MGX

D1

12/24V DIN 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.

MAIN UNIT BUTTON FUNCTIONS

1. Power On/Off/Volume
● Short press: Turn the radio on.
● Long press: Turn the radio off.
● Rotate: Change the volume level.

2. Indicator Light
  While transmitting, the LED will be illuminated red.
  While receiving, the LED will be illuminated green.

3. Front Mic Jack

4. MENU Button
● Short press: To enter the menu section.
● Long press: Add/Remove the channel to/from Memory Scan

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

6. Duplex Button
● Short press: To enable/disable the repeater function (CH01-08 & CH41-48 only).
● Long press: To transmit a Call Tone.

7. Quiet Button
● Short press: To enable/disable Quiet mode.

8. DOWN Button
● Short press: Channel down in operation mode.
                           Scroll down in MENU mode.
● Long press: Channel scan down.

9. UP Button
● Short press: Channel up in operation mode.
                           Scroll down in MENU mode.
● Long press: Channel scan up.

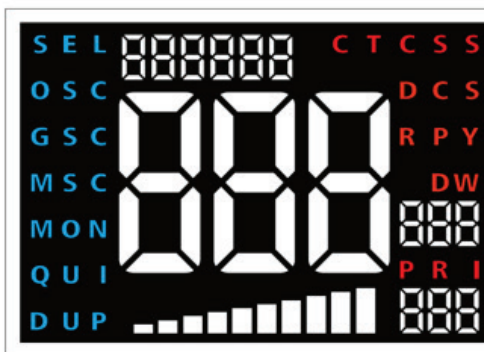**NOTE:**   *Dual Watch is disabled while scanning.*

10. Display

11. Squelch
Use to select the squelch level. The squelch blocks all signals weaker than the set squelch level. The squelch only opens when a signal that is stronger than the set squelch level is received. Setting the squelch to 0 opens the squelch completely, allowing all signals to be received (monitor mode).

12. Speaker

DISPLAY ICONS

SEL	Selcall	888888	Used to Enter Selcall Number
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		
QUI	Quiet Mode		
DUP	Duplex Capability		
CTCSS	Analogue Coded Squelch		
DCS	Digital Coded Squelch		
RPY	Replaying RX		
DW	Dual Watch		
PRI	Priority Channel Watch		

SPEAKER MIC BUTTON FUNCTIONS

13. PTT Button

● Transmit when pressed, the LED (2) will glow red.
● Release to receive.

14. Speaker

15. UP Button
● Short Press: Channel up in operation mode.
                  Scroll up in MENU mode.
● Long Press: Channel scan up.

16. DOWN Button
● Short Press: Channel down in operation mode.
                  Scroll down in MENU mode.
● Long Press: Channel scan down.

17. ★ Smart Button
- This button can be assigned in the MENU to one of the following functions-
    CH Scan, Duplex, Quiet Mode, Dual Watch, Monitor, Selcall, CTCSS/DCS. Default: CH Scan

18. PRI Button
● Short Press: To jump to the Priority Channel.
● Long Press: To set the current channel as the Priority Channel.

19. Replay Button
● Short Press: To playback received communications. (⬛ is displayed during playback).
● Long Press: To access the Call ID menu for SELCALL.

20. + Button
- Increase the volume.

21. – Button
- Decrease the volume.

22. Microphone
- For the best performance, speak approximately 5cm away from the built-in microphone.

GENERAL OPERATION

POWER ON/OFF
Press the volume knob (1) to turn the radio on. The display will show every icon for one second, then you will hear a beep, and then the most recently selected channel will be displayed.
Press and hold the volume knob (1) to turn the radio off.

ADJUSTING THE VOLUME
- Main Unit
Turn the volume knob (1) clockwise to increase the volume
Turn the volume knob anticlockwise to decrease the volume.
- Speaker Mic
Press **+** button (20) to increase the volume.
Press **–** button (21) to decrease the volume.

CHANNEL SELECT
Press the **UP** or **DOWN** buttons on the main unit or speaker mic to select the desired channel.

TRANSMITTING
Press and hold the microphone's **PTT** button (13) and speak normally into the microphone.
Hold the microphone approximately 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 channel restrictions and usage guide.*

CHANNEL SCAN
The channel scanning feature allows you to search for active channels automatically.
Press and hold either the **UP** or **DOWN** buttons for 2 seconds to start channel scanning.
The scan direction can be changed at any time by pressing the **UP** or **DOWN** buttons.
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. To skip the active channel, press the **UP** or **DOWN** buttons. Press the PTT button to deactivate scanning.
NOTE: *If scanning is deactivated while on an active channel, the radio will stay on that active channel. If no channels are active, the radio will revert to the current channel.*
There are 3 different scan modes that can be selected in the menu: Open Scan (OS), Group Scan (GS), and Network Scan (NS).

- **Open Scan Mode (OSC)**

Allows continuous scanning of all 80 CB channels. This is the default scanning mode.

- **Group Scan Mode (GS) & Priority Watch (PRI)**

In Group Scan Mode, only channels stored in Group Scan memory are scanned, all other channels are skipped over. This mode includes the Priority Watch feature which allows you to monitor the selected Instant Priority Channel while scanning.

To add/remove the current channel into/from Group Scan memory, press and hold the **MENU** button (the **MSC** icon indicates that the current channel is stored in Group Scan memory).

- **Network Scan Mode (NS)**

In Network Scan Mode, only channels stored in Group Scan memory are scanned, and the squelch will only open if the active channel has the correct CTCSS or DCS code.

In this mode, the radio will switch to the next unused group channel if another signal without the correct code is received. This allows users in a group to communicate without interruption from other radios outside the group.

The Network Scan band is set to P1（CH09-CH20）and the Network Scan code is set to CTCSS 01 by default. The default channels stored in each group can be changed manually if required, but each radio in the group must have the same channels stored in Group Scan memory for Network Scan to work effectively.

To add/remove the current channel into/from Group Scan memory, press and hold the **MENU** button (the **MSC** icon indicates that the current channel is stored in Group Scan memory).

NOTE: *RX only Channels CH22-CH23-CH61-CH62-CH63, Emergency Channels (CH05, CH35), and User Programmable LMR Channels will be skipped during a Network Scan even if they are stored into Group Scan memory.*

Any channels with duplex enabled will also be skipped during a Network Scan.

The default channels stored in each Network Scan Band are listed below.

　　　P_: All channels except RX only, emergency, and LMR channels.

　　　P1: CH09 to CH20.

　　　P2: CH21, CH24-CH30, CH39, CH40.

　　　P3: CH49 to CH60.

　　　P4: CH64 to CH70 and CH79, CH80.

SQUELCH

The squelch blocks all signals that are weaker than the set squelch level. The squelch only opens when a signal that is stronger than the set squelch level is received. Setting the squelch to 0 opens the squelch completely, allowing all signals to be received (monitor mode). If the squelch opens when it should not, increase the squelch level in the settings menu.

The Squelch setting has 10 levels:

0 - Squelch open (Monitor)

1 - Max sensitivity (Default)

9 - Medium sensitivity

DUPLEX (Repeater) Mode (DUP)

Duplex operation allows the radio to transmit on a different frequency to that which it receives, allowing operation through repeater station. Repeaters automatically re-transmit your signal over a wider area, providing greatly increased range. This function is available on channels 1 – 8 and channels 31 – 38. When enabled, the radio will transmit 30 channels higher than the selected channel (channels 41 – 48 and channels 71 – 78). Press the **DUP** button (6) to turn this setting on or off.

PRIORITY CHANNEL (PRI)

The priority channel function allows you to save your most frequently used channel into memory and then jump to that channel at any time by pressing the **PRI** button (18).

- Setting the Priority Channel

1. Press the **UP** or **DOWN** buttons to select the channel you want to set as the priority channel.
2. Press and hold the **PRI** button (18) to save the current channel as the Priority channel.

NOTE: The priority channel is listed in the bottom right corner of the display.

REPLAY (Record) (rCd)

The Instant Replay feature automatically records up to 20 received transmissions with a duration of up to 1 minute each.
Instant Replay does not record while in Monitor Mode (when the squelch level is set to 0).

Short press **REPLAY** to playback the most recently received signal.
During playback, press the **UP** or **DOWN** buttons to cycle through the recordings.
During playback, the display shows the **RPY** icon 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 is enabled by default, but this function can be disabled in the menu.

NOTE:
The maximum number of recordings is 20 with a duration of 1 minute each.
Received signals shorter than 500ms are not recorded.
Automatic recording of received signal(s) is suspended during playback.
Older recordings are automatically overwritten when new recordings are stored.
Transmissions 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.

- Programming the Selcall ID

1. While the radio is off, press and hold the **QUIET** button and then turn on the radio. You will see "id" displayed.
2. Press the **OK** button to enter the Selcall ID setting. The Selcall ID will be displayed at the top of the display with the 6th digit flashing.
3. Use the **+** or **–** buttons to shift between the 6 digits.
4. Use the **UP** or **DOWN** buttons to change the value of the flashing digit. Default ID:000000

5. Press the **OK** button to save the Selcall ID.
6. Press and hold the **MENU** button to exit the Selcall programming mode.
NOTE: 5-digit Selcall is available by setting the 6th digit to "_".

- Store the Selcall IDs of other radios

1. Press and hold the **REPLAY** button for 2 seconds, "**id 01**" will be displayed.

2. Use the **UP** or **DOWN** buttons to select the Selcall ID you want to edit.

3. Press the **OK** button, the selected Selcall ID will be displayed at the top of the display with the 6th digit flashing.

4. Use the **+** or **–** buttons to shift between the 6 digits.

5. Use the **UP** or **DOWN** buttons to change the value of the flashing digit. Default ID: 000000

6. Press the **OK** button to save the Selcall ID.

7. Press the **MENU** button to exit.

NOTE: Up to 10 Selcall IDs can be stored.

5-digit Selcall is available by setting the 6th digit to "_".

TONE CALLING

Tone Calling allows you to selectively call other radios.
To make a Call:
1. Select the channel using the **UP** or **DOWN** buttons.
2. Press and hold the **REPLAY** button for 2 seconds.
3. Use the **UP** or **DOWN** buttons to select the desired Selcall ID.
4. Press the **REPLAY** button to transmit the call, **CAL** will be displayed while transmitting the call. A tone coming from the called radio will be received if you have successfully made contact.

CALL FUNCTION

Press and hold the **DUP** Button, a ringing tone will be transmitted for 3 seconds. There are 5 tones to choose from in the menu.
Note: *Only one call can be transmitted in a 60-second period.*

QUIET MODE (QUI)

Quiet mode *(also known as Tone Squelch mode)* prevents the squelch from opening unless a call with your Selcall ID is received. Quiet mode can be enabled or disabled on the current channel by pressing the **QUIET** button (**QUI** will be displayed while enabled).
NOTE: While in Quiet mode, the PTT is disabled.
Quiet mode cannot be enabled while CTCSS or DCS are enabled.

- Receiving a Selcall

While in Quiet mode, when the radio receives a call with your Selcall ID, the radio will perform the following operations:
1. Automatically responds to the caller by transmitting acknowledge tones.
2. Sounds the call alarm for 10 seconds (the default alarm is 4 successive beeps).
3. Displays the **SEL** icon, the Selcall ID of the caller, and the flashing **QUI** icon for 20 seconds.
While the **QUI** icon is flashing, press the **PTT** button to talk. If you are not able to respond within 20 seconds, the **QUI** icon stops flashing and the radio returns to Quiet mode.
NOTE: The call alarm can be adjusted in the settings.

TONE PERIOD (Pd)

Tone period is the duration of one tone in a Selcall ID sequence. The tone period of each radio must match for Selcall to work.

To set the tone period:
1. While the radio is off, press and hold the **QUIET** button, then turn the radio on.
2. Press the **DOWN** button, "**Pd**" will be displayed.
3. Press the **OK** button to enter the Tone Period setting.
4. Use the **UP** or **DOWN** buttons to select the desired tone period (40ms, 70ms or 100ms). Default: 40ms.
5. Press the **OK** button to save the setting.
6. Press and hold the **MENU** button to exit.

- 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 the Lead-in delay:
1. While the radio is off, press and hold the **QUIET** button, then turn the radio on.
2. Press the **DOWN** button twice, "**Lid**" will be displayed.
3. Press the **OK** button to enter the Lead-in Delay setting.
4. Use the **UP** or **DOWN** buttons to select the desired delay time from 500ms, 1s, 2s, 3s or 4s.
5. Press the **OK** button to save the setting.
6. Press and hold the **MENU** button to exit.

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 while in Quiet mode.

To set the Lead-in Tone:
1. While the radio is off, press and hold the **QUIET** button, then turn the radio on.
2. Use the **UP** or **DOWN** button three times, "**Ldt**" will be displayed.
3. Press the **OK** button to enter the Lead-in Tone setting.
4. Use the **UP** or **DOWN** buttons to select the desired Lead-in Tone (0-9, A-F). Default: 0
5. Press the **OK** button to save the setting.
6. Press and hold the **MENU** button to exit.

Call Alarm Mode (ALr)

When a received code matches your Selcall ID, the radio will respond according to the configured Call Alarm mode. There are two modes available.

Auto mode (Ato)

a) Transmits acknowledge tones to the caller.

b) Sounds the call alarm for 10 seconds.

c) Quiet mode is resumed automatically after 20 seconds if the call is not answered.

Continuous mode (Con)

a) Transmits acknowledge tones to the caller.

b) Initially an alarm of four successive beeps activates for 20 seconds.

c) After 20 seconds, the radio beeps every four seconds continuously until answered.

d) When codes are received that match your Selcall ID, acknowledge tones are transmitted to the caller and the call alarm will then be reset.

To set the Alarm mode

1. While the radio is off, press and hold the **QUIET** button, then turn the radio on.
2. Press the **UP** button twice, "**ALR**" will be displayed.
3. Press the **OK** button to enter the Alarm mode setting.
4. Use the **UP** or **DOWN** buttons to select the Alarm mode (Ato or Con). Default: Ato
5. Press the **OK** button to save the setting.
6. Press and hold the **MENU** button to exit.

Group Calling

The D1 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 (GrP)

The Group Tone period can be adjusted to increase the chance of detecting 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. While the radio is off, press and hold the **QUIET** button, then turn the radio on.
2. Press the **UP** button, "**GRP**" will be displayed.
3. Press the **OK** button to enter the Group Call mode setting.
4. Use the **UP** or **DOWN** buttons to select the Group Call mode (01 or 02). Default: 01
5. Press the **OK** button to save the setting.
6. Press and hold the **MENU** button to exit.

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

1. Turn the radio is off.
2. Press and hold the **OK** button, then turn the radio on, the LCD will display the current band, either "bd1" or "bd2".
3. Use the **UP** or **DOWN** buttons to switch between bd1 and bd2.
   bd1: UHF CB 80CH band
   bd2: LMR band
4. Press **PTT** to confirm your selection.

LICENSED FREQUENCY (LMR) PROGRAMMING (by authorised operator only)

Licenced frequencies within 450MHz-520MHz can be programmed into the LMR band.
Up to 128 channels can be programmed.

High/Low Voltage Alert

1: If the supply voltage exceeds 29.5V DC, an alarm tone sounds, and "HI DC" will be displayed every two seconds.
2: If the supply voltage falls below 10V DC, an alarm tone sounds, and "LO DC" will be displayed every two seconds.
3: If the supply voltage falls below 8.5V DC, the radio will turn off automatically.

MENU FUNCTION SETTINGS

Press the **MENU** button to open the menu, then press the **UP** or **DOWN** buttons to scroll through the settings listed below.
Press the **OK** button to enter the displayed setting.
If no button is pressed within 10 seconds, the menu will be closed automatically.

- TX POWER LEVEL (Pr)

1. Press the **MENU** button, **"PoW"** will be displayed.
2. Press the **OK** button to enter the TX power level settings.
3. Use the **UP** or **DOWN** buttons to change the TX power level displayed (Hi = 5W, Lo = 1W). Default: High.
4. Press the **OK** button to save the setting.

CTCSS and DCS CODE (Cod)

Setting a CTCSS/DCS code prevents the squelch from opening if the received signal does not have the correct subtone.

1. Press the **MENU** button and then press the **UP** button, **"Cod"** will be displayed.
2. Press the **OK** button to enter the CTCSS/DCS setting.
3. Use the **UP** or **DOWN** buttons to select between CTCSS 1-50, DCS 1-104 or OFF. Default: OFF
4. Press the **OK** button to save the setting.

After setting a CTCSS code, the "CTCSS" and the subtone number are displayed.

After setting a DCS code, the "DCS" and the subtone number are displayed.

DUAL WATCH (dUL)

While dual watch is activated, the radio will receive signals from both the current channel and the dual watch channel.

1. Press the **MENU** button and then press the **UP** button twice, **"dUL"** will be displayed.
2. Press the **OK** button to enter the Dual Watch channel setting.
3. Use the **UP** or **DOWN** buttons to select the desired channel. Default: 18
4. Press the **OK** button to save the setting.

REPLAY/RECORD (rCd)

1. Press the **MENU** button and then press the **UP** button three times, **"rCd"** will be displayed.
2. Press the **OK** button to enter the Record setting.
3. Use the **UP** or **DOWN** buttons to select On or Off. Default: On
4. Press the **OK** button to save the setting.

The RPY icon will be displayed during playback.

PRIORITY WATCH (Pri)

Priority watch in group scan mode changes the channel order to scan the priority channel at regular ten channel intervals while scanning the memory channels.

1. Press the **MENU** button and then press the **UP** button four times, **"Pri"** will be displayed.
2. Press the **OK** button to enter the Priority Watch setting.
3. Use the **UP** or **DOWN** buttons to select On or Off. Default: On
4. Press the **OK** button to save the setting.

SCAN MODE (SCn)

1. Press the **MENU** button and then press the **UP** button five times, **"SCn"** will be displayed.
2. Press the **OK** button to enter the Scan Mode setting.
3. Use the **UP** or **DOWN** buttons to select OS for all channel scanning, GS for favourite channel scanning, NS for Network scanning. Default: OS
4. Press the **OK** button to save the setting.

NETWORK SCAN (nSb)

1. Press the **MENU** button and then press the **UP** button six times, **"nSb"** will be displayed.
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 save the setting.

NOTE: The default Network Scan memory channels match the scan channels from the previous scan mode. For example: If you switch from Open scan mode to Network Scan mode, all 80 channels will be set as memory channels; if you switch from Group scan mode to Network Scan mode, the Network Scan memory channels will match the memory channels set in Group scan

mode.

NETWORK SCAN CODE (nSC)
1. Press the **MENU** button and then press the **UP** button seven times, **"nSC"** will be displayed.
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 save the setting.

BUSY CHANNEL LOCKOUT (bSY)
1. Press the **MENU** button and then press the **UP** or **DOWN** button eight times, **"bSY"** will be displayed.
2. Press the **OK** button to enter the Busy Channel Lockout setting.
3. Use the **UP** or **DOWN** buttons to select On or Off. Default: Off
4. Press the **OK** button to save the setting.

NOTE: *While enabled, the PTT button is disabled while a transmission is being received. When the PTT button is pressed, the channel number will flash to indicate that the channel is busy.*

ROGER BEEP (rob)
1. Press the **MENU** button and then press the **DOWN** button seven times, **"rob"** will be displayed.
2. Press the **OK** button to enter the Roger Beep setting.
3. Use the **UP** or **DOWN** buttons to select On or Off. Default: Off
4. Press the **OK** button to save the setting.

NOTE: *While enabled, each transmission sent from the radio will end with a tone, letting the other party know that the transmission has ended.*

KEY BEEP (bEE)
1. Press the **MENU** button and then press the **DOWN** button six times, **"bEE"** will be displayed.
2. Press the **OK** button to enter the Key Beep setting.
3. Use the **UP** or **DOWN** buttons to select On or Off. Default: On
4. Press the **OK** button to save the setting.

CALL TONE (CAL)
1. Press the **MENU** button and then press the **DOWN** button five times, **"CAL"** will be displayed.
2. Press the **OK** button to enter the Call Tone setting.
3. Use the **UP** or **DOWN** buttons to select from tones 01-05. Default: 01
4. Press the **OK** button to save the setting.

ACTIVE NOISE CANCELLING (AnC)
1. Press the **MENU** button and then press the **DOWN** button four times, **"AnC"** will be displayed.
2. Press the **OK** button to enter the Active Noise Cancelling setting.
3. Use the **UP** or **DOWN** buttons to select On and Off. Default: Off
4. Press the **OK** button to save the setting.

NOISE REDUCTION CONTROL (nrC)

1. Press the **MENU** button and then press the **DOWN** button three times, **"nrC"** will be displayed.
2. Press the **OK** button to enter the Noise Reduction settings.
3. Use the **UP** or **DOWN** buttons to select On or Off. Default: Off
4. Press the **OK** button to save the setting.

SMART BUTTON (Stb)

1. Press the **MENU** button and then press the **DOWN** button twice, **"Stb"** will be displayed.
2. Press the **OK** button to enter the Smart Button setting.
3. Use the **UP** or **DOWN** buttons to select between: CH Scan (SCn), Duplex (dUP), Quiet (QUi), Dual Watch (dUL), Monitor (non), Selcall (SEL) CTCSS/DCS (Cod). Default: CH Scan.
4. Press the **OK** button to save the setting.

SPEAKER SELECT (SPl-)

1. Press the **MENU** button and then press the **DOWN** button, **"SPl-"** will be displayed.
2. Press the **OK** button to enter the Speaker Select setting.
3. Use the **UP** or **DOWN** buttons to select which speaker is active:
   Ba: The speaker in the main unit is active.
   Rn: The speaker in the microphone is active.
   Bo: Both speakers are active. (default)
4. Press the **OK** button to save the setting.

FACTORY RESET

While the radio is off, press and hold the **PTT** button (13) and the **MENU** button (4), turn the radio on and then release the buttons. The radio will display "**rSt**" and the version number.

NOTE: *It will take ~ 10 seconds to reset the radio and reboot. All recordings will be deleted.*

Factory Default Setting Table

Channel	1 (bd1)	CTCSS/DCS	OFF
TX Power Level	High (5W)	Quiet Mode	OFF
DW channel	18	Key Beep	ON
Roger Beep	OFF	Scan mode	OS
Duplex Mode	OFF	Priority Watch	ON
PRI Channel	40	NRC	OFF
ANC	OFF	Busy Lockout	OFF
GS Memory Channels	None	OS Memory Channel	All 80 channels
Repeater Channels	None	SELCALL	OFF
Replay/Record	ON	Call Tone	01

Channel description and usage:

- Channels 5 and 35 are for emergency use only.
- Channels 22 and 23 are for telemetry and SelCall only, TX is disabled.
- Channels 61-63 are guard band channels, TX is disabled.
- Channels 01-08, 31-38, 41-48 and 71-78 can be used as repeater channels (duplex).
- Channel 10 is commonly used for recreational 4x4, clubs, convoys, and national parks.
- Channel 18 commonly used for caravan and campers.
- Channel 29 is commonly used on the Pacific & Bruce highways.
- Channel 40 is used for highway vehicles and trucks.

Selcall Tone Frequency List

Tone #	Tone frequency (MHz)	Tone #	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

Channel Frequency List

CH #	Simplex Mode Transmit/Receive Frequency (MHz)	Duplex Mode Transmit Frequency (MHz)	CH #.	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

No	Freq	No	Freq	No	Freq	No	Freq	No	Freq
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

No	Code	No	Code	No	Code	No	Code
1	D023N	28	D155N	55	D325N	82	D516N
2	D025N	29	D156N	56	D331N	83	D523N
3	D026N	30	D162N	57	D332N	84	D526N
4	D031N	31	D165N	58	D343N	85	D532N
5	D032N	32	D172N	59	D346N	86	D546N
6	D036N	33	D174N	60	D351N	87	D565N
7	D043N	34	D205N	61	D356N	88	D606N
8	D047N	35	D212N	62	D364N	89	D612N
9	D051N	36	D223N	63	D365N	90	D624N
10	D053N	37	D225N	64	D371N	91	D627N
11	D054N	38	D226N	65	D411N	92	D631N
12	D065N	39	D243N	66	D412N	93	D632N
13	D071N	40	D244N	67	D413N	94	D654N
14	D072N	41	D245N	68	D423N	95	D662N
15	D073N	42	D246N	69	D431N	96	D664N
16	D074N	43	D251N	70	D432N	97	D703N
17	D114N	44	D252N	71	D445N	98	D712N
18	D115N	45	D255N	72	D446N	99	D723N
19	D116N	46	D261N	73	D452N	100	D731N
20	D122N	47	D263N	74	D454N	101	D732N
21	D125N	48	D265N	75	D455N	102	D734N
22	D131N	49	D266N	76	D462N	103	D743N
23	D132N	50	D271N	77	D464N	104	D754N
24	D134N	51	D274N	78	D465N		
25	D143N	52	D306N	79	D466N		
26	D145N	53	D311N	80	D503N		
27	D152N	54	D315N	81	D506N		

SPECIFICATIONS

TYPE:	1-DIN
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
CHANNEL WIDTH:	12.5kHz / 25KHz (Narrowband / Wideband)
DISPLAY:	3 Colour VA
INGRESS PROTECTION:	IP66 Microphone
REPLAY:	RX saved in 20 Groups of 1 minute each
ACTIVE NOISE CANCELLING:	TX and 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
SPEAKER MIC:	Yes
BUILT-IN SPEAKER:	Yes
EXTERNAL SPEAKER JACK:	Yes
ANTENNA CONNECTION:	FME
MICROPHONE JACK:	Front & Rear
MICROPHONE MOUNT:	Magnetic & Clip
SLIDE MOUNT BRACKET:	Yes
DIMENSIONS WxHxD:	173x52x98mm

INCLUDES
- Mounting Cradle
- Magnetic Mic Holder
- Clip Mic Holder
- 4m Mic Extension Lead
- 100mm Mic Ext. 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