ST-6500 Setup Guide for Windows

TOSHIBA TEC CORPORATION

1. Introduction

This setup guide describes the procedure and notes for installing the drivers on the ST-6500/ST-6500-C7.

The procedure outline to set up the OS for the ST-6500/ST-6500-C7 is described below. Some drivers supported by some OS will be automatically installed, when the OS is installed.

Procedure outline to set up the ST-6500/ST-6500-C7 on Windows

- 1) Setting up BIOS
- 2) Installing Windows
- 3) Installing the 810E2 chipset software
- 4) Installing the SM712 graphic driver (for the ST-6500-C7)
- 5) Installing the PnP touch panel driver
- 6) Changing the serial port setting

2. Setup on Windows 98/Windows 98SE

1) Setting up BIOS

By pressing the F2 key on the keyboard, when the machine starts up, the BIOS Setup Menu is selected. Select the following item for BIOS setup.

[Exit]-> Load Setup Defaults (Win98/Me)

2) Installing Windows

Install Windows 98 or Windows 98SE.

- 3) Installing the 810E2 Chipset Software
 - Installing the Intel Chipset Installation Utility

Execute Chipset¥Chipset¥Disk1¥Setup.exe contained in the driver kit, and install "Intel Chipset Installation Utility."

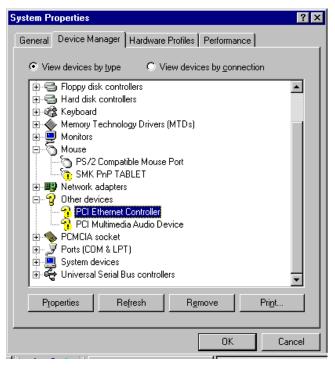
Installing the Intel 810/815 Chipset Family Graphics Driver

To enable the CRT display, this driver must be installed.

Execute Chipset¥Graphics¥Win9x¥Graphics¥Setup.exe contained in the driver kit, and install "Intel 810/815 Chipset Family Graphics Driver."

Installing the Intel[®] PRO/100 VE Network Connection Driver

Execute Chipset¥LAN¥100pdisk.exe contained in the driver kit, to extract the files onto the hard disk. Select [PCI Ethernet Controller] in the Device Manager and click on the "Properties" button.



The following screen appears. Select "Reinstall Driver" to install the driver.

Select the folder to extract 100pdisk.exe to, as the folder containing the driver to be installed. Select "Intel[®] PRO/100 VE Network Connection" to install the driver.

PCI Ethernet Controller Properties	? ×
General Driver Resources	
Sector Sector	
Device type: Other devices Manufacturer: None specified.	
Hardware version: 003	
Device status	
The drivers for this device are not installed reinstall the drivers for this device, click Rei	
	nstall Driver
□ Device usage	
Disable in this hardware profile	
Exists in all hardware profiles	
OK	Cancel
elect Device	×
Network adapters: The following models are	
Click the one you want to set up, and then the list, click Show All Devices. This list sho	
installation disk.	ows only what was round on the
Models:	
Intel(R) PR0/100 VE Network Connection	
En Intel(h) FRO/100 VE Network Connection	
Show compatible devices	<u>H</u> ave Disk
C Show all devices	
	OK Cancel

For detailed installation procedure, refer to Intel's documents and online help.

4) Installing the SM712 Graphic Driver

Select [Display] on the Control Panel and display the "Display Properties" screen. On this screen, select [Settings] – [Advanced] to display the "Standard PCI Graphics Adapter Properties" screen. Select [Adapter] – [Change] on this screen. Select "Display¥SM712¥Win98" in the driver kit to install "Silicon Motion LynxEM+."

5) Installing the CHIPS Graphic Driver

Select [Display] on the Control Panel and display the "Display Properties" screen. On this screen, select [Settings] – [Advanced] to display the "Standard PCI Graphics Adapter Properties" screen. Select [Adapter] – [Change] on this screen. Select "Display¥Chips¥Win98" in the driver kit to install "Chips And Technologies, Accelerator."

Display Properties
Background Screen Saver Appearance Effects Web Settings
Display:
Default Monitor on Standard PCI Graphics Adapter (VGA)
Colors Screen area 16 Colors Screen area 640 by 480 pixels
Extend my Windows desktop onto this monitor.
OK Cancel Apply

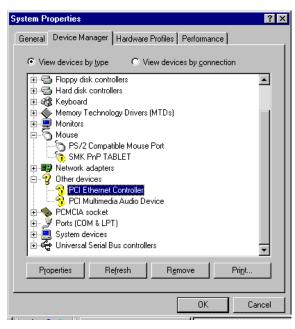
Standard PCI Graphics	Adapter Properties	? ×
General Adapter Moni	tor Performance Color Ma	anagement
Standard PCI 0	àraphics Adapter	<u>C</u> hange
-Adapter / Driver inform	ation	
Manufacturer:	(Standard display types)	
Software version:	(Unknown)	
Current files:	vga.drv,*vdd,*vflatd	
	ОК С	ancel <u>Apply</u>

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6) Installing the PnP Touch Panel Driver

Select "SMK PnP TABLET" in the Device Manager, and click on the "Properties" button. On the "SMK PnP TABLET properties" screen, select [General] – [Reinstall Driver] to install the driver.

Select "Tablet¥PnPTablet¥Win9x" in the driver kit to install "SMK PnP Tablet Driver."



Reboot the machine. Select [Touch Panel] on the Control Panel to display the "Touch Panel Property" screen. On this screen, select [Calibration] – [Execute] to set up calibration.

Touch Panel Property ? 🗙
Button Double Touch Sound Calibration
Executes position alignment of the touch panel and display device.
OK Cancel Apply

IMPORTANT:

- * Unless any of the PS/2 mouse, the serial mouse, or the USB mouse is used, the touch panel is not detected. When installing the driver, connect any of the mice and let the machine detect the touch panel.
- * Do not check the "Beep when touched" checkbox on the Sound tab page. This function is not available on Windows 98. (Windows 98 cannot keep the sound constant.)
- 7) Changing the Serial Port Setting

IRQ for COM4 has been set incorrectly. Change the IRQ to "11." No additional operation for the SIO1 port is required, since it cannot be actually used due to hardware configuration.

8) Setting up the Dual Display

To enable the dual display, carry out this setup.

The ST-6500-C7 enables the dual display using the Dual Display functions supported by Windows.

Select [Display] on the Control Panel to display the "Display Properties" screen. On this screen, select [Settings] – [Display]. Select the on-board VGA (Intel810E2)-equipped display. Check the "Extend my Windows desktop onto this monitor" checkbox at the lower left, then click on the "Apply" button. The on-board VGA will be enabled. Select proper "Colors" and "Screen area".

isplay Prope	rties		? ×
Background	Screen Saver Appea	irance Effects Web	Settings
Drag the m	onitor icons to match the	e physical arrangement of	your monitors
Display: 2. Mitsubisł	ni RD15M on Intel(R) 82	810E Graphics Controller	
Colors 256 Color	s	Screen area Less 640 by 480 p	More
	ny Windows desktop on	to this monitor.	A <u>d</u> vanced
	0	IK Cancel	Apply

IMPORTANT:

* Windows 98/98SE/2000/XP can use the Dual Display functions supported by the OS. However, Windows NT cannot use the Dual Display functions, since Windows NT does not support them.

IMPORTANT:

* If the SM712 VGA board (SMI) has been inserted on the machine, when Windows 98 is installed, the on-board VGA (Intel810E2) cannot be used after Windows 98 has been installed. On the "Device Manager" tab of the "System Properties" screen, the on-board VGA (Intel810E2) is marked with "!", which indicates the device is disabled. (See the screen below.)

To solve this problem, remove the SM712 VGA board from the machine, then start up the PC. It will make the on-board VGA (Intel810E2) enabled.

System Properties ? 🗙
General Device Manager Hardware Profiles Performance
View devices by type View devices by connection
E Computer E 2 CDROM E = Disk drives
 Display adapters Silicon Motion LynxEM+ Standard PCI Graphics Adapter (VGA)
E S Floppy disk controllers E S Hard disk controllers
E
E - ■ Network adapters E - J Ports (COM & LPT) E ■ System devices
E Controllers
Properties Refresh Remove Print
OK Cancel

9) Cautions of dual-screen use by Windows98 and Windows98SE.

If a dual-screen is set up by Windows 98 and Windows 98SE, an error may occur. iln order to set up a dual-screen without generating an error, please set up the follows;

Settings tab of Display Properties Control Panel.

When screen is in the state of disable, as shown in a figure, it is displayed faintly.

A second screen can be enabled by clicking the second display of a figure.

isplay Properties	?
Background Screen Saver Appea	arance Effects Web Settings
Drag the monitor icons to match the	e physical arrangement of your monitors
	2
	**).
Display:	
1. Default Monitor on Chips & Tech	nologies 65550 PCI 🔹
Juie energia internation en empre a reen	
	Screen area
Colors	
	Screen area
Colors	Screen area
Colors	Screen area Less More 800 by 600 pixels
Colors High Color (16 bit)	Screen area Less More 800 by 600 pixels

And then the following message boxes are displayed, choose Yes.



Apply button is clicked.

The Distance State			
A	- Decigonal Sciencificae Assesses Statil Met. Rolling		
California de la constante de	Онд Не закот сахото пися те дуксаматериент стуск сонон.		
Transaction	1 2		
Contraction Endpoint in Endpoint in	Inclusion of the Inclus		
Balant.	Contract Mc0182941 on Intel® 53708 Stanfor Converse Stanform		
for the second	Gif by 40 years Gif by		
	Dr. Canal	_	
1999 (12 8 2)		(1002M)	

Please perform PC re-starting or PC shutdown in the state having opened the control panel. Please do not click OK button or Cancel button of a display properties control panel. (If "OK" button or "Cancel" button are clicked, error may occur.)

3. Setup on Windows NT 4.0

1) Setting up BIOS

By pressing the F2 key on the keyboard when the machine starts up, the BIOS Setup Menu is selected. Select the following item for BIOS setup.

[Exit]-> Load Setup Defaults (DOS/WinNT/Other)

2) Installing Windows

Connect the PS/2 mouse and install Windows NT 4.0.

IMPORTANT:

* When Windows NT is installed without connecting the PS/2 mouse, the touch panel driver cannot be installed. Be sure to connect the PS/2 mouse before installing Windows NT.

3) Installing the Service Pack (SP)

Some drivers require a new version service pack. Install the required service pack.

- 4) Installing the 810E2 Chipset Software
 - Installing the Intel 810/815 Chipset Family Graphics Driver

To enable the CRT display, this driver must be installed.

Execute Chipset¥Graphics¥Win9x¥Graphics¥Setup.exe contained in the driver kit, and install "Intel 810/815 Chipset Family Graphics Driver."

Installing the Intel[®] PRO/100 VE Network Connection Driver

Execute Chipset¥LAN¥100pdisk.exe contained in the driver kit and extract the files onto the hard disk. Select [Network] on the Control Panel and execute "Network Setup Wizard."

Network Setup Wizard	
	To have setup start searching for a Network Adapter, click Start Search button. Network <u>A</u> dapters:
	BackCancel

Click on the "Select from list" button, and select the extracted folder to install the driver.

Network Setup Wizard	
	To have setup start searching for a Network Adapter, click Start Search button. Start Search Network <u>A</u> dapters: ☑ III Intel(R) PRO Adapter <u>S</u> elect from list
	< <u>B</u> ack <u>Next</u> > Cancel

For the detailed installation procedure, refer to Intel's documents or online help.

IMPORTANT:

*	service pack	ted component is installed and the machine is rebooted after the is installed, the message indicating the service is not functioning is he following event error is recorded in the event log.
	Even ID:	7001
	Source:	Service control manager
	Туре:	Error
	Explanation:	The Computer Browser service depends on the Server service which failed to start because of the following error: Not enough server storage is available to process this command.
		Event Detail
		Dete: 4/17/02 Event ID: 7001 True: 228/06 PM Source: Service Control Manager
		User NJA Type Error Computer STEON Category None
		<u>O</u> escription: The Computer Browser service depends on the Server service which Field to start because of the following ends Not enough serves alconge is available to process this command.
		Date & Lore & Lore
		Close Bevious New Help
	To clear this e	error, install the service pack again.

5) Installing the SM712 Graphic Driver

To use the SM712 VGA board (SMI), install this driver.

Select [Display] on the Control Panel to display the "Display Properties" screen. On this screen, select [Settings] – [Display Type]. Select "Display¥SM712¥WinNT" in the driver kit, to install "Silicon Motion LynxEM+."

6) Installing the CHIPS Graphic Driver

Select [Display] on the Control Panel and display the "Display Properties" screen. On this screen, select [Settings] – [Advanced] to display the "Standard PCI Graphics Adapter Properties" screen. Select [Adapter] – [Change] on this screen. Select "Display¥Chips¥WinNT" in the driver kit to install "Chips And Technologies, Accelerator."

Display Properties
Background Screen Saver Appearance Plus! Settings
Color Palette
16 Colors Less More
640 by 480 pixels
Font Size
Small Fonts
List All Modes Test Display Lype
OK Cancel Apply

splay Type			?
Adapter Type —			Cancel
vga compatible di	splay adapter	<u>C</u> hange	Detect
Driver Information			
Manufacturer:	Microsoft Corporation		
Version Numbers:	4.00, 4.0.0		
Current Files:	vga.sys, vga.dll		
Adapter Information	on		
Chip Type:	<unavailable></unavailable>		
DAC Type:	<unavailable></unavailable>		
Memory Size:	<unavailable></unavailable>		
Adapter String:	<unavailable></unavailable>		
Bios Information:	<unavailable></unavailable>		

7) Installing the PnP Touch Panel Driver

Select [Mouse] on the Control Panel to display the "Mouse Properties" screen. Select [General] – [Change]. Select the "PnPTablet¥WinNT" fonder in the driver kit to install "SMK PnP Tablet Driver."

Mouse Properties	? ×
Buttons Pointers Motion General	
Ó	
Name: Microsoft PS/2 Port Mouse	<u>C</u> hange
OK Cancel	Apply

After rebooting the machine, select [Start] - [Run] and run "tabcalNT.exe" to set up calibration.

8) Setting up the Dual Display

Since Windows NT does not support the Dual Display functions, the Dual Display functions cannot be used.

4. Setup on Windows 2000

1) Setting up BIOS

By pressing the F2 key on the keyboard, when the machine starts up, the BIOS Setup Menu is selected. Select the following item for BIOS setup.

[Exit]-> Load Setup Defaults (Win2000/XP)

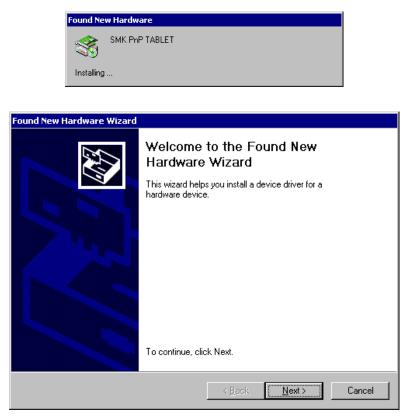
2) Installing Windows

Install Windows 2000.

- 3) Installing the 810E2 Chipset Software and the PnP Touch Panel Driver
 - Installing the Intel Chipset Installation Utility

Execute Chipset¥Chipset¥Disk1¥Setup.exe contained in the driver kit and install "Intel Chipset Installation Utility."

The following message is displayed after the machine is rebooted. Install the touch panel driver.



On the "Found New Hardware Wizard" screen, select "Search for suitable driver for my device" and click on [Next].

Found New Hardware Wizard
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
SMK PhP TABLET
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< <u>B</u> ack <u>N</u> ext > Cancel

Then, select "Specify a location" and designate the "Tablet¥PnPTablet¥Win2K" folder in the driver kit to install the driver.

Found New Hardware Wizard
Locate Driver Files Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify. To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy <u>d</u> isk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< <u>B</u> ack <u>N</u> ext≻ Cancel

Installing the Intel 810/815 Chipset Family Graphics

To enable the CRT display, install this driver.

Execute "Chipset¥Graphics¥Win2K_XP¥Graphics¥Setup.exe" contained in the driver kit, and install the "Intel 810/815 Chipset Family Graphics Driver."

Reboot the machine. Select [Touch Panel] on the Control Panel to display the "Touch Panel Property" screen. On this screen, select [Calibration] – [Execute] to set up calibration.

IMPORTANT:

* Unless any of the PS/2 mouse, the serial mouse or the USB mouse has been connected, the touch panel driver cannot be loaded properly, disabling the calibration setup. Connect any of the mice to let the machine recognize it.

4) Installing Other PCI Device Drivers

Execute "Chipset¥LAN¥100pdisk.exe" contained in the driver kit, and extract the files onto the hard disk.

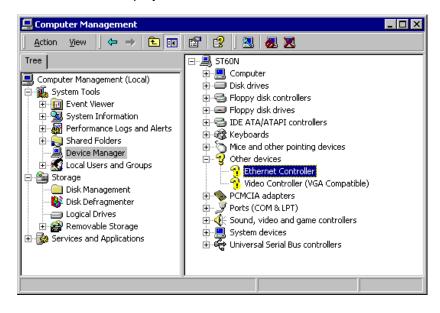
The Windows 2000 Device Manager indicates that "Ethernet Controller" and "Video Controller" are not properly installed.

Open the properties screen for the device with the "?" mark and click on "Reinstall Driver." Install these controllers in the same manner as the PnP Tablet Driver.

Designate the following folders:

Ethernet Controller: Folder that 100pdisk.exe was extracted to

Video Controller: "Display¥SM712¥Win2K" in the driver kit



5) Changing the Serial Port Setting

On Windows 2000, COM4 is recognized as if there are two. Therefore, either of them must be changed from COM4 to COM5 (SIO1).

IMPORTANT:

used due to hai there are two, e	peration for the SIO1 port is required, since it cannot be actually rdware configuration. However, since COM4 is recognized as if ither of them must be changed from COM4 to COM5 (SIO1). The and IRQs for COM4 and COM5 should be set as below:
• COM4	
Port address:	270-277
IRQ:	IRQ11
• COM5 (SIO1)	
Port address:	2E8-2EF
IRQ:	IRQ15

6) Updating the Driver

The driver kit contains drivers newer than those supported by Windows. Update the drivers, as required.

7) Setting up the Dual Display

Refer to 8) Setting up the Dual Display of Section 2. Setup on Windows 98/Windows 98SE.

IMPORTANT:

* On Windows 2000/XP, when the mouse pointer is moved on the screen of MPEG data on the CRT monitor in the dual display, another mouse pointer may appear on the TFT monitor.

To prevent this phenomenon from occurring, perform the following procedure: Display the "Display Properties" screen. Select [Settings] – [Advanced] – [Troubleshooting]. On the displayed screen, set the "Hardware acceleration" level to any level other than "FULL". This phenomenon will not occur.

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			Troublesho		-		
ļ	settings	control how	blems with y v Windows u ubleshoot dis	ises yo	our graphics	hardware	
Hard	ware accel	eration —					
you		hardware.	el of accelera Use the Disp				
Har	dware acc	eleration:	None			, F	ull
	olems with		p acceleratio pointer, or to				
		1		3	Cancel	1	

IMPORTANT:

* On Windows 2000, the on-board VGA (Intel810E2) is set as primary monitor. After Windows 2000 is installed, the on-board VGA is used for the screen display.

To perform the dual display, after installing the SM712 VGA board (SMI) driver, the TFT and the CRT monitors should be set as primary and secondary monitors, respectively.

To set the TFT monitor as primary monitor, select [Display] on the Control Panel to display the "Display Properties" screen. On this screen, select [Settings] – [Display]. Select "Silicon Motion LynxEM+." Check the "Use this device as the primary monitor" checkbox at the lower left, then click on the "Apply" button. The TFT monitor is set as primary monitor.

To use only the TFT monitor, set the TFT monitor as primary monitor, then disable the on-board VGA (Intel810E2).

isplay Properties	?
Background Screen Saver Appear	ance Web Effects Settings
Drag the monitor icons to match the p	hysical arrangement of your monitors.
Display: 2. Default Monitor on Silicon Motion Colors 256 Colors	LynxEM+ Screen area Less More
	800 by 600 pixels
Use this device as the primary mo Extend my Windows desktop onto Identify	
10	Cancel Apply

5. Setup on Windows XP

1) Setting up BIOS

By pressing the F2 key on the keyboard when the machine starts up, the BIOS Setup Menu is selected. Select the following item for BIOS setup.

[Exit]-> Load Setup Defaults (Win2000/XP)

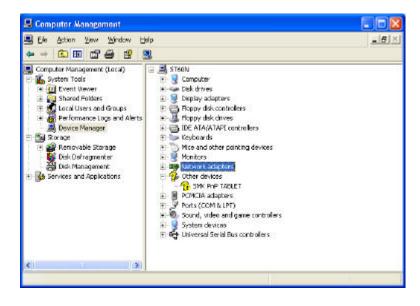
2) Installing Windows

Install Windows XP.

3) Installing the PnP Touch Panel Driver

The Windows XP Device Manager indicates that "SMK PnP Tablet" is not properly installed.

Open the properties screen and click on "Reinstall Driver" to install the PnP Tablet Driver.



On the "Found New Hardware Wizard" screen, select "Install from list or specific location" and click on [Next].



Select "Include this location in the search" and designate the "PnPTablet¥WIN2K" folder in the driver kit to install the driver.

ound New Hardware Wizard				
Please choose your search and installation options.				
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.				
Search removable media (floppy, CD-ROM)				
✓ Include this location in the search:				
D:\DrvKit\TABLET\PnPTablet\WIN2K				
O Don't search. I will choose the driver to install.				
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.				
<u>≺Back</u> <u>N</u> ext> Cancel				

Reboot the machine. Select [Control Panel] – [Touch Panel] to display the "Touch Panel Property" screen. On this screen, select [Calibration] – [Execute] to set up calibration.

IMPORTANT:

* Unless any of the PS/2 mouse, the serial mouse or the USB mouse has been connected, the touch panel driver cannot be loaded properly, disabling the calibration setup. Connect any of the mice to let the machine recognize it.

4) Installing Other PCI Device Drivers

Designate the following folder to install the driver: Video Controller: "Display¥SM712¥WinXP" in the driver kit

5) Changing the Serial Port Setting

On Windows XP, COM4 is recognized as if there are two. Therefore, either of them must be changed from COM4 to COM5 (SIO1).

IMPORTANT:

*	used due to har there are two, e	beration for the SIO1 port is required, since it cannot be actually dware configuration. However, since COM4 is recognized as if other of them must be changed from COM4 to COM5 (SIO1). The and IRQs for COM4 and COM5 should be set as be low:
	• COM4	
	Port address:	270-277
	IRQ:	IRQ11

• COM5 (SIO1) Port address: 2E8-2EF IRQ: IRQ15

6) Updating the Driver

The driver kit contains divers newer than those supported by Windows. Update the drivers as required.

7) Setting up the Dual Display

Refer to 8) Setting up the Dual Display of Section 2. Setup on Windows 98/Windows 98SE.

IMPORTANT:

* On Windows 2000/XP, when the mouse pointer is moved on the screen of MPEG data on the CRT monitor in the dual display, another mouse pointer may appear on the TFT monitor.

To prevent this phenomenon from occurring, perform the following procedure: Display the "Display Properties" screen. Select [Settings] – [Advanced] – [Troubleshooting]. On the displayed screen, set the "Hardware acceleration" level to any level other than "FULL". This phenomenon will not occur.

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			Troublesho		-		
ļ	settings	control how	blems with y v Windows u ubleshoot dis	ises yo	our graphics	hardware	
Hard	ware accel	eration —					
you		hardware.	el of accelera Use the Disp				
Har	dware acc	eleration:	None			, F	ull
	olems with		p acceleratio pointer, or to				
		1	ок	3	Cancel	1	