

**ATTACHMENT M: USER'S MANUAL**

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**JDG-415H  
(GMRS)**

**SERVICE MANUAL**

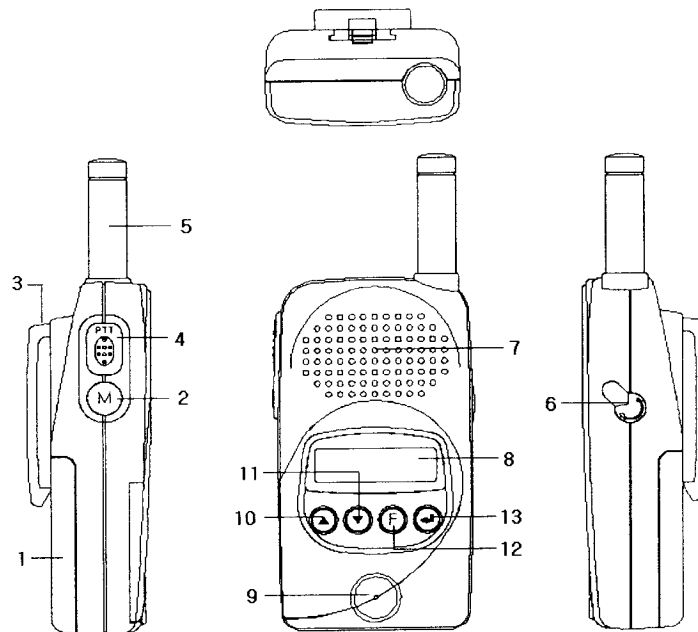
**2-WAY PORTABLE  
HANDHELD  
RADIOS**

2000.7.18

J-communications Co., Ltd

### 3. OPERATION

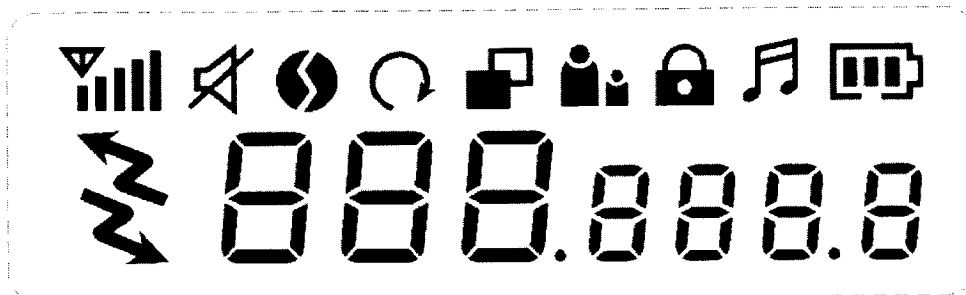
#### 3.1 Key Name



#### FUNCTIONS AND CONTROLS

- |                                |                                  |
|--------------------------------|----------------------------------|
| 1) Battery Door                | 11) Down Button & Volume Control |
| 2) Monitor Button              | 12) Function Button              |
| 3) Detachable Belt Clip        | 13) Power On/Off & Enter Button  |
| 4) Push-To-Talk (PTT) Button   |                                  |
| 5) Antenna                     |                                  |
| 6) External Mic / Speaker      |                                  |
| 7) Built-in Speaker            |                                  |
| 8) LCD Panel                   |                                  |
| 9) Built-in Microphone         |                                  |
| 10) Up Button & Volume Control |                                  |

### 3.2 ICONS on LCD



- 1) RSSI (Receiving Signal Strength Indicator) or TX Bar Icon



Indicates the receiving signal strength and blinks during transmission.

- 2) Monitor Indicator



Appears when the monitor button is used.

- 3) CTCSS Indicator



Blinks when the correct CTCSS tone is entered.

- 4) Auto Channel Scan Indicator



Appears in the auto scan mode or when the auto scan mode is activated.

- 5) Dual Watch Scan Indicator



Appears in dual watch scan mode or when the dual watch scan mode is activated.

- 6) Key Lock Indicator



Blinks in auto lock selection mode or when the key lock is activated.

7) VOX Indicator



Blinks in VOX selection mode or appears when VOX is activated.

8) Battery Level Indicator



Battery Level Meter indicates the remaining battery strength.

9) Tx Indicator



Appears when a signal is being transmitted.

10) Rx Indicator



Appears when a signal is being received.

12) Large Segment Display



Indicates the channel number in use at the normal mode.

When the Function Button is pressed, it Displays the function menu in sequence : CH / cTc / SC / dW / U0 / Udt / ALo / CAL / ton / tAL / bEP

13) Small Segment Display



Displays the CTCSS tone option at the normal mode. CTCSS option is displayed in Hz.

Displays the SUBMENU of each MENU in the function mode.  
(e.g. CH 1~69 / cTc: hz / SC: up, dn / dW: channel number /  
U0: high, mid, low, off / Udt: 5sec, 3sec, 2sec, 1sec /  
ALo: off, auto / CAL number:1-7,off / ton:no-Freq / tAL:on,off  
bEP: on,off

### 3.3 Key Function

#### 3.3-1 ENTER BUTTON (#13)

##### 1) Short Touch - Power On

- Press this button (#13) briefly to turn the unit on.  
A short confirming melody will play.

##### 2) Long Touch - Power Off

- Press this button (#13) for longer than 1.5 seconds to turn the unit off.

※ Press it to confirm the required option for respective functions during function edit mode.

#### 3.3-2 FUNCTION BUTTON (#12)

##### 1) Short Touch - Power On

- Press this button briefly to enter function edit mode in standby mode.

##### 2) Long Touch - Power Off

- Press for longer than 1.5 seconds to activate the KEY LOCK in the standby mode.

※ Please note all buttons will be disabled except the Monitor Button (#2) and PTT Button (#4) will remain fully operational.

#### 3.3-3 UP BUTTON (#10)

##### 1) Short Touch

- In the standby mode, press this button briefly to move to the next higher main volume level.  
In the function edit mode, press briefly to shift from the current option in each submenu to the next option in the same submenu.

## 2) Long Touch

- Pressing this button for more than 1.5 seconds will allow you to navigate at a more rapid rate through different volume level in the standby mode or through different menus in the function edit mode.

## 3.3-4 DOWN BUTTON (#11)

### 1) Short Touch

- In the standby mode, press this button briefly to move to the previous lower main volume level.  
In the function edit mode, press briefly to shift from the current option in each submenu to the previous option in the same submenu.

### 2) Long Touch

- Pressing this button for more than 1.5 seconds will allow you to navigate at a more rapid rate through different volume level in the standby mode or through different menus in the function edit mode.

## 3.3-5 PUSH-TO-TALK (PTT) BUTTON (#4)

- Press it firmly and speak into the Built-in Microphone (#9) to transmit.  
The red Tx LED Indicator at the right side of the LCD Panel (#8) will light.
- Release it to revert to standby mode. When an incoming call is received, the green Rx LED Indicator on the left side of the LCD Panel (#10) will light.
- 2-Way Call Ringer  
: Press the PTT Button twice quickly to call another party on the same channel.  
The word CALL and the Tx icon will appear in the display.  
The user selected call ringer melody will play.

### 3.3-6 MONITOR BUTTON (#2)

- Press it to check activity on the current channel before you try to transmit.
- Adjust the Volume Control (#10, #11) if necessary.
- When you press the Monitor Button, the LCD Panel (#8) will be illuminated with an amber color back-light and both the Tx and Rx LED Indicators will light.
- If you press the Monitor Button during the function edit mode, you will return to standby mode directly.
- In the standby mode, press monitor Button for more than 3 second Will sound short Beep tone. And then Monitor function is released. If you want return standby mode, briefly press to monitor Button And

### 3.3-7 EXTERNAL MIC/SPEAKER (#6)

- This jack accepts an optional headset/microphone for totally handsfree operation.  
Please refer to the enclosed Accessory Order Form to order accessories.  
See also section regarding VOX SELECTION MODE.

## 3.4 Setting and Operation

### 3.4-1 BASIC CHANNEL SELECTION

In order to communicate with other JDG-414H units, both you and the receiving party must be on the same channel.

GMRS has 15 channels (1-15) as indicated by the large digits in the LCD Display Panel (#8). Before, trying to transmit on the selected channel, you should press the Monitor Button (#2) to check the activity on that channel. If someone is already on the selected channel, you should try another channel that is clear.

To change the basic channel,

- In the standby mode, press the Up Button (#10) briefly to move to the next higher main channel number.



### 3.4-2 CTCSS (Coded Tone Controlled Squelch System) SUB-CHANNEL SELECTION MODE

This feature allows you to utilize a less used channel range (00-38) within a main channel. This enables you to communicate with another party on the same main channel using the same subcode. This helps to avoid congestion on the main channel and filters out unwanted noise and static.

There are 38 CTCSS subchannels for each main channel.

To change the CTCSS subchannel,

- Press the Function Button (#12) until the word cTc appears in the LCD Panel (#8).
- Press the Up Button (#10) or the Down Button (#11) to choose the desired subchannel to use. The corresponding subcode frequency will be displayed in the lower right corner.
- Press the Enter Button (#13) to confirm your selection.

*NOTE: To communicate with other JDG-415H units, they must be switched to the same channel and CTCSS subcode.*

*To communicate with other JDG-415H units that do not have subcodes, switch your unit to the same channel with the subcode set to OFF.*

### 3.4-3 AUTO CHANNEL SCAN MODE

This feature allows you to scan for an active channel and communicate with the party transmitting.

To access the Auto Channel Scan menu,

- Press the Function Button (#12) until the auto channel icon blinks and SC appears in the LCD Panel (#8).
- Press the Up Button (#10) or the Down Button (#11) to choose scanning up or down from the current channel number.
- Press the Enter Button (#13) to confirm your selection.
- The unit will begin scanning for an active main channel.  
If a transmission is detected, the Rx and RSSI icons will appear in the LCD Panel (#8).
- To turn off the auto channel scan feature in the standby mode, simply press the Function Button (#12) once.

the LCD Panel (#8).

- To turn off the auto channel scan feature in the standby mode, simply press the Function Button (#12) once.

#### 3.4-4 DUAL WATCH SCAN MODE

This feature allows you to monitor two different channels at the same time. If you pre-set any priority channel other than the current channel in use, the pre-set channel will be scanned every 0.5 second and signals you when a call is received.

To access the Dual Watch Scan menu,

- Press the Function Button (#12) until the dual watch icon blinks and dW appears in the LCD Panel (#8).
- Press the Up Button (#10) or the Down Button (#11) to select the desired channel number you wish to closely monitor.
- Press the Enter Button (#13) to confirm your selection.
- To turn off the dual watch feature in the standby mode, simply press the Function Button (#12) once.

#### 3.4-5 VOX SELECTION MODE

The Voice Activated Transmission (VOX) function allows your voice to activate transmission automatically when the Communicator is used with the optional handsfree mic/headset (refer to enclosed Accessory Order Form). It also allows handsfree use when a mic/headset is not being used without having to use the PTT Button (#4).

To access the VOX Selection menu,

- Press the Function Button (#12) until the VOX icon blinks and UO appears in the LCD Panel (#8).
- Press the Up Button (#10) or the Down Button (#11) to select from high, mid, low or off. High, mid or low setting determines VOX response sensitivity.
- Press the Enter Button (#13) to confirm your selection.
- To turn off the VOX feature, enter the VOX selection mode and then select Off.

#### 3.4-6 VOX RECOVERY TIME SELECTION MODE

This allows the response characteristics of the VOX function to be

- Press the Up Button (#10) or the Down Button (#11) to select from 5, 3, 2 or 1 second setting. This setting determines the delay time between transmitting and receiving.
- Press the Enter Button (#13) to confirm your selection.
- Please note you may need to try different VOX time settings to determine the best value to suit your speaking habit.
- To turn off the VOX feature, enter the VOX selection mode and then select Off.

#### 3.4-7 AUTO KEY LOCK SELECTION MODE

This feature prevents accidental channel change and disturbance to the preferred settings of the Communicator. Auto Key Lock temporarily disables the Up, Down and Enter Buttons.

To access the Auto Key Lock Selection menu,

- Press the Function Button (#12) until the auto lock icon blinks and AL0 appears in the LCD panel (#8).
- Press the Up Button (#10) or Down Button (#11) to select the Auto option.
- Press the ENTER key to confirm your selection.
- If you do not press any key for more than 15 seconds in the standby mode, all respective keys will automatically be locked.
- To turn the auto key lock on or off in standby mode, simply press and hold the Function Button (#12) for more than 1.5 seconds.
- To quickly activate the Auto Key Lock, hold the Function Button (#12) for more than 1.5 seconds.

#### 3.4-8 CALL RINGER MELODY SELECTION MODE

This feature provides 7 user selectable call ringer melodies to alert you of a calling party.

To select your favorite Call Ringer melody,

- Press the Function Button (#12) until the call icon blinks and CAL appears in the LCD panel (#8).
- Press the Up Button (#10) or Down Button (#11) to preview the 7 available melodies.
- Press the ENTER key to confirm your selection.

- Press the Up Button (#10) or Down Button (#11) to preview the 7 available melodies.
- Press the ENTER key to confirm your selection.

#### 3.4-9 TONE FREQ/NUMBER SELECTION MODE

In Order to convenient use tone function selected the tone freq or Number.

In the tone mode, press UP or DOWN Button selected Freq or number.

#### 3.4-10 TAL ON OFF MODE

TAL on Function remove the SQ Tail during the Transmitter and Receiving of units.

#### 3.4-11 BEEP ON OFF MODE

In the Beep mode, press the beep off released Beep tone function of Any other key operation.