

4.2 Main controls and parts of the radio

LCD Display



No.	Icon	Description
1		Signal strength indication
2	H	High transmitting power(longest communication distance and largest power consumption).
	L	Low transmitting power(most power efficient and relatively close distance).
	M	Mid transmitting power
3		Beep
4	DCS	This symbol indicates that the current tone is DCS.
	CT	This symbol indicates that the current tone is CTCSS.
5	+	The difference between the receive and transmit frequencies of a radio channel is + offset

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6		The difference between the receive and transmit frequencies of a radio channel is - offset
7		The presence of this symbol indicates that the dual-band watch is on, in the dual watch state, the intercom can simultaneously monitor the two frequency bands displayed on the screen
8		The symbol will appear when the keyboard is locked; Hold 【# 00】 to unlock
9		This symbol indicates that the VOX function is activated and the intercom will start transmitting when the sound pressure level of the microphone reaches the set value.
10	R	Reverse the receive and transmit frequencies in frequency mode/channel mode.
11	N	This symbol appears when the channel is operating in narrowband mode.
12		Current battery power remaining. Full battery charge; Battery Remains. When the battery is about to run out, the outer frame of this icon flashes to show that the radio is unable to transmit at this time.
13/17	Frequency	Working Frequency on A/B band
14/15		A/B band indicator
16/18	Channel No.	The channel number of the A/B band in channel mode.

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4.3 Status Indications

The status LED has a very simple and traditional design.

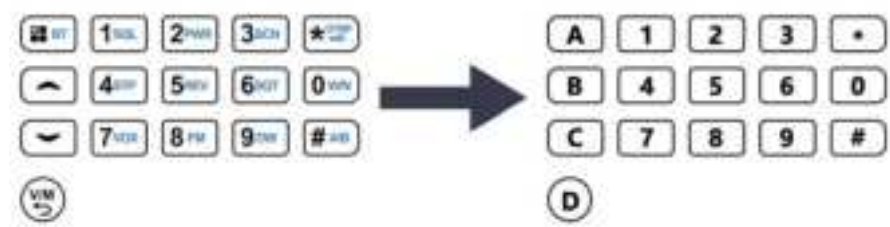
LED Indicator	Radio Status
Constant Red	Transmitting.
Constant Green	Receiving.

4.4 Main keypad controls

- **(MENU)**key: It is used for activating the MENU, choose each MENU selection and confirm the parameter. In standby mode, press and hold the key to switch between frequency (VFO) mode and channel (MR) mode. To save frequencies to channel memory you must be in Frequency (VFO) mode. Memory mode is sometimes also referred to as Channel mode.
-  key: Press it for more than 2 seconds, the channel and frequency will move upwards rapidly; in SCAN mode, press this control to move the scanning upwards.
-  key: Keep it pressed it for more than 2 seconds, the channel and frequency will move downwards rapidly; in SCAN mode,  press this control to move the scanning downwards.

• **Numeric keypad**

With these keys you can input the information or your selections on the radio. In tx mode, push the number keys to send a corresponding DTMF code.



- ***  Key**
A short momentary press of the key enables the reverse function.
If you press this button for more than 2 seconds you will lock/unlock the keypad.

5. BASIC OPERATIONS

5.1 Power on the radio

• Turning the unit on

To turn the unit on, simply rotate the volume/power knob clockwise until you hear a "click". If your radio powers on correctly there should be an audible double beep after about one second and the display will show a message or flash the LCD depending on settings for about one second. Then it will display a frequency or channel. If the Voice prompt is enabled, the voice will announce "frequency mode" or "channel mode".

• Turning the unit off

Turn the volume/power knob counter-clock wise all the way until you hear a "click". The unit is now off.

5.2 Adjusting the volume

To turn up the volume, turn the volume/power knob clock-wise. To turn the volume down, turn the volume/power knob counter-clock-wise. Be careful not to turn it too far, as you may inadvertently turn your radio off.

5.3 Channel selection

There are two modes of operation: Frequency (VFO) mode, and Channel or Memory (MR) mode.

For everyday use, Channel (MR) mode is going to be a whole lot more practical than Frequency (VFO) mode. However, Frequency (VFO) mode is very handy for experimentation out in the field. Frequency (VFO) mode is also used for programming channels into memory.

In Channel (MR) mode you can navigate up and down the channel by using the $\curvearrowright/\curvearrowleft$ keys or the encoder.

Ultimately which mode you end up using will depend entirely on your use case.

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5.4 Making a call

- Channel mode call: After selecting a channel, hold down the [PTT] key to initiate a call to the current channel. Speak into the microphone with normal tone. Initiate a call, the red LED is on.
 - Frequency mode call: The off state, hold press [MENU] key to open the radio, switching to the frequency mode, the frequency range allowed entering, press the [PTT] key, a call to the current channel. Speak into the microphone with normal tone. Initiate a call, the red LED is on.
 - Receive a call: When you release the [PTT] key, you can answer it without any action.
- When receiving a call, the green LED is on.

NOTE: To ensure the best reception volume, keep the distance between the microphone and the mouth at the time of transmission from 2.5 cm to 5 cm.

5.5 Frequency (VFO) mode

In Frequency (VFO) mode you can navigate up and down the band by using the $\curvearrowright/\curvearrowleft$ keys. Each press will increment or decrement your frequency according to the frequency step you've set your transceiver to.

You can also input frequencies directly on your numeric keypad with kilohertz accuracy.

The following example assumes the use of a 12.5 kHz frequency step.

Example. Entering the frequency 432.56250 MHz on display A

a. In standby mode, switch to the frequency (VFO) mode.

b. Enter [4][3][2][5][6][2][5] [0] on the numeric keypad.

© In VFO mode, VFO will be displayed on the right. Any transmission is prohibited, and reception and scanning are allowed. Among them, the scanning frequency can be accurately set.

WARNING!

Just because you can program in a channel does not mean you're automatically authorized to use that frequency. Transmitting on frequencies you're not authorized to operate on is illegal, and in most jurisdictions a serious offence. However, it is legal in most jurisdictions to listen. Contact your local regulatory body for further information on what laws, rules and regulations apply to your area.

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5.6 Channel (MR) mode

The use of Channel (MR) mode is dependent on actually having programmed in some channels to use. Once you have channels programmed and ready, you can use the  /  keys or the encoder to navigate between channels.

©In MR mode, the channel number will be displayed on the right.

6. ADVANCED FEATURES

6.1 Frequency scanning

This function can scan the frequency.

a. In frequency mode, press [SCAN]key for more than 2 seconds. The radio will start scanning the frequency according to the set frequency step.

b. Press [EXIT]key to stop the scanning.

Note: for Scan mode, see Menu No.17.

6.2 Channel scanning

Use scan to search the channels for transmissions from unknown parties, to find someone in your group who has accidentally changed channels or to quickly find unused channels for your own use.

a. In channels mode, press [SCAN] key for more than 2 seconds. The radio will start scanning according to the channel you set.

b. You can change the scanning direction with the  /  keys.

c. Press EXIT key to stop scanning.

6.3 CTCSS scanning

The function allows scanning the frequencies with CTCSS tone enabled.

a. In standby mode, press [MENU] [2][8], “SEEK 67.0” will appear on the display.

b. Press [MENU] and the scan of CTCSS tones will start.

NOTES: The function cannot be activated when the radio is set in Channel mode. The Scan will start only when the receiving band will detect a signal.

6.4 DCS scanning

The function allows scanning the frequencies with CTCSS tone enabled.

a. In standby mode, press [MENU] [2][8], “SEEK 67.0” will appear on the display.

b. Press [MENU] and the scan of CTCSS tones will start.

NOTES: The function cannot be activated when the radio is set in Channel mode. The Scan will start only when the receiving band will detect a signal.

6.5 Keypad lock

This function locks the keypad to prevent accidental pressure of the controls.

To unlock the keypad, press [* ] for more than 2 seconds.

6.6 FM Radio (FM)

The frequency range to listen to the radio is 76-108MHz.

A. In frequency or channel mode, Press [FM] to turn on the radio.

B. Select the desired radio frequency with the  /  keys or input the frequency. Or

- Press [*SCAN] to automatically search a radio station.

C. Press [FM] to exit FM radio.

Note: while you are listening to the radio, the frequency or channel of A / B receiving signal will automatically switch to the frequency or channel mode for normal transmitting and receiving.

When the signal disappears the radio will automatically switch again to FM radio mode.



6.7 TX 1000Hz, 1450Hz, 1750Hz, 2100Hz repeaters tone

Press [PTT] + [LAMP/Monitor] to send 1750Hz repeaters tone. This function is useful for communications through repeaters. If you have the keypad lock enabled on your radio, you can still send a 1750Hz tone the regular way without having to unlock your radio.

6.8 Manual Programming (Channels Memory)

Memory channels are an easy way to store commonly used frequencies so that they can easily be retrieved at a later date. The radio features 200 memory channels that each can hold: Receive frequencies, group signaling information, bandwidth, ANI/ PTT-ID settings and a six character alphanumeric identifier or channel name .You store them in the specified channel number via menu 25 Store Channels.

Frequency Mode vs. Channel Mode

In standby mode, press VFO/MR key to switch between frequency (VFO) mode and channel (MR) mode.

These two modes have different functions and are often confused.

Frequency Mode (VFO) : Used for a temporary frequency assignment, such as a test frequency or quick field programming if permitted.

Channel Mode (MR) : Used for selecting preprogrammed channels.

Ex 1. Programming a Scan Channel with CTCSS Tone

EXAMPLE New memory in Channel 31:

RX = 432.55000 MHz

TX CTCSS tone 123.0

A. Press the [EXIT] button to switch between menus.

B. Press and hold the [VFO/MR] key to set the radio to VFO mode, and the VFO icon is displayed on the right.

C. [MENU] [2][6] Deletes Prior Data in channel (Ex. 31)

D. [MENU] [1][1] [MENU]123.0 [MENU] [EXIT] Selects desired RX encode tone

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E. Enter RX frequency (Ex. **43255000**)

F. [MENU] [2][7] [MENU] [3][1] [MENU] Enter the desired channel (Ex 31)
-->>[EXIT] RX has been added

G. Press [VFO/MR] key to return to the MR mode and the channel number will reappear.

Ex 2. Channel memory for scanning frequency

EXAMPLE New memory in Channel 31:

Scans frequency ranger 430-435MHz

RX = 432.55000 MHz

RX DCS D023N

A. Press the [EXIT] button to switch between menus.

B. Press and hold the [MENU] key to set the radio to VFO mode, and the VFO icon is displayed on the right.

C. [MENU] [1][7] [MENU] Enter the scan range menu

D. Enter [4][3][0][4][3][5] [MENU] [EXIT] Enter the scan frequency range

E. Press and hold the [* SCAN] key to start frequency scan, 432.55000 frequency points start to scan. Frequency required for scanning

There is activity, stay here temporarily, press [PTT]

key to stop scanning, confirm the required frequency.

F. [MENU] [10] [MENU] [1] [MENU] [EXIT] Stop scanning, the required storage frequency
Select desired RX encode sub tone (Ex D023N DCS)

G. [MENU] [2][8] Deletes Prior Data in channel (Ex. 31)

H. [MENU] [2][7] [MENU] [3][1] [MENU] Enter the desired channel (Ex 31)

- ->> [EXIT] Channel has been added

I. Press and hold the [MENU] key to return to the MR mode and the channel number will reappear.

6.9 Built-in LED Flashlight

Press the flashlight button to turn and keep the light on. Press the flashlight button again, the light is off.

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6.10 Bluetooth Programming

— Step 1 —

Download Odmaster App



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— Step 2 —

Register an account and log in

Tip : It is recommended to register by email or log in directly by Facebook



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— Step 3 —

Connect bluetooth and radio in app



Tips:

After the phone is turned on Bluetooth, do not paired the device with your phone in BT settings, just make sure that BT is enabled and then open the Odmaster App and pair with the programmer within the App.

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— Step 4 —

Select model and read from radio



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PC Programming

Odmaster Web allows you to set parameters on the web page. After saving, it will be synchronized to the mobile phone and can be directly written to the radio. Compared with the mobile phone page, the web page is more comfortable, convenient and faster.



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7. WORKING THE MENU SYSTEM

For a complete reference on available menu items and parameters, see **Appendix C, Shortcut Menu operations**.

Note: in channel mode, the setting of these features is not possible: CTCSS/ DCS tones, wide/narrow bandwidth, PTT-ID, Busy channel lock out, channel name edit.

7.1 Basic use

Using the menu with arrow keys

A. Press the [MENU] key to enter the menu.

B. Use the $\curvearrowright$ / $\curvearrowleft$ keys to navigate between menu items.

C. Once you find the desired menu item, press [MENU] again to select that menu item.

D. Use the $\curvearrowright$ / $\curvearrowleft$ keys to select the desired parameter.

E. When you've selected the parameter you want to set for a given menu item;

a). To confirm your selection, press [MENU] and it will save your setting and bring you back to the main menu.

b). To cancel your changes, press [EXIT] and it will reset that menu item and bring you out of the menu entirely.

F. To exit out of the menu at any time, press the [EXIT] key.

7.2 Using short-cuts

As you may have noticed if you looked at **Appendix C, Shortcut Menu operations**, every menu item has a numerical value associated with it. These numbers can be used for direct access of any given menu item.

The parameters also have a number associated with them; see **Appendix C, Shortcut Menu operations** for details.

Using the menu with short-cuts

A. Press the [MENU] key to enter the menu.

B. Use the numerical keypad to enter the number of the menu item.

C. To enter the menu item, press the [MENU] key.

D. For entering the desired parameter you have two options:

a). Use the arrow keys as we did in the previous section; or

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- b). Use the numerical keypad to enter the numerical short-cut code.
- E. And just as in the previous section;
- a). To confirm your selection, press [MENU] and it will save your setting and bring you back to the main menu.
- b). To cancel your changes, press [EXIT] and it will reset that menu item and bring you out of the menu entirely.
- F. To exit out of the menu at any time, press the [EXIT] key.
- G. All further examples and procedures in this manual will use the numerical menu short- cuts.

7.3 Functions and operations

(0) Wide/Narrow bandwidth (Bandwidth) - MENU No.0

This function is used to set the working bandwidth of the radio.

You can choose between wide or narrow bandwidth.

Wide: 25KHz, Narrow: 12.5KHz

Note: In channel mode, this function cannot be modified.

(1) Squelch level (Squelch) - MENU No.1

Thanks to this function you can adjust the squelch in 10 different levels:

- Level 0: opened squelch. With this setting, radio will detect all signals, also the weakest ones, but will also receive the background noise or undesired signals.
- Levels 1- 9: level 1 (lowest squelch level), level 9 (highest squelch level).

If the squelch is set to the highest level, the radio will receive the strongest signals only.

(2) TX Power - MENU No.2

This function lets you select the three different power output according to using scenario.

(3) Power save (Power Save) - MENU No.3

The power save feature enables a reduction in the consumption of the battery when the radio is in standby.

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You have 5 selections available: Off/ Mode 1/ Mode 2/ Mode 3/ Mode 4. For example: Mode 1= 1s' working and 1s' battery saving. Mode 2= 1s' working and 2s' battery is saving.

NOTE: The higher the number the longer the battery lasts. The higher number increases the RX sleep cycle, but you may miss the first few syllables before the RX opens

(4) Step frequency (Step) - MENU No.4

This function lets you select the desired frequency step.

The selectable steps are the following: 2.5/5.0/6.25/10.0/12.5/20.0/25.0/50.0 KHz

Note: in channel mode, this function cannot be modified.

(5) Backlight (Backlight) - MENU No.5

With this function you can adjust the auto off time of the display backlight (Bright, 1-10Sec).

When the option is Bright, the backlight is always on, which will affect the battery standby time.

Note: we suggest you setting 4-5s levels.

(6) Keypad beep (Beep) - MENU No.6

When this function is enabled, every time a button is pressed, you will hear a beep tone.

(7) VOX Function (Vox Level) - MENU No.7

This function allows hands-free conversations: just speak in the direction of the microphone and the communication will be automatically activated.

You can choose amongst 11 levels: Off, 1-9. 1 is the highest level, 9 is the lowest one. If this option is set to Off, the VOX function is turned off

Note: the higher is the level, the higher is the microphone sensitivity. The VOX function cannot be modified in SCAN and FM radio mode.

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