



 **MemoryFrame™**
USB Digital Photo Frame



USER'S MANUAL

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1. Introduction

Welcome to the future of personal digital imaging. The Pacific Digital MemoryFrame™ combines the vibrant high-resolution quality of active-matrix TFT (Thin Film Transistor) display technology with the convenience and speed of the popular Universal Serial Bus (USB) interface for a new way to display your photos instantly.

The Pacific Digital MemoryFrame is designed to download and display pictures from Personal Computers, USB Mass Storage Digital Cameras, or USB Mass Storage memory-card readers using the two USB ports built into MemoryFrame.

By using the DirectConnect™ feature of the MemoryFrame you can download digital photos directly and play them back in a slideshow-type fashion in your home or office. The USB interface provides speed and portability, allowing you to download immediately from your own or your friend's camera. It is ideal for both home and office users to proudly display family, vacation, or business related images on the desk, shelf, or wall. For those who use a PC, you can also create, name and save hundreds of different slideshows for easy USB transfer to/from the PC.

MemoryFrame stores 50+ photos and allows you to select how long each image is displayed and what style of transition is used between each image!

MemoryFrame is perfect as a gift for friends, business contacts, or relatives. Imagine preloading the MemoryFrame with those "just perfect" photos, and sending it as a family gift. It would leave an impression long after the gift is opened.

For that personal touch, a wide variety of wood and lacquered frames are available to suit any décor. Frames can be changed in moments, and locked directly onto the MemoryFrame to be displayed on a desk, mantelpiece, or hanging on a wall.

So let MemoryFrame free your imagination to explore the many ways you can express yourself, not only with the photos you take, but the way you present them.

2. Ways to Use Your MemoryFrame™

The MemoryFrame is a stand-alone device that is designed to transfer and store images from either a PC or a camera/reader and then display the images in a continuous slideshow. You can set a transition style and display-time duration for each of the slides. After transferring photos, the MemoryFrame does not need to remain connected to the USB cable in order to display the photo slideshow. For example, after transferring photos, the MemoryFrame can be moved to a different room for display.

Transfer Camera Images Directly to the MemoryFrame

No PC required. Take pictures with your digital camera, DirectConnect™ your USB camera to MemoryFrame to select which photos to transfer. Then disconnect your camera and simply display them. With its easy-to-use on-screen menu system and multi-function control buttons, users can view their digital camera or memory card contents at a glance with easy to view thumbnails, edit slideshows, select the time between image changes, add fun transition and display effects, delete images from slideshows, and much more. Manual image forward, pause, and reverse buttons and adjustable contrast are also provided. If your camera does not support USB Mass Storage (see Section 12 of this manual for more information), you can use either a USB Mass Storage compatible card-reader or a PC to transfer and display your pictures (see below).

Connect a USB Memory-Card Reader to the MemoryFrame

No PC required. Take pictures with your digital camera, then remove the memory card from the camera and insert it into a USB Mass Storage compatible memory-card-reader. Next, connect the USB card-reader to the camera USB port of the MemoryFrame to transfer and display your pictures. If your card-reader does not support USB Mass Storage (see Section 12 of this manual for more information), you can use a PC to transfer and display your pictures (see next page).

Transfer Images from a PC to the MemoryFrame

Many digital camera users will want to take advantage of their personal computer's power, memory and user interface to edit, enhance, and archive their photos and other images. Using the Digital PixMaster application supplied with the MemoryFrame™,

you can organize a personalized photo show and download it to the MemoryFrame using USB.

PowerPoint™ Slides

PowerPoint slides can be saved as JPEG images or pasted into photo-applications as JPEGs. After your slides have been converted to JPEGs, simply drag & drop them into Digital PixMaster for quick USB download to MemoryFrame. Integrating PowerPoint slides into the photo slideshows is fun, and in business can make MemoryFrame a valuable tool for many applications.

E-mail Images

When you receive a picture via e-mail, most programs allow you to save the image file to your computer's hard disk. If the image is visible on your computer screen, simply drag & drop the picture into Digital PixMaster for quick USB download to MemoryFrame. If the image file is contained in an attachment to an e-mail, there is usually a button or link that requires clicking. In AOL, this is the "Download Now" button. Once the image file is saved to your hard disk, use PixMaster™ to send it to your MemoryFrame for viewing.

Internet Images

JPEG images found on many websites can be transferred to MemoryFrame. First, right-click the image, then either Copy (for later Paste into Digital PixMaster), or Save-As (to save to your hard disk for later drag & drop into Digital PixMaster) for quick USB download to MemoryFrame.

3. Warnings



Do not block the ventilation holes on the back, bottom, or sides of the MemoryFrame at any time. See Figure-1 for locations of ventilation holes.

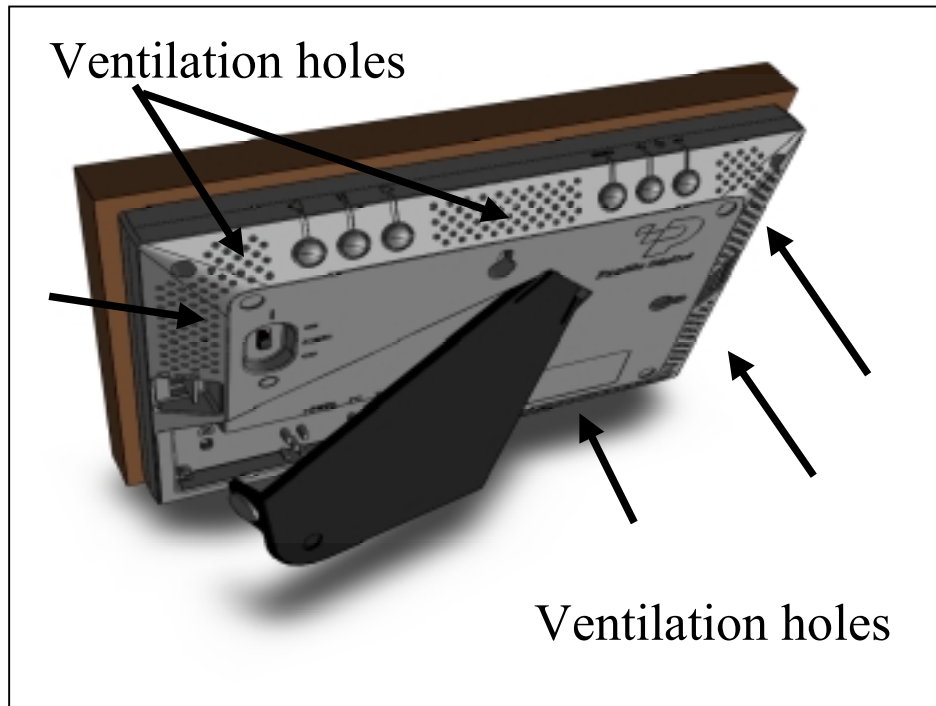


Figure 1 – Ventilation Holes



Do not open the plastic case of the MemoryFrame at any time. There is risk of electric shock. There are no User serviceable parts inside. Opening the plastic case voids the product warranty.



The screen of the MemoryFrame is made of glass and must be treated with care or may break. It is covered with plastic polarizing material that can be scratched. Follow the screen care instructions in Chapter 10 "Tips" to properly care for your MemoryFrame display.



Keep your MemoryFrame out of direct sunlight. **DIRECT SUNLIGHT MAY CAUSE DAMAGE.**



MemoryFrame is sold in North America with a North American only external power-supply. If it is plugged into locations outside of North America that use 240 VAC 50 Hz, it will damage the unit and void the warranty. Pacific Digital offers a separate international external power supply for use outside of North America.

4. Getting Started

The following sections provide step-by-step instructions on setting up your MemoryFrame for the first time.

4.1 Unpacking your MemoryFrame™

In the retail box, the MemoryFrame unit is wrapped in a cardboard shock-absorbent holder. **Do NOT RIP the “shrink-wrap” portion when removing the unit.** Instead, remove the entire cardboard shock-absorbent holder from the box, and unfold the cardboard so that it lies flat. After unfolding the cardboard, you can gently slide the MemoryFrame from out of the “shrink-wrap” material. Next refold the cardboard shock-absorbent holder and place it back in the retail box. Save the box so you can pack or store the unit in the future.

The MemoryFrame MF-570 retail pack includes:

- *MemoryFrame*™ Electronic USB Digital Picture Frame
- Wood 5x7 decorative frame (may be already attached to unit)
- External power supply with cable, 120 VAC, 60 Hz
- USB Cable (2 meters)
- *Digital PixMaster*™ PC compatible photo slideshow software and USB Drivers on CD-ROM
- This Users Manual
- Mail-in registration/warranty card (inserted into manual)

Make sure all of these parts are included before continuing. If something is missing from the above list, contact customer service at: 1-888-999-0732.

4.2 Registration & Your Product Serial Number

Please record the model and serial number from the bar coded label located on the rear of the *MemoryFrame* to keep for reference. The serial number is required for Technical Support and Product Registration. See Figure 2 for location of model and serial number.

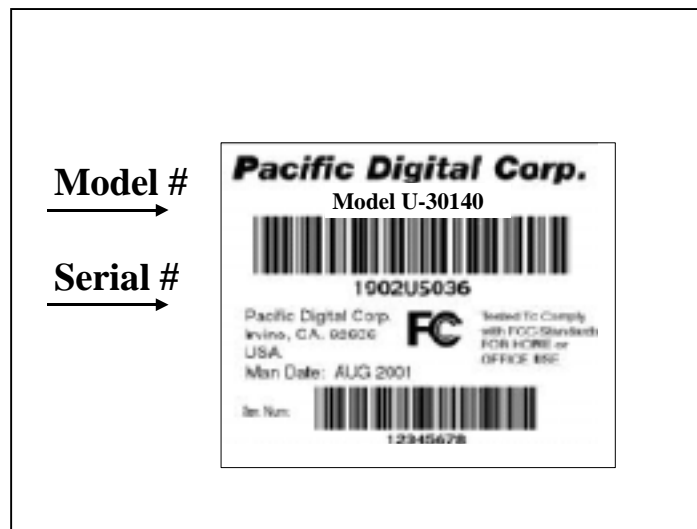


Figure 2 – Product Serial Number Label

In order to receive your one year of free technical support, you must register online at: <http://www.PacificDigital.com> or alternatively fill-out and mail the included mail-in registration card within 3 days of your purchase date.

4.3 Removing the Protective Plastic Film from the LCD

The MemoryFrame ships with a protective plastic film on its LCD screen. The purpose of this protective plastic film is to prevent the LCD screen from being scratched or damaged during manufacturing and packaging. You can choose whether to remove the protective plastic film or to keep it on. Please note, however, that the clarity of the images will appear brighter and clearer after removing the protective plastic film from the LCD screen. To remove the protective plastic film, look closely at the four corners of the MemoryFrame LCD screen. You will see that one of the four corners is lifted slightly. Carefully lift that corner and peel the protective plastic film away from the MemoryFrame. Use the Contrast Up/Down buttons to achieve your desired level of contrast. **Note:** You may choose to leave the protective plastic film on the LCD screen to keep it protected.

4.4 Connecting MemoryFrame to the Power Supply

MemoryFrame runs on AC power from an ordinary wall outlet. Use only the supplied MemoryFrame external Power Supply. Other power adapters will cause damage to MemoryFrame and void the warranty.

Before connecting the power supply, make sure that the MemoryFrame power switch is in the OFF position. Connect the External Power Supply to the Power receptacle jack on the back of MemoryFrame. Plug the External Power supply wall plug into a 120 VAC 60 Hz supply.



Warning! Plugging the North American plug into locations outside of North America that use 240 VAC 50 Hz will damage unit and void warranty.

Pacific Digital offers an international external power supply for use outside of North America.

4.5 Using the Foldout Stand

The stand on the back of MemoryFrame is designed to properly support the MemoryFrame in either portrait (vertical) or landscape (horizontal) orientations. The stand is designed to support MemoryFrame on flat surfaces only.

Fold out the Stand from the rear of the MemoryFrame. Choose the orientation that you prefer, and set the MemoryFrame on a flat surface.

4.6 Power-on Initialization

Move the MemoryFrame's Power Switch to the "ON" position to turn on the MemoryFrame.

Important Note: In the power-on sequence of the MemoryFrame, its initialization screen will take a few moments to appear. The entire power-on sequence may take up to 3 minutes and you will be unable to use the push-button menu system until the first photo appears on the screen.

After going through a power-on initialization sequence, the MemoryFrame will automatically enter the slideshow mode and begin displaying the currently loaded show (a default show is included with the unit from the factory).

Each image in the slideshow has an assigned transition effect, and display-time duration. When the display-time of the current image ends, the MemoryFrame transitions to the next picture.

The type of transition and the display-time duration is selected by the user during slideshow creation. Slideshows can be created on a PC using the Digital PixMaster™ application. If photos were directly loaded into MemoryFrame from a USB camera or card-reader without a PC, then MemoryFrame allows you to change/set the transition and duration after the photos have been transferred. Settings may be changed using the control button menus defined in the Menu section.

5. Control Buttons and Connectors

This section briefly summarizes the main control buttons and connectors. The buttons can have a variety of functions while in the Menu system. More detailed control button usage in the Menu system is discussed in the Menu System section (Chapter 9).

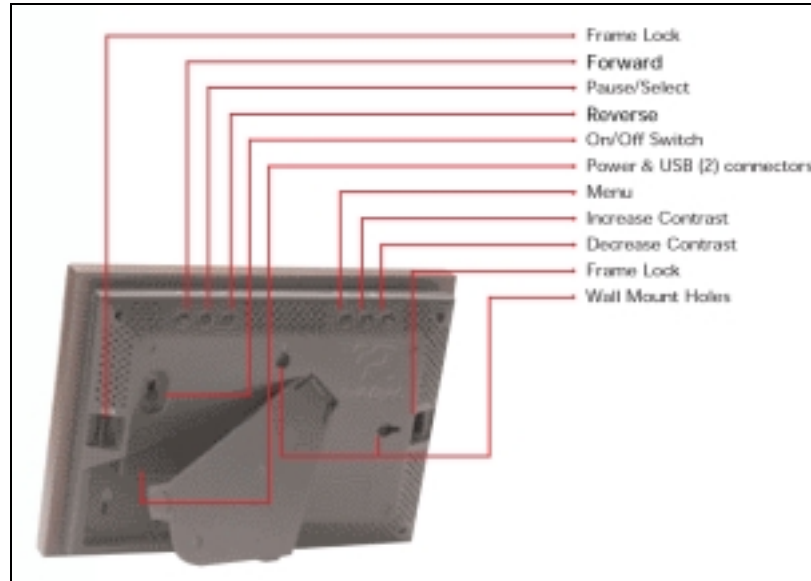


Figure 3 – Buttons & Connectors

Frame Lock

The two frame locks hold a decorative 5x7 frame in place. There are two locations, one on each side. The “Locked” position is toward the outside of the unit. A noticeable “click” will be heard when locked or unlocked.

Forward (▶)

During a slideshow, press the ▶ button to transition to the next photo in the slideshow. When viewing a user-interface menu (see Menu button), use this button to highlight the next menu option.

Pause/Select (||)

Press the || button to pause or restart the slide show. When the show is paused, the || button resumes the slideshow. When viewing a user-interface menu (see Menu button), this button

functions as the “Select” key to select a photo or menu options.

Reverse (◀)

During a slideshow, press the ◀ button to transition to the previous photo in the slideshow. When viewing a user-interface menu (see Menu button), use this button to highlight the previous menu option.

On/Off Switch

The On/Off Switch is the main power control for the MemoryFrame. Be sure that the power is Off before plugging in or unplugging MemoryFrame from the wall socket. This will help protect the electronics from possible power surge damage.

Power Connector

The Power Connector is the connection point for the supplied power adapter, and is used to provide main power to the MemoryFrame. The input is 12 VAC developed through the supplied AC power adapter.

USB Connectors

There are 2 USB connectors as shown in Figure 4 on the following page. The one marked “Camera” is used to transfer images from a camera or USB memory-card-reader. The one marked “PC” is used to transfer shows to/from a PC running the bundled Digital PixMaster software.



Figure 4 – Power & USB Connectors

Menu	When using MemoryFrame without a PC, this button is used to download directly from a camera and to select and set the organization of the MemoryFrame slide show.
Increase Contrast	MemoryFrame is easy to adjust for different ambient lighting conditions. With the slideshow in operation, adjust the contrast to create the optimum display setting. Use this button to increase the contrast of the image currently in the display. One button press will increase the contrast by one step. If the user presses and holds the button, after two seconds the contrast will increase at a rate of one step each half-second until maximum contrast is achieved. Note: the Contrast buttons respond only when MemoryFrame is displaying a slideshow, and do not respond while in the Menu system.
Decrease Contrast	Use this button to decrease the contrast of the image currently in the display. One button press will decrease the contrast by one step. If the user presses and holds the button, after two seconds the contrast will increase at a rate of one step each half-second until minimum contrast is achieved. Note: the Contrast buttons respond only when MemoryFrame is displaying a slideshow, and do not respond while in the Menu system.
Wall Mount Slots	There are two wall mount slot locations; one for portrait and one for landscape orientation. The slots will accept a standard #8 wood screw (.164inch / 4.17mm diameter).
Screen	Displays your pictures in vivid color. Your MemoryFrame screen is made of glass and should be treated with care. See Section 10.2 for care and cleaning.
Kensington® Lock	MemoryFrame has a receptacle that accepts a locking system to add protection and security when used in business environments. (See Chapter 10).

6. Using MemoryFrame with a Personal Computer

Although MemoryFrame does not require a PC, many digital camera users will want to take advantage of their personal computer's power, memory, user interface, and photo editing software. The PC can be used to edit, enhance, and archive photos and other images. Using a PC, you can simply and easily download images to your MemoryFrame. You can organize a personalized photo show and quickly transfer it to/from the MemoryFrame using USB. In this usage scenario the PC is momentarily connected directly to the MemoryFrame with the USB cable that was provided in the box with the unit.

After transferring photos, the MemoryFrame does not need to remain connected to the PC via the USB cable in order to display the photo slideshow. For example, after transferring photos, the MemoryFrame can be disconnected from the USB cable and moved to a different room for display. Alternatively, if the display location for the MemoryFrame is near the PC, you can leave the MemoryFrame connected to the PC as may be the case in a home office or at work.

6.1 Digital PixMaster™ PC Software Overview

A PC communicates with the MemoryFrame using Digital PixMaster™ software. The Digital PixMaster software runs on your desktop computer and is a special application (also provided in the box on a CD) used to control and configure MemoryFrame. Digital PixMaster uses a special USB driver to communicate (also provided on the CD). PixMaster is an innovative solution that is incredibly easy to use, while offering key features, such as the ability to rotate photos, specify transition effects, and create/name/save unique slideshows from your vacations, sporting events, family functions, etc. The software presents a graphical user interface that allows you to do the following:

- Easily create professional looking photo slideshows to be displayed on the MemoryFrame. Choose the pictures, choose the times & transitions and let Digital PixMaster do the rest. The software easily allows you to create custom slideshows that integrate photos from both your camera as well as images stored anywhere on your PC. Simply drag & drop the desired photos for a particular show into Digital PixMaster. Digital PixMaster software can import the following picture formats: JPEG, BMP, ICO, or GIF.

- Retrieve an existing slideshow from the MemoryFrame and store it on a PC with a name of your choosing for later use (example: you can save a slideshow as HawaiiVacation.pd).
- Quickly transfer the slideshows that you created on your PC using the Digital PixMaster application into the MemoryFrame via USB for instant viewing enjoyment.
- Digital PixMaster also allows you to upgrade the software in your MemoryFrame as new features and enhancements become available (see Upgrading your MemoryFrame software in Chapter 14).

6.2 Minimum PC System Requirements

Digital PixMaster™ has the following minimum system requirements:

- IBM compatible PC
- Pentium II 200MHz or higher with at least 64 MB of memory. Pentium III 300MHz or higher recommended for optimum performance
- Microsoft Windows® XP, Windows® 2000, Windows® 98SE, or Windows® ME
- Mouse (to drag & drop photos)
- USB port (either USB 1.1 or USB 2.0)
- VGA compatible display (or higher)
- 10MB of hard-disk space for software installation, and 50MB for storage of slideshows. Slideshows can be stored on any media (examples: HDD, ZIP, CD-RW, DVD, etc.)

6.3 Installing Digital PixMaster™ PC Software

Place the software CD-ROM that came with MemoryFrame in your PC's CD-ROM drive. If your Windows®PC is configured to auto-run, the Install-Shield wizard for Digital PixMaster should automatically start within one minute.

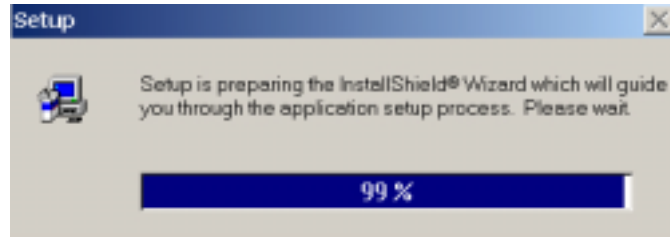


Figure 5 –Digital PixMaster Setup Program

Follow the on screen instructions to install Digital PixMaster to your PC's hard-drive.

If however, the InstallShield Wizard does not automatically start to install after one minute, click your mouse on START, then RUN, then browse to your CD drive and select SETUP.EXE from the CD drive to run. Finally, follow the on-screen instructions to install the Digital PixMaster software application to your PC's hard-drive.

After the installation is completed, the Digital PixMaster icon will automatically be located on your Windows Desktop.

Figure 6 – Digital PixMaster Icon



Digital PixMaster

To start Digital PixMaster double click on the icon.

6.4 Installing MemoryFrame's USB Drivers

MemoryFrame has custom USB drivers from Pacific Digital that are shipped to you on the same software CD as Digital PixMaster. To load them, boot your Windows PC, and after Windows has completely loaded, simply connect your PC to your MemoryFrame with the USB cable that was provided in the box with the unit.

Connect the larger "standard USB" connector to the USB port of the PC. Connect the smaller "mini-USB" connector to the "PC" connector of the MemoryFrame. Figure 7 shows the location of the "PC-to-MemoryFrame" connector on the back of MemoryFrame.

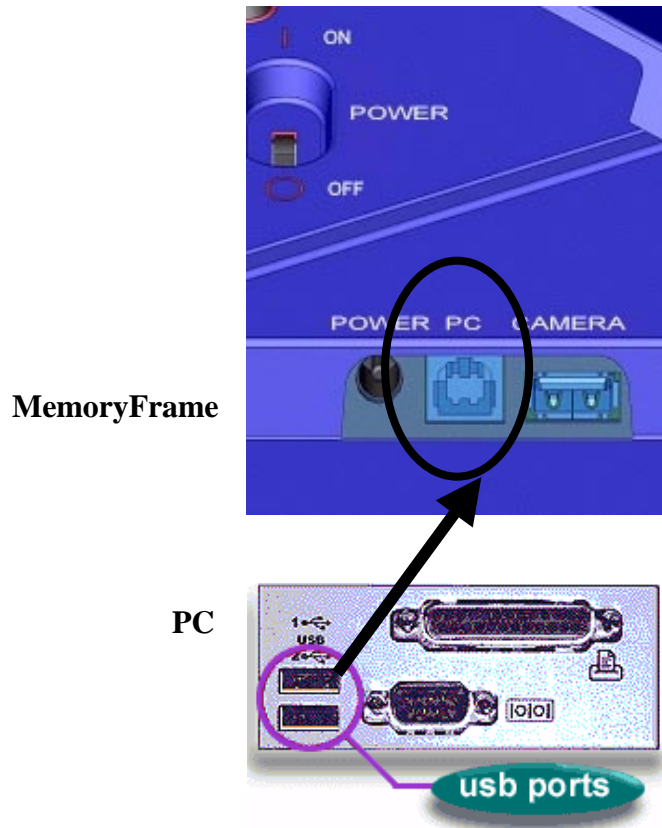


Figure 7 – Connecting a PC to MemoryFrame

After connecting, the Windows® Hardware Wizard will detect the MemoryFrame. When the Hardware Wizard begins, the following screen should be displayed:

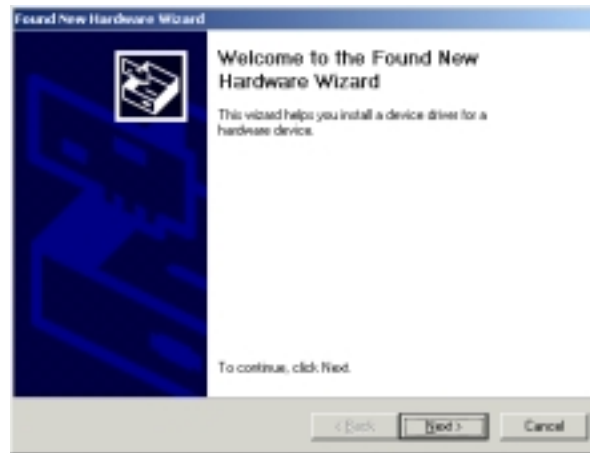


Figure 8 – Windows Hardware Found Wizard

Click Next to begin installation.

The next step is INSTALL HARDWARE DEVICE DRIVERS. To do so, select the install method for the “Digital Picture Frame”. Select “**Search for suitable driver for my device**” and click **Next** to continue installation.

Next, in the LOCATE DRIVER FILES screen, select the device where the MemoryFrame “Digital Picture Frame” USB driver can be found. The MemoryFrame “Digital Picture Frame” USB driver resides on the Digital PixMaster software CD. Insert the CD-ROM into the appropriate device and select the CD-ROM drive checkbox. Then click on **Next** to continue the installation.

After Windows® finds and installs the driver, the COMPLETING THE NEW HARDWARE WIZARD screen will be displayed. Click on **Finish** to complete the installation.

Some older versions of Windows® require a system restart. If so, you will see the following screen. If this screen is displayed, click on **Yes** to restart the system.

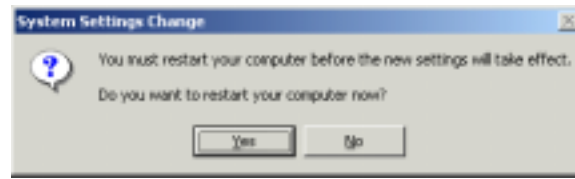


Figure 9 – Windows Settings Change Message

If the above screen is not displayed, the system does not need to be restarted.

Note: Once the MemoryFrame USB driver is installed the “Pacific Digital MemoryFrame MF-570” USB device will be listed as an “Imaging Device” in the imaging devices section of the Windows® Device Manager.

6.5 Using Digital PixMaster™ to Create Slideshows

The PC does not need to be connected to the MemoryFrame to create slideshows. You don't need to connect the USB cable until you want to transfer slideshows from the PC to your MemoryFrame, or when you want to transfer a slideshow from MemoryFrame back to your PC.

The Digital PixMaster icon should be located on your Windows Desktop. To start Digital PixMaster double click on its icon. By default, Digital PixMaster will open an empty slideshow and also launch the Windows® Explorer program to your MyPictures directory. In the figure below, the Digital PixMaster program is open on the left, while MyPictures directory is shown on the right.

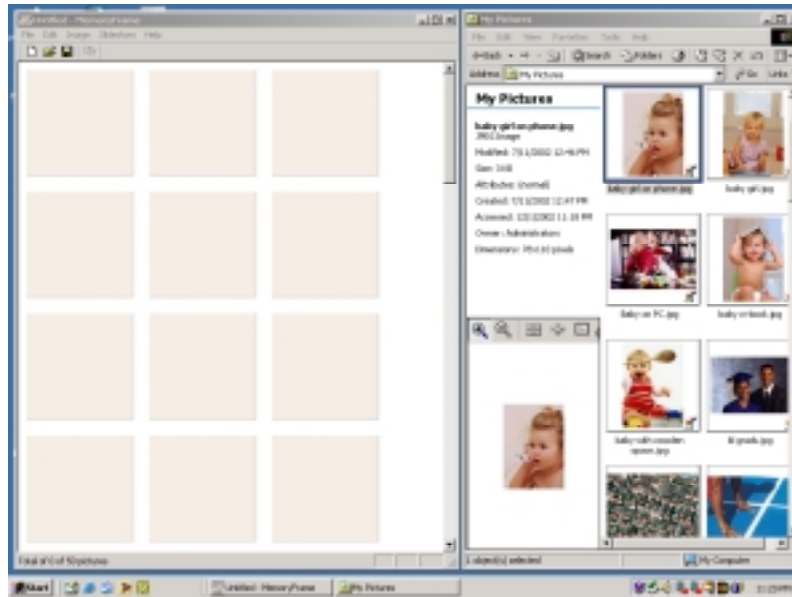


Figure 10 – Digital PixMaster Empty Show

Digital PixMaster lets you create a complete slideshow of up to 55 images for download to MemoryFrame.

In the Windows® Explorer program (which by default will point to your MyPictures directory) locate the photo images (JPEG, BMP, ICO, or GIF) that you want to download onto your MemoryFrame frame.

Digital PixMaster supports “drag and drop,” so simply select one or more photos (up to 55 maximum) from any location on your hard-drive and “drag and drop” over to the Digital PixMaster application window.

Digital PixMaster also supports “paste from clipboard,” to allow simple selection of one or more photos from the Internet, email, your hard-drive, or any other storage device in your PC. Use the Windows “Copy” function, then “Paste” the images into the Digital PixMaster application window.

The original image files on your PC will be left unmodified, and a re-sized copy of the image will be added to the Digital PixMaster slideshow file. The original high-resolution photo files will remain in the directory where they were.

You can also select photos from any application, directory, CD, DVD, etc. to import via “drag and drop” or “copy/paste” into your slideshow. Simply find the images that you want to include in the slideshow.

Repeat this process until you have selected all of the images (up to 55) that you wish to add to this particular slideshow. The figure below shows an example of a Digital PixMaster slideshow after pictures have been imported via “drag and drop” from other applications and directories.



Figure 11 – Digital PixMaster Full show

6.5.1 Application Commands and Pull-Down Menus

Across the top of the Digital PixMaster application are the pull-down menus: File, Edit, View, MemoryFrame, and Help. All of the commands (except those in the MemoryFrame pull-down) can be performed on the PC without the need for a MemoryFrame to be connected. This allows you to create slideshows on any PC. The Figure below shows the various options under the File, Edit, and View pull-down menus.

File		Edit		View
New	Ctrl-N	Undo Delete	Ctrl-Z	Preview
Open...	Ctrl-O	Cut	Ctrl-X	Status Bar
Close		Copy	Ctrl-C	Toolbar
Save	Ctrl-S	Paste	Ctrl-V	
Save As...		Delete	Del	
<i>Recent Files</i>		Select All	Ctrl-A	
Exit	Alt-F4	Insert from File	Ctrl-I	
		Hide Image	Ctrl-H	
		Rotate 90°	Ctrl-R	
		Image Properties	Ctrl-P	

Figure 11 – Application Commands: File, Edit, View

6.5.2 Naming and Saving Slideshows

You can create, name, and save hundreds of different slideshows on your PC (e.g. Graduation, Hawaii, Little League, Soccer, Wedding, Lakers, Church, etc.). Each can be quickly downloaded to MemoryFrame over USB. To save a slideshow that you have created, click on File then select “Save” or “Save As” to save the slideshow to your hard drive under a name of your choosing. The file extension for MemoryFrame slideshows created with Digital Pixmaster is the “.pd” extension. Using the “Save As” function, you can create variations of a slideshow that differ by one or more photos.

Digital PixMaster can have only one slideshow open at one time. If you choose to open a new blank slideshow while another is already open, the program will close the first one (asking you if you want to save first) before opening the new blank one. Additionally, you can open existing slideshows that you had previously saved.

6.5.3 Removing an image from a slideshow

There are three ways to remove an image from a slideshow. The first method is to Right-Click on the image that you wish to remove, and select Delete or Cut. The other method is to first select the image to be removed by using Left-Click. Then, click EDIT, and select either Delete or Cut to remove the Image from the slideshow. Alternatively, you can press the delete key on your keyboard. Cut

will make the image available in the Windows Clipboard for subsequent Paste.

6.5.4 Inserting an image into a slideshow

In addition to the Drag&Drop and Paste functions discussed earlier, you can also Insert an image from a directory or storage device with the "Insert Image from File" option available in the Edit menu. This option will ask you to specify the location or Browse to find.

6.5.5 Rotating an image in a slideshow

Some of your pictures will have been taken with the camera in a horizontal position, and others in a vertical position. The Rotate 90° option is under the Edit menu (or Right-Click menu) and allows you to set the proper orientation to display any particular photo. When you select Rotate 90°, Digital PixMaster will rotate the currently selected picture 90° to the right. Select the image you wish to rotate and then rotate it as many times as necessary until you reach the desired orientation.

6.5.6 Hiding an image in a slideshow

You may not want to delete an image from a slideshow, but still not want to display it in that slideshow. Selecting Hide Image from the Edit menu allows you to hide that particular slide. This setting can also be reversed to unhide the slide in the show. This option can also be selected from the Image Properties screen discussed below.

6.5.7 Copying images from one slideshow to another

You Since Digital PixMaster can have only one slideshow open at one time, you must open/start another session of Digital PixMaster (by double clicking on its icon again or invoking from the Windows Program list), in order to copy images from one slideshow to another show. With two instances of Digital PixMaster running, you can drag images from one show to another.

6.5.8 Image Properties: Transition Effects and Timings

Digital PixMaster features a wide variety of transitions between images. Selecting Image Properties from the Edit menu allows you to assign transitions, fill colors, and set the slide display duration time for each individual slide (or apply to all slides). Figure 12 below shows the Image Properties screen.

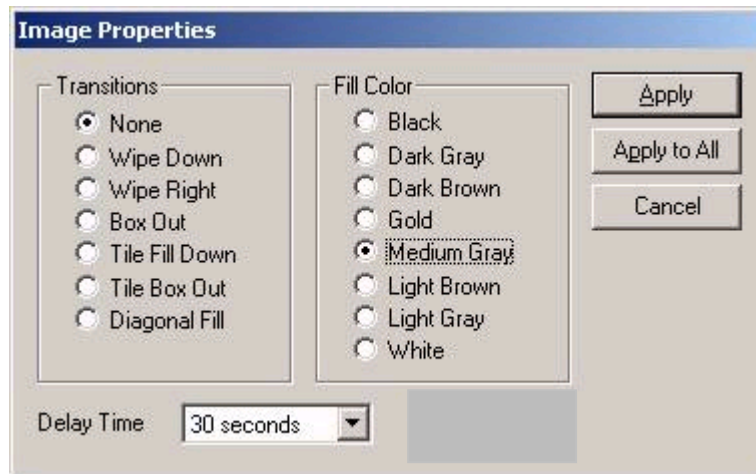


Figure 12 – Image Properties

Fill Color: The program will fill any unused portion of the screen with a background of your choosing from the list of colors. This reduces the “black bar” effect seen when pictures do not have the same 4:3 proportion as the MemoryFrame screen. See section 10.1 for details.

Transitions: Seven (7) transitions are available. The transitions in your MemoryFrame may differ from those listed below depending on the version of software shipped with your MemoryFrame. Check our website for software upgrades.

None: The next image simply appears replacing the previous.

Wipe Down: The next image wipes down from the top of the screen.

Wipe Right: The next image wipes from the left of the screen towards the right side.

Box out: The next image appears from center in a small box and expands towards the edges of the screen.

Tile Fill Down: The old image is tiled over as the new image wipes down from the top.


Tile Box out: The old image is tiled over as the next image appears from center and expands towards edges to replace the previous.

Diagonal Fill: The next image overwrites with diagonal stripes to replace the previous.

Timings: The Image Properties in the Edit menu also allows you to set the time that each slide will display.

Once you have selected the desired settings you can then Apply to the individual slide selected, or you can Apply to All to make the settings apply to all the images in the slideshow.

6.5.9 Preview Slideshow

Now that your slideshow is configured with your selected transitions and fill-colors, you can preview how the slideshow will appear in landscape mode on the MemoryFrame before sending. Selecting “Preview Slideshow” from the View menu will present the slideshow in a window using your selections. This function is also available by clicking on “preview-slideshow” icon () in the toolbar.

6.6 Transferring Slideshows to/from MemoryFrame

The next Figure below shows the various options under the MemoryFrame and Help pull-down menus. The three (3) commands in the MemoryFrame pull-down menu involve communication with the MemoryFrame and can only be performed when a MemoryFrame is connected to the PC.

MemoryFrame	Help
S <u>e</u> nd Slideshow	C <u>o</u> ntents
R <u>e</u> trieve Slideshow	A <u>b</u> out Digital PixMaster...
U <u>p</u> date Firmware	

Figure 13 – Additional Application Commands

Note: Exit any on-board-button menus and return to displaying the current slideshow. This will place the MemoryFrame in the mode that is required to communicate with the PC.

When the MemoryFrame is connected to a computer running Digital PixMaster with its USB drivers, the MemoryFrame accepts and processes communication from the computer. Digital PixMaster can retrieve the current slideshow in MemoryFrame to the PC (retrieve) for saving or editing, or it can replace the slideshow in the MemoryFrame with a new one from the computer (send).

To transfer slideshows from the PC to your MemoryFrame or from MemoryFrame back to your PC, you must first connect your PC to the MemoryFrame with the USB cable that was provided in the box with the unit.


Connect the larger “standard USB” connector to the USB port of the PC. Connect the smaller “mini-USB” connector to the “PC” connector of the MemoryFrame. See Figure 7.

Important! For the PC application (Digital PixMaster) to communicate to your MemoryFrame, you first need to prepare your MemoryFrame for communicating to a PC, as described in the section below.

Preparing MemoryFrame to Communicate to a PC


The MemoryFrame cannot be managed or communicate with a PC while it is in the Menu system mode. In all cases, you must be in photo slideshow Display mode for Digital PixMaster to communicate. Exit any on-board button menus and return to displaying the current slideshow. This will place the MemoryFrame in the mode that is required to communicate with the PC.

Getting the current slideshow from the MemoryFrame

From the “MemoryFrame” pull-down menu of Digital PixMaster, select Retrieve-Slideshow to get the current slideshow from the MemoryFrame. This function is also available by clicking on “retrieve-slideshow” icon () in the toolbar. When the MemoryFrame receives the Retrieve-Slideshow command it transfers the current slideshow photos (and associated delay times, fill-colors, delays, etc.) from its memory to the PC. Once complete, you can save or edit this show.

Sending slideshows to the MemoryFrame

Important! Because MemoryFrame will overwrite an existing slideshow if a new one is sent to it, you may want to first Retrieve the existing show to your PC for saving on your PC hard drive before sending a new one.

First open the show you want to send on the PC. From the "MemoryFrame" pull-down menu of Digital PixMaster, select Send-Slideshow. This function is also available by clicking on "send-slideshow" icon () in the toolbar. This will send your PC slideshow to the MemoryFrame. When the application sends the Send-Slideshow command, the MemoryFrame will erase its current slideshow, then read in the new show over the USB connection from the PC and save it into its onboard memory.

After you click on Send, Digital PixMaster will display a progress bar to indicate the transfer of the new images to MemoryFrame.

Important! When the progress bar is complete, it only signifies that the file has been transferred, but not yet stored in memory. This is just the beginning of the MemoryFrame's actual process of updating its Slideshow, **so do not turn off the power**

After the transfer is complete, the MemoryFrame will erase the current slideshow portion of its memory and program in the new slideshow image. You must wait up to one (1) minute for the frame to complete the slideshow change.

Important! Do not unplug or cut power to the MemoryFrame or PC during the send slideshow process!

Once the new slideshow has been loaded into the MemoryFrame's storage memory, the MemoryFrame will indicate it is done by displaying the first new image of the slideshow. A power-cycle is not required.

6.7 Exiting Digital PixMaster

Choosing Exit from the File menu will exit the Digital PixMaster program. If you have an unsaved slideshow file currently open, the program will ask you if you want to save it before exiting the program. Clicking on the close window box (x) in the upper right corner will also exit the Digital PixMaster program.

7. Connecting a Camera to the MemoryFrame

For those who wish to bypass their PC, MemoryFrame can also be connected directly to USB digital cameras that support the USB Mass Storage Specification (see Chapter 12). In this mode, the Photos stored in the camera must be in JPEG format (not TIF or other camera formats).

In this mode, independent of a PC, MemoryFrame is capable of downloading JPEG formatted pictures, changing the resolution of the pictures to match that of the MemoryFrame display, storing the pictures in nonvolatile memory, and displaying the downloaded pictures with user specified durations and transitions.

Important! To transfer slideshows from the Camera directly to your MemoryFrame, you first need to prepare your MemoryFrame for communicating, as described in the section below.

Preparing MemoryFrame to Communicate to Camera

The MemoryFrame is a single function device; this means that it cannot be managed or communicate with a camera while it is displaying a slide show. In all cases, you must stop the slideshow by pressing the Menu Button. This will place the MemoryFrame in the Menu System mode that is required to communicate with the Camera.

Important! Make sure that the camera's memory-card is already inserted into the camera before connecting the USB cable.

Next, connect the MemoryFrame directly to the USB digital camera using the USB cable that was provided by the camera manufacturer (i.e. the cable that came with your camera).

To use a camera, connect the "micro-USB" connector to the camera's USB port. Then connect the "Standard USB" connector to the "Camera" connector of the MemoryFrame. See Figure 14.

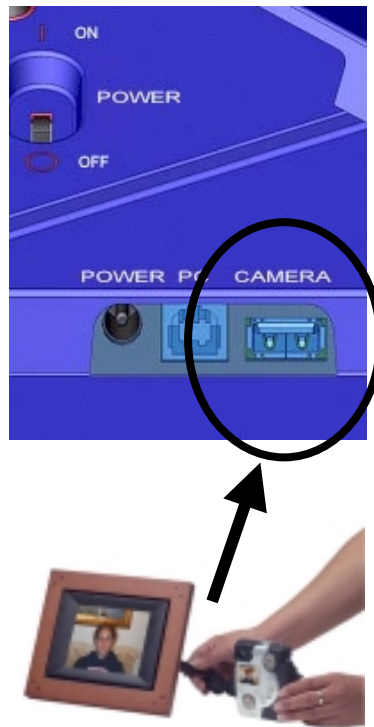


Figure 14 – Connecting a Camera

The MemoryFrame is capable of displaying the pictures found in the camera and allows you to download pictures from the camera directly into the MemoryFrame until the internal memory of the MemoryFrame is full.

Important! The camera will need to be set into the appropriate mode to transmit its pictures. Many cameras have two modes of operation: proprietary and standard (driver-less) mode, and the camera has menu items and/or buttons that set the USB mode. The standard (driver-less) makes the camera look like a drive-letter to Windows Explorer without the need for the camera manufacturer's custom driver. This standard driverless mode (called "disk-drive" mode by some cameras) is required to interface to MemoryFrame. See your camera's user manual for details of how to prepare your camera for driver-less USB transfers.

After the camera is connected, use the MemoryFrame's onboard Menu System (described in Chapter 9 of this manual), and select the "Download Pictures" option from the Main Menu.

Follow the onscreen instructions for transferring images to MemoryFrame from the camera and for setting the display times and transitions. More information on navigating the menu system is described in the Camera Download section of Chapter 9, the MemoryFrame Menu System chapter.

8. Connecting a USB Card-Reader to MemoryFrame

If you have a Camera that is not compliant with the USB Mass Storage specification, you can still bypass your PC by using MemoryFrame directly with USB memory-card readers that support the USB Mass Storage Specification (see Chapter 12).

Important! To transfer slideshows from the Memory Card Reader directly to your MemoryFrame, you first need to prepare your MemoryFrame for communicating, as described in the section below.

Preparing MemoryFrame to Communicate with Card-Readers

The MemoryFrame is a single function device; this means that it cannot be managed or communicate with a card reader while it is displaying a slide show. In all cases, you must stop the slideshow by pressing the Menu Button. This will place the MemoryFrame in the Menu System mode that is required to communicate with the USB memory-card-reader.

Important! Make sure that the memory-card is already inserted into the card reader before connecting the USB cable to the MemoryFrame.

Next, connect the MemoryFrame directly to the USB memory-card reader using the USB cable that was provided by the card-reader manufacturer (i.e. the cable that came with your reader).

To do this with a USB memory-card reader, connect the USB connector of the card-reader's USB cable to the "Camera" connector of the MemoryFrame. See Figure 15.

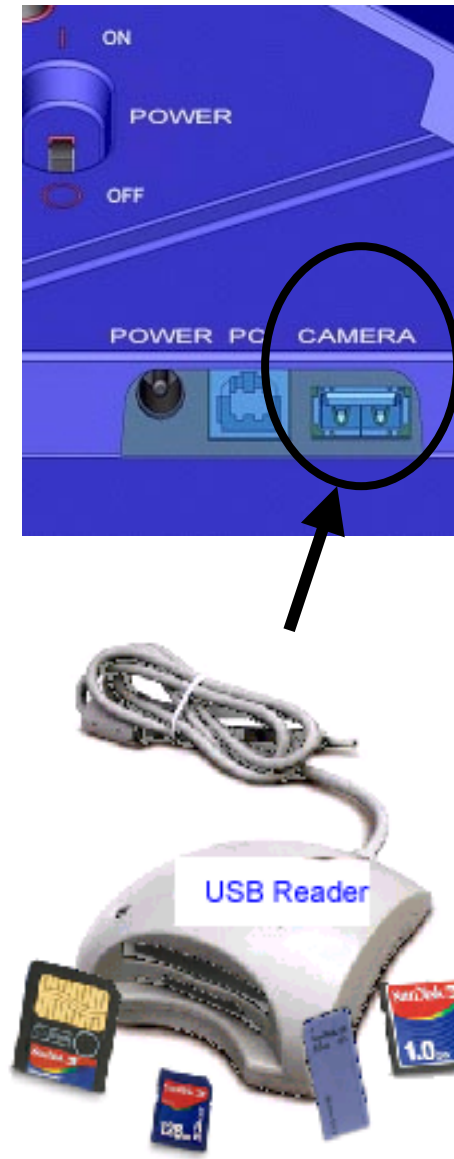


Figure 15 – Connecting a Card-Reader

The MemoryFrame is capable of displaying the JPEG pictures found in the reader's memory cards and allowing the user to download pictures from the reader directly into the MemoryFrame until the internal memory of the MemoryFrame is full.

After the card reader is connected, use the MemoryFrame's onboard Menu System (described in Chapter 9 of this manual), and select the "Download Pictures" option from the main menu.

Note: The on-board menu system options for "Download Pictures from Camera" are also used for card readers.

Follow the onscreen instructions for transferring images to MemoryFrame from the reader and for setting the display times and transitions. More information on navigating the menu system is described in the Camera Download section of Chapter 9, the MemoryFrame Menu System chapter.

9. MemoryFrame Menu System

When the user presses the Menu button, the MemoryFrame enters the Management mode menu. This menu system, which is controlled by pushing the buttons on the top of the MemoryFrame, allows you to use the MemoryFrame without a PC to download and configure slideshows by simply using the buttons on the top of the MemoryFrame unit. In this mode, the user may download new slideshows, alter the current slide show, or change MemoryFrame options as described in the following sections.

9.1 Menu Navigation

When you enter the menu system, the MemoryFrame changes the usage of three of the buttons: Forward (▶), Pause/Select (||) and Reverse (◀).

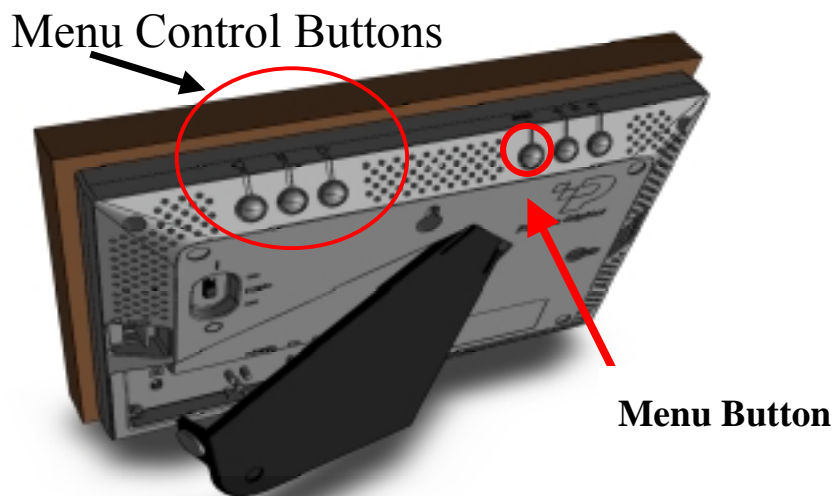


Figure 16 – Menu Buttons

While in the Menu system, these buttons are used to navigate through the MemoryFrame management menus and to execute the various management functions as follows:

- Forward (▶)** While in the Menu system, pressing the Forward (▶) button will move the item selector either down to next menu text line, or to the right to next thumbnail, depending upon the current menu context.
- Pause/Select (||)** While in the Menu system, the (||) button functions as the “select” key to select a thumbnail or to select and execute a text menu option.
- Reverse (◀)** While in the Menu system, pressing the Reverse (◀) button will move the item selector either up to the prior menu text line, or to the left to the prior thumbnail, depending upon the current menu context.

The basis of operation is that the MemoryFrame will highlight the currently selected item in one of two ways. If the item is a thumbnail, the selected thumbnail will be designated by an outline. If the material is text, the selected text option will be highlighted in a different color than the rest of the menu. This highlight is called the selector. Once the appropriate item has been highlighted, you can press Pause/Select (||) to perform the selected function.

9.2 Main Menu

When you press the Menu button during a slideshow, the MemoryFrame™ will stop displaying the slideshow and enter the menu system into the “Main” Menu. Figure 17 is a sample of the Main Menu screen.

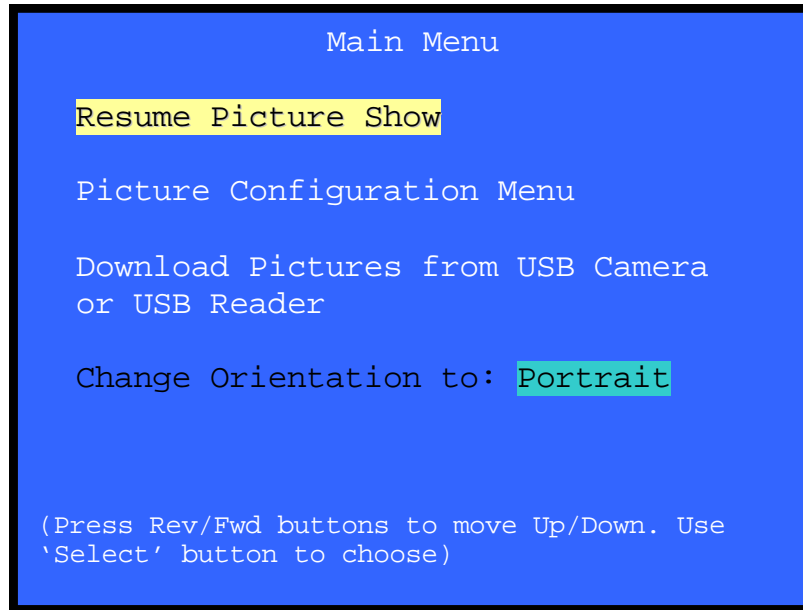


Figure 17 Main Menu

The first and last items in the main menu execute the listed task, while the middle two items in the main menu each launch a sub-menu for the described function. Each of the options in the main menu are described below.

9.2.1 Resume Picture Show

When you wish to exit the Menu system, use the appropriate button (Forward (▶) or Reverse (◀)) to highlight the Resume Picture Show menu selection and then press the Pause/Select (||) button. This will resume the slideshow from the last picture that was displayed before entering the Menu system.

9.2.2 Change Orientation to: Portrait or Landscape

This function in your MemoryFrame™ may differ from that described below depending on the version of software shipped with your MemoryFrame™. Check our website for software upgrades. The stand on the back of the MemoryFrame is designed to support the MemoryFrame in either the portrait (vertical) or the landscape (horizontal) orientation. The default position is Landscape (horizontal).

After you stand the MemoryFrame into the desired position, you will need to select the appropriate choice in the menu option to match the orientation by pushing the Pause/Select (||) button after highlighting this menu option. Upon selection, your MemoryFrame frame will automatically rotate all its menus and stored slideshow pictures from horizontal to vertical or vice-versa.

9.2.3 Picture Configuration Menu

Note: This menu lets you set or change the same settings as the PC Application allows you to set/change. This allows you to use the MemoryFrame without a PC, or change settings originally set with the PC application with the on-board button Menu system. This method is not as fast as the PC.

To enter the Picture Configuration sub-menu, highlight the Picture Configuration Menu entry by using the Forward (▶) or Reverse (◀) button and then press the Pause/Select (||) button.

Important! On any menu that has thumbnail images, the thumbnails will take a few moments to appear, and you will be unable to select a picture or move the highlight until ALL of the thumbnails have appeared in their entirety.

Selecting this menu option will cause the menu being displayed to change from the Main Menu to a sub-menu called the Picture Configuration menu. For this menu, the focus is initially on thumbnails of the stored pictures as depicted in the Figure 18.

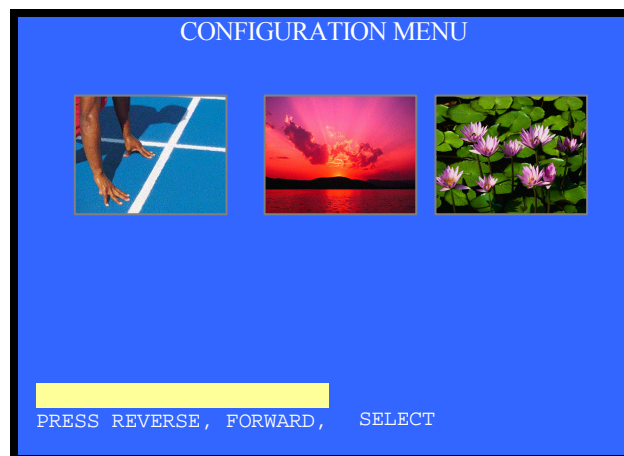


Figure 18- Configure Pictures Menu

In this menu, you are first presented with a thumbnail view of three (3) of many pictures stored in the MemoryFrame. If you have marked any of the pictures as hidden (with either the PC application or in this menu system), the hidden pictures will be displayed in normal sequence with the word "Hidden" appearing over or near the picture.

You can navigate through the pictures using the Forward (▶) and Reverse (◀) buttons. Since the MemoryFrame can hold 50+ pictures, this display of three (3) thumbnails serves as a window into the MemoryFrame's picture memory. When you navigate past the third picture on the screen, the program will render the next three (3) thumbnails, and so on until the last picture is displayed. At this point the Forward (▶) navigation button will not let you advance past the last picture. Conversely, when you use the Reverse (◀) button to navigate to a picture prior to the currently displayed thumbnails, the prior three (3) thumbnails will appear on the screen, and so on until the first picture is displayed. When you have reached the beginning of your pictures, the Reverse (◀) navigation button will not let you navigate back any further.

Changing a Picture's Display Characteristics

When you press 'Select' to select a picture, the menu options for that picture will appear and apply to that picture only. This sub-menu allows you to set the attributes of your slideshow without a PC (the time the photos are displayed, the photo transitions effects, as well as the ability to hide and delete photos , etc).

First, find a picture where you want to change either the time displayed, transition effect, hide, or delete it. Then, press the Pause/Select (||) button. After the Pause/Select button is pressed, the MemoryFrame will display the Picture Configuration menu choices underneath the thumbnail display.

Note: On any menu that has thumbnail images, the menus may take a few moments to appear, and you cannot move the highlight until the display has fully appeared.

The picture configuration menu items presented for the selected photo are:

- Return to Main Menu**
- Delete**
- Hide/Show Image**
- Set Transition Effect**

Set Transition Delay
Set Background (fill) Color
Cancel
Rotate 90°

Each setting applies only to the selected thumbnail. Each photograph in the slideshow can have different effects, delays, etc.

Whenever these Picture Configuration menu options are displayed, the Forward (▶) and Reverse (◀) navigation buttons operate on the menu items and not on the thumbnails. Each of these Picture Configuration menu choices are described below.

9.2.3.1 Return to Main Menu

When you want to exit the Picture Configuration sub-menu, select "Return to Main Menu." This will bring you back to the Main Menu from where you may resume the slideshow.

9.2.3.2 Hide/Show Image

The MemoryFrame allows pictures that are stored in memory to be hidden (not shown) when the normal slideshow is presented. This allows the user to alter the slideshow without deleting the photo from memory. If you have marked any of the pictures as hidden (with either the PC application or in this menu system), the thumbnails for these "hidden" pictures will be displayed in normal sequence with the word "Hidden" over or near the picture. Upon selection of the "Hidden" feature, MemoryFrame will automatically record the change and return to the thumbnail navigation mode.

9.2.3.3 Delete Picture

The Delete Picture option allows you to delete a particular image from your MemoryFrame's storage. Highlight the thumbnail of the image to be deleted then push the Pause/Select (||) button.

9.2.3.4 Set Transition Effect

Your MemoryFrame features seven (7) choices for transition effects between images. These are the same as those selectable with the PC application software, Digital PixMaster. When you choose a transition effect, this menu selection will save the changes into memory and then return you to thumbnail navigation mode. The transitions in your

MemoryFrame may differ from those listed below, depending on the version of software shipped with your MemoryFrame.

None: The next image simply appears replacing the previous.

Wipe Down: The next image wipes down from the top of the screen.

Wipe Right: The next image wipes from the left of the screen towards the right side.

Box out: The next image appears from center in small box and expands towards edges.

Diagonal Fill: The next image overwrites with diagonal stripes to replace the previous.

Tile Box out: The old image is tiled over as the next image appears from center and expands towards edges to replace the previous.

Tile Fill Down: The old image is tiled over as the new image wipes down from the top.

9.2.3.5 Set Transition Delay (the delay between slide changes)

You can select the amount of time the selected photo image will display: from 10 seconds to several hours. Upon selection of a time MemoryFrame will automatically, record the change and return to thumbnail navigation mode.

9.2.3.6 Set Background (Fill) Color

Your MemoryFrame will fill any unused portion of the screen with a background of your choice from the list of colors. This reduces the "black bar" effect seen when pictures do not have the same 4:3 proportion as the MemoryFrame screen (see Section 10.1 for more information).

9.2.3.7 Cancel

If you select and execute Cancel, the MemoryFrame will undo any changes that have been made to the selected picture, as well as any configuration settings from the time you last selected the Pause/Select button and will automatically return you to the thumbnail navigation mode, leaving the current picture selected.

9.2.3.8 Rotate 90°

This function in your MemoryFrame™ may differ from that described below depending on the version of software shipped with your MemoryFrame™. Check our website for software upgrades. Your pictures may have been taken with the camera in either horizontal or vertical position. The Rotate 90° option allows you to set the proper orientation to display any particular image. When you select Rotate 90°, the MemoryFrame will rotate the currently selected picture 90° to the right. This change in orientation will be lost if you later select Cancel. First select the thumbnail image you wish to rotate and then push the Pause/Select button as necessary to rotate the image to the desired orientation. This will save the change into memory and then return to thumbnail navigation mode.

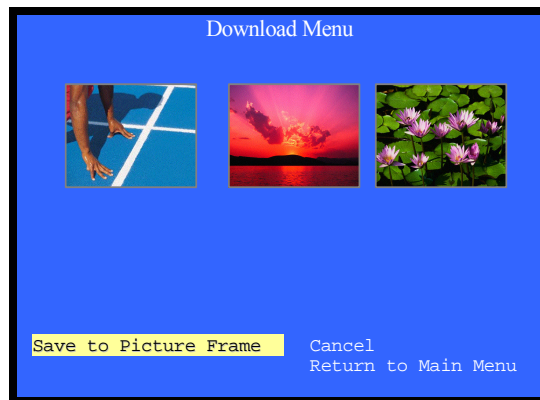
9.2.4 Download Pictures (from USB Camera or Reader)

Important! Before selecting this item, you must first perform all the steps in either Chapter 7 “Camera Connection to MemoryFrame” or Chapter 8 “Card-Reader Connection to MemoryFrame.”

The initial menu view for Download Pictures (from Camera/Reader) is very similar to the prior Picture Configuration sub-menu section). The major difference is that all the thumbnail pictures displayed are from the Camera or USB Memory-Card reader, and not from the MemoryFrame's picture storage memory.

To enter this menu, highlight “Download Pictures,” and press Pause/Select for the MemoryFrame to enter it's picture download mode (from camera or reader).

Figure 19- Download Pictures Menu



In this mode, the user is presented with a thumbnail view of three (3) of the many pictures in the Camera or Reader. The pictures reside on the USB device and NOT in the MemoryFrame.

You can navigate through the pictures in the Camera/reader using the Forward (▶) and Reverse (◀) buttons. The display of three (3) thumbnails serves as a window into the camera/reader's picture memory. When you navigate past the third thumbnail picture on the screen, the program will display the next three (3) thumbnail images, and so on until the last picture is displayed. At this point the Forward (▶) navigation button will not let you advance past the last picture. Conversely, when you use the Reverse (◀) button to navigate to a picture prior to the currently displayed thumbnails, the screen the program will display the prior 3 thumbnail images, and so on until the first picture is displayed. At this point the Reverse (◀) navigation button will not let you navigate back any further.

Note: On any menu that has thumbnail images, the menus may take a few moments to appear, and you cannot move the highlight until the image has completely appeared.

Selecting Camera/Reader Pictures to Transfer

First find a picture you want to copy from the Camera (or Reader) into the MemoryFrame's picture storage memory. Press the Pause/Select (||) button. The MemoryFrame will display sub-menu items underneath the thumbnail display. When these options are displayed, the navigation keys operate on the menu items and not the thumbnails.

Now that you have selected the picture you want to transfer, you must now select either "Save to Picture Frame" or "Cancel" to return to thumbnail navigation. Highlight either option and press the Pause/Select (||) button.

10. Tips and Tricks

This chapter discusses ways to enhance your use of MemoryFrame™. Areas covered include: image optimization, care of the LCD screen, securing MemoryFrame in busy environments, and changing the decorative frame.

10.1 Optimizing images for display on MemoryFrame

The physical screen resolution of the MemoryFrame is 320 x 240 pixels. Images larger than this will not increase detail or resolution when displayed on the MemoryFrame.

Although a PC is not required, many digital camera users will want to take advantage of their personal computer's power, memory, and user interface to edit, enhance, and archive their photos and other images. Using the Digital PixMaster™ application supplied with the MemoryFrame, you can organize a personalized photo show and download it to the MemoryFrame using USB. If you do use a PC to transfer your photos to MemoryFrame, then you will want to take pictures at full resolution and store them on your hard-drive. The Digital PixMaster software will automatically resize photos appropriately when you drag & drop a photo into the application. This will not affect the size and resolution of the original photo on your hard-drive, therefore, if you do desire to print that photo later, you will still have the original full-resolution photo on your hard-drive.

If you want an image to fill the screen completely, ensure that it has an aspect ratio (ratio of width and height) of 4:3 (or 3:4 for vertical pictures).

If you use the DirectConnect feature to connect your camera (or USB card-reader) directly to MemoryFrame, shooting pictures at 640 x 480 or adjusting the resolution in image manipulation software down to this size will increase the number of pictures that can be stored on your Memory Storage Card. It will also speed decompression of the pictures, improving camera-connection download and performance. In this mode, your MemoryFrame will automatically reduce the size of large image files to fit on the screen. Images smaller than 320 x 240 pixels will not be enlarged.

10.2 Caring for the Screen:

As is noted in Section 4.3, the MemoryFrame is shipped with a protective plastic film on its LCD screen. Please see Section 4.3 for instructions on removal of the protective plastic film.

The screen on MemoryFrame is made of glass and is extremely delicate. It can be easily scratched. Treat the screen with care and avoid touching it. If the screen does become dirty, turn off the power and use a soft, absorbent cloth (not tissue paper) dampened with water. Do not use Windex or other glass cleaners to clean it unless they are specifically recommended as LCD cleaning solutions. Please wipe off any moisture before turning the power back on. Listed below are some additional precautions for the LCD screen:



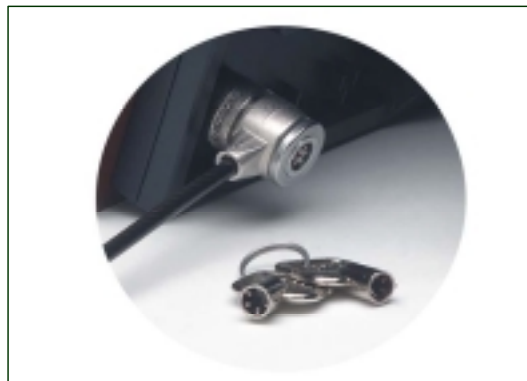
- LCD screen display surface never likes dirt, stains, or oil mists. Do not use furniture polish. Do not use window cleaners, acetic acid, chlorine compounds, or other glass cleaners to clean it unless they are specifically recommended as LCD cleaning solutions, as they will damage the TFT LCD display screen.
- The LCD screen scratches easily, please handle it carefully.
- Avoid applying pressure to the surface of the LCD screen, as it may cause display non-uniformity or other functional issues.
- Do not twist or bend the module.
- Prevent the use of unsuitable external force to the LCD display module.
- Be sure to operate the module within the specified temperature range (32 – 85 degrees Fahrenheit, 0-30 degrees Celsius) and keep out of direct sunlight.
- Avoid keeping the slideshow in either pause mode or menu management mode for long periods (multiple hours) to avoid displaying the same image continuously, as it will cause image sticking (burn-in of the image into LCD).

- Be sure to turn Off the power before connecting or disconnecting MemoryFrame to the external AC Adapter.
- Sudden temperature changes may cause condensation. This can cause the LCD screen polarizer to be damaged.
- High temperature and humidity may degrade performance. Please do not expose the module to the direct sunlight.
- Static electricity can damage the module, please do not touch the module without first discharging any static charge you may have.
- Do not disassemble and reassemble the module. This will void the warranty.
- Do not expose the unit to strong vibration or shock. It may damage the unit and void the warranty.
- When storing the unit, store the unit in suitable environment in its original packaging.

10.3 Securing MemoryFrame in Office Environments

With its ability to mix PowerPoint slides with photos, MemoryFrame is perfect for use in business for reception counters and desks. To keep it secure in these high-traffic areas, MemoryFrame has a receptacle that accepts a Kensington® compatible locking system. This adds protection and security when used in business environments. See Figure 20.

Figure 20 – Security Lock



10.4 How to change the decorative 5 x 7 frame

Follow these instructions to remove and reinstall your MemoryFrame Decorative frame.

To remove decorative frames from MemoryFrame

- Read the section of the manual “Caring for the Screen” (Chapter 9) before removing the decorative frame. Try to avoid touching the LCD screen during this process.
- MemoryFrame has two “frame lock” tabs on the rear of the unit. These are used to lock a decorative 5x7 frame in place. There are two locations, one on each side. The “Locked” position is toward the outside of the unit.
- Pick up MemoryFrame with the LCD screen facing away from you and fold in the Stand from the rear of the MemoryFrame. Grasp the edges of the frame with thumbs against the “frame lock” tabs on the rear of the unit.
- Apply **strong** thumb pressure inward towards the center of the frame until the frame locks are in the unlocked position. A noticeable “click” may be heard when unlocked.
- The wood 5x7 picture frame can now be pulled away from the face of the MemoryFrame housing.

To install decorative frames on the MemoryFrame

- Read the section of the manual “Caring for the Screen” (Chapter 9) before removing the decorative frame. Try to avoid touching the LCD screen during this process.
- After removing (as described above) the wood 5x7 picture frame that came with MemoryFrame, place your new wood 5x7 frame onto the face of the MemoryFrame housing.
- Pick up MemoryFrame with the LCD screen facing away from you and grasp the edges of the frame with thumbs against the “frame lock” tabs on the rear of the unit.
- Apply **strong** thumb pressure outward towards the edges of the frame until the frame locks are in the locked position. A

noticeable “click” may be heard when locked.

- Fold out the Stand from the rear of the MemoryFrame. Choose the orientation that you prefer either portrait (vertical) or landscape (horizontal) orientation, and set the MemoryFrame on a flat surface.

11. Purchasing New Decorative 5x7 Frames

MemoryFrame's stylish design and unique ability to use virtually any off-the-shelf wood 5x7 picture frame allows you to choose a frame that matches your décor, whether it be cherry wood, walnut, oak, teak, etc. This unique feature allows MemoryFrame to make a handsome display in any home or office, suiting any motif.

Additional frames are available from Pacific Digital. Please see our website for details: www.pacificdigital.com



Figure 21 – Sample 5 x 7 Frames

In addition to frames from Pacific Digital's website, you can also purchase standard 5x7 frames from your local store. The rest of this section gives details on how to select a frame that is compatible with MemoryFrame.

MemoryFrame works with many off the shelf wood 5"x7" picture frames. The Figure below shows some examples of the types of frames that work with MemoryFrame.



Figure 22 – Examples of wood frames

Size of Frames that Fit MemoryFrame

The frames can be of various dimensions, but they must fit 5" x 7" pictures. The inner dimensions of frames that fit are approximately 11.9cm x 17 cm. The outer dimensions of the frames that work can vary by as much as 2 cm in each direction. For example, as you can see in the Figure 22, the rear-middle frame shown is slightly wider and taller than the rest and this is fine.

Types of 5 x 7 Frames that Fit MemoryFrame

In general, most 5 x 7 frames come in three different basic types in terms of how the photo and the stand mechanism are retained (secured) into the frame. These three types are briefly described below. The first two types are not usable by MemoryFrame, and only the third type described will fit MemoryFrame:

1. Some 5x7 frames supply retention for the photo and the stand mechanism by having metal clips attached to the wood itself which either swivel or bend over the stand mechanism to provide retention. **Please note, that MemoryFrame cannot use this type of frame, so purchase only type #3 below.**
2. The second type of 5x7 frames have a slot in the bottom such that the glass, picture, and stand-mechanism all slide up from the bottom of the frame. **Please note, MemoryFrame cannot use this type of frame, so purchase only type #3 below.**

3. The third type of 5x7 frame has a “groove” cut into the inside perimeter of the frame, which is used by the stand mechanism to swivel a metal clip into the groove for retention. This is the type of frame that will work with MemoryFrame. A rear-view of this type of required frame and the groove in the frame is shown in Figure 23. Typically, this type of frame is made of wood, but sometimes is made of metal or other materials.



Figure 23 – Example of groove in rear of frame

Retention Groove – Minimum Length

In the example 5x7 picture frames shown in this manual, the retention groove extends around the entire interior perimeter of the rear of the frame. It is not required for the groove to extend this far, but is acceptable if it does. At minimum, the groove must be at least 1 inch in length and be centered on each of the two short sides of the frame, Grooves are not required on the long sides of the frame, but are acceptable if present.

12. Troubleshooting / FAQ

Q: I have a USB camera connected, but MemoryFrame doesn't recognize my camera.

A: The camera will need to be set into the appropriate mode to transmit its pictures. Many cameras have two modes of operation: proprietary and standard (driver-less) mode, and the camera has menu items and/or buttons that set the USB mode. The standard (driver-less) makes the camera look like a drive-letter to Windows Explorer without the need for the camera manufacturer's custom driver. This standard driverless mode (called "disk-drive" mode by some cameras) is required to interface to MemoryFrame. See your camera's user manual for details of how to prepare your camera for driver-less USB transfers.

Even though your camera is a USB model, your camera may not support the *USB Mass Storage* specification. The DirectConnect™ feature of MemoryFrame allows a user to directly attach a USB camera without the need for a PC. For the DirectConnect feature of MemoryFrame to operate seamlessly with your camera, the camera needs to support the USB Mass Storage specification. This specification (co-authored by Microsoft) is built into Windows®98SE, Windows ME, Windows 2000, and Windows XP. If a camera supports this spec, then it does NOT need its own custom driver from the camera manufacturer for Windows to recognize and be able to use it as a "drive letter" in Windows Explorer. This allows you to drag pictures from the camera onto your hard-drive.

If your camera is not recognized by MemoryFrame, then the camera won't work in DirectConnect mode, and instead, such a non-compliant camera must use either a PC (running Digital PixMaster software) or a USB memory-card-reader in order to get its photos into the MemoryFrame. Check the Pacific Digital website for a partial list of cameras which are known to be compliant to the Microsoft USB Mass Storage specification. You may also want to contact Pacific Digital customer support at (888) 999-0732 to see if there is a software upgrade available to support your camera.

Q: I did not need to install a custom driver for Windows® XP to recognize my USB camera, but MemoryFrame still doesn't recognize my camera.

A: Your camera may not support the USB Mass Storage specification, and Microsoft may have included the custom driver for your camera

model in the XP release. The DirectConnect specifies on the box that the camera needs to support the USB Mass Storage specification. If your camera is not recognized by MemoryFrame, then the camera won't work in DirectConnect mode, and instead, such a non-compliant camera must use either a PC (running Digital PixMaster software) or a USB memory-card-reader in order to get its photos into the MemoryFrame. Check the Pacific Digital website for a list of cameras which are compliant to the Microsoft USB Mass Storage specification. You may also want to contact Pacific Digital customer support at (888) 999-0732 to see if there is a software upgrade available to support your camera.

Q: With my camera connected, MemoryFrame doesn't display any pictures, even though I know there are pictures in the camera.

A: Your camera may be storing images in a non-standard format. MemoryFrame frame only supports standard JPEG (.JPG) files. Consult your camera's documentation to learn if your camera can be configured to store pictures in JPEG (.jpg) format. Alternatively, you can transfer the photos first to your PC. The bundled Digital PixMaster software can download the following picture formats to MemoryFrame: JPEG, BMP, ICO, or GIF.

Q: With my camera connected, picture display seems to be slow.

A: Your picture files may be very high-resolution. Large picture files take longer to display. Many cameras allow you to choose between different picture storage resolutions. To maximize MemoryFrame responsiveness, take your pictures with the camera on its lowest resolution setting.

Q: I have attached a USB card reader to MemoryFrame with my camera's memory-card inserted, but MemoryFrame does not recognize the USB card-reader.

A: Even though your card-reader is a USB model, your card-reader may not support the USB Mass Storage specification. The DirectConnect™ feature of MemoryFrame allows a user to directly attach a USB card-reader without the need for a PC. For this DirectConnect feature of MemoryFrame, it is specified that the card-reader needs to support the USB Mass Storage specification. This spec (co-authored by Microsoft) is built into Windows 98SE, Windows ME, Windows 2000, and Windows XP. If a card-reader supports this specification, then it does NOT need its own custom driver from the card-reader manufacturer for Windows to recognize and be able to utilize as a "drive letter" in Windows Explorer. This specification allows you to drag pictures from the card-reader onto

your hard-drive without requiring a custom Driver. If your card-reader is not recognized by MemoryFrame, then the card-reader won't work in DirectConnect mode. Such a non-compliant card-reader must use a PC (running Digital PixMaster software) in order to get its photos into the MemoryFrame.

Q: I have attached a USB card reader to MemoryFrame with my camera's memory-card inserted. MemoryFrame sees the card-reader but does not see the pictures.

A: Your camera may not be storing pictures on the memory-cards in standard MS-DOS compatible format, or your camera may be storing images in a non-standard format. MemoryFrame only supports standard JPEG (.JPG) files. Consult your camera's documentation to learn if your camera can be configured to store pictures JPEG (.jpg) format. You may also want to contact Pacific Digital customer support at (888) 999-0732 to see if there is a software upgrade available to support your camera. Alternatively, you can transfer the photos first to your PC. The bundled Digital PixMaster software can download the following picture formats to MemoryFrame: JPEG, BMP, ICO, or GIF.

Q: My MemoryFrame has fingerprints on the LCD screen. How do I clean it without scratching the screen?

A: The screen on MemoryFrame is made of glass and is extremely delicate. It can be easily scratched. Treat the screen with care and avoid touching it. If the screen does become dirty, use a soft, absorbent cloth (not tissue paper) dampened with water. Do not use glass cleaners to clean it unless they are specifically recommended as LCD cleaning solutions.

Q: Where can I find additional known resolved issues and information to help me solve a problem on my MemoryFrame?

A: A list of additional resolved issues and information is posted on the Pacific Digital WEB site at www.PacificDigital.com

13. MemoryFrame Specifications

Screen Type/Size:	Bright 5.6" Active Matrix TFT LCD
Camera Interface:	USB 1.1 Host interface
# of photos stored:	55 photos maximum per slideshow
Photo File Format:	JPEG on Camera, and JPEG, ICO, and BMP on PC
Resolution:	640 x 480 logical resolution, 320 x 240 physical. Larger pictures are automatically scaled to fit the screen
Buffer Sizes:	16 MB RAM & 8MB Flash memory
PC Interface:	USB 1.1 Target interface
AC Adapter:	120 VAC, 60 Hz, 17w
Dimensions:	8.31 x 6.33 x 1.71 in (211 x 161 x 43 mm) (w/h/d)
Weight/Mass:	28 oz. (800g)
Environment:	32 – 85 OF, 0-30 OC, 40-64% RH (non-condensing)
Accessories:	USB cable, software CD-ROM, wood frame

14. Upgrading MemoryFrame Firmware

Software Updates May Be Available

From time to time, Pacific Digital may make improvements to MemoryFrame's internal software (firmware) to add features or enhancements. Check www.pacificdigital.com for updates to your MF-570 software.

How to Download MemoryFrame Software updates

Go to www.pacificdigital.com

Follow the links to the MemoryFrame firmware update page.

Updates to the MemoryFrame firmware should be downloaded to your PC's hard-drive.

How to Update MemoryFrame Software

When the MemoryFrame is connected to a computer running Digital PixMaster with its USB drivers, the MemoryFrame accepts and processes communication from the computer. Digital PixMaster can update the MemoryFrame's software image with the new one you downloaded from the Pacific Digital website.

You must first connect your PC to the MemoryFrame with the USB cable that was provided in the box with the unit.

Connect the larger "standard USB" connector to the USB port of the PC. Connect the smaller "mini-USB" connector to the "PC" connector of the MemoryFrame. See Figure 7.

Important! For the PC application (Digital PixMaster) to communicate to your MemoryFrame, you first need to prepare your MemoryFrame for communicating to a PC, as described in the section below.

Preparing MemoryFrame to Communicate to a PC

The MemoryFrame cannot be managed or communicate with a PC while it is in its menu system mode. In all cases, you must be in photo slideshow display mode for Digital PixMaster to communicate. Exit any on-board button menus and return to displaying the current slideshow. This will place the MemoryFrame in the mode that is required to communicate with the PC.

Digital PixMaster's Update Firmware Command

Use the Digital PixMaster™ software to transfer the software update to your MemoryFrame. The Digital PixMaster icon should be located on your Windows Desktop. To start Digital PixMaster double-click on the icon.

Next, from the “MemoryFrame” pull-down menu of Digital PixMaster, select “Update Firmware.” Follow the on-screen instructions to point to the updated firmware file (with a “.bin” file extension) that you just downloaded from the Pacific Digital website to your hard-drive.

After you click on the OPEN box to select the .bin firmware update file, Digital PixMaster will display a progress bar to indicate the transfer of the file to MemoryFrame.

On the MemoryFrame's LCD screen, the MemoryFrame will display a sequence of messages to show the progress of the firmware update. The first progress message is:

“FIRMWARE BEING DOWNLOADED, PLEASE WAIT”

Important! When the progress bar shown in Digital PixMaster is complete, it only signifies that the file has been transferred, and it is just the beginning of the MemoryFrame's actual process of updating its firmware.

If a transfer error occurs, the MemoryFrame will display the following message:

“BAD FLASH DOWNLOAD, PLEASE RETRY”

If so, retry the update by select “Update Firmware” from the “MemoryFrame” pull-down menu of Digital PixMaster.

When the MemoryFrame receives the updated firmware file, the MemoryFrame will erase the current firmware portion of its memory and program in the new firmware image. You must wait up to five (5) minutes for the frame to complete the software upgrade.

Important! Do not unplug or cut power to the MemoryFrame or PC during the upgrade process! A loss of power could erase both old and new operating systems, leaving the MemoryFrame inoperable.

The MemoryFrame will display the following sequence of messages to show the progress of the firmware update:

“FLASH BEING ERASED”

“FLASH BEING LOADED”

“READING FLASH”

“VERIFYING FLASH”



If an error occurs in the above process (either erase, loading, or verification), the MemoryFrame will display the following message:

“REDO FLASH- DON'T POWER OFF (error code number)”

Caution! Important! Do not unplug or cut power to the MemoryFrame or PC. The above error message indicates that there was an error (either erase, loading, or verification) during the firmware update. The firmware update MUST BE RE-DONE and the PICTURE FRAME MUST NOT BE POWERED OFF BEFORE THAT during the upgrade process! A loss of power could erase both old and new operating systems, leaving the MemoryFrame inoperable.

If no errors occur, then once the new firmware update file has been loaded into the MemoryFrame's storage memory, the MemoryFrame will indicate it is done by displaying the following message indicating when you can reset the MemoryFrame:

“PLEASE POWER THE MEMORYFRAME OFF/ON”

Only then can you turn the MemoryFrame OFF, then turn it back ON. When the MemoryFrame goes into normal operation, the upgrade has been completed.

Enjoy the new firmware!

15. MemoryFrame Limited Warranty

Pacific Digital Corporation warrants this product to be free from manufacturing defects for a period of 90 days from the date of invoice to the end user (Customer). In the event that this product should fail during this period, Pacific Digital Corporation reserves the right to either replace or repair the product at its own discretion. If the product becomes defective during the Warranty period, Pacific Digital will repair or replace any defective component part at no charge to the original owner, subject to the limitations and requirements listed.

THE FOLLOWING IS REQUIRED BY PACIFIC DIGITAL CORPORATION when requesting warranty service:

Check your resellers return policy first. All purchased products must be returned to original reseller within their return policy time period. If the product is out of reseller's return period, all returns to Pacific Digital Corporation for warranty repair within the warranty period must be authorized by Pacific Digital with a Return Material Authorization (RMA) number. To obtain an RMA number, contact tech-support at 888-999-0372 or send an email to support@pacificdigital.com to obtain an RMA. The product must be packed in the original shipping carton or in suitable packing offering a similar degree of protection. To avoid scratches or other damage to the product during shipping, separate items such as the cables, power cords, etc. Each should be individually wrapped and placed in the same package.

Limitations:

The limited warranty provided by Pacific Digital Corporation does not cover:

- The cost of returning the product to Pacific Digital (i.e. this is the user's responsibility)
- Any product with serial numbers or identification altered or removed
- Exterior cosmetic damage
- Damage, defect or failure caused by or resulting from: improper installation or operation of the unit from incorrect voltages or power supply; improper service by a non-authorized service facility; abuse, neglect, accidents, misuse,

fire, flood, or acts of God; unauthorized modification by end user; installation removal or on site service.

- Damages resulting from loss of use, loss of data, loss of time or inconvenience, cost of temporary replacement unit or spares, property damage caused by this unit or its failure to work, or any other incidental or consequential damages
- Damage caused by installation/operating software which may or may not be supplied with the product is not covered by this Limited Warranty. Separate End-User License Agreement provisions and restrictions apply.

Customer's acceptance of Pacific Digital's RMA number reflects acceptance to the terms and conditions of Pacific Digital's Warranty and Return Policy, as set by Pacific Digital. All requests for RMA numbers must include product serial numbers and proof of purchase. Customer agrees to assume shipping charges on return shipments to Pacific Digital and Pacific Digital agrees to assume shipping charges back to customer. All returns are for repair or replacement at Pacific Digital's discretion. There are no returns for credit or refunds. This warranty excludes defects or damage due to misuse, abuse, or neglect.

The foregoing warranty is in lieu of all other warranties, express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose. In no event shall Pacific Digital Corporation be liable for special, indirect, incidental, or consequential damages whether in contract, tort, or negligence.

16. Contacting Technical Support

Pacific Digital Corporation
2052 Alton Pkwy
Irvine, CA 92606

Phone: 888-999-0732

Fax: 949-252-9397

WEB: www.PacificDigital.com

During installation, record the following information. This information will be needed to contact technical support.

When calling the Technical Support Department, **MAKE SURE TO HAVE THE FOLLOWING INFORMATION READILY AVAILABLE, BECAUSE IT IS NECESSARY IN ORDER TO RECEIVE TECHNICAL SUPPORT.**

RETAILER INFORMATION

Date of Purchase: _____ Invoice #: _____

Product Purchased From: _____

Seller's Tech Support Phone #: _____

PDC PRODUCT INFORMATION

PDC Part #: U-30- _____ PDC Serial #: _____

Name of Software: _____

Software Version: _____

OTHER INFORMATION ABOUT YOUR DIGITAL CAMERA

Camera Image Type (JPEG, TIF, etc.): _____

Brand of Camera: _____

Type of Memory: _____

USB type: _____

OTHER INFORMATION ABOUT THE PC YOU USE TO RUN THE DIGITAL PIXMASTER SOFTWARE

Processor Speed: _____

Brand of Computer: _____

RAM Size: _____

Operating System: _____

The Pacific Digital part number for this MemoryFrame MF-570 User's Manual is: **1862-PF-03-x** (revised Jan-24-2003)

The Pacific Digital part number for the MF-570 model of the MemoryFrame product line is: U-30140

Specifications are subject to change without notice. All trademarks and logos are the property of their respective owners.

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