

MIPRO[®]

MA-705

PORTABLE WIRELESS PA SYSTEM

User Guide



MIPRO MIPRO Electronics Co., Ltd.

Headquarters: 814 Pei-Kang Road, Chiayi, 60096, Taiwan.

Web: www.mipro.com.tw

E-mail: mipro@mipro.com.tw

CE FC




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

1. **FOR OUTDOOR USE:**
To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
2. **UNDER WET LOCATION:**
Apparatus should not be exposed to dripping or splashing and no objects filled with liquids, such as vases should be placed on the apparatus.
3. **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.



 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 & IC - ID

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES AND RSS-123 ISSUE1 OF CANADA. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

Disposal Dispose of any unusable devices or batteries responsibly and in accordance with any applicable regulations.



2005-08-13

Disposing of used batteries with domestic waste is to be avoided!

Batteries / NiCad cells often contain heavy metals such as cadmium(Cd), mercury(Hg) and lead(Pb) that makes them unsuitable for disposal with domestic waste. You may return spent batteries/ accumulators free of charge to recycling centres or anywhere else batteries/accumulators are sold.

By doing so, you contribute to the conservation of our environment!

PORTABLE WIRELESS PA SYSTEM

KEY FEATURES 1

PART NAMES AND FUNCTIONS 2

CONTROL PANEL..... 4

CONNECTION FOR EXTERNAL AUDIO SOURCES 5

REPLACING BATTERIES 6

POWER USAGE INSTRUCTION 7

SELECTION AND INSTALLATION OF WIRELESS RECEIVER MODULES 8

MRM-70: UHF DIVERSITY RECEIVER MODULE 9

SET-UP RECEIVER AND TRANSMITTER FREQUENCIES10

ADDITIONAL INSTALLATION OF CD OR MIPRO OTHER PLAYER 11

HELPFUL OPERATING TIPS 12

FAQ - PORTABLE PA 13

FAQ - RECHARGEABLE BATTERY13

RECHARGEABLE BATTERY GUIDE 14

OPTIONAL MA-705 ACCESSORIES 15

MIPRO WIRELESS MICROPHONE SYSTEMS15

PRODUCT OVERVIEW

High output power, Compact, Lightweight, Clear and loud sound quality. Ideal for just about any PA application, including schools, seminars, conferences, worship centers, exhibitions, aerobics, shopping center presentations, sporting functions, and any medium-large scale venues.

KEY FEATURES

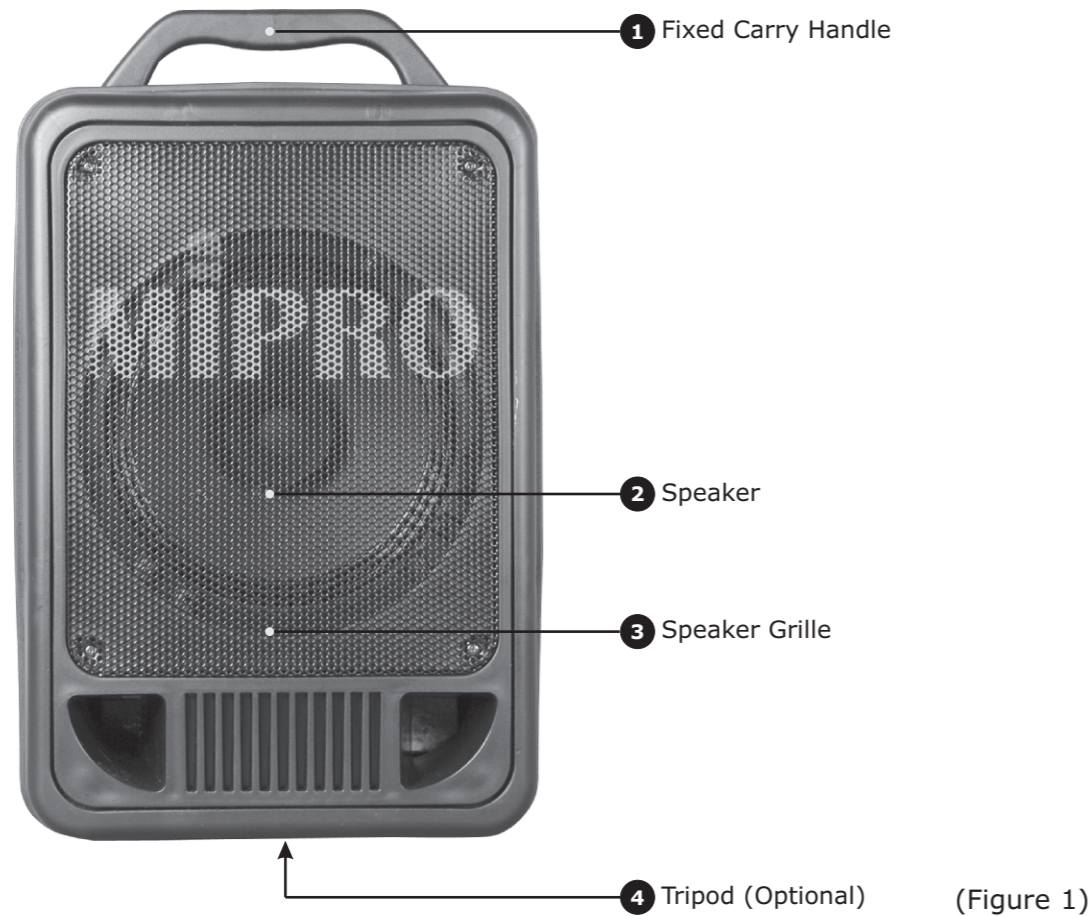
- 70-Watt Audio Output.
- Robust, heavy duty housing.
- Weighs less than 10kg.
- 8 Hours continuous use per charge.
- Up to two optional diversity wireless receivers, skip-free CD/USB player, wired microphone and other audio sources can be mixed simultaneously to the input.
- Newly added voice-over-music priority and Echo effect features.
- Line-in for audio playing/Line-out for external recording.
- Built-in antenna design eliminates inconvenience and breakage.
- Can be stand or table mounted.
- Handles crowd of up to 500 people.
- Professional quality and features at affordable price.

MA-705 Portable System Includes

- MA-705 Main Unit x 1
- Switching Power Supply x 1
- AC Cord x 1
- MB-30 Rechargeable Battery x 2
- User Guide x 1

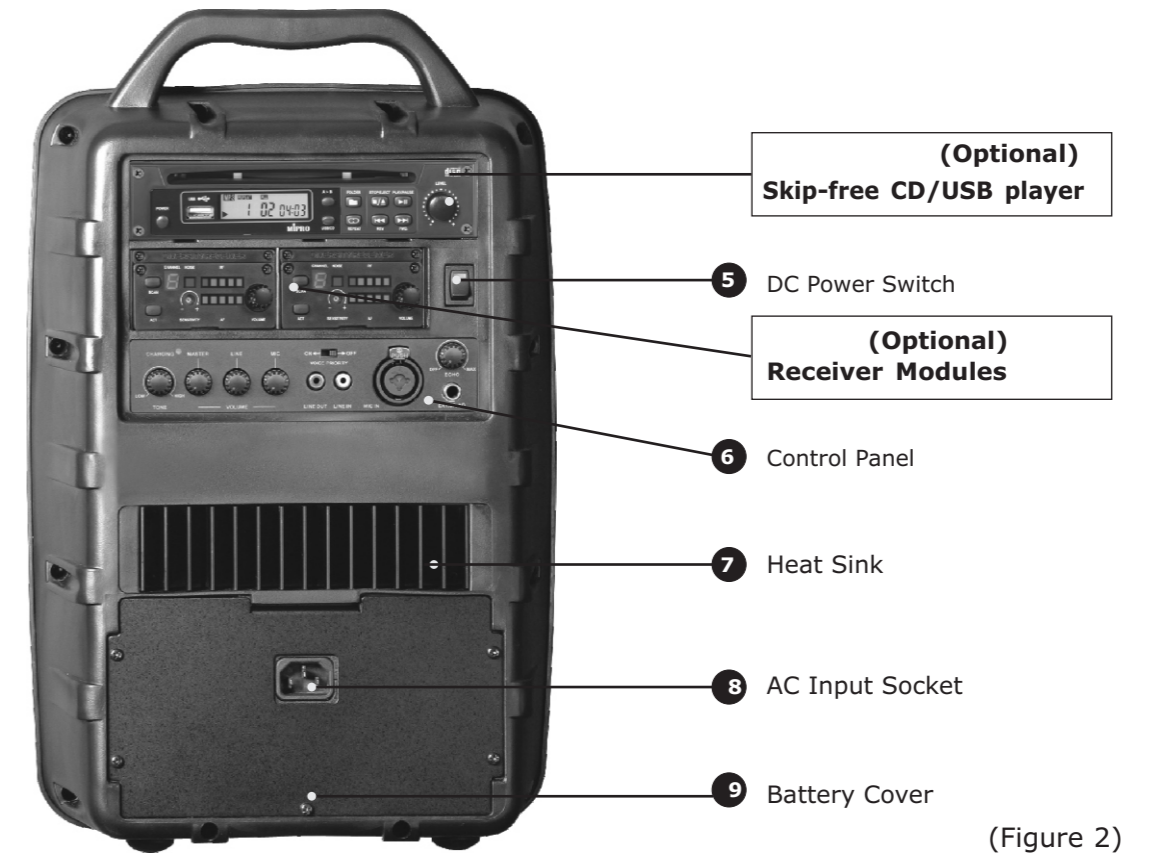
PART NAMES AND FUNCTIONS

Front Panel



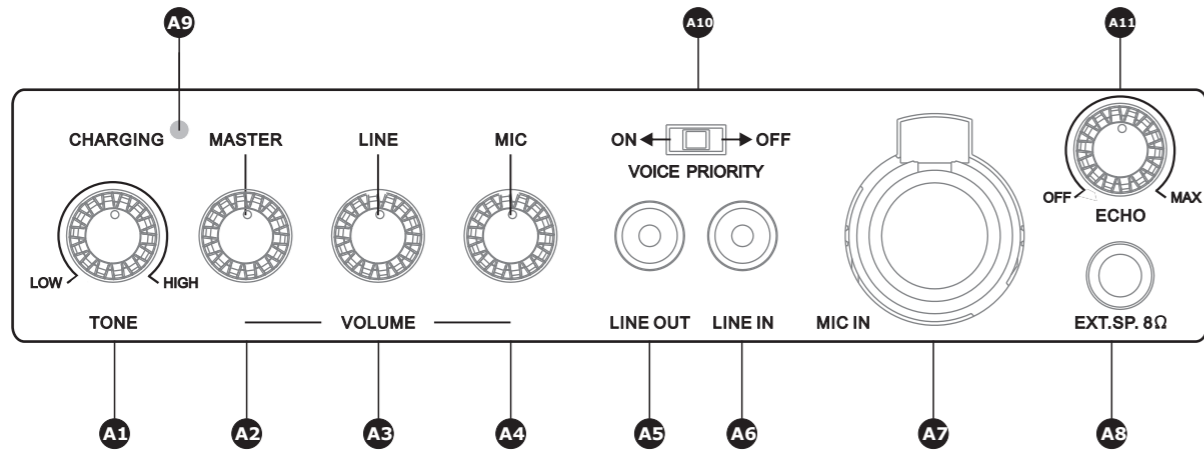
- 1 **Fixed Carry Handle:** For balanced, easy hand carrying.
- 2 **Speaker:** A powerful 8-inch full-range speaker.
- 3 **Speaker Grille:** To protect the speaker cone from damage.
- 4 **Tripod (Optional):** There is a tripod mating socket mounted in the base of the MA-705 to accommodate a 35mm tripod stand.

Rear Panel



- 5 **DC Power Switch:** Turns DC power on/off of the unit. The indicator glows when you turn the power on. Please note that to avoid over-discharging or stressing built-in batteries, it is recommended that you charge the unit immediately the LED indicator flashes (indicating a low battery warning status). Otherwise, the unit will turn off automatically at a preset, low DC power limit. Normal charging time is approximately six hours and a built in protection circuit will prevent over-charging.
- 6 **Control Panel**
- 7 **Heat Sink:** Designed specially for the built-in amplifier, please keep it adequately ventilated.
- 8 **AC Power Input Socket:** Input socket for AC Power (100~240V)
(Various outlets fitting the standards of various countries are available for this unit)
- 9 **Battery Cover:** To protect the built-in batteries and power supply. If you need to change the batteries, please observe the correct polarity and always keep the battery full-charged. Unless you experience a battery failure, changing or uninstalling batteries should not be necessary. If in doubt, please contact your nearest service agent or supplier.

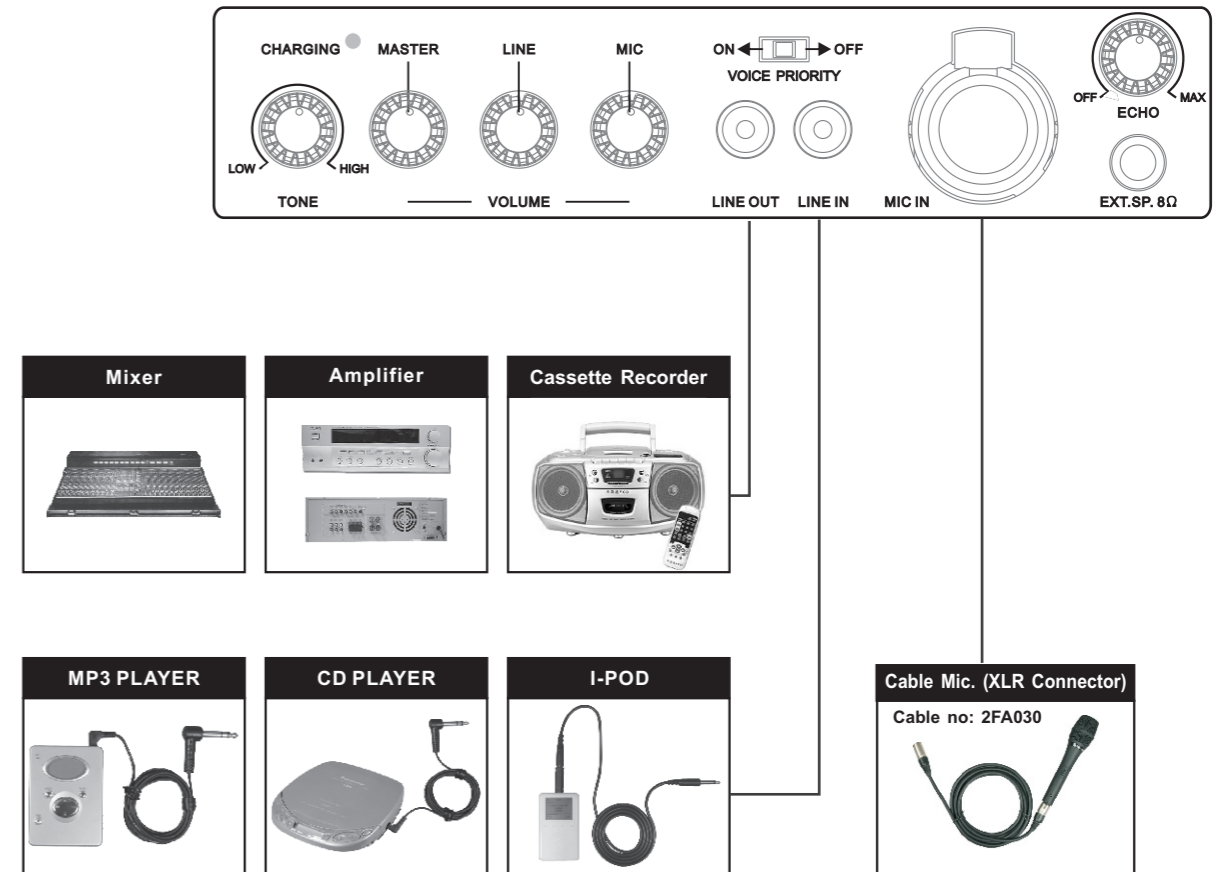
CONTROL PANEL



(Figure 3)

- A1 Tone Control:** Turn counterclockwise to increase bass or turn clockwise to increase treble. Positioned at 12 o'clock for a flat response.
- A2 Master Volume Control:** Adjust the volume of all mixed audio inputs.
- A3 LINE IN Volume Control:** Controls the volume of an input from an external source **A6**.
- A4 Mic In Volume Control:** Control the volume of the wired microphone **A7**.
- A5 Line Out Socket:** Line level output. Allows you to use the MA-705 as a program input source for some other audio device.
- A6 Line In Socket:** Allows you use an external device with unbalanced audio output signal as an input to the MA-705.
- A7 Wired Microphone Input Socket (6.3mm/1/4" Unbalanced):** Allows you to use an Unbalanced, wired microphone as an input source.
- A8 Extension Speaker Socket:** Connects to an 8 Ohm/50W speaker.
- A9 Charging Indicator:** The charging indicator flashes when the system is charging. Flashing stops when the batteries are fully charged.
- A10 Voice Priority Switch:** Voice over music Priority Function.
- A11 ECHO Control:** Adjust for desired ECHO effects.

CONNECTION FOR EXTERNAL AUDIO SOURCES



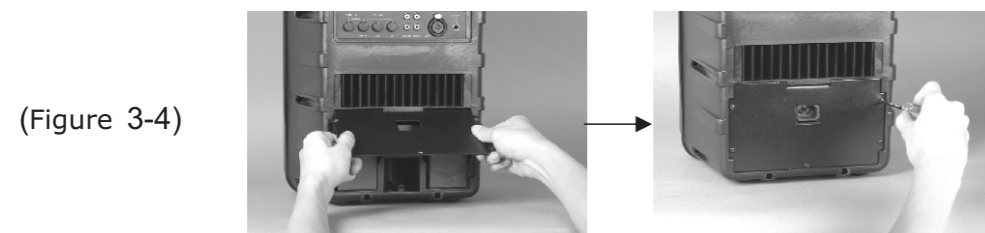
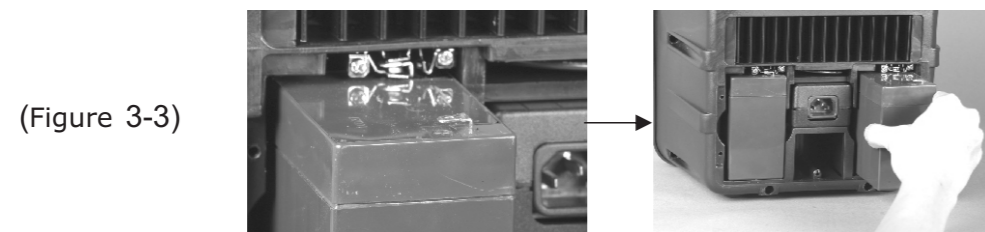
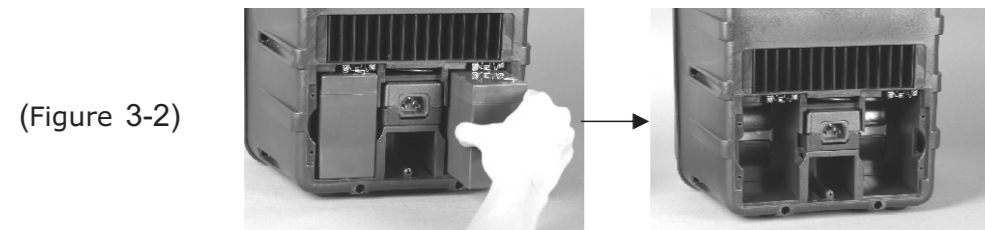
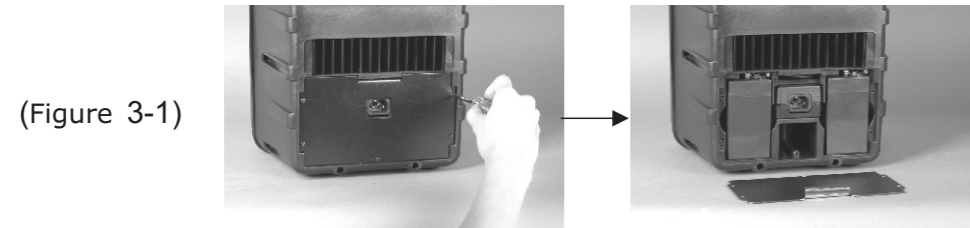
AVAILABLE CABLE FROM MIPRO:

MIPRO NO: 2FA072	MIPRO NO: 2FA070
<p>6.3 φ 3.5 φ</p>	<p>3.5 φ RCA</p>

(Figure 4)

REPLACING BATTERIES

- A. Remove the screws and take off the battery cover (as shown in figure 3-1)
- B. Gently remove the existing batteries (as shown in figure 3-2)
- C. Slide the new batteries in to the battery compartment by aligning the battery springs, taking care to ensure the correct polarity and terminal contact (as shown in figure 3-3)
- D. Replace the battery cover and screws (as shown in figure 3-4)



Please only use the following rechargeable internal battery when it is to be changed.

Manufacturer	Kung Long Batteries Industrial Co., Ltd.
Cat No	WP4.5-12
Rating	12 Vdc, 4,5 Ah

Caution

Replace with the same type and rating rechargeable battery only.
 Rechargeable battery can be purchased from authorized MIPRO dealers or MIPRO directly.
 Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

POWER USAGE INSTRUCTION

A. General Summary:

- 1. A built-in switching power supply allows for AC power inputs ranging from 100 ~ 240volt.
- 2. A built-in AC power supply powers the unit itself and provides recharging to the built-in lead-acid rechargeable batteries, too.
- 3. The built-in lead-acid batteries provide enough power to be operated alone without plug into an AC power supply.

B. How to use AC power input:

- 1. AC power provides power to both the unit itself and the built-in lead-acid rechargeable batteries.
- 2. When using the AC power, you can remove or plug the power cord freely, no need to turn off the power switch first. When a power cut is happened during usage, the device will activate the DC power automatically to maintain continuous operation.

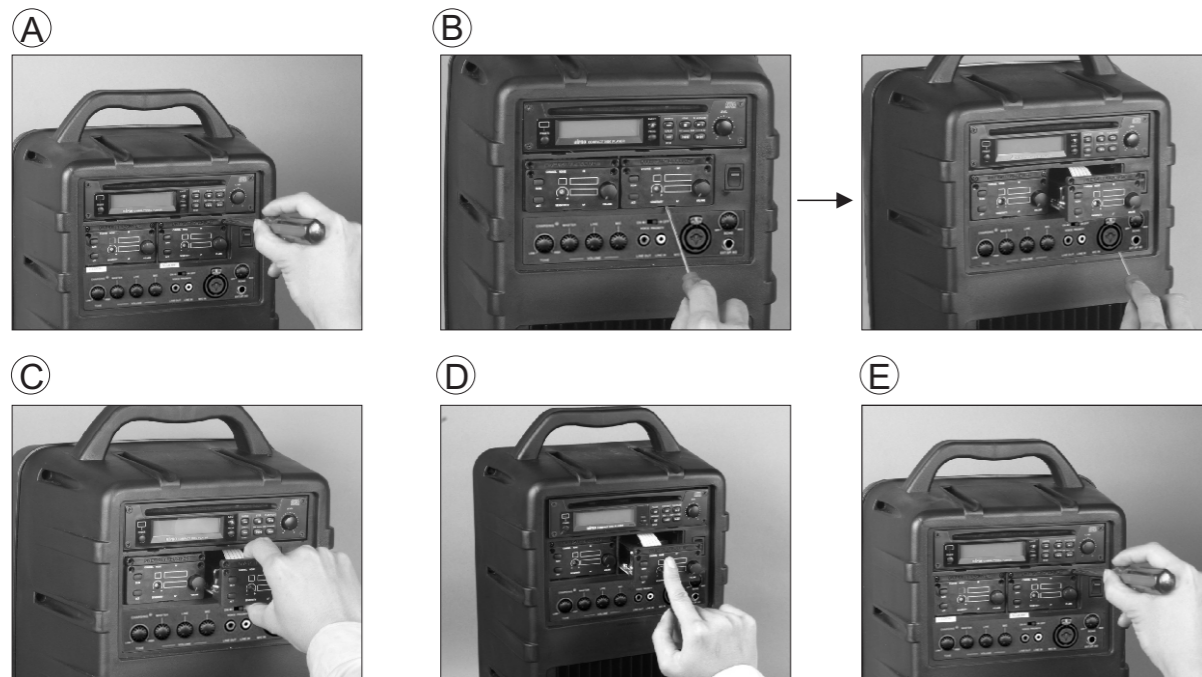
C. How to use DC power input:

- 1. Two built-in series connection lead-acid batteries with models WP 4.5-12 are used. When the1. Two built-in series connection lead-acid batteries with model models WP 2.9-12 are used. When the batteries are fully charged, the unit can operated continuously for approximate 5 hours in standby mode (CD player and two receivers are turned on); 4 hours for audio and 3 hours for music. (The above figures are references for fresh, new batteries only)
- 2. The built-in rechargeable batteries can be recharged when the unit is plugged into an AC or DC power outlet.
- 3. Always store MA-705 system with the batteries fully charged if needing to store the system for more than 3 months. Leave the system plugged into an AC power outlet when not in use. The rechargeable batteries will not function properly if not recharged for an extended period of time. It is therefore, recommended to recharge after every use regardless of the usage time to preserve battery life.
- 4. Fully discharged (completely drained) lead-acid rechargeable battery can be possibly "rescued" by the following method (please proceed with extreme caution). Charging with DC power supply at 18V/2A for at least 30 minutes and ascertain battery surface temperature do not exceed 50 °C. Then unplug and insert the charged batteries into the unit and power on. If battery LED indicator flashes continuously, that means the batteries can be charged normally by connecting into an AC power outlet. On the contrary, if battery LED indicator does not flash at all, that means the batteries can't be "rescued" and therefore, a new, fresh replacement battery is needed.

PS. AC power and DC power can not be used at the same time.

SELECTION AND INSTALLATION OF WIRELESS RECEIVER MODULES

1. Each MA-705 can be installed 2 wireless receiver modules, they can be optionally selected according to different applications.
2. Steps of installation or replacement of wireless receiver modules:
 - A. Unscrew the screws from the filter panel.
 - B. To withdraw the old receiver module by using the screw driver with flat head.
 - C. Inter the receiver module into the empty slot.
 - D. Push it carefully into its matching connector.
 - E. Use the screws removed previously to secure the receiver module into position.



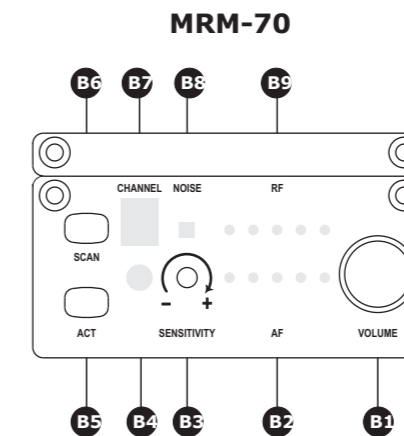
MRM-70: UHF DIVERSITY RECEIVER MODULE

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



- B1 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.
- B2 Audio Signal Level Indicator:** Indicate the audio signal level.
- B3 Sensitivity Adjuster:** Higher sensitivity (+) to increase receiving distance. Lower sensitivity (-) to minimize noise interference.
- B4 ACT Infrared (IR) Port:** Transmits IR signal to transmitter to synchronize frequencies.
- B5 ACT Sync Button:** Press to synchronize the receiver and transmitter frequencies.
- B6 Scan Button:** Press for an interference-free frequency.
- B7 LED Screen:** displays current channel.
- B8 Noise Indicator:** Denotes the presence of interference.
- B9 RF Signal Level Indicator:** Indicate the RF signal strength received.

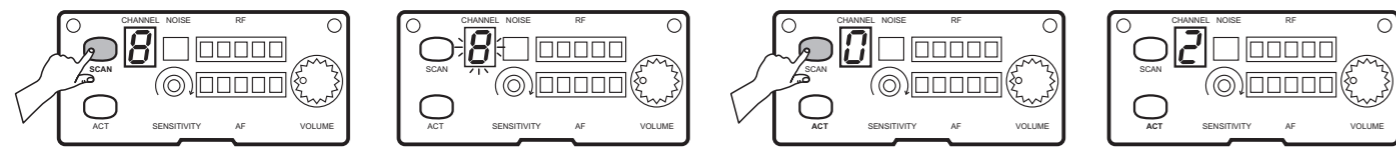
SET-UP RECEIVER AND TRANSMITTER FREQUENCIES

AUTOMATIC "RECEIVER" FREQUENCY SELECTION

1. POWER "ON" the portable PA

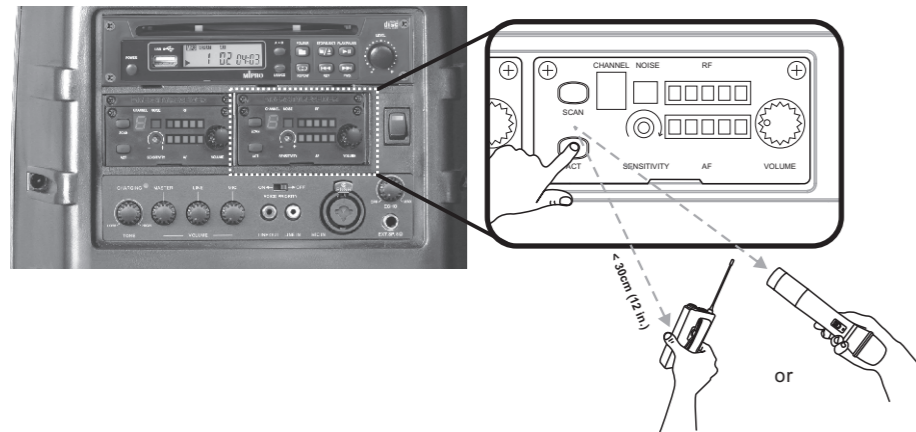


2. POWER on receiver by turning "VOLUME" knob.



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

ADDITIONAL INSTALLATION OF CD OR MIPRO OTHER PLAYER

1. STEPS OF CD PLAYER INSTALLATION AS FOLLOWING:

- A. Remove the cover plate (as shown in Figure 5-1)
- B. Play Block in accordance with the correct orientation into the lock (as shown in Figure 5-2)
- C. Gently push the CD player in to position and tighten accordingly (as shown in Figure 5-3)

(Figure 5-1)



(Figure 5-2)



(Figure 5-3)



2. OPERATIONS OF CD PLAYER:

PLEASE REFER TO ENCLOSED MANUAL IN THE CARTON.

HELPFUL OPERATING TIPS

1. Before turning the unit ON, please set all volume controls to their minimum level. This prevents any loud "thumps" at power on. Adjust the volume controls only after the unit is fully powered up.
2. All audio sources can be amplified simultaneously while output volume of each audio source can be controlled separately.
3. During use, you may use the line level audio output to make a recording
4. Please refer to the operating instructions for the wireless microphone for more details on its use.
5. MA-705 combines both a high efficient speaker and a super cardioid wireless microphone for a clear and powerful output. So, NEVER place a microphone right in front of speaker otherwise damaging feedback could occur (both to operators ears and the system!).
6. The extension speaker of MA-705 is rated at 50 watts @ 8 ohms. DO NOT short out the speaker cables, otherwise, unwarranted damage could be done to the system amplifier.
7. To ensure optimal performance, the MA-705 can be installed on a stand or placed on a platform, while microphones should be located beside or behind the system to avoid feedback.
8. If you experience a short operating time when you know that the batteries are fully charged, it is often a sign of aging batteries. Both rechargeable batteries must be replaced (as a pair) at your earliest convenience.
9. Do not expose this product to an environment where there are water dropping or splashing.

FAQ - PORTABLE PA**Q: Why is my MA-705 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-708) 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-705 ACCESSORIES

MA-705EXP: Extension Speaker for MA-705

Unpowered extension speaker (10-meter speaker cable included)

MB-30: 12V/2.9AH Rechargeable Battery

Gell-cell (Sealed lead-acid) type rechargeable battery (MA-705 requires 2 MB-30 batteries)

MS-70 - Speaker Tripod Stand

Adjustable stand for MA-705 portable PA system

SC-50 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 ; ACT-3Ha- 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) ; MU-210 (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-23 (beige) Subminiature Headworn Microphone

Omni-directional, 3mm, 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

