

LSC Radio User Guide Information and Guidelines

The following user guide applies to both the Motorola VL50 and CLS1410 Radio's. Below are guidelines established for usage.

- 1) Radios and headsets are to be signed out at the beginning of each day.
- 2) Radios are to be returned at the end of each day. It has been found that the majority of damage to both the headsets and radios occur when stuffed into a personal carrying bag.
- 3) The Chief Judges or their designee is responsible for issuing at the beginning of the day and collection at the end of each day.
- 4) The chief judge should have the radios set to the proper channels before issuing. It is advised that the keyboard should be locked out before issuing in order to avoid settings from being accidentally changed.
- 5) Any problems with either the headset or radio should be noted on the sign-out/in log.
- 6) We understand that accidents happen, please note any at the time of return.

Thanks for volunteering, your time and effort is appreciated by the LSC, Coaches and most of all our swimmers. Have a great meet!

LSC Officials Committee

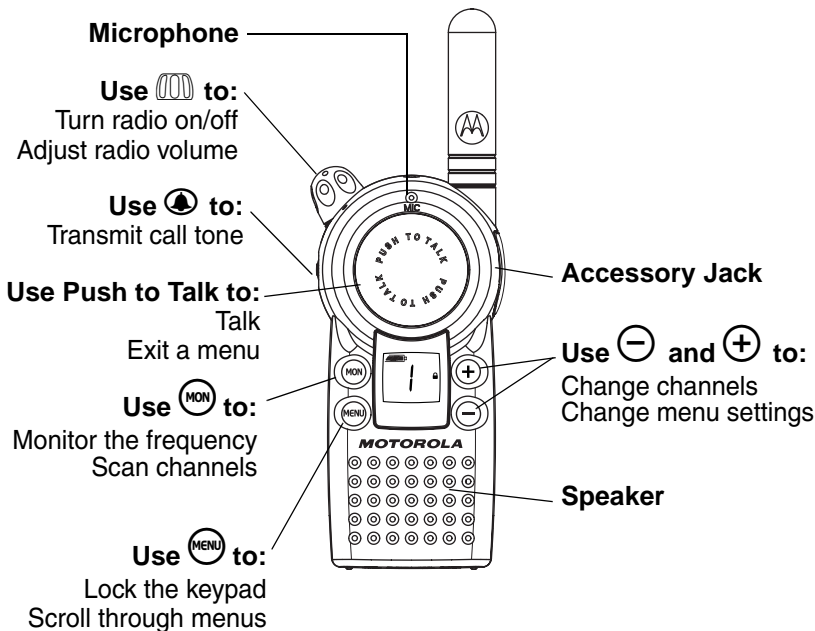


VL50

Two-Way Radio User Guide



Radio Controls



Charging Status LEDs





On the drop-in charger, the radio and battery charging pockets have their own LEDs.

On the MUC, each of the 6 charging pockets has an LED. The LEDs are grouped into pairs to show which charging pockets are paired (for cloning, see page 27).

The LED is solid red when the battery is charging, and solid green when charging is complete.

Battery Meter

The battery meter in the upper left corner of the display (see page 15) shows how much battery power is remaining.

Battery Type	3 Bars	2 Bars	1 Bar	Flashing
				
Li-Ion	100%–85%	85%–25%	25%–10%	Final 10%
AAA Alkaline	100%–75%	75%–40%	40%–10%	Final 10%

Battery Life


Based on 5% transmit, 5% receive, 90% standby (standard duty cycle):

Li-Ion – 12 Hours AAA Alkaline – 10 Hours

Note: For optimal battery life, high-capacity alkaline batteries are recommended.

Turning Your Radio On and Off

See page 8 for a basic radio diagram.

Turn  clockwise to turn the radio on, and counterclockwise to turn the radio off. When the radio is on, the transmit light on the top of the radio flashes every 3 seconds.

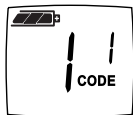


When you turn the radio on, the radio chirps and the display briefly shows all features and display segments.


The radio then displays the current channel (larger number in the center) and the frequency assigned to that channel (on the right indicated by **FREQ**).



The Interference Eliminator Code displays briefly (indicated by **CODE**), then the current channel remains displayed.

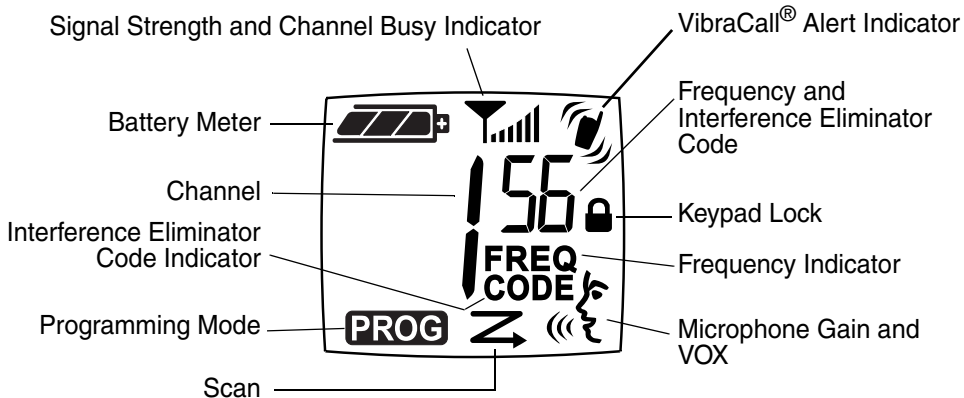


Adjusting the Volume

Turn  clockwise to increase the volume, and counterclockwise to decrease the volume.



Note: Do not hold the radio too close to your ear when adjusting the volume.

Reading the Display




Talking and Receiving


Basic Radio Operation

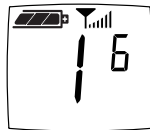
1. Press and hold  to check for channel activity. If you hear static, the channel is clear to use. Do not transmit if someone is speaking on the channel. Press  again to stop monitoring.
2. To talk, press and hold **Push to Talk** and speak into the microphone. Hold the radio 2 to 3 inches away from your mouth.
3. To listen, release **Push to Talk**.

The transmit LED on the top of the radio is red when transmitting.

Signal Strength and Channel Busy Indicators



When there is activity on a frequency, the radio displays  and the transmit light flashes at a faster rate of once per second.

When there is activity on the same frequency and code as your radio (your radio is receiving), the radio displays  and a signal strength from 1 (weakest) to 6 (strongest). This can help determine when a radio is moving out of range.



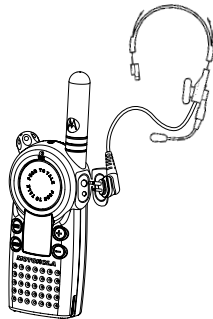
Note: Obstacles that block the signal path may affect the strength of the incoming signal.

With Compatible VOX Accessories


1. Turn the radio off.
2. Open the accessory cover.
3. Plug the audio accessory firmly into the accessory jack.
4. Turn the radio on. The radio displays . **If  is flashing and you are setting up the VOX accessory for the first time, set the VOX sensitivity level (see page 19).**
5. Lower the radio volume BEFORE placing the accessory in or near your ear.
6. To transmit, speak into the accessory microphone. To receive, stop talking.










To disable VOX operation, press **Push to Talk** or remove the audio accessory.

Note: To order accessories, call 1-800-422-4210, or contact your point of purchase.



Setting the VOX Sensitivity

You can adjust the sensitivity of your radio's accessory or microphone during VOX operation to suit different operating environments. These menus appear only when the VOX feature is in use, which is indicated by .



1. Press  until  displays. The radio displays  when you are setting the external VOX (with audio accessory).
2. Press  or  to select the sensitivity level:
 = Off  = Low  = Medium  = High



External VOX





Locking the Keypad

You can lock the keypad to avoid accidentally changing your radio settings.

1. Press and hold  for 3 seconds.
2. To unlock, press and hold  for 3 seconds.


Monitoring a Channel

Monitoring allows you to check for activity on a channel.

1. Press and hold . If the channel is clear to use, you will hear static and  and  will display.
2. Press  again to stop monitoring.







Entering Programming Mode

Press and hold **Push to Talk** and  for 3 seconds while turning the radio on. The radio beeps and displays **PROG**, the channel number flashes, and the frequency (indicated by **FREQ**) and code (indicated by **CODE**) display alternately.





Note: If you press and release the **Push to Talk** button when programming, you will return to the front of the Programming Mode.

Selecting a Channel

1. In programming mode, press  until the channel number flashes and the frequency and code display alternately (this is the first setting after you enter programming mode).
2. Press  or  to select the channel.
3. Press and hold **Push to Talk** to exit programming mode, or press  to continue programming.



Programming the Frequency



1. In programming mode, press  until **FREQ** displays and the frequency number flashes.
2. Press  or  to select the frequency.
3. Press and hold **Push to Talk** to exit programming mode, or press  to continue programming.




Note: See page 34 for information on frequencies for communicating with other business radios. If you are matching your VL50 radio to an existing Spirit GT radio, see page 40.

Advanced Features


You can set the following features by pressing and holding additional buttons **while turning the radio on**.


To Do This	Press This Button While Turning the Radio On	Default Setting
Turn Keypad Tones On/Off Turns keypad beeps off for silent keypad operation.	⊖	On
Turn End-of-Transmission Tone On/Off If enabled, your two-way radio transmits a tone when you finish transmitting (like saying <i>Roger</i> or <i>Over</i>). If keypad tones are off and end-of-transmission tone is on, you will not hear the end-of-transmission tone, but it is transmitted.	⊕	Off
Turn Battery Save Mode On/Off Decreases attack time, which is the brief period of time between when the radio receives a transmission on its frequency and broadcasts audio. Turning battery save mode off decreases battery life by approximately 20%.	Push to Talk  	On

To Do This	Press This Button While Turning the Radio On	Default Setting
Restore Factory Defaults Returns radio to its original factory settings.	Push to Talk 	---

Troubleshooting

Symptom	Try This:
No Power	Recharge or replace Li-Ion battery. Reposition or replace Alkaline batteries.
Message not transmitted	Make sure Push to Talk is completely pressed while transmitting. Recharge, replace, and/or reposition batteries. Verify the transmit light is illuminated while speaking. Verify Channel, Frequency, and Code settings are correct.
Hearing other noises or conversation on a channel	Frequency may be in use. Change on all radios if possible (see page 23 and 24).
Poor audio quality	Bandwidth does not match. For optimal audio quality when communicating with VL50 radios, the bandwidth of other radios should be set to 12.5 kHz, if possible.

Symptom	Try This:
Limited talk range	<p>Steel and/or concrete structures, heavy foliage, buildings, or vehicles decrease range (see page 17). Check for clear line of sight to improve range.</p> <p>Wearing radio close to body such as in a pocket or on a belt decreases range. Change location of radio.</p>
Message not received	<p>Confirm radios have the same channel, frequency, and interference eliminator code settings (see page 21).</p> <p>Recharge, replace, and/or reposition batteries.</p> <p>Move to another location. Obstructions and operating indoors or in vehicles may decrease range.</p> <p>Verify radio is not in scan mode.</p>
Heavy static or interference	<p>Radios are too close. They must be at least 5 feet apart.</p> <p>Radios are too far apart or obstacles are interfering with transmission.</p>
Keypad locked	<p>Unlock by holding  for 3 seconds.</p>
Low batteries	<p>Recharge or replace batteries. Extreme operating temperatures affect battery life.</p>

Symptom	Try This:
Charger light does not come on	Reinsert radio and/or battery. Clean battery and/or charger contacts. Verify that the charging pin on the transformer is inserted correctly into the drop-in charger. AAA cells installed in radio. Remove and replace with Li-Ion battery.
Low battery meter reading although new batteries are installed	Verify radio is set to the correct battery type (see page 10). Verify high-capacity alkaline batteries are used for optimal battery life.
Cannot activate VOX	Feature not set and on (see page 18). Sensitivity set to  (see page 19). Verify that accessory allows VOX operation.
Cannot enter PROG mode	Unplug audio accessories and retry.

Use and Care



Use a soft damp cloth to clean the exterior.



Do not immerse in water.



Do not use alcohol or cleaning solutions.

If the radio is submerged in water...



Turn radio off and remove batteries.



Dry with soft cloth.



Do not use radio until completely dry.

VL50 Radio Programming Quick Reference

To enter programming mode, press and hold **Push to Talk** and **mon** for 3 seconds while turning the radio on. The radio beeps and displays **PROG**, the channel number flashes, and the frequency (indicated by **FREQ**) and code (indicated by **CODE**) display alternately.

Set the Channel



Press **-** or **+**.

Set the Frequency



Press **MENU** until **FREQ** displays.
Press **-** or **+** to change the frequency.

Set the Interference Eliminator Code



Press **MENU** until **CODE** displays. Press **-** or **+** to change the code.

Set Available Channels



Press **MENU** until **CH** displays.
Press **-** or **+** to select number of available channels.

VL50 Radio Programming Quick Reference



Set a Call Tone



Press **(MENU)** until **CR** displays.
Press **(-)** or **(+)** to select **1**, **2**, or **3** for audible call tones, **4** for VibraCall, or **0** for off (default).

Set the Microphone Gain



Press **(MENU)** until **G** and **G** display.
Press **(-)** or **(+)** to select:
1 Low sensitivity
2 Medium sensitivity
3 High sensitivity

Edit the Scan List



Press **(MENU)** until **≧** displays and the channel number and **Y** or **n** flash.
Press **(-)** or **(+)** to select the channel, then press **(MON)** to select **Y** (include channel) or **n** (exclude channel).