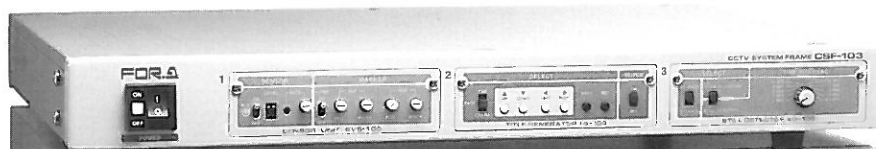
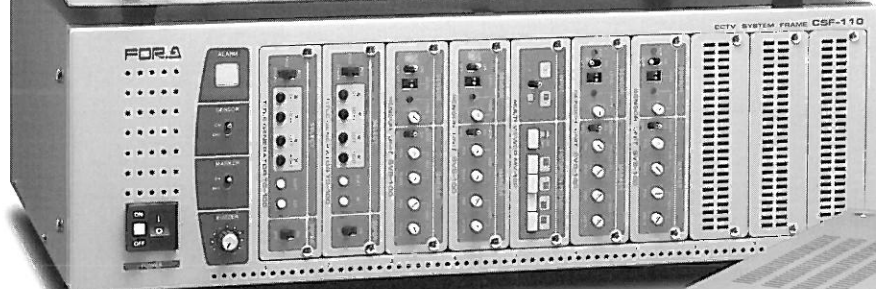


# CCTV SYSTEMS

## System Frames & Support Modules

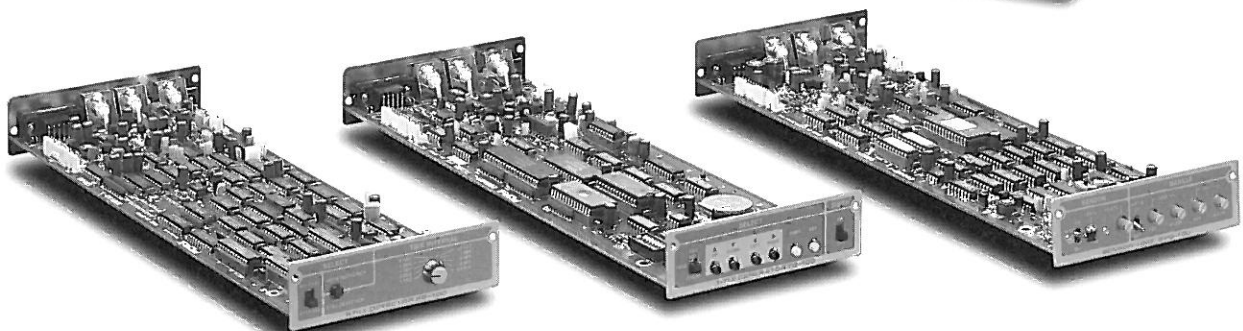


CSF-103



CSF-110

CSF-101



# Flexible, compact, and reliable multi func

## CCTV System Frames

The CSF series CCTV system frames provide flexible and expandable applicational system support. With 3 different CSF frames available, and a range of compatible modules, system configurations can be tailored to meet operational requirements and budget constraints. If system expansion is required at a later date, simply add on another frame and/or whichever modules you may require. And the CSF-110 even comes with front panel controls for functions related to the most commonly used modules.

	CSF-101	CSF-103	CSF-110
Modules	1 only	Up to 3 max.	Up to 10 max.
Power	12VDC (AC adaptor)	100-117VAC or 220-240VAC, 50/60HZ	
Consumption**	Approx. 16VA (12W) (w/ 1 mod.)	Approx. 28VA (15W) (w/ 3 mod.)	Approx. 83VA (47W) (w/ 10 mod.)
Dimensions	215 (W) x 44 (H) x 301 (D) mm (1/2 width EIA 1RU size)	430 (W) x 44 (H) x 301 (D) mm (EIA 1RU size)	430 (W) x 132 (H) x 301 (D) mm (EIA 3RU size)
Weight	Approx. 1.8 kg (w/o mod.)	Approx. 3.0 kg (w/o mod.)	Approx. 8.5 kg (w/o mod.)
Options	Rack mount brackets (1 or 2 frame)	Front, rear slot cover panels	Front, rear slot cover panels Dummy load board **

\* Note actual consumption will vary depending on modules installed. Above given for average reference only.

\*\* Dummy load required if fewer than three modules installed to CSF-110 to maintain minimum current draw.

### SPECIFICATIONS COMMON TO ALL CSF SERIES MODULES

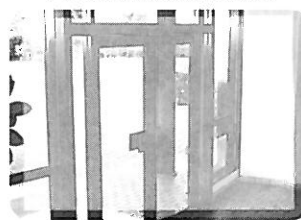
Television standard	NTSC or PAL	Power	5VDC $\pm$ 0.25 (from CSF frame)
Temperature	0°C - 40°C	Consumption	For 1 module/CSF-101
Humidity	30% - 90% (no condensation)	Dimensions	298.5 (L) x 104 (W) mm

## SVS-100/110 Video Sensors

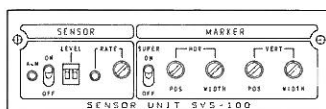
The SVS-100 and SVS-110 Video Sensor modules are designed to give alarm notification when unusual movement occurs within the sensor marker area. Marker area user set and covers up to 80% of effective picture area or as little as 1 dot (SVS-110) or 16 dots (SVS-100). Both units have adjustable sampling rates and luminance sensitivity levels. In addition, both modules can improve quality of input video at output. A further advantage is that either one of these modules can be interconnected with the SD-100 to add NR capability or for use in detection/alarm notification of objects which remain stationary for too long within marker area set at SD-100.

Video input	1.0Vp-p, 75 $\Omega$ or loopthrough, 1ea., BNC	Consumption	SVS-100: Approx. 9VA (6W) SVS-110: Approx. 15VA (11W)
Video output	1.0Vp-p, 75 $\Omega$ , 1ea., BNC	Options	Bus mouse (Can be supplied by FOR-A, for use with SVS-110 only)
Sensor marker display	65 (H) x 52 (V) dot matrix SVS-100: One area. Size and H/V positioning adjustable SVS-110: Selected areas. Add/erase marker with optional bus mouse		
Sensor sensitivity	4 luminance levels		
Sampling rate	Adjustable approx. 0.2-5 sec.		
Alarm			
Indications	Front panel indicator, buzzer tone,		
Output	Open collector, neg. logic, max. 24VDC (40mA), 1ea., 9-pin D-sub connector		
Remote control	9-pin D-sub connector, 1ea.		

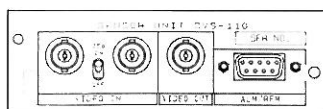
▼SVS-100 Sensor Marker



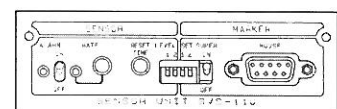
▼SVS-110 Sensor Marker



▲SVS-100 front panel



▲SVS-100/110 rear panel



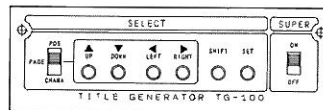
▲SVS-110 front panel

# tion support configurations.

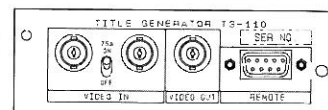
## TG-100/110 Title Generators

The TG-100 and TG-110 Title Generator modules are designed to add superimposed title character to video for identification or informational purposes. The TG-100 gives basic 1 line positionable title support in 2 character size selections, while computer controlled TG-110 can display 5 or 10 lines per page depending on character size selected. Both have a 128 page memory, battery backup of title settings, character contrast edge, superimpose ON/OFF, and can be remote controlled.

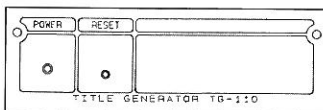
Video input	1.0Vp-p, 75Ω or loopthrough, 1ea., BNC
Video output	1.0Vp-p, 75Ω, 1ea., BNC
Character display	TG-100: 1 line, 16 (normal) or 8 (large) characters/page, max. 128 pages TG-110: Max. 16 chara (normal)/line, 10 lines/page or 8 chara (large)/line, 5 lines/page; max. 128 pages
Character format	7 (H) x 5 (V) dot matrix, ASCII text
Character size	14H/field, approx. 2.0μS (normal) or 28H/field, approx. 4.0μS (large)
Character position Control	Step adjustable (H/V), 80% of picture area TG-100: Via front panel or BCD remote TG-110: Via RS-232C connector
Remote control	9-pin D-sub connector, 1 ea.
Consumption	TG-100: Approx. 9VA (6W) TG-110: Approx. 11VA (7W)



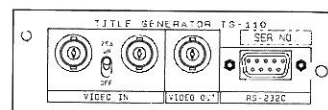
▲TG-100 front panel



▲TG-100 rear panel



▲TG-110 front panel



▲TG-110 rear panel

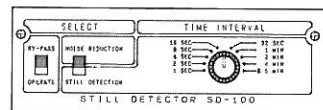


▲TG-110 character display

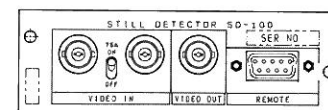
## SD-100 Still Dectector

The SD-100 Still Dectector module is designed to perform one of two selectable functions. Can be used for noise reduction purposes improve view clarity of an observed/recorded area or interconnected with SVS-100/SVS-110 for detection of objects remaining stationary for too long a period within the marker area. (Alarm indications provided by SVS circuitry).

Video input	1.0Vp-p, 75Ω or loopthrough, 1ea., BNC
Video output	1.0Vp-p, 75Ω, 1ea., BNC
Picture resolution	512 (H) x 512 (V)
Grey scale	6 bits (64 steps)
Sampling rate	Adjustable 1 sec.-8.5 min.
Remote control	9-pin D-sub connector, 1 ea.
Consumption	Approx. 13VA (11W)



▲SD-100 front panel



▲SD-100 rear panel



▲ Object moving / no alarm

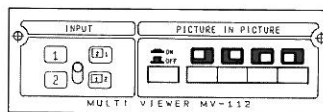


▲ Object stopped / alarm

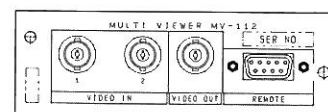
## MV-112 Multi Viewer

The MV-112 Multi Viewer module is designed to either display 1 of 2 video inputs full screen, or both as a full screen with P-in-P display. P-in-P displayed input is positionable to any corner within 80% of the effective picture area. Freeze and/or addition of contrast border (P-in-P), selection of input displayed (full screen or P-in-P), and remote control of basic functions also possible.

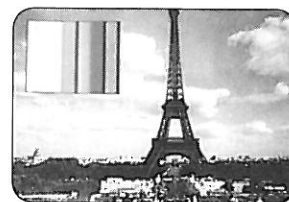
Video input	1.0Vp-p, 75Ω or loopthrough, 2ea., BNC
Video output	1.0Vp-p, 75Ω, 1ea., BNC
P-in-P display	Size: H- 74H/field (NTSC) or 78H/field (PAL), V- 14.8μS (NTSC/PAL) Position: To 1 of 4 corner positions
Remote control	9-pin D-sub connector, 1 ea.
Consumption	Approx. 13VA (19W)



▲MV-112 front panel



▲MV-112 rear panel



▲P-in-P display

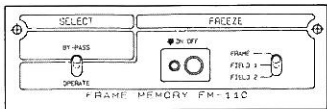


▲P-in-P display

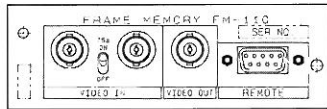
## FM-110 Frame Memory

The FM-110 Frame Memory module is designed to add superb frame memory support to your CSF frame system configurations. Freeze of output video is selectable as frame, field 1, or field 2. Level, trigger, strobe, and auto freeze or black upon signal dropout can also be easily set. In addition, the FM-110 also incorporates ACC circuitry, realtime memory capability, and operate/by-pass signal selection. Remote control of freeze performance and operate/by-pass selection also possible.

Video input	1.0Vp-p, 75Ω or loophrough, 1ea., BNC
Video output	1.0Vp-p, 75Ω, 1ea., BNC
Freeze	Local or remote initiated, selectable frame, field 1, or field 2; 3 strobe delay settings, auto freeze function.
Frequency response	Y: 60Hz-5MHz, -3dB
Quantization	8 bit
Memory	2 field (no backup on power loss)
Remote control	9-pin D-sub connector, 1 ea.
Consumption	Approx. 16VA (12W)



▲FM-110 front panel

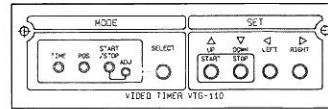


▲FM-110 rear panel

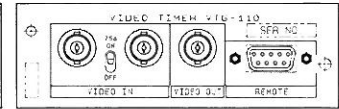
## VTG-110 Video Timer

The VTG-110 Video Timer module superimposes one line of step positionable M-D-Y H: M: S: count up time reference on output video. Count cycle selectable as am/pm or 24 hour. Black contrast character edge. Displayed count advances automatically and remains accurate throughout long/short months and leap years. (Maintained at power loss.) Multiple units can be master/slave configured.

Video input	1.0Vp-p, 75Ω or loophrough, 1ea., BNC
Video output	1.0Vp-p, 75Ω, 1ea., BNC
Time reference	Internal crystal, ±60 seconds/month at 25°C
Character format	7 (H) x 5 (V) dot matrix
Character size	14H/field, approx. 1.6μS
Character position	Step adjustable (H/V) over 80% (NTSC) or 75% (PAL) of effective picture area
Remote control	9-pin D-sub connector, 1 ea.
Consumption	Approx. 10VA (7W)



▲VTG-110 front panel

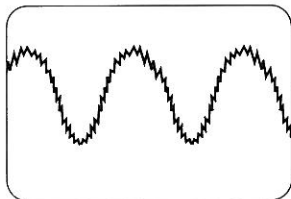


▲VTG-110 rear panel

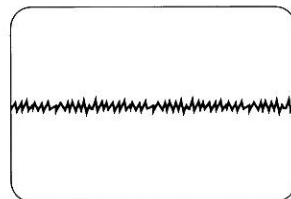
## HC-100 Hum Canceller

The HC-100 Hum Canceller module conveniently adds cable compensation to your CSF system to cancel out the effects of line hum or distortion problems. Compensation can be set effective up to 300m (RG-11/U cable) or 200m (RG-59B/U cable). It also functions as a 1-to-4 signal distributor if multiple outputs required.

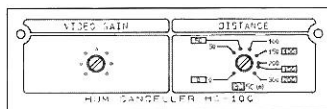
Video input	Composite, 1.0Vp-p, 75Ω, 1ea., BNC
Video output	Composite, 1.0Vp-p, 75Ω, 4ea., BNC
Gain range	± 2dB
Hum improvement	Better than 49dB (common hum of 30Vp-p, 60Hz) Better than 22dB (hum of 0.5Vp-p, 60Hz)
Frequency response	500kHz-8MHz, within ± 1dB
S/N ratio	Better than 55dBp-p/rms
Consumption	Approx. 17VA (12W)



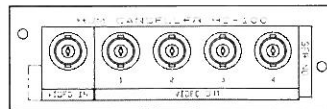
▲ Signal before



▲ Signal after



▲HC-100 front panel

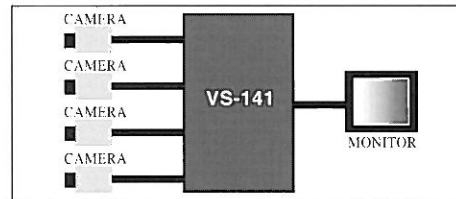


▲HC-100 rear panel

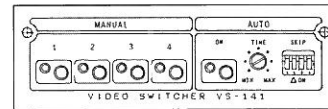
## VS-141 Video Switcher

The VS-141 Video Switcher module is designed to switchover up to 4 video inputs and output one. Switchover can be auto performed sequentially (1-60 sec.) or manually. Auto skip setting to avoid no input channels. Addition of VS-141EX cable option allows output to be automatically switched upon alarm input, or adds tally/clock related functions depending on which other modules/units are configured with VS-141. Master/slave configuration also possible.

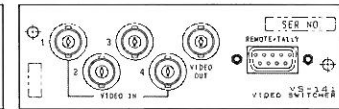
Video input	1.0Vp-p, 75Ω, 4ea., BNC
Video output	1.0Vp-p, 75Ω, 1ea., BNC
Switchover interval	During vertical blanking period
Consumption	Approx. 12VA (8W)
Option	VS-141EX cable assembly



▲ Connection example



▲VS-141 front panel



▲VS-141 rear panel

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