

Editing Control Unit BVE-2000



SONY®



With the introduction of the BVE-910, Sony set the industry standard for a mid-size screen-based editing control unit.

Taking full advantage of the technical experience and expertise acquired in the development of the BVE-910, Sony now introduces the BVE-2000, designed with more advanced features and operational simplicity in mind.

Improved keyboard layout, built-in floppy disk drive, advanced list management and expanded device control capability are some of the examples.

With its enhanced interface versatility, the BVE-2000 can be integrated into a wide range of post production applications from simple cuts-only to multi-machine editing systems.

The BVE-2000, at the heart of the Sony system, will surely simplify complex editing and enhance your program production capability.

VTR Interface

The BVE-2000 allows versatile machine control in various editing configurations and takes full advantage of the available Sony VTR functions.

VTR control

With the standard configuration, up to 4 VTRs can be controlled simultaneously in an A/B-roll edit. Additionally, when the optional BKE-2020 expanded RS-422 I/F board is installed, a maximum of 12 VTRs can be connected of which up to 6 can be controlled simultaneously in one edit. Three auxiliary inputs are provided to control a camera, title generator—etc, through a properly connected video switcher.

Dynamic motion control

Variable speed control over player VTRs equipped with Dynamic Tracking™ is available from the BVE-2000. Speed control functions such as Mark Speed, Set Speed and Fit are also provided.

DMC learn

To realize flexible and creative motion editing, manually controlled tape speed trajectory can be memorized and stored in the EDL.

Recorder control/assignment

The BVE-2000 allows full recorder assignment and the monitor switcher interface ensures that the correct previews will be made. Additionally, the system will allow Temporary Recorder assignment and up to 2 recorders, with an offset, to be assigned simultaneously.

Four channel audio control

Four VTR audio channels can be independently

controlled during insert or split editing. The BVE-2000 also features Audio split-In/Out capability. At both the In and Out points, each of the 4 audio channels can be given a separate timing by setting preset values or by marking splits for individual channels.

Color framing

With the optional plug-in color framing detector board, accurate editing with the correct color frame phase for NTSC, PAL, or SECAM can be performed.

Pre-read control

For Sony D-2 and Digital BETACAM™ VTRs, which incorporate Pre-read capability, the BVE-2000 provides control of this feature on an edit by edit basis. Two machine transitions with live pictures can be performed using this function. The pre-read edit is stored in the EDL.

Time code source selection

LTC (Logitudinal Time Code), VITC (Vertical Interval Time Code) or CTL (Control Track) based editing can be independently selected for each VTR. Discontinuous time code can also be handled.

TBC snapshot for digital BETACAM™

When connected to the DVW series VTRs, the BVE-2000 takes the snapshots of the TBC settings and stores them in the EDL for subsequent recall.

Switcher Interface

For sophisticated post production operations, interactive communication between the editing control unit and the switcher is essential. The BVE-2000 incorporates a powerful switcher interface capability for a wide range of switchers.

Basic controls

From the serial switcher interface port, a range of video switchers can be controlled. Cross point assignment, wipe pattern recall, keyers, and other various switcher functions are controlled from the BVE-2000.

Independent DSK control

The BVE-2000 features separate control of Down Stream Keyer function. The DSK can CUT in/out, MIX in/out, or FADE in/out. In case of MIX/FADE effects, the transition rates and in/out timing can be specified.

DFS-500 control

Sony DFS-500 can be controlled directly from the BVE-2000 or through the BVS-3000 series switchers via the RS-422 interface. When directly controlled, all the effect patterns are assigned as wipe patterns and the transition speed which is set on the editor is transferred to the DFS-500.

Initial panel settings

When interfaced with the Sony BVS-3000 series

switchers, DFS-500 or GVG model 100/110 switchers, initial panel settings for every edit can be transferred via the serial interface and stored in the EDL.

E-File™/Snapshot control

At a specified point during the editing operation, the BVE-2000 can initiate an E-File™/E-MEM™ or the snapshot register of the BVS-3000 series switchers, GVG model 100/110 or DFS-500. This information is stored in the Edit Decision List.

Switcher preview function

This is another time-saving feature which enables only the preview of switcher effect. There is no need to wait for the VTRs to be cued up in case only the effect preview is desired.

Monitor switcher control

The Sony BVS-V1201/A1201 monitor switchers can be controlled from the BVE-2000 via a 25-pin parallel cable. The video and audio monitoring automatically follows the reassignment of the recorder VTR.

Audio Interface

Advanced audio device control for sophisticated audio/video production is featured in the BVE-2000.

Audio mixer interface

The BVE-2000 supports both the 9-pin serial control using ESAM II protocol and a 15-pin parallel connector to interface to a variety of audio mixers.

Audio mixer initial panel

The BVE-2000 stores the initial panel settings of the DMX-E2000 digital audio mixer in the EDL and recalls the same panel settings.

PCM-7050/7030 interface

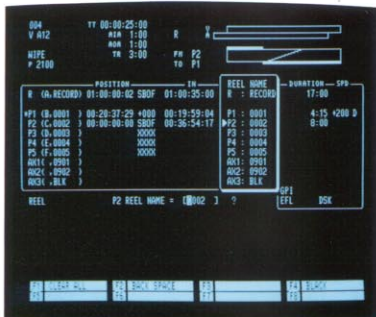
The BVE-2000 can control the tape motion of the PCM-7030 and PCM-7050 DAT decks. With the memory option fitted to the PCM-7050/7030, the BVE-2000 can access the Memory Jog Function. Program Play is also available providing full quality audio at play speed $\pm 12.5\%$.

Ease of operation

During program production, the editing control unit is always at the heart of the system regardless of the system application. The BVE-2000 allows creative edit decisions to be made with its logical keyboard layout and advanced software.

Improved CRT display

For easier operation, pop-up window menus for Reel number, Constants, and GPI settings are supported in the BVE-2000 display. Also a comprehensive graphic display shows the current edit status at a glance.



Reel number settings

Six alpha numeric characters can be used to specify the source tapes being used for editing. The status of each reel is displayed when the Reel Number menu is selected.

Programmable function keys

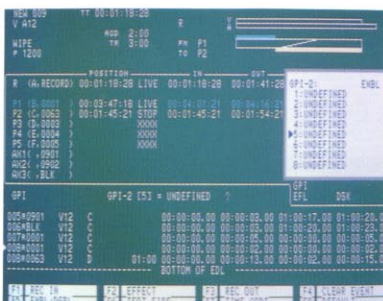
The BVE-2000 supports 20 PF keys to store total of 255 key-stroke sequences in the memory system. These sequences can be executed with just a press of the corresponding PF key. Labeling of the keys is also possible.

Save / Recall of PF key data

It is possible to save/recall only the PF key data to the floppy disk. This feature allows you to have your own preferred PF key data on your own floppy disk and load the data into any BVE-2000 without effecting any other menus.

Color VDU display

With the color VDU display, the BVE-2000 greatly simplifies editing by an easy-to-read color menu display. Different colors help to differentiate between various parts of the display for maximum clarity and to avoid mis-operation.



Arithmetic function

During editing sessions, there are many cases when calculations of the timecode values become necessary. With the BVE-2000, the timecode calculation feature is built-in so as to speed up the task. Calculated values appear in the scratchpad area and can be directly reflected to the edit page.

Advanced match frame edits

The time track function, which automatically calculates the player match-frame in-point whenever the recorder in-point is changed, has been enhanced. Action Track/Scroll Track/Recorder Track/Player Track and Auto Track are supported in the BVE-2000.

Digital process delay adjustment

For highly synchronized editing within the system, frame by frame adjustment of the system delay is possible. Just define the delay timing in the SETUP menu and the BVE-2000 will do the rest.

Set-up data storage to floppy disk

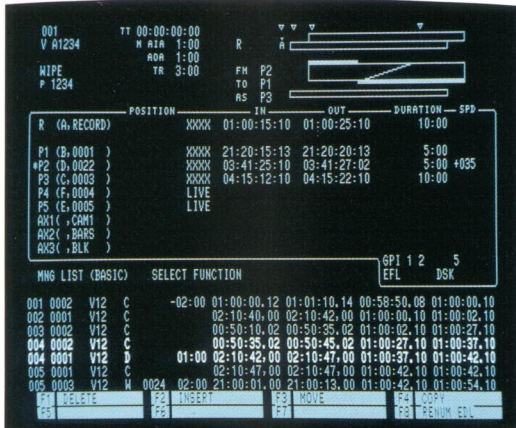
As well as INIT and AUX data, SETUP data, such as VTR constants, monitor mode and PVW mode settings, can be stored, recalled and printed.

List Management

In the actual video editing process, edit data is not merely a simple compilation of tape address information. The BVE-2000 provides facilities to store, review and modify the edit data for efficient editing.

List management function

As well as basic list management functions, the BVE-2000 supports functions such as INSERT, DELETE, CORRECT and MOVE with RIPPLE. The BVE-2000 also supports MODIFY, CLEAN and SORT EDL functions which allow flexible list management operation.



998 event memory

Up to 998 events can be stored in the EDL memory system and the data is protected by the back-up battery in case of power failure.

Built-in floppy disk drive

The BVE-2000 features a built-in 3.5-inch floppy disk drive in its mainframe. This enables storage of the operator's set-up as well as EDL data.

Notes/Remarks

Notes or remarks can be stored in the EDL for every edit. When an edit is recalled from the EDL, the notes can be automatically displayed. Each line of a note can be edited.

Other Interfaces

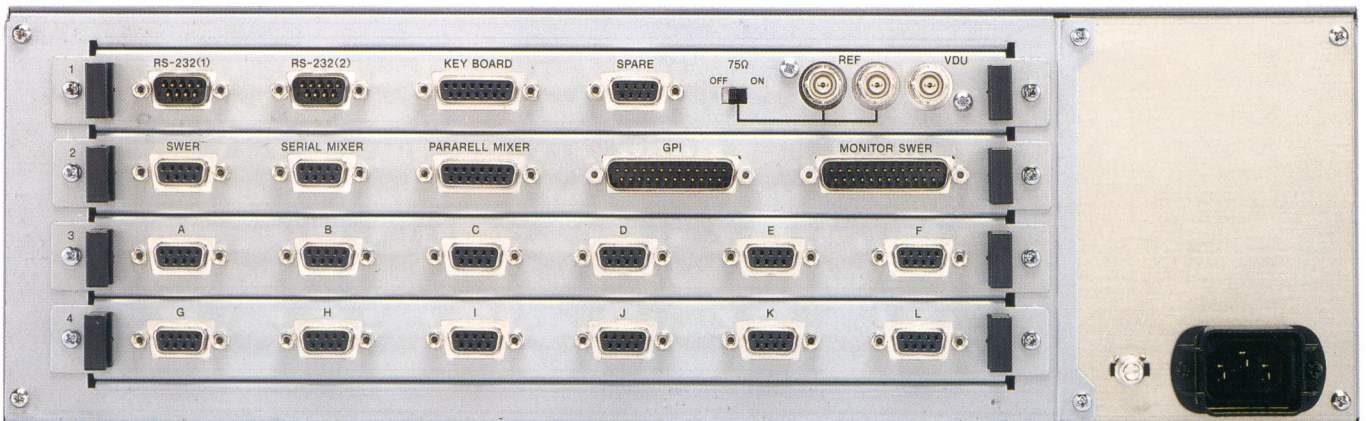
Eight Standard GPI ports

A total of eight GPI ports are supported in the BVE-2000 enabling basic control (FIRE or CLOSE) of various devices such as a character generator and audio tape recorder which cannot be directly interfaced with the BVE-2000. The trigger pulse can be assigned from the BVE-2000 keyboard and each GPI can be activated 8 times per edit.

Two Standard RS-232 interface

The BVE-2000 has two RS-232 ports in its standard configuration enabling interface with devices such as printers and IBM PC™ compatible personal computers.

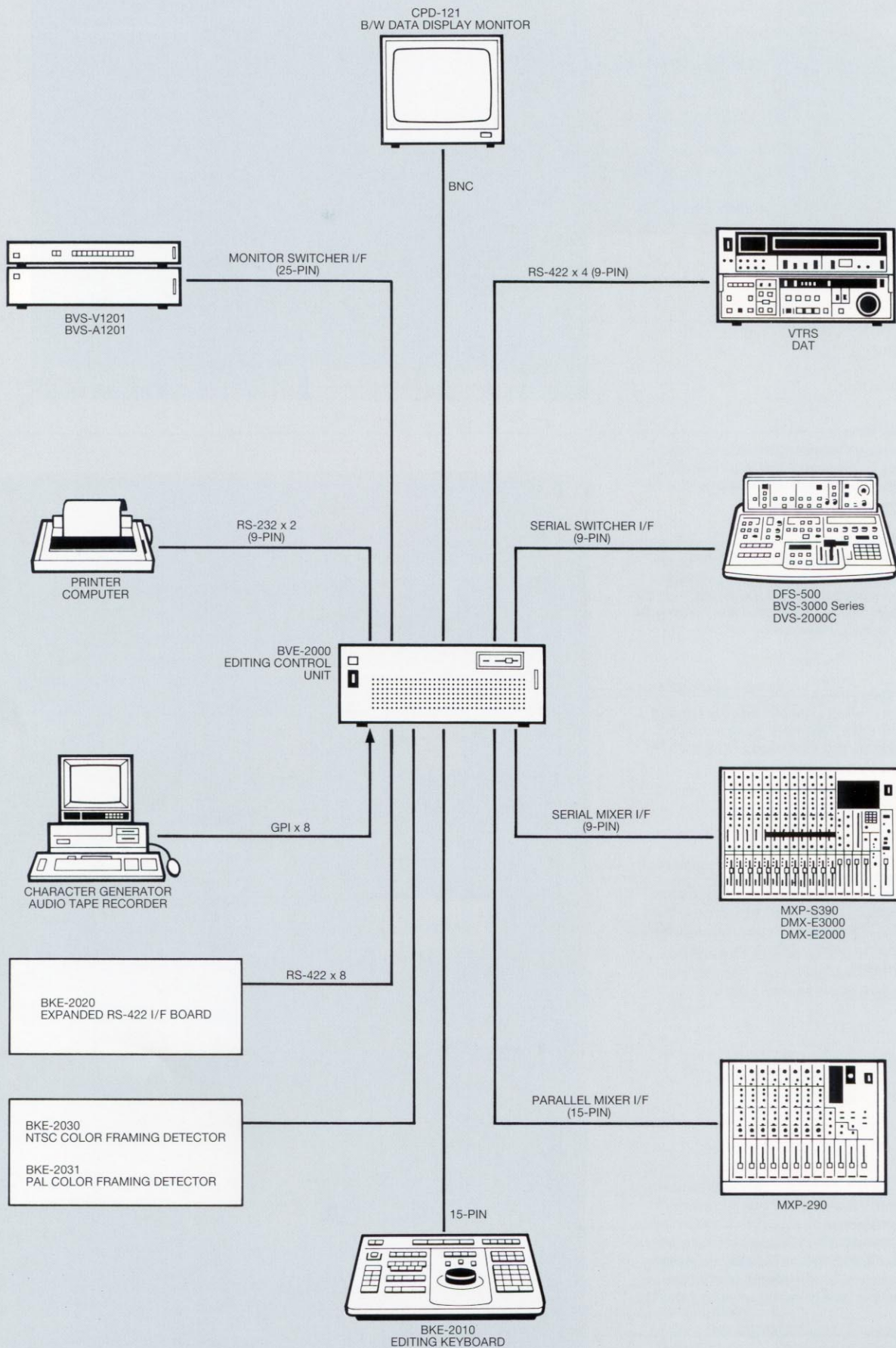
Connector Panel



* with BKE-2020 Expanded RS-422 I/F board.

System Configuration

BVE-2000 Details

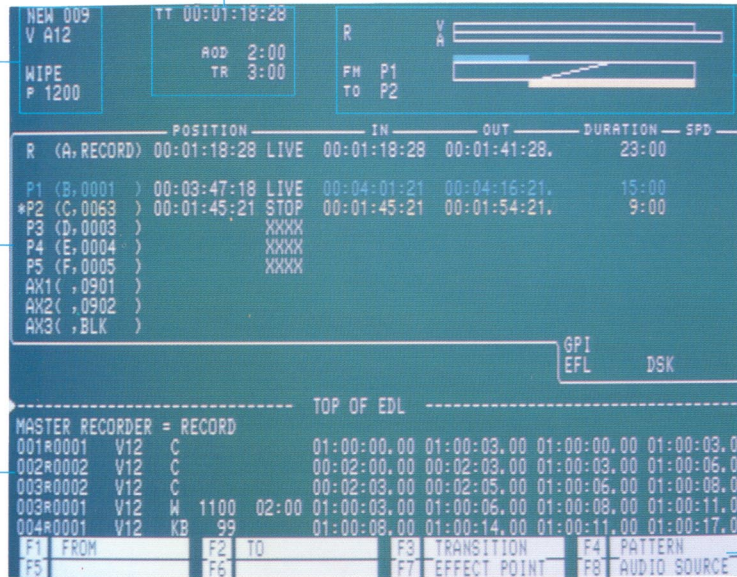


BVE-2000 Details

Edit number, edit mode, type of edit and effect pattern number are displayed here.

This section displays the status of each VTR. EDIT IN/OUT points, edit duration time, and the color framing status can easily be read. GPI trigger points and the E-File in-point is also displayed.

EDL data is displayed here.



This section of the audio/ video display shows the current effect pattern.

This graphic including info on edit mode, transition duration, and transition dial.

This area displays function keys.

Function Keys

The dialogues between operator and editor depends on the operation of these keys. The menus for the keys will be displayed at the bottom of the CRT display.

Initialization Menu

Menus which set pre-roll/post-roll times, GPI assignments, recorder assignment, switcher crosspoint assignment and source are set in the initialization menu. This section also contains the control for floppy disk drive.

Effect Type

The type of effect to be performed is selected using the Effect Type Keys. Standard effect types, Pattern key, DSK, Manual Edit, E-File™ control are provided here.

Automatic Control

Automatic cueing, previewing and recording sequences on the VTRs are performed with the operation of these keys. Record, Manual Record, Replay and a variety of Previews are also selected here.

Source Selection

These keys are used to select from the various sources the BVE-2000 is capable of controlling. It is possible to access several sources at once to issue time code or motion control commands.

Time Mark

Time Mark keys are operated when reading a current time code off the tape to be used as an IN or OUT point. This section also contains a Mark Split key and a Mark Delay key for split edits.



displays the total time, delay value of video and the transition duration of effect.

shows the current editing status, information on the GPI trigger points, transition type, edit start point, dialogue and split audio status.



BKE-2011, QWERTY keyboard

In addition to the dedicated keyboard, a QWERTY type keyboard is available to respond to a wide range of operational preference.

displays the current menu of the



Edit Mode

Separate selection of Video and four channel Audio inserts for the edit is made here. '1st Edit' and Assemble Edit mode are also selected here.

Miscellaneous Key

Many of the special functions of the BVE-2000 such as Time Track functions and SPLIT IN/OUT are accessed through the keys located here.

Keypad

This section contains a numeric pad and keys for the edit list management functions. The numeric keypads are used for entering timecode values and also to set the transition durations. List management functions such as INSERT, DELETE and CORRECT with RIPPLE are controlled here. A NOTE to store remarks is also available in this section.

Manual Control

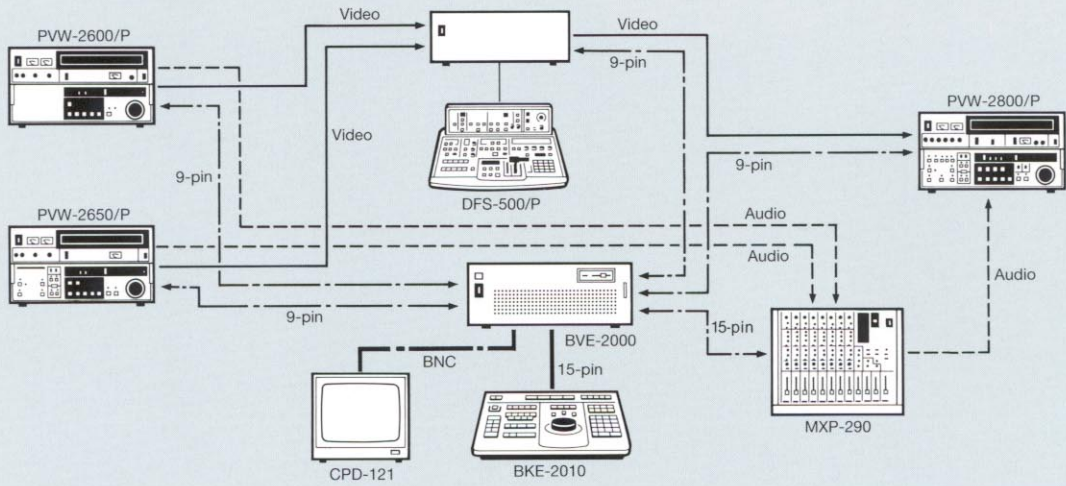
This block is used to control the VTR tape transports. It also contains a rotary knob used for the Jog, Shuttle and Dynamic Motion (variable speed) functions along with an LED display to indicate tape direction.

All Stop/Shift

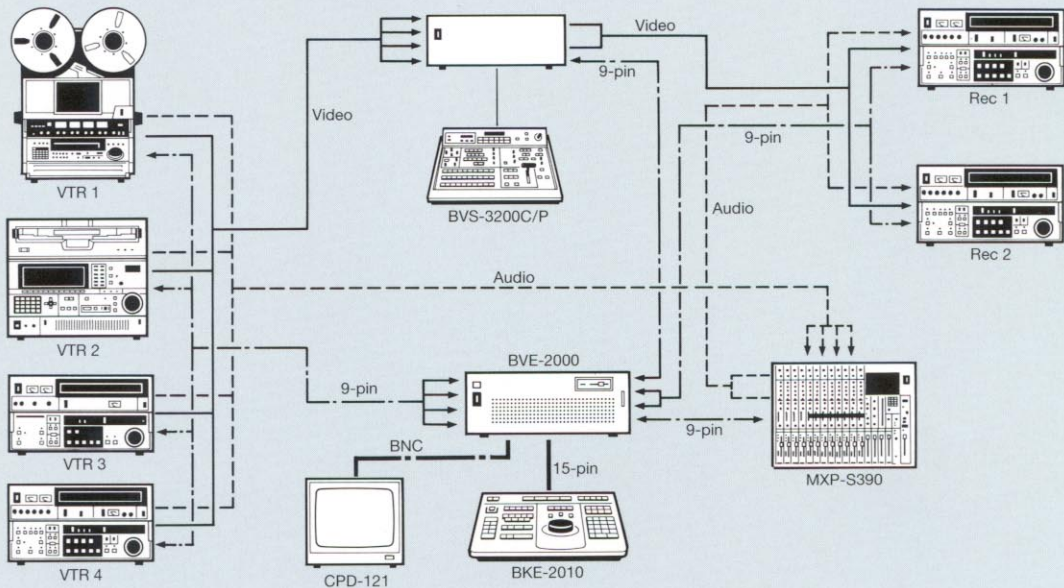
The All Stop bar halts the current operation of the BVE-2000, as well as any transports under its control. The Shift keys activate the secondary functions of the keys. The CTRL key, which allows the programmable function key assignment, is also located in this section.

System Connections

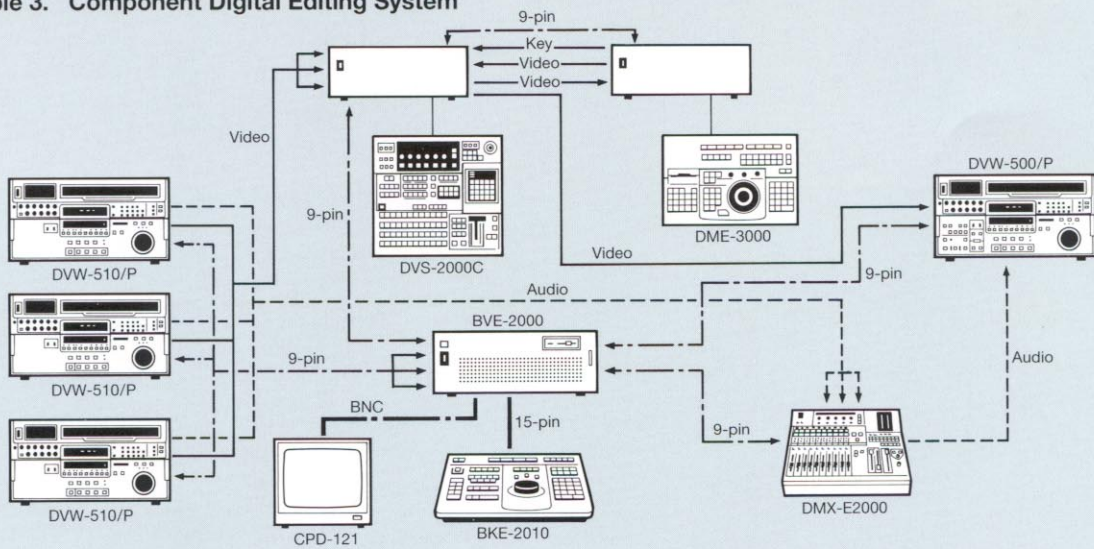
Example 1. PVW series Three Machine Control



Example 2. Multi-recorder Editing System



Example 3. Component Digital Editing System



Specifications

Power requirements:	AC100 to 240 ± 10%, 48Hz to 64Hz	
Power consumption:	28W max. including all BKE boards	
Operating temperature:	0°C to 35°C (32°F to 95°F)	
Storage temperature:	-40°C to +60°C (-40°F to +140°F)	
Weight:	Card file unit	Approx. 11 kg (25 lb 4 oz)
	Keyboard	Approx. 2.3 kg (5 lb 1 oz)
Dimensions: (W x H x D)	Card file unit	Approx. 424 x 132 x 350mm (16 ³ / ₄ x 5 ¹ / ₄ x 13 ⁷ / ₈ inches)
	Keyboard	Approx. 424 x 65 x 258mm (16 ³ / ₄ x 2 ⁵ / ₈ x 10 ¹ / ₄ inches)
Video/Reference signal:	External sync input -0.2 to 5.0Vp-p 1.0 ± 0.2Vp-p video signal, 75Ω	
	Reference video input -0.1 ± 0.2Vp-p, 75Ω (when BKE-2030/1 fitted)	
	VDU output 1.0V ± 0.3Vp-p, 75Ω	
Operation:	Data and source controlled by keyboard with VDU of edit data and source status	
Edit reference:	Control track signal, SMPTE/EBU LTC, VITC	
Editing accuracy:	±0 frame with time code operation (normal play mode)	
Edit list:	998 events	
GPI:	8 ports, programmable pulse output	
External edit control:	RS-232C x 2, programmable BAUD rate and bit	
VDU:	8 x 9 dot matrix, 80 characters x 29 lines	
Supplied accessories:	Maintenance manual User's guide Operational manual 25-pin D-sub male Rack mount screws AC power cord	
Optional accessories:	BKE-2010	Editing Keyboard
	BKE-2011	Editing Keyboard (Qwerty)
	BKE-2020	Expanded RS-422 I/F Board
	BKE-2030	NTSC Color Traming Detector Board
	BKE-2031	PAL Color Traming Detector Board
	RMM-3010	Rack Mount Kit
	VMC-10V	Color Monitor Cable
Peripherals:	CPD-121/CE	B/W Data Display Monitor
	BVS-V1201	Video Monitor Switcher
	BVS-A1201	Audio Monitor Switcher
	BKE-9500	Editing Disk Unit

BVE-2000 performance

Source selection

Recorder, Player 1-5, AUX 1-3

VTR control

Play/Still/FF/Stby/Eject/Shuttle/Jog/DMC/All Stop/All Stby off/Play±
DAT Memory Jog and Program play

Edit mode

Insert (V, A1, A2, A3, A4)
Assemble edit
Split edit (audio/video base)
1st edit

Effect type

Cut/Dissolve/Key/Wipe/Pattern Key/Manual
From Source/To Source/Transition/Pattern/Key Delay/Effect Type
Audio Source
Effect Start/Center/End
Reverse Wipe Pattern
Take Timing in Manual Edit
Key 1/2 Priority Selection

Edit data entry

Mark In/Out/Split in/Split out/Constant/User Bit/Key delay
Set In/Out/Duration
Split In/Out/Multi, Multi/All, Advance/Delay
Base Audio/Video, Convert
Fit In/Out/Duration/Speed
Reel# 6 character ASCII
Switcher Initial Panel Store/Recall
E-file Register#/Recall timing
DSK Cut/Mix/Fade Transition/Timing
GPI Record VTR-Absolute/Relative
Player VTR-Absolute
Multi-fire/Label/Enable/Disable/Test-fire
Recall Last-X/Last edit
Comment 5 lines with Delete/Insert/Save/Recall/and Set Pause

Preview/replay

Master Preview In/Out/Eff
Player Preview In/Out/Eff
Recorder Preview In/Out/Eff
Replay In/Out/Eff
Go to In/Out/SCR-PAD

Editing functions

Preview In/Out/Effect
Sync Play In/Out/Effect/Scratch pad
Go to In/Out/Effect/Scratch pad
Replay In/Out/Effect
Recording 1 edit/Record Off/Manual
Auto-Assy Skip Record/Continue Record
Butt Edit
Pre-read
Temporary Recorder
Recorder Assign
DMC Manual override
Edit Mode Manual Override

EDL management

Store Edit Sequential Edit No./Record In-time
Recall Edit FS/BS/Timecode/Action search/Scroll/Comment/Top/Bottom
List Management Correct/Delete/Move/Insert/Copy-with ripple
Clean Up Auto/Manual
Sort Edit#/R-Time/P-Time
Renummer Auto/Manual
Modify EDL Reel#/Edit Mode/R-Time/P-Time
Load EDL MFD/RS-232C in BVE-5000/9100/CMX
Save EDL MFD/RS-232C in BVE-5000/9100/CMX

Other functions

P.F. Keys 20 Keys, Total 255 keystrokes with Learn/Label
Time Track Time Track/Action Track/Scroll Track/R Track/P Track/
Auto Track
Constant Registers 10
Disk Format/File Copy/File Erase/Copy Disk
BKE-9500 Format/File Copy/File Erase/Copy Disk
Timer set with back-up

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