Triplett
CobraCam
USB2

Inspection Camera with USB Interface

Instruction Manual

TRIPLETT
Test Equipment & Tools

CobraCam USB 2 Features

• Low Cost Digital Inspection Camera Solution for use with PC, Laptop, and MAC
• Handheld 34" flexible 'snake' can be bent to numerous shapes
• SnapShot and Live Video function
• Snapshots and Video can be saved to memory on the PC or Laptop
• Quick Zoom Button (4 Settings) Does not work on MAC
• Full color image (settable to Black and White)
• Camera is only 7/16" (11.5mm) diameter, inserts in small places
• Camera has 2 adjustable white LEDs for illumination
• Camera is waterproof up to the handle
• Camera focuses at approx 2 1/2" (usable to infinity)
• No batteries needed (powered by USB connection)
• 6ft cable from Camera to computer
• Hard-Sided Carrying Case included
• Magnetic Pickup, Hook, and Mirror accessories included
• Works with Windows XP, ME, 2000, Vista, 7 (32 bit), and MAC with "Photo Booth"
• One Year Warranty

PC Only: Provided software allows capture of still images (bitmap or JPEG) or video (AVI). Image can be rotated and/or mirrored, and properties are adjustable (brightness, contrast, hue, gamma, etc.) Various special effects included (Solarize, Mosaic, Invert, Edge, Distort, etc.)

MAC: Please use pre-installed software "Photo Booth". Do not use software provided and do not insert Mini CD into Mac disc slot.

MAC software allows capture of still images (JPEG) or video (AAC H.264). Adjustments are limited, but various effects are available.

Uses for the CobraCam USB 2

• See plumbing and electrical installations in inaccessible places (wall, ceiling, etc.)
• See behind or beneath objects that are difficult to move (bookcase, desk, refrigerator, etc)
• See inside furnace ductwork or in and around the heat exchanger or 'A' coil
• See inside pipes
• See how cables are connected to the back of equipment
• See hidden leaks
• See Insect or Rodent infestations
• See lost jewelry
• See the part you dropped
• See hidden sensors on car engine
• See around corners or through small holes
• Retrieve small magnetic objects (nuts, bolts, washers, screws, etc.)
• Many other uses too numerous to mention . . . in industry, around the house,
  during surveillance, or just as a fun toy.

Introduction

The Triplett CobraCam USB 2 Inspection Camera is a hi-tech tool that uses the latest technology to see images of difficult to view locations. Its water resistant flexible shaft and miniature camera fit into awkward spaces, tight locations or through small holes. Bright LED headlights in the camera illuminate dark areas, allowing the camera to 'see' in total darkness. A magnetic probe, hook, and mirror enhance the usefulness by allowing the camera to pick up magnetic objects, hook onto small objects, or view objects located at right angles to the camera body.

The USB interface provides a low cost solution for users who already have a computer with a USB connection. The provided software allows the CobraCam USB 2 to display its images on computers running Windows XP, ME, 2000, Vista, or 7 (32 bit). CobraCam USB 2 can be used with MAC, but only with the pre-installed software "Photo Booth".

The CobraCam USB 2 requires no additional power source, and the software allows the user to conveniently save photos or video of anything the CobraCam USB 2 sees. Adjustable software controls allow the images to be enhanced or modified in various ways.

Product Specifications

Size:	Flexible Snake: 3/8" dia x 34" long Camera: 7/16" (11.5mm) dia x 2 1/4" long USB Cable: 6ft
Camera:	640 x 480 (300K) pixels 1/6th VGA CMOS imager Focal distance 2 1/2". Usable to infinity 54 degree viewing angle F 2.8 lens Auto exposure Waterproof to 3ft
Snake:	Polyethylene covered steel flex. Minimum radius bend, 1 1/2"
Illumination:	2 adjustable brightness white LEDs in camera head
Interface:	USB, 1.1 or higher
Operating System:	Windows XP, ME, 2000, Vista, 7 (32 bit), or MAC
Provided Software:	AMCAP Super_Telescope.exe on CD PC Only

Installing the Software (PC Only)

The details of software installation vary depending on the PC and Operating System used. These instructions are for a generic installation on a computer running Windows XP.

Install the software before connecting the CobraCam USB 2 to the computer.

Insert CobraCam USB 2 CD into the computer.

Use only with 'tray' type CD drives. Do not use with 'slot' type. Mini CD may jam slot type drives. The computer may automatically start the Install shield Wizard, it may open a dialog box showing the location of the 'Super_Telescope.exe' software, or it may do nothing. If the Wizard starts, follow the instructions to install the software. If a dialog box opens showing the Super_Telescope.exe file, left click (or double click) on 'Super_Telescope.exe' to start the Installshield Wizard and follow its instructions. If nothing happens when the CD is inserted, use 'My Computer' or 'Windows Explorer' to find the file named 'Super_Telescope.exe' on the CD. When Super_Telescope.exe is found, left click (or double click) on 'Super_Telescope.exe' to start the Installshield Wizard. Follow the Wizard's instructions to complete the first part of the software installation. A dialog box may appear with a message about software compatibility (Windows Logo testing). If this message appears, click 'Continue Anyway'. Follow the Wizard's instructions to complete this part of the installation. The dialog box may disappear several times during the installation. Wait until the box reappears and completes the installation. The last screen of the Wizard will ask the user to click the Finish button. Click the Finish button and wait for the box to close.

Other Operating Systems

When the CobraCam USB 2 software is installed on a Windows Operating System (OS) other than XP, different but similar dialog boxes will appear. There may be some additional steps . . . or fewer steps. Generally, follow the instructions in the Wizard to complete the software installation.

MAC Setup

Do Not Use Included CD with MAC. To use the CobraCam USB 2 first open the software "Photo Booth" . Second, plug in the CobraCam USB 2 into your computers USB port. Third, Go to the menu at the top and click on the "Camera" drop down menu and select "Digital Camera". Once selected the CobraCam USB 2 will start working. Zoom feature will be disabled.

First use of the CobraCam USB 2 (PC)

With the CobraCam USB 2 plugged into the computer's USB port, click the Start / Snapshot button on the handle of the CobraCam USB 2. This will open the application software (called AMCAP) and the image from the CobraCam USB 2 will appear on the computer

screen. (On some OS's, the AMCAP window may not open, but its icon appears on the Task Bar. If this happens, click on the icon to open the AMCAP application. If an image from the camera is not seen, click on the Options tab and select Preview. Then click the Start / Snapshot button on the CobraCam USB 2 to initialize the image capture. AMCAP may be opened manually by selecting USB 2.0 PC Camera, then AMCAP from the Program menu.

The video image from the camera should now be displayed in the AMCAP main window. The tabs at the top of the AMCAP window allow various settings and adjustments to be altered. The user may change these experimentally and observe their effect upon the images.

(PC & MAC)
Many features of the CobraCam USB 2 are automatic. The camera adjusts itself to produce the best image obtainable. As with all video cameras, the image becomes more noisy as the light level is reduced. Since the CobraCam USB 2 is a digital camera, it produces digital noise (instead of analog noise) that looks like random horizontal lines in the image. These become less visible as the light level is increased.

The CobraCam USB 2 has relatively slow response time. If the camera is moved quickly, the image seen on the computer will blur. To obtain the best images, move the camera slowly and hold it steady.

The best image focus occurs several inches in front of the camera lens. Objects farther away are slightly out of focus but still easily viewable.

CobraCam USB 2 Controls

1) Headlite Control (MAC & PC)

2) Start / Snapshot Button (PC)

3) Zoom Button (PC)

Using the CobraCam USB 2 Controls

The proper use of the Headlite control (located on the handle of the CobraCam USB 2) is not obvious and requires some experimentation. It has little effect when there is adequate light for the camera, but has a dramatic effect when the light level is low or absent. The Headlites are intended to illuminate objects near the camera lens. They will not light up objects that are several feet or more away. The Headlite control is adjusted so that the best view of the desired object is obtained. If the adjustment is too bright, the image will 'glare' and obscure visibility. Generally, the lowest brightness that produces a usable image is best. It will often be found that a better image can be obtained by slightly repositioning the camera and adjusting the Headlite brightness. (PC & MAC)

The Start / Snapshot button on the CobraCam USB 2 serves two purposes. First, with some OS's, like XP, it will automatically open the application software and the image window with its initial press. Subsequent presses with take a 'snapshot' of the image in the window. If you do not save the images, the next press of the button will overwrite the previous image. (PC Only)

The Zoom button is used to instantly select the desired zoom level. Press and release the button to select a higher zoom. When the highest zoom level is reached, pressing the button again resets the zoom to the lowest level. (PC Only)

Saving Pictures (PC Only)

After AMCAP is running, take a 'snapshot' by pressing the Start / Snapshot button on the CobraCam USB 2. The snapshot will appear in a Snapshot Reader window. To save the snapshot, click on the File (F) tab, then click Save. The File Save Dialog window opens. Choose a location to save the snapshot. Give a name to the file (the software defaults to 'Image'). Choose to save the file in Bitmap (bmp) or JPEG (jpg) format. Click Save.

MAC Saving Pictures

After "Photo Booth" is running, take a 'snapshot' by pressing the red /white camera icon in the "Photo Booth" software. Pictures will be automatically be saved to "Photo Booth", but can be exported to other areas by left clicking and selecting "Export". To view or play the files, find them in the locations that they were saved to, then click on them to open. "Preview" will be used for images and "Quick Time" will be used for Video.

Saving Video (PC Only)

Start AMCAP. Click the File tab, select Set Capture File and the Set Capture File window will open. Choose a location to save the video. Give a name to the file. Be sure to put '.avi' on the end of the name. Click Open. The Set File Size window will open. Enter a maximum file size (Note: .avi files use about 10MB per second) Click OK. The window will close and the main AMCAP window will be displayed. Click on the Capture tab then select Start Capture. The Ready to Capture window will open. To start recording video, click OK. The Ready to Capture window will close, displaying the main AMCAP window showing the video image that is being recorded. The recording will stop when the file reaches the maximum size (or maximum time). To stop recording video, click the Capture tab and select Stop Capture.

Note: Video files can be very large. To reduce the size of the file, capture it a low frame rates and low resolution.

MAC Saving Video

After "Photo Booth" is running, take a 'video' by pressing the red /white film icon on the left in the "Photo Booth" software. The Icon should move to center, press again to start recording. Videos will be automatically be saved to "Photo Booth", but can be exported to other areas by left clicking and selecting "Export".

To view or play the files, find them in the locations that they were saved to, then click on them to open. "Preview" will be used for images and "Quick Time" will be used for videos

Viewing Snapshots and Video

AMCAP does not contain viewers for the saved snapshots or video. Windows contains various 'viewers' and 'players' for these files. To view or play the files, find them in the locations that they were saved to, then click on them to open them with a Windows viewer or player. The snapshots can usually be viewed in Windows Explorer, and the video can usually be viewed in Windows Media Player.

CobraCam USB 2 Includes:

Magnetic Attachment

Hook Attachment

Mirror Attachment

Software CD (PC Only)

Instruction Manual

Carrying Case

Maintenance

No regular maintenance of the CobraCam USB 2 is required. In the event the product is defective or is damaged, please contact Triplett for repair information.

Customer Support

In the unlikely event that you experience problems with your Triplett product, please contact us at sales@triplett.com.

Triplett One Year Limited Warranty

Triplett / Jewell Instruments warrants instruments and test equipment manufactured by it to be free from defective material or workmanship and agrees to repair or replace such products which, under normal use and service, disclose the defect to be the fault of our manufacturing, with no charge within one year of the date of original purchase for parts and labor. If we are unable to repair or replace the product, we will make a refund of the purchase price. Consult the Instruction Manual for instructions regarding the proper use and servicing of instruments and test equipment. Our obligation under this warranty is limited to repairing, replacing, or making refund on any instrument or test equipment which proves to be defective within one year from the date of original purchase.

This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries and fuses, not of our manufacture used with this product are not covered by this warranty.

To register a claim under the provisions of this warranty, contact Triplett / Jewell Instruments' Customer Service Department for a Return Authorization Number (RMA) and return instructions. No returned product will be accepted without an RMA number. Upon our inspection of the product, we will advise you as to the disposition of your claim.

ALL WARRANTIES IMPLIED BY LAW ARE HEREBY LIMITED TO A PERIOD OF ONE YEAR FROM DATE OF PURCHASE, AND THE PROVISIONS OF THE WARRANTY ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES EXPRESSED OR IMPLIED.

The purchaser agrees to assume all liability for any damages and bodily injury which may result from the use or misuse of the product by the purchaser, his employees, or others, and the remedies provided for in this warranty are expressly in lieu of any other liability Triplett / Jewell Instruments may have, including incidental or consequential damages.

Some states (USA ONLY) do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. No representative of Triplett / Jewell Instruments or any other person is authorized to extend the liability of Triplett / Jewell Instruments in connection with the sale of its products beyond the terms hereof.

Triplett / Jewell Instruments reserves the right to discontinue models at any time, or change specifications, price or design, without notice and without incurring any obligation.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

NOTES

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