80 80 80 30 80 80
3C68- 80 B4 7F 7F 7F 7F 7F 7F
3C70- 7F 7F 7F 7F 80 00 00 80
3C78- 00 00 00 00 00 00 00 00
3C80- 00 00 00 00 00 00 00 00
3C88- 00 00 00 00 00 00 00 00
3C90- 00 00 00 00 00 00 00 7E
3C98- 7F 00 00 00 00 00 00 00
3CA0- 00 00 00 00 00 00 00 00
3CAB- 00 00 00 00 00 00 00 00
3CB0- 00 00 00 00 9C 80 80 80
3CB8- 80 80 80 80 80 80 80 80
3CC0- 80 80 80 90 80 00 00 00
3CC8- 00 00 00 00 00 00 00 00
3CD0- 80 80 80 80 00 00 00 00
3CD8- 00 00 00 00 00 00 00 9E
3CE0- 80 7C 0F 80 7C 01 80 C8
3CE8- 08 7F 7F 7F 7F 7F 7F 7F
3CF0- 7F 3F 9B 81 80 80 00 80
3CF8- 00 00 00 00 00 00 00 00
3D00- 00 00 00 00 00 00 00 00
3D08- 00 00 00 00 00 00 00 00
3D10- 00 00 00 00 00 7E 7F 7F
3D18- 7F 7F 7F 00 00 00 00 00
3D20- 00 00 00 00 00 00 00 00
3D28- 00 00 00 00 00 00 00 00
3D30- 00 00 00 40 81 80 80 80
3D38- 80 80 80 80 80 80 80 80
3D40- 80 80 80 E0 01 00 00 00
3D48- 00 00 00 00 00 00 00 00
3D50- 00 00 00 00 00 00 00 00
3D58- 00 00 00 00 00 00 00 00
3D60- 00 80 80 88 80 B2 00 00
3D68- 00 7B 7F 7F 7F 7F 7F 7F
3D70- 7F 3F 80 80 80 80 00 00
3D78- 00 00 00 00 00 00 00 00

```



```

3D80- 00 00 00 00 00 00 00 00
3D88- 00 00 00 00 00 00 00 00
3D90- 00 00 00 00 7F 7F 7F 7F
3D98- 7F 7F 7F 3F 00 00 00 00
3DA0- 00 00 00 00 00 00 00 00
3DAB- 00 00 00 00 00 00 00 00
3DB0- 00 00 00 60 7F 7F 7F 80
3DB8- 80 80 80 80 00 80 80 80
3DC0- 80 80 80 C0 03 00 00 00
3DC8- 00 00 00 00 00 00 00 00
3DD0- 00 00 00 00 00 00 00 00
3DD8- 00 00 00 00 00 00 00 00
3DE0- 7E 7F 7F 7F 07 00 00 00
3DE8- 00 7C 7F 7F 7F 7F 7F 7F
3DF0- 03 80 80 80 80 00 00 00
3DF8- 00 00 00 00 00 00 00 00
3E00- 00 00 00 00 00 00 00 00
3E08- 00 00 00 00 60 7F 7F 07
3E10- 00 80 80 80 7E 7F 7F 7F
3E18- 7F 7F 7F 7F 00 00 00 00
3E20- 00 00 00 00 00 00 00 00
3E28- 00 00 00 00 00 00 00 00
3E30- 00 00 00 70 7F 7F 7F 1F
3E38- 80 40 7F 7F 7F 7F 01 80
3E40- 80 80 80 80 80 00 00 00
3E48- 00 00 00 00 00 00 00 00
3E50- 00 00 00 00 00 00 00 00
3E58- 00 00 00 00 00 60 7F 7F
3E60- 7F 7F 7F 7F 1F 00 00 00
3E68- 00 00 78 7F 7F 0F 00 00
3E70- 00 00 00 00 00 00 00 00
3E78- 00 00 00 00 00 00 00 00
3E80- 00 00 00 00 00 00 00 00
3E88- 00 00 00 78 7F 7F 7F 3F
3E90- A0 80 80 80 F8 7F 7F 7F
3E98- 7F 7F 7F 7F 01 00 00 00
3EA0- 00 00 00 00 00 00 00 00
3EAB- 00 00 00 00 00 00 00 00
3EB0- 00 00 80 78 7F 7F 7F 7F
3EB8- 01 70 7F 7F 7F 7F 7F 80
3EC0- 80 80 80 80 80 80 80 80
3EC8- 80 00 00 00 00 00 00 00
3ED0- 00 00 00 00 00 00 00 00

```

```

3ED8- 00 00 00 00 7C 7F 7F 00
3EE0- 7B 7F 7F 7F 01 00 00 00
3EE8- 00 00 00 00 00 00 00 00
3EF0- 00 00 00 00 00 00 00 00
3EF8- 00 00 00 00 00 00 00 00
3F00- 00 00 00 00 00 00 00 00
3F08- 00 00 40 7F 7F 7F 7F 13
3F10- 80 80 80 80 80 80 80 80
3F18- 7F 7F 7F 3F 00 00 00 00
3F20- 00 00 00 00 00 00 00 00
3F28- 00 00 00 00 00 00 00 00
3F30- 00 00 00 70 7F 7F 7F 7F
3F38- 80 80 7E 7F 7F 7F 3F 80
3F40- 80 80 80 82 80 80 80 80
3F48- 80 00 00 00 00 00 00 00
3F50- 00 00 00 00 00 00 00 00
3F58- 00 00 00 00 00 00 00 00
3F60- 00 00 00 00 00 00 00 00
3F68- 00 00 00 00 00 00 00 00
3F70- 00 00 00 00 00 00 00 00
3F78- 00 00 00 00 00 00 00 00
3F80- 00 00 00 00 00 00 00 00
3F88- 00 00 00 7C 7F 7F 03 80
3F90- 80 80 80 80 80 80 80 80
3F98- 80 80 80 00 00 00 00 00
3FA0- 00 00 00 00 00 00 00 00
3FAB- 00 00 00 00 00 00 00 00
3FB0- 00 00 00 00 60 7F 7F 3F
3FB8- 80 80 80 80 80 80 80 80
3FC0- 80 80 74 8F FC 7F 7F 7F
3FC8- 7F 00 00 00 00 00 00 00
3FD0- 00 00 00 00 00 00 00 00
3FD8- 00 00 00 00 00 00 00 00
3FE0- 00 00 00 00 00 00 00 00
3FE8- 00 00 00 00 00 00 00 00
3FF0- 00 00 00 00 00 00 00 00
3FF8- 00 00 00 00 00 00 00 00

```

5. G2

```

2000- 00 00 00 00 00 00 00 00
2008- 00 00 00 00 00 00 00 00
2010- 00 00 00 00 00 00 00 00
2018- 00 00 00 00 00 00 00 00
2020- 00 00 00 00 00 00 00 00

```

202B-	00	00	00	00	00	00	00	00
2030-	00	00	00	7C	7F	7F	81	80
2038-	80	80	80	80	80	80	80	80
2040-	80	80	80	00	00	00	00	00
2048-	00	00	00	00	00	00	00	00
2050-	00	00	00	00	00	00	00	00
2058-	00	00	00	00	60	7F	7F	1F
2060-	80	80	80	80	80	80	80	80
2068-	80	80	78	8F	F8	7F	7F	7F
2070-	7F	00	00	00	00	00	00	00
2078-	00	00	00	00	00	00	00	00
2080-	00	00	00	00	00	00	00	00
2088-	00	00	00	00	00	00	00	00
2090-	00	00	00	00	00	00	00	00
2098-	00	00	00	00	00	00	00	00
20A0-	00	00	00	00	00	00	00	00
20AB-	00	00	00	00	00	00	00	00
20B0-	00	00	00	00	00	81	80	80
20B8-	80	80	80	80	80	80	80	80
20C0-	80	80	80	80	00	00	00	00
20CB-	00	00	00	00	00	00	00	00
20D0-	80	80	80	00	00	00	00	00
20DB-	00	00	00	00	00	00	80	80
20E0-	80	60	07	80	80	78	80	80
20EB-	80	84	7F	7F	7F	7F	7F	7F
20F0-	7F	7F	7F	9F	80	80	00	80
20FB-	00	00	00	00	00	00	00	00
2100-	00	00	00	00	00	00	00	00
2108-	00	00	00	00	00	00	00	00
2110-	00	00	00	00	00	00	60	7F
2118-	7F	07	00	00	00	00	00	00
2120-	00	00	00	00	00	00	00	00
2128-	00	00	00	00	00	00	00	00
2130-	00	00	00	00	9C	80	80	80
2138-	80	80	80	80	80	80	80	80
2140-	80	80	80	B8	80	00	00	00
2148-	00	00	00	00	00	00	00	00
2150-	80	80	80	80	00	00	00	00
2158-	00	00	00	00	00	00	00	90
2160-	81	78	01	80	7E	80	80	D8
2168-	00	78	7F	7F	7F	7F	7F	7F
2170-	7F	7F	7F	80	80	80	00	80
2178-	00	00	00	00	00	00	00	00

2180-	00	00	00	00	00	00	00	00
2188-	00	00	00	00	00	00	00	00
2190-	00	00	00	00	40	7F	7F	7F
2198-	7F	7F	7F	01	00	00	00	00
21A0-	00	00	00	00	00	00	00	00
21A8-	00	00	00	00	00	00	00	00
21B0-	00	00	00	40	81	80	80	80
21B8-	80	80	80	80	80	80	80	80
21C0-	80	80	80	80	81	00	00	00
21C8-	00	00	00	00	00	00	00	00
21D0-	00	00	00	00	00	00	00	00
21D8-	00	00	00	00	00	00	00	00
21E0-	00	78	7F	5B	ED	00	00	00
21E8-	00	7F	7F	7F	7F	7F	7F	7F
21F0-	7F	1F	80	80	80	00	00	00
21F8-	00	00	00	00	00	00	00	00
2200-	00	00	00	00	00	00	00	00
2208-	00	00	00	00	00	00	00	00
2210-	00	00	00	00	7F	7F	7F	7F
2218-	7F	7F	7F	1F	00	00	00	00
2220-	00	00	00	00	00	00	00	00
2228-	00	00	00	00	00	00	00	00
2230-	00	00	00	60	7F	7F	7F	01
2238-	80	80	80	80	80	80	80	80
2240-	80	80	80	80	03	00	00	00
2248-	00	00	00	00	00	00	00	00
2250-	00	00	00	00	00	00	00	00
2258-	00	00	00	00	00	00	00	3E
2260-	7E	7F	7F	7F	0F	00	00	00
2268-	00	70	7F	7F	7F	7F	7F	7F
2270-	01	80	80	80	80	00	00	00
2278-	00	00	00	00	00	00	00	00
2280-	00	00	00	00	00	00	00	00
2288-	00	00	00	00	78	7F	7F	0F
2290-	00	80	80	8A	7E	7F	7F	7F
2298-	7F	7F	7F	7F	01	00	00	00
22A0-	00	00	00	00	00	00	00	00
22A8-	00	00	00	00	00	00	00	00
22B0-	00	00	00	70	7F	7F	7F	3F
22B8-	80	60	7F	7F	7F	7F	03	80
22C0-	80	80	80	E0	01	00	00	80
22C8-	00	00	00	00	00	00	00	00
22D0-	00	00	00	00	00	00	00	00

22D8- 00 00 00 00 00 70 7F 7F
 22E0- 7F 7F 7F 7F 1F 00 00 00
 22E8- 00 00 60 7F 7F 07 00 00
 22F0- 00 00 00 00 00 00 00 00
 22F8- 00 00 00 00 00 00 00 00
 2300- 00 00 00 00 00 00 00 00
 2308- 00 00 00 7E 7F 7F 7F 7F
 2310- AA 80 80 80 F0 7F 7F 7F
 2318- 7F 7F 7F 7F 01 00 00 00
 2320- 00 00 00 00 00 00 00 00
 2328- 00 00 00 00 00 00 00 00
 2330- 00 00 80 70 7F 67 7F 47
 2338- 01 70 7E 7B 7F 7F 7F 80
 2340- 80 80 80 80 80 80 80 80
 2348- 80 00 00 00 00 00 00 00
 2350- 00 00 00 00 00 00 00 00
 2358- 00 00 00 00 7C 7F 3F 00
 2360- 70 7F 7F 7F 00 00 00 00
 2368- 00 00 00 00 00 00 00 00
 2370- 00 00 00 00 00 00 00 00
 2378- 00 00 00 00 00 00 00 00
 2380- 00 00 00 00 00 00 00 00
 2388- 00 00 40 7F 7F 7F 7F 21
 2390- 80 80 80 80 80 80 80 80
 2398- 7E 7F 7F 3F 00 00 00 00
 23A0- 00 00 00 00 00 00 00 00
 23AB- 00 00 00 00 00 00 00 00
 23B0- 00 00 00 40 7F 1F E0 3F
 23B8- 80 80 7B 7F 7F 7F 3F 80
 23C0- 80 80 C0 40 80 80 80 80
 23CB- 00 00 00 00 00 00 00 00
 23D0- 00 00 00 00 00 00 00 00
 23D8- 00 00 00 00 00 00 00 00
 23E0- 00 00 00 00 00 00 00 00
 23E8- 00 00 00 00 00 00 00 00
 23F0- 00 00 00 00 00 00 00 00
 23F8- 00 00 00 00 00 00 00 00
 2400- 00 00 00 00 00 00 00 00
 2408- 00 00 00 00 00 00 00 00
 2410- 00 00 00 00 00 00 00 00
 2418- 00 00 00 00 00 00 00 00
 2420- 00 00 00 00 00 00 00 00
 2428- 00 00 00 00 00 00 00 00

```

2430- 00 00 00 78 7F 7F 81 80
2438- 80 80 80 80 80 80 80 80
2440- 80 80 BE 00 00 00 00 00
2448- 00 00 00 00 00 00 00 00
2450- 00 00 00 00 00 00 00 00
2458- 00 00 00 00 00 7F 7F 0F
2460- 80 80 80 80 80 80 80 80
2468- 80 80 78 7F 78 7F 7F 7F
2470- 7F 01 00 00 00 00 00 00
2478- 00 00 00 00 00 00 00 00
2480- 00 00 00 00 00 00 00 00
2488- 00 00 00 00 00 00 00 00
2490- 00 00 00 00 00 00 00 00
2498- 00 00 00 00 00 00 00 00
24A0- 00 00 00 00 00 00 00 00
24A8- 00 00 00 00 00 00 00 00
24B0- 00 00 00 00 A0 80 80 80
24B8- 80 80 80 80 80 80 80 80
24C0- 80 80 80 80 00 00 00 00
24C8- 00 00 00 00 00 00 00 00
24D0- 80 80 80 00 00 00 00 00
24D8- 00 00 00 00 00 00 94 80
24E0- 80 7C 0F 80 80 78 80 80
24E8- 80 61 7F 7F 7F 7F 7F 7F
24F0- 7F 7F 7F 87 80 80 00 80
24F8- 00 00 00 00 00 00 00 00
2500- 00 00 00 00 00 00 00 00
2508- 00 00 00 00 00 00 00 00
2510- 00 00 00 00 00 00 78 7F
2518- 7F 0F 00 00 00 00 00 00
2520- 00 00 00 00 00 00 00 00
2528- 00 00 00 00 00 00 00 00
2530- 00 00 00 00 BE 80 80 80
2538- 80 80 80 80 80 80 80 80
2540- 80 80 80 80 00 00 00 00
2548- 00 00 00 00 00 00 00 00
2550- 80 80 80 00 00 00 00 00
2558- 00 00 00 00 00 00 00 70
2560- 80 80 80 80 3C 80 80 EA
2568- 00 7F 7F 7F 7F 7F 7F 7F
2570- 7F 7F BF 80 80 80 00 80
2578- 00 00 00 00 00 00 00 00
2580- 00 00 00 00 00 00 00 00

```

2588- 00 00 00 00 00 00 00 00
 2590- 00 00 00 00 60 7F 7F 7F
 2598- 7F 7F 7F 01 00 00 00 00
 25A0- 00 00 00 00 00 00 00 00
 25A8- 00 00 00 00 00 00 00 00
 25B0- 00 00 00 80 83 7F 81 80
 25B8- 80 80 80 80 80 80 80 80
 25C0- 80 80 80 80 80 00 00 00
 25C8- 00 00 00 00 00 00 00 00
 25D0- 00 00 00 00 00 00 00 00
 25D8- 00 00 00 00 00 00 00 00
 25E0- 00 7C 7F 3F 00 00 00 00
 25E8- 00 7C 7F 7F 7F 7F 7F 7F
 25F0- 7F 9F 80 80 80 00 00 00
 25F8- 00 00 00 00 00 00 00 00
 2600- 00 00 00 00 00 00 00 00
 2608- 00 00 00 00 00 00 00 00
 2610- 00 00 00 00 00 7E 7F 7F
 2618- 7F 7F 7F 3F 00 00 00 00
 2620- 00 00 00 00 00 00 00 00
 2628- 00 00 00 00 00 00 00 00
 2630- 00 00 00 60 7F 7F 7F 03
 2638- 80 80 80 80 80 80 80 80
 2640- 80 80 80 80 80 00 00 00
 2648- 00 00 00 00 00 00 00 00
 2650- 00 00 00 00 00 00 00 00
 2658- 00 00 00 00 00 00 40 7F
 2660- 7F 7F 7F 7F 0F 00 00 00
 2668- 00 78 7F 7F 7F 7F 7F 7F
 2670- 00 80 80 80 00 00 00 00
 2678- 00 00 00 00 00 00 00 00
 2680- 00 00 00 00 00 00 00 00
 2688- 00 00 00 00 7C 7F 7F 0F
 2690- 80 80 88 90 7E 7F 7F 7F
 2698- 7F 7F 7F 7F 01 00 00 00
 26A0- 00 00 00 00 00 00 00 00
 26A8- 00 00 00 00 00 00 00 00
 26B0- 00 00 00 70 7F 7F 7F 3F
 26B8- 80 60 7F 7F 7F 7F 07 80
 26C0- 80 80 80 80 80 00 80 80
 26C8- 00 00 00 00 00 00 00 00
 26D0- 00 00 00 00 00 00 00 00
 26D8- 00 00 00 00 00 70 7F 7F

```

26E0- 7F 7F 7F 7F 0F 00 00 00
26E8- 00 00 60 7F 3F 00 00 00
26F0- 00 00 00 00 00 00 00 00
26F8- 00 00 00 00 00 00 00 00
2700- 00 00 00 00 00 00 00 00
2708- 00 00 00 7E 7F 7F 7F 1F
2710- C2 80 80 80 E0 7F 7F 7F
2718- 7F 7F 7F 7F 01 00 00 00
2720- 00 00 00 00 00 00 00 00
2728- 00 00 00 00 00 00 00 00
2730- 00 00 80 70 7F 67 7F 47
2738- 01 70 7F 7B 7F 7F 7F 80
2740- 80 80 80 88 80 80 80 80
2748- 80 00 00 00 00 00 00 00
2750- 00 00 00 00 00 00 00 00
2758- 00 00 00 00 7C 7F 1F 00
2760- 60 7F 7F 0F 00 00 00 00
2768- 00 00 00 00 00 00 00 00
2770- 00 00 00 00 00 00 00 00
2778- 00 00 00 00 00 00 00 00
2780- 00 00 00 00 00 00 00 00
2788- 00 00 00 7F 7F 7F 7F B3
2790- 80 80 80 80 80 80 80 80
2798- 6C 7F 7F 1F 00 00 00 00
27A0- 00 00 00 00 00 00 00 00
27A8- 00 00 00 00 00 00 00 00
27B0- 00 00 00 80 7F 7F FC 7F
27B8- 80 80 70 7F 7F 7F 1F 80
27C0- 80 80 80 E2 81 80 80 80
27C8- 80 00 00 00 00 00 00 00
27D0- 00 00 00 00 00 00 00 00
27D8- 00 00 00 00 00 00 00 00
27E0- 00 00 00 00 00 00 00 00
27E8- 00 00 00 00 00 00 00 00
27F0- 00 00 00 00 00 00 00 00
27F8- 00 00 00 00 00 00 00 00
2800- 00 00 00 00 00 00 00 00
2808- 00 00 00 00 00 00 00 00
2810- 00 00 00 00 00 00 00 00
2818- 00 00 00 00 00 00 00 00
2820- 00 00 00 00 00 00 00 00
2828- 00 00 00 00 00 00 00 00
2830- 00 00 00 70 7F 7F 81 80

```



```

2838- 80 80 80 80 80 80 80 80
2840- 80 80 86 00 00 00 00 00
2848- 00 00 00 00 00 00 00 00
2850- 00 00 00 00 00 00 00 00
2858- 00 00 00 00 00 7F 7F 07
2860- 80 80 80 80 80 80 80 80
2868- 80 E0 78 7F 7D 7F 7F 7F
2870- 7F 02 00 00 00 00 00 00
2878- 00 00 00 00 00 00 00 00
2880- 00 00 00 00 00 00 00 00
2888- 00 00 00 00 00 00 00 00
2890- 00 00 00 00 00 00 00 00
2898- 00 00 00 00 00 00 00 00
28A0- 00 00 00 00 00 00 00 00
28A8- 00 00 00 00 00 00 00 00
28B0- 00 00 00 00 A0 80 80 80
28B8- 80 80 80 80 80 80 80 80
28C0- 80 80 80 88 80 00 00 00
28C8- 00 00 00 00 00 00 00 00
28D0- 80 80 80 00 00 00 00 00
28D8- 00 00 00 00 00 00 90 80
28E0- 80 7E 1F 80 80 3C 80 80
28E8- A0 70 7F 7F 7F 7F 7F 7F
28F0- 7F 7F 7F 87 80 80 00 80
28F8- 00 00 00 00 00 00 00 00
2900- 00 00 00 00 00 00 00 00
2908- 00 00 00 00 00 00 00 00
2910- 00 00 00 00 00 40 7F 7F
2918- 7F 7F 00 00 00 00 00 00
2920- 00 00 00 00 00 00 00 00
2928- 00 00 00 00 00 00 00 00
2930- 00 00 00 00 86 80 80 80
2938- 80 80 80 80 80 80 80 80
2940- 80 80 80 D0 00 00 00 00
2948- 00 00 00 00 00 00 00 00
2950- 80 80 80 00 00 00 00 00
2958- 00 00 00 00 00 00 00 00
2960- A4 80 80 80 80 80 A0 80
2968- 00 7F 7F 7F 7F 7F 7F 7F
2970- 7F 7F 8F 80 80 80 00 80
2978- 00 00 00 00 00 00 00 00
2980- 00 00 00 00 00 00 00 00
2988- 00 00 00 00 00 00 00 00

```

2990- 00 00 00 00 7B 7F 7F 7F
 2998- 7F 7F 7F 07 00 00 00 00
 29A0- 00 00 00 00 00 00 00 00
 29A8- 00 00 00 00 00 00 00 00
 29B0- 00 00 00 80 63 7F 07 80
 29B8- 80 80 80 80 80 80 80 80
 29C0- 80 80 80 C0 01 00 00 00
 29C8- 00 00 00 00 00 00 00 00
 29D0- 00 00 00 00 00 00 00 00
 29D8- 00 00 00 00 00 00 00 00
 29E0- 40 7F 7F 7F 00 00 00 00
 29E8- 00 7F 7F 7F 7F 7F 7F 7F
 29F0- 7F 80 80 80 80 00 00 00
 29F8- 00 00 00 00 00 00 00 00
 2A00- 00 00 00 00 00 00 00 00
 2A08- 00 00 00 00 00 00 00 00
 2A10- 00 00 00 80 7F 7F 7F 7F
 2A18- 7F 7F 7F 3F 00 00 00 00
 2A20- 00 00 00 00 00 00 00 00
 2A28- 00 00 00 00 00 00 00 00
 2A30- 00 00 00 70 7F 7F 7F 03
 2A38- 80 80 80 E0 1D 80 80 80
 2A40- 80 80 80 80 03 00 00 00
 2A48- 00 00 00 00 00 00 00 00
 2A50- 00 00 00 00 00 00 00 00
 2A58- 00 00 00 00 00 00 70 7F
 2A60- 7F 7F 7F 7F 1F 00 00 00
 2A68- 00 70 7F 7F 7F 7F 7F 1F
 2A70- 00 80 80 80 00 00 00 00
 2A78- 00 00 00 00 00 00 00 00
 2A80- 00 00 00 00 00 00 00 00
 2A88- 00 00 00 00 7F 7F 7F 1F
 2A90- 80 80 80 93 7E 7F 7F 7F
 2A98- 7F 7F 7F 7F 00 00 00 00
 2AA0- 00 00 00 00 00 00 00 00
 2AAB- 00 00 00 00 00 00 00 00
 2AB0- 00 00 00 7B 7F 7F 83 BC
 2AB8- 80 60 7F 7F 7F 0F 80
 2AC0- 80 80 80 80 80 00 80 80
 2AC8- 00 00 00 00 00 00 00 00
 2AD0- 00 00 00 00 00 00 00 00
 2ADB- 00 00 00 00 00 7B 7F 7F
 2AE0- 7F 7F 7F 7F 0F 00 00 00

```

2AEB- 00 00 00 00 00 00 00 00
2AF0- 00 00 00 00 00 00 00 00
2AFB- 00 00 00 00 00 00 00 00
2B00- 00 00 00 00 00 00 00 00
2B08- 00 00 00 00 7E 7F 7F 7F
2B10- BC 80 80 80 80 E0 7F 7F
2B18- 7F 7F 7F 7F 01 00 00 00
2B20- 00 00 00 00 00 00 00 00
2B28- 00 00 00 00 00 00 00 00
2B30- 00 00 00 70 7F 67 7F 47
2B38- 80 60 7E 7B 7F 7F 7F 80
2B40- 80 80 80 80 80 80 80 80
2B48- 80 00 00 00 00 00 00 00
2B50- 00 00 00 00 00 00 00 00
2B58- 00 00 00 00 7B 7F 0F 00
2B60- 40 7F 7F 03 00 00 00 00
2B68- 00 00 00 00 00 00 00 00
2B70- 00 00 00 00 00 00 00 00
2B78- 00 00 00 00 00 00 00 00
2B80- 00 00 00 00 00 00 00 00
2B88- 00 00 00 7F 7F 7F 7F 80
2B90- 80 80 80 80 80 80 80 80
2B98- 80 7E 7F 07 00 00 00 00
2BA0- 00 00 00 00 00 00 00 00
2BAB- 00 00 00 00 00 00 00 00
2BB0- 00 00 00 80 7E 7F 71 7F
2BB8- 80 80 40 7F 7F 7F 0F 80
2BC0- 80 80 80 C6 81 80 80 18
2BC8- 80 00 00 00 00 00 00 00
2BD0- 00 00 00 00 00 00 00 00
2BD8- 00 00 00 00 00 00 00 00
2BE0- 00 00 00 00 00 00 00 00
2BE8- 00 00 00 00 00 00 00 00
2BF0- 00 00 00 00 00 00 00 00
2BF8- 00 00 00 00 00 00 00 00
2C00- 00 00 00 00 00 00 00 00
2C08- 00 00 00 00 00 00 00 00
2C10- 00 00 00 00 00 00 00 00
2C18- 00 00 00 00 00 00 00 00
2C20- 00 00 00 00 00 00 00 00
2C28- 00 00 00 00 00 00 00 00
2C30- 00 00 00 60 7F 1D 81 80
2C38- 80 80 80 80 80 80 80 80

```

```

2C40- 80 80 80 80 00 00 00 00
2C48- 00 00 00 00 00 00 00 00
2C50- 00 00 00 00 00 00 00 00
2C58- 00 00 00 00 00 03 7E 03
2C60- 80 80 80 80 80 80 80 80
2C68- 80 A0 7C 7F 7F 7F 7F 7F
2C70- 7F 07 3F 00 00 00 00 00
2C78- 00 00 00 00 00 00 00 00
2C80- 00 00 00 00 00 00 00 00
2C88- 00 00 00 00 00 00 00 00
2C90- 00 00 00 00 00 00 00 00
2C98- 00 00 00 00 00 00 00 00
2CA0- 00 00 00 00 00 00 00 00
2CAB- 00 00 00 00 00 00 00 00
2CB0- 00 00 00 00 98 80 80 80
2CB8- 80 80 80 80 80 80 80 80
2CC0- 80 80 80 8C 80 00 00 00
2CC8- 00 00 00 00 00 00 00 00
2CD0- 80 80 80 00 00 00 00 00
2CDB- 00 00 00 00 00 00 00 80
2CE0- 80 7F 1F 80 80 1E 80 80
2CE8- C0 7B 7F 7F 7F 7F 7F 7F
2CF0- 7F 7F 7F 83 80 80 00 80
2CF8- 00 00 00 00 00 00 00 00
2D00- 00 00 00 00 00 00 00 00
2D08- 00 00 00 00 00 00 00 00
2D10- 00 00 00 00 00 60 7F 7F
2D18- 7F 7F 01 00 00 00 00 00
2D20- 00 00 00 00 00 00 00 00
2D28- 00 00 00 00 00 00 00 00
2D30- 00 00 00 40 81 80 80 80
2D38- 80 80 80 80 80 80 80 80
2D40- 80 80 80 C0 80 00 00 00
2D48- 00 00 00 00 00 00 00 00
2D50- 80 80 80 00 00 00 00 00
2D58- 00 00 00 00 00 00 00 00
2D60- A3 82 80 80 80 80 E0 80
2D68- 00 7E 7F 7F 7F 7F 7F 7F
2D70- 7F 7F 87 80 80 80 00 80
2D78- 00 00 00 00 00 00 00 00
2D80- 00 00 00 00 00 00 00 00
2D88- 00 00 00 00 00 00 00 00
2D90- 00 00 00 00 7C 7F 7F 7F

```

2D98-	7F	7F	7F	0F	00	00	00	00
2DA0-	00	00	00	00	00	00	00	00
2DAB-	00	00	00	00	00	00	00	00
2DB0-	00	00	00	40	7E	7F	07	80
2DB8-	80	80	80	80	80	80	80	80
2DC0-	80	80	80	80	03	00	00	00
2DC8-	00	00	00	00	00	00	00	00
2DD0-	00	00	00	00	00	00	00	00
2DD8-	00	00	00	00	00	00	00	00
2DE0-	60	7F	7F	7F	01	00	00	00
2DE8-	00	7E	7F	7F	7F	7F	7F	7F
2DF0-	3F	80	80	80	80	00	00	00
2DF8-	00	00	00	00	00	00	00	00
2E00-	00	00	00	00	00	00	00	00
2E08-	00	00	00	00	00	00	00	00
2E10-	00	00	80	80	7F	7F	7F	7F
2E18-	7F	7F	7F	7F	00	00	00	00
2E20-	00	00	00	00	00	00	00	00
2E28-	00	00	00	00	00	00	00	00
2E30-	00	00	00	70	7F	7F	7F	03
2E38-	80	80	80	7F	7F	01	80	80
2E40-	80	80	80	C0	03	00	00	00
2E48-	00	00	00	00	00	00	00	00
2E50-	00	00	00	00	00	00	00	00
2E58-	00	00	00	00	00	00	7C	7F
2E60-	7F	7F	7F	7F	0F	00	00	00
2E68-	00	40	7F	7F	7F	7F	7F	03
2E70-	00	80	80	80	00	00	00	00
2E78-	00	00	00	00	00	00	00	00
2E80-	00	00	00	00	00	00	00	00
2E88-	00	00	00	40	7F	7F	7F	3F
2E90-	80	80	B2	B3	7F	7F	7F	7F
2E98-	7F	7F	7F	7F	01	00	00	00
2EA0-	00	00	00	00	00	00	00	00
2EAB-	00	00	00	00	00	00	00	00
2EB0-	00	00	80	78	7F	7F	80	88
2EB8-	80	70	7F	7F	7F	7F	1F	80
2EC0-	80	80	80	E0	01	80	80	80
2EC8-	00	00	00	00	00	00	00	00
2ED0-	00	00	00	00	00	00	00	00
2ED8-	00	00	00	00	40	79	7F	7F
2EE0-	7E	7F	7F	7F	0F	00	00	00
2EE8-	00	00	00	00	00	00	00	00

```

2EF0- 00 00 00 00 00 00 00 00
2EF8- 00 00 00 00 00 00 00 00
2F00- 00 00 00 00 00 00 00 00
2F08- 00 00 00 7E 7F 7F 7F 3F
2F10- 88 80 80 80 C0 7F 7F 7F
2F18- 7F 7F 7F 7F 01 00 00 00
2F20- 00 00 00 00 00 00 00 00
2F28- 00 00 00 00 00 00 00 00
2F30- 00 00 00 70 7F 6F 7F 4F
2F38- 80 60 7E 7F 7F 7F 7F 80
2F40- 80 80 80 A0 80 80 80 80
2F48- 80 00 00 00 00 00 00 00
2F50- 00 00 00 00 00 00 00 00
2F58- 00 00 00 00 50 48 01 00
2F60- 00 78 05 00 00 00 00 00
2F68- 00 00 00 00 00 00 00 00
2F70- 00 00 00 00 00 00 00 00
2F78- 00 00 00 00 00 00 00 00
2F80- 00 00 00 00 00 00 00 00
2F88- 00 00 00 7F 7F 7F 1F 80
2F90- 80 80 80 80 80 80 80 80
2F98- 80 7E 7F 03 00 00 00 00
2FA0- 00 00 00 00 00 00 00 00
2FAB- 00 00 00 00 00 00 00 00
2FB0- 00 00 80 80 7F 7F 7F 7F
2FBB- 80 80 80 7C 7F 7F 07 80
2FC0- 80 80 D0 82 80 80 78 7C
2FC8- 80 00 00 00 00 00 00 00
2FD0- 00 00 00 00 00 00 00 00
2FD8- 00 00 00 00 00 00 00 00
2FE0- 00 00 00 00 00 00 00 00
2FEB- 00 00 00 00 00 00 00 00
2FF0- 00 00 00 00 00 00 00 00
2FF8- 00 00 00 00 00 00 00 00
3000- 00 00 00 00 00 00 00 00
3008- 00 00 00 00 00 00 00 00
3010- 00 00 00 00 00 00 00 00
3018- 00 00 00 00 00 00 00 00
3020- 00 00 00 00 00 00 00 00
3028- 00 00 00 00 00 00 00 00
3030- 00 00 00 00 7E BF 80 80
3038- 80 80 80 80 80 80 80 80
3040- 80 80 90 80 00 00 00 00

```

304B-	00	00	00	00	00	00	00	00
3050-	00	00	00	00	00	00	00	00
305B-	00	00	00	00	00	80	81	80
3060-	80	80	80	80	80	80	80	80
306B-	80	80	7B	7F	7F	7F	7F	7F
3070-	7F	67	7F	00	00	00	00	00
307B-	00	00	00	00	00	00	00	00
3080-	00	00	00	00	00	00	00	00
308B-	00	00	00	00	00	00	00	00
3090-	00	00	00	00	00	00	00	00
309B-	00	00	00	00	00	00	00	00
30A0-	00	00	00	00	00	00	00	00
30AB-	00	00	00	00	00	00	00	00
30B0-	00	00	00	00	80	80	80	80
30BB-	80	80	80	80	80	80	80	80
30C0-	80	80	80	82	00	00	00	00
30CB-	00	00	00	00	00	00	00	00
30D0-	80	80	80	80	00	00	00	00
30DB-	00	00	00	00	00	00	B0	B2
30E0-	80	7E	1F	80	80	0F	80	80
30EB-	9A	7B	7F	7F	7F	7F	7F	7F
30F0-	7F	7F	7F	83	80	80	00	80
30FB-	00	00	00	00	00	00	00	00
3100-	00	00	00	00	00	00	00	00
310B-	00	00	00	00	00	00	00	00
3110-	00	00	00	00	00	7B	7F	7F
311B-	7F	7F	03	00	00	00	00	00
3120-	00	00	00	00	00	00	00	00
312B-	00	00	00	00	00	00	00	00
3130-	00	00	00	40	81	80	80	80
313B-	80	80	80	80	80	80	80	80
3140-	80	80	80	E0	80	00	00	00
314B-	00	00	00	00	00	00	00	00
3150-	80	80	80	00	00	00	00	00
315B-	00	00	00	00	00	00	00	00
3160-	80	80	80	80	80	80	80	03
316B-	00	7F	7F	7F	7F	7F	7F	7F
3170-	7F	7F	87	80	80	80	00	80
317B-	00	00	00	00	00	00	00	00
3180-	00	00	00	00	00	00	00	00
318B-	00	00	00	00	00	00	00	00
3190-	00	00	00	00	7C	7F	7F	7F
319B-	7F	7F	7F	1F	00	00	00	00

```

31A0- 00 00 00 00 00 00 00 00
31A8- 00 00 00 00 00 00 00 00
31B0- 00 00 00 00 80 7E 7F 0F 80
31B8- 80 80 80 80 80 80 80 80 80
31C0- 80 80 80 C0 80 00 00 00
31C8- 00 00 00 00 00 00 00 00
31D0- 00 00 00 00 00 00 00 00
31D8- 00 00 00 00 00 00 00 00
31E0- 70 7F 7F 7F 03 00 00 00
31E8- 00 7E 7F 7F 7F 7F 7F 7F
31F0- 1F 80 80 80 80 00 00 00
31F8- 00 00 00 00 00 00 00 00
3200- 00 00 00 00 00 00 00 00
3208- 00 00 00 00 00 00 00 00
3210- 00 00 80 80 7F 7F 7F 7F
3218- 7F 7F 7F 7F 00 00 00 00
3220- 00 00 00 00 00 00 00 00
3228- 00 00 00 00 00 00 00 00
3230- 00 00 00 70 7F 7F 7F 07
3238- 80 80 7C 7F 7F 07 80 80
3240- 80 80 80 80 82 00 00 00
3248- 00 00 00 00 00 00 00 00
3250- 00 00 00 00 00 00 00 00
3258- 00 00 00 00 00 00 7E 7F
3260- 7F 7F 7F 7F 1F 00 00 00
3268- 00 40 7F 7F 7F 7F 03 00
3270- 00 00 80 80 00 00 00 00
3278- 00 00 00 00 00 00 00 00
3280- 00 00 00 00 00 00 00 00
3288- 00 00 00 70 7F 7F 7F 3F
3290- 80 81 82 F4 7B 7F 7F 7F
3298- 7F 7F 7F 7F 01 00 00 00
32A0- 00 00 00 00 00 00 00 00
32A8- 00 00 00 00 00 00 00 00
32B0- 00 00 80 78 7F 1F 78 73
32B8- 80 70 0F FC 7F 7F 1F 80
32C0- 80 80 80 C0 01 80 80 80
32C8- 00 00 00 00 00 00 00 00
32D0- 00 00 00 00 00 00 00 00
32D8- 00 00 00 00 7B 7F 7F 1F
32E0- 7C 7F 7F 7F 0F 00 00 00
32E8- 00 00 00 00 00 00 00 00
32F0- 00 00 00 00 00 00 00 00

```


32F8-	00	00	00	00	00	00	00	00
3300-	00	00	00	00	00	00	00	00
3308-	00	00	40	7F	7F	7F	7F	4F
3310-	80	80	80	80	80	7C	7F	7F
3318-	7F	7F	7F	7F	01	00	00	00
3320-	00	00	00	00	00	00	00	00
3328-	00	00	00	00	00	00	00	00
3330-	00	00	00	60	7F	67	7F	07
3338-	80	40	7E	7F	7F	7F	7F	80
3340-	80	80	80	80	80	80	80	80
3348-	80	00	00	00	00	00	00	00
3350-	00	00	00	00	00	00	00	00
3358-	00	00	00	00	00	00	00	00
3360-	00	00	00	00	00	00	00	00
3368-	00	00	00	00	00	00	00	00
3370-	00	00	00	00	00	00	00	00
3378-	00	00	00	00	00	00	00	00
3380-	00	00	00	00	00	00	00	00
3388-	00	00	00	7F	7F	7F	37	82
3390-	80	80	80	80	80	80	80	80
3398-	80	7E	7F	00	00	00	00	00
33A0-	00	00	00	00	00	00	00	00
33A8-	00	00	00	00	00	00	00	00
33B0-	00	00	00	80	7E	7F	7F	7F
33B8-	80	80	80	60	7F	7F	01	80
33C0-	80	80	80	83	80	80	7F	7E
33C8-	07	00	00	00	00	00	00	00
33D0-	00	00	00	00	00	00	00	00
33D8-	00	00	00	00	00	00	00	00
33E0-	00	00	00	00	00	00	00	00
33E8-	00	00	00	00	00	00	00	00
33F0-	00	00	00	00	00	00	00	00
33F8-	00	00	00	00	00	00	00	00
3400-	00	00	00	00	00	00	00	00
3408-	00	00	00	00	00	00	00	00
3410-	00	00	00	00	00	00	00	00
3418-	00	00	00	00	00	00	00	00
3420-	00	00	00	00	00	00	00	00
3428-	00	00	00	00	00	00	00	00
3430-	00	00	00	00	02	8C	80	80
3438-	80	80	80	80	80	80	80	80
3440-	80	80	80	80	00	00	00	00
3448-	00	00	00	00	00	00	00	00

3450- 00 00 00 00 00 00 00 00
 345B- 00 00 00 00 00 00 C0 84 80
 3460- 80 80 80 80 80 80 80 80
 346B- 80 80 7C 7F 7F 7F 7F 7F
 3470- 7F 7F 7F 29 03 00 00 00
 347B- 00 00 00 00 00 00 00 00
 3480- 00 00 00 00 00 00 00 00
 348B- 00 00 00 00 00 00 00 00
 3490- 00 00 00 00 00 00 00 00
 349B- 00 00 00 00 00 00 00 00
 34A0- 00 00 00 00 00 00 00 00
 34AB- 00 00 00 00 00 00 00 00
 34B0- 00 00 00 00 90 80 80 80
 34BB- 80 80 80 80 80 80 80 80
 34C0- 80 80 80 80 00 00 00 00
 34CB- 00 00 00 00 00 00 00 00
 34D0- 80 80 80 80 00 00 00 00
 34DB- 00 00 00 00 00 00 40 83
 34E0- 80 7E 3F 80 40 07 80 80
 34EB- 9C 7C 7F 7F 7F 7F 7F 7F
 34F0- 7F 7F F6 81 80 80 00 80
 34FB- 00 00 00 00 00 00 00 00
 3500- 00 00 00 00 00 00 00 00
 350B- 00 00 00 00 00 00 00 00
 3510- 00 00 00 00 00 00 7C 7F 7F
 351B- 7F 7F 0F 00 00 00 00 00
 3520- 00 00 00 00 00 00 00 00
 352B- 00 00 00 00 00 00 00 00
 3530- 00 00 00 40 81 80 80 80
 353B- 80 80 80 80 80 80 80 80
 3540- 80 80 80 80 80 00 00 00
 354B- 00 00 00 00 00 00 00 00
 3550- 80 80 80 00 00 00 00 00
 355B- 00 00 00 00 00 00 00 00
 3560- 80 C9 80 80 80 C0 85 00
 356B- 00 7B 7F 7F 7F 7F 7F 7F
 3570- 7F 7F 83 80 80 80 00 80
 357B- 00 00 00 00 00 00 00 00
 3580- 00 00 00 00 00 00 00 00
 358B- 00 00 00 00 00 00 00 00
 3590- 00 00 00 00 7C 7F 7F 7F
 359B- 7F 7F 7F 1F 00 00 00 00
 35A0- 00 00 00 00 00 00 00 00

35A8-	00	00	00	00	00	00	00	00
35B0-	00	00	00	40	7F	7F	1F	80
35B8-	80	80	80	80	80	80	80	80
35C0-	80	80	80	80	80	00	00	00
35C8-	00	00	00	00	00	00	00	00
35D0-	00	00	00	00	00	00	00	00
35D8-	00	00	00	00	00	00	00	00
35E0-	7B	7F	7F	7F	07	00	00	00
35E8-	00	7E	7F	7F	7F	7F	7F	7F
35F0-	0F	80	80	80	80	00	00	00
35F8-	00	00	00	00	00	00	00	00
3600-	00	00	00	00	00	00	00	00
3608-	00	00	00	00	00	60	7F	00
3610-	00	80	80	80	7F	7F	7F	7F
3618-	7F	7F	7F	7F	00	00	00	00
3620-	00	00	00	00	00	00	00	00
3628-	00	00	00	00	00	00	00	00
3630-	00	00	00	70	7F	7F	7F	0F
3638-	80	80	7E	7F	7F	3F	80	80
3640-	80	80	80	80	80	00	00	00
3648-	00	00	00	00	00	00	00	00
3650-	00	00	00	00	00	00	00	00
3658-	00	00	00	00	00	00	7F	7F
3660-	7F	7F	7F	7F	1F	00	00	00
3668-	00	00	7F	7F	7F	7F	00	00
3670-	00	00	80	80	00	00	00	00
3678-	00	00	00	00	00	00	00	00
3680-	00	00	00	00	00	00	00	00
3688-	00	00	00	7B	7F	7F	7F	3F
3690-	80	A3	80	E0	7B	7F	7F	7F
3698-	7F	7F	7F	7F	00	00	00	00
36A0-	00	00	00	00	00	00	00	00
36A8-	00	00	00	00	00	00	00	00
36B0-	00	00	80	7B	7F	8F	7E	63
36B8-	01	70	5D	FC	7F	7F	3F	80
36C0-	80	80	80	80	80	80	80	80
36C8-	80	00	00	00	00	00	00	00
36D0-	00	00	00	00	00	00	00	00
36D8-	00	00	00	00	7C	7F	7F	03
36E0-	7C	7F	7F	7F	07	00	00	00
36E8-	00	00	00	00	00	00	00	00
36F0-	00	00	00	00	00	00	00	00
36F8-	00	00	00	00	00	00	00	00

```

3700- 00 00 00 00 00 00 00 00
3708- 00 00 40 7F 7F 7F 7F 03
3710- 81 80 80 80 80 7C 77 7B
3718- 7F 7F 7F 7F 01 00 00 00
3720- 00 00 00 00 00 00 00 00
3728- 00 00 00 00 00 00 00 00
3730- 00 00 00 60 7F 6F 7F 4B
3738- 80 40 7D 7D 7F 7F 7F 80
3740- 80 80 80 80 80 80 80 80
3748- 80 00 00 00 00 00 00 00
3750- 00 00 00 00 00 00 00 00
3758- 00 00 00 00 00 00 00 00
3760- 00 00 00 00 00 00 00 00
3768- 00 00 00 00 00 00 00 00
3770- 00 00 00 00 00 00 00 00
3778- 00 00 00 00 00 00 00 00
3780- 00 00 00 00 00 00 00 00
3788- 00 00 00 7F 7F 7F 07 80
3790- 80 80 80 80 80 80 80 80
3798- 80 7C 3F 00 00 00 00 00
37A0- 00 00 00 00 00 00 00 00
37A8- 00 00 00 00 00 00 00 00
37B0- 00 00 00 80 7C 7F 7F 7F
37B8- 80 80 80 80 7E 3F 80 80
37C0- 80 80 80 83 BA 60 7F 7F
37C8- 0F 00 00 00 00 00 00 00
37D0- 00 00 00 00 00 00 00 00
37D8- 00 00 00 00 00 00 00 00
37E0- 00 00 00 00 00 00 00 00
37E8- 00 00 00 00 00 00 00 00
37F0- 00 00 00 00 00 00 00 00
37F8- 00 00 00 00 00 00 00 00
3800- 00 00 00 00 00 00 00 00
3808- 00 00 00 00 00 00 00 00
3810- 00 00 00 00 00 00 00 00
3818- 00 00 00 00 00 00 00 00
3820- 00 00 00 00 00 00 00 00
3828- 00 00 00 00 00 00 00 00
3830- 00 00 00 00 40 8F 80 80
3838- 80 80 80 80 80 80 80 80
3840- 80 80 90 81 00 00 00 00
3848- 00 00 00 00 00 00 00 00
3850- 80 80 80 00 00 00 00 00

```

```

3858- 00 00 00 00 00 80 B2 80
3860- 80 80 80 80 80 80 80 80
3868- 80 80 7E 7F 7F 7F 7F 7F
3870- 7F 7F 7F 7F 87 00 00 00
3878- 00 00 00 00 00 00 00 00
3880- 00 00 00 00 00 00 00 00
3888- 00 00 00 00 00 00 00 00
3890- 00 00 00 00 00 00 00 60
3898- 0F 00 00 00 00 00 00 00
38A0- 00 00 00 00 00 00 00 00
38A8- 00 00 00 00 00 00 00 00
38B0- 00 00 00 00 98 80 80 80
38B8- 80 80 80 80 80 80 80 80
38C0- 80 80 80 88 00 00 00 00
38C8- 00 00 00 00 00 00 00 00
38D0- 80 80 80 80 00 00 00 00
38D8- 00 00 00 00 00 00 40 A3
38E0- 80 7E 1F 80 60 03 80 80
38E8- 8C 7B 7F 7F 7F 7F 7F 7F
38F0- 7F 1F 80 80 80 80 00 80
38F8- 00 00 00 00 00 00 00 00
3900- 00 00 00 00 00 00 00 00
3908- 00 00 00 00 00 00 00 00
3910- 00 00 00 00 00 00 7C 7F
3918- 7F 7F 0F 00 00 00 00 00
3920- 00 00 00 00 00 00 00 00
3928- 00 00 00 00 00 00 00 00
3930- 00 00 00 40 81 80 80 80
3938- 80 80 80 80 80 80 80 80
3940- 80 80 80 F0 01 00 00 00
3948- 00 00 00 00 00 00 00 00
3950- 80 80 00 00 00 00 00 00
3958- 00 00 00 00 00 00 00 00
3960- 00 80 80 80 80 82 85 00
3968- 00 7F 7F 7F 7F 7F 7F 7F
3970- 7F 7F 81 80 80 80 00 00
3978- 00 00 00 00 00 00 00 00
3980- 00 00 00 00 00 00 00 00
3988- 00 00 00 00 00 00 00 00
3990- 00 00 00 00 7F 7F 7F 7F
3998- 7F 7F 7F 1F 00 00 00 00
39A0- 00 00 00 00 00 00 00 00
39A8- 00 00 00 00 00 00 00 00

```

```

39B0- 00 00 00 40 7F 7F 3F 80
39B8- 80 80 80 80 80 80 80 80
39C0- 80 80 80 80 03 00 00 00
39C8- 00 00 00 00 00 00 00 00
39D0- 00 00 00 00 00 00 00 00
39D8- 00 00 00 00 00 00 00 00
39E0- 7C 7F 7F 7F 07 00 00 00
39E8- 00 7E 7F 7F 7F 7F 7F 7F
39F0- 0F 80 80 80 80 00 00 00
39F8- 00 00 00 00 00 00 00 00
3A00- 00 00 00 00 00 00 00 00
3A08- 00 00 00 00 40 7F 7F 00
3A10- 00 80 80 80 7F 7F 7F 7F
3A18- 7F 7F 7F 7F 01 00 00 00
3A20- 00 00 00 00 00 00 00 00
3A28- 00 00 00 00 00 00 00 00
3A30- 00 00 00 70 7F 7F 7F 0F
3A38- 80 80 7F 7F 7F 7F 80 80
3A40- 80 80 80 C0 81 00 00 00
3A48- 00 00 00 00 00 00 00 00
3A50- 00 00 00 00 00 00 00 00
3A58- 00 00 00 00 00 40 7F 7F
3A60- 7F 7F 7F 7F 1F 00 00 00
3A68- 00 00 7E 7F 7F 3F 00 00
3A70- 00 00 80 00 00 00 00 00
3A78- 00 00 00 00 00 00 00 00
3A80- 00 00 00 00 00 00 00 00
3A88- 00 00 00 78 7F 7F 7F 3F
3A90- 80 84 80 80 78 7F 7F 7F
3A98- 7F 7F 7F 7F 01 00 00 00
3AA0- 00 00 00 00 00 00 00 00
3AAB- 00 00 00 00 00 00 00 00
3AB0- 00 00 80 78 7F 8F 7F 67
3ABB- 01 70 63 FB 7F 7F 3F 80
3AC0- 80 80 80 80 80 80 80 80
3ACB- 80 00 00 00 00 00 00 00
3AD0- 00 00 00 00 00 00 00 00
3ADB- 00 00 00 00 7E 7F 7F 01
3AE0- 7C 7F 7F 7F 03 00 00 00
3AEB- 00 00 00 00 00 00 00 00
3AF0- 00 00 00 00 00 00 00 00
3AFB- 00 00 00 00 00 00 00 00
3B00- 00 00 00 00 00 00 00 00

```

3B08-	00	00	40	7F	7F	7F	7F	0B
3B10-	80	80	80	80	80	80	80	0B
3B18-	7F	7F	7F	3F	00	00	00	00
3B20-	00	00	00	00	00	00	00	00
3B28-	00	00	00	00	00	00	00	00
3B30-	00	00	00	60	7F	5F	7F	5F
3B38-	80	80	19	7F	7F	7F	3F	80
3B40-	80	80	80	81	80	80	80	80
3B48-	80	00	00	00	00	00	00	00
3B50-	00	00	00	00	00	00	00	00
3B58-	00	00	00	00	00	00	00	00
3B60-	00	00	00	00	00	00	00	00
3B68-	00	00	00	00	00	00	00	00
3B70-	00	00	00	00	00	00	00	00
3B78-	00	00	00	00	00	00	00	00
3B80-	00	00	00	00	00	00	00	00
3B88-	00	00	00	7E	7F	7F	13	80
3B90-	80	80	80	80	80	80	80	80
3B98-	80	58	05	00	00	00	00	00
3BA0-	00	00	00	00	00	00	00	00
3BA8-	00	00	00	00	00	00	00	00
3BB0-	00	00	00	00	7B	7F	7F	3F
3BB8-	80	80	80	80	80	80	80	80
3BC0-	80	80	70	C7	BE	7B	7F	7F
3BC8-	0F	00	00	00	00	00	00	00
3BD0-	00	00	00	00	00	00	00	00
3BD8-	00	00	00	00	00	00	00	00
3BE0-	00	00	00	00	00	00	00	00
3BE8-	00	00	00	00	00	00	00	00
3BF0-	00	00	00	00	00	00	00	00
3BF8-	00	00	00	00	00	00	00	00
3C00-	00	00	00	00	00	00	00	00
3C08-	00	00	00	00	00	00	00	00
3C10-	00	00	00	00	00	00	00	00
3C18-	00	00	00	00	00	00	00	00
3C20-	00	00	00	00	00	00	00	00
3C28-	00	00	00	00	00	00	00	00
3C30-	00	00	00	00	00	9F	80	80
3C38-	80	80	80	80	80	80	80	80
3C40-	80	80	80	80	80	00	00	00
3C48-	00	00	00	00	00	00	00	00
3C50-	80	80	80	00	00	00	00	00
3C58-	00	00	00	00	00	80	81	80

```

3C60- 80 80 80 80 80 30 80 80
3C68- 80 B4 7F 7F 7F 7F 7F 7F
3C70- 7F 7F 7F 7F 80 00 00 80
3C78- 00 00 00 00 00 00 00 00
3C80- 00 00 00 00 00 00 00 00
3C88- 00 00 00 00 00 00 00 00
3C90- 00 00 00 00 00 00 00 7E
3C98- 7F 00 00 00 00 00 00 00

3CA0- 00 00 00 00 00 00 00 00
3CAB- 00 00 00 00 00 00 00 00
3CB0- 00 00 00 00 9C 80 80 80
3CB8- 80 80 80 80 80 80 80 80
3CC0- 80 80 80 90 80 00 00 00
3CC8- 00 00 00 00 00 00 00 00
3CD0- 80 80 80 80 00 00 00 00
3CD8- 80 00 00 00 00 00 00 9E
3CE0- 80 7C 0F 80 7C 01 80 CB
3CE8- 08 7F 7F 7F 7F 7F 7F 7F
3CF0- 7F 3F 9B 81 80 80 00 80
3CF8- 00 00 00 00 00 00 00 00
3D00- 00 00 00 00 00 00 00 00
3D08- 00 00 00 00 00 00 00 00
3D10- 00 00 00 00 00 7E 7F 7F
3D18- 7F 7F 7F 00 00 00 00 00
3D20- 00 00 00 00 00 00 00 00
3D28- 00 00 00 00 00 00 00 00
3D30- 00 00 00 40 81 80 80 80
3D38- 80 80 80 80 80 80 80 80
3D40- 80 80 80 E0 01 00 00 00
3D48- 00 00 00 00 00 00 00 00
3D50- 00 00 00 00 00 00 00 00
3D58- 00 00 00 00 00 00 00 00
3D60- 00 80 80 88 80 B2 00 00
3D68- 00 78 7F 7F 7F 7F 7F 7F
3D70- 7F 3F 80 80 80 80 00 00
3D78- 00 00 00 00 00 00 00 00
3D80- 00 00 00 00 00 00 00 00
3D88- 00 00 00 00 00 00 00 00
3D90- 00 00 00 00 7F 7F 7F 7F
3D98- 7F 7F 7F 3F 00 00 00 00
3DA0- 00 00 00 00 00 00 00 00
3DAB- 00 00 00 00 00 00 00 00
3DB0- 00 00 00 60 7F 7F 7F 80

```


3DB8-	80	80	80	80	80	80	80	80
3DC0-	80	80	80	C0	03	00	00	00
3DC8-	00	00	00	00	00	00	00	00
3DD0-	00	00	00	00	00	00	00	00
3DD8-	00	00	00	00	00	00	00	00
3DE0-	7E	7F	7F	7F	07	00	00	00
3DE8-	00	7C	7F	7F	7F	7F	7F	7F
3DF0-	03	80	80	80	80	00	00	00
3DF8-	00	00	00	00	00	00	00	00
3E00-	00	00	00	00	00	00	00	00
3E08-	00	00	00	00	60	7F	7F	07
3E10-	00	80	80	80	7E	7F	7F	7F
3E18-	7F	7F	7F	7F	00	00	00	00
3E20-	00	00	00	00	00	00	00	00
3E28-	00	00	00	00	00	00	00	00
3E30-	00	00	00	70	7F	7F	7F	1F
3E38-	80	40	7F	7F	7F	7F	01	80
3E40-	80	80	80	80	80	00	00	00
3E48-	00	00	00	00	00	00	00	00
3E50-	00	00	00	00	00	00	00	00
3E58-	00	00	00	00	00	60	7F	7F
3E60-	7F	7F	7F	7F	1F	00	00	00
3E68-	00	00	78	7F	7F	0F	00	00
3E70-	00	00	00	00	00	00	00	00
3E78-	00	00	00	00	00	00	00	00
3E80-	00	00	00	00	00	00	00	00
3E88-	00	00	00	78	7F	7F	7F	3F
3E90-	A0	80	80	80	F8	7F	7F	7F
3E98-	7F	7F	7F	7F	01	00	00	00
3EA0-	00	00	00	00	00	00	00	00
3EA8-	00	00	00	00	00	00	00	00
3EB0-	00	00	80	78	7F	47	7F	67
3EB8-	01	70	7C	7B	7F	7F	7F	80
3EC0-	80	80	80	80	80	80	80	80
3EC8-	80	00	00	00	00	00	00	00
3ED0-	00	00	00	00	00	00	00	00
3ED8-	00	00	00	00	7C	7F	7F	00
3EE0-	78	7F	7F	7F	01	00	00	00
3EE8-	00	00	00	00	00	00	00	00
3EF0-	00	00	00	00	00	00	00	00
3EF8-	00	00	00	00	00	00	00	00
3F00-	00	00	00	00	00	00	00	00
3F08-	00	00	40	7F	7F	7F	7F	13

```

3F10- 80 80 80 80 80 80 80 80
3F18- 7F 7F 7F 3F 00 00 00 00
3F20- 00 00 00 00 00 00 00 00
3F28- 00 00 00 00 00 00 00 00
3F30- 00 00 00 70 7F 7F FE 7F
3F38- 80 80 7E 7F 7F 7F 3F 80
3F40- 80 80 80 82 80 80 80 80
3F48- 80 00 00 00 00 00 00 00
3F50- 00 00 00 00 00 00 00 00
3F58- 00 00 00 00 00 00 00 00
3F60- 00 00 00 00 00 00 00 00
3F68- 00 00 00 00 00 00 00 00
3F70- 00 00 00 00 00 00 00 00
3F78- 00 00 00 00 00 00 00 00
3F80- 00 00 00 00 00 00 00 00
3F88- 00 00 00 7C 7F 7F 03 80
3F90- 80 80 80 80 80 80 80 80
3F98- 80 80 80 00 00 00 00 00
3FA0- 00 00 00 00 00 00 00 00
3FAB- 00 00 00 00 00 00 00 00
3FB0- 00 00 00 00 60 7F 7F 3F
3FB8- 80 80 80 80 80 80 80 80
3FC0- 80 80 74 8F FC 7F 7F 7F
3FC8- 7F 00 00 00 00 00 00 00
3FD0- 00 00 00 00 00 00 00 00
3FDB- 00 00 00 00 00 00 00 00
3FE0- 00 00 00 00 00 00 00 00
3FEB- 00 00 00 00 00 00 00 00
3FF0- 00 00 00 00 00 00 00 00
3FF8- 00 00 00 00 00 00 00 00

```

6. X

```

2000- FF FF FF FF FF FF FF FF
2008- FF FF FF FF FF FF FF FF
2010- FF FF FF E0 BF FE FF FF
2018- BF FC FF FF FF FF FF FF
2020- FF FF FF FF FF FF FF 00
2028- CF FB 9F 80 80 80 FE FF
2030- 87 FF FF FF FF FF D1 8A
2038- FC FF FF E5 BF C4 A9 D5
2040- AA F9 E7 FF FF F1 81 95
2048- AA D5 FC FF A7 E5 FF 00
2050- FF FF FF FF FF FF C7 A2
2058- 91 82 FE FF FF FF FF FF
2060- FF FF FF 9F 80 80 BE F6

```

```

2068- 9B FD F3 FF FF FF 93 88
2070- E6 FF BF CE E7 9F 81 00
2078- 00 00 00 00 00 00 00 00
2080- FF FF A7 C5 FF 91 FE FF
2088- FF FF FF FF FF FF FF FF
2090- FF FF FF FF FF FF FF E7
2098- 81 FF E3 BF FE FF FF FF
20A0- FF FF FF FF FF FF FF 00
20A8- 8F CF FF FF FF 9F 8F C5
20B0- F2 FF FF C3 FF 89 D1 CA
20B8- AB F5 9F E5 FF FF 9F D0
20C0- AA E5 F8 BF 88 C4 AA D5
20C8- AB F1 FF FF A7 95 FF 00
20D0- FF FF FF FF FF 83 F3 BF
20D8- 9C E2 E7 E7 E1 FF FF FF
20E0- FF FF FF FF 9F 80 FF D0
20E8- FF C7 F3 FF FF E0 CE 92
20F0- E5 F0 9F BF F3 A7 C1 00
20F8- 00 00 00 00 00 00 00 00
2100- FF FF A9 D5 88 91 FF FF
2108- FF FF FF FF FF FF FF FF
2110- FF FF FF FF FF FF FF FF
2118- D1 AA F5 C3 BF E0 FF FF
2120- FF FF FF C7 C7 FF 83 00
2128- A3 8A 95 FE FF E1 8A D5
2130- FC FF 9F FE FF F4 AA D5
2138- F2 FF FF C5 FF FF FF FF
2140- FF FF FF FF FF D1 E0 FF
2148- FF FF FF FF 9F D5 FC 00
2150- FF FF FF 9F AA E5 A9 80
2158- A8 B9 80 C5 AA C1 DF FD
2160- FF FF FF 81 80 C0 FF AB
2168- B0 8E F2 FF CF 82 81 82
2170- F0 FF FF FF 80 A8 94 00
2178- 00 00 00 00 00 00 00 00
2180- FF 9F BF FC 8B E3 FE FF
2188- FF FF FF FF FF FF FF FF
2190- FF FF FF FF 89 FF FF FF
2198- 9F CF FF DE B7 AA FE FF
21A0- 9F FF FF FF FF FF FF 00
21A8- 9F 95 CA FF FF 9F A2 F1
21B0- FF FF FF FF BF 80 AA D5
21B8- CA FF FF 95 AA E5 EF F3

```

```

21C0- 8F C0 FC FF FF FF FF FF
21C8- FF FF FF FF 9F D5 FC 00
21D0- FF 83 C0 FF A8 D1 E8 C1
21D8- AA D1 A2 D5 B2 D0 A2 D5
21E0- F2 FC FF FF FF A3 D4 A0
21E8- C5 AA C1 FF FF BF AA D5
21F0- F2 FF FF FF FF 87 AA 00
21F8- 00 00 00 00 00 00 00 00
2200- FF FF CF A8 C5 AA FE FF
2208- FF FF FF FF FF FF FF FF
2210- FF FF FF C6 F2 FF BB FF
2218- FF 9F FF CD AA 84 F9 FF
2220- FC FF FF FF FF FF FF 00
2228- FF FF FF FF FF 9F B0 80
2230- FC FF FF FF FF FF FF FF
2238- FF FF FF E7 FF FF F1 FF
2240- FF FF FF FF FF FF CF FF
2248- BF 80 FF FF FF FF A9 00
2250- FF BF 9E FF B3 94 A8 D5
2258- AA 80 FE C3 AA C0 A2 98
2260- A2 C5 FF 81 87 A4 CC AA
2268- D5 AA 9C F3 C7 9F AA F5
2270- F2 FF FF FF FF BF A2 00
2278- 00 00 00 00 00 00 00 00
2280- FF FF A8 BC C0 D3 F8 FF
2288- FF FF FF FF FF FF A8 95
2290- A0 D5 80 C1 FC 8F F8 FF
2298- D9 BF 95 FF B9 8A FF E7
22A0- FF FF FF D3 FC FF FF 00
22A8- FF FF FF FF 9F F0 8F B8
22B0- BF E7 FF FF FF FF FF FF
22B8- FF FF FF E7 9F FF FF FF
22C0- FF FF FF FF 83 F8 FF FF
22C8- FF FF FF FF 87 D0 CA 00
22D0- FF DF B7 C6 C7 91 80 D5
22D8- 80 DF FF CF 87 C0 A2 B0
22E0- FE 9F FF FF B3 D8 FF 83
22E8- A0 D5 B2 CE F9 F8 FC FF
22F0- FF FF FF F9 FF D4 8A 00
22F8- 00 00 00 00 00 00 00 00
2300- FF 93 AA D1 F0 8C F8 F3
2308- FF FF FF FF FF FF E7 EE
2310- FB CF FD 85 9F 80 FF A8

```

2318- D5 AA D5 C8 AA C4 FC FF
 2320- 8F F0 FF BF CA D3 FC 00
 2328- FF FF FF FF 80 80 80 F0
 2330- 8D F7 89 FC FF FF FF FF
 2338- FF FF FF E7 9F FF FF FF
 2340- FF F9 BC FE FF FF FF FF
 2348- FF BF 86 A3 A8 9E E0 00
 2350- FF FF F3 FF BF FC FF FF
 2358- 9F EF C0 9F F3 FF C3 87
 2360- FE F9 FF FF E7 CC 89 D5
 2368- A2 95 FE FF FF FF E7 CC
 2370- 99 B3 FE FF FF 9F A8 00
 2378- 00 00 00 00 00 00 00 00
 2380- FF E7 FC F8 FF BF CE E7
 2388- FF 8F FF FF BF BF D4 CA
 2390- 9D F3 FF 85 80 FE 9F AE
 2398- FC FF FB 82 D5 B2 E4 FF
 23A0- 87 9C 9E C4 A9 E5 FF 00
 23AB- FF FF FF FF FF FF 9F FE
 23B0- E3 BF F8 FF FF FF FF FF
 23B8- FF FF FF FF 87 F8 FF BF
 23C0- FE FF BF 86 F8 FF FF FF
 23CB- FF BF AE DE C7 FF C1 00
 23D0- FF FF FF FF FF FF FF FF
 23D8- FF E7 FF FF F9 FF FF FF
 23E0- FF FF FF 8F FF FF FF A1
 23E8- 98 E7 FF 9F FE FF FF 81
 23F0- 93 B3 BE FC FF FF FF 00
 23F8- 00 00 00 00 00 00 00 00
 2400- FF FF FF FF FF FF FF FF
 2408- FF FF FF FF FF FF FF FF
 2410- FF FF FF F3 FF FC FF FF
 2418- 8F FF FF FF FF FF FF FF
 2420- FF FF FF FF FF FF FF 00
 2428- 9F FF FF 8F 80 80 FF FF
 2430- FF FF FF FF FF FF D3 E2
 2438- F8 FF FF E5 FF 94 AA D5
 2440- AA F9 F7 FF BF E4 A8 D5
 2448- A8 95 FE FF A7 E5 FF 00
 2450- FF FF FF FF FF FF D1 AA
 2458- C5 E2 FF FF FF FF FF FF
 2460- FF FF FF 9F 80 C0 F9 B7
 2468- 88 FC F3 FF FF FF C3 83

```

2470- EC FF 80 F7 E1 9F D1 00
2478- 00 00 00 00 00 00 00 00
2480- FF FF A7 95 BF D4 FC FF
2488- FF FF FF FF FF FF FF FF
2490- FF FF FF FF FF FF FF E7
2498- 83 BF B8 FF FC FF FF FF
24A0- FF FF FF FF FF FF FF 00
24A8- E7 C1 FD FF E7 81 A3 C5
24B0- F2 FF FF 98 FE 89 D1 CA
24B8- AF D5 9E E5 FF FF FF C1
24C0- AA B5 F0 FF E3 D4 AA D5
24C8- A8 F9 FF FF 8F 95 FF 00
24D0- FF FF FF FF FF C3 F9 FF
24D8- B3 E2 87 9C C8 FF FF FF
24E0- FF FF FF 9F 80 80 FC FF
24E8- FF C3 F3 FF BF E2 C7 82
24F0- A4 F6 BF FE E7 83 C1 00
24F8- 00 00 00 00 00 00 00 00
2500- FF FF A9 85 8A 95 FF FF
2508- FF FF FF FF FF FF FF FF
2510- FF FF FF FF BF FC FF FF
2518- C5 AA F9 80 FE C8 FF FF
2520- FF FF FF F3 9F E0 FC 00
2528- A7 AA 94 FF FF F3 8A 95
2530- FE FF 9F FF FF F4 AB D5
2538- E2 FF FF 95 FF FF FF FF
2540- FF FF FF FF FF 87 FE FF
2548- FF FF FF FF 9F D5 FC 00
2550- FF FF FF CF AA C5 A9 D5
2558- AA FC 8F D1 AA 95 80 E0
2560- FF FF FF 83 80 C0 FF A7
2568- B1 80 F0 FF 9F A2 B1 C0
2570- 8C FE FF FF 93 8A 80 00
2578- 00 00 00 00 00 00 00 00
2580- FF BF FC E1 BB 86 FF FF
2588- FF FF FF FF FF FF FF FF
2590- FF FF FF FF C8 FF FF FF
2598- CD E7 BF BF 97 AA FC FF
25A0- 9F FF FF FF FF FF FF 00
25A8- 9F D5 BA F0 FF FF A0 FC
25B0- FF FF FF FF FF D3 AA D5
25B8- E2 FF FF 95 AA E5 FF F3
25C0- 87 C0 F8 FF FF FF FF FF

```

```

25C8- FF FF FF FF 9F D5 FC 00
25D0- FF 81 F0 81 A2 C5 86 D4
25D8- AA D1 A2 95 A0 C0 A2 85
25E0- F2 FC FF FF FF AB D4 A0
25E8- C5 AA 95 FF FF 9F AA D5
25F0- C2 FF FF FF FF 87 AA 00
25F8- 00 00 00 00 00 00 00 00
2600- FF FF 9F AB D5 80 FF FF
2608- FF FF FF FF FF FF FF FF
2610- BF F0 FF D0 F2 FF C7 FF
2618- FF 9F FF D3 AA 85 F9 BF
2620- FC FF FF FF FF FF FF 00
2628- FF FF FF FF FF 9F 80 80
2630- FC FF FF FF FF FF FF FF
2638- FF FF FF E7 FF BF FC FF
2640- FF FF FF FF FF FF CF FF
2648- 83 F8 FF BF FC FF A1 00
2650- FF 83 CF FF E7 94 AB D5
2658- 8A C0 FF 9F AA D1 A2 E6
2660- 82 F1 FF FC 9C 80 C0 AA
2668- D5 AA 81 F9 9C 80 AB FD
2670- 80 FF FF FF FF 9F 8A 00
2678- 00 00 00 00 00 00 00 00
2680- FF BF AA F1 9F C7 F2 FF
2688- FF FF FF FF FF BF AA 85
2690- 80 95 80 85 FC FF FF FF
2698- F9 AA 95 FE F4 C8 FF E7
26A0- FF FF FF C7 FC FF FF 00
26A8- FF FF FF FF B7 C0 87 F8
26B0- FF C3 FF FF FF FF FF FF
26B8- FF FF FF E7 9F FF FF FF
26C0- FF FF FF 9F C0 FF FF FF
26C8- FF FF FF FF B3 C0 CA 00
26D0- FF 9F E7 F0 C7 C1 8A 80
26D8- 80 CF E1 DF 87 C4 A2 E0
26E0- FF 9F FF FF F3 80 80 D0
26E8- AA D5 82 8E F0 E7 80 80
26F0- 80 80 80 F8 FF D4 CA 00
26F8- 00 00 00 00 00 00 00 00
2700- FF C7 AB 94 E0 8F FC E7
2708- FF FF FF FF FF FF A7 EF
2710- F7 8F FC 85 CF C7 BF AA
2718- D5 AA D5 C2 AA C4 FC FF

```

```

2720- FF F7 FE BF 8A 93 FE 00
2728- FF FF FF FF 81 80 80 E0
2730- 9B FB 81 FE FF FF FF FF
2738- FF FF FF E7 9F FF FF FF
2740- BF F8 BC FE FF FF FF FF
2748- FF 8F FE 87 88 8E 80 00
2750- FF FF C7 FF 8F FF FF FF
2758- BF CF E1 8F 87 9F F0 FF
2760- FF FC FF FF 83 B0 A6 D5
2768- A0 95 FE FF FF FF 87 B3
2770- E6 B0 FE FF FF BF AA 00
2778- 00 00 00 00 00 00 00 00
2780- FF E1 BC FE FD F7 99 CF
2788- 9F BC FC FF FF FF D4 BA
2790- C6 F8 FF 85 AA FE BF AE
2798- F0 FF F3 A9 95 B8 C0 FF
27A0- A1 B1 80 E5 A9 E5 FF 00
27A8- FF FF FF FF FF FF BF FC
27B0- 83 80 FF FF FF FF FF FF
27B8- FF FF FF FF 81 E0 FF 9F
27C0- FF FF 9F F0 FF FF FF FF
27C8- FF FF F0 F8 F1 FB C1 00
27D0- FF FF FF FF FF FF FF FF
27D8- FF CF FF FF FC FF FF FF
27E0- FF FF FF 9F FE FF FF 8F
27E8- FC FB FF 9F FE FF FF FF
27F0- E7 B0 BE F3 FF FF 80 00
27F8- 00 00 00 00 00 00 00 00
2800- FF FF FF FF FF FF FF FF
2808- FF FF FF FF FF FF FF FF
2810- FF FF FF F7 FF FC 83 FF
2818- C7 FF FF FF FF FF FF FF
2820- FF FF FF FF FF FF FF 00
2828- BF FC FF FF 81 98 FF FF
2830- FF FF FF FF FF 8F 83 B8
2838- E2 FF FF E5 FF D1 AA D5
2840- AA F9 FB FF 9F 85 AA D5
2848- A8 95 FF FF A7 E5 FF 00
2850- FF FF FF FF FF BF D4 AA
2858- C5 CA FF FF FF FF FF FF
2860- FF FF FF BF 80 E0 9E EE
2868- 88 FB F3 FF FF FF 81 A1
2870- DE BF CE BB CE 9F D1 00

```



```

2878- 00 00 00 00 00 00 00 00
2880- FF FF A7 95 9F D5 FC FF
2888- FF FF FF FF FF FF FF FF
2890- FF FF FF FF FF FF FF F3
2898- 83 8E CF FF F9 FF FF FF
28A0- FF FF FF FF FF FF FF 00
28A8- F3 88 DE FD F8 89 AB C5
28B0- F2 FF BF FE FC 83 D4 82
28B8- FE D5 CF E5 FF FF FF 87
28C0- AB C5 E2 FF BF D4 AA 95
28C8- AA FC FF FF 9F 95 FF 00
28D0- FF FF FF FF FF E3 FD EF
28D8- 8F CA E7 F3 98 FF FF FF
28E0- FF FF FF 87 80 80 FF FF
28E8- FF E3 F3 FF BF E2 C0 90
28F0- B0 F7 FF FC 8F A8 C1 00
28F8- 00 00 00 00 00 00 00 00
2900- FF FF A3 F1 88 90 FF FF
2908- FF FF FF FF FF FF FF FF
2910- FF FF FF FF 9F F9 FF FF
2918- CE AA 81 8E E0 C8 FF FF
2920- FF FF FF F9 BF 9E FE 00
2928- A7 A9 C1 FF FF F3 A2 95
2930- FF FF 9F F7 FF F4 AB D5
2938- 8A FF E7 95 FF 87 FE FF
2940- FF FF FF FF FF FF FF FF
2948- FF FF FF FF 9F D5 FC 00
2950- FF FF FF C7 AA 95 A9 D5
2958- AA FC A7 D1 AA D5 A2 C5
2960- FF FF FF 83 80 80 FF A6
2968- B1 FE F3 FF BF A0 B9 DA
2970- ED FC FF FF C7 82 D4 00
2978- 00 00 00 00 00 00 00 00
2980- FF 9F FF CD BB E5 FF FF
2988- FF FF FF FF FF FF FF FF
2990- FF FF FF BF CA FF FF FF
2998- E3 E6 BF 8F B7 AA F9 FF

29A0- 9F FF FF FF FF FF FF 00
29A8- BF D4 82 80 80 F8 83 FE
29B0- FF FF FF FF FF D3 AA D5
29B8- F2 FF FF 95 A2 E5 E7 ED
29C0- A3 D0 F2 FF FF FF FF FF
29C8- FF FF FF FF 9F D5 FC 00

```

```

29D0- FF 81 98 FC A0 C5 AB D5
29D8- AA D1 A2 C5 B8 C7 A2 80
29E0- B2 FC FF FF BF AA 84 A8
29E8- C0 AA C5 FF FF CF AA D5
29F0- CA FF FF FF FF 83 AA 00
29F8- 00 00 00 00 00 00 00 00
2A00- FF FF BF A2 B5 CA FF FF
2A08- FF FF FF FF FF FF FF FF
2A10- 8F C5 FF D1 F2 FF CF FF
2A18- FF BF 8E D4 AA 91 F9 CF
2A20- FD FF FF F1 FF FF FF 00
2A28- FF FF FF FF FF BF 80 80
2A30- FC FF FF FF FF FF FF FF
2A38- FF FF FF E7 FF 87 FF FF
2A40- FF FF FF FF FF FF CF 9F
2A48- C0 FF FF FF F3 FF AB 00
2A50- FF BD EF F0 E7 D4 AB D5
2A58- 8A E0 FF BF AA D1 A2 98
2A60- B2 F0 FF FF B3 FE 9F AA
2A68- D5 AA B9 FC B3 F8 A9 D5
2A70- 80 FC FF FF FF CF AA 00
2A78- 00 00 00 00 00 00 00 00
2A80- FF 9F AA E5 9F C6 F2 FF
2A88- FF FF FF FF FF BF AA 81
2A90- 80 94 83 B5 FE FF FF FF
2A98- F3 AB D5 BC D4 C9 FF CF
2AA0- FD FF FF CF F8 FF FF 00
2AA8- FF FF FF FF 83 80 83 FC
2AB0- F1 8D FF FF FF FF FF FF
2AB8- FF FF FF E7 9F FF FF FF
2AC0- FF FF FF 81 FC FF FF FF
2AC8- FF FF E1 FF 99 87 CA 00
2AD0- FF BF EF FF E3 D1 AA D5
2AD8- 80 EF CC 9F BF C4 82 FF
2AE0- FF C3 FF FF E7 81 80 D0
2AE8- AA D5 98 E7 C7 87 86 80
2AF0- 80 80 FE FF FF D1 CA 00
2AF8- 00 00 00 00 00 00 00 00
2B00- FF CF 80 90 C0 87 FC CF
2B08- FF FF FF FF FF FF 87 F7
2B10- F7 FF FE 85 CF BF 9F EA
2B18- DF 82 C0 CA AA C4 FC FF
2B20- FF 8F FF BF AA 90 DF 00

```

```

2B2B- FF FF FF FF 81 80 80 FC
2B30- C7 FF 83 FF FF FF FF FF
2B38- FF FF FF E7 9F FF FF FF
2B40- 9F BB B8 FE FF FF FF FF
2B48- BF E0 FE EF 8E 8E 88 00
2B50- FF FF 9F FC E0 FF FF FF
2B58- BF DE FF CF 9F C0 E7 FF
2B60- BF FE FF FF 80 C0 A1 D5
2B68- A4 95 FE FF FF FF E7 CC
2B70- 99 B3 FE FF FF 81 80 00
2B78- 00 00 00 00 00 00 00 00
2B80- FF E4 DC FF FB EF C7 CF
2B88- CF E1 F9 FF FF FF D0 AA
2B90- D0 FC FF A5 A8 FC FF AC
2B98- 80 DE E7 A3 C1 FF C0 BF
2BA0- A8 85 AA F1 A9 E5 FF 00
2BA8- FF FF FF FF FF FF FF B1
2BB0- 93 CC FF FF FF FF FF FF
2BB8- FF FF FF FF 80 C0 FF B7
2BC0- FF FF C3 FF FF FF FF FF
2BC8- FF FF FF 81 BC FC C1 00
2BD0- FF FF FF FF FF FF FF FF
2BD8- FF 9F FE 9F FE FF FF FF
2BE0- FF FF FF 9F FE FF FF 8F
2BE8- FC FF FF 9F FE FF FF FF
2BF0- 87 B3 8E 8E FE 83 83 00
2BF8- 00 00 00 00 00 00 00 00
2C00- FF FF FF FF FF FF FF FF
2C08- FF FF FF FF FF FF FF FF
2C10- FF FF FF FF FF 8C F8 FC
2C18- E3 F0 FF FF FF FF FF FF
2C20- FF FF FF FF FF FF FF 00
2C28- BF F6 FF FF FF 9F FF FF
2C30- FF FF FF FF FF A3 88 9F
2C38- CA FF FF E5 FF C7 AA D5
2C40- AA FB FF FF 8F 95 AA D5
2C48- A2 95 FF FF A7 E5 FF 00
2C50- FF FF FF FF FF 8F D5 A2
2C58- D5 C8 87 F0 FF FF FF FF
2C60- FF FF FF BF 80 E0 EE D9
2C68- 80 F0 F3 FF FF FF 94 A8
2C70- 80 BF EE DD CF 9F D1 00
2C78- 00 00 00 00 00 00 00 00

```

```

2C80- FF FF A7 95 8E D5 FC FF
2C88- FF FF FF FF FF FF FF FF
2C90- FF FF FF FF FF FF FF C1
2C98- 87 F0 F1 FF F3 FF FF FF
2CA0- FF FF FF FF FF FF FF 00
2CAB- B9 AA CC 83 EC AB AB D1
2CB0- F2 FF 9F F3 F1 C7 D4 D0
2CB8- F8 FF E3 E5 FF FF FF BF
2CC0- 80 C5 82 FF 83 D4 AA 95
2CC8- AA FE FF FF 9F 95 FF 00
2CD0- FF FF FF FF FF E7 FE 9F
2CD8- BF 8A CF E3 D4 FF FF FF
2CE0- FF FF FF 83 80 C0 E7 FF
2CE8- FF E1 F3 FF BF 82 85 B8
2CF0- 9E F1 FF F9 CF A2 C1 00
2CF8- 00 00 00 00 00 00 00 00
2D00- FF FF 83 FC 81 C7 FF FF
2D08- FF FF FF FF FF FF FF FF
2D10- FF FF FF FF 8F F9 FF FF
2D18- 9F AA 80 DF 99 9A FF FF
2D20- FF 87 FE F9 BF BF FF 00
2D28- A7 A9 F1 FF FF F3 A2 C5
2D30- FF FF BF 8E 9F F4 AB C5
2D38- AA BE CF 95 FF D1 80 FF
2D40- BF F8 FF FF FF FF FF FF
2D48- FF FF FF FF 9F D5 FC 00
2D50- FF FF FF D3 AA D5 AB D5
2D58- AB 80 A0 D4 AA D5 AB 91
2D60- FF FF FF 80 80 80 FE 8D
2D68- B1 80 80 80 80 83 8C F3
2D70- E1 81 80 80 80 80 D5 00
2D78- 00 00 00 00 00 00 00 00
2D80- FF BF FC C5 BB E4 FF FF
2D88- FF FF FF FF FF FF FF FF
2D90- FF FF FF BF CA FF FF FF
2D98- FB F1 BF 87 87 AA F9 FF
2DA0- BF FE FF FF FF FF FF 00
2DAB- FF 81 80 80 C0 FF FF FF
2DB0- FF FF FF FF FF D3 AA D5
2DB8- F8 FF BF 95 A2 E5 DB E9
2DC0- A9 D5 F2 FF FF FF FF FF
2DC8- FF FF FF FF 9F D5 F8 00
2DD0- FF 81 C4 FF 87 C5 AB D5

```

```

2DD8- AA 91 80 80 C8 CF A2 E6
2DE0- 82 F8 FF FF BF AA D0 88
2DE8- C5 AA 85 FE FF CF AA D5
2DF0- CB FF FF FF FF 83 AA 00
2DF8- 00 00 00 00 00 00 00 00
2E00- FF FF FF 88 D0 E0 FF FF
2E08- FF FF FF FF FF FF FF FF
2E10- A3 95 FF D1 F8 F8 9F FF
2E18- F9 FF A0 D5 AA 84 F9 E7
2E20- FB FF FF E4 FF FF FF 00
2E28- FF FF FF FF FF BF 80 80
2E30- FE FF FF FF FF FF FF FF
2E38- FF FF FF E7 FF F1 FF FF
2E40- FF FF FF FF FF FF CF 81
2E48- FC FF FF FF EF 81 AA 00
2E50- FF 9D B7 E6 CF D1 A8 D5
2E58- 8A F0 FF FF AB C5 A2 E6
2E60- E2 C3 FF FC 8F 80 90 AA
2E68- D5 AA F0 FC FF 83 80 80
2E70- 80 F8 FF FF FF C7 AA 00
2E78- 00 00 00 00 00 00 00 00
2E80- FF C7 AA C5 CF CD F2 FF
2E88- FF FF FF FF FF FF A8 98
2E90- B7 C4 9F 85 F0 FF FF FF
2E98- C7 BF D5 F8 D3 C1 FF 9F
2EA0- FE FF FF CF F2 FF FF 00
2EA8- FF FF FF FF 81 80 82 FC
2EB0- EE 9D FF FF FF FF FF FF
2EB8- FF FF FF E7 9F FF FF FF
2EC0- FF FF BF E0 FF FF FF FF
2EC8- FF FF DC FF DC 8F E2 00
2ED0- FF BF CF FF E1 87 AA 95
2ED8- 80 EF 9E 9F 87 84 F8 FF
2EE0- BF F0 FF FF 87 80 80 D0
2EE8- A2 D5 B8 F0 9F F0 87 80
2EF0- 80 80 FE FF FF D3 8A 00
2EF8- 00 00 00 00 00 00 00 00
2F00- FF 9F A8 85 80 87 F8 9F
2F08- FF FF FF FF FF E3 87 C7
2F10- F7 9F FF 85 9F FF CF FA
2F18- B5 F8 9F AA AA C1 FC FF
2F20- FF CF FF BF AA 94 CF 00
2F28- FF FF FF FF 83 80 82 FE

```

```

2F30- FF FF 9F FF FF FF FF FF
2F38- FF FF FF E7 9F FF FF BF
2F40- CC F7 B3 FE FF FF FF FF
2F48- 80 F3 FD DF 9D 87 98 00
2F50- FF FF FF 81 FC FF FF FF
2F58- BF 9E FE C3 9F FF 8F FF
2F60- 8F FF FF BF F8 83 82 95
2F68- A6 95 FF FF FF FF 87 B3
2F70- E6 B0 FE FF 87 80 FC 00
2F78- 00 00 00 00 00 00 00 00
2F80- BF 8E FC FF E1 8F 9E 9F
2F88- CF 8F FC FF FF FF D0 AA
2F90- 85 FE FF E5 A9 F9 FF A1
2F98- E0 80 C7 87 FC FF 80 80
2FA0- AA 95 AA FC A3 E5 FF 00
2FA8- FF FF FF FF FF FF FF 81
2FB0- D6 E6 FF FF FF FF FF FF
2FB8- FF FF FF BF 80 C0 FF F3
2FC0- FE FF F3 FF FF FF FF FF
2FC8- FF FF FF F9 F0 FF C0 00
2FD0- FF FF FF FF FF FF FF FF
2FDB- FF FF F0 C3 FF FF FF FF
2FE0- FF FF FF BF FC FF FF 8F
2FE8- FC FF FF 9F FE FF FF FF
2FF0- E7 B0 82 F8 81 FC F0 00
2FF8- 00 00 00 00 00 00 00 00
3000- FF FF FF FF FF FF FF FF
3008- FF FF FF FF FF FF FF FF
3010- FF FF FF FF FF 80 FF F9
3018- 83 FC FF FF FF FF FF FF
3020- FF FF FF FF FF FF FF 00
3028- 9F F0 FF FF FF CF FF 87
3030- FE FF FF FF FF A9 E1 CF
3038- 8A FF FF E5 FF 8F AA D5
3040- AA F0 FF FF A7 95 AA D5
3048- A2 95 FF FF A7 C5 FF 00
3050- FF FF FF FF FF A7 D5 A2
3058- D5 CB F0 C7 FF FF FF FF
3060- FF FF FF FF 80 E0 EF B3
3068- 86 F3 F3 FF FF FF 94 8A
3070- BF FF E8 EE E3 9F D1 00
3078- 00 00 00 00 00 00 00 00
3080- FF FF 8F D5 A0 95 FE FF

```

```

3088- FF FF FF FF FF FF FF FF
3090- FF FF FF FF FF FF FF 9F
3098- C6 82 FE FD E7 FF FF FF
30A0- FF FF FF FF FF FF FF 00
30A8- A9 AA 81 83 86 AA AE D1
30B0- F2 FF 9F FC A7 C0 84 D5
30B8- 82 BF F8 E5 FF FF FF FF
30C0- 87 C0 8A 80 80 D4 AA C5
30C8- 8A FF FF FF 9F 95 FF 00
30D0- FF FF FF FF 9F E0 FE FF
30D8- B8 CA 9C 93 A0 FF FF FF
30E0- FF FF FF 81 80 E0 83 FF
30E8- BF E0 F3 FF FF 81 B4 B8
30F0- B0 F8 FF E3 AF 8A C1 00
30F8- 00 00 00 00 00 00 00 00
3100- FF DF F9 8E DB E7 FF FF
3106- FF FF FF FF FF FF FF FF
3110- FF FF FF FF A7 FC FF FF
3118- BF A8 98 BF 9B 9A FF FF
3120- FF F9 F0 F9 FF BF FF 00
3128- A7 A1 F1 FF FF F3 A2 E5
3130- FF FF FF B8 90 F4 AB C5
3138- AA B0 AC 95 FF D4 A2 FC
3140- 9F F7 FF FF FF FF FF FF
3148- FF FF FF FF 9F D5 FC 00
3150- FF FF 83 80 A0 D5 A8 95
3158- AA D0 AA D4 AA 95 AA 90
3160- 80 FF FF 9F B0 FC F0 B9
3168- 98 FF FF FF BF B9 80 E0
3170- C9 FD FF FF FF 8F D5 00
3178- 00 00 00 00 00 00 00 00
3180- FF FF 8C C3 8B E4 FF FF
3188- FF FF FF FF FF FF FF FF
3190- FF FF FF 9F CA FF FF FF
3198- F9 E7 BF A7 81 A8 F9 FF
31A0- 8F FC FF FF FF FF FF 00
31A8- FF 8F B0 B0 B0 B0 F0 FF
31B0- FF FF FF FF FF C7 AA 95
31B8- FE FF F7 D1 A8 C5 D3 E1
31C0- A8 D5 F2 FF FF FF FF FF
31C8- FF FF FF FF 9F D5 F2 00
31D0- FF FF F3 FF BF C5 A8 D5
31D8- AA C1 AA D5 E0 CF A2 98

```

31E0- 82 F1 FF FF 9F AA D4 AA
 31E8- D5 AA 81 F8 FF C7 AA D5
 31F0- CA FF FF FF FF B3 AB 00
 31F8- 00 00 00 00 00 00 00 00
 3200- FF FF BF A0 95 FE FF FF
 3208- FF FF FF FF FF FF FF FF
 3210- AB 95 FE D5 F0 FC 9F FF
 3218- F0 FF 89 D0 8A A5 FC F3
 3220- FF FF FF C4 FF FF FF 00
 3228- FF FF FF FF FF FF 80 80
 3230- FF FF FF FF FF FF FF FF
 3238- FF FF FF E7 BF FC FF FF
 3240- FF FF FF FF FF FF 8F E0
 3248- FF FF FF 8F DC 94 AB 00
 3250- FF DD B7 CF CF D1 AB D5

 3258- 8A F8 87 FE A9 C5 A2 98
 3260- E2 9B FF FF 9F FE BF AA
 3268- D5 AA F2 FC FF BE 82 80
 3270- 80 80 FC FF FF D3 AA 00
 3278- 00 00 00 00 00 00 00 00
 3280- FF D3 AA 95 CF B3 C2 FF
 3288- FF FF FF FF FF FF C3 DB
 3290- EF E1 FF 85 87 FF FF FF
 3298- 9F FE D7 E2 C7 94 FF FF
 32A0- FE FF FF CF F2 FF FF 00
 32A8- FF FF FF FF 81 80 80 FC
 32B0- DE CD 8E FF FF FF FF FF
 32B8- FF FF FF E7 9F FF FF FF
 32C0- FF FF BF FE FF FF FF FF
 32C8- FF FF B2 FF FC 8F 80 00
 32D0- FF BF 9E BE F0 E7 80 95
 32D8- 80 EF 9E 9F F3 C1 FF FF
 32E0- 83 F7 FF FF 87 80 98 D4
 32E8- 8A D5 F8 FF FF FF 87 80
 32F0- 98 B3 FE FF FF C7 AA 00
 32F8- 00 00 00 00 00 00 00 00
 3300- FF BF AA 95 80 80 E0 BF
 3308- FC FF FF FF FF 89 93 B6
 3310- F7 8F FF 85 9F FC CF BA
 3318- F1 FF FF AB A1 A9 FE FF
 3320- FF E7 FF FE AB 94 86 00
 3328- FF FF FF FF 87 80 83 9F
 3330- FE FF 9F FF FF FF FF FF

3338- FF FF FF E0 9F FF FF 9F
 3340- CB FF 87 FE FF FF FF 80
 3348- FE F3 FF FF FF 81 FC 00
 3350- FF FF FF FF FF FF FF FF
 3358- FF BE F8 E1 CF FF BF FC
 3360- C3 FF FF 9F FE 8F 98 80
 3368- 86 85 83 F8 FF FF E7 8C
 3370- 98 B3 FE FF 81 FE F3 00
 3378- 00 00 00 00 00 00 00 00
 3380- BF 9E F8 FF 80 9E C0 BF
 3388- 9E FF FF FF FF FF C4 AA
 3390- 91 FF FF E5 A3 F1 FF 87
 3398- B1 94 BF CF FF FF A9 C5
 33A0- AA D5 88 FE A7 E5 FF 00
 33A8- FF FF FF FF FF FF FF A8
 33B0- 8C F3 FF FF FF FF FF FF
 33B8- FF FF FF BF 80 80 FF F3
 33C0- FF FF F3 FF FF 81 FF FF
 33C8- FF FF FF B9 86 9F D0 00
 33D0- FF FF FF FF FF FF FF FF
 33D8- FF FF 87 F8 FF FF FF FF
 33E0- FF FF FF 87 F0 FF FF 87
 33E8- F8 FF FF 8F FF FF FF FF
 33F0- 87 B3 80 80 FF 87 FC 00
 33F8- 00 00 00 00 00 00 00 00
 3400- FF FF BF FC FF FF FF FF
 3408- FF FF FF FF FF FF FF FF
 3410- FF FF FF FF BF CE FF F3
 3418- 81 FE FF FF FF FF FF FF
 3420- FF FF FF FF FF FF FF 00
 3428- FF E3 FF FF FF CF FF D1
 3430- FC FF FF FF FF A9 F1 C3
 3438- AA FC EF E5 FF BF A8 D5
 3440- AA E6 FD BF A3 94 AA D5
 3448- A2 C5 FF FF A7 95 FF 00
 3450- FF FF FF FF FF 8F D5 80
 3458- D5 88 FE 9F FE FF FF FF
 3460- FF FF FF FF 87 E1 EF 85
 3468- FF E7 F1 FF FF 9F 80 C0
 3470- FF FF E3 F7 F9 9F C1 00
 3478- 00 00 00 00 00 00 00 00
 3480- FF FF BF C5 A0 94 FF FF
 3488- FF FF FF FF FF FF FF FF

```

3490- FF FF FF FF FF FF FF FF
3498- D0 F2 BF FE CF FF FF FF
34A0- FF FF FF FF FF FF FF 00
34AB- B9 AA 91 F8 B1 AB AA D4
34B0- F8 FF 9F FF 8F 9D A0 D5
34B8- B2 80 FF E5 FF FF FF FF
34C0- FF 80 80 80 80 D4 AA C1
34C8- E2 FF FF FF 9F 95 FF 00
34D0- FF FF FF FF 87 C5 FE F3
34D8- C5 E2 99 C3 8A FF 8F F8
34E0- FF FF FF B1 80 E0 FB F8
34E8- 87 C0 F3 FF BF B0 C4 80
34F0- E4 FF FF 8F B7 88 D1 00
34F8- 00 00 00 00 00 00 00 00
3500- FF 8F FC F7 FE E1 FF FF
3508- FF FF FF FF FF FF FF FF
3510- FF FF FF FF A7 FE FF FF
3518- BF 82 DE F3 BF BE FE FF
3520- FF FC 87 F8 FF BF FF 00
3528- A7 85 F2 FF FF E7 8A E0
3530- FF FF FF 83 8F F4 AA D1
3538- AA 80 E3 95 83 94 88 F9
3540- 9F EC FF FF FF FF FF FF
3548- FF FF FF FF 9F D5 FC 00
3550- FF BF 80 D0 8A D5 AB D5
3558- AA D1 8A D5 AA 85 AA D4
3560- B0 FE FF FF 80 FF 84 E0
3568- 8F F8 FF FF BF BC AA 85
3570- B8 FC FF FF FF 8F D5 00
3578- 00 00 00 00 00 00 00 00
3580- FF FF C1 E0 D1 C8 FF FF
3588- FF FF FF FF FF FF FF FF
3590- FF FF FF CF E2 FF DF FF
3598- FC FB BF 87 BA 89 F8 FF
35A0- E3 FF FF FF FF FF FF 00
35AB- FF FF FF 87 80 80 80 FE
35B0- FF FF FF FF FF 9F AA C1
35B8- FF FF EF 81 AB 95 83 83
35C0- AB C5 F2 FF FF FF FF FF
35C8- FF FF FF FF 9F D5 F2 00
35D0- FF FF F9 FF 9F 95 AB D5
35D8- AA 91 80 D4 C2 CF A2 E6
35E0- A2 C5 FF FF 8F AB C5 AA

```

35E0- D5 AA 81 80 FF C7 AA D5
35F0- CB FF FF FF FF FF AB 00
35FB- 00 00 00 00 00 00 00 00
3600- FF FF 9F 83 80 C0 FF FF
3603- FF FF FF FF FF FF FF B7
3610- AA D5 FC D5 8C FC 9F FF
3618- C4 FF A0 85 A0 A9 FE F3
3620- FF FF FF 91 FF FF FF 00
3628- FF FF FF FF FF FF 81 80
3630- C0 FF FF FF FF FF FF FF
3638- FF FF FF E7 9F FF FF FF
3640- FF FF FF FF FF FF 80 FE
3648- FF FF FF F7 B3 D0 A0 00
3650- FF DD B7 CF CF D1 AB D5
3658- 82 FC F1 F8 A9 95 A2 E6
3660- E2 98 FF FF BF E0 BF AA
3668- D5 8A F2 FC EF B9 FE FF
3670- FF FF C1 FF FF D1 AA 00
367B- 00 00 00 00 00 00 00 00
3680- FF D3 AA 95 E6 8C 82 FE
3688- FF FF FF FF FF FF 8F FF
3690- EF F3 FF 85 BF F8 BF 80
3698- 80 E0 FF 8A CF 94 FF FF
36A0- FC FF FF CF E2 FF FF 00
36A8- FF FF FF FF 80 80 80 FC
36B0- DE 8D B2 FE FF FF FF FF
36B8- FF FF FF E7 9F FF FF FF
36C0- FF FF BF FE FF FF FF FF
36C8- FF FF A0 BF FE 9F F8 00
36D0- FF FF BE 80 F8 E3 9F 80
36D8- 98 EF 9E 9F F3 FF FF 9F
36E0- F0 F7 FF FF 87 B3 E6 D4
36E8- 8A D5 FC FF FF FF B7 B3
36F0- E6 80 FE FF FF 8F AA 00
36F8- 00 00 00 00 00 00 00 00
3700- FF BF 82 90 F0 9F 8C FE
3708- 81 FE FF FF FF A9 C0 90
3710- F7 BF FE 85 80 FE CF BE
3718- FC FF FF 87 A9 A9 FC FF
3720- FF E7 FF 89 A8 C5 B1 00
3728- FF FF FF FF 9F E0 87 8F
3730- FF FF CF FF FF FF FF FF
3738- FF FF FF FF 9F FF FF 9F

```

3740- 87 FF 87 FE FF FF 81 FE
3748- FF E7 EF FD FF 8F FC 00
3750- FF FF FF FF FF FF FF
3758- FF FC 81 F8 CF FF FF 81
3760- F8 FF FF 8F FE 9F B8 8C
3768- B2 C0 80 E0 FF FF 87 E3
3770- E4 B0 FE 9F F8 FF 8F 00
3778- 00 00 00 00 00 00 00
3780- BF CE F9 BF 80 FC FC FF
3788- B9 FE FF FF FF FF 94 AA
3790- C4 FF FF E5 A7 E5 FF BF
3798- 80 80 CE DC FF FF A1 C5
37A0- AA D5 C8 FF A7 E5 FF 00
37A8- FF FF FF FF FF FF BF A8
37B0- F9 E1 FF FF FF FF FF FF
37B8- FF FF FF 9F 80 80 FF F3
37C0- FF FF F3 FF FF BB FE FF
37C8- FF FF FF 83 BE 80 D5 00
37D0- FF FF FF FF FF FF FF FF
37D8- FF FF FF FF FF FF FF FF
37E0- FF FF FF 83 80 FE FF 80
37E8- E0 FF FF 87 FC FF FF FF
37F0- 8F B0 82 80 80 80 F2 00
37F8- 00 00 00 00 00 00 00
3800- FF FF 8F F1 FF FF FF FF
3808- FF FF FF FF FF FF FF FF
3810- FF FF FF FF 9F DF FF F3
3818- 81 FE BF E0 FF FF FF FF
3820- FF FF FF FF FF FF FF 00
3828- FF C7 FF FF FF E7 FF 94
3830- F8 FF FF FF FF A9 B4 D0
3838- AA E1 C7 E5 FF FF A1 D5
3840- AA FD FD FF A8 C4 AA D5
3848- A2 E5 FF FF A7 95 FF 00
3850- FF FF FF FF FF 8F 94 FC
3858- D0 C0 BF 9C FC FF FF FF
3860- FF FF FF FF 9F C1 DF 81
3868- FF 87 F0 FF FF CF E3 BE
3870- F0 FF C7 FB FC 9F C1 00
3878- 00 00 00 00 00 00 00
3880- FF FF A7 94 88 C5 FF FF
3888- FF FF FF FF FF FF FF FF
3890- FF FF FF FF FF FF FF FF

```

```

3898- D1 E2 87 FF 9F FF FF FF
38A0- FF FF FF FF FF FF FF 00
38A8- A9 AA D1 FC FF C9 AB D4
38B0- FC FF CF FB BF F4 AA D5
38B8- F2 FF FF E5 FF FF FF FF
38C0- FF BF 80 80 FE D4 AA 9C
38C8- F8 FF FF FF 9F 95 FE 00
38D0- FF FF FF FF A1 85 FC E0
38D8- D3 E0 9B D1 A0 FE EF FB
38E0- FF FF FF 81 80 E0 FF 81
38E8- E0 C4 F3 FF 9F B2 C0 A2
38F0- E5 FF FF 9F B8 AB 90 00
38F8- 00 00 00 00 00 00 00 00
3900- FF CF FC 9B FC E6 FF FF
3908- FF FF FF FF FF FF FF FF
3910- FF FF FF FF A3 FE FF FF
3918- BF 9E DF ED 8F BE FE FF
3920- BF FE CF F3 FF FF FE 00
3928- A7 D5 F2 FF FF E7 8A E5
3930- FF FF FF FF 8F F4 8A D4
3938- AA DE F3 95 AB C4 E1 F8
3940- 8F E8 FF FF FF FF FF FF
3948- FF FF FF FF 9F D5 FC 00
3950- FF 8F 80 C0 AA D4 88 C0
3958- AA D1 8A D5 AA C5 8A D5
3960- F8 FC FF FF FF BF 94 80
3968- C0 82 FF FF BF FF AB D5
3970- FC FE FF FF FF 8F 81 00
3978- 00 00 00 00 00 00 00 00
3980- FF FF 93 82 D4 E2 FF FF
3988- FF FF FF FF FF FF FF FF
3990- FF FF FF CF F2 FF BF 9F
3998- FE C1 FF 86 AA C0 F8 FF
39A0- F9 FF FF FF FF FF FF 00
39A8- FF FF FF FF 87 80 FE FF
39B0- FF FF FF FF FF BF 80 FC
39B8- FF FF EF C5 A9 94 83 87
39C0- AA C5 F2 FF FF FF FF FF
39C8- FF FF FF FF 9F D5 F2 00
39D0- FF FF FC 81 9E 95 AB D5
39D8- AA 81 80 D0 8A CF A2 98
39E0- A2 95 FF FF 83 AB C5 AA
39E8- D5 A0 80 B8 FE C7 AA D5

```

```

39F0- C8 FF FF FF FF FF AB 00
39FB- 00 00 00 00 00 00 00 00
3A00- FF FF 9F E7 E7 94 FE FF
3A08- FF FF FF FF FF FF 8F D0
3A10- AA D5 F0 D5 FC F9 CF FF
3A18- 9C 8E 86 D0 AA AB FE F3
3A20- FF FF FF 93 FF FF FF 00
3A28- FF FF FF FF FF FF 87 C0
3A30- 87 FC FF FF FF FF FF FF
3A38- FF FF FF E7 9F FF FF FF
3A40- FF FF FF FF FF 87 F0 FF
3A48- FF FF FF FF AF C4 A2 00
3A50- FF DD B7 CF CF D1 AB D5
3A58- 82 BC FC E3 A3 95 A2 98
3A60- 82 9E FF 83 BE 82 80 AA
3A68- D5 C0 82 9C DE 83 80 80
3A70- 80 80 80 FB FF D1 82 00
3A78- 00 00 00 00 00 00 00 00
3A80- FF D3 AA D5 B0 83 B2 FC
3A88- FF FF FF FF FF FF E7 BE
3A90- FC E7 FF 85 FF C3 81 8F
3A98- D4 8A F0 AB 80 94 FE FF
3AA0- F9 EF FF 9F CA 9F FE 00
3AA8- FF FF FF FF 80 80 80 FB
3AB0- AE 9B 98 FC FF FF FF FF
3AB8- FF FF FF E7 9F FF FF FF
3AC0- FF 87 BF FE FF FF FF FF
3AC8- FF FF A0 BC FC 9F F0 00
3AD0- FF FF FC 81 FE F1 FF 8F
3AD8- 9E EF 9E 9F F3 FF FF C3
3AE0- F3 F3 FF FF E7 CC 99 D4
3AE8- 8A D5 FC FF FF FF E7 CC
3AF0- 99 B3 FE FF FF CF 80 00
3AF8- 00 00 00 00 00 00 00 00
3B00- FF BF F8 87 FE FF B9 FB
3B08- FF F0 FF FF FF A3 D4 B2
3B10- FB 87 FE B1 AA FE CF AE
3B18- FE FF DF BF A0 AB F9 FF
3B20- FF E7 FF C1 AB E5 FF 00
3B28- FF FF FF FF FF FF 87 B7
3B30- FE FF C7 FF FF FF FF FF
3B38- FF FF FF FF 9F FF FF BF
3B40- F6 FF BB FE FF 83 FC FF

```

```

3B48- FF BF DF FF FE BF C0 00
3B50- FF FF FF FF FF FF FF FF
3B58- FF F9 87 FE E7 FF FF FF
3B60- FF FF FF BF FF BF F3 8F
3B68- F2 98 FC 83 FF FF 8F B0
3B70- 98 B3 FE 83 F0 FF FF 00
3B78- 00 00 00 00 00 00 00 00
3B80- EF EE F3 8F 80 F0 FD FF
3B88- B3 FE FF FF FF FF D4 80
3B90- F1 FF FF E5 8F E5 F7 87
3B98- A8 BC 9C E0 FF FF 89 C4
3BA0- AA D5 E0 FF A7 E5 FF 00
3BA8- FF FF FF FF FF FF 9F A8
3BB0- 85 88 FF FF FF FF FF FF
3BB8- FF FF FF 9F 80 80 83 E0
3BC0- 89 FE F3 FF FF F3 86 E3
3BC8- FF FF FF E3 F0 BF D0 00
3BD0- FF FF FF FF FF FF FF FF
3BD8- FF FF FF FF FF FF FF FF
3BE0- FF FF FF BF 80 80 80 80
3BE8- 80 FE FF 83 F8 FF FF FF
3BF0- BF B0 BE B0 80 80 8E 00
3BF8- 00 00 00 00 00 00 00 00
3C00- FF FF A7 E5 FF C7 FF FF
3C08- FF FF FF FF FF FF FF FF
3C10- FF FF FF FF FF FF FF E7
3C18- 81 FF 8F 8F FF FF FF FF
3C20- FF FF FF FF FF FF FF 00
3C28- BF 80 FE FF FF C1 BF 94
3C30- F2 FF FF FF FF 89 C5 C2
3C38- AA 9D 98 E5 FF FF 87 D5
3C40- AA E1 F9 FF A9 C4 AA D5
3C48- A2 E5 FF FF A7 95 FF 00
3C50- FF FF FF FF FF 87 C0 CF
3C58- C7 E2 CF C1 F9 FF FF FF
3C60- FF FF FF FF 9F C0 BF C3
3C68- FF 87 F3 FF FF E1 8D 98
3C70- E5 F7 CF BF F8 8F C1 00
3C78- 00 00 00 00 00 00 00 00
3C80- FF FF A3 D5 88 C5 FF FF
3C88- FF FF FF FF FF FF FF FF
3C90- FF FF FF FF FF FF FF FF
3C98- D1 8A C0 EF 9F FF FF FF

```

```

3CA0- FF FF FF FF FF FF FF 00
3CAB- A1 BA D5 FC FF C9 8B D5
3CB0- FC FF CF FD FF F4 AA D5
3CB8- F2 FF FF E5 FF FF FF FF
3CC0- FF FF FF FF FF D4 8A FF
3CC8- FF FF FF FF 9F D5 FC 00
3CD0- FF FF FF BF AB E5 80 CA
3CD8- 83 89 87 94 8A FC 8F F8
3CE0- FF FF FF 81 80 E0 FF 83
3CE8- E0 84 F3 FF CF 80 CC 82
3CF0- E5 FF FF BF 9F AB 90 00
3CF8- 00 00 00 00 00 00 00 00
3D00- FF CF DD E1 BD C0 FF FF
3D08- FF FF FF FF FF FF FF FF
3D10- FF FF FF FF FF FE FF FF
3D18- 9F CF FF DE B7 AE FE FF
3D20- BF FE EF E7 FF FF FF 00
3D28- 8F D5 E0 FF FF CF A3 E5
3D30- FF FF FF FF 9F DD A0 D5
3D38- 8A FF FC 95 AA E4 E7 F9
3D40- 8F 88 FE FF FF FF FF FF
3D48- FF FF FF FF 9F D5 FC 00
3D50- FF 87 80 9F AA D1 E8 CF
3D58- AA D1 8A D5 AA D1 A2 D5
3D60- F2 FC FF FF FF 8F 94 80
3D68- C5 AA FC FF FF FF AB C1
3D70- FC FF FF FF FF 87 AA 00
3D78- 00 00 00 00 00 00 00 00
3D80- FF FF 87 AA 95 80 FF FF
3D88- FF FF FF FF FF FF FF FF
3D90- FF FF FF CE F2 FF BF C0
3D98- FF CD FF C6 AA 91 F8 FF
3DA0- FC FF FF FF FF FF FF 00
3DAB- FF FF FF FF FF 9F 80 80
3DB0- FE FF FF FF FF FF FF FF
3DB8- FF FF FF E7 FF FF C7 FF
3DC0- FF FF FF FF FF FF CF FF
3DC8- FF 87 F0 FF FF FF A9 00
3DD0- FF FF BE FC B8 94 AB D5
3DD8- AA 80 80 C0 AA C6 A2 E6
3DE0- A2 95 FF 9F 80 A0 C1 AA
3DE8- D5 8A 8E 8E F0 CF AA D5
3DF0- E3 FF FF FF FF BF A2 00

```


3DFB- 00 00 00 00 00 00 00 00
 3E00- FF FF 83 8F CF D1 FC FF
 3E08- FF FF FF FF FF FF A3 D5
 3E10- AA D5 80 D1 FC E3 E3 FF
 3E18- FC E0 95 87 80 AA FE F3
 3E20- FF FF FF 93 FE FF FF 00
 3E28- FF FF FF FF FF FF 9F F0
 3E30- 9C F3 FF FF FF FF FF FF
 3E38- FF FF FF E7 9F FF FF FF
 3E40- FF FF FF FF BF 80 FF FF
 3E48- FF FF FF FF 9F D5 82 00
 3E50- FF C1 B7 CF CF D1 A8 D5
 3E58- 82 9E FF EF A3 C1 A2 86
 3E60- E0 9F FF F8 B8 DE FF A8
 3E68- 85 D4 F2 CC BC 8E FE FF
 3E70- FF FF FF F9 FF D4 AA 00
 3E78- 00 00 00 00 00 00 00 00
 3E80- FF 93 AA D5 B8 83 F2 F9
 3E88- FF FF FF FF FF FF E7 DE
 3E90- FB E7 FF 85 FF 9F FC A3
 3E98- D5 AA 85 8E 8A D1 FC FF
 3EA0- E3 F7 FF BF CA C7 FC 00
 3EA8- FF FF FF FF 80 80 80 F8
 3EB0- 8D C7 89 FC FF FF FF FF
 3EB8- FF FF FF E7 9F FF FF FF
 3EC0- FF F3 BE FE FF FF FF FF
 3EC8- FF BF 80 88 9A 9F F0 00
 3ED0- FF FF F9 FF FF F8 FF FF
 3ED8- 9F EF 8C 9F F3 FF 9F F8
 3EE0- F9 FB FF FF 87 B3 86 D5
 3EE8- 8A D5 FC FF FF FF 87 B3
 3EF0- E6 B0 FE FF FF CF AA 00
 3EF8- 00 00 00 00 00 00 00 00
 3F00- FF BF FC E3 FF DF F3 F3
 3F08- FF E7 FF FF FF 8F D1 B2
 3F10- FB E7 FE B1 AA FE CF AE
 3F18- FE FF BF FC 84 AA F1 FF
 3F20- FF CF FF 90 A8 E5 FF 00
 3F28- FF FF FF FF FF FF 8F FF
 3F30- F9 FF E1 FF FF FF FF FF
 3F38- FF FF FF FF 9F FF FF FF
 3F40- F8 FF BF FE 83 F8 FF FF
 3F48- FF BF B0 FF 9F FC 90 00

```

3F50- FF FF FF FF FF FF FF FF
3F5B- FF F3 FF FF F3 FF FF FF
3F60- FF FF FF 8F FF FF EE A7
3F6B- E0 8F FF 8F FF FF BF B0
3F70- E3 B0 FE E0 EF FF FF 00
3F7B- 00 00 00 00 00 00 00 00
3F80- 8F FC C7 83 80 80 FC FF
3F8B- B7 FE FF FF FF FF D4 AA
3F90- FB FF FF E5 9F E5 83 D0
3F9B- AA F9 81 FF FF FF A9 C0
3FA0- AA D5 F0 FF A7 E5 FF 00
3FAB- FF FF FF FF FF FF CF 8B
3FB0- 84 AA FE FF FF FF CF FF
3FB8- FF FF FF 9F 80 80 80 8F
3FC0- F6 FC F3 FF FF 87 D2 8B
3FCB- FB FF FF B8 E6 BF D4 00
3FD0- 00 00 00 00 00 00 00 00
3FD8- 00 00 00 00 00 00 00 00
3FE0- 00 00 00 00 00 00 00 00
3FEB- 00 00 00 00 00 00 00 00
3FF0- 00 00 00 00 00 00 00 00
3FFB- 00 00 00 00 00 00 00 00

```

7. ML2

```

2000- 00 00 00 00 00 00 00 00
200B- 00 00 00 00 00 00 00 00
2010- 00 00 00 00 00 00 00 00
201B- 00 00 00 00 00 00 00 00
2020- 00 00 00 00 00 00 00 00
202B- 00 00 00 00 00 7E 7F 7F
2030- 7F 7F 7F 7F 7F 61 36 5B
203B- 6D 30 1B 7E 7F 7F 7F 7F
2040- 7F 7F 7F 7F 7F 7F 7F 3F
204B- 00 00 00 00 00 00 00 00
2050- 00 00 00 00 00 7E 7F 77
205B- 1F 00 00 7F 43 7F 07 00
2060- 00 47 5F 77 47 7F 3C 7E
206B- 7F 7F 7F 7F 00 7E 6F 3F
2070- 00 00 00 00 00 00 00 00
207B- 00 00 00 00 00 00 00 00
2080- 00 00 00 00 00 7E 7F 7F
208B- 7F 7F 7F 7F 7F 01 00 00
2090- 7C 7F 7F 7F 7F 7F 7F 7F
209B- 7F 7F 7F 7F 7F 7F 7F 3F

```

20A0- 00 00 00 00 00 00 00 00
 20AB- 00 00 00 00 00 7E 7F 7F
 20B0- 7F 7F 7F 7F 0F 3C 7E 7F
 20B8- 7F 37 43 7F 7B 4F 0F 7F
 20C0- 7F 7F 7F 7F 7F 7F 7F 3F
 20CB- 00 00 00 00 00 00 00 00
 20D0- 00 00 00 00 00 7E 7F 7F
 20DB- 07 7C 07 78 7F 7F 7F 7F
 20E0- 7F 1F 7F 7E 7F 1F 7E 07
 20EB- 00 7E 78 7F 7F 1F 7F 3F
 20F0- 00 00 00 00 00 00 00 00
 20FB- 00 00 00 00 00 00 00 00
 2100- 00 00 00 00 00 7E 7F 7F
 210B- 7F 7F 7F 7F 7F 01 00 00
 2110- 60 7F 7F 7F 7F 7F 7F 7F
 211B- 7F 7F 7F 7F 7F 7F 7F 3F
 2120- 00 00 00 00 00 00 00 00
 212B- 00 00 00 00 00 7E 7F 7F
 2130- 7F 7F 7F 40 0D 76 7F 63
 213B- 6F 30 43 0F 47 03 36 43
 2140- 7F 7F 03 78 7F 7F 7F 3F
 214B- 00 00 00 00 00 00 00 00
 2150- 00 00 00 00 00 7E 7F 7F
 215B- 7F 7F 7F 7F 7F 7F 7F 7F
 2160- 7F 7F 6F 7F 7F 7F 3F 7F
 216B- 7F 7F 7F 7F 7F 7F 7F 3F
 2170- 00 00 00 00 00 00 00 00
 217B- 00 00 00 00 00 00 00 00
 2180- 00 00 00 00 00 7E 7F 7F
 218B- 7F 7F 7F 7F 7F 7F 07 78
 2190- 7F 5F 6F 7F 7F 7F 7F 7F
 219B- 7F 7F 7F 7F 7F 7F 7F 3F
 21A0- 00 00 00 00 00 00 00 00
 21AB- 00 00 00 00 00 7E 7F 7F
 21B0- 7F 0F 36 5B 6D 0C 5B 6D
 21BB- 36 1B 7C 7F 5B 61 36 5B
 21C0- 6D 36 5B 0D 7E 7F 7F 3F
 21CB- 00 00 00 00 00 00 00 00
 21D0- 00 00 00 00 00 7E 7F 7F
 21DB- 7F 7F 7F 7F 7F 7F 7F 7F
 21E0- 7F 7F 7F 7F 7F 7F 7F 7F
 21EB- 7F 7F 7F 7F 7F 7F 7F 3F
 21F0- 00 00 00 00 00 00 00 00

21F8- 00 00 00 00 00 00 00 00 00
 2200- 00 00 00 00 00 00 7E 7F 7F
 2208- 7F 7F 07 00 00 00 00 00 7C
 2210- 77 77 1D 30 1E 7F 7F 7F
 2218- 7F 7F 7F 7F 7F 7F 7F 3F
 2220- 00 00 00 00 00 00 00 00 00
 2228- 00 00 00 00 00 00 7E 0F 00
 2230- 70 7F 37 5B 61 06 7B 1F
 2238- 36 5B 61 36 5B 6D 36 5B
 2240- 61 36 5B 6D 36 3E 7C 3F
 2248- 00 00 00 00 00 00 00 00 00
 2250- 00 00 00 00 00 00 00 00 00
 2258- 00 00 00 00 00 00 00 00 00
 2260- 00 00 00 00 00 00 00 00 00
 2268- 00 00 00 00 00 00 00 00 00
 2270- 00 00 00 00 00 00 00 00 00
 2278- 00 00 00 00 00 00 00 00 00
 2280- 00 00 00 00 00 00 7E 7F 7F
 2288- 7F 7F 0F 00 00 00 00 7C
 2290- 7F 70 7F 3F 40 7F 7F 7F
 2298- 7F 7F 7F 7F 7F 7F 7F 3F
 22A0- 00 00 00 00 00 00 00 00 00
 22AB- 00 00 00 00 00 00 7E 7F 0F
 22B0- 7F 7F 7F 47 6D 00 5B 6D
 22B8- 36 5B 61 00 00 6C 36 70
 22C0- 1F 36 1B 4F 37 5B 0D 3E
 22C8- 00 00 00 00 00 00 00 00 00
 22D0- 00 00 00 00 00 00 00 00 00
 22D8- 00 00 00 00 00 00 00 00 00
 22E0- 00 00 00 00 00 00 00 00 00
 22E8- 00 00 00 00 00 00 00 00 00
 22F0- 00 00 00 00 00 00 00 00 00
 22F8- 00 00 00 00 00 00 00 00 00
 2300- 00 00 00 00 00 00 7E 7F 7F
 2308- 7F 7F 7F 7F 7F 7F 47 7F
 2310- 3F 7F 7F 0F 7F 7F 7F 7F
 2318- 7F 7F 7F 7F 7F 7F 7F 3F
 2320- 00 00 00 00 00 00 00 00 00
 2328- 00 00 00 00 00 00 7E 7D 7D
 2330- 3B 60 7F 3B 6C 06 5B 6D
 2338- 36 03 40 7F 7F 7F 31 5B
 2340- 61 36 1B 7B 30 00 60 3F
 2348- 00 00 00 00 00 00 00 00 00

2350- 00 00 00 00 00 00 00 00
 2358- 00 00 00 00 00 00 00 00
 2360- 00 00 00 00 00 00 00 00
 2368- 00 00 00 00 00 00 00 00
 2370- 00 00 00 00 00 00 00 00
 2378- 00 00 00 00 00 00 00 00
 2380- 00 00 00 00 00 7E 7F 7F
 2388- 7F 7F 7F 7F 7F 7F 1F 58
 2390- 0D 7F 41 7F 7F 7F 7F 7F
 2398- 7F 7F 7F 7F 7F 7F 7F 3F
 23A0- 00 00 00 00 00 00 00 00
 23AB- 00 00 00 00 00 7E 7F 7E
 23B0- 5E 1F 7E 73 61 06 5B 6D
 23BB- 36 40 7F 7E 7F 5F 7F 58
 23C0- 01 36 18 0F 70 7F 7F 3C
 23CB- 00 00 00 00 00 00 00 00
 23D0- 00 00 00 00 00 00 00 00
 23DB- 00 00 00 00 00 00 00 00
 23E0- 00 00 00 00 00 00 00 00
 23EB- 00 00 00 00 00 00 00 00
 23F0- 00 00 00 00 00 00 00 00
 23FB- 00 00 00 00 00 00 00 00
 2400- 00 00 00 00 00 00 00 00
 240B- 00 00 00 00 00 00 00 00
 2410- 00 00 00 00 00 00 00 00
 241B- 00 00 00 00 00 00 00 00
 2420- 00 00 00 00 00 00 00 00
 242B- 00 00 00 00 00 7E 7F 7F
 2430- 7F 7F 7F 7F 1F 6C 36 43
 243B- 6D 36 18 7E 00 60 7F 7F
 2440- 7F 7F 7F 7F 7F 7F 7F 3F
 244B- 00 00 00 00 00 00 00 00
 2450- 00 00 00 00 00 7E 7F 77
 245B- 7F 01 70 7F 63 7F 7F 1F
 2460- 7C 47 5F 77 47 7F 3C 7E
 246B- 7F 7F 7F 7F 3E 7E 6F 3F
 2470- 00 00 00 00 00 00 00 00
 247B- 00 00 00 00 00 00 00 00
 2480- 00 00 00 00 00 7E 7F 7F
 248B- 7F 7F 7F 7F 7F 01 00 00
 2490- 7C 7F 7F 7F 7F 7F 7F 7F
 249B- 7F 7F 7F 7F 7F 7F 7F 3F
 24A0- 00 00 00 00 00 00 00 00

24AB-	00	00	00	00	00	7E	7F	7F
24B0-	7F	7F	7F	7F	03	3C	7E	7F
24B8-	61	07	43	7F	7B	4F	0F	7B
24C0-	7F	7F	7F	7F	7F	7F	7F	3F
24C8-	00	00	00	00	00	00	00	00
24D0-	00	00	00	00	00	7E	7F	7F
24D8-	7F	01	60	7F	7F	7F	7F	7F
24E0-	7F	1F	7F	70	7F	03	7E	47
24E8-	7F	7F	43	7F	7F	43	7F	3F
24F0-	00	00	00	00	00	00	00	00
24F8-	00	00	00	00	00	00	00	00
2500-	00	00	00	00	00	7E	7F	7F
2508-	7F	7F	7F	7F	7F	01	00	00
2510-	70	7F	7F	7F	7F	7F	7F	7F
2518-	7F	7F	7F	7F	7F	7F	7F	3F
2520-	00	00	00	00	00	00	00	00
2528-	00	00	00	00	00	7E	7F	7F
2530-	7F	7F	7F	58	0D	76	7F	63
2538-	7F	36	43	3F	47	63	36	5B
2540-	7F	7F	7B	7B	7F	7F	7F	3F
2548-	00	00	00	00	00	00	00	00
2550-	00	00	00	00	00	7E	7F	7F
2558-	7F	7F	7F	7F	7F	7F	7F	7F
2560-	7F	7F	4F	7F	7F	7F	0F	7F
2568-	7F	7F	7F	7F	7F	7F	7F	3F
2570-	00	00	00	00	00	00	00	00
2578-	00	00	00	00	00	00	00	00
2580-	00	00	00	00	00	7E	7F	7F
2588-	7F	7F	7F	07	60	7F	03	7B
2590-	7D	5F	4F	7F	7F	7F	7F	7F
2598-	7F	7F	7F	7F	7F	7F	7F	3F
25A0-	00	00	00	00	00	00	00	00
25AB-	00	00	00	00	00	7E	7F	7F
25B0-	7F	63	36	5B	6D	06	5B	6D
25B8-	06	1B	00	00	18	6C	36	5B
25C0-	6D	06	5B	61	7C	7F	7F	3F
25C8-	00	00	00	00	00	00	00	00
25D0-	00	00	00	00	00	7E	7F	7F
25D8-	7F	7F	7F	7F	7F	7F	7F	7F
25E0-	7F	7F	7F	7F	7F	7F	7F	7F
25E8-	7F	7F	7F	7F	7F	7F	7F	3F
25F0-	00	00	00	00	00	00	00	00
25F8-	00	00	00	00	00	00	00	00

2600- 00 00 00 00 00 7E 7F 7F
 2608- 7F 7F 07 00 00 00 00 7C
 2610- 77 7F 7F 30 1F 7F 7F 7F
 2618- 7F 7F 7F 7F 7F 7F 7F 3F
 2620- 00 00 00 00 00 00 00 00
 2628- 00 00 00 00 00 7E 03 00
 2630- 70 7F 07 5B 61 06 7B 01
 2638- 36 5B 61 36 5B 6D 36 00
 2640- 60 36 5B 6D 36 3E 7C 3F
 2648- 00 00 00 00 00 00 00 00
 2650- 00 00 00 00 00 00 00 00
 2658- 00 00 00 00 00 00 00 00
 2660- 00 00 00 00 00 00 00 00
 2668- 00 00 00 00 00 00 00 00
 2670- 00 00 00 00 00 00 00 00
 2678- 00 00 00 00 00 00 00 00
 2680- 00 00 00 00 00 7E 7F 7F
 2688- 7F 7F 3F 00 00 30 00 7F
 2690- 7F 7F 7F 7F 47 7F 7F 7F
 2698- 7F 7F 7F 7F 7F 7F 7F 3F
 26A0- 00 00 00 00 00 00 00 00
 26A8- 00 00 00 00 00 7E 7F 6F
 26B0- 7F 7F 7F 47 6D 00 5B 6D
 26B8- 36 5B 61 00 00 6C 36 73
 26C0- 1F 36 18 7F 37 5B 6D 3E
 26CB- 00 00 00 00 00 00 00 00
 26D0- 00 00 00 00 00 00 00 00
 26DB- 00 00 00 00 00 00 00 00
 26E0- 00 00 00 00 00 00 00 00
 26EB- 00 00 00 00 00 00 00 00
 26F0- 00 00 00 00 00 00 00 00
 26FB- 00 00 00 00 00 00 00 00
 2700- 00 00 00 00 00 7E 7F 7F
 2708- 7F 7F 7F 7F 7F 7F 07 7F
 2710- 3F 7B 7F 01 7F 7F 7F 7F
 2718- 7F 7F 7F 7F 7F 7F 7F 3F
 2720- 00 00 00 00 00 00 00 00
 2728- 00 00 00 00 00 7E 7D 7C
 2730- 1E 4F 7F 73 61 06 5B 6D
 2738- 36 03 60 7F 7F 7F 07 5B
 2740- 0D 36 18 4F 37 7B 03 3E
 2748- 00 00 00 00 00 00 00 00
 2750- 00 00 00 00 00 00 00 00

275B-	00	00	00	00	00	00	00	00
2760-	00	00	00	00	00	00	00	00
276B-	00	00	00	00	00	00	00	00
2770-	00	00	00	00	00	00	00	00
277B-	00	00	00	00	00	00	00	00
2780-	00	00	00	00	00	7E	7F	7F
278B-	7F	7F	7F	7F	7F	7F	1F	5B
2790-	6D	7F	59	7F	7F	7F	7F	7F
279B-	7F	7F	7F	7F	7F	7F	7F	3F
27A0-	00	00	00	00	00	00	00	00
27AB-	00	00	00	00	00	7E	7F	7E
27B0-	1E	0F	7E	70	61	00	40	6D
27BB-	06	40	7F	7E	7F	1F	7E	00
27C0-	00	36	1B	00	70	7F	7F	3C
27CB-	00	00	00	00	00	00	00	00
27D0-	00	00	00	00	00	00	00	00
27DB-	00	00	00	00	00	00	00	00
27E0-	00	00	00	00	00	00	00	00
27EB-	00	00	00	00	00	00	00	00
27F0-	00	00	00	00	00	00	00	00
27FB-	00	00	00	00	00	00	00	00
2800-	00	00	00	00	00	7E	7F	7F
280B-	7F	7F	7F	7F	7F	7F	7F	7F
2810-	7F	7F	7F	7F	7F	7F	7F	7F
281B-	7F	7F	7F	7F	7F	7F	7F	3F
2820-	00	00	00	00	00	00	00	00
282B-	00	00	00	00	00	7E	7F	7F
2830-	7F	7F	7F	7F	5F	6D	36	43
283B-	6D	36	1B	7E	7E	6F	7F	7F
2840-	7F	7F	7F	7F	7F	7F	7F	3F
284B-	00	00	00	00	00	00	00	00
2850-	00	00	00	00	00	7E	7F	67
285B-	7F	01	70	7F	61	7F	7F	1F
2860-	7C	47	5F	77	47	7F	3C	7E
286B-	7F	7F	7F	03	3E	7E	63	3F
2870-	00	00	00	00	00	00	00	00
287B-	00	00	00	00	00	00	00	00
2880-	00	00	00	00	00	7E	7F	7F
288B-	7F	7F	7F	7F	7F	01	00	00
2890-	70	7F	7F	7F	7F	7F	7F	7F
289B-	7F	7F	7F	7F	7F	7F	7F	3F
28A0-	00	00	00	00	00	00	00	00
28AB-	00	00	00	00	00	7E	7F	7F

28B0-	7F	7F	7F	7F	03	0E	7F	7F
28B8-	3F	1E	43	7F	00	7C	00	73
28C0-	7F	7F	7F	7F	7F	7F	7F	3F
28C8-	00	00	00	00	00	00	00	00
28D0-	00	00	00	00	00	7E	7F	7F
28D8-	7F	7F	7F	7F	7F	7F	7F	7F
28E0-	7F	3F	7F	71	7F	43	7F	77
28E8-	7F	7F	5F	7F	7F	73	7F	3F
28F0-	00	00	00	00	00	00	00	00
28F8-	00	00	00	00	00	00	00	00
2900-	00	00	00	00	00	7E	7F	7F
2908-	7F	7F	7F	7F	7F	07	00	00
2910-	7C	7F	7F	7F	7F	7F	7F	7F
2918-	7F	7F	7F	7F	7F	7F	7F	3F
2920-	00	00	00	00	00	00	00	00
2928-	00	00	00	00	00	7E	7F	7F
2930-	7F	7F	0F	5B	0D	60	3F	40
2938-	3F	36	40	3F	47	61	06	1B
2940-	7F	7F	7B	7B	7F	7F	7F	3F
2948-	00	00	00	00	00	00	00	00
2950-	00	00	00	00	00	7E	7F	7F
2958-	7F	7F	7F	7F	7F	7F	7F	7F
2960-	7F	7F	1F	7E	7F	7F	67	7F
2968-	7F	7F	7F	7F	7F	7F	7F	3F
2970-	00	00	00	00	00	00	00	00
2978-	00	00	00	00	00	00	00	00
2980-	00	00	00	00	00	7E	7F	7F
2988-	7F	7F	7F	00	00	7E	00	7B
2990-	7F	7F	03	7E	7F	7F	7F	7F
2998-	7F	7F	7F	7F	7F	7F	7F	3F
29A0-	00	00	00	00	00	00	00	00
29AB-	00	00	00	00	00	7E	7F	7F
29B0-	7F	63	36	5B	6D	06	5B	6D
29B8-	36	1B	60	36	1B	6C	36	5B
29C0-	6D	36	5B	61	7C	7F	7F	3F
29C8-	00	00	00	00	00	00	00	00
29D0-	00	00	00	00	00	7E	7F	7F
29D8-	7F	7F	7F	7F	7F	7F	7F	7F
29E0-	7F	7F	7F	7F	7F	7F	7F	7F
29E8-	7F	7F	7F	7F	7F	7F	7F	3F
29F0-	00	00	00	00	00	00	00	00
29FB-	00	00	00	00	00	00	00	00
2A00-	00	00	00	00	00	7E	7F	7F

2A08- 7F 7F 07 00 00 00 00 78
 2A10- 77 5B 7B 00 07 7C 7F 7F
 2A18- 7F 7F 7F 7F 7F 7F 7F 3F
 2A20- 00 00 00 00 00 00 00 00
 2A28- 00 00 00 00 00 7E 01 00
 2A30- 7E 01 30 5B 0D 06 03 6C
 2A38- 36 5B 61 36 5B 6D 00 18
 2A40- 00 36 5B 0D 30 3E 7C 3F
 2A48- 00 00 00 00 00 00 00 00
 2A50- 00 00 00 00 00 00 00 00
 2A58- 00 00 00 00 00 00 00 00
 2A60- 00 00 00 00 00 00 00 00
 2A68- 00 00 00 00 00 00 00 00
 2A70- 00 00 00 00 00 00 00 00
 2A78- 00 00 00 00 00 00 00 00
 2A80- 00 00 00 00 00 7E 7F 7F
 2A88- 7F 7F 7F 00 00 3C 40 7F
 2A90- 7F 7F 7F 7F 47 7F 7F 7F
 2A98- 7F 7F 7F 7F 7F 7F 7F 3F
 2AA0- 00 00 00 00 00 00 00 00
 2AA8- 00 00 00 00 00 7E 7F 67
 2AB0- 7F 01 70 47 6D 00 5B 6D
 2AB8- 36 5B 01 00 00 60 36 43
 2AC0- 1F 36 18 7B 30 5B 6D 3C
 2AC8- 00 00 00 00 00 00 00 00
 2AD0- 00 00 00 00 00 00 00 00
 2ADB- 00 00 00 00 00 00 00 00
 2AE0- 00 00 00 00 00 00 00 00
 2AE8- 00 00 00 00 00 00 00 00
 2AF0- 00 00 00 00 00 00 00 00
 2AF8- 00 00 00 00 00 00 00 00
 2B00- 00 00 00 00 00 7E 7F 7F
 2B08- 7F 7F 7F 7F 7F 7F 1F 7C
 2B10- 3F 00 00 7C 7F 7F 7F 7F
 2B18- 7F 7F 7F 7F 7F 7F 7F 3F
 2B20- 00 00 00 00 00 00 00 00
 2B28- 00 00 00 00 00 7E 7D 7E
 2B30- 5E 5F 7F 73 61 06 5B 6D
 2B38- 36 03 78 7F 7F 7F 0F 5B
 2B40- 0D 36 18 7F 37 7B 7B 3E
 2B48- 00 00 00 00 00 00 00 00
 2B50- 00 00 00 00 00 00 00 00
 2B58- 00 00 00 00 00 00 00 00

2B60-	00	00	00	00	00	00	00	00
2B68-	00	00	00	00	00	00	00	00
2B70-	00	00	00	00	00	00	00	00
2B78-	00	00	00	00	00	00	00	00
2B80-	00	00	00	00	00	7E	7F	7F
2B88-	7F	7F	7F	7F	7F	7F	07	58
2B90-	6D	00	18	7C	7F	7F	7F	7F
2B98-	7F	7F	7F	7F	7F	7F	7F	3F
2BA0-	00	00	00	00	00	00	00	00
2BA8-	00	00	00	00	00	7E	7F	7C
2BB0-	38	60	7F	70	01	36	03	00
2BB8-	00	40	1F	0E	78	7F	7E	00
2BC0-	0C	36	18	40	7F	7F	7F	3C
2BC8-	00	00	00	00	00	00	00	00
2BD0-	00	00	00	00	00	00	00	00
2BD8-	00	00	00	00	00	00	00	00
2BE0-	00	00	00	00	00	00	00	00
2BE8-	00	00	00	00	00	00	00	00
2BF0-	00	00	00	00	00	00	00	00
2BF8-	00	00	00	00	00	00	00	00
2C00-	00	00	00	00	00	7E	7F	7F
2C08-	7F	7F	7F	7F	7F	7F	7F	7F
2C10-	7F	7F	7F	7F	7F	7F	7F	7F
2C18-	7F	7F	7F	7F	7F	7F	7F	3F
2C20-	00	00	00	00	00	00	00	00
2C28-	00	00	00	00	00	7E	7F	7F
2C30-	7F	7F	7F	7F	4F	6D	36	43
2C38-	6D	36	18	06	7E	0F	7E	7F
2C40-	7F	7F	7F	7F	7F	7F	7F	3F
2C48-	00	00	00	00	00	00	00	00
2C50-	00	00	00	00	00	7E	7F	0F
2C58-	7F	7F	7F	3F	78	7F	7F	7F
2C60-	7F	47	5F	67	43	7F	3C	7E
2C68-	7F	7F	07	78	0F	7F	7B	3F
2C70-	00	00	00	00	00	00	00	00
2C78-	00	00	00	00	00	00	00	00
2C80-	00	00	00	00	00	7E	7F	7F
2C88-	7F	7F	7F	7F	7F	00	00	00
2C90-	70	7F	7F	7F	7F	7F	7F	7F
2C98-	7F	7F	7F	7F	7F	7F	7F	3F
2CA0-	00	00	00	00	00	00	00	00
2CAB-	00	00	00	00	00	7E	7F	7F
2CB0-	7F	7F	7F	7F	43	6F	7F	7F

2CB8-	7F	1F	5B	7F	7B	7F	07	77
2CC0-	7F	7F	7F	7F	7F	7F	7F	3F
2CC8-	00	00	00	00	00	00	00	00
2CD0-	00	00	00	00	00	7E	7F	7F
2CD8-	7F	7F	7F	7F	7F	7F	7F	7F
2CE0-	7F	3F	7F	01	7F	41	7F	73
2CE8-	7F	7F	1F	7C	3F	70	7F	3F
2CF0-	00	00	00	00	00	00	00	00
2CF8-	00	00	00	00	00	00	00	00
2D00-	00	00	00	00	00	7E	7F	7F
2D08-	7F	7F	7F	7F	7F	07	00	00
2D10-	7C	7F	7F	7F	7F	7F	7F	7F
2D18-	7F	7F	7F	7F	7F	7F	7F	3F
2D20-	00	00	00	00	00	00	00	00
2D28-	00	00	00	00	00	7E	7F	7F
2D30-	7F	7F	01	5B	4D	07	00	1B
2D38-	3E	40	19	7C	00	6C	30	03
2D40-	7C	7F	03	7B	7F	7F	7F	3F
2D48-	00	00	00	00	00	00	00	00
2D50-	00	00	00	00	00	7E	7F	7F
2D58-	7F	7F	7F	7F	7F	7F	7F	7F
2D60-	7F	7F	7F	7E	7F	7F	77	7F
2D68-	7F	7F	7F	7F	7F	7F	7F	3F
2D70-	00	00	00	00	00	00	00	00
2D78-	00	00	00	00	00	00	00	00
2D80-	00	00	00	00	00	7E	7F	7F
2D88-	7F	7F	7F	00	00	7E	00	7C
2D90-	7F	7F	1F	7E	7F	7F	7F	7F
2D98-	7F	7F	7F	7F	7F	7F	7F	3F
2DA0-	00	00	00	00	00	00	00	00
2DA8-	00	00	00	00	00	7E	7F	3F
2DB0-	00	00	00	5B	6D	06	5B	6D
2DB8-	30	1B	60	36	1B	6C	36	5B
2DC0-	6D	30	1B	60	00	40	7F	3F
2DC8-	00	00	00	00	00	00	00	00
2DD0-	00	00	00	00	00	00	00	00
2DD8-	00	00	00	00	00	00	00	00
2DE0-	00	00	00	00	00	00	00	00
2DE8-	00	00	00	00	00	00	00	00
2DF0-	00	00	00	00	00	00	00	00
2DF8-	00	00	00	00	00	00	00	00
2E00-	00	00	00	00	00	7E	7F	7F
2E08-	7F	7F	07	00	00	00	00	7B

2E10-	6F	43	0F	0E	03	7C	7F	7F
2E18-	7F	7F	7F	7F	7F	7F	7F	3F
2E20-	00	00	00	00	00	00	00	00
2E28-	00	00	00	00	00	7E	01	00
2E30-	7F	7D	37	58	0D	06	5B	6D
2E38-	36	5B	61	36	58	6D	06	5B
2E40-	0F	36	58	0D	30	3E	7C	3F
2E48-	00	00	00	00	00	00	00	00
2E50-	00	00	00	00	00	00	00	00
2E58-	00	00	00	00	00	00	00	00
2E60-	00	00	00	00	00	00	00	00
2E68-	00	00	00	00	00	00	00	00
2E70-	00	00	00	00	00	00	00	00
2E78-	00	00	00	00	00	00	00	00
2E80-	00	00	00	00	00	7E	7F	7F
2E88-	7F	7F	7F	00	00	3C	40	7F
2E90-	70	7F	7F	7F	47	7F	7F	7F
2E98-	7F	7F	7F	7F	7F	7F	7F	3F
2EA0-	00	00	00	00	00	00	00	00
2EA8-	00	00	00	00	00	7E	7F	77
2EB0-	1F	7C	07	1F	6C	00	5B	6D
2EB8-	36	1B	00	00	00	00	36	1B
2EC0-	0F	36	1B	4F	37	5B	6D	3C
2EC8-	00	00	00	00	00	00	00	00
2ED0-	00	00	00	00	00	00	00	00
2ED8-	00	00	00	00	00	00	00	00
2EE0-	00	00	00	00	00	00	00	00
2EE8-	00	00	00	00	00	00	00	00
2EF0-	00	00	00	00	00	00	00	00
2EF8-	00	00	00	00	00	00	00	00
2F00-	00	00	00	00	00	7E	7F	7F
2F08-	7F	7F	7F	7F	7F	7F	7F	7D
2F10-	3F	06	1C	7E	7F	7F	7F	7F
2F18-	7F	7F	7F	7F	7F	7F	7F	3F
2F20-	00	00	00	00	00	00	00	00
2F28-	00	00	00	00	00	7E	7D	7E
2F30-	5E	1F	7E	73	61	06	5B	6D
2F38-	36	03	78	7F	00	7F	0F	5B
2F40-	0D	36	18	78	30	78	7B	3C
2F48-	00	00	00	00	00	00	00	00
2F50-	00	00	00	00	00	00	00	00
2F58-	00	00	00	00	00	00	00	00
2F60-	00	00	00	00	00	00	00	00

2F68-	00	00	00	00	00	00	00	00
2F70-	00	00	00	00	00	00	00	00
2F78-	00	00	00	00	00	00	00	00
2F80-	00	00	00	00	00	7E	7F	7F
2F88-	7F	7F	7F	7F	7F	7F	33	1B
2F90-	60	00	5B	71	7F	7F	7F	7F
2F98-	7F	7F	7F	7F	7F	7F	7F	3F
2FA0-	00	00	00	00	00	00	00	00
2FAB-	00	00	00	00	00	7E	7F	7D
2FB0-	7B	7F	7F	7B	61	36	5B	6D
2FB8-	06	40	5F	6F	7B	7F	7E	1F
2FC0-	0C	36	58	7F	7F	7F	7F	3E
2FC8-	00	00	00	00	00	00	00	00
2FD0-	00	00	00	00	00	00	00	00
2FDB-	00	00	00	00	00	00	00	00
2FE0-	00	00	00	00	00	00	00	00
2FEB-	00	00	00	00	00	00	00	00
2FF0-	00	00	00	00	00	00	00	00
2FFB-	00	00	00	00	00	00	00	00
3000-	00	00	00	00	00	7E	7F	7F
3008-	7F	7F	7F	7F	7F	7F	7F	7F
3010-	7F	7F	7F	7F	7F	7F	7F	7F
3018-	7F	7F	7F	7F	7F	7F	7F	3F
3020-	00	00	00	00	00	00	00	00
3028-	00	00	00	00	00	7E	7F	7F
3030-	7F	7F	7F	7F	1F	6C	36	00
3038-	6C	36	18	70	7F	7F	70	7F
3040-	7F	7F	7F	7F	7F	7F	7F	3F
3048-	00	00	00	00	00	00	00	00
3050-	00	00	00	00	00	7E	7F	3F
3058-	7F	7F	7F	3F	7C	7F	7F	7F
3060-	7F	47	5F	67	73	7F	3C	7E
3068-	7F	7F	77	7F	7F	7F	7B	3F
3070-	00	00	00	00	00	00	00	00
3078-	00	00	00	00	00	00	00	00
3080-	00	00	00	00	00	7E	7F	7F
3088-	7F	7F	7F	7F	7F	00	00	00
3090-	70	7F	7F	7F	7F	7F	7F	7F
3098-	7F	7F	7F	7F	7F	7F	7F	3F
30A0-	00	00	00	00	00	00	00	00
30AB-	00	00	00	00	00	7E	7F	7F
30B0-	7F	7F	7F	7F	43	6F	7F	5F
30B8-	7F	03	1B	7E	7B	63	07	47

30C0-	7F	7F	7F	7F	7F	7F	7F	3F
30C8-	00	00	00	00	00	00	00	00
30D0-	00	00	00	00	00	7E	7F	7F
30D8-	7F	7F	7F	7F	7F	7F	7F	7F
30E0-	7F	3F	7C	0F	00	7B	7F	73
30E8-	7F	7F	7F	01	00	7F	7F	3F
30F0-	00	00	00	00	00	00	00	00
30F8-	00	00	00	00	00	00	00	00
3100-	00	00	00	00	00	7E	7F	7F
3108-	7F	7F	7F	7F	7F	0F	00	00
3110-	00	70	7F	7F	7F	7F	7F	7F
3118-	7F	7F	7F	7F	7F	7F	7F	3F
3120-	00	00	00	00	00	00	00	00
3128-	00	00	00	00	00	7E	7F	7F
3130-	7F	7F	31	5B	4D	0F	1B	1B
3138-	3E	5B	79	7D	40	6D	36	5B
3140-	7D	7F	77	7D	7F	7F	7F	3F
3148-	00	00	00	00	00	00	00	00
3150-	00	00	00	00	00	7E	7F	7F
3158-	7F	7F	7F	7F	7F	7F	7F	7F
3160-	7F	7F	7F	70	7F	7F	70	7F
3168-	7F	7F	7F	7F	7F	7F	7F	3F
3170-	00	00	00	00	00	00	00	00
3178-	00	00	00	00	00	00	00	00
3180-	00	00	00	00	00	7E	7F	7F
3188-	7F	7F	3F	00	00	3C	00	7C
3190-	0F	7E	1D	7C	7F	7F	7F	7F
3198-	7F	7F	7F	7F	7F	7F	7F	3F
31A0-	00	00	00	00	00	00	00	00
31A8-	00	00	00	00	00	7E	7F	01
31B0-	00	60	36	43	6D	06	5B	6D
31B8-	36	5B	61	36	43	6D	36	5B
31C0-	0D	30	1B	6C	06	1E	7F	3F
31C8-	00	00	00	00	00	00	00	00
31D0-	00	00	00	00	00	00	00	00
31D8-	00	00	00	00	00	00	00	00
31E0-	00	00	00	00	00	00	00	00
31E8-	00	00	00	00	00	00	00	00
31F0-	00	00	00	00	00	00	00	00
31F8-	00	00	00	00	00	00	00	00
3200-	00	00	00	00	00	7E	7F	7F
3208-	7F	7F	07	00	00	00	00	7B
3210-	6F	43	6F	0F	03	7C	7F	7F

```

3218- 7F 7F 7F 7F 7F 7F 7F 3F
3220- 00 00 00 00 00 00 00 00
3228- 00 00 00 00 00 00 7E 01 00
3230- 07 7C 07 58 0D 06 5B 6D
3238- 36 5B 61 36 5B 0D 06 43
3240- 0F 36 18 00 30 1E 7C 3F
3248- 00 00 00 00 00 00 00 00
3250- 00 00 00 00 00 00 00 00
3258- 00 00 00 00 00 00 00 00
3260- 00 00 00 00 00 00 00 00
3268- 00 00 00 00 00 00 00 00
3270- 00 00 00 00 00 00 00 00
3278- 00 00 00 00 00 00 00 00
3280- 00 00 00 00 00 00 7E 7F 7F
3288- 7F 7F 7F 07 40 7F 40 1F
3290- 7C 7F 7F 7F 73 7F 7F 7F
3298- 7F 7F 7F 7F 7F 7F 7F 3F
32A0- 00 00 00 00 00 00 00 00
32A8- 00 00 00 00 00 00 7E 7F 77
32B0- 5F 7F 3F 1F 6C 00 5B 6D
32B8- 36 1B 00 70 7F 03 36 1B
32C0- 0F 36 1B 7F 37 5B 6D 3E
32C8- 00 00 00 00 00 00 00 00
32D0- 00 00 00 00 00 00 00 00
32D8- 00 00 00 00 00 00 00 00
32E0- 00 00 00 00 00 00 00 00
32E8- 00 00 00 00 00 00 00 00
32F0- 00 00 00 00 00 00 00 00
32F8- 00 00 00 00 00 00 00 00
3300- 00 00 00 00 00 00 7E 7F 7F
3308- 7F 7F 7F 7F 7F 7F 7F 61
3310- 3D 06 1C 7E 7F 7F 7F 7F
3318- 7F 7F 7F 7F 7F 7F 7F 3F
3320- 00 00 00 00 00 00 00 00
3328- 00 00 00 00 00 00 7E 7D 7E
3330- 5E 1F 7E 73 61 06 5B 6D
3338- 36 00 7C 0F 3E 78 0F 5B
3340- 6D 30 1B 4F 37 38 7B 3C
3348- 00 00 00 00 00 00 00 00
3350- 00 00 00 00 00 00 00 00
3358- 00 00 00 00 00 00 00 00
3360- 00 00 00 00 00 00 00 00
3368- 00 00 00 00 00 00 00 00

```


3370- 00 00 00 00 00 00 00 00
 3378- 00 00 00 00 00 00 00 00
 3380- 00 00 00 00 00 7E 7F 7F
 3388- 7F 7F 7F 7F 7F 7F 33 5B
 3390- 6D 06 5B 71 7F 7F 7F 7F
 3398- 7F 7F 7F 7F 7F 7F 7F 3F
 33A0- 00 00 00 00 00 00 00 00
 33A8- 00 00 00 00 00 7E 7F 7D
 33B0- 7B 7F 3F 7B 61 36 5B 6D
 33B8- 06 40 5F 67 73 7F 7C 1F
 33C0- 0C 36 40 7F 7F 7F 03 3E
 33C8- 00 00 00 00 00 00 00 00
 33D0- 00 00 00 00 00 00 00 00
 33D8- 00 00 00 00 00 00 00 00
 33E0- 00 00 00 00 00 00 00 00
 33E8- 00 00 00 00 00 00 00 00
 33F0- 00 00 00 00 00 00 00 00
 33F8- 00 00 00 00 00 00 00 00
 3400- 00 00 00 00 00 7E 7F 7F
 3408- 7F 7F 7F 7F 7F 3F 00 7B
 3410- 7F 7F 7F 7F 7F 7F 7F 7F
 3418- 7F 7F 7F 7F 7F 7F 7F 3F
 3420- 00 00 00 00 00 00 00 00
 3428- 00 00 00 00 00 7E 7F 7F
 3430- 7F 7F 7F 7F 1F 6C 36 7C
 3438- 6F 36 18 7E 7F 7F 70 7F
 3440- 7F 7F 7F 7F 7F 7F 7F 3F
 3448- 00 00 00 00 00 00 00 00
 3450- 00 00 00 00 00 7E 7F 3F
 3458- 7E 7F 7F 1F 7C 7F 7F 7F
 3460- 7F 47 5F 07 70 7F 3C 7E
 3468- 7F 3F 70 0F 70 7F 79 3F
 3470- 00 00 00 00 00 00 00 00
 3478- 00 00 00 00 00 00 00 00
 3480- 00 00 00 00 00 7E 7F 7F
 3488- 7F 7F 7F 7F 7F 00 00 00
 3490- 60 7F 7F 7F 7F 7F 7F 7F
 3498- 7F 7F 7F 7F 7F 7F 7F 3F
 34A0- 00 00 00 00 00 00 00 00
 34AB- 00 00 00 00 00 7E 7F 7F
 34B0- 7F 7F 7F 7F 4F 77 7F 7F
 34B8- 7C 1F 1B 7C 73 43 67 5E
 34C0- 7F 7F 7F 7F 7F 7F 7F 3F

34C8- 00 00 00 00 00 00 00 00
 34D0- 00 00 00 00 00 7E 7F 7F
 34D8- 7F 7F 7F 7F 7F 7F 7F 7F
 34E0- 7F 7F 7D 7F 00 7F 7F 7B
 34E8- 7F 7F 7F 7F 7F 7F 7F 3F
 34F0- 00 00 00 00 00 00 00 00
 34F8- 00 00 00 00 00 00 00 00

 3500- 00 00 00 00 00 7E 7F 7F
 3508- 7F 7F 7F 7F 7F 7F 00 00
 3510- 7E 70 7F 7F 7F 7F 7F 7F
 3518- 7F 7F 7F 7F 7F 7F 7F 3F
 3520- 00 00 00 00 00 00 00 00
 3528- 00 00 00 00 00 7E 7F 7F
 3530- 7F 7F 30 5B 4D 0F 1B 00
 3538- 00 5B 79 01 40 0D 36 5B
 3540- 01 7E 77 7D 7F 7F 7F 3F
 3548- 00 00 00 00 00 00 00 00
 3550- 00 00 00 00 00 7E 7F 7F
 3558- 7F 7F 7F 7F 7F 7F 7F 7F
 3560- 7F 7F 7F 07 7E 03 7E 7F
 3568- 7F 7F 7F 7F 7F 7F 7F 3F
 3570- 00 00 00 00 00 00 00 00
 3578- 00 00 00 00 00 00 00 00
 3580- 00 00 00 00 00 7E 7F 7F
 3588- 7F 7F 0F 00 00 30 00 7C
 3590- 77 7B 7D 7C 7F 7F 7F 7F
 3598- 7F 7F 7F 7F 7F 7F 7F 3F
 35A0- 00 00 00 00 00 00 00 00
 35A8- 00 00 00 00 00 7E 7F 01
 35B0- 00 60 36 5B 6D 06 5B 6D
 35B8- 36 5B 61 36 43 6D 36 5B
 35C0- 0D 36 5B 6D 06 3F 7F 3F
 35C8- 00 00 00 00 00 00 00 00
 35D0- 00 00 00 00 00 00 00 00
 35D8- 00 00 00 00 00 00 00 00
 35E0- 00 00 00 00 00 00 00 00
 35E8- 00 00 00 00 00 00 00 00
 35F0- 00 00 00 00 00 00 00 00
 35F8- 00 00 00 00 00 00 00 00
 3600- 00 00 00 00 00 7E 7F 7F
 3608- 7F 7F 07 00 00 00 00 60
 3610- 6F 43 6F 0F 03 7C 7F 7F
 3618- 7F 7F 7F 7F 7F 7F 7F 3F

```

3620- 00 00 00 00 00 00 00 00
3628- 00 00 00 00 00 00 7E 01 60
3630- 70 7F 7F 40 0D 06 5B 6D
3638- 36 5B 61 00 00 00 00 73
3640- 1F 36 18 4F 37 00 78 3F
3648- 00 00 00 00 00 00 00 00
3650- 00 00 00 00 00 00 00 00
3658- 00 00 00 00 00 00 00 00
3660- 00 00 00 00 00 00 00 00
3668- 00 00 00 00 00 00 00 00
3670- 00 00 00 00 00 00 00 00
3678- 00 00 00 00 00 00 00 00
3680- 00 00 00 00 00 00 7E 7F 7F
3688- 7F 7F 7F 7F 7F 7F 40 7F
3690- 7D 7F 7F 7F 73 7F 7F 7F
3698- 7F 7F 7F 7F 7F 7F 7F 3F
36A0- 00 00 00 00 00 00 00 00
36A8- 00 00 00 00 00 00 7E 7F 71
36B0- 47 7F 3F 1E 6C 00 5B 6D
36B8- 36 18 00 70 7F 03 36 1B
36C0- 00 36 18 78 30 5B 0D 3E
36C8- 00 00 00 00 00 00 00 00
36D0- 00 00 00 00 00 00 00 00
36D8- 00 00 00 00 00 00 00 00
36E0- 00 00 00 00 00 00 00 00
36E8- 00 00 00 00 00 00 00 00
36F0- 00 00 00 00 00 00 00 00
36F8- 00 00 00 00 00 00 00 00
3700- 00 00 00 00 00 00 7E 7F 7F
3708- 7F 7F 7F 7F 7F 7F 7F 01
3710- 70 36 4F 7F 7F 7F 7F 7F
3718- 7F 7F 7F 7F 7F 7F 7F 3F
3720- 00 00 00 00 00 00 00 00
3728- 00 00 00 00 00 00 7E 7D 7E
3730- 5E 1F 7E 73 61 06 5B 6D
3738- 36 00 7C 6F 7F 7B 3F 5B
3740- 6D 30 18 7F 37 38 7F 3C
3748- 00 00 00 00 00 00 00 00
3750- 00 00 00 00 00 00 00 00
3758- 00 00 00 00 00 00 00 00
3760- 00 00 00 00 00 00 00 00
3768- 00 00 00 00 00 00 00 00
3770- 00 00 00 00 00 00 00 00

```

```

3778- 00 00 00 00 00 00 00 00
3780- 00 00 00 00 00 7E 7F 7F
3788- 7F 7F 7F 7F 7F 7F 30 43
3790- 0D 06 03 70 7F 7F 7F 7F
3798- 7F 7F 7F 7F 7F 7F 7F 3F
37A0- 00 00 00 00 00 00 00 00
37A8- 00 00 00 00 00 7E 7F 7D
37B0- 73 7F 0F 78 0F 30 5B 6D
37B8- 00 40 5F 77 47 7F 7C 00
37C0- 0C 00 7F 7F 7F 1F 60 3F
37C8- 00 00 00 00 00 00 00 00
37D0- 00 00 00 00 00 00 00 00
37D8- 00 00 00 00 00 00 00 00
37E0- 00 00 00 00 00 00 00 00
37E8- 00 00 00 00 00 00 00 00
37F0- 00 00 00 00 00 00 00 00
37F8- 00 00 00 00 00 00 00 00
3800- 00 00 00 00 00 7E 7F 7F
3808- 7F 7F 7F 7F 7F 3F 00 78
3810- 7F 7F 7F 7F 7F 7F 7F 7F
3818- 7F 7F 7F 7F 7F 7F 7F 3F
3820- 00 00 00 00 00 00 00 00
3828- 00 00 00 00 00 7E 7F 7F
3830- 7F 7F 7F 7F 1F 60 06 7C
3838- 07 36 00 7E 1F 7C 60 7F
3840- 7F 7F 7F 7F 7F 7F 7F 3F
3848- 00 00 00 00 00 00 00 00
3850- 00 00 00 00 00 7E 7F 7F
3858- 70 7F 7F 43 7F 7F 7F 7F
3860- 7F 5F 1F 0E 78 1F 7C 40
3868- 7F 00 7E 7F 7F 3F 7C 3F
3870- 00 00 00 00 00 00 00 00
3878- 00 00 00 00 00 00 00 00
3880- 00 00 00 00 00 7E 7F 7F
3888- 7F 7F 7F 7F 7F 00 00 00
3890- 60 7F 7F 7F 7F 7F 7F 7F
3898- 7F 7F 7F 7F 7F 7F 7F 3F
38A0- 00 00 00 00 00 00 00 00
38A8- 00 00 00 00 00 7E 7F 7F
38B0- 7F 7F 7F 7F 4F 77 7F 7F
38B8- 7F 1F 1B 7E 77 63 67 5E
38C0- 7F 7F 7F 7F 7F 7F 7F 3F
38C8- 00 00 00 00 00 00 00 00

```

```

38D0- 00 00 00 00 00 7E 7F 7F
38D8- 7F 7F 7F 7F 7F 7F 7F 7F
38E0- 7F 7F 79 7F 00 7F 7F 7B
38E8- 7F 7F 7F 7F 7F 7F 7F 3F
38F0- 00 00 00 00 00 00 00 00
38F8- 00 00 00 00 00 00 00 00
3900- 00 00 00 00 00 7E 7F 7F
3908- 7F 7F 7F 7F 7F 7F 00 00
3910- 7E 00 7C 7F 7F 7F 7F 7F
3918- 7F 7F 7F 7F 7F 7F 7F 3F
3920- 00 00 00 00 00 00 00 00
3928- 00 00 00 00 00 7E 7F 7F
3930- 7F 1F 36 5B 0D 0E 5B 6D
3938- 36 1B 7C 7F 43 61 36 5B
3940- 6D 00 00 40 7F 7F 7F 3F
3948- 00 00 00 00 00 00 00 00
3950- 00 00 00 00 00 7E 7F 7F
3958- 7F 7F 7F 7F 7F 7F 7F 7F
3960- 7F 7F 7F 7F 7E 7B 7F 7F
3968- 7F 7F 7F 7F 7F 7F 7F 3F
3970- 00 00 00 00 00 00 00 00
3978- 00 00 00 00 00 00 00 00
3980- 00 00 00 00 00 7E 7F 7F
3988- 7F 7F 0F 00 00 30 00 7C
3990- 77 7F 7D 7E 7F 7F 7F 7F
3998- 7F 7F 7F 7F 7F 7F 7F 3F
39A0- 00 00 00 00 00 00 00 00
39A8- 00 00 00 00 00 7E 1F 00
39B0- 00 00 36 1B 6C 06 03 00
39B8- 36 5B 61 36 43 6D 36 5B
39C0- 0D 36 43 6D 06 3F 7C 3F
39C8- 00 00 00 00 00 00 00 00
39D0- 00 00 00 00 00 00 00 00
39D8- 00 00 00 00 00 00 00 00
39E0- 00 00 00 00 00 00 00 00
39E8- 00 00 00 00 00 00 00 00
39F0- 00 00 00 00 00 00 00 00
39F8- 00 00 00 00 00 00 00 00
3A00- 00 00 00 00 00 7E 7F 7F
3A08- 7F 7F 0F 00 00 00 00 40
3A10- 3F 47 7B 0F 00 7F 7F 7F
3A18- 7F 7F 7F 7F 7F 7F 7F 3F
3A20- 00 00 00 00 00 00 00 00

```

3A2B-	00	00	00	00	00	7E	7F	7F
3A30-	7E	7F	7F	43	0D	06	5B	6D
3A38-	36	5B	61	36	5B	6D	06	7B
3A40-	1F	36	18	7F	37	40	79	3F
3A48-	00	00	00	00	00	00	00	00
3A50-	00	00	00	00	00	00	00	00
3A58-	00	00	00	00	00	00	00	00
3A60-	00	00	00	00	00	00	00	00
3A68-	00	00	00	00	00	00	00	00
3A70-	00	00	00	00	00	00	00	00
3A78-	00	00	00	00	00	00	00	00
3A80-	00	00	00	00	00	7E	7F	7F
3A88-	7F	7F	7F	7F	7F	7F	40	6F
3A90-	71	7F	7F	7F	70	7F	7F	7F
3A98-	7F	7F	7F	7F	7F	7F	7F	3F
3AA0-	00	00	00	00	00	00	00	00
3AAB-	00	00	00	00	00	7E	03	7C
3AB0-	73	7F	7F	38	6C	00	5B	6D
3AB8-	36	03	00	7E	7F	7F	30	5B
3AC0-	61	36	18	4F	37	40	61	3F
3AC8-	00	00	00	00	00	00	00	00
3AD0-	00	00	00	00	00	00	00	00
3AD8-	00	00	00	00	00	00	00	00
3AE0-	00	00	00	00	00	00	00	00
3AEB-	00	00	00	00	00	00	00	00
3AF0-	00	00	00	00	00	00	00	00
3AF8-	00	00	00	00	00	00	00	00
3B00-	00	00	00	00	00	7E	7F	7F
3B08-	7F	7F	7F	7F	7F	7F	7F	59
3B10-	71	77	6F	7F	7F	7F	7F	7F
3B18-	7F	7F	7F	7F	7F	7F	7F	3F
3B20-	00	00	00	00	00	00	00	00
3B28-	00	00	00	00	00	7E	7D	7E
3B30-	5E	1F	7E	73	61	06	5B	6D
3B38-	36	00	7C	61	7F	43	3F	58
3B40-	6D	30	18	78	30	00	7F	3C
3B48-	00	00	00	00	00	00	00	00
3B50-	00	00	00	00	00	00	00	00
3B58-	00	00	00	00	00	00	00	00
3B60-	00	00	00	00	00	00	00	00
3B68-	00	00	00	00	00	00	00	00
3B70-	00	00	00	00	00	00	00	00
3B78-	00	00	00	00	00	00	00	00

3B20-	00	00	00	00	00	7E	7F	7F
3B88-	7F	7F	7F	7F	7F	0F	36	5B
3B90-	6D	30	43	7F	7F	7F	7F	7F
3B98-	7F	7F	7F	7F	7F	7F	7F	3F
3BA0-	00	00	00	00	00	00	00	00
3BA8-	00	00	00	00	00	7E	7F	7D
3BB0-	77	7F	0F	7E	4F	37	5B	6D
3BB8-	00	40	5F	77	47	7F	7C	7E
3BC0-	0D	7E	7F	7F	7F	5F	6F	3F
3BC8-	00	00	00	00	00	00	00	00
3BD0-	00	00	00	00	00	00	00	00
3BD8-	00	00	00	00	00	00	00	00
3BE0-	00	00	00	00	00	00	00	00
3BE8-	00	00	00	00	00	00	00	00
3BF0-	00	00	00	00	00	00	00	00
3BF8-	00	00	00	00	00	00	00	00
3C00-	00	00	00	00	00	7E	7F	7F
3C08-	7F	7F	7F	7F	7F	07	00	00
3C10-	7E	7F	7F	7F	7F	7F	7F	7F
3C18-	7F	7F	7F	7F	7F	7F	7F	3F
3C20-	00	00	00	00	00	00	00	00
3C28-	00	00	00	00	00	7E	7F	7F
3C30-	7F	7F	7F	7F	0F	00	70	1F
3C38-	7E	30	43	7F	73	01	0E	7F
3C40-	7F	7F	7F	7F	7F	7F	7F	3F
3C48-	00	00	00	00	00	00	00	00
3C50-	00	00	00	00	00	7E	7F	7F
3C58-	77	7F	7F	7B	7F	7F	7F	7F
3C60-	7F	5F	7F	7E	7F	1F	7E	47
3C68-	7F	7E	7E	7F	7F	3F	7F	3F
3C70-	00	00	00	00	00	00	00	00
3C78-	00	00	00	00	00	00	00	00
3C80-	00	00	00	00	00	7E	7F	7F
3C88-	7F	7F	7F	7F	7F	01	00	00
3C90-	60	7F	7F	7F	7F	7F	7F	7F
3C98-	7F	7F	7F	7F	7F	7F	7F	3F
3CA0-	00	00	00	00	00	00	00	00
3CA8-	00	00	00	00	00	7E	7F	7F
3CB0-	7F	7F	7F	07	40	77	7F	7F
3CB8-	07	1F	1B	66	47	63	00	58
3CC0-	7F	7F	7F	7F	7F	7F	7F	3F
3CC8-	00	00	00	00	00	00	00	00
3CD0-	00	00	00	00	00	7E	7F	7F

3CDB- 7F 7F 7F 7F 7F 7F 7F 7F
 3CE0- 7F 7F 63 7F 7F 7F 3F 7E
 3CEB- 7F 7F 7F 7F 7F 7F 7F 3F
 3CF0- 00 00 00 00 00 00 00 00
 3CFB- 00 00 00 00 00 00 00 00
 3D00- 00 00 00 00 00 7E 7F 7F
 3D0B- 7F 7F 7F 7F 7F 7F 07 60
 3D10- 67 47 63 7F 7F 7F 7F 7F
 3D1B- 7F 7F 7F 7F 7F 7F 7F 3F
 3D20- 00 00 00 00 00 00 00 00
 3D2B- 00 00 00 00 00 00 7E 7F 7F
 3D30- 7F 1F 36 5B 6D 0E 5B 6D
 3D3B- 36 1B 7C 7F 5B 61 36 5B
 3D40- 6D 36 5B 4D 7F 7F 7F 3F
 3D4B- 00 00 00 00 00 00 00 00
 3D50- 00 00 00 00 00 7E 7F 7F
 3D5B- 7F 7F 7F 7F 7F 7F 7F 7F
 3D60- 7F 7F 7F 7F 00 7B 7F 7F
 3D6B- 7F 7F 7F 7F 7F 7F 7F 3F
 3D70- 00 00 00 00 00 00 00 00
 3D7B- 00 00 00 00 00 00 00 00
 3D80- 00 00 00 00 00 7E 7F 7F
 3D8B- 7F 7F 0F 00 00 00 00 7C
 3D90- 77 77 1D 76 43 7F 7F 7F
 3D9B- 7F 7F 7F 7F 7F 7F 7F 3F
 3DA0- 00 00 00 00 00 00 00 00
 3DAB- 00 00 00 00 00 7E 0F 00
 3DB0- 40 7F 30 5B 61 06 7B 1F
 3DBB- 36 5B 61 36 43 6D 36 5B
 3DC0- 61 36 5B 6D 36 3E 7C 3F
 3DCB- 00 00 00 00 00 00 00 00
 3DD0- 00 00 00 00 00 00 00 00
 3DDB- 00 00 00 00 00 00 00 00
 3DE0- 00 00 00 00 00 00 00 00
 3DEB- 00 00 00 00 00 00 00 00
 3DF0- 00 00 00 00 00 00 00 00
 3DFB- 00 00 00 00 00 00 00 00
 3E00- 00 00 00 00 00 7E 7F 7F
 3E0B- 7F 7F 0F 00 00 00 00 7C
 3E10- 7F 77 7F 3F 40 7F 7F 7F
 3E1B- 7F 7F 7F 7F 7F 7F 7F 3F
 3E20- 00 00 00 00 00 00 00 00
 3E2B- 00 00 00 00 00 7E 7F 3F

3E30-	7E	7F	7F	43	0D	06	5B	6D
3E38-	36	5B	01	36	5B	6D	06	7B
3E40-	1F	36	18	7B	30	40	61	3F
3E48-	00	00	00	00	00	00	00	00
3E50-	00	00	00	00	00	00	00	00
3E58-	00	00	00	00	00	00	00	00
3E60-	00	00	00	00	00	00	00	00
3E68-	00	00	00	00	00	00	00	00
3E70-	00	00	00	00	00	00	00	00
3E78-	00	00	00	00	00	00	00	00
3E80-	00	00	00	00	00	7E	7F	7F
3E88-	7F	7F	7F	7F	7F	7F	43	7F
3E90-	0F	7F	7F	0F	7B	7F	7F	7F
3E98-	7F	7F	7F	7F	7F	7F	7F	3F
3EA0-	00	00	00	00	00	00	00	00
3EA8-	00	00	00	00	00	7E	7F	7D
3EB0-	7B	7F	7F	3B	6C	06	5B	6D
3EB8-	36	03	40	7F	7F	7F	31	5B
3EC0-	61	36	18	7F	37	40	61	3F
3EC8-	00	00	00	00	00	00	00	00
3ED0-	00	00	00	00	00	00	00	00
3ED8-	00	00	00	00	00	00	00	00
3EE0-	00	00	00	00	00	00	00	00
3EE8-	00	00	00	00	00	00	00	00
3EF0-	00	00	00	00	00	00	00	00
3EF8-	00	00	00	00	00	00	00	00
3F00-	00	00	00	00	00	7E	7F	7F
3F08-	7F	7F	7F	7F	7F	7F	3F	5B
3F10-	61	43	63	7F	7F	7F	7F	7F
3F18-	7F	7F	7F	7F	7F	7F	7F	3F
3F20-	00	00	00	00	00	00	00	00
3F28-	00	00	00	00	00	7E	01	7E
3F30-	5E	1F	7E	73	61	06	5B	6D
3F38-	36	00	7F	7C	7F	5F	3F	5B
3F40-	01	36	18	0F	00	7B	7F	3C
3F48-	00	00	00	00	00	00	00	00
3F50-	00	00	00	00	00	00	00	00
3F58-	00	00	00	00	00	00	00	00
3F60-	00	00	00	00	00	00	00	00
3F68-	00	00	00	00	00	00	00	00
3F70-	00	00	00	00	00	00	00	00
3F78-	00	00	00	00	00	00	00	00
3F80-	00	00	00	00	00	7E	7F	7F

3F88-	7F	7F	7F	7F	7F	6F	36	5B
3F90-	6D	30	5B	7F	7F	7F	7F	7F
3F98-	7F	7F	7F	7F	7F	7F	7F	3F
3FA0-	00	00	00	00	00	00	00	00
3FAB-	00	00	00	00	00	7E	7F	71
3FB0-	07	7F	01	7E	4F	07	40	6D
3FB8-	00	40	5F	77	47	7F	3C	7E
3FC0-	01	7E	7F	7F	3F	40	6F	3F
3FCB-	00	00	00	00	00	00	00	00
3FD0-	00	00	00	00	00	00	00	00
3FDB-	00	00	00	00	00	00	00	00
3FE0-	00	00	00	00	00	00	00	00
3FEB-	00	00	00	00	00	00	00	00
3FF0-	00	00	00	00	00	00	00	00
3FFB-	00	00	00	00	00	00	00	00

8. TLY

2000-	00	00	00	00	00	00	00	00
2008-	00	00	00	00	00	00	00	C
2010-	00	00	00	00	00	00	00	00
2018-	00	00	00	00	00	00	00	00
2020-	00	00	00	00	00	00	00	00
2028-	00	00	00	00	00	40	7F	7F
2030-	7F	7F	03	55	78	7F	7F	7F
2038-	00	00	00	00	00	00	00	00
2040-	00	00	00	00	00	00	00	00
2048-	00	00	00	00	00	00	00	00
2050-	00	00	00	00	00	00	00	00
2058-	00	00	00	00	00	00	00	00
2060-	00	00	00	00	00	00	00	00
2068-	00	00	00	00	00	00	00	00
2070-	00	00	00	00	00	00	00	00
2078-	00	00	00	00	00	00	00	00
2080-	00	00	00	00	00	00	00	00
2088-	00	00	00	00	00	00	00	00
2090-	00	00	00	00	00	00	00	00
2098-	00	00	00	00	00	00	00	00
20A0-	00	00	00	00	00	00	00	00
20AB-	00	00	00	00	00	40	7F	4F
20B0-	7F	2A	1D	55	08	79	1F	7C
20BB-	00	00	00	00	00	00	00	00
20C0-	00	00	00	00	00	00	00	00
20CB-	00	00	00	00	00	00	00	00
20D0-	00	00	00	00	00	00	00	00

20D8-	00	00	00	00	00	00	00	00
20E0-	00	00	00	00	00	00	00	00
20E8-	00	00	00	00	00	00	00	00
20F0-	00	00	00	00	00	00	00	00
20F8-	00	00	00	00	00	00	00	00
2100-	00	00	00	00	00	00	00	00
2108-	00	00	00	00	00	00	00	00
2110-	00	00	00	00	00	00	00	00
2118-	00	00	00	00	00	00	00	00
2120-	00	00	00	00	00	00	00	00
2128-	00	00	00	00	00	40	7F	7F
2130-	7F	7F	54	2A	75	72	7F	47
2138-	00	00	00	00	00	00	00	00
2140-	00	00	00	00	00	00	00	00
2148-	00	00	00	00	00	00	00	00
2150-	00	00	00	00	00	00	00	00
2158-	00	00	00	00	00	00	00	00
2160-	00	00	00	00	00	00	00	00
2168-	00	00	00	00	00	00	00	00
2170-	00	00	00	00	00	00	00	00
2178-	00	00	00	00	00	00	00	00
2180-	00	00	00	00	00	00	00	00
2188-	00	00	00	00	00	00	00	00
2190-	00	00	00	00	00	00	00	00
2198-	00	00	00	00	00	00	00	00
21A0-	00	00	00	00	00	00	00	00
21A8-	00	00	00	00	00	40	7F	79
21B0-	7F	1F	55	2A	05	60	7F	7F
21B8-	00	00	00	00	00	00	00	00
21C0-	00	00	00	00	00	00	00	00
21C8-	00	00	00	00	00	00	00	00
21D0-	00	00	00	00	00	00	00	00
21D8-	00	00	00	00	00	00	00	00
21E0-	00	00	00	00	00	00	00	00
21E8-	00	00	00	00	00	00	00	00
21F0-	00	00	00	00	00	00	00	00
21F8-	00	00	00	00	00	00	00	00
2200-	00	00	00	00	00	40	7F	7F
2208-	7F	7F	7F	7F	7F	7F	7F	7F
2210-	00	00	00	00	00	00	00	00
2218-	00	00	00	00	00	00	00	00
2220-	00	00	00	00	00	00	00	00
2228-	00	00	00	00	00	40	7F	01

2230-	7F	7F	7F	7F	71	7F	7F	7F
2238-	00	00	00	00	00	00	00	00
2240-	00	00	00	00	00	00	00	00
2248-	00	00	00	00	00	00	00	00
2250-	00	00	00	00	00	00	00	00
2258-	00	00	00	00	00	00	00	00
2260-	00	00	00	00	00	00	00	00
2268-	00	00	00	00	00	00	00	00
2270-	00	00	00	00	00	00	00	00
2278-	00	00	00	00	00	00	00	00
2280-	00	00	00	00	00	40	7B	00
2288-	50	2A	40	2A	71	7F	7F	7F
2290-	00	00	00	00	00	00	00	00
2298-	00	00	00	00	00	00	00	00
22A0-	00	00	00	00	00	00	00	00
22A8-	00	00	00	00	00	40	3F	14
22B0-	1E	05	20	15	27	55	2A	79
22B8-	00	00	00	00	00	00	00	00
22C0-	00	00	00	00	00	00	00	00
22C8-	00	00	00	00	00	00	00	00
22D0-	00	00	00	00	00	00	00	00
22D8-	00	00	00	00	00	00	00	00
22E0-	00	00	00	00	00	00	00	00
22E8-	00	00	00	00	00	00	00	00
22F0-	00	00	00	00	00	00	00	00
22F8-	00	00	00	00	00	00	00	00
2300-	00	00	00	00	00	40	7F	7F
2308-	1B	7F	3D	37	7E	7F	7F	7F
2310-	00	00	00	00	00	00	00	00
2318-	00	00	00	00	00	00	00	00
2320-	00	00	00	00	00	00	00	00
2328-	00	00	00	00	00	40	23	55
2330-	72	7F	7F	1F	2A	15	7E	7F
2338-	00	00	00	00	00	00	00	00
2340-	00	00	00	00	00	00	00	00
2348-	00	00	00	00	00	00	00	00
2350-	00	00	00	00	00	00	00	00
2358-	00	00	00	00	00	00	00	00
2360-	00	00	00	00	00	00	00	00
2368-	00	00	00	00	00	00	00	00
2370-	00	00	00	00	00	00	00	00
2378-	00	00	00	00	00	00	00	00
2380-	00	00	00	00	00	40	7F	7F

2388-	7F	4C	1B	55	62	7F	7F	7F
2390-	00	00	00	00	00	00	00	00
2398-	00	00	00	00	00	00	00	00
23A0-	00	00	00	00	00	00	00	00
23A8-	00	00	00	00	00	40	7F	01
23B0-	00	00	00	00	00	7C	7F	7F
23B8-	00	00	00	00	00	00	00	00
23C0-	00	00	00	00	00	00	00	00
23C8-	00	00	00	00	00	00	00	00
23D0-	00	00	00	00	00	00	00	00
23D8-	00	00	00	00	00	00	00	00
23E0-	00	00	00	00	00	00	00	00
23E8-	00	00	00	00	00	00	00	00
23F0-	00	00	00	00	00	00	00	00
23F8-	00	00	00	00	00	00	00	00
2400-	00	00	00	00	00	00	00	00
2408-	00	00	00	00	00	00	00	00
2410-	00	00	00	00	00	00	00	00
2418-	00	00	00	00	00	00	00	00
2420-	00	00	00	00	00	00	00	00
2428-	00	00	00	00	00	40	7F	7F
2430-	7F	7F	31	54	7C	7F	7F	7F
2438-	00	00	00	00	00	00	00	00
2440-	00	00	00	00	00	00	00	00
2448-	00	00	00	00	00	00	00	00
2450-	00	00	00	00	00	00	00	00
2458-	00	00	00	00	00	00	00	00
2460-	00	00	00	00	00	00	00	00
2468-	00	00	00	00	00	00	00	00
2470-	00	00	00	00	00	00	00	00
2478-	00	00	00	00	00	00	00	00
2480-	00	00	00	00	00	00	00	00
2488-	00	00	00	00	00	00	00	00
2490-	00	00	00	00	00	00	00	00
2498-	00	00	00	00	00	00	00	00
24A0-	00	00	00	00	00	00	00	00
24A8-	00	00	00	00	00	40	7F	4F
24B0-	57	2A	1F	55	08	79	47	71
24B8-	00	00	00	00	00	00	00	00
24C0-	00	00	00	00	00	00	00	00
24C8-	00	00	00	00	00	00	00	00
24D0-	00	00	00	00	00	00	00	00
24D8-	00	00	00	00	00	00	00	00

24E0-	00	00	00	00	00	00	00	00
24E8-	00	00	00	00	00	00	00	00
24F0-	00	00	00	00	00	00	00	00
24F8-	00	00	00	00	00	00	00	00
2500-	00	00	00	00	00	00	00	00
2508-	00	00	00	00	00	00	00	00
2510-	00	00	00	00	00	00	00	00
2518-	00	00	00	00	00	00	00	00
2520-	00	00	00	00	00	00	00	00
2528-	00	00	00	00	00	40	7F	7F
2530-	7F	3F	54	2A	7D	72	7F	4F
2538-	00	00	00	00	00	00	00	00
2540-	00	00	00	00	00	00	00	00
2548-	00	00	00	00	00	00	00	00
2550-	00	00	00	00	00	00	00	00
2558-	00	00	00	00	00	00	00	00
2560-	00	00	00	00	00	00	00	00
2568-	00	00	00	00	00	00	00	00
2570-	00	00	00	00	00	00	00	00
2578-	00	00	00	00	00	00	00	00
2580-	00	00	00	00	00	00	00	00
2588-	00	00	00	00	00	00	00	00
2590-	00	00	00	00	00	00	00	00
2598-	00	00	00	00	00	00	00	00
25A0-	00	00	00	00	00	00	00	00
25A8-	00	00	00	00	00	40	7F	79
25B0-	7F	3F	54	2A	55	7C	7F	7F
25B8-	00	00	00	00	00	00	00	00
25C0-	00	00	00	00	00	00	00	00
25C8-	00	00	00	00	00	00	00	00
25D0-	00	00	00	00	00	00	00	00
25D8-	00	00	00	00	00	00	00	00
25E0-	00	00	00	00	00	00	00	00
25E8-	00	00	00	00	00	00	00	00
25F0-	00	00	00	00	00	00	00	00
25F8-	00	00	00	00	00	00	00	00
2600-	00	00	00	00	00	40	7F	7F
2608-	7F	60	7F	7F	7F	7F	7F	7F
2610-	00	00	00	00	00	00	00	00
2618-	00	00	00	00	00	00	00	00
2620-	00	00	00	00	00	00	00	00
2628-	00	00	00	00	00	40	7F	0D
2630-	7F	7F	7F	7F	7B	1F	60	7F

263B-	00	00	00	00	00	00	00	00
2640-	00	00	00	00	00	00	00	00
2648-	00	00	00	00	00	00	00	00
2650-	00	00	00	00	00	00	00	00
2658-	00	00	00	00	00	00	00	00
2660-	00	00	00	00	00	00	00	00
2668-	00	00	00	00	00	00	00	00
2670-	00	00	00	00	00	00	00	00
2678-	00	00	00	00	00	00	00	00
2680-	00	00	00	00	00	40	07	00
2688-	40	0A	00	2A	65	7F	7F	7F
2690-	00	00	00	00	00	00	00	00
2698-	00	00	00	00	00	00	00	00
26A0-	00	00	00	00	00	00	00	00
26A8-	00	00	00	00	00	40	1F	55
26B0-	00	65	0F	14	26	55	2A	79
26B8-	00	00	00	00	00	00	00	00
26C0-	00	00	00	00	00	00	00	00
26C8-	00	00	00	00	00	00	00	00
26D0-	00	00	00	00	00	00	00	00
26D8-	00	00	00	00	00	00	00	00
26E0-	00	00	00	00	00	00	00	00
26E8-	00	00	00	00	00	00	00	00
26F0-	00	00	00	00	00	00	00	00
26F8-	00	00	00	00	00	00	00	00
2700-	00	00	00	00	00	40	7F	7F
2708-	03	7F	3E	2F	7E	7F	7F	7F
2710-	00	00	00	00	00	00	00	00
2718-	00	00	00	00	00	00	00	00
2720-	00	00	00	00	00	00	00	00
2728-	00	00	00	00	00	40	29	55
2730-	72	7F	7F	3F	2A	45	7F	7F
2738-	00	00	00	00	00	00	00	00
2740-	00	00	00	00	00	00	00	00
2748-	00	00	00	00	00	00	00	00
2750-	00	00	00	00	00	00	00	00
2758-	00	00	00	00	00	00	00	00
2760-	00	00	00	00	00	00	00	00
2768-	00	00	00	00	00	00	00	00
2770-	00	00	00	00	00	00	00	00
2778-	00	00	00	00	00	00	00	00
2780-	00	00	00	00	00	40	7F	7F
2788-	7F	11	06	55	72	7F	7F	7F

2790-	00	00	00	00	00	00	00	00
2798-	00	00	00	00	00	00	00	00
27A0-	00	00	00	00	00	00	00	00
27AB-	00	00	00	00	00	40	7F	7F
27B0-	7F	01	00	00	7F	7F	7F	7F
27B8-	00	00	00	00	00	00	00	00
27C0-	00	00	00	00	00	00	00	00
27C8-	00	00	00	00	00	00	00	00
27D0-	00	00	00	00	00	00	00	00
27D8-	00	00	00	00	00	00	00	00
27E0-	00	00	00	00	00	00	00	00
27E8-	00	00	00	00	00	00	00	00
27F0-	00	00	00	00	00	00	00	00
27F8-	00	00	00	00	00	00	00	00
2800-	00	00	00	00	00	00	00	00
2808-	00	00	00	00	00	00	00	00
2810-	00	00	00	00	00	00	00	00
2818-	00	00	00	00	00	00	00	00
2820-	00	00	00	00	00	00	00	00
2828-	00	00	00	00	00	40	7F	7F
2830-	7F	3F	64	01	0C	7F	7F	7F
2838-	00	00	00	00	00	00	00	00
2840-	00	00	00	00	00	00	00	00
2848-	00	00	00	00	00	00	00	00
2850-	00	00	00	00	00	00	00	00
2858-	00	00	00	00	00	00	00	00
2860-	00	00	00	00	00	00	00	00
2868-	00	00	00	00	00	00	00	00
2870-	00	00	00	00	00	00	00	00
2878-	00	00	00	00	00	00	00	00
2880-	00	00	00	00	00	00	00	00
2888-	00	00	00	00	00	00	00	00
2890-	00	00	00	00	00	00	00	00
2898-	00	00	00	00	00	00	00	00
28A0-	00	00	00	00	00	00	00	00
28AB-	00	00	00	00	00	40	7F	1F
28B0-	5F	7A	07	54	02	7C	73	67
28B8-	00	00	00	00	00	00	00	00
28C0-	00	00	00	00	00	00	00	00
28C8-	00	00	00	00	00	00	00	00
28D0-	00	00	00	00	00	00	00	00
28D8-	00	00	00	00	00	00	00	00
28E0-	00	00	00	00	00	00	00	00

28E8- 00 00 00 00 00 00 00 00
 28F0- 00 00 00 00 00 00 00 00
 28F8- 00 00 00 00 00 00 00 00
 2900- 00 00 00 00 00 00 00 00
 2908- 00 00 00 00 00 00 00 00
 2910- 00 00 00 00 00 00 00 00
 2918- 00 00 00 00 00 00 00 00
 2920- 00 00 00 00 00 00 00 00
 2928- 00 00 00 00 00 00 40 7F 3F
 2930- 7E 0F 55 2A 7D 72 7F 4E
 2938- 00 00 00 00 00 00 00 00
 2940- 00 00 00 00 00 00 00 00
 2948- 00 00 00 00 00 00 00 00
 2950- 00 00 00 00 00 00 00 00
 2958- 00 00 00 00 00 00 00 00
 2960- 00 00 00 00 00 00 00 00
 2968- 00 00 00 00 00 00 00 00
 2970- 00 00 00 00 00 00 00 00
 2978- 00 00 00 00 00 00 00 00
 2980- 00 00 00 00 00 00 00 00
 2988- 00 00 00 00 00 00 00 00
 2990- 00 00 00 00 00 00 00 00
 2998- 00 00 00 00 00 00 00 00
 29A0- 00 00 00 00 00 00 00 00
 29A8- 00 00 00 00 00 00 40 3F 73
 29B0- 7F 7F 54 2A 55 7C 7F 7F
 29B8- 00 00 00 00 00 00 00 00
 29C0- 00 00 00 00 00 00 00 00
 29C8- 00 00 00 00 00 00 00 00
 29D0- 00 00 00 00 00 00 00 00
 29D8- 00 00 00 00 00 00 00 00
 29E0- 00 00 00 00 00 00 00 00
 29E8- 00 00 00 00 00 00 00 00
 29F0- 00 00 00 00 00 00 00 00
 29F8- 00 00 00 00 00 00 00 00
 2A00- 00 00 00 00 00 00 40 7F 7F
 2A08- 1F 0A 7F 7F 7F 7F 7F 7F
 2A10- 00 00 00 00 00 00 00 00
 2A18- 00 00 00 00 00 00 00 00
 2A20- 00 00 00 00 00 00 00 00
 2A28- 00 00 00 00 00 00 40 7F 1F
 2A30- 7E 7F 7F 3F 7C 41 0A 7F
 2A38- 00 00 00 00 00 00 00 00

2A40-	00	00	00	00	00	00	00	00
2A48-	00	00	00	00	00	00	00	00
2A50-	00	00	00	00	00	00	00	00
2A58-	00	00	00	00	00	00	00	00
2A60-	00	00	00	00	00	00	00	00
2A68-	00	00	00	00	00	00	00	00
2A70-	00	00	00	00	00	00	00	00
2A78-	00	00	00	00	00	00	00	00
2A80-	00	00	00	00	00	40	0F	00
2A88-	4C	02	00	28	65	7F	7F	7F
2A90-	00	00	00	00	00	00	00	00
2A98-	00	00	00	00	00	00	00	00
2AA0-	00	00	00	00	00	00	00	00
2AAB-	00	00	00	00	00	40	1F	55
2AB0-	22	65	7F	54	20	55	2A	7C
2AB8-	00	00	00	00	00	00	00	00
2AC0-	00	00	00	00	00	00	00	00
2AC8-	00	00	00	00	00	00	00	00
2AD0-	00	00	00	00	00	00	00	00
2ADB-	00	00	00	00	00	00	00	00
2AE0-	00	00	00	00	00	00	00	00
2AEB-	00	00	00	00	00	00	00	00
2AF0-	00	00	00	00	00	00	00	00
2AFB-	00	00	00	00	00	00	00	00
2B00-	00	00	00	00	00	40	7F	7F
2B08-	77	7F	7E	0E	7E	7F	7F	7F
2B10-	00	00	00	00	00	00	00	00
2B18-	00	00	00	00	00	00	00	00
2B20-	00	00	00	00	00	00	00	00
2B28-	00	00	00	00	00	40	29	55
2B30-	72	7F	7F	3F	2A	71	7F	7F
2B38-	00	00	00	00	00	00	00	00
2B40-	00	00	00	00	00	00	00	00
2B48-	00	00	00	00	00	00	00	00
2B50-	00	00	00	00	00	00	00	00
2B58-	00	00	00	00	00	00	00	00
2B60-	00	00	00	00	00	00	00	00
2B68-	00	00	00	00	00	00	00	00
2B70-	00	00	00	00	00	00	00	00
2B78-	00	00	00	00	00	00	00	00
2B80-	00	00	00	00	00	40	7F	7F
2B88-	7F	53	20	55	70	7F	7F	7F
2B90-	00	00	00	00	00	00	00	00

2B78-	00	00	00	00	00	00	00	00
2BA0-	00	00	00	00	00	00	00	00
2BAB-	00	00	00	00	00	40	7F	7F
2BB0-	7F	7F	7F	7F	7F	7F	7F	7F
2BB8-	00	00	00	00	00	00	00	00
2BC0-	00	00	00	00	00	00	00	00
2BC8-	00	00	00	00	00	00	00	00
2BD0-	00	00	00	00	00	00	00	00
2BDB-	00	00	00	00	00	00	00	00
2BE0-	00	00	00	00	00	00	00	00
2BEB-	00	00	00	00	00	00	00	00
2BF0-	00	00	00	00	00	00	00	00
2BF8-	00	00	00	00	00	00	00	00
2C00-	00	00	00	00	00	00	00	00
2C08-	00	00	00	00	00	00	00	00
2C10-	00	00	00	00	00	00	00	00
2C18-	00	00	00	00	00	00	00	00
2C20-	00	00	00	00	00	00	00	00
2C28-	00	00	00	00	00	40	7F	7F
2C30-	7F	1F	45	0F	21	7C	7F	7F
2C38-	00	00	00	00	00	00	00	00
2C40-	00	00	00	00	00	00	00	00
2C48-	00	00	00	00	00	00	00	00
2C50-	00	00	00	00	00	00	00	00
2C58-	00	00	00	00	00	00	00	00
2C60-	00	00	00	00	00	00	00	00
2C68-	00	00	00	00	00	00	00	00
2C70-	00	00	00	00	00	00	00	00
2C78-	00	00	00	00	00	00	00	00
2C80-	00	00	00	00	00	00	00	00
2C88-	00	00	00	00	00	00	00	00
2C90-	00	00	00	00	00	00	00	00
2C98-	00	00	00	00	00	00	00	00
2CA0-	00	00	00	00	00	00	00	00
2CAB-	00	00	00	00	00	40	7F	3F
2CB0-	7C	7F	51	50	12	7E	7B	4C
2CB8-	00	00	00	00	00	00	00	00
2CC0-	00	00	00	00	00	00	00	00
2CC8-	00	00	00	00	00	00	00	00
2CD0-	00	00	00	00	00	00	00	00
2CDB-	00	00	00	00	00	00	00	00
2CE0-	00	00	00	00	00	00	00	00
2CE8-	00	00	00	00	00	00	00	00

```

2E48- 00 00 00 00 00 00 00 00
2E50- 00 00 00 00 00 00 00 00
2E58- 00 00 00 00 00 00 00 00
2E60- 00 00 00 00 00 00 00 00
2E68- 00 00 00 00 00 00 00 00
2E70- 00 00 00 00 00 00 00 00
2E78- 00 00 00 00 00 00 00 00
2E80- 00 00 00 00 00 40 3F 40
2E88- 1F 62 4E 21 71 7F 7F 7F
2E90- 00 00 00 00 00 00 00 00
2E98- 00 00 00 00 00 00 00 00
2EA0- 00 00 00 00 00 00 00 00
2EAB- 00 00 00 00 00 40 0F 55
2EB0- 2A 71 7F 51 28 55 2A 7E
2EB8- 00 00 00 00 00 00 00 00
2EC0- 00 00 00 00 00 00 00 00
2EC8- 00 00 00 00 00 00 00 00
2ED0- 00 00 00 00 00 00 00 00
2ED8- 00 00 00 00 00 00 00 00
2EE0- 00 00 00 00 00 00 00 00
2EE8- 00 00 00 00 00 00 00 00
2EF0- 00 00 00 00 00 00 00 00
2EF8- 00 00 00 00 00 00 00 00
2F00- 00 00 00 00 00 40 7F 7F
2F08- 4F 7F 1E 0E 3E 7C 7F 7F
2F10- 00 00 00 00 00 00 00 00
2F18- 00 00 00 00 00 00 00 00
2F20- 00 00 00 00 00 00 00 00
2F28- 00 00 00 00 00 40 29 55
2F30- 62 7F 7F 7F 28 7C 7F 7F
2F38- 00 00 00 00 00 00 00 00
2F40- 00 00 00 00 00 00 00 00
2F48- 00 00 00 00 00 00 00 00
2F50- 00 00 00 00 00 00 00 00
2F58- 00 00 00 00 00 00 00 00
2F60- 00 00 00 00 00 00 00 00
2F68- 00 00 00 00 00 00 00 00
2F70- 00 00 00 00 00 00 00 00
2F78- 00 00 00 00 00 00 00 00
2F80- 00 00 00 00 00 40 7F 7F
2F88- 7F 07 2A 55 70 7F 7F 7F
2F90- 00 00 00 00 00 00 00 00
2F98- 00 00 00 00 00 00 00 00

```

2CF0-	00	00	00	09	00	00	00	00
2CF8-	00	00	00	00	00	00	00	00
2D00-	00	00	00	00	00	00	00	00
2D08-	00	00	00	00	00	00	00	00
2D10-	00	00	00	00	00	00	00	00
2D18-	00	00	00	00	00	00	00	00
2D20-	00	00	00	00	00	00	00	00
2D28-	00	00	00	00	00	40	7F	1F
2D30-	6F	27	15	2A	7D	42	0F	67
2D38-	00	00	00	00	00	00	00	00
2D40-	00	00	00	00	00	00	00	00
2D48-	00	00	00	00	00	00	00	00
2D50-	00	00	00	00	00	00	00	00
2D58-	00	00	00	00	00	00	00	00
2D60-	00	00	00	00	00	00	00	00
2D68-	00	00	00	00	00	00	00	00
2D70-	00	00	00	00	00	00	00	00
2D78-	00	00	00	00	00	00	00	00
2D80-	00	00	00	00	00	00	00	00
2D88-	00	00	00	00	00	00	00	00
2D90-	00	00	00	00	00	00	00	00
2D98-	00	00	00	00	00	00	00	00
2DA0-	00	00	00	00	00	00	00	00
2DA8-	00	00	00	00	00	40	3F	60
2DB0-	7F	7F	51	2A	55	7C	7F	7F
2DB8-	00	00	00	00	00	00	00	00
2DC0-	00	00	00	00	00	00	00	00
2DC8-	00	00	00	00	00	00	00	00
2DD0-	00	00	00	00	00	00	00	00
2DD8-	00	00	00	00	00	00	00	00
2DE0-	00	00	00	00	00	00	00	00
2DE8-	00	00	00	00	00	00	00	00
2DF0-	00	00	00	00	00	00	00	00
2DF8-	00	00	00	00	00	00	00	00
2E00-	00	00	00	00	00	40	7F	7F
2E08-	4F	2A	7C	7F	7F	7F	7F	7F
2E10-	00	00	00	00	00	00	00	00
2E18-	00	00	00	00	00	00	00	00
2E20-	00	00	00	00	00	00	00	00
2E28-	00	00	00	00	00	40	7F	3F
2E30-	7E	7F	7F	1F	3E	54	2A	7E
2E38-	00	00	00	00	00	00	00	00
2E40-	00	00	00	00	00	00	00	00

2FA0-	00	00	00	00	00	00	00	00
2FAB-	00	00	00	00	00	40	7F	7F
2FB0-	7F	7F	7F	7F	7F	7F	7F	7F
2FBB-	00	00	00	00	00	00	00	00
2FC0-	00	00	00	00	00	00	00	00
2FCB-	00	00	00	00	00	00	00	00
2FD0-	00	00	00	00	00	00	00	00
2FDB-	00	00	00	00	00	00	00	00
2FE0-	00	00	00	00	00	00	00	00
2FEB-	00	00	00	00	00	00	00	00
2FF0-	00	00	00	00	00	00	00	00
2FFB-	00	00	00	00	00	00	00	00
3000-	00	00	00	00	00	00	00	00
300B-	00	00	00	00	00	00	00	00
3010-	00	00	00	00	00	00	00	00
301B-	00	00	00	00	00	00	00	00
3020-	00	00	00	00	00	00	00	00
302B-	00	00	00	00	00	40	7F	7F
3030-	7F	0F	15	3F	28	79	7F	7F
303B-	00	00	00	00	00	00	00	00
3040-	00	00	00	00	00	00	00	00
304B-	00	00	00	00	00	00	00	00
3050-	00	00	00	00	00	00	00	00
305B-	00	00	00	00	00	00	00	00
3060-	00	00	00	00	00	00	00	00
306B-	00	00	00	00	00	00	00	00
3070-	00	00	00	00	00	00	00	00
307B-	00	00	00	00	00	00	00	00
3080-	00	00	00	00	00	00	00	00
308B-	00	00	00	00	00	00	00	00
3090-	00	00	00	00	00	00	00	00
309B-	00	00	00	00	00	00	00	00
30A0-	00	00	00	00	00	00	00	00
30AB-	00	00	00	00	00	40	7F	7F
30B0-	61	0F	54	0A	12	20	7E	43
30BB-	00	00	00	00	00	00	00	00
30C0-	00	00	00	00	00	00	00	00
30CB-	00	00	00	00	00	00	00	00
30D0-	00	00	00	00	00	00	00	00
30DB-	00	00	00	00	00	00	00	00
30E0-	00	00	00	00	00	00	00	00
30EB-	00	00	00	00	00	00	00	00
30F0-	00	00	00	00	00	00	00	00

```

30F8- 00 00 00 00 00 00 00 00
3100- 00 00 00 00 00 00 00 00
3108- 00 00 00 00 00 00 00 00
3110- 00 00 00 00 00 00 00 00
3118- 00 00 00 00 00 00 00 00
3120- 00 00 00 00 00 00 00 00
3128- 00 00 00 00 00 40 7F 27
3130- 63 20 15 2A 7D 02 60 71
3138- 00 00 00 00 00 00 00 00
3140- 00 00 00 00 00 00 00 00
3148- 00 00 00 00 00 00 00 00
3150- 00 00 00 00 00 00 00 00
3158- 00 00 00 00 00 00 00 00
3160- 00 00 00 00 00 00 00 00
3168- 00 00 00 00 00 00 00 00
3170- 00 00 00 00 00 00 00 00
3178- 00 00 00 00 00 00 00 00
3180- 00 00 00 00 00 00 00 00
3188- 00 00 00 00 00 00 00 00
3190- 00 00 00 00 00 00 00 00
3198- 00 00 00 00 00 00 00 00
31A0- 00 00 00 00 00 00 00 00
31A8- 00 00 00 00 00 40 7F 7C
31B0- 7E 7F 47 2A 15 7E 7F 7F
31B8- 00 00 00 00 00 00 00 00
31C0- 00 00 00 00 00 00 00 00
31C8- 00 00 00 00 00 00 00 00
31D0- 00 00 00 00 00 00 00 00
31D8- 00 00 00 00 00 00 00 00
31E0- 00 00 00 00 00 00 00 00
31E8- 00 00 00 00 00 00 00 00
31F0- 00 00 00 00 00 00 00 0Q
31F8- 00 00 00 00 00 00 00 00
3200- 00 00 00 00 00 40 5F 7F
3208- 47 2A 71 7F 7F 7F 7F 7F
3210- 00 00 00 00 00 00 00 00
3218- 00 00 00 00 00 00 00 00
3220- 00 00 00 00 00 00 00 00
3228- 00 00 00 00 00 40 7F 3F
3230- 4C 6F 7F 07 1F 55 2A 7E
3238- 00 00 00 00 00 00 00 00
3240- 00 00 00 00 00 00 00 00
3248- 00 00 00 00 00 00 00 00

```

3250-	00	00	00	00	00	00	00	00
325B-	00	00	00	00	00	00	00	00
3260-	00	00	00	00	00	00	00	00
326B-	00	00	00	00	00	00	00	00
3270-	00	00	00	00	00	00	00	00
327B-	00	00	00	00	00	00	00	00
3280-	00	00	00	00	00	40	7F	7F
328B-	3F	38	5F	1D	7C	7F	7F	7F
3290-	00	00	00	00	00	00	00	00
329B-	00	00	00	00	00	00	00	00
32A0-	00	00	00	00	00	00	00	00
32AB-	00	00	00	00	00	40	27	15
32B0-	2A	79	7F	53	2B	55	0A	7F
32BB-	00	00	00	00	00	00	00	00
32C0-	00	00	00	00	00	00	00	00
32CB-	00	00	00	00	00	00	00	00
32D0-	00	00	00	00	00	00	00	00
32DB-	00	00	00	00	00	00	00	00
32E0-	00	00	00	00	00	00	00	00
32EB-	00	00	00	00	00	00	00	00
32F0-	00	00	00	00	00	00	00	00
32FB-	00	00	00	00	00	00	00	00
3300-	00	00	00	00	00	40	7F	7F
330B-	0F	7F	6E	46	0C	79	7F	7F
3310-	00	00	00	00	00	00	00	00
331B-	00	00	00	00	00	00	00	00
3320-	00	00	00	00	00	00	00	00
332B-	00	00	00	00	00	40	29	55
3330-	4A	7F	7F	7F	01	7F	7F	7F
333B-	00	00	00	00	00	00	00	00
3340-	00	00	00	00	00	00	00	00
334B-	00	00	00	00	00	00	00	00
3350-	00	00	00	00	00	00	00	00
335B-	00	00	00	00	00	00	00	00
3360-	00	00	00	00	00	00	00	00
336B-	00	00	00	00	00	00	00	00
3370-	00	00	00	00	00	00	00	00
337B-	00	00	00	00	00	00	00	00
3380-	00	00	00	00	00	40	7F	7F
338B-	7F	4F	2B	15	72	7F	7F	7F
3390-	00	00	00	00	00	00	00	00
339B-	00	00	00	00	00	00	00	00
33A0-	00	00	00	00	00	00	00	00

33A8- 00 00 00 00 00 00 00 00
 33B0- 00 00 00 00 00 00 00 00
 33B8- 00 00 00 00 00 00 00 00
 33C0- 00 00 00 00 00 00 00 00
 33C8- 00 00 00 00 00 00 00 00
 33D0- 00 00 00 00 00 00 00 00
 33D8- 00 00 00 00 00 00 00 00
 33E0- 00 00 00 00 00 00 00 00
 33E8- 00 00 00 00 00 00 00 00
 33F0- 00 00 00 00 00 00 00 00
 33F8- 00 00 00 00 00 00 00 00
 3400- 00 00 00 00 00 00 00 00
 3408- 00 00 00 00 00 00 00 00
 3410- 00 00 00 00 00 00 00 00
 3418- 00 00 00 00 00 00 00 00
 3420- 00 00 00 00 00 00 00 00
 3428- 00 00 00 00 00 00 40 7F 3F
 3430- 7F 23 15 7C 2B 79 7F 7F
 3438- 00 00 00 00 00 00 00 00
 3440- 00 00 00 00 00 00 00 00
 3448- 00 00 00 00 00 00 00 00
 3450- 00 00 00 00 00 00 00 00
 3458- 00 00 00 00 00 00 00 00
 3460- 00 00 00 00 00 00 00 00
 3468- 00 00 00 00 00 00 00 00
 3470- 00 00 00 00 00 00 00 00
 3478- 00 00 00 00 00 00 00 00
 3480- 00 00 00 00 00 00 00 00
 3488- 00 00 00 00 00 00 00 00
 3490- 00 00 00 00 00 00 00 00
 3498- 00 00 00 00 00 00 00 00
 34A0- 00 00 00 00 00 00 00 00
 34A8- 00 00 00 00 00 00 40 7F 7F
 34B0- 0F 60 54 2A 40 0B 7F 4F
 34B8- 00 00 00 00 00 00 00 00
 34C0- 00 00 00 00 00 00 00 00
 34C8- 00 00 00 00 00 00 00 00
 34D0- 00 00 00 00 00 00 00 00
 34D8- 00 00 00 00 00 00 00 00
 34E0- 00 00 00 00 00 00 00 00
 34E8- 00 00 00 00 00 00 00 00
 34F0- 00 00 00 00 00 00 00 00
 34FB- 00 00 00 00 00 00 00 00

```

3500- 00 00 00 00 00 00 00 00
3508- 00 00 00 00 00 00 00 00
3510- 00 00 00 00 00 00 00 00
3518- 00 00 00 00 00 00 00 00
3520- 00 00 00 00 00 00 00 00
3528- 00 00 00 00 00 40 7F 33
3530- 0C 20 55 28 75 02 0F 7C
3538- 00 00 00 00 00 00 00 00
3540- 00 00 00 00 00 00 00 00
3548- 00 00 00 00 00 00 00 00
3550- 00 00 00 00 00 00 00 00
3558- 00 00 00 00 00 00 00 00
3560- 00 00 00 00 00 00 00 00
3568- 00 00 00 00 00 00 00 00
3570- 00 00 00 00 00 00 00 00
3578- 00 00 00 00 00 00 00 00
3580- 00 00 00 00 00 00 00 00
3588- 00 00 00 00 00 00 00 00
3590- 00 00 00 00 00 00 00 00
3598- 00 00 00 00 00 00 00 00
35A0- 00 00 00 00 00 00 00 00
35A8- 00 00 00 00 00 40 7F 39
35B0- 7F 7F 1F 28 45 7F 7F 7F
35B8- 00 00 00 00 00 00 00 00
35C0- 00 00 00 00 00 00 00 00
35C8- 00 00 00 00 00 00 00 00
35D0- 00 00 00 00 00 00 00 00
35D8- 00 00 00 00 00 00 00 00
35E0- 00 00 00 00 00 00 00 00
35E8- 00 00 00 00 00 00 00 00
35F0- 00 00 00 00 00 00 00 00
35F8- 00 00 00 00 00 00 00 00
3600- 00 00 00 00 00 40 1F 7F
3608- 53 2A 05 7E 7F 7F 7F 7F
3610- 00 00 00 00 00 00 00 00
3618- 00 00 00 00 00 00 00 00
3620- 00 00 00 00 00 00 00 00
3628- 00 00 00 00 00 40 7F 7F
3630- 18 30 7F 61 1F 55 2A 7C
3638- 00 00 00 00 00 00 00 00
3640- 00 00 00 00 00 00 00 00
3648- 00 00 00 00 00 00 00 00
3650- 00 00 00 00 00 00 00 00

```

```

3658- 00 00 00 00 00 00 00 00
3660- 00 00 00 00 00 00 00 00
3668- 00 00 00 00 00 00 00 00
3670- 00 00 00 00 00 00 00 00
3678- 00 00 00 00 00 00 00 00
3680- 00 00 00 00 00 40 7F 7F
3688- 7F 3C 7F 0F 7F 7F 7F 7F
3690- 00 00 00 00 00 00 00 00
3698- 00 00 00 00 00 00 00 00
36A0- 00 00 00 00 00 00 00 00
36A8- 00 00 00 00 00 40 27 15
36B0- 2A 7C 7F 47 28 55 62 7F
36B8- 00 00 00 00 00 00 00 00
36C0- 00 00 00 00 00 00 00 00
36C8- 00 00 00 00 00 00 00 00
36D0- 00 00 00 00 00 00 00 00
36D8- 00 00 00 00 00 00 00 00
36E0- 00 00 00 00 00 00 00 00
36E8- 00 00 00 00 00 00 00 00
36F0- 00 00 00 00 00 00 00 00
36F8- 00 00 00 00 00 00 00 00
3700- 00 00 00 00 00 40 7F 7F
3708- 67 7F 4E 10 20 79 7F 7F
3710- 00 00 00 00 00 00 00 00
3718- 00 00 00 00 00 00 00 00
3720- 00 00 00 00 00 00 00 00
3728- 00 00 00 00 00 40 29 15
3730- 00 7C 7F 7F 7F 7F 7F 7F
3738- 00 00 00 00 00 00 00 00
3740- 00 00 00 00 00 00 00 00
3748- 00 00 00 00 00 00 00 00
3750- 00 00 00 00 00 00 00 00
3758- 00 00 00 00 00 00 00 00
3760- 00 00 00 00 00 00 00 00
3768- 00 00 00 00 00 00 00 00
3770- 00 00 00 00 00 00 00 00
3778- 00 00 00 00 00 00 00 00
3780- 00 00 00 00 00 40 7F 7F
3788- 7F 1F 22 45 72 7F 7F 7F
3790- 00 00 00 00 00 00 00 00
3798- 00 00 00 00 00 00 00 00
37A0- 00 00 00 00 00 00 00 00
37AB- 00 00 00 00 00 00 00 00

```

37B0-	00	00	00	00	00	00	00	00
37B8-	00	00	00	00	00	00	00	00
37C0-	00	00	00	00	00	00	00	00
37C8-	00	00	00	00	00	00	00	00
37D0-	00	00	00	00	00	00	00	00
37D8-	00	00	00	00	00	00	00	00
37E0-	00	00	00	00	00	00	00	00
37E8-	00	00	00	00	00	00	00	00
37F0-	00	00	00	00	00	00	00	00
37F8-	00	00	00	00	00	00	00	00
3800-	00	00	00	00	00	00	00	00
3808-	00	00	00	00	00	00	00	00
3810-	00	00	00	00	00	00	00	00
3818-	00	00	00	00	00	00	00	00
3820-	00	00	00	00	00	00	00	00
3828-	00	00	00	00	00	40	7F	1F
3830-	3E	28	55	00	22	79	7F	7F
3838-	00	00	00	00	00	00	00	00
3840-	00	00	00	00	00	00	00	00
3848-	00	00	00	00	00	00	00	00
3850-	00	00	00	00	00	00	00	00
3858-	00	00	00	00	00	00	00	00
3860-	00	00	00	00	00	00	00	00
3868-	00	00	00	00	00	00	00	00
3870-	00	00	00	00	00	00	00	00
3878-	00	00	00	00	00	00	00	00
3880-	00	00	00	00	00	00	00	00
3888-	00	00	00	00	00	00	00	00
3890-	00	00	00	00	00	00	00	00
3898-	00	00	00	00	00	00	00	00
38A0-	00	00	00	00	00	00	00	00
38A8-	00	00	00	00	00	40	7F	7F
38B0-	7F	7F	54	2A	75	62	7F	1D
38B8-	00	00	00	00	00	00	00	00
38C0-	00	00	00	00	00	00	00	00
38C8-	00	00	00	00	00	00	00	00
38D0-	00	00	00	00	00	00	00	00
38D8-	00	00	00	00	00	00	00	00
38E0-	00	00	00	00	00	00	00	00
38E8-	00	00	00	00	00	00	00	00
38F0-	00	00	00	00	00	00	00	00
38F8-	00	00	00	00	00	00	00	00
3900-	00	00	00	00	00	00	00	00

3908-	00	00	00	00	00	00	00	00
3910-	00	00	00	00	00	00	00	00
3918-	00	00	00	00	00	00	00	00
3920-	00	00	00	00	00	00	00	00
3928-	00	00	00	00	00	40	7F	79
3930-	5C	27	55	02	75	02	7F	7F
3938-	00	00	00	00	00	00	00	00
3940-	00	00	00	00	00	00	00	00
3948-	00	00	00	00	00	00	00	00
3950-	00	00	00	00	00	00	00	00
3958-	00	00	00	00	00	00	00	00
3960-	00	00	00	00	00	00	00	00
3968-	00	00	00	00	00	00	00	00
3970-	00	00	00	00	00	00	00	00
3978-	00	00	00	00	00	00	00	00
3980-	00	00	00	00	00	40	7F	7F
3988-	7F	7F	7F	7F	7F	7F	7F	7F
3990-	00	00	00	00	00	00	00	00
3998-	00	00	00	00	00	00	00	00
39A0-	00	00	00	00	00	00	00	00
39AB-	00	00	00	00	00	40	7F	37
39B0-	7F	7F	7F	03	60	7F	7F	7F
39BB-	00	00	00	00	00	00	00	00
39C0-	00	00	00	00	00	00	00	00
39CB-	00	00	00	00	00	00	00	00
39D0-	00	00	00	00	00	00	00	00
39DB-	00	00	00	00	00	00	00	00
39E0-	00	00	00	00	00	00	00	00
39EB-	00	00	00	00	00	00	00	00
39F0-	00	00	00	00	00	00	00	00
39FB-	00	00	00	00	00	00	00	00
3A00-	00	00	00	00	00	40	3F	7C
3A08-	50	2A	55	00	7F	7F	7F	7F
3A10-	00	00	00	00	00	00	00	00
3A18-	00	00	00	00	00	00	00	00
3A20-	00	00	00	00	00	00	00	00
3A28-	00	00	00	00	00	40	7F	7F
3A30-	01	45	0F	70	0F	55	2A	79
3A38-	00	00	00	00	00	00	00	00
3A40-	00	00	00	00	00	00	00	00
3A48-	00	00	00	00	00	00	00	00
3A50-	00	00	00	00	00	00	00	00
3A58-	00	00	00	00	00	00	00	00

3A60-	00	00	00	00	00	00	00	00
3A68-	00	00	00	00	00	00	00	00
3A70-	00	00	00	00	00	00	00	00
3A78-	00	00	00	00	00	00	00	00
3A80-	00	00	00	00	00	40	7F	7F
3A88-	3F	7E	63	37	7E	7F	7F	7F
3A90-	00	00	00	00	00	00	00	00
3A98-	00	00	00	00	00	00	00	00
3AA0-	00	00	00	00	00	00	00	00
3AAB-	00	00	00	00	00	40	27	55
3AB0-	00	7F	7F	4F	2A	55	72	7F
3AB8-	00	00	00	00	00	00	00	00
3AC0-	00	00	00	00	00	00	00	00
3AC8-	00	00	00	00	00	00	00	00
3AD0-	00	00	00	00	00	00	00	00
3AD8-	00	00	00	00	00	00	00	00
3AE0-	00	00	00	00	00	00	00	00
3AEB-	00	00	00	00	00	00	00	00
3AF0-	00	00	00	00	00	00	00	00
3AF8-	00	00	00	00	00	00	00	00
3B00-	00	00	00	00	00	40	7F	7F
3B08-	07	7E	0D	54	22	7C	7F	7F
3B10-	00	00	00	00	00	00	00	00
3B18-	00	00	00	00	00	00	00	00
3B20-	00	00	00	00	00	00	00	00
3B28-	00	00	00	00	00	40	23	55
3B30-	2A	01	40	7F	7F	7F	7F	7F
3B38-	00	00	00	00	00	00	00	00
3B40-	00	00	00	00	00	00	00	00
3B48-	00	00	00	00	00	00	00	00
3B50-	00	00	00	00	00	00	00	00
3B58-	00	00	00	00	00	00	00	00
3B60-	00	00	00	00	00	00	00	00
3B68-	00	00	00	00	00	00	00	00
3B70-	00	00	00	00	00	00	00	00
3B78-	00	00	00	00	00	00	00	00
3B80-	00	00	00	00	00	40	7F	7F
3B88-	7F	7F	08	50	72	7F	7F	7F
3B90-	00	00	00	00	00	00	00	00
3B98-	00	00	00	00	00	00	00	00
3BA0-	00	00	00	00	00	00	00	00
3BAB-	00	00	00	00	00	00	00	00
3BB0-	00	00	00	00	00	00	00	00

3BB8-	00	00	00	00	00	00	00	00
3BC0-	00	00	00	00	00	00	00	00
3BC8-	00	00	00	00	00	00	00	00
3BD0-	00	00	00	00	00	00	00	00
3BD8-	00	00	00	00	00	00	00	00
3BE0-	00	00	00	00	00	00	00	00
3BE8-	00	00	00	00	00	00	00	00
3BF0-	00	00	00	00	00	00	00	00
3BF8-	00	00	00	00	00	00	00	00
3C00-	00	00	00	00	00	00	00	00
3C08-	00	00	00	00	00	00	00	00
3C10-	00	00	00	00	00	00	00	00
3C18-	00	00	00	00	00	00	00	00
3C20-	00	00	00	00	00	00	00	00
3C28-	00	00	00	00	00	40	7F	4F
3C30-	41	2B	15	14	0A	79	7F	7F
3C38-	00	00	00	00	00	00	00	00
3C40-	00	00	00	00	00	00	00	00
3C48-	00	00	00	00	00	00	00	00
3C50-	00	00	00	00	00	00	00	00
3C58-	00	00	00	00	00	00	00	00
3C60-	00	00	00	00	00	00	00	00
3C68-	00	00	00	00	00	00	00	00
3C70-	00	00	00	00	00	00	00	00
3C78-	00	00	00	00	00	00	00	00
3C80-	00	00	00	00	00	00	00	00
3C88-	00	00	00	00	00	00	00	00
3C90-	00	00	00	00	00	00	00	00
3C98-	00	00	00	00	00	00	00	00
3CA0-	00	00	00	00	00	00	00	00
3CAB-	00	00	00	00	00	40	7F	7F
3CB0-	7F	7F	54	2A	75	72	7F	1B
3CB8-	00	00	00	00	00	00	00	00
3CC0-	00	00	00	00	00	00	00	00
3CC8-	00	00	00	00	00	00	00	00
3CD0-	00	00	00	00	00	00	00	00
3CD8-	00	00	00	00	00	00	00	00
3CE0-	00	00	00	00	00	00	00	00
3CE8-	00	00	00	00	00	00	00	00
3CF0-	00	00	00	00	00	00	00	00
3CF8-	00	00	00	00	00	00	00	00
3D00-	00	00	00	00	00	00	00	00
3D08-	00	00	00	00	00	00	00	00

3D10-	00	00	00	00	00	00	00	00
3D18-	00	00	00	00	00	00	00	00
3D20-	00	00	00	00	00	00	00	00
3D28-	00	00	00	00	00	40	7F	79
3D30-	73	0F	55	2A	50	4B	7F	7F
3D38-	00	00	00	00	00	00	00	00
3D40-	00	00	00	00	00	00	00	00
3D48-	00	00	00	00	00	00	00	00
3D50-	00	00	00	00	00	00	00	00
3D58-	00	00	00	00	00	00	00	00
3D60-	00	00	00	00	00	00	00	00
3D68-	00	00	00	00	00	00	00	00
3D70-	00	00	00	00	00	00	00	00
3D78-	00	00	00	00	00	00	00	00
3D80-	00	00	00	00	00	40	7F	7F
3D88-	7F	7F	7F	7F	7F	7F	7F	7F
3D90-	00	00	00	00	00	00	00	00
3D98-	00	00	00	00	00	00	00	00
3DA0-	00	00	00	00	00	00	00	00
3DAB-	00	00	00	00	00	40	7F	1B
3DB0-	7F	7F	7F	7F	73	7F	7F	7F
3DB8-	00	00	00	00	00	00	00	00
3DC0-	00	00	00	00	00	00	00	00
3DC8-	00	00	00	00	00	00	00	00
3DD0-	00	00	00	00	00	00	00	00
3DD8-	00	00	00	00	00	00	00	00
3DE0-	00	00	00	00	00	00	00	00
3DE8-	00	00	00	00	00	00	00	00
3DF0-	00	00	00	00	00	00	00	00
3DF8-	00	00	00	00	00	00	00	00
3E00-	00	00	00	00	00	40	3F	00
3E08-	50	2A	55	2A	7C	7F	7F	7F
3E10-	00	00	00	00	00	00	00	00
3E18-	00	00	00	00	00	00	00	00
3E20-	00	00	00	00	00	00	00	00
3E28-	00	00	00	00	00	40	7F	40
3E30-	07	05	00	45	27	55	2A	79
3E38-	00	00	00	00	00	00	00	00
3E40-	00	00	00	00	00	00	00	00
3E48-	00	00	00	00	00	00	00	00
3E50-	00	00	00	00	00	00	00	00
3E58-	00	00	00	00	00	00	00	00
3E60-	00	00	00	00	00	00	00	00

3E6B-	00	00	00	00	00	00	00	00
3E70-	00	00	00	00	00	00	00	00
3E7B-	00	00	00	00	00	00	00	00
3E80-	00	00	00	00	00	40	7F	7F
3E8B-	3F	7E	5D	37	7E	7F	7F	7F
3E90-	00	00	00	00	00	00	00	00
3E9B-	00	00	00	00	00	00	00	00
3EA0-	00	00	00	00	00	00	00	00
3EAB-	00	00	00	00	00	40	27	55
3EB0-	72	7F	7F	4F	2A	55	7B	7F
3EBB-	00	00	00	00	00	00	00	00
3EC0-	00	00	00	00	00	00	00	00
3ECB-	00	00	00	00	00	00	00	00
3ED0-	00	00	00	00	00	00	00	00
3EDB-	00	00	00	00	00	00	00	00
3EE0-	00	00	00	00	00	00	00	00
3EEB-	00	00	00	00	00	00	00	00
3EF0-	00	00	00	00	00	00	00	00
3EFB-	00	00	00	00	00	00	00	00
3F00-	00	00	00	00	00	40	7F	7F
3F0B-	37	7E	0D	54	0B	7F	7F	7F
3F10-	00	00	00	00	00	00	00	00
3F1B-	00	00	00	00	00	00	00	00
3F20-	00	00	00	00	00	00	00	00
3F2B-	00	00	00	00	00	40	0F	54
3F30-	0A	00	00	00	70	7F	7F	7F
3F3B-	00	00	00	00	00	00	00	00
3F40-	00	00	00	00	00	00	00	00
3F4B-	00	00	00	00	00	00	00	00
3F50-	00	00	00	00	00	00	00	00
3F5B-	00	00	00	00	00	00	00	00
3F60-	00	00	00	00	00	00	00	00
3F6B-	00	00	00	00	00	00	00	00
3F70-	00	00	00	00	00	00	00	00
3F7B-	00	00	00	00	00	00	00	00
3F80-	00	00	00	00	00	40	7F	7F
3F8B-	7F	7F	21	55	72	7F	7F	7F
3F90-	00	00	00	00	00	00	00	00
3F9B-	00	00	00	00	00	00	00	00
3FA0-	00	00	00	00	00	00	00	00
3FAB-	00	00	00	00	00	00	00	00
3FB0-	00	00	00	00	00	00	00	00
3FBB-	00	00	00	00	00	00	00	00

3FC0- 00 00 00 00 00 00 00 00
 3FCB- 00 00 00 00 00 00 00 00
 3FD0- 00 00 00 00 00 00 00 00
 3FDB- 00 00 00 00 00 00 00 00
 3FE0- 00 00 00 00 00 00 00 00
 3FEB- 00 00 00 00 00 00 00 00
 3FF0- 00 00 00 00 00 00 00 00
 3FFB- 00 00 00 00 00 00 00 00

9. TLY2

2000- 80 80 80 80 80 80 FC FF
 200B- FF FF FF FF FF FF FF FF
 2010- FF 81 80 80 80 80 C0 FF
 2018- FF FF FF FF FF FF FF FF
 2020- FF 9F 80 80 80 80 80 80
 2028- 80 80 80 80 80 80 FC FF
 2030- FF FF A9 81 E2 FF FF FF
 2038- FF 81 80 80 80 80 C0 FF
 2040- FF FF FF A3 C0 CA FF FF
 2048- FF 9F 80 80 80 80 80 80
 2050- 80 80 80 80 80 80 FC FF
 2058- FF FF 80 FB FF FF DF FD
 2060- FF 81 80 80 80 80 C0 FF
 2068- DF FD FF FF 8F 80 FF FF
 2070- FF 9F 80 80 80 80 80 80
 2078- 8D 68 AA AD 00 E0 49 20
 2080- 80 80 80 80 80 80 FC FF
 208B- FF FF FF FF 9F 8A FF FF
 2090- FF 81 80 80 80 80 C0 FF
 2098- FF FF A8 FC FF FF FF FF
 20A0- FF 9F 80 80 80 80 80 80
 20AB- 80 80 80 80 80 80 FC FF
 20B0- FF 9F 86 F0 C4 FF FF FF
 20B8- FF 81 80 80 80 80 C0 FF
 20C0- FF FF FF 91 87 B0 FC FF
 20CB- FF 9F 80 80 80 80 80 80
 20D0- 80 80 80 80 80 80 FC 9F
 20DB- AA F0 C7 FF FF FF 8F FF
 20E0- FF 81 80 80 80 80 C0 FF
 20EB- FF FB FF FF FF F1 87 AA
 20F0- FC 9F 80 80 80 80 80 80
 20FB- B5 60 0A 0A 0A 0A 15 62
 2100- 80 80 80 80 80 80 FC FF
 210B- FF FF 9F A0 D5 AA E1 C7

2110- FF 81 80 80 80 80 80 C0 FF
 2118- F1 C3 AA D5 82 FC FF FF
 2120- FF 9F 80 80 80 80 80 80
 2128- 80 80 80 80 80 80 FC FF
 2130- FF D3 88 A0 D5 C2 8F FF
 2138- FF 81 80 80 80 80 C0 FF
 2140- FF F8 A1 D5 82 88 E5 FF
 2148- FF 9F 80 80 80 80 80 80
 2150- 80 80 80 80 80 80 FC D3
 2158- AA 95 FE 81 BE 94 F0 FF
 2160- FF 81 80 80 80 80 C0 FF
 2168- FF 87 94 BE C0 BF D4 AA
 2170- E5 9F 80 80 80 80 80 80
 2178- AD 6B 03 C9 3A B0 E1 AD
 2180- 80 80 80 80 80 80 FC FF
 2188- FF FF D4 82 80 A8 86 80
 2190- FE 81 80 80 80 80 C0 BF
 2198- 80 80 8A 80 A0 95 FF FF
 21A0- FF 9F 80 80 80 80 80 80
 21A8- 80 80 80 80 80 80 FC FC
 21B0- F9 87 A8 85 FC AB 9F FF
 21B8- FF 81 80 80 80 80 C0 FF
 21C0- FF FC EA 9F D0 8A F0 CF
 21C8- 9F 9F 80 80 80 80 80 80
 21D0- 80 80 80 80 80 80 FC C7
 21D8- AA D5 A0 E5 FF D4 A8 95
 21E0- FF 81 80 80 80 80 C0 FF
 21E8- D4 8A 95 FF D3 82 D5 AA
 21F0- F1 9F 80 80 80 80 80 80
 21FB- 29 22 2E 2A 22 2E 2B 22
 2200- 80 80 80 80 80 80 FC FF
 2208- FF FF CF FD FB CF FF FF
 2210- FF 81 80 80 80 80 C0 FF
 2218- FF FF F9 8F DF F9 FF FF
 2220- FF 9F 80 80 80 80 80 80
 2228- 80 80 80 80 80 80 9C F7
 2230- FF E8 D5 AA E5 FF FF FF
 2238- FF 81 80 80 80 80 C0 FF
 2240- FF FF FF D3 AA D5 8B FF
 2248- F7 9C 80 80 80 80 80 80
 2250- 80 80 80 80 80 80 FC FF
 2258- A9 D5 AA FE FF 9F A0 D5
 2260- FC 81 80 80 80 80 C0 9F

226B- D5 82 FC FF BF AA D5 CA
 2270- FF 9F 80 80 80 80 80 80
 2278- 00 00 00 00 00 00 00 00
 2280- 80 80 80 80 80 80 FC FF
 2288- FF FF 8F EE EF FF FD FF
 2290- FF 81 80 80 80 80 C0 FF
 2298- FF DF FF FB BB FB FF FF
 22A0- FF 9F 80 80 80 80 80 80
 22AB- 80 80 80 80 80 80 BC EE
 22B0- FF E9 D7 AA 95 FE CF FF
 22BB- FF 81 80 80 80 80 C0 FF
 22C0- FF F9 BF D4 AA F5 CB FF
 22CB- BB 9E 80 80 80 80 80 80
 22D0- 80 80 80 80 80 80 FC FF
 22DB- FF D1 CA FF FF FF A9 D5
 22E0- F2 81 80 80 80 80 C0 A7
 22EB- D5 CA FF FF FF A9 C5 FF
 22F0- FF 9F 80 80 80 80 80 80
 22FB- 00 00 00 00 00 00 00 00
 2300- 80 80 80 80 80 80 FC FF
 230B- FF C7 AB 85 F6 BF FC FF
 2310- FF 81 80 80 80 80 C0 FF
 231B- FF 9F FB B7 D0 BA F1 FF
 2320- FF 9F 80 80 80 80 80 80
 232B- 80 80 80 80 80 80 FC FF
 2330- 9F E8 95 AB D5 BC E7 F3
 233B- FF 81 80 80 80 80 C0 FF
 2340- E7 F3 9E D5 8A D4 8B FC
 234B- FF 9F 80 80 80 80 80 80
 2350- 80 80 80 80 80 80 FC FF
 235B- FF FF FF BF 80 D0 AA D5
 2360- F8 81 80 80 80 80 C0 8F
 236B- D5 AA 85 80 FE FF FF FF
 2370- FF 9F 80 80 80 80 80 80
 237B- 00 00 00 00 00 00 00 00
 2380- 80 80 80 80 80 80 F0 FF
 238B- FF FF A1 D5 A0 F9 FF FF
 2390- FF 81 80 80 80 80 C0 FF
 239B- FF FF CF 82 D5 C2 FF FF
 23A0- FF 87 80 80 80 80 80 80
 23AB- 80 80 80 80 80 80 FC FF
 23B0- FF A7 D5 AA E5 FF FF D9
 23BB- FF 81 80 80 80 80 C0 FF

23C0- CD FF FF D3 AA D5 F2 FF
 23CB- FF 9F 80 80 80 80 80 80
 23D0- 80 80 80 80 80 80 FC FF
 23DB- FF FF FF FF FF FF FF FF
 23E0- FF 81 80 80 80 80 C0 FF
 23EB- FF FF FF FF FF FF FF FF
 23F0- FF 9F 80 80 80 80 80 80
 23FB- 00 00 00 00 00 00 00 00
 2400- 80 80 80 80 80 80 FC FF
 240B- FF FF FF FF FF FF FF FF
 2410- FF 81 80 80 80 80 C0 FF
 241B- FF FF FF FF FF FF FF FF
 2420- FF 9F 80 80 80 80 80 80
 242B- 80 80 80 80 80 80 FC FF
 2430- FF FF A9 81 E2 FF FF FF
 243B- FF 81 80 80 80 80 C0 FF
 2440- FF FF FF A3 C0 CA FF FF
 244B- FF 9F 80 80 80 80 80 80
 2450- 80 80 80 80 80 80 FC FF
 245B- FF FF 80 F8 FF FF DF FD
 2460- FF 81 80 80 80 80 C0 FF
 246B- DF FD FF FF 8F 80 FF FF
 2470- FF 9F 80 80 80 80 80 80
 247B- 00 00 00 00 00 00 00 00
 2480- 80 80 80 80 80 80 FC FF
 248B- FF FF FF FF 9F 8A FF FF
 2490- FF 81 80 80 80 80 C0 FF
 249B- FF FF AB FC FF FF FF FF
 24A0- FF 9F 80 80 80 80 80 80
 24AB- 80 80 80 80 80 80 FC FF
 24B0- FF 9F 86 F0 C4 FF FF FF
 24BB- FF 81 80 80 80 80 C0 FF
 24C0- FF FF FF 91 87 80 FC FF
 24CB- FF 9F 80 80 80 80 80 80
 24D0- 80 80 80 80 80 80 FC 9F
 24DB- AA F0 C7 FF FF FF 8F FF
 24E0- FF 81 80 80 80 80 C0 FF
 24EB- FF F8 FF FF FF F1 87 AA
 24F0- FC 9F 80 80 80 80 80 80
 24FB- 00 00 00 00 00 00 00 00
 2500- 80 80 80 80 80 80 FC FF
 250B- FF FF 9F A0 D5 AA E1 C7
 2510- FF 81 80 80 80 80 C0 FF

2518- F1 C3 AA D5 82 FC FF FF
 2520- FF 9F 80 80 80 80 80 80
 2528- 80 80 80 80 80 80 FC FF
 2530- FF D3 88 A0 D5 C2 8F FF
 2538- FF 81 80 80 80 80 C0 FF
 2540- FF F8 A1 D5 82 88 E5 FF
 2548- FF 9F 80 80 80 80 80 80
 2550- 80 80 80 80 80 80 FC D3
 2558- AA 95 FE 81 BE 94 F0 FF
 2560- FF 81 80 80 80 80 C0 FF
 2568- FF 87 94 BE C0 BF D4 AA
 2570- E5 9F 80 80 80 80 80 80
 2578- 00 00 00 00 00 00 00 00
 2580- 80 80 80 80 80 80 FC FF
 2588- FF FF D4 82 80 AB 86 80
 2590- FE 81 80 80 80 80 C0 BF
 2598- 80 B0 8A 80 A0 95 FF FF
 25A0- FF 9F 80 80 80 80 80 80
 25A8- 80 80 80 80 80 80 FC FC
 25B0- F9 87 AB 85 FC AB 9F FF
 25B8- FF 81 80 80 80 80 C0 FF
 25C0- FF FC EA 9F D0 8A F0 CF
 25C8- 9F 9F 80 80 80 80 80 80
 25D0- 80 80 80 80 80 80 EC C7
 25D8- AA D5 A0 E5 FF D4 AB 95
 25E0- FF 81 80 80 80 80 C0 FF
 25E8- D4 8A 95 FF D3 82 D5 AA
 25F0- F1 9F 80 80 80 80 80 80
 25F8- 00 00 00 00 00 00 00 00
 2600- 80 80 80 80 80 80 FC FF
 2608- FF FF CF FD F8 CF FF FF
 2610- FF 81 80 80 80 80 C0 FF
 2618- FF FF F9 8F DF F9 FF FF
 2620- FF 9F 80 80 00 80 80 80
 2628- 80 80 80 80 80 80 9C F7
 2630- FF E2 D5 AA E5 FF FF FF
 2638- FF 81 80 80 80 80 C0 FF
 2640- FF FF FF D3 AA D5 88 FF
 2648- F7 9C 80 80 80 80 80 80
 2650- 80 80 80 80 80 80 FC FF
 2658- A9 D5 AA FE FF 9F A0 D5
 2660- FC B1 80 80 80 80 C0 9F
 2668- D5 B2 FC FF BF AA D5 CA

```

2670- FF 9F 80 80 80 80 80 80
2678- 00 00 00 00 00 00 00 00
2680- 80 80 80 80 80 80 FC FF
2688- FF FF 8F EE EF FF FD FF
2690- FF 81 80 80 80 80 C0 FF
2698- FF DF FF FB BB F8 FF FF
26A0- FF 9F 80 80 80 80 80 80
26A8- 80 80 80 80 80 80 BC EE
26B0- FF E9 D7 AA 95 FE CF FF
26B8- FF 81 80 80 80 80 C0 FF
26C0- FF F9 BF D4 AA F5 CB FF
26C8- BB 9E 80 80 80 80 80 80
26D0- 80 80 80 80 80 80 FC FF
26D8- FF D1 CA FF FF FF A9 D5
26E0- F2 81 80 80 80 80 C0 A7
26E8- D5 CA FF FF FF A9 C5 FF
26F0- FF 9F 80 80 80 80 80 80
26F8- 00 00 00 00 00 00 00 00
2700- 80 80 80 80 80 80 FC FF
2708- FF C7 A8 85 F6 8F FC FF
2710- FF 81 80 80 80 80 C0 FF
2718- FF 9F F8 B7 D0 8A F1 FF
2720- FF 9F 80 80 80 80 80 80
2728- 80 80 80 80 80 80 FC FF
2730- 9F E8 95 A8 D5 BC E7 F3
2738- FF 81 80 80 80 80 C0 FF
2740- E7 F3 9E D5 8A D4 8B FC
2748- FF 9F 80 80 80 80 80 80
2750- 80 80 80 80 80 80 FC FF
2758- FF FF FF BF 80 D0 AA D5
2760- F8 81 80 80 80 80 C0 8F
2768- D5 AA 85 80 FE FF FF FF
2770- FF 9F 80 80 80 80 80 80
2778- 00 00 00 00 00 00 00 00
2780- 80 80 80 80 80 80 F0 FF
2788- FF FF A1 D5 A0 F9 FF FF
2790- FF 81 80 80 80 80 C0 FF
2798- FF FF CF 82 D5 C2 FF FF
27A0- FF 87 80 80 80 80 80 80
27A8- 80 80 80 80 80 80 FC FF
27B0- FF A7 D5 AA E5 FF FF D9
27B8- FF 81 80 80 80 80 C0 FF
27C0- CD FF FF D3 AA D5 F2 FF

```

```

27C8- FF 9F 80 80 80 80 80 80
27D0- 80 80 80 80 80 80 FC FF
27D8- FF FF FF FF FF FF FF FF
27E0- FF 81 80 80 80 80 C0 FF
27E8- FF FF FF FF FF FF FF FF
27F0- FF 9F 80 80 80 80 80 80
27F8- 00 00 00 00 00 00 00 00
2800- 80 80 80 80 80 80 FC FF
2808- FF FF FF FF FF FF FF FF
2810- FF 81 80 80 80 80 C0 FF
2818- FF FF FF FF FF FF FF FF
2820- FF 9F 80 80 80 80 80 80
2828- 80 80 80 80 80 80 FC FF
2830- FF FF A9 D5 F0 FF FF FF
2838- FF 81 80 80 80 80 C0 FF
2840- FF FF FF FF 87 D5 CA FF FF
2848- FF 9F 80 80 80 80 80 80
2850- 80 80 80 80 80 80 FC FF
2858- FF FF F9 FF FF FF 9F FB
2860- FF 81 80 80 80 80 C0 FF
2868- EF FC FF FF FF CF FF FF
2870- FF 9F 80 80 80 80 80 80
2878- 00 00 00 00 00 00 00 00
2880- 80 80 80 80 80 80 FC FF
2888- FF FF FF FF C7 AA FE FF
2890- FF 81 80 80 80 80 C0 FF
2898- FF BF AA F1 FF FF FF FF
28A0- FF 9F 80 80 80 80 80 80
28A8- 80 80 80 80 80 80 FC FF
28B0- FF C7 90 BE 94 FF FF FF
28B8- FF 81 80 80 80 80 C0 FF
28C0- FF FF FF 94 BE 84 F1 FF
28C8- FF 9F 80 80 80 80 80 80
28D0- 80 80 80 80 80 80 FC CF
28D8- AA C5 8F FF FF FF CF FF
28E0- FF 81 80 80 80 80 C0 FF
28E8- FF F9 FF FF FF F8 D1 AA
28F0- F9 9F 80 80 80 80 80 80
28F8- 00 00 00 00 00 00 00 00
2900- 80 80 80 80 80 80 FC FF
2908- FF FF C7 AA D5 AA 81 C0
2910- FF 81 80 80 80 80 C0 FF
2918- 81 C0 AA D5 AA F1 FF FF

```


2920- FF 9F 80 80 80 80 80 80
 2928- 80 80 80 80 80 80 80 FC FF
 2930- FF 93 8A 85 D5 BA B0 FE
 2938- FF 81 80 80 80 80 C0 FF
 2940- BF 86 AE D5 D0 A8 E4 FF
 2948- FF 9F 80 80 80 80 80 80
 2950- 80 80 80 80 80 80 FC D3
 2958- AA D5 BC 94 80 94 BC E0
 2960- FF 81 80 80 80 80 C0 FF
 2968- 83 9E 94 80 94 9E D5 AA
 2970- E5 9F 80 80 80 80 80 80
 2978- 00 00 00 00 00 00 00 00
 2980- 80 80 80 80 80 80 FC FF
 2988- FF FF D1 B0 EE 88 BF C0
 2990- FF 81 80 80 80 80 C0 FF
 2998- 81 FE 88 BB 86 C5 FF FF
 29A0- FF 9F 80 80 80 80 80 80
 29A8- 80 80 80 80 80 80 BC E6
 29B0- E3 8F A9 A1 F1 FF C7 FF
 29B8- FF 81 80 80 80 80 C0 FF
 29C0- FF F1 FF C7 C2 CA F8 E3
 29C8- B3 9E 80 80 80 80 80 80
 29D0- 80 80 80 80 80 80 FC CF
 29D8- AA D5 A2 F1 FF D1 AA 95
 29E0- FE 81 80 80 80 80 C0 BF
 29E8- D4 AA C5 FF C7 A2 D5 AA
 29F0- F9 9F 80 80 80 80 80 80
 29F8- 00 00 00 00 00 00 00 00
 2A00- 80 80 80 80 80 80 FC FF
 2A08- FF FF CF BD F7 CF FF FF
 2A10- FF 81 80 80 80 80 C0 FF
 2A18- FF FF F9 F7 DE F9 FF FF
 2A20- FF 9F 80 80 80 80 80 80
 2A28- 80 80 80 80 80 80 9C FB
 2A30- FF E9 D5 AA E5 FF FF FF
 2A38- FF 81 80 80 80 80 C0 FF
 2A40- FF FF FF D3 AA D5 CB FF
 2A48- EF 9C 80 80 80 80 80 80
 2A50- 80 80 80 80 80 80 FC FF
 2A58- A3 D5 AA FE FF FF A9 D5
 2A60- FC 81 80 80 80 80 C0 9F
 2A68- D5 CA FF FF BF AA D5 E2
 2A70- FF 9F 80 80 80 80 80 80

2A7B- 00 00 00 00 00 00 00 00
 2A80- 80 80 80 80 80 80 80 FC FF
 2A88- FF C7 8F 8E EF BF FE FF
 2A90- FF 81 80 80 80 80 80 C0 FF
 2A98- FF BF FE FB 8B F8 F1 FF
 2AA0- FF 9F 80 80 80 80 80 80
 2AAB- 80 80 80 80 80 80 80 FC 9C
 2AB0- BE E8 D7 8A D5 FC 9E FF
 2AB8- FF 81 80 80 80 80 80 C0 FF
 2AC0- FF BC 9F D5 A8 F5 8B BE
 2AC8- 9C 9F 80 80 80 80 80 80
 2AD0- 80 80 80 80 80 80 80 FC FF
 2AD8- FF C7 E2 FF FF FF A8 D5
 2AE0- F2 81 80 80 80 80 80 C0 A7
 2AE8- D5 8A FF FF FF A3 F1 FF
 2AF0- FF 9F 80 80 80 80 80 80
 2AF8- 00 00 00 00 00 00 00 00
 2B00- 80 80 80 80 80 80 80 FC FF
 2B08- FF 9F A2 85 F6 CF FD FF
 2B10- FF 81 80 80 80 80 80 C0 FF
 2B18- FF DF F9 B7 D0 A2 FC FF
 2B20- FF 9F 80 80 80 80 80 80
 2B28- 80 80 80 80 80 80 80 FC FF
 2B30- BF BA C1 AA 95 FE F9 F3
 2B38- FF 81 80 80 80 80 80 C0 FF
 2B40- E7 CF BF D4 AA C1 AE FE
 2B48- FF 9F 80 80 80 80 80 80
 2B50- 80 80 80 80 80 80 80 FC FF
 2B58- FF FF 81 80 80 80 AA 85
 2B60- FE 81 80 80 80 80 C0 BF
 2B68- D0 AA 80 80 80 C0 FF FF
 2B70- FF 9F 80 80 80 80 80 80
 2B78- 00 00 00 00 00 00 00 00
 2B80- 80 80 80 80 80 80 80 F8 FF
 2B88- FF FF A1 D5 8A FC FF FF
 2B90- FF 81 80 80 80 80 80 C0 FF
 2B98- FF FF 9F A8 D5 C2 FF FF
 2BA0- FF 8F 80 80 80 80 80 80
 2BAB- 80 80 80 80 80 80 80 FC FF
 2BB0- FF A7 D5 AA F1 FF FF C0
 2BB8- FF 81 80 80 80 80 80 C0 FF
 2BC0- 81 FF FF C7 AA D5 F2 FF
 2BC8- FF 9F 80 80 80 80 80 80

2BD0- 80 80 80 80 80 80 FC FF
 2BD8- FF FF FF FF FF FF FF FF
 2BE0- FF 81 80 80 80 80 C0 FF
 2BE8- FF FF FF FF FF FF FF FF
 2BF0- FF 9F 80 80 80 80 80 80
 2BF8- 00 00 00 00 00 00 00 00
 2C00- 80 80 80 80 80 80 FC FF
 2C08- FF FF FF FF FF FF FF FF
 2C10- FF 81 80 80 80 80 C0 FF
 2C18- FF FF FF FF FF FF FF FF
 2C20- FF 9F 80 80 80 80 80 80
 2C28- 80 80 80 80 80 80 FC FF
 2C30- FF FF A9 D5 F0 FF FF FF
 2C38- FF 81 80 80 80 80 C0 FF
 2C40- FF FF FF 87 D5 CA FF FF
 2C48- FF 9F 80 80 80 80 80 80
 2C50- 80 80 80 80 80 80 FC FF
 2C58- FF FF F9 FF FF FF 9F FB
 2C60- FF 81 80 80 80 80 C0 FF
 2C68- EF FC FF FF FF CF FF FF
 2C70- FF 9F 80 80 80 80 80 80
 2C78- 00 00 00 00 00 00 00 00
 2C80- 80 80 80 80 80 80 FC FF
 2C88- FF FF FF FF C7 AA FE FF
 2C90- FF 81 80 80 80 80 C0 FF
 2C98- FF BF AA F1 FF FF FF FF
 2CA0- FF 9F 80 80 80 80 80 80
 2CAB- 80 80 80 80 80 80 FC FF
 2CB0- FF C7 90 BE 94 FF FF FF
 2CB8- FF 81 80 80 80 80 C0 FF
 2CC0- FF FF FF 94 BE 84 F1 FF
 2CC8- FF 9F 80 80 80 80 80 80
 2CD0- 80 80 80 80 80 80 FC CF
 2CD8- AA C5 BF FF FF FF CF FF
 2CE0- FF 81 80 80 80 80 C0 FF
 2CE8- FF F9 FF FF FF F8 D1 AA
 2CF0- F9 9F 80 80 80 80 80 80
 2CF8- 00 00 00 00 00 00 00 00
 2D00- 80 80 80 80 80 80 FC FF
 2D08- FF FF C7 AA D5 AA 81 C0
 2D10- FF 81 80 80 80 80 C0 FF
 2D18- 81 C0 AA D5 AA F1 FF FF
 2D20- FF 9F 80 80 80 80 80 80

```

2D28- 80 80 80 80 80 80 FC FF
2D30- FF 93 8A 85 D5 BA D0 FE
2D38- FF 81 80 80 80 80 C0 FF
2D40- BF 86 AE D5 D0 AB E4 FF
2D48- FF 9F 80 80 80 80 80 80
2D50- 80 80 80 80 80 80 FC D3
2D58- AA D5 BC 94 80 94 BC E0
2D60- FF 81 80 80 80 80 C0 FF
2D68- 83 9E 94 80 94 9E D5 AA
2D70- E5 7F 80 80 80 80 80 80
2D78- 00 00 00 00 00 00 00 00
2D80- 80 80 80 80 80 80 FC FF
2D88- FF FF D1 80 EE 88 BF C0
2D90- FF 81 80 80 80 80 C0 FF
2D98- 81 FC 88 BB 86 C5 FF FF
2DA0- FF 9F 80 80 80 80 80 80
2DA8- 80 80 80 80 80 80 BC E6
2DB0- E3 8F A9 A1 F1 FF C7 FF
2DB8- FF 81 80 80 80 80 C0 FF
2DC0- FF F1 FF C7 C2 CA F8 E3
2DC8- B3 9E 80 80 80 80 80 80
2DD0- 80 80 80 80 80 80 FC CF
2DD8- AA D5 A2 F1 FF D1 AA 95
2DE0- FE 81 80 80 80 80 C0 BF
2DE8- D4 AA C5 FF C7 A2 D5 AA
2DF0- F9 9F 80 80 80 80 80 80
2DF8- 00 00 00 00 00 00 00 00
2E00- 80 80 80 80 80 80 FC FF
2E08- FF FF CF BD F7 CF FF FF
2E10- FF 81 80 80 80 80 C0 FF
2E18- FF FF F9 F7 DE F9 FF FF
2E20- FF 9F 80 80 80 80 80 80
2E28- 80 80 80 80 80 80 9C FB
2E30- FF E9 D5 AA E5 FF FF FF
2E38- FF 81 80 80 80 80 C0 FF
2E40- FF FF FF D3 AA D5 CB FF
2E48- EF 9C 80 80 80 80 80 80
2E50- 80 80 80 80 80 80 FC FF
2E58- A3 D5 AA FE FF FF A9 D5
2E60- FC 81 80 80 80 80 C0 9F
2E68- D5 CA FF FF BF AA D5 E2
2E70- FF 9F 80 80 80 80 80 80
2E78- 00 00 00 00 00 00 00 00

```

2E80- 80 80 80 80 80 80 FC FF
 2E88- FF C7 8F 8E EF BF FE FF
 2E90- FF 81 89 80 80 80 C0 FF
 2E98- FF BF FE FB B8 F8 F1 FF
 2EA0- FF 9F 80 80 80 80 80 80
 2EAB- 80 80 80 80 80 80 FC 9C
 2EB0- BE E8 D7 8A D5 FC 9E FF
 2EB8- FF 81 80 80 80 80 C0 FF
 2EC0- FF BC 9F D5 AB F5 8B BE
 2ECB- 9C 9F 80 80 80 80 80 80
 2ED0- 80 80 80 80 80 80 FC FF
 2EDB- FF C7 E2 FF FF FF AB D5
 2EE0- F2 81 80 80 80 80 C0 A7
 2EEB- D5 8A FF FF FF A3 F1 FF
 2EF0- FF 9F 80 80 80 80 80 80
 2EFB- 00 00 00 00 00 00 00 00
 2F00- 80 80 80 80 80 80 FC FF
 2F0B- FF 9F A2 85 F6 CF FD FF
 2F10- FF 81 80 80 80 80 C0 FF
 2F1B- FF DF F9 B7 D0 A2 FC FF
 2F20- FF 9F 80 80 80 80 80 80
 2F2B- 80 80 80 80 80 80 FC FF
 2F30- BF BA C1 AA 95 FE F9 F3
 2F3B- FF 81 80 80 80 80 C0 FF
 2F40- E7 CF BF D4 AA C1 AE FE
 2F4B- FF 9F 80 80 80 80 80 80
 2F50- 80 80 80 80 80 80 FC FF
 2F5B- FF FF 81 80 80 80 AA 85
 2F60- FE 81 80 80 80 80 C0 BF
 2F6B- D0 AA 80 80 80 C0 FF FF
 2F70- FF 9F 80 80 80 80 80 80
 2F7B- 00 00 00 00 00 00 00 00
 2F80- 80 80 80 80 80 80 F8 FF
 2F8B- FF FF A1 D5 8A FC FF FF
 2F90- FF 81 80 80 80 80 C0 FF
 2F9B- FF FF 9F AB D5 C2 FF FF
 2FA0- FF BF 80 80 80 80 80 80
 2FAB- 80 80 80 80 80 80 FC FF
 2FB0- FF A7 D5 AA F1 FF FF C0
 2FBB- FF 81 80 80 80 80 C0 FF
 2FC0- 81 FF FF C7 AA D5 F2 FF
 2FCB- FF 9F 80 80 80 80 80 80
 2FD0- 80 80 80 80 80 80 FC FF

```

2FDB- FF FF FF FF FF FF FF FF
2FE0- FF 81 80 80 80 80 C0 FF
2FE8- FF FF FF FF FF FF FF FF
2FF0- FF 9F 80 80 80 80 80 80
2FF8- 00 00 00 00 00 00 00 00
3000- 80 80 80 80 80 80 FC FF
3008- FF FF FF FF FF FF FF FF
3010- FF 81 80 80 80 80 C0 FF
3018- FF FF FF FF FF FF FF FF
3020- FF 9F 80 80 80 80 80 80
3028- 80 80 80 80 80 80 FC FF
3030- FF FF A3 95 F8 FF FF FF
3038- FF 81 80 80 80 80 C0 FF
3040- FF FF FF 8F D4 E2 FF FF
3048- FF 9F 80 80 80 80 80 80
3050- 80 80 80 80 80 80 FC FF
3058- FF FF F1 FF FF FF 9F F0
3060- FF 81 80 80 80 80 C0 FF
3068- 87 FC FF FF FF C7 FF FF
3070- FF 9F 80 80 80 80 80 80
3078- 00 A0 08 85 50 84 51 A0
3080- 80 80 80 80 80 80 FC FF
3088- FF FF FF FF D1 AA FC BF
3090- FF 81 80 80 80 80 C0 FF
3098- FE 9F AA C5 FF FF FF FF
30A0- FF 9F 80 80 80 80 80 80
30AB- 80 80 80 80 80 80 FC FF
30B0- FF D3 C2 9F 95 FE FF FF
30B8- FF 81 80 80 80 80 C0 FF
30C0- FF FF BF D4 FC A1 E5 FF
30CB- FF 9F 80 80 80 80 80 80
30D0- 80 80 80 80 80 80 FC CF
30DB- AA 95 9F FC FF BE C6 FF
30E0- FF 81 80 80 80 80 C0 FF
30EB- FF B1 BE FF 9F FC D4 AA
30F0- F9 9F 80 80 80 80 80 80
30FB- 00 00 00 00 00 00 00 00
3100- 80 80 80 80 80 80 FC FF
310B- FF FF D1 AA C0 AA 81 E0
3110- FB 81 80 80 80 80 C0 EF
3118- 83 C0 AA 81 AA C5 FF FF
3120- FF 9F 80 80 80 80 80 80
312B- 80 80 80 80 80 80 FC B7

```

```

3130- FF 93 A2 95 D7 EA BF FE
3138- FF 81 80 80 80 80 C0 FF
3140- BF FE AB F5 D4 A2 E4 FF
3148- F0 9F 80 80 80 80 80 80
3150- 80 80 80 80 80 80 FC D3
3158- AA D5 9C D5 80 94 8F C5
3160- FF 81 80 80 80 80 C0 FF
3168- D1 F8 94 80 D5 9C D5 AA
3170- E5 9F 80 80 80 80 80 80
3178- 00 00 00 00 00 00 00 00
3180- 80 80 80 80 80 80 FC FF
3188- FF FF 87 B7 DF C3 FF FF
3190- FF 81 80 80 80 80 C0 FF
3198- FF FF E1 FD F6 F0 FF FF
31A0- FF 9F 80 80 80 80 80 80
31A8- 80 80 80 80 80 80 BC F8
31B0- CF 80 89 AA 85 FE F0 FF
31B8- FF 81 80 80 80 80 C0 FF
31C0- FF 87 BF D0 AA C8 80 F9
31C8- 8F 9E 80 80 80 80 80 80
31D0- 80 80 80 80 80 80 FC 9F
31D8- AA D5 A2 F9 FF D3 BA D5
31E0- FC 81 80 80 80 80 C0 9F
31E8- D5 A8 E5 FF CF A2 D5 AA
31F0- FC 9F 80 80 80 80 80 80
31F8- 00 00 00 00 00 00 00 00
3200- 80 80 80 80 80 80 FC FF
3208- FF FF CF DD F7 9F FB FF
3210- FF 81 80 80 80 80 C0 FF
3218- FF EF FC F7 DD F9 FF FF
3220- FF 9F 80 80 80 80 80 80
3228- 80 80 80 80 80 80 BC FC
3230- FF E9 D5 AA E5 FF FF FF
3238- FF 81 80 80 80 80 C0 FF
3240- FF FF FF D3 AA D5 CB FF
3248- 9F 9E 80 80 80 80 80 80
3250- 80 80 80 80 80 80 FC FF
3258- 8F D5 8A FF FF FF A9 D5
3260- F8 81 80 80 80 80 C0 8F
3268- D5 CA FF FF FF AB D5 F8
3270- FF 9F 80 80 80 80 80 80
3278- 00 00 00 00 00 00 00 00
3280- 80 80 80 80 80 80 FC FF

```

```

3288- FF 93 A6 EC EE 9F FE FF
3290- FF 81 80 80 80 80 C0 FF
3298- FF BF FC BB 9B B2 E4 FF
32A0- FF 9F 80 80 80 80 80 80
32A8- 80 80 80 80 80 80 FC F1
32B0- 80 E8 D7 8A D5 E0 D8 FC
32B8- FF 81 80 80 80 80 C0 FF
32C0- 9F 8D 83 D5 A8 F5 8B 80
32C8- C7 9F 80 80 80 80 80 80
32D0- 80 80 80 80 80 80 FC FF
32D8- FF 9F F0 FF FF BF AA D5
32E0- F2 81 80 80 80 80 C0 A7
32E8- D5 AA FE FF FF 87 FC FF
32F0- FF 9F 80 80 80 80 80 80
32F8- 00 00 00 00 00 00 00 00
3300- 80 80 80 80 80 80 FC FF
3308- FF FF A8 95 BB E6 FF FF
3310- FF 81 80 80 80 80 C0 FF
3318- FF FF B3 EE D4 BA FF FF
3320- FF 9F 80 80 80 80 80 80
3328- 80 80 80 80 80 80 FC FF
3330- FF 80 D4 AA 95 FF FF F3
3338- FF 81 80 80 80 80 C0 FF
3340- E7 FF FF D4 AA 95 80 FF
3348- FF 9F 80 80 80 80 80 80
3350- 80 80 80 80 80 80 FC FF
3358- FF 87 80 80 80 80 80 F0
3360- FF 81 80 80 80 80 C0 FF
3368- 87 80 80 80 80 80 F0 FF
3370- FF 9F 80 80 80 80 80 80
3378- 00 00 00 00 00 00 00 00
3380- 80 80 80 80 80 80 FC FF
3388- FF FF 89 D5 A2 FE FF FF
3390- FF 81 80 80 80 80 C0 FF
3398- FF FF BF A2 D5 C8 FF FF
33A0- FF 9F 80 80 80 80 80 80
33A8- 80 80 80 80 80 80 FC FF
33B0- FF 8F D5 AA FC FF EF E7
33B8- FF 81 80 80 80 80 C0 FF
33C0- F3 FB FF 9F AA D5 F8 FF
33C8- FF 9F 80 80 80 80 80 80
33D0- 80 80 80 80 80 80 80 80
33D8- 80 80 80 80 80 80 80 80

```



```

33E0- 80 80 80 80 80 80 80 80
33E8- 80 80 80 80 80 80 80 80
33F0- 80 80 80 80 80 80 80 80
33F8- 00 00 00 00 00 00 00 00
3400- 80 80 80 80 80 80 FC FF
3408- FF FF FF FF FF FF FF FF
3410- FF 81 80 80 80 80 C0 FF
3418- FF FF FF FF FF FF FF FF
3420- FF 9F 80 80 80 80 80 80
3428- 80 80 80 80 80 80 FC FF
3430- FF FF A3 95 F8 FF FF FF
3438- FF 81 80 80 80 80 C0 FF
3440- FF FF FF 8F D4 E2 FF FF
3448- FF 9F 80 80 80 80 80 80
3450- 80 80 80 80 80 80 FC FF
3458- FF FF F1 FF FF FF 9F F0
3460- FF 81 80 80 80 80 C0 FF
3468- 87 FC FF FF FF C7 FF FF
3470- FF 9F 80 80 80 80 80 80
3478- 00 00 00 00 00 00 00 00
3480- 80 80 80 80 80 80 FC FF
3488- FF FF FF FF D1 AA FC BF
3490- FF 81 80 80 80 80 C0 FF
3498- FE 9F AA C5 FF FF FF FF
34A0- FF 9F 80 80 80 80 80 80
34A8- 80 80 80 80 80 80 FC FF
34B0- FF D3 C2 9F 95 FE FF FF
34B8- FF 81 80 80 80 80 C0 FF
34C0- FF FF BF D4 FC A1 E5 FF
34C8- FF 9F 80 80 80 80 80 80
34D0- 80 80 80 80 80 80 FC CF
34D8- AA 95 9F FC FF BE C6 FF
34E0- FF 81 80 80 80 80 C0 FF
34E8- FF B1 BE FF 9F FC D4 AA
34F0- F9 9F 80 80 80 80 80 80
34F8- 00 00 00 00 00 00 00 00
3500- 80 80 80 80 80 80 FC FF
3508- FF FF D1 AA C0 AA 81 E0
3510- FB 81 80 80 80 80 C0 EF
3518- 83 C0 AA 81 AA C5 FF FF
3520- FF 9F 80 80 80 80 80 80
3528- 80 80 80 80 80 80 FC 87
3530- FF 93 A2 95 D7 EA BF FE

```

```

3538- FF 81 80 80 80 80 80 C0 FF
3540- BF FE AB F5 D4 A2 E4 FF
3548- F0 9F 80 80 80 80 80 80 80
3550- 80 80 80 80 80 80 80 FC D3
3558- AA D5 9C D5 80 94 8F C5
3560- FF 81 80 80 80 80 80 C0 FF
3568- D1 F8 94 80 D5 9C D5 AA
3570- E5 9F 80 80 80 80 80 80 80
3578- 00 00 00 00 00 00 00 00 00
3580- 80 80 80 80 80 80 80 FC FF
3588- FF FF 87 B7 DF C3 FF FF
3590- FF 81 80 80 80 80 80 C0 FF
3598- FF FF E1 FD F6 F0 FF FF
35A0- FF 9F 80 80 80 80 80 80 80
35A8- 80 80 80 80 80 80 80 BC F8
35B0- CF 80 89 AA 85 FE F0 FF
35B8- FF 81 80 80 80 80 80 C0 FF
35C0- FF 87 BF D0 AA C8 80 F9
35C8- 8F 9E 80 80 80 80 80 80 80
35D0- 80 80 80 80 80 80 80 FC 9F
35D8- AA D5 A2 F9 FF D3 8A D5
35E0- FC 81 80 80 80 80 80 C0 9F
35E8- D5 AB E5 FF CF A2 D5 AA
35F0- FC 9F 80 80 80 80 80 80 80
35F8- 00 00 00 00 00 00 00 00 00
3600- 80 80 80 80 80 80 80 FC FF
3608- FF FF CF DD F7 9F FB FF
3610- FF 81 80 80 80 80 80 C0 FF
3618- FF EF FC F7 DD F9 FF FF
3620- FF 9F 80 80 80 80 80 80 80
3628- 80 80 80 80 80 80 80 BC FC
3630- FF E9 D5 AA E5 FF FF FF
3638- FF 81 80 80 80 80 80 C0 FF
3640- FF FF FF D3 AA D5 CB FF
3648- 9F 9E 80 80 80 80 80 80 80
3650- 80 80 80 80 80 80 80 FC FF
3658- 8F D5 8A FF FF FF A9 D5
3660- F8 81 80 80 80 80 80 C0 8F
3668- D5 CA FF FF FF A8 D5 F8
3670- FF 9F 80 80 80 80 80 80 80
3678- 00 00 00 00 00 00 00 00 00
3680- 80 80 80 80 80 80 80 FC FF
3688- FF 93 A6 EC EE 9F FE FF

```

```

3690- FF 81 80 80 80 80 80 80 80
3698- FF BF FC BB 9B B2 E4 FF
36A0- FF 9F 80 80 80 80 80 80
36A8- 80 80 80 80 80 80 FC F1
36B0- 80 EB D7 8A D5 E0 D8 FC
36B8- FF 81 80 80 80 80 80 80
36C0- 9F 8D B3 D5 AB F5 8B 80
36C8- C7 9F 80 80 80 80 80 80
36D0- 80 80 80 80 80 80 FC FF
36D8- FF 9F F0 FF FF BF AA D5
36E0- F2 81 80 80 80 80 80 80
36E8- D5 AA FE FF FF 87 FC FF
36F0- FF 9F 80 80 80 80 80 80
36F8- 00 00 00 00 00 00 00 00
3700- 80 80 80 80 80 80 FC FF
3708- FF FF A8 95 BB E6 FF FF
3710- FF 81 80 80 80 80 80 80
3718- FF FF B3 EE D4 8A FF FF
3720- FF 9F 80 80 80 80 80 80
3728- 80 80 80 80 80 80 FC FF
3730- FF 80 D4 AA 95 FF FF F3
3738- FF 81 80 80 80 80 80 80
3740- E7 FF FF D4 AA 95 80 FF
3748- FF 9F 80 80 80 80 80 80
3750- 80 80 80 80 80 80 FC FF
3758- FF 87 80 80 80 80 80 80
3760- FF 81 80 80 80 80 80 80
3768- 87 80 80 80 80 80 80 80
3770- FF 9F 80 80 80 80 80 80
3778- 00 00 00 00 00 00 00 00
3780- 80 80 80 80 80 80 FC FF
3788- FF FF 89 D5 A2 FE FF FF
3790- FF 81 80 80 80 80 80 80
3798- FF FF BF A2 D5 C8 FF FF
37A0- FF 9F 80 80 80 80 80 80
37A8- 80 80 80 80 80 80 FC FF
37B0- FF 8F D5 AA FC FF EF E7
37B8- FF 81 80 80 80 80 80 80
37C0- F3 FB FF 9F AA D5 F8 FF
37C8- FF 9F 80 80 80 80 80 80
37D0- 80 80 80 80 80 80 80 80
37D8- 80 80 80 80 80 80 80 80
37E0- 80 80 80 80 80 80 80 80

```

```

37E8- 80 80 80 80 80 80 80 80
37F0- 80 80 80 80 80 80 80 80
37F8- 00 00 00 00 00 00 00 00
3800- 80 80 80 80 80 80 FC FF
3808- FF FF FF FF FF E0 FF FF
3810- FF 81 80 80 80 80 C0 FF
3818- FF FF 83 FF FF FF FF FF
3820- FF 9F 80 80 80 80 80 80
3828- 80 80 80 80 80 80 FC FF
3830- FF FF A7 C5 F1 FF FF FF
3838- FF 81 80 80 80 80 C0 FF
3840- FF FF FF C7 D1 F2 FF FF
3848- FF 9F 80 80 80 80 80 80
3850- 80 80 80 80 80 80 FC FF
3858- 80 FF E3 FF FF FF 9F F6
3860- FF 81 80 80 80 80 C0 FF
3868- B7 FC FF FF FF E3 FF 80
3870- FF 9F 80 80 80 80 80 80
3878- 00 00 00 00 00 00 00 00
3880- 80 80 80 80 80 80 FC FF
3888- FF FF FF 8F D4 AA F9 9F
3890- FF 81 80 80 80 80 C0 FF
3898- FC CF AA 95 F8 FF FF FF
38A0- FF 9F 80 80 80 80 80 80
38A8- 80 80 80 80 80 80 FC FF
38B0- FF D3 E2 87 D5 F8 DF FF
38B8- FF 81 80 80 80 80 C0 FF
38C0- FF FD 8F D5 F0 A3 E5 FF
38C8- FF 9F 80 80 80 80 80 80
38D0- 80 80 80 80 80 80 FC C7
38D8- AA 95 FF F0 DF B1 E3 FF
38E0- FF 81 80 80 80 80 C0 FF
38E8- FF E3 C0 FD 87 FF D4 AA
38F0- F1 9F 80 80 80 80 80 80
38F8- 00 00 00 00 00 00 00 00
3900- 80 80 80 80 80 80 FC FF
3908- FF FF D4 8A 80 AA 80 80
3910- FC 81 80 80 80 80 C0 9F
3918- 80 80 AA 80 AB 95 FF FF
3920- FF 9F 80 80 80 80 80 80
3928- 80 80 80 80 80 80 FC B1
3930- FC 93 A2 95 DF AA BD FE
3938- FF 81 80 80 80 80 C0 FF

```

```

3940- BF DE AA FD D4 A2 E4 9F
3948- C6 9F 80 80 80 80 80 80
3950- 80 80 80 80 80 80 FC D3
3958- AA D5 8C 85 FE 94 A0 95
3960- FF 81 80 80 80 80 C0 FF
3968- D4 82 94 BF D0 98 D5 AA
3970- E5 9F 80 80 80 80 80 80
3978- 00 00 00 00 00 00 00 00
3980- 80 80 80 80 80 80 FC FF
3988- FF FF 9F FE DF E7 FF FF
3990- FF 81 80 80 80 80 C0 FF
3998- FF FF F3 FD BF FC FF FF
39A0- FF 9F 80 80 80 80 80 80
39A8- 80 80 80 80 80 80 BC FE
39B0- 9F BA C0 AA E5 80 FE FF
39B8- FF 81 80 80 80 80 C0 FF
39C0- FF BF 80 D3 AA 81 AE FC
39C8- BF 9E 80 80 80 80 80 80
39D0- 80 80 80 80 80 80 FC FF
39D8- AB D5 A2 FC FF C7 8A D5
39E0- FC 81 80 80 80 80 C0 9F
39E8- D5 A8 F1 FF 9F A2 D5 8A
39F0- FF 9F 80 80 80 80 80 80
39F8- 00 00 00 00 00 00 00 00
3A00- 80 80 80 80 80 80 FC FF
3A08- FF FF CF DE EF 9F F8 FF
3A10- FF 81 80 80 80 80 C0 FF
3A18- FF 8F FC FB BD F9 FF FF
3A20- FF 9F 80 80 80 80 80 80
3A28- 80 80 80 80 80 80 BC FE
3A30- FF E9 D7 AA C5 FF FF FF
3A38- FF 81 80 80 80 80 C0 FF
3A40- FF FF FF D1 AA F5 CB FF
3A48- BF 9E 80 80 80 80 80 80
3A50- 80 80 80 80 80 80 FC FF
3A58- BF D4 CA FF FF FF A9 D5
3A60- F2 81 80 80 80 80 C0 A7
3A68- D5 CA FF FF FF A9 95 FE
3A70- FF 9F 80 80 80 80 80 80
3A78- 00 00 00 00 00 00 00 00
3A80- 80 80 80 80 80 80 FC FF
3A88- FF D3 80 A1 EE FF FC FF
3A90- FF 81 80 80 80 80 C0 FF

```

```

3A9B- FF 9F FF BB C2 80 E5 FF
3AA0- FF 9F 80 80 80 80 80 80
3AAB- 80 80 80 80 80 80 FC 87
3AB0- 9E E8 D5 A2 D5 80 C6 F9
3AB8- FF 81 80 80 80 80 C0 FF
3AC0- CF 81 80 D5 A2 D5 8B BC
3AC8- F0 9F 80 80 80 80 80 80
3AD0- 80 80 80 80 80 80 FC FF
3AD8- FF FF FF FF FF 87 80 D5
3AE0- F2 81 80 80 80 80 C0 A7
3AE8- D5 80 F0 FF FF FF FF FF
3AF0- FF 9F 80 80 80 80 80 80
3AF8- 00 00 00 00 00 00 00 00
3B00- 80 80 80 80 80 80 FB FF
3B08- FF FF A9 95 BC F1 FF FF
3B10- FF 81 80 80 80 80 C0 FF
3B18- FF FF C7 9B D4 CA FF FF
3B20- FF 8F 80 80 80 80 80 80
3B28- 80 80 80 80 80 80 FC FF
3B30- FF A7 D5 AA C5 FF FF F3
3B38- FF 81 80 80 80 80 C0 FF
3B40- E7 FF FF D1 AA D5 F2 FF
3B48- FF 9F 80 80 80 80 80 80
3B50- 80 80 80 80 80 80 FC FF
3B58- FF FF 9F 80 80 F0 FF FF
3B60- FF 81 80 80 80 80 C0 FF
3B68- FF FF 87 80 80 FC FF FF
3B70- FF 9F 80 80 80 80 80 80
3B78- 00 00 00 00 00 00 00 00
3B80- 80 80 80 80 80 80 FC FF
3B88- FF FF A9 D4 8B FF FF FF
3B90- FF 81 80 80 80 80 C0 FF
3B98- FF FF FF 8B 95 CA FF FF
3BA0- FF 9F 80 80 80 80 80 80
3BA8- 80 80 80 80 80 80 FC FF
3BB0- FF 8F D4 82 FF FF DF F3
3BB8- FF 81 80 80 80 80 C0 FF
3BC0- E7 FD FF FF A0 95 FE FF
3BC8- FF 9F 80 80 80 80 80 80
3BD0- 80 80 80 80 80 80 80 80
3BD8- 80 80 80 80 80 80 80 80
3BE0- 80 80 80 80 80 80 80 80
3BE8- 80 80 80 80 80 80 80 80

```

```

3BF0- 80 80 80 80 80 80 80 80
3BF8- 00 00 00 00 00 00 00 00
3C00- 80 80 80 80 80 80 FC FF
3C08- FF FF FF FF FF E0 FF FF
3C10- FF 81 80 80 80 80 C0 FF
3C18- FF FF 83 FF FF FF FF FF
3C20- FF 9F 80 80 80 80 80 80
3C28- 80 80 80 80 80 80 FC FF
3C30- FF FF A7 C5 F1 FF FF FF
3C38- FF 81 80 80 80 80 C0 FF
3C40- FF FF FF C7 D1 F2 FF FF
3C48- FF 9F 80 80 80 80 80 80
3C50- 80 80 80 80 80 80 FC FF
3C58- 80 FF E3 FF FF FF 9F F6
3C60- FF 81 80 80 80 80 C0 FF
3C68- B7 FC FF FF FF E3 FF 80
3C70- FF 9F 80 80 80 80 80 80
3C78- 00 00 00 00 00 00 00 00
3C80- 80 80 80 80 80 80 FC FF
3C88- FF FF FF 8F D4 AA F9 9F
3C90- FF 81 80 80 80 80 C0 FF
3C98- FC CF AA 95 F8 FF FF FF
3CA0- FF 9F 80 80 80 80 80 80
3CA8- 80 80 80 80 80 80 FC FF
3CB0- FF D3 E2 87 D5 F8 DF FF
3CB8- FF 81 80 80 80 80 C0 FF
3CC0- FF FD 8F D5 F0 A3 E5 FF
3CC8- FF 9F 80 80 80 80 80 80
3CD0- 80 80 80 80 80 80 FC C7
3CD8- AA 95 FF F0 DF 81 E3 FF
3CE0- FF 81 80 80 80 80 C0 FF
3CE8- FF E3 C0 FD 87 FF D4 AA
3CF0- F1 9F 80 80 80 80 80 80
3CF8- 00 00 00 00 00 00 00 00
3D00- 80 80 80 80 80 80 FC FF
3D08- FF FF D4 8A 80 AA 80 80
3D10- FC 81 80 80 80 80 C0 9F
3D18- 80 80 AA 80 A8 95 FF FF
3D20- FF 9F 80 80 80 80 80 80
3D28- 80 80 80 80 80 80 FC B1
3D30- FC 93 A2 95 DF AA BD FE
3D38- FF 81 80 80 80 80 C0 FF
3D40- BF DE AA FD D4 A2 E4 9F

```

3D48- C6 9F 80 80 80 80 80 80
 3D50- 80 80 80 80 80 80 FC D3
 3D58- AA D5 8C 85 FE 94 A0 95
 3D60- FF 81 80 80 80 80 C0 FF
 3D68- D4 82 94 BF D0 98 D5 AA
 3D70- E5 9F 80 80 80 80 80 80
 3D78- 00 00 00 00 00 00 00 00
 3D80- 80 80 80 80 80 80 FC FF
 3D88- FF FF 9F FE DF E7 FF FF
 3D90- FF 81 80 80 80 80 C0 FF
 3D98- FF FF F3 FD BF FC FF FF
 3DA0- FF 9F 80 80 80 80 80 80
 3DA8- 80 80 80 80 80 80 BC FE
 3DB0- 9F BA C0 AA E5 80 FE FF
 3DB8- FF 81 80 80 80 80 C0 FF
 3DC0- FF BF 80 D3 AA 81 AE FC
 3DC8- BF 9E 80 80 80 80 80 80
 3DD0- 80 80 80 80 80 80 FC FF
 3DD8- A8 D5 A2 FC FF C7 8A D5
 3DE0- FC 81 80 80 80 80 C0 9F
 3DE8- D5 A8 F1 FF 9F A2 D5 8A
 3DF0- FF 9F 80 80 80 80 80 80
 3DF8- 00 00 00 00 00 00 00 00
 3E00- 80 80 80 80 80 80 FC FF
 3E08- FF FF CF DE EF 9F FB FF
 3E10- FF 81 80 80 80 80 C0 FF
 3E18- FF 8F FC FB BD F9 FF FF
 3E20- FF 9F 80 80 80 80 80 80
 3E28- 80 80 80 80 80 80 BC FE
 3E30- FF E9 D7 AA C5 FF FF FF
 3E38- FF 81 80 80 80 80 C0 FF
 3E40- FF FF FF D1 AA F5 CB FF
 3E48- BF 9E 80 80 80 80 80 80
 3E50- 80 80 80 80 80 80 FC FF
 3E58- BF D4 CA FF FF FF A9 D5
 3E60- F2 81 80 80 80 80 C0 A7
 3E68- D5 CA FF FF FF A9 95 FE
 3E70- FF 9F 80 80 80 80 80 80
 3E78- 00 00 00 00 00 00 00 00
 3E80- 80 80 80 80 80 80 FC FF
 3E88- FF D3 80 A1 EE FF FC FF
 3E90- FF 81 80 80 80 80 C0 FF
 3E98- FF 9E FF BB C2 80 E5 FF


```

3EAO- FF 9F 80 80 80 80 80 80
3EAB- 80 80 80 80 80 80 FC 87
3EB0- 9E E8 D5 A2 D5 80 C6 F9
3EB8- FF 81 80 80 80 80 C0 FF
3ECO- CF B1 80 D5 A2 D5 8B 8C
3ECB- F0 9F 80 80 80 80 80 80
3ED0- 80 80 80 80 80 80 FC FF
3EDB- FF FF FF FF FF 87 80 D5
3EE0- F2 81 80 80 80 80 C0 A7
3EEB- D5 80 F0 FF FF FF FF FF
3EF0- FF 9F 80 80 80 80 80 80
3EFB- 00 00 00 00 00 00 00 00
3F00- 80 80 80 80 80 80 F8 FF
3F0B- FF FF A9 95 8C F1 FF FF
3F10- FF 81 80 80 80 80 C0 FF
3F1B- FF FF C7 98 D4 CA FF FF
3F20- FF 8F 80 80 80 80 80 80
3F2B- 80 80 80 80 80 80 FC FF
3F30- FF A7 D5 AA C5 FF FF F3
3F3B- FF 81 80 80 80 80 C0 FF
3F40- E7 FF FF D1 AA D5 F2 FF
3F4B- FF 9F 80 80 80 80 80 80
3F50- 80 80 80 80 80 80 FC FF
3F5B- FF FF 9F 80 80 F0 FF FF
3F60- FF 81 80 80 80 80 C0 FF
3F6B- FF FF 87 80 80 FC FF FF
3F70- FF 9F 80 80 80 80 80 80
3F7B- 00 00 00 00 00 00 00 00
3F80- 80 80 80 80 80 80 FC FF
3F8B- FF FF A9 D4 88 FF FF FF
3F90- FF 81 80 80 80 80 C0 FF
3F9B- FF FF FF 88 95 CA FF FF
3FA0- FF 9F 80 80 80 80 80 80
3FAB- 80 80 80 80 80 80 FC FF
3FB0- FF BF D4 82 FF FF DF F3
3FB8- FF 81 80 80 80 80 C0 FF
3FC0- E7 FD FF FF A0 95 FE FF
3FCB- FF 9F 80 80 80 80 80 80
3FD0- 80 80 80 80 80 80 80 80
3FDB- 80 80 80 80 80 80 80 80
3FE0- 80 80 80 80 80 80 80 80
3FEB- 80 80 80 80 80 80 80 80
3FF0- 80 80 80 80 80 80 80 80
3FFB- 00 00 00 00 00 00 00 00

```