

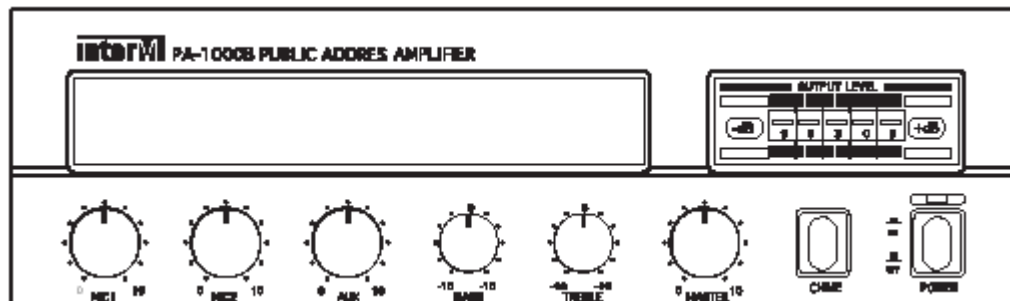
# Operating Manual

## PA-1000B

Public Address Amplifier

## PA-1000BR

Public Address Amplifier/Receiver



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# interM

## Contents

<b>Welcome .....</b>	<b>3</b>
<b>Unpacking .....</b>	<b>3</b>
<b>Warnings .....</b>	<b>3</b>
<b>Operation.....</b>	<b>5</b>
<b>Features .....</b>	<b>6</b>
<b>Front Panel Controls.....</b>	<b>7</b>
<b>Rear Panel Controls .....</b>	<b>9</b>
<b>Installation of Speakers .....</b>	<b>11</b>
<b>Connecting 4Ω or 8Ω Speaker Systems .....</b>	<b>11</b>
<b>Connecting High-Voltage Distributed Speaker Systems .....</b>	<b>11</b>
<b>Specifications.....</b>	<b>12</b>

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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-1000B or PA-1000BR 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 the speakers and other system components.

## **PA-1000B/PA-1000BR Public Address Amplifier/Receiver**

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### **Features**

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#### **Versatile and Convenient**

- Two Mic input channels with both XLR and phone jack, and an Aux input channel.

#### **Announcement Chime**

- Convenient four-tone chime for use with announcements. Can be operated remotely.

#### **Priority Muting**

- Mic1 input and chime mute other inputs when in use. Mute level is adjustable via rear panel control.

#### **Telephone Input/Music-on-Hold (PA-1000BR only)**

- Telephone input with music-on-hold function for connection with telephone system.

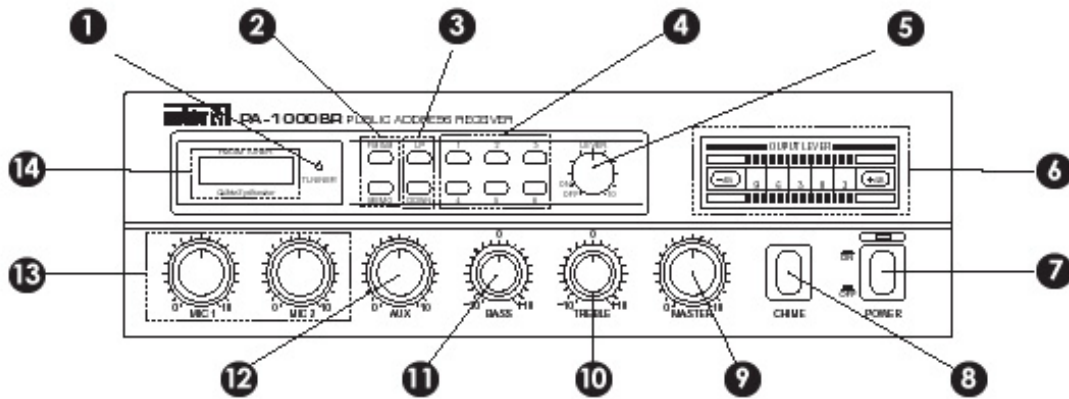
#### **Digital Tuner**

- Easy-to-use, fully digital AM/FM tuner with 30 memory locations for storing your favorite stations.

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## Front Panel Controls

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### 1. Tuning LED (PA-1000BR only)

This indicator lights when the digital tuner has locked onto a signal.

### 2. AM/FM Band Selector and Memory Switches (PA-1000BR only)

This AM/FM Band Selector Switch is used to select the AM or FM frequency band. Pressing the Memory Switch followed by one of the six Address Select switches will enter the currently selected frequency into the designated memory address.

### 3. Up and Down Switches (PA-1000BR only)

Pressing these switches will move the tuner to the next active frequency. Holding the switch down for more than one-half second will activate "Auto-Scan" mode, causing the tuner to scan, pausing for a few seconds at each active frequency. Pressing the Up or Down switch again will de-activate "Auto-Scan" mode.

### 4. Address Select Switches (PA-1000BR only)

These switches select between the six memory address banks used to store radio frequency presets. Each bank can hold up to five individual presets – three FM (F1, F2, F3) and two AM (A1, A2), for a total of 30 presets.

### 5. Tuner Level (PA-1000BR only)

This knob controls the tuner output level. Rotating the knob fully counter-clockwise switches the tuner section off.

### 6. Output Level Display

This multi-segment LED meter indicates the amplifier's output level in RMS.

### 7. Power Switch

Pressing this switch switches the unit on, as indicated by the power indicator LED above the switch. Pressing it again switches the unit off.

### 8. Chime Button

Pressing this switch activates the chime circuitry.

**9. Master Volume**

This rotary switch controls the overall output volume of the amplifier's output signal.

**10. Treble Control**

This knob controls the amount of cut (decrease) or boost (increase) to the higher frequencies. It is a 10kHz shelving type control at  $\pm 10$ dB.

**11. Bass Control**

This knob controls the amount of cut (decrease) or boost (increase) to the lower frequencies. It is a 100Hz shelving type control at  $\pm 10$ dB.

**12. Aux Volume Level**

This knob controls the volume level of the input connected to the rear-panel Aux Input.

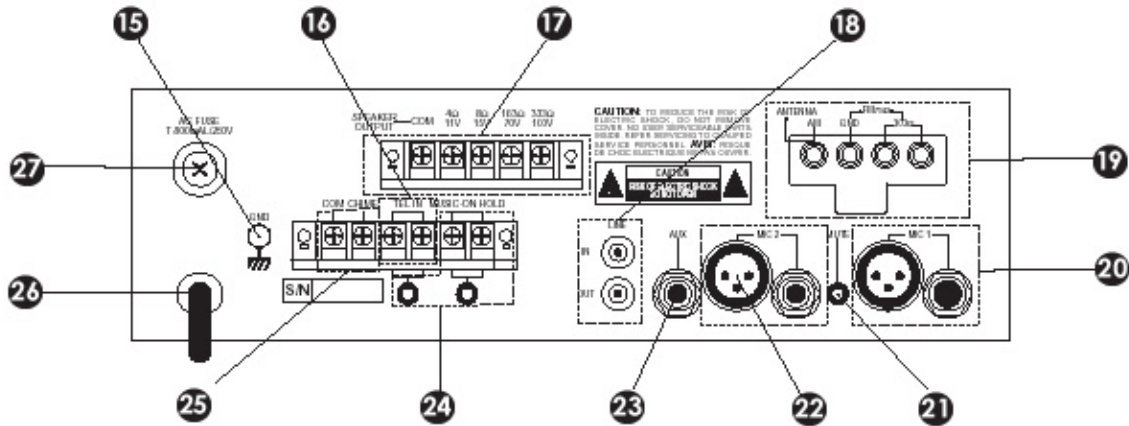
**13. Mic 1 and Mic 2 Level**

These knobs control the volume level of the inputs connected to the rear-panel Mic 1 and Mic 2 inputs.

**14. Tuning Frequency Display (PA-1000BR only)**

Displays the current frequency of the tuner.

## Rear Panel Controls



### 15. 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.

### 16. 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 and Chime) are muted.

### 17. Speaker Output Terminal Strip

Connect speakers to this terminal strip. Connections for impedances of 4Ω, 8Ω, 70V and 100V/250V operation are provided. Connect speakers whose combined impedance is equal to or higher than the rated output impedance, as shown below.

4Ω	8Ω	70V	100V
11V	15V	163 Ω	333 Ω

### 18. Line In/Out Jacks

These are line-level input and output on unbalanced RCA jacks, provided for connection of external sources such as CD or cassette deck.

### 19. Antenna Connector (PA-1000BR only)

This terminal is used to connect the external antenna.

**20. Mic 1 Inputs**

Inputs on balanced XLR and 1/4" phone jacks accept a standard mic-level or line-level input. The level of this input is controlled by the front-panel Mic 1 Level control (13).

**21. Mute Control**

When signal is present at Mic 1 or Chime input, all other inputs are muted. This control adjusts the level of Mic 1 and Chime output when muting is in use.

**22. Mic 2 Inputs**

Inputs on balanced XLR and 1/4" phone jacks accept a standard mic-level or line-level input. The level of this input is controlled by the front-panel Mic 2 Level control (13).

**23. Aux Input**

Input on unbalanced 1/4" phone jack accepts a standard line-level input. The level of this input is controlled by the front-panel Aux Level control (12).

**24. Music-on-Hold/Tel In Level Controls**

The Tel In Control regulates the volume of the signal from an external telephone signal connected to the Tel In Terminal (16).

The Music-on-Hold Control regulates the volume of the signal from the internal tuner (PA-1000BR only), as fed to the telephone connection.

**25. External Chime Terminal**

These terminals are provided for connection of an external chime generator, such as the Inter-M PE-9103A. It may also be used for remote control of the chime signal.

**26. AC Power Cable**

Connect this cable to your AC outlet.

**27. 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.

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## Installation of Speakers

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Before connecting speakers, disconnect the AC power cable. Note the proper connecting terminals as shown below. Make certain that the total impedance is not less than the rated impedance indicated.

### Connecting 4Ω or 8Ω Speaker Systems

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When connecting conventional 4Ω or 8Ω speaker systems, connect the speaker's positive (+) side to the terminal labeled 4Ω or 8Ω. Connect the speaker's negative (-) side to the terminal labeled COM.

### Connecting High-Voltage Distributed Speaker Systems

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When connecting a low-impedance (70V/100V) speaker system in parallel, connect the speaker's positive (+) side to the terminal labeled 70V or 100V. Connect the speaker's negative (-) side to the terminal labeled COM.

**WARNING:** Extreme care must be exercised when connecting low-impedance systems, as potentially hazardous voltages may be present at these terminals.

Do not install this equipment in a confined space with less-than-adequate ventilation.

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## Specifications

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### AMPLIFIER SECTION

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<b>Rated Output Power</b>	30W (RMS)
<b>Frequency Response</b>	60Hz–20kHz
<b>T.H.D (at 1kHz Rated Output)</b>	Less than 0.5%
<b>Tone Control (100Hz, 10kHz)</b>	±10dB
<b>Input Sensitivity/Impedance Mic 1 and 2</b>	1mV/10k $\Omega$ , Balanced Phone 0.3mV/600 $\Omega$ , Balanced XLR
<b>Aux In</b>	100mV/10k $\Omega$
<b>Telephone In</b>	0.775V/600 $\Omega$
<b>Amp In</b>	1V/10k $\Omega$
<b>Speaker Output/Impedance</b>	11V/4 $\Omega$ , 15V/8 $\Omega$ , 70V/163 $\Omega$ , 100V/333 $\Omega$
<b>Line Out/Impedance</b>	1V/600 $\Omega$
<b>Music On Hold/Impedance</b>	0.775V/600 $\Omega$
<b>Tuner Section (PA-1000BR Only)</b>	
<b>Tuning Range</b>	FM 87.5-108MHz, AM 530-1620kHz
<b>Antenna Input</b>	FM 300 $\Omega$ Bal or 75 $\Omega$ Unbal AM Low Impedance Loop Antenna
<b>Usable Sensitivity</b>	FM 2 $\mu$ V, AM 3 $\mu$ V
<b>S/N</b>	FM 60dB, AM 50dB

### GENERAL

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<b>Power Source</b>	AC 110V–240V, 50/60Hz
<b>Power Consumption</b>	80W
<b>Weight</b>	PA-1000B: 4.6kg (10 lbs.) PA-1000BR: 4.8kg (11.5 lbs.)
<b>Dimensions</b>	300 (W) x 88 (H)x 260 (D) mm 11.8(W) x 3.5 (H) x10.2 (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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