

Western Surgical®

OPERATION INSTRUCTION

USER'S MANUAL

MEDICAL VIDEO CAMERA



www.westernsurgical.in

Email : westernsurgical@gmail.com

Email : info@westernsurgical.in

Ph. : +91-281-2232871 / 2243159

CONTENTS

1. P.3 - PRESENTATION OF THE CAMERA
2. P. 3 - PRECAUTIONS FOR USE
3. P. 3 - INSTALLATION
4. P. 4 - USER ADJUSTMENTS
5. P. 6 - DESCRIPTION OF THE BACK PANEL
6. P. 7 - RECOMMENDED PROCEDURE FOR DECONTAMINATION
7. P. 7 - AFTER SALE SERVICE

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



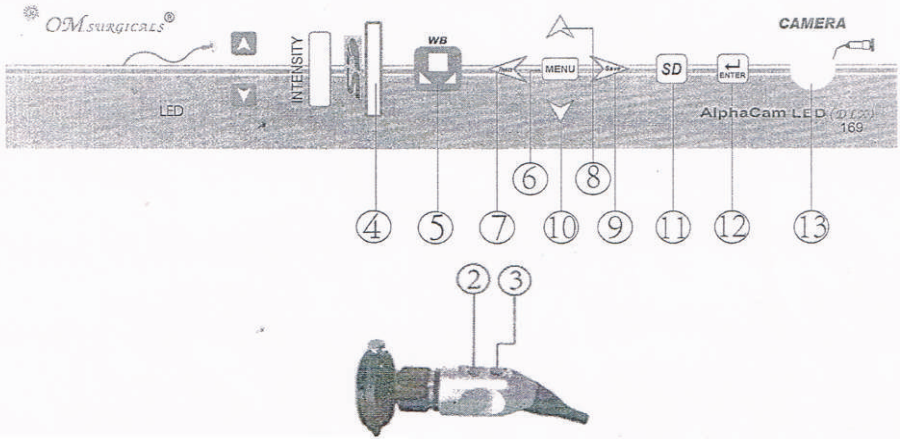
Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

The picture of camera's head panel:



- 1 power switch
- 2 the button of freezing
- 3 the button of storing
- 4 SD card slot
- 5 the button of white balance
- 6 the button of menu
- 7 the button of adjusting
- 8 the button of choice
- 9 the button of save
- 10 the button of choice
- 11 the button of SD card
- 12 the button of confirmation
- 13 Coupler

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

1

PRESENTATION OF THE CAMERA

It is a colour micro camera with deposed electronic, designed for endoscopies.

its ultra-light sensor, its auto-shutter, its performances in terms of sensitivity, resolution as well as its fidelity in the respect of colors make of it the ideal medical tool.

It includes :

- A Control unit.
- A 1/3" CCD, C-Mount camera head, at the end of a 3,25 m cable.
- A Power cable.
- A BNC cable,.
- A Y/C cable.
- A User Manual.

This camera is waterproof.

This equipment was delivered in a pasteboard wrapping

We propose a whole list of accessories complementary to the camera itself.

You will mainly find there light sources, other kinds of cameras, lenses of different focal, diverse instruments holders, couplers for fibroscope,...

For more information on these products, please refer to our catalogue or phone to our commercial department..

2

PRECAUTIONS FOR USE

- We comply with all the requirements in terms of electromagnetic compatibility (EMC) during the development of this camera. Nevertheless, some devices can disturb the quality of the image if their working frequency is close the camera's one (14,1875 MHz and 28,375 MHz). We advise you to keep these devices far from the camera.
- The sensor of the camera and its connector being at the same potential, it is strictly forbidden to place the sensor on the patient if the connector is not linked to the CCU. This one must be grounded thanks to the mains cable.
- Do not expose the CCU to waterfalls and do not save it in damp places (risk of electrocution).
- Put the CCU in a clean, dry and well ventilated place.
- Do not put the CCU on textile surfaces (carpet, blankets, etc.).
- Disconnect the CCU from the mains if you do not use it for several days. Do not draw on the cable.
- Never crunch, pinch or cut the cable linking the sensor to the control unit.
- Never expose the product to severe vibrations.
- Do not drop the CCU or the sensor.
- This camera and its accessories require no special maintenance when no longer used

3

INSTALLATION

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

3.1. CONNECTION OF THE BACK PANEL

- Connect the power supply cable to the mains plug ,and video cable connect to video signal(RGB output/Y/C output/Signal outputs/DVI outputs/USB outputs)
- Plug the other end of this video cable into the video input of your monitor.

3.2. STARTING

- Plug the connector of the sensor on the front panel of the control unit (C1).
 - Screw the ring of the connector on the base.
 - Check that the C-Mount sensor is equipped with an objective. If you did not buy any objective or if you already have C-Mounted ones, think to screw it on the sensor.
 - Power the monitor and camera thanks to the general switch located on the front panel (S2). The camera is ON (The green led of the switch as well as the displayer –D- must be lighted). You can then make sure that the camera works properly and that you are entirely satisfied with the adjustments of your monitor concerning brightness as well as color. Take good note on this matter that the median positions of the adjustments of the monitor do not always give the best image.
- Before connecting your endoscope or fibroscope on the lens of the camera, you must check its condition (clean distal lens, correct focus if necessary) and link it to your light source.
- Then check if the image produced with such a configuration is good. To do so, you just have to power your light source and to place the extremity of your endoscope in the palm of your hand, thus simulating the basic conditions of endoscopy (Beware of the working distance "shooting object-Endoscope" which must be similar to reality, i.e. some centimeters).
- If you obtain a fuzzy image, modify the focus of the lens and if necessary of the endoscope. Check also if there is neither blur nor dust on your lens.

4. USER ADJUSTMENTS

This camera is equipped with an Auto-Shutter. This electronic device allows to have the exposure time of the CCD varying like on a camera. The longer the exposure time is, the more energy the CCD gets and the clearer the image is.

The camera adjusts itself the optimum exposure time according to the analysed image. Thus, if the shot scene suddenly darkens, the camera is going to increase itself its exposure time until it gets a correct luminosity image. On the opposite, if the luminosity of the shot scene increases, the exposure time decreases.

4.1. WHITE BALANCE

A button allows to initialise the White Balance. You must proceed as follows:

- Shoot at a white surface (beware the produced image is clear);
- Press on the "A" (AWB) button of the white balance (WHITE BALANCING is displayed);
- Do not move any longer until BALANCE OK is displayed (several seconds) significative to the end of the

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

white balance. You can then check if the shooted surface appears very white on your monitor. Each balance is memorised. Thus, the next time you power the camera (and if no parameters of your image chain was modified), you will find the same colors.

You could be led to start again this procedure if:

- You change the type of light source;
- You change your lamp (new one);
- You change the optics;
- You change the light cable;
- You change the CCD sensor;
- You not satisfied with the reproduction of the colors.

The camera is detecting automatically the type of light source you are using (halogen or xenon)

Note : If you are not satisfied with the quality of the colors, think to check the adjustments of your monitor (Chroma, contrast,...) Some monitors are equipped on the rear panel with commutators allowing to select a color temperature and thus to favor a color rather than an other

4.2. ADJUSTMENT PARAMETERS

The user can modify different parameters. Here is explained how to do it:

The (6) button allows to display the parameters which can be modified.

Thus, a first push on this button will make appear : parameter adjusted interface and display adjustable parameter The (8) (10) button is selected the parameter and then press adjusting button ready to be modified .Another push will activate the next parameter and so on. Thus we can perform the following adjustments:
light source: xenon, other, nature light,halogen

(Brightness) BRIGHTNESS X (0 to 100)

(Red gain)RED GAIN(0 to 100)

(Blue gain)BLUE GAIN(0 to 100)

(Sharpness)SHARPNESS(0 to 3)

(Zoom level)ZOOM LEVEL(1 to 8)

(Extinction area)(0 to 3)

(Extinction intensity) (10% to 90%)

(Alc type)ALC TYPE(test light: average/peak)

Image plus(0 to 100)

Language: Chinese, English

The (7) (9) button allows to display the parameters which can be modified. If the brightness parameter is selected, these two buttons can choose -8 ~ 8 value. After adjust, press "menu" again ,enter into interface 2, offer endoscopic name: (THORACO ,IBRE ARTHRO, HYSTERO ,CYSTQ ENT, LOPARO, NERVE), Select the appropriate location, press the "confirm" button, can be stored in the corresponding endoscopic name After choose relevant position, press OK, the parameters will save the endoscopic name, press OK ,will exit the interface. If press menu 3 times, enter parameters interface ,choose endoscopic name,press OK, can educe parameters which be saved.

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

4.3 Freeze and save the image

freeze and save:

Please press the button of freezing when examination and operation(panel 7 or camera head 2)then the screen will be freeze and display (FREEZE FOR IMG...). If you do not want to store images or are not satisfied with the freeze image, press the freeze button once again to release of the screen. If you want to store frozen image, press the store button (panel 9 or camera head 3), the screen will display(SAVE IN MEMORY), the image was stored in the camera. After Storage press the frozen button again to release the screen. The camera can store up to 15 images, if stored more than 15 images will be followed by coverage of the image prior to storage, image storage number will be displayed when the freeze in the (FREEZE FOR IMG) behind.

Observe the images:

After saving the images, press the button of save(press two times in the freezing situation) enter into the observing the images. There is three mode of observing the images. Single-screen, four screen, Picture-in-picture), can be observed in the images according to the menu button to switch the status of observation mode.

Single-screen mode, press the save button to switch image , the image 's storage numbers will be displayed on the screen, when indicating storage numbered 00, the display screen in real time.

In four screen mode, press the adjusting button to switch the location of the image, press the save button to switch image .the image's storage numbers will be displayed on the screen, when indicating storage numbered 00, the display screen in real time.

In the picture-in-picture mode, press adjusting button to switch view, press the save button to switch image. After Observed ,press the freeze button and release images ,then return to normal observation status.

Save SD card

Save SD card to the card insert trough, press the SD button. the screen will display (MOUNT SD CARD CREATE FXIMG...), then SD card will set a new file naming FXIMG..., then freeze and save, will display (SAVE IN SD&MEM). The image will be saved in camera and SD card. If you need to continue to examine another case, press the SD button once again, SD card will create a new folder, at the same time, the new store images will be stored in the new folder.

5. DESCRIPTION OF THE BACK PANEL

5.1. MAINS PLUG

The electric power supply of the camera is done through a plug (S2) which must be linked to the local supply circuit thanks to the electric cable delivered with the system. This plug includes a mains filter, a fuses-trap and the general power switch. The two fuses used are of type T800mA - 250V.

During a changing of fuses, it is peremptory to disconnect the camera from the mains and to use fuses of the same kind. The T of "T800mA" means "temporised".

5.2. VIDEO OUTPUTS

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

2 independent video outputs are available on this camera. A composite and A Y/C. One of these 2 outputs

must be linked to the video input of your monitor (Preferably a Y/C)

5.3. DATA

Exclusively reserved to technical services.

5.4. IDENTIFICATION REFILL

The indications mentioned in the refill allow to identify the camera in conformity with the International standard IEC 601-1.(see A3 sheet)

6

RECOMMENDED PROCEDURE FOR DECONTAMINATION

BEWARE : You must respect this procedure only if the sensor of your camera is waterproof. Check if

the sleeves which is located at the level of the sensor is equipped with a blue ring.

If such is the case, the camera sensor and the lens are designed for a cold decontamination by immersion

(Cidex, Stéraniols, ...) or by cold gas like Aldylene or by U.V. All other methods of decontamination are prohibited. The damages due to these other methods could not be taken over by us.

The camera connector cannot be immersed. It is peremptory to leave it outside of the bath of decontamination.

We advise you to immerse the C-Mount sensor with its objective screwed on it.

It is peremptory to respect the procedure consisting in cleaning the parts to immerse before decontamination and after decontamination, to rinse carefully with sterile water all the parts which have been in contact with the decontaminant.

Two cautions will help you to avoid the problems of blur which sometimes occur :

- During the preparation of the instrumentation table, start with the camera and the endoscope so that their temperature reaches the surrounding one.
- Before placing your endoscope in the trocar, clean its distal end with Mercryl (or similar).

7

AFTER SALE SERVICE

No special maintenance is necessary on the camera. However, due to the possible move of the camera from one office to another, or from one operatory to another, or due to a change of staff, here is a list of common problems which are easy to troubleshoot.

For all other cases, contact our Maintenance Service that will help you in best delay. We remind you that the mishandlings are not guaranteed.

7.1. THE ON/OFF LED DOES NOT LIGHT WHEN YOU POWER THE CAMERA.

- Check if the mains plug on the rear panel of the camera is well connected to the mains.
- Check the good state of the fuses (use only fuses of the kind of those specified on the rear face : T800 mA 250V).

7.2. THE ON/OFF LED LIGHTS BUT THERE IS NO IMAGE ON THE MONITOR.

- Check if the sensor is well connected to the front panel and that it shoots a workable image.

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

- Check if the camera is well connected to the monitor.
- If your video chain holds several elements, try to connect directly the camera to the monitor in order to validate that the problem is not located at the level of one of your peripherals.
- Check if the monitor is well powered, switched on the good video input and if the images adjustments are in middle position (color, light and contrast).
- Check your light source, your light cable and optic.

7.3. THE IMAGE IS FUZZY, UNIFORMLY WHITE.

- Check if there is no blur on the lens.
- Check if the sensor do not aim at a too lighted object.
- Check the focus of the lens.

7.4. THE IMAGE IS TOO CLEAR OR TOO DARK.

- Check if the "BRIGHTNESS" parameter is not at its maximum or minimum.

If the problem remains and if you are led to send us back the light source, be careful to do it in its original wrapping. Likewise, you must send us the whole system (control unit, sensor, lenses, cables).

Be

kind enough to join an explanatory note relative to the observed default to the expedition bill.

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

Date of Installation	Installed By
Model No.	Serial No.
Warranty Period	
Name of Doctor & Address :	

Customer Sign. With Stamps

**Marketed By: Western Surgical
Sign. With Stamps**

No Claim Warranty :

1) Any Defect Throughout Power Supply

2) Any Physical Damage

3) Under Warranty Standby Unit Not Provide

4) Under Warranty When Company Send Parts or Machine we Imidiat send to Buyer.

* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



Western Surgical

www.westernsurgical.in

Email : westernsurgical@gmail.com

Ph. : +91-281-2232871 / 2243159

OUR OTHER PRODUCTS RANGE



* Carrying Warranty at Rajkot only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.

Western Surgical®

"Happy Home", 2nd Floor, 23, Karanpara,
B/h. S.T. Bus Stand, Kanak Road,
Rajkot-360 001. Ph. : 0281-2232871/2243159
Mo. : 98250 69069 - 98250 45997
Email : westernsurgical@gmail.com
Email : info@westernsurgical.in

* www.westernsurgical.in *

