

OtoPet-USA Full Video VetScope System Operating Instructions



FOR **VETERINARY** USE ONLY

OtoPet-USA is a division of DermaZoo™
8909 Iverleigh Court, Potomac, MD 20854
301-365-0192
info@otopet-usa.com
www.OtoPet-USA.com



Contents

Correct Handling of VetScope Handset	3
Introduction to the OtoPet-USA Video VetScope System	4
System Components and Accessories	5
Attachments for the OtoPet-USA VetScope Camera and Vet Otoscope	6
Assembly and Installation	6
Instructions for Attaching/Disconnecting Fiber Optic Cable.	7
Using the Full Hand Held Camera Otoscope	7
VetScope Wiring Instructions	7
VetScope Wiring Diagram	8
Operating Instructions.	9
Care and Maintenance	9
Veterinary Otoscope Disinfection	9
Technical Specifications	10
Trouble Shooting Guide for VetScope.	11
Transportation and Storage.	12
Limited Warranty	12



ELECTRICAL GROUNDING INSTRUCTIONS
This apparatus is equipped with a three-prong (grounding) plug for your protection against shock hazard and must be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove grounding prong from this plug.

Correct Handling of VetScope Handset



Breakage of the light cable because of incorrect handling, will not be warranted.



INCORRECT HANDLING



CORRECT HANDLING

Introduction

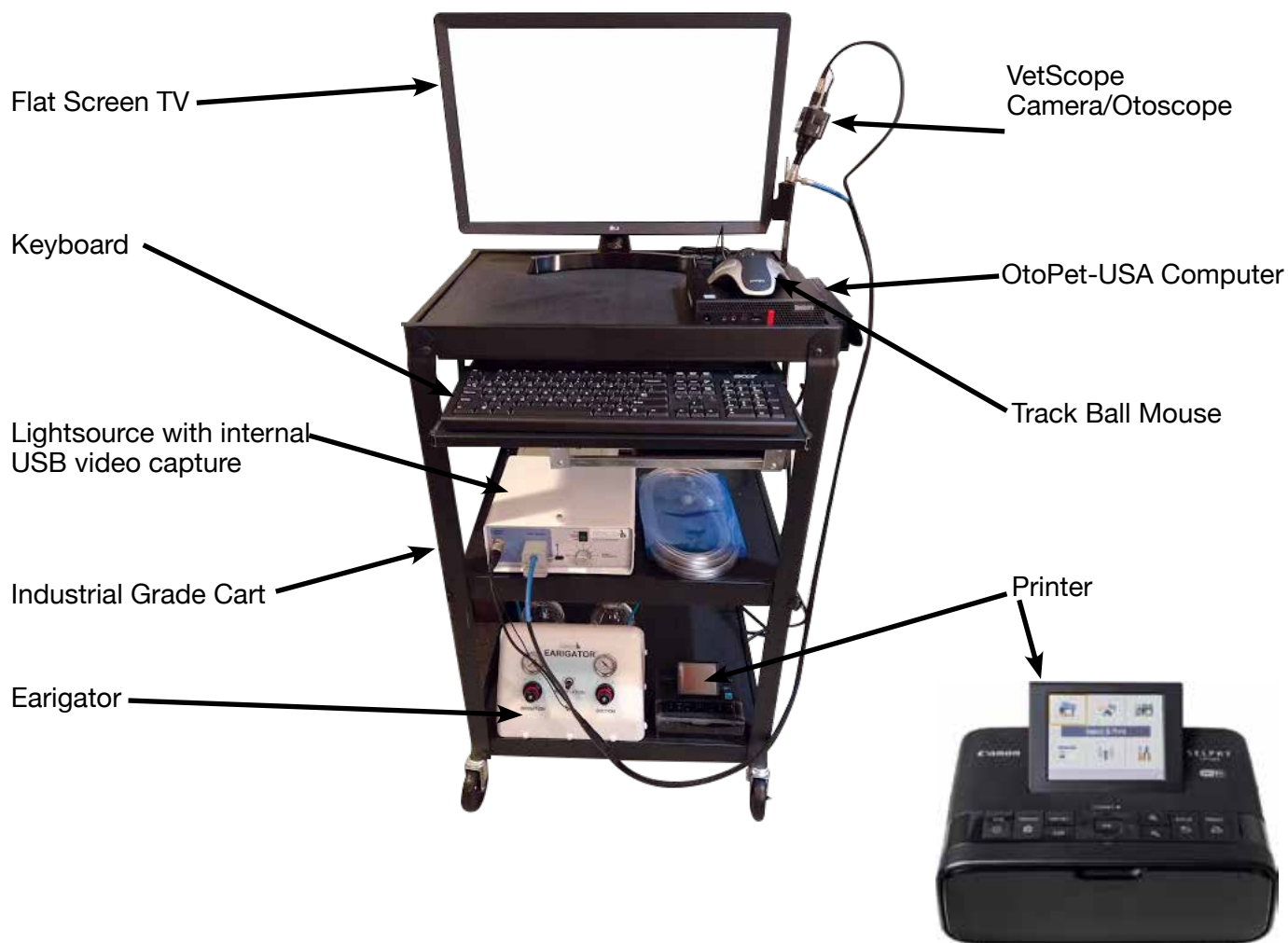
THE FULL VIDEO VETSCOPE SYSTEM:

- VetScope Otoscope with 2 mm Channel
- Mini Camera
- Flat Screen TV
- Color Photo Printer
- Light Source w/Internal USB Video Capture
- Capture Foot Pedal
- Computer w/Keyboard
- Industrial Grade Cart w/Accessory Tray
- Earigator System
- Full Image Lens
- Track Ball Mouse

- Cleaning Brush
- Biopsy Tool
- Stainless Curette
- All necessary Cables
- One-Year Warranty

Options:

- Endo-Coupler
- Full Range of Flexible Endoscopic Instruments



COMPONENTS MAY CHANGE

Optional Printer

System Components and Accessories

Camera/Otoscope Assembly

This hand held assembly part includes the custom designed and patented optical otoscope and high resolution color video camera. These are the key components to the system. The camera operates on 12V DC provided from the light source.

CAUTION: the mini-camera can not get wet!

Fiber Optic Cable

The cable, containing thousands of high-grade glass fibers, connects the light source to the otoscope. The connection to the otoscope uses a connector, which pushes on and locks in place on the otoscopes optical socket. The connector is released from the otoscope by pulling firmly on the connector.

Super Cable

This cable carries light, camera power, and video.

Light-Source with Internal USB Video Capture

The super cable connects the light-source to the otoscope and camera. 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 otoscope. A 3/4 rotation of the dial is usually appropriate. However, some adjustment may be necessary for optimum image clarity.

Mobile Cart

The cart allows for storage, interoffice mobility, and an easily viewed screen. For stability of the system it is recommended that the cart be pulled rather than pushed.

TV

The high-resolution TV uses HDMI or Composite input.

Color Photo Printer

The printer digitally reproduces the image viewed by the camera/otoscope assembly. This image is a valuable and informative tool to help educate your client.

Computer (See VetScope View Software Manual for more information)

The Computer hooks to any video source, like ultrasound, endoscopes or digital cameras. Included in the package are a fully functional trackball mouse and mini-keyboard. The Computer allows you to instantly store images in the database, USB flash drives or CD-RW disks. It can store and play back short video clips. The database allows you to enter client information. The Computer is also network capable.

Earigator

The Earigator is invaluable when performing outer and middle ear flushes. Dual gauges allow for the control of irrigation and suction. It can be used through our VetScope working channel via a catheter or as a stand-alone unit.

Foot Switch

The foot switch is a convenient way to control image capture function. It allows for hands free operation of the image freeze. The remote foot switch must be plugged into the trackball mouse.

Full Image Lens

The full image lens connects to the camera and has IRIS and focus adjustments, which allows for pictures of the skin, full animal, x-ray and records. The full image lens will focus from 1/2" to infinity.

Biopsy Tool

Used through the Vet Scope's 2mm working channel facilitates taking biopsy samples as well as removal of foreign matter.

OPTIONAL ACCESSORY

35mm Endo-Coupler Accessory

OtoPet-USA supplies a full range of eyepiece and C-mount adapters to attach rigid and flexible endoscopes to the video platform.

Attachments for the OtoPet-USA VetScope Camera and Vet Otoscope



Assembly and Installation

INSTALLATION INSTRUCTIONS

Although no specific order is required for connecting the Video VetScope System, it is sometimes helpful to understand the flow of the signal from the camera to the TV.

The printer, TV, and light source need to be plugged into the power strip on the cart. If not using cart please use a surge protected power strip.

The computer connects to the TV.

The super cable carries three components, the fiber optic cable, 12 volt power cable, and video out cable. The large round female connector snaps into the front of the light-

source. The fiber optic cable end slides in straight to the front left of the light source while pressing down on the quick disconnect. The other end of the super cable connects to the otoscope and camera.

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 allow animals to bite or chew cables.

References:

VetScope wiring instructions and a photo of current equipment are on page 8.

Instructions for Attaching/ Disconnecting Fiber Optic Cable

To Connect: Push the connector end on the otoscope as shown.

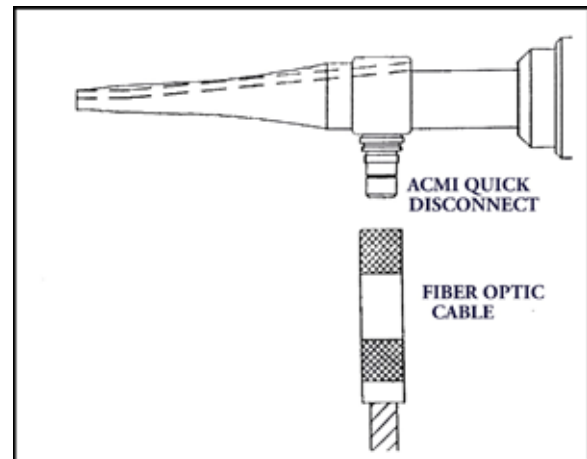
To Disconnect: With thumb and forefinger holding the ACMI quick-disconnect snap gently pull the otoscope away from the connector.

Using the Hand Held Camera Otoscope

CAUTION: The full hand held camera otoscope/assembly is only to be used by a person qualified in the use of a VetScope. Misuse can cause a patient pain and possible injury.

Prior to insertion, the otoscope 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.

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.



VetScope Wiring Instructions

CONNECTING THE OTOPET-USA IMAGE SYSTEM

Main Equipment, Cables and Accessories
(numbers correspond to diagram on facing page)

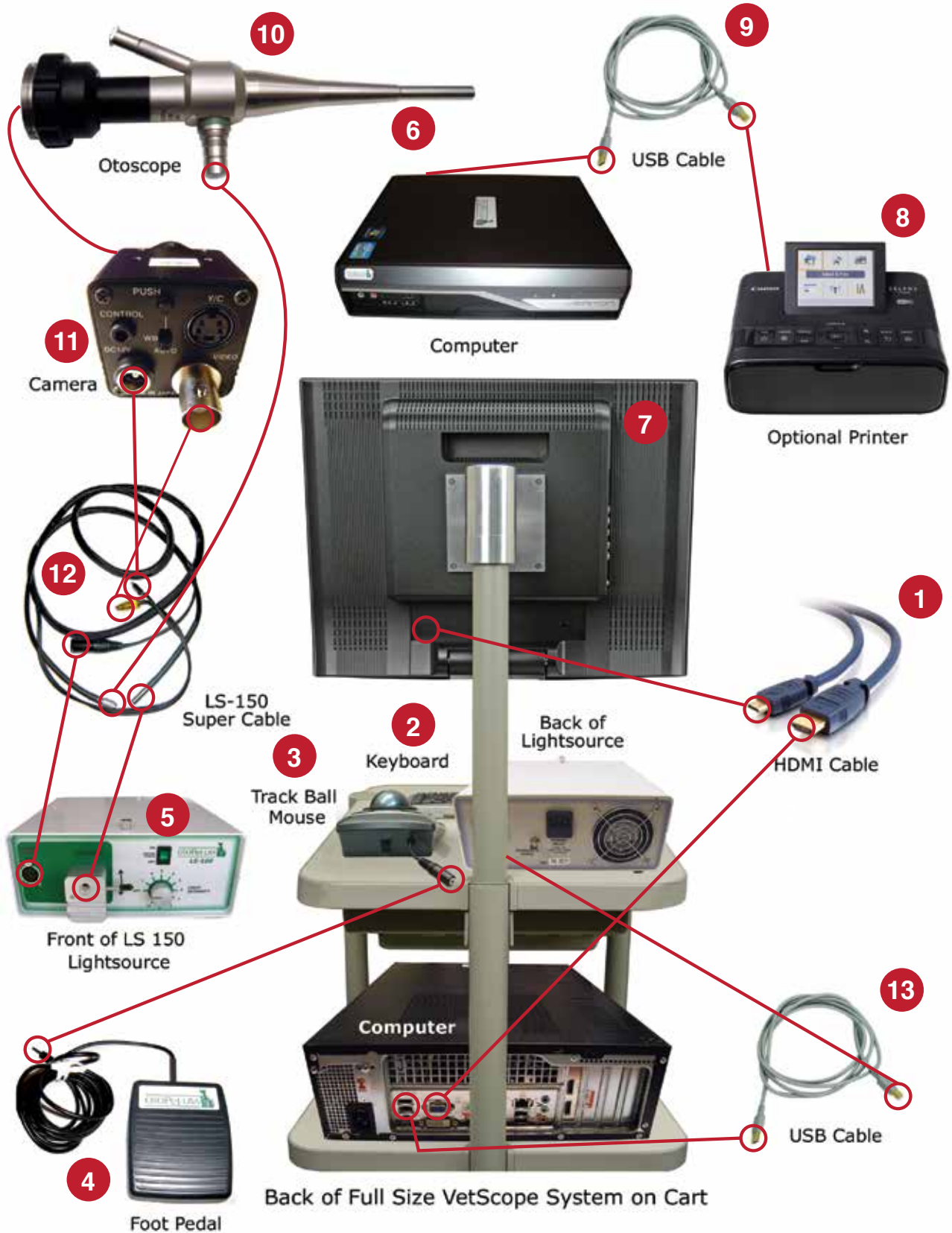
1. HDMI Cable
2. Keyboard
3. Track Ball Mouse
4. Foot Pedal
5. Lightsource
6. Computer
7. Flat Screen TV
8. Color Photo Printer w/ USB Cable (optional)
9. USB Cable
10. Otoscope
11. Camera
12. LS160 cable
13. USB Cable

Wiring Instructions:

1. Plug one end of HDMI cable into the TV and the other end into the Computer.
2. (IF USING A COMPUTER) Plug one end of the USB cable into the back of the LS160 Lightsource. Plug the other end of the USB cable into the USB jack on the computer.
3. IF NOT USING A COMPUTER: attach the BNC end of your RCABNC cable to the LS-150 Light Source, attach the other end to the yellow video jack on your TV.
4. Plug Keyboard into any USB port on the Computer.
5. Plug Track Ball Mouse into any USB port on the Computer.
6. Plug Foot Pedal into back of Track Ball Mouse.
7. If you have a Color Photo Printer plug the included USB Cable from the printer into any USB port on the Computer.
8. Plug all power cords into the power strip.

NOTE: Accessories may vary

OtoPet-USA VetScope Wiring Diagram



Operating Instructions

TURNING ON THE SYSTEM

- To use your video-otoscope, turn on the TV, both switches on your lightsource and computer. The printer can be turned on when necessary.

Light-Source

The lightsource intensity is controlled by rotating a knob located on the front of the light box. The light source should be turned to full intensity. Once the otoscope is in the animal, 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. Let bulb cool down before turning off completely. This will increase the life of the bulb.

Camera

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

- **NOTE: Shut down Computer through the Start Menu before shutting down entire unit.**

- 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 250 hours. We suggest you keep a spare bulb on hand at all times.

- The Earigator should be kept off until needed.

Care and Maintenance

Your OtoPet-USA Video VetScope has been designed to provide years of trouble-free service. Do not remove or open the covers 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 the components.

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

Operational Tips

When taking a Biopsy always avoid pulling the specimen through the working channel to prevent risk of contamination.

IMPORTANT:

- THE Otoscope TIP COVER SHOULD BE RETAINED AND USED FOR ADDITIONAL TRANSPORTATION PROTECTION OF THE VIDEO SCOPE OPTICS WHILE IN OR OUT OF THE FOAM CASE

- OTOPET-USA 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 Veterinary 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.

Veterinary Otoscope Disinfection

The Veterinary Otoscope is sealed so that it may be wiped with the following surface cleaners to disinfect: Alcohol, Chlorhexiderm, Cidex, Nolvasan, Parvocide, Parvosol, Roccal, Synphenol

Technical Specifications

Video Camera

- 1/3" CCD
- Color
- CS lens mount
- 10 bit DSP
- NTSC & PAL formats
- Electronic shutter

LS-160 Light Source

- Internal USB video capture: NTSC/PAL format
- 150 watt halogen – variable intensity
- Fan cooled
- Quick disconnects for fiber light cable and video cable
- 115 volt power input
- Composite or USB output

Color Digital Printer (currently)

- Multiple pictures on one sheet capability
- UL-1950 safety standard
- Universal serial BUS USB output
- 8 bit image quality (256 gradations)
- Other specifications change due to model changes

Flat Screen LCD TV

- AC 100 to 120 V, 50/60 Hz
- Wide aspect ratio (1440 x 900) res.
- Specifications change due to model change

Mobile Cart

- Sturdy construction
- Three shelves and keyboard tray
- Six outlet power strip
- Rolling/lockable castors
- Storage tray

Additional System Features Include:

- Foot switch
- Camera power/fiber optic/video cable
- Instructions/wiring diagram/manual
- Endoscope coupler optional
- Full image lens
- Biopsy tool
- 1.8 mm curette
- Earigator
- Track ball mouse

Otoscope

- Field of view 60 degree + 10-5 degree
- Some are Autoclavable / ETO
- Focal plane from tip .25" (+/- .125")
- 360 degree glass fiber light at tip
- Conventional optical elements, color corrected
- Minimum intensity 750 FC at 1"
- Illumination through the otoscope via a fiber optic bundle.
- The outside diameter of the distal end of the otoscope: 5.50 mm.
- The otoscope has a 30 mm straight section at the distal end.
- The overall length of the otoscope is 155 mm.
- The working length from the light connection to the tip is 87 mm.
- The working channel is 2.0 mm inside diameter. The radius of the bend inside the working channel is 150 mm. The channel is fully sealed.
- A Luer Lock fitting is on the working channel
- Tapered, conical for durability
- Stainless steel body
- Integral glare reduction filter
- Normal erect image orientation
- Swivel mount
- FFA.OS fiber optic socket
- CS mount
- Impervious to alcohol cleaning

Note: The camera and otoscope are sold as a matched system with OtoPet-USA proprietary coupling and focusing techniques. Should either the camera or otoscope become defective either part can be replaced; however, the process must be accomplished at the OtoPet-USA USA manufacturing facility.

Comment: While system specifications may serve some benefit in comparing various products, discretion must be used in determining overall system performance. It is suggested that a logical system test might involve the comparison of color printouts of the same subject, such as a known ear canal, using various systems. The OtoPet-USA system has been optimized with respect to each specified component. Claims of specifications of individual components do not reflect the overall optimization of the system as will be evidenced through such a test. System optimization provides the end user with the best value for the investment. That is the OtoPet-USA commitment.

Trouble Shooting Guide

PROBLEM	MAIN CAUSE	SOLUTION
Fuzzy or out of focus picture	Enlarging ring left on otoscope. Damaged otoscope or dirty otoscope tip (dried cerumen). When changing adapters on camera, make sure space ring is removed with adapters.	Remove enlarging ring. Vigorously clean otoscope tip with an alcohol wipe.
No picture on flat screen TV	Short in super cable. TV not set to correct video input. TV not turned on.	Replace super cable. Push source button on TV to correct video input.
No input signal	Camera/Control Source not turned on.	Check all connections.
Can't capture picture	Trackball not connected. Foot switch not plugged in.	Plug in foot switch. Check all connections.
No light from otoscope tip	Bulb burnt out. Intensity switch on lightsource turned off.	Turn on lightsource (replace bulb). Rotate button clockwise.
Picture is dark	Light source too low. Camera is not white balanced.	Turn up intensity of light source. Press white balance button. Call OtoPet-USA for service.
Green Screen	Camera not connected. RCABNC or USB Cable not connected. Super Cable not connected.	Check power to camera and all connections.
Dark Screen	HDMI cable not plugged in. TV not set to correct video input selection. TV or Computer not turned on.	Check all connections and power switches.

NOTE: REFER TO WIRING DIAGRAM FOR LOCATIONS

This guide was designed to assist you in diagnosing minor problems. Should service be needed, please call OtoPet-USA for Technical Support Monday-Friday, **EST 9:00 A.M.-5:00 P.M. AT 301-365-0192** and at info@otopet-usa.com.

Transportation and Storage

When transporting or storing your video VetScope, it is best to use the original packing case or similar packaging.

Store the system in a cool, dry location and do not place your system in direct sunlight.

Care must be taken to protect the system from shock, moisture damage and mishandling.

Do not place heavy objects on any of the system's components.

Remove batteries from any wireless remote controls if they are not going to be used for extended periods of time.

To assure proper operation and warranty protection, use manufacturer's replacement components only.

For proper care of the video TV and printer, please refer to the appropriate operator's manual (included in the original packaging).

Limited Warranty

OtoPet-USA, Inc. warrants the OtoPet-USA Video VetScope 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 OtoPet-USA at (301) 365-0192. The company's representative will advise the owner to either return specific components or the entire system to:

OtoPet-USA
8909 Iverleigh Court
Potomac, MD 20854

OtoPet-USA 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. OtoPet-USA 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.

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