

Vivitar®

MagnaCam DIGITAL CAMERA/BINOCULAR



10 x 25B INSTRUCTION MANUAL

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10 August 2003

1. Introduction

Vivitar MagnaCam 10 x 25B is a unique combination of a binocular and digital camera. It is designed for simple operational utility with these features:

- o Fully functional binocular
- o Integral Digital Camera offering:
 - Digital-still image capture of the scene
 - Continuous shooting (movie) mode – up to 30 seconds
 - USB Connectivity to your computer
 - Self-Timer with 10 second delay
 - Automatic exposure and white balance control
 - Automatic Power-off/Power Management

1.1 Package Contents

The Vivitar MagnaCam Digital Binocular kit typically includes the following items:

1. Digital camera/binocular
2. Binocular carrying pouch
3. Binocular neck strap
4. Two AAA batteries
5. Cleaning cloth
6. CD ROM(s) with application software
7. USB cable
8. Lens hood
9. Instruction Manual*
10. Warranty card

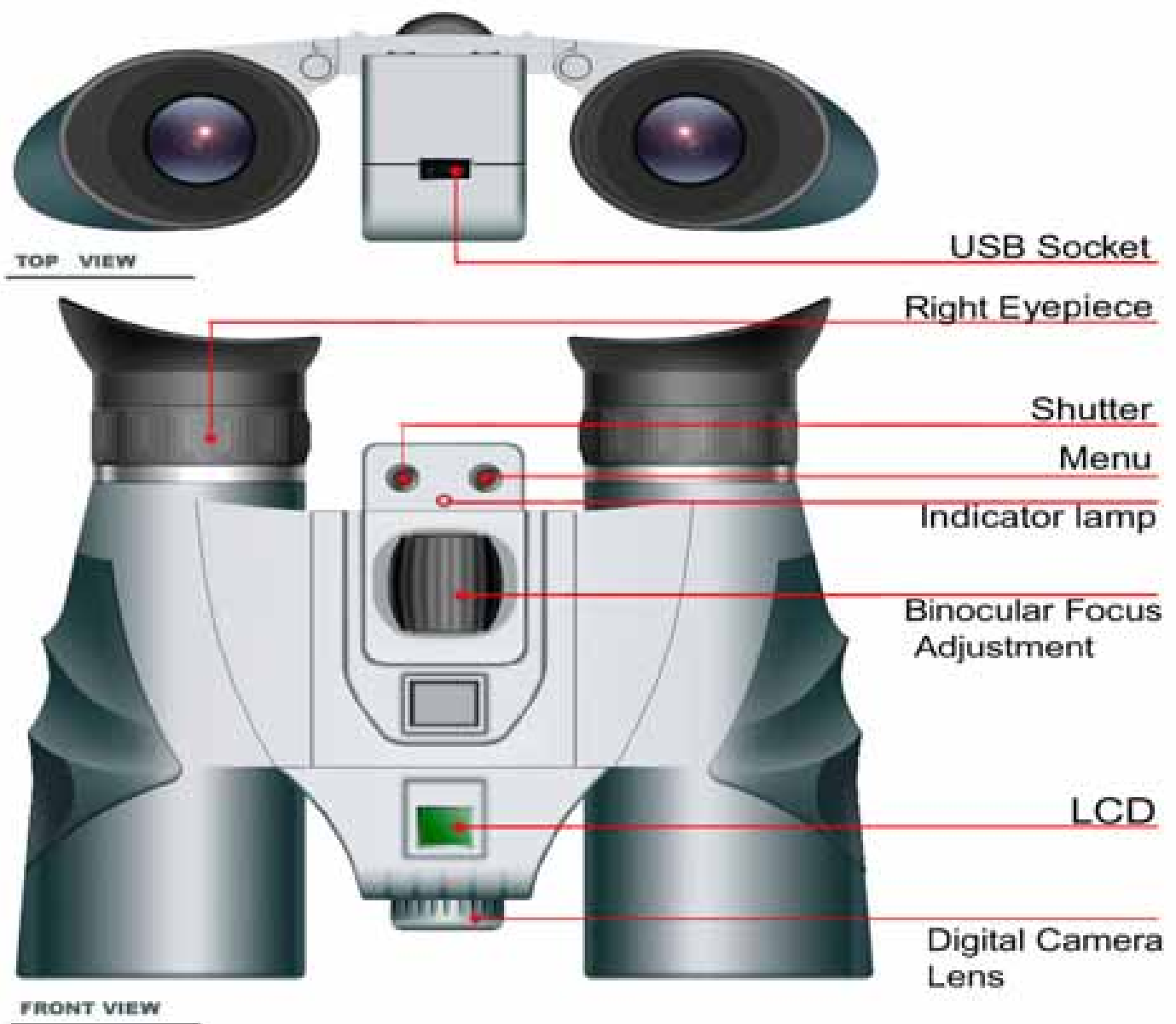
Please note that inclusions and accessories will vary depending upon your retailer.

* Updates to this Product User Manual will be available on the Vivitar website at www.vivitar.com

2. Specifications – MagnaCam 10x25B

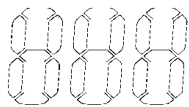
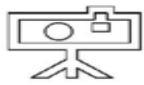
Digital Camera	
Image Resolution (still images)	High = 640×480 (Hr), Low = 320×240 (Lr)
Image Storage	52 images (High res), 209 images (Low res)
Internal Memory	8 MB (7 MB available for image storage)
Lens Aperture	F/4 fixed focus lens
Focus Length	33 mm (35 mm equivalence= 154 mm)
Angle of View (degrees)	Horizontal: +/- 4.44, Vertical: +/- 3.33
Range of Focus	30 feet to infinity
Exposure & White Balance	Automatic
Power	2 x AAA batteries
Binocular	
Magnification	10X
Angle of View (degrees)	± 3.15
Objective Lens Diameter	25 mm
Nearest Observing Distance	6 meters (20 feet)
Exit Pupil Distance & Diameter	10 mm, 2.5 mm
Product Dimension Size	135 x 130 x 50 mm (5.3 x 5 x 2 inches)
Weight (without batteries)	340 grams (12 ounces)

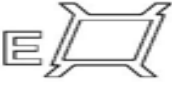
2.1 Product Features:



2.2 LCD Display

Digital camera modes and functions are presented on the information LCD display on the top of the binocular frame. Press and hold the **Menu** button for one second to power-on the camera. The camera will beep as it powers-up. The camera will display the current resolution setting (example: Hi), and the maximum number of images that you can take based upon available memory (example: 52). Press the **Menu** button (repeatedly) to scroll through the digital camera options. The meaning of each symbol is as follows:

Display	Meaning	Operation
	Number of images remaining	Press Shutter to take one picture, the counter will decrease by one
	Turn off	Press Shutter to turn off the digital camera
	Self-timer	Press Shutter to invoke 10-second self-timer. The camera beeps and LED blinks.
	Movie Capture	Press and hold Shutter to begin Movie capture, LED flashes. Release Shutter to stop Movie capture
	Clear All Images	To delete all images in memory, Press Shutter once to start deletion, the LCD will blink. Press Shutter again to confirm your decision – red LED blinks once and the camera beeps once to confirm.

	Clear (delete) Last image	Press Shutter to delete the last image. The counter will increase by one.
	Resolution setting	Press Shutter to toggle between High Res (640 x 480) and Low Res (320 x 240)
	Low/High compression rate	Press Shutter to toggle between Low compression and High compression of image.
	Frequency setting	Press Shutter to toggle between 50HZ and 60HZ. This setting refers to local lighting conditions.

Note: The sequence of the digital camera menu presentation is the same as this table. When the batteries are low, the LCD display will blink and the camera will automatically turn off.

3. Binocular Operation

Adjusting the Pupil Distance

Hold the two barrels of the binocular in each hand. Pull the barrels together or apart until you see a single circular field with both eyes. This is the best inter-pupillary distance for observation.

Focusing the Binocular

1. Close your right eye and look through the binocular at an object. Rotate the Center Focus Knob until the object is sharp and clear to your left eye. At this point the object is in focus for your left eye.
2. Close your left eye and look through the binocular at the same object with your right eye. Rotate the Diopter ring until the object is sharp and clear. At this point the object is in focus for both eyes.

After the diopter setting is made, you may focus upon any object using the Center Focus Knob.

Rubber Eyecups

Without eyeglasses, place your eyes against the rubber eyecups while observing through the binocular. For best results with eyeglasses, fold down the rubber eyecups and place your glasses directly against the rubber eyepieces while observing through the binocular.

Caution: Never observe or shoot into the Sun.

3.1 Digital Camera Operation

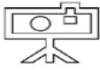
The MagnaCam 10 x 25B digital camera has two imaging modes: still image mode, and movie mode.

3.1.1 Still Image Mode (for shooting individual frames) -

- Press the **Menu** button to turn on the camera and observe the LCD display. If there is no symbol on the LCD, the battery must be replaced.
- Make camera adjustments as described in section 2.2.
- Look through the binocular and locate an object to shoot.
- Press the **Shutter** button to capture an image.
- Note that the camera has automatic power-off function. It is suggested that you select an object through the binocular before you turn on the camera.
- Confirm that your image was stored. The image counter in the LCD display will decrement by one after an image is captured.
- You can delete one or all the previous images at any time.
- Still Images are stored in JPG file format, in camera memory.

Note: The camera performs best with good lighting conditions. Avoid shooting in conditions of strong back lighting, use lens hood in strong lighting conditions.

3.1.2 Self-Timer Shooting -

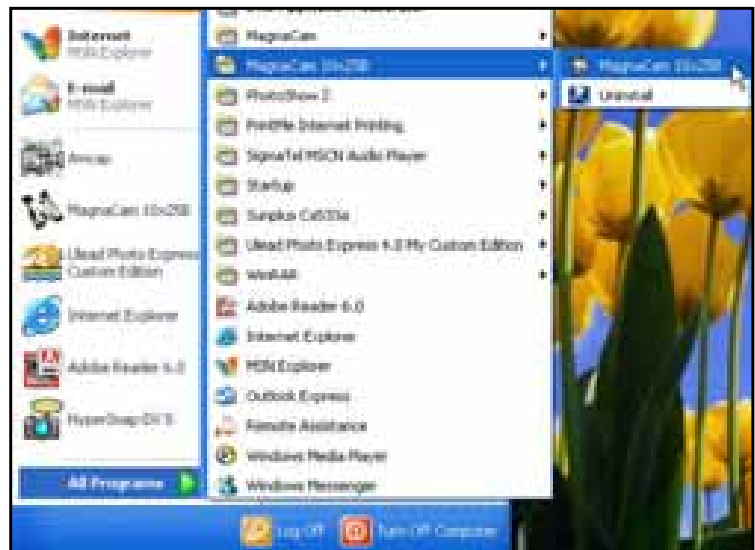
- Press **Menu** until  appears in the LCD display.
- Press the **Shutter** button. The LCD will countdown, the LED will flash, and the camera will beep for 10 seconds.

3.1.3 Movie Shooting -

- Press **Menu** until  appears in the LCD display.
- View the object through the binocular.
- Press and hold the **Shutter** button to begin movie capture. Release the **Shutter** button to stop movie capture.
- Note: Hold the camera steady in movie mode.
- The maximum length of a movie is 30 seconds (209 frames). The camera should be set to low resolution.
- Movies are stored in AVI file format, in camera memory.
- To view your images use Windows Media Player or Apple QuickTime.
- Movies do not include sound. (Silent video)

3.1.4 Downloading Images -

- o Note: Before connecting your MagnaCam to your PC install the Twain driver first (see section 4).
- o After the driver software has been installed, your still images and movie clips can be transferred to your PC using the USB cable.
- o Using the USB cable, connect your MagnaCam to your PC.
- o From the Windows desktop, click on Start, Programs, MagnaCam, MagnaCam 10x25B. MagnaCam 10x25B is the TWAIN driver program that allows you to download image files from MagnaCam to your PC.
- o You can also Double click the MagnaCam 10x25B icon on your computer desktop to download images:
- o When you run the MagnaCam driver utility it will open a window as follows:





1. Click the "Download" button to view your images.
2. Click an image thumbnail to select it. Click on Next page to see more images. Click on "Select All" button to select all images.
3. Click on "Save to Disk" to save the images you have selected.

Note: After transferring images to your computer, delete the images from camera memory so that you may capture more images.

Computer System Requirements:

Your digital camera images can be transferred to your computer for viewing and processing. As a minimum your computer should have:

- Windows 98/Me/2000/XP
- 200 MHz processor
- 128 MB RAM
- CD-ROM drive
- Available USB port
- 60MB available hard disk space

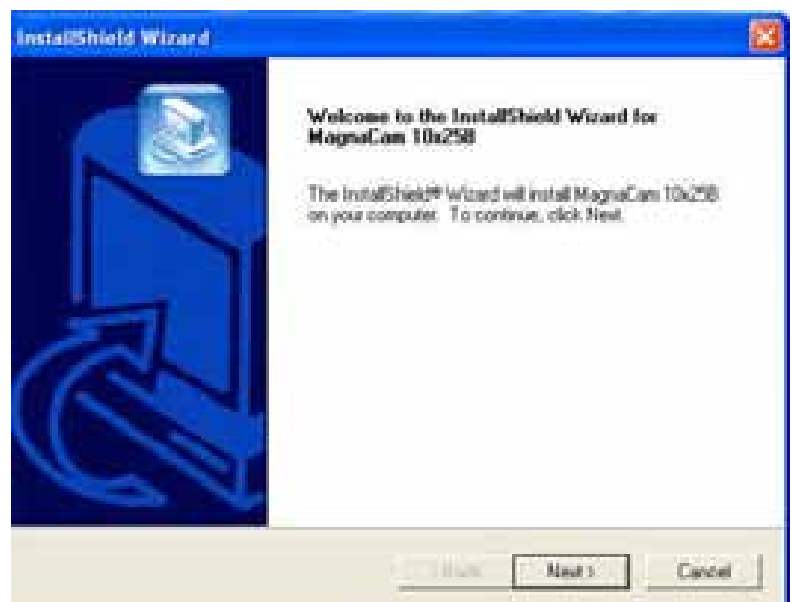
Precautions and Warnings:

- o **WARNING:** Handling the USB cable on this product may expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.***
- o Never operate this camera/binocular while driving a vehicle. This may cause a traffic accident.
- o Remove the batteries if the camera will not be used for an extended period of time. The batteries may leak and cause a fire, injury or soiling of the battery compartment. If the batteries leak, clean and wipe the battery compartment carefully and install new batteries. Wash your hands carefully if you touch the battery fluid.

4. Software Installation

Software and drivers should be installed **before** connecting the MagnaCam to your PC for the first time.

- Windows users should insert the enclosed CD into your computers CD-ROM drive.
- The CD should run automatically. If not, go to My Computer and click on the CD-ROM icon. Then, double click on the file “MagnaCamsetup.exe” to start the installation program.
- Follow the screen instructions:
- The welcome Screen appears. Click “Next” to continue.
- The installer will copy the necessary files.
- Click “Finish” to complete the installation and restart your PC.





4.1 Video Mode

You may also use your MagnaCam 10 x 25B as a PC video camera. Windows XP users can access the video mode of using Movie Maker. You may demonstrate the video function of MagnaCam 10 x 25B using a video utility PCCam.exe included with the driver. This utility can be found in the Windows Twain 32 directory under Magnacam 10x25B.

5. Maintenance

Basic Maintenance

- Operation environments: 0 - 100 Deg F, 20 85% rel. humidity.
- Do not submerge this product in liquid or expose to direct steam.
- Do not place the product in the places of high temperature, direct sunlight, or dust.
- Do not modify the product or attempt repair, as this will lead to product malfunction.
- Remove the battery if the digital camera function will not be used for more than 10 days. Download your images before removing the batteries. (See note below.)
- To clean your digital binocular, use a mild detergent and soft damp cloth.

Important Note Regarding Image Storage

- The MagnaCam 10x25B camera features SDRAM memory built-in. If battery power is removed for more than 30 seconds your images will be erased. Therefore, please download your images to your computer before taking out, or replacing, the battery. Never remove the battery while the camera is ON.