15.1" and 17" ChassisTouch Flat Panel Display Monitors Installation Guide

3M Touch Systems

Document Title*: 15.1" and 17" ChassisTouch Flat Panel Display Monitors Installation Guide*
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Contents

Chapter 4 Maintenance and Troubleshooting

Overview

Congratulations on the purchase of your touch monitor, and welcome to the world of 3M Touch Systems — a world where using a computer is as simple as touching the screen. This guide describes how to set up your 15.1" or 17" ChassisTouch™ flat-panel display (FPD) touch monitor.

This document assumes you have basic computer skills. You should know how to use the mouse and keyboard, choose commands from menus, open and run application programs, and save files.

Important Safety Information

Read and understand all safety information before using this product. Follow all instructions marked on the product and described in this document. Pay close attention to the following installation warnings and safety precautions.

Intended Use

The 15.1" or 17" ChassisTouch™ flat-panel display (FPD) touch monitors have been designed and tested to replace an existing monitor and convert it into a flat-panel touch screen. These models are intended for indoor use only and are not designed for use in hazardous locations.

DANGER
To avoid the risk of fire and/or explosion, which could result in serious personal injury or death, do not install this product in a hazardous location.

DANGER
To reduce the risk of fire, which could result in serious personal injury or death, do not remove the cover or back of the monitor. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

DANGER

To reduce the risk of electric shock, which could result in serious personal injury or death:

- Do not service the Flat Panel Display.
- Do not use non-conforming replacement parts.
- Do not remove the cover or back of the monitor.
- Do not place wet or damp objects on the monitor.
- Do not expose the monitor to rain or other sources of water, steam, or moisture.
- Do not place foreign objects on the monitor or its cables.
- Do not use a damaged power supply.
- Do not use a power cord that is frayed or otherwise damaged.

CAUTION

To reduce the risk of glass breakage, which could result in personal injury:

- Handle the monitor with care to avoid breaking the touch screen sensor. The display contains glass parts. Dropping the display may cause the glass parts to break.
- Do not place foreign objects on the monitor.

CAUTION

To avoid possible environmental contamination, which could result in personal injury, dispose of the flat panel display according to applicable governmental regulations.

To avoid the risk of property damage follow these important notes:

- Plug power cord into appropriate power source.
- Plug power cord into a grounded receptacle.
- When unplugging power supply cord, pull on plug not cord.
- Do not connect or disconnect this product during an electrical storm.
- Install the display in a well-ventilated area. Always maintain adequate ventilation to protect the display from overheating and to ensure reliable and continued operation.
- Do not expose this display to direct sunlight or heat. Passive heat may cause damage to the metal case and other parts.
- Do not install this display in areas where extreme vibrations may be generated. For example, nearby manufacturing equipment may produce strong vibrations. The vibrations may cause the display to exhibit picture discoloration or poor video quality.
- Ensure the metal enclosure does not contact the touch screen.
- Be sure to gasket display to enclosure properly.
- To avoid ergonomic concerns:
  - Do not install the monitor in a manner or location with awkward accessibility.
  - Extended use may result in muscle, tendon, or fixed posture strains. It is recommended you take periodic breaks from continuous use.

Explanation of Symbols

 Attention: Read accompanying documentation

 Caution: Risk of fire

 Caution: Risk of electric shock

Service and Repair Indicators

Do not attempt to service this unit yourself. Removing the display cover may expose you to dangerous voltage or other risks. Unplug the display from the power outlet and refer servicing to qualified service personnel in the event that:

- Liquid is spilled into the product or the product is exposed to rain or water.
- The product does not operate properly when the operating instructions are followed.
- The product has been dropped or the metal case has been damaged.
- The product exhibits a distinct change in performance, indicating a need for service.
- The power cable or plug is damaged or frayed.

3M Touch Systems Support Services

3M Touch Systems provides extensive support services through our website and technical support organization. Visit the 3M Touch Systems website at www.3Mtouch.com, where you can download touch screen software and drivers, obtain regularly updated technical documentation on 3M Touch Systems products, and learn more about our company.

Whenever you contact Technical Support, please provide the following information:

- Part number and serial number from your monitor
- Current driver version
- Operating system used
- Information on additional peripherals

Technical Support is available Monday through Friday 8 am to 8 pm US Eastern Standard Time – 9 am to 5 pm throughout Europe. Limited service Saturdays, Sundays and holidays.

You can contact 3M Touch Systems Technical Support (US only -- Eastern Standard Time) by calling the hot line or sending a fax.

- Technical Support Hot Line: 978-659-9200
- Technical Support Fax: 978-659-9400
- Toll Free: 1-866-407-6666
- Email: US-TS-Tech_Support@mmm.com

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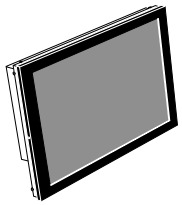
CHAPTER 1

Introduction to Flat-Panel Displays

Overview

The 3M Touch Systems product line of Flat-Panel Display (FPD) touch monitors offers the ChassisTouch monitor for kiosk, ATM, and industrial enclosures.



All ChassisTouch monitors are encased in rugged metal instead of plastic. The ChassisTouch monitors feature a touch screen interface, several mounting options, and sturdy construction.

The ChassisTouch FPDs are available in 15.1" and 17" diagonal screen sizes. The flat-panel display uses active-matrix thin-film transistor (AM-TFT) liquid crystal display technology. The 15.1" monitor supports a full-screen resolution of 1024 x 768; the 17" monitor supports a full-screen resolution of 1280 x 1024.

Note: The ChassisTouch FPD does not have a power LED. Each monitor has four buttons for using the on-screen menu and adjusting the video display. Refer to Chapter 3 for more information on these controls.

The monitors are available with 3M Touch System's ClearTek® capacitive touch screens. Capacitive is the touch screen of choice for public access applications requiring high levels of durability and reliable performance 24 hours a day, 7 days a week.

For those applications that require flexibility of input, including gloved hand use, we offer the ChassisTouch in a 5-wire resistive touch screen. This technology has been tested in a laboratory environment to withstand 35 million mechanical touches without noticeable degradation to the surface.[1]

The monitors also feature space saving designs, high resolution, low radiation, and low power consumption. These qualities make the FPD touch monitors ideal for applications that require superior color, resolution, and clarity.

Video Resolution on a Flat-Panel Display

Flat-panel displays, unlike CRTs, are optimized to run at one resolution. A flat-panel display has discrete points on the display which determine the exact location of a pixel. Each flat-panel display has an exact number of pixels associated with it. There is a one-to-one mapping between the number of pixels and the video addressability, sometimes called resolution.

Native Video Resolution

A flat-panel display should be used only at the resolution dictated by the number of pixels on the panel. For example, the 15.1" ChassisTouch monitors have 1024 pixels across the screen and 768 lines of pixels down the screen and can accurately display one resolution (1024 x 768) at full screen. The 17" ChassisTouch monitors have 1280 pixels across the screen and 1024 lines of pixels down the screen and can accurately display one resolution (1280 x 1024) at full screen.

Options for Using Other Video Resolutions

The 3M Touch Systems 15.1" and 17" FPD monitors support all standard resolutions up to their respective native resolution for monitor setup. Many video cards initially display a screen image at the SVGA or VGA resolution. By supporting these resolutions, the monitor can display the desktop controls that let you change to the optimal resolution of either 1024 x 768 (15.1") or 1280 x 1024 (17").

[1] Mechanical touches tested in a single x/y location using a finger-like stylus of 45 durometer, “A” shore hardness, 0.5 diameter with a load of 0.46 pounds, ±0.1 pound of force.

CHAPTER 2

Setting Up Your ChassisTouch FPD Monitor

This chapter describes how to set up and integrate your 3M Touch Systems ChassisTouch FPD monitor into a touch application. You need to complete the following tasks:

- Unpack the components
- Connect the video, touch screen, and power cables
- Power on the monitor and test your setup
- Install the touch screen software
- Calibrate the touch screen

System Requirements

The ChassisTouch flat-panel touch monitors require a personal computer (PC). These touch monitors are not supported on Macintosh computers.

The requirements for your PC are as follows:

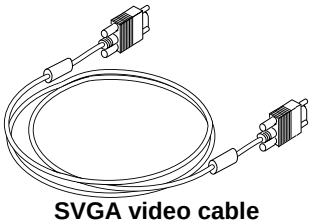
- Your PC must have an available RS-232 serial communication (COM) port. You connect the touch screen to this port.
- Your PC must have a unique interrupt request (IRQ) available to the COM port that the touch screen will use. The touch screen cannot share an IRQ with another device.
- If the only serial port available on your PC has 25 pins, you will need a 9-pin to 25-pin adapter.
- Your PC must have a video card and video driver already installed for the monitor. If you need to install a video card or a video driver, refer to your computer documentation for instructions.

When choosing your workspace, select a sturdy, level surface. Also, make sure you can easily access the back of the touch monitor and the computer. Easy access helps ensure a smooth setup of the touch monitor.

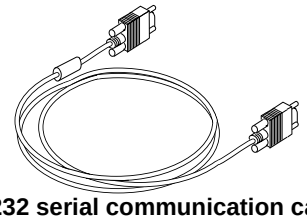
Note: Before setting up your ChassisTouch FPD, refer to the "Important Safety Information" section at the beginning of this document.

Unpacking Your Touch Monitor

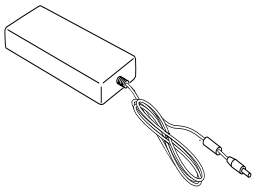
Carefully unpack the carton and inspect the contents. Your ChassisTouch FPD includes the following cables and accessories:



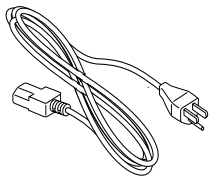
SVGA video cable



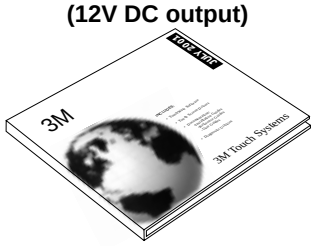
RS-232 serial communication cable



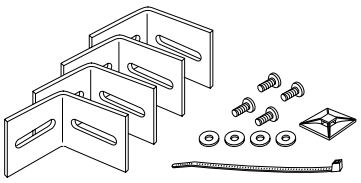
AC/DC power supply (12V DC output)



AC power cable



CD with touch screen software, documentation, and utilities

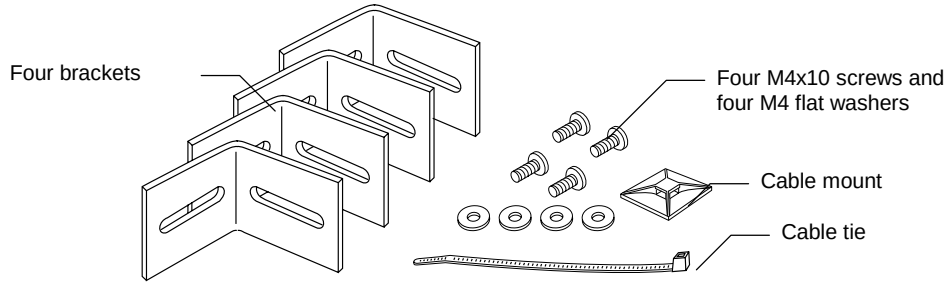


hardware kit (includes mounting brackets, screws, washers, cable tie, and cable mount)

Mounting the ChassisTouch Monitor

The ChassisTouch monitor is designed to fit any type of enclosure. All ChassisTouch monitors are encased in rugged metal instead of plastic, making them easy to integrate.

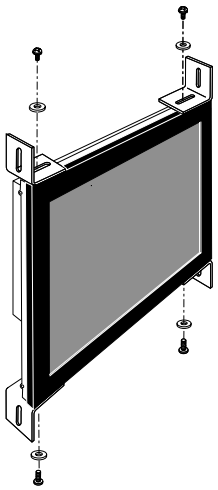
The ChassisTouch monitor includes a hardware accessory kit for mounting the unit into an enclosure.



The ChassisTouch hardware accessory kit includes four brackets, washers, and screws. The mounting holes are located on the sides of the monitor and are threaded to an M4 thread.

You can attach the brackets to the edges of the chassis. The brackets are slotted, allowing the chassis to slide in and out. You can also rotate the brackets to various positions.

Both units have the 100mm VESA mounting pattern on the back case to allow for arm mount capability.



Suggested Mounting for the 15.1″ ChassisTouch

Note: Do not mount the chassis unit directly from the rear of the cover. Always use the holes and brackets provided. Do *not* drill additional holes in the unit to mount brackets in other locations.

Access to the Video Controls

The controls for adjusting the video display are located on the back of the ChassisTouch monitor. These buttons let you display the on-screen

menu and adjust the phase, image position, contrast, and brightness. Make sure you will be able to access the video controls once the ChassisTouch monitor is installed.

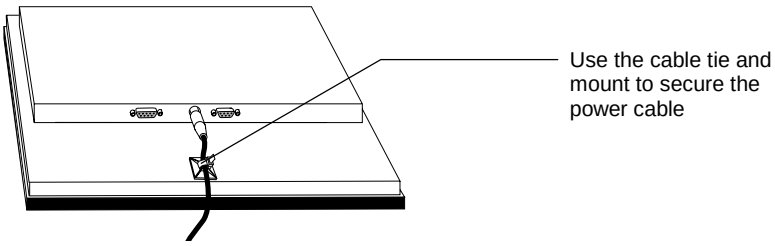
Clearance and Ventilation

Leave at least two inches of clearance space behind the ChassisTouch monitor for proper ventilation. Always maintain adequate ventilation to protect the display from overheating and to ensure reliable and continued operation.

Securing and Routing System Cables

You must be sure to secure all cable connections. Shaking and vibration, especially during shipment, may dislodge components that are improperly connected.

- Be sure to tighten all cable screws.
- Use the cable tie and cable mount supplied in the ChassisTouch hardware kit to secure the power supply cable.
- Route all wiring and cabling away from heat sources and sharp metal edges to avoid damage. Also, keep the touch screen cable away from sources of electromagnetic and radio frequency interference.



Installing the Video Card and Video Driver

Before you can connect your touch monitor, make sure your computer has a video card already installed for the monitor. After you connect the monitor, you need to install the video software driver. The video driver is supplied by the video card manufacturer and may be found on the diskettes that came with your computer. If you need information on installing a video card or video driver, refer to the manual that came with your video card.

Supported Video Display Modes and Refresh Rates

Your video card must support one of the display modes specified in Table 1. If you select an unsupported video mode, the monitor will stop working or display unsatisfactory picture quality.

Table 1. Applicable Display Mode and Refresh Rate

Display Mode	Refresh Rate
VGA (640 x 480)	60 72 75
SVGA (800 x 600)	56 Hz (15.1” only) 60 72 75
XGA (1024 x 768)	60 70 75
SXGA (1280 x 1024) (17” only)	60 75

Configuring the Display Settings

After you connect your ChassisTouch FPD and turn on your computer, you may need to configure one or more of these display settings. The ideal settings for these monitors are as follows:

- Display mode (also called desktop area or video resolution) 1024 x 768 (15.1") or 1280 x 1024 (17")
- Refresh rate (also called vertical scan rate or vertical sync) 60 Hz
- Color depth (also called color palette or number of colors) at least 16-bit (high color)

Using the Standard Controls for the Video Card

In addition to the standard controls on the monitor, each video card has several controls that let you adjust the display settings. The software and driver for each video card is unique. In most cases, you adjust these settings by using a program or utility provided by the manufacturer of the video card.

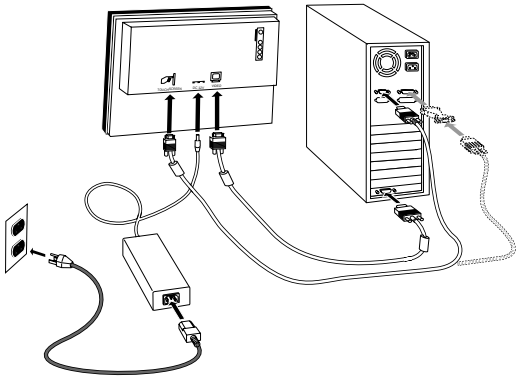
For example, you can use the Windows Display Properties control panel to adjust the desktop area (resolution), color depth, and refresh rate. Whenever you change these settings, the image size, position, or shape may change. This behavior is normal. You can readjust the image using the monitor controls described in this chapter.

For more information on adjusting the desktop area (resolution), color depth, or refresh rate, refer to the user manual that came with your video card.

Connecting the Touch Monitor

To connect the ChassisTouch FPD monitor

1. Turn off your computer. You should always turn off the computer before connecting or disconnecting a device.
2. Connect one end of the video cable to the video connector on the FPD. Connect the other end to the video card in your computer.
3. Connect one end of the RS-232 serial touch screen cable to the FPD. Connect the other end to an available serial communication (COM) port on the back of your computer.



4. Plug the AC/DC power supply into the FPD. Be sure to use the power supply included (LSE9901B1260) with the monitor or an equivalent class 2 rated (LPS) power supply.
5. Connect the power cable.

Testing the ChassisTouch FPD

Note: The ChassisTouch FPD does not have a power status light.

After connection, the monitor will switch on automatically. Before you test your touch monitor, make sure all cables are connected properly. Be sure to tighten all cable screws.

To test that the monitor is working properly:

1. Turn on your computer.
2. Make sure the video image is displayed. If it is not, turn on your monitor.
3. Make sure the video image is centered within the screen area. Use the monitor controls to adjust the image, if necessary.

You can adjust the horizontal and vertical position, image size, contrast, and brightness to better suit your video card and your personal preference. Refer to Chapter 3 for more information on using the on-screen menu to adjust the video display.

Installing TouchWare Software

TouchWare software includes the touch screen driver and control panel that enables your touch screen to work with your computer. When you install the CD, TouchWare will automatically load the correct driver for your system. 3M Touch Systems currently supports touch screen drivers for the following PC operating systems:

- Windows 2000
- Windows NT 4.0
- Windows 9x
- Windows Me

These drivers, as well as relevant documentation, can be found on the latest 3M Touch Systems CD. After the software is installed, restart your computer to load and activate the touch screen driver. To complete the setup of your touch monitor, make sure you calibrate the touch screen.

Calibrating the Touch Screen

After you connect your touch monitor and install TouchWare, you must calibrate the touch screen. *Calibration* serves two purposes:

- Sets the active area of the touch screen
- Aligns the touch screen's active area to the underlying video

To calibrate the touch screen, open the touch screen control panel and select Calibrate. Follow the directions displayed on the screen. For more information on calibration, refer to the online help or the user documentation.

CHAPTER 3

Adjusting the Video Display

Your ChassisTouch FPD monitor has several control buttons and an on-screen menu for adjusting the video display. For example:

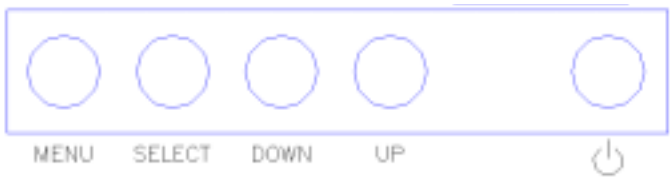
- You can adjust the pixel clock and phase to eliminate noise.
- You can adjust the image contrast and brightness to your lighting conditions.
- You can adjust the horizontal and vertical position of the image.

This chapter presents guidelines for adjusting the video display and describes how to use the available monitor controls to adjust the image to your liking. Before you make any adjustments:

- Be sure to set the controls under your normal lighting conditions.
- Display a test image or pattern whenever you adjust the video.

Controls for Adjusting the 15.1″ Video Display

Your 15.1″ ChassisTouch FPD monitor has four controls for adjusting the video display.



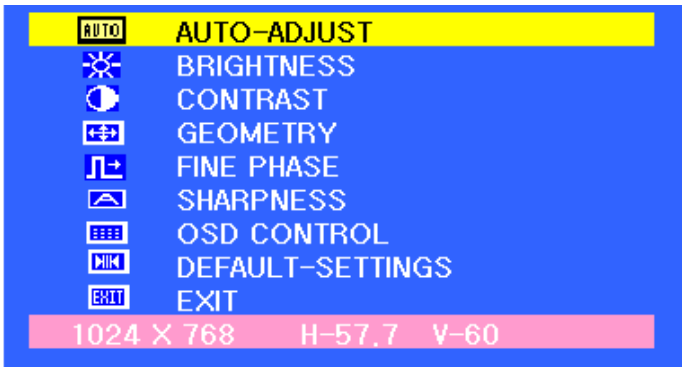
- MENU – Shows or hides the menu.
- SELECT -- Selects the current item or saves the current setting. Press ▼ or ▲ to change the value.

- ▼/DOWN -- Decreases the value of the selected menu option or moves to the next menu item.
- ▲/UP -- Increases the value of the selected menu option or moves to the previous menu item.

If you do not press the Menu, Select, or Adjust buttons for approximately 20 seconds, the Monitor Adjustment program times out and hides the menu options. You can press the Menu button at any time to display the options again.

OSD Controls for the 15.1" Monitor

Pressing MENU will pull up the On Screen Display (OSD) menu, as shown below.



On Screen Display for the 15.1" Monitor

Auto-Adjust

To perform an Auto Adjust, press SELECT.

Brightness

Selecting the Brightness option will allow you to adjust the brightness of the display. Adjust the brightness using the UP and DOWN buttons, and press SELECT to confirm the new setting.

Contrast

When the Contrast option is chosen, a sub-menu will appear. From this sub-menu, you can choose to adjust the overall contrast, or to alter the color bias of the display, making pictures look warmer (biased towards red) or cooler (biased towards blue).

Use the UP and DOWN buttons to move to the relevant setting. Press the SELECT button, and use the UP and DOWN buttons to alter the

setting. Press SELECT to confirm the change. Once you are satisfied with the contrast settings, press MENU to return to the main menu.

Geometry/Positioning

To alter the position and horizontal size of the displayed image, select the geometry option from the menu. This will bring up a sub-menu allowing you to alter the horizontal size, and the horizontal and vertical position of the image.

Horizontal Size Adjustment

If the Horizontal Size setting of your image is not fine-tuned, you may observe periodic vertical bars of video noise. These bars of noise are usually adjusted out when an Auto Adjust is performed. If the bars of noise are still present, this setting can be adjusted manually.

Adjust this setting so that the vertical bars of noise are replaced by either an even amount of noise across the whole screen, or the noise disappears completely. Any remaining noise can be eliminated by adjusting the Fine Phase Setting.

Fine Phase Setting

If the phase of your monitor is not fine-tuned, you may observe unstable horizontal noise lines and cross-talking, stretching from the edge of small windows on your display. This noise can be eliminated by adjusting the Fine Phase setting.

If you change your display to Windows shut down mode, this noise will be more visible, and easier to eliminate. Click on the "Start" button at the bottom right side, then click Shutdown. This will bring you to the Windows shutdown mode. After finishing phase adjustment, click on "Cancel" to return to your original Windows display.

If you do an Auto Adjust, the monitor will try to find the best Clock Phase setting. If you are not satisfied with the auto adjust, please fine-tune the phase manually as described above.

Sharpness

The Sharpness option can be used to adjust the sharpness of the picture when lower resolutions are being displayed.

OSD Control

Selecting the OSD Control option allows you to alter the position on the display that the OSD menu will appear, and how long the menu should stay on the screen when no buttons are pressed.

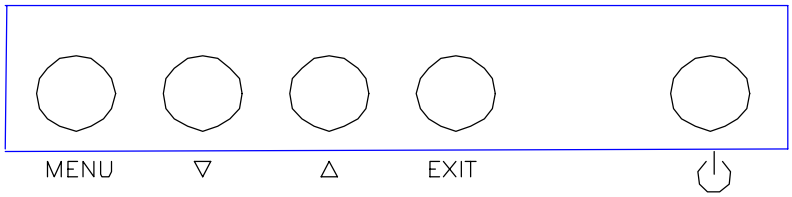
Factory Default Settings

If you wish to set the monitor display settings back to the default factory values, select the Default Settings option from the main OSD menu.

To save the current settings and close the OSD menu, select the Exit option at the bottom of the main OSD menu.

Controls for Adjusting the 17″ Video Display

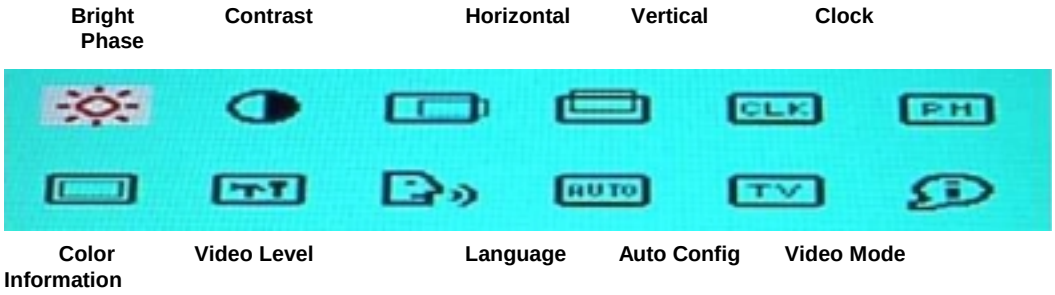
Your 17″ ChassisTouch FPD monitor has four controls for adjusting the video display.



- MENU -- Displays a menu of on-screen display (OSD) controls. Move to the relevant icon and press MENU again – the Status Bar at the bottom will change to red. Pressing MENU again saves the current settings and the Status Bar returns to green.
- ▼/DOWN -- Decreases the value of the selected menu option.
- ▲/UP -- Increases the value of the selected menu option.

If you do not press the Menu, Exit, or Adjust buttons for approximately 20 seconds, the Monitor Adjustment program times out and hides the menu options. You can press the Menu button at any time to display the options again.

OSD Controls for the 17" Monitor



On Screen Display for the 17" Monitor

Brightness and Contrast

These two settings allow you to adjust the brightness and contrast of the display to suit the environment that the display is to be used in.

Horizontal and Vertical Position

You can use the Auto Configuration function to adjust the image size and position mode automatically. These settings allow you to center the image on the display manually.

Clock (Horizontal Size) Setting

If the clock setting of your image is not fine-tuned, you may observe periodic vertical bars of video noise on your image. These bars of noise are usually adjusted out when an Auto Configuration is performed. If the bars of noise are still present, this setting can be adjusted manually.

Adjust this setting so that either the vertical bars of noise are replaced by an even amount of noise across the whole screen, or the noise disappears completely. Any remaining noise can be eliminated by adjusting the Clock Phase Setting.

Phase Adjustment Setting

If the phase of your monitor is not fine-tuned, you may observe unstable horizontal noise lines and cross-talk, stretching from the edge of small windows on your display. This noise can be eliminated by adjusting the Clock Phase setting.

If you change your display to Windows shut down mode, this noise will be more visible, and easier to eliminate. Click on the "Start" button at the bottom right side, and then click Shut Down. This will bring you to

the Windows shutdown mode. After finishing phase adjustment, click on the "Cancel" to return to your original Windows display.

If you do an Auto configuration, the monitor will try to find the best Clock Phase setting. If you are not satisfied with the auto adjustment, please fine-tune the phase manually as described above.

Color Adjustment

When you choose the Color option from the OSD, this will bring up a sub-menu that will allow you to adjust the color balance and level for your display.

By adjusting a single color, you can make the picture look warmer (biased towards red) or cooler (biased towards blue). Adjusting all three levels will make colors appear more or less striking.

Video Level Select

This setting allows you to alter the contrast of display to take account of VGA cards that use a higher signal voltage level.

Video Mode

TV is not supported.

Other Adjustments

You can change your OSD setting to display in other languages, according to your preference. It is also possible to monitor the input signal status in the status display row of the Information menu.

CHAPTER 4

Maintenance and Troubleshooting

If you have a problem setting up or using your monitor, you may be able to solve it yourself. Before calling 3M Touch Systems, try the suggested actions that are appropriate to the problems you are experiencing with the monitor. You may also want to consult your video card user's manual for additional troubleshooting advice.

Maintaining Your Touch Monitor

To maintain your display and keep your monitor operating at peak performance:

- Keep your monitor and screen clean
- Adjust the monitor video controls. Refer to Chapter 3 for more information.
- Do not install the display in a place where ventilation may be hindered. Always maintain adequate ventilation to protect the display from overheating and to ensure reliable and continued operation.

Touch Screen Care and Cleaning

The touch screen requires very little maintenance. 3M Touch Systems recommends that you periodically clean the glass touch screen surface.

Typically, isopropyl alcohol and water solution ratio of 50:50 is the best cleaning agent for your touch screen. You can also use straight isopropyl alcohol. Be sure to follow solvent manufacturer's precautions and directions for use when using any solvents.

- It is important to avoid using any caustic chemicals on the touch screen. Do not use any vinegar-based solutions.
- Apply the cleaner with a soft, lint-free cloth. Avoid using gritty cloths.

- Always dampen the cloth and then clean the screen. Be sure to spray the cleaning liquid onto the cloth, not the screen, so that drips do not seep inside the display or stain the bezel.
- Always handle the touch screen with care. Do not pull on or stress cables.

Monitor Installation Problems

Problem	Possible Causes and Solutions
No image displayed (blank screen)	**Is the monitor receiving power?** • Check that the computer's power cable is connected properly and securely into a grounded electrical outlet. • Check that the AC/DC power supply is firmly plugged into the monitor. Check that the LED is showing green on the AC/DC power supply. • Check that the monitor's power cable is connected properly and securely to an electrical outlet. • Try using another power cable. • Try using another electrical outlet. **Is the monitor receiving a valid video signal from the PC?** • Check that the computer is powered on. • Check that the video cable is connected properly and securely to the monitor and the computer. • Check that no pins are bent in the video cable connector. • Check that the video card is firmly seated in the card slot in your computer. • Check that the video input from the video card falls within the refresh rate of the display. Refer to **Table 1** for details. • Check that your computer is using a supported display mode. Refer to **Table 1** for details. **Is the monitor in Power Management mode?** • Touch the screen, press any key on the keyboard, or move the mouse to restore operation. **Are the brightness and contrast settings too low?** • Use the monitor controls to adjust these values.
Abnormal image	• Check that the video input from the video card falls within the refresh rate of the display. Refer to **Table 1** for details. • Check that the video cable is connected properly and securely to the monitor and the computer.
Colors of image are abnormal	• Check that the video cable is connected properly and securely to the monitor and the computer. • Check that no pins are bent in the video cable connector.
Disturbances on the screen	• The video display adjustments are incorrect. Refer to Chapter 3 for adjusting procedures.

Troubleshooting the Touch Screen

If you are experiencing problems with the touch screen, check the following list of common installation errors.

Table 2. Common Touch Screen Installation Issues

Common Installation Issues	Possible Solutions
Touch screen does not respond to touch	• Review the installation procedures. Are all cables connected properly? • After you installed TouchWare, did you restart your PC to activate the touch screen driver? • Are the communication settings correct? Is the touch screen trying to use the same COM port or IRQ as another device (for example, a mouse)? If so, a hardware device conflict will result and the touch screen will not work.
Touch screen is not accurate	Calibrate the touch screen for the current video resolution and operating system.
Cursor does not follow finger movement or does not reach the edges of the screen	Calibrate the touch screen for the current video resolution and operating system.
Cursor is not located directly underneath your finger	• Open the touch screen control panel and make sure all cursor offsets (vertical, edge/horizontal) are turned off. • Calibrate the touch screen for the current video resolution and operating system.
Cursor is extremely jittery or erratic	Stabilize the cursor by adjusting the operating frequency of the touch screen controller.
Cursor lags finger	Lower the baud rate of the touch screen controller and the touch screen driver.

Power Management

The ChassisTouch monitor conforms to the Video Electronics Standards Association (VESA) Display Power Management Signaling (DPMS) standard. To benefit from power management, the monitor must be used in conjunction with a computer and video card that implements the VESA DPMS standard.

The PC automatically invokes the power management feature if you do not use the touch screen, mouse, or keyboard for a user-defined period of time. To restore the video image, simply touch the screen, press a key, or move the mouse.

Regulatory Agency Approvals

ChassisTouch 15.1" Monitor

Your product complies with the following regulatory standards:

- FCC-B
- CE
- UL/CUL

This equipment has been tested and found to comply within limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection, against harmful interference in residential installations. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may case harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Move the equipment away from the receiver.
- Consult the dealer or an experienced radio/television technician for additional suggestions.

You are cautioned that any change or modification to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

This device complies with Part 15 of the FCC rules: Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. 3M Touch Systems is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user’s authority to operate the equipment.

ChassisTouch 17" Monitor

Your product complies with the following regulatory standards:

- FCC-A
- CE
- UL/CUL

This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection, against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may case harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. 3M Touch Systems is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user’s authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.