

Duet

Professional FM Transceiver

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DT-303 Full Band
Two-way Radio

User's Manual



Dear Users

Thanks for choosing our **Duet** DT-303 Two-way radio! We firmly believe this Two-way radio featuring clear voice, long communication distance and strong penetrability will offer you reliable and efficient communication service.

With perfect design, strong transmission power, wide frequency band, ultrahigh brightness Chinese/English wide display and CTCSS and CDCSS techniques, **Duet** DT-303 Two-way radio is an ideal device for use during business logistics, night watch, recreation and outing, etc. Model DT-303 also provides FM radio and DTMF technique dedicated for the HAMs.

Please read carefully this User's Manual to fully understand the features and performance of the product and properly use and maintain it.

Thanks again for your choosing of **Duet** Two-way radio!

This manual is applicable to model **Duet** DT-303 VHF/UHF Two-way radios.

Duet DT-303

Two-way radio schematics



Fig.0-1

Duet DT-303

LCD display

Icon	Meaning
🔒	Keylock
99	Channel number display
⌚	Enable automatic turnoff function
⌚	Enable key tone
⊖	Select negative potential difference
⊕	Select positive potential difference
CT	Set CTCSS
DCS	Set CDCSS
DW	Monitor the model of Two-way radio under radio state
DTMF	Enable ANI function
VOX	Enable voice control function
LOW	Select low power transmission
PRI	Set priority sweep
SAV	Enable power saving function
🔋	Real-time battery power display
RADIO	Turn on the radio
█	Field intensity display



Fig.0-2

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Safety Instructions



Safely power on

In the event that the use of Two-way radio is prohibited or will lead to interference or danger, please do not power it on.



Ensure traffic safety

Please observe traffic laws and regulations. Please drive with both hands as possible as you can. Traffic safety should be the priority during driving.



Interference

All Two-way radio can be interfered and the performance will be adversely affected.



Power off in hospital

Please observe all relevant limitations and regulations. Please power your Two-way radio off when you stay near medical equipment.



Power off on board

Please observe all relevant limitations and regulations. The use of Two-way radio can interfere with your airplane.



Power off at gas stations

Please don't use Two-way radio at gas stations or near fuel or chemicals.



Power off near explosion places

Please observe all relevant limitations and regulations. Please don't use Two-way radio at the places where explosive operations are going on.



Using qualified maintenance service

Only qualified servicemen can assemble or repair the Two-way radio.



Accessories and battery

Only approved accessories and battery can be used. Please don't use non-matched products.



Connecting other devices

Please don't connect your Two-way radio to non-matched devices.



Use properly

The Two-way radio can only be used at normal position. Please don't touch the antenna area unless it is necessary. Your radio should be kept vertically when transmitting and the microphone should be kept at least 3cm away from your mouth (the antenna should also be at least 3cm away from head or body).

Open-Case Inspection

Please carefully open the packing case with face up and check the items inside according to Packing List. In case of loss, damage or nonconformity with specification, please immediately notify your local distributor.

To effectively protect your business interests, please ask for invoice issued by the distributor and carefully fill in the Warranty Card under the guide of the distributor. Properly keep both the invoice and the Warranty Card. Additionally, please protect all labels on the product during usage to ensure correct identification during the after-sales service.

Friendly Note:

- ▶ To know about the figures of standard fittings listed on the packing list, please see the diagrams provided in Optional Accessories in this manual.
- ▶ The frequency band of antenna applicable to our Two-way radio is clearly marked on the circle label at the bottom of the antenna, please verify with the label on the machine.

Packing List

Items	Unit	Quantity
Two-way radio	set	1
Antenna	piece	1
1+1 smart charger	set	1
Li-ion Battery	set	1
Screw	piece	1
Belt clip	piece	2
String	piece	1
User's Manual	piece	1

Proper Charging and Maintenance of Battery

Due to its inherent properties, the battery is not charged before leaving the factory, generally its capacity shall be kept below the normal level ex-factory. Please charge the newly purchased or long-term stored (over 2 months) battery. After being charged/discharged two or three times, the battery capacity will reach its peak state. If the battery is being charged properly many times and still has weak power, replace the battery.

Charging Steps

1. Plug the DC plug of power adapter into the DC socket on the back of the 1+1 smart charger (hereinafter called "charger");
2. Vertically plug the Two-way radio loaded with battery into the front socket of the charger or directly plug the battery into the front or back socket of the 1+1 charger;
3. Plug the AC plug of power adapter into AC power outlet;
4. Ensure that the battery contacts the charging terminal properly. When the red indicator light on the charger is on, it means charging process starts;
5. When the green indicator light is on, it means the charging process is finished and the battery is ready for use.
6. Unplug the AC plug of power adapter from AC power outlet.



Fig.3-1

Proper Charging and Maintenance of Battery

Friendly Note:

- ▶ Please use quality guaranteed genuine **Duet** battery in order to avoid adverse effects on your normal communication.
- ▶ Please use quality guaranteed genuine **Duet** charger to ensure proper charging of the battery and prolong its service life.

Caution:

- ▶ The ambient temperature during charging process shall be 5-40C, otherwise the battery cannot be fully charged.
- ▶ Please power off the Two-way radioloaded with battery when charging.
- ▶ Never disassemble the battery casing by yourself.
- ▶ Don't plug or unplug power supply or battery during the charging process in order to avoid disturbing the charging procedure.
- ▶ If completely proper charging process cannot prolong the service time of battery, it means that the service life of the battery ends, please replace the battery.

Warning!

- ▶ Do not throw the battery into fire or allow the battery being strongly impacted, otherwise it may explode and cause body injury.
- ▶ Under no circumstance shall the electrode terminals of the battery be shorted. Please wipe the battery surface with dry towel and do not place the battery (or the Two-way radio) with keys or other metal wares in the same pocket or wallet.

Assembling and Disassembling Accessories

1. Assembling battery

Clasp the convex tab on the bottom of the battery ❶ unit with the tab at the bottom of the Two-way radio, and gently press the battery ❷, when you hear a "click" sound, the battery is clasped with the top of the Two-way radio, and the assembly is completed (See Fig. 4-1). If the battery cannot be clasped tightly, please remove and reassemble it.

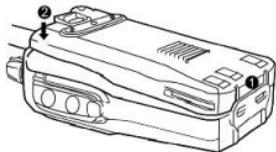


Fig.4-1

2. Disassembling battery

Power off the Two-way radio and hold it in hand. Pull up the tab of the battery with your fingers to loosen ❶ and remove the battery unit ❷. (See Fig. 4-2)

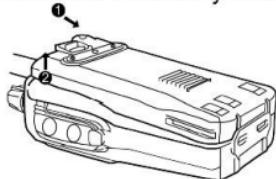


Fig.4-2

3. Assembling antenna

Insert the threaded end of the antenna into the screw hole on the top of the radio and rotate clockwise till it is tightened. (See Fig. 4-3)



Fig.4-3

4. Disassembling antenna

Rotate counterclockwise till the antenna is screwed out (See Fig. 4-4).



Fig.4-4

Assembling and Disassembling Accessories

5. Assembling belt clip

Insert the 2 screws provided together with the Two-way radio into the screw holes at the back of the battery, tightening clockwise to fasten the belt clip (See Fig. 4-5).

6. Disassembling belt clip

Rotate the screws counterclockwise until they are completely untightened to remove the belt clip (See Fig. 4-5).

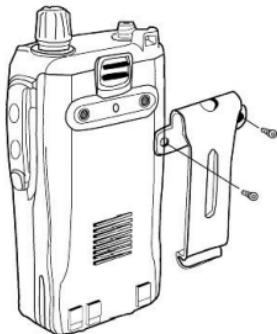


Fig.4-5

7. Assembling external earphone/microphone

Uncover the MIC/SP jack and plug the earphone/microphone into MIC/SP jack.

8. Disassembling external earphone/microphone

Unplug the earphone/microphone from MIC/SP jack and cover the MIC/SP jack (See Fig. 4-6).



Fig.4-6

Basic Operations of Two-way radio

1. Power on/off

Rotate power on/off switch/volume knob clockwise. When you hear a “click” sound, the Two-way radio is powered on and will give a “beep” sound (See diagram 5-1).

Rotate power on/off switch/volume knob counter-clockwise. When you hear a “click” sound, the Two-way radio is powered off (See diagram 5-2).



Fig.5-1



Fig.5-2

2. Adjusting volume

Press and hold down the “MONI” key and listen to the background noise, then rotate power on/off switch/volume knob to adjust the volume. Rotating clockwise will turn up the volume while rotating counter-clockwise will turn down the volume.

3. Entering into calling state

Press and hold down 『PTT』 key and the red indicator light will be lit. Talk to the microphone in usual tone and keep your mouth about 3-5cm away from the microphone to ensure the receiver copy best voice quality.

4. Entering into receiving state

Release 『PTT』 key to enter into receiving state. When the channel you are using is called, you may hear the voice from the other party. If the calling signal is weak and you've set a higher squelch level, you may fail to receive the calling voice.

5. Monitoring

Press and hold down 『MONI』 key and you may hear weaker signals that are hard to be heard under normal operation, and you can also use power on/off/ volume knob to adjust the volume when there is no signal.

Basic Operations of Two-way radio

Table of Communication Distance Reference

Open field (noobstacle)	over 15km
Urban building complex	3km
High - rise	20 stories
Basement	1-2 story(ies)

Shortcut Operations of Two-way radio

With the help of the distributor, you may set each function of the Two-way radio in radio programming software or by following indications from the manual menu. As for software operation details, you may get real-time help in radio programming software.

NO.	Function	Menu display	Setting content	Shortcut	Ex-factory setting
1	Setting squelch level	SQL	0-9 levels	F+1,↑↓ ,F	Level 3
2	Power saving function	SAV	On/Off	F+2,↑↓ ,F	Power saving
3	Setting automatic power-off time	APO	Off、 1H-12h	F+3,↑↓ ,F	Off
4	On/off key tone	BEEP	On/Off	F+4,↑↓ ,F	On
5	Positive/negative alien frequency	+/-	+/-	F+5,↑↓ ,F	Off
6	CTCSS	CT	Off, 67.0-254.1 (50 groups)	F+6,↑↓ ,F	Off
7	CDCSS	DCS	Off,023-854 (105groups)	F+7,↑↓ (or directly input code by keypad), F	Off
8	Priority channel sweep	PRI	On/Off	F+8,↑↓ (or directly input channel by keypad), F	Off
9	Voice-operated transmission function	VOX	Off、 1-9	F+9,↑↓ ,F	Off
10	Frequency stepstetting	STEP	5KHz-100KHz	F+*,↑↓ ,F	Off
11	DTMF (ANI)	DTMF	On/Off	F+0,↑↓ ,F	Off
12	Radio state/Two-way radio state switch	RADIO	On/Off	F+#, enter into radio state	Two-way radio
13	Sweep function	SCANNING	Direct sweeping	F+↑, Choice of scan direction (↑ or ↓)	-

Two-way radio Shortcut Operations List

14	Whether monitor receiving signal under radio state	DW	On/Off	F+↓,↑↓,F	Off
15	Setting alien frequency value	OFFSET	00.000-69.975MHz(UHF) 00.000-37.995MHz(UHF)	F+F, input the value of alien frequency by keypad	
16	Unlock/lock numerical keypad	LOCK	keylock	Press and hold down F key for 2 seconds to unlock/lock digital keypad	Locked
17	Selecting high/low power	LOW	high/low	Press * key to switch high/low power	High power
18	time out timer			Set time out timer On or Off via radio programming software	180 seconds
19	Busy channel lockout			Set Disable or Enable via radio programming software	enabled
20	Setting backlight			1. OFF; 2 Always On; 3. On for five seconds. Setting via radio programming software.	On for 5 seconds
21	Backlight switch and monitor signal			Short press moni key, switch the backlight; Long press moni key, Cancel squelch instantaneously;	Cancel squelch instantaneously

Friendly note:

The above-mentioned shortcuts can be implemented under VFO mode, some function settings are not allowed under memory channel display mode and channel display mode.