Golden Source Electronics Ltd.

Operation Manual

FRS with GMRS channel
(Family Radio Service)
Model: 1050-US
(With CTCSS function)

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FRS (1050-US) Mar 11, 2002

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1   Operation Manual Version Change History

Version No.	Details	Date
0.00	- Initiate	Dec 31, 01
0.10	- Add item 23.2, 11.1.6, 13, - Change item 2, 9.2.1, 14	Jan 23, 02
0.11	- Change item 2, 2.2,	Jan 29, 02
0.12	- Change item 2, 2.2,	Mar 11, 02

2. *Display Icon, LCD and Button Description*
2.1 Icon Description

1½ digit 7 segments, displays CHANNEL number

2 Digits 7 segments, displays 38 CTCSS code (sub-channel)

LEVEL Icon, displays sound level function
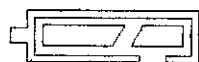
BATTERY Icon, displays Battery Capacity Level function

LOCK Icon, displays Button LOCKED function

BUSY Icon, displays Channel BUSY function

SCAN Icon, displays Channel SCAN function

VOX Icon, displays voice activate transmitting function

FrS Icon, displays FRS Channel can be selected function

GMRS Icon, displays GMRS Channel function

2.2 LCD View

2.3 Button Function Description

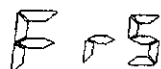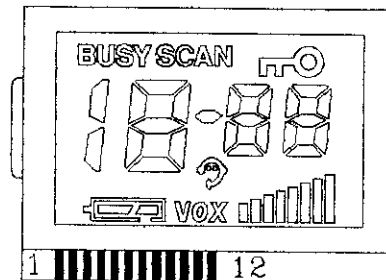| Button symbol	Description
⊘	Electronic Power ON/OFF button function
PTT	Push to Talk function
MENU	MENU selection function
SCAN	SCAN function
MON	MONITOR function
LAMP+	LCD back-light and Button LOCK function
CALL	CALL alert function
▲ ▼	VOLUME UP and DOWN function

3. Turning the Unit ON

Press and hold the ⊘ (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 ⊘ button. The unit will "beep" with a signal tone and the LCD SCREEN will turn off.

5. Adjusting Speaker Volume

5.1 Press the ▲ (UP) button to increase the Speaker Volume.

5.2 Press the ▼ (DOWN) button to decrease the Speaker Volume.

5.3 The Speaker Volume level is indicated by the number of bars displayed in the lower right corner of the LCD SCREEN.

5.4 Press and hold UP ▲ button. The volume level will automatically increase sound level until maximal level.

5.5 Press and hold ▼ button. The volume level will automatically decrease sound level until minimal level.

5.6 During MENU operating, ▲ / ▼ button will change to other function according to MENU function.

5.7 Volume ▲ and ▼ button are disabled during button locked mode.

6. Receiving a Signal

6.1 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.

6.2 During receiving mode, if you pressing PTT (Push to Talk) button and then the unit will change to TRANSMIT mode immediately.

7. Transmitting a Signal

7.1 Check the channel's activity to press the MON (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.

7.2 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.

7.3 While holding the PTT button, speak into the unit a normal tone of voice.

7.4 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.

8. 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.

8.1 Press CALL button with short touch, the call tone keep 3 seconds with transmit together.

8.2 Press and hold the CALL button, the Power red LED will light up 3 seconds but TRANSMIT will continuous until CALL button release. User can talk with their voice after 3 seconds CALL alert signal.

9. LAMP+ (LAMP / LOCK button) Function

9.1 Press LAMP+ button to light up the LCD SCREEN. The Back-lit will shut off automatically after 4 seconds if no buttons have been pressed.

9.2 Press and hold LOCK(LAMP+) button until the BUTTON LOCK icon is display on the LCD SCREEN.

    9.2.1 During Button LOCK turn on, if user press button ▲, ▼ and MENU 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 the ENTER button again to deactivate Button LOCK mode.

NOTE: Button ▲, ▼ and MENU Operations are disabled during BUTTON LOCK mode. But PTT, CALL, MON and LAMP+ button are still function.

10. MENU Function

You can use the MENU button to select CHANNEL number, Sub-channel (CTCSS code), VOX sensitivity feature.

10.1 Press the MENU button once to enter channel selection mode.

    10.1.2 User can press ▲ or ▼ button to select channel number. Please check the detail description in their relative paragraphs [**Channel Selection Function**].

10.2 Press the MENU button 2 times to enter CTCSS code (sub-channel) selection mode.

    10.2.1 After enter CTCSS code selection mode, sub-channel number will flash, you can press ▲ or ▼ button to select sub-channel number. Please check the detail description in their relative paragraphs [**Changing CTCSS Code (sub-channel) Function**].

10.3 Press MENU button 3 times to enter VOX mode

    10.3.1 Press ▲ button to select higher VOX sensitivity.

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

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

10.4 Press MENU button 4 times to return to volume selection mode

11. VOX (hand free function) Function

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

11.1 Press MENU button 3 times to enter VOX mode

    11.1.1 Press ▲ button to select higher VOX sensitivity.

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

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

    11.1.4 During VOX sensitivity mode, press the PTT or CALL button to confirm selected VOX sensitivity and return to standby mode.

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

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

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

12. MONITOR Function

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

12.1 Press the MON button to get continuous monitoring. If no further instruction, continuous monitoring function will change back to stand by mode after 15 seconds automatically.

    12.1.1 During continuous monitoring function, press MON buttons one more time to release continuous monitoring function.

    12.1.2 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.

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

13. FRS / GMRS Selection Function

The unit has FRS 14 channels and GMRS 15 channels. User can select FRS or GMRS as

following

13.1 On standby mode, press POWER button once to select GMRS channel mode. Press POWER button one more time to select FRS channel mode

    13.1.1 When select FRS channel mode, the FrS segment will show on LCD display 0.5 seconds to confirm FRS channel mode.

    13.1.2 When select GMRS channel mode, the HEADSET icon will show on LCD display to confirm GMRS channel mode.

13.2 On standby mode, press the MENU button once to enter channel selection mode.

    13.2.1 After enter Channel selection mode, Channel number will flash, you can press POWER button as toggle switch to select FRS or GMRS channel.

        13.2.1.1 When select FRS channel mode, the FrS segment will show on LCD display 0.5 seconds to confirm FRS channel mode.

        13.2.1.2 When select GMRS channel mode, the HEADSET icon will show on LCD display to confirm GMRS channel mode.

13.3 After confirm FRS or GMRS Channel, user can press ▲ or ▼ button to select channel number.

14. Channel Selection Function

The unit has FRS 14 channels and GMRS 15 channels.

14.1 Press the MENU button once to enter channel selection mode.

    14.1.1 After enter Channel selection mode, Channel number will flash, you can press POWER button to select FRS or GMRS channel mode first.

        14.1.1.1 When select FRS channel mode, the FrS segment will show on LCD display 0.5 seconds to confirm FRS channel mode.

        14.1.1.2 When select GMRS channel mode, the HEADSET icon will show on LCD display to confirm GMRS channel mode.

14.2 After confirm FRS or GMRS Channel, user can press ▲ or ▼ button to select channel number.

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

15. Changing CTCSS Code (sub-channel) Function

The unit has 38 available CTCSS codes. Please set CTCSS code in addition to channel setting if you do not bothered by someone else. To set CTCSS code:

15.1 Press MENU button 2 times until the current CTCSS number flashes.

    15.1.1 While the CTCSS number is flashing:

        15.1.1.1 Press ▲ or ▼ button to move to a higher or lower code respectively.

        15.1.1.2 The sub-channel can be changed from 00 to 38 or 38 to 00.

    15.1.2 Press CALL button to confirm the selection channel and transmit with CALL function.

    15.1.3 After 5 seconds, if no any button pressing, the original flash channel will kept no change.

15.2 Press MENU button or PTT button to select the desired channel and CTCSS Code, and return to the standby mode.

15.3 Channel change function is disabled during button LOCK mode.

16. Channel SCAN Function

Channel SCAN performs searches for active signals in an endless loop from 1 to 14, and endless CTCSS code loop from 00 to 38.

16.1 Press and release the MENU button and the current number flashing.
Press the SCAN button to activate channel SCAN. The CTCSS number is set at 00, and the channel number on the LCD Screen changes rapidly until an active signal is detected.

16.2 When an active signal (any one of channel) is detected, SCAN pauses keeping the active signal broadcast. Press PTT to communicate through the active signal channel and CTCSS code to continue searching.

16.3 Press SCAN button to deactivate channel SCAN. The SCAN stops at starting channel when no active channel is detected. But the SCAN stops at an active channel when an active channel is detected.

Note: Volume and channel change function is disabled during button LOCK mode. Press and hold LAMP+ again to deactivate button LOCK mode.

17. CTCSS code SCAN (sub-channel SCAN) Function

17.1 Select the desired channel before activation CTCSS code SCAN. When a channel has been selected, press the MENU button twice or once more during channel SCAN mode until a CTCSS number flashes.

17.2 When an active CTCSS code (one of 38 codes) is detected, SCAN pauses keeping the active signal broadcast. Press MON and then PTT to communicate through the active channel and CTCSS code SCAN is deactivated. If another code is desired, press ▲ or ▼ button to search for another active sub-channel.

17.3 Press the SCAN button to deactivate CTCSS code SCAN. The Scan stops at starting channel + CTCSS code when no active channel is detected. But the SCAN stops at a different channel when an active channel is detected.

18. Battery Capacity Level/Low Battery Indication

18.1 The Battery Capacity Level is indicated by the number of squares present inside the battery icon on the LCD SCREEN.

18.2 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 DC ADAPTOR using, do not use non-rechargeable batteries put in your unit.

19. Accessory Connection

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

20. External DC ADAPTOR charging function – option accessory (For rechargeable batteries only)

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

20.1 After DC header plug in the unit, the charging action will indicate as GREEN LED.

20.1.1 The ADAPTOR (120V input) 6V/100mA can be used for normal charging function.

16.1.1.1 It takes approximately 14 hours to fully charge for new batteries.

20.1.2 During external ADAPTOR charging, unit will just keep rechargeable batteries

charging function only

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

21. *Major Function*

Channels Available	14 Channels
	15 Channels
ERP Output Power (TX)	< 0.16W
Range	2 miles

22. *Channel and Frequency Table*

22.1   FRS 14 channel and frequency table

CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	462.5625	6	462.6875	11	467.6375
2	462.5875	7	462.7125	12	467.6625
3	462.6125	8	467.5625	13	467.6875
4	462.6375	9	467.5875	14	467.7125
5	462.6625	10	467.6125		

22.2   GMRS 15 channel and frequency table

CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	462.5625	6	462.6875	11	462.5500
2	462.5875	7	462.7125	12	462.6000
3	462.6125	8	462.5750	13	462.6500
4	462.6375	9	462.6250	14	462.7000
5	462.6625	10	462.6750 *	15	462.7250

GMRS emergency channel is 462.6750 (CH-10)

22.3   38 CTCSS channel and frequency table

Sub CH	Frequency (Hz)	Sub CH	Frequency (Hz)	Sub CH	Frequency (Hz)	Sub CH	Frequency (Hz)
1	67.0	11	97.4	21	136.5	31	192.8
2	71.9	12	100.0	22	141.3	32	203.5
3	74.4	13	103.5	23	146.2	33	210.7
4	77.0	14	107.2	24	151.4	34	218.1
5	79.7	15	110.9	25	156.7	35	225.7
6	82.5	16	114.8	26	162.2	36	233.6
7	85.4	17	118.8	27	167.9	37	241.8
8	88.5	18	123.0	28	173.8	38	250.3
9	91.5	19	127.3	29	179.9	00	NIL
10	94.8	20	131.8	30	186.2		

23. Outlook and Button View

FCC Notice

Safety Information:

Your wireless hand-held portable transceiver contains a low power transmitter. When the Push-to-Talk (PTT) button is pushed it sends out radio frequency (RF) signals. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for hand-held wireless devices.

Important: To maintain compliance with the FCC's RF exposure guidelines, hold the transmitter and ANTENNA at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the ANTENNA pointed up and away from the face. If you wear the handset on your body while using the headset accessory, use only the supplied BELT CLIP for this product and when transmitting, take it out of the belt to ensure that the ANTENNA is at least 1 inch (2.5 centimeters) from your body.

Use only the supplied ANTENNA. Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

● Reorient or relocate the receiving antenna.
● Increase the separation between the equipment and receiver.
● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
● Consult the dealer or an experienced radio/TV technician for help.

APPENDIX 1 B

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NOTE

When the Radio is transmitting on GMRS frequencies, that operation on GMRS frequencies requires an FCC license and such operation is subject to additional rules specified in 47 C.F.R. Part 95.

FCC Licensing Information

Operation on GMRS frequencies requires a license from the Federal Communications Commission (FCC).

Information regarding an application for your license can be obtained as follows if your intend to use the GMRS channels:

Website - http://wireless.fcc.gov/prs/genmbl.html

Tel. 1-800-418-3676

GMRS Licensing Information

Before any station transmits on any channel authorized in the GMRS from any point within or over the territorial limits of any area where radio services are regulated by the FCC, thé responsible party must obtain a license for a GMRS system. An individual 18 years of age or older, who is not a representative of a foreign government, is eligible to apply for a GMRS system license. Application for a GMRS system license is made on FCC Form 605 and you can obtain a copy from the FCC's Web site: http://www.fcc.gov/formpage.html or by calling the FCC's Forms Distribution Center 1-800-418-FORM (3676), or from the fax-on-demand by dialing (202) 418-0177. There is a filing fee. For information on fees, see the FCC's Web site: http://wireless.fcc.gov/csinfo/feeinfo.html

APPENDIX H