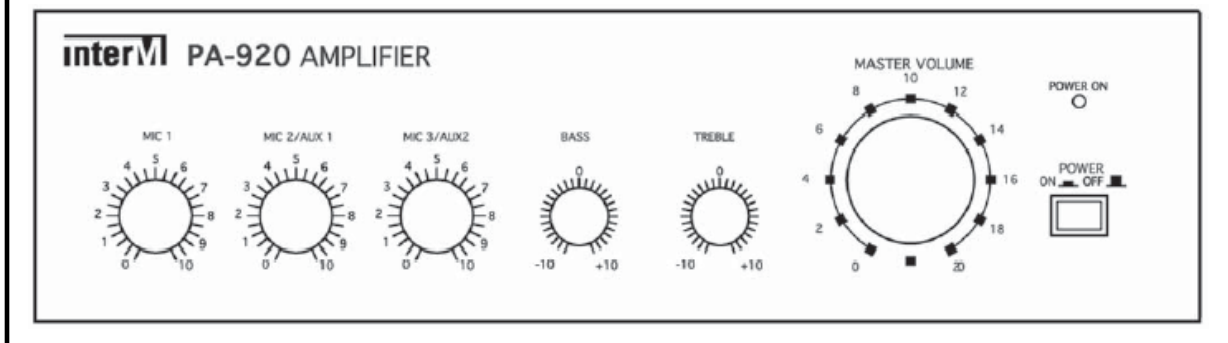


# Operating Manual

## PA-920/PA-935 Mixer/Amplifier



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# interM

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## Welcome

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### **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!

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## Unpacking

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Although your PA-920/PA-935 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.

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## Warnings

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### **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><b>CAUTION</b> 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><b>WARNING</b></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**

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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.

## **PA-920/PA-935 Mixer/Amplifier**

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### **Features**

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#### **High Power, Low Distortion**

- 20W (PA-920) or 35W (PA-935) of RMS power, with less than 5% THD.

#### **Versatile and Convenient**

- Three mixable inputs: Mic 1, Mic2/Aux1, Mic3/Aux2.

#### **Configurable**

- Mic2/Aux1 and Mic3/Aux2 are individually selectable.

#### **Telephone Paging Input**

- Telephone input for connection with telephone system.

#### **Priority Muting**

- Mic 2/Aux 1 and Mic 3/Aux 2 inputs mute when telephone paging and/or Mic 1 in use.

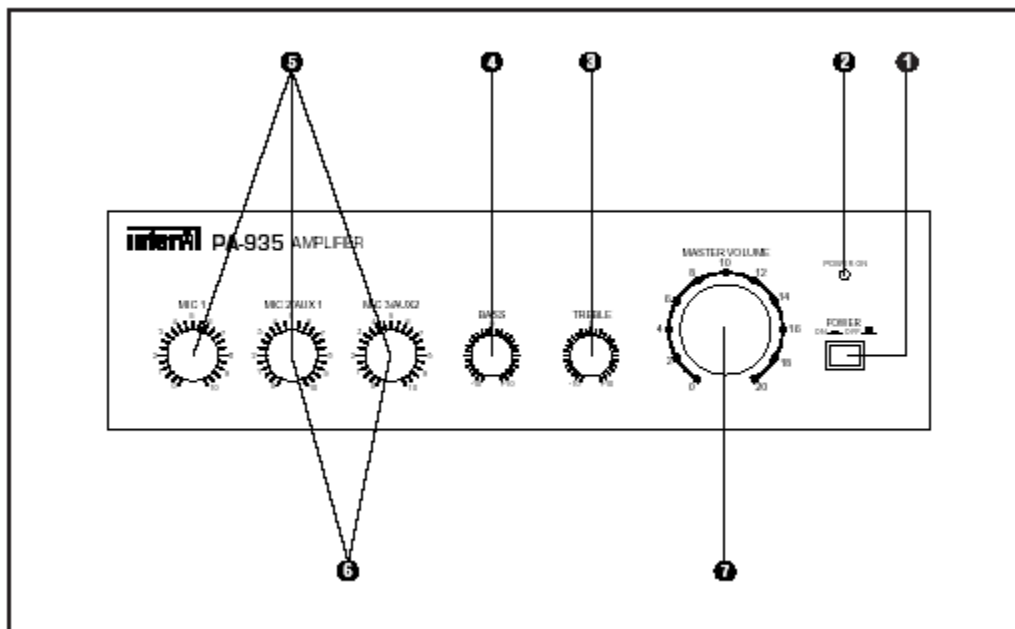
#### **Tone Control**

- Separate Bass and Treble controls to tailor your sound.

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## Front Panel Controls

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### 1. Power Switch

Pressing this switch switches the unit on, as indicated by the Power LED (2) above the switch. Pressing it again switches the unit off.

### 2. Power LED

When the unit is switched on, the Power LED will glow steadily.

### 3. Treble Control

This knob controls the high frequency response, by adding up to 12dB of cut (decrease) or boost (increase).

### 4. Bass Control

This knob controls the low frequency response, by adding up to 12dB of cut (decrease) or boost (increase).

### 5. Mic Volumes 1-3

These knobs control the volume of Mic Inputs 1-3.

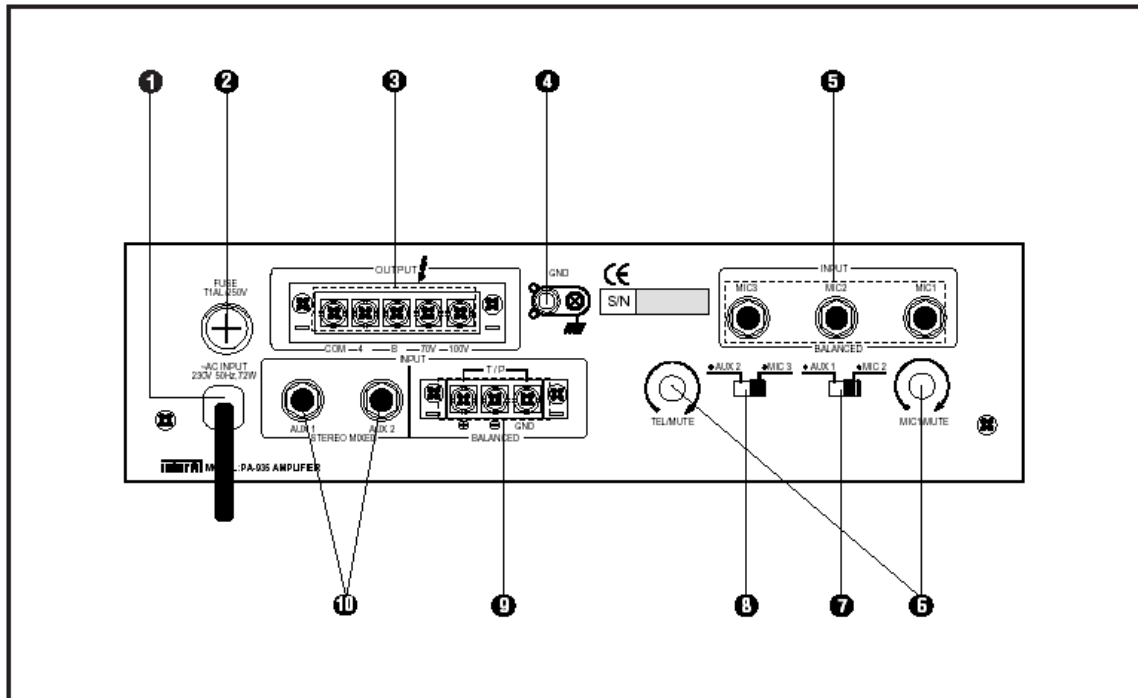
### 6. Aux Volume 1-2

These knobs control the volume of Aux Inputs 1 and 2.

### 7. Master Volume

This knob controls the overall volume of the PA-920/935 output.

## Rear Panel Controls



### 1. AC Power Cable

Connect this cable to your AC outlet.

### 2. 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, as shown below.

If the fuse continues to blow, refer servicing to a qualified service technician.

AC Fuse Ratings		
Model	100VAC – 120 VAC	220VAC-240VAC
PA-920	1A / 250V	.5A / 250V
PA-935	2A / 250V	1A / 250V

### 3. Speaker Output Terminal

These terminals are used to connect speakers to the unit. You may select either 4Ω or 8Ω conventional operation, or High Impedance operation at either 70V or 100V.

### 4. GND Terminal

This grounding terminal is provided for connecting with the chassis of a turntable or other input device to reduce hum and other ground loop noise. It may also be connected to a true earth ground, such as an AC third-pin ground or water pipe, to further reduce ground loop noise.

**5. Mic 1,2,3 Inputs**

These 1/4" phone jacks accept a standard mic-level or line-level input. Mic inputs 2 and 3 may be set to line-level with the use of their associated Mic/Aux switches (see 7-8 below).

**6. Mute Controls**

When signal is present at Mic 1 or Telephone input, all other inputs are muted. These controls adjust the level of Mic 1 and Telephone output when muting is in use.

**7. Mic 2/Aux 1 Selector Switch**

This switch is used to select between mic level and line level for Mic 2/Aux 1 input.

**8. Mic 3/Aux 2 Selector Switch**

This switch is used to select between mic level and line level for Mic 3/Aux 2 input.

**9. Telephone In Terminal**

These terminals are used to connect to a telephone exchange system for paging purposes.

NOTE: When signal is present on the Telephone Input terminal, all other input signals (except Mic 1) are muted.

**10. Aux Inputs**

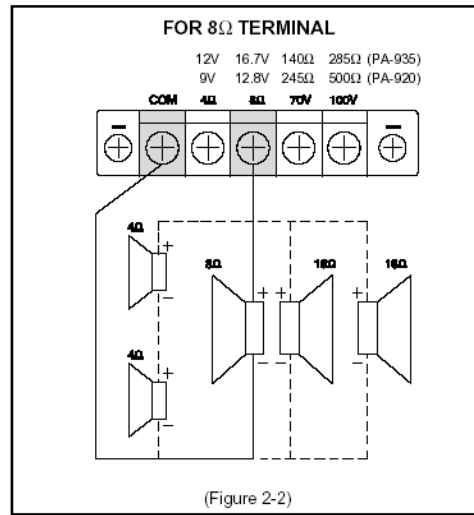
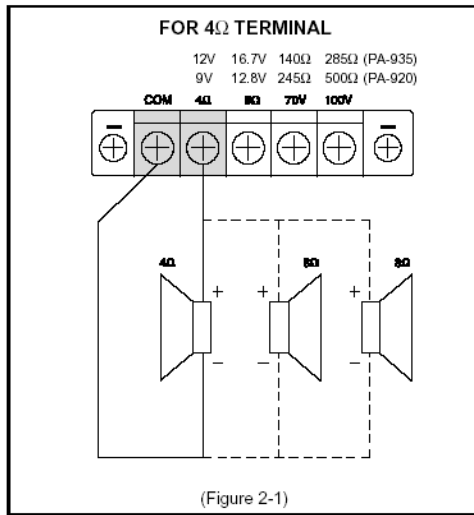
These inputs are used for connecting line-level sources, such as CD or cassette deck. When using these inputs, the respective Mic/Aux switches must be set to their Aux settings.

## Connecting Speakers

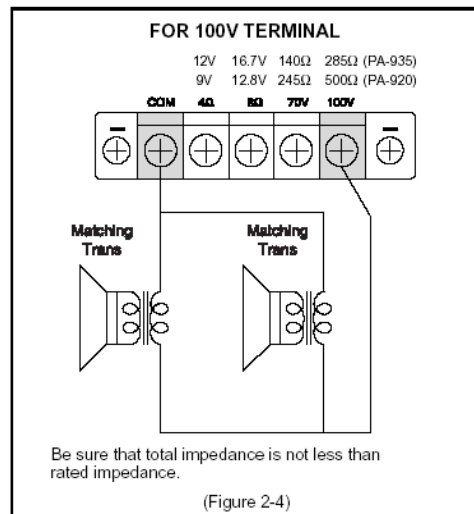
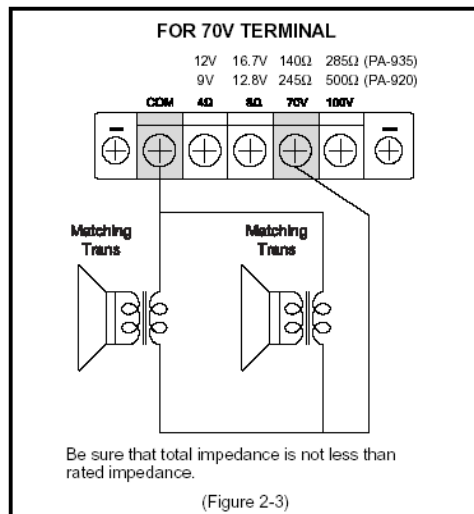
Before connecting speakers to your PA-920/PA-935 unit, be sure to disconnect the AC power cable. Make certain that the total impedance is not less than the rated impedance indicated.

For 4Ω speakers, connect in parallel, with the negative (-) connectors to the 4Ω terminal and the positive (+) connectors to the COM terminal. See Figure 2-1 below.

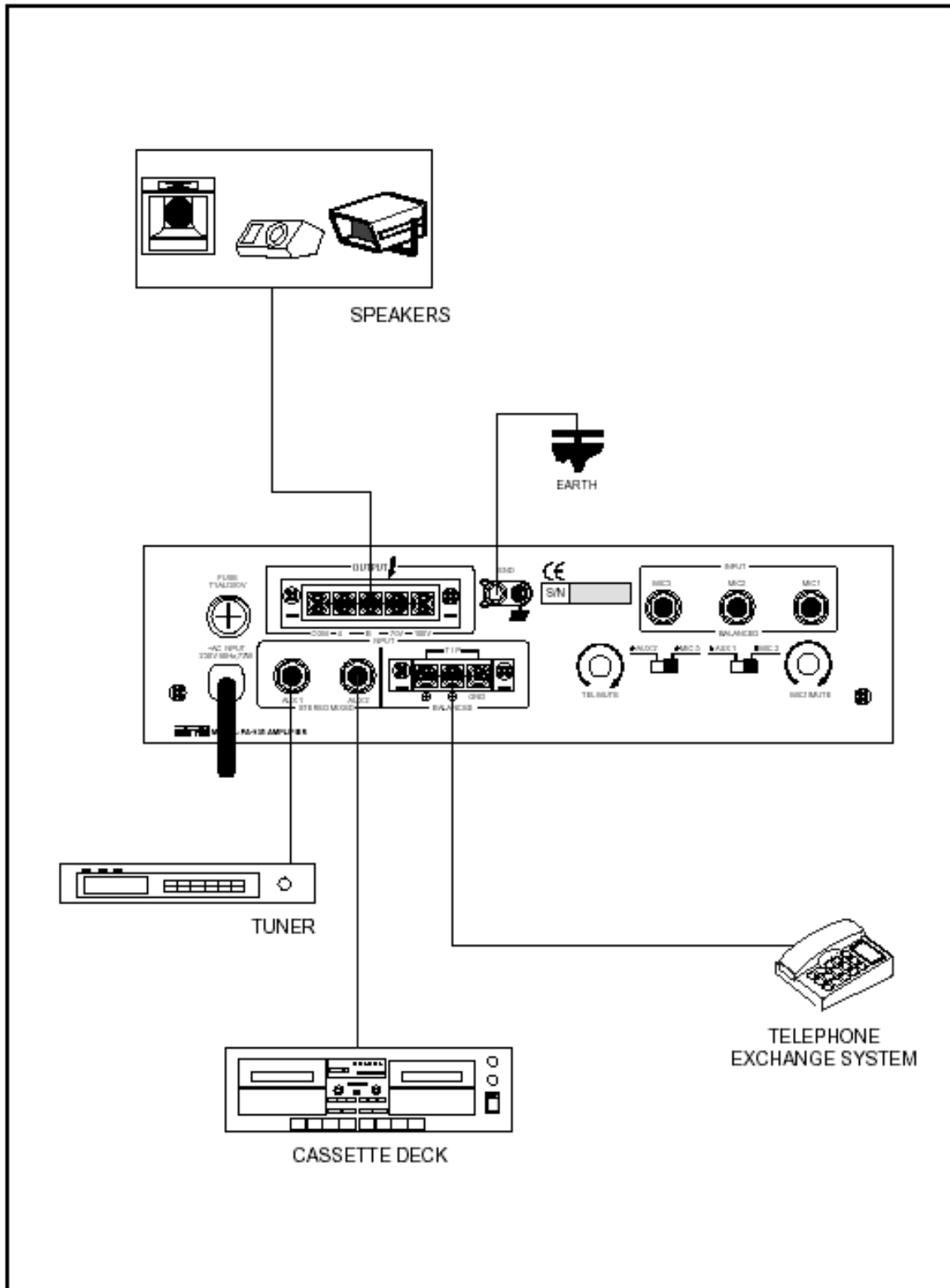
For 8Ω speakers, connect in parallel, with the negative (-) connectors to the 8Ω terminal and the positive (+) connectors to the COM terminal. See Figure 2-2 below.



For high-voltage distributed systems, connect with matching transformer as per Figures 2-3 and 2-4 below. Be certain that the total impedance does not equal less than the rated impedance.



## Connections







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## Specifications

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### PA-920

#### ELECTRICAL

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<b>Rated Output Power (THD 10%)</b>	20W (RMS) 4 $\Omega$ /8.9V, 8 $\Omega$ /12.8V, 245 $\Omega$ /70V, 500 $\Omega$ /100V
<b>Frequency Response</b>	150Hz–15kHz
<b>T.H.D (at 1kHz Rated Output)</b>	Less than 0.5%
<b>Tone Control Effect</b>	$\pm$ 10dB
<b>S/N</b>	Better than 60dB
<b>Input Sensitivity/Impedance</b>	Mic Input 2mV/600 $\Omega$ Aux Input 150mV/1K $\Omega$ Telephone Input 0.775V/600 $\Omega$

#### GENERAL

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<b>Power Source</b>	AC 100V-120V/220V-240V
<b>Weight</b>	3.5 Kg (7.7 lbs)
<b>Dimensions</b>	290(W) x 76(H) x 196(D) mm 11.4(W) x 3(H) x 7.7(D) inches

### PA-935

#### ELECTRICAL

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<b>Rated Output Power (THD 5%)</b>	35W (RMS) 4 $\Omega$ /11.8V, 8 $\Omega$ /16.7V, 245 $\Omega$ /70V, 500 $\Omega$ /100V
<b>Frequency Response</b>	150Hz–15kHz
<b>T.H.D (at 1kHz Rated Output)</b>	Less than 0.5%
<b>Tone Control Effect</b>	$\pm$ 10dB
<b>S/N</b>	Better than 60dB
<b>Input Sensitivity/Impedance</b>	Mic Input 2mV/600 $\Omega$ Aux Input 150mV/1K $\Omega$ Telephone Input 0.775V/600 $\Omega$

#### GENERAL

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<b>Power Source</b>	AC 100V-120V/220V-240V
<b>Weight</b>	4.4 Kg (9.7 lbs)
<b>Dimensions</b>	290(W) x 76(H) x 196(D) mm 11.4(W) x 3(H) x 7.7(D) inches

\* 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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