

# Panasonic

AJ-SD955B

AJ-SD930B

DVCPRO50 Studio VTRs (525)



**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 DVCPR050 50Mbps 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 audio quality professionals need. Each comes standard with SDI input and output, allowing its use in D1, D5 and Digital Betacam video production. Also equipped with with a 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 DVCPR0, DV and DVCAM™ tapes as well as DVCPR050 tapes. It also records and plays UMID data. These and other features make each model an ideal solution to a wide range of production and broadcast uses.



## High-End DVCPR050 Quality

Featuring 4:2:2 digital component video recording and 4-channel digital audio, the AJ-SD955B and AJ-SD930B deliver the picture and audio quality required in high-end broadcasting and production. Both models are switchable between DVCPR050 50Mbps and DVCPR0 25Mbps for recording and playback, and both play back DV and DVCAM™ tapes.



**DVCPR050**

# 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 (SMPTE 259M-C serial digital interface) input/output and AES/EBU digital audio input/output. Analog output is also standard. Analog input, IEEE1394 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.



# Superior Digital Quality and Versatile Editing



## 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 low 3.3:1 compression ratio minimizes picture degradation during compression, 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\*<sup>1</sup> on an AJ-5P92LP compact 1/4" cassette tape. In DVCPRO mode, recording time is doubled to 184 minutes.\*<sup>2</sup>

In playback, the AJ-SD955B and AJ-SD930B automatically detects the recording format used and plays the tape back accordingly.

\*1: Based on AJ-5P92L cassette

\*2: 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 not possible.

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.

### 525/625 Selectable — AJ-SD955B

The 525/625 selectable function in the AJ-SD955B lets you play and use PAL footage in program production. Use the standard-equipped SDI or optional AJ-YA932G 625 analog input board for 625 input, and the standard-equipped SDI and analog 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 fluorescent character display, gives you easy-to-read, precise operation status. In shuttle mode, you can search in color at  $\pm 32$  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 DVCPRO50 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, straightforward 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 analog 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 625 switchable function. This cost-effective AJ-SD930B can serve as the heart of a low-cost system for dubbing or on-air transmission, or as a player in an editing system.



# Standard Digital Interfaces for Easy Expandability

## 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 high-end post-production applications.

## IEEE 1394\* or SDTI Interface

Its option slot allows system expansion. 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.\*<sup>1</sup> Or, connecting an AJ-YAC930G SDTI (Serial Data Transport Interface) board\*<sup>2</sup> lets you transfer compressed data, with no degradation, with a DVCPR050/DVCPRO VTR for broadcast use.

\*1: In 625(PAL) mode, DV data input is impossible.

\*2: 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.

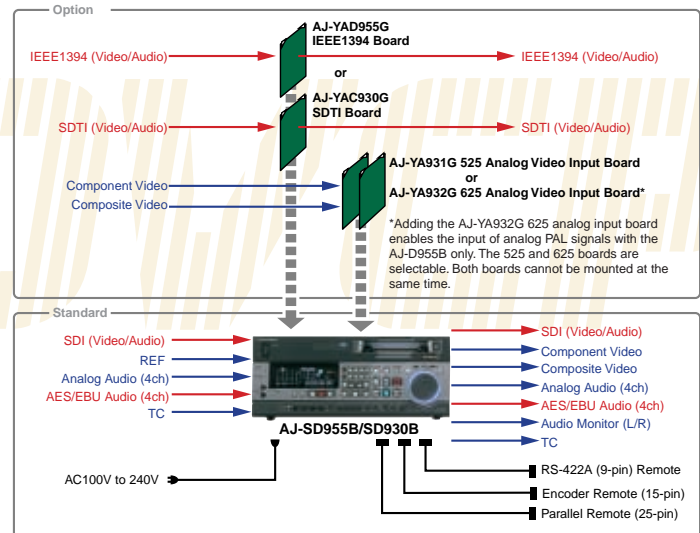
## Analog Input/Output

The AJ-SD955B and AJ-SD930B are equipped standard with output composite and component video signals. They also come standard with four channels of analog audio input/output. Analog 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.

\*AJ-SD955B only.

## RS-422A/RS-232C Remote and Other Features

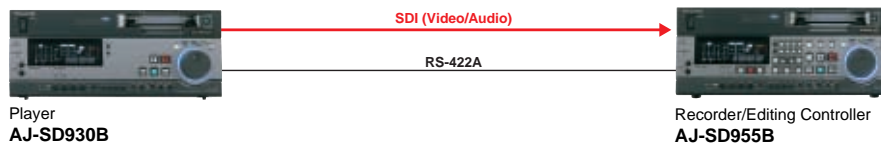
- RS-422A (9-pin) for interfacing with a system that includes an editing controller.
- RS-232C (25-pin) for PC applications.
- Encoder (15-pin) for remote adjustment of the video signal.
- Parallel (25-pin) for general-purpose remote control.
- World-wide voltage support (AC100 to 240V  $\pm$ 10%, 50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



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

### 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.



### Non-Linear Editing

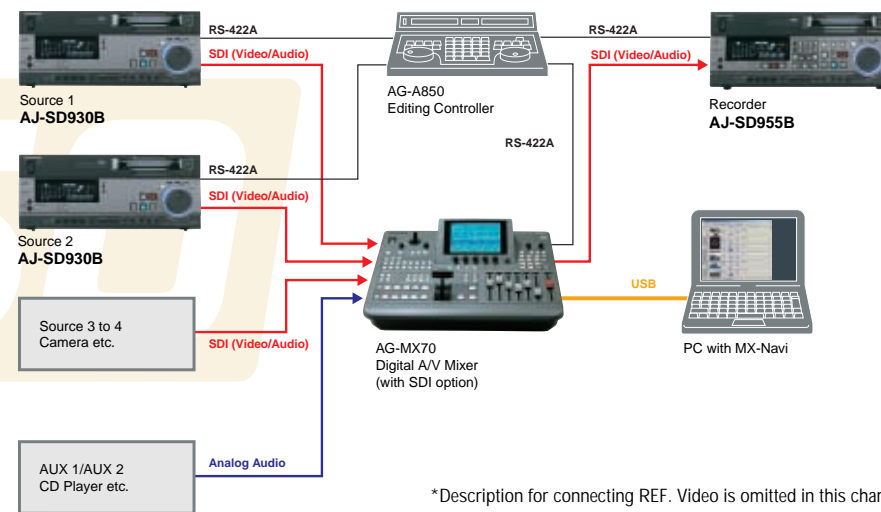
Connect to a PC for non-linear editing or webcasting with the optional AJ-YAD955G IEEE1394 board.

\*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.



### 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.



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

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



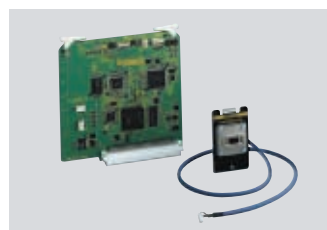
**AJ-YA931G**  
525 Analog Video Input Board  
(for AJ-SD955B/SD930B)



**AJ-YA932G**  
625 Analog Video Input Board  
(for AJ-SD955B only)



**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)

<b>General</b>		<b>Audio</b>		<b>Audio Input</b>	
Power Supply:	AC100 to 240V $\pm$ 10%, 50 to 60 Hz	Sampling Frequency:	48kHz (sync. with video)	Analog(CH1/2/3/4):	XLR x 4, +4/0/-20 dBu switchable, 600 $\Omega$ /high-impedance switchable
Power Consumption:	120W (full option)	Quantization:	16 bits	Digital(CH1/2, CH3/4):	BNC x 2, AES/EBU
Operating Temperature:	41°F to 104°F (5°C to 40°C)	Frequency Response:	20Hz to 20kHz, $\pm$ 1.0dB (reference level)	Serial Digital:	SMPT259M-C / 272M-A (BNC 75 $\Omega$ )
Operating Humidity:	10% to 80% (non dew)	Dynamic Range:	More than 90dB (1kHz, emphasis off, "A" weighted)	<b>Audio Output</b>	
Weight:	AJ-SD930B: 32.8 lbs (14.9 kg) AJ-SD955B: 33.1 lbs (15.0 kg)	Distortion:	within 0.05% (1kHz, emphasis off, reference level)	Analog (CH1/2/3/4):	XLR x 4, Low-impedance, +4/0/-20 dBu switchable
Dimensions (WxHxD):	16-3/4" x 6-15/16" x 16-15/16" (424 x 175.2 x 430 mm)	Cross Talk:	Less than -80dB (1kHz, between any 2ch)	Digital (CH1/2, CH3/4):	BNC x 2, AES/EBU 1.0 $\pm$ 0.2Vp-p, 75 $\Omega$
Recording Format:	DVCPRO50/DVCPRO switchable	Wow & Flutter:	Below measurable limit	Serial Digital:	SMPT259M-C / 272M-A (BNC 75 $\Omega$ )
Video Format:	AJ-SD930B: 525i AJ-SD955B: 525i/625i switchable	Headroom:	20 dB	Monitor:	XLR x 2, Low-impedance, +4/0/-20 dBu switchable
Recording Track:	Digital Video/Audio: Helical track TC: Subcode area Cue: 1 longitudinal track CTL: 1 longitudinal track	De-Emphasis:	T1=50 $\mu$ sec, T2=15 $\mu$ sec ON/OFF (Automatically switching)	Phones:	M3, variable level control, 8 $\Omega$
Tape Speed:	525i: 67.640mm/s (DVCPRO50) 625i: 67.708mm/s (AJ-SD955B)	Cue Track:	300Hz to 6kHz, $\pm$ 3dB (DVCPRO50)	<b>Others</b>	
Rec/Play Time:	Max. 92 minutes (*Based on AJ-5P92LP cassette)	<b>Video Input</b>		IEEE1394 (option):	6 pin x 1, IEEE1394-1995
Tape:	Metal Particle	Analog Component:	BNC x 3 (Y/P <sub>B</sub> /P <sub>R</sub> ), Y: 1.0Vp-p, 75 $\Omega$ P <sub>B</sub> /P <sub>R</sub> : 0.486 / 0.7Vp-p, 75 $\Omega$ (75% color bar, 7.5% set up)	TC IN:	XLR x 1, 0.5 to 8.0 Vp-p, 10K $\Omega$
FF/REW Time:	Less than 3 minutes (*Based on AJ-5P92LP cassette)	Analog Composite:	BNC x 2 (loop-through), 75 $\Omega$ On/Off, Video:1.0Vp-p(75 $\Omega$ )	TC OUT:	XLR x 1 low-impedance, 2.0 $\pm$ 0.5 Vp-p
Digital Slowmotion:	-0.43x to +0.43x, +0.5x, +0.75x (DVCPRO50, DVCPRO)	Reference:	Analog Composite BNC x 2 (loop-through) 75 $\Omega$ On/Off	RS-422A IN:	D-sub 9 pin RS-422A I/F
Editing Accuracy:	$\pm$ 0 frame (TC)	SDI:	BNC x 2 (active through), SMPT259M-C	RS-422A OUT:	D-sub 9 pin RS-422A I/F
Tape Timer Accuracy:	$\pm$ 1 frame (continuous CTL)	SDTI (option):	BNC x 1, SMPT259M-C	RS-232C:	D-sub 25 pin RS-232C I/F
Servo Lock Time:	Within 0.5 sec (color framing/standby ON)	<b>Video Output</b>		Parallel IN/OUT:	D-sub 25 pin
<b>Video</b>		Analog Component:	BNC x 3(Y/P <sub>B</sub> /P <sub>R</sub> ), Y: 1.0Vp-p, 75 $\Omega$ P <sub>B</sub> /P <sub>R</sub> : 0.486 / 0.7Vp-p, 75 $\Omega$ (75% color bar, 7.5% set up)	Encoder Remote:	D-sub 15 pin
Sampling Frequency:	Y: 13.5MHz, P <sub>B</sub> /P <sub>R</sub> : 6.75MHz (DVCPRO50)	Analog Composite:	BNC x 3 Video1/Video2: Video/WFM switchable Video 3: Superimpose on/off	<b>Video Specifications with the AJ-YA931G Optional Analog Input Board</b>	
Quantization:	8 bits	SDI:	BNC x 3, SMPT259M-C SDI1, SDI2, SDI3 (superimpose on/off)	[Analog Component In/Component Out]	
Error Correction:	Reed-solomon product code	SDTI (option):	BNC x 2, SMPT259M-C	Bandwidth:	Y: 30Hz to 5.5MHz ( $\pm$ 1.0dB) 5.75MHz -2.0dB P <sub>B</sub> /P <sub>R</sub> : 30Hz to 2.5MHz ( $\pm$ 1.0dB) 2.75MHz (-2.0dB)
Compression Method:	DV-Based Compression (SMPT259M-C)	<b>Video Out Adjustment Range</b>		S/N Ratio:	55 dB or more
Compression Ratio:	3.3:1 (DVCPRO50), 5:1 (DVCPRO)	Video Gain:	$\pm$ 3 dB	K Factor :	1% or less (Y 2T)
Bit Rate:	50 Mbps (DVCPRO50) 25 Mbps (DVCPRO)	Chroma Gain:	$\pm$ 3 dB	Y/C Delay:	20 nsec or less
[Digital In/Analog Component Out] (standard)		Hue:	$\pm$ 30°	[Analog Composite In/Composite Out]	
525i Bandwidth:	Y: 30Hz to 5.75MHz ( $\pm$ 0.5dB) P <sub>B</sub> /P <sub>R</sub> : 30Hz to 2.75MHz ( $\pm$ 0.5dB)	Set up Level:	$\pm$ 14IRE	Bandwidth:	Y: 30Hz to 4.5MHz ( $\pm$ 1.0dB) 5.5MHz (-3.0dB)
625i Bandwidth:	Y: 25Hz to 5.75MHz ( $\pm$ 1.0dB) P <sub>B</sub> /P <sub>R</sub> : 25Hz to 2.75MHz ( $\pm$ 1.0dB)	Sync Phase:	$\pm$ 15 $\mu$ sec	Y/C Delay:	20 nsec or less
S/N Ratio:	60dB or more (Y)	SC Phase:	$\pm$ 180°	Weight and dimensions shown are approximate. Specifications are subject to change without notice. These products may be subject to export regulations.	
K Factor:	1% or less (Y 2T)			*DVCAM is a registered trademark of Sony Corp.,	
Y/PB, PR Delay:	10 nsec or less				

# Panasonic

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