

# Operation Manual

## Pre Amplifier **PP-6214**



\* Rack mount products in the Western Hemisphere(North America, South America, and the Caribbean) do not have handles installed due to customer preference.

**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!



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.

\*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.

\*CLASS 2 WIRING (Adjacent to speaker terminal): The speaker output of this apparatus can exceed 10 Watts and could be a shock injury. Connection to speakers should be performed by a skilled person.

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

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

\*This apparatus shall be connected to a mains socket outlet with a protective earthing connection.

\*It has heed to be easy to disconnect the device. To disconnect the device from power, separate AC input cable from inlet or unplug the AC Cord.

\*The socket-outlet shall be installed near the equipment and shall be easily accessible.

## 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.

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## Unpacking

Although your PP-6214 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

### - VERSATILE AND COMPACT

Flexible mix architecture in a space-saving two RU package.

### - TWELVE INPUTS AND TWO OUTPUTS

Eight mono inputs and two stereo inputs, plus a stereo output.

### - INPUT AND OUTPUT METERING

Peak meters on input channels, plus multi-segment LED metering to monitor your output signal.

### - THREE-BAND EQ

Three-Band EQ control on output section

### - ON-BOARD PHANTOM POWER

Built-in +18VDC phantom power for condenser microphones

### - AC OR DC OPERATION

Runs on 100-120VAC, 220-240VAC, or 24VDC for true portability.

## Accessories

One detachable AC power cord is provided for use with this product.

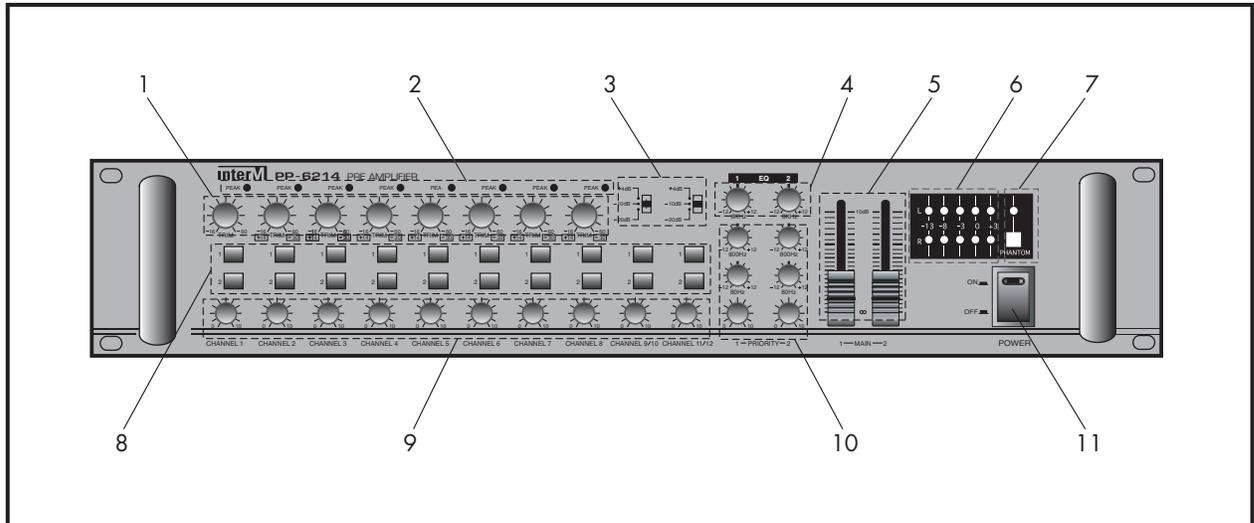
## Operation

Make certain that speakers and input sources are properly connected before switching on.

Keep volume levels turned down before switching on.

**NOTE:** The system's operation is delayed by approximately three seconds after pressing the power switch. This is due to the built-in protection circuitry, designed to protect speakers and other system components.

## Front Panel



### 1. TRIM CONTROLS 1-8

These knobs provide continuous control of pre-amp gain from +14dB to +58dB.

### 2. PEAK INDICATORS 1-8

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 (1) to avoid distortion.

### 3. GAIN SELECT SWITCHES 9/10 – 11/12

These switches select the input gain level for Stereo Channels 9/10 and 11/12. You may select between +4dB, -10dB or -20dB input level, depending on your input source. If the signal is too weak (very low level), select a higher setting; if the signal is too hot (overloaded and distorted), select a lower setting.

### 4. EQ CONTROLS

These knobs provide continuous control of equalization for the stereo (master) output. Three bands of equalization are provided:

Low: 80Hz,  $\pm 12$ dB, Shelving

Mid: 800Hz  $\pm 12$ dB, Shelving

High: 8kHz  $\pm 12$ dB, Shelving

### 5. MAIN OUTPUT LEVEL CONTROLS

These sliders provide control of the stereo (master) output level. The output level may be monitored by the Output Level Meters (6).

### 6. OUTPUT LEVEL METERS

These five-segment LED meters monitor the level of the stereo (master) output signal.

**7. PHANTOM POWER SWITCH AND INDICATOR**

Pressing this switch activates the +18VDC phantom power supply to the Mic Inputs 1-8, for use with condenser mics requiring external power. When Phantom Power is active, the LED indicator lights. Push this switch again to turn off Phantom Power.

**8. CHANNEL SELECTOR SWITCHES 1-8**

These buttons assign the channel's input signal to one or both of the stereo outputs.

**9. CHANNEL OUTPUT LEVELS 1-8**

These knobs provide continuous control of the associated channel's output level.

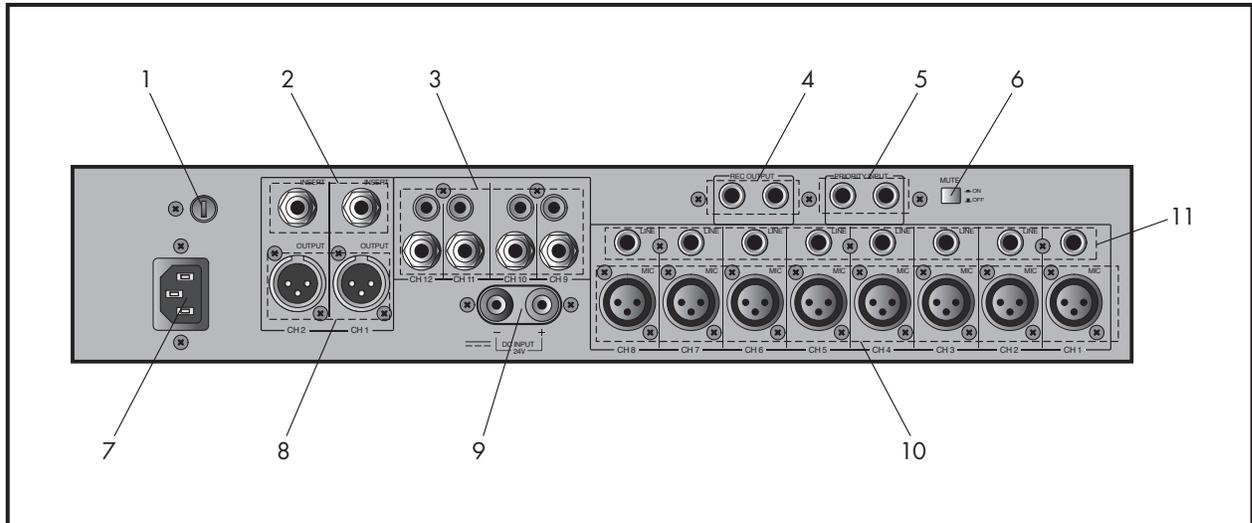
**10. PRIORITY LEVEL CONTROL**

This knob provides continuous control of the volume of the input signal of the chime, siren, or other audio source connected to the Priority Input jacks on the rear panel. When signal is present at the Priority Input jacks, all other signals except Channel 1 are muted.

**11. POWER SWITCH**

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

## Rear Panel



### 1. AC FUSE HOLDER

This holder 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.

### 2. INSERTS

These unbalanced 1/4" TRS jacks are provided for input of an audio source before the master fader. The input signal is unaffected by the Channel Input levels.

### 3. LINE INPUTS 9-12

Line-level inputs on unbalanced RCA and 1/4" phone connectors. These are provided as two sets of stereo inputs (9/10 and 11/12).

### 4. REC OUTPUT

These two unbalanced 1/4" line-level inputs are provided for connecting to an external recording device.

### 5. PRIORITY INPUT

These two unbalanced 1/4" line-level inputs are provided for priority connection of chime/siren equipment. When input signal is present on these inputs, all other audio inputs except Channel 1 are automatically muted.

### 6. MUTE SWITCH

When this switch is pressed, priority muting is activated, and all signals except Channel 1 and Priority Input are muted.

### 7. AC POWER INPUT

Connect the supplied standard AC input cable here.

**8. MAIN OUTPUTS**

These are balanced XLR output jacks for connecting to the input of a power amp.

**9. DC INPUT TERMINALS**

These terminals are provided for the connection of backup battery. Connect a 24VDC 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.

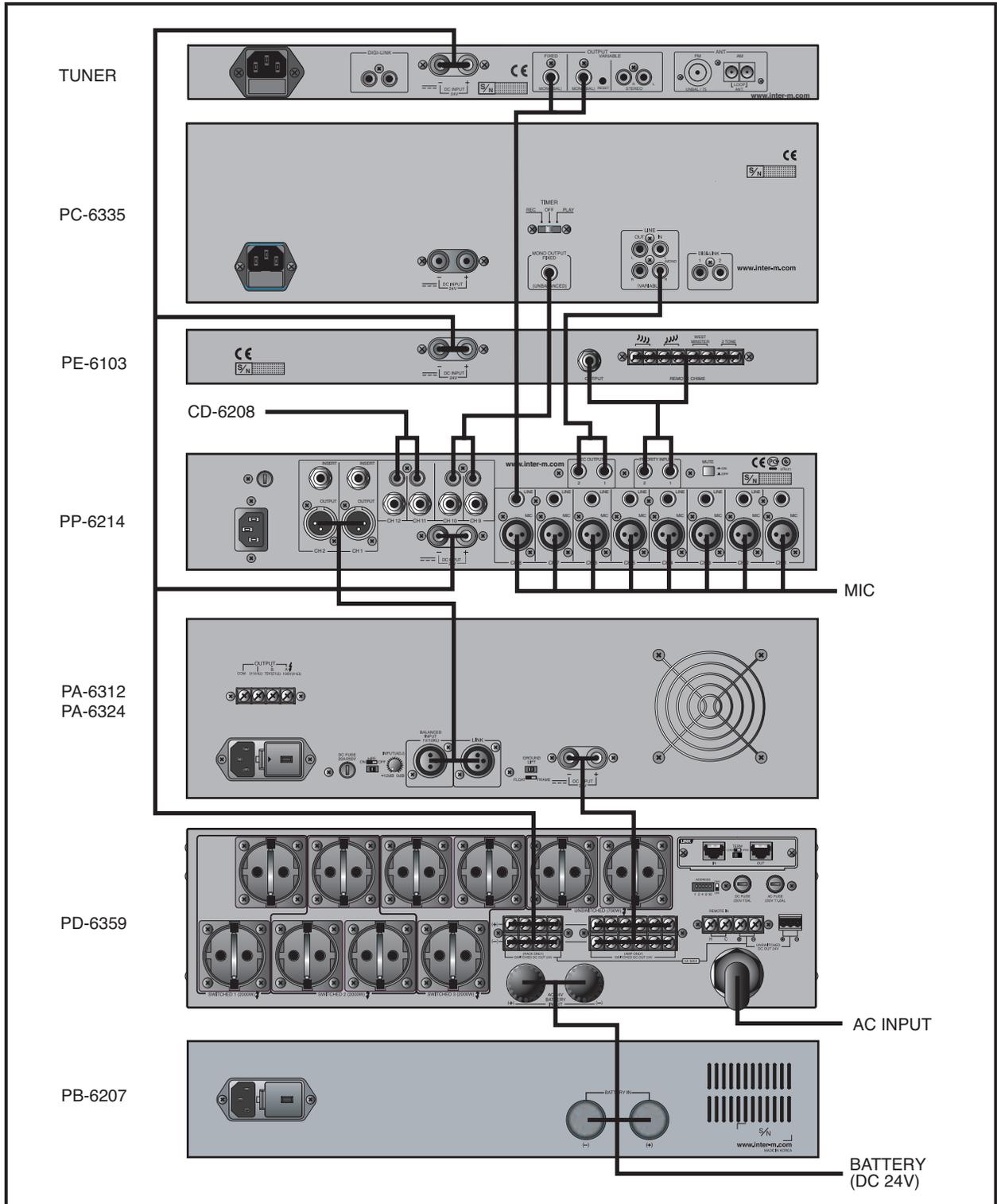
**10. MIC INPUTS 1-8**

Mic-level inputs on balanced three-pin XLR connectors.

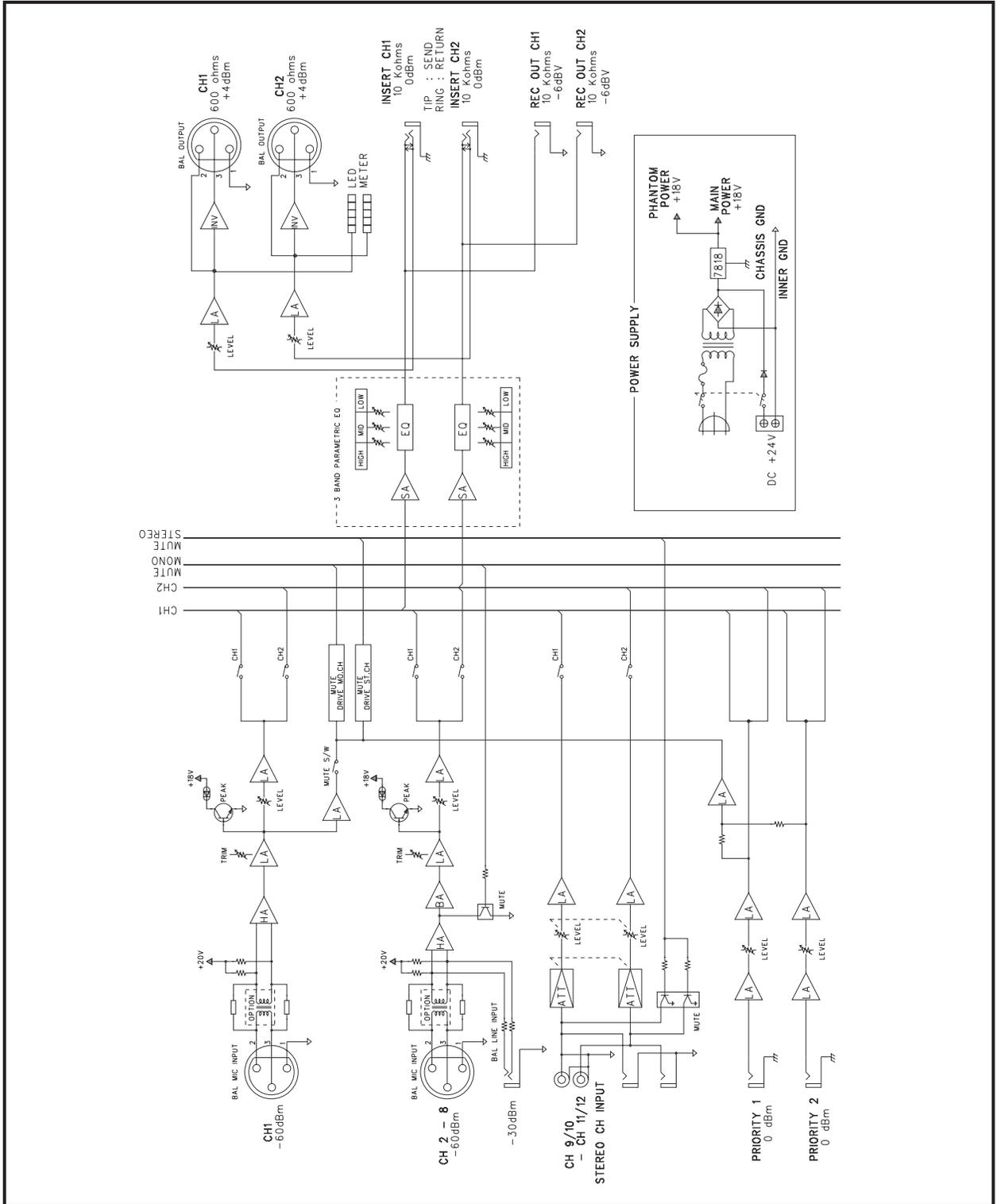
**11. LINE INPUTS 2-8**

Line-level inputs on balanced 1/4" phone connectors.

# Applications



# Block Diagram

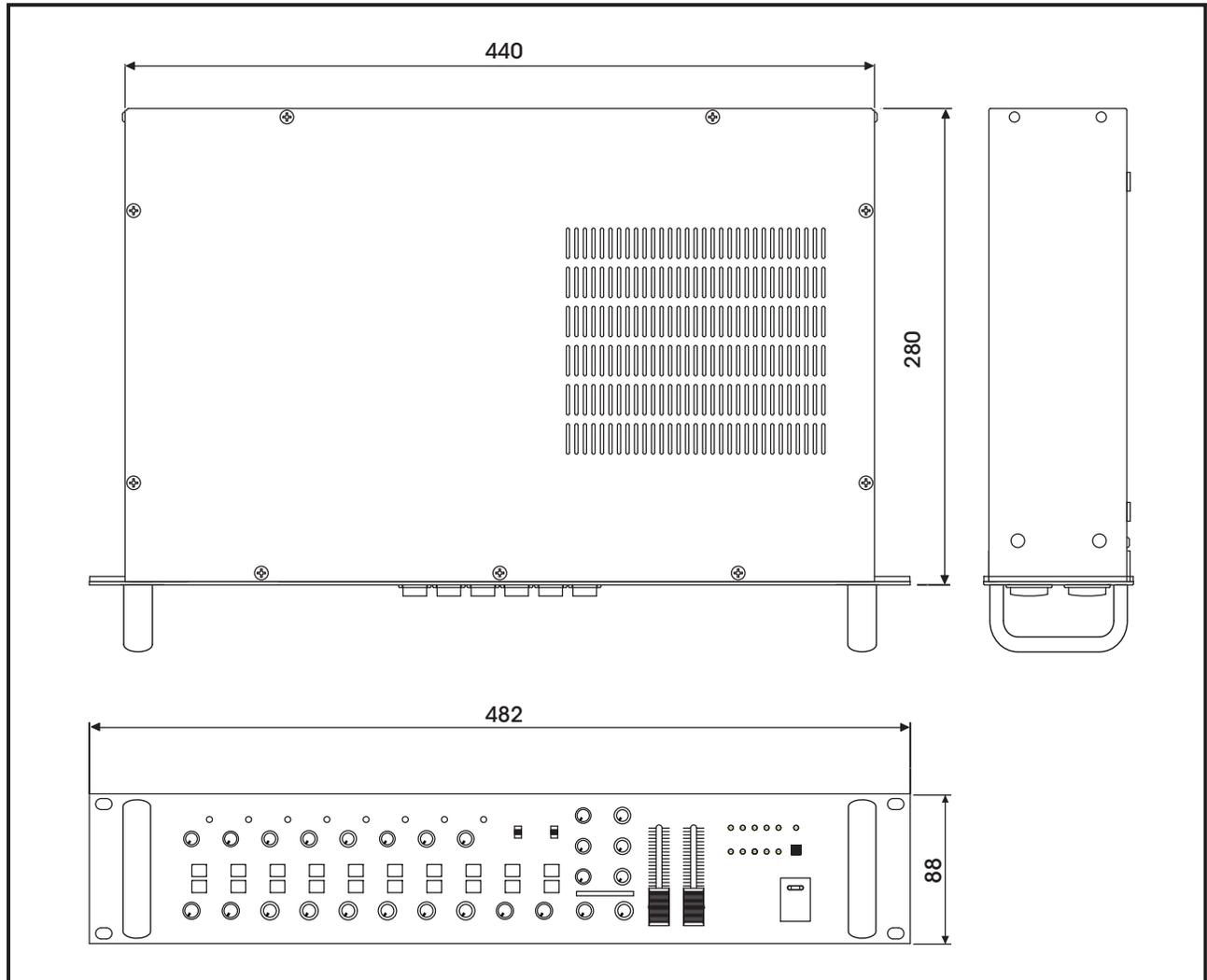


## Specifications

	PP-6214
Frequency Response (+1 dB/-3dB)	20Hz-20kHz
Total Harmonic Distortion	Less than 0.5%
Input Sensitivity/Impedance	
Mic Input 1-8	-60dB/600Ω, Balanced
Line Input 2-8	-30dB/10kΩ, Balanced
Line Input 9-12	+4dB, -10dB, -20dBm/10kΩ, Unbalanced
Priority In	0dB/10kΩ
Output/Impedance	
Ch 1-2 (Master)	+4dB/600Ω, Balanced
Rec Out	-10dB/10kΩ, Unbalanced
Insert	0dB/10kΩ, Unbalanced
Residual Noise	
All Faders Min	90dB
All Faders Min, Master Fader Max	70dB
Crosstalk	
Input to Output	70dB
Adjacent	70dB
Power Source	100–120VAC or 220–240VAC; 50/60Hz, 24VDC Auto-Switching (Supplied AC mains transformer depends on country requirements)
Power Consumption	9.8W
Weight (SET)	5kg/11lb
Dimensions (SET)	482(W)x88(H)x280(D)mm/19(W)x3.5(H)x11(D)in

\* Specifications and design are subject to change without notice.

## ※ DIMENSIONS



## 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.

**Inter-M Americas, Inc.**

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