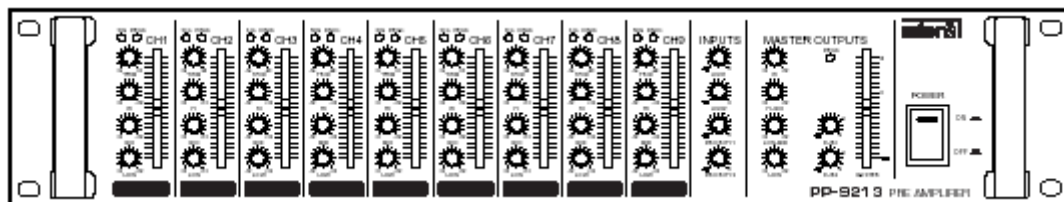


Operating Manual

PP-9213 Preamplifier



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interM

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Welcome

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

Thank you for purchasing this fine Inter-M product. All of us here at Inter-M are dedicated to providing you with the highest quality products and the best value.

We sincerely trust this product will provide you with 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 a part of our worldwide extended family!

Unpacking

Although your PP-9213 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.

Warnings




Environment

Never place this product in an environment that could alter its performance or reduce its service life. Such environments are usually characterized by high levels of heat, dust, moisture, or vibration.

Safety

1. Read these instructions carefully.
2. Follow all instructions.
3. Keep all warnings.
4. Do not operate this apparatus near water.
5. Clean only with a damp cloth.
6. Do not block any of the ventilation openings.
7. Install only in accordance with the instructions in this manual.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (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 is 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 it is attached to the apparatus.
11. Use only the attachments/accessories specified.
12. Use only with a cart, stand, tripod, bracket, or table specified, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid overturning.
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.

 <p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>	 <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.</p>
<p>WARNING</p> <p>To prevent fire or shock hazard, do not expose the unit to rain or moisture.</p>	 <p>This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.</p> <p>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.</p> <p>Attention: 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.</p>
<p>*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 that objects do not fall and liquids are not spilled into the enclosure through openings."</p>	

Operation

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

Keep volume levels at minimum gain before switching on.

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

PP-9213 Preamplifier

Features

Rugged, Compact Design

- A versatile, high-performance mixer in a space-saving two RU package.

Flexible Mixing Architecture

- Nine Mono inputs, three Stereo inputs, two Aux inputs, plus one Main output and two Sub outputs.

Three-Band Channel EQ

- Three-Band EQ control on each channel.

Four-Band Output EQ

- Four-Band EQ control on Master Output.

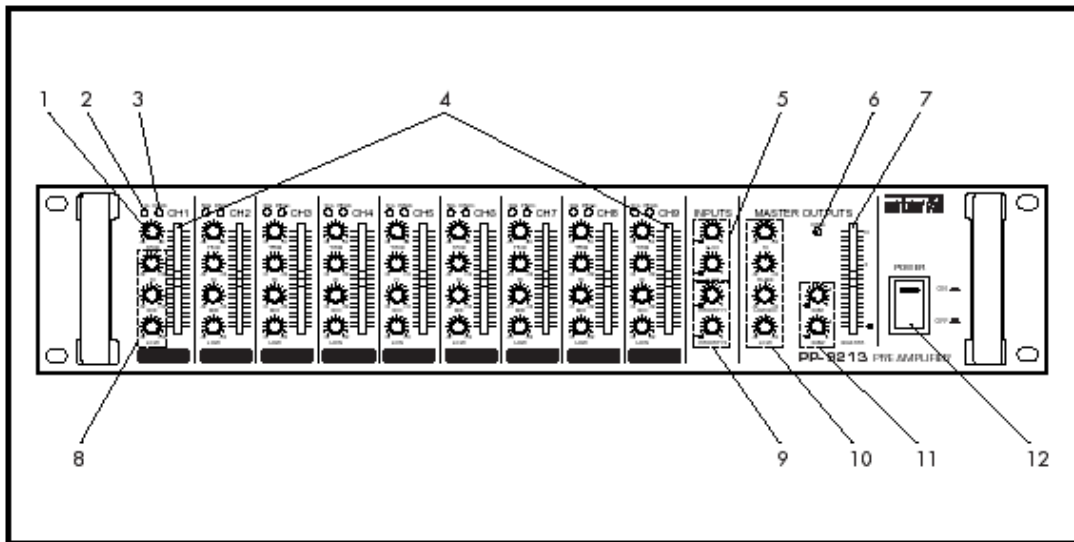
On-Board Phantom Power

- Built-in +18VDC phantom power for condenser microphones.

AC or DC Operation

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

Front Panel Controls



1. Trim Controls 1-9

These knobs control the gain level for the associated input channel.

2. Signal Indicators 1-9

These LED indicators light when signal is present at the associated channel's input.

3. 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 (1) to avoid distortion.

4. Channel Faders 1-9

These are the main output level controls for each channel. They control 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.

5. Aux Levels 1-2

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

6. 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 (7), or the levels from the active input channels (4) to avoid distortion.

7. Master Output Fader

This is the main output level control for the Master Output, and controls the level appearing at the rear-panel Master Output.

8. Channel EQ Controls

These knobs control the equalization for the associated Input Channel. Three bands of equalization are provided:

- Low: 100Hz, ± 12 dB, Shelving
- Mid: 1kHz ± 12 dB, Shelving
- High 10kHz ± 12 dB, Shelving

9. Priority Controls

These knobs control the level of Priority signals, as connected to the rear-panel Priority 1 and 2 inputs.

10. Master EQ Controls

These knobs control the equalization for the Master Output. Four bands of equalization are provided:

- Low: 80Hz, ± 12 dB, Shelving
- Low-Mid: 400Hz, ± 12 dB, Shelving
- Hi-Mid: 2kHz ± 12 dB, Shelving
- High 10kHz ± 12 dB, Shelving

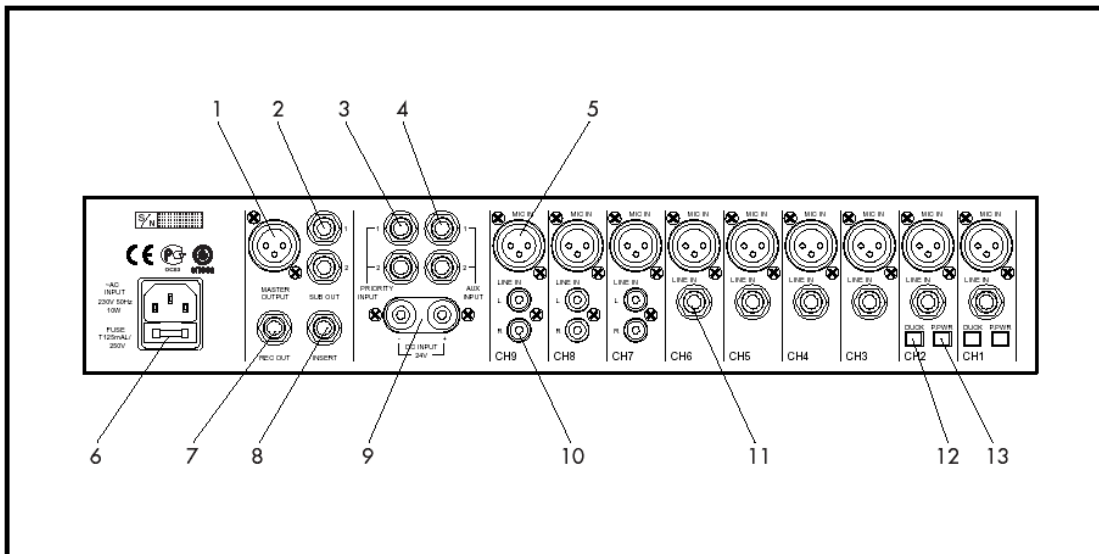
11. Sub Output Controls

This knob controls the level of signal connected to the rear-panel Sub Output.

12. Power Switch

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

Rear Panel Controls



1. Master Output

This is a balanced XLR output jack for connecting to the input of a power amp.

2. Sub Outputs 1-2

These are unbalanced 1/4" phone jack outputs for connecting to the input of a power amp or other audio input.

3. Priority Inputs 1-2

These are line level inputs on unbalanced 1/4" phone jacks. When 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 (9).

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 (5).

5. Mic Inputs 1-9

These are mic-level inputs on balanced three-pin XLR connectors. Their level is controlled by the front-panel Trim controls (1). Phantom power is supplied to these inputs with the rear-panel Phantom Power switch (13).

6. 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.

7. Rec Output

This is an unbalanced line-level output on 1/4" phone jack, for connection to an external recording device.

8. 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.

9. DC Input Terminals

These terminals are provided for the connection of 24VDC power source, such as the Inter-M PD-9211 or Inter-M PD-9359. 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. 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.

11. 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.

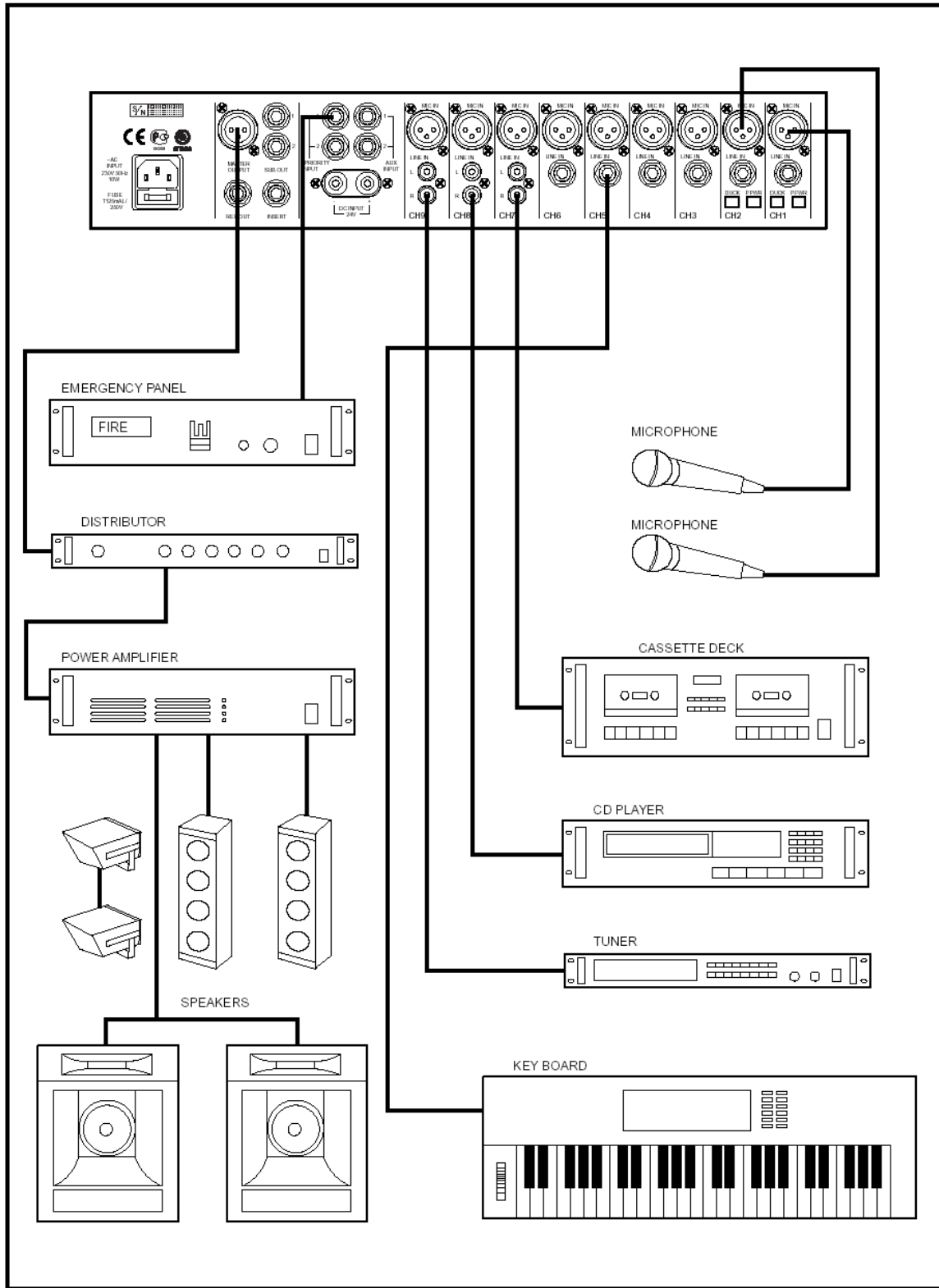
12. Priority Switches

When the Priority Switches are activated, signal to the associated Mic Inputs 1 and 2 will automatically lower the gain level of the other input channels.

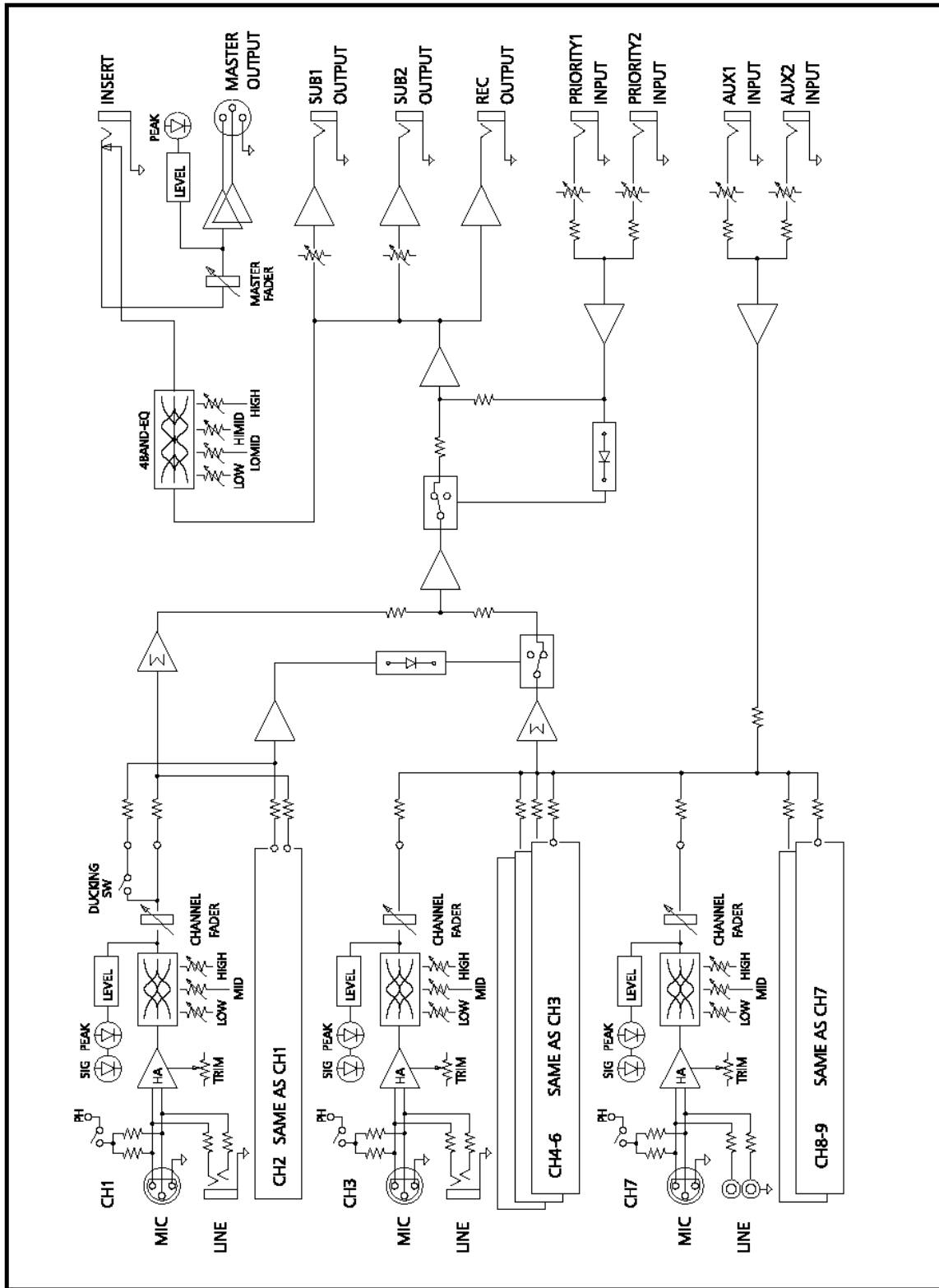
13. Phantom Power Switches

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 switch off Phantom Power.

Connections



Block Diagram



Specifications

ELECTRICAL

Input Sensitivity/Impedance

Mic Input 1-9	-60dBm/600Ω Balanced
Line Input 1-9	-20dBm/47kΩ Balanced
Line Input 7-9	-20dBm/47kΩ Balanced
Priority Input	0dBm/10kΩ, Unbalanced
Aux Input	-10dBm/20kΩ, Unbalanced
Insert	0dBm/10kΩ Unbalanced

Output/Impedance

Master Out	+4dBm/600Ω Balanced
Sub Out	+4dBm/600Ω Balanced
Rec Out	-10dBV/10kΩ Unbalanced

Frequency Response (+1/-3dB)

30Hz-20kHz

T.H.D

Less than 0.3%

Input Channel EQ

High	±12dB@10kHz
Mid	±12dB@1kHz
Low	±12dB@100Hz

Output EQ

High	±12dB@10kHz
Hi-Mid	±12dB@2kHz
Low-Mid	±12dB@400Hz
Low	±12dB@80Hz

Residual Noise

Less than -90dB

Crosstalk

Less than -60dB

Phantom Power

+18VDC

Audio Output Level

Variable 0.2 – 2.0 V

GENERAL

Power Source

120/230/240VAC, (50/60Hz), 24VDC

Power Consumption

10W

Weight

7.5 Kg (16.5 lbs)

Dimensions

482(W) x 88(H) x 280(D) mm
19(W) x 3.5(H) x 11(D) in.

* Specifications and design subject to change without notice for improvements.



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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