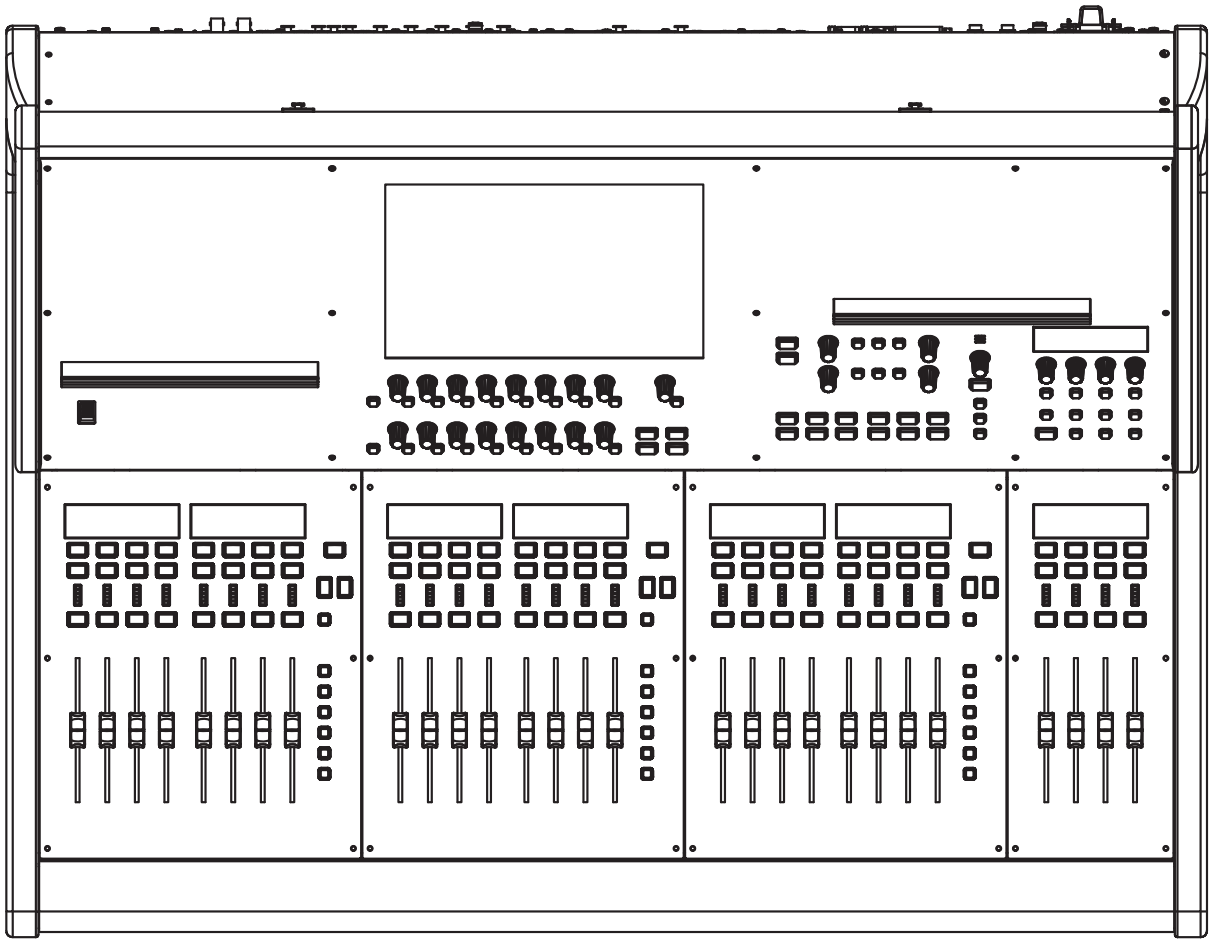
LIVE MIXING CONSOLE **M-5000**

Reference Manual



Before using the unit, ensure that its system program is at the most recent version. For information on available upgrades for the system program, see the Roland website.

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Organization of the Documentation

The documentation for this unit is organized as follows.

Quick Start

This describes basic matters and procedures necessary for unit operation and quick startup.

Reference Manual (this document)

This adds to the information in Quick Start by describing the operational features on the various screens and other detailed usage methods.

RCS User's Guide

This describes how to use the M-5000 RCS dedicated remote-control software that runs on a Windows or Macintosh computer.

Remote User's Guide

This describes how to use the M-5000 Remote dedicated remote-control software that runs on an iPad.

Telnet Reference Manual

This describes how to control the M-5000 over a local area network (TCP/IP protocol), using Telnet.

MIDI Implementation

This describes the MIDI messages that the M-5000 supports.

RS-232C Reference Manual

This describes the RS-232C interface commands that the M-5000 supports.

The PDF-format versions of documentation can be downloaded from the Roland website.

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Main Features

The M-5000 is Roland's next-generation flagship mixing console, featuring an ideal user interface for operating a 96-kHz mixing engine loaded with original Roland technology.

The M-5000 can flexibly transform its configuration and functions to accommodate a wide range of situations with its large complement of outstanding features.

The following key words encapsulate the novel technology built into this unit.

"O-H-R-C-A™ = Open High Resolution Configurable Architecture"

Let's take a look at each feature.

Configurable Architecture

The M-5000's mixing engine can freely change its configuration and functions to accommodate the situation. This means it's not defineable the M-5000 as a mixer having a specific number of input channels and output buses. For instance, it can become an FOH mixer with 100 input channels at one time, and a monitor mixer having 60 output buses at another.

How is this incredible flexibility and functionality achieved?

The M-5000 is provided with internal processing power for 128 audio paths. These paths can freely be used as input channels, auxiliary buses, groups, matrices, etc. You, the user, can assign these any way you like. When considering the configuration, keep in mind that talkback, oscillators, monitor speakers, and other such functions also each use up audio paths, and plan accordingly.

Now let's take a look at some actual examples of the kinds of mixer configurations you can achieve with this functionality.

1 Standard

- 75 monaural input channels
- 6 stereo input channels
- Main LR/C
- 24 AUX
- 8 MATRIX
- Monitors, talkback, oscillator, headphones (6 audio paths used)

2 Monitor mix

- 48 monaural input channels
- 8 stereo input channels
- Main LR
- 54 AUX
- Monitors 1 and 2, talkback, oscillator, headphones (8 audio paths used)

3 FOH mix

- 79 monaural input channels
- 8 stereo input channels
- Main LR/C
- 10 subgroups
- 6 AUX
- 8 MATRIX
- Monitors, talkback, oscillator, headphones (6 audio paths used)

4 Broadcast

- 72 monaural input channels
- 6 stereo input channels
- Main 5.1 + stereo downmix (8 audio paths used)
- 8 subgroups
- 8 AUX
- 4 MIX-MINUS
- 8 MATRIX
- Monitors 1 and 2, talkback, oscillator, headphones (8 audio paths used)

So what do you think? It's clear that the M-5000 has an extremely powerful mixing engine.

High Resolution

All elements installed in the M-5000 operate at a sample rate of 96 kHz. Not only AD/DA but the mixing engine as well operates at 96 kHz. All effect algorithms operate at 96kHz.

The analog input and output section, which has such a big impact on mixer sound quality, also incorporates Roland expertise with even further refinements. The discrete microphone preamps in the input section have been exclusively designed for 24bit/96kHz operation of the M-5000, enhancing the signal-to-noise ratio for unaffected, high-resolution sound.

Combining these examples of precise analog and digital technology achieves a clarity of sound with an easy naturalness and a sense of high resolution --- just what you'd expect a flagship unit to deliver.

Open

The M-5000 is provided with two slots for installing expansion interfaces to expand input and output capability. A variety of formats are supported for installable expansion interfaces, including MADI and Dante as well as REAC, with even more types to be added. Each of these expansion slots provides an additional option of bidirectional input and output on up to 160 channels (when at 48 kHz) or 80 channels (when at 96 kHz), assuring expandability of the M-5000 on into the future.

Channel Strips

The high-functionality channel strips that can operate as either input channels or output buses as we have seen can also modify content. The EQ and dynamics algorithms deliver superb sound quality and reproduce the feel of analog effecters when manipulating parameters. It is also possible to rearrange the sequence of EQ and dynamics applied.

GEQs and Effects

The M-5000 is equipped with 32 31-band graphic equalizers that you can insert in input channels and output buses. You can select either proportional or constant as the Q type for GEQs as well as switch a GEQ to operate as an 8-band PEQ.

Eight stereo (16 dual-mono) effects are available as well. The high-quality effects provided on Roland mixers have been redesigned to operate at 96 kHz, and operational feel is also improved.

A new "dynamic EQ" effect type has also been added.

REAC

At the core of digital transmission on the M-5000 is Roland's own originally developed REAC (Roland Ethernet Audio Communication) protocol. Roland was among the first to note the usefulness of digital transmission, and announced the first REAC device, the S-4000S Digital Snake, in 2005. Since then, the simplicity of setup and high stability of REAC devices has been acknowledge by acceptance and used around the world. One of the three REAC ports on the M-5000 supports REAC Embedded Power, making it possible to power and communicate with an M-48 personal mixer or S-0808 digital snake over a single LAN cable.

You can also install additional REAC expansion interfaces in the expansion slots described later in this manual.

Super Patchbay

Because digital communication using REAC and expansion using the optional expansion interface are both covered, the M-5000's patchbays are amply powerful on their own.

When at 96 kHz: 300 inputs/296 outputs

When at 48 kHz: 460 inputs/456 outputs

With the combination of input and output ports, and with the ability to incoming signals to output without passing through the mixer core, it is possible to create flexible setups such as for transmission between front of house and monitors or direct out to recorders.

Remote Control

You can use the M-5000 RCS dedicated control program to operate the M-5000 remotely from a Windows or Macintosh computer. You can also remotely control the console from an iPad by using the M-5000 Remote dedicated application.

External Control

With the M-5000's four input and 12 output GP I/O connectors, you can send and receive control signals to and from external devices. The M-5000 also provides four inputs for footswitch pedals.

As with other Roland digital mixers up to now, control via MIDI or the RS-232C interface is also possible.

Live Recording

Connecting a Macintosh or Windows-based computer to the USB COMPUTER connector engages 16x16 recording and playback audio interface that can be used with most digital audio workstation (DAW) software.

Recording and playback of two-channel WAV files on USB flash drives is also available using the USB port on the console surface.

Connecting an R-1000 48-track recorder to the REAC connector lets you carry out 48-track (48 kHz) or 24-track (96 kHz) recording and playback as a standalone device.

Redundancy

Connecting an optional S-240P to the EXT. POWER DC INPUT connector achieves redundant power so if a problem occurs in the M-5000's main power source, backup power is supplied by the S-240P.

Using 2 REAC ports to a digital snake achieves redundant audio transmission.

Ideal User Interface

So far we're taken a look at many of the M-5000's outstanding functions.

A basic rule of design holds that increasing the number of functions generally can have a negative impact on ease of use.

However, the M-5000 shatters this rule by architecting a highly rational user interface using a small number of controls. Let's look at the several sections that make up the M-5000's outstanding user interface.

1 Display section

Nearly all parameters can be manipulated using the touch display with the attractive design and the 16 knobs and switches laid out beneath it. Any parameter you touch on the screen can also be immediately adjusted directly by the one “Selected Knob”.

Because operations are completed using just this section, time loss due to large hand movements is minimized.

The high-reliability, pressure-sensitive 12-inch display clearly and vividly displays a variety of information with high image quality and a wide viewing angle.

2 Fader bank section and assignable fader section

The fader bank section, where 8 faders are provided, can also be used as independent sets of 8 faders or as interlinked sets of 16 or 24 faders. The decision on how to use the 24 controls can be made instantly, letting you operate the M-5000 and its huge mixing engine with optimal efficiency. You can also assign often-used input channels and output buses to the four assignable faders and display them on the top panel at all times.

Organic EL displays offering excellent brightness and visibility are provided above both the fader bank section and the assignable fader section, enabling quick confirmation of information.

3 User-assignable section

Assigning frequently used functions to the user-assignable section lets you display important functions on the top panel at all times. This groups together four encoders and eight buttons in a compact layout, but you can assign many more functions to this section by switching between three banks.

Quick Start

First we'll take a look at how to install the unit, part names and functions, an overview of operations, and other such information. The content of this chapter is the same as the Quick Start document packed with the unit.

This chapter is organized into the following sections.

→ "Placement and Setup" (p. 15)
→ "Installing REAC Devices" (p. 26)
→ "Part Names and Functions" (p. 28)
→ "Overview of Operations" (p. 44)

Included Items

The items included with the M-5000 are as follows. Check to ensure that all are present.

- Power cord

* Be sure to use only the power cord included with the M-5000.

- REAC connector covers (3)
- Ferrite cores (6)
- Quick Start
- Cover
- Dock cable
- Tablet sheets (2)

If any included item is missing, contact the nearest Roland Service Center.

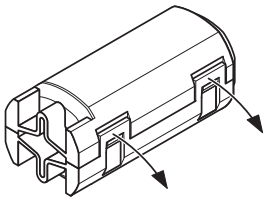
Attaching the Ferrite Cores

Before you use the M-5000, be sure to attach ferrite cores to any cables connected to the following connectors.

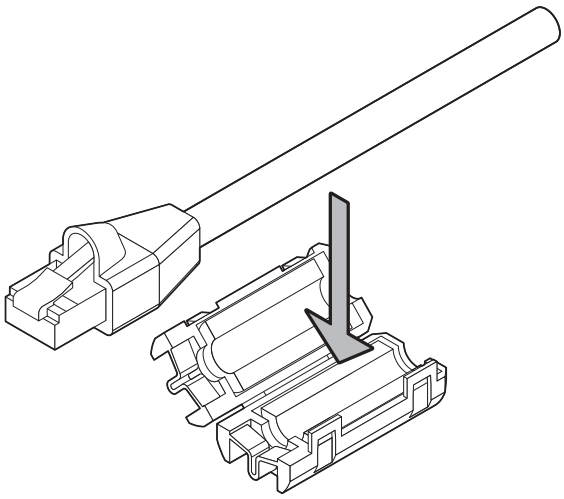
- REAC ports (A, B, SPLIT/BACKUP)
- LAN port
- AES/EBU OUT 1/2, AES/EBU OUT 3/4 jacks

The ferrite cores are intended to counter electromagnetic noise. Leave them attached at all times.

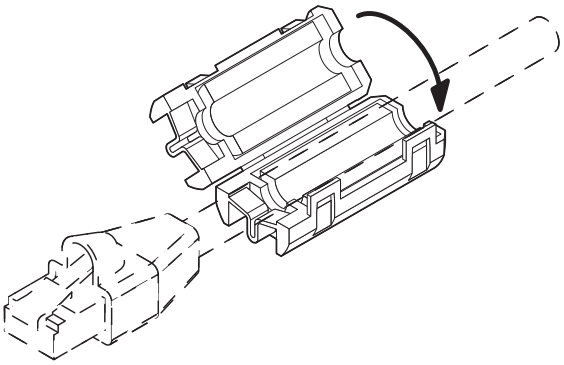
1. Spread open the tabs and open the ferrite core.



2. Attach the ferrite core at a location near the plug base.



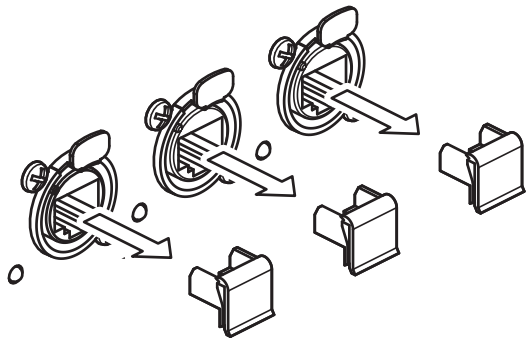
3. Close the ferrite core by pressing down until it snaps into place with an audible click.



4. Connect the plug at the end where the ferrite core is attached to the unit.

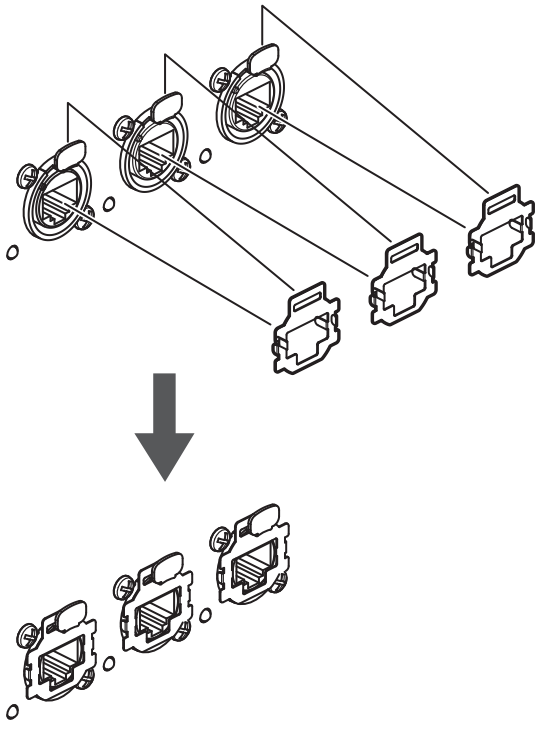
Detaching the REAC Caps

By default, the REAC ports are fitted with REAC caps. Remove these REAC caps when you use the REAC ports. Be careful to not lose the removed REAC caps so you can insert them again when transporting or when the port(s) are not in use.



Attaching the REAC Connector Covers

When using commercially available Category 5e Ethernet cables, attach the included REAC connector covers.



Memo

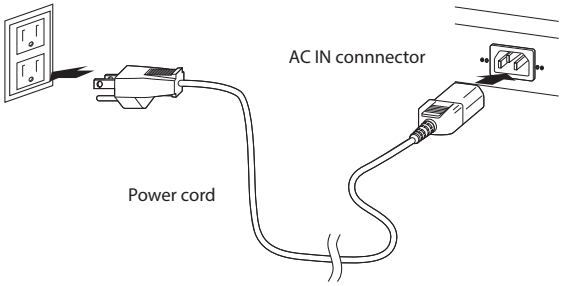
Remove the REAC connector covers when using EtherCon type REAC cables (such as SC-W20F, SC-W100S, or W100S-R). Be careful to keep removed REAC connector covers from becoming lost.

Connecting the Power Cord

NOTE

Be sure to use the included power cord for connecting the power supply.

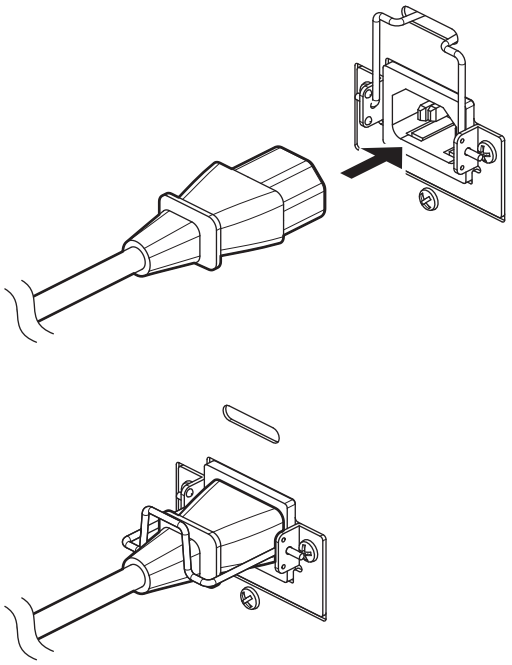
1. Connect the included power cord to the AC IN connector on the rear panel.



* The shape of the power cord's plug varies depending on the country.

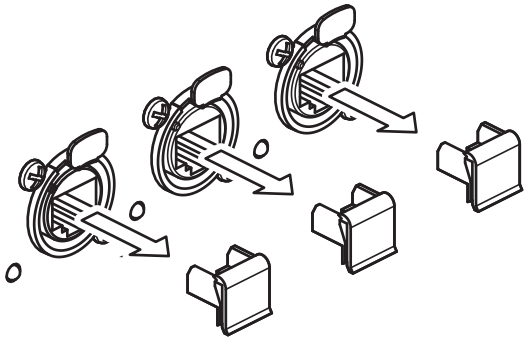
Using the Power-cord Clamp

Lower the power-cord clamp as shown in the figure to secure the power cord's plug in place.



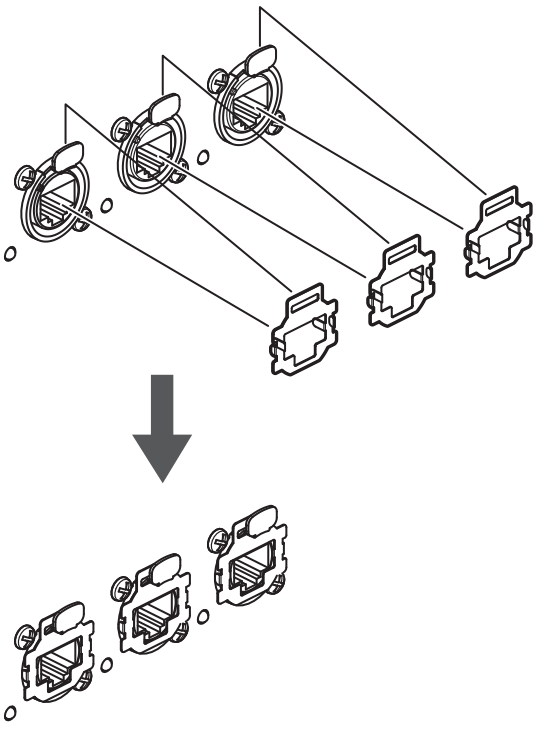
Retrait des caches REAC

Par défaut, les ports REAC sont pourvus de caches REAC. Retirez ces caches REAC lorsque vous utilisez les ports REAC. Veillez à ne pas égarer les caches REAC qui ont été retirés.



Fixation des couvres connecteur REAC

Lors de l'utilisation de câbles Ethernet de catégorie 5e disponibles dans le commerce, fixer les couvres connecteur REAC inclus.



Note

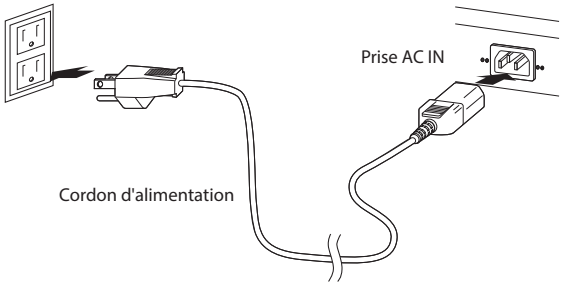
Retirez les couvres connecteur REAC lors de l'utilisation de câbles REAC de type EtherCon (SC-W20F, SC-W100S ou W100S-R). Veillez à ne pas égarer les couvres connecteur REAC qui ont été retirés.

Connexion du cordon d'alimentation

NOTE

Veillez à utiliser le cordon d'alimentation fourni pour brancher l'alimentation.

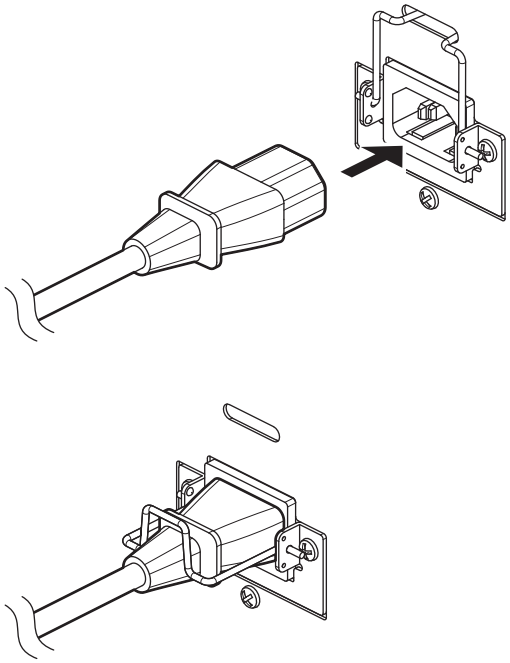
1. Brancher le cordon d'alimentation fourni à la prise AC IN sur le panneau arrière.



* La forme de la fiche du cordon d'alimentation varie selon les pays.

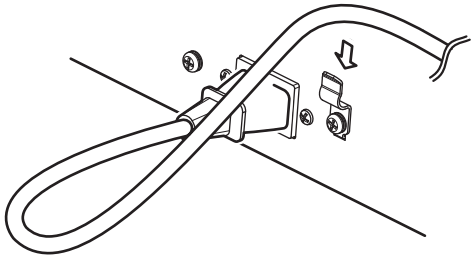
Utilisation de l'attache du cordon d'alimentation

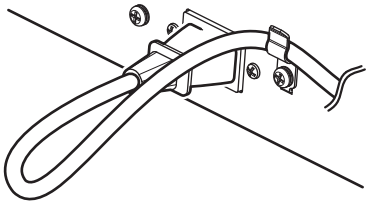
Abaisser l'attache du cordon d'alimentation comme indiqué sur la figure pour fixer la fiche du cordon d'alimentation en place.



Using the Power-cord Hook

Engage the power cord on the power-cord hook as shown in the figure to secure the power cord in place.



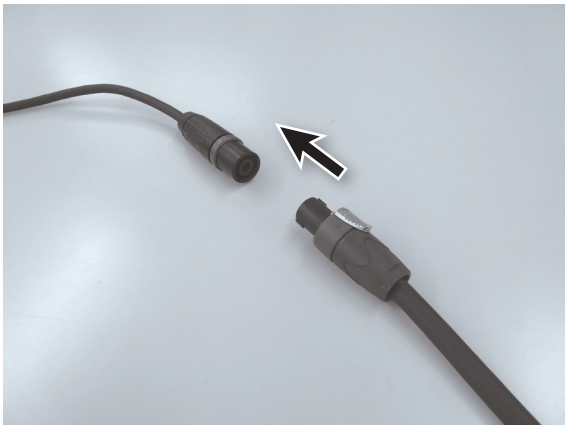


Connecting Backup Power to the M-5000

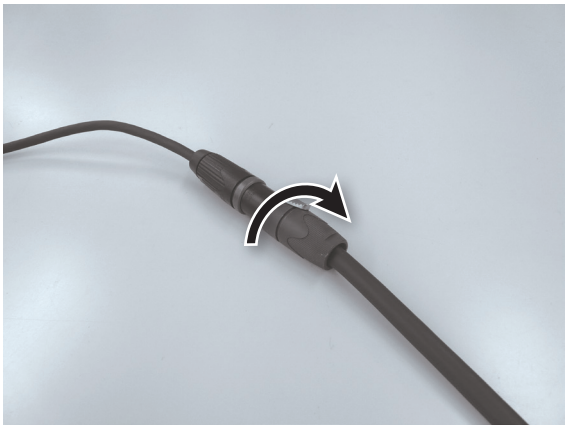
You can connect an adapter cable to the DC OUTPUT plug on an optional S-240P unit, and connect that to the EXT. POWER DC INPUT connector on the M-5000.

For information on the adapter cable used for connection to the DC OUTPUT plug, consult your Roland vendor.

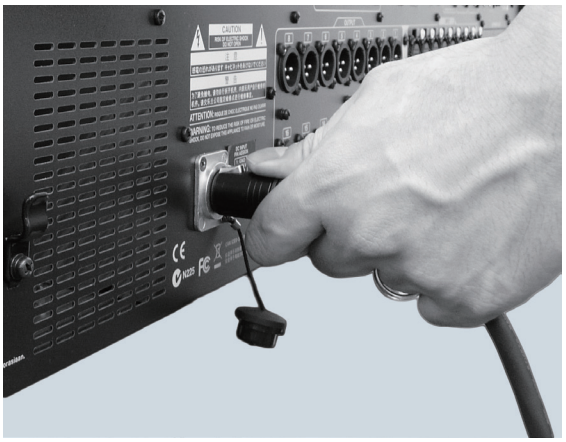
1. Insert the DC OUTPUT plug on the S-240P into the adapter cable (Speakon end).



2. Twist the S-240P's DC OUTPUT plug clockwise until you hear it click.

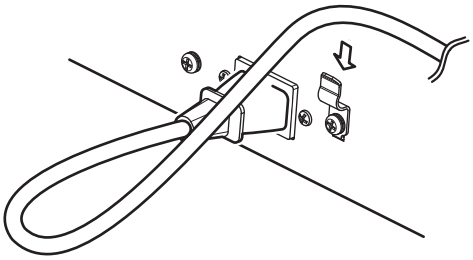


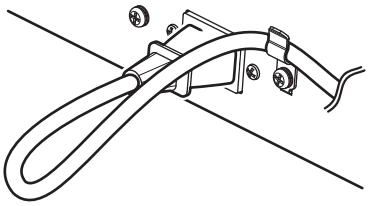
3. Insert the adapter cable (XLR4 end) into the EXT. POWER DC INPUT connector on the M-5000 until you hear it click.



Utilisation du Crochet du cordon d'alimentation

Engager le cordon d'alimentation sur le Crochet du cordon d'alimentation comme indiqué sur la figure pour fixer le cordon d'alimentation en place.



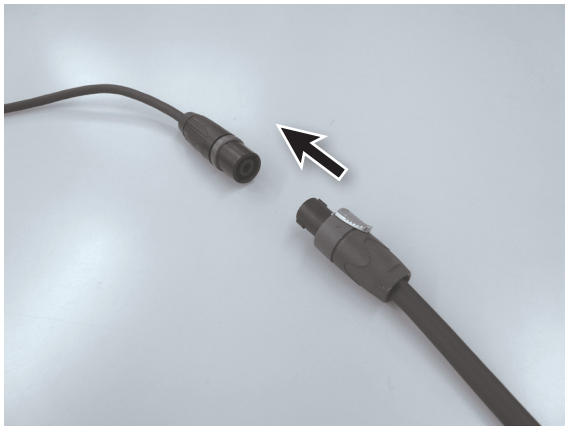


Raccordement d'une alimentation de secours au M-5000

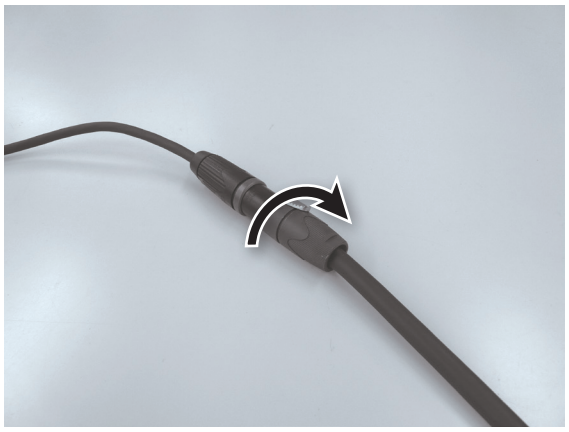
Vous pouvez connecter un câble d'adaptateur à la prise DC OUTPUT d'une unité S-240P optionnelle et le raccorder au connecteur EXT. POWER DC INPUT du M-5000.

Pour plus d'informations sur le câble d'adaptateur utilisé pour la connexion à la prise DC OUTPUT, consultez votre fournisseur Roland.

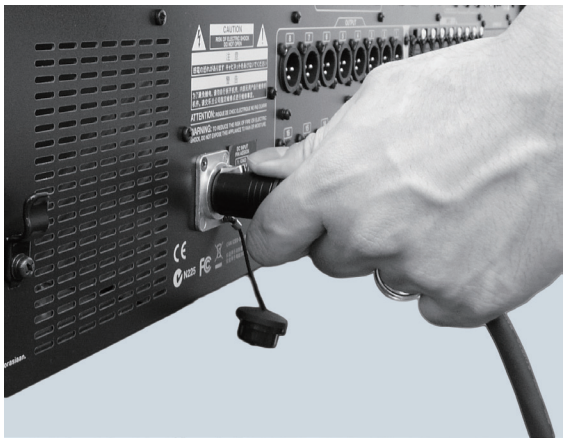
1. Insérer la fiche DC OUTPUT sur le S-240P dans le câble de l'adaptateur (extrémité Speakon).



2. Tourner la fiche DC OUTPUT du S-240P dans le sens des aiguilles d'une montre jusqu'à ce que vous entendiez un déclic.



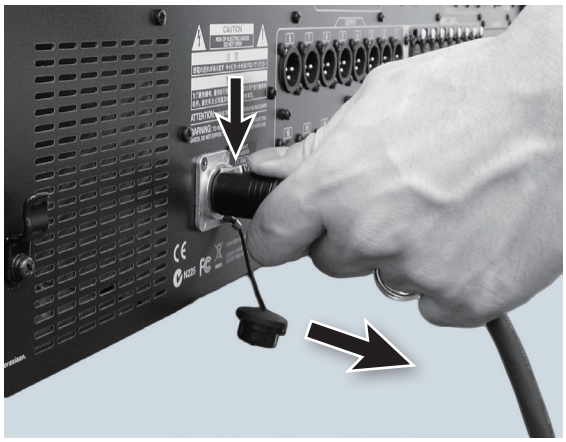
3. Insérer le câble de l'adaptateur (extrémité XLR4) dans le connecteur EXT. POWER DC INPUT du M-5000 jusqu'à ce que vous entendiez un déclic.



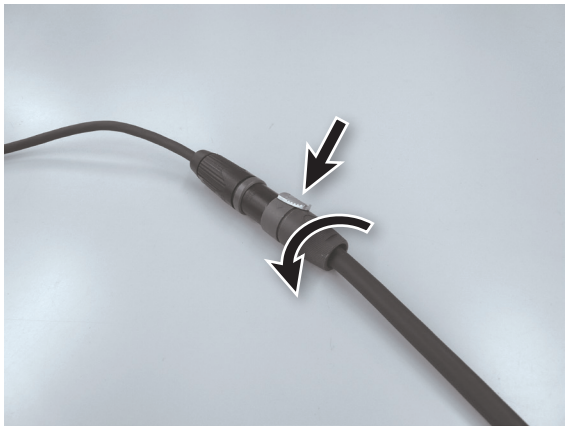
Disconnecting Backup Power

Follow the steps below to disconnect the external power unit.

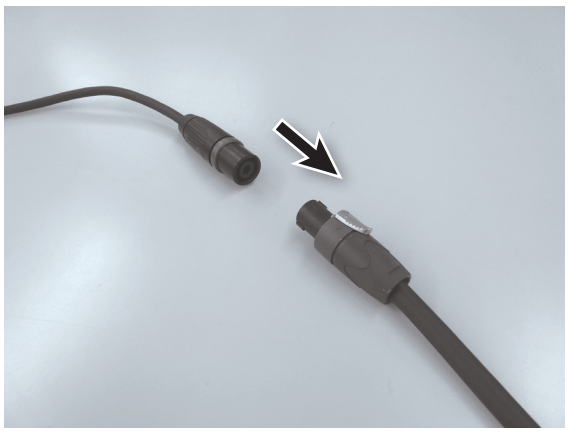
1. While keeping the lock switch on the adapter cable (XLR4 end) connected to the S-240P depressed, detach the cable from the EXT. POWER DC INPUT connector.



2. While holding the lock switch on the S-240P's DC OUTPUT plug pulled back, twist counterclockwise.



3. Detach the DC OUTPUT plug on the S-240P from the adapter cable (Speakon end).



Turning the Power On and Off

* Before turning the unit on/off, always be sure to turn the levels down as well as turning off any amps or powered speakers. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.

Turning the Power On

* Once everything is properly connected be sure to follow the procedure below to turn on the power. If you turn on equipment in the wrong order, you risk causing malfunction or equipment failure.

1. Turn on the power to any equipment connected to audio inputs on the M-5000 or on any input/output units (S-2416, S-4000S, or the like) connected to the M-5000.

* Acoustic feedback could be produced depending on the location of microphones relative to speakers. This can be remedied by:

- Changing the orientation of the microphone(s).
- Relocating microphone(s) at a greater distance from speakers.
- Lowering volume levels.

2. Turn on the [POWER] switch on the M-5000.

* This unit is equipped with a protection circuit. A brief interval (a few seconds) after turning the unit on is required before it will operate normally.

* When restarting the unit with the expansion interface installed, wait for about one second before you turn on the power.

3. Turn on the power to the external power unit connected to the EXT. POWER DC INPUT connector on the M-5000.

4. Turn on the power to the input/output units.

5. Turn on the power to any equipment connected to audio output on the M-5000 or on any input/output units.

Turning the Power Off

1. Go to the MUTE GROUP MASTER window and tap <MUTE ALL OUTPUTS> to mute audio output on the M-5000 and on any input/output units (S-2416, S-4000, or the like) connected to the M-5000.

→ "Muting All Outputs" (p. 61)

2. Turn down the output and turn off the power to any equipment connected to audio output on the M-5000 or on any input/output units.

3. Turn off the power to the external power unit connected to the EXT. POWER DC INPUT connector on the M-5000.

* If an external power Unit is providing power to the M-5000, the M-5000 will keep operating even if the power switch is in the OFF position.

4. Turn off the [POWER] switch on the M-5000.

5. Turn off the power to the input/output units.

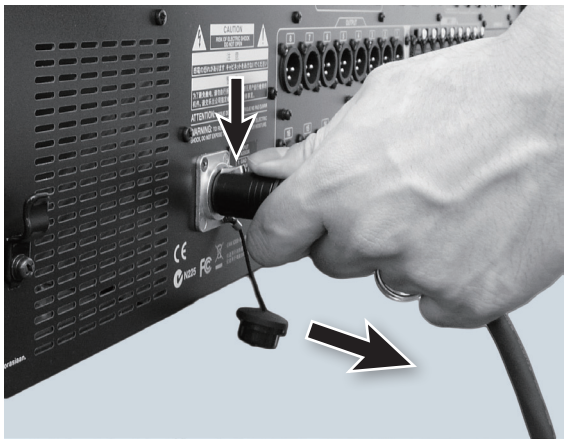
6. Turn off the power to any equipment connected to audio input on the M-5000 or on any input/output units.

* To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.

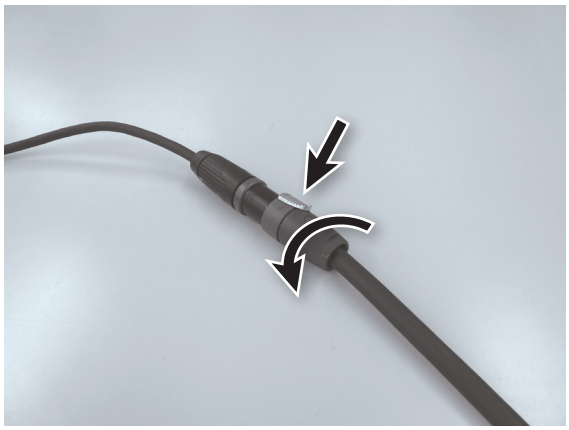
Déconnexion de l'alimentation de secours

Suivre les étapes ci-dessous pour débrancher l'unité d'alimentation externe.

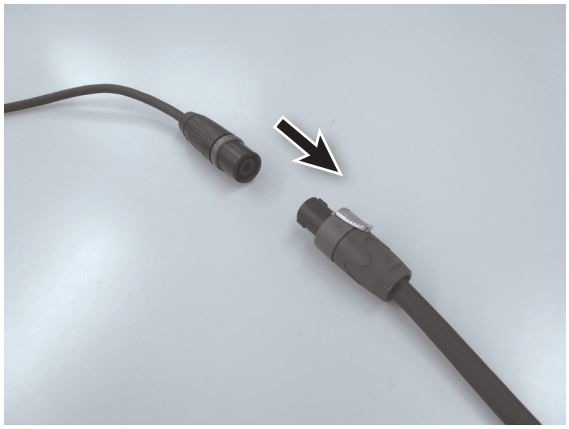
1. Tout en maintenant le commutateur de verrouillage du câble de l'adaptateur (extrémité XLR4) relié au S-240P non pressé, débrancher le câble du connecteur EXT. POWER DC INPUT.



2. Tout en maintenant le commutateur de verrouillage sur la fiche DC OUTPUT du S-240P tiré vers l'arrière, tournez dans le sens inverse des aiguilles d'une montre.



3. Détacher la fiche DC OUTPUT sur le S-240P du câble de l'adaptateur (extrémité Speakon).



Mise sous tension et hors tension de l'appareil

* Avant d'allumer/éteindre l'appareil, veuillez toujours baisser le volume. Même avec le volume au minimum, un son peut se faire entendre lorsque vous allumez/éteignez l'appareil. Cependant, c'est tout à fait normal et n'indique pas un dysfonctionnement.

Mise sous tension

* Une fois que tout est correctement connecté veillez à bien suivre la procédure ci-dessous pour la mise sous tension de l'appareil. Si vous allumez l'équipement dans le mauvais ordre, vous risquez de provoquer un dysfonctionnement ou une panne de l'équipement.

1. Allumer tout appareil raccordé aux entrées audio du M-5000 ou de toute unité d'entrée/sortie (S-2416, S-4000S, ou autres) connectée au M-5000.

* Un effet Larsen peut se produire en fonction de la position des micros par rapport aux haut-parleurs. Cela peut être résolu en :

- Modifiant l'orientation du ou des micro(s).
- Plaçant le ou les micro(s) à une plus grande distance des haut-parleurs.
- Abaissant les niveaux de volume sonore.

2. Allumer l'interrupteur [POWER] du M-5000.

* Cet appareil est équipé d'un circuit de protection. Un bref laps de temps (quelques secondes) après allumage de l'appareil est nécessaire avant qu'il puisse fonctionner normalement.

3. Allumer l'unité d'alimentation externe branchée sur le connecteur EXT. POWER DC INPUT du M-5000.

4. Allumer les unités d'entrée/sortie.

5. Allumer tout équipement connecté à la sortie audio du M-5000 ou toute unité d'entrée/sortie.

Mise hors tension

1. Aller à la fenêtre MUTE GROUP (GROUPE EN SOURDINE) puis appuyez sur <MUTE ALL OUTPUTS> (TOUTES SORTIES EN SOURDINE) pour couper la sortie audio du M-5000 et de toute unité d'entrée/sortie (S-2416, S-4000, ou autres) connectée au M-5000.

→ "Muting All Outputs" (p. 61)

2. Baisser la sortie et éteindre l'alimentation de tout appareil raccordé à la sortie audio du M-5000 ou de toute unité d'entrée/sortie.

3. Éteindre l'unité d'alimentation externe branchée sur le connecteur EXT. POWER DC INPUT du M-5000.

* Si une unité d'alimentation externe alimente le M-5000, le M-5000 va continuer à fonctionner même si l'interrupteur d'alimentation est en position OFF.

* If you need to turn off the power completely, first turn off the unit, then unplug the power cord from the power outlet.
* When restarting the unit with the expansion interface installed, wait for about one second before you turn on the power.

Replacing the Internal Lithium Battery

The M-5000 has an internal lithium battery that maintains the units's clock function and preserves the mixer settings. If the battery runs down, the clock function and recovery of mixer settings before power-down can fail to operate correctly. If a popup message prompting battery replacement appears after turning on the power, follow the procedure below to replace the battery.

The type of the replacement lithium battery is CR2032. When purchasing a replacement, specify a "CR2032 lithium battery" at an electrical-appliance store or other such point of sale.

1. Save the data in the M-5000.

→ "Backing Up All Data in the M-5000" (p. 59)

2. Turn off the power to the M-5000 and unplug the power cord from the power outlet.

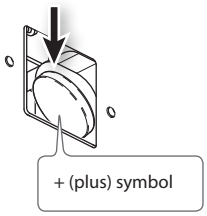
3. Loosen the mounting screw for the BATTERY slot and detach the BATTERY panel.



4. Take out the old battery and replace it with a fresh one.

Press down on the battery to eject it.

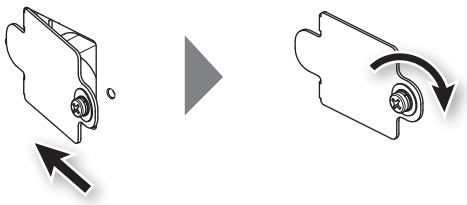
Install so that the battery's "+" (plus) symbol faces back toward the front.



NOTE

Be careful to avoid cutting your hand when opening.

5. Attach the BATTERY panel and secure it in place using the screw loosened in step 3.



6. Turn on the power to the M-5000 and set the date and time.

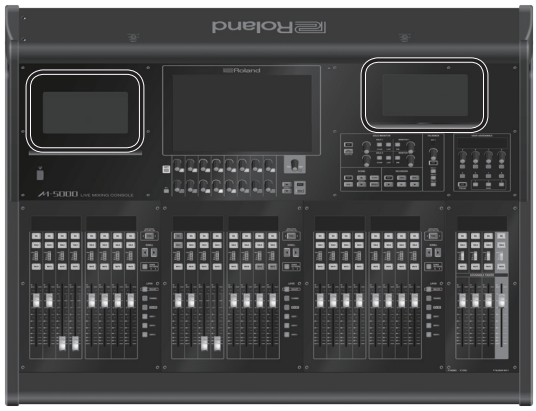
→ "Setting the Date and Time" (p. 61)

7. Restoring All Data in the M-5000

→ "Restoring All Data in the M-5000" (p. 60)

Attaching the Tablet Sheets

Attach the tablet sheets to places shown below. They will protect your tablet / smartphone / PC.



4. Commuter l'interrupteur [POWER] du M-5000 en position OFF.

5. Éteindre les unités d'entrée/sortie.

6. Éteindre tout équipement connecté à l'entrée audio du M-5000 ou toute unité d'entrée/sortie

* Pour éviter tout dysfonctionnement et une défaillance du matériel, veillez à réduire le volume et éteindre toutes les unités avant d'effectuer les connexions.

* .Si vous devez éteindre complètement l'alimentation, éteignez d'abord l'appareil avant de débrancher le cordon d'alimentation de la prise de courant.

Remplacement de la pile au lithium interne

Le M-5000 est équipé d'une pile interne au lithium qui maintient la fonction d'horloge de l'unité et conserve les réglages de la console. Si la pile est déchargée, la fonction d'horloge et de récupération des réglages de la console avant la mise hors tension risque de ne pas fonctionner correctement. Si un message contextuel demandant le remplacement de la pile apparaît après la mise sous tension, veuillez suivre la procédure ci-dessous pour remplacer la pile.

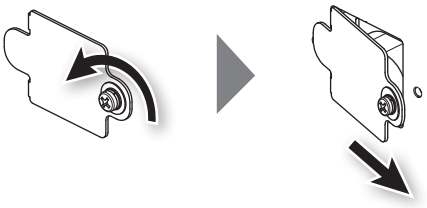
Le modèle de pile au lithium de rechange est CR2032. Lors de l'achat d'une nouvelle pile, veuillez spécifier une "pile au lithium CR2032" dans un magasin d'appareils électriques ou tout autre point de vente similaire.

1. Sauvegarder les données dans le M-5000.

→ "Backing Up All Data in the M-5000" (p. 59)

2. Éteindre l'alimentation du M-5000 et débrancher le cordon d'alimentation de la prise de courant.

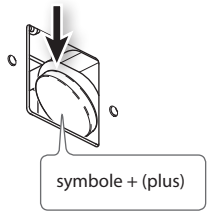
3. Desserrer la vis de fixation du logement de la PILE puis détacher le panneau de la PILE.



4. Ôter la vieille pile et la remplacer par une neuve.

Appuyer sur la pile vers le bas pour l'éjecter.

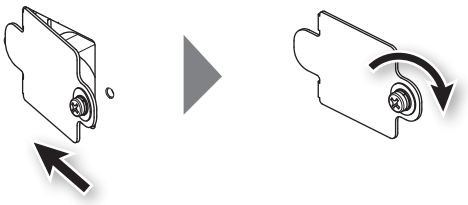
L'installer afin que le symbole "+" (plus) de la pile soit tourné vers l'avant.



NOTE

Faites attention à ne pas vous couper la main avec l'ouverture.

5. Attacher le panneau de la PILE avant de le fixer à l'aide de la vis desserrée à l'étape 3.



6. Allumer le M-5000 et régler la date et l'heure.

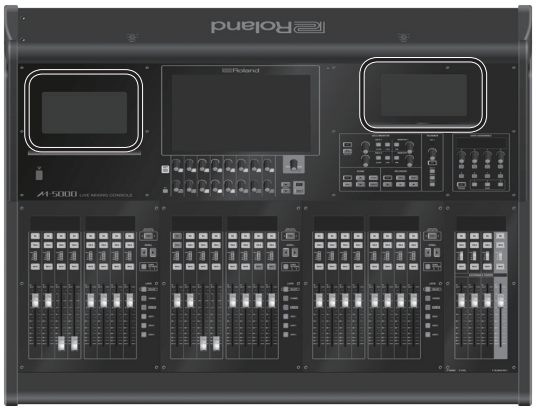
→ "Setting the Date and Time" (p. 61)

7. Restaurer toutes les données dans le M-5000

→ "Restoring All Data in the M-5000" (p. 60)

Fixation des housses de tablette

Fixez les housses de tablette aux endroits indiqués ci-dessous. Ils protégeront votre tablette / smartphone / PC.



Installing an Expansion Interface (Option)

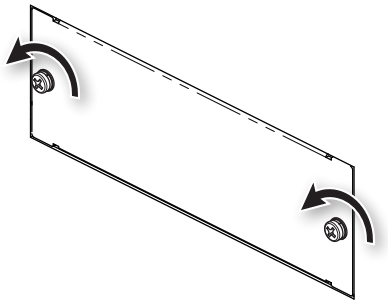
You can expand the M-5000's input and output capabilities by installing a separately available expansion interface into the unit's expansion slot.

For information on the expansion interfaces that can be installed in the M-5000, refer to the Roland website.

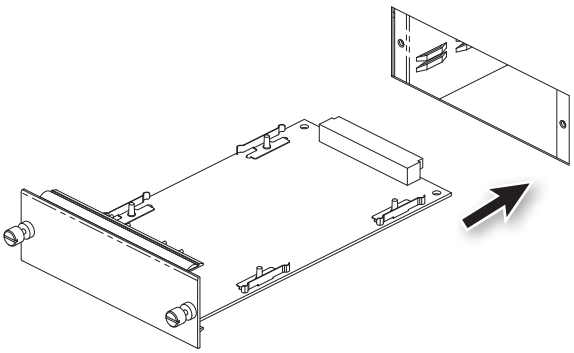
* When restarting the unit with the expansion interface installed, wait for about one second before you turn on the power.

1. Turn off the power to the M-5000 and unplug the power cord from the power outlet.

2. Loosen the mounting screws (2) for the expansion slot specified in the figure, then detach the panel.



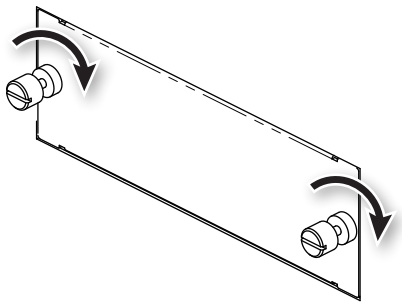
3. Insert the expansion interface.



* To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the expansion interface.

- Before you touch the expansion interface, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
- When handling the expansion interface, grasp it only by the front panel or the expansion interface's edges. Avoid touching any of the electronic components or connectors.
- Save the bag in which the expansion interface was originally shipped, and put the expansion interface back into it whenever you need to store or transport it.

4. Secure using the screws (2) for the expansion slot specified in the figure.



* Install only the specified expansion interface. Remove only the specified screws.

* Before installing the expansion interface, you must first always turn off the unit and unplug its power cord.

* Do not touch any of the printed circuit pathways or connection terminals.

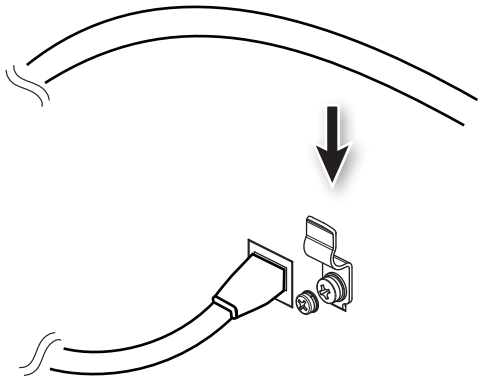
* Never use excessive force when installing an expansion interface. If it doesn't fit properly on the first attempt, remove the expansion interface and try again.

* When expansion interface installation is complete, double-check your work.

* Always turn the unit off and unplug the power cord before attempting installation of the expansion interface.

Using the LAN-cable Hook

Engage the LAN cable connected to the LAN port on the LAN-cable hook as shown in the figure to secure it in place. This can help prevent inadvertent detachment of the LAN cable.



* Never apply strong force to the LAN cable.

* Never wind (bend) the LAN cable using a coil radius of 25 millimeters or less, or bend the cable sharply enough to kink it.

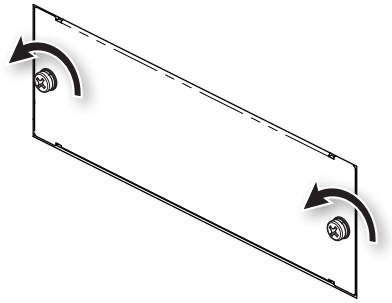
Installation d'un module d'interface (en option)

Vous pouvez étendre les capacités d'entrée et de sortie du M-5000 en installant dans le logement d'expansion de l'unité un module d'interface vendu séparément.

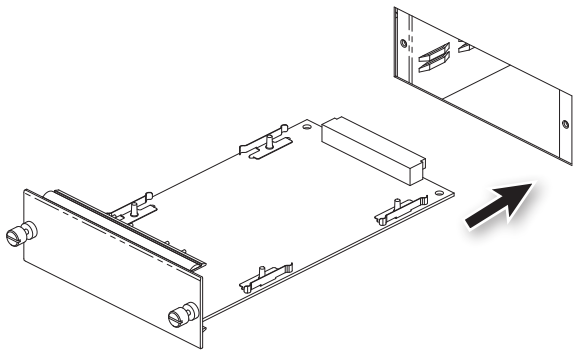
Pour plus d'informations sur les modules d'interface qui peuvent être installés dans le M-5000, veuillez consulter le site Web Roland suivant.

1. Éteindre l'alimentation du M-5000 et débrancher le cordon d'alimentation de la prise de courant.

2. Desserrer les vis de fixation (2) du logement d'extension indiqué sur la figure, puis retirer le panneau.



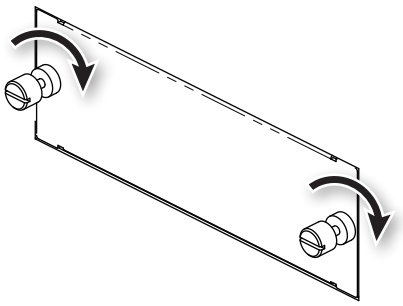
3. Insérer le module d'interface.



* Pour éviter tout risque d'endommager les composants internes à cause de l'électricité statique, veuillez respecter attentivement les instructions suivantes lorsque vous manipulez le module d'interface.

- Avant de toucher le module d'interface, toujours serrer préalablement un objet métallique (comme un tuyau d'eau), afin de s'assurer que l'électricité statique dont vous pourriez être porteur a été déchargée.
- Lorsque vous manipulez le module d'interface, veuillez ne le tenir que par le panneau ou les bords du module d'interface. Évitez de toucher les composants électroniques ou les connecteurs.
- Conservez l'emballage dans lequel le module d'interface a été expédié pour y mettre le module d'interface lorsque vous avez besoin de le stocker ou de le transporter.

4. Fixer à l'aide des vis (2) pour l'emplacement d'extension indiqué sur l'illustration.



* Installer uniquement le module d'interface spécifié. Retirer uniquement les vis spécifiées.

* Avant d'installer le module d'interface, vous devez d'abord toujours éteindre l'appareil et débrancher le cordon d'alimentation.

* Ne pas toucher aux circuits imprimés ou aux bornes de connexion.

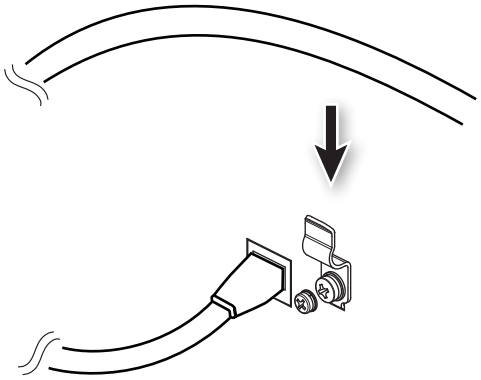
* Ne jamais forcer lors de l'installation d'un module d'interface. S'il ne s'insère pas correctement lors de la première tentative, retirer le module d'interface et essayer à nouveau.

* Lorsque l'installation des module d'interface est terminée, revérifiez votre travail.

* Toujours éteindre l'appareil et débrancher son cordon d'alimentation avant de procéder à l'installation du module d'interface.

Utilisation du crochet de câble réseau

Engager le câble réseau branché au port LAN sur le crochet de câble réseau comme indiqué sur la figure pour le fixer en place. Cela peut aider à prévenir le détachement accidentel du câble réseau.



* Ne jamais forcer sur le câble réseau.

* Ne jamais enrouler (plier) le câble réseau avec un rayon de bobine de 25 mm ou moins, ou plier le câble au point de l'emmêler.

Installing REAC Devices

Basic REAC Knowledge

REAC (Roland Ethernet Audio Communication) is Roland's own original digital audio-transmission technology using Ethernet. Its uses a protocol independently developed by Roland based on Ethernet technology, and makes possible transmission of 40 input and 40 output channels of 24-bit digital audio at 96 kHz using a single Category 5e Ethernet cable. REAC devices can also easily be interconnected.

- Capable of 40 input and 40 output of 24-bit digital audio at 96 kHz
- Allows easy device connection using just master, slave, and split settings
- Capable of transmission of up to 100 meters over a single Cat 5e cable
- Extension of cable length possible using an Ethernet switching hub
- Easy signal splitting possible using a switching hub
- Extremely short transmission latency between REAC devices (approx. 375 microseconds)

About Cables

Because Category 5e Ethernet cables are used, connecting REAC devices to one another is simple and easy. These Cat 5e Ethernet cables are ordinarily used to make computer network connections.

Ethernet Cable Types

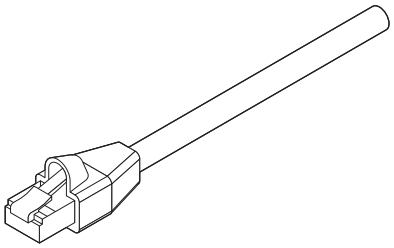
- Crossover cable
  The cable's internal wiring crosses over at each RJ45 plug. This means that the connections of the RJ45 plugs at either end of the signal cable are different.
- Straight cable
  The cable's internal wiring is arranged identically at each end.

With this unit, you can use either crossover cables or straight cables.

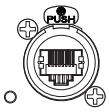
For making connections to the REAC ports, we recommend using optionally available REAC cables (SC-W20F, SC-W100S, W100S-R, etc.).

Ethernet Connectors

Ethernet cables use RJ45 plugs. REAC devices are provided with an RJ45 connector at REAC port.



RJ45 plug



REAC RJ45 connector

For critically important communication, protecting RJ45 plugs and connectors is vital. In such cases, rugged Neutrik EtherCon plugs are used for the REAC RJ45 plugs.

Using EtherCon RJ45 plugs makes possible the same kind of latch-locked connections as when using XLR plugs.

Neutrik provides EtherCon RJ45 plugs, as well as EtherCon plugs that you can add to or use to modify RJ45 plugs on third-party Ethernet cables.

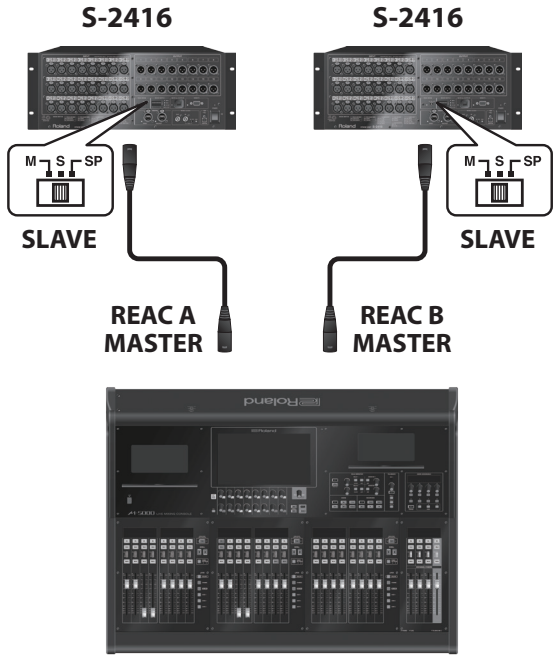
Important Notes on Handling Ethernet Cables

- Never apply strong force to Ethernet cables.
- Never wind (bend) an Ethernet cable using a coil radius of 25 millimeters or less, or bend the cable sharply enough to kink it.
- Never bind bundled Ethernet cables too tightly.
- Never run lengths of multiple Ethernet cables in parallel over long distances.
- Keep Ethernet cables away from sources of noise (such as power cords, motors, and fluorescent lights).

Connecting REAC Input/Output Units

This describes how to connect REAC input/output units to the M-5000.

This section shows a typical example of a connection using the S-2416. For connections of greater complexity, refer to the Reference Manual (PDF).



The input/output units connected to the REAC A and B ports and the default input/output patchbays on the M-5000 are as follows.

Input port	Input channel
REAC A INPUT 1–24	CH 1–24
REAC B INPUT 1–24	CH 25–48
CONSOLE INPUT 1–16	CH 49–64
FX 7 OUTPUT L/R	CH 65 (stereo)
FX 8 OUTPUT L/R	CH 66 (stereo)
DOCK L/R	CH 67 (stereo)
PLAY L/R	CH 68 (stereo)

Output port	Output bus
REAC A OUTPUT 1–16	AUX 1–16
REAC B OUTPUT 1–8	AUX 17–24
REAC B OUTPUT 9-13	MATRIX 1-5
REAC B OUTPUT 14-16	MAIN L, R, C
CONSOLE OUTPUT 15-16	MONITOR 1 L,R

Important Notes on REAC Connections

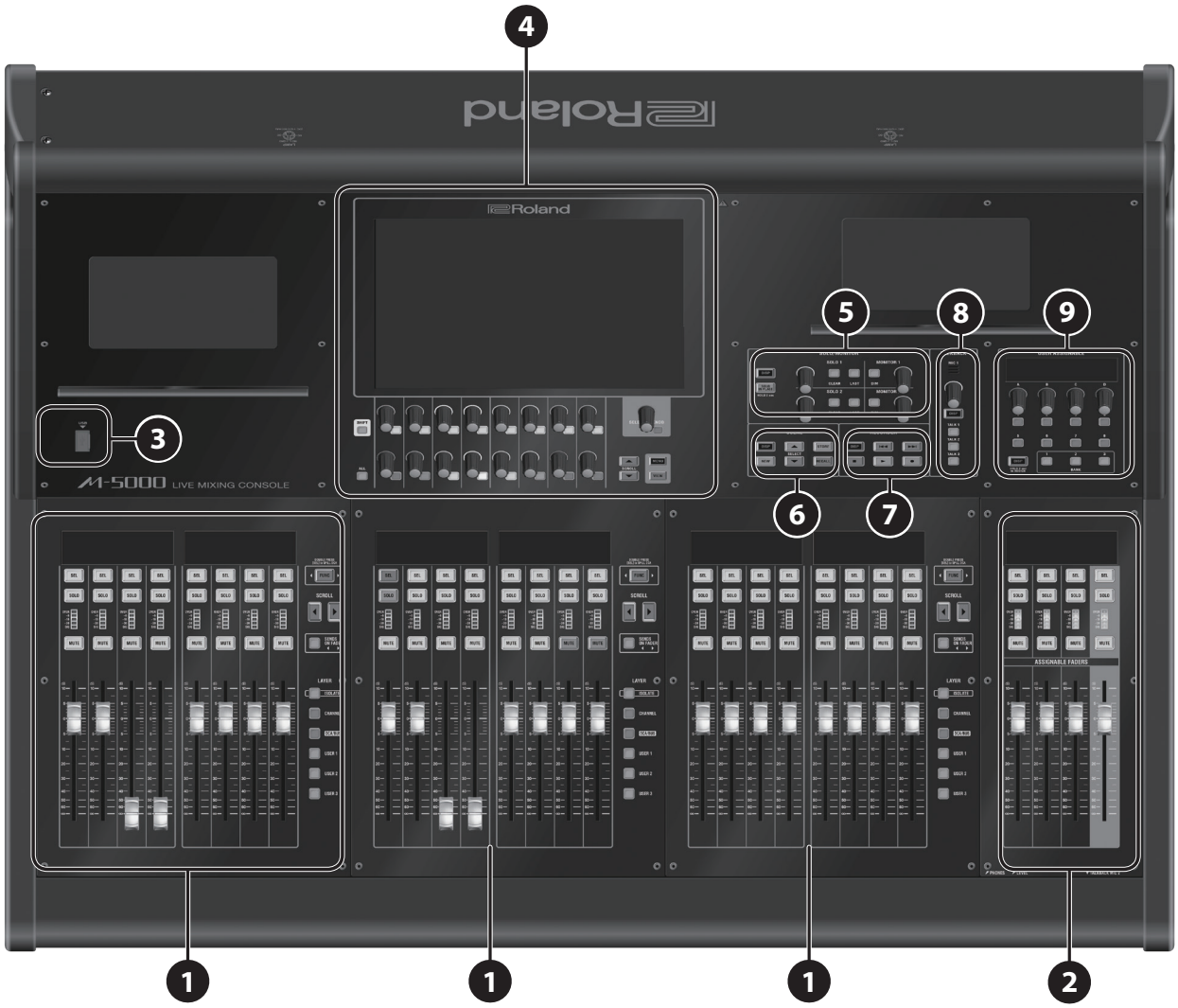
REAC connections are designed not to produce noise when hot-swapping (inserting or detaching live lines) is performed. In rare cases, however, noise might occur in the system's audio output. The following two methods can prevent damage due to hot-swapping to speakers or other devices connected to audio outputs.

- Make the REAC connection while holding down [MUTE ALL OUTPUTS] on the input/output unit.
- Go to the MUTE GROUP MASTER window and use [MUTE ALL OUTPUTS] to mute output, then make the REAC connection.

→ “Muting All Outputs” (p. 61))

Part Names and Functions

Top Panel



1 Fader Bank Section

This section is for working with input channels and output buses in sets of eight. You use the layer buttons and scroll buttons to access the desired input channel or output bus.

→ "Fader Bank Section" (p. 29)

2 Assignable Fader Section

This section lets you assign any four input channels or output buses select. This makes it possible to keep important input channels and output buses accessible on the top panel at all times.

→ "Assignable Fader Section" (p. 30)

3 USB MEMORY Connector

This connector is for connecting a USB flash drive.

→ "USB MEMORY Connector" (p. 30)

4 Display Section

This section is for displaying and working with mixer parameters and system settings.

→ "Display Section" (p. 31)

5 Monitor Section

This section is for working with and controlling the monitor busses.

→ "Monitor Section" (p. 32)

6 Scene Section

This section is for working with scene memories.

→ "Scene Section" (p. 33)

7 Recorder Section

This section is for working with and controlling a USB memory recorder or another external recorder such as the R-1000 48-track recorder.

→ "Recorder Section" (p. 33)

8 Talkback Section

This section is for working with and controlling the talkback functions.

→ "Talkback Section" (p. 34)

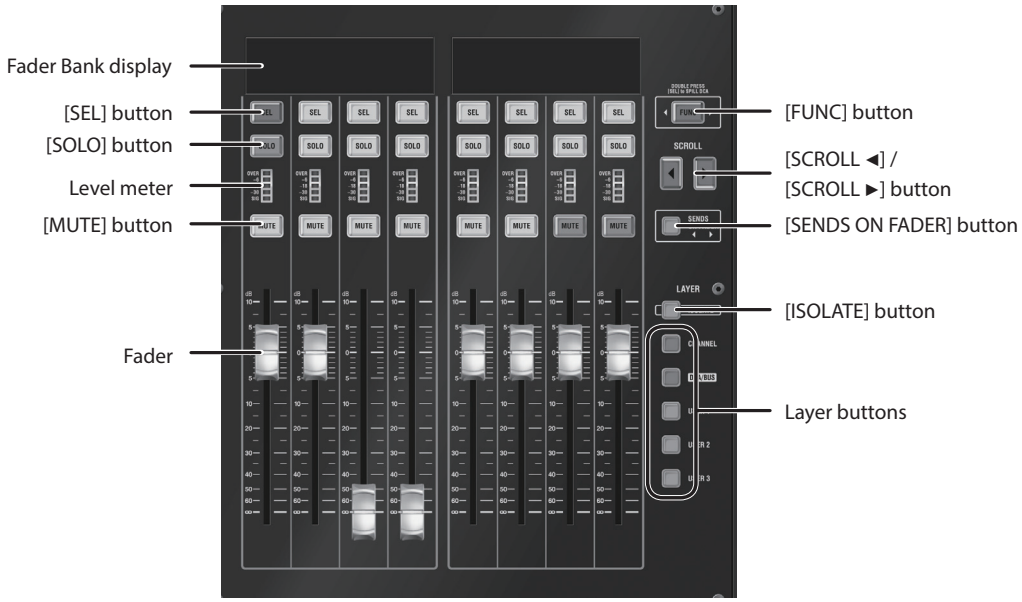
9 User-assignable Section

This section is for assigning and working with parameters of your choosing.

→ "User-assignable Section" (p. 35)

Fader Bank Section

This section is for working with eight input channels or output buses or both. You use layer selection and scrolling to access the desired input channel or output bus.

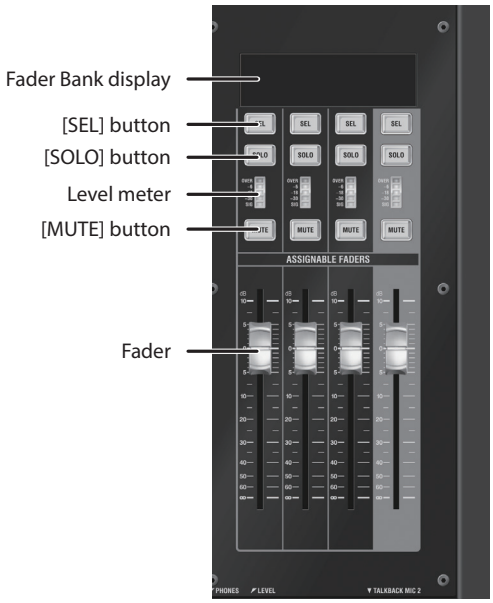


Name	Description
Fader bank display	This displays information such as the input channel/output bus name and fader value. In the Function mode, it displays menu information such as a list of functions and parameter values.
[SEL] button	This selects the input channel/output bus designating the display target. In the Function mode, it selects the function and sets parameters.
[SOLO] button	This turns solo on and off for the input channel/output bus.
Level meter	This displays the signal level of the input channel/output bus.
[MUTE] button	This turns muting on and off for the input channel/output bus.
Fader	This operates the fader for the input channel/output bus.
[FUNC] button	This turns the function mode on and off. It flashes when the function mode is on.
[SCROLL ◄] / [SCROLL ►] button (JUMP)	This scrolls the channel left and right. Pressing [SCROLL <] and [SCROLL >] at the same time displays the anchor channel where the currently selected Layer in the fader bank display is registered (anchor jump).
[SENDS ON FADER] button	This turns SENDS ON FADER on and off. It flashes when on. → "Using Faders to Adjust the Send Level to AUX (SENDS ON FADER)" (p. 51)
[ISOLATE] button	This turns the isolation of the Fader Bank on and off. → "Isolated Banks" (p. 46)
Layer buttons	This selects the layer for the Fader Bank section. The button for the selected layer lights up.

Assignable Fader Section

This section lets you assign any four channels of you choosing to the 4 assignable faders. This makes it possible to keep important channels accessible at all times.

For details, refer to the "Assignable Fader Section" in the Reference Manual (PDF).



Name	Description
Fader Bank display	This displays information such as the input channel/output bus name and fader value. In the Function mode, it displays information such as a list of functions and parameter values.
[SEL] button	This selects the input channel/output bus and selects the display target. In the function mode, it selects the function and manipulates parameters.
[SOLO] button	This turns solo on and off for the input channel/output bus.
Level meter	This displays the signal level of the input channel/output bus.
[MUTE] button	This turns muting on and off for the input channel/output bus.
Fader	This operates the fader for the input channel/output bus.

USB MEMORY Connector

The M-5000 can use a USB flash drive to store and load a variety of data.

- Project files

→ "Saving a Project File to a USB Flash Drive" (p. 59)
→ "Loading a Project File from a USB Flash Drive" (p. 60)

- Recording and playback of WAV files using a USB flash drive

→ "Recording/Playback to/from a USB Flash Drive" (p. 58)

NOTE

* Never turn off the power or disconnect a USB flash drive when the access light of the device is lit or blinking

* Carefully insert the USB flash drive all the way in—until it is firmly in place.

* Some USB flash drive types or USB flash drives from some manufacturers may not record or play back properly.

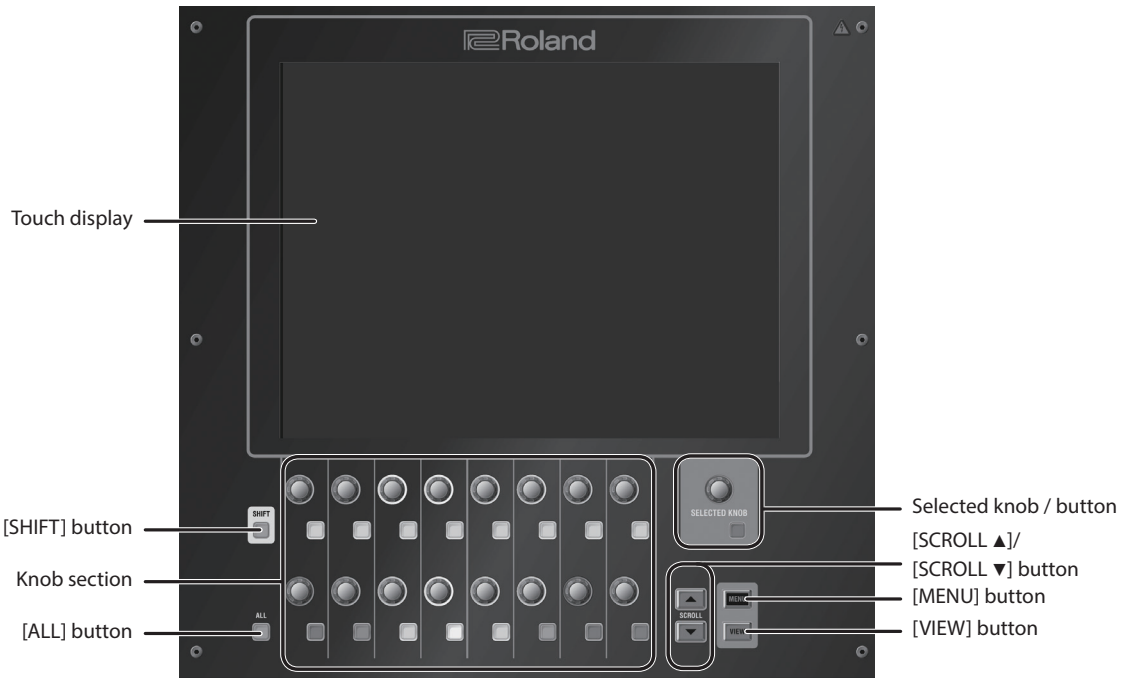
* All USB flash drives eventually wear out. We recommend that you consider the USB flash drive not as a permanent storage site, but as a place to store data temporarily. We also recommend that you back up important data onto another media.

Memo

- Before using a USB flash drive on this unit, please format the USB flash drives using the built-in format function.
  → "Formatting a USB Flash Drive on the M-5000" (p. 61)
- Some USB flash drives might not be able to be used on this unit. If an error message appears when formatting as described in "Formatting a USB Flash Drive on the M-5000" (p. 61), it is not possible to use this USB flash drive on the M-5000.
- The M-5000 supports only USB flash drives (USB flash Memory and USB memory). USB Hard Disk and Memory Card Readers are not supported.
- USB flash drives do not work via USB hub.

Display Section

This section lets you display and work with mixer parameters, system settings, and other values.
For details, refer to the "Operation of the touch display" section in the Reference Manual (PDF).



Name	Description
Touch display	This displays mixer parameters, settings, and other values. You touch this to manipulate the parameters.
[SHIFT] button	This changes the functioning of buttons while depressed.
Knob section	This manipulates the parameter area displayed at the bottom of the touch display. The color of the knob or button changes according to the parameter.
[ALL] button	When this is pressed, the action of the knob or button is applied to the eight channels shown on the touch display.
Selected knob / button	This manipulates the selected parameter on the touch display. The color of the knob or button changes according to the selected parameter.
[SCROLL ▲]/[SCROLL ▼] button	This switches the AUX value selected at the knob-assign area of the HOME screen (p. 48).
[MENU] button	This makes the MENU window appear on the touch display.
[VIEW] button	This switches the appearance of the channel strip on the HOME screen (p. 48).

* Pressing or scraping the surface of the touch display using a pointed object can damage the touch display.
* If the touch display surface becomes dirty, clean by wiping gently using a soft cloth moistened with neutral detergent.

Monitor Section

This section is for working with monitor functions.

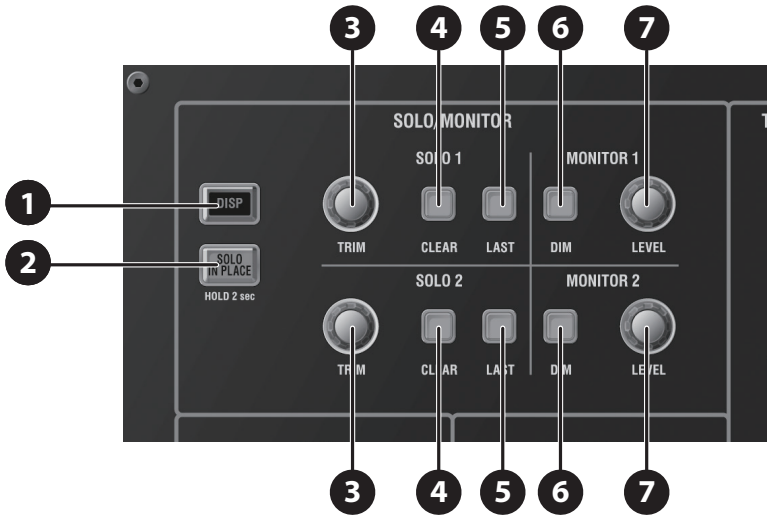
This unit is provided with two monitor systems.

The available selections for MONITOR 1 are 5.1, STEREO, and NONE (no assignment), and the available selections for MONITOR 2 are STEREO and NONE (no assignment).

The unit is also provided with two solo systems. These are SOLO 1 for MONITOR 1 and SOLO 2 for MONITOR 2.

The input channel or output bus selected using [SOLO] on the top panel is sent to the monitor.

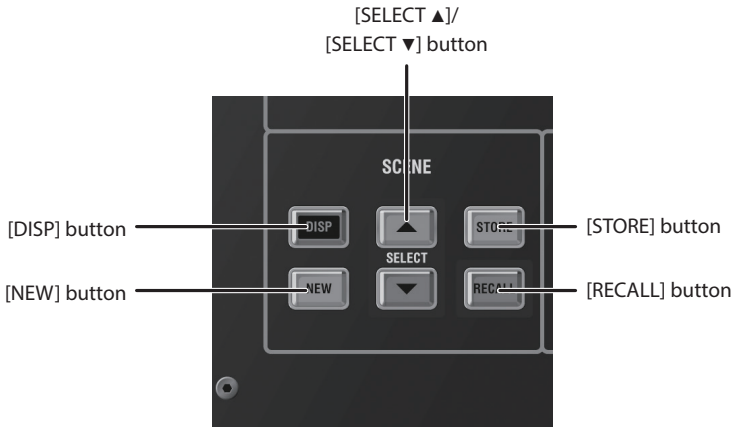
For details, refer to the "Monitor" section in the Reference Manual (PDF).



Number	Name	Description
1	[DISP] button	This displays the MONITOR window.
2	[SOLO IN PLACE] button	This turns Solo in Place on and off. To turn on Solo in Place, press and hold this button for 2 seconds. It flashes when on. * When Solo in Place is on, a solo signal is sent to the output buses. Note that input channels where solo is turned off are not output.
3	SOLO 1 / SOLO 2 [TRIM] knob	This adjusts the level of SOLO 1 or 2.
4	SOLO 1 / SOLO 2 [CLEAR] button	This clears SOLO 1 or 2. It flashes when a channel is currently soloed.
5	SOLO 1 / SOLO 2 [LAST] button	This turns the LAST mode on and off for SOLO 1 or 2.
6	MONITOR 1 / MONITOR 2 [DIM] button	This turns the dimmer on and off for MONITOR 1 or 2.
7	MONITOR 1 / MONITOR 2 [LEVEL] button	This adjusts the level of MONITOR 1 or 2.

Scene Section

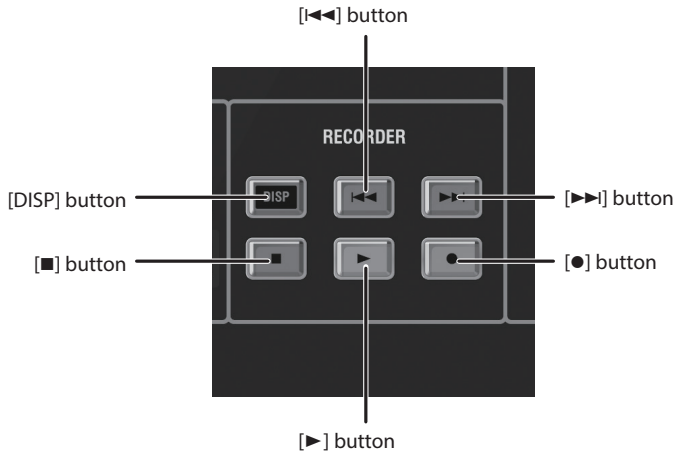
This section is for working with scene memories.
Scene memory is a function that lets you store and recall mixing parameters as "scenes."



Name	Description
[DISP] button	This displays the SCENE window.
[NEW] button	This creates a new scene after the selected scene, and saves the current mixer parameters.
[SELECT ▲] button	This selects the scene just before the currently selected scene.
[SELECT ▼] button	This selects the scene just after the currently selected scene.
[STORE] button	This stores the current mixer parameters to the selected scene.
[RECALL] button	This recalls the mixer parameters from the selected scene.

Recorder Section

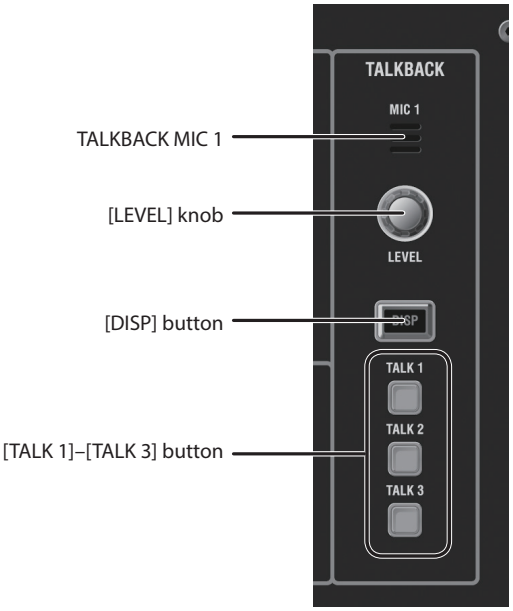
This section is for working with a USB memory recorder or another external recorder such as the R-1000 48-track recorder.



Name	Description
[DISP] button	This displays the RECORDER window.
[■] button	This stops recording/playback.
[I◄◄] button	This selects the previous song. Holding this down during playback rewinds the song being played.
[►►I] button	This selects the next song. Holding this down during playback fast-forwards the song being played.
[►] button	This starts recording/playback.
[●] button	This puts the unit into recording standby.

Talkback Section

This section is for working with talkback functions.



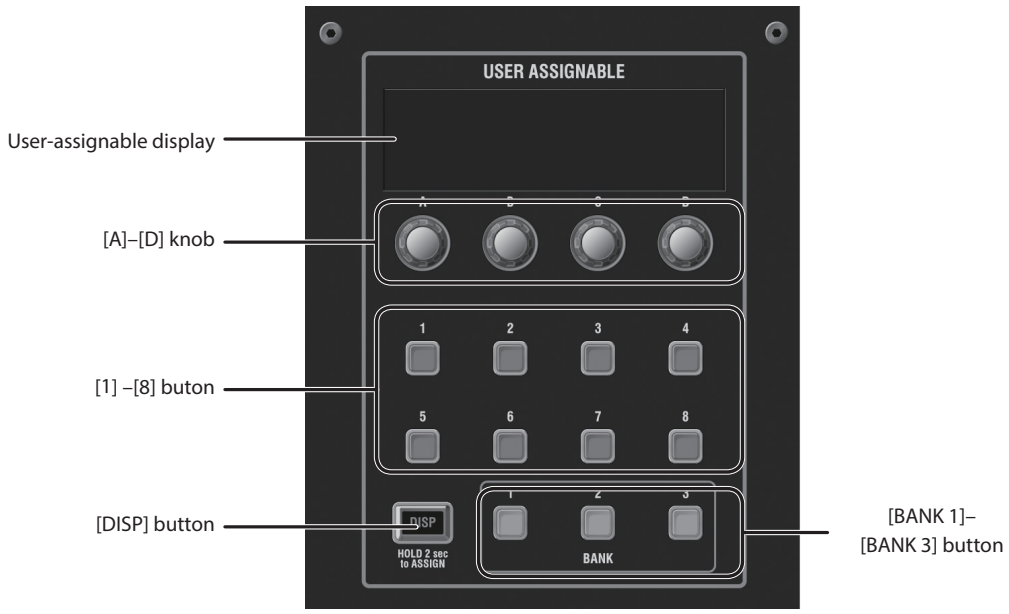
Name	Description
TALKBACK MIC 1	This is the internal microphone for talkback.
[LEVEL] knob	This adjusts the level of talkback.
[DISP] button	This displays the TALKBACK/OSC window.
[TALK 1]–[TALK 3] button	These send talkback to the output destinations assigned to TALK 1 through TALK 3.

Memo

The way in which talkback is turned on and off differs depending on how you press the [TALK 1] through [TALK 3] buttons.
When you release the button quickly after pressing it, it operates as a toggle turning talkback on or off with each press.
When depressed for a longer interval before releasing, it operates as a momentary switch that turns on talkback only while held down.

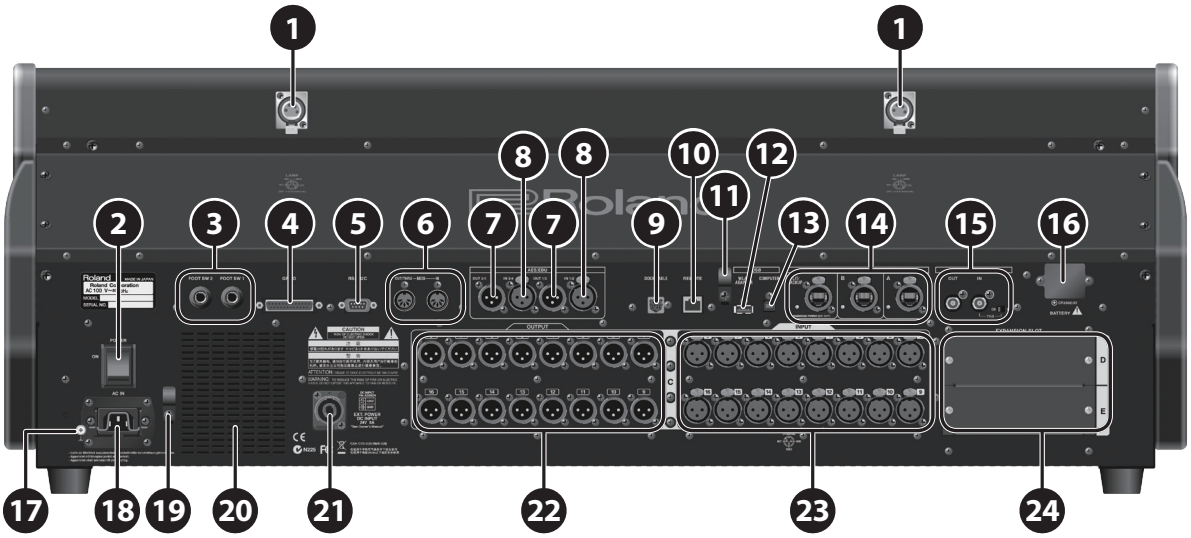
User-assignable Section

This section is for assigning and working with parameters of your choosing.



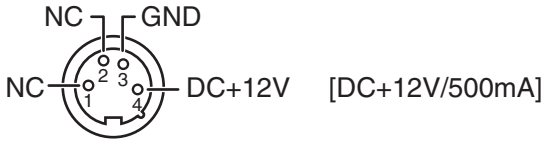
Name	Description
User-assignable display	This displays the parameters assigned to assignable knobs/buttons.
[A]–[D] knob	These manipulate the assigned parameter value.
[1]–[8] button	These turn assigned parameters on and off and access screens and windows.
[DISP] button	This displays the USER ASSIGNABLE window. Pressing and holding it for 2 seconds enters the assign mode. It flashes when in the assign mode.
[BANK 1]–[BANK 3] button	These changes banks in the user-assignable section.

Rear Panel



1 LAMP Connectors

These are XLR-4-31 connectors that supply power to third-party gooseneck lamps.



2 POWER Switch

This turns the power on and off.

→ "Turning the Power On and Off" (p. 20)

NOTE

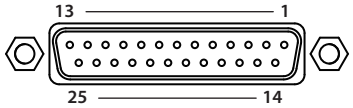
If you need to turn off the power completely, first turn off the unit, then unplug the power cord from the power outlet.

3 FOOT SW 1/2 Jacks

These are TRS standard jacks for connecting footswitch pedals.

4 GP I/O Connector

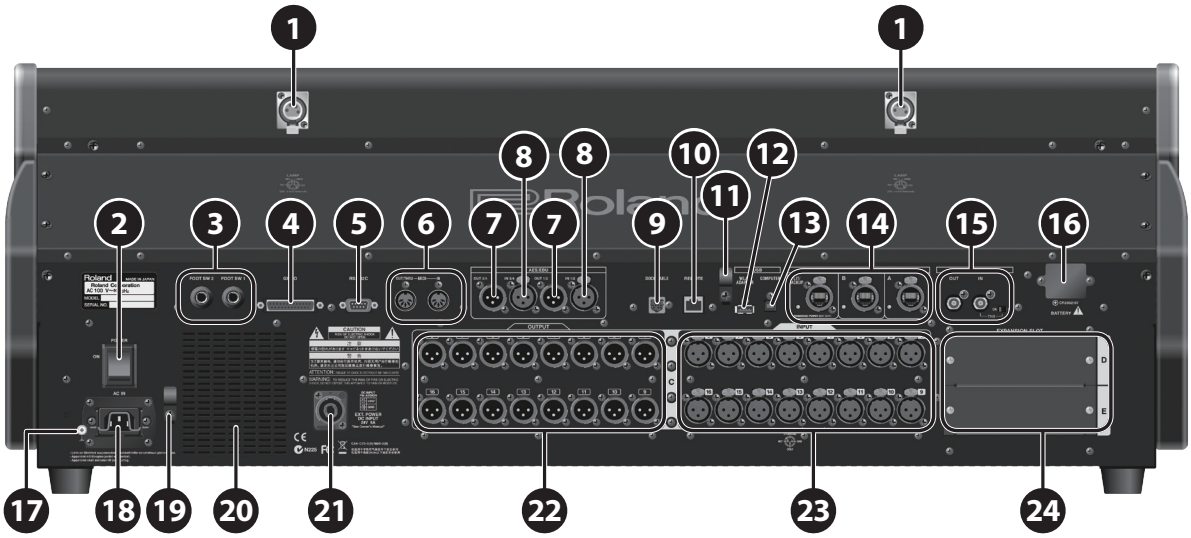
This is a D-sub 25-pin connector (4 in/12 out) for sending and receiving control signals to and from an external device.



Connector No.	Type
1	GPO 1
2	GPO 3
3	GPO 5
4	GPO 7
5	GND
6	GND
7	GND
8	GND
9	+5V
10	GPI 2
11	GPI 4
12	GPO 10
13	GPO 12
14	GPO 2
15	GPO 4
16	GPO 6
17	GPO 8
18	GND
19	GND
20	GND
21	+5V
22	GPI 1
23	GPI 3
24	GPO 9
25	GPO 11

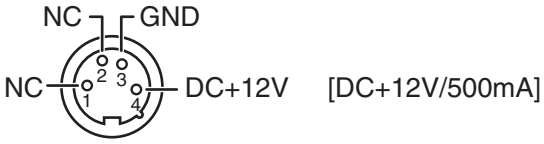
Input pin [Voltage detection range: 0-5V , Max +5V]
Output pin [Open collector , Vmax=12V , Imax/pin=75 mA]
DC output [DC+5V / 1000mA]

Panneau arrière



1 Connecteurs LAMP

Ce sont les connecteurs XLR-4-31 qui alimentent les lampes à col de cygne tierces.



2 Commutateur d'alimentation POWER

Permet de mettre sous ou hors tension.

→ "Mise sous tension et hors tension de l'appareil" (p. 21)

NOTE

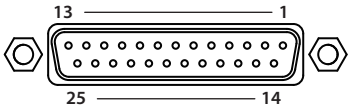
Si vous devez éteindre complètement l'alimentation, éteignez d'abord l'appareil avant de débrancher le cordon d'alimentation de la prise de courant.

3 Prises FOOT SW 1/2

Ce sont des prises standard TRS pour connecter les commutateurs au pied.

4 Connecteur GP I/O

Il s'agit d'un connecteur D-sub à 25 broches (4 in/12 out) pour envoyer et recevoir des signaux de commande vers et depuis un dispositif externe.



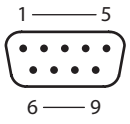
Connecteur No.	Type
1	GPO 1
2	GPO 3
3	GPO 5
4	GPO 7
5	GND
6	GND
7	GND
8	GND
9	+5V
10	GPI 2
11	GPI 4
12	GPO 10
13	GPO 12
14	GPO 2
15	GPO 4
16	GPO 6
17	GPO 8
18	GND
19	GND
20	GND
21	+5V
22	GPI 1
23	GPI 3
24	GPO 9
25	GPO 11

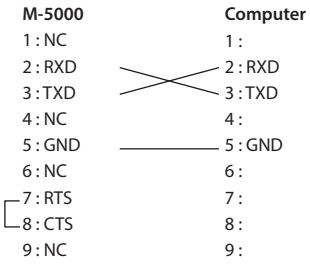
Broche d'entrée [Plage de détection de tension: 0-5V , Max +5V]
Broche de sortie [Collecteur ouvert, Vmax=12V , Imax/pin=75 mA]
DC sortie [DC+5V / 1000mA]

5 RS-232C Connector

You can use this RS-232C connector to control the M-5000 remotely from an external device.

Transmission method	Start-stop synchronization (asynchronous mode), full-duplex
Communication speed (baud rate)	4800, 9600, 14400, 31250, 38400, 57600, 115200 bps
Parity	None
Data length	8 bit
Stop-bit length	1 bit
Code set	ASCII

Connector No.	Signal name	Pin connections
1	NC	
2	RXD	
3	TXD	
4	DTR	
5	GND	
6	DSR	
7	RTS	
8	CTS	
9	NC	



* Pins 7 and 8 are connected inside the M-5000.
* For the M-5000 to function, the three pins RXD, TXD, and GND must be connected as shown in the figure.
* In addition to the owner's manual, RS-232C Reference Manual (PDF) is available as a reference material that covers RS-232C port control.
  Download the PDF file from the Roland website.
* RS-232C Reference Manual (PDF) contains the following information.
  - Information on setup
  - Overviews, detailed explanations, and lists of commands

6 MIDI Connectors

These are connectors for attaching MIDI devices. An IN connector (for reception) and an OUT/THRU connector (for transmission and "thru") are provided.

7 AES/EBU OUT 1/2, AES/EBU OUT 3/4 Jacks

These jacks output digital audio signals in AES/EBU format (IEC60958-compliant).

8 AES/EBU IN 1/2, AES/EBU IN 3/4 Jacks

These jacks input digital audio signals in AES/EBU format (IEC60958-compliant).

NOTE

The AES/EBU IN 1/2 and AES/EBU IN 3/4 jacks are not equipped with a sampling-rate converter. Input digital audio signals synchronized to the M-5000's word clock.

9 DOCK CABLE Connector

This is for connecting an iPad using the dock cable included with the M-5000. This lets you operate the unit remotely and perform audio input and output on 2 channels using the iPad.
Charging starts automatically when an iPad is connected.

10 LAN Port

This is an RJ45 connector for connecting a computer or Wi-Fi router.
It lets you operate the M-5000 remotely using a computer or iPad.

11 LAN-cable Hook

This secures the LAN cable connected to the LAN port. This can help prevent inadvertent detachment of the LAN cable.
→ "Using the LAN-cable Hook" (p. 24)

12 USB WLAN ADAPTER Connector

This is a USB port for connecting a wireless USB adapter (WNA1100-RL, sold separately).
It lets you connect an iPad, computer, or Wi-Fi router.

13 USB COMPUTER Connector

This is a USB port for connecting a computer.
It lets you operate the M-5000 remotely and perform audio input and output on 16 channels.

14 REAC Ports (A B, SPLIT/BACKUP)

These are RJ45 connectors for attaching input/output units (such as the S-2416, S-1608, S-0816, and S-4000S) using Cat 5e Ethernet cables.
The unit has two series of REAC ports (A and B). The SPLIT/BACKUP port can split or duplicate the REAC A or B connection.

The REAC SPLIT/BACKUP port is compatible with REAC EMBEDDED POWER, and can supply power to devices compatible with REAC EMBEDDED POWER.
When a REAC device is connected, the system automatically detects whether the device is compatible with REAC EMBEDDED POWER and supplies power if compatible.
Power is not supplied if the device is not compatible with REAC EMBEDDED POWER.

15 WORD CLOCK IN/OUT Connectors

These are connectors for word-clock input and output. To terminate word-clock input at the M-5000, set the 75 ohms switch to ON.

16 BATTERY Slot

This slot contains a lithium battery that maintains the M-5000's clock function and preserves the mixer settings. If the battery runs down, you need to replace it.
→ "Replacing the Internal Lithium Battery" (p. 22)

17 Ground Terminal

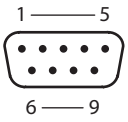
This terminal is used to connect the M-5000 to an electrical ground.

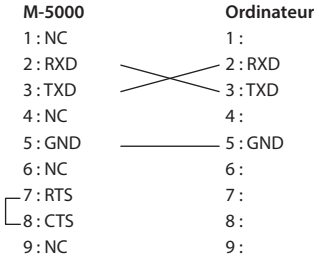
* Depending on the circumstances of a particular setup, you may experience a discomforting sensation, or perceive that the surface feels gritty to the touch when you touch this device, microphones connected to it, or the metal portions of other objects, such as guitars. This is due to an infinitesimal electrical charge, which is absolutely harmless. However, if you are concerned about this, connect the ground terminal (see figure) with an external ground. When the unit is grounded, a slight hum may occur, depending on the particulars of your installation. If you are unsure of the connection method, contact the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.
  Unsuitable places for connection:
  - Water pipes (may result in shock or electrocution)
  - Gas pipes (may result in fire or explosion)
  - Telephone-line ground or lightning rod (may be dangerous in the event of lightning)

5 Connecteur RS-232C

Vous pouvez utiliser ce connecteur RS-232C pour contrôler le M-5000 à distance via un périphérique externe.

Méthode de transmission	Synchronisation Start-Stop (mode asynchrone), duplex intégral
Vitesse de communication (taux de transmission)	4800, 9600, 14400, 31250, 38400, 57600, 115200 bps
Parité	Aucune
Longueur de données	8 bits
Longueur Bit d'arrêt	1 bit
Jeu de codes	ASCII

Connecteur No.	Nom du signal	Connexions de broche
1	NC	
2	RXD	
3	TXD	
4	DTR	
5	GND	
6	DSR	
7	RTS	
8	CTS	
9	NC	



* Les broches 7 et 8 sont connectées à l'intérieur du M-5000 .
* Pour que le M-5000 fonctionne, les trois broches RXD, TXD et GND doivent être connectées comme indiqué sur la figure.
* Outre le mode d'emploi, le Manuel de référence du V-Mixer RS-232C (PDF) est disponible en tant que document de référence concernant le port RS-232C.
  Téléchargez le fichier PDF sur le site Roland.
* Le Manuel de référence du RS-232C (PDF) contient les informations suivantes.
  - Informations sur la configuration
  - Aperçus, explications détaillées et listes de commandes

6 Connecteurs MIDI

Ces connecteurs servent à la connexion des périphériques MIDI. Un connecteur IN (pour la réception) et un connecteur OUT/THRU (pour la transmission et "THRU") sont fournis.

7 Prises AES/EBU OUT 1/2, AES/EBU OUT 3/4

Ces prises assurent la sortie des signaux audio numériques au format AES/EBU (conformité IEC60958).

8 Prises AES/EBU IN 1/2, AES/EBU IN 3/4

Ces prises assurent l'entrée des signaux audio numériques au format AES/EBU (conformité IEC60958).

NOTE

Les prises AES/EBU IN 1/2 et AES/EBU IN 3/4 ne sont pas équipées d'un convertisseur de taux d'échantillonnage. Les signaux audio numériques d'entrée sont synchronisés avec l'horloge du M-5000.

9 Connecteur DOCK CABLE

Il sert à connecter un iPad via le câble dock fourni avec le M-5000. Cela vous permet d'utiliser l'appareil à distance et d'effectuer l'entrée et la sortie audio sur 2 canaux via un iPad.
Le chargement démarre automatiquement quand un iPad est connecté.

10 Port LAN

Il s'agit d'un connecteur RJ45 pour le raccordement d'un ordinateur ou d'un routeur Wi-Fi.
Il vous permet d'utiliser le M-5000 à distance via un ordinateur ou un iPad.

11 Crochet de câble LAN

Il immobilise le câble réseau connecté au port LAN. Il permet de prévenir le détachement accidentel du câble réseau.
→ "Utilisation du crochet de câble réseau" (p. 25)

12 Connecteur USB WLAN ADAPTER

Il s'agit d'un port USB pour connecter un adaptateur USB sans fil (WNA1100-RL, vendu séparément).
Il vous permet de connecter un iPad, un ordinateur ou un routeur Wi-Fi.

13 Connecteur USB COMPUTER

Il s'agit d'un port USB pour la connexion d'un ordinateur.
Il vous permet d'utiliser le M-5000 à distance et d'effectuer l'entrée et la sortie audio sur 16 canaux.

14 Ports REAC (A, B, SPLIT/BACKUP)

Il s'agit de connecteurs RJ45 pour la fixation des unités d'entrée/sortie (comme le S-2416, S-1608, S-0816 et S-4000S) à l'aide de câbles Ethernet Cat 5e.
L'unité est dotée de deux séries de ports REAC (A et B). Le port SPLIT/BACKUP peut diviser ou dupliquer la connexion REAC A ou B.

Le port REAC SPLIT/BACKUP est compatible avec REAC EMBEDDED POWER (alimentation intégrée REAC), et peut alimenter des appareils compatibles avec REAC EMBEDDED POWER.
Quand un appareil REAC est connecté, le système détecte automatiquement si cet appareil est compatible avec REAC EMBEDDED POWER et l'alimente le cas échéant.
L'alimentation n'est pas fournie si l'appareil n'est pas compatible avec REAC EMBEDDED POWER.

15 Connecteurs WORD CLOCK IN/OUT

Il s'agit des connecteurs pour l'entrée et la sortie de l'horloge. Pour mettre fin à l'entrée d'horloge du M-5000, commuter l'interrupteur 75 ohms sur ON.

16 Logement BATTERY

Ce logement contient une pile au lithium qui fait fonctionner l'horloge du M-5000 et conserve les réglages de la console. Si la pile est déchargée, elle doit être remplacée.
→ "Remplacement de la pile au lithium interne" (p. 23)

17 Borne de terre

Cette borne est utilisée pour connecter le M-5000 à une masse électrique.

* En fonction de votre installation, il est possible que vous éprouviez un certain inconfort ou que vous perceviez une rugosité en touchant la surface de l'amplificateur, des microphones connectés ou des parties métalliques d'autres objets, tels que les guitares, par exemple. Ce phénomène est dû à de petites charges électriques, absolument sans danger. Pour y remédier, vous pouvez relier la prise de terre (voir l'illustration) à une prise de terre extérieure. Lorsque l'appareil est ainsi connecté, un léger bourdonnement peut apparaître, en fonction de l'installation. Si vous n'êtes pas certain du mode de connexion à établir, prenez contact avec le centre de maintenance Roland le plus proche, ou avec un distributeur Roland agréé comme indiqué sur la page "Informations".
  Environnements déconseillés
  - Conduites d'eau (risque de choc électrique ou d'électrocution)
  - Conduites de gaz (risque d'incendie ou d'explosion)

18 AC INPUT Connector, Power-cord Clamp

This connector is for attaching the included power cord.

To keep the power cord from being inadvertently disconnected, you use the power-cord clamp to secure the cord in place.

→ "Connecting the Power Cord" (p. 16)

→ "Using the Power-cord Clamp" (p. 16)

19 Power-cord Hook

You can use this power cord hook to prevent the power cord from being accidentally disconnected.

→ "Using the Power-cord Hook" (p. 18)

20 Cooling Fan

This is the fan for cooling the M-5000. When placing the M-5000, be careful not to obstruct the ventilation holes.

21 EXT. POWER DC INPUT Connector

This connector is for attaching an optional S-240P external power-supply unit to supply backup power to the M-5000.

If an S-240P External Power Supply Unit is providing power to the M-5000, the M-5000 will keep operating even if the power switch is in the OFF position.

* DC INPUT [DC+24V / 6A]

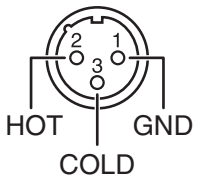
NOTE

To avoid damage or injury, never connect anything to the EXT. POWER DC INPUT jack except the DC output of the S-240P External Power Supply Unit.

22 INPUT 1–16 Connectors

These are female balanced XLR-3-31 input connectors for incoming analog audio signals from microphones and line-level equipment.

* This instrument is equipped with balanced (XLR) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



+PHANTOM [+48V/14mA]

NOTE

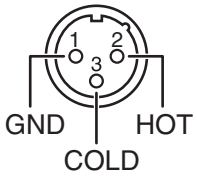
Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.

(This instrument's phantom power: DC+48 V, 14 mA Max)

23 OUTPUT 1–16 Connectors

These are male balanced XLR-3-32 output connectors for sending analog audio signals.

* This instrument is equipped with balanced (XLR) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



24 EXPANSION SLOT

This slot is for installing an optional expansion interface.

→ "Installing an Expansion Interface (Option)" (p. 24)

* When restarting the unit with the expansion interface installed, wait for about one second before you turn on the power.

- Masse de ligne téléphonique ou paratonnerre (dangereux en cas de foudre)

18 Connecteur AC INPUT, Attache du cordon d'alimentation

Ce connecteur permet de raccorder le cordon d'alimentation fourni.

Afin d'éviter que le cordon d'alimentation ne soit déconnecté par inadvertance, veuillez utiliser l'attache du cordon d'alimentation pour fixer le cordon en place.

→ "Connexion du cordon d'alimentation" (p. 17)
→ "Utilisation de l'attache du cordon d'alimentation" (p. 17)

19 Crochet du cordon d'alimentation

Vous pouvez utiliser ce Crochet du cordon d'alimentation pour éviter la déconnexion accidentelle du cordon d'alimentation.

→ "Utilisation du Crochet du cordon d'alimentation" (p. 19)

20 Ventilateur de refroidissement

Il s'agit du ventilateur de refroidissement du M-5000. Lorsque vous placez le M-5000, veillez à ne pas obstruer ses orifices de ventilation.

21 Connecteur EXT. POWER DC INPUT

Ce connecteur permet de brancher une unité d'alimentation externe S-240P optionnelle comme alimentation de secours du M-5000.

Si une unité d'alimentation externe S-240P alimente le M-5000, le M-5000 va continuer à fonctionner même si l'interrupteur d'alimentation est en position OFF.

* DC INPUT [DC+24V / 6A]

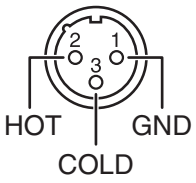
NOTE

Pour éviter tout dommage ou blessure, ne jamais brancher quoi que ce soit à la prise EXT. POWER DC INPUT à l'exception de la sortie DC de l'unité d'alimentation externe S-240P.

22 Connecteurs INPUT 1-16

Il s'agit de connecteurs d'entrée symétriques XLR-3-31 femelles pour les signaux audio analogiques entrants des micros et des équipements de niveau ligne.

* Cet instrument est doté de prises symétriques (XLR). Les diagrammes de câblage de ces prises sont indiqués ci-dessous. Effectuez les connexions après avoir préalablement vérifié les schémas de câblage des équipements que vous souhaitez connecter.



+PHANTOM [+48V/14mA]

NOTE

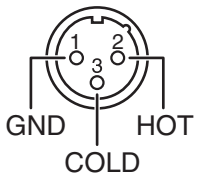
Toujours éteindre l'alimentation fantôme avant de brancher tout autre appareil qu'un microphone à condensateur nécessitant une alimentation fantôme. Vous risquez de provoquer des dommages si vous fournissez à tort une alimentation fantôme à des micros dynamiques, des appareils de lecture audio ou d'autres appareils qui ne nécessitent pas une telle alimentation. Assurez-vous de vérifier les spécifications de tout microphone que vous souhaitez utiliser en vous référant au manuel qui l'accompagne.

(Alimentation fantôme de cet instrument : DC+48 V, 14 mA Max)

23 Connecteurs OUTPUT 1-16

Il s'agit de connecteurs de sortie symétriques XLR-3-32 males pour les signaux audio analogiques sortants.

* Cet instrument est doté de prises symétriques (XLR). Les diagrammes de câblage de ces prises sont indiqués ci-dessous. Effectuez les connexions après avoir préalablement vérifié les schémas de câblage des équipements que vous souhaitez connecter.



24 EXPANSION SLOT

Cet emplacement sert à l'installation d'un module d'interface en option.

→ "Installation d'un module d'interface (en option)" (p. 25)

Front Panel



1 PHONES 1/2 Jacks

These are jacks for connecting headphones. You can use them to monitor MONITOR 1 or MONITOR 2 audio.
Two outputs are provided: miniature stereo phone type and stereo 1/4-inch phone type.
Ensure that the total impedance of both is less than 16 ohms.

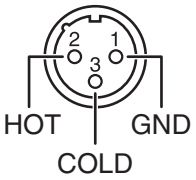
2 PHONES LEVEL Knob

This adjusts the output level for headphones connected to the PHONES jacks.

3 TALKBACK MIC 2 Jack

This is a female balanced XLR-3-31 input connector for connecting an external microphone for talkback use.

* This instrument is equipped with balanced (XLR) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



+PHANTOM [+48V/14mA]

NOTE

Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.
(This instrument's phantom power: DC+48 V, 14 mA Max)

Panneau avant



1 Prises PHONES 1/2

Il s'agit de prises pour brancher un casque. Vous pouvez les utiliser pour le contrôle audio du MONITOR 1 ou MONITOR 2.
Deux sorties sont disponibles : stéréo miniature de type téléphone et stéréo 1/4 pouces type téléphone.
Assurez-vous que l'impédance totale des deux est de moins de 16 ohms.

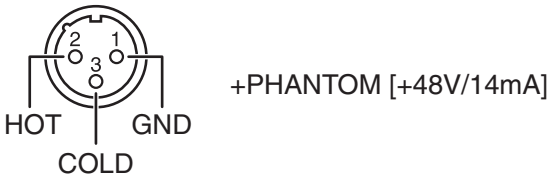
2 Molette PHONES LEVEL

Elle permet de régler le niveau de sortie pour les écouteurs connectés aux prises PHONES.

3 Prise TALKBACK MIC 2

Il s'agit d'un connecteur d'entrée symétrique XLR-3-31 femelle pour connecter un microphone externe pour une utilisation de la fonction talkback.

* Cet instrument est doté de prises symétriques (XLR). Les diagrammes de câblage de ces prises sont indiqués ci-dessous. Effectuez les connexions après avoir préalablement vérifié les schémas de câblage des équipements que vous souhaitez connecter.



NOTE

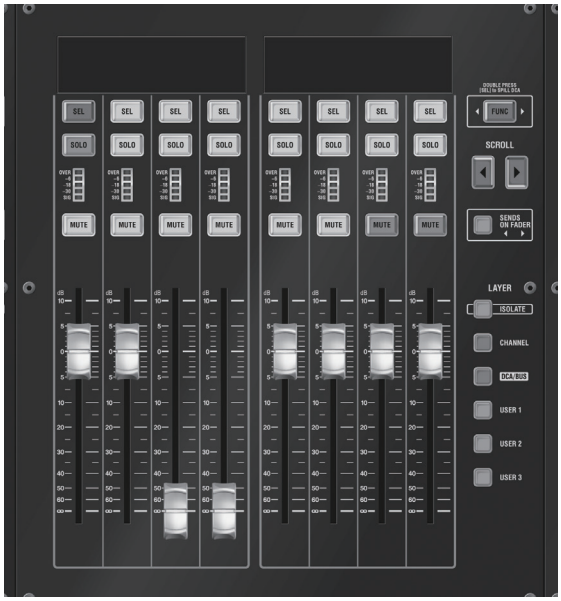
Toujours éteindre l'alimentation fantôme avant de brancher tout autre appareil qu'un microphone à condensateur nécessitant une alimentation fantôme. Vous risquez de provoquer des dommages si vous fournissez à tort une alimentation fantôme à des micros dynamiques, des appareils de lecture audio ou d'autres appareils qui ne nécessitent pas une telle alimentation. Assurez-vous de vérifier les spécifications de tout microphone que vous souhaitez utiliser en vous référant au manuel qui l'accompagne.
(Alimentation fantôme de cet instrument : DC+48 V, 14 mA Max)

Overview of Operations

This section describes typical procedures for operating the M-5000.

Fader Bank Section

On the M-5000, operations are carried out using groups of eight faders. Each set of eight faders is called a "fader bank."



The M-5000 is provided with three fader banks. You can operate the respective fader banks in an interlinked way or independently, enabling you to carry out your intended operations instantly.

Layers

Each fader bank has two basic layers (CHANNEL and DCA/BUS) and three customizable layers (USER 1 through 3) that you can switch between according to purpose.



Scrolling

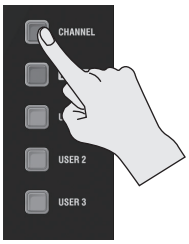
Pressing the [SCROLL ◄] or [SCROLL ►] button shifts the channels accessed by the fader bank in the currently selected layer by eight channels at a time.



Basic Operations of Fader Bank Section

Changing Layers

1. Press a layer button to switch to the desired layer.



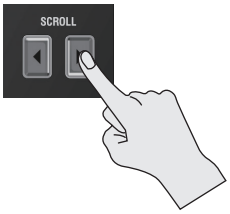
If you pressed the button at a "Normal bank" (p. 46), other normal banks also change in an interlinked way.

If an isolated bank has been pressed, only that isolated bank is switched.

Layer button	Description
[CHANNEL]	This accesses the input-channel layer.
[DCA/BUS]	This accesses the layer of the DCA group master and the output buses (MAIN, SUBGROUP, AUX, MIX-MINUS, and MATRIX).
[USER 1]–[USER 3]	These access user-assigned channels. You can assign up to 64 at a time for each layer.

Scrolling the Channels

1. Press the [SCROLL ◄] or [SCROLL ►] button to scroll the channels.



The channels assigned to the fader bank section in the selected layer are switched in groups of eight.

Memo

If you pressed the button at a "Normal bank" (p. 46), other normal banks also change in an interlinked way.

Memo

Scrolling by one channel at a time when the [SHIFT] button is on.

Anchor Channels

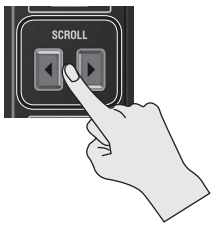
You can mark channels you want to access rapidly in the various layers. These are called "anchor channels."
Specifying anchor channels in the respective layers lets you quickly jump to the desired channel. You can register up to 8 anchor channels in each layer.

Memo

In the settings, preset anchors are present in the CHANNEL layer at every 24th channel and in the DCA/BUS layer by channel type (DCA, MAIN, SUBGROUP, and the like).

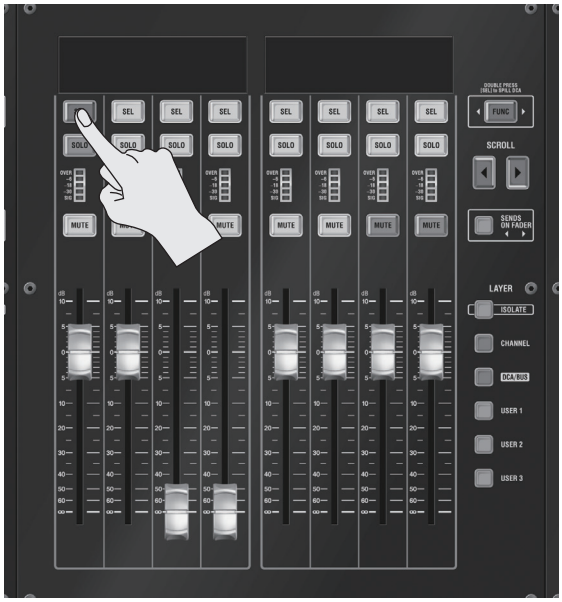
Accessing an Anchor Channel (Anchor Jump)

1. Press [SCROLL ◄] and [SCROLL ►] at the same time.



Anchor channels registered in the currently selected layer are shown on the fader bank display.

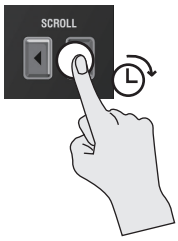
2. Press the [SEL] button that corresponds to the desired anchor channel.



The fader bank scrolls to the location where the anchor channel is displayed in the leftmost fader.

Accessing Adjacent Anchor Channels

Pressing and holding the [SCROLL ◄] or [SCROLL ►] button scrolls forward or backward to the anchor channel nearest the currently accessed channel.



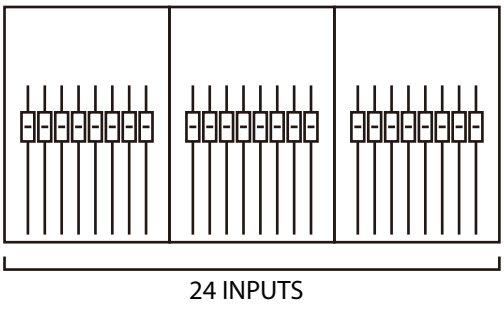
Isolated Banks

A fader bank whose [ISOLATE] button has been turned on is called an "isolated bank." Using isolated banks makes it possible to configure a wide variety of fader layouts, such as arranging a CHANNEL layer and DCA/BUS layer side by side at the same time.

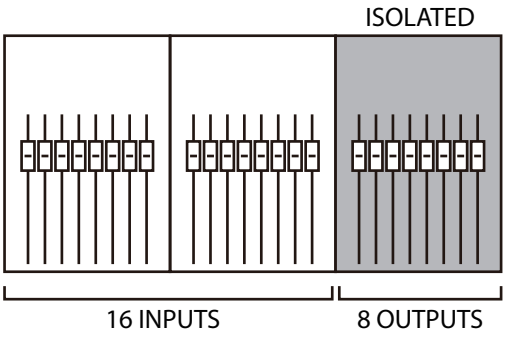


[ISOLATE]	Term	Description
Off (dark)	Normal bank	The bank operates in an interlinked fashion with other normal banks. When layer-switching or scrolling is performed in this normal bank, the earlier or later channel in other normal banks is also accessed.
On (lighted)	Isolated bank	This bank is isolated from other fader banks. In an isolated bank, layer-switching and scrolling can be performed independently of other fader banks.

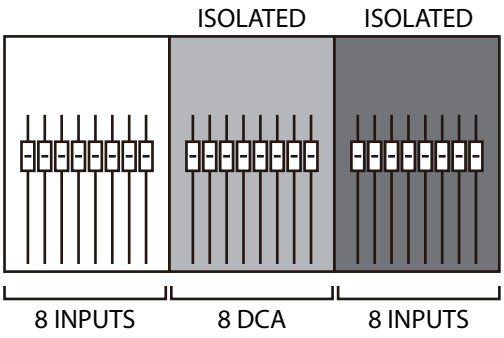
Usage Examples



All banks are set to be normal banks. This allows access to, for example, 24 input-channel faders.



One bank is set as an isolated bank. This allows access to, for example, 16 input-channel faders and 8 output-bus faders.



Two banks are set as isolated banks. This allows access to, for example, 8 input-channel faders, 8 DCA faders, and 8 other input-channel faders.

Isolating a Fader Bank

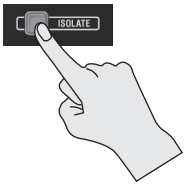
1. At the desired fader bank, press the [ISOLATE] button to turn it on (lighted).



The target fader bank is isolated.

Unisolating a Fader Bank

1. Press the [ISOLATE] button to turn it off (dark).



If one or more other normal banks exist, each switches to the same layer, and the same earlier or later channel is accessed.

Basic Touch Operations

The following four operations are used when working with the touch display.

Tap

Using your fingertip, you press and release an on-screen button, area, or other item.



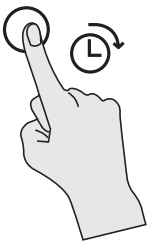
Double-tap

You make two taps in rapid succession.



Long tap

You touch and hold your fingertip to the touch display for a specific interval before release.



Slide

You drag your fingertip across the touch display while pressing and holding it against a target item.



Using Templates to Select a Mixer Configuration

The configuration of the mixing engine in the M-5000 can be changed as you like to suit the desired purpose. This section describes selecting a mixer configuration from templates.

1. Press the [MENU] button.

2. Tap <SETUP>, then tap <MIXER CONFIGURATION>.

The MIXER CONFIGURATION window appears.



3. Tap <TEMPLATE>.

The TEMPLATE popover appears.

4. Tap <DEFAULT>.

Starting point templates for the mixer configurations are available. The Default configuration has the following:

- INPUT CHANNEL (MONO): 64
- INPUT CHANNEL (STEREO): 4
- MAIN: LCR
- AUX: 24
- MATRIX: 8
- MONITOR 1 (STEREO)
- TALKBACK
- OSC 1+OSC 2
- HEADPHONES (STEREO)
- (The remaining audio paths: 14)

5. Turn on the <STEREO> button for any input channel or output bus you want to make stereo.

6. Tap <APPLY>.

HOME Screen

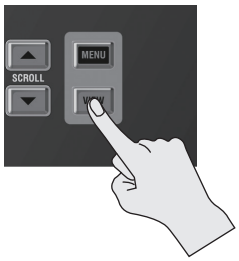
The HOME screen appears at startup.



When other window is displayed, to close the window and display the HOME screen, press the [VIEW] button.

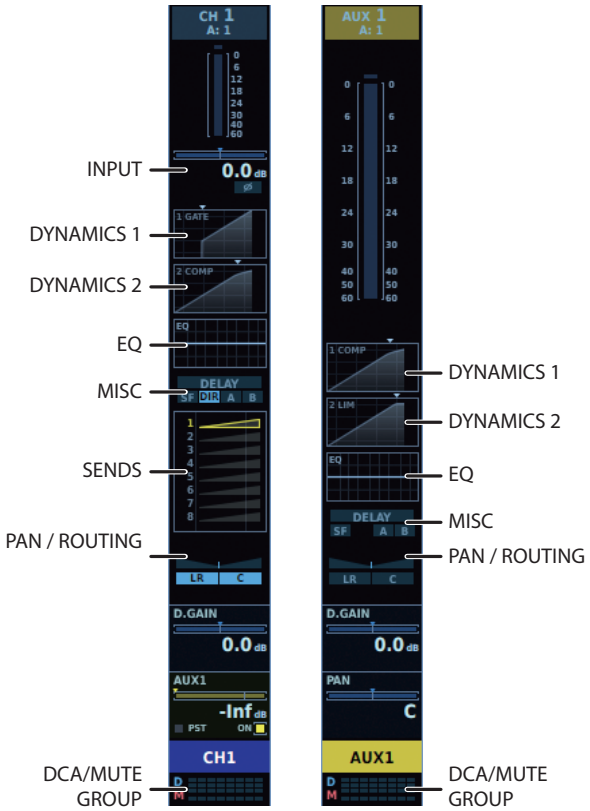
This quits the window, attendant popovers, and attendant popups and displays the HOME screen.

(Excludes the MIXER CONFIGURATION window)



Access the CH EDIT window

1. On the HOME screen, tap areas are shown below.



The CH EDIT window appears.

For details on how to work with the CH EDIT window, refer to the "CH EDIT Window" section in the Reference Manual (PDF).

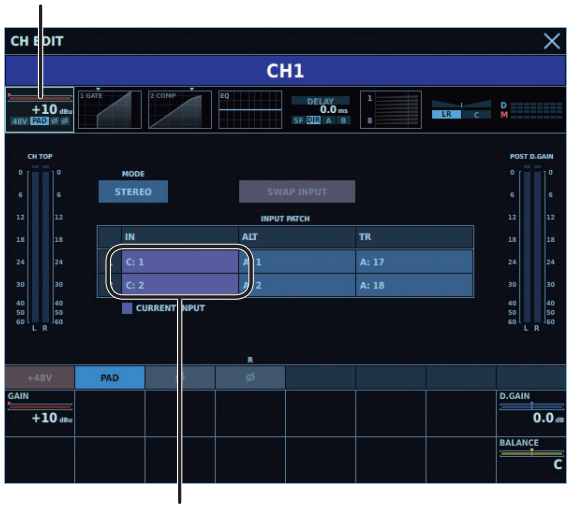
Selecting the Source for an Input Channel

1. Access the CH EDIT window for the desired input channel.

→ "Access the CH EDIT window" (p. 48)

2. Tap the <INPUT tab>.

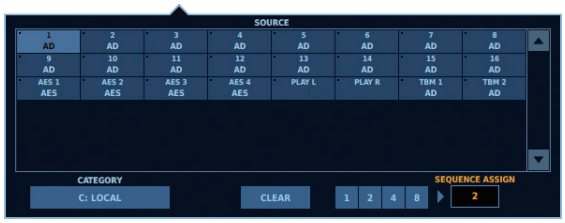
INPUT tab



IN

3. Tap <IN>.

The SOURCE popover appears.



4. Tap <CATEGORY> and select the source type.

5. Select the desired source.

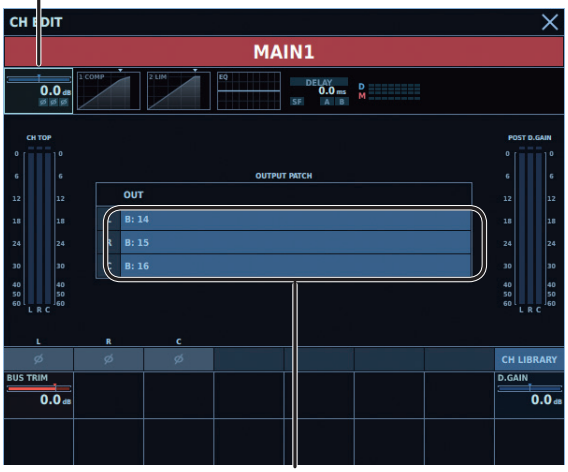
Selecting the Destination for an Output Bus

1. Access the CH EDIT window for the desired output bus.

→ "Access the CH EDIT window" (p. 48)

2. Tap the <OUTPUT tab>.

OUTPUT tab



OUT

3. Tap <OUT>.

The DESTINATION popover appears.



4. Tap <CATEGORY> and select the output-destination type.

5. Select the desired output destination.

Turning Phantom Power On or Off

1. Access the CH EDIT window for the desired input channel.

→ "Access the CH EDIT window" (p. 48)

2. Tap the <INPUT tab>.

INPUT tab



3. Tap <+48V>.

* Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it. (This instrument's phantom power: DC+48 V, 14 mA Max)

Memo

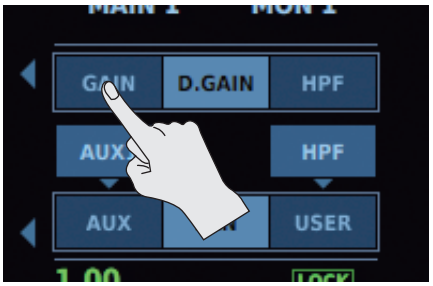
To prevent occurrence of noise, input is briefly muted when phantom power is turned on or off.

Adjusting the Preamp Gain

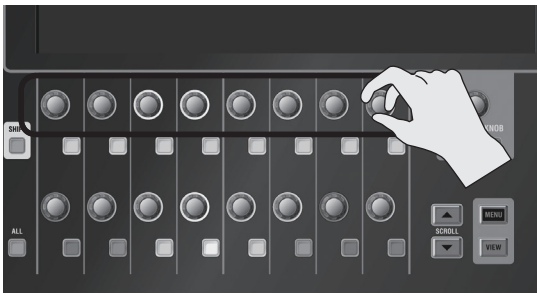
1. On the HOME screen, go to the knob-assign area and tap <GAIN>.



knob-assign area



2. Adjust the preamp gain in the top row of the knob section.



Applying Dynamics

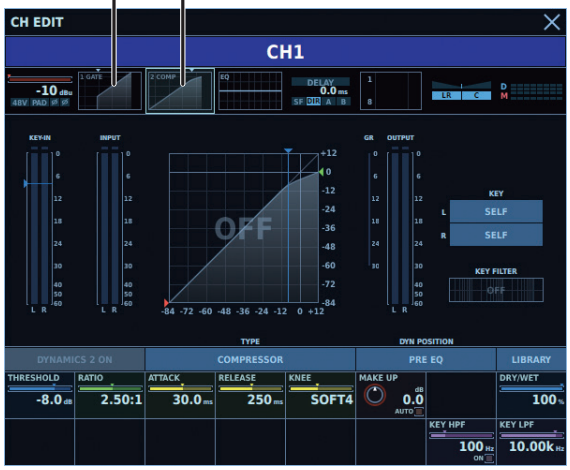
1. Access the CH EDIT window.

→ "Access the CH EDIT window" (p. 48)

2. Tap the <DYNAMICS 1 tab> or <DYNAMICS 2> tab.

DYNAMICS 1 tab

DYNAMICS 2 tab



3. Tap <TYPE> and select the dynamics type.

4. Tap <DYNAMICS 1 ON> or <DYNAMICS 2 ON> to turn it on.

5. Carry out operations using the touch display and knob section.

Applying EQ

1. Access the CH EDIT window.

→ "Access the CH EDIT window" (p. 48)

2. Tap the <EQ tab>.

EQ tab



3. Carry out operations using the touch display and knob section.

Using Faders to Adjust the Send Level to AUX (SENDS ON FADER)

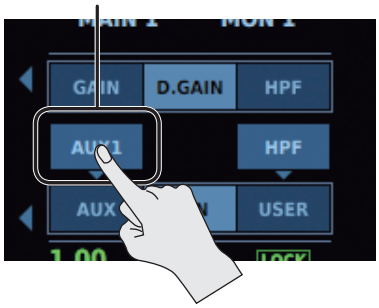
Using SENDS ON FADER lets you use faders to adjust the send level to an AUX.

Memo

SENDS ON FADER is applied to all fader banks.

1. On the HOME screen, go to the knob-assign area and tap <AUX TARGET>.

AUX TARGET



2. On the SELECT AUX SENDS window, select the AUX that you want to adjust the send levels to.



3. Press the [SENDS ON FADER] button to turn it on (flashing).



The SENDS ON FADER mode is activated, and you can use faders to adjust the send level to the AUX selected in step 2.

4. Use the faders to adjust the send level.

To change the AUX you are sending to, carry out steps 1 and 2 again.

Memo

- If an AUX has been assigned to the fader bank, you can change the destination AUX by pressing the corresponding [SEL] button.

Sending to SUBGROUP/MIX-MINUS

This sends an input channel to a SUBGROUP or MIX-MINUS.

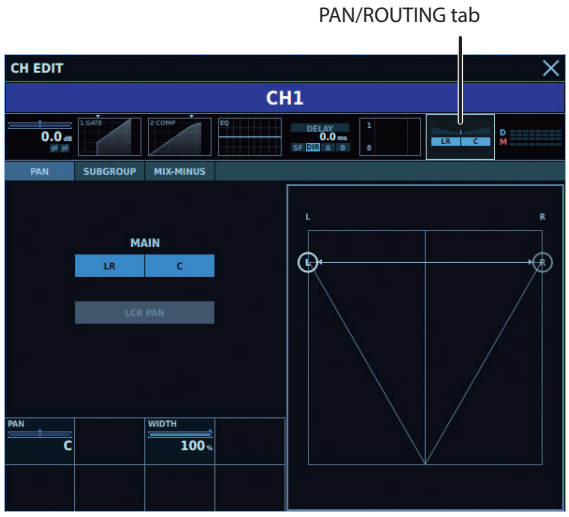
Memo

MIX-MINUS lets you mix a specific channel pulled from MAIN. By default, all input channels are sent with POST FDR (on), with only necessary channels turned off.

1. Access the CH EDIT window.

→ "Access the CH EDIT window" (p. 48)

2. Tap the <PAN/ROUTING tab>.



3. Tap <SUBGROUP tab> or <MIX MINUS tab>.



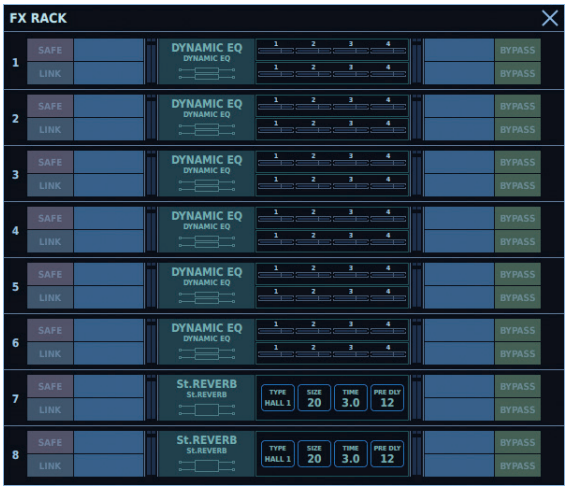
4. Select the SUBGROUP or MIX-MINUS you want to send.

Using an FX with Send/Return

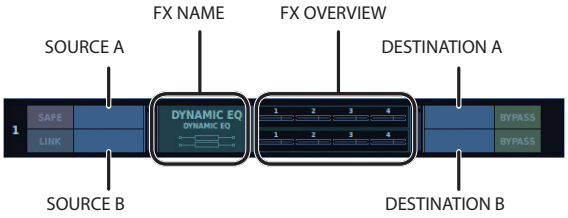
1. On the HOME screen, tap <FX>.



The FX RACK window appears.

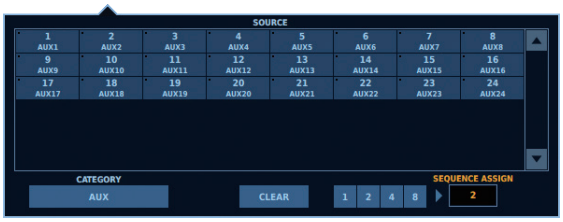


Eight sets of effect racks are displayed.



2. Tap <SOURCE A> or <SOURCE B>.

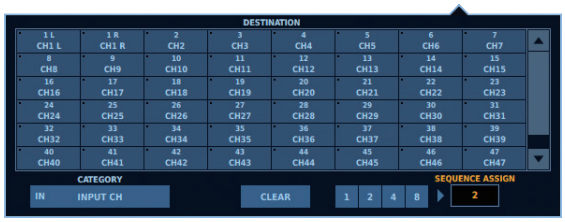
The SOURCE popover appears.



3. Select the AUX to send to the FX.

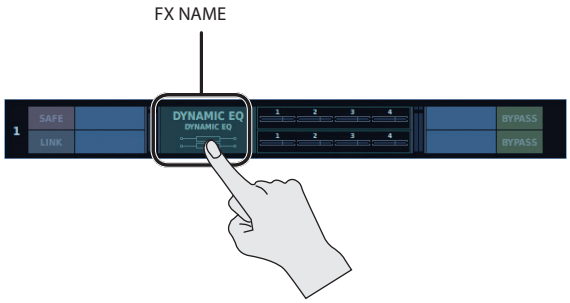
4. **Tap <DESTINATION A> or <DESTINATION B>.**

The DESTINATION popover appears.



5. **Select the input channel for returning the FX.**

6. **Tap <FX NAME> and select the effect library.**



7. **Tap <FX OVERVIEW>.**

The FX EDIT window appears.

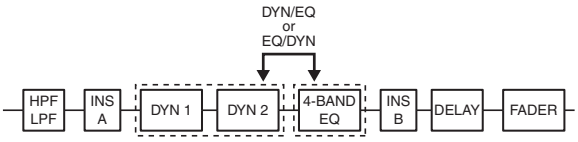


8. **Carry out operations using the touch display and knob section.**

Inserting an FX

This inserts an FX at INSERT A or INSERT B on an input channel or output bus.

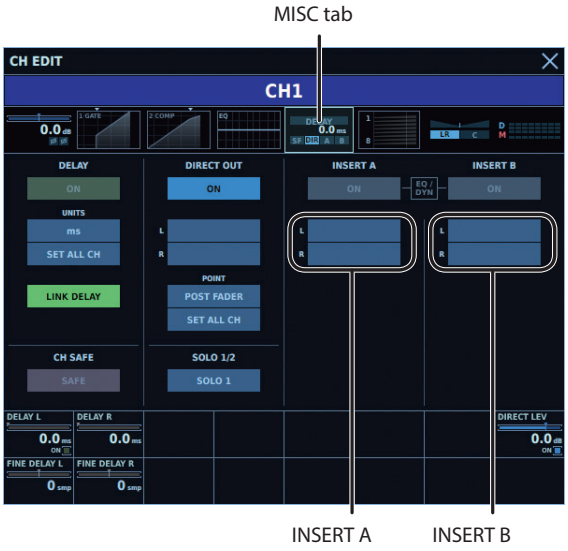
INSERT A is inserted before dynamics and EQ, and INSERT B is inserted after dynamics and EQ.



1. **Press the [SEL] button for the input channel or output bus.**

The CH EDIT window appears.

2. **Tap the <MISC tab>.**



3. **Tap <INSERT A> or <INSERT B>, then select the number of the FX to insert.**



Memo

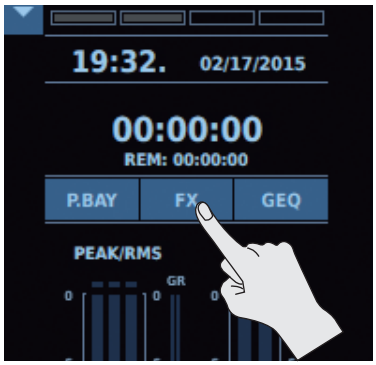
If the input channel or output bus is stereo, you can make insertions at the following four locations.

- <INSERT A - L>
- <INSERT A - R>
- <INSERT B - L>
- <INSERT B - R>

4. **Tap INSERT A <ON> or INSERT B <ON>.**

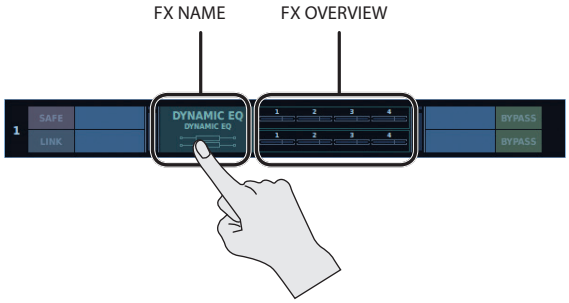
The selected FX is inserted.

5. **On the HOME screen, tap <FX>.**



The FX RACK window appears.

6. **Tap <FX NAME> and select the effect library.**



7. **Tap <FX OVERVIEW>.**

The FX EDIT window appears.

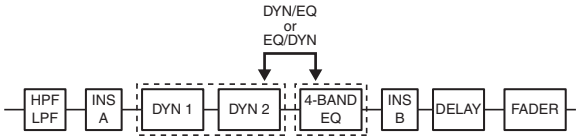


8. **Use the touch display and knob section to make detailed adjustments.**

Inserting a GEQ

This inserts a GEQ at INSERT A or INSERT B.

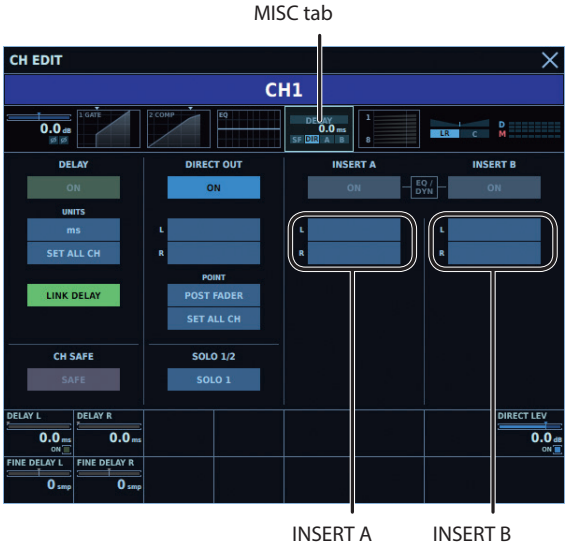
INSERT A is inserted before the dynamics and EQ, and INSERT B is inserted after the dynamics and EQ.



1. **Access the CH EDIT window.**

→ "Access the CH EDIT window" (p. 48)

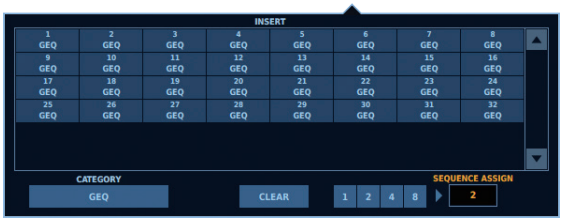
2. **Tap the <MISC tab>.**



3. **Tap <INSERT A> or <INSERT B>.**

The INSERT popover appears.

4. **Tap <CATEGORY> and select the effect category <GEQ>, then select the number of the GEQ to insert.**



5. **Tap INSERT A <ON> or INSERT B <ON>.**

The selected GEQ us inserted.

Memo

If the input channel or output bus is stereo, you can make insertions at the following four locations.

- <INSERT A - L>
- <INSERT A - R>
- <INSERT B - L>
- <INSERT B - R>

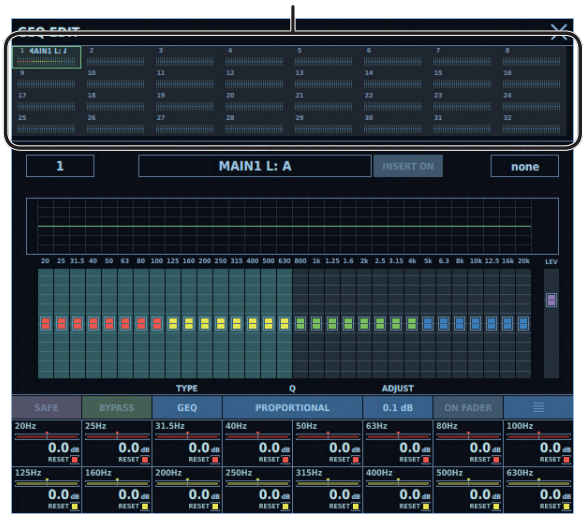
6. On the HOME screen, tap <GEQ>.



The GEQ window appears.

7. Tap a tab from <GEQ 1> to <GEQ 32>, then use the touch display and knob section to make detailed adjustments.

<GEQ 1> - <GEQ 32>



Linking Channels

You can link multiple input channels or output buses into up to 12 groups.

The parameters of linked input channels or output buses are set to the same values. You can select the parameters to link.

1. Press the [MENU] button.

2. On the MENU window, tap <SETUP>, then tap <CHANNEL LINK>.

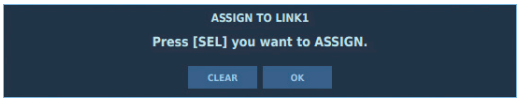
The CHANNEL LINK window appears.



3. Tap a link number from <LINK 1> to <LINK 12>.

4. Tap <LINK LIST>.

A popup for setting the link is displayed.



5. Press the [SEL] button for the input channel or output bus you want to assign to the channel link.

The input channel or output bus is assigned to the channel link.

6. Tap <OK>.

7. Select <LINK PARAMETER> to link.

Making Assignments to DCA/MUTE Groups

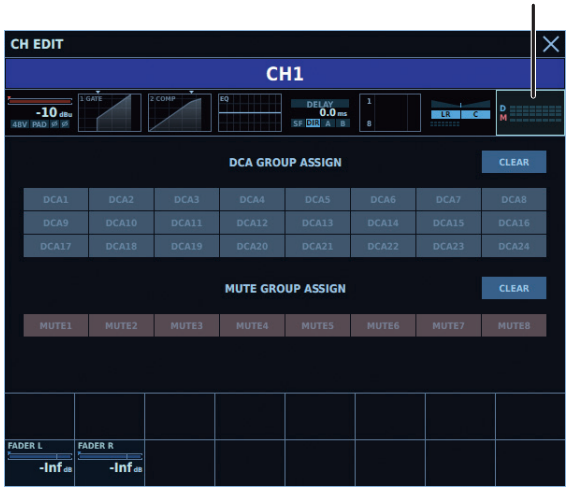
In DCA groups, you manipulate the levels of all assigned input channels or output buses at one time.
In MUTE groups, you perform batch muting for the assigned input channels or output buses.

1. Access the CH EDIT window.

→ "Access the CH EDIT window" (p. 48)

2. Tap the <DCA/MUTE GROUP tab>.

DCA/MUTE GROUP tab



3. Tap an item from <DCA 1> to <DCA 24>or <MUTE 1> to <MUTE 8> to make the assignment to the DCA group or MUTE group.

Using Talkback

1. Go to the talkback section on the top panel and press the [DISP] button.

The TALKBACK/OSC window appears.

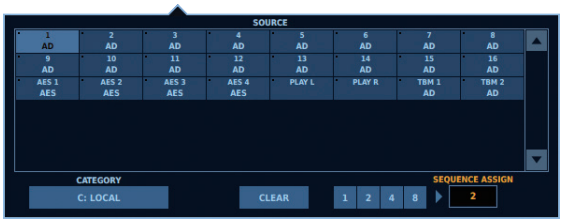
2. Tap the <TALKBACK> tab.

The TALKBACK tab appears.



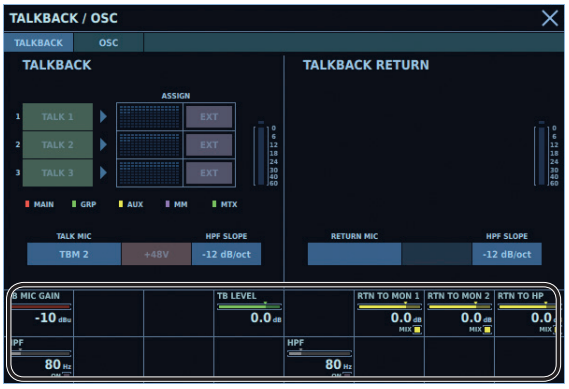
TALK MIC

3. Tap <TALK MIC>.



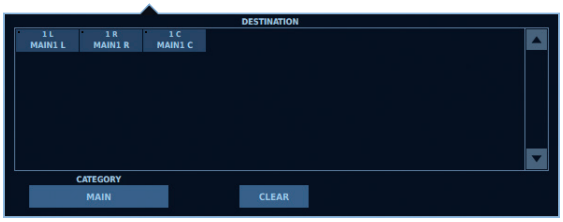
4. Select the input connector.

5. Use the touch display and knob section to make the settings for the talkback mic.



6. Tap <ASSIGN> for TALK 1 to TALK 3.

The DESTINATION popover appears.



7. Select the output destination for TALK 1 to TALK 3.

8. Press one of the [TALK 1] through [TALK 3] buttons in the talkback section.

Talkback is sent to the selected output bus.

Memo

The way in which talkback is turned on and off differs depending on how you press the [TALK 1] through [TALK 3] buttons.

When you release the button quickly after pressing it, it operates as a latch to turn talkback on or off with each press.

When depressed for a longer interval before release, it operates as a momentary switch that turns on talkback only while held down.

Using the Oscillators

1. Go to the talkback section on the top panel and press the [DISP] button.

The TALKBACK/OSC window appears.

2. Tap the <OSC tab>.

The TALKBACK/OSC window OSC tab appears.

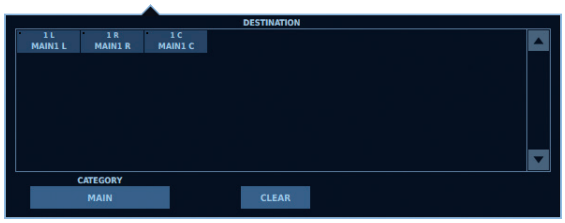


3. Select OSCILLATOR TYPE.

PINK	Pink noise
WHITE	White noise
SINE	Sine wave
MULTI	31-band multi-sine wave

4. Tap <ASSIGN>.

The DESTINATION popover appears.



5. Select the output destination for the oscillator.

6. Tap <ON>.

7. Tap <OSC 1 LEVEL>/<OSC 2 LEVEL>.

8. Use the selected knob to adjust the level of the oscillator.

The oscillator signal is sent to the selected output bus.

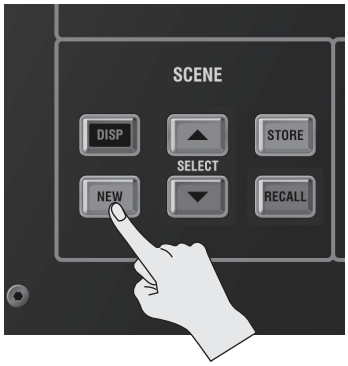
Scene memory

Scene memory is a function that lets you store and recall mixing parameters as "scenes."

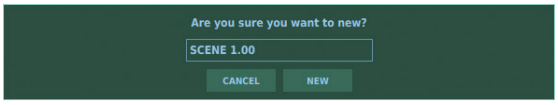
Creating New Scenes and Adding Scenes

This adds a new scene following the currently selected scene.

1. Go to the scene section on the top panel and press the [NEW] button.



A popup for setting the scene name is displayed.



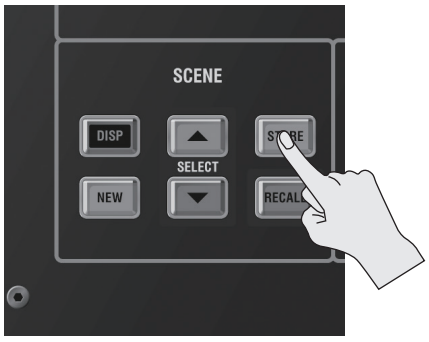
2. Specify the scene name, then press the [NEW] button.

A new scene is add immediately following the currently selected scene.

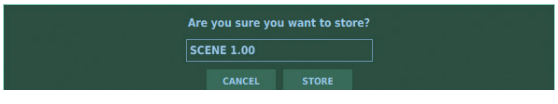
Storing a Scene (by Overwriting)

1. Go to the scene section on the top panel and press the [SELECT ▲] or [SELECT ▼] button to select the number of the scene you want to store.

2. Press the [STORE] button.



A popup prompting you to confirm the operation is displayed.



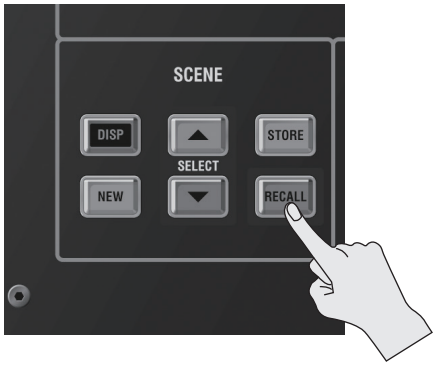
3. Press the [STORE] button.

The scene is stored.

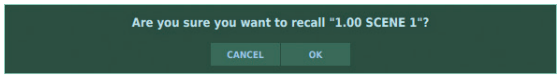
Recalling a Scene

1. **Go to the scene section on the top panel and press the [SELECT ▲] or [SELECT ▼] button to select the number of the scene you want to recall.**

2. **Press the [RECALL] button.**



A popup prompting you to confirm the operation is displayed.



3. **Press the [RECALL] button.**
The scene is recalled.

Recording/Playback to/from a USB Flash Drive

You can record 2-track WAV files to a USB flash drive. You can also play back 2-track WAV files from a USB flash drive.

WAV File Formats

The formats of recordable WAV files are as follows.
The sampling frequency of recorded WAV files is the same as the M-5000's sampling frequency.

Sampling frequency: 96kHz, 48kHz, 44.1kHz
Bit depth: 16bits
Number of channels: 2 channels

The formats of playable WAV files are as follows.
Playback is possible even if the sampling frequency of the WAV file differs from the M-5000's sampling frequency.

Sampling frequency: 96kHz, 48kHz, 44.1kHz
Bit depth: 24bits, 16bits
Number of channels: 2 channels, 1channel

Recording to a USB Flash Drive

1. **Go to the recorder section on the top panel and press the [DISP] button.**
The RECORDER window appears.



2. **Tap <SOURCE>.**
The SOURCE popover appears.



3. Select the output bus for recording.

4. Go to the recorder section on the top panel and press the [●] button.

5. Go to the recorder section on the top panel and press the [►] button.

Recording on the selected output bus starts.

6. Go to the recorder section on the top panel and press the [■] button.

Recording stops.

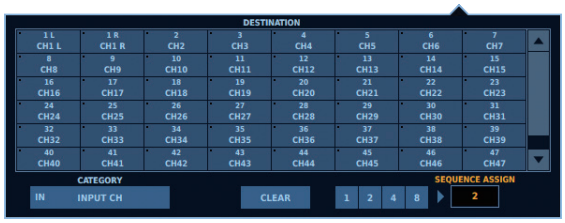
Playback from a USB Flash Drive

1. Go to the recorder section on the top panel and press the [DISP] button.

The RECORDER window appears.

2. Tap <PLAYBACK>.

The DESTINATION popover appears.



3. Select the input channel to receive the playback output.

4. Go to the recorder section on the top panel and press the [►] button.

The WAV file is played back.

5. Go to the recorder section on the top panel and press the [■] button.

Playback stops.

Backing Up All Data in the M-5000

The data in the M-5000 is saved as a project file.

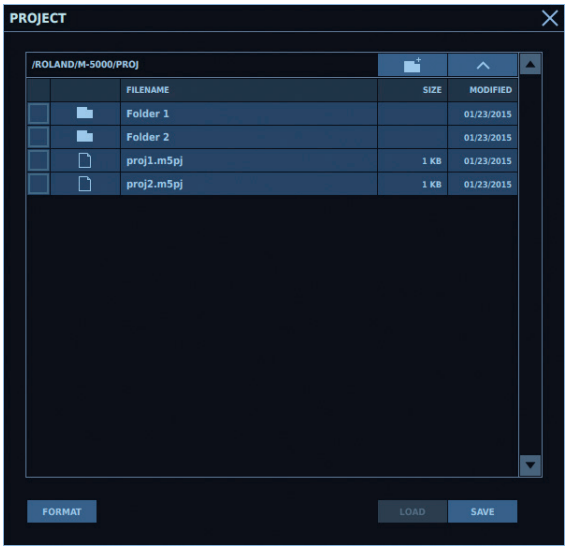
You back up the data in the M-5000 by saving the project file to a USB flash drive.

Saving a Project File to a USB Flash Drive

1. Press the [MENU] button.

2. On the MENU window, tap <SETUP>, then tap <PROJECT>.

The PROJECT window appears.

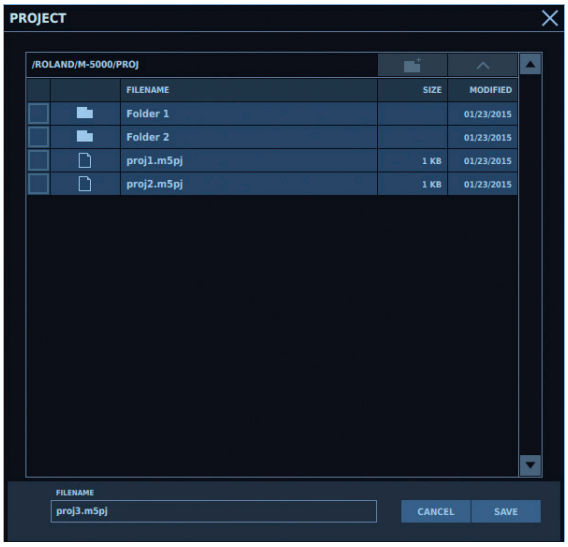


3. Move to the folder where you want to save the file.

	Moves one level below the current folder.
	Creates a new folder at the current level.
	Moves up one level.

4. Tap <SAVE>.

A window for specifying the file name is displayed.



5. Specify the file name, then tap <SAVE>.

The project file is saved to the USB flash drive.

Restoring All Data in the M-5000

The data in the M-5000 is saved as a project file.

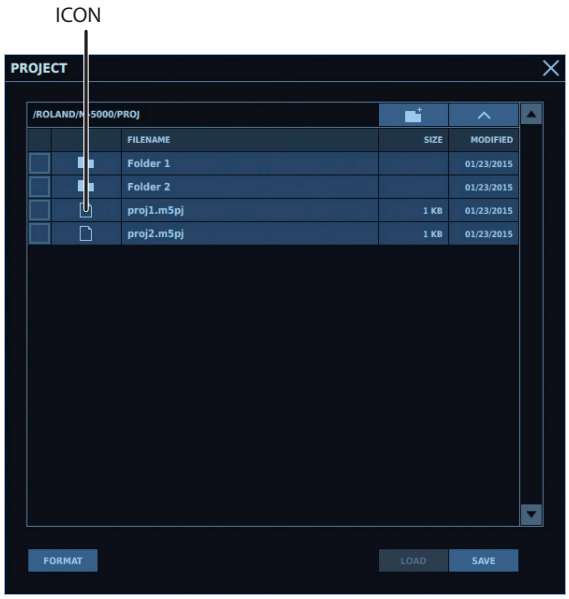
You restore data to the M-5000 by loading a project file from a USB flash drive.

Loading a Project File from a USB Flash Drive

1. Press the [MENU] button.

2. On the MENU window, tap <SETUP>, then tap <PROJECT>.

The PROJECT window appears.



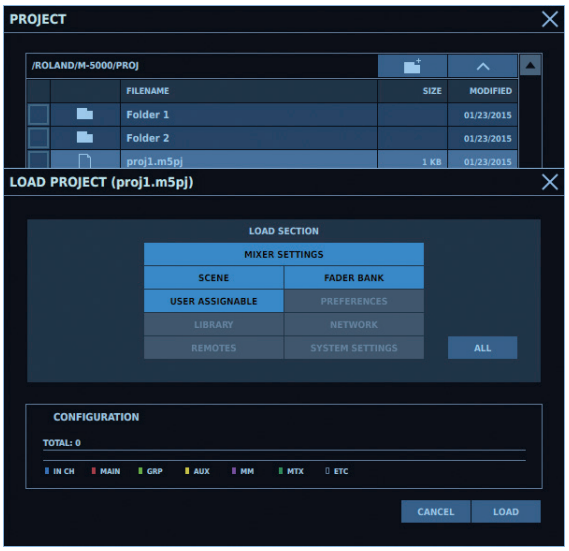
3. Move to the folder where you want to load the file.

	Moves one level below the current folder.
	Moves up one level.

4. Tap <ICON> for the project file you want to load.

5. Tap <LOAD>.

The LOAD PROJECT window appears.

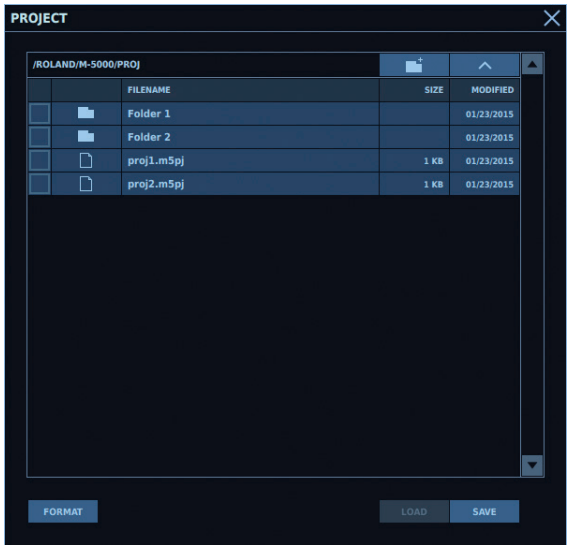


6. Select the section you want to load, then tap <LOAD>.

The data in the selected section is loaded.

Formatting a USB Flash Drive on the M-5000

1. **Press the [MENU] button.**
2. **On the MENU window, tap <SETUP>, then tap <PROJECT>.**
   The PROJECT window appears.



3. **Tap <FORMAT>.**
   A popup prompting you to confirm the operation is displayed.
4. **Tap <FORMAT>.**
   Formatting of the USB flash drive starts.

Muting All Outputs

This mutes all outputs at times such as when turning the M-5000's power on or off.

1. **Press the [MENU] button.**
2. **On the MENU window, tap <MUTE GROUP>.**
   The MUTE GROUP MASTER window appears.



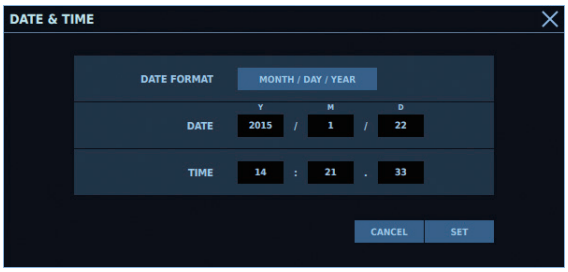
3. **Turn on <MUTE ALL OUTPUTS>.**
   This mutes all outputs on the M-5000 and input/output units.

Setting the Date and Time

1. **On the HOME screen, tap <DATE & TIME AREA>.**



The DATE & TIME window appears.



2. **Set the date and time, then tap <SET>.**
   The settings for the date and time are applied.

Factory Reset

This initializes the M-5000, returning it to its factory-default state.

NOTE

Performing initialization causes all data to be lost.
Data that is needed can be saved to a USB flash drive.
→ "Backing Up All Data in the M-5000" (p. 59)
→ "Restoring All Data in the M-5000" (p. 60)

1. **Go to the Display section on the top panel, and while holding down the [MENU] button and [VIEW] button, turn on the power to the M-5000.**
2. **Tap <FACTORY INITIALIZE>.**
   A popup prompting you to confirm the initialization operation is displayed.
3. **Tap <INITIALIZE>.**
   Initialization starts.

NOTE

Never turn off the power to the M-5000 before initialization finishes.
The factory reset will require approximately 10 minutes.

4. **When "Factory Initialize completed." appears, tap <OK>.**
5. **Turn off the power.**

Fader Calibration

If the fader positions are no longer aligned with the index markings of the top panel, carry out fader calibration to adjust.

1. Press the [MENU] button.

2. On the MENU window, tap <SYSTEM>, then tap <FADER CALIBRATION>.

The FADER CALIBRATION window appears.



3. Tap an item from <-INF> to <+10dB>.

This moves to the location where all faders are supported.

4. Adjust the fader that is not aligned with the index markings on the top panel.

The <UPDATE> appears.



5. Tap <UPDATE>.

The fader position is adjusted to the specified location.

Touch Display Operations



This section and the following sections describe the M-5000 in detail as a reference manual.
First, you'll learn how to work with the touch display, where a large amount of information is shown.

In this chapter, the explanations are organized into the following sections.

- "Touch Display Operations" (p. 64)
- "Interlinked Operation of the Touch Display and Top Panel" (p. 70)

Touch Display Operations

Operating the Touch Display

The following four operations are used when working with the touch display.

Tap

Using your fingertip, you press and release an on-screen button, area, or other item.



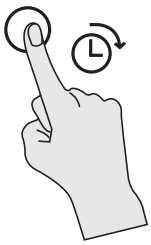
Double-tap

You make two taps in rapid succession.



Long tap

You touch and hold your fingertip to the touch display for a specific interval before release.

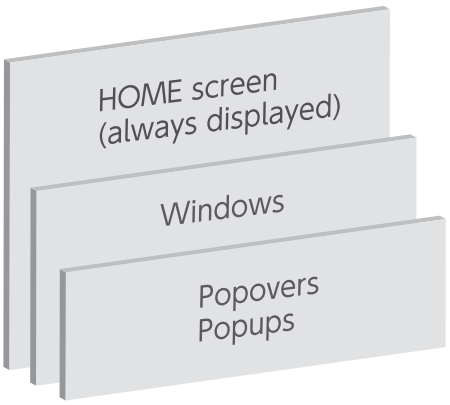


Slide

You drag your fingertip across the touch display while pressing and holding it against a target item.



Organization of the Display Screen



The display is composed of the following elements.

- HOME screen

The HOME screen is the screen displayed at startup.
Even when windows, popovers, and other elements are present, the HOME screen is always displayed underneath.

- Windows

These are displayed for adjusting input channels and output buses, making various settings, and other such tasks (CH EDIT window, GEQ window, RECORDER window, etc.).

- Popovers/popups

Popovers are displayed for setting input sources and output destinations, entering numerical values, and the like.
Popups are displayed to confirm operations and communicate warnings.

HOME Screen

The HOME screen appears at startup.



Even when windows, popovers, or other elements are displayed, this screen is always displayed underneath.

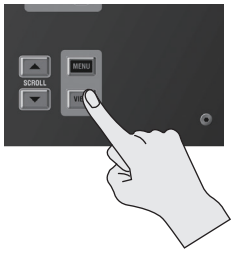
The HOME screen contains a lot of information and a large number of functions. For details, check the separate section dedicated to it.

Displaying the HOME Screen

When an other window is displayed, to close the window and display the HOME screen, press the [VIEW] button.

This quits the window, attendant popovers, or attendant popups and displays the HOME screen.

(Excludes the MIXER CONFIGURATION window)



Windows

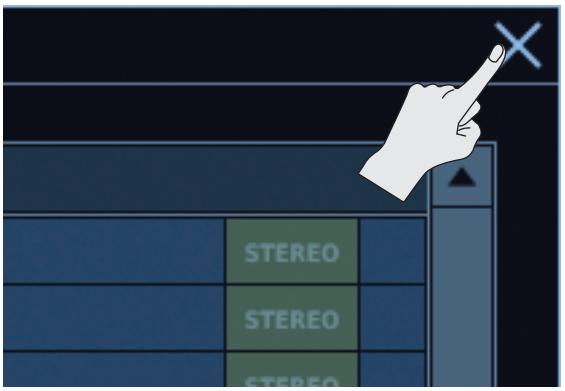
Windows include the CH EDIT window and the GEQ window. You use them to perform such tasks as adjusting input channels and output buses and making various settings.



To display windows, you use the top panel's [DISP] button or [MENU] button, or the HOME screen.

Exiting Windows

Tapping the <X> at the top right of the window exits the window.



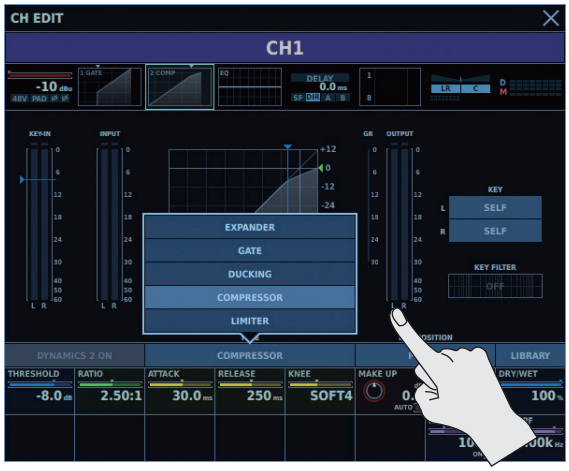
Popovers

Popovers are views briefly displayed on-screen when you select particular parameters.
They are displayed mainly in cases of parameters that have three or more selections.



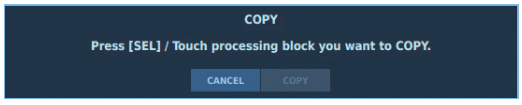
Exiting Popovers

Tapping outside a popover exits the popover. Any operations that have not yet been applied are canceled.



Popups

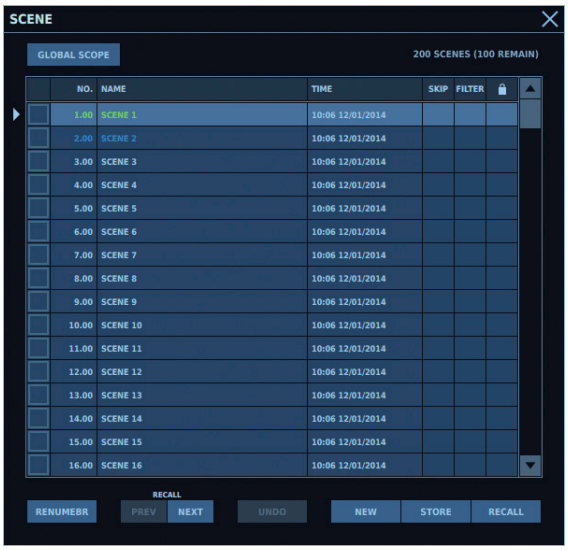
Popups are displayed at times such as when confirming an operation or communicating a warning.



Popups are always displayed in the foreground, on top of everything else. Selecting <CANCEL>, <DONE>, or the like in the popup exits it.

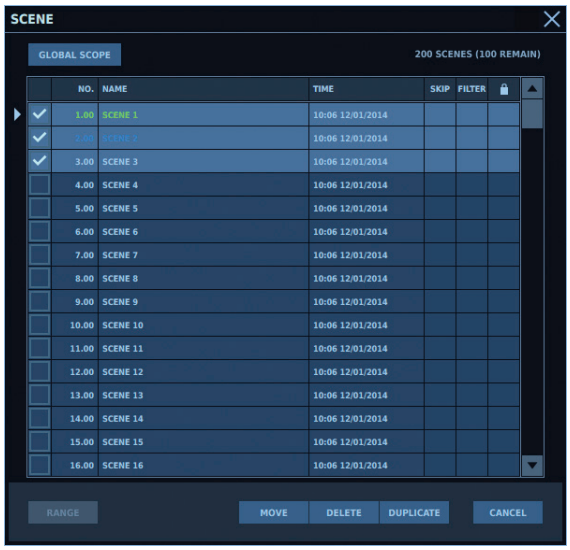
List Operations

Lists are sometimes displayed in windows.
When a list is displayed you can select and manipulate multiple elements.



Selecting and Moving Multiple List Items

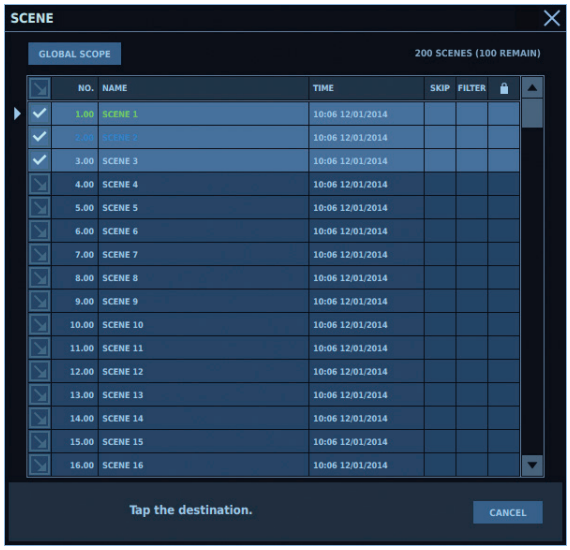
1. For each list element you want to move, select its <CHECKBOX> to turn it on.



RANGE	This selects all items in the range from the first-selected item as the start point to the next-selected item.
CANCEL	This cancels the operation and clears any selections.

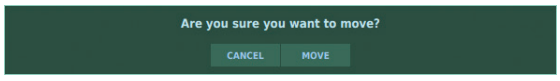
2. Tap <MOVE>.

A window for selecting the location to move to is displayed.



3. Tap the <CHECKBOX> for the location you want to move to.

A popup prompting you to confirm the operation is displayed.

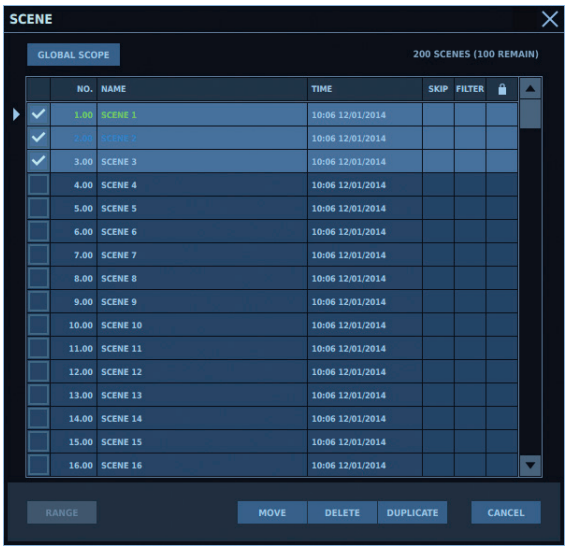


4. Tap <MOVE>.

The elements you selected in step 1 are moved.

Selecting and Duplicating Multiple List Items

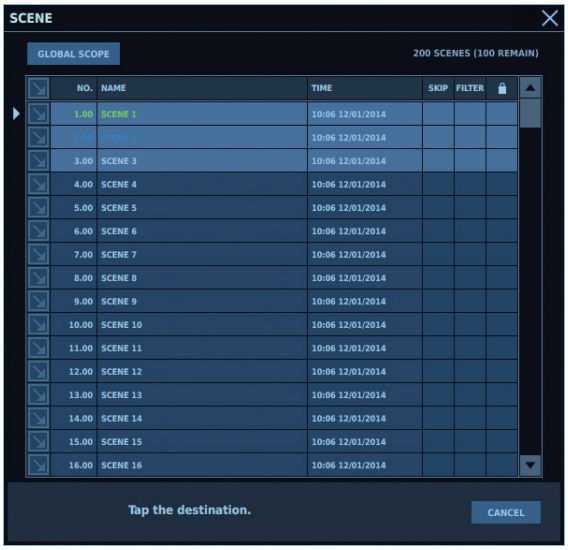
1. For each list element you want to duplicate, select its <CHECKBOX> to turn it on.



RANGE	This selects all items in the range from the first-selected item as the start point to the next-selected item.
CANCEL	This cancels the operation and clears any selections.

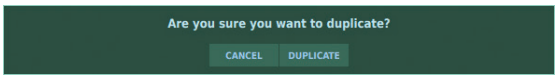
2. Tap <DUPLICATE>.

A window for selecting the location for the duplicates is displayed.



3. Tap <CHECKBOX> for the location where you want to place the duplicates.

A popup prompting you to confirm the operation is displayed.

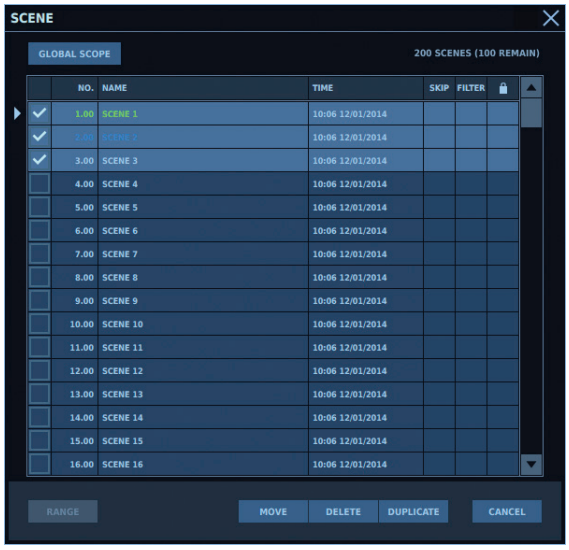


4. Tap <DUPLICATE>.

The elements you selected in step 1 are duplicated.

Selecting and Deleting Multiple List Items

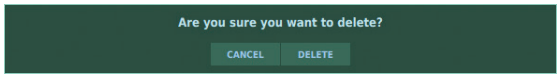
1. For each list element you want to delete, select its <CHECKBOX> to turn it on.



RANGE	This selects all items in the range from the first-selected item as the start point to the next-selected item.
CANCEL	This cancels the operation and clears any selections.

2. Tap <DELETE>.

A popup prompting you to confirm the operation is displayed.



3. Tap <DELETE>.

The elements you selected in step 1 are deleted.

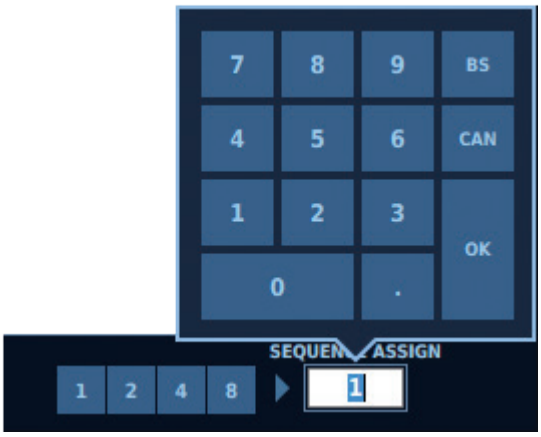
Entering Numerical Values

The following view is displayed when entering numerical values.



1/2/4/8	These enter 1, 2, 4, or 8 into the value input area.

Tapping the value input area displays a value input popover.



0 - 9	These input 0 - 9.
.	This inputs a decimal point.
BS	Backspace This deletes the numeral just before the cursor.
CAN	Cancel This discards any entered value and exits the popover.
OK	This applies the value input and exits the popover.

Entering Text

When entering text, a screen keyboard like the one shown below is displayed.



0-9, A-Z, `-=[]\;',./	These input text.
NEXT	This jumps to text input for the next channel.
CAPS	When this is on, letters of the alphabet are input in upper case.
SHIFT	When this is on, letters of the alphabet are input in upper case. This is turned off after a single character is input. Also, when this is on, you can select multiple characters by tapping < ← > or < → >.
COPY	This copies multiple selected characters.
CUT	This cuts multiple selected characters.
PASTE	This pastes multiple selected characters.
BS	Backspace This deletes the character just before the cursor.
ENTER, OK	These apply the text input and exit the popover.
← / →	These move the cursor left/right.
CANCEL	Cancel This discards any text input and exits the popover.

Changing Channel Names and Channel Colors

When entering the name of an input channel or output bus, an area for changing the channel color is displayed in addition to the screen keyboard.



Select from among nine channel colors.

- RED
- ORANGE
- YELLOW
- LIME
- GREEN
- BLUE
- NAVY
- VIOLET
- BLACK

Interlinked Operation of the Touch Display and Top Panel

This interlinks the display section's touch display and knob section or the touch display and selected knobs, achieving rapid operation.

Control Using the Knob Section

This lets you use the knob section on the top panel to perform operations.

Knob Section Area

The area divided into the 16 shown below and displaying parameters is called the knob section area.



Knob section area

The example shown above is the HOME screen.
At the CH EDIT window EQ tab, for example, the section shown below is the knob section area.



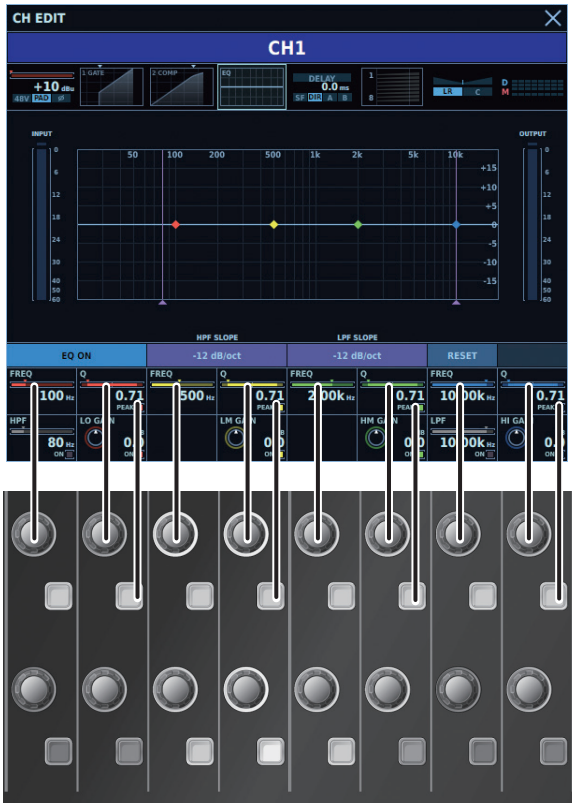
Knob section area

Some windows lack a knob section area, and in such cases the knob section of the top panel is dark and cannot be operated.



Knob Section and Knob Section Area

This interlinks the knob section area shown on the display with the top panel's knob section.



(The lower portion of the knob section is also interlinked in the same way.)

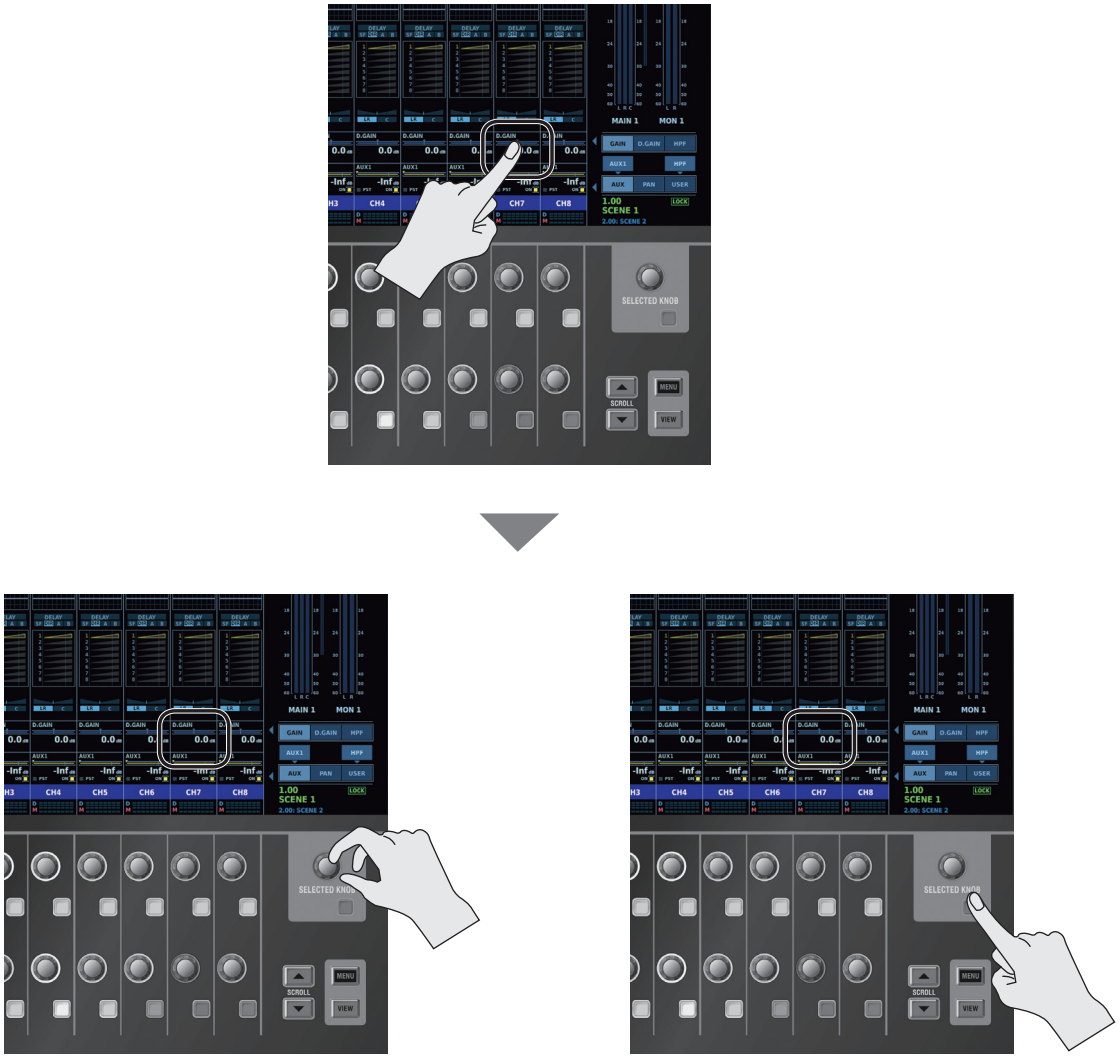
Knob Section Area of the HOME Screen

To select parameters to assign to the knob section area of the HOME screen, you use the sidebar's knob-assign area.

→ "Knob-assign Area" (p. 134)

Control Using Selected Knobs/Buttons

Tapping a parameter on the touch display shifts focus to the parameter. When a parameter has focus, you can use the selected knob and button to work with it.



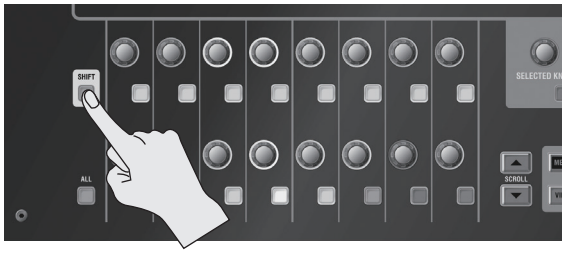
[SHIFT] Button and [ALL] Button

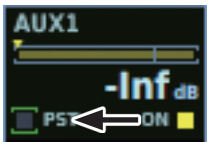
[SHIFT] Button

Sometimes two controllers are displayed in the parameter area.



You press the [SHIFT] button to change the target of operation.





Memo

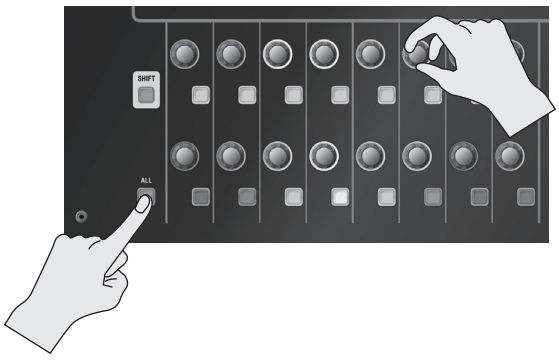
The way the [SHIFT] button is turned on and off changes depending to how you press the [SHIFT] button.

When you release the button quickly after pressing it, it operates as a toggle turning on or off with each press.

When held depressed for a longer interval before release, it operates as a momentary switch that turns on only while held down.

[ALL] Button

You can display the parameters for any eight channels you choose on the HOME screen. You can work with all 8 parameters at once by holding down the [ALL] button and turning a knob or pressing a button.





Memo

The way the [ALL] button is turned on and off changes depending to how you press the [ALL] button.

When you release the button quickly after pressing it, it operates as a toggle turning on or off with each press.

When held depressed for a longer interval before release, it operates as a momentary switch that turns on only while held down.

Configuring the Mixer



One of the most powerful features of this unit is how it lets you freely set the inputs and outputs for the mixing engine any way you like. In this chapter, you'll learn how to configure the mixing engine to match the situation.

First we'll take a look at the types of input channels and output buses you can select in the M-5000.
After that, we'll change the number of input channels and output buses and make settings for input and output patchbays.

In this chapter, the explanations are organized into the following sections.

→ "Overview of Input Channels/Output Buses" (p. 74)
→ "Changing the Number of Input Channels/Output Buses" (p. 79)
→ "Rearranging Input Channels/Output Buses" (p. 86)
→ "Patchbays" (p. 87)

Overview of Input Channels/Output Buses

Types of Input Channels/Output Buses

You can select from among the following types of input channels and output buses for the M-5000's mixing engine.

Input channels

- INPUT CHANNEL (MONO/STEREO)

Output buses

- MAIN (MONO/LR/LCR/CROSS-MATRIX LCR/5.1)
- SUBGROUP (MONO/STEREO)
- AUX (MONO/STEREO)
- MIX-MINUS (MONO/STEREO)
- MATRIX (MONO)

You make the settings for the types of input channels and output buses and the number of each to use in the MIXER CONFIGURATION window.
→ "Changing the Number of Input Channels/Output Buses" (p. 79)

You work with the input channels and output buses in the CH EDIT window.
→ "Input Channel and Output Bus Operations" (p. 93)

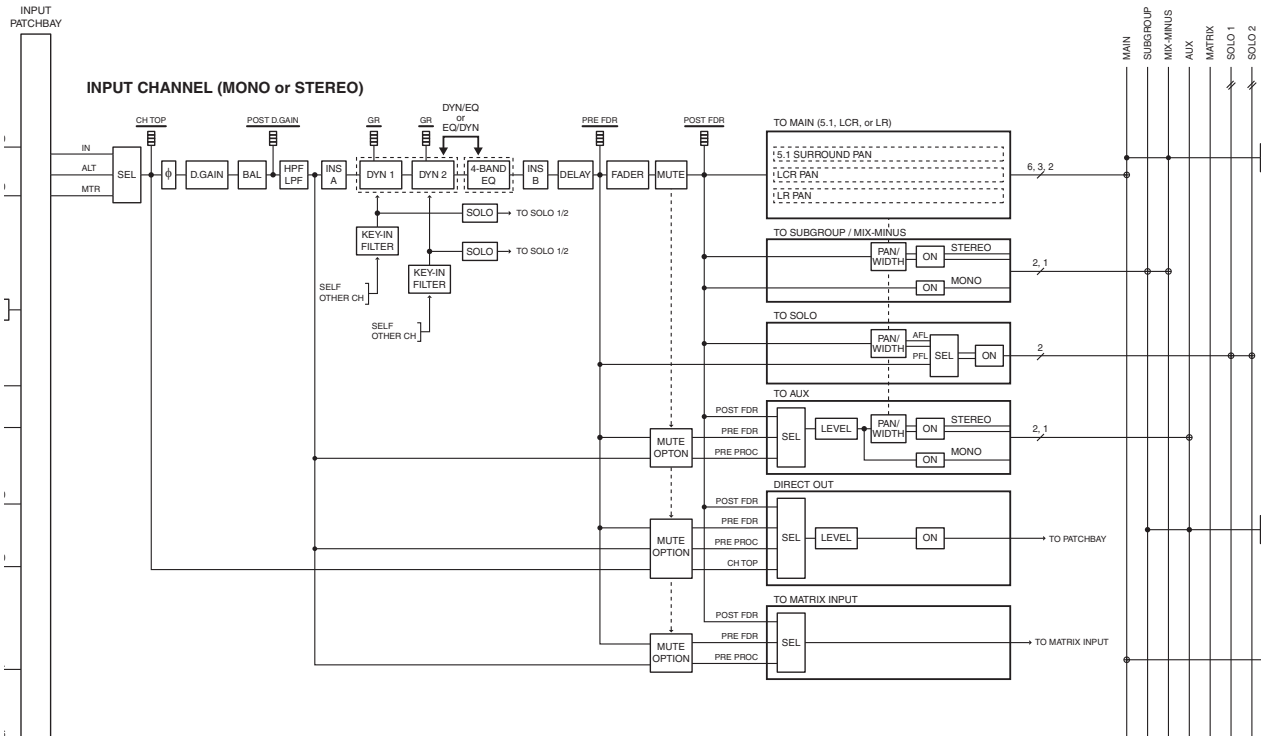
STEREO/LCR/CROSS-MATRIX LCR/5.1

When input channels or output buses are set to STEREO, LCR, CROSS-MATRIX, or 5.1, the following parameters are identical for all channels in STEREO/LCR/CROSS-MATRIX LCR/5.1.

- PREAMP (GAIN/+48V/PAD)
- D.GAIN
- BAL
- HPF/LPF
- DYN 1/DYN 2 (Excludes the key-in)
- 4-BAND EQ
- MUTE
- TO SUBGROUP/MIX-MINUS ON
- TO SOLO SEL
- TO SOLO ON
- TO AUX SEL
- TO AUX LEVEL
- TO AUX ON
- DIRECT OUT SEL
- DIRECT OUT LEVEL
- DIRECT OUT ON

INPUT CHANNEL

INPUT CHANNEL processes audio from INPUT PATCHBAY and sends it to the output bus. Direct output to OUTPUT PATCHBAY is also possible. You can select MONO or STEREO.



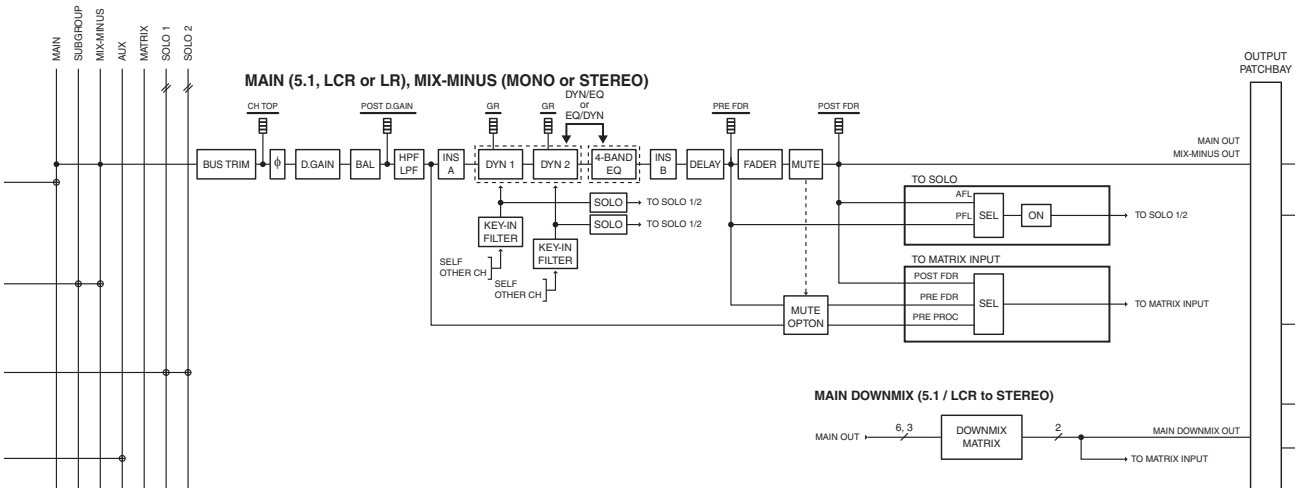
INPUT PATCHBAY	Connects the input connector and INPUT CHANNEL.
INPUT SEL	Selects from among input connectors/alternate input connectors.
Φ	Polarity Inverts the polarity.
D.GAIN	Adjusts the level in the digital domain (also known as digital attenuation).
BAL	Adjusts the L/R balance (STEREO only).
HPF/LPF	High-pass filter/low-pass filter
INS A	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DYN 1/DYN 2	Dynamics 1/2 You can change the order of this to be pre or post the 4-BAND EQ.
4-BAND EQ	4-band EQ You can change the order of this in relationship to DYN 1/DYN 2.
INS B	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DELAY	Delay
FADER	Adjusts the send level to MAIN.
MUTE	Mutes sending to MAIN.
MUTE OPTION	Mutes sending to AUX/DIRECT OUT/MATRIX. Interlinking with MUTE can be set.
5.1 SURROUND PAN	Adjusts the panning of audio sent to MAIN.
LCR PAN	
LR PAN	
PAN/WIDTH	Adjusts the panning of audio sent to SUBGROUP/MIX MINUS/SOLO/AUX.
SUBGROUP/MIX MINUS ON	Turns sending to SUBGROUP/MIXMINUS on/off.
SOLO ON	Turns sending to SOLO on/off.
AUX ON	Turns sending to AUX on/off.
DIRECT OUT ON	Turns sending to DIRECT OUT on/off.
SOLO SEL	Selects the location sent to SOLO.
AUX SEL	Selects the location sent to AUX.
DIRECT OUT SEL	Selects the location sent to DIRECT OUT.
MATRIX SEL	Selects the location sent to MATRIX.

MAIN/MIX-MINUS

MAIN and MIX-MINUS process audio sent from input channels, SUBGROUP, and AUX and send it to OUTPUT PATCHBAY. Output to MATRIX is also possible.

With MIX MINUS, the send level from input channels, SUBGROUP, and AUX is identical with that of MAIN, but the setting to not send a specific channel can be made. You can select MONO or STEREO for MIX MINUS.

This M-5000 is equipped with 2 MAINs. You can select from among MONO, LR, LCR, CROSS-MATRIX LCR, and 5.1.



BUS TRIM	Adjusts the level in the digital domain.
Φ	Polarity Inverts the polarity.
D.GAIN	Adjusts the level in the digital domain (also known as digital attenuation).
BAL	Adjusts the L/R balance (STEREO only).
HPF/LPF	High-pass filter/low-pass filter
INS A	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DYN 1/DYN 2	Dynamics 1/2 You can change the order of this to be pre or post the 4-BAND EQ.
4-BAND EQ	4-band EQ You can change the order of this in relationship to DYN 1/DYN 2.
INS B	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DELAY	Delay
FADER	Adjusts the output level.
MUTE	Mutes output.
MUTE OPTION	Mutes sending to MATRIX. Interlinking with MUTE can be set.
SOLO SEL	Selects the location sent to SOLO.
MATRIX SEL	Selects the location sent to MATRIX.
SOLO ON	Turns sending to SOLO on/off.

MAIN DOWNMIX

MAIN DOWNMIX allows a stereo downmix to be set from MAIN 1 from a 5.1 or LCR configuration.
Processing such as EQ or Dynamics is not performed; nor is level adjustment or the like.
You make the settings for downmixing 5.1ch or LCR to stereo (coefficient settings) in the DOWNMIX SETTINGS window.

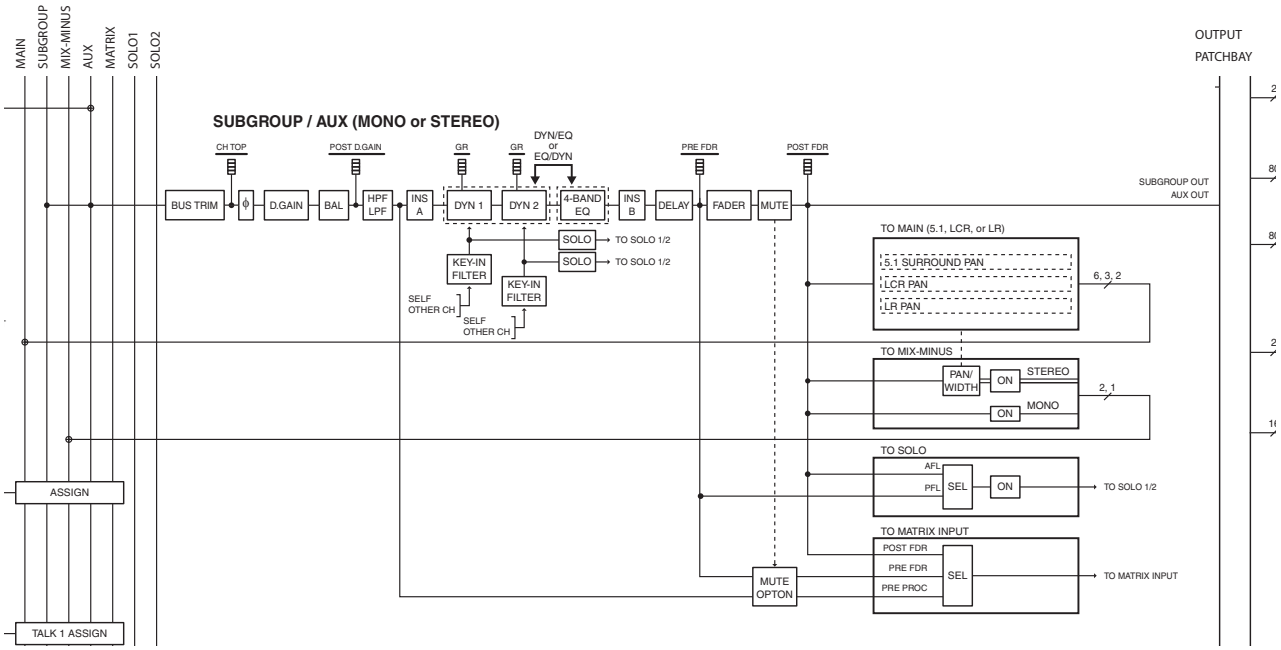
* Creating DOWNMIX uses up two audio paths.

SUBGROUP/AUX

SUBGROUP and AUX process audio sent from input channels, and output it to OUTPUT PATCHBAY. Output to MAIN, MIX MINUS, or MATRIX is also possible.

For SUBGROUP, POST FDR is the only send point from input channels, and adjusting the send level is also not possible.
For AUX, you can select from among POST PROC, PRE FDR, and POST FDR as the send point, and you can also adjust the send level.

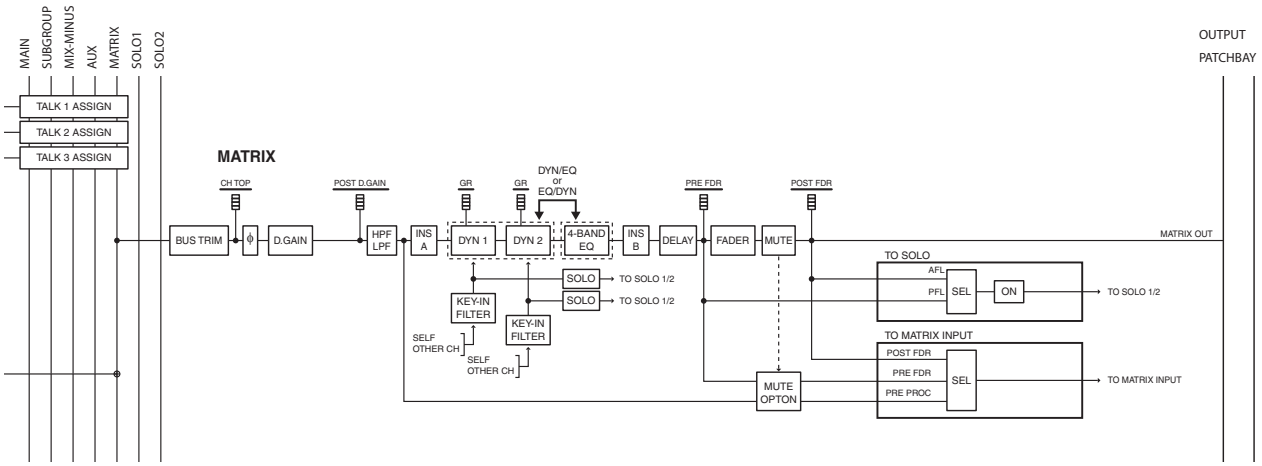
You can select MONO or STEREO for SUBGROUP or AUX.



BUS TRIM	Adjusts the level in the digital domain.
Φ	Polarity Inverts the polarity.
D.GAIN	Adjusts the level in the digital domain.
BAL	Adjusts the L/R balance (STEREO only).
HPF/LPF	High-pass filter/low-pass filter
INS A	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DYN 1/DYN 2	Dynamics 1/2 You can change the order of this to be pre or post the 4-BAND EQ.
4-BAND EQ	4-band EQ You can change the order of this in relationship to DYN 1/DYN 2.
INS B	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DELAY	Delay
FADER	Adjusts the output level.
MUTE	Mutes output.
MUTE OPTION	Mutes sending to MATRIX. Interlinking with MUTE can be set.
5.1 SURROUND PAN	Adjusts the panning of audio sent to MAIN.
LCR PAN	
LR PAN	
MIX MINUS ON	Turns sending to MIX MINUS on/off.
SOLO ON	Turns sending to MIX SOLO on/off.
SOLO SEL	Selects the location sent to SOLO.
MATRIX SEL	Selects the location sent to MATRIX.

MATRIX

MATRIX processes audio sent from input channels and output buses, and outputs it to OUTPUT PATCHBAY.



BUS TRIM	Adjusts the level in the digital domain.
Φ	Polarity Inverts the polarity.
D.GAIN	Adjusts the level in the digital domain.
HPF/LPF	High-pass filter/low-pass filter
INS A	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DYN 1/DYN 2	Dynamics 1/2 You can change the order of this to be pre or post the 4-BAND EQ.
4-BAND EQ	4-band EQ You can change the order of this in relationship to DYN 1/DYN 2.
INS B	Inserts GEQ 1 - 32/FX 1 - 8/INSERT 1 - 64.
DELAY	Delay
FADER	Adjusts the output level.
MUTE	Mutes output.
MUTE OPTION	Mutes sending to MATRIX. Interlinking with MUTE can be set.
SOLO SEL	Selects the location sent to SOLO.
MATRIX SEL	Selects the location sent to MATRIX.
SOLO ON	Turns sending to SOLO on/off.

Changing the Number of Input Channels/Output Buses

About the Unit's Mixing Engine

The M-5000 is provided with internal audio paths for 128 channels. These paths can freely be used as either input channels or output buses. You, the user, can assign these any way you like. When considering the configuration, keep in mind that talkback, oscillators, monitor, and other such functions also each use up one audio paths, and plan accordingly.

You can assign the 128 audio paths to any of the following.

- INPUT CHANNEL
- MAIN
- SUBGROUP
- AUX
- MIX-MINUS
- MATRIX
- Monitor
- Talkback/Talkback return
- Oscillator
- Headphones

Memo

You can modify the mixer configuration without having to restart the unit.

* You can assign output buses (MAIN, SUBGROUP, AUX, MIX-MINUS, and MATRIX) to a total of 124 paths.

* You can create 64 output buses (SUBGROUP, AUX, MIX-MINUS, and MATRIX) each.

Examples of Configurations Achievable Using the Unit's Mixing Engine

This section shows a number of mixer configurations that you can achieve using this unit.
As you can see, this single unit can accommodate a wide range of situations.

1 Standard

- 75 monaural input channels
- 6 stereo input channels
- Main LR/C
- 24 AUX
- 8 MATRIX
- Monitors, talkback, oscillator, headphones (6 audio paths used)

2 Monitor mix

- 48 monaural input channels
- 8 stereo input channels
- Main LR
- 54 AUX
- Monitors 1 and 2, talkback, oscillator, headphones (8 audio paths used)

3 FOH mix

- 79 monaural input channels
- 8 stereo input channels
- Main LR/C
- 10 subgroups
- 6 AUX
- 8 MATRIX
- Monitors, talkback, oscillator, headphones (6 audio paths used)

4 Broadcast

- 72 monaural input channels
- 6 stereo input channels
- Main 5.1 + stereo downmix (8 audio paths used)
- 8 subgroups
- 8 AUX
- 4 MIX-MINUS
- 8 MATRIX
- Monitors 1 and 2, talkback, oscillator, headphones (8 audio paths used)

MIXER CONFIGURATION Window

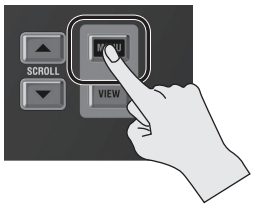
Changes in mixer configuration are made in the MIXER CONFIGURATION window.



TYPE	Type of input channel/output bus, etc. A list of input channels/output buses, etc., selected using TYPE is displayed in the input channel/output bus list on the right.
Input channel/ output bus list	Displays a list of input channels/output buses, etc., selected using TYPE on the left; used to change the number (quantity) and type of input channels/output buses, etc.
CAPACITY BAR	Displays the number of audio paths currently being used.
TEMPLATE	Displays the TEMPLATE popup. Displays a template for mixer configuration.
INIT MIXER	Turning on INIT MIXER and applying the changes to the mixer configuration initializes the parameters for all paths.
CANCEL	Discards any changes to the mixer configuration and quits the MIXER CONFIGURATION window.
APPLY	Applies changes to the mixer configuration and exits the MIXER CONFIGURATION window.

Displaying the MIXER CONFIGURATION Window

1. Go to the display section and press the [MENU] button.



The MENU window appears.

2. Tap <SETUP>, then tap <MIXER CONFIGURATION>.

Changing the Number and Type of Input Channels/Output Buses, Etc.

Changes in number and type are made in the MIXER CONFIGURATION window, using input channel/output bus list. The information displayed changes as shown below depending on what has been selected using TYPE in the MIXER CONFIGURATION window.

INPUT CHANNEL



NUMBER	Input channel number
NAME	Input channel name * When no specific name exists, a name corresponding to the input channel number (CH xx) is automatically assigned.
STEREO	Turning this on makes the input channel stereo. * Two audio paths are used.
Value input area	Enter the number of input channels you want to add.
ADD	Increases the quantity of input channels by the number entered in the value input area.

Memo

You can select multiple channels for moving or deleting.

→ "Selecting and Moving Multiple List Items" (p. 67)
→ "Selecting and Deleting Multiple List Items" (p. 68)

MAIN



NONE	No MAIN at all is used.
MONO	MAIN 1: MONO MAIN 2: None * One audio path is used.
LR	MAIN 1: LR MAIN 2: None * Two audio paths are used.
LR+M	MAIN 1: LR MAIN 2: MONO * Three audio paths are used.
LR+LR	MAIN 1: LR MAIN 2: LR * Four audio paths are used.
LCR	MAIN 1: LCR MAIN 2: None * Three audio paths are used.
CROSS-MATRIX LCR	MAIN 1: CROSS-MATRIX LCR MAIN 2: None * Three audio paths are used.
5.1+LR	MAIN 1: 5.1ch MAIN 2: LR * Eight audio paths are used.
STEREO DOWNMIX	Creates an output bus where MAIN 1 is downmixed to stereo. * Two audio paths are used.

What's STEREO DOWNMIX?

This creates a "DMIX" output bus on which a MAIN 1, set to 5.1ch or LCR, is downmixed to stereo.

The "DMIX" output bus is displayed in the Output Patchbay. Processing such as EQ or Dynamics is not performed; nor is level adjustment or the like.

You make the settings for downmixing 5.1ch or LCR to stereo (coefficient settings) in the DOWNMIX SETTINGS window.

* Creating "DMIX" output buses use up two audio paths.

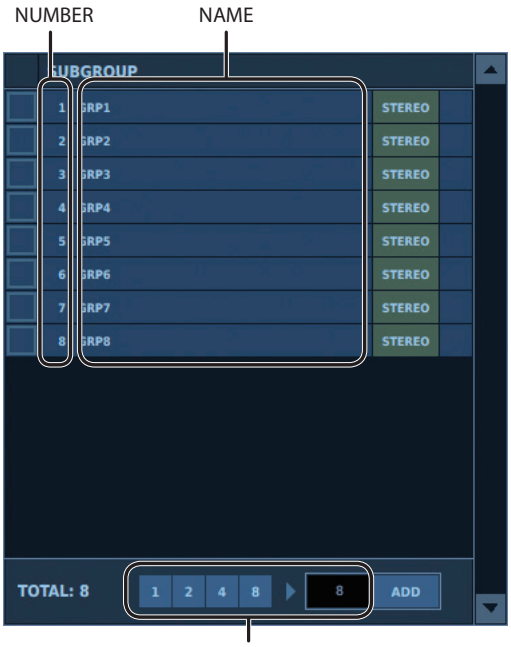
What's CROSS-MATRIX LCR?

When MAIN is set to CROSS-MATRIX LCR, the feeds sent to MAIN LR or MAIN C are subject to exclusive control.

When sending to MAIN LR is on, feed to MAIN C is automatically turned off.

When sending to MAIN C is on, feed to MAIN LR is automatically turned off.

SUBGROUP



NUMBER	SUBGROUP number
NAME	SUBGROUP name * When no specific name exists, a name corresponding to the SUBGROUP number (GRP xx) is automatically assigned.
STEREO	Turning this on makes the SUBGROUP stereo. * Two audio paths are used.
Value input area	Enter the number of SUBGROUPs you want to add.
ADD	Increases the quantity of SUBGROUPs by the number entered in the value input area.

Memo

You can select multiple channels for moving or deleting.

→ "Selecting and Moving Multiple List Items" (p. 67)
→ "Selecting and Deleting Multiple List Items" (p. 68)

AUX



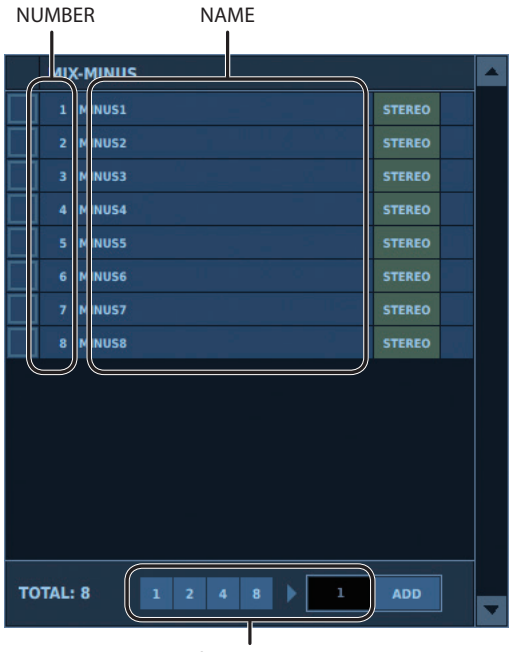
NUMBER	AUX number
NAME	AUX name * When no specific name exists, a name corresponding to the AUX number (AUX xx) is automatically assigned.
STEREO	Turning this on makes AUX stereo. * Two audio paths are used.
Value input area	Enter the number of AUXes you want to add.
ADD	Increases the quantity of AUXes by the number entered in the value input area.

Memo

You can select multiple channels for moving or deleting.

→ "Selecting and Moving Multiple List Items" (p. 67)
→ "Selecting and Deleting Multiple List Items" (p. 68)

MIX-MINUS



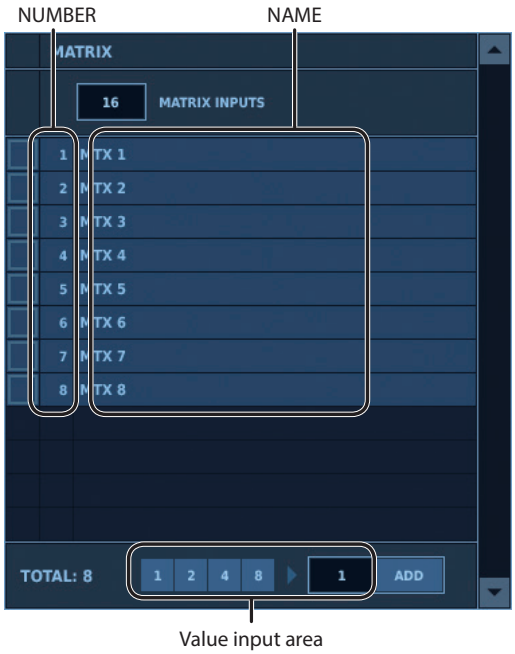
NUMBER	MIX-MINUS number
NAME	MIX-MINUS name * When no specific name exists, a name corresponding to the MIX-MINUS number (MINUS xx) is automatically assigned.
STEREO	Turning this on makes MIX-MINUS stereo. * Two audio paths are used.
Value input area	Enter the number of MIX-MINUSes you want to add.
ADD	Increases the quantity of MIX-MINUSes by the number entered in the value input area.

Memo

You can select multiple channels for moving or deleting.

→ "Selecting and Moving Multiple List Items" (p. 67)
→ "Selecting and Deleting Multiple List Items" (p. 68)

MATRIX



MATRIX INPUTS	Sets the number of input channels/output buses sent to MATRIX.
NUMBER	MATRIX number
NAME	MATRIX name * When no specific name exists, a name corresponding to the MATRIX number (MTX xx) is automatically assigned.
Value input area	Enter the number of MATRIXes you want to add.
ADD	Increases the quantity of MATRIXes by the number entered in the value input area.

Memo

You can select multiple channels for moving or deleting.

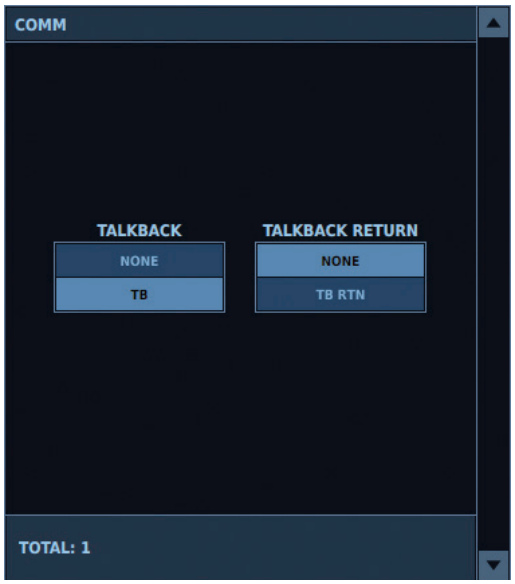
→ "Selecting and Moving Multiple List Items" (p. 67)
→ "Selecting and Deleting Multiple List Items" (p. 68)

MONITOR



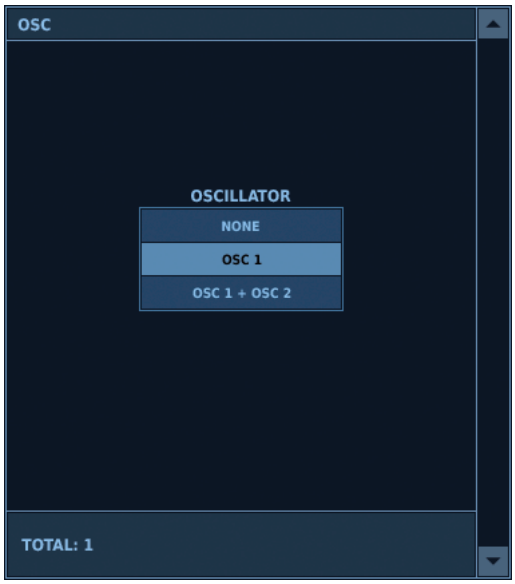
NONE	No monitors are used.
STEREO	Stereo * Two audio paths are used.
LCR	LCR (stereo + center) * Three audio paths are used.
5.1	5.1-channel surround * Six audio paths are used.

COMM



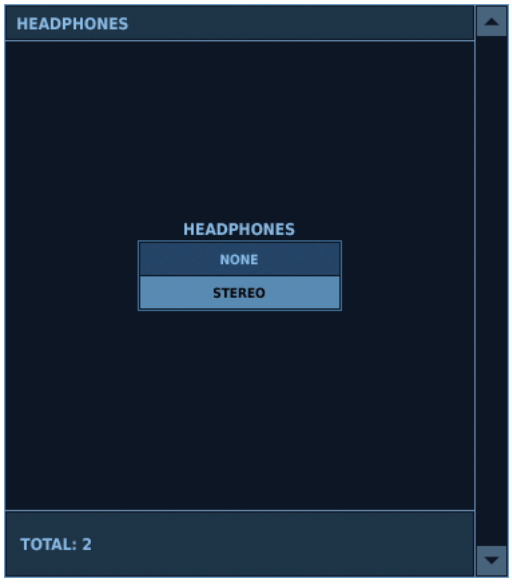
NONE	No talkback or talkback return is used.
TB	Uses talkback. * One audio path is used.
TB RTN	Uses talkback return. * One audio path is used.

OSC



NONE	No oscillator at all is used.
OSC 1	Oscillator x 1 * One audio path is used.
OSC 1+OSC 2	Oscillator x 2 * Two audio paths are used.

HEADPHONES



NONE	The PHONES 1/2 jacks are not used.
STEREO	Uses the PHONES 1/2 jacks. * Two audio paths are used.

Moving/Deleting Multiple Input Channels/Output Buses

When you display INPUT CHANNEL, SUBGROUP, AUX, MIX-MINUS, or MATRIX in the input channel/output bus list, you can select multiple channels and move or delete them as a group.

→ "Selecting and Moving Multiple List Items" (p. 67)
→ "Selecting and Deleting Multiple List Items" (p. 68)

Selecting a Mixer Configuration from a Template

You use the TEMPLATE popover to load a preset mixer configuration template.

1. Display the MIXER CONFIGURATION window.

2. Tap <TEMPLATE>.

The TEMPLATE popover is displayed.



3. Select a template for mixer configuration.

→ "Mixer Configuration Templates" (p. 85)

The mixer configuration you selected in step 3 is created.

* Selecting a template makes the mixer configuration change immediately.

Mixer Configuration Templates

DEFAULT

Channel number	Audio paths used	Type
CH 1-64	64	MONO
CH 65-68	8	STEREO
MAIN 1	3	LCR
AUX 1-24	24	MONO
MTX 1-8	8	MONO (16x8 MATRIX)
MON 1	2	STEREO
TB1	1	Talkback
OSC 1/2	2	OSC1+OSC2
HEADPHONE	2	Headphones
[TOTAL]	114	

Memo

Selecting this template sets MATRIX INPUTS to 16.

ALL CLEAR

Channel number	Audio paths used	Type
(CH)	0	
(MAIN)	0	
(GRP)	0	
(AUX)	0	
(MINUS)	0	
[TOTAL]	0	

FOH

Channel number	Audio paths used	Type
CH 1-87	87	MONO
MAIN 1	3	LCR
GRP 1-8	8	MONO
AUX 1-16	16	MONO
MTX 1-8	8	MONO
MON 1	2	STEREO
TB1	1	Talkback
OSC 1	1	OSC1
HEADPHONE	2	Headphones
[TOTAL]	128	

MONITOR

Channel number	Audio paths used	Type
CH 1-74	74	MONO
AUX 1-48	48	MONO
MON 1	2	STEREO
TB1	1	Talkback
OSC 1	1	OSC1
HEADPHONE	2	Headphones
[TOTAL]	128	

BROADCAST

Channel number	Audio paths used	Type
CH 1-84	84	MONO
MAIN 1/2	8	5.1+LR
MAIN DOWNMIX	2	Downmix
AUX 1-6	6	MONO
MINUS 1-8	8	MONO
MTX 1-8	8	MONO
MON 1/2	8	5.1+LR
TB1	1	Talkback
OSC 1	1	OSC1
HEADPHONE	2	Headphones
[TOTAL]	128	

THEATER

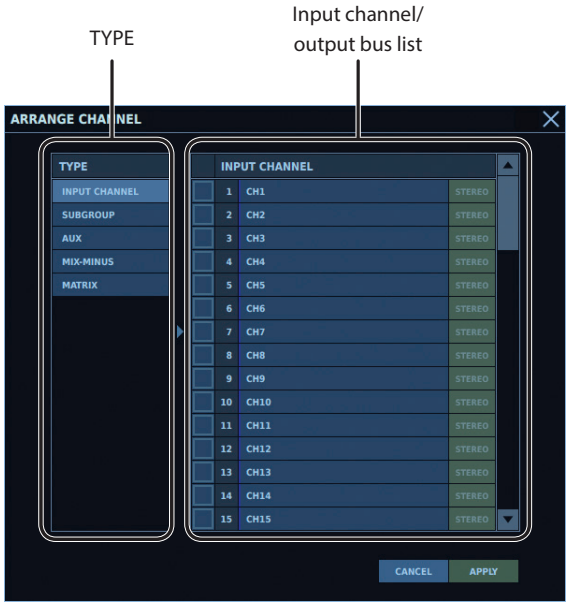
Channel number	Audio paths used	Type
CH 1-94	94	MONO
MAIN 1	3	LCR
AUX 1-16	16	MONO
MTX 1-8	8	MONO
MON 1	2	STEREO
TB1	1	Talkback
OSC 2	2	OSC1+OSC2
HEADPHONE	2	Headphones
[TOTAL]	128	

Rearranging Input Channels/Output Buses

On this unit, you can freely rearrange the order of input channels and output buses, even after applying the mixer configuration. Rebooting the console is not necessary.

ARRANGE CHANNEL Window

Rearranging input channels and output buses is carried out in the Input channel/output bus list in the ARRANGE CHANNEL window.

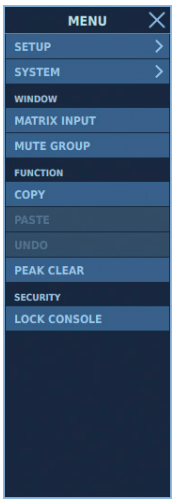


TYPE	Selects the type of input channels/output buses you want to rearrange. • INPUT CHANNEL • SUBGROUP • AUX • MIX-MINUS • MATRIX
Input channel/ output bus list	Rearrange a list of the input channels/output buses selected using TYPE. Double-tapping or long-tapping the channel name lets you change the channel name and channel color. → "Changing Channel Names and Channel Colors" (p. 69)

Displaying the ARRANGE CHANNEL Window

1. Go to the display section and press the [MENU] button.

The MENU window appears.



2. Tap <SETUP>, then tap <ARRANGE CHANNEL>.

Patchbays

After establishing the mixer configuration, you can then route your inputs and outputs in the patchbays.
Patchbay operations are carried out mainly in the PATCHBAY window.

PATCHBAY Window



In the PATCHBAY window, five tabs are displayed.

Tab	Function
CH	Displays the PATCHBAY window CH tab. → "PATCHBAY Window CH Tab" (p. 87)
BUS	Displays the PATCHBAY window BUS tab. → "PATCHBAY Window BUS Tab" (p. 88)
MISC	Displays the PATCHBAY window MISC tab. → "PATCHBAY Window MISC Tab" (p. 88)
INPUT	Displays the PATCHBAY window INPUT tab. → "PATCHBAY Window INPUT Tab" (p. 89)
OUTPUT	Displays the PATCHBAY window OUTPUT tab. → "PATCHBAY Window OUTPUT Tab" (p. 89)

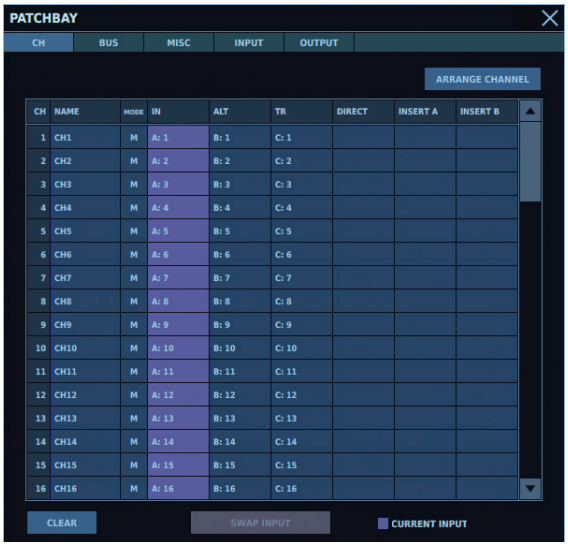
Displaying the PATCHBAY Window

To display the PATCHBAY window, go to the HOME screen sidebar and tap <P.BAY>.



PATCHBAY Window CH Tab

In the PATCHBAY window CH tab, you make patchbay settings for input channels.



CH	Displays the input channel number.
NAME	Channel name/channel color Double-tap or long tap, then set the channel name/channel color.
MODE	Display the monaural/stereo setting.
IN	Input connector Tap and specify an input connector. Currently specified input connectors among IN, ALT, and TR are displayed in purple.
ALT	Alternate input connector Tap and specify an input connector. Currently specified input connectors among IN, ALT, and TR are displayed in purple.
TR	
DIRECT	Input channel direct out Tap and specify an output connector.
INSERT A	Inserts an effect/GEQ/external effect processor at the INSERT A point (post filter).
INSERT B	Inserts an effect/GEQ/external effect processor at the INSERT B point (pre fader).
CLEAR	Deletes the patchbay settings for all input channels.
SWAP INPUT	Uses alternate input connectors. → "Using Alternate Input Connectors" (p. 91)

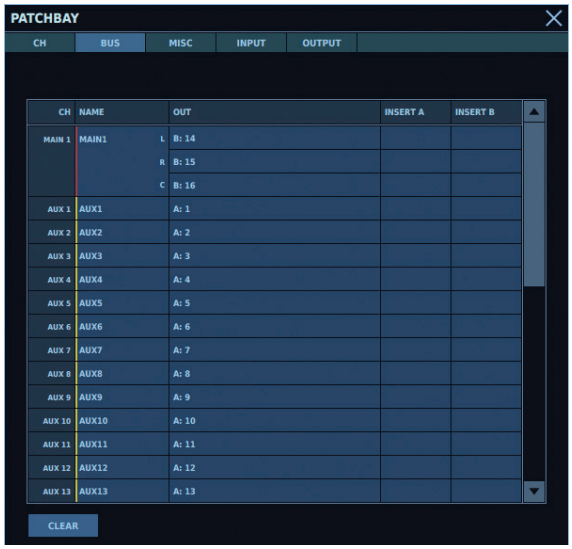
Memo

For information on how to work with the popover for making patchbay settings, refer to "Popover for Making Patchbay Settings" (p. 90).

For information on how to use alternate input connectors, refer to "Using Alternate Input Connectors" (p. 91)

PATCHBAY Window BUS Tab

In the PATCHBAY window BUS tab, you make patchbay settings for output buses.



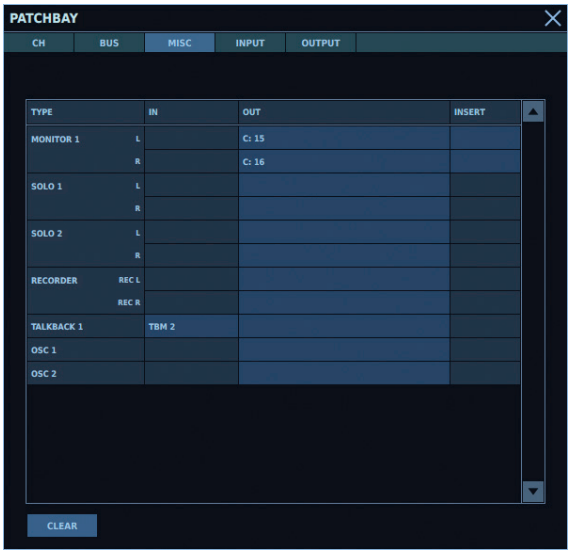
CH	Displays the output bus type/channel number.
NAME	Channel name/channel color Double-tap or long-tap, then set the channel name/channel color.
OUT	Output connector Tap and specify an output connector.
INSERT A	Inserts an effect/GEQ/external effect processor at the INSERT A point (post filter).
INSERT B	Inserts an effect/GEQ/external effect processor at the INSERT B point (pre fader).
CLEAR	Deletes the patchbay settings for all output buses.

Memo

For information on how to work with the popover for making patchbay settings, refer to "Popover for Making Patchbay Settings" (p. 90).

PATCHBAY Window MISC Tab

In the PATCHBAY window MISC tab, you make patchbay settings for Monitor, Solo, Recorder, Talkback, and Oscillator.



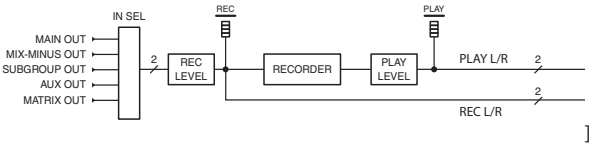
TYPE	Channel type/number
IN	Input connector (talkback only) Tap and specify an input connector.
OUT	Output connector (not available for TALKBACK RETURN) Tap and specify an output connector.
INSERT	Inserts an effect/GEQ/external effect processor (MONITOR only).
CLEAR	Deletes the patchbay settings for all channels.

Memo

For information on how to work with the popover for making patchbay settings, refer to "Popover for Making Patchbay Settings" (p. 90).

Memo

The output points of REC L/R are as follows.



]

PATCHBAY Window INPUT Tab

In the PATCHBAY window INPUT tab, you can list the input-connector settings for input and output devices connected to the M-5000.

NUMBER/TYPE



DEVICE	Selects the device for which you want to make an input connector setting.
NUMBER	Input connector number
TYPE	Input connector type • AD (analog audio input) • AES (AES/EBU input) • MIC (TALKBACK MIC 1)
DESTINATION	Input channel Tap and set an input channel.
48V	Preamp +48 V phantom power
PAD	Preamp PAD
GAIN	Preamp GAIN Make the setting using the selected knob. → "Control Using Selected Knobs/Buttons" (p. 71)
CLEAR	Deletes the patchbay settings for all input connectors.

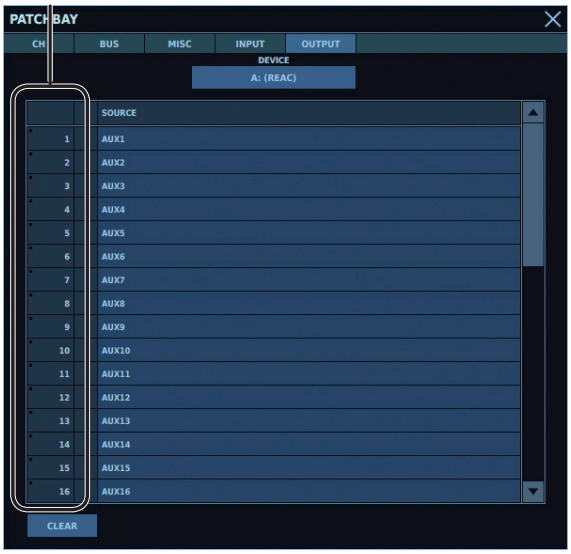
Memo

For information on how to work with the popover for making patchbay settings, refer to "Popover for Making Patchbay Settings" (p. 90).

PATCHBAY Window OUTPUT Tab

In the PATCHBAY window OUTPUT tab, you can list the output-connector settings for input and output devices connected to the M-5000.

NUMBER/TYPE



DEVICE	Select the device whose output-connector settings you want to check.
NUMBER	Output connector number
TYPE	Output connector type • DA (analog audio output) • AES (AES/EBU output)
SOURCE	Output bus Tap and set an output bus.
CLEAR	Deletes the patchbay settings for all output connectors.

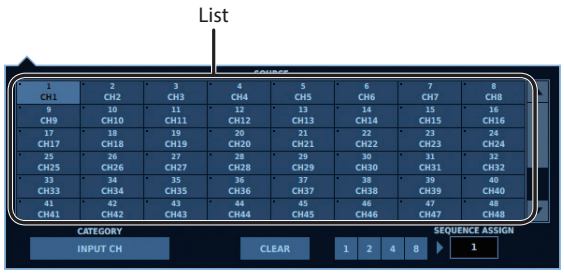
Memo

For information on how to work with the popover for making patchbay settings, refer to "Popover for Making Patchbay Settings" (p. 90).

Popover for Making Patchbay Settings

When you select an input connector, output connector, input channel, output bus, or other such element, a popover like the one shown below appears.

Tap the list to select.



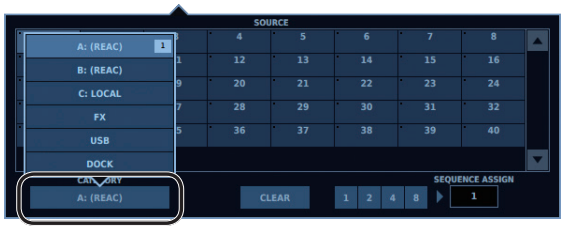
CATEGORY	Selects the type of device for input/output, the type of input channel/output bus, etc.
CLEAR	Deletes settings and quits the popover.

Making Patchbay Settings

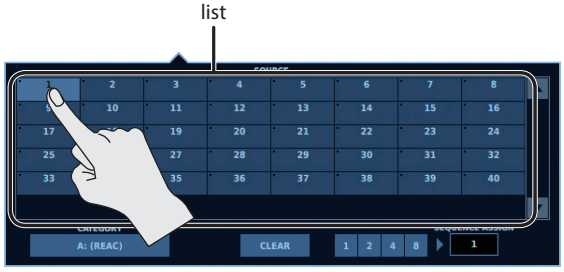
1. Display the popover for making patchbay settings.



2. Tap <CATEGORY> and select the types of input device, output device, input channel, output bus, and the like.



3. In <list>, select and tap the input connector, output connector, input channel, output bus, and the like.

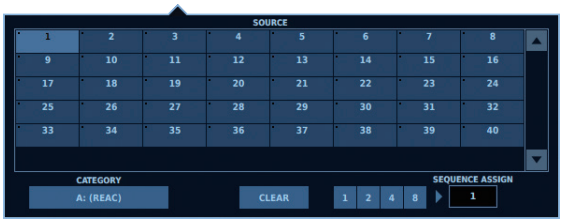


Assigning a Range of Channels in a Patchbay

You can assign a range of channels for a patchbay.

Example: This assigns inputs connectors 1 through 24 on an S-2416 stage unit to INPUT CHANNELs 1 through 24 at one time.

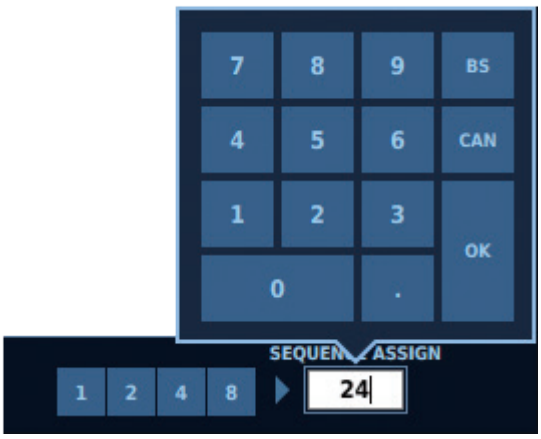
1. Tap the beginning of the patchbay you want to set a range and display the popover for making patchbay settings.



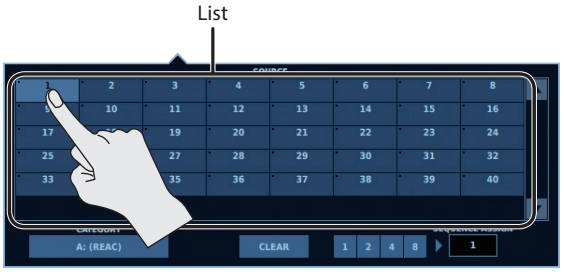
2. Tap <CATEGORY> and select the type of input device, output device, input channel, output bus, etc.



3. For <SEQUENCE ASSIGN>, enter the total number of channels to assign.



4. Select the first number in the patchbay from which you want the range to applied.



The channels are assigned from that point in the quantity you specified in step 2.

Using Alternate Input Connectors

You can set three types of input connectors for input channels --- IN, ALT (alternative), and TR (track) --- and switch between these according to the circumstances and application.

Currently specified input connectors among IN, ALT, and TR are displayed in purple.

Usage Example 1) A backup microphone is specified for main vocals. The main mic is set to IN and the backup mic to ALT. This application allows a critical input to switch to a new source instantly with no patching required.

→ "Setting an Alternate Input Connector for Each Input Channel" (p. 91)

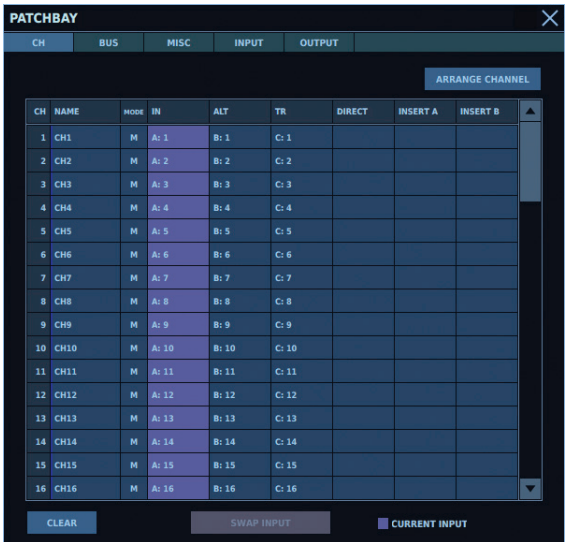
Usage Example 2) Recording is performed on a multi-track recorder, and at rehearsal the following day, the recording data is played-back to the M-5000 and mixed. The recording mic is set to IN and the output from the multi-track recorder is set to TR. IN and TR are switched together. This example is ideal not only for easy multi-channel recording but also for soundchecks and training.

→ "Setting All Input Channels to Alternate Input Connectors" (p. 92)

Setting an Alternate Input Connector for Each Input Channel

1. On the PATCHBAY window CH tab, tap <SWAP INPUT>.

This makes the input connectors selectable.



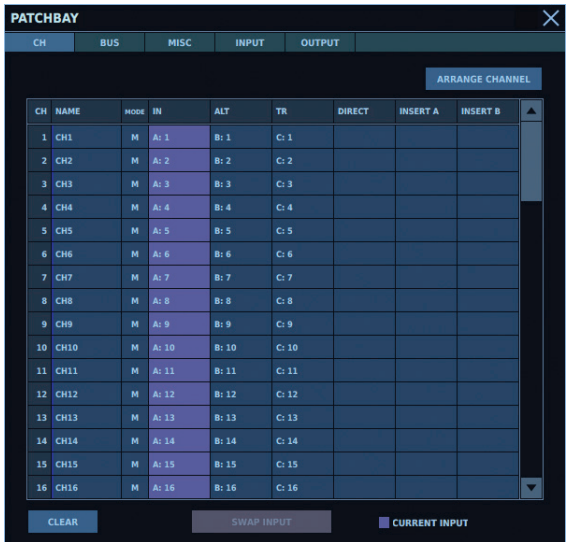
2. Select the IN, ALT, or TR column.



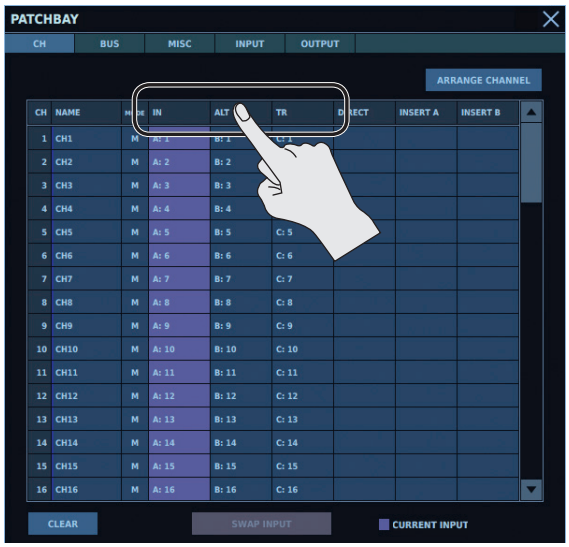
The input connector for selected channel is switched.

Setting All Input Channels to Alternate Input Connectors

1. **On the PATCHBAY window CH tab, tap <SWAP INPUT>.**



2. **Tap the header of the IN, ALT, or TR column.**



The input connectors for all input channels are switched.

Input Channel and Output Bus Operations

The chapters up to now have shown you how to configure the mixer differently according to circumstances.
Now, in this chapter, we're ready to do some mixing!

Adjusting EQ, dynamics, send level, and other such parameters for input channels and output buses is accomplished mainly on the HOME screen and the CH EDIT window.

In this chapter, the explanations are organized into the following sections.

- "HOME Screen" (p. 94)
- "CH EDIT Window" (p. 100)

HOME Screen

When the M-5000 starts up, the HOME screen (Process View) is displayed.

You can display information for any eight channels you choose on the HOME screen. Pressing the [SEL] buttons on the top panel lets you access input channels and output buses quickly.

→ "Switching the HOME Screen/CH EDIT Screen" (p. 127)

HOME Screen

The HOME screen is divided into two main areas.



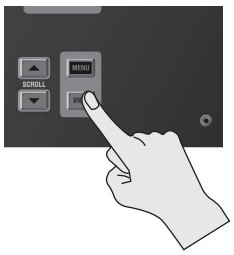
Channel Strips	This shows an overview of the 8 input channels/ output buses in the display target.
Sidebar	Important information you want to monitor at all times and buttons for accessing important screens are displayed here. → "Sidebar" (p. 129)

Displaying the HOME Screen

When another window is displayed, to close the window and display the HOME screen, press the [VIEW] button.

This quits the window, attendant popovers, and attendant popups and displays the HOME screen.

(Excludes the MIXER CONFIGURATION window)

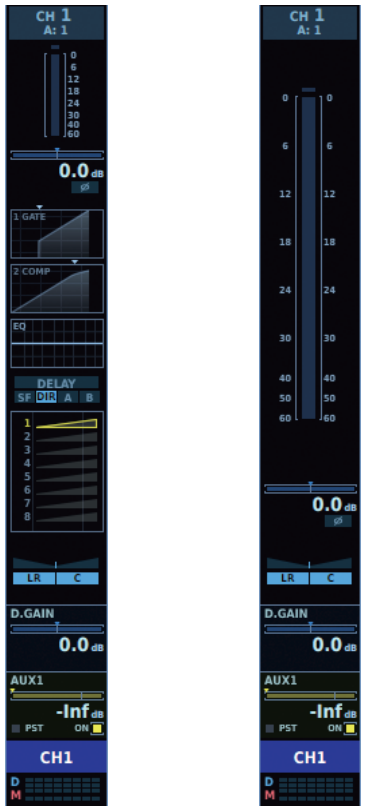


Channel Strips

The channel strips displayed on the HOME screen show information for input channels and output buses. The information displayed differs depending on whether an input channel, output bus, or DCA is selected.

Changing the Appearance of a Channel Strip

On the HOME screen, you can select either of two types of appearances.



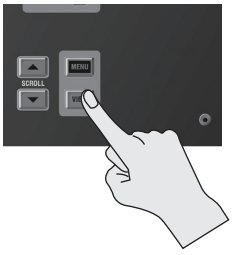
Process view

Meter view

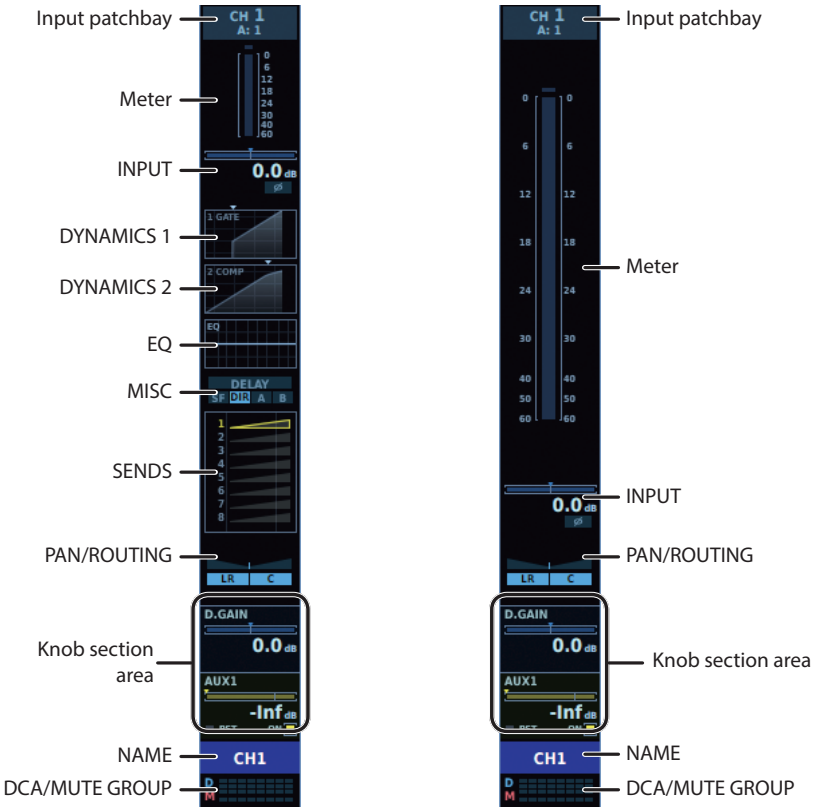
Process View displays a large amount of information about the input channel or output bus.

Meter View displays a large meter view.

To change the appearance, press the [VIEW] button on the top panel while the HOME screen is displayed.

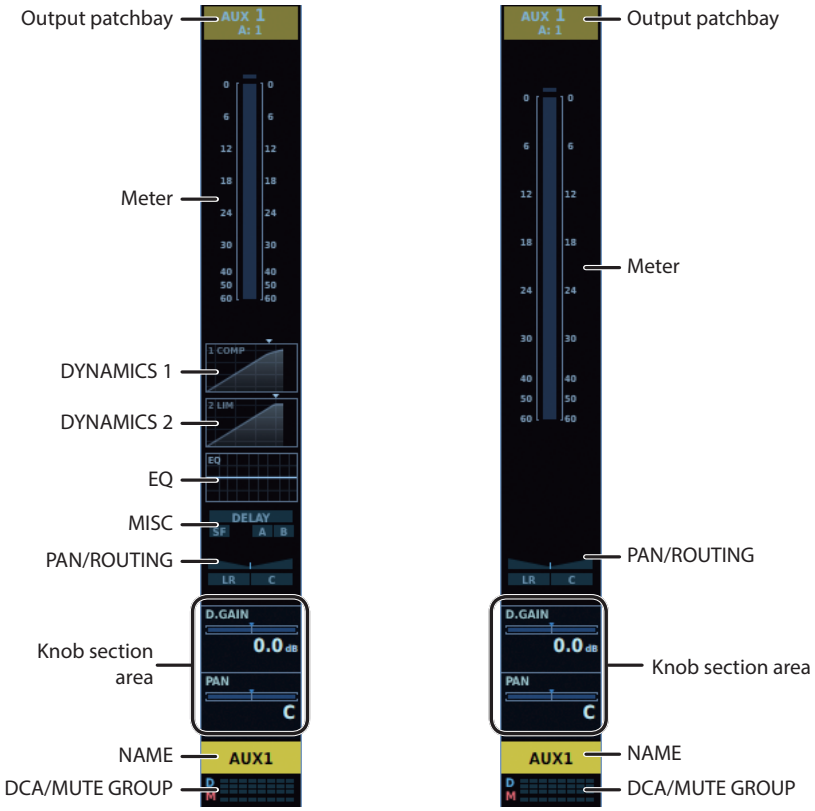


Channel Strip (Input Channel)



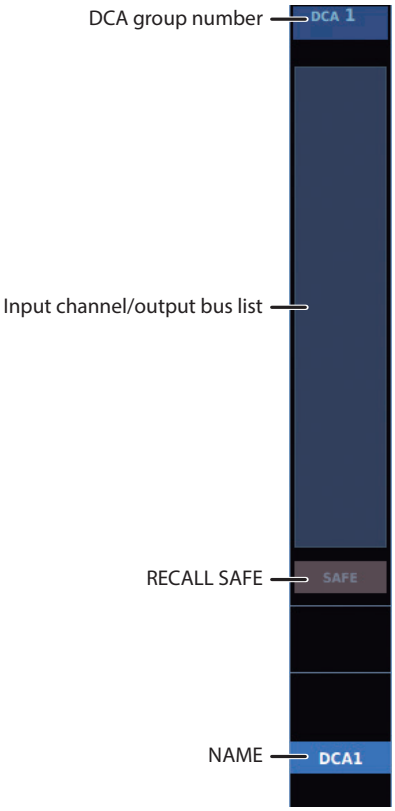
Input patchbay	Displays the channel number and input source as set in the patchbay.
Meter	Displays the signal level. The level detection position is selected on the METER SETUP popover. → "METER SETUP Popover" (p. 132)
INPUT	Displays the status for preamp gain, phantom power, pad, and polarity. Tapping displays the CH EDIT window INPUT tab.
DYNAMICS 1 **DYNAMICS 2**	Displays general characteristics for DYNAMICS. Tapping displays the CH EDIT window DYNAMICS tab. **Memo** The order in which DYNAMICS 1/2 and EQ are displayed depends on the routing for DYNAMICS 1/2 and EQ.
EQ	Display general characteristics for EQ. Tapping displays the CH EDIT window EQ tab. **Memo** The order in which DYNAMICS 1/2 and EQ are displayed depends on the routing for DYNAMICS 1/2 and EQ.
MISC	Displays the status of Channel Delay, Recall Safe, Direct Out, or Insert A/B. Tapping displays the CH EDIT window MISC tab.
SENDS	Displays the status of send levels to AUX buses. Tapping displays the CH EDIT window SENDS tab.
PAN/ROUTING	Displays the status of Pan, Subgroup, or Mix-Minus. Tapping displays the CH EDIT window PAN/ROUTING tab.
Knob section area	These are parameters assigned to the knob section on the top panel. Assigned parameters are set in the knob-assign area on the sidebar. → "Knob-assign Area" (p. 134)
NAME	Displays the channel name and channel color. To change the channel name or channel color, double-tap or long-tap this.
DCA/MUTE GROUP	Displays the DCA group/Mute group status. Tapping displays the CH EDIT window DCA/MUTE GROUP tab.

Channel Strip (Output Bus)



Output patchbay	Displays the channel number and output destination as defined in the patchbay.
Meter	Displays the signal level. The level detection position is selected on the METER SETUP popover. → "METER SETUP Popover" (p. 132)
DYNAMICS 1 **DYNAMICS 2**	Displays general characteristics for DYNAMICS. Tapping displays the CH EDIT window DYNAMICS tab. **Memo** The order in which DYNAMICS 1/2 and EQ are displayed depends on the routing for DYNAMICS 1/2 and EQ.
EQ	Display general characteristics for EQ. Tapping displays the CH EDIT window EQ tab. **Memo** The order in which DYNAMICS 1/2 and EQ are displayed depends on the routing for DYNAMICS 1/2 and EQ.
MISC	Displays the status of Channel Delay, Recall Safe or Insert A/B. Tapping displays the CH EDIT window MISC tab.
PAN/ROUTING	Displays the status for Pan or Mix-Minus. Tapping displays the CH EDIT window PAN/ROUTING tab. **Memo** Diplayed for SUBGROUP and AUX.
Knob section area	These are parameters assigned to the knob section on the top panel. Assigned parameters are set in the knob-assign area on the sidebar. → "Knob-assign Area" (p. 134)
NAME	Displays the channel name and channel color. To change the channel name or channel color, double-tap or long-tap this.
DCA/MUTE GROUP	Displays the DCA group/Mute group status. Tapping displays the CH EDIT window DCA/MUTE GROUP tab.

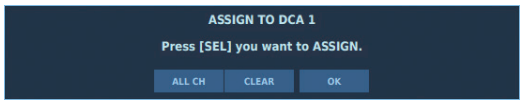
Channel Strip (DCA)



DCA group number	Displays the number of the DCA group.
Input channel/output bus list	Displays a list of input channels/output buses assigned to the DCA group. Tapping displays the ASSIGN TO DCA popup.
RECALL SAFE	Recall Safe When this is on, the item is excluded as a target for Scene recall.
NAME	Displays the channel name and channel color. To change the channel name or channel color, double-tap or long-tap this.

ASSIGN TO DCA Popup

Tapping the <Input channel/output bus list> in a channel strip (DCA) displays the ASSIGN TO DCA popup.
Channels whose [SEL] buttons on the top panel have been pressed are assigned to the DCA group.



ALL CH	Assigns all input channels to the DCA group.
CLEAR	Deletes all channels assigned to the DCA group.
OK	Applies the channel assignments and quits the ASSIGN TO DCA popup.

Knob Section Area of the HOME Screen

Assigned parameters in the knob section area of the HOME screen are set using the knob-assign area of the sidebar.
→ "Knob-assign Area" (p. 134)

Copying/Pasting Input Channel/Output Bus Settings on the HOME Screen

Copying Input Channel/Output Bus Settings on the HOME Screen

1. **Go to the display section and press the [MENU] button.**
The MENU window appears.

2. **Tap <COPY>.**



3. **Press the [SEL] button for the input channel or output bus you want to copy, or go to the HOME screen and tap the parameter you want to copy.**





4. **Tap <COPY>.**
The selected setting is saved to the clipboard.

Pasting Input Channel/Output Bus Settings on the HOME Screen

1. **Go to the display section and press the [MENU] button.**
The MENU window appears.

2. **Tap <PASTE>.**



3. **Press the [SEL] button for the input channel or output bus where you want to paste, or go to the HOME screen and tap the parameter where you want to paste.**





4. **Tap <PASTE>.**

The setting is pasted.

Memo

To undo (cancel) the last paste operation, go to the MENU window and tap <UNDO PASTE>.

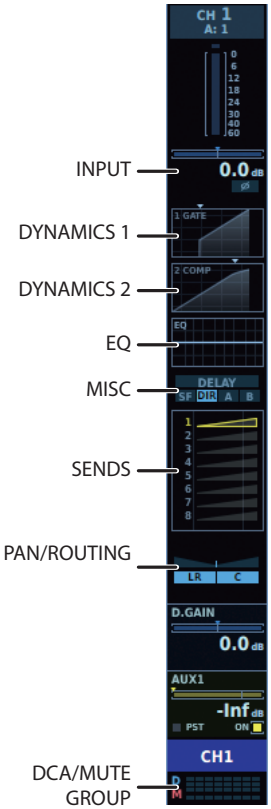
CH EDIT Window

You perform operations on input channels and output buses in the CH EDIT window.

Displaying the CH EDIT Window

Displaying the CH EDIT Window from the HOME Screen

To display the CH EDIT window, on the HOME screen, tap <INPUT>, <EQ>, <DYNAMICS 1/2>, <MISC>, <SENDS>, <PAN/ROUTING>, or <DCA/MUTE GROUP>.



Switching the Input Channel/Output Bus Displayed in the CH EDIT Window

To switch the input channel or output bus displayed in the CH EDIT window, go to the HOME screen and tap the channel strip you want to switch.



Displaying the CH EDIT Window from the Top Panel

Use the [SEL] buttons on the top panel to switch the view between the HOME screen and the CH EDIT window.

→ "Switching the HOME Screen/CH EDIT Screen" (p. 127)

Layout of the CH EDIT Window



- Channel name/channel color
  To change the channel name or channel color, double-tap or long-tap this.
- Tabs
  These change the functioning of the CH EDIT window.

INPUT tab		p. 101 * Displayed for input channels.
OUTPUT tab		p. 112 * Displayed for output buses.
DYNAMICS tab		p. 102
EQ tab		p. 104
MISC tab		p. 105 p. 112
SENDS tab		p. 106 * Displayed for input channels.
PAN/ROUTING tab		p. 108 * Displayed for input channels, SUBGROUP, and AUX.
DCA/MUTE GROUP tab		p. 111

- Display area
  This displays the functions switched using the tabs.

CH EDIT Window (Input Channel)

INPUT Tab

In the INPUT tab, you make input patchbay settings, preamp settings, and other such settings.



CH TOP meter	Displays the signal level at CH TOP.
MODE	Selects monaural/stereo.
SWAP INPUT	Uses alternate input connectors. → "Using Alternate Input Connectors" (p. 102)
IN (L/R)	Input connector Tap and specify an input connector. Currently specified input connectors among IN, ALT, and TR are displayed in purple.
ALT (L/R)	Alternate input connector Tap and specify an input connector.
TR (L/R)	Currently specified input connectors among IN, ALT, and TR are displayed in purple.
POST D.GAIN meter	Displays the signal level at POST D.GAIN.
+48V	Preamp +48 V phantom power
PAD	Preamp PAD
Φ (L/R)	Polarity
GAIN	Preamp gain
D.GAIN	Digital gain
BALANCE	Adjusts L/R balance before filters, EQ, or Dynamics. * This is displayed when the input channel is stereo.

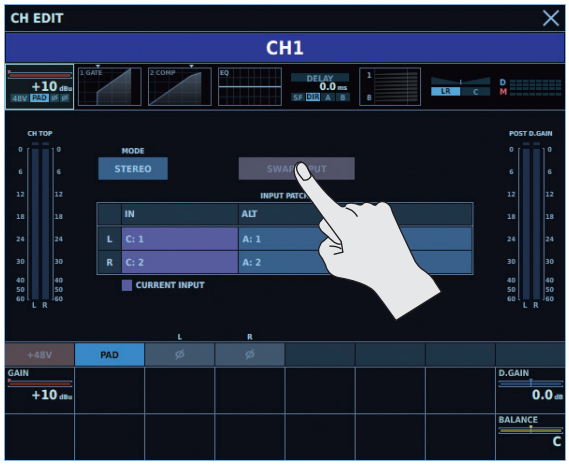
Using Alternate Input Connectors

You can set three types of input connectors for input channels --- IN, ALT (alternative), and TR (track) --- and switch between these according to circumstances during use.

Currently specified input connectors among IN, ALT, and TR are displayed in purple.

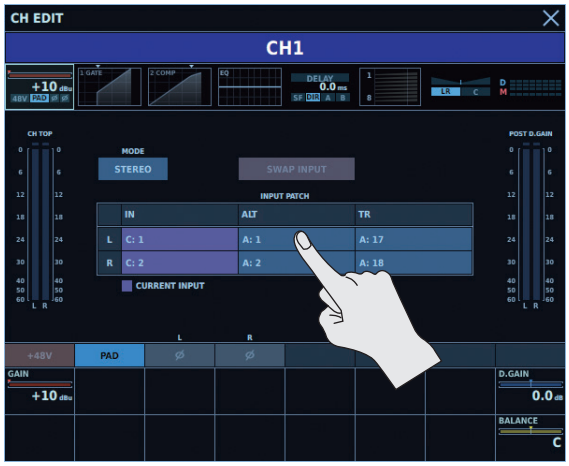
Usage Example) A backup microphone is specified for main vocals. The main mic is set to IN and the backup mic to ALT.

1. Tap <SWAP INPUT>.



This makes the input connectors selectable.

2. Select the IN, ALT, or TR column.



This switches to the selected input connector.

Memo

When the input channel is stereo, you can tap the header of the IN, ALT or TR column to switch the input connectors for all input channels.

DYNAMICS Tab

In the DYNAMICS tab, you make the settings for Dynamics 1 and 2. The operation procedures for Dynamics 1 and Dynamics 2 are the same.

You can select from among the following types.

- EXPANDER
- GATE
- DUCKING
- COMPRESSOR
- LIMITER

Memo

The order in which the DYNAMICS 1/2 tabs and the EQ tab are displayed depends on the routing of DYNAMICS 1/2 and EQ as set in the DYN POSITION.



Parameter area

KEY-IN METER	Key-in signal level
INPUT METER	Dynamics input level (Pre DYN)
DYNAMICS graph	General characteristics of dynamics
GR METER	Amount of gain reduction
OUTPUT METER	Dynamics output level (Post DYN)
KEY (L/R)	Selects the key-in signal (also known as side-chain). Tapping displays a popover for selecting the key-in signal.
KEY FILTER	General characteristics of key-in filter
DYNAMICS ON	Turns dynamics on/off.
TYPE	You select from among the following as the type of dynamics. • EXPANDER • GATE • DUCKING • COMPRESSOR • LIMITER
DYN POSITION	Specifies the sequence in which the Dynamics will be applied in relation to the 4-BAND EQ. • PRE EQ • POST EQ
Parameter area	→ "Parameter Area of the DYNAMICS Tab" (p. 103)

Memo

The isolation point for the key-in signal is as follows.

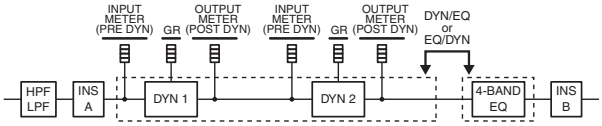
Key-in signal	Isolation point
SELF	Signal input to Dynamics
Input channel	CH TOP
Output bus	POST FADER

Memo

With MAIN, only SELF can be selected for the key-in signal.

MEMO

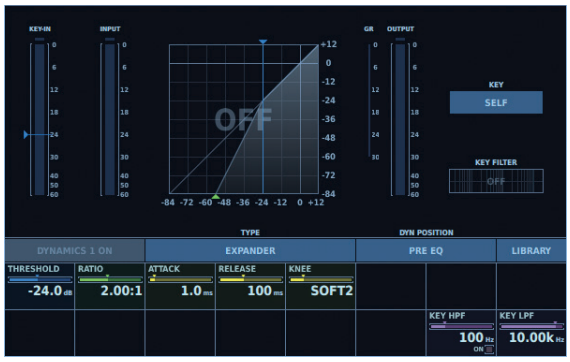
The level detection points for INPUT METER, OUTPUT METER, and GR METER are as follows.



Parameter Area of the DYNAMICS Tab

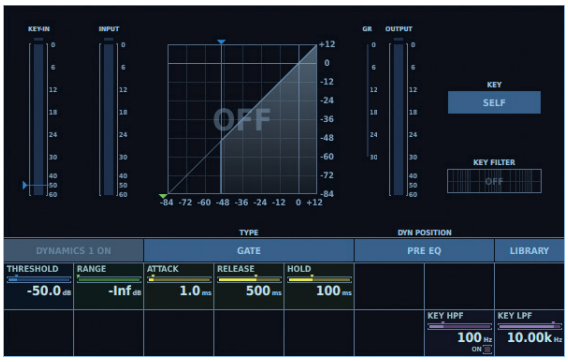
The parameters displayed in the parameter area of the DYNAMICS tab differ according to the Dynamics type.

EXPANDER



THRESHOLD	Threshold
RATIO	Ratio
ATTACK	Attack Time
RELEASE	Release Time
KNEE	Knee • HARD • SOFT 1-9
KEY HPF	HPF center frequency for the key-in filter
ON	Turns key-in filter on/off.
KEY LPF	LPF center frequency for the key-in filter

GATE



THRESHOLD	Threshold
RANGE	Range
ATTACK	Attack Time
RELEASE	Release Time
HOLD	Hold Time
KEY HPF	HPF center frequency for the key-in filter
ON	Turns key-in filter on/off.
KEY LPF	LPF center frequency for the key-in filter

DUCKING



THRESHOLD	Threshold
RANGE	Range
ATTACK	Attack Time
RELEASE	Release Time
HOLD	Hold Time
KEY HPF	HPF center frequency for the key-in filter
ON	Turns key-in filter on/off.
KEY LPF	LPF center frequency for the key-in filter

MEMO

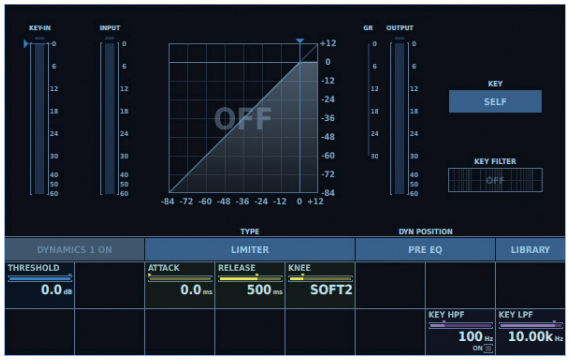
When the key-in signal is set to an input channel (other than SELF), fader values and muting are applied to the key-in signal.

COMPRESSOR



THRESHOLD	Threshold
RATIO	Ratio
ATTACK	Attack Time
RELEASE	Release Time
KNEE	Knee • HARD • SOFT 1-9
MAKE UP	Make-up gain
AUTO	Auto make-up gain This raises the gain for the upper limit of the output level when attack time is 0 ms so as to impart 6 dB of headroom from the clipping level (0 dB). This automatically increases gain up to a maximum of +34 dB.
DRY/WET	Sets the ratio for dry level and wet level.
KEY HPF	HPF center frequency for the key-in filter
ON	Turns key-in filter on/off.
KEY LPF	LPF center frequency for the key-in filter

LIMITER



THRESHOLD	Threshold
ATTACK	Attack Time
RELEASE	Release Time
KNEE	Knee • HARD • SOFT 1-9
KEY HPF	HPF center frequency for the key-in filter
ON	Turns key-in filter on/off.
KEY LPF	LPF center frequency for the key-in filter

EQ Tab

In the EQ tab, you make the settings for HPF, LPF, and 4-BAND EQ.

Memo

The order in which the DYNAMICS 1/2 tabs and the EQ tab are displayed depends on the routing of DYNAMICS 1/2 and EQ as set in the DYNAMICS window. It is important to note that the HPF and LPF are always processed first regardless of the Pre or Post Dynamics setting.

EQ graph



Parameter area

INPUT meter	EQ input level (Pre EQ)
EQ graph	General characteristics for EQ and LPF/HPF
OUTPUT meter	EQ output level (Post EQ)
EQ ON	Turns EQ on/off.
HPF SLOPE	HPF slope characteristics • -6dB/oct • -12dB/oct
LPF SLOPE	LPF slope characteristics • -6dB/oct • -12dB/oct
RESET	Initializes the 4-BAND EQ settings. * HPF/LPF are not initialized.

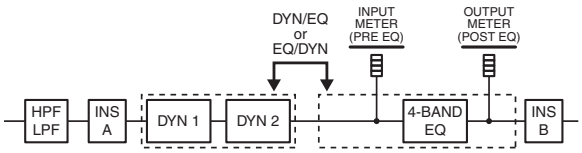
You perform the following operations in the parameter area.



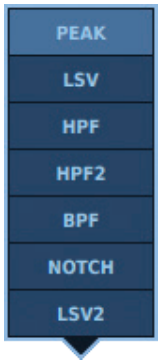
HPF/LPF	HPF/LPF center frequency
HPF/LPF ON	Turns HPF/LPF on/off.
FREQ	Center frequency
Q	Sharpness of the frequency-response curve
TYPE	Displays the Filter Type Selection popover.
GAIN	Gain
ON	Turns the respective band on/off. Pressing and holding this resets the respective band.

Memo

The level detection points for INPUT meter and OUTPUT meter are as follows.



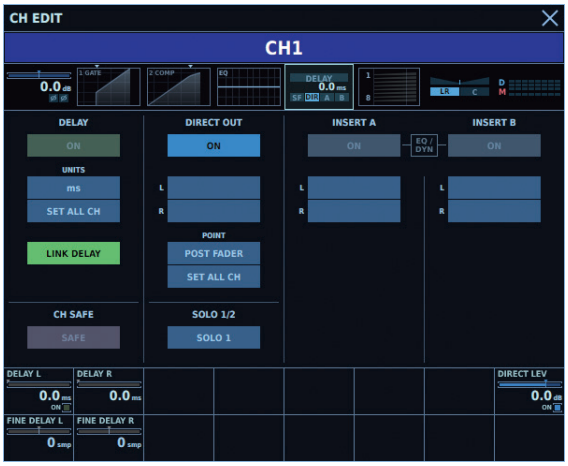
Filter Type Selection Popover



PEAK	Peaking
LSV	Low shelving
HSV	High shelving
HPF	High-pass filter (-6 dB/oct)
HPF2	High-pass filter (-12 dB/oct)
LPF	Low-pass filter (-6 dB/oct)
LPF2	Low-pass filter (-12 dB/oct)
BPF	Bandpass filter
NOTCH	Notch filter
LSV2	Low shelving with controllable Q
HSV2	High shelving with controllable Q

MISC Tab

In the MISC tab, you make a variety of settings, such as Delay, Direct Out, Channel Safe, Solo, and Insert.



DELAY ON	Turns Delay on/off.
UNITS	Selects from among the following as the unit for delay time. • ms • meter • feet • 24fps/25fps/29.97fps/30fps
SET ALL CH	Makes the unit for delay time on all input channels the same as the selection made using <UNITS>.
LINK DELAY	Makes the delay times for all stereo channels, stereo buses, and surround buses identical.
SAFE	When on, the channel is excluded from scene recall.
DIRECT OUT ON	Turns Direct Out on/off.
DIRECT OUT (L/R)	Selects the Direct Out output connector.
POINT	Selects from among the following as the send point for Direct Out. • TOP OF CH • PRE EQ • PRE FADER • POST FADER
SOLO 1/2	SOLO selection • SOLO 1 • SOLO 2 • SOLO 1+2
INSERT A/B ON	Turns Channel Insert on/off.
INSERT A/B (L/R)	Selects the effect/GEQ/external effect to insert on the channel.
DELAY (L/R)	Delay time
DELAY (L/R) ON	Turns Delay on/off.
FINE DELAY L/R	Fine-tuning of delay time
DIRECT LEV	Direct Out level
DIRECT LEV ON	Turns Direct Out on/off.

Changing DELAY UNIT

The available DELAY UNIT values are msec, Meter, Feet and Frame (24, 25, 29.97, or 30 fps). Delay on the M-5000 is based on msec steps, and simply changing the DELAY UNIT parameter does not alter delay times in msecs. For this reason, just after DELAY UNIT has been changed, discrepancies might occur between msec values and display values in the M-5000 specified by DELAY UNIT. To correct these discrepancies, set the delay time again.

Meter/Feet/Frame Calculation

The relationship of meters, feet, and frames to msec is as follows. (Approximations of calculation results are used.)

Meter

[msec] = Delay [Meter]1000/343.59

Feet

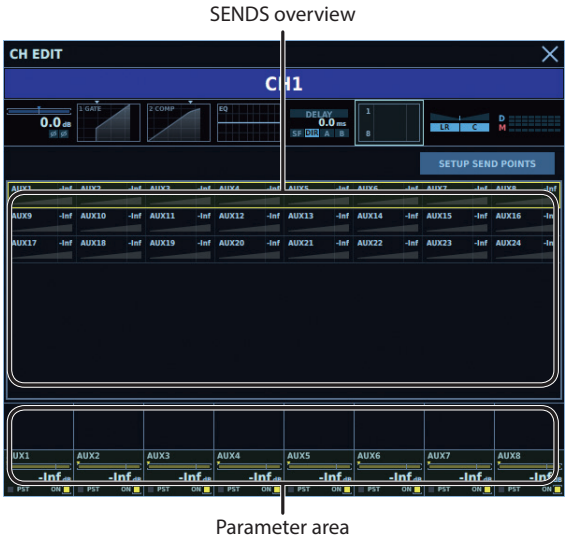
[msec] = Delay [Feet] x1000/1127.26

Frame(24/25/29.97/30fps)

[msec] = Delay [Frame] x1000/FrameRate

SENDS Tab

In the SENDS tab, you make the settings for sendings for input channels to AUX.

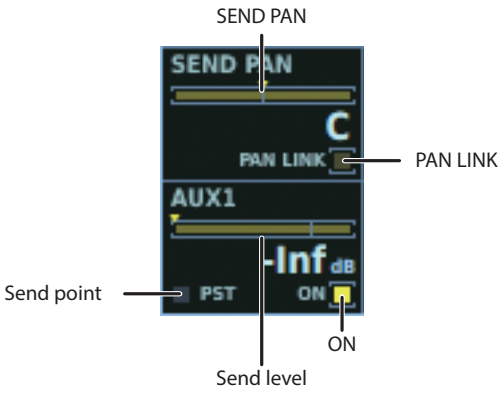


SENDS overview	Selects AUXes to work with in the parameter area, in groups of 8 channels.
SETUP SEND POINTS	Displays the SETUP SENDS POINTS window. → "SETUP SENDS POINTS Window" (p. 107)

You use the parameter area to manipulate the send levels sent to AUXes selected using SENDS overview.

Parameter Area of the SENDS Tab





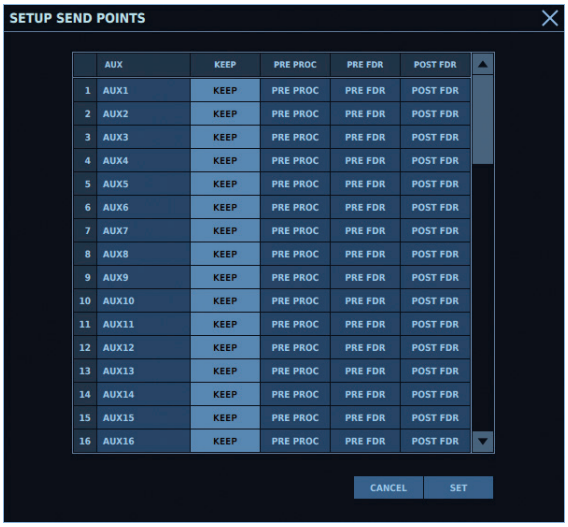
SEND PAN	Send pan to AUX * This is displayed when the AUX is stereo.
PAN LINK	When PAN LINK is on, PAN to MAIN and SEND PAN are linked. * This is displayed when the AUX is stereo.
Send level	Send level sent to AUX
Send point	Selects from among the following as the send point from input channel to AUX. • PRE-P Pre-processing • PRE Pre-fader • POST Post-fader * To change the send point, press the [SHIFT] button, then go to the knob section area and use the buttons or selected button to perform the operation.
ON	Turns sending to AUX on/off. Pressing and holding this sets the send level to 0.0 dB.

Memo

You can work with all 8 parameters at once by holding down the [ALL] button and turning a knob or pressing a button.

SETUP SENDS POINTS Window

In the SETUP SENDS POINTS window, you set send points to an AUX for all input channels at one time.



KEEP	Keeps the current send point settings.
PRE PROC	Sets all input-channel send points to pre-processing.
PRE FDR	Sets all input-channel send points to pre-fader.
POST FDR	Sets all input-channel send points to post-fader.
CANCEL	Cancels any changes to send points and quits the SETUP SENDS POINTS window.
SET	Applies the changes to send points and quits the SETUP SENDS POINTS window. All input-channel send points change.

PAN/ROUTING Tab

The further tabs are displayed on the PAN/ROUTING tab.

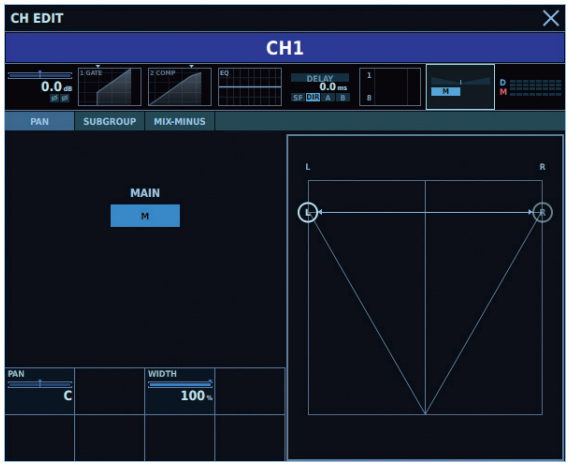
- PAN tab
  This sets panning when sending to MAIN.
- SUBGROUP tab
  This sets assignments to SUBGROUPs.
- MIX-MINUS tab
  This is displayed using the input channel, AUX, and SUBGROUP.

PAN Tab Operations

The operation procedures in the PAN tab differ according to the setting for MAIN that has been made in the MIXER CONFIGURATION window.

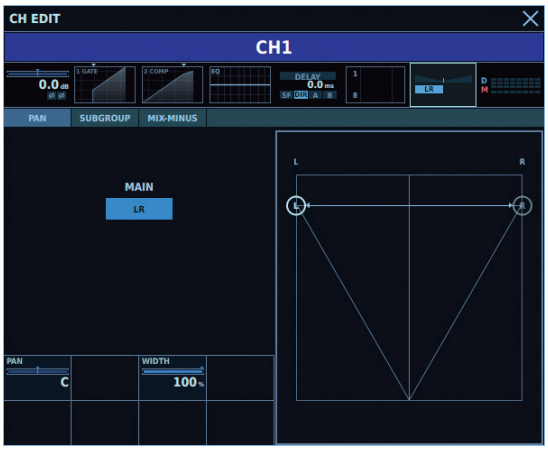
MAIN setting	Operation
NONE	Parameters are not displayed when no MAIN exists.
MONO	→ "PAN Tab (MONO)" (p. 108)
LR	→ "PAN Tab (LR)" (p. 108)
LR+M	MAIN 1 → "PAN Tab (LR)" (p. 108) MAIN 2 → "PAN Tab (MONO)" (p. 108)
LR+LR	MAIN 1/2 → "PAN Tab (LR)" (p. 108)
LCR	→ "PAN Tab (LCR/CROSS-MATRIX LCR)" (p. 109)
CROSS-MATRIX LCR	→ "PAN Tab (LCR/CROSS-MATRIX LCR)" (p. 109)
5.1+LR	MAIN 1 → "PAN Tab (5.1)" (p. 110) MAIN 2 → "PAN Tab (LR)" (p. 108)

PAN Tab (MONO)



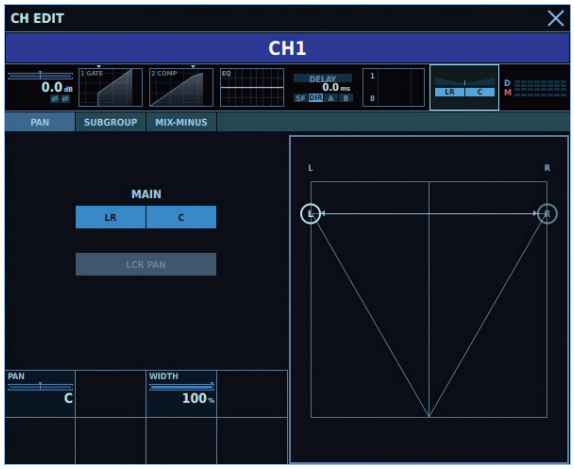
MAIN M	Sends the signal to MAIN M (monaural).
PAN	Sends pan to MAIN M (monaural)
WIDTH	Sets the width of the stereo image. You can maintain the stereo-image width set here while working with PAN. -100% - 100% * This is displayed when the input channel/ output bus being manipulated is set to STEREO.

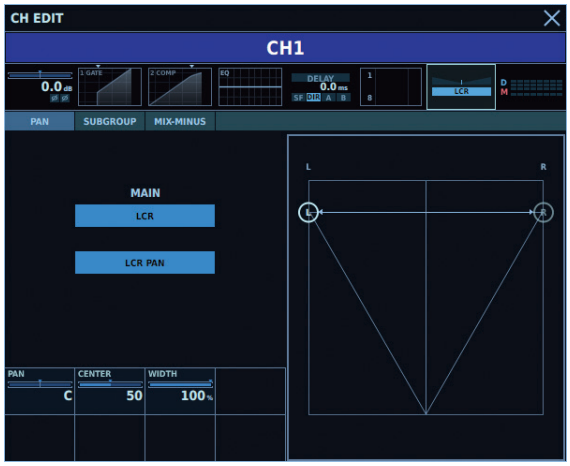
PAN Tab (LR)



MAIN LR	Sends the signal to MAIN LR.
PAN	Sends pan to MAIN LR
WIDTH	Sets the width of the stereo image. You can maintain the stereo-image width set here while working with PAN. -100% - 100% * This is displayed when the input channel/ output bus being manipulated is set to STEREO.

PAN Tab (LCR/CROSS-MATRIX LCR)





MAIN LR	Sends the signal to MAIN LR.
MAIN C	Sends the signal to MAIN C.
MAIN LCR	Sends the singal to MAIN LCR.
LCR PAN	Specifies how signals are sent to MAIN LR and MAIN C.
PAN	Sends pan to MAIN LR or MAIN LCR
CENTER	Sets the ratio of the signal sent to MAIN C when PAN is set to C (center). * This is displayed when LCR PAN is on.
WIDTH	Sets the width of the stereo image. You can maintain the stereo-image width set here while working with PAN. -100% - 100% * This is displayed when the input channel/ output bus being manipulated is set to STEREO.

LCR PAN

When this is on, the signals sent to MAIN LCR can be collectively turned on/off. Pan will operate across the MAIN LCR and CENTER is displayed.

When this is off, the signals sent to MAIN LR and MAIN C can be individually turned on/off.

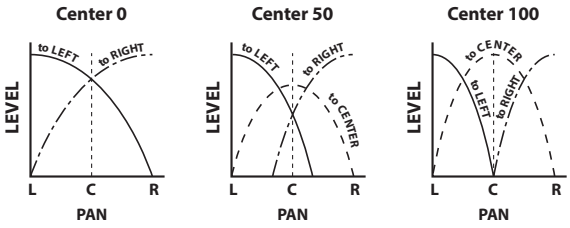
CENTER

This sets the amount of the signal sent to MAIN C within a range of 0 to 100 when PAN is set to C (center).

When set to 0, no signal is sent to MAIN C.

When set to 100, setting PAN to C causes the signal to be sent only to MAIN C.

* This is displayed when LCR PAN is on.



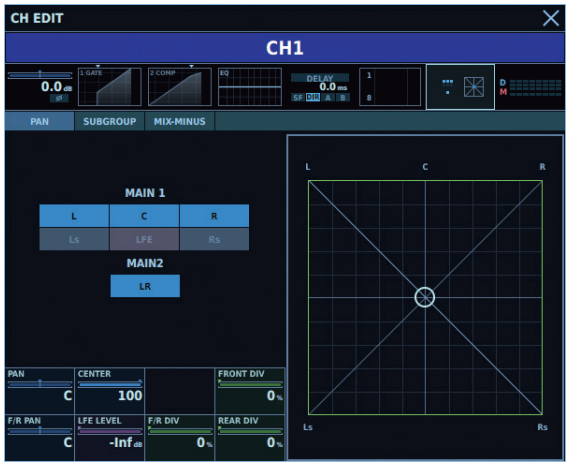
CROSS-MATRIX LCR

When MAIN is set to CROSS-MATRIX LCR, the feeds sent to MAIN LR or MAIN C are subject to exclusive control.

When sending to MAIN LR is on, feed to MAIN C is automatically turned off.

When sending to MAIN C is on, feed to MAIN LR is automatically turned off.

PAN Tab (5.1)



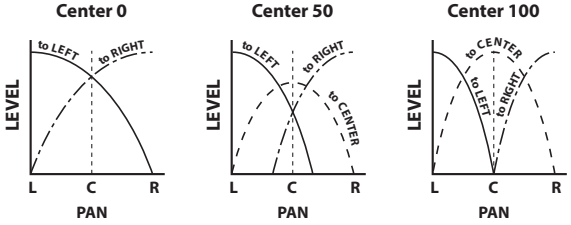
MAIN L	Sends the signal to MAIN L.
MAIN C	Sends the signal to MAIN C.
MAIN R	Sends the signal to MAIN R.
MAIN Ls	Sends the signal to MAIN Ls (Left Surround).
MAIN LFE	Sends the signal to MAIN LFE (Low-Frequency Effects).
MAIN Rs	Sends the signal to MAIN Rs (Right Surround).
PAN	Send pan along the X (horizontal) axis (left-right)
CENTER	Sets the ratio of the signal sent to MAIN C when PAN is set to C (center).
WIDTH	Sets the width of the stereo image. You can maintain the stereo-image width set here while working with PAN. -100% - 100% * This is displayed when the input channel/output bus being manipulated is set to STEREO.
FRONT DIV	Front Divergence Adjusts the amount of divergence along the X axis at the front.
F/R PAN	Send pan along the Y axis (front-rear)
LFE LEVEL	Send level to MAIN LFE
REAR DIV	Rear Divergence Adjusts the amount of divergence along the X axis at the rear.
F/R DIV	Front/Rear Divergence Adjusts the amount of divergence along the Y axis.

CENTER

This sets the amount of the signal sent to MAIN C within a range of 0 to 100 when PAN is set to C (center).

When set to 0, no signal is sent to MAIN C.

When set to 100, setting PAN to C causes the signal to be sent only to MAIN C.



Divergence

Divergence adjusts the amount of diffusion along the respective axes (front X axis, rear X axis, or Y axis). For example, setting FRONT DIV, REAR DIV, and F/R DIV all to "0%" and placing the signal directly above L outputs the audio only to L, with nothing output to other channels (C, R, Ls, LFE, and Rs). High values for FRONT DIV, REAR DIV, and F/R DIV reduce output via L, with output from other channels at the set ratios.

The overall volume level does not change.

Setting Divergence to 0% narrows the audible range. Location becomes easier.

Setting Divergence to 100% broadens the audible range. Location becomes difficult.

SUBGROUP Tab



SGRP 1 - SGRP (n)	Sends the signal to SUBGROUP.

* This is only displayed when a SUBGROUP exists.

MIX-MINUS Tab

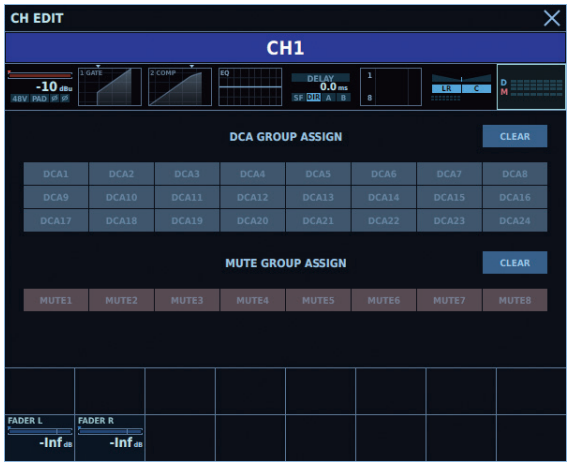


MINUS 1 - MINUS (n)	Sends the signal to MIX-MINUS.

* This is only displayed when a MIX-MINUS exists.

DCA/MUTE GROUP Tab

In the DCA/MUTE GROUP tab, you assign input channels and output buses to DCA and MUTE groups

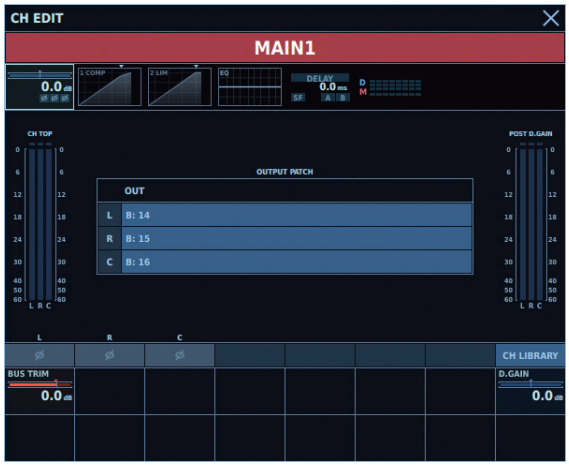


DCA 1 - DCA 24	Assigns to the DCA group.
MUTE 1 - MUTE 8	Assigns to the MUTE group.
CLEAR	Clears all assignments to DCA/MUTE groups.
FADER	Manipulates fader.

CH EDIT Window (Output Bus)

OUTPUT Tab

In the OUTPUT tab, you make output patchbay settings. Input channels are not displayed.



CH TOP meter	Displays the signal level at CH TOP.
OUT	Output connector Tap and specify an output connector.
POST D.GAIN meter	Displays the signal level at POST D.GAIN.
Φ (L/R/C/LFE/Ls/Rs)	Polarity When the output bus has stereo or more channels, the channels that are used are all displayed.
BUS TRIM	Trim Adjusts the input level in the digital domain.
D.GAIN	Digital gain Adjusts the input level in the digital domain.
BALANCE	L/R balance * Displayed only when the output bus is stereo.

DYNAMICS Tab, EQ Tab, and DCA/MUTE GROUP Tab

Operation procedures are the same as for input channels.

→ "DYNAMICS Tab" (p. 102)
→ "EQ Tab" (p. 104)
→ "DCA/MUTE GROUP Tab" (p. 111)

The specifications for the DYNAMICS tab differ as described below.

- The DYNAMICS key-in signal isolation point on the output bus is as follows.
  SELF: Signal input to Dynamics
  Other than SELF: POST FADER
- With MAIN, only SELF can be selected for the key-in signal.

MISC Tab

In the MISC tab, you make a variety of settings, such as Delay, Channel Safe, Solo, and Insert.



DELAY ON	Turns Delay on/off.
UNITS	Selects from among the following as the unit for delay time. • ms • meter • feet • 24fps/25fps/29.97fps/30fps
SET ALL GRP **SET ALL AUX** **SET ALL MINUS** **SET ALL MTX** **SET ALL MAIN**	Sets the unit for all SUBGROUP/AUX/MIX-MINUS/MATRIX/MAIN delay times to the same value selected by <UNITS>.
LINK DELAY	Makes the delay times for stereo channels, stereo buses, and surround buses identical.
SAFE	When on, the channel is excluded from scene recall.
SOLO 1/2	SOLO selection
INSERT A/B ON	Turns Channel Insert on/off.
INSERT A/B (L/R/C/LFE/Ls/Rs)	Selects the effect/GEQ/external effect to insert on the channel.
DELAY (L/R/C/LFE/Ls/Rs)	Delay time
FINE DELAY (L/R/C/LFE/Ls/Rs)	Fine-tuning of delay time

Changing DELAY UNIT

The available DELAY UNIT values are msec, Meter, Feet and Frame (24, 25, 29.97, or 30 fps). Delay on this unit is based on msec steps, and simply changing the DELAY UNIT parameter does not alter delay times in msecs. For this reason, just after DELAY UNIT has been changed, discrepancies might occur between msec values and display values in the unit specified by DELAY UNIT. To correct these discrepancies, set the delay time again.

Meter/Feet/Frame Calculation

The relationship of meters, feet, and frames to msec is as follows. (Approximations of calculation results are used.)

Meter

[msec] = Delay [Meter]1000/343.59

Feet

[msec] = Delay [Feet] x1000/1127.26

Frame(24/25/29.97/30fps)

[msec] = Delay [Frame] x1000/FrameRate

PAN/ROUTING Tab

The PAN/ROUTING tab is displayed for SUBGROUP and AUX, and you can make settings for sending to MAIN and sending to MIX-MINUS.

The operation procedures are the same as for the CH EDIT window PAN/ROUTING tab for input channels.

The following specifications are different.

- SUBGROUP tab is not displayed.

Copying/Pasting Input Channel/Output Bus Settings at the CH EDIT Window

Copying Input Channel/Output Bus Settings at the CH EDIT Window

1. **Display the CH EDIT window where you want to copy.**
2. **Go to the display section and press the [MENU] button.**
   The MENU window appears.
3. **3. Tap <COPY (INPUT, DYN, EQ, MISC, SENDS, PAN, DCA/MUTE)>.**



The selected setting is saved to the clipboard.

Pasting Input Channel/Output Bus Settings at the CH EDIT Window

1. **Display the CH EDIT window where you want to paste.**
2. **Go to the display section and press the [MENU] button.**
   The MENU window appears.
3. **Tap PASTE (INPUT, DYN, EQ, MISC, SENDS, PAN, DCA/MUTE)>.**

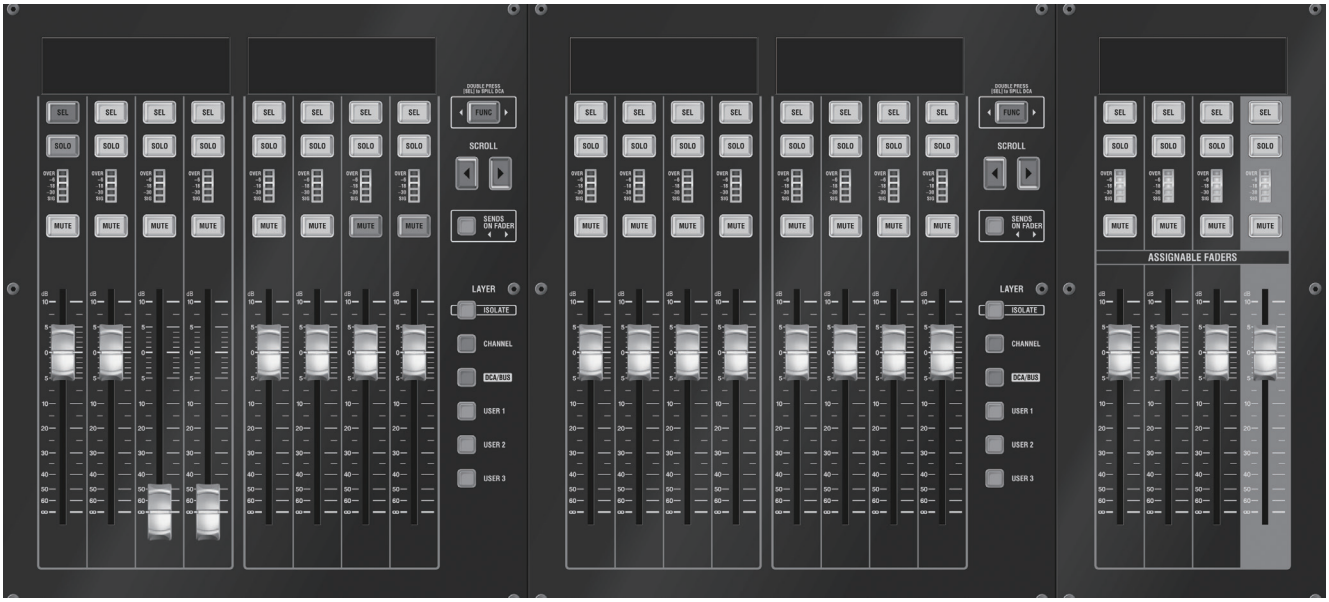


The setting is pasted.

Memo

To undo (cancel) the last paste operation, go to the MENU window and tap <UNDO PASTE>.

Top Panel (Fader Region)



This chapter describes operation procedures for the lower half of the top panel, the fader region.
In particular, mastering use of the fader bank section, one of this unit's strong points, will let you accomplish quick level adjustment with very little body movement.

In this chapter, the explanations are organized into the following sections.

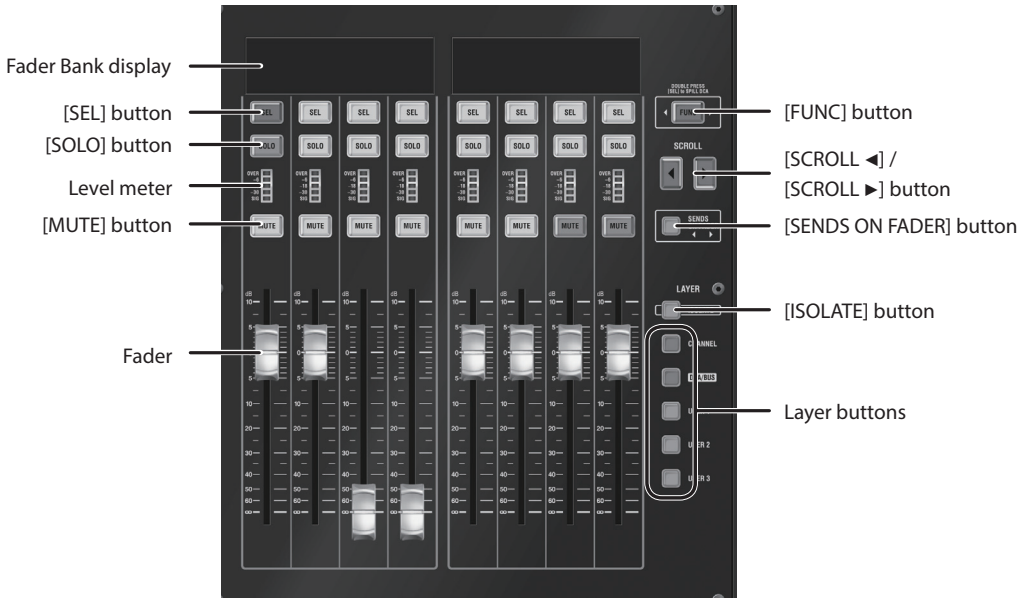
- "Fader Bank Section" (p. 116)
- "Assignable Fader Section" (p. 125)
- "Switching the HOME Screen/CH EDIT Screen" (p. 127)

Fader Bank Section

About the Fader Bank Section

On the M-5000, operations are carried out using groups of eight faders. Each set of eight faders is called a "fader bank."

The M-5000 provides three fader banks. You can operate the respective fader banks in an interlinked way or independently, enabling you to carry out your intended operations instantly.



Name	Description
Fader bank display	This displays information such as the input channel/output bus name and fader value. In the Function mode, it displays a list of functions and parameter values.
[SEL] button	This selects the input channel/output bus and selects the display target. In the Function mode, it selects the function and manipulates parameters.
[SOLO] button	This turns solo on and off for the input channel/output bus.
Level meter	This displays the signal level of the input channel/output bus.
[MUTE] button	This turns muting on and off for the input channel/output bus.
Fader	This operates the fader for the input channel/output bus.
[FUNC] button	This turns the function mode on and off. It flashes when the function mode is on.
[SCROLL ◄] / [SCROLL ►] button (JUMP)	This scrolls the channel left and right. Pressing [SCROLL <] and [SCROLL >] at the same time displays the anchor channel where the currently selected Layer in the fader bank display is registered (anchor jump).
[SENDS ON FADER] button	This turns SENDS ON FADER on and off. It flashes when on. → "Using Faders to Adjust the Send Level to AUX (SENDS ON FADER)" (p. 120)
[ISOLATE] button	This turns isolate of Fader Bank on and off. → "Isolated Banks" (p. 118)
Layer buttons	This selects the layer for the Fader Bank section. The button for the selected layer lights up.

Layers

Each fader bank has two basic layers (CHANNEL and DCA/BUS) and three customizable layers (USER 1 through 3) that you can switch between according to purpose.



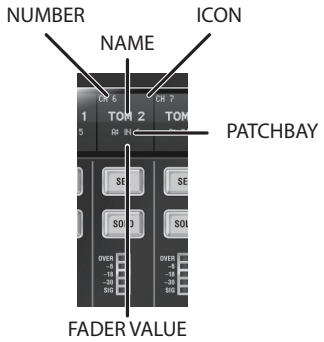
Layer button	Description
[CHANNEL]	This accesses the input-channel layer.
[DCA/BUS]	This accesses the layer of the DCA group master and the output buses (MAIN, SUBGROUP, AUX, MIX-MINUS, and MATRIX).
[USER 1]–[USER 3]	These access user-assigned channels. You can assign up to 64 at a time for each layer.

Scrolling

Pressing the [SCROLL ◄] or [SCROLL ►] button shifts the channels accessed by the fader bank in the currently selected layer by eight channels at a time.



Fader Bank Display

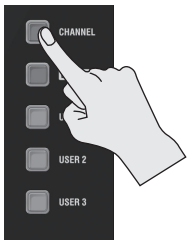


NUMBER	Displays the input channel/output bus number.
NAME	Displays the input channel/output bus name.
ICON	When the channel is stereo, LCR, or 5.1ch, an icon is displayed.
PATCHBAY	Displays the input/output patchbay.
FADER VALUE	Displays the value when the fader has been operated or touched.

Basic Operations of Fader Bank Section

Changing Layers

1. Press a layer button to switch to the desired layer.

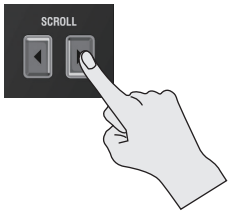


If you pressed the button at a "Normal bank" (p. 46), other normal banks also change in an interlinked way.
If an isolated bank has been pressed, only that isolated bank is switched.

Layer button	Description
[CHANNEL]	This accesses the input-channel layer.
[DCA/BUS]	This accesses the layer of the DCA group master and the output buses (MAIN, SUBGROUP, AUX, MIX-MINUS, and MATRIX).
[USER 1]–[USER 3]	These access user-assigned channels. You can assign up to 64 at a time for each layer.

Scrolling the Channels

1. Press the [SCROLL ◄] or [SCROLL ►] button to scroll the channels.



The channels assigned to the fader bank section in the selected layer are switched in groups of eight.

An orange bar is displayed in the fader bank display to the right of the fader bank you're scrolling. For each respective layer, this shows the approximate position of the channel loaded into the fader bank.

Memo

If you pressed the button at a "Normal bank" (p. 46), other normal banks also change in an interlinked way.

Memo

Scrolling by one channel at a time when the [SHIFT] button is on.

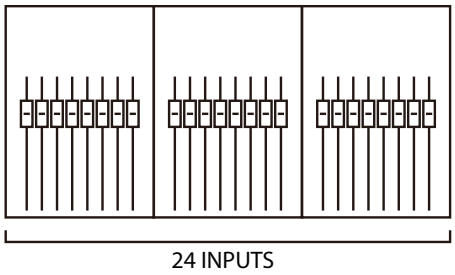
Isolated Banks

A fader bank whose [ISOLATE] button has been turned on is called an "isolated bank." Using isolated banks makes it possible to configure a wide variety of fader layouts, such as arranging the CHANNEL layer and DCA/BUS layer side by side at the same time.

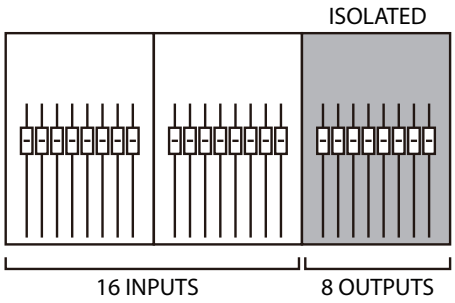


[ISOLATE]	Term	Description
Off (dark)	Normal bank	The bank operates in an interlinked fashion with other normal banks. When layer-switching or scrolling is performed in this normal bank, the previous or later channel in other normal banks is also accessed.
On (lighted)	Isolated bank	This bank is isolated from other fader banks. In an isolated bank, layer-switching and scrolling can be performed independently of other fader banks.

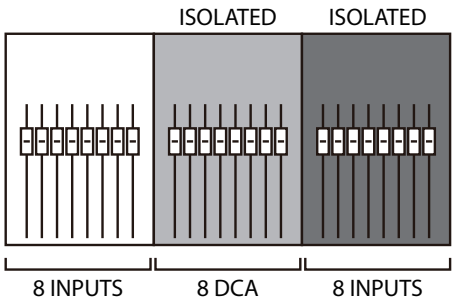
Usage Examples



All banks are set to be normal banks. This allows access to, for example, 24 input-channel faders.



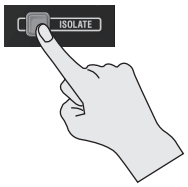
One bank is set as an isolated bank. This allows access to, for example, 16 input-channel faders and 8 output-bus faders.



Two banks are set as isolated banks. This allows access to, for example, 8 input-channel faders, 8 DCA faders, and 8 other input-channel faders.

Isolating a Fader Bank

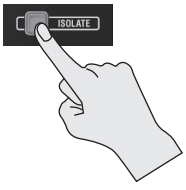
1. At the desired fader bank, press the [ISOLATE] button to turn it on (lighted).



The target fader bank is isolated.

Unisolating a Fader Bank

1. Press the [ISOLATE] button to turn it off (dark).



If one or more other normal banks exist, each switches to the same layer, and the same earlier or later channel is accessed.

Anchor Channels

You can mark channels you want to access rapidly in the various layers. These are called "anchor channels."
Specifying anchor channels in the respective layers lets you quickly jump to the desired channel. You can register up to 8 anchor channels in each layer.

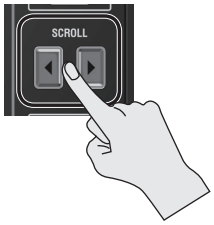
You can select anchor channels in the function mode.
→ "Setting an Anchor Channel" (p. 124)

Memo

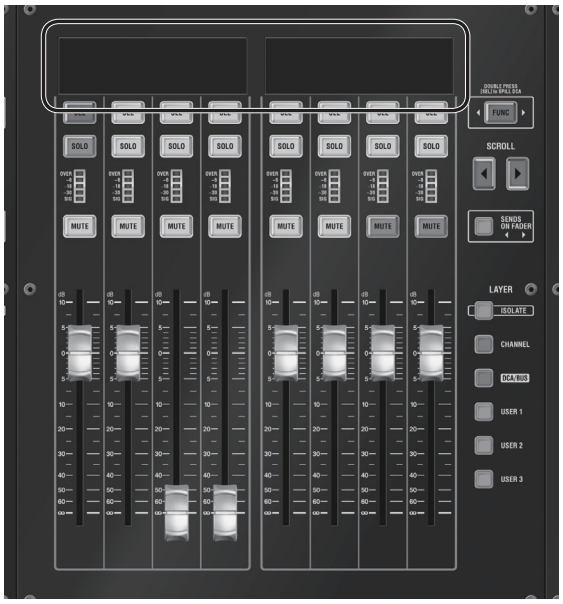
In the default settings, preset anchors are present in the CHANNEL layer at every 24th channel and in the DCA/BUS layer by channel type (DCA, MAIN, SUBGROUP, and the like).

Accessing an Anchor Channel (Anchor Jump)

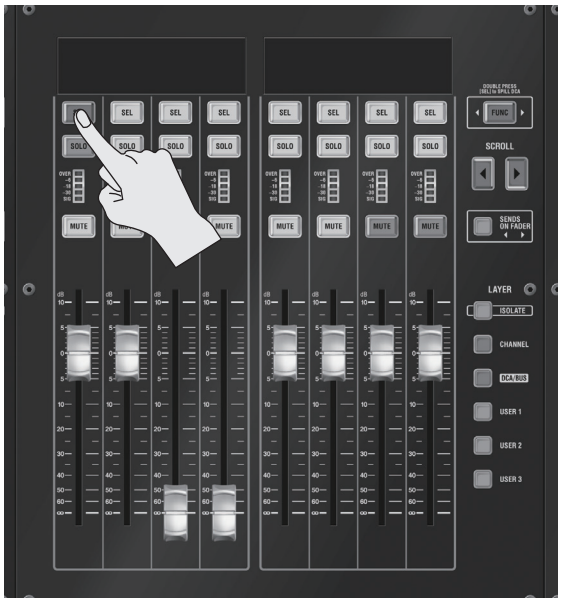
1. Press [SCROLL ◄] and [SCROLL ►] at the same time.



Anchor channels registered in the currently selected layer are shown on the fader display.



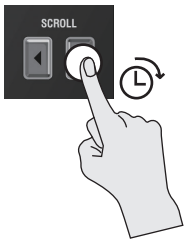
2. Press the [SEL] button that corresponds to the desired anchor channel.



The fader bank scrolls to the location where the anchor channel is displayed in the leftmost fader.

Accessing Adjacent Anchor Channels

Pressing and holding the [SCROLL ◄] or [SCROLL ►] button scrolls forward or backward to the anchor channel nearest the currently accessed channel.



An orange bar is displayed in the fader bank display to the right of the anchor/jumped fader bank. For each respective layer, this shows the approximate position of the channel loaded into the fader bank.

Listing Channels Assigned to a DCA Group (SPILL DCA)

Using SPILL DCA lets you take input channels and output buses assigned to a DCA group and temporarily expand them into a normal bank to list them.

The DCA group you want to list is loaded into an isolated bank.

1. Load the DCA into an isolated bank.

2. Press (two times) the [SEL] button for the DCA you want to expand.



The input channels or output buses assigned to the selected DCA are temporarily expanded into the normal bank.

3. Adjust the input channels or output buses assigned to the DCA.

4. Press the [SEL] button you selected in step 2 to quit the SPILL DCA mode.

Using Faders to Adjust the Send Level to AUX (SENDS ON FADER)

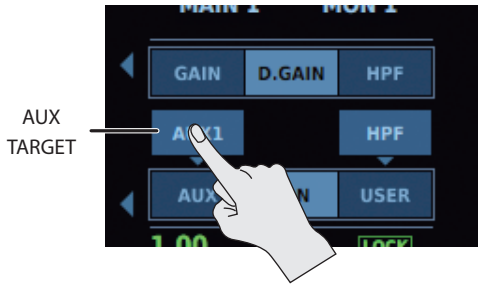
Using SENDS ON FADER lets you use faders to adjust the send level to AUX.

Memo

SENDS ON FADER is applied to all fader banks.

1. On the HOME screen, go to the knob-assign area and tap <AUX TARGET>.

The SELECT AUX SENDS window appears.



2. In the SELECT AUX SENDS window, select AUX.



3. Press the [SENDS ON FADER] button to turn it on (flashing).



All fader banks and assignable fader sections change to the SENDS ON FADER mode, and you can use faders to adjust the send level to AUX selected in step 2.

4. Use the faders to adjust the send level.

Memo

- To change the AUX for sending, carry out steps 1 and 2 again.

Memo

- If an AUX has been assigned to the fader bank, you can change the destination AUX by pressing the corresponding [SEL] button.

SELECT AUX SENDS Window

Tapping <AUX TARGET> displays the SELECT AUX SENDS window.

* This is not displayed when no AUX exists.



AUX 1 - AUX (n)	Selects the AUX selected in the knob section area of the HOME screen. Also simultaneously selects AUXes accessed when SENDS ON FADER was on. After selection, the SELECT AUX SENDS window disappears. * The value of (n) depends the number of AUXes created.
SOLO FOLLOWS	Turns on SOLO for the AUX worked with while SENDS ON FADER is on. Also turns on SOLO for the AUX worked with when the AUX is assigned to the knob section area of the HOME screen and the SELECT AUX SENDS window is displayed.
SET SOLO EXCEPTION	AUX is selected unless SOLO is turned on, even when <SOLO FOLLOWS> is on.
KEEP WINDOW	When this is on, the SELECT AUX SENDS window remains open after <AUX 1> - <AUX (n)> is tapped.

Function Mode

Pressing the [FUNC] button in the fader bank section enables the Function mode, and a variety of selectable functions are displayed in the fader bank display.

List of Function Mode Functions

Function	Description	Parameter	Operation
SELECT SOLO	Selects SOLO 1 or SOLO 2.	SOLO 1/SOLO 2/SOLO 1+2	→ "Setting Parameters for Channels Using the Top Panel" (p. 122)
RECALL SAFE	Makes the setting for Recall Safe. Channels set as Recall Safe are excluded from scene recall.	SAFE ON/SAFE OFF	→ "Setting Parameters for Channels Using the Top Panel" (p. 122)
ASSIGN FADER	Assigns a channel to a USER layer.	-	→ "Assigning Channels to Faders" (p. 126)
UNASSIGN FADER	Releases a channel assigned to a USER layer.	-	→ "Canceling Channel Assignments to Faders" (p. 126)
SET COLOR	Selects a channel color.	RED/ORANGE/YELLOW/LIME/GREEN/BLUE/NAVY/VIOLET/BLACK	→ "Setting Parameters for Channels Using the Top Panel" (p. 122)
SET ANCHOR	Sets an anchor channel. → "Anchor Channels" (p. 119)	ANCHOR ON/ANCHOR OFF	→ "Setting Parameters for Channels Using the Top Panel" (p. 122)

Operation Procedures in the Function Mode

The operation procedures in the Function mode are different for when you're setting parameters of your choosing for a channel and when you're assigning a channel of your choosing to a fader.

Setting Parameters for Channels Using the Top Panel

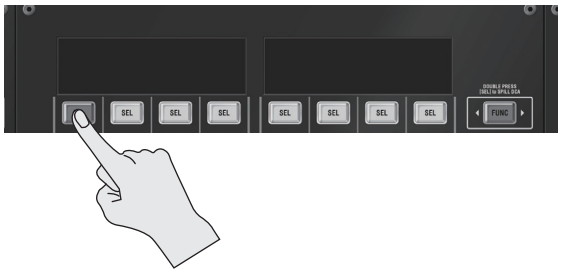
1. Press the [FUNC] button to turn it on (flashing).



All fader banks and assignable faders change to the Function Selection mode. Selectable functions are shown on the fader display.

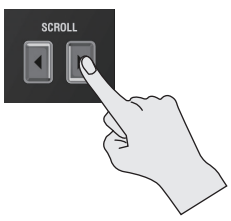


2. Press the [SEL] button to select the desired function.



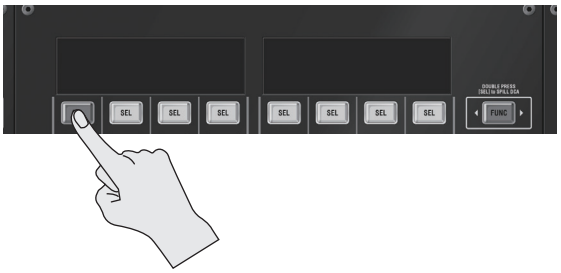
The M-5000 switches to the mode for making the settings for the selected function.

3. Operate the fader bank to access the desired input channel or output bus.





4. Press the [SEL] button to set the parameters for the desired input channel or output bus.



5. Press the [FUNC] button to turn it off (dark).

The M-5000 exits the Function mode.

Assigning Channels to Faders

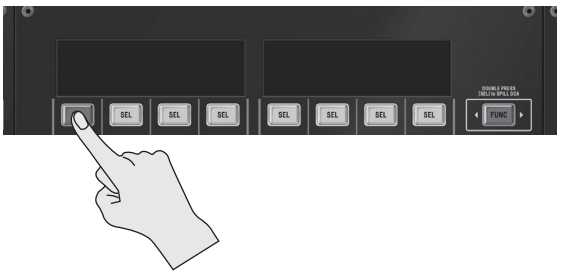
This changes assignments to the [USER 1] through [USER 3] layers and to assignable faders.

1. Press the [FUNC] button.



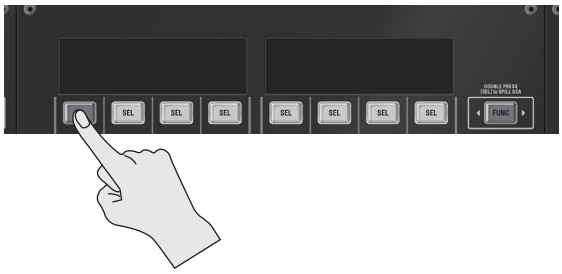
All fader banks and assignable fader sections change to the Function Selection mode. Selectable functions are shown on the fader display.

2. Select "ASSIGN FADER". (Press the corresponding [SEL] button.)



The M-5000 switches to the ASSIGN FADER mode.

3. Press the [SEL] button for the fader whose assignment you want to change to apply a check mark (ASSIGN ☑).



MEMO

You can select multiple faders.

If you selected multiple faders in step 3, then in the following step 4, when you select an input channel or output bus, the channels or buses are assigned in succession, starting with the one you select there.

4. Select the input channel or output bus you want to assign to the fader you selected in step 3, then press the [SEL] button (TO FDRS).

The selected input channel or output bus is assigned to the fader selected in step 3.

MEMO

If you selected multiple faders in step 3, then when you select an input channel or output bus here, the channels or buses are assigned in succession, starting with this one.

5. Repeat steps 3 and 4.

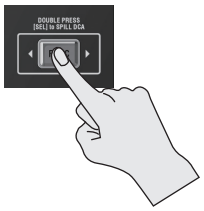
MEMO

You can assign up to 64 input channels and output buses to each of USER 1 through 3 layers.

6. Press the [FUNC] button to exit the Function mode.

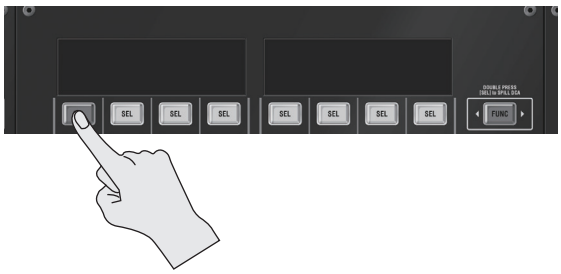
Canceling Channel Assignments to Faders

1. Press the [FUNC] button.



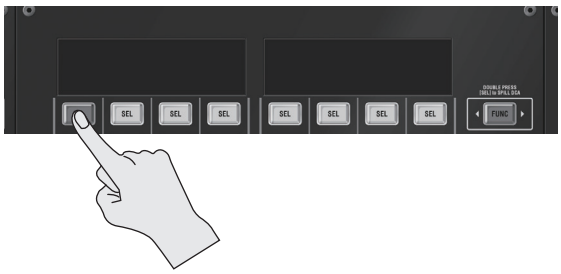
All fader banks and assignable fader sections change to the Function Selection mode. Selectable functions are shown on the fader display.

2. Select "UNASSIGN FADER". (Press the corresponding [SEL] button.)



The M-5000 switches to the UNASSIGN FADER mode.

3. Press the [SEL] button for the fader whose assignment you want to release to apply a check mark (UNASSIGN ☑).



The channel assignment to the fader is cleared.

4. Press the [FUNC] button to exit the Function mode.

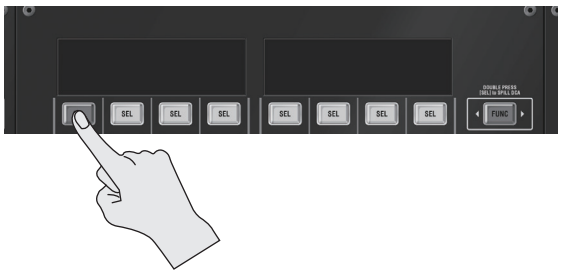
Setting an Anchor Channel

1. Press the [FUNC] button.



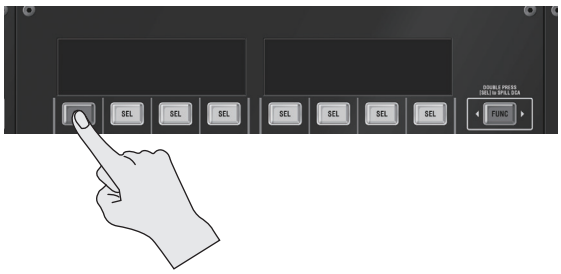
All fader banks and assignable fader sections change to the Function Selection mode. Selectable functions are shown on the fader display.

2. Select "SET ANCHOR". (Press the corresponding [SEL] button.)



The M-5000 switches to the SET ANCHOR mode.

3. Press the [SEL] button for the fader which you want to set an anchor to apply a check mark (ASSIGN ☑).

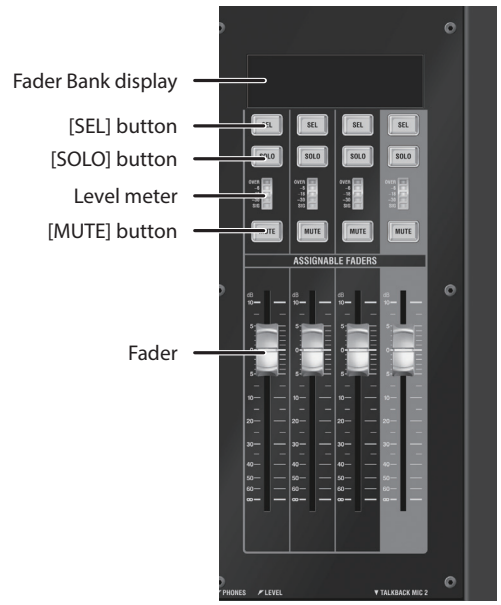


4. Press the [FUNC] button to exit the Function mode.

Assignable Fader Section

About the Assignable Fader Section

You can assign any four channels to the assignable fader section. This lets you keep important channels displayed on the top panel at all times. It can be handy to assign channels that you always want instant access to, such as MASTER, main vocals, and MC mic.



Name	Description
Fader Bank display	This displays information such as the input channel/output bus name and fader value. In the Function mode, it displays a list of functions and parameter values.
[SEL] button	This selects the input channel/output bus and selects the display target. In the function mode, it selects the function and manipulates parameters.
[SOLO] button	This turns solo on and off for the input channel/output bus.
Level meter	This displays the signal level of the input channel/output bus.
[MUTE] button	This turns muting on and off for the input channel/output bus.
Fader	This operates the fader for the input channel/output bus.

The operation procedures for the assignable fader section are nearly the same as for the fader bank section, except for the following differences.

- Layers are not present.
- Switching layers in the fader bank section has no effect.
- Scrolling in the fader bank section has no effect.
- Only two functions are available in the Function mode (ASSIGN FADER and UNASSIGN FADER).

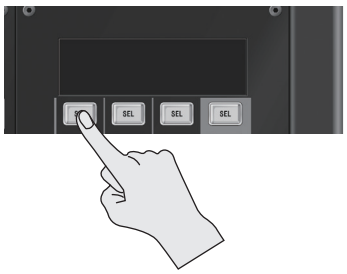
Assigning Channels to Faders

1. Press the [FUNC] button.



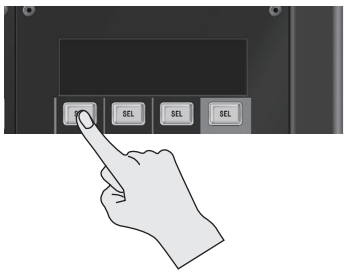
All fader banks and assignable fader sections change to the Function Selection mode. Selectable functions are shown on the fader display.

2. Select "ASSIGN FADER". (Press the corresponding [SEL] button.)



The M-5000 switches to the ASSIGN FADER mode.

3. Press the [SEL] button for the fader whose assignment you want to change to apply a check mark (ASSIGN ☑).



MEMO

You can select multiple faders.

If you selected multiple faders in step 3, then in the following step 4, when you select an input channel or output bus, the channels or buses are assigned in succession, starting with the one you select there.

4. Select the input channel or output bus you want to assign to the fader you selected in step 3, then press the [SEL] button (TO FDRS).

The selected input channel or output bus is assigned to the fader selected in step 3.

MEMO

If you selected multiple faders in step 3, then when you select an input channel or output bus here, the channels or buses are assigned in succession, starting with this one.

5. Repeat steps 3 and 4.

6. Press the [FUNC] button to exit the Function mode.

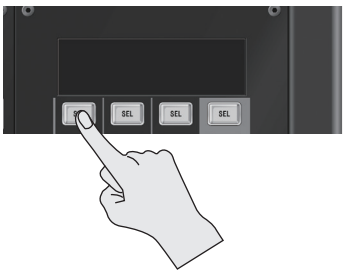
Canceling Channel Assignments to Faders

1. Press the [FUNC] button.



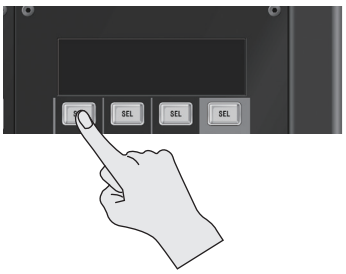
All fader banks and assignable fader sections change to the Function Selection mode. Selectable functions are shown on the fader display.

2. Select "UNASSIGN FADER". (Press the corresponding [SEL] button.)



The M-5000 switches to the UNASSIGN FADER mode.

3. Press the [SEL] button for the fader whose assignment you want to release to apply a check mark (UNASSIGN ☑).



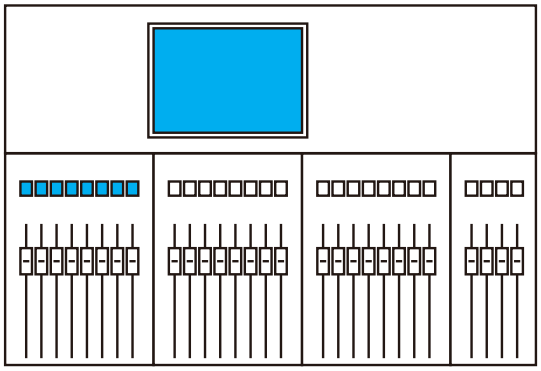
The channel assignment to the fader is cleared.

4. Press the [FUNC] button to exit the Function mode.

Switching the HOME Screen/CH EDIT Screen

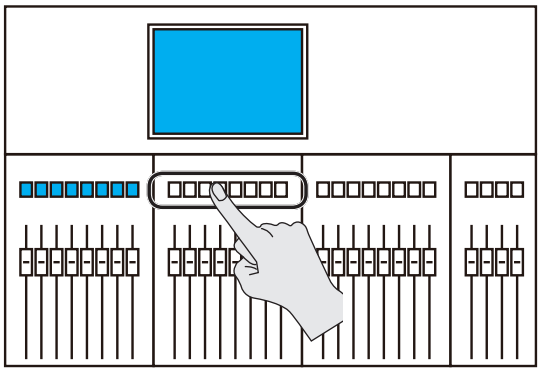
To select which input channels or output buses are displayed on the HOME screen or CH EDIT screen, you use the [SEL] buttons on the top panel.

When the M-5000 starts up, the channel strip for the leftmost fader bank section is displayed.

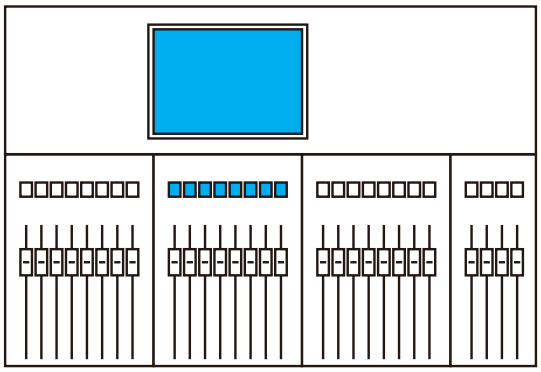


When the HOME Screen Is Displayed

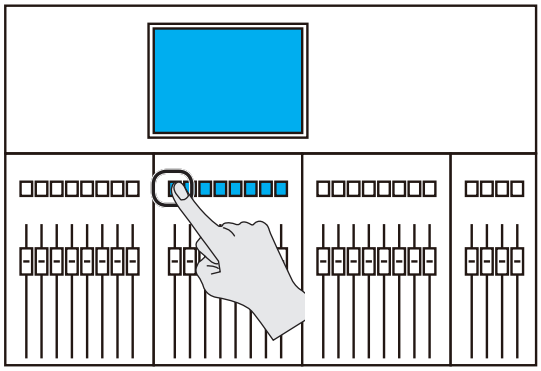
1. Press the [SEL] button for an unselected fader bank section or assignable fader section.



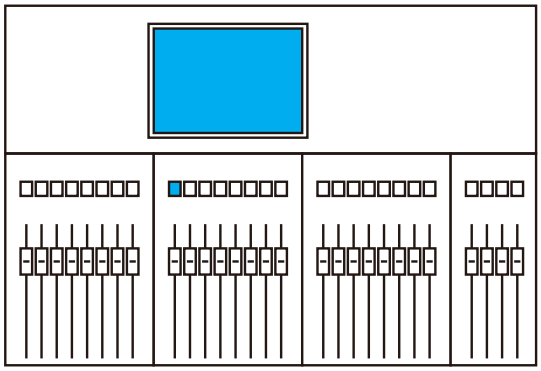
The channel strip (HOME screen) for the selected fader bank section or assignable fader section appears.



2. Press the [SEL] button for the selected fader bank section or assignable fader section.

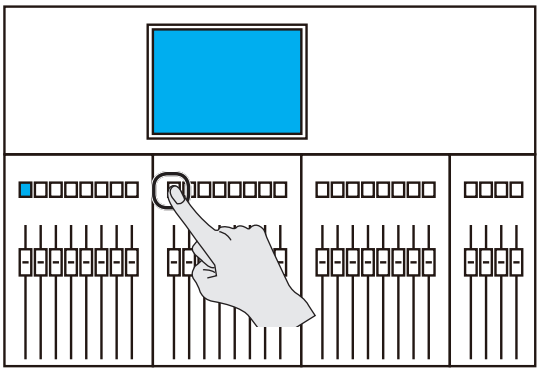


The CH EDIT window for the selected input channel or output bus appears.

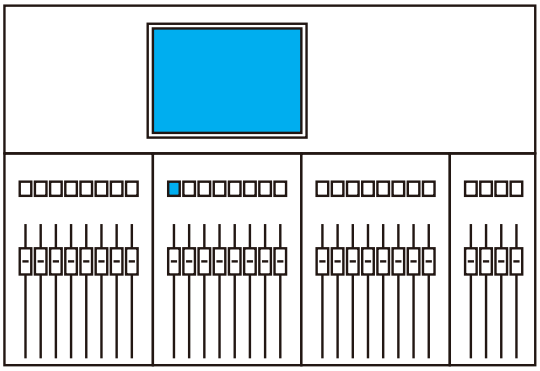


When the CH EDIT Screen Is Displayed

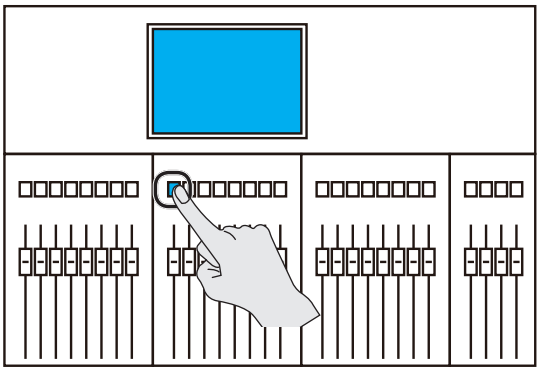
1. Press an unselected [SEL] button.



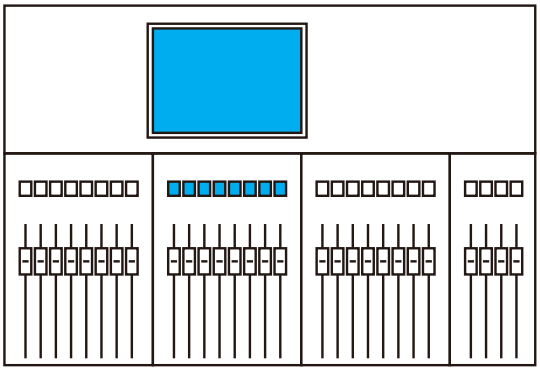
The CH EDIT window for the selected input channel or output bus appears.



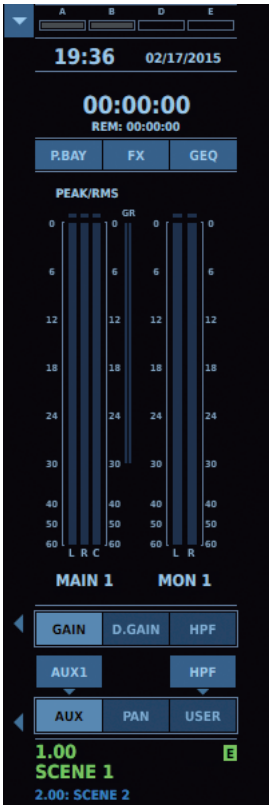
2. Press the selected [SEL] button.



The CH EDIT window disappears and the HOME screen appears.



Sidebar



The sidebar for the HOME screen is always displayed and never hidden, even when various windows are displayed.
Important information that you want to monitor at all times and buttons for accessing important screens are displayed here.

In this chapter, the explanations are organized into the following sections.

- "Sidebar" (p. 130)
- "Overviewing Meters/Faders" (p. 132)
- "Date and Time" (p. 133)
- "Knob-assign Area" (p. 134)
- "Effects" (p. 136)
- "About Effect Types" (p. 140)
- "GEQ" (p. 156)

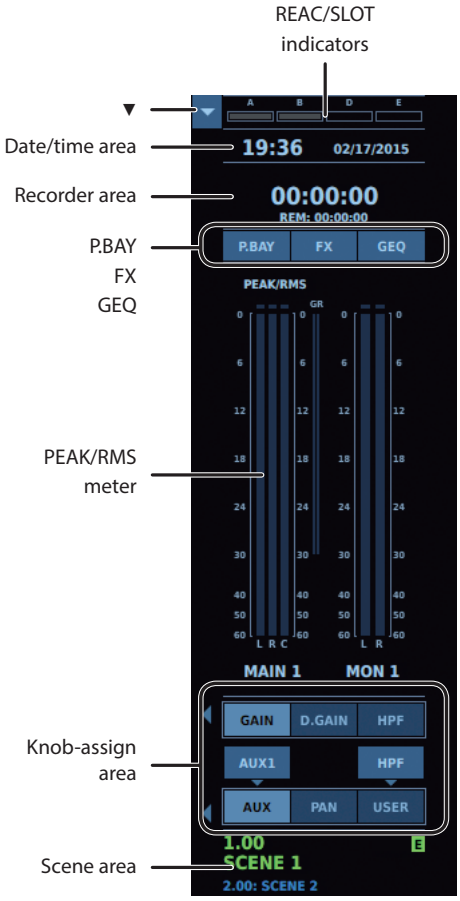
Sidebar

About the Sidebar

The right side of the HOME screen is called the "sidebar."



Important information you want to monitor at all times and buttons for accessing important screens are displayed here.



▼	Displays the meter bridge → "Overviewing Meters/Faders" (p. 132)
REAC/SLOT indicators	Indicate the communication status of the REAC ports and EXPANSION SLOTs. → "Checking the REAC Port and EXPANSION SLOT Communication Status" (p. 130)
Date/time area	Displays the date and time. Tapping this displays the DATE & TIME window. → "Date and Time" (p. 133)
Recorder area	Displays file information and playback/recording time during playback/recording. Tapping this displays the RECORDER window. → "USB Memory Recorder" (p. 180)
P.BAY	Tapping this displays the PATCHBAY window. → "Patchbays" (p. 87)
FX	Tapping this displays the FX window. → "Effects" (p. 136)
GEQ	Tapping this displays the GEQ window. → "GEQ" (p. 156)
PEAK/RMS meter	You can select meters displayed in the sidebar. • PEAK/RMS meter of MAIN 1/2 • PEAK meter of MONITOR 1/2 → "Changing What the PEAK/RMS Meter Displays" (p. 131)
Knob-assign area	Selects parameter to assign to the knob section area of the HOME screen. → "About the Screens for Working with Effects" (p. 136)
SCENE	Displays the currently selected scene (green) and the next scene (blue). Tapping this displays the SCENE window. → "Scene Memory" (p. 174)

Checking the REAC Port and EXPANSION SLOT Communication Status

You can use the "REAC/SLOT indicators" on the sidebar to check the confirmation status of the REAC ports and EXPANSION SLOTs.



A	Indicates the status of REAC A port. When the REAC SPLIT/BACKUP port splits or duplicates (backs up) the REAC A port, the status of the REAC SPLIT/BACKUP port is also displayed.
B	Indicates the status of the REAC B port. When the REAC SPLIT/BACKUP port splits or duplicates (backs up) the REAC B port, the status of the REAC SPLIT/BACKUP port is also displayed.
D	Indicates the status of EXPANSION SLOT D (upper).
E	Indicates the status of EXPANSION SLOT E (lower).

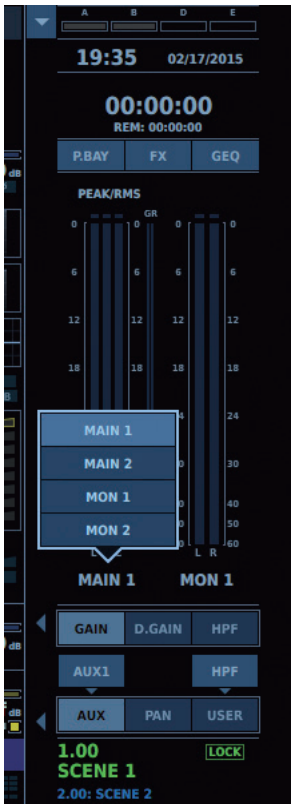
The respective indicators show the following states.

Indicator	Status
Unlighted	No REAC device/optional expansion interface is connected.
Flashing	Connection to a REAC device/optional expansion interface is being established.
Lighted	A REAC device/optional expansion interface is connected correctly.

* When restarting the unit with the expansion interface installed, wait for about one second before you turn on the power.

Changing What the PEAK/RMS Meter Displays

On the PEAK/RMS meter on the sidebar, you can select and display any two from among MAIN 1, MAIN 2, MONITOR 1, and MONITOR 2. To change what is displayed, tap the PEAK/RMS meter.



Overviewing Meters/Faders

Meter Bridge

On the Meter Bridge, you can overview all meters and faders for input channels and output buses.



SETUP	Tapping this displays the METER SETUP popover.
▲	Exits the Meter Bridge.

Displaying the Meter Bridge

To display the Meter Bridge, go to the sidebar and tap <▼>.

METER SETUP Popover

In the METER SETUP popover, you make settings for meters. These settings are applied not only to the Meter Bridge, but also to the HOME screen, the CH EDIT screen, and other meters.

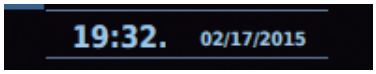


CH METER POINT	Selects the level detection point for the input-channel meter. • CH TOP • POST D.GAIN • PRE FDR • POST FDR
BUS METER POINT	Selects the level detection point for the output-bus meter. • CH TOP • POST D.GAIN • PRE FDR • POST FDR
HOLD	Turns peak hold on/off.
HOLD TIME	Sets the duration for which the peak hold or "over" level indication stays lighted. • 1-4 sec • CONTINUE
OVER LEVEL	Sets the "over" level. When the "over" level is reached, the topmost section of the meter lights up in red.

Date and Time

Checking the Date and Time

You can use the date/time area on the sidebar to check the date and time.

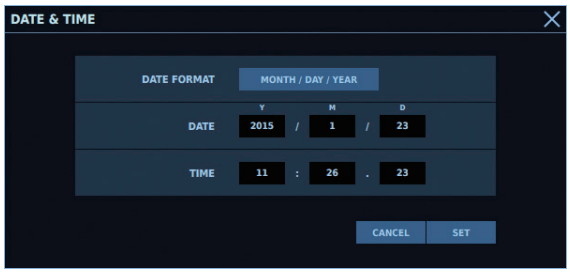


DATE & TIME Window

You use the DATE & TIME window to set the date and time on the M-5000.

To display the DATE & TIME window, go to the HOME screen and tap the <Date/time area>.



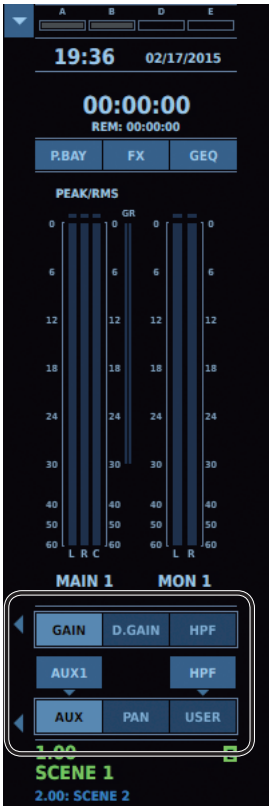


DATE FORMAT	Selects from among the following date formats. • MONTH/DAY/YEAR • DAY/MONTH/YEAR • YEAR/MONTH/DAY
DATE Y	Year
DATE M	Month
DATE D	Day
TIME H	Hour
TIME M	Minute
TIME S	Second
CANCEL	Discards any date and time settings and quits the DATE & TIME window.
SET	Applies the date and time settings and quits the DATE & TIME window.

Knob-assign Area

About the Knob-assign Area

The portion of the sidebar shown below is called the "knob-assign area."



You use this to select parameters to assign to the knob section area of the HOME screen.



GAIN	Assigns the following parameters to the upper portion of the knob section area of the HOME screen. Knob: Preamp gain Button: PAD Button (SHIFT) : +48V * This assigns the following parameters when no analog-audio input/output connectors exist. Knob: D.GAIN
D.GAIN	Assigns the following parameters to the upper portion of the knob section area of the HOME screen. Knob: D.GAIN
HPF	Assigns the following parameters to the upper portion of the knob section area of the HOME screen. Knob: HPF frequency Button: HPF ON/OFF
AUX	Assigns the following parameters to the lower portion of the knob section area of the HOME screen. Knob: AUX send level Button: Send ON/OFF * Pressing and holding this sets the send level to 0.0 dB. Button (SHIFT) : AUX send point **Memo** AUX is switched using the [SCROLL ▲]/[SCROLL ▼] buttons.
PAN	Assigns the following parameters to the lower portion of the knob section area of the HOME screen. Knob: PAN Button: PAN L100/C/R100
USER	Assigns the parameter selected using <USER SELECTABLE> to the lower portion of the knob section area of the HOME screen.
AUX TARGET	Tapping this displays the SELECT AUX SENDS window.
USER SELECTABLE	Tapping this displays the USER SELECTABLE popover.

SELECT AUX SENDS Window

Tapping <AUX TARGET> displays the SELECT AUX SENDS window.

* This is only displayed when an AUX exists.

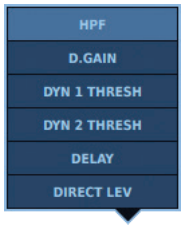


AUX 1 - AUX (n)	Selects the AUX selected in the knob section area of the HOME screen. Also simultaneously selects AUXes accessed when SENDS ON FADER was on. After selection, the SELECT AUX SENDS window disappears. * The value of (n) depends the number of AUXes created.
SOLO FOLLOWS	Turns on SOLO for the AUX worked with while SENDS ON FADER is on. Also turns on SOLO for the AUX worked with when the AUX is assigned to the knob section area of the HOME screen and the SELECT AUX SENDS window is displayed.
SET SOLO EXCEPTION	AUX is selected unless SOLO is turned on, even when <SOLO FOLLOWS> is on.
KEEP WINDOW	When this is on, the SELECT AUX SENDS window remains open after <AUX 1> - <AUX (n)> is tapped.

USER SELECTABLE Popover

Tapping <USER SELECTABLE> displays the USER SELECTABLE popover.

To assign a parameter selected using the USER SELECTABLE popover to the knob section area, go to the knob-assign area and tap <USER>.



HPF	Selects the following parameters. Knob: HPF frequency Button: HPF ON/OFF
D.GAIN	Selects the following parameters. Knob: D.GAIN
DYN 1 THRESH	Selects the following parameters. Knob: DYNAMICS 1 threshold Button: DYNAMICS 1 ON/OFF
DYN 2 THRESH	Selects the following parameters. Knob: DYNAMICS 2 threshold Button: DYNAMICS 2 ON/OFF
DELAY	Selects the following parameters. Knob: DELAY TIME Button: DELAY ON/OFF
DIRECT LEV	Selects the following parameters. Knob: DIRECT OUT LEVEL Button: DIRECT OUT ON/OFF

Effects

About Effects

The M-5000 is provided with eight stereo effect systems.

For each effect, you can freely select from among 22 high-quality effect types for use.

→ "About Effect Types" (p. 140)

About the Screens for Working with Effects

You use the FX RACK window to make settings for effect input/output, effect type, and the like.

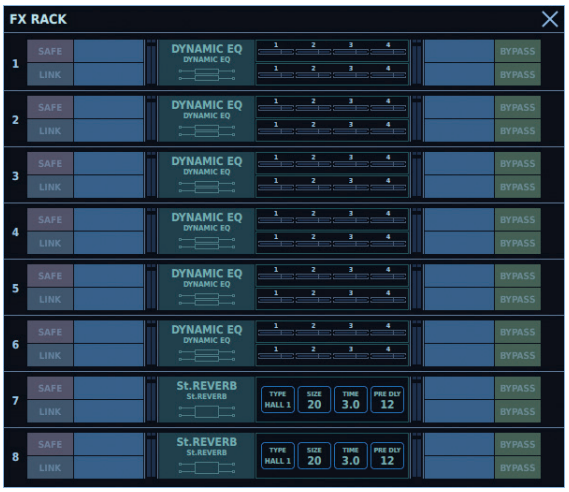
→ "FX RACK Window" (p. 136)

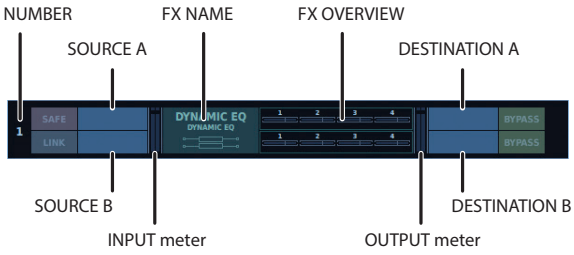
From the FX RACK window, you can display an FX EDIT window for each effect, and in the FX EDIT window you work with advanced parameters for the respective effect.

→ "FX EDIT Window" (p. 138)

FX RACK Window

In the FX RACK window, you make settings for effect input/output, effect type, and the like. The settings for FX 1-8 are displayed in a row.

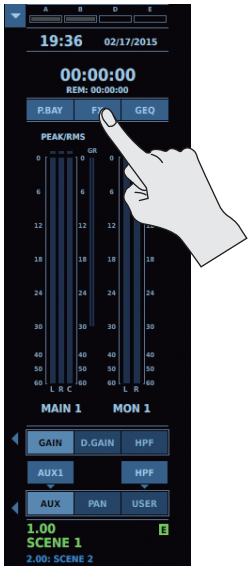




NUMBER	Indicates the effect number.
SAFE	Excludes from scene recall.
LINK	Links the effect's L/R parameters.
SOURCE A **SOURCE B**	Selects the effect input source or insert destination.
INPUT meter	Effect input level
FX NAME	Displays the following information. • Selected effect type • Library name • Effect input/output type Tapping this displays the effect library popover. → "Effect Library Popover" (p. 137)
FX OVERVIEW	Overview of effect parameters Tapping this displays the FX EDIT window. → "FX EDIT Window" (p. 138)
OUTPUT meter	Effect output level
DESTINATION A **DESTINATION B**	Selects the effect output destination. Selection is not possible when <SOURCE> has been used to insert an effect.
BYPASS	Bypass

Displaying the FX RACK Window

To display the FX RACK window, go to the HOME screen and tap <FX>.



Effect Library Popover

Use effect library popover to select the efect library.



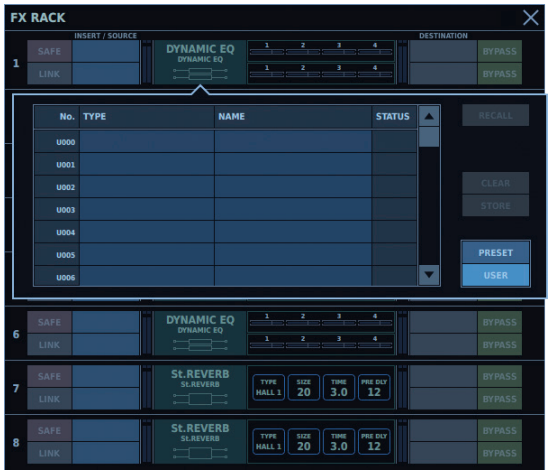
PRESET	Displays the preset of the effect library.
USER	Displays the effect library user create.

Effect Library (Preset)



TYPE	Effect type → "About Effect Types" (p. 140)
No.	Effect library number
NAME	Effect library name Tapping this selects the effect library.
RECALL	Recalls the selected library data.

Effect Library (User)



No.	Effect library number
TYPE	Effect type Tapping this selects the effect library. → "About Effect Types" (p. 140)
NAME	Effect library name Tapping this selects the effect library. Double-tap or long tap, then set the library name.
STATUS	When <LOCK> is on, libraries cannot be edited.
RECALL	Recalls the selected library data.
CLEAR	Clears the selected library data.
STORE	Stores the selected library data.

FX EDIT Window

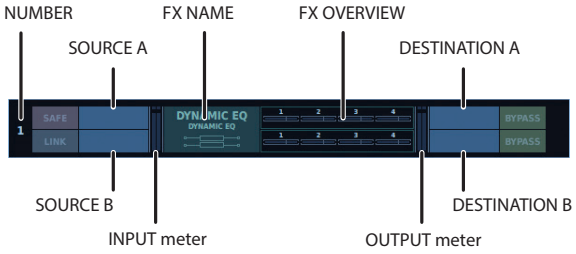
In the FX EDIT window, you work with advanced parameters for the respective effects.

The layout of the FX EDIT window varies according to effect type, but the general layout is as shown below.



Rack Area

The same parameters as in the FX RACK window are displayed for the effect you're working with.



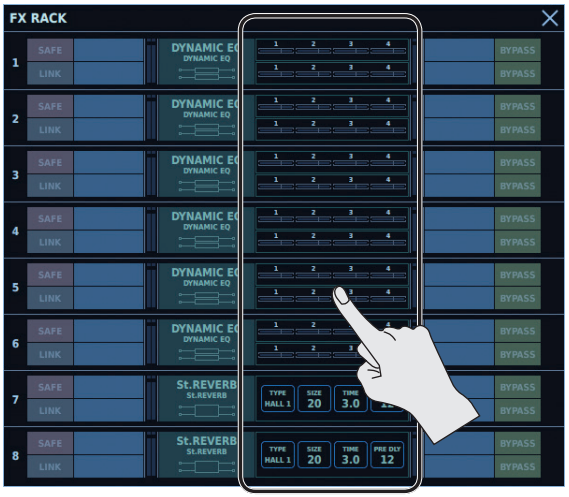
NUMBER	Indicates the effect number.
SAFE	Excludes from scene recall.
LINK	Links the effect's L/R parameters.
SOURCE A **SOURCE B**	Selects the effect input source or insert destination.
INPUT meter	Effect input level
FX NAME	Displays the following information. • Selected effect type • Library name • Effect input/output type Tapping this displays the effect library popover. → "Effect Library Popover" (p. 137)
FX OVERVIEW	Overview of effect parameters Tapping this displays the FX EDIT window.
OUTPUT meter	Effect output level
DESTINATION A **DESTINATION B**	Selects the effect output destination. Selection is not possible when <SOURCE> has been used to insert an effect.
BYPASS	Bypass

Parameter Area

Here you work with advanced parameters for the respective effects. The content is different for each individual effect. For details, refer to "About Effect Types" (p. 140).

Displaying the FX EDIT Window

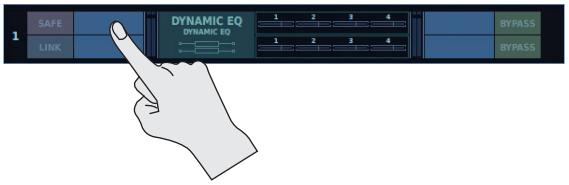
To display the FX EDIT window, go to the FX RACK window and tap <FX OVERVIEW>.



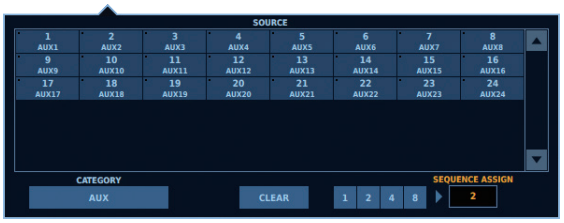
Making Effect Input/Output Settings

Using an FX with Send/Return

1. Tap <SOURCE A> or <SOURCE B> on the FX RACK window.



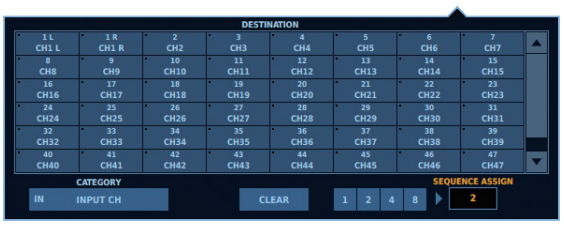
The SOURCE popover appears.



2. Select the AUX to send to the FX.

3. Tap <DESTINATION A> or <DESTINATION B>.

The DESTINATION popover appears.



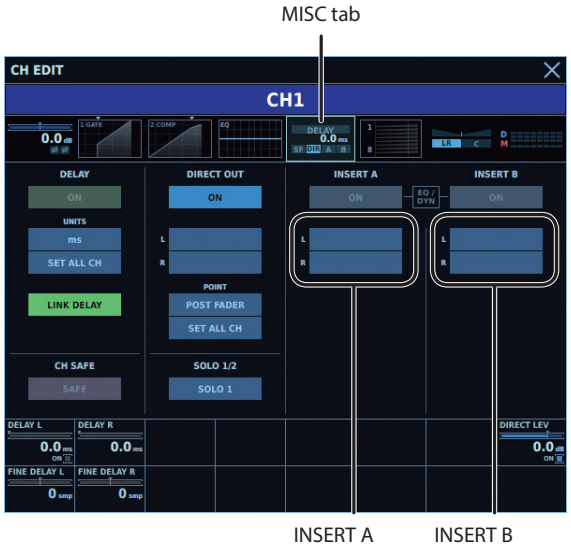
4. Select the input channel for returning the FX.

Inserting an FX

1. Display the CH EDIT window.

→ "CH EDIT Window" (p. 100)

2. Tap the <MISC tab>.



3. Tap <INSERT A> or <INSERT B>, then select the number of the FX to insert.



Memo

If the input channel or output bus is stereo, you can make insertions at the following four locations.

- <INSERT A - L>
- <INSERT A - R>
- <INSERT B - L>
- <INSERT B - R>

4. Tap INSERT A <ON> or INSERT B <ON>.

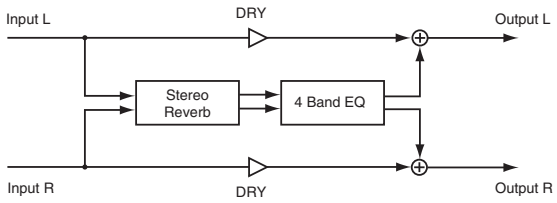
The selected FX is inserted.

About Effect Types

This section covers the 22 high-quality effect types you can select on the M-5000.

Reverb

STEREO REVERB



This is a stereo-in, stereo-out reverb. It adds reverberation without impairing the position of the sound image that's been set for the stereo input, by panning or other means.

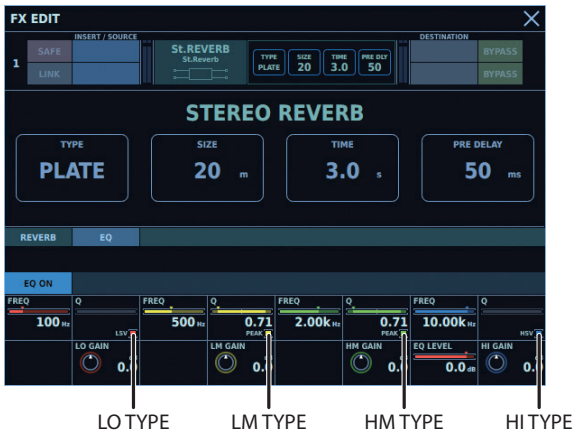
When STEREO REVERB is selected, two tabs are displayed.

REVERB Tab



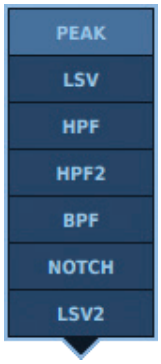
REVERB TYPE	Type of reverb • ROOM1 • ROOM2 • HALL1 • HALL2 • HALL3 • PLATE
BINAURAL FILTER	Binaural filter
SIZE	Size of the room or hall
TIME	Length of the reverberation
PRE DELAY	Time until the reverb is heard
ER LEVEL	Level of the early reflections
DIFFUSION	Adjusts the change in the density of the reverb over time. The higher the value, the more the density increases with time. The effect of this setting is most pronounced with long reverb times.
DENSITY	Density of the early reflection/reverb sound
WET	Level of the reverb sound
DRY	Level of the original sound
LF DMP GAIN	Low-frequency attenuation of the reverb sound
LF DMP FREQ	Frequency at which the low-frequency region of the reverb sound begins to be attenuated * This setting is in effect even when LF DAMP GAIN is 0 dB.
HF DMP GAIN	High-frequency attenuation of the reverb sound
HF DMP FREQ	Frequency at which the high-frequency region of the reverb sound begins to be attenuated * This setting is in effect even when HF DAMP GAIN is 0 dB.
HI CUT FREQ	Frequency at which the high-frequency region of the reverb sound will be cut
SPREAD	Reverb spread
MIX BALANCE	L/R output level balance of the reverb

EQ Tab



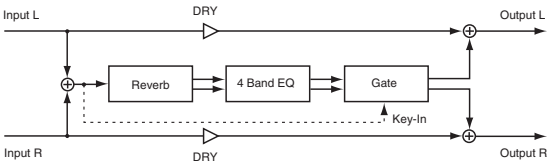
EQ ON	Turns the EQ on/off
FREQ	Center frequency
Q	Sharpness of the frequency-response curve
TYPE	Displays the Filter Type Selection popover.
GAIN	Gain
EQ LEVEL	EQ level

Filter Type Selection Popover



PEAK	Peaking
LSV	Low shelving
HSV	High shelving
HPF	High-pass filter (-6 dB/oct)
HPF2	High-pass filter (-12 dB/oct)
LPF	Low-pass filter (-6 dB/oct)
LPF2	Low-pass filter (-12 dB/oct)
BPF	Bandpass filter
NOTCH	Notch filter
LSV2	Low shelving with controllable Q
HSV2	High shelving with controllable Q

REVERB



This is a mono-in, stereo-out reverb. It provides a gate that can be used for gating or ducking, allowing you to cut the reverb during its decay, or to cut the reverb when the level of the original sound is high.

When REVERB+GATE is selected, three tabs are displayed.

REVERB Tab



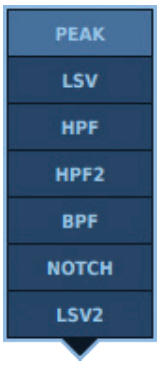
SIZE	Size of the room or hall
TIME	Length of the reverberation
PRE DELAY	Time until the reverb is heard
ER LEVEL	Level of the early reflections
DIFFUSION	Adjusts the change in the density of the reverb over time. The higher the value, the more the density increases with time. The effect of this setting is most pronounced with long reverb times.
DENSITY	Density of the early reflection/reverb sound
WET	Level of the reverb sound
DRY	Level of the original sound
LF DMP GAIN	Low-frequency attenuation of the reverb sound
LF DMP FREQ	Frequency at which the low-frequency region of the reverb sound begins to be attenuated * This setting is in effect even when LF DAMP GAIN is 0 dB.
HF DMP GAIN	High-frequency attenuation of the reverb sound
HF DMP FREQ	Frequency at which the high-frequency region of the reverb sound begins to be attenuated * This setting is in effect even when HF DAMP GAIN is 0 dB.
HI CUT FREQ	Frequency at which the high-frequency region of the reverb sound will be cut

EQ Tab



EQ ON	Turns the EQ on/off
FREQ	Center frequency
Q	Sharpness of the frequency-response curve
TYPE	Displays the Filter Type Selection popover.
GAIN	Gain
EQ LEVEL	EQ level

Filter Type Selection Popover



PEAK	Peaking
LSV	Low shelving
HSV	High shelving
HPF	High-pass filter (-6 dB/oct)
HPF2	High-pass filter (-12 dB/oct)
LPF	Low-pass filter (-6 dB/oct)
LPF2	Low-pass filter (-12 dB/oct)
BPF	Bandpass filter
NOTCH	Notch filter
LSV2	Low shelving with controllable Q
HSV2	High shelving with controllable Q

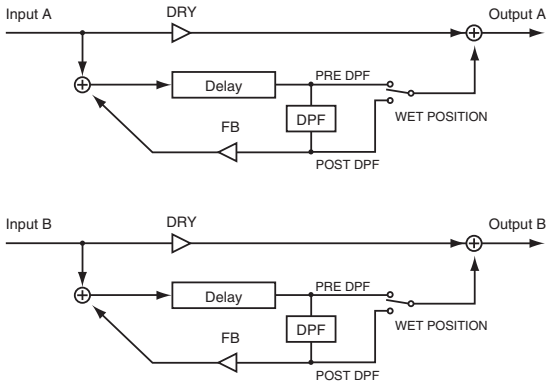
GATE Tab



GATE ON	Turns the gate on/off
GATE TYPE	GATE: Sound lower than the THRESHOLD level will be attenuated by the amount specified by RANGE DUCKING: Sound that exceeds the THRESHOLD level will be attenuated by the amount specified by RANGE
THRESHOLD	Threshold level
RANGE	Range
ATTACK	Attack time
RELEASE	Release time
HOLD	Hold time

Delay

DELAY x2

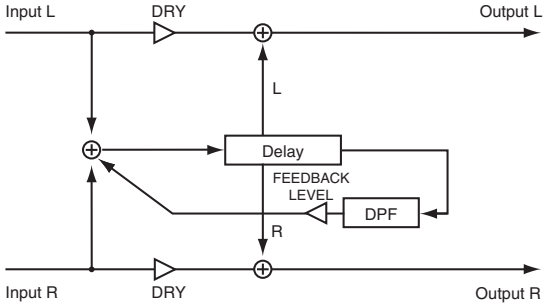


This is a dual-mono delay.
The operation procedures for A and B are the same.



WET POSITION	The wet position specifies how the delay's wet signal is related to the position of the DPF (Damp Filter). PRE DAMP: Takes the wet sound from before the damp filter. The signal before passing through the damp filter is used as the wet signal. In this case, the damp filter is applied only to the delay feedback. POST DAMP: Takes the wet sound from after the damp filter. The signal after passing through the damp filter is used as the wet signal. In this case, the damp filter is applied to all of the delay sound.
DELAY TIME	Time between the original sound and when the delay is heard 0.0-1350ms
TAP	Tap Tempo Specifies the DELAY TIME as the average interval at which the button is pressed.
FEEDBACK	Amount of delayed sound returned to the input of the delay. The feedback level specifies the amount of sound that is returned. Increasing this setting will increase the number of delay repetitions.
WET LEVEL	Level of the delay sound
DRY LEVEL	Level of the original sound
LF DMP GAIN	Low-frequency attenuation of the delay sound
LF DMP FREQ	Frequency at which the low-frequency region of the delay sound begins to be attenuated
HF DMP GAIN	High-frequency attenuation of the delay sound
HF DMP FREQ	Frequency at which the high-frequency region of the delay sound begins to be attenuated

LONG DELAY

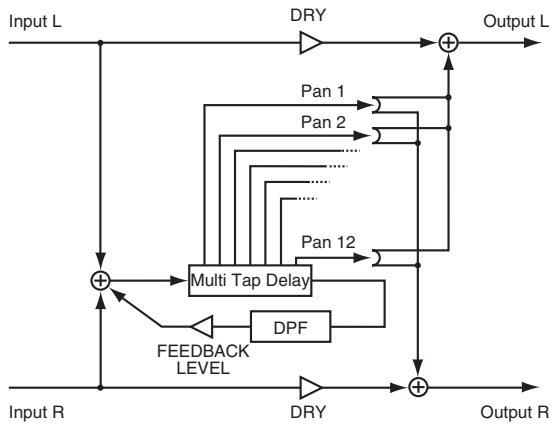


This is a mono-in, stereo-out long delay.



DELAY TIME L	Time from the original sound until the left-channel delay is heard 0.0-2700ms
DELAY TIME L TAP	Tap Tempo Specifies the DELAY TIME L as the average interval at which the button is pressed.
DELAY TIME R	Time from the original sound until the right-channel delay is heard 0.0-2700ms
DELAY TIME R TAP	Tap Tempo Specifies the DELAY TIME R as the average interval at which the button is pressed.
FB TIME	Time until the delayed sound is returned to the input of the delay
FB LEVEL	Amount of delayed sound returned to the input of the delay. The feedback level specifies the amount of sound that is returned. Increasing this setting will increase the number of delay repetitions.
WET LEVEL	Level of the delay sound
DRY LEVEL	Level of the original sound
LF DMP GAIN	Low-frequency attenuation of the delay sound
LF DMP FREQ	Frequency at which the low-frequency region of the delay sound begins to be attenuated
HF DMP GAIN	High-frequency attenuation of the delay sound
HF DMP FREQ	Frequency at which the high-frequency region of the delay sound begins to be attenuated

MULTI TAP DELAY



This is a mono-in, stereo-out twelve-stage tap delay.

When MULTI TAP DELAY is selected, four tabs are displayed.

TIME Tab



DELAY 1-12	Time from the original sound until the delay is heard
TAP	Tap Tempo Specifies the DELAY 1-12 as the average interval at which the button is pressed.

LEVEL Tab



LEVEL 1-12	Level of the delay sound

PAN Tab



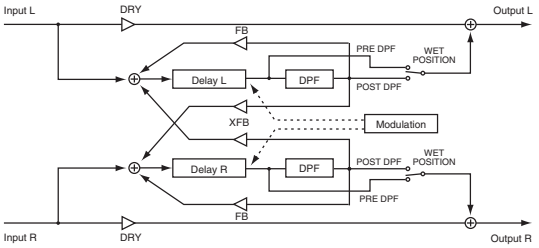
PAN 1-12	Panning of the delay sound

FEEDBACK Tab



FB TIME	Time until the delayed sound is returned to the input of the delay
FB LEVEL	Amount of delayed sound returned to the input of the delay. The feedback level specifies the amount of sound that is returned. Increasing this setting will increase the number of delay repetitions.
WET LEVEL	Level of the delay sound
DRY LEVEL	Level of the original sound
LF DMP GAIN	Low-frequency attenuation of the delay sound
LF DMP FREQ	Frequency at which the low-frequency region of the delay sound begins to be attenuated
HF DMP GAIN	High-frequency attenuation of the delay sound
HF DMP FREQ	Frequency at which the high-frequency region of the delay sound begins to be attenuated

X.MOD DELAY



This is a stereo-in, stereo-out cross-modulation delay.

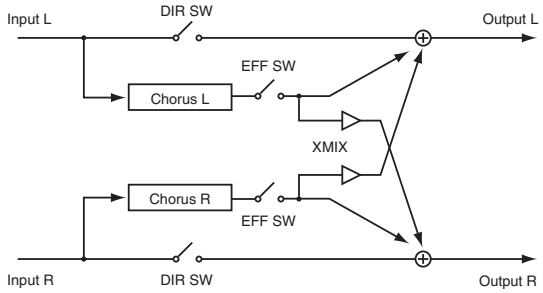


WET POSITION	The wet position specifies how the delay's wet signal is related to the position of the DPF (Damp Filter). PRE DAMP: Takes the wet sound from before the damp filter. The signal before passing through the damp filter is used as the wet signal. In this case, the damp filter is applied only to the delay feedback. POST DAMP: Takes the wet sound from after the damp filter. the signal after passing through the damp filter is used as the wet signal. In this case, the damp filter is applied to all of the delay sound.
MOD WAVE	Waveform used for modulation SIN/SQR/EXP+/EXP-
DELAY TIME L	Time from the original sound until the left-channel delay is heard
DELAY TIME L TAP	Tap Tempo Specifies the DELAY TIME L as the average interval at which the button is pressed.
DELAY TIME R	Time from the original sound until the right-channel delay is heard
DELAY TIME R TAP	Tap Tempo Specifies the DELAY TIME R as the average interval at which the button is pressed.
FEEDBACK	Amount of delayed sound returned to the input of the delay.
X-FEEDBACK	Amount of delayed sound returned to the input of the delay of the opposite side * Cross feedback will feed back the effect sound to the opposite input (left or right).
WET LEVEL	Level of the delay sound
DRY LEVEL	Level of the original sound
LF DMP GAIN	Low-frequency attenuation of the delay sound
LF DMP FREQ	Frequency at which the low-frequency region of the delay sound begins to be attenuated
HF DMP GAIN	High-frequency attenuation of the delay sound
HF DMP FREQ	Frequency at which the high-frequency region of the delay sound begins to be attenuated
MOD RATE	Rate of modulation
MOD DEPTH	Depth of modulation
MOD PHASE	Phase difference between modulation L and R

Modulation

In modulation-type effects, raising the feedback value will make the sound richer and more spacious.
Negative values will invert the phase.

STEREO CHORUS

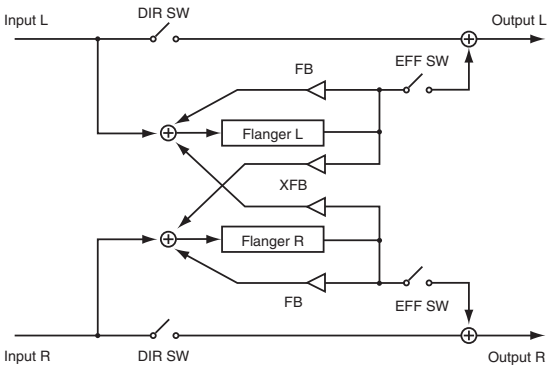


This is a stereo-in, stereo-out chorus. It lets you apply chorus without impairing the position of the sound image that's been set for the stereo input, by panning or other means.



EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
RATE	Chorus rate
DEPTH	Chorus depth
PRE DELAY	Time until the chorus sound is output
X-MIX	Mix amount for the opposite-side chorus
LEVEL	Chorus level

STEREO FLANGER

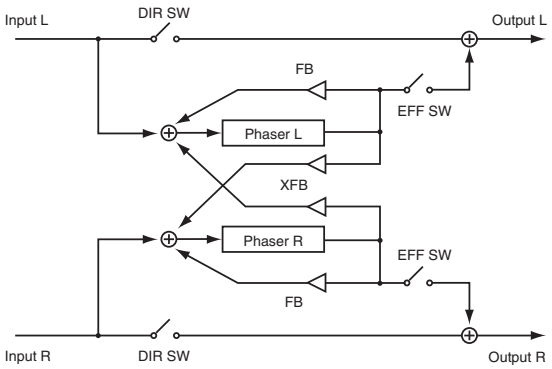


This is a stereo-in, stereo-out flanger. It lets you apply flanging without impairing the position of the sound image that's been set for the stereo input, by panning or other means.



EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
RATE	Flanger rate
DEPTH	Flanger depth
MANUAL	Center frequency at which the flanger effect is applied
LFO PHASE	Phase difference between L and R for the LFO
FEEDBACK	Amount of flanger sound that is returned to the input of the flanger
X-FEEDBACK	Amount of flanger sound that is returned to the opposite-side input of the flanger
LEVEL	Flanger level

STEREO PHASER

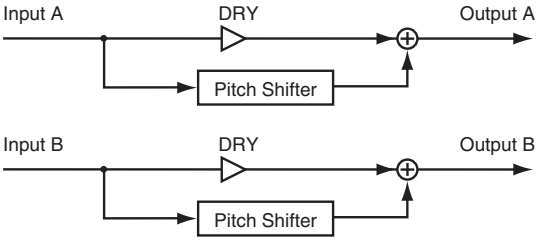


This is a stereo-in, stereo-out phaser. It lets you apply a phaser effect without impairing the position of the sound image that's been set for the stereo input, by panning or other means.



EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
MODE	Type of phaser • 4STAGE • 8STAGE
RATE	Phaser rate
DEPTH	Phaser depth
MANUAL	Center frequency at which the phaser effect is applied
LFO PHASE	Phase difference between L and R for the LFO (Low-Frequency Oscillator)
FEEDBACK	Amount of phaser sound that is returned to the input of the phaser
X-FEEDBACK	Amount of phaser sound that is returned to the opposite-side input of the phaser
LEVEL	Phaser level

PITCH SHIFTER x2



This is a dual-mono pitch shifter.
The operation procedures for A and B are the same.



MODE	MONO VOICE: Suitable for a monophonic voice. MONO INST: Suitable for a monophonic instrument. POLY FAST/POLY MID/POLY SLOW: Suitable for polyphonic instruments
PITCH	Amount of pitch shift (in semitone steps)
FINE PITCH	Amount of pitch shift (in one-cent steps)
WET LEVEL	Level of the pitch-shifted sound
DRY LEVEL	Level of the original sound

MEMO

The difference between POLY FAST, POLY MID, and POLY SLOW is in the length of time (delay) it takes before the pitch-shifted sound is produced.

POLY FAST offers a shorter time until the pitch-shifted sound is heard, but the pitch-shifted sound will be less stable.

POLY SLOW takes a longer time until the pitch-shifted sound is heard, but the pitch-shifted sound will be more stable.

POLY MID has a response time for the pitch-shifted sound that is between POLY FAST and POLY SLOW.

Roland Vintage Effects

RE-201 (Space Echo)

This is a delay that models the Roland RE-201 Space Echo. The original was mono-in, mono-out, but this modeling adds PAN HEAD SHORT/MIDDLE/LONG settings and a REVERB STEREO Sw, allowing you to use it as a mono-in, stereo-out effect.

The RE-201 was a very popular product that was produced from 1974 to 1987.



EFFECT ON	Turns the effect sound on/off
MODE	Mode selector Combination of the three playback heads and reverb
REVERB	Specifies whether the reverb sound will be output in stereo
MODE SEL	Mode selector Combination of the three playback heads and reverb
BASS	Low-frequency tone of the tape echo sound
TREBLE	High-frequency tone of the tape echo sound
REVERB VOL	Level of the reverb sound
DIRECT	Turns the unprocessed sound on/off
REPEAT RATE	Tape speed
INTENSITY	Number of times the delay sound will repeat
ECHO VOL	Volume of the tape echo sound
PAN 1	Panning of the short playback head
PAN 2	Panning of the middle playback head
PAN 3	Panning of the long playback head
TAPE DIST	Adds distortion typical of a tape
W.F. RATE	WOW and FLUTTER RATE Speed of pitch modulation caused by tape aging and uneven rotation
W.F. DEPTH	WOW and FLUTTER DEPTH Depth of pitch modulation caused by tape aging and uneven rotation

The mode selector position corresponds to the playback head and reverb as follows.

		REV	REPEAT				REVERB ECHO						
		ONLY	1	2	3	4	1	2	3	4	5	6	7
MODE SEL		0	1	2	3	4	5	6	7	8	9	10	11
Playback head	S		●				●			●		●	●
	M			●		●		●		●	●		●
	L				●	●			●		●	●	●
Reverb		●					●	●	●	●	●	●	●

SRV-2000 (Digital Reverb)

This is a mono-in, stereo-out reverb that models the Roland SRV-2000 MIDI digital reverb. It provides two modes: REVERB mode in which it operates as a conventional reverb, and NON LNR (non-linear) mode in which the reverb sound is cut off according to the gate time setting.

When SRV-2000 is selected, two tabs are displayed.

REVERB Tab



MODE	Switches between REVERB mode and NON LNR mode
PRE DELAY	Time until the reverb sound is output • 0–160 ms (REVERB mode) • 0–120 ms (NON LNR mode)
REV TIME	Length of the reverb sound
HF DAMP	Proportion by which the high-frequency range is attenuated (only in REVERB mode)
REV SEL	Type of reverb (only in REVERB mode) P-A, P-B: Two types of PLATE reverb, A or B H37, H32, H26, H22, H15: HALL reverb, Number indicates the room size (in meters) R37, R32, R26, R22, R15, R7.0, R1.0, R0.3: ROOM reverb, Number indicates the room size (in meters)
OUTPUT	Output level of reverb sound
MIX BALANCE	Balance between the direct sound and reverb sound
REV DENSITY	Density of the reverb sound (only in REVERB mode)
ATK GAIN	Attack gain for the early reflections (only in REVERB mode)
ATK TIME	Attack time for the early reflections (only in REVERB mode)
ATK DENSITY	Density of the early reflections (only in REVERB mode)
ATK LEVEL	Level of the early reflections (only in REVERB mode)

MEMO

The lower and upper limits of the value will differ depending on <MODE> and <REV SEL>.

NON LNR mode: -.9-99s
(For negative (-) values, the reverberation will gradually become louder.)

REVERB mode:

REV SEL	REV TIME
P-A, P-B, H37, R37	0.5-99
H32, R32	0.4-90
H26, R26	0.3-70
H22, R22	0.2-50
H15, R15	0.1-30
R7.0	0.1-6.0
R1.0	0.1-1.0
R0.3	0.1-0.5

EQ Tab



LOW FREQ	Center frequency for the LOW EQ
L BOOST/CUT	Amount of boost/cut for the LOW EQ
MID FREQ	Center frequency for the MID EQ
MID Q	Sharpness of the MID EQ frequency-response curve
M BOOST/CUT	Amount of boost/cut for the MID EQ
HIGH FREQ	Center frequency for the HIGH EQ
HIGH Q	Sharpness of the HIGH EQ frequency-response curve
H BOOST/CUT	Amount of boost/cut for the HIGH EQ

SDE-3000 x2 (Digital Delay)

This is a delay that models the Roland SDE-3000 digital delay. The original unit was mono-in, mono-out, but this modeling provides a dual-mono configuration with two such units in parallel. The MOD LINK Sw allows you to use this as a stereo-in, stereo-out unit.
The SDE-3000 was released in 1983, and was used in numerous recording studios and PA systems around the world.

The operation procedures for A and B are the same.



MOD LINK	Specifies whether the modulation of the two SDE-3000 units will be linked
MOD B	Specifies whether to invert the phase of the modulation for channel B NORM/INV
EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
FILTER	Changes the frequency response of the delay sound
TIME x2	OFF: TIME 0-1500ms(EXPAND 1.00) Frequency response 10 Hz–17 kHz (+0.5 dB/-3 dB) ON: TIME 0-3000ms(EXPAND 1.00) Frequency response 10 Hz–8 kHz (+0.5 dB/-3 dB)
DLY PHASE	Reverse/normal phase for the delay sound (useful in conjunction with modulation)
MOD	Modulation on/off
FB PHASE	Reverse/normal phase for the delay sound feedback
TIME	Time from original sound to when delay sound is heard 0-1500ms(SYNC Sw OFF) OFF, 1/64T-1/1(SYNC Sw ON)
TAP	Tap Tempo Specifies the TIME as the average interval at which the button is pressed.
FEEDBACK	Amount of delay sound returned to the delay's input
OUT	Output level of the delay sound
MOD RATE	Modulation oscillator frequency
MOD DEPTH	Modulation depth
EXPAND	Expands the TIME by up to 1.60 times

Memo

Just as in the original unit, the EXP A/B setting will change the sampling frequency of processing. For inputs other than an electric guitar or electric bass, an alias noise may be generated. If this occurs, lower the value to a point where alias noise does not occur.

SDD-320 (Dimension D Chorus)

This is a stereo-in, stereo-out chorus that models the Roland SDD-320 Dimension D.

The SDD-320 was released in 1979, and became standard equipment in many recording studios.



EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
INPUT MODE	Input signal stereo/mono setting
DIMENSION MODE	Specifies how the chorus changes (OFF / 1 / 2 / 3 / 4 / 1+4 / 2+4 / 3+4)
LEVEL	Output level

SPH-323 x2 (Phase Shifter)

This is a phase shifter that models the Roland SPH-323 Phase Shifter. The original was mono-in, mono-out, but this modeling is a dual-mono design with two units in parallel. The MOD LINK Sw allows you to use this as a stereo-in, stereo-out effect.

The operation procedures for A and B are the same.



MOD LINK	Specifies whether the modulation of the two SPH-323 units will be linked
MOD B	Specifies whether the phase of the modulation for channel B will be inverted
EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
SHIFT MODE	Specifies the number of stages for the phaser 8STAGE/4STAGE
LFO-1 DEPTH	LFO1 modulation depth
LFO-1 RATE	LFO1 modulation rate
LFO-2 DEPTH	LFO2 modulation depth
LFO-2 RATE	LFO2 modulation rate
CENTER FREQ	Center frequency at which the phaser effect is applied
RESONANCE	Boosts the region around the center frequency specified by CENTER FREQ
LEVEL	Output level

SBF-325 (Stereo Flanger)

This is a stereo-in, stereo-out flanger that models the Roland SBF-325 Stereo Flanger.



EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
EFFECT MODE	FLANGER I: Monaural mode flanger FLANGER II: Stereo mode flanger FLANGER III: Cross-mix mode flanger OFF: Modulation off CHORUS: Chorus
CH-A PHASE	Specifies whether the channel A flanger sound will be phase-reversed NORM/INV
CH-B MOD	Specifies whether the channel B flanger effect will be inverted NORM/INV
CH-B PHASE	Specifies whether the channel B flanger sound will be phase-reversed NORM/INV
FEEDBACK	Amount of flanger sound returned to the input (valid only if EFFECT MODE is set to FLANGER)
CENTER FREQ	Center frequency at which the flanger effect is applied
MOD RATE	Modulation rate
MOD DEPTH	Modulation depth
LEVEL	Output level

BOSS Compact Pedal Effects

CE-1 (Chorus Ensemble)

This is a chorus modeled on the Boss CE-1 Chorus Ensemble.

The original has mono in and mono out (or wet/dry out) specifications, but the modeling adds a mode selection switch that also enables use as an effect with stereo in or stereo out specifications. The modeling also provides a level knob for adjusting the output level.

The CE-1 was launched in 1976 as the first Boss-branded product.



EFFECT ON	Turns the effect sound on/off
INPUT MODE	MONO: Signals input to IN L and IN R for use as mono in or mono out effects are mixed. The same signal is output from OUT L and OUT R. MONO-ST: Used as effects for mono in or wet/dry out (OUT L: wet out, OUT R: dry out) STEREO: Used as effects for stereo in or stereo out
CHORUS/VIBRATO	CHORUS/VIBRATO
LEVEL	Adjustment of output level
CHO INTENS	Adjustment of chorus effect
VIB DEPTH	Depth of vibrato effect
VIB RATE	Cycle of vibrato effect

DD-3 x2 (Digital Delay)

This is a delay modeled on the Boss DD-3 Digital Delay.
The original has mono in and mono out (or delay/direct out) specifications, but the modeling has dual mono specifications that simulate two units in parallel.

The operation procedures for A and B are the same.



EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
MODE	S.50ms: Delay time of 12.5 ms to 50 ms M.200ms: Delay time of 50 ms to 200 ms L.800ms: Delay time of 200 ms to 800 ms HOLD: Hold effect When <ON> is on, the last sound will take on the Hold effect. The <D.TIME> adjust the hold time. When you change the <D.TIME> while the hold sound is heard, its pitch changes; turn it clockwise lowers the pitch and counter-clockwise raises it.
E.LEVEL	Level of delay sound
F.BACK	Repetition of delay sound
D.TIME	Fine-tuning of delay time Continuously variable from x0.25 to x1 of range setting

DM-3 x2 (Delay)

This is a delay modeled on the Boss DM-3 Delay.
The original has mono in and mono out (or delay/direct out) specifications, but the modeling has dual mono specifications that simulate two units in parallel.

The operation procedures for A and B are the same.



EFFECT ON	Turns the effect sound on/off
DIRECT ON	Turns the unprocessed sound on/off
RPT RATE	Adjusts the delay time
ECHO	Level of delay sound
INTENSITY	Repetition of delay sound

DIST x2 (Distortion/Overdrive)

This is distortion/overdrive that has dual mono specifications with noise suppressor.
<MODE A>/<MODE B> enables use as either distortion or overdrive.

The operation procedures for A and B are the same.



EFFECT ON	Turns the effect sound on/off
MODE	Used as DISTORTION/OVERDRIVE
LEVEL	Level of effect sound
TONE	Adjusts tone
GAIN	Adjusts amount of distortion
NS THR	Adjust the threshold level of the noise suppressor
NS DECAY	Adjusts the decay time when the input level for the noise suppressor falls below the threshold level

MULTIBAND DYNAMICS

This regularizes the volume level for separate bands (low, midrange, and high).

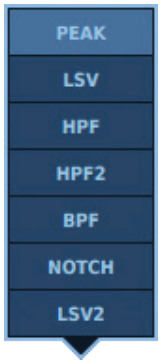
When MASTERING is selected, six tabs are displayed.

EQ Tab



EQ ON	Equalizer on/off
HPF SLOPE	HPF slope characteristics -6dB/oct, -12dB/oct, -18dB/oct
FREQ	Center frequency
Q	Sharpness of the frequency-response curve
TYPE	Displays the Filter Type Selection popover.
GAIN	Gain
HPF	HPF center frequency
ON	Turns HPF on/off.
EQ LEVEL	EQ level

Filter Type Selection Popover



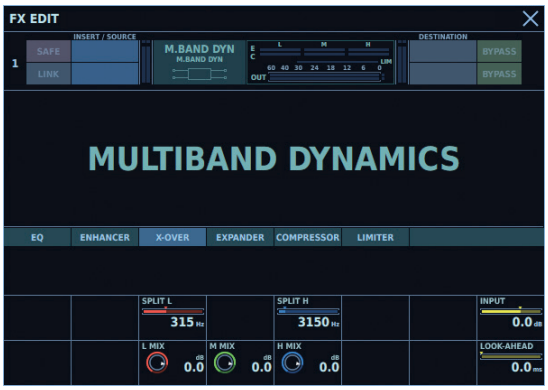
PEAK	Peaking
LSV	Low shelving
HSV	High shelving
HPF	High-pass filter (-6 dB/oct)
HPF2	High-pass filter (-12 dB/oct)
LPF	Low-pass filter (-6 dB/oct)
LPF2	Low-pass filter (-12 dB/oct)
BPF	Bandpass filter
NOTCH	Notch filter
LSV2	Low shelving with controllable Q
HSV2	High shelving with controllable Q

ENHANCER Tab



ENHANCER ON	Enhancer on/off
SENS	Amount of enhancer effect
FREQ	Frequency at which application of the enhancer effect starts
MIX	Volume level of enhancer sound

X-OVER Tab



SPLIT L	Frequency for splitting the original sound into 3 bands (low end)
SPLIT H	Frequency for splitting the original sound into 3 bands (high end)
L MIX	Volume level of the low band after passing through the LO MIX (low-mix level) expander and compressor
M MIX	Volume level of the middle band after passing through the MID MIX (middle-mix level) expander and compressor
H MIX	Volume level of the high band after passing through the HI MIX (high-mix level) expander and compressor
INPUT	Overall volume level before entering expander/ compressor
LOOK-AHEAD	Look-ahead time Time by which the original sound input is delayed

Memo

With an ordinary compressor, a momentary delay occurs before compression starts after an exceeded level is detected.

This algorithm is intended to avoid this problem by using only detection of the input-sound level to use sound delayed by a specified amount for actual processing and output.

The delay-time setting for this is input look-ahead time (LOOK-AHEAD).

Applying look-ahead time creates a time lag between input and output audio signals, and so care is required when using it with channel insertion or the like.

EXPANDER Tab



EXPANDER ON	Expander on/off
ATTACK	Interval until application of the expander effect starts after the input level falls below the threshold level
RELEASE	Interval until application of the expander effect ends after the input level surpass the threshold level
THRESHOLD	Volume level at which application of the expander effect starts
RATIO	Ratio of output compression when the input level falls below the threshold level

LIMITER Tab



LIMITER ON	Limiter on/off
SOFT CLIP	Suppresses prominent distortion when extreme compressor/limiter effect is applied
ATTACK	Interval until application of the limiter effect starts after the input level exceeds the threshold level
RELEASE	Interval until application of the limiter effect ends after the input level falls below the threshold level
THRESHOLD	Volume level at which application of the limiter effect starts
OUTPUT	Overall volume level after passing through the limiter

COMPRESSOR Tab



COMPRESSOR ON	Compressor on/off
ATTACK	Interval until application of the compressor effect starts after the input level exceeds the threshold level
RELEASE	Interval until application of the compressor effect ends after the input level falls below the threshold level
THRESHOLD	Volume level at which application of the compressor effect starts
RATIO	Ratio of output compression when the level is exceeded

Memo

The compressor automatically corrects the level to optimal based on the settings for the threshold level (THRESHOLD) and ratio (RATIO). Also, because longer attack times (ATTACK) can cause distortion, a margin of -6 dB is applied. Adjust the mixer (L/M/H MIX) level on X-OVER tab as required.

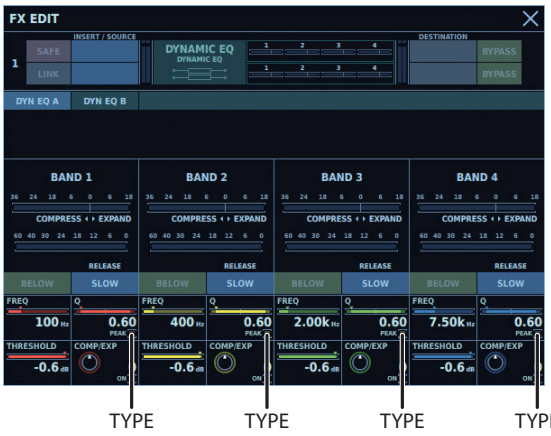
DYNAMIC EQ

This applies a compressor or expander around a specific frequency. You can make settings for four bands each for A and B.
The operation procedures for A and B are the same.

MEMO

The center-frequency setting ranges for each band are as follows.

- Band1: 40Hz-320Hz
- Band2: 150Hz-1.6kHz
- Band3: 800Hz-9kHz
- Band4: 1.6kHz-18kHz



BELOW	ON: Effect applied to incoming signals below the set threshold value OFF: Effect applied to incoming signals above and below the set threshold value
RELEASE	Release time (FAST/SLOW)
FREQ	Center frequency
Q	Sharpness of the frequency-response curve
THRESHOLD	Threshold
COMP/EXP	Compressor/Expander
ON	Turns the respective band on/off.

GEQ

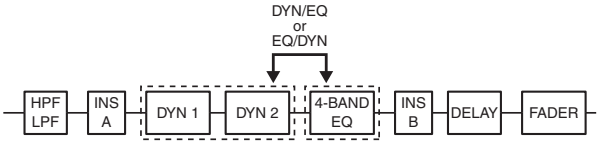
About GEQs

This M-5000 is equipped with 32 GEQ (graphic equalizer) systems (monaural). Any one of them can be configured as

- 31-band GEQ (proportional Q)
- 31-band GEQ (constant Q)
- 8-band PEQ

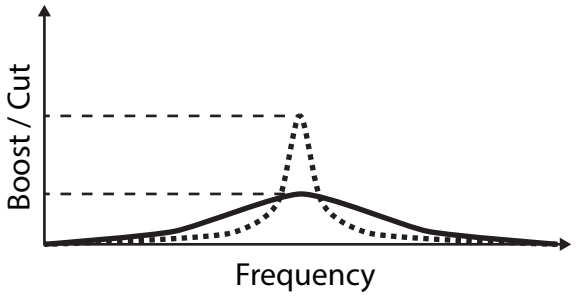
These are ways in which you can use the systems.

You can insert the 31-band GEQ or 8-band PEQ into input channels and output buses. There are two types of locations where you can insert them: INSERT A (before Dynamics and EQ) and INSERT B (after Dynamics and EQ).

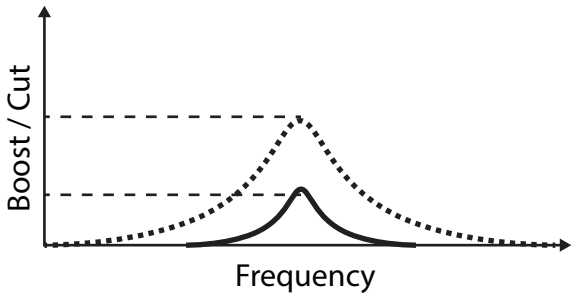


Proportional Q and Constant Q

When a GEQ is set to Proportional Q, larger amounts of boost or cut result in greater Q.

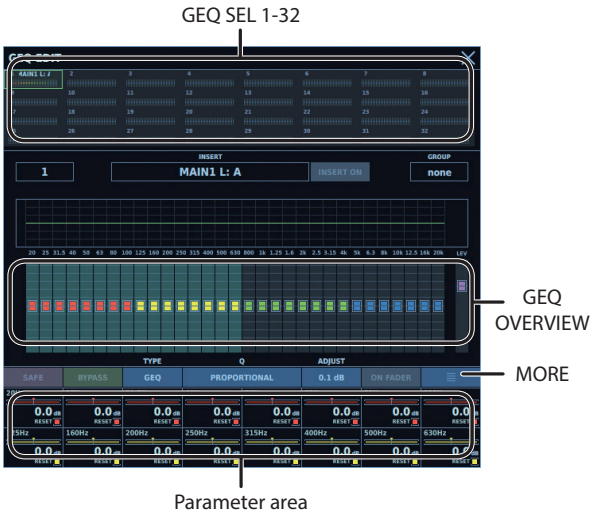


When a GEQ is set to Constant Q, Q is unchanging irrespective of the amounts of boost or cut.



GEQ EDIT window (GEQ)

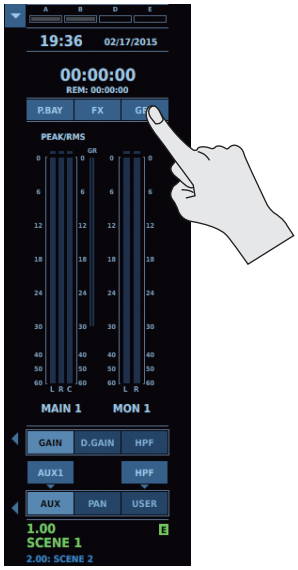
In the GEQ EDIT window, you make settings for GEQ input and output, parameters, and other such values. Some parts displayed in the window differ depending on whether you're using the system as a GEQ or a PEQ.



GEQ SEL 1-32	Selects the GEQ to work with (1-32).
INSERT	Selects the input channel/output bus for insertion. → "Inserting a GEQ" (p. 157)
GROUP	Selects the GEQ group. GEQs set to the same GEQ group have the same settings.
GEQ OVERVIEW	Displays the 31-band GEQ values and GEQ level. Tapping this selects a range to manipulate using faders or knobs.
SAFE	Excludes the GEQ from scene recall.
BYPASS	Bypass
TYPE	Selects GEQ or PEQ. The window display changes when this is set to PEQ. → "GEQ EDIT Window (PEQ)" (p. 161)
Q	Selects Q for the GEQ. • PROPORTIONAL (larger boost/cut amounts yield greater Q) • CONSTANT (constant Q)
ADJUST	Selects from among the following as the operational amount for GEQs. • 0.1 dB steps • 0.5 dB steps
ON FADER	When this is on, you can use the faders to operate the GEQ. → "Operating a GEQ Using the Faders (GEQ ON FADER)" (p. 158)
MORE	A popup for performing the following operations is displayed. • RESET → "Returning GEQ Settings to Their Default Values" (p. 159) • MAKE GRP → "Making a GEQ Group" (p. 159)
Parameter area	The range selected using GEQ OVERVIEW is displayed. You can use the knob section on the top panel to perform operations. → "Operating a GEQ Using the Knob Section" (p. 157)

Displaying the GEQ EDIT Window

To display the GEQ EDIT window, go to the HOME screen and tap <GEQ>.



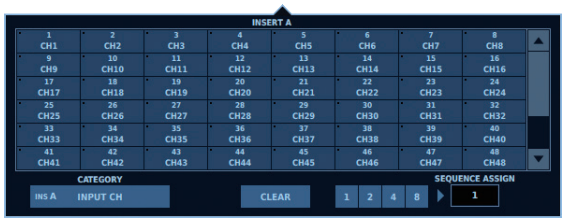
Inserting a GEQ

1. Use <GEQ SEL 1> through <GEQ SEL 32> to select a GEQ to work with.



2. Tap <INSERT>.

The INSERT popover appears.



3. Select the input channel or output bus where you want to insert.

The GEQ is inserted into the selected input channel or output bus.

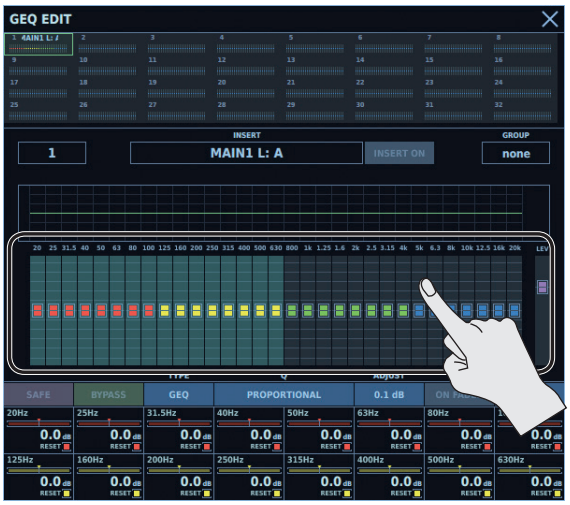
Operating a GEQ Using the Knob Section

1. Use <GEQ SEL 1> through <GEQ SEL 32> to select a GEQ to work with.

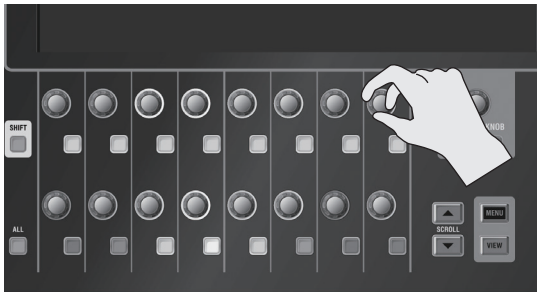


2. Use <GEQ OVERVIEW> to select the range to manipulate using the knobs.

- 20Hz-630Hz
- 125Hz-4kHz
- 800Hz-20kHz, GEQ LEVEL



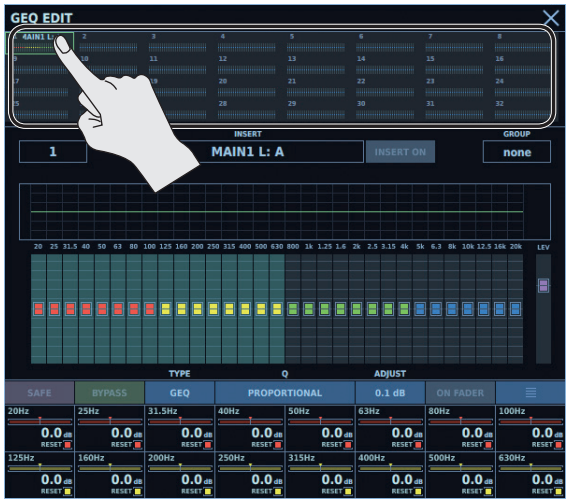
3. Use the knob section to work with the range you selected in step 2.



Pressing the button resets the setting for each band.

Operating a GEQ Using the Faders (GEQ ON FADER)

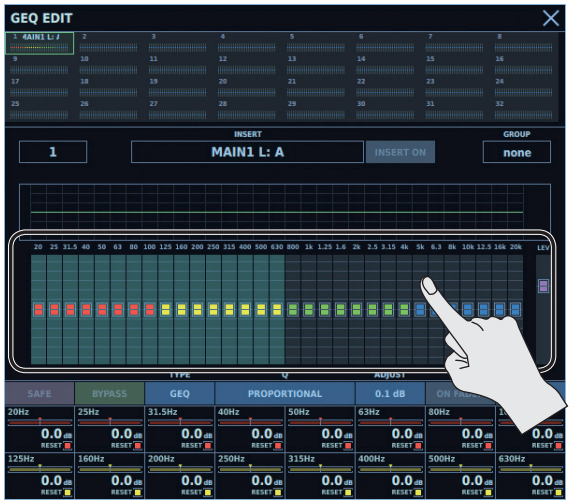
1. **Use <GEQ SEL 1> through <GEQ SEL 32> to select a GEQ to work with.**



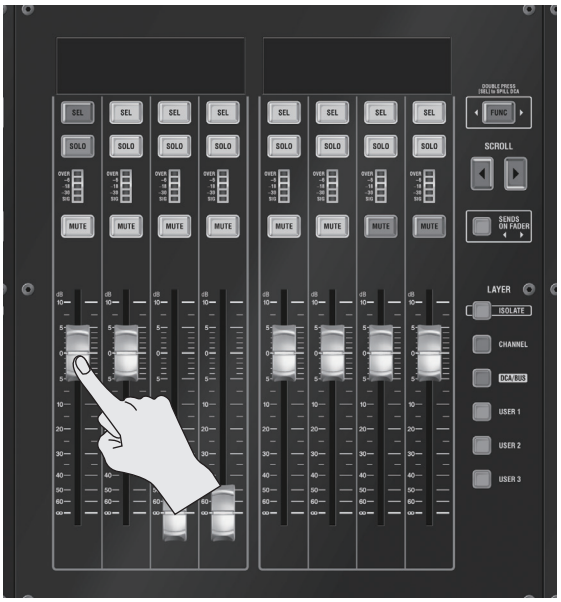
2. **Set <ON FADER> to ON.**

3. **Use <GEQ OVERVIEW> to select the range to manipulate using the knobs.**

- 20Hz-4kHz
- 125Hz-20kHz, GEQ LEVEL



4. **Use the faders to work with the range you selected in step 3.**



Memo

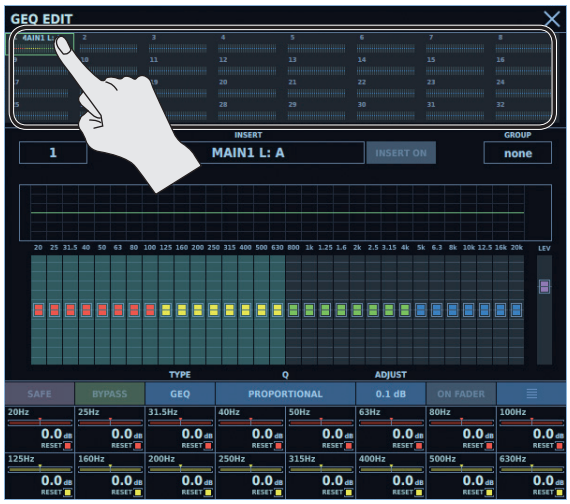
When a fader is at a position other than 0 dB, the corresponding [MUTE] indicator lights. Pressing a lit [MUTE] resets the corresponding fader to the 0.0-dB position.

Memo

When a parameter is changed, the corresponding [SEL] indicator flashes. Pressing a flashing [SEL] undoes the corresponding parameter.

Returning GEQ Settings to Their Default Values

1. Use <GEQ SEL 1> through <GEQ SEL 32> to select a GEQ to work with.



2. On the GEQ EDIT window, tap <MORE>, then tap <RESET>.



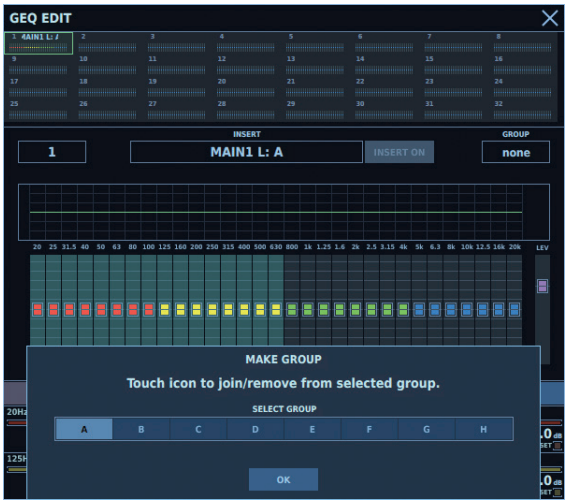
The GEQ or PEQ settings are returned to their default values.

Making a GEQ Group

When you assign several GEQs to a GEQ group, the GEQs assigned to the same GEQ group have the same settings.

1. On the GEQ EDIT window, tap <MORE>, then tap <MAKE GRP>.

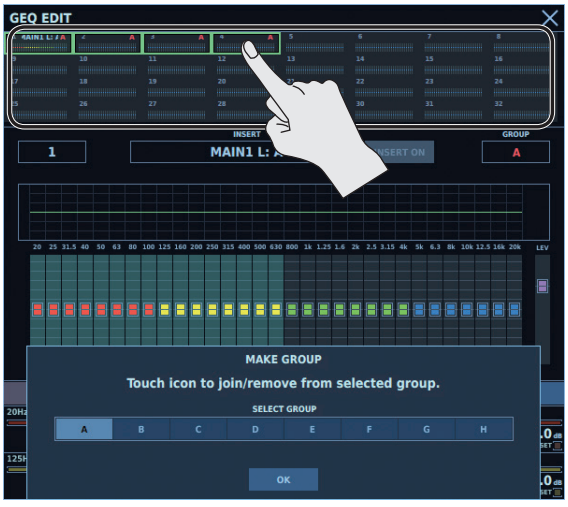
A popup for setting a GEQ group is displayed.



2. Select from among <A> through <H> for the GEQ group you want to set.

3. Select from among <GEQ SEL 1> through <GEQ SEL 32> for the GEQ you want to set.

You can select multiple items.

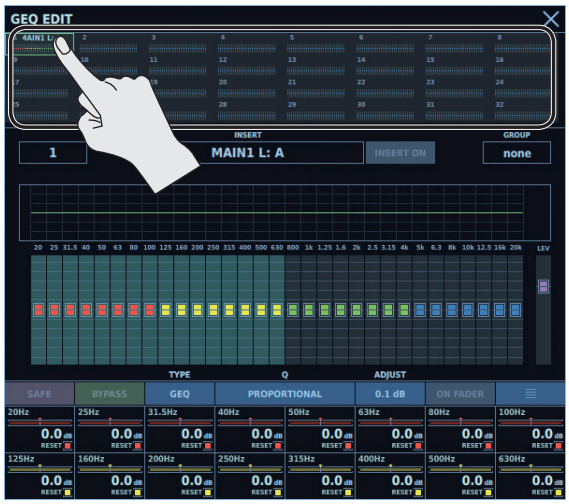


4. Tap <OK>.

The selected GEQs are set to the same GEQ group and take the same settings.

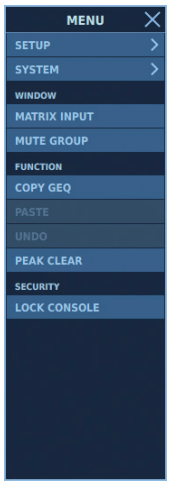
Copying/Pasting GEQ Settings

1. **Use <GEQ SEL 1> through <GEQ SEL 32> to select a GEQ to copy.**



2. **Go to the display section and press [MENU] button.**

The MENU window appears.

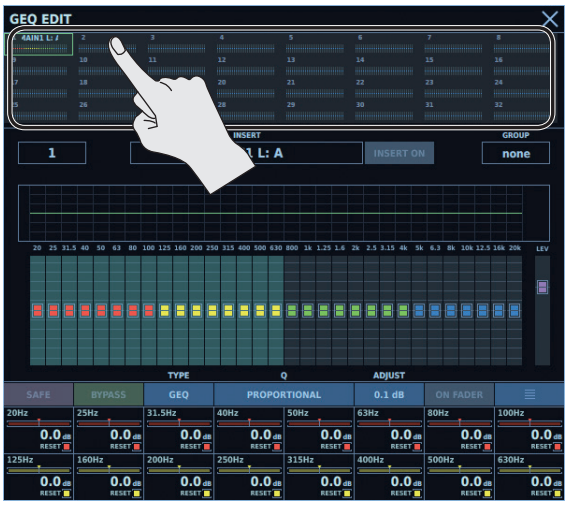


3. **Press <COPY GEQ> in the MENU window.**



The selected GEQ settings are saved to the clipboard.

4. **Use <GEQ SEL 1> through <GEQ SEL 32> to select the GEQ where you want to paste the settings.**



5. **Go to the MENU window and tap <PASTE GEQ>.**



The settings are pasted to the GEQ you selected in step 4.

Memo

To undo the last-performed paste, go to the MENU window and tap <UNDO PASTE GEQ>.

GEQ EDIT Window (PEQ)

Some parts displayed in the window are different when the system is set to PEQ.



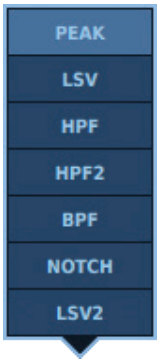
GEQ SEL 1-32	Selects the GEQ to work with (1-32).
INSERT	Selects the input channel/output bus for insertion. → "Inserting a GEQ" (p. 157)
GROUP	Selects the GEQ group. GEQs set to the same GEQ group have the same settings.
BAND 1-4	Lets you work with BAND 1-4 in the parameter area.
BAND 5-8	Lets you work with BAND 5-8 in the parameter area.
SAFE	Excludes the GEQ from scene recall.
BYPASS	Bypass
TYPE	Selects GEQ or PEQ. The window display changes when this is set to GEQ. → "GEQ EDIT window (GEQ)" (p. 156)
MORE	A popup for performing the following operations is displayed. • RESET → "Returning GEQ Settings to Their Default Values" (p. 159) • MAKE GRP → "Making a GEQ Group" (p. 159)
Parameter area	You can use the knob section on the top panel to manipulate the range selected using BAND 1-4/ BAND 5-8. → "Operating a PEQ Using the Knob Section" (p. 162)

You perform the following operations in the parameter area.



FREQ	Center frequency
Q	Sharpness of the frequency-response curve
TYPE	Displays the Filter Type Selection popover.
GAIN	Gain
ON	Turns the respective band on/off.

Filter Type Selection Popover



PEAK	Peaking
LSV	Low shelving
HSV	High shelving
HPF	High-pass filter (-6 dB/oct)
HPF2	High-pass filter (-12 dB/oct)
LPF	Low-pass filter (-6 dB/oct)
LPF2	Low-pass filter (-12 dB/oct)
BPF	Bandpass filter
NOTCH	Notch filter
LSV2	Low shelving with controllable Q
HSV2	High shelving with controllable Q

Operating a PEQ Using the Knob Section

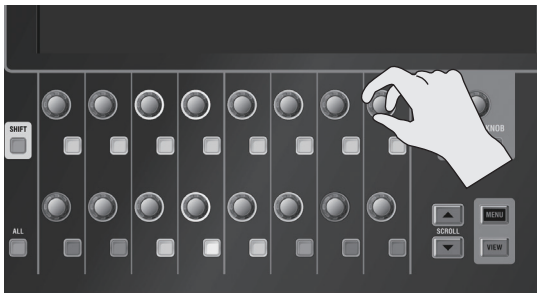
1. Use <GEQ SEL 1> through <GEQ SEL 32> to select a GEQ to work with.



2. Use <BAND 1-4> or <BAND 5-8> to select the range to work with using the knobs.



3. Use the knob section to work with the range you selected in step 2.



Top Panel (Display Region)



This chapter describes how to use the controls arranged in the upper half of the top panel, in the display region.

In this chapter, the explanations are organized into the following sections.

- "User-assignable Section" (p. 164)
- "Monitor/Solo" (p. 167)
- "Scene Memory" (p. 174)
- "USB Memory Recorder" (p. 180)
- "Talkback/Oscillator" (p. 183)

User-assignable Section

About the User-assignable Section

The user-assignable section has four knobs and eight buttons, which you can assign to parameters of your choosing and display on the top panel. The user-assignable section also has three banks, letting you work with more parameters by switching among them.

Assigning Parameters to the User-assignable Section

1. In the user-assignable section, press and hold the [DISP] button for 2 seconds or longer.



The user-assignable section enters the assign mode, and the [DISP] button flashes.

2. Operate the knob or button to which you want to assign a parameter.



The user-assignable display shows that the operated knob or button is assignable.

If you want to make an assignment to a knob or button on another bank, then switch the banks.

3. On the touch display, touch the parameter you want to assign.



The touched parameter is assigned.

The settings for the appropriate LABEL (parameter name) and color are made automatically for the assigned knob or button.

Memo

The currently assigned parameter is enclosed in the yellow box. Touching one clears the assignment.

Memo

You can also make assignments to access a specific window or popover.

4. **Press the [DISP] button.**

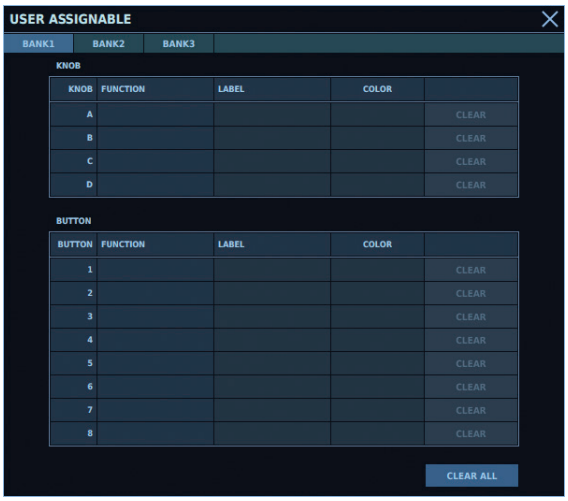


The assign mode ends.

USER ASSIGNABLE Window

Pressing the [DISP] button in the user-assignable section displays the USER ASSIGNABLE window.

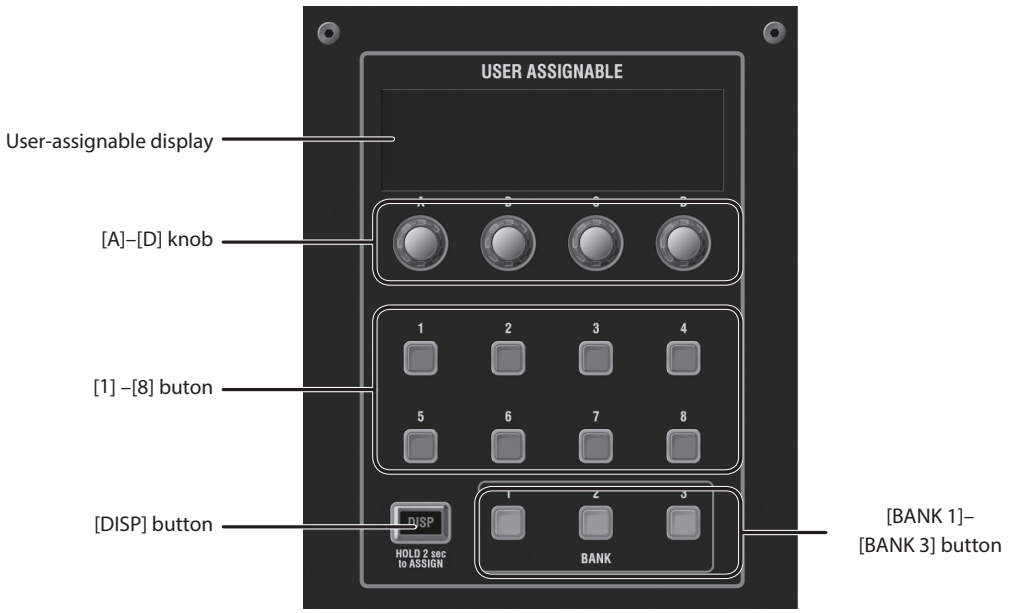
In the USER ASSIGNABLE window, you can change the LABELs (parameter names) and knob or button colors shown on the user-assignable display, and clear parameter assignments.



BANK 1 tab	These switch among BANK 1-BANK 3.
BANK 2 tab	
BANK 3 tab	
LABEL	This sets a text string for KNOB A-D or BUTTON 1-8 on the user-assignable display.
COLOR	This changes the color for KNOB A-D or BUTTON 1-8.
CLEAR	This clears the parameter assignment for KNOB A-D or BUTTON 1-8.
CLEAR ALL	This clears all parameter assignments in the user-assignable section.

User-assignable Section of the Top Panel

This section is for assigning and working with parameters of your choosing.



Name	Description
User-assignable display	This displays the parameters assigned to assignable knobs/buttons.
[A]–[D] knob	These manipulate the assigned parameter value.
[1]–[8] button	These turn assigned parameters on and off and access screens and windows.
[DISP] button	This displays the USER ASSIGNABLE window. Pressing and holding it for 2 seconds enters the assign mode. It flashes when in the assign mode.
[BANK 1]–[BANK 3] button	These changes banks in the user-assignable section.

Monitor/Solo

About Monitor/Solo

"Monitor" is a function that takes an input channel or output bus selected as the monitor source and outputs it to an output connector or headphones for monitoring. The M-5000 is equipped with a monitor function that supports up to 5.1 channels, for an extremely high degree of freedom.

Output-bus monitoring uses the POST FDR signal, and input-channel monitoring uses the CH TOP signal.

The M-5000 is equipped with two completely independent monitor systems (MONITOR 1 and MONITOR 2). For MONITOR 1, you can select from among 5.1, LCR, STEREO, and NONE (no assignment), and for MONITOR 2, you can select either STEREO or NONE (no assignment).

Using two monitor systems lets you monitor using different devices, such as an in-ear monitor on MONITOR 1 and a monitor speaker on MONITOR 2.

Also, setting one or both to NONE (no assignment) when two monitor systems are not needed lets you free up audio paths.

→ "Changing the Number of Input Channels/Output Buses" (p. 79)

You can select whether to use MONITOR 1 or MONITOR 2 for headphones output.

To use the PHONES 1/2 jacks, go to the MIXER CONFIGURATION window and set "HEADPHONES" to STEREO.

The M-5000 is also equipped with two solo systems (SOLO 1 and SOLO 2) for the two monitor systems.

The unit has SOLO 1 for MONITOR 1 and SOLO 2 for MONITOR 2, and you can select from among the following three types of behavior by pressing the appropriate [SOLO] button on the top panel.

SOLO 1	Turns feed to SOLO 1 on/off.
SOLO 2	Turns feed to SOLO 2 on/off.
SOLO 1+2	Turns both feed to SOLO 1 and feed to SOLO 2 on/off.

The functioning of the [SOLO] button (SOLO 1, SOLO 2, or SOLO 1+2) is selected by the function mode of the fader bank section.

→ "Function Mode" (p. 121)

Solo uses no spaces on the M-5000's channel strip.

Solo Priority

Priority for solos is set as follows.

(High)	3	Input channel
Priority	2	DCA
(Low)	1	Output buses

Solos operate according to rules like the following.

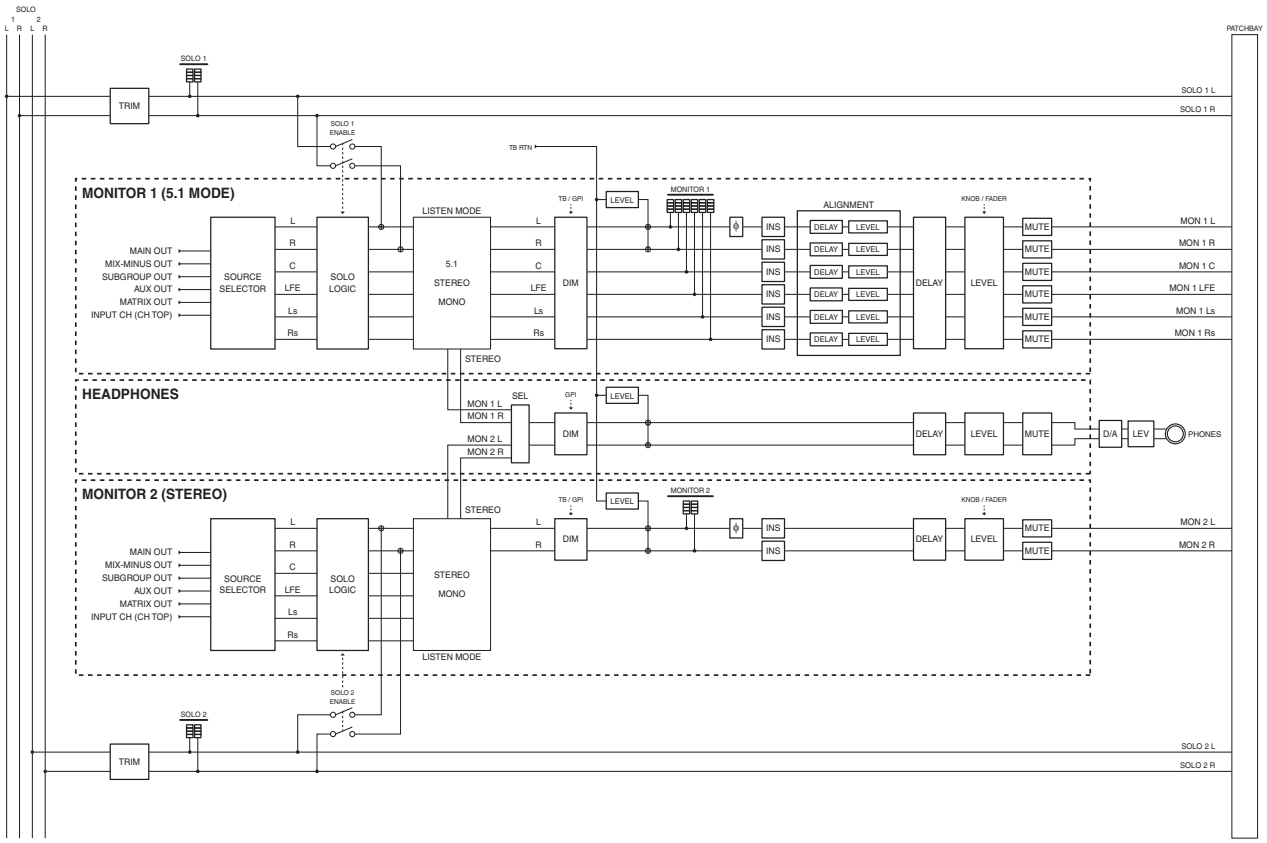
- Switching on a high-priority solo makes it temporarily replace a low-priority solo. Canceling the high-priority solo makes the low-priority solo return.
- Switching on a low-priority solo cancels all higher-priority solos.

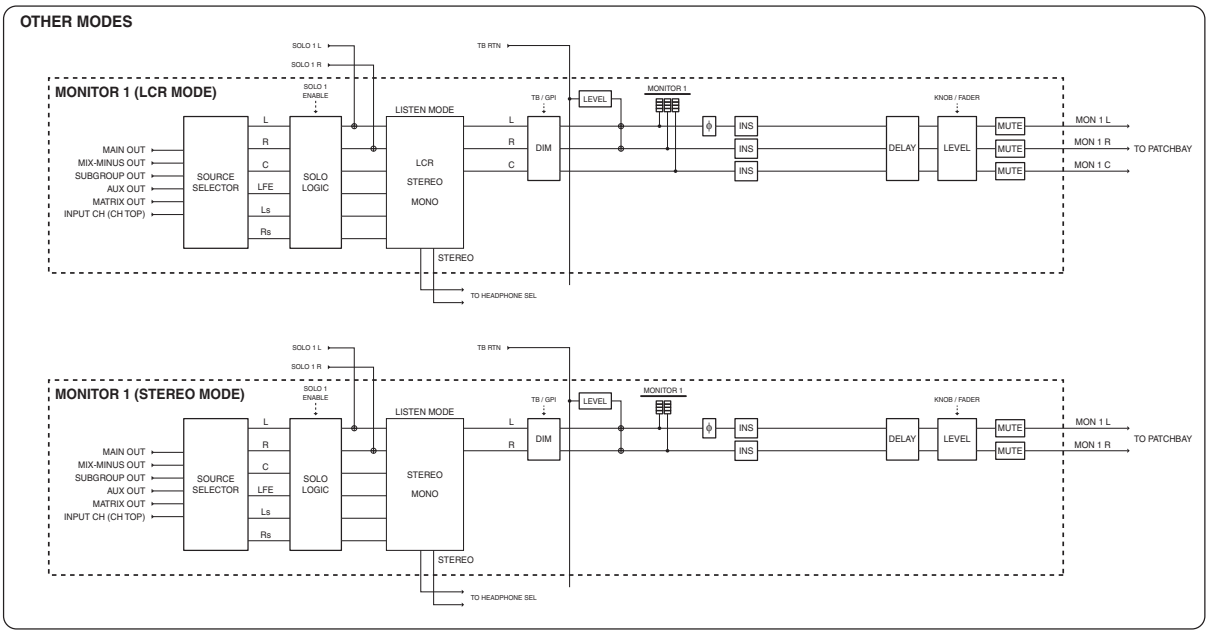
Solo in Place

Solo in Place is a function that outputs an input channel whose [SOLO] button is on and mutes input channels whose [SOLO] buttons are off.

To activate Solo in Place, go to the top panel and press and hold the [SOLO IN PLACE] button for 2 seconds, or go to the MONITOR window and tap <IN PLACE>.

Monitor/Solo Block Diagram

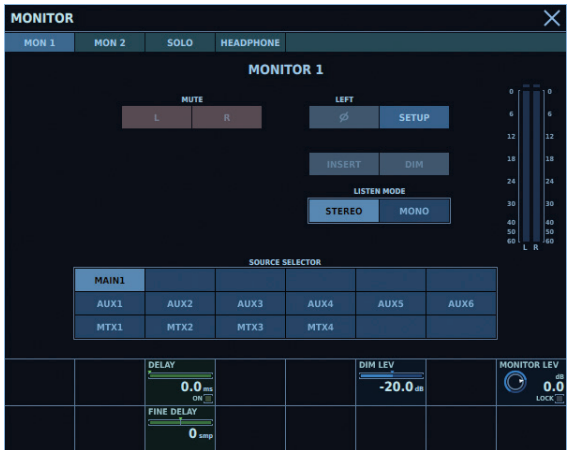




TRIM	Adjusts the solo level.
SOURCE SELECTOR	You can register 18 input channels/output buses you want to input to a monitor. This selects one of those and sends it to the monitor. Output-bus monitoring uses the POST FDR signal, and input-channel monitoring uses the CH TOP signal.
LISTEN MODE	Selects from among the following as the mode for monitor output. • 5.1 • STEREO • MONO If the monitor setting and LISTEN MODE differ, the signal is mixed and output according to the downmix setting.
DIM	Dimmer Lowers the monitor level by the amount set. You can also interlink this with talkback/GPI settings.
TB RTN LEVEL	Talkback return level
Φ	Polarity Inverts the polarity.
INS	Inserts GEQ 1-32/FX 1-8/INSERT 1-64.
ALIGNMENT DELAY	Alignment delay * Displayed when the monitor is set to 5.1.
ALIGNMENT LEVEL	Alignment level * Displayed when the monitor is set to 5.1.
DELAY	Delay Applies delay of the same value to each monitor channel.
LEVEL	Level Adjusts each monitor channel to a level of the same value.
MUTE	Mute Sets each monitor channel to mute.

MONITOR Window

In the MONITOR window, you make settings for monitor, solo, and headphones.



Three more tabs are displayed in the MONITOR window.

• MON 1 tab

Here you make settings for MONITOR 1.

• MON 2 tab

Here you make settings for MONITOR 2.

→ "MONITOR 1/2 SETUP Window" (p. 170)

• SOLO

Here you make settings for SOLO1/SOLO2.

→ "SOLO Tab" (p. 171)

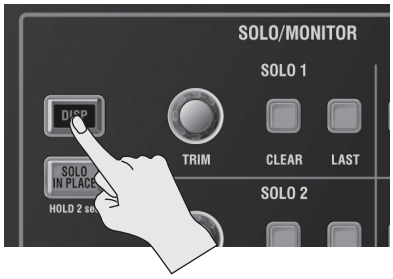
• HEADPHONES

Here you make settings for headphones.

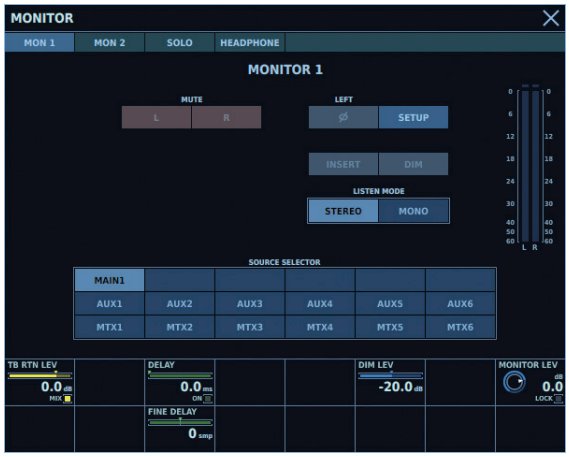
→ "HEADPHONES Tab" (p. 172)

Displaying the MONITOR Window

To display the MONITOR window, go to the monitor section on the top panel and press the [DISP] button.

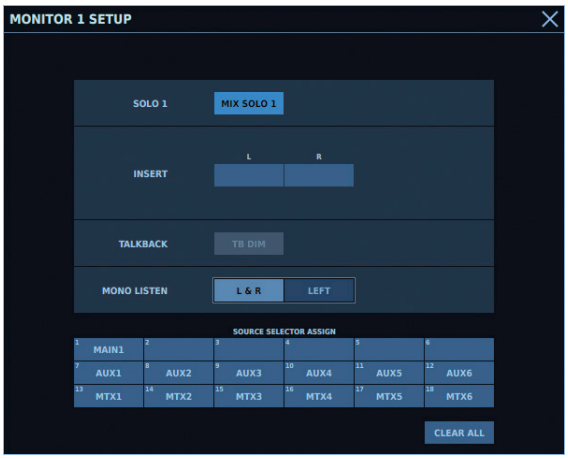


MON 1/MON 2 Tabs



MUTE L/R/C/LFE/ Ls/Rs	Mutes each monitor channel. * The number displayed varies according to the number of monitor channels.
LEFTΦ	Polarity of MONITOR 1 L/MONITOR 2 L
SETUP	Displays the MONITOR 1/2 SETUP window.
INSERT	Turns insert effect on/off.
DIM	Turns dimmer on/off.
LISTEN MODE	This selects from among the following as the mode for monitor output. • 5.1 • LCR • STEREO • MONO If the monitor setting and LISTEN MODE differ, the signal is mixed and output according to the downmix setting. * Modes having more channels than the monitor setting are not displayed.
SOURCE SELECTOR	Selects the monitor source. You can assign any desired input channel/output bus to <SOURCE SELECTOR>. You make the setting in the MONITOR 1/2 SETUP window.
TB RTN LEV	Talkback return level
MIX	Turns talkback return on/off.
DELAY	Delay time
DELAY ON	Turns delay on/off.
FINE DELAY	Fine-tuned delay time
DIM LEV	Dimmer level
MONITOR LEV	Monitor level
MONITOR LEV LOCK	Monitor level lock Turning this on prevents changing the monitor level.

MONITOR 1/2 SETUP Window



MIX SOLO 1/2	Turning this on outputs SOLO 1/2 to MONITOR 1/2.
INSERT L/R/C/LFE/ Ls/Rs	Selects the effect/GEQ/external effects device to insert in the monitor.
TB DIM	Turning this on makes the dimmer function turn on/off in tandem with talkback turning on/off.
MONO LISTEN	When LISTEN MODE for the monitor is set to MONO, this selects from among the following outputs. • L&R Output in which MONITOR L and R are downmixed to monaural • LEFT MONITOR L • CENTER MONITOR C * Not displayed when no MONITOR C exists.
SOURCE SELECTOR ASSIGN	Selects the monitor source displayed for SOURCE SELECTOR on the MON 1/2 tab.
CLEAR ALL	Clears all SOURCE SELECTOR ASSIGN selections.

When a monitor is set to "5.1," the following additional tab is also displayed. At such times, the values just described are displayed on the SETUP tab.

MONITOR 1/2 ALIGNMENT Tab



DELAY ON	Turns delay on/off for each monitor channel.
DELAY	Delay time for each monitor channel
FINE DELAY	Fine-tunes the delay time for each monitor channel.
LEVEL	Level of each monitor channel
RESET	Initializes the settings on the ALIGNMENT tab.

Selecting the Monitor Source Displayed for SOURCE SELECTOR

1. In the MONITOR 1/2 SETUP window, tap <SOURCE SELECTOR ASSIGN> for the setting you want to change.

2. Press the [SEL] button for the input channel or output bus you want to set.

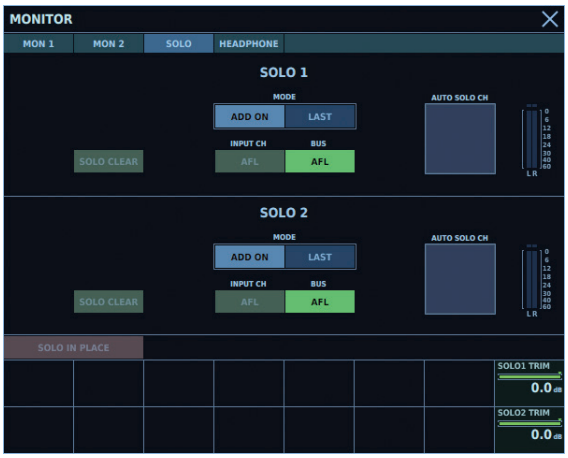
Tapping <CLEAR> clears the setting at the location you tapped in step 1.

MEMO

Output-bus monitoring uses the POST FDR signal, and input-channel monitoring uses the CH TOP signal.

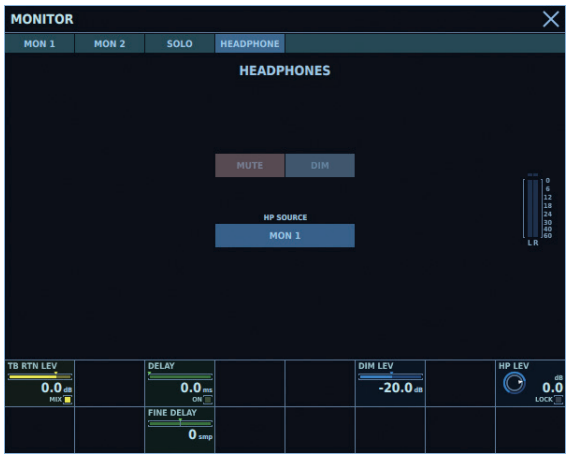
3. Tap <OK>.

SOLO Tab



SOLO CLEAR	This clears SOLO 1 or 2. It flashes when solo is on.
ADD ON	Puts SOLO 1 or 2 in the ADD ON mode. When in the ADD ON mode, channels for which [SOLO] is on are mixed.
LAST	Puts SOLO 1 or 2 in the LAST mode. When in the LAST mode, only input channels/ output buses whose [SOLO] was turned on most recently are output.
INPUT CH AFL	Selects the location for sending the solo from the input channel. If this is on, the post-pan signal is sent. If this is off, the pre-fader signal is sent.
BUS AFL	Select the location for sending the solo from the output bus. If this is on, the post-pan signal is sent. If this is off, the pre-fader signal is sent.
AUTO SOLO CH	Sets the input channels for which solo is automatically turned on when input-channel solo is turned on. This is useful when setting return for reverb or the like.
IN PLACE	Turns Solo in Place on/off.
SOLO1/2 TRIM	Adjusts the level for SOLO 1 or 2.

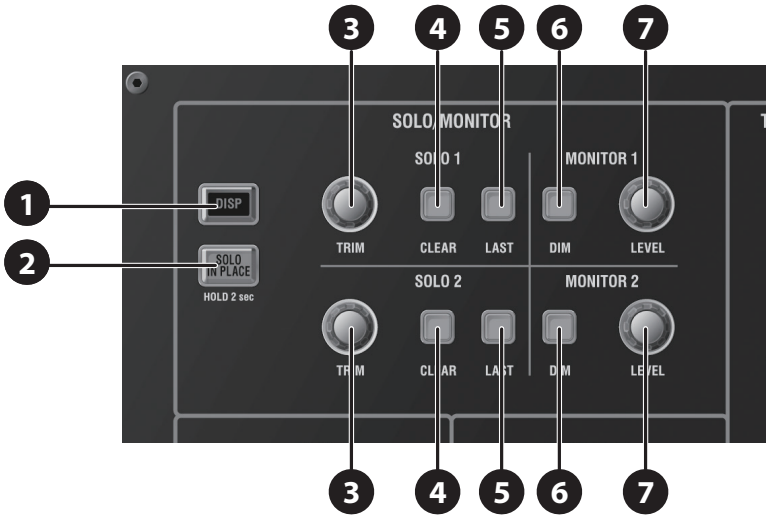
HEADPHONES Tab



MUTE	Mutes headphones.
DIM	Turns dimmer on/off. Lowers and outputs headphones output by the amount set using <DIM LEV>.
HP SOURCE	Selects the headphones source from among the following. • MON 1 • MON 2
TB RTN LEV	Talkback return level
TB RTN MIX	Turns talkback return on/off.
DELAY	Delay time
DELAY ON	Turns delay on/off.
DINE DELAY	Fine-grained delay time
DIM LEV	Dimmer level
HP LEV	Headphones level (digital)
HP LEV LOCK	Prevents manipulation of <HP LEV>.

Monitor Section of the Top Panel

You can use the top panel's monitor section to operate monitors.



Number	Name	Description
1	[DISP] button	This displays the MONITOR window.
2	[SOLO IN PLACE] button	This turns Solo in Place on and off. To turn on Solo in Place, press and hold this button for 2 seconds. It flashes when on. * When Solo in Place is on, a solo signal is sent to the output buses. Note that input channels where solo is turned off are not output.
3	SOLO 1 / SOLO 2 [TRIM] knob	This adjusts the level of SOLO 1 or 2.
4	SOLO 1 / SOLO 2 [CLEAR] button	This clears SOLO 1 or 2. It flashes when a channel is currently soloed.
5	SOLO 1 / SOLO 2 [LAST] button	This turns the LAST mode on and off for SOLO 1 or 2.
6	MONITOR 1 / MONITOR 2 [DIM] button	This turns the dimmer on and off for MONITOR 1 or 2.
7	MONITOR 1 / MONITOR 2 [LEVEL] button	This adjusts the level of MONITOR 1 or 2.

Scene Memory

About Scene Memory

Scene memory is a function that lets you store mixer parameters as a scene, and recall them when desired. On the M-5000, you can store up to 300 scenes.

You can give each scene a name up to 32 characters long.
You can also give each scene a number having up to two digits to the right of the decimal point.

List of Scene Memory Functions

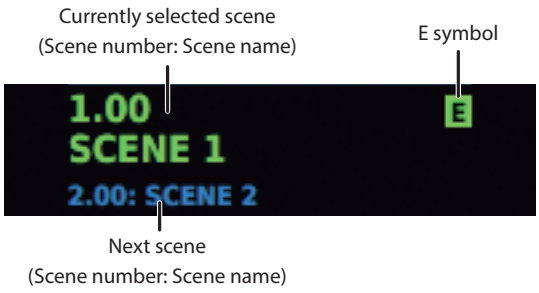
Scene memory on the M-5000 is provided with the following functions, which you can combine to organize and manage mixer parameters appropriately.

NEW	Creates/adds a new scene. Newly created or added scenes are each automatically given a scene number (having up to two digits to the right of the decimal point). → "Creating New Scenes and Adding Scenes" (p. 175)
STORE	Stores a scene by overwriting. → "Storing a Scene (by Overwriting)" (p. 175)
RECALL	Recalls a scene. → "Recalling a Scene" (p. 175)
RECALL PREV	Recalls the previous scene.
RECALL NEXT	Recalls the next scene.
UNDO	Cancels the last recall operation.
RENUMBER	Renumbers all scene numbers, using integer values.
SKIP	Excludes from RECALL PREV/RECALL NEXT operations.
RECALL FILTER	Specifies a parameter to recall for individual scenes. → "Using Recall Filter" (p. 178)
GLOBAL SCOPE	Specifies a parameter to recall for all scene memories. → "Using Global Scope" (p. 177)
LOCK	Prevents STORE, DELETE, and other change operations on scene memories.
MOVE	Changes the scene numbers of multiple scenes.
DELETE	Deletes multiple scenes.
DUPLICATE	Duplicates multiple scenes.

You organize and manage scene memories in the SCENE window.
→ "SCENE Window" (p. 176)

Scene Area of the HOME Screen

Displayed in the HOME screen's scene area are the currently selected scene and the next scene.



If the currently selected scene is being edited, an "E" symbol is displayed.
The scene number blinks when the currently recalled scene (CURRENT SCENE) is different from the currently selected scene (SELECTED SCENE).
→ "Selected Scene, Current Scene" (p. 176)
Tapping the scene area displays the SCENE window.

Mixer Parameters Stored in Scenes

The following parameters are stored in scenes.

- Input patchbay
- Output patchbay
- Preamp settings (including input/output units)
- INPUT CHANNEL
- MAIN
- MIX-MINUS
- SUBGROUP
- AUX
- MATRIX
- Effects
- GEQ
- External-device insertion
- Talkback
- Oscillator
- DCA group/MUTE group
- USB memory recorder

The following parameters are not stored in a scene:

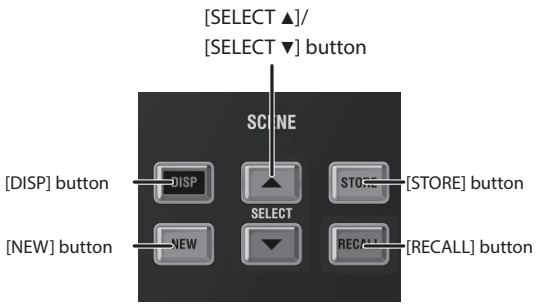
- MIXER CONFIGURATION
- [TALK 1]-[TALK 3] button on/off settings
- TALKBACK MIC settings
- Monitor settings
- [SOLO] button on/off settings
- USB memory recorder status (REC/PLAY, etc.)
- USB memory recorder playback mode
- USB memory recorder song selection

Recalling a Scene Stored Before Changing the MIXER CONFIGURATION

One of the most powerful features of this unit is how it lets you freely set the inputs and outputs for the mixing engine any way you like.
After changing the MIXER CONFIGURATION, if you recall a scene stored before the MIXER CONFIGURATION was changed, the unit operates as follows.

Modification of MIXER CONFIGURATION (Selection of TEMPLATE)	Result of scene recall
ARRANGE CHANNEL	The scene reflects changing MIXER CONFIGURATION and is recalled normally
DELETE	
STEREO → MONO	
MONO → STEREO	The scene stored before changing the MIXER CONFIGURATION is recalled on the STEREO L side. Only parameters existing on the R side (PATCH R, INSERT R, and so on) remain unchanged when a scene is recalled.
ADD	Added channels remain unchanged when a scene is recalled.
Loading MIXER SETTINGS and SCENE from a project file	The mixer configuration and scene saved in the project file can be used normally.
Loading MIXER SETTINGS from a project file (Not loading SCENE)	If the channel saved in the scene match with the mixer configuration saved in the project, the scene can be used normally.

Scene Section of the Top Panel

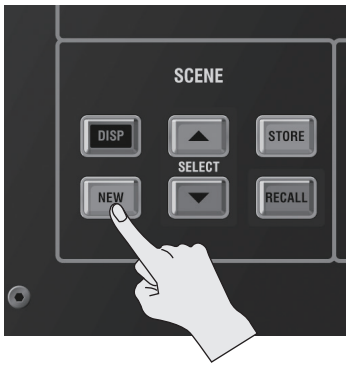


Name	Description
[DISP] button	This displays the SCENE window.
[NEW] button	This creates a new scene after the selected scene, and saves the current mixer parameters.
[SELECT ▲] button	This selects the scene just before the currently selected scene.
[SELECT ▼] button	This selects the scene just after the currently selected scene.
[STORE] button	This stores the current mixer parameters to the selected scene.
[RECALL] button	This recalls the mixer parameters from the selected scene.

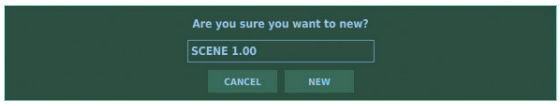
Creating New Scenes and Adding Scenes

This adds a new scene following the currently selected scene.

1. Go to the scene section on the top panel and press the [NEW] button.



A popup for setting the scene name is displayed.



2. Specify the scene name, then press the [NEW] button.

A new scene is add immediately following the currently selected scene.

Memo

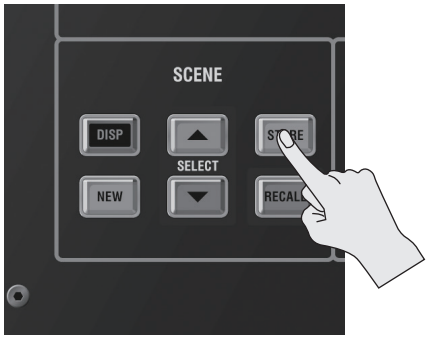
Newly created or added scenes are each automatically given a scene number (having up to two digits to the right of the decimal point).

If no next scene exists, the scene is created and given a scene number equal to the number of the selected scene plus one. If the next scene exists, the scene is created and given an intermediate scene number.

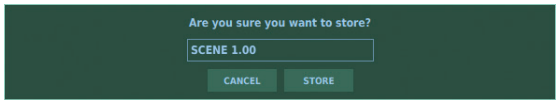
Storing a Scene (by Overwriting)

1. Go to the scene section on the top panel and press the [SELECT ▲] or [SELECT ▼] button to select the number of the scene you want to store.

2. Press the [STORE] button.



A popup prompting you to confirm the operation is displayed.



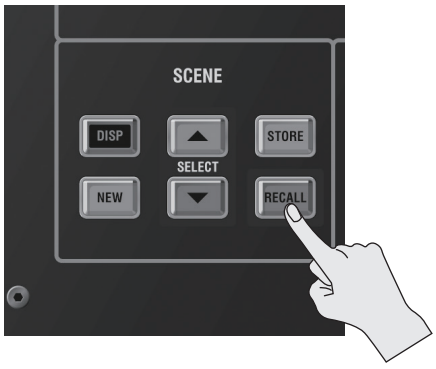
3. Press the [STORE] button.

The scene is stored.

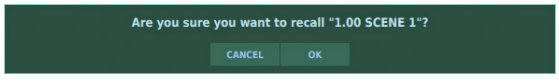
Recalling a Scene

1. Go to the scene section on the top panel and press the [SELECT ▲] or [SELECT ▼] button to select the number of the scene you want to recall.

2. Press the [RECALL] button.



A popup prompting you to confirm the operation is displayed.

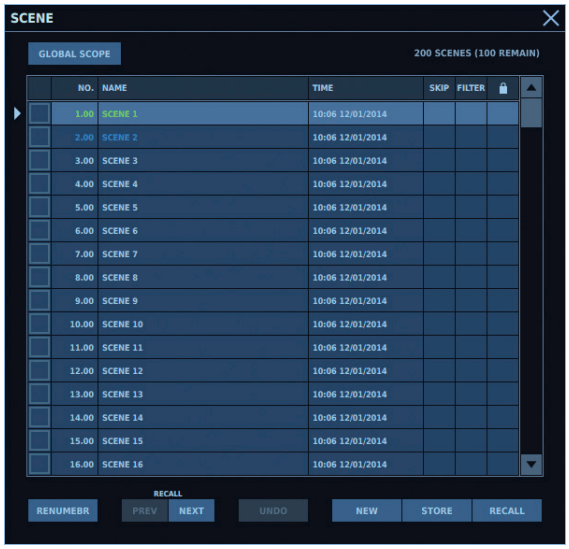


3. Press the [RECALL] button.

The scene is recalled.

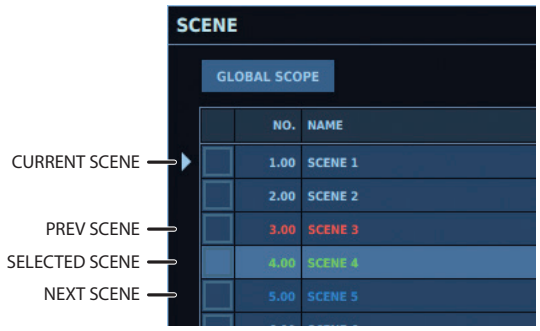
SCENE Window

You organize and manage scene memories in the SCENE window.



GLOBAL SCOPE	Displays the GLOBAL SCOPE window. In the GLOBAL SCOPE window, you specify the range to recall for all scene memories. → "GLOBAL SCOPE Window" (p. 177)
CHECKBOX	Checkbox Turning on the checkbox lets you move, delete, or duplicate a scene. → "List Operations" (p. 66)
NO.	Scene number Tapping this lets you select a scene.
NAME	Scene name Tapping this lets you select a scene. Long-tapping or double-tapping this lets you change the scene name. → "Entering Text" (p. 69)
TIME	Time and date when the scene was stored
SKIP	Skip on/off setting Turning on skip for a scene excludes it from RECALL PREV/RECALL NEXT operations.
FILT	Recall Filter on/off setting Tapping this displays the RECALL PARAMETER window. In the RECALL PARAMETER window, you specify the parameters to recall for individual scenes. → "RECALL PARAMETER Window" (p. 178)
LOCK	Lock on/off setting Locked scenes cannot be stored, deleted or renamed.
RENUMBER	Renumbers all scene numbers, using integer values in ascending order.
RECALL PREV	Recalls the scene previous to the current scene (excluding scenes for which skip is on).
RECALL NEXT	Recalls the next scene after the current scene (excluding scenes for which skip is on).
UNDO	Undoes (cancels) the last recall operation.
NEW	Adds a new scene following the currently selected scene. Operation is the same as the [NEW] button in the scene section of the top panel. → "Creating New Scenes and Adding Scenes" (p. 175)
STORE	Stores the scene memory by overwriting. Operation is the same as the [STORE] button in the scene section of the top panel. → "Storing a Scene (by Overwriting)" (p. 175)
RECALL	Recalls a scene memory. Operation is the same as the [RECALL] button in the scene section of the top panel. → "Recalling a Scene" (p. 175)

Selected Scene, Current Scene

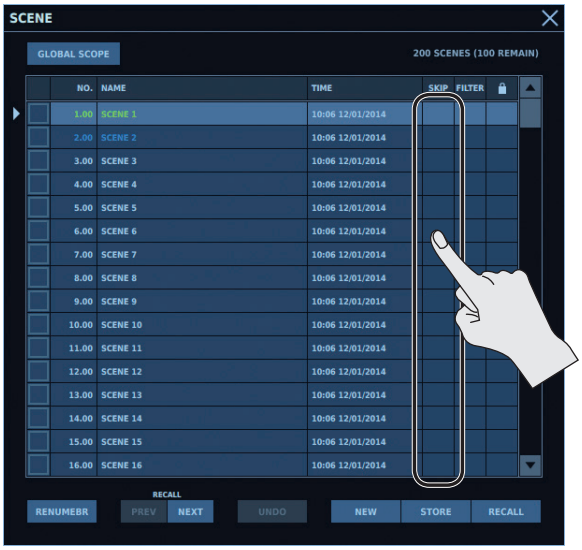


PREV SCENE	The scene previous to the currently selected scene (excluding scenes for which skip is on)
SELECTED SCENE	The currently selected scene
NEXT SCENE	The next scene after the currently selected scene (excluding scenes for which skip is on)
CURRENT SCENE	The currently recalled scene

Excludes Scene from RECALL PREV/RECALL NEXT operations

Turning on skip for a scene excludes it from RECALL PREV/RECALL NEXT operations.

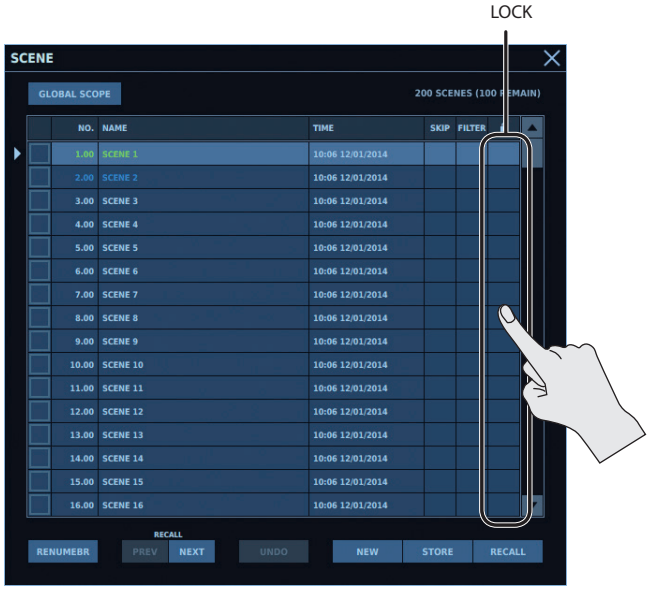
To turn on skip for a scene, go to the SCENE window and tap <SKIP>.



Prohibiting Editing for the Scene (Lock)

Locked scenes cannot be stored, deleted or renamed.

To turn on lock for a scene, go to the SCENE window and tap <LOCK>.



Setting a Range to Recall

You can specify a range (of channels or parameters) for recalling scene memories.

Global Scope

Global Scope is a function for restricting channels or parameters when performing a recall operation on all scene memories.

You make the settings for Global Scope in the GLOBAL SCOPE window.

→ "Using Global Scope" (p. 177)

Recall Filter

Recall Filter is a function for restricting channels or parameters for recall operations on individual scenes.

You make the settings for Recall Filter in the RECALL PARAMETER window.

→ "Using Recall Filter" (p. 178)

GLOBAL SCOPE Window

In the GLOBAL SCOPE window, you set the recall range for all scene memories.

To display the GLOBAL SCOPE window, go to the SCENE window and tap <GLOBAL SCOPE>.



The following four tabs are displayed.

CHANNEL	Here you set the input-channel recall range.
DCA/BUS	Here you set the DCA GROUP/output bus/MUTE GROUP recall range.
FX/GEQ/INS	Here you set the FX/GEQ/INSERT recall range.
OTHER	Here you set the CHANNEL LINK recall range.

Using Global Scope

1. **On the SCENE screen, tap <GLOBAL SCOPE>.**

   The GLOBAL SCOPE window appears.

2. **Tap the tab where you want to set Global Scope (<CHANNEL tab>, <DCA/BUS tab>, <FX/GEQ/INS tab>, or <OTHER tab>).**

3. **At the recall parameter list, turn off parameters you want to exclude from scene recall.**

   → "Recall Parameter List" (p. 178)

   Selected parameters are all excluded from scene recall.

RECALL PARAMETER Window

In the RECALL PARAMETER window, you set the recall range for individual scenes.

To display the RECALL PARAMETER window, go to the SCENE window and tap <FILT>.



ALL	Sets parameters on/off for the entire recall parameter list.
FILTER ON	Sets Recall Filter to be enabled/disabled.
CANCEL	Discards settings and exits the window.
APPLY	Applies settings and exits the window.

The following four tabs are displayed.

CHANNEL	Here you set the input-channel recall range.
DCA/BUS	Here you set the DCA GROUP/output bus/MUTE GROUP recall range.
FX/GEQ/INS	Here you set the FX/GEQ/INSERT recall range.
OTHER	Here you set the CHANNEL LINK recall range.

Using Recall Filter

1. Go to the SCENE screen and tap <FILT>.

The RECALL PARAMETERS window appears.

2. Tap the tab where you want to set Recall Filter (<CHANNEL tab>, <DCA/BUS tab>, <FX/GEQ/INS tab>, or <OTHER tab>).

3. In the recall parameter list, turn off parameters you want to exclude from scene recall.

→ "Recall Parameter List" (p. 178)

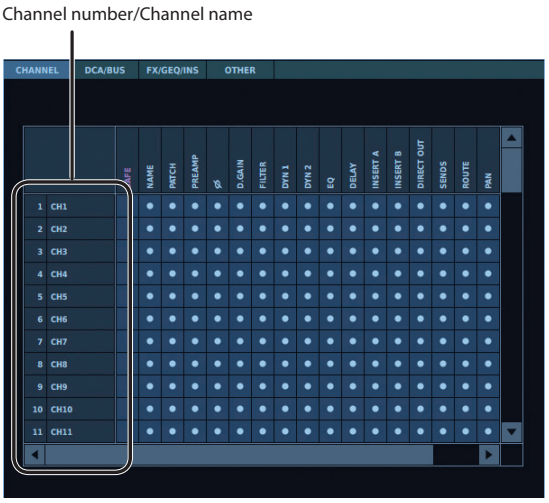
Selected parameters are excluded from recall in the scenes selected in step 1.

Recall Parameter List

To set a range to recall, using Recall parameter list.

The information displayed changes as shown below depending on what tab has been selected at the GLOBAL SCOPE window or RECALL PARAMETER window.

CHANNEL tab



Channel number	Channel number
Channel name	Channel name Tapping this turns all parameters on the row on/off.

You set the following parameters on/off for each column. Parameters set to "off" are excluded from scene recall.

SAFE	Sets Channel Safe on/off Input channels for which Channel Safe is turned on are all excluded from scene recall.
NAME	Input-channel name
PATCH	Input patchbay
PREAMP	Preamp settings
Φ	Polarity
D.GAIN	Digital gain
FILTER	HPF, LPF
DYN 1	Dynamics 1
DYN 2	Dynamics 2
EQ	4-band EQ
DELAY	Delay
INSERT A	Channel insert
INSERT B	Channel insert
DIRECT OUT	Direct out (on/off, send point, level)
SENDS	Sends to AUX
ROUTE	Sends on/off to MAIN/SUBGROUP/MIX-MINUS
PAN	Pan settings
MUTE	Muting
FADER	Sends to MAIN

Tapping the header areas of the respective columns turns the entire column on or off.

DCA/BUS tab

The further tabs are displayed on the DCA/BUS tab.

- DCA
- MAIN
- SUBGROUP
- AUX
- MTX INPUT
- MTX
- MIX-MINUS
- MUTE GRP

Channel number/Channel name



Channel number	Channel number
Channel name	Channel name Tapping this turns all parameters on the row on/off.

You set the following parameters on/off for each column. Parameters set to "off" are excluded from scene recall.

SAFE	Sets Channel Safe on/off Output buses/DCA GROUPs/MUTE GROUPs for which Channel Safe is turned on are all excluded from scene recall.
NAME	Outbut bus/DCA GROUP name
PATCH	Output patchbay
BUS TRIM	Digital gain
Φ	Polarity
D.GAIN	Digital gain
FILTER	HPF, LPF
DYN 1	Dynamics 1
DYN 2	Dynamics 2
EQ	4-band EQ
DELAY	Delay
INSERT A	Channel insert
INSERT B	Channel insert
SENDS	Sends to AUX
ROUTE	Sends on/off to MAIN/SUBGROUP/MIX-MINUS
PAN	Pan settings
MUTE	Muting
FADER	Sends to MAIN
ASSIGN	Assignments to DCA/MUTE GROUP

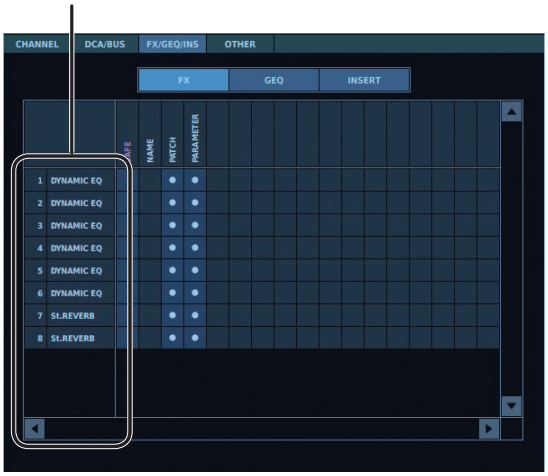
Tapping the header areas of the respective columns turns the entire column on or off.

FX/GEQ/INS tab

The further tabs are displayed on the FX/GEQ/INS tab.

- FX
- GEQ
- INSERT

Channel number/Channel name



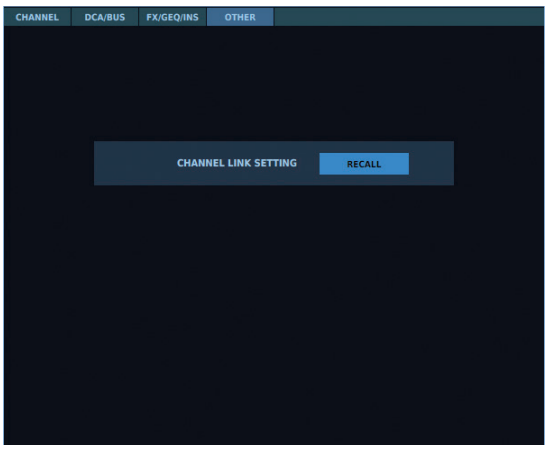
Channel number	Channel number
Channel name	Channel name Tapping this turns all parameters on the row on/off.

You set the following parameters on/off for each column. Parameters set to "off" are excluded from scene recall.

SAFE	Sets Channel Safe on/off FX/GEQ/INSERT for which Channel Safe is turned on are all excluded from scene recall.
NAME	INSERT name
PATCH	Patchbay
PARAMETER	Parameters of FX/GEQ/INSERT

Tapping the header areas of the respective columns turns the entire column on or off.

OTHER tab



CHANNEL LINK SETTING	Channel link setting

USB Memory Recorder

About the USB Memory Recorder

You can select any two output buses and record a 2-track WAV file onto a USB flash drive. You can also play back 2-track WAV files from a USB flash drive.

* Before using USB flash drives for this unit, please format the USB flash drives on this unit.

→ "Formatting a USB Flash Drive on the M-5000" (p. 202)

WAV File Formats

The formats of recordable WAV files are as follows.

The sampling frequency of recorded WAV files is the same as the M-5000's sampling frequency.

When the file size of the recorded data reaches 2 GB, it is automatically split into a new file.

Sampling frequency: 96kHz, 48kHz, 44.1kHz
Bit depth: 16bits
Number of channels: 2 channels

The formats of playable WAV files are as follows.

Playback is possible even if the sampling frequency of the WAV file differs from the M-5000's sampling frequency.

Sampling frequency: 96kHz, 48kHz, 44.1kHz
Bit depth: 24bits, 16bits
Number of channels: 2 channels, 1channel

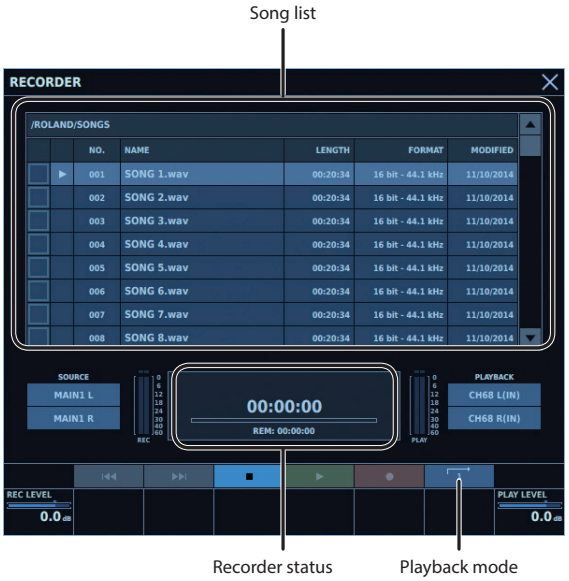
WAV File Directory and File Names

WAV files are recorded into the "/ROLAND/SONGS" folder on the USB flash drive, and WAV files in the same folder can be played back.

Recording and playback are possible for up to 100 files.

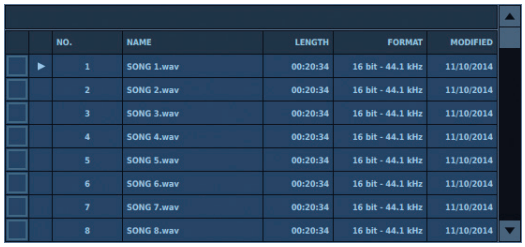
RECORDER Window

You use the RECORDER window to operate the USB memory recorder. To display the RECORDER window, go to the recorder section of the top panel and press the [DISP] button.



Song list	Displays the WAV files and folders inside the folder.
SOURCE L/R	Displays the SOURCE popover for selecting input sources for USB memory recorder.
REC meter	Recording level
Recorder status	Displays the recording or playback status, the name of the WAV file and time information.
PLAY meter	Playback level
PLAYBACK L/R	Displays the PLAYBACK popover for selecting output destinations for the USB memory recorder.
I◄◄	Selects the previous WAV file. Holding this down during playback rewinds the file. Operation is the same as the [I◄◄] button on the top panel.
►►I	Selects the next WAV file. Holding this down during playback fast-forwards the file. Operation is the same as the [►►I] button on the top panel.
■	Stops recording/playback. Operation is the same as the [■] button on the top panel.
►	Starts recording/playback. Operation is the same as the [►] button on the top panel.
●	Puts the M-5000 into recording standby. Operation is the same as the [●] button on the top panel.
Playback mode	Switches the playback mode. • 1-song playback • 1-song repeat • Play to end • All-song repeat
REC LEVEL	Adjusts the recording level.
PLAY LEVEL	Adjusts the playback level.

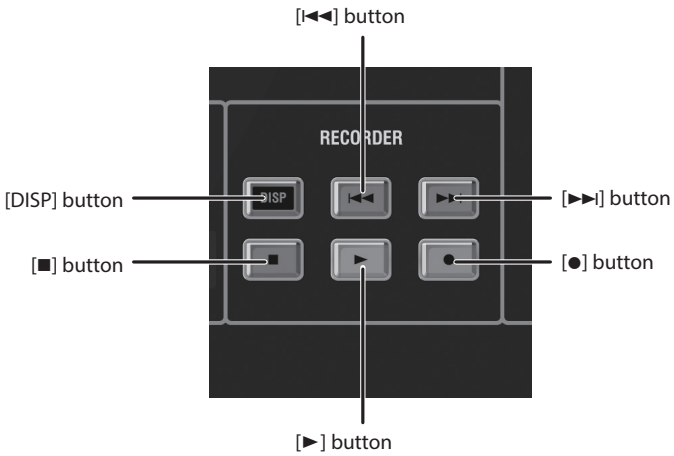
Song list



NO.	NAME	LENGTH	FORMAT	MODIFIED
▶ 1	SONG 1.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014
2	SONG 2.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014
3	SONG 3.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014
4	SONG 4.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014
5	SONG 5.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014
6	SONG 6.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014
7	SONG 7.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014
8	SONG 8.wav	00:20:34	16 bit - 44.1 kHz	11/10/2014

CHECKBOX	Turning on the checkbox lets you delete WAV files. (You can not select multiple items.)
NO.	The sequence in which WAV files are played back (alphabetical order)
NAME	WAV file name
LENGTH	WAV file length (time)
FORMAT	WAV file format
MODIFIED	Date and time when the WAV file was last edited

Recorder Section of the Top Panel



Name	Description
[DISP] button	This displays the RECORDER window.
[■] button	This stops recording/playback.
[I◄◄] button	This selects the previous song. Holding this down during playback rewinds the song being played.
[►►I] button	This selects the next song. Holding this down during playback fast-forwards the song being played.
[►] button	This starts recording/playback.
[●] button	This puts the unit into recording standby.

Recording/Playback to/from a USB Flash Drive

Recording to a USB Flash Drive

1. **Go to the recorder section on the top panel and press the [DISP] button.**
   The RECORDER window appears.



2. **Tap <SOURCE>.**
   The SOURCE popover appears.



3. **Select the output bus for recording.**

4. **Go to the recorder section on the top panel and press the [●] button.**

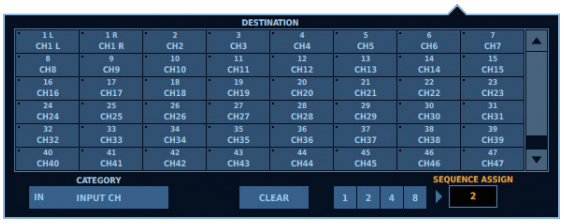
5. **Go to the recorder section on the top panel and press the [►] button.**
   Recording on the selected output bus starts.

6. **Go to the recorder section on the top panel and press the [■] button.**
   Recording stops.

Playback from a USB Flash Drive

1. **Go to the recorder section on the top panel and press the [DISP] button.**
   The RECORDER window appears.

2. **Tap <PLAYBACK>.**
   The DESTINATION popover appears.



3. **Select the input channel to receive the playback output.**

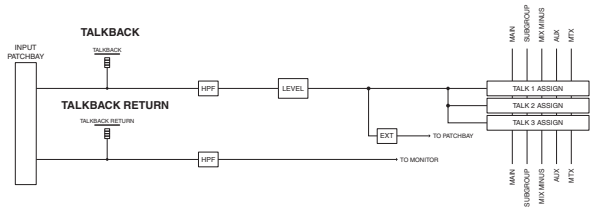
4. **Go to the recorder section on the top panel and press the [►] button.**
   The WAV file is played back.

5. **Go to the recorder section on the top panel and press the [■] button.**
   Playback stops.

Talkback/Oscillator

About Talkback/Talkback Return/ Oscillator

About Talkback/Talkback Return



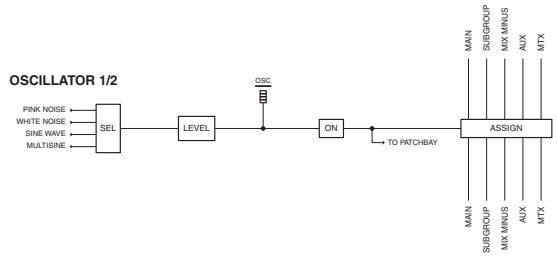
Talkback is a function that sends the signal from a desired input connector to an output bus or output patchbay. This is useful in situations such as when the operator sends instructions to on-stage performers, stage managers, or staff. The M-5000 has three talkback systems, TALK 1 through 3, and each can individually be assigned to different outputs and set on or off.

Talkback return is a function that sends the signal from a desired input connector to MONITOR 1, MONITOR 2, or HEADPHONES. It is handy at times such as when returning instructions to the operator from another booth or location.

You make the settings for talkback and talkback return in the TALKBACK tab of the TALKBACK/OSC window.

→ "TALKBACK/OSC Window TALKBACK Tab" (p. 184)

About the Oscillator



The oscillator generates noise or a sine wave and sends it to an output bus or output patchbay. This is useful when, for example, measuring a venue's acoustics or checking connections to external equipment.

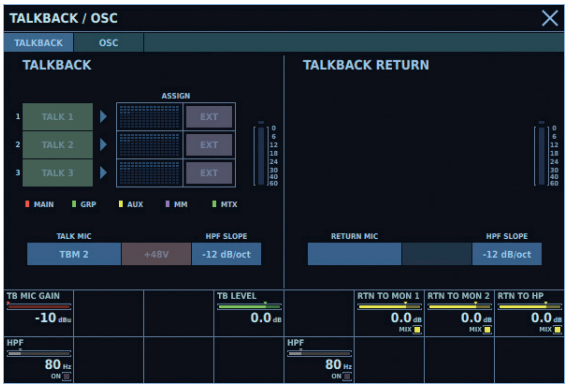
The two systems, OSCILLATOR 1 and OSCILLATOR 2, can be used at the same time.

You use the TALKBACK/OSC window to make the settings for the oscillator.

→ "TALKBACK/OSC Window OSC Tab" (p. 185)

TALKBACK/OSC Window

To display the TALKBACK/OSC window, go to the top panel and press the [DISP] button in the talkback section.



The following two tabs appear.

TALKBACK	Here you make settings for talkback and talkback return.
OSC	Here you make the settings for the oscillator.

TALKBACK/OSC Window TALKBACK Tab

TALKBACK



TALK 1-3	These send talkback to the output destinations assigned to TALK 1 through TALK 3. Operation is interlinked with the [TALK 1]-[TALK 3] buttons on the top panel.
ASSIGN	Displays the assignments to output buses/output patchbay. The left side shows the status of assignments to output buses. Tapping it displays the DESTINATION popover for making assignments to output buses. When <EXT> on the right side is turned on, output to the output patchbay is permitted. You make the assignment to the output patchbay in the PATCHBAY window. → "PATCHBAY Window" (p. 87)
INPUT METER	Input-connector input level
TALK MIC	Selects the input connector to use for talkback.
+48V	Turns input-connector phantom power on/off.
HPF SLOPE	Input-connector HPF slope characteristics • -6dB/oct • -12dB/oct
TB MIC GAIN	Input-connector preamp gain
TB LEVEL	Talkback level
HPF	HPF center frequency
HPF ON	Turns the HPF on/off.

* This is only displayed when talkback has been turned on in the MIXER CONFIGURATION window.

Memo

The way in which talkback is turned on and off varies depending on how you press <TALK 1> through <TALK 3>.

When you release the button quickly after pressing it, it operates as a latch to turn talkback on or off with each press.

When held depressed for a longer interval before release, it operates as a momentary switch that turns on talkback only while held down.

TALKBACK RETURN



INPUT METER	Input-connector input level
RETURN MIC	Selects the input connector to use for talkback return.
+48V	Turns input-connector phantom power on/off.
HPF SLOPE	HPF slope characteristics • -6dB/oct • -12dB/oct
RTN MIC GAIN	Input-connector preamp gain
RTN MIC PAD	Turns input-connector PAD on/off.
RTN TO MON 1	Send level to MONITOR 1
RTN TO MON 1 MIX	Turns sending to MONITOR 1 on/off.
RTN TO MON 2	Send level to MONITOR 2
RTN TO MON 2 MIX	Turns sending to MONITOR 2 on/off.
RTN TO HP	Send level to HEADPHONES
RTN TO HP MIX	Turns sending to HEADPHONES on/off.
HPF	HPF center frequency
HPF ON	Turns the HPF on/off.

* This is not displayed when no talkback return has been created in the MIXER CONFIGURATION window.

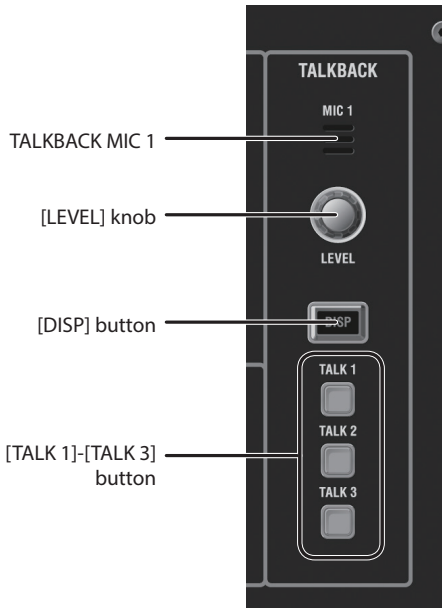
TALKBACK/OSC Window OSC Tab



PINK	Outputs pink noise from the oscillator.
WHITE	Outputs white noise from the oscillator.
SINE	Outputs a sine wave from the oscillator.
MULTI	Outputs a 31-band multi-sine wave from the oscillator.
ASSIGN	Displays assignments to output buses. Tapping this displays the DESTINATION popover for making assignments to output buses.
ON	Turns oscillator output on/off.
OSC METER	Oscillator output level
OSC 1/2 LEVEL	Oscillator level
OSC 1/2 ON	Turns oscillator output on/off.

* This is only displayed when either oscillator 1 or 2 has been created in the MIXER CONFIGURATION window.

Talkback Section of the Top Panel



Name	Description
TALKBACK MIC 1	This is the internal microphone for talkback.
[LEVEL] knob	This adjusts the level of talkback.
[DISP] button	This displays the TALKBACK/OSC window.
[TALK 1]-[TALK 3] button	These send talkback to the output destinations assigned to TALK 1 through TALK 3.

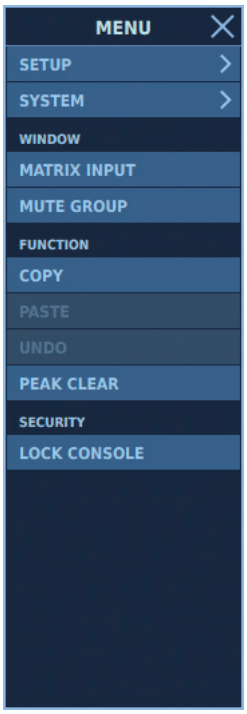
Memo

The way in which talkback is turned on and off varies depending on how you press <TALK 1> through <TALK 3>.

When you release the button quickly after pressing it, it operates as a latch to turn talkback on or off with each press.

When held depressed for a longer interval before release, it operates as a momentary switch that turns on talkback only while held down.

MENU Window



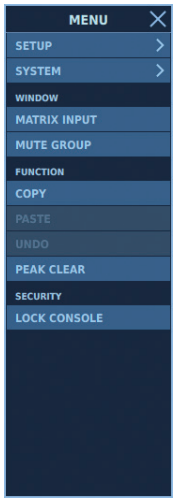
Up to this point we have covered basic mixing operations.
The M-5000 has a variety of other functions as well, and you access these from the MENU window.
The MENU window is the gateway to expansive functions.

In this chapter, the explanations are organized into the following sections.

- "MENU Window" (p. 188)
- "Using a MATRIX" (p. 189)
- "MUTE Groups" (p. 191)
- "Locking the Console to Prevent Operation" (p. 192)

MENU Window

To display the MENU window, go to the display section and press the [MENU] button.



SETUP	Displays the SETUP window. → "SETUP Window" (p. 193)
SYSTEM	Displays the SYSTEM window. → "SYSTEM Window" (p. 205)
WINDOW	
MATRIX INPUT	Displays the MATRIX INPUT window. → "Using a MATRIX" (p. 189)
MUTE GROUP	Displays the MUTE GROUP MASTER window. → "MUTE Groups" (p. 191)
FUNCTION	
COPY	→ "Copying/Pasting Input Channel/Output Bus Settings on the HOME Screen" (p. 98) → "Copying/Pasting Input Channel/Output Bus Settings at the CH EDIT Window" (p. 114) → "Copying/Pasting GEQ Settings" (p. 160)
PASTE	
UNDO	
PEAK CLEAR	Clears the level meter's peak hold or "over" indication.
SECURITY	
LOCK CONSOLE	Locks the M-5000, preventing operation. → "Locking the Console to Prevent Operation" (p. 192)

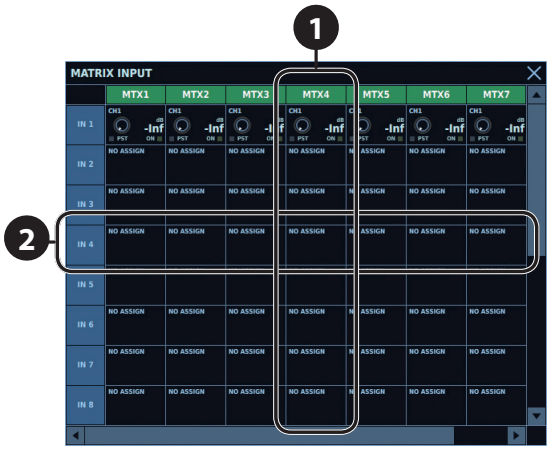
Using a MATRIX

MATRIX processes audio sent from input channels and output buses, and outputs it to OUTPUT PATCHBAY.
In the MATRIX INPUT window, you select input channels or output buses to send to MATRIX and adjust the send levels.

You specify the MATRIX count and the number of input channels or output buses to input to MATRIX in the MIXER CONFIGURATION window.
→ "Changing the Number of Input Channels/Output Buses" (p. 79)

MATRIX INPUT Window

To display the MATRIX INPUT window, go to the MENU window and tap <MATRIX INPUT>.

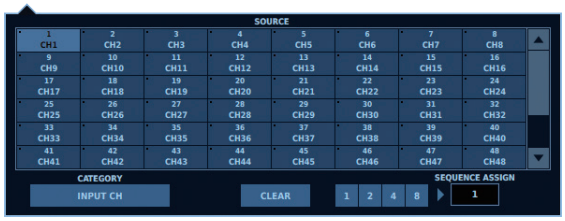


1 MATRIX column

This adjusts the send level from the input channels and output buses to the MATRIX at the head of the column.

2 Input channel/output bus row

This adjusts the send level to each respective MATRIX from the input channels or output buses at the head of the row.
Tapping <IN 1> through <IN (n)> (at the head of each row) displays a popover for selecting the input channel or output bus.



Tapping an individual element lets you manipulate the following parameters using the selected knob/button.

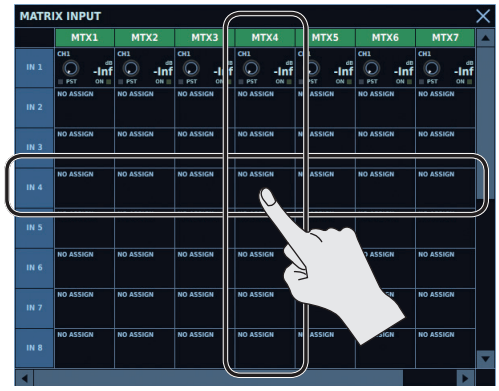


Send level	Send level to MATRIX
Send point	Selects the send point to the MATRIX from the input channel/output bus from among the following. • PRE-P Pre-processing • PRE Pre-fader • POST Post-fader
ON	Turns sending to MATRIX on/off.

Adjusting the Send Level to MATRIX

1. Tap <IN 1> through <IN (n)>, then select the input channel or output bus you want to input to MATRIX.

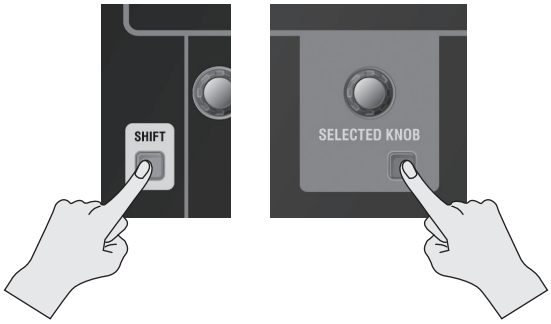
2. Tap the location where the desired MATRIX column and the desired input channel/output bus row intersect.



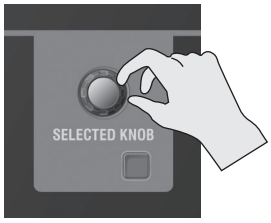
3. In the top panel's display section, press the selected button to turn on sending to MATRIX.



4. Hold down the [SHIFT] button and press the selected button to change the send point.



5. Use the selected knob to adjust the send level.



MUTE Groups

About MUTE Groups

You can assign input channels or output buses to a MUTE group and mute them out together.

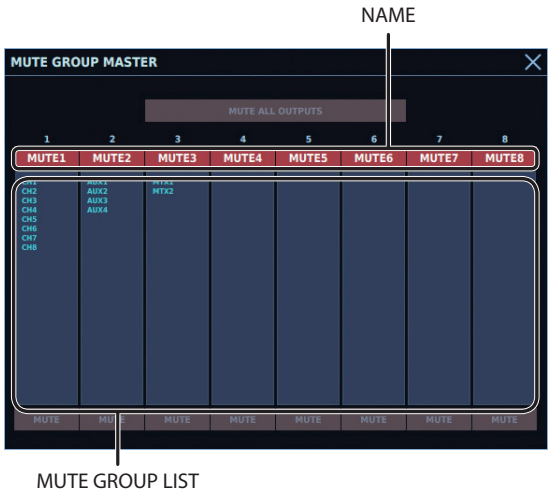
You can assign input channels and output buses to multiple MUTE groups.

Rules of Muting

Muting individual input channels or output buses and muting using MUTE groups are different. If an input channel or output bus was muted before muting using a MUTE group, it remains muted even after the MUTE group is released.

MUTE GROUP MASTER Window

You make settings for MUTE groups in the MUTE GROUP MASTER window. To display the MUTE GROUP MASTER window, go to the MENU window and tap <MUTE GROUP>.

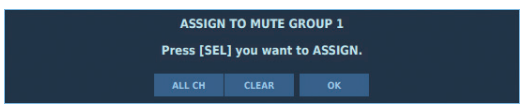


MUTE ALL OUTPUTS	Mutes all outputs of the M-5000 and input/output units.
NAME	Displays the MUTE GROUP name and MUTE GROUP color. To change the MUTE GROUP name or MUTE GROUP color, double-tap or long-tap this.
MUTE GROUP LIST	List of input channels/output buses assigned to the MUTE group
MUTE	Mutes the MUTE group.

Making Assignments to MUTE GROUP

1. On the MUTE GROUP MASTER window, tap <MUTE GROUP LIST>.

A popup for making assignments to MUTE GROUP appears.



ALL CH	Assigns all input channels to the MUTE group.
CLEAR	Clears the currently assigned input channels/output buses.

2. Press [SEL] buttons for the input channel or output bus you want to assign.

3. Tap <OK> to confirm the operation.

Locking the Console to Prevent Operation

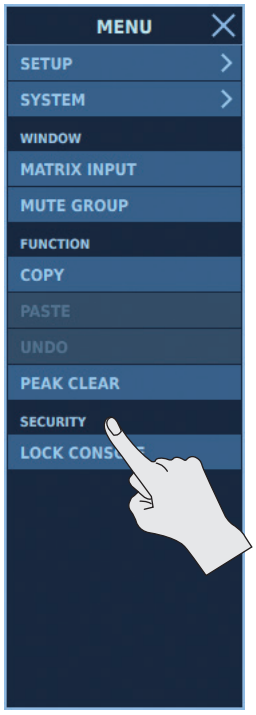
You can lock the console to prevent it from being operated.

Memo

If you turn off the power while the console is locked, the console is unlocked the next time you turn on the power.

Locking the console

To lock the console, go to the MENU window and tap <LOCK CONSOLE>.



The screen shown below is displayed while the console is locked.



Unlocking the Console

To unlock the console, tap <UNLOCK>.



SETUP Window



In the SETUP window, you can display screens for making configuration settings for the M-5000, such as changing the mixer configuration, organizing and managing projects, and initializing the unit.

In this chapter, the explanations are organized into the following sections.

- "SETUP Window" (p. 194)
- "Inserting External Effects Devices" (p. 195)
- "Channel Link" (p. 197)
- "Projects" (p. 199)
- "Initializing Mixer Parameter" (p. 203)

SETUP Window

To display the SETUP window, go to the MENU window and tap <SETUP>.

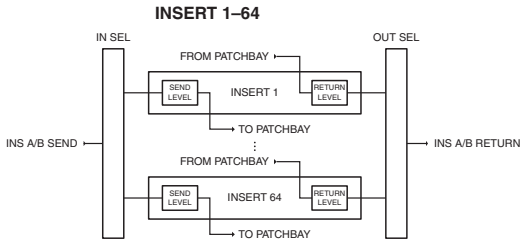
→ "MENU Window" (p. 187)



MIXER CONFIGURATION	Displays the MIXER CONFIGURATION window. → "Changing the Number of Input Channels/Output Buses" (p. 79)
ARRANGE CHANNEL	Displays the ARRANGE CHANNEL window. → "Rearranging Input Channels/Output Buses" (p. 86)
INSERT SETTINGS	Displays the INSERT SETTINGS window. → "Inserting External Effects Devices" (p. 195)
CHANNEL LINK	Displays the CHANNEL LINK window. → "Channel Link" (p. 197)
USER ASSIGNABLE	Displays the USER ASSIGNABLE window. → "User-assignable Section" (p. 164)
PROJECT	Displays the PROJECT window. → "Projects" (p. 199)
INITIALIZE	Displays the INITIALIZE window. → "Initializing Mixer Parameter" (p. 203)

Inserting External Effects Devices

About Inserting External Effects Devices

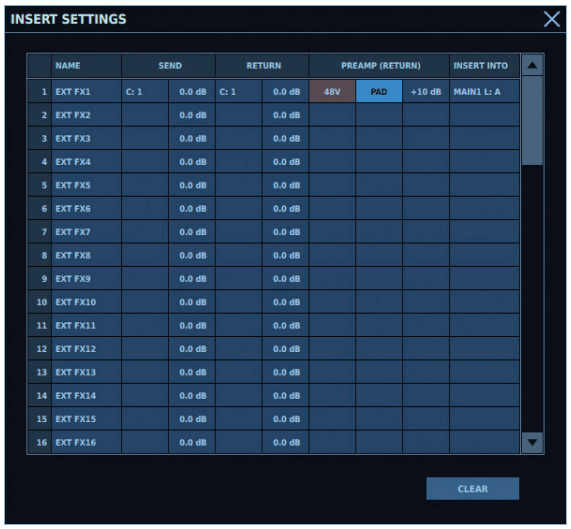


You can connect external effects devices to input and output connectors on the M-5000 and on input and output units connected to the M-5000, and insert the devices into input channels, output buses, and monitors.

You make the settings for inserting external effects devices in the INSERT SETTINGS window.

INSERT SETTINGS Window

To display the INSERT SETTINGS window, go to the SETUP window and tap <INSERT SETTINGS>.

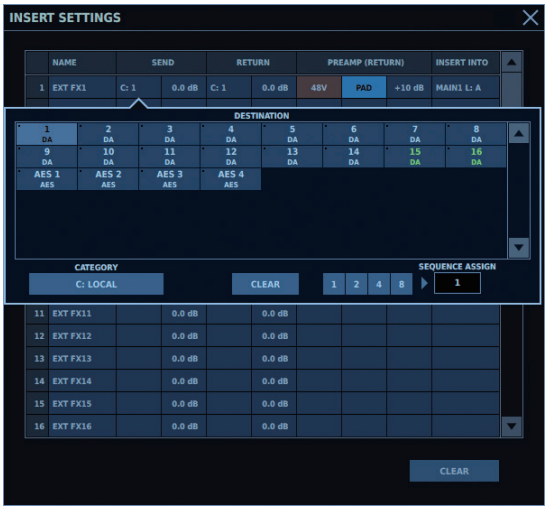


NAME	Here you enter the name of the external effects device.
SEND	Specifies output to the external effects device. At the left, you set the output connector. At the right, you adjust the output level.
RETURN	Specifies the input from the external effects device. At the left, you set the input connector. At the right, you adjust the input level.
48V	Input-connector phantom power
PAD	Input-connector pad
PREAMP (RETURN)	Preamp setting for the input-connector
INSERT	Input channel/output bus where inserted
CLEAR	Clears all insert settings for all external effects devices.

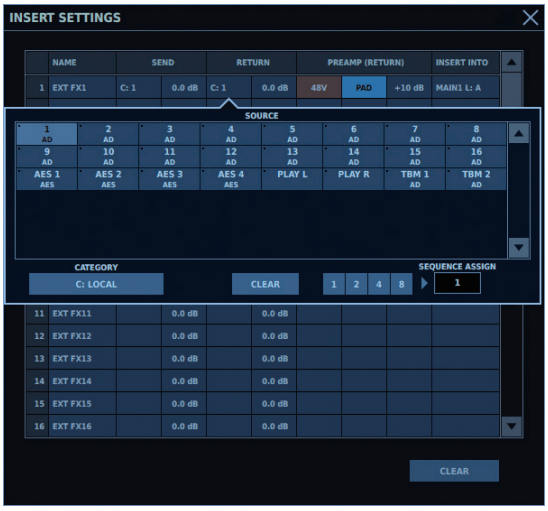
Inserting an External Effects Device

1. **Display the INSERT SETTINGS window.**

2. **Use <SEND> to specify the output connector where the external effects device is connected.**

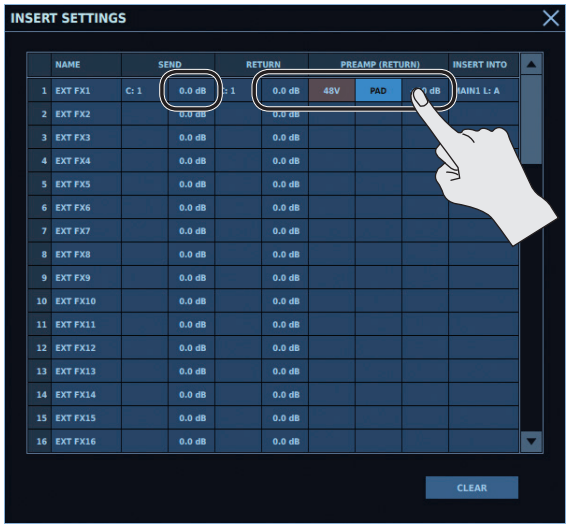


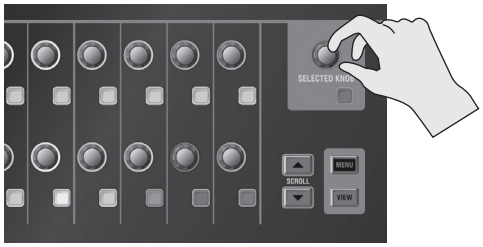
3. **Use <RETURN> to specify the input connector where the external effects device is connected.**



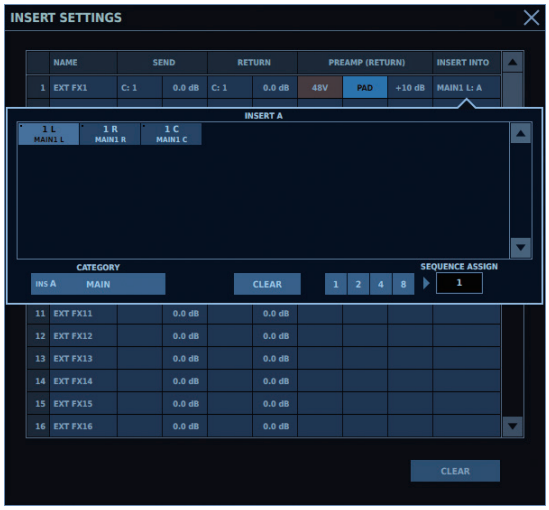
4. Use <SEND> or <RETURN> to adjust the input or output level as needed.

Tap the parameter you want to work with, then use the selected knob/button to manipulate it.





5. Tap <INSERT>, then select the input channel, output bus, or monitor for inserting the external effects device.



The external effects device is inserted into the input channel, output bus, or monitor.

Memo

Tapping <NAME> and entering a name for the external effects device can facilitate organizing and management.

Channel Link

About Channel Link

Channel link is a function that makes specific input channels or output buses have the same parameters.

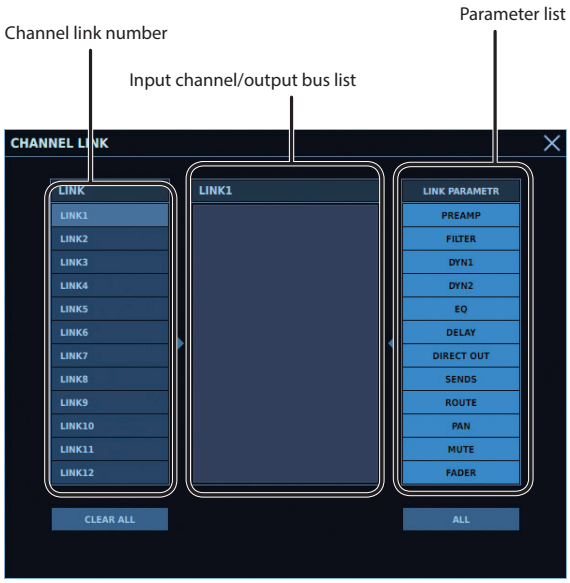
The M-5000 has 12 channel links.
You can assign any number of input channels or output buses to a single channel link. The linked parameters in the channel link are also selectable.

* Assigning individual input channels or output buses to multiple channel links is not possible.

You make the settings for channel link in the CHANNEL LINK window.

CHANNEL LINK Window

To display the CHANNEL LINK window, go to the SETUP window and tap <CHANNEL LINK>.
→ "SETUP Window" (p. 194)



Channel link name	Selects the channel link you want to specify (LINK 1-12). Double-tap or long tap, then set the name.
CLEAR ALL	Clears all input channels/output buses for which a channel links (LINK 1-LINK 12) are set.
Input channel/ output bus list	Displays the set input channels/output buses in a channel link. You tap the input channel/output bus list and add input channels/output buses.
Parameter list	Selects the parameters to link in a channel link.
ALL	Selects all parameters or nothing in the parameter list.

Linkable Parameters

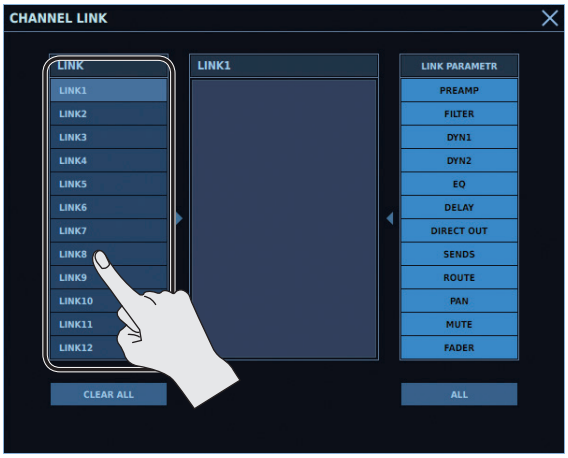
You can link the following parameters for input channels or output buses specified for a single channel link.

PREAMP	Preamp settings
FILTER	HPF, LPF
DYN 1	Dynamics 1(Excludes the key-in)
DYN 2	Dynamics 2(Excludes the key-in)
EQ	4-band EQ
DELAY	Delay
DIRECT OUT	Direct out (on/off, send point, level)
SENDS	Sends to AUX
ROUTE	Sends on/off to MAIN/SUBGROUP/MIX MINUS
PAN	Pan settings
MUTE	Muting
FADER	Sends to MAIN

Making the Settings for Channel Link

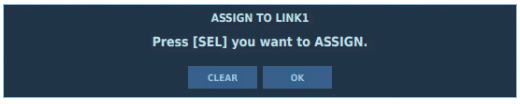
1. Display the CHANNEL LINK window.

2. Tap the channel link number from <LINK 1> to <LINK 12> that you want to specify.



3. Tap the input channel/output bus list.

A popup for making the channel link settings appears.

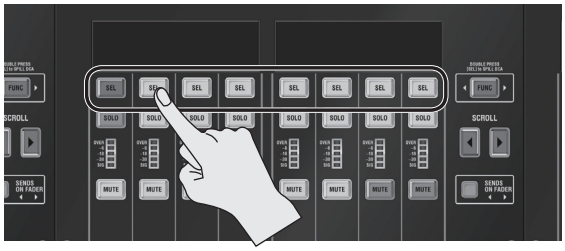


CLEAR	Clears the input channels/output buses specified for the channel link you selected in step 2.

4. **Press the [SEL] button for the input channel or output bus you want to assign to the channel link.**

The input channel or output bus is assigned to the channel link.





5. **From the parameter list, select the parameters to link.**



6. **Tap <OK>.**

The input channel or output bus you selected in step 4 is assigned to the channel link.

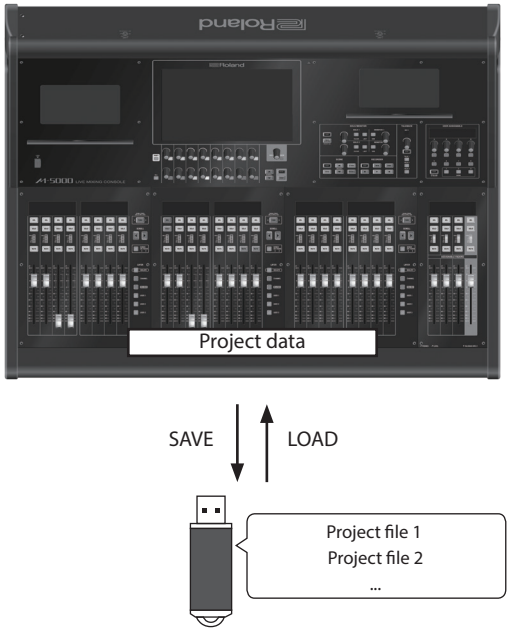


Projects

About Projects

The settings you create by operating the M-5000 are stored in the unit as project data. You can save and organize these on a USB flash drive as project files (file extension: m5pj).

You can also load saved project files back into the M-5000.



You organize and manage projects in the PROJECT window.

* Before using USB flash drives for this unit, please format the USB flash drives on this unit.

→ "Formatting a USB Flash Drive on the M-5000" (p. 202)

Data Saved in Projects

The data saved in projects is sectionalized as shown below, and you can manage the data by section.

Section name	Data contained
MIXER SETTINGS	• **Mixer configuration** • Patchbay • Input channels • Output buses • Effects • GEQs • Insert settings • DCA/MUTE groups • Monitor • Talkback • Oscillator • Matrix inputs • Channel links
SCENE MEMORIES	Scene memories → "Scene Memory" (p. 174)
FADER BANKS	Fader bank section and assignable fader section of the top panel → "Fader Bank Section" (p. 116) → "Assignable Fader Section" (p. 125)
USER ASSIGNABLE	User assignable section of the top panel → "User-assignable Section" (p. 164)
PREFERENCES	Preferences → "Changing the Preferences for the User Interface" (p. 207)
LIBRARIES	Effect library
NETWORK	Network setting
REMOTES	• MIDI → "MIDI Settings" (p. 215) • RS-232C → "RS-232C settings" (p. 215)
SYSTEM SETTINGS	• PANEL • OPTION • DOWNMIX SETTINGS • WORD CLOCK • REAC/SLOT → "SYSTEM Window" (p. 205)

By default, project files are saved in the following directory.
/ROLAND/M-5000/PROJ

PROJECT Window

You use the PROJECT window to work with project files. To display the PROJECT window, go to the SETUP window and tap <PROJECT>.

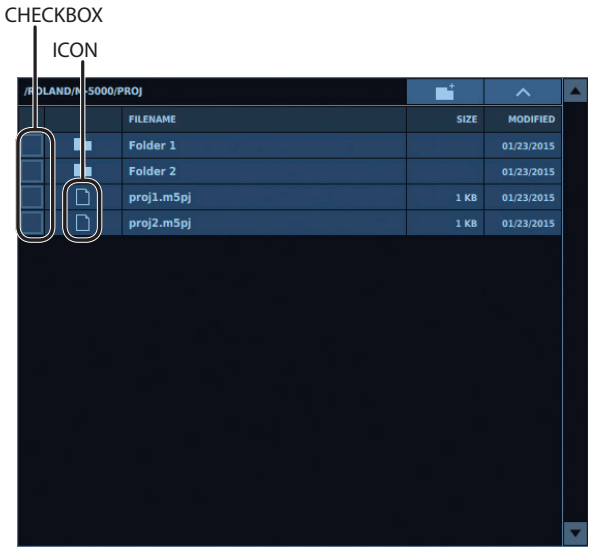
→ "SETUP Window" (p. 194)

The PROJECT window displays the contents of the USB flash drive connected to the USB MEMORY connector on the top panel.



FORMAT	Formats the USB flash drive. → "Formatting a USB Flash Drive on the M-5000" (p. 202)
LOAD	Loads a project file. → "Loading a Project File" (p. 201)
SAVE	Saves a project file. → "Saving a Project File" (p. 201)

Project File List



CHECKBOX	Turning on the checkbox lets you move and delete project files. → "Selecting and Moving Multiple List Items" (p. 67) → "Selecting and Deleting Multiple List Items" (p. 68)
ICON	Tapping this lets you select the project file.
FILENAME	Names of the project files Long-tapping or double-tapping this lets you change the name. → "Entering Text" (p. 69)
SIZE	Sizes of the project files
MODIFIED	Date and time when the project file was last edited

You can move to the desired directory by tapping the following icons.

	Moves one level below the current folder.
	Creates a new folder at the current level.
	Moves up one level.

Memo

You can tap the header of the FILENAME, SIZE or MODIFIED column to sort folders and files.

Working with Projects

Saving a Project File

You save project files on a USB flash drive.
When you save a file, the data in all categories is saved.

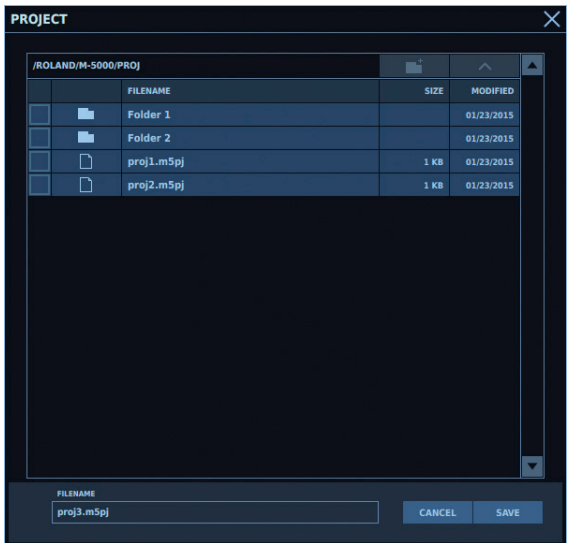
1. Display the PROJECT window.

2. Move to the folder where you want to save the file.

	Moves one level below the current folder.
	Creates a new folder at the current level.
	Moves up one level.

3. Tap <SAVE>.

A window for specifying the file name is displayed.



Memo

You can tap the existing file to overwrite.

4. Specify the file name, then tap <SAVE>.

The data in all categories is saved as a project file (extension: m5pj).

Loading a Project File

You load project files from a USB flash drive.
When you load a file, you can select individual sections of data to load.

1. Display the PROJECT window.

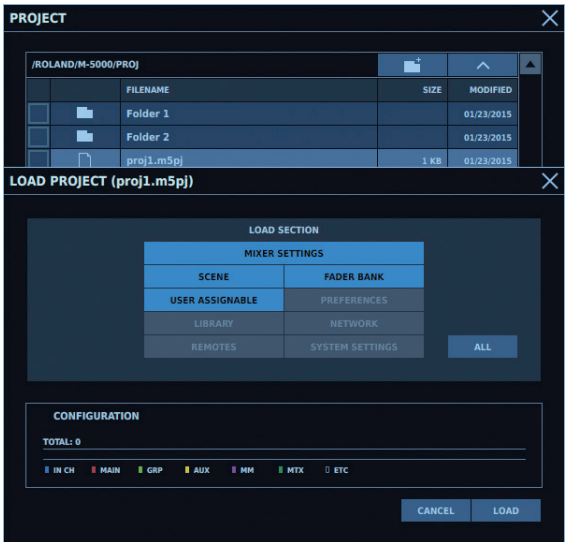
2. Move to the folder where you want to load the file.

	Moves one level below the current folder.
	Moves up one level.

3. Tap <ICON> for the project file you want to load.

4. Tap <LOAD>.

The LOAD PROJECT window appears.

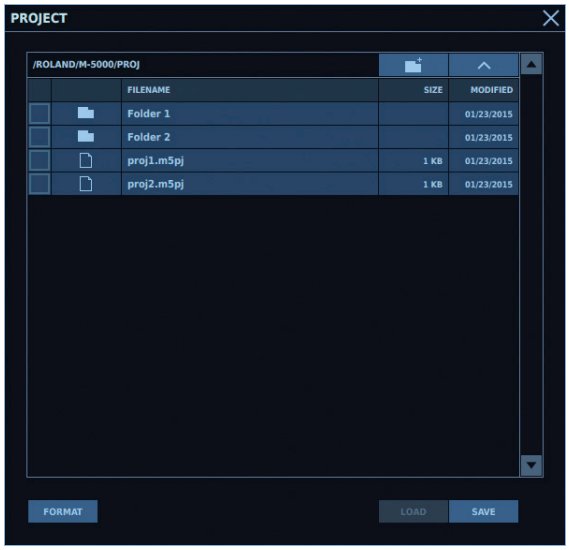


5. Select the section you want to load, then tap <LOAD>.

The data in the selected section is loaded.

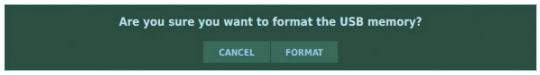
Formatting a USB Flash Drive on the M-5000

1. Display the PROJECT window.



2. Tap <FORMAT>.

A popup prompting you to confirm the operation is displayed.



3. Tap <FORMAT>.

Formatting of the USB flash drive starts.

Initializing Mixer Parameter

To initialize mixer parameters, you use the INITIALIZE window.

The following mixer parameters are not initialized.

- **Mixer configuration**
- Fader calibration

INITIALIZE Window

To initialize project mixer parameters, you use the INITIALIZE window.

To display the INITIALIZE window, go to the SETUP window and tap <INITIALIZE>.

→ "SETUP Window" (p. 194)



MIXER SETTINGS	Selects the section of mixer parameter to initialize.
SECTION	Selects the section to initialize except for mixer parameters.
ALL	Selects all <SECTION>.
CANCEL	Cancels initialization and exits the INITIALIZE window.
INIT	Executes initialization.

You select the category of data to initialize from among the following.

MIXER SETTINGS

INPUT CH PARAMETER	Input channel parameter
INPUT CH PATCH	Input channel patchbay
BUS PARAMETER	Bus parameter
BUS PATCH	Bus patchbay
ALL MIXER SETTINGS	All mixer settings • Patchbay • Input channels • Output buses • Effects • GEQs • Insert settings • DCA/MUTE groups • Monitor • Talkback • Oscillator • Matrix inputs • Channel links

SECTION

SCENE	Scene memories → "Scene Memory" (p. 174)
FADER BANK	Fader bank section and assignable fader section of the top panel → "Fader Bank Section" (p. 116) → "Assignable Fader Section" (p. 125)
USER ASSIGNABLE	User assignable section of the top panel → "User-assignable Section" (p. 164)
PREFERENCES	Preferences → "Changing the Preferences for the User Interface" (p. 207)
LIBRARY	Effect library
NETWORK	Network setting
REMOTES	MIDI → "MIDI Settings" (p. 215) RS-232C → "RS-232C settings" (p. 215)
SYSTEM SETTINGS	• PANEL • OPTION • DOWNMIX SETTINGS • WORD CLOCK • REAC/SLOT → "SYSTEM Window" (p. 205)

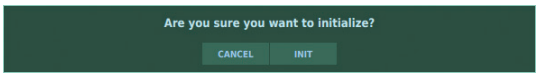
Initializing the Data in the Unit

1. Display the INITIALIZE window.

2. In the INITIALIZE SECTION, select the section you want to initialize.

3. Tap <INIT>.

A popup prompting you to confirm the operation is displayed.



4. Tap <INIT>.

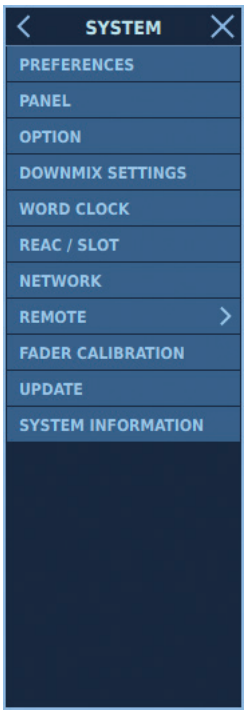
Initialization starts.

When the message "Completed." appears, initialization is finished.

NOTE

Never turn off the power to the M-5000 before initialization finishes.

SYSTEM Window



In the SYSTEM window, you can display screens for changing the M-5000's system settings.

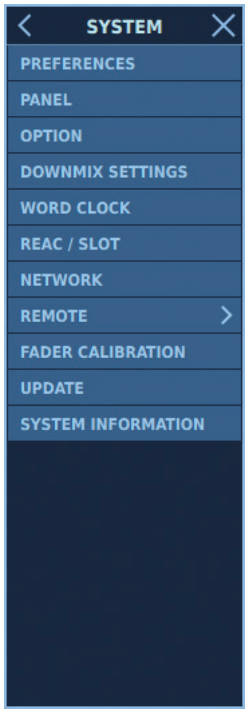
In this chapter, the explanations are organized into the following sections.

- "SYSTEM Window" (p. 206)
- "Changing the Preferences for the User Interface" (p. 207)
- "Adjusting the Brightness of the Top Panel and Touch Sensitivity" (p. 208)
- "Other Options" (p. 209)
- "Downmix Settings" (p. 210)
- "Settings for the Word Clock" (p. 211)
- "Settings for the REAC Ports and Expansion Slots" (p. 212)
- "Remote Control" (p. 215)
- "Fader Calibration" (p. 216)
- "Updating the Unit" (p. 217)
- "Viewing the Information about the Unit" (p. 218)

SYSTEM Window

In the SYSTEM window, you can display screens for changing the M-5000's system settings.

To display the SYSTEM window, go to the MENU window and tap <SYSTEM>.



PREFERENCES	Displays the PREFERENCES window. Here you can change your preferences for the user interface. → "Changing the Preferences for the User Interface" (p. 207)
PANEL	Displays the PANEL window. Here you can adjust the brightness and touch sensitivity of the top panel. → "Adjusting the Brightness of the Top Panel and Touch Sensitivity" (p. 208)
OPTION	Displays the OPTION window. Here you make settings for other options. → "Other Options" (p. 209)
DOWNMIX SETTINGS	Displays the DOWNMIX SETTINGS window. Here you make settings for downmixing. → "Downmix Settings" (p. 210)
WORD CLOCK	Displays the WORD CLOCK window. Here you make settings for the word clock. → "Settings for the Word Clock" (p. 211)
REAC / SLOT	Displays the REAC / SLOT window. Here you make settings for the REAC ports and expansion slots. → "Settings for the REAC Ports and Expansion Slots" (p. 212)
NETWORK	Displays the NETWORK window.
REMOTE	Displays the REMOTE window. The REMOTE window displays the following information. • MIDI Displays the MIDI window. → "MIDI Settings" (p. 215) • RS-232C Displays the RS-232C window. → "RS-232C settings" (p. 215)
FADER CALIBRATION	Displays the FADER CALIBRATION window. Here you adjust for deviation between the fader positions and the index markings on the top panel. → "Fader Calibration" (p. 216)
UPDATE	Updates the M-5000. → "Updating the Unit" (p. 217)
SYSTEM INFORMATION	Displays the SYSTEM INFORMATION window. Here you can view information about the M-5000. → "Viewing the Information about the Unit" (p. 218)

Changing the Preferences for the User Interface

In the PREFERENCES window, you can change your preferences for the user interface.

PREFERENCES Window

To display the PREFERENCES window, go to the SYSTEM window and tap <PREFERENCES>.



CONFIRM

SCENE / LIBRARY RECALL	When this is on, a confirmation popup appears when you recall a scene memory/library.
PATCHBAY CHANGE	When this is on, a confirmation popup appears when you change the input/output patchbay.

BUTTON

[SEL] follows [SOLO]	When the [SOLO] button is pressed, the M-5000 behaves as if the [SEL] button was also simultaneously pressed.

Adjusting the Brightness of the Top Panel and Touch Sensitivity

In the PANEL window, you can adjust the brightness of the lamps, LEDs, and displays, and the touch sensitivity of the faders.

PANEL Window

To display the PANEL window, go to the SYSTEM window and tap <PANEL>.

Tap the parameter you want to work with, then use the selected knob to manipulate it.



TOUCH INDICATOR

BRIGHTNESS

ACTIVE LED	Adjusts the brightness of active LEDs for panel buttons, meters, etc.
LED GLOW	Adjusts the brightness of inactive LEDs for panel buttons, meters, etc.
LAMP	Adjusts the brightness of a lamp connected to the LAMP connector.
FADER DISP	Adjusts the brightness of the fader bank display and user-assignable display.
MAIN DISPLAY	Adjusts the brightness of the touch display.
MASTER	Adjusts the relative brightness of all settings (ACTIVE LED, LED GLOW, LAMP, FADER DISP, and MAIN DISPLAY).

FADER DISPLAY AUTO DIM

TIME	Adjusts the time to start dimming the fader bank display and user-assignable display.

FADER TOUCH SENS

SENSITIVITY	Adjusts the touch sensitivity of the faders.
CALIBRATE TOUCH SENS	Changes the detected touch sensitivity of the faders when their touch sensitivity is malfunctioning. Never touch the faders while calibration is in progress.
TOUCH INDICATOR	Makes faders light up when a touch is detected. Adjust SENSITIVITY until you achieve the intended touch detection.

Memo

Depending on the environment where the M-5000 is used, fader touch sense may fail to function effectively, leading to incorrect fader operation (especially during times of high humidity).

At such times, press <CALIBRATE TOUCH SENS>.

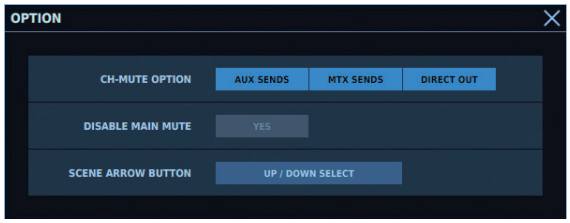
If the condition is not improved, set TOUCH SENS to 0 (zero) to turn off touch sense.

Other Options

In the OPTION window, you make settings for other options.

OPTION Window

To display the OPTION window, go to the SYSTEM window and tap <OPTION>.



CH-MUTE OPTION

AUX SENDS	When an input channel is muted, sends to AUX are also muted.
MTX SENDS	When an input channel is muted, sends to MATRIX are also muted.
DIRECT OUT	When an input channel is muted, direct out is also muted.

* The parameters are valid when the send points are set to CH TOP/PRE PROC/PRE FDR.

DISABLE MAIN MUTE

DISABLE MAIN MUTE	Disables the mute for MAIN.

SCENE ARROW BUTTON

SCENE ARROW	Selects from among the following for the behavior when the [SELECT ▲]/[SELECT ▼] button in the top panel's scene section is pressed. • UP / DOWN Selects the currently selected scene's previous/next scene. • RECALL PREV / RECALL NEXT Recalls the currently selected scene's previous/next scene (excluding scenes for which skip is on). The [SELECT ▲]/[SELECT ▼] button will light.

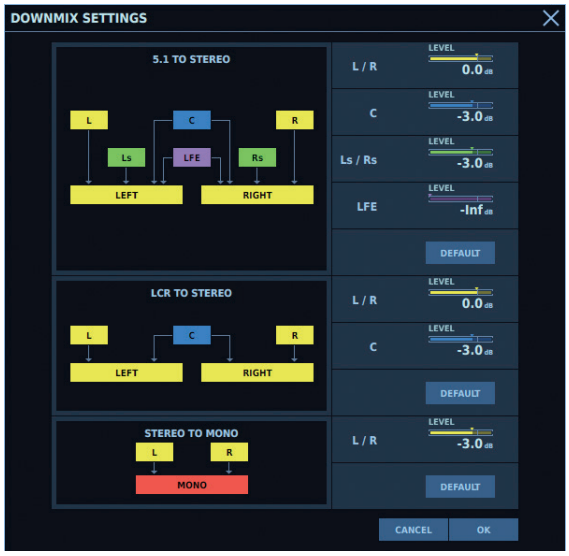
Downmix Settings

In the DOWNMIX SETTINGS window, you can specify a factor for downmixing from a large number of channels to a smaller number of channels.

The M-5000 performs downmixing in a wide variety of situations. For example, downmixing is done when monitoring 5.1 channels or LCR using headphones.

DOWNMIX SETTINGS Window

To display the DOWNMIX SETTINGS window, go to the MENU window and tap <DOWNMIX SETTINGS>.



5.1 TO STEREO	
L/R LEVEL	Sets the amount of audio sent from 5.1ch L/R to STEREO L/R. The default value is 0.0 dB.
C LEVEL	Sets the amount of audio sent from 5.1ch C to STEREO L/R. The default value is -3.0 dB.
Ls/Rs	Sets the amount of audio sent from 5.1ch Ls/Rs to STEREO L/R. The default value is -3.0 dB.
LFE	Sets the amount of audio sent from 5.1ch LFE to STEREO L/R. The default value is -Inf dB.
LCR TO STEREO	
L/R LEVEL	Sets the amount of audio sent from LCR L/R to STEREO L/R. The default value is 0.0 dB.
C LEVEL	Sets the amount of audio sent from LCR C to STEREO L/R. The default value is -3.0 dB.
STEREO TO MONO	
L/R LEVEL	Sets the amount of audio sent from STEREO L/R to MONO. The default value is -3.0 dB.
DEFAULT	Returns the settings for 5.1 TO STEREO, LCR TO STEREO, and STEREO TO MONO to their default values.
CANCEL	Discards any changes to 5.1 TO STEREO, LCR TO STEREO, and STEREO TO MONO, and exits the DOWNMIX SETTINGS window.
OK	Applies changes to 5.1 TO STEREO, LCR TO STEREO, and STEREO TO MONO and exits the DOWNMIX SETTINGS window.

Settings for the Word Clock

About the Word Clock

The word clock is a synchronizing signal for digital-audio signals.

This is used in the M-5000's internal digital signal processing and in the transmission of digital-audio signals between devices.

When transmitting or receiving digital-audio signals between different devices, all devices are synchronized to the same word-clock signal. Pops and clicks occur if synchronization is not accomplished correctly.

You can select from among the following as the sampling frequency for the M-5000.

- 96kHz
- 48kHz
- 44.1kHz

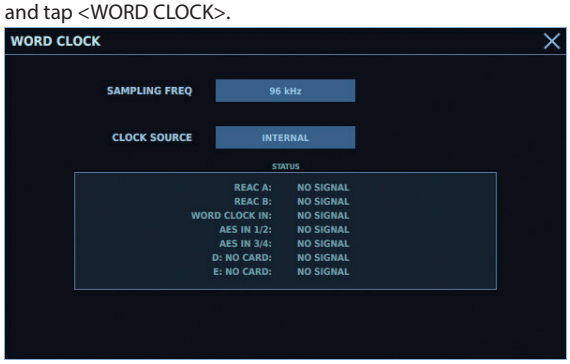
You can select from among the following as the word clock (clock source) to which M-5000 and REAC devices connected to it are synchronized.

INTERNAL	The M-5000's internal clock.
WORD CLOCK	WORD CLOCK IN connector
A: REAC	Master device connected to REAC port A
B: REAC	Master device connected to REAC port B

WORD CLOCK Window

In the WORD CLOCK window, you set the M-5000's sampling frequency and the clock source.

To display the WORD CLOCK window, go to the SYSTEM window and tap <WORD CLOCK>.



SAMPLING FREQ	Selects from among the following as the sampling frequency at which the M-5000 operates. • 96kHz • 48kHz • 44.1kHz
CLOCK SOURCE	Selects the clock source from among the following. • INTERNAL • WORD CLOCK • A: REAC • B: REAC
STATUS	Displays the status of the word clock. Connectors for which synchronization has not been achieved are displayed in red.

Changing the Settings for the Word Clock

1. **Display the WORD CLOCK window.**
2. **Tap <SAMPLING FREQ> and select a sampling frequency.**
   If the setting has changed, <APPLY> is displayed.
3. **Tap <CLOCK SOURCE> and select a clock source.**
   If the setting has changed, <APPLY> is displayed.
4. **Tap <APPLY>.**
   The values set in steps 2 and 3 are applied.

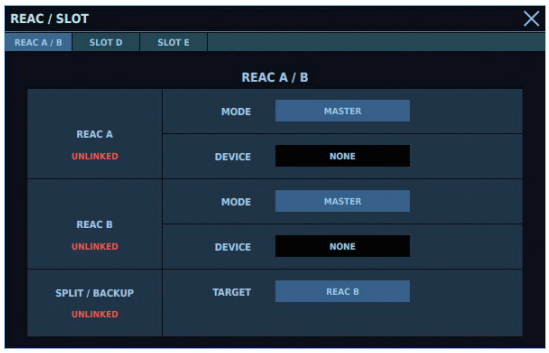
Settings for the REAC Ports and Expansion Slots

In the REAC / SLOT window, you make the settings for expansion interfaces attached to the REAC ports and expansion slots.

* When restarting the unit with the expansion interface installed, wait for about one second before you turn on the power.

REAC / SLOT Window

To display the REAC / SLOT window, go to the SYSTEM window and tap <REAC / SLOT>.



The following three tabs are available.

- REAC A/B tab

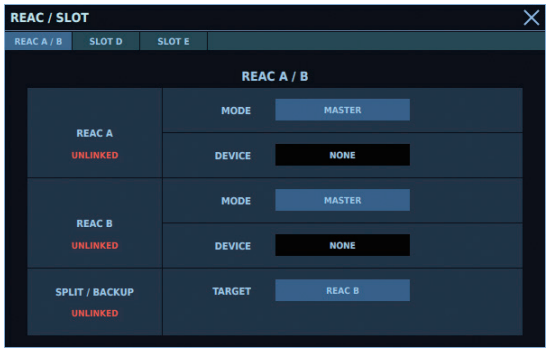
Here you make settings for the REAC ports (A, B, SPLIT/BACKUP).

- SLOT D tab
- SLOT E tab

Here you make settings for EXPANSION SLOT D or E.

Operation methods differ according to the attached expansion interface.

REAC A/B Tab



MODE	Selects the REAC A/B port REAC mode from among the following. • MASTER • SLAVE • SPLIT
DEVICE	Displays the device connected to the REAC A/B port.
BELONG TO	Selects from among the following as the connector for the signal that the REAC SPLIT/BACKUP port splits or backs up. • REAC A port • REAC B port

About the REAC SPLIT/BACKUP Port

The SPLIT/BACKUP port is used to split or back up (duplicate) REAC A or B. In the REAC / SLOT window REAC A/B tab, you use <TARGET> to specify split/backup for either the REAC A or B port.

Whether split or backup is performed is set automatically according to the connected equipment.

If the device connected to the SPLIT/BACKUP port supports a REAC backup (redundant) connection, then if a problem occurs in the main REAC connection (the REAC A or B port), the system automatically switches to the backup REAC connection (the SPLIT/BACKUP port).

When using an Ethernet switching hub to extend the REAC backup connection, use the same model of switching hub for both the main REAC connection and the backup REAC connection.

When a split REAC device is connected to the SPLIT/BACKUP port, audio is distributed to the split REAC device.

The REAC SPLIT/BACKUP port is compatible with REAC EMBEDDED POWER, and can supply power to devices compatible with REAC EMBEDDED POWER.

When a REAC device is connected, the system automatically detects whether the device is compatible with REAC EMBEDDED POWER and supplies power if compatible. Power is not supplied if the device is not compatible with REAC EMBEDDED POWER.

Requirements for switching hubs

Switching hubs used to connect REAC devices must meet the following conditions:

- We recommend a switching hub that supports 1000BASE-T (IEEE 802.3ab, Gigabit Ethernet)
- 100BASE-TX interface must be supported (IEEE 802.3u, Fast Ethernet)
- Full duplex communication (simultaneous bidirectional communication) must be supported

Caution when using a switching hub

- The network propagation time between REAC devices is approximately 375 microseconds, but if the signal passes through a switching hub, there will be approximately 200 microseconds of delay for each unit.
- Up to four switching hubs can be connected in series.
- Connect REAC devices to a switching hub that supports 100BASE-TX.
- Carefully read the owner's manual of the switching hub you use.

Restrictions in Use with the M-48 at 96kHz

When the sampling rate is set at 96 kHz, the number of audio channel that a REAC slave device present at the REAC port where the M-48 is connected can send to the M-5000 is 32. Sending more than 32 channels produces noise.

(Because of the M-48's control signals, obtaining a band on 100BASE-TX ample enough for the REAC slave device to send 40 audio channels at 96 kHz is not possible.)

REAC device sending 40 channels at 96 kHz

- M-5000
- S-4000S-4000
- S-4000M
- S-2416 with cascade connection
- R-1000

Connection Producing Noise (Not OK)



S-4000S-4000

REAC SLAVE

↓ 40ch/96kHz

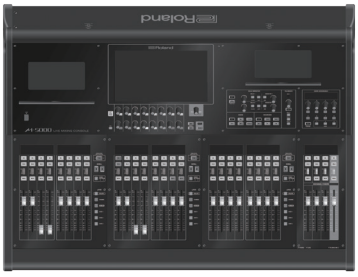


M-48



S-4000D

REAC A MASTER



M-5000 96kHz

REAC MASTER

Connection Producing No Noise 1 (OK)

Set the system's sampling rate at 48 kHz.



S-4000S-4000

REAC SLAVE

↓ 40ch/48kHz



M-48



S-4000D

REAC A MASTER

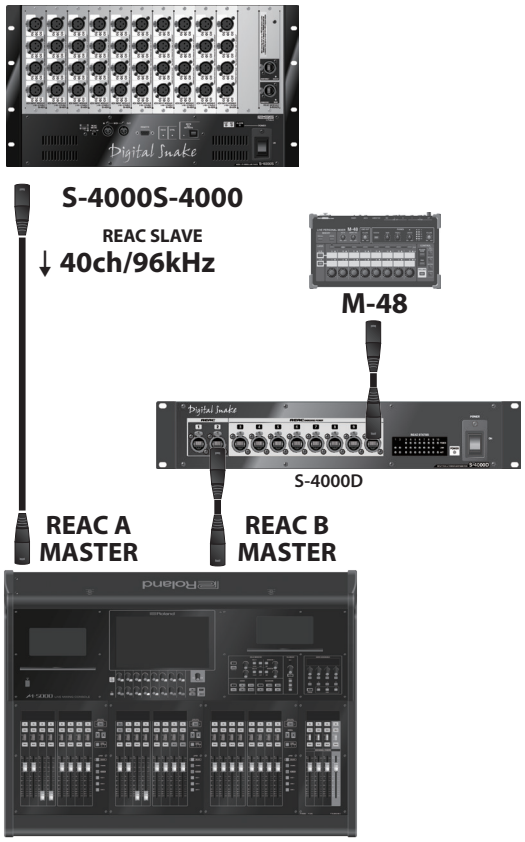


M-5000 48kHz

REAC MASTER

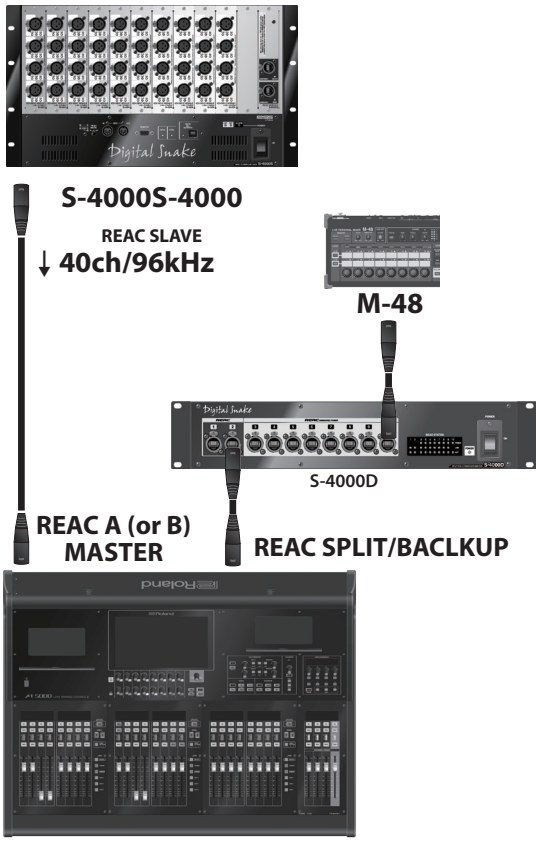
Connection Producing No Noise 2 (OK)

Change the number of audio channels that the REAC slave device at the REAC port where the M-48 is connected to 32 channels or fewer.
In the figure below, no REAC slave device is present at the REAC port where the M-48 is connected, and so no noise is produced.



Connection Producing No Noise 3 (OK)

Change the number of audio channels that the REAC slave device at the REAC port where the M-48 is connected to 32 channels or fewer.
In the figure below, no REAC slave device is present at the REAC port where the M-48 is connected, and so no noise is produced.

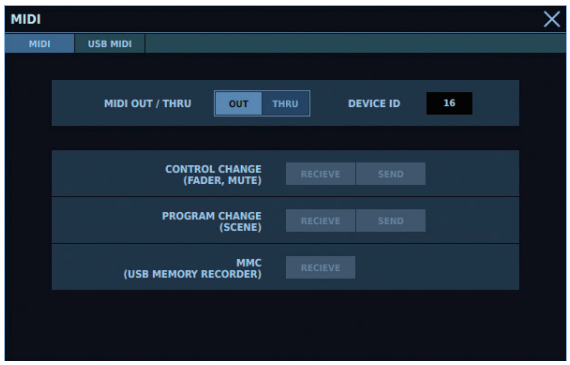


MIDI Settings

MIDI Window

In the MIDI window, you make settings for MIDI and USB MIDI.

To display the MIDI window, go to the SYSTEM window and tap <REMOTE>, then tap <MIDI>.



Two tabs are displayed.

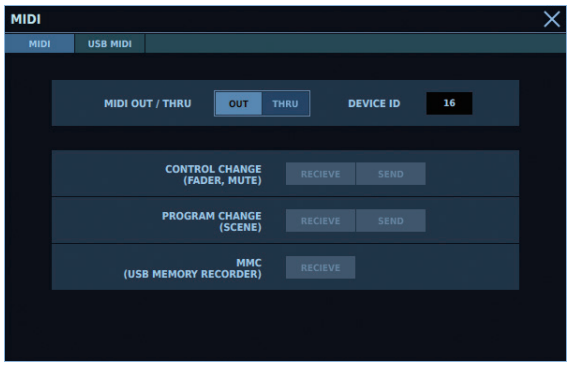
- MIDI tab

Here you make settings for the MIDI connector.

- USB MIDI tab

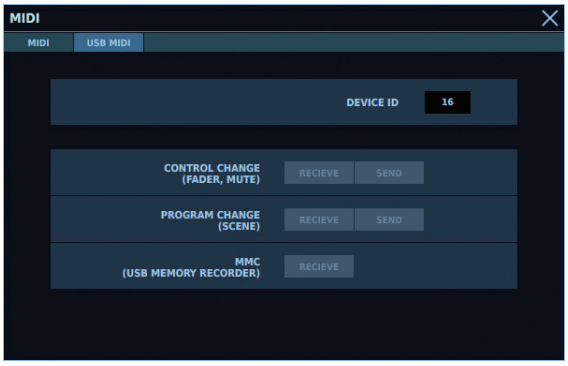
Here you make settings for MIDI communication via the USB COMPUTER connector.

MIDI Window MIDI Tab



MIDI OUT/THRU	Selects whether the MIDI OUT/THRU connector is used as a MIDI OUT or MIDI THRU connector.
DEVICE ID	Sets the M-5000's device ID. This setting is shared by MIDI and USB MIDI.
CONTROL CHANGE (FADER, MUTE)	
RECEIVE	When this is on, control changes are received.
SEND	When this is on, control changes are sent.
PROGRAM CHANGE (SCENE)	
RECEIVE	When this is on, program changes are received.
SEND	When this is on, program changes are sent.
MMC (USB MEMORY RECORDER)	
RECEIVE	When this is on, MMC commands are received.

MIDI Window USB MIDI Tab



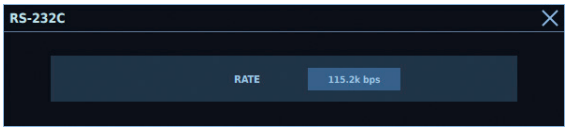
DEVICE ID	Sets the M-5000's device ID. This is setting is shared by MIDI and USB MIDI.
CONTROL CHANGE (FADER, MUTE)	
RECEIVE	When this is on, control changes are received.
SEND	When this is on, control changes are sent.
PROGRAM CHANGE (SCENE)	
RECEIVE	When this is on, program changes are received.
SEND	When this is on, program changes are sent.
MMC (USB MEMORY RECORDER)	
RECEIVE	When this is on, MMC commands are received.

RS-232C settings

RS-232C Window

In the RS-232C window, you set the communication speed for the RS-232C interface.

To display the RS-232C window, go to the SYSTEM window and tap <REMOTE>, then tap <RS-232C>.



RATE	Selects the RS-232C communication speed from among the following. • 4.8k bps • 9.6k bps • 14.4k bps • 31.25k bps • 38.4k bps • 57.6k bps • 115.2k bps

Fader Calibration

If the fader positions are no longer aligned with the index markings of the top panel, carry out fader calibration to adjust.

1. Press the [MENU] button.

2. On the MENU window, tap <SYSTEM>, then tap <FADER CALIBRATION>.

The FADER CALIBRATION window appears.



3. Tap an item from <-INF> to <+10dB>.

This moves to the location where all faders are supported.

4. Adjust the fader that is not aligned with the index markings on the top panel.

The <UPDATE> appears.



5. Tap <UPDATE>.

The fader position is adjusted to the specified location.

Updating the Unit

1. In the SYSTEM INFORMATION window, you can view the software version for the M-5000.

* If the unit is already at the latest version, no update is necessary.

2. Download the archive file containing the updater.

Download the Zip-format file.

3. Expand the archive file.

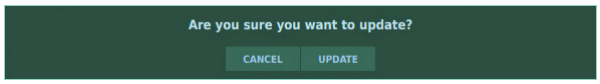
When expansion ends, a folder containing the updater appears.

4. Copy the updater to the root directory of a USB flash drive.

5. Start the M-5000 and insert the flash drive into its USB MEMORY connector.

6. In the SYSTEM window, tap <UPDATE>.

A message prompting you to confirm the update operation is displayed.



7. Tapping <UPDATE> starts the update.

A progress bar is displayed while the update is in progress.

8. When the message "Completed! Please Reboot." appears, the update has finished.

Restart the unit.

NOTE

If a loss of power or other accident occurs while the update operation is in progress, the M-5000 might fail to start. Servicing is necessary in such cases.

Contact the nearest Roland Service Center.

Viewing the Information about the Unit

In the SYSTEM INFORMATION window, you can view the version information for the M-5000.

SYSTEM INFORMATION Window

To display the SYSTEM INFORMATION window, go to the SYSTEM window and tap <SYSTEM INFORMATION>.

SOFTWARE VERSION	
GUI	Version of the GUI program
MIXER ENGINE	Version of the mixer engine
HARDWARE STATUS	
POWER SUPPLY	Status of power supplied via the AC INPUT connector The DC voltage is displayed in parentheses.
EXT. POWER SUPPLY	Status of power supplied via the EXT. POWER DC INPUT connector The DC voltage is displayed in parentheses.
LITHIUM BATTERY	Status of the lithium battery The voltage is displayed in parentheses.
SIDE FAN	Status of the cooling fan on the side of the M-5000
INSIDE FAN	Status of the cooling fan inside the M-5000
LICENSE	
License information of software	

Data

Appendix

Main specifications

Roland M-5000: LIVE MIXING CONSOLE

Processing

Mixing Structure

Up to 128 Audio Paths (combination of INPUT CHANNEL, MAIN, SUBGROUP, AUX, MIX-MINUS, MATRIX, MONITOR, COMM, OSC, HEADPHONES)

Inputs

Max 300 (96 kHz), Max 460 (48 kHz / 44.1 kHz)
CONSOLE: 16
AES/EBU: 4
REAC: 40 x 2
EXPANSION SLOT: 80 x 2 (96 kHz), 160 x 2 (48 kHz / 44.1 kHz)
USB AUDIO: 16
DOCK: 2
USB RECORDER: 2
FX 1L-8R: 16
TALKBACK: 2
OSC: 2

Outputs

Max 296 (96 kHz), Max 456 (48 kHz / 44.1 kHz)
CONSOLE: 16
AES/EBU: 4
REAC: 40 x 2
EXPANSION SLOT: 80 x 2 (96 kHz), 160 x 2 (48 kHz / 44.1 kHz)
USB AUDIO: 16
DOCK: 2
USB RECORDER: 2
FX 1L-8R: 16

Internal Processing

72 bits (fixed point, bus summing)

Signal Processing

AD/DA Conversion: 24 bit
Sampling Rate: 96 kHz, 48 kHz, or 44.1 kHz

Connectors

INPUT jacks (1 16): XLR-3-31 type (balanced, phantom power)
TALKBACK MIC 2 jack: XLR-3-31 type (balanced, phantom power)
AES/EBU IN jacks (1/2, 3/4): XLR-3-31 type (balanced)
OUTPUT jacks (1 16): XLR-3-32 type (balanced)
PHONES 1 jack: Stereo 1/4 inch phone type
PHONES 2 jack: Stereo miniature phone type
AES/EBU OUT jacks (1/2, 3/4): XLR-3-32 type
REAC ports (A, B, SPLIT/BACKUP): RJ-45 EtherCon type, REAC SPLIT/BACKUP port supports REAC EMBEDDED POWER.
WORD CLOCK connector (IN, OUT): BNC type
RS-232C connector: DB-9 type
MIDI connector (OUT/THRU, IN)
USB port (MEMORY): USB type A
USB WLAN ADAPTOR port: USB type A
USB COMPUTER port: USB type B
LAN port: RJ45 type
DOCK CABLE port: 10-pin mini DIN type
GP I/O port: DB-25 type
FOOT SWITCH jacks (1, 2): 1/4-inch TRS phone type
LAMP jacks: XLR-4-31 type x 2, LAMP power: DC +12 V/500 mA
EXT.POWER DC IN jack: XLR-4-32 type

* XLR type: 1 GND, 2 HOT, 3 COLD
* Phantom power: DC +48 V (unloaded maximum), 14 mA (maximum load) (All XLR type inputs)

Input/Output Characteristics

Input Impedance

INPUT jacks (1 16): 7 k ohms
TALKBACK MIC 2 jack: 4 k ohms (Phantom: ON)

Nominal Input Level (Variable, typ.)

INPUT jacks (1 16): -65 to -10 dBu (Pad: OFF), -45 to +10 dBu (Pad: ON)
TALKBACK MIC 2 jack: -65 to -10 dBu

Non Clip Maximum Input level (1 kHz, typ.)

INPUT jacks (1 16): +8 dBu (Pad: OFF), +28 dBu (Pad: ON)
TALKBACK MIC 2 jack: +8 dBu

Output Impedance (typ.)

OUTPUT jacks (1 16): 600 ohms
PHONES jacks (1, 2): 45 ohms

Recommended Load Impedance

OUTPUT jacks (1 16): 10 k ohms or greater
PHONES jacks (1, 2): 32 ohms or greater

Minimum Load Impedance

PHONES jacks (1, 2): 16 ohms

Nominal Output Level (ty.)

OUTPUT jacks (1 16): +4 dBu (Load impedance: 10 k ohms)

Non Clip Maximum Output level (1 kHz, typ.)

OUTPUT jacks (1 16): +22 dBu (10 k ohms load)
PHONES jacks (1, 2): 500 mW + 500 mW (40 ohms load)

Other

Display

Graphic color LCD 800 x 600 dots (touch screen)
Graphic organic light emitting display 256 x 64 dots (Fader Bank Display x 7, User Assignable Display x 1)

Power Consumption

180 W

Dimensions

934 (W) x 725 (D) x 346 (H) mm
36-13/16 (W) x 28-9/16 (D) x 13-5/8 (H) inches

Weight

36 kg
79 lbs 6 oz

Operation Temperature

+5 to +40 degrees Celsius
+41 to +104 degrees Fahrenheit

Accessories

Owner's manual
Power cord
Dock cable
REAC connector cover x 3
Ferrite core x 6
Tablet sheet x 2
Cover

* 0 dBu = 0.775 Vrms

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

Connecting to Your Computer via USB

If you connect the USB COMPUTER connector to your computer, you can perform audio input and output on 16 channels.

- Inputting audio playback from the computer to an input channel
- Recording audio output from an output bus on the computer
- Inserting a plug-in effect from the computer into an input channel or output bus

In order to connect to your computer via USB, you must first install the USB driver in your computer.The M-5000's dedicated driver can be downloaded from the Roland website.
Refer to the Roland website for details on the operating requirements. The program and procedure for installing the driver will differ depending on your system. Carefully read the Readme.htm file included with the downloaded file.

Inputting Computer Audio

→ "Patchbays" (p. 87)

1. Display the popover for making input patchbay settings.



2. Tap <CATEGORY> and select <USB>.



3. Select the USB channel.



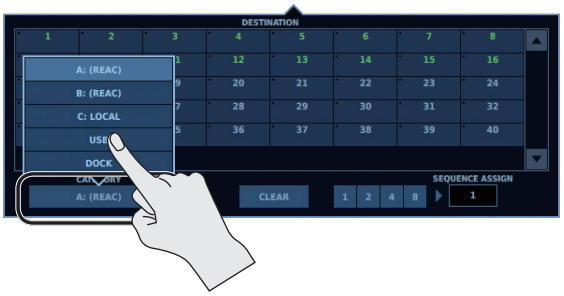
Outputting Audio to the Computer

→ "Patchbays" (p. 87)

1. Display the popover for making output patchbay settings.



2. Tap <CATEGORY> and select <USB>.



3. Select the USB channel.



Adjusting the Detection Position of the Touch Display

If the detection position of tap operations is inaccurate depending on the person operating the touch display or the location of the operation, use the following method to adjust the detection position.

1. **Hold down the [MENU] and [VIEW] buttons in the top panel's display section and turn on the power.**

   The unit starts in SYSTEM CONFIG MODE.

2. **Tap <TOUCH SCREEN CALIBRATION>.**

3. **Tap the symbols from <1> to <5>.**

   Tap using the location and posture of normal operation.

   The unit performs correction so that the tapped location is accurately detected.

4. **When SYSTEM CONFIG MODE appears again, turn off the power.**

Factory Reset

This initializes the M-5000, returning it to its factory-default state.

NOTE

Performing initialization causes all data to be lost.

Data that is needed can be saved to a USB flash drive.

→ "Backing Up All Data in the M-5000" (p. 59)

→ "Restoring All Data in the M-5000" (p. 60)

1. Go to the Display section on the top panel, and while holding down the [MENU] button and [VIEW] button, turn on the power to the M-5000.

2. Tap <FACTORY INITIALIZE>.

A popup prompting you to confirm the initialization operation is displayed.

3. Tap <INITIALIZE>.

Initialization starts.

NOTE

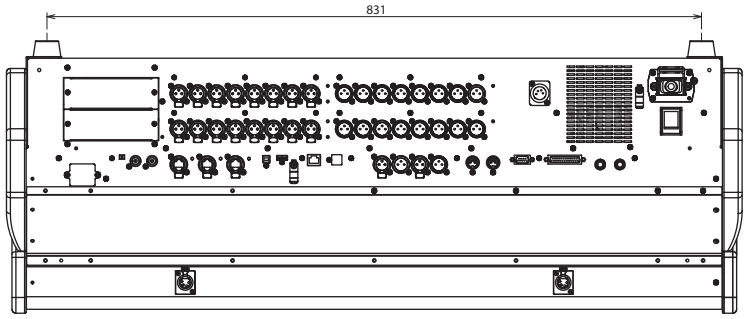
Never turn off the power to the M-5000 before initialization finishes.

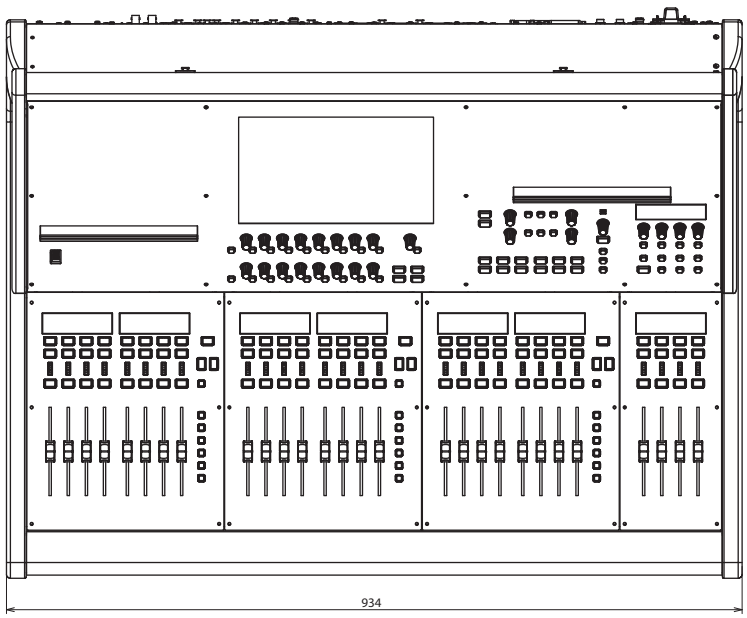
The factory reset will require approximately 10 minutes.

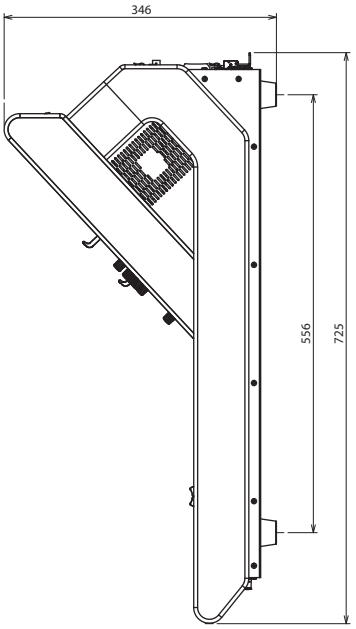
4. When "Factory Initialize completed." appears, tap <OK>.

5. Turn off the power.

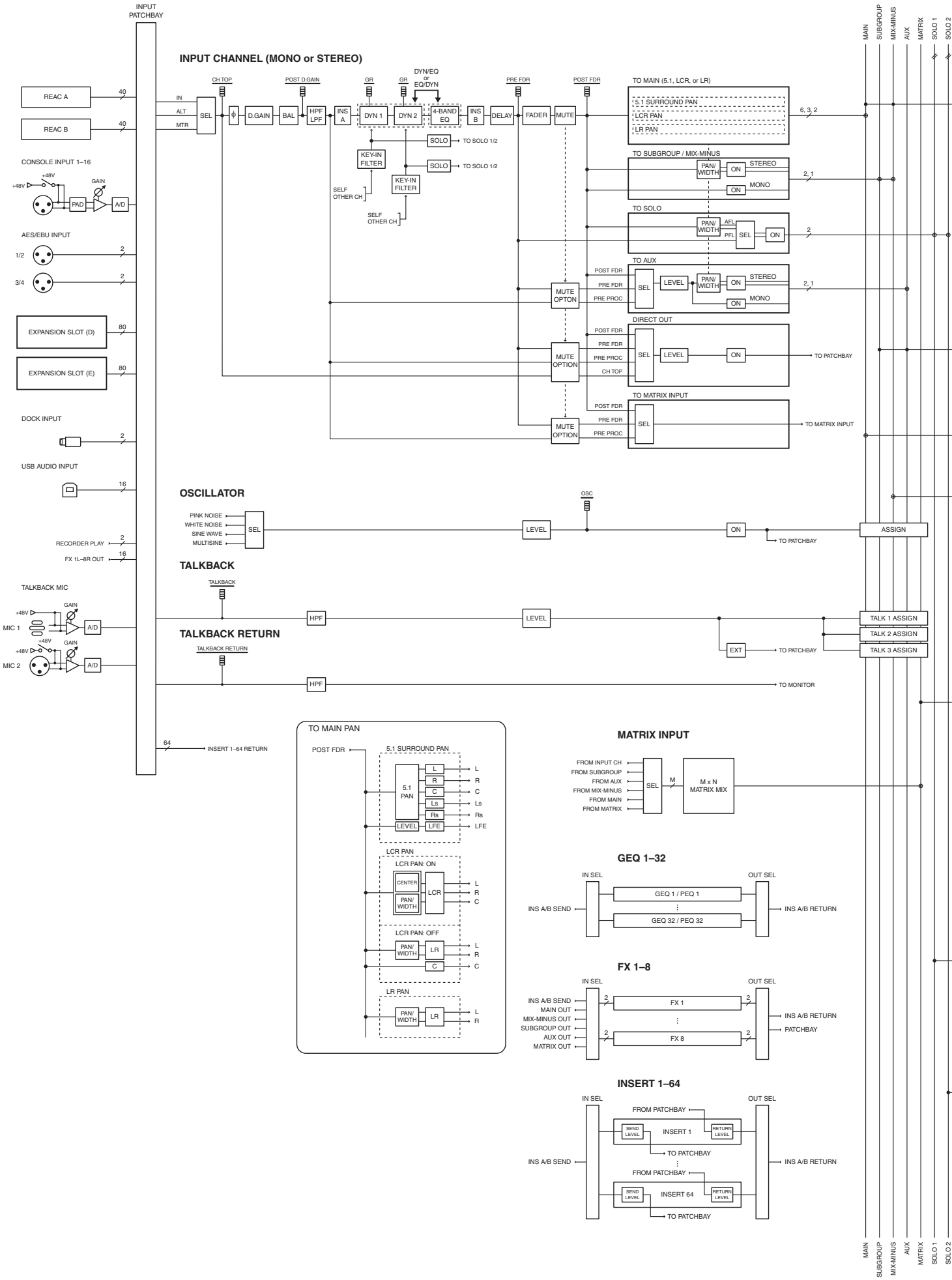
Dimensions

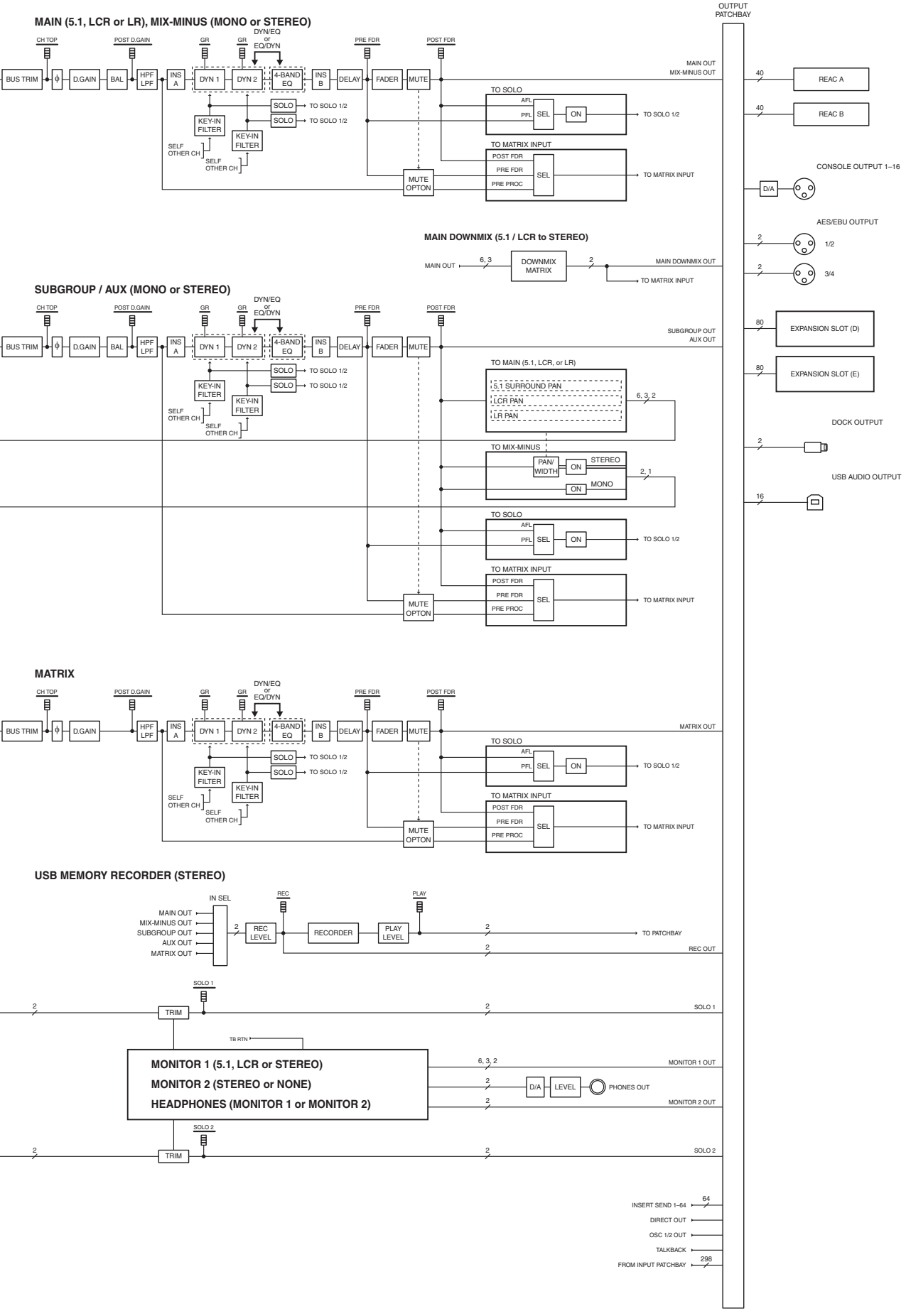




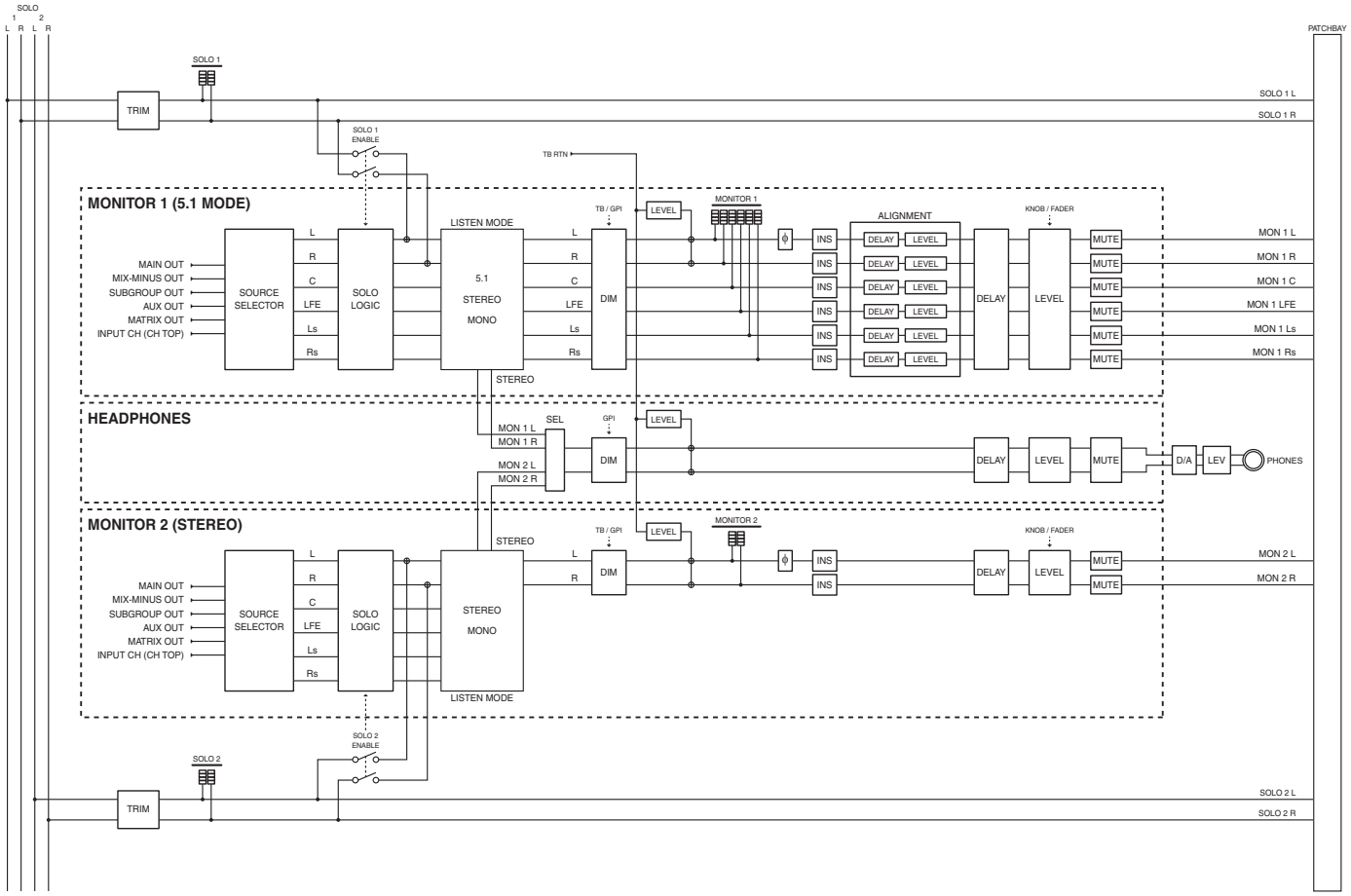


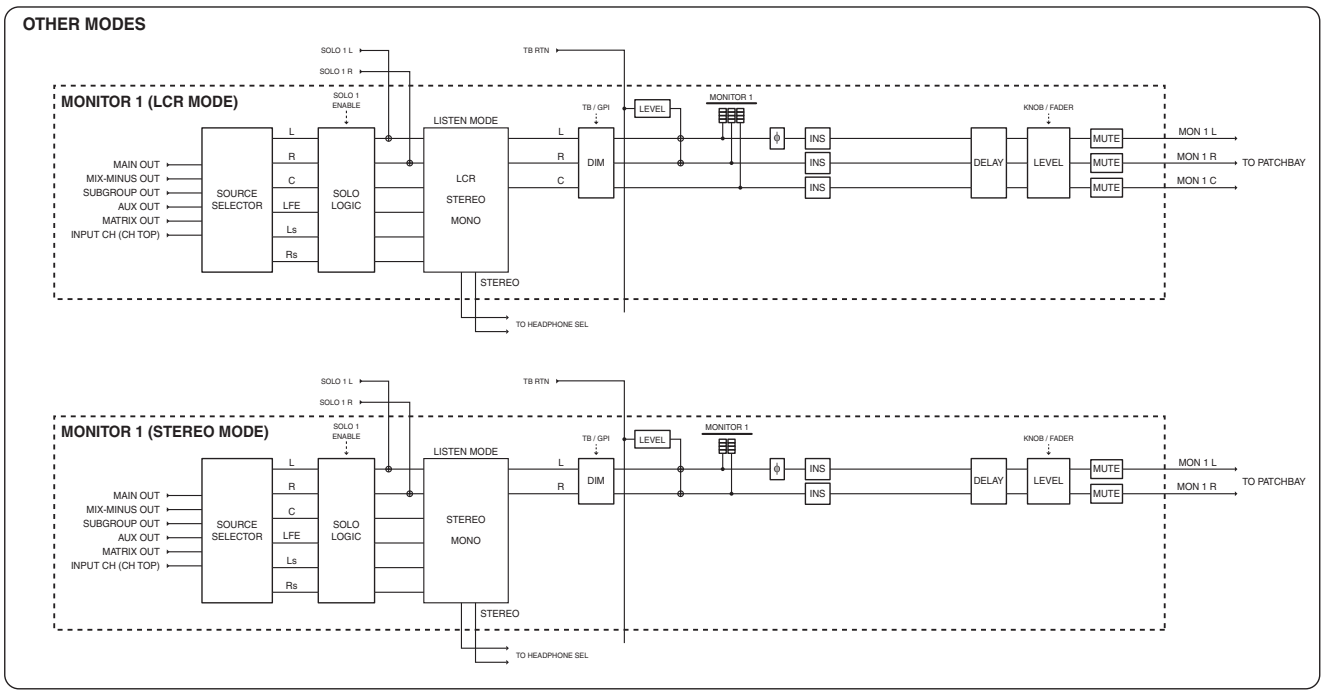
Block Diagram




MAIN (5.1, LCR or LR), MIX-MINUS (MONO or STEREO)
OUTPUT PATCHBAY
CH TOP
POST D.GAIN
GR
DYN/EQ or EQ/DYN
PRE FDR
POST FDR
BUS TRIM
D.GAIN
BAL
HPF LPF
INS A
DYN 1
DYN 2
4-BAND EQ
INS B
DELAY
FADER
MUTE
MAIN OUT
MIX-MINUS OUT
TO SOLO
AFL
PFL
SEL
ON
TO SOLO 1/2
SOLO
KEY-IN FILTER
SELF
OTHER CH
TO MATRIX INPUT
POST FDR
PRE FDR
PRE PROC
MUTE OPTON
MAIN DOWNMIX (5.1 / LCR to STEREO)
MAIN OUT
DOWNMIX MATRIX
MAIN DOWNMIX OUT
SUBGROUP / AUX (MONO or STEREO)
SUBGROUP OUT
AUX OUT
TO MAIN (5.1, LCR, or LR)
5.1 SURROUND PAN
LCR PAN
LR PAN
TO MIX-MINUS
PAN/ WIDTH
STEREO
MONO
MATRIX
MATRIX OUT
USB MEMORY RECORDER (STEREO)
IN SEL
REC
PLAY
MAIN OUT
MIX-MINUS OUT
SUBGROUP OUT
AUX OUT
MATRIX OUT
REC LEVEL
RECORDER
PLAY LEVEL
TO PATCHBAY
REC OUT
SOLO 1
TRIM
TB RTN
MONITOR 1 (5.1, LCR or STEREO)
MONITOR 2 (STEREO or NONE)
HEADPHONES (MONITOR 1 or MONITOR 2)
MONITOR 1 OUT
D/A
LEVEL
PHONES OUT
MONITOR 2 OUT
SOLO 2
INSERT SEND 1–64
DIRECT OUT
OSC 1/2 OUT
TALKBACK
FROM INPUT PATCHBAY
REAC A
REAC B
CONSOLE OUTPUT 1–16
AES/EBU OUTPUT
1/2
3/4
EXPANSION SLOT (D)
EXPANSION SLOT (E)
DOCK OUTPUT
USB AUDIO OUTPUT

Block Diagram of Monitor Section





Additional Features Currently Under Development

Following features will be available by future version upgrade.

- iPad app
- Remote Control Software (Win/Mac)
- M-48 manager
- GPIO
- RS-232C/TELNET
- MIDI/V-LINK
- R-1000 control
- Key-In SOLO
- S-4000M configuration

