



Color LCD Projection Panel

10 Series

REFERENCE MANUAL

Important FCC Statement

This equipment generates, uses, and can radiate radio frequency energy that may cause interference to radio communications if not installed and used in accordance with this manual. The equipment has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J, Part 15 of FCC Rules which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference which the user (at his/her own expense) will be required to correct.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Overhead Projector Compatibility

This product works with all transmissive type overhead projectors which have the light source beneath the projection surface. Reflective projectors which have the light source above the projection surface will produce unsatisfactory results.

For the best image, the projector should provide a bright (minimum of 3000 lumens), uniformly illuminated image. As a general rule, the better the projector, the better the results will be.

NOTE: *The company warrants that 99.998% of the total 921,600 subpixels (3 subpixels per pixel) of this product are usable and that not more than 20 subpixels are inactive.*

TRADEMARK NOTE: *Trademarks appearing in this reference manual are trademarks or registered trademarks of their respective companies.*

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Introduction

Thank you for selecting the *K-12 DataBook*. Our goal is to bring you innovative products of superior quality and performance. We welcome your comments.

For simplicity, the primary components of the *K-12 DataBook* will be referred to as the *Panel*, the *Writing Pad* option, and the *Audio/Video* option. If you need assistance, contact us at the number displayed on the *Panel* when it is first powered on or at the number printed on the back cover of this *Reference Manual*.

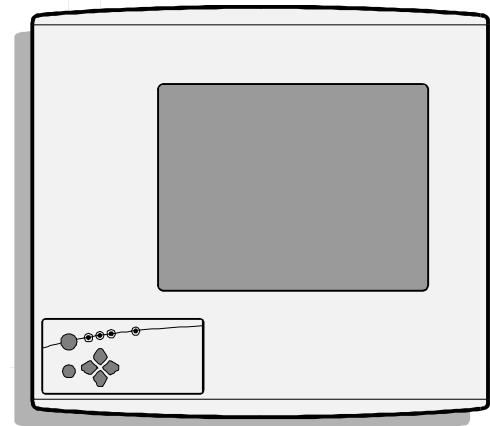
The *Panel* uses advanced active matrix liquid crystal display (AMLCD) technology and is capable of displaying up to 16.7 million colors. The quality of the image and the brightness of the image are directly related to the quality of your overhead projector, the reflectivity of the projection surface, and the ambient room light.

The *K-12 DataBook* is available in 4 models:

- Model 10/05 Data projection *Panel*
- Model 10/10 Data projection *Panel* with *Audio/Video* option
- Model 10/15 Data projection *Panel* with *Writing Pad* and Microsoft *PenMouse* option
- Model 10/20 Data projection with *Panel Audio/Video* , *Writing Pad* and Microsoft *PenMouse* option

This *Reference Manual* describes the operation of the *Panel* and its two options: *Audio/Video* and *Writing Pad*. All models include the following basic features:

- Up to 16.7 million colors
- Full motion capability
- Automatic video signature recognition
- *Panel* keypad controls
- On-screen menu for easy video adjustments
- On-screen menu for diagnostic and performance statistics
- On-screen menu for setting preferences
- Front or rear projection
- Concurrent computer monitor support
- Up to two data video sources on-line and selectable
- VGA, MAC II, MAC LC, Quadra, PowerBook compatibility
- Automatic detection of fan failure
- Easy connect numbered cables
- Automatic power management for saving energy
- Universal power supply

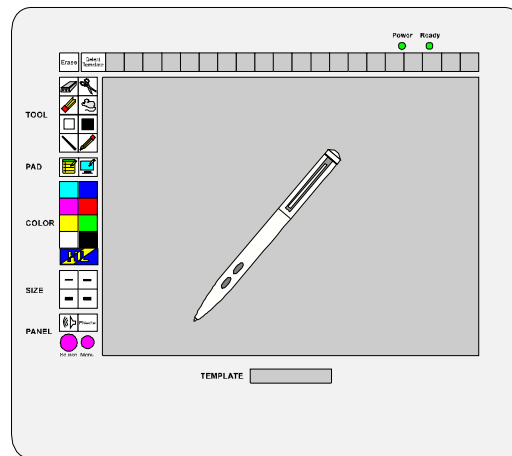


The **Audio/Video** option provides the following additional features:

- On-screen menu for video and audio adjustments that can be activated from the **Panel**, **Writing Pad** option, or **Remote Control** option
- Built-in 4 watt speaker and amplifier
- Two stereo audio inputs
- One stereo audio output
- Video and S-Video input (laserdisc, VCR, or CD-ROM)

The **Writing Pad** option includes a writing **Tablet** and **Pen** and a set of icon templates which allow you to do the following:

- Freehand draw or write in any of 8 colors and 4 line weights
- Highlight information
- Draw and move boxes, frames and icons
- Draw straight lines
- Write on video or a notepad
- Select and use 120 icons from 6 icon libraries
- Use the **Pen** as a Microsoft mouse (Macintosh available as an accessory)
- Quick access to frequently used features
- Adjust the **Panel**
- Select **Panel** features
- Turn the sound off and on
- Freeze and unfreeze the video image
- Control notepad color and **Pen** button features



Additional accessories that may be purchased separately include:

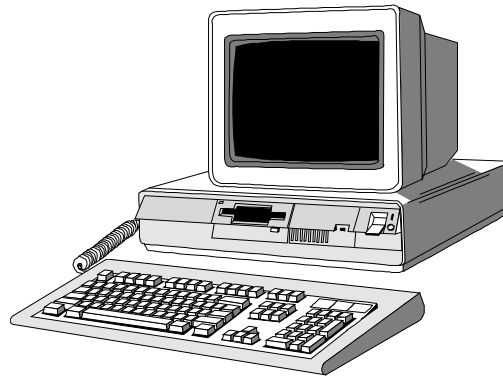
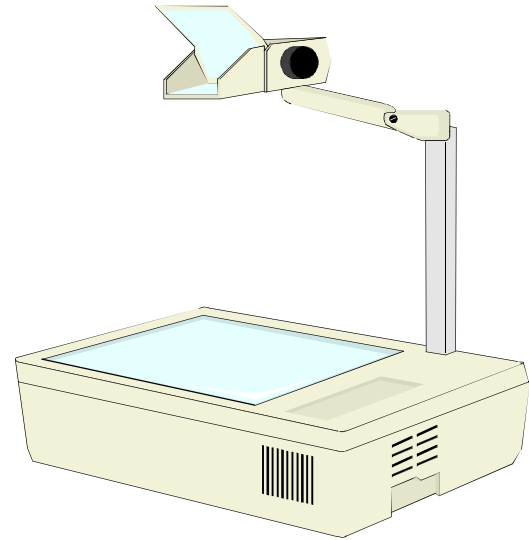
- Soft carrying case
- Attaché style carrying case
- 10-foot monitor extension cables
- 10-foot S-Video cable
- 25-foot **Writing Pad** extension cable
- Audio output cables
- Wireless **Remote Control** with on-screen prompts
- Microsoft compatible mouse for use with **Remote Control** or **Writing Pad**
- Macintosh compatible mouse for use with **Remote Control** or **Writing Pad**
- VGA data Cable
- Mac data Cable

Getting Started

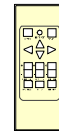
The **Panel** is simple to use. Place it on top of a transmissive overhead projector and plug it into your computer and, if you have the **Audio/Video** option, connect it to the audio and video of your VCR, CD-ROM or laserdisc. For best results, we recommend the use of a high gain projection screen and at least a 4,000 lumen overhead projector.



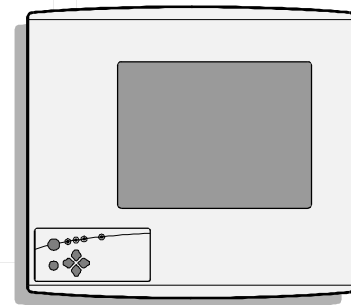
If you are using a computer, the **Panel** plugs directly into the same computer connector used by your computer monitor. Your computer monitor may be used concurrently by plugging it into the side of the **Panel**.



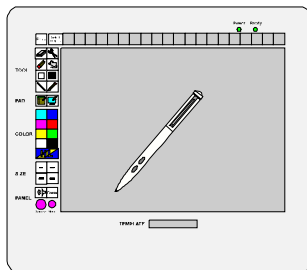
If you need to make adjustments to the **Panel**, this can be done from the **Panel** keypad, the **Remote Control** option, or the **Writing Pad** option. Any adjustments you make are automatically saved for the video mode you are using.



The keypad for operating the **Panel** is located on top of the **Panel** and connectors for attaching various devices are located on the side. An IR (infrared) lens is on the front of the **Panel** (facing the projected image) and is used to receive input from the **Remote Control** option. If you have the **Audio/Video** option, its speaker is located on the back of the **Panel** (away from the projected image).

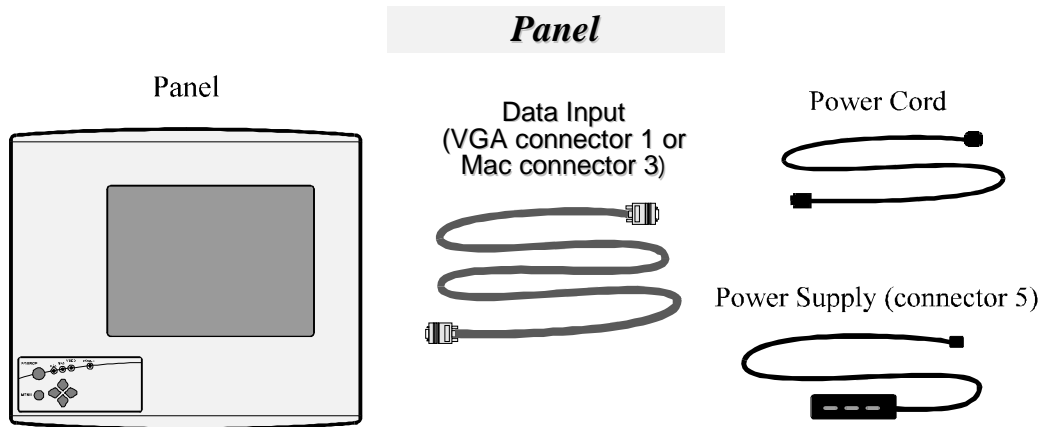


Most of the cables provided are numbered and labeled for easy connection. The cable numbers correspond to the numbers on the side of the **Panel**. Connecting the **Panel** is done by connecting the numbered cables to the corresponding numbered connectors on the side of the **Panel**. For example, cable 1 connects to connector 1 and so on. The type of cable is also marked on the **Panel** and on the cable. Connect only those cables that are needed for your application.



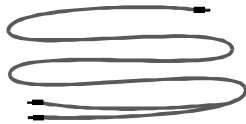
Unpacking

Unpack the shipping case. Inspect the contents to ensure that you have all the parts identified below.

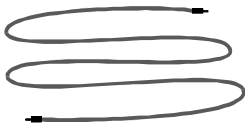


Audio/Video Option

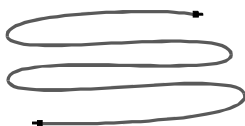
Audio Input (connector A or B)
(mini-jack to two RCA jacks)



Audio Input (connector A or B)
(mini-jack to mini-jack)



Composite Video (connector 9)



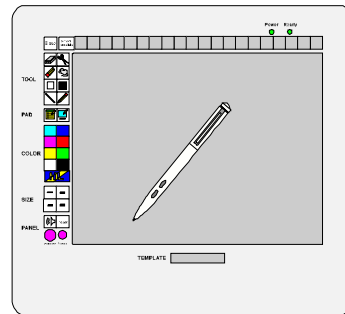
The *Audio/Video* option or the *Writing Pad* option will only be included if you purchased a model which includes these options.

If anything is missing, contact your service representative or call the number displayed on the *Panel* when it is powered on. If anything is damaged, call the freight company.

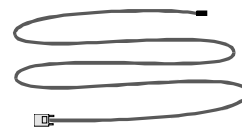
If you purchased the *Audio/Video* option, it is internal to the *Panel* and is identified by a second row of connectors numbered 8 and 9 for video and A, B, and C for audio.

Writing Pad Option

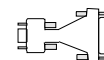
Tablet and Pen (connector 7)



PC Mouse Cable (connector 6)

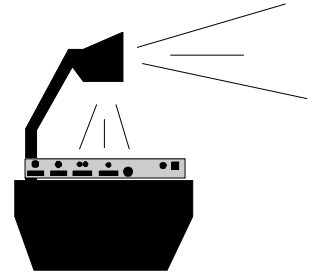


PC Mouse Adapter

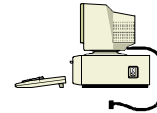


Panel Setup

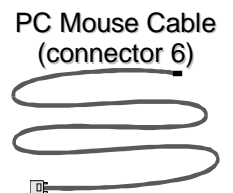
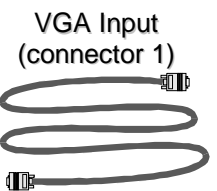
1. Turn off your computer and overhead projector.
2. Place your **Panel** on top of a transmissive overhead projector. Turn the **Panel** so that the cable connectors are on your right as you stand behind your projector and face your projection screen or wall.



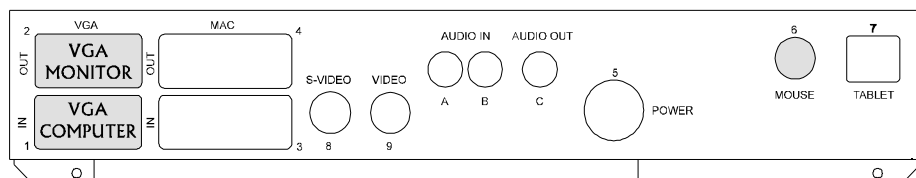
3. Unplug the monitor from your computer.
4. **If you purchased the *Panel* for use with a VGA compatible computer:**



- a. Select cable 1 (*VGA In*) and with the number 1 facing up, plug the cable into connector 1 (*VGA In*) on the **Panel**. Plug the other end into the monitor port of your computer.
- b. To use your computer monitor concurrently, plug it into connector 2 (*VGA Out*) of the **Panel**. If you need additional distance for your monitor, a 10-foot extension cable is available as an accessory.
- c. If you have a Microsoft compatible mouse and the **Writing Pad** option, you may use the **Writing Pad** as a mouse by connecting the *PC Mouse* cable to connector 6 and the other end to the mouse port of your computer serial port. The *PC Mouse Adapter* is provided for use with 25-pin serial ports. If you purchased the *Remote Control* option, it may also be used as a remote mouse.

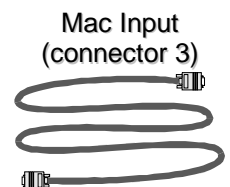


PC Mouse Adapter

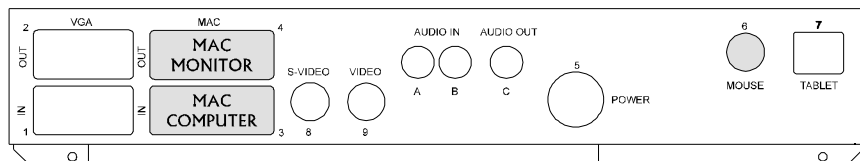


5. **If you purchased the *Panel* for use with a Macintosh type computer:**

- a. Select cable 3 (*Mac In*) and with the number 3 facing up, plug the cable into connector 3 (*Mac In*) on the **Panel**. Plug the other end into the monitor port of your Macintosh.
- b. To use your Macintosh monitor concurrently, plug it into connector 4 (*Mac Out*) of the **Panel**. If you need additional distance for your monitor, a 10-foot extension cable is available as an accessory.



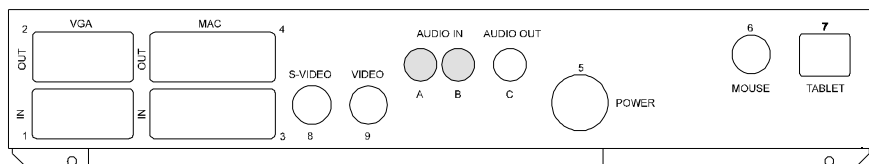
- c. If you wish to use the *Remote Control* option and/or the *Writing Pad* as a Macintosh mouse, a Macintosh mouse adapter is available as an accessory.



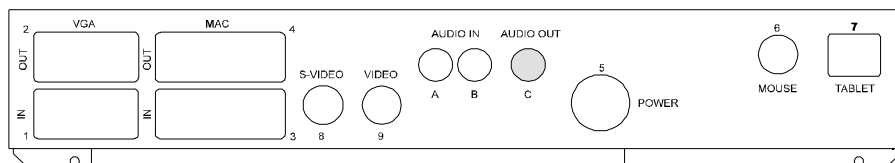
6. Tighten all connector screws. If you do not have the *Audio/Video* option you may skip to step 9.

7. Connect your audio input sources with the audio cables provided to connectors A and/or B (*Audio*) of the *Panel*. Using the *Panel Audio Menu* (see **Panel Operation** section), you may control and assign your audio sources to any of your video sources so that the appropriate audio is automatically selected when you display its video.

Audio Input (connector A or B)

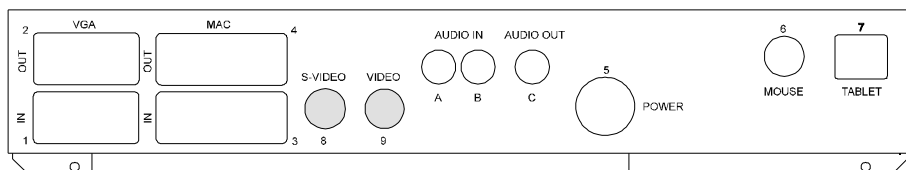
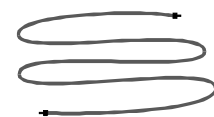


8. If you have your own audio system, you may use connector C (*Audio Out*) of the *Panel* to disable the internal speaker and provide a line level output to an external amplifier and speakers. Volume may also be controlled with the *Remote Control* option or turned on or off with the *Writing Pad*.

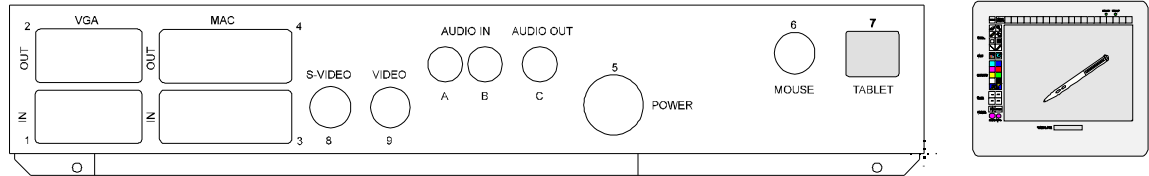


8. Connect your video source to connector 9 (*Video*) using the composite video cable provided. If you are using S-Video, connect the S-Video cable to connector 8 (*S-Video*). If you do not have an S-Video cable, a 10-foot S-Video cable is available as an accessory. Both sources may be connected simultaneously.

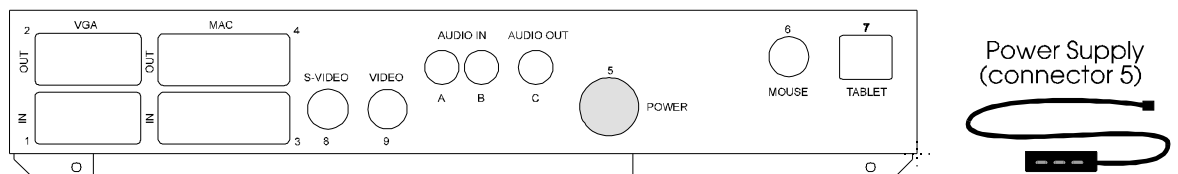
Composite Video (connector 9)



9. If you have the **Writing Pad** option, connect the **Writing Pad Tablet** cable to connector 7 of the **Panel**.



10. Connect the power supply cable to connector 5 (**Power**) of the **Panel**, connect the power cable to the power supply, and plug the power cord into an outlet.

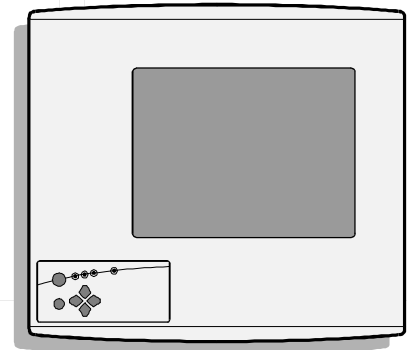
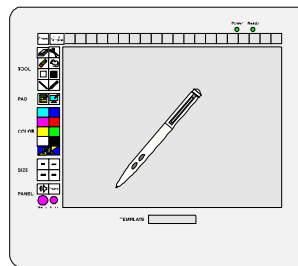


11. Turn on the overhead projector and the equipment you attached to the **Panel**. If the **Panel** is receiving power, the green **Power Lamp** near the keypad will light, all active video sources will be identified, and the fan will operate. When you turn off your overhead projector light, the lamps on the **Panel** keypad and the cooling fan will automatically turn off.



NOTE: *If you are using the Remote Control option or the Writing Pad as a mouse, you must apply power to the **Panel** before you power-on your computer in order for the mouse to be properly identified.*

12. Adjust the room lighting. Your **Panel** is ready for use. You may make changes and adjustments with the **Panel** keypad, **Remote Control** option, or the **Writing Pad**. Any changes or adjustments you make are automatically saved and will be recalled the next time you turn on the unit. See **Troubleshooting** section if you are having problems.



Panel Operation

Automatic Power Management

The *Panel* has a built-in power management system that causes it to automatically power down some of the electronics whenever the overhead projector is turned off. This reduces power consumption and the need to turn the unit on and off. Simply turn the overhead projector on or off as you need it and the *Panel* will respond accordingly.

Automatic Fan Failure Detection

The *Panel* is equipped with an internal fan that protects the LCD from overheating when the overhead projector is operating. If the *Panel* power supply is plugged into a working power outlet and connected to the *Panel*, the fan will operate and the green *Power Lamp* on the *Panel* will light whenever the overhead projector light is on.

In the event that the overhead projector light is on and the fan is not operating, the *Panel* will prompt you with the following message:

"The Panel fan is not operating. Discontinue use of the panel until the problem is resolved. Depress the <<Source>> key to clear this message."

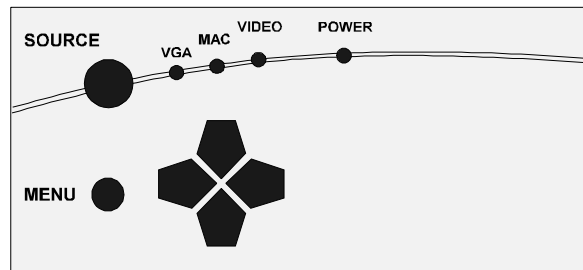
Continued use of the *Panel* when the fan is not operating may cause damage to the LCD. If the fan begins to operate, the message will automatically clear. If the fan problem cannot be cleared, contact your service representative. If you clear the message by depressing the *Panel Source* key, the message will not be re-displayed until the overhead projector has been turned off and on again or power to the *Panel* has been removed and restored.

Panel Lamps and Keypad

The *Panel Lamps* give the status of power and each video source when the overhead projector light is on.

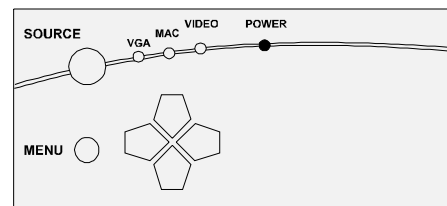
The *Panel Keypad* allows selection of all features and adjustments to the *Panel* through on-screen menus.

These feature selections and adjustments can also be accessed by the *Remote Control* option or the *Writing Pad*. In addition, some *Panel* controls such as *Volume*, *Color*, *Contrast* and *Freeze* can be directly accessed with the *Remote Control* option. *Volume* on/off and *Freeze* can also be accessed with the *Writing Pad*.



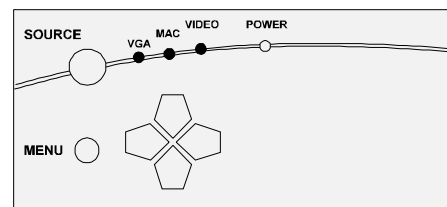
Power Lamp

When the power supply is attached to connector 5 of the *Panel* and power is initially applied to the *Panel*, the green *Power Lamp* will light and all available video sources will be identified. If the overhead projector light is on, the *Power Lamp* will remain lit. If power is not present or the overhead projector light is off, the *Power Lamp* will not light.



Source Lamps

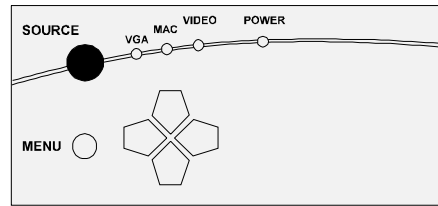
When the *Power Lamp* is green, the three *Source Lamps* (*VGA*, *Mac*, *Video*) indicate the status of the attached video sources. An unlit lamp indicates the corresponding video source is not present. Steady green indicates video present. Orange indicates video present and selected. Red indicates the video was lost while selected. If a selected source is lost, it will remain selected unless you change it with the *Source* key. When initially powered on the last source selected before power-off will be re-selected if it is available. If it is not available, the first available source will be selected.




The *VGA* or *Mac Lamp* lights if a video source is present on connector 1 or 3, respectively. The *Video Lamp* lights if a video source is present on connector(s) 8 and/or 9.

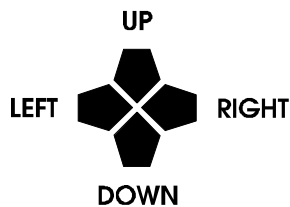
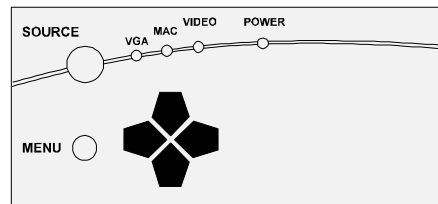
Source Key

Up to four (4) video sources may be connected simultaneously to the **Panel** (VGA on connector 1, Macintosh on connector 3, S-Video on connector 8, composite video on connector 9). The **Source** key is used to switch between the connected sources. Any **Source Lamp** that is displayed in green or orange is a selectable video source. Only one source may be selected at a time. When a source is selected, the corresponding **Source Lamp** is illuminated orange. Switching between sources will also switch the assigned **Audio Channel** if you purchased the **Audio/Video** option.






Center Image Keys

If the **Menu** key  has **not** been pressed, the direction keys highlighted to the right will move the projected image left, right, up, or down as shown below:



If **On-Screen Prompts** are enabled in the **Preferences Menu**, a message indicating the direction of image movement will appear at the bottom center of the image


whenever a direction key  is depressed. If **On-Screen Prompts** are disabled, no message will appear. If the **Menu** key  has been pressed, the  keys will select menus and change items on a selected menu as described on the next page.

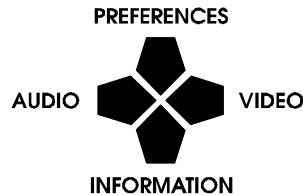
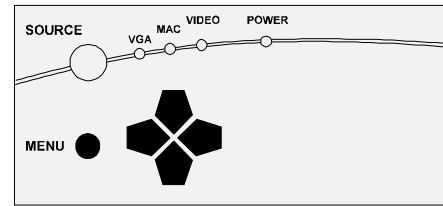
To properly align the image, display a full image and depress any of the **Center Image Keys**. This will display a highlight line in each of the four corners of the image. Using the **Center Image Keys**, position the image such that each corner of the image exactly overlays each corner highlight line.







IMPORTANT NOTE: *If the image is not properly centered, the image may have some loss of color, color banding across the image, or part of the image may not be visible. To correct these problems, align the image as described above.*







Menu Keys



The *Menu* keys are used to enter and exit the *Preferences*, *Video*, *Information* and *Audio* menus. These menus may also be accessed

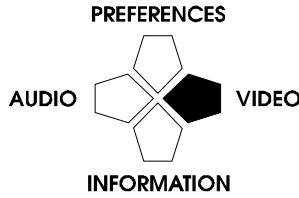
with the *Remote Control* option and the *Writing Pad*. Depress the *Menu* key  and the menu below is displayed on the projected image:



Depress one of the  keys on the *Panel* keypad or *Remote Control* option. If you have the *Writing Pad* option, use the *Pen* to directly select a menu with the finger tip of the hand  symbol. Depress the  key for the *Audio Menu*, the  key for the *Video Menu*, the  key for the *Preferences Menu*, or the  key for the *Information Menu*.






Once selected, the corresponding menu will be displayed on the projected image. The last selected item on the chosen menu is outlined in red. To select a different item on a menu, depress one of the up or down  keys with the *Panel* keypad or the *Remote Control* option. To change a selected item on a menu, depress the left or right  keys with the *Panel* keypad or the *Remote Control* option. If you have the *Writing Pad* option, you may directly select and change items on the menus by touching the finger tip of the hand  symbol on the item of your choice. Once you have completed your changes, exit the menu by depressing the *Menu* key  and any change you have made will automatically be saved. If you have the *Writing Pad* option, you may exit the menu by depressing the finger tip of the hand  symbol on the exit  button.

All changes and adjustments are made by either selecting a box or moving a slider. The numeric value displayed in the corner of some adjustments are for reference purposes only. If you have the *Writing Pad* option, a change is made by touching the finger tip of the hand  symbol on the appropriate box or touching it on the slider  button and moving the *Pen* with the tip depressed.



Video Menu

The *Video Menu* allows you to make adjustments to the currently selected video source. The *Panel* automatically sets the recommended parameters for the video you are using; however, you may wish to make additional adjustments with the *Video Menu*. Any changes you make, affect only the video source you are viewing.

To make changes to the video parameters, press the *Menu*  key and then the *Video*  key and the *Video Menu* to the right will be displayed. To exit the menu, press the *Menu*  key. If you have the *Writing Pad* option, you may also exit the menu by depressing the finger tip of the hand  symbol on the *Video Menu* exit  button.



The *Color* adjustment controls the saturation of color. + *Color* will darken the colors and - *Color* will lighten the colors. The *Color* control is also directly accessible using the *Remote Control* option.



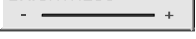
The *Tint* adjustment controls the amount of red and green in the image. Move the slider left or right to adjust tint.



The *Contrast* adjustment controls color detail. Move the slider left or right to adjust contrast. The *Contrast* control is also directly accessible using the *Remote Control* option.

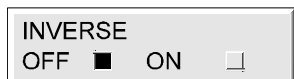


The *Brightness* control will be available when your selected source is *Video* (connector 8 or 9) and it is used to control the white level in the image. + *Brightness* will lighten the image and - *Brightness* will darken the image.

The *Brightness* adjustment control will appear in a light gray  if this control is unavailable for the source you are viewing.




The *Colors* control selects between one of three color palettes: LOW, MED (medium), and HIGH. For most computer data applications and many graphics applications, a LOW color setting is all that is necessary. For graphics applications using many color shades and some video applications, the MED setting is best. For applications using a very high degree of color such as broadcast video, the HIGH setting is best. Choose the color setting that works best for your application.



The *Inverse* adjustment controls whether colors will be displayed in their normal mode or in an inverse or negative image mode. *Inverse ON* will create an effect of viewing a photographic negative. *Inverse ON* is helpful when viewing white text on a black background. *Inverse OFF* will restore the original colors.

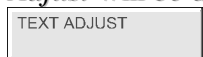


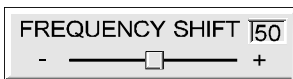
The *Focus* adjustment controls image flicker or sparkle. If the edge of an image or character sparkles or a color is flickering, try the other *Focus* settings until the best setting is found. The *Focus* adjustment control will

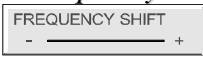
appear in a light gray  if this control is unavailable for the source you are viewing.



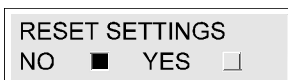
When viewing text on a *VGA Text* video source, there may be some distortion of letters. To eliminate the distortion, select one of the 9 *Text Adjust* settings that gives the best image. If your computer is not in text mode, *Text Adjust* will be disabled and the *Text Adjust* control will appear in a light gray





The *Frequency Shift* adjustment is used to correct vertical bands of distortion in the projected image. The easiest way to determine the need to make a frequency shift is to project a full image of repeated information. In text mode for example, an image filled with the letter M or in a graphics mode, an image filled with a small repeating pattern. If a frequency shift is necessary, you will notice 1 or more vertical bands where the image is distorted within each band. To correct the problem, move the *Frequency Shift* slider in a direction that eliminates the distortion. Only one direction will improve the condition. A *Frequency Shift* setting of 50 is normal. *Frequency Shift* will appear in a light gray  if this control is unavailable for the source you are viewing.

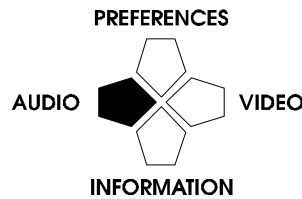
When you are done making a *Frequency Shift* adjustment, enter the *Information Menu* and center the image with the  keys.








The *Reset Settings* selection allows you to restore factory video settings for the video mode you are viewing. If you choose YES and exit the *Video Menu*, the video mode you are viewing will be reset to the factory settings. All *Video Menu* parameters will be reset and the image position (*Information Menu*) is restored to a *Horizontal Offset* of 0 and a *Vertical Offset* of 0.

Some video sources such as VGA can have many video modes; however, only the one you are viewing will be reset. The video mode is displayed in the *Information Menu* and it is also briefly displayed when you switch video sources.

Audio Menu



The *Audio Menu* allows you to assign and adjust either of two (2) audio inputs channels (connectors A and B) for the video source you are viewing (connectors 1, 3, 8 or 9). Any audio changes you make are automatically saved for the video source you are viewing.

Press the *Menu*  and then the *Audio*  key and the *Audio Menu* to the right will be displayed. To exit the menu, press the *Menu*  key. If you have the *Writing Pad* option, you may also exit the menu by depressing the finger tip of the hand  symbol on the *Audio Menu* exit  button.

AUDIO MENU	
AUDIO CHANNEL	
A <input checked="" type="checkbox"/>	B <input type="checkbox"/>
SOUND	
ON <input checked="" type="checkbox"/>	OFF <input type="checkbox"/>
VOLUME	
-	90
BASS	
-	79
TREBLE	
-	50
BALANCE	
L	R
AUDIO INPUT	
STEREO <input checked="" type="checkbox"/>	MONO <input type="checkbox"/>


AUDIO CHANNEL	
A <input checked="" type="checkbox"/>	B <input type="checkbox"/>

The *Audio Channel* controls which *Audio In* channel (A or B) is assigned to the video being viewed. Each *Video Source* may be assigned either no audio (*Sound - Off*), audio from connector A, or audio from connector B. To assign an *Audio Channel*, display the video source to be associated with the audio using the *Source* key and then select the appropriate *Audio Channel*. Once selected, the *Audio Channel* will automatically be selected whenever the corresponding video source is selected.

With the *Audio Menu* selected, you can change any video source simply by using the *Source* key and making the necessary audio adjustments. Your changes will automatically be saved whenever you change the video source.

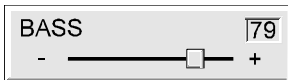
NOTE: If you attach a stereo mini-jack to connector C (Audio Out), the *Panel's* internal speaker will automatically disconnect. Connector C may be used to provide line output to an external amplifier and speaker system.



The *Sound* control sets the audio ON or OFF for the video source you are viewing regardless of the *Audio Channel* you may have selected. *Sound* can also be turned ON or OFF with the **Writing Pad** by touching the *Mute*  button.



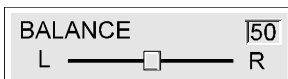
The *Volume* adjustment sets the volume level for the selected *Audio Channel*. + *Volume* will increase the volume of the **Panel's** built-in speaker or increase the output at connector C (*Audio Out*). - *Volume* will decrease the volume of the built-in speaker or decrease the line level at connector C (*Audio Out*). The *Volume* control is also directly accessible using the *Remote Control* option.



The *Bass* adjustment controls the bass level for both the internal speaker and the output at connector C (*Audio Out*). + *Bass* will increase bass and - *Bass* will decrease bass.



The *Treble* adjustment controls the treble level for both the internal speaker and the output at connector C (*Audio Out*). + *Treble* will increase treble and - *Treble* will decrease treble.

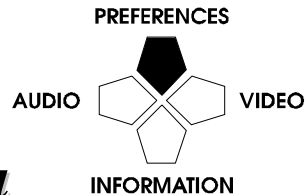


The *Balance* adjustment controls the balance of sound from a stereo input to the internal speaker and the output at connector C (*Audio Out*). If the input is mono, set *Balance* to a value of 50 to ensure reception. Moving the *Balance* slider toward + or - *Balance* will shift the balance of sound from a stereo input.



The *Audio Input* control defines the type of audio you have connected to the selected *Audio Channel* (connector A or B).


Preferences







Menu

The *Preferences Menu* allows you to configure the *Panel* and the *Writing Pad* to your liking. If you do not have the *Writing Pad* feature or it is not connected, *Notepad Color* and *Pen Barrel Button* are disabled and they will appear in a light gray.

Press the *Menu*  key and then the

Preferences  key and the *Preferences Menu* to the right will be displayed. To exit

the menu, press the *Menu*  key. If you have the *Writing Pad* option, you may also exit the menu by depressing the finger tip of the hand  symbol on the *Preferences Menu* exit  button.

PREFERENCES	
ON-SCREEN PROMPTS	OFF <input type="checkbox"/> ON <input checked="" type="checkbox"/>
REAR PROJECTION	OFF <input checked="" type="checkbox"/> ON <input type="checkbox"/>
NOTEPAD COLOR	
PEN BARREL BUTTONS	CUSTOM <input type="checkbox"/> STD <input type="checkbox"/> OFF <input checked="" type="checkbox"/>
MOUSE TYPE	PC <input checked="" type="checkbox"/> MAC <input type="checkbox"/>
LANGUAGE	ENG <input checked="" type="checkbox"/> FRN <input type="checkbox"/> GRM <input type="checkbox"/> SPN <input type="checkbox"/>

ON-SCREEN PROMPTS	OFF <input checked="" type="checkbox"/> ON <input type="checkbox"/>
-------------------	---

On-Screen Prompts controls the appearance of a message in the lower center of the image whenever the *Source*, *Volume*, *Color*, *Contrast*, *Freeze* or *Mute* functions are activated or the image position is changed with the *Panel* keypad. This *Prompt* describes the action taken by the selected function. If *On-Screen Prompts* is ON, the prompts are visible. If *On-Screen Prompts* is OFF, the prompts are not displayed.

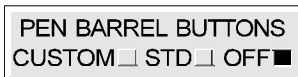
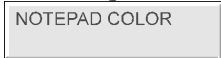
REAR PROJECTION	OFF <input checked="" type="checkbox"/> ON <input type="checkbox"/>
-----------------	---

You may use the *Panel* for either front or rear projection. Select OFF to disable and ON to enable *Rear Projection*. When *Rear Projection* is enabled, all output of the *Panel* is mirrored including menus and *Writing Pad* information. You should erase any writing on the screen before you select *Rear Projection* as existing writing will not be mirrored.







You may change the *Notepad Color* to any of 8 colors.

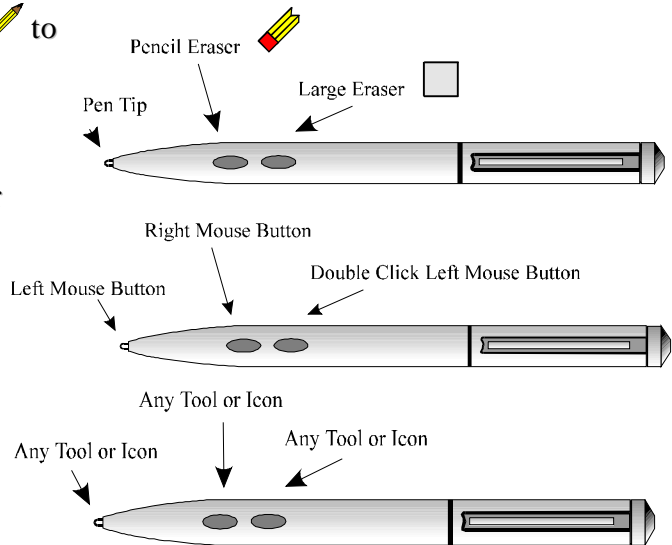
The color you select is displayed in the upper right-hand corner of the *Notepad Color* selection and will become the **Writing Pad Notepad** color when you exit the *Preferences Menu* and return to the *Notepad*. Whenever the *Notepad* color is changed, a suitable *Tool* color is automatically assigned to the last *Notepad Tool* you were using. You may change the assigned *Notepad Tool* color simply by selecting a different color while using the *Notepad*. If you do not have the **Writing Pad** option, the *Notepad Color* control will be disabled and will appear in a light gray



The *Pen Barrel Buttons* control allows you to choose one of three modes for the *Pen* barrel buttons. OFF disables the *Pen* barrel buttons.

STD (standard) assigns the *Pencil Eraser*  to the lower *Pen* barrel button and the *Large Eraser*  to the upper *Pen* barrel button.


If the *Mouse*  *Tool* is selected, the lower barrel button enables the right mouse button and the upper barrel button enables the left double click. See the *Mouse*  *Tool* description for additional information. CUSTOM allows you to assign any *Tool* or *Icon*, *Color* and *Size* to each of the *Pen* barrel buttons. If you do not have the **Writing Pad** option, the *Pen Barrel Buttons* control will be disabled and will appear in a light gray



CUSTOM mode is very handy when you use several *Tools* frequently, such as during a presentation. For example, in CUSTOM mode you could assign a medium size red *Pencil* to the *Pen* tip, a pointer *Icon* to the lower barrel button, and the mouse to the upper barrel button. This gives you instant access to these three features directly from the *Pen*.

To assign a *Pen* barrel button, depress a *Pen* barrel button and touch the *Tool* or *Icon*, *Size*, and *Color* you wish to assign (*Icons* can be programmed from different icon libraries). Once assigned, depressing a *Pen* barrel button will select the feature.

Depressing the *Pen* barrel button and the *Pen* tip in the *Writing Area* will activate the assigned feature.

Any changes you make in CUSTOM mode are automatically saved so that the next time you use CUSTOM mode your last *Pen* tip setting in *Videopad*  and barrel button settings will be restored. If you are sharing the *Panel* with other users, you may wish to set *Pen Barrel Buttons* to OFF when you are done with the *Panel*.



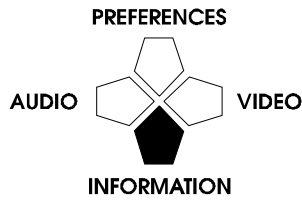
The *Mouse Type* identifies which type of mouse you have connected to the *Panel*. The default is PC as this is the type of mouse cable provided with the *Writing Pad*. If you have purchased the Macintosh mouse adapter, change the *Mouse Type* to MAC. See the *Mouse Tool* description for additional instructions on the proper use of the mouse.

NOTE: *When using a PC Mouse Type, the Panel assumes you are using a Microsoft compatible mouse driver. For the PC mouse to operate properly, you must apply power to the Panel with the PC mouse cable attached before you power-on your computer in order for the mouse to be properly identified.*

If you wish to alternate between the PC and the Macintosh mouse, be sure to bring up the PC mouse as described in the note above. Once the PC mouse is operating, you may change the mouse to Macintosh or back to the PC by changing the appropriate cables and setting the *Mouse Type* to the corresponding mouse source. The last *Mouse Type* setting is retained if you power-off the *Panel*.








The *Language* selection identifies the language to be used for *Panel* messages and menus. The language options include ENG for English, FRN for French, GRM for German, and SPN for Spanish. To change the language, select the appropriate language and exit the *Preferences Menu*. All subsequent messages will be shown in the new language. If a language is not available, it will appear in a light gray.



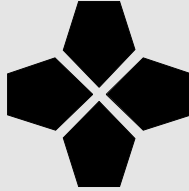
Information Menu

The *Information Menu* allows you to view information about your current video source and gives access to diagnostic information regarding the *Panel*. The diagnostic information is useful to our technical support staff when diagnosing problems.

Press the *Menu*  key and then the *Information*  key and the *Information Menu* to the right will be displayed. To exit the menu, press the *Menu*  key. If you have the *Writing Pad* option, you may also exit the menu by depressing the finger tip of the hand  symbol on the *Information Menu* exit  button.


- INFORMATION





VIDEO SOURCE	VGA TEXT
HORIZONTAL SYNC	NEGATIVE
VERTICAL SYNC	POSITIVE
VIDEO RESOLUTION	720 X 480
HORIZONTAL OFFSET	-3 PIXELS
VERTICAL OFFSET	0 PIXELS



DIAGNOSTIC INFORMATION

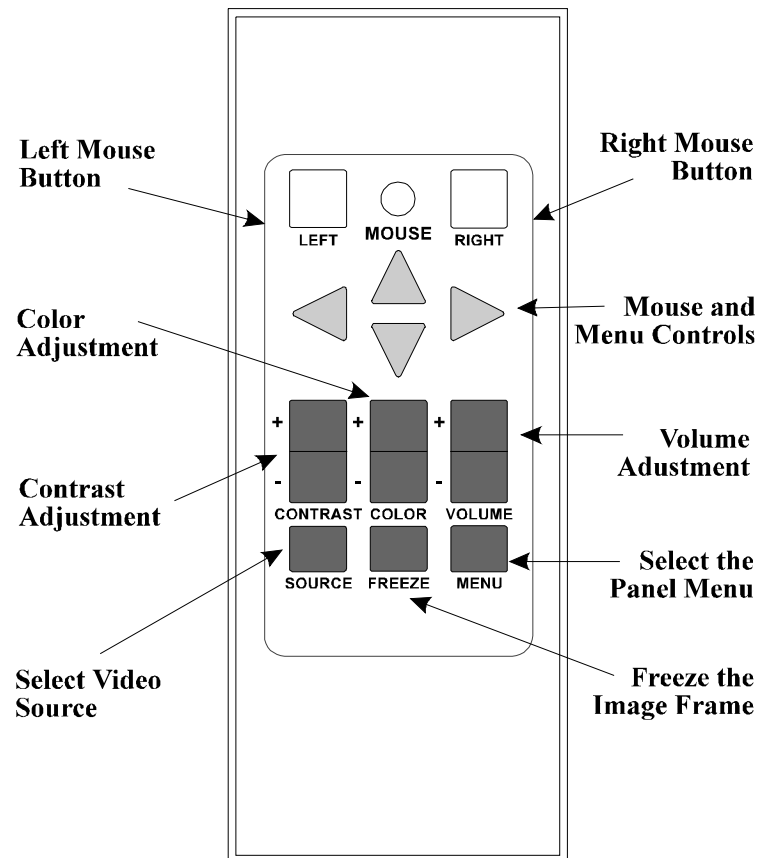
2.01	357	39A	0	284973
2539.2	865.9	374.4	538.7	295.3

When the *Information Menu* is selected, the  keys on the *Panel* and the *Remote Control* option may be used to center the image in the display. When these keys are used the new image position is displayed in the *Horizontal Offset* and *Vertical Offset* of the *Information Menu*.

When the  keys are operated in this mode, each of the four corners of the display will be marked with a highlight line to assist in aligning the projected image. The placement of the highlight lines is determined by the type of video being displayed. To properly position the image, display a full screen of information and move the image with the  keys until the edges of the image and the highlight lines overlap. If you are using the *Writing Pad*, you may touch the  keys on the projected image with the hand  symbol to make adjustments.

Remote Control Option

The *Remote Control* option provides the ability to select features and control the *Panel*, directly address the more frequently used features of the *Panel*, and use the *Remote Control* as a mouse for controlling presentations.



The top two keys (shown as square white keys above) provide control of a Microsoft compatible mouse left and right button (Macintosh mouse is available as an accessory). The arrow keys (shown as light gray keys above) provide X and Y control for the mouse and if the *Menu* key has been depressed, allow selection and adjustment of menu items.

The bottom half of the *Remote Control* (shown as dark gray keys above) provides access to the *Source* and *Menu* keys found on the *Panel* keypad, image *Freeze* ON and OFF, and direct access to *Contrast*, *Color*, and *Volume* adjustment.

Writing Pad Operation

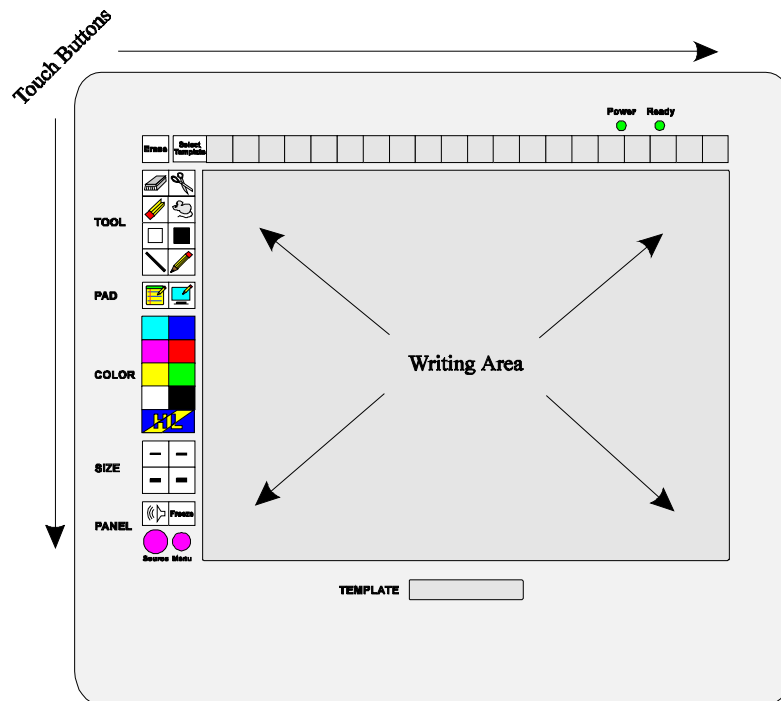
The electronic **Writing Pad** allows you to electronically write on your projected image independent of the video sources that you may have attached. The **Writing Pad** consists of a writing **Tablet** that plugs directly into the **Panel** and a battery operated **Pen**.

CAUTION: Do not use the Tablet on top of a monitor, as a monitor generates radio frequency noise that may cause the Tablet to give unpredictable results.

Use of the Tablet

The **Tablet** is used for writing on the projected image, controlling the **Panel**, or controlling a mouse-based application. Controlling a mouse based application requires the proper cable or adapter and compatible mouse driver software in your computer. See the discussion on the **Mouse Tool** in this section for more information.

The surface consists of **Touch Buttons** and a **Writing Area**. The **Writing Area** is the area on which all writing is done and corresponds to the projected image. The **Touch Buttons** are an array of buttons across the top and down the left side of the **Writing Area** that activate the various features of the **Writing Pad**.



A blinking *Power* light indicates power is present at the *Tablet*. A steady *Power* light indicates that power is present at the *Tablet* and the *Pen* is in proximity. A steady *Ready* light indicates the *Tablet* is operational.

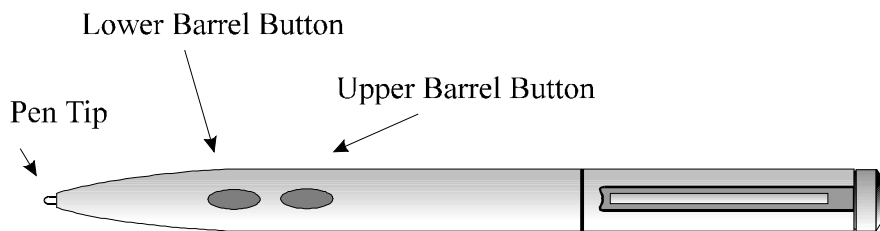
Use of the Pen








The *Pen* is used to write on the projected image or to select or control features of the *Writing Pad*, the *Panel*, or your application program. Writing or drawing is done in the *Writing Area* located adjacent to the *Touch Buttons*. This *Writing Area* corresponds to the projected image. The *Pen* functions are selected by depressing the *Pen* tip on a *Touch Button(s)* located along the left and top of the *Tablet*.

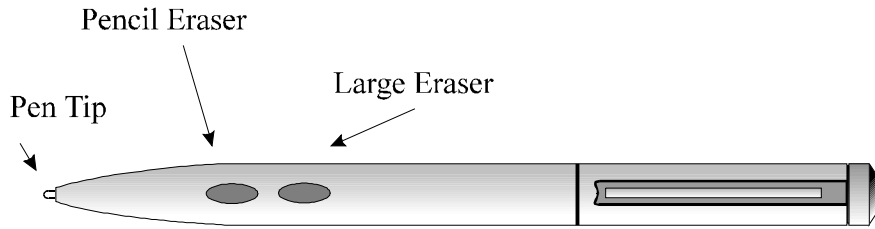
A symbol will appear on the projected image whenever the *Pen* is in proximity of the *Writing Area*. Proximity means the *Pen* tip is near the surface of the *Writing Area* and the *Pen* tip is **not** depressed. The symbol identifies the *Tool or Icon*, *Color*, and *Size* of the selected *Writing Pad* feature. The position of the symbol is changed by moving the *Pen* within the *Writing Area* while in proximity.

Moving the symbol on the image is very much like moving a mouse. The easiest way to use the *Pen* is to place it in proximity of the *Writing Area*, look at the projected image, position the symbol, and press the *Pen* tip to the *Writing Area* to perform the selected function.

The *Pen* has three moveable sensors, a *Pen* tip and two barrel buttons on the side of the *Pen*. Depressing the *Pen* tip on a *Touch Button* selects that feature. Depressing and moving the *Pen* tip in the *Writing Area* causes the selected *Tool* to be performed in the last selected *Color* and *Size*.



If the *Pen Barrel Buttons* are set to *STD* in the *Preferences Menu*, the lower barrel button may be used to erase small areas with the *Pencil Eraser*  and the upper barrel button may be used to erase large areas with the *Large Eraser* . If the *Mouse*  *Tool* is selected, the lower barrel button is a right mouse click and the upper barrel button is a double left mouse click. If *Pen Barrel Buttons* are set to *CUSTOM* in the *Preferences Menu*, the *Pen* barrel buttons can be programmed. The *Pen Barrel Buttons* are initially *OFF*; however, the *Pencil Eraser*  and the *Large Eraser*  features are always directly available as *Touch Button Tools*  and .



The *Pen* is operated with batteries which should provide about one year of service before replacement is necessary. The batteries used are standard products that can be purchased at any store that sells calculators, cameras or watches. See the **Service Information** section of this **Reference Manual** for more details.

IMPORTANT NOTE: *To conserve power, the Pen will automatically shut down if the Pen tip or barrel buttons have not been used for more than a minute. To awaken the Pen, simply press any barrel button or the Pen tip. When storing the Pen, ensure that the Pen tip and barrel buttons are not depressed in order to avoid an unnecessary drain on the batteries. If the Pen is placed in a pencil holder, be sure that the Pen tip is up. If the Pen is placed in your pocket, be sure the Pen clip is adjusted so that the Pen tip does not reach the bottom of your pocket.*

Tablet Layout









The *Touch Buttons* are divided into 7 categories. Beginning at the top and moving down the left side they include:











The **Writing Pad** has six (6) libraries of *Icons* available for use. The *Select Template* button allows you to select an *Icon* library and the corresponding paper *Icon Template* allows you to retrieve the corresponding *Icons*. The paper *Icon Template* is placed under the plastic overlay of the **Writing Pad** and the *Icons* appear in the 20 boxes to the right of the *Select Template* button.



Erase *Erase* clears all **Writing Pad**-generated data from the viewed image.



TOOL










The *Tools* are your primary writing and control devices. The *Tools* include *Large Eraser*  for erasing large areas, *Scissors*  for erasing larger areas or cutting holes, *Pencil Eraser*  for erasing small areas, *Mouse*  for controlling a mouse-based application, *Frame*  for drawing or highlighting, *Box*  for drawing, highlighting, erasing or creating small writing areas, *Straight Line*  for drawing straight lines, and *Pencil*  for freehand writing or drawing. Each *Tool* may be used with any *Pad*, *Color* and *Size*. With some *Tools* the *Color* and *Size* are not relevant.





PAD

	
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



The *Pad* buttons provide instant access to two separate writing areas. The *Notepad*  is for taking notes, doing examples or explaining ideas. The *Videopad*  is for writing on video. You may switch freely between the two *Pads* and the information in each *Pad* is retained until you erase it. Each *Pad* will retain its last used *Tool* or *Icon*, *Color* and *Size* whenever it is selected.




COLOR



The *Colors* are used by the *Frame* , *Box* , *Straight Line*  and *Pencil*  *Tools*, and some *Icons*. The color may be changed at any time. The highlight color has the unique property of inverting the colors that it writes over.

SIZE



	
	

The *Sizes* are used by the *Frame* , *Straight Line*  and *Pencil*  *Tools*. The size may be changed at any time by touching the desired button.

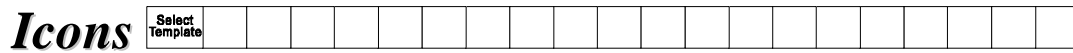
PANEL



	
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The *Panel* controls allow direct access for turning sound on and off (mute), freezing and unfreezing an image, switching video sources, and accessing the *Panel* menus.

 
Source Menu

Touch Button Descriptions

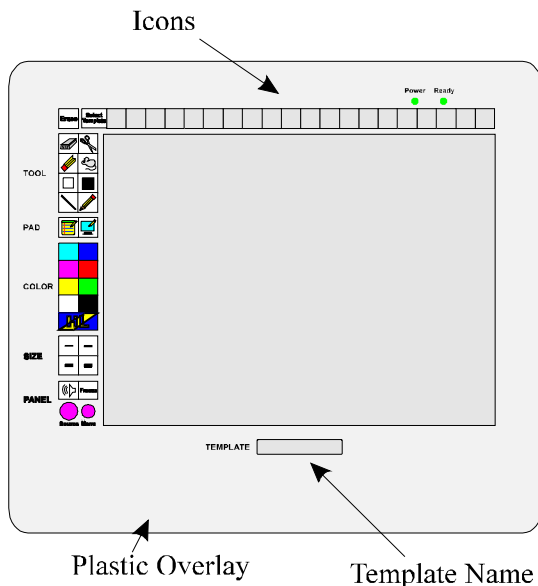


The **Writing Pad** includes six (6) libraries of twenty (20) *Icons* each. *Icons* can be placed anywhere on the projected image. To select an *Icon* library, depress the *Pen* tip on the *Select Template* button and a *Select Template Menu* will be displayed. Using the *Pen*, touch the hand on the template of interest and the 20 *Icons* of the selected template will be displayed. Once you have found the *Icons* you would like to use, depress the finger of the hand  symbol on the exit  button in the upper left hand corner of the *Template Menu*.

SELECT TEMPLATE
SPORTS
POINTERS
SYMBOLS
MILITARY
ALPHANUM
EQUIPMNT



The **Panel** now knows which set of *Icons* you intend to use.




Now select the corresponding paper *Icon Template* from the set of six (6) *Icon Templates* that were included with the **Writing Pad**. Place the *Icon Template* under the plastic *Tablet* overlay and position the *Icons* under the buttons to the right of the *Select Template* button. The name of the template will appear adjacent to the word *Template* below the *Writing Area* and the *Icons* will appear to the right of the *Select Template* button when the template is correctly positioned.

You only need to use *Select Template* when changing libraries. Once a library has been selected, the **Writing Pad** will remember your selection the next time you power-on.



To select an *Icon*, depress the *Pen* tip on the desired *Icon*. The symbol on the projected image when the *Pen* is in proximity of the *Writing Area* will now be the *Icon* you selected. You may use this *Icon* as a pointing device or to place copies of it on the projected image. To place a copy of the *Icon* on the projected image, move the *Icon* symbol to the area you wish to mark and depress the *Pen* tip. If an *Icon* has







a wild color, the last *Color* selected will replace the wild color. You can identify the wild color *Icons* by changing *Color* when a *Select Template* library is being displayed.

To move an *Icon* that has been placed on the image, position the *Tool* or *Icon* symbol near the center of the *Icon*. When the hand  symbol appears, depress the *Pen* tip and move the *Icon* to the desired position. Only the first 36 *Icons* may be moved.



Icons may be erased the same as other **Writing Pad**-generated information. To discontinue the use of an *Icon*, simply select another *Icon* or any *Tool*.

Erase


The *Erase*  button will erase all **Writing Pad**-generated information in the displayed image. To use *Erase*, depress the *Pen* tip on  and all **Writing Pad**-generated information on the projected image will be instantly erased.

There are also four other ways to erase **Writing Pad**-generated data.  erases small areas,  erases large areas,  erases areas in *Videopad*  and cuts holes in *Notepad* , and  allows you to create custom erasers.




Pads

All **Writing Pad** activities are performed in either *Notepad*  or *Videopad*  mode. The *Tool* or *Icon*, *Color* and *Size* that you select in each *Pad* are automatically saved and restored when you switch between *Pads*.

Notepad


The *Notepad* is a writing pad for doing examples, explaining ideas or taking notes. To select the *Notepad*, simply depress the *Pen* tip on the *Notepad*  button. The color of the *Notepad* may be changed at any time with the *Preferences Menu*. If you change the *Notepad* color, the **Writing Pad** will automatically assign a


suitable *Tool* color. You may change the assigned *Tool* color at any time using the *Color* buttons.

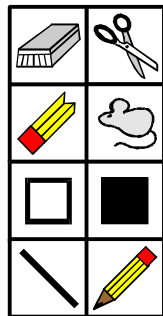
The *Scissors*  *Tool* allows you to cut holes in the *Notepad* creating video windows for viewing your selected video source. These video windows can be erased by shrinking them until they explode, moving a *Box*  over the windows, touching *Erase* , or moving another window over the windows.



Videopad

Videopad displays your video source as your writing pad. To select the *Videopad*, simply depress the *Pen* tip on the *Videopad*  button. The *Videopad* may be used the same as the *Notepad* except that the background is your selected video source.

The *Scissors*  *Tool* allows you to erase large areas of the *Videopad*.






Tools

The *Tools* menu provides access to the ***Writing Pad*** erasers, mouse and writing features. Each *Tool* remains selected until changed by another *Tool*, *Icon* or *Pen* button selection. The last used *Tool* is retained with each *Pad*; therefore, switching *Pads* will restore the *Tool*.





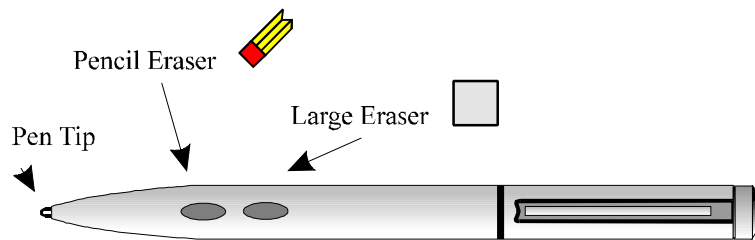
Large Eraser

The *Large Eraser* is available as a *Tool*  and conditionally available on the upper barrel button of the *Pen*. When the *Large Eraser* is selected by either method, the *Tool* symbol will change to a  and allow you to erase any ***Writing Pad*** data that









passes under  while the *Pen tip* is depressed. When you are done erasing, select another *Tool*.











Upper Barrel Button

If *Pen Barrel Buttons* is STD in the *Preferences Menu*, depressing the upper *Pen barrel button* will temporarily switch the *Tool* to a *Large Eraser*  and allow you to erase any ***Writing Pad*** data that passes under the *Large Eraser*  while the *Pen tip* is depressed. Release the *Pen barrel button* and the *Pen tip* will restore the last used *Tool*.






Scissors

The *Scissors*  allows you to erase large areas of the *Videopad*  or to cut windows in the *Notepad*  that allow you to view the video through it. To erase with the *Scissors*  in *Videopad* , depress the *Pen tip* on the *Scissors*  *Tool*, position the center of the *Scissors*  symbol at any corner of a rectangular area to be erased, depress the *Pen tip* and draw a diagonal of the area to be erased. The *Scissors*  will generate a dotted rectangle as the diagonal is drawn and all ***Writing Pad*** data within the rectangle will be erased.



To cut a window in the *Notepad* , depress the *Pen tip* on the *Scissors*  *Tool*, position the center of the *Scissors*  symbol at any corner of the window to be cut, depress the *Pen tip* and draw a diagonal of the window. The *Scissors*  will cut a window as the diagonal is drawn and all ***Writing Pad*** data within the window will be erased. Once the window is drawn it may be moved and re-sized the same as a *Frame*  or *Box*  (See ***Manipulating***  and  ***Objects***). To erase a window, either reduce its size until it explodes, erase it by moving a *Box*  over it, or touch the *Erase*  button.

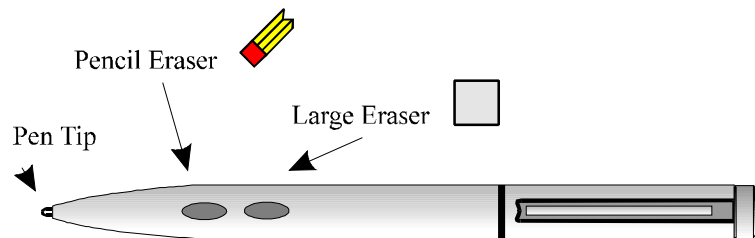


Pencil Eraser


The *Pencil Eraser*  is available as a *Tool* and conditionally available on the lower barrel button of the *Pen*. When the *Pencil Eraser* is selected by either method, the *Tool* will change to a  and allow you to erase any **Writing Pad** data that passes under the eraser end of the  while the *Pen* tip is depressed. When you are done erasing, select another *Tool*.


Lower Barrel Button

If *Pen Barrel Buttons* is STD in the *Preferences Menu*, depressing the lower *Pen* barrel button will temporarily switch the *Tool* to a  and allow you to erase any **Writing Pad** data that passes under the eraser end of the  while the *Pen* tip is depressed. Release the *Pen* barrel button and the *Pen* tip will restore the last used *Tool*.




Mouse

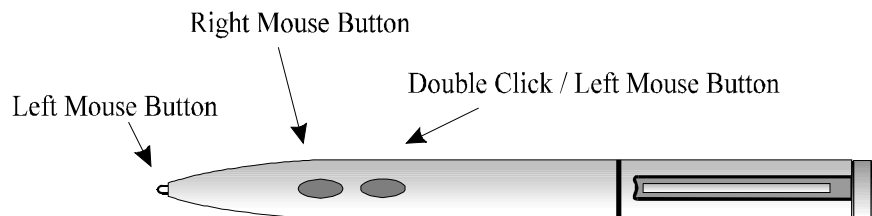
The *Mouse* provides the ability to control a mouse-based application program. The *Mouse Type* setting (PC or MAC) in the *Preferences Menu* determines which type of mouse you are using. Use of the *Mouse*  *Tool* with a Microsoft-compatible mouse driver requires the *PC Mouse* serial cable to be attached to connector 6 (*Mouse*) of the **Panel** and to the mouse serial port of your computer, and a *Mouse Type* of PC selected in the *Preferences Menu*. An adapter is provided if you are using a 25-pin connector.


The *Macintosh Mouse* adapter is available and may be purchased separately. Use of the *Mouse*  *Tool* with the *Macintosh Mouse* requires installation of a driver, connection of the *Macintosh Mouse* adapter to connector 6 (*Mouse*) of the **Panel**

and to the ADB port of your Macintosh, and a *Mouse Type* of MAC selected in the *Preferences Menu*.

Once the mouse is properly installed, depressing the *Pen* tip on the *Mouse*  *Tool* will allow the **Writing Pad Pen** and *Tablet* to become a Microsoft-compatible mouse or a Macintosh mouse, depending on which mouse you installed and the *Mouse Type* setting of the *Preferences Menu*.

The tip of the *Pen* serves as the mouse button for a Macintosh or as the left mouse button for a Microsoft-compatible mouse. The lower barrel button is equivalent to the Macintosh button or the right button on a Microsoft-compatible mouse. The upper barrel button is equivalent to a double click of the Macintosh button or double click of the left button of a Microsoft-compatible mouse. The *Pen Barrel Buttons* must be set to STD in the *Preferences Menu* for the *Pen* barrel button mouse features to work.



To use the *PC Mouse*, depress the *Pen* tip on the *Mouse*  *Tool*. Position the mouse on the image by moving the *Pen* tip over the *Writing Area* while it is in proximity. To activate the left mouse button, position the mouse to the proper position and depress the *Pen* tip. To activate the right mouse button, position the mouse to the proper position, depress the lower barrel button, and depress the *Pen* tip. To double click the left mouse button, position the mouse to the proper position, depress the upper barrel button, and depress the *Pen* tip. The *Macintosh Mouse* behaves in a similar manner.




You may also double click the left mouse button by depressing the *Pen* tip twice. If you use this method, be sure to keep the mouse position stationary between clicks or it will be detected by your application software as two single clicks rather than one double click. Holding the *Pen* vertical to the *Tablet* while clicking will reduce the chance of the mouse moving between clicks.

The double click of the upper barrel button is set for medium speed, so you may need to adjust your mouse driver accordingly for it to work properly.








If the *Pen* should reach the edge of the *Writing Area* and the *PC Mouse* still has not reached the edge of the image, simply move the *Pen* to the opposite side of the *Writing Area* and back, keeping the *Pen* in proximity while you move it.









NOTE: To ensure that the Microsoft compatible Mouse is correctly identified by your PC, the **Panel PC Mouse** cable must be the only mouse connected to your PC and the **Panel** must be powered-on before your PC is powered-on.

NOTE: If you can adjust the mouse driver settings, we recommend a slow mouse speed and a medium speed double click.

NOTE: If the Mouse  Tool is selected when you switch a video Source, the Mouse  Tool will automatically be de-selected. This is done to minimize the chance of accidentally activating the mouse while viewing a different video Source, for example, a VCR. The Mouse  Tool is still available in this mode; however, you must re-select it to use it.









Frame



Frame allows you to create a rectangular frame for diagramming or framing areas of interest. To create a frame , select the *Frame*  Tool with the *Pen* tip, position the upper right-hand corner of the *Frame*  symbol at a corner of the frame  to be drawn, depress the *Pen* tip and draw a diagonal of the frame  and release the *Pen* tip. The frame  is generated while the diagonal is being drawn. After the *Pen* tip is released the frame  is displayed in the last selected *Color* and *Size*.



A previously drawn frame  may be erased with a *Box* , *Large Eraser* , *Pencil Eraser* , *Erase* , or by shrinking it until it explodes. See **Manipulating  and  Objects** for information on moving and re-sizing a *Frame* .

Box







Box allows you to create rectangular objects, mini writing pads, hide video information, highlight video information, or create erasers of any size.




To create a box , select the *Box*  Tool, position the upper right-hand corner of the *Box*  symbol at a corner of the box  to be drawn, depress the *Pen* tip and draw a diagonal of the box , and release the *Pen* tip. The box  is generated while the diagonal is being drawn. To highlight information, select the  *Color* before you draw the box. To create a box of any color, select the *Color* before drawing the box. To hide information, draw a box  over the information you wish






to hide in any color except the  *Color*. To erase any *Writing Pad* information or erase any holes in *Notepad*, move a box  over the area to be erased.



Any box may also be used as a mini writing pad. Once the box is created it can be moved or re-sized by activating a corner of the box (See **Manipulating  and  Objects**). To erase information written on a box, simply activate a box corner with the *Pen* as you would if you were going to move or re-size the box. A box may be erased by shrinking it until it explodes.










Manipulating and Objects

The *Frame*  and *Box*  *Tools* create objects ( and ) that can be moved or re-sized. These operations are performed by grabbing a corner of a frame  or box  with the *Tool* symbol as described below.

To move a frame  or box , position the current *Tool* symbol inside the lower left-hand corner or the upper right-hand corner of the object until the hand  symbol appears. Depress the *Pen* tip, move the object to the desired location, and release the *Pen* tip.




To re-size a frame  or box , position the *Tool* symbol inside the upper left-hand corner or the lower right-hand corner of the object until the re-size  symbol appears. Depress the *Pen* tip and expand or shrink the object to the desired size by expanding or shrinking the diagonal. Release the *Pen* tip when the proper size has been drawn. Activating any corner will also cause any *Writing Pad*-generated data on the frame  or box  to be erased.

Up to eighteen (18) frame  and box  objects may be moved or re-sized. If more than eighteen 18 objects are created, only the first seventeen (17) and the last one may be manipulated.

A frame  or box  drawn over previously generated *Writing Pad* information will erase that information. Moving or expanding a box  will destroy any *Writing Pad* information it passes over. Erasing any corner of a frame  or box  will destroy the ability to move or re-size that frame  or box . A frame  or box  may also be destroyed by shrinking it until it explodes.





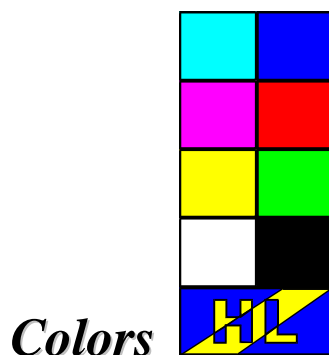
Straight Line

The *Straight Line*  *Tool* allows you to draw a straight line in the last selected *Color* and *Size*. To select the straight line, depress the *Pen* tip on the *Straight Line*  *Tool*. To draw a straight line, position the center of the *Straight Line*  symbol at the start of the line and depress the *Pen* tip, draw the line and release the *Pen* tip. The line is generated as the *Pen* is moved.



Pencil

The *Pencil* allows you to electronically write or draw in the last selected *Color* and *Size*. To select the pencil, depress the *Pen* tip on the *Pencil*  *Tool*. To write or draw, position the *Pencil*  tip to your starting point, depress the *Pen* tip, and begin writing or drawing. To change the color or size, simply depress the *Pen* tip on the desired *Color* or *Size* button.







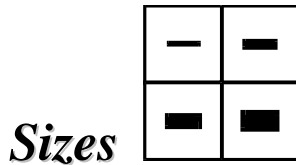
Colors





Eight (8) colors and highlight are available with a *Tool* or *Icon*. Touching a *Color* button selects that color for use with the selected *Tool* or *Icon* until another *Color* button is touched. Each *Pad* retains its last used *Color*; therefore, switching *Pads* will automatically restore the selected *Color*. The available colors include:

<i>Cyan</i>	<i>Magenta</i>	<i>Yellow</i>	<i>White</i>	
<i>Blue</i>	<i>Red</i>	<i>Green</i>	<i>Black</i>	<i>Highlight</i>


If you select , any writing in *Videopad*  will appear in the inverse color of the video color you write over and in *Notepad*  an inverse hole will be cut in the

paper to reveal the video behind it. The *Box*  *Tool* with *Color*  is very useful for highlighting video information in the *Videopad*  or the *Notepad* .




Touching a *Size* button will select a line thickness for the *Frame* , *Pencil* , *Pencil Eraser* , or *Straight Line*  *Tools*. Where appropriate, the size of the *Tool* symbol reflects the size selected. The size will remain selected until changed. Each *Pad* retains its last used size; therefore, switching *Pads* will automatically restore the *Size*.




Fine allows you to draw or erase a thin line (2 pixels plus an outline). To select *Fine*, depress the *Pen* tip on the *Fine*  *Size*.




Medium allows you to draw or erase a medium line (3 pixels plus an outline). To select *Medium*, depress the *Pen* tip on the *Medium*  *Size*.



Large allows you to draw or erase a thick line (4 pixels plus an outline). To select *Large*, depress the *Pen* tip on the *Large*  *Size*.






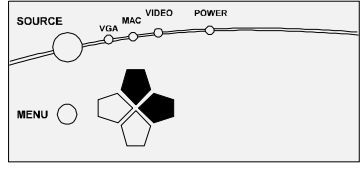


Bold allows you to draw or erase a bold line (6 pixels plus an outline). To select *Bold*, depress the *Pen* tip on the *Bold*  *Size*.

Troubleshooting

The next page begins a list of problems and probable causes. If your problem can be identified from the list, check the probable causes for a solution. If you continue to have trouble, cycle power to the **Panel** by removing and then reinserting the **Panel** power plug (connector 8).

If problems persist, you may do a factory reset of the **Panel** by performing the following procedure.

CAUTION: Factory reset will change all menu settings to original factory settings. Any *Preferences*, *Video*, *Audio* or *Information Menu* changes you have made will be lost.

1. Remove power from the **Panel** (connector 8).
 2. On the **Panel** keypad, depress the  and  keys simultaneously .
- 
3. While holding both keys simultaneously , restore power to the **Panel** (connector 8).
 4. Continue to hold both keys  until the **Panel** displays the message "Restoring Factory Settings" at the middle of the startup screen.
 5. When the "Restoring Factory Settings" message clears, the **Panel** will complete a normal startup and all settings will be the original factory settings.

If problems persist, call us at the number displayed on the **Panel** startup image or shown on the back cover of this *Reference Manual*.

Fan failure message

- The **Panel** constantly checks for proper operation of the fan. If a fan failure occurs, the fan failure message will appear. To clear a fan failure message condition, depress the *Source* key on the **Panel**. To avoid damage to the LCD, discontinue the use of the **Panel** until the fan can be serviced. Check for objects stuck in the fan and make sure the **Panel** is centered on the overhead projector.

No image on the Panel

- **Panel** power supply not connected.
- AC outlet defective.
- Computer or video device power not on.
- Video cable not secure or cable is defective.
- No video signal present.
- Incompatible video signal.
- Overhead projector is not on.
- *Notepad* selected.

No image on monitor

- Incompatible video signal.
- Computer or monitor video cable not secure or cable is defective.
- Monitor power off or disconnected.
- **Panel** power supply not connected.
- No video signal from computer.
- Computer power off or disconnected.
- Contrast or brightness is misadjusted on the monitor.

Flickering or unstable image

- Adjust *Focus* setting (*Video Menu*).
- Computer video cable not secure or cable is defective.
- Incompatible video signal.
- If VGA text mode, check the *Text Adjust* (*Preferences Menu*)
- Video alignment (*Information Menu*) not adjusted.

Poor color or no color

- Make sure entire image is visible and positioned properly. Move the image left or right as necessary using the left and right keys of the **Panel** keypad or use the *Information Menu*.
- Try factory settings; select *Reset* (yes) from the *Video Menu*.
- Adjust *Color* setting (*Video Menu* or **Remote Control**).
- Adjust *Tint* setting (*Video Menu*).
- Adjust *Contrast* setting (*Video Menu* or **Remote Control**).
- Adjust *Focus* setting (*Video Menu*).
- Wrong Inverse mode; change Inverse state (*Video Menu*).
- Video from computer is monochrome.
- Computer video cable not secure or cable is defective.
- Adjust room lighting.

Split image or partial image

- Image alignment needed; use left, right, up and down keys on the **Panel** keypad or use the *Information Menu*.
- Incompatible video signal from computer.

No lamps illuminated on Panel with overhead projector on

- **Panel** power supply not connected or defective.
- Defective AC outlet.
- **Panel** not centered on overhead projector.

Visible bright or dark spots

- An inactive subpixel may appear as a bright or dark spot on the display. The **Panel** may contain as many as 20 inactive subpixels or 0.002% of a total of 921,600 subpixels.

Source Lamp is red

- Video signal has been lost, check that the video source is still operating and video cable is secure.

No audio from internal speaker

- Enable Sound (*Audio Menu* or *Writing Pad*).
- Incorrect *Audio In* source selected. Change source with the *Audio Menu*.
- Volume is too low, adjust volume with *Audio Menu* or *Remote Control*.
- *Panel* power supply not connected.
- AC outlet defective.
- Audio source turned off.
- Audio source not connected to the *Audio In* (connector A or B).
- *Audio Out* cable connected. This will automatically disable the internal speaker.
- Overhead projector is turned off.

No audio from external speaker

- Enable Sound (*Audio Menu* or *Writing Pad*).
- Incorrect *Audio In* source selected. Change source with the *Audio Menu*.
- Volume is too low, adjust volume with external amplifier, *Audio Menu*, or *Remote Control* option.
- External speakers not connected or misadjusted.
- *Panel* power supply not connected.
- AC outlet defective.
- Audio source turned off.
- Audio source not connected to the *Audio In* (connector A or B).
- *Audio Out* cable not connected.
- Overhead projector is turned off.

Mouse not working

- Computer was powered-on before the *Panel*.
- Mouse cable not installed (connector 6 to the serial port of your computer).
- Mouse software incompatible or not installed.
- Standard mouse is still connected to the computer mouse port.
- Internal TrackPoint (IBM) or trackball not disabled.

Care and Maintenance

Storage and Transportation

Store and transport the system at temperatures between 0° and 140°F (-17° to 60°C). Avoid storage in automobiles during seasonal temperature extremes. Automobile interior temperatures can exceed 160°F (71°C) in summer and drop to -40°F (-40°C) in winter.

If the *Panel* has been exposed to extremely hot, cold or humid conditions, allow it to stand at room temperature for at least 30 minutes before use. Since the *Panel* contains several pieces of glass, avoid jarring impacts. When traveling, the *Panel* should be checked as baggage only when packed in its original shipping container.

Cleaning & Handling

The external glass of the *Panel* may be cleaned with a lint-free nonabrasive cloth and a glass cleaner. The *Panel* and the *Writing Pad* may be cleaned with a lint-free nonabrasive cloth using water and a mild detergent. Never use a hydrocarbon cleaner such as acetone, or an abrasive cloth. Be sure to unplug any cables from the *Panel*, disconnect its power source, and disconnect the *Writing Pad* from the *Panel* before cleaning.

Avoid sharply banging or dropping the *Panel* and the *Writing Pad Tablet* and *Pen*, and never immerse them in any fluid.

Never place the *Pen* near your computer diskettes or other magnetic storage devices as the *Pen* produces an electromagnetic field that could erase information.

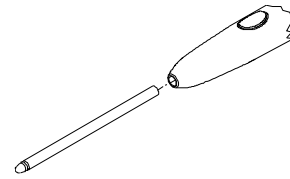
IMPORTANT NOTE: *To conserve power, the Pen will automatically shut down if the Pen tip or barrel buttons have not been used for more than a minute. To awaken the Pen, simply press any barrel button or the Pen tip. When storing the Pen, ensure that the Pen tip and barrel buttons are not depressed in order to avoid an unnecessary drain on the batteries. If the Pen is placed in a pencil holder, be sure that the Pen tip is up. If the Pen is placed in your pocket, be sure the Pen clip is adjusted so that the Pen tip does not reach the bottom of your pocket.*

Service Information

The system is designed for long, dependable service. However, should your equipment fail, contact us at the number displayed on the **Panel** when it is first powered on or at the number printed on the back cover of this *Reference Manual*. When returning equipment for service, be sure to use its original shipping container and insure the shipment against loss or damage due to shipping.

Replacing the Pen Tip

If you purchased the **Writing Pad** option and the stylus of the *Pen* becomes worn, it may be replaced. Two replacement *Pen* tips were included with your shipment and additional *Pen* tips may be purchased. To replace the *Pen* tip, grasp the tip and pull straight out as shown to the right. Insert the new tip and press firmly into place.

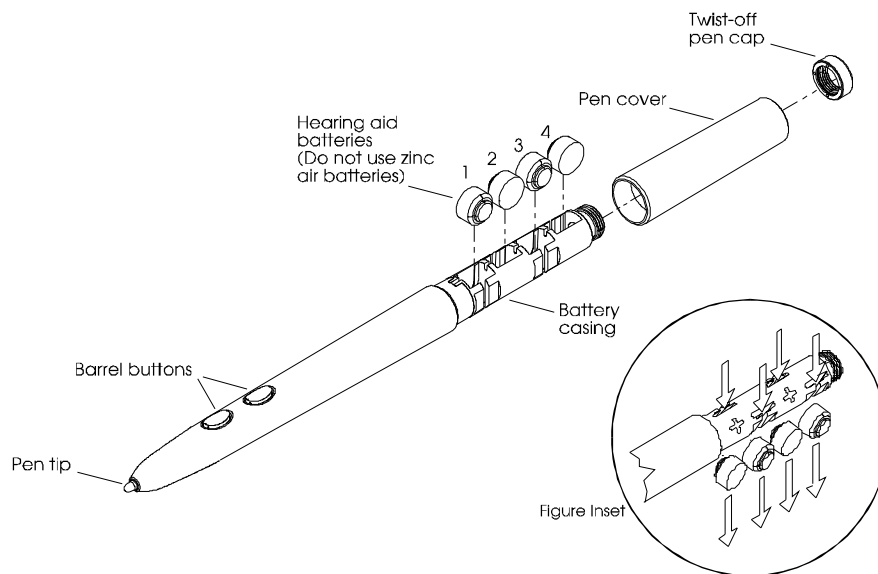


Replacing the Pen Batteries

The *Pen* is powered with batteries which should provide about one year of service before replacement is necessary. The batteries used are standard products that can be purchased at any store that sells calculators, cameras or watches. The correct battery type is 1.55 Volts, size 393 hearing aid battery. **DO NOT USE ZINC AIR BATTERIES.** The *Pen* is designed to operate on two or four batteries. You can use all four batteries at one time for longer battery life or you can choose to use two of the batteries and keep the remaining two as spares. The spare batteries can either be removed or stored in the battery casing with the polarities reversed (+ to - and - to +). Reversing any battery creates an open circuit and deactivates the battery pair (i.e., batteries 1 and 2 or 3 and 4).

To replace the *Pen* batteries:

- Unscrew the *Pen* cap. Hold the *Pen* from the bottom and gently slide off the *Pen* cover to expose the batteries.
- Remove the old batteries by pushing a thin, pointed object through the open slot on the bottom of the battery casing as shown in the inset below.



- If you wish to use four batteries, position the batteries as they are shown above.
- If you wish to use two batteries, you must position the batteries in slots 1 and 2 or in slots 3 and 4 then remove or reverse the remaining battery pair.
- Replace the *Pen* cover and screw the *Pen* cap onto the *Pen*.

Accessories

<u>Item</u>	<u>Model</u>	<u>Description</u>
<i>Writing Pad</i>	2000	The electronic <i>Tablet</i> and <i>Pen</i> writing accessory.
<i>Remote Control</i>	1105	Wireless remote control for controlling the <i>Panel</i> and the computer mouse when the <i>PenMouse</i> option is installed.
<i>Tablet Extension Cable</i>	1903	25-foot extension cable for the <i>Writing Pad Tablet</i> .
<i>Mac PenMouse</i>	1907	An adapter for using the Writing Pad or <i>Remote Control</i> as a Macintosh mouse.
<i>PC PenMouse</i>	1334	Serial cable for using the <i>Writing Pad</i> or <i>Remote Control</i> as a Microsoft Mouse.
<i>PenMouse Adapter</i>	1335	9-pin to 25-pin adapter for use with the PC or Mac <i>PenMouse</i> .
<i>Pen Tips</i>	1212	Replacement tips for the <i>Writing Pad Pen</i> .
VGA Data Cable	1332	Data cable for VGA class of computers.
VGA Monitor Extension	1333	10-foot extension cable for a VGA monitor.
Mac Data Cable	1327	Data cable for Macintosh class of computers.
Mac Monitor Extension	1328	10-foot extension cable for a Macintosh monitor.
Soft Carrying Case	1604	Soft carrying case for <i>Panel</i> , <i>Writing Pad</i> and accessories.
Attaché Carrying Case	1608	Attaché type hard carrying case for <i>Panel</i> , <i>Writing Pad</i> and accessories.
S-Video Cable	1332	10-foot video cable for S-Video input.