

Operation Manual

Audio Pre Amplifier
PP-613



interM

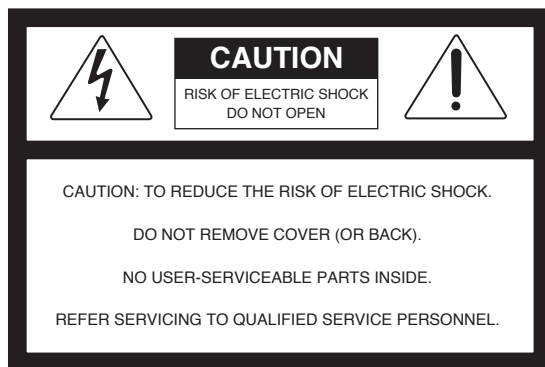
Welcome

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!



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.

***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 that objects do not fall and liquids are not spilled into the enclosure through openings.

***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.

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.



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.

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

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Unpacking

Although your PP-613 is neither complicated nor difficult to operate, we recommend you take a few minutes to read this brief manual and familiarize yourself with the important information regarding product features, setup and operation.

As with most electronic devices, we strongly recommend you retain the original packaging. In the unlikely event the product must be returned for servicing, the original packaging (or reasonable equivalent) is required.

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.



Features

- 9 CHANNEL INPUT, 1 CHANNEL FOR MASTER OUTPUT, 2 CHANNEL FOR SUB OUTPUT, 1 CHANNEL FOR RECORDING OUTPUT

9 channel input and 1 channel for master output and 2 sub channel for flexible use and 1 channel for recording output which is not affected by the master level fader built in.

- AUXILIARY INPUT AND PRIORITY INPUT

Auxiliary Input is built in so that users can use the external sound source in there convenience and the sound source connected to 2 channels of this priority input is played prior to the other input.

- EQ ON EACH CHANNEL

3 band (High, Mid, Low) Graphic equalizers are built-in so that a user can adjust the tone of sound to there taste.

- PHANTOM POWER

Phantom powers are available on channel 1 and 2 for the condenser microphone.

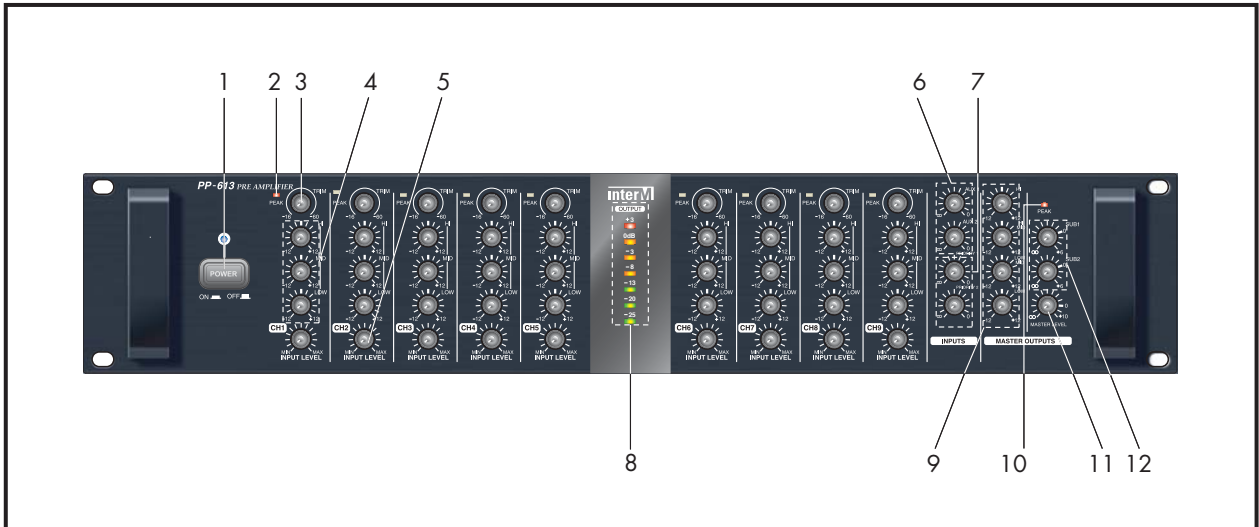
- DUCKING

Ducking function available on channel 1 and 2 enable their sound source to be broadcast prior to the others. A user can select whether to use it or not.

Operation

1. Plug into the outlet directly or connect DC terminal in right polarity with the DC power supplier.
2. Locate all knobs for sound quality at "0" and minimize all knobs for sound level.
3. When power switch is on, it starts to work.
4. Please adjust the gain of the input signal with trim control according to the signal level of the input channel connected with CD player or deck or microphone.
5. When using level controller of the input channel, make favorable audio mixing and adjust the output level with level controller of the master output.
6. When monitoring output level, adjust favorable color of tone using input channel tone controller and master channel tone controller.

Front Panel



1. POWER SWITCH

Pressing this switch turns the unit on, as indicated by the Power LED in the switch. Pressing it again turns the unit off.

2. PEAK INDICATORS 1~9

These LED indicators light when the input signal to the associated channel is 3dB below clipping. If the indicator is lit steadily, reduce the channel's Trim level (3) to avoid distortion.

3. TRIM CONTROLS 1~9

This trim adjusts the gain of input signal, the range adjustable is 44dB

These knobs provide continuous control of the gain level for the associated input channel.

4. CHANNEL EQ CONTROLS (3 BAND)

These knobs provide continuous control of equalization for the associated input channel. Three bands of equalization are provided:

Low : 100Hz, Mid : 1kHz, High : 10kHz

5. CHANNEL FADERS 1~9

These are the main output level controls for each channel. They provide continuous control of the signal level sent from the associated input channel to the master output buss. Faders of unused channels should be set to their lowest point.

6. AUX LEVELS (AUX1, AUX2)

These knobs provide continuous control of the levels for signals connected to the rear-panel Aux 1 and Aux 2 inputs.

7. PRIORITY CONTROLS (PRIORITY 1, PRIORITY 2)

This is the volume controller for the priority input.

When the terminal for the priority is connected to PE-603(Chime & Siren), locating this controller at more than 12 o'clock direction is recommended.

- First place : Priority input 1, input 2
- Second place : When ducking is on, channel 1, channel 2
- Third place : other channels (channel 3 to 9), Aux input (Aux1, Aux2)

8. OUTPUT LEVEL METER

This is the display for the output level of this unit. Please use this in the range not to light 3dB LED up.

9. MASTER EQ CONTROLS (4 BAND EQUALIZER)

These knobs provide continuous control of equalization for the master output. Four bands of equalization are provided:

Low : 80Hz, Low-Mid : 400Hz, Hi-Mid : 2kHz, High : 10kHz

10. MASTER PEAK INDICATOR

These LED indicators light when the master output signal is 3dB below clipping. If the indicator is lit steadily, reduce the master output level (11), or the levels from the active input channels (5) to avoid distortion.

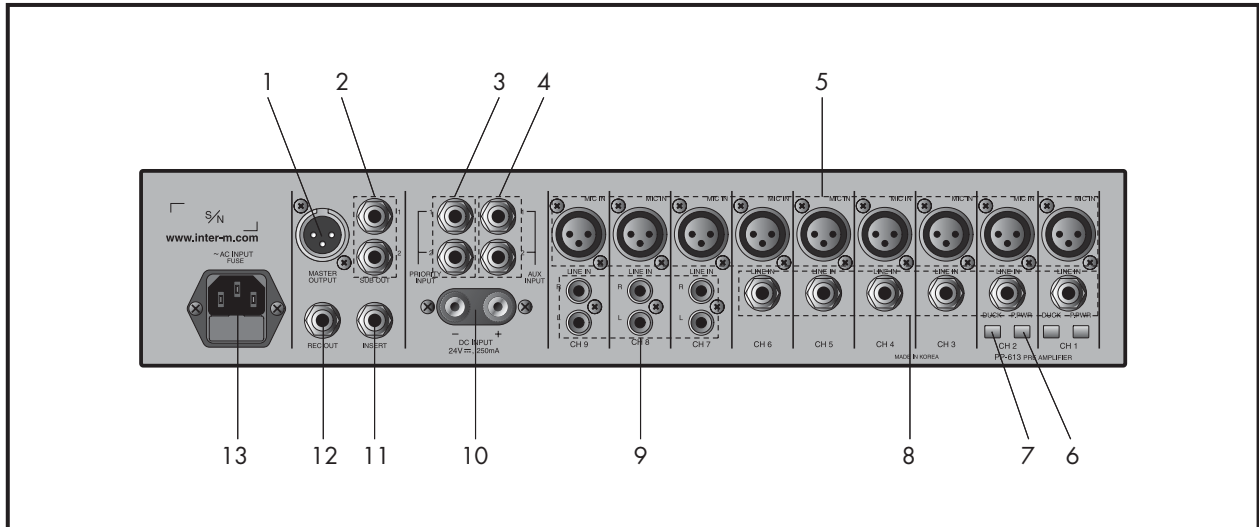
11. MASTER OUTPUT CONTROL

This is the controller that adjusts the level of the master output which is a mixture of each channel's signal.

12. SUB OUTPUT CONTROLS (SUB1, 2)

When sending a mixed signal of each channel signals to Sub 1, 2 the leveling of the signal is performed by this controller.

Rear Panel



1. MASTER OUTPUT

This is a balanced XLR output jack for connecting to the input of a power amp.
(Output level : +4dBm/600Ω)

2. SUB OUTPUTS 1-2

These are unbalanced 1/4" phone jack outputs for connecting the input of a power amp or other audio input. (Output level : +4dBm/600Ω)

3. PRIORITY INPUTS 1-2

These are line level inputs on unbalanced 1/4" phone jacks. When the signal is present at these inputs, all other inputs are muted. The level for these inputs is controlled by the front-panel priority level control (7).

4. AUX INPUTS 1-2

These are line level inputs on unbalanced 1/4" phone jacks. Their level is controlled by the front panel AUX level controls (6). (Input level : -10dBm/20kΩ)

5. MIC INPUTS 1-9

These are mic-level inputs on balanced three-pin XLR connectors. (1:GND, 2:HOT, 3:COLD)
Their level is controlled by the front panel Trim controls (3). Phantom power is supplied to these inputs with the rear-panel phantom power(+18V) switch (6).

6. PHANTOM POWER SWITCHES

Pressing these switches activates the +18VDC phantom power supply to associated Mic Inputs 1 and 2, for use with condenser mics requiring external power. Push this switch again to turn off the phantom power.

※ NOTE : In case the switch is on without the lowest level of input channel and master output, high voltage may occur by assigning DC +18V suddenly to the mic input which can harm the speakers.

7. PRIORITY SWITCHES

When the priority switches are activated, signals of the associated Mic Inputs 1 and 2 will automatically lower the gain level of the other input channels.

8. MONO LINE INPUTS 1-6

These are line-level inputs on balanced 1/4" connectors. These are provided as six mono inputs, for the connection of line-level input sources.

9. STEREO LINE INPUTS 7-9

These are line-level inputs on unbalanced RCA connectors. These are provided as three sets of stereo inputs, for the connection of line-level input sources.

10. DC INPUT TERMINALS

These terminals are provided for the connection of 24V DC power source, such as the Inter-M PD-659. Connect a 24V DC battery source to these terminals. Make certain the red terminal is connected to the battery's positive (+) side, and the black terminal to the battery's negative (-) side.

11. INSERT

This is an unbalanced line-level input on 1/4" phone jack, provided for connecting external devices to the mixer's outputs. Inserting a connector into the Insert jack will disconnect the output of the mixer's master output buss.

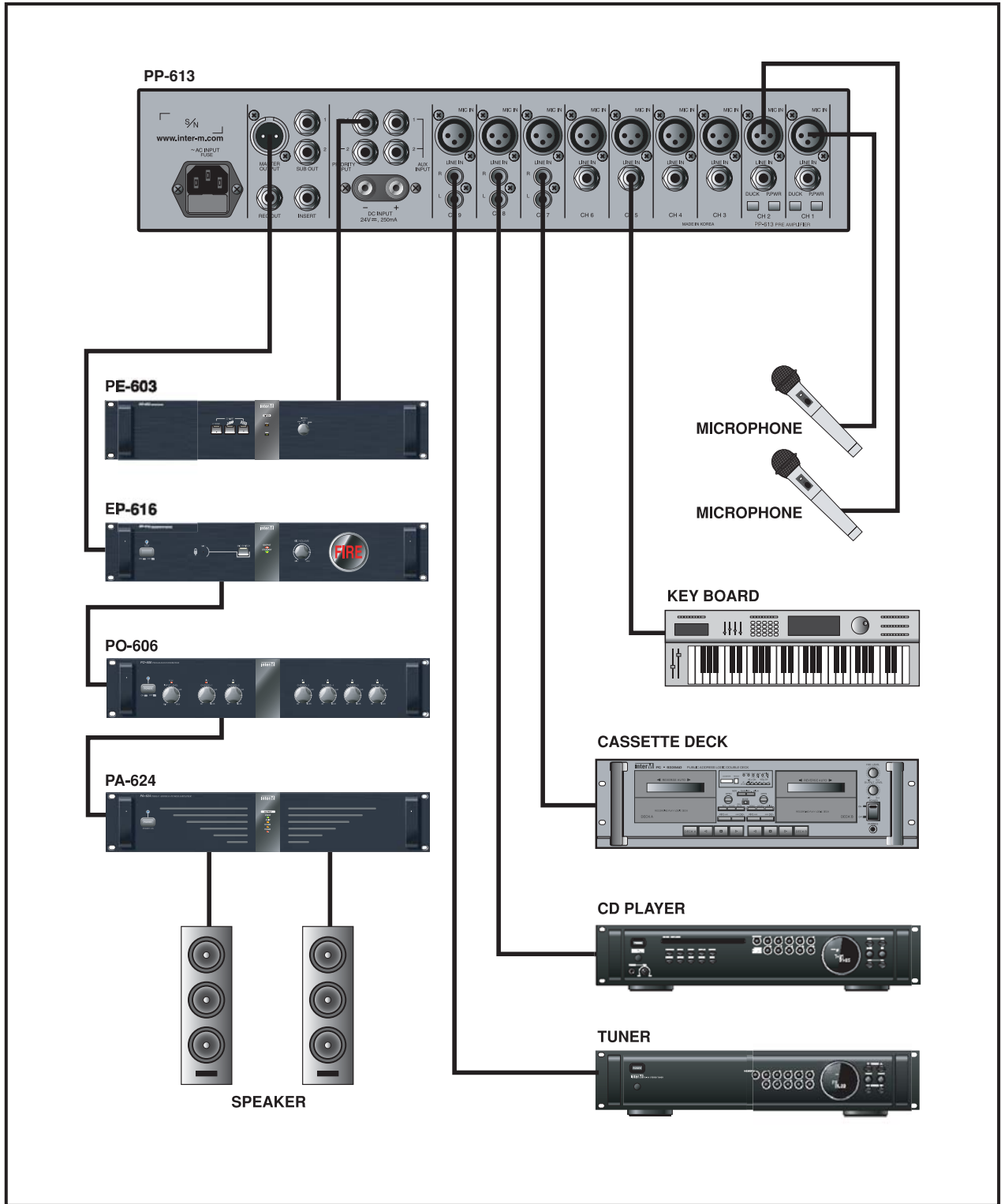
12. REC OUTPUT

This is the unbalanced output for recording mixed signals the output level is -10dBm/10k Ω .

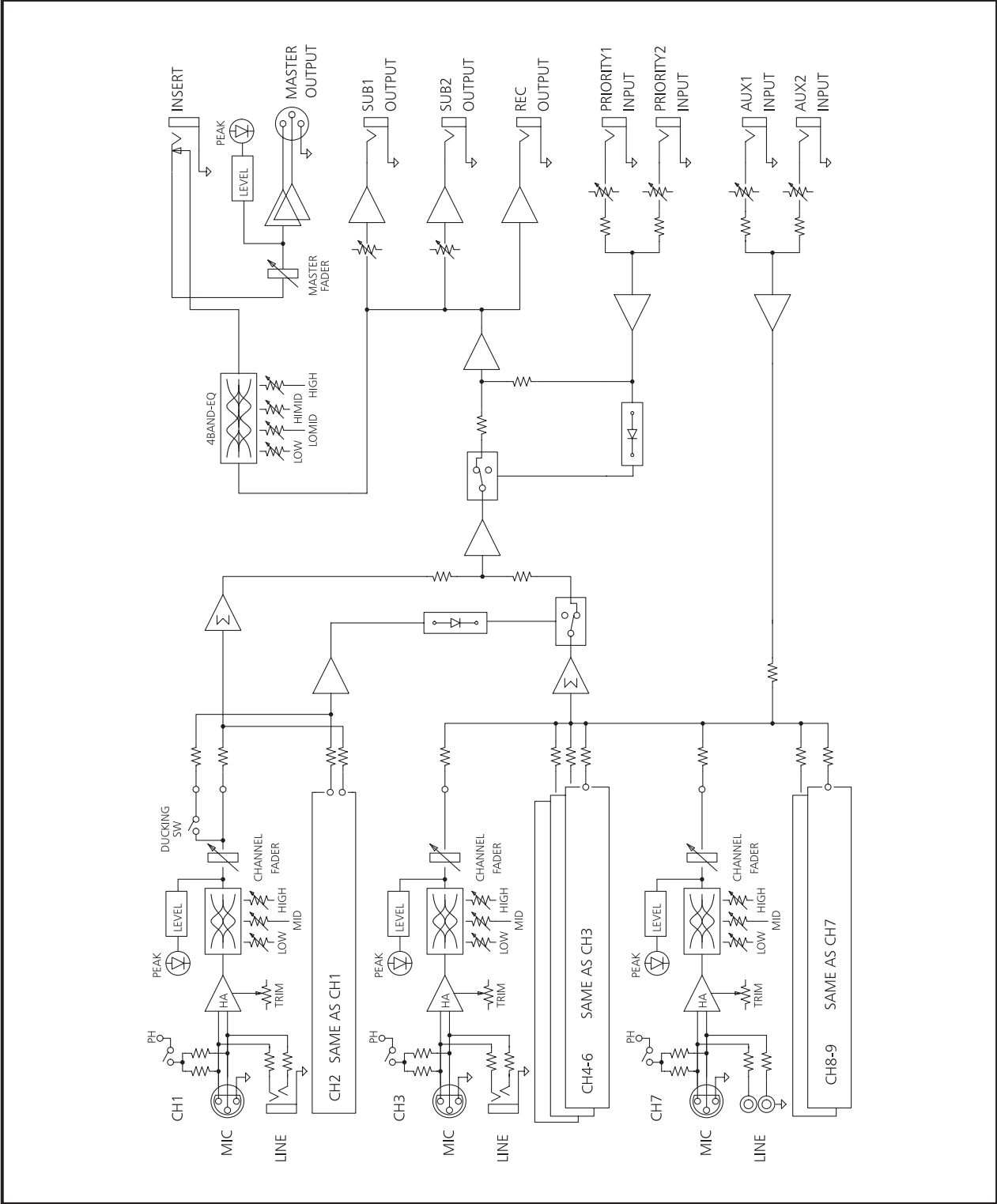
13. AC CONNECTOR AND FUSE HOLDER

Connect the supplied standard AC input cable to this input. The fuse holder below the input contains the AC overload protection fuse. If the fuse has blown out, replace it with a fuse of the same type and rating. If the fuse continues to blow, refer servicing to a qualified service technician.

Applications



Block Diagram



Specifications

		PP-613
Rated Output (1 kHz)	Master Output	+4dBm/600Ω, BAL
	SUB 1,2 Output	+4dBm/600Ω, UNBAL
	REC Output	10dBm/10kΩ, UNBAL
Input Sensitivity / Impedance	MIC (CH1~CH9)	-60dBm/600Ω, BAL
	LINE (CH1~CH6)	-20dBm/47kΩ, BAL
	LINE (CH7~CH9)	-20dBm/47kΩ, UNBAL
	AUX 1,2	10dBm/20kΩ, UNBAL
	Priority 1,2	0dBm/20kΩ, UNBAL
	Insert	0dBm/20kΩ, UNBAL
	T.H.D	Less than 0.3%
Frequency Response	30Hz-20kHz (+1dB, -3dB)	
Input Channel Equalizer	HIGH	±12dB (10kHz)
	MID	±12dB (1kHz)
	LOW	±12dB (100Hz)
Output Channel Equalizer	HIGH	±12dB (10kHz)
	HI-MID	±12dB (2kHz)
	LOW-MID	±12dB (400Hz)
	LOW	±12dB (80Hz)
Residual Noise (at V/R Min)	Less than -90dB	
Crosstalk	Less than -50dB	
Phantom Power	+18V DC	
Operation Temperature	-10°C ~ +40°C	
Power Source	100-120VAC or 220-240VAC; 50/60Hz (Supplied AC mains transformer depends on country requirements)	
Power Consumption	10W	
Weight (SET)	5.5kg / 21.1lb	
Dimensions (SET)	482(W)x88(H)x380(D)mm / 19(W)x3.5(H)x15(D)in	

* Specifications and design are subject to change without notice.

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

Variations of this product exist to reflect the variations in AC power requirements throughout the world. Product supplied through local 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.

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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