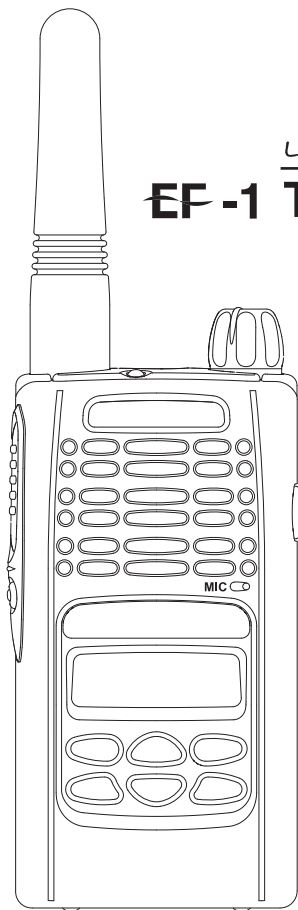


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EF-1 Two Way Radio



USER GUIDE

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1. Main Features

8 Channels, 38 CTCSS

Sturdy solid body

Clear and loud sound

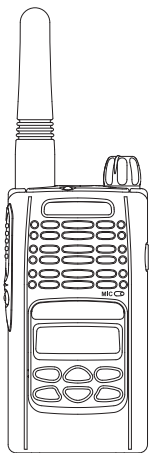
Practical functions

- DTMF Encoder
- VOX
- Scan
- 11 Calls
- Vibration
- Key Lock
- Monitor

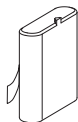
Various LCD Indicators

Easy to Operate

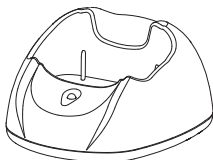
2. Main Item



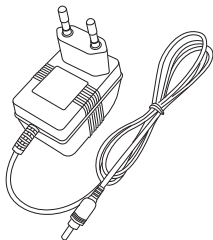
Radio



Ni-MH battery



Charger



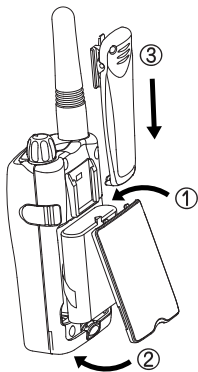
Adapter



User guide

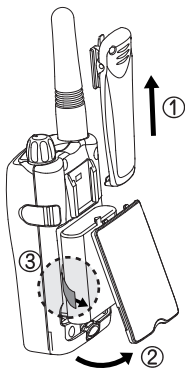
3. Battery Installation

Installing the Battery



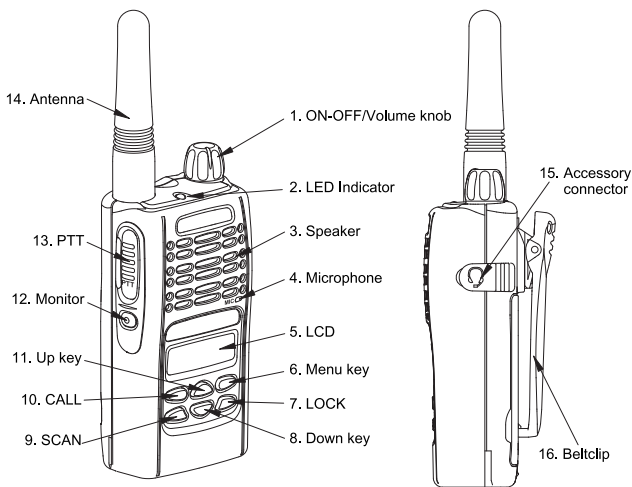
1. Insert the battery observing the polarity as shown.
2. Press the top part of the battery towards the radio until you hear a click.
3. Slide the belt clip down into the slot on the back of the radio until belt clip latch clicks.

Removing the Battery



1. Remove the belt clip (see picture).
2. Remove the battery cover and pull the ribbon attached on the inside of the battery compartment.
3. Pull the battery out of the compartment.

4. Panel description



1. On-Off / Volume Knob

Turn the power/volume control knob clockwise to turn the radio on.

6. Menu key

This key is used to choose the menu selection.

12. Monitor button

Press the Monitor key momentarily to disable the Tone squelch.

13. PTT (Push To Talk) button

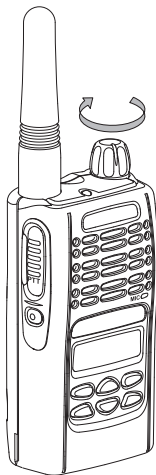
Press this button to transmit and release this button if you want to receive a call.

15. Accessory connector

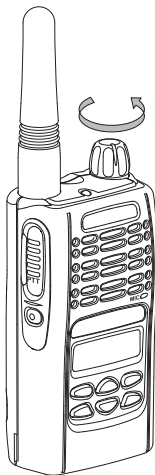
Connect headsets, remote speaker/microphones and other accessories. Replace attached dust cap when not in use.




5. Radio Operation

Turning the Radio ON

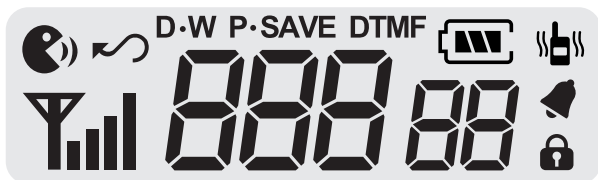


Turning the Radio OFF



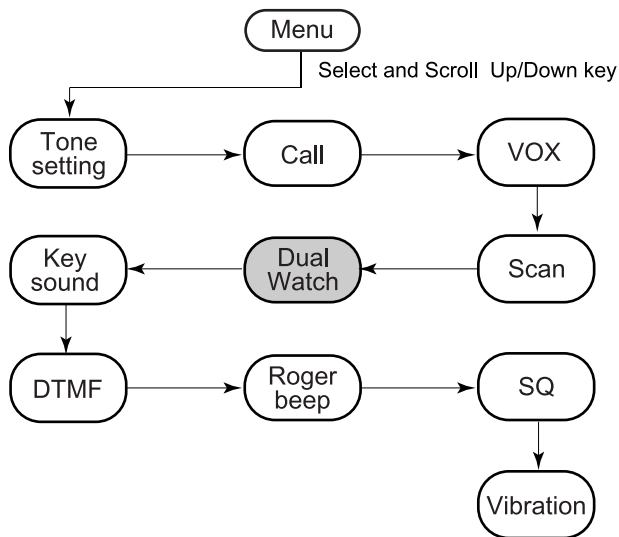
1. To turn the radio on, turn the On-Off/Volume Control knob clockwise.
2. To turn the radio off, turn the On-Off/Volume Control knob counterclockwise until you hear a click.
3. Selecting a Radio Channel
Select the desired channel by using 
4. Selecting a Tone
Menu key → Select the tone by using 
→ To complete, press 
- ※ All radios in your group must be set to same channel and tone to communicate.
5. To talk, press and hold the PTT button.
Hold the radio 5 ~10cm away from your mouth when talking.
6. When listening, release the PTT button.

6. LCD Indicators



Icon	Description
	Indicates signal strength level
D·W	Dual Watch indicator - Monitoring two channels at the same time
	Key Lock indicator - Appears during key lock function ON.
	Alert(Beep) On/Off indicator - Appears when beep sound is turned ON.
	Battery level indicator - Indicates remaining battery power
	VOX indicator - Appears when VOX function is turned ON.
	Scan indicator - Appears when Scan function is activated.
DTMF	DTMF indicator
P·SAVE	Power Save function indicator
	Vibration indicator

7. Menu chart



※ DW channel will be activated when DW scan was selected by user.





8. Functions

① Tone setting

By selecting one of 38 codes, it allows you not to be disturbed by other users on the same channel.



Method






1.  to enter Menu Mode.
2.   to select tone code (OFF to 38)
3.  to save the code setting.

② Call

This function is used to change the call beep. So you can alert other users that you want to talk.



Method




1.  to press the Menu key twice.
 2.   to change and hear call beep. (OFF to 11)
 3.  to save the new call beep.
- ※ To transmit your call beep to other users, press 
 - ※ In case transmitting call 11, it alerts other users by vibration.

③ VOX (Hands free transmission)

The radio detects the sound and transmits, without pressing the PTT button.



Method

1.  to press the Menu key 3 times.
 2.   to select VOX level. (OFF to 5)
- ※ Higher level detects lower sound.

④ Scan

Press  and select the scan type.

Scan type : Channel Scan/Tone Scan/Dual Watch.

Channel Scan (Normal scan)



Tone Scan



Dual Watch

Monitoring two channels at the same time.

When you press the PTT button on a received channel, you can transmit on that channel.






Method

1.  to press the Menu key 4 times.

2.   to change the scan type.

3.  to save scan setting.

※ In case you select the Dual Watch scan type, if you press , the channel of dual watch will be indicated. Then, you can select the channel by using  

⑤ Key Beep ON/OFF

 appears when Key beep is turned ON.



Method

1.  to press the Menu key 5 times.

2.  or  to turn ON / OFF

3.  to select.

⑥ DTMF

DTMF function enables users to know there is a transmitting and receiving signal.



Method

1. to press the Menu key 6 times.
 2. to select DTMF code (OFF to 9)
 3. to save the DTMF code.
- ※ After selecting the code, press the PTT button, then the radio transmits the DTMF code.

⑦ Roger beep

This function allows you to inform other users that you are finished talking by releasing the PTT button.



Method

1. to press the Menu key 7 times.
2. to select ON or OFF.
3. to save the Roger beep setting.

⑧ Squelch Level

When you turn on the radio for the first time, Squelch Level is set to "Level 4".



Method

1. to press the Menu key 8 times.
 2. or to select the SQ level. (OFF to 7)
 3. to save the SQ level setting.
- ※ To listen to weak signal transmissions, set the level lower.

⑨ Vibration



Method

1. to press the Menu key 9 times.
 2. or to select ON or OFF.
 3. to save the setting.
- ※ If you receive a signal on the same channel and tone, the vibration will be activated. The reset time of vibration will takes 30 seconds.

⑩ Key Lock

This function prevents changing your radio settings.

will be indicted when you press , you can select ON and OFF. To unlock the radio, press and hold for 2 seconds or until is no longer displayed.



9. Battery Information

- To keep the optimum capacity and for safe operation, please fully charge the battery before use. (10~12 hours)
 - The battery is designed for the "EF-1" charger only. Please do not charge the battery with other brand's charger.
 - In order to fully charge, please turn the radio off before charging.
 - If you disassemble or unwrap the battery, it may explode and cause personal injury. Manufacturer does not guarantee against this action.
 - If the battery terminals are in contact with any metals or conductive substances, it may cause harm to a human body or goods. Please be careful not to contact.
 - If the polarity of batteries is not correct, it may result in a risk of fire or damage to the unit.
 - To maximize the battery life, do not put the battery on the charger more than 15 hours.
- ※ FYI, during long term storage, turn off the radio and remove the battery from the radio.

10. Charger Information

Specification

- Charger input voltage: DC 9V 300mA
- Adapter input voltage: AC 220V 60Hz.

Operating instruction

1. Plug the AC power supply into the plug on the desk stand charger, then plug the AC power supply into a standard wall outlet.
2. The light on the charger will glow continuously when radio/battery is inserted. (It takes 10~12hours to charge.)

Precaution

- Do not use this charger for any other purpose (e.g. power supply, etc...)
- Do not put the radio into the charger while the radio is switched on.
- Pull out the plug when the charger is not in use.
- Operating temperature: 0°C~40°C
- Keep the charger out of the direct rays of Sun light and humidity.
- Do not allow the charger to make contact with any metals or any conductive substances.
- In the event the charger gets wet, do not switch on, contact your dealer immediately.
- Do not attempt to charge alkaline batteries. This may cause explosion.

11.CTCSS Frequency chart

CTCSS Frequency chart

NO	Freq (Hz)	NO	Freq (Hz)
001	67.0	020	131.8
002	71.9	021	136.5
003	74.4	022	141.3
004	77.0	023	146.2
005	79.7	024	151.4
006	82.5	025	156.7
007	85.4	026	162.2
008	88.5	027	167.9
009	91.5	028	173.8
010	94.8	029	179.9
011	97.4	030	186.2
012	100.0	031	192.8
013	103.5	032	203.5
014	107.2	033	210.7
015	110.9	034	218.1
016	114.8	035	225.7
017	118.8	036	233.6
018	123.0	037	241.8
019	127.3	038	250.3

12. Notice for EF-1 User

1. Do not touch AC plug and battery with wet hands.
2. Use the accessories and batteries approved by the manufacturer. If not, it could cause explosion or damage to the radio.
3. Do not keep the battery and radio near heating equipment or electronic (gas) ovens.
4. Manufacturer's warranty does not apply to water damage, battery leak or abuse.
5. Do not hold the antenna when the radio is "IN USE". Holding the antenna affects the effective range.



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