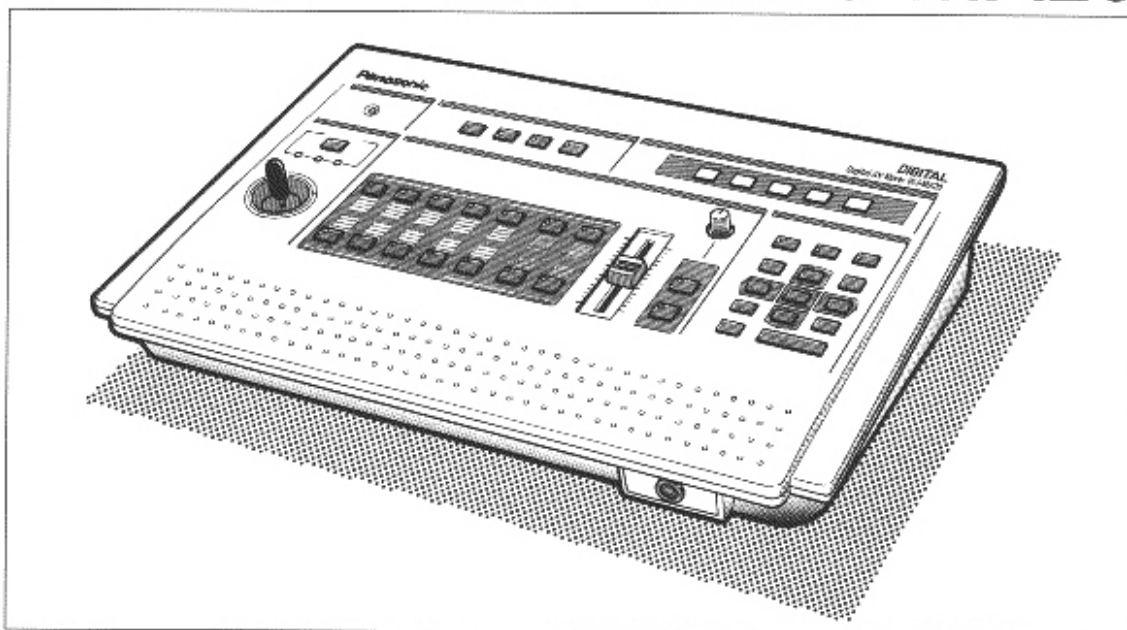# Operating Instructions

Digital AV Mixer
WJ-MX20

Panasonic ®

Before attempting to connect or operate this product, please read these instructions completely

CAUTION:
Before attempting to connect or operate this product, please read the label on the bottom.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

SA 1965

The lightning flash with arrowhead symbol, within an equilateral triangle, 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.

SA 1966

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

--- For U.S.A ---
Warning:
This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications.   It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

--- For CANADA ---
This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

The serial number of this product may be found on the bottom of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.
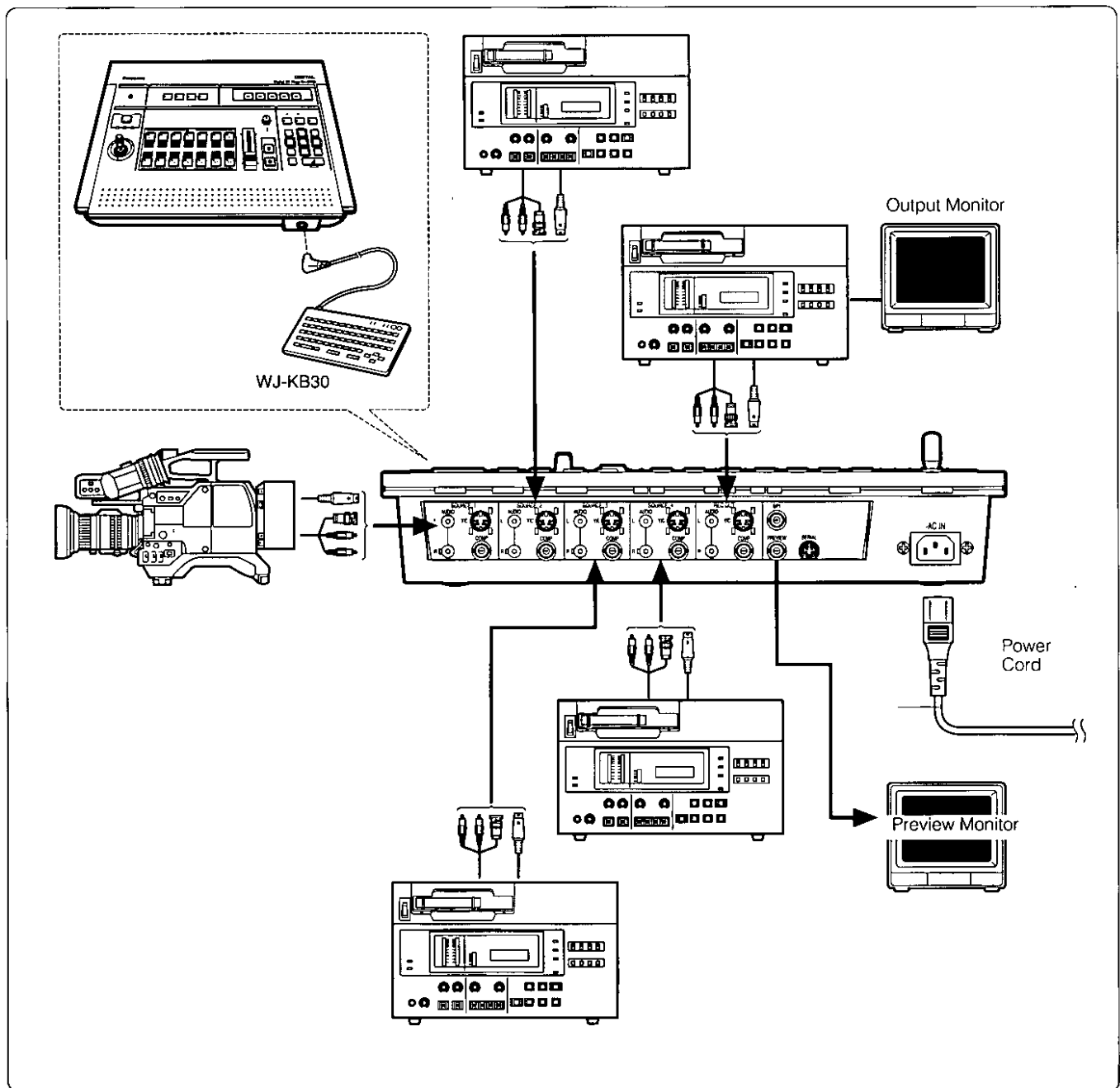
Model No. _____

Serial No. _____

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CONNECTION

Precaution: When supplying the composite video signal and S-video signal simultaneously, the S-video signal has priority.

WJ-KB30

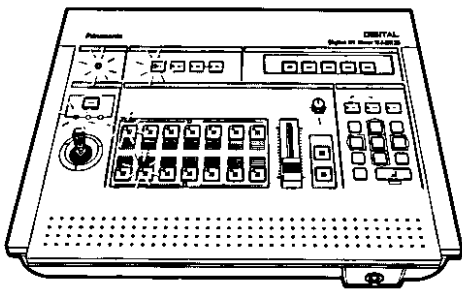Output Monitor

Power Cord

Preview Monitor

Power On

Precaution: Be sure to connect the Power Cord firmly between AC IN on the rear panel of this unit and a local AC Outlet.

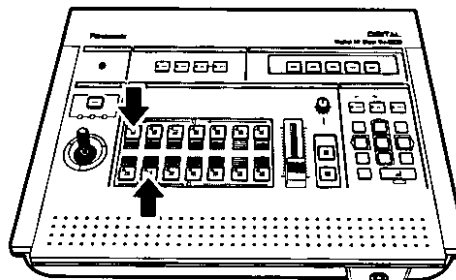• **Press the Power Switch on the side panel to the ON position.**

-1-
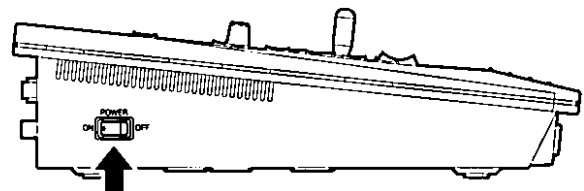
Initial Mode

The LED's on the operation panel light up as shown, indicating that the unit is now in initial mode for operation.

Video Source Selection

Press the desired button for A-bus video source.
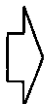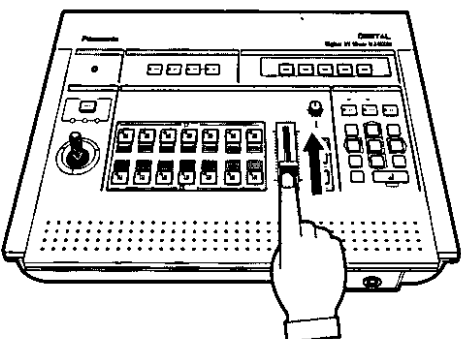**Press the desired button for B-bus video source.**

Wipe

- **Press WIPE/MIX button.** The LED on this button lights up.
- **Press WIPE button.** The wipe patterns are displayed on the preview monitor.
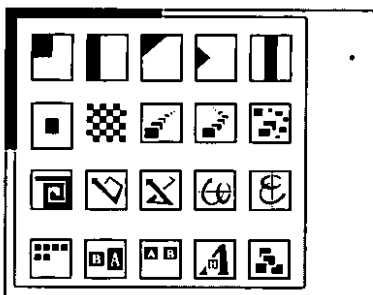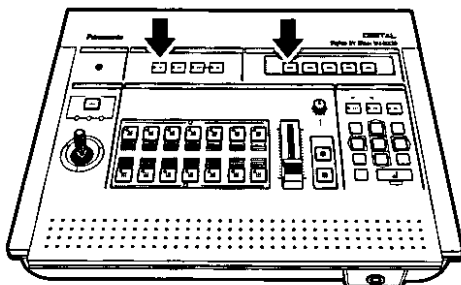
- **Select ▯ by using the Up/Down/Left/Right button.**
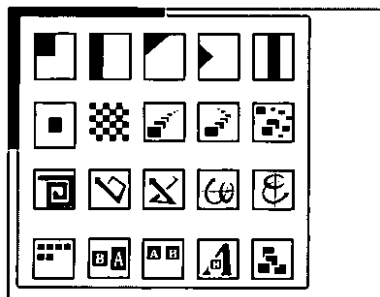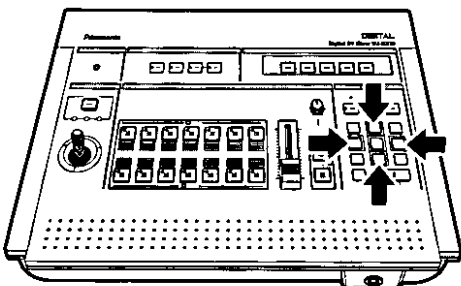
- **Slide the Wipe/Mix Control to the A-bus position.**
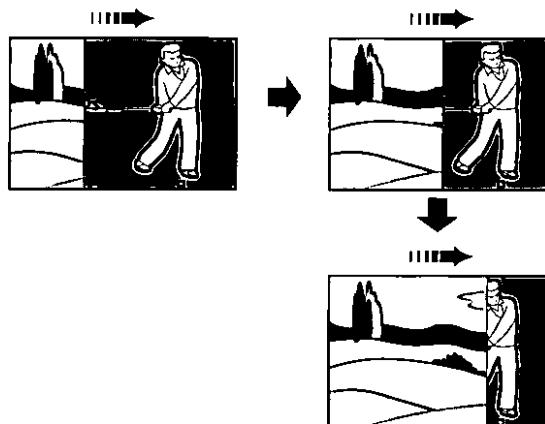
Effect

Ex.: MOSAIC effect on B-bus

- **Press EFFECT button.** The EFFECT menu is displayed on the preview monitor.



```
■EFFECT  :A B

□STROBE  :0  1  2  3  4  5
□MOSAIC  :0  1  2  3  4  5
□PAINT   :0  1  2  3  4
□STILL   :FLD FRM
□NEGA    :OFF ON
□CHROMA  :OFF ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄┤►►►►
```

- **Select B by using the Left/Right button.**


```
■EFFECT  :A B

□STROBE  :0  1  2  3  4  5
□MOSAIC  :0  1  2  3  4  5
□PAINT   :0  1  2  3  4
□STILL   :FLD FRM
□NEGA    :OFF ON
□CHROMA  :OFF ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄┤►►►►
```

- **Move the cursor to the MOSAIC position by using the Up/Down button.**


```
□EFFECT  :A B

□STROBE  :0  1  2  3  4  5
■MOSAIC  :0  1  2  3  4  5
□PAINT   :0  1  2  3  4
□STILL   :FLD FRM
□NEGA    :OFF ON
□CHROMA  :OFF ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄┤►►►►
```

- **Select the desired level (in this case, 3) by using the Right/Left button.**


```
□EFFECT  :A B

□STROBE  :0  1  2  3  4  5
■MOSAIC  :0  1  2  3  4  5
□PAINT   :0  1  2  3  4
□STILL   :FLD FRM
□NEGA    :OFF ON
□CHROMA  :OFF ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄┤►►►►
```

Press the Effect Output button on B-bus.
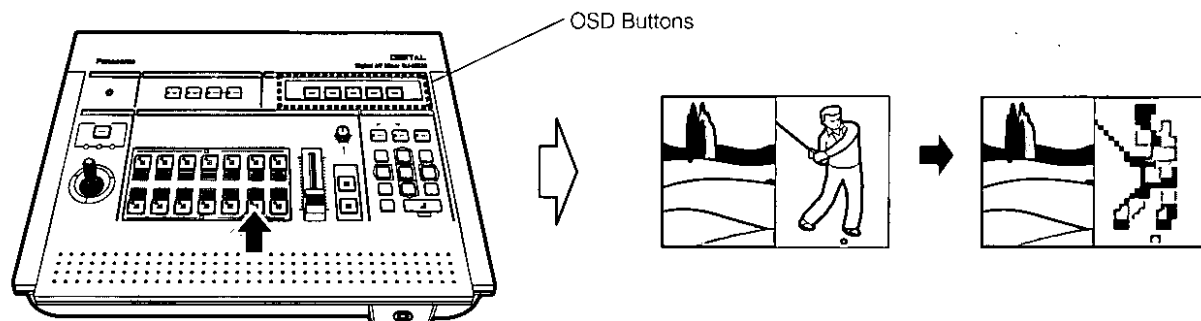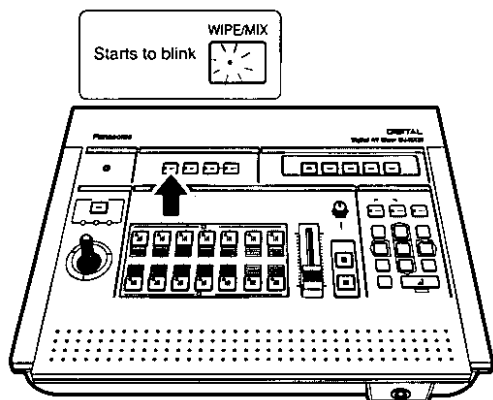
OSD Buttons

Note: To close the menu for the OSD buttons, press the same button again.

Mix

Press WIPE/MIX button.
The LED on this button starts to blink.

WIPE/MIX
Starts to blink

Slide the Wipe/Mix control to the A-bus position.
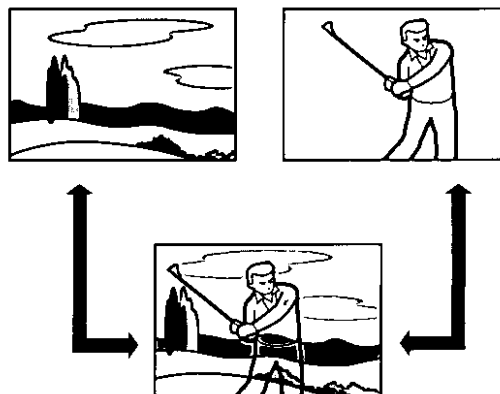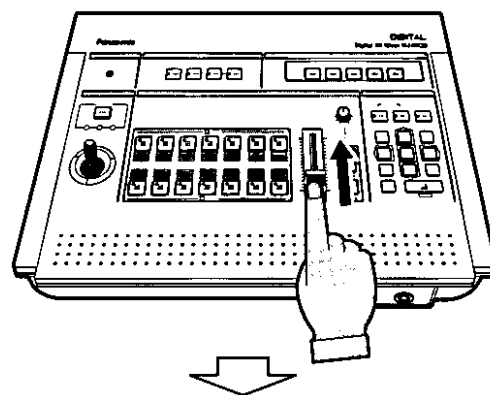
Dear Customer

We would like to take this opportunity to thank you for purchasing a Panasonic Digital AV Mixer (WJ-MX20).

Please read these Operating Instructions carefully and keep them handy for later reference.

CONTENTS

Preface

Two-channel digital frame synchronization permits special effects in each of the A/B program buses. Four sources can be switched, and any two of them are routed to the program buses. The A/B program buses can be monitored at the A/B program recording output and can be selected at the EFFECT switch in the PROGRAM OUT section. There is an external Editing Controller Input for RS-422 serial controls. Also, a GPI input is featured. This means the WJ-MX20 is compatible with a wide variety of video editing devices to complement the video editing system.

Main Features

- Digital effect - Still, Strobe, Mosaic, Paint, Negative
- Chroma Key, Luminance Key
- 298 wipe patterns
- Back color
- Joystick control for picture position and color correction
- Fade control for video and audio
- Audio mixing
- External video titler inputs
- Four audio/video source inputs
- RS-422 interface

Precautions

The WJ-MX20 is a sensitive, high quality product and should be handled as such. Because it is an electrical device, the danger of electric shock exists if it is used carelessly.

DON'T	DO'S
• Do not attempt to disassemble the unit. In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside.	• Refer all servicing to qualified service personnel.
• Do not abuse the unit. Avoid striking, shaking etc. It could be damaged by improper handling or storage.	• Handle the unit with care.
• Do not use strong or abrasive detergents when cleaning the unit's body.	• Use a dry cloth to clean the unit when dirty. In case dirt is hard to remove, use a mild detergent and wipe gently.
• Do not expose the unit to water or moisture, and do not operate it in wet or humid areas.	• Take immediate action if ever the unit should become wet. Turn the power off and refer servicing to qualified service personnel. Moisture can damage the unit and also create the danger of electric shock.
• Do not use the unit in an extreme environment of high temperature or high humidity.	• Use the unit at ambient temperatures from 0°C to 40°C (32°F - 104°F) and humidity below 90%.

-6-

FUNCTIONS

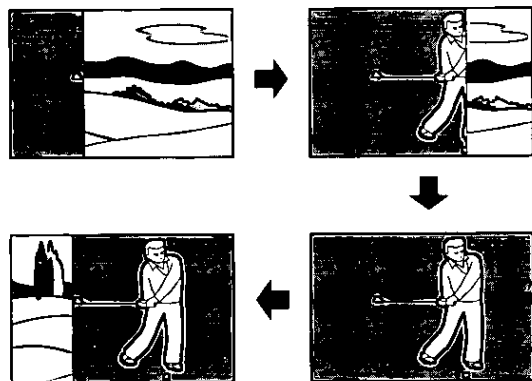The two video signals are mixed in desired proportions to produce a new output signal.
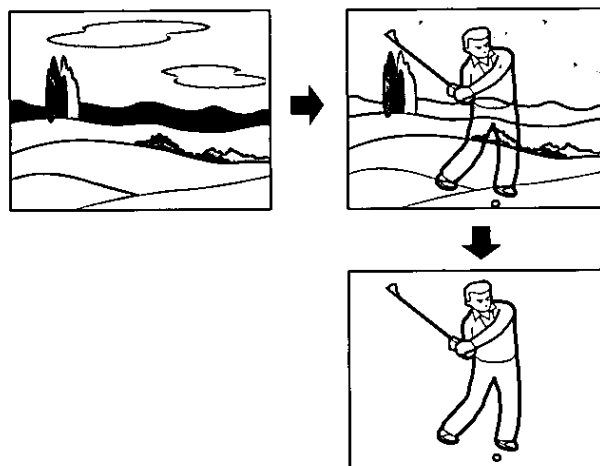
A process in which one image is electronically "wiped" off the screen and replaced by another.

• **Multi mode**

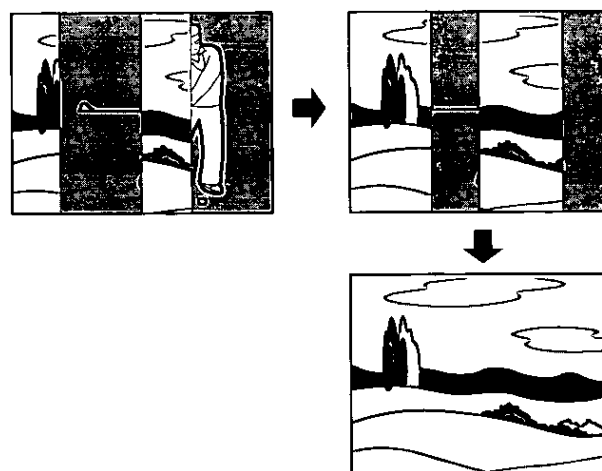• **Wipe Direction mode**
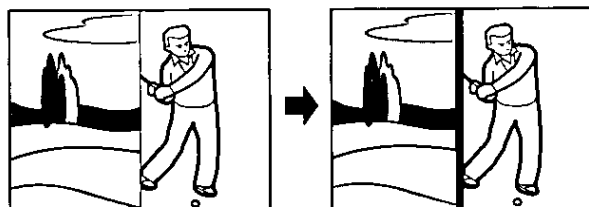
• **Special mode**
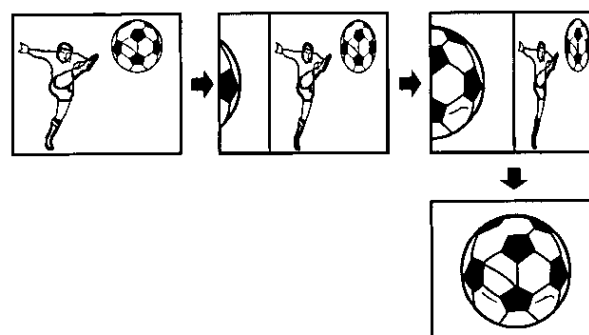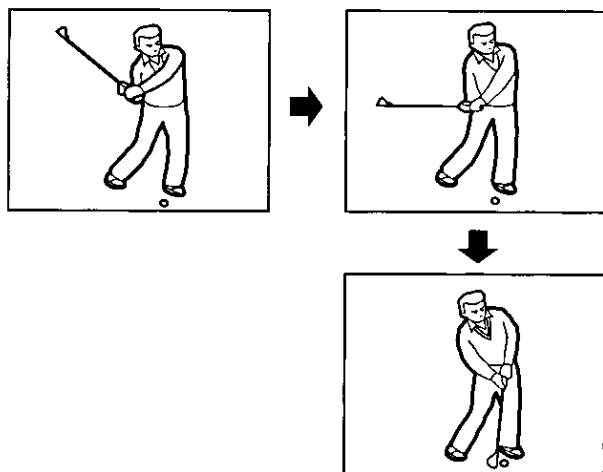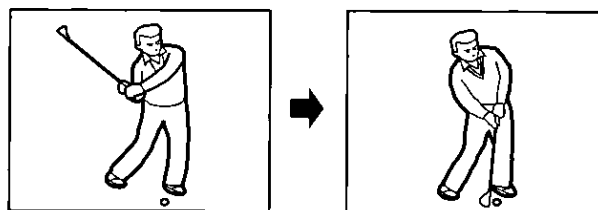
• **Edge mode**

The following is a detailed description of the functions of the DIGITAL EFFECT section which generates digital special effects for the A-bus and B-bus source video signals. The selected effect(s) can be added to either the A-bus or B-bus at one time.

■ Strobe

■ Still

■ Chroma
Alters a video signal to affect the colors.
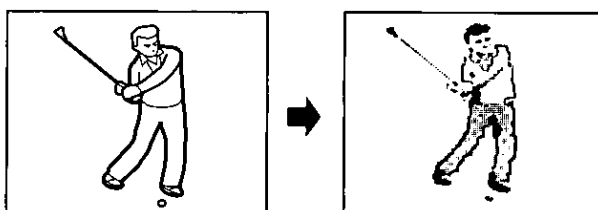
■ Mosaic
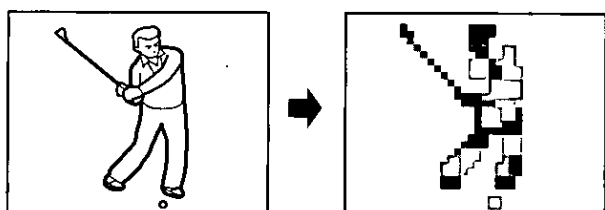
■ Chroma Level
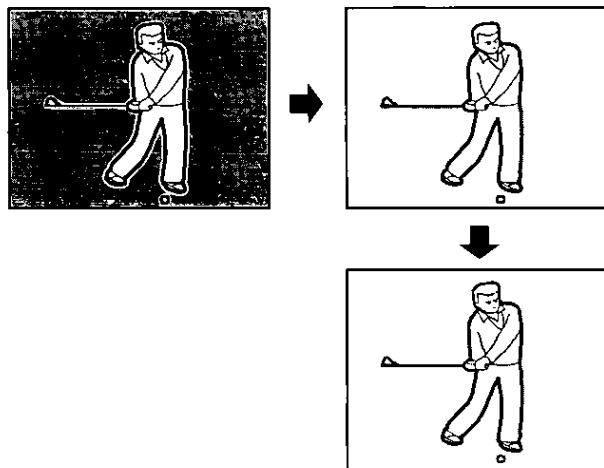Selects the desired chroma level.

■ Paint
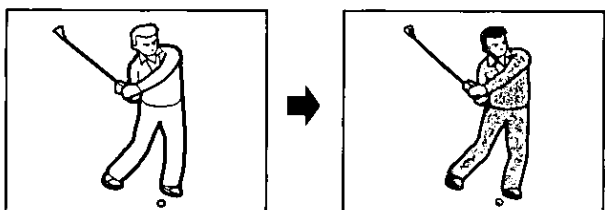
■ Nega
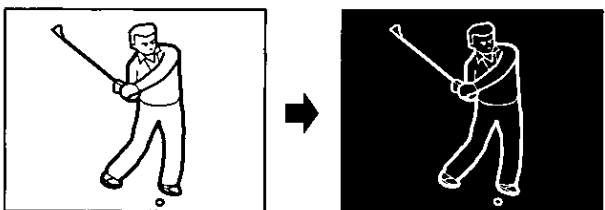
Color Setting .... Refer to page 31.

This function allows color adjustment of a selected input source, as well as compensation for excessive color.

Fade In/Fade Out .... Refer to page 35.

The video, title and audio can be faded together or in any combination.

To white

To Black
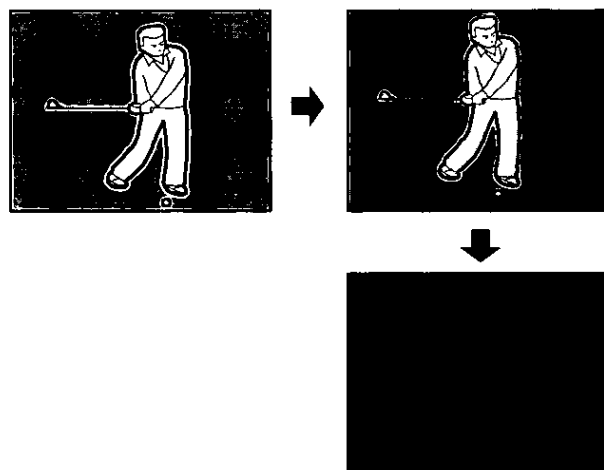
Audio Mix .... Refer to page 37.

Mix two selected audio sources at a selected ratio with the Mix/Wipe Control.

Luminance Key .... Refer to page 39.

To change the brightness by replacing portions of one picture with other portions.

A-bus   B-bus
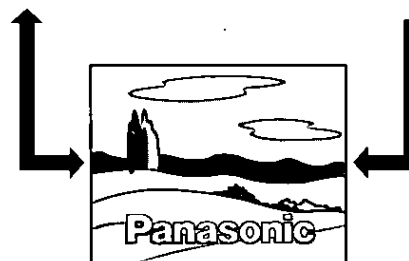
Chroma Key .... Refer to page 40.

The process of replacing portions of one video signal with another by replacing a certain color range with that of the second signal.
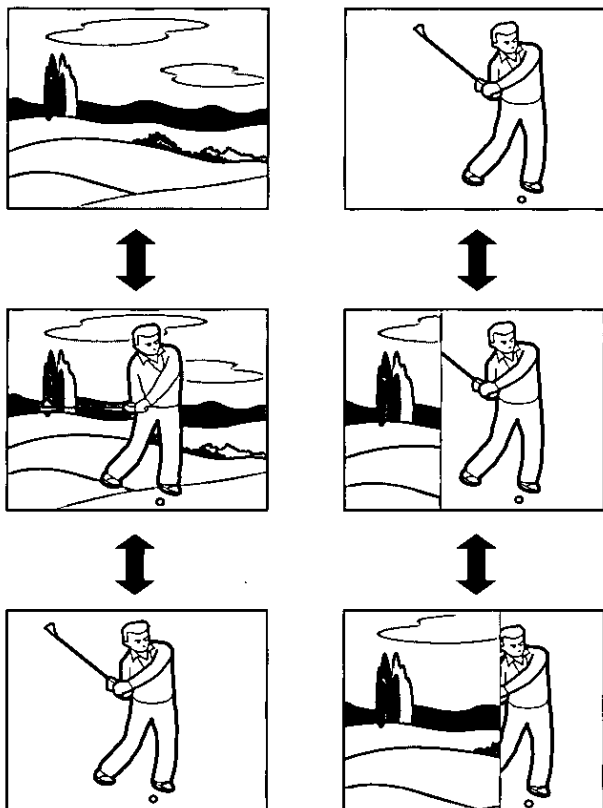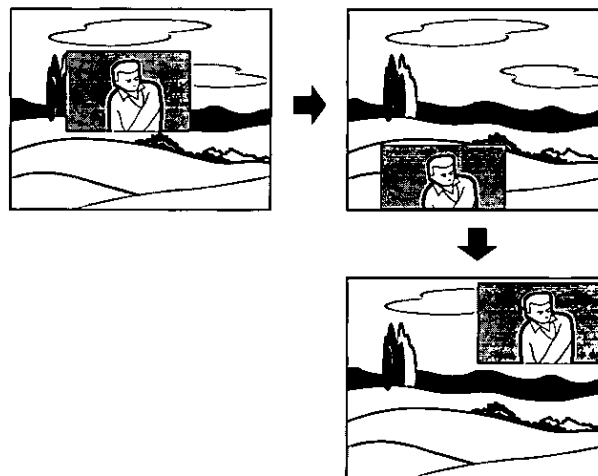
A-bus   B-bus

-9-
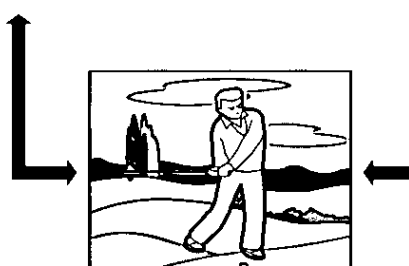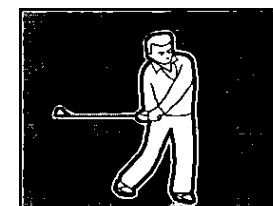
In addition to using the Mix and Wipe Control Slider, Mix and Wipe operation can also be performed automatically by using the Auto Take function.
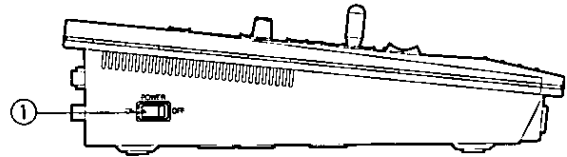
Up to four preset functions can be memorized and re-called.

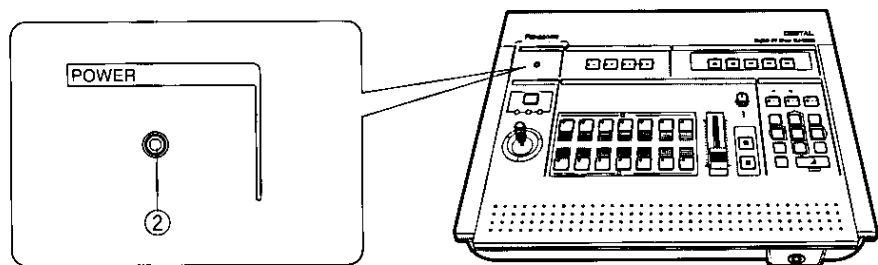# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS
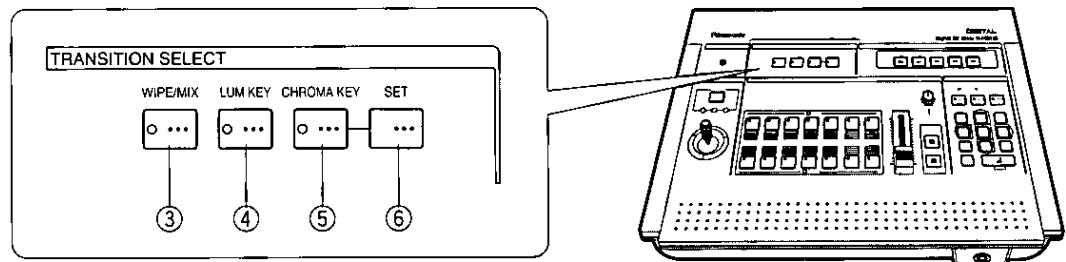
■ Side View

(1) Power Switch (POWER ON/OFF)

■ POWER Section

(2) Power Indicator

■ TRANSITION SELECT Section

(3) Wipe / Mix Button (WIPE/MIX)
Used to select either Wipe or Mix Effect.
Lit :   Wipe selected
Blinking :   Mix selected

(4) Luminance Key Button
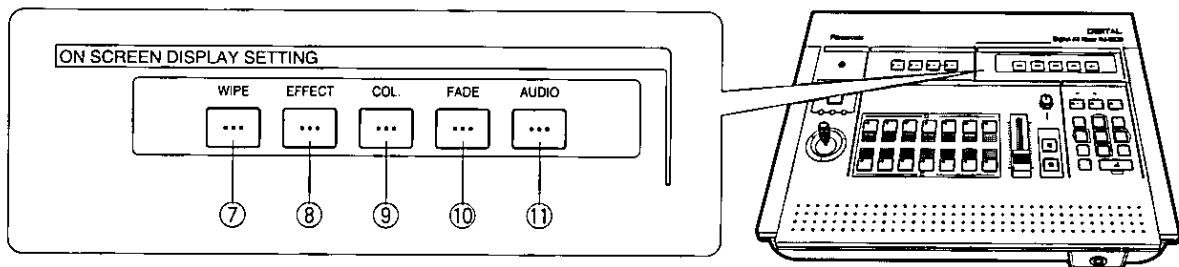Used to replace certain luminance of one picture with that of another picture.

(5) Chroma Key Button
Used to replace certain color of one picture with that of another picture.

(6) Set Button
Used to select a color or colors to remove using the chroma key.

-11-

■ ON SCREEN DISPLAY SETTING Section

(7) Wipe Button (WIPE)

Used to display the Wipe menu on the preview monitor.

(8) Effect Button (EFFECT)

Used to display the Effect Setting menu on the preview monitor.

(9) Color Button (COL.)

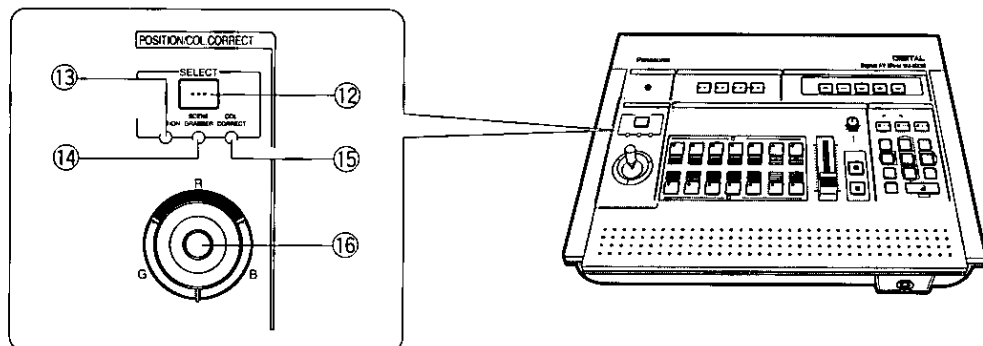Used to select the color for the back color or the wipe edge.

(10) Fade Button (FADE)

Used to display the Fade Setting menu on the preview monitor.

(11) Audio Button (AUDIO)

Used to display the Audio Setting menu on the preview monitor.

■ POSITION/COL. CORRECT Section

(12) Select Button (SELECT)

Used to select POSITION, SCENE GRABBER or COL CORRECT.

Notes :
1. Scene Grabber is available with the ■ pattern.
2. Color correction is selected when the CHROMA ON mode is selected and the desired Effect Output Button is pressed.

(13) Position Indicator (POSITION)

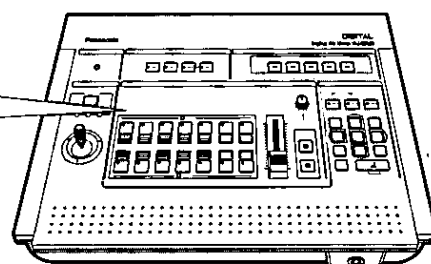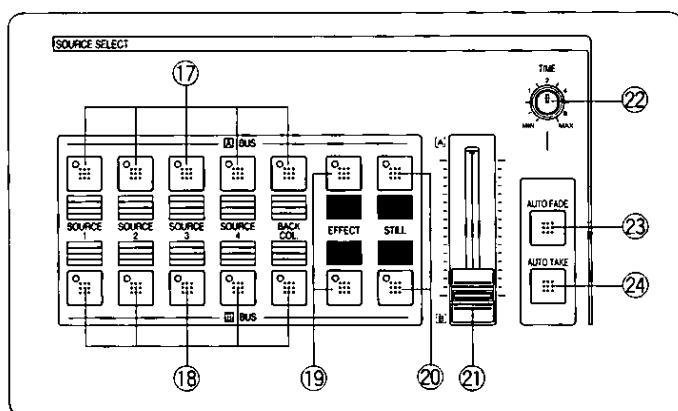**(14) Scene Grabber Indicator (SCENE. GRA.)**

(15) Color Correct Indicator (COL CORRECT)

(16) Joystick Control

This Joystick Control has three functions: setting the position of the specified wipe pattern, moving the cursor for setting the chroma key and correcting the Color A-bus / B-bus.

-12-

■ SOURCE SELECT Section

(17) A-bus Selection Buttons (A)

SOURCE 1: Used to select Source 1 Audio/Video Signals (35)(36)(37) supplied to the rear panel.

SOURCE 2: Used to select Source 2 Audio/Video Signals (38)(39)(40) supplied to the rear panel.

SOURCE 3: Used to select Source 3 Audio/Video Signals (41)(42)(43) supplied to the rear panel.

SOURCE 4: Used to select Source 4 Audio/Video Signals (44)(45)(46) supplied to the rear panel.

BACK COL: Used to select the Back Color.

(18) B-bus Selection Buttons

The same selections are available as for the A-bus Selection buttons (17).

(19) Effect Out Buttons (EFFECT)

Used to supply the effect signal to the preview and Rec Out connectors.

(20) Still Out Buttons (STILL)

An instant still or frozen image can be obtained by pressing this button.

(21) Mix/Wipe Control

Mix and wipe can be performed by operating this control.

(22) Time Control (TIME)

For adjusting the transition time of the Auto Fade Function and Auto Take Function.

(23) Auto Fade Button (AUTO FADE)

Executes automatic fade within the time set by TIME Control.

(24) Auto Take Button (AUTO TAKE)

Executes automatic wipe or mix within the time set by TIME Control.

Note: The Selection Button pressed blinks depending on the status of the Mix/Wipe Control and Auto Take button.

■ MODE SETTING Section

(25) Event Memory Button (EVENT MEMORY)

Used to memorize the present status.

(26) Call Button (CALL)

Used to recall the memorized status.
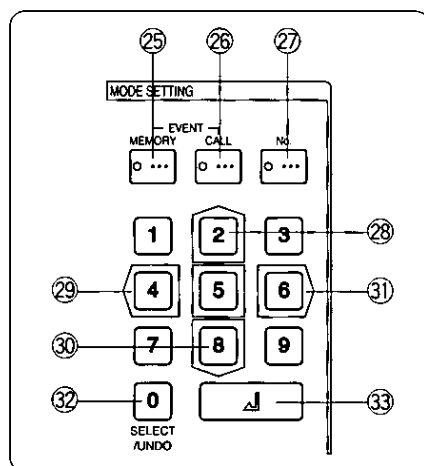
(27) Number Button (No.)

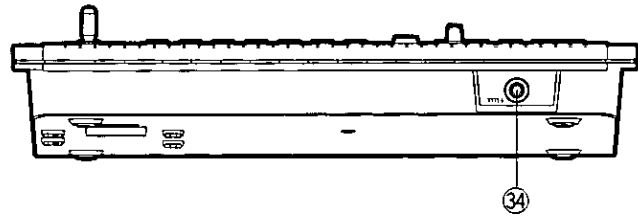**(28) Up Button**

(29) Left Button

(30) Down Button

(31) Right Button

(32) SELECT/UNDO Button

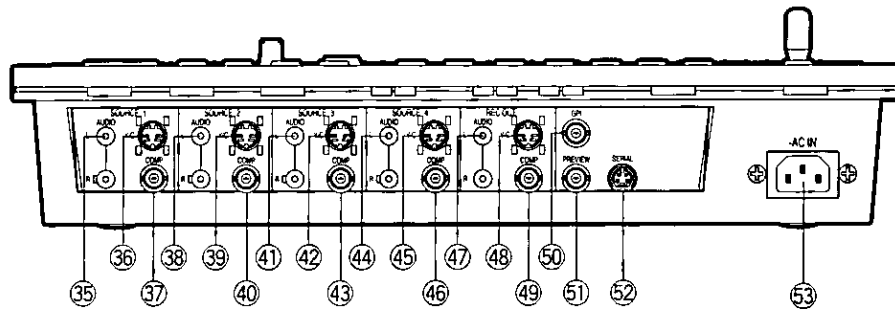**(33) Enter Button (↵)**
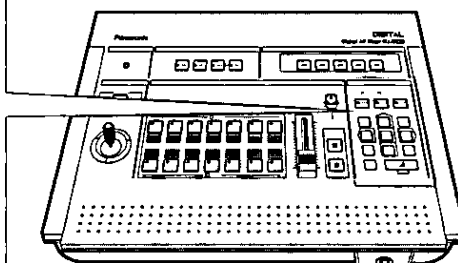
■ Front Panel

(34) Titler Connector (TITLE)

■ Rear Panel

(35) Source 1 Audio Input Jack (SOURCE 1 AUDIO)

(36) Source 1 S-video Input Connector (Y/C)

(37) Source 1 Composite Video Signal Input Jack

(38) Source 2 Audio Input Jack (SOURCE 2 AUDIO)

(39) Source 2 S-video Input Connector (Y/C)

(40) Source 2 Composite Video Signal Input Jack

(41) Source 3 Audio Input Jack (SOURCE 3 AUDIO)

(42) Source 3 S-video Input Connector (Y/C)

(43) Source 3 Composite Video Signal Input Jack

(44) Source 4 Audio Input Jack (SOURCE 4 AUDIO)

(45) Source 4 S-video Input Connector (Y/C)

(46) Source 4 Composite Video Signal Input Jack

(47) Recording Out Audio Output Jack (REC OUT AUDIO)

(48) Recording Out S-video Output Connector (REC OUT Y/C)

(49) Recording Out Composite Video Signal Output Jack

(50) GPI Connector (GPI)
Refer this connection to qualified service technician or system Installer.

(51) Preview Output Connector
Connect to the video input connector of the preview monitor.

(52) Serial Connector (SERIAL)
This connector is used for connecting an AG-850 Editing Controller or similar unit by RS-422 format.

(53) Power Socket (AC IN)
Connect the Power Cord (provided) to this socket.

-14-

WJ-KB30

Output Monitor

Power
Cord

Preview Monitor

-15-
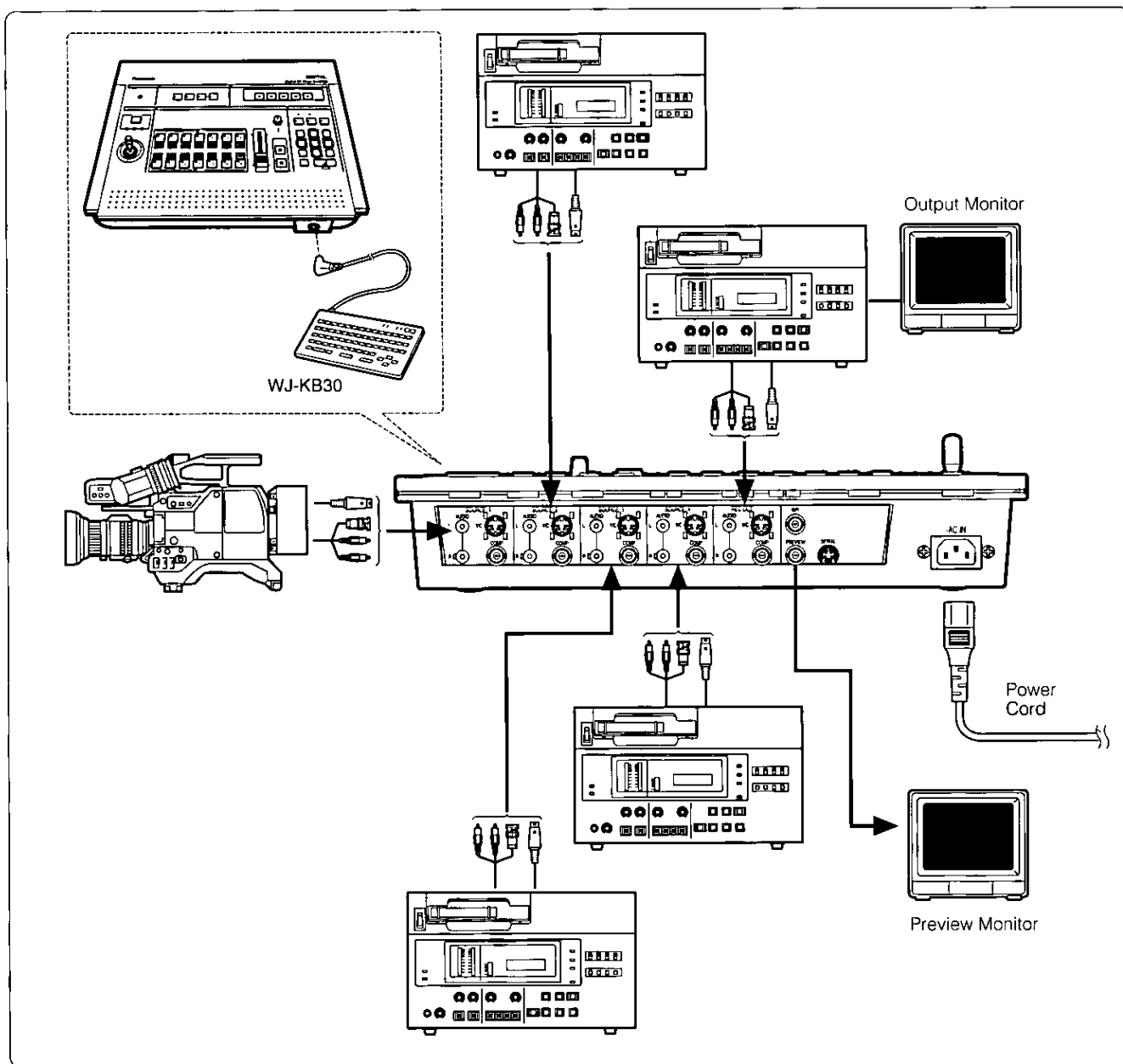
BASIC OPERATIONS

Press the Power Switch on the side panel to the ON position.

The LED`s on the operation panel light up as shown, indicating that the unit is now in initial mode for operation.
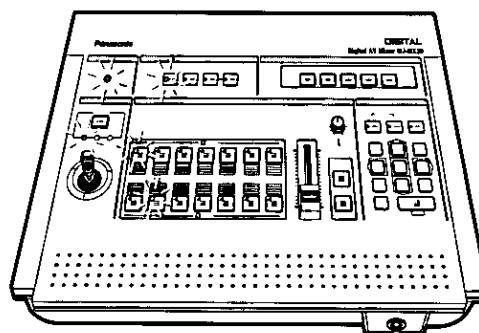
■ Input Signal Selection

1. Slide the Mix/Wipe Control to the A-bus position.

2. Press any of the SOURCE 1, SOURCE 2, SOURCE 3, SOURCE 4 or BACK COL. buttons.
You will see each picture on the screen.

3. Press BACK COL. button.
The LED on the button selected in step 2 starts blinking.
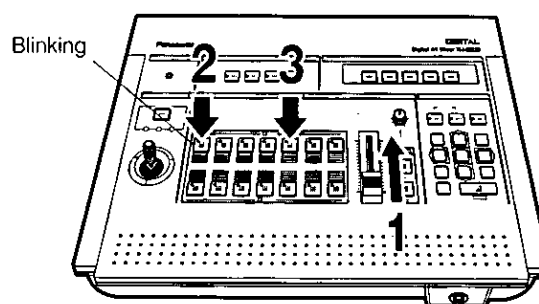
For Back Color Selection see "Back Color Setting" on page 31.

The same procedures apply to the B-bus.

Blinking

■ Video Mix

1. Press WIPE/MIX button.
The LED on this button starts to blink.

2. Press one of the A-bus Selection buttons.

3. Press one of the B-bus selection buttons.

4. Operate the Mix/Wipe Control.

-16-
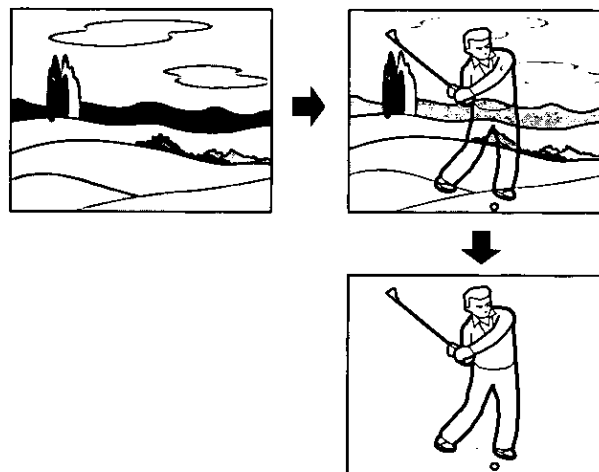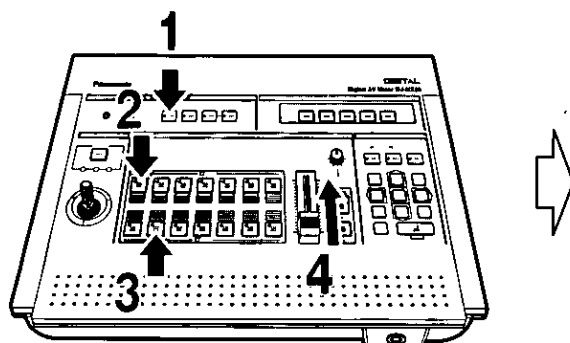
■ Video Wipe

● Wipe Description

※1: This pattern should be controlled with Auto Take Button only.
※2: Dissolve operation   ※3: Back color selection disabled.

Wipe Pattern	Images (change from A-bus image to B-bus image)
Basic Wipe Pattern	
Special Wipe Pattern	

Wipe Pattern		Images (change from A-bus image to B-bus image)
Special Wipe Pattern		

For the last special wipe pattern:

• Select the position of B-bus picture by using the Joystick. **Refer to position setting on page 42 for this operation.**

1. **Press WIPE button.**

The following WIPE menu is displayed on the preview monitor.

WIPE menu
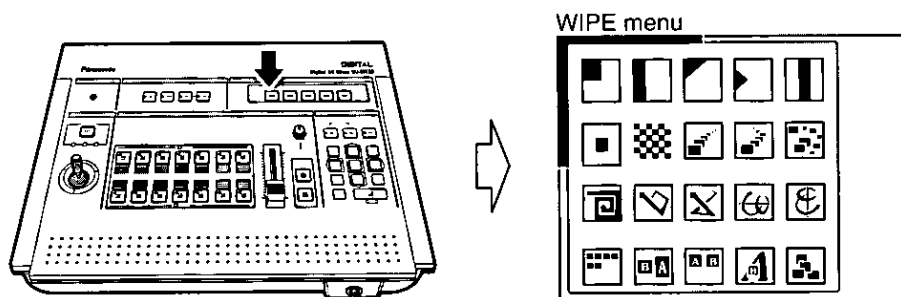
2. Select the desired wipe pattern by using the Up/Down/ Right/ Left Button.

3. Press SELECT/UNDO button repeatedly to select the Sub Pattern modes.
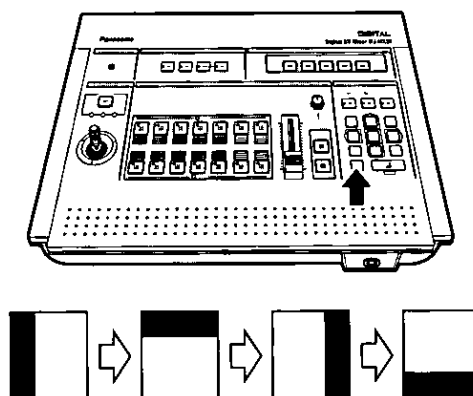
The wipe patterns shown inside the dotted line have Sub Pattern modes.

-19-
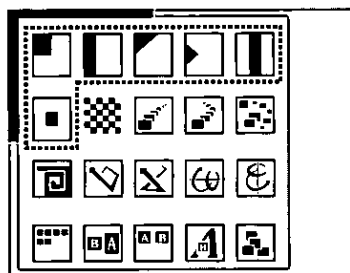
● Wipe Direction Setting

1. Press WIPE button.
Wipe patterns are displayed
on the preview monitor.

2. Select the desired wipe
pattern by using the
Up/Down/ Right/ Left Button.
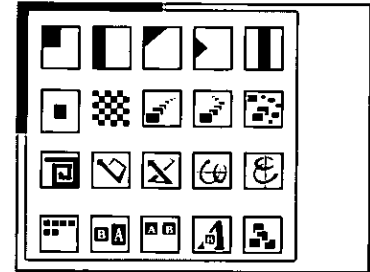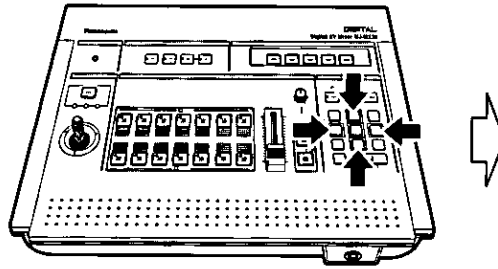
This setting is available for the patterns shown inside
the dotted line.
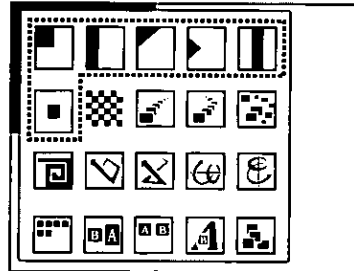
3. Press ⌐ button.
The Mode Table is displayed
on the preview monitor.
Notes:
    1. To set the color for the
        wipe edge, select 🔲
        mode.
    2. The color modes framed
        in blue in the Mode
        Table can be selected.
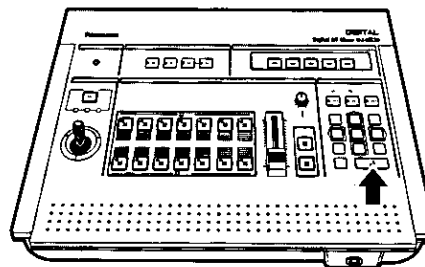
Mode Table
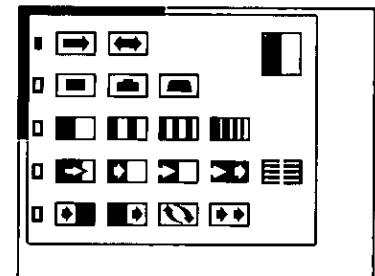
4. Select 🔲 / 🔲 by using
the Up/Down/Right/Left
button.
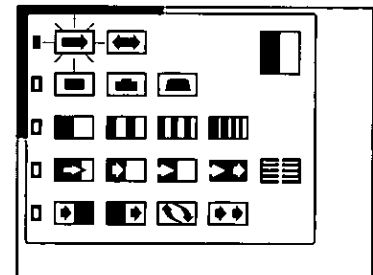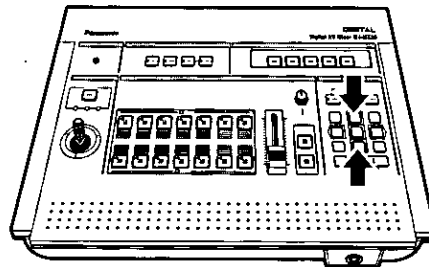
Note: When you choose a combination of any one of (⊡〔〕☰) and ◼️, the direction is automatically set to 🔲.

-20-

5. Press one of the A-bus Selection buttons.

6. Press one of the B-bus Selection buttons.

7. Operate the Mix/Wipe control.
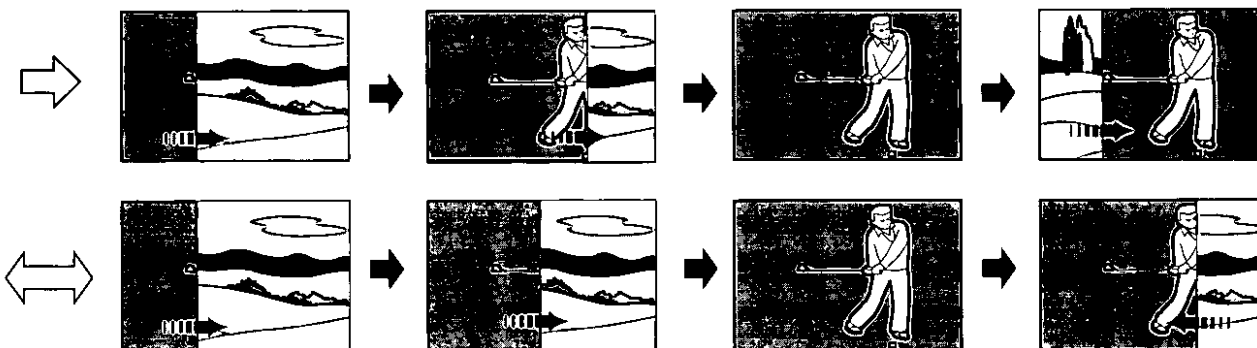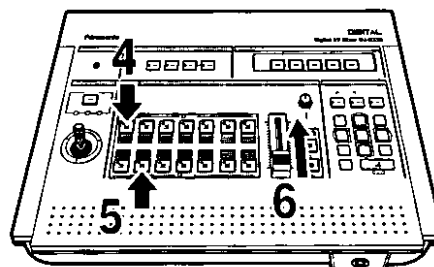
● Wipe Edge

1. Press WIPE button.
Wipe patterns are displayed on the preview screen.
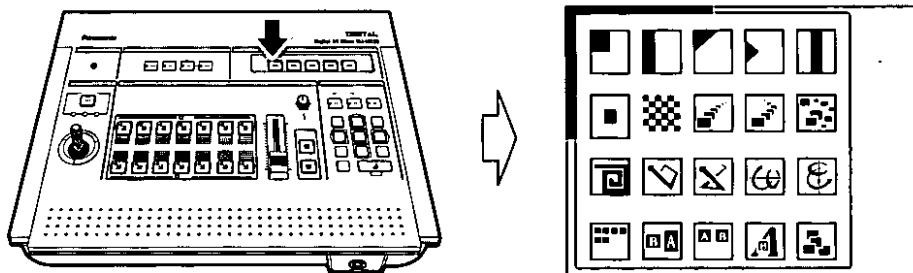
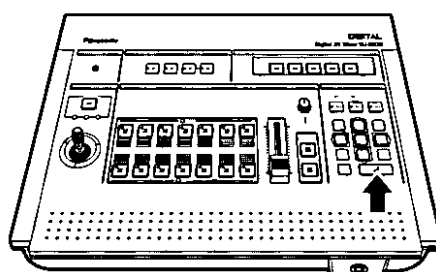Edge selection is available for the patterns shown inside the dotted line.

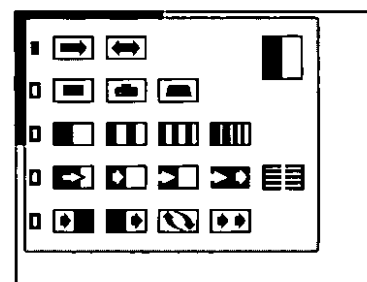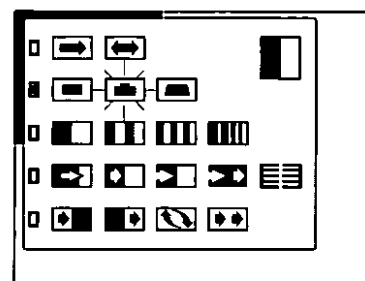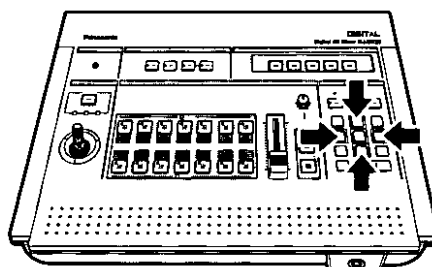**Note:** When selecting ▨ or ▨ pattern, the Mode Table shows the following.
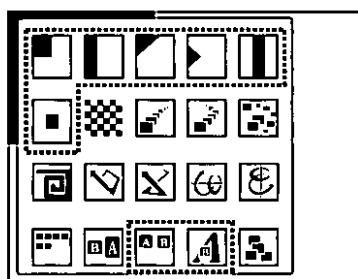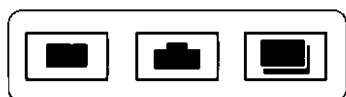
2. Press the ◢ button to display the Mode Table.
Notes:
  1. To set the color for the wipe edge, select ▣ mode.
  2. The color modes framed in blue in the Mode Table can be selected.

Mode Table

3. Select the desired edge by
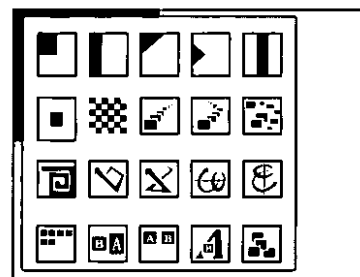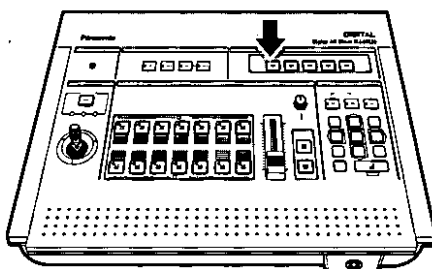using the Up/Down/Right/
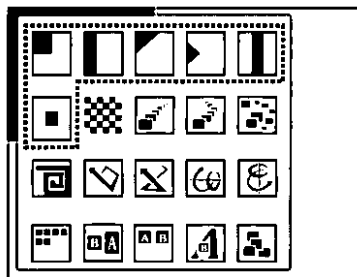Left Button.

☐ : No Edge
☐ : Edge
☐ : Soft Edge

Note: Selection of wipe edge affects the other wipe
patterns automatically .
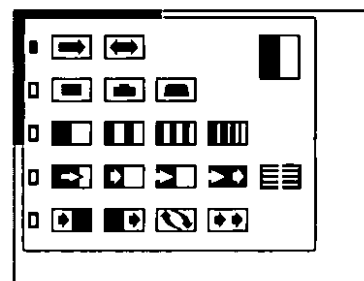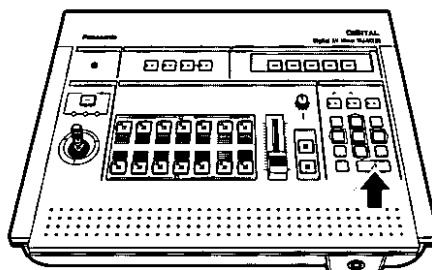
● Multiple Wipe

1. Press WIPE button.

The wipe patterns shown, inside the dotted line
are available.

2. Press ⏎ button.
The Mode Table is displayed
on the preview monitor.

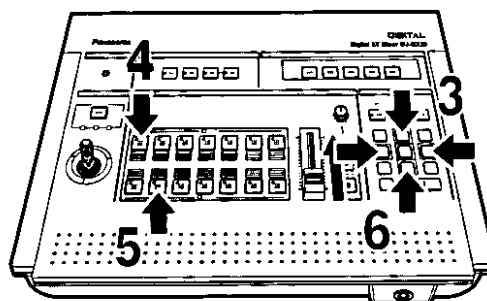**Note:** The modes framed in black in the Mode Table cannot be selected.
(The modes framed in blue in the Mode Table can be selected.)

3. Select the desired multi pattern by using the Up/ Down/Right/Left button.

4. Press one of the A-bus Selection buttons.

5. Press one of the B-bus Selection buttons.
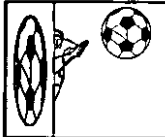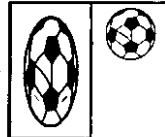
6. Operate the Mix/Wipe Control.
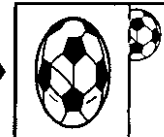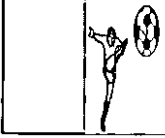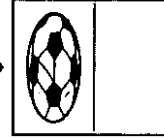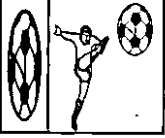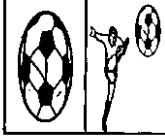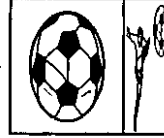
■ Special Mode

● Special Mode Description

Wipe Mode	Images (change from A-bus image to B-bus image)

-23-

Wipe Operation	Images (change from A-bus image to B-bus image)
▶■	
■▶	
↺	※
▶▶	

※ : Back color should be changed to the desired color. Refer to the Back Color Setting for this selection.

1. **Press WIPE button.**
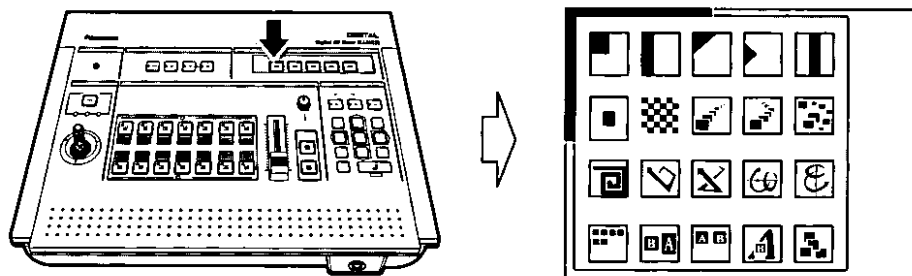
The patterns inside the dotted line have this function.
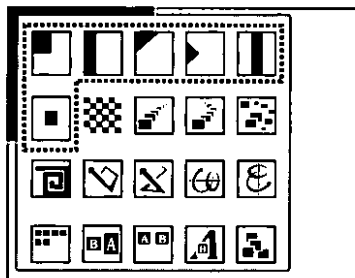
2. **Press ◢ button.**

The Mode Table is displayed on the preview screen.

Notes:

1. The modes framed in black in the Mode Table cannot be selected.

2. The modes framed in blue in the Mode Table can be selected.

-24-
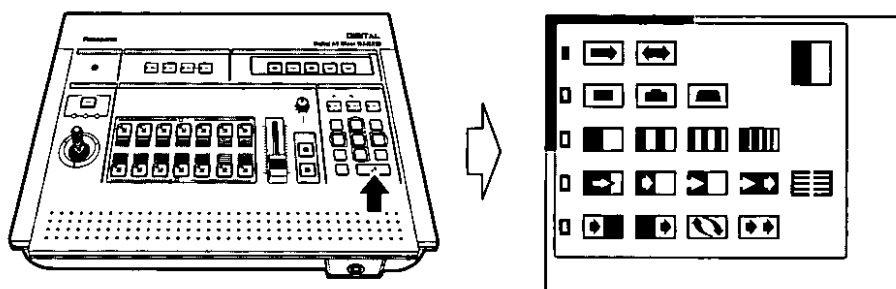
3. Select the desired special mode by using the Up/Down/ Left/Right button.
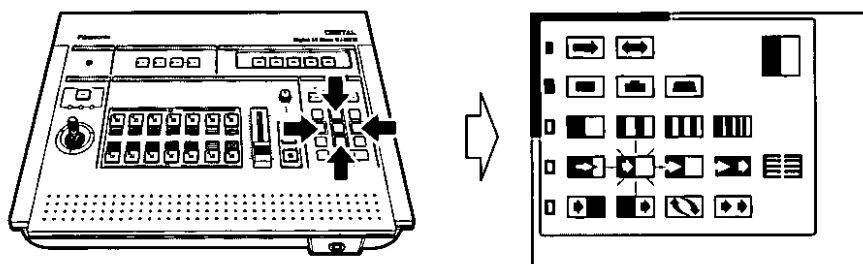
4. Press one of the A-bus Selection buttons.

5. Press one of the B-bus Selection buttons.

6. Operate the Mix/Wipe Control.
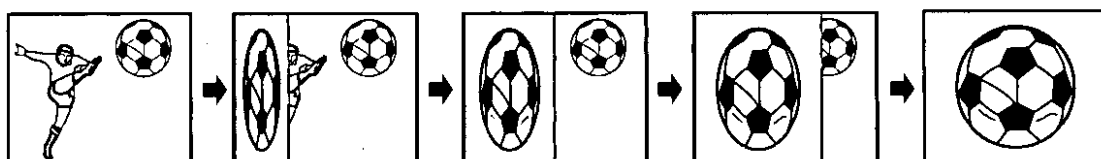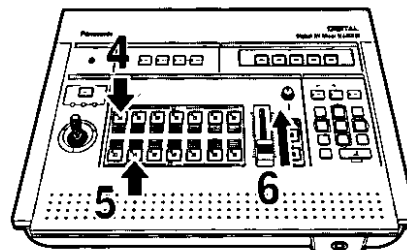
Notes:
1. The modes framed in black in the Mode Table cannot be selected.
   (The modes framed in blue in the Mode Table can be selected.)
2. The Still and Strobo functions are not available in the compressed picture.

In case of selecting the 🔳 pattern,

1. Select the 🔳 pattern and press the ⏎ button.
The WIPE menu disappears and the cursor is displayed.
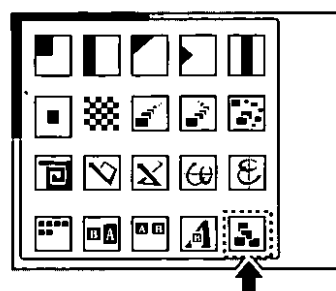
2. Select the desired position by using the joystick.
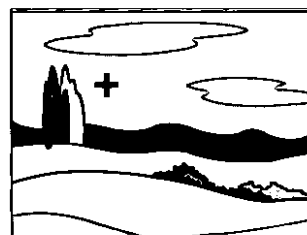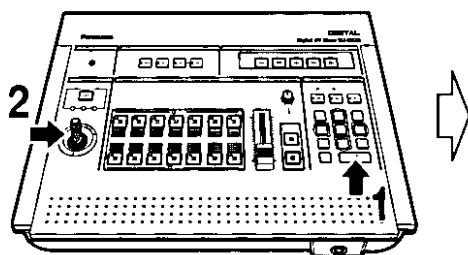
3. Press the ⏎ button to set the position.

4. Press the WIPE button in the OSD section.

-25-
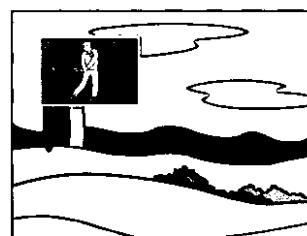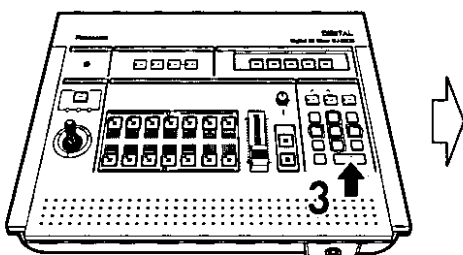
5. Operate the Mix/Wipe Control.

6. To cancel these settings, press the SELECT/UNDO button.
All the settings in this pattern are canceled.
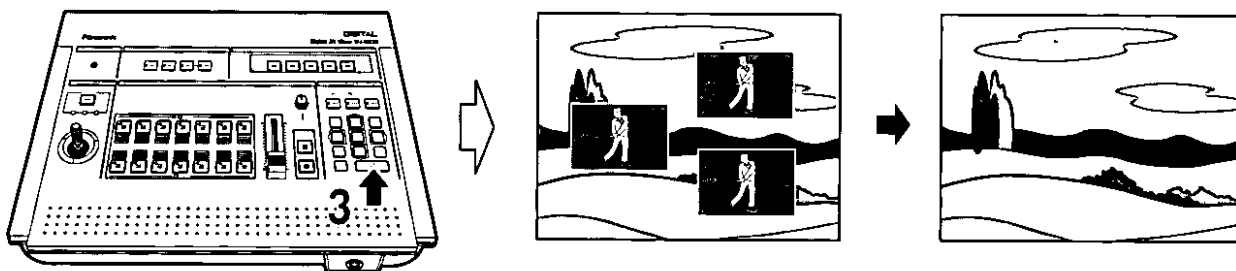
■ Digital Effect

● Strobe Mode Setting

1. Press the EFFECT button.
The EFFECT menu is displayed on the preview monitor.


```
■EFFECT  :A B

□STROBE  :0 1 2 3 4 5
□MOSAIC  :0 1 2 3 4 5
□PAINT   :0 1 2 3 4
□STILL   :FLD FRM
□NEGA    :OFF ON
□CHROMA  :OFF ON

□C.LEVEL:◄◄◄◄◄◄◄◄◄◄◄◄◄►►►►
```
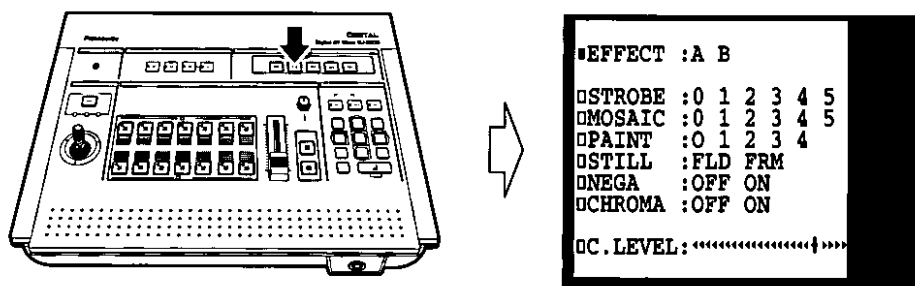
2. Select the A or B-bus for strobe effect by using the Up/Down/Right/Left button.

3. Move the cursor to STROBE by using the Up/Down button.

4. Set the strobe level to the desired position by using the Right/Left button.


```
□EFFECT  :A B

■STROBE  :0 1 2 3 4 5
□MOSAIC  :0 1 2 3 4 5
□PAINT   :0 1 2 3 4
□STILL   :FLD FRM
□NEGA    :OFF ON
□CHROMA  :OFF ON

□C.LEVEL:◄◄◄◄◄◄◄◄◄◄◄◄◄►►►►
```
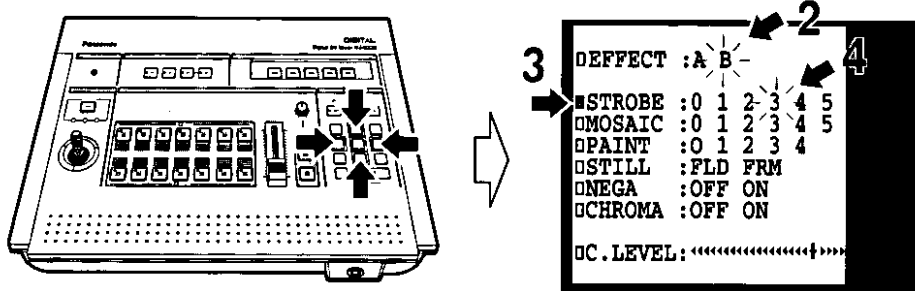
5. Press the EFFECT Output button of the bus you selected in step 2.
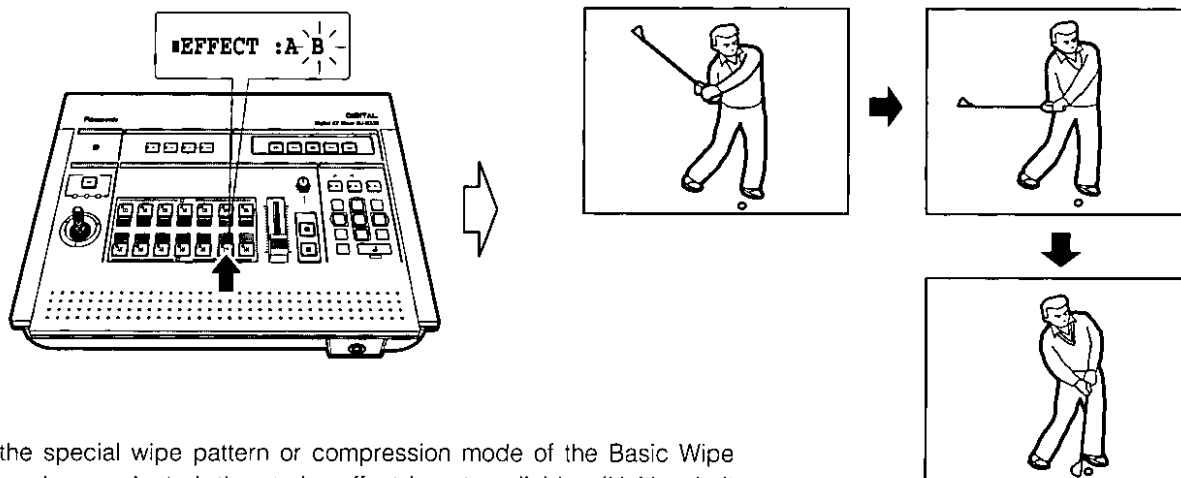
■EFFECT :A B

Note: When the special wipe pattern or compression mode of the Basic Wipe Pattern has been selected, the strobo effect is not available.. (Neither is it possible to change settings.)

● Mosaic Setting

1. Press the EFFECT button.
The **EFFECT** menu is displayed on the preview monitor.
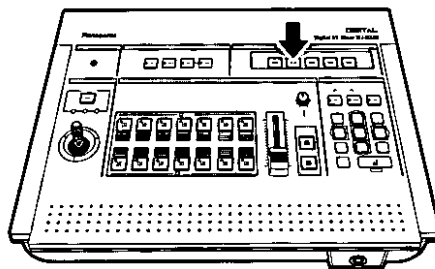
```
■EFFECT :A B

□STROBE :0 1 2 3 4 5
□MOSAIC :0 1 2 3 4 5
□PAINT  :0 1 2 3 4
□STILL  :FLD FRM
□NEGA   :OFF ON
□CHROMA :OFF ON

□C.LEVEL: ‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‡ ››››
```

2. Select the A or B-bus for mosaic effect.

3. Move the cursor to the MOSAIC position by using the Up/Down button.

4. Set the mosaic level to the desired position by using the Right/Left button.

```
□EFFECT :A B

□STROBE :0 1 2 3 4 5
□MOSAIC :0 1 2 3 4 5
□PAINT  :0 1 2 3 4
□STILL  :FLD FRM
□NEGA   :OFF ON
□CHROMA :OFF ON

□C.LEVEL: ‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‡ ››››
```

5. Press the EFFECT Output button of the bus you selected in step 2.

```
■EFFECT :A B
```

● Paint Setting

1. Press the EFFECT button.
The EFFECT menu is displayed on the preview monitor.

```
■EFFECT :A B

□STROBE :0 1 2 3 4 5
□MOSAIC :0 1 2 3 4 5
□PAINT  :0 1 2 3 4
□STILL  :FLD FRM
□NEGA   :OFF ON
□CHROMA :OFF ON

□C.LEVEL: ‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‡ ››››
```

-27-

2. Select the A or B-bus for paint effect by using the Right/Left button.

3. Move the cursor to the PAINT position by using the Up/Down button.

4. Set the paint level to the desired position by using the Right/Left button.

```
◻EFFECT  :A  B  -

◻STROBE  :0 1 2 3 4 5
◻MOSAIC  :0 1 2 3 4 5
■PAINT   :0 1 2 3 4 5
◻NAGA    :OFF  ON
◻STILL   :FIE  FRA
◻CHROMA  :OFF  ON

◻C.LEVEL: ‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹|›››»
```

5. Press the EFFECT Output button of the bus you selected in step 2.

```
■EFFECT  :A  B  -
```

● Still Setting

1. **Press the EFFECT button.**
The EFFECT menu is displayed on the preview monitor.

```
■EFFECT  :A  B

◻STROBE  :0 1 2 3 4 5
◻MOSAIC  :0 1 2 3 4 5
◻PAINT   :0 1 2 3 4
◻STILL   :FLD  FRM
◻NEGA    :OFF  ON
◻CHROMA  :OFF  ON

◻C.LEVEL: ‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹|›››»
```

2. Select the A or B-bus for still effect.

3. Move the cursor to the STILL position by using the Up/Down button.

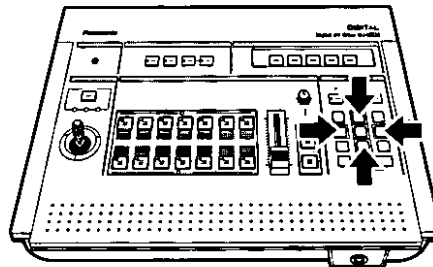**4.** Select the FLD/FRM mode by using the Right/Left button.

```
◻EFFECT  :A  B  -

◻STROBE  :0 1 2 3 4 5
◻MOSAIC  :0 1 2 3 4 5
◻PAINT   :0 1 2 3 4
■STILL   :FLD-FRM
◻NEGA    :OFF  ON
◻CHROMA  :OFF  ON

◻C.LEVEL: ‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹|›››»
```

-28-
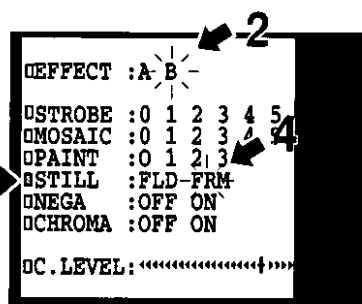
5. Press the STILL button of the bus you selected in step 2.
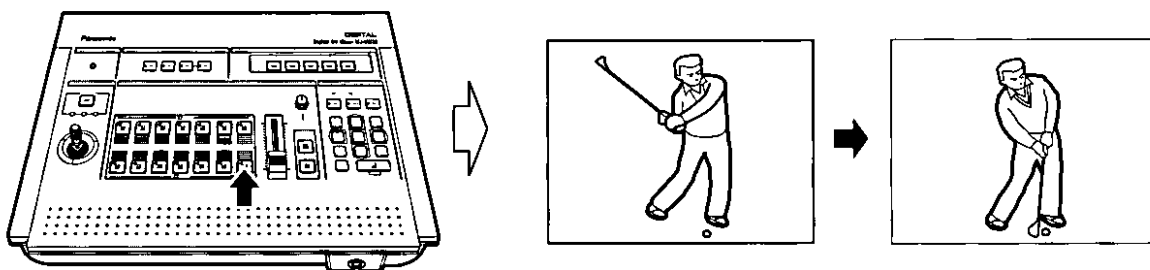
> **Note:** The selection of FLD/FRM should be made while observing the output monitor.

● Nega Setting

1. Press the EFFECT button.
The EFFECT menu is displayed on the preview monitor.
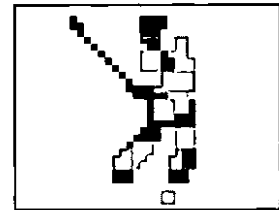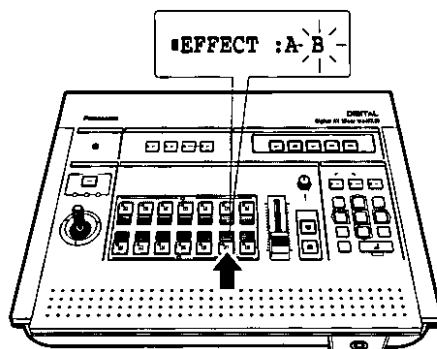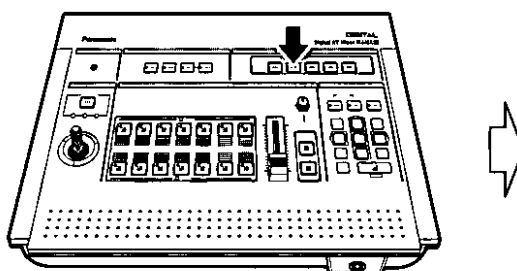


```
■EFFECT :A B

□STROBE :0 1 2 3 4 5
□MOSAIC :0 1 2 3 4 5
□PAINT  :0 1 2 3 4
□STILL  :FLD FRM
□NEGA   :OFF ON
□CHROMA :OFF ON

□C.LEVEL:◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄►►►►
```
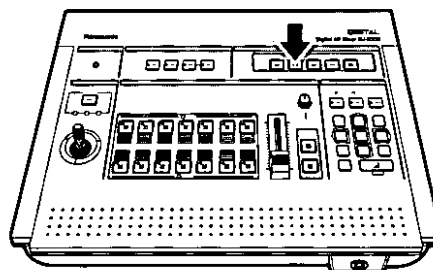
2. Select the A or B-bus for nega effect.

3. Move the cursor to the NEGA position by using the Up/Down button.

4. Select the ON position by using the Right/Left button.
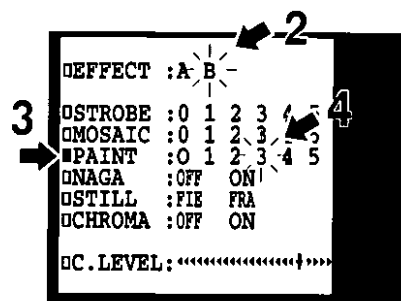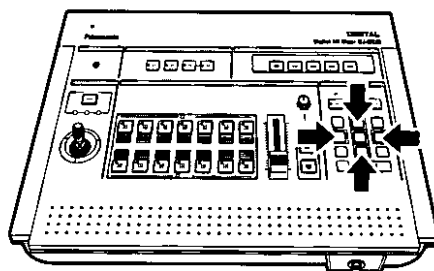


```
□EFFECT :A B

□STROBE :0 1 2 3 4 5
□MOSAIC :0 1 2 3 4 5
□PAINT  :0 1 2 3 4
□STILL  :FLD FRM
□NEGA   :OFF ON
□CHROMA :OFF ON

□C.LEVEL:◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄►►►►
```
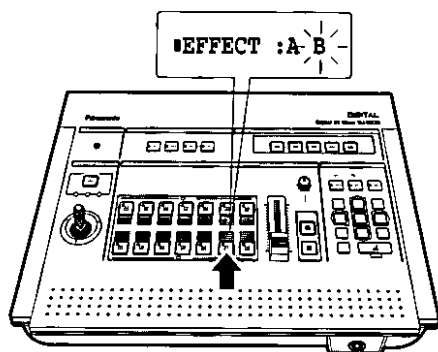
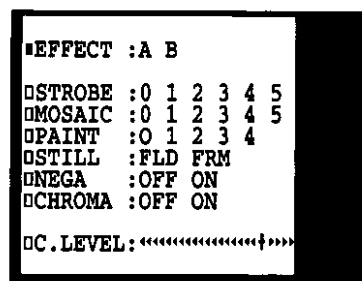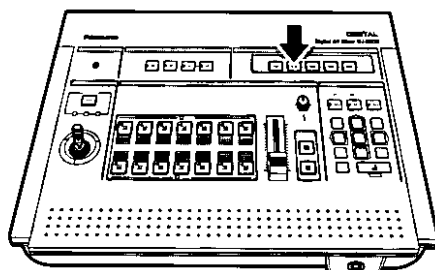**5.** Press the EFFECT Output button of the bus you selected in step 2.


```
■EFFECT :A B
```
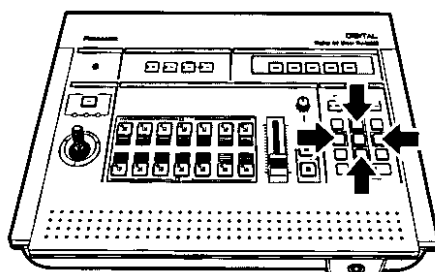
● Color Correction

1. **Press the EFFECT button.**
The EFFECT menu is displayed on the preview monitor.


```
■EFFECT  :A  B

□STROBE  :0  1  2  3  4  5
□MOSAIC  :0  1  2  3  4  5
□PAINT   :0  1  2  3  4
□STILL   :FLD  FRM
□NEGA    :OFF  ON
□CHROMA  :OFF  ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄┼►►►►
```

2. **Select the A or B-bus for chroma effect.**

3. **Move the cursor to the CHROMA position by using the Up/Down button.**

4. **Select the ON mode by using the Right/Left button.**


```
□EFFECT  :A  B

□STROBE  :0  1  2  3  4  5
□MOSAIC  :0  1  2  3  4  5
□PAINT   :0  1  2  3  4
□STILL   :FLD  FRM
□NEGA    :OFF  ON
□CHROMA  :OFF  ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄┼►►►►
```

5. **Press the EFFECT Output button of the bus you selected in step 2.**
The COL. CORRECT Indicator lights.

6. **Correct the color by using the Joystick Control.**

Note: The picture is displayed with the preset condition whenever you select CHROMA ON mode.

● Chroma Level
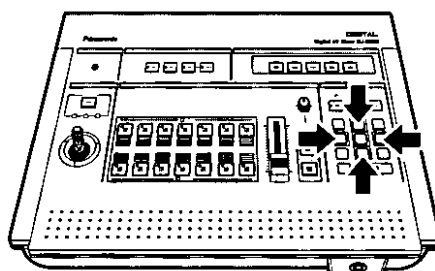
1. **Press the EFFECT button.**
The EFFECT menu is displayed on the preview monitor.


```
■EFFECT  :A  B

□STROBE  :0  1  2  3  4  5
□MOSAIC  :0  1  2  3  4  5
□PAINT   :0  1  2  3  4
□STILL   :FLD  FRM
□NEGA    :OFF  ON
□CHROMA  :OFF  ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄◄◄┼►►►►
```

-30-

2. Select the A or B-bus for color level effect.

3. Move the cursor to the C. LEVEL position.
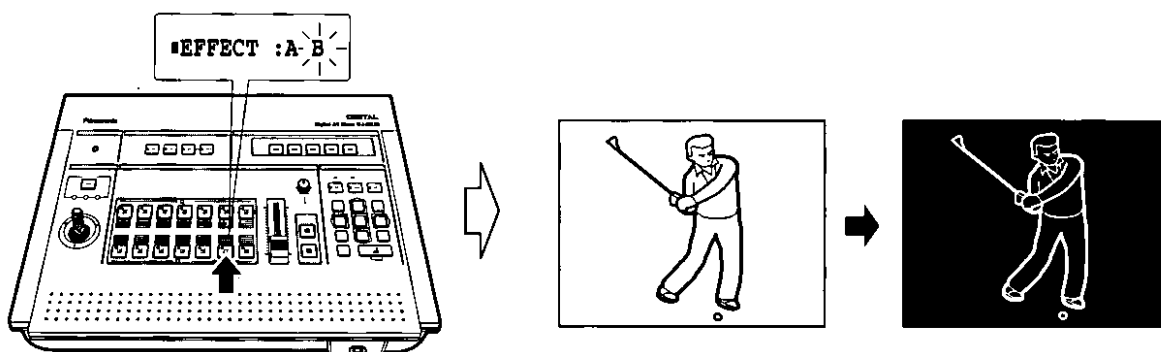
4. Set the chroma level to the desired position.


```
⊡EFFECT  :A  B  -

⊡STROBE  :0 1 2 3 4 5
⊡MOSAIC  :0 1 2 3 4 5
⊡PAINT   :0 1 2 3 4
⊡STILL   :FLD FRM
⊡NEGA    :OFF ON
⊡CHROMA  :OFF ON

⊡C.LEVEL: ‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹‹›››››
```
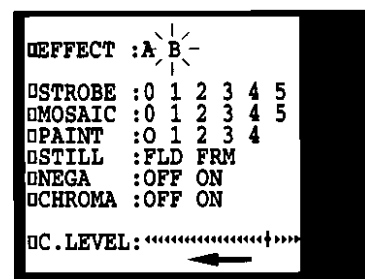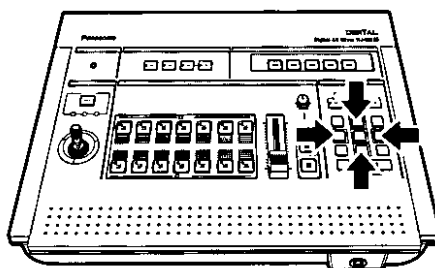
5. Press the EFFECT Output button of the bus you selected in step 2.
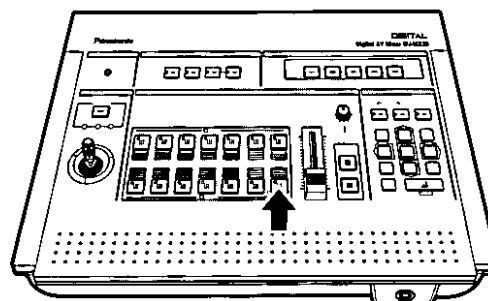
■ Color Setting

● Back Color Setting

1. **Press the COL. button.**
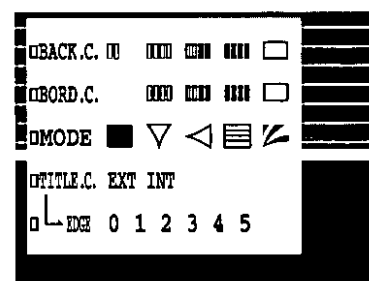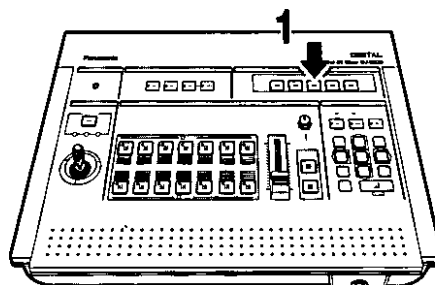COL. menu is displayed on the preview monitor.


```
⊡BACK.C. ▯▯  ▯▯▯▯ ▯▯▯▯ ▯▯▯▯ ☐

⊡BORD.C.     ▯▯▯▯ ▯▯▯▯ ▯▯▯▯ ☐

⊡MODE ■ ▽ ◁ 目 ⋰

⊡TITLE.C. EXT INT

⊡└EDG 0 1 2 3 4 5
```

2. Move the cursor to the BACK.C. position by using the Up/Down button.

3. Set the desired color by using the Left/Right button.


```
⊡BACK.C.─▯X ▯▯▯ ▯▯▯ ▯▯▯ ☐

⊡BORD.C.     ▯▯▯▯ ▯▯▯ ▯▯▯ ☐

⊡MODE ■ ▽ ◁ 目 ⋰

⊡TITLE.C. EXT INT

⊡└EDG 0 1 2 3 4 5
```

-31-
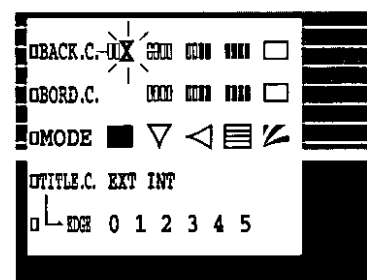
4. To select a color other than a preset one, select the ☐ position by using the Right /Left button.

5. Press the ◢ button.
COL.SET is displayed and the color selection can be made with the **joystick.**

COL. SET

6. After selecting the desired color, press the ◢ button.
This completes the color selection process.

7. Press the BACK COL. button of your desired bus.
The LED on the last selected SOURCE button starts blinking.

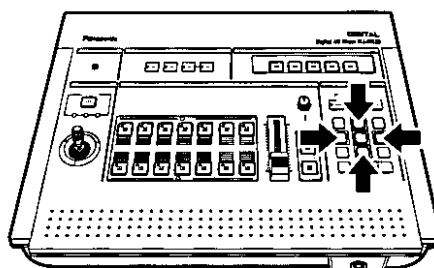**8.** To exit this function, press another SOURCE Button.

● Border Color Setting

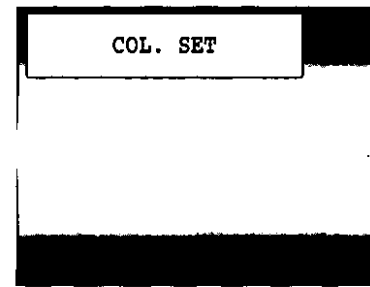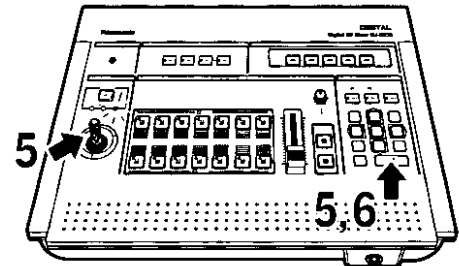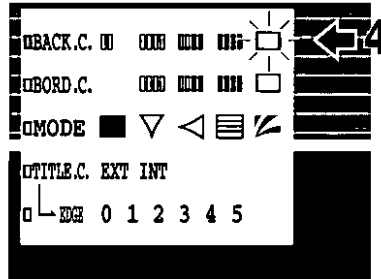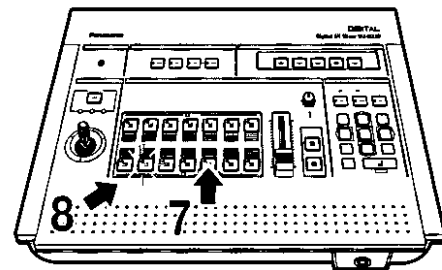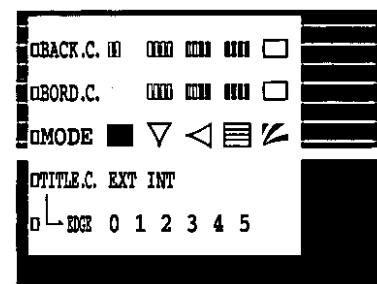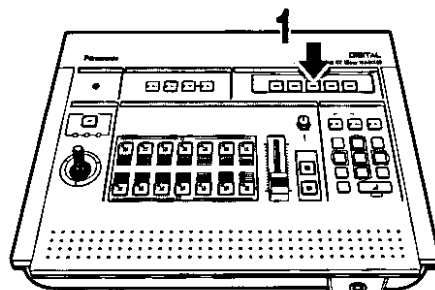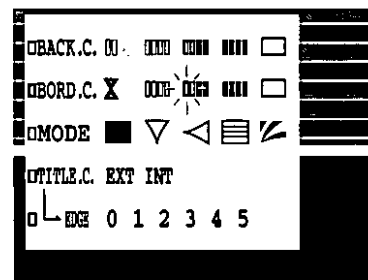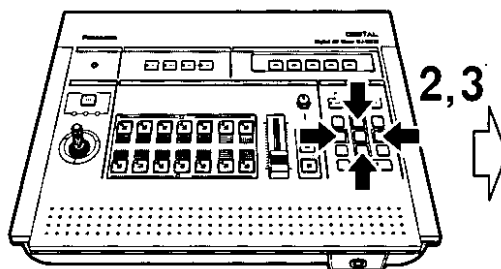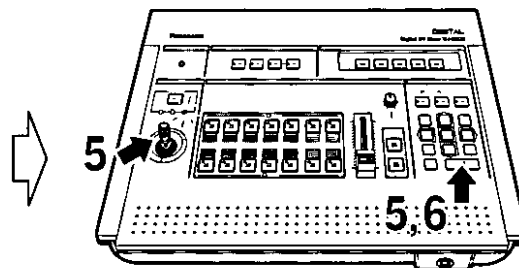**1.** Press the COL button.
The COL. menu is displayed on the preview monitor.

2. Move the cursor to the
BORD.C. position by using
the Up/Down button.

3. Set the desired color by
using the Left/Right button.


```
□BACK.C. □ .  ▥▥ ▥▥ ▥▥ ▢
□BORD.C. X  ▥▥ ▥▥ ▥▥ ▢
□MODE  ■ ▽ ◁ ☰ ⟋
□TITLE.C. EXT INT
□└EDGE  0 1 2 3 4 5
```

4. To select a color other than
a present color select the
☐ position.

5. Press the ↲ button.
COL.SET is displayed and the
color selection can be made
with the **joystick**.

```
□BACK.C. □·. ▥▥ ▥▥ ▥▥ ▢
□BORD.C. ⋎  ▥▥ ▥▥ ▥▥-▢
□MODE  ■ ▽ ◁ ☰ ⟋
□TITLE.C. EXT INT
□└EDGE  0 1 2 3 4 5
```
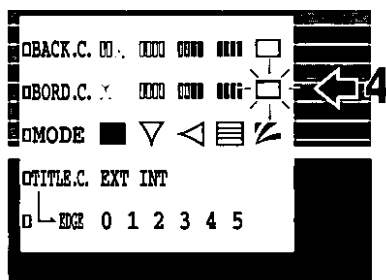
6. After selecting the desired
color, press the ↲ button.
This completes the color selec-
tion process.

● Color Mode Setting

1. Press the COL. button.
The COL. menu is dis-
played on the preview moni-
tor.

```
□BACK.C. □ .  ▥▥ ▥▥ ▥▥ ▢
□BORD.C. ·  ▥▥ ▥▥ ▥▥ ▢
□MODE  ■ ▽ ◁ ☰ ⟋
□TITLE.C. EXT INT
□└EDGE  0 1 2 3 4 5
```

-33-
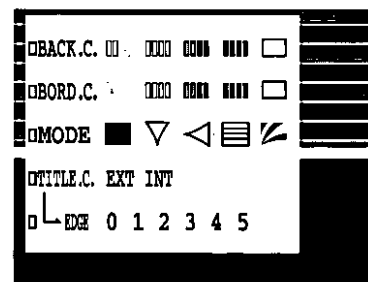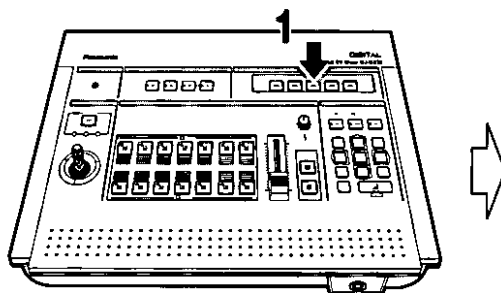
2. Move the cursor to the MODE position by using the Up/Down button.

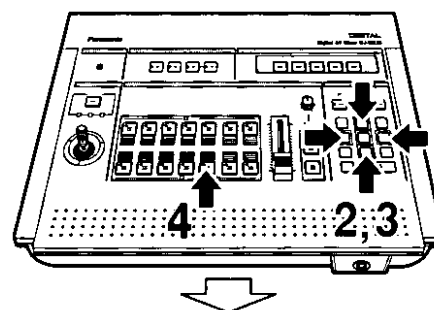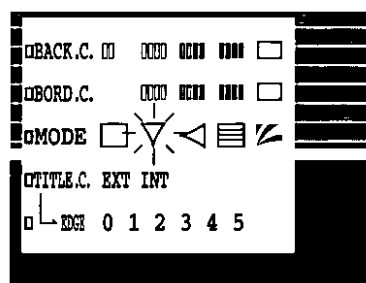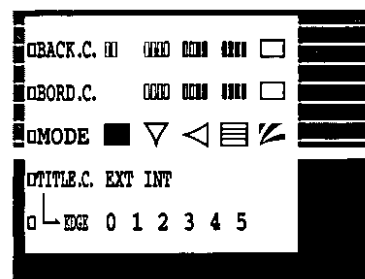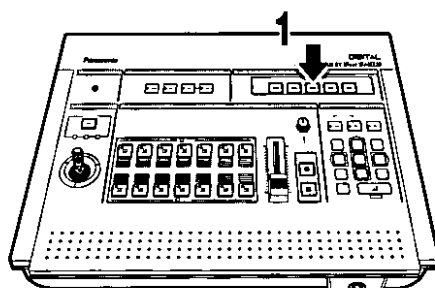**3.** Select the desired mode by using the Left/Right button.

4. Press the desired BACK COL. button.

```
□BACK.C. □□   □□□□ □□□□ □□□□ □
□BORD.C.      □□□□ □□□□ □□□□ □
□MODE □⟍⟋   ◁ ▤ ╱
□TITLE.C. EXT INT
□└EDGE 0 1 2 3 4 5
```


4   2;3

● Title Color Setting

1. Press the COL. button.
The COL. menu is displayed on the preview monitor.

1

```
□BACK.C. □□   □□□□ □□□□ □□□□ □
□BORD.C.      □□□□ □□□□ □□□□ □
□MODE ■ ▽ ◁ ▤ ╱
□TITLE.C. EXT INT
□└EDGE 0 1 2 3 4 5
```

2. Move the cursor to the TITLE.C. position by using the Up/Down button.

2;3

```
□BACK.C. □□   □□□□ □□□□ □□□□ □
□BORD.C.      □□□□ □□□□ □□□□ □
□MODE ■ ▽ ◁ ▤ ╱
□TITLE.C. EXT INT
□└EDGE 0 1 2 3 4 5
```

3. Select the EXT/INT position by using the Left/Right button.
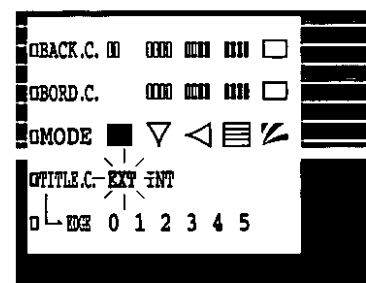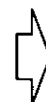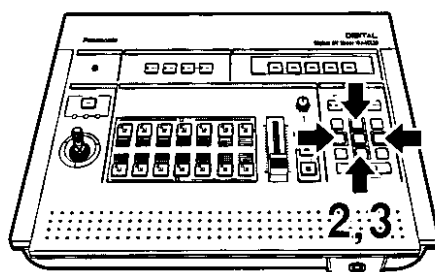
EXT: When connecting the optional Character Generator WJ-KB30, color setting can be made from external.
Note: When the optional Character Generator WJ-KB12 is connected, only a white title color is available.

INT: The color of the title is set internally.

-34-

1. **Press the COL. button.**
The COL. menu is displayed on the preview monitor.

```
□BACK.C. □ □□□ □□ □□ □
□BORD.C. X □□□ □□ □□ □
□MODE  ■ ▽ ◁ 目 ✓
□TITLE.C. EXT INT
□└EDGE  0  1  2  3  4  5
```
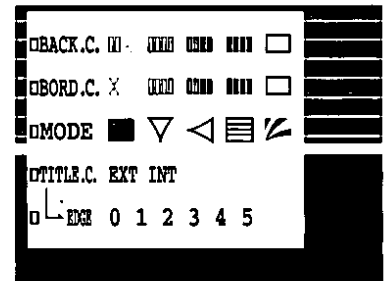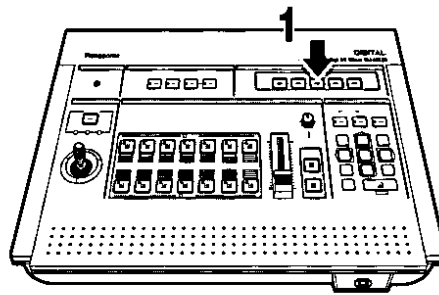
2. **Move the cursor to the EDGE position by using the Up/Down button.**

3. **Select the desired edge width from the 5 steps displayed.**

```
□BACK.C. □ □□□ □□ □□ □
□BORD.C. X □□□ □□ □□ □
□MODE  ■ ▽ ◁ 目 ✓
□TITLE.C. EXT INT
□└EDGE  0  1  2-3-4  5
```

● Fade-out (in) Setting

1. **Press the FADE button.**
The FADE menu is displayed on the preview monitor.

```
■ VIDEO : OFF  ON
□ AUDIO : OFF  ON
□ TITLE : OFF  ON

□ FADE TO : W  B .C.
```
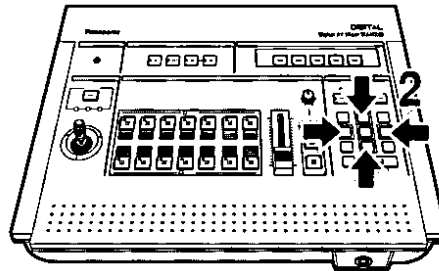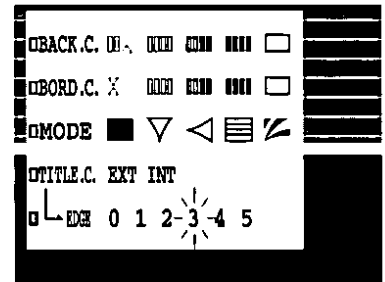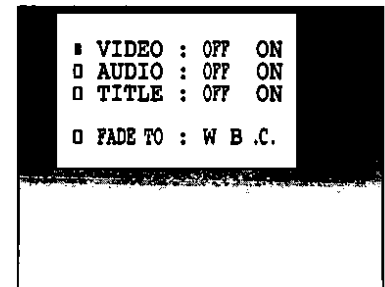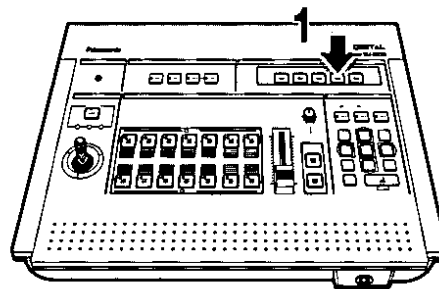
2. **Move the cursor to the VIDEO, AUDIO and/or TITLE position by using the Up/Down button.**

3. **Set each item to ON position by using the Left/Right button.**

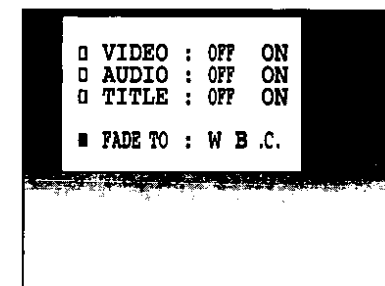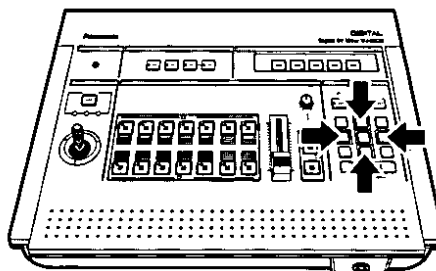**4.** **For fade-out (or in) of the video signal to white,** black or another desired color, move the cursor to the FADE TO position.

5. **Select the desired color to fade-out(or in) by using the Left/Right position.**
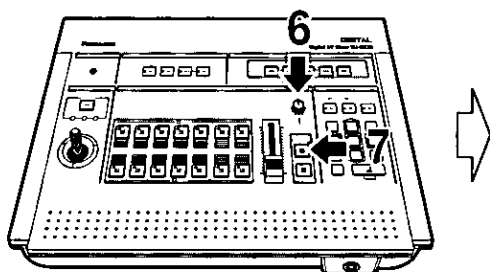**W :** to White color
B : to Black color
C : to back color selected in COL. menu.

```
□ VIDEO : OFF  ON
□ AUDIO : OFF  ON
□ TITLE : OFF  ON

■ FADE TO : W  B .C.
```
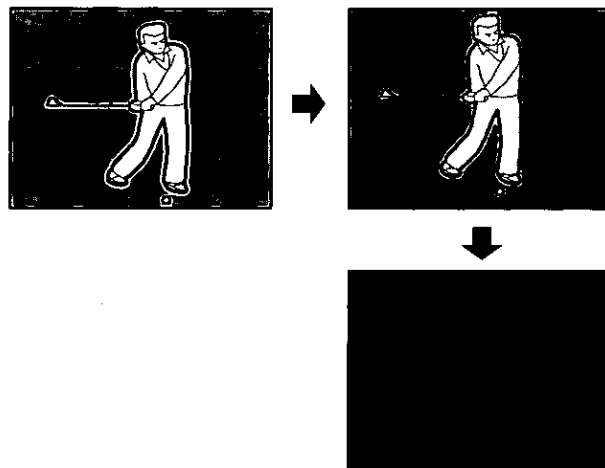
-35-

6. Adjust the TIME control.

7. Press the AUTO FADE button.
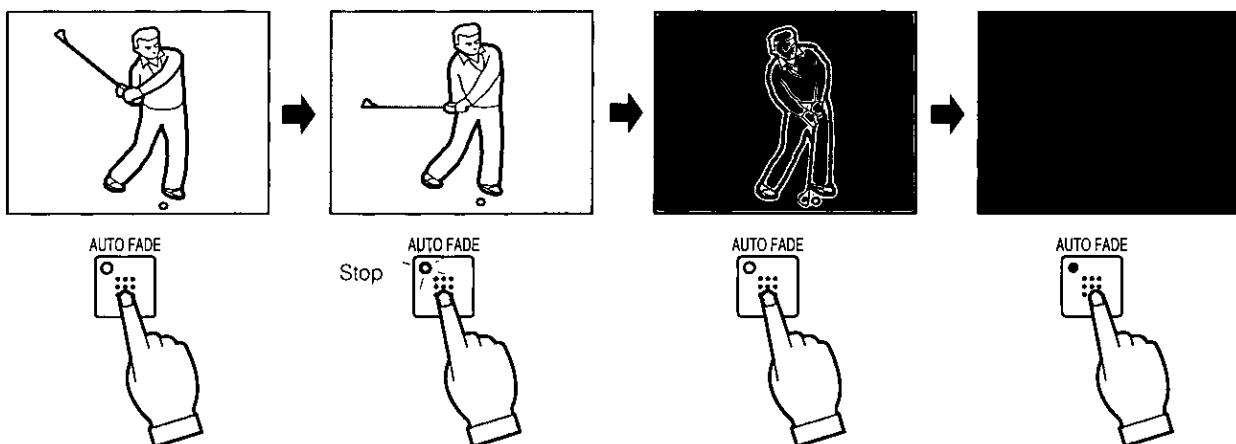The picture starts fading-out to the selected color.

Fade to Black

Notes :
1. If you press the **AUTO FADE** button again before the fade is over, the fade stops. The LED's for the AUTO FADE button start blinking. Press the button again to start the fade again.
2. After fade-out is completed, the LED on the AUTO FADE button remains blinking.

AUTO FADE   AUTO FADE   Stop   AUTO FADE   AUTO FADE
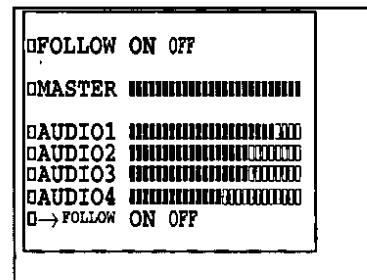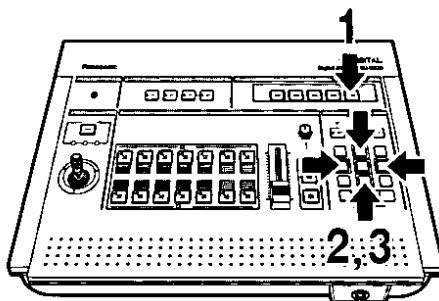
8. Press the AUTO FADE button again.
The picture starts fading-in from the selected color.

Note: The title is displayed on the preview monitor while the Title Fade Operation is executed. (No title display in VIDEO ON mode.)
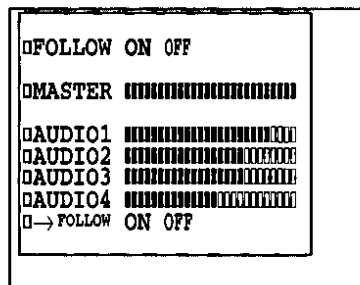
-36-

■ Audio Mix

● Audio Follow Setting

1. Press the AUDIO button. The AUDIO menu is displayed on the preview menu.

2. Move the cursor to FOLLOW by using the Up/Down button.

3. Select ON position by using the Right/Left button.

The four audio signals from source 1,2,3 and 4 can be followed simultaneously.


```
□FOLLOW  ON  OFF
□MASTER  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
□AUDIO1  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯
□AUDIO2  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯
□AUDIO3  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯
□AUDIO4  ▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯▯▯
□→FOLLOW  ON  OFF
```

Note: Audio Follow is effective as shown below depending on the menu setting.

		FOLLOW	
		ON	OFF
■AUDIO4	ON	All	Independent
□└FOLLOW	OFF	Audio 1, 2 and 3	Independent


```
□FOLLOW  ON  OFF
□MASTER  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
□AUDIO1  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯
□AUDIO2  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯
□AUDIO3  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯
□AUDIO4  ▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯▯▯
□→FOLLOW  ON  OFF
```

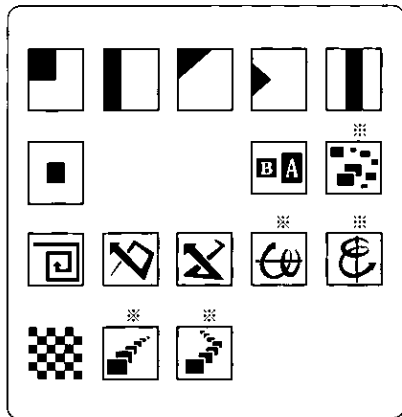To use Audio Follow in combination with Wipe Mode refer to the next page.

● Audio Level Setting

1. Press the AUDIO button. The AUDIO menu is displayed on the preview screen.

2. First select MASTER and set the overall output level with ← → key.

3. Next select AUDIO 1 to 4 and set the output level separately for each of these audio sources.


```
□FOLLOW  ON  OFF
□MASTER  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
□AUDIO1  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯
□AUDIO2  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯
□AUDIO3  ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯
□AUDIO4  ▮▮▮▮▮▮▮▮▮▮▮▮▯▯▯▯▯▯▯▯
□→FOLLOW  ON  OFF
```
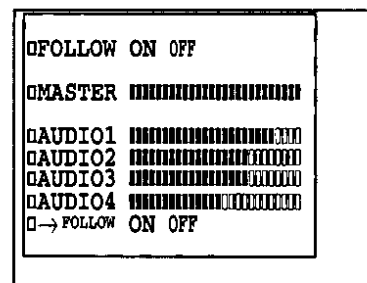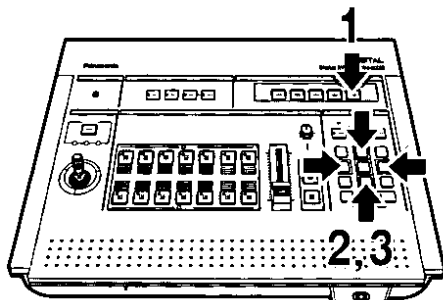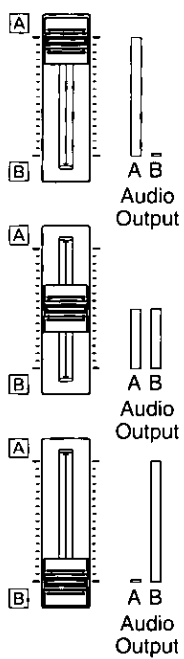
Note: The MASTER volume can be changed with the arrow keys ← → even if the OSD screen is closed.

-37-

Audio Follow Effect

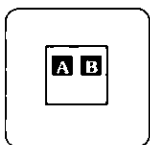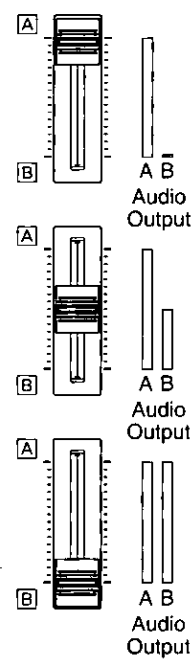

※ Available with "Auto Take" only.

A B
Audio Output

A B
Audio Output

A B
Audio Output

Luminance and Chroma Key Function

A B
Audio Output

A B
Audio Output

A B
Audio Output

A B
Audio Output

A B
Audio Output

A B
Audio Output
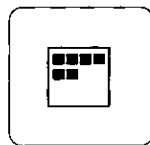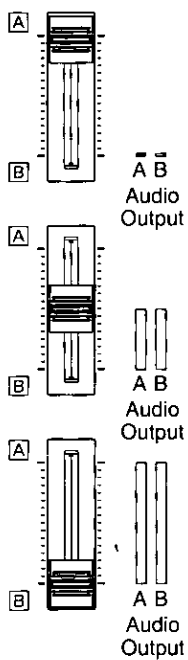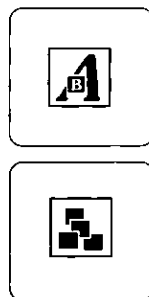
This pattern is available with Auto Take only.

A B
Audio Output

A B
Audio Output

A B
Audio Output
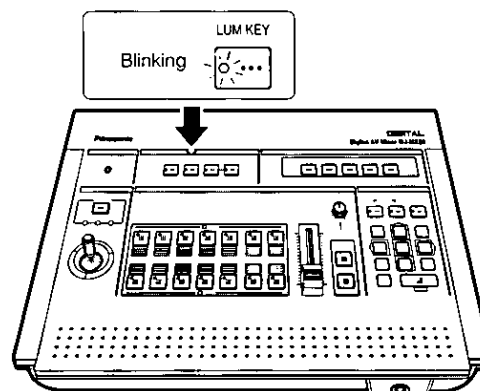
A B
Audio Output

A B
Audio Output
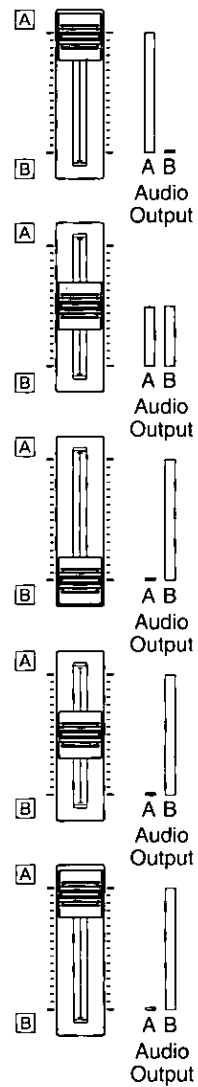
ADVANCED OPERATIONS
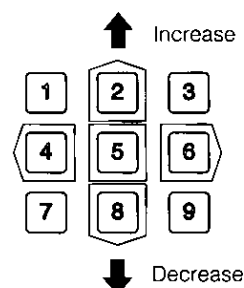
■ Luminance Key Setting

This function affects the B-bus video source.

1. **Press the LUM KEY button.**
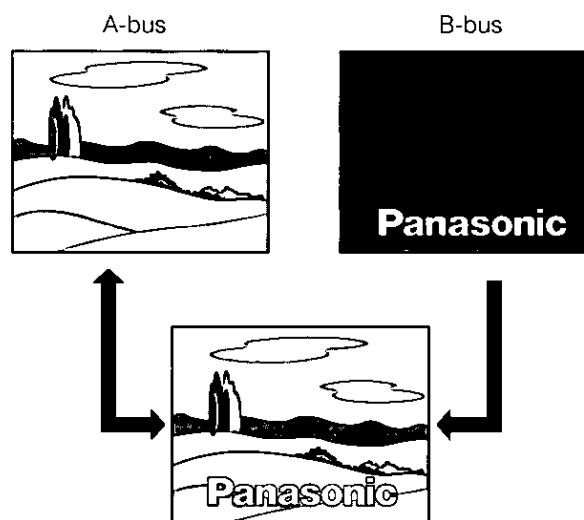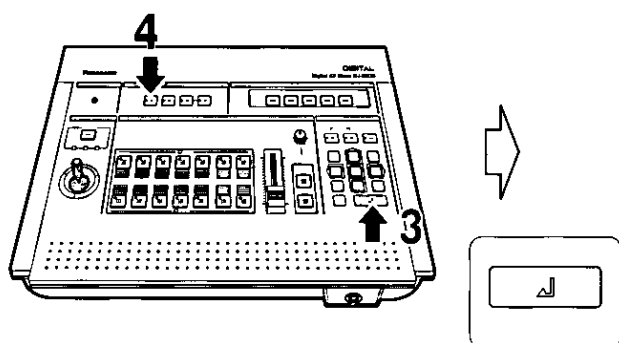   The LED on this button starts blinking.

2. **Adjust the luminance to the desired level by using the Up/Down button.**

   Pressing the Up button increases the level.
   Pressing the Down button decreases the level.
   When the Up/Down button is kept pressed, the level is increased/decreased continuously.

3. **Press the ◢ button to execute this function.**
   The LED on the LUM KEY Button changes from blinking to steddy Light.

4. **To exit this function, press any other button in the TRANSITION SELECT section.**
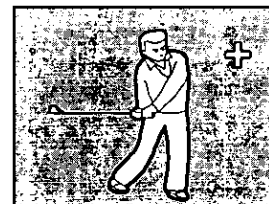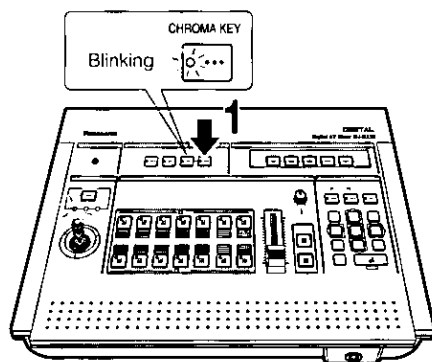
Note: Setting the Luminance Key cancels any condition preset with the chroma key.

-39-

■ Chroma Key Setting

This function affects the B-bus video source.
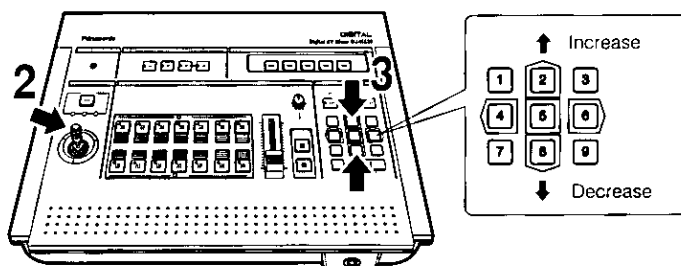
1. Press the SET button.
The LED on the CHROMA KEY starts blinking.
The B-bus picture and the cursor are displayed on the preview monitor. The POSI-TION Indicator starts blink-ing.

2. Move the cursor to the desired position for the chroma key function by using the Joystick Control.

3. Press the ⏎ button.
This completes the chroma key setting process.

4. Adjust the chroma level as desired by using the Up/Down button.

Note:
The chroma key can be set for up to 3 positions.
The cursor disappears when 3 positions have been set.
The level of the selected positions cannot be adjusted independently.

5. Press the CHROMA KEY button to execute this function.
The LED on the CHROMA KEY button changes on from blinking to steady Light.
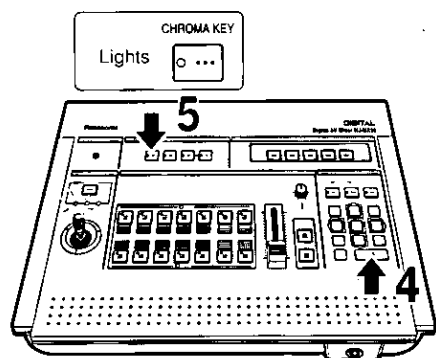
Notes :
1. Setting the chroma Key cancels any condition pre-set with the luminance key.
2. To cancel the setting, press the **SELECT/ UNDO** button.
The latest setting is canceled.

When you want to cancel two or three settings, press the SET button and then the UNDO button.
3. Keeping the Up/Down button pressed does not change the chroma Level. To change the level, press the Up/Down button repeatedly.

-40-

■ Auto Take Setting

1. **Set the transition time by adjusting the TIME Control.**

Transition time can be adjusted between approximately 0 to 10.2 sec.

2. **Press the AUTO TAKE button.**
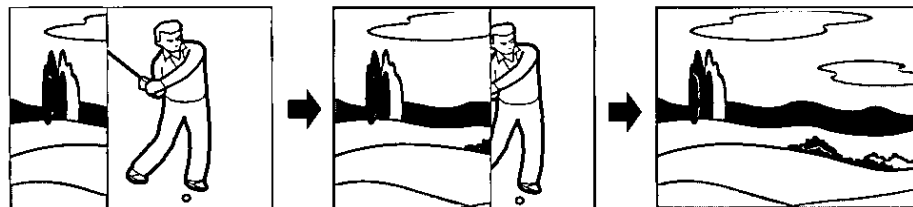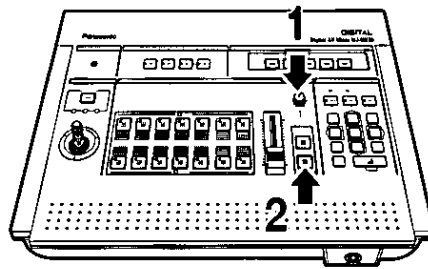
AUTO TAKE

The LED lights. After Auto Take, the LED goes out.

AUTO TAKE

Notes:

1. If you press the button before Auto Take is completed, Auto Take stops and the LED starts blinking. If you want to restart it, press the button again.
2. To release Auto Take mode, slide the Mix/Wipe Control fully to either the A-bus or B-bus position.
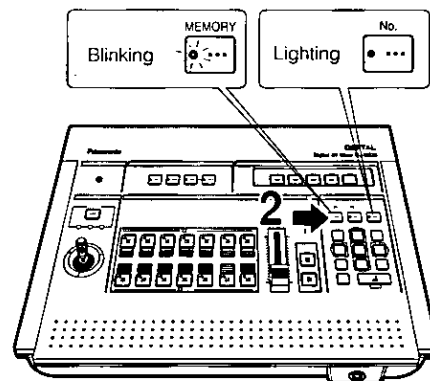
■ Event Setting ──

Frequently used patterns and effects (events) can be stored in memory and recalled at any time for reuse.

── To Store the Event in Memory ──

1. **Select the desired condition for event setting.**

> **Note:** If wipe patterns are selected, confirm the output bus on the RECORD OUT Monitor.
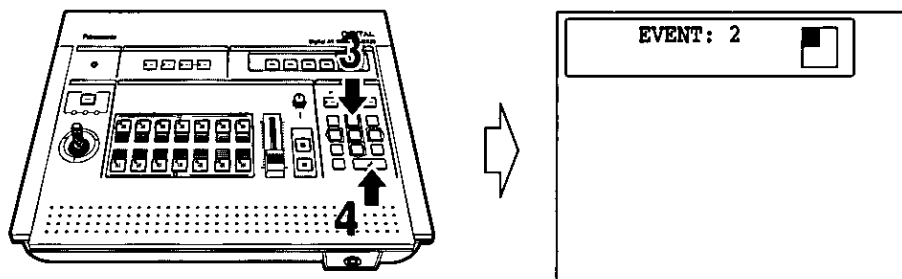> Refer to Wipe Pattern Event Setting on page 44 for more details.

2. **Press the MEMORY button.**
The LED on the MEMORY starts blinking.

3. **Press number from 1 to 7.**
The selected event number is displayed on the preview monitor.

EVENT: 2

4. **Press the ⏎ button.**
The event number disappears from the preview monitor, and the selected event is stored in memory.

Notes:
- There are seven events stored in the memory. When storing an event under a number already assigned to a stored event the event previously stored is overwritten.
- Event setting is not available in the following modes ;
  - Still Mode
  - Wipe Pattern 🔒

-42-

1. Press the CALL button.

The LEDs on the CALL and No. buttons light up and the lowest stored event number is displayed on the preview monitor.

2. Enter the desired event number.

The LED on the CALL button starts blinking and the event number entered appears on the preview monitor.

Note: The contents of the event number is not displayed on the preview monitor. Therefore, check the effect before starting to record.

3. Press the ◄ button.

4. To execute this function, press the AUTO TAKE button.

Note: After pressing the AUTO TAKE button, the next event number is automatically displayed on the preview monitor. Therefore, all you need to do is press the AUTO TAKE button to execute all the stored events in sequence without pressing the CALL and No. buttons. Repeatedly pressing the AUTO TAKE button will cycle the sequential execution of the stored events.

5. To exit this function, press the CALL button.
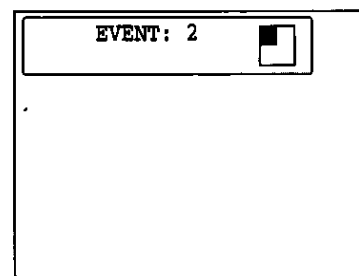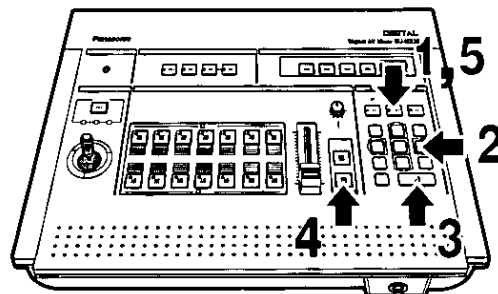
EVENT: 2

Note:
- ■ Green: Mix key
- ■ Blue : Chroma key
- ■ Yellow: Luminance key
- ☐ All patterns: Wipe button

-43-

• Wipe Pattern Event Setting

Example 1: When the ▣ pattern(event) is stored in memory, the execution of this event will follow the relationship shown below.

Output BUS on the RECORD OUT Monitor		Picture on the RECORD OUT Monitor
Storing	Execution	
B	A	A ➡ [B/A] ➡ B
	B	※ B ➡ B ➡ B
A	A	※ A ➡ A ➡ A
	B	B ➡ [A/B] ➡ A

※ The event will not be executed.

Example 2:
To execute all four events in sequence, store them in memory as shown below.

EVENT No.	PATTERN	Mix/Wipe Control Position when storing	RECORD OUT Monitor
EVENT1	◨	Bus B	B
EVENT2	◧	Bus A	A
EVENT3	◺	Bus B	B
EVENT4	▶	Bus A	A

1. The output pictures on the A or B bus should be alternately displayed on the monitor after executing the event function.
2. It determines that the Mix/Wipe Control position or take position by executing Auto Take function.

In this condition , events 1 to 4 are executed in sequence by keeping the Auto Take button pressed after pressing the CALL button.

-44-

—To Clear the Event Memory ———

1. **Press the MEMORY button.**
The LED on the MEMORY button starts blinking.

2. **Press the SELECT/UNDO button.**
"EVENT: CLEAR" is displayed on the preview monitor.

3. **Press the ↵ button.**
"EVENT: CLEAR" disappears from the preview monitor and all the events memorizd in the Event Memory are cleared.

4. **To exit this function, press MEMORY button.**
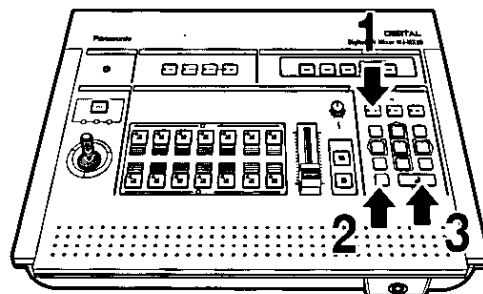
■ Position Setting ————————————————————

1. **Press the WIPE button and select the desired wipe pattern.**

2. **The POSITION indicator lights.**

3. **Move the wiped picture by using the joystick.**
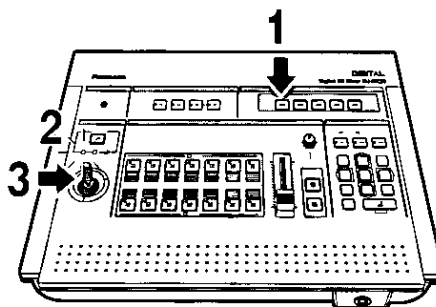
This function is available in the wipe patterns shown inside the dotted line.
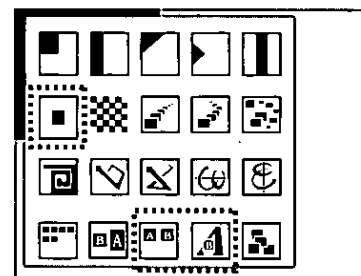
If you select the 🅡 pattern:

1. **Select the 🅡 pattern and press the ↵ button.**
The WIPE menu disappears and the cursor is displayed.

-45-
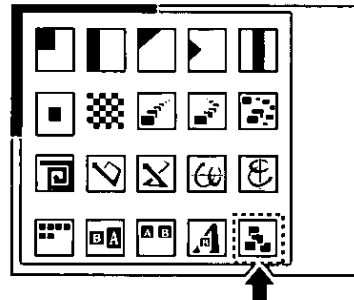
2. Select the desired position by using the joystick.
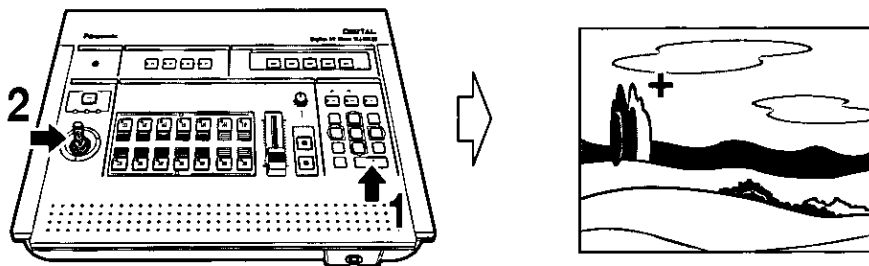
3. Press the ⌐ button to set the position.
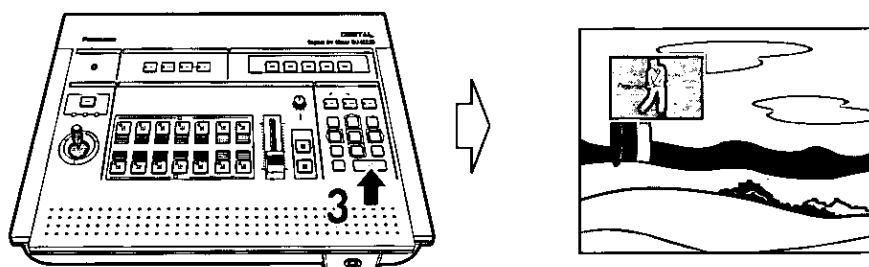
4. To cancel these settings, press the SELECT/UNDO button.
All the settings in this pattern are canceled.

-46-
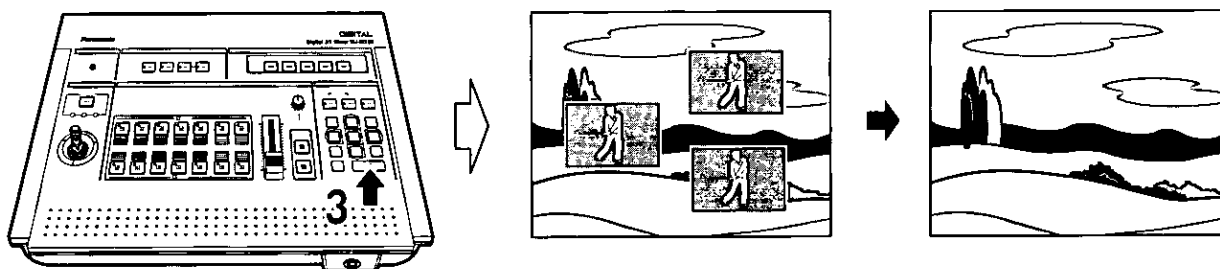
■ Scene Grabber

This function is available in the four patterns shown below inside the dotted line.

1. **Press the WIPE button.**
The WIPE menu is displayed on the preview monitor.
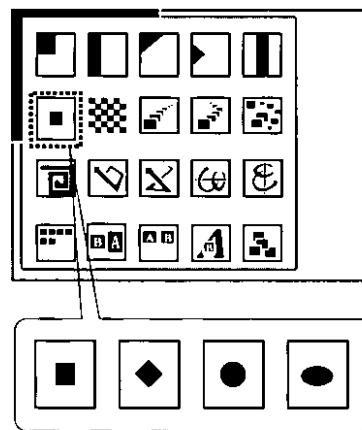
2. **Select the ▣ Pattern by using the Up/Down/Right/ Left button and select the Pattern Mode by using the SELECT/UNDO button.**

3. **Select the SCENE GRABBER position by using the SELECT button. The LED on the SCENE GRABBER Indicator lights.**

4. **Select the desired position by using the joystick.**
Note: You can set the initial size of the scene with the Mix/Wipe Control.
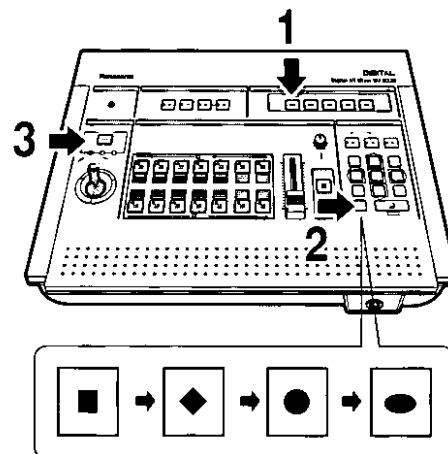
■ No. (Number) Function

If your monitor is not provided with two video input connectors, use this function.
You can work with the preset function (refer to the number in the wipe pattern table on pages 48 and 49.) without the preview screen.

1. **Press the No. button.**

2. **Press the desired number.**

3. **Press the ⏎ button.**
The preset function is executed.
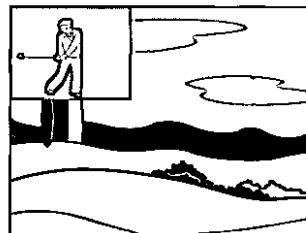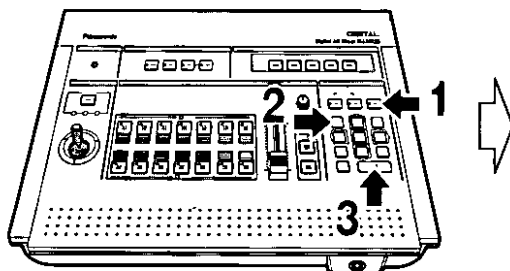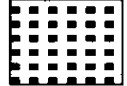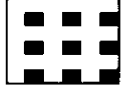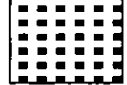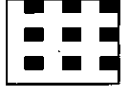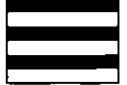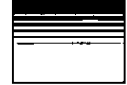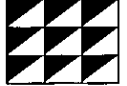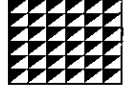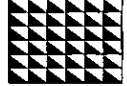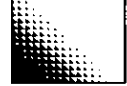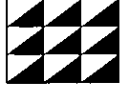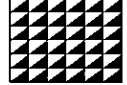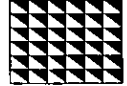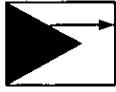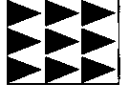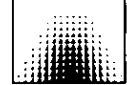
Note: When selecting number 195 the video signal of the on-screen display is supplied from the Rec Out Connector.
(Press number 196 to exit from the 195 function.)

■ Reboot

Turn on the Power while pressing the ⏎ button.
This resets the unit to initial mode.

-47-

■ Basic Wipe Pattern/Number Input Table

Wipe Patterns	Press UNDO Button:	BASIC	Input No.	MULTI 1	MULTI 2	MULTI 3
	0 times		(1)			
	1 time		(2)			
	2 times		(3)			
	3 times		(4)			
	0 times		(5)			
	1 time		(6)			
	2 times		(7)			
	3 times		(8)			
	0 times		(9)			
	1 time		(10)			
	2 times		(11)			
	3 times		(12)			
	0 times		(13)			
	1 time		(14)			
	2 times		(15)			
	3 times		(16)			

-48-

Wipe Patterns	Press UNDO Button:	BASIC	Input No.	MULTI 1	MULTI 2	MULTI 3
	0 times		(21)	(12)		
	1 time		(22)			
	2 times		(23)			
	3 times					
	0 times		(17)			
	1 time		(18)			
	2 times		(19)			
	3 times		(20)			

■ Special Wipe Patterns

Wipe Patterns	Input No.	Wipe Position Movable	Wipe Patterns	Input No.	Wipe Position Movable	Wipe Patterns	Input No.	Wipe Position Movable
	32	○		24	—		26	—
	33	○		25	—		27	—
	34	—		28	—		30	—
	35	—		29	—		31	○
	36	—		37	—			
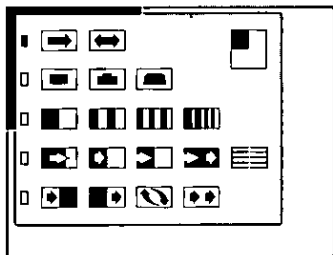
Note: The numerical orders shown above are provided for Number Function.

-49-

■ Number Input Table

This table shows the input numbers entered with the numeral keys and their corresponding functions and setting screens.

● Wipe

For wipe pattern numbers, refer to the wipe pattern tables on pages 48 and 49.

Input Number	Corresponding Function			Corresponding Setting Screen
40	Wipe Direction	: One way	(➡)	
41		: Reverse	(↔)	
42	Edge	: None	(■)	
43		: Border	(■)	
44		: Soft	(■)	Mode Setting Screen
45	Multi Wipe	: Basic	(▮)	
46		: Multi 1	(▯▯)	
47		: Multi 2	(▯▯▯)	
48		: Multi 3	(▯▯▯▯)	
49	Wipe Mode	: Normal	(◧)	
50		: Compression	(◧)	
51		: Slide	(◧)	
52		: Pair	(◧)	
53		: Slide Compression	(☰)	
54	Wipe Operation	: Over	(◧)	
55		: Remove	(◧)	
56		: Flip	(◨)	
57		: Push	(◧)	
0	Video Mix			
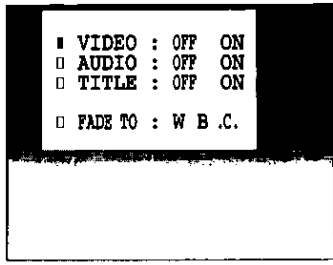
* Numbers and characters in parentheses are shown on the setting screen.

● Special Edge

Input Number	Corresponding Function			Corresponding Setting Screen
61	Edge	: None	(■)	Special Edge Setting Screen
62		: Border	(■)	
63		: Shadow	(■)	
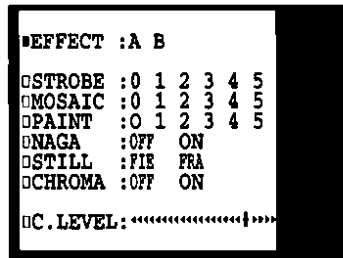
* Numbers and characters in parentheses are shown on the setting screen.

● Fade

Input Number	Corresponding Function			Corresponding Setting Screen
130	Video	: On	(ON)	
131		: Off	(OFF)	Fade Setting Screen
132	Audio	: On	(ON)	
133		: Off	(OFF)	
134	Title	: On	(ON)	
135		: Off	(OFF)	
136	Fade Color	: White	(W)	
137		: Black	(B)	
138		: Setting Color of Back Color	(.C.)	

* Numbers and characters in parentheses are shown on the setting screen.

-50-
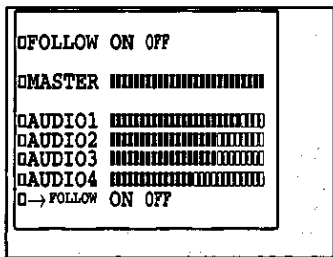
● Effect

Input Number	Corresponding Function			Corresponding Setting Screen
70	A-bus strobo	: Off	(0)	
71		: Step 1	(1)	
72		: Step 2	(2)	
73		: Step 3	(3)	
74		: Step 4	(4)	
75		: Step 5	(5)	Effect Setting Screen
76	A-bus Mosaic	: Off	(0)	
77		: Step 1	(1)	
78		: Step 2	(2)	
79		: Step 3	(3)	
80		: Step 4	(4)	
81		: Step 5	(5)	
82	A-bus Paint	: Off	(0)	
83		: Step 1	(1)	
84		: Step 2	(2)	
85		: Step 3	(3)	
86		: Step 4	(4)	
87	A-bus Nega	: Off	(OFF)	
88		: On	(ON)	
89	A-bus Still	: Field	(FLD)	
90		: Frame	(FRM)	
91	A-bus Color Correct	: Off	(OFF)	
92		: On	(ON)	
93	A-bus Chroma Level			
94	B-bus strobo	: Off	(0)	
95		: Step 1	(1)	
96		: Step 2	(2)	
97		: Step 3	(3)	
98		: Step 4	(4)	
99		: Step 5	(5)	
100	B-bus Mosaic	: Off	(0)	
101		: Step 1	(1)	
102		: Step 2	(2)	
103		: Step 3	(3)	
104		: Step 4	(4)	
105		: Step 5	(5)	
106	B-bus Paint	: Off	(0)	
107		: Step 1	(1)	
108		: Step 2	(2)	
109		: Step 3	(3)	
110		: Step 4	(4)	
111	B-bus Nega	: Off	(OFF)	
112		: On	(ON)	
113	B-bus Still	: Field	(FLD)	
114		: Frame	(FRM)	
115	B-bus Color Correct	: Off	(OFF)	
116		: On	(ON)	
117	B-bus Chroma Level			

Effect Setting Screen

```
■EFFECT :A B

□STROBE :0 1 2 3 4 5
□MOSAIC :0 1 2 3 4 5
□PAINT  :0 1 2 3 4 5
□NAGA   :OFF  ON
□STILL  :FIE  FRA
□CHROMA :OFF  ON

□C.LEVEL: ◄◄◄◄◄◄◄◄◄◄◄◄◄◄│►►►►
```

* Numbers and characters in parentheses are shown on the setting screen.

The shaded numbers ☐ repuire level adjustments to be made with numeral key [4](left) and [6](right).

-51-

● Audio

Input Number	Corresponding Function			Corresponding Setting Screen
120	Audio Follow	: On	(ON)	Audio Setting Screen
121		: Off	(OFF)	
122	Audio Level	: Audio 1	(AUDIO 1)	▢FOLLOW ON OFF
123		: Audio 2	(AUDIO 2)	▢MASTER ▮▮▮▮▮▮▮▮▮▮▮▮▮
124		: Audio 3	(AUDIO 3)	▢AUDIO1 ▮▮▮▮▮▮▮▮▮▮▮▮▮
125		: Audio 4	(AUDIO 4)	▢AUDIO2 ▮▮▮▮▮▮▮▮▮▮▮▮▮ ▢AUDIO3 ▮▮▮▮▮▮▮▮▮▮▮▮▮
126	Audio 4/Audio Follow	: On	(ON)	▢AUDIO4 ▮▮▮▮▮▮▮▮▮▮▮▮▮ ▢→FOLLOW ON OFF
127		: Off	(OFF)	
128	Audio Level	: MASTER		

* Numbers and characters in parentheses are shown on the setting screen.
The shaded numbers ▭ require level adjustments to be made with numeral key [4](left) and [6](right).

● Color

Input Number	Corresponding Function			Corresponding Setting Screen
140	Back Color	: White		
141		: Yellow		
142		: Cyan		
143		: Green		Color Setting Screen
144		: Magenta		
145		: Red		▢BACK.C. ⑴ₐ ▮▮▮ ▮▮▮ ▮▮▮ ▱
146		: Blue		▢BORD.C. X ▮▮▮ ▮▮▮ ▮▮▮ ☐
147		: Black		▢MODE ■ ▽ ◁ ▤ ◢
148		: Setting Color		▢TITLE.C. EXT INT
150	Edge Color	: White		▢└EDG 0 1 2 3 4 5
151		: Yellow		
152		: Cyan		
153		: Green		
154		: Magenta		
155		: Red		
156		: Blue		
157		: Black		
158		: Setting Color		
160	Mode	: Normal	(■)	
161		: Pattern 1	(▽)	
162		: Pattern 2	(◁)	
163		: Pattern 3	(▤)	
164		: Pattern 4	(◢)	
165	Title Color	: INT	(INT)	
166		: EXT	(EXT)	
167	Edge	: 0	(0)	
168		: 1	(1)	
169		: 2	(2)	
170		: 3	(3)	
171		: 4	(4)	
172		: 5	(5)	
174	Setting of Back Color		(☐)	
175	Setting of Edge Color		(☐)	

*Numbers and characters in parentheses are shown on the setting screen.

-52-

■ RS-422 CONTROL

If the unit is connected to an editing machine, enter input No. 422. Then the OSD screen shown at left appears.

REMOTE: If OFF is selected, the mixer will not respond to commands from the editing machine.

PARITY: Set PARITY according to the editing machine connected.

TYPE: Set TYPE according to the editing machine connected.
(1) Panasonic (AG-A850), GVG-100 Format;
(2) Panasonic (AG-A800); (3) SONY (EVE-910);
(4) Undefined; (5) Undefined

```
REMOTE : ON    OFF
PARITY : ODD   EVEN
TYPE   :  1 2 3 4 5
S.MATT : ON    OFF
H.FADE : ON    OFF
```

Special Mode Setting

S. MATT:
In this mode only, a crosspoint change command from the editing machine will not affect the MATTE (BACK COL) setting. This setting can be released by pressing a key other than the MATTE key.

H. FADE:
In this mode, the fade color settings made on the mixer will be valid. (Fade color setting on the editing machine is disabled.)

The following restrictions apply to the editing machine in controlling the mixer by serial communication.
1. If black is selected at the crosspoint, the back color selected at the mixer will be forcibly set to black. (If a different color is selected at the crosspoint, the original color setting at the mixer will return.)
2. In case of selecting some special wipe patterns, transition time settings may be subject to restriction.

Pattern	No.	MIN value	Frame error
▓	30	82	8
◢ ◣	26, 27	50	8
↺ ↻	28, 29	64	1
▨	35	44	8

MIN: Even if transition time is set lower, it will be set at the specified value.

Frame error: A transition may end sooner than the set transition time by up to the specified value. Frame accuracy of ±0 is not guaranteed for other transitions.

RS-422 TABLE OF WIPE PATTERN NUMBERS

Refer to the following table when entering wipe numbers from the editing machine.

WIPE NO.	BASIC PATTERNS NOR.		MULTI MODE MULTI 1 NOR.		MULTI MODE MULTI 1 PAIR		MULTI MODE MULTI 2 NOR.		MULTI MODE MULTI 2 PAIR		MULTI MODE BLIND NOR.		SLIDE				COMP				SL+COMP		PAIR	
	NOR.	REV.	NOR.	REV.	NOR.	REV.	NOR.	REV.	NOR.	REV.	NOR.	REV.	NOR.	REV.	FLIP	PUSH	NOR.	REV.	FLIP	PUSH	NOR.	REV.	NOR.	REV.
1	001	172	094	195			118				141		038	218	046		058	226	069					
2	002	173	095	196			119				142		039	219	047		059	227	070					
3	003	174	096	197			120				143		040	220	048		060	228	071					
4	004	175	097	198			121				144		041	221	049		061	229	072					
5	005	176	098	199	164	245	122		168	249	145		042	222	050	054	062	230	073	080	084	237	088	241
6	006	177	100	200	165	246	123		169	250	146		043	223	051	055	063	231	074	081	085	238	089	242
7	007	178	101	201			124				147		044	224	052	056	064	232	075	082	086	239		
8	008	179	102	202			125				148		045	225	053	057	065	233	076	083	087	240		
9	009	180	103	203			126				149													
10	010	181	104	204			127				150													
11	011	182	105	205			128				151													
12	012	183	106	206			129				152												090	243
13	013	184	107	207	166	247	130		170	251	153												091	244
14	014	185	108	208	167	248	131		171	252	154													
15	015	186	109	209			132				155													
16	016	187	110	210			133				156													
17	017	188	111	211			134				157						066	234	077					
18	018	189	112	212			135				158													
19	019	190	113	213			136				159													
20	020	191	114	214			137				160													
21	021	192	115	215			138				161						067	235	078					
22	022	193	116	216			139				162						068	236	079					
23	023	194	117	217			140				163													

24	▓	024	27	◩	027	30	⊠	030	33		033	36	A	036	MANUAL	099
25	◪	025	28	↻	028	31	⊞	031	34		034	37	▲	037	CHROMA KEY	092
26	◩	026	29	◧	029	32	·	032	35		035				LUMI.KEY	093

-53-

SERIAL Connector Information

① F.G. (FRAME GROUND)
② TA (TRANSMIT A)
③ RB (RECEIVE B)
④ GND (RECEIVE COMMON)
⑤ OPEN
⑥ GND (TRANSMIT COMMON)
⑦ TB (TRANSMIT B)
⑧ RA (RECEIVE A)
⑩ F.G. (FRAME GROUND)

1 TB
2 RA
3 RB
4 OPEN
5 TA
6 GND
7 GND
8 F.G.
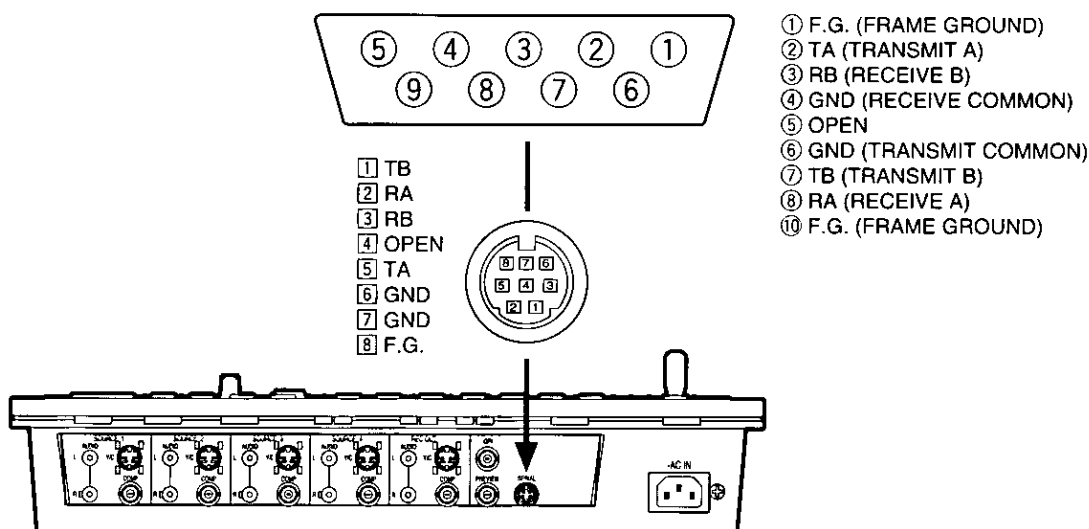
GPI Connector Information

For the external equipment connected to this unit to execute the Auto Take or Event Memory function, its .timing should coincide with the Falling Edge of the GPI signal.

GPI Input Signal

Auto Take/Event Memory is executed
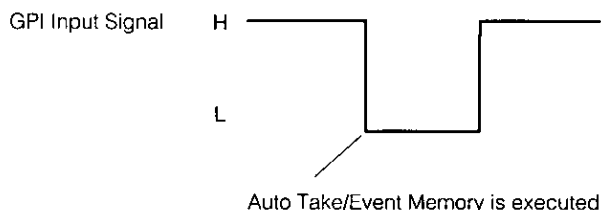
Important Notes on Video Input Signal

1. If the input video signal does not meet the NTSC Color standard, it can cause a disturbance in synchronization.
2. If the signal-to-noise ratio (S/N) of the input signal is too low, it may result in a low quality picture.
3. A jittery source input video signal from a VTR, for example, can cause a disturbance in synchronization or color.
4. Tracking noise on the TV monitor can cause a disturbance in synchronization. In this case, adjust the tracking control of the input VTR.

5. Flag waving (top of picture curls) may appears due to the AFC time constant when input signals are supplied from a certain type of VTR.
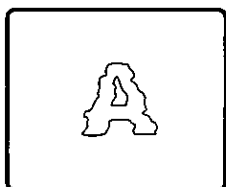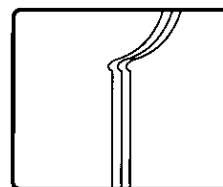
6. Any video signal containing VITC is available at the Recording Output.

Glossary

Luminance :   The black and white component of a video signal
Chrominance (Chroma) :   The color component of a video signal
Composite Video Signal :   Standard video signal
S-video Signal :   The signal at the S-VHS connector

-54-

SPECIFICATIONS

Source Input :	x4 (SOURCE 1/4)
Video Input :	1.0 V[p-p]/75Ω NTSC composite signal, BNC connector
Y/C input:	Y signal : 1.0 V[p-p]/75Ω, C signal : 0.286 V[p-p]/75Ω Mini Din 4-pin connector
Audio Input :	–6 dBs 20 kΩ pin jack (L/R)
Character Input :	x1 (TITLE) ; 10-pin connector for optional Character Generator WJ-KB30/WJ-KB50
Recording Output :	x1 (REC OUT)
Video Output :	1.0 V[p-p]/75Ω NTSC composite signal, BNC connector
Y/C Output :	Y signal : 1.0 V[p-p]/75Ω, C signal : 0.286 V[p-p]/75Ω Mini Din 4-pin connector
Audio Output :	–6 dBV/1 kΩ, pin jacks (L/R)
Preview Output	
Video Output :	1.0 V[p-p]/75Ω NTSC composite signal, BNC connector
Back Color :	White, Yellow, Cyan, Green, Magenta, Red, Blue,Black and Useable
Wipe Patterns :	298 patterns
Video Gain :	Unity
S/N (typical) :	Video : 50 dB (composite), 50 dB (Y/C)
	Audio : 60 dB
Power Source :	120V AC, 60 Hz
Power Consumption :	Approx. 15W
Ambient Operating Temperature :	0°C - 40°C (32°F - 104°F)
Ambient Operating Humidity :	Less than 90%
Dimensions	420 (W) x 300 (H) x 88 (D) mm
Weight	2.5 kg

Weight and dimensions indicated above are approximate.
Specifications are subject to change without notice.

Standard Accessory

Power Cord .... 1 pc.
RS-422 Connecting Cable .... 1 pc.

Optional Accessory

Character Generator WJ-KB30/WJ-KB50

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