PLTV-3250

32" Liquid Crystal Display

User’s Manual
Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatuses (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug.
   A polarized plug has two blades, one wider than the other.
   A grounding-type plug has two blades and a third grounding prong.
   The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, the apparatus does not operate normally, or the apparatus has been dropped.
15. To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
16. Do not expose apparatus to dripping or splashing and do not place objects filled with liquid on the apparatus.
17. Only use apparatus with battery specified by manufacturer.
Product Cautions

TO PREVENT POSSIBLE DANGER, ELECTRIC SHOCK, AND OTHER INJURIES WHEN HANDLING YOUR DISPLAY, PLEASE BE AWARE OF ALL WARNINGS AND SAFETY PRECAUTIONS LISTED BELOW.

Never spill any liquid of any kind on the display.

Never insert anything into the display, where objects can come into contact with high voltage nodes or damage internal components.

Do not attempt to service the display yourself. Opening or removing covers exposes high voltage nodes and other hazards. Refer all servicing to qualified service personnel.

Do not touch the display or antenna during thunderstorms. Unplug the display during thunderstorms, or if it will not be used for extended periods. Failure to do so may result in electric shock or fire.

Before cleaning the display, unplug it from the wall. Use a damp cloth for cleaning. Never use liquid or aerosol cleaners.

To prevent overheating and ensure reliable operation, place the display only in a well ventilated location. Avoid cramped or inadequately ventilated locations. Place the display at least 10 cm (4") from walls or other objects. Always keep the vent clean. Never place the display upside down.

Dangerous Voltage

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated, dangerous voltage within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

Instructions

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note: Read all safety and operating instructions before operating your new display.
Conformity and Compliance

FCC Compliance Statement
This equipment has been tested and found to comply with the 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 when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (this can be determined by turning the device 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.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution:
To comply with the limits for an FCC Class B computing device, the user should use the shielded signal cable and power cord supplied with the unit. The FCC warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Radio Frequency Interference Statement

Warning:
This is a Class B product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Canadian DOC Notice for Class B Computing Devices
This digital apparatus does not exceed the Class B limits for radio noise emissions from a digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.
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Introduction

Congratulations on purchasing your new Protron Liquid Crystal Display!

You can use your new display as a television, in a home theater system, or even as a computer monitor. With HDMI, component, composite, and S-Video video inputs, you can connect numerous devices to your display, including DVD players, VCRs, HDTV receivers, video game systems, camcorders, and so on. And with video and audio output, you can connect your display to a home stereo system with a subwoofer, or even record what is displayed on the screen.

The built-in HDTV tuner allows you to simply connect a standard HDTV antenna to enjoy the clarity and brilliance of modern digital television.

The progressive scan HDMI and component video inputs on your display give you the highest quality video available, allowing you to enjoy crystal-clear DVDs and other media.

Features

- 32" viewable display area
- 1366 × 768 resolution
- Built-in HDTV tuner with coaxial input
- Analog TV tuner with coaxial input
- HDMI audio/video input
- 2 progressive scan component video inputs
- 2 composite video inputs
- S-Video input
- 5 stereo audio inputs, one for each video input
- Optical S/PDIF audio output
- VGA computer video input
- 1/8" stereo audio input jack for computer audio
- VESA DPMS-compliant power saving—automatically turns off the display after a configurable period of inactivity
- Windows 95/98/2000/XP Plug and Play compliant
- Conforms to VESA standards and supports the DDC1 and DDC2B specifications
- Wide viewing angle
- Versatile, functional, and user-friendly On-Screen Display (OSD)
Unpacking Your New Display

Before using your new display, you should unpack the contents of the box and check to make sure everything is present and undamaged.

To unpack the display:
1. Open the top of the box, then remove the accessories box from behind the display and set it aside.
2. Lift the display out of the box.
3. Remove the pads and set the display aside.

The accessories box should contain the items indicated below. If any items are missing or damaged, contact the seller immediately.

- Power Cord
- VGA Cable
- PC Audio Cable
- RCA Cable
- Component Video Cable
- Remote Control
- 2 × AAA Battery
Setting Up the Display

The display requires a stable, level, and clean surface near a power outlet, 10 cm (4") away from walls or other large objects. The rear ventilation grid should be unobstructed, and the display should not be exposed to water or heat. Before setting up the display, prepare such a space.

To set up the display:
1. Remove the power cord from the accessories box, insert the appropriate end into the power (AC IN) connector on the bottom of the display, and then insert the other end into a free power outlet.

2. Turn on the power switch on the bottom of the display.

Connecting a Digital TV Signal

To connect a digital TV signal source to the display, connect a coaxial cable between the ATSC input and the TV signal source.
Setting Up the Display

Connecting an Analog TV Signal
An analog TV signal may come from a cable box, satellite receiver, antenna, or similar device.

To connect an analog TV signal source to the display, connect a coaxial cable between the NTSC input and the TV signal source (for example, a cable box, satellite receiver, or antenna).

Note: If you would like to be able to record the TV signal with a VCR, DVD recorder, or similar device, connect the TV signal source to the input of the recording device with one cable, then connect the output of the recording device to the NTSC jack on the display with another cable.

Connecting Composite Video Devices
Many video devices, such as VCRs, DVD players, video game systems, and camcorders, have composite video outputs. Composite video uses one RCA cable to transmit video information and generally provides lower quality than S-Video, component video, and HDMI (see below).

To connect a composite video source to the display:
1. Using an RCA cable, connect the composite video output (yellow) on the source device to the corresponding jack in one of the two composite video blocks on the display (AV 1 IN or AV 2 IN).
2. Using two other RCA cables, connect the right (red) and left (white) audio outputs on the source to the corresponding jacks in the same composite video block used above.
Connecting S-Video Devices

Many video devices that have composite video outputs also have S-Video outputs. S-Video uses a single four-wire cable to transmit video information. Two of the wires are used to transmit video. Because it splits the video signal into two components, S-Video generally provides higher quality than composite video, but lower quality than component video and HDMI (see below).

**Note:** The pins used in S-Video connectors are somewhat fragile. Take care to avoid bending the pins, as a bent or broken pin can cause loss of color information or total signal loss.

To connect an S-Video source to the display:

1. Using an S-Video cable, connect the S-Video output on the source device to the S-Video jack on the display.

2. Using two RCA cables, connect the right (red) and left (white) audio outputs on the source to the corresponding audio jacks on the display.
Connecting Component Video Devices

High-quality video devices, such as HDTV receivers and high-end DVD players, have component video outputs. Component video uses three RCA connections to transmit video information. Because the information is split into three signals, component video offers higher quality than composite video and S-Video.

**To connect a component video source to the display:**

1. Using three RCA cables, connect the three component video outputs to the corresponding jacks in one of the two component video blocks on the display.

2. Using two other RCA cables, connect the right (red) and left (white) audio outputs on the source to the corresponding jacks in the same component video block used above.

Connecting HDMI Devices

The highest-quality video devices have HDMI outputs. An HDMI cable carries progressive scan video of the highest quality.

To connect an HDMI signal source to the display, use an HDMI cable to connect the source device to the HDMI input on the bottom of the display.

Connecting to an Audio System

Your display has an optical audio output that can be used to play the display’s audio on a peripheral system, such as a stereo system or a home theater system.

To connect the display to an audio system, connect the OPTICAL output to your stereo system using an optical digital cable.
Connecting a PC
Your display can be used as a computer monitor for any computer with a VGA video output. In addition, the computer’s audio output can be connected to the display and played through the display’s speakers.

To connect a PC to the display:
1. Set the video resolution on the computer to 1280 × 1024 or less before connecting to the display (see “Supported Computer Video Modes” on page 28 for a full list of supported modes).

   In Windows, right-click on the desktop and select Properties to bring up the Display Properties window. Select the Settings tab. Adjust the Screen resolution as needed, select Apply, then select OK.

   In Mac OS X, select System Preferences under the Apple menu. Open the Displays panel and select the Display tab. Select the desired resolution from the list.
Setting Up the Display

2. Connect a VGA cable between the VGA output on the computer and the D-SUB input on the display.

3. (OPTIONAL) Using a 1/8” stereo audio cable, connect the computer’s audio line output (LINE OUT) to the audio input on the bottom of the display (PC AUDIO IN).
Operating the Display

Using the Buttons on the Display
There are a number of touch-sensitive buttons at the bottom right of the screen. To press one, simply touch its label.

Turning the Display On and Off
There is a power switch on the bottom of the display and a power button on the front of the display and on the remote. The power switch is used to cut off power completely, whereas the power button turns the screen off but allows the remote to continue working.

To turn the display on:
1. If the power light on the front of the display (bottom right) is off, turn on the power switch on the bottom of the display.
2. Press the power button.

To turn the display off:
1. Press the power button.
2. If the display will be unused for an extended period of time, turn off the power switch on the bottom of the display and disconnect the power.

Selecting the Video and Audio Source
The signal source may come from any of the input blocks on the sides or bottom of the display. The SOURCE button cycles through these.

To change the audio/video source, press the SOURCE button until the correct source is selected. The SOURCE button cycles through the following sources:

- TV
- DTV
- Component1
- Component2
- AV1
- AV2
- HDMI
- S-Video
- VGA

Adjusting the Volume
The audio volume may be adjusted from the remote or the front of the display.

To change the volume, press the VOL - and VOL + buttons on the display or the VOL - and VOL + buttons on the remote.

Selecting the Television Channel
The television channel may be selected from the remote or the front of the display.
Operating the Display

To change the channel, press the CH ▲ and CH ▼ buttons.

To change to a particular channel directly, enter the desired channel number on the remote keypad, then press the • button.

Accessing the On-Screen Display

The On-Screen Display allows you to configure the operation of the display. You can change video and audio settings, activate and configure closed captioning, select television channels, control access to mature programming, and configure other general display behavior. See “Configuring the Display” on page 16 for more information.

To access the OSD, press the MENU button.
Using Your Display for the First Time

When you turn on your LCD for the first time, you will need to set up the display for proper operation by scanning the television spectrum for available channels.

Setting up Digital Television Channels
Once the HDTV signal is connected to the display, you should scan all channels to find strong signals. This will make it much easier to navigate through the channels.

To scan all channels:
1. Turn the display on using the power button.
2. Press SOURCE until the signal source is set to DTV.
3. Press MENU to bring up the On-Screen Display (OSD).
4. Press ▲ until the Setup menu shows.
5. Press ▼ until Time Zone is highlighted, then press ▲ until the correct time zone is selected and press ENTER.
6. Press ▲ until the Channel menu shows.
7. Press ▼ until Auto Program is highlighted and then press ENTER twice to begin scanning for available television channels.
Setting up Analog Television Channels
Once an analog television signal is connected to the display, if you are connecting directly to a
wall jack or antenna, you should scan all channels to weed out channels with insufficient signal
strength. This will make it much easier to navigate through the channels.

To scan the signal spectrum:
1. Turn the display on using the power button.
2. Press SOURCE until the signal source is set to TV.
3. Press MENU to bring up the On-Screen Display (OSD).
4. Press ▼ until the TV menu shows.
5. Press ENTER to enter the menu.
6. Press ▼ until Channel System is
   highlighted, then press ENTER to select it.
7. Press the ▲ and ▼ buttons until the
   appropriate system is highlighted, then
   press the ENTER button to select it.
   Select Air if you are using an antenna.
   Select one of the Cable options if you are connecting directly to a cable TV wall outlet.
   Contact your cable service provider to find out which system is in use in your area. Cable or
   Cable-IRC will work with most systems.
8. Press MENU to return to the TV menu.
9. Press ▲ until Auto Scan is highlighted and then press ENTER to select it. The display will
   automatically scan all television channels for those with a strong signal.
Using the Remote Control

The remote control can be used to control every aspect of the display's operation and includes more functionality than the controls on the front of the display.

<table>
<thead>
<tr>
<th>Button(s)</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Turns the display on and off</strong></td>
<td></td>
</tr>
<tr>
<td>Displays current source and television channel information</td>
<td></td>
</tr>
<tr>
<td>Switches between the TV signal sources: TV and DTV</td>
<td></td>
</tr>
<tr>
<td>Selects the signal source: TV, DTV, Component1, Component2, AV1, AV2, HDMI, S-Video, or VGA</td>
<td></td>
</tr>
<tr>
<td>When viewing digital TV, displays a list of available channels</td>
<td></td>
</tr>
</tbody>
</table>

The following is a list of all buttons on the remote and their functions:
### Using the Remote Control

<table>
<thead>
<tr>
<th>Button(s)</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLEEP</td>
<td>Sets the display sleep timer. The timer can be turned off or set to 30, 60, 90, or 120 minutes.</td>
</tr>
<tr>
<td>PICTURE</td>
<td>Cycles through the color temperature options: Warm, Normal, Cool, or User</td>
</tr>
<tr>
<td>SOUND</td>
<td>Cycles through the sound enhancement options: Normal, Music, Speech, Jazz Club, Concert, or Movie</td>
</tr>
<tr>
<td>CH.</td>
<td>When viewing digital TV, brings up a list of the channels you have viewed most</td>
</tr>
<tr>
<td>C.C.</td>
<td>When viewing analog TV, brings up the closed captioning menu, where you can select the closed caption channel</td>
</tr>
<tr>
<td>V-chip</td>
<td>When viewing digital TV, turns closed captioning on and off</td>
</tr>
<tr>
<td>INFO</td>
<td>Brings up the V-Chip configuration menu</td>
</tr>
<tr>
<td>GUIDE</td>
<td>When viewing digital TV, brings up the program guide, which displays program schedules and information for each channel</td>
</tr>
<tr>
<td>1 2 3</td>
<td>Used to enter numbers on the display and to select the television channel</td>
</tr>
<tr>
<td>4 5 6</td>
<td></td>
</tr>
<tr>
<td>7 8 9</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Returns to the previous channel</td>
</tr>
<tr>
<td>MP1</td>
<td>When viewing TV, used to jump to a television channel once it has been entered on the keypad</td>
</tr>
<tr>
<td>MTS</td>
<td>When viewing analog TV, selects the MTS (Multichannel Television Sound) audio channel used: Mono, Stereo, or SAP (Secondary Audio Programming)</td>
</tr>
<tr>
<td>MENU</td>
<td>When viewing digital TV, selects the audio language</td>
</tr>
<tr>
<td></td>
<td>Brings up the On-Screen Display, where you can configure display settings</td>
</tr>
<tr>
<td></td>
<td>Used to navigate display menus</td>
</tr>
<tr>
<td></td>
<td>Selects the highlighted item or confirms the current adjustment</td>
</tr>
<tr>
<td></td>
<td>Selects the television channel</td>
</tr>
<tr>
<td>MUTE</td>
<td>Mutes the audio</td>
</tr>
</tbody>
</table>
## Using the Remote Control

**Note:** To use a universal remote with your display, program the remote to control any NEC television.

### Replacing the Remote Batteries

The remote requires two AAA batteries, which are held in a small enclosure on the rear of the remote.

**To replace the batteries:**

1. Release the tab and pull the enclosure out of the remote.
2. Remove the old batteries and replace them with the new batteries. Ensure the batteries are oriented as indicated in the enclosure.
3. Snap the enclosure back into the remote.

### Button(s) Function

<table>
<thead>
<tr>
<th>Button(s)</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPECT</td>
<td>Selects the aspect ratio used by the display: 4:3 or Full (16:9)</td>
</tr>
<tr>
<td>VOL</td>
<td>Adjusts the audio volume</td>
</tr>
</tbody>
</table>

![Remote Control Diagram](image)
Configuring the Display

The On-Screen Display (OSD) allows you to configure the operation of the LCD. You can change video and audio settings, activate and configure closed captioning, select television channels, control access to mature programming, and configure other general display behavior.

Note: When the source is set to DTV, there is a different set of OSD menus than for other sources.

To use the OSD (DTV):
1. Press the MENU button on the remote or the top of the display.
2. Once the OSD appears, use the ▲ and ▼ buttons to navigate the menus represented by icons at the top of the OSD.
3. Use the ▲ and ▼ buttons to navigate the menu items.
4. Press the ENTER button to select the desired item.
5. Use ▲ and ▼ (or ▲ and ▼ for sub-menus) to adjust the value and then press ENTER to accept.
6. Press MENU to exit a menu.

To use the OSD (other sources):
1. Press the MENU button on the remote or the top of the display.
2. Once the OSD appears, use the ▲ and ▼ buttons to navigate the menus.
3. Press the ENTER button to enter the selected menu.
4. Use the ▲ and ▼ buttons to navigate the menu items.
5. Press the ENTER button to select the desired item.
6. If a sub-menu appears upon pressing ENTER, repeat steps 4 and 5 to select an item on the sub-menu.
   Otherwise, use ▲ and ▼ to adjust the parameter and then press ENTER to accept the value.
7. Press MENU to exit a menu and then, finally, to exit the OSD.
Configuring the Display

**Note:** The currently selected source determines which menus are available in the OSD. The following table lists the menus available for each source:

<table>
<thead>
<tr>
<th>Source</th>
<th>Image</th>
<th>Audio</th>
<th>TV</th>
<th>PC</th>
<th>Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Component1</td>
<td>•</td>
<td>•</td>
<td></td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>Component2</td>
<td>•</td>
<td>•</td>
<td></td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>AV1</td>
<td>•</td>
<td>•</td>
<td></td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>AV2</td>
<td>•</td>
<td>•</td>
<td></td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>HDMI</td>
<td>•</td>
<td></td>
<td></td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>S-Video</td>
<td>•</td>
<td>•</td>
<td></td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>VGA</td>
<td></td>
<td>•</td>
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<td></td>
<td>•</td>
</tr>
</tbody>
</table>

**Image**

The Image menu allows you to change the display's video settings. You can adjust the following parameters:

- **Scheme**
  Selects a display scheme for different video types: Normal, Vivid, Sports, or Nature.

- **Brightness**
  Sets the brightness of the display image.

- **Contrast**
  Sets the variation between light and dark colors.

- **Hue**
  Sets the intensity of color in the display image.

- **Saturation**
  Sets the saturation of color in the display image.

- **Sharpness**
  Sets the image sharpness.

- **Color Temperature**
  Sets the color temperature used by the display: Warm, Normal, Cool, or a user-defined setting (User).

  To set the user-defined color temperature, select the User option and adjust the levels of red, green, and blue to be used to produce white.
Configuring the Display

Aspect Ratio
Controls the aspect ratio used by the display: Full (16:9—widescreen) or 4:3.

Audio
The Audio menu allows you to change the way audio is played, including balance, equalization, and other sound processing. You can change the following settings:

Volume
Adjusts the speaker volume.

Mute
Mutes and unmutes the sound.

Bass
Adjusts the volume of bass in the audio.

Treble
Adjusts the volume of treble in the audio.

Balance
Sets the relative volumes of the left and right speakers.

Auto Volume
Turns automatic volume adjustment, used to compensate for program sound level variation, on and off.

MTS
(TV only)
Selects the MTS (Multichannel Television Sound) channel played back while watching television: Auto, Mono, Stereo, or SAP (Secondary Audio Programming).

Sound Field
Selects a sound enhancement scheme: Normal, Music, Speech, Jazz Club, Concert, or Movie.

HDMI Audio
(HDMI only)
Selects the source for HDMI audio:

- HDMI—Audio carried by the HDMI cable
- PC Phone Jack—Audio connected to the PC AUDIO IN jack
Configuring the Display

TV
The TV menu allows you to select the television signal type and select which television channels are available for viewing, manually or automatically. It contains the following menu items:

   **Auto Scan**
   When selected, automatically scans all television channels for valid signals and makes unavailable any channels with insufficient signal strength.

   **Channel System**
   Sets the type of television signal source in use. The options are as follows:
   - **Antenna**—A standard television antenna
   - **Cable**—A cable TV signal
   - **Cable-HRC**—A type of cable signal primarily used on the West Coast of the US
   - **Cable-IRC**—A type of cable signal primarily used on the East Coast of the US

   **Program Editor**
   Allows you to manually adjust which channels are available when flipping through channels. Select **Add Program** to include the current channel and **Delete Program** to exclude it.

   **Fine Tune**
   Finely adjusts the reception frequency used for the current channel, for better reception.

PC
The PC menu allows you to change the video options used with a VGA or HDMI video source. You can adjust the following parameters:

   **Auto Adjust**
   When turned on, automatically adjusts image position and synchronization.

   **Phase**
   Adjusts the phase of the video clock.

   **Clock**
   Adjusts the frequency of the video clock.

   **Display Adjustment**
   Controls the position of the image on the screen. Use the arrow keys to center the screen image.
Configuring the Display

Setup
The Setup menu contains general display settings, including OSD options, timers, display format, closed captioning, and parental controls. It contains the following menu items:

Clock Display
Turns the time display on and off. When on, the time shows in the top right corner of the display.

Set Date
Sets the current date. Select each digit using the arrow keys, then enter it using the keypad.

Set Time
Sets the current time. Select each digit using the arrow keys, then enter it using the keypad.

Sleep Timer
Activates and sets a sleep timer that automatically puts the display into standby mode when there is no activity for a specified period. The timer can be turned off or set to 30, 60, 90, or 120 minutes.

Language
Selects the language used for the OSD: English, French, or Spanish.

All Reset
Resets all display options to factory-default settings. Select Yes to reset, No to cancel.

System Info
Displays information about your display’s configuration.

CC Mode
Turns closed captioning on and off and selects the closed captioning channel used. Closed captioning displays the dialog of the current program or other information on the screen so it may be read.

The available channels are CC1–4 and Text 1–4. CC1 is the most-used closed captioning channel, usually used for English dialog. CC2 is usually used for foreign language translations. Text 1–4 are usually used for other channel information.

The CC1–4 modes display only a few lines of text at the bottom of the screen. The Text 1–4 modes scroll text across most of the screen.
V-Chip
This sub-menu allows you to control access to television content based on industry maturity ratings.

Upon attempting to enter the sub-menu, the display will ask for the current password. Once you enter the password, press ENTER to continue to the sub-menu.

The factory-default password is ‘1234’.

The following menu items are available:

- **Change PIN**—Sets the V-Chip password. To change the password, enter and confirm the new password.
- **Clear All**—Resets all V-Chip settings to factory defaults (unblocked).
- **Movie Rating**—A sub-menu that sets the MPAA (Motion Picture Association of America) rating level the V-Chip will block without a password.

Blocking a particular rating will automatically block all ratings above that level. Similarly, unblocking a rating will automatically unblock all ratings below that level.

Select a rating using the arrow controls on the remote, then press ENTER to block/unblock it. A check mark next to a rating means it is unblocked. Press MENU to exit this sub-menu.

The ratings are as follows:

<table>
<thead>
<tr>
<th>Rating Level</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>All material unblocked</td>
</tr>
<tr>
<td>G</td>
<td>General audiences (all ages)</td>
</tr>
<tr>
<td>PG</td>
<td>Parental guidance suggested (some material may not be suitable for children)</td>
</tr>
<tr>
<td>PG-13</td>
<td>Parents strongly cautioned (some material may be inappropriate for children under 13)</td>
</tr>
<tr>
<td>R</td>
<td>Restricted (minors under 17 require an accompanying parent or adult guardian)</td>
</tr>
<tr>
<td>NC-17</td>
<td>No one under 17 admitted</td>
</tr>
<tr>
<td>X</td>
<td>Adults only (no one under 17 admitted)</td>
</tr>
</tbody>
</table>

- **TV Rating**—A sub-menu that sets the TV PG rating level the V-Chip will block without a password.

Blocking a particular rating will automatically block all ratings above that level. Similarly, unblocking a rating will automatically unblock all ratings below that level.

Select a rating using the arrow controls on the remote, then press ENTER to block/unblock it. A check mark next to a rating means it is unblocked. Press MENU to exit this sub-menu.

The ratings are as follows:

<table>
<thead>
<tr>
<th>Rating Level</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>All material unblocked</td>
</tr>
<tr>
<td>TV Youth</td>
<td>All children</td>
</tr>
</tbody>
</table>
Configuring the Display

<table>
<thead>
<tr>
<th>Rating Level</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV Youth 7</td>
<td>Children 7 years and older</td>
</tr>
<tr>
<td>TV-G</td>
<td>General audience</td>
</tr>
<tr>
<td>TV-PG</td>
<td>Parental guidance suggested</td>
</tr>
<tr>
<td>TV-14</td>
<td>Parents strongly cautioned</td>
</tr>
<tr>
<td>TV-MA</td>
<td>Mature audience only</td>
</tr>
</tbody>
</table>

- **Parental Lock**—Turns V-Chip protection on and off.

**Adjustment (DTV)**

The Adjustment menu sets general video and audio options for digital TV. The following settings are available:

- **Brightness**
  Sets the brightness of the display image.

- **Contrast**
  Sets the variation between light and dark colors.

- **Saturation**
  Sets the saturation of color in the display image.

- **Hue**
  Sets the intensity of color in the display image.

- **SPDIF Output**
  Selects the type of S/PDIF audio put out on the optical S/PDIF output: Dolby, PCM, or Off.

**Channel (DTV)**

The Channel menu allows you to select which digital television channels are available for viewing, manually or automatically, and create a list of your favorite channels. It contains the following menu items:

- **Auto Program**
  Automatically scans all channels for strong signals and disables any channels with weak signals.

- **Manual Program**
  Allows you to select channels individually and view their signal-to-noise ratios (SNR).

- **Channel List**
  Displays a list of available channels.

- **Favorite List**
  Displays a list of your most-viewed channels.
Configuring the Display

**Closed Caption (DTV)**
Configures digital TV closed captioning. The options are as follows:

- **Caption**
  Turns closed captioning on and off.

- **Service Type**
  Selects the closed caption channel to be displayed: Service1–6 (digital) or CC1–4 (analog).

**V-Chip (DTV)**
Configures parental controls for digital TV programming, allowing you to block individual channels.

Upon attempting to enter the menu, the display will ask for the current password. Once you enter the password, the menu will display.

The factory-default password is ‘1234’.

The following menu items are available:

- **Parental Guide**
  A sub-menu that sets the TV PG rating level (listed on the left) the V-Chip will block without a password.

Specific types of mature content (listed across the top) can be blocked for some of the ratings. For example, programs rated TV-Y7 with violent content can be blocked.

Blocking a particular rating will automatically block all ratings above that level. Similarly, unblocking a rating will automatically unblock all ratings below that level.

Select a rating using the arrow controls on the remote, then press **ENTER** to block/unblock it. Press **MENU** to exit this sub-menu.

The ratings are as follows:

<table>
<thead>
<tr>
<th>Rating Level</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV-Y</td>
<td>All children</td>
</tr>
<tr>
<td>TV-Y7</td>
<td>Children 7 years and older</td>
</tr>
<tr>
<td>TV-G</td>
<td>General audience</td>
</tr>
<tr>
<td>TV-PG</td>
<td>Parental guidance suggested</td>
</tr>
<tr>
<td>TV-14</td>
<td>Parents strongly cautioned</td>
</tr>
<tr>
<td>TV-MA</td>
<td>Mature audience only</td>
</tr>
</tbody>
</table>
Configuring the Display

<table>
<thead>
<tr>
<th>Content Type</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>FV</td>
<td>Fantasy violence</td>
</tr>
<tr>
<td>V</td>
<td>Violence</td>
</tr>
<tr>
<td>S</td>
<td>Sexual content</td>
</tr>
<tr>
<td>L</td>
<td>Foul language</td>
</tr>
<tr>
<td>D</td>
<td>Suggestive dialog</td>
</tr>
</tbody>
</table>

**MPAA Rating**

A sub-menu that sets the MPAA (Motion Picture Association of America) rating level the V-Chip will block without a password.

Blocking a particular rating will automatically block all ratings above that level. Similarly, unblocking a rating will automatically unblock all ratings below that level.

Select a rating using the arrow controls on the remote, then press ENTER to block/unblock it. Press MENU to exit this sub-menu.

The ratings are as follows:

<table>
<thead>
<tr>
<th>Rating Level</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>All content unblocked</td>
</tr>
<tr>
<td>G</td>
<td>General audiences (all ages)</td>
</tr>
<tr>
<td>PG</td>
<td>Parental guidance suggested (some material may not be suitable for children)</td>
</tr>
<tr>
<td>PG-13</td>
<td>Parents strongly cautioned (some material may be inappropriate for children)</td>
</tr>
<tr>
<td>R</td>
<td>Restricted (minors under 17 require an accompanying parent or adult guardian)</td>
</tr>
<tr>
<td>NC-17</td>
<td>No one under 17 admitted</td>
</tr>
<tr>
<td>X</td>
<td>Adults only (no one under 17 admitted)</td>
</tr>
</tbody>
</table>

**Change PIN**

Sets the V-Chip password. To change the password, enter and confirm the new password.

**Setup (DTV)**

Sets general digital TV options, as follows:

**OSD Language**

Selects the language used for the OSD: English, French, or Spanish.

**Time Zone**

Selects the current time zone.

**All Reset**

Resets all digital TV settings to factory defaults. Select Yes to reset all settings, No to cancel.

**System Info**

Displays information about the display’s configuration.
## Troubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No picture (power indicator does not light up)</td>
<td>Power cord not securely connected</td>
<td>Make sure the power cord is firmly inserted into the socket and outlet.</td>
</tr>
<tr>
<td></td>
<td>Power switch is off</td>
<td>Turn on the power switch on the bottom of the display.</td>
</tr>
<tr>
<td></td>
<td>Power outlet is off or not working</td>
<td>Try plugging a different device into the outlet and see if it turns on. If not, turn on the outlet or use a different outlet.</td>
</tr>
<tr>
<td>No picture (power indicator is red)</td>
<td>The display is in power-saving mode</td>
<td>If connected to a computer and in VGA or HDMI mode, press a key on the keyboard or move the mouse. Otherwise, press a button on the remote.</td>
</tr>
<tr>
<td></td>
<td>The display is off</td>
<td>Press the power button on the remote or on the front of the display.</td>
</tr>
<tr>
<td>No picture (power indicator is green)</td>
<td>No signal</td>
<td>Make sure the proper source is selected. If there is still no picture, check the signal cable(s) and signal source.</td>
</tr>
<tr>
<td></td>
<td>Contrast or brightness too low</td>
<td>Adjust the contrast and/or brightness until picture appears.</td>
</tr>
<tr>
<td>Unclear or noisy picture</td>
<td>Signal cable(s) not securely connected</td>
<td>Make sure the signal cable(s) are firmly connected.</td>
</tr>
<tr>
<td></td>
<td>Poor TV signal</td>
<td>Check the TV signal. If using an antenna, adjust the position for better signal. If using cable or satellite TV, contact your service provider.</td>
</tr>
<tr>
<td>No sound</td>
<td>Audio cable(s) not securely connected</td>
<td>Make sure the audio signal cable(s) are firmly connected.</td>
</tr>
<tr>
<td></td>
<td>Headphones plugged in</td>
<td>Unplug the headphones.</td>
</tr>
<tr>
<td></td>
<td>Audio muted</td>
<td>Unmute the audio by pressing the <strong>MUTE</strong> button on the remote.</td>
</tr>
<tr>
<td>Display is too dark or too bright</td>
<td>Contrast or brightness too low or too high</td>
<td>Adjust the contrast and/or brightness to desired setting.</td>
</tr>
<tr>
<td>Display not centered</td>
<td>Position incorrectly adjusted in OSD</td>
<td>Adjust the image position in the PC menu in the OSD (see “PC” on page 19).</td>
</tr>
<tr>
<td>Image vibrating</td>
<td>Signal cable(s) not securely connected</td>
<td>Make sure the signal cable(s) are firmly connected.</td>
</tr>
<tr>
<td></td>
<td>Power voltage too high or too low</td>
<td>Check the power source to make sure it matches the display specification. Try a different power outlet on a different circuit.</td>
</tr>
</tbody>
</table>
Troubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>After-image remains on screen after display is turned off</td>
<td>Inherent LCD characteristics</td>
<td>This is characteristic of an LCD. The after-image will disappear after a few minutes.</td>
</tr>
<tr>
<td>Distorted image</td>
<td>Display format set incorrectly</td>
<td>Check that the correct Aspect Ratio is selected in the Image menu in the OSD (see “Image” on page 17).</td>
</tr>
<tr>
<td>“Invalid Mode” message on screen</td>
<td>VGA input signal is not in a supported mode</td>
<td>Adjust the resolution and refresh rate on the PC to match a supported mode, listed under “Specifications” on page 27.</td>
</tr>
<tr>
<td>Red, green, blue, or white dots on screen</td>
<td>Inherent LCD characteristics</td>
<td>This is characteristic of an LCD and will not cause a malfunction.</td>
</tr>
<tr>
<td>Remote control not functioning</td>
<td>Batteries inserted improperly</td>
<td>Make sure the batteries are inserted and oriented properly.</td>
</tr>
<tr>
<td></td>
<td>Batteries low on energy</td>
<td>Replace the batteries.</td>
</tr>
<tr>
<td></td>
<td>A button is stuck</td>
<td>Jog any stuck buttons on the remote to unstick them.</td>
</tr>
<tr>
<td></td>
<td>Obstacle between remote and display</td>
<td>Remove the obstacle.</td>
</tr>
<tr>
<td></td>
<td>The remote is too far from the display</td>
<td>Move closer to the display.</td>
</tr>
</tbody>
</table>

If none of the resolutions above resolves the problem, turn the display off and then on again using the power switch on the bottom of the display, then check to see if the problem has resolved.

**Note:** Further troubleshooting information can be found on the Protron website at www.protronusa.com.

Support Information

Do not return this product to your retailer until you have performed the steps laid out in the Easy Setup Instructions and contacted the Customer Service Center. Merchandise may not be returned to Protron without a return form authorization.

Before contacting Protron Customer Service, please record the following information, which may be found on the back of your display:

- Model Number
- Serial Number
- Date of Manufacture

The Protron Customer Service Center may be contacted 24 hours a day, 7 days a week at the following number:

**1-888-257-8899**
Specifications

General

Dimensions 31.8” (810mm) W × 26.1” (663mm) H × 9.21” (234mm) D  
Weight 39.2lbs (17.8kg)  
Panel Type Active Matrix TFT LCD  
Screen Size 32” widescreen (16:9)  
Color Range 24 bits (16.7 million colors)  
Max. Resolution 1366 × 768  
Pixel Pitch 0.51075mm (H) × 0.51075mm (V)  
Sync Range Horizontal: 40–49kHz  
                      Vertical: 48–62Hz  
Dynamic Contrast Ratio 1200:1  
Brightness 500 cd/m²  
Viewing Angle +/−89° (H/V)  
Response Time 8ms (gray to gray)  
Inputs 1 x ATSC TV (75 ohm coaxial F)  
                    1 x NTSC-M TV (75 ohm coaxial F)  
                    1 x HDMI  
                    2 x progressive scan component video (RCA)  
                    2 x composite video (RCA)  
                    1 x S-Video  
                    5 x stereo audio (RCA)  
                    1 x SVGA (15-pin D-Sub)  
                    1 x stereo audio line in (1/8” TRS)  
Outputs 1 x optical S/PDIF audio (TOSLINK™)  
                    1 x headphone (1/8” TRS)  
Video Formats Supported SDTV: 480i  
                    EDTV: 480p  
                    HDTV: 720p, 1080i  
TV Tuners NTSC-M, CATV, 125 channels  
                    ATSC HDTV  
TV Audio NTSC: Mono, Stereo, SAP  
                    ATSC: Stereo, Dolby Digital 5.1 Surround  
Parental Controls V-Chip (TV PG, MPAA)  
Closed Captioning NTSC: CC1–4, TEXT1–4  
                    ATSC: Analog channels 1–4, digital channels 1–6  
Speakers 2 x 10W  
Plug and Play Compliance VESA DDC1, DDC2B  
Power Supply 100–240VAC, 50–60Hz  
Power Consumption Operation: 194W max.  
                      Standby: <5W  
Storage Temperature 0 to 60°C  
Operating Temperature 5 to 35°C
### Specifications

#### Supported Computer Video Modes

<table>
<thead>
<tr>
<th>Display Resolution</th>
<th>Vertical Frequency (Refresh Rate) Hz</th>
<th>Horizontal Frequency kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGA 640 × 480</td>
<td>60</td>
<td>31.5</td>
</tr>
<tr>
<td>SVGA 800 × 600</td>
<td>56</td>
<td>35.1</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>37.9</td>
</tr>
<tr>
<td>XGA 1024 × 768</td>
<td>60</td>
<td>48.4</td>
</tr>
<tr>
<td>SXGA 1280 × 1024</td>
<td>60</td>
<td>64.0</td>
</tr>
<tr>
<td>WXGA 1280 × 768</td>
<td>60</td>
<td>44.8</td>
</tr>
<tr>
<td>1366 × 768</td>
<td>60</td>
<td>47.7</td>
</tr>
</tbody>
</table>
Limited Warranty

Protron warrants this product to be free from manufacturing defects in material and workmanship under normal use for the term stated below.

How to obtain service:

• Visit the Protron Customer Service Portal at www.protronusa.com support tab or call Protron Customer Support at 1-888-257-8899. If the issue cannot be resolved over the phone with trouble-shooting techniques, you may be eligible for warranty service. To request warranty repair, you may also contact us by e-mail at protron@ewestcsp.com. All warranties must be authorized by Protron prior to service and will result in the issuance of an authorization number for service.

• For televisions with screen sizes of 37" or less, you will be requested to ship your television to our National Return Center.

• For televisions with screen sizes 40" and above, you may be eligible for in-home service. Our Customer Service Representative will locate an authorized Protron Service Center, provided that your television is located within the geographic territory covered by an authorized Protron Service Center. If in-home service is not available in your area, you must either take your television to the Service Center location at your own expense, pay for the additional cost that the Service Center may charge to transport your television to and from your home, or send the unit to our National Return Center for repair.

• Proof of purchase in the form of a bill of sale or receipted invoice with product name, model and/or serial number, which provides evidence that the product is within the warranty period, must be presented to obtain warranty service.

This warranty does not cover:

• Physical or cosmetic damages
• Damage caused by abuse and/or neglect
• Ordinary adjustments as outlined in the owners manual that can be performed by the customer
• Damage to equipment not properly connected to the product
• Any cost incurred in shipping the product for repair
• Signal reception problems caused by external antenna, cable systems or interference
• Incompatibility due to a change in TV/CATV broadcast systems after the product was sold
• Batteries
• Images burnt on to the screen
• Initial installation and related adjustments
• Power surge and/or damage by lightning
• Force majeure or uncontrollable external force damage
• Product shipped for service with inadequate packaging or packaging materials
Limited Warranty

What we will do:

- Protron will repair and/or replace your product at our National Return Center with new, like new, or refurbished product and/or parts, at our discretion.
- For models 40" and above, Protron will reimburse an authorized Protron Service Center, obtained by Protron for you, for the new or, at our discretion, refurbished replacement parts required to repair your television.

This warranty is void if:

- Product is used in a commercial application or rental.
- Damaged through misuse, negligence or abuse.
- Modified or repaired by anyone other than authorized Protron Service Center.
- Damaged because it is improperly connected to any other equipment.
- If the original proof of purchase cannot be supplied.
- If the identifiable markings on the TV such as the serial number are defaced, unrecognizable, or missing.
- The product is used outside the country in which it was originally sold.

This warranty is not transferable and only applies to the original purchase. Any implied warranties, including the warranty of merchantability, are limited in duration to the period of this expressed warranty and no warranty whether expressed or implied shall apply to the product thereafter. Under no circumstance shall Protron be liable for any loss or consequential damage arising out of the use of this product. This warranty gives specific legal right. However, you may have other rights that may vary from state/province to state/province. Some states/provinces do not allow limitations on implied warranties or exclusions of consequential damage. Therefore these restrictions may not apply to you.

37" and Below: 1 year Parts & Labor Depot Warranty
40" and Above: 1 year Parts & Labor In-Home Warranty