



***Pointmaker®PVI-65***  
**HD/SD-SDI Broadcast Video Marker**

**User's Manual**



# ***Pointmaker<sup>®</sup> PVI<sup>™</sup>-65***

***HD/SD-SDI Broadcast Video Marker***

***User's Manual***

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# **SECTION ONE:**

## **GETTING STARTED**

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# INTRODUCTION

## A Professional Marker for HD/SD-SDI

### Powerful

The Pointmaker® PVI-65 HD/SD-SDI Broadcast Video Marker by Boeckeler Instruments, Inc., now makes it possible to utilize the power of video annotation with high definition video, using the Serial Digital Interface standard.

The PVI-65 can generate a key signal. This feature can be used by inputting video and configuring SDI output #2 to pass the key signal. The key output is routed to the broadcast switcher. The annotated video from SDI output #1 can still be displayed on a preview monitor for talent or crew. These configurations can be set through the Pointmaker menu system.

The HD/SD-SDI outputs can also be used to provide a key signal by inputting a black reference signal, setting annotation to white, and routing the signal to a broadcast switcher.

In addition, it supports up to ten different pointing/marketing/controlling devices (digitizing tablet, touch screen, keyboard, mouse devices, etc.) for interacting with the displayed images.



Figure 1-1: Marking on a plasma w/touch screen

## Effortless Interaction

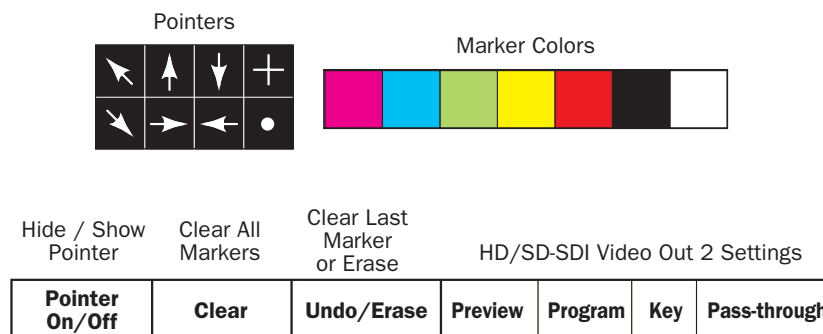
This Pointmaker model can handle environments where a number of people need to mark images during discussions or presentations. By giving each person a controller and having each mark in a unique color, it's possible to achieve a smooth coordination of discussion and marking among all participants.

## Making Your Point

### Marker Multiplicity

The large variety of Pointmaker markers further enhances your ability to emphasize each point to an audience. To begin with, you can assign a variety of colors to the markers you create. Marker options include: varying line thicknesses (with or without drop shadows), text labels in multiple fonts and sizes, arrows or pointers of differing shapes and sizes. None of the markers affect the original images in any way. Markers actually exist on a clear layer above the image called an “overlay”.

The figure below is a breakout of some digitizing tablet template commands, illustrating some of the marker options. Each item is available at the click of a button.



**Figure 1-2: Breakout of PVI-65 Template Commands**

The keyboard controller supports some additional marker types: frames, a date/time stamp, and straight line drawing. Frames include boxes and circles. Frames can be sized in advance of a presentation, then used to frame or fill certain areas of the video image.

### Marker Manipulation

One of the most powerful features for presentations using a Pointmaker is the ability to store up to 25 different marker overlays. They can be created and saved ahead of time, ready for quick recall during the presentation. For more

on overlays, see “Basic Marking Concepts” in “Section Five: Using Markers” on page 61, and “Manipulating Overlays” on page 79.

As easily as the markers are created, so are they easily erased: either one at a time until the screen is clear, or all at once.

## Ins and Outs

### Connection Overview

You can think of the component connections as falling into three groups:

- The video source, which will supply the Pointmaker with the images you want to mark over.
- The control devices, which allow you to select and manipulate the markers. They also allow you to assign various display settings within the Pointmaker.
- The displays, used to view the final output, such as monitors, projectors, big screens, LCD panels, etc.

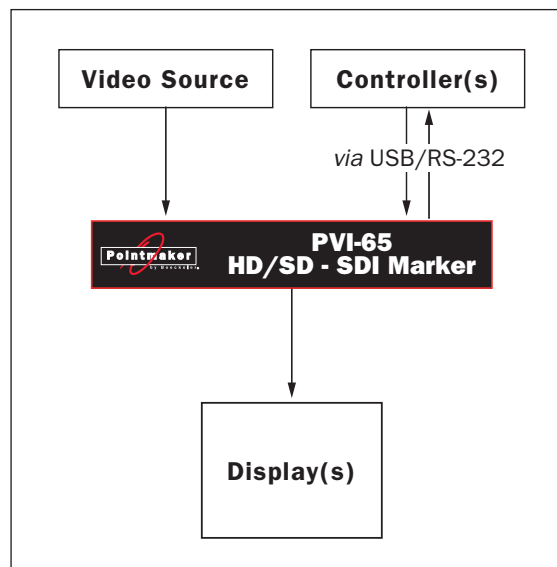


Figure 1-3: PVI-65 Flow Diagram





# FEATURES

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- **HD/SD - SDI Compatibility**

up to 1920x1080i, 720p.

- **Multiple Controllers**

Inputs for up to **10 pointing/marketing/controlling devices**.

- **Two types of marking tools**

**Freehand drawing** tools in six different line options; fine, medium and bold, with or without a drop shadow.

**Pointers**, including arrows, dots and cross hairs, which may be moved or anchored anywhere on the screen. Arrows may be preset to point in one of 8 different angles. Dots and cross hairs may be pre-selected in a small or large size.

- **Four additional marking tools with keyboard connected**

**Straight line drawing** mode allows underscoring, mapping or otherwise drawing a straight line. Three different line thicknesses are available: fine, medium and bold, with or without a drop shadow.

**Text** can be typed on the video image in one of 6 different fonts, each available in one or more sizes. You can add a text background to further enhance the text on the video image.

**Frames** in the shapes of circles or boxes may be sized and positioned to call attention to an area within the frame. **Filled frames** allow you to block out portions of the video image, useful in classroom exams or in blocking out extraneous visuals.

**An active date/time label** can be placed on the video image to time an event.

- **The ability to position and anchor a combination of several markers and drawings on the screen at once.**
- **Options for clearing lines and pointers from an overlay all at once, one at a time (beginning with the most recently anchored marker), or selectively erased.**
- **Ability to attribute a different color to each marker on the screen. Up to 7 different colors are available for quick access. The color palette can be minimized by presetting selections in a palette menu.**
- **A drop shadow effect may be selected to further optimize the display of drawn lines.**

- **The ability to store up to 25 different marker overlays of Pointmaker markers so that presentations may be prepared in advance. You can scroll forward or backward a page at a time or enter an overlay number to quickly display the desired overlay using the keyboard or RS-232 commands.**
- **Keyboard control provides you a quick way to select many of the menu options without having to go to the menu system. Instead, function keys provide choices for pointer type, background, marker colors, brightness levels, on-screen help, video source selection and more.**
- **Pen Proximity feature allows you to determine visibility of the active pointer as the pen is moved away from the tablet or screen. The pointer can be made to disappear as the pen is pulled away, or to remain on the video image, ready for positioning**
- **Brightness adjustment gives you the opportunity to set the brightness of the Pointmaker markers to coincide with the brightness level of the video signal, so that the markers are displayed optimally for standard video or for professional broadcasting.**
- **On-Screen Help to assist you in quickly setting up your presentations.**

## PERIPHERAL DEVICES

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The peripherals for the Pointmaker fall easily into two categories:

- **Displays** - SD-SDI or HD-SDI compatible displays
- **Controllers** - Digitizing Tablets, Keyboards, Touch Screens, Mouse Devices (USB or RS-232)

We offer a number of control devices for use with the **Pointmaker PVI-65**. Some are included with certain models and some are sold separately. This section describes the basic operation of the most commonly used controllers. The ones described are RS-232 devices but the PVI-65 also supports USB devices. A complete list of commands for these controllers are found in “Quick Reference for Devices” in the “Appendix” on page A-5.

## Digitizing Tablet

The **Pointmaker Digitizing Tablet**, similar to the one diagrammed below, comes standard with the **PVI-65**. In general, the tablet is used to draw, position pointers or make menu selections. The position and movements of the stylus (also called a pen) are represented on whatever display devices are activated. Additionally, most setup commands can be activated using the tablet rather than entering the menu system (See “Menu Basics” on page 25).

Refer back to this section, if needed, for general instructions concerning the tablet’s operation.

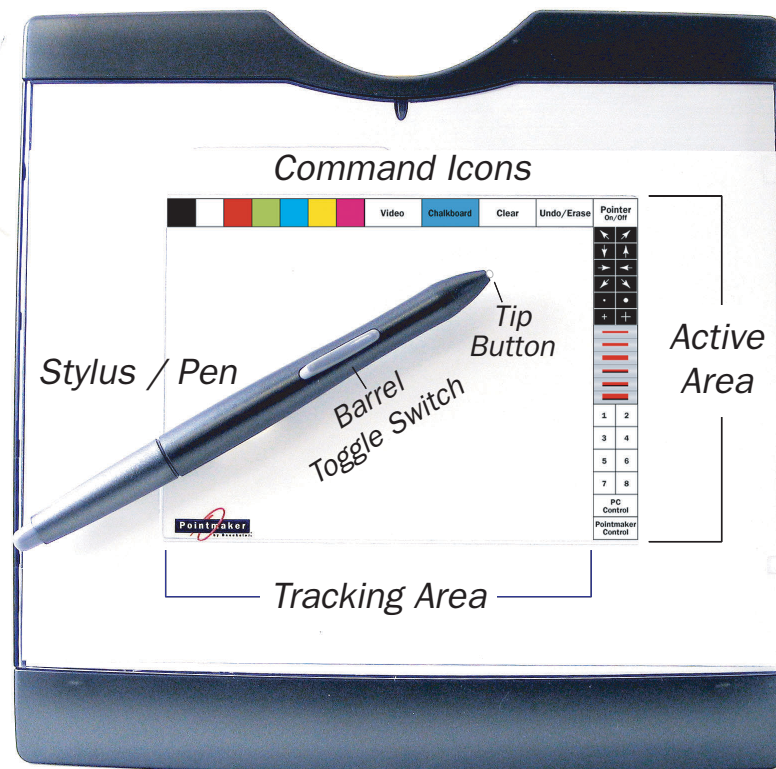


Figure 1-4: Digitizing Tablet Overview

### ACTIVE AREA

This is the area on the tablet that responds to the stylus. The template is placed here. This area measures 5" x 5" and includes the Command Area and the Tracking Area.

### TRACKING AREA

This is the region within the tablet's Active Area that responds to the stylus movements. The Tracking Area corresponds to the

screen area on the monitor or display. Pointmaker users draw and point with the stylus in the Tracking Area.

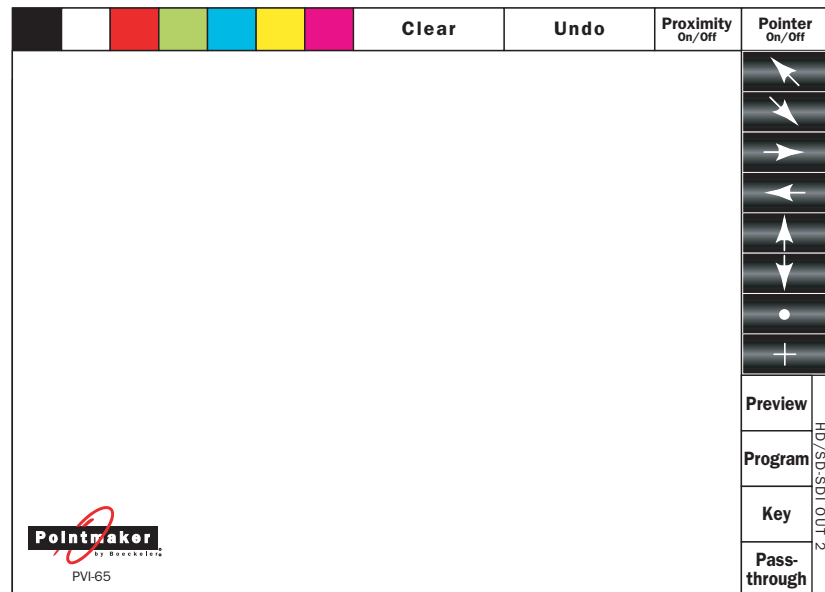


Figure 1-5: Sample Template for PVI-65

### COMMAND AREA

This is the top portion of the Active Area where Pointmaker commands can be activated. The PVI-65 Template has image icons or words which stand for PVI-65 commands and allow you to easily activate pointers, colors, and numerous other Pointmaker features.

### TIP BUTTON

When pressed (clicked) on a Menu Strip icon, the Tip Button activates the function you select. When the Tip Button is pressed anywhere on the Tracking Area and dragged, pointing or drawing takes place.

### BARREL BUTTONS

When clicked, this button anchors the active pointer, if a pointer is displayed.

### BOTH BUTTONS

The Tip Button is used in combination with the Barrel Button to access the menu system where you can make selections not available from the tablet template. The menu is activated by pressing and holding the barrel button, while pressing the tip of

the stylus into the drawing area for about five seconds. This feature is disabled if the keyboard is connected.

## **Marker and Cursor Movement**

Unlike a mouse controller, a tablet allows users to make drawings and place pointers with absolute positioning. Absolute positioning means that the position of the stylus on the tablet surface corresponds directly to the position of the pointer on the screen. For example, if you place the stylus in the lower-left corner of the tablet active area, the active pointer will “jump” to the lower-left corner of the screen.

A complete list of commands for this controller is found in “Quick Reference for Devices” in the “Appendix” on page A-5. Marking is described in “Section Five: Using Markers” starting on page 59.

## Keyboard Controller

The Pointmaker KB-30 Keyboard, diagrammed below, comes standard with all **PVI-65** models. It can be used to select, type, position, save and erase Pointmaker markers, along with changing their appearance. When the keyboard is attached, it becomes the only way to access the menu system.

Refer back to this section, if needed, for general instructions concerning its use.

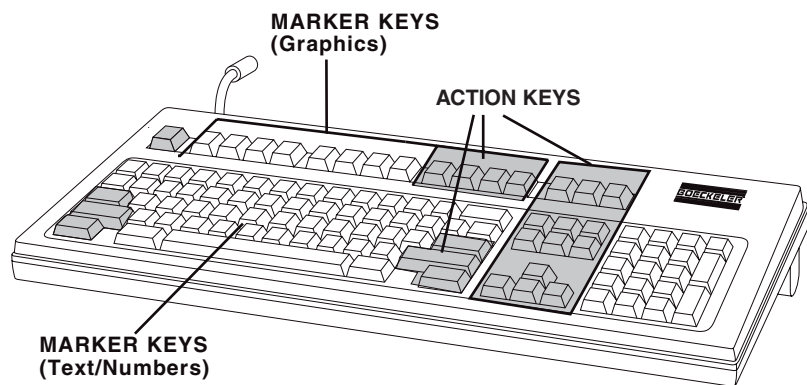


Figure 1-6: Pointmaker Keyboard Controller

### MARKER KEYS

These keys allow operators to select markers and the appearance of those markers. Marker keys include

- **POINTERS [F1]**
- **LINE STYLE [F2]**
- **FRAMES [F3]**
- **SIZE FRAMES [F4]**
- **STRAIGHT DRAW [F5]**
- **FONTS [F6]**
- **TEXT BKGRND ON/OFF [F7]**
- **SHOW DATE/TIME [F8]**

Auxiliary functions associated with several of these keys are activated by pressing **CTRL + the marker key**. Auxiliary functions are:

- **POINTER ON/OFF [CTRL + F1]**
- **FONT SIZE [CTRL + F6]**
- **SET DATE/TIME [CTRL + F8]**

## TEXT KEYS

Text and number keys on the Pointmaker keyboard controller are used to create labels or markers. Upper and lower case characters are available. Each line of type may be freely positioned until it is anchored (See “Active & Anchored Markers” in “Section Five: Using Markers” on page 61).

## ACTION KEYS

Action keys perform an action other than marking, such as positioning and anchoring a marker, changing the color of a marker, entering the menu system or Help, moving to another marker overlay, or erasing a marker. These keys include

- **HELP [ESC]**
- **CHANGE COLOR [F9]**
- **CHANGE BRIGHTNESS [F10]**
- **OVERLAY ON/OFF [F12]**
- **MENU SYSTEM [PRINT SCREEN]**
- **GO TO OVERLAY # [SCROLL LOCK]**
- **ENTER KEY**
- **DROP [INSERT]**
- **ACTIVE MARKER OFF [HOME]**
- **PREVIOUS OVERLAY [PAGE UP]**
- **UNDO [DELETE]**
- **CLEAR ALL [END]**
- **NEXT OVERLAY [PAGE DOWN]**
- **CTRL**
- **SHIFT**
- **POSITIONING KEYS (LEFT, RIGHT, UP, AND DOWN).**

## Marker and Cursor Movement

The POSITIONING (arrow) keys are the heart of movement when using the keyboard as a controller. The “active” markers it creates “float” above the overlay and may be positioned vertically by pressing the up and down keys, or horizontally using the right and left keys. Once the marker is where you want it, it is anchored on the overlay by pressing the DROP [Insert] or ENTER key.

POSITIONING keys are also used for sizing frames before they are anchored. You can also use them to navigate menus.



A complete list of commands for this controller is found in “Quick Reference for Devices” in the “Appendix” on page A-5. Marking is described in “Section Five: Using Markers” starting on page 59.

## Touch Screen

The touch screen, diagrammed below, is not supplied or sold by Boeckeler Instruments. Most touch screens on the market are compatible with the Pointmaker PVI-65. It is a very popular and intuitive control device.

Some display devices have integrated touch screens. It's also likely that you can attach a touch screen to a display device you currently own. If you wish to use one with your Pointmaker, check with your dealer or contact Boeckeler Instruments directly for information regarding compatibility.

In general, the touch screen can be used to draw, position pointers or make menu selections by touching or dragging your finger on the screen. There are also four command areas which will activate Pointmaker functions when touched.

Refer back to this section, if needed, for general instructions concerning its use.

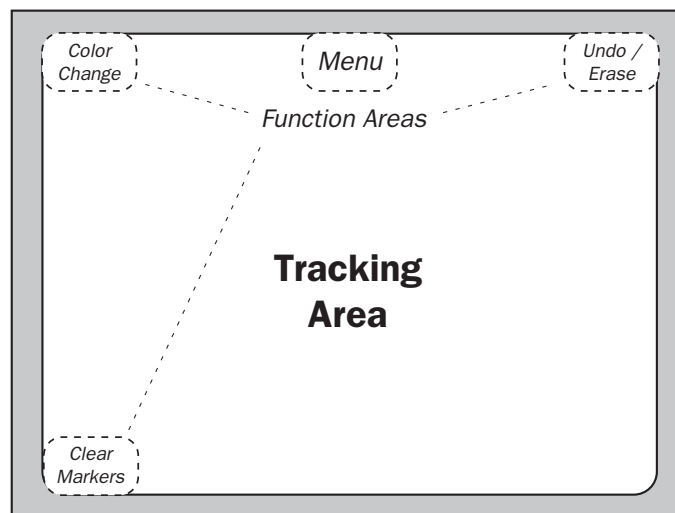


Figure 1-7: Touch Screen Controller

### TRACKING AREA

The area on the touch screen where you draw and point using your finger or other pointer.

### FUNCTION AREAS

The regions on the touch screen that, when tapped, activate a function. Tapping the upper-left corner changes the color of the next marker. Tapping the top center of the screen activates the menu system (disabled if the keyboard is attached). Tapping the upper-right corner will undo/erase the most recent marker. Tapping the lower-left corner clears the screen of all markers.

## Marker and Cursor Movement

When operating the Pointmaker with a touch screen, the pointer will be displayed and anchored any time you tap the screen (unless the pointer is disabled). A pointer can't be repositioned using the touch screen; however, it can be cleared or erased from the screen. Drawing takes place when you press a finger on the Tracking Area of the screen and drag across it. Menu selections are made by tapping the menu selection you desire.

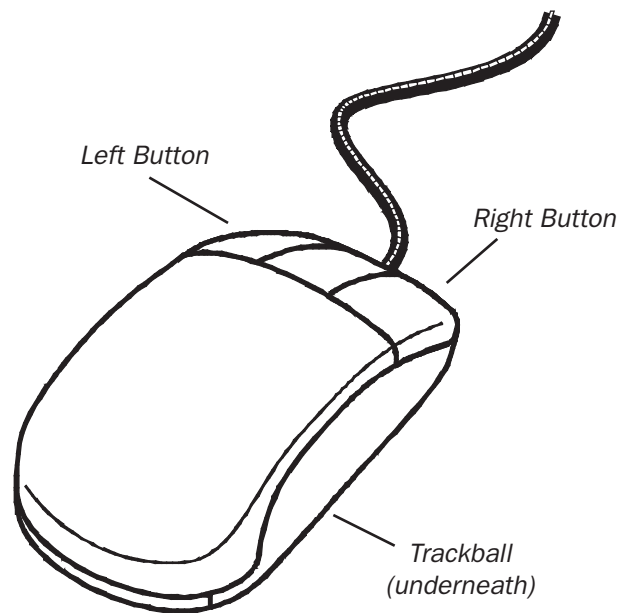
Calibrating the touch screen enhances the intuitive feel of drawing on the display and should be done upon the first installation and whenever a new touch screen or monitor is used. (See “*Controllers Requiring Calibration*” in “*Section Four: Comm Port Devices Menu*” on page 49)

A complete list of commands for this controller is found in “Quick Reference for Devices” in the “Appendix” on page A-5. Marking is described in “Section Five: Using Markers” starting on page 59.

## Mouse-type Devices

Numerous other drawing devices are compatible with the Pointmaker PVI-65 HD/SD-SDI Broadcast Video Marker. They fall into the general categories of mouse controllers, trackballs, and wireless remote control devices. Boeckeler Instruments does not supply or sell any of these products. These devices may be used like a writing utensil to draw, position pointers, or move a cursor by “dragging” the device across a mouse pad or (in the case of remote controls) in midair when aimed at the display.

The diagram and definitions listed below are generalizations for how the device might function connected to the Pointmaker. Refer back to this section, if needed, for general instructions concerning their use.



**Figure 1-8: Mouse Device**

There are so many of these types of devices that compatibility is probably best determined by simply trying the device. If it can be used as a mouse-type device on a personal computer, it is likely to work with the Pointmaker.

### **LEFT OR FIRST BUTTON**

When *clicked*, the *Left* or *First Button* anchors pointers on the screen at the point they were positioned. Freehand drawing is accomplished when this button is pressed down while continuing to write or draw with the device across a smooth surface or in midair (in the case of a remote control).

**RIGHT OR SECOND BUTTON**

When *clicked*, this button erases the most recently anchored marker. When *pressed*, this button clears the screen entirely of markers.

**BOTH BUTTONS**

The two buttons can be used in combination to either change the color of a marker or access the **menu system**. Menu access from the mouse device is disabled if the keyboard is connected.

**Marker and Cursor Movement**

When operating the **Pointmaker** with the mouse device, the cursor or active pointer may be moved anywhere on the screen by moving the device's *track ball* or by moving the remote control in midair. The active pointer or cursor will move respectively. For example, "dragging" the mouse to the left on the mouse pad, rotating a track ball to the left or aiming the remote control to the left of the remote receiver will correspondingly move the pointer to the left on the screen. Directing the device to the right while drawing will draw a line to the right.

A complete list of commands for this controller is found in "Quick Reference for Devices" in the "Appendix" on page A-5. Marking is described in "Section Five: Using Markers" starting on page 59.



# INSTALLATION

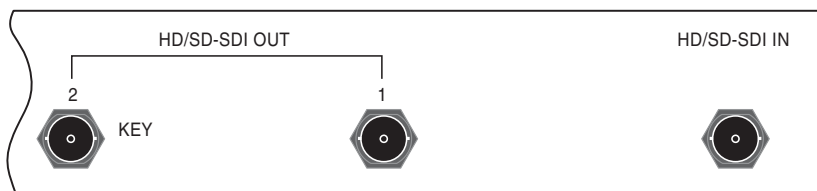
Installation of the Pointmaker PVI-65 can be divided into the following three areas:

- **Connect Video Source and Output(s)**
- **Connect Control Device(s)**
- **Power Up (leaving PVI-65 to last)**

## Connecting Video Source and Output(s)

The PVI-65 supports video input/output only from SD-SDI or HD-SDI compatible devices. For these connections, (See “Cutaway of back panel showing video input/output connectors.” below.).

1. **Use a BNC cable to connect your HD/SD-SDI source to the port labeled HD/SD-SDI IN.**



**Figure 1-9: Cutaway of back panel showing video input/output connectors.**

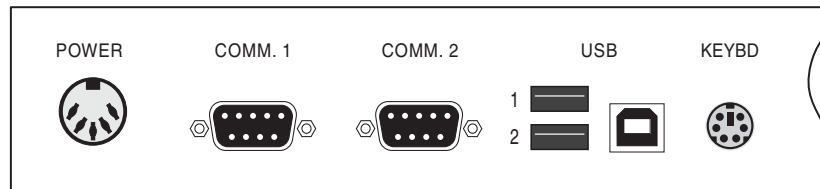
2. **Use a BNC cable to connect either or both video output(s) to the port(s) labeled HD/SD-SDI OUT.**

Port #1 is a Preview out, combining your video input with annotation. Port #2 can be programmed to function as Program, Key or Preview out. (See “Programming Video Mode“ in “Section Three: Display Menu” on page 43)

## Connecting Control Devices

The PVI-65 allows up to 10 different control devices to be attached, including a keyboard. The following steps describe how to set up some of the most popular devices. For help in locating connectors on the Pointmaker, refer to “Cutaway of back panel, showing power and controller connectors.” on page 22.

**NOTE: Be sure the Pointmaker is powered down before connecting or disconnecting any controllers.** It will automatically detect the controllers installed upon power up. If users change controllers or add a new controller, they will need to power down, install the new controller(s), then power up.



**Figure 1-10: Cutaway of back panel, showing power and controller connectors.**

### **Connecting the KB-30 Keyboard:**

**NOTE:** Make all connections before applying power.

**NOTE:** If you are connecting both the keyboard and the digitizing tablet, skip these instructions and proceed to the next section for connecting a digitizing tablet.

1. **Connect the Pointmaker keyboard cable to the KEYBD port on the back of the Pointmaker.**

This is a female PS/2 port.

### **Connecting a DT-30 Digitizing Tablet:**

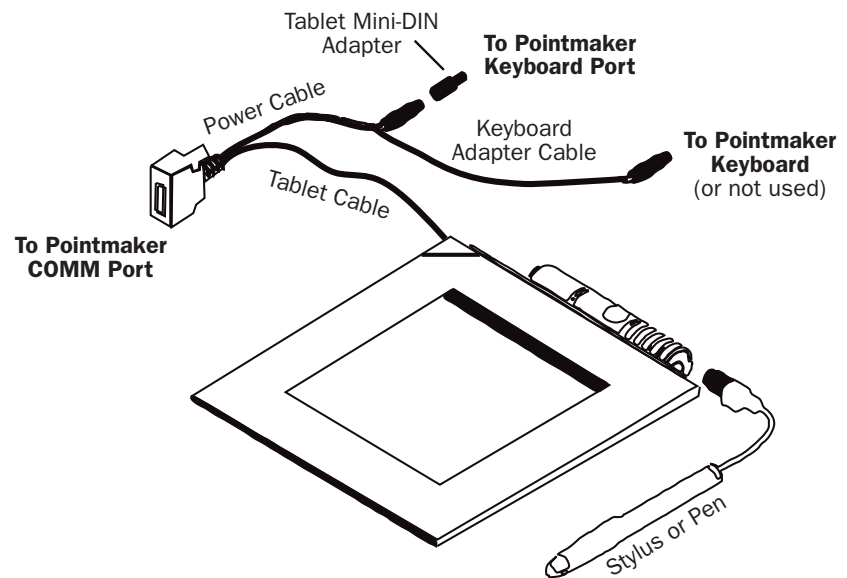
1. **Connect the stylus to the digitizing tablet.**
2. **Using the RS-232 cable provided with the digitizing tablet, connect the female 9-pin connector to a COMM port on the back of the Pointmaker.**
3. **Connect the power cable (which runs off the tablet cable) to the keyboard adapter cable provided with the digitizing tablet.**

There is only one way to plug in these connectors.

4. **Connect one end of the keyboard adapter cable to the female KEYBD connector on the back of the Pointmaker (for power).**

**NOTE:** If the keyboard is also being attached, connect the other end of the keyboard adapter cable to the Pointmaker keyboard. The extra cable that runs off the keyboard adapter cable is extraneous for applications where the Pointmaker keyboard is not connected.





**Figure 1-11: Connections for the Pointmaker DT-30 Digitizing Tablet**

### **Connecting a Touch Screen**

NOTE: Make all connections before applying power.

Upon first power up, or whenever a new monitor is connected, the touch screen should be calibrated.

NOTE: If the touch screen is to be your only or first control device, it's important to calibrate it at start up. Be sure to review “*Controllers Requiring Calibration*” in “*Section Four: Comm Port Devices Menu*” on page 49 before you do the initial power up.

- 1. Connect the RS-232 interface to a COMM port on the back of the Pointmaker.**

As indicated in the diagram below, there will also be a video connection for the monitor.

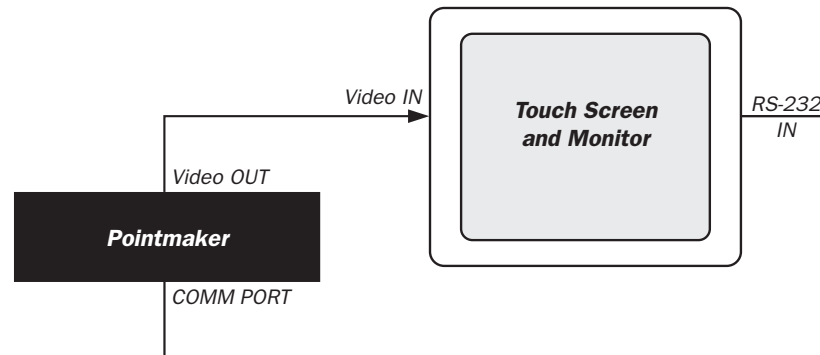
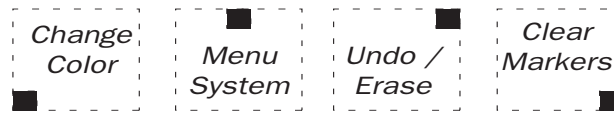


Figure 1-12: Typical Touch Screen Connections



*\*Menu System is disabled if keyboard is attached.*

Figure 1-13: Touch Screen Labels

If desired, copy the touch screen labels above, cut them out and affix them to the corresponding corners of the touch screen. This may help presenters unfamiliar with touch screen functions. Each label identifies the function of its assigned corner (the filled block in the corner of each square identifies the corner of the monitor where it should be placed).

NOTE: Stickers of touch screen labels are available from Boeckeler Instruments at (800) 552-2262 or (520) 745-0001.

### **Connecting a Mouse Device:**

1. Using the 9-pin adapter provided, connect the mouse pen/device cable to a COMM port or USB port on the back of the Pointmaker.

# ACTIVATION

---

## Power Up

1. **Plug the power cord of the inline power supply into the back of the Pointmaker and then into any grounded outlet.**
2. **Power up your video source and controller(s), if needed.**
3. **Press the power button on the Pointmaker.**

NOTE: In order for the **Pointmaker** to properly sync with the video signals, the source should be turned on first.

After a moment, the display will show a video image. A copyright message will briefly appear. This is followed by port initialization. After initialization, users will be presented with a marker overlay displaying any previously anchored markers. If this overlay is not properly displayed, recheck installation or call Boeckeler Instruments for service at (800) 552-2262 or (520) 745-0001.

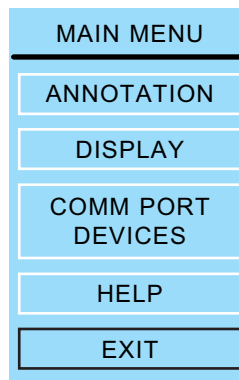
NOTE: To bypass port initialization, press ESC.

## Menu Basics

If the keyboard is installed, it is the only way you can enter the menu system. If the keyboard is not installed, you can access the menu system from one of the other control devices.

### Activating the Menu

*Keyboard: Press Menu System[Print Screen] key.*



**Figure 1-14: PVI-65 Main Menu**

*Digitizing Tablet:* Press and hold the Barrel Button, then the Tip Button on the drawing area. Keep both pressed for about 5 seconds.

NOTE: Press the tip button soon after the barrel button, or the PVI-65 may interpret the barrel button press as a “clear” command.

*Touch Screen (or White Board):* Tap upper center zone.

*Mouse Device:* Press Right (Second) Button, then Left (First) Button, pressing both together for about 5 seconds.

## Making Menu Selections

Once the menu system is displayed, you can make selections from it to navigate to the option(s) you wish to change. A selection from the Main Menu causes a submenu to appear next to it. A selection from the submenu displays a second submenu of choices based on the selection you make. The menu structure is an outline format that allows you to “drill down” to the specific option you wish to change. Whenever the Main Menu is visible, you can select directly from it to activate a different branch of submenus.

*Digitizing Tablet:* Move pen tip lightly across the active area of the tablet until your selection is highlighted. Push the tip to select.

*Keyboard:* Use arrow keys to highlight selection and press the Enter key.

*Touch Screen (or White Board):* Tap the screen over the option you want to select.

*Mouse Devices:* Click Left Button on your selection.



Figure 1-15: Sample Submenu (Annotation)

## Exiting Menus

Exit a submenu by selecting any option in the Main Menu.

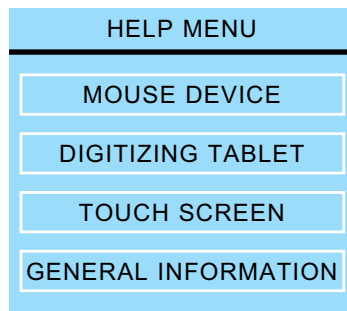
Exit the Main Menu by selecting EXIT.

## Built-in Help Messages

The Pointmaker Help Menu that is accessed in the menu system offers operational help for auxiliary controllers such as the digitizing tablet, mouse device, and touch screen plus some more generalized help information. Keyboard help is accessed directly from the keyboard by pressing the **HELP [Esc]** key. If presenters elect to use a hard copy version of help instead, a master for index card-sized “*Quick Notes*” is provided at the conclusion of this section.

## Accessing Help Messages

1. **Activate the Main Menu.**
2. **Select the HELP option.**



**Figure 1-16: Help Menu**

The Help Menu appears.

**3. In the Help Menu, select the desired option.**

Choosing the DIGITIZING TABLET option, for example, will display help messages that specifically pertain to tablet operating procedures.

**4. In the Help Submenu, select the desired help topic.**

The Main Menu and Help Submenu will disappear, and the selected Help Message will appear on-screen.

**5. To exit a help message, follow the simple exit instructions displayed in each help message.**

You will be returned to the Help Submenu.

**6. To back up one menu from the Help Submenu, select the PREVIOUS MENU option.**

**7. To exit all help menus, select any option in the Main Menu.**

## **Accessing Keyboard Help Messages**

The keyboard must be attached for this help function to operate.

**1. Press HELP [Esc], followed by the function key for which you desire help.**

The Help Menu corresponding to the function key pressed will appear on-screen.

**2. To exit the help press ENTER.**

## **SECTION TWO:**

### **ANNOTATION MENU**

---





# ANNOTATION SETTINGS

This section describes all of the options available in the Annotation Menu. Also included, when applicable, are instructions for making the same selections using other controllers.

NOTE: Keep in mind that when the keyboard is attached, it becomes the **only** way to access the menu system. However, once the menu is activated, other controllers can make selections from it.

Instructions for operating the menu system are covered earlier in this manual. (See “Menu Basics“ in “Section One: Getting Started” on page 25)

## Pointers

There are several ways to select a pointers: from the tablet template, keyboard, or menu system. Instructions for using the pointers are covered in detail in “Section Five: Using Markers” starting on page 59.

### 1. Activate the menu system.

(See “Activating the Menu“ in “Section One: Getting Started” on page 25)

The Main Menu appears. (See Figure 1-14.; “PVI-65 Main Menu” on page 26)

### 2. Select Annotation.

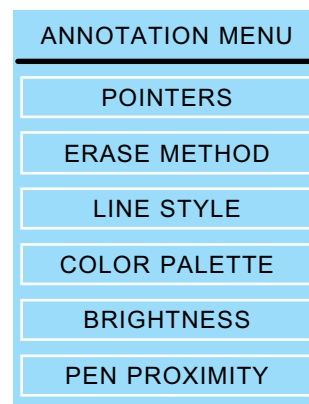
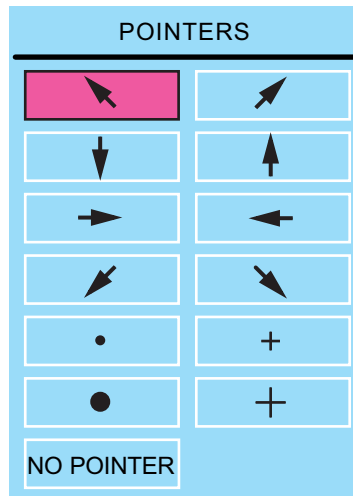


Figure 2-1: Annotation Menu

The Annotation menu appears.

### 3. Select the POINTERS option.



**Figure 2-2: The Pointers dialog.**

The Pointers dialog appears.

### 4. Select the pointer desired.

The selected pointer will highlight.

NOTE: Select “No Pointer” if you want the pointer hidden from view.

### 5. Exit the menu system.

## Selecting an Erase Method

This option allows you to select the method you prefer for erasing markers: using a “block” eraser to remove any parts you choose, or using the “Undo” command to remove the most recently anchored marker. The block eraser has three sizes: small, medium, and large.

### 1. Activate the menu system.

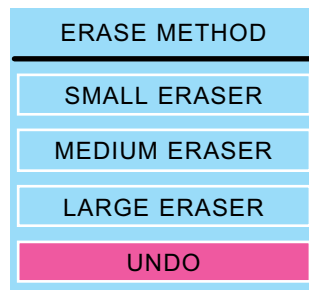
*(See “Activating the Menu” in “Section One: Getting Started” on page 25)*

The Main Menu appears. *(See Figure 1-14.; “PVI-65 Main Menu” on page 26)*

### 2. Select Annotation.

The Annotation menu appears. (See Figure 2-1; “Annotation Menu” on page 31)

**3. Select Erase Method.**



**Figure 2-3: Erase Method dialog**

The Erase Method dialog appears.

**4. Select either an eraser size or Undo.**

Both methods cannot be used at the same time.

**5. Exit the menu system.**

**Caution:** When changing from undo to eraser mode, all current annotations are deleted.

## Selecting a Line Style

This selection gives you a choice of three line thicknesses, with or without line shadows.

**1. Activate the menu system.**

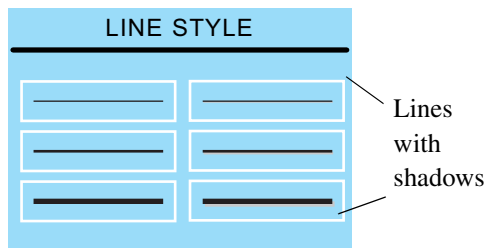
(See “Activating the Menu” in “Section One: Getting Started” on page 25)

The Main Menu appears. (See Figure 1-14; “PVI-65 Main Menu” on page 26)

**2. Select Annotation.**

The Annotation menu appears. (See Figure 2-1; “Annotation Menu” on page 31)

**3. Select the Line Style option.**



**Figure 2-4: Line Style dialog**

The Line Style dialog appears.

4. **Select the line style you desire.**
5. **Exit the menu system.**

## Customizing the Color Palette

With this menu, you can select which colors (out of a pool of 7) are available during a presentation. It also lets you set an option for displaying the currently selected color on-screen.

During a presentation, control devices (other than the tablet) select colors by cycling through whatever colors are enabled in this menu. Each time a button on the controller is pressed, the next color in the cycle is activated. If you only like to use two or three colors out of the seven, it's more efficient to turn the others off. The Color Palette menu gives you that ability.

1. **Activate the menu system.**

*(See "Activating the Menu" in "Section One: Getting Started" on page 25)*

The Main Menu appears. *(See Figure 1-14.; "PVI-65 Main Menu" on page 26)*

2. **Select Annotation.**

The Annotation menu appears. *(See Figure 2-1.; "Annotation Menu" on page 31)*

3. **Select the COLOR PALETTE option.**

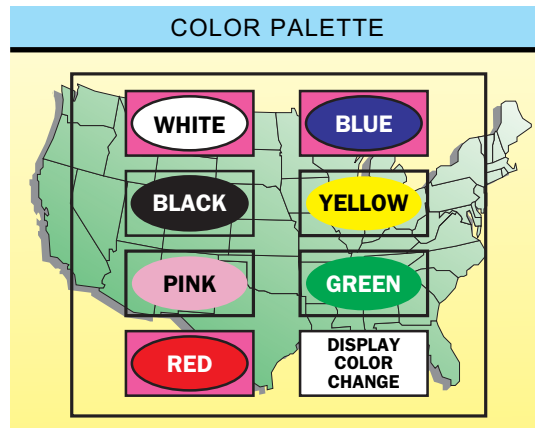


Figure 2-5: Color Palette Menu

The Color Palette Menu appears.

**4. Select the colors you wish to use during the presentation.**

A minimum of one color must be selected. If only one color is selected, users will be able to deselect this color only after a second color is chosen.

Only the colors surrounded by a solid fill will be available to the user during the presentation.

**5. Enable or disable the DISPLAY COLOR CHANGE option.**

When this option is enabled, a small block of color will briefly appear in the lower-right of the screen each time you change colors during a presentation, making it easy for touch screen users to tell which color is currently selected.

For broadcasters and certain other presenters, the color block appearing on-screen may not be desirable. In these cases it is advised that the DISPLAY COLOR CHANGE option be disabled.

NOTE: Because there is no need for a color block display with the Pointmaker digitizing tablet, the DISPLAY COLOR CHANGE option has no affect when using that controller.

**6. Exit the menu system.**

## Changing Colors Using the Digitizing Tablet:

Digitizing Tablet users do not need to access the menu system to select a marker color. They may simply press the tablet icon depicting the color desired. Choices made on the tablet override any selections made in the Color Palette Menu.

## Setting an Overlay Brightness Level

This option lets you select a brightness level for all displayed markers on any particular overlay, helping you create optimum contrast between Pointmaker graphics and the video image. This makes it possible to assign a different brightness level for each of the 25 overlays. For more on overlays, see *“Manipulating Overlays”* in *“Section Five: Using Markers”* on page 79.

Brightness is most easily controlled from the keyboard or the Presenter template. Controllers other than the keyboard must use the menu system to change the brightness level.

NOTE: Adjust the brightness after placing at least one marker on the current overlay.

### 1. Activate the menu system.

*(See “Activating the Menu” in “Section One: Getting Started” on page 25)*

The Main Menu appears. *(See Figure 1-14; “PVI-65 Main Menu” on page 26)*

### 2. Select Annotation.

The Annotation menu appears. *(See Figure 2-1; “Annotation Menu” on page 31)*

### 3. Select the BRIGHTNESS option.

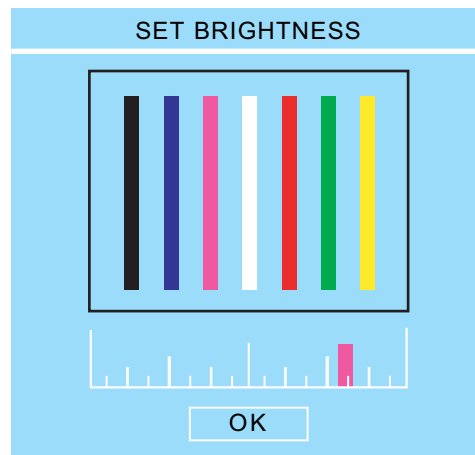


Figure 2-6: Set Brightness dialog

The Brightness Menu appears.

**4. Adjust the sliding scale using any of the following methods:**

- Move the colored slider by dragging it left or right.
- Click on the plus or minus at each side of the scale to move the slider in small increments.
- Click on the scale itself to move the slider to the desired location.

Adjust the brightness controls until the marker displays the desired brightness level.

NOTE: Moving the cursor to the left will decrease brightness. Moving the cursor to the right will increase brightness. If the brightness is set too high for the monitor, the markers will smear across the image.

**5. Exit the menu system.**

## Setting a Brightness Level Using the Keyboard

**1. Repeatedly press the CHANGE BRIGHTNESS [F10] key until the marker displays the desired brightness level.**

To scroll backwards through the brightness options, press SHIFT + CHANGE BRIGHTNESS [F10].

NOTE: Brightness selections on the keyboard override any settings made in the menu system.

## Changing Pen Proximity

When Pen Proximity is activated, the active pointer will disappear as the pen tip is moved away from the digitizing tablet. When Pen Proximity is deactivated, the active pointer will remain on-screen even when the pen is pulled away from the tablet.

NOTE: This assumes the active pointer has not been turned off (See “Turning the Active Pointer On/Off” in “Section Five: Using Markers” on page 65).

### Changing Pen Proximity

1. **Activate the menu system.**

(See “Activating the Menu” in “Section One: Getting Started” on page 25)

The Main Menu appears. (See Figure 1-14.; “PVI-65 Main Menu” on page 26)

2. **Select Annotation.**

The Annotation menu appears. (See Figure 2-1.; “Annotation Menu” on page 31)

Notice that the Pen Proximity selection is displayed near the bottom.

NOTE: If the Pen Proximity option box displays a solid fill, it is active. If it is not filled, Pen Proximity is inactive.

3. **Select the PEN PROXIMITY option to turn it on or off.**

The fill in the Pen Proximity box will reflect the new status selected.

4. **Exit the menu system.**

## Pointer Toggle

The ENABLE POINTER TOGGLE option gives you the ability to hide the pointer during a presentation. You might want to engage this option if you expect to be drawing most of the time, rather than pointing, or if you need a pointer only occasionally. If it is activated, you can turn the pointer on or off during a presentation. When deactivated, the pointer remains visible at all times.



**1. Activate the menu system.**

*(See “Activating the Menu” in “Section One: Getting Started” on page 25)*

The Main Menu appears. *(See Figure 1-14; “PVI-65 Main Menu” on page 26)*

**2. Select Annotation.**

The Annotation menu appears. *(See Figure 2-1; “Annotation Menu” on page 31)*

**3. Select the Enable Pointer Toggle option to turn it on or off.**

NOTE: If the Enable Pointer Toggle button has a solid fill, it is active. If it is not filled, it is inactive.

**4. Exit the menu system.****To toggle the pointer off or on during a presentation:**

Mouse:

- 1. First press the second button, then press the first button so that both buttons are pressed until the pointer disappears. Then release both buttons. To make the pointer reappear, repeat the same procedure.**

Digitizing Tablet:

- 1. Use the pen to click on the POINTER ON/OFF icon on the tablet Menu.Strip. The pointer will disappear. To make the pointer reappear, repeat the same procedure.**

Touch Screen

- 1. Because there is no active pointer on a touch screen, the ENABLE POINTER TOGGLE is inactive.**

If users wish to turn off the pointer, they can select NO POINTER in the Pointer Selection Menu.



## **SECTION THREE:**

### **DISPLAY MENU**

---



# THE DISPLAY MENU

---

## Programming Video Mode

The second video out port, labeled HD/SD-SDI OUT 2, can be programmed for any of three different outputs:

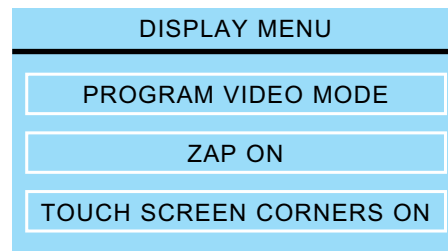
- 1) **Program** - video with annotation, no menus.
- 2) **Key** - outputs a key signal of annotation, no menus.
- 3) **Preview** - video with annotation, menus.
- 4) **Passthrough** - passes video signal through unchanged.

### 1. Activate the menu system.

*(See “Activating the Menu“ in “Section One: Getting Started” on page 25)*

The Main Menu appears. *(See Figure 1-14.; “PVI-65 Main Menu” on page 26)*

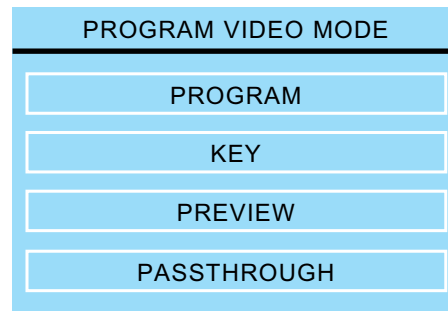
### 2. Select the Display option.



**Figure 3-1: The Display Menu.**

The Display menu appears.

### 3. Select the PROGRAM VIDEO MODE option.



**Figure 3-2: Program Video Mode Menu**

The Program Video Mode menu appears.

**4. Select the mode desired.**

Program is video without annotation.

Key is a key signal.

Preview is video with annotation.

**5. Exit the menu system.**

Port #2 now outputs the selected video mode.

## Turning Zap Icon On/Off

This selection toggles the display of the Zap icon on and off. When turned on, it is displayed in the lower right hand corner of the screen. This is useful if you are switching between other video sources that are not connected to the PVI-65. With the Zap icon displayed, it will be clear when you are displaying video from the PVI-65.



**Figure 3-3: Zap Icon**

**1. Activate the menu system.**

*(See “Activating the Menu“ in “Section One: Getting Started” on page 25)*

The Main Menu appears. (See Figure 1-14; “PVI-65 Main Menu” on page 26)

**2. Select the DISPLAY option.**

The Display menu appears. (See Figure 3-1; “The Display Menu.” on page 43).

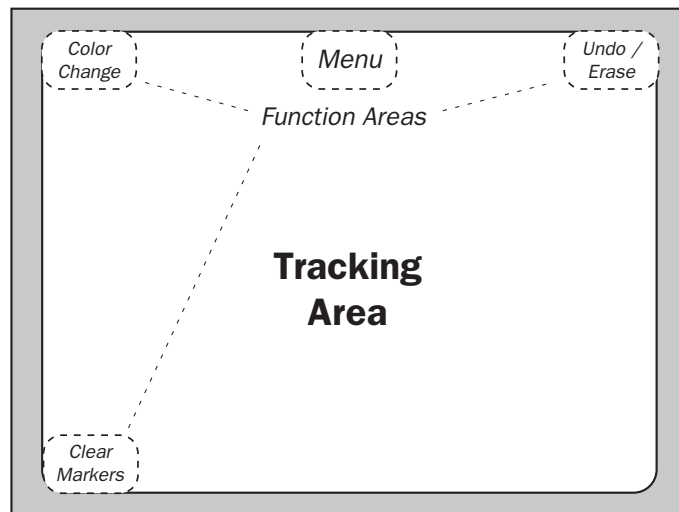
**3. Activate the ZAP ON button.**

When active, the button contains a solid color fill. Each activation of the button toggles it to the opposite state.

**4. Exit the menu system**

## Turning Touch Screen Function Areas On/Off

This selection activates/deactivates the touch sensitive function areas used with the touch screen controller. (See “Touch Screen” in “Section One: Getting Started” on page 16) When activated, the function areas are sensitive to touch. When deactivated, they will not respond to touch.



**Figure 3-4: Touch Screen Controller**

**1. Activate the menu system.**

(See “Activating the Menu” in “Section One: Getting Started” on page 25)

The Main Menu appears. (See Figure 1-14; “PVI-65 Main Menu” on page 26)

**2. Select the DISPLAY option.**

The Display menu appears. (*See Figure 3-1.; “The Display Menu.” on page 43*).

**3. Activate the TOUCH SCREEN CORNERS ON button.**

When active, the button contains a solid color fill. Each activation of the button toggles it to the opposite state.

**4. Exit the menu system**



## **SECTION FOUR:**

### **COMM PORT DEVICES MENU**

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## COMM PORT OPERATIONS

---

This section covers the various settings and options available through the use of the COMM ports on the PVI-65.

### Controllers Requiring Calibration

Controllers which require calibration are: remote control, touch screen and white board.

If you are using any of these as your initial controller, Boeckeler recommends calibrating them upon first power up. They can also be calibrated at any time using the selections in this part of the menu system if you are using the digitizing tablet or keyboard as your initial controller.

### Calibrating the Remote Control, Touch Screen or White Board at Start Up:

1. **Power up the Pointmaker and wait for the copyright message to appear.**
2. **During the 8-second copyright message, activate the controller:**
  - A. by touching the left button on the remote control
  - OR -
  - B. by tapping once on the touch screen
  - OR -
  - C. by tapping once on the White Board.
3. **Follow the calibration instructions displayed on the screen.**

After the calibration is complete, the Pointmaker will complete its startup and be ready for use.

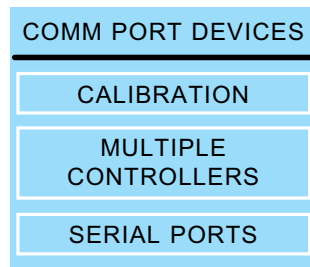
### Calibrating the Remote Control, Touch Screen or White Board Using the Menu System:

1. **Activate the menu system.**

*(See “Activating the Menu“ in “Section One: Getting Started” on page 25)*

The Main Menu appears. (See Figure 1-14; “PVI-65 Main Menu” on page 26)

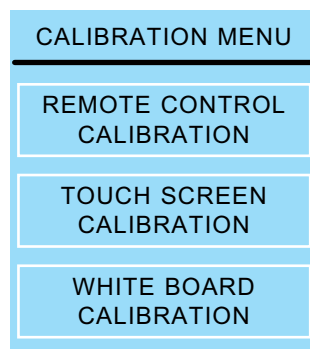
**2. Select the COMM PORT DEVICES option.**



**Figure 4-1: Comm Port Devices Menu**

The Comm Port Devices menu appears.

**3. Select the CALIBRATION option.**



**Figure 4-2: Calibration Menu**

The Calibration Menu appears.

**4. In the Calibration Menu, select the controller to be calibrated.**

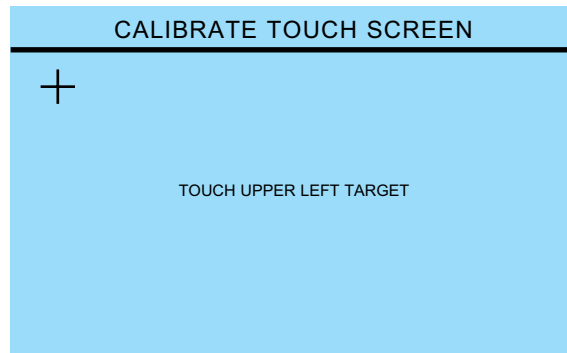


Figure 4-3: Calibrate Touch Screen dialog

The appropriate calibration screen appears.

**5. Follow the calibration instructions displayed.**

After users perform final calibration procedures, the Calibration Procedure display will automatically disappear, and users will be returned to the menu system.

**6. Exit the menu system.**

## Prioritizing Controller/Marker Usage

If desired, you can prioritize who's controller/marker has precedence when more than one is installed.

Three different modes are available:

**OPEN mode:** Allows all installed controllers to draw and point at any time. All users may change the appearance of markers, including clearing markers. However, while one user is drawing, no other user can mark or change the appearance of markers.

**SELECTIVE mode:** Adds slightly more organization, requiring a user to first select CONTROL on the tablet or touch screen before they begin marking. Again, while one user is drawing, no other user can mark or change the appearance of markers. This option only works with digitizing tablets and touch screens. Other controllers continue to work in the OPEN mode.

**PRIORITY USER mode:** This mode allows one pre-assigned user to take and release control of marking functions. On first use, the Priority User assigned in this menu is in control. While in control, a small “zap” character icon will appear in the lower-right corner of the

screen. When the Priority User is in control, no other user can take control of marking functions. The Priority User can release control to other users by again selecting CONTROL on the tablet or touch screen. Use is then similar to the SELECTIVE mode: users must select CONTROL in order to mark or change marker appearance. The Priority User can take exclusive control at any time by selecting CONTROL. This option only works with digitizing tablets and touch screens. Other controllers work in the OPEN mode.

### **To Set a Priority Mode:**

#### **1. Activate the menu system.**

(See “Activating the Menu“ in “Section One: Getting Started” on page 25)

The Main Menu appears. (See Figure 1-14:, “PVI-65 Main Menu” on page 26)

#### **2. Select COMM PORT DEVICES.**

The Comm Port Devices Menu appears (See Figure 4-1:, “Comm Port Devices Menu” on page 50).

#### **3. Select MULTIPLE CONTROLLERS.**

MULTIPLE-USER OPTIONS

MODE

OPEN

SELECTIVE

PRIORITY USER

Selecting PRIORITY USER option requires designating a priority COMM # (below).

PRIORITY COMM # 00 of 10

PRIORITY TO CURRENT DIGITIZING TABLET OR TOUCH SCREEN

**Figure 4-4: Multiple-User Options dialog**

The Multiple-User Options dialog appears.

#### 4. Select a priority mode.

If you select PRIORITY USER, identify the user by selecting their port number. It will highlight in pink when selected.(COMM port numbers are printed on the back of the PVI-65 unit.)

#### 5. Exit the menu system.

## Serial Port Settings

Serial ports are used for two main purposes: 1) connecting controller/marker devices 2) connecting to other systems (remote control, a second Pointmaker, a PC). This section explains the options available to you for each purpose.

The Serial Port dialog also allows you to assign a priority system to control users if multiple controller/markers are connected.

## Configuring Device Types

### Initialization of Device Types

Serial ports are “initialized” when the PVI-65 is powered on. During this process, the PVI-65 attempts to determine what device type (controller/marker) is connected to each port. This procedure can be lengthy since the PVI-65 accommodates a wide range of devices, and in its default detection mode (autodetect), it will run through the entire list of possibilities for each port. Using the settings available in the Serial Ports menu, it is possible for you to limit the initialization process for a designated port so that the PVI-65 looks for only the device type you specify. This speeds up the initialization process considerably.

### Integrating the PVI-65 with Other Systems

Since only controller/marker device types are able to be recognized during the initialization process, all other devices must be set up manually. The PVI-65 allows you to manually adjust communication settings for either of its COMM ports(See “*Setting Comm Port Parameters*” on page 56). This allows the PVI-65 to be integrated with:

- 1) an A/V system as a remote control command station where it can both control A/V devices and mark over any images presented;
- 2) a remote control system which can send commands to the PVI-65, controlling its various functions (See “*Section Six: Commands for RS-232 Control*” on page 81).

### **Designating a Device Type**

#### **1. Activate the menu system.**

(See “Activating the Menu” in “Section One: Getting Started” on page 25)

The Main Menu appears. (See Figure 1-14.; “PVI-65 Main Menu” on page 26)

#### **2. Select COMM PORT DEVICES.**

The Comm Port Devices Menu appears (See Figure 4-1.; “Comm Port Devices Menu” on page 50).

#### **3. Select SERIAL PORTS.**



**Figure 4-1: Serial Ports Dialog**

The Serial Ports dialog appears.

NOTE: All the serial ports installed on your PVI-65 are listed by port number, with the device type displayed to the right of each number. If the device type is in blue, it has been assigned through the autodetect procedure at startup.

#### **4. Select the device type you wish to have permanently assigned.**

If the device type can be permanently assigned (some types cannot), the color changes from blue to black. With the device permanently assigned, the next time the PVI-65 is powered up, the autodetect procedure will skip this port. If the assigned device needs initialized at startup, it will be initialized according to the device type listed.



NOTE: If the device type listed for a port cannot be permanently assigned (for example: device type “unknown” or if you try to assign more than one port for use with other systems (See “*Integrating the PVI-65 with Other Systems*” on page 53)), or you just wish to select a different type, there are two ways to change it. The next two steps describe how.

5. (optional) Select the arrow to the right of the device type you wish to change.



Figure 4-2: Device Select Dialog

The Device Select dialog appears.

This dialog presents a scrolling list of all device types currently supported by the PVI-65 in alphabetical order. The Page Up and Page Down buttons allow you to quickly scroll through the names until you find the device type you desire. When you locate and select the name you wish to assign, it will move to the center of the list, where it will be highlighted. The new device type is now assigned.

Device types which cannot be selected are in white.

When a “?” button is selected, a screen with further information about that device type will be displayed.

If a device type that is used for communicating with other systems is selected, an arrow button will replace its “?” button. Selecting that arrow button will activate the dialog for setting port parameters.

You can return to the Serial Ports dialog to make further changes by selecting Comm Port Devices and then selecting Serial Ports.

NOTE: If you are designating a port for use with another system you will need to set Comm Port parameters before exiting the menu system(See “*Setting Comm Port Parameters*” on page 56).

NOTE: The PVI-65 must be rebooted for the new device type assignments to be made permanent.

#### **6. (optional) Select the device type name you wish to change.**

When the device type name, instead of the arrow to its right, is activated, the device type will change without having to display the Device Select submenu. This method is only recommended for those with more extensive experience in assigning device types. Each time the name is selected, it causes a different device type to appear. The list of devices available using this method is an abbreviated version of the list seen in the Device Select dialog.

A click on the right side of the name moves forward one device. A click on the left side of the name moves backward one device. (If you are using the keyboard to select, it moves backward through the list only.) Keep clicking until the device type you desire is displayed. It will be assigned permanently when the PVI-65 is rebooted.

NOTE: If you are designating a port for use with another system you will need to set Comm Port parameters before exiting the menu system(See “*Setting Comm Port Parameters*” on page 56).

NOTE: The PVI-65 must be rebooted for the new device type assignments to be made permanent.

#### **7. Exit the menu system and recycle the power on the PVI-65.**

The PVI-65 implements the new settings.

### **Setting Comm Port Parameters**

If you are assigning a port for communicating with another system (See “*Integrating the PVI-65 with Other Systems*” on page 53), you must select either **Control Port** or **PVI to PVI** as your device type. The PVI-65 supports assigning only one port for each type.

**Control Port:** Choose this option if the PVI-65 is being used as an A/V remote control command station or if it is being controlled remotely using RS-232 commands.

**PVI-to-PVI:** Use this selection if the PVI-65 is being used to connect to another Pointmaker system.

1. **Select the appropriate device type in the Device Select dialog for the port where you are connecting the other system**(See “Designating a Device Type” on page 54).

Where a question mark is usually found, you will instead see an arrow.

NOTE: If the device type you desire for connecting to other systems is unavailable, check to see if it is assigned to another port. Remember, only one use of each is allowed.

2. **Activate the arrow next to the device type to set its communication parameters.**

Control Port PORT #2		
<b>BAUD RATE</b>	<b>PARITY</b>	<b>STOP BITS</b>
9600	NONE	1
4800	EVEN	2
2400	ODD	
1200	SPACE	
600	MARK	
300		
110		

**Figure 4-3: Control Port Dialog**

The corresponding dialog appears.

Select the desired baud rate, parity, and stop bits.

NOTE: Factory settings are 9600 baud, no parity, 1 stop bit. Data bits, which cannot be manually set, are 8 data bits.

3. **Exit the menu system and recycle the power on the PVI-65.**

The PVI-65 implements the new settings.



## **SECTION FIVE:**

## **USING MARKERS**

---



## OVERVIEW

---

This section covers marking procedures you might follow while making a presentation. It is assumed that you have basic familiarity with the operational buttons of your control device, and how to use them to anchor a marker and draw (See “Peripheral Devices“ in “Section One: Getting Started” on page 9).

### Basic Marking Concepts

#### Markers

Pointmaker Video Markers make it possible to create a variety of graphic shapes (including text), called markers, which can be placed over a video image. Available markers include: pointers, freehand drawing, typed text, straight line drawing, sizeable frames, and a date/time label.

#### Control Devices

Markers are created or placed using one or more control or marking devices. The most commonly used controllers are: digitizing tablets, keyboards, touch screens and mouse devices. Each type of device has its own strengths and weaknesses when used in a presentation.

#### Active & Anchored Markers

An active marker is a special kind of marker that “floats” over the image until it is anchored or “fixed” into a location assigned by the user. While it is active, its attributes can be altered. Depending on the type of marker being created, some of those attributes are: position, color, size, line thickness, and shape. Once a marker is anchored, its attributes cannot be changed. It can only be removed and re-created or covered with another marker.

Any markers created with the keyboard are active markers. All other control devices (except the touch screen) have only one type of active marker available: pointers.

#### Overlays

Markers never alter the displayed video images because they are actually placed on a clear layer above the image called an overlay. The Pointmaker can store up to 25 different overlays and each overlay can hold any combination of

markers. A user can prepare overlays in advance of a presentation and then recall them at will when they are needed. Once an overlay is recalled, it can be changed or erased. When the Pointmaker is powered down, it will automatically save the overlays in its memory.

Instructions for marking are divided into the following categories:

- **Assigning Marker Appearance**
- **Marking**
- **Clearing Markers**
- **Displaying Different Overlays**



## ASSIGNING MARKER APPEARANCE

---

While the marker is still active, and before you begin to draw or place markers, you can change the appearance of your drawing or next marker in one of several ways.

- **Assign Marker Color**
- **Assign Line Style**
- **Assign Pointer Type**
- **Turn Pointer On/Off**

### Assigning Marker Colors

The color that the active marker displays is the color that the marker will be anchored in. You can anchor markers of different colors on a single overlay.

The colors available during a presentation are based on those activated in the Color Palette menu (See “Customizing the Color Palette” in “Section Two: Annotation Menu” on page 34).

If the color of the markers does not change from black, the brightness level is too low and must be increased before selecting the color (See “Setting an Overlay Brightness Level” in “Section Two: Annotation Menu” on page 36).

### From Any Controller

**Activate the Change Color command from your control device.**

*(see “Quick Reference for Devices” in “Appendix” on page A-5)*

All markers anchored from this point on will appear in the newly selected color.

**NOTE:** If the pointer has been disengaged, and the Display Color Change option in the Color Palette Menu has been activated, a small block of color will briefly appear in the lower right of the screen to help you identify the new marker color. The Display Color Change block does not appear when using the digitizing tablet.

**NOTE:** In mouse devices, be careful to click the tip (or first) button rather than press it. Pressing the tip (or first) button could inadvertently toggle the pointer on/off or cause the menu system to appear.

## Assigning Line Styles

You can have drawn lines of different styles on a single overlay. Once you draw the line, or anchor a straight line, you cannot change that line style. However, you can erase or undo the drawing and begin again. (See “Clearing Markers” on page 75)

You can change line style directly from the digitizing tablet or from the keyboard. You can also change the line style from other devices by accessing the menu system. When the keyboard is installed, you can only access the menu system from the keyboard.

### From Digitizing Tablet

1. **Click the pen tip on the desired line style icon on tablet.**

All lines drawn from this point on will appear in the newly selected line width and style.

### From the Keyboard

1. **Activate the Line Style command.** (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

A small sample of the active line style will appear briefly in the lower-right hand corner of the screen.

2. **Repeatedly activate the Line Style command until the desired line style appears in the on screen sample.**

You can scroll backwards through the line options, by activating the Reverse Toggle command.

All lines drawn from this point on will appear in the newly selected line width and style.

### From the Menu System

(See “Selecting a Line Style” in “Section Two: Annotation Menu” on page 33)

## Selecting Pointers

Select a pointer type while the pointer is active, or positionable. After you anchor the pointer, you cannot change that pointer's type. However, you can erase or undo the anchored pointer and begin again (*See "Clearing Markers" on page 75*).

### From the Digitizing Tablet

1. **Click the pen tip on the desired pointer icon on tablet.**

The corresponding active pointer appears on screen, ready for positioning or anchoring.

### From the Keyboard

1. **Repeatedly activate the POINTERS command until the desired pointer type appears on screen.** (*see "Quick Reference for Keyboard" in "Appendix" on page A-6*)

You can scroll backwards through the pointer options, by activating the Reverse Toggle command.

The pointer you selected appears on screen, ready for positioning.

### From the Menu System

(*See "Pointers" in "Section Two: Annotation Menu" on page 31*)

## Turning the Active Pointer On/Off

Sometimes a presenter chooses not to have the pointer showing during a presentation. This command allows you to turn the visibility of the pointer off or on. When the active pointer is turned off, you can still anchor pointers.

Since touch screens and whiteboards do not display active pointers, you do not need to use the Pointer On/Off command with those devices.

**NOTE:** An alternative to the Pointer On/Off command, is using the Pen Proximity feature available on the tablet template or through the menu system. When active, this feature causes the active pointer to disappear each time you remove your drawing device from proximity

of the tablet or screen drawing surface (See “Changing Pen Proximity” in “Section Two: Annotation Menu” on page 38).

### From the Digitizing Tablet

1. **Press the Pointer On/Off icon on the tablet Menu Strip.**

The pointer disappears.

2. **To make the pointer reappear, repeat the procedure.**

### From the Keyboard

1. **Activate the Pointer On/Off command.** (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

The pointer disappears.

2. **To make the pointer reappear, repeat the procedure.**

NOTE: To turn off all active markers, including active frames, use the keyboard Active Marker On/Off command.

### From the Menu System

Pointers are turned off in the same dialog where they are selected. (See “Pointers” in “Section Two: Annotation Menu” on page 31)

# MARKING

---

This section covers pointing and drawing procedures. The following outline lists the procedures in the general order that most presenters use them.

- **Entering the Marking Mode**
- **Pointing (with positionable or anchored pointers)**
- **Drawing**
- **Typing Text (keyboard installed)**
- **Framing (keyboard installed)**
- **Stamping the Date/Time**

## Entering the Marking Mode

The Pointmaker is in the marking mode by default. The only time it is not in marking mode is when a menu is displayed. In the Marking mode, the image from the video source is displayed along with any stored markers. An active pointer is also displayed, unless it was disabled during setup (See “Turning the Active Pointer On/Off” on page 65).

## Pointing

You can move the pointer around the screen, using it to direct the viewer’s attention without anchoring it. You can also position and anchor several pointers on the overlay, giving you the opportunity to point in a more lasting manner on several areas of the image.

Before using or anchoring a pointer, you may want to select a new pointer type (See “Selecting Pointers” on page 65). Or you may change the pointer color (See “Assigning Marker Colors” on page 63).

### From Any Controller

1. **Position the pointer anywhere on the video image to direct attention to an image detail.**

Refer to instructions for your particular control device (See “Peripheral Devices” in “Section One: Getting Started” on page 9).

2. **If desired, reposition the same active pointer anywhere on the image to make your second point, and continue as often as desired.**
3. **If desired, anchor the active pointer.**

Refer to instructions for your particular control device (*See “Peripheral Devices” in “Section One: Getting Started” on page 9*).

The pointer is anchored and a new active pointer appears on screen, identical to the first.

NOTE: Active pointers are not displayed for touch screens, only anchored markers.

4. **Repeat any of these steps as often as desired.**

## Drawing

You can draw on the Pointmaker overlay simply by beginning to draw. The drawing feature allows you to circle important parts of the image, write on the image, or underscore particular parts of text. You can draw freehand curves or straight lines.

To draw, you can use the digitizing tablet stylus on the tablet drawing area, your finger on a touch screen, or a magic marker on the SMART Board. You can also use other mouse devices to draw. You cannot freehand draw using the keyboard, but you can use it for straight line drawing.

Before drawing, you may wish to change the drawing line color (*See “Assigning Marker Colors” on page 63*). Or you may wish to change the width and style of the drawing line (*See “Assigning Line Styles” on page 64*).

### Drawing Freehand

1. **Position the active pointer (if one is displayed) anywhere on the video image where the drawing is to begin.**

NOTE: If you are using a touch screen or white board, position a finger or marker pen.

2. **Activate the Draw command from your particular drawing device.**

(*See “Peripheral Devices” in “Section One: Getting Started” on page 9*)

3. **Reposition the active marker (if one is displayed) and repeat the above procedures for another drawn line.**

NOTE: You may create as many drawings as desired.

## Straight Line Drawing

This feature works only using the keyboard. (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

- 1. Activate the Straight Draw command from the keyboard.**

A cursor appears representing the first endpoint of the straight line.

- 2. Using the arrow keys, position the cursor where you want the line to begin, and anchor it.**

A second cursor appears, joined by a line to the first endpoint.

- 3. Position the second cursor where the line is to end and anchor it.**

The line segment is complete.

- 4. If desired, draw another straight line by positioning the new active cursor and anchoring it.**

NOTE: You may anchor as many lines as desired.

## Typing Text Labels

This feature works only using the keyboard. (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

Anytime you press an alphanumeric key on the keyboard, a text label begins. Before you anchor a line of text, you can choose to display it in one of six (6) fonts, each of which offers one or more sizes. These fonts are (in order): TI Roman (4 sizes); Helvetica (4 sizes); TI Dom Casual (4 sizes); Fargo (3 sizes); Symbol (1 size); and Map (1 size). Symbol and Map fonts are charted in Section Five: Appendices.

- 1. Position the active marker anywhere on the image.**

- 2. Create a line of text by pressing the desired text keys.**

NOTE: Do not anchor this line of text yet, since only an active (or positionable) line of text will display the font options.

- 3. Select the desired font by repeatedly activating the Fonts command until the font appears on screen.**

You can scroll backwards through the font options, by activating the Reverse Toggle command.

- 4. Select a font size by repeatedly activating the Font Size command until the correct size appears on screen.**

You can scroll backwards through the size options, by activating the Reverse Toggle command.

- 5. Turn the text background on or off by activating the Text Background On/Off command.**

NOTE: The color of the background is always blue.

- 6. Position the active label anywhere on the video image, then anchor the label.**

The line of text is anchored. You can anchor a new line of text immediately below the previously anchored text line by not moving the cursor. Or you can position the second line of text anywhere on the screen.

NOTE: To create a paragraph of several lines of text, remember that text does not wrap, so press ENTER or DROP [Insert] at the end of each line.

- 7. Exit text typing mode by pressing any other function key.**

## Sizing and Anchoring Frames

This feature works only using the keyboard. (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

The Pointmaker features four frame types: box frame, circle frame, solid box frame, and solid circle frame. Frames remain active (sizeable and positionable) until you anchor them.

Before anchoring a frame, you may want change the frame color (See “Assigning Marker Colors” on page 63).

- 1. Select a frame type by repeatedly activating the Frames command until the desired frame appears.**

You can scroll backwards through the font options, by activating the Reverse Toggle command.

The active frame appears, ready for sizing and positioning. A crossed line displayed within the boundaries of an active frame represents a



solid frame. The frame will be filled with the color of the active marker after you anchor it.

**2. Enter the Sizing mode by activating the Size Frames command.**

The frame is now sizeable.

**3. Size the frame using the keyboard or other controller.**

Upward commands make the frame taller. Downward commands make the frame shorter. Leftward commands make the frame wider. Rightward commands make the frame narrower.

For finer control in sizing, activate the Fine Positioning command.

**4. Store the size by pressing the ENTER or DROP [Insert] key.**

The sized frame is ready for positioning.

**5. Position the sized frame anywhere on the image, then anchor it by pressing the ENTER or DROP [Insert] key.**

A new active frame appears, identical to the first.

**6. If desired, size and position the new active frame anywhere on the video image to frame a second area.**

**7. Exit Frames by pressing any other function key.**

## Stamping the Date/Time

This feature works only using the keyboard. (see “*Quick Reference for Keyboard*” in “*Appendix*” on page A-6)

You can “stamp” an overlay with the current date and/or time, depending on which display mode you selected in the Set Date/Time Menu.

While active (or positionable) the date/time stamp is represented by an icon. The numerical date and/or time will appear as soon as you anchor the icon. You can anchor only one Date/Time stamp on each overlay. To reposition a stamp, activate the command again. The old stamp disappears and the new stamp appears, ready for positioning.

Before anchoring a date/time stamp, you may want to select a new color for the stamp’s text (See “*Assigning Marker Colors*” on page 63).

**1. Activate the Show Date/Time command.**

A date/time icon appears.

2. **Position the date/time icon anywhere on the video image.**
3. **To select a solid or transparent label background, activate the Text Background On/Off command.**
4. **Anchor the date/time label.**

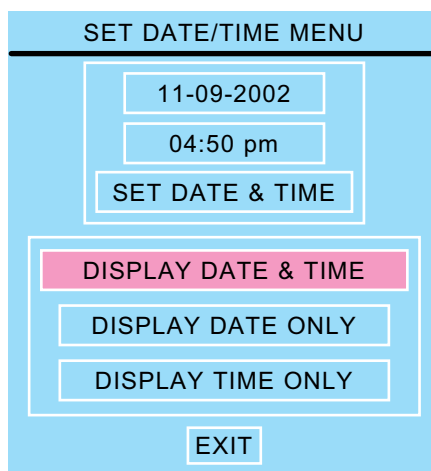
The current date/time label appears. A date/time cursor also appears on screen, ready for the next action.

## Setting Date/Time Label Options

This feature works only using the keyboard. (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

The Date/Time function has a menu for setting its options. The menu lets you set the current date and time. It also allows the selection of which label is to be displayed: DATE, DATE/TIME, or TIME.

1. **Activate the SET DATE/TIME MENU by pressing CTRL + SHOW DATE/TIME [F8].**



**Figure 5-1: Set Date/Time Menu**

The Set Date/Time Menu will be displayed on-screen.

The top section of the menu is for changing and setting the date/time. The bottom portion allows the user to select which label is to be placed on the overlay. When the menu opens, the EXIT command will be highlighted. Use the POSITIONING KEYS to move the highlight to the appropriate box for your selection.

**2. Set the date and/or time if necessary. If they are correct, skip this step.**

*Setting the Date & Time:*

- (1) Use the POSITIONING KEYS to move the highlight to the box with the date inside.

- (2) Enter the correct date.

The cursor will move across the screen as each number is entered.

- (3) Press ENTER to accept the entry.

The highlight will move down to the time box.

- (4) Enter the correct time.

The cursor will move across the screen as each number is entered.

- (5) Press “a” for am or “p” for pm.

The highlight will move down to the Set Date & Time box.

- (6) Press ENTER to set the changes.

*Setting the Date:*

- (1) Use the POSITIONING KEYS to move the highlight to the box with the date inside.

- (2) Enter the correct date.

The cursor will move across the screen as each number is entered.

- (3) Press ENTER to accept the entry.

The highlight will move down to the time box.

- (4) Press ENTER to accept the current time.

The highlight moves down to the Set Date & Time box.

- (5) Press ENTER to set the changes.

*Setting the Time:*

- (1) Use the POSITIONING KEYS to move the highlight to the box with the time inside.

- (2) Enter the correct time.

The cursor will move across the screen as each number is entered.

- (3) Press “a” for am or “p” for pm.

The highlight will move down to the Set Date & Time box.

- (4) Press ENTER to set the changes.

- 3. Use the POSITIONING KEYs to highlight one of the three display options: DISPLAY DATE & TIME, DISPLAY DATE ONLY, or DISPLAY TIME ONLY.**

- 4. Press ENTER to activate your selection.**

The selected box will fill with color to indicate it is activated.

- 5. Use the POSITIONING KEYs to highlight the EXIT command.**

- 6. Press ENTER to exit the menu.**

The entries you make will remain until you enter this menu to change them.

## CLEARING MARKERS

---

After you anchor markers (drawings, lines, frames, and pointers), you may want to clear the screen of all or some of the markers before proceeding to the next point of discussion. You can erase markers in one of the three following ways:

- **Clearing All Markers**
- **Undoing the Most Recent Marker**
- **Erasing Markers**

If you don't want to clear markers, but just need to temporarily remove the marker overlay, then use the Marker Overlay On/Off command (*See "Turning Off the Marker Overlay" on page 80*).

### Clearing All Markers

Follow these instructions to clear the entire screen of markers.

#### From the Digitizing Tablet

1. **Select the CLEAR icon on the tablet Menu Strip.**

All markers disappear. An active pointer remains on screen unless the pointer was disengaged.

NOTE: Markers are cleared even if you are in PC Mode.

#### From Other Controllers

1. **Activate the Clear command for your particular controller.**

All markers disappear. An active pointer remains on screen unless the pointer was disengaged.

### Undoing a Marker

Follow these instructions to undo a marker, beginning with the most recently anchored marker or line segment. You can repeat this command as often as needed until the screen is clear of markers.

## From the Digitizing Tablet

1. **Press the tip button on the UNDO icon located on the tablet Menu Strip.**

The most recently anchored marker disappears. An active pointer remains on screen unless the pointer was disengaged.

NOTE: You can undo markers even if you are in PC Mode.

## From Other Controllers

1. **Activate the Undo command for your particular controller.**

The most recently anchored marker disappears. An active pointer remains on screen unless the pointer was disengaged.

## Erasing Markers

Follow these instructions to erase markers from the overlay, wiping them clear like a traditional eraser. You activate Erase mode from the menu system, but you erase the markers using your drawing device.

When you are in Erase mode, you can no longer undo markers. Conversely, when you are in Undo Mode, you cannot erase markers.

NOTE: Entering Erase mode clears markers from any overlays that you might have stored.

## Activating Erase Mode

*(See “Selecting an Erase Method“ in “Section Two: Annotation Menu” on page 32)*

## Erasing Markers

Follow these instructions to erase markers. Be sure you are in Erase mode before implementing these procedures. *(See “Selecting an Erase Method“ in “Section Two: Annotation Menu” on page 32)*

**From the SMARTBoard®**

1. **After marking, activate the Undo/Erase command by picking up the eraser.**
2. **Wipe the eraser over your markers.**

The markers disappear as you wipe. When you finish erasing, lift the eraser from the board. Lifting the eraser closes the eraser function, and enters Marking mode. If you need to erase again, repeat steps 1-3.

**From Other Drawing Devices**

1. **After marking, activate the Undo/Erase command for your particular controller.**

A square eraser appears on screen, ready for positioning.

2. **Drag the eraser over the markers**

The markers disappear as you wipe. When you lift the drawing device (that is, your finger or stylus), the Pointmaker closes the eraser function, and enters Marking Mode. If you need to erase again, repeat the steps.





## MANIPULATING OVERLAYS

---

With the keyboard installed, you can display one of 10 stored marker overlays. Also, you can temporarily turn off the marker overlay, without affecting the markers you store there.

This section covers the following overlay functions:

- **Paging Through Overlays (in sequence or out-of-sequence)**
- **Turning an overlay Off/On**

### Paging Through Overlays

Use these instructions when the keyboard is installed and you wish to display a new overlay. After you display a new overlay you can add or clear markers from that overlay. Overlays are saved automatically.

#### To go to the next or previous overlay

**Activate the Next Overlay or Previous Overlay command.** (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

The next or previous overlay of markers is displayed, and an overlay # briefly appears in the corner of the screen.

#### To go to an out-of sequence overlay

1. **Activate the Go To Overlay # command.** (see “Quick Reference for Keyboard” in “Appendix” on page A-6)

A small “#” sign appears in the lower-right corner, followed by an underscore prompting you to type a number.

2. **Type in the overlay number.**

The overlay corresponding to the number appears. This selection is confirmed by a brief display of the overlay number in the lower-right corner of the screen.

NOTE: If you do not respond within a few seconds, the overlay does not change.

## Turning Off the Marker Overlay

When the keyboard is installed, you can turn off the Pointmaker overlay to view the video image without any markers. When you turn the overlay on again, the markers you anchored on that overlay will reappear. You can only activate this command from the keyboard.

1. **Activate the Marker Overlay On/Off command.** (see “*Quick Reference for Keyboard*” in “*Appendix*” on page A-6)

The markers disappear.

2. **Activate the Marker Overlay On/Off command again.**

The markers reappear.

**SECTION SIX:**  
**COMMANDS FOR RS-232**  
**CONTROL**

---



# INTRODUCTION

The following commands can be used to program A/V programmable remote control systems allowing the **PVI-65** to be operated from a remote device.

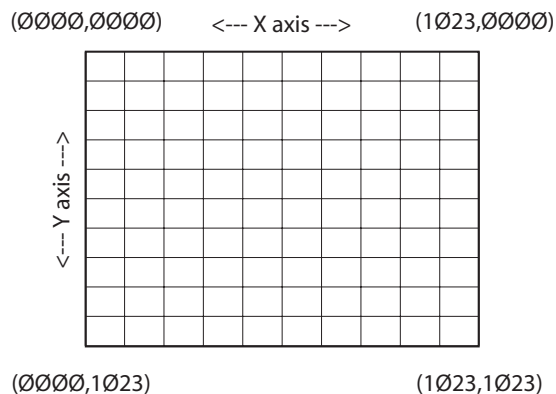
All commands begin with an ASCII escape (<Esc>) code (generated using the Esc key on your keyboard), followed by a forward parenthesis “(”. The initiating code then appears as follows:

<Esc> (

All other characters which follow this command require a combination of alphanumeric codes.

## X-Y Coordinate Grid

Numerous commands refer to a screen grid with coordinates based on an internal grid that is 1024 x 1024 units. The grid can be absolute, covering the entire screen area, or relative to a current position. The absolute grid coordinate of 00000000 is at the upper-left of the screen. The grid coordinate of 10231023, then, is in the lower-right. Relative grid coordinates can include negative numbers to indicate positions above or left of a current position. In the illustration below, XXXX = a numeric value for the horizontal axis. YYY = a numeric value for the vertical axis.



**Figure 6-1: Screen Grid**



# COMMANDS

## (C) Active Marker Off/On

The “C” command turns the visibility of the active marker off or on. If off, note that it will reappear if the pointing device is moved. Unlike turning the *pointer* off or on, turning the *active marker* off or on will affect any active marker, not just an active pointer. This includes an active frame, active text label, and active date/time label.

<Esc>(CØ	Turn active marker off.
<Esc>(C1	Turn active marker on.
<Esc>(CT	Toggle active marker visibility.

## (CE) Color Enable

The “CE” command determines what colors are available from the color palette. Refer to the “CS” commands for how to change the color of a marker using this enabled palette.

<Esc>(CEW1	Enable White
<Esc>(CEWØ	Disable White
<Esc>(CEB1	Enable Black
<Esc>(CEBØ	Disable Black
<Esc>(CEP1	Enable Pink
<Esc>(CEPØ	Disable Pink
<Esc>(CEG1	Enable Green
<Esc>(CEGØ	Disable Green
<Esc>(CEY1	Enable Yellow
<Esc>(CEYØ	Disable Yellow
<Esc>(CEC1	Enable Cyan
<Esc>(CECØ	Disable Cyan
<Esc>(CER1	Enable Red
<Esc>(CERØ	Disable Red

## (CL) Clear

The “CL” command clears the markers from the video overlay.

<Esc>(CL	Clears All Markers
----------	--------------------

## (CM) Marker Move

The “CM” command moves an active marker (pointer, frame, label or text or date/time label) using the XY coordinate grid. (See “X-Y Coordinate Grid” on page 83) The coordinates are: XXXX = a numeric value for the horizontal axis point and YYYY = a numeric value for the vertical axis point.

<Esc>(CMXXXXYYYY	Move an active marker to coordinates XXXX and YYYY Example: <Esc>(CM00250037
------------------	---

## (CS) Color Selection

The “CS” command handles color attributes of an active marker. These commands will force an “enable” of the color selected without having to enable that color using the “CE” commands or going to the Setup Menu.

<Esc>(CSR	Select Red
<Esc>(CSW	Select White
<Esc>(CSB	Select Black
<Esc>(CSP	Select Pink
<Esc>(CSG	Select Green
<Esc>(CSY	Select Yellow
<Esc>(CSC	Select Cyan
<Esc>(CSN	Select Next sequence forward to the next available color that has been enabled. (See “(CE) Color Enable” on page 85)
<Esc>(CSD1	Display Color Change display a sample block of the new color. May be desired if a pointer is not being displayed. The option may not be desired if users wish to change colors during a live broadcast.
<Esc>(CSDØ	Do not display color change



<Esc>(CSDT	Toggle color change display
------------	-----------------------------

## (DL) Draw Line

The “DL” command draws a line using the XY coordinate grid. (See “X-Y Coordinate Grid” on page 83) The first coordinate series XXXXXXXY is the beginning point of the drawn line, and the second series XXXXXXXY represents the end point of the drawn line.

<Esc>(DLXXXXXXXXXXXXYYY	Draw a Line
-------------------------	-------------

## (DP) Drop Marker

The “DP” command drops an active marker (pointer, frame, label or cursor) using the XY coordinate grid. (See “X-Y Coordinate Grid” on page 83) The coordinates are: XXXX = a numeric value for the horizontal axis point and YYYY = a numeric value for the vertical axis point.

<Esc>(DPXXXXXXXX	Drop an active marker at coordinates XXXX and YYY Example: <Esc>(DP00250037
------------------	--

## (E) Echo

The “E” command tells the Pointmaker to echo the input over the RS-232 link, in full, in part or not at all.

<Esc>(EA	Echo all input
<Esc>(EC	Echo all except commands
<Esc>(EN	Disable echo

## (EM) Erase Method

The “EM” command activates your choice of erase methods.

ESC(EM0	Erase Method: "UNDO"
ESC(EM1	Erase using Small eraser
ESC(EM2	Erase using Medium eraser
ESC(EM3	Erase using Large eraser

## (FS) Frame Size

The “FS” command defines an active frame.

<Esc>(FSXXXXYYYY	Designating the size of an active frame. XXXX = a numeric value for the horizontal dimension. YYYY = a numeric value for the vertical dimension. Units range from 0001 to 1024.
------------------	--

## (FT) Frame Type

The “FT” command tells the Pointmaker which type of frame to display on-screen.

<Esc>(FTB0	Box Frame
<Esc>(FTB1	Filled Box Frame
<Esc>(FTC0	Circle Frame
<Esc>(FTC1	Filled Circle Frame
<Esc>(FTN	Next Frame

## (I) Marker Intensity or Brightness

The “I” command sets the intensity or brightness level for markers. Positive or negative values may be coded.

<Esc>(ISXXX	Set the brightness level (absolute). XXX is numeric value between -256 and 256.
-------------	---

<Esc>(ICXXX	Increases brightness level (relative). XXX is numeric value between -256 and 256.
<Esc>(IC-XXX	Decreases brightness level (relative). XXX is numeric value between -256 and 256.

## (IM) Identify Mode for Multiple Users

The “IM” command designates the mode to use when multiple digitizing tablets or touch screens are installed. When PRIORITY USER mode is selected, users will also need to send the command designating which controller (COMM #) is the priority user.

<Esc>(IMO	Assigns Open Mode.
<Esc>(IMS	Assigns Selective Mode.
<Esc>(IMP	Assigns Priority User Mode.
<Esc>(IMCXX	Sets COMM port for Priority User. XX = the COMM port (01-10) The port selected should be connected to a digitizing tablet or touch screen.

## (L) Line Style

The “L” command determines the line style to use when drawing a freehand line, straight line or frame.

<Esc>(LF	Fine or thin line.
<Esc>(LSF	Fine or thin line with drop shadow.
<Esc>(LM	Medium line.
<Esc>(LSM	Medium line with drop shadow.
<Esc>(LB	Bold line.
<Esc>(LSB	Bold line with drop shadow.

## (PA) Pass-through

The “PA” command enables the video image to “pass-through” the system without displaying the marker overlay.

<Esc>(PA1	Enable pass-through. (overlay is hidden)
-----------	--

<Esc>(PAØ	Disable pass-through. (overlay is displayed)
<Esc>(PAT	Toggle pass-through.

## (PT) Pointer Type

The “PT” command controls the display of pointer types contained in the Pointmaker.

<Esc>(PTC	Displays Circle
<Esc>(PTDL	Display Down Left Arrow
<Esc>(PTDØ	Display Down Arrow
<Esc>(PTDR	Display Down Right Arrow
<Esc>(PTL	Display Left Arrow
<Esc>(PTN	Hide Pointer
<Esc>(PTP	Display Cross Hairs
<Esc>(PTR	Display Right Arrow
<Esc>(PTSC	Display Small Circle
<Esc>(PTSP	Display Small Cross Hairs
<Esc>(PTT1	Enable pointer toggle.
<Esc>(PTT2	Turn pointer off.
<Esc>(PTT3	Turn pointer on.
<Esc>(PTT4	Toggle pointer on/off.
<Esc>(PTT5	Display next pointer selects next pointer in the sequence.
<Esc>(PTTØ	Disable pointer toggle.
<Esc>(PTUL	Display Up Left Arrow
<Esc>(PTUØ	Display Up Arrow
<Esc>(PTUR	Display Up Right Arrow

## (PX) Proximity On/Off

The “PX” command controls the pen proximity feature of digitizing tablets. When proximity is on, active pointers disappear when the pen is lifted from

the drawing area. When proximity is off, active pointers remain on-screen when the pen is lifted.

<Esc>(PX1	Turn proximity on.
<Esc>(PXØ	Turn proximity off.
<Esc>(PXT	Toggle proximity.

## (R) Restart Pointmaker

The “R” command restarts the Pointmaker. Options include saving current settings and markers in memory (a soft boot), or clearing memory of all settings and markers (a hard boot).

<Esc>(RS	Restart saving current settings and markers in memory.
<Esc>(RH	Restart clearing current settings and markers.

## (S) Date/Time Marker

The “S” command controls options concerning the date/time marker. It displays as an active marker.

<Esc>(STØ	Displays date/time marker in time only mode.
<Esc>(SDØ	Displays date/time marker in date only mode.
<Esc>(SDT	Displays date/time marker in time only mode.
<Esc>(SDSMMDDYYYY	Set the date. M=month, D=Day, Y=year
<Esc>(STAHHMM	Set time as a.m. H=hour, M=minute
<Esc>(STPHHMM	Set time as p.m. H=hour, M=minute

## (SU) Port Initialization

The “SU” command controls COMM port detection on start-up. It can also activate the autodetection process immediately.

**Note:** If a new controller is installed, a soft restart will be necessary to initialize the device.

<Esc>(SUA	Run autodetect at startup. (check all COMM ports)
<Esc>(SUK	Keep current settings.
<Esc>(SUR	Run autodetect now. (check all COMM ports)

## (SUM) Menu System

The “SUM” command displays the Main Menu.

<Esc>(SUM	Activate the menu system.
-----------	---------------------------

## (T) Text Label

The “T” command controls active text labels. Labels can be composed of single characters or text blocks. This command also allows you to set font and size.

<Esc>(TTc	Displays any single character. “c” is any displayable character.
<Esc>(TBccc...	Displays a block of characters. “ccc...” is however many displayable characters you choose to display - limited by screen display area.

Font selection commands can be assigned to the active text label after it is visible on the screen.

<Esc>(TFØ	Change font to TI Roman.
<Esc>(TF1	Change font to Helvetica.
<Esc>(TF2	Change font to TI Dom Casual.
<Esc>(TF3	Change font to Fargo.
<Esc>(TF4	Change font to Symbol.
<Esc>(TF5	Change font to Map.
<Esc>(TN	Change to the next font.
<Esc>(TP	Change to the previous font.

Font size commands can be assigned to the active text label after it is visible on the screen:

<Esc>(TSØ	Small works with: TI Roman, Helvetica, TI Dom Casual, Fargo, Symbol, Map
<Esc>(TS1	Medium works with: TI Roman, Helvetica, TI Dom Casual, Fargo
<Esc>(TS2	Large works with: TI Roman, Helvetica, TI Dom Casual, Fargo
<Esc>(TS3	Extra Large works with: TI Roman, Helvetica, TI Dom Casual

## (TC) Touch Screen Corner Control

The “TC” commands tell the Pointmaker to enable or disable the corner function areas on a touch screen (See “Touch Screen” in “Section One: Getting Started” on page 16)..

<Esc>(TCØ	Disable corner function areas
<Esc>(TC1	Enable corner function areas
<Esc>(TC2	Toggle corner function areas

## (U) Undo/Erase

The “U” command erases the last created anchored marker. Each time this command is given, an anchored marker will be erased from the overlay, beginning with the most recently anchored marker.

<Esc>(U	Undo the last anchored marker.
---------	--------------------------------

## (V) Select an Overlay

The “V” command tells the Pointmaker which overlay to display.

<Esc>(V#	Display overlay number specified. replace # with overlay number desired.
<Esc>(VN	Display next overlay.
<Esc>(VP	Display previous overlay.

NOTE: To hide the overlay, see the Pass-through (PA) command.

## (Z) Zap Icon

The “Z” command allows you to turn the Zap Icon on and off. When on, it is displayed in the lower right corner of the screen.

<Esc>(ZØ	Turn Zap Icon off.
<Esc>(Z1	Turn Zap Icon on.
<Esc>(ZT	Toggle Zap Icon



# APPENDIX

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## TROUBLESHOOTING GUIDE

Boeckeler's quality inspectors test each Pointmaker for software and hardware performance prior to shipment. Therefore, most problems which presenters encounter are related to installation. The table below describes common problems and their solutions. If, after referring to this table, a problem still exists, call Boeckeler Instruments, Inc., at (800) 552-2262 or (520)745-0001 and ask for technical assistance.

There are no user serviceable parts in the Pointmaker.

**Do not open the cabinet.**

**Table 1: Troubleshooting**

Symptoms	Possible Solutions
The green indicator light on the front of the Pointmaker does not light up.	<ol style="list-style-type: none"> <li>1. Check that the Pointmaker is plugged into a live outlet.</li> </ol>
No image on monitor.	<ol style="list-style-type: none"> <li>1. Check that the monitor is plugged into a live outlet.</li> <li>2. Check that the monitor is switched on.</li> <li>3. Check that the monitor brightness and contrast controls are properly adjusted.</li> </ol>
The Pointmaker markers appear to bloom.	<ol style="list-style-type: none"> <li>1. Adjust system parameters on the video output device, monitor or camera (if in use) such as contrast, gain, brightness, color, light and intensity.</li> <li>2. Decrease brightness of Pointmaker markers or use a different marker color.</li> </ol>
Monitor lights up but does not display a picture.	<ol style="list-style-type: none"> <li>1. Check that the video source and Pointmaker are each plugged into a live outlet.</li> <li>2. Check that the video source and Pointmaker are both switched on.</li> <li>3. Check that the proper cables are connected to the proper connectors on the video source, the Pointmaker and the monitor. Some sources and monitors have multiple output and input connectors. Consult your computer manuals for correct connection information.</li> <li>4. Bypass the Pointmaker by connecting the monitor directly to the video source. If the video image still does not appear, have the video source and monitor checked.</li> </ol>

**Table 1: Troubleshooting**

Symptoms	Possible Solutions
Monitor automatically adjusts brightness so that video image is dull while markers are bright.	<ol style="list-style-type: none"> <li>1. Monitor is automatically adjusting for the overall brightness level of the markers and the video image. On the Pointmaker, enter the Setup Menu and select the BRIGHTNESS option to tone down the settings on the brightness scale. If using the keyboard, press the CHANGE BRIGHTNESS [F10] key to decrease brightness. The monitor will adjust accordingly.</li> </ol>
Monitor displays a scrambled picture.	<ol style="list-style-type: none"> <li>1. Check the horizontal hold control on the video monitor for proper adjustment.</li> <li>2. Monitor is not compatible with video source. Use compatible system.</li> <li>3. Check to be sure that the video in and out connectors on the Pointmaker are secure.</li> </ol>
Touch screen will not operate properly.	<ol style="list-style-type: none"> <li>1. (See "Peripheral Devices" in "Section One: Getting Started" on page 9); (See "Installation" in "Section One: Getting Started" on page 21). ALSO refer to the manufacturer's operating instructions that came with the controller.</li> </ol> <p>For touch screens, calibration from copyright message may be needed.</p>

## QUICK REFERENCE FOR DEVICES

This section contains tables for quick reference to the device commands for the PVI-65. Tables are arranged alphabetically by function.

The list below outlines the devices covered in this section.

- **DTU-30 or DTR-30 Digitizing Tablet**
- **Touch Screen (or White Board)**
- **KB-20 Keyboard**
- **Mouse devices**

### Quick Reference for Digitizing Tablet

The commands in this table are for the DTU-30 or DTR-30 digitizing tablet when used with the Pointmaker PVI-65. If a function you want is not listed in this table, then you must select that function in the menu system.

COMMAND	OPERATION
<b>Anchor a Marker</b>	Click Barrel Button when marker is in desired position.
<b>Brightness, Change</b>	(Presenter Template only) Click pen tip on brightness scale, left
<b>Clear Markers</b>	Click pen tip on Clear icon.
<b>Color, Change Marker</b>	Click Tip Button on Menu Strip icon; in menu system, click tip button while cursor is over desired option.
<b>Draw</b>	Press Tip Button anywhere on Tracking Area of tablet and drag.
<b>Line Thickness, Change</b>	Click pen tip on icon displaying desired line thickness.
<b>Pen Proximity</b>	(Broadcaster Template only) Click pen tip on Pen Proximity icon to turn this feature on or off. When activated, the active pointer disappears as the pen tip is pulled away from the screen. The pointer reappears when the pen tip is brought close again to the screen.
<b>Point</b>	Lightly drag Tip Button across Tracking Area to position pointer. To keep pointer positionable, do not click or press any stylus button.
<b>Pointer Selection</b>	Click pen tip on desired pointer icon.
<b>Undo/Erase Marker</b>	Click pen tip on Undo icon. If Erase Mode is activated in the menu system, this command activates Erase Mode instead of undoing a marker.
<b>Menu System, Access</b>	(Operational only when keyboard not installed.) Press Barrel Button, then Tip Button, pressing both together for about 5 seconds.

## Quick Reference for Keyboard

The commands in these tables are for the KB-20 keyboard when used with the Pointmaker PVI-65.

MARKING COMMAND	KEY
Date/Time Display	[F8]
Date/Time Setup	Ctrl + [F8]
Font Selection for Text Labels (typed text)	[F6]
Font Size for Text Labels (typed text)	Ctrl + F6
Frame Selection (circular or boxlike)	[F3]
Frame Sizing Activation	[F4]
Frame Sizing Keys	Positioning Keys
Line Style	[F2]
Pointers	[F1]
Pointer (Active) On/Off	Ctrl + [F1]
Straight Line Draw	[F5]
Text Labels (typed text)	AlphaNumeric Keys
Text Background On/Off	[F7]

ACTION (OPS) COMMAND	KEY
Active Marker On/Off	[Home]
Anchor Marker	Insert [Drop]
Change Brightness	[F10]
Clear All Markers	Clear [End]
Color Change of Active Marker	[F9]
Delete a Marker (undo)	Undo [Delete]
Help	[Escape]
Next Overlay	[Page Down]
Overlay of Markers On/Off	[F12]
Overlay, Go to #	[Scroll Lock]
Positioning Marker or Cursor	Positioning Keys
Positioning Marker, Fine Control	Ctrl + Posit. Key
Previous Overlay	[Page Up]
Reverse Toggle Order	Shift + Function Key
Select	[Enter] or [Drop]
Menu System	[Print Screen]

## Quick Reference for Touch Screens and White Boards

The commands in this table are for a compatible touch screen or white board, when used with the Pointmaker PVI-65. If a function you want is not listed in this table, then you must select that function on the digitizing tablet or in the menu system.

COMMAND	OPERATION
<b>Anchor a Marker</b>	Quickly tap screen where you want the marker anchored.
<b>Clear Markers</b>	Tap lower right corner.
<b>Color, Change Marker</b>	Tap lower left corner.
<b>Control</b>	Tap upper left corner to take control when multiple touch screens (or tablets) are installed and you have activated Selective or Priority User mode in the menu system.
<b>Draw</b>	Press and drag finger.
<b>Point</b>	Lightly drag finger across Tracking Area to position pointer. To keep pointer positionable, do not tap or press.
<b>Undo/Erase Marker</b>	Tap upper right corner. If Erase Mode is activated in the the menu system, this command activates Erase Mode instead of undoing a marker.
<b>Menu System, Access</b>	(Operational only when keyboard not installed.) Tap upper center zone.

## Quick Reference for Other Mouse Devices

The commands in this table are for a compatible mouse device when used with the Pointmaker PVI-65. If a function you want is not listed in this table, then you must select that function on the digitizing tablet or in the menu system.

COMMAND	OPERATION
<b>Anchor a Marker</b>	Click the Left (First) Button.
<b>Clear Markers</b>	Press Right (Second) Button.
<b>Color, Change Marker</b>	Press Right (Second) Button, then click Left (First) Button. Each click cycles to another color in the Color Palette.
<b>Draw</b>	Press Left (First) Button and draw while pressing.
<b>Point</b>	Lightly drag mouse across pad to position pointer. To keep pointer positionable, do not click or press any button.
<b>Menu System, Access</b>	(Operational only when keyboard not installed.) Press Right (Second) Button, then Left (First) Button, pressing both together for about 5 seconds.
<b>Undo/Erase a Marker</b>	Click Right (Second) Button. If Erase Mode is activated in the menu system, this command activates Erase Mode instead of undoing a marker.





## GLOSSARY

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### ACTIVE MARKER

-- a mode in which a marker can be altered. Mainly associated with markers created using the keyboard, all of which begin as active markers. All other control devices (except the touch screen) have only one type of active marker: pointers.

### ANCHORED MARKER

-- a marker which has been “fixed” onto an overlay. It cannot be altered or moved. It can only be erased, cleared, or covered with another marker. If an active marker is *anchored*, another identical active marker appears on-screen.

### BLOOM

-- markers or text which enlarge or blur on the monitor due to excessive brightness.

### BUTTON/ICON, TABLET

-- the square or rectangular zone on the tablet Menu Strip that represents a PVI-65 function. When this zone is clicked on with the pen tip, that function is engaged.

### CLEAR

-- the function for removing all markers from an overlay at once.

### CLICK

-- the action of quickly depressing and releasing a button on the Pointmaker auxiliary controller, as opposed to a press of the button.

### COLOR PALETTE

-- a user-defined group of colors which may be attributed to each active marker before anchored. From 1 to 7 colors are available.

### COM(M) PORT

-- a serial port typically on a computer (COM), and designated as a COMM port on Pointmakers. Serial devices that connect to these ports (such as a mouse or touch screen), send and receive data in single bits of information one after the other, thus the term serial.

### CONNECTOR

-- hardware installed on cable ends to provide cable attachment to an input or output device. Input and output device ports which mate with this hardware are also called connectors.

**CONTROLLER**

-- a device that controls the creation, selection, positioning, anchoring and clearing of markers on the Pointmaker overlay. Popular options include digitizing tablets, touch screens, keyboards and mouse devices.

**DRAW**

-- the Pointmaker feature which allows presenters to freehand draw or write over a video or computer image.

**DROP SHADOW**

-- the Pointmaker option which allows presenters to attribute a shadow to drawing lines, frames or straight lines for the purpose of creating a line that stands out from the video image. Most colors have a black drop shadow. Black has no drop shadow.

**EIA RS-170**

-- the specifications describing monochrome electrical performance standards issued by the Electronic Industries Association (EIA). Also referred to as RS-170 (Recommended Standard). The EIA standard is used in North and South America, Japan and most of Asia.

**FONT**

-- a particular style of text such as Helvetica or Times Roman. The six (6) fonts installed in the Pointmaker are available in one or more sizes.

**FRAME**

-- the marker used to frame an image with a sizeable box or circle (available only on the keyboard). Filled frames are also available and would be used to block out certain areas of the image.

**ICON/BUTTON, TABLET**

-- see *button/icon*.

**MARKERS**

-- pointers (arrows, cross hairs, dots), frames, date/time labels, freehand drawings and straight lines which can be placed and anchored on a Pointmaker marker overlay.

**NTSC**

-- the commonly accepted term describing the composite color version of the EIA RS-170 video standard. The color version of EIA RS-170 is in process of standardization by the Electronics Industries Association (EIA). NTSC is used in North and South America, Japan and most of Asia.

**OVERLAY**

-- a combination of one or more markers placed on the screen using the capabilities of the Pointmaker. These markers overlay a chosen video image. While

the markers are visible, the actual overlay is invisible, allowing users to mark directly on top of a video image (or solid background if selected).

#### POINTERS

-- the 8 different arrows, 2 cross hairs and 2 dot pointers which may be selected and placed on a Pointmaker overlay, in any number and in combination with other markers. Pointers are considered markers. However, not all markers (such as frames) are pointers.

#### PRESS

-- on the keyboard, the action of pressing then releasing the function key. On the auxiliary controller, a press is the action of depressing and not releasing a button until the desired effect takes place on the screen (as opposed to a click of the button).

#### PROXIMITY

-- a feature of the Pointmaker that affects the digitizing tablet. When proximity is activated, the active pointer automatically disappears each time the pen is lifted from the drawing area.

#### UNDO / ERASE

-- the keyboard function or button action on the auxiliary controller which allows presenters to erase anchored markers on an overlay one at a time, beginning with the most recently anchored marker.



## SYMBOL FONT CHART (KEYBOARD)

→ ← ↑ ↓ ↖ ↗ ↘ ↙ ⇨ ⇩ ⇧ ⇩

a b c d e f g h i j k l

↩ ↪ ↪ ↩ ↶ ↷ ↷ ↶ ↻ ↻ ↻ ↻

m n o p q r s t u v w x

○ ◉ ⇄ ⇅ ⇆ ⇇ ⇈ ⇉ ⇊ ⇋ ⇌

y z A B C D E F G H I J

↶ ↷ ↸ ↹ ⇅ ⇆ ⇇ ⇈ ⇉ ⇊ ⇋ ⇌

K L M N O P Q R S T U V

⇄ ⇅ ⇆ ⇇ ⇈ ⇉ ⇊ ⇋ ⇌

W X Y Z













` 1 2 3 4 5 6 7 8 9 0












- = [ ] \ ; ' , . /













~ ! @ # \$ % ^ & \* ( )





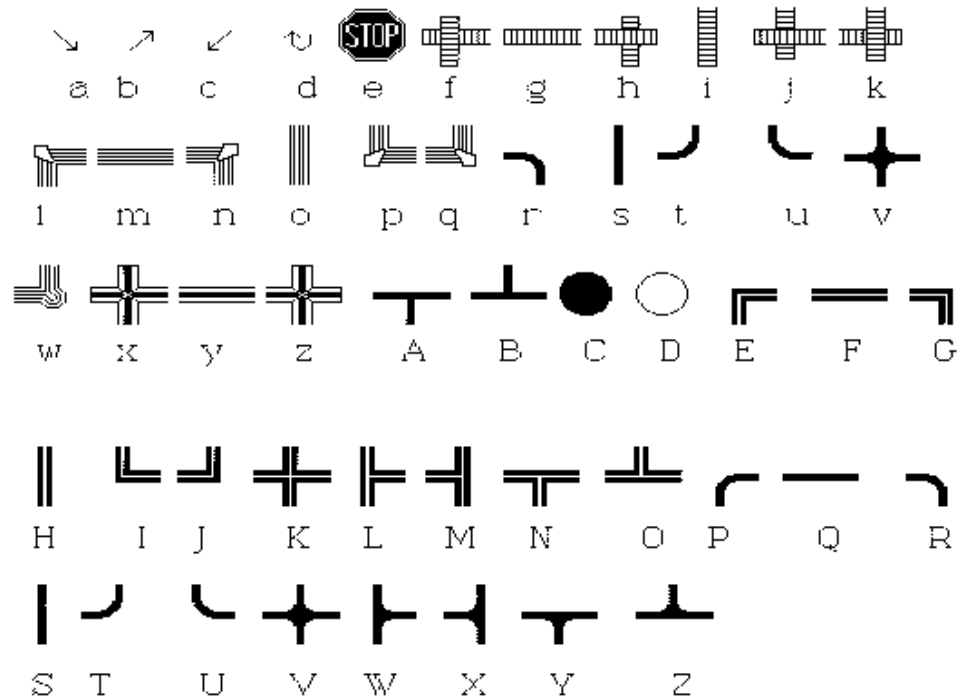







\_ + { } | : " < > ?

## MAP FONT CHART (KEYBOARD)



↖ ↗ ↘ ↙ ↘ ↙ ↘ ↙ ↘ ↙ ↘  
 ` 1 2 3 4 5 6 7 8 9 0

⌞ ⌟ ↺ ↻ ↵ ⌞ ⌟ ⌞ ⌟  
 - = [ ] \ ; ' , . /

⌞ ⌟ ⌞ ⌟ ⌞ ⌟ ⌞ ⌟ ⌞ ⌟  
 ~ ! @ # \$ % ^ & \* (

⌞ ⌟ ⌞ ⌟ ⌞ ⌟ ⌞ ⌟ ⌞ ⌟  
 ) \_ + { } | : " < > ?



## RS-232 PINOUT (COMM PORT-MALE)

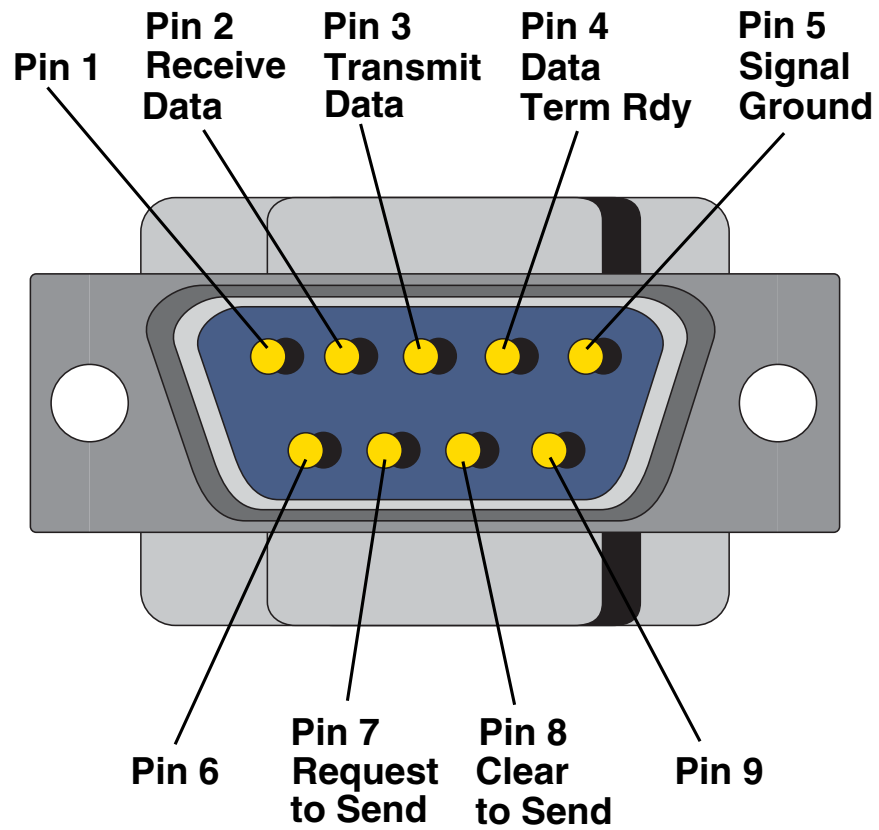


Figure A-1: RS-232 Pinout (COMM Port-Male)



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