

SANYO

SRT-series
Real Time Video Cassette Recorders

TLS-series
Time-Lapse Video Cassette Recorders

SRT-8960P **PAL**
AC/DC Operation

SRT-8040P **PAL**
AC Operation only

TLS-1960P **PAL**
AC/DC Operation

TLS-9924P **PAL**
AC Operation only

TLS-4024P **PAL**
DC Operation only



Time-Lapse & Real Time Video Cassette Recorders

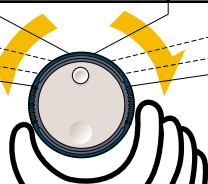
Jog/Shuttle control

(SRT-8960P, SRT-8040P, TLS-1960P, TLS-9924P)

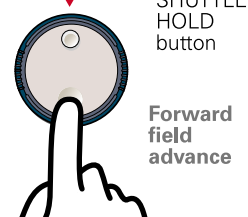
Simply turn the Jog dial or Shuttle ring to search through the recorded images field-by-field or at fast speeds. Turn to the right to search in the forward direction and to the left for the reverse direction. Using the Shuttle ring, you can also change the direction of playback by what direction, and speed of the playback by how far, you turn the ring. Use the SHUTTLE HOLD button so that you can let go of the Shuttle ring and still have the operation you were performing (e.g., playback, slow motion playback, or picture search) continue.

The Jog dial and Shuttle ring can also be used to change menu settings to simplify operations.

Rewind		Stop mode		Fast forward
Reverse picture search	Reverse playback	Normal playback	Normal playback	Forward picture search
Reverse picture search	Reverse playback	Reverse slow motion	Still image	Slow motion
			Normal playback	Forward picture search



Shuttle Jog



Reverse field advance

Forward field advance

Tape Management system

Allows you to prevent tapes from being recorded over before a certain amount of time, to set the number of times tapes can be recorded over to prevent excessive tape wear, and to set groups to prevent the mixing of tapes between applications.

Multiple recording modes

All models are equipped with a variety of recording modes to match your recording needs. Increase the recording time for more time on one tape or decrease it for a smoother picture.

SRT-8960P	E-180 tape	6, 18, 30, 48, 72, 96, 120, 168, 240, 360, 480, 720, 960-hour
	E-240 tape	8, 24, 40, 64, 96, 128, 160, 224, 320, 480, 640, 720, 960-hour
SRT-8040P	E-180 tape	6, 18, 30-hour
	E-240 tape	8, 24, 40-hour
TLS-1960P	E-180 tape	3, 12, 24, 48, 72, 96, 120, 168, 240, 360, 480, 720, 960-hour
TLS-9924P	E-180 tape	3, 12, 24-hour
TLS-4024P	E-180 tape	3, 12, 24-hour

Security lock

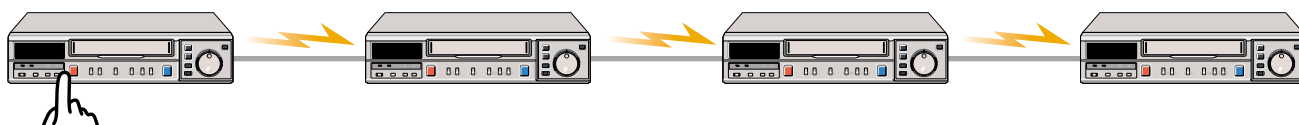
(SRT-8960P, SRT-8040P, TLS-1960P, TLS-9924P)

To prevent unauthorized manipulation or accidental operation, the operation buttons, Jog dial, and Shuttle ring can be locked. All models also offer two types of security locks: a quick method security lock and a 4-digit password security lock. (Both types of security locks cannot be set at the same time.)

*Model TLS-4024P offer a quick method security lock only.

Synchronization Control system

This system saves you much time and hassle by allowing you to connect together multiple VCRs and set one as the master so that when you perform operations such ejecting, stopping, recording and menu setting at the master, the other connected VCRs (up to 9 slave VCRs) perform the same operations automatically.



Master/slave eject

When using multiple VCRs, you can eject the tapes from all the machines by pressing the EJECT button at only the master VCR.

Clock adjustment

When using multiple VCRs, use the clock adjustment feature to force the timers on all the slave VCR to be synchronized with the master VCR once a day at a preset time.

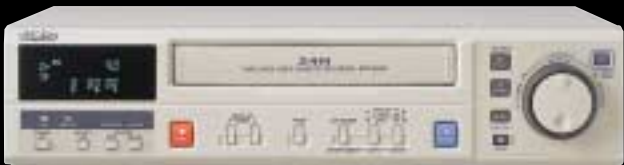
Variety of languages available

You can set the menus to be displayed in one of seven different languages: English, French, German, Spanish, Italian, Russian, Portuguese.

SRT-series



SRT-8960P



SRT-8040P

TLS-series



TLS-1960P



TLS-9924P

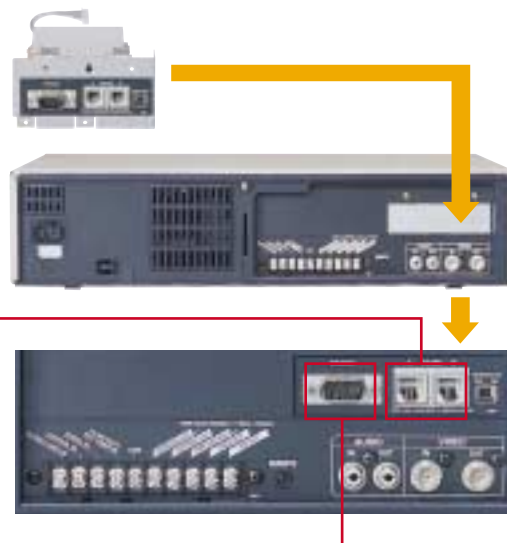
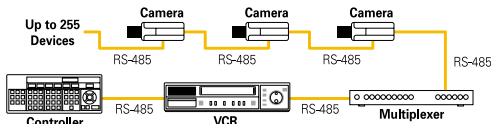


TLS-4024P

Option

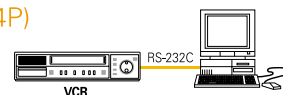
Optional RS-485 compatibility

By adding the optional VZU-485/232C interface board for TLS-1960P, TLS-9924P, SRT-8960P and SRT-8040P, or VZU-40485 interface board for TLS-4024P, your VCR becomes compatible with the RS-485 interface. The RS-485 interface allows your VCR to communicate with systems that use Sanyo's Security Serial Protocol (SSP). With SSP, you can connect up to 255 cameras, multiplexers, and VCRs, in a daisy chain over a distance of up to 1,200 meters (4,000 feet), and control them all centrally from a single controller.



Optional RS-232C compatibility (SRT-8960P, SRT-8040P, TLS-1960P, TLS-9924P)

By adding the optional VZU-485/232C interface board, your VCR becomes compatible with the RS-232C interface. The RS-232C interface allows your VCR to interface with an external PC so that it can accept commands from the PC for remote control.



Other Features

- Automatic Daylight Saving Time adjustment
- Open collector terminal
 - Warning out terminal (Max. 500 mA)
 - Tape end out terminal (Max. 50 mA)
- Video loss alarm
- Clog detection
- Auto head cleaning
- 30-day memory backup
- Thread check
- Recording check
- Recording resume function
- Recording features
 - Alarm recording
 - Auto repeat recording
 - Series recording
 - Timer recording (with holiday set)
 - External timer recording
 - Single image recording

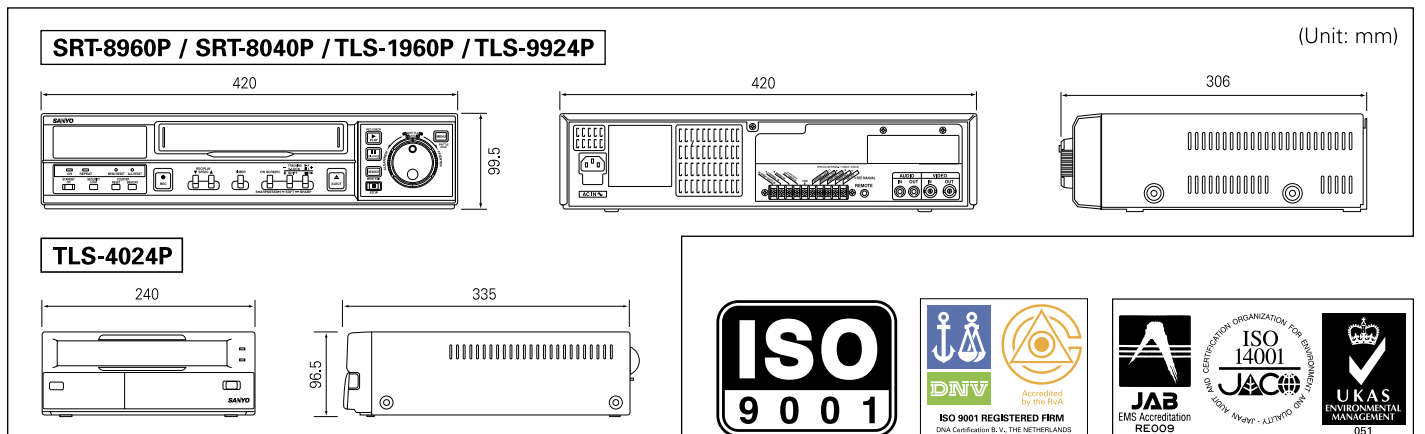
- Search and scan features
 - Alarm Search
 - Alarm Scan
 - Day/Time Search
 - Field recording/Field playback
 - Built-in time date generator
 - Tracking control
 - Vertical Lock control
 - OSD (On Screen Display) position control
 - Remote jack
 - Lifetime counter
 - Alarm counter
 - AC/DC Operation: SRT-8960P, TLS-1960P
 - AC Operation: SRT-8040P, TLS-9024P
 - DC Operation: TLS-4024P
- (SRT-8960P, SRT-8040P, TLS-1960P, TLS-9924P)
- Forward/Reverse field advance
 - Reverse playback (9-hour mode, 6-hour mode)
 - Sharpness control

SRT-8960P/SRT-8040P/TLS-1960P/TLS-9924P/TLS-4024P

Specifications

MODEL	SRT-8960P		SRT-8040P	TLS-1960P	TLS-9924P	TLS-4024P	
General	Tape format		Standard 1/2" VHS (E-240 / E-180)		Standard 1/2" VHS (E-180)		
	Video recording system		2-video helical heads for recording and standard playback / 4-head helical scan heads for special playback				
	Recording/playback time	E-240	8,24,40,64,96,128,160, 224,320,480,640,720,960-hour	8,24,40-hour			
		E-180	6,18,30,48,72,96,120,168,240,360,480,720,960-hour	6,18,30-hour	3, 12, 24, 48, 72, 96, 120, 168, 240, 360, 480, 720, 960-hour	3,12,24-hour	3,12,24-hour
	Recording/playback time with audio	E-240	8,24,40-hour				
		E-180	6,18,30-hour		3,12,24-hour		
Television system		PAL colour system					
Video	Video input		1.0 V (p-p), 75 ohms, unbalanced (BNC)				
	Video output		1.0 V (p-p), 75 ohms, unbalanced (BNC)				
	Horizontal resolution	B / W	350 TV lines or more				
		Colour	250 TV lines or more				
Video S/N ratio		45 dBs or more					
Audio	Input		-8 dBs, 27k ohms, unbalanced (RCA)				
	Output		-8 dBs, 600 ohms, unbalanced (RCA)				
Connectors	Alarm (1 shot) input		Low 0 V at alarm (1shot) in (normally 5 V, 0 V: 100 ms or more)				
	Control input (SET1)		Key code (normally 5 V)				
	Clock set input (SET2)		Low 0 V at Clock set in (normally 5 V, 0 V: 100 ms or more)				
	Series input (SET1)		Low 0 V at Series in (normally 5 V, 0 V: 1 sec. or more)				
	Eject input (SET2)		Low 0 V at Eject in (normally 5 V, 0 V: 100 ms or more)				
	External timer (Alarm reset) input		Low 0 V at external timer rec (alarm reset) (normally 5 V, 0 V: 100 ms or more)				
	Warning output		Low 0 V (max. 500 mA) at warning (open collector)				
	Control output (SET1)		Key code (normally 5 V)				
	Clock set output (SET2)		Low 0 V at clock out (normally 5 V)				
	Tape end (Series) output		Low 0 V (max. 50 mA) at tape end (series) (open collector)				
	Timer output (SET1)		Low 0 V at timer rec (normally 5 V)				
	Eject output (SET2)		Low 0 V at eject out (normally 5 V)				
	Switch output		Switching pulse (normally 5 V)				
	Common		0 V (GND)				
	Remote control input		3.5 mm mini jack				
	Electrical	Power source		220-240 V AC 50 Hz, or 12/24 V DC	220-240 V AC, 50 Hz	220-240 V AC 50 Hz, or 12/24 V DC	220-240 V AC, 50 Hz
Power consumption		Approx. 18 W		Approx. 15 W			
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Power consumption		Approx. 18 W		Approx. 15 W			
Physical	Operating conditions	Temperature	5°C to 40°C [40°F to 104°F]				
		Humidity	80% or less				
	Dimensions (W x H x D)		420 x 99.5 x 306 mm [16.54 x 3.92 x 12.05 in.]			240 x 96.5 x 335 mm	
	Weight		Approx. 4 kg [8.8 lbs]			Approx. 3.5 kg [7.7 lbs]	

*Specifications subject to change without notice.



Caution : Please consult the instruction manual to ensure safe and proper operation of the product.

Distributed by:

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 Video Imaging Systems Division
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