Editing Control System
BVE-9100

SONY®

Main Features

Fast CPU processing. The power of a 32 bit microprocessor running at 20 MHz provides five times the processing speed of the BVE-9000, making the BVE-9100 extremely fast in program operation. Dedicated CPUs on interface boards handle I/O processing, so that even with many external devices being controlled, the main processor is still free to run high level control programs.

System Expandability and Flexibility. The modular design of the BVE-9100, combined with a wide range of options, enables each system to be configured to an individual requirement and at a reasonable cost. It also makes it simple to expand a system by adding additional options as requirements change. Almost all the BVE-9000 options are compatible with the BVE-9100.* Moreover, an upgrade kit, the BKE-9000K1, is available for the BVE-9000, enhancing its capabilities to provide many functions now available on the BVE-9100.
* The BKE-9001, BKE-9005, BKE-9007 and BKE-9520 cannot be used for the BVE-9100.

System Interface.
♦ **VTR/ATR interface.** An extensive range of Sony VTR/ATRs can be directly controlled via the serial interface of the BVE-9100. Other manufacturers equipment, such as Ampex VTRs and Abekas disc recorders, are also supported. With DT™ equipped VTRs, slow and fast motion control is provided. Manually controlled tape speed trajectory can be memorized and stored in the EDL memory.

♦ **Switcher interface.** The BVE-9100 uses a 'Status Reporting' function to interface with Sony 8000/3000 series switchers for advanced edit control. This allows all panel status and switcher operation to be reported to and stored in the EDL memory in real-time. This data, which can be easily modified, takes full advantage of the many capabilities of these Sony switchers. The switcher control programs also make it possible to directly control serial switchers from GVG®, Abekas and Ampex.

♦ **Audio mixer interface.** All functions of the Sony VSP-8000 can be fully controlled via the Sony protocol serial interface. Bus crosspoint, transition control, preview control and snapshot function are completely supported. Graham Patten ESAM II protocol is also available. A parallel interface provides the VCA control for Sony MXP-290/2900 consoles.

♦ **DME interface.** Keyframe effects of the Sony DME-5000 and DME-9000, the GVG Kaleidoscope™ and Abekas A53-D can be directly controlled from the BVE-9100. It provides a variety of control functions, such as edit point inputs, slow/fast motion control from the

editor's jog/shuttle dial and effect number registration.

♦ **Monitor switcher interface.** Video and audio monitoring switchers such as the Sony DVS-V1201/A1201 and BVS-V1201/A1201 can be controlled from the BVE-9100. This provides an advanced preview function and greatly simplifies multi-generation editing.

♦ **Color corrector interface.** By interfacing to the Sony BVX-D10 color corrector, it is possible to store and recall color correction parameters.

Floppy Disk Based Software. All operational functions are fully supported by optional software, including two types of operating programs and a wide range of switcher/mixer programs. The operating programs are exclusive to the BVE-9100; one for basic operation and

Functions

BZE-9101 Software
System Set-up.
♦ System Set-up Menu
♦ Initialization Menu
♦ Auxiliary Menu
♦ Load/Save Init./Aux. Men From/To Disk
Selection of Signal Source.
♦ R (R1-R8), P1-P12, AUX1, AUX2, Black
♦ Audio Monitor Muting (A1-A4)
Edit Mode.
♦ Insert (V/A1/A2/A3/A4)
♦ Assemble
♦ 1st Edit
♦ Split Edit (Audio Base, Video Base)
♦ Multiple Audio Split-In

Edit Transition Type.
♦ Cut, Wipe, Dissolve, Key, Pattern Key
♦ 1-key wipe, 1-key Dissolve
♦ Manual
Edit Data Entry.
♦ Mark In/Out/U-bit/Const
♦ Mark Split/K-delay
♦ Mark Speed
♦ Last 10 Mark Buffers for each VTR
♦ Set In/Out/Dur
♦ Trim In/Out/Dur
♦ Back In/Out/Dur/Aux.
♦ Store Const/Recall Const
♦ 10 Global Const Registers
♦ Automatic Time Track
♦ Manual Time Track
♦ Action Track
♦ Recorder Track (with Repeat Search)

♦ Player Track (with Repeat Search)
♦ Track to DMC Learn Data
♦ Track to Scroll EDL
♦ Fit Function
Preview/Replay.
♦ Master Preview In/Out/Eff
♦ Player Preview In/Out/Eff
♦ Recorder Preview In/Out/Eff
♦ Quick P-PVW/R-PVW
♦ Multi Edit Preview/P-PVW (Look Ahead Control)
♦ Fly Edit Preview
♦ Replay In/Out/Eff
♦ Sync Play In/Out/Eff/Scr-Pad (with Lip Sync)
♦ Frame Bump
♦ Go To/Preroll In/Out/ Eff/Scr-Pad
♦ Choice of Preview Devices

List Management.
♦ Data Back-up System (Last X, Last Edit, X-CHG, Save)
♦ Page Search (Recall, FS, BS)
♦ Correct
♦ Insert
♦ Delete
♦ Move
♦ Copy
♦ Ripple
♦ Renumber
♦ Automatic Clean-up
♦ Clean-up Overlaps
♦ Dump/Load (Pause, Restart)
♦ Note
♦ Modify EDL (Reel Number, Block Number, Edit Mode, Recorder Time, Player Time)
♦ Sort EDL (Block Number, Edit Number, Time Code)

the other for advanced operation. The switcher and mixer programs enable the BVE-9100 to directly control a variety of video switchers and audio mixers. All software is supplied on 3.5-inch floppy disks for easy upgrading of software versions.

Disk Drive Interface. Two 3.5-inch micro floppy disk drives are fitted as standard in the main unit for storage of EDL data and the operator's personal system set-up. An optional editing control disk unit with two 3.5-inch floppy disk drives is also available for remote operation. These disk drives accept both types of 1.4 MB high-density floppy disks and 700 KB double-density floppy disks. A 42 MB hard disk unit, which can boot the system program, save/load EDL and the

operator's personal system set-up data, can be mounted in the main unit as an option. An optional 8-inch disk drive provides compatibility with the BVE-5000 or CMX format.

Full List Management. With the advanced operating program, full list management, including trace and clean-up functions, can be obtained. The standard EDL memory capacity is 6,000 edits/lines, which can be expanded by interfacing the optional hard disk drive unit. Up to sixteen different EDLs can be handled in the memory.

Four Channel Audio Control. The BVE-9100 provides control of the four audio channels of digital VTRs such as the DVR-1000/2100 and DVR-10/18/20/28. Independent split in-point setting for each of the four channels is available on the BVE-9100. It is possible to pair channels during configuration.

VTR and Crosspoint Assignments.
A maximum of 14 VTRs can be simultaneously rolled in an edit. A maximum of 12 VTRs can be assigned as players and up to eight VTRs as recorders.

Player/recorder VTR reassignment is easily accessed from the keyboard. A temporary REC function is also available. These powerful features are important aids to the creation of multi-layered pictures.

Choice of Keyboard. In addition to the ASCII type keyboard, a BVE-910 type dedicated keyboard is available. Additionally, a user programmable sub keyboard providing 30 x 4 assignable keys can be connected with both types of keyboard.

Character Superimposer. With an optional board installed in the IDC, time code data, editing status and other information can be displayed on the master monitor and the sub-monitors for each VTR. Both composite and component superimposers are available.

GPI Ports. Four GPI ports are provided as standard in the BVE-9100 to trigger external equipment which cannot be directly interfaced. A maximum of 32 GPI outputs and eight inputs can be added by fitting two optional boards to the IDC. Eight output timings can be set for each of these 32 GPI ports. Comprehensive GPI triggering modes are included.

Color Display. The BVE-9100 simplifies editing by an interactive operation system and easy-to-read color menu display. Different colors can be chosen to differentiate between each of the ten menu blocks for maximum clarity and to avoid miss-operation.

◆ Scroll Edit (Full Screen, Half Screen)
◆ Gap List
◆ Append
Learn Function.
◆ Learn, Player-learn
◆ SW-MEM, MX-MEM, DM-MEM, Color Corrector MEM
◆ Delete Event
◆ Modify Event
◆ Create Event
Editing.
◆ Automatic Recording
◆ Automatic Assembly (Checkerboard, Pause at Live Source Edit, Look Ahead Control)
◆ Background Recording
◆ Manual Edit

◆ Fly Edit
◆ Rec Off
◆ Multi Recorder
◆ Temporary Recorder
◆ Temporary XPT Assignment
◆ DMC Editing (Fit, Manual Override)
◆ Digital Process Delay Setting
Disk Management.
◆ File List Print
◆ File Processing (Print, Copy, Rename, Delete, Resume)
◆ Volume Processing (Copy, Rename, Initialize, Pack)
Others.
◆ Self Diagnostics (Board Level, ROM/RAM Level)
◆ GPI Control (Std. 4 Output Ports, Optional Max. 32

Output Ports/8 Input Ports, Test Fire, Reaction Time Setting, Repeat Mode up to 9999 times)
◆ Master/Slave Control
◆ Color Framing
◆ User Programmable VDU Position/Color Layout
◆ TC Source Selection
◆ Sync Grade Selection
◆ Reel Number with ASCII Code
◆ Background Rec Function
◆ Automatic Action Scroll
◆ 16 User Programmable Keys with Learn and Pause
◆ Keyboard Reassignment
◆ Sw'er Local Key
◆ Mixer Local Key

◆ 28 Device I/F Ports
◆ 16-Color Screen Display (Selectable from 262,144 Colors)

BZE-9102 Software:
Advanced List Management.
◆ Multiple EDL's in memory (Move, Copy, Define Label, Clear Whole EDL, Initialize All EDL)
  ◆ Clean-up (Range, Separate Clean-up, Clean Overlaps, Join Match Edits, Maximize Clean-up, Pull-up Gaps)
  ◆ Trace, Quick Trace

BVE-9100 (NTSC)
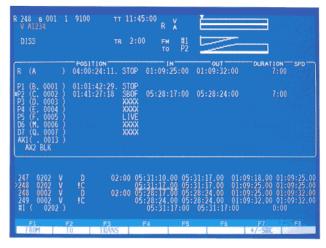**BVE-9100P** (PAL)
BVE-9100PM (PAL-M)

The Sony BVE-9000 set the standard for editing systems in broadcast stations and post-production houses around the world.

Its many users have continually sought new creative editing ideas and faster operation. This customer feedback has had a major influence on a continuing research and development program which has now led to a new BVE editor. The BVE-9100 provides unmatched interface capabilities together with an extended range of options and improved operating functions.

Interfacing the edit controller to peripherals has frequently been a major problem in editing systems, principally because individual components were not designed with a 'system concept' in mind. The result was that editors could be distracted by the problem of operating machines, instead of concentrating on creative program making.

Although the BVE-9100 offers many interface options for other equipment, its integration with Sony DVTRs, switchers, DMEs and other peripherals brings truly outstanding benefits in total editing system control. Learn functions, keyframe effects controls, advanced preview functions and color corrector control are just some of the advantages of a fully integrated system.

With its design based on a modular design concept for flexibility in upgrading, the BVE-9100 will simplify complex editing and enhance program production, both now and in the future.

Edit Data Page ►

The well accepted style graphic display tells at a glance what the displayed event is without forcing the operator to analyze the time code values.

```
R 248 B 001 1 9100        TT 11:45:00    V
V A1234                                R A
                                              ┌──────────┐
DISS                      TR  2:00   FM  #1   └──────────┘
                                     TO  P2
                POSITION          IN         OUT      DURATION   SPD
R (A      )  04:00:24:11. STOP  01:09:25:00  01:09:32:00   7:00

P1 (B. 0001 )  01:01:42:29. STOP
P2 (C. 0002 )  01:41:27:18  SBOF  05:28:17:00  05:28:24:00   7:00
P3 (D. 0003 )              XXXX
P4 (E. 0004 )              XXXX
P5 (F. 0005 )              LIVE
D6 (M. 0006 )              XXXX
D7 (Q. 0007 )              XXXX
AX1( . 0013 )
  AX2 BLK

 247  0202  V    D     02:00 05:31:10.00 05:31:17.00 01:09:18.00 01:09:25.00
>248  0202  V   !C           05:31:17.00 05:31:17.00 01:09:25.00 01:09:25.00
 248  0002  V    D     02:00 05:28:17.00 05:28:24.00 01:09:25.00 01:09:32.00
 249  0002  V   !C           05:28:24.00 05:28:24.00 01:09:32.00 01:09:32.00
 #1 (  0202 )                05:31:17.00 05:31:17.00              0:00

 F1      F2      F3      F4      F5      F6      F7      F8
FROM     TO    TRANS                                  +/-SRC
```

◄ Setup Menu

The setting of hardware conditions which do not require frequent chahges once set, such as the switcher cross point assignment, control device setup, and RS-232C Baud Rate are stored in the EEPROM. Revisions can easily be accessed from the keyboard.

Initialization Menu / Auxiliary menu ►

The operating conditions such as, device assignment, EDL specifications, PF key assignment, etc. can be set via the Initialization / Auxiliary menu and can be stored in the 3.5-inch micro floppydisk or the optional hard disk unit.

```
MAIN :

GROUP SELECTION IN MAIN SETUP

1   MAIN GROUP

2   ------------------

3   AUDIO MIXER GROUP

4   ------------------

5   OPTION GROUP

6   DISK GROUP

SELECT FUNCTION

 F1      F2      F3      F4      F5      F6      F7      F8
GROUP-1        GROUP-3        GROUP-5 GROUP-6
```

```
              BVE-9100 (N) INIT MENU 1

 1 SHOW START TIME   =  UNDEFINED   10 FLY EDIT            =  OFF
 2 PREROLL TIME      =  5:00        11 SKIP REC            =  OFF
 3 POSTROLL TIME     =  1:00        12 CONTINUOUS REC      =  ON
 4 REACTION TIME     =  0:00        13 QUICK PREVIEW       =  ON
 5 FRAME CONTROL MODE =  NON-DROP   14 BACKGROUND REC      =  OFF
 6 COLOR FRAMING     =  OFF         15 LIVE PVW            =  ON
 7 SYSTEM OF PHASE   =  A           16 DIGITAL PROCESS DELAY = 0
 8 DECISION BASE     =  VIDEO       17 LIP SYNC MODE       =  OFF
 9 EDIT POINT DATA   =  EFFECT START

                              BZE-9102  V1.04QA2
                              BZE-9604  V2.02   (DVS-8000)
                              EDL/NOTE  2369 UNOCCUPIED

              KEEP EDL   OK  ?

 F1      F2      F3      F4      F5      F6      F7      F8
MENU 1  MENU 2  ASSIGN   CPL    PF KEY  LAYOUT        CHG DATA
```

◄ Key Assignments

Keyboard re-assignment allows users to customize the functions of the keyboard to their own preference.

```
                    KEY ASSIGN
```

Advanced List Management ►

When the BZSS-9102 Advanced Operating Software is installed, the BVE-9100 provides advanced list management functions such as, MULTI EDL, EXTENDED CLEAN-UP and TRACE.

```
R 082 B 001 5 9102        TT 13:12:10    V        * 1 9100   * 9 Hawaii
V                                      R A        * 2 BZE   *10 BRIAN
                                                  * 3 D-2100 *11 SUB-1
DISS                      TR  1:00   FM  BLK      * 4 DVR-2  *12 SUB-2
                                     TO  P1       * 5 9102   *13 CG-1
                POSITION          IN         OUT  * 6 910EDL *14 CG-2
R (A      )  04:00:24:11. SBOF 01:10:52:10 01:11:0* 7 910B01 *15
                                                  * 8 910B02  16
P1 (B. 0001 )  01:01:42:29. SBOF  01:46:45:23  01:46:5
P2 (C. 0002 )  01:41:27:18  SBOF
P3 (D. 0003 )              XXXX
P4 (E. 0004 )              XXXX
P5 (F. 0005 )              LIVE
D6 (M. 0006 )              XXXX
D7 (Q. 0007 )              XXXX
AX1( . 0013 )
  AX2 BLK

MULTI EDL                           Select EDL
                                  (            )
 080  BLK   V    D     01:00 00:00:00.00 00:00:01.00 01:10:50.10 01:10:51.10
 081  BLK   V    C           00:00:00.00 00:00:01.00 01:10:51.10 01:10:52.10
>082  BLK   V   !C           00:00:00.00 00:00:01.00 01:10:52.10 01:10:52.10
 082  0001  V    D     01:00 01:46:45.23 01:46:53.23 01:11:00.10 01:11:21.10
 083  0007  V    C           00:04:34.00 00:04:55.00 01:11:00.10 01:11:21.10
                             01:11:00.10 01:11:21.10

 F1      F2      F3      F4      F5      F6      F7      F8
DEF LABEL CLEAR EDL INIT EDLS  MOVE    COPY
```

System Configuration

BVE-9100	Editing Control Unit (NTSC)
BVE-9100P	Editing Control Unit (PAL)
BVE-9100PM	Editing Control Unit (PAL-M)
BKE-9000K1	BVE-9000 Expansion Kit
BKE-9002	4 x Intelligent Device Controller Interface
BKE-9003	4 x RS-232C Interface
BKE-9004A	2 x 9-pin Sony VTR (DMC learn) or 1 x Video Switcher (GVG 100) Interface
BKE-9006	2 x 9-pin Ampex VPR-3/6 Interface (Fixed speed slow-motion)
BKE-9008	Kaleidoscope™ Interface
BKE-9009	DME (Sony DME-5000, 9000) Interface
BKE-9011	Video Switcher/Audio Mixer/Monitor Switcher Interface
BKE-9012	4 x 9-pin Sony VTR (DMC learn)
BKE-9013	4 x Color Corrector (BVX-D10) Interface
BKE-9107	Hard Disk Unit
BKE-9400A	Editing Keyboard (Qwerty)
BKE-9401	Sub Keyboard
BKE-9410	Editing Keyboard (Dedicated)
BKE-9500	Dual 3.5-inch MFD
BKE-9510	8-inch Floppydisk Drive
BKE-9600	Intelligent Device Controller
BKE-9601	Time Code Generator/Reader
BKE-9602	Character Superimposer
BKE-9603	Expansion RAM Board (for serial switcher interface)
BKE-9604	Component Character Superimposer
BKE-9611	9-pin VTR Control/Superimposer Control ROM Kit
BKE-9631	Parallel Switcher Interface
BKE-9632	Parallel Mixer Interface
BKE-9633	Monitor Switcher Interface
BKE-9651	General Purpose Interface Kit (16 ports)
BZE-9101	Basic Operating Program
BZE-9102	Advanced Operating Program
BZE-9601	Switcher Control Program (GVG 100/1680/300, Sony HDS-1000T)
BZE-9602	Switcher Control Program (GVG 200)
BZE-9603	Switcher Control Program (GVG Kadenza™)
BZE-9604	Switcher Control Program (Sony DVS-8000/BVS-3000 series)
BZE-9605	Switcher Control Program (Abekas A84)
	Switcher Control Program (Ampex AVC VISTA™ series)
	Mixer Control Program (Sony VSP-8000, Graham-Patten GPS-600 series)

Specifications

Power requirements		AC 100 to 240V, 50/60Hz (±10%)
Power consumption		60W (incl. 7 BKE boards)
Operating temperature		+ 5°C to + 35°C (41°F to 95°F)
Storage temperature		- 20°C to + 60°C (- 4°F to 140°F)
Dimensions		Approx. 424(W) x 220(H) x 480(D)mm (16 3/4 x 8 3/4 x 19")
Weight		Approx. 21kg (46 lb 5 oz) excl. optional boards
Input/Output:	REF VIDEO IN	Composite video 1V ±0.2Vp-p (75 ohms terminated) or Composite sync 0.2V to 5Vp-p (75 ohms terminated), BNC connector
	REF VIDEO OUT	
	MAIN KEYBOARD	
	PRINTER	
	AUX	
	GPI	
	B/W VDU	

System	
Editing reference	
Editing accuracy	
EDL memory capacity	

Interfaces

VTR/ATR/Disc recorder interface:	Using optional BKE-9004A, BKE-9012 or BKE-9002 and BKE-9600 + BKE-9611:
Serial switcher interface:	
Serial mixer interface:	
Parallel mixer interface:	
DME interface:	
Monitor switcher interface:	
	Using optional BKE-9013: BVX-D10

SONY®

Distributed by

Sony Corporation