

VIDEO SYSTEM CENTER

## CV-170

Combination of HDTV and NBI is now available with an LED light source in one design



## Main Features

- HDTV imaging capability provides the best possible image quality for endoscopes, enabling observation of capillaries, mucosal structures, and other patterns.
- NBI (Narrow Band Imaging) enhances the visibility of capillaries and other structures on the mucosal surface.
- Newly adopted long-life LED light source minimizes lamp replacement, while reducing energy and noise.
- The pre-freeze function selects the clearest still image automatically. It may help to save time and eliminate the physician's frustration.
- Two types of structure enhancement are available – mainly, the conventional Type A is ideal for observation of larger mucosal tissues with high contrast in the lower gastrointestinal tract, while the new Type B is suitable for observation of vascular tissues in the upper gastrointestinal tract.
- Portable memory (MAJ-1925) is compatible, which is the standard for data management. Simply connect and upload.
- Compatible with EVIS 100/130/140 Series, Actera 150 Series, EVIS EXERA 160 Series, EVIS EXERA II 180 Series and GI/BF/VISERA Series scopes.  
\*Please note that there are some exceptions.
- 16:9 and 16:10 output for a HDTV monitor is available. Compatible with analog, HD-SDI, and DVI output.



## Specifications

Power Supply	Voltage	100-240 V AC (NTSC)/220-240 V AC (PAL); within $\pm 10\%$
	Frequency	50/60 Hz; within $\pm 1$ Hz
	Rated input	200 VA
Size	Dimensions (W x H x D)	295 x 145 x 425 mm
	Weight	11.0 kg
Classification (medical electrical equipment)	Type of protection against electric shock	Class I
	Degree of protection against electric shock of applied part	Depend on applied part. Also refer to applied part (camera head or videoscope).
	Degree of protection against explosion	The video system center should be kept away from flammable gases.
Observation	Examination lamp	LED lamp
	Analog HDTV signal output	Either RGB (1080/60i: NTSC)/(1080/50i: PAL) or YPbPr (1080/60i: NTSC)/(1080/50i: PAL) output can be selected.
	Analog SDTV signal output	VBS composite (480/60i: NTSC)/(576/50i: PAL), Y/C (480/60i: NTSC)/(576/50i: PAL), and RGB (480/60i: NTSC)/(576/50i: PAL); simultaneous outputs possible.
	Digital signal output	HD-SDI (SMPTE 292M), SD-SDI (SMPTE 259M) and DVI (WUXGA, 1080p or SXGA) can be selected.
	White balance adjustment	White balance adjustment is possible using the white balance button on the front panel.
	Standard color chart output	The "Color bar" or the "50% white" screen can be displayed.
	Color tone adjustment	The following color tone adjustments are possible. • Red adjustment: $\pm 8$ steps • Blue adjustment: $\pm 8$ steps • Chroma adjustment: $\pm 8$ steps
	Automatic gain control (AGC)	The image can be electronically amplified when the light is inadequate due to the distal end of the endoscope being too far from the object.
	Contrast	The image contrast can be set to one of the following three modes (N, H, L). • N (Normal): Normal image • H (High): The dark areas are darker and the bright areas are brighter than in the normal image. • L (Low): The dark areas are brighter and bright areas are darker than in the normal image.
	Noise reduction	Noise is corrected by image processing.
	Iris	The auto iris modes can be selected using the "iris mode" switch on the front panel. • Peak: The brightness is adjusted based on the brightest part of the endoscopic image. • Average: The brightness is adjusted based on the average brightness of the endoscopic image.
	Image enhancement setting	Fine patterns or edges in the endoscopic images can be enhanced electrically to increase the image sharpness. Either the structural enhancement or edge enhancement can be selected according to the user setup. • Structural enhancement: Enhancement of contrast of the fine patterns in the image. • Edge enhancement: Enhancement of edges of the endoscopic image.
	Switching the enhancement modes	The enhancement level can be selected from 3 levels (1, 2, and 3).
	Image size selection	The size of the endoscopic image can be changed using the "IMAGE SIZE" key on the keyboard.
	Freeze	An endoscopic image is frozen using an endoscope or the "FREEZE" key on the keyboard.
	Pre-freeze	The image with the least blur is selected from the images captured in the set time period before freeze operation and displayed.
	NBI observation	This is one of optical-digital observations using the narrow band observation light.
	Reset to defaults	The following settings can be reset to their defaults. • Color tone • Iris mode • Image enhancement mode • Image size • Contrast • Freeze • Release index • Electronic zoom • Optical-digital observation • Arrow pointer • Stopwatch • Characters on screen • Brightness
	Remote control	The following ancillary equipment can be controlled (specified models only). • DVR • Video printer • Image filing system • Flushing pump • Endoscopic CO <sub>2</sub> regulation unit
Documentation	Patient data	The following data can be displayed in the endoscopic image screen. • Patient ID • Patient name • Sex • Age • Date of birth • Date of recording (time, stopwatch) • Comments
	Displaying the record state	The recording state of the following ancillary equipment can be displayed on the monitor. • Portable memory and internal buffer • DVR • Video printer • Image filing system
	Displaying the image information	The following data can be displayed on the monitor. • Structure enhancement level • Edge enhancement level • Zoom ratio • Color mode
	Advance registration of patient data	Up to 50 patient's data can be registered. • Patient ID • Patient name • Sex and age • Date of birth
Portable Memory	Media	MAJ-1925 (OLYMPUS)
	Recording format	• TIFF: no compression • JPEG (1/5): approx. 1/5 compression • JPEG (1/10): approx. 1/10 compression
	Number of recording images	• TIFF: approx. 227 images • JPEG (1/5): approx. 1024 images • JPEG (1/10): approx. 2048 images
Memory Backup	User settings	Up to 20 user settings can be registered.
	Memorization of selected setting	The following settings are held in memory even after the video system center is turned OFF. • Color tone • Iris mode • Image enhancement mode • Color enhancement mode • Contrast • AGC • Color mode • White balance • Brightness adjustment method • Brightness • Air feeding
	Lithium battery	Life: 5 years

Specifications, design and accessories are subject to change without any notice or obligation on the part of the manufacturer.