GMRS1100 Users Manual

Model GMRS-1100 (FCC License Required)

Model GMRS-1100 DISPLAY

1. **Beep Tone Indicator:** Icon appears when beep button confirmation tone is selected; icon disappears when tone is off.

2. **Key Lock Indicator:** Icon appears when the keypad is locked. This function disables keys such as channel up/down and MODE.

3. **Monitor Indicator:** Icon appears when the Monitor **(M)** button is pressed and the channel monitor function is activated.

4 **Signal Strength Indicator:** Icon appears when a signal is being received. The icon consists of five bars to indicate the received signal level. The icon also represents transmit signal power during transmission.

5. **Coded Tone Controlled Squelch System (CTC) Indicator:** Icon appears when the CTCSS tone function is active.

6. **Large Segment Display:** Indicates the channel number in use.

7. **Scan Indicator:** This function allows the user to scan a channel and/or a tone code 5 second to search for a valid signal.

8. **Emergency Indicator: EMG** Icon appears when the EMG button is pressed. (The frequency is NOT monitored by authorities).

9. **Battery Level Indicator:** Icon indicates the battery charge level.

10. *Hi/LO* **Indicators:** Appropriate icon appears when the transmit power is set to desired output power.

11. **RogerBeep Tone On/Off Indicator:** This icon appears when the Roger Beep tone is on, and disappears when tone is not in use.

12. **Small Segment Display:** Displays the CTCSS tone option in the channel from (00-38).

13. Dual Watch Mode Indicator: Icon appears when dual watch mode is active.

14. Voice Activated Transmission (VOX) Indicator: This function allows hands free conversation. The icon appears when the VOX mode is activated.

Powering the transceiver:
Your GMRS 1100 radio transceiver operates on four AAA batteries. Alkaline batteries will provide slightly better performance than rechargeable batteries. Only Audiovox approved rechargeable batteries can be recharged in the radio transceiver using the optional charging stand.

Installing the batteries:
Battery installation is made more convenient when the belt clip is removed. To do this, release the spring clip securing the belt clip to radio and slide the belt clip downward and away from the radio body.   Next, press down with the thumb at the arrow, slide the battery cover down and lift off the battery cover. Insert four AAA batteries (alternate positive ends (+) toward the bottom of the transceiver, (starting left-to-right).

1. Using thumb, press down on battery cover at arrow and slide cover down to open.
2. Slide the cover down and then lift cover at bottom to open. Remove cover.
3. Insert four AAA batteries (positive (+) end toward the bottom begining at left side and alternating positive terminals as shown),or insert the rechargeable batteries.

The following guidelines will improve performance and provide longer operating times for the GMRS-1100:

   1. Do not mix old and new batteries.
   2. The use of alkaline-type batteries is recommended to provide the longest operating time.
   3. Do not mix alkaline, standard (carbon-zinc) or rechargeable batteries.
   4. If the unit is not to be used for an extended period of time, remove the batteries. Old or leaking batteries can cause damage to the unit and will void the warranty.

GMRS-1100 OPERATIONAL MODES

NOTE:
To switch between GMRS and Weather Band modes, press and hold the Mode button for 2 seconds. To differentiate between operating modes, look for HI or LO indication below the battery power level indicator when in GMRS mode. In Weather Band mode, these indications are not present. Refer to the appropriate section of this manual for detailed operating instructions for each mode. When in GMRS standby mode, the transmit/receive indicator will flash once every S seconds as the unit checks for transmissions

Controls:

Power On/Off (15) Button
Press and hold the power on/off button (   ) for at least 2 seconds. You will hear a confirming melody to indicate the unit is on. To turn the unit off, press and hold the button for at least 2 seconds.

Adjusting the Volume
With the unit powered on, press the Up Channel/Volume button (▲) to increase volume and the Down Channel/Volume button (▼) to decrease volume. The display will indicate the current volume level by the small number in the icon (   )

Monitor/Display Backlight Button (2)
This button is used to to check activity on the current frequency before transmitting. Check activity by pressing the Monitor (M) Button longer than 2 seconds; the ◀ᐦ icon will apppear on the display and you will hear static if frequency is clear.
Do not transmit if you hear conversation.
Hold down the Monitor Button again longer than 2 seconds and the ◀ᐦ icon will disapppear from the display.
The monitor function will temporarily bypass the squelch setting and play all signals on a given channel. This feature is useful when communicating with other parties at extreme range.
By pressing the monitor button momentarily, the LCD backlight is turned on; the LCD backlight will turn off automatically in about 5 seconds, or when the monitor button is pressed momentarily once again.

Push To Talk (PTT) Button (4)
Pressing and holding this button will allow you to speak to any transceiver that is set to the same channel and privacy code setting as yours. Hold the transceiver approximately 1 to 2 inches from your face as you speak into the built in microphone (9). After you have finished speaking, release the PIT Button to allow reception of incoming signals. It is not possible to transmit and receive at the same time. The Transmit/Monitor LED at the upper right corner of the LCD Panel (8) will light **red** while the PTT Button is pressed and the signal indicator will display the relative strength of the transmitted signal. Releasing the button allows the unit to revert to standby mode. When receiving an

incoming signal, the Transmit/Monitor LED indicator will light **green** and the received signal strength indicator (   ) will display the relative strenth of the signal.
The PTT Button can also be used as a two-way call ringer Pressing the button twice quickly will call another party on the same channel. The Transmit LED will light **red** for approximately 3 seconds and then go out.

Up Channel/Volume Button (10)

In the standby mode, pressing this button will increment the listening volume. When in function edit mode this button will be used to adjust the unit's settings.

Down Channel/Volume Button (11)

In the standby mode, pressing this button will decrement the listening volume. When in function edit mode this button will be used to adjust the unit's settings.

Mode Button (12)

This button is used to select various feature settings in the GMRS or weather band mode. Holding the MODE button longer than 2 seconds will toggle between the GMRS and weather band modes.

Emergency (EMO) Call Button Button (14)
This radio has a quick access button (EMO) to the Emergency and Assistance Channel. This channel is not monitored by local authorities. When using this channel, **EMG** appears on the display. Pressing this button will set the transceiver to the channel 10, 462.6750 MHZ).

External Speaker (SPK)/Microphone (MIC) Jacks (6)
This set of jacks accepts an Audiovox headset/microphone connector for total hands-free operation.

Scan/Lock Button (13)
Press this Button momentarily to enable or disable the scan mode. Press and hold Button for more than 1 second to lock or unlock the key pad, except PU and Monitor (M). When the keypad the (   ) icon will display in the top right corner.

Operating Mode and Features

GRMS Operation
 - From GMRS standby mode, press and hold the (~) button for 2 seconds to turn on power.
 - Press the MODE button so the Channel number flashes.
 - Select the desired channel with the Up (10) and Down (11) Buttons. When receiving a
   call, the
   signal strength meter appears to indicate incoming received signal strength and the
   Monitor
   section of the Transmit/Monitor LED (16) lights *green.*
 - Press and hold the PU button (4) to transmit, then speak into the microphone clearly
   and slowly. The Transmit section of the Transmit/Monitor LED (16) lights *red.*
 - Release PTT Button (4) to receive.
 - Communication can only be accomplished when the channel and CTCSS tone
   frequency of at least two parties are the same.
 - The **CTC** icon will be displayed on the LCD panel if the CTCSS tone frequency
   function is enabled.

Channel Selection
In order to communicate with other GMRS units, both transmitting and receiving party must be on the same frequency.
The GMRS-1100 has 22 channels (frequencies) (1-22) indicated by the large digits on the LCD display panel.   Channels 1 through 14 are the same frequency as FRS channels 1 through 14. Communication with Audiovox FRS and compatible units is possible on these seven channels. Before transmitting on the selected channel, press the Monitor (M) Button (2) to check the activity on that channel. It there is activity on the selected channel, change to another channel that is clear.
To change the channel,
-   From GMRS standby mode, press the MODE button (12) until the channel number
    flashes.
-    Press the Up Button (10) briefly to move to the next higher main channel number.
-    Press the Down Button (11) briefly to move to the next lower main channel number.

CTCSS Mode (Sub-Channel) Selection
Coded Tone Controlled Squelch System (CTCSS) with 38 Sub-Frequencies. This feature allows you to utilize the coded squelch tones (00-38) within a main channel. This enables you to communicate with another party on the same main channel using the same subcode. (This filters out unwanted transmissions without the same coded squelch tone). There are 38 CTCSS Sub-channels for each main channel. A different subcode may be selected for each of the 15 channels.
To change the CTCSS Sub-channel,
   - From GMRS standby mode, press the Mode Button twice; a flashing **oF** or
   sub-channel
      number is displayed. If **oF** is displayed, press the Up or Down button to enable the
      CTCSS mode; the **CTC** icon will appear steady on the display with the flashing

sub-channel number.
- Then press the Up or Down button to select the desired sub-channel for use.
- Press the Power On/Oft button momentarily to confirm selection.

The CTCSS mode can be turned off by selecting the **oF** icon as the setting.

NOTE:
To communicate with other GMRS units, they must be switched to the same channel and CTCSS subcode. To communicate with other GMRS units that do not have subcodes, switch your unit to the same channel with the subcode set to **oF.**
The OTOSS subcodes do not prevent others from hearing your transmission. This will only allow you to ignore all traffic on a given channel not using the same subcode.

VOX Selection Mode
This option enables you to have hands-free conversation. Your voice or nearby sound is detected and the radio transmits without the need to press the PTT button.
To set radio for VOX operation,
- From GMRS standby mode, press the MODE button until the **VOX** icon flashes on the display.
- Press the Up or Down button to select VOX On (if **oF** appears flashing) and the **1-5** VOX level sensitivity.
- Momentarily press the Power On/Oft button to confirm the VOX selection.
- The **VOX** icon will appear steady on the LCD display.

VOX can be turned off by selecting **oF** as the setting.

Channel Scan Operation
This feature allows you to monitor all channels automatically for valid signals. While scanning, you can transmit and receive. When a signal is received, the scan is interrupted and will return to scan mode S seconds after reception is terminated.
NOTE:
While the scan function is active, the MODE button will be inoperative. The scan mode will reduce the overall battery life due to the battery save function is overridden.
To enable the channel scan mode,
- From GMRS standby mode, momentarily press the SCAN Button; **(SCAN)** will appear on the LCD display.
- The radio will display each channel (1-15) with CTCSS code number in order as the scan mode operates to find an active main channel.
-When unit doesn't find any signals and you want to transmit, press the PTT switch to return to seconds after the communication is completed.
- If there is no activity and you want to leave the scan mode, press the SCAN button momentarily and the unit will return to normal operation; **(SCAN)** icon will disappear from the LCD display.

Dual Watch Mode
This feature allows you to monitor two channels at the same time. While in dual watch mode, the unit will continuously monitor both the primary and dual watch channel. Received signals will be played for S seconds, then the unit will resume scanning the two channels. Pressing the PH button during a received transmission will set the unit to transmit on the same channel. Pressing the PH button when no signal is received will set the unit to transmit on the primary channel.
To set the Dual Watch Mode:
- From GMRS standby mode, press the MODE button 5 times; the DW icon flashes on the display. If the dual watch mode is off, the **oF** icon will also appear flashing.
- To enable the dual watch mode, press the Up or Down button; the dual watch channel number will flash and start to increment up or down as the Up or Down button is pressed.
- Press the MODE button again to select the CTCSS function and select the CTCSS code if desired for the dual watch channel just selected.
- Press the Power On/Off button to confirm selection of the dual watch channel. The display
  will now alternate between the primary channel and the dual watch channel just selected.
Momentarily press the SCAN button to exit the dual watch mode.

Key Tone
This feature allows the transceiver to sound a confirmation tone whenever
the following keys are pressed: Monitor (M) Button, Up/Down Buttons, MODE
Button, SCAN Button, or the EMO Button.
To turn the key tones on or oft,
- From GMRS standby mode, press the MODE Button six times until **bp,** the Bell (   ) icon, and **On** or **oF** flash on the LOD display.
- Press the Up or Down Button to toggle the key tone feature On or Off.
- Press the Power On/Off button momentarily to confirm selection. When the key tone feature is on, the Bell icon appears steady on the display, and the beep tones sound in response to button activation.

Transmit Power Selection Mode
This feature permits selection of the transmitting power level to high (1.8 watts)or low (0.5 watt). Using low power the unit will have a lower transmit range but battery life will be increased.
To access the transmitter power selection function:
- From GMRS standby mode, press the MODE Button until the **Po** icon appears with a flashing **HI** or **Lo** indication on the display.
- Press the Up or Down button to toggle between the High and Low selections.
- Press the Power On/Oft button momentarily to confirm selection. The display will indicate the current setting in standby mode.

Roger Beep Tone

The Roger Beep is a tone which is automatically transmitted whenever the PTT button is released. This tone alerts the receiving party that the transmission has been terminated intentionally.

To enable and disable the Roger Beep tone:
- From GMRS standby mode, press the MODE Button 7 times until **rb** appears on the display with the flashing Roger Beep icon (♫) and On or **oF**.
- Press the Up or Down Button to select the tone on or off as desired. When enabled, the tone icon (♫)appears steady on the display.
- Press the Power On/Oft button momentarily to confirm selection.

Call Ringer Selection Mode

The transceiver provides 5 user-selectable call ringer melodies to alert you to an incoming call.
Jo select your favorite call ringer melody:
- From GMRS standby mode, press the MODE button 8 times; **CA** will appear on the display, together with a flashing number be tween **1** and **5**, and an appropriate call ring.
- Press the Up or Down Button to preview and hear the 5 available call melodies.
 - Press the Power On/Off button momentarily to confirm selection.
Refer to the PU button (4) to transmit ring signal.

Auto Key Lock Selection Mode

This feature prevents accidental channel change to the preferred settings of the unit. The Auto key Lock function temporarily disables the Up, Down and Mode Buttons.
To access the Auto Key Lock selection menu:,
- From GMRS standby mode, press and hold the Scan Button for over 2 seconds to Lock the Auto Key function; the (   ) icon appears on the display.
- The PTT and Monitor Buttons are not effected.
- To unlock the Auto key function press and hold the SCAN button for at least 2 seconds; the icon (   ) disappears from the display.

Emergency and Assistance Channel Mode

This radio has a quick access button (EMG) to the Emergency and Assistance Channel. This channel is not monitored by local authorities. When using this channel, ***EMG*** appears on the display. Pressing this button will set the transceiver to the channel 10, 462~6750 MHz). The Emergency Channel can be used transmit and receive on a special frequency (CH10: 462.6750 MHz).
The Emergency Channel can be selected quickly from any user mode. To access the Emergency Channel mode,
- Press Emergency (EMG) Button; ***EMG*** and Channel **10** appears on the display
- To turn off the Emergency Channel feature, press and release the EMG Button.

Key Tone
This feature allows the transceiver to sound a tone whenever the following
keys are pressed: Monitor (M) Button, Up/Down Buttons, MODE Button,
SCAN Button, or the EMG Button.
To turn the key tones on or oft,
- From Weather Band standby mode, press the MODE button three times until **bp,** the
  Bell (   ) icon, and **On** or **oF** flash on the LCD display.
- Press the Up or Down Button to toggle the key tone feature On or Off.
- Press the Power On/Off button momentarily to confirm selection.
  When the key tone feature is on, the Bell icon appears steady on the display and the
  beep tones sound in response to button activation.

Battery Alert
When the battery icon (   ) blinks on the LCD panel, recharge unit or install fresh
batteries. If the batteries are not replaced the   (   ) icon will appear and an audio tone
will sound to warn the user that the batteries must be replaced.

Batteries
There are two methods of powering the GMRS-1100:
  1. Alkaline Batteries - (4 x AAA size)
  2. Rechargeable Ni-MH Batteries - (Rechargeable Ni-MH batteries and Charging
     Stand not included). Use only Audiovox approved rechargable batteries.
     NOTE: To extend battery life, avoid overcharging the batteries.

NOTES FOR GOOD COMMUNICATION
1. The GMRS-1100 22channels are shared on a 'take turns' basis. This means other
   groups may be talking on any of the channels. A common code of ethics/courtesy is
   to switch to another vacant channel and not to attempt to talk over someone who is
   already using the channel you first selected.
2. The GMRS-1100 has been designed to maximize performance and improve
   transmission range in the field. To avoid interference, it is recommended that you do
   not use the units closer than 5 feet apart.
3. For best transmission results, always keep your mouth about 2-3 inches from the
   microphone (9) and speak slowly in a normal voice.
4. To increase battery life, avoid features such as Scan, Dual Watch and Weather Alert.
   These features will reduce operating time considerably.

Warning
- Do not operate the transceiver unless you are licensed to do so.
- Remove the batteries from the transceiver if it is not expected to be used for long
  periods. This will eliminate the possibility of chemicals leaking from the batteries and
  corroding the transceiver.
- Avoid exposing the transceiver to water or extremes of temperature.
- Do not use this device in or near a mining facility, which uses remotely triggered

explosives or in areas labeled "Blasting Area". Premature or accidental detonation may result.
- Do not attempt to modify or in any way increase the output of this transceiver Its output is designed to meet the legal limits set by the FCC.
- Do not use this device or change its batteries in potentially explosive atmospheres as sparks in such areas could result in an explosion. Turn your transceiver off wherever posted notices restrict the use of radios or cellular telephones. Facilities such as hospitals may use equipment that is sensitive to RF energy.
- Turn your transceiver off on board aircraft when requested to do so.
- Do not place your radio in front of a vehicle's air-bag. It the air-bag deploys, it could propel the transceiver like a projectile causing bodily injury.

Troubleshooting

Problem	Possible cause	Correction
No transmission while pressing the PU Button	Weak batteries	Charge or replace batteries
	Incorrect battery polarity	Install the batteries following the directions in paragraph Installing the Batteries.
Weak or no signal received	Weak batteries	Charge or replace batteries
	Channel and privacy Code not set the same as target transceiver	Adjust the transceiver's Settings to match those Settings of the target transceiver
	Volume level too low PTT Button inadvertently Depressed	Increase volume level Release PTT Button
	Excessive radio interference on a particular channel Obstruction of radio signal	Change to a different channel Avoid operating in or near large buildings or vehicles
Unit beeps, but will not function when turned on	Batteries extremely discharged	Charge or replace batteries
Reception of unwanted signals	CTCSS privacy mode not on	Turn on the CTCSS privacy Mode and set code number to Match the setting of the target transceiver.
	Interference from electronic devices such as computers or TVs	Turn the devices off or move father away from them.

Technical Specifications:

General

Frequency Range	
GMRS (22 Channels)	462.5500 - 467.71250 MHz
Channel Spacing	12.5kHz
Privacy Codes38	for each main channel
Dimensions (W x H x D)	2.l0in x 3.86in x l.l0in
(Without Antenna)	53.4mm x 98mm x28 mm

Power Supply]

Power Source	Alkaline Batteries, AAA (4), 6 VDC
	Ni-MH rechargeable, AAA (4),
	4.8VDC, 650 mAh
Operating Time	30 hours Low Power
(Transmit; Receive: Standby)	14 hours High Power
(5: 5: 90 ratio)	
(Based on alkaline batteries)	

Receiver

Useable Sensitivity	> -119dBm
Maximum Audio Output Power	> 0.2 Watt maximum (8 Ohm)
Modulation Distortion	< 5%(1 kHz70%)

Transmitter

RF Output Power	1.4 Watt maximum (high power)
	0.4Watt maximum (low power)
Maximum Deviation	+/- 2.5 kHz
Modulation Distortion	<5%(1 kHz 70%)

This transceiver complies with FCC regulations for use in the United States of America. Use in other countries may be prohibited or restricted by local regulation. Please check with the local regulating agency before using this device outside the United States of America.

Main Channel Frequencies:

GMRS	Frequencies	FRS
1	462.5625MHz	1
2	462.5875MHz	2
3	462.6125MHz	3
4	462.6375MHz	4
5	462.6625MHz	5
6	462.6875MHz	6
7	462.7125MHz	7
8	467.5625MHz	8
9	467.5875MHz	9
10	467.6125MHz	10
11	467.6375MHz	11
12	467.6625MHz	12
13	467.6875MHz	13
14	467.7125MHz	14
15	462.5500MHz	
16	462.5750MHz	
17	462.6000MHz	
18	462.6250MHz	
19	462.6500MHz	
20	462.6750MHz	
21	462.7000MHz	
22	462.7250MHz	

CTCSS Tone Code

Frequencies (in Hz)

CTCSS	Freq. Hz	CTCSS	Freq. Hz
1	67.0	20	131.8
2	71.9	21	136.5
3	74.4	22	141.3
4	77.0	23	146.2
5	79.7	24	151.4
6	82.5	25	156.7
7	85.4	26	162.2
8	88.5	27	167.9
9	91.5	28	173.8
10	94.8	29	179.9
11	97.4	30	186.2
12	100.0	31	192.8
13	103.5	32	203.5
14	107.2	33	210.7
15	110.9	34	218.1
16	114.8	35	225.7
17	118.8	36	233.6
18	123.0	37	241.8
19	127.3	38	250.3

*oF =No Tone