

**PROTECH<sup>®</sup>**

**LS-700VP**

*Optical Fiber Studio System*

**Dual HD-SDI Optical Fiber Studio System**

**Dual-line and Bi-directional transmission  
- Suitable for 3D shooting -**



**FEATURES**

Dual-line and bi-directional transmission of HD/SD-SDI

2km transmission of power supply

2 intercom lines

Prompter video signal transmission

8 Pin / LANC remote control

TC IN OUT transmission

GEN LOCK transmission

Support embedded audio

2 channel analogue audio bi-directional transmission

Microphone input / phantom microphone input

HD-Y return video transmission

Red / Green Tally

Cable connection error detection

Each signal error detection

Support battery operation

Support DC12V input

Support AC input

### LS-700 Optical Fiber Camera Adaptor

The LS-700 Optical Fiber Camera Adaptor is mounted to the back of the shoulder type camera recorders and supplies the following interfaces to the camera recorder:

- Attaches directly to Sony camcorder (HDCAM, XDCAM PDW, XDCAM EX), Panasonic P2 camera recorder, Ikegami GFCAM, etc.
- Transmits HD/SD-SDI, Audio, TC, Remote, Intercom signal, etc.
- 2 channels of HD-SDI can be transmitted.  
3D video shooting transmission is realized.

- HD/SD SDI input (2ch) from a camera
- Video (composite or HD-Y) input from a camera
- RET video (HD/SD-SDI with embedded audio) output (2ch) to a monitor
- RET video (HD-Y or Composite) output to VF-89W
- Prompter/Video (HD-Y or Composite) output
- Time code input /output
- Reference output
- 8-pin connector, LANC connector
- Analog audio input & output 2ch
- Audio level meter
- XLR Male 4pin intercom headset jacks (4W x2)
- TALLY out
- Cable connection indicator
- 15.0 V DC output (max 3A)
- SMPTE Fiber cable connector



### LS-800 Optical Fiber Base Station

The LS-800 Optical Fiber Base Station supplies the following interfaces for easy integration to a production studio infrastructure:

- Receives HD/SD-SDI and audio signals.  
The connectors of return, tally, intercom, gen-lock, remote control, etc are equipped.
- It is possible to send DC power (maximum 70W) to a camera up to 2km.
- HD/SD SDI output (2ch) (each channel has loop through outputs) / auto detecting (SD/HD)
- HD/SD SDI input (2ch) / auto detecting (SD/HD)
- HD-Y/Composite output
- Prompter/Video (HD-Y or Composite) input
- Time code input /output
- Reference video input
- Reference video output (Composite)
- Intercom headset jack x1 on the front panel
- Intercom system jacks x3 on the back panel (2-wire x1, 4-wire x2)
- 8-pin connector for remote control controller (i.e. RM-B150/B750), LANC connector
- Analog audio input & output both 2ch
- Audio level meter
- Cable connection indicator
- RET video input (HD-Y or Composite) x2, to interface to video switcher program output
- TALLY IN & OUT connectors
- DC 12V input: XLR Male 4pin for remote location operation
- AC power line cord jack
- SMPTE fiber optic cable connector



### HDF-700 HD View Finder

- 7.0inch Multi-function HD View Finder . HD-SDI HD component input.  
Equipped with measuring functions (Vector Scope, Wave Form).  
TALLY lamp on the front and back both x2. Peaking, Marker, color/mono select.

- 16:9, Display size: 152.4 x 91.4mm, Resolution: 800 x 480 (H x V)
- HD-SDI/SD-SDI input
- HD-SDI/SD-SDI return input
- Embedded audio output by Cannon 3P
- DC 12 V input



## Dual-line of HD/SD-SDI bi-directional transmission

- LS-700 Optical Fiber Camera Adaptor is equipped with dual-line of bi-directional HD/SD-SDI transmission. 3D shooting becomes possible.

## Equipped with 2 channels of intercom

- Intercom for an engineer and intercom for a producer are equipped. Intercom for broadcasting can be connected directly. (Some models are exceptional.) Connection with 4W intercom is possible. When connect PROTECH intercom, optional interface is necessary. Please use PROTECH DL-400 headset (option).

## HD Camera View Finder can be connected

- By the combination with HD Camera View Finder HDF-700 / HDF-700/S, it is possible to make HD studio. High quality return video is available and it supports high quality shooting very strongly.

## Multi-output of HD/SD-SDI can be connected with switcher, monitor, recorder at the same time

- It supports multi-camera recording with the combination of cameras which have HD/SD-SDI signal output  
LS-800 base station has multi-output to support various cases as follows;  
SDI OUT 1: 3 output connectors  
SDI OUT 2: 4 output connectors

## VF Interface Unit

- Tally and return video signal can be monitored with the view finder of a camera recorder by using the optional VF interface unit.



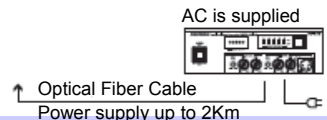
\*VF interface unit is different by Sony and Panasonic. Confirm model name of camera when order it.

## AC/DC operation is possible

- AC/DC operation is possible. The Optical Fiber Camera Adapter LS-700 and the Optical Fiber Base Station LS-800 can be operated with the battery (12V type/14.4V type) in the field under the low power consumption for long time operation.

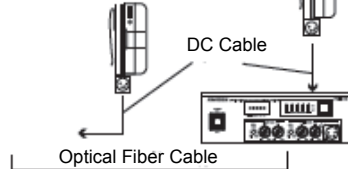
### AC Operation

CamLight/Prompter can be used.



### Battery Operation

Power is supplied from battery.



\*When the camera view finder is operated by battery, one intercom headset can be used.

## Real time display of the system status

- Equipped with the link monitor display function to indicate the communication status if HD/SD-SDI signal and other signal are communicated correctly. In the base station, status of incomplete connection of the cables can be displayed. Operator can confirm the status at a glance.

## Remote control operation

- Remote control of the camera is allowed by connecting the Sony RM-B750/B150, Panasonic, Ikegami remote control unit and LANC control with the base station. As well as basic operation (lens iris, white balance of a camera, gain), gamma, black level, detail, etc can be controlled remotely. Control items are different by connected camera. LANC can transmit the direct connection mode. Please confirm the model name of connected camera before order .

## Low cost – High quality Optical Fiber Cable (option)

- PROTECH can offer low cost – high quality optical fiber cable in lengths to suit your application. Maximum distance is 2km. Each cable can be connected directly without joint connector. It makes the cable installation in the field easy. Signal can be transmitted up to 2km with little or no signal deterioration.

Please confirm the connector type (ex. LEMO) when you place a order.



## Power via Optical Fiber Cable

- Power is supplied via the optical fiber cable from the base station to the camera adaptor up to a maximum 2000m. Approximately 75 W DC power can be used. If a camera recorder is low power consumption type, LCD camera view finder (monitor) for return video and CamLight can be used.



## ENG operation is possible with a camera adaptor

- By removing the optical fiber cable and attaching the battery on the back side the camera adaptor LS-700, camera recorder can be used for ENG operation instantly. Camera recorder can be used for multi-purpose.





### LS-700VP Composition

Optical Fiber Camera Adaptor	LS-700	x1
Optical Fiber Base Station	LS-800	x1
HD View Finder	HDF-700/S	x1
Intercom Headset	DL-400	x2

Remote Cable	RCC-450S	x1
External Tally Cable	TC-550	x1
Control Cable (LANC)		x1
BNC Cable 0.4m		x3
BNC Cable 1m		x1

LS-800	
<b>Output</b>	
HD/SD-SDI	HD/SD-SDI OUT 1 : BNCx3 (Audio, T/C embedded) HD/SD-SDI OUT 2 : BNCx4 (Audio, T/C embedded)
HD-Y/COMPOSITE	BNC x1 Composite or HD-Y
Audio	XLR 3pin (male) x2: LINE+4dB / MIC=-60dB
Time code	BNC x1
Remote Video	BNC x1 ( Composite )
Monitor	Stereo headphone jack φ6.3mm
Tally	D-sub 15pin (female) x1
<b>Input</b>	
HD/SD-SDI	HD/SD-SDI IN 1 : BNCx1 (Audio, T/C embedded) (Return signal) HD/SD-SDI IN 2 : BNCx1 (Audio, T/C embedded)
HD-Y/COMPOSITE	(Return signal) BNCx2: Composite or HD-Y
Prompter/Video	BNCx1: (Teleprompter input / Composite or HD-Y input)
Audio	XLR 3pin (female) x2: LINE+4dB / MIC=-60dB
Time Code	BNC x1
Reference	BNC x1
Tally	D-sub 15pin (female) x1
DC	XLR 4pin (male) x1: DC 12V
<b>INTERCOM</b>	
2W	Producer line : XLR 3pin x2 (female & male) Engineer line : XLR 3pin x2 (female & male)
4W	D-sub 15pin (female) x1: IN: -10dB to +4dB / OUT: -10dB
Headset	XLR 4 pin (male) x1
<b>Remote</b>	
Remote	8pin (female) x1, LANC (mini jack) x1
<b>Optical fiber connection</b>	
Cable plug	LEMO P/N: FXW.3K93C.TLM
Maximum distance	2km with DC power supply to LS-500 via fiber optic cable
<b>General</b>	
Weight	Approx. 3.3kg
Dimensions (WxHxD)	215 x 115 x 302 mm
Power requirement	AC: 100/200V(85-240V) 60Hz/50Hz DC: 12V(12V-16V)
Power consumption	AC operation Maximum: approx. 128W DC operation Maximum: approx. 28W
Operating temperature	0°C to 40°C
Storage temperature	-20 to 60°C

### HDF-700

Main specifications			
Video	LCD panel	TFT-LCD active matrix (TN)	
	Size	7.0" Diagonal	
	Display area (H x V)	152.4 x 91.4 (mm)	
	Aspect ratio	16:9 (16:10)	
	Resolution	800 x 480	
	Angle of visibility	Upper 50°/Lower60°/Left65° /right65°	
	Color reproducibility	16.7M colors	
Input / Output	Input	HD-SDI x1 RET HD-SDI x1 HD component	
	Monitor	HD-SDI roop through / one screen	
	Audio terminal	XLR 3-pin Canon male connector x2 (output level +4dB), 2 stereo jack (6.3φ)	
	TALLY IN	2 channels	
	Power	DC 12V XLR 4-pin Canon connector	
General	Power consumption	Approx. 12W (1A)	
	Operation temperature	Temperature	0°C - 40°C
		Recommendable temperature	20°C - 30°C
		Humidity	30% - 85% (no dewfall)
	Storage temperature	Temperature	-10°C - 40°C
		Humidity	0% - 90%
	Weight	Approx. 1.2Kg (with stand)	
Dimension	Approx. 195 x 151 x 62 (mm) for main unit		

	Detection method	Auto detection	
	System	SDI	Component
Signal	480/60i	○	○
	576/50i	○	○
	480/60p	-	○
	576/50p	-	○
	720/60p	○	-
	720/30p	○	-
	720/25p	○	-
	720/24p	○	-
	1080/60i(30PsF)	○	○
	1080/50i(25PsF)	○	○
	1080/48i(24PsF)	○	○
	1080/30p	○	-
	1080/25p	○	-
	1080/24p	○	-
	VGA	-	○
	SVGA	-	○
	XGA	-	○
SXGA	-	○	
UXGA	-	○	

### Distributor

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