Operation Manual

Network System Remote Mic Station

RM-N3000



interM

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!





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: 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.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant on une autre sortie de courant, sauf si les lames peuvent étre insérées à fond sans en laisser aucune partie à découvert.
Pour deconnecter completement l’appareil du reseau d’alimentation. deconnecter le cordon d’alimentation de la prise murale.
La prise du reseau d’alimentation doit demeurer aisement accessible.

WARNING

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

*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.
*Warning : To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.
*This apparatus shall be connected to a mains socket outlet with a protective earthing connection.
*To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
*The mains plug of the power supply cord shall remain readily accessible.

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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Unpacking

Although your RM-N3000 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.

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.



Features

- BROADCAST PAGING VIA NETWORK
RM-N3000 can connect Inter-M's Network Connecting System and paging broadcast thorough it.

- GOOSENECK MICROPHONE
You can use the gooseneck microphone to broadcast paging in each area.

- 0~9 KEY, ALL, TALK, CHIME BUTTON
You can select the broadcasting area simply by using the 0~9 key and the All button. In addition, you can set the operation mode of the Talk button and the Chime button.

- 2.43 INCH OLED DISPLAY
You can check and set the status of the device through the display.

- OUTPUT LEVEL METER
You can check the output level through the level meter.

- MONITOR SPEAKER
You can check the current output in real time through the monitor speakers.

- INPUT/OUTPUT ADJUSTMENT VOLUME
You can adjust the MIC input gain and monitor speaker output, Chime, and AUX volume.

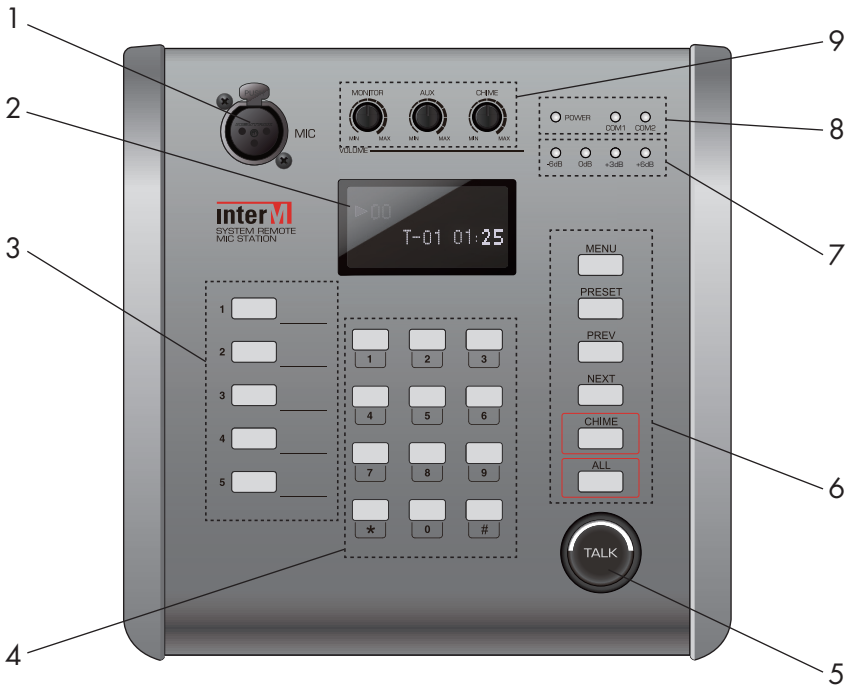
- DC 24V POWER INPUT
Since there is a DC 24 V power input terminal, you can input the power using the adaptor.

- POWER SUPPLY USING POE (POWER OVER ETHERNET)
In locations featuring a PoE, you can supply power using the PoE without going through a dedicated adapter. (PoE supplies Primary only.)

Contents and Accessories

1. **DC Adapter x 1EA**
2. **Gooseneck Microphone x 1EA**
3. **User Manual x 1EA**

Front Panel



1. MIC INPUT TERMINAL
This is the terminal to connect the gooseneck microphone.

2. OLED DISPLAY
The organic light-emitting diode (OLED) displays the current status and settings of the device.

3. INPUT SHORTCUT BUTTONS
Numbers 1 ~5 are input shortcut buttons.

4. 0~9 / * / # BUTTON
You can use the buttons to select the number of broadcasting areas or various modes.

5. TALK BUTTON
Press the button to start broadcasting after selecting a broadcasting area. Refer to the 5. Talk Type Settings on page 18 of this manual for detailed information about the Talk button settings.

6. MENU / PRESET / PREV / NEXT / CHIME / ALL BUTTON

1) MENU / PREV: You can use MENU / PREV to select the setting menu or return to the standby screen.
2) PREV/NEXT: If there are 8 or more numbers registered in the Number Input screen, you can use PREV / NEXT as a Scroll button.
3) CHIME: You can use this button to activate a CHIME that signals the beginning or end of a broadcast. Refer to the 4. Chime Set on page 16 of this manual for detail information about the CHIME settings.
4) ALL: This button is used to select all the broadcasting areas.
5) PRESET: If you select PRESET from the standby screen, an "Invalid Function" message will appear on the screen.

7. LED INDICATOR

You can check the output level through the level meter.

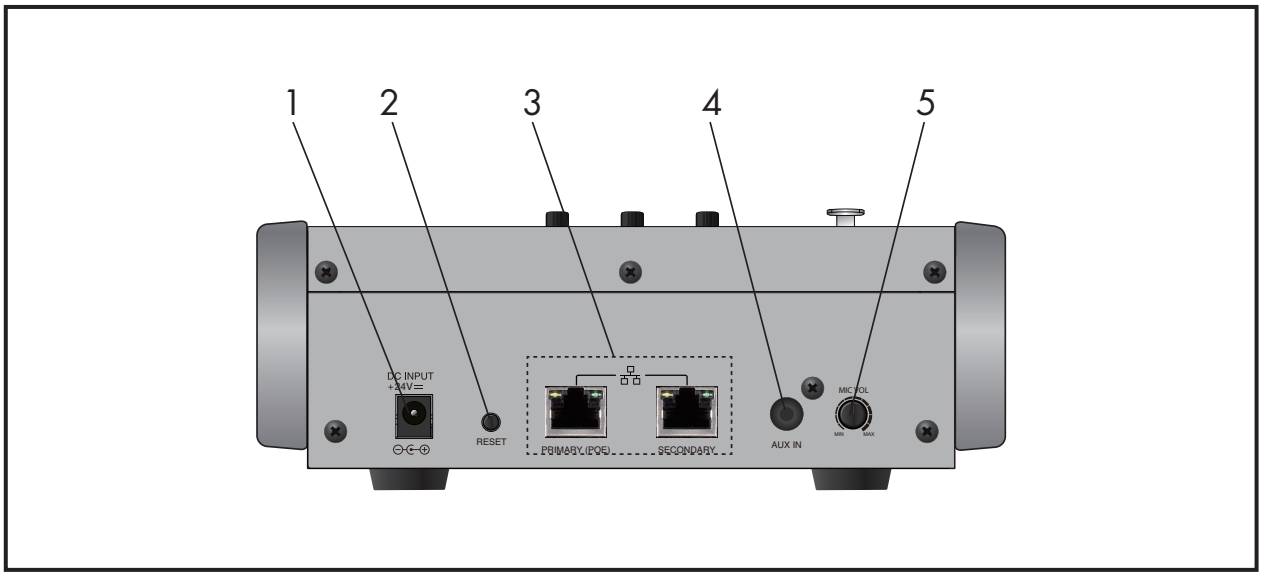
8. POWER AND COMMUNICATION LED INDICATOR

It is the LED that shows the power status and communication status. The power LED is lit when power is applied, and the communication LED is lit to indicate Primary/Secondary operating status.

9. MONITOR / AUX / CHIME VOLUME

This volume controls the MONITOR/AUX/CHIME output.

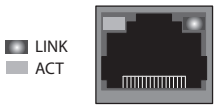
Rear Panel



1. DC 24V INPUT TERMINAL
   This is a DC 24 V power supply terminal. You can input power by using the adaptor.

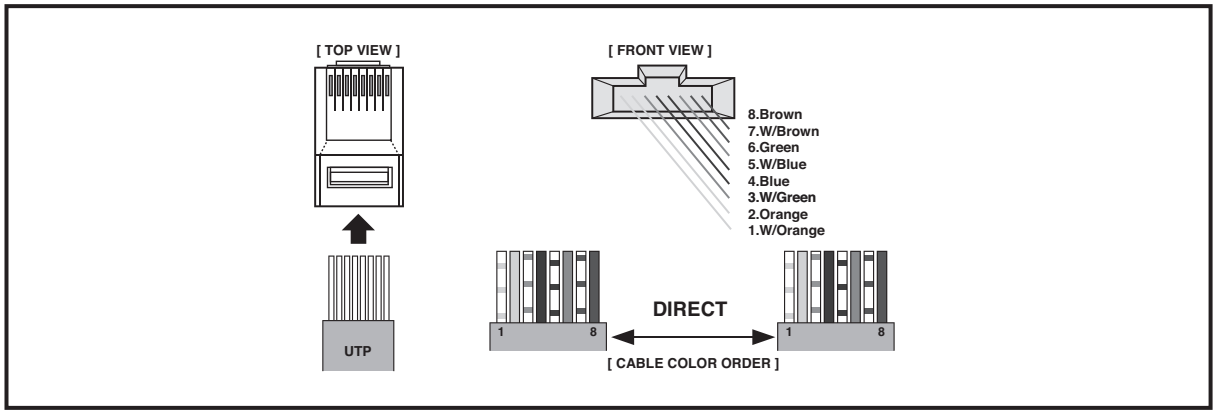
2. RESET SWITCH
   Press more than 10 seconds to reset the device to the factory settings.

3. NETWORK (PRIMARY & SECONDARY) CONNECTING TERMINAL
   It is a terminal to connect the device to the network. You can control the broadcasting by using integration software.
   ※ For more information on how to set up, refer to the integration software manual. Download the manual at home page. (www.inter-m.net)



	<100 Base-T>		<1G Base-T>
PIN NO	Function	PIN NO	Function
1	TXN	1	MX(0)+
2	TXP	2	MX(0)-
3	RXN	3	MX(1)+
4	NA	4	MX(1)-
5	NA	5	MX(2)+
6	RXP	6	MX(2)-
7	NA	7	MX(3)+
8	NA	8	MX(3)-

※ Communication Cable Standards



4. AUX INPUT TERMINAL

You can use this terminal to use the AUX IN jack to input an external sound source and broadcast through the RM-N3000.

5. MIC GAIN ADJUSTMENT VOLUME

This is the volume that adjusts the input GAIN of the microphone.

How To Set Up The Device And Precautions

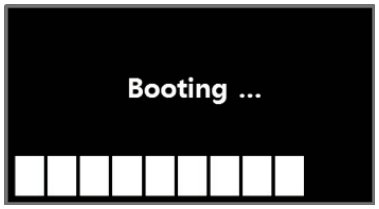
1. BOOT SCREEN: AFTER THE POWER SUPPLIED TO THE DEVICE, AN APPROPRIATE DESCRIPTION DISPLAY ON THE BOOT SCREEN.

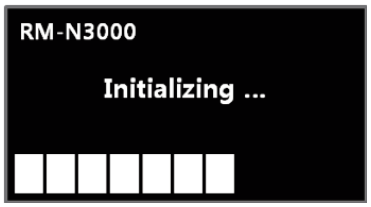
- INITIAL SCREEN

1) A "Welcome" message will appear on the screen during the booting and OS initialization process.
2) When the app is launched, the message will disappear for 5 seconds, then reappear on the screen.



3) When the app is launched after OS initialization, a "Booting… ", " Initializing…" message will appear on the screen. (Takes approximately 30 seconds)





- STANDBY SCREEN

1) When booting is complete, the standby screen will appear. If the device is connected to a network, the IP will appear on the screen. (Initial IP: 192.168.1.99)



※ The IP can be changed from the web page of the device. Please refer to the software manual for more details.

2) If there is no input for 30 seconds on the standby screen, it switches to the sleep screen.

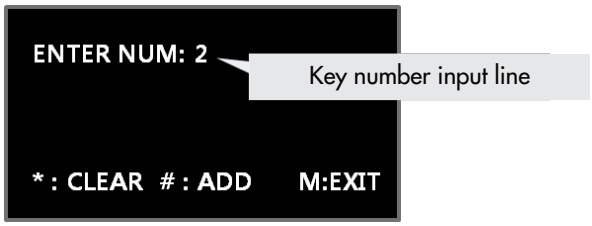


3) If you select any key on the front panel in sleep status, it will switch to the standby screen.

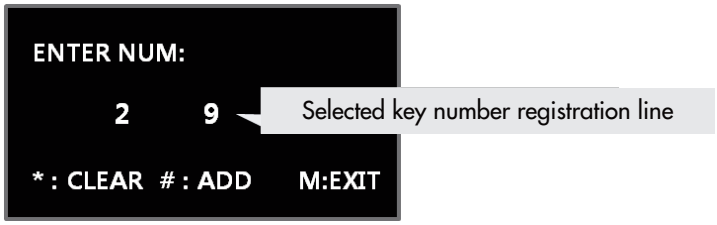
2. BROADCASTING FUNCTION: THIS FUNCTION ALLOWS YOU TO SELECT THE AREA TO BROADCAST.

- NUMBER INPUT SCREEN

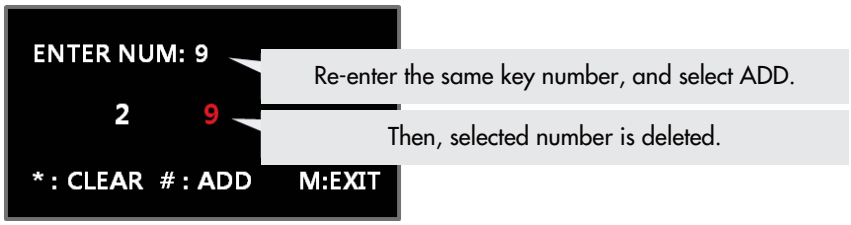
1) When you select any number key on the standby screen, it switches to the number input screen, which displays your input number.
2) Press the MENU key on the Number Input screen to switch to the standby screen. (M: EXIT)



3) Enter the number to broadcast.
4) If you input a wrong number while inputting the number, select the * key to delete the wrong number (Backspace function).
5) After entering the number to broadcast, you can complete your input by selecting the # key (Add).
6) You can repeat the step 4) and 6) to register multiple numbers.



7) If you want to cancel after adding a number to broadcast, re-enter the same number to remove it (Remove).



8) When inputting a number to broadcast on the input screen, you can broadcast by selecting this is the Talk key.

- TALK SCREEN



1) The Request screen will appear when you enter the desired Number to broadcast and select the Talk Key.
2) If the device is not registered as a source device on MS-N300, the Talk screen will appear for 10 seconds, then return to the standby screen.
   The Talk screen will appear when the device operates correctly as a registered source device.



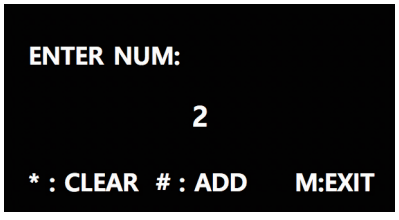
3) You can modify the MIC Mute On/Off settings by using the * key.
4) You can modify the AUX Mute On/Off settings by using the # key.
5) You can't set Mute as On for both MIC and AUX at the same time.
6) According to the talk type during the broadcast, when the Talk button is operated, the standby screen is switched after the broadcast ends.
   ※ For information about setting the talk type, refer to page 14 of this manual.

3. INPUT SHORTCUT BUTTON: FUNCTIONS AS SHORTCUT KEYS FOR INPUTS.

1) The 1 ~ 5 key on the front left side of RM-N3000. Press the 1 ~ 5 key to corresponding number is input.



2) The following screen is displayed when selecting key 1 of left 1 ~ 5 keys.



4. CHIME SET: SETUP MENU WHEN YOU SELECT THE MENU BUTTON FROM THE STANDBY SCREEN.

- START CHIME SET



1) Press the number button 1 to select none.
   ※ If 'none' set, Chime is not output before starting broadcast.
2) Press the number button 2 to select the 2Step up tone.
   ※ If '2step up tone' set, Chime is output in the 2Step up tone.
3) Press the number button 3 to select the 4Step up tone.
   ※ If '4step up tone' set, Chime is output in the 4Step up tone.
4) If you select the MENU button on the Start Chime Set screen, the End Chime Set screen is displayed.

- END CHIME SET



1) Press the number button 1 to select none.
   ※ If none is set, Chime is not output after ending broadcast.
2) Press the number button 2 to select the 4Step down tone.
   ※ If 4Step down tone is set, Chime is output in the 4Step down tone.
3) If you select the MENU button on the End Chime Set screen, the Talk Type Set screen is displayed.

5. TALK TYPE SET: YOU CAN SET HOW THE TALK BUTTON WORKS.



1) Press the number button 1 to select Toggle.
   ※ If set to Toggle, press the Talk button once to enable RM broadcasting. Press the Talk button once again to end the broadcasting.
2) Press the number button 2 to select Push to Talk.
   ※ If set to Push to Talk, the RM broadcast is output only while you press and hold the Talk button after selecting Zone. If the Talk button is Off, the broadcasting is ended.

6. NETWORK INFO SCREEN: YOU CAN CHECK THE PRIMARY / SECONDARY NETWORK STATUS INFORMATION OF THE DEVICE.





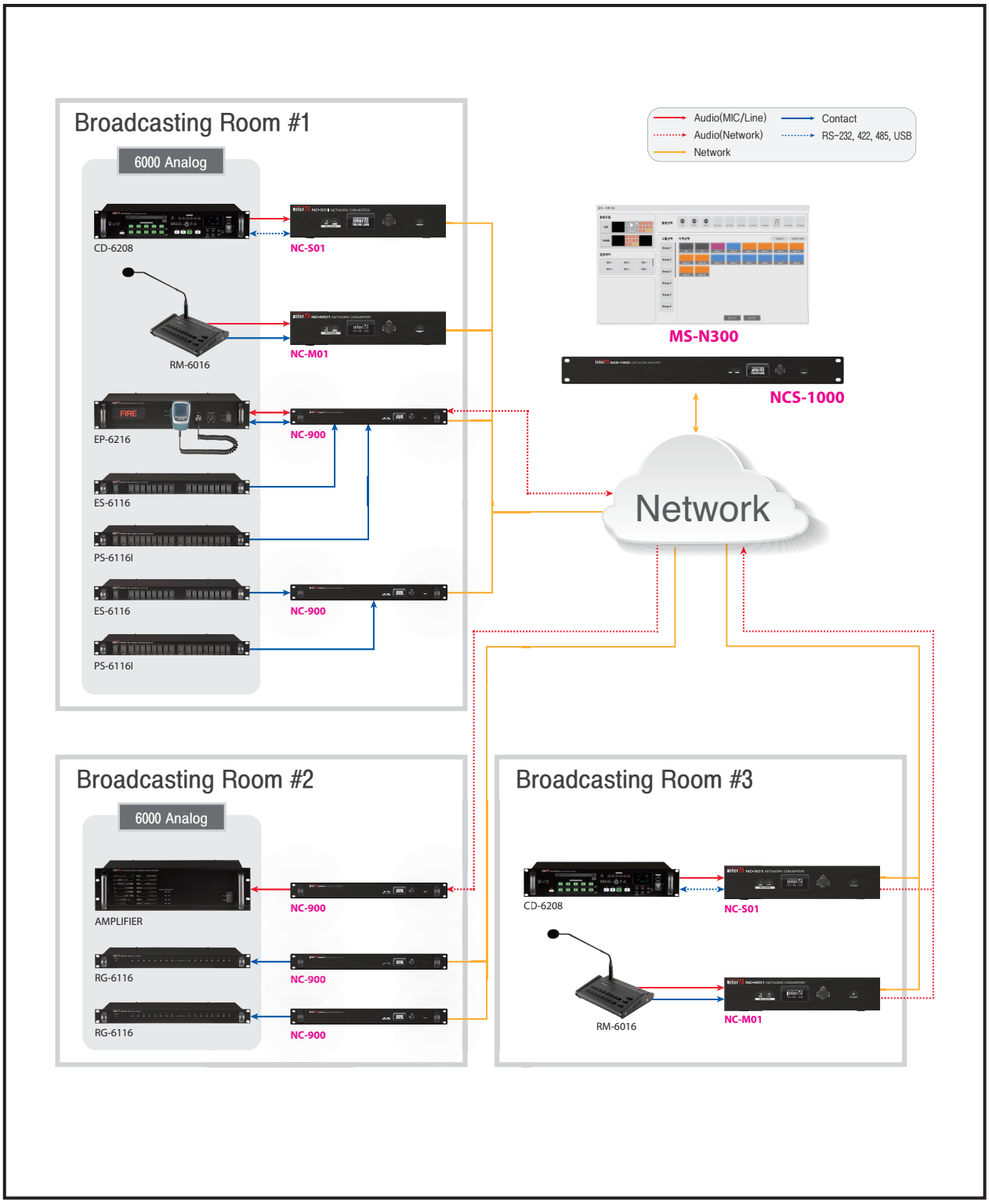
1) On the Talk Type Set screen, press the MENU button to go to the NETWORK Info screen.
2) You can check the PRIMARY / SECONDARY network status information.

7. FIRMWARE VERSION: YOU CAN CHECK THE FIRMWARE VERSION.

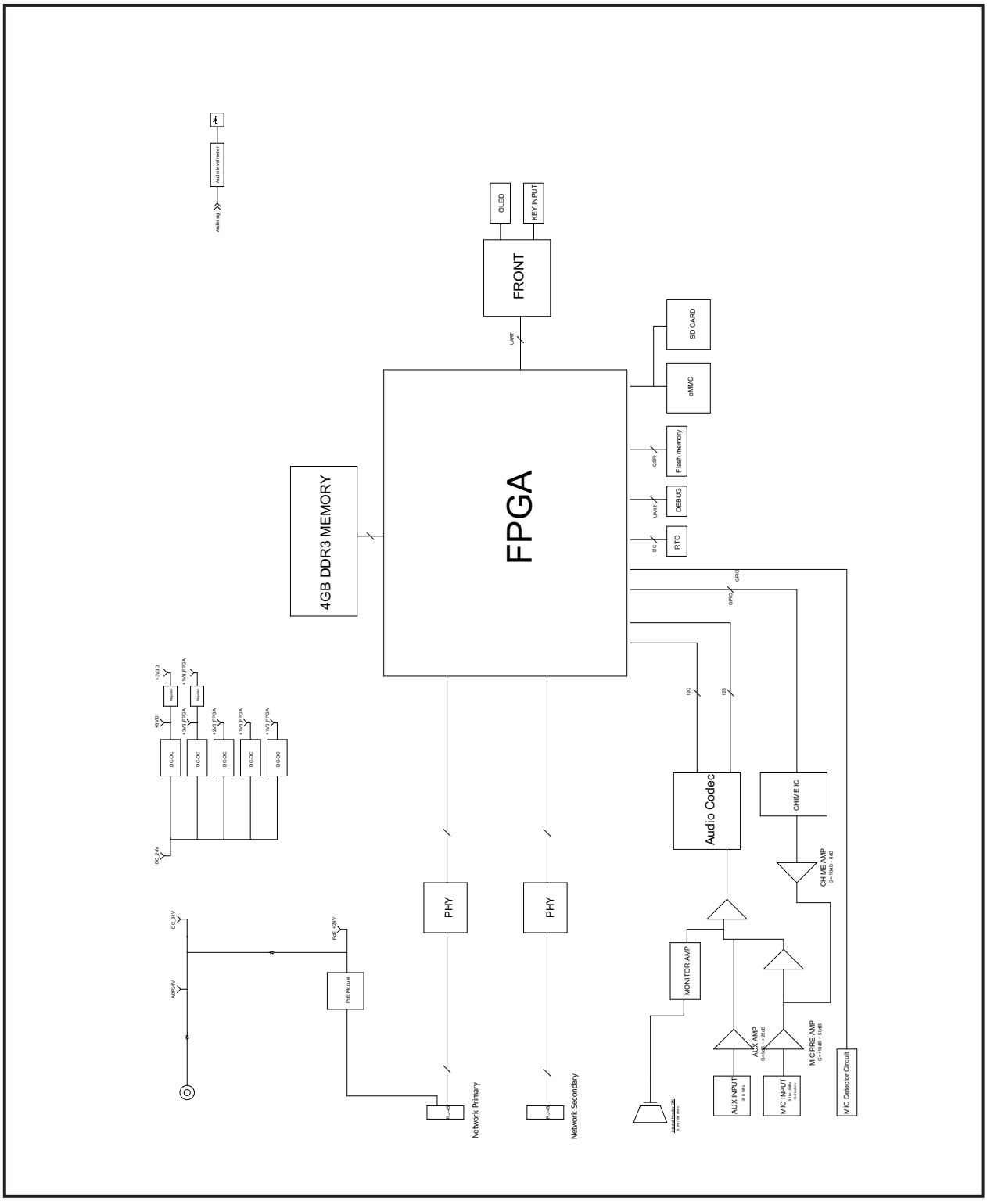


1) Press the MENU button on the NETWORK Info screen to check the firmware version.
   ※ M: Main board firmware version, F: Front board firmware version
2) Press the MENU button on the Firmware Version screen to switch to the Chime Set screen, where you can switch from the MENU screen to standby screen by pressing the PREV button.

Applications



Block Diagram

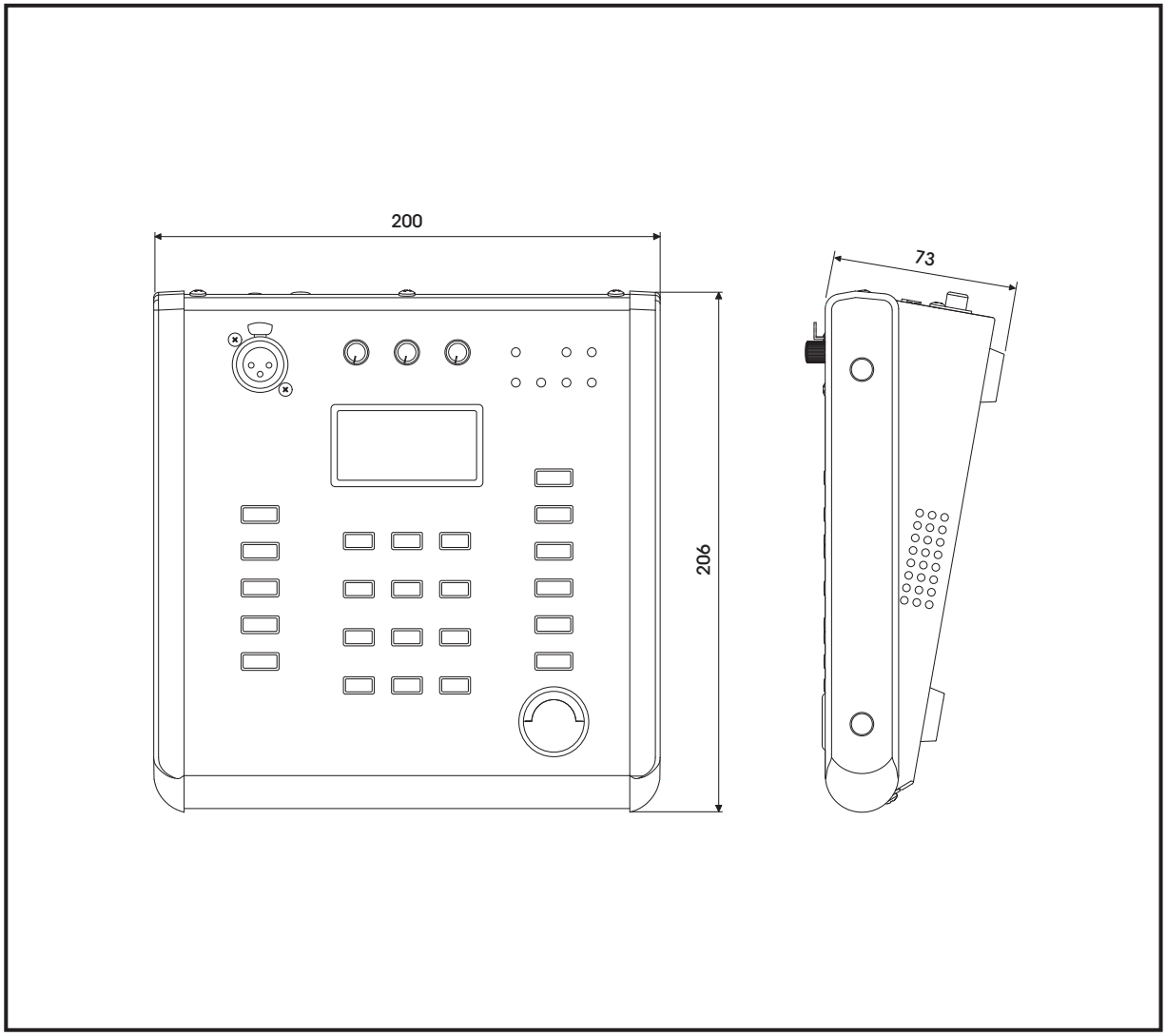


Specifications

		RM-N3000
Audio Feature		
MIC	Input Sensitivity	-50dBV ± 3dB
	Signal-to-noise Ratio (<20 kHz LPF)	More than 65dB
	THD (<20kHzLPF)	Less than 0.1%
	Frequency Response 100 Hz ~ 18 kHz (Input: -50dBV, 1kHz)	0dB ± 3dB
AUX	Input Sensitivity	-10dBV ± 3dB
	Signal-to-noise Ratio (<20 kHz LPF)	More than 75dB
	THD (<20kHzLPF)	Less than 0.1%
	Frequency Response 100 Hz ~ 18 kHz (Input: -10dBV, 1kHz)	0dB ± 3dB
Data Communication		
Network Communication		100/1000 B ase-t (RJ-45)
General Characteristics		
Operating Temperature		-10℃ ~ +40℃
Power Source		DC 24V
Power Consumption		MAX 10W
Weight (Set)		1.29kg/2.84lb
Dimensions (SET)		200(W) x 73(H) x 206(D)mm/7.9(W) x 2.9(D) x 8.1(H)in

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

※ **DIMENSIONS**



Service

Procedures
Take steps to insure the problem is not related to operator error or other products within the system. Information provided in the troubleshooting portion of this manual may help with this process. 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.

Variations and Options

Variations
Products supplied through legitimate sources are compatible with local AC power requirements.

Options
No optional items are available for this product.

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.

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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