Function & Feature Display

LCD SCREEN

BATTERY INDICATOR

CHANNEL & CTCSS INDICATOR

TX INDICATOR

RX INDICATOR

DUAL WATCH

ROGER BEER INDICATOR

VIBRATOR INDICATOR

VOX INDICATOR

KEY LOCK INDICATOR
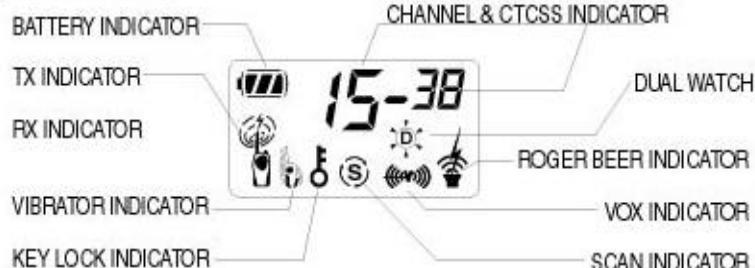
SCAN INDICATOR

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

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 opeartion

1-1. Option Mode key sequence

1'st press -- Call Tone Control

2'nd press -- Beep tone

3'rd press -- Vibrator call

4'th press -- VOX sensitivity level control

1-2. Call Melody step control

CA 01   *CA 07*

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

bP On   *bP OF*

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

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 partirs with the same unit that has a special call identy code in calling signal

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

1-5. VOX Sensitivity Level Control

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

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

Icons	Level	Enviornment
—v	88-01	Most Snsitivity 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 opeartion

2-1. Function Mode button((MODE)) sequence

1'st press -- Contionuse 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 choise)
6'th press -- Dual Watch sub tone(CTCSS)
7'th press -- Voice aactivated Transmission(VOX) ON/OFF
8'th press -- Roger Beep Tone

2-2. CTCSS Tone Setup

The Contionuse 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 adifferent 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) buttonto 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

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

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01-OF        01-On
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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).

88-85	Normal opearting channel with sub tone
	Dual Watch icon
ⓓ	Dual Watch activates
88-85 88-86	Special (watching) channel with sub tone
88-88 88-25	Operates Dual Watch between Normal
88-85 88-25	channel to watching channel with sub tone

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 channe 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 watsh mode

2-6. VOX Operation

This feature enables you to have hands-free conversation your voice or the sigi- nal 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.

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((•v•)))       88-OF       88-Oß
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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 identy signal to other parties whenever your trans- mitting finished

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88-OF       88-Oß
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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 directi- on 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.

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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 opeartion.

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 (M) button down to listen to audio level while roating the Volume co-ntrol knob. Clockwise to increase volume and counter clockwise to decrease vol-ume to adjust level that is most comfortable for you

Up / Down button

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

Push to Talk(PTT)

Pressing and holding this button will alow you to speake to any other parties that is set to the same channel and sub tone(CTCSS) setting as yous.
Hold the unit approximately 2 to 3 inchs from your face as you speake into the built in microphone. The transmit symbol located on the LCD panel will appears while the PTT button is pressed.After you have finished speakering, release the PTT button to allow the reception of incomming signals. It is not possible to tran-smit and receiver at the same time

Mode Button

Depress the (MODE) button momentarily. in stanby 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 (PTT) button retum to the NOR-
MAL mode after making your selection. In the function edit mode, press the
(MODE) button agaiin to shift from the current option in each submenu to the
next option after selecting or skip over a current option

Monitor ButtonT

Hold the Monitor button to deactiveate the automatic squelch feature to allow the user to temporarily listen to the air traffic on the current channel before initi-ating transmission. This useful when comunicating with other parties at extreme range. Also useful if you suspect someone in your group does not have the pro-per 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 your channel will hear your call tone that has beem selected the melody among 7 tones at option mode.
Turn on your unit select any of the 15 chnnels 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 thw raadio is in low battery power. Charge the recharbeable 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 co-msumption and increase the useful life of the batteies in standbt 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 diaplay on the LCD panel.

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Receiving a Signal

The unit is continusly 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 SCRREN" 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 (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 posti- on 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 receving party must be on the same frequency.
The IFG-400 has 15 available channels(1-15) indicated by the large digites 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 flshing "charg"
3. The unit switches to standby mode automatically with beer when the unit rec-harged fully after 3 hours.

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

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 week.	Rotate the ON/OFF VOLUME CONTROL in a clockwise direction to increase VOLUME. The receiving signal maybr weak and/or out of range If this happens, press the MONITOR button
Cannot change channeis.	To chang CTCSS channel. press the mode button until the CTOss channel number flashes on the LCD SCREEN Press the ▲or ▼ buttond to chang CTCSS channel.
Range is limited.	batteries may be weak. Replace with new batteries if the battery change levelindicator is low. The maximum range will vary depening on terrain and environment Open fields provide the maxium range, while steel/concrete structures, heavy foliage and use in buildimgs and in vehi-cles may limit the range significantly. Wearing the radio cloe to the body, such as in pocketor on a belt, will decreasa range; change the location of the radio.
Sound distortion problems	If you are transmiting, 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 tranmission. Talk range is up to 2 miles in clear unobstru-cted conditions.

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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	NoTone