BETACAM SX™

Digital Video Cassette Player

DNW-65

SONY®

The Digital Video Cassette Player—DNW-65

Betacam SX™ products take advantage of the opportunities provided by digital technology to streamline broadcast operations. They are designed to integrate with equipment such as digital editing and A/V server systems, and use MPEG-2 4:2:2 Profile@Main Level compression technology to deliver exceptional video quality.

In developing the Betacam SX range, Sony has introduced players and recorders with features that support both linear and non-linear post production operations. For linear operations, the range has included models with the ability to play back analog Betacam™ and Betacam SP™ recordings. However, this backwards compatibility is not always a system requirement and this is the philosophy behind the introduction of the DNW-65 Digital Video Cassette Player.

The DNW-65 is a direct replacement for current Sony BVW Series analog studio players. It includes a wide range of features, including DMC (Dynamic Motion control), Freeze function, 525/625 operation, variable speed playback, Good Shot Mark support, and an optional SDTI (Serial Data Transport Interface) carrying MPEG data. It is ideally suited for many linear operations and can be installed in Sony Flexicart™ and Library Management System™ (LMS) multicassette systems. A NTSC/PAL monitoring capability and four-channel audio playback are also provided.

Note: SDTI is defined as SMPTE 305M.

DNW-65

High Quality Digital Video and Audio Playback

The DNW-65 delivers exceptional video quality of the Betacam SX format, recording 8-bit, 4:2:2 component digital signals using MPEG-2 4:2:2 Profile@Main Level compression technology. The system also includes four 16-bit, uncompressed audio channels.

Long Playback Time

The DNW-65 provides long playback time up to 194 minutes on a single L-cassette and 62 minutes on a single S-cassette.

Betacam SX Tape

Variable Speed Control

The range of the Variable Speed Control using Betacam SX recordings is from -1 to +2 times with noiseless image and digital jog sound.

DMC (Dynamic Motion Control)

Equipped with the Dynamic Motion Control functions, the DNW-65 provides slow-motion playback from the control panel or from external controllers such as the BVE series editors or DTR-3000 slow motion controller.

Freeze Function

The DNW-65 is equipped with digital memory that enables an operator to freeze any picture and view it in a solid, stable, still format.

Playable in the Flexicart and LMS Systems

The DNW-65 can be used as a player in the Flexicart or LMS systems, giving these multicassette systems the advantage of long playing times and lower maintenance costs associated with the Betacam SX format.

FLEXICART

LMS

525/60 or 625/50 Versatility

The DNW-65 can easily be switched from 525/60 to 625/50 modes. This enables the DNW-65 to work in international environments.

Versatile Interfaces

The DNW-65 is equipped with analog composite and component video outputs, component SDI outputs and 4 channels of analog audio outputs, AES/EBU outputs, and 2 audio monitor outputs as standard. In addition, RS-422A control, RS232C control, Parallel 50-pin remote control interface, video processor control interface (Parallel 15-pin), and Time Code output are also included. SDTI (SX) output is an optional interface. It enables to transfer the material to an A/V Server at a maximum of 2 times normal speed and will speed up the editing time.

Good Shot Mark

One of the most useful features of the Betacam SX series is the Good Shot Mark system, providing a method for qualitative decisions made in the camcorder to be utilized during the editing process. The DNW-65 can scan the tapes at high speed and automatically detect shot marks recorded on the tape. After scanning for

DNW-65 Front Panel

marks, a list of all the marks is displayed on the monitor, allowing easy cueing to any mark. In addition, the DNW-65 has two additional types marks, the Record Start Mark and the Virtual Shot Marks. A record start mark is inserted at the beginning of every recording. A Virtual Shot Mark is inserted in the list by the operator to mark scenes for easy cueing at a later time. These features can dramatically speed up the edit search process.

Flexible Usage of the Control Panel

The remote control panel of the DNW-65 can be extended. Since the DNW-65 is equipped with a remote panel connector on the rear panel, it can be controlled from two control panels, adding greater operational flexibility.
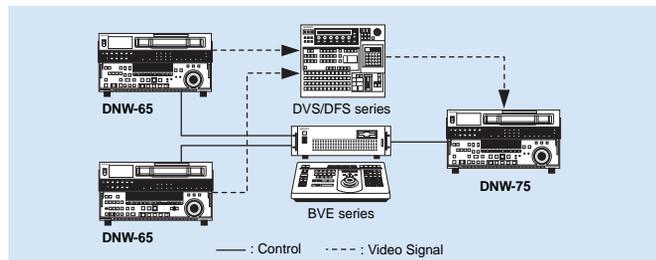

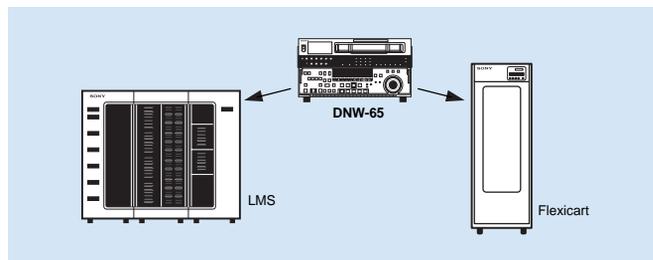**BKNW-119** with BKNW-121

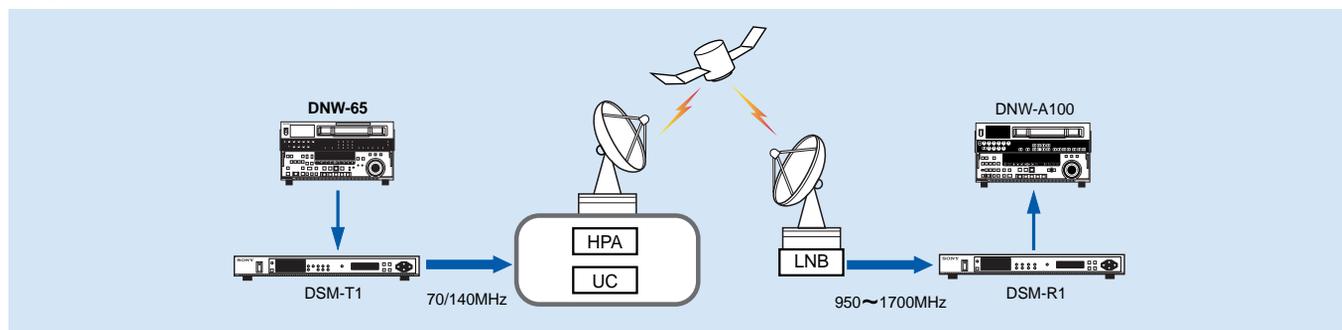**DNW-65** Front Sub-panel

DNW-65 Rear Panel

System Configuration

Linear A/B roll system

DNW-65

DVS/DFS series

DNW-75

BVE series

DNW-65

———— : Control   - - - - : Video Signal

DNW-65 in Flexicart and LMS

LMS

DNW-65

Flexicart

Digital Satellite Link System

DNW-65

DNW-A100

DSM-T1   70/140MHz
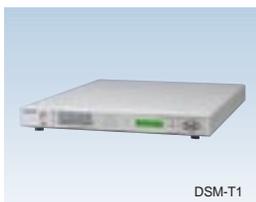
HPA

UC

LNB   950～1700MHz   DSM-R1

Optional Accessories

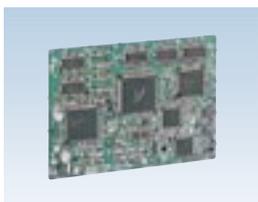Video Processor Controller
BVR-50

Dynamic Motion Controller
DTR-3000

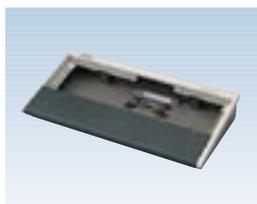Digital Satellite Modulator/Demodulator
DSM-T1/R1

SDTI Multiplexer/Demultiplexer
DSM-M1/D1

SDTI (SX) Output Board
BKNW-118

Control Panel
BKNW-119

Control Panel Case
BKNW-121

Control Panel Extension Kit
BKNW-122

Rack Mount Kit
RMM-111

Remote Control Cable
(5m) (10m) (30m)
RCC-5G/10G/30G

Betacam SX Video Cassette
BCT-12SX/22SX/32SX/60SX/62SX
(Small)

BCT-64SXL/94SXL/124SXL/184SXL/194SXL
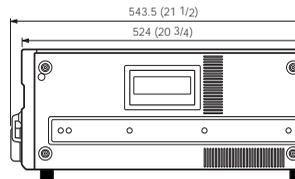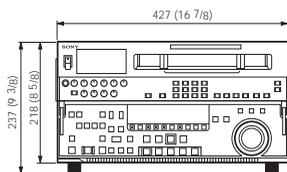**(Large)**

Cleaning Cassette
BCT-D12CL

Cleaning Cassette
BCT-5CLN

Maintenance Manual

Specifications

DNW-65

General	Power requirements	AC 100 V to 240 V, 50/60 Hz
	Power consumption	165 VA (156 W) /AC 240
	Operating temperature	+5°C to +40°C (+41°F to +104°F)
	Storage temperature	-20°C to +60°C (-4°F to +140°F)
	Humidity	25% to 80% (relative humidity)
	Mass	26 kg (57 lb 3 oz)
	Dimensions (WxHxD)	427x237x524 mm (16 7/8 x 9 3/8 x 20 3/4 inches)
	Tape speed	59.515 mm/s (525 mode), 59.575 mm/s (625 mode)
	Digital playback time	Max. 194 min with BCT-194SXL cassette
	Fast forward/rewind time	Approx. 3 min with BCT-194SXL cassette
	Search speed range	±78 times normal playback speed
	Servo lock time	0.5 s or less (from standby on)
	Load/unload time	6 s or less
Outputs signal	Analog composite output	BNC (x3, including one character out), 1.0 Vp-p, 75Ω, sync negative
	Analog component output	BNC (x3, for 1 set, Y/R-Y/B-Y),Y: 1.0 Vp-p, 75Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75Ω
	SDI output	BNC (x3, including one character out), SMPTE 259M,(ITU-R BT.656-3), 270 Mbit/s
	SDTI (SX) output (option)	BNC (x2), Maximum x2 speed, SMPTE 305M
	Analog audio output (CH 1, 2, 3, 4)	XLR (x4)
	Digital audio output (CH 1/2, 3/4)	BNC (x2), AES/EBU
	Remote control — Remote	D-sub 9-pin (x2), Sony 9-pin remote interface
	Remote control — RS-232C	D-sub 9-pin (x1), RS-232C interface
	Remote control — Processor Control	D-sub 15-pin (x1)
	Remote control — Connector for Control Panel	Mini D-sub 29-pin (x1)
	Remote control — Parallel Remote	50-pin x1
	Remote control — Time code output	XLR (x1)
	Remote control — Monitor output L/R	XLR (x2)
Processor adjustment range	Video level	±3 dB/ -∞ to 3 dB selectable
	Chroma level	±3 dB/ -∞ to 3 dB selectable
	Set up/Black level	±30 IRE/±210 mV
	Chroma phase/hue	±30 °
	System sync phase	±15 µs
	System SC phase	±200 ns
Digital video performance	Sampling frequency	Y: 13.5 MHz R-Y/B-Y: 6.75 MHz
	Quantization	8 bits/sample
	Error correction	Reed-Solomon code
Digital audio performance	Sampling frequency	48 kHz (synchronized with video)
	Quantization	16 bits/sample
	Frequency response (0 dB at 1 kHz)	20 Hz to 20 kHz +0.5 dB/-1.0 dB
	Dynamic range (at 1 kHz, emphasis ON)	More than 90 dB
	Distortion (at 1 kHz, emphasis ON, reference level)	Less than 0.05%
	Cross talk (at 1 kHz, between any two channels)	Less than -80 dB
	Wow & flutter	Below measurable level
	Head room	20 dB (18 dB selectable)
	Emphasis (ON/OFF selectable in REC mode)	T1=50 µs, T2=15 µs
Supplied accessories	PSW 4x16 Rack Mount Screw	x4
	Operation manual	x1

Dimensions

427 (16 7/8)
237 (9 3/8)
218 (8 5/8)
543.5 (21 1/2)
524 (20 3/4)

Unit: mm (inch)

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