

# interM



Inter-M, Ltd. (Korea) began operations in 1983.

Since then, Inter-M has grown to become one of the largest manufacturers of professional audio and commercial sound electronics equipment in the world.

Inter-M has gained worldwide recognition for its own branded products, as well as private label manufacturing of electronics sold under other names (OEM).

The company is no longer just a Korean company, but rather a global company that is truly international in scope, with factories and offices in Korea and China, and sales and marketing operations located in Japan, Europe, and the U.S.A.

With more than 850 employees around the globe, Inter-M is well-poised for further growth and expansion.

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**MADE IN KOREA**  
February 2007 9000000120

# Operation Manual

Hybrid Mixing Console (16ch/24ch/32ch)

**IMX-416/424/432**



**interM**



# Welcome

## A personal welcome to you from the management and employees of Inter-M

All of the co-workers here at Inter-M are dedicated to providing excellent products with inherently good value, and we are delighted you have purchased one of our products.

We sincerely trust this product will provide years of satisfactory service, but if anything is not to your complete satisfaction, we will endeavor to make things right.

Welcome to Inter-M, and thank you for becoming part of our worldwide extended family!

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.</p> <p>DO NOT REMOVE COVER (OR BACK).</p> <p>NO USER-SERVICEABLE PARTS INSIDE.</p> <p>REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		



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



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

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

## WARNING

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

\*Do not install this equipment in a confined space such as a book case or similar unit.

\*The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

\*Worded: "WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING-WATER AND MOISTURE: Unit should not be used near water(e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so than objects do not fall and liquids are not spilled into the enclosure through openings."

### Service Instructions

\*Worded: "Caution: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so."

\*Location: Instruction Manual.

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

**\* It can be heated up if you use this product in closed box or ill-ventilated place.**

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## Unpacking

Please take a few minutes to read this manual to familiarize yourself with important information regarding product features, and operation.

As with most electronic devices, ORIGINAL PACKAGING (OR EQUAL) IS REQUIRED in the unlikely event that the product needs to be returned for servicing.

## Installation

### Environment

Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture, and vibration.

### Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



## Introduction

Thank you for choosing the IMX-400 SERIES professional mixing console. Your IMX-400 SERIES benefits from over 20 years of Inter-M's professional audio design and manufacture. This operation manual should quickly acquaint you with the console's features and controls, while offering some suggestions for its application. Whilst we believe the information in this guide to be reliable we do not assume responsibility for inaccuracies. We also reserve the right to make changes in the interest of further product development.

## Features

### - FLEXIBILITY OF CHOICE

Three frame sizes accommodating 8, 16 or 24 Mono inputs channels, and 4 Stereo channels.

### - FULL FUNCTION INPUT CHANNELS

Mono channels are equipped with Individual 48-volt phantom power supply, 4-band equalizer with two swept mid frequencies, high-pass filter, 6 Auxiliary sends with pre-fader signal switching, Direct output, 100mm high-quality fader, 4 segment signal metering.

### - FADER POSITION MEMORY

The mixer has a facility of fader position and mute memory by internal CPU chips. The recalled fader positions are indicated by 7-segment display on each channel.

### - 4 STEREO INPUT CHANNELS

Full function Stereo Input Channels with 4-band EQ.

### - FREE VOLTAGE POWER SUPPLY

Internal power supply accepts any AC mains voltage from 100V to 240V.

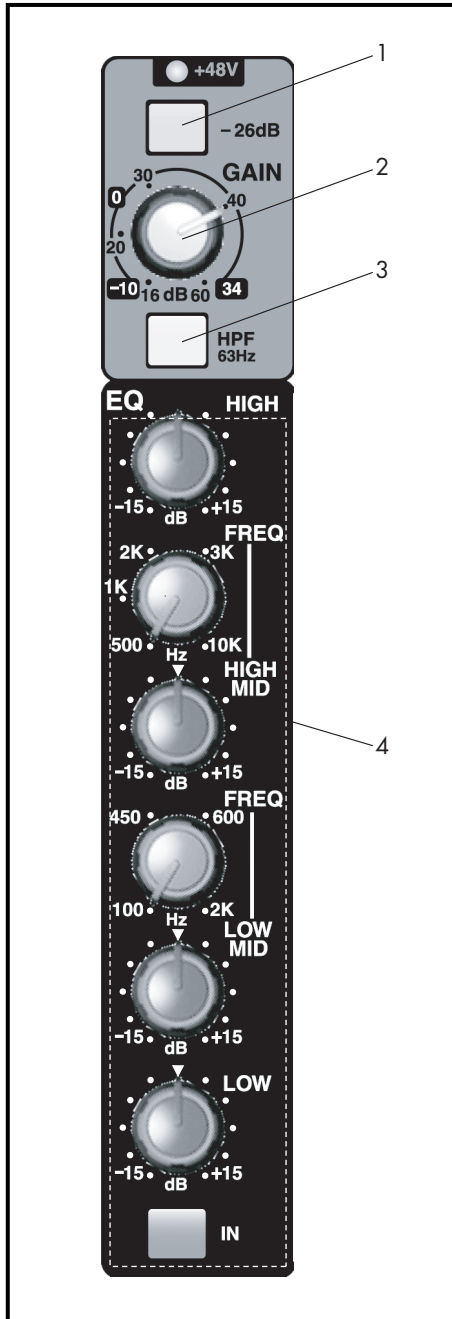
### - 2 STEREO RETURNS

Stereo Return has 2 AUX sends, MIX and MONO bus assignment, 60mm fader and AFL system.

### - TALK-BACK SYSTEM

Talk-Back assignment to AUX, Groups, MIX outputs can be selected.

## Mono Input Channel



### 1. -26dB PAD

Reduces input level at both the jack and XLR sockets by 26dB. This is useful for ensuring that high output sources do not distort the inputs.

### 2. GAIN

The input signal's gain is continuously variable from +16dB to +60dB (-10dB to +34dB with the pad enabled). The actual value of the gain required will depend upon the source and should ideally be set such that peaks in level on the input should not cause the input amplifier to overload.

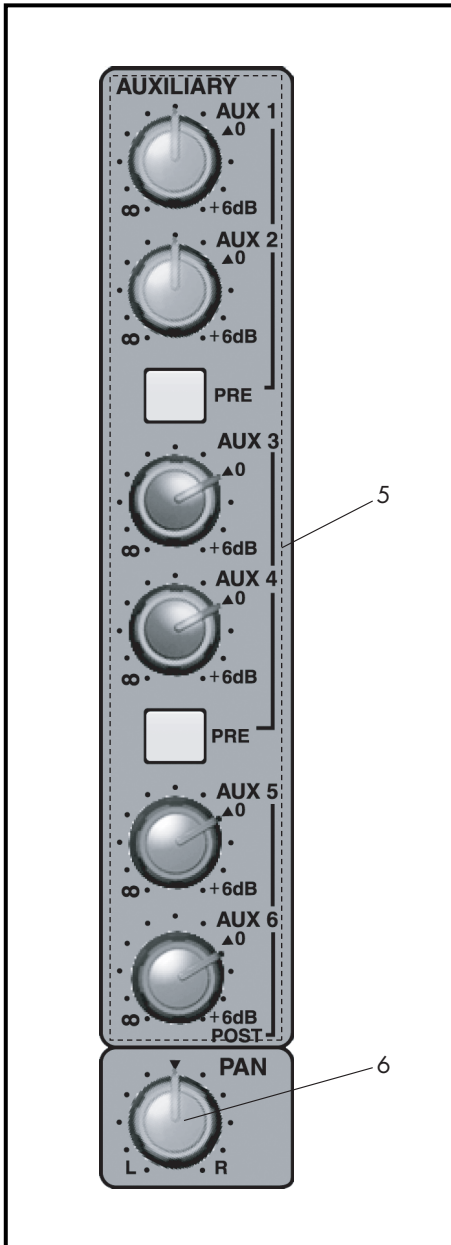
You need to watch level indicator placed near FADER, flashing "PEAK" lamp is too high, occasional peaks of "+12" is better.

### 3. HPF

The 12dB/oct High-Pass Filter is a useful tool in combating undesirable low frequency content, such as microphone handling noise or overzealous bass players. The cut-off frequency is 63Hz.

### 4. EQUALIZER

IMX's equalizer is a 4 bands Baxandall based circuit. LF and HF bands are shelving response, with fixed frequencies of 80Hz and 12kHz respectively. Its two bell-response MID bands are semi-parametric, meaning that the center frequency of the curve can be varied. The IN switch inserts all four bands into the signal path, which is useful when checking the effectiveness of your EQ settings.



## 5. AUXILIARY

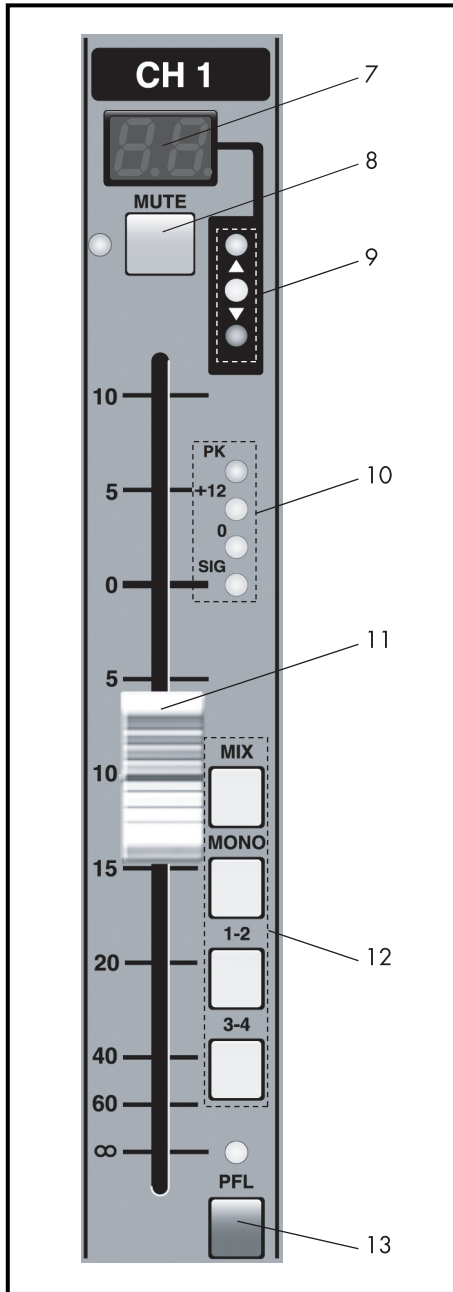
Your IMX has 6 auxiliary sends. These are commonly used for effects, stage monitors and any additional sends, e.g. camera sound. Each control varies the amount of signal sent to the related Auxiliary bus from off to +6dB. Ordinarily, auxiliaries are fed post fader, meaning that the channel's fader level will affect the level sent to the auxiliary. PRE switches in the auxiliary section change the signal source to pre fader. These are grouped to allow maximum flexibility.

## 6. PAN

Controls the signal's position in the stereo image. This affects both main MIX outputs as well as any groups to which the channel is routed. Panning left sends the signal to odd numbered groups only, and panning right sends it to even numbered groups only.

If, for example, you are panning from hard left to center, you will notice a 3dB drop in the left channel as you do so. This "panning law" ensures that signals sound equally loud at all pan positions.





**7. 7 SEGMENT CHANNEL DISPLAY**

This indicates channel fader's level approximately.

LEVEL(dB)	7 SEGMENT CHANNEL DISPLAY
+10	99
+5	90
0	80
-5	70
-10	60
-15	50
-20	40
-40	10
-60	3
-∞	--

**8. MUTE**

This removes the channel's signal from all MIX, group and auxiliary buses, although audio will continue to pass through any attached insert devices.

**9. UP / DOWN LAMP**

These LED lamps display the differences of "recalled" fader position and "absolute" fader position. For example, if the recalled fader position were upper than absolute position, "UP" lamp lights to give you an attention to "up" the fader to match the level. When the recalled position and absolute position were the same, a center "NULL" lamp lights.

**10. CHANNEL LEVEL**

Displays the channel's pre-fader signal level. The "SIG" lamp indicates the presence of signal at around 12dB below nominal level. The "PK" lamp warns of signal levels approaching the upper headroom limit within about 3dB. We recommend that you reduce the input gain to avoid unpleasant distortion!

**11. CHANNEL FADER**

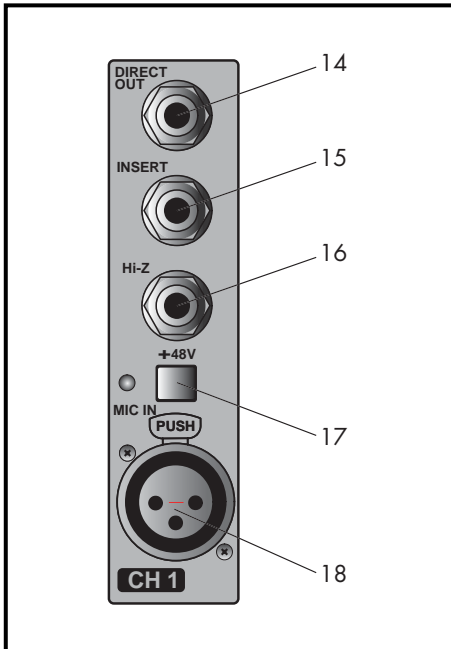
A professional 100mm fader gives you smooth, high-resolution control over the channel level.

**12. BUS ROUTING SWITCHES**

Connects the channel signal to each Sub-GROUP and MIX buses. After-fader signal is fed via PANPOT section. GROUP 1-2, 3-4 behaves as stereo path by panning. ODD numbers are left, and EVEN are right. "MIX" switch connects signal to MIX L and R bus, and "MONO" switch is for "MONO" bus. The "MONO" bus signal is not affected by PAN control.

**13. PFL**

Routes the signal to the "PFL" bus for isolated auditioning and detailed metering.



#### 14. DIRECT OUT

As standard, the direct out jack socket carries the channel's post-fader signal at a nominal level of 0dBu.

#### 15. INSERT

1/4" TRS socket for inserting external devices. The send is post-filter, pre-EQ. The tip is wired to a ground compensated send, unbalanced return is via the ring and sleeve. Nominal I/O level is 0dBu.

#### 16. Hi-Z INPUT

Use this input when connecting sources such as instruments, keyboards or playback devices. This input signal is summed with the XLR input, but you needn't worry about phantom power; that will only be supplied from the XLR.

Available input level is about 26dB higher than the XLR input, and impedance of this input is approximately 20k $\Omega$ .

If using an unbalanced source, please make sure to link Sleeve and Ring together to avoid unwanted noise.

#### 17. 48V PHANTOM POWER

This switch provides +48V phantom power to XLR input.



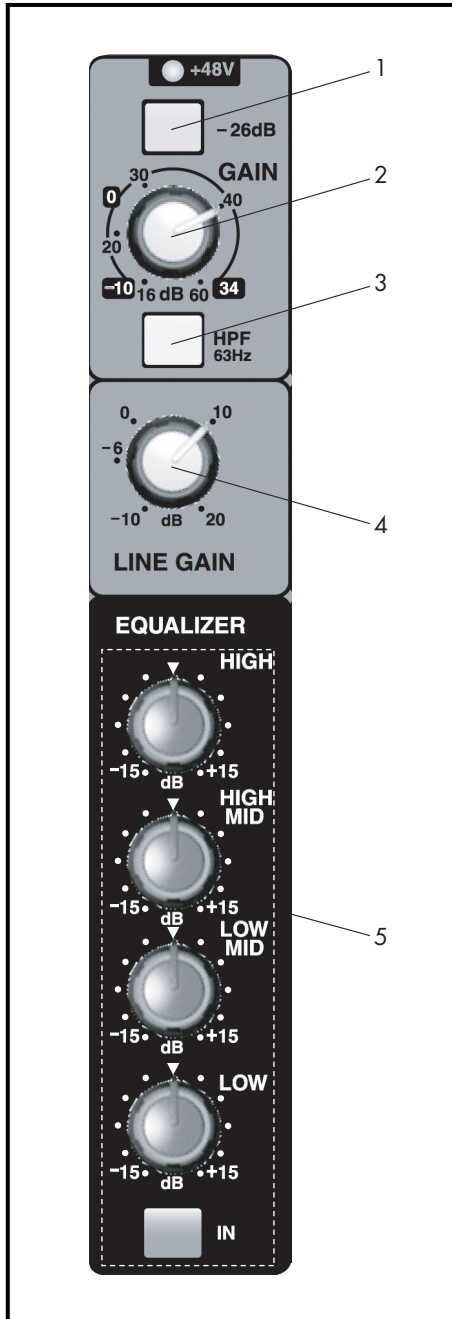
**DO NOT** use unbalanced sources with the phantom power switched on. The voltage on pins 2 & 3 of the XLR connector may cause serious damage.

Please minimize the fader before pressing this switch to avoid speaker's damage.

#### 18. MIC INPUT

Microphone inputs are on Female XLR. The impedance of this input is approximately 2k $\Omega$ .

## Stereo Input Channel



### 1. -26dB PAD

Reduces MONO MIC input level at both the jack and XLR sockets by 26dB. This is useful for ensuring that high output sources do not distort the inputs.

### 2. GAIN

MONO MIC gain is continuously variable from +16dB to +60dB (-10dB to +34dB with the pad enabled). The actual value of the gain required will depend upon the source and should ideally be set such that peaks in level on the input should not cause the input amplifier to overload.

You need to watch level indicator placed near FADER, flashing "PEAK" lamp is too high, occasional peaks of "+12" is better.

### 3. HPF

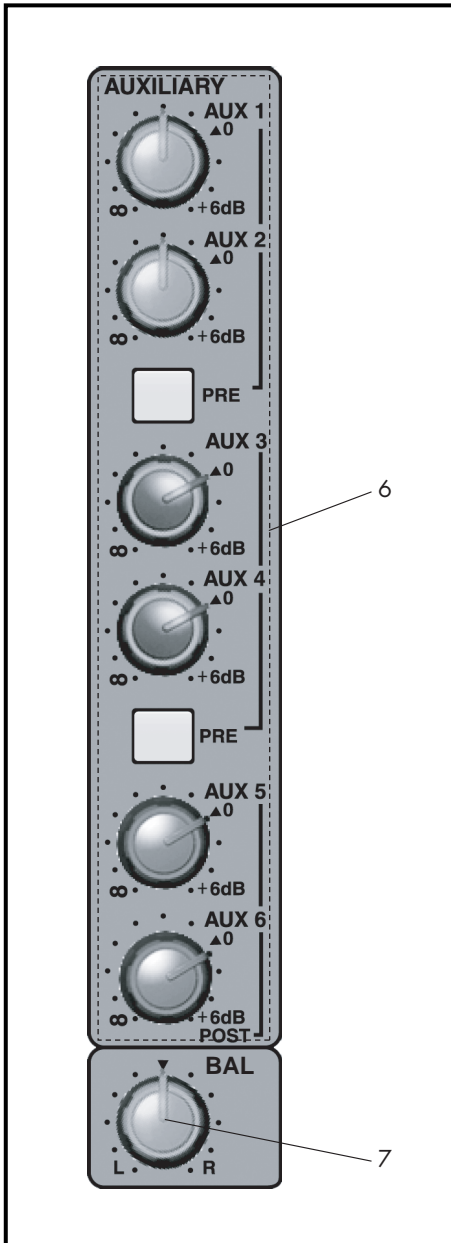
The 12dB/oct High-Pass Filter is a useful tool in combating undesirable low frequency content, such as microphone handling noise or overzealous bass players. The cut-off frequency is 63Hz.

### 4. LINE GAIN

Controls stereo line input gain from -10dB to +20dB.

### 5. EQUALIZER

Here is a four-band traditional Baxandall based equalizer. LF and HF filters have a shelving response at 80Hz and 12kHz respectively. High Mid and Low Mid bands have a bell response centered around 3.15kHz and 315Hz respectively. The IN switch inserts all four bands into the signal path, which is useful when checking the effectiveness of your EQ settings.



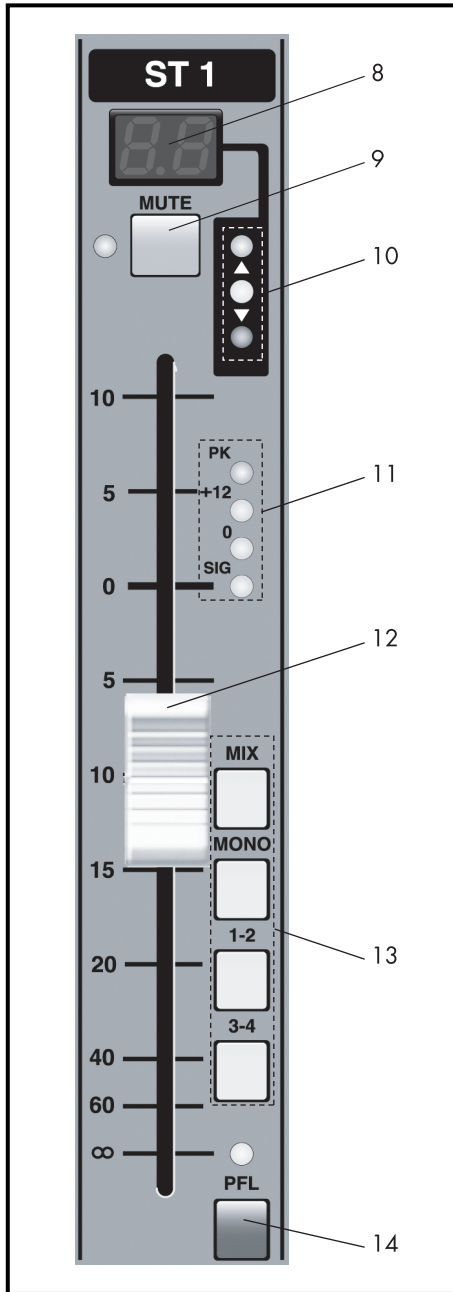
## 6. AUXILIARY

Your IMX has 6 auxiliary sends. These are commonly used for effects, stage monitors and any additional sends, e.g. camera sound. Each control varies the amount of signal sent to the related Auxiliary bus from off to +6dB. Ordinarily, auxiliaries are fed post fader, meaning that the channel's fader level will affect the level sent to the auxiliary. PRE switches in the auxiliary section change the signal source to pre fader. These are grouped to allow maximum flexibility.

## 7. BAL

Controls the signal's position in the stereo image. This affects both main MIX outputs as well as any groups to which the channel is routed. Panning left sends the signal to odd numbered groups only, and panning right sends it to even numbered groups only.

If, for example, you are panning from hard left to center, you will notice a 3dB drop in the left channel as you do so. This "panning law" ensures that signals sound equally loud at all pan positions.



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This indicates channel fader's level approximately.

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**9. MUTE**

This removes the channel's signal from all MIX, group and auxiliary buses, although audio will continue to pass through any attached insert devices.

**10. UP/DOWN LAMP**

These LED lamps display the differences of "recalled" fader position and "absolute" fader position. For example, if the recalled fader position were upper than absolute position, "UP" lamp lights to give you an attention to "up" the fader to match the level. When the recalled position and absolute position were the same, a center "NULL" lamp lights.

**11. CHANNEL LEVEL**

Displays the channel's pre-fader signal level. The "SIG" lamp indicates the presence of signal at around 12dB below nominal level. The "PK" lamp warns of signal levels approaching the upper headroom limit within about 3dB. We recommend that you reduce the input gain to avoid unpleasant distortion!

**12. CHANNEL FADER**

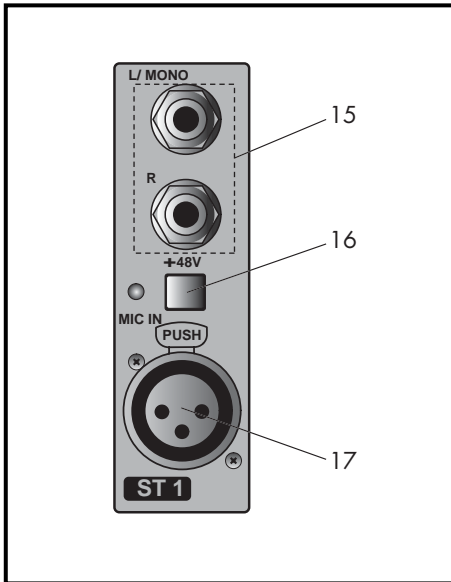
A professional 100mm fader gives you smooth, high-resolution control over the channel level.

**13. BUS ROUTING SWITCHES**

Connects the channel signal to each Sub-GROUP and MIX buses. After-fader signal is fed via PANPOT section. GROUP 1-2, 3-4 behaves as stereo path by panning. ODD numbers are left, and EVEN are right. "MIX" switch connects signal to MIX L and R bus, and "MONO" switch is for "MONO" bus. The "MONO" bus signal is not affected by PAN control.

**14. PFL**

Routes the signal to the "PFL" bus for isolated auditioning and detailed metering.



### 15. STEREO LINE INPUTS

This TRS balanced stereo inputs are designed for attaching line level devices up to +10dBu.

When you connect un-balanced signal to this input, make sure to link "Ring" and "Sleeve" of your jack plug.

### 16. 48V PHANTOM POWER

This switch provides +48V phantom power to XLR input.



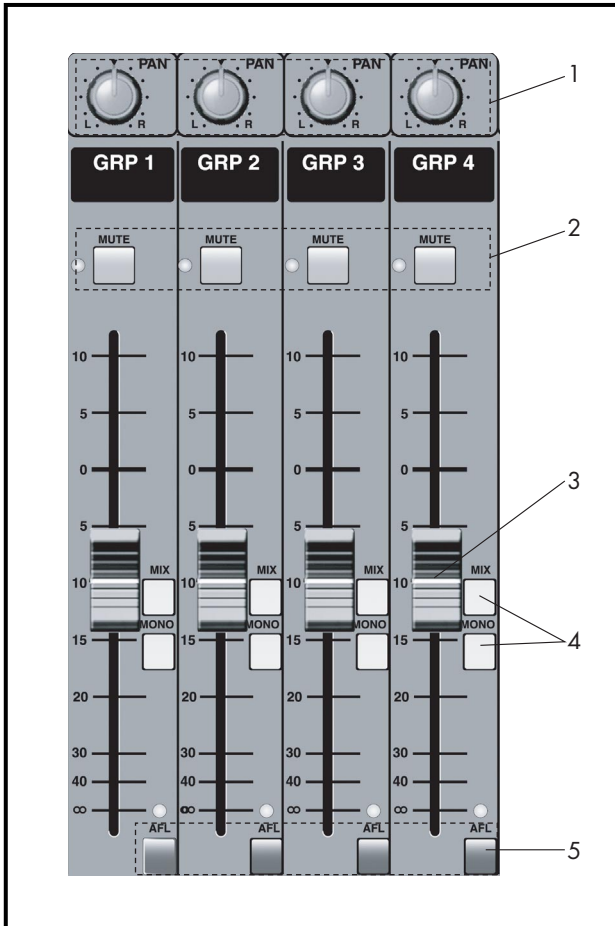
DO NOT use unbalanced sources with the phantom power switched on. The voltage on pins 2 & 3 of the XLR connector may cause serious damage.

Please minimize the fader before pressing this switch to avoid speaker's damage.

### 17. MIC INPUT

Microphone inputs are on Female XLR. The impedance of this input is approximately 2kΩ.

## Sub-Group



### 1. PAN

Controls the signal's position in the stereo image when you rout signal to "MIX" bus.

### 2. MUTE SWITCH

Cuts post fader signal.

### 3. SUB-GROUP FADER

A professional 100mm fader gives you smooth, high resolution control over the sub-group level.

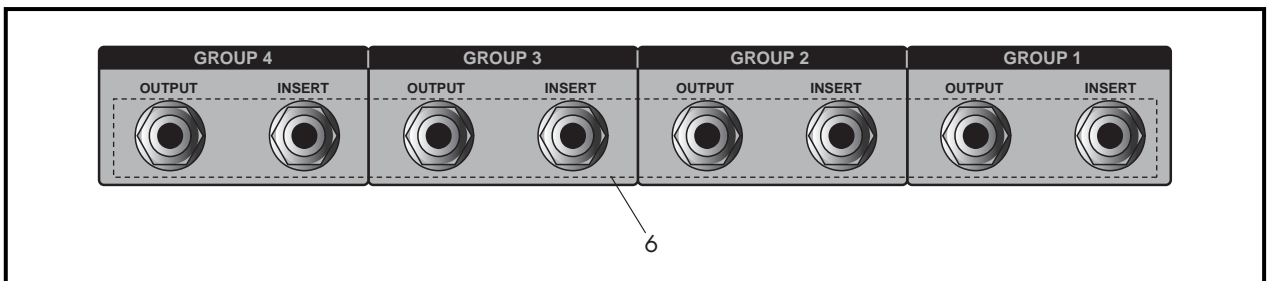
### 4. BUS ROUTING

Groups can be routed to the main "MIX" outputs and "MONO" output.

The "MONO" signal is not affected by PAN control.

### 5. AFL

Connects the sub-group's Post-Fader signal to mono AFL bus. You can monitor the signal on your phones and the AFL BAR METER.



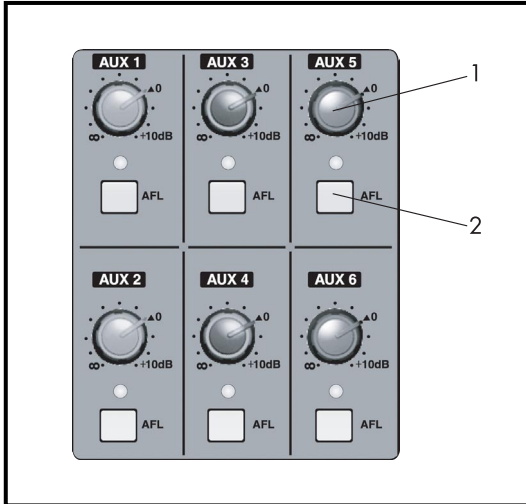
### 6. SUB-GROUP OUTPUTS AND INSERTS

The Sub-Group's outputs and insert points are placed as a couple.

1/4" TRS socket for inserting external devices. The send is pre-fader. The tip is wired to a ground compensated send, unbalanced return is via the ring and sleeve. Nominal I/O level is 0dBu.

The "OUTPUT" TRS socket is impedance-balanced sub-group signal output.

## Auxiliary Master

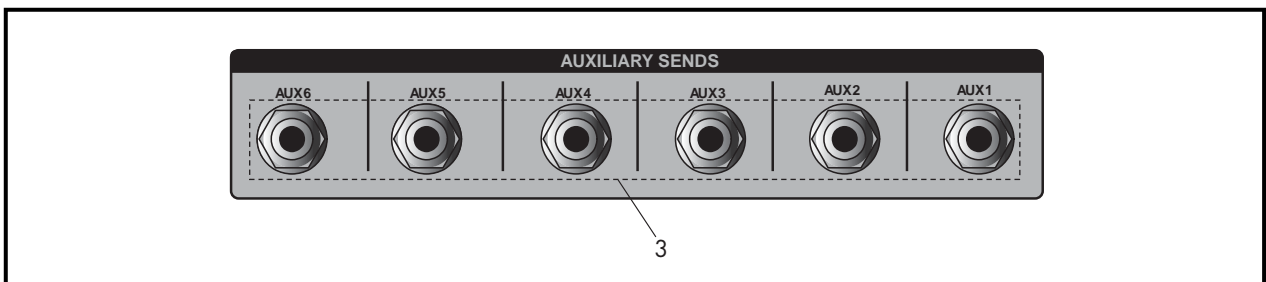


### 1. MASTER LEVEL

Auxiliary signal sent from each channels is controlled its output level by this potentiometer, which has +10dB gain at fully clockwise, and unity at 0 position.

### 2. AFL

Connects the AUX output signal to monaural AFL bus.

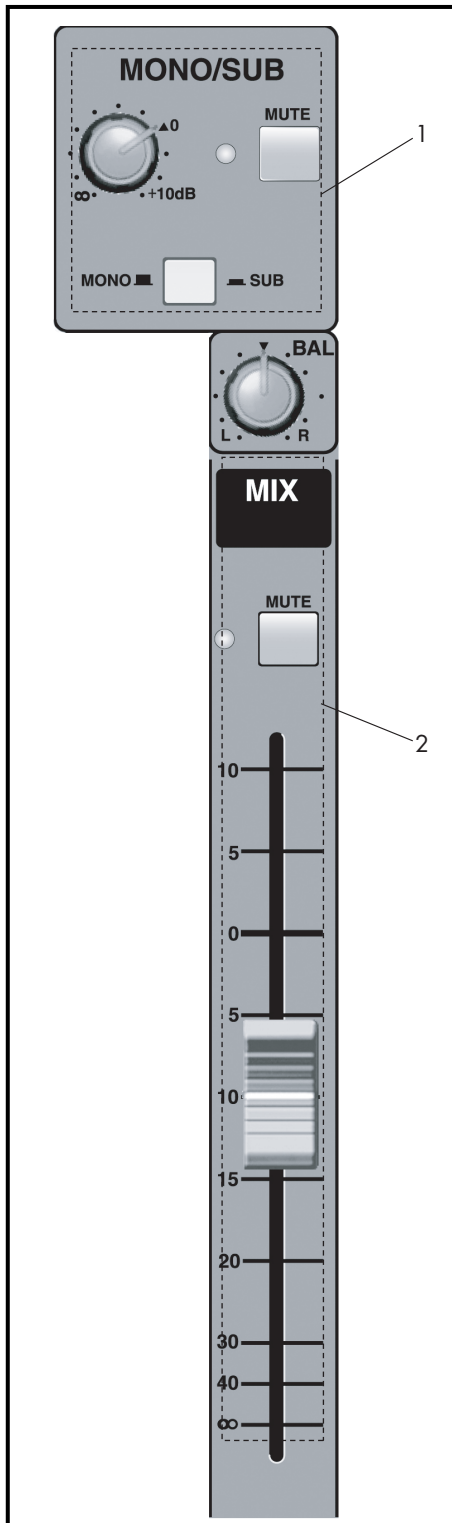


### 3. AUX OUTPUTS

The Auxiliary outputs are on TRS jack socket as impedance-balanced signal. The nominal level is 0dBu.



## Mix Master



### 1. MONO AND SUB MASTER

The signal routed to "MONO" bus from each input channels appears here. And also the stereo "MIX" signal appears as "SUB" signal.

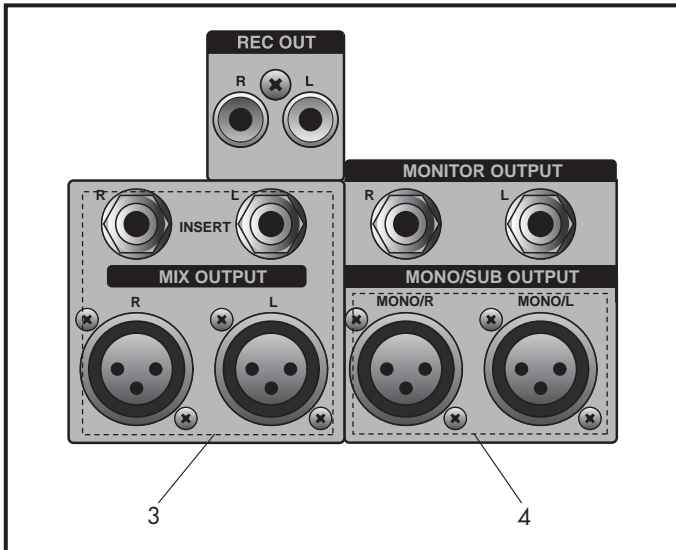
You can choose "MONO" or "SUB" signal to output by using "MONO/SUB" select switch.

The output level can be controlled by a potentiometer, which has +10dB gain at fully clockwise, and unity at 0 position.

### 2. MIX MASTER

"MIX" bus signal sent from input channels is mainly via this MIX master.

MIX master has a 100mm stroked stereo vertical fader, MUTE and left / right BALANCE control.

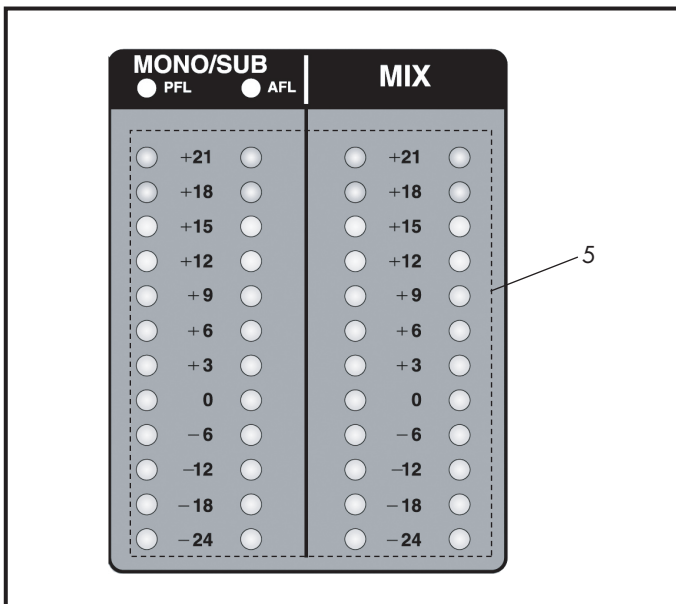


**3. MIX OUTPUT**

Male XLR connectors for balanced MIX signal outputs. Nominal I/O level is 0dBu. Each MIX output has a 1/4" TRS type insert point. The tip is wired to a ground compensated send, unbalanced return is via the ring and sleeve. Nominal I/O level is 0dBu. REC OUT is the same MIX outputs. Nominal REC OUT level is -10dBv.

**4. MONO/SUB OUTPUT**

Male XLR connectors for balanced MONO or SUB signal outputs. The "MONO" signal is fed from each input channel by pressing "MONO" bus switch, and the SUB signal is the same to pre-fader MIX output. Nominal I/O level is 0dBu.

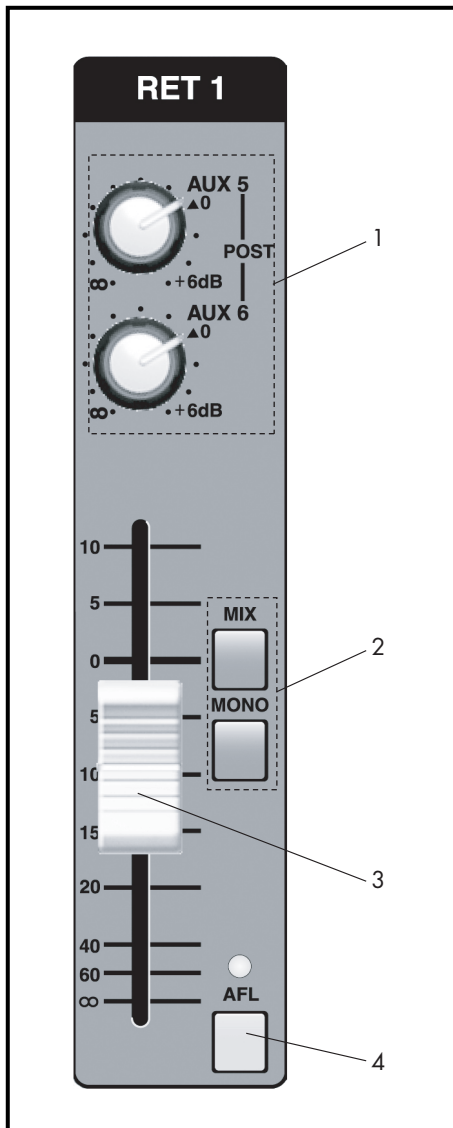


**5. 12 DOT LED BAR METER**

12-segment peak response meter shows the level of MIX output and MONO/SUB output. The MONO/SUB meter also shows PFL and AFL levels when a PFL or AFL button is activated. LED METER's "0" is 0dB.

## EFX Return

Two stereo return inputs are available for the connection of stereo devices, such as reverb processors, which do not need extensive processing, or access to the full range of auxiliaries.



### 1. AUX SENDS

Return channels can be sent to Aux 5 and 6. Send signal is always post-fader. One useful application of this is sending reverb to In Ear Monitors.

### 2. BUS ROUTING

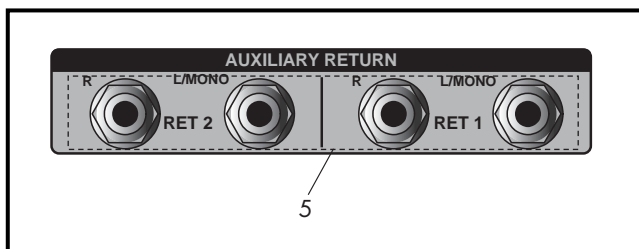
Connects the RETURN signal to MIX bus and MONO bus.

### 3. RETURN FADER

A 60mm stereo fader gives you smooth, high resolution control over the RETURN level controls.

### 4. AFL

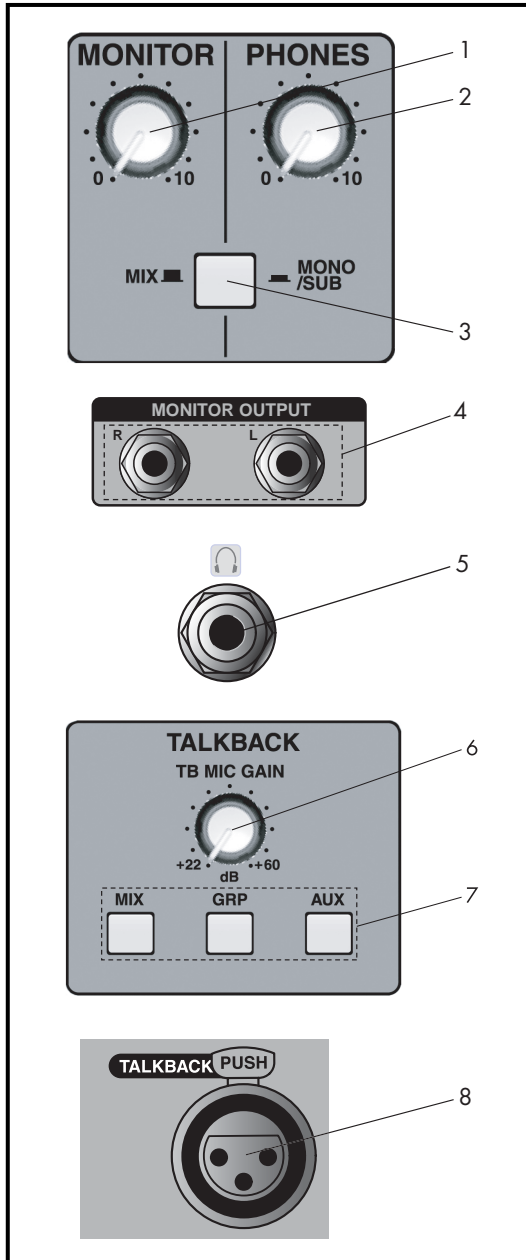
Connects the channel signal to AFL bus.



### 5. L / R Input

A pair of 1/4" TRS jack sockets allow balanced input. Nominal input level is 0dBu, and approximately input impedance is about 10kΩ.

## Monitor and Talk Back



### 1. MONITOR LEVEL

Controls monitor output level.

### 2. PHONES LEVEL

Gives independent control over headphone volume.

### 3. MONITOR SOURCE SELECT

Selects monitor signal feed from MIX and MONO/SUB. PFL or AFL signal can be monitored alternatively whenever PFL or AFL button is activated.

### 4. MONITOR OUTPUT

A pair of 1/4" TRS jack sockets allow impedance balanced output.

Nominal output level is 0dBu by over 2k $\Omega$  load.

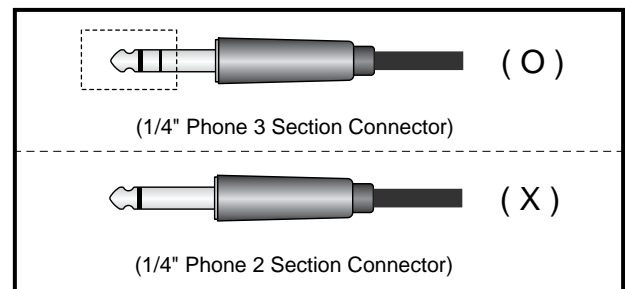
### 5. PHONES JACK SOCKET

Two paralleled TRS jack sockets for head phone plug. Tip is left, and ring is for right signal. You can use the headphones over 35 $\Omega$  impedance.



Use only stereo phones!

When a mono connector is plugged into the stereo connector, it connects both sides of the headphone amplifier to a single load.



### 6. TB LEVEL

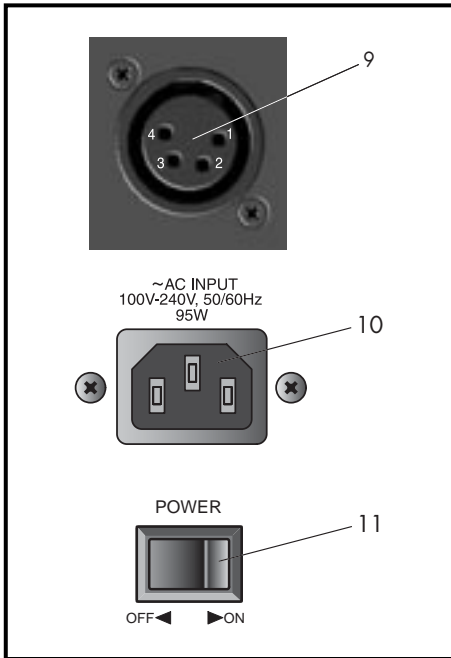
Controls talk-back microphone gain from +22dB to +60dB.

### 7. DESTINATION

This sends the talkback mic signal to the outputs selected in the above routing section. It's a momentary action button, so you have to hold it down for it to work.

### 8. TALK BACK MIC

A Talkback Mic can be connected via this front panel XLR.



### 9. LAMP

Lamp connector is female XLR-4 pin. DC +12V is appeared on pin 3(+) and pin 4(-). Available current is 350mA (3.6W/12V).

### 10. AC INLET

The IMX can be operated in any country AC voltages by means of internal "free voltage power supply unit".

Please make sure enclosed power cable matches your AC outlet type.

### 11. POWER SWITCH

The power switch is used to turn ON/OFF the AC main power.



The power switch is used to turn ON/OFF the AC main power.

Please make sure the amplifier's main volume is at the minimum position before switching power on or off to avoid loud pops through the sound system loudspeakers.



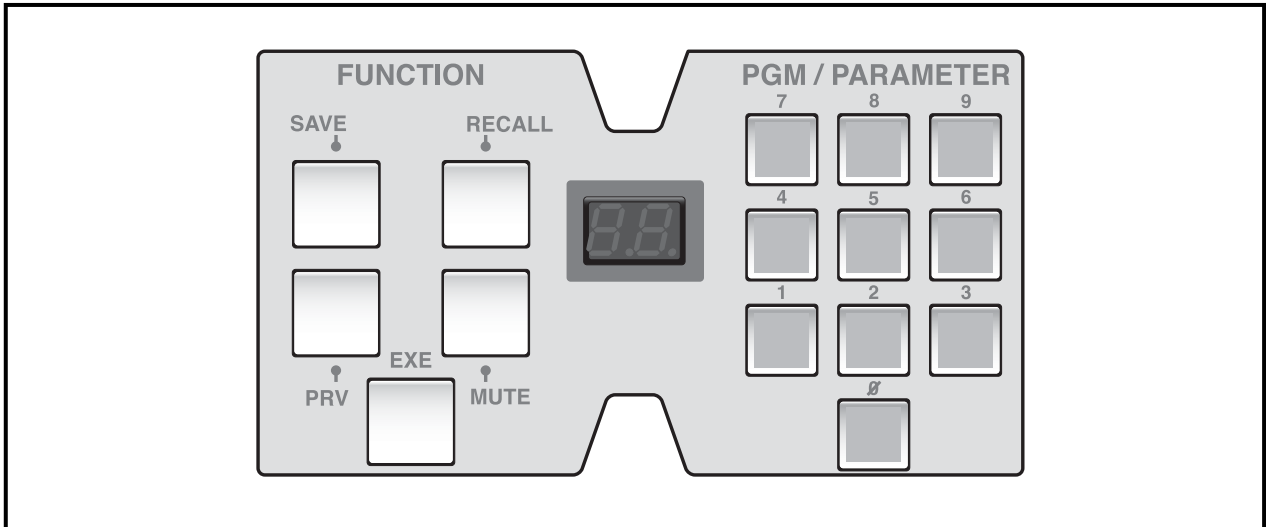
### THIS APPARATUS MUST BE EARTHED!

REPLACEMENT OF MAINS FUSE OR ANY COMPONENTS SHOULD BE UNDERTAKEN ONLY AFTER DISCONNECTING THE MAINS SUPPLY LEAD FROM THE APPARATUS.

THIS UNIT CONTAINS NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO A QUALIFIED SERVICE ENGINEER, THROUGH THE APPROPRIATE Inter-M DEALER.

SERVICING SHOULD ONLY BE CARRIED OUT BY TECHNICALLY COMPETENT PERSONNEL.

## Master Control



The IMX has computer controlled scene memory function. All the channel's fader level, MUTE and MUTE GROUPING can save memory as a Program. The functions you can control are;

- a) SAVE FUNCTION
- b) RECALL FUNCTION
- c) PREVIEW FADER POSITION
- d) MUTE GROUP FUNCTION

### a) SAVE

Saves current fader position and MUTE settings to the internal memory.

- 1) Press "SAVE" key. The "SAVE" lamp lights and 7 segment indicator starts blinking.
- 2) Select PGM number where you want to save the current setting by using 10 numeric keys. You can use from "01" to "99" to save your settings.
- 3) Press "EXE" key. The SAVE is done.

If you wanted to stop SAVE action, please press "SAVE" key again, or the function will be automatically canceled after 30 seconds without pressing "EXE" key.

### b) RECALL

Loads memorized fader position and MUTE settings to the mixer surface.

- 1) Press "RECALL" key. The "RECALL" lamp lights and 7 segment indicator starts blinking.
- 2) Select PGM number which you want to recall by using 10 numeric keys. You can use from "01" to "99" to recall your settings.
- 3) Press "EXE" key. The RECALL is done.

If you wanted to stop SAVE action, please press "RECALL" key again, or the function will be automatically cancelled after 30 seconds without pressing "EXE" key.

Recalled fader positions are indicated on 7 segment display of each channels.

When there is a difference between "recalled" position and "absolute" fader position, "up", "down" and "null" LED lamps by channel fader would let you know. For example, if the recalled fader position were upper than absolute position, "up" lamp lights to give you an attention to "up" the fader to match the level.

If you want to trim some faders, you only move up or down faders until green "null" lamp were lit. Please remember that the audio level will not change before "null" lamp is lit.

On the other hand, if you wanted to make it the level of current fader position, press "RECALL" keys more than 2 seconds, and all the audio level would be changed to the current fader position.

#### c) PREVIEW FADER POSITION

You can check the fader position that saved into internal memory by 7 segment numeric LED without loading the data to the channel.

- 1) Press "PRV" key. The "PRV" lamp lights and 7 segment indicator starts blinking.
- 2) Select PGM number which you want to see the contents by using 10 numeric keys.
- 3) Press "EXE" key. The fader position will be displayed on 7 segment numeric LED on each input channels.

This function does not change current fader data, only lets you know what data is saved in the memory.

If you wanted to stop PREVIEW action, please press "PRV" key again, or the function will be automatically cancelled after 30 seconds without pressing any key.

#### d) MUTE GROUP FUNCTION

- Assigns the channel to 9 combinations of MUTE GROUP.

- 1) Press "MUTE" key continuously more than 2 second. The "MUTE" lamp and 7 segment indicator starts blinking.
- 2) Select MUTE GROUP number into "1" to "9" by using 10 numeric keys.
- 3) Press "EXE" key. The assignment is done.

If you wanted to stop this action, please press "MUTE" key again, or the function will be automatically cancelled after 30 seconds without pressing "EXE" key.

- Mutes all channels that assigned to the corresponding mute group.

- 1) Press "MUTE" key to enter the "MUTE GROUP" mode. And the 7 segment indicator starts to blink.
- 2) Select MUTE GROUP number into "1" to "9" by using 10 numeric keys. When you selected the number, channel's MUTE indicator starts blinking to show you which channel is ready to mute.
- 3) Press "EXE" key to exit the MUTE GROUP.

It is executed when the state of MUTE which is pressed by users is added to the contents of MUTE GROUP which is saved.

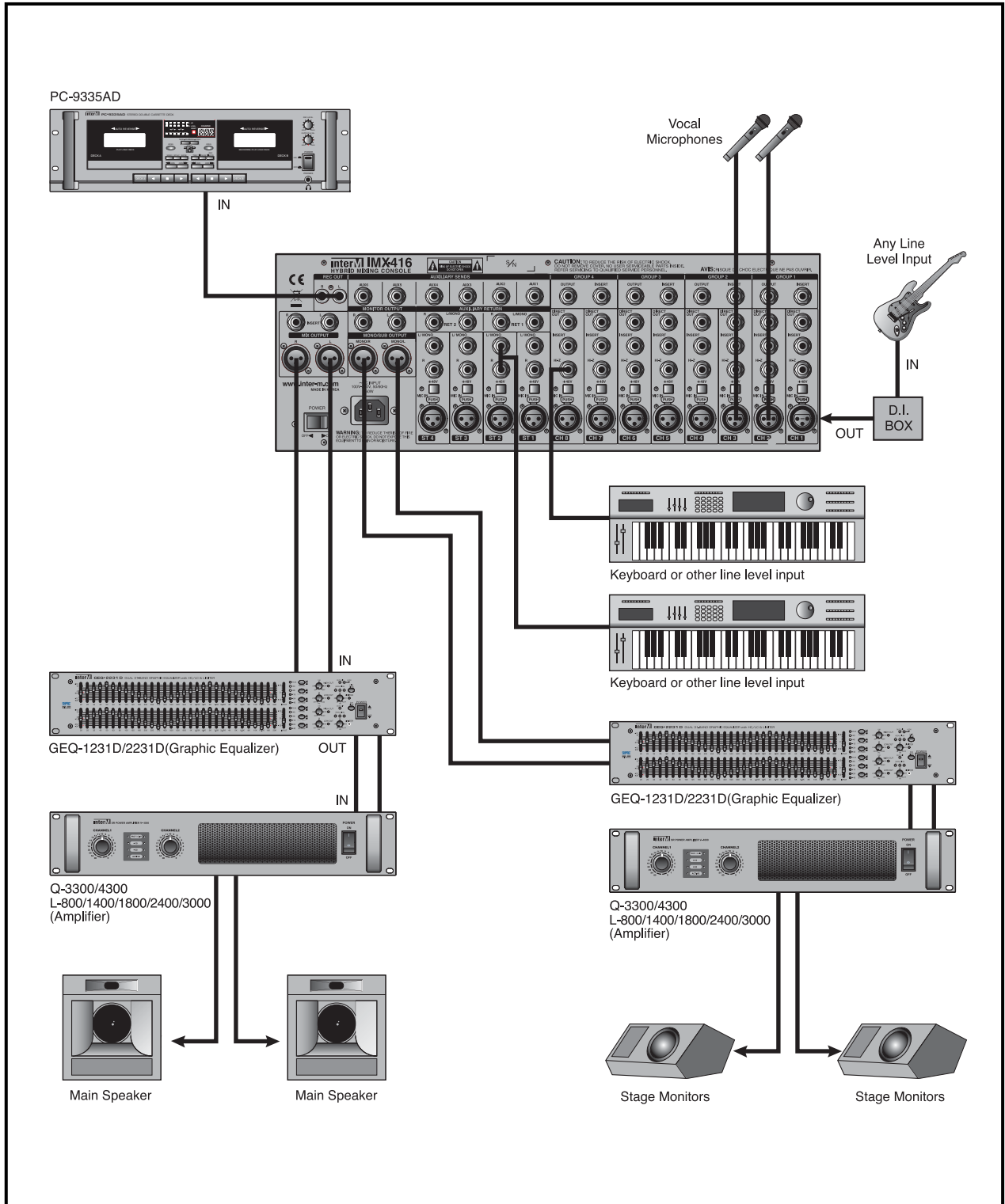
The MUTE GROUP number "0" is always "MUTE GROUP OFF".

#### \* SOFTWARE RESET FUNCTION

Please turn the power on with pressing the number "2" key and keep it pressed until the current software version is displayed in the segment display.

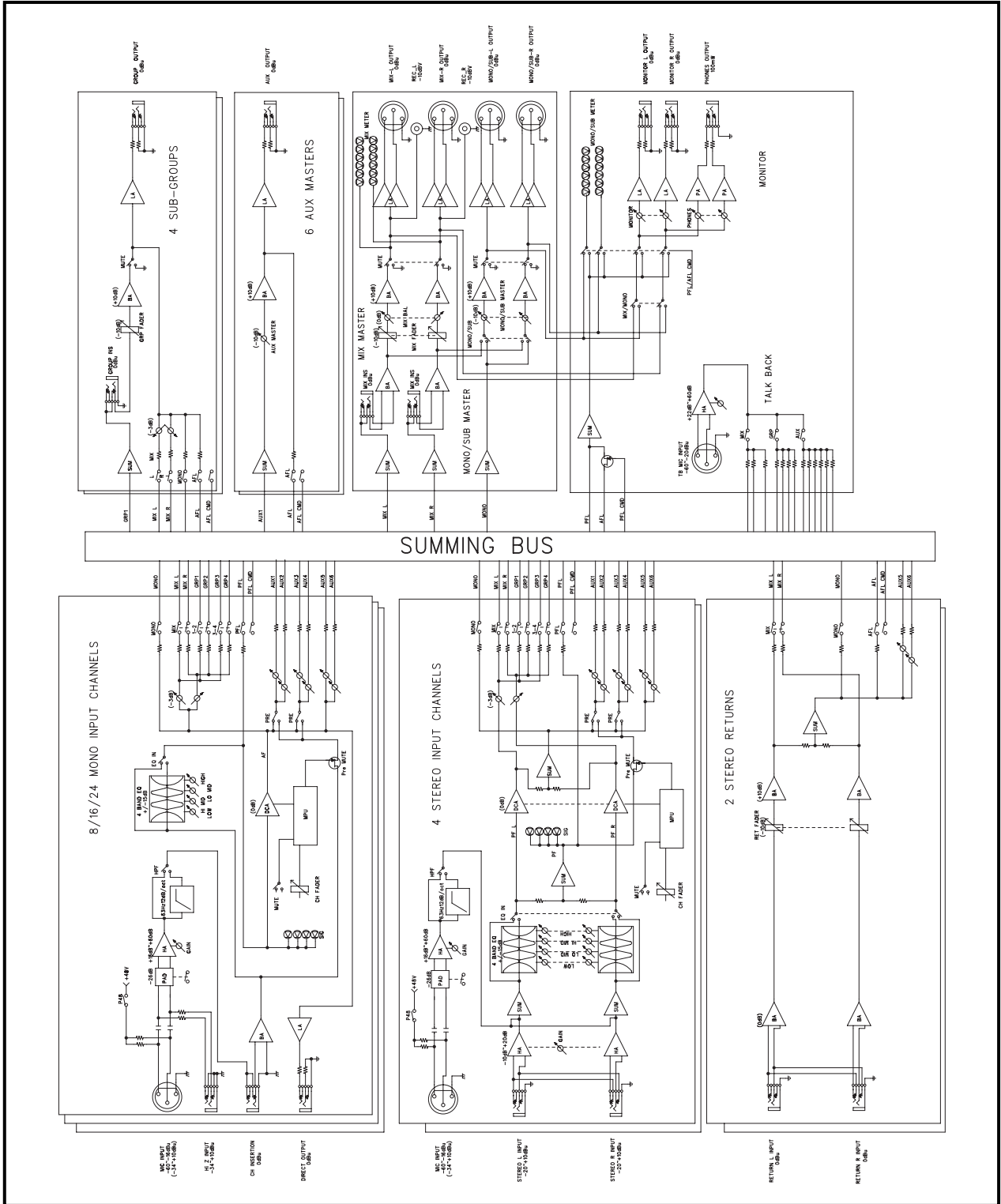
All data which the user stores in the memory is deleted.

# Applications





# Block Diagram



# Specifications

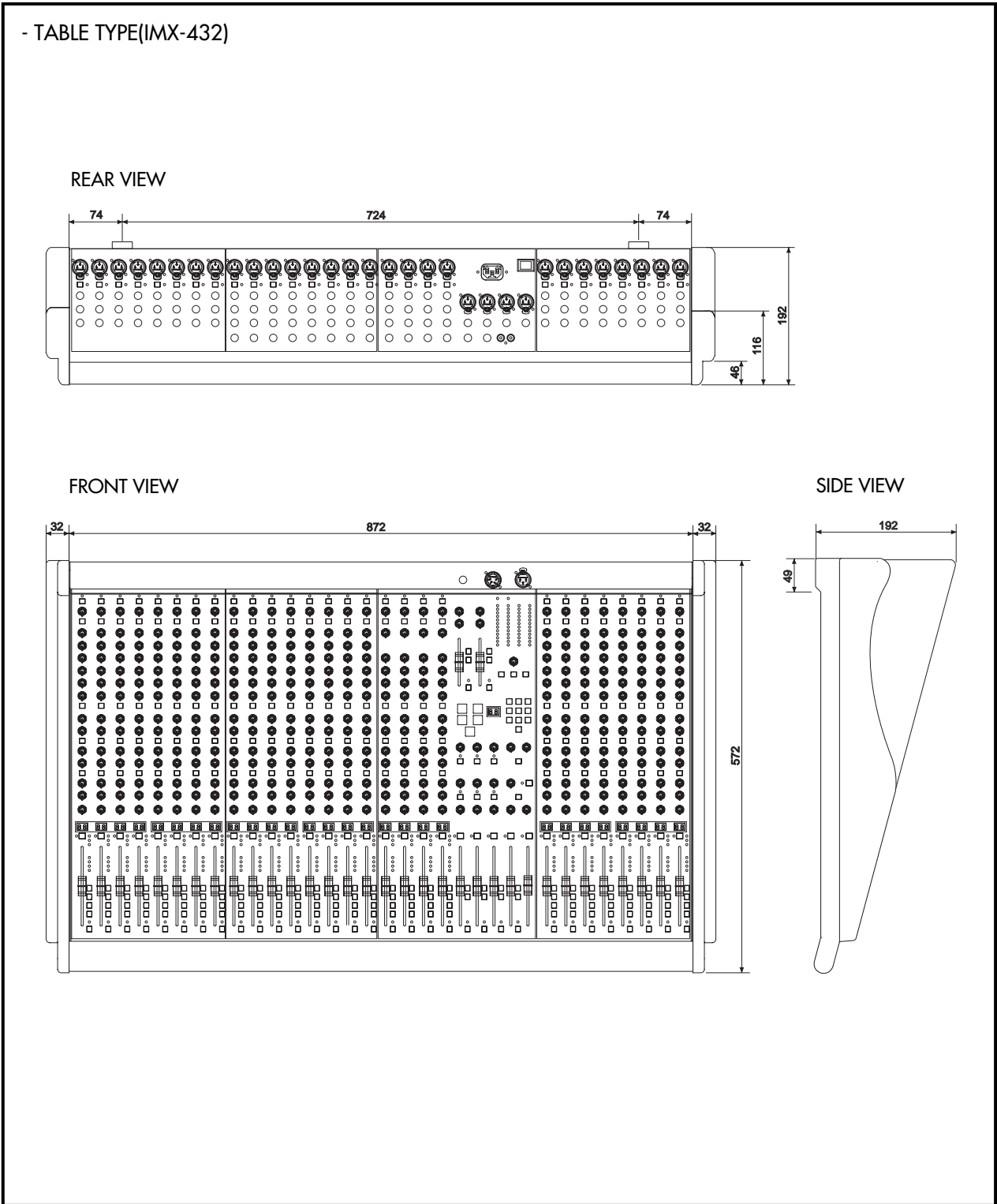
\*0dBu=0.775V, 0dBV=1V

	IMX-416	IMX-424	IMX-432
MIC INPUT	XLR 3 type female Electronically Balanced		
Input Impedance	>1.5k $\Omega$		
Nominal Level	-60dBu to +10dBu(+30dBu Max.)		
Hi-Z INPUT	TRS Jack socket Electronically Balanced		
Input Impedance	>10k $\Omega$		
Nominal level	-34dBu to +10dBu(without PAD)		
STEREO INPUT	TRS Jack socket Electrical Balanced		
Input Impedance	10k $\Omega$		
Nominal level	-20dBu to +10dBu(+30dBu max)		
RETURN INPUT	TRS Jack socket Electrical Balanced		
Input Impedance	10k $\Omega$		
Nominal level	0dBu(+20dBu Max.)		
INSERTION RETURN	TRS Jack socket Unbalanced		
Input Impedance	10k $\Omega$		
Nominal level	0dBu(+20dBu Max.)		
TB MIC INPUT	XLR3 type female Electrical Balanced		
Input Impedance	>1.5k $\Omega$		
Nominal level	-60dBu to -22dBu		
MIX OUTPUT	XLR3 type male Electrical Balanced		
Output Impedance	<150 $\Omega$		
Minimum load	>600 $\Omega$		
Nominal level	0dBu(+20dBu Max.)		
GROUP OUTPUT	TRS Jack socket Impedance Balanced		
Output Impedance	<150 $\Omega$		
Minimum load	>2k $\Omega$		
Nominal level	0dBu(+20dBu Max.)		
AUX OUTPUT	TRS Jack socket Impedance Balanced		
Output Impedance	<150 $\Omega$		
Minimum load	>2k $\Omega$		
Nominal level	0dBu(+20dBu Max.)		
MONITOR OUTPUT	TRS Jack socket Impedance Balanced		
Output Impedance	<150 $\Omega$		
Minimum load	>2k $\Omega$		
Nominal level	0dBu(+20dBu Max.)		

		IMX-416	IMX-424	IMX-432
REC OUTPUT		RCA pin type Unbalanced		
Output Impedance		<150Ω		
Minimum load		>2kΩ		
Nominal level		-10dBV(+10dBV Max.)		
PHONES OUTPUT		TRS Jack socket Unbalanced		
Minimum load		>35Ω		
Maximum power		100mW / 600Ω		
LAMP		XLR 4 type female(pin3=V+, pin4=V-)		
Output Voltage		+12V(350mA Max.)		
Operating Temperature Range		-10°C~+35°C		
Humidity		0 to 90% @35°C		
Frequency Responses		+0dB/-1dB(20Hz to 20kHz MIC to Mix O/P at +60dB input gain)		
Noise Level	Mic Ein	<-127dBu(MIC to Mix +60dB input gain with 150Ω termination, 22Hz to 22kHz)		
	Residual noise	<-90dB(Mix O/P with no signal assignment, 20Hz to 22kHz)		
Distortion		<0.05%(1kHz, MIC to MIX with +16dB input gain at +20dBu output)		
Maximum System Gain		93dB (MIC input to MIX output via a GROUP)		
Channel HPF		63Hz 12dB/oct.		
Channel Equalizer (Mono)	High	12kHz +/-15dB Shelf		
	High Mid	500Hz~10kHz sweepable +/-15dB Peak Q=1.4		
	Low Mid	100Hz~2kHz sweepable +/-15dB Peak Q=1.4		
	Low	80Hz +/-15dB Shelf		
Channel Equalizer (Stereo)	High	12kHz +/-15dB Shelf		
	High Mid	3.15kHz +/-15dB Peak Q=1.4		
	Low Mid	315Hz +/-15dB Peak Q=1.4		
	Low	80Hz +/-15dB Shelf		
Power Source		AC 100V to 240V, 50Hz/60Hz (Supplied AC mains transformer depends on country requirements)		
Power Consumption		95W		
Weight	Set	15kg/33.06lb	21kg/46.29lb	27kg/59.52lb
	Shipping Weight	22kg/48.50lb	29kg/63.93lb	37kg/81.57lb
Dimensions	Set(Table)	504(W)x192(H)x572(D)mm/ 19.8(W)x7.5(H)x22.5(D)in	720(W)x192(H)x572(D)mm/ 28.3(W)x7.5(H)x22.5(D)in	936(W)x192(H)x572(D)mm/ 36.8(W)x7.5(H)x22.5(D)in
		610(W)x270(H)x690(D)mm/ 24.0(W)x10.6(H)x27.1(D)in	825(W)x270(H)x690(D)mm/ 32.4(W)x10.6(H)x27.1(D)in	1040(W)x270(H)x690(D)mm/ 40.9(W)x10.6(H)x27.1(D)in
	Box	610(W)x270(H)x690(D)mm/ 24.0(W)x10.6(H)x27.1(D)in	825(W)x270(H)x690(D)mm/ 32.4(W)x10.6(H)x27.1(D)in	1040(W)x270(H)x690(D)mm/ 40.9(W)x10.6(H)x27.1(D)in
		610(W)x270(H)x690(D)mm/ 24.0(W)x10.6(H)x27.1(D)in	825(W)x270(H)x690(D)mm/ 32.4(W)x10.6(H)x27.1(D)in	1040(W)x270(H)x690(D)mm/ 40.9(W)x10.6(H)x27.1(D)in

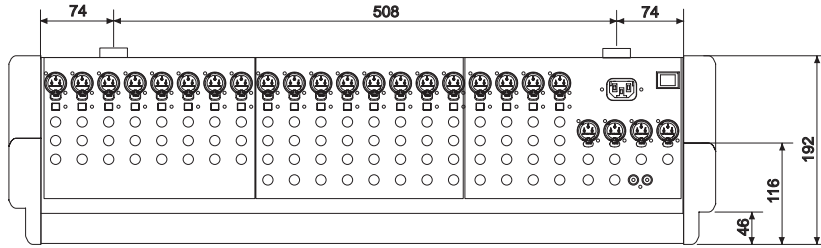
\* Specifications and design subject to change without notice.

# Dimensions

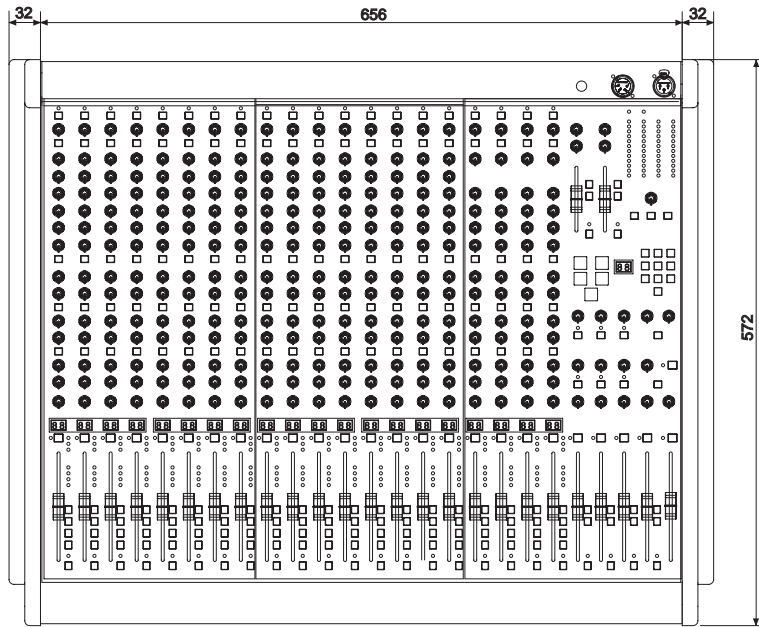


- TABLE TYPE(IMX-424)

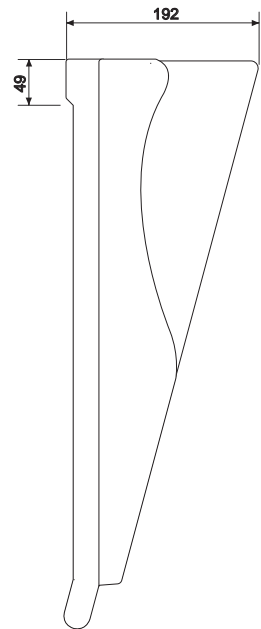
REAR VIEW



FRONT VIEW

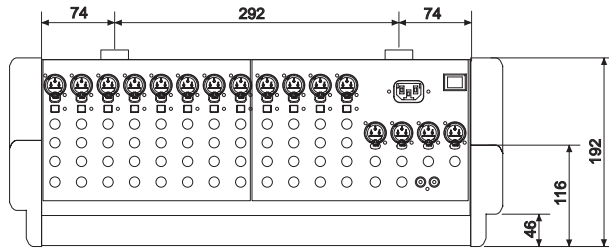


SIDE VIEW

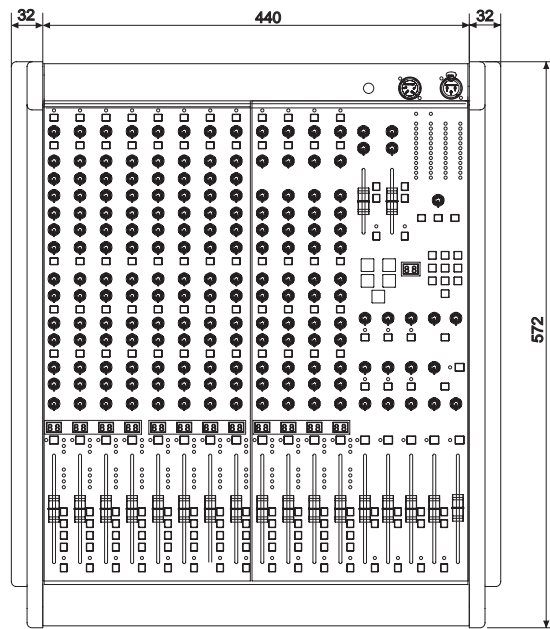


- TABLE TYPE(IMX-416)

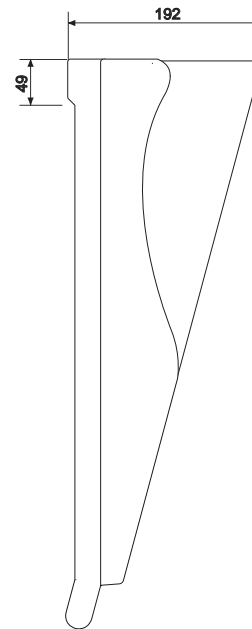
REAR VIEW



FRONT VIEW

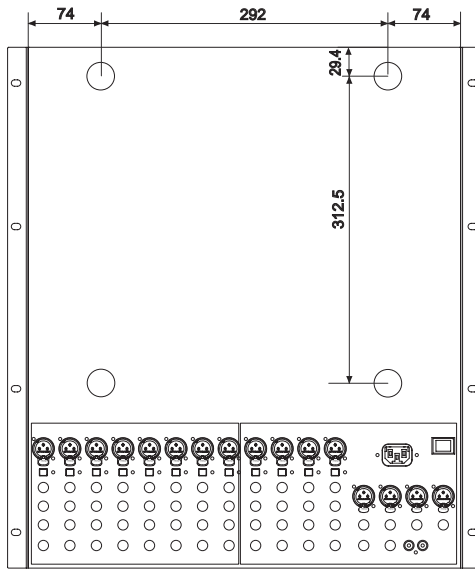


SIDE VIEW

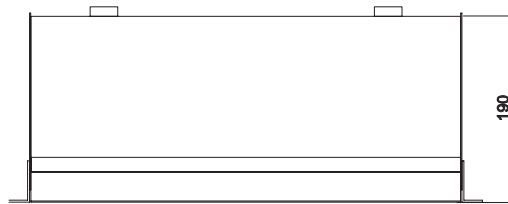


- RACK TYPE(IMX-416)

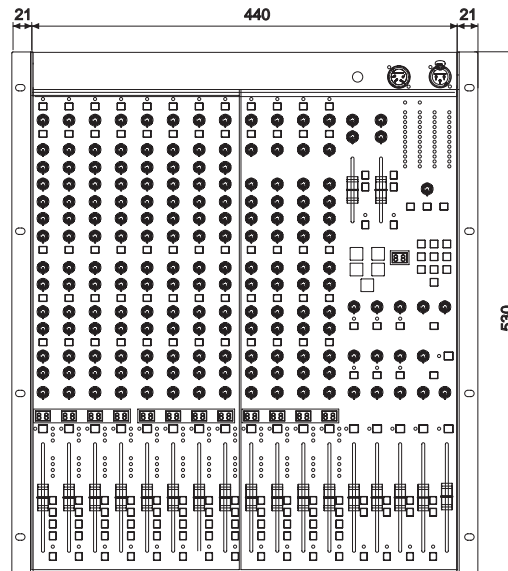
REAR VIEW



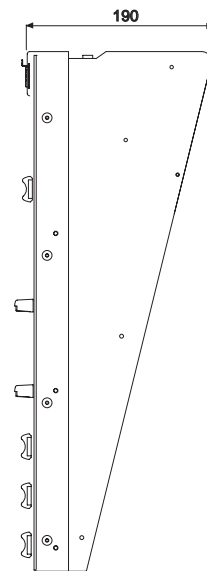
TOP VIEW



FRONT VIEW



SIDE VIEW



## Service

### Procedures

Take steps to insure the problem is not related to operator error or other products within the system. Information provided in the troubleshooting portion of this manual may help with this process. Once it is certain that the problem is related to the product contact your warranty provider as described in the warranty section of this manual.

### Schematic

A Schematic is available by contacting your warranty provider.

### Parts List

A Parts List is available by contacting your warranty provider.

## Variations and Options

### Variations

Products supplied through legitimate sources are compatible with local AC power requirements.

### Options

No optional items are available for this product.

## Warranty

Warranty terms and conditions vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

To obtain specific warranty information and available service locations contact Inter-M directly or the authorized Inter-M Distributor for your specific country or region.