

901GMRS User Manual Prelim

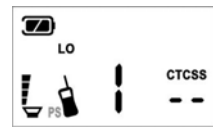
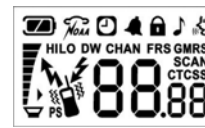
OPERATION BUTTONS :

- POWER
- PTT
- UP
- DOWN
- MODE
- MONITOR
- SCAN/LOCK
- CALL

Features and Operating Procedures

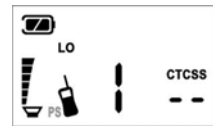
Turn the Radio ON/OFF

1. Press and release **[POWER]**. The display will appear (*all segments will turn on for 1 second*)
2. The LCD display will show the current channel number.
3. To turn the radio off, press and hold **[POWER]** for 1 second until the display clears.



Adjust the Volume

1. In normal operating mode, press the **[UP]** or **[DOWN]** buttons to raise or lower the radio's volume.
2. The radio will beep to indicate the volume level is changed.



Key Tones

1. The Key tones (press any key, except the **[PTT]** and **[MODE]** button) on the radio are at fixed level and are not affected by changing the radio's volume
2. The **[PTT]** and **[MODE]** button does not have key tone.
3. If speaker is enabled, there will be no key tone for **[UP]** or **[DOWN]** keys.

Change the Channel

1. From the normal operating mode, press **[MODE]** button once to enter the channel selection menu. The CHAN indicator will begin to flash and the radio's current Channel will be shown.
2. Use the **[UP]** or **[DOWN]** buttons to select a new channel (1-22) while the CHAN indicator is flashing.
3. The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** several times back to normal operation mode.



Change the CTCSS Tone

1. From the normal operating mode, press **[MODE]** 2 times to enter the CTCSS selection menu. The CTCSS indicator will begin to flash and the radio's current CTCSS will be shown.
2. Press the **[UP]** or **[DOWN]** button to select a new code while the CODE icon is flashing. (Codes 1-38 are selectable. If you don't want this code, set it to '--').
3. The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** several times back to normal operation mode.



To change and hear a Call-Ring tone:

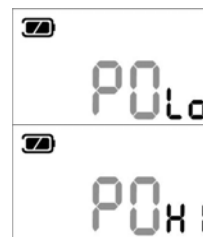
1. From the normal operating mode, press **[MODE]** 3 times to enter the Call-Ring selection menu. The CALL indicator will appear and the large numeric display will show the current Call-Ring number (1 to 10).
2. Use the **[UP]** or **[DOWN]** buttons to change the Call-Ring tone. You can hear the Call-Ring tone as you change your selection. There are totally 10 types of Call-Ring tones
3. The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** several times back to normal operation mode.



Note : You can send Call-Ring tone only on channels 1 to 14 with **LO** power. However, you may not send Call-Ring tone on Channel 1 to 7 with **HI** power and Channel 15 to 22 with either **HI** or **LO** power because of the **FCC's restriction**.

To change the TX HI/LOW Power

- 1 From the normal operating mode, press **[MODE]** 4 times to enter the HI/LOW POWER selection menu. The PO indicator will appear Lo/Hi
- 2 Use the **[UP]** or **[DOWN]** buttons to change the HI / LOW Power .
- 3 The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** several times back to normal operation mode.



Note : You can select HI/LO power for channels 1 to 7 and channel 15 to 22. You cannot select HI power for channels 8 to 14 because of the **FCC's restriction**.

DW (Dual Watch)

- 1 From the normal operating mode, press **[MODE]** 5 times to enter the Dual watch selection menu.
- 2 Use the **[UP]** or **[DOWN]** buttons to change the main Chan
For example, if you select main channel to be 1 and dual watch channel to be 9, the radio will monitor both channel 1 and 9 at standby. Any valid channel activities will turn on the radio's speaker and the radio will stay at the active channel for about 4 seconds for you to response. If you don't need the dual watch, set it to "OFF".
- 3 The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** several times back to normal operation mode.



VOX

- 1 From the normal operating mode, press **[MODE]** 6 times to enter the VOX selection menu.
- 2 Use the **[UP]** or **[DOWN]** buttons to change the VOX sensitive level. The most sensitive level is level 1 and OFF means to disable the VOX function.
- 3 The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** several times back to normal operation mode.

Note : VOX feature will be temporarily disabled during setting, receiving, transmitting, scanning and monitoring.

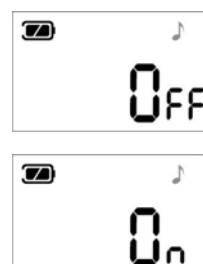



To Set Roger Beep Tone

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 the Roger Beep Tone:

1. From the normal operating mode, press **[MODE]** 7 times to enter the Roger Beep Setting menu.
2. Press the **[UP]** button to select the tone on or press **[DOWN]** buttons to select the tone off as desired.
3. The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** button back to normal operation mode.



When Roger Beep tone enabled, the tone icon  appears on the display.

To set Auto Power off

Your radio can be programmed to turn itself off after a certain period of inactivity. This feature is used to prevent unwanted battery usage.

To enable the Auto Power Off feature:

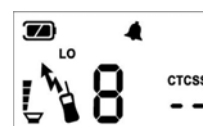
1. From the normal operating mode, press **[MODE]** 8 times to enter the Auto Power Off Setting menu.
2. Use the **[UP]** or **[DOWN]** buttons to change the power off time setting (from 0 to 3 hours, 0 means no auto-power off).
3. The radio will return to the normal operating mode after 10 seconds or when you press the **[PTT]** button or press **[MODE]** button back to normal operation mode.

If no buttons are pressed during the selected time interval, the radio will sound a unique tone one minute prior to turning itself off.



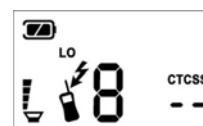
Sending messages (Call-Ring tone)

1. If **[CALL]** buttons are pressed, the radio will send out the selected Call-Ring tone with the microphone muted.
2. The Call-Ring tone indicator glow continuously when call-ring transmitting.



BUSY indicator

Anytime when the radio detects valid signal in the selected channel, the BUSY indicator will appear, but the speaker only enabled when matching CTCSS code



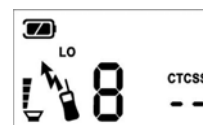
Receive Monitor

At normal operating mode, press **[MONITOR]** button for 1 second to turn off the auto-squelch to hear signals on the current channel. Press **[MONITOR]** button to turn on the auto-squelch function.

Note : The **[LOCK]** buttons will be temporarily disable during monitor on.

Sending messages (TALK)

1. Press the **[PTT]** button and speak into the radio microphone. The TRANSMIT indicator glow continuously when transmitting.
2. To receive messages, release the **[PTT]** button.



Key Lock

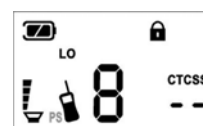
Lock allows you to disable the **[UP]**, **[DOWN]**, **[CALL]** and **[MODE]** buttons so that the radio settings cannot be changed accidentally. **[PTT]** and **[SCAN/LOCK]** remain functional.

To activate the Lock feature:

- Press and hold **[LOCK/SCAN]** for 1 second, the LOCK indicator will appear.

To disable the Lock feature:

- Press and hold **[LOCK/SCAN]** again for 1 second, the LOCK indicator will disappear.



SCAN

Scan allows you to monitor channels of other transmitting radios. When the radio detects channel activity, it stops scanning and locks in the active channel. It allows you to listen and talk back to the person(s) transmitting without having to switch channels.

- To activate SCAN function, press **[LOCK/SCAN]** button at normal operating mode. The SCAN indicator will flash.



If SCAN feature is activated, the SCAN indicator will flash in the normal operating mode indicating scanning in progress.

When the radio detects channel activity, the radio will stay at the active channel. The SCAN indicator will glow continuously and the LCD display will indicate the active channel number. You can press **[PTT]** button to talk to scanned speaker at the active channel.

When the radio detects channel activity, it stops scanning and stays at that channel for 2 seconds.

- To de-activate SCAN function:

Pressing the **[MENU]** or **[LOCK/SCAN]** button for 1 second will de-activate the SCAN function and return normal operating mode with the radio at the previously selected channel.

Note : The **[MONITOR]** and **[PTT]** buttons will be temporarily disable during scanning.

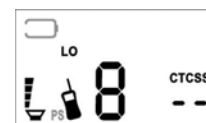
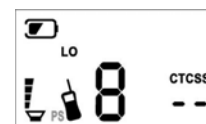
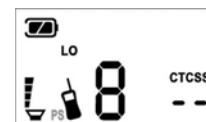
BATTERY METER indicator

The radio can detect the battery in 3 levels:

- 1 If the battery is at Hi Level, the Battery Full indication appears.
- 2 If the battery is at Medium Level, the Battery Half indication appears.
- 3 If the battery is at Low Level, the Battery Low indication will flash. At this point, it is necessary to remove, or replace and recharge the batteries

When the battery is at Low Level, the Battery Meter icon will blink at an interval of 0.5 second. During this condition, the radio will emit a warning beep:

- For 3 seconds after turning power on
- Every 5 seconds in standby mode
- After release the PTT button



Use Jack of Auxiliary Microphone and Earphone

The radio has an Auxiliary Microphone and Earphone. If it is pushed in the jack on the radio, the speaker of radio will be disabled and replaced by the earphone.

LCD Back Light

Whenever a button is pressed (except **[PTT]** button), the LCD back light will illuminate for 5 seconds.

Power Saving Feature

At normal operating mode (standby to receive), the Power Saving feature will put the radio's RF section in a ON/OFF duty cycle to save battery power. It also the Power Saving indicator will be flashed. ON/OFF duration is about 120ms ON and 480ms OFF.

If SCAN function is activated, the RF receive section will not have power saving and continue to scan for channel activity. At

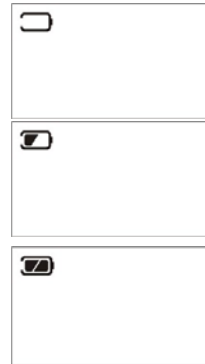
this moment, the Power Saving indicator will be disappeared.

Charging Procedures

1. Plug the 7.5V, 200mA ADAPTOR into the DC IN socket on the top of the radio.
2. The battery icon will show charging status
3. After charged for 8 hours, the batteries will be fully charged. The battery icon will show the all segments. (Condition : use 4 X AAA, 600mAH, Ni-MH chargeable battery)
4. It is necessary to remove the radio from the ADAPTOR.
5. The radio will be in power off mode after removed from the ADAPTOR.

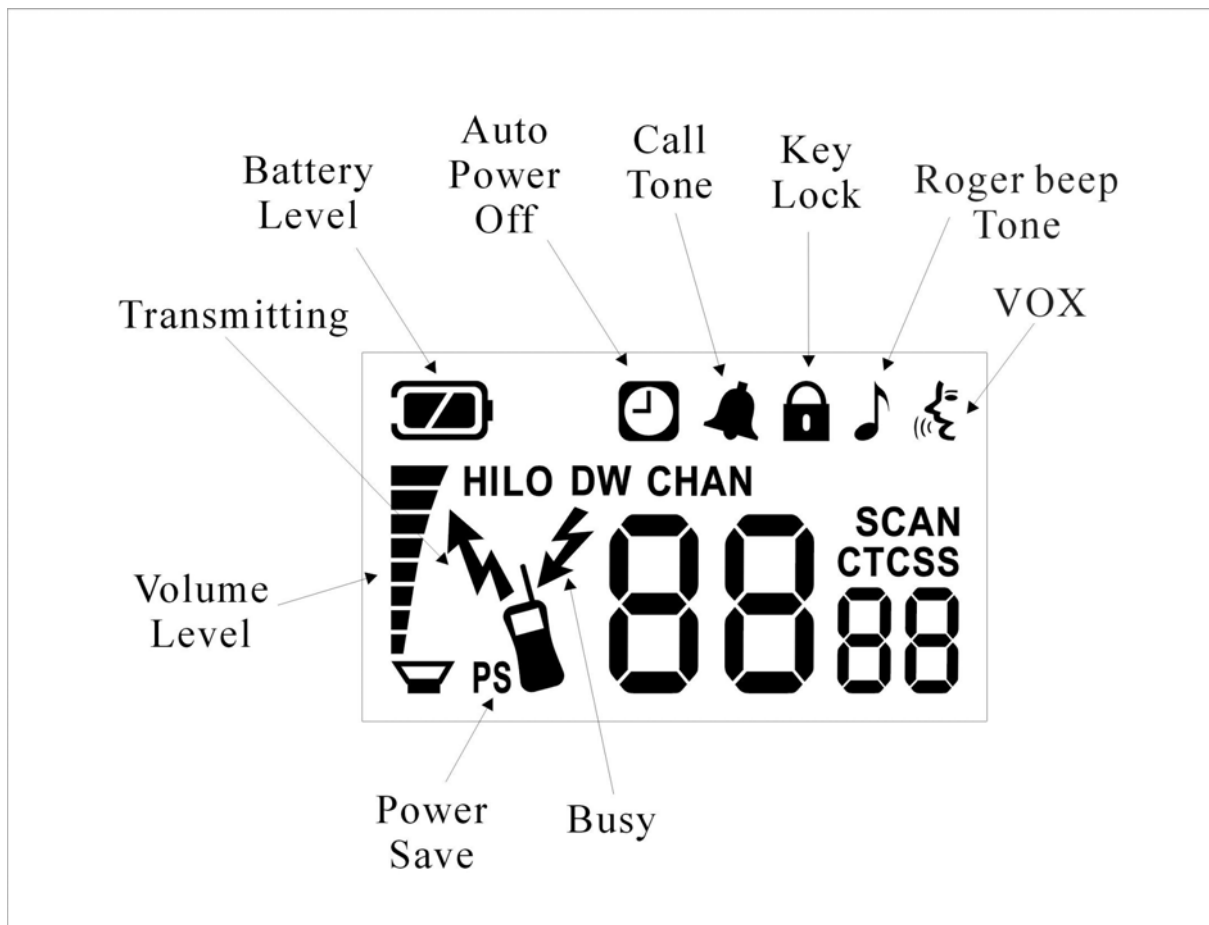
Note:

1. The unit cannot receive or transmit when charging is taking place.
2. Use 4 X AAA, 700mAH, NI-MH chargeable battery, **do not** attempt to recharge Alkaline batteries.
3. Do not attempt to use any other power supply except the one supplied.
4. During charging the radio will get warm, this is normal and does not indicate a fault.



CAUTIONS AND RF EXPOSURE WARNING

1. DO NOT OPERATE THE TRANSCEIVER IN GMRS CHANNEL MODE UNLESS YOU ARE LICENSED TO DO SO.
2. KEEP THE ANTENNA AT 1 INCH(2.5 cm) AWAY FROM YOUR HEAD AND BODY.
3. DO NOT USE YOUR GMRS-901 RADIO TRANSCEIVER WITH A DAMAGED ANTENNA
4. DO NOT HOLD THE ANTENNA WHEN THE RADIO IS "TRANSMITTING."
5. TO MAINTAIN COMPLIANCE WITH FCC RF EXPOSURE GUIDELINES FOR BODY-WORN OPERATION, THE SUPPLIED BELT-CLIP MUST BE ATTACHED TO THE RADIO WHEN TRANSMITTING. THE USE OF A NON-SUPPLIED BELT-CLIP MAY EXCEED FCC RF EXPOSURE GUIDELINES AND SHOULD BE AVOIDED.
6. 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.



List of Tone Types

Tone No	Tone Name	Usage
1	Ring_1	Call-Ring tone type 1
2	Ring_2	Call-Ring tone type 2
3	Ring_3	Call-Ring tone type 3
4	Ring_4	Call-Ring tone type 4
5	Ring_5	Call-Ring tone type 5 (Music)
6	Ring_6	Call-Ring tone type 6 (Music)
7	Ring_7	Call-Ring tone type 7 (Music)
8	Ring_8	Call-Ring tone type 8 (Music)
9	Ring_9	Call-Ring tone type 9 (Music)
10	Ring_10	Call-Ring tone type 10 (Music)
11	Alert	Normal key tone for button pressed
12	Alarm	Low battery alarm tone
13	Warning	Pressing [PTT] button over 60 seconds
14	Power-On	Signal tone when radio's power turned on
15	Power-Off	Signal tone when radio's power turned off

List of 38 CTCSS Code Frequency

No.	Frequency (Hz)	No.	Frequency (Hz)	No.	Frequency (Hz)
1	67.0	14	107.2	27	167.9
2	71.9	15	110.9	28	173.8
3	74.4	16	114.8	29	179.9
4	77.0	17	118.8	30	186.2
5	79.7	18	123.0	31	192.8
6	82.5	19	127.3	32	203.5
7	85.4	20	131.8	33	210.7
8	88.5	21	136.5	34	218.1
9	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
13	103.5	26	162.2		

List of Channel Frequency

Channel Number	Frequency (MHz)	Max. Power (W)
1	462.5625(GMRS / FRS)	2W / 0.5W
2	462.5875(GMRS / FRS)	2W / 0.5W
3	462.6125(GMRS / FRS)	2W / 0.5W
4	462.6375(GMRS / FRS)	2W / 0.5W
5	462.6625(GMRS / FRS)	2W / 0.5W
6	462.6875(GMRS / FRS)	2W / 0.5W
7	462.7125(GMRS / FRS)	2W / 0.5W
8	467.5625(FRS)	0.5W
9	467.5875(FRS)	0.5W
10	467.6125(FRS)	0.5W
11	467.6375(FRS)	0.5W
12	467.6625(FRS)	0.5W
13	467.6875(FRS)	0.5W
14	467.7125(FRS)	0.5W
15	462.5500(GMRS)	2W
16	462.5750(GMRS)	2W
17	462.6000(GMRS)	2W
18	462.6250(GMRS)	2W
19	462.6500(GMRS)	2W
20	462.6750(GMRS)	2W
21	462.7000(GMRS)	2W
22	462.7250(GMRS)	2W

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