

# Motorola T600 FRS Radio Quick Start Guide



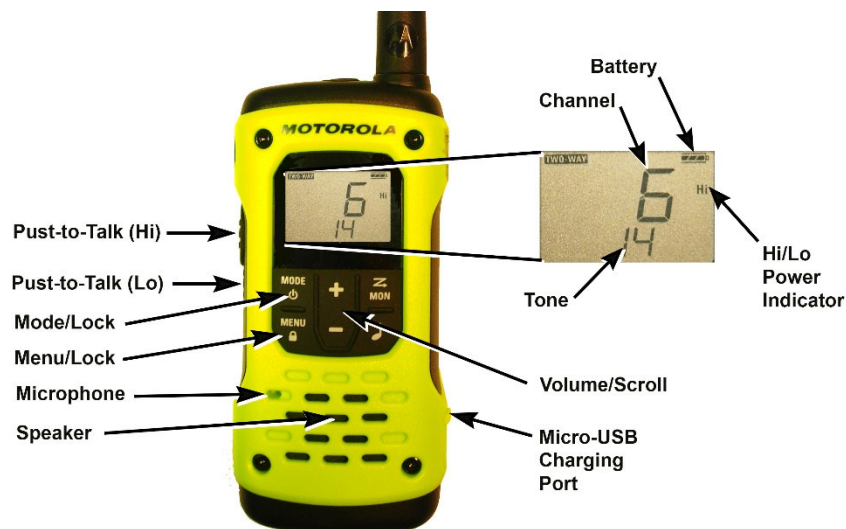
During an emergency, communication is vital. Dial "911" whenever possible to reach emergency services. The 911 dispatchers are best equipped to handle emergencies. However, wired, and wireless telephone service can fail during emergency situations like ice storms, earthquakes, and flooding. In these situations, residents can use a "Motorola T600 Family Radio Service (FRS) Radio" (referred to as "FRS radio") to communicate with neighbors within Lake Oswego.

## Uses and Limitations

1. FRS radios will **NOT** allow you to communicate with public safety agencies (fire, police and 911).
2. Emergency 911 will **NOT** monitor FRS radios.
3. FRS radios are for communicating and relaying information within the neighborhoods to solve issues at the lowest levels; without public agencies involved.
4. FRS radios require all operators to be on the same channel and within the transmitting and receiving range; and are not capable of long-distance communications.
5. FRS radios can be used to relay pertinent information to central sites in your neighborhood or possibly to a fire station. (NOTE: During an emergency/disaster, fire stations may not be staffed)

## FRS Radio Layout

This illustration describes the buttons and features of the FRS radio you use the most. A detailed operations video is available at: <https://www.ci.oswego.or.us/fire/emergency-communications>



## Using the Micro-USB Charger

The micro-USB charger allows you to charge your NiMH battery pack. **Do not** charge alkaline batteries.

1. Make sure your radio is turned OFF.
2. Plug the micro-USB cable into the micro-USB charging port on your radio.
3. Connect the other end of the micro-USB charger to the wall power outlet.  
**NOTE:** An empty battery will be fully charged in roughly 8 hours.
4. The battery meter on the LCD screen will move to indicate the battery is charging.

## Setting Up the FRS Radio

To use your FRS Radio, you must:

- Find your neighborhood Channel and Tone settings.
- Configure the Channel and Tone settings on the FRS Radio.
- Transmit and receive from a location free from obstructions.
- Be within range of another FRS radio set to the same Channel and Tone.

### Find your Channel and Tone Settings

To communicate, all radios in your group must be set to the same Channel and Tone. A city-wide plan was developed to help distribute radio traffic and provide a starting point for citizens. If you aren't able to connect with a neighbor on the assigned neighborhood channel/tone, try an adjoining neighborhood channel.

This example shows finding the Channel and Tone settings for the "Palisades East" neighborhood in the "Southeast Division" of Lake Oswego.

Division / Neighborhood	Primary		Secondary ^		Tactical Call Sign
	Channel	Tone	Channel	Tone	
Northwest Division	22	20			Northwest Division
Holly Orchard	7	20	14	20	Holly Orchard
Lake Forest	1	20	8	20	Lake Forest
McVey - South Shore	1	22	8	22	McVey
Old Town	1	22	12	22	Old Town
Palisades - East **	6	14	11	14	East Palisades
Skylands	7	22	14	22	Skylands

**NOTE:** The Secondary FRS Channel and Tone settings are for communications over a short distance; such as between CERT/Neighborhood Emergency Response Teams conducting assessments on a single street.

### Power-On and Volume Setting on Your FRS Radio

After you have charged the battery on your FRS radio, follow these steps to power-on and set the volume on your radio.

1. Long press the **Mode/Lock** button to power-on the radio.  
**NOTE:** Long press the **Mode/Lock** button to power it off.
2. Turn FRS radio volume up and down by pressing "+" or "-" on the **Volume/Scroll** button.  
**NOTE:** The volume setting appears as a number 0 to 7 in the **Tone** indicator.

### Configure the Channel on Your FRS Radio

Your FRS radio has 22 channels. The channel corresponds to the frequency the radio uses to transmit.

1. With the radio on, press the **Menu/Lock** button until the **Channel** number starts to flash. The channel number flashing is the currently set channel.

**NOTE:** When the radio is on a 1.5 watt channel, the display shows **Hi**. When the radio is on a 0.5 watt channel, the display shows **Lo**.

2. Using the **Volume/Scroll** button, press "+" or "-" and select your neighborhood **Channel**. In this example channel "6" for Palisades East.
3. Press the **Push to Talk (PTT)** button to save the channel setting or **Menu/Lock** button to continue set up.

### Configure the Tone on Your FRS Radio

The Tone setting on your FRS radio filters out all of the other traffic except the FRS radios configured to your neighborhood Tone. It's like a "secret handshake" between the radios.

1. With the radio on, press **Menu/Lock** button until the **Tone** number starts to flash.
2. Using the **Volume/Scroll** button, press "+" or "-" and select your neighborhood's **Tone**. In this example tone "14" for Palisades East.
3. Press the **PTT** button to save the Tone setting or **Menu/Lock** button to continue set up.

### Talking and Listening

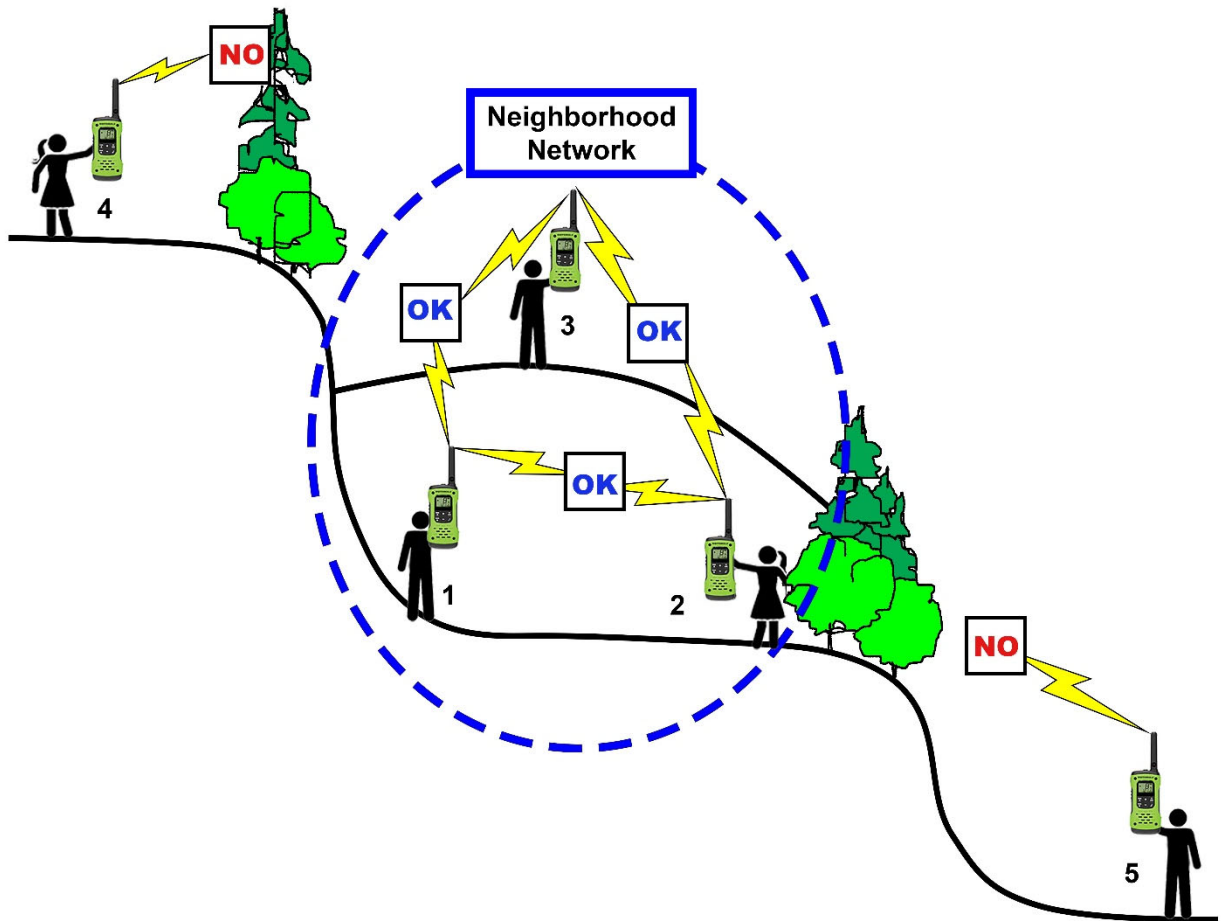
Talking and listening to your neighbors using the FRS radios provides communications during an emergency or for training and testing purposes.

1. To talk, press and hold the **PTT** button, pause for 2 seconds, talk calmly and clearly. When transmitting, the **TWO-WAY** icon blinks and **Tx** is shown. If it's a high-power transmission, **Hi** is shown. If it is a low power transmission, **Lo** is shown.
2. When you are finished talking, pause for 1 second and then release the **PTT** button.
3. When receiving, the **TWO-WAY** icon blinks and **Rx** is shown.  
**NOTE:** For maximum clarity, hold the radio two to three inches away from your mouth at an angle and speak directly across the microphone. Do not cover the microphone while talking.

### If You Can't Connect

A few very simple things can keep your FRS radio from connecting to others in the neighborhood network.

1. Check the volume on the FRS radio. The volume could be turned off or so low you can't hear your connections.
2. Confirm you have set your FRS Channel and Tone settings correctly. It's possible someone may not have a Tone set (0) so they will hear traffic but nobody with a Tone set will hear them.
3. Move around and try connecting from different locations. Operating outside will provide the best signal performance. The following illustration shows a group of neighbors successfully connected and neighbors who cannot connect because of line-of-site limitations.



In this illustration, neighbors 1, 2, and 3 are connecting because they have a line-of-sight connection between their FRS radios. Neighbors 4 and 5 have geographic (hills and valleys) and physical obstructions (trees and buildings) limiting their FRS radio's line-of-sight signals.

Just moving, as little as 6 feet or away from trees and buildings can help you gain connectivity.

### Test & Practice Your Radio Skills

Once you have become familiar with your FRS radio and can communicate with a neighbor or two, use the Training Guides provided by Lake Oswego Fire Department to conduct regularly scheduled radio nets and evaluate local radio propagation with more neighbors. For more information, visit: <https://www.ci.oswego.or.us/fire/emergency-communications>.

## General Mobile Radio Service (GMRS) Repeaters

GMRS radios and repeaters are different than FRS radios but share some common channels. You may hear radio traffic on channels 15-22 and attempt to talk to them but not have anyone respond. FRS radios can hear the output of GMRS repeaters but are not able to transmit. There are many GMRS repeaters in the area, including in Lake Oswego. You can listen to the LAK17R repeater on Channel 17 (462.600), Tone 18 (123.0 Hz). During a disaster, listen for announcements at "17" after the hour.