Appendix A

Valpaint Installation

Installing Valpaint is a simple operation, and making it run is even simpler. The three basic steps are:

1. Plug your mouse into the serial port of your computer.
2. Using SETUP, tell Valdocs what kind of graphics peripherals you are using with Valpaint.
3. Run Valpaint from Valdocs by pressing the **[MENU]** keyboard key, and then selecting Valpaint as an applications program.

These procedures are explained below.

STEP 1: CONNECTING THE MOUSE

Follow the instructions in your mouse manual for assembly. When the components are fully assembled, the mouse must be

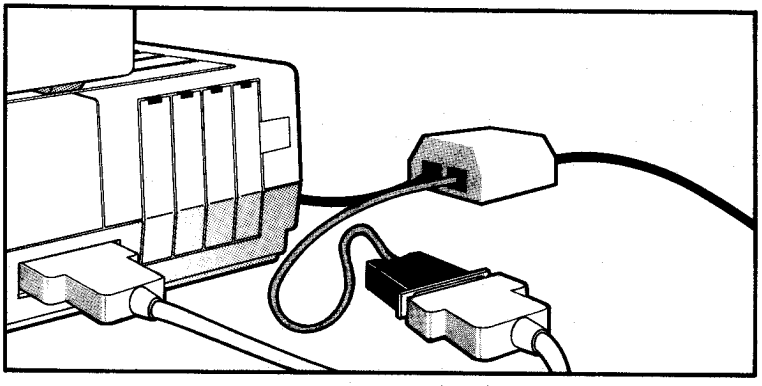

Figure 12. Connecting the mouse to the RS-232C interface

connected to the RS-232C serial interface in the back of your computer.

If your mouse has a male connector, like the one supplied with Valpaint, you should be able to simply plug it directly into the serial socket on the back of the computer.

If you use another type of mouse and it has a female (socket) connector, it will probably work if it's connected to your computer via a standard "modem" cable, such as an Epson #713 cable.

Troubleshooting the Installation

If your system doesn't recognize the mouse, first check to see that it's properly connected to your computer. Otherwise, consider the following:

1. The signals on pin 2 and pin 3 of the mouse connector may be reversed.
2. The mouse serial baud rate may be set incorrectly. The mouse baud rate should be set to 1200 baud.
3. There may be a hardware malfunction in the mouse.

If you've checked all of the above and are still experiencing problems, contact Rising Star Customer Services, as mentioned in the introduction to this manual.

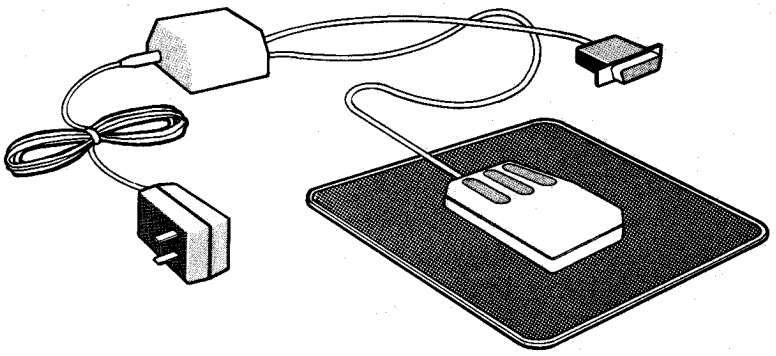

Figure 13. The mouse

STEP 2: CONFIGURING SETUP FOR VALPAINT

You will use the Valdocs SETUP program to inform the Valdocs system of the peripherals you have connected to your computer. This allows Valdocs to properly handle graphics input and output.

First, turn on your computer and start Valdocs in the normal manner. Press the <**M**>enu Key, choose <**S**>etup System and then the <**M**>iscellaneous Peripherals option. Next, select one of the following to indicate the type of graphics input device you have connected:

- None (You can still use your computer keyboard to paint with Valpaint if you make this selection. Unless told otherwise, Valdocs selects this setting automatically.)
- The Rising Star Mouse (supplied with Valpaint), or any Mouse Systems compatible mouse.
- The Summagraphics MM1201 digitizer.

When you've made your selections, press the **[STORE]** key to save the changes (the changes will be incorporated into your computer's memory; they are not kept on the disk), then press the **[MENU]** key to return to the Valdocs menu program.

Valpaint is now installed and ready to run!

STEP 3: RUNNING VALPAINT

Start up your Valpaint program by performing these steps:

1. Press the **[MENU]** key on your keyboard and select the <**M**>enu of Applications option.
2. Place your Valpaint program disk in the disk drive you have indicated in Step 1, above.
3. Select VALPAINT from the Menu of Applications displayed on the screen.

   You can also select <**R**>un Specific Program and type in "VALPAINT." The system will look for the disk containing Valpaint and will start it up for you.

Valpaint is up and running. You can now edit an existing painting by using either the **[RETRIEVE]** or **[INDEX]** keys (these work exactly as they do with the Valdocs editor), or start a new painting from scratch.

A SWITCH OPTION

If you are using an external modem or have both a printer and plotter, you can avoid a lot of wear and tear on both your computer and fingers by investing in a switch box. A switch box lets you change connections from one peripheral to another with the press of a button.

Comrex makes a CR-700 printer switch that lets you swap printers and plotters. Other manufacturers make RS-232C switches which can be used to switch between your mouse and external modem. Check with your local Epson dealer for information about these useful accessories.

Appendix B

Keyboard Interface

Most often, when painting with Valpaint, you will use the mouse, but you can also use the keyboard keys for some operations.

Arrow Keys	Pan the screen. The cursor remains stationary, but the viewpoint changes as indicated by the arrow direction. Must be zoomed in to pan.
[SHIFT] Arrow Keys	Move the cursor in the direction indicated by the selected arrow.
[SIZE]	Zoom in (as well as the **[+]** key)
[RETURN]	Zoom out to full screen in one keystroke
[CTRL] [SIZE]	Zoom out (as well as the **[–]** key)
[CTRL] [O]	On-screen menu
[CTRL] [U]	User definitions menu
[CTRL] [M]	Miscellaneous menu
[CTRL] [Q]	Quirks menu

Appendix C

Output Devices

PRINTERS

Valpaint can print paintings in either black and white, or in color, depending on your printer. The recommended printer for color printing is the JX-80, a four-color ribbon, dot-matrix printer. For black and white printing, the FX-80 dot-matrix printer is capable of printing Valpaint's pixel arrangement.

For installation and setup procedures, see your printer manual.

PHOTOGRAPHING YOUR SCREEN

You can also record your paintings by photographing the Valpaint screen. To display the painting only, select <**O**>nscreen in the Main Menu, then <**S**>how Painting Only.

You can directly photograph your Epson high-resolution screen

in color or in black and white. All you need is the following equipment:

1. A sturdy tripod.
2. A shutter cable release. (You can also use the built-in shutter delay timer if you don't have a cable release.)
3. A low-power telephoto lens than can focus on the full screen. A normal 55 mm lens, when equipped with extension tubes or a macro focusing capability introduces "barrel distortion." A 105 mm lens (or zoom equivalent) with macro focusing capability is ideal.

Screen photography is best performed in a dark or dimly lit room, in order to minimize reflections and image "washout." If you can't darken your computer area, plan to shoot at night.

Use ASA 400 or faster film, and daylight color film when shooting in color. Ektachrome 160 Tungsten slide film gives all the radiant color you see on the screen, and it works well for monochrome screens, too.

Metering and Shooting the Screen

You won't be able to get an accurate exposure reading with your camera metering system from a computer screen, so try this approach:

1. In a dark room, turn the screen brightness up until the entire active part of the screen begins to glow. Turn the brightness down until the glow just disappears. This setting is the brightest that will still give clear images.
2. Using ASA 400 film, set your camera for manual exposure at F8 and 1/4 of a second. You'll probably have to experiment to find the best exposure for your particular computer screen.
3. Never shoot a picture of your screen with lens "wide open." Even though the screen appears flat, there is a curve to the image. Use at least an F5.6 or F8 setting for sharpness and depth of field. Also, expose your film for shorter than 1/30 sec. That way, your exposure won't get caught in "mid-scan."
4. When setting up, make sure your camera is lined up "square on" with the screen. Then use the cable release

or the shutter delay timer to take the picture. Since screen exposures are long, any camera or floor vibration will blur the image. Stand still until the shutter closes.

"Negative" Prints from Black and White

Black and white positive pictures (white lines, black background) are usually clear and sharp, but you can also choose to make "negative" prints (white background, dark lines) if you have access to a darkroom. To do this:

1. Make a normal print, but put the negative in the enlarger upside down. Remember the enlarger exposure settings and time.
2. Process and dry the print (a hairdryer will speed up the process).
3. Make a "contact print" from the print you just dried. Put the dried print on top of a piece of unexposed print paper, emulsion sides facing each other, then clamp them together in a contact proofer or between two layers of glass. Without any film in the enlarger, expose the print paper through the positive print using about 2 1/2 times the amount of light used to make the original print.
4. Process the print in the normal fashion.

As an alternative, you can modify the painting BEFORE photographing it, as follows. Store the painting if it has not already been stored. Fill up the blank screen with white if you have a color machine, or green if a monochrome display. Retrieve the painting, selecting the <**D**>ither option on the Retrieve Menu.

Screen photography is an art in itself. Accurate color reproduction from the screen can be difficult because the color balance of a CRT screen often changes with the brightness setting and no two screens have exactly the same color balance or saturation.

But it can be done, and it's great fun learning the process. These few pointers should get you started on the way to enjoying Valpaint through your camera.

Appendix D

Notes on the Illustrations

Number 1: "Chickens" by Bonnie MacKain

Figure 14. "Chickens" by Bonnie MacKain

Number 2: "Dragon" by Bonnie MacKain

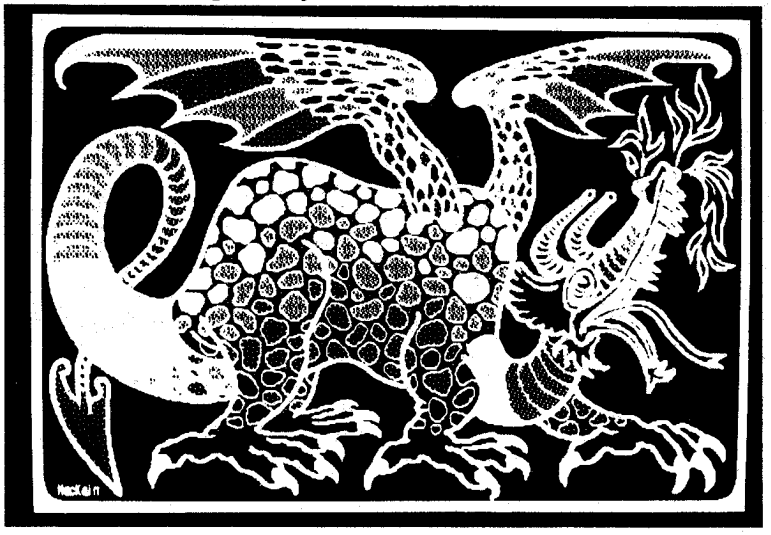

Figure 15. "Dragon" by Bonnie MacKain

These paintings were made by first drawing the figures with a solid paintbrush line. The lines and shapes were then trimmed and shaped with the eraser. Later, some of the shapes were filled in with patterns and the Boundary Fill tool.

Number 3: "The Sandy River" by Melody Elwell (see Color photo 5)

This painting was approached in a more or less traditional manner, like the application of pastel chalks on black paper. Solid brush colors were smudged onto the screen, with areas being blurred and erased to suggest shadows.

Number 4: "Purple Road" by Melody Elwell (see Color photo 6)

This painting was created entirely with the Geometric Shapes and Boundary Fill tools.

Appendix E

Error Messages

The following is a list of possible Valpaint error messages, what kind of errors they are, and when or where they might occur.

DATA DISK IS FULL

Use Miscellaneous or Quirks menu to change data disk or log in a new drive. Push any key to continue

There is not enough room on the disk for storing and naming your painting. Even though the indexer may say there is room left on the disk, it is insufficient for paint operation.

When: During the storing process
During the naming process
Storing a non-indexed file to some other than the current logged drive, and the disk doesn't have enough room for it.

Solution: Get back to the main screen and your painting, and then go to the Main Menu. Choose the

<Q>uirks menu if you are using a hard disk system (or you have more than one data disk drive) and <L>og in a New Data Drive. If you are using a floppy system, choose the <M>iscellaneous option, then <C>hange Floppy Disk. Insert a new, formatted data disk, and repeat the storing operation.

PLEASE PUT PAINT.DAT ON THE SYSTEM DRIVE, then push any key to continue or push COPY DISK

When: If you try to enter Valpaint without the file PAINT.DAT on the system drive (left drive if you are using a floppy system), this message will appear.

If you are in Valpaint, "More Tools" and the "Effects of Paint" menus will not come up either. If you try to do either of these procedures without PAINT.DAT, you will also get this error message.

Solution: You can't enter Valpaint without PAINT.DAT on the system drive. Hitting any key three times will put you in COPYDISK.

The best plan is to leave Valpaint and put PAINT.DAT onto your Valpaint system disk. Use the Valdocs Copydisk function.

NO RECORDING FOUND ON DATA DISK

If you have changed the currently logged drive (either by changing data disks or through the <Q>uirks Menu) sometime between starting and playing back the recording, this message will appear.

When: If you've made a recording and changed the currently logged drive (either by changing data disks or from the <Q>uirks Menu), and then try to play back the recording, you will get this message. The recording resides on the data drive you were using while making the recording.

Solution: Either restore the disk that contains the recording by changing data disks, or log back onto the drive that has the recording. You should be able to play

back the recording from there. If not, you will have to make a new recording.

Changing data disks or logging onto a new drive stops the recording process, so make sure when you make your new recording that you don't do either one of these functions, and you will be able to play back your recording.

ERROR MESSAGES WHEN YOU DON'T HAVE INDX.* ON VALPAINT DISK

Please replace system disk in Drive A
Press any key when disk is replaced

When: 1. The Indexer overlay file, INDX.OVL, is missing from the Valpaint disk, or:
2. The logged-on drive, with the data disk for storing your paintings, is the left drive.

Solution: First, put the system disk in the left drive so that you have full use of the Indexer, and store your painting.

If #2, above, is your problem, copy INDX.OVL onto the data disk from your system disk, using the Copydisk function. Or, you can switch the Valpaint program disk over to the left drive (the easiest solution).

If this error message occurs with the Valpaint program disk in the left drive (#1, above), copy INDX.OVL onto it from the system disk—after you've put in the system disk to store the painting.

You can also store without the Indexer by using the <**Q**>uirks option, <**S**>tore as Non-indexed File.

If you try to run Valpaint with the Valdocs system not loaded (in other words, "raw" TPM—no INDX.*), you will experience the following menu changes:

Quirks Menu change:
No <**L**>og in New Data Drive option

Miscellaneous Menu change:
No <**C**>hange Floppy Disks option

Also: Upon pressing **[STORE]** or **[RETRIEVE]**, you will be popped into the TPM store or retrieve mode because there are no Indexer program files (INDX.*) on the Valpaint disk. When you try to exit by pushing an application key, the system will automatically put you into the default Valdocs module (the module your system has been instructed to start up in by SETUP.SYS settings).

MUST RUN WITH SYSINIT.CHN AND GDRIVER.CHN LOADED

When: If you try to run Valpaint without the Valdocs system loaded (in other words, "raw" TPM). If you have a color machine, you won't be able to see anything without GDRIVER loaded.

Solution: Load your Valdocs system and enter Valpaint through the Menu of Applications.

Appendix F

PICTURE.SYS— The Picture Utility

PICTURE.SYS is a useful graphics utility that resides on your graphics disk. With PICTURE, you can retrieve and display a picture; you can also retrieve a color painting in the monochrome mode.

In addition, PICTURE can help you prepare graphics for the photographic process by setting up exposure times and performing color separation for color graphics. It's a real time and money saver when you want to prepare your picture for offset or other printed media. If you are using a Diablo Ink Jet printer, PICTURE offers additional printing options, such as a color correction routine.

ENTERING PICTURE.SYS

PICTURE is located on your Valdraw/Valpaint disk. You can enter PICTURE as you would Valpaint, Valdraw, and other

Valdocs applications—from the Menu of Applications. You can also enter PICTURE from TPM (see below).

To enter PICTURE from the Menu of Applications:

1. Press the **[MENU]** key.
2. Select <**M**>enu of Applications and press **[RETURN]**.
3. To Valdocs' prompt, answer <**L**>eft Drive, and press **[RETURN]**. If you are using a hard disk system, supply the appropriate drive and user area, followed by **[RETURN]**.
4. Place the disk containing PICTURE.SYS into the left drive, and press any key.
5. Select PICTURE.SYS from the Menu of Applications index by pressing **[RETURN]**.
6. Press **[RETURN]** again to run the program.

Entering PICTURE from TPM

To enter PICTURE from TPM, follow these steps:

1. Put the disk containing PICTURE.SYS into the left drive and press **[CTRL] [B]**. If you're using a hard disk, log onto the appropriate drive and user area.
2. At the prompt, type PICTURE and **[RETURN]**.

PICTURE'S MAIN MENU OPTIONS

```
Select a Picture Utility item and then press RETURN.

    <R>etrieve a picture              <M>iscellaneous
    <P>rint a picture                 <Q>uirks
    <D>isplay for photograph

                  < UNDO for prior menu >                < 12:14 P >
```

Retrieving a Picture

Select the <**R**>etrieve Picture option and enter the name of the document (in this case, the name of the picture). When you press **[RETRIEVE]**, the most recent index entry will be displayed. For a direct selection, press **[INDEX]**.

Once you've specified which picture you'd like to retrieve, another menu will come up and give you three retrieval options:

<**F**>ull Color
If you've created a color painting and want to retrieve it in full color mode, select this option.

<**H**>alf-tone (black and white)
This selection will adjust graphics created on a color system for monochrome display. The color variations are re-interpreted as shades of green and black.

<**C**>olor Separation
Selecting this option will take you to the Color Plane Menu. This consists of seven possible color planes for retrieval.

Note: A monochrome painting will remain unchanged when retrieved in the color mode. In other words, it will not suddenly become a color picture. However, if you retrieve it in the half-tone mode, the shades will be somewhat altered from the original monochrome.

If you plan to print a color photo of your picture using the conventional printing process, color separation is a necessary part of this process. PICTURE can save you time and expense if the separation is performed in the initial photographic process rather than later, by the printer.

The color planes are divided into two groups. The grouping pertains to the nature of "pure colors," or colors made from light. (For more information regarding pure color mixing and Valpaint colors, see "Shades and Colors" in Part II of this manual.)

Magenta, cyan, yellow, and black make up the first color grouping. If one of these options is chosen and a color painting is retrieved in this mode, the selected color will be separated out. At first, however, it will appear that one of the primary colors has been selected—then, the screen will be overlayed with a second, and yet a third primary color. This creates a separation display consisting of white and the selected color.

The primary colors—blue, red, and green—make up the second color grouping. If one of these options is chosen, and a color painting is then retrieved in this mode, the color you select will be separated out and displayed on the screen. The areas of the painting not included in this color plane will be displayed as black.

Press **[STOP]** to halt the retrieval process.

After your picture has been fully retrieved, the Main Menu will pop up again. To display your picture without the Main Menu,

select the <**D**>isplay For Photograph option, then the <**W**>ait for Keypress option from the subsequent menu. For details on these options, see "Displaying Your Picture for Photographing," below.

Printing a Picture

After you've retrieved a picture, you can print it by selecting the <**P**>rint Picture option. (You *must* have retrieved a picture however.)

If, when you select this option, you are using a black and white printer, such as an FX-80, PICTURE will ask you how you want the black portions of the screen to print out—<**B**>lack or <**W**>hite. You can also print your picture by pressing the **[PRINT]** key on the top row of your keyboard. Or, tuck away the menu with <**D**>isplay for Photograph and <**W**>ait for Key Press, then press **[CTRL]** and **[PRINT]** at the same time. This will give you what is called a "screen dump." You will not have a choice on the black areas on the screen, however.

If you've specified <**O**>ther Printer in the Valdocs SETUP module, and are using a Diablo Ink Jet printer, PICTURE will supply the following options:

<**D**>iablo Ink Jet
- <**L**>arge—Prints your picture in the large format.
- <**S**>mall—Prints your picture in the small format.
- <**C**>olor correction—PICTURE will match the screen colors with the Diablo inks and adjust them for a "true-to-screen" hard copy.

Displaying Your Picture for Photographing

This Main Menu option is for display purposes—primarily for setting photographic exposure times. Selecting this option gives you the following choices:

<**W**>ait for key press
: This option causes the Main Menu to drop away. Only the picture is displayed—until you press another key.

<**1**>/50 sec
: This option exposes your picture on the screen for 1/50th of a second, five seconds after you have selected it by pressing **[RETURN]**.

<**2**>/50 sec
This option exposes your picture on the screen for 2/50ths of a second, five seconds after you've selected it by pressing **[RETURN]**.

<**4**>/50 sec
This option exposes your picture on the screen for 4/50ths of a second, five seconds after you've selected it by pressing **[RETURN]**.

Changing Floppy Disks and Logging in Different Drives

If you want to change data disks or log in a different disk drive, select the <**M**>iscellaneous option from the Main Menu. From there, make the appropriate selection. Change floppies and press any key when done. If you want to log in a different drive or user area, enter the new drive and user area.

*The <**Q**>uirks Menu*

Selecting the <**Q**>uirks menu will give you the following choices:

<**T**>PM directory (*.PIC)
If you select this option, PICTURE will display all the picture files on the currently logged drive.

<**R**>etrieve non-indexed file
If you want to retrieve a non-indexed picture, such as one created with Basic, select this option, enter the filename to retrieve, and press **[RETURN]**.

<**S**>pool picture (ON/OFF)
If you want to load the printer with a list of paintings to print, choose this option. Be aware that this will temporarily take up a lot of space on your data disk, so select this option only if you have sufficient room. After selecting <**S**>pool, retrieve and select <**P**>rint for each document you want spooled.

<**A**>lignment markers (ON/OFF)
When making color separated photographs for conventional printing, alignment markers are used by the printer to line up the different color plates. This option will place perfectly aligned markers in each corner.

Error Messages

In addition to the standard error messages you may encounter in Valdocs, there are three messages you may see in PICTURE:

File not found—Press ANY KEY to continue

You will receive this error message if you have entered a file name that does not exist on the logged-in data disk. You have either made a typing error, or you need to look at the names of the files on the disk.

If you're looking for an indexed file, press **[INDEX]** for a direct selection during the retrieval process. If you are looking for a non-indexed file, go to the <**Q**>uirks Menu, and select the <**T**>PM Directory (*.PIC). This will display a list of all the picture files on the current data disk. If that doesn't help you locate the picture you're looking for, change disks or log in a different data drive from the <**M**>iscellaneous menu.

The printer is either not READY, not connected, or turned off. Please make it READY.

Check to see if the printer is on. If you are using a device switch box and are sharing the printer with another system, check to make sure the correct switch is activated. If that doesn't help, examine the printer cable connections.

Printer is being used

This error message will occur if the printer is currently in use, whether printing data from the editor, spreadsheet, or some other application. You can wait for the printer to complete its current task, or you can spool your picture to the printer by toggling the <**S**>pool Picture option ON, from the <**Q**>uirks menu.

File error. Perhaps not enough space

If you are spooling pictures to the printer and run out of disk space, you'll get this error message. Make room on your disk, or turn the spooler off and simply print the picture.