MGX

R1

12/24V REMOTE MIC
WATERPROOF UHF
LMR/CB HYBRID RADIO

TABLE OF CONTENTS

SAFETY NOTES

Read these instructions carefully and completely before using this UHF CB Radio.
Keep the instructions with the radio so that they are always accessible to all users.

Observe the following notes about road safety:
Use this device in such a way that you can always safely control your vehicle.
As the driver, you should not use this unit in a way that will distract you from driving.
Traffic signs and traffic regulations always have priority.
Always listen at a moderate volume to protect your hearing and to be able to hear acoustic warning signals (e.g., police sirens).
Do not transmit without an antenna connected, as this may damage the radio and void the warranty.

SPEAKER MIC BUTTON FUNCTIONS
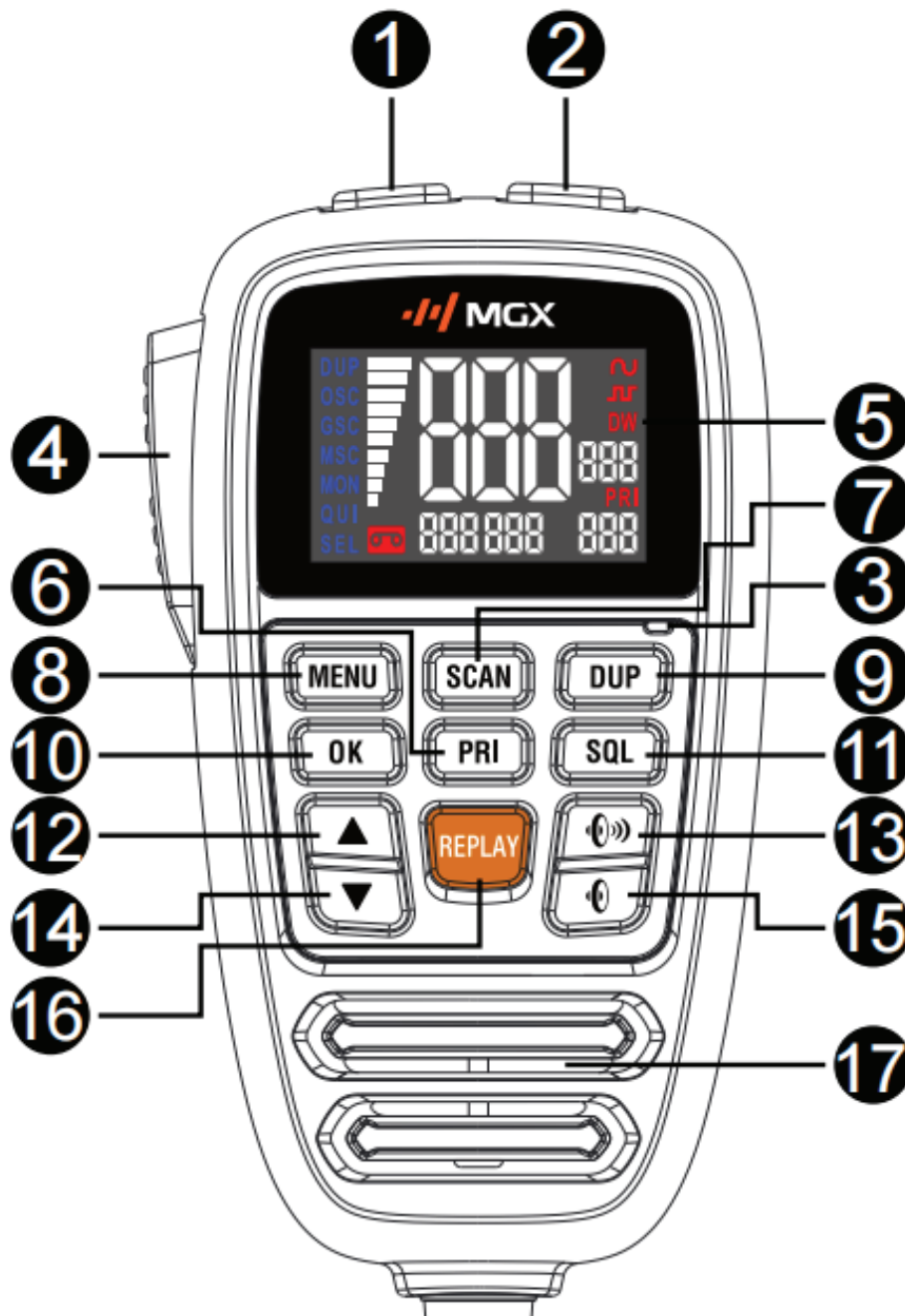
1. Smart Button

This button can be assigned in the MENU to one of the following functions- CH Scan, Duplex, Quiet, Dual Watch, Monitor, Selcall, DCS/CTCSS. Default is MON.

2. Power On/Off

- Short Press: ON
- Long Press: OFF

3. Microphone

For best performance, speak approximately 5cm distance from the built-in microphone.

4. PTT Button

- Press to Transmit. ● Release to Receive

5. Display

6. Priority Button
- ● Short Press: Go to set Priority Channel
- ● Long Press: Set or cancel the current channel as Priority Channel.

7. SCAN Button
- ● Short Press: To Scan Channels
- ● Long Press: To add or remove the Memory Channel. [Only in GS (Group Scan) or NS (Network Scan) mode]

NOTE: *Dual Watch is disabled while scanning, short press again to exit scanning.*
Pressing the UP and DOWN buttons (12 or 14) during scanning to change the direction.

8. MENU Button
- ● Short press: To enter the menu section.
- - Then use the UP and DOWN buttons (12 or 14) to scroll through the function options.
- - Press the OK button (10) to enter that function.
- - Use the UP and DOWN buttons to make changes to the function.
- - Press the OK button to accept the change. The display will then revert to the MENU options.
- ● Long press: Keypad lock status: ON/OFF

9.DUP Button
- ● Short Press: Enable/Disable Repeater function.
- ● Long press: TX Call Tone.

10. OK Button
- ● Short press: To enter Menu function or to accept the function change.
- ● Long-press: Dual Watch On/Off.

11. Squelch Button
- ● Short Press: Enter SQUELCH setting- then use the CH+ and CH- arrow buttons (12 or 14) to adjust.

12. UP Button
- ● Short Press: Channel up in operation mode
  Function or Function select in MENU mode
- ● Long Press: Scan Up

13. VOLUME UP

14. DOWN Button
- ● Short Press: Channel down in operation mode.
  Function down or Function select in MENU mode.
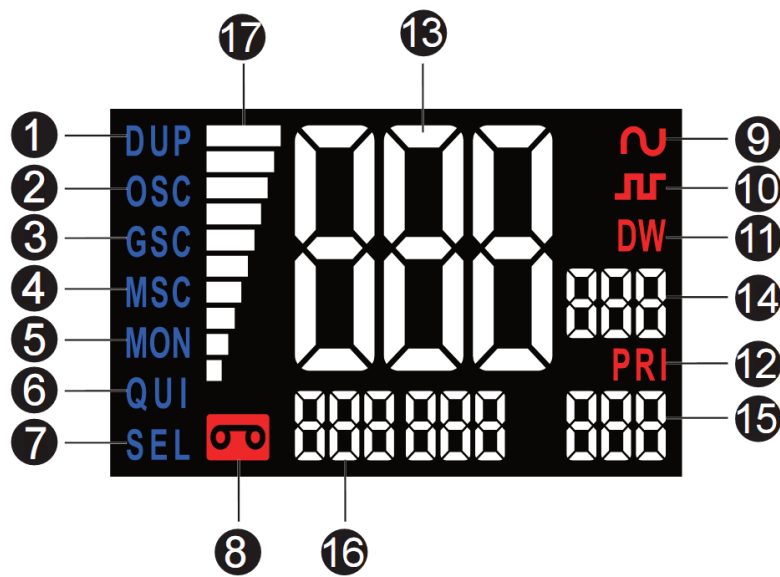- ● Long Press: Scan Down

15. VOLUME DOWN

16. REPLAY Button
- ● Short Press: To playback received communications. The RPY icon will display during playback.
- ● Long Press: To display the ID of the radio, press OK key to edit the 6-digit ID setting.

17. SPEAKER

DISPLAY FUNCTIONS

DUP Duplex Capability	
OSC Open Scan (OS)	**888** Channel Number 001~128
GSC Group Scan (GS)	**888** Dual Watch Channel
MSC Memory Scan Channel	**888** Priority Channel
MON Monitor Function On/Off	**888888** Selcall set up
QUI Quiet Mode	
SEL Selcall	
〰 CTCSS	
⎍ Digital Coded Squelch	
▭ Replaying RX	
DW Dual Watch	
PRI Priority Channel Watch	

1. DUP
● Indicates that Duplex capability is ON.

2. OSC
● Indicates that Open scanning is active.

3. GSC
● Indicates that Group scanning is active.

4. MSC
● Indicates that Master scanning scanning is active.

5. MON
● Indicates that the Monitor function is active.

6. QUI
● Indicates that the Quiet mode is ON.

7. SEL
● Indicates that the Selcall mode is ON.

8. ▭
● This icon is displayed during playback of recorded RX.

9. 🔴
● Indicates that CTCSS is active.

10. 🔴
● Indicates that DCS (Digital Coded Squelch) is active.

11. DW
● Indicates that Dual Watch is active.

12. PRI
● Indicates that a Priority Channel is set.

13. ▦ Large
● Current Channel Number

14. ▦ Small
● Dual Watch Channel Number

15. ▦ Small
● Priority Channel Number

16. 888888
● Selcall ID setup

17. ▃▅▇
● TX/RX Signal Meter

GENERAL OPERATION

POWER On/Off
Press ON/Off button (2) to turn on. Press and hold for 2 seconds to turn off
When turned ON, you will hear a tone and LCD display will show all icons for one second. The display will then revert to the most recently selected channel.

ADJUSTING THE VOLUME
1. Push the 🔊 button (13) to increase the volume
2. Push the 🔈 button (15) to decrease the volume.

CHANNEL SELECT
Press the **UP** or **DOWN** buttons (12 or 14) to select desired channel.

TRANSMITTING
Select the desired channel by using the **UP** or **DOWN** buttons (12 or 14).
Press the microphone's **PTT** button (4) and speak normally into the microphone.
Hold it approx. 5-7cm from your mouth.
Release the **PTT** button to end the transmission and listen for a reply.
NOTE: *Refer to the Channel Frequency page to see channels restrictions and usage guide.*

CHANNEL SCAN

The UHF CB Radio has a scanning feature that allows you to search for active channels automatically. Furthermore, the UHF CB Radio is designed to have three types of scanning; Open Scanning (OSC), Group Scanning (GSC) and Network Scan (NS), to give you flexibility and allow you to use the radio more effectively.

Press and hold the **UP** or **DOWN** buttons for 2 seconds or Press SCAN button to start channel scanning.

The OSC, GSC or MSC icon flashes depending on which scan mode you are in.

The scan direction can be changed at any time by pressing the **UP** or **DOWN** buttons.

- Open Scan Mode (OSC)

Allows continuous scanning of all 80 channels. If an active channel is found, scanning will stop on that channel.

To use Open Scan Mode, press and hold for 2 seconds the **UP** or **DOWN** buttons or Press SCAN button - **OSC** icon appears.

To deactivate SCAN, press the PTT button or the SCAN button.

- Group Scan Mode (GSC) & Priority Watch

Includes the Priority Watch feature which allows you to monitor the selected Instant Priority Channel while scanning.

To use Group Scan Mode, press and hold for 2 seconds the **UP** or **DOWN** buttons or Press SCAN button - **GSC** icon appears on the display.

If an active channel is found, scanning will stop on that channel. If the received signal ceases, the unit will wait 3 seconds for the signal to return, otherwise scanning resumes. After transmission in scan mode, the unit will wait 20 seconds for the signal to return, otherwise scanning resumes.

To skip the active channel, press the **UP** or **DOWN** buttons.

NOTE: *If SCAN is deactivated while on an active channel, the UHF CB will stay on the active channel. If no channels are active, the UHF CB will revert to the current channel.*

- Network Scan Mode (NSC)

Network Scan will scan the channels stored into Group Scan memory and opens the squelch for signals with the correct CTCSS or DCS code only.

The radios must have the same channel and CTCSS or DCS code. By scanning only group channels, radios will be able to detect and receive group transmissions- continual communication without interruption. When transmitting in this mode, the radio switches to an unused group channel if it detects another signal with no code, or the wrong code, on the channel last used by the group. In this way, all users will be able to have continual communication to or from other users.

P1（CH09-CH20）is stored into GS Memory and CTCSS 01 is set for Network Scan code by default. The GS memory can be changed, channel by channel, if desired- but for Network Scan to work effectively each radio in the group must have the same channels in its GS memory.

*Press and hold **the SCAN** button to add/remove channels into/from GS SCAN Memory.*

NOTE: *RX only Channels CH22-CH23-CH61-CH62-CH63, Emergency Channels (CH05, CH35), User Programmable LMR Channels and Police or Fire (& Ambulance) channels group will not be included in NETWORK SCAN Mode even though stored into GS Memory.*

Channels for which Duplex Setting are On also will be skipped in NETWORK SCAN Mode.

SQUELCH

Use the Squelch to select the Squelch level. The highest level will provide less interference but will affect the communicate distance. Lowest level is fully open and allows all channels faint or close to be heard.

Select a squelch level that allows only clear communications to be heard.

1. Press **SQL** key. The LCD displays "SqL"
2. Use the **UP** and **DOWN** buttons to select SQ Level 00-09. Default: 01
3. Press and release **SQL key** to finish your setting.

DUPLEX (Repeater) Mode (DUP)

Duplex operation allows the radio to transmit on a different frequency to that which it receives allowing operation through repeater stations, Repeaters automatically re-transmit your signal over a wider area, providing greatly increased range.

Press **DUP** button (9) to select ON or OFF.
ON is repeat mode on and only channels 01-08 and 41-48 can be selected as repeat, other channels are invalid when selecting relay and display an error.
Default is OFF - The **DUP** icon is displayed.

Duplex operation is only on channels 1-8 and 41-48. When duplex is selected on these channels, the radio receives on that channel but actually transmits 30 channels higher.
Channel Selecting 1 - 8
Receiving Channel 1 - 8
Transmitting Channel 31 - 38
Channel Selecting 41 - 48
Receiving Channel 41 - 48
Transmitting Channel 71 – 78

PRIORITY CHANNEL (PRI)

- **Setup**

1. Press the **UP** or **DOWN** buttons to select the Priority Channel you prefer.
2. Press and hold the **PRI** button (18) to store the current channel as the Priority channel. The **PRI** icon and channel will be displayed.

- **Recalling the Priority Channel**

Press **PRI** at any time during standby to recall the Priority Channel.
Press **PRI** again to return to the previous channel.

REPLAY (RPY)

The Instant Replay feature automatically records up to 20 groups with 1 minute of received signal.
Instant Replay automatically records receive signal(s) in the following modes:
- *CB RX channel*
- *Scan Mode*

Instant Replay does not record when in Monitor Mode (SQT-0 setting in normal channel mode).

Short press **REPLAY** to playback the most recently received signal.
During playback, the display shows **RPY** and the number of the currently playing recording.

After the most recently received signal has been played back, a long confirmation tone sounds, and the radio returns to the previous mode.

Replay can be turned On or Off in the Menu-

Using the **UP** or **DOWN** buttons, select ON or OFF.

ON means that the recording of communication function is active. Default is ON.

Press the **OK** button to confirm.

NOTE: *The maximum number of recordings is 20.*

 Received signals shorter than 500ms are not recorded.

 Automatic recording of receive signal(s) is suspended during playback.

 Older recordings are automatically overwritten when new recordings are stored.

 Most received communications are short and the 1-minute file may contain several recordings.

 Transmissions (TX) are not recorded.

SELCALL (SEL)

Selective Calling (Selcall) is a special Sequential Tone Squelch System that allows the user to receive/transmit calls selectively from/to an individual or group, on a shared busy channel. Therefore, Selcall is a group feature used by groups with similarly set up radios.

1. Be sure that the radio is off
2. Press and hold **PRI**, then turn on the radio, and you will see "**id**" displays.
3. Press **OK** to start the Selcall ID edit. The 6th digit of the ID flashes.
4. Use the Volume **UP** or **DOWN** buttons to shift between digits. A 6th digit (for 6 tone Selcall) is available and indicated by a '_'.
5. Press **UP** or **DOWN** to select the desired ID. Default ID:000000
6. Press and release **OK** to finish your setting
7. Press and hold **MENU** to exit programming mode.
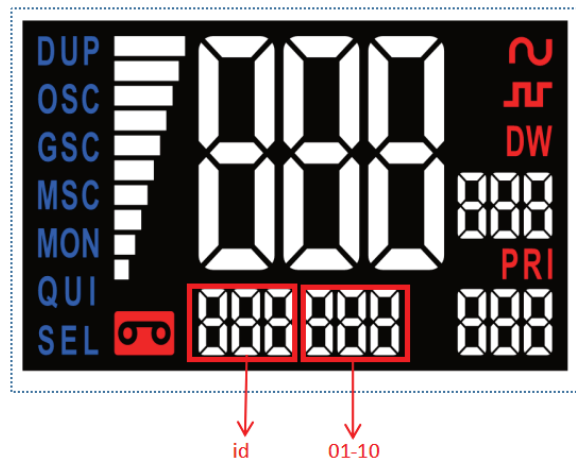
### Store Selcall IDs of receivers into the ID Memory

1. Press and hold **Replay**. The Selcall ID memory will open.

2. Use the **UP** or **DOWN** buttons to select the desired memory you want to edit.

 Up to 10 ID memories can be stored.

If you expect to make calls to radios not stored in the ID memory, then leave memory ID 1 blank for manual ID entry at the time of the call.

3. Press **OK** to start the ID edit. The 6th digit of the ID flashes.

4. Use the Volume **UP** or **DOWN** buttons to shift between digits. A 6th digit (for 6 tone Selcall) is available and indicated by a '_'.

5. Press **UP** or **DOWN** buttons to select the desired ID. Default ID:000000

6. Press and release **OK** to finish your setting.

7. Press **MENU** to exit programming mode.

id   01-10
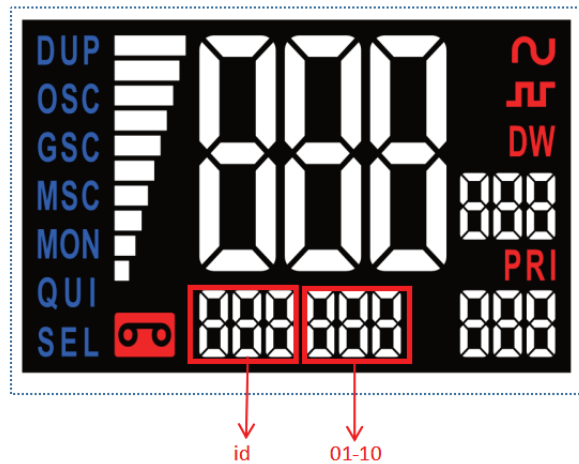
TONE CALLING

Tone Calling allows you to selectively call other radios.

To Call:

1. Select the channel that you and your group agreed to use for Selective Calling.

2. Press and hold **Replay** for 2 seconds.

A beep tone will sound, and the last stored ID or last transmitted ID will be displayed.

3. Use **UP** or **DOWN** buttons to select the desired Selcall ID.

4. Press **Replay** to transmit the Selcall.

CAL will display when transmitting the Selcall.

A tone coming from the called radio will be received if you have successfully made contact.

CALL FUNCTION

Press and hold **DUP** Button. A three second ringing tone will be transmitted.

You may select from 5 types of tones. See MENU function (CAL)

Note: *The call tone is provided the cumulative duration of this tone is not exceed 3 s in any 60s period.*

QUIET MODE (QUI)

Puts the receiver in the QUIET mode (also known as the Tone Squelch mode) for the selected channel. When activated, the transceiver prevents any unwanted conversations in the channel from being heard unless the call is specifically directed to you and the Selcall ID required to open the QUIET condition has been received.

NOTE: *1. Under this condition, PTT is temporarily disabled. If you wish to use the same Channel for normal communication, simply remove the channel from QUIET mode.*

2. QUI function will not work when the channel is with CTCSS/DCS

- **To Activate/Deactivate QUI function on a Channel**

See menu instruction (QUI) below

Receiving a Selcall

While in QUI mode, when the radio receives a code matching your Selcall ID, it will perform the following operations:

1. Automatically responds to the caller by transmitting Acknowledge Tones.

2. Informs you that a caller is on the Channel by emitting a CALL ALARM (Default Alarm Setting: four successive beeps in a regular interval for 10 seconds.

Refer to 'Alarm Mode' for other alarm settings) and displays the SEL icon.

3. Flashes the **QUI** icon for about 20 seconds allowing you to use the PTT button. If you are not able to respond within the 20 second period, **QUI** icon stops flashing and QUIET mode resumes. Press **PTT** to talk.
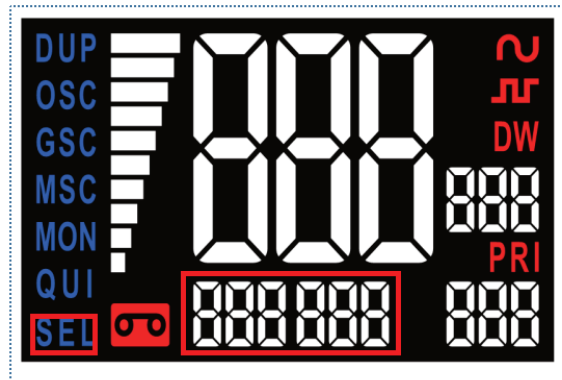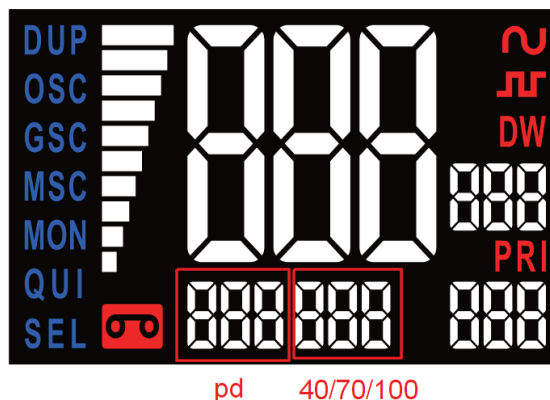
TONE PERIOD (PD)

Tone period is the duration of one tone in a Selcall ID sequence. The setting of this parameter depends on the type of application. On long-distance communications, for example: where the signal strength of the transmitted information is greatly reduced and affected by noise, it is advisable to use a longer Tone Period. A long Tone Period gives the decoder more time and information to check and evaluate the code. The decoder takes more time and information to check and evaluate the code.

NOTE: However, be sure that all the radios in your group use the same Tone Period setting. Otherwise, you will not be able to selectively call one another.

The radio allows you to select which Tone Period is best for you. The three most used tone settings (40, 70 or 100mSec) are available. With the freedom to change this parameter, you can easily adapt to the existing system in your group without the inconvenience of having the unit serviced by the dealer.

To set tone period

1. Be sure that the radio is off
2. Press and hold **PRI**, then turn on the radio.
3. Use **UP** or **DOWN** buttons until "**pd**" displays
4. Press **OK** to select the Tone Period setting

pd   40/70/100

5. Use **UP** or **DOWN** buttons to select the desired tone period from 40ms, 70ms or 100ms.
6. Press and release **OK** to finish your setting.
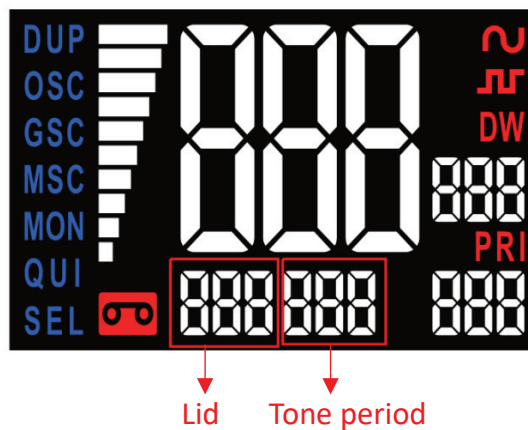7. Press and hold **MENU** to exit programming mode.

LEAD IN DELAY (Lid)

Lead-in delay is a Selcall transmission parameter that 'wakes-up' and helps the receiver of the other radio to lock onto the incoming signal. Each time a Selcall ID is transmitted, the Lead-in Delay attaches itself to the starting of the code sequence and causes the transmitter to be on for a longer period prior to the code transmission. This makes for a stronger communication link between the transmitter and the other receiver.

One major advantage to having the longer Lead-in Delay is when selectively calling another radio via a repeater station. A longer Lead-in Delay helps to stabilize both the communication link from your radio to the repeater station and from the repeater station to the other radio.

To set Lead in delay (Lid)

1. Be sure that the radio is off.
2. Press and hold **PRI**, then turn On the radio.
3. Use **UP** or **DOWN** buttons until **"Lid"** displays
4. Press **OK** to select the lead in delay setting.
5. Use the **UP** or **DOWN** buttons to select the desired tone period from 500ms,1s,2s,3s or 4s.

Lid   Tone period

6. Press and release **OK** to finish your setting.
7. Press and hold **MENU** to exit programming mode.

Lead-in Tone (Ldt)

The Lead-in Tone, when programmed, 'rides' on the Lead-in Delay.

Hence, when transmitting a Selcall ID, a continuous tone will be heard for the duration of the Lead-in Delay. The main purpose of the Lead-in Tone is to increase the probability of contact between your unit and another radio when QUIET Scanning.

To set Lead in tone

1. Be sure that the radio is off
2. Press and hold **PRI**, then turn on the radio.
3. Use **UP** or **DOWN** buttons until **"Ldt"** displays
4. Press **OK** to select the Lead-in Tone setting The current setting appears.
5. Use **UP** or **DOWN** buttons to select the desired Lead-in Tone.

Lt   t-(0-9)/(A-F)
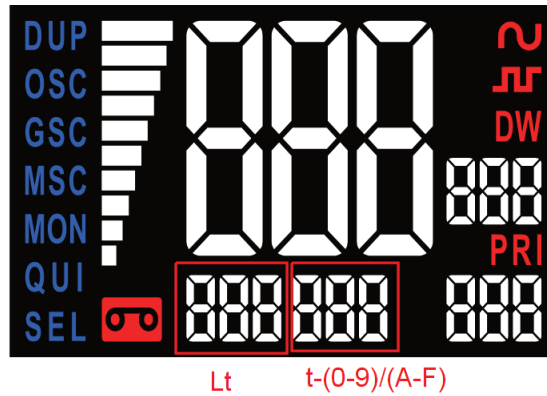
6. Press and release **OK** to finish your setting
7. Press and hold **MENU** to exit programming mode.

Alarm Mode (Alr)

When a received code matches to your receiver Selcall ID the radio will respond based on the Call Alarm mode.

Call Alarm - Auto mode (Default)

1.Transmit an Acknowledge tone to the Caller.
2.Emit CALL Alarm for 10 seconds only.
3.Resume Quiet condition automatically after 20 seconds if the call is not answered.
4.The Unit will start decoding again when the 20 second period elapsed and the call remained unanswered.

Call Alarm - Continue mode

a) Transmit an Acknowledge Tone to the Caller.
b) Initially an alarm of four successive beeps is emitted for 20 seconds and then two successive beeps every four seconds continuously unless answered.
c) The Quiet Condition is never resumed.
d) The Unit continues to check if incoming codes have your Receiver Selcall ID even though the Quiet Condition is already opened. When detected, it will send an acknowledge Tone to the caller and then resets the Call Alarm

To set Alarm

1. Be sure that the radio is off.
2. Press and hold **PRI**, then turn on the radio.
3. Use **UP** or **DOWN** buttons until you will see "**Alr**" displays
4. Press **OK** to select Alr setting. The current setting appears.
5. Use **UP** or **DOWN** buttons to select the desired Alarm mode from ATO or CON.
6. Press and release **OK** to finish your setting
7. Press and hold **MENU** to exit programming mode.

Group Calling

The R1 has the capability to respond to Group Calling and to transmit Group Calling Codes. Group Calling allows you to call members of your group simultaneously. However, to do this, you need to follow a certain format (see below) when programming your TX Selcall ID.
Selcall ID Format
To call Transmitter SELCALL ID

10 radios [X] [X] [X] [X] [X] [A]
100 radios [X] [X] [X] [X] [A] [A]
1000 radios [X] [X] [X] [A] [A] [A]
10000 radios [X] [X] [A] [A] [A] [A]
….
where: [X] is a common Selcall ID prefix of your group- and - [A] is the CCIR Assigned Group Tone Code

Example:
If one group comprises 10 members with Selcall IDs the ID numbers could be as follows:
Group ID # Individual ID#
[1] [2] [3] [4] [5] [0]
[1] [2] [3] [4] [5] [1]
[1] [2] [3] [4] [5] [2]
[1] [2] [3] [4] [5] [3]
to -
[1] [2] [3] [4] [5] [9]
all in QUI mode at CH1
If someone transmits ID 12345A on CH1, all of the above units will open their Tone Squelched Receiver.

Group Call Mode

The Group Tone period can be adjusted to increase the ability to identify group calls.
Group 01 mode sets the tone period to 1 tone period (default). Group 02 mode sets the first group tone period to 3 tone periods.
1. Be sure that the radio is off.
2. Press and hold **PRI**, then turn on the radio.
3. Use **UP** or **DOWN** buttons until you will see "**grp**" display
3. Press **OK** to select the Group Call mode setting. The current setting flashes.
4. Use **UP** or **DOWN** buttons to select the desired Group Call mode from 01 or 02.
5. Press **OK** to finish your setting.
7. Press and hold **MENU** to save and exit programming mode.

Select UHF CB 80 CH or LMR Function (if programed)

1. Be sure that the radio is off.
2. Press and hold **OK**, then turn on the radio, the LCD displays the current band- **bd1** or **bd2**.
3. Use **UP** or **DOWN** buttons to switch between bd1 and bd2.
   bd1: UHF CB 80 CH band
   bd2: LMR band
4. Press **PTT** to confirm your selection.
5.The radio will go to the band you selected automatically.

LICENSED FREQUENCY PROGRAMMING (by authorised operator only)

Via the programming software, the licenced frequency can be programmed from 450MHz-520MHz for bd2 bands with 12.5Khz (NB) and 25KHz (WB) steps.

Hi/Lo Voltage Alert

1: If the power voltage exceeds 29.5V DC, an alert tone sounds, and HI DC will display every 2 seconds.

2: If the input voltage falls below 10V DC, an alert tone sounds, and LO DC will display every 2 seconds.

3: If the input voltage falls below 8.5VDC, the radio will turn off automatic.

MENU FUNCTION SETTINGS

Short press **MENU** button to enter all the functions settings highlighted in this section, then press the **UP** or **DOWN** buttons to scroll through the available functions below.

Press the **OK** button to enter the chosen function.

If there is not any operation in 10s, it will return to the current channel automatically.

- POWER LEVEL (Pr)

1. Press the **MENU** button and scroll **UP** or **DOWN** till **"Pr"** displays.
2. Press the **OK** button to enter the power setting.
3. Use the **UP or DOWN** buttons to select between Hi (5W) and Low (1W)
4. Press the **OK** button to confirm selection.
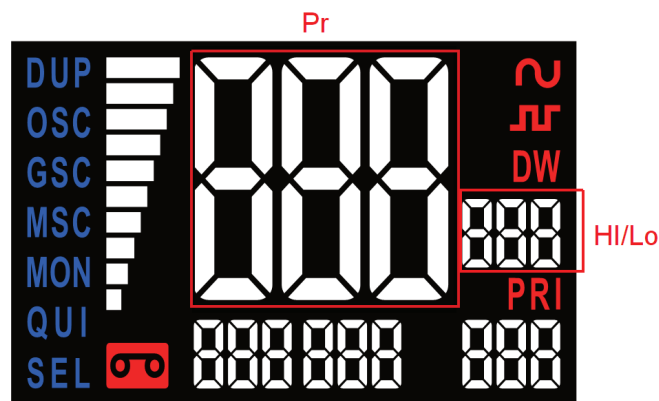
- BRIGHTNESS ADJUST (DIM)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"DIM"** displays.
2. Press the **OK** button to enter the Brightness setting.
3. Use the **UP** or **DOWN** buttons to select 01,02,03. Default: 03
4. Press the **OK** button to confirm selection.
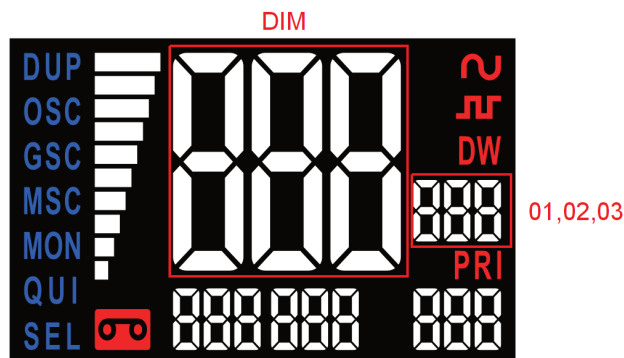
- QUIET MODE (QUI)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"QUI"** displays.
2. Press the **OK** button to enter the Quiet MODE setting.
3. Use the **UP** or **DOWN** buttons to select On and Off. Default: Off
4. Press the **OK** button to confirm selection.

- CTCSS and DCS CODE（Cod）
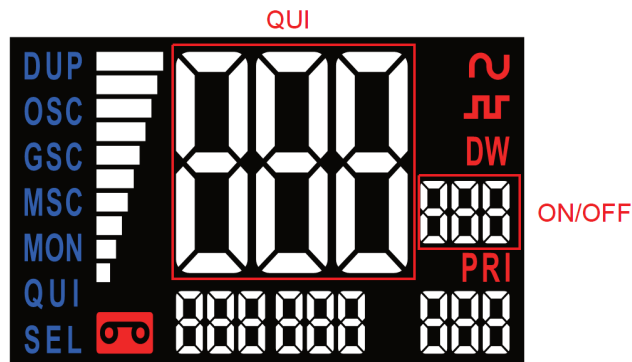
1. Press the **MENU** button and scroll **UP** or **DOWN** until **"Cod"** displays.
2. Press the **OK** button to enter the CTC/DCS Code setting.
3. Use the **UP** or **DOWN** buttons to select between off, CTCSS 01-50 and DCS 01-104. Default: OFF
4. Press the **OK** button to confirm selection.

- DUAL WATCH (dul)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"DUL"** displays
2. Press the **OK** button to enter dual watch channel setting.
3. Use the **UP** or **DOWN** buttons to select the channel you want to set. Default: 18
4.Press the **OK** button to confirm selection.

- RECORD (rcd)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"rcd"** displays.
2. Press the **OK** button to enter record setting.
3. Use the **UP** or **DOWN** buttons to select between On and Off. Default: On
4.Press the **OK** button to confirm selection.

- PRIORITY WATCH (Pri)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"Pri"** displays.
2. Press the **OK** button to enter Pri watch setting.
3. Use the **UP** or **DOWN** buttons to select between On and off. Default: On
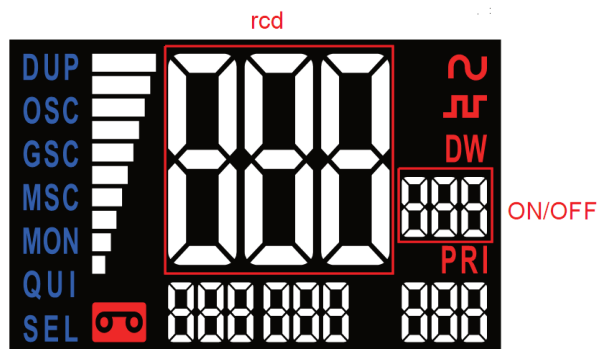4. Press the **OK** button to confirm selection.
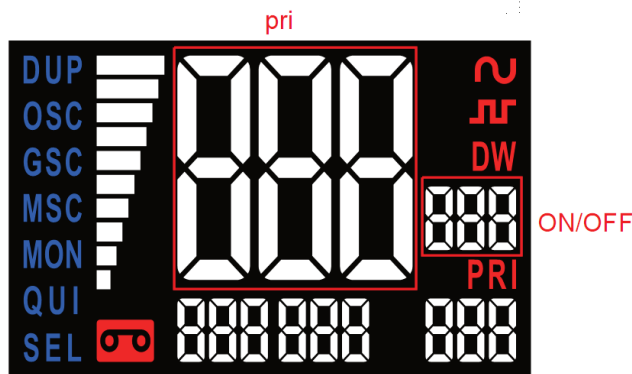
- SCAN MODE (SCN)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"SCn"** displays
2. Press the **OK** button to enter scan mode setting
3. Use the **UP** or **DOWN** buttons to select between oS (Open Scan), gs (Group Scan) and Ns (Network Scan). Default: os
4. Press the **OK** button to confirm selection.

- NETWORK SCAN BAND (NSC)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"NSb"** displays
2. Press the **OK** button to enter the Network Scan Band setting
3. Use the **UP** or **DOWN** buttons to select between P-, P1, P2, P3, P4. Default: P-
4. Press the **OK** button to confirm selection.

Network Scan is ON with the current GS channel memory. Open/Group Scan is disabled.

P-: Network Scan works current CH in GS memory
P1: Network Scan works from CH09 to CH20 in GS.
P2: Network Scan works from CH21, CH24-CH30, CH39, CH40 in GS.
P3: Network Scan works from CH49 to CH60 in GS.
P4: Network Scan works from CH64 to CH70 and CH79, CH80 in GS

- - NETWORK SCAN CODE (NCd)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"NSC"** displays.
2. Press the **OK** button to enter the Network Scan code setting
3. Use the **UP** or **DOWN** buttons to select between CTCSS 01-50 and DCS 01-104. Default: CTCSS-01
4. Press the **OK** button to confirm selection.

- BUSY CH LOCKOUT (BSY)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"bsy"** displays.
2. Press the **OK** button to enter busy lock setting
3. Use the **UP** or **DOWN** buttons to select between On and Off. Default: OFF
4. Press the **OK** button to confirm selection.

- ROGER BEEP (rob)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"rob"** displays.
2. Press the **OK** button to enter roger beep setting.
3. Use the **UP** or **DOWN** buttons to select between On and Off. Default: On
4. Press the **OK** button to confirm selection.

- KEY BEEP (bEE)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"bee"** displays.
2. Press the **OK** button to enter key beep setting.
3. Use the **UP** or **DOWN** buttons to select between On and Off. Default: On
4. Press the **OK** button to confirm selection.

- CAL (CALL TONE)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"CAL"** displays.
2. Press the **OK** button to enter call tone setting.
3. Use the **UP** or **DOWN** buttons to select from 01 to 05. Default: 01
4. Press the **OK** button to confirm selection.

- AUTO NOICE CANCEL (ANC)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"ANC"** displays.
2. Press the **OK** button to ANC setting
3. Use the **UP** or **DOWN** buttons to select between On and Off. Default: OFF
4. Press the **OK** button to confirm selection.

- NOICE REDUCE CONTROL (NRC)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"NRC"** displays.
2. Press the **OK** button to NRC setting.
3. Use the **UP** or **DOWN** buttons to select between On and Off. Default: OFF
4. Press the **OK** button to confirm selection.

- SMART BUTTON (Stb)

1. Press the **MENU** button and scroll **UP** or **DOWN** until **"stb"** displays.
2. Press the **OK** button to smart button setting.
3. Use the **UP** or **DOWN** buttons to select between, CH Scan (SCN), Duplex (Dup), Quiet (QUI), Dual Watch (Dul), Monitor (Mon), Selcall (SEL), DCS/CTCSS (Cod). Default: Monitor (Mon).
4. Press the **OK** button to confirm selection.

RESET (RES)

1. The Radio must be OFF.
2. Press and hold PTT button (4) and the MENU button (8), then turn ON the unit. The radio will display "**rst+version**".
3. Let go of the buttons and the radio will return to the factory default settings.

NOTE: *It will take several seconds to finish the reset procedure.*
    All recordings will be deleted.

Factory Default Setting Table

Channel	1(bd1)	CTCSS/DCS	OFF
Roger Beep	OFF	Key Beep	ON
Duplex Mode	OFF	Scan Mode	OS
Priority Channel	40	SQL	01
Dual Watch	18		
GS Memory Channel	None	Busy Lockout	OFF
Repeater Channel	None	OS Memory Channel	ALL 80 Channels
Record	ON	SELCALL	OFF
Brightness (DIM)	03	Quiet Mode	OFF

Channel description and usage:

- Channels 5 and 35 are for emergency use only- penalties will apply.
- Channels 22 and 23 are for monitoring and control and cannot be used.
- Channels 61-63 are guard channels and cannot be used.
- Channels 01-08, 31-38, 41-48 and 71-78 can be used as repeater output/input duplex.
- Channel 10 is commonly used for recreational 4x4, Clubs, convoys, and National Parks.
- Channel 18 used for Caravan and Campers.
- Channel 29 is commonly used on the Pacific & Bruce Highways.
- Channel 40 is used for highway vehicles and trucks.

Channel Frequency List

CH NO.	Simplex Mode Transmit/Receive Frequency (MHz)	Duplex Mode Transmit Frequency (MHz)	CH NO.	Simplex Mode Transmit/Receive Frequency (MHz)
1	476.425	477.175(CH31)	21	476.925
2	476.450	477.200(CH32)	22	476.950(RX only)
3	476.475	477.225(CH33)	23	476.975(RX only)
4	476.500	477.250(CH34)	24	477.000
5	476.525	477.275(CH35)	25	477.025
6	476.550	477.300(CH36)	26	477.050
7	476.575	477.325(CH37)	27	477.075
8	476.600	477.350(CH38)	28	477.100
9	476.625		29	477.125
10	476.650		30	477.150
11	476.675		31	477.175
12	476.700		32	477.200
13	476.725		33	477.225
14	476.750		34	477.250
15	476.775		35	477.275
16	476.800		36	477.300
17	476.825		37	477.325
18	476.850		38	477.350
19	476.875		39	477.375
20	476.900		40	477.400
41	476.4375	477.1875(CH71)	61	476.9375(RX only)
42	476.4625	477.2125(CH72)	62	476.9625(RX only)
43	476.4875	477.2375(CH73)	63	476.9875(RX only)
44	476.5125	477.2625(CH74)	64	477.0125
45	476.5375	477.2875(CH75)	65	477.0375
46	476.5625	477.3125(CH76)	66	477.0625
47	476.5875	477.3375(CH77)	67	477.0875
48	476.6125	477.3625(CH78)	68	477.1125
49	476.6375		69	477.1375
50	476.6625		70	477.1625
51	476.6875		71	477.1875
52	476.7125		72	477.2125
53	476.7375		73	477.2375
54	476.7625		74	477.2625
55	476.7575		75	477.2875
56	476.8125		76	477.3125
57	476.8375		77	477.3375
58	476.8625		78	477.3625
59	476.8875		79	477.3875
60	476.9125		80	477.4125

CTCSS Table

01	67.0	**11**	97.4	**21**	136.5	**31**	192.8	**41**	165.5
02	71.9	**12**	100.0	**22**	141.3	**32**	203.5	**42**	171.3
03	74.4	**13**	103.5	**23**	146.2	**33**	210.7	**43**	177.3
04	77.0	**14**	107.2	**24**	151.4	**34**	218.1	**44**	183.5
05	79.7	**15**	110.9	**25**	156.7	**35**	225.7	**45**	189.9
06	82.5	**16**	114.8	**26**	162.2	**36**	233.6	**46**	196.6
07	85.4	**17**	118.8	**27**	167.9	**37**	241.8	**47**	199.5
08	88.5	**18**	123.0	**28**	173.8	**38**	250.3	**48**	206.5
09	91.5	**19**	127.3	**29**	179.9	**39**	69.4	**49**	229.1
10	94.8	**20**	131.8	**30**	186.2	**40**	159.8	**50**	254.1

DCS Table

01	023	19	116	37	225	55	325	73	452	91	627
02	025	20	122	38	226	56	331	74	454	92	631
03	026	21	125	39	243	57	332	75	455	93	632
04	031	22	131	40	244	58	343	76	462	94	654
05	032	23	132	41	245	59	346	77	464	95	662
06	036	24	134	42	246	60	351	78	465	96	664
07	043	25	143	43	251	61	356	79	466	97	703
08	047	26	145	44	252	62	364	80	503	98	712
09	051	27	152	45	255	63	365	81	506	99	723
10	053	28	155	46	261	64	371	82	516	A0	731
11	054	29	156	47	263	65	411	83	523	A1	732
12	065	30	162	48	265	66	412	84	526	A2	734
13	071	31	165	49	266	67	413	85	532	A3	743
14	072	32	172	50	271	68	423	86	546	A4	754
15	073	33	174	51	274	69	431	87	565		
16	074	34	205	52	306	70	432	88	606		
17	114	35	212	53	311	71	445	89	612		
18	115	36	223	54	315	72	446	90	624		

SELCALL Tone Frequency List

Tone NO.	Tone frequency (MHz)	Tone NO.	Tone frequency (MHz)
0	1981	8	1747
1	1124	9	1860
2	1197	A (group)	2400
3	1275	B	930
4	1358	C	2247
5	1446	D	991
6	1540	E(repeat)	2110
7	1640	F	1055

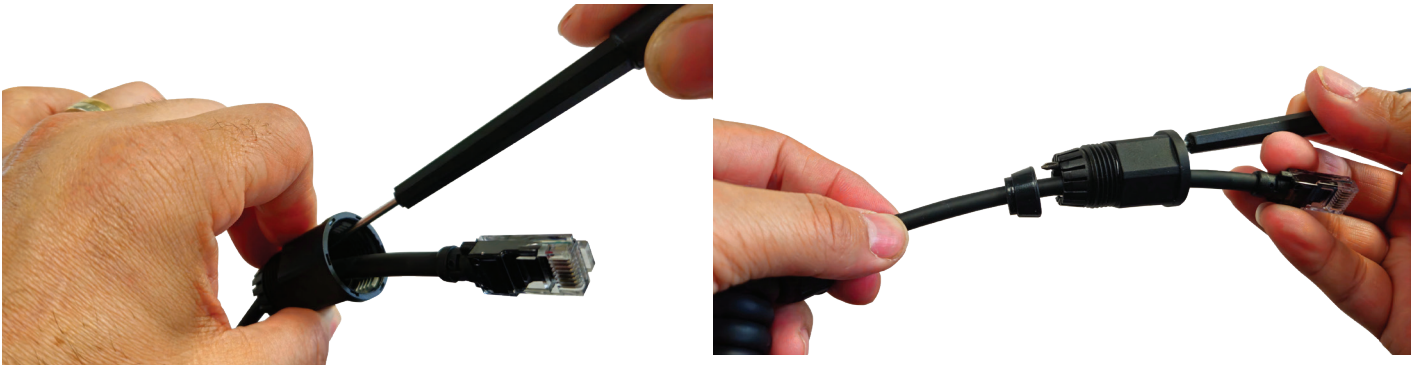# How to remove waterproof housing for MIC

Step 1:
Unscrew the two pieces of the waterproof connector.
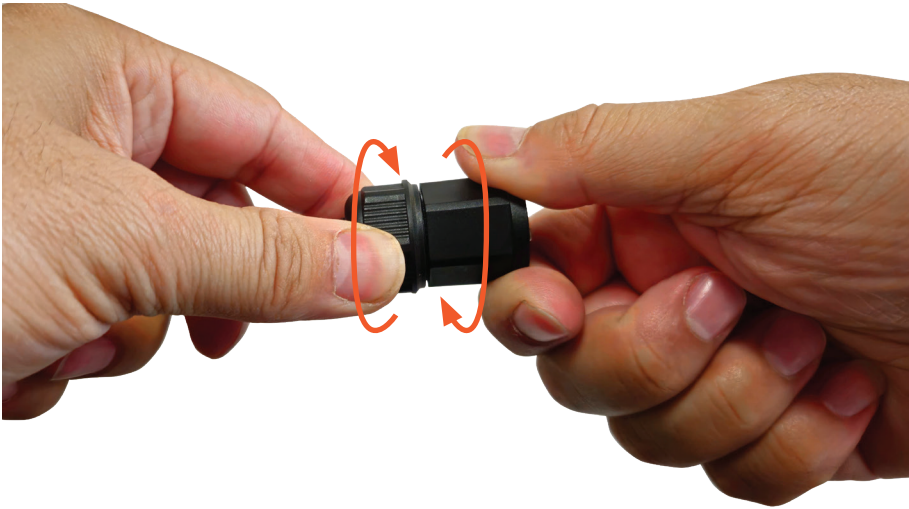
Step 2:
Use a tool to push out the rubber seal

Step 3:
Carefully remove shroud so as to not damage connector clip

SPECIFICATIONS

TYPE:	Remote Mic
CHASSIS:	Die-Cast Alloy
POWER SOURCE:	12/24V DC
MAX POWER OUTPUT:	5W
CHANNELS CB/LMR:	2 Banks: 80 (CB), 128 (LMR - Dealer Programmable)
CB FREQUENCY RANGE:	476.425 ~ 477.4125MHz
LMR FREQUENCY RANGE:	450~520MHz
LMR CHANNEL WIDTH:	12.5KHz/25KHz (Narrowband/Wideband Selectable)
DISPLAY:	Colour VA
ILLUMINATED CONTROLS:	Yes
INGRESS PROTECTION:	IP67
REPLAY:	RX saved in 20 Groups of 1 minute each
ACTIVE NOISE CANCELLING:	TX & RX
PROGRAMABLE SMART BUTTON:	Yes
PRIORITY CHANNEL:	Yes
DUAL WATCH:	Yes
SELCAL:	Yes
CTCSS/DCS:	50/104
SQUELCH:	Manual
QUIET MODE:	Yes
MONITOR FUNCTION:	Yes
KEY LOCK:	Yes
SPEAKER MIC:	Yes
BUILT-IN SPEAKER:	Yes
EXTERNAL SPEAKER JACK:	Yes
ANTENNA CONNECTION:	FME
MIC JACK:	Rear RJ45
MIC MOUNT:	Magnetic & Clip
SLIDE MOUNT BRACKET:	Yes
DIMENSIONS WxHxD:	102x24x105.5mm

INCLUDES:

- Slide Mount Cradle
- Magnetic Mic Holder
- Clip Mic Holder
- 2m Mic Extension Lead
- 100mm Mic Extension M/M Adaptor
- Power Lead

WARRANTY

Congratulations on your purchase of a quality product! You're joining thousands of satisfied customers who enjoy & experience the benefits of the products we distribute. In the unlikely event that some technical difficulty arises with your purchase, be assured that we are most anxious to see that the problem is quickly rectified to your satisfaction. Please familiarise yourself with the following simple conditions of our warranty. This warranty covers faults through component failure or failure of the product to operate in accordance with published specifications. Product failure as a result of unreasonable environmental conditions, accident, misuse, improper installation, unauthorised repair, vehicle electrical or wiring faults or neglect etc, will not be covered by this warranty. Removal and installation costs, if any, would be paid by the owner as well as any freight or postage costs of transporting the product to AUTOBACS AUSTRALIA PTY LTD and shall not be liable or responsible for any loss of use of this product or any form of consequential loss.

CONSUMER WARRANTY

This product is warranted by AUTOBACS AUSTRALIA PTY LTD to be free from defects in materials and workmanship under **NORMAL USE** for a period of **SIXTY MONTHS** from the date of purchase.

WITHIN 30 DAYS OF PURCHASE DATE:
Please return the unit for replacement to our National Service Centre or the Retailer from where you made the purchase. All accessories must be included. Proof of purchase date **must** accompany the products.

AFTER 30 DAYS OF PURCHASE DATE:
Warranty repair and service is carried out by our National Service Centre. Repair and service will be carried out at no cost to the owner if proof of ownership and the date of purchase can be verified to the satisfaction of the authorised centre concerned with this repair. This proof should take the form of either:
a) The warranty card accompanying this product, stamped and dated by the dealer.
b) A Tax Invoice or Receipt showing full details of original vendor, purchaser, model number and serial number.

COMMERCIAL WARRANTY

A product used in or associated with a commercial application will carry a limited TWELVE MONTHS warranty.
An abnormal commercial application is one where usage, dust, vibration, heat/cold and other environmental conditions exist at an extreme level.
Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Purchaser's Name: _____

Purchaser's Address: _____

_____

Model Number: _____ **Serial Number:** _____

Dealer Name: _____ **Date of Purchase:** ___ / ___ / ___

Dealer Address: _____

Invoice/Sales Docket no: _____

General Hints: To expedite service and prompt return of the equipment, please:

a) Clearly describe the fault in detail b) Safely and securely pack the unit for transport
c) Include your return address d) Provide proof of purchase date as outlined above

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National Service Contacts:
AUTOBACS AUSTRALIA PTY LTD
Telephone: 1300 288 029
email: services@autobacs.com.au