Panasonic

AJ-SD955B
AJ-SD930B
DVCPRO50 Studio VTRs (625)

DVCPRO 50

The Heart of a Versatile, High-End

The AJ-SD955B and AJ-SD930B 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-SD955B and AJ-SD930B fit perfectly into a system with an editing controller. Each model features a jog & shuttle dial, and the AJ-SD955B adds an edit control panel that allows easy, automatic editing with two VTRs.

The AJ-SD955B and AJ-SD930B play DVCPRO, DV and DVCAM™ tapes as well as DVCPRO50 tapes. Its also record and play UMID data.

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-SD955B and AJ-SD930B deliver the picture and sound quality required in high-end broadcasting and production. Both models are switchable between DVCPRO50 and DVCPRO for recording and playback, and both play back DV and DVCAM™ tapes.

Digital Production Environment

High-End Digital Interface

The AJ-SD955B and AJ-SD930B are the first in their class to come standardly equipped with SDI (ITU-R BT, 656-3 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-SD955B and AJ-SD930B 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-SD955B features an edit control panel that allows automatic editing when an external VTR is connected as a player.

Digital Video Cassette Recorder AJ-SD955

Superior Digital Quality and Versatile Editing

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-SD955B and AJ-SD930B 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-SD955B and AJ-SD930B 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-SD955B and AJ-SD930B 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-SD955B and AJ-SD930B 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.*

*Recording on Mini-DV cassette with an adaptor is impossible. Even with an adaptor,DVCPRO VTRs cannot play Mini-DV cassette tapes recorded in LP mode,nor 80/120 minutes Mini-DV cassette tapes.

Linear Editing with Frame Accurate 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-SD955B

The AJ-SD955B 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.

625/525 Selectable — AJ-SD955B

The 625/525 selectable function in the AJ-SD955B lets you play and use NTSC footage in program production. Use the standard-equipped SDI or optional AJ-YA931G 525 analogue input board for 525 input, and the standard-equipped SDI and analogue out for output.

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 +0.43, +0.5, +0.75 times normal speed in DVCPRO50 and DVCPRO. Digital audio monitoring is possible in jog mode.

UMID Data Recording and Playback

The AJ-SD955B and AJ-SD930B record and play data that conform to the UMID standard and contain a variety of supplementary information. This allows it to read GPS data (latitude, longitude and altitude) recorded by the AJ-SDX900 Camera-Recorder. The AJ-SD955B and AJ-SD930B can also handle VANC data for broadcast such as Teletext.

*UMID (Unique Material Identifier): These identifiers for the AV material identifiers have been defined in the SMPTE 330M international standard.

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. This on-screen display is now available on one of the SDI outputs in addition to the composite monitor output, thus eliminating the need for analogue inputs on the Video Monitor.

AJ-SD930B: Simple Operation Panel

The AJ-SD930B has virtually the same performance, interface, and features as the AJ-SD955B, but without the edit control panel and 525 switchable function.
This makes the cost-effective AJ-SD930B 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-SD955B and AJ-SD930B 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.

SDTI or IEEE 1394* Interface

An option slot allows system expansion. Connecting an AJ-YAC930G SDTI (Serial Data Transport Interface) board lets you transfer compressed data, with no degradation, with a DVCPRO50/DVCPRO VTR for broadcast use. Or, connecting an AJ-YAD955G IEEE 1394 Digital Interface Board gives you degradation-free transfer of compressed data , which delivers a full 4:2:2 compressed signal for use in PC and Macintosh based editing systems.
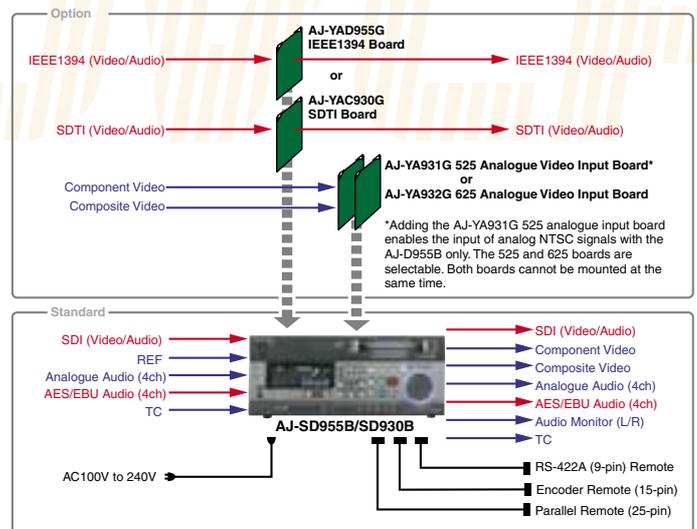
*Users must select either the AJ-YAC930G SDTI board or the IEEE 1394 Digital Interface Board. The two boards cannot be mounted or used at the same time.

Analogue Input/Output

The AJ-SD955B and AJ-SD930B 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-YA931G (525) or AJ-YA932G (625) boards. This efficient design provides all the versatility needed in today's video production environment.
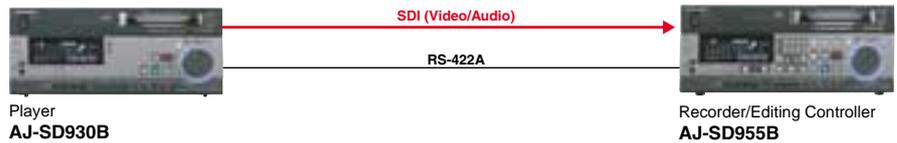
RS-422A, RS-232C, and Encoder Remote

• RS-422A (9-pin): For interfacing with a system that includes an editing controller.
• RS-232C (25-pin):For PC applications.
• Encoder (15-pin): For remote adjustment of the video signal.
• Parallel (25-pin): For general-purpose remote control.
• World-wide Voltage support (AC100 to 240V ±10%, 50 to 60Hz).

DVCPRO 50

Simple Editing with Two VTRs

For automatic editing,
the AJ-SD955B's edit control panel
can be used to control an
AJ-SD930B (or other external VTR)
used as a player.

Player
AJ-SD930B

SDI (Video/Audio)

RS-422A

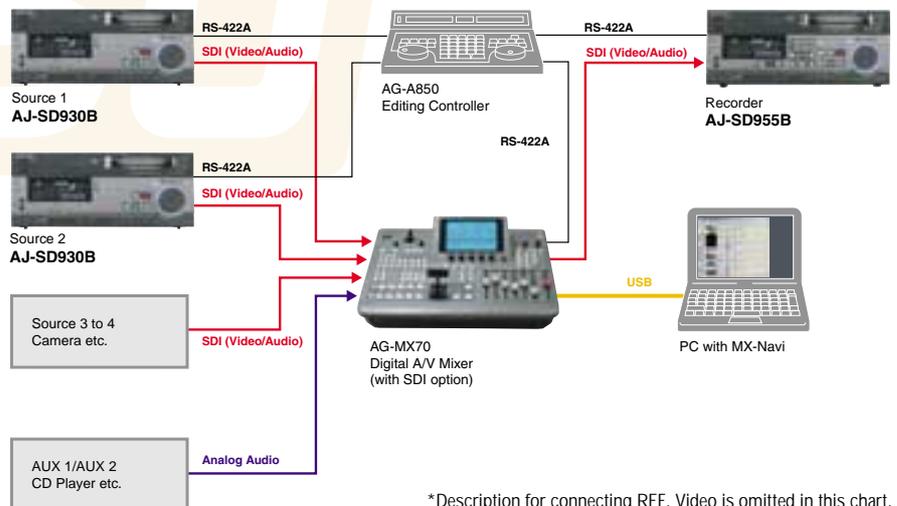Recorder/Editing Controller
AJ-SD955B

Non-Linear Editing

Connect to a PC for non-linear editing
or webcasting with the optional
AJ-YAD955G IEEE1394 board.

*The PC must be equipped with an IEEE1394 interface
and appropriate software. DVCPRO50 data can only
be used by systems that are compatible with
50-Mbps DV data.

AJ-SD930B/SD955B
with AJ-YAD955G IEEE1394 board

IEEE1394 Digital Interface

PC (Windows or Macintosh)

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.

Source 1
AJ-SD930B

RS-422A
SDI (Video/Audio)

AG-A850
Editing Controller

RS-422A
SDI (Video/Audio)

Recorder
AJ-SD955B

Source 2
AJ-SD930B

RS-422A
SDI (Video/Audio)

RS-422A

Source 3 to 4
Camera etc.

SDI (Video/Audio)

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

USB

PC with MX-Navi

AUX 1/AUX 2
CD Player etc.

Analog Audio

*Description for connecting REF. Video is omitted in this chart.

AJ-YA931G
525 Analogue Video Input Board
(for AJ-SD955B only)

AJ-YA932G
625 Analogue Video Input Board
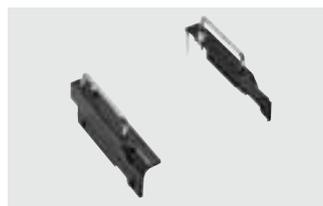(for AJ-SD955B/SD930B)

AJ-YAC930G
SDTI Board
(for AJ-SD955B/SD930B)

AJ-YAD955G
IEEE1394 Board
(for AJ-SD955B/SD930B)

AJ-CS455P
Mini-DV Cassette Adaptor

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

SPECIFICATIONS

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 80% (non dew)
Weight:	14.9 kg (AJ-SD930B)
	15.0 kg (AJ-SD955B)
Dimensions (WxHxD):	424 x 175.2 x 430 mm
Recording Format:	DVCPRO50/DVCPRO switchable
Video Format:	AJ-SD930B: 625i
	AJ-SD955B: 625i/525i switchable
Recording Track:	Digital Video:625/50i
	Digital Audio: 4 channels (DVCPRO50)
	2 channels (DVCPRO)
	TC: Subcode area
	Cue: 1 longitudinal track
	CTL: 1 longitudinal track
Tape Speed:	625i: 67.708mm/s
(DVCPRO50)	525i: 67.640mm/s (AJ-SD955B)
Rec/Play Time:	Max. 92 minutes with AJ-5P92LP
Tape:	metal particle
FF/REW Time:	Less than 3 minutes with AJ-5P92LP
Digital Slowmotion:	−0.43x to +0.43x, +0.5x, +0.75x
	(DVCPRO50,DVCPRO)
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 (Y 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
De-Emphasis:	T1=50μsec, T2=15μsec
	ON/OFF (Automatically switching)
Cue Track:	300Hz to 6kHz (±3dB)(DVCPRO50)

Video Input

Analogue Component:	BNC x 3 (Y/P_B/P_R),
(option)	Y: 1.0Vp-p, 75Ω
	P_B/P_R: 0.7Vp-p, 75Ω
	(100% colour bar)
Analogue Composite :	BNC x 2 (loop-through),
(option)	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 1 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 2 with AJ-YAC930G,
	SMPTE 305M/321M

Video Out Adjustment Range

Video Gain:	±3 dB
Chroma Gain:	±3 dB
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

IEEE1394:	9 pin x 1, IEEE1394-1995
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)
Y/C 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.

*DVCAM is a registered trademark of Sony Corp,.

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