

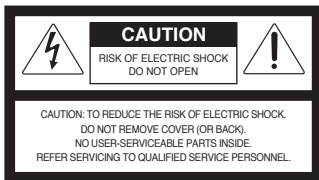
Operation Manual

PS-80 FIXED-INSTALLATION 5" POWERED SPEAKER



interM

Warning



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



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: 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.

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 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.

***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.**

***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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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!

Unpacking

Please take a few minutes to read this manual to familiarize yourself with important information regarding installation, product features, and operation.

As with most electronic devices, ORIGINAL PACKAGING (OR EQUAL) IS REQUIRED in the unlikely event that the product needs to be returned for servicing.

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.

- **AVOID EXCESSIVE HEAT, HUMIDITY, DUST AND VIBRATION**

Keep the unit away from locations where it is likely to be exposed to high temperatures or humidity-such as near radiators, stoves, etc. Also avoid locations which are subject to excessive dust accumulation, or to vibration that could cause mechanical damage.

- **AVOID PHYSICAL SHOCKS**

Strong physical shocks to the unit may cause damage. Handle the unit with care.

- **DO NOT OPEN THE CASE OR ATTEMPT REPAIRS OR MODIFICATIONS YOURSELF**

This product contains no user-serviceable parts. Refer all maintenance to qualified Inter-M service personnel. Opening the case and/or tampering with internal circuitry voids the warranty.

- **ALWAYS POWER OFF BEFORE MAKING CONNECTIONS**

Always turn the AC mains OFF before connecting or disconnecting cables. This is important to prevent damage to the unit itself as well as other connected equipment.

- **HANDLE CABLES CAREFULLY**

Always plug and unplug cables (including the AC mains power cord) by gripping the connector, not the cord.

- **CLEAN WITH A SOFT DRY CLOTH**

Never use solvents such as benzine or paint thinner to clean the unit. Wipe clean with a soft, dry cloth.

Cautions For Safety Of Installation

- Please read and appropriately use the unit.
- Please follow this instruction because it includes the important safety contents.
- Please keep this instruction in a place where you can check out any time after you read it once.



WARNING

Please be noted that any person can get hurt because a speaker may be dropped if making an error in installation.

1) Refer all servicing to qualified service personnel.

- Flying installation attaching a speaker on the ceiling requires technology and experience. Any person can get hurt if the speaker is dropped being installed by the person who has no base of technology and experience.

2) Caution for Flying Installation

- Please follow this instruction when proceeding with flying installation attaching a speaker on the ceiling. If not, any person can get hurt because a speaker may be dropped.
 - * Please use the enough intensity of speaker support line or chain to endure weight of speakers.
 - * Please use all parts(Enclosure, support ring, screw, etc.) which are not transformed, cracked, an corroded.

3) Please check out the intensity for the installation place.

- Please install a speaker in the place of a high intensity to endure weight on the ceiling or the wall after checking the weight including all parts to install a speaker.
 - * Please avoid the place of a low intensity with care to prevent the case that a speaker is dropped and any person can get hurt.

4) Please use the unit in an indoor area.

- Do not install in an outdoor area because a hard freeze, heat sources, waterproofing are not considered for this unit. If used then, it may have a breakdown and reduce a product life cycle. Therefore, the use in an outdoor area is prohibited.

5) Please use the appropriate bolt and nut for the purpose

- Please use bolt and nut appropriate for material or construction of the wall or ceiling.
If not, any person can be damaged because a speaker can be dropped.

6) Please fasten bolts and nuts of each part.

- After installing a speaker, please double-check if bolt and nut are wringed up well.
If it is loose, a speaker can be dropped and any person can get hurt as time passes..

7) Please do not install in the vibrating place.

- If installing a speaker in a vibrating area, bolts and nuts may be loosened or assembly parts may be damaged and a speaker can be dropped. Then, any person can get hurt.

8) Please connect the cable of a speaker when the power of amplifier is off.

- Please do not connect the cable of a speaker in the permitted power of amplifier.
Please check if the power of amplifier is off and connect it.

9) Please do not put a heavy stuff on a speaker and ride on it.

- When a heavy stuff is put on a speaker or a person gets on it, a speaker may make an unbalance and cause an accident.

10) Please do not use the unit with a distorted sound.

- If used with a distorted sound, a speaker is heated and damaged and can be the cause of a fire.

11) While a speaker is used, it should be checked on a regular basis.

- When used by fixing a speaker on the ceiling or on the wall, please check if bolts and nuts are loosened through the regular check and immediately take action in the event of failure.

Introduction

INTER-M PRO SOUND is well-known brand for the professional sound market and supplies full line-up based on Inter-M's 30 years of R&D research. The brand new PS-80 which supply stable sound through optimized circuit and 170W Amp based on MS-80 received a good response in a market.

PS-80 supplies true "PLUG & PLAY" which enjoy high quality sound. Users can install easily without technical knowledge on Amplifier selection and adjustment.

PS-80 is an installed powered speaker that supplies the best solution on middle and small spaces that needs BGM play and voice transmission at reasonable price. It also produces high quality sound through enclosure and circuit. PS-80 is a compact size speaker which supplies enough high and low sound pressure based on dedicate low sound port. It is adjusted as flat sound which can be used in various circumstances. Furthermore, it uses specialized network design to keep same tone in circumstances of allowed speaker maximum output.

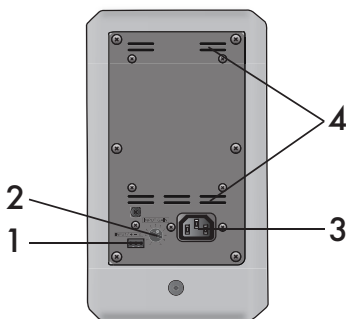
Features

- High quality, high efficient powered speaker for installation
- 170W high efficiency Amp Module
- 5" Woofer + 1" Silk-dome, 2way type
- 110-120V, 220-230V power
- Volume adjustment (Line Level,+6dB)
- Euroblock, standard AC connector
- Ease installation (rigging, bracket)
- Natural Sound
- EASE data

Application

- Main Speaker in small and medium-sized space
- Down-fill speaker in balcony area
- Front-fill speaker in local area
- Conference room speaker
- Restaurant BGM Speaker

Rear Panel



1. AUDIO SIGNAL INPUT

It's a connector that support Euroblock balance type audio input. It supports ease connection by using sealed Euroblock and it is available high S/N signal input by balance input.

2. VOLUME CONTROL

It's a volume knob of input signal that support infinite ~ maximum input range. Built-in Amp of the speaker includes +6dB amplifying circuit for supporting connect of commercial appliance. When connect professional appliance, proper adjustment of input signal is needed.

3. POWER INPUT

It's a section of input AC power, so must use enclosed standard connector matching with electronic specifications.

※CAUTION : It has to be connected firmly, because it cause mechanical trouble or fire hazard when it's connected roughly or used with unstandardized connector.

4. HEAT VENT

It's a section to dissipate the heat generated from built-in Amp of speaker. It's located on speaker's rear side.

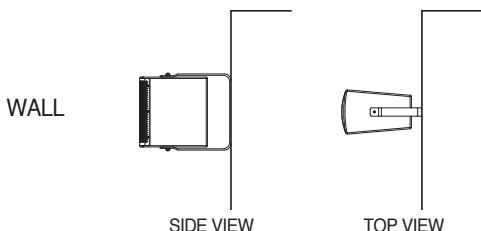
※CAUTION : If this part is blocked, the equipment's operation could be unstable, so when it installed, it has to have enough space.

Installation

This speaker is reformed as flat sound for commercial fixed installation. If the speaker is installed near the walls or multiple speakers are installed, it might need proper ton control.

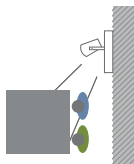
Selection of install location

- Advantage & precaution of wall installation



If the speaker is installed near the walls, ton could be changed due to bass sound rises. Even if it doesn't affect on playing BGM much, proper bass control is needed for ensuring clarity of sound.

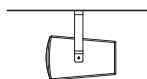
The bracket which sells separately with main product is the best way to install the speaker on the wall.



Speaker's front should be faced to the audience. Inappropriate location might cause lack of sound clearness, and lack of high-pitched sound.

- Advantage & precaution of ceiling installation

CEILING



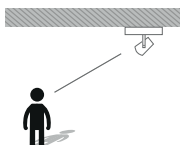
SIDE VIEW



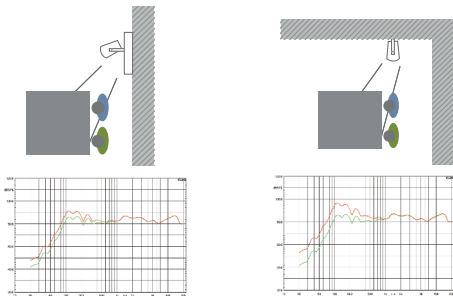
FRONT VIEW

Install a speaker on the ceiling tightly causes increasing low low-pitched sound as installed closed to the walls. Even if it generates soft tone, the sound clearness may be dropped. Recommend to control the tone by EQ on external panel.

The bracket which sells separately with main product is the best way to install the speaker on the wall. The user can change angles easily with the angle control function.



• Advantage & precaution of ceiling installation



Install the speaker at the corner of the ceiling or wall causes lots of energy increase. For listening accurate sound, tone control by EQ is necessary. Do not recommend to install at piled up space, but if the user can improve the sound control by EQ, it doesn't matter the location of installation.

Multiple speaker installaton

Even if speaker support a 120 degree wide angel, we recommend overlapped speaker installation properly, when numerous speakers are installed nearly. If narrow and long-distance sound is needed, two speakers can be installed at less than 120 degree. However, still less than 90 degree is not recommended.

Speaker should be installed with proper space, if not, it cause the low quality of sound due to interference of speakers. In this case, recommend to install 2 X distance than speaker and audience distance.

When the speaker is used for sub-speaker, the delay compensating circuit should be added according to the distance with main speaker. The playing sound from multiple speakers arrived to audience at different time. It might cause lack of sound clearness, sound degradation, sound dualization etc.

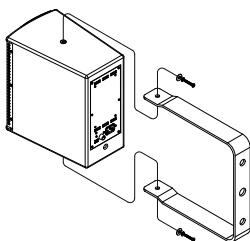
Wall bracket usage

• Bracket Components

1. □ shape bracket
2. Speaker connecting bolt (M6) X 2
3. Speaker connecting flat washer x 2
4. Speaker connecting spring washer x 2

※CAUTION : Before install the bracket, the users have to have additional devices fitted at mounting environment. The bracket function is only for speaker fixation, it doesn't supply additional function by environment. Furthermore, separate hex wrench(4mm) is needed for bolt connection.

• Bracket Installation



1. Inspect the proper device on the bracket mounting.
2. Remove insert nut located on speaker's up and down, assemble bolt+spring washer+flat washer.
3. Fix speaker bracket tightly.
4. Connect bracket and speaker then set proper degrees.

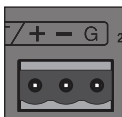
Connection

Cable connection

※CAUTION : The speaker is designed as fixed installation, it doesn't supply separate AC power switch. For avoiding extra noise, connect the audio cable first, and then connect power cable with minimized volume. Built-in Amp type speaker's power ON/OFF will be more efficiency using Sequential Power Supply like Inter-M's 'SPAC-660'. For reference, the speaker is designed to be compensated low power consumption, when audio signal doesn't exist.

Speaker should connect 2 cables for AC output power and audio signal input. AC power uses standard IEC connector, the grounding type consent has to be used. Audio signal input connector should use with connecting balance audio signal which is 3P euro block type.

Connector



Operation

Level Setting

Installed speaker offers volume control for proper level setting. Signal input has built-in +6dB amplifier circuit for corresponding to low output devices. For setting up with proper volume by turning clockwise.

Specifications

	PS-80
General Specifications	
Type	FIXED-INSTALLATION, 5" POWERED SPEAKER
Frequency Range (-10dB)	60Hz~20kHz
Frequency Response (-3dB)	67Hz~20kHz
Sensitivity	88dB
Max. SPL	113.1dB
Coverage	120° conical
LF Driver	130 mm (5 in) driver with 50.8 mm (2 in) voice coil
HF Driver	25 mm (1 in) exit compression driver, 34.4 mm (1.35 in) voice coil
Horn/Waveguide	Integral Conical Horn with HF
Enclosure	12T Birch Plywood
Fittings	2 Point for Bracket
Finish	Textured black RoHS compliant paint
Grille	Black powder coated 14 gauge hexagon perforated steel, protection mesh backing
Connection	3P EURO Block
Environmental Spec.	Storage -20~70, ≤90% Operating -10~40, ≤90%
Package	AC Code Cable 3P Terminal EURO Block
Weight	4.29 kg / 9.45 lb
Shipping Weight	4.87 kg / 10.73 lb
Dimensions (WxHxD)	160 x 250 x 243 mm / 6.3 x 9.8 x 9.5 in
Shipping Dimensions (WxHxD)	303 x 322 x 215 mm / 11.9 x 12.7 x 8.5 in
Electronic Specifications	
Type	Class - D
Output Power (@THD 1%)	more than 170W
Input Sensitivity	4.5 dBu
S/N (use A-weighted filter)	more than 95dB
Power	100-120VAC or 220-240VAC; 50/60Hz (Supplied AC mains transformer depends on country requirements)
Power Consumption	21W

* Design and specification are subject to be changed for the improvement of product quality without pre notice.

Service

Procedures

Ensure the problem is not related to operator error, or external system devices, 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.

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.

NOTE



NOTE





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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