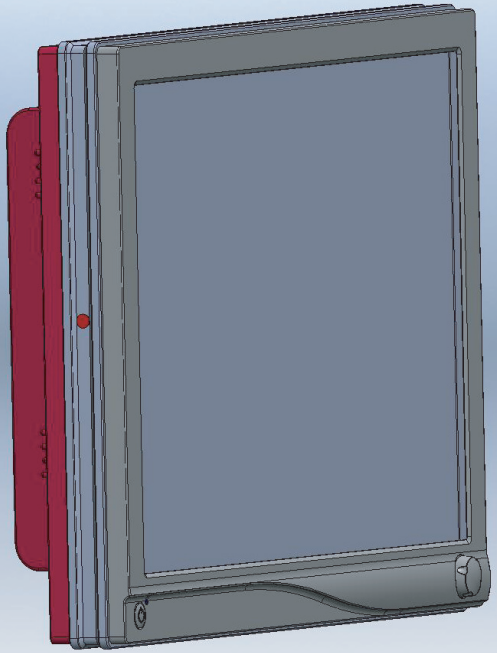
Vision Elect WHDTV
26″ High-Definition
LCD Monitor

REF 240-030-970

ADVAN

User Guide



Contents

Warnings and Cautions

Please read this manual and follow its instructions carefully. The words warning, caution, and note carry special meanings and should be carefully reviewed:

Warning	**Indicates risks to the safety of the patient or user. Failure to follow warnings may result in injury to the patient or user.**
Caution	**Indicates risks to the equipment. Failure to follow cautions may result in product damage.**
Note	Provides special information to clarify instructions or present additional useful information.

An exclamation mark within a triangle is intended to alert the user to the presence of important operating and maintenance instructions in the manual.

A lightning bolt within a triangle is intended to warn of the presence of hazardous voltage. Refer all service to authorized personnel.

Warnings

Warning

To avoid potential serious injury to the user and the patient and/or damage to this device, please note the following warnings:

1. Read the operating manual thoroughly and be familiar with its contents prior to using this equipment.
2. Carefully unpack the unit and check if any damage occurred during shipment.
3. Test this equipment prior to a surgical procedure. This display was fully tested at the factory before shipment.
4. Do not place the display or any other heavy object on the power cord. Damage to the cable can cause fire or electric shock.
5. This equipment is not suitable for use in the presence of a flammable anesthetic mixture with air, or with oxygen or nitrous oxide.
6. Do not put any liquid or solid object into the panel. If this occurs, unplug the unit and have it checked by qualified personnel before operating it any further.
7. Unplug the unit if it is not to be used for an extended period of time. To

disconnect the cord, unscrew the plug first then, pull the cord out by the plug. Never pull the cord itself.

8. To avoid electric shock, avoid removing the control unit covers.
9. Do not attempt internal repairs or adjustments not specifically detailed in this operating manual.
10. Pay close attention to the care and cleaning instructions in this manual. A deviation may cause damage (refer to the "Cleaning" section).
11 Do not sterilize the display.
12. Use appropriate caution to prevent contact with fluids if the unit is being used with a power supply in patient environments.
13. Federal law (United States of America) restricts this device to sale by, or on the order of, a physician.

Cautions

1. Plug the AC adapter in to a grounded power outlet.
2. Use only the proprietary Vision Elect WHDTV power supply (P/N 240-030-950, Manufacturer: JEC Korea, Model No: JMW1150KA2400F07) for the Vision Elect WHDTV display (model 240-030-970). Completely

3. Connect equipment to a receptacle labeled "Hospital Only" or "Hospital Grade" to achieve grounding reliability.
4. To connect to an international power supply, use an attachment plug appropriate for the power outlet
5. Power off the unit when it is not in use.
6. Remove the power module and connection when transporting the unit.
8. Handle the display with care. Do not strike or scratch the screen.
9. Never operate the unit right after having been transported from a cold location directly to a warm location.
10. Do not expose the display to moisture or apply liquid cleaners directly to the screen. Spray the cleaning solution into a soft cloth and clean gently.
11. Allow adequate air circulation to prevent internal heat buildup.
12. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots. The display is cooled by natural convection and has no fan.
13. Do not install the unit near sunlight, excessive dust, mechanical vibration, or shock.
14. Do not operate the unit in a vertical position. The unit is designed for operation in a horizontal position.

15. Keep the unit away from equipment that uses strong magnets (i.e., large loudspeakers).
16. Do not touch the patient with signal input or output connectors. Equipment with SIP/SOP connectors should either comply with IEC 60601-1 and/or IEC 60601-1-1 harmonized national standards or the combination should be evaluated.
17. CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

This equipment has been tested and found to comply with the limit for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation, which can be determined by turning the equipment off and on. The user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation distance between the equipment.
- Connect the equipment to an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer or field service technician for help.

18. To ensure electromagnetic compatibility, refer to the "Electromagnetic Compatibility" section of this manual. The VISION ELECT WHDTV (model 240-030-970) display must be installed and operated according to the EMC information provided in this manual.

The VISION ELECT WHDTV (model 240-030-970) display has been tested under the UL 60601-1 standard and is UL listed for medical application.

The warranty is void if any of these warnings or cautions are disregarded.

Symbol Definitions

The following symbols appear on the product, its labeling, or the product packaging. Each symbol carries a special definition, as defined below:


Dangerous High Voltage


Consult accompanying documents


Direct Current


Protective earth ground


For indoor use only


DC power control switch

Serial Number


Top - Bottom


Fragile


Do not get wet

Maximum Stacking


Manufacturer

European Authorized Representative


Indicates proof of conformity to applicable European Economic Community Council directives and to harmonized standards published in the official journal of the European Communities

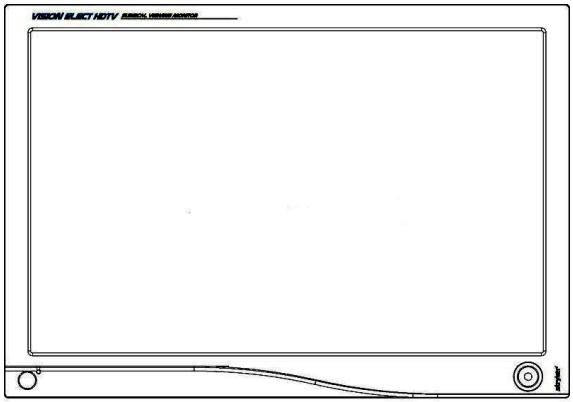
Medical Equipment is in accordance with UL 60601-1 and CAN/CSA C22.2 No. 601.1 in regards to electric shock, fire hazards, and mechanical hazards


Tested to comply with FCC Class B standards

• DC power on at locker switch


This symbol indicates that the waste of electrical and electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact the manufacturer or other authorized disposal company to decommission your equipment.

Product Description



The Vision Elect WHDTV (VE WHDTV) is a high-definition, widescreen LCD surgical display with a maximum resolution of WUXGA (1920 × 1200 at 60 Hz). The VE WHDTV supports various video inputs, including digital RGB, analog RGB, serial digital interface (SDI), component video (YPbPr/RGB), S-video, and C-video.

Intended Use

The VE WHDTV is intended to display video images during the following types of surgical procedures:

- arthroscopy (orthopedic surgery)
- laparoscopy (general and gynecological surgery)
- thoracoscopy
- endoscopy (general, gastroenterological, and ENT surgery)
- general surgery

The VE WHDTV is intended for use by qualified general surgeons, gynecologists, urologists, thoracic, orthopedic, ENT, and plastic surgeons adequately trained in these surgical procedures. It is a non-sterile, reusable device, not intended for use in the sterile field.

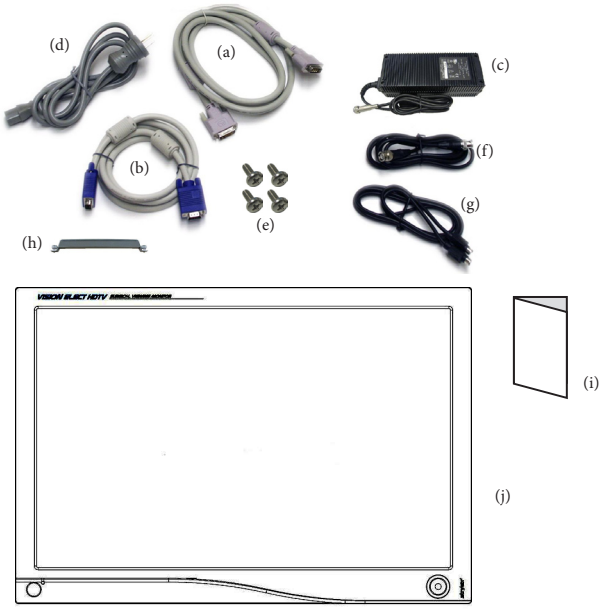
Indications/Contraindications

The VE WHDTV is indicated for use as an accessory to an endoscopic surgical camera during general surgery, general laparoscopy, nasopharyngoscopy, ear endoscopy, sinusoscopy, and plastic surgery wherever a laparoscope/endoscope/arthroscope is indicated for use.

Some of the more common endoscopic surgeries where the VE WHDTV is indicated for use include: cholecystectomy; hernia repair; appendectomy; pelvic lymph node dissection; hysterectomy; laparoscopic and thoracoscopic anterior spinal fusion; anterior cruciate ligament reconstruction; knee, shoulder, and small-joint arthroscopy; decompression fixation; wedge resection; flexible endoscopy; urology and gynecology; lung and pleural biopsy; dorsal sympathectomy; pleurodesis; internal mammary artery dissection for coronary artery bypass; coronary artery bypass grafting where endoscopic visualization is indicated; and examination of the evacuated cardiac chamber during performance of valve replacement .

There are no known contraindications.

Package Contents

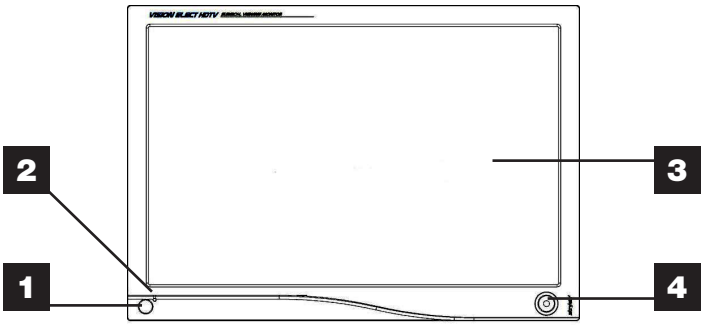


a. 1 DVI cable
b. 1 VGA HDDB15 cable
c. 1 AC adapter (Stryker P/N 240-030-950, Manufacturer: JEC, Model No: JMW1150KA2400F07)
d. 1 Hospital-grade AC power cord
e. 4 M4 × 10mm VESA screws
f. 1 BNC cable
g. 1 S-Video cable
h. 2 Cable-management clamps
i. 1 User guide
j. 1 VE WHDTV display

Device Features

Front panel

Operate the display using the rotary control located on the front panel. A list of the display controls and their functions is provided below.



1. **Power LED**	Shines green if the display is powered on; blinks red if the display is in standby mode.
2. **Power switch (soft)**	Powers the display on and off
3. **Rotary control**	Accesses the on-screen display and navigates through its functions

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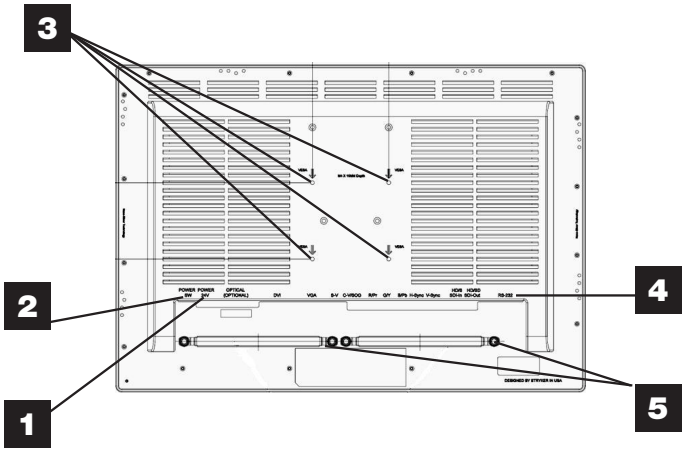
Rear panel



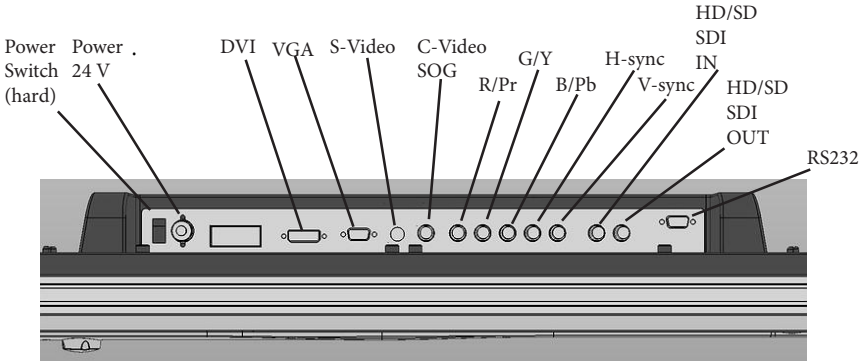
1.	**Power connector**	Connects to the 24V DC power converter
2.	**Power switch (hard)**	Powers on and off the input DC power
3.	**VESA mounting holes (100mm)**	Provide access points for mounting the monitor
4.	**Connector tags**	Indicate the types of video connectors.
5.	**Cable-management clamps**	Organize cables

Setup and Interconnection

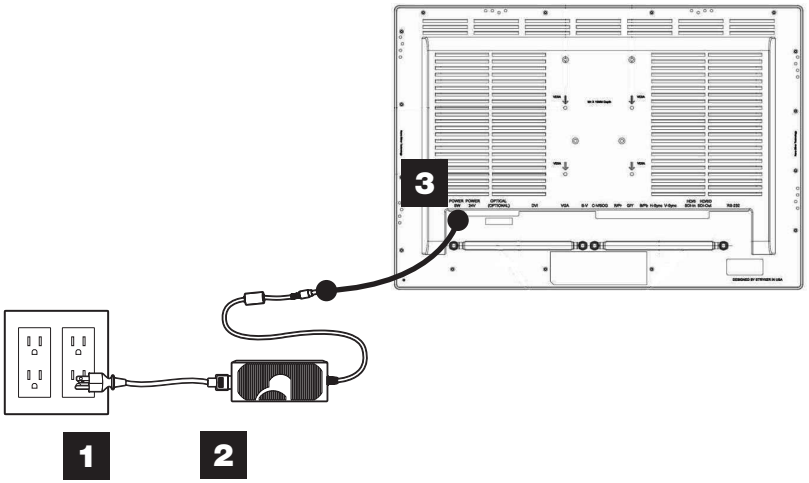
Stryker Endoscopy considers instructional training, or inservice, an integral part of the transmitter. Your local Stryker Endoscopy sales representative will perform at least one inservice at your convenience to help set up your equipment and instruct you and your staff on its operation and maintenance. To schedule an inservice, contact your local Stryker Endoscopy representative after your equipment has arrived.

Connection Ports

Video input signals are connected to the rear of the VE WHDTV display, as illustrated below:

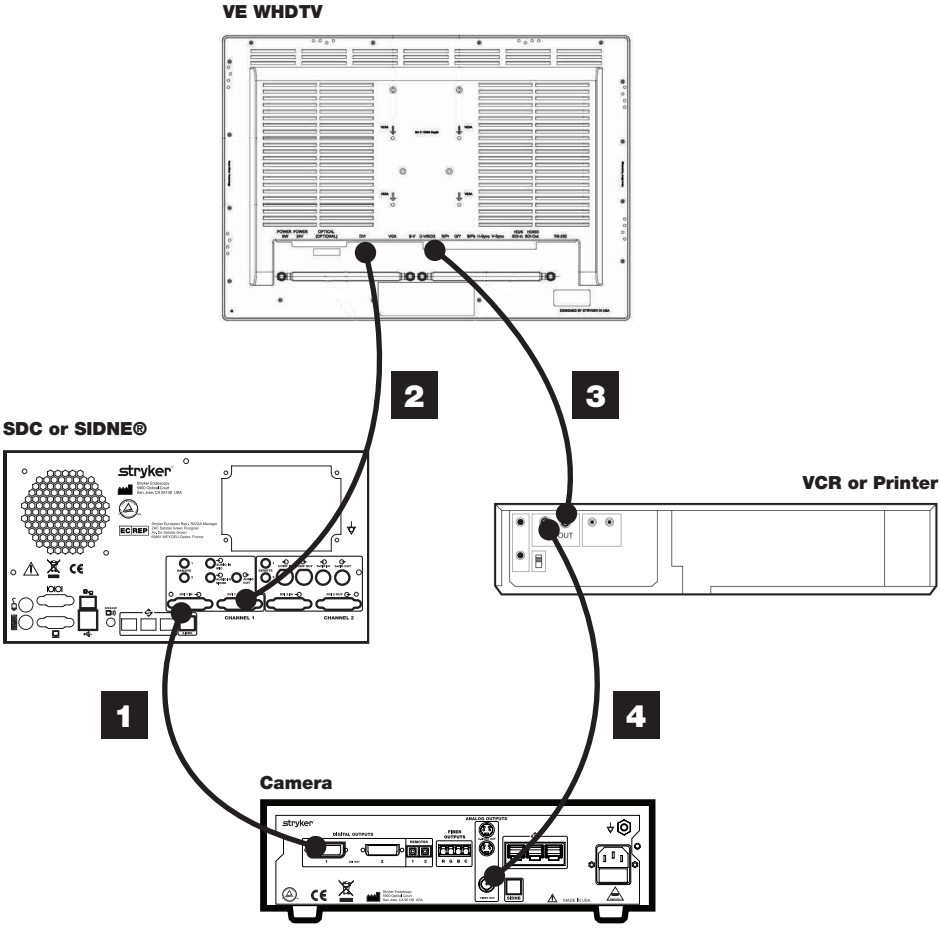


Connecting AC Power



1. Connect the AC power, using the supplied hospital-grade power cord.
2. Connect the power cord to the power supply.
   (240-030-950, manufacturer: JEC Korea, model JMW1150KA2400F07)
3. Connect the power supply to the 24V input on the display.

Basic Video Setup

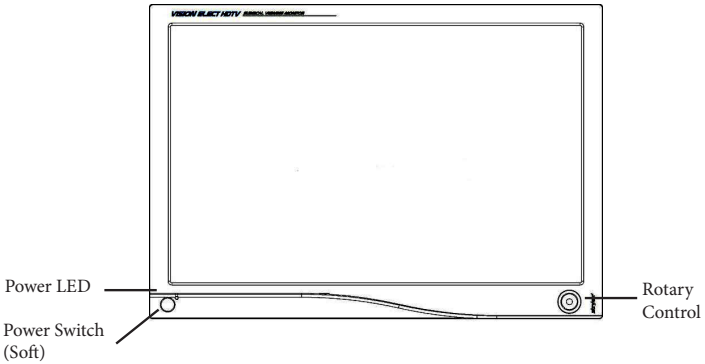


1. Route the video input 1 from the camera to the SDC or SIDNE.
2. Route the video input 1 to the DVI input on the display.
3. Connect the C-video input on the display to the C-video output on a VCR or printer.
4. Connect the C-video input on the VCR or printer to the C-video output on the camera.

Operating the Display

Accessing the On-Screen Display

Operate the display using the rotary control located on the front panel. A list of the display controls and their functions is provided below.



1. Power LED: Indicates menu current status. Displays green if display is powered on; blinks red if display is in Standby mode.
2. Power Switch (Soft): Turns the power ON or OFF.
3. Rotary Control (Turn Right / Left): With the on-screen display menu activated, increases/decreases the value of the selected parameter. With the on-screen display deactivated, activates the video source selection menu.
4. Rotary Control Switch (Push): Accesses/selects on-screen display menu.
5. Rotary Control Switch (Push and Hold): Exits on-screen display menu.

Using the On-Screen Display

The display provides an on-screen display to help navigate through the various display-adjustment menus.

1. Press the **Rotary Control** to activate the on-screen display (OSD) menu.
2. Rotate the **Rotary Control** to move up or down through the menu. The parameter will be highlighted when selected.
3. Press the **Rotary Control** to enter the next level OSD.
4. Rotate the **Rotary Control** to increase or decrease the value of the selected parameter, or to make a selection on different options.
5. To exit the OSD menu screen from the second- or third-level OSD menu, select the Exit option. To completely exit the OSD, press and hold the **Rotary Control**. If no keys are pressed for a time period, the OSD automatically times out.
6. While the OSD menu is deactivated, rotate the **Rotary Control** to activate the input signal selection menu. The current input signal will be highlighted with a dot. Rotate the Rotary Control to select the preferred input signal.

Stryker Camera Preset Modes

Camera	Resolution (H x V)	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
988	1024 x 768	49.09	59.90
988i	1024 x 768	41.25	50.00
1088/SDC Pro2	1024 x 768	50.03	60.00
1088i/SDC Pro2	1024 x 768	41.10	50.00
1088/1188/SDC HD	1280 x 1024	64.02	60.10
1088i/1188i/SDC HD	1280 x 1024	59.99	50.00
1188w720	1280 x 720	45.00	60.00
1188iw720	1280 x 720	37.50	50.00

On-Screen Display Menus

Item	Function Description	Range
Specialty		
Color Temperature *	Chooses between color temperatures for Standard, Arth, Lap, PACS, or Norm	
Red	Red balance	-128 to 128
Green	Green balance	-128 to 128
Blue	Blue balance	-128 to 128
Gamma	Gamma value	0.1 to 2.5, S0, S1, S2
Setting		
Brightness	Increases or decreases the brightness	0-100
Contrast	Increases or decreases the contrast	0-100
Phase**	Increases or decreases the Phase level	0-100
Chroma**	Increases or decreases the Chroma level	0-100
Image Sharpness	Sets image sharpness	1-10
Video Sharpness**	Increases or decreases the video sharpness	0-100
Image Effect		
Scale Mode	Chooses scale mode between Fill All, V-Fill, H-Fill, One To One or Fill To Aspect	
Freeze Frame	Enables or Disables freeze frame	
Zoom/Pan	Enables zoom-in and pan function	
PIP	Enables PIP (Picture In Picture) function	
POP	Enables POP (Picture On Picture) function	
PBP	Enables PBP (Picture y Picture) function	
Advanced		
OSD Control	Controls OSD Menu Position, Background, and Timeout	
Screen Control***	Controls and adjust Horizontal, Vertical, Frequency, Phase	
DPMS	Chooses DPMS (Display Power Management Signaling)	ON, OFF, 60min, 90min, 120min

Item	Function Description	Range
Auto Source Select	Adjusts Auto Source Select between on and off	
Restore Factory Settings	Sets to factory default	
Key lock	Sets to Key lock mode	
Wireless		
Mac ID	Unique Machine ID of WHDTV Transmitter	
Status	Status Message	
Information		
User Name Entry	Enters custom username display for boot-up display	
Serial Number	Displays display serial number	
Runtime	Displays current run time of display	
Input Format	Displays current input format	

Actual on-screen display values may vary with updated versions of the firmware and user setting.

* Color Temperature RGB adjustment is available only for Standard, Arth and Lap settings.

* PACS and Norm selection only available under SOG input.

** Only available under SDI, S, or C-video input.

*** Only available under VGA input.

Cleaning and Maintenance

Caution

Do not expose the display to moisture or apply liquid cleaners directly to the screen. Spray the cleaning solution into a soft cloth and clean the screen gently.

No specific liquid or chemical is necessary for cleaning the VISION ELECT WHDTV (model 240-030-970) LCD display. Use only non-abrasive cloths and cleaning solutions to clean similar equipment used in hospitals.

1. Clean the plastic areas of the display with a dry soft cloth, or a soft cloth lightly moistened with mild detergent solution. Do not use any type of solvent, such as alcohol or benzine, which might damage the finish. Acceptable cleaning agents for bezel cleaning include:
   - Cidex (2.4% glutaraldehyde solution)
   - 0.5% Chlorhexidine in 70% isopropyl alcohol
2. Apply alcohol to glass surfaces with soft cotton applicator to aid in cleaning and drying without leaving spots or streaks.
3. Clean the display filter with a dry soft cloth, or soft cloth lightly moistened with warm water. Other acceptable cleaning agents are listed below:
   - 70% isopropyl alcohol
   - Cidex (2.4% glutaraldehyde solution)
   - 0.5% Chlorhexidine in 70% isopropyl alcohol
4. Dry thoroughly with soft towel or gauze surgical sponge.

Maintenance

The VE WHDTV requires no periodic maintenance. There are no user-serviceable parts inside.

Refer all service questions to authorized Stryker service representatives.

Troubleshooting

Before returning your LCD display for service, consult the troubleshooting list below:

Problem	Current Status	Remedy
No picture	LED on	Using the OSD, adjust the brightness and contrast to maximum, or reset them to their default settings.
	LED off	Check the power switch at the front and back of the display.
		Check if the AC power cord is properly connected to the AC adapter.
	LED blinking	Check if the video signal cable is properly connected at the back of the display.
		Check if power of the video signal source system is ON. Abnormal
Abnormal picture	Oversized, undersized, or missing display; or center shift.	Using the Screen Menu, adjust the PHASE, FREQUENCY, HORIZONTAL, and VERTICAL settings with non-standard video signal timing.
		Wait a few seconds after initial sync of video signals, or power cycle the display.
OSD error message	“No wireless channels available”	Please turn off potential wireless interference, such as 802.11a/n access points and 5.8 GHz phones
OSD error message	“Video format not supported”	Ensure that an acceptable video source is connected. Refer to technical specifications for a list of acceptable video formats.

Technical Specifications

Display

LCD Display Panel	25.54 inches (a-Si TFT Active matrix LCD)
Synchronization	2.5 - 5.0 Vpp separated sync
Pixel Pitch	0.2865(W) × 0.2865(H)
Response Time	<25ms Typ
View Angle	+/-89° (L/R) × +/-89° (U/D)
Display Colors	16 million colors
Native Resolution	1920 dots × 1200 dots
Input Signal	1 × DVI 1 × VGA 1 × HD/SD-SDI 1 × C-Video/SOG 1 × S-Video 1 × Component (Y/G, Pb/B, Pr/R, H/CS, VS)
Maximum Pixel Clock	170MHz

Electrical

Power Adapter	AC 100-240V; DC 24V
Power Consumption	150W (max)
Current Direct	

Dimensions

Dimensions (W × H × D)	616.4 × 428.8 × 121.2mm
Weight	19.62 lbs
VESA Mounting Interface	VESA 100 × 100mm

Operating Conditions

Operating Temperature	41 to 90°F (5 to 32.2°C)
Relative Humidity	10 to 60%
Atmospheric Pressure Range	500 to 1060 hPa
Electrical Input Rating	24V DC 6.25A

Transport & Storage Conditions

Storage	-4 to 140°F (-20 to 60°C)
Relative Humidity Range	10 to 85%
Atmospheric Pressure Range	500 to 1060 hPa

Classification and Approvals

Class I Equipment

Medical equipment with respect to electric shock, fire and mechanical hazards only in accordance with UL 60601-1 and CAN/CSA C22.2 No. 601.1.

Continuous operation
This display is intended for use on Health Care Facilities model 240-030-970.

Electromagnetic Compatibility

Like other electrical medical equipment, the VISION ELECT WHDTV (model 240-030-970) requires special precautions to ensure electromagnetic compatibility with other electrical medical devices. To ensure electromagnetic compatibility (EMC), the display must be installed and operated according to the EMC information provided in this manual.

Note — The VISION ELECT WHDTV (models 240-030-970 and -971) has been designed and tested to comply with IEC 60601-1-2:2001 requirements for EMC with other devices.

Caution — **Portable and mobile RF communications equipment may affect the normal function of the display.**

Caution — **Do not use cables or accessories other than those provided with the display, as this may result in increased electromagnetic emissions or decreased immunity to such emissions.**

Caution — **If the display is used adjacent to or stacked with other equipment, observe and verify normal operation of the display in the configuration in which it will be used prior to using it in a surgical procedure. Consult the tables below for guidance in placing the display.**

Warning

When this device is connected with other electrical equipment, leakage currents may be additive. To minimize total leakage current per patient, ensure that all systems are installed according to the requirements of IEC 60601-1-1.

Guidance and Manufacturer's Declaration: Electromagnetic Emissions		
The Model 240-030-970 is intended for use in the electromagnetic environment specified below. The customer or the user of Model 240-030-970 should ensure that it is used in such an environment..		
Emissions test	**Compliance**	**Electromagnetic Environment - guidance**
RF emissions CISPR 11	Group 1	Model 240-030-970 uses RF energy only for its internal function; therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The Model 240-030-970 is suitable for use in all establishments other than domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following warning is heeded: **Warning: This system is intended for use by healthcare professionals only. This system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as reorienting or relocating the system or shielding the location.**
Harmonic emissions IEC61000-3-2	Class D	
Voltage Fluctuations/ flicker emissions IEC61000-3-3	Complies	

Guidance and Manufacturer's Declaration--Electromagnetic Immunity			
Model 240-030-970 is intended for use in the electromagnetic environment specified below. The customer or the user of Model 240-030-970 should ensure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment--Guidance**
Electrostatic Discharge (ESD) IEC61000-4-2	6kV contact 8kV air	6kV contact 8kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC61000-4-4	2kV for power supply lines 1kV for input/ output lines	2kV line to ground 1kV line to line	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC61000-4-5	1kV differential mode 2kV common mode	1kV differential mode 2kV common mode	Mains power quality should be that of a typical commercial or hospital environment
Voltage dips, short interruptions and voltage variations on power supply input lines IEC61000-4-11	<5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut (60% dip in Ut) for 5 cycles 70% Ut (30% dip in Ut) for 25 cycles <5% Ut (>95% dip in Ut) for 5 sec.	<5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut (60% dip in Ut) for 5 cycles 70% Ut (30% dip in Ut) for 25 cycles <5% Ut (>95% dip in Ut) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of Wireless Transmitter requires continued operation during power mains interruptions, it is recommended that Wireless Transmitter be powered from an uninterruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	3.0 A/m	3.0 A/m	Power-frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: Ut is the AC mains voltage prior to application of the test level.			

Guidance and Manufacturer's Declaration: Electromagnetic Immunity			
Model 240-030-970 is intended for use in the electromagnetic environment specified below. The customer or the user of Model 240-030-970 should ensure that it is used in such an environment.			
Immunity Test	IEC 60601 Test level	Compliance Level	Electromagnetic Environment - guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the Wireless Transmitter system, including its cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended Separation Distance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	$d = 1.17\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2.5 GHz	3 V/m	$d = 1.17\sqrt{P}$ 80 MHz to 800 MHz $d = 2.33\sqrt{P}$ 800 MHz to 2.5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey (a), should be less than the compliance level in each frequency range(b). Interference may occur in the vicinity of equipment marked with the following symbol: 
NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.			
NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.			
(a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast, cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Model 240-030-970 system is used exceeds the applicable RF compliance level above, the Model 240-030-970 system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Model 240-030-970 unit. (b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			

Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the Model 240-030-970 System

The Model 240-030-970 system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The user of the Model 240-030-970 system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Model 240-030-970 system as recommended below, according to the maximum output power of the communications equipment..

	Separation distance (m) according to frequency of transmitter		
Rated maximum output power (W) of transmitter	150 kHz to 80 MHz $d = 1.17\sqrt{P}$	80 kHz to 800 MHz $d = 1.17\sqrt{P}$	800 kHz to 2.5 GHz $d = 1.17\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.33
10	3.70	3.70	7.37
100	11.70	11.70	23.30

For transmitters rated at a maximum output power not listed above, the recommended separation distance (d) in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Warranty

Stryker Endoscopy warrants all products, subject to the exceptions provided herein, to be free from defects in design, materials and workmanship and to substantially conform to the product specifications contained in the documentation provided by Stryker Endoscopy with the products for a period of one year from the date of purchase (the "Warranty Period"). This warranty shall apply only to the original end-user purchaser of products directly from Stryker Endoscopy or a Stryker Endoscopy authorized distributor. This warranty may not be transferred or assigned without the express written consent of Stryker Endoscopy.

If a valid warranty claim is received within the Warranty Period, Stryker will, in its sole discretion: (1) repair the product at no charge, (2) replace the product at no charge with a product that is at least functionally equivalent to the original product, or (3) refund the purchase price of the product. In any event, Stryker's liability for breach of warranty shall be limited to the replacement value of the defective or non-conforming part or component.

This warranty does not apply to: (1) products that have been misused, neglected, modified, altered, adjusted, tampered with, improperly installed or refurbished; (2) products that have been repaired by any person other than Stryker Endoscopy personnel without the prior written consent of Stryker Endoscopy; (3) products that have been subjected to unusual stress or have not been maintained in accordance with the instructions in the user manual or as demonstrated by a Stryker Endoscopy representative; (4) products on which any original serial numbers or other identification marks have been removed or destroyed; or (5) products that have been repaired with any unauthorized or non-Stryker components, including replacement lamps.

If Stryker determines in its reasonable discretion that the claimed defect or non-conformance in the product is excluded from warranty coverage as described hereunder, it will notify the customer of such determination and will provide an estimate of the cost of repair of the product. In such an event, any repair would be performed at Stryker's standard rates.

Products and product components repaired or replaced under this warranty continue to be warranted as described herein during the initial Warranty Period or, if the initial Warranty Period has expired by the time the product is repaired or replaced, for thirty (30) days after delivery of the repaired or replaced product. When a product or component is replaced, the item provided in replacement will be the customer's property and the replaced item will be Stryker's property. If a refund is provided by Stryker, the product for which the refund is provided must be returned to Stryker and will become Stryker's property.

The inspection, testing, acceptance or use of the products and services furnished hereunder shall not affect Stryker's obligation under this warranty, and such warranty shall survive inspection, test, acceptance and use.

Notwithstanding the above, the following products are warranted for a period of ninety (90) days from the date of purchase: Scopes, VCRs, Displays, and Printers. Replacement light bulbs are warranted for a period of sixty (60) days from the date of purchase.

TO THE FULLEST EXTENT PERMITTED BY LAW, THE EXPRESS WARRANTY SET FORTH HEREIN IS THE ONLY WARRANTY APPLICABLE TO THE PRODUCTS AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTY BY STRYKER, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS SPECIFICALLY PROVIDED IN THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW, STRYKER IS NOT RESPONSIBLE FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR UNDER ANY OTHER LEGAL THEORY.

Return Policy

A Returned Merchandise Authorization ("RMA") number must be obtained from Stryker Endoscopy before returning product. To obtain an RMA number, please contact Stryker Endoscopy Customer Service at 1-800-624-4422. Please send any returned products to: Stryker Endoscopy, Attn: Service Unit, 5900 Optical Court, San Jose, CA 95138.

With the return, please include the RMA number, the applicable purchase order number, the original invoice number, the name, address, and account number of the organization returning the product, an itemization of the items being returned, and the reason for the return. Please carefully package the product being returned. Credit will not be given for items that are damaged in return shipment due to inadequate packaging. Please clean and sterilize all potentially contaminated products prior to returning them to Stryker Endoscopy. It is unlawful to transport bio-contaminated products through interstate commerce, unless they are properly packaged and labeled as such. Stryker Endoscopy reserves the right to destroy contaminated product at the customer's expense and charge the customer for a replacement unit.

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