

SoonTone®

Working frequency:

136~150MHz

150~174MHz

400~440MHz

450~470MHz etc.

SoonTone

Professional VHF /
UHF FM Transceiver

INSTRUCTION MANUAL



VHF FM TRANSCEIVER

QX-218

UHF FM TRANSCEIVER

QX-318

QIXIANG CORPORATON

THANK YOU!

We are grateful for your purchase of this transceiver. We believe this easy-to-use transceiver will provide you with dependable and reliable communications.

We adopt advanced technology & workmanship for this transceiver, we trust our laborative design will make it better & quicker service for you. For correct use, please read this manual before use.

MODELS COVERED BY THIS MANUAL

218:16-channel VHF FM Transceiver 136-150MHz
150-174MHz

318:16-channel UHF FM Transceiver 400-440MHz
450-470MHz etc.

The transceiver apply for the software of QXPG-34D

NOTE: For avoiding mistakes, should read the data first, then program.

QUICK-OPERATION GUIDE

FUNCTION	OPERATION	PAGE
High Power	Press PTT to switch ON and pressing for 5 seconds more. Release PTT and turn the Channel Selector to channel 1 and save by pressing PTT then switch OFF and reboot.	9
Low Power	Press PTT to switch ON and pressing for 5 seconds more. Release PTT and turn the Channel Selector to channel 2 and save by pressing PTT then switch OFF and reboot.	9
VOX	Press MONI to switch ON and pressing for 5 seconds more. Turn the Channel Selector to select VOX gain{1(L)~16(H)} Save by pressing PTT while cancel by pressing MONI . Switch OFF and reboot.	9

PROMPTION

"Du du" sounds at intervals.	Out of lock, programmed frequency is out of the range of the range of transceiver.
The red indicator flashes when transmitting but it can still communicate	The voltage of battery is low. Please charge!
The transmitting will stop when the red indicator flashes and "Du" sounds	The voltage of battery is too low. Please charge at once!
The transmitting (last a little while) will stop when hear constant "Du" from speaker.	TOT alert is ON. Release PTT and retransmit.
When receive signal, the kelly light ON. Press PTT to transmit and "Du" sounds, it will be back to receive and cannot transmit.	BCL function has been set
When receive signals, the kelly light on, but no voice is out from speaker.	QT or DQT has been set
It will transmit automatically when talking without pressing PTT .	VOX has been set.
The distance get closer	If set Low power.

PROMPTION

For using this transceiver safety and efficiency, please read the following notes carefully:

1. Repairing is only for qualified technicians. Please do not disassemble the transceiver causally.
2. Do not modify the transceiver causally.
3. Power off when enter into the flammable and explosive places.
4. Please do not change or charge the battery when under the flammable and explosive circumstances.
5. Please power OFF the transceiver before entering the explosive and detonators areas.
6. To avoid the problem caused by electromagnetism interfering or compatibility, please power OFF when you entering into the places where is not allowed to use the transceiver, such as hospitals and airplanes.
7. Please put the device out of the range of the extension of the airbag in the car.
8. Do not expose the transceiver under sunshine for a long time, nor place it close to heating appliances.
9. Please keep the antenna at least 2.5cm far away from you when transmitting.
10. Do not put the device into the dusty, humid and wet areas, nor put it into the rough surface.
11. If the device smelled abnormally or smoking, please power OFF at once, and take out the battery, then contact with the local distributor.

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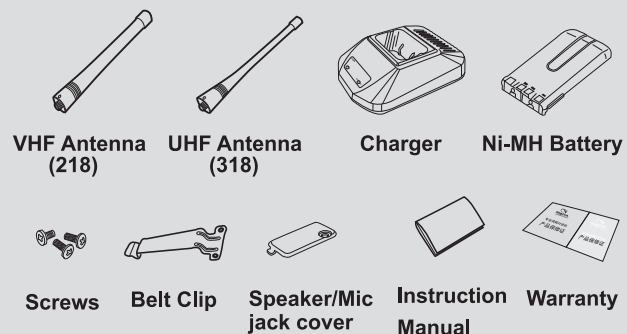
UNPACKING & CHECKING EQUIPMENT

Carefully unpack the transceiver. We suggest that you confirm the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

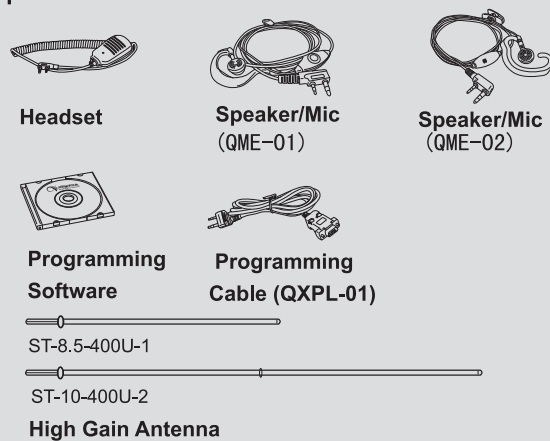
■ SUPPLIED ACCESSORIES

ITEM			QUANTITY
Antenna	318	M(450-470MHz)	1
		M2(440-440MHz)	
	218	M3(150-174MHz)	
		M4(136-150MHz)	
Charger			1
Ni-MH Battery (6.5V 700mAh)			1
Gallus			1
Screws			1
Belt Clip			1
Instruction Manual			1
Warranty			1

Standard Accesories



Optional Accessories



BATTERY

NOTES:

Please charge the battery before you use it, because it was uncharged against delivery. The first charging after purchasing or keeping for more than 2 months without using cannot achieve normal battery capacity. After repeating the charge/discharge for 2 or 3 times, the battery can get to the best performance. Please change or charge the battery if low power.

1. Please use the specific charger, other models may cause explosion and lead to hurt the body.
2. Do not short circuit the battery or put it into fire, nor remove the housing of the battery.
3. The ambient temperature should be between 5°C and 40°C while charging. Otherwise, it may not fully charge.
4. Power OFF the transceiver with battery while charging. Using the device while charging would affect normal charging.
5. To avoid interfering the charging, please do not cut off the power or take out the battery during charging.
6. The battery life will over soon when its operating time decreases even though it is fully and correctly charged. Please replace the battery.
7. Please do not take out the battery and recharge it after it was fully charged, otherwise the battery would be damaged or the life would be shortened.
8. Please do not charge when the battery or the transceiver is damped. Do it before wipe it up to avoid the hazard.

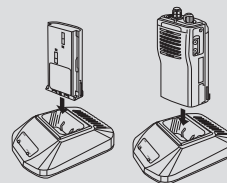


WARNING

When jewelry, keys or ornamental chain and other electric metals contact with the battery terminal, the battery may cause damage or hurt bodies. If the battery terminal short circuit it will generate a lot of heat. Please be careful when you bring or use the battery, especially put it into the pocket, purse or other metal container.

HOW TO CHARGE

Plug the adaptor into the AC outlet.



Slide the Ni-MH battery or transceiver with a Ni-MH battery into the charger.

Make sure the battery is connected with the charging terminals.

The charger LED lights and charging begins.

After charging the supplied battery for 9 hours, remove it or the transceiver equipped with it from the charger. The charger does not turn OFF automatically after fully charged.

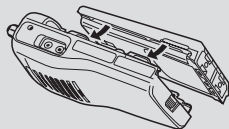
The average life of the supplied Ni-MH battery is 8 hours. Average times are calculated using 5% transmit time, 5% receive time, and 90% standby time.



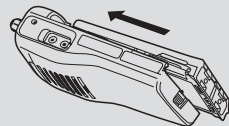
WARNING

- Don't short the battery circuit or throw it into fire.
- Please do not disassemble the battery housing.
- Don't install the battery in dangerous surroundings, spark will cause explosion.

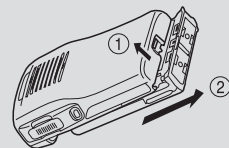
INSTALLING/REMOVING THE BATTERY PACK



Match the battery pack with the bottom of transceiver.



Slide the battery until the release latch of the transceiver locks.

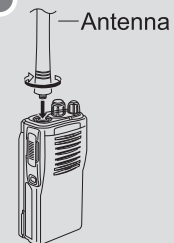


To remove the battery pack, press the release latch and slide the pack out of the transceiver.

INSTALLING THE ANTENNA

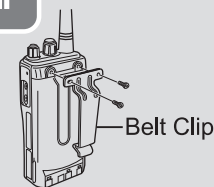
Screw the antenna into the connector on the top of the transceiver by holding the antenna base and turning it clockwise until secure.

NOTE: Please do not hang the things in the antenna, and it is not a handle, either. Using it in these ways may damage the antenna and degrade your transceiver's performance.



INSTALLING THE BELT CLIP

If necessary, attach the belt clip using the two supplied 3*8mm screws.



Installing the Cover Over the Speaker/Microphone Jacks

If you are not using a speaker/microphone, install the cover over the speaker/microphone jacks using the supplied 3x6mm screw.

NOTE: To keep the transceiver water resistant, you must cover the speaker/microphone jacks with the supplied cover.



GETTING ACQUAINTED

Antenna
Receive/transmit signals

LED Indicator

Lights Red while transmitting in high power. Lights Orange while transmitting in low power. (Red and Kelly lights together) Kelly lights ON while receiving signals. Red indicator flashes while transmitting in low battery.

Microphone

Channel Selector

Turn it to select channel 1~16

Power Switch/Volume Control

Turn clockwise to switch ON the transceiver, while turn counterclockwise until a click sounds to switch OFF. Rotate to adjust the volume level.

Speaker

PTT(Push-To-Talk) Switch

Press, then speak into the microphone.
Release to receive.

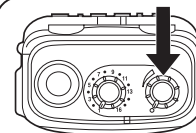
Monitor Key

Press to hear the background noise.

Speaker/ Microphone jacks

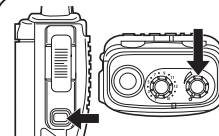
Battery pack

BASIC OPERATION

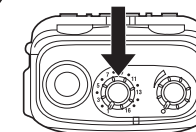


Switch ON the transceiver by turning **Power Switch/Volume Control** clockwise.

- A "Beep" sounds if set the voice prompting function.

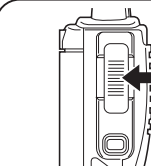


Press **MONITOR**, and meanwhile rotate **Power Switch/Volume Control** to adjust volume.



Rotate the **Channel Selector** to select the needed channel.

- When you receive an appropriate signal, you will hear audio from the speaker.



To make a call, press **PTT**, then speak into the microphone in normal speaking voice.

- Keep the microphone approximately 3~4cm from your lips to ensure perfect communication.

Release **PTT** to receive.

NOTE: When the battery becomes too low, the LED flashes Red and stop transmitting. See "Low Battery Warning" on page 11.

ADVANCED OPERATION

VOX Function

VOX function can support handsfree communication. 16 levels for free choice to get used to different environment.

1. Switch ON VOX

Turn the **Power Switch/Volume Control** to power OFF, press **MONI** to power ON, and keep pressing for more than 5 seconds until a voice prompt heard then release it to set VOX function ON. VOX sensitivity is the same as that set last time.

Set VOX Sensitivity

When VOX function is ON, turn the **Channel Selector** to the needed value. Different sensitivity setting according to different surroundings; Press **PTT** to save the setting value(1L~16H) while VOX is OFF by pressing **MONI**.

2. Switch OFF VOX

Turn **Power Switch/Low Control** to power OFF. Press **MONI** to power ON, and keep pressing for more than 5 seconds until a prompt voice heard, then release it. And press again to set off the VOX function. If you want to set ON the function again, please repeat the procedure.

High/Low Power Switch Function

The transceiver spends a lot of battery capacity when transmitting in high power. Choose low power to save battery when in close communication. If the communicating distance is too far, choose high power to transmit.

1. Enter the function status. Turn **Power Switch/Volume Control** to power OFF. Press **PTT** to power ON, and keep pressing for more than 5 seconds until a prompt voice heard, then release it to set the function ON.

ADVANCED OPERATION

2. Choose High/Low power in function status: turn the **Channel Selector** to choose the needed function{1.High power channel (Red light);2.Low power channel(Kelly light)}. You can turn the **Channel Selector** to choose between 1-2 for High/Low power and save by pressing **PTT**.

NOTE: Power off and restart to enter set function status.

AUXILIARY OPERATION

Adopt QXPG-34D(software) and QXPL-01(program cable) to program.

Time-out Timer

The purpose of the Time-out Timer is to prevent any single person from using a channel for an extended period of time. If you continuously transmit over limited time, the transceiver will stop transmitting and a "Beep" sounds. To stop the tone, release **PTT**. Press **PTT** again to resume transmitting. (The limited time can be set by software of the dealer).

Battery Save

The battery save function decrease the amount of power used when a signal is not being received and no operations are being performed (no keys are being pressed, and no switches are being turned).

While the channel is not busy and no operation is performed for more than 5 seconds, Battery Save turns ON. When a signal is received or an operation is performed, Battery Save turns OFF automatically.

Low Battery Warning

Low battery warning alerts you when the battery needs to be charged.

While transmitting, if the battery power goes below a predetermined value, the LED flashes red. When a tone sounds, the transceiver stops transmitting. Please replace or recharged the battery pack.

Busy Channel Locked

It can prevent from the interferent with other radio used the same channel when switch on the function. When the channel is occupied, press **PTT**, a warning tone will be heard and back to receiving status.

AUXILIARY OPERATION

Squelch RF

Squelch level is to set the simulate average level of the interior squelch through the CPU. It can make speaker mute. The squelch level decide when the squelch should be ON/OFF. If squelch level is too high, then you can not get weak signal; if the squelch level is too low, the user will get noise and keep receiving. Squelch level can be set from 0 to 9.

Wide/Narrow Band

You can set Wide/Narrow band of the transceiver according to different countries.

NOTE: High volume but big distortion when wide-band transceiver communicate with narrow-band transceiver. Low volume but large noise when narrow-band transceiver communicate with wide-band transceiver.

Prompting Voice

You can choose prompting voice ON/OFF.

NOTE: The function covers all the prompting voice of the transceiver.

CTCSS/DCS

Some channels may set CTCSS/DCS function. The CTCSS/DCS tone is a subaudible tone which allows you to ignore(not hear) calls from other parties who are using the same channel but different code with yours. When you receive the different code of your transceiver you cannot get this call.

NOTE: Program CTCSS/DCS code in your transceiver, it can help you to ignore some unnecessary callings. But that not means your challing privacy.

SPECIFICATION

Frequency	136-150MHz
	150-174MHz
	400-440MHz
	450-470MHz etc.
Working Temperature	From -20℃ to +55℃
Frequency Synthesization	PLL
Working Voltage	DC6.5V(Ni-MH Battery)
Number of Channels	16 Channels
Antenna Configuration	High Gain Antenna
Antenna Impedance	50 Ω
Working Way	Simplex in same channel Simplex in different channel
Grounding	Cathode
Size	100mm*52mm*27mm
Weight	225g (Included battery and antenna)

SPECIFICATION

Transmitter	
Output Power	high power: 3W
	low power: 1W
Modulation	FM
Max. Freq.Deviation	wide $\leq \pm 5\text{KHz}$
	narrow $\leq \pm 2.5\text{KHz}$
Residual Wave Radiation	$\leq -65\text{dB}$
Pre-emphasis	6dB
Transmitting Current	high power $\leq 950\text{mA}$
	low power $\leq 600\text{mA}$
Receiver	
Sensitivity(12dB SINAD)	Wide band $< 0.18 \mu\text{V}$ Narrow band $< 0.25 \mu\text{V}$
Squelch Sensitivity	$< 0.18 \mu\text{V}$
Antimodulation Interference	60dB
Audio Power	$\geq 400\text{mW}$
Receiving Current	$\leq 200\text{mA}$
Squelch Standby	20mA

TROUBLE SHOOTING GUIDE

Trouble phenomenon	Shooting method
No power	<ul style="list-style-type: none"> • Maybe out of battery, please charge or replace new battery. • Maybe the battery is not correctly installed, try again.
Unable to talk with others in the group	<ul style="list-style-type: none"> • Check whether the Frequency and CTCSS is same as that of other members • Whether other members are in valid communication distance of transceivers
There is disturbance from other members	<ul style="list-style-type: none"> • Please modify CTCSS, also signal order of other members. • Modify to work in other frequency.
The battery life is short even after correctly charged.	<ul style="list-style-type: none"> • The battery's life is over, replace with a new one.
Noisy after being programmed	<ul style="list-style-type: none"> • Squelch is open when programming, non-professional users please do not modify parameters causally.
Some regulated "da da" sounds after being programmed	<ul style="list-style-type: none"> • Some errors happen when program it. Maybe it is out of working frequency range.

TROUBLE SHOOTING GUIDE

Trouble phenomenon	Shooting method
There is no sound after using the earphone for a period	<ul style="list-style-type: none"> • Something wrong with ear bud (Send it to distributor for reparation)
Communication distance closer and sensitivity weaker.	<ul style="list-style-type: none"> • Whether the antenna and its connector is complete. • Whether set to be in low power. (Send it to distributor for reparation)
It can receive but not transmit	<ul style="list-style-type: none"> • Check PTT key. (Send it to distributor for reparation)
Power off often	<ul style="list-style-type: none"> • Check whether the connector of battery is complete
The voice is too low, and often cut off	<ul style="list-style-type: none"> • Check whether the MIC jack is block with something. (Send it to distributor for reparation)
Receiving signal unconsciously, and with big noise	<ul style="list-style-type: none"> • Out of communication distance. • Block with high buildings. • Use it in the underground building (Send it to distributor for reparation)
Speaker with "ka ka" sound after using for a period of time.	<ul style="list-style-type: none"> • Check whether there is something on the cover of speaker. (Send it to distributor for reparation)
No sound from speaker	<ul style="list-style-type: none"> • Check whether it is in Min volume (Send it to distributor for reparation)

FREQUENCY CHART

Mode : _____

Serial: _____

Channel	Receive Frequency	Transmit Frequency	Receive Code	Transmit Code	BCL
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					