

Operation Manual

LM-8000 Remote Control with Audio In



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.

*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."

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.

* It can be heated up if you use this product in closed box or ill-ventilated place.

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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.

Short Form Instructions

1. Do not connect the unit to the AC mains until some preliminary settings are completed. AC mains should only be switched on later in this procedure. Ensure that the AC mains power and phantom power switches are in the OFF position.
2. Set all the output volume lever down to the minimum.
3. Connect each zone OUTPUT of the PX-8000 to the corresponding zone of an amplified loudspeaker system.

4. Connect the LOCAL AUDIO SOURCES (tape deck, CD player, tuner, etc..) to the BGM inputs on the PX-8000 and turn the input gain control knobs (on the rear panel) to half way.
5. Connect the AC mains power cord to the PX-8000 and switch the AC mains power to the ON position. Switch ON the PHANTOM POWER if condenser microphones will be used with this system.
6. Press the BGM select button located on the front panel until the illuminated number displays the desired input channel number for the local audio source.
7. Slowly slide the output volume lever up on the front panel to increase the volume being sent to the amplifier for the loudspeaker system until the desired level is reached. Obviously, if there is distortion, feedback, or other cause for concern, reduce the signal level of the input or the output.
8. Connect one or more LM-8000 to each of the ZONE connectors as needed. There is no need to set the address. Connect a remote audio source or remote microphone to the LM-8000. Use the gain and BGM select button on the unit instead of the ones located on the PX-8000. The LM-8000 has a higher priority than the PX-8000 and will override the gain and BGM Selection of the PX-8000.
9. Connect one or more (maximum 4) RM-8000 units to the remote mic input connector on the back of the PX-8000. Connect a microphone to each RM-8000. Select one or more zones using the selectors on the front of the RM-8000. Speak into the microphone and adjust the signal level.
10. Set the level for each zone as desired by using the zone gain control on the PX-8000 or by using the gain control of the LM-8000, if so equipped. Connect the PX-8000 to the corresponding zone of an amplified loudspeaker system.

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.

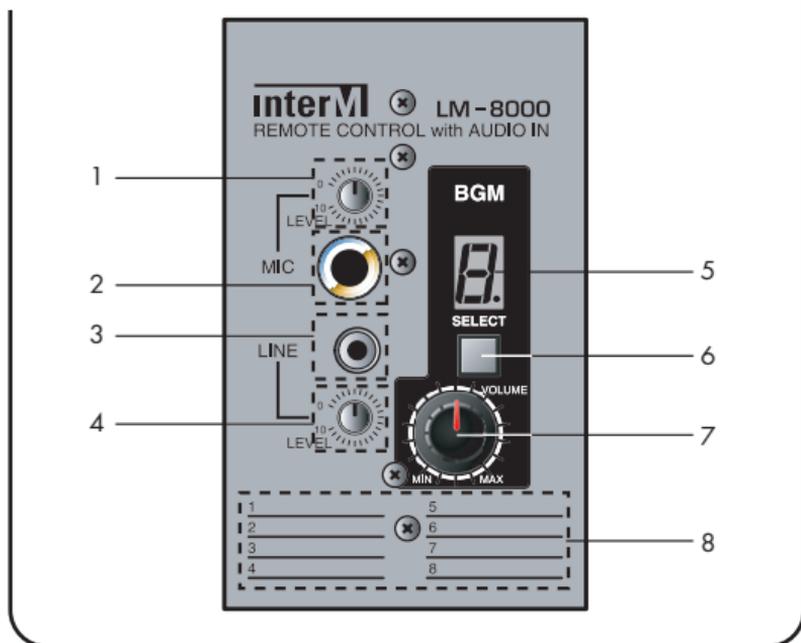
- CLEAN WITH A SOFT DRY CLOTH

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

Features

- Convenient installation and construction without need of ID setting.
- Adoption of RS-422 communication method to support a long distance.
- Remote control for zone volume and selection of BGM.
- Independent local MIC and BGM broadcasting.

Front Panel



1. MIC INPUT VOLUME

Adjusts MIC input volume.

2. MIC INPUT JACK

MIC input terminal. It is recommended to input balance.

3. LINE INPUT JACK

LOCAL BGM input terminal.

4. LINE INPUT VOLUME

Adjusts volume of LOCAL BGM input.

5. BGM DISPLAY

Displays input channel of the MAIN BGM output to the relevant zone of the PX-8000. A DOT (.) display turns on if control right is endowed to LM-8000.

6. BGM SELECT BUTTON

Switch to select MAIN BGM input channel.

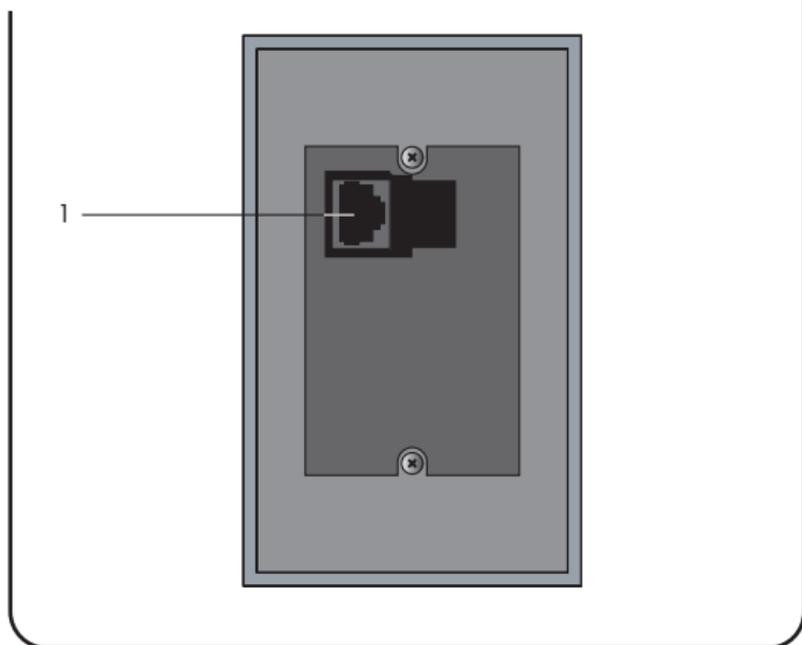
7. ZONE VOLUME ENCODER

Volume to adjust BGM output volume in the area where LM-8000 is installed.

8. BGM LIST

Position to write the name of each BGM Source input so that the user can easily know.

Rear Panel



1. MODULAR JACK

PIN Number	Functions	Color
1	Tx-	BLU
2	Tx+	BLU/WHT
3	Rx-	GRN
4	Rx+	GRN/WHT
5	GND	ORG
6	VCC	ORG/WHT
7	Audio+	BRN
8	Audio-	BRN/WHT

Priority of Broadcasting

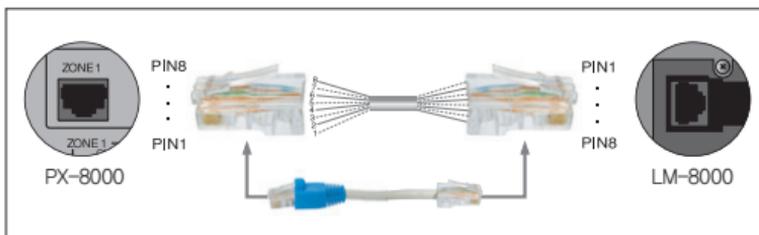
This system broadcasts according to following priority:

- PAGING MIC > FIRE ALARM (REC&PLAY IC) > RM-8000 MIC > LM-8000 > PX-8000 BGM
- The PX-8000 BGM broadcasting becomes slowly MUTE if Local broadcasting is done in the LM-8000 during the PX-8000 BGM broadcasting.

Operation

□ LM-8000 CONNECTION

- Connect to the LM-8000 connection terminal on the rear side of PX-8000 by using CATEGORY5 (UTP) material.



- The connection jack numbers of the connected PX-8000 show output area and ensure connection of up to 300M.
- Connection of 8 sets of LM-8000 to a PX-8000 is allowed.
- Immediate use is allowed by automatically recognizing LM-8000 without need of separate ID setting.
- If powering on, 0, 1, 2, 3, 4, 5, 6, 7, 8, A, B, C, D, E and F are orderly displayed on the BGM display window of LM-8000 and the BGM number is displayed for the relevant area.

- You can select BGM or adjust BGM output volume of using a LM-8000 if a DOT(.) is displayed on the LM-8000 BGM Display Window.
- You may endow with or release the control right of LM-8000 using the WALL CTRL button on the front side on the PX-8000. If the right is endowed to LM-8000, the button of PX-8000 lights and DOT(.) is displayed on the LM-8000 BGM Display Window.
- Check connection status and the unit if “E” continues to flash on the display window.
 - ※Turn the encoder volume clockwise until checking is done that volume is changed since volume is set to minimum for the initial use.

□ **CHANGE OF MAIN BGM AND ADJUSTMENT OF VOLUME IN OUTPUT AREA USING LM-8000**

- Endow with the control right of LM-8000 by pressing the WALL CTRL button of PX-8000.
- Check that the BGM number is changed, by operating the BGM Selection Button of LM-8000.
- Same BGM number is displayed on the front BGM Display Window of PX-8000 and LM-8000.
- Adjust local output volume using a volume adjustment encoder.
 - ※The volume adjustment encoder of LM-8000 and the slide volume (FADER) on the front side of PX-8000 unit control the BGM broadcasting volume of the output area. A paging MIC broadcasting and the local output volume of RM-8000 are not controlled with the encoder and the slide volume.

□ INDEPENDENT LOCAL BGM AND MIC BROADCASTING USING LM-8000

Independent local broadcasting is possible if using LM-8000. You can perform the desired MIC broadcasting or listen to BGM music in respective area other than the Main BGM connected to PX-8000.

LOCAL BGM&MIC of LM-8000 has higher priority than Main BGM of PX-8000 and thus main BGM automatically becomes MUTE during the independent local broadcasting of LM-8000.

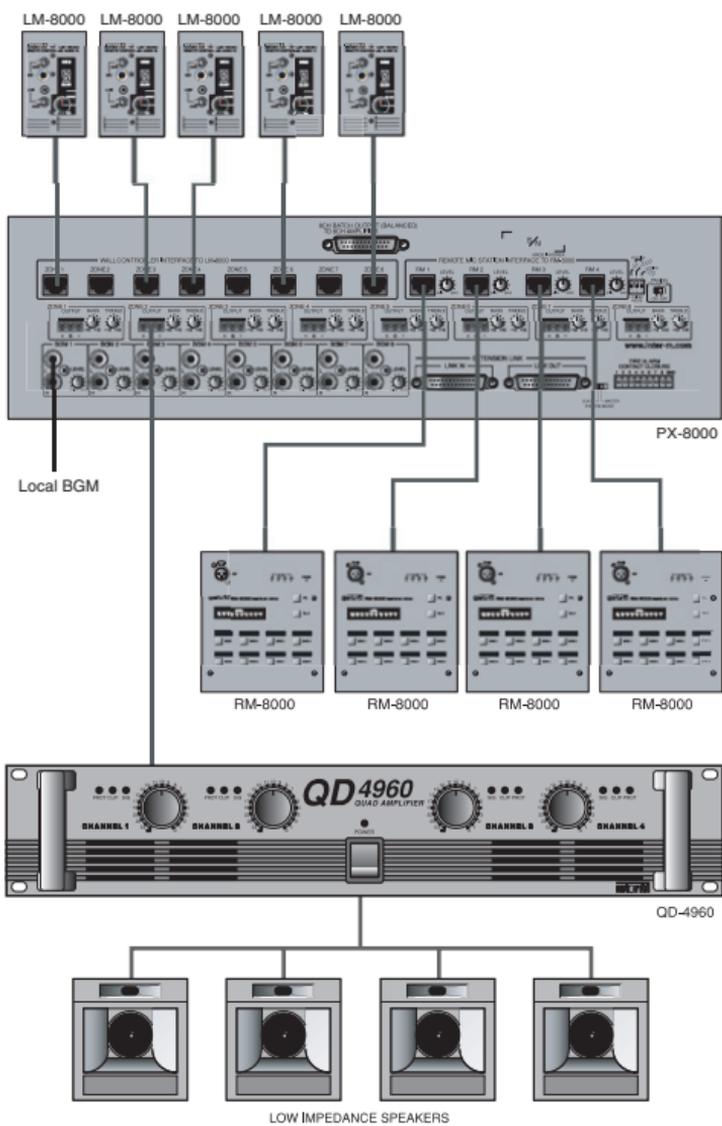
- Connect the desired MIC or sound source unit to MIC or LINE input.
- Adjust volume by using the respective volume to adjust input sound.
- Immediate broadcasting is allowed and the local output volume is adjusted by using encoder of LM-8000 or a slide volume of PX-8000.
- Main BGM on the BGM Display Window becomes MUTE when performing independent LM-8000 broadcasting. If there is no local broadcasting, Main BGM is broadcast while MUTE is released.

※A condenser MIC cannot be used for the LM-8000 LOCAL MIC broadcasting.

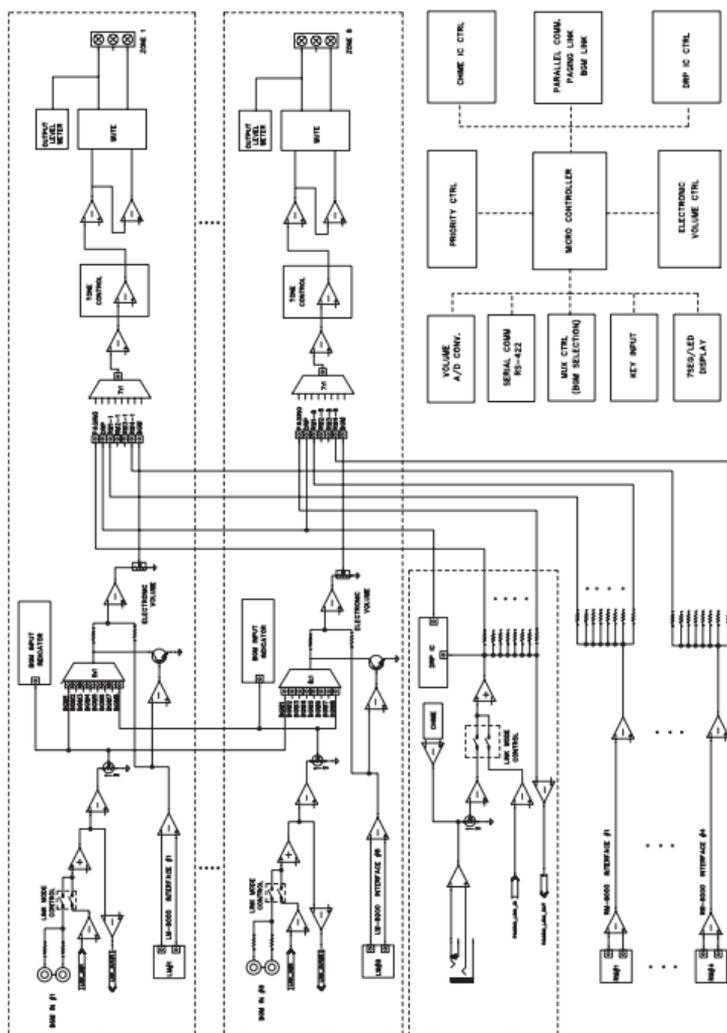
※Display status of the BGM Display Window for LM-8000 is as follow:

For PX-8000 Paging broadcasting	P
For PX-8000 FIRE ALARM	F
For RM-8000 broadcasting	R

Connections



Block Diagram



Specifications

		LM-8000
Audio Output		0dB(Balanced)
Audio Input	Local BGM(LINE)	-10dB
	MIC	-50dB(Balanced)
Frequency Response	BGM(60Hz ~ 15kHz)	± 3 dB
	MIC(100Hz ~ 10kHz)	± 3 dB
S/N	BGM	Better than 75dB
	MIC	Better than 65dB
T.H.D.	BGM	Less than 0.05%
	MIC	Less than 0.05%
Priority Control		Paging MIC > DRP > RM1 > RM2 > RM 3 > RM 4 > LM-8000 > Main BGM
Serial Interface (RS-422)	Communication Speed	9600 bps
	Communication Distance	Maximum 300m (using UTP Cat5)
Operation Temperature		-10°C ~ +40°C
Power Source		DC 24V, 50mA
Weight (SET)		130g/0.28lb
Dimensions (SET)		70(W)x114(H)x52(D)mm 2.8(W)x4.5(H)x2.0(D)in

* Specifications and design subject to change without 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



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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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