3. Reconfigure AMI WinBIOS System

3.1. Enter AMI WinBIOS Configuration Program

During power-on memory test, pressing the <Del> key will bring the SETUP main menu to the screen. You can use the <Tab> Key to move to the next window and use the <Enter> key to make selection in the current window. Pressing <Alt><H> will bring up the help menu.

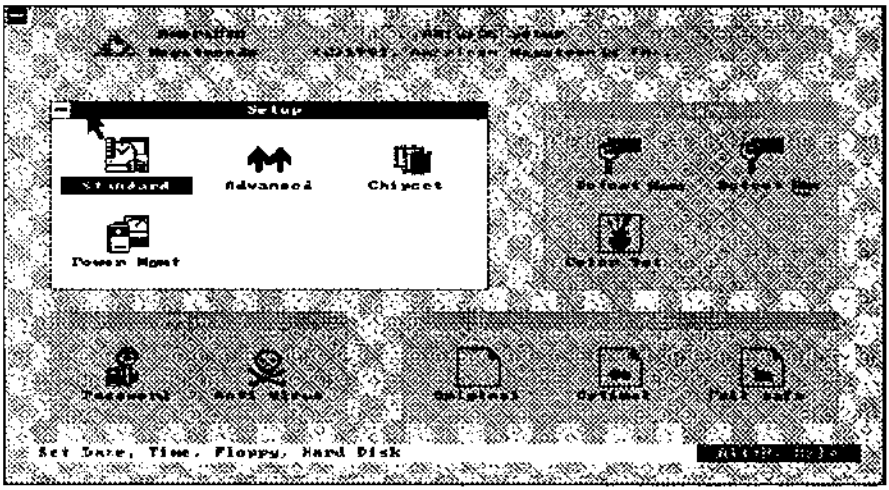


Figure 3-1 The screen of WinBIOS SETUP PROGRAM

NOTE : Use mouse cursor to select a desired option. After highlighting the option, press the <Enter> key to enter its menu.

3.2. Standard Setup

The WinBIOS setup options described in this section are selected by choosing the appropriate high-level icon from the WinBIOS Setup main menu selection screen. The selected windows is as follows.

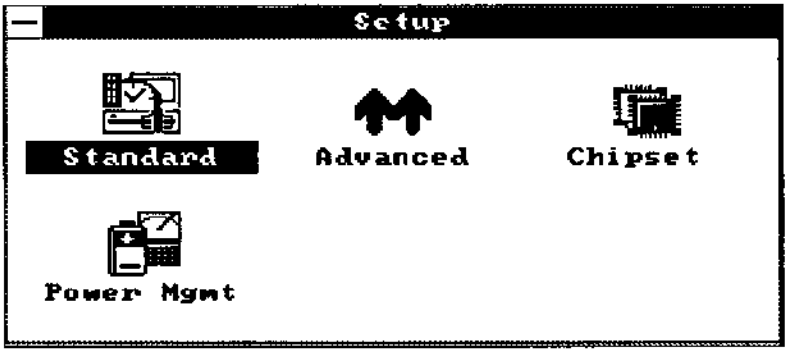


Figure 3-2 The screen of STANDARD SETUP

You can move the cursor to select the "Date/Time", "Floppy A", "Floppy B", "Master Disk" or "Slave Disk" icons, then press the <Enter> key to set them up.

The STANDARD SETUP screen is as follows.

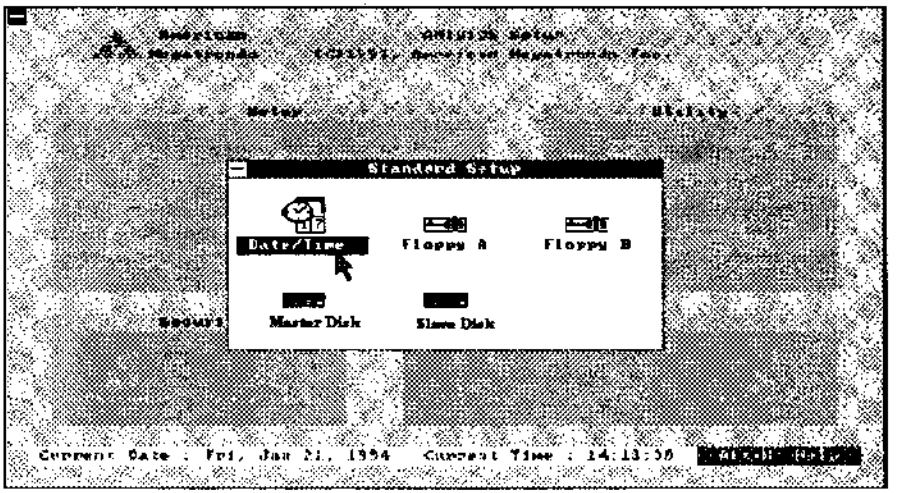


Figure 3-3 The screen of STANDARD SETUP

3.3. Advanced Setup

ADVANCED SETUP	
System Keyboard	: Present
Primary Display	: VGA/EGA
Above 1MB Memory Test	: Disabled
Extended BIOS RAM Area	: 0:300
System Boot up Num Lock	: On
Floppy Drive Seek At Boot	: Disabled
System Boot Up Sequence	: C:, A:
System Boot Up CPU Speed	: High
External Cache	: Enabled
Internal Cache	: Enabled
Password Checking	: Setup
Video Shadow C000, 16K	: Enabled
Video Shadow C400, 16K	: Enabled
Shadow C800, 16K	: Disabled
Shadow CC00, 16K	: Disabled
Shadow D000, 16K	: Disabled
Shadow D400, 16K	: Disabled
Shadow D800, 16K	: Disabled
Shadow DC00, 16K	: Disabled
Shadow E000, 64K	: Disabled
Block Mode	: Disabled
IDE Prim Controller 32Bit xfer	: Disabled
IDE Prim Master HDD LBA Mode	: Disabled
IDE Prim Slave HDD LBA Mode	: Disabled
Number of HDDs in Sec Controller	: None
IDE Sec Controller 32Bit xfer	: Disabled
IDE Sec Master HDD LBA mode	: Disabled
IDE Sec Slave HDD LBA mode	: Disabled

NOTE:

- ***Your BIOS can support 4 Hard Disk by changing "None" to "2" of Number of HDDs in Sec Controller***
- ***Block Mode : Disabled. If your hard disk drive supports IDE block transfer mode, enable this option for faster IDE hard disk drive transfer rate.***
- ***IDE Prim(Sec) Master (Slave) LBA Mode : Disabled. LBA (Logical Block Addressing) mode is for a new HDD accessing method to overcome the 528 Megabyte bottleneck.***

3.4. Chipset Setup

CHIPSET SETUP	
Auto Config	: Enabled
Hidden Refresh	: Enabled
Slow Refresh	: Disabled
Single ALE Enable	: No
Keyboard Reset Control	: Disabled
Master Mode Byte Swap	: Disabled
AT Cycle Wait State	: Enabled
AT Cycle Between I/O Cycles	: 3
AT Bus Clock Selection	: CLKI/4
AT Bus Clock Control	: Synchro
Fast AT Cycle	: Disabled
DRAM Burst Cycle	: 4-3-3-3 *
Memory Write Wait State	: 1W/S
Cache Read Cycle	: 2-2-2-2
Cache Write Wait State	: 0W/S
Non - Cacheable Block-1 Size	: Disabled
Non - Cacheable Block-1 Base	: Disabled
Non - Cacheable Block-2 Size	: Disabled
Non - Cacheable Block-2 Base	: Disabled
Video Cacheable C000, 16K	: No
Video Cacheable C400, 16K	: No
Cacheable C800, 16K	: No
Cacheable CC00, 16K	: No
Cacheable D000, 16K	: No
Cacheable D400, 16K	: No
Cacheable D800, 16K	: No
Cacheable E000, 64K	: No

Auto Config Function : Enabled. The BIOS automatically configures six features that are listed below, based on detection of the CPU clock speed.

Auto Config Function : Disabled. Allow user manually configures those features.

If CPU clock is 33MHz, 40MHz, 50MHz, 66MHz, 80MHz or 100MHz, then change the chipset setup as shown as following table :

	DX33MHz	DX40MHz DX2/80MHz	DX50MHz	DX2-50MHz	DX2 -66MHz	DX4-100MHz
AT Bus Clock Selection	CLKI/4	CLK/5	CLKI/6	CLK/3	CLKI/4	CLKI/4
DRAM Burst Cycle	4-3-3-3 *	5-4-4-4	5-4-4-4	5-4-4-4	4-3-3-3 *	5-4-4-4
Memory Write Wait state	0	1	1	1	1	1
Cache Read Cycle	2-2-2-2	3-2-2-2	3-2-2-2	3-2-2-2	2-2-2-2	2-2-2-2
Cache Write Wait State	0	0	1	1	0	0
AT Cycle Wait State	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled

3.5. Power Management Setup

POWER MANAGEMENT SETUP	
IDE Power Down	: Disabled
Power Management Mode Select	: Disabled
System Timeout	: 5 Min
IRQ 1 Monitor	: Enabled
IRQ 3 Monitor	: Enabled
IRQ 4 Monitor	: Enabled
IRQ 5 Monitor	: Disabled
IRQ 6 Monitor	: Enabled
IRQ 7 Monitor	: Disabled
IRQ 8 Monitor	: Disabled
IRQ 9 Monitor	: Disabled
IRQ 10 Monitor	: Disabled
IRQ 11 Monitor	: Disabled
IRQ 12 Monitor	: Disabled
IRQ 14 Monitor	: Disabled
IRQ 15 Monitor	: Disabled
DRQ 0 Monitor	: Disabled
DRQ 1 Monitor	: Disabled
DRQ 2 Monitor	: Disabled
DRQ 3 Monitor	: Disabled
DRQ 5 Monitor	: Disabled
DRQ 6 Monitor	: Disabled
DRQ 7 Monitor	: Disabled
Keyboard IO Port Monitor	: Disabled
Floppy IO Port Monitor	: Disabled
Hard Disk IO Port Monitor	: Enabled
Video IO Port Monitor	: Disabled
Video Memory Monitor	: Disabled
Screen Sleep	: Sleep
APM Function	: Enabled

The OPTi 895 GREEN PC provides two GREEN Modes in Power Management Mode.

- The AUTO_GREEN Mode is used to accommodate non-SL CPU's.
- The SMI_GREEN Mode is used to accommodate SL CPU's.

You can monitor the following events for GREEN Mode.

IDE Power Down

This option specifies the length of time of hard disk drive inactivity that must expire before the IDE hard drive enter the IDE Standby Power Down Mode. The settings are from *1 Min to 15 Min* or *Disabled. IDE Power Down* is an individual feature with independent timeout timer and not affected by *Power Management Mode Select.*

ATTENTION

Some Hard Disk Drives may not be power down even if the IDE Standby Power Down Mode is selected. Those Hard Disk Drive do not accept the BIOS IDE Power Down Command because of their build-in old version firmware.

Power Management Mode Select

OPTi 895 mainboard provides two Power Management mode, *Auto_mode* for non SL-Series dynamic CPU, it slows down CPU clock speed to 8 MHz; *SMI_*mode for SL-Series/P24C CPU, it may slow down CPU clock speed to 0 MHz (stop_clock) when system timeout timer expires. Please refer to section 3.6 *Definition of Power Management States.*

System Timeout

This option specifies the length of time for system enter Auto_mode or SMI_mode power management state. The timer options are 15sec, 2min, 5min, 30min, 45min, 1hr, or 4hr. The timer can be reloaded by any IRQs, DRQs, keyboard, video, hard disk and floppy accesses.

IRQ 1 (~15) Monitor

Enabled these options will allow the IRQs (Interrupt Request) input to be monitored for both inactivity for entering Auto_mode/SMI_mode and activity for entering Normal_mode.

IRQ1:	Keyboard	Default - Enabled
IRQ3:	COM2, 4	Default - Enabled
IRQ4:	COM1, 3	Default - Enabled
IRQ5:	LPT2	Default - Disabled
IRQ6:	Floppy Disk	Default - Enabled
IRQ7:	LTP1	Default - Disabled
IRQ8:	RTC	Default - Disabled
IRQ9:	Redirection IRQ2	Default - Disabled
IRQ14:	Hard Disk	Default - Disabled
IRQ10, 11, 12, 15:	Reserved	Default - Disabled

DRQ 0 (~ 7) Monitor

Enabled these options will allow the DRQ (DMA Request) input to be monitored for both inactivity for entering Auto_mode/SMI_mode and activity for entering Normal_mode.

DRQ2:	Floppy Disk	Default - Disabled
DRQ 0, 1, 3, 5, 6, 7:	Reserved	Default - Disabled

Keyboard I/O Port Monitor

Enabled this option will allow you to gain accesses on port 60h and 64h to be monitored for both entering Auto_mode/SMI-mode and exiting Auto_mode/SMI_mode.

Floppy I/O Port Monitor

Enabled this option will allow floppy port (3F5h) accesses to be monitored for both entering Auto_mode/SMI_mode and exiting Auto_mode/SMI_mode.

Hard Disk I/O Port Monitor

Enabled this option will allow hard disk port (1F0h to 3F6H) accesses to be monitored for both entering Auto_mode/SMI_mode and exiting Auto_mode/SMI_mode.

Video Memory Monitor

Enabled this option will allow video memory (A0000 to BFFFF) accesses to be monitored for both entering Auto_mode/SMI_mode and exiting Auto_mode/SMI_mode.

Video I/O Port Monitor

Enabled this option will allow video ports accesses to be monitored for both entering Auto_mode/SMI_mode and exiting Auto_mode/SMI_mode.

Screen Sleep

This option specifies *screen sleep* when system enter Auto_mode or SMI_mode power management state. If the option is Sleep, the display will turn to blank when system enter to Auto/SMI_mode. If the option is *Non-Sleep*, the display will freeze when system enter Auto/SMI_mode.

APM Function

This option specifies the system *Enabled* or *Disabled* APM (Advanced Power Management) Function.

It is no need to install an APM program for most CPUs, but you must install the APM program if you use the stop clock Green function (SMI).

Caution: *If you don't install the APM program and enable the "System Timeout" item. After the timer stops, the system will has timer problems when the system wakes up.*

For an OS that provides APM function :

At present, only Microsoft DOS 6.x and Windows 3.1 provide APM programs.

1. For Microsoft DOS 6.x, the APM program's filename is POWER.EXE.

To install the APM , add the following statement to your config.sys file:

Device = C:\DOS\POWER.EXE

2. To install the APM in the Microsoft Windows 3.1 program:

In the Windows directory, execute **Setup** and highlight the item **"COMPUTER,"** then choose the option **"MS-DOS system with APM."** In the Windows "**MAIN**" group, execute **Control Panel** and choose **"POWER,"** then set "Power Management in Advance." **APM** installation is then completed.

3.6. Definition of Power Management States

	Normal_Mode (Power Management Mode set to"Disabled")
CPU Type	Non SL- Series CPU or SL-Series CPU
System Time-out Timer	Not Available
CPU Clock	Full Speed
Screen Sleep	Not Available
Monitor Power Down (By Ext. power control port)	Not Available
IDE Standby Power Down	Available (Independent Time-out Timer 1Min~15 Min)

	Auto_Mode (Power Management Mode set to"Auto")
CPU Type	Non S- Series CPU
System Time-out Timer	15 sec ~ 4 hours
CPU Clock	Slow Down to 8 MHz (When system Time-out Timer Expires)
Screen Sleep	Available (Screen Sleep set to "**Sleep**")
Monitor Power Down (By Ext. power control port)	Not Available
IDE Standby Power Down	Available (Independent Time-out Timer 1Min~15 Min)

	SMI_Mode (Power Management Mode set to"SMI")
CPU Type	SL- Series CPU and Intel P24C
System Time-out Timer	15 sec ~ 4 hours
CPU Clock	Slow Down to 0 MHz (When system Time-out Timer Expires)
Screen Sleep	Available (Screen Sleep set to "**Sleep**")
Monitor Power Down (By Ext. power control port)	Available (Green Power Supply is needed)
IDE Standby Power Down	Available (Independent Time-out Timer 1Min~15 Min)

3.7. Utility

ICON	FUNCTION
Detect Master	Automatically detect & configure Master Disk
Detect Slave	Automatically detect & configure Slave Disk
Color Set	Set the color of WinBIOS Setup screen

3.8. Password Setup

WinBIOS Setup has an optional password feature. The system can be configured so that all users must enter a password every time the system is booted or when you select the password icon in the "Security" window.

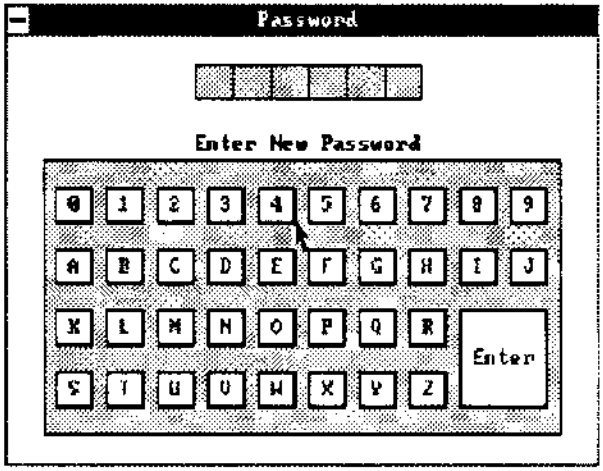


Figure 3-4 The screen of PASSWORD SETUP

You can enter a password by :

- Typing the password on the keyboard.
- Selecting each letter via the mouse, or
- Selecting each letter via the pen stylus.

Pen access must be customized for each specific hardware platform.

The password check option in ADVANCED SETUP (P.3-3) can be enabled by choosing either *always* (the password prompt appears every time the system is power on) or *setup* (the password prompt will appear only when WinBIOS setup is run). The password entered is stored in CMOS RAM.

Enter a 1-6 character password. The password does not appear on the screen when typed. WinBIOS will ask you to retype the password. WinBIOS will then display the following :

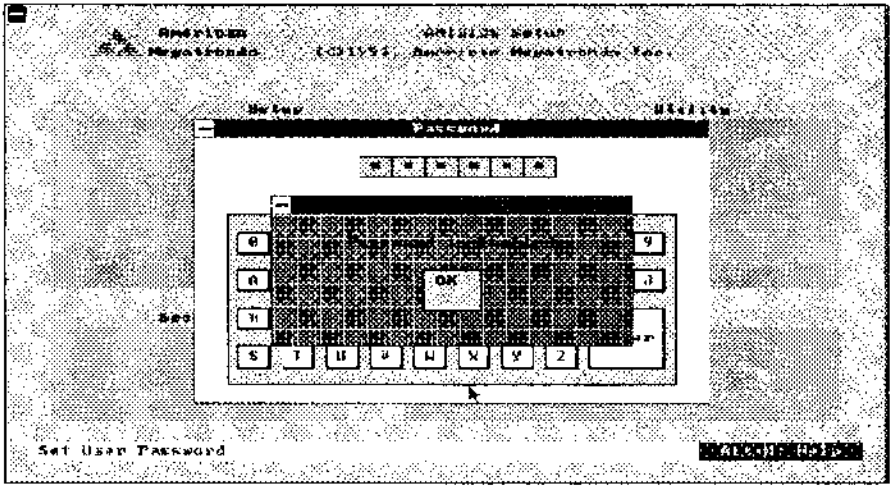


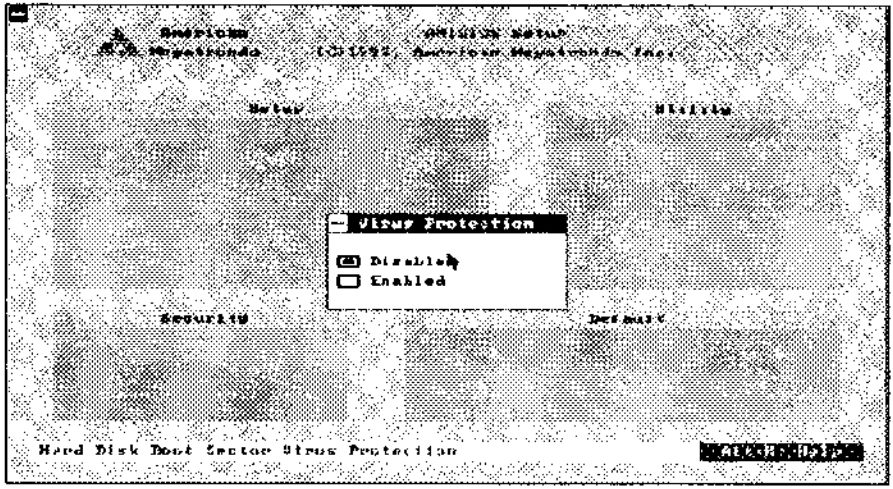
Figure 3-5 The screen of PASSWORD SETUP

Select the *"Password"*icon from the *"security"* section of the WinBIOS Setup main menu, Enter the password and press <Enter>. The screen does not display the characters entered. After the current password is entered, enter the new password as prompted and press <Enter>.

If the password confirmation is incorrect, an error message appears. If the new password is correctly entered, press <Esc> to return to the WinBIOS Setup main menu, the password is stored in CMOS RAM after WinBIOS Setup completed. The next time the system reboots, you are prompted for the password if the password function is present and is enabled.

3.9. Anti-Virus

When this icon is selected from the Security section of the WinBIOS Setup main menu, WinBIOS gives a warning when any program (or virus) issues a Disk Format command or attempts to write to the boot sector of the hard disk drive. The following screen appears when you select the Anti-Virus icon :



There are two settings, Enabled or Disabled. If enabled, the following massages appears when a write is attempted to the boot sector. You may have to type N several times to prevent the boot sector write.

Boot Sector Write !!!
Possible VIRUS : Continue (Y/N)? _

The following massage will be displayed after any attempt to format any cylinder, head, or sector of any hard disk drive via the BIOS INT13 Hard Disk Drive Service :

Format !!!
Possible VIRUS : Continue (Y/N)? _

You should disable *anti-virus protection* when you try to format a hard disk drive.

If the anti-virus feature is enabled, a virus warning message will be displayed when you attempt to format the hard disk drive.

If you select continue, formatting proceeds as normal.

If you do not want to continue formatting, you may have to press N several times (depending on how many retries are performed by the upper-level software). DOS, for example, does at least five retries before the format utility is actually aborted.

3.10. Default

The icons in this section allow you to select a group of settings for all WinBIOS Setup options. You can use these icons to configure system parameters quickly for preferable settings.

Original

Choose the Original icon to return to the system configuration values present in WinBIOS Setup .

Optimal

You can load the *optimal* default settings for the WinBIOS Setup options by selecting the Optimal icon. The Optimal default settings are best-case values that should optimize system performance. If CMOS RAM is corrupted, the Optimal settings are loaded automatically.

Fail-Safe

You can load the *Fail-Safe* WinBIOS Setup option settings by selecting the Fail-Safe icon from the Default section of the WinBIOS Setup main menu.

The Fail-Safe settings provide far from optimal system performance, but are the most stable settings. Use this option as a diagnostic aid if the system is behaving erratically.

4. Appendix

4.1. Drive table

Type	Cylinders	Heads	Write Precomp	LZ	Sector	Size
1	306	4	128	305	17	10MB
2	615	4	300	615	17	20MB
3	615	6	300	615	17	31MB
4	940	8	512	940	17	62MB
5	940	6	512	940	17	47MB
6	615	4	65535	615	17	20MB
7	462	8	256	511	17	31MB
8	733	5	65535	733	17	30MB
9	900	15	65535	901	17	112MB
10	820	3	65535	820	17	20MB
11	855	5	65535	855	17	35MB
12	855	7	65535	855	17	50MB
13	306	8	128	319	17	20MB
14	733	7	65535	733	17	43MB
15	—	—	—	—	—	—
16	612	4	0	663	17	20MB
17	977	5	300	977	17	41MB
18	977	7	65535	977	17	57MB
19	1024	7	512	1023	17	60MB
20	733	5	300	732	17	30MB
21	733	7	300	732	17	43MB
22	733	5	300	733	17	30MB
23	306	4	0	336	17	10MB
24	925	7	0	925	17	54MB
25	925	9	65535	925	17	69MB
26	754	7	754	754	17	44MB
27	754	11	65535	754	17	69MB
28	699	7	256	699	17	41MB
29	823	10	65535	823	17	68MB
30	918	7	918	918	17	53MB
31	1024	11	65535	1024	17	94MB
32	1024	15	65535	1024	17	128MB
33	1824	5	1024	1024	17	43MB
34	612	2	128	612	17	10MB
35	1024	9	65535	1024	17	77MB
36	1024	8	512	1024	17	68MB
37	615	8	128	615	17	41MB
38	987	3	987	987	17	25MB
39	987	7	987	987	17	57MB
40	820	6	820	820	17	41MB
41	977	5	977	977	17	41MB
42	981	5	981	981	17	41MB
43	830	7	512	830	17	48MB
44	830	10	65535	830	17	69MB
45	917	15	65535	918	17	114MB
46	1224	15	65535	1223	17	152MB
47	—	—	—	—	—	—