

# Quick Reference Set-up Guide

for **KARL STORZ** Video Systems

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*This manual is not intended to replace the manuals for the individual components. All product manuals should be read in their entirety.*

**STORZ**

Karl Storz Veterinary  
E n d o s c o p y  
karlstorzvet.com  
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# Assembly & Installation Instructions

This guide will assist you in setting up your new Digital Photo Printer. Most of your set up questions will be answered by following these instructions in the order that they are presented.

Three standard s-video cables are required to set up this printer. Your KARL STORZ camera comes with an s-video cable, and you will need two additional s-video cables that have been supplied with your shipment. This type of cable needs to be aligned properly by matching the square hole in the plug with the square post in the cable.

Plug the first s-video cable into an s-video output on the back of the camera box and plug the other end into the Y/C IN on the back of the monitor under Line A. Plug one end of the second s-video cable into the other output on the back of the camera box and plug the other end into the S-VIDEO IN on the front of the printer. The third cable connects the printer to the monitor on Line B. One end connects to the S-VIDEO plug located on the back of the printer and plugs into the back of the monitor labeled Y/C IN under Line B. This allows you to use Line A on the monitor for real-time images, and Line B for capturing and printing. While the image is being printed (approximately 90 seconds), you can continue working by switching back to line A.

Load the ink ribbon and the paper. Refer to pages 23-26 in the manual if assistance is needed.

Next, the long silver end of the light guide cable is inserted into the light source, and the other end is screwed onto the light guide post of the otoendoscope.

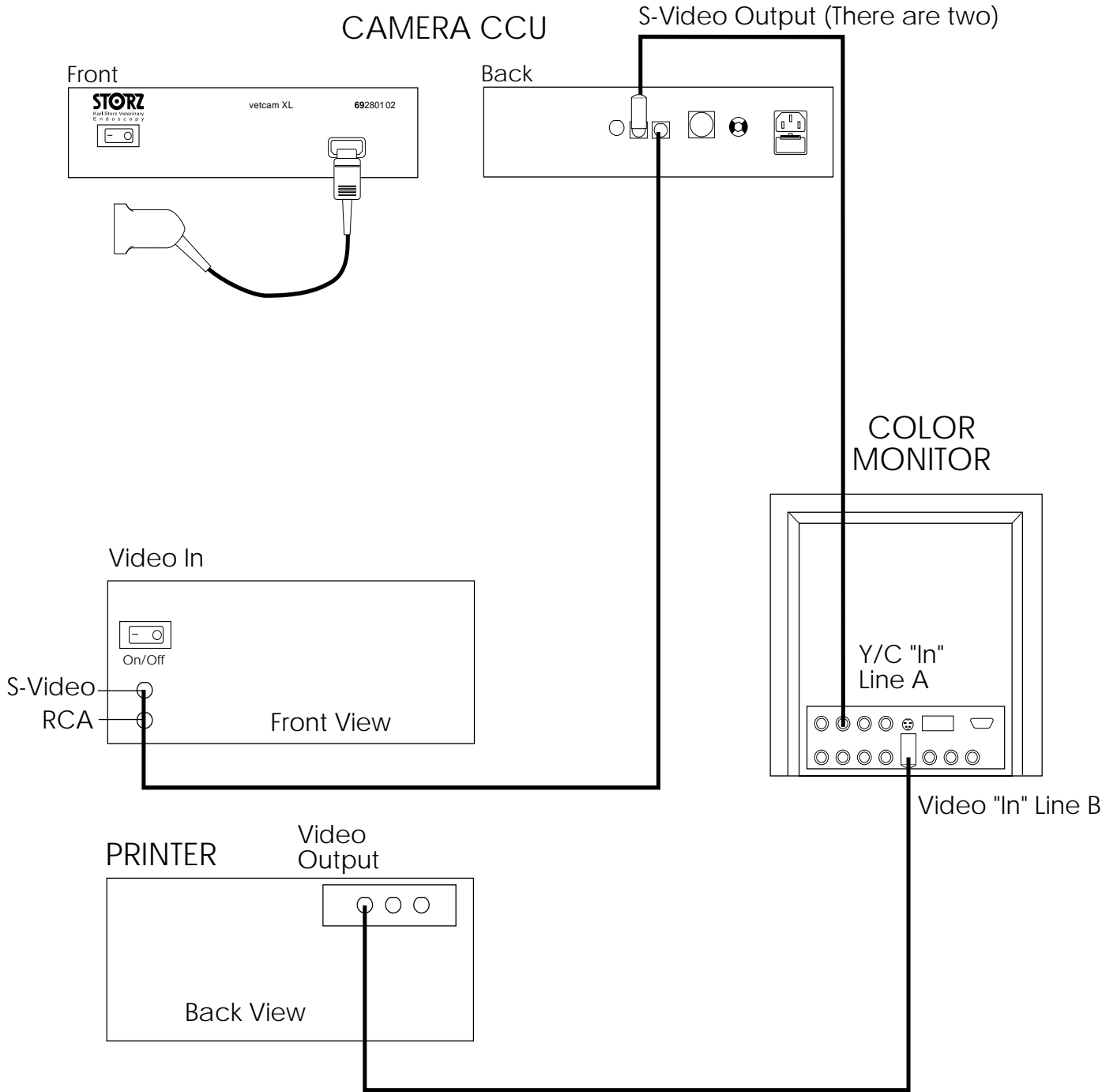
The camera head cable must be plugged into the camera control unit. The card edge connector on the camera cable must be dry and clean. It can be wiped with alcohol and allowed to dry completely before plugging it into the camera control unit with the word "UP" visible. Be sure to hold the box with one hand and push the plug all the way in with the other hand until it can go no further.

The camera head is attached to the otoendoscope by squeezing the two rabbit ears on the adaptor and placing the eye piece against the lens. Once the rabbit ears are released, the otoendoscope will be locked onto the camera head.

Once the printer is set up and the light source and camera are turned on, there will be an image on the monitor. The red power indicator light on the printer is illuminated when the printer is off. If the red indicator light is not illuminated check to see that both ends of the supplied AC power cord are secured to the printer and your 110v outlet. The red indicator light turns green when the power is switched on. Remember to switch to line B on the monitor when using the printer.

The knurled knob on the camera head is the focus adjustment. Point the otoendoscope about 1/2 inch away from an object and adjust the focus ring until the image is clear. Minimal focusing is required after your initial adjustment.

# Wiring Diagram



## Operating the Buttons on the Camera Head



### Operating the buttons on the Vetcam XL camera head.

**Button 1** - has only one function, to **white balance**. White balancing resets the camera system's chrominance controls to conform to the color temperature of the light source in use. To perform this adjustment, switch on the light source to be used and point the camera with the otoendoscope attached at a white surface like a gauze square. Pressing the User Control Button 1 on the camera head, the screen will fade to white indicating proper white balancing has occurred. If white balance has not been performed correctly (too much or too little light) the screen will not fade to white. If white balancing fails, lengthen or shorten the distance between the otoendoscope and the white surface and perform the white balance adjustment again. **Note:** The values of the last white balance remain stored even if the camera control unit is turned off. When the camera is next used, a new white balance is necessary only if a different light source, light cable or telescope is used.

**Button 2** - has two functions. This button controls **aperture on/off** and **gain**. These functions are accessed using either a short or long push as described below.

A **long push** (more than 2 seconds) of the User Control Button 2 on the camera head will turn the **aperture** on and off. Hold the button down until a negative image flashes on the screen to signal that the aperture has been turned either on or off depending on the last setting used. With a rigid telescope (the otoendoscope) the aperture should be "on" to optimize the image. With a flexible fiberscope the aperture should be "off," to soften the image/reduce the honeycomb or moiré effects sometimes seen with these scopes.

**Short pushes** of User Control Button 2 control **gain** or basic brightness. Pressing this button will increase or decrease image brightness depending on the last setting. Pressing the button again will cycle through high, medium, and low settings. The gain setting is independent of the aperture setting and will work whether the aperture is on or off.

### Setting up the Printer for Digital Capture

There are two ways to select operations for the printer, either the flip down panel located on the front of the unit or the remote control. For set-up, use the flip down panel. First select the input source that will feed the printer the image. When printing from the live video image, press the INPUT SELECT button repeatedly until the green light on the front of the printer indicates VIDEO, and the message on the monitor states VIDEO/INPUT. If your camera and monitor are on, and the printer is wired correctly there will be a live image at this time. There are prompt messages that will be displayed on the monitor to help with the process.

### To create a print from live video image

Press enter on the printer (or remote), which will freeze the image. The prompt will ask you if you would like to print or save. Press PRINT on the control panel to begin the printing process. You can continue working during the printing process (90 seconds) by switching the monitor to Line A. When the print has finished, press the PICTURE button to return to the live image on the printer and return to Line B on the monitor to be ready for your next print. If the captured image is not of acceptable quality or content, press the PICTURE button to return to the live image **prior to printing**.

### Storing Images

This printer can store images on any of three media storage systems: Sony's Memory Stick, a PC card or CD-R/RW discs. There are advantages and disadvantages to each system: however, the most universal and cost-effective system is the CD-R/RW. There are two types of discs that can be used. The designation CD-RW is used to collectively identify both. The CD-RW (ReWriteable) discs allow you to write or delete data (images) repeatedly, making them ideal for use in the office for storage and archiving of patient records. The CR-R (Recordable) discs

also allow you to write or delete data (images) repeatedly; however, the disc capacity does not increase after images are deleted. The CD-R discs cost much less than CD-RW and could be given to the client or placed in the medical record. These discs are available at any retail computer or electronic store.

Regardless of the disc you choose, it must be prepared for saving images (initialization). Insert an unformatted CD-R/RW disc into the disc tray located on the front of the printer above the printer paper tray. Press INPUT SELECT to turn on the CD-RW indicator. Press the arrow buttons to select YES to initialize the disc and then press ENTER/PRINT QTY. You can now use the disc to save images by following the prompts that occur after the image is captured.

### To save images to a CD

Set the INPUT SELECT on the printer to VIDEO. When you have an image to save press ENTER/PRINT QTY to freeze the image. The prompt will ask you if you would like to print or save, press the SAVE button. A drop down menu will appear and will ask you where you would like to save the image. Using the arrow buttons, select CD-RW, and follow the on-screen instructions. You can create new folders to store individual patient images or just save them in one folder. The maximum number of files you can save on a CD-R/RW is 4000. The finalization procedure allows you to view and read the images of a CD-R/RW disc recorded by the printer with the CD-ROM drive of your computer (page 56), however, no additional images can be added to the disc after this is completed. If you are using a CD-RW disc, the unfinalization procedure will allow you to add additional images to the disc. In the case of CD-R discs, the finalization procedure is permanent.

See pages 47-60 of the manual for disc requirements and initialization and operating instructions.

Refer to pages 27 & 45 in the manual for detailed

instructions on the use of Memory Sticks or PC cards.

### To create prints from images stored on a CD

Set the INPUT SELECT to CD-RW. Each folder (album) will be seen on the screen, represented by one of the images stored in that folder. Use the arrow button to select the folder containing the images you'd like to print, and press ENTER. All the images in that folder will now appear. Using the arrow button, select the image for printing and press ENTER, then PRINT. To print multiple images per sheet of paper, press the CREATIVE PRINT button on the printer, and select

Split Images with the arrow button. For more information on Split Images, refer to page 77 in the manual.

*Please refer to page 110-112 for troubleshooting tips.*

There are many more functions of this printer, not covered here. This QUICK SET UP GUIDE is to help you get started and it is suggested that you read the manual in its entirety to understand all the functions of the Sony DPP-SV88 image capture device & printer.

## Attaching the Microscope Adaptor

Remove the VetcamXL threaded adaptor by turning the entire unit counter-clockwise. Attach the microscope adaptor by turning it clockwise, threading in onto the camera head. Remove either ocular from your microscope by simply

sliding it out. Then slide the microscope adaptor into the ocular. Focus and light control is done via adjustments on the microscope. The image quality will be dependent on the quality and light intensity of the microscope.

## Care & Maintenance

The Karl Storz Vetcam XL Endoscope System's electronic components should remain assembled and on the cart when not in use. Store the cart in a dust free area that is not exposed to high temperatures or intense sunlight.

The **camera head, light guide cable** and **otoendoscope** can be removed and completely immersed in cleaning and disinfection solutions. They can **NOT** be steam sterilized in an autoclave but are compatible with Sterad and Steris. ETO sterilization can also be used on both the otoendoscope and light guide cable but **NOT** the camera head.

When a procedure is completed, simply wipe down the camera head, light guide cable, and otoendoscope with a damp sponge and a non-abrasive cleaning agent, rinse under distilled water, and dry thoroughly. When performing a procedure that requires sterility, all

the equipment can be soaked in a 2.5 % glutaraldehyde solution, (i.e., Cidex by Johnson & Johnson), for 20 - 40 minutes and rinsed well with sterile water. Avoid any glutaraldehyde solution that is stronger than 2.5% or has a shelf life longer than 2 weeks, as they contain surfactants that will shorten the life of the equipment.

To prevent over saturation, the otoendoscope should not be soaked in any solution longer than 45 minutes.

The camera head cable and light guide cable respectively house electronic wires and glass fiber bundles. Keep these cables in loose coils; prevent kinks and severe bending. Do not carry the camera head by the cable.

Please see the next page for information on handling and cleaning the flexible instruments.

# Flexible Instrument Handling & Cleaning Guide

**Endoscopic instruments are more delicate than the instruments normally used by veterinarians. Proper handling and cleaning will extend the life of your instruments.**

This information is not meant to replace any of the handling and cleaning instructions that are provided in our Instruction Manuals which should be read in their entirety before using any Karl Storz equipment.

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## Handling Tips

**When procuring biopsies, close forceps only until the two jaws meet.**

***Warning: Exerting pressure to the point that the jaws begin to twist may result in breakage and a costly repair bill.***

1. Flexible instruments should be used for the surgical procedure for which they were designed.
2. Excessive bending of flexible instruments may damage the control mechanism.
3. Lubricate all flexible instruments on a regular basis (*see #3 in "Cleaning Tips" below*).

## Cleaning Tips

1. Use a soft brush to remove adherent debris from the jaws, shaft, and handle.
2. Rinse and dry thoroughly. Residual moisture may result in corrosion and interfere with smooth functioning.
3. Lubricate all flexible instruments regularly as follows:
  - Soak in a good quality instrument milk as you would your other instruments.
  - Lubricate the jaws, handles, and springs with instrument oil (*part 27656 listed above*).

## Recommended Lubricant

27656	Instrument oil, 55cc bottle	15.00
27655	Oil dropper, available for pin point dispensing 27656 oil ( <i>oil not included</i> )	30.00

## Sterilization/Disinfection

Flexible instruments may be ETO or steam sterilized, or soaked in a disinfection solution.

# Trouble Shooting Guide

<b>Problem</b>	<b>Main Cause</b>	<b>Solution</b>
Blurred picture, streaks, smears, etc.	The optics or lens of the otoendoscope or camera is soiled or fogged	Clean with cotton swab and alcohol.
Inaccurate colors	White balance adjustment faulty Color adjust on monitor or printer	Repeat white balance adjustment. Adjust color of either unit under the appropriate menu.
Nothing on the monitor	Power switches not turned on A cable is bad Wrong input signal on the printer Defective power fuse Camera head cable not properly inserted	Turn on all equipment in the loop and assure connections are secure. Check each cable by going directly from the camera to the monitor and see that it works. Check that input select switch properly corresponds Line A/B to line in use. Check that there is power at the wall outlet. Check that UP is visible and that the card edge will go no further into the camera control unit.
Print is blurred	Movement by operator	Select "Video Motion" on input select.
Print color is pale	The paper is loaded upside down	Check that paper has shiny side up and words on the under side.
No print	Paper jam	Turn off the printer and turn back on, if it can not complete the printing cycle call for servicing.

## Manufacturer's Warranty

Karl Storz instruments and equipment are manufactured for use only by qualified medical personnel who are trained in their use. All Karl Storz Vetcam XL Systems are warranted to be free from defects in workmanship and materials for one (1) year from the date of sale. Any Karl Storz instrument or equipment with a defect during the applicable warranty period will be promptly repaired or replaced at no charge to the customer. Karl Storz shall not be liable, expressly or impliedly, for:

- a. Any damages which might arise or be caused, whether by the customer or by any of the users of the instruments or equipment, as a result of
  - (i) misuse, mishandling, and/or improper operation
  - (ii) repairs, modifications or alterations performed by any person or entity other than Karl Storz or a Karl Storz authorized repair facility, or
  - (iii) use in combination with adaptors and/or equipment, or use in any manner or medical procedure, other than those for which it is designed; and
- b. Any special, indirect and/or consequential damages of any kind and however caused arising from the sale or use of the instrument and/or equipment.

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