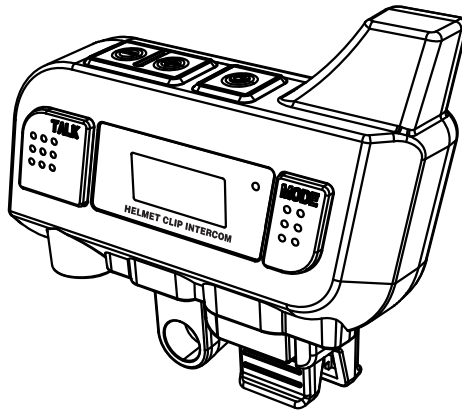


USER'S MANUAL FOR HELMET CLIP INTERCOM

Ver.20110MST



Perfect wireless Intercom solution for
Helmet-wearing workers
Model; HC-900M, HC-2.4G

Maytel Co., Ltd.

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1. General Information

1.1 Introduction

"HELMET CLIP INTERCOM" is the most advanced and compact hands-free wireless intercom device that can be equipped to the helmet, which frees the users' hands and provides reliable full-duplex communication allowing up to 10 users to speak simultaneously. The "HELMET CLIP INTERCOM" can expand the talk distance and minimize the influence of the obstacles without a help of any external device ; Supported in 4 Modes.

The " HELMET CLIP INTERCOM " combines reliable performance, quality and versatility into a compact and easy to use through state-of-the-art technology.

1.2 Main Feature

- Support 4 professional operating modes and directly select the optimized mode according to the environment in the field.
- Realize 9 fixed users + Any one out of unlimited participants direct talking together with hands-free simultaneously while rest members are listening.
 - Any-one participant can participate into the communication by pressing TALK button while the rest members are listening
 - Another participant who desires to talk can participate by pressing TALK button only when the prior speaker has released the button.
- Crystal clear sound quality, loud enough audio output and super dynamic noise cancellation more than 95dB.
- Long enough talk distance through 4 professional operating modes that can be directly selected in the field.
- Individual PIN encryption that can be set up by each group and clear LCD display showing Channel & ID number on the same screen.
- Fully met IP54 waterproof including strong and rugged mechanism.
- Easy and convenient USB Type-C magnetic charging system.
- Separable clip for installation to the helmet.

1.3 Package Components

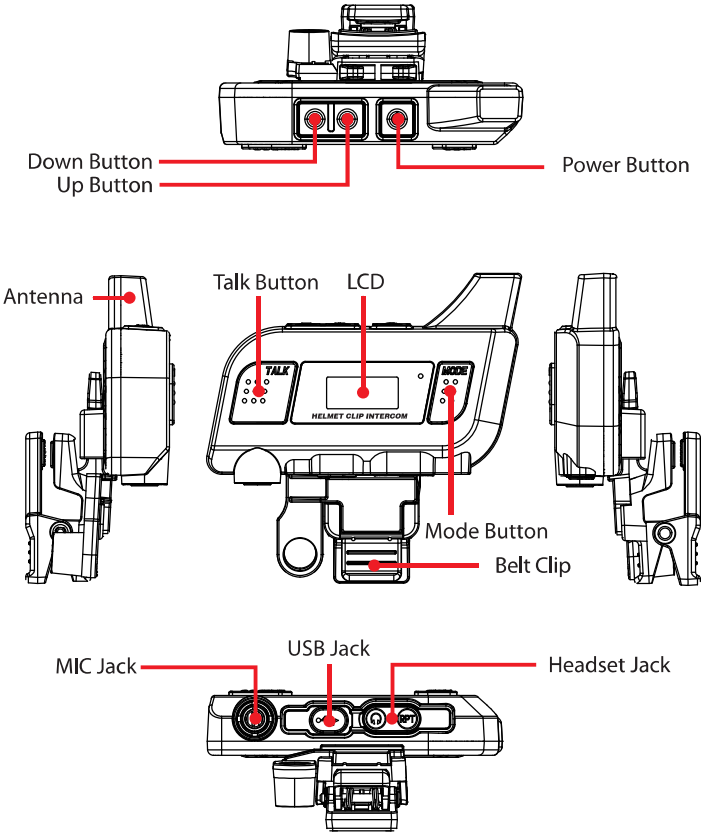
- HC-900M or HC-2.4G ; Helmet Clip Intercom 1PC
- HPB-01LG ; Left ear Speaker Pad Boom Microphone 1PC
- HC-RH01 ; Regular Hemet Clip 1PC
- UC-05 ; Right angle type USB charging cable 1PC
- User's Manual 1PC

1.4 Optional Accessories

- HC-RH01 ; Regular Helmet Clip
- HC-RH01R ; Additional clip for fixing speaker pad when the product is mounted on the back of the regular helmet
- HC-HH01 ; Various hard hat clip
- HC-HH01R ; Various hard hat clip for rear
- HC-HH01RLR ; Additional clip for fixing speaker pad when the product is mounted on the back of hard hat
- HC-BC01 ; All kinds of ball cap clip
- HPB-01LG ; Left ear speaker pad boom microphone
- HPB-01RG ; Right ear speaker pad boom microphone
- HPB-01RLG ; Left ear speaker pad boom microphone for back mounted device
- HPB-01RRG ; Right ear speaker pad boom microphone for back mounted device
- HBM-01 ; Helmet boom microphone
- HSP-01 ; Helmet speaker pad
- WC-01 ; Wind screen for HPB-01
- SC-01 ; Speaker cover for HPB-01
- UC-05 ; Right angle type USB charging cable
- BRC-01 ; Boom microphone port rubber cap
- EHE-01 ; Ear holder type earphone
- EHB-01G ; Ear holder type boom microphone
- PC-01 ; Program cable
- AU-01 ; Aux cable
- BT-11 ; Extra battery

2. Controls and Indicators

2.1 HELMET CLIP INTERCOM



Power Button

Press and hold the Power button for a second to turn the device power On/Off

Mode Button

Select Group number, ID number, Side Tone, Microphone sensitivity Level, Security Code selection , Operation mode selection and Roaming selection.

Up Button

Increase Volume Level, Group number, and ID number etc. in each mode

Down Button

Decrease Volume Level, Group number, and ID number etc. in each mode

Talk Button

Talk and Mute On/Off

Headset Jack

3.5mm headset contact

MIC Jack

Microphone contact

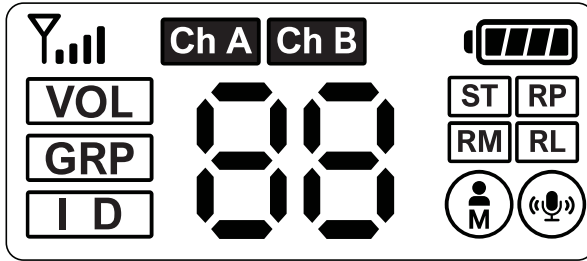
LCD















Indicate current status and setting

USB Jack

USB port for firmware upgrade and battery recharge

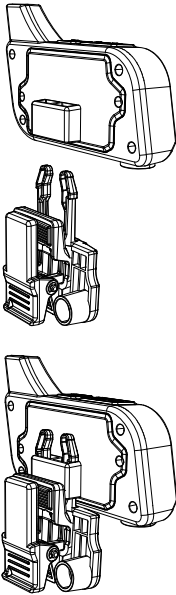
2.2 LCD



-  Signal Strength
-  Battery status
-  Main Master
-  Sub Master
-  Volume
-  Group
-  ID
-  Current Setting
-  TALK State
-  Set as Master
-  9+Any one Mode
-  Repeater Mode
-  Roaming Mode
-  Relay Mode

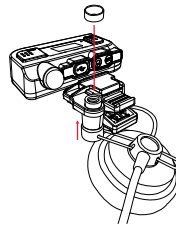
3. Accessories and How to Install

How to install Belt Clip

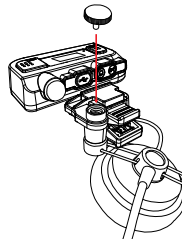


Push in the Belt Clip to the back side of HELMET CLIP INTERCOM until a clicking sound occurs

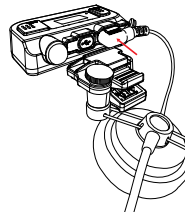
How to install Ear Speaker Pad Boom Microphone



1. Insert the Ear Speaker Pad Boom Microphone to the Clip hole and screw in the nut.



2. Screw in the bolt to fix Ear Speaker Pad Boom Microphone.

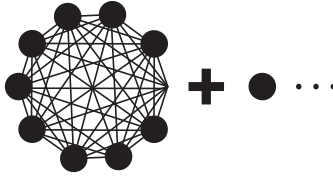


3. Plug in the 2 plugs connector to Helmet Clip Intercom.

4. Selectable Operating Modes

4.1 [ST] 9+any one

9 fixed users + any one out of the participants talking together simultaneously.



ID for [ST] mode is assigned from 00~08, A (Any one), L (Listen Only), 09. Refer to Table 1 below.

Table 1, ID setting for [ST] mode

ID	Status	Operation	Description
00	Master	Fixed TX/RX of ID 0	Must exist in each group
01	Slave	Fixed TX/RX of ID 1	Full duplex simultaneous communication between the members
02	Slave	Fixed TX/RX of ID 2	Full duplex simultaneous communication between the members
03	Slave	Fixed TX/RX of ID 3	Full duplex simultaneous communication between the members
04	Slave	Fixed TX/RX of ID 4	Full duplex simultaneous communication between the members
05	Slave	Fixed TX/RX of ID 5	Full duplex simultaneous communication between the members
06	Slave	Fixed TX/RX of ID 6	Full duplex simultaneous communication between the members
07	Slave	Fixed TX/RX of ID 7	Full duplex simultaneous communication between the members
08	Slave	Fixed TX/RX of ID 8	Full duplex simultaneous communication between the members
A	Slave	ID 9 ; Shared	Unlimited, Can listen to other members' conversation, Can talk by pressing the Talk button
L	Slave	Listen Only	Unlimited, Can listen to other members' conversation
09	Slave	Fixed TX/RX of ID 9	Full duplex simultaneous communication between the members, Should not use A when setting the device

4.2 [RM] Roaming

Talking distance expansion through mutual relay between Master and Submaster.



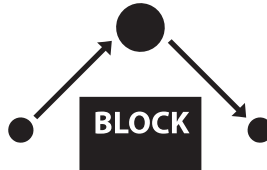
ID for [RM] mode is assigned from 00~08, A (Any one), L (Listen Only), 09. Refer to Table 2 below.

Table 2, ID setting for [RM] mode

ID	Status	Operation	Description
00	Main Master	Fixed TX/RX of ID 0	Must exist in each group
01	Sub Master	Fixed TX/RX of ID 1	Full duplex simultaneous communication between the members
02	Slave	Fixed TX/RX of ID 2	Full duplex simultaneous communication between the members
03	Slave	Fixed TX/RX of ID 3	Full duplex simultaneous communication between the members
04	Slave	Fixed TX/RX of ID 4	Full duplex simultaneous communication between the members
05	Slave	Fixed TX/RX of ID 5	Full duplex simultaneous communication between the members
06	Slave	Fixed TX/RX of ID 6	Full duplex simultaneous communication between the members
07	Slave	Fixed TX/RX of ID 7	Full duplex simultaneous communication between the members
08	Slave	Fixed TX/RX of ID 8	Full duplex simultaneous communication between the members
A	Slave	ID9 ; Shared	Unlimited, Can listen to other members' conversation, Can talk by pressing the Talk button
L	Slave	Listen Only	Unlimited, Can listen to other members' conversation
09	Slave	Fixed TX/RX of ID 9	Full duplex simultaneous communication between the members, Should not use A when setting the device

4.3 [RP] Repeater

Ideally located Master unit relays each user's talking to minimize the impact of surrounding obstacles.



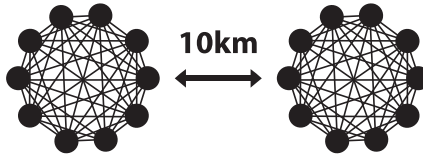
ID for [RP] mode is assigned from 00~07, A (Any one), L (Listen Only), 08. Refer to Table 3 below.

Table 3, ID setting for [RP] mode

ID	Status	Operation	Description
00	Master	Fixed TX/RX of ID 0	Must exist in each group
01	Slave	Fixed TX/RX of ID 1	Full duplex simultaneous communication between the members
02	Slave	Fixed TX/RX of ID 2	Full duplex simultaneous communication between the members
03	Slave	Fixed TX/RX of ID 3	Full duplex simultaneous communication between the members
04	Slave	Fixed TX/RX of ID 4	Full duplex simultaneous communication between the members
05	Slave	Fixed TX/RX of ID 5	Full duplex simultaneous communication between the members
06	Slave	Fixed TX/RX of ID 6	Full duplex simultaneous communication between the members
07	Slave	Fixed TX/RX of ID 7	Full duplex simultaneous communication between the members
A	Slave	ID8 ; Shared	Unlimited, Can listen to other members' conversation, Can talk by pressing the Talk button
L	Slave	Listen Only	Unlimited, Can listen to other members' conversation
08	Slave	Fixed TX/RX of ID 8	Full duplex simultaneous communication between the members, Should not use A when setting the device

4.4 [RL] Relay

Long-distance relay via two-way radio for intra-group talking.



ID for [RL] mode is assigned from 00~08, A (Any one), L (Listen Only), 09. Refer to Table 4 below.

Table 4, ID setting for [RL] mode

ID	Status	Operation	Description
00	Master	Fixed TX/RX of ID 0	Must exist in each group, Connected with 2way radio
01	Slave	Fixed TX/RX of ID 1	Full duplex simultaneous communication between the members
02	Slave	Fixed TX/RX of ID 2	Full duplex simultaneous communication between the members
03	Slave	Fixed TX/RX of ID 3	Full duplex simultaneous communication between the members
04	Slave	Fixed TX/RX of ID 4	Full duplex simultaneous communication between the members
05	Slave	Fixed TX/RX of ID 5	Full duplex simultaneous communication between the members
06	Slave	Fixed TX/RX of ID 6	Full duplex simultaneous communication between the members
07	Slave	Fixed TX/RX of ID 7	Full duplex simultaneous communication between the members
08	Slave	Fixed TX/RX of ID 8	Full duplex simultaneous communication between the members
A	Slave	ID9 ; Shared	Unlimited, Can listen to other members' conversation, Can talk by pressing the Talk button and cannot communicate with other Groups.
L	Slave	Listen Only	Unlimited, Can listen to other members' conversation
09	Slave	Fixed TX/RX of ID 9	Full duplex simultaneous communication between the members, Should not use A when setting the device

5. How to Use

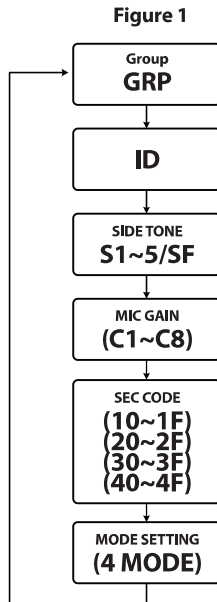
5.1 Functions

There are 2 operation modes, normal mode and setting mode.

The default mode is normal when turn on the power.

Long press Mode button to go to setting mode. Setting values are shown in the order of Group -> ID -> Side Tone -> Mic Gain -> SEC Code -> Operation mode change in Figure 1.

It is available to see the setting modes in order when short press the Mode button.



Long press Mode button to go to setting mode to change the setting values such as Group and ID.

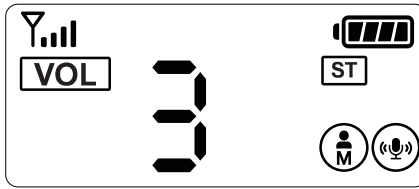
5.2 Power On/Off

Press and hold the "Power" button for a second to turn the device power On/Off.

5.3 Volume Adjustment

Volume adjustment function to let the user to change the volume when needed.

- Volume Level appears on the top of the LCD screen when turn on the power.
- In normal mode, adjust the volume to the desired level by pressing Up/Down button on the top of the device.
- Volume can be set from 0 ~ 8. [Default Level : 3]



5.4 Group Selection

Group setting function to let the user to change the Group when needed.

- Turn on the power of the device.
- Long press the Mode button then the LCD screen becomes setting mode and [GRP] blinks.
- Press Up/Down button on the top of the device to set to the desired Group.

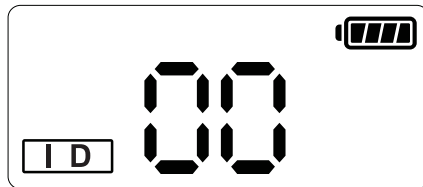


- Group can be set from 0 ~ 39.
 - HC-900M; 0 ~ 25
 - HC-2.4G; 0 ~ 39
- Long press the Mode button to finish the setting.

5.5 ID Selection

ID Setting function to let the user to change ID when needed.

- Turn on the power of the device.
- Long press the Mode button to go to setting mode.
- Short press Mode button to go to ID Setting screen, and **ID** blinks.
- Press Up/Down button to set to the desired ID.
- Refer to Tables 1 ~ 4 for ID Setting method of each mode.

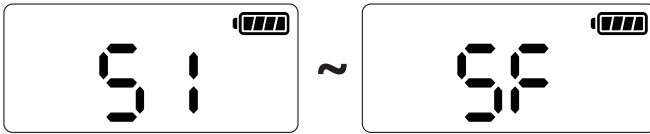


- Long press the Mode button to finish the setting.

5.6 Side Tone Selection

Side Tone can be turned On/Off.

- Turn on the power of the device.
- Long press the Mode button to go to setting mode.
- Short press Mode button to go to ID Setting screen.
- The user can set Side Tone level 1 (S1) ~ level 5 (S5) or Off (SF) by Up/Down buttons.

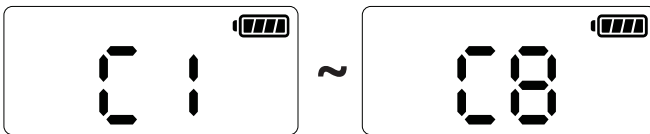


- Long press the Mode button to finish the setting.

5.7 Microphone Sensitivity Level Selection

Mic Gain level can be adjusted when using.

- Turn on the power of the device.
- Long press the Mode button to go to setting mode.
- Short press Mode button to go to Mic level setting screen.
- Adjust the Mic Gain setting by Up/Down buttons.
- Mic Gain level can be set from 1 ~ 8.

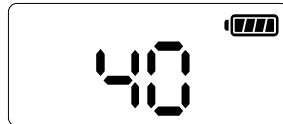
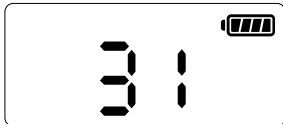


- Long press the Mode button to finish the setting.

5.8 Security Code Selection

Security Code can be changed by the user.

- Turn on the power of the device.
- Long press the Mode button to go to setting mode.
- Short press Mode button to go to Security Code setting screen.
- The user can change the Security Code by Up/Down buttons. Security Code is composed of 4 digits and each digit can be set as 0 ~ 9, A, b, C, d, E, F.
- Security Code can be set one digit by one digit. Short press Mode button to move to the next digit. 1, 2, 3, 4 on the left indicates which digit the code is located. The right indicates hexadecimal number.
- For example, to set the code as 0xFC10, it should be set in the following order : 1F -> 2C -> 31 -> 40.



- Long press the Mode button to finish the setting.

5.9 Roaming Setting

Roaming function can be set by the user. It can be set as Auto Roaming, Manual Roaming, Master Fix, Sub master Fix.

Roaming function	Description
H0	Auto Roaming
H1	Manual Roaming. Short press Mode button to manually change connection between Master and Sub master.
H2	Master Fix
H3	Sub master Fix

Ch A (Main Master) or **Ch B** (Sub Master) is displayed on the LCD.

5.10 Operation Mode Selection

Operation Mode can be selected to boot the device with the selected one of the 4 modes.

- Turn on the power of the device.
- Long press the Mode button to go to setting mode.
- Short press Mode button to go to Operation mode selection setting screen.
- Press Up/Down buttons to select the desired application.
; Operation Mode
 - Pt ; ST Mode
 - PL ; RL Mode
 - PP ; RP Mode
 - PO ; RM Mode
- Long press the Mode button to finish the setting.
- The power automatically goes off once the Operation Mode has changed. The device will be booted with the selected mode when turn on the power afterwards.



6. Specification

Dimension

100 x 69 x 32 mm

Weight

98g

Frequency Range

HS-900M; 902MHz ~ 928MHz

HS-2.4G; ISM 2402MHz ~ 2480 MHz

Radio Interface

GFSK Modulation

Voice Codec

16bit/8KHz

Tx Max Output Power

TBD mW

Rx Sensitivity

-95dBm

Num. of Frequency Channel

HC-900M; 26ch

HC-2.4G; 40 ch

Power Supply

Li-ion Battery @3.7V/ 1,100 mA

Antenna

Internal

Environmental Rating

IP54

7. Declaration of Conformity

Maytel hereby declares that Maytel conforms to the major characteristic specifications and other relevant specifications given in the Directive 1999/5/EEC and is made after following specifications;

EN 60950:2002
EN 301 489-1 / -5
EN 300 086-2 V1.1.1 (2001-03)

Manufactured by :

Maytel Co., Ltd.
#416 Doosan Venture Digm, Heung An Dae-Ro, Dongan-Gu,
Anyang-Si, Gyeonggi-do, South Korea (Zip; 14059)
www.maytel.kr

Imported by :

KBC import / export
Argonstraat 6, 6718 WT, Ede
The Netherlands

8. Warranty

Maytel will give 12 months warranty against failure made by the manufacturer from the date of purchase.
The warranty will not cover damage made by the user, the user opening the equipment, moist, dirt, heat or cold. The warranty will not cover lightning/overvoltage. Please, contact your dealer if a problem with the equipment arises.

9. Waste Disposal

Electrical and electronic products can contain materials, parts and units that can be dangerous for the environment and human health. Products marked with the WEEE mark (shown below), shall not be disposed together with your normal household waste. Please inform yourself about the local rules and disposal collection system for electrical and electronic products. The correct disposal of your old product will help to prevent negative consequences for the environment and human health. (WEEE = Waste of Electrical & Electronic Equipment)

