Panasonic

AJ-**SD955**
AJ-**SD930**
DVCPRO50 Studio VTRs(625)

DVCPRO 50

The Heart of a Versatile, High-End

The AJ-SD955 and AJ-SD930 are versatile, cost-effective studio VTRs designed for today's high-end digital video production.

Use of the popular DVCPRO50 format makes each model suitable for creating high-end programming. With 4:2:2 digital component recording and four channels of digital audio, each delivers the superior picture and sound quality professionals need. Each comes standard with SDI input and output, allowing its use in D1 digital video production.

Also equipped with RS-422A remote, the AJ-SD955 and AJ-SD930 fit perfectly into a system with an editing controller. Each model features a jog & shuttle dial, and the AJ-SD955 adds an edit control panel that allows easy, automatic editing with two VTRs.

The AJ-SD955 and AJ-SD930 play DVCPRO, DV and DVCAM tapes as well as DVCPRO50 tapes. These and other features make each model an ideal solution to a wide range of broadcast and professional uses.

High-End DVCPRO50 Quality

Featuring 4:2:2 digital component video recording and 4-channel digital audio, the AJ-SD955 and AJ-SD930 deliver the picture and sound quality required in high-end broadcasting and production. Both models are switchable between DVCPRO50 and DVCPRO for recording, and both play back DV and DVCAM tapes.

Digital Production Environment

High-End Digital Interface

The AJ-SD955 and AJ-SD930 are the first in their class to come standardly equipped with SDI (SMPTE259M serial digital interface) input/output and AES/EBU digital audio input/output. Analogue output is also standard. Analogue input, and SDTI are available as options. This combination of standard features and options gives the AJ-SD955 and AJ-SD930 the flexibility to fit a wide range of digital video production environments.

High-End Editing

The new illuminated jog & shuttle dial, offered as standard equipment, ensures easy, comfortable editing. Both models offer slow-motion playback, and the AJ-SD955 features an edit control panel that allows automatic editing when an external VTR is connected as a player.

DVCPRO50 Equipment in Sydney 2000 Olympic Games

4:2:2 Component Video

The DVCPRO50 format's 4:2:2 component video recording and playback is designed for high-end video production. The 3.3:1 compression ratio minimises picture degradation during both compression and decompression, so the 4:2:2 images retain their superior quality.

4-Channel Digital Audio

The AJ-SD955 and AJ-SD930 provide four channels of high-quality 48-kHz/16-bit digital audio.* A level meter for each channel provides a continuous display of the recording or playback level. A linear cue audio track adds convenience when searching for edit points.

*In DVCPRO mode there are two digital audio channels.

DVCPRO50/DVCPRO Switchable Recording

The AJ-SD955 and AJ-SD930 record and play back in both DVCPRO50 and DVCPRO formats. In DVCPRO50 mode, each model can record up to 92 minutes on an AJ-5P92LP compact 1/4" cassette tape. In DVCPRO mode, recording time is doubled to 184 minutes.*
In playback, the AJ-SD955 and AJ-SD930 automatically detect the recording format used and play the tape back accordingly.

*When recording in DVCPRO50 mode on a DVCPRO tape, the recording time will be half the amount indicated on the cassette.

DV Playback

For added versatility, the AJ-SD955 and AJ-SD930 can play back DV and DVCAM tapes. Standard DV tapes can be played without an adaptor, while Mini-DV tapes can be played using the AJ-CS455P adaptor.*

*Even with an adaptor, the AJ-SD955 and AJ-SD930 cannot record on Mini-DV cassettes, play Mini-DV cassette tapes recorded in LP mode, or play extended-time Mini-DV cassette tapes (SP mode 80 minutes/LP mode 120 minutes).

Linear Editing with To-the-Frame Precision

The DVCPRO50 and DVCPRO formats both use intra-frame compression. This allows tape-to-tape editing with to-the-frame precision and with no picture degradation at the edit points.

Complete Editing Functions -- AJ-SD955

The AJ-SD955 features an edit control panel and provides functions such as assemble editing, insert editing, preview, review, and trim. Single-event editing and audio split are also possible, using the RS-422A control interface and a standard editing controller.

New Illuminated Jog & Shuttle Dial

The ring of the newly designed Jog & Shuttle dial lights up in search mode. This, plus the large LCD metering window, gives you easy, precise operation. In shuttle mode you can search in colour at ±32 times normal speed. Slow-motion playback is provided at -0.43 to +0.75 times normal speed in all playback formats. Digital audio monitoring is possible in jog mode.

Easy Set-Up with On-Screen Display

On-screen display makes it easy to change a number of initial settings. The display combines a simple, straight-forward control panel with a host of functions.

Light Weight, Low Power Consumption

With a compact 4U size and a weight of only about 16 kg, the AJ-SD955 and AJ-SD930 mount easily in a 19-inch rack using the optional AJ-MA75P* rack mount adaptor. Their low power consumption (120 W) is an advantage in both the studio and an OB van. Each model is equipped with handles for convenient carrying.
*Slide rail not included

AJ-SD930: Simple Operation Panel

The AJ-SD930 has virtually the same performance, interface, and features as the AJ-SD955, but without the edit control panel.
This makes the cost-effective AJ-SD930 ideal at the heart of a low-cost system for dubbing or on-air transmission, or as a player in an editing system.

Standard SDI and AES/EBU In/Out

The AJ-SD955 and AJ-SD930 come standard with SDI (Serial Digital Interface), allowing input/output of digital component signals. They also come standard with AES/EBU digital audio in/out (4 channels). This versatility makes them ideal for post-production applications in an ordinary D1 environment.

Analogue Input/Output

The AJ-SD955 and AJ-SD930 come standard with output composite and component video signals. They also come standard with four channels of analogue audio input/output. Analogue video input is available by adding the optional AJ-YAC932G board. This efficient design provides all the versatility needed in today's video production environment.

## Expandable Interface Slot for Data Transfer

An option slot is provided for system expansion. Connecting an AJ-YAC930G SDTI (Serial Data Transport Interface) board gives you degradation-free transfer of compressed data with a DVCPRO50/DVCPRO VTR for broadcast use.

RS-422A, RS-232C, and Encoder Remote

- RS-422A (9-pin): For interfacing with a system that includes an editing controller.
- RS-232C (25-pin): For remote maintenance and other PC applications.
- Encoder (15-pin): For remote adjustment of the video signal.
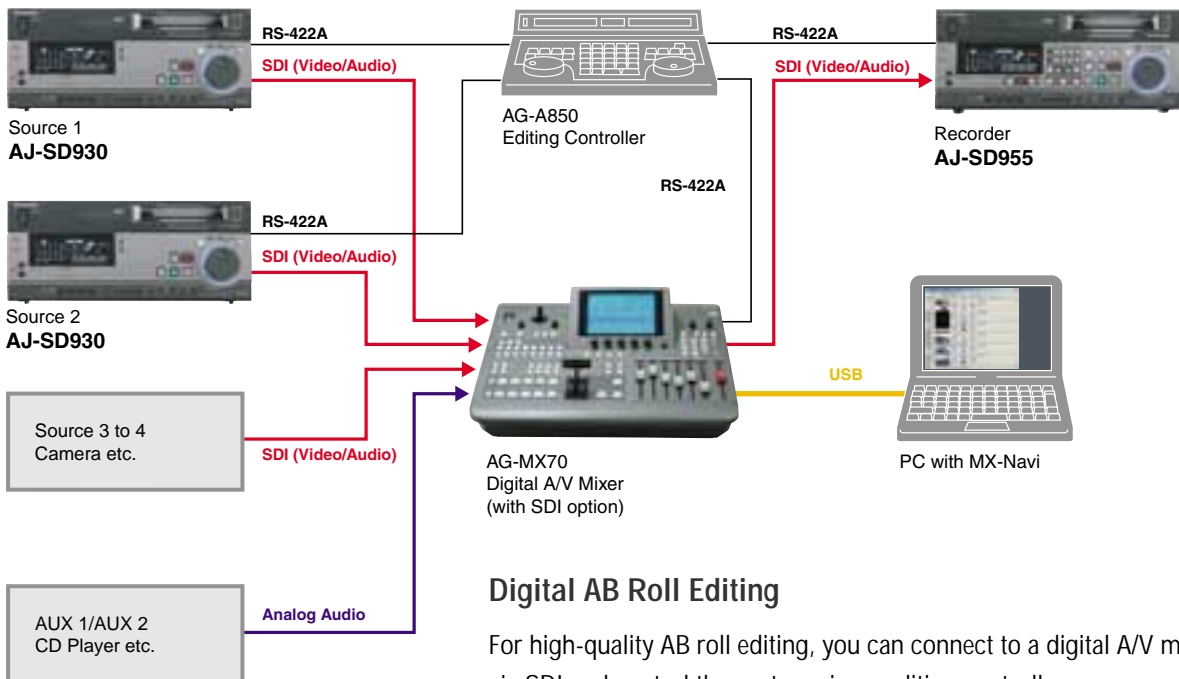- Parallel (25-pin): For general-purpose remote control.

S Y S T E M   A P P L I C A T I O N S

SDI (Video/Audio)

RS-422A

Player
AJ-SD930

Recorder/Editing Controller
AJ-SD955
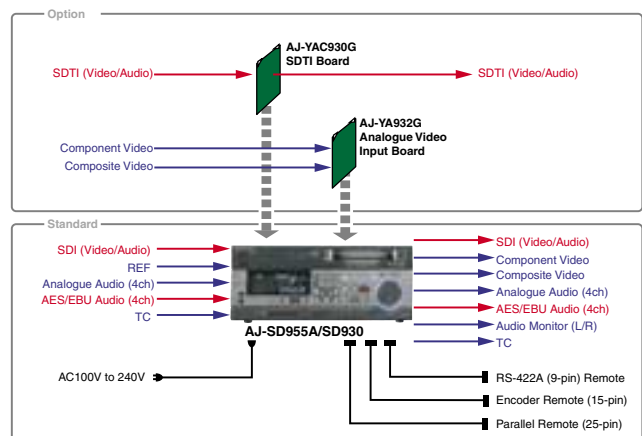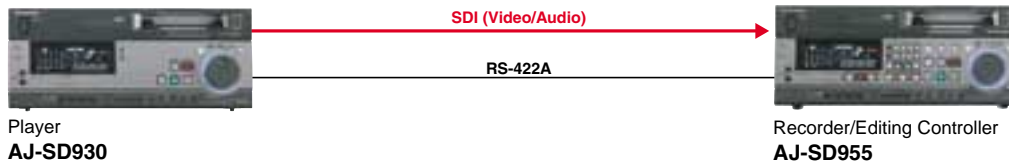
Simple Editing with Two VTRs

For automatic editing, the AJ-SD955's edit control panel can be used to control an AJ-SD930 (or other external VTR) used as a player.

RS-422A

Source 1
AJ-SD930

SDI (Video/Audio)

AG-A850
Editing Controller

RS-422A

Recorder
AJ-SD955

SDI (Video/Audio)

RS-422A

Source 2
AJ-SD930

SDI (Video/Audio)

USB

Source 3 to 4
Camera etc.

SDI (Video/Audio)

AG-MX70
Digital A/V Mixer
(with SDI option)

PC with MX-Navi

AUX 1/AUX 2
CD Player etc.
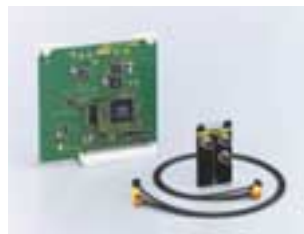
Analog Audio

Digital AB Roll Editing

For high-quality AB roll editing, you can connect to a digital A/V mixer via SDI and control the system via an editing controller.

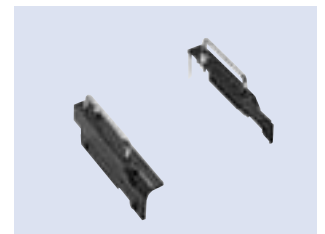## O P T I O N A L   A C C E S S O R I E S

AJ-YA932G
Analogue Video Input Board
(625i

AJ-YAC930G
SDTI Board

AJ-CS455P
Mini-DV Cassette Adaptor

AJ-MA75P
Rack Mount Adaptor
(slide rail, not included)

General

Power Supply:	AC100 to 240V ±10%, 50 to 60 Hz
Power Consumption:	120W (full operation)
Operating Temperature:	5°C to 40°C
Operating Humidity:	10% to 90% (non dew)
Weight:	14.9 kg (AJ-SD930) 15.0 kg (AJ-SD955)
Dimensions (WxHxD):	424 x 175.2 x 430 mm
Recording Format:	DVCPRO50/DVCPRO switchable
Recording Track:	Digital Video:625i Digital Audio: 4 channels (DVCPRO50) 2 channels (DVCPRO) TC: Subcode area Cue: 1 longitudinal track CTL: 1 longitudinal track
Tape Speed:	67.708mm/s (DVCPRO50)
Rec/Play Time:	Max. 92 minutes with AJ-5P92LP Max. 33 minutes with AJ-5P33MP
Tape:	metal particle
FF/REW Time:	Less than 3 minutes with AJ-5P92LP Less than 2 minutes with AJ-5P33MP
Digital Slowmotion:	−0.43x to +0.43x, +0.5x, +0.75x
Editing Accuracy:	±0 frame (TC)
Tape Timer Accuracy:	±1 frame (continuous CTL)
Servo Lock Time:	Within 0.5 sec (colour framing/standby ON)

Video

Sampling Frequency:	Y: 13.5MHz, P_B/P_R: 6.75MHz (DVCPRO50)
Quantization:	8 bits
Error Correction:	Reed-solomon product code
Compression Method:	DV-Based Compression (SMPTE 314M)
Compression Ratio:	3.3:1 (DVCPRO50), 5:1 (DVCPRO)
Bit Rate:	50 Mbps (DVCPRO50) 25 Mbps (DVCPRO)

[Digital In/Analogue Component Out] (standard)

Bandwidth:	Y: 25Hz to 5.5MHz ±0.5dB P_B/P_R: 25Hz to 2.5MHz ±0.5dB
S/N Ratio:	60dB or more (Y)
K Factor:	1% or less (U 2T)
Y/PB, PR Delay:	10 nsec or less

Audio

Sampling Frequency:	48kHz (sync. with video)
Quantization:	16 bits
Frequency Response:	20Hz to 20kHz, ±1.0dB (reference level)
Dynamic Range:	More than 90dB (1kHz, emphasis off, "A" weighted)
Distortion:	within 0.05% (1kHz, emphasis off, reference level)
Cross Talk:	Less than −80dB (1kHz, between any 2ch)
Wow & Flutter:	Below measurable limit
Headroom:	18 dB
Emphasis:	T1=50μsec, T2=15μsec (ON/OFF)
Cue Track:	300Hz to 6kHz (±3dB)(DVCPRO50)

Video Input

Analogue Component: (option)	BNC x 3 (Y/P_B/P_R), Y: 1.0Vp-p, 75Ω P_B/P_R: 0.7Vp-p, 75Ω (100% colour bar)
Analogue Composite : (option)	BNC x 2 (loop-through), 75Ω On/Off, Video:1.0Vp-p(75Ω)
Reference:	Analogue Composite BNC x 2 (loop-through) 75Ω On/Off
SDI:	BNC x 2 (active through), ITU-R BT.656-3
SDTI (option):	BNC x 2 (active through) with AJ-YAC930G, SMPTE 305M/321M

Video Output

Analogue Component:	BNC x 3(Y/P_B/P_R), Y: 1.0Vp-p, 75Ω P_B/P_R: 0.7Vp-p, 75Ω (100% colour bar)
Analogue Composite:	BNC x 3 Video1/Video2: Video/WFM switchable Video 3: Superimpose on/off
SDI:	BNC x 3 (SDI1, SDI2, SDI3: Superimpose on/off), ITU-R BT.656-3
SDTI (option):	BNC x 1 with AJ-YAC930G, SMPTE 305M/321M

Video Out Adjustment Range

Video Gain:	±3 dB
Chroma Gain:	±3 dB
Hue/Chroma Phase:	±30°
Black Level:	±100mV
Sync Phase:	±15 μsec
SC Phase:	±180°

Audio Input

Analogue(CH1/2/3/4):	XLR x 4, +4/0/−20 dBu switchable, 600Ω/high-impedance switchable
Digital(CH1/2, CH3/4):	BNC x 2, AES/EBU
Serial Digital:	ITU-R BT.656-3 (BNC75Ω)

Audio Output

Analogue (CH1/2/3/4):	XLR x 4, Low-impedance, +4/0/−20 dBu switchable
Digital (CH1/2, CH3/4):	BNC x 2, AES/EBU 1.0±0.2Vp-p, 75Ω
Serial Digital:	ITU-R BT.656-3
Monitor:	XLR x 2, Low-impedance, +4/0/−20 dBu switchable
Phones:	M3, variable level control, 8Ω

Others

TC IN:	XLR x 1, 0.5 to 8.0 Vp-p, 10KΩ
TC OUT:	XLR x 1 low-impedance, 2.0 ±0.5 Vp-p
RS-422A IN:	D-sub 9 pin RS-422A I/F
RS-422A OUT:	D-sub 9 pin RS-422A I/F
RS-232C:	D-sub 25 pin RS-232C I/F
Parallel IN/OUT:	D-sub 25 pin
Encoder Remote:	D-sub 15 pin

Video Specifications
with the AJ-YA932G Optional Analogue Input Board

[Analogue Component In/Component Out]

Bandwidth:	Y:	25Hz to 5.5MHz ±1.0dB 5.75MHz -2.0dB
	P_B/P_R:	25Hz to 2.5MHz ±1.0dB 2.75MHz -2.0dB
S/N Ratio:	55 dB or more	
K Factor :	1% or less (Y 2T)	
Y/PB, PR Delay:	20 nsec or less	

[Analogue Composite In/Composite Out]

Bandwidth:	Y:	25Hz to 4.5MHz ±1.0dB, 5.75MHz (−3.0dB)
S/N Ratio:	49 dB or more	
K Factor :	2.5% or less	
Y/PB, PR Delay:	20 nsec or less	

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.
These products may be subject to export regulations.

Panasonic

[Countries and Regions]

Argentina	Tel. 54-1-308-1610	Korea	Tel. 82-2-784-0245	Switzerland	Tel. 41-41-259-9632
Australia	Tel. 61-2-9887-6222	Kuwait	Tel. 965-481-2123	Taiwan	Tel. 886-2-2725-9100
Austria	Tel. 43-1-61080-773	Lebanon	Tel. 961-1-216827	Thailand	Tel. 66-2-731-8888
Bahrain	Tel. 973-252292	Malaysia	Tel. 60-3-5549-5422	Turkey	Tel. 90-216-416-0150
Belgium	Tel. 32-2-481-0481	Mexico	Tel. 52-5-488-1000	U.A.E.	Tel. 971-4-282201
Brazil	Tel. 55-11-3889-4035	Netherlands	Tel. 31-73-640-2721	U.K	Tel. 44-118-902-9210
Canada	Tel. 1-905-624-5010	New Zealand	Tel. 64-9-272-0100	U.S.A.	Tel. 1-201-348-7621
China	Tel. 86-10-6515-8828	Norway	Tel. 47-22916800		
(Hong Kong	Tel. 852-2313-0888)	Pakistan	Tel. 92-21-455-5766		
Czech Republic	Tel. 42-02-2166-4120	Panama	Tel. 507-229-2955		
Denmark	Tel. 45-43-200-853	Peru	Tel. 51-145-29470		
Egypt	Tel. 20-2-3938151	Philippines	Tel. 63-2-633-6162		
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Indonesia	Tel. 62-21-801-5666	Singapore	Tel. 65-6270-0110		
	62-21-385-9449	Slovakia	Tel. 421-7-5292-1423		
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Jordan	Tel. 961-6-586-1914	Sweden	Tel. 46-8-680-8238		

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