# Using the South Jordan Country Crossing MURS MU-5 and GM15-Pro Emergency Communications Radio

Both the MU-5 and the GM15-PRO are manufactured by Baofeng. The MU-5 is distributed by RadioDiddy. The MU-5 is the standard radio used by Community Members and Block Captains in the South Jordan Country Crossing Emergency Response Area. It operates on the MURS (Multi-Use Radio Service) band, which does not require an FCC (Federal Communications Commission) personal use license. The GM15-PRO is the standard radio used by the Division Leader and the Area Coordinators. It operates on the GMRS (General Mobile Radio Service) band, which does require an FCC (Federal Communications Commission) personal use license.

## 1.0 Package Contents

1 transceiver

1 Fast desktop charger

1 Lithium ion battery pack 1500 milli amp hours 7.4V

1 Wall adaptor

1 Belt clip

1 Earpiece Speaker/Microphone

1 detachable antenna

## 1.1 Radio Care and Maintenance Guidelines

This two-way radio is a precisely engineered electronic device and should be handled with care. The following guidelines below will help preserve its longevity and maintain warranty coverage:

* Do not open the transceiver. Unauthorized disassembly will void the warranty.
* Avoid storing the radio in direct sunlight or high temperature environments.
* Excessive heat can reduce the lifespan of electronic components and may warp or melt plastic parts.
* Keep the radio away from dusty or dirty environments.
* Always keep the radio dry. Moisture can corrode internal electronic circuits.
* If the radio emits an unusual smell or smoke, immediately power it off and disconnect the battery or charger.
* Never transmit without an antenna attached.

## 1.2. Charging the Battery Pack

The Lithium-ion battery pack is not pre-charged at the factory and must be charged before initial use. When charging for the first time—or after extended storage (over two months)—the battery may not reach full capacity immediately. Optimal performance typically requires 2–3 full charge/discharge cycles.

Over time, if the battery’s runtime significantly decreases despite full and proper charging, it may be time to replace the battery pack.

## 1.3 Supplied Charger

Always use the charger provided with the radio. Using an unapproved charger may cause damage, fire, or personal injury. If the radio gives a low battery voice prompt after inserting the battery pack, please charge it immediately.

## 1.4 Lithium-Ion Battery Safety Guidelines

1. **Risk of Explosion:** A short circuit or exposure to fire may cause the battery to explode.
2. **Temperature Range:** Charge the battery between 41°F to 104°F. Charging outside this range may result in incomplete charging.
3. **Power Off Before Charging:** Turn off the radio before charging to ensure proper functioning of the charging circuit.
4. **Do Not Interrupt Charging:** Do not unplug the power or remove the battery during charging until the green indicator light turns on.
5. **Avoid Overcharging:** Do not recharge the battery if it is already fully charged, as this can shorten its lifespan or cause damage.
6. **Dry Before Charging:** Never charge a damp battery or radio. Moisture can damage the internal components.
7. **WARNING:** If metal objects (e.g., keys or wires) contact the battery terminals, it can cause a short circuit and result in high heat or injury. Always carry and store the battery in an insulated container.

## 1.5 Charging via Type-C USB Port

The Type-C USB port offers a convenient alternative charging method:

1. Ensure the radio is powered **off**.
2. Plug the Type-C USB cable into the battery’s charging port, and the other end into the supplied charger.
3. A fully depleted battery takes about 2-5 hours to charge.
4. The LCD battery meter will animate to indicate charging.
5. Disconnect the battery after charging is finished.

**Note:**

* Powering off the radio while charging is recommended.
* If charging with the radio powered on, it may not be able to transmit if the battery is completely empty. Wait until at least one bar appears before transmitting.
* For optimal battery health, unplug the radio from the charger within 6 hours. Do not store it while connected to power.
* When the radio is powered on during charging, it continues to draw power, which may prevent the charger from accurately detecting full battery capacity.

## 1.6 LED Indicator Guide

* **Red:** Charging
* **Green:** Charging completed
* **Flashing Red & Green:** Battery is too warm, or there is a short circuit in the battery or charger.

## 1.7 Battery Storage Guidelines

1. Store the battery at approximately 80% charge.
2. Keep in a cool, dry place. Avoid storing in hot places and direct sunlight.
3. **Do not:**

Short circuit the battery (risk of explosion)

Attempt to open or disassemble the battery pack

Dispose of the battery in fire or expose it to high heat

## 1.8 Installing the Belt Clip

1. Locate the two screws towards the top of the battery on the back of the radio.
2. Remove these screws, align the belt clip with the screw holes, and reinsert the screws through the clip into the radio body.

## 1.9 Installing the Battery Pack

Ensure the radio is turned **off** before attaching or removing the battery. Turn the power/volume knob fully counterclockwise to power off.

1. Align the battery pack with the radio, keeping it parallel to the body. The bottom edge of the battery should start about 1–2 cm below the edge of the radio.
2. Slide the battery upward along the guide rails until it clicks into place, indicating it is securely locked.

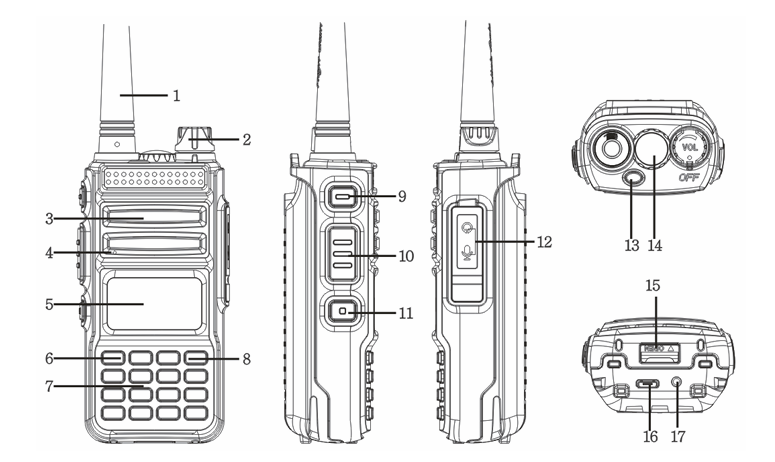
## 1.10 Removing the Battery Pack

To remove the battery, press the **battery release button** located above the battery pack while sliding the battery downward and away from the radio.

## 1.11 Installing the Optional Speaker/Microphone

1. Open the rubber cover over the MIC/Headset jack on the side of the radio.
2. Insert the speaker/microphone plug into the dual-pin jack securely.

## 1.12 Radio Overview – Buttons and Controls



1. **Antenna** – Transmits and receives radio signals.
2. **Power Switch / Volume Control** – Rotate to power the radio on/off and adjust the volume level.
3. **Speaker** – Outputs audio from incoming transmissions.
4. **Microphone** – Captures your voice during transmissions.
5. **LCD Display** – Shows current channel, mode, battery status, and other indicators.
6. **MENU Key** –

**Short Press:** Under 2 seconds. Opens the function menu and confirms selections.

**Long Press:** Greater than 2 seconds less than 5 seconds. Switches between Frequency Mode (VFO) and Channel Mode.

1. **Alphanumeric Keypad** – Used for frequency/channel input, function configuration and menu navigation.
2. **Back/WX Key** –

**Short Press:** Exits the current menu or function.

**A/B Selector:** Toggles between active channels (A/B as displayed).

**Long Press (5 seconds):** Switches between MURS communication mode and NOAA Weather reception mode.

1. **FM/SOS Key** –

**Short Press:** Turns the FM radio on or off.

**Long Press:** Activates the audible and visual SOS alarm.

1. **PTT (Push-To-Talk) Key** – Hold to transmit; release to receive.
2. **LAMP/Monitor Key** –

**First Press:** Turns on the flashlight.

**Second Press:** Enables flashing flashlight mode.

**Third Press:** Turns off the flashlight.

**Long Press:** Activates Monitor Mode for listening without squelch.

1. **MIC/SP Jack** – Connects to an external speaker or microphone.
2. **LED Indicator** –

**Red:** Transmitting

**Green:** Receiving

1. **Flashlight** – Built-in LED flashlight for emergency or utility use.
2. **Battery Release Latch** – Slide to remove the battery pack.
3. **Type-C Charging Port** – For USB DC 5V input charging.
4. **Charging Indicator Light** –

**Red:** Charging in progress

**Green:** Charging complete

## 1.13 Main Controls and Parts of the Radio

LCD Display Indicators

1. **Signal Strength Meter** – Displays the strength of the received signal.
2. **Low Power Indicator** – Shown when the radio is operating in low power mode.
3. **DTMFST Indicator** – Appears when DTMF settings (DT-ST / DT+ANI / ANI-ST) are enabled.
4. **DCS Code Indicator** – Indicates a DCS (Digital Coded Squelch) code is set for TX (transmit) or RX (receive).

Appears during transmission in TX mode.

Remains visible during standby in RX mode.

1. **CTCSS Code Indicator** – Shows that a CTCSS (Continuous Tone-Coded Squelch System) code is set for TX or RX.

Appears during transmission in TX mode.

Remains visible during standby in RX mode.

1. **Dual Watch Active (D)** – Displays when Dual Watch (monitoring two channels) is enabled.
2. **VOX Indicator** – Shown when Voice-Activated Transmission (VOX) is turned on.
3. **Bandwidth Indicator** –

**N** = Narrow bandwidth.

No icon = Wide bandwidth.

1. **Keypad Lock Icon** – Indicates the keypad is locked.

Press **[\*]** to unlock.

1. **Battery Level Indicator** – Shows current battery charge level.

When the battery is low, the icon blinks, transmission is blocked, and an audible "Low Voltage" warning is given (if voice prompts are enabled).

1. **Primary VFO Indicator** –

**Solid Arrow**: Shows the active VFO and its related settings.

**Outline Arrow**: Indicates an incoming signal is being received.  
12/13. **Display Mode (SYNC/Channel/VFO)** –

**SYNC On / Channel Mode**: Displays channel name (top) and frequency (bottom).

**SYNC On / VFO Mode**: Displays "VFO" (top) and frequency (bottom).  
14/15. **Channel Number / Function ID** –

In Channel Mode, displays the stored channel number.

Also serves as a keypad shortcut to jump to that channel.

In Menu Mode, shows the function ID, which can be used to directly access a menu option using the keypad.

## 1.14 Main Keypad Controls

Function Key (MENU)

**Short Press:** Opens the function menu. Navigate through options using the ▲ and ▼ keys (resembling picnic table icons).

**Direct Access:** Enter a Function ID using the numeric keypad to jump directly to that setting.

**Long Press:** Toggles between Frequency (VFO) mode and Channel (Memory) mode.

*Note: You must be in VFO mode to save a frequency to memory.*

Navigation Keys (▲ / ▼)

▲ (Up Arrow):

**Short Press:** Moves one step up through channels, frequencies, or menu options.

**Long Press:** Scrolls upward quickly.

In SCAN mode, starts scanning upward.

▼ (Down Arrow):

**Short Press:** Moves one step down.

**Long Press:** Scrolls downward quickly.

In SCAN mode, starts scanning downward.

A/B – Back/WX Key

**Short Press:** Escapes out of the current menu or function.

**Short Press:** In standby mode, Sets the cursor to Channel A (top) or Channel B (bottom).

In SYNC=Off + Channel mode, both A and B are shown with a solid arrow indicating the primary (active) channel.

In SYNC=On, only one channel is shown (channel name + frequency).

**Long Press:** In standby mode, Switches between MURS and NOAA Weather reception mode.

**Short Press:** *In FM Broadcast mode*, *used to toggle between 65–75 MHz and 76–108 MHz bands when listening to FM.*

Note: Only the channel/frequency with the solid black arrow is active for transmission (Tx) and reception (Rx) unless Dual Watch (D.WAIT) is enabled.

Numeric Keypad

**Frequency Input:** Directly enter frequencies in VFO mode.

**Function Shortcuts:** Enter Function IDs to access settings quickly.

**DTMF Tones:** While holding the PTT button, the number keys send corresponding DTMF tones instead of numeric inputs.

[\*] Key – Keypad Lock

**Long Press:** Locks or unlocks the keypad.

[#] Key – Scan/Voltage

**Short Press (in standby):** Displays battery voltage.

**Long Press:** Starts scanning.

In FM mode, scanning stops automatically when a station is found—regardless of scan settings.

## 1.15 Basic Operations

Powering the Radio On/Off

**Turn On:** Rotate the Power/Volume knob clockwise until it clicks.

**Turn Off:** Rotate the knob fully counterclockwise until it clicks.

Adjusting Volume

* Rotate the Power/Volume knob Clockwise to increase volume. Counterclockwise to decrease volume.
* Ensure volume is loud enough to hear traffic clearly.

## 1.16 Channel Selection

There are two primary operating modes:

**Frequency (VFO) Mode**: Ideal for experimentation or manually tuning to a specific frequency. Also used to program memory channels.

**Channel (Memory) Mode:** Most practical for daily use once channels are programmed.

**Switching Mode:** Long press the function key while in standby.

Navigating Channels:

Use the ▲ / ▼ keys or enter a channel shortcut via the keypad.

## 1.17 Making and Receiving Calls

Switching Between Modes

**Long press:** the function key to toggle between VFO and Memory mode.

**Cursor Selection:** Short press the A/B (Back/WX) key to select Channel A or B (indicated by solid black arrow)

Transmitting

**Select Channel/Frequency:** Ensure the solid black arrow points to the desired channel/frequency. Also verify the channel/frequency is the same as the target station(s).

**Press and Hold PTT:** Speak within 2 inches of the mic. The red LED indicates active transmission. Hold the button down for the duration of the transmission.

Receiving

When a signal is received, the green LED lights up.

If using privacy codes, a solid green light with no audio means the radio is picking up traffic. But the signal is being ignored.

Only the strongest signal is received when multiple signals are present.

## 1.18 MURS Transmission Limits

Only 5 specific MURS channels are available for transmission.

If the red LED does not light up when pressing PTT, the selected frequency is not MURS-compliant, and transmission is blocked.

Receiving on non-MURS channels is permitted.

Additional Notes

**Interoperability:** MURS radios from different brands can communicate if set to the same frequency and privacy code.

**Privacy Codes:** Ensure matching CTCSS or DCS tones for communication.

**Legal Compliance:** Use only authorized MURS channels and follow FCC rules. Unauthorized transmission is illegal.

## 1.19 Frequency (VFO) Mode

Use the ▲ / ▼ keys to scroll through frequencies. Steps depend on the STEP setting.

Direct Frequency Entry Example (12.5 kHz steps):

To enter 436.61250 MHz into VFO A:

Ensure you're in Frequency (VFO) Mode (long press MENU if needed).

Use the A/B key to select the top (A) channel.

On the keypad, enter: [4] [3] [6] [6] [1] [2] [5] [0].

"VFO" appears on the display in this mode.

Only transmission on the 5 MURS frequencies is permitted.

Scanning and listening to all UHF/VHF bands is allowed.

Green Tx light only activates on legal MURS transmissions.

Programming a frequency does not authorize you to transmit on it. Listening is generally legal, but unauthorized transmission is a serious offense.

## 1.20 Channel (Memory) Mode

Use once channels have been programmed Navigate channels using the ▲ / ▼ keys or keypad shortcuts. Alternatively, use the keypad shortcuts to jump directly to a channel.

The right side of the display shows the channel number. Entering the channel number on the keypad will jump directly to the channel. The DLs and BCs will need to become familiar with a couple of channels they will use for the different layers of communication. The Community Radios do not require any changing of channels to engage in area communications.

### MURS Community radio Pre-Programmed Channel Defaults

Channel **CM** and **CCAREA** with the cursor as indicated by the **arrow on CM** and **D.Wait=On**. With these settings, community members will receive area communications on CCAREA and may engage in two-way communication with nearby community members and their Block Captions. It is not recommended that Community Members make any changes to their radio stations. It is better to get a second radio to experiment with to ensure one radio is always ready for emergency communications. One of the biggest issues seen in testing is being on the wrong channel.

### MURS Block Captain radio Pre-Programmed Channel Defaults

Channel **BC** and **CCAREA** with the cursor as indicated by the **arrow on BC** with **D.Wait=On.**

In addition to the Default BC channel settings, BC’s have two other channels for two-way communication needed to communicate with either DL or the CMs. They are:

Channel **BC** and **DL** with the **cursor on BC**.

Channel **BC** and **CM** with the **cursor on CM**.

The BCs will switch the CCAREA channel to the DL channel when told to do so. In this configuration, two-way communication between the BCs and DLs is enabled.

And the DL will operate the BC Net. After the BC Net is concluded, the BCs switch from the DL channel to the CM channel to run the Community Net. After CM Net is completed, the BC switches CM back to DL for wellness reporting.

For BCs, it’s best to keep one channel bank always on the BC channel. The other channel bank will be one of three channels: CCAREA, DL or CM. The start channel will always be CCAREA. On the CCAREA channel, DLs will tell BCs when to move to the DL channel.

### GMRS Division Leader Pre-Programmed Channel Defaults

Channel **BC** and **CCAREA** with the cursor as indicated by the **arrow on CCAREA** with **D.Wait=On**

Both Area Coordinators and Division Leaders engage in two-way communication on the CCAREA channel. The CCAREA channel covers the entire area and then some.

### GMRS Area Coordinator Pre-Programmed Channel Defaults

Channel **CCAREA** with **D.Wait=Off**

The AC’s will monitor the CCAREA channel and respond to DL traffic as needed. The AC’s could enable D.Wait=On to receive traffic on channel BSHP2M shortcut 058 (Bishop Storehouse) or channel SLCEOC shortcut 055 (Salt Lake County South Jordan EOC). The AC’s will direct HAM station operators with external communications as necessary. AC’s can receive emergency traffic on channel SLCEOC and BSHP2M only. Note, BSHP2M Nets occur every Tuesday at 9PM. But SLCEOC is not routinely tested or verified.

## 1.21 ADVANCED FEATURES

### Frequency scanning

Frequency scanning is when a range of frequencies continuously checked for radio traffic. When traffic is detected, it will stop for the time specified in the Scan Mode function.

* 1. In frequency mode, toggle scanning on and off by long pressing the pound key. If in channel mode, long press the function menu key to enter frequency mode. The radio will start scanning the frequency according to the set frequency Step and Range functions.
  2. You can change the scanning direction with the arrow keys.
  3. Long press the pound key to stop the scanning.

### Channel scanning

Channel scanning is when a range of channels is continuously checked for radio traffic. When traffic is detected, it will stop for the time specified in the Scan Mode function. Only channels with Scan Add = Yes are included.

* 1. In channels mode, toggle scanning on and off by long pressing the pound key. If in frequency mode, long press the function menu key to enter channel mode.
  2. You can change the scanning direction with the arrow keys.
  3. Long press pound key to stop scanning.

### CTCSS scanning

The function allows scanning the frequencies with CTCSS tone enabled.

1) In standby mode, press menu MENU [3] [0], "SEEK 67.0" will appear on the display.

2) Press MENU and the scan of CTCSS tones will start.

In testing, the scan function can be activated in both frequency mode and channel mode. However, it only works if both radios are in channel mode.

### DCS scanning

This function allows scanning the frequencies with DCS code enabled.

1) In standby mode, press the menu key [3] [1]; the display will show "SEEK D023N".

2) Press the menu key and the scan of DCS codes will start.

In testing, the scan function can be activated in both frequency mode and channel mode. However, it only works if both radios are in channel mode.

### Back Key

The Back key is on the keypad in the top right. A short press of the Back key will toggle the cursor to the upper channel A or the lower channel B. The top is referred to A and the bottom is referred to as B. The solid black arrow indicates which channel is active.

lmportant1: Both the MU-5 and the GM15-Pro have a dual watch function. In frequency mode, you will see two different receiving and transmitting frequencies, while on channel mode you will see to two different channels displayed. Transmitting always originates from the channel with the solid black arrow. Receiving likewise unless the D. Wait function is enabled. If the D.Wait = On, Receiving will occur on both channel A and channel B. If D.Wait = Off, receiving will only occur on the channel with the solid black arrow. D.Wait and Dual Watch are the same thing.

### Keypad lock

This function locks the keypad to help prevent accidental changes. Long press the star key to toggle on or off.

### FM Radio (FM)

There are two frequency ranges for listening to broadcast radio: 65-75 MHz and 76-108 MHz. When listening to broadcast FM, short pressing the Back key switches between 65-75 MHz and 76-108 MHz band.

1) In frequency or channel mode, Press [FM/SOS] button to turn on the radio. It’s the top left button.

2) Select the desired radio frequency with the arrow keys or input the frequency directly on the keypad. Short press the pound key to start searching for a radio station.

3) Press [FM/SOS] key again to exit FM radio.

When listening to the FM broadcast radio, if a signal is received the radio will automatically switch to the incoming signal. The radio will automatically return to the FM broadcast when there is no radio signal.

### Manual Programming

Memory channels are an easy way to store commonly used frequencies so that they can easily be retrieved later. Both the MU-5 and the GM15-PRO features many 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.

#### Frequency Mode vs. Channel Mode

In standby mode, press and hold the menu key to switch between frequency (VFO) mode and channel (MR) mode. These two modes have different functions and are often confused.

Frequency Mode is referred to as VFO mode for short. VFO mode is typically used to store channels for use in channel mode. It is unusual to operate in VFO mode during normal operation.

Channel Mode is referred to as Memory mode or MR mode for short. Memory mode is the normal operation mode used for selecting preprogrammed channels.

##### Example 1 Save the frequency 432.55000 MHz on Channel 55

1. Press the Back key to set the cursor to either the main channel A or sub channel B. The sold arrow indicates the location of the cursor.
2. Long press the menu key to set the radio to VFO mode. In VFO mode VFO is displayed on the right of the frequency.
3. Press the Menu key then function id [2] [8] press the Menu key again then enter value [5] [5] then press the Menu key again to save. This will delete the existing data on channel 55.
4. Enter RX frequency for example 43255000
5. Press the Menu key. Then press function [2] [7] press them Menu key to select then enter the channel to store the frequency in [5] [5] press menu again to save. The frequency is now saved in cnannel 55.
6. Long press Menu key to return to channel mode.

Note: In testing, it was discovered that both deleting memory and setting memory from the keypad on the MU-5 only works for memory locations between 55-250. One would expect it to work with channels between 21-54. However, Channels 21-54 can be set up with programming software.

##### Example 2 Scan Frequency Range 430-435MHz

1. Long press the menu key to set the radio to VFO mode. In VFO mode VFO is displayed on the right of the frequency.
2. Press Menu then function id [1] [8] then press Menu again to enter the scan range menu
3. Enter value [4] [3] [0] [4] [3] [5] followed by the Menu key to save and Back key to escape the Menu.
4. Long press the pound key to start scanning in frequency mode. The scan behavior is determined by the Scan Mode function setting.
5. Short press the [PTT] key to stop scanning.

NOTE: The scanning feature is very slow compared to commercial scanners. It does work well in channel mode due to the limited numbers of emergency channels we are concerned with.

### Built-in LED Flashlight

To turn the light on short press the [LAMP/Monitor] button on the lower left once for constant light. Short press the [LAMP/Monitor] a second time for flashing light. Short press the [LAMP/Monitor] a third time to turn off. Only turn the flashlight on when necessary to conserve battery power. In an emergency the flashing light indicates distress and help is needed.

### NOAA weather Receiver / Scan

Your radio supports listening to broadcasts by the United States National Oceanic and Atmospheric Administration (NOAA).

To turn the NOAA weather receiver on, long press the Back key. When activated, scan mode is entered by default which will start scanning all 11 channels and stop on any active channel. To change direction or continue scanning short press the arrow keys. To stop the NOAA weather scans and set the channel manually on the NOAA weather band, short press the pound key during NOAA weather scan. The radio will stop scanning and the display will show the current WX Band channel. After exiting the default scan mode use the arrow keys to set the specific channel you want. To turn the NOAA weather receiver off, long press the Back key.

NOAA weather radio stations are assigned to cover specific areas and service may be limited. Please check with your local weather office for frequency and details or visit www.weather.gov/nwr in the US to view the appropriate transmitter for your area. When you listen to a weather channel, you cannot use the radio in scan mode or for communications.

## Working The Menu System

### Basic use

Using the Menu with arrow keys

1) Press the Menu key to enter the function list.

2) Use the up and down arrows keys to move sequentially from one function to the next. The function shortcuts can also be used to jump directly to another function.

3) Once you find the desired function, press Menu key again to edit the function values.

4) Use either the up down arrows keys to select the desired parameter or the keypad shortcut.

5) When you've selected the value, you want to set for a given function:

1. To confirm your selection, short press the Menu key and it will save your setting.
2. To escape out and cancel edits keep short pressing the Back key as needed.

### Using Shortcuts

Every function accessed from the Menu key has a numerical value associated with it. These numbers can be used to jump directly for a specific function. The function values also have a number associated with them.

Using the menu with shortcuts

1) Short Press the Menu key to access the function list.

2) Use the keypad to enter the number of the desired function.

3) The Menu key is for both selecting the desired function and saving function values.

4) After selecting the desired function:

* + 1. To select any available function parameters, use the arrow the keys or use the keypad to enter the numerical shortcut code.
    2. To confirm your selection and save any changes short press the Menu key.
    3. To cancel changes or escape from the current function continue to short press the Back key as needed.

## Functions and operations

To enter the functions below, short press the Menu key followed by the number in parentheses.

### (0) Squelch

Level 0: opened squelch. With this setting, the radio will detect all signals, also the weakest ones, but will also receive 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.

### (1) Step

In channel mode only viewing the current value is possible. Long press the Menu key to switch to frequency mode (VFO) to modify the settings to one of the following: 2.5/5/6.25/10/12.5/20/25/50 KHz

### (2) Power Save

The Power Save feature reduces battery consumption when the radio is in standby mode. You can choose from five settings:

* Off: No power saving; the radio remains fully active.
* Mode 1: Radio operates for 1 second, then enters battery-saving mode for 1 second.
* Mode 2: Radio operates for 1 second, then enters battery-saving mode for 2 seconds.
* Mode 3: Radio operates for 1 second, then enters battery-saving mode for 3 seconds.
* Mode 4: Radio operates for 1 second, then enters battery-saving mode for 4 seconds.

The higher the mode number, the longer the radio stays in battery-saving mode, extending battery life. However, a higher number increases the receiver's sleep cycle, which may cause you to miss the beginning of transmissions.

### (3) Vox Level

The VOX (Voice Operated Exchange) function enables hands-free communication by automatically activating the microphone when it detects your voice. You can adjust the sensitivity across nine levels:

* Level 1: Most sensitive; responds to the faintest sounds.
* Level 9: Least sensitive; requires louder sounds to activate.

If set to Off, the VOX function is disabled.

Note: For optimal performance, especially in noisy environments, consider using a headset with a boom microphone positioned close to your mouth. This setup reduces the likelihood of unintended transmissions and ensures clearer voice detection

### (4) Bandwidth

Either Wide 25k or Narrow 12.5k

### (5) Backlight

The Display Backlight Auto-Off Timer feature allows you to adjust the auto-off duration for the display backlight, with options ranging from **1 to 10 seconds**. When set to **Bright**, the backlight remains continuously on, which can significantly reduce battery life.

To conserve battery, it's advisable to set the backlight to turn off after a shorter duration, such as 1 or 2 seconds. This adjustment helps extend standby time without compromising visibility during use.

### (6) D.Wait

The Dual Watch feature allows simultaneous monitoring of both A and B banks. When a signal is detected on either channel, the corresponding cursor arrow on the display points to the channel with activity.

**Operating Modes:**

* **Off**: Dual Watch is disabled; the radio monitors only the active channel.
* **A**: The radio monitors both channels but transmits only on Channel A.
* **B**: The radio monitors both channels but transmits only on Channel B.

In Dual Watch mode, you can freely adjust the parameters of either channel, including frequency settings. However, certain functions may be limited while in this mode.

### (7) Beep

When this function is enabled, every time a button is pressed, you will hear a beep tone. It may be useful for a vision impaired person.

### (8) TOT

The Time-Out Timer (TOT) feature is designed to prevent prolonged transmissions and conserve battery life. When activated, it automatically halts transmission if the Push-To-Talk (PTT) button is held down beyond a preset duration.

**Settings:**

* **Off**: Disables the TOT function; transmission continues if the PTT button is pressed.
* **Preset Durations**: Choose from various time intervals (e.g., 15s, 30s, 45s) to limit the maximum transmission time.

**Note:** When set to **Off**, you can press and hold the PTT button to maintain continuous transmission. However, enabling the TOT function helps prevent accidental long transmissions and reduces the risk of channel monopolization.

### (9) Rx DCS

DCS codes are like access codes and can be added to channels, to create a sort of personal channel. They enable the radio to communicate with the users that are tuned on the same channel and have set the same DCS code.

You can choose between Off and D023N-D754N (Normal DCS), D023I-D754I (Inverse DCS)

NOTE: This function cannot be changed in channel mode.

### (10) Rx CTCSS

As DCS codes, the CTCSS codes can be added to the channels for creating new private channels.

NOTE: In channel mode the CTCSS tones cannot be changed.

### (11) Tx DCS

In this Menu you activate DCS codes in Tx mode. You can choose between Off and D023N-D754N (Normal DCS), D023I-D754I (Inverse DCS)

NOTE: DCS codes cannot be changed in channel mode.

### (12) Tx CTCSS

In this Menu you can set a CTCSS tone in Tx mode.

You can choose: Off or CTCSS (67.0 to 254.1 Hz)

NOTE: In channel mode the CTCSS tones cannot be changed.

### (13) Voice

With this function, you activate a voice that informs you about any operation / selection you are doing. May be helpful for vision impaired persons.

### (14) ANl-ID

With this function you can set a DTMF ID-code. It can be programmed by the proper programming software. You can edit up to 5 digits.

### (15) DTMFST

Determines when DTMF Side Tones can be heard from the transceiver speaker. You can choose between four options:

• Off: No DTMF Side Tones are heard

• DT-ST: Side Tones are heard only from manually keyed DTMF codes

• ANI-ST: Side Tones are heard only from automatically keyed DTMF codes

• DT+ANI: All DTMF Side Tones are heard

### (16) S-CODE

Set 1 of 15 preprogrammed DTMF codes. The DTMF codes are programmed with software and are up to 5 digits each.

### (17) Scan Add

In channel mode, to scan the current channel, the channel must be added to the scan group.

• On: Turn on the scan function of the current channel.

• Off: Do not scan the current channel.

### (18) Scan Ran

In frequency mode, the frequency range can be precisely set. Using a smaller range increases the speed of traffic detection. Input the start value and end value on the keypad.

For example, in frequency mode enter 144146 for the range of 144. 000-146. 000MHZ. Enter 430450, in frequency mode, scan in the range of 430.000-450.000MHZ.

NOTE: In channel mode, the set frequency range is invalid and cannot be saved.

### (19) Scan Mode

You can choose between three options:

• Time-operated SCAN Whenever a signal is detected, the radio will suspend the SCAN for 5 seconds and then will continue to SCAN even if the signal is still present.

• Carrier-operated SCAN Whenever a signal is detected, the radio will stop scanning. It will resume to SCAN once the signal disappears.

• Search -Search SCAN The radio will stop scanning once a signal is detected.

### (20) PTT-ID

With this function you can decide when sending the ANI-ID code in TX mode. You can choose from 4 possibilities.

• Off

• BOT: the code is sent when you press the PTT

• EOT: the code is sent when the PTT is released

• BOTH: the code is sent when you press and release the PTT

### (21) MDF-A

This only applies on Channel Mode. This function is used to set the display mode of bank A to use either the frequency or the name.

NOTE: Setting channel names requires programming software. The name supports up to six alphanumeric characters.

### (22) MDF-B

This function is used to set the display mode of channel B.

This only applies on Channel Mode. This function is used to set the display mode of bank B to use either the frequency or the name.

NOTE: Setting channel names requires programming software. The name supports up to six alphanumeric characters.

### (23) Busy Lock

When this function is on, it may prevent interference caused by transmission on the same channel at the same time as another station. If the selected channel is being used by other radios as seen by the green led, when you press key PTT, your radio cannot transmit. Release the PTT and transmit as soon as the frequency is no longer busy. When using privacy codes, traffic without the privacy code is not audible. But that doesn't mean there are no other stations transmitting. If two stations transmit at the same time on the same frequency, receivers will only pickup the strongest signal.

### (24) AUTO LK

When this feature is activated, the keypad will be automatically locked after 15s; this prevents unintentional configurations changes. The keypad lock can be manually enabled through the keypad star key.

### (25) Direction

Unused on MU-5.

### (26) Offset

Unused on MU-5.

### (27) Memory

Stores a frequency into the select channel. Only works from in Frequency mode. On the MU-5, enter a channel between 55-250 so save the frequency in.

NOTE: If you want to set CTCSS tones, DCS codes or the frequency offset, you must do it before storing the channel. The channels already stored are displayed as CH followed by a dash followed by the channel number.

In testing, it was discovered that both deleting memory and setting memory from the keypad on the MU-5 only works for memory locations between 55-250. One would expect it to work with channels between 21-54. However, Channels 21-54 can be set up with programming software.

### (28) Delete

Used to delete the content of a stored channel.

NOTE: Only channels between 21 and 250 can be deleted. Channels 1-20 are reserved for MURS TX channels and cannot be deleted.

### (29) Alarm Mode

This function sets the alarm mode to one of the following: Site, Tone or Code. Long press the [FM/SOS] key to activate.

**Site**: the speaker emits an alarm tone, but the radio doesn't transmit.

**Tone**: the speaker emits an alarm tone, and the radio transmits it;

**Code**: the speaker emits an alarm tone, and the radio transmits it followed by ANl-ID code.

### (30) SEEK

The function allows scanning the frequencies with CTCSS tone enabled.

NOTE: The function cannot be activated when the radio is set in Channel mode. The Scan will stop only when the receiving band detects a signal.

### (31) SEEK

This function allows scanning the frequencies with DCS code enabled.

NOTE: The function cannot be activated when the radio is set in Channel mode. The Scan will stop only when the receiving band detects a signal.

### (32) TAIL

This function is used to eliminate squelch tail noise between handhelds that are communicating directly (no repeater). Reception of a 55 Hz or 134.4 Hz tone burst mutes the audio long enough to prevent hearing any squelch tail noise.

### (33) RP-STE

Unused on MU-5.

### (34) RPT-TL

Unused on MU-5.

### (35) ROGER

When the PTT is released, the radio will beep.

### (36) R-TONE

With this function you can select 1000Hz, 1450Hz, 1750Hz, 2100Hz repeater tone. To send out a repeater tone; You hold down the [PTT]+ [LAMP/MONI] key. 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.

### (37) OPNSET

Changes what is displayed when the radio is powered on to one of the following: the RadioDiddy logo, a Welcome message, or the voltage.

### (38) Language

Set to English. Cannot change.

### (39) Hopping RX

Unused on MU-5.

### (40) Reset

Reset the radio to the factory defaults. There are two options: VFO and ALL.

### (41) SYNC

Sync=Off is when the screen can display two separate channels or frequencies at the same time. When set this way, the top is channel is referred to A, and the bottom channel is referred to B. The Back button toggles between A and B. There is no relationship between A and B when set this way.

When Sync=On the display shows the name in A and the frequency of the name in B.