MULTICOM
USER'S MANUAL

MULTIPLEX COMMUNICATION RADIO
WITH HANDS FREE,
Model; MC11

1. General Information

1.1 Introduction
The "MULTICOM" is the most optimized multiplex communication device with hands free talks and it combines quality and versatility into a compact and easy to use with state of the art technology.

1.2 Main Feature
* Team mode version :
  Up to 5 people conference talks in full duplex mode
* Group mode version :
  Up to 5 people conference talks and other up to 94 people listening at the same time
  The listener is also able to become speaker by press Talk button and one of speakers who joined earliest among 5 speakers drops to listener in that case
* Long distance coverage over 800yd / 900m typically in 900Mhz version or 400m typically in 2.4Ghz version
* Crystal clear sound quality with super surround noise cancellation
* Longer than enough battery life, over 10 hours
* Outdoor purpose water resistant and hands free communication
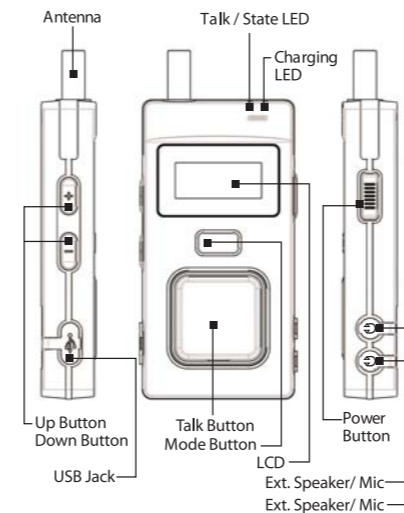* Convenient micro USB charging solution compatible with most of mobile phone charging adapters to charge

1.3 Accessories
* Ear set Boom Microphone
* Neck Strap
* USB Charging Cable
* Arm Band Strap

1.4 Optional Accessories
* CB20; Charging Container for 20 sets (535 x 282 x 132mm)
* CB40; Charging Container for 40 sets (625 x 412 x 132mm)
* CC01; Carrying Case with Belt Clip
* CA01; USB Charging Adapter
* HM01; Headset Boom Microphone
* CM01; Clip on Microphone

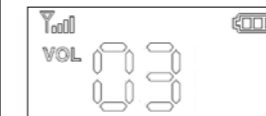## 2. Controls and Indicators

Antenna
Talk / State LED
Charging LED
Up Button
Down Button
USB Jack
Talk Button
Mode Button
LCD
Ext. Speaker/ Mic
Ext. Speaker/ Mic
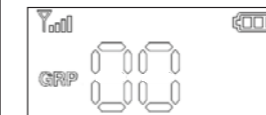Power Button

3. How to use

3.1 Power On/Off
Press and hold the "Power" button longer than 3 seconds to turn the device power on. The LCD display is on and shows the default volume level "VOL 03". After that press and hold the "Power" switch again for 3 seconds to turn the device power off.
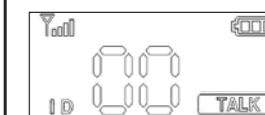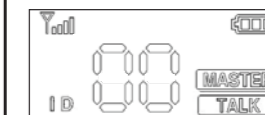

3.2 Group selection
Press and hold the "Mode" button longer than 3 seconds after turn the device power on. The "GRP" symbol on the LCD is blinking. Select the Group number 0~39 as you desire by press "▲" or "▼" button and then release all the buttons longer than 3 seconds to fix it. Every radio needs to have a same Group number to communicate each other in a group.

3.3 ID selection
In a group, every radio needs to have each different ID per radio from "00" to "99". The ID "00" becomes a master radio in a group and every group needs to have a master radio with ID "00" per group without alternative. The "MASTER" and "TALK" are displaying on the LCD as soon as the ID "00" is set. Press and hold the "Mode" button longer than 3 seconds after turn the device power on. The "GRP" symbol on the LCD is blinking. And press the "Mode" button one more time instantly. The "ID" symbol on the LCD is blinking. Select each different ID number per radio from "00" to "99" in a group by press "▲" or "▼" button and then release all the buttons longer than 3 seconds to fix it.
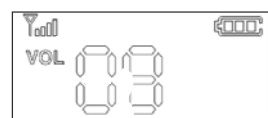

3.4 Transmitting and Receiving
In a master radio with ID "00", its transmitting and receiving are activating automatically as soon as its ID is set with "00". For other radios, press "Talk" button for 2 seconds and leave it as long as you want to do transmitting and receiving at the same time. The "TALK" is displaying on the LCD. In case you want to do receiving only without transmitting, no need to press "Talk" button after turn the device power on. If you want to change the mode from the transmitting and receiving to the receiving only, just press again "Talk" button for 2 seconds. The "TALK" is disappeared on the LCD and the radio works as receiving only
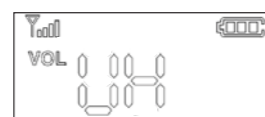
3.5 Volume Up/ Down
It gives you to adjust the hearing volume level with 6 steps as per you prefer. Press "▲" button to control volume up and "▼" button for volume down after turn the device power on. It is available to adjust the volume level 0~6 from low to high.

Note; Its default is "VOL 3".

3.6 Audio Output High / Low
It serves you to choose higher audio output or lower beside of Volume Up / Down. The higher audio output is effective when you listen to the device in a heavy noise place. Press and hold the "Mode" button longer than 3 seconds after turn the device power on. The "GRP" is blinking on the LCD. Press the "Mode" button 6 times instantly. Select either "UH" for higher audio output or "UL" for lower audio output by press "▲" or "▼" button and then release all the buttons longer than 3 seconds to fix it.
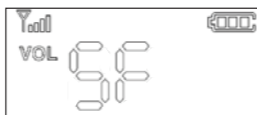

Note;
1) Its default setting is "UL".
2) There might be kinds of white noise when you set the audio output at "UH". Hence, it is recommendable to set the audio output at "UL" except using the device in a heavy noise place.

3.7 Side Tone On/ Off
The side tone feature gives you to hear what you are talking as a self monitoring system. Press and hold the "Mode" button longer than 3 seconds after turn the device power on. The "GRP" symbol on the LCD is blinking. Press the "Mode" button twice instantly. The "SO" symbol on the LCD is blinking. Press "▼" button to change the Side Tone Off. The "SF" is displaying on the LCD. Release all the buttons longer than 3 seconds to fix the Side Tone Off.
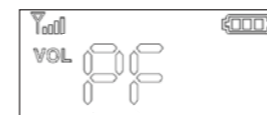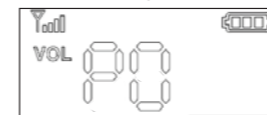

Note; Its default setting is "SO".

3.8 Receiving only mode selection
It is available to set the device as receiving only. Press and hold the "Mode" button longer than 3 seconds after turn the device power on. The "GRP" is blinking on the LCD. Press the "Mode" button 4 times instantly.
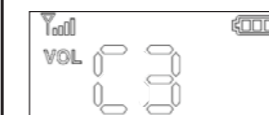

Select either "PO" for the device Receiving and Transmitting capable as a normal activity or "PF" for the device receiving only as transmitting mute by press "▲" or "▼" button and then release all the buttons longer than 3 seconds to fix it.

Note; Its default setting is "PO".

3.9 Microphone sensitivity level control
It is available to select the microphone sensitivity up to 5 steps according to the environment you have. Press and hold the "Mode" button longer than 3 seconds after turn the device power on. The "GRP" is blinking on the LCD. Press the "Mode" button 5 times instantly. Select the microphone sensitivity level 1 ~ 5 as per you desire by press "▲" or "▼" button and then release all the buttons longer than 3 seconds to fix it.

Note;
1) The "C 1" the lowest microphone sensitivity and "C 5" is the highest.
2) Its default setting is "C 3"

3.10 Occupied status indicator
In the group mode, "PT1" is blinking when the 5 speakers are already existing in the channel you want to talk. If you press "Talk" button for 2 seconds while "PT1" blinking, the earliest speaker among 5 speakers will drop to Listener and you will be Speaker.

4. Battery
The rechargeable Li-Ion battery 3.7V, 1,100mA is installed in the device. Plug the USB charging cable into the USB port and recharge the battery. The Charging LED in the right side top corner of device is blinking during the charging and turned it off when the battery is fully charged.

5. Specification

Radio Frequency Type   ISM 2403MHz ~ 2480MHz
Type   Wireless Microphone/Receiver Unit
Radio Interface   ISM 2.4GHz: FSK Modulation with Frequency Hopping
Output Power: Class 1(100mW)
Voice Codec   16bit/16KHz
Tx Max Output Power   100mW
Rx Sensitivity   -95dBm
Voice Latency   < 35ms
Num. of Frequency Channel   78ch
Channel Spacing   2MHz
Data Rate   2Mbps
Freq. Bandwidth   2MHz
Battery   Li-ion Battery @3.7V/ TBD 1100mA
Antenna   Internal Helical Antenna
Talk Time   10hr Typ.
Power Consumption   Avg. 100mA at Class 1(100mW)
Distance Range(LOS)   100M @ Class 1
Frequency response   50 Hz ~ 7 kHz
Maximum operation users   5person (include Master device)
Dimension / Weight   98mm(H) x 49mm(W) x 17mm(D) / 88g
Audio In   TBD
Audio Out   TBD
LED Display   Status LED, Talk LED, Charging LED
Low Battery Alert   Audible signal (Beep)
Water Proof   TBD