

# *Digital Audio Mixer*

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## **Operating Instructions**

Before operating the unit, please read this manual thoroughly and retain it for future reference.

This instruction manual supports the DMX-R100 software Version 2.0. If you update the DMX-R100 from Version 1.0x/1.1x to Version 2.0, see "Updating the DMX-R100 Version" in Chapter 4.

### **Note**

A title saved by the Version 1.0x/1.1x console is not compatible with a title saved by the Version 2.0 console. If you try to load a title saved using Version 1.0x/1.1x from the flash memory of the Version 2.0 console, a title error occurs and the title saved in Version 1.0x/1.1x is automatically lost.

## **DMX-R100**

## Owner's Record

The model and serial numbers are located on the rear. Record the serial numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding the product.

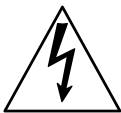
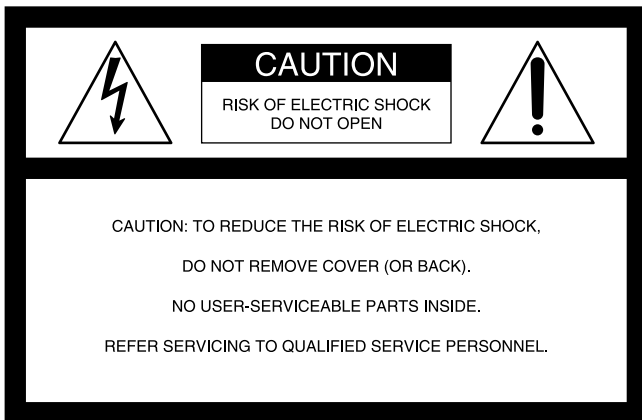
Model No. DMX-R100 Serial No. \_\_\_\_\_

## WARNING

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

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

THIS APPARATUS MUST BE EARTHED.



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



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

### For the customers in the U.S.A.

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

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

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

### For the customers in Europe

This product with the CE marking complies with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European standards:

- EN60065: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment(s):

E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).

### Pour les clients européens

Ce produit portant la marque CE est conforme à la fois à la Directive sur la compatibilité électromagnétique (EMC) (89/336/CEE) et à la Directive sur les basses tensions (73/23/CEE) émises par la Commission de la Communauté européenne.

La conformité à ces directives implique la conformité aux normes européennes suivantes:

- EN60065: Sécurité des produits
- EN55103-1: Interférences électromagnétiques (émission)
- EN55103-2: Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants:

E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé ex. studio de télévision).

### Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt sowohl die EMV-Direktive (89/336/EEC) als auch die Direktive Niederspannung (73/23/EEC) der EG-Kommission. Die Erfüllung dieser Direktiven bedeutet Konformität für die folgenden Europäischen Normen:

- EN60065: Produktsicherheit
- EN55103-1: Elektromagnetische Interferenz (Emission)
- EN55103-2: Elektromagnetische Empfindlichkeit (Immunität)

Dieses Produkt ist für den Einsatz unter folgenden elektromagnetischen Bedingungen ausgelegt:

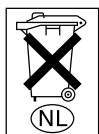
E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtbereich im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio)

### **Voor der Klanten In Nederland**

Dit apparaat bevat voor memory back-up een batterij die niet vervangen hoeft te worden tijdens de levensduur van het apparaat.

Raadpleeg uw leverancier indien de batterij moet worden vervangen na langdurig of intensief gebruik. Om kortsluiting en elektrocutie te voorkomen, mag de batterij alleen worden verwijderd en vervangen door vakbekwaam servicepersoneel.

Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).



### **Für Kunden in Deutschland**

Wenn Sie das Gerät entsorgen wollen, wenden Sie sich bitte an das nächste Sony-Kundendienstzentrum. Der eingebaute Akku muß als chemischer Sondermüll entsorgt werden.



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# Overview

The DMX-R100 is a compact digital audio mixer for a post production house that creates digital media or digital broadcasting.

## High quality audio signal processing

The unit allows you to select the sampling frequency to 44.1 kHz, 48 kHz, 88.2 kHz or 96 kHz.

When you select either 88.2 kHz or 96 kHz, the frequency response range expands to 40 kHz.

The analog signal is converted to a 24-bit digital signal in the mixer. The unit enables AES/EBU format input/output with at least 24-bit precision. The high precision floating point used for internal calculation results in high quality signal processing.

*When either 88.2 kHz or 96 kHz is selected as a sampling frequency, the number of channels and optional boards is limited.*

*For details, see page 86.*

## Easy operation using the high resolution color LCD and touch panels

The parameters of each channel are displayed in color and as patterns on one screen. This improves the operation for equalization or dynamics setting and allows you to perform operations precisely and quickly.

## Snapshot/Automation functions for professional use

### • Snapshot

The unit can memorize up to 99 control settings (snapshots) per title. Settings such as of faders and controls on the channel strips, settings of the equalizer or dynamics for source signals, signal path, etc., as snapshot data. You can easily recall the snapshot data, allowing you to preset programs instantaneously.

### • Automation

You can select either SMPTE or MTC (MIDI timecode) as the timecode for reference.

The unit can memorize and recall parameters such as faders, pan controls, equalizer, dynamics and AUX signal setting. Also the fader is touch sensitive to improve operation. A scene stored as a snapshot data can be linked with a cue point with a defined timecode value. These functions provide you with the same function as those of a large console-type mixer.

### • You can store snapshot automation data and dynamic automation data on a 3.5-inch floppy disk.

## The channel strips

The LEDs of the pan controls and faders on the channel strip allow you to see the analog data at a glance. You can define the desired parameters to pan pots and faders, directly confirming analog data on the channel strips.

## Flexible built-in matrix switchers

- The built-in input matrix switcher allows you to assign standard analog input, digital input or input from option boards to any desired channel. You can change the switcher operation easily using the touch panel on the screen.
- The built-in output matrix switcher allows you to assign the outputs of PGM buses, AUX buses and MTR buses to the output of the desired optional boards. Also, the unit can output one signal to different output connectors at the same time.

## Large number of channels

- The unit is equipped with 24 analog channels which can input a wide variety of analog sources. Also, the unit is equipped with XLR connectors and standard TRS jacks.
- In addition to 48 fully featured input channels, the unit has 8 AUX returns. This allows you to mix up to 56 channels at the same time. Also, the PGM bus, AUX bus and MTR bus are equipped with equalizer and dynamics control.
- The unit has four optional slots. The optional board handles 8 inputs and/or outputs. Thus, maximum 32 channels of inputs/outputs are available from the four slots.

## Surround mode

- 5.1 surround mode can be set using the MTR bus.
- The unit has 6 channels for surround monitors, so it is not necessary to use other outputs for monitoring.
- You can control the surround pan with touch panel operation. Stored sound images can be recalled using dynamic automation.

## Connection to video equipment

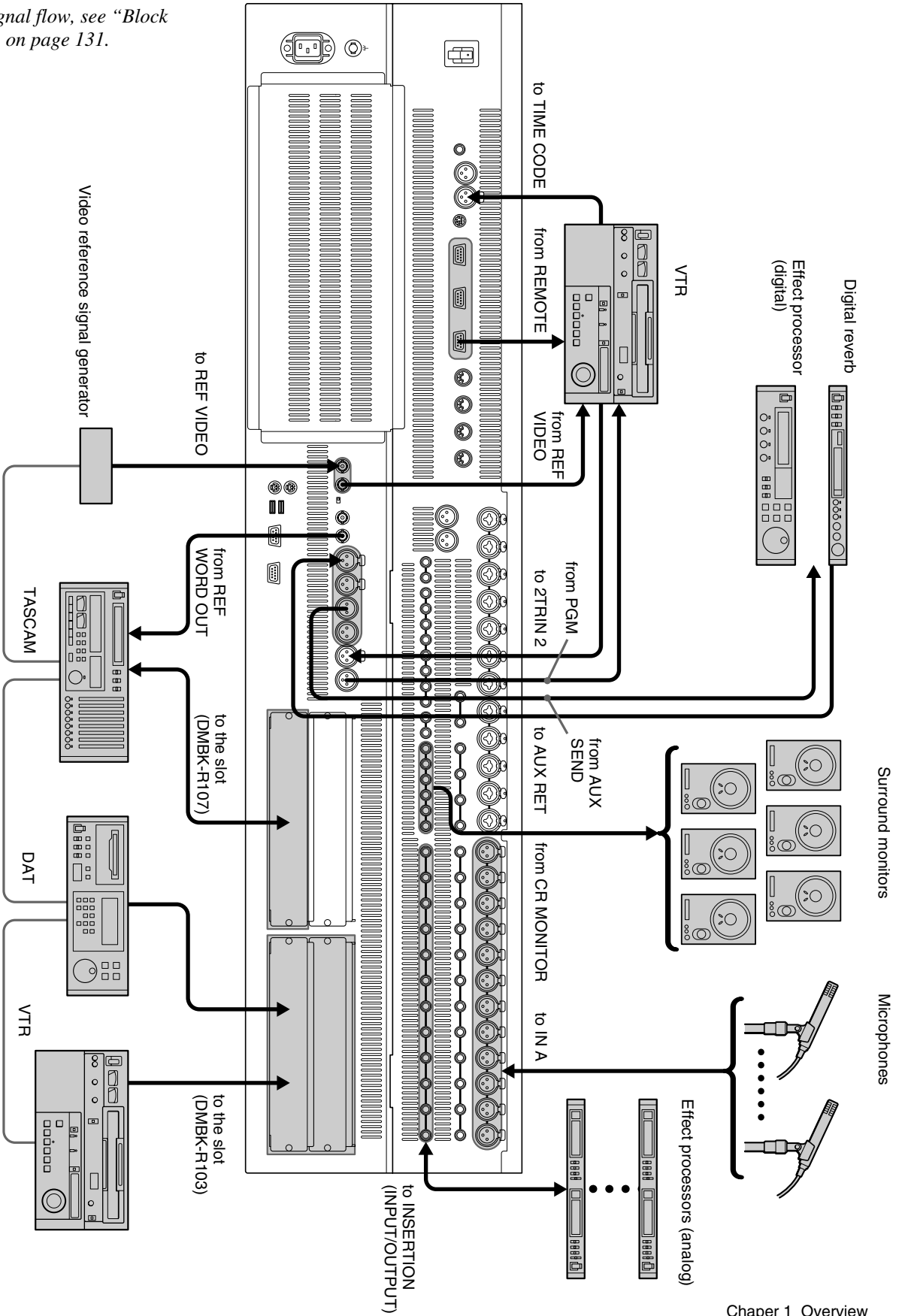
- The unit can synchronize with video equipment such as a digital VTR, by supplying reference video signals. Since the unit is equipped with video input connectors, it is not necessary to use an external connector.
- The unit can control external devices conforming to the Sony 9-pin remote serial interface, by connecting external devices such as a VTR to the remote connector on the rear panel.



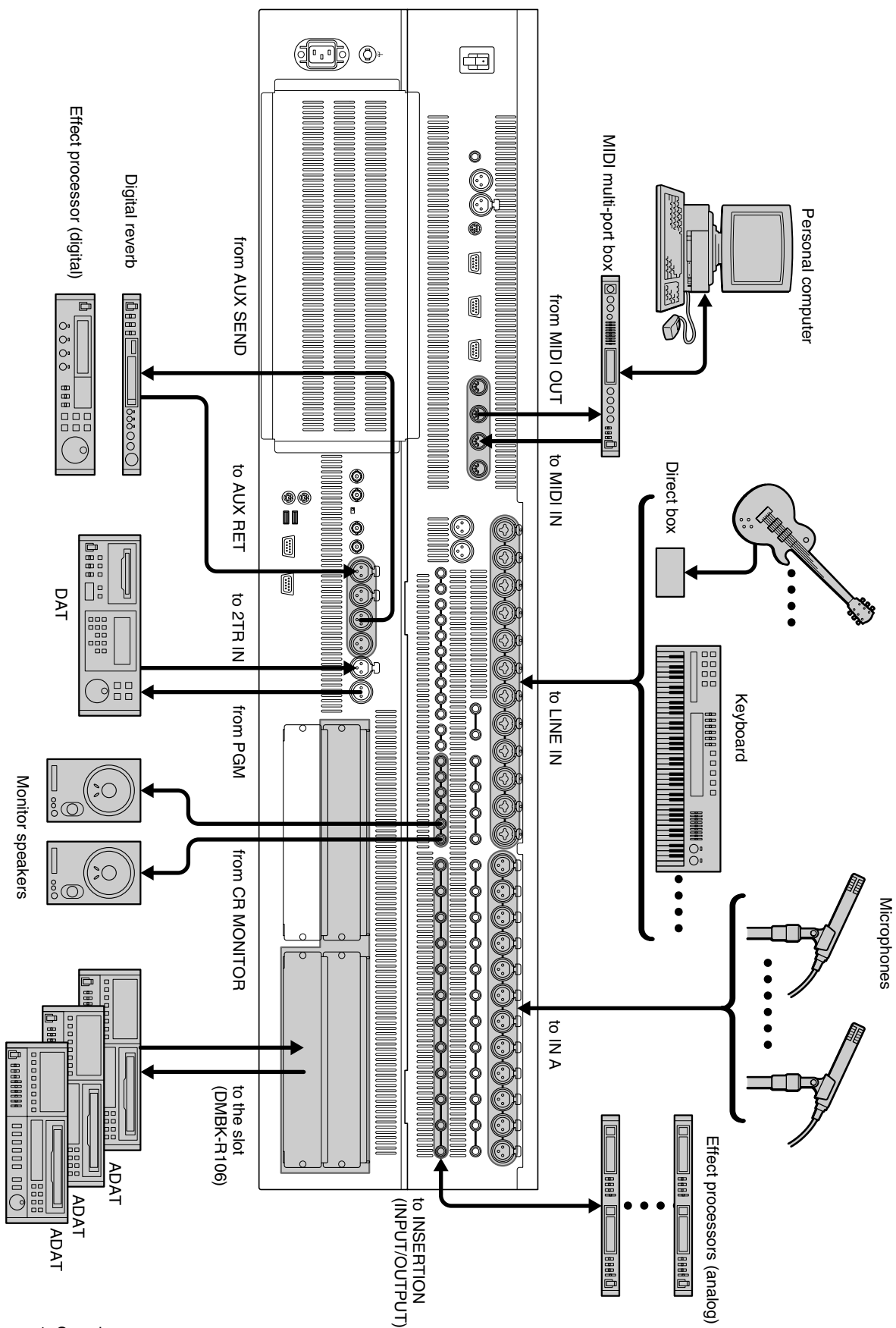
# Connection Examples

## Video Post Production

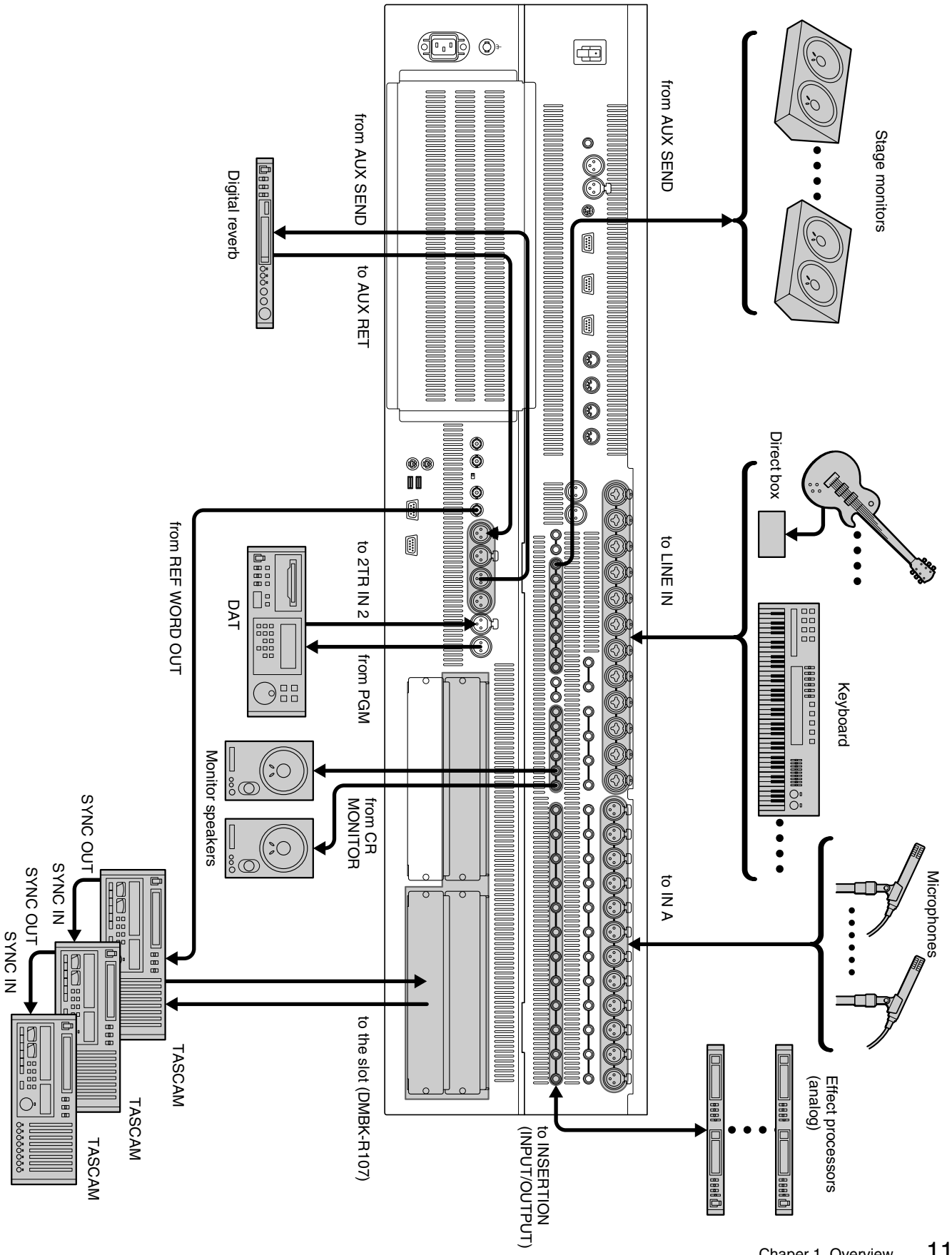
For the signal flow, see “Block Diagram” on page 131.



## Music Production



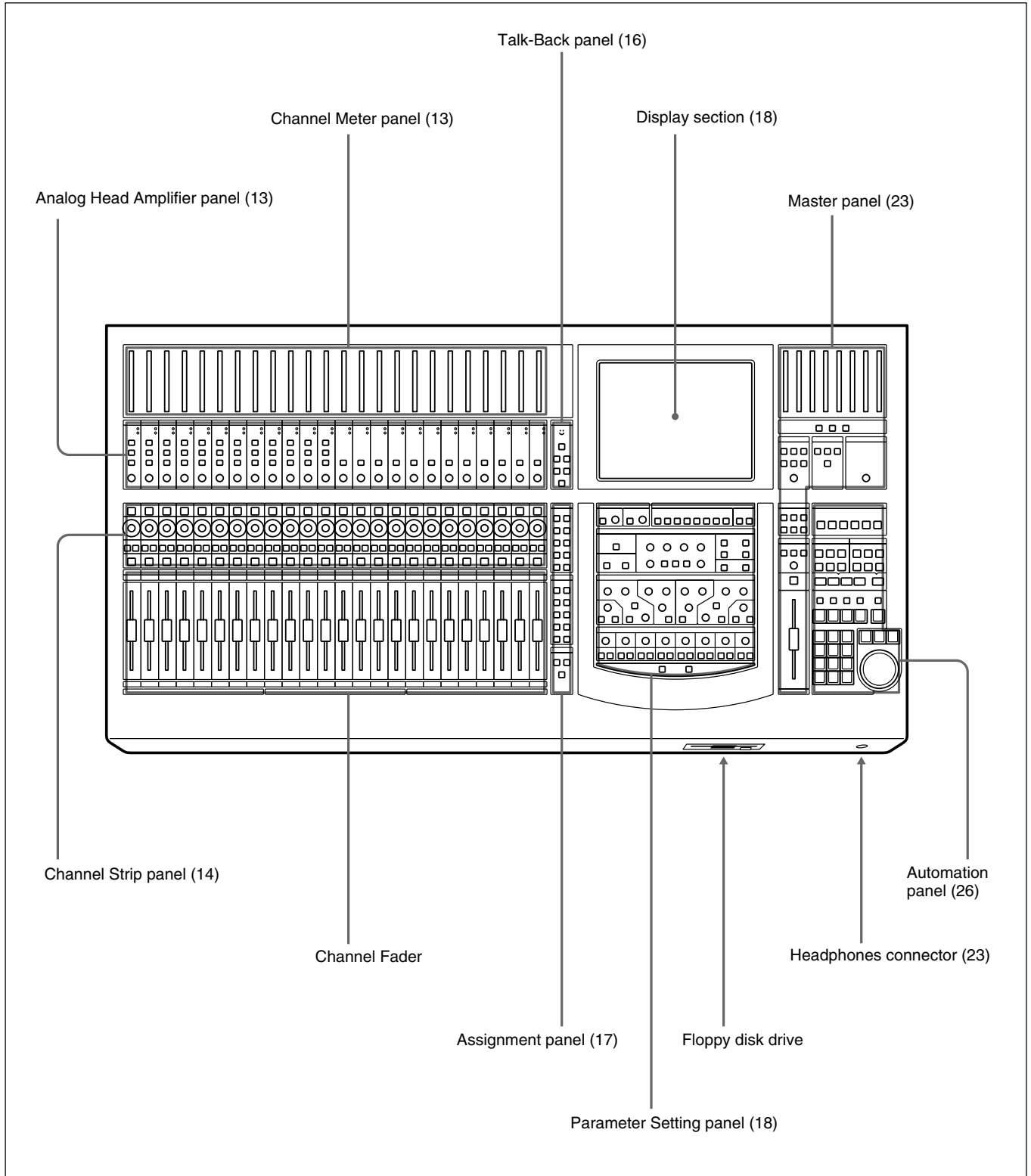
# Live Recording



# Locations and Functions of Parts and Controls

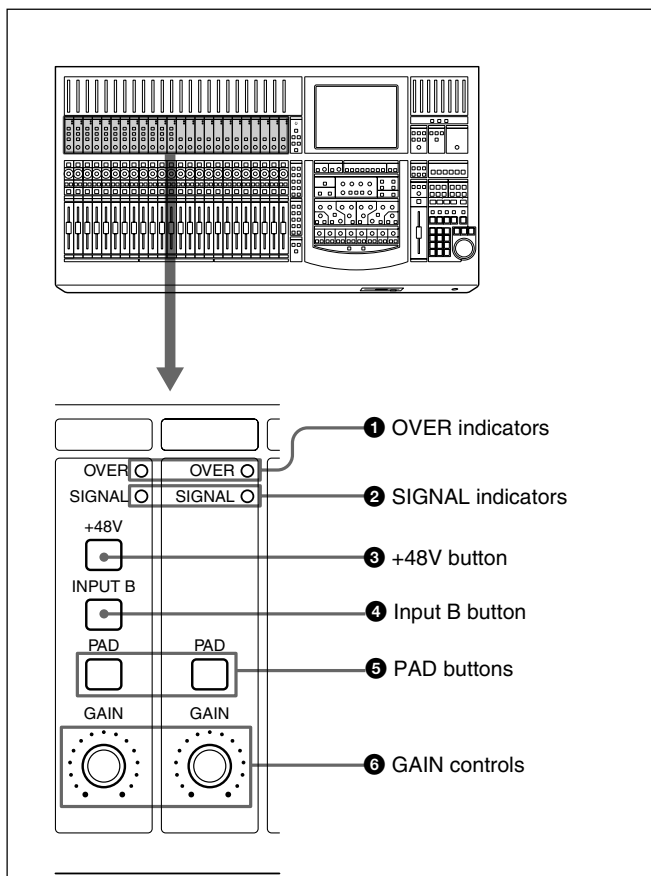
## Composition of the Front Panel

For details, refer to pages indicated in parentheses.



## Analog Head Amplifier Panel

This panel allows you to select the input circuit of the analog input signal and their level adjustment. Buttons and controls on this panel are not automatable.



**1 OVER (analog head amplifier peak) indicators**  
Lights when the input level reaches the level where the analog head amplifier starts to clip. The clip level is -6 dBFS.

**2 SIGNAL (analog head amplifier signal) indicators**

Lights when the signal is input to the analog head amplifier. The level at which the SIGNAL indicator lights is about -40 dBFS.

### Note

The OVER indicator and SIGNAL indicator are active only when the input signal is routed to any channel using the input router.

**3 +48V button**

Press this button to send + 48 V power to the microphone connected to the IN A connector (XLR connector) on the rear panel.

**4 Input B (input selector) button**

Selects the input signal connected to the analog head amplifier. When pressed, the IN-B connector (1/4" TRS jack) on the rear panel becomes active. When this button goes off, the IN A connector (XLR connector) becomes active.

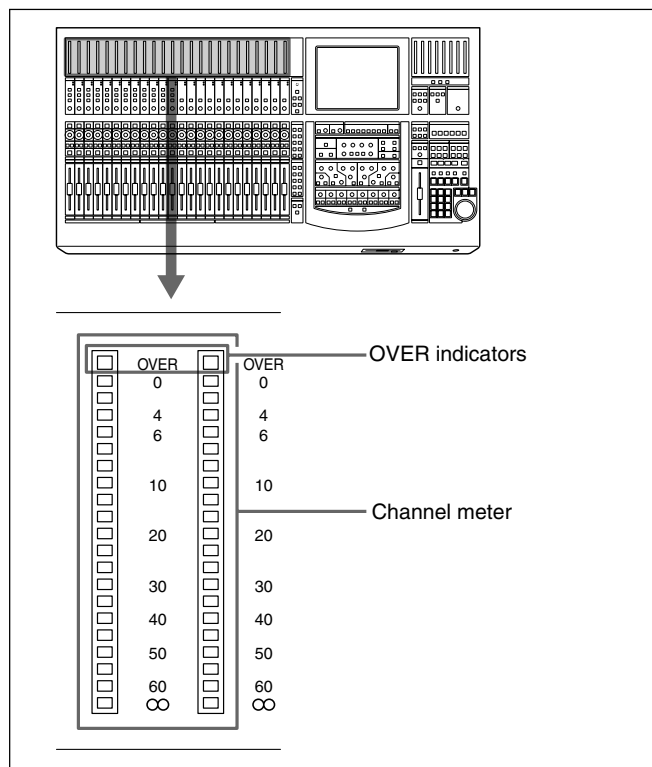
**5 PAD buttons**

When pressed, an attenuation pad of 30 dB is inserted into the input circuit of the analog head amplifier.

**6 GAIN controls**

Adjusts the gain of the input circuit of the analog head amplifier.

## Channel Meter Panel

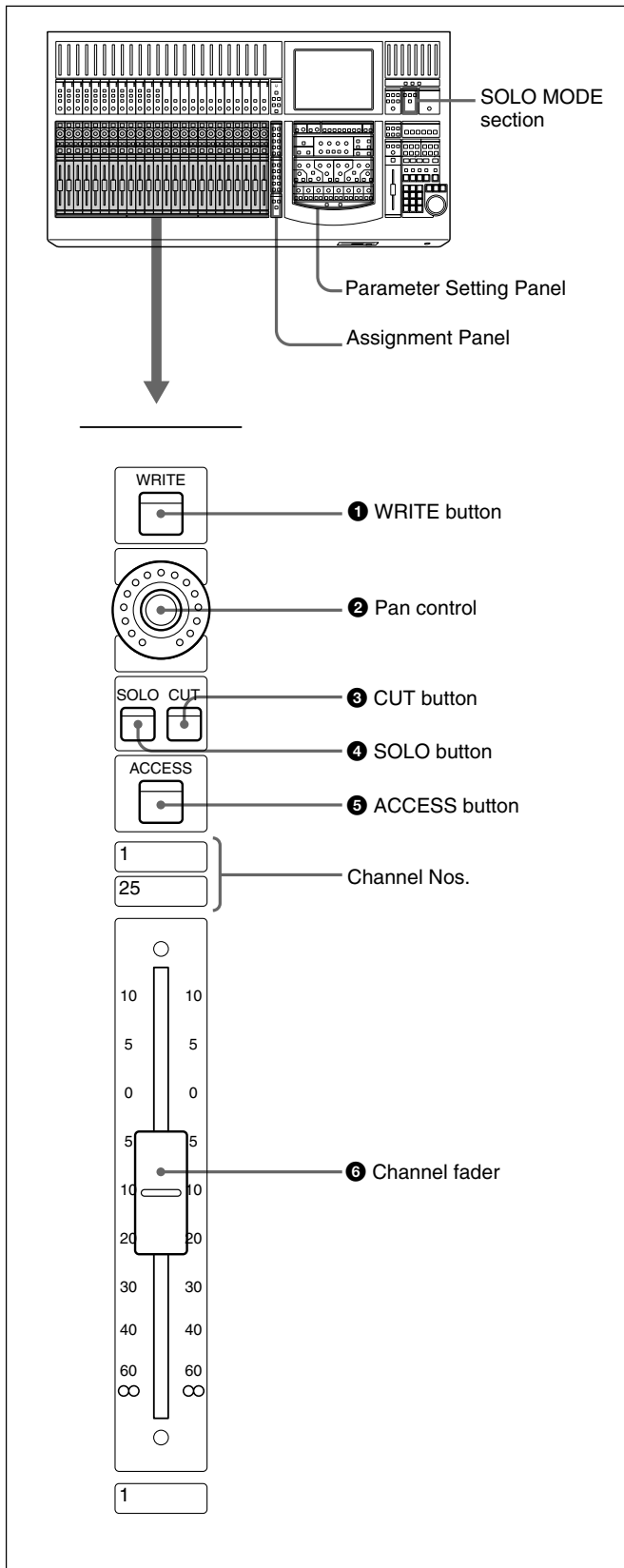


The channel meters indicate the input signal level of the channel strips.

On the MISC SETUP window, you can select input, pre-fader signal or post-fader signal to be metered. When the input signal is the analog signal, these meters indicate the level of the signal converted after the A/D converter.

The OVER indicator lights when the level of the input signal reaches the clip level.

## Channel Strip Panel



### Note

To select the desired channel, press the ACCESS button corresponding to the desired channel so that the ACCESS button lights.

The PAGES button on the Assignment panel allows you to switch the channel strip to channels 1 to 24 or channels 25 to 48.

### 1 WRITE button

This button is used to control and indicate the automation status of the channel.

**Not lit:** All of the processing controls for that channel are in safe mode where they cannot be written to.

**Blinking:** There are one of more processing controls ready status. Press the blinking WRITE button to drop controls into WRITE mode.

**Lit:** There are items that are in write mode. By pressing the lit WRITE button, the button blinks and items that are in write mode in that channel turn in ready status. Those items are turned to safe mode depending on the conditions assigned in AUTO RETURN section in the AUTOMATION window.

*For detailed information on the AUTOMATION window, see page 77.*

When the READY SETUP button on the top menu bar on the window is lit yellow, pressing the WRITE button in the channel strip results in all items subject to the automation operation in that channel turning to ready mode or safe mode depending on the lighting status of the WRITE button.

### 2 Pan control

This control is used for various purposes. The function is determined by the FADERS section and the PANS section on the Assignment panel.

*For detailed information on the Assignment panel, see page 17.*

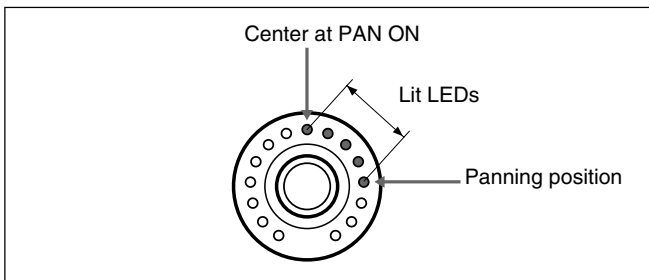
When all buttons in the PANS section are off, this control operates as the pan control of the signal path selected in the FADERS section. For example, when the MTR button is lit in the FADERS section and all buttons in the PANS section are off, this control operates as the pan control of the MTR send. When one of buttons in the PANS section is lit, this control operates as the control for the volume level of the signal path corresponding to the lit button.

For example, the AUX 1 button is lit in the PANS section, this control operates as control for the send volume of AUX 1.

*For detailed information on the Assignment panel, see page 17.*

### Indication of the PAN control

When the PAN controls are operating, the operation status is displayed on the control using the LEDs. When PAN is ON: LEDs from the center LED to the one corresponding to the panning position are lit.



When PAN is OFF: Only the LED corresponding to the panning position is lit. When the panning position corresponds to the center LED, all LEDs are off. When functions other than panning (AUX, TRIM and MTR) are selected, the LED corresponding to the volume level is lit.

Also, if you set the Pan control to ready mode beforehand, the result of the pan control operation can be saved as automation data.

*For detailed information on how to set the pan control to ready status, see page 40.*

*For detailed information on how to save it as automation data, see page 108.*

### Notes

- When the signal path which does not have the pan function is selected in the FADERS section and buttons in the PANS section are not lit, the pan control becomes deactivated and you cannot operate this control.
  - When the AUX set in MONO mode is selected in the FADERS section
  - The TRIM button is lit in the fader section
- Since trimming is not subject to an automation operation, even if TRIM is selected in either PANS section or FADERS section, the operation cannot be stored as automation data.

### 3 CUT button

This button is used to cut various signals depending on the signal path selected in the FADERS section in the Assignment panel. When the CUT button is lit, the signal is cut to the signal path.

If you set the CUT button to ready mode beforehand, the button's operation is stored as automation data.

*For detailed information on how to set the CUT button to ready status, see page 40.*

*For detailed information on how to save it as automation data, see page 108.*

### 4 SOLO button

Press this button so that it lights, to listen to the signal of the corresponding channel in PFL, AFL or SOLO mode.

The SOLO mode is controlled from the master panel. *For details of the SOLO MODE section, see page 24.*

### 5 ACCESS button

Press this button so that it lights, to assign the corresponding channel to the Assignment panel and Parameter setting panel.

This button is not used for automation operation.

When you press the ACCESS button of the accessed channel, the window automatically switches to show the channel settings.

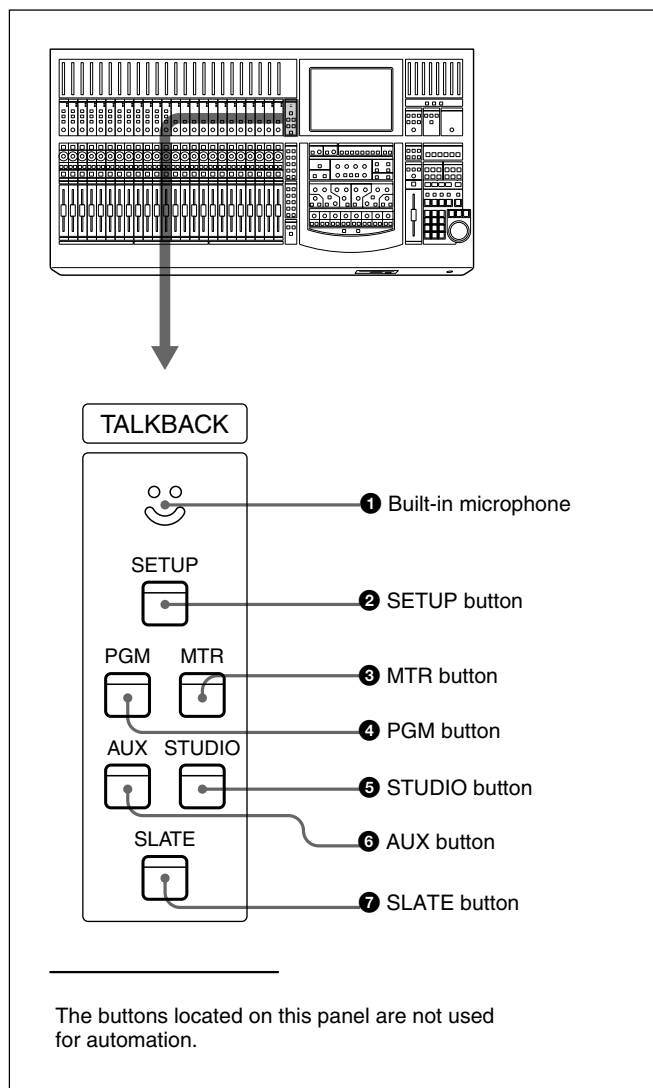
You can copy the settings of a channel to another channel by operating this button. Pressing the ACCESS button for more than 1 second opens the COPY/LINK window.

*For information about the channel copy operation, see page 60.*

### 6 Channel fader

This control is used for various purposes: trim, AUX 1 to AUX 8 bus, the MTR bus and program bus. The function is determined by the FADERS section on the Assignment panel.

## Talk-Back Panel



### 1 Built-in microphone

Built-in microphone for talkback.

### 2 SETUP button

Press this button so that it lights, to display the OSC/TALK BACK screen on the display.

*For detailed information on the OSC/TALKBACK window, see page 70.*

### 3 MTR button

Press this button so that it lights, to route the talkback signal memorized on the OSC/TALK BACK screen to the MTR bus.

### 4 PGM button

Press this button so that it lights, to route the talkback signal memorized on the OSC/TALK BACK window to the PGM output.

### 5 STUDIO button

Press this button so that it lights, to route the talkback signal to the studio monitor output.

Press the button again so that it turns off, to cancel the talkback signal routed to the studio monitor output.

### 6 AUX button

Press this button so that it lights, to route the talkback signal to the AUX bus memorized on the OSC/TALK BACK window.

### 7 SLATE button

Press this button so that it lights, to route the talkback signal to all PGM, MTR, AUX outputs.

Press the button again so that it turns off, to cancel the talkback signal routing to all PGM, MTR, AUX outputs.

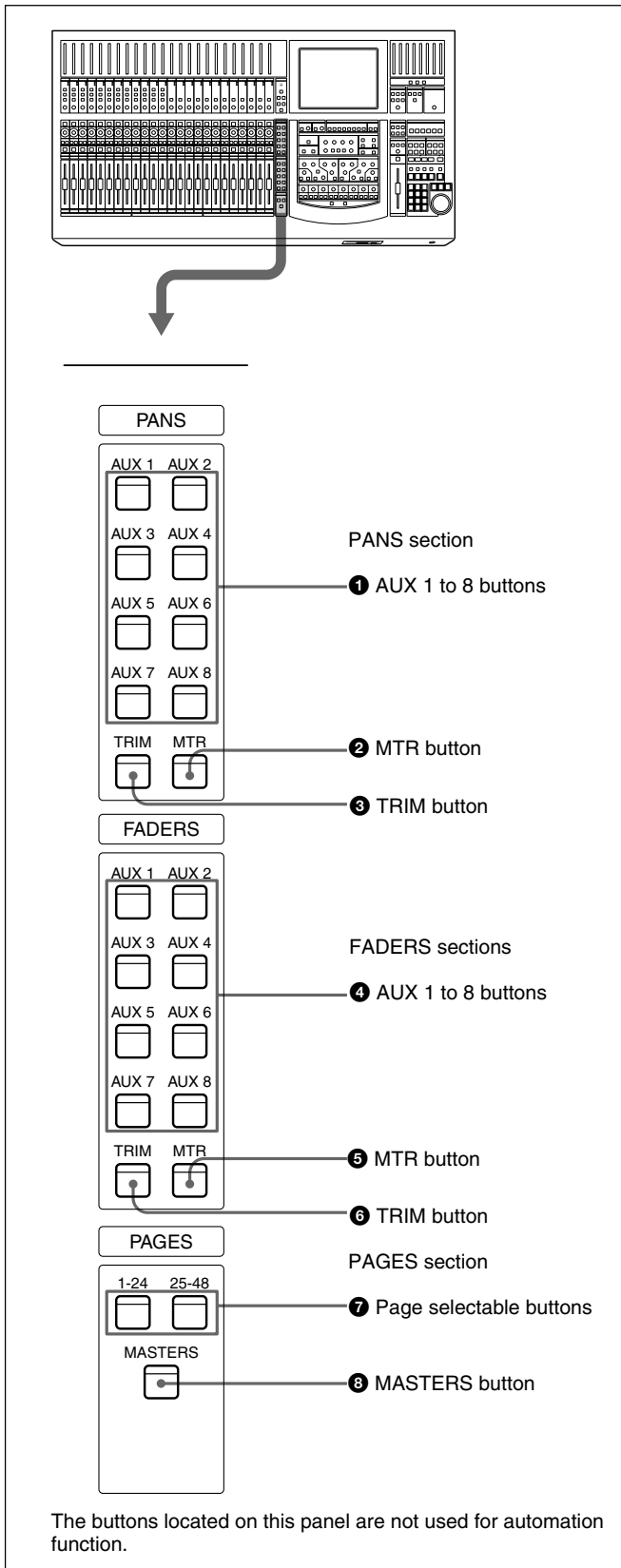
### Note

Be sure to set the MEMORY button to memorize the talkback outputs selected on the OSC/TALKBACK window before using the MTR button 3, PGM button 4, STUDIO button 5 and AUX button 6.

*For detailed information on the OSC/TALKBACK window, see page 70.*



## Assignment Panel



### PANS section

The PANS section allows you to select the functions of the pan controls on the Channel strip panel. When all buttons in this section are turned off, the Pan control operates as the pan control of the signal path selected in the FADERS section.

#### Note

When TRIM is assigned or the AUX set in monaural mode is assigned in the FADERS section, the PAN control is deactivated.

#### 1 AUX 1 to 8 buttons

Press the button corresponding to the desired auxiliary send bus so that it lights. When it is lit, the PAN controls on the Channel strip panel function as the send-volume controls for AUX 1 to AUX 8. When the AUX bus set in stereo mode is selected, both odd/even number AUX buttons turn on simultaneously.

#### 2 MTR button

Press this button so that it lights. The Pan controls on the channel strip panel function as the send-volume control for the MTR bus.

#### 3 TRIM button

Press this button so that it lights. The Pan controls on the channel strip panel function as the digital input volume controls.

### FADERS section

The FADERS section allows you to select the functions of the Pan control, the CUT button, the SOLO button and the fader on the Channel strip panel.

#### 4 AUX 1 to 8 buttons

Press the button corresponding to the desired auxiliary send bus so that it lights. When it is lit, the channel faders on the Channel strip panel function as the send-volume controls for AUX 1 to AUX 8. When the AUX bus set in stereo mode is selected, both odd/even number AUX buttons turn on simultaneously.

# Locations and Functions of Parts and Controls

## 5 MTR button

Press this button so that it lights. The channel faders on the Channel strip panel function as the send-volume controls for the MTR bus.

## 6 TRIM button

Press this button so that it lights. The channel faders on the Channel strip panel function as the trimming volume controls.

## PAGES section

The PAGES section allows you to select the pages of 24 channels assigned to the Channel strip panel. Although the inactive pages are hidden the correct display positions are recalled when paged.

## 7 Page selectable buttons

Press button (1 - 24) so that it lights, to load settings (for the meter, WRITE button, pan control, SOLO button, CUT button, ACCESS button and the channel fader) for channels (1 to 24).

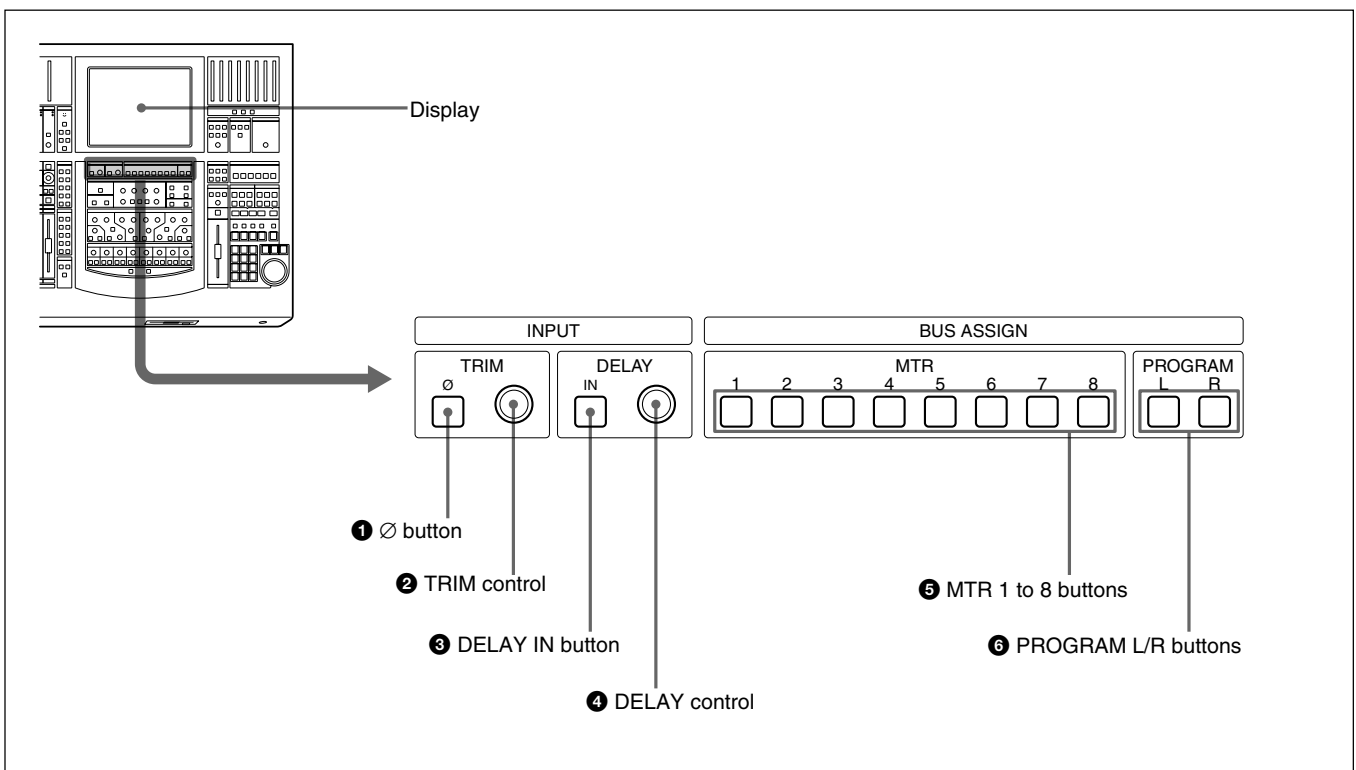
Press a button (25 - 48) so that it lights, to load settings for channels (25 to 48).

## 8 MASTERS button

Press this button so that it lights. When this button is lit, controls on the channel strip panel (meter, WRITE button, PAN control, SOLO button, CUT button, ACCESS button and the channel fader) are assigned to 24 channel strips for MTR buses (channel 1 to channel 8), AUX SEND buses (channel 1 to channel 8) and AUX RETURN buses (channel 1 to channel 8).

## Parameter Setting Panel

This panel allows you to set the parameters of channels. The ACCESS button is used to assign channels.



## INPUT Section and BUS ASSIGN section

### INPUT section

This section allows you to adjust the digital input signal. When the signal input is analog, you can adjust the converted digital signal.

Buttons and controls in the INPUT section are only available for snapshot automation and not dynamic automation.

#### ❶ Ø button

Inverts the phase of the input signal.

#### ❷ TRIM control

Trim level control for -15 dB to +15 dB adjustment.

#### ❸ DELAY IN button

Press this button to enable the delay function.

#### ❹ DELAY control

Adjusts the delay between 0 and 999 milli seconds (at the sampling frequency of 48 kHz).

### BUS ASSIGN section

Buttons in the BUS ASSIGN section are used for the snapshot automation function and dynamic automation function.

#### ❺ MTR 1 to 8 buttons

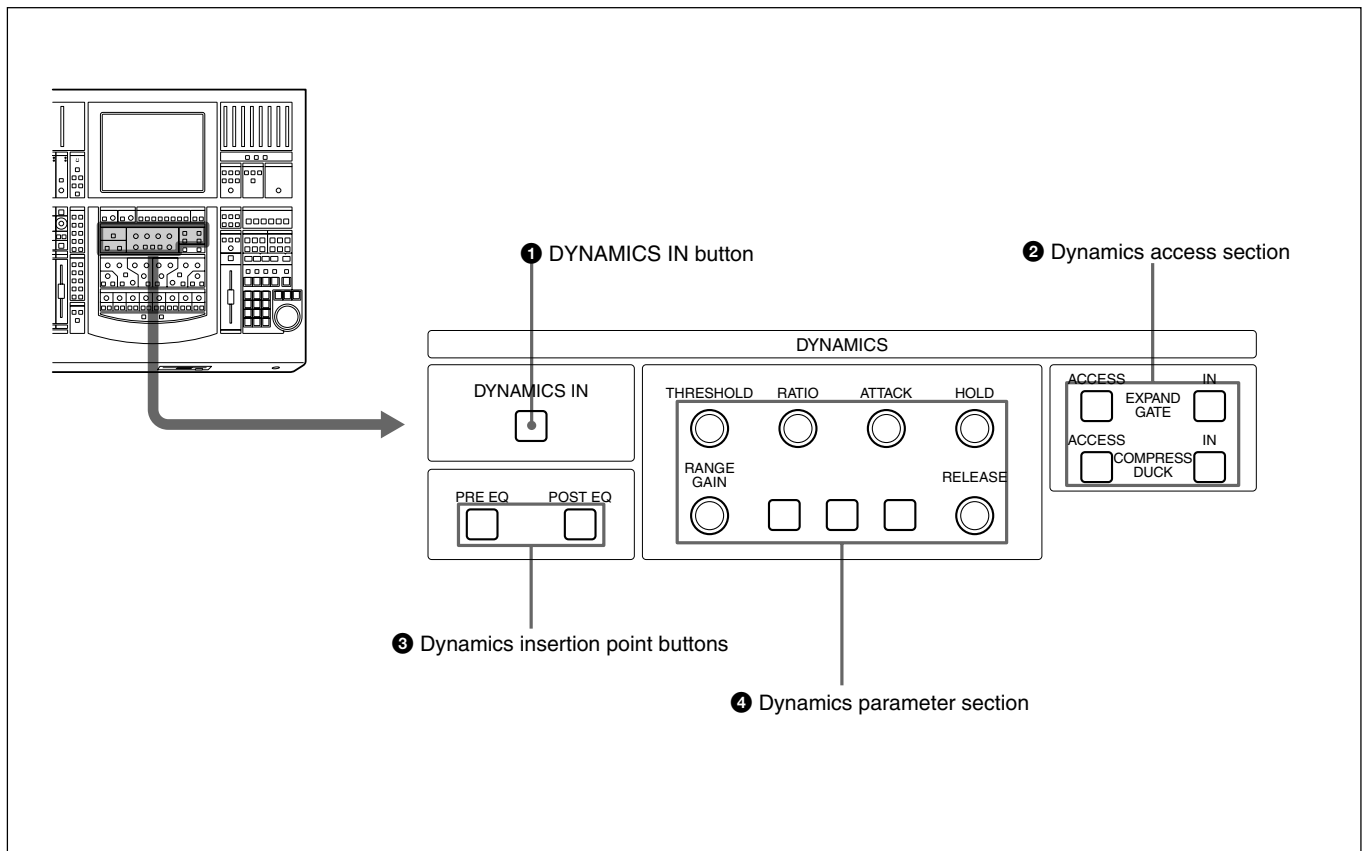
Press the button to route the accessed channel to the selected MTR bus.

#### ❻ PROGRAM L/R buttons

Press the PROGRAM L button to route the accessed channel to the left PGM bus.

Press the PROGRAM R button to route the accessed channel to the right PGM bus.

## DYNAMICS section



# Locations and Functions of Parts and Controls

## ① DYNAMICS IN button

Press this button to make the dynamics section active. The settings on the DYNAMICS section are displayed on the DYNAMICS window (page 49).

## ② Dynamics access section

Selects the functions of dynamics parameter section

### ④.

**ACCESS button for EXPAND/GATE:** Press this button so that the corresponding DYNAMICS window opens. Parameters of the expander and gate can be set using the THRESHOLD, RATIO, ATTACK, HOLD, RANGE/GAIN and RELEASE controls in the Dynamics Parameter section.

**IN button for EXPAND/GATE:** Press this button to activate the expander and gate.

**ACCESS button for COMPRESS/DUCK:** Press this button so that the corresponding DYNAMICS window opens. Parameters of the compressor and ducking can be set using the THRESHOLD, RATIO, ATTACK, HOLD, RANGE/GAIN and RELEASE controls in the dynamics parameter section.

**IN button for COMPRESS/DUCK:** Press this button to activate the compressor ducking function.

ACCESS buttons in this section are not used for snapshot and automation function.

## ③ Dynamics insertion point buttons

Select the point where the dynamics is inserted.

**PRE EQ button:** Inserts the dynamics settings before the equalizer.

**POST EQ button:** Inserts the dynamics settings after the equalizer.

PRE EQ and POST EQ buttons are controlled by snapshot and automation.

## ④ Dynamics parameter section

The function of these buttons in this section depends on the setting of the ACCESS button in the dynamics access section ②.

When the ACCESS button of EXPAND/GATE in the dynamics access section ② is pressed: the following parameters for the expander and gate can be set.

**THRESHOLD control:** Threshold

**RATIO control:** Ratio

**ATTACK control:** Attack time

**HOLD control:** Hold time

**RANGE/GAIN control:** Range

**RELEASE control:** Release time

When the ACCESS button for COMPRESS/DUCK in the dynamics access section ② is pressed: The following parameters for the compressor and ducking can be set.

**THRESHOLD control:** Threshold

**RATIO control:** Ratio (effective only in the COMPRESS mode)

**ATTACK control:** Attack time

**HOLD control:** Hold time

**RANGE/GAIN control:** Range in the DUCK mode and gain in COMPRESS mode.

The fully clockwise position is “AUTO” and results in automatic gain control (when the input signal is -20 dBfs, the gain is automatically adjusted so that the output signal is -20 dBfs).

**RELEASE control:** Release time

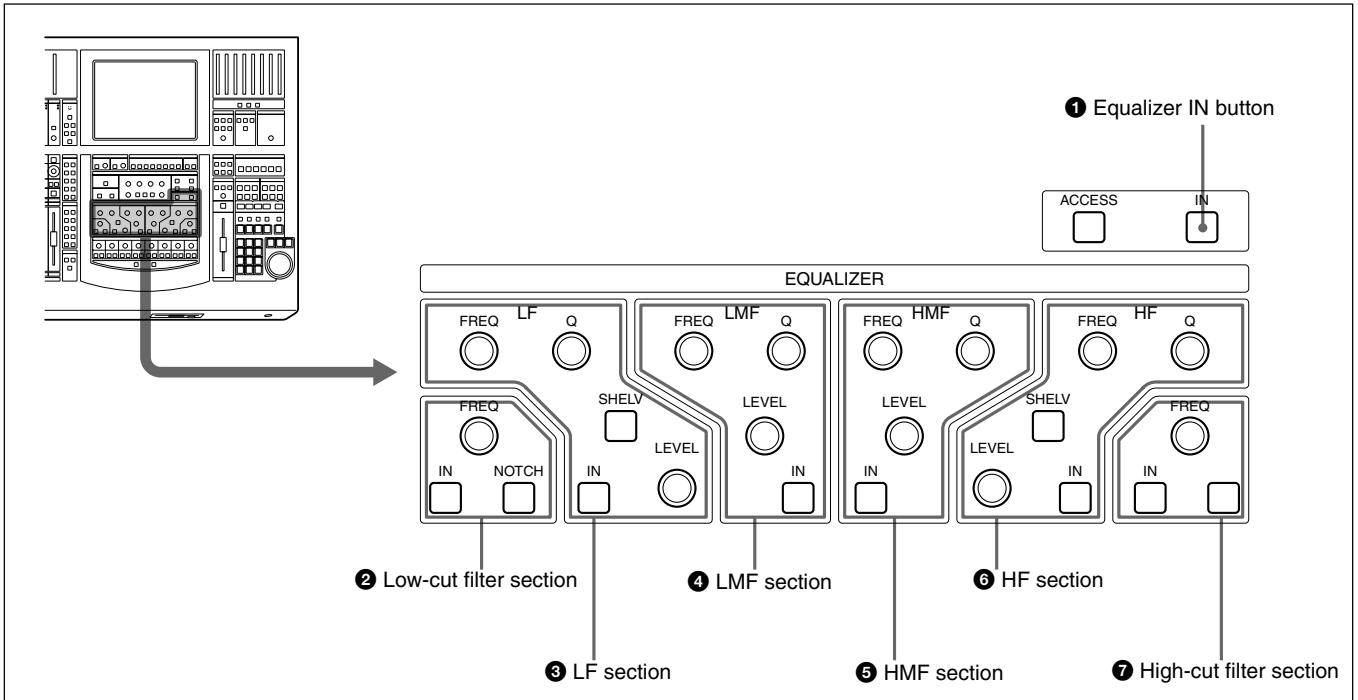
Controls and buttons in this section are used for the snapshot and dynamic automation.

### To open the DYNAMICS window directly from the panel

If the AUTO ZOOM button is lit (ON) in the MISC SETUP window, the window directly switches to the DYNAMICS window, when you activate the dynamics, expander/gate or compressor/duck by pressing the corresponding IN button in each section.

*For further information about the MISC SETUP window, see page 94 .*

## EQUALIZER section



Controls and buttons in this section are used for the snapshot and dynamic automation.

### 1 Equalizer IN button

Press this button to switch in the equalizer.  
The setting status of this button is displayed on the *EQUALIZER/FILTER* window. (page 48).

### 2 Low-cut filter section

**FREQ control:** Sets the cut-off frequency of the low-cut filter.

**IN button:** Press this button to activate the low-cut filter.

**NOTCH button:** Press this button so that the low-cut filter acts as a notch filter.

### 3 LF (Low frequency range equalizer) section

**FREQ control:** Sets the frequency.

**Q control:** Sets Q.

**SHELV button:** Selects the characteristics of the low frequency range equalizer to either peaking or shelving type.

**LEVEL control:** Sets the level.

**IN button:** Press this button to activate the low frequency range equalizer.

### 4 LMF (Low-mid frequency range equalizer) section

**FREQ control:** Sets the frequency.

**Q control:** Sets Q.

**LEVEL control:** Sets the level.

**IN button:** Press this button to activate the low-mid frequency range equalizer.

### 5 HMF (High-mid frequency range equalizer) section

**FREQ control:** Sets the frequency.

**Q control:** Sets Q.

**LEVEL control:** Sets the level.

**IN button:** Press this button to activate the high-mid frequency range equalizer.

### 6 HF (High frequency range equalizer) section

**FREQ control:** Sets the frequency.

**Q control:** Sets Q.

**SHELV button:** Selects the characteristics of the high frequency range equalizer to either shelving or peaking type.

**LEVEL control:** Sets the level.

**IN button:** Press this button to activate the high frequency equalizer.

## Locations and Functions of Parts and Controls

### 7 High-cut filter section

**FREQ control:** Sets the cut-off frequency of the high-cut filter.

**IN button:** Press this button to activate the high-cut filter.

#### Note

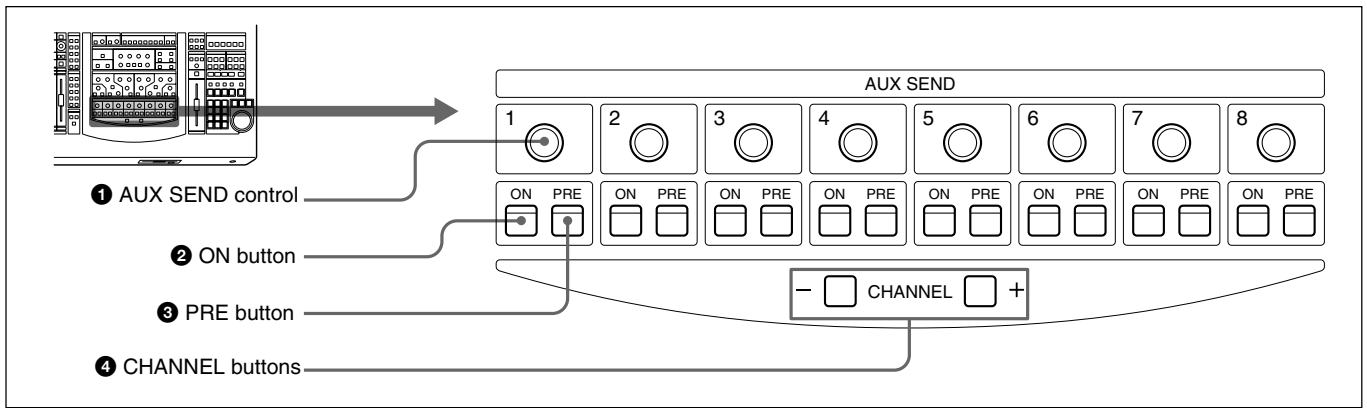
The high-cut filter and low-cut filter operate regardless of the setting of the Equalizer IN button.

### To open the EQUALIZER/FILTER window directly from the panel

If the AUTO ZOOM button is lit (ON) in the MISC SETUP window, the window directly switches to the EQUALIZER/FILTER window, when you activate the equalizer by pressing the corresponding IN button in each section.

*For further information about the MISC SETUP window, see page 94.*

### AUX SEND section and CHANNEL button



#### 1 AUX SEND control 2 ON button 3 PRE button

Press the ON button so that it lights. The channel signal is sent to the corresponding AUX bus. AUX SEND controls 1 to 8 allow you to adjust the level of the corresponding AUX send bus.

If the AUX SEND bus is set to stereo, the even number controls function as the pan control and the odd/even number ON buttons are linked.

When the PRE button is lit, the pre-fader signal is sent to the corresponding AUX bus. When the PRE button is not lit, the post-fader signal is sent.

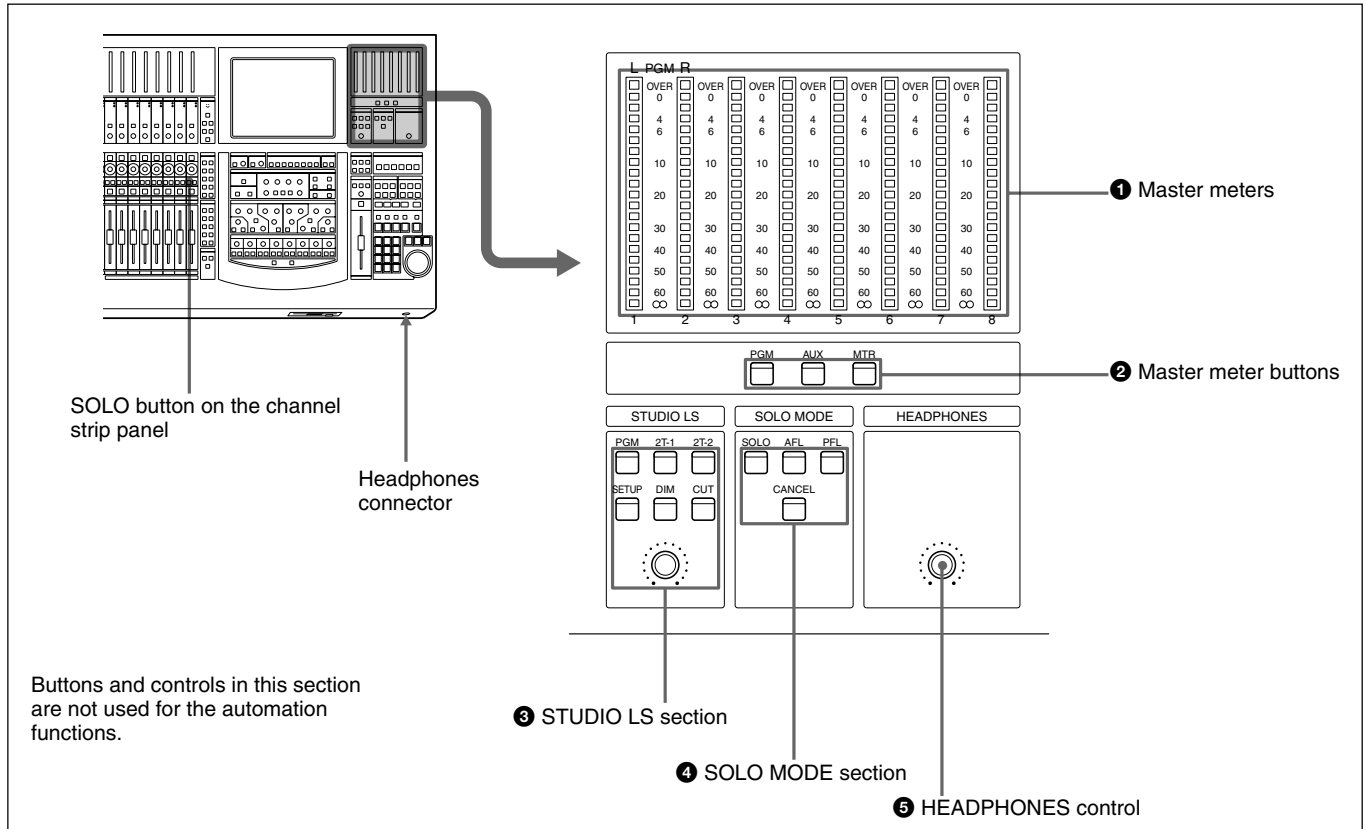
The AUX SEND control, ON and PRE buttons are available for both snapshot and dynamic automation.

#### 4 CHANNEL buttons

Allow the access channel number to be incremented or decremented - allowing fast use of the Assignment panel.

## Master Panel

### Master meter/studio monitor/solo mode sections



#### 1 Master meters

Indicate the level of the signal selected by master meter button 2.

#### 2 Master meter buttons

Select the signals to be displayed on the master meters.

**PGM button:** When this button is lit, the levels of the PGM output signal are displayed on master meters 1 and 2.

**AUX button:** When this button is lit, the levels of the output signals from AUX buses 1 to 8 are displayed on master meters 1 to 8.

**MTR button:** When this button is lit, the levels of the output signals from MTR buses 1 to 8 are displayed on master meters 1 to 8.

If the peak-hold metering display is set to MAN (manual) in the MISC SETUP window, the peak-hold display is cleared when you press the lit PGM, AUX or MTR button.

#### 3 STUDIO LS (studio speaker) section

Selects the studio monitor signal (which is output from the STD MONITOR connector on the rear panel).

**PGM button:** When this button is lit, PGM signal is monitored.

**2T-1 button:** When this button is lit, the signal input to the 2TR IN 1 connector is monitored.

**2T-2 button:** When this button is lit, the signal input to the 2TR IN 2 connector is monitored.

**SET UP button:** When this button is lit, the MONITOR window (page 67) is displayed, showing the STUDIO LS page. You can monitor the source signal (EXT, AUX, or MTR) selected on the STUDIO LS page of the MONITOR window.

**DIM button:** When this button is lit, the volume of the studio monitor signal is reduced.

**CUT button:** When this button is lit, the studio monitor signal is cut. Also, this button is lit when the monitor signal is cut in the STUDIO LS section in the MONITOR window.

**Volume control:** Controls the level of the signal to the studio monitor output.

# Locations and Functions of Parts and Controls

## 4 SOLO MODE section

Changes the function of the channel SOLO buttons. **SOLO button:** When this button is lit, the SOLO buttons on the channel strip panel function as ‘destructive solo’ buttons and cause all other channels to cut.

For detailed information on how to set SOLO disabled, see “SOLO buttons” on the MONITOR window on page 69.

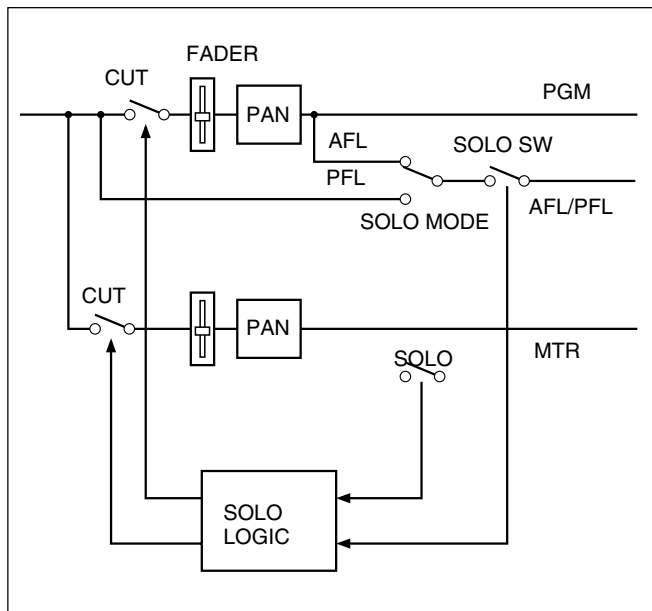
### Note

The solo mode affects both monitoring and the mix output. The solo mode is operational for stereo pan and surround sound MTR bus monitoring.

**AFL (after-fader listening) button:** When this button is lit, the SOLO buttons on the channel strip panel function as the AFL buttons. The AFL signal is sent to the monitor, regardless of the settings in the FADERS section.

**PFL (pre-fader listening) button:** When this button is lit, the SOLO buttons on the channel strip panel function as the PFL buttons. The PFL signal is sent to the monitor, regardless of the settings in the FADERS section.

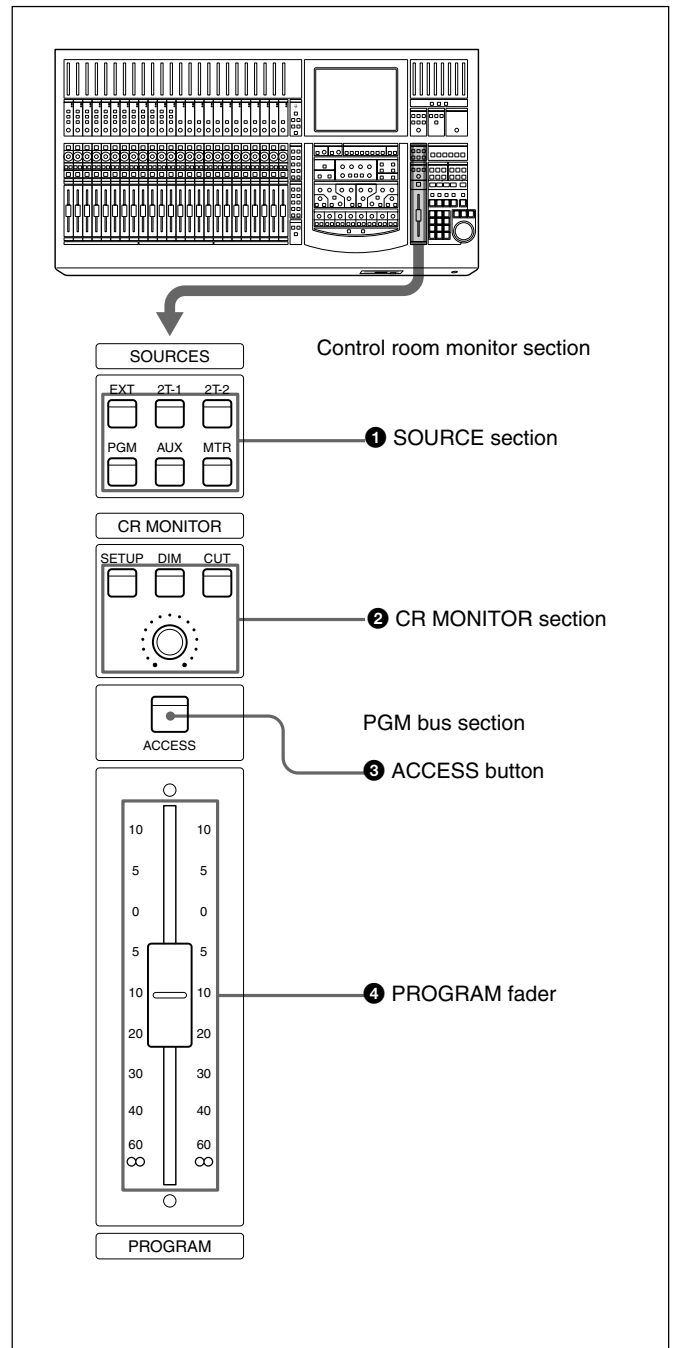
**CANCEL button:** Provides an automatic method of cancelling all SOLO’d channels (set in SOLO mode).



## 5 HEADPHONES control

Adjusts the volume of the headphones.

## Control room monitor section and PGM bus section



### 1 SOURCE section

Selects the signal for the control room monitor (which is output to the CR MONITOR connector on the rear panel).

**EXT button:** When this button is lit, the EXT MONITOR signal selected on the MONITOR window (page 67) is monitored.

**2T-1 button:** When this button is lit, the signal input to the 2TR IN 1 connector is monitored.



**2T-2 button:** When this button is lit, the signal input to the 2TR IN 2 connector is monitored.

**PGM button:** When this button is lit, the signal of the PGM bus is monitored.

**AUX button:** When this button is lit, the AUX bus selected on the MONITOR window is monitored.

**MTR button:** When this button is pressed, the MTR bus selected on the MONITOR window is monitored.

## ② CR (control room) MONITOR section

Controls the control monitor output.

**SETUP button:** When this button is lit, the MONITOR window is displayed, showing the CR MONITOR page.

**DIM button:** When this button is lit, the monitor level is reduced. You can set the dim level on the MISC SETUP window (page 94).

**CUT button:** When this button is lit, the signal to the control room monitor speakers is cut.

When executing the cut function, select the signal to be cut by pressing the CUT ENABLE buttons in the MONITOR window in advance, then press this button. When the CUT button is set to ON in the MONITOR window, the button is also lit. To cancel CUT function, press the button again so that it turns off.

**VOLUME control:** Controls the level of the signal to the monitor speaker.

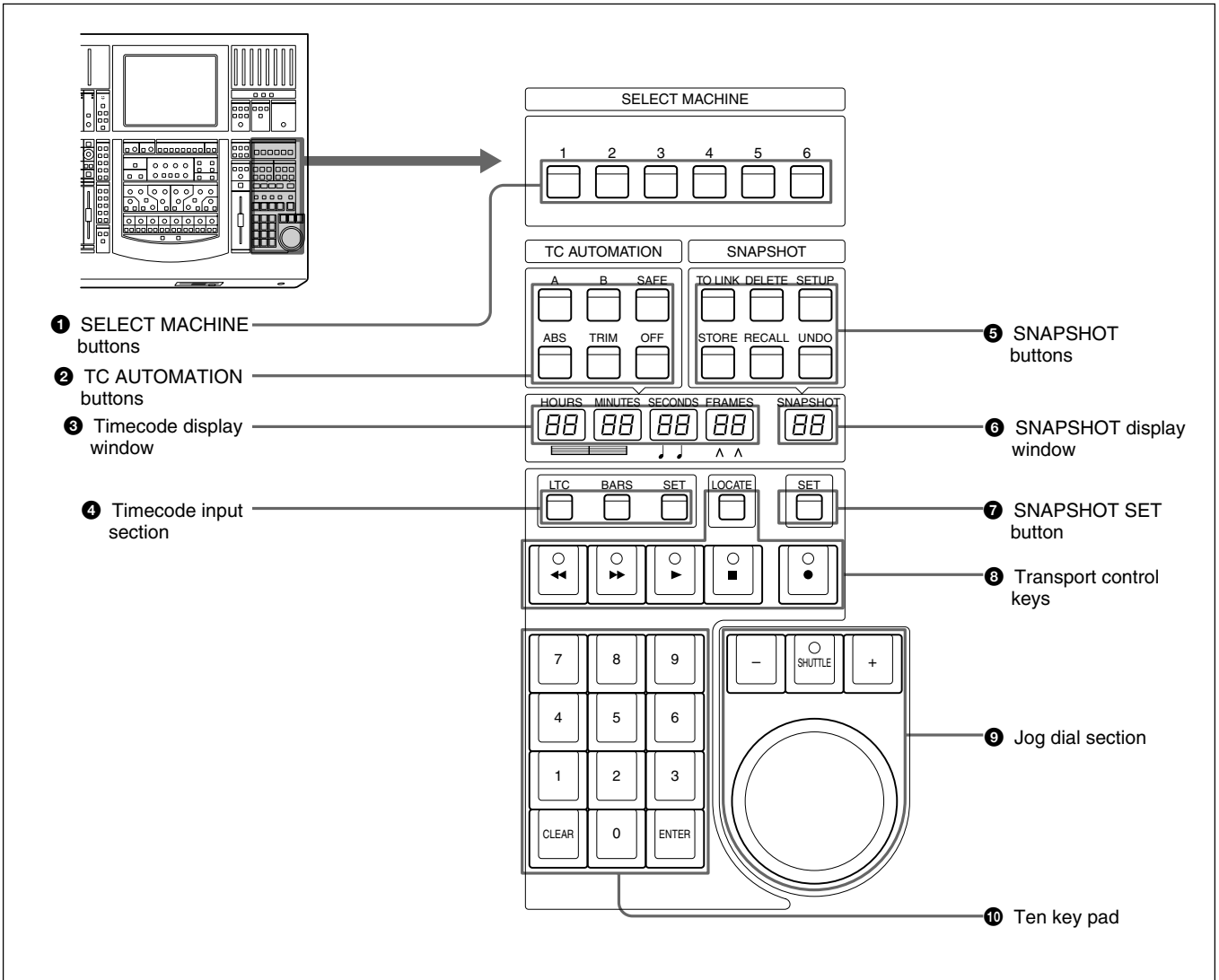
## ③ ACCESS button

Press this button so that it lights, to set the parameters (equalizer, etc.) for the PGM bus on the parameter setting panel.

## ④ PROGRAM fader

Fader for the PGM bus. This fader provides manual, snapshot automation and dynamic automation of the PGM output.

## Automation Panel



### 1 SELECT MACHINE buttons

Selects the device to be controlled using the transport control keys. You can assign the device to a controller port on the MACHINE CONTROL window (page 80) on the display.

### 2 TC (timecode) AUTOMATION buttons

The master dynamic automation functions are controlled by this section.

**SAFE button:** At the time when the timecode stops, and automation data is completed. With this button set to off, the previous automation data is updated when the timecode stops. With this button lit (ON), the previous automation data is not processed to inhibit the update of the automation data.

Switching this button will be useful in the following cases:

- If you perform an undesired operation as a mistake, the automation data now processed can be cancelled by setting the SAFE button to ON before you stop the tape recorder.
- If you perform an operation with the SAFE button set ON, the operation now performed can be stored in an automation data by setting the SAFE button to OFF before you stop the tape recorder.

#### Note

In AUDITION mode, the SAFE button functions in a different manner; an undesired operation performed cannot be cancelled by the SAFE button.

For further information about the SAFE button in AUDITION mode, see page 78.

**ABS (absolute value) button:** When this button is lit, automation is on and the timecode automation is executed in ABS mode.

**TRIM button:** When this button is lit, automation is on and the timecode automation data is recalled in the trimming mode.

**OFF button:** When this button is lit, the timecode automation data is neither stored nor recalled.

*For detailed information on the timecode automation mode, see page 108.*

**A button:** Recalls automation data stored in the A buffer.

**B button:** Recalls automation data stored in the B buffer.

By using the A and B buttons, you can copy stored data between the A/B buffers as explained below.

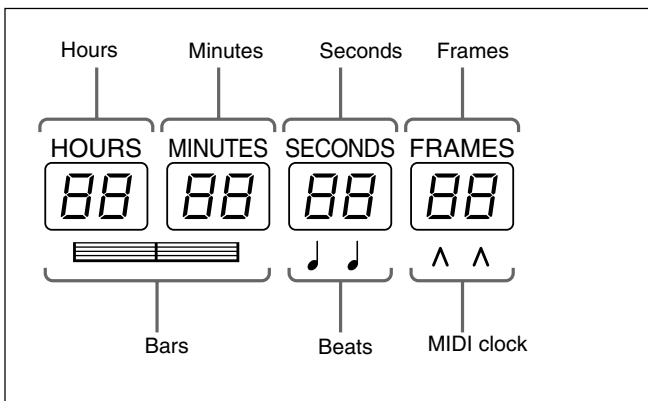
### To copy the data stored in the A buffer to the B buffer

- 1 Press and hold the A button more than 1 second, then press the B button.  
The confirmation dialog box appears.
- 2 Select [YES] on the dialog box.  
Data in the A buffer is copied into the B buffer.

To copy the data stored in the B buffer to the A buffer, press and hold the B button for more than 1 second, then press the A button. Select [YES] on the dialog box.

### ③ Timecode display window

When the LTC button is lit on the timecode input section ④, the timecode is displayed in the window. When the BARS button is lit, the timecode is converted to bars, beats and the MIDI clock and displayed.



### ④ Timecode input section

Selects the contents to be displayed in the timecode display window ③.

**LTC button:** When this button is lit, the timecode read by the built-in timecode reader is displayed in the window.

**BARS button:** When this button is lit, the timecode is converted to the bars, beats and the MIDI clock and displayed.

When both the BARS button and SET button are lit, you can enter the desired value using the ten key pad. The entered value is converted to the timecode and used.

**SET button:** When this button is lit, you can input the desired timecode using the ten key pad. Also, you can increase or decrease the timecode using the +/- buttons and the jog dial.

When a device is selected on the SELECT MACHINE button ①, you can input the locate time.

When this button is not lit, the timecode display window shows the values read by the built-in timecode reader or the tape time of the device selected by the SELECT MACHINE button ①.

### ⑤ SNAPSHOT buttons

**TC LINK button:** When this button is lit, the mixer will automatically link snapshots and mixer cues. In this case, the value displayed on the SNAPSHOT window is treated as the cue number.

Also, when this button is lit, you can manually recall a snapshot which has been linked with a cue.

When the button is lit, the STORE button allows a new cue point and snapshot to be saved and linked.

When this button is not lit, you can recall snapshot data manually. The snapshot data is stored without the timecode.

**DELETE button:** By pressing this button, the snapshot data or the cue currently displayed on the SNAPSHOT display window is deleted depending on the set condition of the TC LINK button.

**SETUP button:** Press this button so that it lights, to display the SNAPSHOT window or CUE window. (When the TC LINK button is not lit, the SNAPSHOT window opens. When the TC LINK button is lit, the CUE window opens.)

*For detailed information on the SNAPSHOT window, see page 72, and for the CUE window, see page 74.*

**STORE button:** Press this button so that it lights, to store the current settings on the SNAPSHOT window as the snapshot data. If the TC LINK button is lit, the snapshot data is stored with the cue.

**RECALL button:** Press this button so that it lights, to recall the snapshot data or the cue currently displayed on the SNAPSHOT display window depending on the set condition of the TC LINK button.

**UNDO button:** Press this button so that it lights, to clear the last snapshot operation.

### ⑥ SNAPSHOT display window ⑦ SNAPSHOT SET button

Press the SNAPSHOT SET button ⑦ so that it lights, to enter the snapshot number in the SNAPSHOT display window ⑥ using the ten key pad.

Also, you can increase or decrease the snapshot number using the +/- buttons and the jog dial.

To execute the snapshot number, press the ENTER key.

The number displayed on the window is treated as a cue number when the TC LINK button is lit.

If you press the STORE button when any number is not set on the display window, the lowest unused number is used for the new snapshot (or cue) number.

### ⑧ Transport control keys

Controls the tape movement of the recorder selected by the SELECT MACHINE buttons ①.

◀◀ (Rewind)/▶▶ (Fast forward)/▶ (Play)/■ (Stop)/● (Record)

When you press the ◀◀ or ▶▶ button while holding the ■ button down, the tape advances (or rewinds) for five seconds.

**LOCATE button:** Cues up the tape of the recorder selected by the machine controller to the locate time previously set.

When CYCLE CUES is selected in the MACHINE CONTROL window, this button is lit continuously. In this case, when you press this button, the tape moves to the locate point, then runs in the CYCLE mode.

### ⑨ Jog dial section

The jog dial can be used for both machine control and data entry.

Press the SHUTTLE +/- button so that it lights, to control the device selected by the SELECT MACHINE buttons ① in shuttle mode.

*There may be devices that cannot be controlled in shuttle mode.*

The jog dial can also be used to change data values, for example, by pressing the SET button under the SNAPSHOT display window, the dial adjust the SNAPSHOT number.

### ⑩ Ten key pad

When the SET button is lit in the Timecode input section ④, you can enter a value in the timecode display window, using the ten key pad.

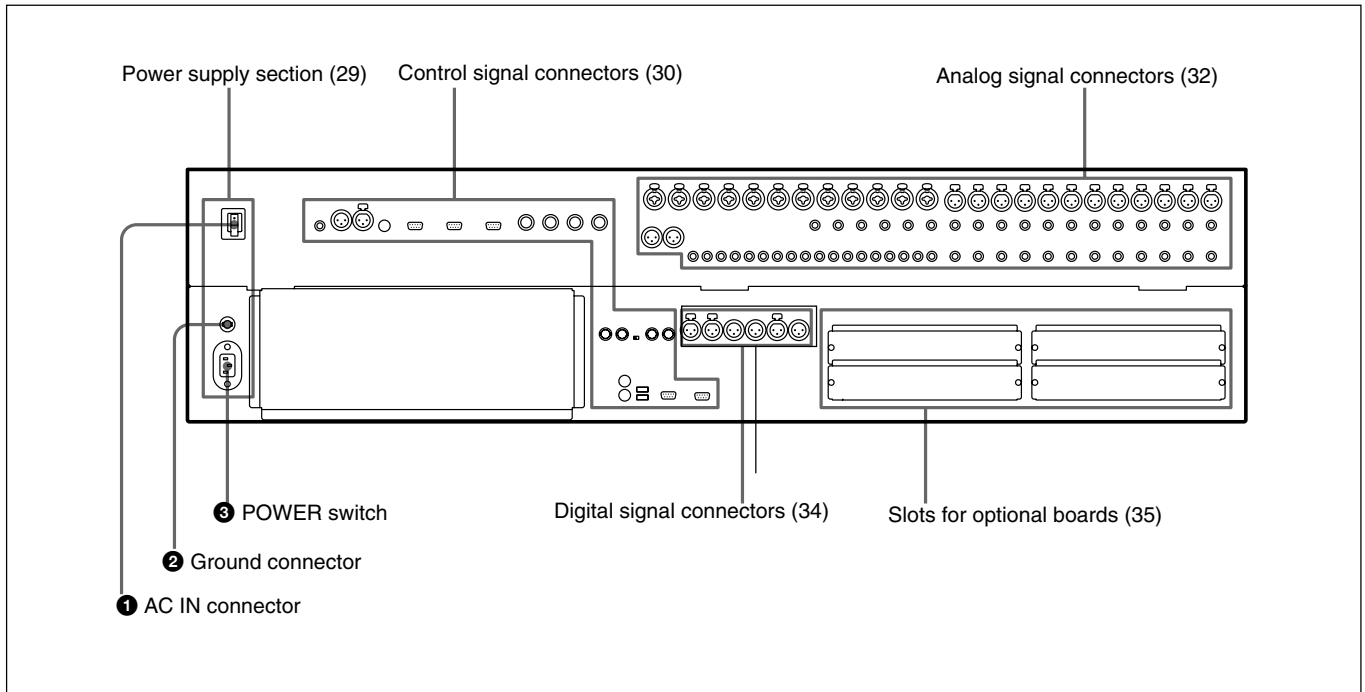
When the SNAPSHOT SET button ⑦ is lit, you can enter a snapshot number in the SNAPSHOT display window, using ten key pad.

Pressing the ENTER key accepts the entered value that is displayed on the window.

## Elements of the Rear Panel

For detailed information on connectors, refer to pages indicated parentheses.

For connection examples, see page 9, for detailed information on connectors, see “Specifications” on page 120, and for signal flow, see “Block Diagram” on page 131.



## Power Supply Section

### ① ~ AC IN connector

Connects to an AC outlet using the supplied AC power cord.

### ② Ground connector

Connects to the grounding terminal.

### ③ POWER switch

Press the I (IN) side of the button to power the unit. At this time, the unit boots and the system starts, recalling the conditions registered using the KEEP operation. As required, load the title.

#### Notes

- Press [OUT] to turn off the power. Edited data which has not been registered using the KEEP or SAVE operation and the A/B buffer data which has not been stored are cleared.
- Make sure you turn off the power of the unit and all

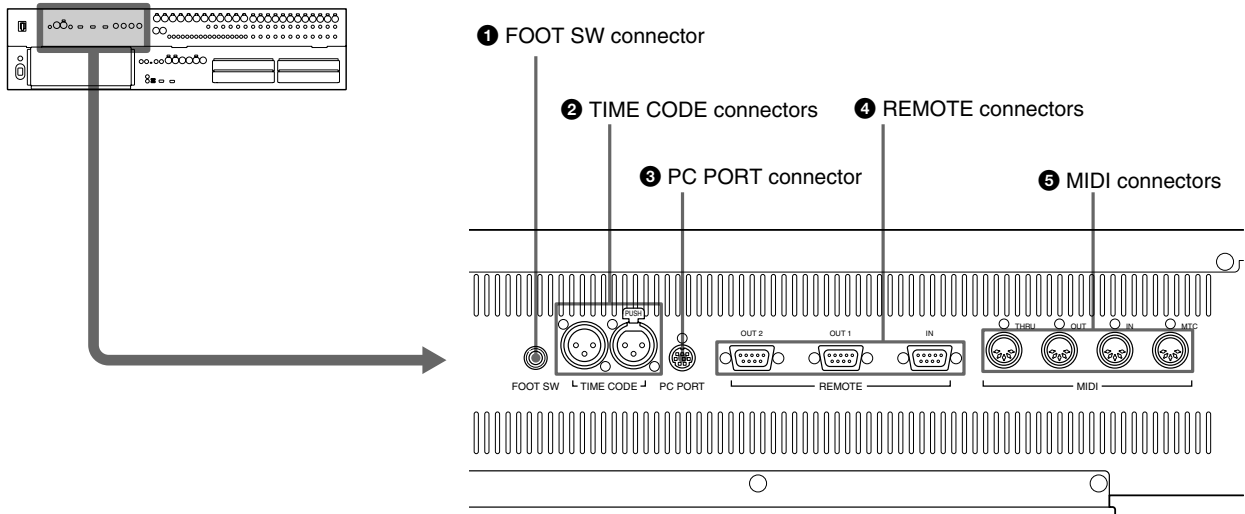
other devices before attempting to make any connections.

- Do not turn off the power of the unit when the LED of the floppy disk drive is lit, or the clock icon is displayed after a KEEP or SAVE operation. If you turn off the power, the data or the software may be damaged.
- Do not turn on the power of the unit with a floppy disk inserted in the disk drive. If a floppy disk remains in the disk drive, the unit will not power on and the following message appears on the window. “Booting from Removable Media.” In such a case, remove the floppy disk from the disk drive, then turn on the power again.
- When you turn on the power again after you have turned it off once, wait for more than 10 seconds. If you turn on the power again within 10 seconds, this may cause a malfunction to occur.

## Control Signal Connectors

For connection examples, see page 9, for detailed information on connectors, see “Specifications” on page 120, and for signal flow, see “Block Diagram” on page 131.

### Control signal connectors (part 1)



#### 1 FOOT SW connector (Phone jack)

Connect the foot switch (not supplied) to control the remote automation functions.

#### 2 TIME CODE connectors (XLR 3-pin)

**IN connector:** Inputs the timecode signal from an external device.

**OUT connector:** Outputs the timecode to an external device.

#### 3 PC PORT connector (Mini DIN 8-pin)

Connect the host computer.

#### 4 REMOTE connectors (D-sub 9-pin)

**IN connector:** For expansion use in future.

**OUT 1/2 connectors:** Used for connecting to an external device such as VTR. You can control the 9-pin devices using the transport control keys on the automation panel.

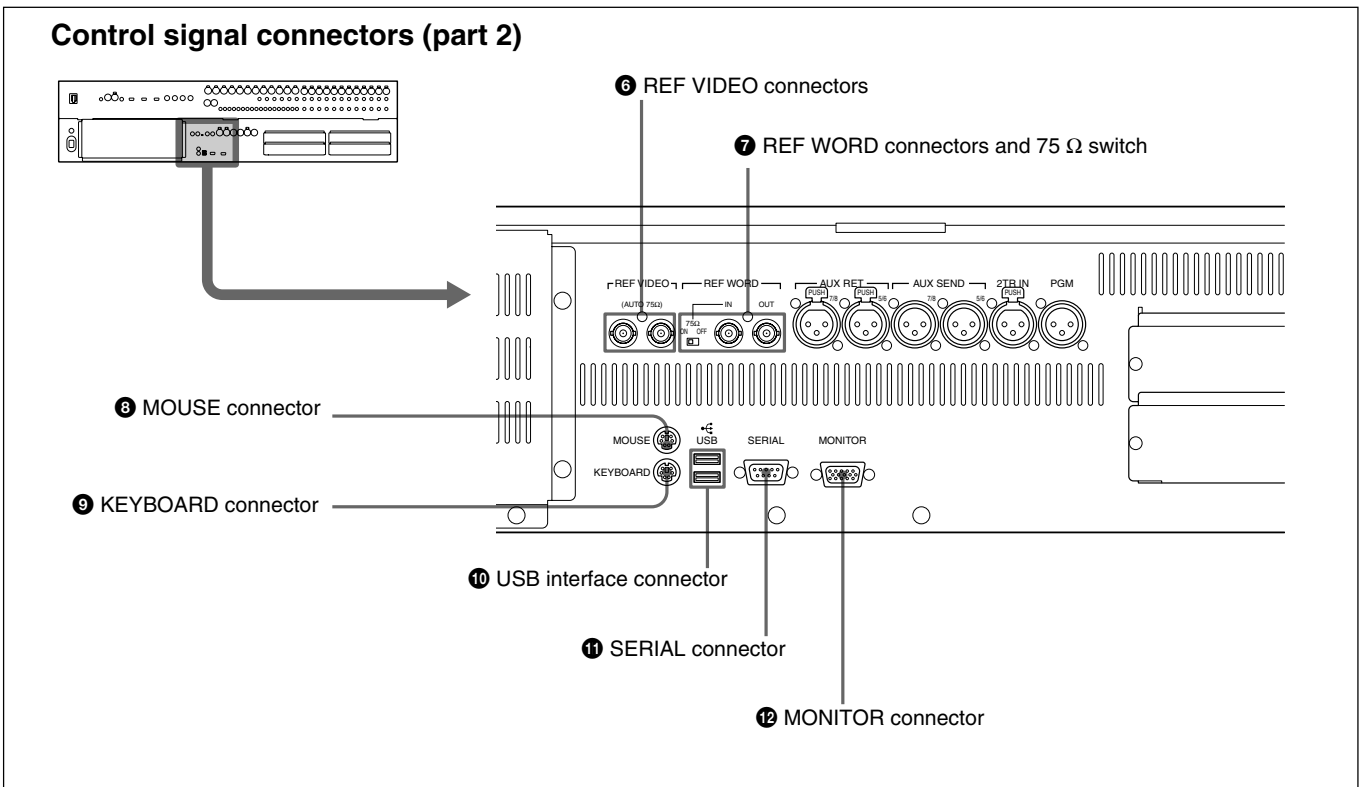
#### 5 MIDI connectors (DIN 5-pin)

**MTC connector:** Inputs the MTC (MIDI timecode) used in automation operation.

**MIDI IN connector:** Used for connecting incoming MIDI data, including remote control of faders, pan, cuts and snapshots, functions depend on the settings of the MIDI window.

**MIDI OUT connector:** Used for outgoing MIDI messages, including MIDI machine control and front panel tallies (faders, cuts and pan).

**MIDI THRU connector:** Outputs the signal input from the MIDI IN connector via a buffer.



**6 REF VIDEO (reference video signal) connectors (BNC type)**

Input/output connectors for NTSC or PAL reference video signals for synchronizing with an external device. These connectors are loop-through. When the loop-through output is not used, the input connector is automatically terminated at 75 ohms.

**7 REF WORD (reference word sync signal input/output) connectors (BNC type) and 75 Ohm switch**

Input/output connectors for synchronizing with an external device.

**REF WORD IN connector:** Inputs the word sync signal.

**75 Ohm switch:** Must be switched correctly.

Normally set this switch to ON. When you send the word sync signal to other machines via the type T BNC relay connector, set this switch to OFF.

**REF WORD OUT connector:** Outputs the word sync signal.

**8 MOUSE connector (Mini DIN 6-pin)**

Used for connecting an external mouse (PS/2 type).

**9 KEYBOARD connector (Mini DIN 6-pin)**

Used for connecting a standard computer keyboard (PS/2 type).

**10 USB interface connector**

For expansion use in future.

**11 SERIAL connector (D-sub 9-pin)**

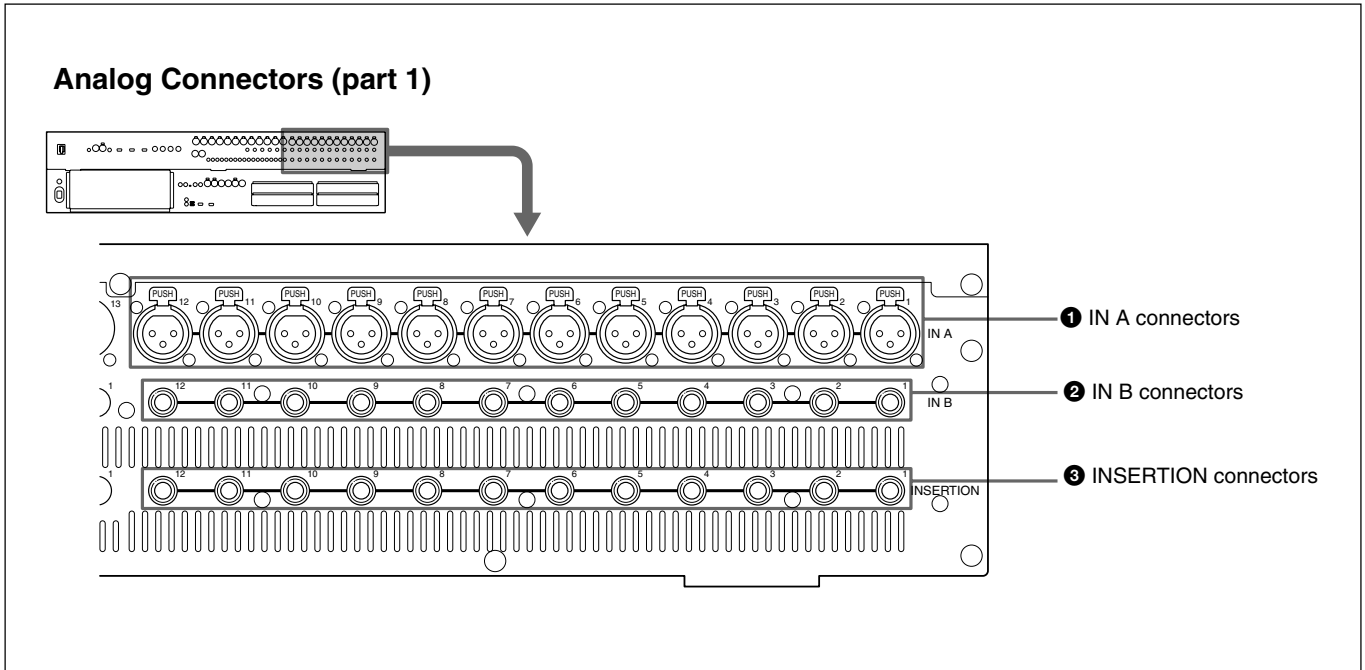
For expansion use in future.

**12 MONITOR connector (D-sub high density 15-pin)**

Used for connecting a standard computer's monitor to repeat the DMX-R100 on board display.

## Analog Signal Connectors

For connection examples, see page 9, for detailed information on connectors, see “Specifications” on page 120, and for signal flow, see “Block Diagram” on page 131.



### ❶ IN A (analog input A) connectors 1 to 12 (XLR 3-pin)

These connectors are enabled when the INPUT B button on the analog head amplifier panel is not pressed.

The IN A 1 to 12 connectors are equipped with 48 V power for condenser microphones, each channel feature a front panel 48 V switch

### ❷ IN B (analog input B) connectors 1 to 12 (1/4" TRS jack)

These connectors are enabled when the INPUT B button is pressed.

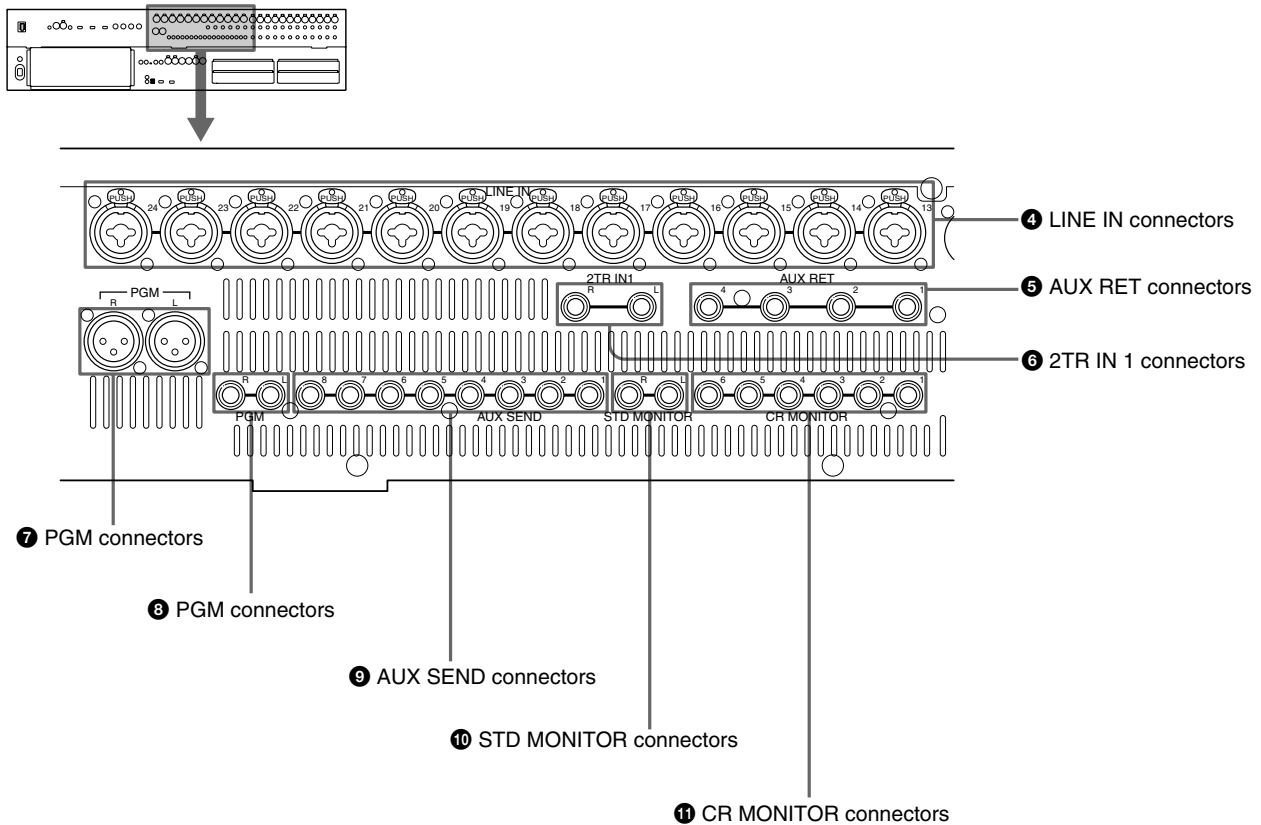
### ❸ INSERTION (insertion input/output) connectors 1 to 12 (1/4" TRS jack)

Used for connecting external effectors the inserts are analog and positioned before the analog to digital converters.

For the pin assignment of the INSERTION connectors, see page 121.



## Analog Connectors (part 2)



### 4 LINE IN (line input) connectors 13 to 24 (Combo coax)

These additional analog inputs can accept both XLR and 1/4" TRS jacks.

### 5 AUX RET (auxiliary return) connectors (1/4" TRS jack)

For additional analog input signals which are processed using the external effectors.

### 6 2TR IN 1 (2-track signal input) connectors (1/4" TRS jack)

For inputting the monitor signals from a 2-channel analog recorder.

### 7 PGM (program) connectors (XLR 3-pin)/8 PGM connectors (1/4" TRS jack)

For outputting the analog PGM signal.

### 9 AUX SEND connectors (1/4" TRS jack)

For outputting the analog signal assigned to the AUX SEND bus. Normally used for interfacing to external processing devices.

### 10 STD MONITOR (studio monitor output) connectors L/R (1/4" TRS jack)

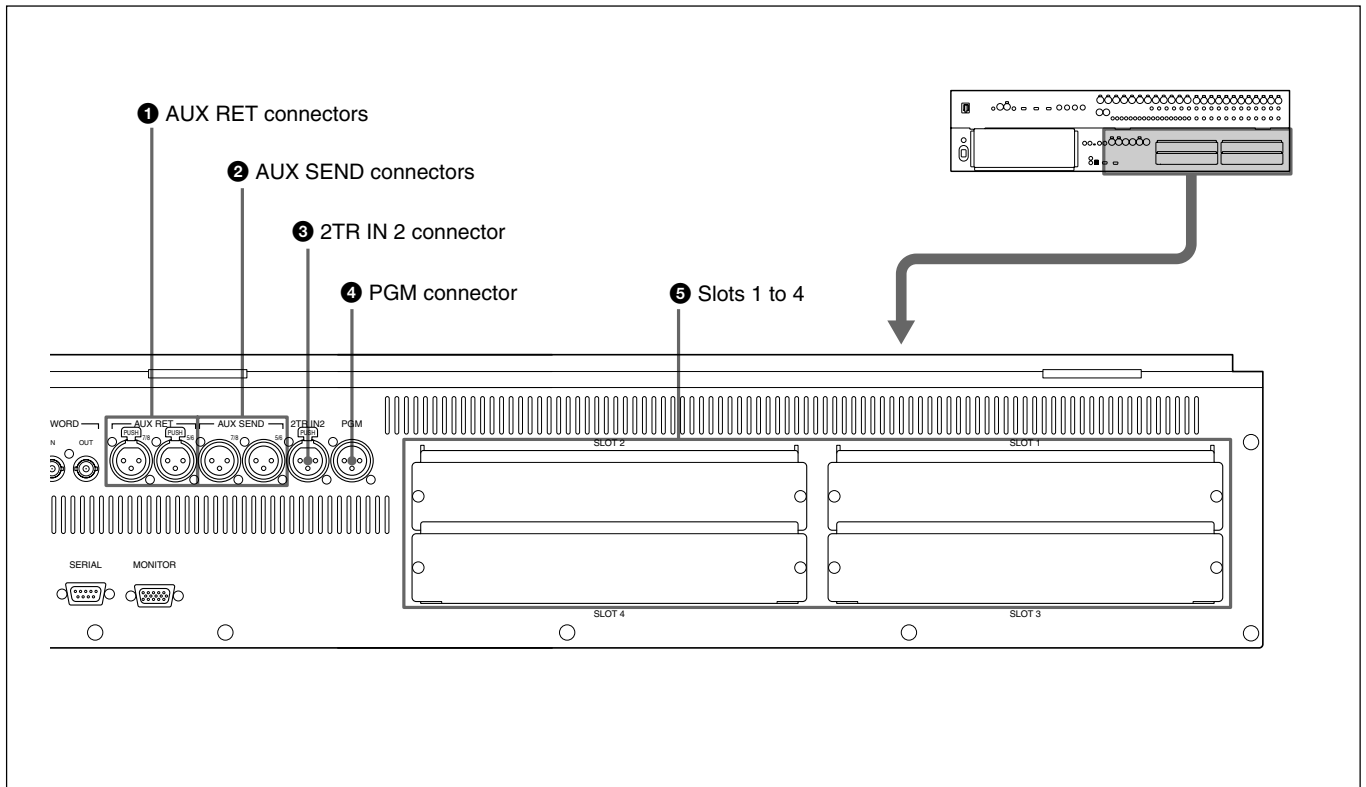
For outputting the signals for studio monitoring via a power amplifier.

### 11 CR MONITOR (control room monitor output) connectors 1 to 6 (1/4" TRS jack)

When CR monitoring in MONO or STEREO, the L/R control room monitor signal is outputted to connectors 1 and 2, or 5 and 6 when MINI MONITOR is selected. For surround sound monitoring, all 6 connectors are used (1 = L, 2 = R, 3 = C, 4 = Sub, 5 = SL and 6 = SR).

## Digital Signal Connectors

For connection examples, see page 9, for detailed information on connectors, see “Specifications” on page 120, and for signal flow, see “Block Diagram” on page 131.



### ❶ AUX RET (auxiliary return) connectors (XLR 3-pin)

Inputs the digital signals processed by the external digital effectors.

Connectors 5 and 6 are for AUX-return channel 5 and channel 6.

Connectors 7 and 8 are for AUX-return channel 7 and channel 8.

### ❷ AUX SEND (auxiliary send) connectors (XLR 3-pin)

Outputs the digital signals assigned to AUX sends 5 and 6 (or 7 and 8).

### ❸ 2TR IN 2 (two-track signal input) connector (XLR 3-pin)

Inputs the digital audio signals from a 2-channel digital recorder for monitoring.

### ❹ PGM (program signal output) connector (XLR 3-pin)

Outputs the 2-channel digital PGM signal.

### ❺ Slots 1 to 4 (slots for optional boards)

Insert the optional boards here.

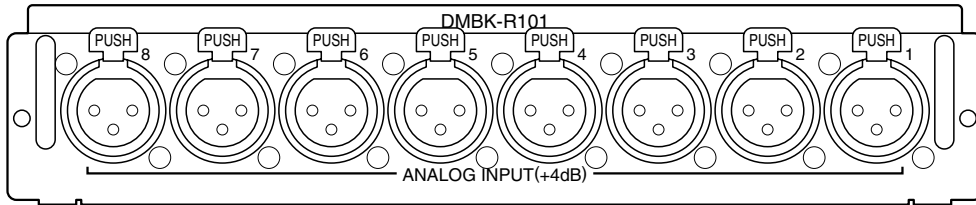
*For details of how to insert these boards, contact your Sony dealer.*

*For detailed information on optional boards, see the next page.*

## Optional Boards

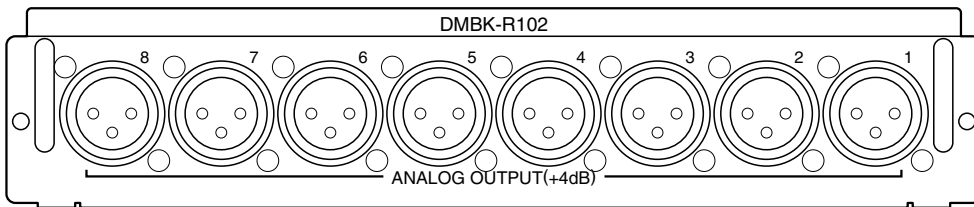
### DMBK-R101 8CH Analog Line In Board

Inputs balanced analog signals (+4 dBu standard). The input channels are selected on the AUDIO INPUT ROUTING screen.



### DMBK-R102 8CH Analog Line Out Board

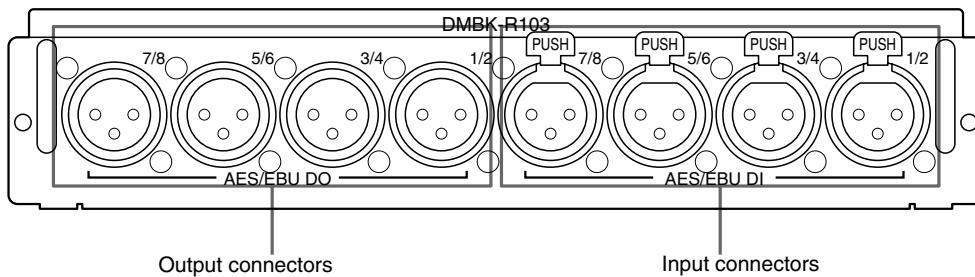
Outputs balanced analog signals (+4 dBu standard). The output signals are selected on the AUDIO OUTPUT ROUTING screen.



### DMBK-R103 8CH AES/EBU DIO Board

Inputs/outputs AES/EBU signals at both standard (44.1, 48 kHz) and double samples rates (88.2, 96

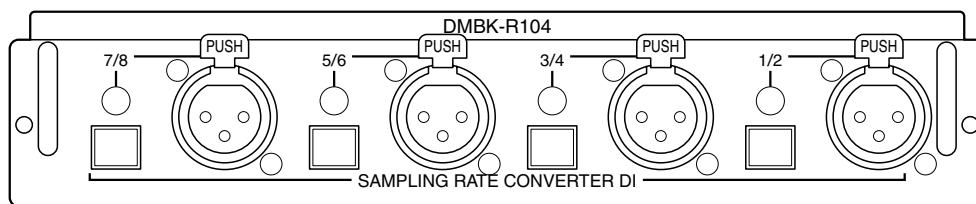
kHz). At double sample rates, the data transfer rate is double the rate for standard.



### DMBK-R104 8CH Sampling Rate Converter DI Board

Inputs AES/EBU signals or optical signals such as from a consumer CD players.

The upper sample rate of DMBK-R104 is 56 kHz and it can not convert double sample rate signals (88.2, 96 kHz) to standard sample rates.



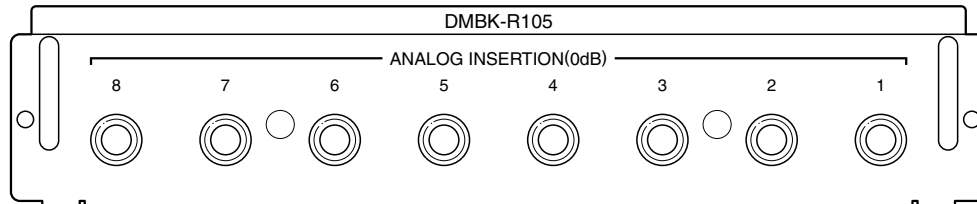
## Locations and Functions of Parts and Controls

### DMBK-R105 8CH Insertion board

Inputs/outputs unbalanced analog signals (0 dBu standard). The insertion point is set on the AUDIO OUTPUT ROUTING screen.

#### Note

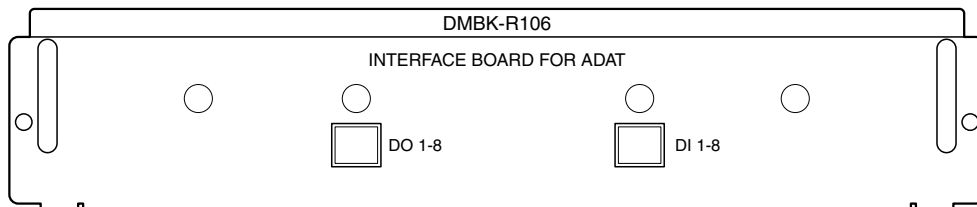
You can use only one DMBK-R105 8CH Insertion Board in the DMX-R100.



### DMBK-R106 Interface Board for ADAT

Connects external devices such as ADAT <sup>1)</sup> interface boards, or external devices such as tape recorders that have an ADAT interface.

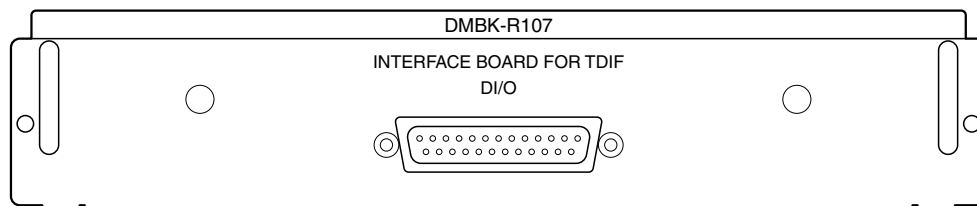
Note that this board does not function when the unit is running at 88.2 kHz or 96 kHz.



### DMBK-R107 Interface Board for TDIF

Connects external devices such as tape recorders that have a TDIF <sup>2)</sup> interface.

Note that this board does not function when the unit is running at 88.2 kHz or 96 kHz.



1) ADAT is the registered trademark of the interface of ALESIS STUDIO ELECTRONICS, INC.

2) TDIF is the trademark of the interface of TEAC Corporation.

# Menu Structure

The window based operating menus of the DMX-R100 are organized in the following structure.

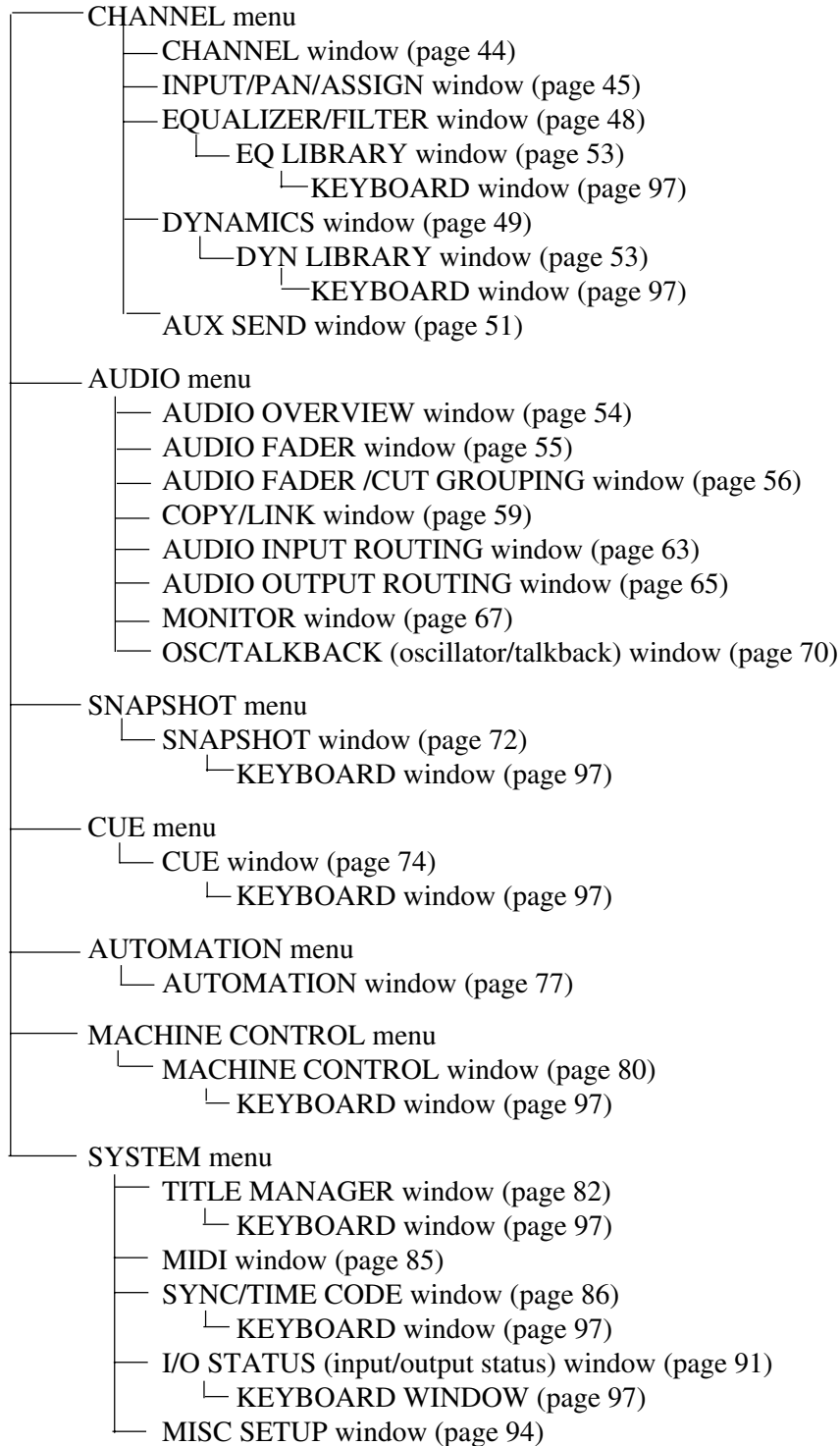
*For detailed information on each menu, refer to the pages indicated in parentheses.*

## Menus related to automation (placed on the top bar on the display)

- TITLE menu (page 38)
- Snapshot display (page 39)
- Automation mode display (page 39)

## Menus for controlling and monitoring the mixer

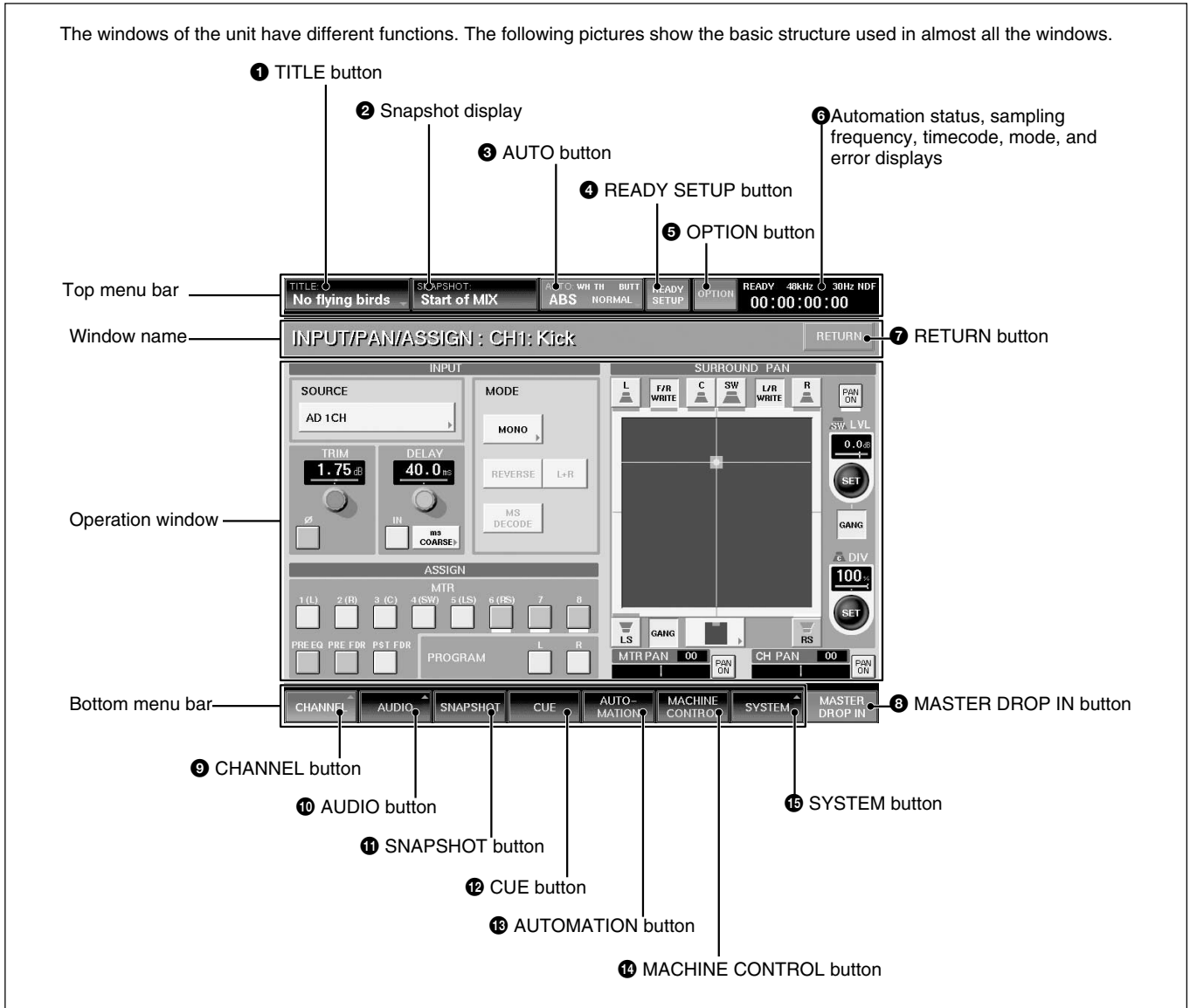
These menus open by touching the bottom menu button on the display.



# Basic Components and Functions of the Windows

## Basic Components of the Windows

The windows of the unit have different functions. The following pictures show the basic structure used in almost all the windows.



### Top bar

#### 1 TITLE button

“TITLE” is the term used in DMX-R100 for storing and recalling all the mixer’s automation and housekeeping functions for a project. The current title’s name is displayed in the TITLE button.

*For detailed information on the function of the TITLE MANAGER window and how to enter the title name, see page 82.*

Touching the TITLE button opens the TITLE menu.

#### TITLE menu

##### • KEEP

When you select KEEP, the data in the work area, volatile memory, is saved in the Current Title’s non-volatile memory.

##### • SAVE AS NEW

When you select SAVE AS NEW, the data in the work area is saved in a new title with the unused number in the flash memory.

## • SAVE

When you select SAVE, the data in the work area is saved in the current title in the flash memory.

### Notes

- A title loaded from a floppy disk cannot be saved just after it is loaded. Before saving it, execute SAVE AS NEW to save it in a flash memory area as a new title.
- When restarting or turning off the unit, the unit will lose data that has not been SAVED or KEEPed.
- After executing KEEP or SAVE, do not turn off the power while the cursor indication changes to a clock showing that the data is being processed or while the LED on the floppy disk drive is on. In such a case, the unit is writing the data in the flash memory or is storing in the floppy disk. If you turn off the unit during this process, the Current Title or saving title may be lost.

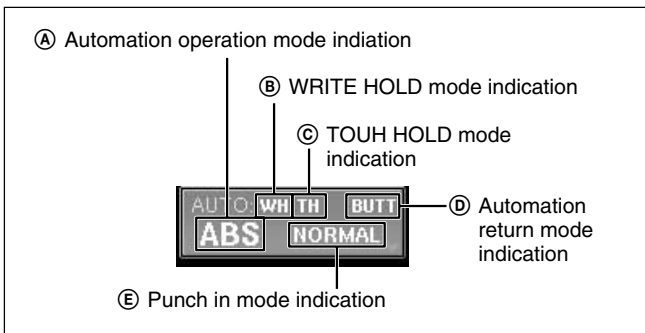
## ② Snapshot display

The name of the snapshot last recalled is displayed on the SNAPSHOT button.

## ③ AUTO (automation) button

By touching the AUTO button on the top menu bar, you can change the automation mode and return time mode without opening the AUTOMATION window.

### Automation setting indication



## ④ Automation operation mode indication

- **ABS:** Automation is in the ABSOLUTE (absolute value) mode. In ABS mode, the display lights red. (When the SAFE button is lit on the console, the display is dark red.)
- **TRIM:** Automation is in the TRIM (fine adjustment) mode. In TRIM mode, the whole display is green. (When the SAFE button is lit on the console, the display is dark green)

- **OFF:** Shows the automation is off. In OFF mode, the whole display is black.

For information on the fader operation and its results in ABS mode and trim mode, see page 110.

## ⑤ WRITE HOLD mode indication

“WH” appears when the WRITE HOLD mode is set.

For detailed information on the WRITE HOLD mode, see page 112.

## ⑥ TOUCH HOLD mode indication

“TH” appears when the TOUCH HOLD mode is set.

For the detailed information on the TOUCH HOLD mode, see page 113.

## ⑦ Automation return mode indication

Indicates the automation return mode when the Drop Out function is performed.

**BUTT:** The faders and other controls immediately jump back to the position stored in the previous data.

**RAMP:** Faders and other controls ramp back to the position stored in the previous data in a number of frames.

**TO END:** Holds the position to the end and renews the automation data. (HOLD TO END)

**TO NEXT:** Holds the position to the next event (HOLD TO NEXT).

**TOP TO END:** Holds the position from the top to the end and renews the automation data. (TOP TO END)

## ⑧ Punch in mode indication

- **NORMAL:** The punch in/punch out functions are not set.
- **FOOT:** Punching in/punching out using the foot switch is set.
- **AUTO:** An auto punch is performed according to a specified time entered on the Automation window.
- **AUDITION:** The AUDITION function is set.

### Menu of the AUTO button

- **NORMAL:** The punch in mode is set to NORMAL.
- **FOOT:** The punch in mode is set to FOOT.
- **AUTO:** The punch in mode is set to AUTO.
- **AUDITION:** The punch in mode is set to AUDITION.
- **BUTT:** Return time mode is set to BUTT.
- **RAMP:** Return time mode is set to RAMP
- **TO END:** Return time mode is set to HOLD TO END.

## Basic Components and Functions of the Windows

- **TO NEXT:** Return time mode is set to HOLD TO NEXT.
- **TOP TO END:** Return time mode is set to TOP TO END.
- **WRITE HOLD:** Turns on or off the WRITE HOLD mode.
- **TOUCH HOLD:** Turns on or off the TOUCH HOLD mode.

### 4 READY SETUP button



Normally, this button is dark yellow (READY/SAFE setup is off). In this case, the buttons, controls and switches directly control the audio processing.

When you touch the button shown, it turns light yellow. This allows you to select controls to the READY status.

Now, when you operate the controls, they switch between READY active and READY off, and the controls do not control the audio processing. Press READY SETUP again to revert the controls to audio processing.

With READY SETUP on, controls switch as follows:

**Buttons:** Whenever you operate the buttons on the panel and window, the READY status is switched.

**Controls:** Turning them clockwise results in setting them to READY. Turning them counterclockwise results in setting them to SAFE. Also touching the numerical value on the display window results in switching READY/SAFE.

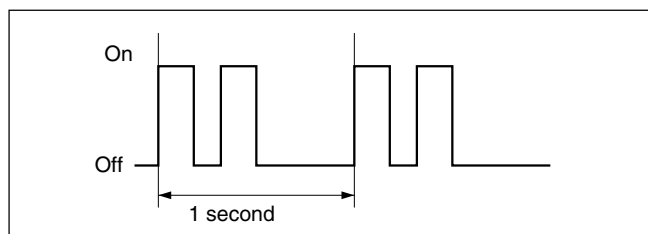
**Faders:** Whenever you touch the fader, READY/SAFE is switched. Also pressing the numerical value on the display window results in switching READY/SAFE.

**WRITE buttons on the channel strips:** Whenever you press the WRITE button, all of the controls that can be dynamically automated in the channel are READY'ed (i.e. are in READY status).

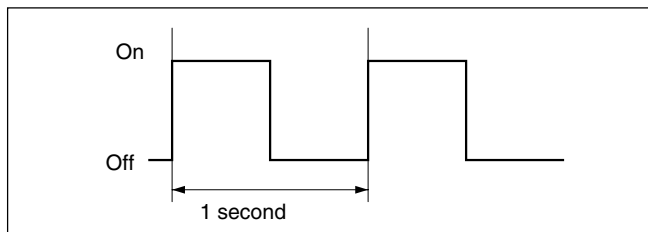
### Notes

- The READY SETUP cannot be turned ON (light yellow) when the timecode is run at PLAY speed executing automation.
- When the READY SETUP button is set to ON, the faders, controls and buttons, do not control the sound.
- If the timecode is run at PLAY speed, while you set the automation items, READY SETUP is automatically switched off.
- On the channel involved in automation, the WRITE button in READY mode blinks in two ways;

–While READY SETUP is ON



–While READY SETUP is OFF



### 5 OPTION button

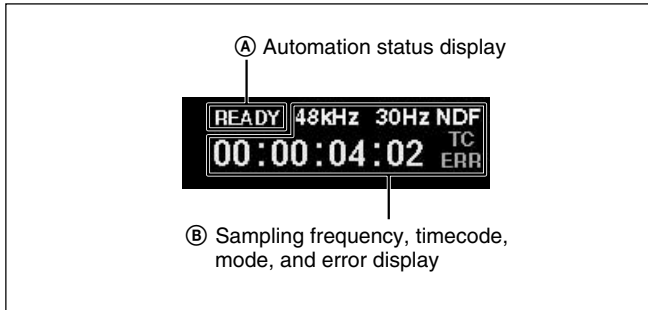
This button is effective when the READY SETUP button is lit yellow. If you touch this button, the pull down menu opens and you can select the items to be READY'ed.

- **ALL EQs:** Sets the faders/equalizers of all channels to READY.
- **ALL DYNAMICS:** Sets dynamics of all channels to READY.
- **ALL AUX KNOBS:** Sets the AUX SEND controls of all channels to READY.
- **ALL AUX BUTTONS:** Sets the AUX SEND buttons of all channels to READY.
- **ALL CUTs:** Sets the cut setting of all channels to READY.
- **ALL ASSIGNs:** Sets the ASSIGN buttons of all channels to READY.
- **ALL PANs:** Sets the pan setting of all channels to READY.
- **ALL FADERS:** Sets the faders of all channels to READY.



- ALL CANCEL: Sets all READY to SAFE modes.
- CLOSE: Close the OPTION button menu.

## 6 Automation status, sampling frequency, timecode, mode and error displays



### A Automation status display

Displays the automation status mode.

- **READY:** Execution of automation is always possible if the timecode advances at the PLAY speed.
- **RUN:** Storing/recalling of automation is possible.
- **STBY:** Automation data cannot be stored due to the presence of timecode before cue, before the punch in or after the punch out. However, you can recall automation.

### B Sampling frequency, timecode, mode, and error display

Displays the sampling frequency and any error indication. The timecode display is from the internal timecode reader.

- When an error occurs on the word PLL (or video PLL), the sampling frequency display turns red.
- When the timecode does not advance correctly, “TC ERR” is displayed for one second.
- When the format of the entered timecode is different from the format setting of the unit, the timecode mode is displayed in red.

### 7 RETURN button

Touch this button to return to the previous window (from which the current window is displayed).

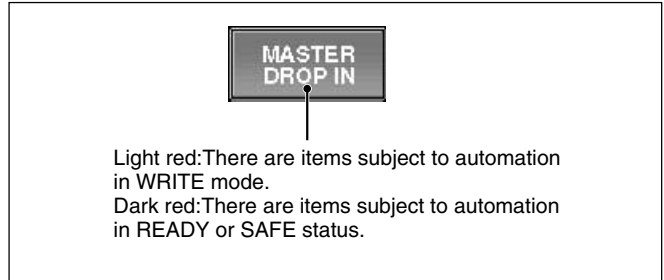
### 8 MASTER DROP IN button

Under normal conditions (where there are no items subject to automation in WRITE mode), this button is displayed in dark red.

If you touch the button while it is dark red, the button turns light red and drops automation READY controls into automation WRITE.

If even one of the items subject to automation is switched to WRITE mode, this button turns light red.

If you touch the MASTER DROP IN button while it is light red, this button turns dark red and all controls in automation WRITE are ‘DROPEd’ out and return to the READY status.



## Bottom menu bar

Touching one of the bottom menu buttons 9 to 15 opens a menu related to the settings of the unit. For details on the window, see pages indicated in parentheses.

### 9 CHANNEL button

Touch this button to open the CHANNEL menu which allows you to select windows for channel processing controls. The display changes corresponding to the selected window.

CHANNEL menu

- CHANNEL (page 44)
- INPUT/PAN/ASSIGN (page 45)
- EQUALIZER/FILTER (page 48)
- DYNAMICS (page 49)
- AUX SEND (page 51)

### 10 AUDIO button

Touch this button to open the AUDIO menu which allows you to select windows that control and display fader functions, input/output routing and communication functions.

The display changes corresponding to the selected window.

AUDIO menu

- OVERVIEW (page 54)
- FADER (page 55)
- FADER GROUPING (page 56)
- COPY/LINK (page 59)
- INPUT ROUTING (page 63)
- OUTPUT ROUTING (page 65)
- MONITOR (page 67)
- OSC/TALKBACK (oscillator/talkback) (page 70)

# Basic Components and Functions of the Windows

## 11 SNAPSHOT button

Touch this button to open the SNAPSHOT window (page 72).

## 12 CUE button

Touch this button to open the CUE window (page 74).

## 13 AUTOMATION button

Touch this button to open the AUTOMATION window (page 77).

## 14 MACHINE CONTROL button

Touch this button to open the MACHINE CONTROL window (page 80).

## 15 SYSTEM button

Touch this button to open the SYSTEM menu which allows you to select the windows that control system settings.

The display changes to the one corresponding to the selected window.

SYSTEM menu

- TITLE MANAGER (page 82)
- MIDI (page 85)
- SYNC/TIME CODE (page 86)
- I/O STATUS (page 91)
- MISC SETUP (page 94)

## Operating the Touch Panel

### Changing the channel

“CH XX” which is displayed next to the window name indicates the number of the channel.

To change the channel, press the ACCESS button on the corresponding channel strip.

Example: To change the channels to be displayed from CH-1 to CH-48

**1** Press the 25 to 48 button on the Assignment panel to switch the faders to channels 25 to 48.

**2** Press the ACCESS button corresponding to the CH-48.  
“INPUT/PAN/ASSIGN: CH 48 (+ channel name)” appears on the window.

You can also change the channel by using the +/- CHANNEL button on the Parameter Setting panel.

### Selecting the item

Many functions can be directly switched by button icons on the display. The color of the button icons will change to show their status.

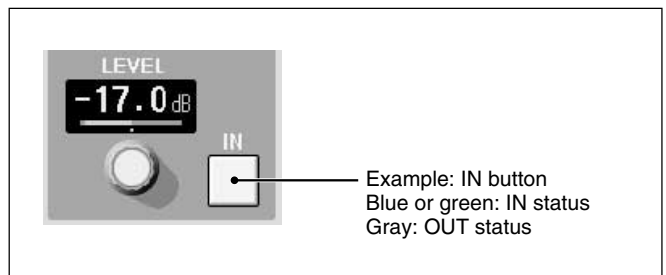
In this manual, such an operation is described using the phrase “Touch .. to select...”.

The color change is not described if it is not necessary.

### Setting the function ON/OFF (or IN/OUT) on the window

The IN button and NOTCH button allow you to switch the appropriate function on or off on the EQUALIZER/FILTER window and INPUT/PAN/ASSIGN window.

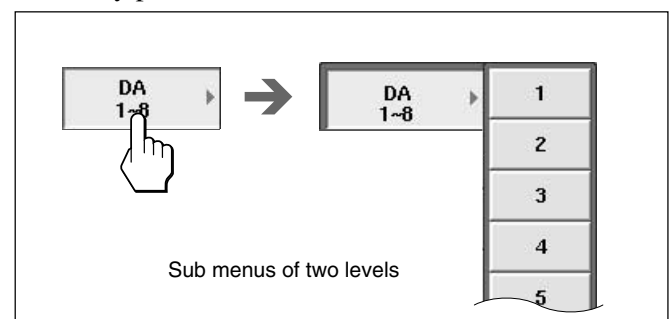
When you touch one of these buttons, the color of the button turns green and this means the function of these buttons is IN (or ON). When you touch one of these buttons again, the color of the buttons turns gray and this means that the function of those buttons is OUT (or OFF).



### Selecting the channel or source individually

On the AUDIO INPUT ROUTING window and AUDIO OUTPUT ROUTING window, when you want to select a single channel, the sub menus of two levels open. Touch the desired channel or source to select it.

The sub menu closes when you make a selection or touch any point other than the sub menu.



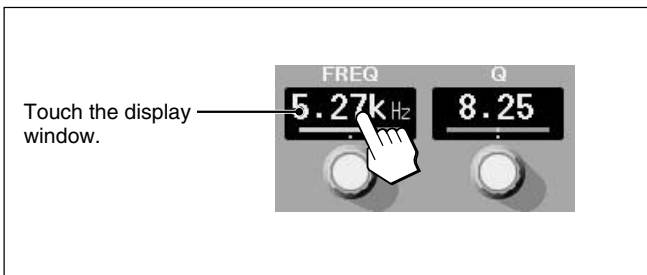
## Writing data in the automation data

### When READY SETUP button is light yellow

All of the appropriate channel processing controls on the display can be switched into READY status by touching the button icons by or parameter numeric value window. The READY status is shown by either the parameter number turning yellow, or yellow bar appearing under the buttons. The controls in SAFE mode have green parameter numbers or no bar display under the switches.

### When the READY SETUP button is dark yellow

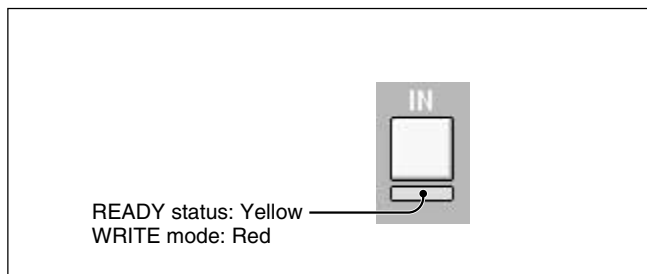
Individual channel controls that are already in the READY status can be 'DROP'ed into automation WRITE by touching their parameter value or button icon. The WRITE mode is displayed by touching the parameter numbers red or by displaying a red bar under button icons. New automation data is written when a control is in WRITE and timecode is run at PLAY speed.



### READY/WRITE display on the IN/OUT button icons on the window

In READY status, a yellow bar appears under the IN/ON buttons.

When 'DROPEd' into automation WRITE, a red bar appears under the IN/ON buttons.



## Note

Automation data written in the unit is cleared when the power is turned off or the unit is restarted unless you perform the KEEP or SAVE operation.

Also, the snapshot data is cleared when the unit is turned off or restarted if the KEEP or SAVE function hasn't been performed.

*For detailed information on the KEEP operation, see pages 38 and 100.*

*For detailed information on the SAVE operation, see pages 38 and 100.*

## Entering characters

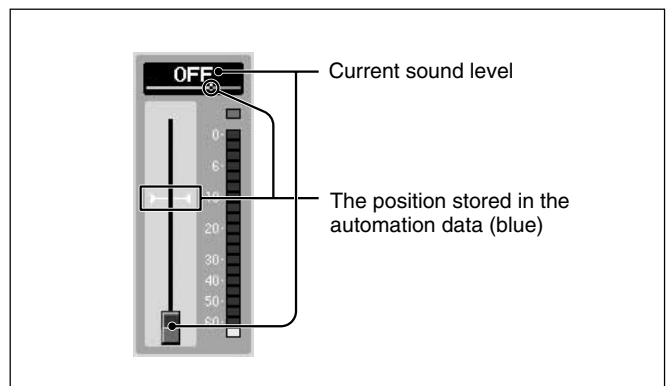
When you touch a row box through which you can enter characters such as the channel name or snapshot name, the box turns on in yellow and the KEYBOARD window opens automatically waiting for you to enter/change the characters. While the KEYBOARD window is open, you can also enter the characters from the external PS2 keyboard, plugged into the rear panel.

## Entering numerical value

When you touch a row box through which you can enter numerical values such as the timecode, the box turns on in yellow waiting for you to enter/change the numbers from the ten keys on the panel. While the row lights in yellow, you can also increase or decrease the value using the +/- keys or jog dial.

## Level indication stored in automation data

In the display window of the item in automation and the fader level indication, the horizontal blue line and blue dot indicate the level stored in the automation data. Use them as a guide when you manually return the items/faders to the previous stored level.



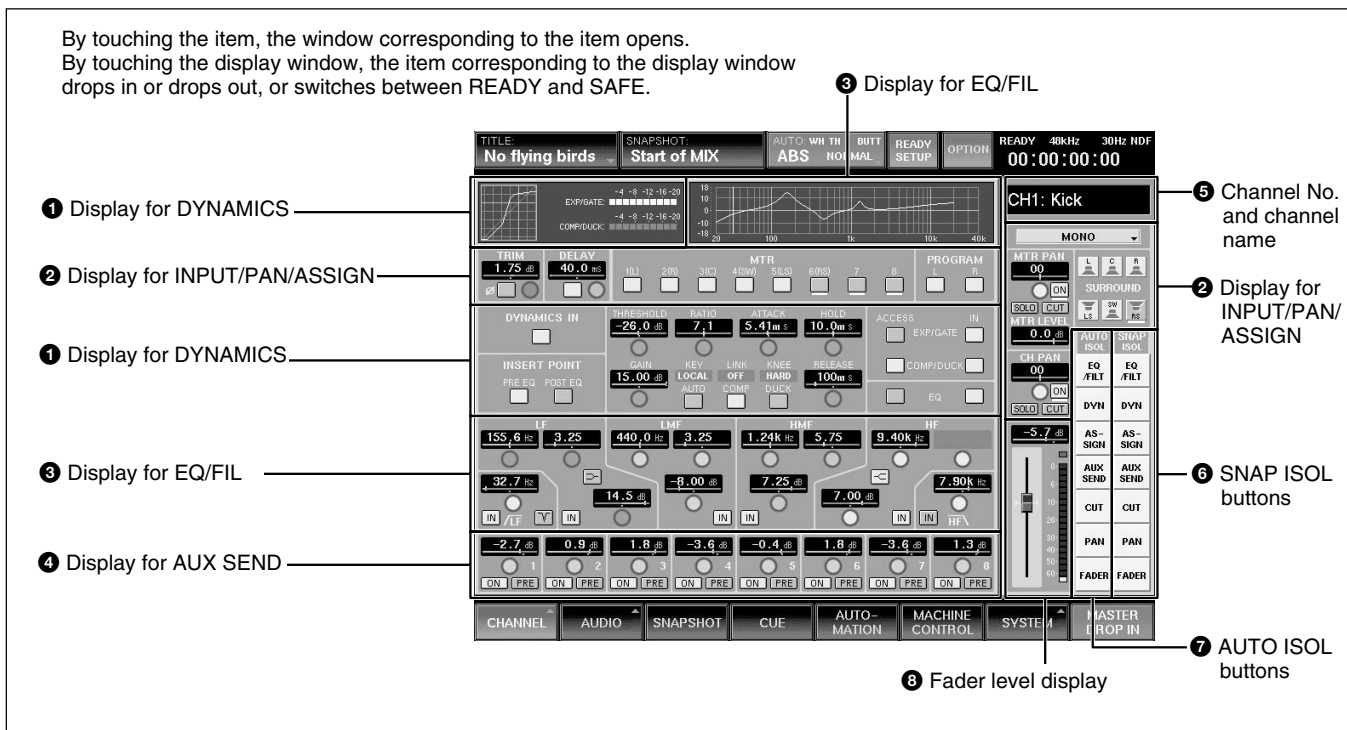
## CHANNEL Window

To open this window, touch the CHANNEL button on the bottom menu bar to open the menu, then select [CHANNEL].

channel specified by pressing the ACCESS button on the channel strip. When you operate the controls and faders, the control moves are displayed on the window.

The CHANNEL window displays the status of the

By touching the item, the window corresponding to the item opens.  
By touching the display window, the item corresponding to the display window drops in or drops out, or switches between READY and SAFE.



### 1 Display for DYNAMICS

Displays the following: Dynamic ON/OFF, dynamic insert point, active dynamics page (GATE/EXPANDER or COMPRESSOR/DUCKING), linking, graph and gain.

### 2 Display for INPUT/PAN/ASSIGN

Displays the following: MONO/STEREO/SURROUND channel mode in MTR bus master, AUX SEND master and AUX return (in stereo mode, even channel and odd channel are linked, and in surround mode six channels linked in one unit), trim, phase inversion, delay ON/OFF and delay value, MTR bus and PROGRAM bus assignments, Panning and surrounding panning status, automation ISOLATE status.

### 3 Display for EQ/FIL

Displays the following:

- Frequency and ON/OFF of the high -cut filter and low-cut filter and NOTCH mode of the low-cut filter

- Frequency, ON/OFF, Q, level, characteristics (peaking/shelving type) of the HF, HMF and LF sections.

### 4 Display for AUX SEND

Displays the following: Send level to the AUX SEND bus. Pan when the AUX SEND bus is set in stereo mode, ON/OFF and prefader/postfader.

### 5 Channel No. and channel name

Touching channel name allows you to change the channel number.

### 6 SNAP ISOL (isolate) buttons

These buttons show the functions that are active or isolated from snapshot recall.

### 7 AUTO ISOL (automation isolate) buttons

These buttons show the functions that are active or isolated from dynamic automation.

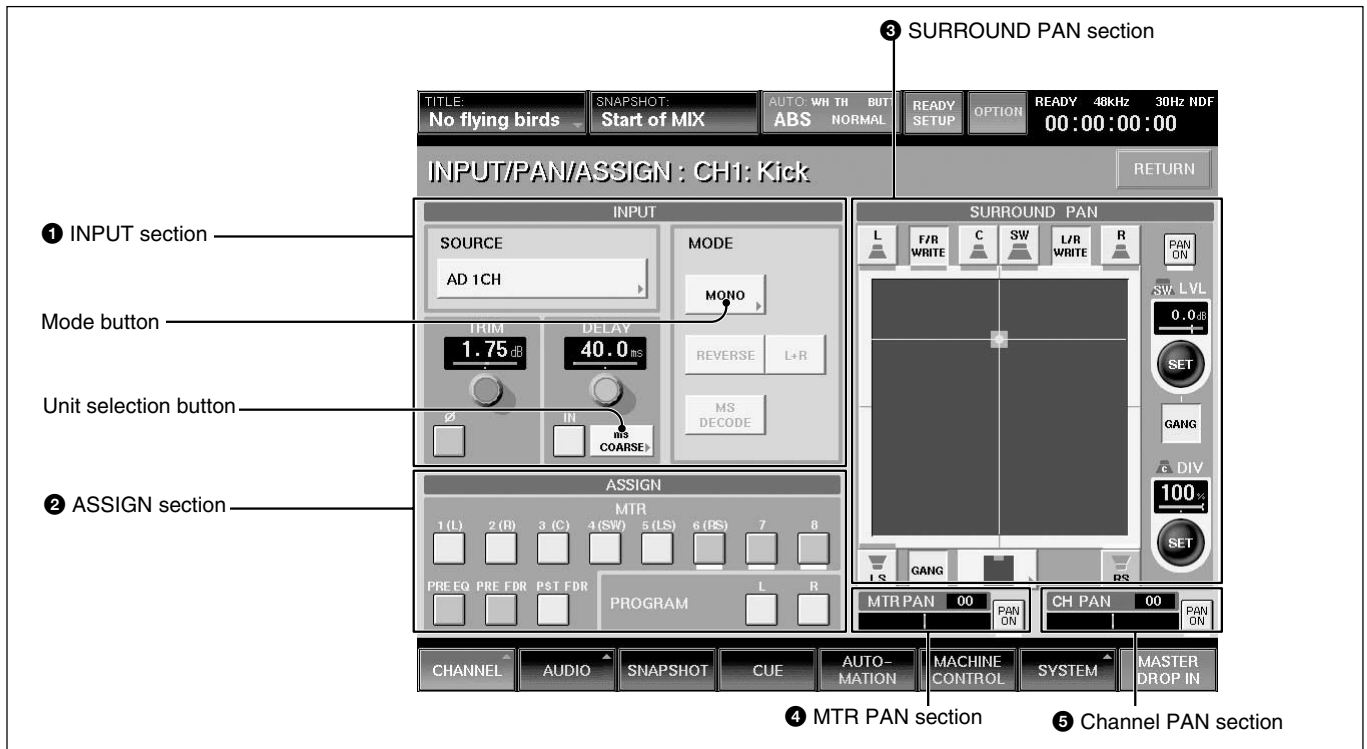
### 8 Fader level display

Displays the fader level.

## INPUT/PAN/ASSIGN Window

To open this window, touch the CHANNEL button on the bottom menu bar, then select “INPUT/PAN/ASSIGN.” Or, when the CHANNEL window is displayed, touch any point of the INPUT/PAN/ASSIGN display.

When setting a channel in STEREO or SURROUND mode, the link settings on the COPY/LINK window turn to active.



### 1 INPUT section

#### SOURCE section

Displays the source currently selected.

To change the source, touch this button to open the list of available inputs.

#### TRIM section

**Display window:** Displays the input gain trim setting that are controlled by the TRIM control on the Parameter Setting panel.

**Ø button:** Touching this button inverts the phase of the input signal. In its normal state, the button color is gray. When the phase is inverted, this button color changes to green.

#### Delay section

**Display window:** Displays the setting of the programmable delay amount that is set by the DELAY control on the Parameter Setting panel.

**IN button:** Touch this button to turn the delay ON or OFF on the window. In its normal state (when the delay is off), the button color is gray. When the delay is on, this button changes to green.

**Unit selection button:** Touch to change the delay mode to WORD, mS or FRAME units. Each unit has two adjusting modes: NORMAL mode (adjusts in minimum units) and COARSE mode (rough adjustment).

When you change the delay mode, if the displayed mode and actual delay amount are in different units, a yellow  $\Delta$  appears over the unit display in the window.

#### MODE section

**MODE button:** Touching this button selects either MONO, STEREO link or SURROUND link mode. When STEREO is displayed on the button, adjacent channels, (i.e. channels 1 and 2), operate in stereo mode.

When SURROUND is displayed on the button, the channels operate in surround mode, by linking six channels in one unit.

Example of the channel assignment of CH 1 to CH 6;

CH 1→L                      CH 2→R  
 CH 3→C (center)      CH 4→SW (sub woofer)  
 CH 5→LS (rear left) CH 6→RS (rear right)

## Menu Windows

The REVERSE, L + R and MS DECODE buttons are active, only when the STEREO button is lit.

In STEREO or SURROUND mode, the linking set in the COPY/LINK window turns to active.

**REVERSE button:** When this button is lit, the right and left are swapped.

**L + R button:** When this button is lit, the right and left channels are mixed (L + R signal).

**MS DECODE button:** Inserts a middle/side decoder to convert the odd numbered channel (M - Mid-capsule) and even numbered channel (S - Side-capsule) to Left and Right. This is only active in STEREO mode.

These signals are converted to right and left signals before the channel faders.

To control the left and right decoding, adjust the input gain of M/S using the TRIM control on the Parameter Setting panel.

### 2 ASSIGN section

**MTR button and PROGRAM button:** Touching these buttons results in the output of the displayed channel being assigned to the corresponding the MTR or PROGRAM buses.

**PRE EQ button:** When this button is ON, the signal before the equalizer/dynamics circuit is sent to the MTR bus.

**PRE FDR button:** When this button is ON, the signal before the channel fader is sent to the MTR bus.

**PST FDR button:** When this button is ON, the signal after the channel fader is sent to the MTR bus.

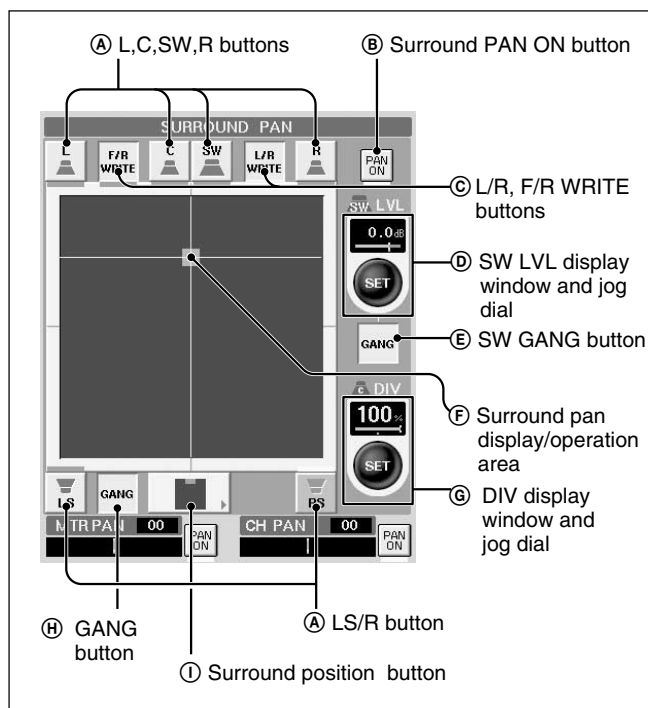
If the PRE EQ button, the PRE FDR button or the PST FDR button is selected, the remaining two buttons are cleared.

### 3 SURROUND PAN section

To switch the MTR busses to Surround, the SURROUND button must be "ON" in the MTR BUS MODE section of the MISC SETUP window.

When the unit is in normal mode, this section is not active. For channels set to stereo link, the surround panning for the right channel and left channel can be set individually.

*For detailed information on the MISC SETUP window, see page 94.*



**A) L (left), C (center), R (right), LS (left surround), RS (right surround) and SW (sub woofer) buttons**  
These have the same functions as the MTR button on the unit.

The assignment of MTR busses to the surround send outputs is as follows.

- L button → MTR 1 bus
- C button → MTR 3 bus
- R button → MTR 2 bus
- LS button → MTR 5 bus
- RS button → MTR 6 bus
- SW button → MTR 4 bus

**B) Surround PAN ON button**

Touch this button to switch the surround panning to ON or OFF.

**C) L/R, F/R WRITE buttons**

Touch these buttons to switch the surround pan to READY and to DROP IN/OUT of automation WRITE. L/R and F/R pan can be set separately. When both of them are set to READY, they are switched to DROP IN/OUT simultaneously.

**D) SW LVL (sub woofer level) window and jog dial**

In surround mode, by touching the jog dial on the window, you can set sub woofer level using the jog dial on the unit. Touching the SW LVL window allow you to set the mode to READY and to DROP IN/OUT of automation WRITE.

### Ⓔ SW (sub woofer) GANG button

When this button is lit, the sub woofer level is linked with the MTR send level.

### Ⓕ Surround pan display/operation area

In surround mode, you can set the surround panning in this area. Touch this area, then drag the icon to the desired point.

### Ⓖ DIV (divergence) display window and jog dial

In surround mode, by touching the jog dial on the window, you can set the divergence value (ratio of the divergence among L channel, center channel and R channel) using the jog dial on the unit. The set divergence value is displayed on the DIV window.

Touching the DIV display window allows you to set the mode to READY and to DROP IN/OUT of automation WRITE.

### Ⓗ GANG (MTR pan gang) button

When this button is lit, the panning level of the MTR bus is linked with the MTR send level.

### Ⓘ Surround position button

Touch this button to access the nine preset surround pan positions. You can set the surround position by selecting the icon corresponding to the desired type from the list.

### ④ MTR PAN section

Displays the panning operation status of the MTR bus. Touch this button to set the MTR pan on or off.

### ⑤ Channel PAN section

Displays the channel panning operation status. Touch this button to set the channel pan on or off.

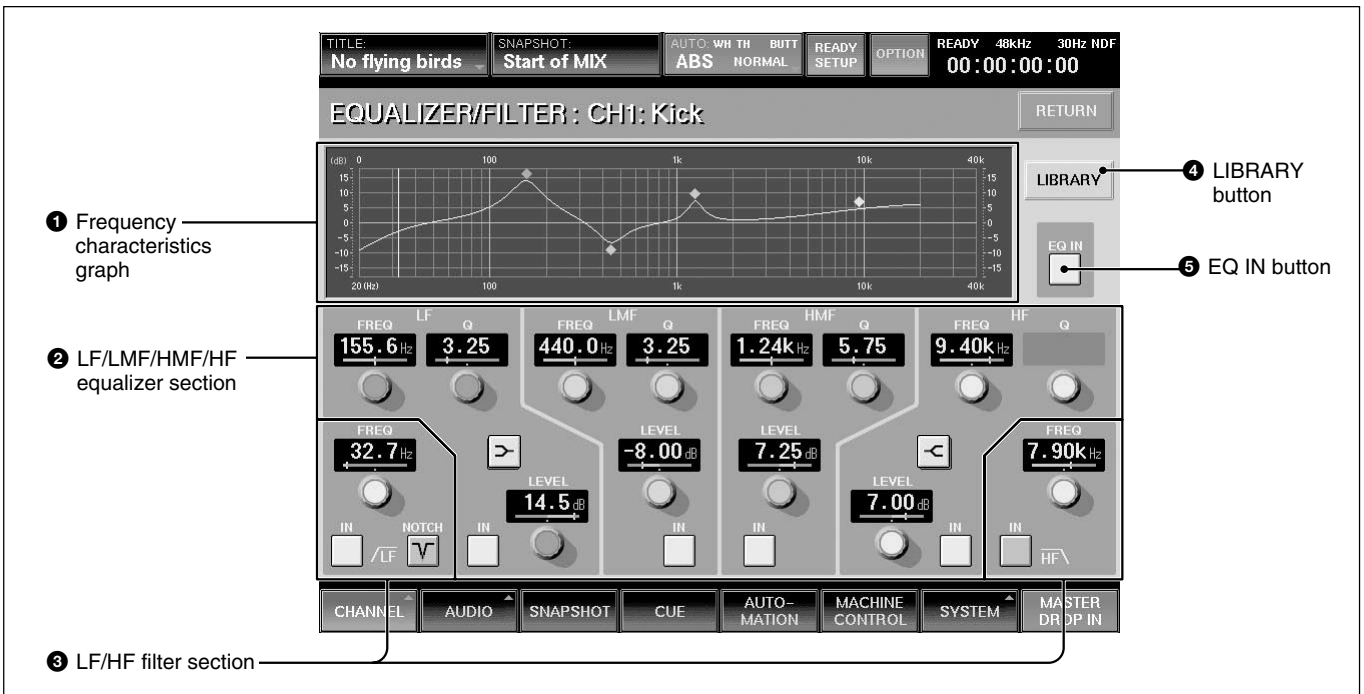
## EQUALIZER/FILTER Window

To open this window, perform one of the following:

- Touch the CHANNEL button on the bottom menu bar, then select “EQUALIZER/FILTER.”
- When the CHANNEL window is displayed, touch any point on the EQ/FIL display section.
- While AUTO ZOOM is ON in MISC SETUP window, the EQUALIZER/FILER window opens automatically, when you activate the equalizer by touching the EQ IN button on the panel.

This window displays the settings on the EQUALIZER section on the Parameter Setting panel of the unit.

If you touch the display window where the numerical value is displayed, that item is set to READY status or automation DROP IN/OUT, during automation operation.



### 1 Frequency characteristics graph

Displays the total frequency characteristics of the equalizers and filters.

### 2 LF/LMF/HMF/HF equalizer section

Displays Q, the level and in/out status of each equalizer section.

**FREQ (frequency) display:** Displays the frequency set by the FREQ control.

**Q display:** Displays the setting of the Q control.

**LEVEL display:** Displays the level set by the LEVEL control on the unit.

**IN button:** This button puts each equalizer section in and out of the circuit.

▷/◁(equalizer characteristics selector) buttons:

These buttons change the equalizer section from a peaking equalizer to a shelving type of equalizer.

### 3 LF/HF filter section

#### FREQ (cut-off frequency) display

Displays the filter’s cut-off frequency set by the FREQ control on the EQUALIZER section on the Parameter Setting panel.

**IN button:** This button puts the filter in and out of circuit.

**NOTCH button (only for low-cut filter):** This button turns notch mode ON or OFF. When this button is lit, the low-cut filter acts as a notch filter.

### 4 LIBRARY button

Touch this button to open the EQ LIBRARY window.



### 5 EQ (equalizer) IN button

Touch this button to turn on or off the whole equalizer section. This button is linked to the IN button above and to the right of the EQUALIZER section on the Parameter Setting panel.

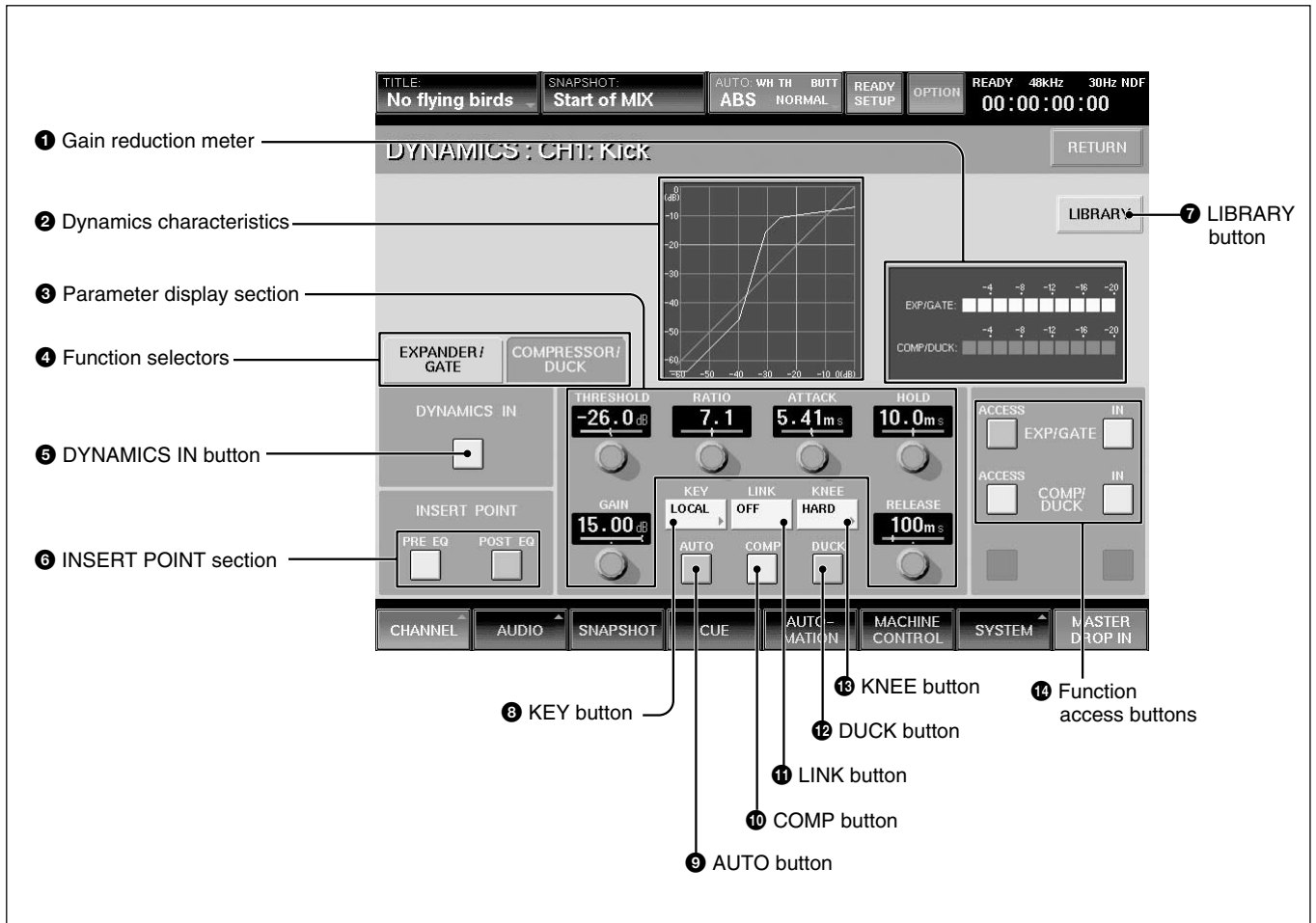
### Note

Even if the IN button in each equalizer section is lit, the equalizer/filter sections are not turned on if this button is not lit. Filters are turned on or off regardless of the EQ IN button setting.

## DYNAMICS Window

- To open this window, perform one of the following:
- Touch the CHANNEL button on the bottom menu bar, then select “DYNAMICS.”
  - When the CHANNEL window is displayed, touch any point on the DYNAMICS display.
  - While the AUTO ZOOM is ON in MISC SETUP window, the DYNAMICS window opens automatically, when you activate the GATE or COMPRESSOR by touching the GATE IN button or COMPRESS/DUCK IN button on the panel.

This window displays the settings of the DYNAMICS section on the Parameter Setting panel. If you touch the display window where the numerical value is displayed, that item is set to READY status or automation DROP IN/OUT, during automation operation.



## 1 Gain reduction meter

Displays the gain reduction of both dynamics sections.

## 2 Dynamics characteristics

Displays the graph of the dynamics gain transfer function.

## 3 Parameter display section

Displays the following values of the Expander/Gate or Compressor/Ducking selected by the Function selectors 4.

- THRESHOLD: Threshold
- RATIO: Ratio
- ATTACK: Attack time
- HOLD: Hold time
- RANGE: Range of the gate (In compressor mode, gain )
- RELEASE: Release time

## 4 Function selectors

Switch the function to be displayed on the Parameter display section 3 between Expander/Gate and Compressor/Duck.

**EXPANDER/GATE tab:** Touch this tab to select the Expander/Gate function.

**COMPRESSOR/DUCK tab:** Touch this tab to select the Compressor/Duck function.

## 5 DYNAMICS IN button

This puts the dynamics in the signal path.

### Note

Even if the IN button of the function access buttons 12 is selected, the dynamics are not in the circuit if the DYNAMICS IN button is out.

## 6 INSERT POINT section

Switches the insertion point of the dynamics between PRE/POST EQ.

**PRE EQ button:** Touch this button to insert the dynamics processing before the equalizer.

**POST EQ button:** Touch this button to insert the dynamics processing after the equalizer.

## 7 LIBRARY button

Touch this button to open the DYN LIBRARY window.

## 8 KEY button

Touch this button to open the sub menu that allows you to select the key signal for the dynamics processing.

**LOCAL:** Uses its own channel signal as the key signal.

**1 to 24 (or 25 to 48):** Uses the signal of the selected channel as the key signal. The audio channel is selected using two-level channel lists.

**AUX:** Uses the AUX SEND signal as the key signal. The setting of this button is common to EXPAND/GATE and COMPRESSOR/DUCK.

## 9 AUTO (auto gain) button

When the COMP/DUCK is set to use as a COMPRESSOR, this button appears to turn ON/OFF the AUTO GAIN MAKEUP function. By setting the button ON, the COMPRESSOR setting is ignored, and the input gain is automatically set so that the unit provides a -20 dBFS output when a stable -20 dBFS signal is input.

## 10 12 EXP (expander) and GATE buttons (when the EXPANDER/GATE tab 4 is selected), COMPRESSOR and DUCK buttons (when the COMPRESSOR/DUCK tab 4 is selected)

Select the parameters to be displayed on the Parameter display section 3 between the expander (when the EXP button is selected) and gate (when the GATE button is selected).

When the COMPRESSOR/DUCK tab 4 is selected, 8 becomes the COMPRESSOR button and 9 becomes the DUCK button.

## 11 LINK button

Touch this button to link the dynamics settings of this channel to the adjacent channel to the right.

The setting of this button is common to EXPAND/GATE and COMPRESSOR/DUCK.

### Note

Adjacent channels are placed in different pages, such that CH 24 and CH 25, CH 48 and CH1, cannot be linked. Also, AUX SEND 1 to 4 and AUX SEND 5 to 8 can be linked. However, AUX SEND 4 and AUX SEND 5 cannot be linked.

### 13 KNEE button

This button is effective only when the compressor mode is selected.

Touch this button to open the sub menu. Then select the knee amount. If SOFT is selected, the dynamics transfer function has a smooth curve at the threshold point.

### 14 Function access buttons

These buttons have the same function as the ACCESS button and IN button on the DYNAMICS section on the Parameter Setting panel.

**ACCESS button of EXPAND/GATE (or COMP/DUCK):** Touch these buttons to switch the display between controlling the EXP/GATE and COMP/DUCK.

**IN button of EXPAND/GATE (or COMP/DUCK):** Touch these buttons to activate the parameters of the expander/gate (or compressor/ducking) displayed on the Parameter display section ③.

## AUX SEND Window

To open this window, touch the CHANNEL button on the bottom menu bar, then select “AUX SEND.” Or, when the CHANNEL window is displayed, touch any point on the AUX SEND display. This window allows you to display and control the settings for AUX SEND 1 to 8.

The ON button and PRE button on the window have the same function as those of the AUX SEND section on the Parameter Setting panel.

By touching the display window where the numerical values are displayed, these items are switched to READY or DROP IN/OUT of automation WRITE, during automation operation.

The screenshot shows the AUX SEND window for CH1: Kick. At the top, there are fields for TITLE (No flying birds), SNAPSHOT (Start of MIX), and various control buttons (ABS, NORMAL, READY SETUP, OPTION). The main area displays 8 channels with gain values: 1 (-2.7 dB), 2 (0.9 dB), 3 (1.8 dB), 4 (-3.6 dB), 5 (-0.4 dB), 6 (1.8 dB), 7 (-3.6 dB), and 8 (1.3 dB). Below each gain value are ON and PRE buttons. Callout 1 points to the gain display area, callout 2 points to the ON button, and callout 3 points to the PRE button. At the bottom, there is a menu bar with buttons: CHANNEL, AUDIO, SNAPSHOT, CUE, AUTO-MATION, MACHINE CONTROL, SYSTEM, and MASTER DROP IN.

# Menu Windows

## ❶ Display window

Displays the levels of the AUX SEND 1 to 8 busses. The level of the AUX send bus is adjusted using AUX SEND controls 1 to 8 on the AUX SEND section on the Parameter Setting panel.

When the AUX send bus is set to stereo mode, the display windows of the even channels indicate the panning/balance settings.

To set the AUX SEND bus to stereo mode, select the MASTER button on the PAGES section and then access one of the AUX SEND faders. On the display, select STEREO using the channel mode select button on the CHANNEL window.

## ❷ ON buttons 1 to 8

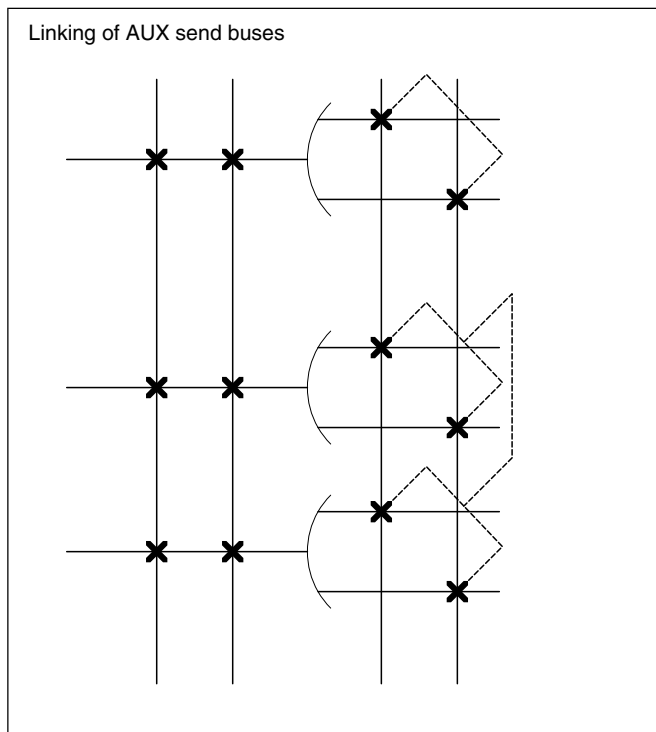
Touch the desired button and it turns green indicating it is on. The accessed channel is sent to the corresponding AUX send bus.

For busses set in stereo mode, the channels are switched ON/OFF by linking them as shown below.

## ❸ PRE (prefader) buttons 1 to 8

Touch the desired button and turns green to indicate PRE. The pre-fader signal of the channel is routed. When the button is routed, the post-fader signal is sent out.

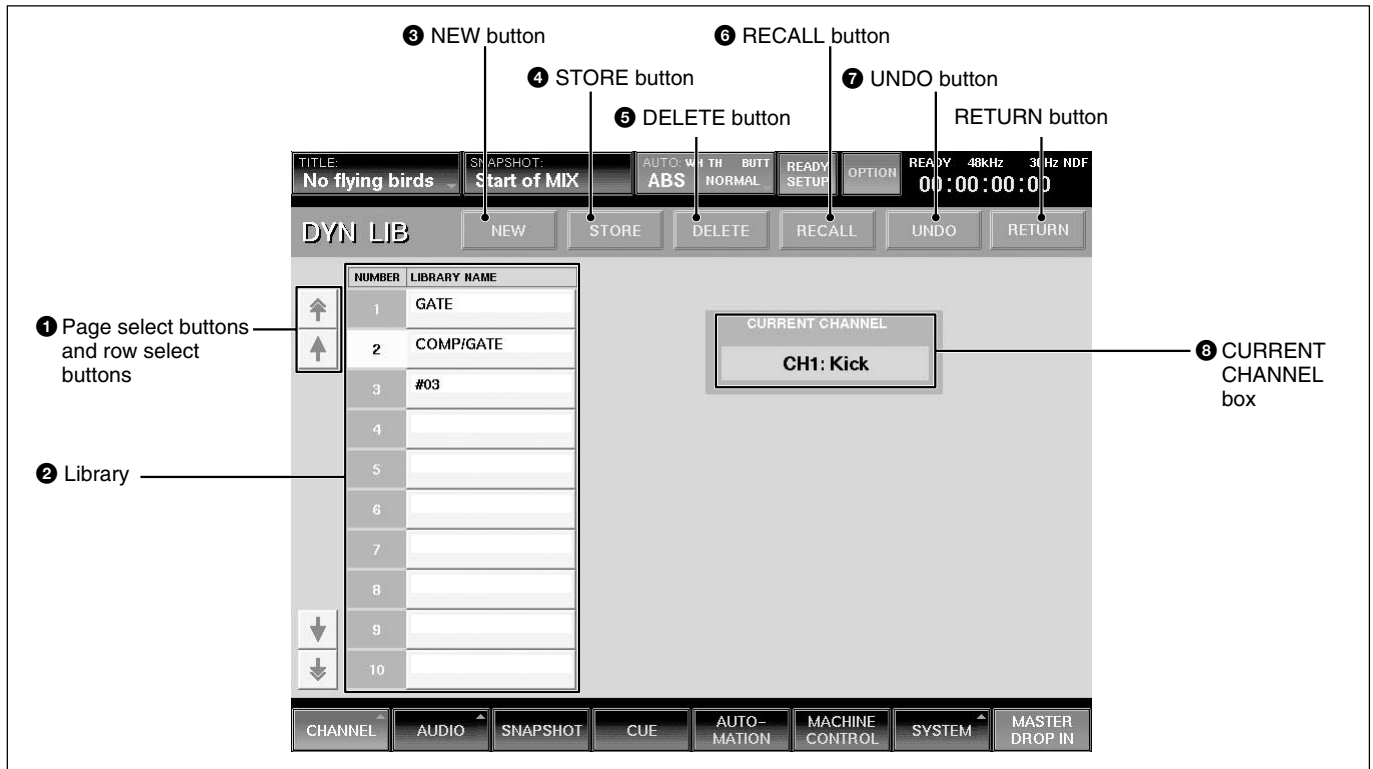
For busses set in stereo mode, the odd and even channels are linked, the PRE button of the even channel toggles the pan on and off.



## EQ LIBRARY and DYN LIBRARY Windows

To open the EQ LIBRARY (or DYN LIBRARY) window, touch the LIBRARY button in the EQUALIZER (or the DYNAMICS) window. In the LIBRARY windows, you can store or recall the equalizer settings (or the dynamics setting) for each channel.

As an example of the LIBRARY window, the following description is based on the DYN LIBRARY window. You will find the same information applies to the EQ LIBRARY window.



### 1 Page select buttons and row select buttons

Touch the  $\uparrow$  ( or the  $\downarrow$  ) button to move the library list upwards (or downwards) by 10 rows. Touch the  $\uparrow$  ( or the  $\downarrow$  ) button to move the list upwards (or downwards) one row at a time.

### 2 Library

Displays the number and name of the library stored. By touching the NUMBER row, you can select the library to be handled. When you touch a LIBRARY NAME box, the KEYBOARD window opens so you can enter or change the library name.

### 3 NEW button

Touch this button to save the equalizer (dynamics) setting of the current channel as a new library. The lowest number among the unused numbers is assigned to the new library and it is temporarily named “# + xx” (xx is the library number). This new library is displayed in the LIBRARY NAME box.

### 4 STORE button

Touch this button to save the equalizer (dynamics) setting of the current channel to the library selected.

### 5 DELETE button

Touch this button to delete the library selected.

### 6 RECALL button

Touch this button to recall the library selected on the current channel.

### 7 UNDO button

Touch this button to cancel the STORE or DELETE operation previously performed.

### 8 CURRENT CHANNEL box

Displays the channel currently accessed. STORE and RECALL are executed for the channel displayed in the box.

## AUDIO OVERVIEW Window

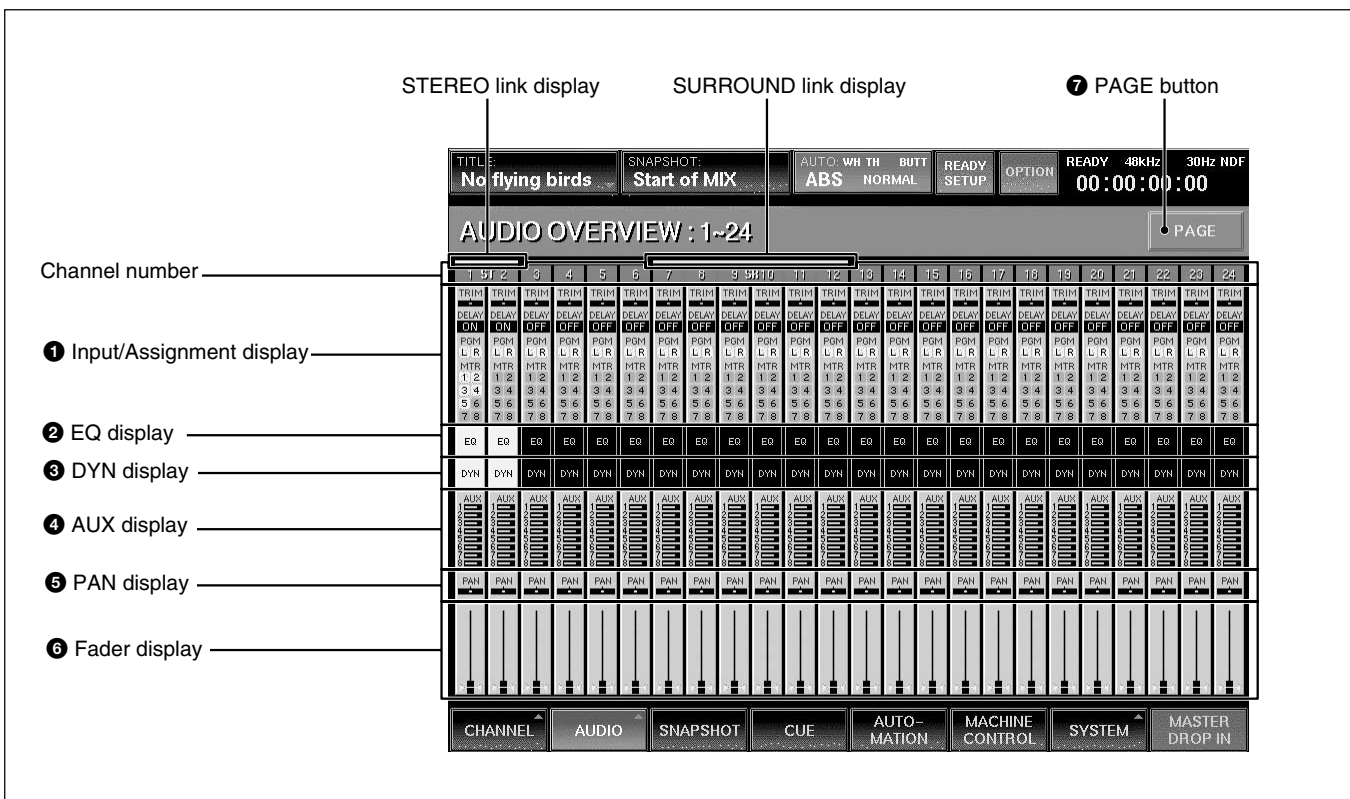
To open this window, touch the AUDIO button on the bottom menu bar, then select “OVERVIEW”.

This window allows you to see the settings performed on the unit at glance.

To change channels from the page for CH 1 to CH 24 to the page for CH 25 to CH 48, touch the PAGE button on the window.

This window shows the active/inactive status of the equalizer, dynamics, MTR routing and AUX SEND routing.

When you touch the display, the window of the corresponding channel (where detailed settings of the touched item is available) appears.



### 1 Input/Assignment display

Displays the following items:

- TRIM: Trim ON/OFF
- DELAY: Delay ON/OFF
- PGM: Status of assignment to the program buses L and R
- MTR: Status of assignment to the MTR bus

### 2 EQ display

Displays whether the equalizer/filter circuit is in or out.

### 3 DYN display

Displays whether the dynamics circuit is in or out.

### 4 AUX display

Displays the AUX send level.

### 5 PAN display

Displays the pan position. When PAN is off, this is displayed in gray.

### 6 Fader display

Displays the fader level.

### 7 PAGE button

Changes the channel page to be displayed on the AUDIO OVERVIEW window.

## AUDIO FADER Window

To open this window, touch the AUDIO button on the bottom menu bar, then select “FADER.”

This window allows you to see the fader levels of channels 1 to 48, the MTR busses, the AUX send busses and the AUX return busses.

Touching the display of the desired channel opens the CHANNEL window of the corresponding channel.

The screenshot displays the 'AUDIO FADER' window. At the top, it shows 'Channels 1 to 48'. Below this is a control bar with fields for 'TITLE: No flying birds', 'SNAPSHOT: Start of MIX', 'AUTO: ABS', 'M TH: NORMAL', 'BUTT: READY SETUP', 'OPTION', 'READY: 48kHz 30Hz NDF', and a timer '00:00:00:00'. The main area is a grid of faders. The first two rows represent channels 1-24 and 25-48, with numerical values displayed above each fader. The third row represents MTR busses (MTR1-MTR8) and AUX busses (AUX1-AUX8). The bottom of the window features a menu bar with buttons: CHANNEL, AUDIO, SNAPSHOT, CUE, AUTO-MATION, MACHINE CONTROL, SYSTEM, and MASTER DROP IN. Two callouts on the left side point to a knob and a horizontal line on a fader, labeled '1 Fader operation level' and '2 Automation level' respectively.

### 1 Fader operation level

The position of the knob indicates the level of the fader currently set on the unit.

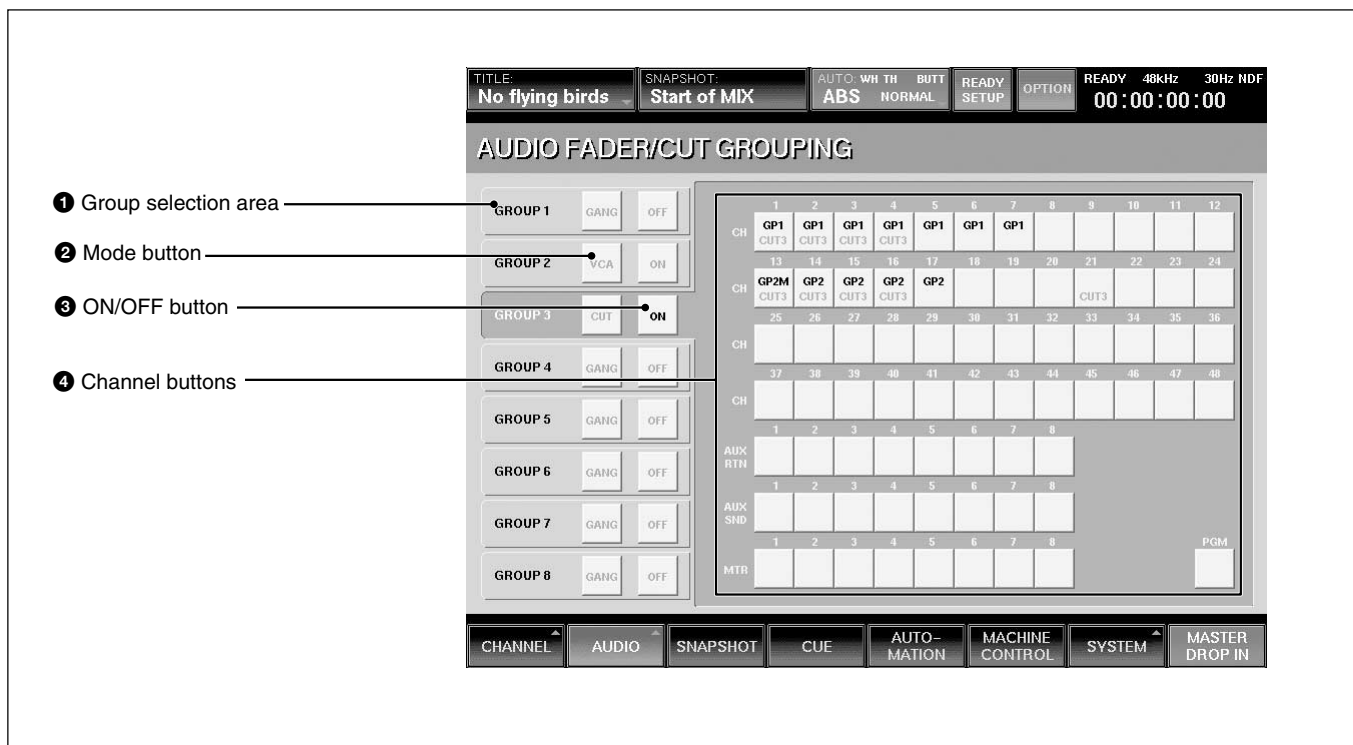
### 2 Automation level

The position of the horizontal line indicates the level stored in the automation data.

## AUDIO FADER/CUT GROUPING Window

To open this window, touch the AUDIO button on the bottom menu bar, then select “FADER GROUPING.” This window allows you to set the fader group and cut

group for channels 1 to 48, the MTR busses, the AUX send busses and the AUX return busses.



### 1 Group selection area

Touch the corresponding button to select the desired group.

### 2 Mode button

Each time you touch this button, the button display changes to GANG, VCA, or CUT, in order.

**GANG:** Keeps the relative level among faders when touching faders on the unit.

**VCA:** When moving the fader assigned as the master fader, the difference between the original level and the current level is added to the level of the slave fader as offset. Slave faders don't move when the master fader is moved.

**CUT:** The cut switches of the channels belonging to the corresponding group operate together.

The cut group is set independently from the fader group.

### Note

To select the mode of the group, remove all channels from the group before attempting to select the mode.

### 3 ON/OFF button

Selects whether the corresponding group is active.

### 4 Channel buttons

One channel can belong to one fader group and one cut group. Channels cannot belong to multiple fader groups or cut groups.

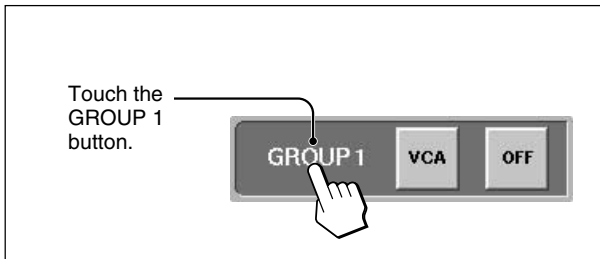
On the channel button, the upper number indicates the fader group number and the lower number indicates the cut group number.



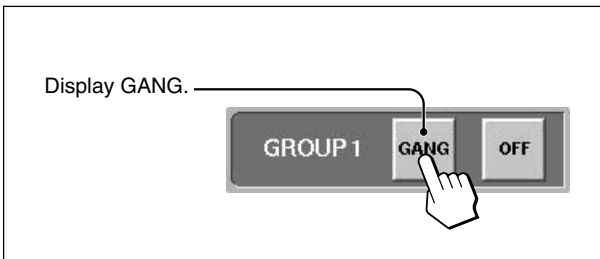
To assign or remove the channel to or from the group, proceed as follows.

## Setting the GANG fader group

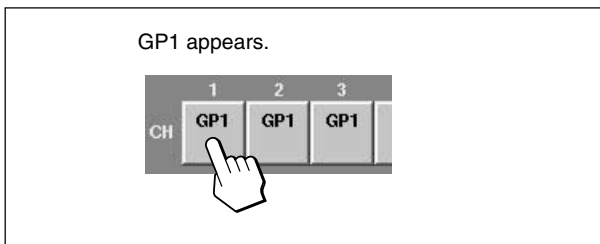
- 1 Touch the desired group button.  
Example: To set GP 1 to the GANG mode:



- 2 Touch the mode button for the group selected in step 1 until GANG appears on the mode button.



- 3 Touch the channel button(s) that you wish to assign to the GANG group.  
Channel(s) already assigned to other GANG or VCA groups must be unassigned before being available for selection.  
The group number appears on the channel button.



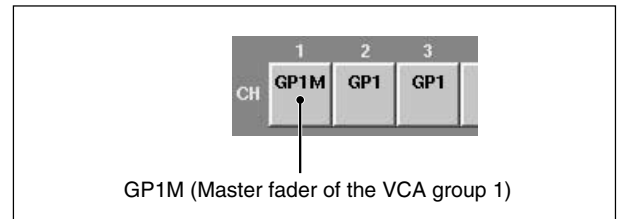
To remove the channel from the group, touch this button(s) on which the group number is displayed. The group number disappears and that channel is removed from the group.

## Setting the VCA fader group

Perform the following operation after step 1 described in “Setting the GANG fader group”.

- 2 Touch the mode button corresponding to the group selected in step 1 until VCA appears on the mode button.

- 3 Touch the channel button that you wish to assign to the VCA group.  
When there are channels that are not assigned to the group, the fader of the channel that you touched first becomes the master fader. GP1M is displayed on the channel button assigned to the master fader.



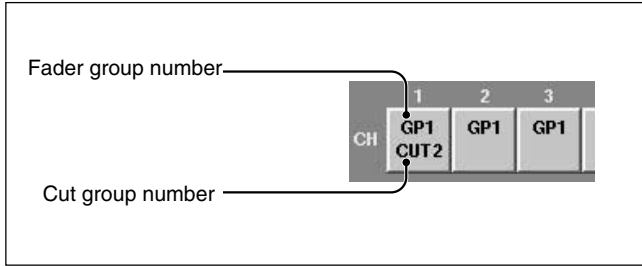
To remove the channel(s) from the group, touch this button(s) on which the group number is displayed.

In the VCA group, if you touch the channel button assigned to the master fader, the master fader becomes a slave fader of the group, and the group has no master fader. The fader which you touch first after removing the former master fader becomes the new master fader of the group.

## Setting the CUT group

You can set the CUT group with the same operation procedure as the ones for setting the GANG group except that you have to display CUT on the mode button in step 2.

The cut group number is displayed on the lower part of the channel button.

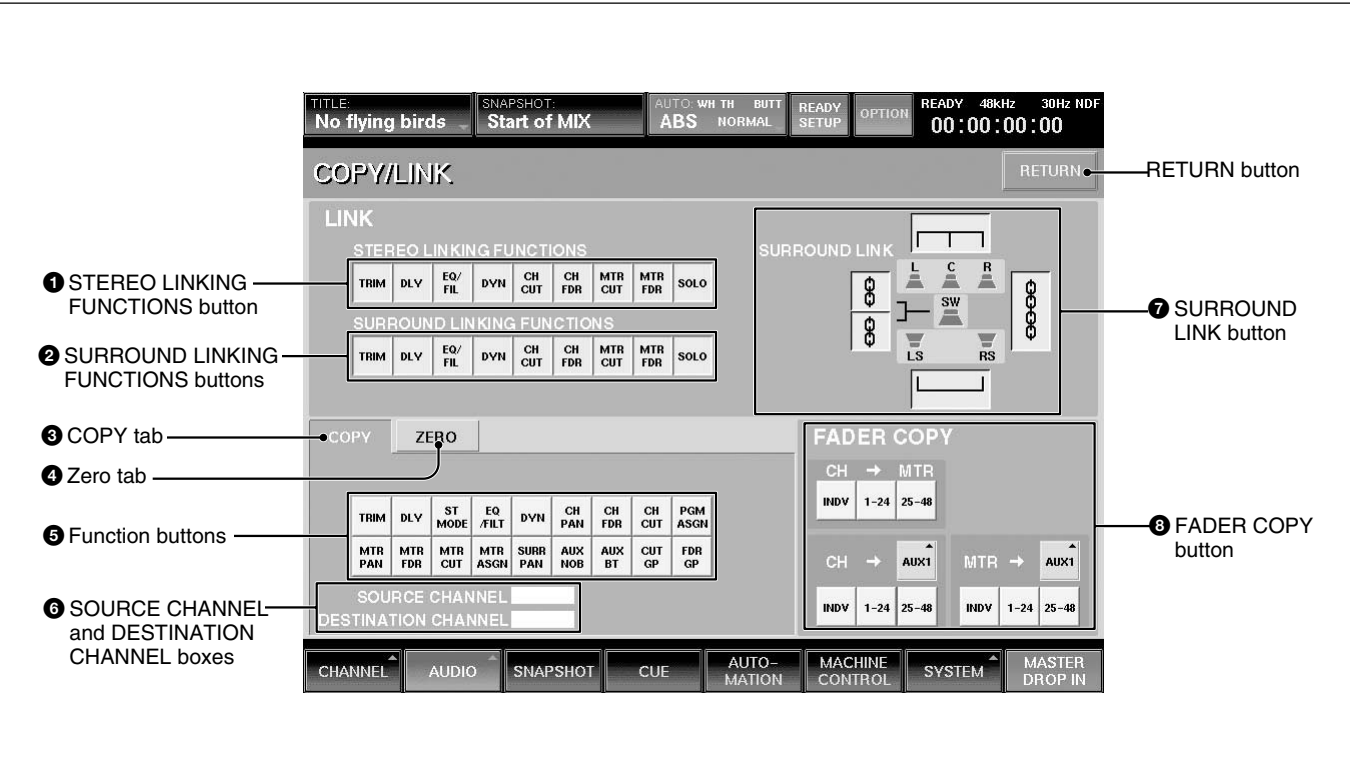


## Clearing the group

- 1 Touch the group button corresponding to the group that you wish to clear.
- 2 Touch all channel buttons assigned to the group selected in step 1.

# COPY/LINK Window

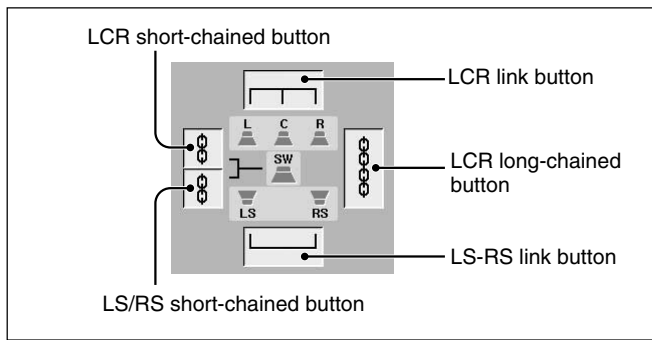
- To open this window, perform one of the following:
- Touch the AUDIO button on the bottom menu bar, then select “COPY/LINK.”
  - On the control panel, hold the ACCESS button of the source channel down one second or more.



## LINK section

Linking is set using the following buttons. The current status is displayed in the TITLE box on the top menu.

- 1 STEREO LINKING FUNCTIONS and 2 SURROUND LINKING FUNCTIONS buttons**  
The buttons grouped under STEREO LINKING FUNCTIONS select the functions to be linked in stereo mode. The buttons grouped under SURROUND LINKING FUNCTIONS are for surround mode. Desired functions can be selected simultaneously.
- 7 SURROUND LINK buttons**  
In surround mode, the functions lit by the 2 SURROUND LINKING FUNCTIONS buttons are linked in the channels selected below.



- LCR link button:** When this button is lit, the L, C, and R channels are linked.
- LS-RS link button:** When this button is lit, the LS and RS channels are linked.
- LCR short-chained button:** When this button is lit, the L/C/R and SW channels are linked.
- LS/RS short-chained button:** When this button is lit, the LS, RS, and SW channels are linked.

LCR long-chained button: When this button is lit, the L/C/R, LS, and RS channels are linked.

When the chain buttons are lit, the associated channels are linked automatically.

When both of the LCR short- and LS/RS short-chained buttons are lit, the LCR long-chained button is lit automatically.

## Note

Though the LINK button and the KEY button on the DYNAMICS window are not included in the linking functions in this window, they will be simultaneously set to READY/DROP IN, if the DYNA button is lit in the SURROUND LINKING FUNCTIONS group.

## COPY section

### 3 COPY tab

When this tab is selected, you can select the subject to be copied, and the source and destination channels of the copy.

### 5 Function buttons

Touch and light the desired function buttons.

- TRIM
- DLY (delay)
- ST MODE
- EQ/FIL
- DYN (dynamics)
- CH PAN
- CH FDR (CH fader)
- CH CUT
- PGM ASGN (PGM assign)
- MTR PAN
- MTR FDR (MTR fader)
- MTR CUT
- MTR ASGN (MTR assign)
- SURN PAN (surround pan)
- AUX NOB (AUX knob)
- AUX BT (AUX button)
- CUT GP (cut group)
- FDR GP (fader group)

### 6 SOURCE CHANNEL and DESTINATION CHANNEL boxes

When the copy is executed, the SOURCE CHANNEL box shows the source channel, and the DESTINATION CHANNEL box shows the last channel to which the copy was executed.

## Copying the setting of the channel

- 1 Touch the COPY tab on the window.
- 2 Select the desired functions to be copied by touching the Function buttons on the window.
- 3 Hold the ACCESS button of the source channel down for 1 second or more.

The ACCESS button blinks showing that the console is in copy mode.

- 4 While the source channel ACCESS button is blinking, press the ACCESS button of the destination channel.

The settings of the source channel subject selected in step 2 are copied.

The input assignments set in the AUDIO INPUT ROUTING window are not copied.

- 5 Press the ACCESS button of the source channel.

The blinking ACCESS button stops blinking and stays lit, and the copying operation is cancelled.

## To copy the settings to a channel on a different page

You can copy the settings of channels 1 to 24 to channels 25 to 48 and vice versa.

- 1 Hold the ACCESS button of the source channel down for 1 second or more.

The ACCESS button blinks.

- 2 Press the other Page selectable button in the Assignment panel.

The pages are switched. The source channel disappears from the Channel strip panel. However, the settings of the source channel remain effective.

- 3 Press the ACCESS button of the destination channel.

The settings of the source channel are copied.

#### 4 Press the original Page selectable button.

The channels of the original page appear again.

#### 5 Press the ACCESS button of the source channel.

The blinking ACCESS button stops blinking and stays lit and the copying operation is cancelled.

#### Notes

- When the source channel is on a different page, if you press the ACCESS button without knowing it, the settings of the source channel are copied to that channel. Make sure to clear the copying function of the source channel.
- While using the automation, you cannot perform a copying operation. Also, switching on the automation will cancel active copying.
- The channel name is copied regardless of the function button selection ⑤.

### ZERO section

On the DMX-R100, a “Zero” function is provided for setting the specified values to the desired value.

#### ④ Zero tab

When this tab is selected, you can set the “Zero” functions which means they will return to their default settings.

#### ⑤ Function buttons

When the Zero tab is lit, the “Zero” function can be executed on the following subjects. Touch and light the desired buttons.

- |                           |               |           |
|---------------------------|---------------|-----------|
| • TRIM                    | • DLY (delay) | • ST MODE |
| • EQ/FIL                  | • DYNA        | • CH PAN  |
| • CH FDR (CH fader)       |               | • CH CUT  |
| • PGM ASGN (PGM assign)   |               | • MTR PAN |
| • MTR FDR (MTR fader)     |               | • MTR CUT |
| • MTR ASGN (MTR assign)   |               |           |
| • SURN PAN (surround pan) |               |           |
| • AUX NOB (AUX knob)      |               |           |
| • AUX BT (AUX button)     |               |           |

The CUT GP (cut group) and FDR GP (fader group) buttons are deactivated when using the “Zero” function.

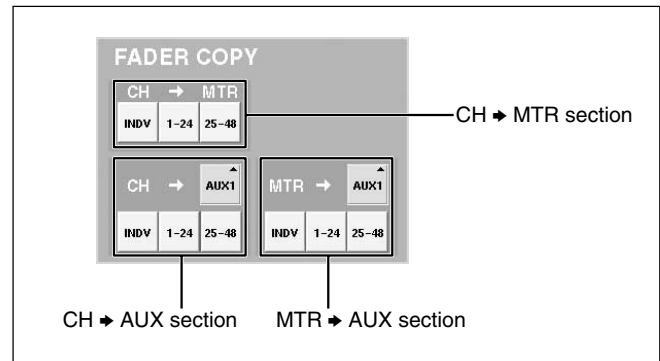
### Executing the “Zero” function

- 1 Touch the Zero tab on the window.
- 2 Select the functions to be executed using the “Zero” function by touching the Function buttons on the window.
- 3 Press and release the ACCESS button of the channel to perform the “Zero” function.

The DESTINATION CHANNEL box shows the last channel to which the “Zero” function was executed.

### FADER COPY section

The desired fader level, PAN and CUT of the channels or the MTR sends can be copied to the MTR send, AUX send or other channel faders.



**CH → MTR section:** The source channel faders are selected by the INDV, 1-24 or 25-48 buttons. The destination faders are the MTR send faders of the selected channels.

**CH → AUX section:** The source channel faders are selected by the INDV, 1-24 or 25-48 buttons. The destination faders are the AUX send faders selected by the AUX buttons.

**MTR → AUX section:** The source channel faders are the MTR send faders of the channel selected by the INDV, 1-24 or 25-48 buttons. The destination faders are the AUX send faders selected by the AUX buttons.

**AUX button:** Selects the destination AUX send faders.

**INDV button:** To select the desired source fader individually, touch to light this button (green). Then, on the control panel, press and release the desired channel (or MTR) ACCESS buttons down. The source

fader level is copied to the MTR or AUX fader.

**1-24 and 25-48 buttons:** To select the desired source faders 1-24 or 25-48 as a group, touch and light either button. Then, the faders selected are copied to the MTR or AUX faders.

---

### Executing the fader copy

#### To copy the channel fader of CH 1 to the AUX 3 send fader

- 1** Touch the AUX button of the CH → AUX section, then select AUX3 on the sub-menu.
- 2** Touch the INDV button of the CH → AUX section.  
The button lights in green.
- 3** Hold the ACCESS button of CH 1 on the panel.

#### To copy all channel faders of CH 1 to CH 24-to the MTR send faders

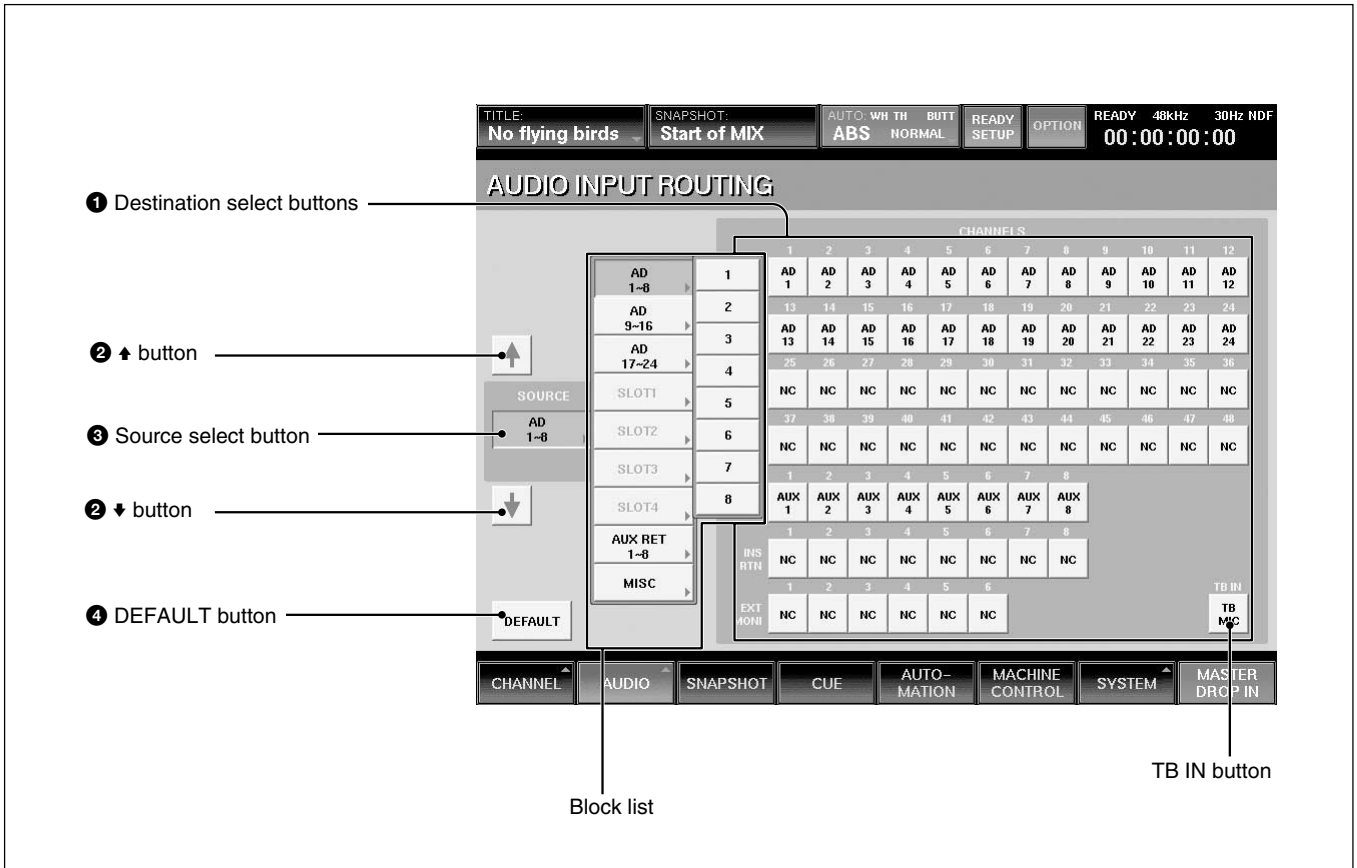
- 1** Touch the 1-24 button of the CH → MTR section.
- 2** Confirm the dialog information, then touch “OK” on the dialog box.

#### Note

When the destination AUX buses are set to MONO mode, the fader copy is executed, regardless of the pan setting.

## AUDIO INPUT ROUTING Window

To open this window, touch the AUDIO button on the bottom menu bar, then select “INPUT ROUTING.” This window allows you to assign the desired input signal to the desired channel.



### 1 Destination select buttons (CH-1 to CH-48, AUX RET 1 to 8, INS RET 1 to 8, EXT MONI 1 to 6, TB IN)

The large display area shows all of the available destinations for the input matrix. Once an input signal has been selected, routing is achieved by pressing the appropriate destination button.

The talkback microphone can also be routed.

By selecting the TB IN button, the input signal selected by the source select button is used as the talkback signal. For example, if you assign LINE IN CH24 to the TB IN button, the input of the LINE IN CH 24 can be used as the talkback signal.

### 2 ↓/↑ buttons

Touch the ↑ button to select the block over the currently selected block.

Touch the ↓ button to select the block below the selected block.

### 3 Source select button

Displays the selected source block.

Touch this button to open the block list in the ► direction. Touch the desired block button to open the list of the sources included in the block.

The list of source blocks and the source list of each source block are as follows:

- Blocks for AD 1 to 8 to AD 17 to 24  
Each block has the source lists for 8 inputs.
- Blocks for SLOT 1 to SLOT 4  
Each block has the source lists for 8 channels.
- AUX RET block  
This block has the source list for 8 channels.
- MISC block  
Includes the lists of 2TR1-L, 2TR1-R, 2TR2-L, 2TR2-R, NC (NO CONNECTION) and TB MIC. Touching NC opens NC8 (the adjacent 8 channels are simultaneously set to NO CONNECTION).

The display of the block list buttons corresponding to SLOT 1 to SLOT 4 depends on the board inserted.

- When the DMBK-R101 is inserted: SLOTxADC1 to 8
- When the DMBK-R102 is inserted: SLOTxDAC1 to 8
- When the DMBK-R103 is inserted: SLOTxDIO1 to 8
- When the DMBK-R104 is inserted: SLOTxSRC1 to 8
- When the DMBK-R105 is inserted: SLOTxINSERT1 to 8
- When the DMBK-R106 is inserted: SLOTxADAT1 to 8
- When the DMBK-R107 is inserted: SLOTxTDIF1 to 8

#### **4** DEFAULT button

Touch this button to reset the setting of the input matrix to the default.

---

### Assigning the input source

- 1** Touch the source select button.  
The block list opens.
- 2** Touch the desired source block on the block list.  
The list of the sources included in the block opens.

If you want to assign all 8 sources to 8 adjacent processing channels, go to step 4.

- 3** Touch the desired source on the source list.
- 4** Touch the desired destination select button to select the destination processing channel to which the source signal is to be routed.  
The source signal selected in step 3 is automatically routed to the destination processing channel. When you want to assign a complete block, simply select the block as is in step 2, then touch the first destination processing channel.  
Example: When you select ANALOG IN 1 to 8 as a block, if you touch this button of CH-3, the source signals of ANALOG IN 1 to 8 are routed to CH-3 to CH-10 respectively.

---

### Resetting the input matrix to the default setting

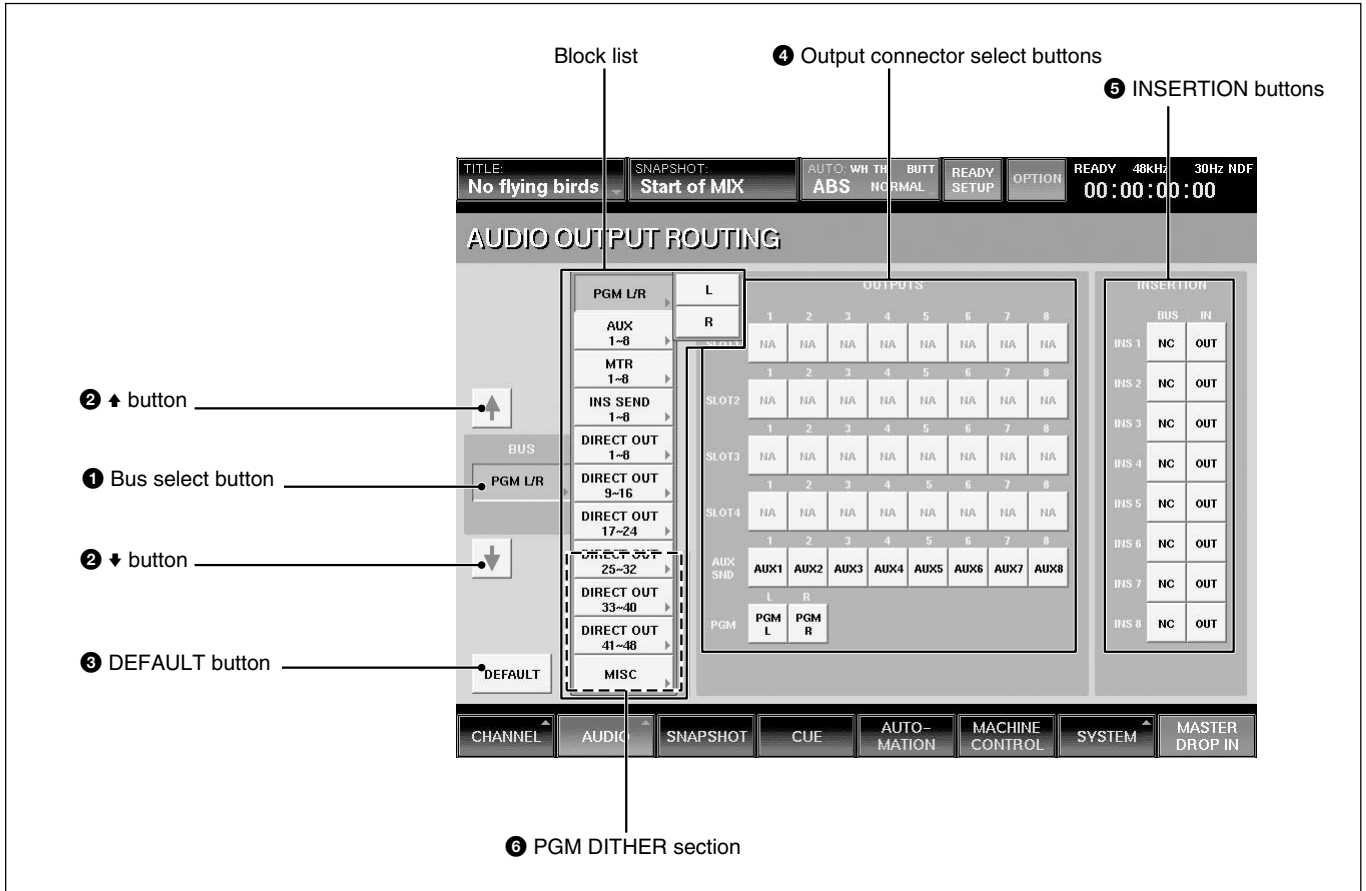
- 1** Touch the DEFAULT button.  
A dialog box appears.
- 2** Touch [OK] in the dialog box.  
The setting of the input matrix is reset to the default setting.

*For detailed information on the contents of the default setting, see page 101.*



## AUDIO OUTPUT ROUTING Window

To open this window, touch the AUDIO button on the bottom menu bar, then select “OUTPUT ROUTING”. This window allows you to assign the bus output signal to the desired output connector.



### 1 Bus select button

Displays the block (or bus) currently selected. Touch this button to open the list for the bus output blocks in the ► direction. Touch the desired bus block to open the list of the busses included in the block.

The list of the block and its output bus list are as follows:

- PGM L/R  
L and R
- AUX  
This block has 8 busses (AUX 1 to 8).
- MTR  
This block has 8 busses (MTR 1 to 8).
- INS SEND  
This block has 8 busses (Insert Send 1 to 8).
- DIRECT OUT 1 to 8 to 41 to 48  
Each block has 8 outputs.

### • MISC

This block has NC (NO CONNECTION), CR MONITOR 1 to 6 and ST MONITOR L/R. Touching NC opens NC 8 (adjacent 8 outputs are simultaneously set to NO CONNECTION).

### 2 ↓/↑ buttons

Touch the ▲ button to select the block above the selected block.  
Touch the ▼ button to select the block below the selected block.

### 3 DEFAULT button

Touch this button to reset the setting of the output matrix to the default.

## ④ Output connector select buttons

### SLOT 1 to 4, AUX SEND 1 to 8, PGM, MONI OUT

Selects the output connector to which the bus block is routed.

Each of SLOT 1 to SLOT 4 has 8 output connectors.

## ⑤ INSERTION buttons

**BUS buttons:** Assigning an insert to an output bus is a 2 stage process. Firstly the output buses are assigned to internal INSERTION circuits (assigned by selecting each mono output bus from the block list and then touching the selected INSERTION button), second each insertion must be assigned to an output and an input on the two routing pages.

**IN button:** When IN is displayed on the button by touching it, the bus insert is active.

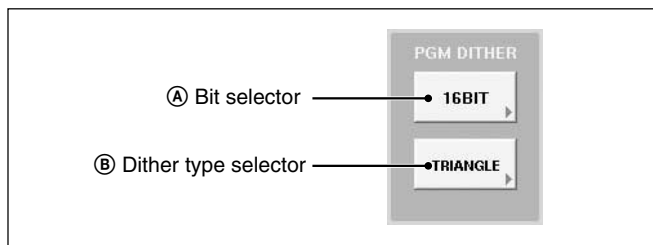
When OUT is displayed on the button, the insertion send signal is still output. However, the insertion return signal is not used.

### Note

These inserts can be only assigned to bus signals (PGM master, AUX SEND master and MTR master busses).

## ⑥ PGM DITHER section

The PROGRAM busses have the dither function.



### A Bit selector

**OFF:** The dither is not activated.

**24 BIT:** Processed by dithering, the signal is rounded off to 24 bits.

**22 BIT:** Processed by dithering, the signal is rounded off to 22 bits.

**20 BIT:** Processed by dithering, the signal is rounded off to 20 bits.

**18 BIT:** Processed by dithering, the signal is rounded off to 18 bits.

**16 BIT:** Processed by dithering, the signal is rounded off to 16 bits.

By selecting the most suitable dither for the effective bit value on the recording machine, the unit allows you

to derive an extremely accurate level of signal processing. For example, a 16 BIT setting is recommended for making a master tape for a CD, and a 20 BIT setting is recommended for recording on a digital tape recorder with 20 bit recording capabilities.

### B Dither type selector

**TRIANGLE:** Use this position (recommended) for best performance.

**RECTANGLE:** The signal-to-noise ratio can sometimes be improved with this setting.

## Assigning the bus

- 1 Touch the bus select button.  
The block list of the bus opens.
- 2 Touch the desired bus on the block list.  
The list of the busses included in the selected block opens.

To select the busses by the block, go to step 4.

- 3 Touch the desired bus on the bus list.
- 4 Touch the output connector button to route the bus signal.  
The bus signal selected in step 3 is routed to the output terminal selected in step 4.

You can route an entire output block to an adjacent set of output connectors by simply selecting the block and then touching the first output connector button.

**Example:** When you select MTR 1 to 8 as a block, if you touch this button of SLOT 1, the bus signals of MTR 1 to 8 are routed to SLOT 1 to SLOT 8 respectively as a single action.

## Resetting the output matrix to the default setting

- 1 Touch the DEFAULT button.  
A dialog box appears.
- 2 Touch [OK] in the dialog box.  
The setting of the output matrix is reset to the default setting.

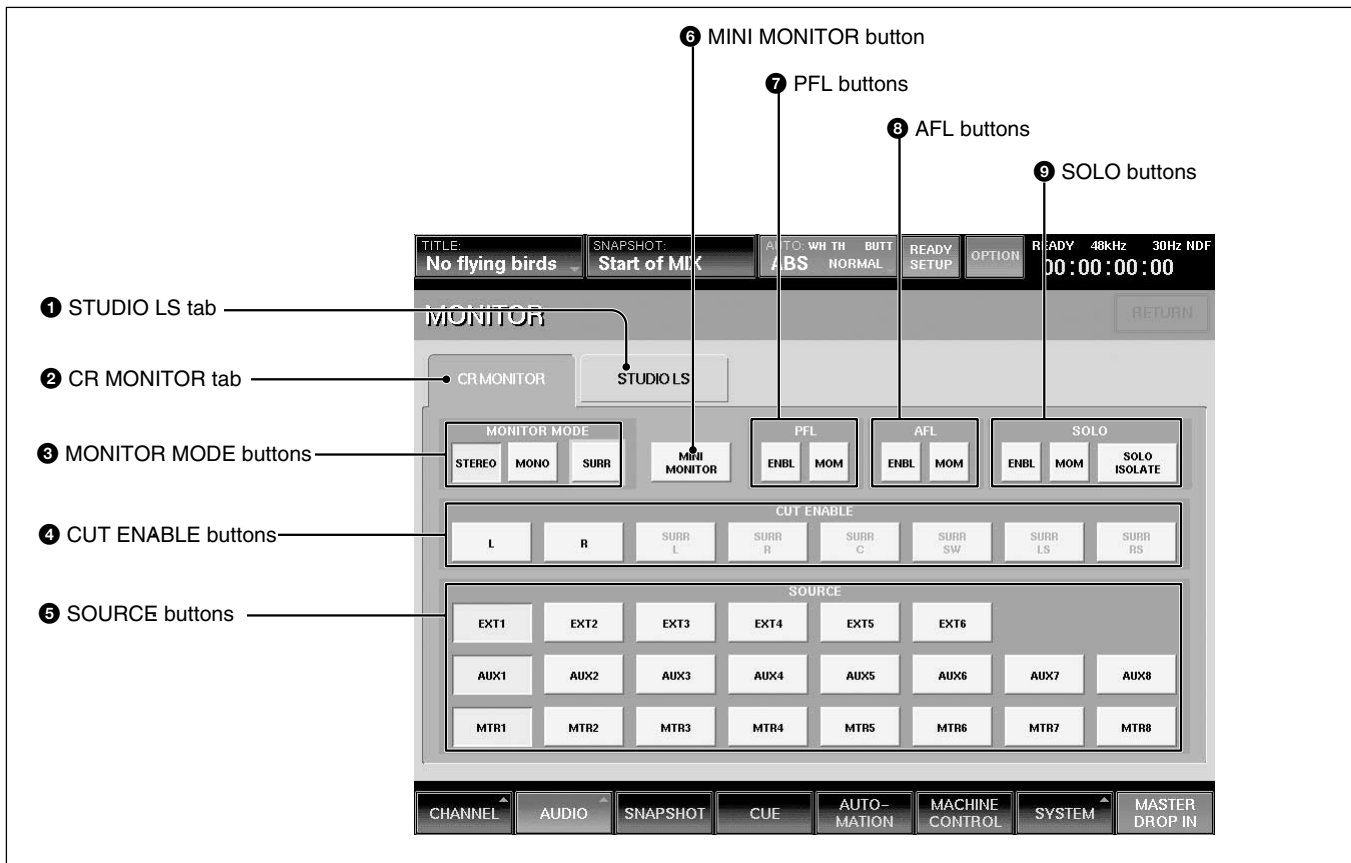
*For detailed information on the contents of the default setting, see page 101.*

## MONITOR Window

To open this window, perform one of the following:

- Touch the AUDIO button on the bottom menu bar, then select “MONITOR.”
- Press the SETUP button on the STUDIO LS section or the CR MONITOR section of the front panel.

This window allows you to control and check the settings for monitoring.



### 1 STUDIO LS (studio monitor) tab

Touch this tab to switch the display to the studio monitor section.

### 2 CR MONITOR (control monitor) tab

Touch this tab to switch the display to the control room monitor section.

### 3 MONITOR MODE buttons

Select the mode for the audio monitoring.

**STEREO button:** Touch this button to select the stereo mode.

The L signal (or the odd channel) is sent directly to the L channel of the monitor and the R signal (or the even channel) directly to the R channel of the monitor.

**MONO button:** Touch this button to select the monaural mode.

The L + R signal is sent to both the L and the R channels of the monitor.

**SURR (surround) button:** Touch this button to select the surround mode. The signal of MTR 1 to 6 or EXT 1 to 6 is sent to CR MONI 1 to 6 as the surround signal. This button is active only for CR MONITOR and you can turn it on and off regardless of the settings of the STEREO and MONO buttons.

## 4 CUT ENABLE buttons

You can cut the monitor signal by touching the CUT buttons in the CR MONITOR, STUDIO LS section on the panel, when the CUT ENABLE buttons, L, R, SURR L to SURR RS on the window are set to ON (lit green).

## 5 SOURCE buttons

These are used to select the signals for control room monitoring. Touch the CR MONITOR tab, then select the desired source for each EXT, AUX, MTR button on the SOURCE section of the Control room section, by touching the corresponding SOURCE buttons. For the STUDIO LS monitoring, touch the STUDIO LS tab. You can monitor the source selected on the SOURCE buttons.

**EXT 1 to EXT 6 buttons:** The input routing matrix allows you to assign any input signal to the EXT 1 to 6 channels. When you touch EXT 1 to 6 buttons, you can monitor the signals using the EXT button on the SOURCE section.

When the SURR button is set to ON, you can monitor the signals of EXT 1 to EXT 6.

When the SURR button is set to OFF, you can select one pair among pairs of 1/2, 3/4, and 5/6. It is possible to set both buttons to ON simultaneously.

For example, When the EXT 1 button is ON and the EXT 2 is OFF, by touching either the EXT 1 or EXT 2, a pair of EXT 1/2 is selected.

When EXT 1 and EXT 2 buttons are ON and the EXT 6 button is OFF, by touching the EXT 6 button, the pair of EXT 5 and EXT 6 is selected.

In the CR MONITOR section, you can monitor the selected source signals when the EXT button in the SOURCE section of the Control room section is selected.

In the STUDIO LS section, you can monitor the selected source signal by selecting the EXT 1 to 6 button and pressing the SETUP button on the front panel.

**AUX 1 to AUX 8 buttons:** These buttons allow you to monitor the AUX SEND busses and they operate like the EXT 1 to 6 buttons.

In the CR MONITOR section, you can monitor the signals when the AUX button in the SOURCE section of the Control room section is selected.

In the STUDIO LS section, you can monitor the signal when the SETUP button is selected in the STUDIO LS section on the Master panel.

**MTR 1 to MTR 8 buttons:** When the SURR button is set to ON, you can monitor the surround sound mixer's output from the MTR busses 1 to 6. MTR 7 and MTR 8 become one pair. You can select either MTR 1 to MTR 6 or a pair as MTR 7 and MTR 8. In this case, selecting either MTR 7 or MTR 8 selects the pair.

When the SURR button is set to OFF, these busses are selected by pairs of 2 channels as in the case of the EXT buttons.

In the CR MONITOR section, you can monitor the signals when the MTR button in the SOURCE section of the Control room section is selected.

In the STUDIO LS section, you can monitor the signal when the SETUP button is selected in the STUDIO LS section on the Master panel.

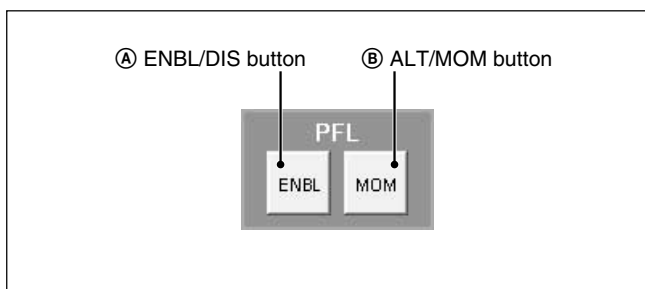
L and R of PGM are the defaults.

## 6 MINI MONITOR buttons

When the SURR button is set to OFF, you can change the output bus of the CR monitor from CR 1/2 to CR 5/6. This button is not active when the SURR button is set to ON.

## 7 PFL buttons

Select how the PFL signal is injected into the monitoring.



### A ENBL/DIS (enable/disable) button

This button enables (or disables) the PFL monitor logic to inject the signal into the control room or studio LS output.

When ENBL is displayed, the PFL signal is inserted into the monitor signal.

When DIS is displayed, the PFL signal is not inserted into the monitor signal.

**Ⓑ ALT/MOM (alternate/momentary) button**

This button works for both the studio and the control monitor signals.

Selects the operation of the SOLO button of each channel when PFL is set to SOLO mode.

When MOM (MOMENTARY) is displayed, the PFL signal is active only while you hold down a channel SOLO button.

When ALT is displayed, the SOLO buttons operate in a latching mode.

**Ⓒ AFL buttons**

Select how to insert the AFL signal into the monitor signal.

**Ⓐ ENBL/DIS (enable/disable) button**

When ENBL is displayed, the AFL signal is inserted into the monitor signal.

When DIS is displayed, the AFL signal is not inserted into the monitor signal.

**Ⓑ ALT/MOM (alternate/momentary) button**

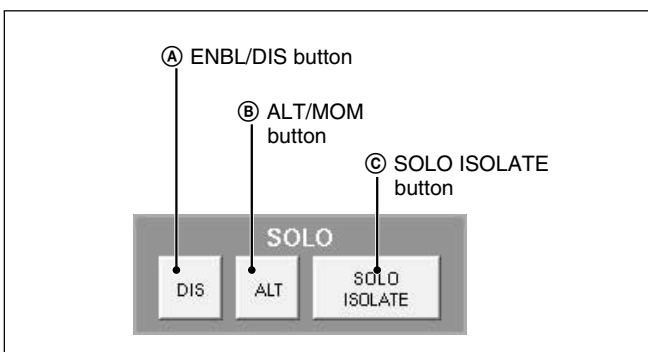
This button works for studio monitor signals and select the operation of the SOLO button when the mixer is set to SOLO mode.

When MOM (MOMENTARY) is displayed, the AFL signal is inserted only while you hold down the SOLO button on the unit.

When ALT is displayed, the AFL signal is toggled off and on each time you press the SOLO button.

**Ⓓ SOLO buttons**

Set the functions of SOLO.

**Ⓐ ENBL/DIS (enable/disable) button**

Selects whether the SOLO function is executed or not. When ENBL is displayed, the SOLO function is executed.

When DIS is displayed, the execution of the SOLO function is inhibited.

**Note**

In DMX-R100, the SOLO mode is the listening mode which cuts all other channels. So SOLO affects the monitor and other mixer outputs. The AFL and PFL are the non-destructive listening modes that do not affect the other mixer outputs.

This button works for both the studio and the control monitor signals, differentiating from AFL and PFL.

**Ⓑ ALT/MOM (alternate/momentary) button**

This button works for both studio and control monitor signals.

Selects the operation of the SOLO button of each channel when setting the SOLO mode to SOLO.

When MOM is displayed, the SOLO signal is inserted only while you hold down the SOLO button on the unit.

When ALT is displayed, the SOLO signal is toggled off and on each time you press the SOLO button.

**Ⓒ SOLO ISOLATE button**

SOLO ISOLATE allows you to isolate mixer channels from being CUT when the SOLO button is pressed on another channel. The SOLO ISOLATE is often used on channels that process signals from external effects devices.

To set a channel to SOLO ISOLATE, touch the SOLO ISOLATE button on the display and then press the channel SOLO buttons for the desired channels. Switching the SOLO ISOLATE display clears the isolated channels.

ISOL appears above the SOLO button on the CHANNEL window, when the SOLO button is isolated.

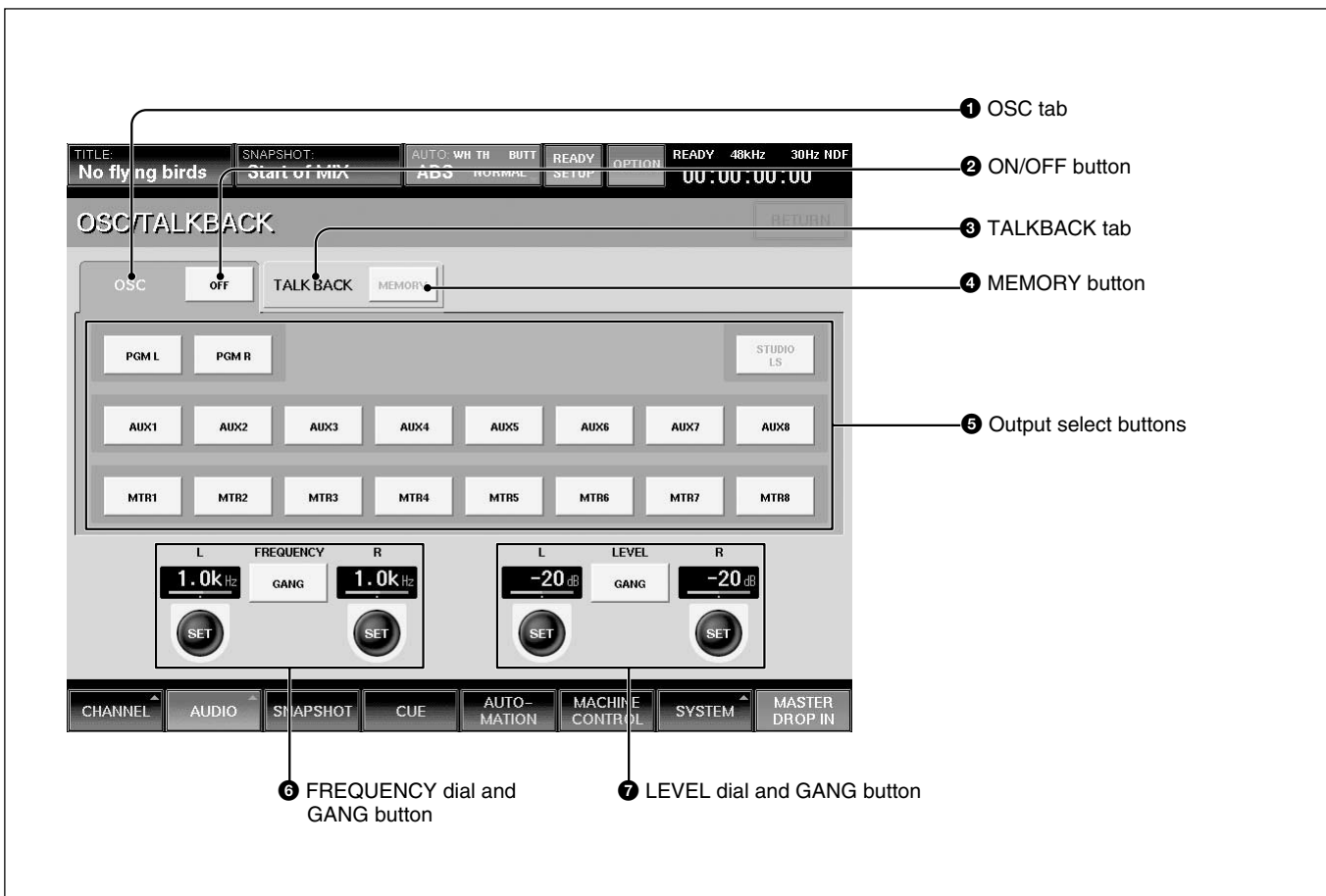
After you use the SOLO ISOLATE function, be sure to clear it for ordinary use, by touching the SOLO ISOLATE button again.

## OSC/TALKBACK Window

To open this window, perform one of the following:

- Touch the AUDIO button on the bottom menu bar, then select “OSC/TALKBACK”.
- Press the SETUP button on the Talkback panel on the unit.

This window allows you to operate oscillators and talkback functions.



### 1 OSC (oscillator) tab

Touch this tab to set up the oscillators.

### 3 TALKBACK tab

Touch this tab to set up the settings for talkback system.

### When selecting the OSC tab

When the OSC tab 1 is selected, buttons 2 and 5 act as setting buttons for oscillators.

### 2 ON/OFF (Oscillator signal output ON/OFF) button

When the button is ON, the oscillator signal is sent to the signal path. Select the signal path for the oscillator signal output using the Output select buttons 5.

When the button is OFF, the oscillator signal is not generated.

### ⑤ Output select buttons

Touch the corresponding button to select the desired signal path for the oscillator signal.

### ⑥ FREQUENCY dial and GANG button

**L /R dials:** Touch the dial so that you can set the frequency of the L or R oscillator signal using the jog dial on the unit. The set frequency is displayed on the display window.

**GANG button:** Touch the GANG button so that you can adjust the frequency of the L and R oscillator signals simultaneously.

### ⑦ LEVEL dial and GANG button

**L /R dials:** Touch the dial so that you can set the level of the L or R oscillator signal using the jog dial on the unit. The set level is displayed on the display window.

**GANG button:** Touch the GANG button so that you can adjust the level of the L and R oscillator signals simultaneously.

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## When selecting the TALKBACK tab

When the TALKBACK tab ③ is selected, buttons ④ and ⑤ act as control buttons for talkback signals. Buttons ⑥ are not affected.

### ④ MEMORY button

When the MEMORY button is on, the active/inactive status of the talkback output select buttons ⑤ are stored.

When you press MTR, PGM or AUX button on the talk-back panel, the talkback signal of the built-in microphone is sent to the corresponding bus stored in this section.

When the MEMORY button is off, the talkback signal is sent to the bus selected by the Output select button ⑤.

### ⑤ Output select buttons

Touch the desired output button to select the connector so that the talkback signal is sent to it.

### ⑦ LEVEL dial

Touch the R LEVEL dial so that you can adjust the level of the talkback signal using the jog dial on the unit.

## SNAPSHOT Window

To open this window, perform one of the following:

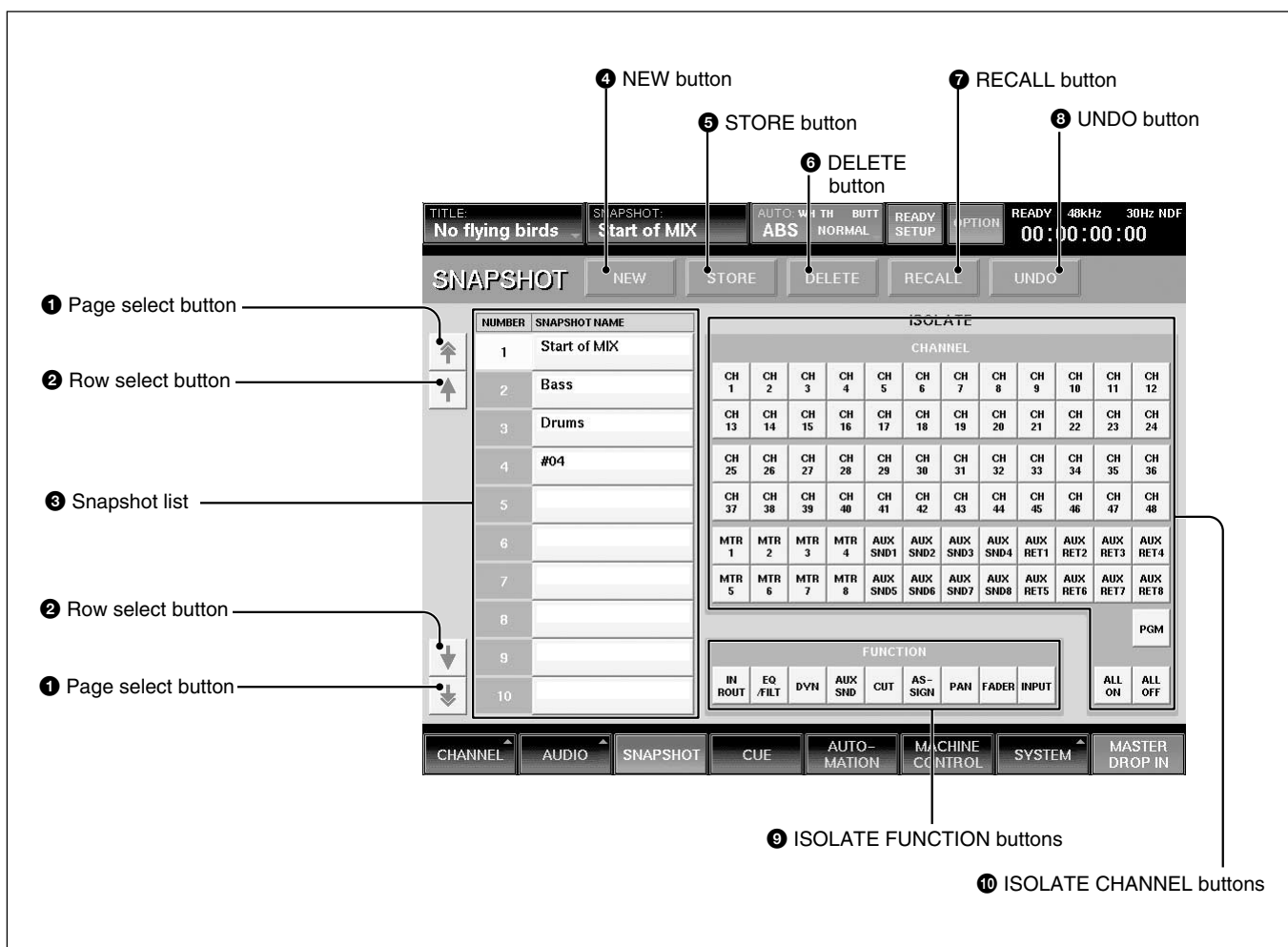
- Touch the SNAPSHOT button on the bottom menu bar.
- Press the SETUP button from among SNAPSHOT buttons on the Automation panel.

This window allows you to control and monitor the snapshot automation.

*For detailed information on snapshot automation, see page 104.*

### Note

When you switch on/off the prefader signal of AUX SEND or make switching pre/post signal of DYNAMICS while recalling a snapshot, the output signal may momentarily become the unity gain level.



### 1 Page select button

Touch to move the snapshot list 3 upwards or downwards by 10 rows.

### 2 Row select buttons

Touch to move the snapshot list 3 upwards or downwards one row at a time.

### 3 Snapshot list

Displays the number and name of the stored snapshots.

Touching the name opens the KEYBOARD window. You can enter a name for the snapshot data from the KEYBOARD window or by using the keyboard connected to the unit.

To select a snapshot, touch its number or name in the list.



**4 NEW button**

Touch this button to store the current mixer settings as a new snapshot data.

The lowest unused number is used for the new snapshot and it is temporarily named “# + xx” (xx is the snapshot number).

**5 STORE button**

Touch this button to store the current mixer setting to the snapshot data selected on the snapshot list **3**.

**6 DELETE button**

Touch this button to delete the snapshot selected on the snapshot list **3**.

**7 RECALL button**

Touch this button to recall the snapshot selected from the snapshot list **3**.

**8 UNDO button**

Touch this button to cancel the previous snapshot operation.

**9 ISOLATE FUNCTION (local) buttons**

When you touch the FUNCTION button, the corresponding function is not recalled when the SNAPSHOT RECALL is performed.

- IN ROUT button removes the INPUT ROUTER, Ø, TRIM, DELAY functions.
- EQ/FIL button removes the equalizer and filter functions.
- DYNA button removes the dynamics functions.
- AUX SND button removes the aux send functions.
- CUT button removes the cut functions.
- ASSIGN button removes the assign functions.
- PAN button removes the panning and surround panning functions.
- FADER button removes the fader and MTR send functions.
- INPUT button removes trim and delay settings of the input signal.

The following items are not used for the snapshot automation.

- Analog head amplifier
- Channel name
- Mono/stereo/surround mode on channels and master buses
- Gang settings between MTR pan and surround pan
- Gang settings between MTR send and SW LVL

- Fader grouping
- Output routing
- Monitor signal settings
- Oscillator/talkback signal settings
- MTR bus mode

The FUNCTION (local) buttons only affect SNAPSHOT RECALL. All of the mixer’s processing parameters are saved, regardless of the FUNCTION button status.

**10 ISOLATE CHANNEL buttons**

**CH 1 to PGM buttons:** Touch the button corresponding to the channel that you want to remove SNAPSHOT RECALL.

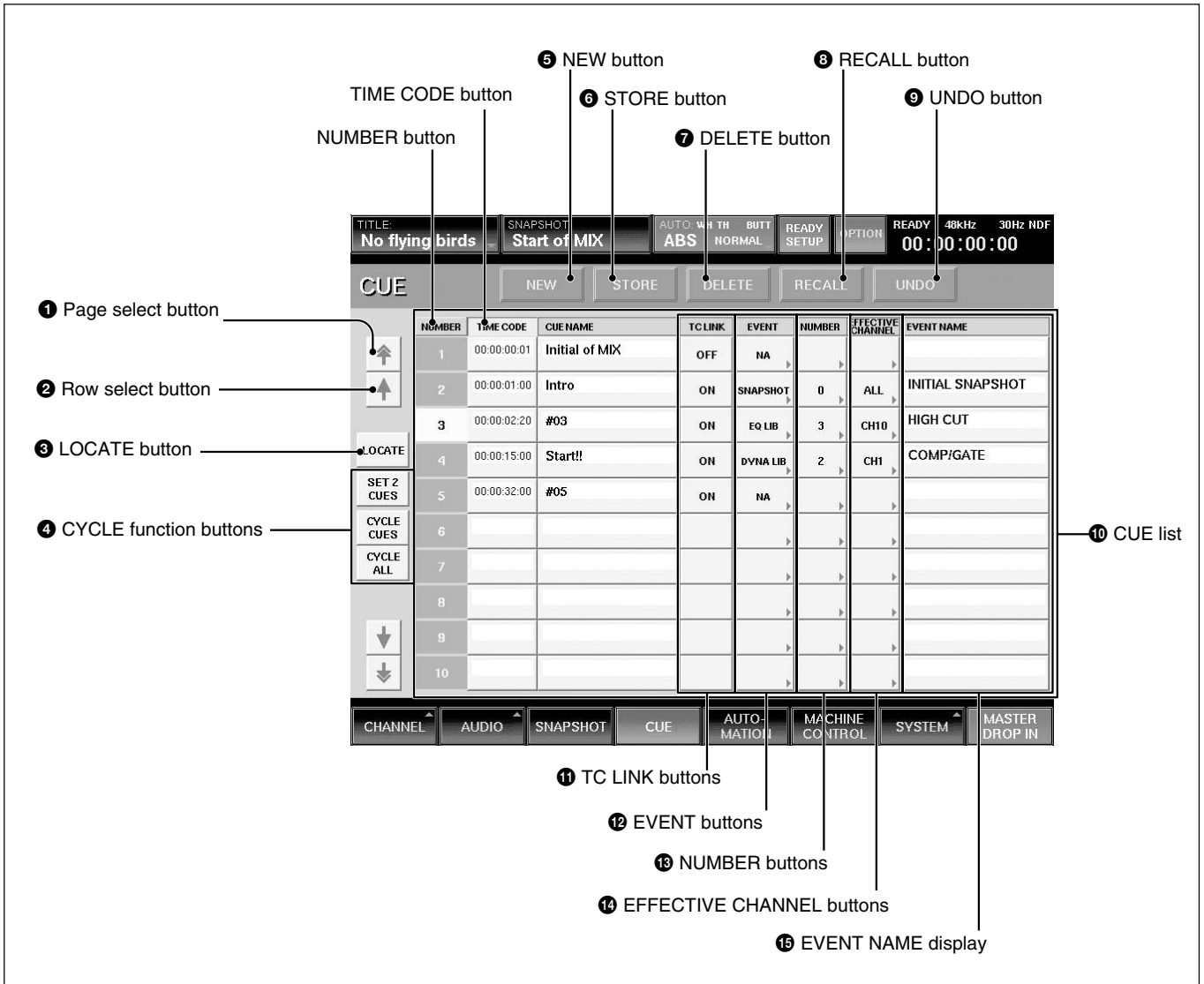
**ALL ON button:** Sets all channels to the ISOLATE function.

**ALL OFF button:** Clears the ISOLATE function of all channels

## CUE Window

To open this window, touch the CUE button on the bottom menu bar. This window allows you to control the cue function.

For detailed information on cue operation, see page 106.



### 1 Page select button

Touch this button to move the CUE list 10 up or down by 10 rows.

### 2 Row select button

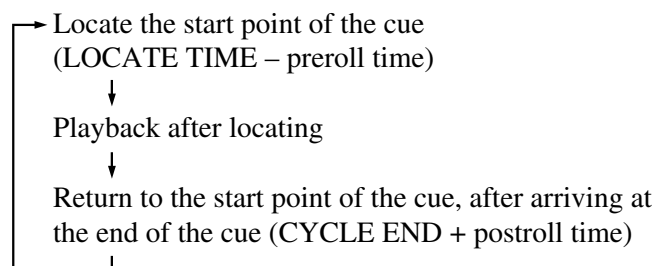
Touch this button to move the CUE list 10 up or down one row at a time.

### 3 LOCATE button

To locate the selected machine to a cue timecode, select the cue by touching it on the display and then touch the LOCATE button.

### 4 CYCLE function buttons

The tape recorder plays back the specified duration repeatedly in the selected CYCLE manner.



**SET 2 CUES button:** When this button is ON and you select two cues, the unit displays them on the MACHINE CONTROL window. The earlier timecode cue is assigned to the LOCATE TIME, and the larger number timecode is assigned to the CYCLE END. If the difference between CYCLE END and LOCATE TIME is within 5 seconds, the unit memorizes a temporary CYCLE END by adding 10 seconds to the LOCATE TIME.

**CYCLE CUES button:** While this button is ON, the cue cycle is executed when you press the LOCATE button on the panel or in the window. The unit memorizes this button setting (ON/OFF) for all 6 machines.

**CYCLE ALL button:** When this button is ON, the stored earliest timecode is assigned to the LOCATE TIME point, and the latest of the stored timecodes is assigned to the CYCLE END point. While this button is ON, the cycle is executed when you press the LOCATE button on the panel or in the window.

#### 5 NEW button

Touch this button to save a new cue. The timecode displayed on the display window on the Automation panel is the value for the new cue.

The lowest number among the unused numbers is assigned to the new cue point and it is temporarily named “# + xx” (xx is the cue point number). This new cue point is displayed on the CUE list.

When the TC LINK button is lit on the Automation panel on the unit, and you touch the NEW button, the mixer saves a cue and snapshot and it also automatically links the snapshot to the cue, using the TC LINK function.

#### Note

Do not recall snapshots linked to continuous cues that have durations shorter than within 5 frames of each other.

Otherwise, only the snapshot linked with the last cue may be recalled. Automation data for the duration of remaining cues may not be recalled and saved.

#### 6 STORE button

Touch this button to save a cue. The timecode displayed on the Automation panel is saved with the cue.

#### 7 DELETE button

Touch this button to delete the selected cue point from the CUE list 10.

If the event is linked with the cue point, the event is not deleted.

#### 8 RECALL button

Touch this button to recall the cue point data selected on the CUE list 10.

When the event is linked with the cue point, this event is executed.

#### 9 UNDO button

Touch this button to cancel the previous event performed using the SNAPSHOT buttons on the Automation panel on the unit.

#### 10 CUE list

Displays the number, address (timecode) and name of cue points stored.

**NUMBER row:** Displays the cue number.

**TIME CODE row:** Displays the time (timecode) of the cues.

By touching the timecode box, you can change the timecode using the ten key pad.

**CUE NAME row:** By touching a cue name box, the KEYBOARD window opens. You can enter or change the name of the cue point using the keyboard connected to the unit or on the KEYBOARD window.

When you touch the NUMBER button at the top of the NUMBER row or the TIME CODE button on the TIME CODE row, the cue list is sorted in the order of the cue numbers or the timecode.

When the cue list is sorted in the order of the timecode, the current cue is lit cyan if any cue point is not selected.

#### 11 TC LINK buttons

Touch the button to link a SNAPSHOT RECALL to the specified cue.

# Menu Windows

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## 12 EVENT buttons

Touch the desired button to open the menu list of the events that can be TC linked.

**SNAPSHOT:** Links a snapshot.

**EQ LIB (equalizer library) and DYN LIB**

**(dynamics library):** Specify the channel which the library affects.

**NA (No ACTION) button:** Nothing is executed.

## 13 NUMBER buttons

Touch the desired button to open the event name list and select the desired event to be executed.

## 14 EFFECTIVE CHANNEL buttons

Specify the channels which the event affects.

When the ALL button is displayed: Touch this button to specify all channels.

When the EVENT button 12 indicates EQ LIB or DYN LIB, you can select one channel from the CH 1 to 48, MTR 1 to 8, AUX 1 to 8, PGM.

When the EVENT button 12 indicates SNAPSHOT, then only the ALL button is automatically switched to ALL.

## 15 EVENT NAME display

Displays the event name.

---

## Initial cue

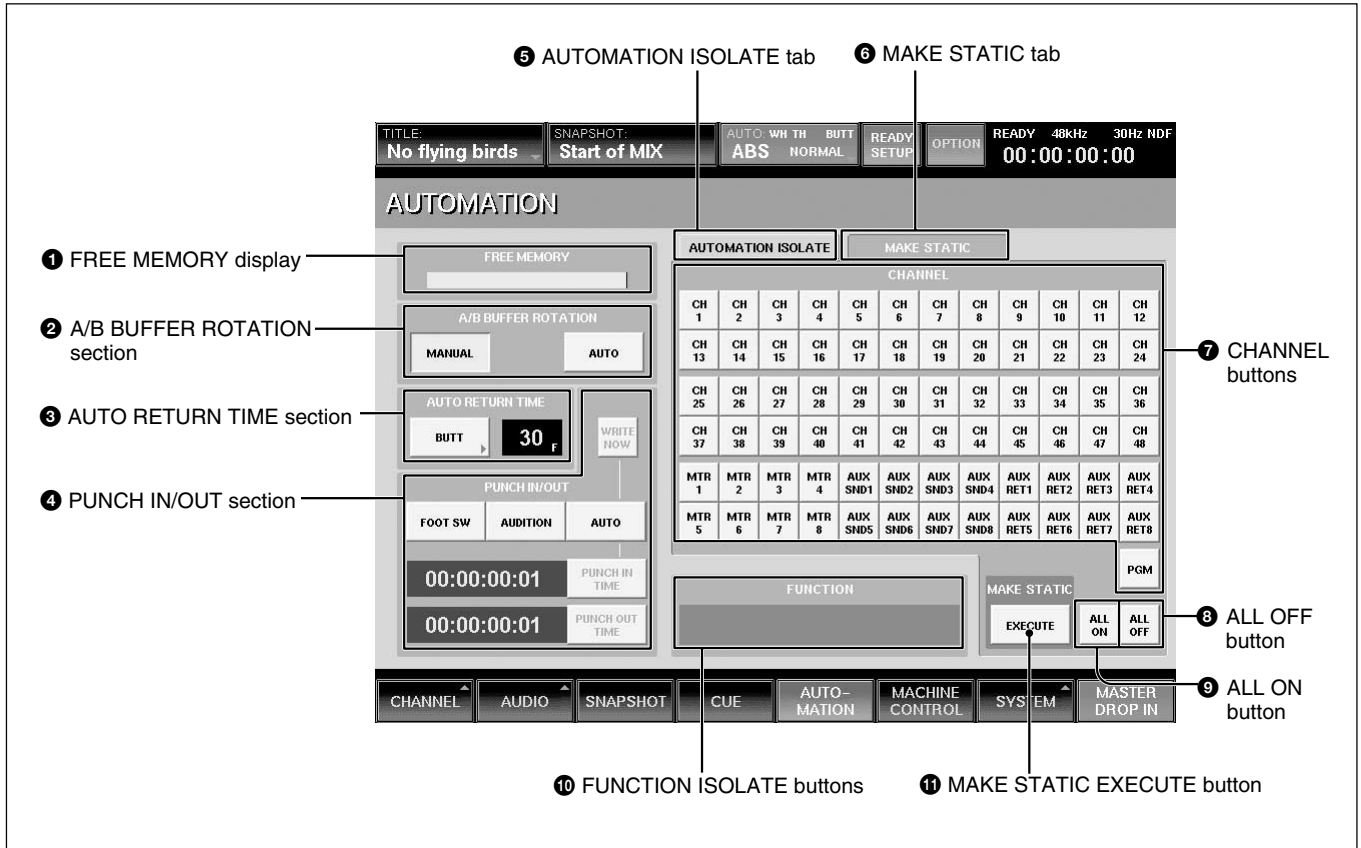
- CUE 1 is reserved as an initial cue to indicate the start point of the dynamic automation.
- If automation reference timecode is lower value than the CUE 1 value, dynamic automation will not operate.
- To change the initial cue, perform the same procedure as for changing other cue points. But if you set the timecode after that of the original initial cue timecode point, dynamic automation data between the former timecode and the newly set timecode will be lost. Similarly, you can change the snapshot linked with the initial cue. But if you change it, a problem may occur between the snapshot data and the automation data.

*For detailed information on cue, see “Cue Operation Procedure” on page 106.*

## AUTOMATION Window

To open this window, touch the AUTOMATION button on the bottom menu bar. This window allows you to control aspects of the dynamic automation.

For detailed information on automation, see page 108.



### 1 FREE MEMORY display

Displays the remaining amount of memory available for dynamic automation data storage.

### 2 A/B BUFFER ROTATION section

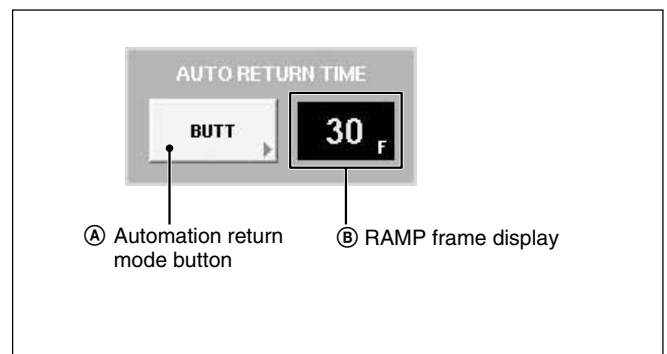
Sets the memory buffers for two different modes.

**AUTO button:** When an automation data is completed, the active buffer switches automatically from A to B or B to A. (When the TC AUTOMATION SAFE button is selected on the Automation panel, the active buffer is not switched since automation data can not be accessed or overwritten.)

**MANUAL button:** Allows you to switch the buffer by pressing the A or B button of the TC AUTOMATION buttons on the Automation panel.

### 3 AUTO RETURN TIME section

This section allows you to set the mode for control to return to previous automated positions when the DROP OUT function is performed.



## Ⓐ Automation return mode button

Touch this button to select the mode that returns to the previous data.

**BUTT:** Returns to the previous data as a “jump” at the DROP OUT.

**RAMP:** Ramps back to the previous position after the DROP OUT.

**HOLD TO NEXT:** Holds the setting at the DROP OUT point until the next automation move is replayed.

**HOLD TO END:** Holds the setting at the DROP OUT point to the end of the data.

**TOP TO END:** Holds the setting at the DROP OUT point from the top of the timecode (00:00:00:00) to the end of the data.

## Ⓑ RAMP frame display

Sets the time to return to the position stored in the previous data in unit of frame.

By touching the display, you can set the desired return time using the ten key pad. The displayed values can be increased or decreased using the +/- keys and the jog dial on the panel.

## ④ PUNCH IN/OUT section

This section allows you to punch in and out of dynamic automation WRITE by sending an ON/OFF signal or specifying the timecode.

**FOOT SW button:** Touch this button to active the foot switch automation WRITE control. When this button is not selected, the foot switch status is ignored.

**AUDITION button:** When you touch this button, the following items are automatically set as below.

WRITE HOLD and TOUCH HOLD modes → ON.

SAFE button on the panel → ON.

Auto return mode → BUTT.

In this mode, the automation data is overwritten only while the SAFE button is OFF.

### Notes

- In AUDITION mode, the SAFE button controls storing of the automation data; When the button is OFF the data is stored, and when the button is ON the data is not stored. Therefore, in this mode, the previous data is not protected even when you set the SAFE button to ON before stopping the tape.
- The items cannot be dropped out (cancels WRITE) automatically even when the AUDITION mode is cancelled. Drop out them using a manual operation.

*For the use of the AUDITION mode, see page 114.*

**AUTO button:** Touch this button to enable the PUNCH IN TIME/PUNCH OUT TIME display windows. When this button is not selected, automation data is stored regardless of the values in the PUNCH IN/OUT TIME windows.

### PUNCH IN TIME button and display window:

Touch this button to accept the time displayed on the timecode display window on the Automation panel. This time is then displayed in the windows.

You can enter the timecode using the ten keys by touching the timecode on the display window.

Remember to press the ENTER button to accept this value.

You can increase or decrease the numeric values using the + / - buttons and the jog dial.

### PUNCH OUT TIME button and display window:

Touch this button to accept the time displayed on the timecode display window on the Automation panel. This time is then displayed in the window.

You can enter the timecode using the ten keys by touching the timecode on the display window.

Remember to press the ENTER button to accept this value.

You can increase or decrease the numeric values using the + / - buttons and the jog dial.

**WRITE NOW button:** Touch this button to write the automation data between punch-in and punch-out durations without running the tape.

## To change the data between punch-in and punch-out duration

- 1 Stop the timecode feed, eg stop a MT machine.
- 2 Touch the AUTO button on the window.
- 3 Specify the punching in and out points.
- 4 Set the automation mode to ABS or TRIM.
- 5 Set the item to be adjusted to READY.
- 6 Drop in the adjusted item.
- 7 Adjust the item in step 5 to the proper level.

- 8** Touch the OFF LINE button.  
The dialog appears for confirmation, and then off line is executed.  
In the duration between the punch-in/-out points, the dropped-in item data is overwritten by the new data in step 7.

**Note**

The AUTO RETURN TIME setting is ignored.

**5 AUTOMATION ISOLATE tab**

Selects the channels or functions that you want to isolate from automation replay.

Touch this tab, then touch the CHANNEL button(s) and FUNCTION ISOLATE button(s) **10** for the functions you want to isolate.

**6 MAKE STATIC tab/11 MAKE STATIC EXECUTE button**

To select the channels for automation data you want to delete, touch the MAKE STATIC tab **6**, then touch the desired CHANNEL button(s) **7**.

Touching the MAKE STATIC EXECUTE button after selecting a channel(s) results in clearing all the automation data from that channel(s).

**7 CHANNEL buttons (CH1 to PGM)**

After selecting the AUTOMATION ISOLATE tab **5** (or MAKE STATIC tab **6**), select the channel that you want to isolate from automation replay (or the channel that you want to delete) using these channel buttons.

**8 ALL OFF button**

Touch this button in order that no channels are selected.

**9 ALL ON button**

Touch this button to select all channels.

**10 FUNCTION ISOLATE buttons**

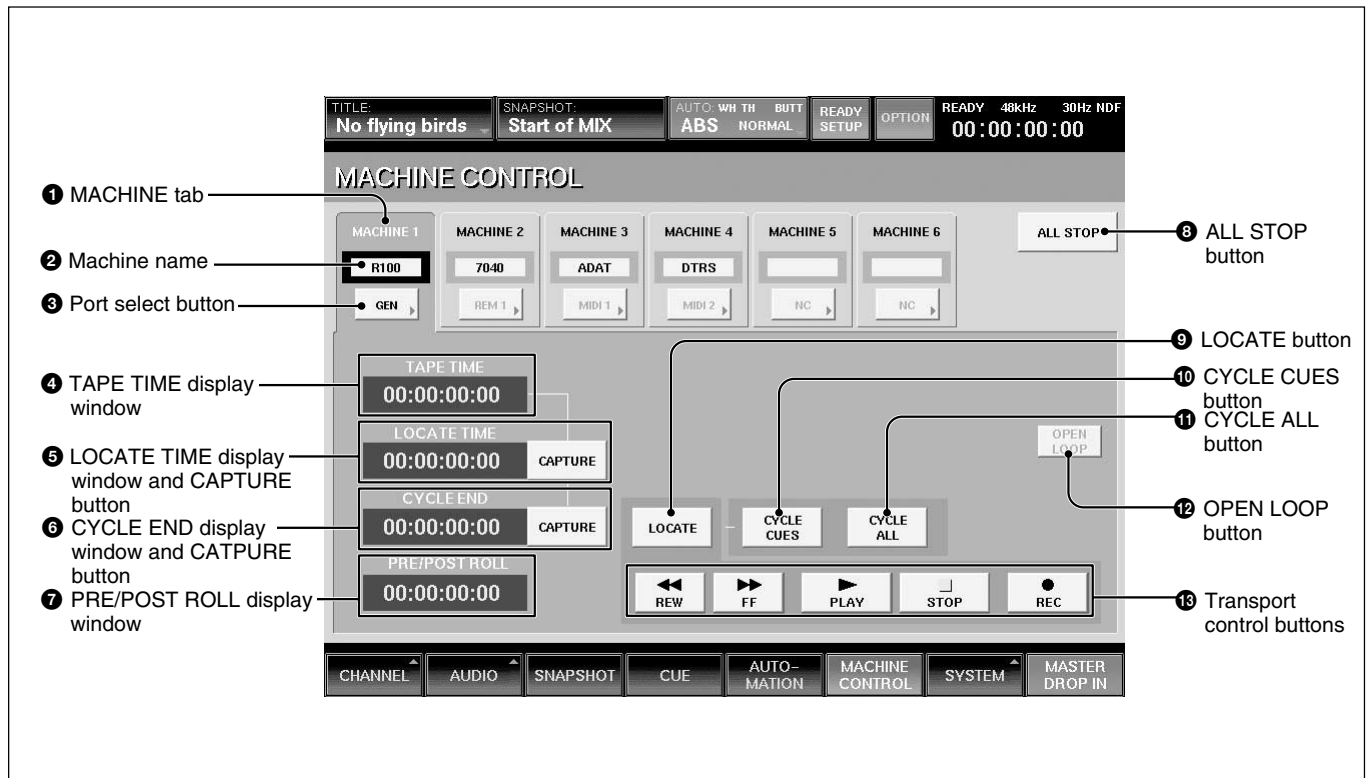
Touch these buttons to prevent automation replay accordingly. The function corresponding to selected buttons will not be replayed.

## MACHINE CONTROL Window

To open this window, touch the MACHINE CONTROL button on the bottom menu bar. This window allows you to set up the mixer to control devices that use MIDI machine control (MMC), Sony 9-pin and timecode chase.

### Note

There may be machines which cannot be controlled using this unit. Only one machine can be controlled at any one time, but the mixer can be quickly re-configured to control up to six different machines.



### 1 MACHINE tab

Touch this tab to select the machine to be controlled. You can control the selected machine using the transport control keys on the unit or from the MACHINE CONTROL window.

### 2 Machine name

Displays the name of the machine. Touching the name opens the KEYBOARD window allowing entry or change to the name of the machine selected.

### 3 Port select button

Selects the port assigned to the machine.

- MIDI 1 to 16
- REMOTE OUT 1 or 2
- TC GEN: Built-in timecode generator
- NC (no connection)

### 4 TAPE TIME display window

Displays the tape time of the machine.

### Note

The tape time may not be displayed for some machines connected to the system.



### ⑤ LOCATE TIME display window and CAPTURE button

Displays the time the machine locates to.

Touching the display allows you to enter the locate time using the ten key pad.

You can increase or decrease the numeric values using the + / - buttons and the jog dial.

Touch the CAPTURE button to copy the timecode displayed on the TAPE TIME display window onto the LOCATE TIME display.

### ⑥ CYCLE END display window and CAPTURE button

Displays a timecode which is the end point for using the locate function in CYCLE mode; while operating in CYCLE mode, when the TAPE TIME passes over the CYCLE END point + POST ROLL time, the unit moves to the LOCATE TIME point and repeats the playback.

Touch the CAPTURE button to copy the timecode displayed on the TAPE TIME display box onto the CYCLE END box. If the captured time is earlier than the LOCATE TIME+10 seconds, the unit automatically compensates and adjusts the captured time to the value of LOCATE TIME+10 seconds.

By touching the display, you can set the desired numbers using the ten key pad. The displayed numbers can be increased or decreased using the +/- keys and the jog dial on the panel.

### ⑦ PRE/POST ROLL display window

Displays the value (for booting the unit) used to compensate the LOCATE time.

When executing LOCATE, the unit goes to the point pre the LOCATE TIME according to the preroll entry. While operating in CYCLE, the unit advances to the point displayed in the window (post roll time), then executes the locate function.

By touching the display, you can set the desired value by using the ten key pad. The displayed value can be increased or decreased using the +/- keys and the jog dial on the panel.

#### Note

You cannot enter a minus value for the time.

### ⑧ ALL STOP button

Touch this button to issue the stop command to all of the machine control ports.

### ⑨ LOCATE button

Touch this button to issue the locate command to the current machine at the locate time displayed on the LOCATE TIME display window.

#### Notes

- There may be machines that cannot locate even if the locate command is received.
- The CYCLE 2CUES ⑩, CYCLE ALL ⑪ buttons are not effective in the open loop control.

### ⑩ CYCLE 2CUES button

When you touch the LOCATE button while the CYCLE 2CUES button is ON, the unit executes the repeat playback between the LOCATE TIME and TAPE TIME points.

To cancel the cycling operation, touch the STOP button.

### ⑪ CYCLE ALL button

When you touch the LOCATE button while the CYCLE ALL button is ON, the unit executes a repeat playback between the stored points of the lowest and highest value time code points.

To cancel the cycling operation, touch the STOP button.

### ⑫ OPEN LOOP button

When MIDI is selected by the Port select button ③, this button is automatically set to OFF (the button becomes deactivated) and MIDI must be controlled using a closed loop (i.e. 2 MIDI cables).

When the return signal is not sent back from the machine after 2 seconds have elapsed, the unit will not exercise control with the closed loop. In this case, after the dialog is displayed, the unit changes to open loop control and this button becomes activated.

Also, you can switch between closed loop control and open loop control manually.

#### Note

- In OPEN LOOP control, the tape time and the transport status of the machine can not be displayed. Also, the transport status may differ from the actual machine transport.
- In OPEN LOOP control, the CYCLE operation is automatically cancelled.

# Menu Windows

## Open loop control and closed loop control

The open loop control is a one-way control mode where the command is sent to the machine, but the return signal is not received from the machine. In the closed loop mode, the return signal is received from the machine. Thus, 2 MIDI cables (one for the send command and the other is for the return signal) are required in the closed loop control.

## 13 Transport control buttons

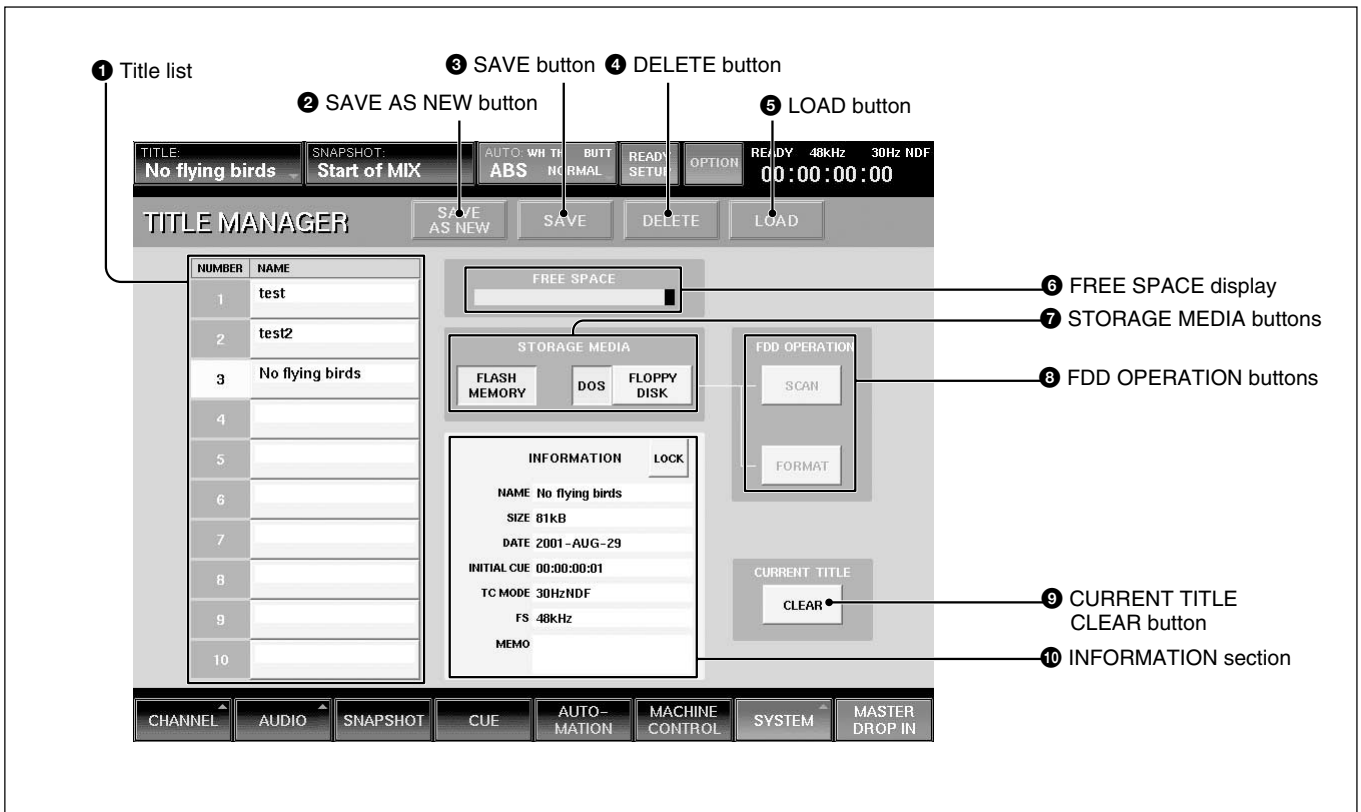
Touch the corresponding button to issue the FF, REW, PLAY, STOP or REC command to the current machine.

To set the machine to record mode, touch the REC button first to make it active, then touch the PLAY button. Or touch the REC button while playing.

## TITLE MANAGER Window

To open this window, touch the SYSTEM button to open the SYSTEM menu, then select "TITLE MANAGER."

This window allows you to create, store and load the mixer's titles.



In the DMX-R100, data related to a project (snapshot data, automation data, library data, settings for sampling frequency, timecode mode, etc.) is called "Title."

There are two types of titles:

- Current title which is the data associated to the current project.
- Title stored as a file

*For the structure of the title in memory, see page 100.*

### 1 Title list

Displays the list of titles stored in the media selected by the STORAGE MEDIA button 6.

A maximum of 10 titles can be stored in the flash memory. This depends on the size of the title. When you open this window, the title loaded last is selected.

You can store a maximum one title on one floppy disk. However, 2 or more floppy disks may be required to store 1 title depending on its size.

**2 SAVE AS NEW button**

Touch this button to store the current title in the unused title number that is the lowest one.

**3 SAVE button**

Touch this button to store the current title into the selected title on the list. Select the media where the current title is to be saved by the STORAGE MEDIA buttons **7** before attempting to save.

**Notes**

- When executing “SAVE” on a floppy disk, the data previously saved on the disk is cleared.
- After executing “SAVE”, do not turn off the power while the cursor indication changes to an arrow showing that the data has been processed or while the LED on the floppy disk drive is on. If you turn off the unit during this process, the title being saved may be lost, as the unit requires time to write the data in the flash memory or on the floppy disk.

**4 DELETE button**

Touch this button to delete the title selected on the title list.

**5 LOAD button**

Touch this button to load the title selected on the title list on the unit.

**Note**

When a title with different Fs setting is loaded, the unit automatically restarts.

**6 FREE SPACE display**

Displays the amount of free space for the media selected by the STORAGE MEDIA button **7**.

When FLOPPY DISK is selected, if the title is saved on multiple floppy disks, the amount of free space for each disk is displayed.

**7 STORAGE MEDIA buttons**

Selects a media location where a title is saved or loaded.

**FLASH MEMORY button:** Touch this button to display the titles stored in the built-in flash memory on the title list.

When the TITLE MANAGER window is opened, the built-in flash memory is automatically selected.

**FLOPPY DISK button:** When this button is ON, the unit scans the floppy disk inserted in the disk drive, and displays the names of any titles stored on the disk.

**Note**

- The unit only accepts a 2 HD floppy disk, formatted in the DMX-R100 format or the DOS format. Disks other than the above are not acceptable.
- A dialogue “There are no titles or this is an unformatted disk. Check media in the floppy disk drive.” appears, in the following cases:
  - A floppy disk is not inserted in the drive.
  - The inserted disk is unformatted.

**DOS button :** (Fire-up default) When this button is ON, the title will be saved in the DOS format. When this button is OFF, the data will be saved in the DMX-R100 format.

When loading, or scanning, the button setting automatically switches to the format of the disk (ON for DOS format, and OFF for DMX-R100 format.)

**Note**

- Don’t save a title on a DOS formatted floppy disk where data other than a title exists. The title data may not be saved correctly on such disks. When you re-use a disk that has been used on a PC, initialize the disk in DOS format using the PC, or initialize it in the DMX-R100 format using the unit, to erase all the data in the disk, in advance.
- When you access title data saved on a DOS formatted disk on a PC, you will find that a title consists of the following six files:

AUTO.DAT: Automation data

CUE.DAT: Cue data

DYLIB.DAT: Dynamics library data

EQLIB.DAT: Equalizer library data

SNAP.DAT: Snapshot data

SYSF.DAT: General data on the title

Never attempt to manipulate the file name of title data on a PC. If you change, replace or delete a file name on a PC, the unit will not read the data correctly and a malfunction may occur.

**Notes**

- When the titles have been saved in the floppy disk, titles and their information are displayed. When no title is saved on the floppy disk, the title list section and INFORMATION section are blank.
- When data has been saved in 2 or more floppy disks due to the size of the title, #1 or #2 is attached to the title name displayed in the NAME box in the INFORMATION section.

- When loading a title of a two-disk set, be sure to load the first disk (#1 is displayed or blank in the NAME box in the INFORMATION section). When the second disk of a two-disk set should be inserted, the dialog to replace the disk appears.

### ③ FDD OPERATION buttons

**SCAN button:** Touch this button so that a floppy disk is scanned and the titles stored on the disk are displayed. Be sure to touch this button when you change the floppy disk.

**FORMAT button:** Touch this button to format the floppy disk inserted in the floppy disk drive in the DMX-R100 format. All data stored on the disk is erased. The title list becomes blank.

This button is not effective when the DOS button is ON. You cannot initialize a disk in DOS format by this unit.

### ⑨ CURRENT TITLE CLEAR button

Touch this button, and a confirmation dialog box appears. After confirming, the new title is created based on the current sampling frequency and timecode mode in the flash memory and is loaded on the unit as a current title.

The new title is named “UNTITLED”.

#### Notes

- If a new title is created, all snapshot and automation data current in the unit are cleared. It is recommended that you save the data using the SAVE button ③ before creating a new title.
- When a new title is created by the CURRENT TITLE CLEAR button, the initial cue is automatically created. Before using the unit in automation mode, reset the initial cue data.

*For detailed information on the cue operation, see page 106.*

### ⑩ INFORMATION section

The following information is displayed for the title selected on the title list. You can enter the name and a memo in those rows.

**NAME row:** Displays the name of the title. To enter the title name, touch the NAME row, and then enter the name using the KEYBOARD window.

**SIZE row:** Displays of the data size for the title.

**DATE row:** Displays the date when the title was saved last.

**INITIAL CUE row:** Displays the timecode of the initial cue (CUE 1) from which automation starts.

**TC MODE row:** Displays the mode of the timecode to be used in automation.

**Fs row:** Displays the sampling frequency.

**MEMO row:** Displays the memo attached to the title. To enter a memo, touch the MEMO row, then enter the text using the KEYBOARD window.

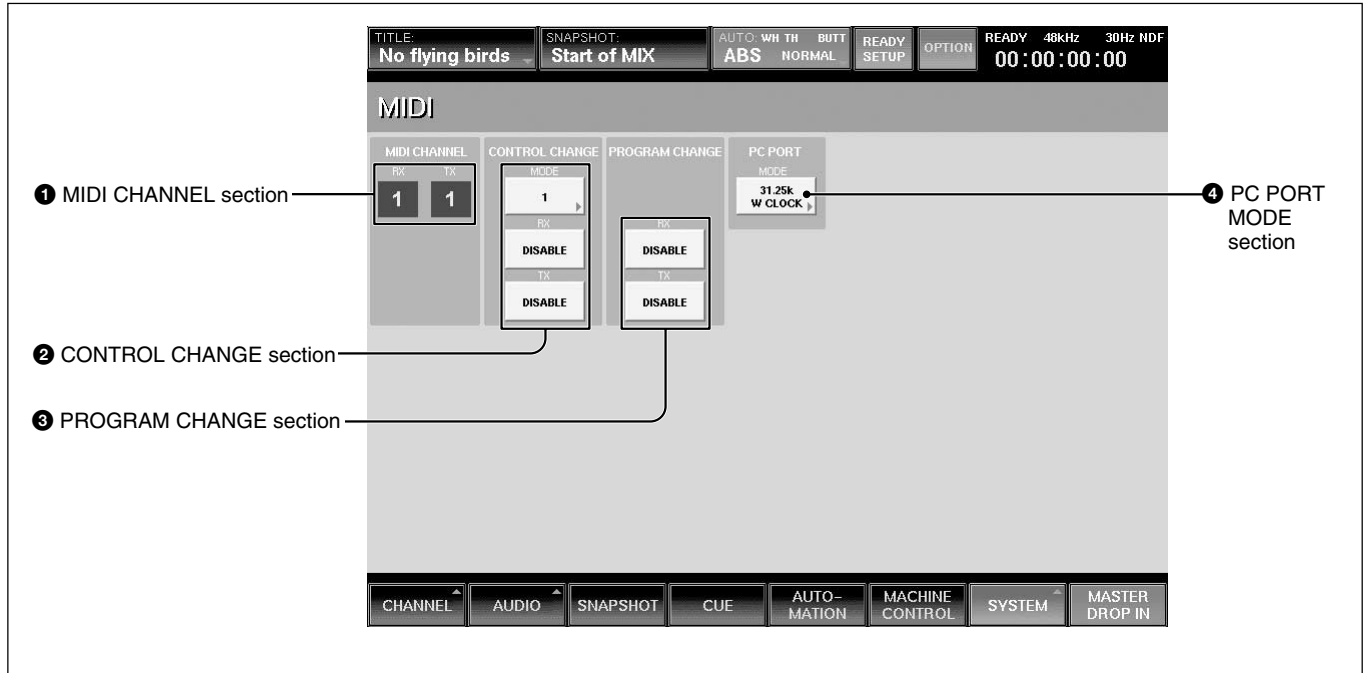
**LOCK button:** Touch this button to lock the title selected on the title list. The title is protected from being overwritten or deleted.

When no title is selected, the mixer settings and automation relate to the last KEEP operation via the TITLE menu pop-down.

## MIDI Window

To open this window, touch the SYSTEM button on the bottom menu bar, then select “MIDI” on the menu. This window allows you to perform the assignment of

the MIDI channels, program change-snapshot configuration, mixer event-control change configuration and the settings of the PC ports.



### ❶ MIDI CHANNEL section

**RX channel display and channel increment and decrement buttons:** Displays the channel that receives the MIDI message and executes tasks. Touch the ↓ or ↑ buttons to select the channel.

**TX channel display and channel increment and decrement buttons:** Displays the channel to be used when transmitting the MIDI message. Touch the ↓ or ↑ buttons to select the channel.

#### Note

Usually set the RX channel and TX channel to the same channel.

### ❷ CONTROL CHANGE section

**MODE button:** Touch this button to select either MODE 1, MODE 2 or MODE 3 to set up the configuration of parameters on the unit and control change message.

*For details for each mode, see page 125.*

**RX ENABLE button:** When this button is selected (ON), the parameters defined in each mode are updated when receiving the control change message to the MIDI IN connector.

**TX ENABLE button:** When this button is selected (ON), the parameters defined in each mode are sent from the MIDI OUT connector.

### ❸ PROGRAM CHANGE section

**RX ENABLE button:** When this button is selected (ON), the snapshot data is recalled on the unit when receiving the program change message at the MIDI IN connector.

**TX ENABLE button:** When this button is selected (ON), the snapshot data is recalled and the program change message corresponding to its program number is sent from the MIDI OUT connector.

### ❹ PC PORT MODE section

Selects the mode according to the PC connected to the PC PORT connector.

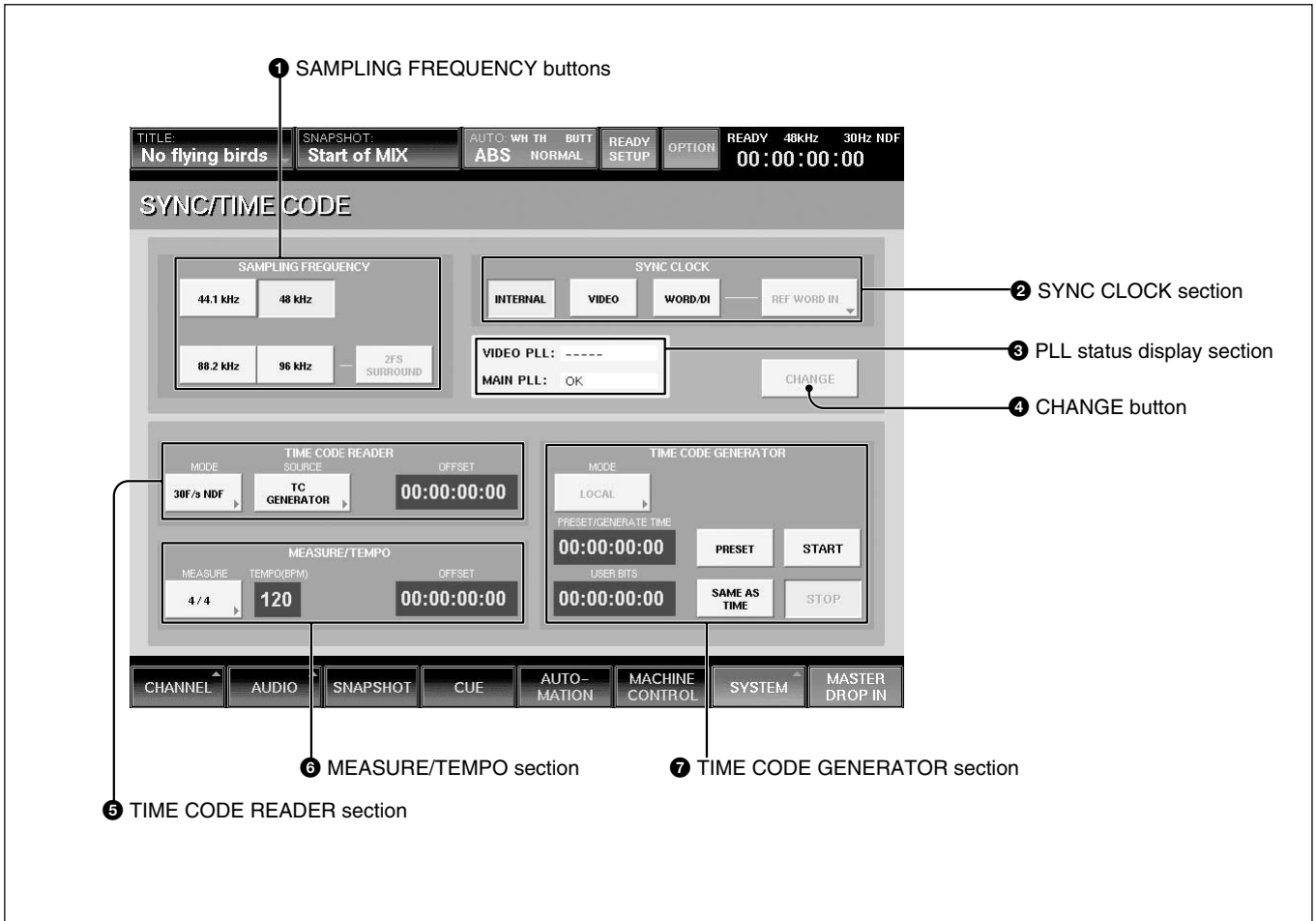
**31.25 k W CLOCK:** Selects this mode when a Macintosh computer is used.

**31.25 k, 38.4 k:** Selects one of these values when a PC/AT compatible computer is used. Select either 31.25 k or 38.4 k according to the external MIDI device.

## SYNC/TIME CODE Window

To open this window, touch the SYSTEM button on the bottom menu bar, then select “TIME CODE” on the menu.

This window allows you to control the settings of the reference signal and the timecodes used for automation.



### Synchronous signal section

#### 1 SAMPLING FREQUENCY buttons

Touch the button corresponding to the desired sampling frequency from 44.1 kHz, 48 kHz, 88.2 kHz or 96 kHz.

#### Note

When 88.2 kHz or 96 kHz is selected, the frequency range expands to 40 kHz. However, the following functions are limited. Buttons corresponding to the limited functions are disabled.

- Input channel: The channel number is reduced from 48 to 24.

- AUX Send: The channel number is reduced from 8 to 2.
- AUX Return: The channel number is reduced from 8 to 4.
- MTR bus: The channel number is reduced from 8 to 4.
- Insertion send: The channel number is reduced from 8 to 4.
- Direct out: The channel number is reduced from 48 to 24.
- Optional boards: DMBK-R106 and DMBK-R107 cannot be used. The DMBK-R104 cannot be used for a channel where the sample rate converter is set to ON.
- The number of oscillator paths becomes one and the same signal is output to both the L and R channels.

- The maximum value of the programmable delay amount is halved.
- The channel number of the EXT inputs of MONITOR is reduced from 6 to 2.
- When METER INPUT is selected in the MISC SETUP window, the OVER indicator does not function.
- The SOLO buttons of the AUX Return function as AFL buttons only even if these are set to PFL.
- When SYNC LOCK is set to WORD/DI, if the sync reference signal is greater than 96 kHz, the DSP (Digital Signal Processor) does not work function correctly and this may cause noise.

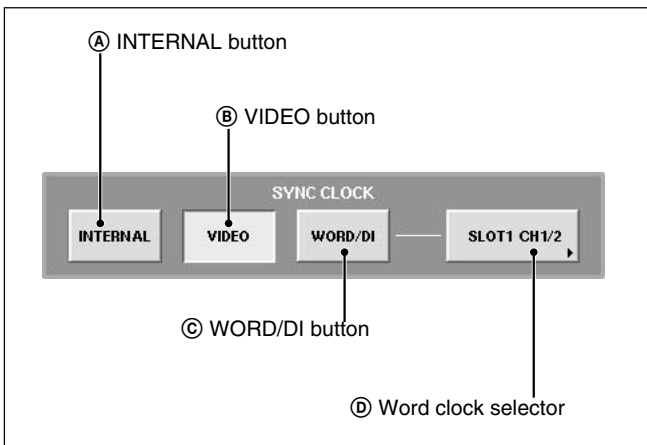
**2FS SURROUND button:** This button is activated when an 88.2 kHz or 96 kHz sampling frequency is selected. To operate the surround mix with 2FS, touch the CHANGE button after setting this button to ON, and restart the unit.

#### Note

When 2 FS SURROUND is selected, the following functions have some limitations.

- PGM L/R busses can not be used.
- Dynamics are not linked between L-C-R-SW (MTR 1 to 4) and LS-RS (MTR 5 and 6).
- STUDIO monitor cannot be used.
- HEADPHONES output does not function.

## 2 SYNC CLOCK section



The unit synchronizes using the reference selected by touching one of these buttons.

### A INTERNAL button

Touch this button to use the built-in word clock generator as the reference signal.

When this button is selected, external digital audio equipment must be synchronized with the DMX-R100 that is the sync master.

### B VIDEO button

The unit synchronizes using the video signal connected to the REF VIDEO connector on the unit. When this button is selected, external digital audio equipment must be synchronized to the same video signal.

### C WORD/DI (digital input) button

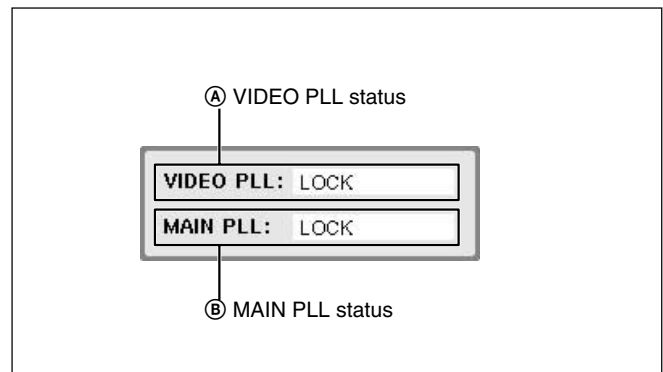
The unit synchronizes using a word clock signal connected to the REF WORD connector or a digital audio signal connected to any of the mixer digital inputs. You can select which signal you use as the reference signal by using the word clock selector D. When this button is selected, the unit and external digital audio equipment must be synchronized using the same reference sync signal.

### D Word clock selector

Displays the source of the external reference word clock when the WORD/DI button C is touched. Touching the selector results in opening the list and you can then select the source from the following.

- REF WORD IN
- 2TR IN 2
- AUX RTN 5/6, 7/8
- CH 1/2, CH3/4, CH5/6 or CH7/8 for SLOT 1 to SLOT 4

## 3 PLL status display section



### A VIDEO PLL status

When the VIDEO is selected as the reference signal, the status of PLL which generates the word clock signal from the video signal is displayed.

When a signal other than VIDEO is used as the reference signal, “-----” is displayed.

**LOCK:** Operating correctly.

**UNLOCK:** Synchronization is lost. Check the setting of the terminated resistor or whether the correct video signal is being input.

# Menu Windows

**NO VIDEO:** The video signal is not being received. Check the setting of the termination resistor or whether the correct video signal is being received.  
-----: A signal other than VIDEO is used.

## Ⓑ MAIN PLL status

Displays the status of PLL which generates clock signals used internally by the unit.

**LOCK:** Operating correctly.

**UNLOCK:** Synchronization is lost. When the word clock signal is selected as the reference signal, check the setting of the termination resistor or if the word clock selector is set correctly. Check whether the device that supplies the clock signal is working correctly.

When INTERNAL or VIDEO is selected as the reference signal, make sure the unit is operating correctly.

**NO WORD:** The word clock signal is not input. When WORD CLOCK is selected as the reference signal, check the setting of the termination resistor or if the word clock selector is set correctly. Check whether the device that supplies the clock signal is working correctly.

## ④ CHANGE button

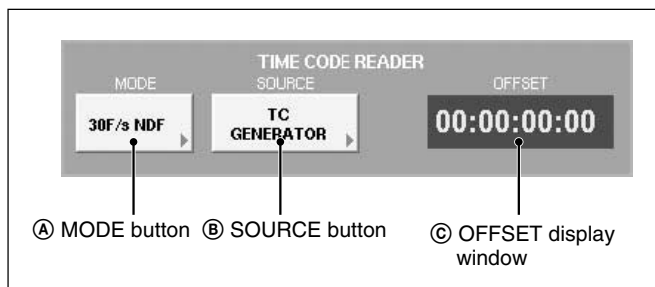
Touch this button to change the setting of the SYNC CLOCK section. A dialog box appears. After confirming, select [OK]. The unit restarts and the settings are changed.

### Note

When restarting, the contents of the title which has not been saved will be lost.

## TIME CODE section

### ⑤ TIME CODE READER section



## Ⓐ MODE button

Displays and selects the mode of the timecode to be used for automation.

The timecode generator works according to the timecode selected here.

Touching this button opens the following list:

- 29.97F/s DF  
29.97 frames/second, drop frame
- 30NDF  
30 frames/second, non drop frame
- 29.97F/s NDF  
29.97 frames/second, non drop frame
- 30F DF  
30 frames/second, drop frame
- 25F/s  
25 frames/second

### Note

After storing the automation data, be sure not to change the mode of the timecode. This results in incorrect operation of the automation or a shift in recalling events.

## Ⓑ SOURCE button

Displays and selects the timecode source used for automation.

- TIMECODE IN  
The timecode source is the signal input to the TIME CODE IN connector.
- TC GENERATOR  
The signal generated by the built-in timecode generator
- MTC (PC PORT)  
The MTC (MIDI timecode) signal input to the PC PORT connector
- MTC IN  
The MTC (MIDI timecode) signal input to the MTC IN connector

## Ⓒ OFFSET display

Displays and enters the offset using the ten key pad or the jog dial by touching this display.

The value set here is added to the timecode read by the time code reader and used as the reference timecode. The time displayed in the MACHINE CONTROL window is the value added this offset.

Example: Using the OFFSET function

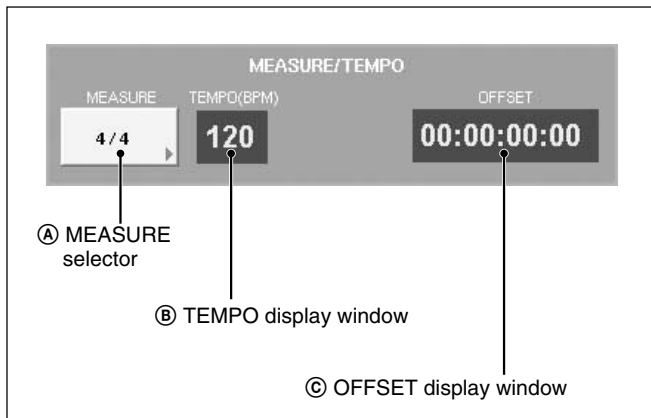
- To trim the execution timing of automation, enter an offset of few frames.



- To avoid the automation interruption when the timecode goes over “00:00:00:00”, enter an offset of an hour unit.
- To manipulate the multiple materials, which have the same timecode, in one title automation, enter an offset of an hour unit.

## ⑥ MEASURE/TEMPO section

When the BARS button is lit on the timecode input section on the Automation panel, the beats and bars are calculated on the settings entered in this section.



### ① MEASURE selector

Selects the measures of a tune.

First level:  $n/2$ ,  $n/4$ ,  $n/8$ ,  $n/16$

2nd level:  $n$

### ② TEMPO display window

Touch this part to select and enter the tempo.

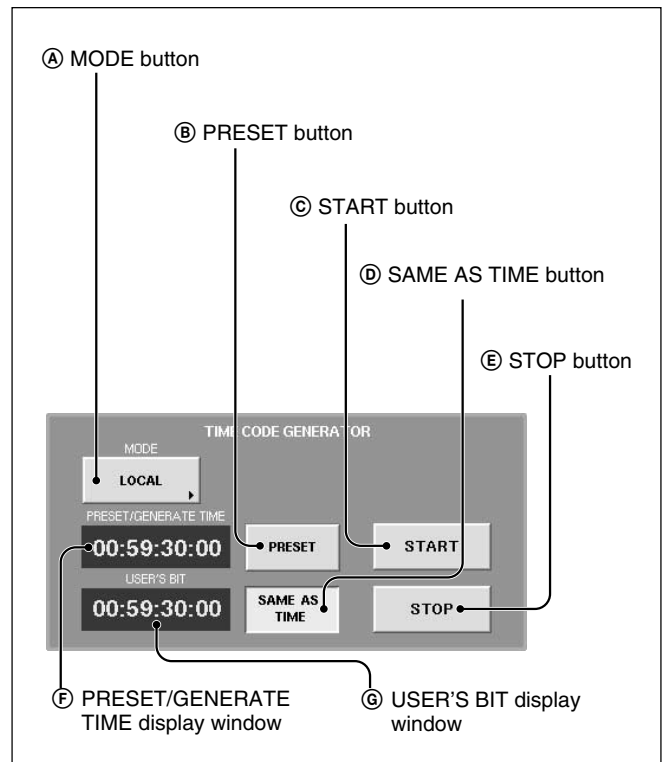
### ③ OFFSET display window

Touch this part to select and enter the timecode of the first beat of the first measure.

### Notes

- The values of the measure, beats and MIDI clocks displayed when pressing the BARS button on the Automation panel are estimated values obtained by converting the timecode value based on the information set by MEASURE/TEMPO section. The greater the difference from the timecode set on the OFFSET display window is, the greater the error is.
- The automation operation is executed based on the timecode regardless of the setting of the BARS button by the transport control keys on the Automation panel.

## ⑦ TIME CODE GENERATOR section



### ① MODE button

Touch this button to set the operation mode of the built-in timecode generator.

#### • LOCAL

The timecode can be run and stopped using the START/STOP buttons.

#### • SLAVE LOCK

Generates the timecode based on the timecode read by the built-in reader.

#### • SLAVE LOCK (AUTO RUN)

Once the timecode read by the built-in reader runs correctly, the timecode is generated as running automatically generated regardless of the incoming timecode.

### Note

When the TC GEN is selected in the MACHINE CONTROL window, this button is locked to LOCAL. Also, when the TC GENERATOR is selected in the TIMECODE READER section in the SYNC/TIMECODE window, the button is locked to LOCAL.

# Menu Windows

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## Ⓑ PRESET button

Touch this button to set ON. You can enter and display the preset time on the PRESET/GENERATE TIME display window.

When the LOCAL mode is selected, touching START will generate timecode from the preset time.

Enter the timecode using a keyboard connected to the unit or the 10 keypad after touching the PRESET/GENERATE TIME display window to highlight it.

## Ⓒ START button

When the generator is in LOCAL mode, touching the START button will make the timecode start running from the preset value.

## Ⓓ SAME AS TIME button

Touch this button to set the user bits to the same value as the current timecode.

## Ⓔ STOP button

Touch this button to stop the generator, when in LOCAL mode or SLAVE LOCK (AUTO RUN) mode.

## Ⓕ PRESET/GENERATE TIME display window

Displays the preset time or the generated timecode according to the PRESET button status.

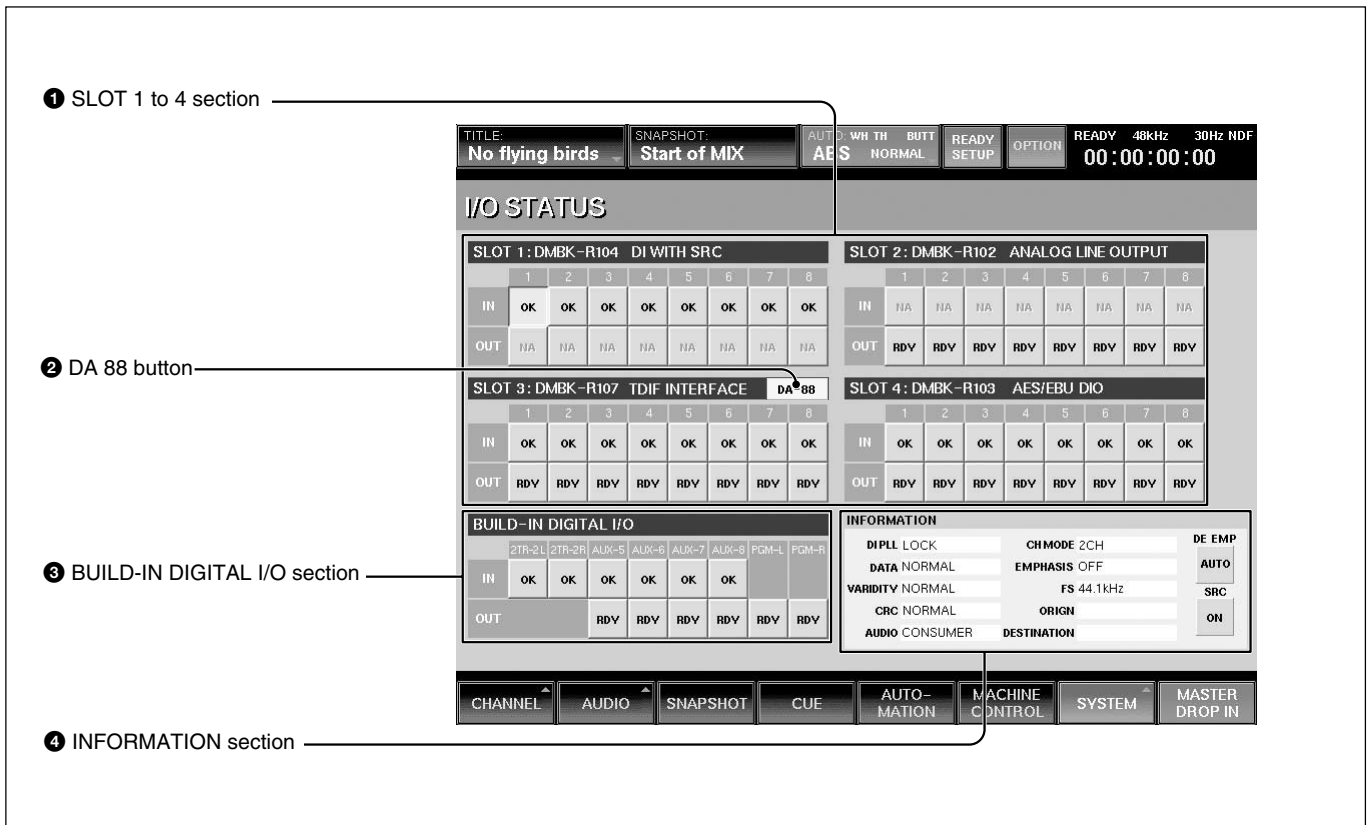
## Ⓖ USER'S BIT display window

Displays and allows entry of the timecode user bit data. Enter the user bits using the ten key pad or keyboard after touching this display window. The values that can be entered are 0 to 9. A, B, C, D, E and F can not be entered.

## I/O STATUS Window

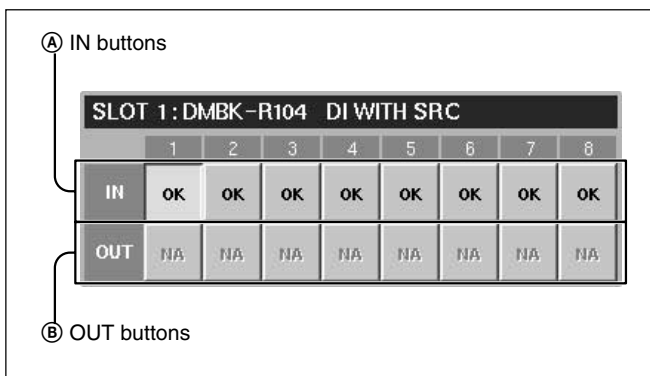
To open this window, touch the SYSTEM button on the bottom menu bar, then select the I/O STATUS on the menu.

This window allows you to check the performance of the digital audio input/output.



### 1 SLOT 1 to 4 section

Displays the name and function of the board inserted into the four slots on the unit. It also displays the status of the input/output signals.



### A IN buttons

On these buttons, OK, NA, or !xxx is displayed as the status of the input signal of the channel.

By touching this button, the details of the input signal of the channel are displayed on the INFORMATION section 4.

The status displays have the following meaning.

- OK  
Indicates that the signal is input correctly.
- NA (Not Available)  
Indicates that this channel cannot be used as the input signal.
- !xxx  
Indicates that there is trouble in the input signal. In this case, touch this button to display the details on the INFORMATION section and check the status. When !UNLC (unlock) is displayed, the input's PLL cannot be locked.

# Menu Windows

When !SLP (SLIP) is displayed, the input signal is not synchronized to the unit.

## Ⓑ OUT buttons

On these buttons, RDY or NA is displayed as the status of the output signal of the channel. By touching this button, the details of the output signal of the channel are displayed on the INFORMATION section ④.

The content of the display is as follows:

- RDY (ready)  
Indicates that this channel can be used as the output signal.
- NA (Not Available)  
Indicates that this channel cannot be used.

## ② DA 88 button

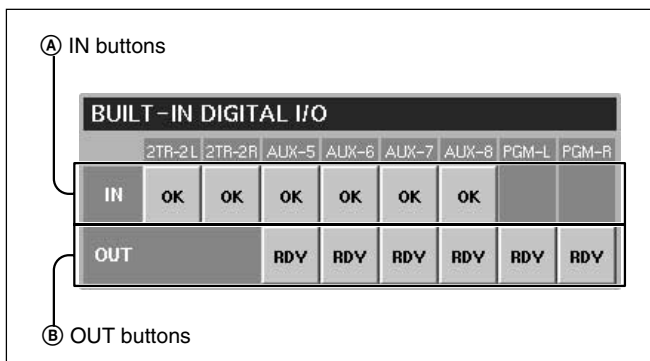
This button is displayed only when the DMBK-R107 is inserted into the slot.

When you have interfaced a DA-88 manufactured by the TEAC corporation with a DMBK-R107 Interface Board, touch this button to set it to ON (lit in green). When you use another TDIF device, set this button to OFF.

If this button is not turned on (lit in green) with a DA-88 inserted into the slot, it is necessary to replace the ROM in the DMBK-R107 slot. Contact your Sony dealer.

## ③ BUILT-IN DIGITAL I/O section

Displays the status of the signal of the built-in digital input/output connectors.



## Ⓐ IN buttons

On these buttons, OK, NA, or !xxx is displayed as the status of the input signal.

By touching any one of these buttons, the details of the input signal of the channel are displayed on the INFORMATION section ④.

The content of the display is as follows:

- OK  
Indicates that the signal is input correctly.
- NA (Not Available)  
Indicates that this channel cannot be used as the input signal.
- !xxx  
Indicates that there is trouble in the input signal or attention is required.  
In this case, touch this button to display the details on the INFORMATION section and check the status of the input signal.  
When !UNLC (unlock) is displayed, the input's PLL cannot be locked. The signal is not input or the wrong signal is input.  
When !SLP (SLIP) is displayed, the input signal is not synchronized to the unit. However, if the sampling converter is effective in the DMBK-R104, there is no problem.

## Ⓑ OUT buttons

On these buttons, RDY or NA is displayed according to the status of the output signal of the channel. By touching a button, the details of the output signal of the channel are displayed on the INFORMATION section ④.

The content of the display is as follows:

- RDY (ready)  
Indicates that this channel can be used as the output signal.
- NA (Not Available)  
Indicates that this channel cannot be used as the output signal.

## ④ INFORMATION section

Displays detailed information on the signal selected by SLOT 1 to SLOT 4, the IN button or OUT button on the BUILT-IN DIGITAL I/O section.

The following items are displayed as the detailed information of the signal:

- DIPLL  
Displays the status of the lock of the PLL built in each input path.  
**LOCK:** Displays that the PLL is correctly locked.  
**UNLOCK:** Displays that the PLL is not locked. In this case, "----" is displayed on the remaining information items.
- DATA  
Displays the status of synchronization between the signal and the unit.

**NORMAL:** Indicates that they are correctly synchronized.

**SLIP:** Asynchronization causes interpolation or cropping of data. This results in noise or distortion. Check that the unit synchronizes with each unit correctly.

However, when the sampling converter is effective on the DMBK-R104, there is no problem even if SLIP is displayed.

- **VALIDITY**

Displays the status of the VALIDITY flag of the AES/EBU digital audio signal.

**NORMAL:** Indicates that the VALIDITY flag bit is 0.

**INVALID:** Indicates that the VALIDITY flag bit is 1. This signal is not suitable as an audio signal.

- **CRC**

Displays the result of the CRC check of the channel status of the AES/EBU digital audio signal.

**NORMAL:** Indicates that there is no trouble.

**ERROR:** Indicates that there is some trouble with the results of the CRC check. For the items after CRC, such as AUDIO, CH MODE and so on, NA is displayed.

Depending on the machine connected, a correct CRC code may not be attached. There will be no problem, if ERROR appears when the DIPLL and DATA displays are correct. However, the de-emphasis is not set automatically. Set it manually.

- **AUDIO**

Displays the mode of the digital audio signal.

**PROFESSIONAL:** Indicates that the signal is sent from equipment for broadcasting studio.

**NON AUDIO:** Indicates that the signal is not an audio signal.

**CONSUMER:** Indicates that the signal is sent from equipment for consumer use.

**COPY IHN:** Indicates that the signal is sent from equipment for consumer use and has a copyright.

- **CH MODE**

Displays the mode of the digital audio signal. 2 CH or STEREO is displayed depending on the definition of the channel status.

- **EMPHASIS**

Displays the status of emphasis of the digital audio signal.

**ON:** Indicates that the signal is a preemphasised digital audio signal.

**OFF:** Indicates that the signal is not a preemphasised digital audio signal.

- **FS**

Displays the sampling frequency of the digital audio signal.

- **ORIGIN**

Displays the ORIGIN information written in the channel status of the AES/EBU digital audio signal in four characters.

When the OUT button is selected, after touching this row, you can enter the information using the keyboard or on the KEYBOARD window.

- **DESTINATION**

Displays the DESTINATION information written in the channel status of the AES/EBU digital audio signal in four characters.

When the OUT button is selected, after touching this row, you can enter the information using the keyboard or on the KEYBOARD window.

- **DE EMP button**

Touch this button to set whether the digital audio signal is emphasised or deemphasised.

**AUTO:** Indicates that the digital audio signal is automatically deemphasised according to the emphasis flag. Usually, use this setting.

**ON:** Indicates that the digital audio signal is deemphasised regardless of the emphasis flag.

**OFF:** Indicates that the digital audio signal is not deemphasised regardless of the emphasis flag.

### Notes

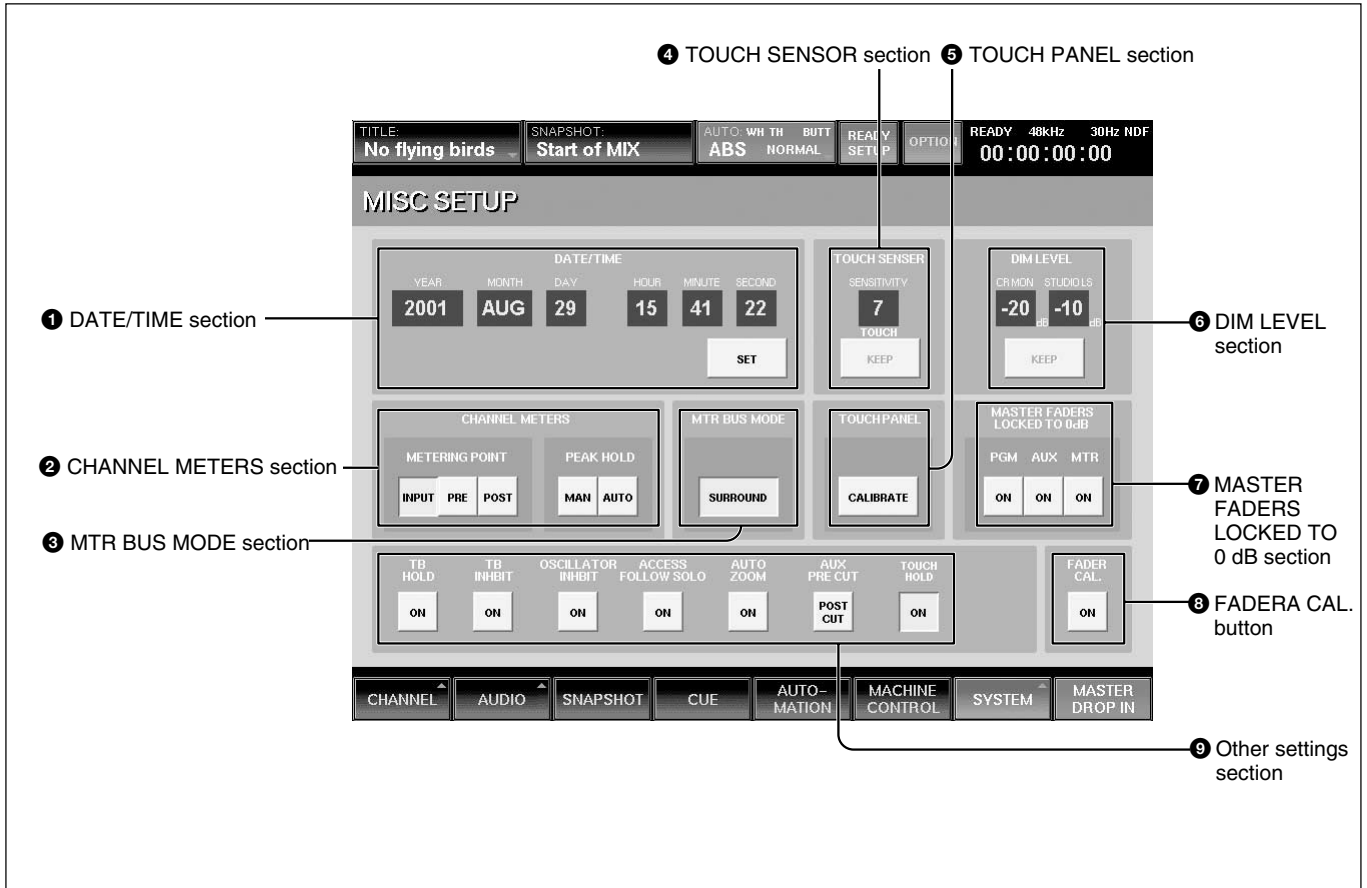
- INSERTION return 1 to 8 do not have the deemphasis function.

- When the digital audio signal is used as INSERTION return 1 to 8, set the emphasis of the effector's output to off.

## MISC SETUP Window

To open this window, touch the SYSTEM button on the bottom menu bar, then select “MISC SETUP” on the menu.

This window allows you to control and check settings for the system’s clock, the channel meter display, the sensitivity of the touch sensor and the dimmer level of the monitor signals.



### 1 DATE/TIME section

Sets the built-in clock.

YEAR

MONTH

DAY

HOUR (24-hour time display system)

MINUTE

SECOND

To increase or decrease the value, touch each box and enter the value using the ten key pad or the jog dial.

**SET button:** Touch this button to adjust the date and the time of the built-in clock.

### 2 CHANNEL METERS section

Sets the peakhold of the master meter and channel meters and selects the signal which is to be displayed on the channel meters.

When the channel faders are used as faders for AUX SEND 1 to 8 or MTR bus, the meters display the level of the bus signal.

#### METERING POINT button

Selects the point in the signal path to be displayed.

**INPUT button:** Selects the signal of the point just before the  $\emptyset$  switch (phase inversion) of the input signal path.

**PRE (prefader) button:** Selects the signal of the point located before the CUT switch of the input signal path.

**PST (post fader) button:** Selects the signal of the point located before the pan of the input signal path. For AUX send, MTR bus and PGM, the signal after the master fader is selected.

#### **PEAK HOLD button**

Selects the method used to display the peak hold level of the input signals.

**MAN (manual) button:** Touch this button to always display the maximum level of the input signal (peakhold status). Touch this button again to cancel the display of the peakhold status.

**AUTO button:** Touch this button to display the peak level of the input signal for three seconds, and the hold display is automatically reset.

#### **③ MTR BUS MODE section**

Touch the button to display SURROUND. When SURROUND is displayed, the MTR bus is set to surround mode. When the display is off, the MTR bus is set to mono/stereo mode.

In 2 FS mode, the display is fixed to OFF. In 2 FS surround mode, the display is fixed to ON.

#### **④ TOUCH SENSOR section**

Sets the sensitivity of the fader touch sensor.

**SENSITIVITY display:** Displays the sensitivity as steps of 0 to 15. The maximum sensitivity is 15. To increase or decrease the sensitivity, touch the display box and set the value using the ten key pad or the jog dial.

**TOUCH display:** The characters “TOUCH” appear in red when any one fader is touched. They appear in white when all faders are untouched.

**KEEP button:** Touch this button to store the sensitivity on the SENSITIVITY display window in the current title. At the same time, data in the work area is also stored in the current title.

#### **To adjust the sensitivity of the touch sensor**

The fader sensitivity may deteriorate with use. If a fader fails to store/recall the automation data, or if the sound level does not change when you move a fader manually, adjust the sensitivity of the touch sensor as follows.

**1** Touch the sensitivity display in the TOUCH SENSOR section in the MISC SETUP window.

**2** By using the – key or the jog dial, decrease the sensitivity until “TOUCH” appears in white. Be care not to touch a fader while performing operations of steps from 2 to 4.

**3** By using the + key or the jog dial, increase the sensitivity to the value just where “TOUCH” appears in red.

**4** Press the – key twice. The sensitivity is lowered by 2 units more than the level set in step 3.

**5** Touch all faders one by one, and confirm that “TOUCH” appears in red, when you touch a fader.

- If the characters do not appear in red, increase the sensitivity value by 1.
- If the characters occasionally appear in red, decrease the sensitivity by 1.
- The touch sensor sensitivity has been set to 7 or 8 at the factory.

**6** After confirming that the characters appear in red only when you touch a fader, touch the KEEP button. The sensitivity value is stored in the unit.

**7** Touch multiple faders at one time, and confirm that “TOUCH” appears in red, when you touch the faders.

#### **⑤ DIM LEVEL section**

CR MON is for control room monitors and STUDIO LS is for studio monitors. To adjust the dim level of the monitor signals, touch the display box and set the value using the ten key pad or the jog dial.

**KEEP button:** Touch this button to store the dimmer level displayed on the window in the current title. At the same time, data in the work area is also stored in the current title.

#### **⑥ MASTER 0 dB section**

When the PGM, MTR, AUX button is ON, the master fader of each bus is fixed to 0 dB.

#### **⑦ TOUCH PANEL section**

Calibrates the touch panel.

When the cursor does not move correctly, calibration of the touch panel is required.

Touch the button to open the calibration window.

## To calibrate the touch panel, proceed as follows:

- 1 Turn off the power and connect a mouse to the MOUSE connector on the rear panel. Then turn on the power again.
- 2 Select the CALIBRATE button on the TOUCH PANEL section.  
A dialog box appears.
- 3 Select [YES] on the dialog box.  
The calibration window appears.
- 4 Touch the CALIBRATE button on the window. Perform the following operations, step 5 to step 7, according to the blue arrow indicated on the calibration window.
- 5 Touch the left top of the window according to the blue arrow indication.  
The blue arrow indication turns red. By touching the left top again, the arrow turns blue and points to the right bottom.

### Note

The arrow indicates the corner to be touched. Be careful not to touch the arrow itself. If you touch the arrow accidentally, start the calibration operation again from step 1.

- 6 Touch the right bottom on the window according to the blue arrow indicator.  
Touching the arrow at the first time causes the blue arrow to turn red. Touching the red arrow causes a circle mark to appear at a point a little to the right of the center.

### Note

Be careful not to touch the arrow.

- 7 Touch the circle mark on the window.
- 8 Touch the EXIT button to terminate the calibration.  
The calibration of the touch panel is terminated.

### Note

If you fail to calibrate the touch panel, the touch will operate incorrectly. If you fail, open the CALIBRATION panel using the mouse connected to the MOUSE connector again, then perform the operations of steps 5 to 8 again.

## 8 FADER CAL. (fader calibration) button

With this button lit, a dialogue opens to calibrate the fader position.

### To calibrate the fader position

The fader characteristics may change with use. If a fader fails to move correctly, calibrate the fader position as follows:

#### Note

- Before proceeding with the calibration, confirm that the touch sensor sensitivity is set properly.
- Be care that nothing touches a fader while carrying out the calibration. If this occurs, cancel the calibration, and recalibrate.

- 1 Touch the FADER CAL. button, and select OK in the dialogue.  
The faders move in calibration mode for 1 minute.

When the calibration is completed, a dialogue opens to confirm whether you want to store the results on the unit or not.

- 2 Select YES to store the results.  
If you touch a faders while the fader is moving in calibration mode, or a fader does not move correctly, for some reason, select NO to cancel the calibration.

## 9 Other settings section

**TB HOLD (talkback hold) button:** Selects whether the TB button on the panel becomes a latching or momentary type.

**TB INHIBIT button:** Selects whether the talkback is inhibited or not.

**OSCILLATOR INHIBIT button:** Selects whether the oscillator function is inhibited or not.

**ACCESS FOLLOW SOLO button:** Selects whether the channel in solo ON status is automatically accessed or not.

**AUTO ZOOM button:** Selects whether the EQUALIZER/FILTER or DYNAMICS window automatically open or not, when pressing the EQUALIZER IN or DYNAMICS IN button on the panel.

**AUX PRE CUT button:** Selects whether the AUX PRE signal is affected by CH CUT or not, when the POST CUT indication appears in green.

**TOUCH HOLD button:** Selects whether a fader, (which has been dropped in by touching) drops out or not, when you remove your finger.



With the button lit, a fader holds the drop in status, and “TH” appears in the AUTO box on the top menu bar.

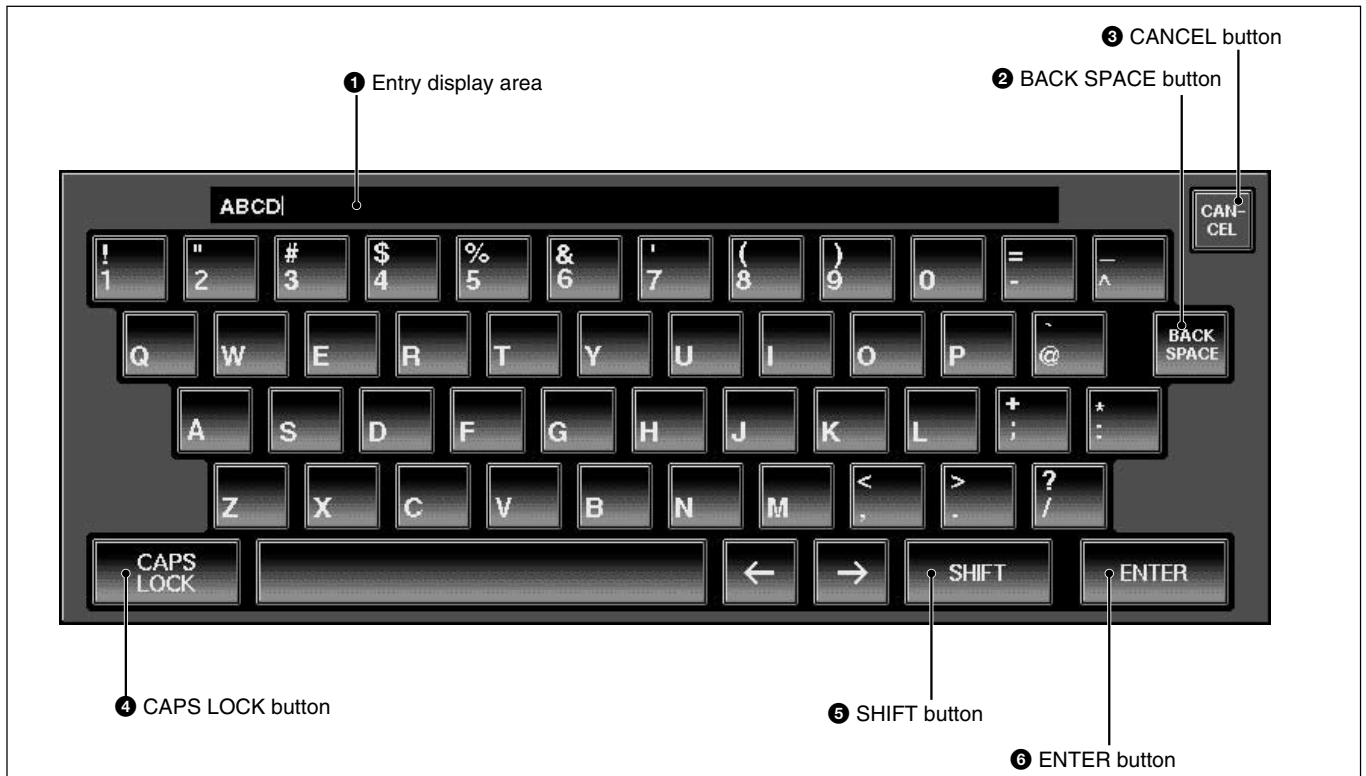
You can switch the TOUCH HOLD button on/off by selecting TOUCH HOLD from the AUTO button menu, too.

## KEYBOARD Window

To open this window, touch the row or box which accepts characters on the SNAPSHOT, CUE, EQ LIBRARY, DYN LIBRARY, TITLE MANAGER, MACHINE CONTROL, SYNC/TIMECODE or I/O

STATUS window.

While this window opens, you can enter the characters from an external keyboard, too.



### 1 Entry display area

Displays the characters entered. When the item is already named on the window opened before the KEYBOARD window opens, that name is displayed here.

### 2 BACK SPACE button

Deletes the character placed before the cursor.

### 3 CANCEL button

Clears the characters entered in the entry display area 1 and closes the KEYBOARD window. The original name is not replaced.

### 4 CAPS LOCK button

Touch this button to enter the alphabetical characters from A to Z in capitals. Numeric numbers and symbols are not affected by this button.

### 5 SHIFT button

Touch this button to set the shift function to ON to use the upper symbols on the numerical and symbol buttons.

The SHIFT button is reset to OFF when you have entered one character.

### 6 ENTER button

Enters the name entered in the entry display area, replaces the name on the window opened before the KEYBOARD window opens. Pressing the ENTER button also closes the KEYBOARD window.

# For System Setup

## Changing the Keyboard Type

The DMX-R100 is factory-preset for use with a Japanese type keyboard. Select the desired keyboard type as described below.

- 1** Turn on the power of the DMX-R100.  
“Loading Now.....” appears.
- 2** While the numbers of dots on the screen is increasing, press [K] on the keyboard currently connected.

The following dialogue appears;

“Do you want to change the keyboard type?

f : French keyboard (fr\_FR\_102.kbd)

g : German keyboard (de\_DE\_102.kbd)

j : Japanese keyboard (ja\_JP\_106.kbd)

u : US keyboard (en\_US\_101.kbd)

other : Don't change the keyboard type.”

- 3** Touch the character of the desired keyboard type; “f”, “g”, or “u”.  
The keyboard type indication on the bottom left of the window changes to the one selected.

## Updating the DMX-R100 Version

The update kit for Version 2.0 consists of two disks: “SYSTEM UPDATE 2.0” and “APPLICATION UPDATE 2.0.” When updating the console from Version 1.0x /1.1x to Version 2.0, follow the steps in “Updating the console” to update the DMX-R100 system, then perform the same steps to update the application by using the “APPLICATION UPDATE 2.0” disk.

The updating disks also allows you to patch any bugs that occur in the DMX-R100 software system and/or application in Version 2.0.

### Notes on updating the DMX-R100 Version

- The system files of Version 2.0 are different from those of Version 1.0 and 1.1. Before updating the DMX-R100 software from Version 1.0x/1.1x to Version 2.0, update the DMX-R100 system to Version 2.0 first, then proceed to the application update.
- Before updating the console to Version 2.0, be sure to save the titles of Version 1.0x/1.1x onto floppy disks in advance. A title saved by the Version 1.0x/1.1x console is not compatible with a title saved by the Version 2.0 console. If you try to load a title saved by Version 1.0x/1.1x from the flash memory of the Version 2.0 console, a title error occurs and the title saved in Version 1.0x/1.1x will be lost.
- After updating the console to Version 2.x, if you want to use a Version 1.x title on a floppy disk, be sure to switch the console version back to 1.17 or higher by using the update disk for Version 1.17 or higher.  
*To obtain an update kit for version 1.17 or higher, contact your Sony dealer.*
- Once the console system is updated to Version 2.0, you can update the application to Version 2.x or return to Version 1.x simply by performing the following steps, **2** to **9**, using the appropriate “APPLICATION UPDATE xx” disk.

## Updating the console Version

### Updating the console system

- 1 Confirm that you have the update files “SYSTEM UPDATE 2.0,” on the DOS-formatted floppy disk.
- 2 Connect a PS/2 keyboard (optional) to the console and turn on the power of the console. The start-up window opens.

```

DMX-R100
  ■■■■■
  ■■■■■
  ■■■■■
Sony Digital Audio Mixer

```

- 3 Press the ESC key on the external keyboard a few times until the dialogue “Loading now.....” appears in white on a blue screen.

When the console system enters the update mode of the software, the dialogue “Will you update this system? (y/n)” appears.

- 4 To execute the update, press “y” on the keyboard.

If you enter this mode by mistake, press “n.”  
When you press “n”, the system starts as usual.

#### **WARNING**

Never press “y” without preparing the update floppy disks. If the DMX-R100 executes the update operations without the correct update disk, the console software files may be damaged and the console may not work properly.

When you press “y”, the message “Insert the floppy disk and press any key.” appears.

- 5 Insert the “SYSTEM UPDATE 2.0” disk into the floppy disk drive on the console, and press the space bar on the keyboard. The specifics of the update and the “This update is ...OK? (y/n)” appear.

- 6 Confirm the contents on the screen, then;
  - press “y” on the keyboard, to start the update.
  - if the screen shows incorrect information or parameters, press “n” to cancel the update operation.

When you press “y”, the update programs are decompressed, and the disk files are installed in order, with the process showing on the screen.

When the DMX-R100 system is updated, the message “Update for XXXX completed. Remove your floppy disk and press any key...” appears.

- 7 Remove the floppy disk and press the space bar on the keyboard.
- 8 When the dialogue “Stand-by....” appears, turn the power of the console OFF of the console once. Wait more than 10 seconds, then turn the power ON again.

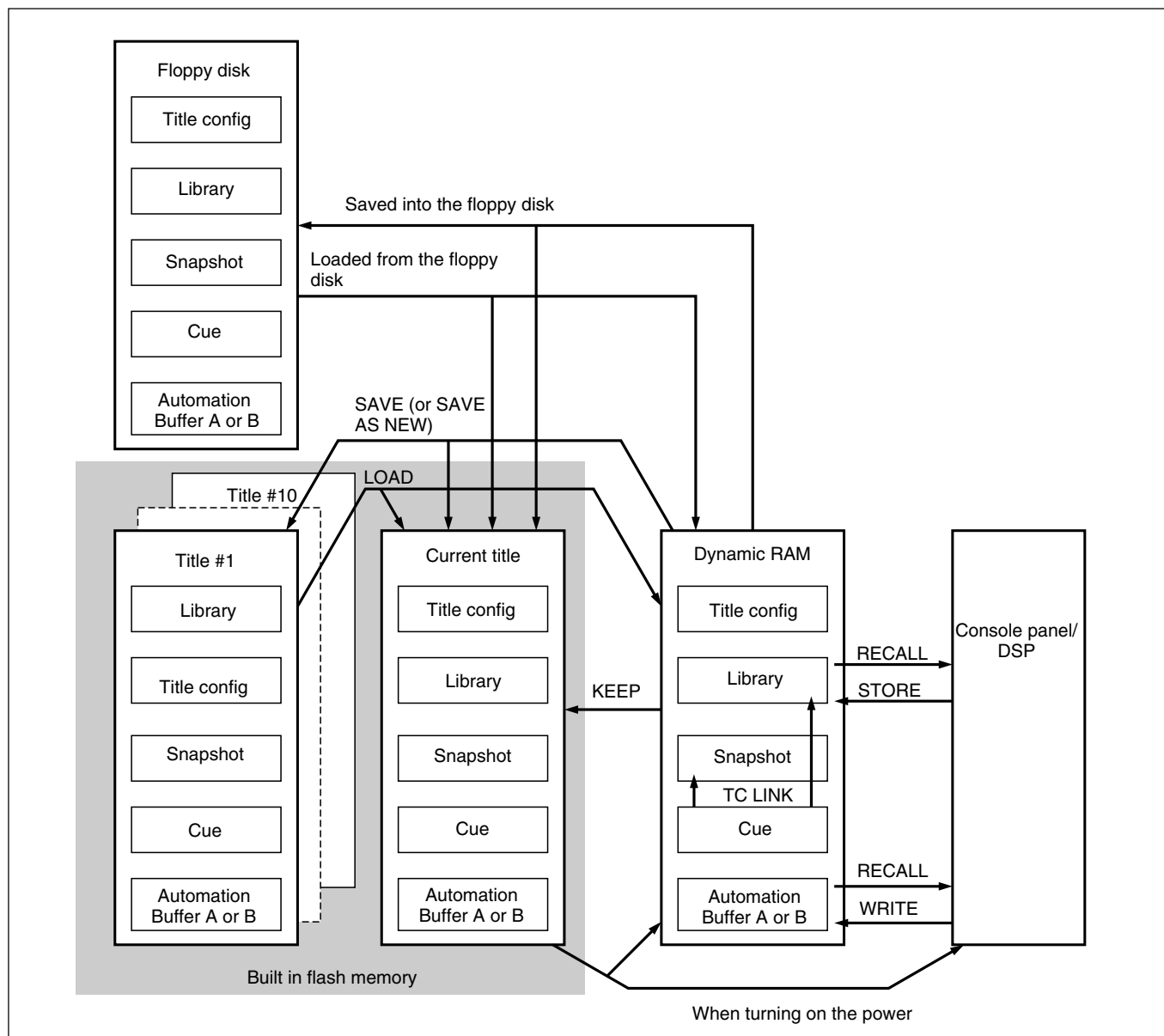
### Updating the application

After updating the DMX-R100 system, perform steps 2 to 8 again, using the “APPLICATION UPDATE 2.0” disk in step 5.

When the update of both the system and the application are completed, the version of your DMX-R100 will be Version 2.0.

# Memory Structure and Title

## Structure of Snapshot and Automation Memory



The above figure shows the memory structure of the unit.

Automation data, snapshot data and cue data created on the unit are stored, updated and deleted within the dynamic RAM. Thus, when restarting the unit or turning off the power of the unit, this data is lost. To temporarily save the data that is being worked, select KEEP from the TITLE menu which opens by touching the TITLE button on the top bar on the window (in this manual, this operation is also called KEEP). Data in the work area on the dynamic RAM is saved in the current title which is the backup file in the flash memory. Thus, the data is not lost

when restarting or turning off the power of the unit. You can save the current title as the title with the title number and title name on the TITLE MANAGER window too.

Also, you can initialize the title by using the CLEAR button of CURRENT TITLE in the TITLE MANAGER window. In this case, the timecode and the sampling frequency of the title being used are stored. However, the remaining data (such as automation data, snapshot data and cue data) is cleared.

## About Titles

In operating the unit, data such as snapshots, dynamic automation data, sampling frequencies and timecode required for the mixing operation are stored in 'Titles'. There are two types of titles: One is the "current title" automatically created in the flash memory, the other is the title stored as a file.

For detailed information on how to create a title, see "TITLE MANAGER Window" on page 82.

### Initializing a title (CURRENT TITLE CLEAR)

A new current title which has no data is created based on the current sampling frequency and timecode mode setting. At this time, all data other than the sampling frequency and timecode are cleared.

The current title is the working title created in the memory or flash memory.

### Saving a title

The current title is saved into the specified TITLE number.

### Loading a title

The specified title is loaded as the current title. If the setting for Fs (sampling frequency) and/or SYNC SOURCE is different between the loaded title and current title, the unit restarts after giving a confirmation message.

### Changing the sampling frequency

When you change the sampling frequency, the contents of the current title is cleared.

## Titles when turning on the power of the unit

### When there are created titles

- The sampling frequency, sync source and timecode mode are set on the unit according to the content of the existing title.
- The current title worked on just before turning off the unit is automatically loaded. The dynamic automation data is automatically loaded into the effective buffers.

### When you use the unit for first time (with the default setting) or there are no current files

The current title is created with the following settings.

- Sampling frequency: 48 kHz
- Sync-lock (reference synchronous signal): INTERNAL
- Timecode mode: NTSC30NDF
- Initial cue: 00:00:00:01
- Event: not linked.

### Default setting of the unit

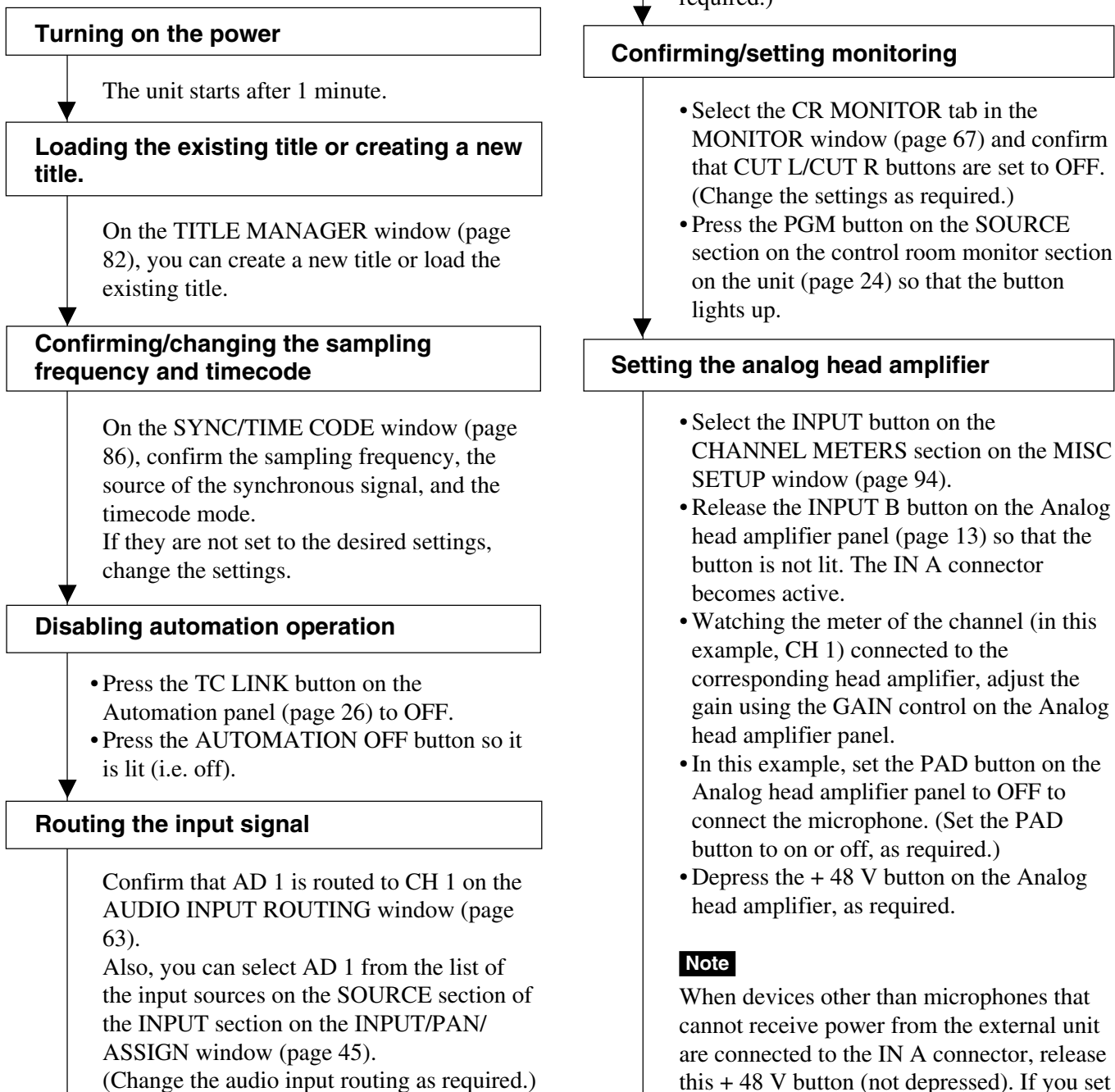
Item	Setting
Input routing	<ul style="list-style-type: none"> <li>• Connect AD 1 to 24 to CH-1 to CH-24.</li> <li>• When the DMBK-R105 is inserted in the option slot, connect each input channel of the DMBK-R105 to Insertion return 1 to 8.</li> <li>• When the DMBK-R101/103/104/106/107 is/are inserted, connect them starting from the lowest slot number to the channels from CH-25 in order.</li> </ul>
Channel mode	Monaural
Trim setting of the input signal	0 dB
Delay amount	0 Frame, COARSE: OFF
Pan, MTR pan	Control: Center, Button: ON
Surround pan	Front center
Divergence	100 %
MTR assign	OFF
PGM assign	PGM L/R: ON
Equalizer	Control : Center, Button: OFF
Dynamics	Control :Center, Button: OFF, EXPANDER: Access
AUX send	Set all busses to monaural, OFF and POST
Fader group	Set all groups to GANG and OFF.
Cut	OFF
Fader	- infinity
Output routing	<ul style="list-style-type: none"> <li>• Connect PGM L/R busses to the PGM L/R connectors.</li> <li>• Connect the AUX 1 to 8 busses to the AUX 1 to 8 connectors.</li> <li>• When the DMBK-R105 is inserted in the option slot, connect each output channel of the DMBK-R105 to insertion send 1 to 8.</li> <li>• When the DMBK-R102/103/106/107 is/are inserted, the MTR 1 to 8 are connected.</li> </ul>
Copy/Link function	All ON

# Basic Operation Procedure

## Basic Mixer Operation Flow from Turning On to Monitoring

The basic mixer operation is explained in the following operation flow chart.

Example: In the following flow chart, audio from the microphone connected to the IN A connector is routed to CH 1 and the fader is used as a channel fader. Then the signal is output to the PGM bus and monitored on the control monitor. The unit is used in manual mode. *For detailed information on operations, see the page in parentheses.*



To the left column

To the next page

From the previous page

### Setting the channel

- Press the ACCESS button on the channel strip panel (page 14) for CH 1 on the unit so that the button lights up.
- Press the PROGRAM L/R buttons on the BUS ASSIGN section (page 19) on the unit. (The signal of the channel is assigned to the PGM bus.)
- Set the level of the PROGRAM fader to 0 dB. (Change the level of the PROGRAM fader, as required.)
- Watching the master meter (page 23), adjust the level using the channel fader.
- Adjust the monitor sound volume using the controls on the Control room monitor section (page 24).

### Storing the channel settings as data

- To store the channel data, store it as snapshot data using the STORE button on the SNAPSHOT window (page 72).
- When restarting the unit or turning off the power of the unit, save data by selecting KEEP or SAVE on the TITLE menu which opens by touching the TITLE button.

## Using the stereo signal

### When setting PAN of the channel to OFF

- 1** Display “STEREO” on the MODE button by touching it on the INPUT/PAN/ASSIGN window (page 45).
- 2** Set the PAN button to OFF on the INPUT/PAN ASSIGN window.
- 3** Perform settings for the PROGRAM L/R buttons on the BUS ASSIGN section on the Parameter setting panel.
  - For the L channels (usually the odd channels), set the PROGRAM L button to ON and the PROGRAM R button to OFF.  
For the R channels (usually the even channels), set the PROGRAM R button to ON, and the PROGRAM L button to OFF.  
You can also set the PROGRAM L/R bus on the ASSIGN section on the INPUT/PAN/ASSIGN window.
  - Select the status of the REVERSE button, the L + R button and the MS DECODE button on the INPUT/PAN/ASSIGN window, as required.

### When setting PAN of the channel to ON

- 1** Display “STEREO” on the MODE button by touching it on the INPUT/PAN/ASSIGN window (page 45).
- 2** Set the pan of odd and even channels to ON.
- 3** Set the PROGRAM L/R buttons in the BUS ASSIGN section on the Parameter setting panel to ON.
- 4** Turn the pan control of the odd channel fully counterclockwise.
- 5** Turn the pan control of the even channel fully clockwise.
- 6** Adjust the panning settings of the odd and even channels as required.

#### Note

For channels set in stereo, you have to perform pan/surround panning settings for L and R independently. Perform the pan/surround panning settings, as required.

## Snapshot Automation Procedure

The unit can memorize up to 99 control settings (snapshots).

By linking the stored snapshot settings with the timecode, the snapshot automation operations are performed as explained below.

Since the snapshot data is stored in the working memory when storing it by using the STORE button on the SNAPSHOT window, data stored in the working memory is cleared when restarting the unit or turning off the power. Store the data in the current title by selecting KEEP on the TITLE menu which opens by touching the TITLE button, or save the data as a title file by using the SAVE button in the TITLE MANAGER window. The TITLE button can also be used to store the data.

To perform operations on the unit, use the buttons, the SNAPSHOT buttons and the ten key pad on the Automation panel.

*For buttons and windows used for snapshot automation, see “Automation Panel” on page 26, “SNAPSHOT Window” on page 72 and “TITLE MANAGER window” on page 82.*

### Note

The following items are included in a title, but not in a snapshot.

- The GANG button setting effective between the MTR send and SW level.
- The GANG button setting effective between the MTR PAN and the L/R setting in the surround PAN.
- The mode setting on channels, MTR send masters, AUX send masters (either MONO, STEREO or SURROUND)
- The GANG group, VCA group, MUTE group
- The settings on output signal routing
- The SURROUND setting on MTR busses

## Storing/updating snapshot data

### To store/update snapshot data by manipulating buttons on the unit

- 1 Adjust or set the parameters on the unit as required.
- 2 Confirm that the TC LINK button is set to OFF (not lit).  
It is located in the SNAPSHOT section of the Automation panel.
- 3 Press the SNAPSHOT button so that the button lights up.

4 Using the ten key pad, enter the number of the snapshot that you want to store.

5 Press the STORE button.  
It is located within the SNAPSHOT buttons section.  
The control settings on the unit are stored along with the snapshot number.

### To store/update the snapshot data in the window

- 1 Adjust or set the parameters on the unit as required.
- 2 Open the SNAPSHOT window.
- 3 To create new snapshot data:  
Touch the NEW button to select it.  
Channel processing control values are stored in a new snapshot when the NEW button is pressed.  
The lowest number among the vacant numbers is assigned and the snapshot is given “# + snapshot number” as a temporary name.
- 4 To update the snapshot data:
  - ① Touch the number of the snapshot that you want to update in the snapshot list in the window.  
At this time, you cannot select a non-registered snapshot.
  - ② Touch the STORE button on the window.  
The data of the selected snapshot number is replaced with the current status of control settings on the unit.

## Recalling a snapshot data

### To recall the snapshot data using the ten key pad

- 1 Confirm that the TC LINK button is set to OFF (the button is not lit).
- 2 Press the SNAPSHOT SET button so that the button lights up.
- 3 Enter the number for the snapshot data that you want to recall.
- 4 Press the RECALL button on the unit.



---

### To recall the snapshot data in the window

- 1 Open the SNAPSHOT window.
- 2 Touch the number for the snapshot data that you want to recall on the snapshot list.
- 3 Touch the RECALL button on the window.

---

### Changing a name for snapshot data

- 1 Open the SNAPSHOT window.
- 2 In the snapshot list, touch the name that you want to change.  
The KEYBOARD window appears automatically.
- 3 Enter the name on the KEYBOARD window.
- 4 Touch the ENTER button.

---

### Deleting snapshot data

- 1 Open the SNAPSHOT window.
- 2 Touch the number of the snapshot that you want to delete within the snapshot list.
- 3 Touch the DELETE button.

## Library Operation Procedure

The unit can memorize up to 99 equalizer settings and up to 99 dynamics settings as library entries.

Use the stored libraries as described below;

- Recall manually, for the desired channel.
- Recall automatically for a cue operation, linked with the timecode, for the desired channel.

The library data is included in the title.

---

### Creating/updating a library entry

In this example, the procedures are for equalizer libraries. However, when you operate the dynamics libraries, follow the same steps, by replacing the word “equalizer” with “dynamics”, and use the DYNAMICS screen.

#### To create a new library entry

- 1 Adjust or set the equalizer on the unit as required.
- 2 Open the EQUALIZER/FILTER screen, and recall the channel to store a new equalizer library entry.
- 3 Touch the LIBRARY button on the window.  
The EQUALIZER LIBRARY window opens.
- 4 Touch the NEW button in the EQUALIZER LIBRARY window.  
The channel equalizer settings are stored as a new library entry. The lowest number among the unused library numbers is assigned to the new library setting and it is temporarily named “# + xx” (xx is the library number).

#### To update a library entry

Proceed as in steps **1** to **3**, above.

- 4 On the library list, touch the library entry to be updated.
- 5 In the LIBRARY window, touch the STORE button.  
The contents of the library entry selected in step **4** are updated with the equalizer settings made in step **1**.

# Basic Operation Procedure

---

## Recalling a library entry

- 1 Open the EQUALIZER/FILTER (or DYNAMICS) window.
- 2 Touch the LIBRARY button on the window. The LIBRARY window opens.
- 3 Select the library entry that you want to recall from the library list.
- 4 Touch the RECALL button on the window.

---

## Changing the name of a library entry

- 1 Open the LIBRARY window by touching the LIBRARY button in the EQUALIZER/FILTER (or DYNAMICS) window.
- 2 Touch the library name that you want to change in the library list. The KEYBOARD window opens.
- 3 Enter the new name with the KEYBOARD window, then touch the ENTER button in the window.

---

## Deleting the library entry

- 1 Open the LIBRARY window by touching the LIBRARY button in the EQUALIZER/FILTER (or DYNAMICS) window.
- 2 Touch the library name that you want to delete in the library list.
- 3 Touch the DELETE button in the LIBRARY window.

## Cue Operation Procedure

Since the cue data is stored in the working memory when storing it by using the STORE button in the CUE window, data stored in the working memory is cleared when restarting the unit or turning off the power of the unit. Store the data in the current title by selecting KEEP on the TITLE menu which opens by touching the TITLE button, or save the data as a title file by using the SAVE button in the TITLE MANAGER window. The TITLE button can also be used to store the data.

To perform the cue operation by manipulating buttons and controls on the unit, use the SNAPSHOT SET buttons and the ten key pad on the Automation panel of the unit.

To perform a cue operation in the window, use the CUE window.

*For details of the buttons and windows, see “Automation panel” on page 26, “CUE window” on page 74 and “TITLE MANAGER window” on page 82.*

---

## Initial cue

- CUE 1 is reserved as an initial cue to indicate the start point of the automation.
- When a new timecode point is entered which is before the timecode specified for the initial cue, automation data does not become effective until the timecode advances beyond the timecode of the initial CUE.
- To change the initial cue, perform the same operating procedure as for changing other cue points. **But if you set the timecode after the timecode of the initial cue, automation data between the former timecode and the timecode newly set will be lost.** Similarly, you can change the snapshot linked with the initial cue. But if you change it, an inconsistency may occur between the snapshot data and the dynamic automation data.

---

## Storing a cue point

The operation necessary to register CUE 2 and to link with a snapshot is explained below.

### To store the cue point using the ten key pad

- 1 Press the TC LINK button on the unit so that the button lights up.
- 2 Create the control settings you want to store by manipulating the unit.
- 3 Press the SNAPSHOT SET button so that the button lights up.
- 4 Enter the desired cue number (02 in this example) using the ten key pad.
- 5 Press the STORE button on the unit. A cue point with the specified cue number (02 in this example) is stored and automatically linked with the new snapshot data.

---

## To store the cue point in the CUE window

- 1** Open the CUE window.
- 2** Touch the NEW button.  
At this time, if there are no cue points registered on the cue list, CUE 2 is created.
- 3** Select the TC LINK button by touching the TC LINK button corresponding to CUE 2 in the window.
- 4** Touch the EVENT button to select the snapshot.
- 5** Touch the NUMBER button of the EVENT linked with CUE 2.  
The snapshot name list opens.
- 6** Select the desired snapshot name.  
The specified snapshot is linked with CUE 2.

In the same way, a library entry can be linked with a cue.

### Note

If you change the time of the initial cue and the snapshot data linked with the initial cue, the data existing between the time before the change and after the change is lost and this may have an adverse effect on the result after recalling automation. Take special care when updating the initial cue.

---

## Changing the timecode for a cue point

- 1** Open the CUE window.
- 2** Touch the TIMECODE display corresponding to the cue point that you want to change.
- 3** Enter a new timecode using the ten key pad.  
Or increase or decrease a value using the + / - buttons and the jog dial.
- 4** Press the ENTER key.

---

## Changing the event data linked with a cue point

- 1** Open the CUE window.
- 2** Touch the EVENT display for the cue point that you want to change in the cue list.  
The snapshot, the equalizer library, and the dynamics library can be selected from the EVENT display.
- 3** Touch the NUMBER displayed from the selected EVENT.  
The event list opens.
- 4** Select the desired event from the event list.  
The event linked with the cue point is changed.

When you select the EQUALIZER LIBRARY or DYNAMICS LIBRARY as the EVENT in step **2**, touch the EFFECTIVE CHANNEL button to select the channel to which the event applies.

---

## Changing the name of a cue point

- 1** Open the CUE window.
- 2** Touch the CUE NAME display corresponding to the cue point that you want to change in the cue list.  
The KEYBOARD window opens.
- 3** Enter a new name for the cue point using the KEYBOARD window.

---

## Deleting a cue point

- 1** Open the CUE window.
- 2** Touch the NUMBER display corresponding to the cue point that you want to delete.
- 3** Touch the DELETE button.  
Note that these steps delete the cue point only. The snapshot or libraries linked to the deleted cue point still remain even though the linked cue point is deleted. If you want to delete the snapshot or library data too, delete them separately.

## Automation Procedures

Do not set controls for both snapshot and dynamic automation.

For example, if you want to control the fader in automation, set the faders for the snapshot in ISOLATE mode.

Even though you can set the same item to both snapshot and automation, the unit may perform unpredictably if there is contention.

The automation always stores data for the “drop-in” items while the automation is running, even if the items are in AUTOMATION ISOLATE mode.

The unit has two modes for automation: ABS (absolute) mode and TRIM (fine adjustment) mode. To perform an automation operation, use the TC AUTOMATION buttons on the Automation panel or in the AUTOMATION window.

*For details on buttons, see “Automation Panel” on page 26, and for operations in the window, see “AUTOMATION Window” on page 77.*

Since the automation data that is being written is stored in dynamic RAM, data stored in dynamic RAM is cleared when you restart the unit or turn off the power of the unit. Store the data in the current title by selecting KEEP on the TITLE menu which opens when you touch the TITLE button.

Or save the data as a title file by using the SAVE button in the TITLE MANAGER window. The TITLE button can also be used to save the data.

### Writing automation data for the first time (in ABS mode)

- 1 • To clear all channels subject to automation data, clear the current title in the TITLE MANAGER window.  
• To clear respective channel data, select the channels whose automation data is to be cleared, by touching the MAKE STATIC EXECUTE button in the AUTOMATION window.  
All items subject to automation data in the selected channel are cleared.  
Even if the timecode advances and the automation is set to RUN status (i.e., automation is being replayed), data will not be recalled.

- 2 Change the settings so that automation operates to write and recall automation data.
  - ① Touch the ABS button on the Automation panel to select ABS mode.  
(All channels are not set to work with automation yet.)
  - ② Confirm that the timecode of cue 1 (the initial cue) is set before the project start timecode.
  - ③ Select the items not to be involved with automation by using the CHANNEL buttons or FUNCTION buttons in the AUTOMATION ISOLATE tab.
  - ④ Set the READY SETUP button to ON and select ALL CANCEL using the OPTION button.  
All items subject to automation are currently in SAFE mode.

- 3 Create a rough mix by manipulating faders, controls and switches currently in the status changed in step 2.

- 4 After creating the rough mix, set the automation items you want to record to READY.

- 5 Confirm that the SAFE button on the panel goes off.

- 6 Set the automation items to drop-in status (WRITE).
  - ① Set the tape recorder to play.
  - ② Drop in items using one of the following methods.
    - Drop in items in READY status with the proper timing.
    - Press the blinking WRITE button on the channel strip.
    - Touch the MASTER DROP IN button on the window to turn its color to light red.

Or you can set the tape recorder to play after setting the automation items to WRITE mode. In this case, after the unit recognizes that the timecode has advanced, the unit starts to store data.

- 7 Store automation data by manipulating the faders, controls and buttons as required.

- 8** Drop out the automation data using one of the following methods.
- Touch the MASTER DROP IN button on the window to turn its color to dark red.
  - Touch the numerical value of the items subject to automation.
  - Release the fader.
  - Stop the tape recorder.

Automation data for the items set in WRITE mode in step 6 is written.

#### Notes

- If a lot of items are dropped in (go into “write mode”)/out (cancel “write”) at the same time using the MASTER DROP IN button, data near the drop in/drop out point may not be stored and recalled instantaneously.
- Automation items in WRITE mode are removed from snapshot recall and control using MIDI.

### Updating automation data

The data for the automated items is recalled according to timecode. To update automation data, set the desired automation items to READY, then drop them into WRITE.

You can select either ABS mode or TRIM mode to update data, using the ABS button or the TRIM button within the TC AUTOMATION buttons on the Automation panel.

In ABS mode or TRIM mode, you can set the return mode and the speed to return to the previous data from the new data in the AUTO RETURN TIME section in the AUTOMATION window.

*For details on the return mode (ABS and TRIM), see figures on the next page.*

#### To update automation in ABS mode

Set the tape recorder to play and drop in the desired automation items (go into WRITE). The method used to “drop-in” depends on faders, controls and buttons as explained below.

- **To drop in faders**, touch the fader knob its numerical value displayed on the window.

When you drop in by touching the fader knob, you can drop out (cancel WRITE) by releasing the fader, if the WRITE HOLD or TOUCH HOLD mode is not specified.

When you drop in by touching the numerical value displayed on the window, you can drop out using one of the following methods:

- Touch the numerical value again.
- Press the WRITE button for that channel.
- Touch the MASTER DROP IN button.
- Stop the tape recorder.

- **To drop in buttons**, push them.

The button automatically drops in.

You can drop out using one of the following methods:

In ABS mode

- Press the WRITE button for that channel.
- Touch the MASTER DROP IN button.
- Stop the tape recorder.

In Trim mode, release a button to drop out automatically.

For items dropped in, replay of previously recorded automation is replaced by new automation data.

When dropping out, faders and other controls return to the previous automation data and replay of the previous data continues according to the method specified in the AUTO RETURN TIME section in the AUTOMATION window.

#### Note

- When HOLD TO END is specified, the status of faders, controls and switches at the drop out point are held and stored as automation data to the end of the title.
- When TOP TO END is specified, the status at the drop out point is held and stored as automation data from the beginning to the end of the title.

# Basic Operation Procedure

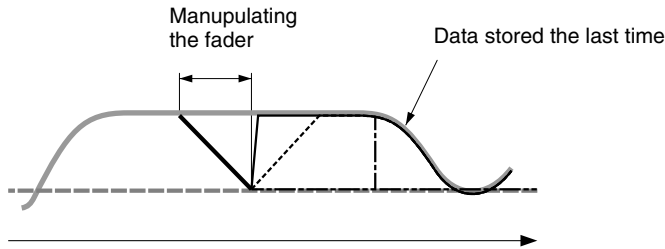
## Fader operation and its results

The following figures show the fader operation and the results of the fader operation.

In the figures, the fader operations are indicated using the following lines:

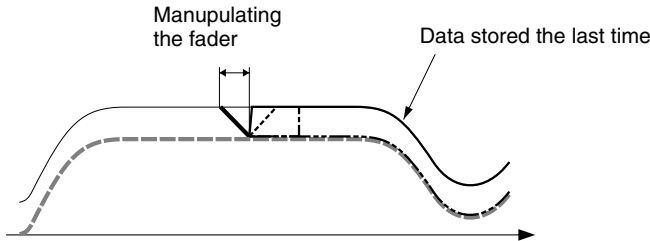
— : Indicates the data stored last time (previous data)  
 — : Indicates the actual results of the fader operation (new data).

### When operating the faders in ABS mode



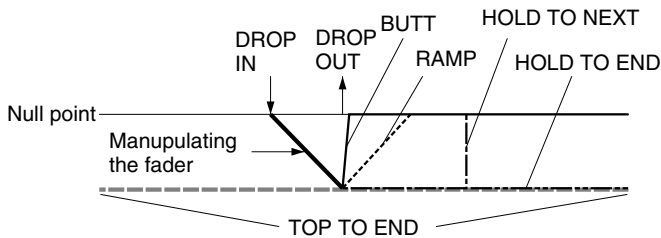
- BUTT: The fader is reset to the position stored the last time (previous data) at the instant you release the fader.
- - - RAMP: The fader is reset to the stored position at the specified speed, when you release the fader.
- - - HOLD TO NEXT: After you release the fader, the fader's position remains as it is up to the next event.
- - - HOLD TO END: After you release the fader, the fader's position remains as it is up to the end. The previous data is overwritten.
- - - TOP TO END: After you release the fader, the fader's position remains as it is up to the top to end of the event. The previous data is overwritten.

### When operating the faders in TRIM mode



The operation performed while holding the fader down is added to the last stored data as offset and recalling is continued.

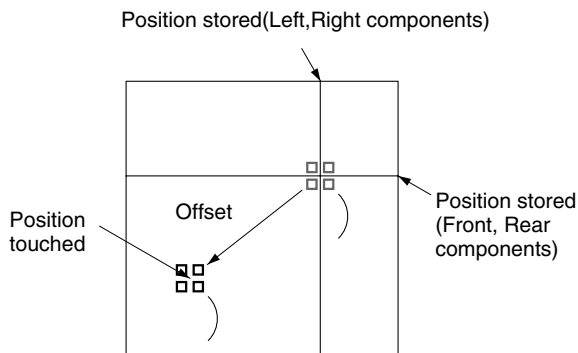
### Detailed figure for the fader operation in TRIM mode



In trim mode, the offset from the NULL point (0 dB point) is added to the previous saved data. The return mode from the drop out point to the null point is selected in the AUTO RETURN TIME section.

Offset of the faders: when the TRIM mode is specified, all channel faders, MTR send faders, AUX send faders move to 0 dB. The difference between the 0 dB point and the current fader point is adapted as an offset.

Offset for the knobs and controls other than faders: Differences between the scale newly performed and the previous stored data value is adapted as an offset.



Offset of the surround pan: The difference between the latest touched-point and the last stored point is added to the previously stored data.

When dropped out, the pan setting returns to the point stored in previous data according to the return mode selected.

### To update in TRIM mode

In TRIM mode, you can update previous automation data by adding offsets.

When the TRIM mode is specified, all faders automatically move to the 0 dB point, and the difference between the fader point and the 0 dB point is recognized as “fader offset”, as shown on the previous page. The new fader operation data is stored by adding its offset from 0 dB to the previous fader data.

In TRIM mode, you can change the ON/OFF timing of CUT, by continuing to hold the CUT button down.

### Example: Using the CUT button in TRIM mode

By releasing the CUT button, the data and audio signals are changed as follows.

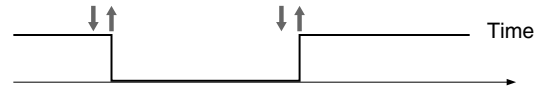
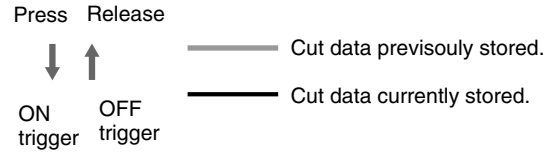
- 1** When you press the CUT button, the audio signal status is held with the ON trigger and the LEDs and ON/OFF status are inverted.
- 2** As long as you hold down the CUT button, the audio signal status in step 1 is held and the displays change according to the automation operation.
- 3** When you release the CUT button, the audio signal status is adjusted to the display status with the OFF trigger.

The audio signal status in steps 1 to 3 is stored as automation data.

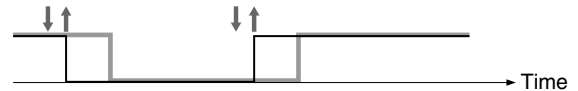
**Note**

In TRIM mode, the function of buttons in automation depends on the button condition (depressed or released). The audio signal is affected when you release the button.

### ON/OFF of the CUT button:

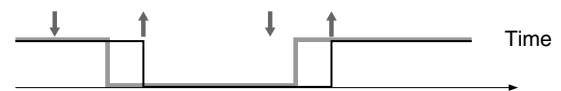


### When shifting the stored Cut ON/OFF timing to an earlier time:



### When shifting the stored Cut ON/OFF timing to a later time:

Press the button before the change and release the button after timing.



### When cancelling the stored Cut ON/OFF:

Press the button before the change, then release the button after the change has been completed.



(Continued)

### Using the Automation Isolate Function

The automation isolate function allows you to remove automation control from a selected channel or function. Using this automation isolate function, you can manually adjust the level, regardless of the stored automation data.

Even if the automation item is set to the isolate function, the control will write automation data if dropped in.

This can be used as an automation mode, allowing you to stop previous automation playback, finding a new setting of the control and dropping in.

- 1** Set the channel or function that has the item you want to adjust to ISOLATE in the AUTOMATION window.
- 2** Set the item to be adjusted to READY.
- 3** Start the tape recorder to play, and adjust the sound signal to the proper level.  
Repeat level adjustments as required.
- 4** Rewind the tape and play it back.
- 5** Drop it at the proper point to set the desired item to WRITE.
- 6** Stop the tape recorder.
- 7** Clear ISOLATE of the automation item.

### Using the WRITE HOLD Mode and the TOUCH HOLD Mode

#### Using the WRITE HOLD mode

When the WRITE HOLD mode is set to ON, controls are prohibited from dropping out and are held in WRITE, even when the timecode is stopped. The WRITE HOLD mode brings the following functions:

- When the items dropped in with the use of the WRITE button or MASTER DROP IN button while the timecode is running, their data relates to the previous event in HOLD TO NEXT mode when the timecode is stopped.
- When the automation mode is set to AUDITION mode, the WRITE HOLD mode is automatically set to ON.
- When you punch in/out by manipulating the foot switch or in AUTO mode, whilst the WRITE HOLD mode to ON, you can adjust the mix balance for a specified duration repeatedly.

#### Example: Readjusting the level independently for the previously stored automation data

- 1** Press the SAFE button on the panel to set it to ON (lit).
- 2** Open the AUTO button menu on the top menu bar and select the WRITE HOLD mode.
- 3** Select the FOOT SW button or AUTO button in the PUNCH IN/OUT section in the AUTOMATION window.  
Punching in/out is set.
- 4** Set the automation item to be adjusted to READY.
- 5** Start the tape recorder in PLAY.
- 6** Drop in the item selected in step 4.
- 7** Adjust the level.
- 8** Repeat the adjustment by rewinding the tape as required.



**9** Set the SAFE button to OFF after adjusting the level to a new setting.

**10** Start the tape recorder in PLAY.

**11** Store the required duration time by setting the punch in and punch out times.  
You can drop out manually if preferred.

**12** Clear Punch in/out and WRITE HOLD modes.

#### Note

In WRITE HOLD mode, once the automated item enters WRITE, the item is held in WRITE until it is dropped out manually. If you do not use the SAFE button and the punch in/out function, the automation data is overwritten each time the tape recorder plays back. When WRITE HOLD mode is cancelled, all items held in WRITE become READY.

### Using the TOUCH HOLD mode

When the TOUCH HOLD mode is set to ON, faders are prohibited from dropping out and are held in WRITE, even when you release the fader. This function allows you to hold the relative balance among the ganged faders, even when you release a fader within a group.

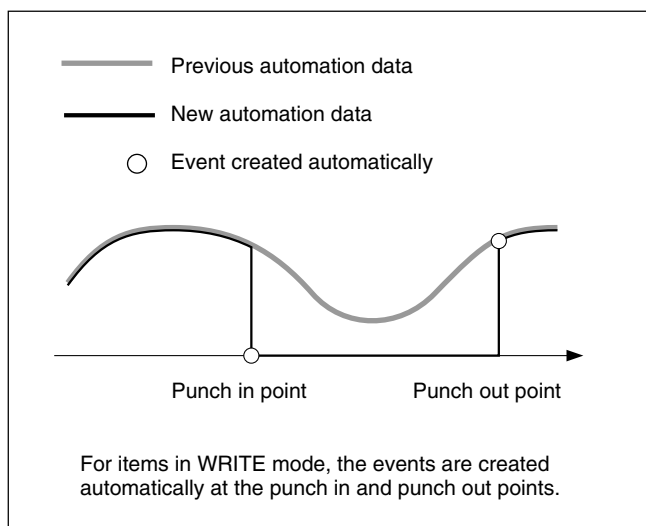
To drop out a fader in TOUCH HOLD mode, manipulate any one of the following;

- Touch the MASTER DROP IN button
- Press the WRITE button in the channel
- On the window, touch the level display of the fader to be dropped out
- Stop the tape recorder

## Punching In/Punching Out

### Punching in/punching out by specifying the durations

You can change automation data between specified durations by using the punch in/out function. The following example shows a case where you want to remove noise recorded on the tape by cutting the audio with the fader.



- 1** Find the timecodes of the start and end of the noise.
- 2** Set the timecodes found in step **1** in the PUNCH IN TIME and PUNCH OUT TIME windows, then press the AUTO button.  
The automation data is stored for the duration between the punch in and punch out times displayed.
- 3** Rewind the tape.
- 4** Set the SAFE button on the panel to OFF so that it goes off.
- 5** Drop in the fader for the desired channel, and slide the fader down to the minimum position. The display turns red, but data will not be written before the PUNCH IN point.
- 6** Start the tape recorder to play back.

## Basic Operation Procedure

During the duration specified by the punch in/out function, the minimum level is stored as automation data for the corresponding fader.  
At the punch in point, the current fader level is stored.  
At the punch out point, the fader level of the previous data is resumed.

When the events have been completed and everything is ready to save as data, select KEEP by touching the TITLE button on the window, as required.

### Performing punch in/punch out using the foot switch

Punching in/punching out using the foot switch allows you to manually control the Drop in/out using an external foot switch.

To perform a cut operation, use the AUTOMATION buttons section on the Automation panel on the unit and in the AUTOMATION window.

*For details of buttons, see “Automation Panel” on page 26, and for operations on the window, see “AUTOMATION Window” on page 77.*

- 1 Select the FOOT SW button on the PUNCH IN/OUT section on the AUTOMATION window.
- 2 Press the ABS button on the TC AUTOMATION section on the Automation panel of the unit so that it lights up.
- 3 Set the fader or other control for the signal you want to cut to READY mode.
- 4 Drop in the fader in the window.  
The display turns in red, but data will not be written until the foot switch is set to ON.
- 5 Press the SAFE button on the TC AUTOMATION section on the Automation panel of the unit so that it is off.
- 6 Locate the tape recorder at a point a little before the PUNCH IN time and play.
- 7 Slide the faders up to the desired level.

- 8 Set the foot switch to ON at the desired time.
- 9 Stop the tape recorder at the right point, or switch the foot switch to OFF.

### Using the Audition Mode

When the AUDITION mode is set to ON, you can safely readjust the mix balance repeatedly. This mode will be usable for fine adjustment of mix balance.

- 1 Touch the AUDITION button in the AUTOMATION window.  
The console enters WRITE HOLD, TOUCH HOLD modes automatically, and the SAFE button is ON (lit).
- 2 Set the AUTO RETURN TIME as desired.  
Note that the AUTO RETURN TIME setting is effective only when you set the SAFE button OFF and stop the timecode.
- 3 Select the AUTOMATION mode.
- 4 Set the automation item to be adjusted to READY.
- 5 Start the tape recorder, and adjust the mix balance while monitoring the sound.
- 6 Drop in the item as desired.
- 7 Repeatedly adjust the mix balance until it is satisfactory by rewinding the tape as required.
- 8 After adjusting the level, rewind the tape.
- 9 Play the tape and set the SAFE button to OFF at the desired automation punch in point.  
The new settings will be recorded.

**10** To store data in AUDITION mode, perform either of the following.

- Stop the tape at the desired point while the SAFE button is set to OFF.

In this case, after passing the frames specified by the AUTO RETURN TIME setting, the data returns to the previously stored point, all items are dropped out. Then the SAFE button is automatically set to ON.

- Set the SAFE button to ON while playing back the tape.

In this case, the data returns to the previous stored point in BUTT mode, and at the same time all items are punched out of automation record.

#### Notes

- The SAFE button in AUDITION mode cannot cancel the current data but it does in certain other modes. When using the AUDITION mode, be sure to save the title or copy it to the other automation data buffer (A or B) in advance, so that you can return the data to the previously stored state, if necessary.
- When the AUDITION mode is cancelled, TOUCH HOLD, WRITE HOLD and SAFE buttons are set to OFF. At the same time all items held in WRITE become READY.

*In modes other than AUDITION, if you perform an undesired operation as a mistake, the automation data now performed can be cancelled by setting the SAFE button to ON. For details on the SAFE button function in other modes, see notes on page 78.*

### Using the WRITE NOW Function

By using the WRITE NOW button, you can execute punch in/out function without running the tape.

- 1** Select the desired AUTOMATION mode.
- 2** Touch the AUTO button in the PUNCH IN/OUT section on the AUTOMATION window.
- 3** Specify the punch in and punch out points.
- 4** Set the item to be adjusted to READY.
- 5** Adjust the item in step 4 to the desired settings.
- 6** Drop those items in.
- 7** Touch the WRITE NOW button in the AUTOMATION window, and touch “EXECUTE” in the dialogue.

### Example 1: Removing noise

- 1** Set the AUTOMATION mode to ABS.
- 2** Touch the AUTO button in the PUNCH IN/OUT section in the AUTOMATION window.
- 3** Specify the punch in point for before the noise and the punch out point for after the noise.
- 4** Set the fader for the signal containing the noise to WRITE, and slide it down to the minimum level.
- 5** Touch the WRITE NOW button on the AUTOMATION window, and touch “EXECUTE” in the dialogue.

### Example 2: Trimming the fader level while keeping previous underlying moves

- 1** Set the AUTOMATION mode to TRIM.
- 2** Touch the AUTO button in the PUNCH IN/OUT section in the AUTOMATION window.
- 3** Specify the period where the fader level is to be trimmed by setting the punch in and punch out points.
- 4** Set the fader to be trimmed to WRITE, and set it to the desired level.
- 5** Touch the WRITE NOW button in the AUTOMATION window, and touch “EXECUTE” in the dialogue.

### Example 3: Overwriting fader moves within a fixed period to set it at a fixed level

- 1** Set the AUTOMATION mode to ABS.
- 2** Touch the AUTO button in the PUNCH IN/OUT section on the AUTOMATION window.
- 3** Specify the period where the fader level is to be fixed by setting the punch in and punch out points accordingly.
- 4** Set the fader where the level is to be fixed to WRITE, and set it to the desired level.

(Continued)

## Basic Operation Procedure

- 5 Touch the WRITE NOW button on the AUTOMATION window, and touch “EXECUTE” in the dialogue.

### Data Connection When Using the FOOT SW Mode or the AUDITION Mode

When using the console in either FOOT SW or AUDITION mode, the current automation data is linked to the previously stored one as explained below.

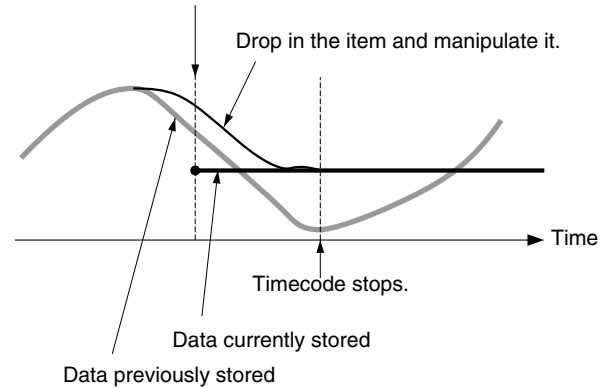
- If the timecode is stopped before executing the punch out, the console starts to update the automation item in two ways (HOLD TO END or TOP TO END):
  - When the AUTO RETURN TIME is set to HOLD TO END mode, the status at the timecode stop point is carried from that point to the end. In this case, at the IN point, the current data is linked to the previous data in BUTT mode.
  - When the AUTO RETURN TIME is set to TOP TO END mode, the settings at the point of the timecode stop is maintained from the IN point to the end.
- If the timecode is stopped after executing the punch out, the automation data is linked to the previous data at the IN and OUT points in BUTT mode, independently, unrelated to the AUTO RETURN TIME setting.

In the AUTO mode, if the timecode stops while punching in, the data in the specified period between the IN and the OUT points is updated, but in other points, the previously stored data is kept. If you know the timecode for the period to be updated, the AUTO mode will be convenient.

#### Automation data when the timecode is stopped before punching out

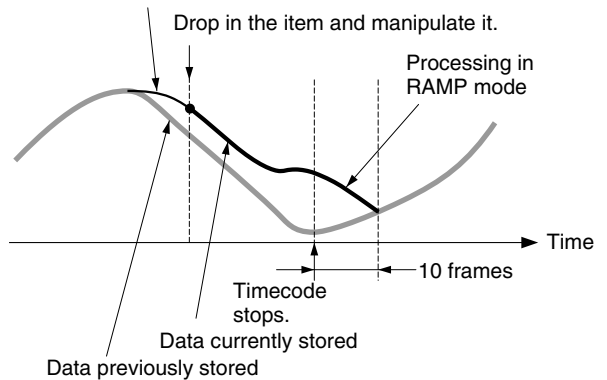
In TOP TO END mode

Punch in with the use of the foot switch or SAFE button.



#### In RAMP mode (AUTO RETURN TIME:10 frames)

Punch in with the use of the foot switch or SAFE button.



# Dialogues on the Window

In the following cases, a dialogue box appears on the window to confirm the operation and indicate the status of the unit. Selecting the [YES] or [CANCEL] button on the box gives the result shown in parenthesis.

Cases	Dialogues and remedies
When you touch the DELETE button on the SNAPSHOT window.	“Are you sure you want to delete the selected snapshot?.” [YES] (The snapshot is deleted.) [CANCEL] (Cancels the deletion.)
When you touch the DELETE button on the CUE window.	“Are you sure you want to delete the selected cue?” [YES] (The cue is deleted) [CANCEL] (Cancels the deletion.)
When you touch the DELETE button on the DYN LIBRARY or EQ LIBRARY window.	“Are you sure you want to delete the selected library?” [YES] (The library is deleted) [CANCEL] (Cancels the deletion.)
The sampling frequency or sync source changes when you touch the CHANGE button on the SYNC/TIME CODE window.	“Are you sure you want to change the FS or sync source? The current title will be lost, if you continue.” [YES] (The FS or sync source is changed, and the unit restarts automatically.) [CANCEL] (No action)
When you touch the CURRENT TITLE CLEAR button on the TITLE MANAGER window.	“Are you sure you want to clear the current title?” [YES] (The current title is cleared.) [CANCEL] (No action)
When you try to save a title with a title which has already been saved, on the TITLE MANAGER window.	“Are you sure you want to overwrite the saved title?” [YES] (The title is overwritten.) [CANCEL] (No action)
When you try to delete a title which has already been saved, on the TITLE MANAGER window.	“Are you sure you want to delete the title?” [YES] (The current title is deleted.) [CANCEL] (No action)
When you try to load a title, on the TITLE MANAGER window:	“Are you sure you want to load the title? The current title will be overwritten, if you continue.” [YES] (The title is loaded.) [CANCEL] (No action)
When the VIDEO is selected as the reference signal, the VIDEO PLL is unlocked.	“Video PLL unlocked.” [YES] (The dialogue is closed.) Remedy: Confirm that the correct reference video signal is inputted and the video signal path is correctly terminated.
The MAIN PLL is unlocked	“MAIN PLL unlocked.” [YES] (The dialogue is closed.) Remedy: Confirm that the signal selected as the SYNC source is inputted correctly.
An error occurs when searching for a title saved on the floppy disk.	“There are no titles or this is an unformatted disk. Check the media in the floppy disk drive.” [YES] (The dialogue is closed.) Remedy: Ignore the dialogue when the disk is already formatted and no title is saved on it. In any other case, format the floppy disk.

## Dialogues on the Window

Cases	Dialogues and remedies
The title files are corrupted.	<p>“Corrupted title files. Do you want to initialize all titles?”</p> <p>[YES] (The corrupted title files are deleted.)</p>
The storage space is insufficient to save the current title.	<p>“Insufficient storage space. You must delete unnecessary file(s) first.”</p> <p>[YES] (The dialogue is closed.)</p> <p>Remedy: Delete any unnecessary file(s) . Or save the title on a floppy disk.</p>
Load error occurs.	<p>“Load error. Current title cleared.”</p> <p>[YES] (The dialogue is closed.)</p> <p>Remedy: If the load error occurs again after reloading, the title or the media is corrupted. If this dialogue appears while loading up a title from the flash memory, delete the title. Note that when this dialogue appears, the current title is cleared.</p>
While saving a title, a write error occurs.	<p>“Save error.”</p> <p>[YES] (The dialogue is closed.)</p> <p>Remedy: While saving on a floppy disk, check that the write-protect tab is set to the protect position or not. While saving on the flash memory of the unit, retry saving.</p>
The current title is corrupted when starting up the unit.	<p>“Corrupted title file. The current title is initialized.”</p> <p>[YES] (The corresponding title is initialized to the default setting.)</p>
The file of the title to be loaded is corrupted.	<p>“Corrupted title file. This title is deleted.”</p> <p>[YES] (The corresponding title is cleared.)</p>
When you touch the CALIBRATE button on the TOUCH PANEL section of the MISC SETUP window.	<p>“Is a PS2 mouse connected to mouse port? Without a mouse, you cannot re-calibrate the touch screen, if you fail to calibrate it successfully.”</p> <p>[YES] (Execute the calibration program of the touch panel.)</p> <p>[CANCEL] (No action)</p> <p><b>NOTE</b></p> <p>Be sure to calibrate the touch panel with a mouse connected. If you fail calibration, re-calibrate the touch panel using the mouse.</p>
When you execute to load or save the title while automation is being run:	<p>“No file access while automation is in ‘RUN’.”</p> <p>[OK] (No action)</p>

Cases	Dialogues and remedies
The tape recorder does not start operation even though 2 seconds have elapsed when MIDI controlling the tape recorder.	“Switching MIDI Machine Control to OPEN LOOP.” [OK] (Switched in open loop control mode.)
When you copy data between the buffers A and B:	“Are you sure you want to copy automation data? Destination buffer will be overwritten” [YES] (Execute copying.) [CANCEL] (No action)
When you execute MAKE STATIC function:	“Are you sure you want to erase automation data?” [YES] (Execute erasing automation data.) [CANCEL] (No action)
When you try to change the initial cue while automation is being run:	“Initial cue timecode value can not be changed, while automation is in ‘RUN’” [OK] (No action)
There are cues to be deleted if you change the timecode of the initial cue.	“You are changing initial cue timecode value. Cue(s) preceding the initial cue timecode value will be deleted.” [YES] (The timecode is changed) [CANCEL] (No action)
You try to create the cue with the timecode that is a lower value than the Cue 1 value.	“The cue has not been stored as the timecode value is before the initial cue.” [OK] (No action)
When you touch the FADER CAL. button in the MISC SETUP window.	“Touch YES for automatic fader calibration. Please keep faders area clear and don’t touch any faders during calibration. This will take around 60 seconds.” [YES] (Execute the calibration.) [CANCEL] (No action)
When the calibration is completed, the following dialog appears to confirm whether you want to save the results on the unit or not.	“Touch YES to save the new fader calibration data” [YES] (Save the new fader calibration data) [CANCEL] (Revert to the original calibration data.)
When you touch the 1-24 CH button in the FADER COPY section in the COPY/LINK window.	“Touch YES to copy the settings for 24 faders simultaneously” [YES] (Execute the fader copying.) [CANCEL] (No action)
When an error occurs in a diagnosis while running DSP.	“We have a DSP error! Please reboot. Error Code: 0x#####” (##### indicating 8-digit error code) [OK] (Close the message.) When the above message appears, the output will be muted. Perform SAVE or KEEP as required, turn the power of the unit OFF once. Then, reboot again. Possible causes: <ul style="list-style-type: none"> <li>• When this error occurs frequently, the reference sync signal may change suddenly, or is unstable.</li> <li>• The inside of the unit increases in temperature, when the ventilation holes of the unit are blocked.</li> <li>• There is the static electricity discharge or there is a heavy noise source near the unit.</li> </ul> Check the above cases, then remove a cause.

# Specifications

## Input/Output Connectors

### Digital audio input/output

#### Digital input connectors

Connector	Number of inputs	Number of channels	Connector type	Signal format
AUX RET 5/6, 7/8	×2	×4	XLR-3-31	AES/EBU
2TR IN 2	×1	Stereo ×2	XLR-3-31	AES/EBU

#### Digital output connectors

Connector	Number of outputs	Number of channels	Connector type	Signal format
PGM	×1	×2 (L/R)	XLR-3-32	AES/EBU
AUX SEND 5/6, 7/8	×2	×4	XLR-3-32	AES/EBU

### Analog audio input/output

#### Analog input connectors

Connector	Number of inputs	Number of channels	Connector type	Reference level	Maximum input level	Input impedance
IN A1 to 12	×12	×12	XLR-3-31, Balanced	-60 to + 10 dBu	+ 24 dBu	4.7 kΩ
IN B1 to 12	×12	×12	1/4 " TRS, Balanced	-60 to + 10 dBu	+ 24 dBu	10 kΩ
LINE IN 13 to 24	×12	×12	Combo coax, Balanced	-60 to + 10 dBu	+ 24 dBu	10 kΩ
2TR IN 1 L/R	×2	×2 (L/R)	1/4 " TRS, Balanced	+ 4 dBu	+ 24 dBu	10 kΩ
AUX RET 1 to 4	×4	×4	1/4 " TRS, Balanced	+ 4 dBu	+ 24 dBu	10 kΩ

#### Analog output connectors

Connector	Number of outputs	Number of channels	Connector type	Reference level (load impedance)	Maximum input level (load impedance)	Output impedance
PGM L/R	×2	×2 (stereo)	1/4 " TRS, Balanced	+ 4 dBu (10 kΩ)	+ 24 dBu (10 kΩ)	150 Ω
	×2	×2 (stereo)	XLR-3-32, Balanced			
AUX SEND 1 to 8	×8	×8	1/4 " TRS, Balanced			
STD MONITOR L/R	×2	×2 (stereo)				
CR MONITOR 1 to 6	×6	×6				



## Analog insertion signal

Connector	Number of inputs/outputs	Number of channels	Connector type	Reference level (load impedance)	Maximum input/output level (load impedance)	Input/output impedance
INSERTION 1 to 12 (send/return)	×12	×12	1/4 " TRS, Unbalanced	0 dBu (10 kΩ)	+20 dBu (10 kΩ)	Send: 150 Ω Return: 10 kΩ

## Control signal input/output

Connector	Connector type (load impedance)	Signal format	Reference level
REF WORD (with 75 Ω termination switch) IN OUT	×1, BNC type (75 Ω) ×1, BNC type (75 Ω)	Duty 50 %	_____
REF VIDEO	×2, BNC type (loop through) (75 Ω)	NTSC Color/ B & W PAL	VB, BB: 1.0 ±0.2 Vp-p Composite: 0.2 V to 5 Vp-p
TIME CODE input/output	XLR-3-32, Balanced/XLR-3-31, Balanced	SMPTE/EBU	_____
MIDI MTC IN OUT THRU	DIN 5-pin, female	MIDI standard	
REMOTE IN OUT 1, OUT 2	D-sub 9-pin, female	Sony 9-pin	
PC PORT	Mini DIN 8-pin, female	_____	
FOOT SW	Phone jack	Make-point	
MOUSE	Mini DIN 6-pin, female	PS/2	
KEYBOARD	Mini DIN 6-pin, female	PS/2	
USB	_____	USB	
SERIAL	D-sub 9-pin, male	RS-232C	
MONITOR	D-sub high density 15-pin, female	Analog RGB	

## Pin assignment

XLR-3-31/XLR-3-32 connector	2:Hot	3:Cold	1:GND
1/4 " TRS (Balanced) connector	Tip:Hot	Ring:Cold	Sleeve:GND
1/4 " TRS (Unbalanced) connector	Tip:INSERTION SEND	Ring:INSERTION RETURN	Sleeve:GND

When 88.2 kHz or 96 kHz is selected as a sampling frequency, some functions are limited.

For detailed information, see page 86.

# Specifications

## Audio Characteristics

### Signal processing characteristics

Characteristics		Specification	
Signal processing		32/40 bit floating point	
Equalizer	High frequency range	Frequency range	1fs <sup>1)</sup> : 622 Hz to 19.9 kHz (61 points) 2fs <sup>2)</sup> : 622 Hz to 39.8 kHz (73 points)
		Response adjustable range	±20 dB (128 points, 0.25 to 0.5 dB step)
		Q	0.5 to 16 (63 points)
		Type	Shelving/Peaking switchable
	High-mid frequency range	Frequency range	220 Hz to 7.0 kHz (61 points)
		Response adjustable range	±20 dB (128 points, 0.25 to 0.5 dB step)
		Q	0.5 to 16 (63 points)
		Type	Peaking
	Low-mid frequency range	Frequency range	77.8 Hz to 2.5 kHz (61 points)
		Response adjustable range	±20 dB (128 points, 0.25 to 0.5 dB step)
		Q	0.5 to 16 (63 points)
		Type	Peaking
	Low frequency range	Frequency range	27.5 Hz to 880 Hz (61 points)
		Response adjustable range	±20 dB (128 points, 0.25 to 0.5 dB step)
		Q	0.5 to 16 (63 points)
		Type	Shelving/Peaking switchable
Filter	High cut filter	Cut-off frequency	1fs <sup>1)</sup> : 1.48 kHz to 22.35 kHz (48 points) 2fs <sup>2)</sup> : 1.48 kHz to 42.2 kHz (59 points)
		Roll-off characteristics	12 dB/Octave
	Low cut filter	Cut-off frequency	27.5 Hz to 415 Hz (48 points)
		Roll-off characteristics	12 dB/Octave
Dynamics	Compressor/Ducking	Threshold	0 dB to - 60 dB (106 points)
		Attack time	20 μs to 1 s (121 points)
		Release time	31.6 ms to 50.1 s (97 points)
		Ratio	1 : 1 to ∞ : 1 (31 points)
		Range	AUTO, 0 dB to 15 dB (0.25 dB step)
		Hold time	20 μs to 1 s (121 points)
	Expander/Gate	Threshold	0 dB to -80 dB (126 points)
		Attack time	20 μs to 1 s (121 points)
		Release time	31.6 ms to 50.1 s (97 points)
		Ratio	1 : 1 to 1 : 10 (31 points)
		Range	0 dB to 60 dB (1 dB step)
		Hold time	20 μs to 1 s (121 points)
Oscillator	Frequency	20 Hz to 20 kHz (28 points)	
	Output level	- ∞ to -80 dBFS, OFF (Total 41 points)	
Level meter	Indicator	20 segment LED	
	Overload detection	Full-scale 1 word	

1): 1fs: 44.1/48 kHz

2): 2fs: 88.2/96 kHz

## Another audio characteristics

Characteristics	Specifications	
Frequency response	Line input (LINE IN to PGM OUT)	20 Hz to 20 kHz, $\pm 0.2$ dB
	Mic input (MIC IN to PGM OUT)	20 Hz to 20 kHz, $\pm 0.3$ dB
Harmonic distortion	Line input (LINE IN to PGM OUT)	0.01 %, at + 4 dBs, 1 kHz
	Mic input (MIC IN to PGM OUT)	0.1 %, at - 60 dBs, 1 kHz
Noise level	Mic input	-104 dBu, 600 $\Omega$ terminated (-80 dB $\mu$ , 4 dB standard)
	Mic input	-126 dBu, 150 $\Omega$ terminated
Crosstalk	Between input and output channels	90 dB at 1 kHz
Dynamic range	Line input (LINE IN to PGM OUT)	104 dB
A to D converter	24-bit, $\times 128$ oversampling	
D to A converter	24-bit, $\times 128$ oversampling	
Total delay	2.5 ms (Between LINE IN and PGM OUT)Fs = 48 kHz	

## Automation Function

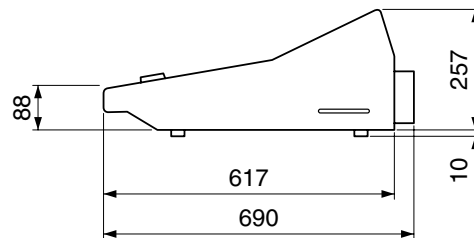
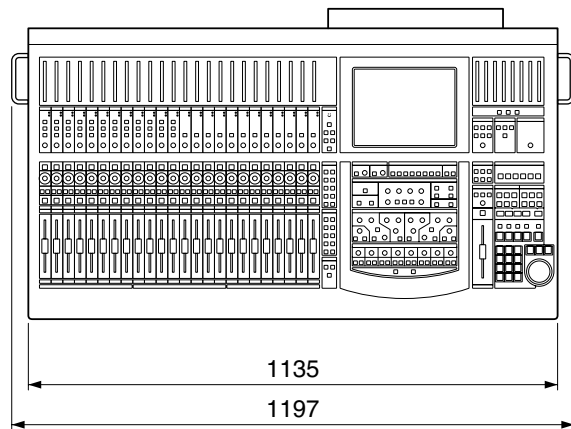
Item	Contents	
Title	Contents of title	Title configuration, snapshot automation, mix (saved dynamic automation)
	Number of title configuration	$\times 1$
	Number of snapshot automation	$\times 1$
	Storage	Built-in flash memory or floppy disk
Title configuration	Contents of title configuration	FS, Initial snapshot, Timecode mode, Output
Snapshot	Number of snapshots	99 max.
	Number of MIDI events	99 max.
	Number of cue points	99 max.
	Number of events per cue point	1
	Size of snapshot	8 kbyte/snapshot
	Memory	Dynamic RAM <sup>a)</sup>
	Time accuracy of cue linked event	$\pm 4$ frames
Contents of snapshots	Input router, delay, phase, trimming, input mode, filter, equalizer, dynamics, pan, assign, cut, fader, AUX	
Library	Number of libraries stored and recalled	Equalizer/dynamics: Max. 99 each
	Number of libraries stored and recalled	Equalizer/dynamics: Dynamic RAM
Dynamic	Buffer size	1 M byte
	Number of temporary buffers	2 (A and B)
	Event size	12 bytes/effective frame (min)
	Memory	Dynamic RAM <sup>a)</sup>
	Time accuracy	$\pm 2$ frames
Contents of dynamic automation <sup>a)</sup>	Filter, equalizer, dynamics, pan, assign, cut, fader, AUX	
Cue	Number of cues stored and recalled	Max.99
	Memory	Dynamic RAM <sup>a)</sup>
Fader resolution	10-bit (1024 steps)	

a) When you turn off the power of the unit, or start the unit without performing KEEP operation, the automation data will be cleared.

# Specifications

## Others

- Power requirements DMX-R100 (UC): AC120 V, 60 Hz  
DMX-R100 (CE): AC 220 to 240 V ~, 50/60 Hz
- Power consumption 200 W
- Peak inrush current
- (1) Power ON, current probe method: 50 A (240V)
  - (2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 10 A (230V)
- Appel de courant de crête
- (1) Mise sous tension (ON), méthode de sondage du courant: 50 A (240V)
  - (2) Mesuré conformément à la norme européenne EN55103-1 : 10 A (230V)
- Spitzenstrom
- (1) Einschaltstrom, Stromsonde: 50 A (240V)
  - (2) Gemessen in EN55103-1: 10 A (230V)
- Dimensions 1140 x 240 x 677 (w/h/d) mm  
(45 x 9 1/2 x 26 3/4 inches)
- Mass 55 kg (121 lb 4 oz)
- Operating temperature 5°C to 35°C (41°F to 95°F)
- Storage temperature -20 °C to 60°C (-4°F to 140°F)



(unit : mm)

## Supplied Accessories

- Power supply cord (1)
- Operating Instructions (1)

## Optional Accessories

- DMBK-R101 8CH Analog Line In Board
- DMBK-R102 8CH Analog Line Out Board
- DMBK-R103 8CH AES/EBU DIO Board
- DMBK-R104 8CH Sampling Rate Converter DI Board
- DMBK-R105 8CH Insertion board
- DMBK-R106 Interface Board for ADAT
- DMBK-R107 Interface Board for TDIF

Design and specifications are subject to change without notice.

## MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic:	At power on	1 to 16, OFF	1 to 16, OFF	Memorized after the power off.
Channel:	Assignable	1 to 16, OFF	1 to 16, OFF	
Mode:	At power on	×	×	
	Message	×	×	
	Altered	*****	×	
Note		×	×	
Number	True voice	*****	×	
Velocity:	Note ON	×	×	
	Note OFF	×	×	
After touch	Keys	×	×	
	Channels	×	×	
Pitch Bend		×	×	
Control change	0-102	○	○	Refer to the control change table.
	Assignable	0/127		
Program change		○	○	
System Exclusive		×	×	
System common:	Song position	×	×	
	Song select	×	×	
	Tune	×	×	
Real time:	Clock	×	×	
	Command	×	×	
Others	Local ON/OFF	×	×	
	All note OFF	×	×	
	Active sensing	×	×	
	Reset	×	×	
Remarks:				

Mode 1: OMNI ON, POLI

Mode 2: OMNI OFF, MONO

Mode 3: OMNI OFF, POLI

Mode 4: OMNI OFF, MONO

○: Yes

×: No

## Control Change Table

Parameter change No.	Mode 1	Mode 2	Parameter change No.	Mode 1	Mode 2
	Function	Function		Function	Function
0	—	—	40	CH39 Fader	AUX8 MASTER Fader
1	CH1 Fader	CH1 Fader	41	CH40 Fader	AUX RET1 Fader
2	CH2 Fader	CH2 Fader	42	CH41 Fader	AUX RET2 Fade
3	CH3 Fader	CH3 Fader	43	CH42 Fader	AUX RET3 Fader
4	CH4 Fader	CH4 Fader	44	CH43 Fader	AUX RET4 Fader
5	CH5 Fader	CH5 Fader	45	CH44 Fader	AUX RET5 Fader
6	CH6 Fader	CH6 Fader	46	CH45 Fader	AUX RET6 Fader
7	CH7 Fader	CH7 Fader	47	CH46 Fader	AUX RET7 Fader
8	CH8 Fader	CH8 Fader	48	CH47 Fader	AUX RET8 Fader
9	CH9 Fader	CH9 Fader	49	CH48 Fader	PGM MASTER Fader
10	CH10 Fader	CH10 Fader	50	MTR1 MASTER Fader	CH1 PAN
11	CH11 Fader	CH11 Fader	51	MTR2 MASTER Fader	CH2 PAN
12	CH12 Fader	CH12 Fader	52	MTR3 MASTER Fader	CH3 PAN
13	CH13 Fader	CH13 Fader	53	MTR4 MASTER Fader	CH4 PAN
14	CH14 Fader	CH14 Fader	54	MTR5 MASTER Fader	CH5 PAN
15	CH15 Fader	CH15 Fader	55	MTR6 MASTER Fader	CH6 PAN
16	CH16 Fader	CH16 Fader	56	MTR7 MASTER Fader	CH7 PAN
17	CH17 Fader	CH17 Fade	57	MTR8 MASTER Fader	CH8 PAN
18	CH18 Fader	CH18 Fader	58	AUX1 MASTER Fader	CH9 PAN
19	CH19 Fader	CH19 Fader	59	AUX2 MASTER Fader	CH10 PAN
20	CH20 Fader	CH20 Fader	60	AUX3 MASTER Fader	CH11 PAN
21	CH21 Fader	CH21 Fader	61	AUX4 MASTER Fader	CH12 PAN
22	CH22 Fader	CH22 Fader	62	AUX5 MASTER Fader	CH13 PAN
23	CH23 Fader	CH23 Fader	63	AUX6 MASTER Fader	CH14 PAN
24	CH24 Fader	CH24 Fader	64	AUX7 MASTER Fader	CH15 PAN
25	CH25 Fader	MTR1 MASTER Fader	65	AUX8 MASTER Fader	CH16 PAN
26	CH26 Fader	MTR2 MASTER Fader	66	AUX RET1 Fader	CH17 PAN
27	CH27 Fader	MTR3 MASTER Fader	67	AUX RET2 Fader	CH18 PAN
28	CH28 Fader	MTR4 MASTER Fader	68	AUX RET3 Fader	CH19 PAN
29	CH29 Fader	MTR5 MASTER Fader	69	AUX RET4 Fader	CH20 PAN
30	CH30 Fader	MTR6 MASTER Fader	70	AUX RET5 Fader	CH21 PAN
31	CH31 Fader	MTR7 MASTER Fader	71	AUX RET6 Fader	CH22 PAN
32	—	MTR8 MASTER Fader	72	AUX RET7 Fader	CH23 PAN
33	CH32 Fader	AUX1 MASTER Fader	73	AUX RET8 Fader	CH24 PAN
34	CH33 Fader	AUX2 MASTER Fade	74	PGM MASTER Fader	CH1 CUT
35	CH34 Fader	AUX3 MASTER Fader	75	CH1 PAN	CH2 CUT
36	CH35 Fader	AUX4 MASTER Fader	76	CH2 PAN	CH3CUT
37	CH36 Fader	AUX5 MASTER Fader	77	CH3 PAN	CH4 CUT
38	CH37 Fader	AUX6 MASTER Fade	78	CH4 PAN	CH5 CUT
39	CH38 Fader	AUX7 MASTER Fader	79	CH5 PAN	CH6 CUT

Parameter change No.	Mode 1	Mode 2	Parameter change No.	Mode 1	Mode 2
	Function	Function		Function	Function
80	CH6 PAN	CH7 CUT	104	CH30 PAN	AUX RET7 CUT
81	CH7 PAN	CH8 CUT	105	CH31 PAN	AUX RET8 CUT
82	CH8 PAN	CH9 CUT	106	CH32 PAN	CH1 AUX1 SEND
83	CH9 PAN	CH10 CUT	107	CH33 PAN	CH2 AUX1 SEND
84	CH10 PAN	CH11 CUT	108	CH34 PAN	CH3 AUX1 SEND
85	CH11 PAN	CH12 CUT	109	CH35 PAN	CH4 AUX1 SEND
86	CH12 PAN	CH13 CUT	110	CH36 PAN	CH5 AUX1 SEND
87	CH13 PAN	CH14 CUT	111	CH37 PAN	CH6 AUX1 SEND
88	CH14 PAN	CH15 CUT	112	CH38 PAN	CH7 AUX1 SEND
89	CH15 PAN	CH16 CUT	113	CH39 PAN	CH8 AUX1 SEND
90	CH16 PAN	CH17 CUT	114	CH40 PAN	CH9 AUX1 SEND
91	CH17 PAN	CH18 CUT	115	CH41 PAN	CH10 AUX1 SEND
92	CH18 PAN	CH19 CUT	116	CH42 PAN	CH11 AUX1 SEND
93	CH19 PAN	CH20 CUT	117	CH43 PAN	CH12 AUX1 SEND
94	CH20 PAN	CH21 CUT	118	CH44 PAN	CH13 AUX1 SEND
95	CH21 PAN	CH22 CUT	119	CH45 PAN	CH14 AUX1 SEND
96	CH22 PAN	CH23 CUT	120	CH46 PAN	CH15 AUX1 SEND
97	CH23 PAN	CH24 CUT	121	CH47 PAN	CH16 AUX1 SEND
98	CH24 PAN	AUX RET1 CUT	122	CH48 PAN	CH17 AUX1 SEND
99	CH25 PAN	AUX RET2 CUT	123	CH48 PAN	CH18 AUX1 SEND
100	CH26 PAN	AUX RET3 CUT	124	—	CH19 AUX1 SEND
101	CH27 PAN	AUX RET4 CUT	125	—	CH20 AUX1 SEND
102	CH28 PAN	AUX RET5 CUT	126	—	CH21 AUX1 SEND
103	CH29 PAN	AUX RET6 CUT	127	—	CH22 AUX1 SEND

Parameter change No.	Mode 3
	Function
0 to 25	Invalid
26	Talkback (PGM)
27	Talkback (AUX)
28	Talkback (MTR)
29	Talkback (STUDIO)
30	Talkback (SLATE)
31 to 127	Invalid





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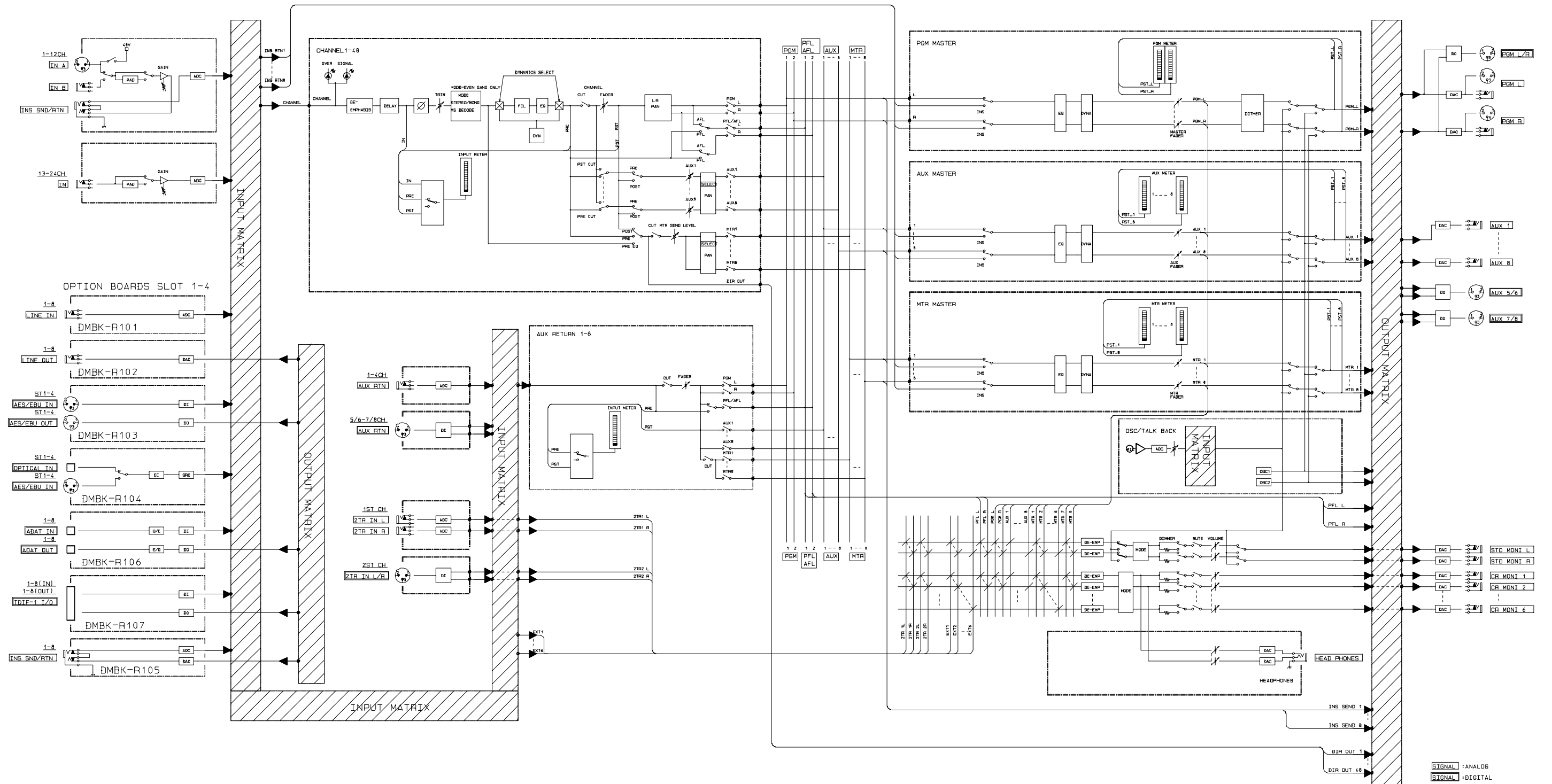
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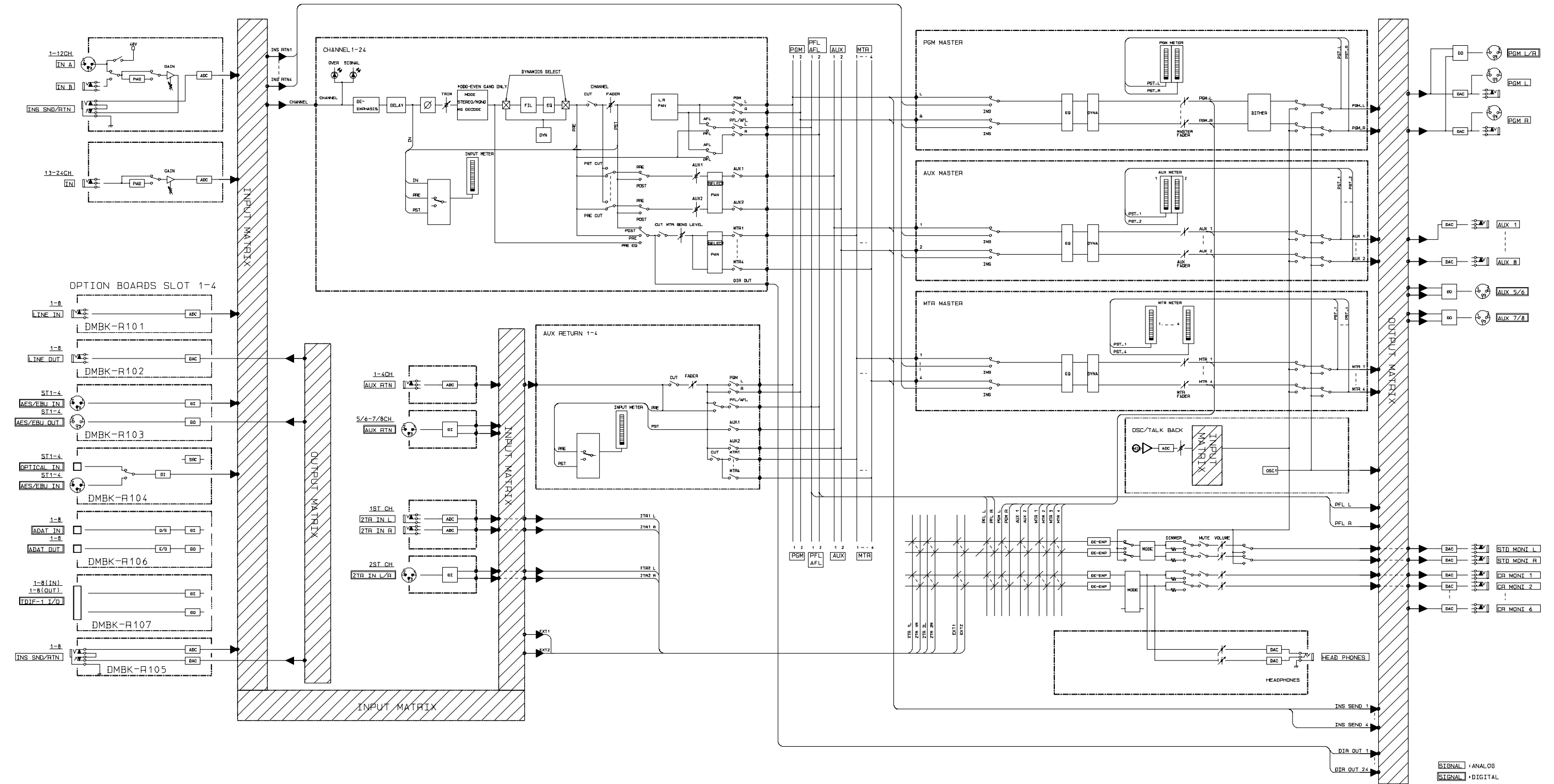
# Block Diagram

Fs = 44.1/48 kHz (1 fs)



# Block Diagram

Fs = 88.2/96 kHz (2 fs)



Appendix



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