

# Golden Source Electronics Ltd.

## Operation Manual

*AS / NZS*  
*Model: 2202-AA*  
*(Basic function)*

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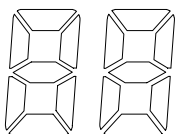
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**1 Operation Manual Version Change and Issue History**

<b>Version No.</b>	<b>Details</b>	<b>Date</b>
0.00	- Initial release	Aug 8, 2003

## 2. Display Icon, LCD and Button Description

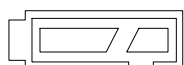
### 2.1 Icon Description



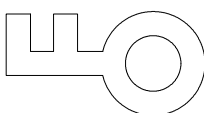
**2 digit 7 segment, displays Channel Number function**



**DW icon, displays Dual Watch function**



**BATTERY icon, displays Battery Capacity function**



**LOCK icon, displays button LOCKED function**



**BUSY icon, displays channel BUSY function**



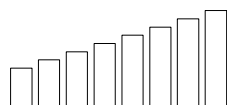
**VOX icon, displays VOX control transmitting function**



**LOW icon, displays output LOW power function**



**SCAN icon, displays channel SCAN function**

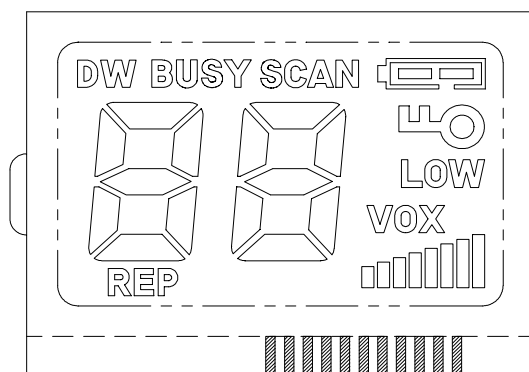


**LEVEL icon, displays sound LEVEL function**



**REP icon, displays REP function**

## 2.2 LCD View



## 2.3 Button Function Description

Button symbol	Description
⓪	Electronic Power ON-OFF / LOW Power button function
PTT	Push to Talk function
*	LCD back-light / LOCK function
📖	MENU selection function
S	REP / SCAN function
M	MONITOR function
C	CALL alert function
▲	VOLUME UP function
▼	VOLUME DOWN function

### 3. Turning the Unit ON

Press and hold the ⓪ (Electronic POWER ON/OFF) button. The unit will “beep” with dual tone, the LCD SCREEN will briefly display a SELF-TEST SCREEN and Turn ON the unit.

### 4. Turning the Unit OFF

Press and hold the ⓪ button, the unit will “beep” with a signal tone and the LCD SCREEN will turn off.

### 5. Power LOW Selection Function

- 5.1 Press **LOW(⊖)** (Power LOW) button to selection power LOW output. Press **LOW(⊖)** button again to deactivate power LOW mode. During power LOW turn ON, LCD will display LOW icon.

## 6. Adjusting Speaker Volume

- 6.1 Press the **▲** (UP) button to increase the Speaker Volume.
- 6.2 Press the **▼** (DOWN) button to decrease the Speaker Volume.
- 6.3 The Speaker Volume level is indicated by the number of bars displayed in the lower right corner of the LCD SCREEN.
- 6.4 Press and hold **▲** button. The volume level will automatically increase sound level until maximal level.
- 6.5 Press and hold **▼** button. The volume level will automatically decrease sound level until minimal level.
- 6.6 During MENU operating, **▲** / **▼** button will change to other function according to MENU function.
- 6.7 Volume **▲** and **▼** button are disabled during button locked mode.

## 7. Receiving a Signal

- 7.1 The unit is continuously in the RECEIVE mode when the unit is ON and not Transmitting. When you receive a signal on the current channel, the RX icon (BUSY) is displayed.
- 7.2 During receiving mode, if you pressing **PTT** (PUSH to TALK) button and then the unit will change to TRANSMIT mode immediately.

## 8. Transmitting a Signal

- 8.1 Check the channel's activity to press the **M** (MONITOR) button. You'll hear static if the channel is unoccupied. Don't use occupied channel for TRANSMIT action if someone is talking on the occupied channel.
- 8.2 Press and hold the PTT button to TRANSMIT. The TX LED Indicator will light up in red LED. Hold the unit in a vertical position with the MICROPHONE 2 to 3 inches from the mouth.
- 8.3 While holding the **PTT** button, speak into the unit a normal tone of voice.
- 8.4 Release the **PTT** button when you have finished transmitting.

NOTE: In order for other people to receive your transmission, they must also be on the same channel you are currently using. Refer to the "Changing Channels" section for more information.

## 9. CALL Function

You can use CALL TONES to alert the other user to identify yourself. You can also use CALL TONES to signal the beginning or the end of a transmission.

- 9.1 Pressing **C** (CALL) button with short touch, the call tone keep 3 seconds with transmit together.
- 9.2 Press and hold the **C** button, the Power red LED will light up 3 seconds but TRANSMIT will continuous until **C** button release. User can talk with their voice after 3 seconds CALL alert signal.
- 9.3 The User cannot send CALL tones again in the next minute. If CALL button is pressed again, it will be treated as PTT function.

## 10. LAMP / LOCK Function

10.1 Press **\*** button to light up the LCD SCREEN. The back light lamp will shut off automatically after 4 seconds if no buttons have been pressed.

10.2 Press and hold **LOCK(\*)** button until the **BUTTON LOCK** icon is display on the LCD SCREEN.

10.2.1 During Button LOCK turn on, if user press button **▲**, **▼**, **S** (SCAN) and **M** (MONITOR) that will not function but LOCK icon will flashing one time with “beep” sound to show the button are on Button LOCK mode. Press and hold **LOCK/(\*)** button again to deactivate Button LOCK mode.

NOTE: Button **▲**, **▼**, **S** and **M** Operations are disabled during **BUTTON LOCK** mode. But **☺**, **PTT**, **C** and **\*** button are still function.

## 11. MENU Function

You can use the MENU button to select CHANNEL number, Dual Watch, VOX sensitivity feature.

11.1 Press the **M** button once to enter channel selection mode.

11.1.1 After enter Channel selection mode, there are 40 channels can be selected for user.

The channel number will flash, user can press **▲** or **▼** button to select channel number. Please check the detail description in their relative paragraphs (**Channel Selection Function**).

11.2 Press **M** button 2 times to enter Dual Watch mode

11.2.1 Press **▲** button to select UP channel you want to monitor.

11.2.2 Press **▼** button to select DOWN channel you want to monitor.

11.2.3 Please check the detail description in their relative paragraphs (**Dual Watch Function**).

11.3 Press **M** button 3 times to enter VOX mode

11.3.1 Press **▲** button to select higher VOX sensitivity.

11.3.2 Press **▼** button to select lower VOX sensitivity or VOX off mode.

11.3.3 Please check the detail description in their relative paragraphs [**VOX (hand free function) Function**].

11.4 Press MENU button 4 times to enter Second-Counter mode

11.4.1 Press **▲** button to select Second Counter start function.

11.4.2 Press **▼** button to select Second-Counter pause function.

11.4.3 Press **MENU** button to go out Second-Counter mode

11.4.4 Please check the detail description in their relative paragraphs (**Second-Counter Function**).

11.5 Press **M** button 5 times to return to volume selection mode

## 12. Dual Watch function

This function allows user to monitor 2 channels at their choice

12.1 Press MENU button 2 times to enter Dual Watch mode

12.1.1 Press **▲** button to select UP channel you want to monitor.

12.1.2 Press **▼** button to select DOWN channel you want to monitor.

12.1.3 Now the Dual Watch function will scan the channel that between the 2 prefixed channel. When a carrier is heard on one of two, Dual Watch Scan will stop on the activated channel to receive. Dual Watch restarts when the carrier disappears.

12.1.3.1 During Dual Watch channel scanning, press **M** button and then the channel

will stop on one of Dual Watch pressing response channel to monitor weak signal 15 seconds.


12.2 To stop Dual Watch function, press the **PTT** or **C** button.

### 13. VOX (hand free function) Function

This function allows user to do the hand free function in Transmitting and Receiving

13.1 Press  button 3 times to enter VOX mode


13.1.1 Press  button to select higher VOX sensitivity.


13.1.2 Press  button to select lower VOX sensitivity or VOX off mode.

13.1.3 During VOX sensitivity mode, press  button to confirm selected VOX sensitivity and return to standby mode.

13.1.4 During VOX sensitivity mode, press the **PTT** or **C** button to confirm selected VOX sensitivity and return to standby mode.


13.1.5 On VOX mode, user can speak with their voice through the Microphone to activate transmitting mode automatically.


13.1.6 During VOX Transmitting mode, if the surrounding is too noise that make your unit can not stop the transmitting and then you can press  button twice to stop the VOX transmitting mode 4 seconds.


After fast press  button twice, user has 4 seconds to adjust the VOX sensitivity to lower sensitivity that suitable a noise surrounding or off mode.


### 14. Second Counter Function


This function allows user to counter second meter from 00 to 99 seconds.


14.1 Press  button 4 times to enter Second Counter mode




14.1.1 Press  button to run Second Counter.


14.1.1.1 During Second-Counter counting, press  button to pause Second Counter running.


14.1.1.1.1 During Second-Counter pause, press  button to reset the Second Counter to 00 status.


14.1.1.1.2 During Second-Counter pause, press  button to start the Second Counter counting again.

14.1.1.1.2 During Second-Counter pause, press  button to return to stand by mode.

14.2 After enter Second-Counter mode, when some number has showed on the Counter, User can select  to continuous run the Second-Counter or select  button to stop the Counter. And press  to run the Second-Counter again.

14.2.1 After Second-Counter reset to 00, if the  pressing and then the Second-Counter will start to running.

14.2.2 After Second-Counter reset to 00, if the  pressing and then the Second-Counter will go back to standby mode.

14.3 Press  button to go back standby mode.

14.4 During Second-Counter running or pause, if an active signal is coming and then unit will go receiving mode.

14.5 During Second-Counter mode, if user pressing **PTT**, **C**, **M** or **S** button and then Second-Counter mode will go back to pressing button function mode.

14.5.1 During Second-Counter mode, if user pressing any function button and then Second-Counter will go back to pressing button function, the Second-Counter will pause on

last counting number.

## 15. MONITOR Function

You can use the MONITOR feature to check for weak signals in the current channel.

15.1 Press the **M** (MONITOR) button to get continuous monitoring. If no further instruction, continuous monitoring function will change back to stand by mode after 15 seconds automatically.

15.1.1 During continuous monitoring function, press **M** buttons one more time to release continuous monitoring function.

15.1.2 During continuous monitoring function, press **PTT** button, the continuous monitoring function will change to Transmit function. After PTT button release, Transmit function will go to stand by mode.

15.1.3 During continuous monitoring function, press **C** button, the continuous monitoring function will change to CALL function. After CALL button release, CALL function will go to stand by mode.

## 16. Repeater Function

This function allows user to do REPEATER feature.

16.1 Press **S** button one time to enter REPEATER mode, press **S** button one more time to release REPEATER function. During REPEATER on mode, display will show REP icon.

## 17. Channel Selection Function

The unit has 40 channels for user selection.

17.1 Press **CH** button one time, the current channel number flashes on the LCD SCREEN

17.1.1 While the channel number is flashing:

17.1.1.1 Press **▲** or **▼** button to move to a higher or lower channel respectively.

17.1.1.2 Press **PTT** button to confirm selection channel.

## 18. Channel SCAN Function

CHANNEL SCAN performs searches for active signals in an endless loop from 1 to 40.

18.1 Press **S** (SCAN) button FOR 1 second to enter channel SCAN mode

18.1.1 During channel scanning, if the **S** button pressing second and then channel SCAN function will be stopped immediately. The channel will stand back to original default channel automatically.

18.1.2 During channel scanning, if the **PTT** button pressing and then the channel scanning function will stop on present pressing channel immediately (e.g. when channel scanning to channel-5 and then press **PTT** button immediately and then channel will pause on channel-5). After 4 seconds, if no further instruction and then the unit will go back to scanning function automatically.

18.1.3 During channel scanning, if the **C** button pressing and then the channel scanning function will pause on present pressing channel with **C** function. After CALL function, if no further instruction and then the unit will go back to scanning function automatically.

18.1.4 During channel scanning, when an active signal (any one channel) is detected, but user want to receiver another available channel, press the **M** button to bypass the current

channel and continue to search for another active channel.

Note: We can call this function as NEXT AVAILABLE CHANNEL SEARCH.

- 18.1.5 During channel scanning, when an active signal (any one channel) is detected, CHANNEL SCAN function will pause and keeping the active signal broadcasts.
- 18.1.6 During channel scanning, if an active signal is detected, press the **PTT** button to communicate through the active signal channel and the CHANNEL SCAN is deactivated.
  - 18.1.6.1 If the active signal is original default channel (e.g. CH-5) and then after you press **PTT** button, the default channel (CH-5) will kept again.
  - 18.1.6.2 If the active signal is not the original default channel (e.g. CH-1) and then after you press PTT button, the default channel (e.g. CH-5) will change to pressing channel (CH-1) automatically.
- 18.1.7 During channel scanning, if no other button pressing, unit will continuous scanning and receiving with detected channel. Above two states will repeat until pressing **PTT**, **S** or **C** buttons

## 19. Battery Capacity Level/Low Battery Indication

- 19.1 The Battery Capacity Level is indicated by the number of squares present inside the battery icon on the LCD SCREEN.
- 19.2 When the Battery Capacity Level is low, display's battery outside case icon will flash and 'beep' with three tone signal to indicate that the batteries need to be replaced.

**CAUTION: During external AC/DC ADAPTOR charge using, do not use non-rechargeable batteries put in your unit.**

## 20. Accessory Connection

The unit is designed to work with external accessory Earphone/Microphone. User can use external headset for the private voice communication.

## 21. External AC/DC ADAPTOR charge function – option accessory (For rechargeable batteries only)

You can use the external DC ADAPTOR to charge up your rechargeable batteries by normal charging function.

- 21.1 After DC header plug in the unit, the charging action will indicate on LCD as battery icon flashing.
  - 21.1.1 The ADAPTOR (120VAC input) 9VDC/100mA can be used for normal charging function.
    - 21.1.1.1 It takes approximately 14 hours to fully charge for new batteries.
  - 21.1.2 During external ADAPTOR charging, unit will just keep rechargeable batteries charging function only

**CAUTION: During external AC/DC ADAPTOR using, do not use non-rechargeable batteries put in your unit.**

**22. Major Function**

Channels Available	40 Channels
Output Power (TX)	< 1.5W
Range	Up to 5 miles

**23. Channel and Frequency Table**

CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1*	476.425	11	476.675	21	476.925	31*	477.175
2*	476.450	12	476.700	22	476.950	32*	477.200
3*	476.475	13	476.725	23	476.975	33*	477.225
4*	476.500	14	476.750	24	477.000	34*	477.250
5*	# 476.525	15	476.775	25	477.025	35*	477.275
6*	476.550	16	476.800	26	477.050	36*	477.300
7*	476.575	17	476.825	27	477.075	37*	477.325
8*	476.600	18	476.850	28	477.100	38*	477.350
9	476.625	19	476.875	29	477.125	39	477.375
10	476.650	20	476.900	30	477.150	40	477.400

# Emergency calling for both simplex and duplex operation. Please do not use this channel in non-emergency cases.

\* These channels may also be used as repeater channels using 750kHz offset. Channels 1 to 8 inclusive are used for mobile reception and channels 31 to 38 for mobile transmission.

**23. Outlook and Button View**

