RECYCLED PACKAGING

Fujian Nan'an Baofeng Electronic Co.,Ltd.
www.baofengradio.com

BAOFENG®

MiNi
Walkie | **Talkie**

Mini size
Easy to operate
Slim fashion
Easy to carry

HD CALLS

USER'S MANUAL

THANK YOU FOR YOUR PURCHASE OF OUR MINI VEHICLE TWO-WAY TRANSCEIVER.
THIS TRANSCEIVER IS DEVELOPED BY BAOFENG FOR THE INTEREST OF THE CAR CLUB AND
THE HAM. COMPLETE SET MUST INCLUDE THE BASE AND THE EXTENSION.IT WILL DELIVER TO YOU SECURE INSTANT RELIABLE COMMUNICATION.

PLEASE READ THIS MANUAL CAREFULLY BEFORE USE.

Table of contents

FUNCTIONS AND FEATURES

- Broadcast FM radio receiver(65-108MHz)
- Alarm and built-in LED flashlight
- Max 20 channels
- Time count down (0.5hr/1hr/.../8hrs)
- Voice prompt
- VOX(voice activated transmission)
- 50 CTCSS tone/104 DCS code/nonstandard tone available
- Tail tone elimination
- Battery saving
- Width/Narrow band selection
- SOS call notice
- PC programmable

Getting started
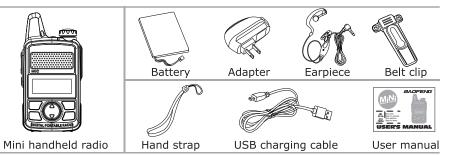
BEFORE PROCEEDING INSURE:

- Qualified technicians shall service this equipment only. Do not modify the radio for any reason.
- Use only BAOFENG supplied or approved accessories.
- Turn off your radio prior to entering any area with explosive and flammable materials. Do NOT USE your transceiver at a gas/fuel station
- Do not expose the radio to direct sunlight over a long time, nor place it close to a heating source.
- To avoid electromagnetic interference or compatibility conflicts, turn off your radio in any area where posted notices instruct you to do so.
- Do not transmit for long periods of time, as it may overheat the transceiver.
- Keep the unit away from dusty, damp and wet environments.

Unpacking and Inspecting

- Please check the packaging of your radio for any signs of damage.
- Carefully open the box, and confirm your received the items listed below.
- If you find the radio or the included accessories are damaged or lost, immediately contact your dealer.

What' s in the Box

	Battery	Adapter	Earpiece	Belt clip
Mini handheld radio	Hand strap	USB charging cable	User manual

Assembly

Battery

Open the battery cover with the screwdriver, then join the electric lead in to the socket of battery, you will hear the voice 'welcome', and report the channel number. Align the electric lead into the slot and place the battery smoothly and screw the cover.
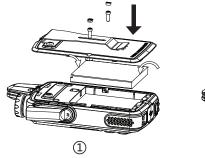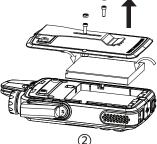If you want to remove the battery, please do as the above steps.

① ②

Charging and battery maintenance

Charging
Battery should be fully charged before initial use. Optimum battery efficiency will be achieved after the three full battery charge and discharge cycles.

When the battery level indicator reads ▭, the battery is depleted. At this point the radio will start beeping periodically, that means you should charge your radio.

1. Connect the charging USB cable with the AC adapter and the socket of the radio.
2. Plug the AC connector of the power adapter into a main AC wall outlet.
3. When the battery level indicator reads ▭, the charge is starting.
4. When the battery level indicator reads ▭, the charge finishes. Pull out the USB charging cable.

Radio should be turned off during charge cycle.

Battery maintenance
The battery for your radio is not fully charged from the factory, so please let it charge for at least three to five hours before you start using your radio.

Use only batteries approved by the original manufacturer.
Never attempt to disassemble the battery pack.
Do not expose the battery to fire or intense heat.
Dispose of batteries in accordance with the local recycling regulations.

Belt clip
At the back of the radio there are two parallel screws mounted, remove these and thread them through the holes on the belt clip as you screw them back into the radio body.
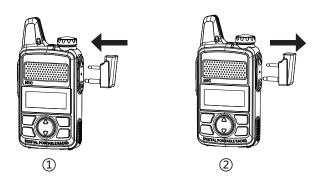
① ②
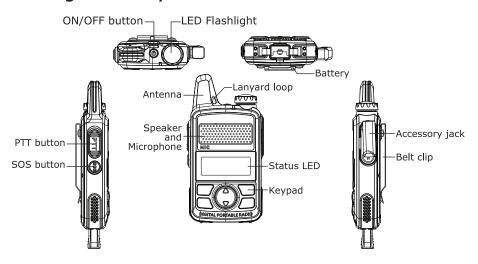
Earpiece

Open the cover of the earpiece jack, align the connector and push fully in.

① ②
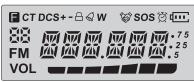
Getting to know your radio

ON/OFF button — LED Flashlight

Battery

Antenna — Lanyard loop

PTT button

Speaker and Microphone

SOS button

Status LED

Keypad

Accessory jack

Belt clip

The main display

The transceiver is fitted with a seven character segment code alphanumeric LCD, with auxiliary icons for miscellaneous features.

Icon	Description	Icon	Description
F	Menu 9. Repeater function setting	⏰	Time countdown setting
⠿	Memory channel	W	Wideband enabled
CT	CTCSS enabled	🔒	Keypad locked enabled
DCS	DCS enabled	🔋	Battery level indicator
FM	Broadcast FM	🤝	The extension synchronizes the base
SOS	Emergency call, pressing SOS button	-------	Volume indicator

Status LED
The status LED has a very simple and traditional design. When you receive a signal it turns green, when you transmit it turns red, and it's off in standby.

SOS button
20 group channels only could be entered via software. And also you could have an extra one for group call or emergency call. While you press this button, all others will receive your call.

Keypad Zone

Menu [MENU]
The menu key, used to enter the menu and confirm menu options, also lock the keypad. Press and hold MENU to lock out all the keys except for three buttons (ON/OFF, SOS,PTT).

Up and down key [⊙]

The arrow keys are used to navigate through the menu as well as select channels, and volume up and down.

FM (Broadcast FM and Alarm) [FM]

Press FM momentarily to start the broadcast FM receiver. Another momentary press turns the broadcast FM receiver off. If a signal is received on the active channel while you are listening to the broadcast FM, the receiver will open squelch to that frequency (as if scanning) and remain there until the signal goes away. It will then switch back to broadcast FM.

Press and hold FM to activate the alarm function. Press FM (a short press) again to turn it off.

> *The broadcast FM band could be set via software.*
> *To search the radio station quickly, press the MENU key.*

MONI/VOL [MONI/VOL]

Press it momentarily, the volume indicator will appear, then press arrow keys to volume up or down.

Press and hold MONI/VOL to monitor the signal. This will open up the squelch so you can listen to the unfiltered signal.

Lamp/scan [⌇]

Press it momentarily to turn on the LED flashlight. Another momentary press will flash the LED. Another momentary press turns the flashlight off.
Press and hold it to enable the scanner. Another momentary press to exit the scanning.

Combination key functions

High and low output power switching

Press and hold the ON/OFF+LAMP about two seconds to switch on the radio, you can select the high or low output power. If the voice prompt is enabled, the voice will announce "one" or "five".

Resets the radio to factory defaults

Press and hold the ON/OFF+MONI/VOL to switch on the radio, all settings are reset to factory defaults. Factory default setting as: 400.025MHz, no CTCSS/DCS, low output power, battery save, volume level 5, width band, SQL 5, key tone ON, other settings off.

Basic Use

Power and volume

Turning the unit on

To turn the unit on, simply press the On/Off button until you hear a "click". If your radio powers on correctly there should be an audible beep after about second and the display will show a message or flash the LCD depending on settings for about second. Then it will display a channel. If the voice prompt is enabled, the voice will announce "welcome to use".

Turning the unit off

Press and hold the ON/OFF button, turn the unit off.

Adjusting the volume

Press the MONI/VOL momentarily, the volume indicator will appear, then press the UP key to turn the volume up; press the down key to turn the volume down. Press MONI/VOL to confirm the volume level you set.

Making a call

Press and hold the PTT button on the side of the radio body to transmit. While transmitting speak approximately 3-5cm from the microphone. When you release the PTT, your radio will go back to receive mode.

Working the menu system

For a complete reference on available menu items and parameters, see Appendix, Menu definitions.

Basic use

Using the menu with arrow keys

1. Press the MENU key to enter the menu.
2. Using the arrow key to navigate between menu items.
3. Once you find the desired menu items, press menu again to select that menu item.
4. Use the arrow keys to select the desired parameter.
5. When you have selected the parameter you want to set for a given menu item;

   *a.*To confirm your selection, press menu and it will save your setting and bring you back to the main menu.
   *b.*To cancel your changes, press SOS or PTT button and it will reset the menu item and bring you out of the menu entirely.

6. To exit out of the menu at any time, press SOS or PTT button.

Scanning

The radio features a built in scanner for the bands. It will scan your channels. To enable the scanner, press and hold LAMP key for about two seconds. Press LAMP key momentarily to stop the scanning mode.

Scanning modes

The scanner is configurable to one of three ways of operation: Time, carrier or search, each of which is explained in further details in their respective section below.
Setting scanner mode

1. Press menu key to enter the menu.
2. Using arrow keys to navigate between the menu items until you come to the scanner mode.
3. Press Menu key to select.
4. Using arrow keys to select the scanning mode.
5. Press Menu key to save and confirm.
6. Press SOS or PTT button to exit the menu.

Time operation
In time operation (TO) mode, the scanner stops when it detects a signal, and after a factory preset time out, it resumes scanning.

Carrier operation
In carrier operation (CO) mode, the scanner stops when it detects a signal, and after a factory preset time with no signal, it resumes scanning.

Search operation
In search operation (SE) mode, the scanner stops when it detects a signal. To resume scanning, please press and hold LAMP key.

Countdown timer
A countdown is a sequence of backward counting to indicate the time remaining before an event is scheduled to occur. There are a lot of different selections. Please do as below:
1. Press menu key to enter the menu.
2. Using arrow keys to navigate between the menu items until you come to NO.6 ALARM.
3. Press Menu key to select.

4. Using arrow keys to select different setting.
5. Press Menu key to save and confirm.
6. Press SOS or PTT button to exit the menu.

Selective calling
Sometimes when you are working with large groups of people using the same channel, things can get very crowed. To minimize this problem, several methods blocking out unwanted transmission on your frequency have developed. In general, there are two forms of selective calling in two-way radio systems: Group calling and individual calling.

Group calling, as the name suggest, is one - to-many form of communication. Every radio in your working group is configured the same way and any radio will make contact with every other radio in the group.

Individual calling, sometimes also known as paging, is one-to-one many form of communication. Every radio is programmed with a unique ID code. And only by sending out a matching code can you get that radio open up to your transmissions.
The Baofeng BF-T1 features three different ways of group calling.

CTCSS / DCS
Tone-burst (1750Hz)

⚠ *1. Using these features does not mean that others won' t be able to listen in on your transmissions.*
They only provide a method to filter out unwanted incoming transmissions.
2. CTCSS/DCS only could be changed via program software.

1750Hz Tone-burst
To send out a 1750Hz Tone-burst; press the MONI/VOL key while holding down the PTT. No further configuration required using this feature.

⚠ *If you have the keypad lock enabled on your radio, you can still send a 1750Hz tone the regular way without having to unlock your radio.*

Repeaters
A radio repeater is an automated transceiver in a fixed location. Usually mounted high up on hilltops or on tall buildings, but sometimes they operate within buildings for internal use. A repeater takes one signal and relays it, usually after amplifying it

by orders of magnitude. This could be very handy, as this enables you to use a small low powered hand-held two-way transceiver to reach great distances.
How to activate the relay function.
1. Press menu key to enter the menu.
2. Using arrow keys to navigate between the menu items until you come to NO.9 RELAYM.
3. Press Menu key to select.
4. Using arrow keys to select different setting.
5. Press Menu key to save and confirm.
6. Press SOS or PTT button to exit the menu.

⚠ *1.The RX and TX frequency only could be programmed by software.*
2.Better encoded with CTCSS or DCS, the squelch level should be 5.

Programming
Memory channels are an easy to store commonly used frequencies so that they can easily be retrieved at a later date.
The BF-T1 features 20 memory channels that each can hold: Receive and transmit frequencies, transmit power, group signaling information, bandwidth.

Computer programming

The radio kit doesn' t include a programming cable. To attain a data cable, please contact your dealer for it and the software.

Appendix.A

Troubleshooting

Symptom	Possible Cause	Solution
•The radio doesn' t start.	•The battery is too low. •The battery isn' t correctly installed.	•Change or recharge the battery. •Remove the battery and reinstall it
•The battery dies quickly.	•The battery is dead. •The battery isn' t fully charged.	•Purchase a new battery. •Recharge the battery.
•The LED indicates reception, •But the speaker is silent.	•Volume is too low. •CTCSS or DCS enabled.	• Turn up the volume. • Change the CTCSS or DCS to match • Those you are trying to communicate. • Turn off your CTCSS or DCS.
•Others can' t hear your transmission.	•Their CTCSS or DCS settings •Don' t match yours. •You are too far apart.	•Change your CTCSS or DCS •Settings to match your peers. •Move in closer.

Appendix.B
Menu definitions
See working the menu system for more info about using the menu-system.

Menu	Name (full name)	Settings	Description
1	SQL-Squelch Level	[0-9] Setting the squelch to 0 will open up the squelch entirely.	Squelch silences the receiver When there is no signal.
2	LIGHT-Display Illumination	OFF/ON/Key	Selection for the LCD backlight
3	BEEP-Keypad Beep Of a key press.	OFF/ON	Allows audible conformation
4	VOX-Voice Operated TX	OFF/1-9	It is not necessary to push the PTT button on the transceiver,When enable it. Adjust the gain level to an appropriate sensitivity to allow smooth transmission
5	VOICE-Voice Prompt	OFF/CHI/EN	Allows audible voice conformation Of a key press.

6	ALARM- Countdown timer	OFF/0.5H/1.0H/.../8.0H	to indicate the time remaining before an event is scheduled to occur.
7	TOT-Transmission Time Out Timer	OFF/30S/60S/.../180S	This feature provides a safety switch that limits transmission time to a programmed value. This will promote battery Conservation by not allowing you to Make excessively long transmissions, And in the event of a stuck PTT switch It can prevent interference to other users As well as battery depletion.
8	SCANM-Scanner Resumed Method	TO/CO/SE	See chapter...
9	RELAYM-Relay Mode	TX/RX/OFF	TX: Synchronize the frequency of TX Base fstation. RX: Synchronize the frequency of RX Base station

10	BCLO-Busy Channel Lock-out	ON/OFF	Disables the [PTT] button on a channel that is in use. The transceiver will sound A beep tone and will not Transmit if the [PTT] button Is pressed when a channel Is already in use.
11	STE-Squelch Tail Elimination	ON/OFF	This function is used Eliminate the squelch tail Noise between radios That are communicating Directly.
12	RXODE-Reception CTCSS/DCS	OFF/CTCSS,DCS see Appendix...	Mutes the speaker of the transceiver in the absence of a specific low-level Signal. If the station you are listening to Does not transmit this specific and Continuous signal, you will not Hear anything.
13	TXODE-Transmit CTCSS/DCS	OFF/CTCSS,DCS see Appendix...	Transmits a specific low-level digital signal to unlock the squelch of a Distant receiver.
14	W/N-Wideband/Narrowband	WIDE/NARROW	Wideband (25KHz bandwidth) Narrowband (12.5KHZ bandwidth

Appendix.C
General

Frequency Range	400.00-440.00 MHz
	440.00- 470.00MHz
Storage Channel	20
Step Frequency	12.5/25KHz
Rated voltage	DC 3.7V
Frequency Stability	±2.5ppm
Work Temperature	-20 ℃ to +60℃
Battery Capacity	H-1500m Ah (Li-ion Battery)
Battery Life	About 12 Hours
Antenna Impedance	50Ω
Dimension	108x55x21 mm (Including Antenna)
Weight	120g(Including battery)

Transmitter

Output Power	0.5W/1W
Modulation Mode(W/N Band)	16KΦF3E/11KΦF3E
Maximum Frequency Deviation (W/N Band)	≤5KHz / ≤2.5KHz
Spurious Power	≤7.5μW
Adjacent channel power	≤-65dB/≤-60dB
Audio Distortion	<5 %
SNR	≥-45dB/≥-40dB
CTSCC/DCS Frequency Deviation(W/N Band)	0.7±0.1KHz (W), 0.4±0.1KHz (N)
Modulation Sensitivity	8-12mV
Transmitting Current	≤1000mA

Receiver

Sensitivity	<0.25μ V (12dB SINAD)
Audio Power	1W
Inter modulation Interference Resistance	≥65dB (W), ≥60dB (N)
Adjacent channel?Selectivity (W/N Band)	≥65dB (W), ≥55dB (N)
Audio Distortion	5 %
Receiving Current	≤380m A

TCSS Table (50)

No	Tone (Hz)	No	Tone (Hz)	No	Tone (Hz)	No	Tone (Hz)	No	Tone (Hz)
1	67.0	11	94.8	21	131.8	31	171.3	41	203.5
2	69.3	12	97.4	22	136.5	32	173.8	42	206.5
3	71.9	13	100.0	23	141.3	33	177.3	43	210.7
4	74.4	14	103.5	24	146.2	34	179.9	44	218.1
5	77.0	15	107.2	25	151.4	35	183.5	45	225.7
6	79.7	16	110.9	26	156.7	36	186.2	46	229.1
7	82.5	17	114.8	27	159.8	37	189.9	47	233.6
8	85.4	18	118.8	28	162.2	38	192.8	48	241.8
9	88.5	19	123.0	29	165.5	39	196.6	49	250.3
10	91.5	20	127.3	30	167.9	40	199.5	50	254.1

DCS Table (210)

D023N	D025N	D026N	D031N	D032N	D036N	D043N	D047N	D051N	D053N	D054N	D065N
D071N	D072N	D073N	D074N	D114N	D115N	D116N	D122N	D125N	D131N	D132N	D134N
D143N	D145N	D152N	D155N	D156N	D162N	D165N	D172N	D174N	D205N	D212N	D223N
D225N	D226N	D243N	D244N	D245N	D246N	D251N	D252N	D255N	D261N	D263N	D265N
D266N	D271N	D274N	D306N	D311N	D315N	D325N	D331N	D332N	D343N	D346N	D351N
D356N	D364N	D365N	D371N	D411N	D412N	D413N	D423N	D431N	D432N	D445N	D446N
D452N	D454N	D455N	D462N	D464N	D465N	D466N	D503N	D506N	D516N	D523N	D526N
D532N	D546N	D565N	D606N	D612N	D624N	D627N	D631N	D632N	D645N	D654N	D662N
D664N	D703N	D712N	D723N	D731N	D732N	D734N	D743N	D754N			

D023I	D025I	D026I	D031I	D032I	D036I	D043I	D047I	D051I	D053I	D054I	D065I
D071I	D072I	D073I	D074I	D114I	D115I	D116I	D122I	D125I	D131I	D132I	D134I
D143I	D145I	D152I	D155I	D156I	D162I	D165I	D172I	D174I	D205I	D212I	D223I
D225I	D226I	D243I	D244I	D245I	D246I	D251I	D252I	D255I	D261I	D263I	D265I
D266I	D271I	D274I	D306I	D311I	D315I	D325I	D331I	D322I	D343I	D346I	D351I
D356I	D364I	D365I	D371I	D411I	D412I	D413I	D423I	D431I	D432I	D445I	D446I
D452I	D454I	D455I	D462I	D464I	D465I	D466I	D503I	D506I	D516I	D523I	D526I
D532I	D546I	D565I	D606I	D612I	D624I	D627I	D631I	D632I	D645I	D654I	D662I
D664I	D703I	D712I	D723I	D731I	D732I	D734I	D743I	D754I			