

MIPRO[®]

MA-707

Portability

Simplicity

Flexibility

PORTABLE WIRELESS PA SYSTEM

User Guide



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 a 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 polarised or ground plug: A polarised plug has two blades with one wider than the other. The wide blade is provided for your safety. When 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 plug, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a 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.
15. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
16. Apparatus should not be exposed to dripping or splashing and no objects filled with liquids, should be placed on the apparatus.
17. Use only with the battery which specified by manufacturer.
18. The power supply cord set is to be the mains disconnected device.



WARNING

DO NOT USE FOR OUTDOOR USE:



TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.


UNDER WET LOCATION:


The apparatus should not be exposed to dripping or splashing and no objects filled with liquids, such as vases should be placed on the apparatus.

SERVICE INSTRUCTIONS:

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.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

 This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

 This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

FC

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

This device complies with Part 74 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

IC

The user manual for the LPD shall contain the following or equivalent statements in a conspicuous position:

"Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

PORTABLE WIRELESS PA SYSTEM

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PRODUCT OVERVIEW:

Thank you for choosing the MIPRO MA-707 Portable Wireless Public Address System. MIPRO is recognized worldwide as a leader in portable PA products. Its' complete line of portable PA systems are easy-to-use, powerful and functional. Before operating the unit, please read this manual thoroughly, and retain it for future references.

The MA-707 operates from an internal DC rechargeable battery supply or from an external AC mains supply and is housed in a heavy duty enclosure and features industry's first retractable luggage-style handle and sturdy wheels for ease of transport.

No other brands can match the innovative features of MIPRO's AutoScan & ACT technology which provide the easiest channel set-up in the industry along with reliable RF transmission and reception.

The MA-707 may be optioned with a cassette player/recorder, CD/USB player and up to 2 UHF diversity receivers. An optional matching passive extension speaker is also available for a wider sound dispersion pattern. An optional innovative, dual-slot battery charger for transmitter batteries to reduce the need to buy batteries for the wireless microphone transmitters.

Key Features:

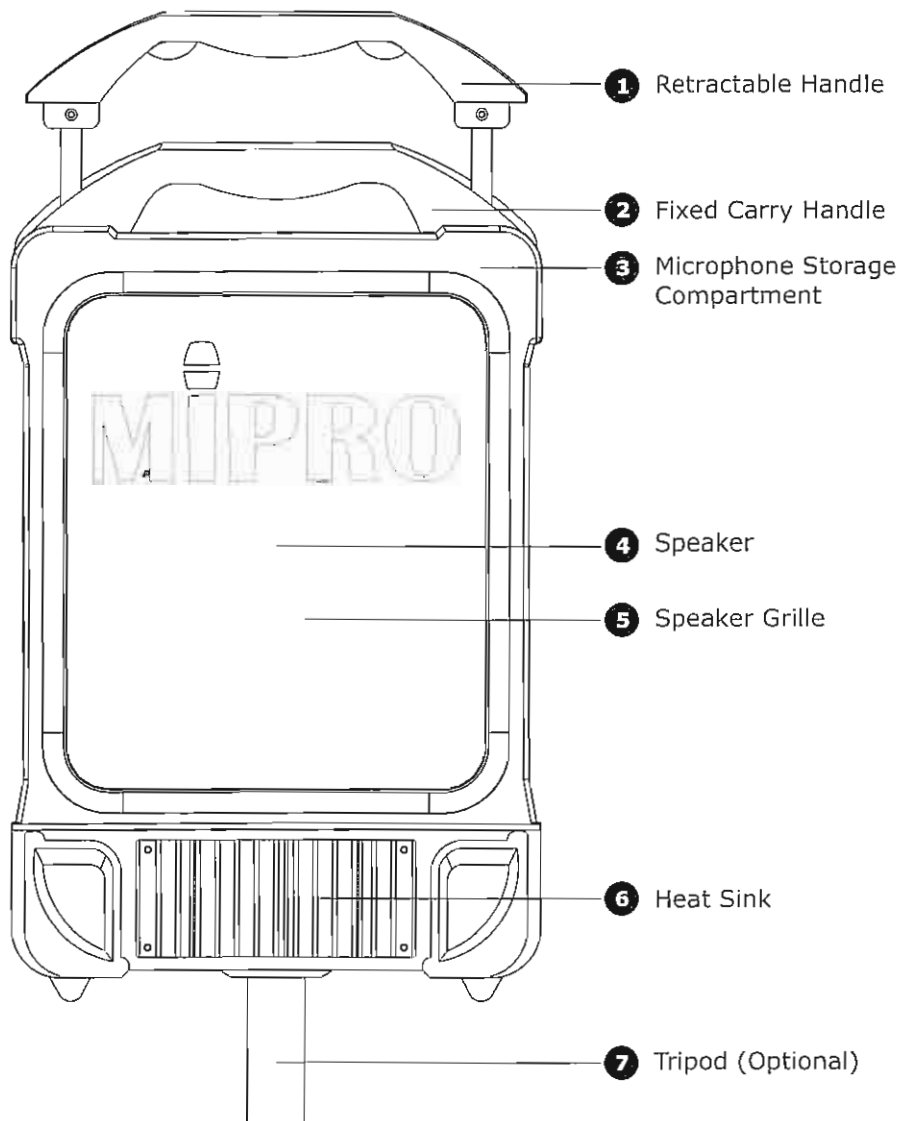
- 70-Watts (RMS) power output delivers clear and powerful sound for speech and music outdoors or indoors.
- Rugged design with a functional retractable handle and sturdy wheels for effortless transport concerns.
- Built-in rechargeable batteries provide up to 8 hours continuous use from a fully charged battery system.
- Accepts up to 2 UHF diversity receivers with 16 automatic scanable frequencies.
- 2 wireless & 2 wired microphones, skip-free CD & recordable cassette players, and other audio sources can be mixed simultaneously to the input.
- Built-in storage compartment for 2 handheld or bodypack transmitters.
- Suitable for Hand-carry, table-top or integrated tripod stand mounting.
- No set-up & take-down required. Simple to operate.
- Handles crowd of up 700 people.

MA-707 Portable System Includes:

- MA-707 Main Unit x 1
- Switching Power Supply x 1
- AC Cord x 1
- MB-70 Rechargeable Battery x 2
- User Guide x 1

PARTS NAMES AND FUNCTIONS

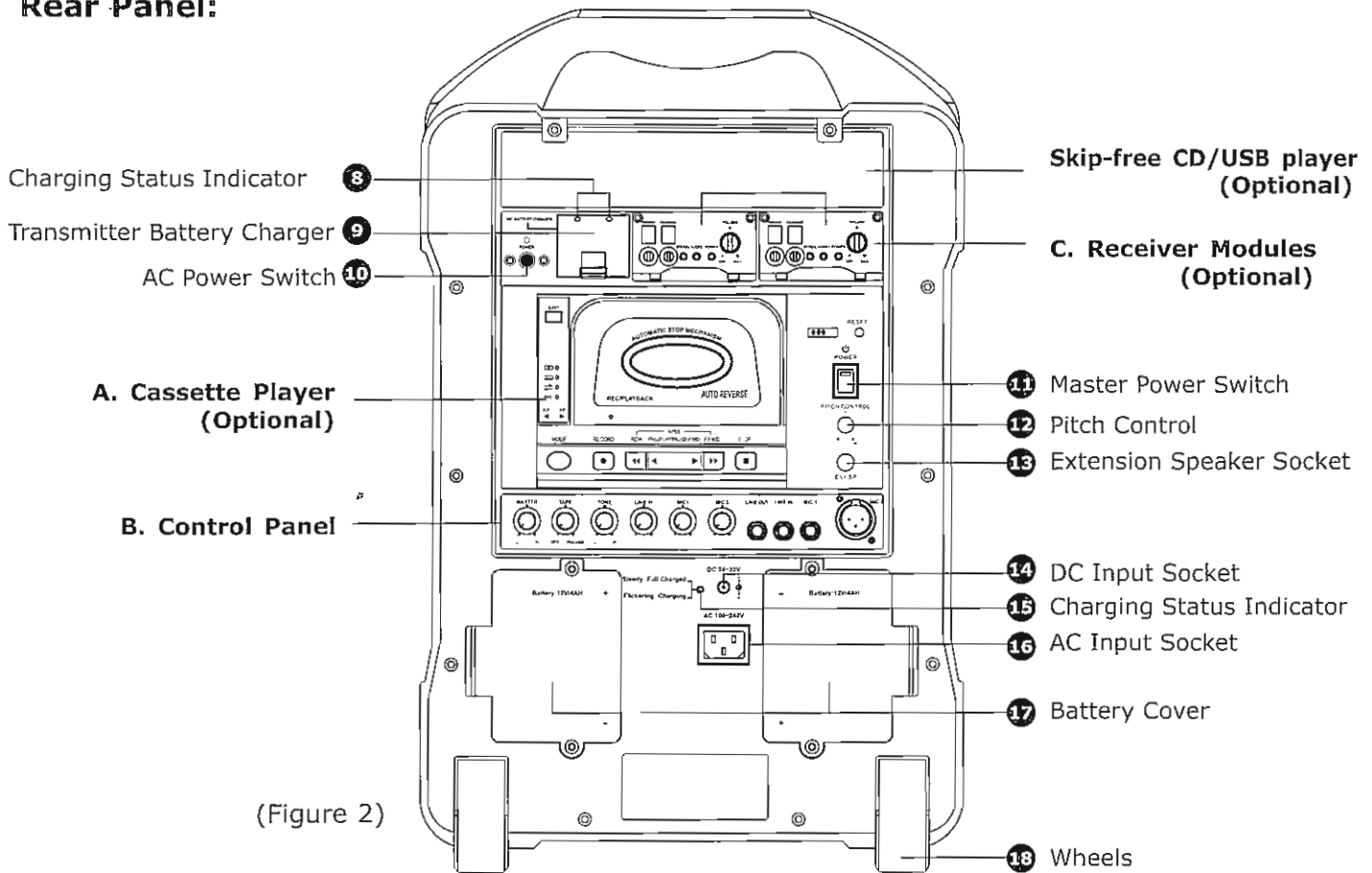
Front Panel:



(Figure 1)

- ❶ **Retractable Handle:** Push up from underneath the handle to expose the retractable extension. Simply push down again for storage and lifting.
- ❷ **Fixed Carry Handle:** For balanced, easy hand carrying.
- ❸ **Microphone Storage Compartment :** A handy storage compartment for 2 handheld or bodypack transmitters.
- ❹ **Speaker :** A powerful, 70 watt, 8-inch full-range speaker.
- ❺ **Speaker Grille :** To protect the speaker cone from damage.
- ❻ **Heat Sink :** Designed specially for the built-in amplifier, please keep it adequately ventilated.
- ❼ **Tripod (Optional) :** There is a tripod mating socket mounted in the base of the MA-707 to accommodate a 35mm tripod stand.

Rear Panel:

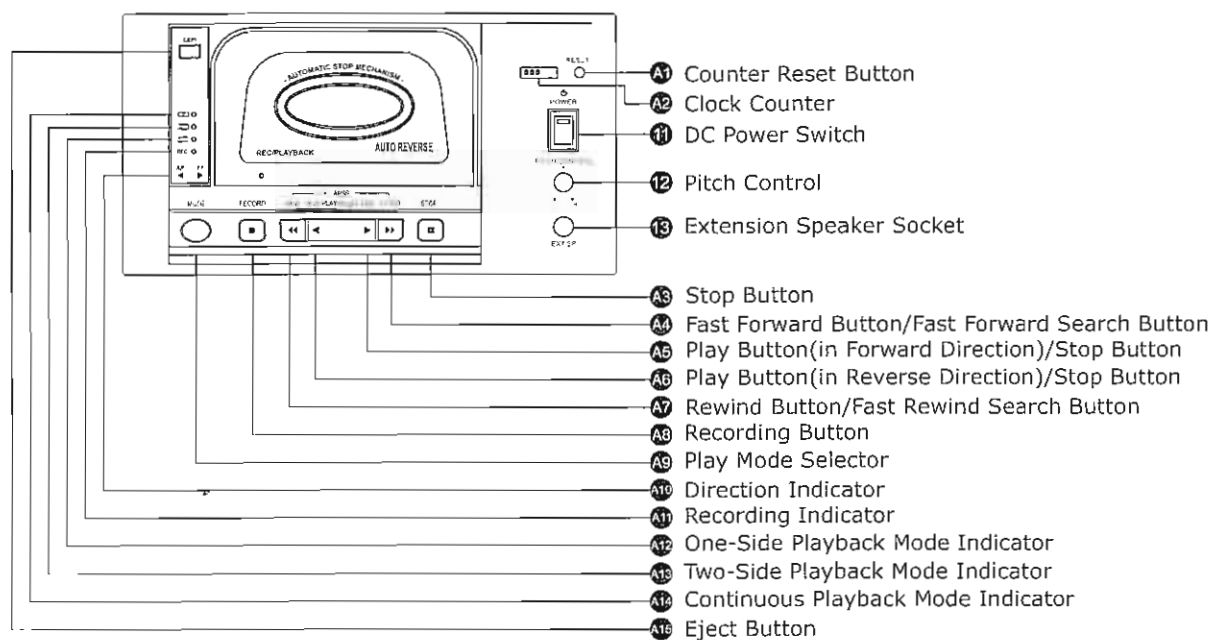


(Figure 2)

- 8 Charging Status Indicator (for 7.2V rechargeable transmitter batteries) :** Green flashing light indicates the charging status. Green light (still) denotes fully charged status. If re-inserted the already charged battery for re-charging again, the green flashing light will appear and will automatically cut off charging current and change to green light ready status again.
- 9 Transmitter Battery Charger (optional):** Holds and charges up to two 7.2V rechargeable transmitter batteries. It has been designed to prevent incorrect insertion. Charging (Red light). Fully charged (Green light)
- 10 AC Power Switch:** Switch must be pressed in order to activate charging of built-in MB-70 rechargeable batteries.
- 11 Master Power Switch :** Turns AC/DC power on/off to the unit. The indicator glows when you turn the power On. Please note that to avoid the over-discharging or stressing of the built-in battery supply, it is recommended that you charge the unit immediately the LED indicator flashes (to warn of low battery charge). Otherwise, the unit will turn off automatically once a pre determined low charge level is reached (and this may interrupt your usage of the unit)
- 12 Pitch Control:** Turn this control clockwise to increase the speed of the cassette, turn it counter-clockwise to decrease the speed of cassette. This will raise and lower the pitch of the sound respectively.
- 13 Extension Speaker Socket :** Allows you to connect an optional MA-707-EXP extension speaker for increased directional coverage. The MA-707-EXP is rated at 70 watts @ 4 ohms and connects in series to the speaker in the MA-707.

- 14 **DC Input Socket :** Allows you to connect an external 24-32V DC power supply if required. Please note that the polarity of the central pin in the socket is positive (+).
- 15 **Charging Status Indicator (For the inbuilt MB-70 12V rechargeable batteries):** A flashing red light indicates charging is in progress while a steady red light indicates that the batteries are fully charged. However, if the indicator remains flashing after normal charging hours, it means the inbuilt rechargeable batteries are damaged and both damaged inbuilt batteries must be replaced immediately.
- 16 **AC Input Socket :** A built-in switch mode power supply allows for AC power inputs ranging from 100V to 240V.
- 17 **Battery Cover :** There are two battery covers, one for each MB-70 rechargeable battery. In the event that you ever have to change a battery, please observe the correct polarity and always keep the battery full-charged. Unless you experience some battery failure, changing or uninstalling batteries should not be necessary. If in doubt, please contact your nearest service agent or supplier.
- 18 **Wheels:** Heavy duty and a truly user friendly feature.

FUNCTIONS OF THE CASSETTE PLAYER

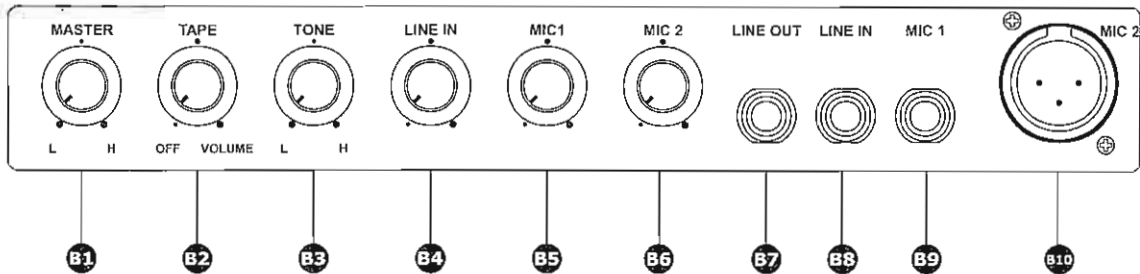


(Figure 3)

The MA-707 may be optioned to include a mechanical cassette player. Operations are as follow:

1. Turn ON the main power switch **(11)** and then turn ON the cassette player switch **(B2)**. The Direction Indicator **(A10)** will flash for about 3 seconds and indicator will show the forward direction. Further operation can not proceed until the indicator for Two-Side Playback mode **(A13)** is ON.
2. **Auto Reverse Mode** : Use the Mode Selector **(A9)** to choose playback mode you prefer.
 - a. When the Continuous Playback Mode Indicator **(A14)** is ON, playback continues until the STOP button **(A3)** is pressed. Note: This mode is not supported while you are recording.
 - b. When the Two-Side Playback Mode Indicator **(A13)** is ON, playback continues on to side B as soon as the end of side A is reached. (The tape stops automatically once the end of side B is reached.)
 - c. When the One-Side Playback Mode Indicator **(A12)** is ON, recording or playback is performed only on one side of the tape (A or B). (The tape stops automatically once the end of the playing/recording side is reached.)
3. **Play Buttons**: Press either **(A5)** Play Button for forward direction or **(A6)** Play Button for reverse direction. Press the same button 2nd time will pause the tape. Press the same button the 3rd time will resume playing.
4. **Recording** : When recording, the Direction Indicator **(A11)** will come ON. After pressing the REC Button **(A8)**. Note that recording is not possible if the erasure prevention tabs in the cassette tape loaded in the deck have been removed.
5. **Stop Button **(A3)**** : Press to stop playing or recording a cassette tape.
6. **Quick Search**: Press **(A4)** Fast Forward Button or **(A7)** Rewind Button for quick search. Press **(A4)** or **(A7)** button during playing mode will quickly search and play the next forward or reverse available song.
7. **Insert or Eject Cassette** : Press the STOP button **(A3)** first and then press the EJECT button **(A15)** to eject the cassette tape from the deck.

CONTROL PANEL



(Figure 4)

- B1 Master Volume Control :** Adjust the volume of all mixed audio inputs.
- B2 Cassette Player Power Switch and Volume control :** It allows you to turn the cassette player (if installed) on/off and adjust its volume.
- B3 Tone Control :** Turn counterclockwise to increase bass or turn clockwise to increase treble. Positioned at 12 o'clock for a flat response.
- B4 LINE IN Volume Control:** Controls the volume of an input from an external source.**B8**
- B5 Mic 1 Volume Control :** Control the volume of the wired microphone.**B9**
- B6 Mic 2 Volume Control :** Control the volume of the wired microphone.**B10**
- B7 Line Out Socket :** Line level output. Allows you to use the MA-707 as a program input source for some other audio device.
- B8 Line In Socket :** Allows you use an external device with unbalanced audio output signal as an input to the MA-707.
- B9 Wired Microphone Input Socket (6.3mm/1/4" Unbalanced) :** Allows you to use an unbalanced, wired microphone as an input source.
- B10 Wired Microphone Input Socket (XLR Balanced) :** Allows you to use wired microphone with a balanced XLR connector as an input source.

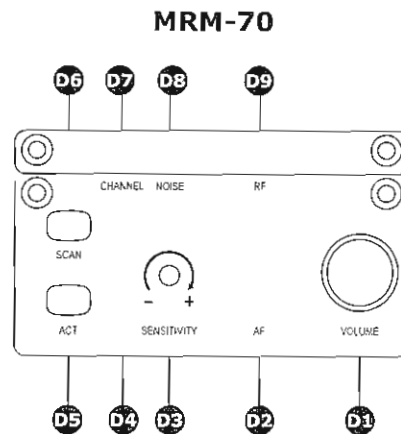
MRM-70: UHF DIVERSITY RECEIVER MODULE

MIPRO offers an optional industry-leading diversity wireless receiver module. Up to 2 receiver modules can be installed quickly and easily for wireless microphone operation. Each receiver module has 16 preset UHF frequencies. Simply press the "scan" button once to quickly autoscan for an interference-free receiver frequency. A built-in "noise" interference indicator (when lit) detects the presence of interference. Once lit during operation simply press scan button to autoscan for another interference-free frequency.

INSTALLING MRM-70 DIVERSITY RECEIVER MODULE

Power off system. Unscrew the 2 screws. Take out the front cover. Insert the receiver module and align the edge connector with the empty slot. Applying even pressure at both corners, push in until it is firmly seated in the slot. Fasten the 2 screws.

OPERATING THE MRM-70 UHF DIVERSITY RECEIVER MODULE



- D1 Receiver Power Switch/Volume Control :** Turns on/off of receiver module. After power on, AF LED will flash. Turns knob clockwise to turn up volume.
- D2 Audio Signal Level Indicator:** Indicate the audio signal level.
- D3 Sensitivity Adjuster:** Higher sensitivity (+) to increase receiving distance. Lower sensitivity (-) to minimize noise interference.
- D4 ACT Infrared (IR) Port:** Transmits IR signal to transmitter to synchronize frequencies.
- D5 ACT Sync Button:** Press to synchronize the receiver and transmitter frequencies.
- D6 Scan Button:** Press for an interference-free frequency.
- D7 LED Screen:** displays current channel.
- D8 Noise Indicator:** Denotes the presence of interference.
- D9 RF Signal Level Indicator:** Indicate the RF signal strength received.

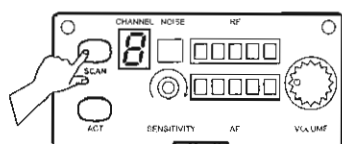
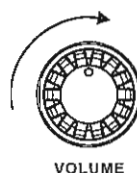
SET-UP RECEIVER AND TRANSMITTER FREQUENCIES

AUTOMATIC "RECEIVER" FREQUENCY SELECTION

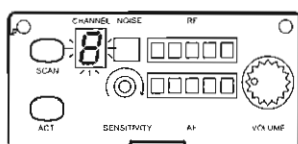
1. POWER "ON" the portable PA



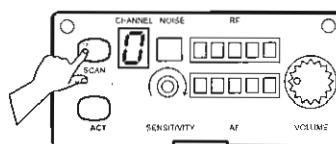
2. POWER on receiver by turning "VOLUME" knob.



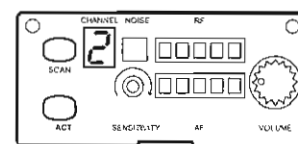
3. Press & hold "SCAN" button for 1 second



4. Existing channel blinks

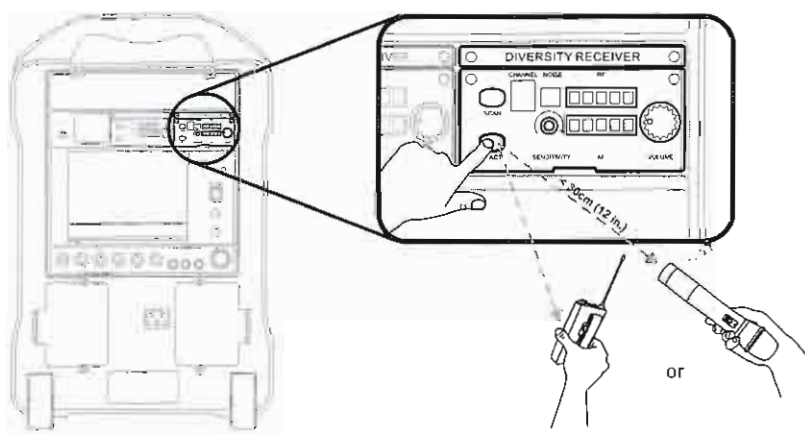


5. Press & release "SCAN" button



6. New interference-free channel appears

AUTOMATIC "TRANSMITTER" SYNC



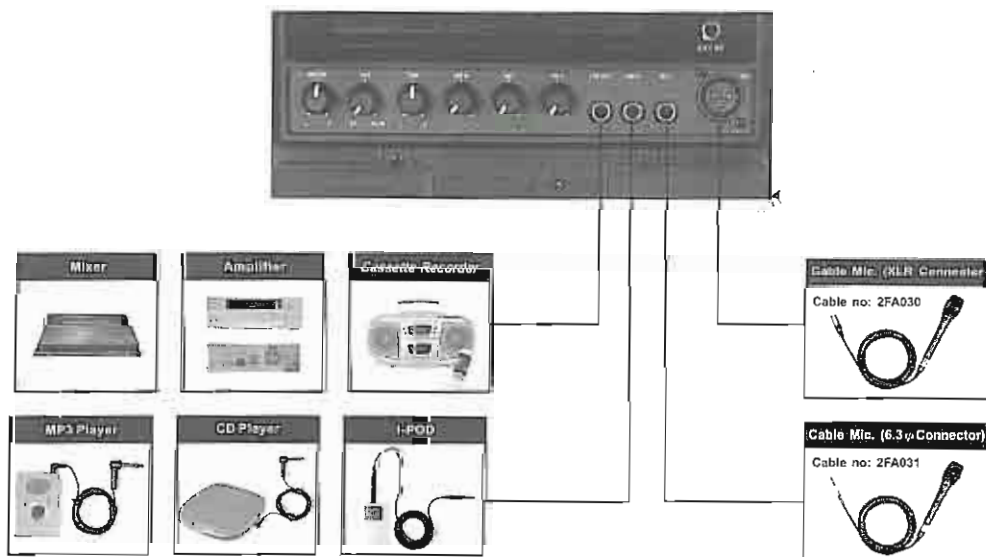
1. **POWER** on transmitter (ensure fresh batteries are properly installed with the correct polarity). Replace transmitter battery when LED glows red during powered-on. (glows red = low battery)
2. Locate and bring an ACT transmitter ***infrared (IR) port** within **30cm (12-inch)** of receiver's ACT button.
3. Press and release **"ACT"** button to synchronize transmitter and receiver frequencies.
4. When the frequencies are synchronized successfully the receiver channel stops flashing and the RF meter is fully lit, the microphone is now ready for use.

NOTE: The transmitter infrared IR port is normally located by a round-shaped red color spot

HELPFUL OPERATING TIPS

1. We recommend placing sound system between the target audience and the presenter, facing the audience and raised above their heads using a speaker stand or table. This set-up helps prevent the annoying feedback by keeping wireless & wired microphone users behind the sound system. The internal power supply rechargeable, lead-acid batteries should be kept fully charged. Always charge the system after use.
2. If you operate the system from an external AC power supply, then the internal battery supply will charge at the same time, a very useful feature.
3. If the LED indicator on the power switch flashes after first turning the unit ON or it starts to do so during use on the internal DC supply (low battery warning), you should switch to the AC power supply by using the AC power cord.
4. Before turning power ON to the unit, please set all volume controls to their minimum level. This prevents any loud 'thumps' at power on. Adjust the volume controls afterward.
5. NEVER place any microphone in front or close in front of the speaker otherwise damaging feedback (both to the operators ears and the system) could occur.
6. The MA-707 features a retractable handle and wheels for easy transport. However, DO NOT pull the unit for long distances or over uneven or rough surfaces. And, DO NOT pull it up or down stairs. Vibration caused by long distance travel or travelling over uneven surfaces may result in function failure not covered by warranty.
7. The MA-707-EXP extension speaker is rated at 70 watts @ 4 ohms. Please take care not to short out the speaker cables otherwise unwarranted damage could be done to the system amplifier.

CONNECTION FOR EXTERNAL AUDIO SOURCES



AVAILABLE CABLE FROM MIPRO:

MIPRO NO: 2FA071	MIPRO NO: 2FA072	MIPRO NO: 2FA070
		
3.5φ	3.5φ 6.3φ	3.5φ RCA

FAQ - PORTABLE PA

Q: Why is my MA-707 not recharging (indicator is not flashing) when plugged into an AC outlet?

A: Ensure AC Power button is pressed in (next to the MRM-70 receiver module slot). An un-pressed button (out) will prevent recharging of the battery.

Q: How to adjust for optimal sound volume?

A: If the portable system has both Master & Microphone volumes, we recommend turning the Master volume to about 3pm (clockwise) first and about 1~2pm (clockwise) for Microphone or other volumes.

Q: How to prevent and minimize the annoying feedback?

A1: Do not stand directly in front of the speakers; keep mics away from speakers.

A2: Avoid pointing microphone towards the speakers.

A3: The microphones should be behind the speakers wherever possible.

A4: Locate the portable PA between the crowd and the presenters and facing the crowd.

A5: Turn down the sound level coming out of the portable PA / speakers if necessary.

A6: Place the speakers above the head of the crowd.

Q: What if I need more power to cover a larger crowd?

A: Two or more portables can be used with one wireless microphone transmitter. Ascertain that the receiver frequency in each portable coincides with the wireless microphone.

Q: Can I play music through the systems?

A: Yes. All MIPRO portables have auxiliary inputs (3.5mm min-jack, RCA or 1/4"phone), which will accept input from an external iPod, MP3, CD, cassette, VCR, DVD players. As well, modular CD players can be inserted into most models.

FAQ - RECHARGEABLE BATTERY

Q: How to Charge the Battery?

A: Simply plug into a power outlet using the included power cable and adapter. "Flashing" LED indicates it is charging. The main power switch can be on or off position during charging. Microphones or music can be used during charging & power is on.

Q: How to Spot System Low Battery?

A: When Power LED is lit (MA-705 & MA-707) or Charge LED is lit (MA-101& MA-101a) or one indicator remaining in battery meter (MA-202, MA-708, MA-808). Plug into a power outlet to re-charge ASAP.

Q: Average Life Span of Sealed Lead-Acid Rechargeable Battery?

A: The batteries should have a life of approx. 2 years if used and maintained properly. Battery life is determined by temperature, depth and rate of discharge, and the number of charges and discharges (called cycles).

Q: When to Replace the Battery?

A1: Power LED indicator is not "lit" when power on. (No battery voltage).

A2: LED indicator or meter is not "flashing" when plugged-in.

A3: Getting 1~2 hours operating time per charge.

A4: When battery has been used extensively for 2~3 years or more.

RECHARGEABLE BATTERY GUIDE

Tips - To Prolong the Life of Rechargeable Batteries

- Always charge the batteries before first and after use.
- Always store portable system with batteries in a fully charged condition.
- Always power off the portable system and transmitter/mic when NOT in use
- It is OK to leave the system plugged into a power outlet when not being used for a long time. The built-in automatic protection circuitry will auto shut-off when fully charged. It will not harm the system or the battery.
- Fully charge the system at least once every 3 months. Battery may not charge if not charged for a prolonged periods of time.
- Store in dry, cool place away from heat. Elevated temperature reduces longevity.
- CAUTION: DO NOT** recharge other types of batteries and connect a battery's negative terminal to another batteries positive terminal. An explosion and/or a fire could occur as a result. Use only rechargeable sealed lead-acid (gel cell) batteries.

OPTIONAL MA-707 ACCESSORIES

MA-707EXP: Extension Speaker for MA-707

Unpowered extension speaker (10-meter speaker cable included)

MB-70: 12V/4.5AH Rechargeable Battery

Gell-cell (Sealed lead-acid) type rechargeable battery (MA-707 requires 2 MB-70 batteries)

MS-70 - Speaker Tripod Stand

Adjustable stand for MA-707 portable PA system

SC-70 Storage Cover

Storage cover and separate storage for mic cable, transmitters, microphone & battery

MM-107 - Handheld Wired Microphone

MIPRO's Hypercardioid Dynamic Microphone with cable.

CDM-2P CD/USB Player

Plays standard 12cm (5") audio CD & MP3 CD.

ASP-10 Aerobic Sports Pouch

Sweat-resistant transmitter pouch belts for MIPRO bodypack transmitters.

MIPRO WIRELESS MICROPHONE SYSTEMS

MRM-70 UHF 16-Channel Diversity Receiver Module

Automatic receiver frequency scan & ACT functions.

ACT-707HE - Handheld Transmitter Microphone (9V x 1: not included)

ACT-3H - Handheld Transmitter Microphone (AA x 2: not included)

ACT-5H - Handheld Transmitter Microphone

ACT-707TE - Body Pack Transmitter (9V x 1: not included)

ACT-3T - Body Pack Transmitter (AA x 2: not included)

ACT-5T - Body Pack Transmitter

(microphone not included - see below)

MU-53HN (black) ; MU-53HNS (beige) Premium Headworn Microphone

Uni-directional, Premium 10mm, Ideal for speech and singing. Works with all MIPRO bodypack transmitters

MU-55HN (black) ; MU-55HNS (beige) Subminiature Headworn Microphone

Omni-directional, 4.5mm, Sweat-proof, Ideal for speech. Works with all MIPRO bodypack transmitters

MU-13 (beige) Premium Single-sided Earworn Microphone

Omni-directional, ultra small & lightweight 3mm, Ideal for speech. Works with all MIPRO bodypack transmitters

MU-53L (black) ; MU-53LS (beige) Premium Lavalier Microphone

Uni-directional, 10mm, High-gain-before-feedback, warm, clear sound. Works with all MIPRO bodypack transmitters

MU-55L (black) ; MU-55LS (beige) Subminiature Lavalier Microphone

Omni-directional, 4.5mm, Low visibility, Works with all MIPRO bodypack transmitters

PORTABLE WIRELESS PA SYSTEM

SPECIFICATIONS

Item	Specifications
Max. Power Output	70 Watts (RMS) in to a 4Ω Load
T.H.D.	<1%
Frequency Response	50Hz~18KHz
Input Sources	Optional Wireless Microphone Receiver, Cassette Player, CD Player, Wired Microphone, External Audio input.
Speaker	8-inch Full-range Speaker.
Power Supply	Built-in 100V~240V Switching Power Supply.
Cycle TimeI	Use continuously for 6-8 hours after charging for 8 hours.
Receiver Module	Up to 2 UHF diversity receivers with 16 factory pre-set frequencies each
Wireless Microphone	If so configured, suitable for use with optional hand held, belt pack or head worn microphones/transmitters.
Wired Microphone	Use a Low Impedance, Dynamic Microphone
Audio Inputs	Accepts an Optional Cassette Recorder or an external Compact Disc Player (a 6.3mm / 1/4" plug is needed)
Dimensions (mm/inch)	310(W)x445(H)x240(D) / 12.2(W)x17.5(H)x9.4(D)
Weight (kg/lbs)	Approx. 14.8 / 32.5
Exterior Color	Black
Please Note:	<p>Not all models are available in all markets and specific model configurations may vary from market to market. Please consult with your local supplier for detail of the various models/configurations available in your market.</p> <p>The suitability of wireless microphone frequencies may vary from location to location. Please consult with your supplier for advice about frequencies suitable in your area. No responsibility is taken by Mipro for interference caused to/by any wireless microphone frequency transmission/reception under any circumstance.</p>