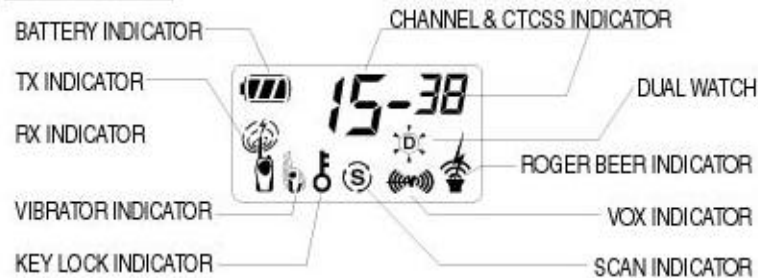


Function & Feature Display

LCD SCREEN



15-38	CHANNEL & CTCSS INDICATOR : Display the channel number and CTCSS number in use
	BATTERY INDICATOR : Displays current battery level by 3 steps
	BUSY INDICATOR : Displays that a RF signal is received
	TX INDICATOR : Appears when a signal is being transmitted
	VIBRATOR INDICATOR : Indicates that "Vibrator" mode has been activated(No Sound Time)
	KEY LOCK INDICATOR : Indicates the 'Key-Lock' feature has been activated
	SCAN INDICATOR : Displayed during "Channel Scan" mode(by Forward Directional flicking)
	VOX INDICATOR : Appears when "VOX" is activated
	ROGER BEEP INDICATOR : Appears when "Roger Beep" feature is activated
	DUAL WATCH : Indicates that "Dual Watch" mode has been activated

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Option Mode

1. Option Mode(PTT+Power on)

Pressing and holding the PTT button while turning the power on will put the option mode. By Pressing the Mode key will appear the each option modes. Pressing the PTT button will put the radio back to normal operation.

1-1. Option Mode key sequence

- 1st press -- Call Tone Control
- 2nd press -- Beep tone
- 3rd press -- Vibrator call
- 4th press -- VOX sensitivity level control

1-2. Call Melody step control



Set up Call Tone Melody from 01 to 07 that is an each different tone by using ▲ ▼ button and enter with PTT button.

1-3. Beep Tone Control



Set up Beep on/off that the key tone is in use by using ▲ ▼ button and enter with PTT button.

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Option Mode

1-4. Vibrator Call



L1

L2

Set up Vibrator Call between L1 mode to L2 mode by using ▲ ▼ button and enter with PTT button.

L 1 Mode : To set this mode for perfect vibrator call by the other parties with the same unit that has a special call identity code in calling signal

L 2 Mode : To set this mode for optional vibrator call by the other parties

1-5. VOX Sensitivity Level Control

To set the VOX sensitivity level to suit your environment of operation (e.g. weeping of a cricket, noisy road, motor bike, factory etc)

Set up VOX level from 01 to 07 by using ▲ ▼ button and enter with PTT button. Level 1 is set default value

Icons	Level	Environment
—v	88-01	Most Sensitivity as a talking in whispers
—(v)	88-02	Talking in a small voice level
—((v))	88-03	Normal communication sensitivity
—(((v)))	88-04	Talking in a little louder voice than level 3
((((v))))	88-05	Talking in a higher voice level
(((((v))))))	88-06	Talking at the top of your voice level

Function Mode

2. Function Mode

In the standby mode, pressing Mode button for momentarily will enter the function edit mode. Subsequent press will cycle to each mode. Pressing the PTT button to confirm your selection will put the radio back to normal operation

2-1. Function Mode button(MODE) sequence

- 1'st press -- Continue Tone Coded Squelch System(CTCSS)
- 2'nd press -- Vibrator Call ON/OFF
- 3'rd press -- Key Lock ON/OFF
- 4'th press -- Dual Watch ON/OFF
- 5'th press -- Dual Watch scan channel(only ON choose)
- 6'th press -- Dual Watch sub tone(CTCSS)
- 7'th press -- Voice activated Transmission(VOX) ON/OFF
- 8'th press -- Roger Beep Tone

2-2. CTCSS Tone Setup

The Continue Tone Coded Squelch System(CTCSS) with 38 sub frequency is a system to avoid interfering signals on the same channel. There are 38 CTCSS sub-channels for each main channel and a different subcode may be selected for each of the 15 channels

01-0F

Press MODE button by first pressing and

01-01

Upon setting CTCSS tone up, the corresponding sub channel number flashes in the LCD panel

01-38

Set up CTCSS Tone by using ▲ ▼ button and enter with PTT button to get out of Function Mode.

2-3. Vibrator Call ON/OFF

Press MODE button until the Vibrator icon appears and blinks on the LCD. Set up VIB ON/OFF by using ▲ ▼ button and enter with PTT key to get out of Function



01-0F

01-0n

Function Mode

2-4. Key Lock ON/OFF

This feature prevents accidental channel change to the preferred settings of the IFG-400 GMRS Radio.

The Key Lock function temporarily disables only the ▲ ▼ and **MODE** function



Press **MODE** button until the Vibrator icon appears and blinks on the LCD Set up VIB ON/OFF by using ▲ ▼ button and enter with **PTT** button to get out of Function Mode.

2-5. DW(Dual Watch) Operation

Dual Watch allows you to monitor special channel (A) while standing by on its normal operating channel(B) that is the main channel.

The assigned special channel will be scanned between normal channel with sub tone(CTCSS).



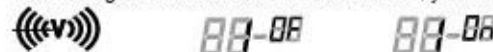
Press **MODE** button until the DW icon appears and blinks on the LCD To activates or Turn off, DW ON/OFF by using ▲ ▼ button and enter with **MODE** button to set up the channel(A) and the sub tone witch you want to monitor the special channel with sub tone(CTCSS). Press the **PTT** button to get out of Function Mode. Once channel(B) has been selected, the radio will operate the dual watch mode

Function Mode

2-6. VOX Operation

This feature enables you to have hands-free conversation your voice or the signal of recognition is detected and the radio automatically transmits without the need to press PTT button when you want to transmit. In the option mode, You can also control the VOX detecting sensitivity by level 1 to level 6 to suit your environment of operation, and appears the different icon by each level step.

When using the external SPK/MIC or EAR/MIC, you have same function.



Press **MODE** button until the VOX icon appears and blinks on the LCD Set up VIB ON/OFF by using ▲ ▼ button and enter with **PTT** button to get out of Function Mode

2-7. Roger Tone Operation

This feature enables give the identity signal to other parties whenever your transmitting finished



Press **MODE** button until the DW icon appears and blinks on the LCD To activates or Turn off, Roger Tone ON/OFF by using ▲ ▼ button and enter with the **PTT** button to get out of Function Mode.

2-8. SCAN Operation.

This feature allows you to scan all 15 GMRS channels with sub tone(CTCSS) for activity. When in scanning operation, The radio will stop on any busy channel with sub tone.

It will remaining on that busy channel until the signal is faded out, then after 5 seconds, revert to scanning. While the radio is scanning will change the direction of scan from ascending to descending by the ▲ ▼ button. Also during the sub tone operating, the radio will not stop on the busy channel if the received signal does not have a mached CTCSS code.



Press **MODE** button more than 3 seconds, than the SCAN icon appears and the symbol circulates on the LCD. To leave the scan mode, Press the **PTT** or **CALL** button to return to home channel and leave the scan operation.

GETTING STARTED

Turning the Unit ON

Rotate the VOLUME CONTROL in a clockwise direction to switch power on. The unit will sound a confirming melody and display all icons with all digits on the LCD to indicate the unit is on.

NOTE : To reset your unit, turn it on depressing the ▲ ▼ button.

Turning the Unit OFF

Rotate the VOLUME CONTROL in a counter-clockwise direction to turn power off with the blank LCD screen.

Adjusting Speaker Volume

Hold the  button down to listen to audio level while rotating the Volume control knob. Clockwise to increase volume and counter clockwise to decrease volume to adjust level that is most comfortable for you

Up / Down button

In the standby mode, pressing this button briefly will change the frequency to the next higher or lower channel. Holding ▲ ▼ button down will cycle channel 1 through channel 15 rapidly

Push to Talk(PTT)

Pressing and holding this button will allow you to speak to any other parties that is set to the same channel and sub tone(CTCSS) setting as yours.

Hold the unit approximately 2 to 3 inches from your face as you speak into the built in microphone. The transmit symbol located on the LCD panel will appear while the PTT button is pressed. After you have finished speaking, release the PTT button to allow the reception of incoming signals. It is not possible to transmit and receive at the same time

Mode Button

Depress the  button momentarily. In standby mode, Press this button briefly to enter the function edit modes in due order SUB TONE(CTCSS) / VIBRATOR / KEY LOCK / DW / VOX / ROGER BEEP function selection mode.

NOTE : In the current function edit mode, press the  button return to the NORMAL mode after making your selection. In the function edit mode, press the  button again to shift from the current option in each submenu to the next option after selecting or skip over a current option

GETTING STARTED

Monitor Button

Hold the Monitor button to deactivate the automatic squelch feature to allow the user to temporarily listen to the air traffic on the current channel before initiating transmission. This is useful when communicating with other parties at extreme range. Also useful if you suspect someone in your group does not have the proper sub tone programmed

Call Button

To alert another party that you intend to transmit, The call button to go directly to the call channel while the radio is in the standby mode, and user on your channel will hear your call tone that has been selected the melody among 7 tones at option mode.

Turn on your unit select any of the 15 channels and the 38 subtones your desired.

Allows you to access a preset priority channel by touching only one

Battery Status Indicator

The  icon will blink when the radio is in low battery power. Charge the rechargeable battery or replace the batteries



Full battery power



Low battery power

Low Battery Alarm

If only  of Battery icon is left, alarm tone is generated every 60 seconds and the alarm tone continues until Battery Power becomes OFF.

Auto Power Save

IFG-400 RADIO has a unique circuit designed to dramatically reduce power consumption and increase the useful life of the batteries in standby mode.

If there is no busy or transmission within 5 seconds, IFG-400 unit switches to the power save mode.

Auto Set Low Transmit Power

The battery is in low level (remain 1 bar), The TX Power will be switched to low TX power mode automatically without any sign or display on the LCD panel.

Operations

Receiving a Signal

The unit is continuously in the RECEIVE mode when the unit is ON.
When you receive a signal on the current channel, the RX icon is displayed. (See "LCD SCREEN" for details)

Transmitting a signal

1. To send your message, check the channel activity by pressing and holding the **M** button. You'll hear static if the channel is clear to use, then speak into the microphone while holding down the **PTT** button.
2. Don't transmit if someone is talking on the channel.
3. For best transmission results, always keep and hold the unit in vertical position with the microphone 2 to 3 inches from the mouth.
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

Changing CHANNELS

In order to communication with other GMRS communicators, both transmitting and receiving party must be on the same frequency.
The IFG-400 has 15 available channels(1-15) indicated by the large digits on the LCD panel. Channels 1 through 7 are the same frequency as FRS channels 1 through 7.

To change the basic channels, In standby mode,
Press the **▲** button briefly to move to a higher channel from 1 to 15 or
Press the **▼** button briefly to move to a lower channel from 15 to 1.

NOTE : Refer to the "Channel Table" section of this owner's manual for frequency listings.

HOW TO QUICK CHARGE

1. Turn on the unit and plug the 8V, 350mA adapter into the unit.
2. Press the **MODE** or **PTT** button when the display shows a fishing "chrg"
3. The unit switches to standby mode automatically with beep when the unit re-charged fully after 3 hours.

Note : The unit cannot transmit or receive the signal during charging the battery.

Trouble Shooting

SYMPTOM	SOLUTION
No power.	Check batteries. Ensure that the batteries are installed properly. The batteries may be weak. Replace old batteries with for (4) new "AAA"alkaline or Ni-MH batteries.
Reception is weak.	Rotate the ON/OFF VOLUME CONTROL in a clockwise direction to increase VOLUME. The receiving signal may be weak and/or out of range if this happens, press the MONITOR button
Cannot change channels.	To change CTCSS channel, press the mode button until the CTCSS channel number flashes on the LCD SCREEN. Press the ▲ or ▼ button to change CTCSS channel.
Range is limited.	batteries may be weak. Replace with new batteries if the battery change level indicator is low. The maximum range will vary depending on terrain and environment. Open fields provide the maximum range, while steel/concrete structures, heavy foliage and use in buildings and in vehicles may limit the range significantly. Wearing the radio close to the body, such as in pocket or on a belt, will decrease range; change the location of the radio.
Sound distortion problems	If you are transmitting, speak in a normal tone of voice, 2 to 3 inches away from the microphone. If you are receiving, lower the volume to a comfortable level. Radios too close. Radios must be at least 5 feet apart; increase your distance. Radios too far apart. Obstacles interfere with transmission. Talk range is up to 2 miles in clear unobstructed conditions.

Frequency Table

NOTE

CHANNEL TABLE

CHANNEL NUMBER	FREQUENCY(MHz)
1	462.5625
2	462.5875
3	462.6125
4	462.6375
5	462.6625
6	462.6825
7	462.7125
8	462.5750
9	462.6250
10	462.6750
11	462.5500
12	462.6000
13	462.6500
14	462.7000
15	462.7250

SUB - CHANNEL TABLE

CTCSS Channel	Freq (Hz)	CTCSS Channel	Freq (Hz)	CTCSS Channel	Freq (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	00	No Tone