LOGO

USER GUIDE

**RADIO
PHOTO**

SAFETY AND GENERAL INFORMATION

Important Information for Safe and Efficient Operation
Please read this information before using your radio.

Safety and General

1. Do not transmit more than 50% of time. It is important as the radio generates measurable RF energy exposure only when transmitting.
2. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
3. Radio frequency signals transmitted may cause interference to hearing aids.
4. Turn off the radio when near medical equipment.
5. This product should not be used by people with pacemakers.
6. Do not use the radio when driving a vehicle or operating machinery.
7. Do not use the radio when on board aircraft.
8. Do not hold the antenna when transmitting.
9. Do not use the radio when the antenna has damaged.
10. Turn off the radio and remove the batteries if you are not going to use it for a long time.

Two-way Radio Operation

The device was tested for typical body-worn operations using the supplied belt-clip.
To maintain compliance with FCC RF exposure requirements, body-worn operations are restricted to the supplied belt-clip.For hand-held operation, the radio should be held at least 1 inch (2.5cm) from the user's face. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements and should be avoided. For more information about RF exposure, please visit the FCC web site at www.fcc.gov.

OPERATIONAL CAUTIONS

1. Never dispose of batteries in a fire. There is a serious risk of explosion and /or the release of highly toxic chemicals.
2. Do not expose your product to direct sunlight, extreme cold or place it near heating appliances.
3. Do not submerge any part of your product in water and do not use it in damp, humid or wet conditions.
4. Do not expose your product to fire, explosive or other hazardous conditions. For example, at petrol stations or areas where explosive products are used.

FCC LICENSING INFORMATION

This two-way radio operates on GMRS (General Mobile Radio Service) frequencies which require an FCC (Federal Communications Commission) license. A user must be licensed prior to operating on any GMRS channels. Serious penalties could result for unlicensed use of GMRS channels, in violation of FCC rules, as stipulated in the Communications Act's Sections 501 and 502 (amended).

Licensed users will be issued a call sign by the FCC, which should be used for station identification when operating this radio. GMRS users should also cooperate by engaging in permissible transmissions only, avoiding channel interference with other GMRS users, and being prudent with the length of their transmission time.

Application for a GMRS system license can be made on FCC Form 605. You can call **the FCC Forms Hotline** 1-800-418-FORM (3676). If You Have Questions about the **FCC License: Call the FCC** 1-888-CALL-FCC (225-5322). You may also visit the FCC's Web site at http://www.fcc.gov or
http://wireless.fcc.gov/services/personal/generalmobile/ concerning GMRS.

Note: Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

Warning: Any adjustment to this equipment is recommended to be performed by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter maintenance and repair duties in the private land mobile services and fixed services by an organization or committee representative of users of those services.

Warning: Replacement of any transmitter component (crystal, semiconductor, etc.) for this equipment could result in violation of FCC rules.

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

FCC STATEMENTS:

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.

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.

Disposal

You are obliged to dispose of consumable goods according to legal requirements. The adjacent symbol indicates that electrical and electronic apparatus and batteries no longer required must be disposed of separate from domestic waste.

Electrical and electronic devices   must be disposed of at suitable collection points provided by the public waste authorities.

Batteries   must be disposed of at the point of sale or at the appropriate collection points provided by the public waste authorities.

Packaging materials   must be disposed of according to local regulations.

2   Putting the Walkie−Talkies into Operation

Safety information

> ⚠ Attention: It is essential to read the Safety Information in Chapter 1 before starting up.

Charging the walkie−talkies

Connect the charging station as illustrated in the diagram.
For safety reasons, only use the power adapter plug supplied.

> ☞ Your radio will not Transmit / Receive during charging.
> Set the main switch, located on the underside of the walkie−talkies, to ON.

Mains power outlet
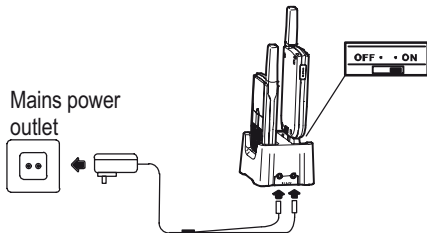
Before using the walkie−talkies for the first time, charge them for at least 18 hours. When the walkie−talkies are connected correctly, the red LEDs light up. They go out when the walkie−talkies are fully charged.

> ☞ Do not charge the walkie−talkies with charging units from other manufacturers.
> For optimal battery life, remove the radio from the charger after fully charging.

The current battery charge status   is indicated in the display:

Full	Half empty	Low	Empty
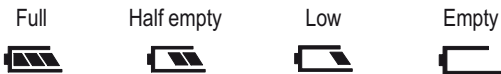
> ☞ The walkie−talkies need to be recharged as soon as the indicator flashes in the display and acoustic warning signals are issued.
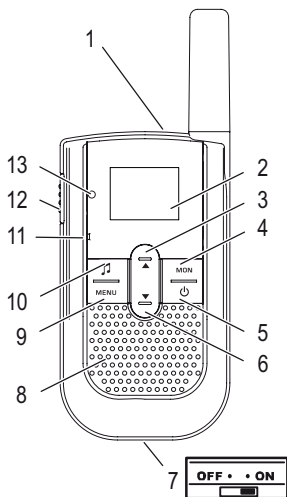
Operating Elements

3 Operating Elements

The features and functions of the product are depicted in the diagram below.

Handset

1. Headset
2. Display
3. Volume + /
   Increase setting
4. Channel scan / Monitor
5. On / Off
6. Volume − /
   Decrease setting
7. Main switch OFF / ON
8. Loudspeaker
9. Menu / Key lock
10. Transmit call tones
11. Microphone
12. PTT button
13. LED, indicator

Display

1. Battery capacity
2. Key lock
3. Channel search
4. Confirmation signal
5. CTCSS / CDCSS code
6. iVOX mode / VOX mode
7. Channel
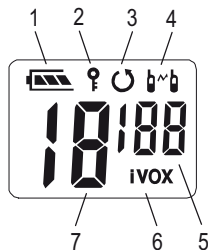
4   Operating the Walkie−Talkies

Display and notation of operating sequences

PTT	Press the button depicted
✍, PTT	Press and hold the button displayed
✍, PTT	Release the button displayed
≳ y ≲	Display indicator
≳ⁿ	Speak into the microphone

Switching the walkie−talkies on/off

The main switch is located on the underside of each walkie−talkie. Set the switch to ON before switching the walkie−talkie on.

✍ ⏻	Switch the walkie−talkie on

☞   A beep tone is heard. The channel and code used last time will display and the Ready LED flashes.

✍ ⏻	Switch the walkie−talkie off

☞   If the walkie−talkie is to remain unused for a longer period, we recommend you set the main switch to OFF. If set the switch to OFF for a long time, the channel and code will return to its default setting.

Volume control

▲ / ▼	Raise or lower the volume (16 levels)

Transmitting and receiving

Transmitting

After pressing the PTT button, the Transmit LED lights up. If the PTT button is pressed longer than 60 seconds, a warning signal is issued. Transmission is interrupted.

✍, PTT, ≳ⁿ	Transmit

☞   Hold the walkie−talkie approx. 5 to 7 cm from your mouth and speak at a normal volume. In order to talk to other subscribers, the respective walkie−talkies must be set to the same channel and CTCSS/CDCSS codes.

Operating the Walkie−Talkies

Receiving

🖐, PTT   Receive

☞   Radio signals cannot be received when the PTT button is being pressed.

Selecting a channel

There are 22 radio channels available in the frequency range 462.5625 MHz to 467.7125 MHz.

1 x MENU , ▲ / ▼ , PTT   Select the channel and confirm it

Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	462.5625	12	467.6625
2	462.5875	13	467.6875
3	462.6125	14	467.7125
4	462.6375	15	462.5500
5	462.6625	16	462.5750
6	462.6875	17	462.6000
7	462.7125	18	462.6250
8	467.5625	19	462.6500
9	467.5875	20	462.6750
10	467.6125	21	462.7000
11	467.6375	22	462.7250

Selecting the CTCSS [1]/ CDCSS[2] code

There are 38 analogue (CTCSS 1 − 38) and 83 digital (CDCSS 39 − 121) codes available per channel. It is only possible to communicate using the walkie−talkies when they are each set to the same channel and CTCSS/CDCSS codes.

☞   The channels and the codes are transmitted as inaudible signals together with the standard voice communication. The voice communication is only transferred to the receiving device's loudspeaker when the channel and the code that it is set on is identical to that received.
If another subscriber is coincidentally using the same channel and code, switch to a different, free channel together with the person operating the device called.

[1] CTCSS: Continous Tone Coded Squelch System = Selective call
[2] CDCSS: Continous Digital Coded Squelch System = Selective call

2 x MENU	Activate programming mode
▲ / ▼ , PTT	Select the code and confirm it

☞ An exception here is code 0 (zero). In the case of this setting, all the calls on the set channel can be heard regardless of the CTCSS/CDCSS code. To be able to participate in the radio communication, it may be necessary to set the necessary CTCSS/CDCSS code.

If you want to communicate with the walkie−talkies which are not using a CTCSS/CDCSS code, you must select CTCSS/CDCSS code "0" (zero) on your walkie-talkie.

Scanning for a channel

Signals are searched for in the eight channels in a continuous cycle. The ⟳ icon appears in the display. If an active channel is detected, the channel scan stops. The Ready LED flashes every second. Press the PTT button to enable radio communication. If the PTT button is not pressed, channel scan resumes after five seconds.

Start/End global channel scanning

To execute a "global channel scan", set the CTCSS/CDCSS code of the output channel to 0 (zero). The scanning routine stops at every channel on which a signal is received, regardless of the code transmitted with the signal.

MON	Start/End channel scanning

☞ The output channel is the channel which is set when the channel scan is activated.

Start/End specific channel scanning

To execute a "specific channel scan", set the CTCSS/CDCSS code for output channel to an individual value.
The scanning routine only stops when a signal is received on a channel that matches the value set.
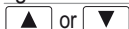
MON	Start/End channel scanning

☞ If a certain channel should be scanned fully during a "specific channel scan", the code must be set to 0 (zero) for this channel.

Operating the Walkie−Talkies

Resuming channel scanning

▲ or ▼	Resume channel scanning

Excluding a channel

If a channel found during the channel scanning process should not be considered for subsequent use, it can be excluded. All the channels are taken into consideration again when a new channel scan is started. During the time that the walkie−talkie is temporarily stopped on the unwanted channel, press and hold the ▲ / ▼ for 3 seconds to exclude that channel.

☞, 3 sec. ▲ or ▼	The channel is excluded and channel scanning automatically resumed

Transmit ringing tone

The ringing tones indicate to other subscribers that you want to talk to them. A condition for this is that the other subscribers are using the same channel and CTCSS/CDCSS code.

♫	Send ringing tones

Selecting/Deactivating the ringing tone

There are 10 ringing tones available for selection. To deactivate the ringing tone, select the setting "0" (zero).

3 x MENU	Activate programming mode
▲ or ▼, PTT	Select the ringing tone and confirm it

Monitor

The Monitor function enables the search for weak signals on the channel currently set. If you receive an external signal, switch to a free channel. Always communicate with other subscribers on a free channel to prevent interference.

☞, MON	Monitor the channel
☞, MON	End the monitoring function

9

Key lock

The key lock function prevents inadvertent modification of settings. When the key lock function is activated, the $\boxed{?}$ icon appears in the display.

Activating

$\mathscr{W}$, 3 sec. $\boxed{\text{MENU}}$ Activate the key lock

Deactivating

$\mathscr{W}$, 3 sec. $\boxed{\text{MENU}}$ Deactivate the key lock

Confirmation signal

The confirmation signal is issued on releasing the $\boxed{\text{PTT}}$ button. This indicates to the caller that you have ended transmission.

Activating/Deactivating the confirmation signal

Switch the walkie−talkie off. Press and hold the $\boxed{\blacktriangle}$ button and, while doing so, switch the walkie−talkie on again.
If the confirmation signal is activated, the $\boxed{\text{🔊}}$ icon appears in the display.

Headset

Use the headset enclosed with the walkie−talkies.
You can put the walkie−talkie in your breast pocket, for example, so that both hands are free. The headset supplied is equipped with an additional $\boxed{\text{PTT}}$ button which can be used to transmit via the headset.

☞ Switch the walkie−talkie off before connecting a headset.

1. Switch the walkie−talkie off.
2. Insert the plug on the headset in the connection socket.
3. Switch the walkie−talkie on.

10

Operating the Walkie−Talkies

Automatic deactivation

The walkie−talkies can be set up so that they are automatically switched off after a certain time. It can be set to 30, 60 or 90 minutes. The function is deactivated when the "0" setting is selected.

5 x MENU	Activate programming mode
▲ or ▼ , PTT	Select the time and confirm it

VOX[1] / iVOX[2] (handsfree)

When this function is active, the walkie−talkie automatically starts to transmit when the unit detects your voice or a sound.
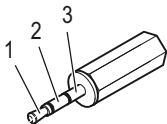
☞ When you start to speak, there is a slight delay before the walkie−talkie starts to transmit.

Activating VOX mode

When using the handsfree function in VOX mode, conversation is carried out via the headset.

Use a commercially available headset without a PTT button equipped with a 3−pin, 2.5 mm stereo jack plug.
Pin assignment : 1 = Loudspeaker, 2 = Microphone, 3 = Earth

☞ Switch the walkie−talkie off before connecting a headset. The headset supplied with the walkie−talkie is not designed for this function because it is equipped with a PTT button. Further information is provided on Page 31.

1. Switch the walkie−talkie off.
2. Insert the plug on the headset in the connection socket.
3. Switch the walkie−talkie on.
4. "VOX" appears in the display.

[1] VOX: Voice Operated Transmission = Noise detection
[2] iVOX: Intelligent Voice Operated Transmission = Noise detection

Deactivating VOX mode

To deactivate VOX mode, pull the headset plug out of the connection socket or press the ⌐PTT⌐ button.

Activating iVOX mode

When using the handsfree function in iVOX mode, conversation is carried out via the walkie-talkie. The ⌐PTT⌐ button on the walkie-talkie need not be pressed to transmit.

1. Switch the walkie-talkie off.
2. Press and hold the ⌐PTT⌐ button and, while doing so, switch the walkie-talkie on again.
3. "iVOX" appears in the display.

Deactivating iVOX mode

In order to deactivate iVOX mode, switch the walkie-talkie off and on again.

Selecting VOX / iVOX sensitivity

There are three sensitivity levels available for operation in VOX / iVOX mode and can be selected according to the ambient noise .

Level 1	Level 2	Level 3
High ambient noise	Normal ambient noise	Low ambient noise

4 x ⌐MENU⌐	Activate programming mode
⌐▲⌐ or ⌐▼⌐ , ⌐PTT⌐	Select the sensitivity and confirm it

5 In Case of Problems

Should problems arise with the walkie-talkies, please refer to the following information first. In the case of claims under the terms of guarantee, please contact your sales outlet. There is a 2 year period of guarantee.

Problems and solutions

Problems	Solutions
Equipment does not function	− Walkie-talkie has not been charged − Key lock has been activated
Transmission not possible	− Press PTT in fully to transmit − Channel is being used by other subscribers
No reception	− Release PTT − Volume setting is too low − You are outside the range of reception, change your position − Obstructions such as trees and buildings impair the range − CTCSS / CDCSS code set is not identical to that of the other party. − Channel is being used by other subscribers

6 Technical Properties

Technical data

Feature	Value
Power(ERP)	0.5 W
Range	15 miles with conditional
Total operating time	Up to 10 h (Based on 5 % transmit, 5 % receive and 90 % standby time)
Max. talk time	Up to 36 min.
Charging time (double charging station)	Min. 18 h
Rechargeable battery(Internal)	3.7 V Li−ion Battery, 700 mAh
Power supply	Input: 120 V, 60 Hz Output: 5 V, 80 mA