

SONY

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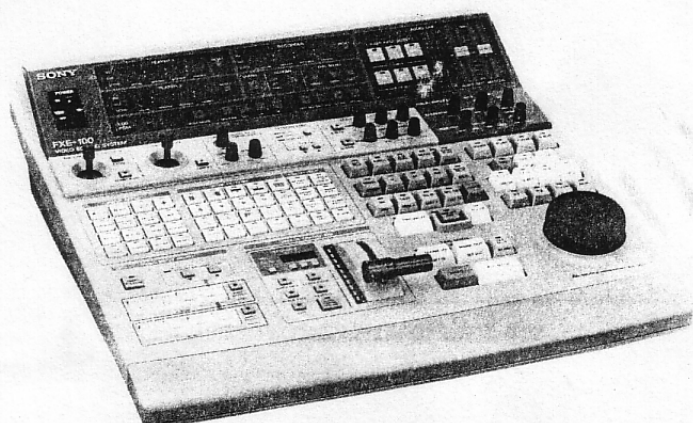
Video Editing System

Modèle:

FXE-100

Mode d'emploi

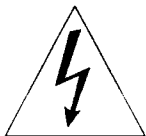
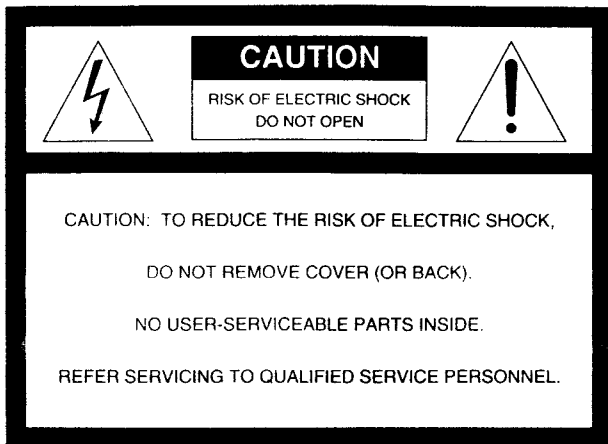
Avant la mise en service de cet appareil, prière de lire attentivement ce mode d'emploi que l'on conservera pour toute référence ultérieure.



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's Record

The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. FXE-100 Serial No. _____

For customers in the U.S.A.

Warning — This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

Table of Contents

	About This Manual	4
Chapter 1	Features	1-2
Outline	System Configuration Examples	1-6
	A-Roll and Cut Editing System	1-6
	A/B Roll Editing System (1)	1-7
	A/B Roll Editing System (2)	1-8
Chapter 2	Control Panel	2-2
Location and	Editing Control and VCR Manual Control Section	2-3
Function of Parts	Time Counter Displays	2-9
	LEARN Button, SCREEN Section and DIAL MENU Section	2-11
	EDIT PGM (Program) Section	2-12
	Video Switcher and Special Effects Control Section	2-14
	Audio Mixer Section	2-24
	Connector Panel	2-26
Chapter 3	Precautions	3-2
Preparations	Connections	3-3
	Player 1 and Player 2 VCR Connections	3-3
	Recorder VCR Connections	3-4
	Main Monitor and Program Monitor Connections	3-5
	Video Camera, CD Player and Microphone Connections	3-6
	Titler, Computer and Editing Controller Connections	3-7
	Switch Settings and System Setup	3-8
	About the Status Display	3-10
	VCR Preparations	3-15
Chapter 4	Controlling the VCRs	4-2
Before Starting to	Selecting a VCR	4-2
Edit	Controlling Tape Transport Manually	4-3
	Searching for a Scene With the Search Dial	4-4
	Controlling the Speed of Dynamic Tracking (DT) Playback	4-6
	Selecting Video and Audio Signals	4-7
	Default Input and Output Signals	4-8
	Selecting the Same Source for Video and Audio Inputs to a Bus	4-9
	Selecting Different Sources for Video and Audio Inputs to a Bus	4-10
	Monitoring Video and Audio Signals	4-11
	Adjusting Video and Audio Signals	4-15
	Adjusting Video Signals	4-15
	Adjusting Audio Levels	4-16

Table of Contents

Chapter 5 Editing Operations

Common Editing Procedures	5-2
Selecting an Edit Mode	5-3
Insert Mode	5-3
Assemble Mode and First Edit Mode	5-5
Selecting an Edit Type	5-9
Cut Editing	5-9
A-Roll Editing	5-10
A/B Roll Editing	5-11
Manual Effects and Sync Roll Editing	5-12
Setting Edit Points	5-13
Setting Edit Points	5-13
Relation Between IN/OUT Points and Duration	5-17
Checking, Cuing Up, Changing and Deleting Edit Points	5-19
Selecting Special Effects	5-25
Cut	5-25
Dissolve	5-26
Wipe	5-29
Key	5-41
Input Effects	5-45
Setting the Transition Time	5-58
Checking FROM and TO Sources	5-60
Preview — The Rehearsal Before Edit Execution	5-61
Executing the Edit	5-63
Sync Grade During Previews and Edit Execution	5-65
Automatic Execution of Multiple Edits	5-66
— Auto Assembly	5-66
Reviewing the Edit	5-68

Chapter 6 Advanced Editing

On the Fly Editing With Two Players — Sync Roll Editing	6-2
Editing With Manual Special Effects	6-4
Auto Transition Effects	6-6
Setting Independent Video and Audio IN Points — Split Editing	6-8
Editing Variable-Speed Playback — DMC Editing	6-13
Editing With Fade In and Fade Out	6-16
Fade In	6-16
Fade Out	6-18
Using Color Backgrounds	6-20
Slide In and Slide Out Using a Color Background	6-20
Recording Time Code — Time Code Insert	6-22

Chapter 7 Managing Edit Data

About the EDL	7-2
About Snapshots	7-4
Using the EDL	7-5
Registering an Edit in the EDL	7-6
Recalling Edits From the EDL	7-7
Revising and Deleting Edits	7-8
Using Registered Edits in Automatic Editing	7-10
Transferring Edits To and From External Equipment	7-11
EDL Output Format	7-14

Chapter 8
Setup Menu

Setup Menu Item Table 8-2
Using the Setup Menu 8-3
Setup Menu Items 8-5
 System Configuration 8-5
 Switcher 8-10
 External Interface and EDL 8-15
 VCR Device Constants 8-20

Appendixes

Error Messages A-2
In Case of Trouble A-4
Audio Signal Flow A-7
GPI Interface Effect Timing A-10
Wipe Patterns A-11
Specifications A-16
Glossary A-20

Index I-1

About This Manual

This manual contains operating instructions for the FXE-100 video editing system. This section describes the contents and purpose of this manual, and explains notational conventions used in the text and illustrations.

Intended audience

This manual is intended to be read by persons responsible for the operation and maintenance of professional video equipment at corporations, educational institutions, cable television stations and so on. It assumes that readers will be familiar with the basic concepts of video editing.

Experienced operators will be able to gain a general grasp of the unit's capabilities by reading through Chapter 2, "Location and Function of Parts". Readers with less experience may wish to turn first to Chapter 4, "Before Starting to Edit", and to the "Basic Editing" section in the handbook which accompanies this manual.

Explanations of technical terms used in the text can be found in the "Glossary" at the end of this manual.

Organization of this manual

Following is a concise description of the contents of each chapter in this manual.

Chapter 1 Outline

Describes the principal features of this unit and shows how typical editing systems can be configured around it.

Chapter 2 Location and Function of Parts

Contains explanations by functional group for each of the buttons, knobs, displays, switches and connectors on the control panel and connector panel.

Chapter 3 Preparations

Explains connections and precautions which should be observed when using this unit.

Chapter 4 Before Starting to Edit

Explains how to use the unit to control VCRs. Also explains how to select and adjust input and output signals in order to take advantage of the unit's built-in video switcher and audio mixer capabilities.

Chapter 5 Editing Operations

Explains the basic operating procedures used in every editing session, such as setting edit points and selecting effects. Also describes the procedures to follow in order to conduct previews, automatic edits, and reviews.

Chapter 6 Advanced Editing

Describes procedures which are useful in advanced editing, such as manual control over transitions, editing with separate video and audio tracks, and editing of variable-speed playback.

Chapter 7 Managing Edit Data

Explains how to use the unit's edit decision list (EDL) to assemble a complete program from individual edits, and how to transfer edit data to and from external equipment.

Chapter 8 Setup Menu

Describes the setup menu, which is used to configure the unit for use with a variety of formats and different kinds of video equipment.

Appendixes

Contain the following supplements to this manual.

Error Messages

In Case of Trouble

Audio Signal Flow

GPI Interface Effect Timing

Wipe Patterns

Specifications

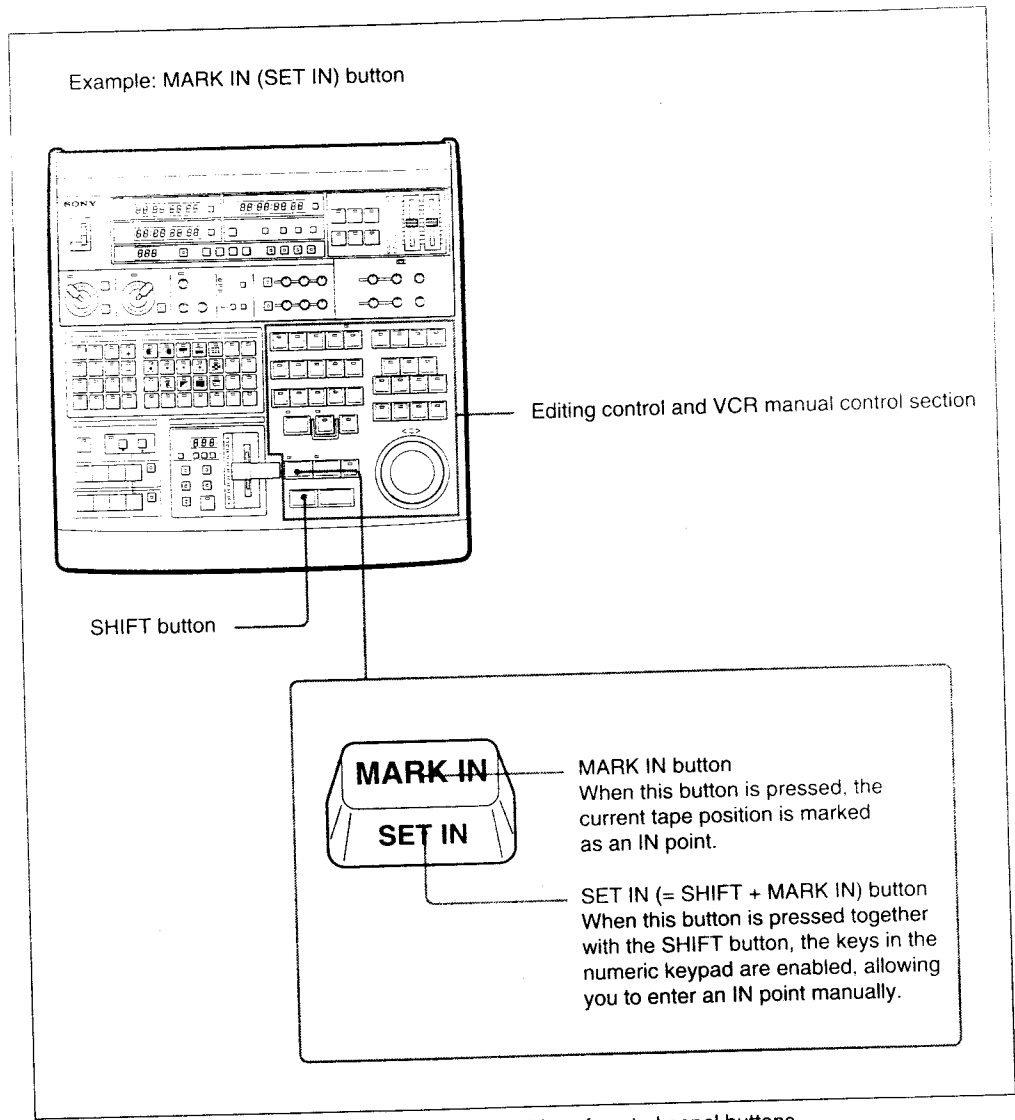
Glossary

Conventions

Button names

Some of the buttons on the control panel have two functions, indicated on the top and front sides of the button. When these buttons are first described in Chapter 2 "Location and Function of Parts", the button's complete name is given, with the name printed on the top of button coming first, followed by the name on the front of the button in parentheses: MARK IN (SET IN).

- To use the function printed on the top of the button (e.g. MARK IN), simply press the button. This is the operation referred to in this manual by "Press the MARK IN button."
- To use the function printed on the front of the button (e.g. SET IN), press the button together with the SHIFT button. The instructions in this manual will say to "Press the SET IN (= SHIFT + MARK IN) button."



Names on the top and front sides of control panel buttons

Related information

References to sections or chapters in this manual which contain related information are printed in italics.

Technical terms

For explanations of technical terms, see the "Glossary" at the end of this manual.

About the FXE-100 handbook

In addition to this manual, a handbook to the FXE-100 is supplied in order to provide an introduction to the unit.

The handbook is divided into two sections, on basic and advanced editing. Readers who have never operated professional video equipment will profit from the explanations of basic video editing procedures. Experienced readers will find suggestions in the advanced section to help lend a professional appearance to their programs.

Chapter 1

Outline

This section introduces the principal features of the FXE-100 and describes several systems configured around it.

Features	1-2
System Configuration Examples	1-6
A-Roll and Cut Editing System	1-6
A/B Roll Editing System (1)	1-7
A/B Roll Editing System (2)	1-8

Features

The FXE-100 video editing system combines the functions of a video switcher, an audio mixer and a precision editing controller capable of executing A/B roll edits. Unlike conventional editing controllers, it does not require complicated connections to external equipment to achieve special effects such as mosaic and chroma-key insertion. All functions are available from an easy-to-use control panel. Connecting a single monitor allows you to view signals from each source at every stage of the editing process, from preview to program recording.

Following is a description of the principal features of this unit.

Supports multiple signal formats

Compatible with various VCRs

Three RS-422 and RS-232C interfaces permit simultaneous control of up to three VCRs. There are I/O connectors for composite video and S-video, making it possible to connect VCRs using a variety of signal formats, such as Hi8 and S-VHS.

Two time code formats

In addition to CTL signals, SMPTE/EBU standard longitudinal time code (LTC) and 8 mm time code can be used to specify locations on source and master tapes.

Editing functions

Versatile editing modes

- **A/B roll:** Uses two player VCRs for transition effects such as mix and wipe.
- **Self A-roll:** Uses one player, but allows mixes and wipes with input effects between different scenes on the tape.
- **A-roll:** Uses one player, but mixes and wipes can be carried out using freeze frame playback from the recorder.
- **Sync roll:** Two players are run in synchronization, allowing you to switch between their playback as often as desired.
- **Manual effects:** Manual control allows you to vary the speed and timing of special effects at will.
- **Split editing:** Audio tracks can be mixed up to a minute sooner or later than video tracks.
- **DMC (Dynamic Motion Control) editing:** Permits editing of noiseless, variable-speed playback when operating with players that support Dynamic Tracking[®] (DT).

Precise edit points and transition times

Edit points can be set while viewing playback on the monitor or entered manually from the numeric keypad. Transition times for effects such as wipes and dissolves can also be set by dedicated buttons on the control panel or entered manually. Transition times range from 0 to 999 frames, for very precise effects.

Edit decision list

Auto assembly

Data for up to 99 edits can be saved in an internal edit decision list, allowing you to revise individual edits at any time for later assembly into a complete program.

Control panel snapshots

The current settings of the knobs and buttons in the video switcher and special effects sections of the control panel can be saved in memory together with edits. The state of the control panel can be instantly restored at any time by recalling the snapshot data.

Input and output of edit data

The unit is equipped with an RS-232C interface for input and output of edit decision list and snapshot data. The data can be transferred to and from personal computers or other external equipment.

Video switcher and special effects

Digital processing for high-quality video

Stable, high-quality video through 4-fsc sampling of input video signals, 8-bit quantizing, and 4:1:1 digital processing in the signal processing section.

Digital frame memory

Both of the unit's signal buses (A and B) are equipped with digital frame memory. An internal synchronizer controls output from frame memory, for precise synchronization of A-bus and B-bus signals. This makes it possible to use VCRs without time base correction (TBC) as input sources.

Sophisticated digital effects

- **Mix:** In addition to normal dissolves, you can select mixes which apply effects such as mosaic, posterization and monochrome during the transition.
- **Wipe:** A total of 131 geometrical wipe patterns are available, along with wipe modes such as slide and scroll. Frequently used patterns may be assigned to the two user-programmable keys in the wipe pattern section.
Wipe patterns can be given borders of a selected width and color.
- **Luminance key, chroma key:** Titles can be inserted into the video using camera output.

Input effects

Digital effects such as freeze frame, multi-screen and strobe may be applied independently to input video on bus A and bus B. Many of the digital effects can be used in combination.

Features

Color correction

Color correction (white balance adjustment) can be carried out independently for A-bus and B-bus signals. Color correction parameters can be saved to memory and recalled when necessary.

Fade in/fade out

Fade in and fade out are available for use with black and white backgrounds.

Audio mixer

You can adjust the audio input level independently for each input signal, and adjust the level of audio output to the program recorder and monitor. You can also mix in audio from a microphone or auxiliary audio source for output as program audio.

Input/output channels

Video and audio input/output channels

As shown below, the unit features a rich variety of video and audio I/O channels.

Video input

Signal source	Signal format	
	S-video	Composite video
Player 1	1	1
Player 2	1	1
Recorder	1	1
Auxiliary source 1	1	1
Total	4	4

Video output

Output signal	Signal format	
	S-video	Composite video
Program signal 1	1	1
Program signal 2	1	1
Monitor signal	—	1
Total	2	3

Audio input

Signal source	Channels
Player 1	4
Player 2	4
Recorder	2
Auxiliary source 1	2
Auxiliary source 2	2
Microphone	1
Total	15

Audio output

Channels	Output signal
Program signal 1	2
Program signal 2	2
Monitor signal	2
Total	6

Switches on the connector panel can be used to select input and output signal impedance to match the impedance of connected equipment.

Black burst output

Signals from the internal black burst signal generator may be output from four output channels, to synchronize source equipment from this unit.

Control functions

In addition to three RS-422 interfaces and three RS-232C interfaces, supports two GPI interfaces, allowing you to output status pulses at edl order to control external equipment, and to input timing pulses in order to c this unit.

Pinch-on delay measurement

Pinch-on delay (the time required for tape transport to start after a VCR receives a tape transport command) can be measured for up to three VCRs connected to this unit's RS-422 and RS-232C connectors. Measurement data is held in memory and used by the unit to adjust the timing of tape transport commands to the VCRs, for quick synchronization.

System setup menu

The system setup menu is displayed on the main monitor. It allows you to select operating modes and signal formats, and to configure the unit for use with various types of external equipment. Selections are made by rotating the search dial.

Optional accessories

The following cables are available for use with this unit.

RS-422 remote control cable

RCC-5G/10G/30G (9-pin, 5m/10m/30m): Connect RS-422 connectors on this unit to VCR RS-422 connectors.

RS-232C remote control cable

SMF-3036C null modem cable (9-pin/25-pin): Connect RS-232 connectors (D-sub 9-pin) and EDL IN/OUT connectors (D-sub 9-pin) on this unit to RS-232C connectors (D-sub 25-pin) on VCRs and external equipment.

XLR 3-pin ↔ phono-jack cross cable

Connect audio I/O connectors (phono-jack) on this unit to XLR 3-pin connectors on external equipment.

- RK-5XLRM (male, 5m)
- RK-5XLRF (female, 5m)

System Configuration Examples

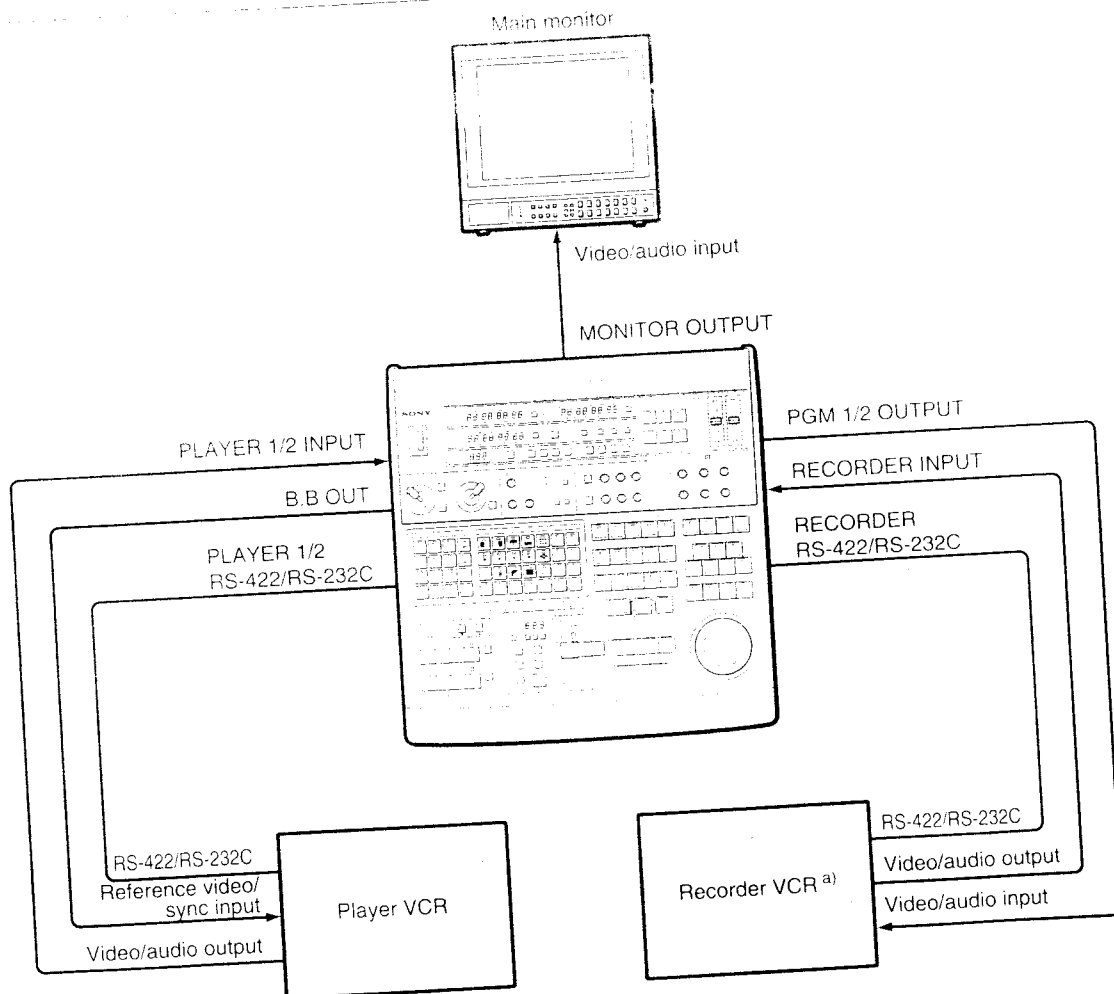
This section presents three examples of editing systems which can be configured around this unit. In the illustrations, connections between system components are illustrated by single lines, even if both audio and video cables are required. Arrows indicate the direction of the connection.

For more information, see "Connections" (page 3-3).

A-Roll and Cut Editing System

This example shows how to configure an editing system using only one player and one recorder.

In A-roll editing, freeze-frame playback from the recorder is read into bus B, allowing you to perform mix and wipe transitions with playback from the player VCR.



a) When connecting a recorder VCR over the RS-422 interface, signals from this unit's PGM 1/2 VIDEO OUTPUT connectors should be output to the VCR's reference video and sync connectors.

A-roll and cut editing system