

WD HDD Repair Tools (Western Digital Hard Disk Repair Software)

使用说明 Version 5.3



前言

感谢您使用WDR-UDMA西数硬盘维修工具，为确保正确安装，请阅读以下说明，如果您需要更多产品信息，请关注我们官方网站 <http://www.hddfix.org>。

欢迎您给我们提供有价值的建议和意见，程序运行在Windows 系统，工具简单，功能强大，是硬盘维修及数据恢复公司必要工具。

关于西数硬盘

作为最大的硬盘制造商,西数硬盘的市场正在越来越多的市场份额。2006年超过迈拓，希捷硬盘用户数量。

西数硬盘常见问题

一个常见的问题是PCB烧坏

硬盘固件问题

固件的主要部分是存储在盘体的服务区域。如果其中一个模块被损坏的硬盘无法正确地初始化和停止工作使数据。

在这种情况下,驱动通电正常,但有下列症状:

- 1.BIOS无法访问
- 2.显示工厂别名（案例：WDC ROM MODEL-MAMMOTH---,WDC ROM MODEL-HAWK---）
- 3.显示错误的SN (案例：WDC-ROM SN# XYZ---)或者容量出错
- 4.无法访问数据或者无法启动系统，显示I/O错误

坏道的修复

WDR UDMA 支持的系列:

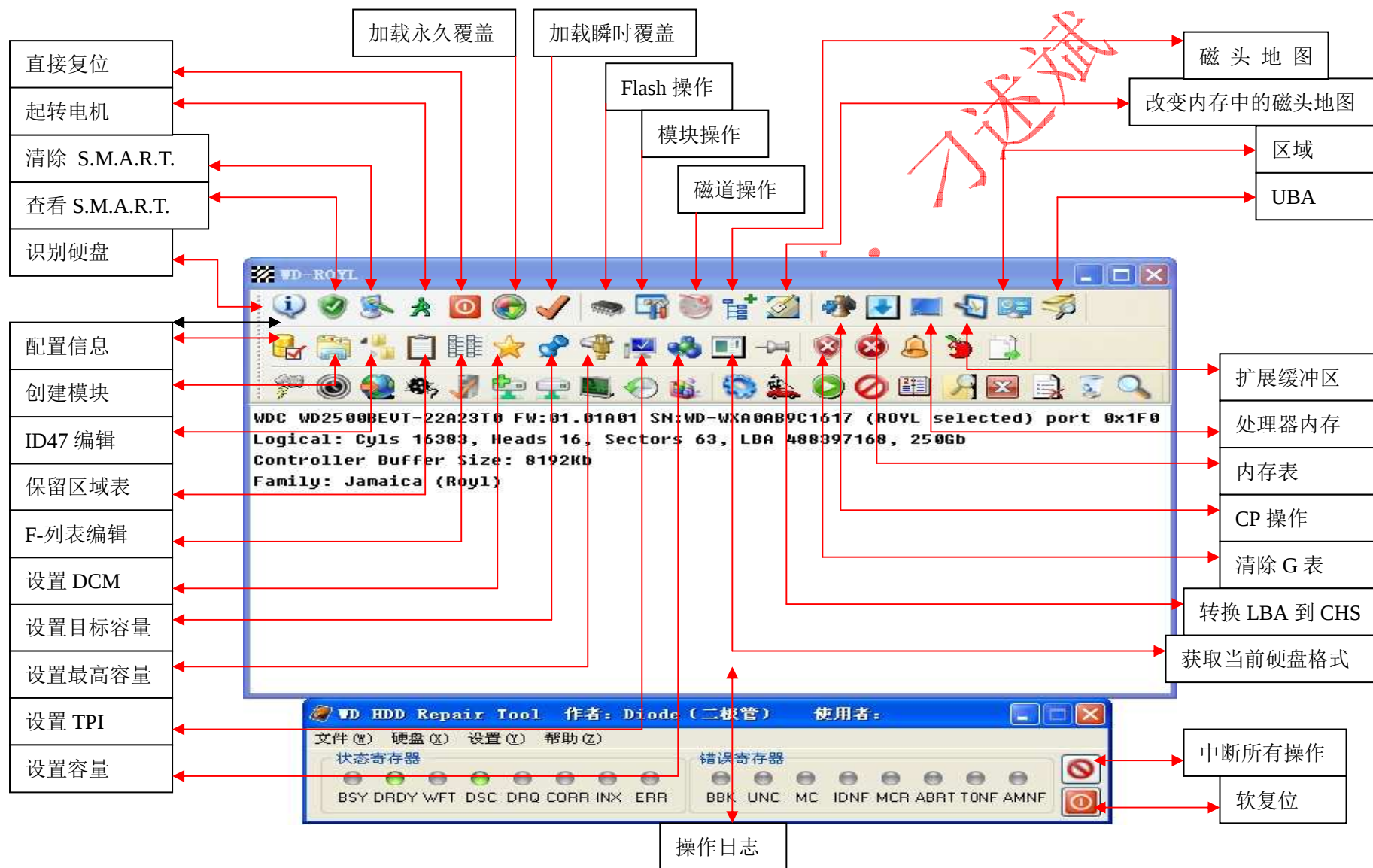
新盘硬盘分为2个种类 L 系列, ROYL 系列

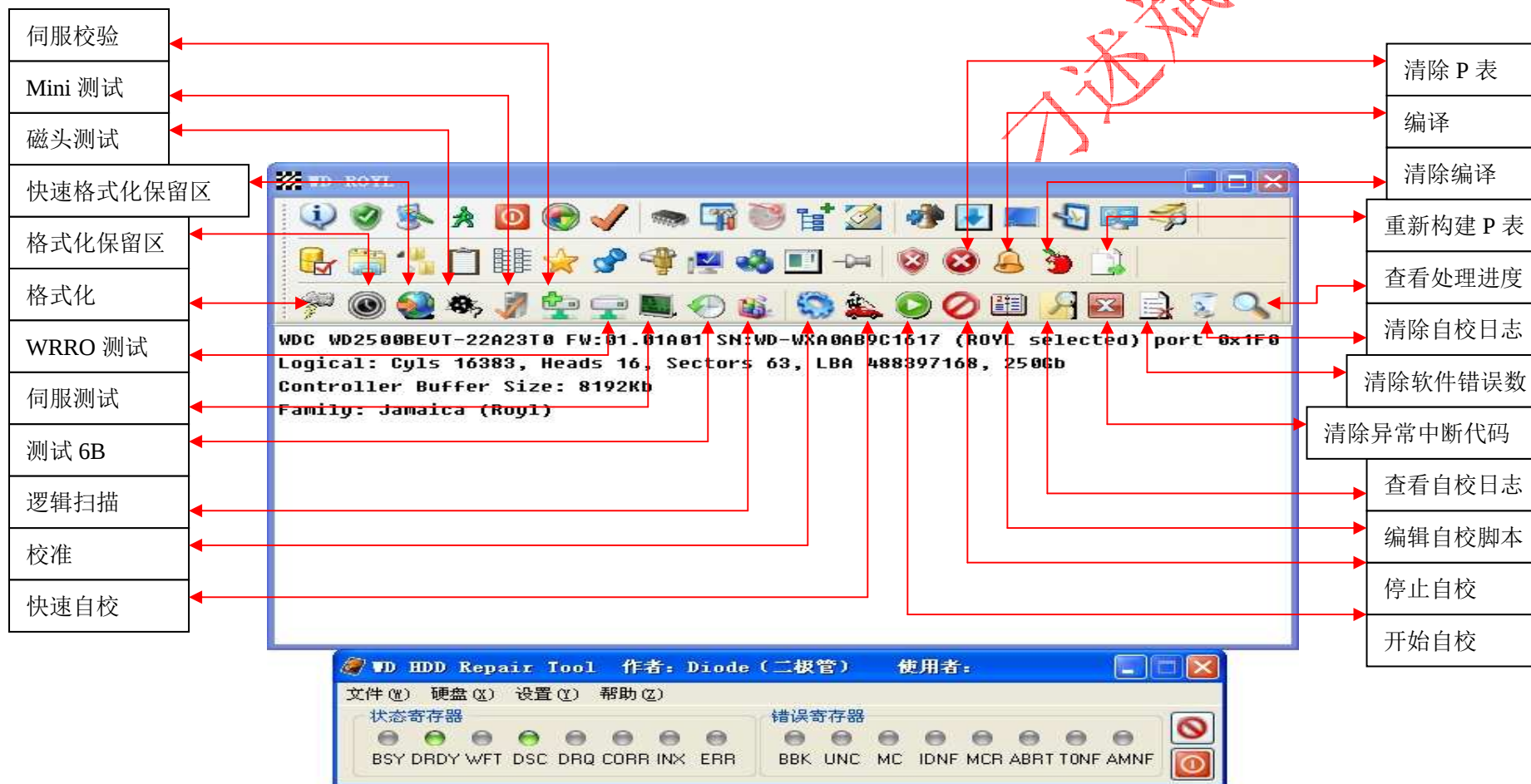
Mammoth, Polaris, Nova, Aspen, Eclipse2, Safari SE, Trailblazer

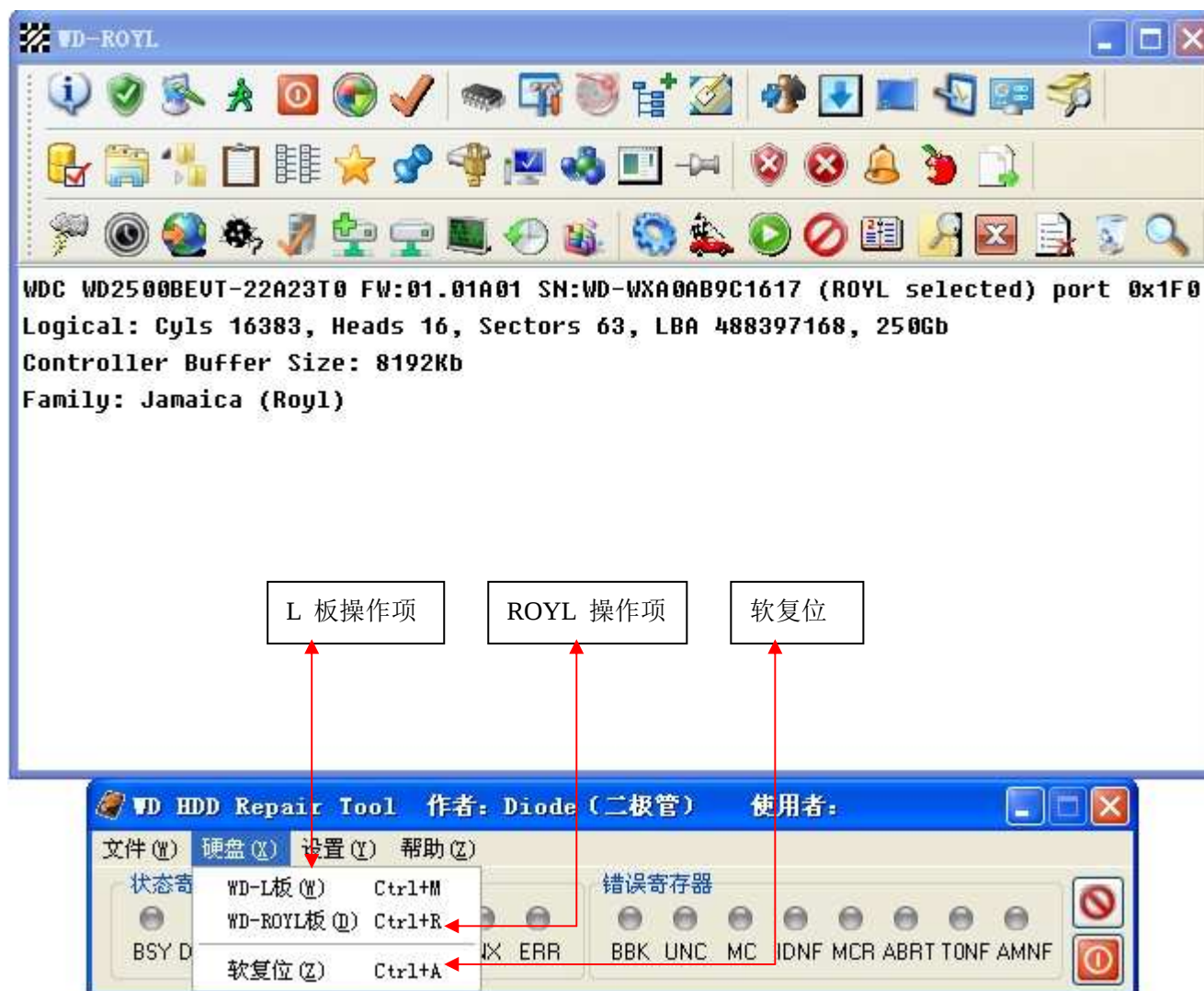
Eagle, Polaris Falcon, Scorpio, Scorpio Mammoth, Scorpio Aspen, Sabre, Mammoth M, Balboa, Lido, Unicorn, Sabre LC, Hercules, Buccaneer, Avalon, Xbox 2, Mosquito, Defender, Catalina, Unicorn2, Sirius, Hawk, Antares, Orion, STG_DFH, STG_VDT, Zeus, Sargas, Taurus, Odyssey, Hercules SAE, STG_VDT2, Zeus6, Raider, Neptune, Zeus_re, STG_ZUMA, Aquarius, Sequoia, Jupiter, Starling, Glacier, Aries, STG_ARIS, McKinley, Starling2, Hawk2, Tornado2, STG_MKLY, Seq_Zuma, Cricket, Tornado3, STG_ARLB, STG_1K, STG_PATA, Unicorn6, Leo, STG_VANC, Seq_PATA, Jup_Zuma, TD2_PATA, Stg_Twin, TD3_PATA, Lynx, STG_VPMR, STG_DNLI, TD2_PMR, SEQ_PMR, Yosemite, TD2_PPMR, Viking, TD3_PMR, Hulk, Cougar, Danu, STG_YOSE, TD3_PPMR, Spider, STG_KODKAtlantis, Denali, Pinnacle, Mars, Nemo, STG_MERC, Seq_RE, T2PMR_RE, T3PMR_RE, HULK_RE, SPIDR_RE, SEQ_PPMR, SEQPMR2M, YOSE_RE, ATLAN_RE, MARS_RE, EMERALD, STG_YUKN, TROY, YUKON, KERMIT, RIGEL, SATURN, PINNA_RE, VENUS, CYPRESS, MERCURY, PINNA_HF, ATLAN_HF, GEKKO, SPART_RE, PINNA_PA, ATLAN_PA, MARS_HF, PINNA_E, ATLAN_E, GEKKO_E, KERMIT_E...

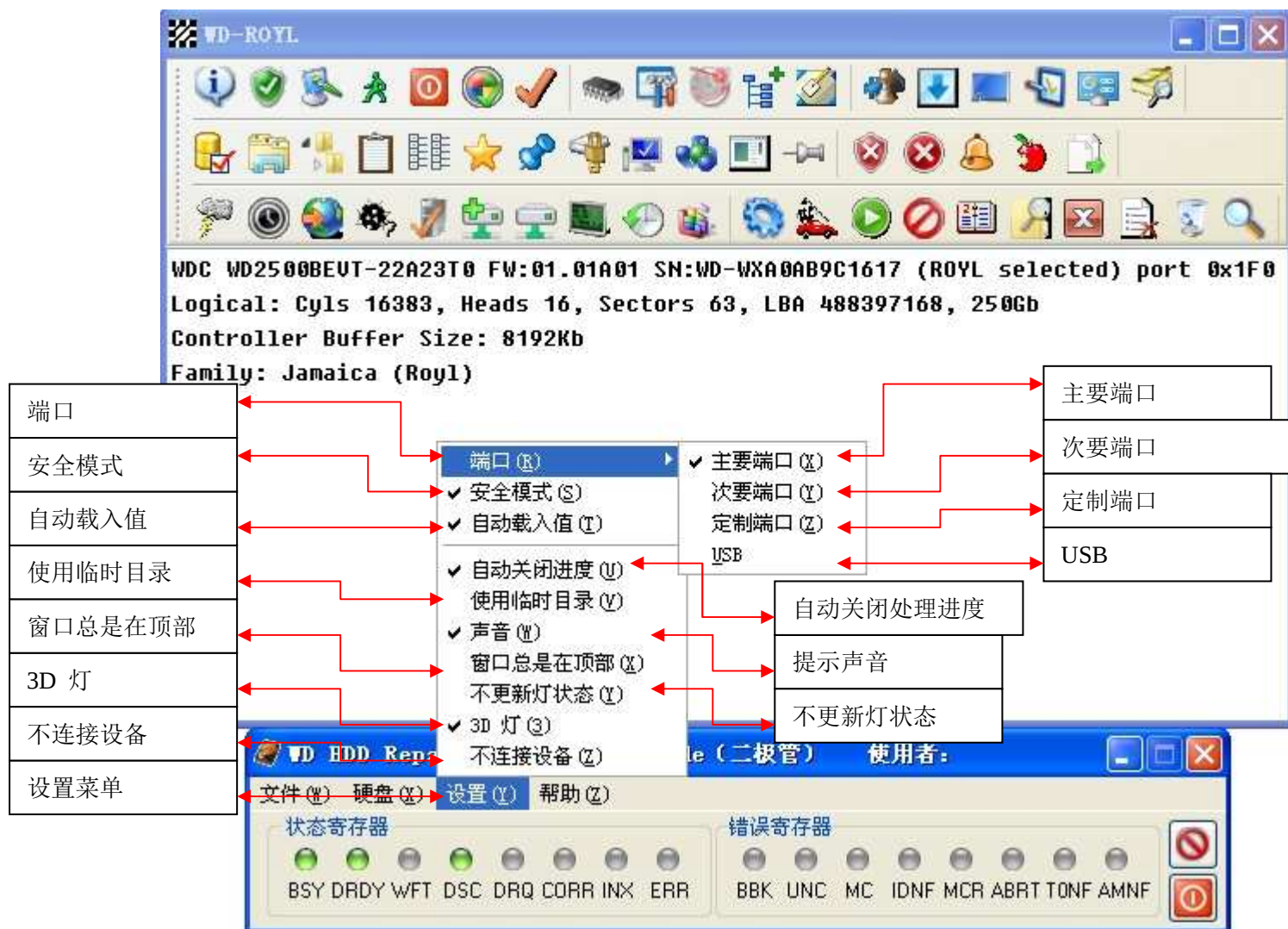
用户须知:

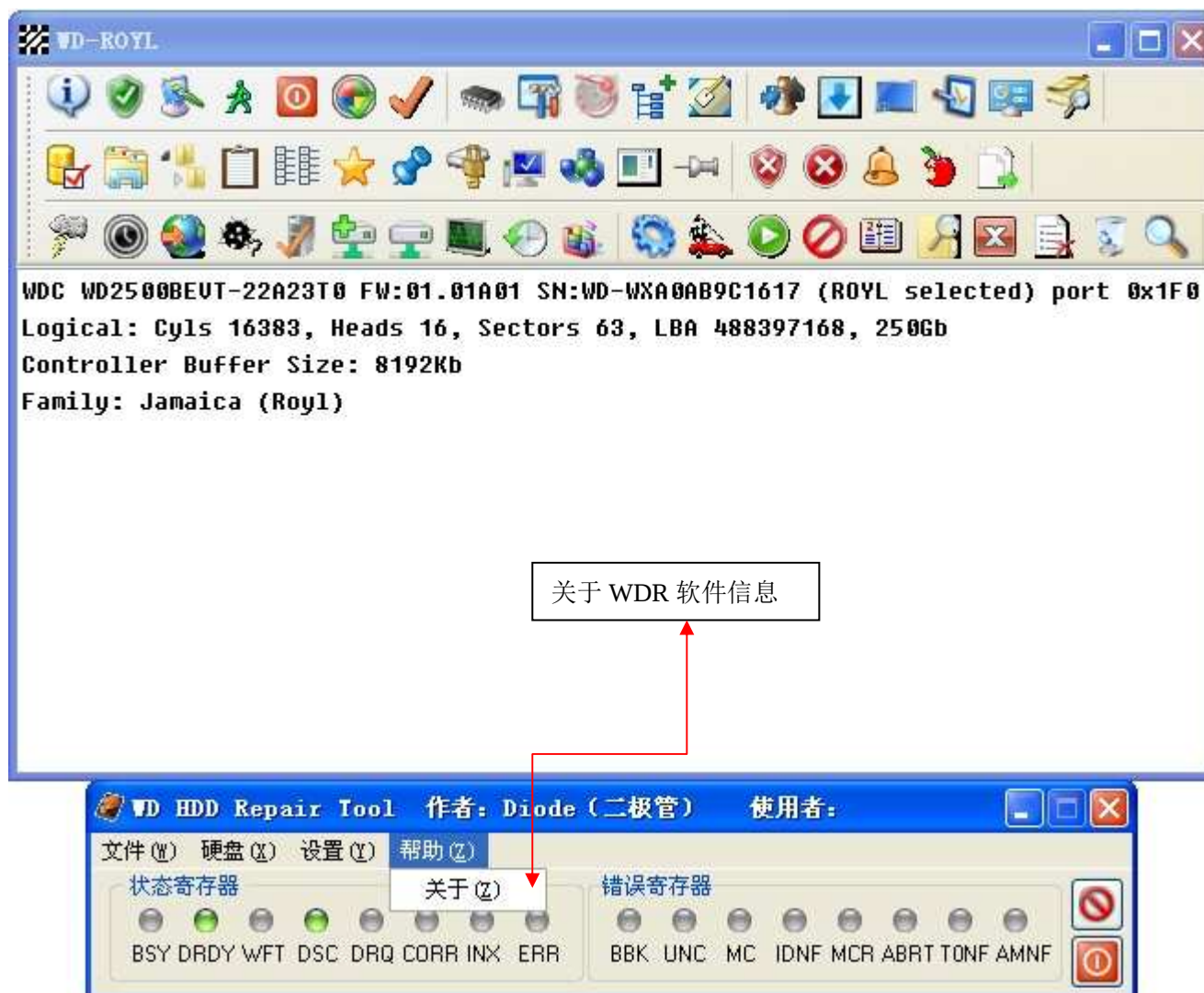
1. 使用带有PC3000的机器上, 可用VCR控制电源开关。
2. 操作前务必备份硬盘的所有SA资源 (ROM、模块、磁道)。
3. Mini测试、保留区格式化、校准跑44 (保留区优化) 后要不断电回写全部固件。
4. Mini测试、保留区格式化后回写全部固件时, 不要回写ID35模块。
5. 修理硬盘时, 请针对硬盘的故障现象, 合理的操作软件功能。











鼠标右键操作菜

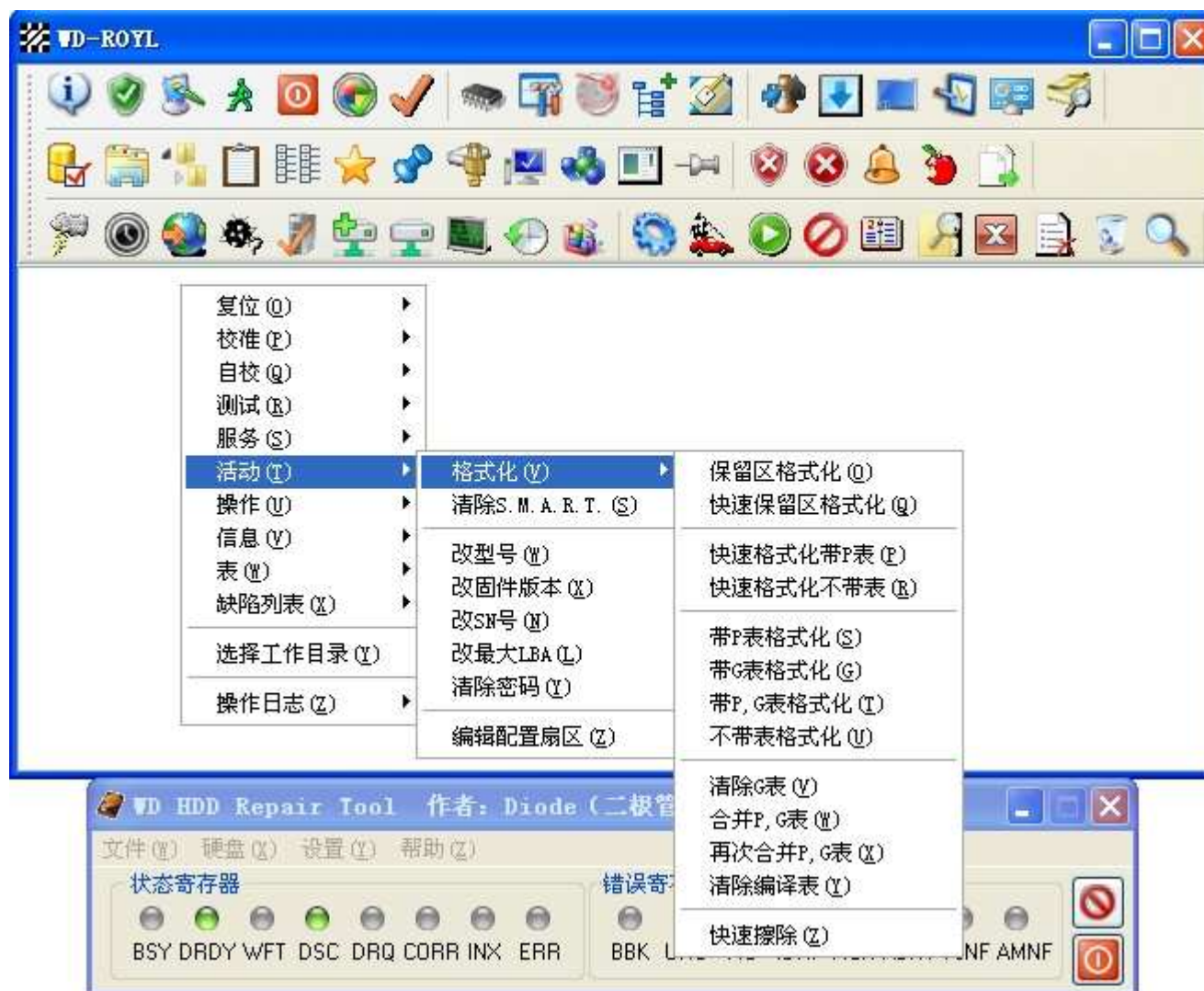






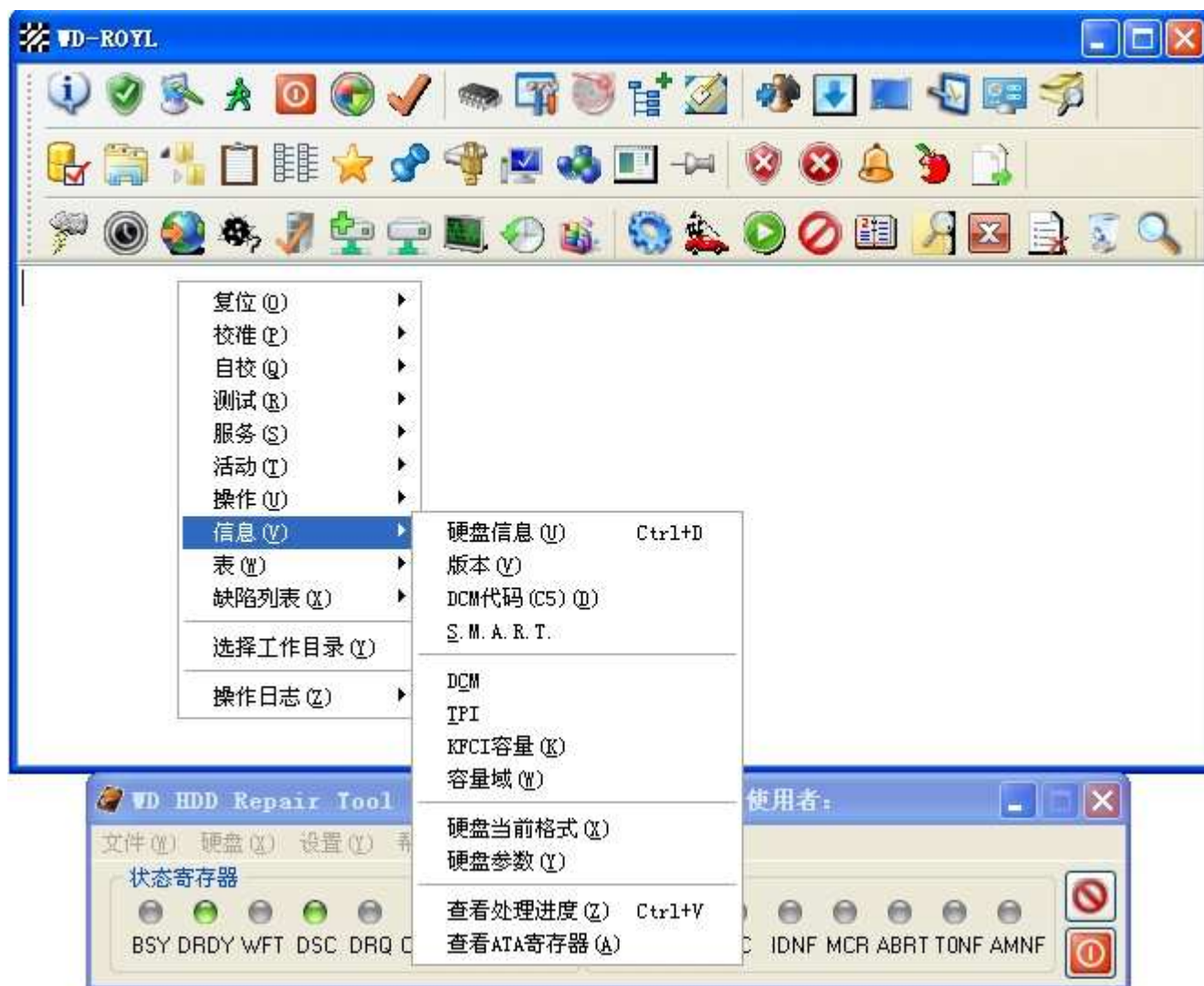




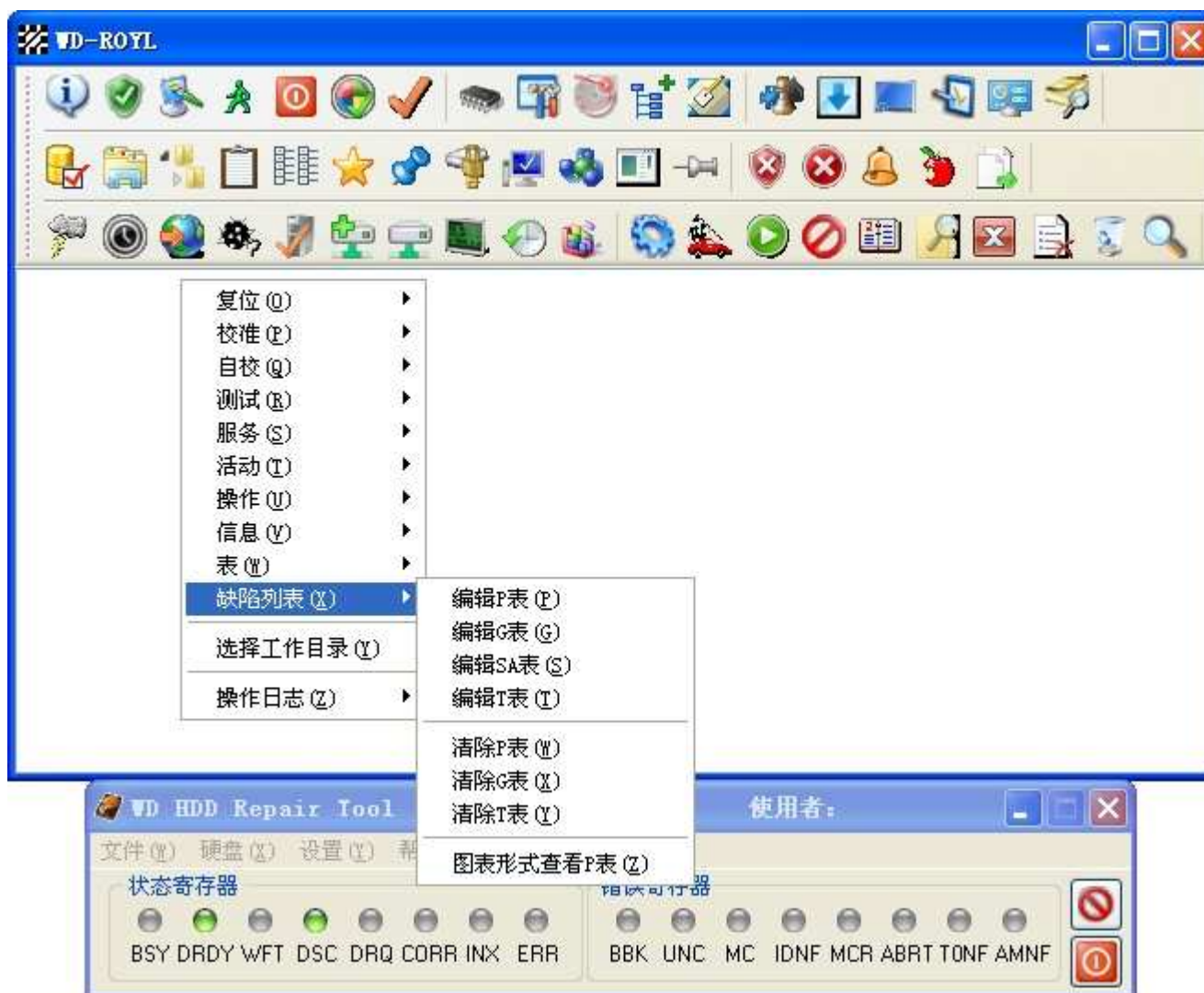
















WD-ROYL

S.M.A.R.T. status - GOOD

ID	Name	Va...	Worst	Tr...	RAW	Health	Flags
1	Raw Read Error Count / DTF Errors (M...	200	200	51	0	*****	L Pf Pr Er S
3	Spin Up Time	154	129	21	0/0/1300	*****	L Pf Pr S
4	Number of Spin-Up Times / Start/Stop ...	99	99	0	1920	*****	Pf C S
5	Reallocated Sectors Count	200	196	140	0/0/0	*****	L Pf C S
7	Seek Error Rate	100	253	0	0	*****	Pf Pr Er S
9	Power-On Hours Count (POH)	100	100	0	112	*****	Pf C S
10	Spin Retry Count	100	100	0	0	*****	Pf C S
11	ReCalibration Retry Count	100	253	0	0	*****	Pf C S
12	Start/stop count / Power cycle count (I...	100	100	0	67	*****	Pf C S
192	Power-off Retract Count / Emergency R...	200	200	0	22	*****	Pf C S
193	Load/Unload Cycle Count (LUL)	197	197	0	10640	*****	Pf C S
194	HDA Temperature (Cur/Max/Min)	105	97	0	0/0/38	*****	Pf S
196	Reallocation Event Count	200	171	0	0/0/0	*****	Pf C S
197	Current Pending Sector Count	200	186	0	0	*****	Pf C S
198	Off-line scan UNC sectors	100	253	0	0	*****	C S
199	UDMA CRC Error Count	200	200	0	0	*****	Pf C S
200	Write Error Rate/Count / Multi Zone Err...	100	253	0	0	*****	Er

WD HDD Repair Tool 作者: Diode (二极管) 使用者:

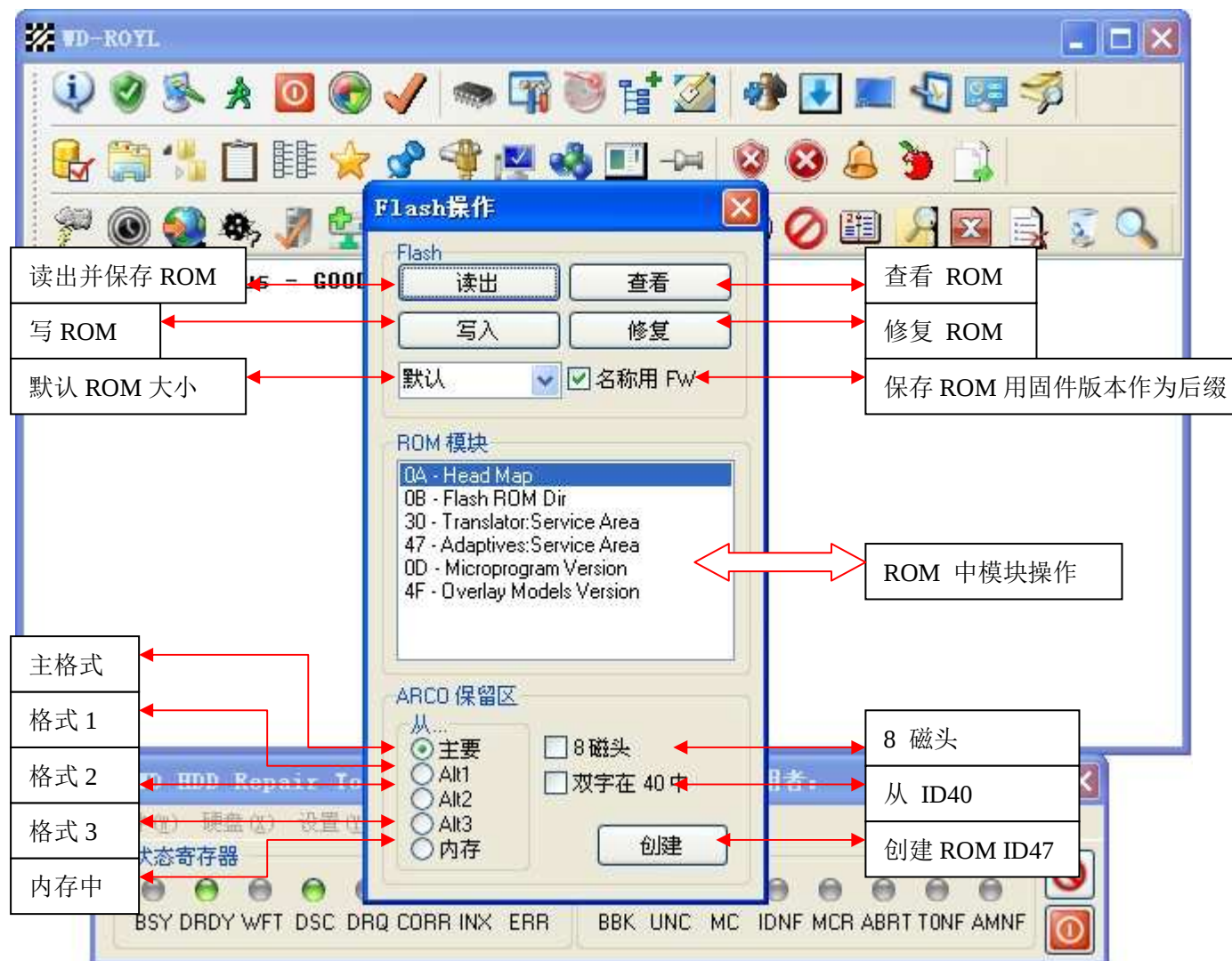
文件(F) 硬盘(D) 设置(S) 帮助(H)

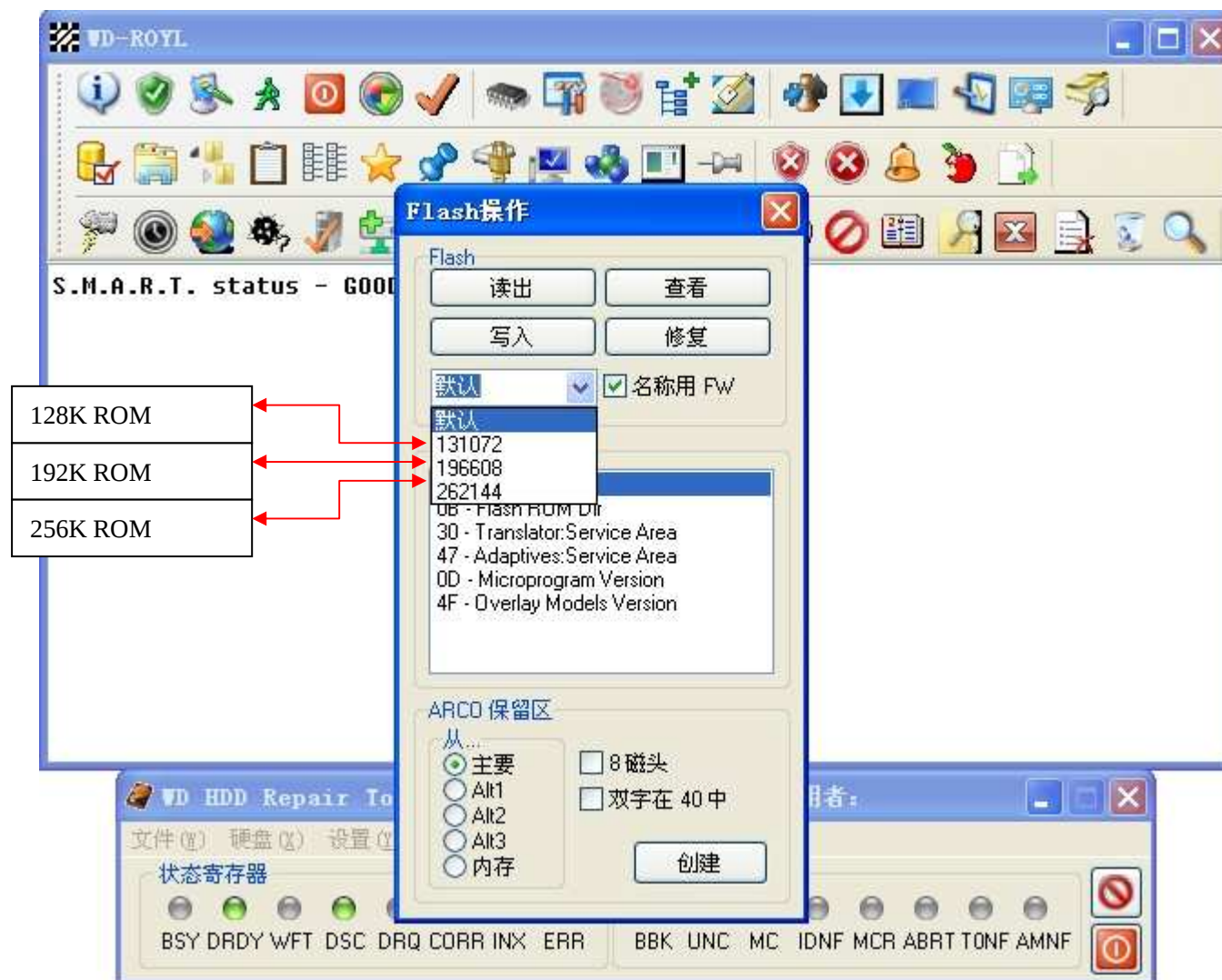
状态寄存器

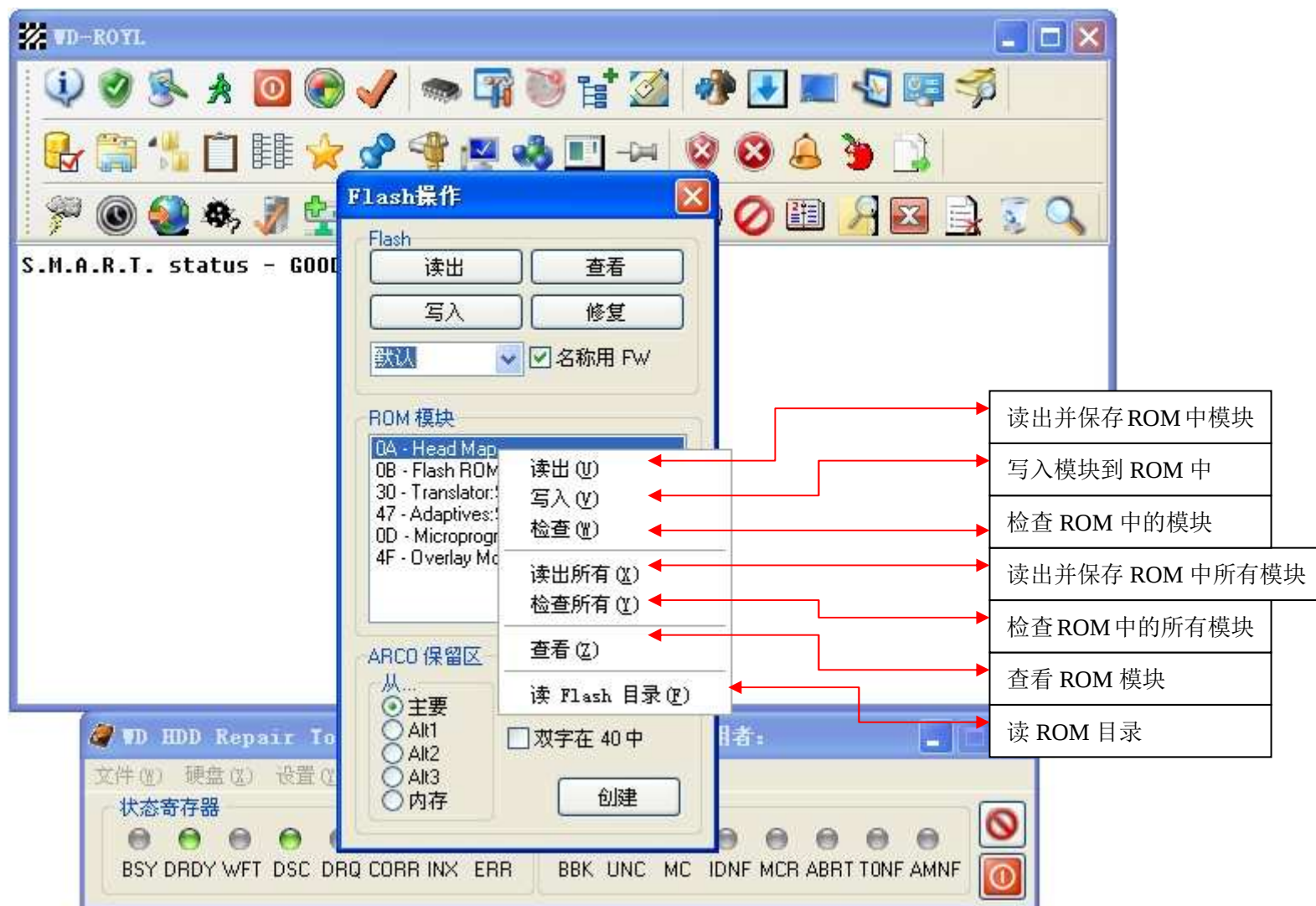
BSY DRDY WFT DSC DRQ CORR INX ERR

错误寄存器

BBK UNC MC IDNF MCR ABRT TONF AMNF









WD-ROYL

固件模块

模块

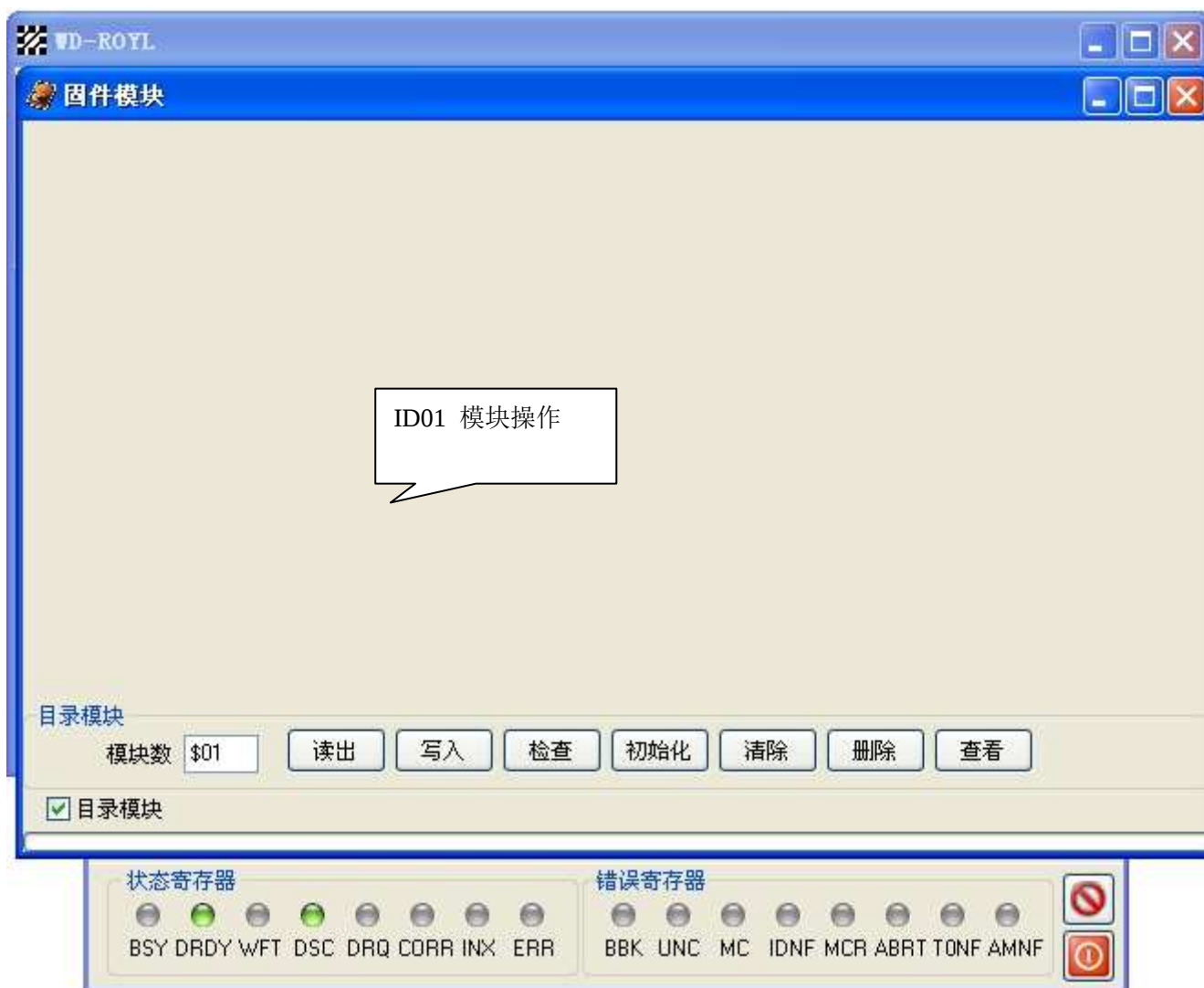
模块ID	C...	磁	扇区	长度	版本	校...	Date	注释
☐ ? 0001	02	0	0000	0018				DIR (Directory Sector)
☐ ? 0001	02	1	0000	0018				DIR (Directory Sector)
☐ ? 0035	02	0	0018	000A				Defects List:Service Area
☐ ? 0035	02	1	0018	000A				Defects List:Service Area
☐ ? 006D	02	0	4D34	0001				Overlay
☐ ? 006D	02	1	4D34	0001				Overlay
☐ ? 0110	02	0	19303	0018				
☐ ? 0110	02	1	19303	0018				
☐ ? 0102	02	0	19302	0001				Copy of id0A
☐ ? 0102	02	1	19302	0001				Copy of id0A
☐ ? 0103	02	0	19300	0002				Copy of id0D + id47
☐ ? 0103	02	1						Copy of id0D + id47
☐ ? 0104	02	0						
☐ ? 0104	02	1	192FF	0001				
☐ ? 0105	02	0	192FD	0002				Copy of id30
☐ ? 0105	02	1	192FD	0002				Copy of id30
☐ ? 0107	02	0	192FC	0001				Copy of id0B
☐ ? 0107	02	1	192FC	0001				Copy of id0B

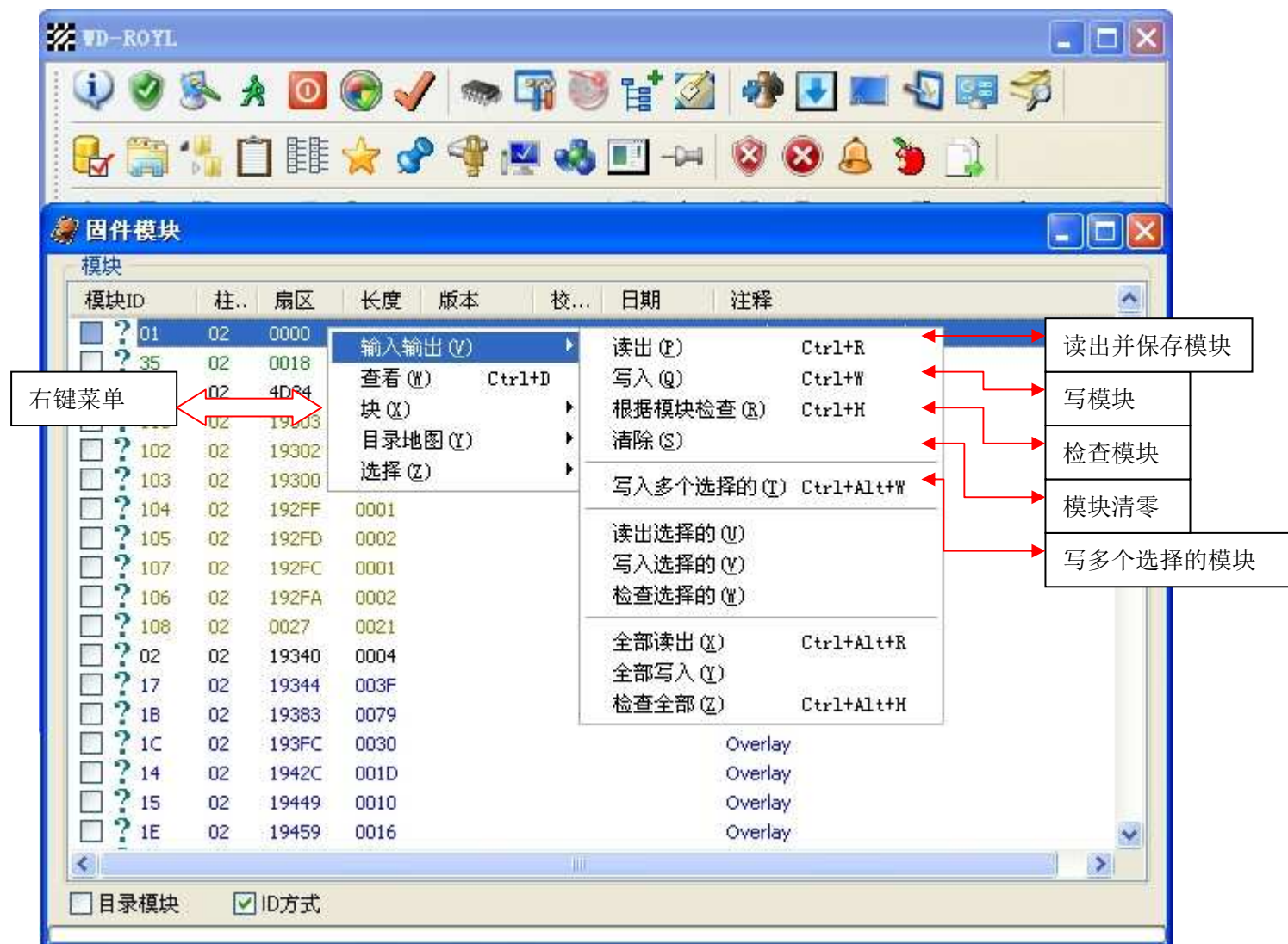
备份 1 和 备份 2 UBA 方式 偏移量

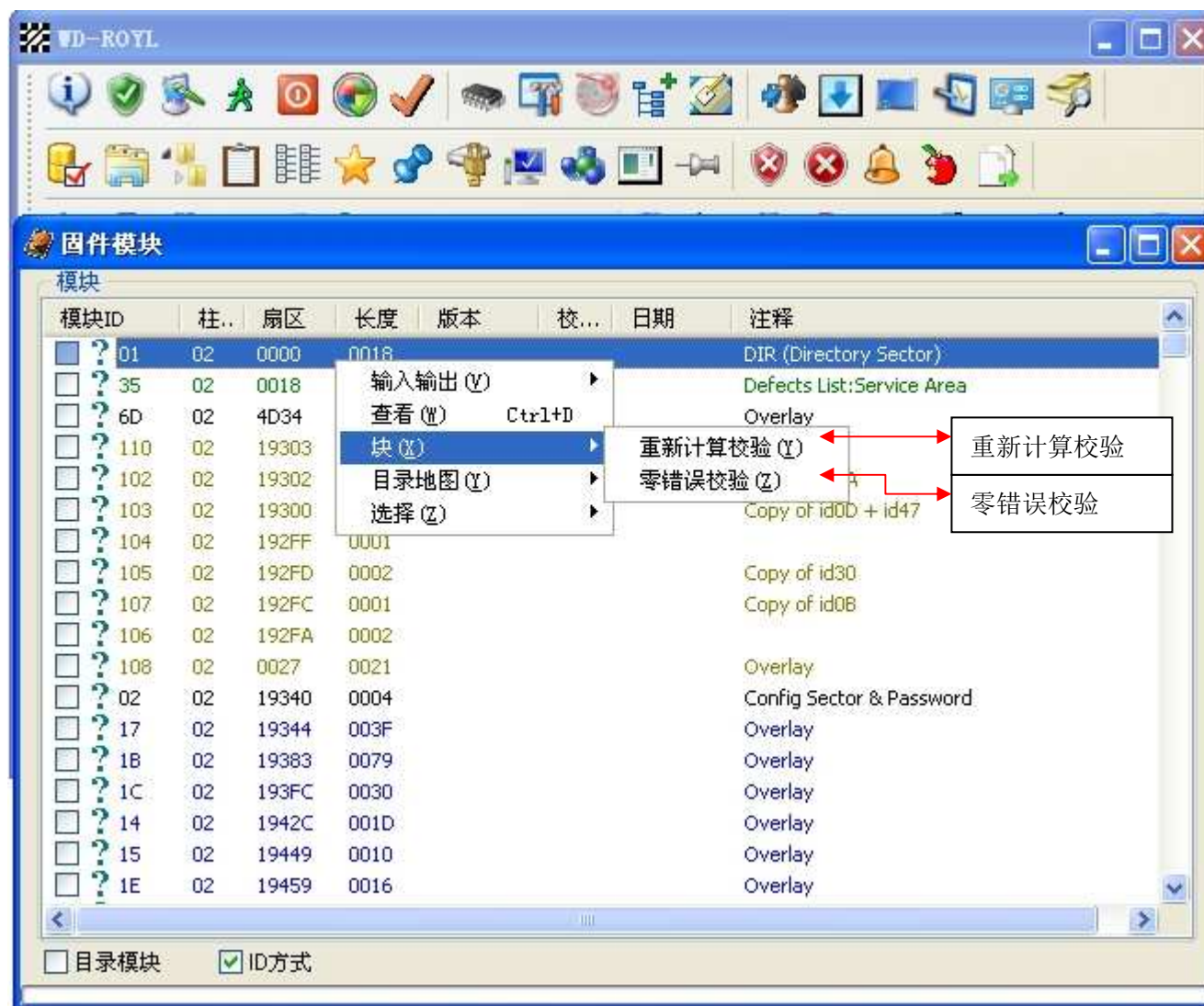
☐ 目录模块 ☐ ID方式 ☐ 第二拷贝地图 ☐ UBA方式 \$36400

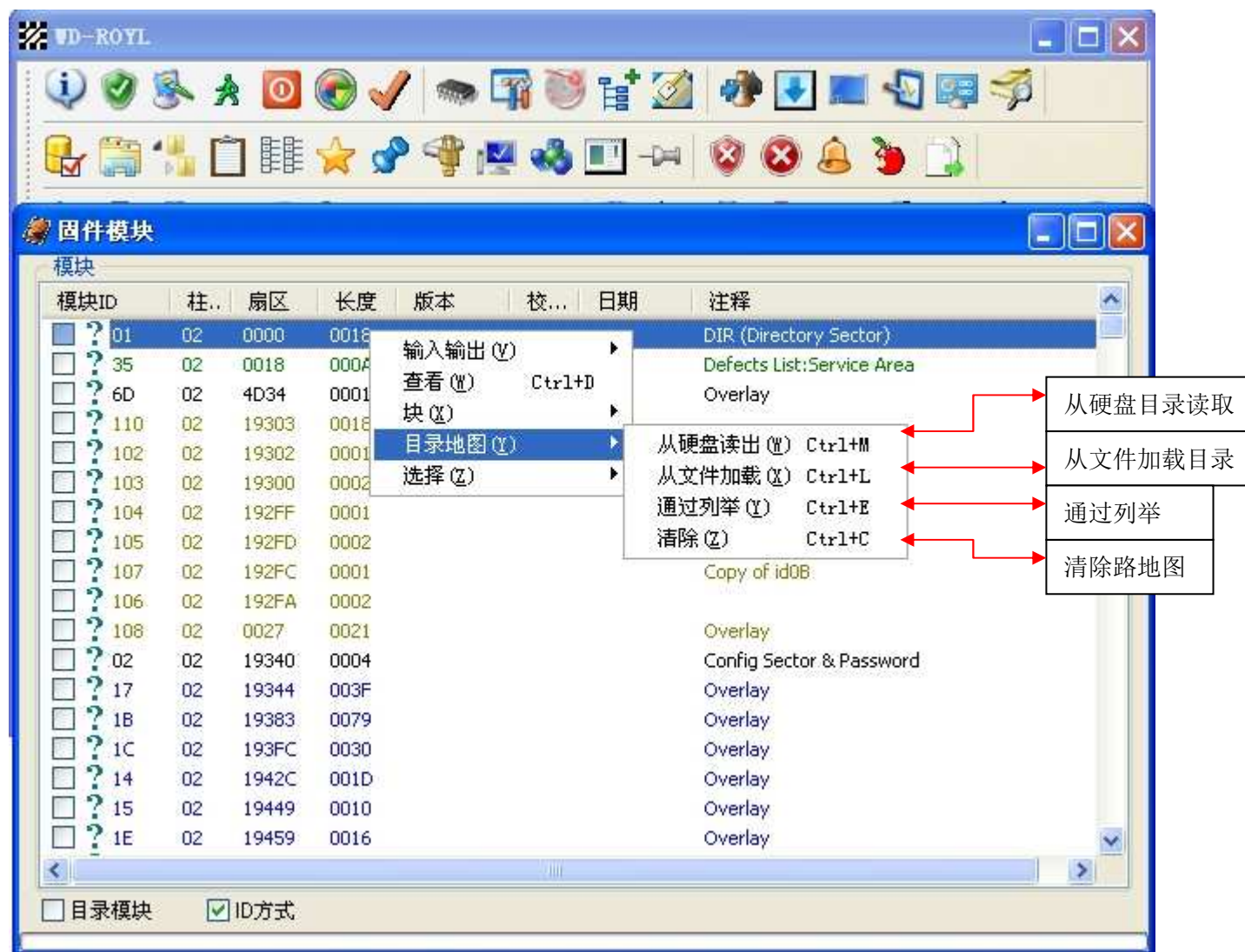
状态寄存器 错误寄存器

BSY DRDY WFT DSC DRQ CORR INX ERR BBK UNC MC IDNF MCR ABRT TONF AMNF









WD-ROYL

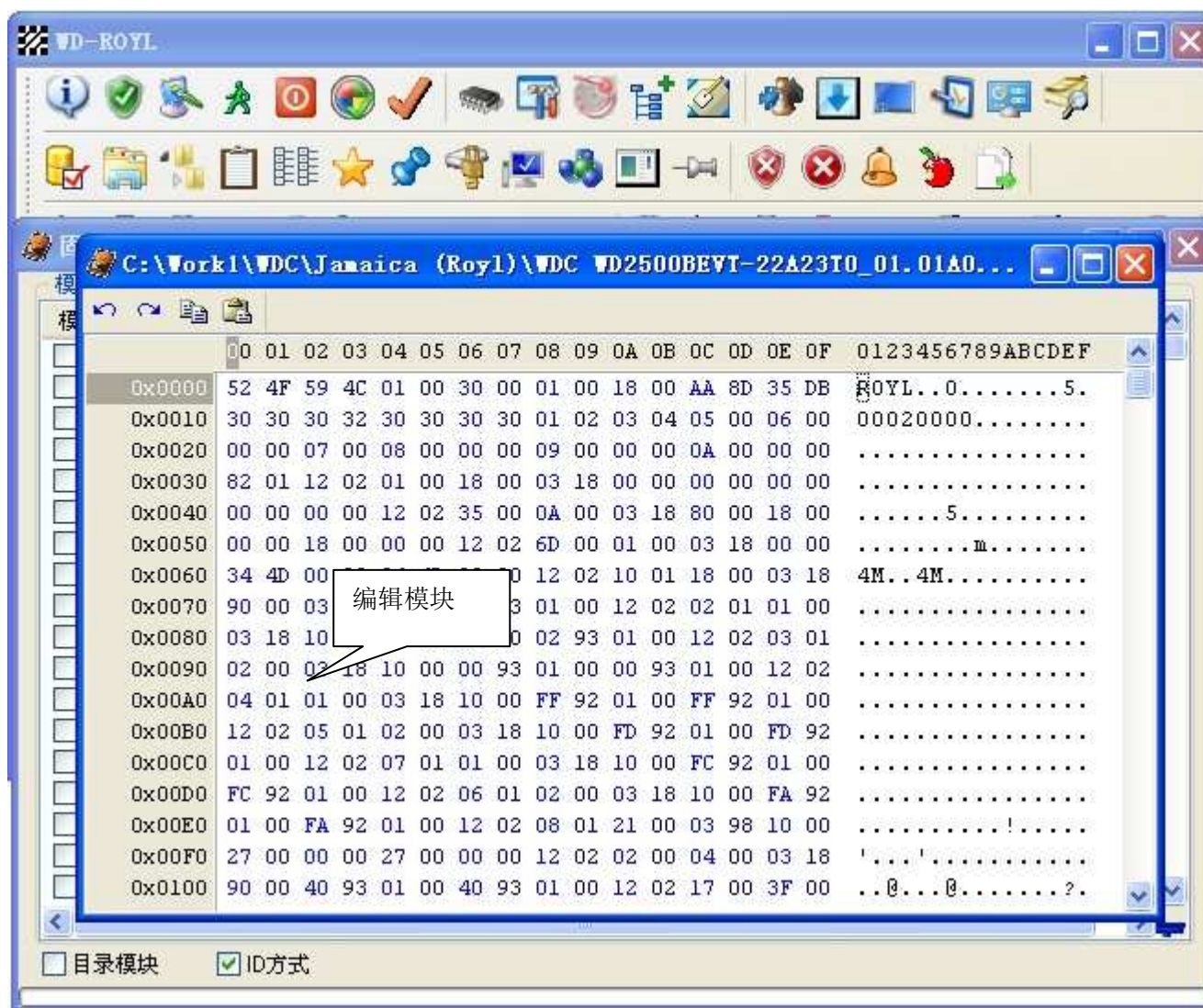
固件模块

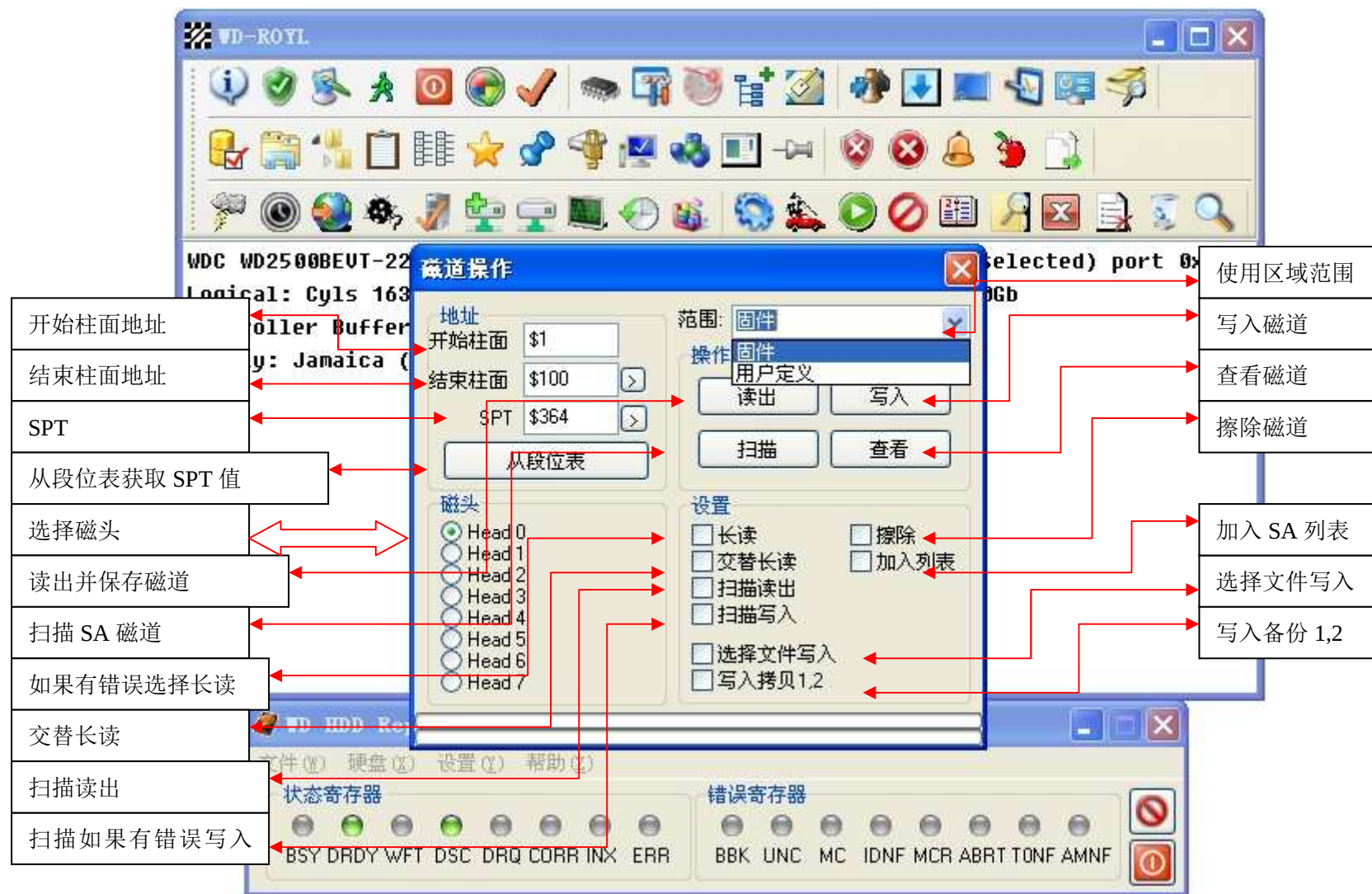
模块ID	柱..	扇区	长度	版本	校...	日期	注释
☒ ? 01	02	0000	0018	输入输出 (V)			DIR (Directory Sector)
☐ ? 35	02	0018	000A	查看 (V) Ctrl+D			Defects List:Service Area
☐ ? 6D	02	4D34	0001	块 (X)			Overlay
☐ ? 110	02	19303	0018	目录地图 (Y)			
☐ ? 102	02	19302	0001	选择 (Z)			
☐ ? 103	02	19300	0002				
☐ ? 104	02	192FF	0001				
☐ ? 105	02	192FD	0002				
☐ ? 107	02	192FC	0001				
☐ ? 106	02	192FA	0002				
☐ ? 108	02	0027	0021				
☐ ? 02	02	19340	0004				
☐ ? 17	02	19344	003F				
☐ ? 18	02	19383	0079				
☐ ? 1C	02	193FC	0030				
☐ ? 14	02	1942C	001D				
☐ ? 15	02	19449	0010				
☐ ? 1E	02	19459	0016				

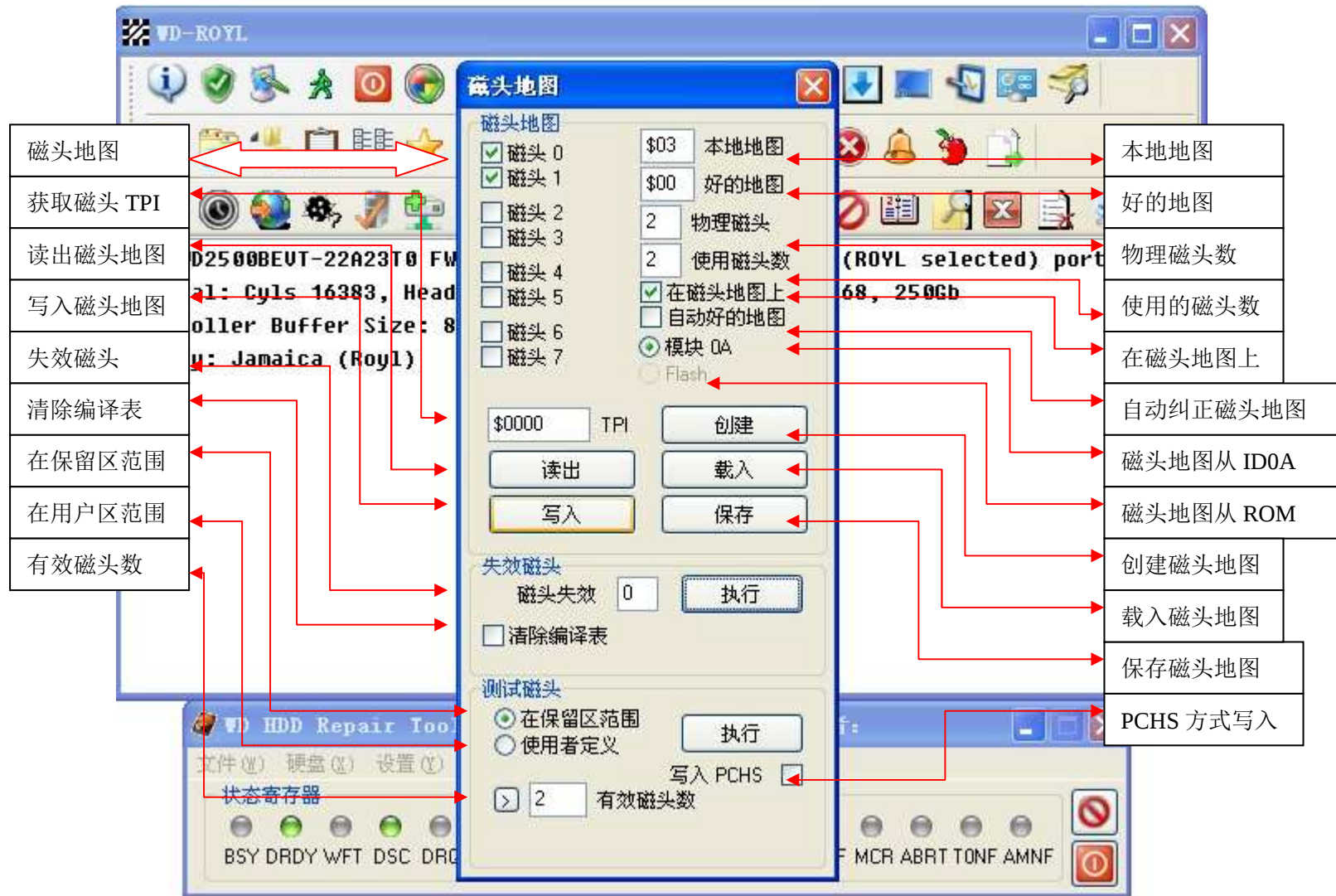
全部选择 (A) Ctrl+A
取消选择 (X)
选择所有 SS (S)
选择 2xxx Group (2)
选择 8xxx Group (8)
全部不选 (U) Ctrl+U
选择颠倒 (Z)
Overlay
Overlay
Overlay
Overlay
Overlay

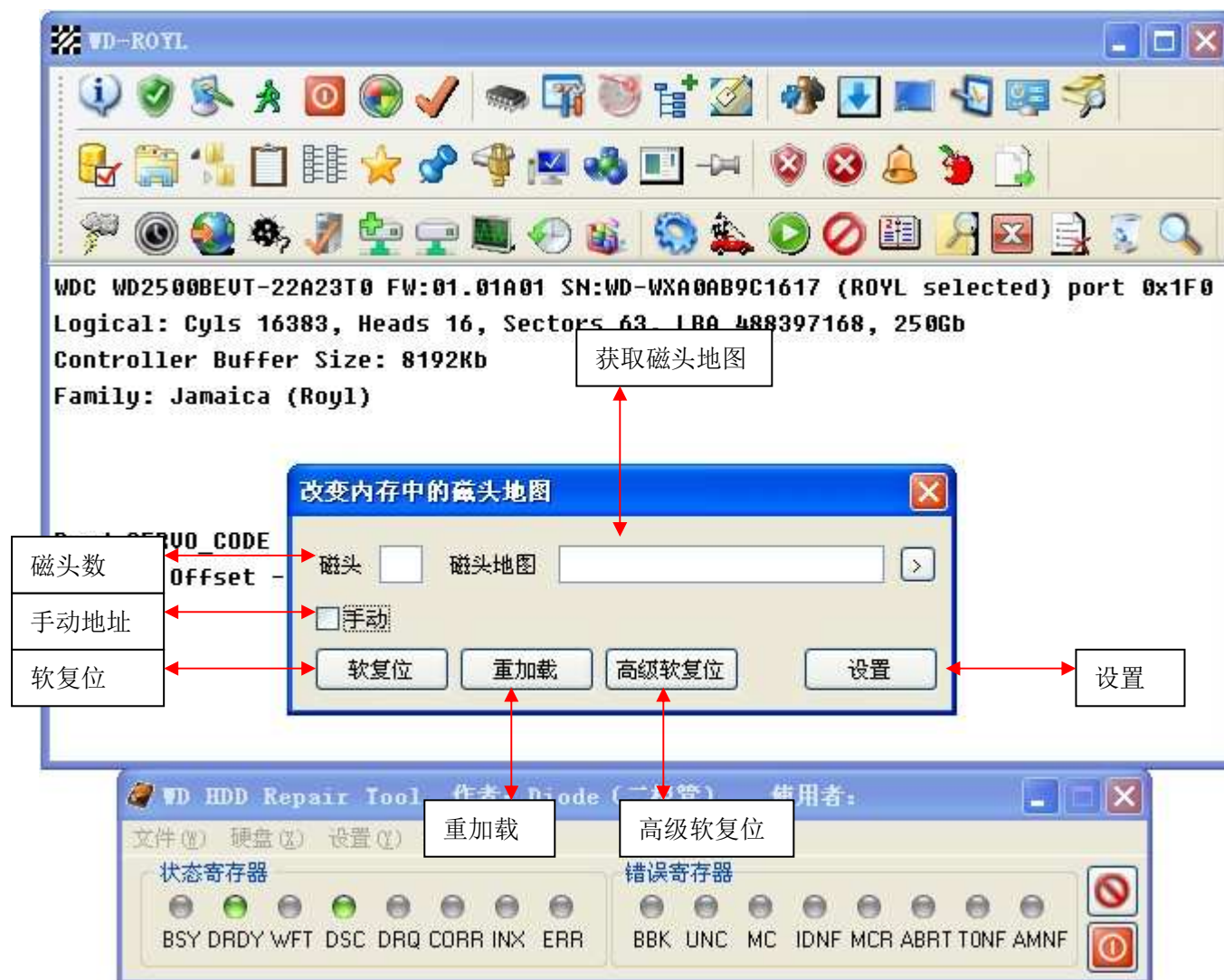
选择全部模块
取消选择
选择所有自校模块
选择 2xxx 模块
选择 8xxx 模块
全部不选
颠倒选择

☐ 目录模块 ☒ ID方式

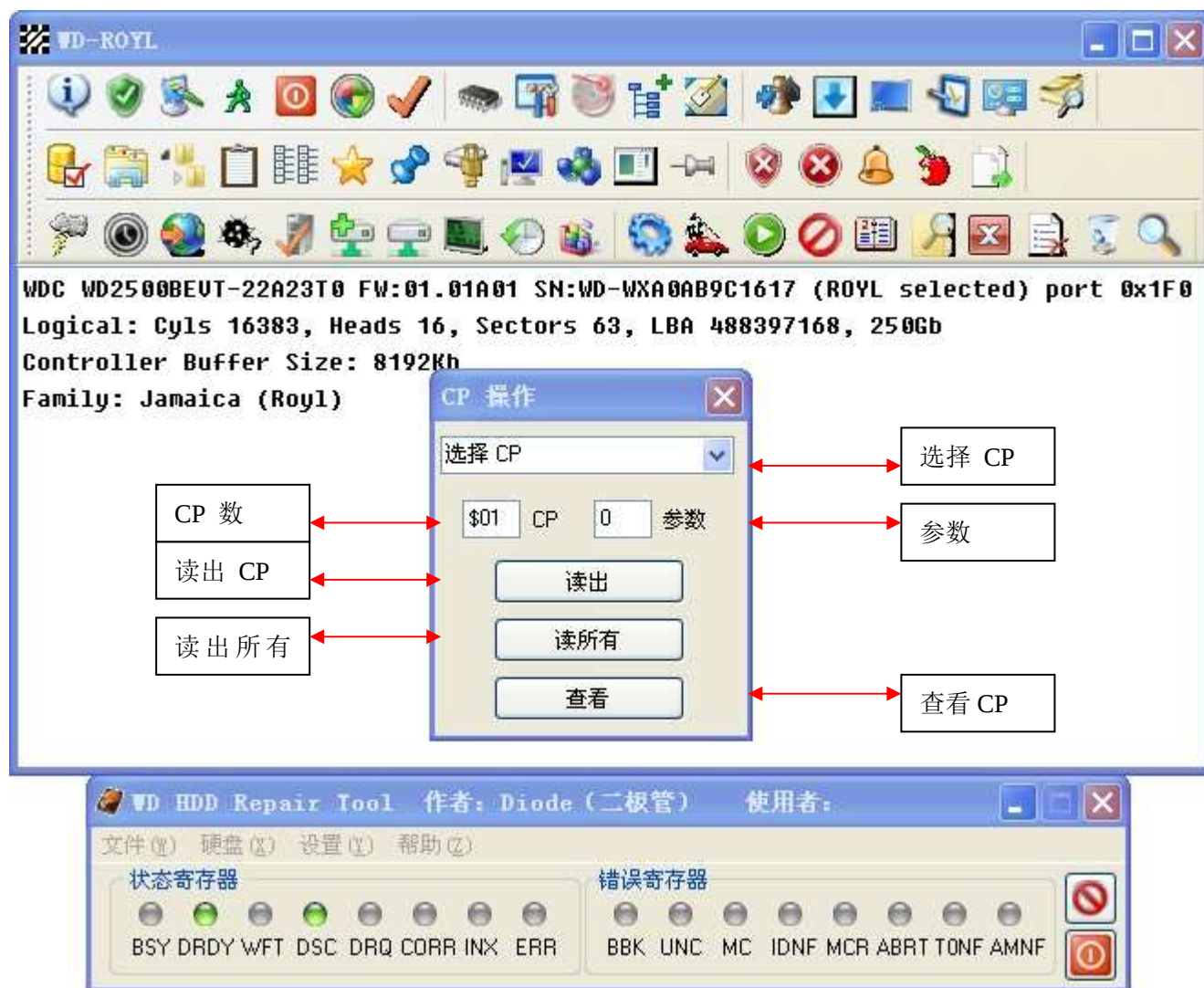






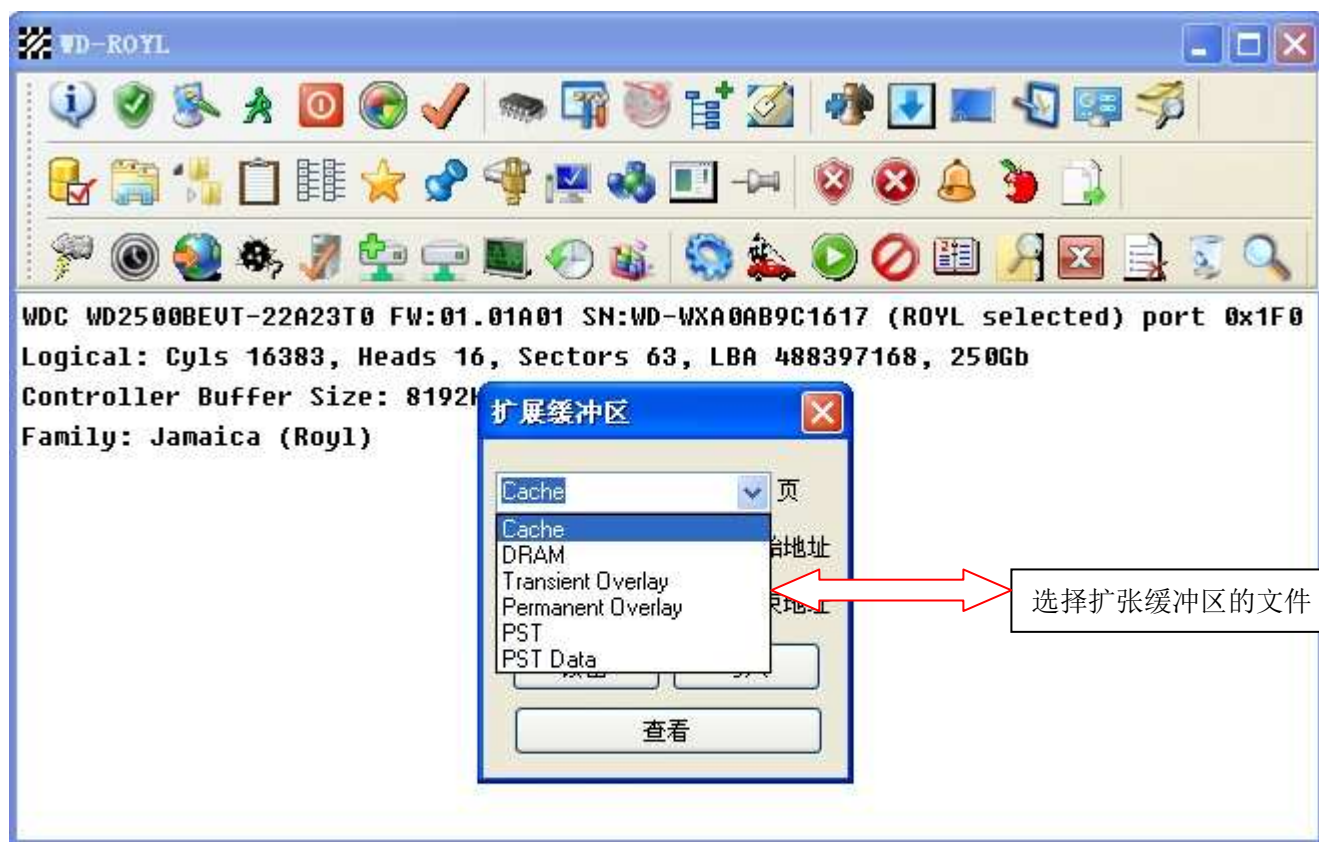


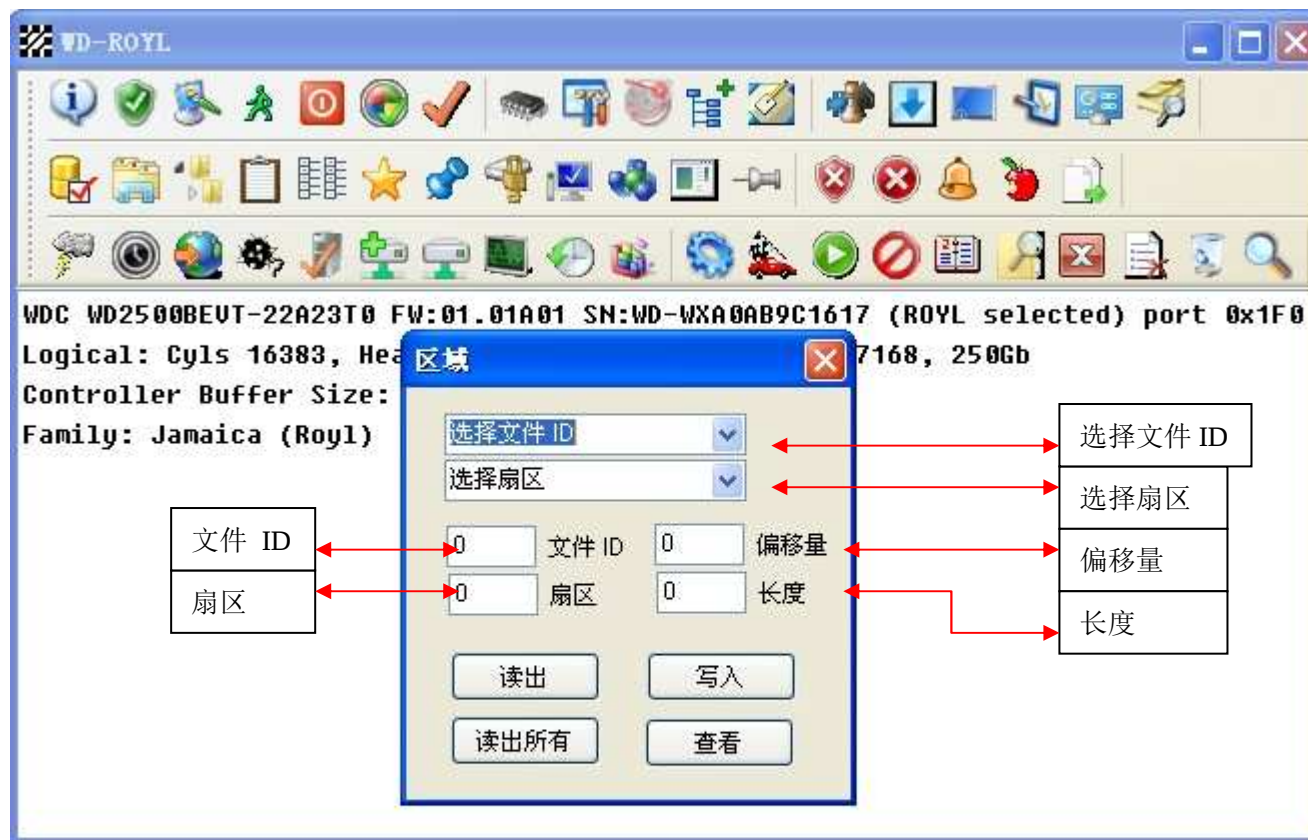






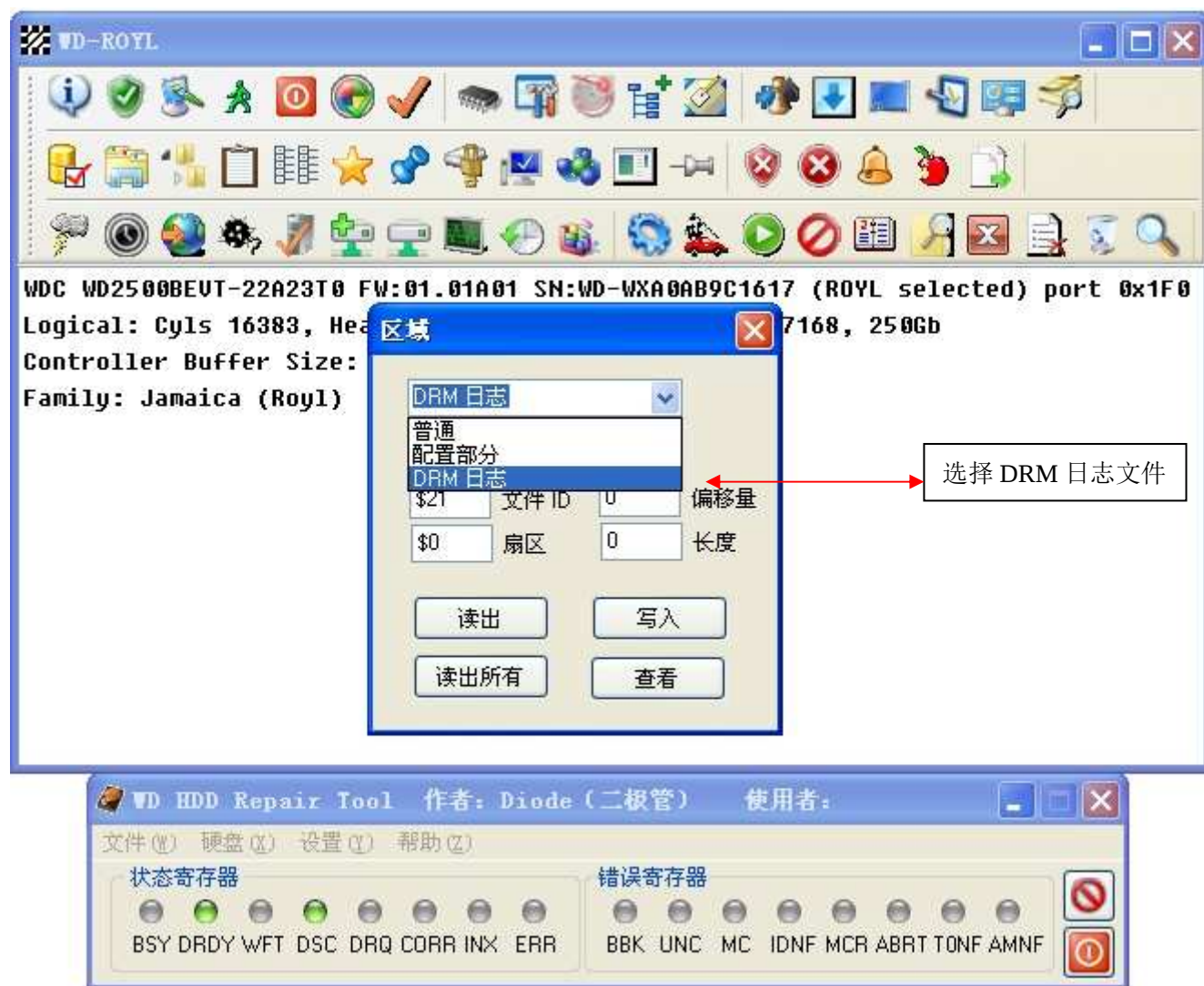


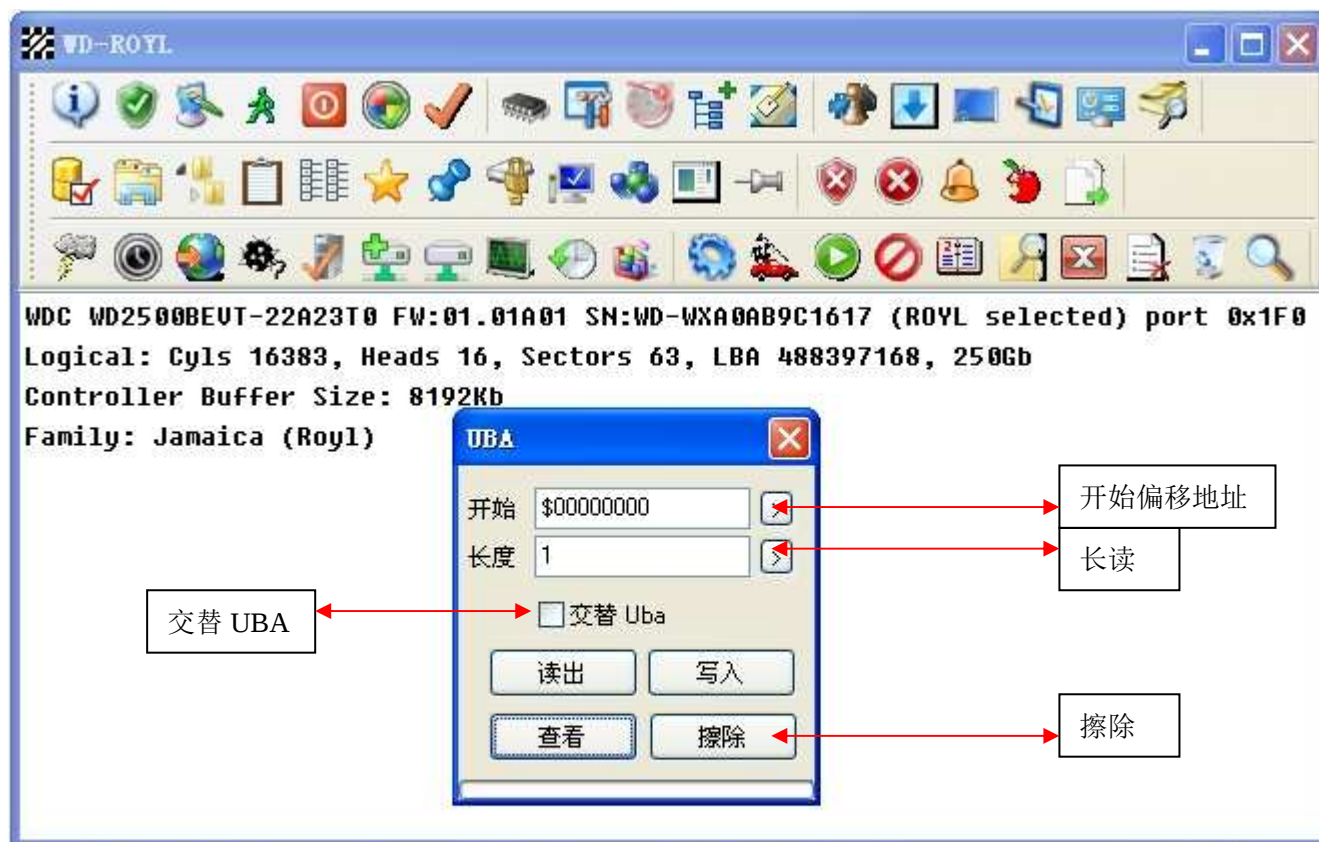


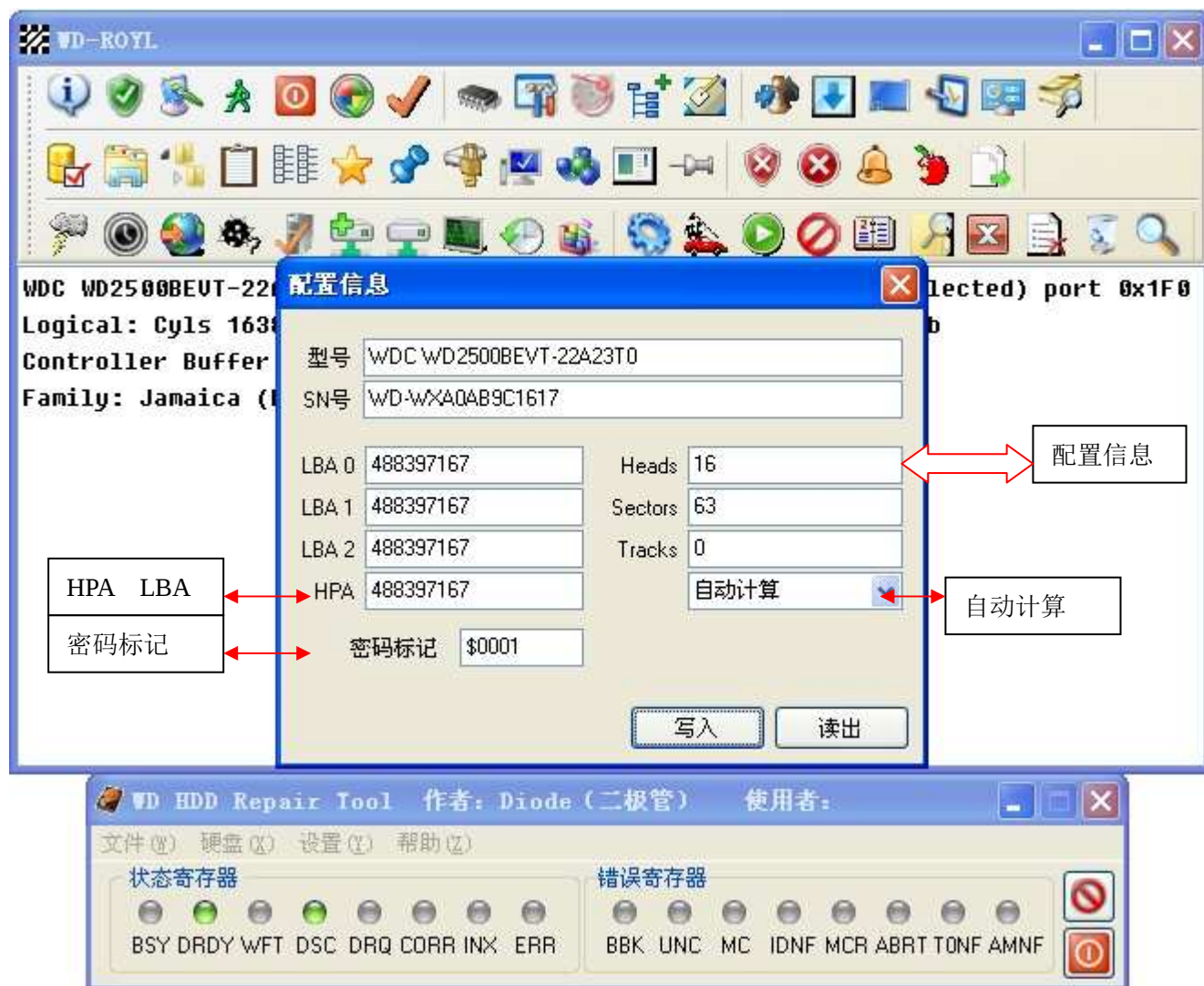


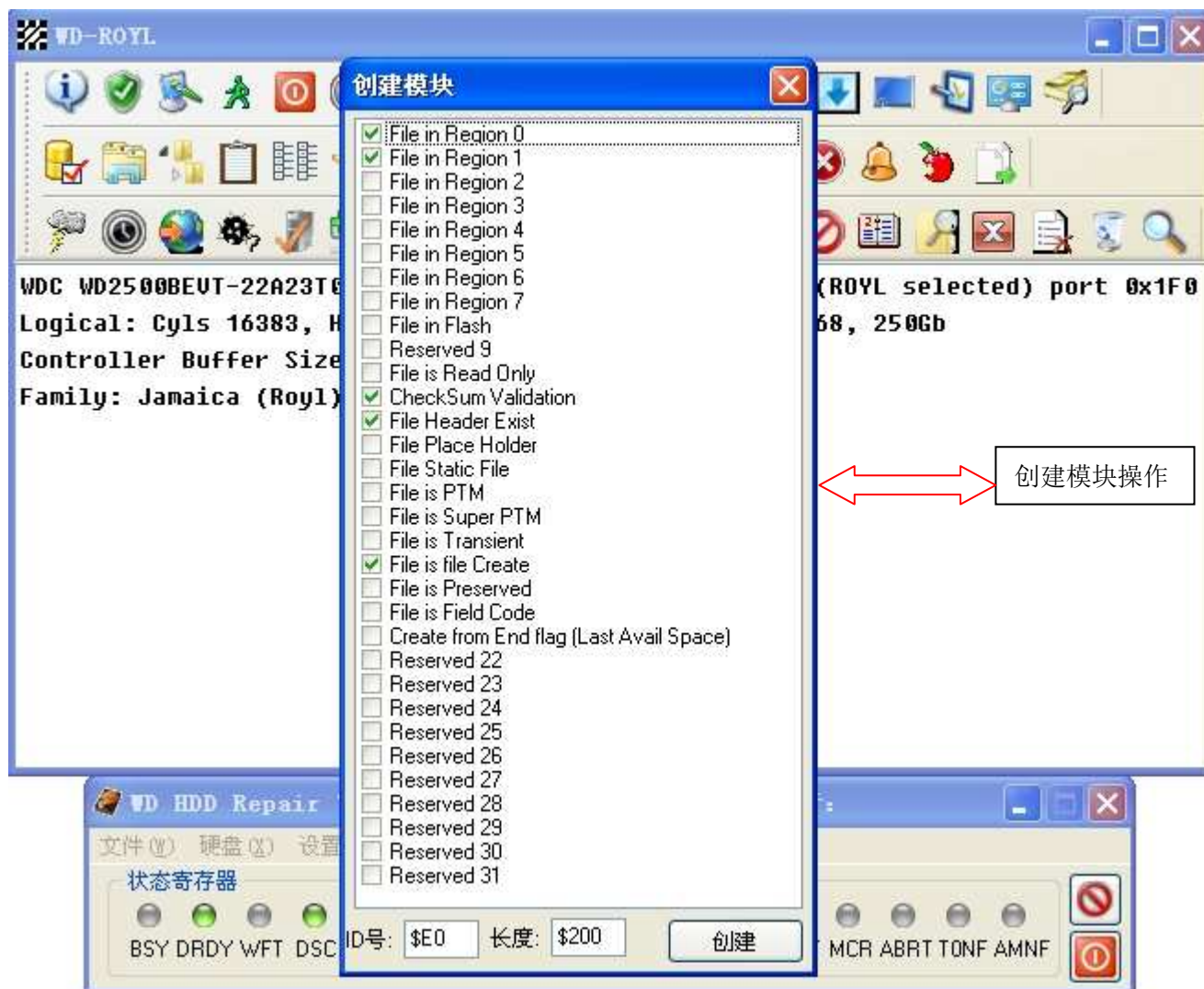


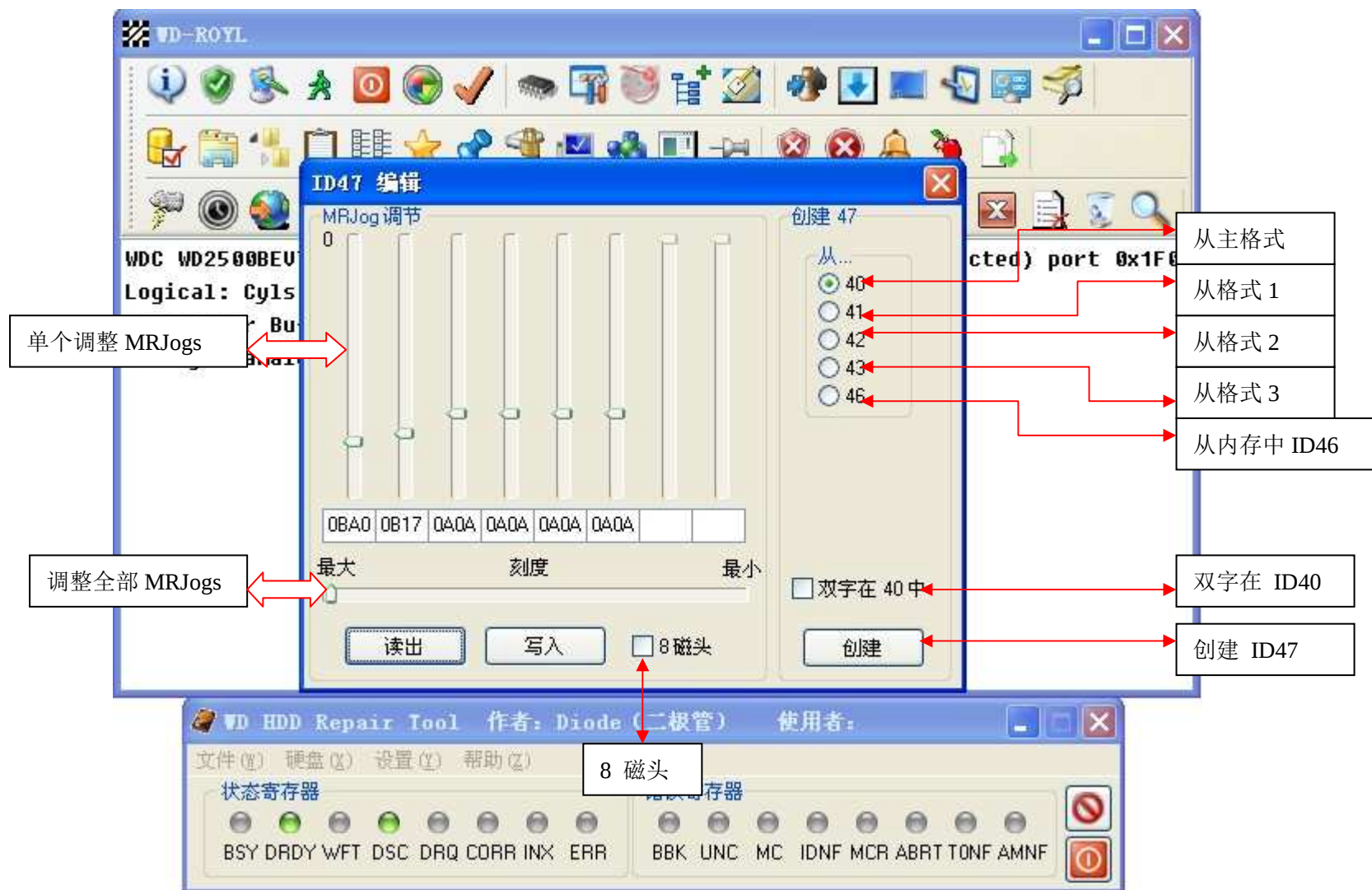


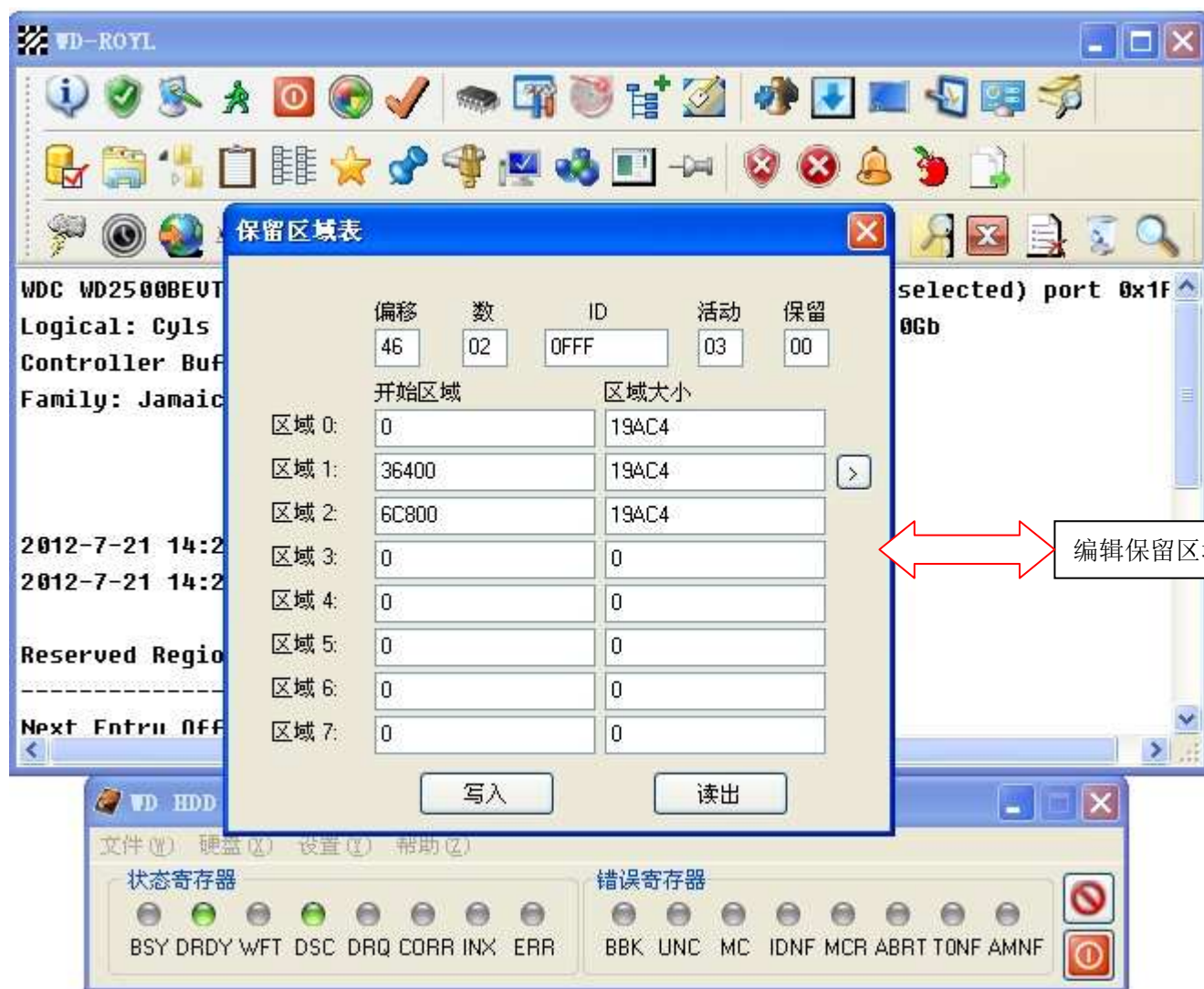


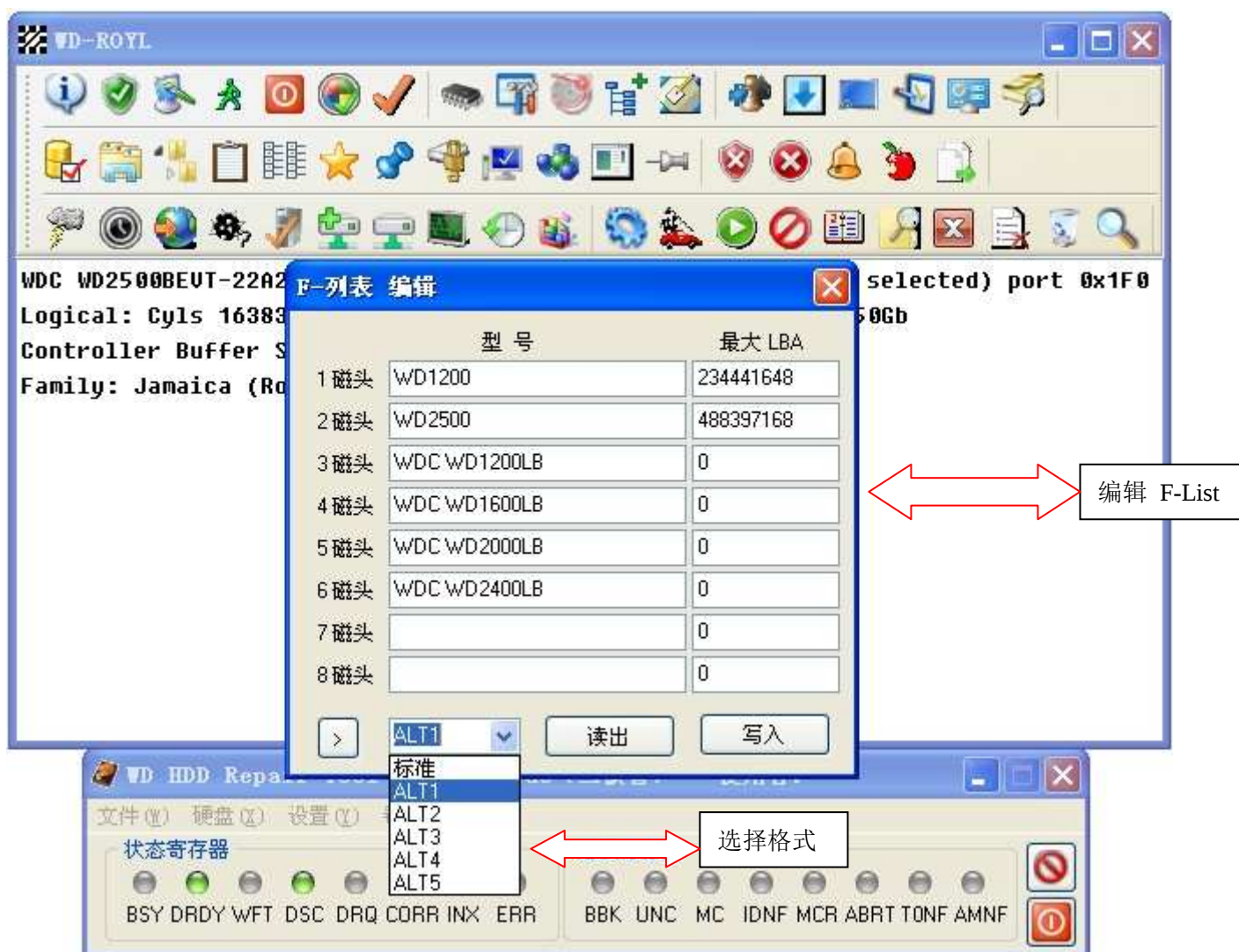


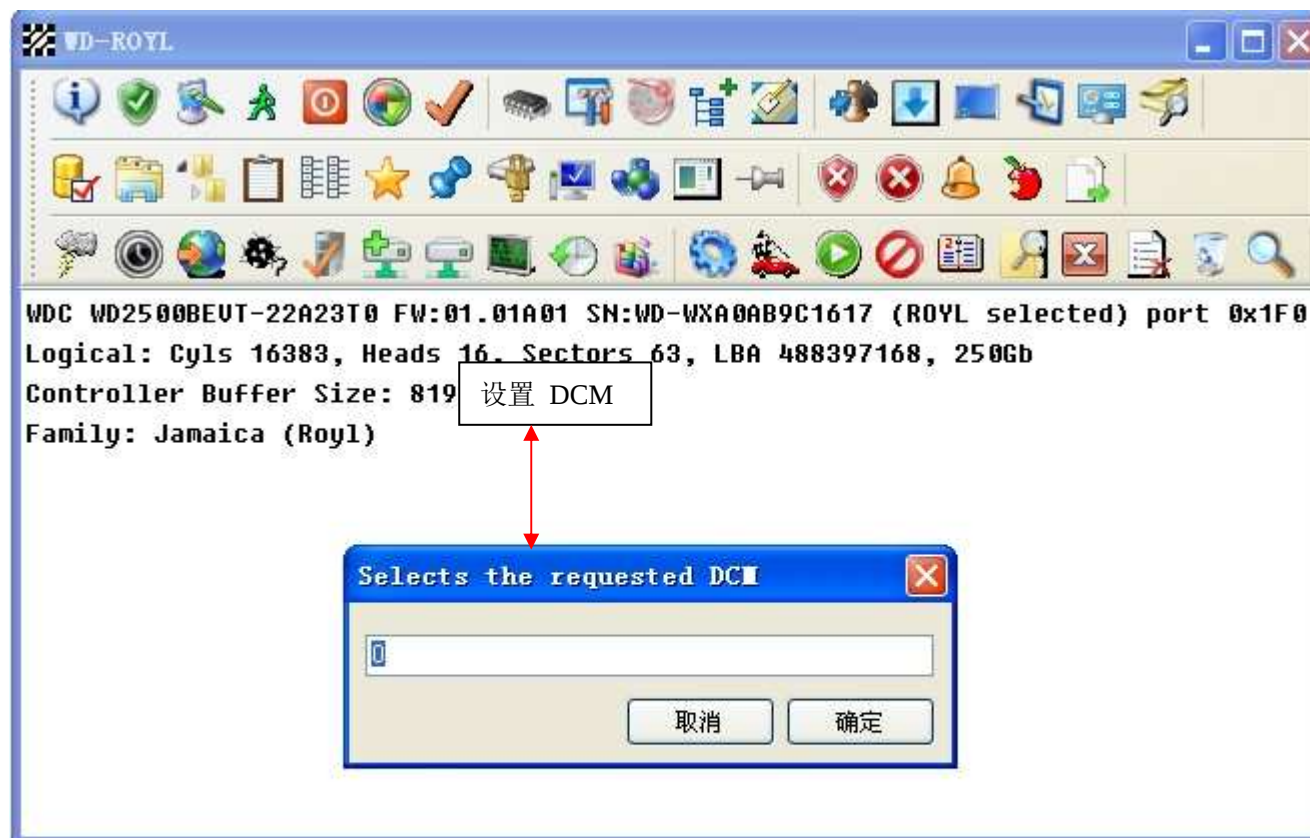


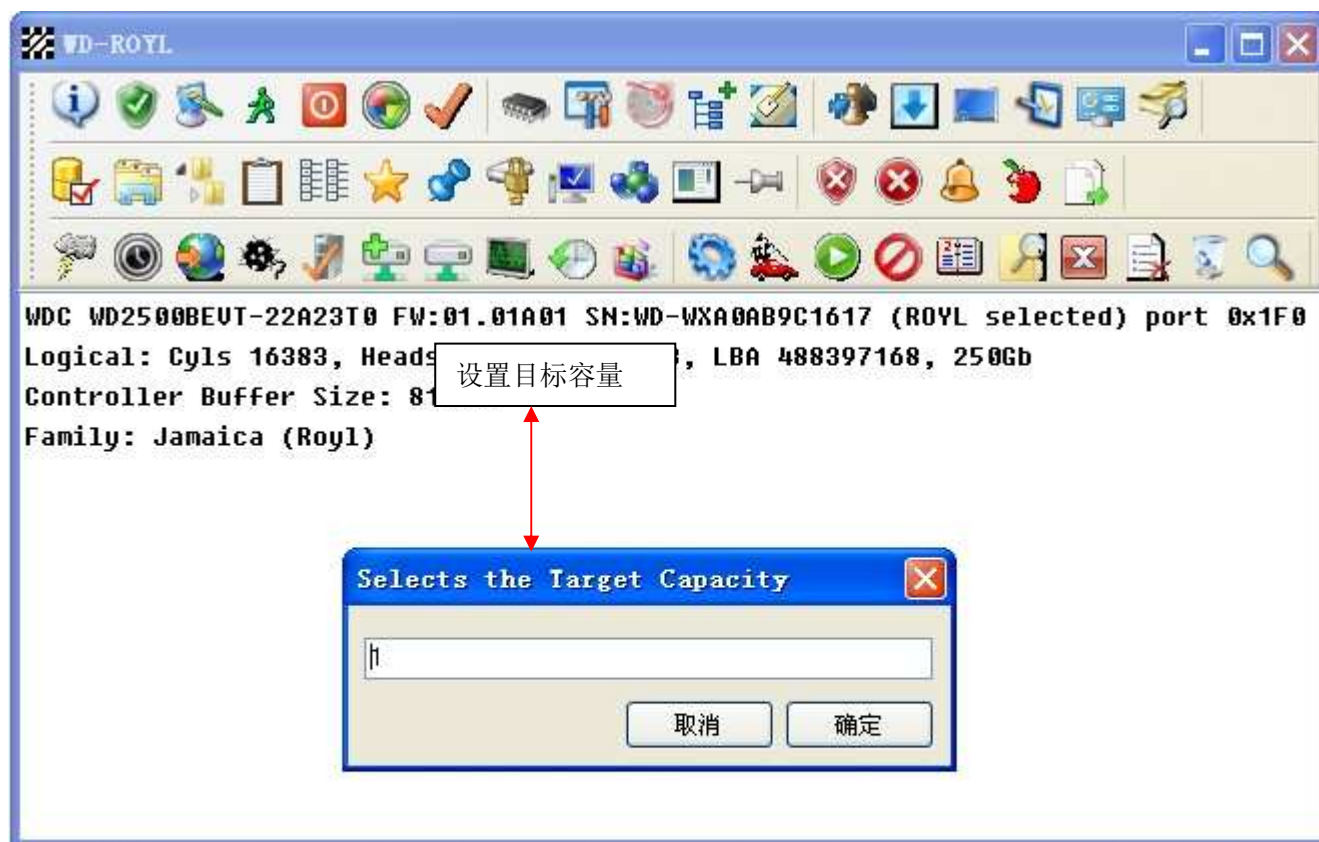




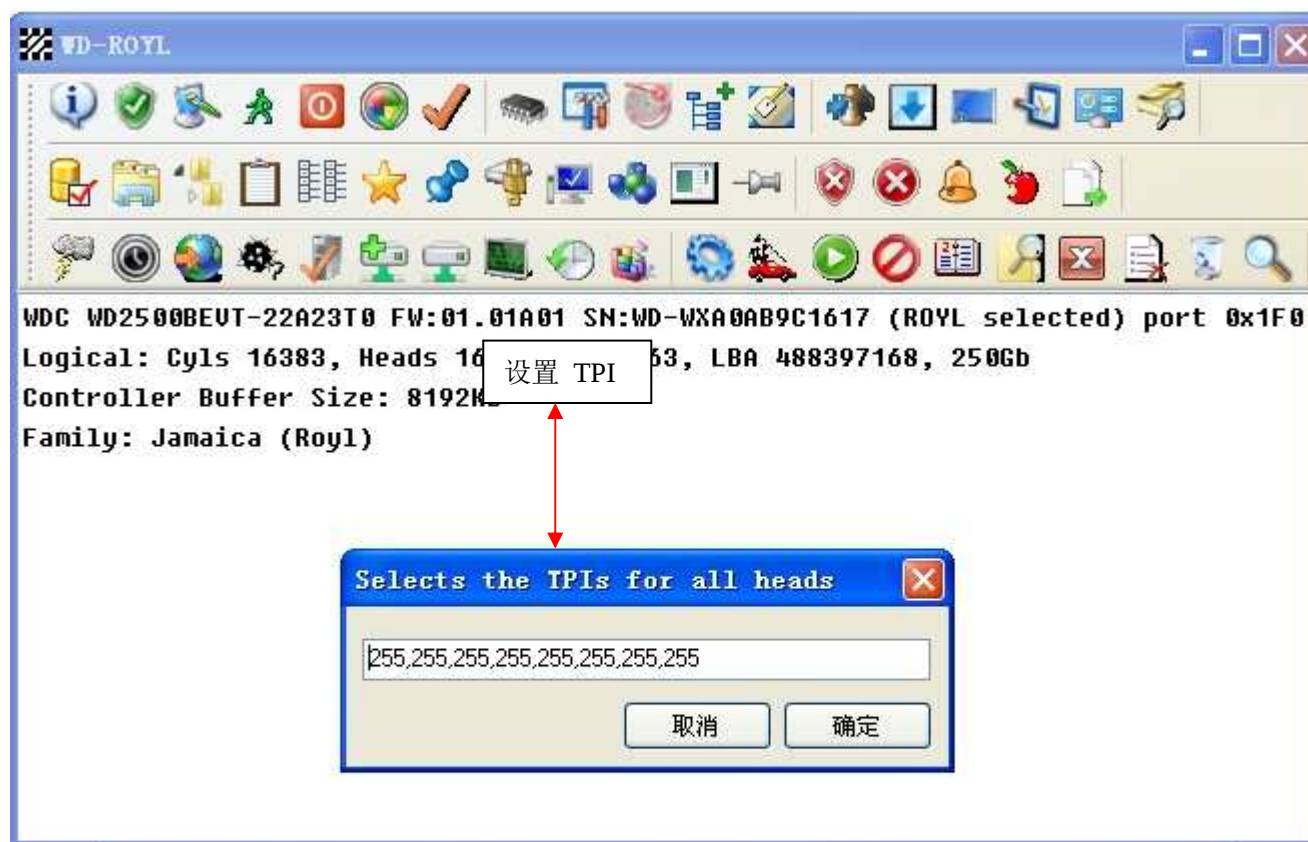


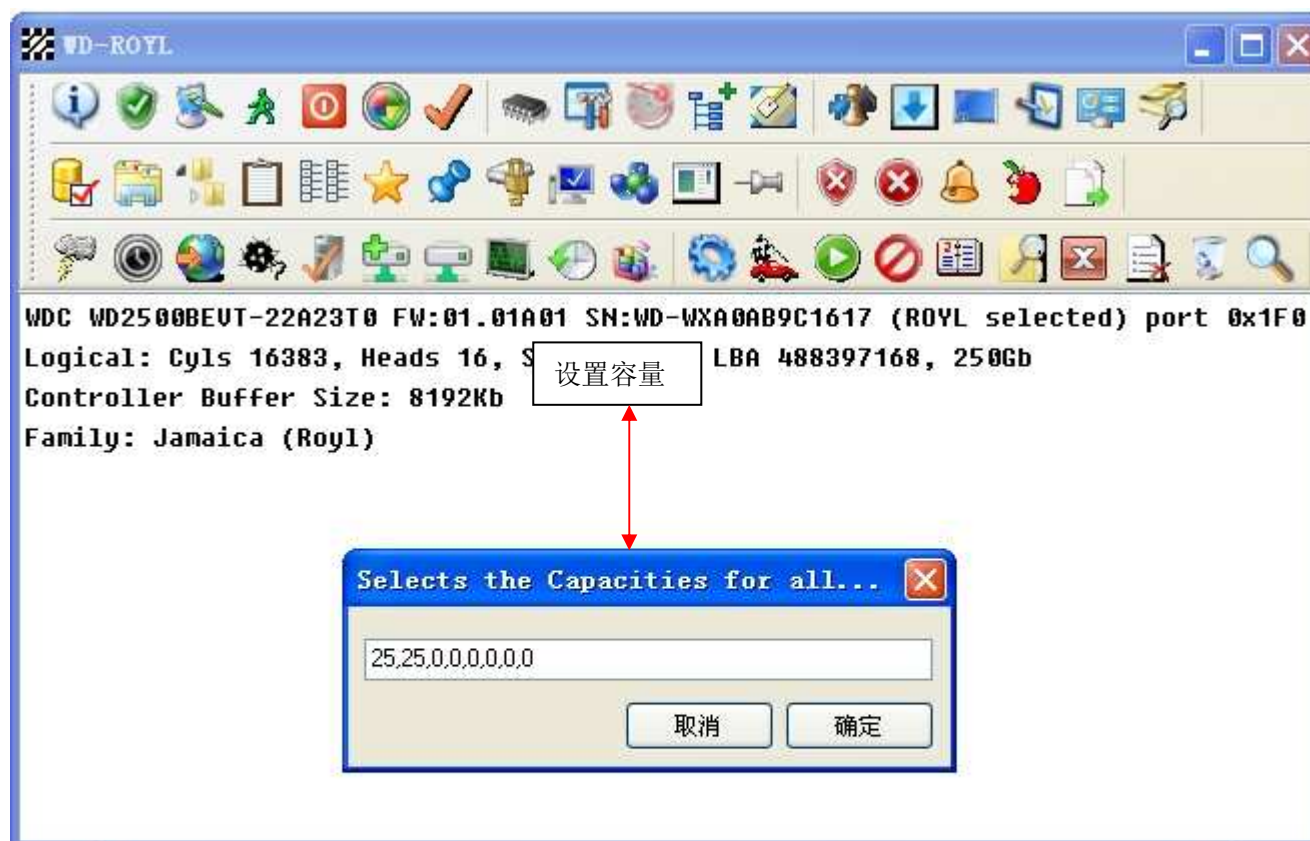


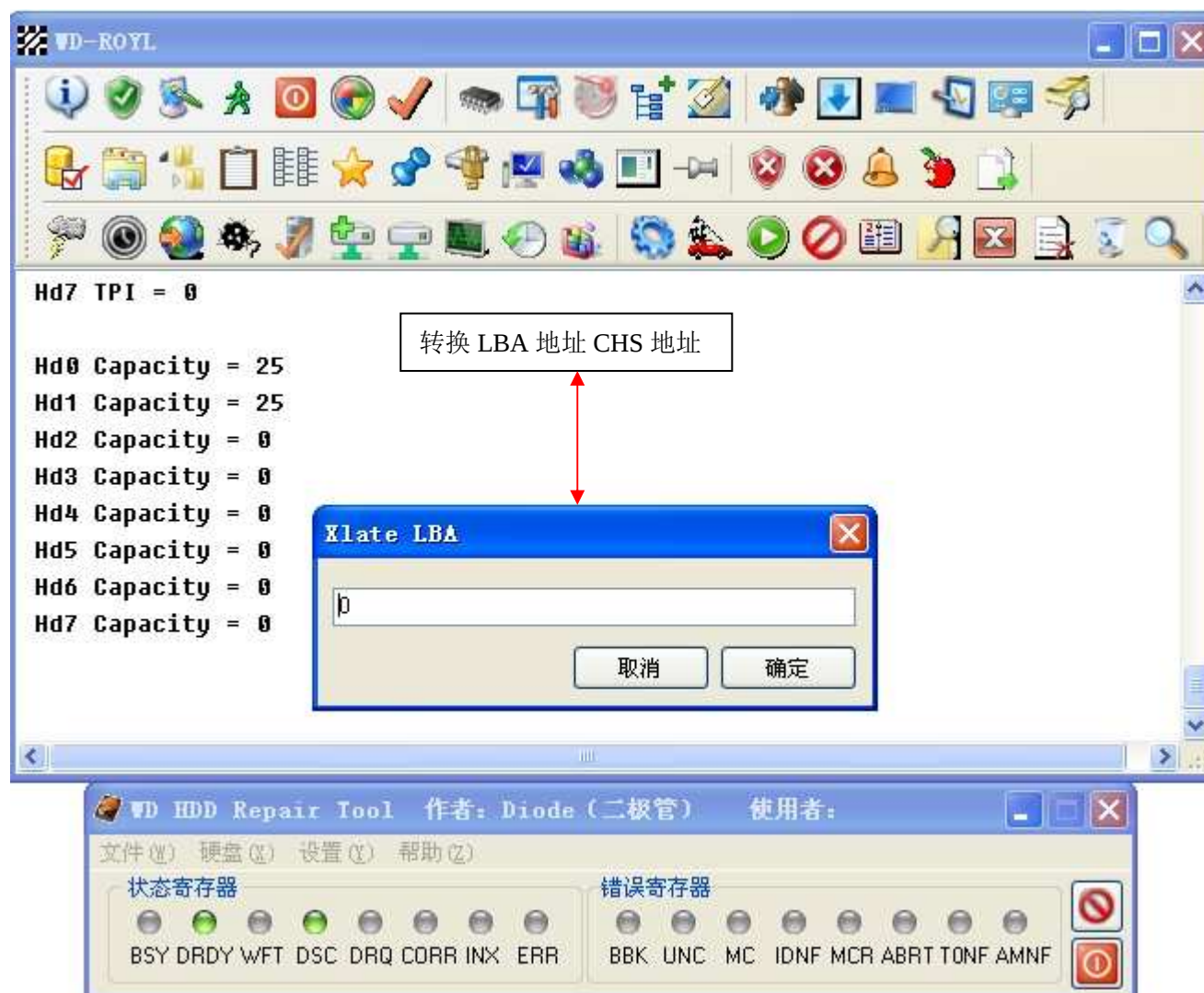






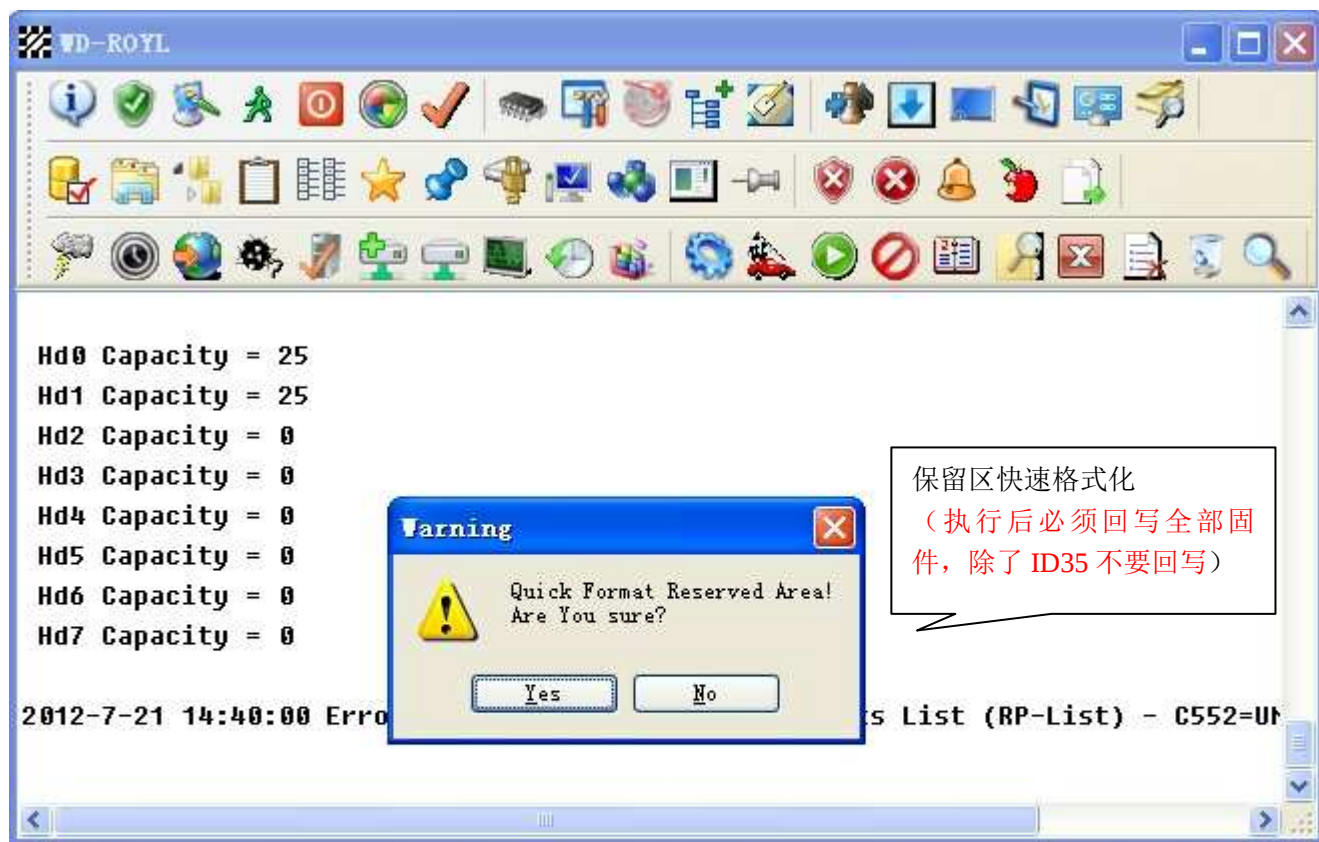


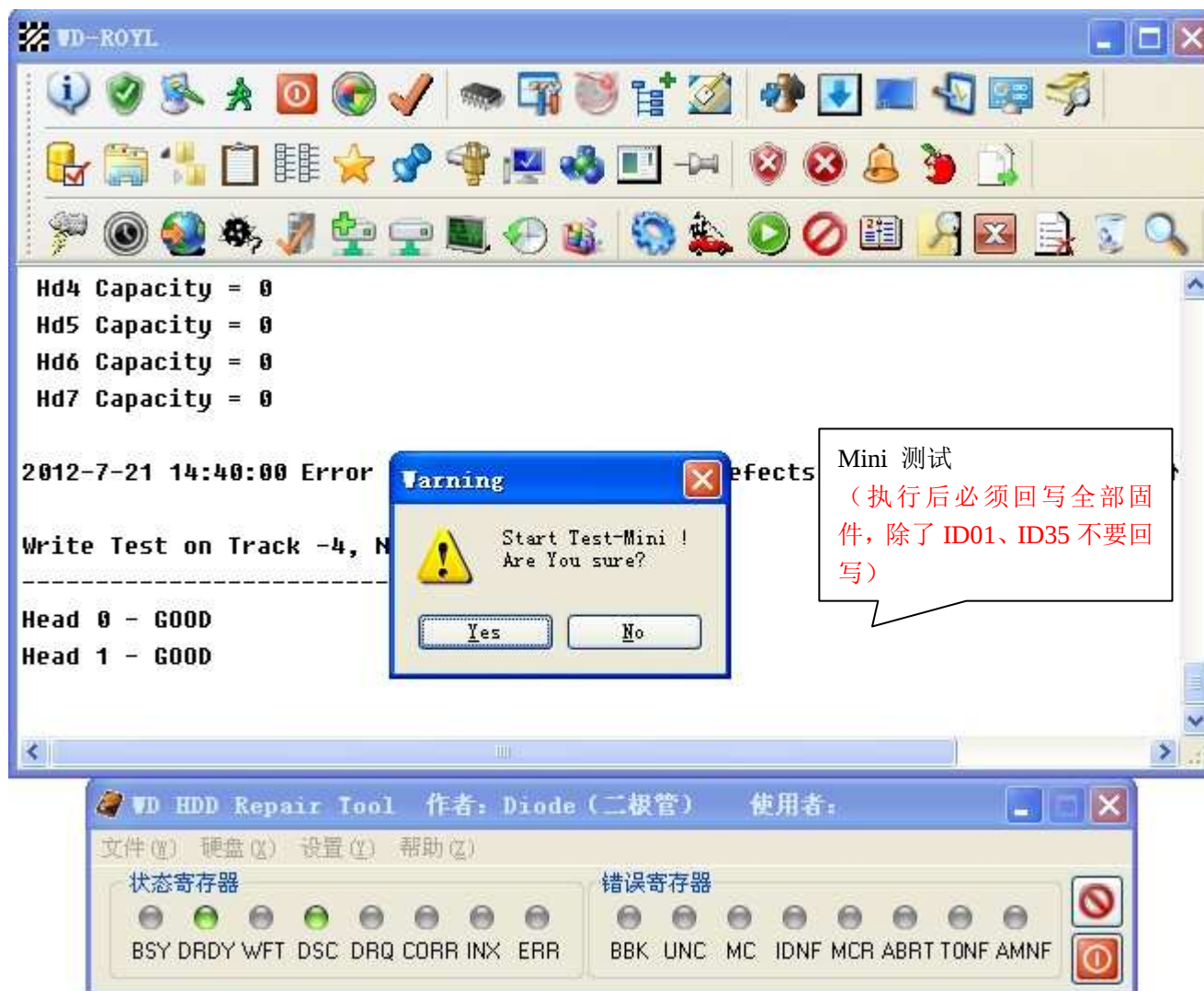


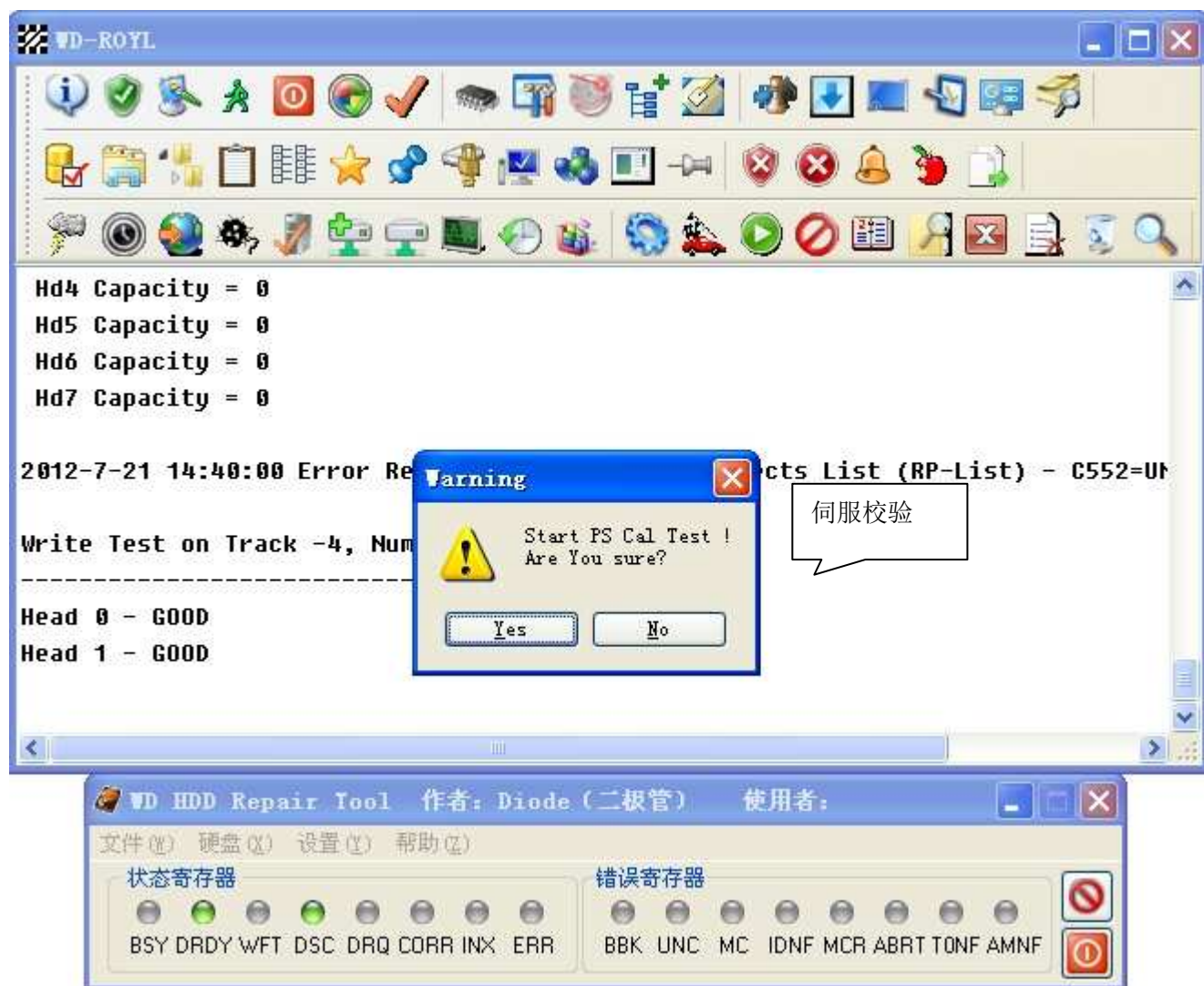


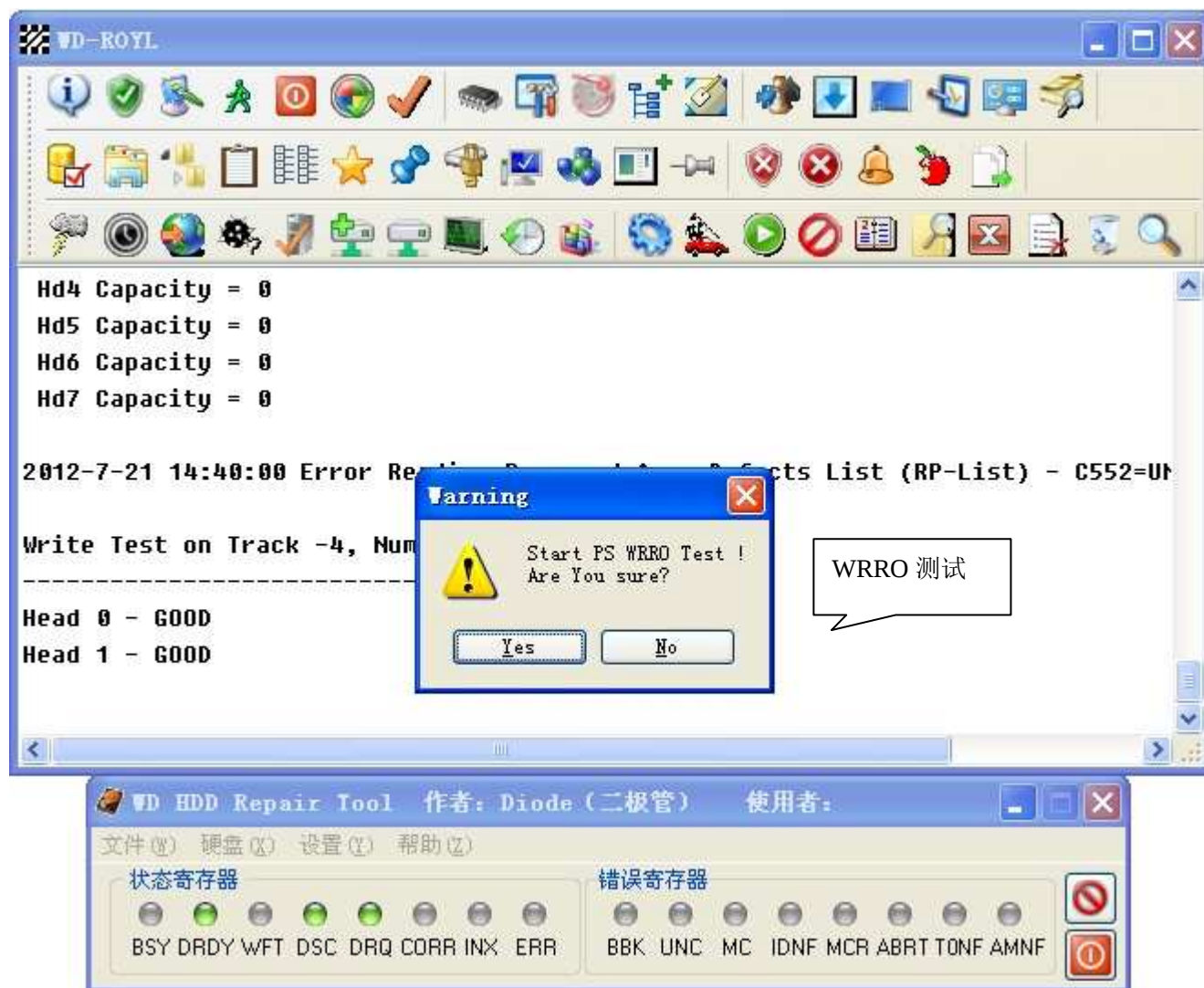


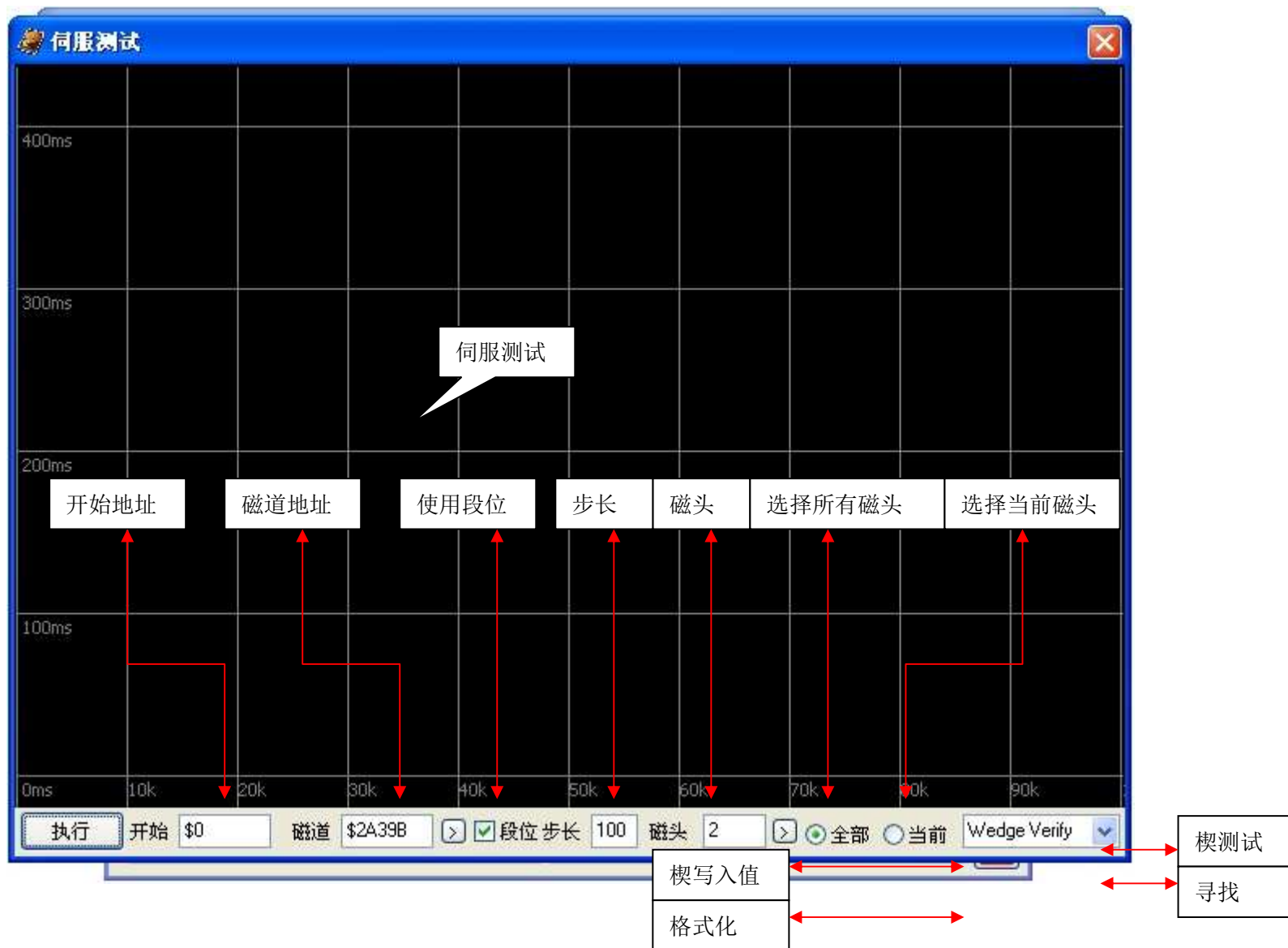


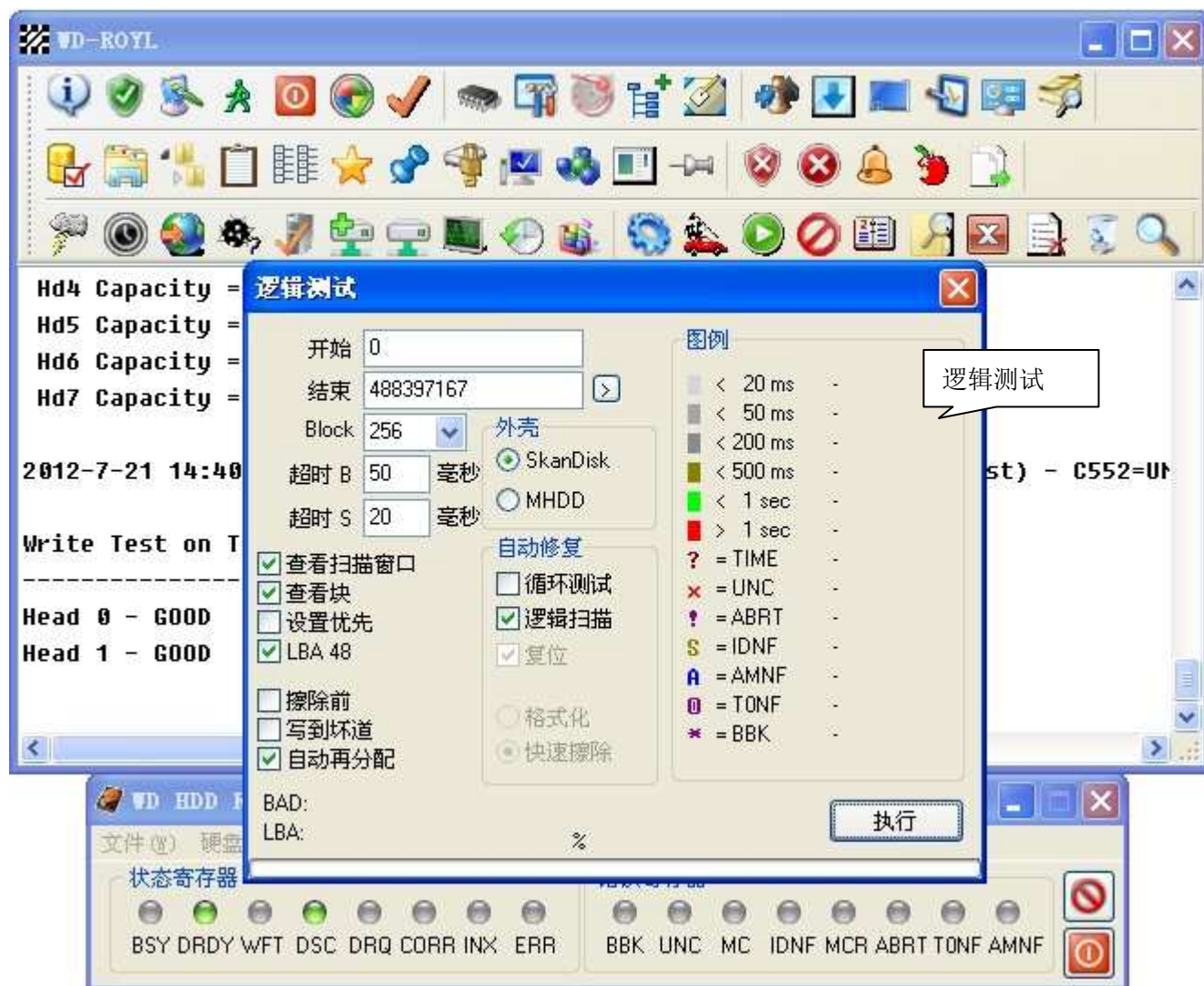














校准

DCM: SIBLPWMTHGCSRRVVK3UJ

任务: D - 服务范围 *工厂使用*

Hex: 19 从主标记

Heads: G

Media: T C4 校准代码

服务范围

读所有模块

写所有模块

执行

状态寄存器: BSY DRDY WFT DSC DRQ CORR INX ERR

错误寄存器: BBK UNC MC IDNF MCR ABRT TONF AMNF

Test on Track

2-7-21 14:40:00 E

4-0 - GOOD

1-1 - GOOD

WD HDD Repair

文件(磁) 硬盘(磁)

显示任务

显示十六进制

磁头 DCM

盘片 DCM

手动加载代码

手动加载 DCM

交变 DCM 地址

选择文件

初始化校准代码

加载瞬时覆盖

加载永久覆盖

加载 ARCO 主代码

显示处理进度

获取 DCM

选择 ARCO 操作项

选择 DCM 来源

选择 ARCO 校准命令

读出并保存所有模

写入所有模块

跑保留区优化 44 后必须回写全部固件

校准

DCM: SIBILIPwMTHGCSRRVVK3UJ

任务: D - 服务范围 *工厂使用*

Hex: 19

Heads: G

Media: T

☒ 手动加
☒ 手动加
☐ 交变DCM地址
☐ 从文件
☒ 初始化校准代码
☒ 加载瞬时覆盖
☒ 加载永久覆盖
☐ 加载ARCO主代码
☒ 显示进度

写所有模块

执行

ARCO For 44
ARCO For 46
ARCO For 4A
ARCO For 6F
ARCO For 6B
ARCO For 6A
ARCO For 70
ARCO For 69

状态寄存器: BSY DRDY WFT DSC DRQ CORR INX ERR

错误寄存器: BBK UNC MC IDNF MCR ABRT TONF AMNF

The screenshot shows the WD-ROYL software interface. A '校准' (Calibration) dialog box is open, displaying various settings for DCM (Data Calibration Method). The dialog box includes fields for DCM, Task, Hex, Heads, and Media. It also has checkboxes for various calibration options and buttons for '写所有模块' (Write all modules) and '执行' (Execute).

Annotations with red arrows point to specific settings in the dialog box:

- 获取 DCM 从主标记 (Get DCM from main mark) points to the '从主标记' (From main mark) option in the Hex field.
- 获取 DCM 从最初 (Get DCM from start) points to the '从主标记' (From main mark) option in the Hex field.
- 获取 DCM 从结束 (Get DCM from end) points to the '从主标记' (From main mark) option in the Hex field.
- 获取 DCM 从最初+温度 (Get DCM from start + temperature) points to the '从主标记' (From main mark) option in the Hex field.
- 获取 DCM 从 ID47 (Get DCM from ID47) points to the '从主标记' (From main mark) option in the Hex field.
- 获取 DCM 从日志 (Get DCM from log) points to the '从主标记' (From main mark) option in the Hex field.

The background window shows the following information:

- Hd4 Capacity = 0
- Hd5 Capacity = 0
- Hd6 Capacity = 0
- Hd7 Capacity = 0
- 2012-7-21 14:40:00
- Write Test on Track
- Head 0 - GOOD
- Head 1 - GOOD

The bottom status bar shows various indicators: BSY, DRDY, WFT, DSC, DRQ, CORR, INX, ERR, BBK, UNC, MC, IDNF, MCR, ABRT, TONF, AMNF.

WD-ROYL 自校脚本编辑

序号	描述
1003	SelfScan:OVL
1008	SelfScan:OVL
C4	Calibrator:Main Code - SARCO User Area
B1	SelfScan:OVL
C4	Calibrator:Main Code - OTC
C4	Calibrator:Main Code - OTC
1000	SelfScan:OVL
D1	SelfScan:Test
DD	SelfScan:Test
DB	SelfScan:Test
D5	SelfScan:Test
D4	SelfScan:Test
D4	SelfScan:Test
D4	SelfScan:Test
D3	SelfScan:Test
D2	SelfScan:Test
1002	SelfScan:OVL
BB	SelfScan:OVL
C4	Calibrator:Main Code - VGA
	SelfScan:OVL
	SelfScan:OVL
1000	SelfScan:OVL
	Calibrator:Main Code - VGA
	Calibrator:Main Code - PBERT
	-
AA	-
AA	-
B6	SelfScan:OVL
1003	SelfScan:OVL
B9	SelfScan:OVL
BA	SelfScan:OVL

Alt=PST 流程总数
Cur= 当前自校开始步

自校脚本 (双击鼠标左键即设置从当前步开始)

编辑 PST 脚本模式

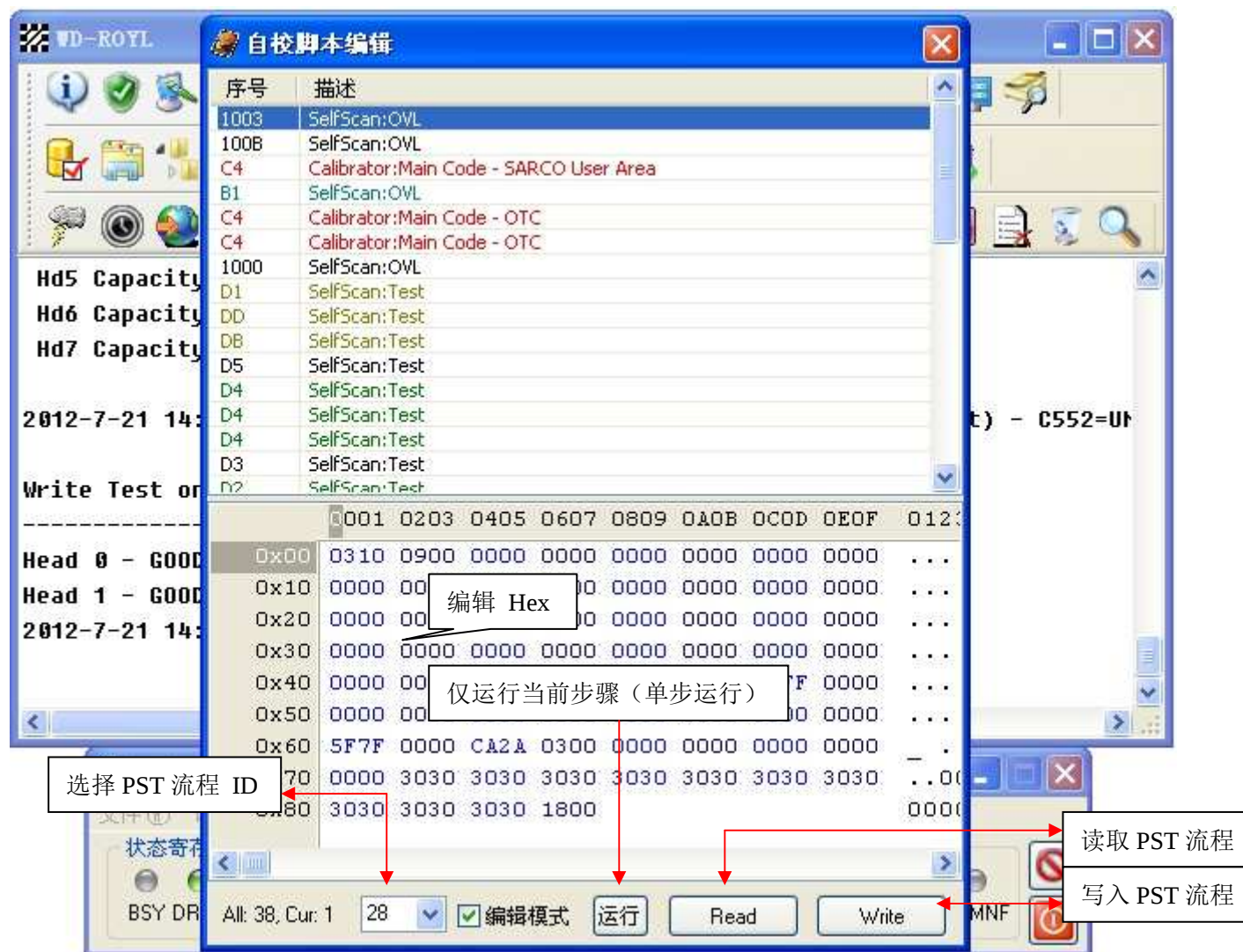
PST 从当前步开始

获取 PST 流程脚本

从设置的步骤开始 PST 自校

All: 38, Cur: 1

☐ 编辑模式 执行 获取 设置



自校脚本编辑

序号	描述
003	SelfScan:OVL
100B	SelfScan:OVL
4	Calibrator:Main Code - SARCO User Area
B1	SelfScan:OVL
C4	Calibrator:Main
C4	Calibrator:Main
1000	SelfScan:OVL
D1	SelfScan:Test
DD	SelfScan:Test
DD	SelfScan:Test
D5	SelfScan:Test
D4	SelfScan:Test
D4	SelfScan:Test
D4	SelfScan:Test
D3	SelfScan:Test
D2	SelfScan:Test

Context Menu:

- 删除 (X) Del
- 插入 (I) Ins
- 追溯ARCO脚本 (A) Ctrl+G
- 从日志追溯脚本 (Z) Ctrl+E
- 备份到3F (3) Ctrl+B

Hex Dump:

	0001	0203	0405	0607	0809	0A0B	0C0D	0E0F	0123
0x00	B100	0000	0000	0000	0000	0000	0000	0000	±..
0x10	0000	0000	0000	0000	0000	0000	0000	0000	...
0x20	0000	0000	0000	0000	0000	0000	0000	0000	...
0x30	0000	0000	0000	0000	0000	0000	0000	0000	...
0x40	0000	0000	0000	0000	0500	0500	FFFF	0000	...
0x50	0000	0000	0000	0000	0000	0100	0000	0000	...
0x60	5D7F	0000	729D	0400	0000	0000	0000	0000	] .
0x70	0000	3332	3306	0708	0F10	1213	0203	0506	..3
0x80	0708	1832	3332	3332					...2

Step: 4h 28 ☒ 编辑模式 运行 Read Write

缺陷表编辑 - P-List

磁道 磁头 TOC ... TOC ...

磁道	磁头	TOC ...	TOC ...
0	0	Track	
0	1	Track	

读出 P-List (P) Ctrl+P
读出 G-List (G) Ctrl+G
读出 SA-List (S) Ctrl+S
读出 T-List (T) Ctrl+T
写入 (W) Ctrl+W
编辑 (E) Ctrl+E
杀掉磁头 (Y) Ctrl+Del
删除 (D) Del
清除 (C) Ctrl+C
从最初入口 (I)
出口到最初 (O)
9E 1 6A6 6AD
9F 1 6A6 6AD
A0 1 6A6 6AD

2012-7-21 14:40:00
Write Test on
Head 0 - GOOD
Head 1 - GOOD
2012-7-21 14:40:00

编辑 P-List

文件 (F) 硬盘 (H)
状态寄存 (S)
All: 12349, Tracks 251, Sectors 12098
BSY DRDY WFT DSC DRQ CORR INX ERR BKB UNC MC IDNF MCR ABRT TONF AMNF

(RP-List) - C552=UP

读出 P-List
读出 G-List
读出 SA-List
读出 T-List
写入
编辑
杀掉磁头
删除
清除
从最初入口
出口到最初

