

Intraoral Camera Installation / Operation

[153759-001 / -003]



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NOTE:

Questions relating to the Camera or any of its components concerning Operation, Technical Service, Troubleshooting, Warranty or Non-Warranty issues, or Parts Ordering contact:

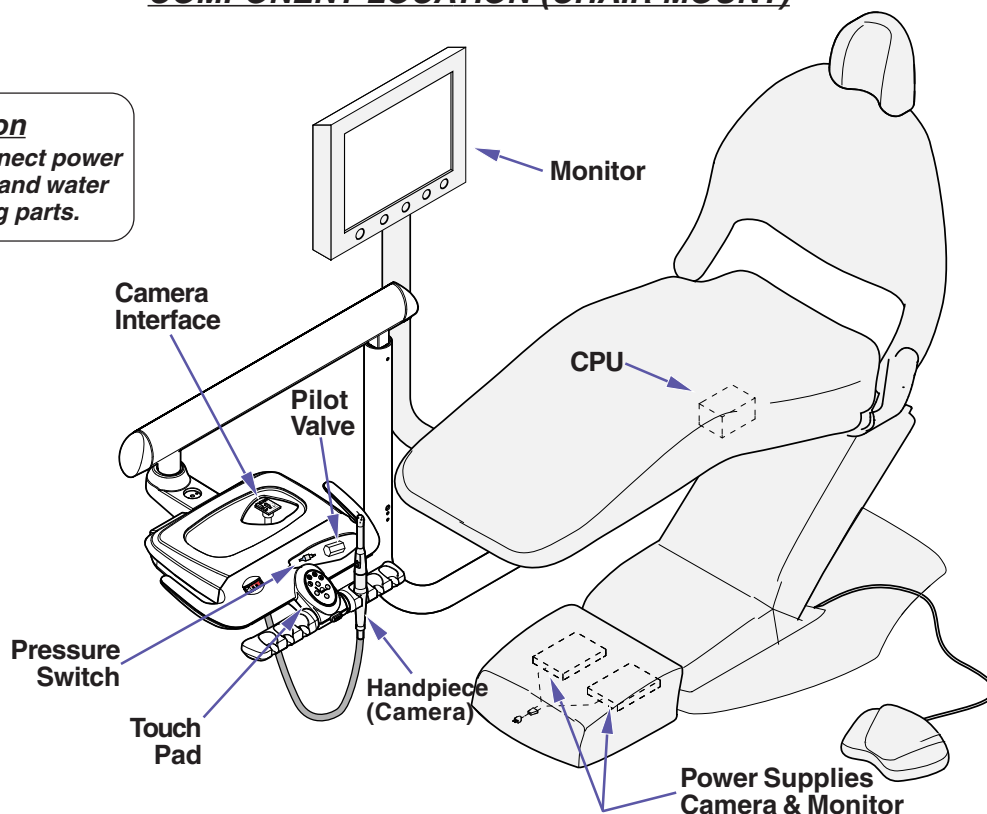
Digital DOC LLC
4511 Golden Foothill Parkway,
Suite 1
El Dorado Hills, CA. 95762
Phone: 1 800 518-1102 or 1 916 941-8010
Fax: 1 916 941-7689
Hours: 7:00 A.M. to 4:00 P.M.
(PST) Mon. - Fri.

COMPONENT LOCATION (CHAIR MOUNT)



Caution

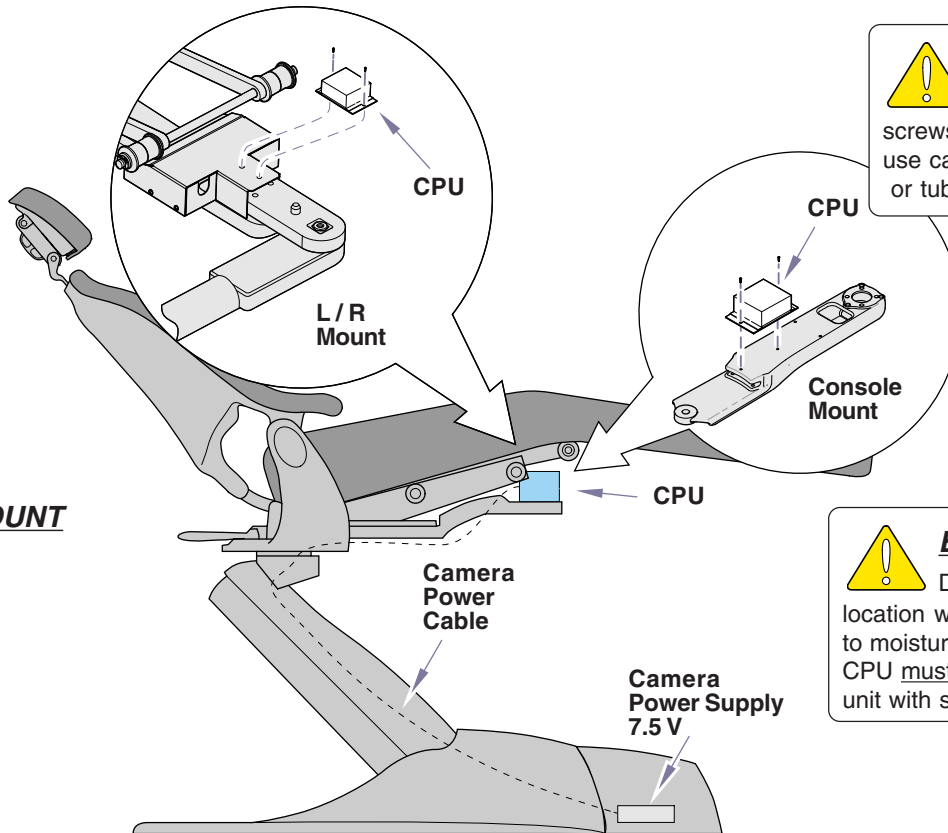
Disconnect power and shut off air and water before removing parts.



DA160600I

CPU LOCATION (L / R, & CONSOLE)

CHAIR MOUNT



Equipment Alert

When installing mounting screws on CPU for Console mount use care not to damage harnesses or tubing located in Console.

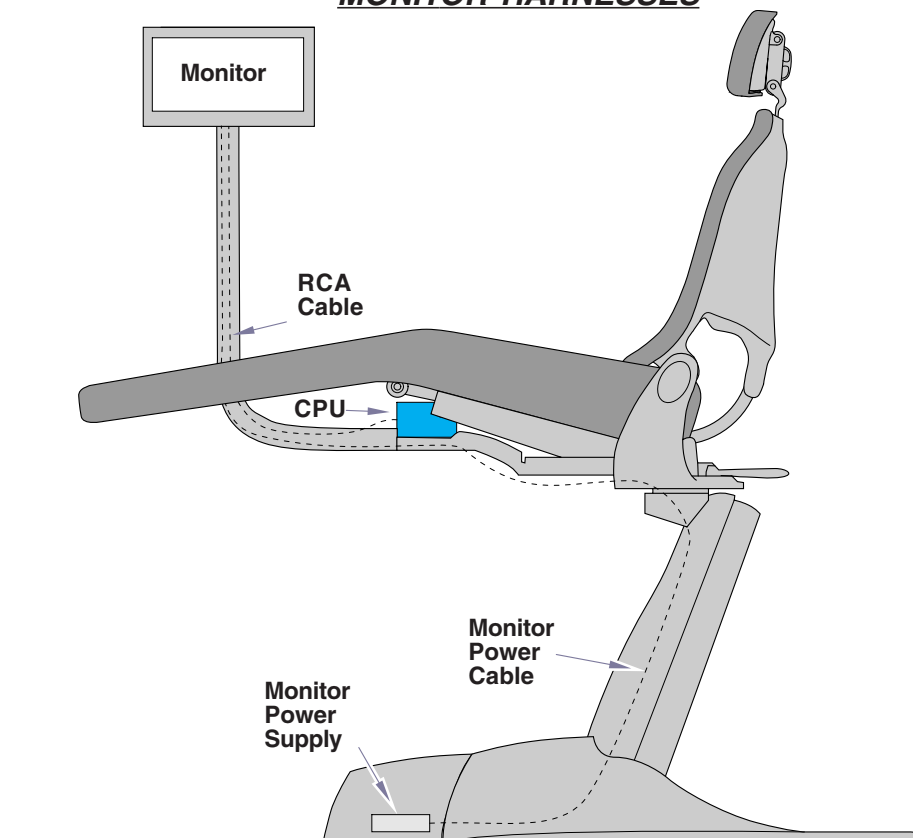


Equipment Alert

Do not place the CPU in any location where it would be susceptible to moisture or excessive heat. CPU must be grounded by securing to unit with screws provided.

DA165001i

MONITOR HARNESSES



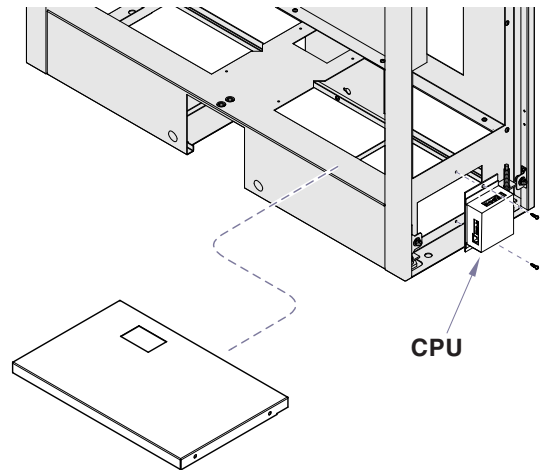
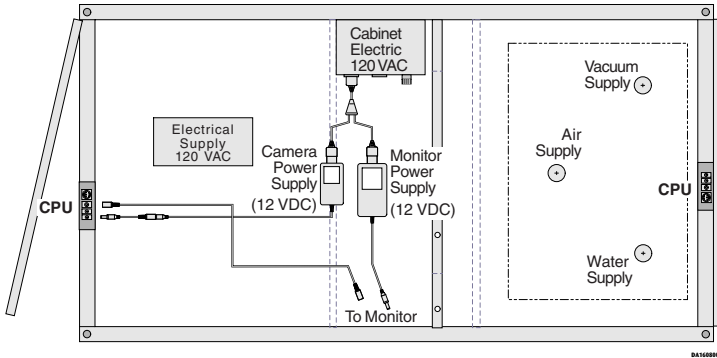
DA161200i

CPU LOCATIONS

FLEX DELIVERY

NOTE:

Open side access panel and position CPU as shown.
CPU can be located on either side.



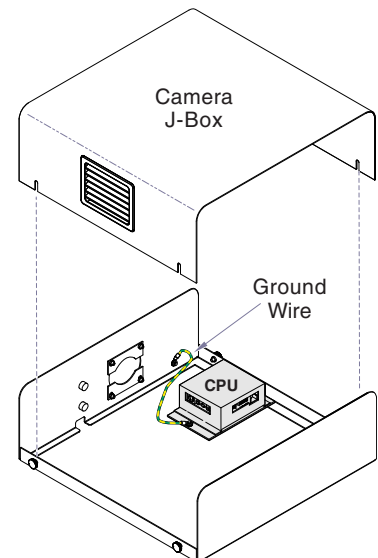
DA164800i



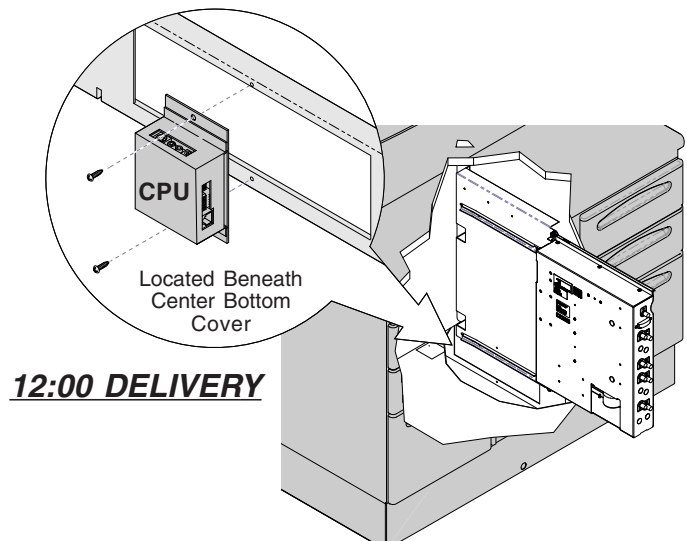
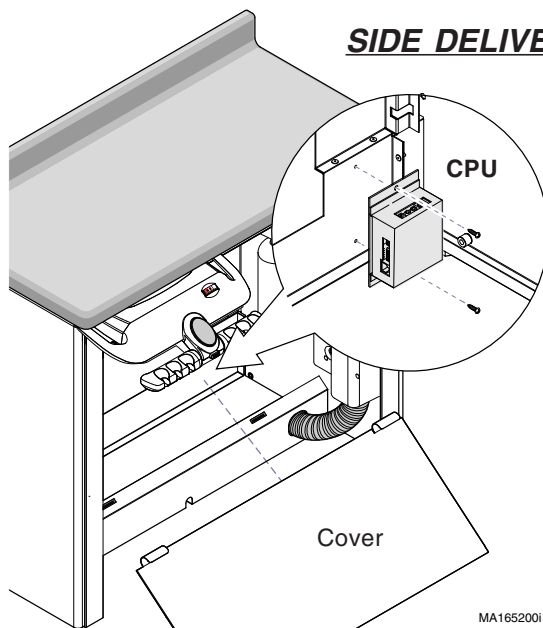
Equipment Alert

Do not place the CPU in any location where it would be susceptible to moisture or excessive heat. CPU must be grounded by securing to unit with screws provided. Wall mount systems with a Camera J-Box will also have a ground wire for the CPU.

WALL MOUNT w/ CAMERA J-BOX

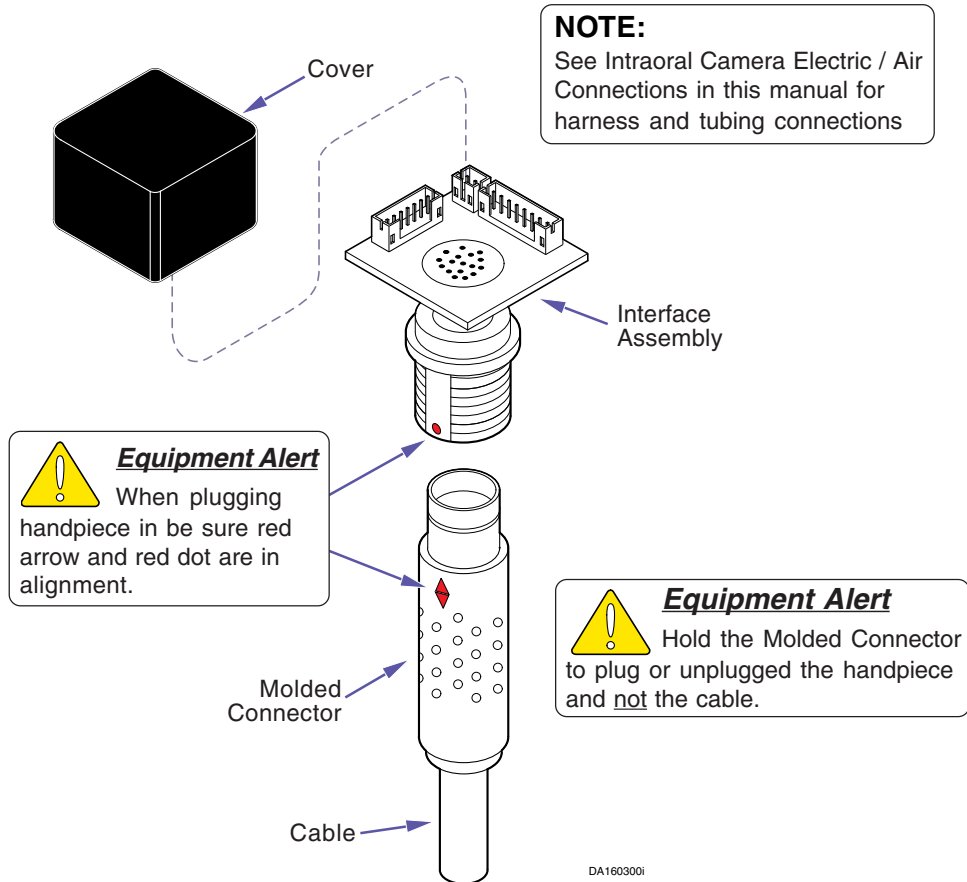


SIDE DELIVERY



12:00 DELIVERY

CAMERA CONNECTION TO INTERFACE ASSEMBLY



TOUCH PAD CAMERA OPERATION

Touch Pad with Camera & Chair Controls (015-1849-00)

NOTE:
Pressing Clear will also place camera in "Live" mode without LED's on.

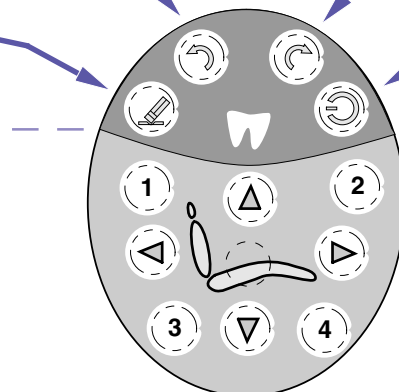
Pressing Memory Clear Permanently erases all stored memory

NOTE:
Interruption of the power supply will Clear memory entirely.
Pressing Power button Off and back On resets memory to position 1 for next snapshot.

Scrolls Backward through Saved Images

Scrolls Forward through Saved Images

Turns Camera Power On and Off.
Will only turn Off when camera is in docked position.

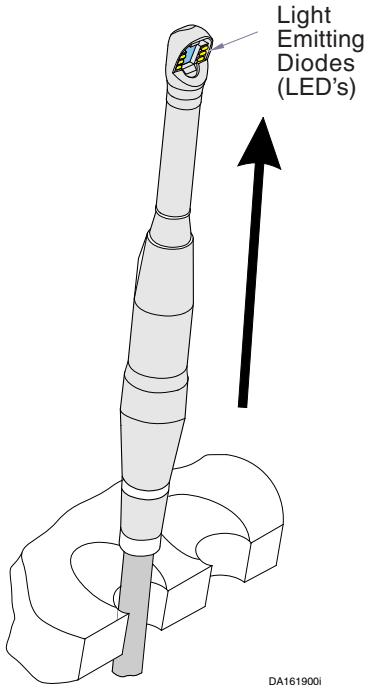


Camera Controls

Chair Controls

DA160000i

TURNING CAMERA ON



DA161900i

Camera “Undocked”

Lifting the Handpiece from the cradle turns the camera *On* and places the system in the *LIVE* mode. The LED's will be illuminated.

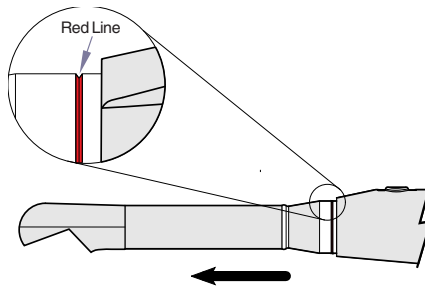
Camera “Docked”

Camera will be in “Memory” mode when docked in cradle. Touchpad Camera On / Off Switch will only turn Camera Off.

CAMERA OPERATION

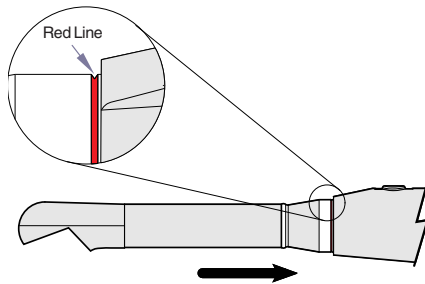
Close Up

Lens Chamber *all the way out*. Red Line *Fully* exposed.



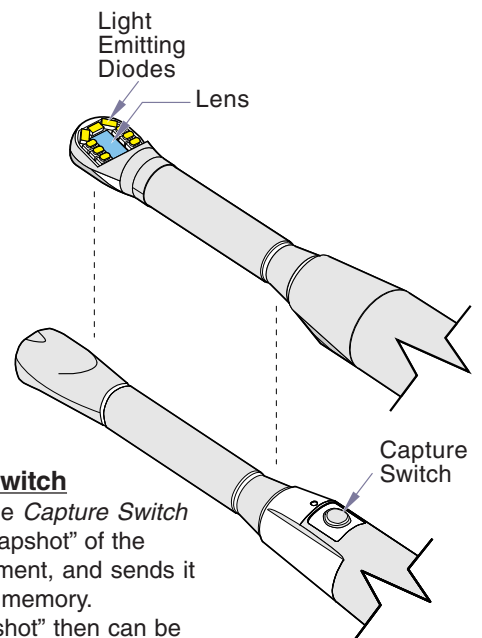
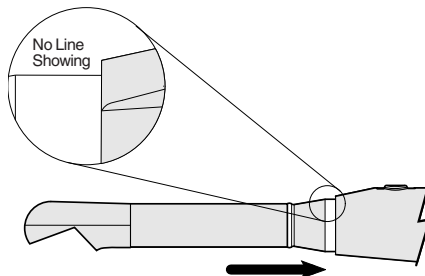
Two Surface

Lens Chamber *partially in*. Red Line *Just* exposed.



Full Smile Face

Lens Chamber *all the way in*. Red Line *Not* exposed.



Capture Switch

Pressing the *Capture Switch* takes a “snapshot” of the viewed element, and sends it to the CPU memory. This “snapshot” then can be brought up for later viewing. The CPU memory has capacity for 12 images.

DA160100i

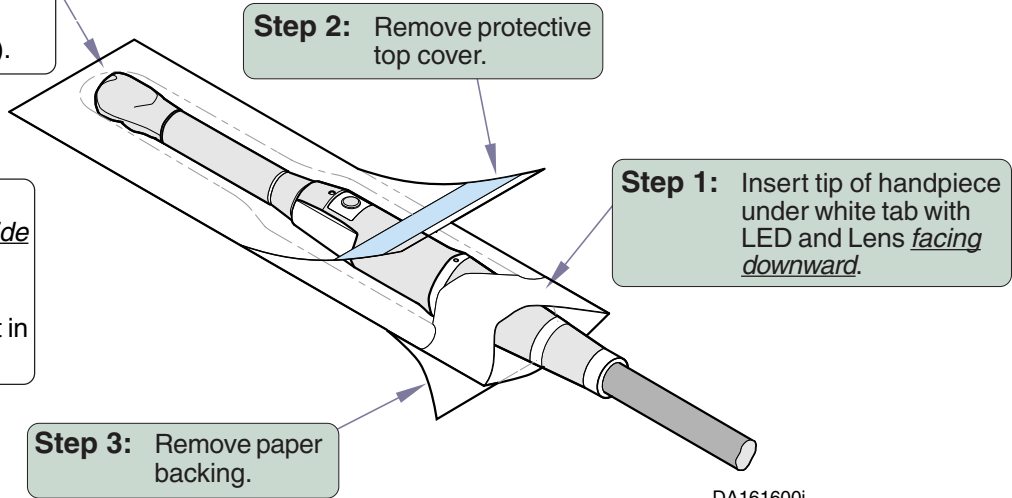
USING CAMERA SHEATH

NOTE:

Sheath must be pulled snugly over lens. Adjust focus for "Two Surface" view (see Camera Operation).

NOTE:

Using a sheath outside the mouth or having the sheath installed backwards will result in "Fogged" images.



CLEANING CAMERA

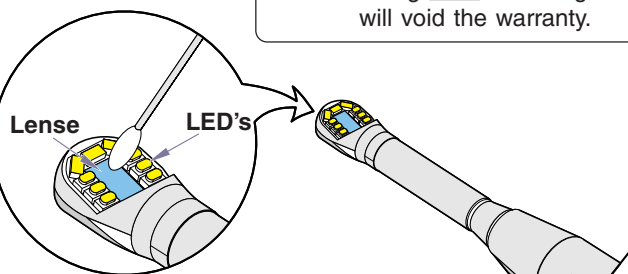


Equipment Alert

Camera is **NOT** submersible or autoclavable.
Do **NOT** use glutaraldehyde or any product containing such.
Using **ANY** form of glutaraldehyde will void the warranty.

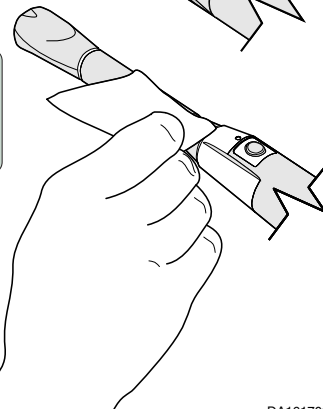
Lense

Use a cotton swap that is lightly dampened with Isopropyl alcohol.



Handpiece & External Surfaces

Use a 2 x 2 that is lightly dampened with Isopropyl alcohol.



DA161700i

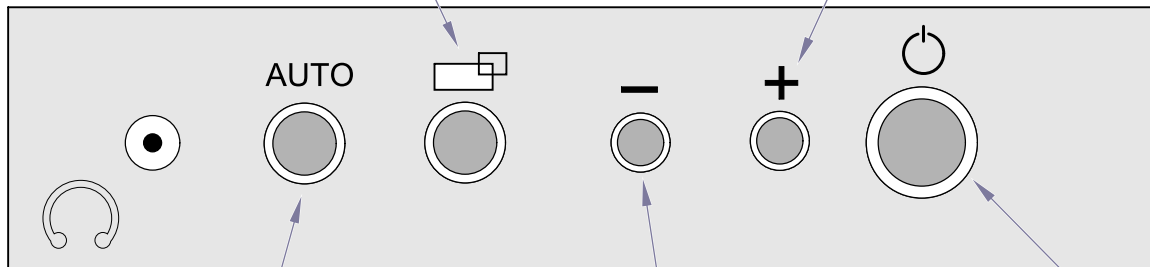
MONITOR OPERATION CONTROLS

Menu:

- Opens Video Adjust menu for image adjustment of color, and brightness. Audio and input select controls.
- Use + and – buttons to navigate Main menu.
- Press Menu button again to highlight the selected item on the menu.
- Use + and – to adjust up or down.

When in Video Mode:

- Increases the value of a setting in the Adjust mode.
- Scrolls UP through Main Menu.



Auto:

- Cycles thru the video sources.
- Activates video line that is in use.

When in Video Mode:

- Decreases the value of a setting in the Adjust mode.
- Scrolls DOWN through Main Menu.

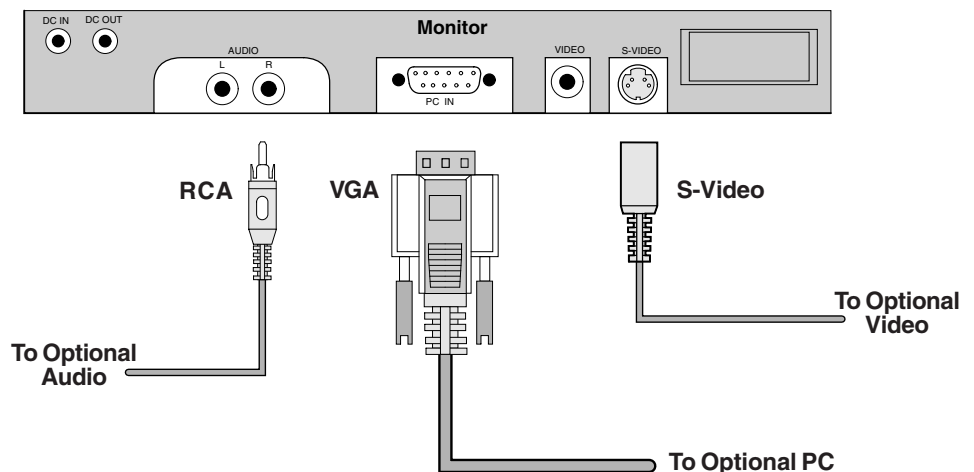
Power

DA162000i

OPTIONAL MONITOR HOOK-UP (with Monitor Cable Pack)

NOTE:

For basic Monitor connections for Midmark application refer to the Electric / Air Connections Diagram.



MONITOR BASE REMOVAL & MONITOR INSTALLATION

In order to install the monitor on a mounting bracket the base of the monitor must be removed.

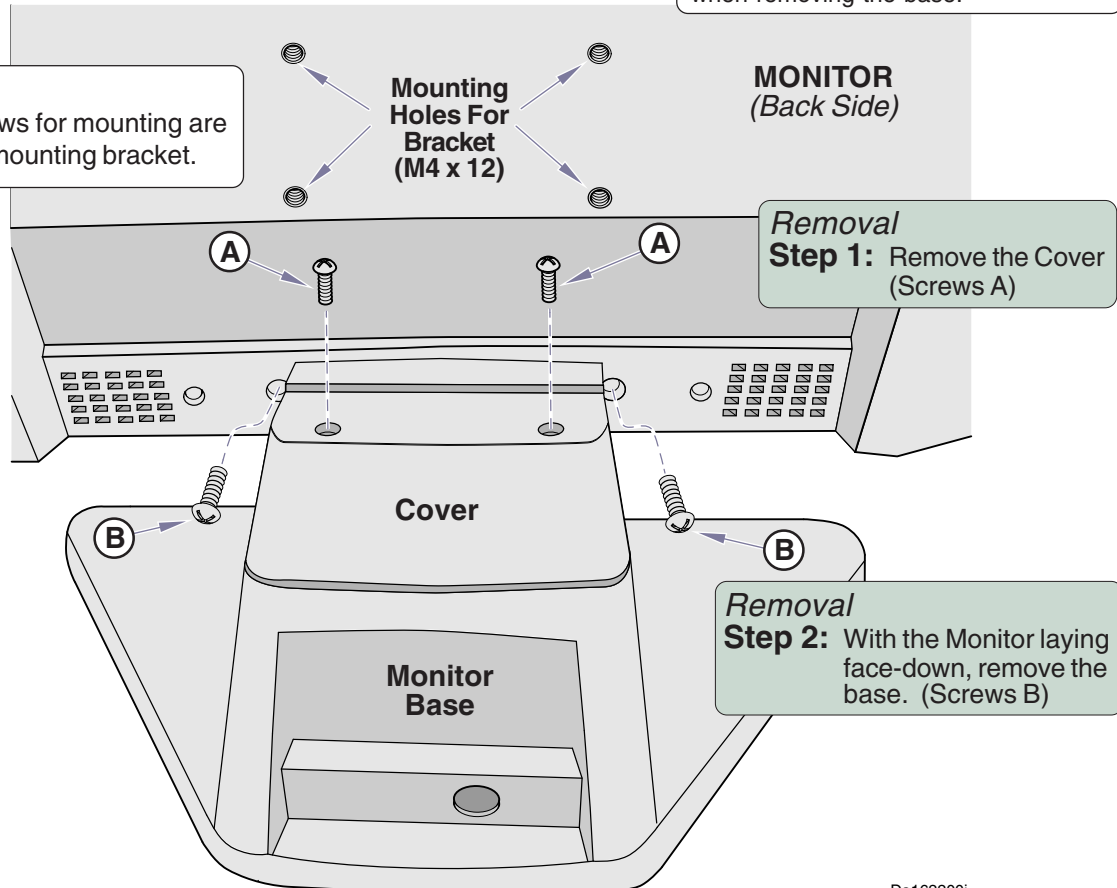


Equipment Alert

Lay the Monitor face-down on a soft cloth, to protect the Monitor face when removing the base.

NOTE:

Four M4 x 12 screws for mounting are supplied with the mounting bracket.



Removal

Step 1: Remove the Cover (Screws A)

Removal

Step 2: With the Monitor laying face-down, remove the base. (Screws B)

Da162200i

Installation

Step 1: Install Mounting Plate

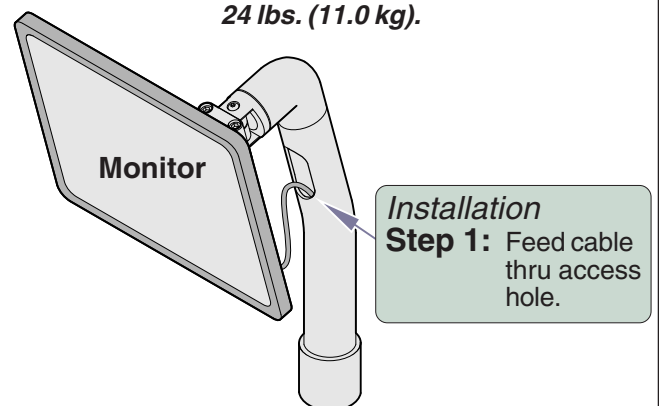
Installation

Step 2: Insert Mounting Plate onto Swivel Mount.



Equipment Alert

Maximum weight capacity of mounting plate is 24 lbs. (11.0 kg).

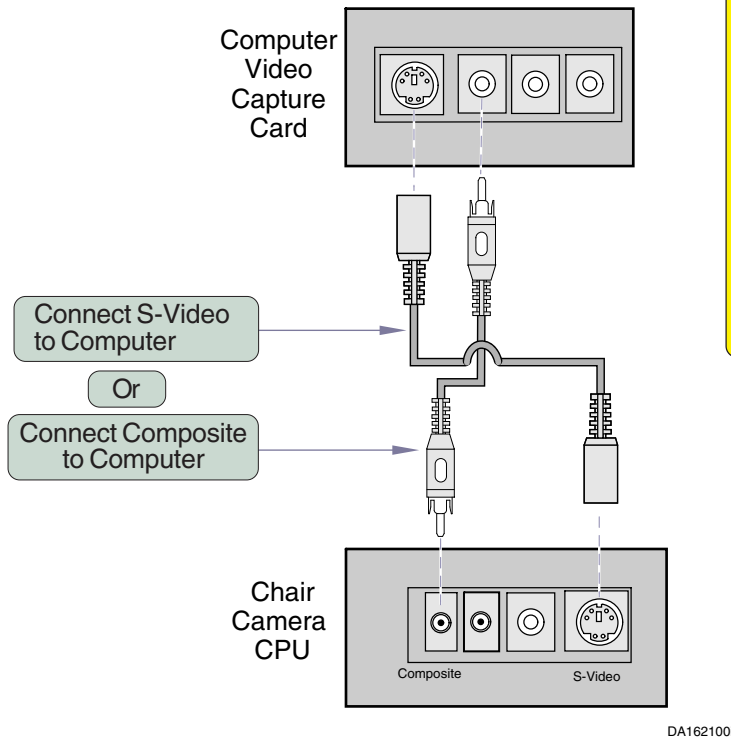


Installation

Step 1: Feed cable thru access hole.

DA165400i

COMPUTER CONNECTION



NOTE:

Questions relating to the Camera CPU, or Monitor hook-up to the Computer contact:

Digital DOC LLC

4511 Golden Foothill Parkway, Suite 1

El Dorado Hills, CA. 95762

Phone: 1 800 518-1102 or 1 916 941-8010

Fax: 1 916 941-7689

Hours: 7:00 A.M. to 4:00 P.M. (PST) Mon. - Fri.

Download Stored Images from CPU to Computer:

- Use a Mouse Click, Keystroke, or software provide Foot Switch to capture or save the image.

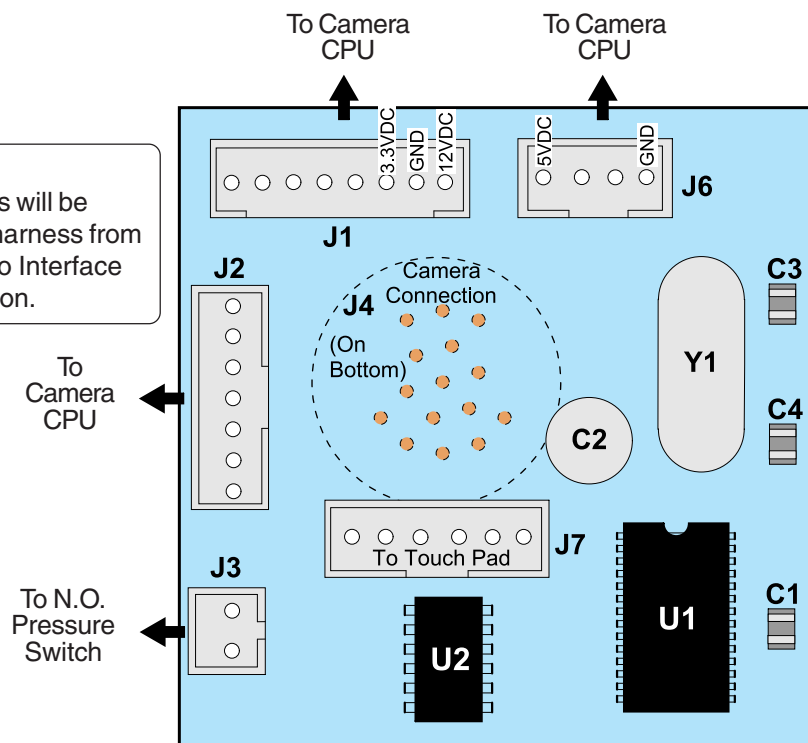
NOTE:

The chair camera will act only as a live video feed when connected to a computer. It has no bearing on the video capture card or practice management software.

CAMERA INTERFACE ASSEMBLY

NOTE:

Designated voltages will be present only when harness from CPU is connected to Interface Board and power is on.

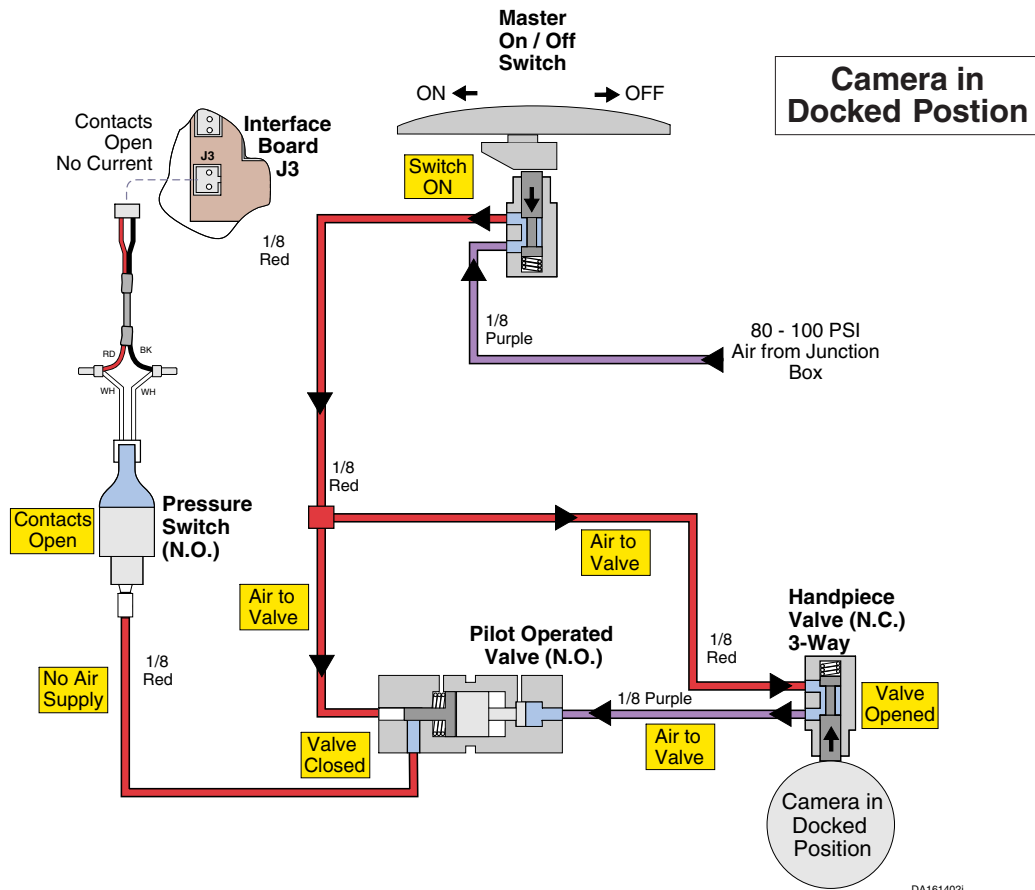


Questions relating to the Camera or any of its Components concerning Operation, Technical Service, Troubleshooting, or Digital DOC Parts Ordering contact:

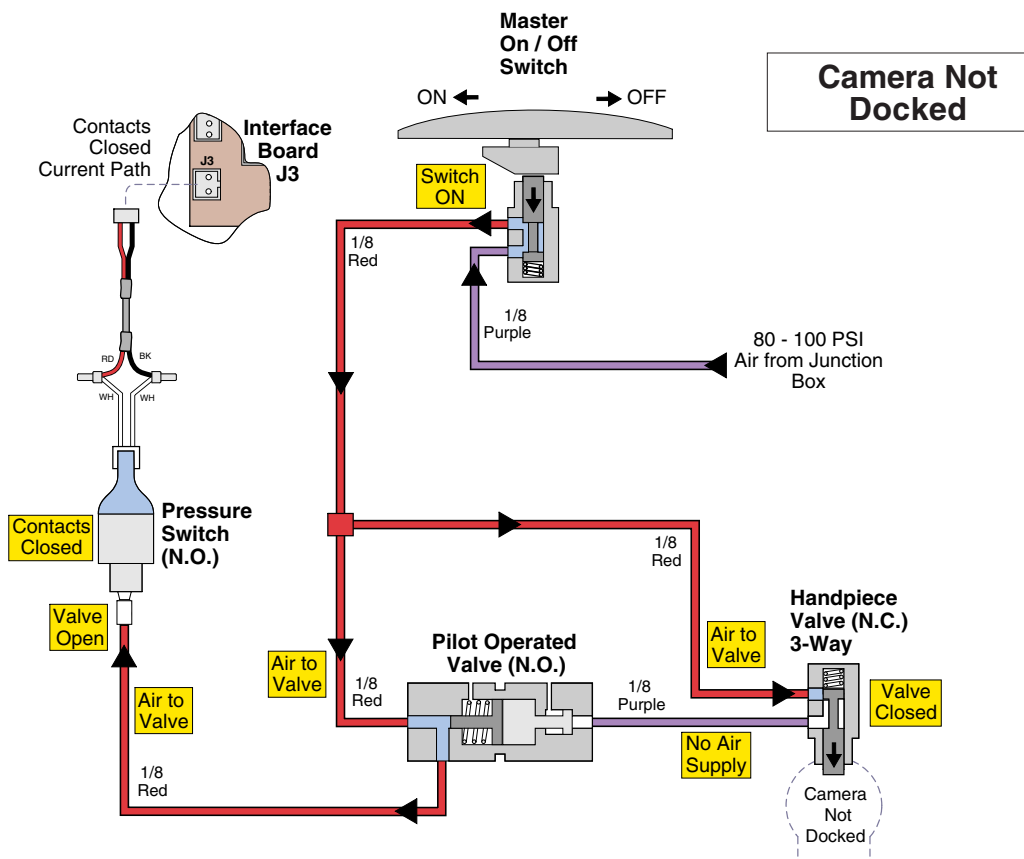
4511 Golden Foothill Parkway
El Dorado Hills, CA 95762
Phone: 1 800 518 1102
1 916 941-8010
Fax: 1 916 941-7689

Hours: 7:00 AM to 4:00 PM (*Pacific Time*) Mon. - Fri.

CAMERA CIRCUIT OPERATION



DA161402i



DA161502i

TROUBLESHOOTING GUIDE

NOTE:

The Troubleshooting Guide is for basic problems that could exist with the camera system. Always check these items before contacting Digital DOC LLC.

Utilize the Camera Circuit Operation, Electrical / Air Connection Layout, and the Interface Assembly illustrations for assistance.

Problem	Symptom	Probable Cause	Check	Correction
Camera Touch Pad Functions Do Not Work	Cannot Scroll Backwards or Forwards. Cannot Turn Power On or Off.	Camera not in docked position.	Camera must be in docked position.	Place camera in docked position.
		Touch Pad harness is not plugged in.	Check harness connections on Touch Pad and J7 of Interface Board.	Connect harness(es).
		Harness connection(s) to IntraOral Camera interface board loose or not connected.	Check harness connections on Interface Board, CPU and from Pressure Switch.	Connect harness(es).
		Air continues to be supplied to Pressure Switch, keeping contacts closed, even though camera is in docked position.	Check N.C. Handpiece Valve. Pilot Air (purple tube) <u>should</u> be supplied from Valve to Pilot Operated Valve when camera is docked.	Replace N.C. Handpiece Valve.
			Check N.O. Pilot Operated Valve (red tube to Pressure Switch). Air <u>should not</u> be supplied from Valve to Pressure Switch when camera is docked.	Replace N.O. Pilot Operated Valve.
		Pressure Switch, connected to J3 of Interface Board malfunctioning. Contacts stay closed when Camera is in docked position.	After assuring Handpiece and Pilot Operated Valves are operational, unplug connector from J3 and check for continuity from Pressure Switch. <u>Should not</u> have continuity when camera is docked.	Replace Pressure switch.
		5VDC <u>not</u> present at J6 (pins 1 & 4) on harness or on J1, 3.3 VDC (pins 2 & 3) and 12 VDC (pins 1 & 2) <u>not</u> present	Check to assure harness is plugged into CPU.	Plug Interface Harness into CPU or replace harness.
Camera Does Not Work.	Camera does <i>Not</i> come "Alive" when removing it from the docked position.	No Air is supplied to Pressure Switch, Contacts will remain Open.	Check N.O. Pilot Operated Valve (red tube to Pressure Switch) <u>Air should be supplied</u> from Valve to Pressure Switch. <u>No pilot air</u> (purple tube to Pilot Operated Valve) should be present.	Replace Interface Assembly with a known good one and check operation.
				Replace N.C. Handpiece Valve if air is going thru valve when Camera is not in Docked position.

CAMERA KIT 002-0866-00

NOTE:

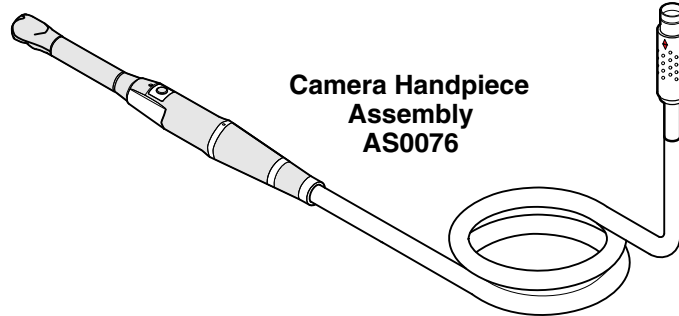
Questions relating to the Camera or any of its components concerning Operation, Technical Service, Troubleshooting, Warranty or Non-Warranty issues, or Parts Ordering contact:

***Digital DOC LLC
4511 Golden Foothill Parkway, Suite 1
El Dorado Hills, CA. 95762***

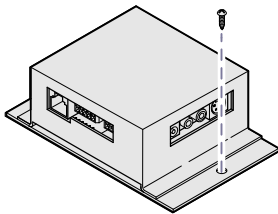
Phone: 1 800 518-1102 or 1 916 941-8010

Fax: 1 916 941-7689

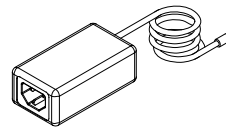
Hours: 7:00 A.M. to 4:00 P.M. (PST) Mon. - Fri.



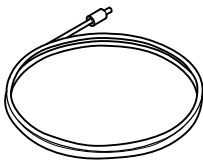
**Camera Handpiece
Assembly
AS0076**



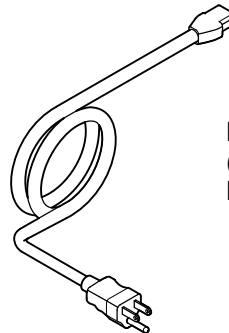
**CPU Assembly
AS0083**
(Includes two #10-3/8" self-tapping screws)



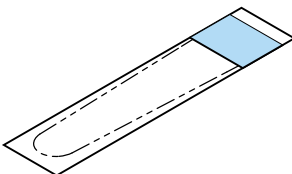
**Camera PowerSupply
(7.5 VDC 2.0 A)
PS007.5V-MED**



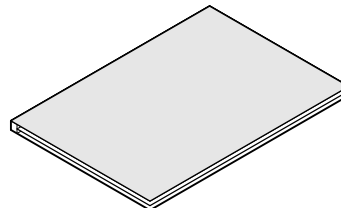
**Camera Power
Extension Cable(12 ft.)
CA0024**



**Power Cable
(Medical Grade)
PC-US-MED**



**Camera Sheath
SH0003-SMPL**
(25 Piece Sample Pack)



**Camera Operator's
Manual
MA0008**

MONITOR KIT 002-1125-00
(INCLUDES 002-1489-00 ~~(002-1059-00 (NO LONGER AVAILABLE))~~)

NOTE:

Questions relating to the Monitor or any of its components concerning Operation, Technical Service, Troubleshooting, Warranty or Non-Warranty issues, or Parts Ordering contact:

***Exorvision
1370 Stewart Street
Seattle, WA. 98109***

Phone: 1-877-801-8342 or 206-254-0220

Hours: 7:00 A.M. to 4:00 P.M. (PST) Mon. - Fri.

NOTE:

Questions relating to warranty or non-warranty repairs please contact:

Digital DOC LLC

4511 Golden Foothill Parkway, Suite 1

El Dorado Hills, CA. 95762

Phone: 1 800 518-1102 or 1 916 941-8010

Fax: 1 916 941-7689

Hours: 7:00 A.M. to 4:00 P.M. (PST) Mon. - Fri.

**WARRANTY & RETURN POLICY
for
DIGITAL DOC LLC**

Digital Doc LLC agrees to guarantee parts and labor for each chair camera purchased by the doctor for the term of two years from the date of purchase, when used in accordance with the manufacturer's instructions. In the event a product is returned by the dealer, or the end user, and the warranty has expired, Digital Doc LLC reserves the right to collect a reasonable fee from the end user for services mutually agreed upon.

Digital Doc LLC agrees to replace any defective product, free of charge, during the first thirty (30) days from the date of purchase. After the first thirty (30) days, Digital Doc LLC, will pay the shipping to return the repaired item to the customer. If the customer elects to ship the product three-day economy, Digital Doc LLC, will return-ship in the same manner. However, if the customer elects to ship the product overnight, Digital Doc, LLC will reciprocate in the same manner.

Digital Doc LLC will require the end user to phone the Technical Service Department at (800) 518-1102. Please have your camera serial number ready prior to contacting Technical Support. Once the cause of the failure has been determined, Digital Doc LLC will issue a "Return Merchandise Authorization" (RMA) number to be written clearly on the outside of the package in which the item is shipped. Items shipped to Digital Doc, LLC without the RMA written on the outside of the package will be returned to the customer at their cost.

No items will be received for warranty or non-warranty work without the RMA number printed clearly on the package.

All non-warranty repairs will need a credit card, or some form of payment prior to the repair work being authorized.

If your repair is deemed under warranty, Digital Doc LLC agrees to repair, or replace the item within 5 business days from the time it was received. The item will then be shipped to the person, or persons whose name appears on the shipping label. Please note that the 5 day turn-around policy does not apply to non-warranty repairs. All non-warranty repairs will be billed at \$95.00 per hour plus parts. All refusals to authorize non-warranty work will be subject to a one hour minimum charge.

Midmark Corporation
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937-526-3662
Fax 937-526-5542
www.midmark.com



Because we care.