



"LET OUR IMAGE ENHANCE YOUR IMAGE"

Operating Instructions
MedRx JVC Portable Video OtoScope System



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Introduction to the MedRx Video OtoScope System

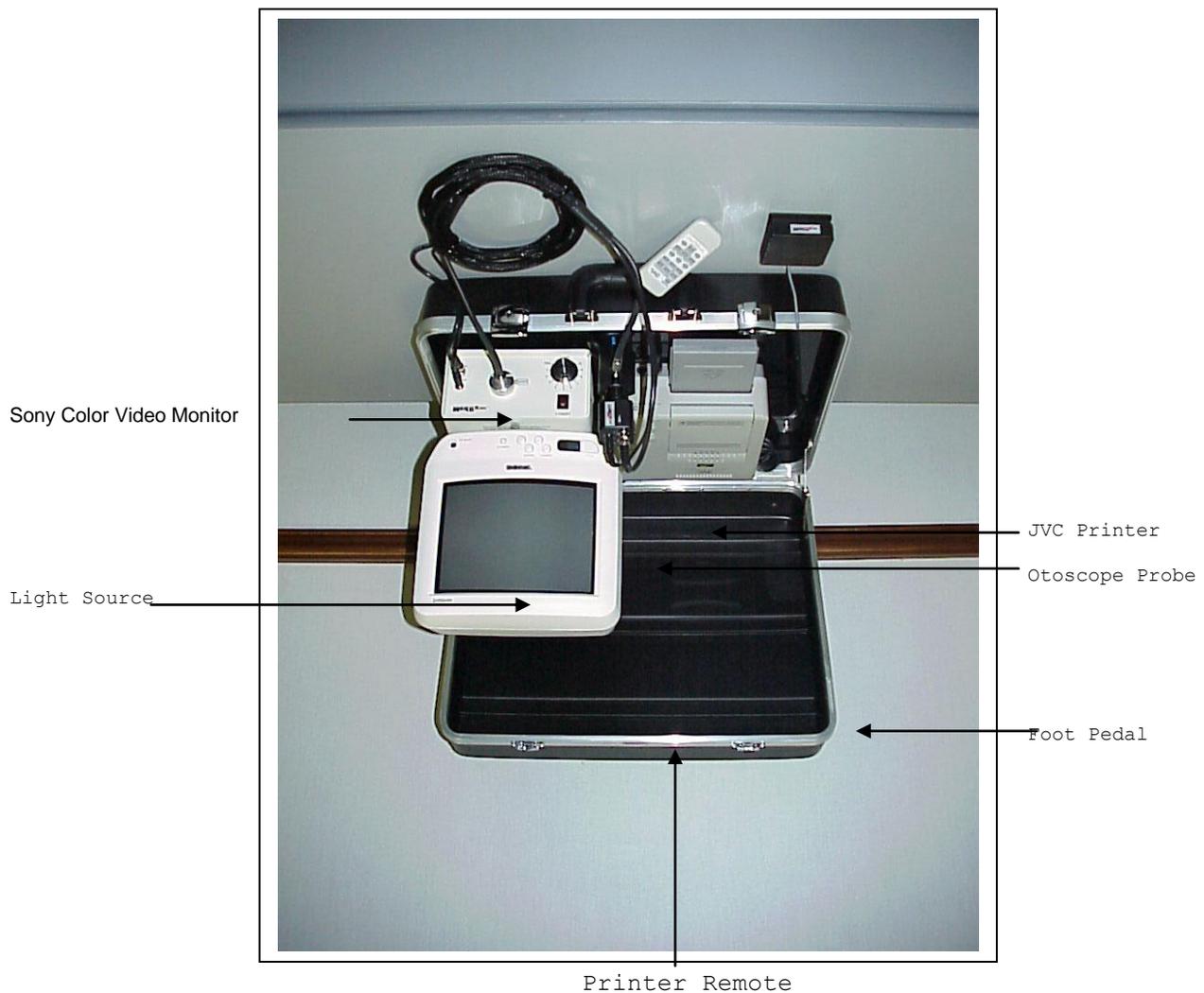
The JVC Portable Video OtoScope System:

- MedRx Patented OtoScope Probe
- MedRx High Resolution Camera
- High Resolution Sony Color Video Monitor
- High Resolution JVC Color Video Printer with Stop Action Foot Pedal
- 0 – 150 Watt Halogen Light Source
- Universal Fiber Optic Cable
- Print Film Pack
- 3mm Specula
- Carrying Case

- All Necessary Cables and Attachments
- One Year Warranty

Options:

- Full Image/Radiograph Lens with Adjustable IRIS
- Extended Warranty



Accessories and System Components

Camera/Probe Assembly

This hand held assembly part includes the custom designed and patented optical probe and high resolution color video camera. These are the key components to the system.

Color Monitor

The high-resolution video monitor has one video input and one video output jacks. The single video output jack can be used to pass the image and displayed on the monitor to an additional video storage/display device.

Remote

The hand held remote unit will enable you to make selections and print images remotely. The functions available are freeze an image, change to multiple pictures of 1-4-16 on one piece of paper.

Foot Switch

The foot switch is a convenient way to control the video printer freeze function. It allows for hands free operation of the image freeze. The remote foot switch must be plugged into the socket on the front of the printer. To release a frozen picture you must press source on-line.

Light Source

This high quality 150-watt variable intensity light source is designed to provide a small spot of high intensity light which enhances the quality of the image. A fiber optic cable transfers the light from the light source to the probe. A 3/4 rotation of the dial is usually appropriate. However, some adjustment may be necessary for optimum image clarity.

Fiber Optic Cable

The cable, containing thousands of high-grade glass fibers, connects the light source to the probe. The connection to the probe uses a

connector which pushes on and locks in place on the probes optical socket. The connector is released from the probe by pulling firmly on the connector.

Twin Lead Power Cable

This cable connects to the camera. The other end connects to the front of the Light Source.

Jumper Cable

The 24" long cable couples the video signal from the back of the printer video output and the monitor video input.

Print Packs – Accessory

For use with the JVC printer only, 50 per pack.

Cerumen Management Tools (Curettes) – Accessory

Replace the speculum on the tapered tip of the probe with a curette, and insert into the canal to remove cerumen.

Full Image Lens - Accessory (Option)

This lens is interchangeable with the probe lens and allows you to demonstrate to your patient how to insert the hearing instrument in the ear. If a CIC (completely-in-the-canal) hearing instrument is being used, you can show your patient that the CIC is not visible. This lens is very useful for any type of documentation.

Speculum - Accessory

A reusable 3mm-speculum cover is used to protect the probe tip. Welsh Allyn 3mm (Part Number: 24303).

Lamp EJA 150 - Accessory

This bulb, used in the light source, lasts approximately 200 hours. We suggest you keep a spare bulb on hand.

Assembly and Installation

Installation Instructions

Although no specific order is required for connecting the Video OtoScope System, it is sometimes helpful to understand the flow of the signal from the camera to the monitor. The following instructions follow the path of the video signal flow. Before you put the system together, please refer to page 5 for connecting instructions, and page 6 for the wiring diagram.

After unpacking the individual components, the interconnecting wires can be installed. Connect the camera to the light source with the 8' twin lead cable, which plugs into the back of the camera and the front of the light source. One of the plugs, called a BNC, plugs in and turns 1/8 of a turn to lock the plug in place. The power plugs straight into the camera and the light source.

The BNC to RCA Cable plugs into the back of the Light Source and into the front of the JVC Printer

The RCA to RCA Cable plugs into back of JVC Printer video input to the back of the Monitor video in.

The printer, monitor, and light source need to be plugged into the power strip. (The fiber optic cable needs to be attached into the light source and the probe.)

Caution: Take care to avoid the following circumstances that could cause extensive damage to your fiber optic cable:

- Do not roll chairs or carts over the cable.
- Do not close the carrying case on the cable.
- Do not pull or yank the cable to disconnect it from the camera.

Instructions for Attaching/Disconnecting Fiber Optic Cable to Probe

To Connect

Push the connector end into the probe as shown in figure 1.

To Disconnect

With thumb and forefinger, gently pull the connector away from the probe.

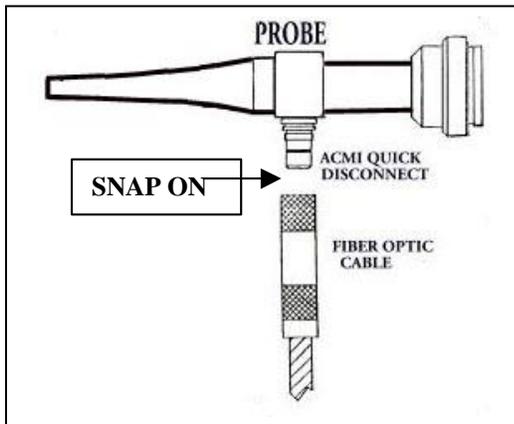
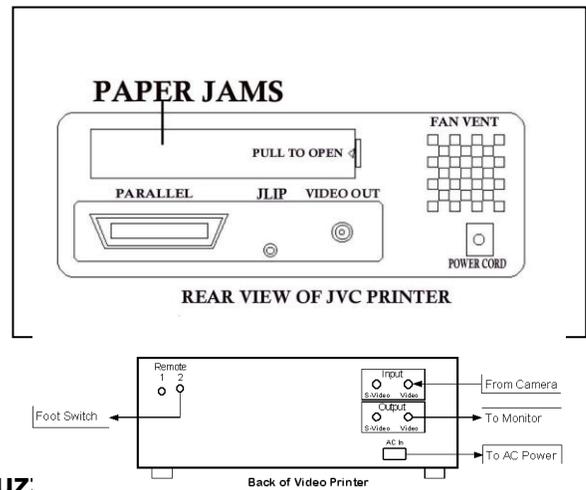


Figure 1

Insuring Proper Picture Quality

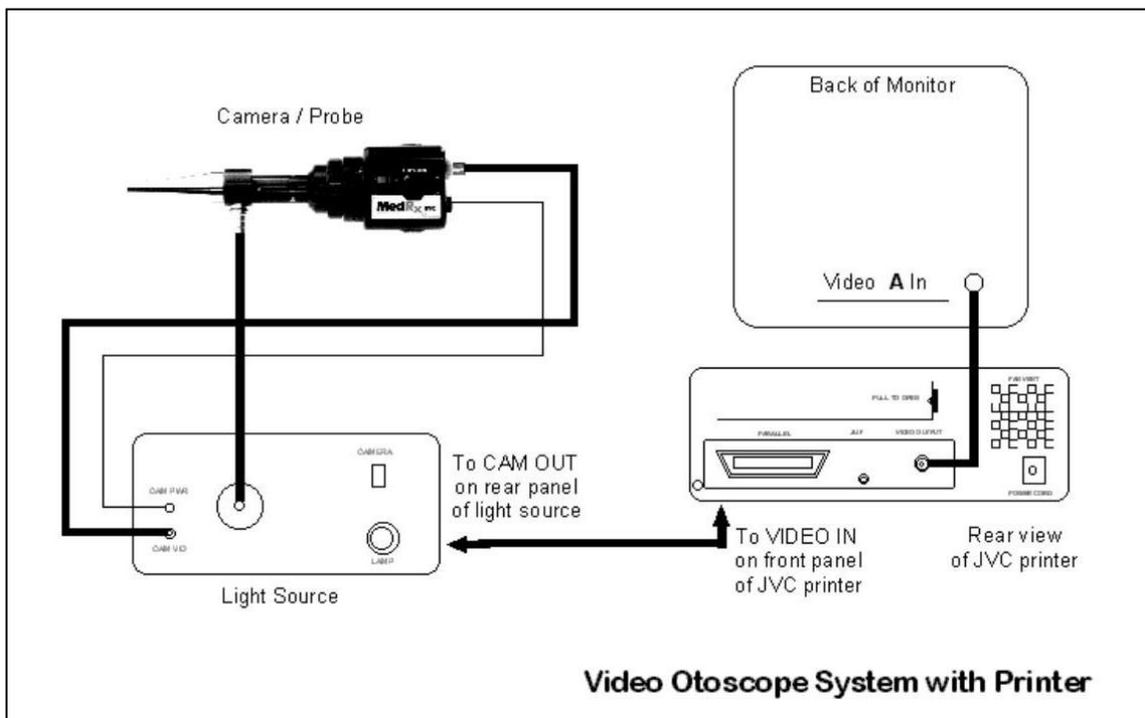
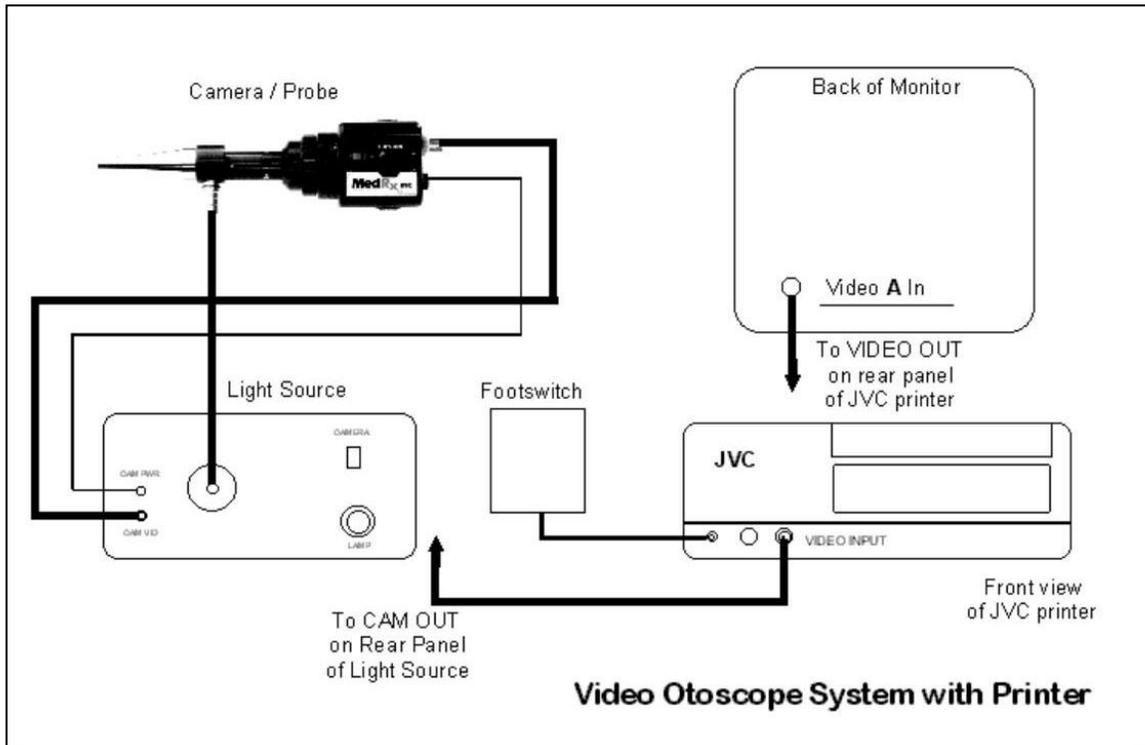
When setting up the printer, the input video plug goes to the scope. The output video plug goes to the monitor, and the Remote goes to the foot switch, located on front of JVC.



Fuz:

Cerumen and/or fog on the lens tip most often cause fuzzy video images. You can correct or prevent either condition by using an alcohol wipe on the lens tip before and after each use.

MedRx Wiring Diagram



Operating Instructions for Using the MedRx Video OtoScope System

Turning on the Video OtoScope System

Master Switch

The master switch is located on the power strip.

Video Monitor

The video monitor power switch is located on the front of the monitor. An indicator light on the front of the monitor turns green when the power is on.

Printer

The printer power switch is located on the top of the printer. An indicator light turns green when the power is on and the printer is ready to print.

Light Source

The light source intensity is controlled by rotating a knob located on the front of the light box. The light source should be turned to 3/4 intensity. Once the probe is in the ear, you may need to adjust the intensity control to achieve an optimum picture. When in the standby mode, leave the light on but turn the intensity down to the lowest setting.

Camera

The camera power switch is located on the front of the light source. An indicator light turns red when the power is on. If no picture is showing, check to see that the printer and monitor are turned on and that all connections are correct.

Suggested Operating Procedure

- * Leave the monitor, camera, and the printer in the on position and control all pieces of equipment with the master switch on a power strip.
- * The light source can be left on for long periods of time, but the lamp intensity should be turned down except when being used. Following this guideline will greatly extend the bulb life, which is estimated to be about 200 hours. We suggest you keep a spare bulb on hand at all times.

Using the JVC Portable Hand Held Camera Probe

CAUTION: The JVC Portable hand held camera probe/assembly is only to be used by a person qualified in the use of an OtoScope. Misuse can cause a patient pain and possible injury.

CAUTION: The JVC Portable hand held camera probe/assembly is only to be used by a person qualified in the use an Otoscope. Misuse can cause a patient pain and possible ear damage. The speculum cover is always to be used with the system. The speculum cover must be cleaned or replaced between usage per accepted medical practice procedures.

Prior to insertion, the probe should be held within 1/4" of a known object, such as your finger, to check the quality of the image. Sometimes the lens is smeared with cerumen or other matter and will need to be vigorously cleaned with an alcohol wipe in order to provide a clear image.

The monitor should be observed as the probe is inserted into the ear. Once the desired image is obtained, press the foot pedal to freeze the image for further study. Once an acceptable frozen image is displayed on the system monitor, pressing the print button located on the front of the printer can make a print of the image held in memory.

Practice is essential to achieving optimum picture quality. Cerumen and/or fog on the lens tip most often cause fuzzy video images. You can correct or prevent either condition by using an alcohol wipe on the lens tip before and after each use.

Using the Printer

For maximum performance of the system, familiarization with the many capabilities of the printer is recommended. Please refer to your JVC multimedia Printer manual for detail instructions.

Care, Maintenance, and Storage

Your MedRx Video OtoScope has been designed to provide years of trouble-free service. Do not remove or open the cabinets of the equipment, as there are no user serviceable components inside.

Cleaning

To keep your system looking new, wipe the exterior of the components with a soft cloth. Stubborn stains may be removed using a cloth moistened with water and mild detergent. Do not allow debris or fluid to enter in the components.

IMPORTANT:

- **THE PROBE TIP COVER SHOULD BE RETAINED AND USED FOR ADDITIONAL TRANSPORTATION PROTECTION OF THE VIDEO SCOPE OPTICS WHILE IN OR OUT OF THE FOAM CASE**
- **MEDRX SUGGESTS THAT AFTER USING THE LIGHT SOURCE, TO REDUCE INTENSITY ON THE DIMMER TO LOWEST POINT AND LET THE BULB COOL FOR 1 – 2 MINUTES PRIOR TO TURNING THE LIGHT SOURCE OFF.**

Since the Video Otoscope incorporates glass lenses for image transmission and fibers for illumination it is breakable. Although the tip is tapered to improve durability, any impact or crushing to the tip may cause serious damage to the instrument.

Video Otoscope Disinfecting

The Video Otoscope is sealed so that it may be wiped with the following surface cleaners to disinfect:

75% alcohol
Chlorhexiderm
Cidex
Nolvasan
Parvocide
Parvosol
Roccal
Synphenol

The scope should NEVER be heat sterilized, gas sterilized or soaked in liquid because damage may result.

Use an alcohol wipe to clean the lens on the end of the OtoScope probe, or a common disinfectant.

Operational Tips

When using the camera be sure camera is in the upright position – so you can read the horizontal writing on the side. This helps orientation of the UP/DOWN on video screen.

Trouble Shooting Guide

<u>Problem</u>	<u>Main Cause</u>	<u>Solution</u>
Fuzzy or out of focus picture	Dirty probe tip (dried cerumen) Short in twin lead cable	Vigorously clean probe tip with an alcohol wipe Replace twin lead cable
No picture on 9" monitor	Source/Memory button in memory	Push to Source on printer or memory
Indicator light switch on Light Source not on	Power supply not plugged in	Unplug twin cable from control box; see if light comes on, if so replace twin leads cable
Can't freeze picture	Printer not on Foot switch not plugged in	Turn on printer Plug in foot switch
No light from probe tip	Light source not on Bulb burnt out	Turn on light source Replace bulb
Picture is dark	Switch on back of camera in wrong position Light source too low	Move camera shutter switch to off position Turn up intensity of light source
Printer alarm constantly on	Mechanical failure	Call MedRx for service
Can't clean probe	Probe dropped and physically damaged	Call MedRx for service

This guide was designed to assist you in diagnosing minor problems. Should service be needed, please call MedRx for Technical Support Monday-Friday, EST 9:00 a.m.-5:00 p.m. at 1(888) 392-1234.

Limited Warranty

MedRx, Inc. warrants the MedRx Video OtoScope System to be free from defects in material and workmanship for one year from the time of purchase. If this system fails to perform as specified during this period, the purchaser is responsible for calling MedRx at (888) 392-1234. The company's representative will advise the owner to either return specific components or the entire system to:

MedRx, Inc.
1200 Starkey Road #105
Largo, FL 33771

MedRx will repair or replace any defective parts, fully test and calibrate the system and/or components and ship the system promptly back to the owner. There is no cost for this warranty service, provided the system is one year old or

less and has not been misused, abused, or damaged. Such damage includes, but is not limited to, dropping, exposure to excessive heat (greater than 100 degrees F), and water/liquid damage. Repair or replacement of the system as provided under this warranty is the sole and exclusive remedy of the purchaser. MedRx shall not be liable for any consequential or incidental damages, or for breach of any express or implied warranty. Except to the extent of applicable law, any implied warranty, merchantability or fitness of this product is limited to the duration of this warranty.

MedRx will, at its discretion, service and repair out of warranty components at the purchaser's request, charging for parts and labor as necessary.

Components Registration for Customer Information

Probe Serial Number: _____

Camera Serial Number: _____

Printer Serial Number: _____

Light Serial Number: _____

Monitor Serial Number: _____

Date Purchased _____