MDC-800
USER'S MANUAL

Getting Started

Camera Operation

Getting Connected

Software Applications

ViewFun

Appendices

2

Copyright Information

FCC Statement

This digital equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if it is not installed and used according to the instruction manual, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off or on, try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Increase the distance between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTES:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

Contents

Chapter 1: Getting Started

Chapter 2: Camera Operation

Chapter 3: Getting Connected

Chapter 4: Software Applications

Chapter 5: ViewFun

Appendices

Preface

Thank you for your purchase of the MDC-800. This guide covers
all of the features and functions of the camera.
In this user guide you will find the following topics:

Chapter 1: Getting Started
This chapter explains how to make your camera operational.

Chapter 2: Camera Operation
This chapter gives you step-by-step instructions on how to operate
the various functions of the camera.

Chapter 3: Getting Connected
This chapter gives you detailed instructions on how to connect and
use the camera with the TV, VCR, and computer.

Chapter 4: Software Applications
This chapter describes in detail how to use the camera's software
(The Photo Album).

Chapter 5: ViewFun
This chapter explains the features and functions of the included
multi-function software.

Appendices
Provides troubleshooting information and specifications for the
camera along with a manual index and technical support information.

Chapter

1   Getting Started

Supported Computer Systems

This camera complies with the TWAIN standards, the industry standard for imaging hardware and software. TWAIN eliminates compatibility problems with software and input devices from different vendors. The following are the minimum system requirements for optimum performance with color images:

- Pentium PC or notebook computer
- Windows 95/98/NT 4.0
- 16 MB RAM (32 MB recommended)
- 120 MB available hard disk space for software installation
- VGA or Super VGA color monitor
- CD-ROM Drive

Package Contents

- MDC-800 camera including 4 AA batteries
- USB and RS232 connection cables
- NTSC and PAL video output cable
- 7.5V DC, 1.3A Power Adapter
- Camera strap and carrying bag
- Installation CD
- User's Manuals

Your Video Digital Camera

The camera is equipped with a number of different features and functions. To better understand and familiarize yourself with these features and functions, please refer to the following pages before using the camera.
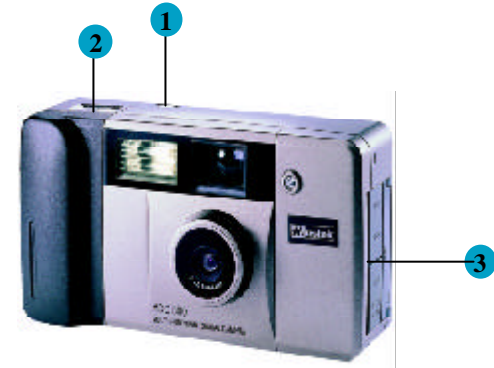
1. **Power Button**: Turns the camera on/off.
2. **Shutter Button:** Captures the image into the camera.
3. **Cable Panel:** Contains the AC Power Adapter, USB, Video, and RS232 connection terminals, as well as the memory card slot.

1. **Viewfinder:** Allows you to position the subject in the image that will be captured.
2. **Lens:** Allows the camera to focus on the subject and to capture the image once the shutter button has been pressed.
3. **LED Indicator:** Alerts you when the self-timer is about to take the picture.
4. **Flash:** Flashes light on the subject.

5. **LCD Panel:** The Liquid Crystal Display Panel allows you to view real-time display, the menu functions, and image playback.
6. **LCD On/Off:** Turns the LCD on or off.
7. **Menu Button:** Displays the camera's function menu in the LCD.
8. **Select (Up):** Scrolls up/backward through the function menu or captured images.
9. **Select (Down):** Scrolls down/forward through the function menu or captured images.
10. **Enter Button:** Selects the options from the function menu.
11. **Viewfinder:** Allows for viewing of the subject.
12. **Strap Holder:** Allows the camera strap to connect to the camera for easy and safe carrying.
13. **Battery Compartment:** For loading/unloading of the batteries.
14. **Tripod Mount:** Allows a tripod to be secured to the bottom of the camera.
15. **CF Memory Card Eject Button:** Allows you to eject the installed CF Memory card from the camera.
16. **Mode Button:** Switches the camera between Camera mode (up), and Playback Mode (down).
17. **Segment LCD Display Panel:** Displays the status of the camera's settings.
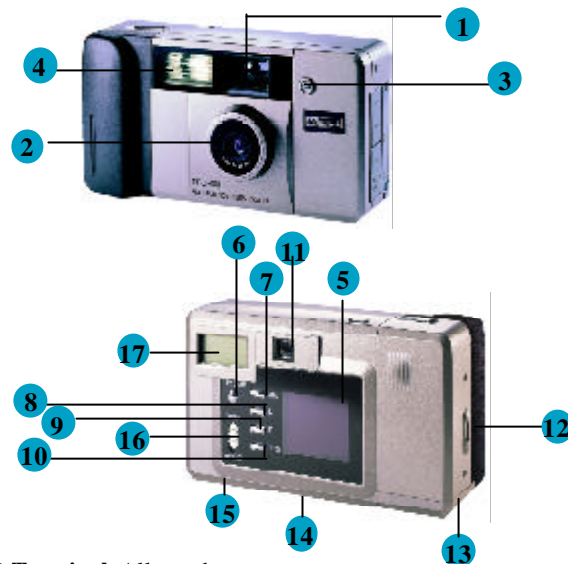
18. **USB Terminal:** Allows the camera to be connected to a computer via a USB interface.
19. **RS232 Terminal:** Allows the camera to be connected to a computer via a serial interface.
20. **Video Terminal:** Allows the camera to be connected to a television or VCR.
21. **AC Power Adapter Terminal:** Allows the camera to be connected to an AC power supply.
22. **Memory Card Compartment:** For inserting/removing the optional memory card.
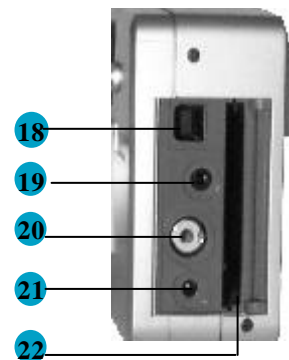
Power Supply
Installing the Batteries

The camera comes with 4 AA alkaline batteries. Please refer to the inside of the battery compartment lid or the following illustration to properly install the batteries.
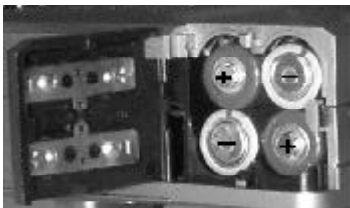
Using an AC Adapter

To save battery power, you may also use a standard (7.5v/1.3 amp) AC power adapter.

To connect an AC power adapter:
- Plug the adapter into an appropriate AC outlet.
- Open the Camera's panel and insert the power adapter into the slot as shown.

Low-Battery Indicator

When the battery power becomes low, the battery icon will display in the Segment LCD Display Panel. To continue to use the camera, either replace the batteries or connect the AC power adapter. The images will remain in the camera's memory for an indefinite period of time.

Note: Extended use of the LCD causes rapid battery usage. Therefore, we recommend using rechargeable batteries or the AC power adapter whenever possible.

Segment LCD Display Panel (Camera Mode)

This camera is equipped with an icon display panel that keeps you aware of all of the camera functions as they are being used.
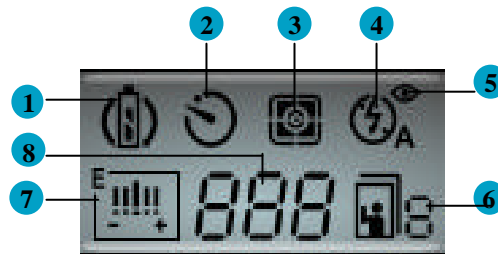
1. Low Battery Warning/Auto Off function
2. Self-timer Activated
3. Exposure Mode (CENTER or MATRIX (shown))
4. Flash Setting (AUTO)
5. Flash Setting with Red-eye
6. Quality Setting (S, H, E, or V (video recording))
7. Exposure Value (-2~+2: bar graph represents value)
8. Picture Number: = # of pictures/videos left to take/record before memory is full.

10

Compact Flash Card

The camera is equipped with a built-in Compact Flash Memory Card port that allows you to use any optional DOS compatible, compact flash card (CF card) to store images. This camera is compatible with all CF card sizes (no MB limit).

Note: Installing a CF card replaces the camera's internal memory and all camera/playback functions access the CF card. To return using the camera's internal memory, remove the CF card.

Note: Installing a new CF card requires a small amount of the CF card's memory capacity to create a directory for storing images.

Installing/removing the Compact Flash Card
• Open the CF card panel.
• Slide the CF card firmly into the slot OR unseat the card from the slot and remove it.
• Close the CF card panel.

To remove:

• Push the CF Memory card Eject button, located on the under side of the camera, towards the middle of the camera, then remove the card as it pops out.

Note: The camera will signal you with a short beep every time you insert or remove the CF card, as well as every time you turn the camera's power on.

Formatting the Compact Flash Card

All Mustek Brand CF cards are pre-formatted for use in this camera and do not require additional formatting before using.

Once you insert an unformatted CF card into the CF card slot you will be prompted with a message if it is not formatted.

Please format the CF card through DOS.

Note: Formatting a CF Card will erase any information currently on the card.

Chapter

2 Camera Operation

Camera Operation

   This chapter explains how to use the camera and its operational features and settings

   The camera has two modes, Camera and Playback. Both modes offer various functions specific to that particular mode.

The LCD Menu- Camera Mode

- Power on the camera.
- Make sure the Camera is in Camera Mode (Mode button UP).
- Press the LCD button then the Menu button **or** just press the Menu button. The camera mode functions are displayed on the LCD.

Selecting a Camera Function:

1. Use the Up/Down buttons to scroll through the list of options.
2. Press Enter to select/toggle an option.
3. A red up or down arrow indicates there are additional menu selections available and a yellow pointer arrow lets you know which menu selection you are currently on.
4. Press the menu button to exit the menu screen.
5. The selected function's icon is displayed on the Digital Icon Display Panel.
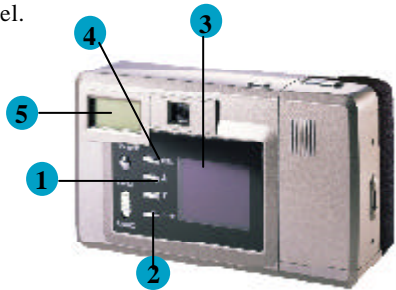
Functions

   The following menu lists the functions available in Camera mode.

MENU

FLASH:	**OFF**/AUTO/AUTO-R/ON/ON-R
QUALITY:	**STD**/HIGH/ECON
SELF-TIMER: ◆	**NO**/YES
EXP. MODE: ◆	**MTRX**/CNTR

W.B.: ◆	**AUTO**/INDOOR-/INDOOR+/OUTDOOR
FILTER: ◆	**NORMAL**/INVERSE/MINT/ROSE/DAISY/LILAC
VIDEO REC: ◆	**OFF**/ON
CONT. SHOT: ◆	**01**/...16

AUTO-OFF: ◆	**YES**/NO
EXP. VALUE:	**0**/+1/+2/-2/-1
DISP BRIGHT: ◆	**0**/+1/+2/-2/-1
INFO DISP: ◆	**YES**/NO

BUZZER:	**OFF**/ON
VIDEO OUT: ◆	**AUTO**/ON/OFF
VIDEO SYS:	**NTSC**/PAL
LANGUAGE:	**ENG**/GER/FRE/SPA/ITA/DUT/POR/SWE/DEN

- The Default (Factory) settings are underlined.
- Functions shown with the symbol { ◆ } beside them return to their Default settings every time the camera is powered off.

(1) FLASH:

The camera is equipped with five flash modes:

ON: the flash will fire with every image capture.

ON-R: the same as ON, preceded by a flash which reduces red-eye.

AUTO: whenever there is insufficient light, the camera automatically detects and fires the flash.

AUTO-R: the same as AUTO, preceded by a flash which reduces red-eye.

OFF: no flash is fired.

Note: The flash will need to be charged prior to, and right after being used. The flash icon will blink in the Segment LCD Display Panel and stops once the flash is ready for use.

(2) QUALITY:

Quality determines the file size and the effect of the captured image that is displayed or printed and is based on the amount of compression. High quality images appear sharp since the camera is not compressing the information as much, but also require more space for storage.

There are three quality modes, and one Video mode:

E • **Economic**- 48 KB of memory space per image.

S • **Standard**- 128 KB of memory space per image.

H • **High**- 320 KB of memory space per image.

V • **Video**- 320 KB when Video Recording has been selected.

(3) Self-timer:

This feature allows you to delay the capturing of an image for ten seconds giving you time to get into some of your own pictures.

To activate this function:

1. Select Self-timer from the LCD menu.
2. Position the camera on a flat stationary surface or mount it on a tripod.
3. Center the image to be captured using the viewfinder or LCD.
4. Press the Shutter button and get in the picture.

   How will I know when the image will be captured?

   The LED indicator at the front of the camera blinks, increasing in speed to alert you when the image will be captured.

(4) Exposure Mode:

Exposure Mode allows you to select the type of exposure used to capture the image:

CENTER: Focuses the quality of exposure on the center of the image (great for photos of people).

MATRIX: Evenly focuses the exposure to all areas of the image (great for landscape shots).

(5) White Balance:

White Balance adjusts the camera's color sensitivity to match the prevailing color of white outdoor light, yellow indoor light, or (sometimes) greenish fluorescent light. The camera is equipped with four white balance modes. Select the white balance mode that most closely matches the light in which you're using the camera.

Auto: automatically adjusts according to surrounding light **(default)**

Outdoor: for natural light

Indoor +: for fluorescent lighting

Indoor -: for incandescent lighting (bulb light)

14

Note: If the image color is not accurate when using the Auto mode, try moving the camera to acclimate the Auto white balance sensor.

(6) Filters:

This feature allows you to add color imaging filters that are applied to your images after capturing them. There are six (6) filter modes to choose from and they appear in the following order:

1. NORMAL: Applies no filter.
2. INVERSE: Reverses black to white and visa versa.
3. MINT: Applies light green filter.
4. ROSE: Applies pink/red filter.
5. DAISY: Applies yellow filter.
6. LILAC: Applies light purple filter.

(7) Video Record:

This feature allows you to record a video (uses 320 KB of memory for each recording).

To activate this function:
1. Select VIDEO REC on the LCD menu, and press Enter to select ON.
2. Press the Shutter button to start/stop recording.
3. Recording stops once 320 KB of memory has been used.

(8) Continuous Shooting:

This feature allows you to continuously capture images (up to a maximum of 16 depending on the memory available in the camera/memory card).

To activate this function:
1. Select CONT SHOT from the LCD menu.
2. Select the number of pictures you want to capture.
3. Press the Shutter button and images are captured into the camera.

Note: Resetting the Power during image capture will stop CONT SHOT and return the camera to regular mode.

(9) Auto-Off:

• Selecting **No:** Turns OFF LCD Display if you do not perform a camera operation for 45 seconds, but camera power stays ON.
• Selecting **Yes:** Turns OFF LCD Display if you do not perform a camera operation for 45 seconds, turns OFF camera power if you do not perform a camera operation for 90 seconds. To restore power to the camera once it has been turned off, simply press the Power On/Off button.

(10) Exposure Value:

Exposure controls the amount of light (brightness) that appears in a captured image. The LCD menu has five exposure settings, ranging from -2 to +2 (darker to lighter), allowing you to control the amount of light in your images.

If your images are too:
• **bright**, decrease (-) the exposure value to darken them.
• **dark**, increase (+) the exposure value to lighten them.

(11) Display Brightness Control:

Allows you to adjust the brightness of the LCD display panel to accommodate for interior or exterior lighting fluctuations.

There are 5 display settings ranging from -2 (least bright) to +2 (most bright).

• From the Camera menu, select DISP BRIGHT.
• Press Enter until the desired brightness level is selected.

(12) Information Display:

This feature uses icons (e.g. flash, counter, etc.) to display camera information and settings on the camera LCD.

The information displayed is from one of two sources.

In *Camera mode* the number that appears reflects how many images it is possible to capture before the memory is full, as well as the current Quality setting. This number will vary depending on the quality mode you are using to capture images. For example, high quality images require more memory, thus less images can be captured and stored.

In *Playback mode* the number that appears reflects the current picture number and is displayed with the Quality setting used to capture that image.

To Disable or Enable the information display:
- From the camera mode menu, select Information Display.
- Press Enter to turn the display off or on.

(13) Buzzer: (On/Off)

Emits an audible sound every time a function button is pressed.

(14) Video Out: (Auto/On/Off)

This feature allows you to decide whether to keep the Video display active when the camera is connected to a video source (e.g. TV).

AUTO: Automatically detects if camera is hooked up to video equipment (e.g. TV); sends and displays the video if connected, or doesn't send or display if not connected.

ON: Always sends video display to video equipment (even if it *isn't* connected). Battery Depleting.

OFF: Camera does not send video to video equipment (even if it *is* connected). Battery Saving

(15) Video System: (NTSC/PAL)

When the camera is connected to the TV, this function allows you to select the type of system used by the TV.

NTSC: Television system most commonly used in North America.
PAL: Television system most commonly used in Europe.

Note: If the image on a color television appears in black and white, try changing the TV setting on the Camera Mode LCD menu.

(16) Language:

This menu option allows you to select the language the LCD menu will appear in.

Capturing Images

There are several factors that should be considered when capturing quality images. Proper positioning, distance, lighting, even holding the camera in just the right way can make all of the difference when capturing quality images.

To capture an image:

1. Power on the camera.

2. Make sure the Mode button is in Camera Mode (Up).

3. From the LCD Menu, select the White Balance, Quality, etc. as described earlier in this section.

4. Position the subject in the viewfinder or the LCD (if activated).

5. Gently press the Shutter button, holding the camera steady to obtain a crisp image.

Note: If the memory full indicator is lit when set on high or standard quality it may be possible to capture one or two more economic quality images; because economic quality images take up less memory than high or standard quality images.

The LCD Menu- Playback Mode

This mode offers functions specific to captured images and allows you to view your captured images on the LCD or TV. When you switch to this mode, the LCD automatically turns on in single picture mode and the last image captured appears.

Selecting a Playback Function:
1. Make sure the camera is in Playback Mode (Mode button Down).
2. LCD display automatically turns ON then press the Menu button.
3. Use the Up/Down buttons to scroll through the list of options.
4. Press Enter to select or toggle an option.
5. Press the Menu button to exit the menu screen.
6. The selected function's icon is displayed on the LCD panel.

Functions

4 PIC MODE: **Enter toggles ON/OFF**
DELETE MENU: **HOME/UP/DOWN/DELETE**
DELETE ALL: **NO/YES, then confirm**
PROTECT: **YES/NO**
VIDEO MENU: **HOME/DELETE/NEXT/PLAY & STOP**
SLIDE SHOW: **OFF/ON**
DIGITAL ZOOM: **OFF/ON**

The following menu lists the functions available in Playback mode.

(1) Four Picture Mode

This function allows you to view four images at once in order to speed up the search process.

Note: You cannot access the playback menu while in four picture mode.

Selecting an image from Four Picture Mode
• Using the Up/Down buttons, highlight the image you wish to select.
• Press the Enter button. The image will automatically appear in single picture mode. (You can now press Menu to display the Playback menu).

(2) Delete Menu:

This function allows you to selectively delete any image in the camera's memory.

To delete an image:
1. From the Playback menu, select Delete Menu.
2. The Delete Menu screen will appear showing a thumbnail of the image you selected and giving you four options.

• Return to main Playback menu

• Scroll Up

• Scroll Down

• Delete

18

Note: When you delete an image, if there are any other images that are in the camera's memory after that image, they will move up in place.

before

1   2   3   4

after

1   2   3   4

blank

To delete a protected image:
1. Select the protected image that you wish to Delete.
2. From the Playback menu, select Protect and press Enter to unlock the image.
3. Continue to delete the image as described earlier.

(3) Delete All

This feature enables you to simultaneously delete all of the images, excluding the protected images, from the camera's memory.
1. From the Playback menu, select Delete All.
2. In order to avoid accidental deletion, a pop-up box will display asking you if you want to delete all of the images.

(4) Protecting or Unprotecting Images: (YES/NO)

This feature protects images from accidental deletion or unprotects images for deletion.

To Protect or Unprotect an image:
1. Select the image that you wish to Protect or Unprotect.
2. From the Playback Menu, select Protect and press Enter to lock or unlock the image.

(5) Video Play Menu

This feature allows you to playback previously recorded videos from the camera.
1. From the Playback menu, select Video Menu.
2. From the Video Play Menu, use the Next icon (select Down) to scroll through the list of saved videos.
3. Press Enter to start/stop video playback (pressing Stop returns the video to the beginning), or delete (Select Up) to remove the video.

- Home
- Delete
- Down
- Start/Stop

(6) Slide Show

This feature enables you to display the captured images in succession (from the first image up to the last image, and returning to the first picture when it is finished)-similar to a typical slide show presentation.

- Press Enter to start the show.
- Press Menu to stop the show.

(7) Digital Zoom: (On/Off)

   This feature enables you to enlarge an image for viewing up to 4X its original size.

- Menu button: Returns you to the playback main menu.
- Select Up button: Allows you to move horizontally across the picture.
- Select Down button: Allows you to move vertically through the picture.
- Enter button: Allows you to change the direction of movement; horizontally (from left to right, or visa versa), OR vertically (from up to down, or visa versa).

Viewing Images
On the Camera LCD

1. Power on the camera, and make sure you are in Playback Mode (Mode button Down).
2. Press the Up/Down buttons to scroll through and preview the images.
3. Press Menu to view the Playback LCD menu and use four picture mode, delete, protect, and more.

On the TV

   The camera has the ability to display previously captured images on a standard NTSC or PAL television system.

   In order to view images on the TV it is essential to connect the camera to the TV. Please refer to the next section, **Getting Connected: Connecting to the TV**, for further instructions.

On the PC

   The camera can also display images on the PC through TWAIN compliant image editing software, such as iPhoto Plus 4. To use the camera with the PC, please refer to the **Software Applications** chapter.

Chapter

3   Getting Connected

Connecting to the TV

1. Plug one end of the included video cable into the VIDEO IN terminal of your television.

2. Open the cable panel and plug the other end of the cable into the camera's VIDEO terminal.

Viewing Images

In order to view images on the TV after connecting, please refer to the following:

1. Turn on the TV and change the TV to the VIDEO mode (the same settings you would select when using your VCR).
2. Turn on the camera and make sure it is in Playback Mode (mode button Down).
   The last image captured will appear on the television screen.
3. Press the Up/Down buttons to scroll through the images until you reach the desired image.
   Press the Menu button to see the Playback options.

Viewing images with the Up Button
The viewing order of the images will count down through the list to the first image then return to the last image and countdown through the list again.

Viewing images with the Down Button
The viewing order of the images will count up through the list to the last image then return to the first image and count up through the list again.

Viewing Real-time Video

In order to view real-time video on the TV after connecting, please refer to the following:

1. Turn on the TV and change the TV to the VIDEO mode (the same settings you would select when using your VCR).
2. Power on the camera and make sure it is in Camera Mode (mode button Up).
3. The real-time video being seen by the camera will be displayed on the TV.
4. To record this video, please refer to the next section.

Note: If the image appears on a color television in black and white, try changing the TV setting on the Camera Mode LCD menu.

Connecting to the VCR

1. Plug one end of the included video cable into the VIDEO IN terminal at the back of your VCR.
2. Plug the other end of the cable into the camera's VIDEO terminal.

Note: Ensure that your TV and VCR are properly connected.

Recording Real-time Video

1. Power on the VCR, TV, and the camera.
2. Change the TV to the Video mode. The object in front of the camera will appear on the TV.
   Note: From the camera mode LCD menu, disable the information display function.
3. Aim the camera at the desired subject.
4. When you are ready, press the **VCR's** Record button.
   Note: All recording functions are controlled using the VCR.

Note: To continuously view or record real-time video ensure the camera menu's AUTO-OFF function is set to NO.

**With ViewFun (Chapter 5),
the camera can display video on the PC!**

Connecting to the PC

1. Plug one end of the cable into the **RS232** or **USB** port at the back of your computer.

**RS232
Connection**

**USB
Connection**

2. Plug the other end of the cable into the camera's **RS232** or **USB Terminal**.
3. Turn the camera on.

**RS232
Connection**

**USB
Connection**

Note: In order to use the USB connection you must be running Windows 98.

After connecting you can transfer images from the camera to your PC by referring to the next section.

Chapter

4   Software Applications

Software Installation

Windows 95/NT 4.0/98

1. Insert the installation CD into your CD-ROM drive.

2. Click on **Start** and select **Run**.

3. In the **Run** dialog box, type "*drive***:\run.exe**" where *drive* is your CD-ROM drive and click **OK**.
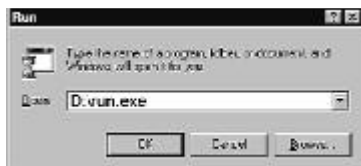
4. Follow the on-screen instructions.

Windows 98 User's Note: For Plug n' Play installation, please refer to the following:

1. After connecting the camera to the PC using the USB cable, a warning will appear.

2. Insert the Installation CD when prompted (asked for a driver), and continue to follow all on-screen instructions.

Transferring Images to the PC

Once you have installed all of the required software (described in the previous chapter) and have captured images, you will want to connect your camera to the PC so that you can transfer your images for editing or storing.

Note: Connecting the camera to the computer renders the camera buttons inoperable. However, several functions can be controlled through the Control Panel as described later in this chapter.

Transferring Images to the PC

The images will be transferred from one of these sources:
1. The internal memory (default)
2. The CF card
3. A PCMCIA CF card reader

To transfer images to the PC, please refer to the next section "Acquiring the Camera Software" for instructions.

Acquiring the Camera Software (Photo Album):

1. Open an image-editing application. We will use **Photo Express** as an example.
2. From the **File** menu, choose **Acquire** and select **Digital Camera, OR**

   Click the Camera icon.
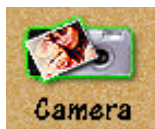
The Select data source box appears in the right margin.

3. Choose Mustek MDC-800 and click **the Acquire** button at the bottom of the window.

4. If you are transferring images from the camera's internal memory, the TWAIN Dialog box (Photo Album) will appear with little thumbnail representations of the images in the camera; otherwise you will have to select the source of the images (CF card, or CF card reader) by clicking on the appropriate icon in the Photo Album.

Previewing Images

Once the Photo Album is active:

- Click on the image(s) you want to preview, then click the Preview icon. **OR**
- Click the Select All icon, then click the Preview icon.

The images will then appear as their numbered thumbnails.

To automatically preview images when you start the Photo Album:

1. Click on the Settings icon and select Settings Information.
2. In the dialog box that displays, select Preview Images on Startup.

The Photo Album

Marked Image: Has a flag symbol displayed.

Displayed Image: An image transferred to the Photo Album displayed with it's image number and resolution.

Protected Image: Has a locked symbol displayed.

Selected Image: A displayed image in a blue box.

Internal Memory: Images are from the internal memory (default).

Memory Card: Images are from the memory card.

Memory card reader: Images are from a memory card reader.

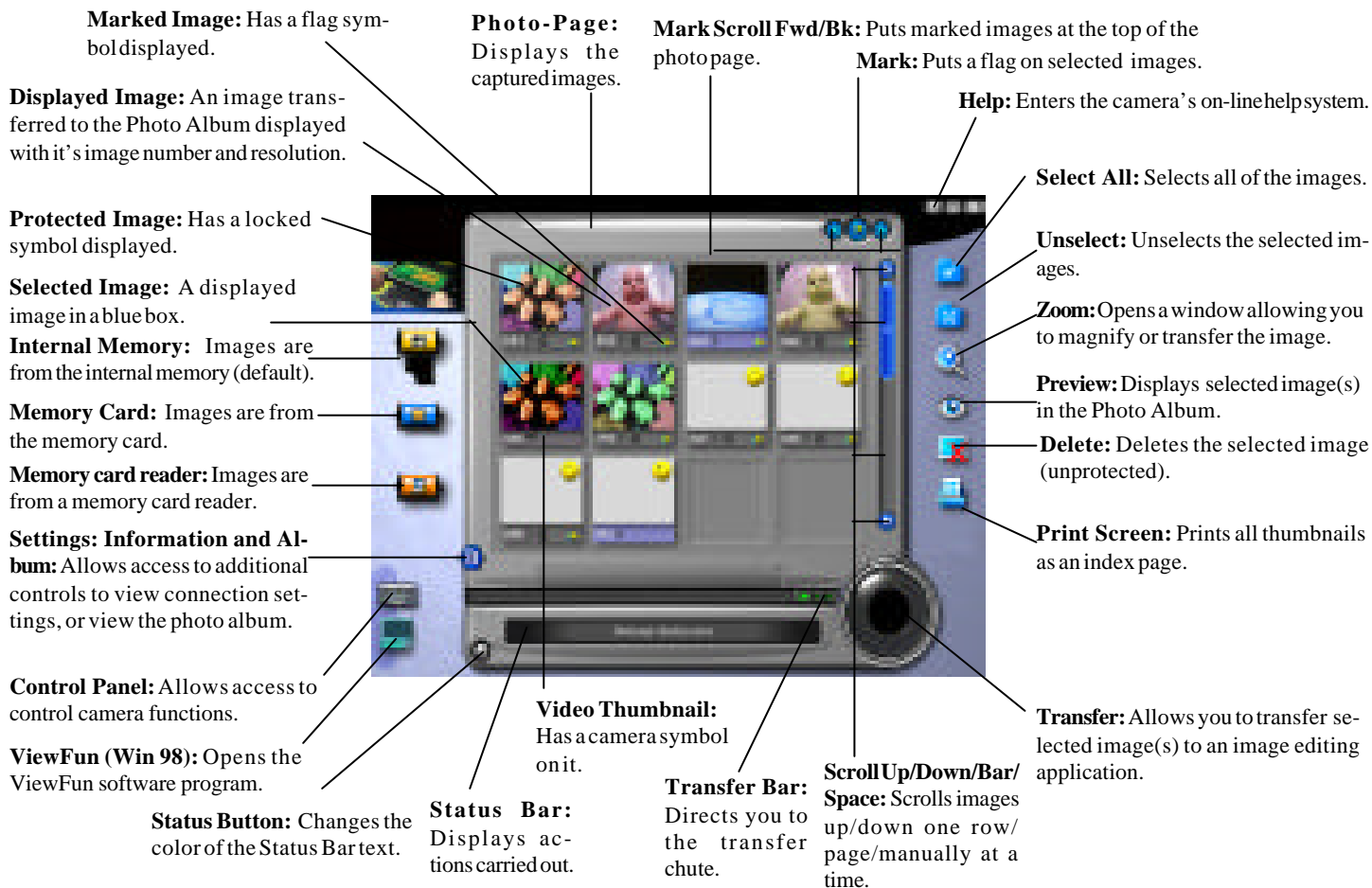**Settings: Information and Album:** Allows access to additional controls to view connection settings, or view the photo album.

Control Panel: Allows access to control camera functions.

ViewFun (Win 98): Opens the ViewFun software program.

Status Button: Changes the color of the Status Bar text.

Status Bar: Displays actions carried out.

Photo-Page: Displays the captured images.

Mark Scroll Fwd/Bk: Puts marked images at the top of the photo page.

Mark: Puts a flag on selected images.

Help: Enters the camera's on-line help system.

Select All: Selects all of the images.

Unselect: Unselects the selected images.

Zoom: Opens a window allowing you to magnify or transfer the image.

Preview: Displays selected image(s) in the Photo Album.

Delete: Deletes the selected image (unprotected).

Print Screen: Prints all thumbnails as an index page.

Video Thumbnail: Has a camera symbol on it.

Transfer Bar: Directs you to the transfer chute.

Scroll Up/Down/Bar/Space: Scrolls images up/down one row/page/manually at a time.

Transfer: Allows you to transfer selected image(s) to an image editing application.

The Photo Album
(1) The Setting Functions

To access this information, click the Settings icon, and select Information. This feature displays or allows you to adjust the settings used to communicate with the camera.

(i) Baud Rate

This is the rate at which the camera and computer communicate with each other through the serial port.

The USB baud rate is automatically determined, whereas, the RS232 baud rate has four possible settings.

RS232 Baud rates

1. 19200 bps (bits/second)
2. 57600 bps
3. 115200 bps
4. Auto Detect

The computer will auto-detect the baud rate and communicate with the camera using the highest setting. Some high quality images cannot be transferred at this rate and therefore, you must manually select a slower baud rate.

(ii) Com Port (RS232 Serial Connection only)

This is the PC port that you connect the RS232 cable into. This setting function automatically detects the Com Port and displays this location in the settings function, so that you are able to properly communicate between the camera and PC.

(iii) Language

This setting allows you to change the language that is used for displaying the camera settings and functions.

(iv) Convert to XGA

Checking this box allows the software to increase the image resolution to 1024 x 768.

(v) Preview on Startup

This feature allows images to automatically appear as thumbnails everytime you open the Photo Album.

(2) Selecting Images

Images must be selected prior to being transferred, downloaded, or deleted.

Note:
- *Unselected* images have no colored box around them.
- *Selected* images have a colored box around them.
- *Protected* images have a lock icon below them.
- *Marked* images have a flag icon below them.
- *Images not Previewed* have a happy face icon in them.

Selecting individual or multiple images

You can manually select an image by clicking on it with your mouse.

There are three ways to select multiple images:

1. Click the Select All icon and all of the images currently in Photo Album are automatically selected.
2. Press **Ctrl** + each image you want to select.
3. Right-click on an image and a pop-up box will display, choose **Select**. Each image that you do this for will remain selected.

To select a series of images:

- Click on the first image, then press **Shift** + click on the last image you wish to select. All images between these two selections will be selected.

(3) Protecting Images

To Protect/Unprotect an image in the Photo Album:

- Right-click on the image and a pop-up box will display.
- Click the **Protect/Unprotect icon** to engage or disengage the lock function.

(4) Deleting Images

To delete an image:

1. Select an image by clicking on it.
2. Ensure that it is unprotected (see above).
3. Click the **Delete icon**

To delete all the images:

1. Ensure that all unwanted images are unprotected (see above).
2. Click the **Select All** icon to select all of the images.
3. Click the **Delete** icon to delete all of the images.

(5) Enlarging Images (using the Zoom tool)

To use Zoom:

1. Click the Zoom icon.
2. Click on the image you wish to enlarge.
3. A dialog box will appear, displaying the enlarged image thumbnails.
4. Click the Tranfer button to send the image to the image editing application. Pressing OK returns you to the Photo Album.

(6) Marking Images

Marking images puts a little flag icon on the image thumbnail allowing you to keep track of important images.

1. Select the image(s) you want to mark.
2. Click on the Mark icon.
3. A colored flag appears under the image thumbnail.

To scroll through marked images:

1. Click the left (scroll marked images back) button to scroll backwards through the Photo Album, putting the next row containing a marked image to the top of the Photo Album.
2. Click the right (scroll marked images forward) button to scroll forwards through the Photo Album, putting the next row containing a marked image to the top of the Photo Album.

(7) Printing a Photo Page Index

This feature allows you to print the entire Photo Album as a contact sheet of thumbnail images.

- Click the Print icon to print an index page using your default printer.

(8) Using the Status Bar

The Status Bar displays brief messages about an action that is being performed, or information about a particular function in the Photo Album.

(9) Using the Status Bar Button

The Status Bar Button allows you to change the color of the text that appears in the Status Bar window.

To change the text color:
1. Click the Status Bar Button.
2. Click one of the colored icons that appears in Status Bar window, and the status text will appear in that color.

(10) Playing Videos

To play a video:
1. Right-click on the video thumbnail and select Play from the popup box.
2. The Photo Album turns into a display screen with playback controls allowing you to play the video.

(11) Transferring Images
• To an image editing application (Transfer)

This function allows you to transfer selected images to an image editing application.

There are three ways to transfer images:
1. Select the images you want to transfer (refer to Selecting Images) then click the **Transfer Chute**.
2. Select the images you want to transfer and drag and drop them in the **Transfer Chute**.
3. Double-click the image you want to transfer.

The images automatically transfer into the image editing software that you used to open the Photo Album.
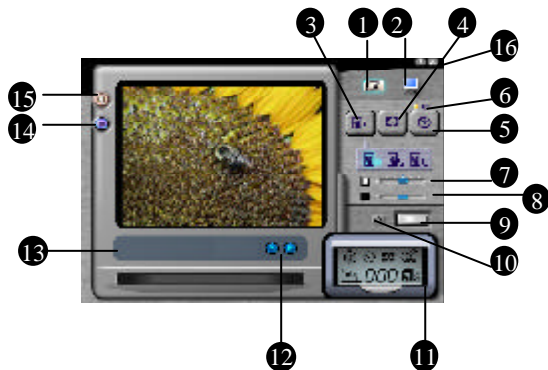
Using The Control Panel

This panel allows you to control certain camera functions while the camera is hooked up to the computer.

(i) Camera Mode:

1 Camera Mode (displayed)
2 Playback Mode (not active)
3 Quality
4 Exposure Mode
5 Flash Mode
6 Red-eye reduction
7 Exposure Value
8 Saturation
9 The Shutter button
10 Self-timer
11 Icon Display
12 Scroll Fwd/Bk (Playback Only)
13 Info Display (playback)
14 Single/4-picture (playback)
15 LCD On/off (playback)
16 Exit

Control Panel: Camera Mode

Using the Control Panel features:

Most of the functions found here are identical to functions found when using the camera without the computer. Simply select the appropriate settings (as described in more detail in the Camera Operation chapter), and follow the instructions below to capture images.

Saturation is a feature not found under normal camera operation, and adjusting this (left to right) increases the richness of color in an image (i.e. a red apple will appear more red).

Capturing Images using the camera software:

1. Connect the camera to the PC as described in the previous chapter and open the Photo Album.
2. Click the **Control Panel icon** and the Control Panel will appear in Camera mode.
3. Position the subject in the Display Picture Window and make the necessary adjustments to the Control Panel settings (quality, flash, etc.).
4. From the Control Panel, click the **Shutter** button.
   • A beep will sound
   • The captured image will remain frozen in the Display Picture Window until the camera is finished processing the image.
   • The Display Picture Window returns to live video and it is possible to capture another image.

(ii) Playback Mode:

This mode allows you to preview your images in either single or 4 picture mode before transferring them to the computer.

1. Select the display type (single or 4 picture mode).
2. Use the Up/Down buttons to scroll through the pictures.
3. Using the GoTo button allows you to immediately view a speci-fied image by typing in its image number and clicking Enter.

Playback Mode:

1   Camera Mode (not active)
2   Playback Mode (displayed)
3   Camera Mode Only
4   Icon Display
5   GoTo
6   Processing Bar
7   Preview Up/Down
8   Info Display
9   Display Picture Window
10 Single/4 Picture Mode
11 LCD On/off
12 Exit

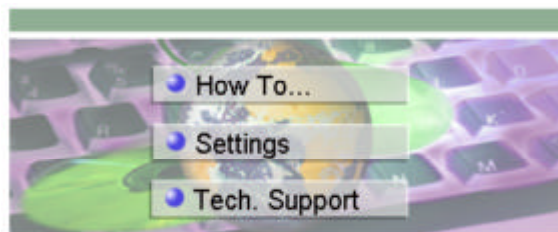**Control Panel: Playback Mode**
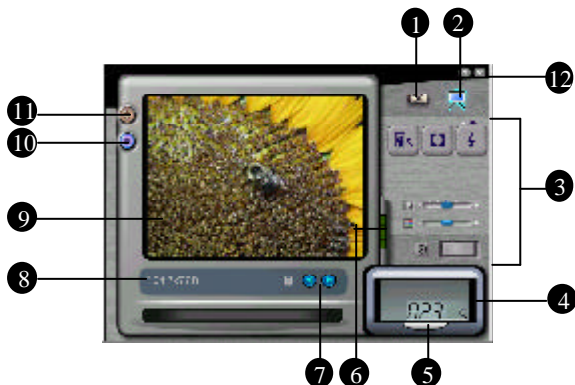
The Help System

This easy-to-use system contains detailed information about the camera topics and procedures, enabling you to use and understand your camera and its functions.

There are a couple of ways to use help:

• Point to a function on the Photo Album or the ViewFun user interface and a help tag (tool tip) will tell you what it is.

• Click on Help to bring up an on-line help system, then click on the topic you wish to view and the help system will guide you through to the desired outcome; OR select search and individually select the topic heading that you would like assistance with.

Chapter

5   ViewFun

ViewFun for Windows 98

ViewFun is specially designed software that makes the camera's image and video capabilities simple to use.

Hardware Installation

- Connect the USB cable to the USB port at the back of the computer.
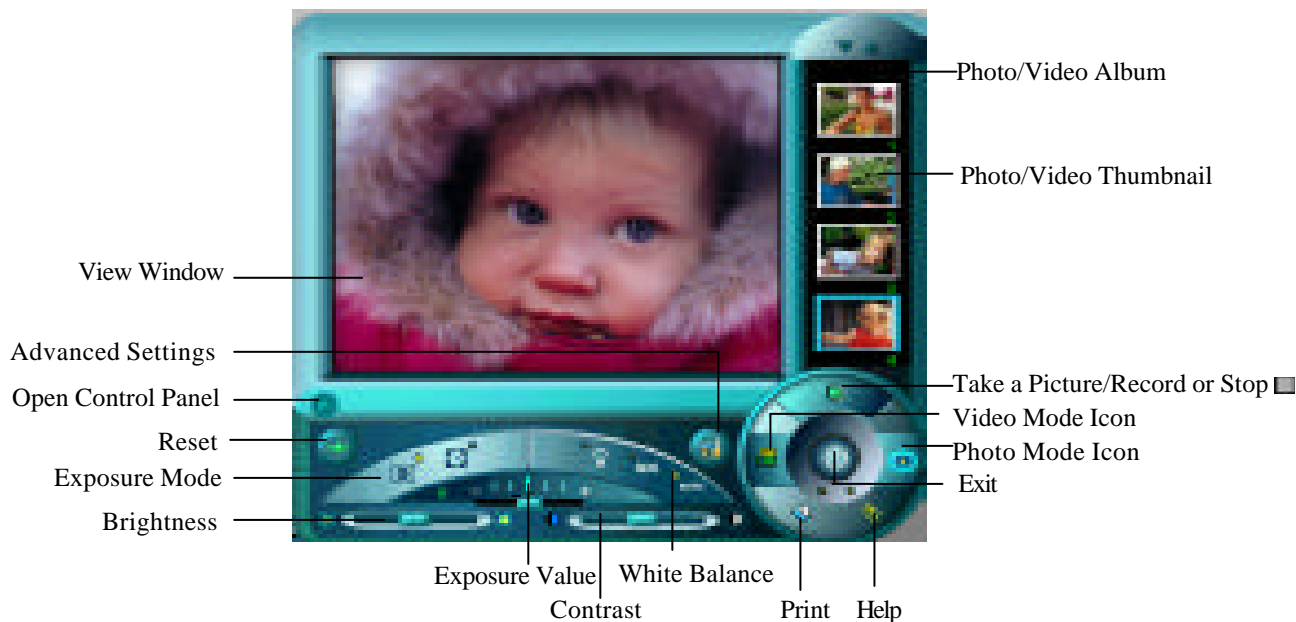- Connect the USB cable to the camera's USB terminal.

Starting ViewFun

Ensure that you have installed the bundled (included) software.

1. Power on your computer and camera.
2. From the Windows 98 Start menu, choose **Programs/MDC-800/ViewFun OR** click the **ViewFun icon** while in the Photo Album.
   ViewFun appears displaying the current camera view.

Note: If no video appears in the View Window, make sure the camera is powered on and is correctly connected to the USB port.

Photo/Video Album

Photo/Video Thumbnail

View Window

Advanced Settings

Open Control Panel

Reset

Exposure Mode

Brightness

Take a Picture/Record or Stop

Video Mode Icon

Photo Mode Icon

Exit

Exposure Value   White Balance

Contrast   Print   Help

Functions

The most important part of ViewFun are the controls. These buttons allow you to control ViewFun's functions.

Record Video

In Video Mode, clicking here starts the recording of a video clip (.AVI file) and sends it to the Video Album as a numbered Thumbnail.

Stop

The Record button turns to the Stop button once recording has begun, allowing you to stop the recording of a video clip and store it in the Video Album as a numbered Thumbnail.
Note: This button also stops the capturing of images if Auto Snap (Advanced Settings Photo Tab) has been executed.

Take a Picture

In Photo Mode, clicking this button captures an image (1 frame) and sends it to the Photo Album as a numbered Thumbnail.
Note: If Auto snap has been selected, clicking this button will take a series of images and store them in a predetermined destination.

Print

Clicking this button captures whatever image is in the View Window and prints it directly to the printer.
Note: This function does not work with a video clip.

Help

Clicking this button accesses the complete ViewFun on-line help system.

Exit

Clicking this button exits ViewFun.

View Window and Display

The View Window is capable of displaying the live video in a number of different ways.

Photo/Video Mode

Click the Video or Photo icon to switch between Video or Photo mode. The album displayed will contain numbered video or photo thumbnails (depending on which mode you are currently in).

Photo/Video Album Scroll Arrows

A lit arrow means that there are more Photo/Video Thumbnails in the direction indicated. An unlit arrow means that there are no thumbnails in the direction indicated.

The Video Album

Once you have located the Video Thumbnail that you would like to view, simply double-click it and it will automatically open in the video displaying software, Media Player.

Video Thumbnail

To Open (View), Save, E-mail, or Delete your captured video clips **right-click** the desired video thumbnail. A pop-up menu appears with the following options:

Open: opens the selected video thumbnail into the video displaying software, Media Player.

Save: opens a Save As dialog box allowing you to rename and save the video clip within your computer system.

E-mail: opens the E-mail setting box and automatically attaches the selected video thumbnail to the e-mail. The E-mail setting box enables you to enter the destination e-mail address and type an attachment. Clicking the **To:** button opens the Address book, allowing you to store addresses and add additional destination addresses to your e-mail.

Note: This function is subject to Internet service provider limitations
Note: in order to enable this function it is first necessary to setup your e-mailing parameters in the Advanced Settings, E-mail Folder, described later in this chapter.

Delete: deletes the selected video thumbnail.

The Photo Album

Once you have located the Photo Thumbnail that you would like to view or edit, double-click it and it will open in the image editing software, e.g. Photo Express.

Photo Thumbnail

To Open (View), Save, E-mail, Print, or Delete your captured video clips **right**-click the desired Photo Thumbnail. A popup menu appears with the following options:

Open: opens the selected Photo Thumbnail into the default image editing software, e.g. Photo Express.

Save: opens a Save As dialog box allowing you to rename and save the photo (e.g. .JPG file) within your computer system.

E-mail: opens the E-mail setting box and automatically attaches the selected Photo Thumbnail (.JPG file) to the e-mail. The E-mail setting box enables you to enter the destination e-mail address and type an attachment. Clicking the **To:** button opens the Address book, allowing you to store addresses and add additional destination addresses to your e-mail.

Note: Subject to Internet service provider limitations
Note: in order to enable this function it is first necessary to setup your e-mailing parameters in the Advanced Settings, E-mail Folder, found later in this chapter.

Print: prints the selected Photo Thumbnail to the default printer.
Delete: deletes the selected Photo Thumbnail.

36

Settings

The settings are accessed by clicking the tab on the left side of the Settings panel. These settings are used to alter the images or the video that you capture. They must be set before capturing an image or video to have an effect.

Exposure Value

This setting allows you to control the amount of light captured with images. In bright conditions it is preferable to capture less light (-), whereas, in darker conditions it is preferable to capture more light (+).

Brightness

This setting allows you to adjust the overall amount of light displayed in an image, making it appear bright (![icon]) or dark (![icon]).

Contrast

This setting allows you to adjust the disparity in tone between the dark and light areas of an image. Positive values (![icon]) create greater differences between dark and light areas of the image, whereas, negative values (![icon]) create greater similarities between the dark and light areas of the image.

Exposure Mode

Exposure Mode allows you to select the type of exposure used to capture the image:

CENTER: Focuses the quality of exposure on the center of the image (great for photos of people).

MATRIX: Evenly focuses the exposure to all areas of the image (great for landscape shots).

White Balance

Clicking this button adjusts the camera's color sensitivity to match the prevailing color of white outdoor light, yellow indoor light, or (sometimes) greenish fluorescent light. Select the white balance mode that most closely matches the light in which you're using the camera.

Auto: for when lighting conditions can change or are uncertain

Indoor ![icon] **:** for incandescent lighting (bulb light)

Indoor ![icon] **:** for fluorescent lighting

Reset

Clicking this button causes all the control settings to return to their original default settings.

Advanced Settings

The Advanced Settings provide advanced controls for video or image capturing along with setting folders for both e-mail and language. Simply open the Advanced Settings and click on the appropriate folder.

The Advanced Settings

The Advanced Settings contains four folders: Video, Picture, E-mail, and Language.

To return to the main screen after making changes to a particular folder, click **OK** to accept the changes, or **Cancel** to ignore the changes.

The Video Folder
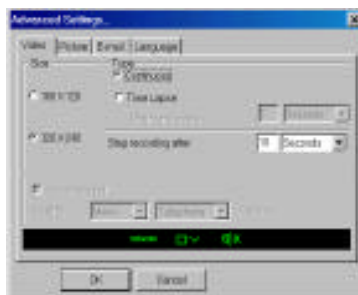
Size

This setting controls the frame size (160x120, 320x240) of the video clip you are going to capture.

Note: The small frame size can capture more frames per second.

Continuous

Select this setting to continuously capture video. The recording will automatically stop after the period of time (seconds, minutes) specified in the Stop Recording After box or it can be stopped by clicking the Stop button.

Time Lapse

This feature controls the image capturing rate (per second or minute) of the camera. The recording will automatically stop after the period of time (seconds, minutes) specified in the Stop Recording After box or it can be stopped by clicking the Stop button.

Record Sound

If your computer has audio recording capabilities (microphone), selecting this feature enables you to record sound and video simultaneously on the same AVI file. The better the audio quality (CD) that you select, the more memory space needed to store it.

If you do not have or use audio recording capabilities the No Sound icon will automatically appear.

The Picture Folder

Size

This setting controls the frame size (320x240, 640x480, 1024x768) of the image you are going to capture. Smaller image frame sizes require less memory space to store the image.

Auto Snap

Checking this box enables the user to automatically capture images at regular intervals (e.g. Auto snap every: 5 seconds) over a specified period of time (e.g. Total time: 20 seconds).

For example, Auto snap every 5 seconds for a Total time of 20 seconds will capture 4 images starting 5 seconds after you click the Take a Picture button on the main screen.

Note: Auto snap images do not appear in the Photo Album. They are saved to a predetermined destination (see below).

Save Snap Series to file:

Using the Browse button you can determine where to save the series of images that are going to be captured while using the Auto Snap function.

Note: The default destination for all captured Auto snap images is C:\ViewFun\AUTOSNAP where they appear as snap bitmap files (e.g. snap1.bmp, snap2.bmp, etc.).

The E-mail Folder

This folder allows you to enter required information that enables you to send captured video clips or images to the Internet using your SMTP address/account.
Note: Subject to internet service provider limitations

Only after the E-mail folder setup has been completed is it possible to use the Mail command found by **right-clicking** the desired video or image thumbnail.

Mail Server: enter your SMTP address (e.g. Mailserver.com).

Your E-mail Address: enter your full e-mail address (e.g. YourID@Mailserver.com).

Video/Picture file:

• **Compression Level:** select the desired compression level. Compression level and file quality have an inverse relationship. For example, higher file compression levels produce lower file quality and smaller file size.
Note: Smaller files are faster to send over and download from the internet.

• **Attach File Name:** to change the default (Video# or Pic#) file name click Change and enter the desired new default file name.
Note: It is not necessary to add the file extension (.AVI or .PIC).

The Language Folder

This folder provides you with seven different language options.

Recording a Video Clip

1. Open the **Video Album** by clicking the **Video Mode Icon,** and set the recording type, duration etc.

2. Aim the camera at the subject.

3. Click the **Record** button.

4. Click the **Stop** button when you want to finish recording, or it will automatically stop (if set in step 1). A numbered **Video Thumbnail** will appear in the **Video Album**.
   NOTE: Longer recordings occupy more memory space.

5. Double-click the **Video Thumbnail** to view it in a video displaying software (or right-click the thumbnail and select Open from the pop-up menu).

Taking a Picture

1. Click the **Photo Mode Icon** to open the **Photo Album**, and select the appropriate Photo capturing settings.

2. Aim the camera at the subject.

3. Click the **Take a Picture** button. A numbered **Photo Thumbnail** will appear in the **Photo Album**.
   NOTE: Larger Images occupy more memory space.

4. Double-click the **Photo Thumbnail** to view it in the image editing software program (e.g. Photo Express (or right-click the thumbnail and select Open from the pop-up menu)).

E-mailing a Video Clip or Picture

Note: In order to enable this function it is first necessary to setup your e-mailing parameters in the Advanced Settings, E-mail Folder, found earlier in this chapter.

1. From the Video or Photo Album, **right**-click the desired Thumbnail. A popup menu will appear.

2. Click on **E-Mail.** The E-Mail setting box opens with the selected Thumbnail automatically attached to the e-mail.

3. Enter the destination e-mail address and type an attachment if desired.

4. Click **OK** to e-mail your message and the attached Video or Photo Thumbnail file.

Note: Subject to Internet service provider limitations.

Appendices

Appendices

	Symptom	Cause	Solution
Power Supply	No Power	1. Batteries not loaded correctly 2. Dead batteries 3. Wrong AC adapter	1. Reinstall batteries 2. Replace batteries 3. Use only recommended AC adapter
	Sudden power failure	1. Low battery power 2. Auto Power Off function engaged	1. Replace batteries 2. Turn power back on
Capturing Images	No capture when shutter is pressed	1. Memory is full.	1. Delete images.
	Inaccurate color capture	1. Indoor fluorescent lighting 2. Indoor incandescent lighting 3. Outdoor natural lighting	1. Change White balance to Indoor+ setting. 2. Change White balance to Indoor- setting. 3. Change White balance to Outdoor setting. ** We recommend using Auto White Balance**
	Image is too dark	Not enough light	1. Use the flash (see Chapter 2)
	Image is too bright	1. Strong direct or reflected light	1. Take picture with image facing the light source.
	Blurry or out of focus	Distance from subject is not correct.	Refer to the Specifications/Focus Range for details.
	Redeye	Reflection of light (flash) off the retina of the human eye	Change the Flash to 1 of 2 Redeye settings *On-R *Auto-R

	Symptom	Cause	Solution
Playback	No Image is present	1. Operation Mode Selector is set to camera mode 2. If using a TV, wrong channel is selected 3. Not connected properly 4. Wrong TV system	1. Set selector to Playback mode 2. Set TV to correct channel for video playback 3. Reconnect the cables 4. Use NTSC or PAL TV system only.
Transfer	Cannot open the Photo Album	1. Software is not installed 2. Not using Windows 98 with USB connection	1. Install the software (see chapter 4) 2-1. Use Windows 98 as your Operating system 2-2. Use RS-232 connection (see chapter 3)
	Cannot transfer data	1. Incorrect cable connection 2. Camera is not turned on	1. Reconnect the cables 2. Turn on the camera
	CF Card error	1. CF Card is not formatted	1. Reformat through DOS using CF Adapter and PCMCIA slot.
Deletion	Cannot delete image	1. Operation Mode Selector is in Camera mode 2. The image is protected 3. There are no images to delete	1. Select Playback mode/Delete Menu 2. From Playback mode, unprotect the image 3. Have fun. Take pictures.
USB	"Device not ready" OR Connection Failure	1. Camera is not powered on 2. USB not connected properly 3. USB host controller problem 4. USB data transfer error 5. Hardware compatibility problem	1. Power on the camera 2. Ensure USB cable is properly connected 3. Refer to the Control Panel/Systems/Device Manager for more details 4. Unplug and reconnect the USB cable 5. Contact your computer vendor for help
RS232	Cannot connect at startup or cannot transfer image/thumbnail	1. RS232 port not functioning properly 2. Current Baud rate not supported	1. Use another RS232 port and check to see if it works by connecting a mouse first. 2. Select a slower baud rate (from Settings) and try again.

Specifications

CCD
Multi-function   Digital camera/USB PC-camera/Video camera
1.8" color TFD video

Picture
Interpolated to 1024 x 768 (XGA)

Memory
Optional CF memory card interface

Digital Ports
12 M bps

(2) RS-232-baud rate

USB PC-camera
Continuous video capturing: max. size (320*240)

Video Capturing Capability   Stores 320KB (up to 30 seconds)
Stores up to 16 pictures

Operation Cycle
Digital Zoom   4X for picture previewing
6 filters available for picture/video capturing

Viewfinder
Flash   Auto/On/Off (red-eye reduction)
10 second delay

White Balance
Exposure   Automatic with 5 selectable Exposure Values (EV)
1/10 to 1/10000 second

Power Control

Compression
Inputs/Outputs   Power adapter input port (7.5V, 1.3A)

Full-motion NTSC and PAL video output

Interface
Presentation Control Capability   PC Remote
64cm (25.2") to infinity

Aperture
Lens Field of view   55 degrees
4 AA size 1.5V alkaline

Dimensions
5.4 x 2.9 x 2.0 (inches)

Weight

Glossary

The following represents terms used throughout the manual, and are defined here for your convenience.

Baud rate: Is the speed at which the computer and camera communicate with each other. It is sometimes necessary to decrease the baud rate because the computer cannot process image information at high speed.

Com port: Is the physical port in the back of the computer where you can connect external devices such as digital cameras and modems.

Dialog box: An on-screen box that conveys or requires information from the user.

Exposure: controls the amount of light (brightness) that appears in a captured image.

Flash card: Is an external device that can be inserted into the camera and allows you to store images (available in various memory size formats).

Fluorescent light: What makes this type of lighting different is that it does not contain all the colors of the visible spectrum and it flickers which causes it to appear greenish.

Icon: Is a graphic (picture form) representation of a particular feature/function or program/file.

Incandescent light: These tungsten-halogen lights (household light bulbs) shine at a constant brightness and create a warmer, yellowish caste.

Iris: A feature that allows varying degrees of light into the camera by adjusting the size of the lens opening, increasing or decreasing the amount of entering light.

LCD: A Liquid Crystal Display is a low-powered display that uses rod shaped crystal molecules that change their orientation when an electrical current passes through them. This allows you to display and view your images.

LED: A Light Emitting Diode is a small electronic device that emits light when a current flows through it. It signals you of a particular feature or function.

NTSC: A National Television Standards Committee television is one that uses 525-line frames and displays full frames at 30 frames / second.

PAL: A Phase Alternative Line television is one that uses 625-line

common system used in most European countries.

Pixels:
or out of which the displayed image is constructed.

RS232:
connect the camera to the computer.

TWAIN:
try standard protocol that allows external devices to communicate
with your computer.

Is the transfer of information from your computer to an
outside source, such as your camera.

Universal Serial Bus is a peripheral bus specification that
eliminates the need to install cards and reconfigure the system. USB

figured as soon as they are physically attached - without the need to
reboot or run setup.

White Balance adapts the camera's color sensi-
tivity to simulate the prevailing color of white outdoor light, yellow

automatically or manually.

Technical Support

If you need help installing or using the digital camera, please call Technical Support.

Mustek, Inc.
121 Waterworks Way, Suite 100
Irvine, CA 92618, USA
TEL: 1-949-788-3600
FAX: 1-949-788-3670
http://www.mustek.com

Mustek Computer GMBH
Hellersbergstr. 2a
41460 Neuss, Germany
TEL: 49-2131-162840
FAX: 49-2131-103830
BBS:49-2131-167104
BBS:49-2131-130052
http://www.mustek-europe.com

Mustek Systems, Inc.
No. 25 R&D Road 2
Science-Based Ind'l Park
Hsinchu, Taiwan, R.O.C.
TEL: 886-3-5779373
FAX: 886-3-5784139
http://www.mustek.com.tw

Product Repairs

For Product repairs please follow these steps:

1. Call the technical support department for a Return Material Authorization (RMA) number and refer to this number in all future calls.

2. Consult your dealer regarding proper repair procedure.

3. For repairs being shipped to the manufacturer, please write the RMA number clearly on the outside of the package and send it postage paid, prepared and packaged appropriately for safe shipment.

Product Returns

• Users must return the products to their point of purchase for a refund or credit, according to the dealer's policy.