

RTS

FC CE



DV-3135

DV-3066

TWO WAY RADIO

INSTRUCTION MANUAL

RTS 

THANK YOU!

Thank you very much for choosing this **RTS** transceiver. **RTS** transceiver will provide you with reliable, clear and efficient communication service.

This transceiver is robust, durable, excellent sound quality, large volume, long distance communication and easy operation. we are confident that you will be satisfied with its perfect quality and functions. For you full comprehension of various functions and using maintenance, please read the instruction manual before using.

MODELS APPLY TO THIS MANUAL

DV3066: 66–88MHz FM Transceiver

DV3135: 135–174MHz FM Transceiver

PROGRAM CAUTIONS:

When programming the transceiver, read the factory initial data first, then rewrite the frequency and signaling etc., otherwise errors may occur because of different frequency band etc..

QUICK OPERATION MANUAL

Side key 1 and Side key 2 can be programmed as one of following auxiliary functions.

For example: When the [side key 1] or [side key 2] programmed as “Keypad lock” auxiliary function,press side key 1 or side key 2 to enable this function.

Function	Operation	Refer to page
Keypad Lock	Press the programmed side key	16
Keypad Lock (with backup)	Press the programmed side key	16
Monitor	Press the programmed side key	16
Monitor Momentary	Press the programmed side key	16
None(no function)	(Factory Default : Side key 1)	
Squelch Off Momentary	(Factory Default : Side key 2)	17
Squelch Off	Press the programmed side key	17
Scan	Press the programmed side key	17
Scan +Temporary Deletion	Press the programmed side key	19
Temporary Deletion	Press the programmed side key	19

Voice Prompt

“Du” “Du ” sounds at intervals	Unlock, programmed frequency is out of the frequency range of transceiver.
“Du” sounds continuously	Empty frequency
During transmitting, RED light flashed and emit “DU” and stop transmitting	Low battery, need to be recharged
The loudspeaker sounds “du” continuously after transmitting for a while, and then stop.	TOT function is on, please release [PTT]
After transmitting for a while, a voice prompt sounds and stop transmitting after a moment	TOT alert is on
Receiving signal from other transceiver, Kelly indicator is on, then press[PTT] to transmit, and after a “du” sound was heard, it returns to receive signal	Set BCL function

CAUTIONS

RTS transceiver is excellent designed with advanced technology. The following tips will be helpful for you in performing your obligation under warranty and understanding the safety of transceiver usage.

- 1.Keep the transceiver and accessories away from children.
- 2.Please do not try to open or modify the transceiver without permission, non-professionals operation may also cause damage.
- 3.Please use assorted battery and charger to avoid damage.
- 4.Please use assorted antenna to ensure the communication distance.
- 5.Please avoid exposing the radio under the sunshine for a long time or storing it in hot areas.
- 6.Please avoid storing the radio in the dusty, dirty and damp areas.
- 7.Do not wash radio with hard chemicals and detergents.
- 8.Do not transmit without antenna.
- 9.When using this transceiver, we recommend transmitting for 1 minute then receiving for 4 minutes. continuously transmitting for long time or working in high power will heat the back of the transceiver. Do not place the transceiver's hot back close to any plastics.
- 10.If any abnormal smell or smoke detected coming from the transceiver, please turn off the power instantly and take off the battery and its case. Then contact local **RTS** dealers.

NOTE:

All the above tips apply for your **RTS transceivers' accessories. If any device can not operate normally, please contact local **RTS** dealers. If you use any accessories made by other companies, **RTS** Company does not guarantee the operability and safety of the transceiver.**

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◦ UNPACKING

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Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please contact dealer immediately.

Supplied Accessories

Item	Number	Quantity
Antenna	QA03V(66–88MHz)	1
	QA03V(136–174MHz)	
	QA03U(350–390MHz)	
	QA03U(400–480MHz)	
	QA03U(470–512MHz)	
Battery	QB–28L	1
Charger	QBC–28L	1
AC Adaptor	QPS01	1
Belt Clip	BC03	1
Screws		1
Speaker/Microphone Jack		1
Instruction Manual		1
Car Charger Line 12V		1
Leather Case		1

• Standard Accessories/Optional Accessories

Standard Accessories



Antenna *

QA03V (136–174MHz)
QA03U (400–480MHz) etc



Battery

(QB–28L1600mAh)



Battery Charger

(QBC–28L)



AC Adaptor

(12V/500mA QPS–01)



Belt Clip

(BC03)



Screws



Speaker/Microphone
Jack



Instruction Manual



Car Charger Line 12V



Leather Case

* Note: For frequency band of antenna, please refer to label indicated in the bottom of the antenna.

Optional Accessories



Headset
(QHM22)



Programming
cable (PC03)



Battery Pack for
Car Charger
(CPS02)



Hand Strap
(GS01)



Antenna



Speaker/
Microphone
(HS03)



Power Adaptor
(QTC–01)



Programming
software
(QPS3308)



Eight-way
Multi-charger

(((•NOTES

The battery is not charged at the factory, please charge it before using. After purchasing or long term storage (more than 2 months), the first time charging of the battery may not bring the battery to its normal operation capacity. After repeatedly and fully charged/discharged for two or three cycle times, the operating capacity will reach the best performance. The battery life is over if its operating time decreases even though it is fully and correctly charged. If so, please replace the battery .

- Please use the specific charger appointed by our company, other models may cause explosion which would injured people.
- Do not short the battery terminals or throw the battery into fire. Never attempt to disassemble the battery or remove the casing from the charger, we show no responsibility on the results caused by modifying freely without permission of our company.
- The ambient temperature should be between 5°C and 40°C during charging. Charging outside this range may not fully charge the battery.
- Do not switch off the transceiver equipped with a battery during charging. Otherwise, it will interfere with correct charging.
- To avoid interfering the charging, please do not cut off the power or take out the battery during charging.
- The battery life is coming to the end if its operating time decreases even though it is fully and correctly charged. Please replace the battery .
- Do not recharge the battery if it is already fully charged. This may shorten the life of the battery or damage it.
- Do not charge the battery or transceiver if it is damp. Dry it before charging to avoid danger.

◦ BATTERY INFORMATION

WARNING :

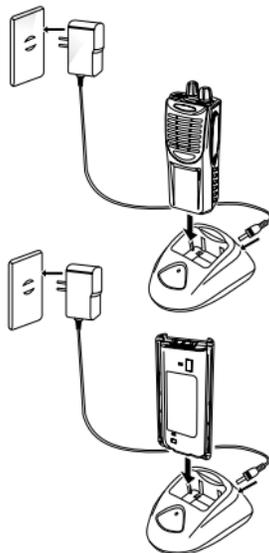
When keys or ornamental chains and other **electrical** metals contact with the battery terminals, the battery may cause damage or hurt bodies. If the battery terminals short circuit, it will generate a lot of heat, please be careful when you bring or using the battery, please put battery or radio into insulated container instead of metal container.

(((How to Charge Li-ion Battery by adaptor

1. Plug the power adaptor into the AC outlet.
2. Plug the cable of AC Adaptor into the DC jack located on the rear of the charger, the charger indicator on Green.
3. Plug the Li-ion battery pack or transceiver with a Li-ion battery into the charger. Make sure the battery is connected well with charging terminals. LED light turns into Red ---- charging.
4. When it is 90% charged (about 3.5 hours charging), LED light turns into light-green (needs 1 hour more charging).
5. About 1 hour later, it is fully charged, LED light turns into Green.

(((How to Charge Li-ion Battery by 12V Car Charger line

1. Plug 12V car charger line into 12V car outlet.
2. Plug the other side of car charger line into DC jack located on the rear of the charger, the charger indicator on Green.



◦ BATTERY INFORMATION

RTS 

3. Plug the Li-ion battery pack or transceiver with a Li-ion battery into the charger. Make sure the battery is connected well with charging terminals. LED light turns into Red ---- charging.
4. When it is 90% charged (about 3.5 hours charging), LED light turns into light-green (needs 1 hour more charging).
5. About 1 hour later, it is fully charged, LED light turns into Green.



NOTE:

After charging the supplied battery for 5 hours, remove it or the transceiver equipped with battery away from charger.

(((How to Store the Battery

1. If the battery needs storing, the battery should be kept in the status of 50% discharge.
2. It should be kept in the shade and dry environment.
3. Keep away from hot places or directly sunlight.

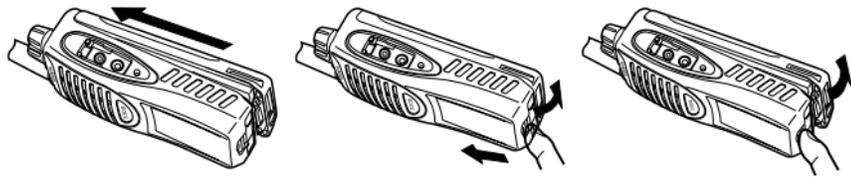
WARNING:

- ☆ Do not short circuit the battery terminals.
- ☆ Never attempt to disassemble the housing from the battery.
- ☆ Never install the battery in dangerous surrounding, sparks may cause explosion.
- ☆ Do not put the battery into hot environment or throw it into fire, it may also cause explosion.

◦ INSTALLATION AND CONNECTION

(((Installing/Removing the Battery

1. Align the battery with the back of the transceiver, then press the battery and transceiver firmly together until the release latch locked on the base of the transceiver.
2. To remove the battery, lift the safety catch on the base of the transceiver, then press the release latch underneath the safety catch.
3. While pressing the release latch, remove the battery from the transceiver.



(((Installing/Removing the Antenna

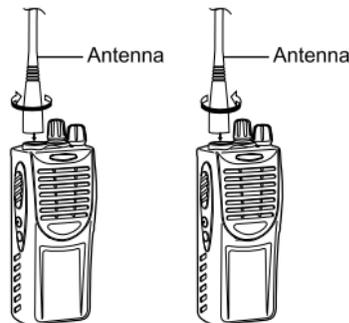
Installing the Antenna:

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

Removing the Antenna:

Turn the antenna anticlockwise to remove it.

NOTE: The antenna is neither a handle/a key ring retainer, nor a speaker/microphone attachment point. Using the antenna in these ways may damage the antenna and degrade your transceiver's performance.



◦ INSTALLATION AND CONNECTION

RTS 

(((Installing/Removing the Belt Clip

Installing the Belt Clip:

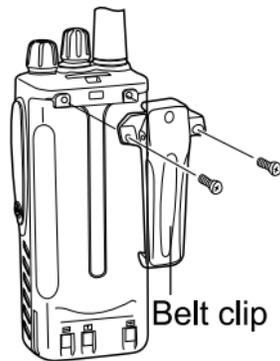
If necessary, fix the belt clip to the back of transceiver with two supplied 3 × 8mm screws.

NOTE: If the belt clip is not installed, its mounting location may get hot during continuous transmission or when it is left in a hot surrounding.

Removing the Belt Clip:

Anticlockwise turn screws to remove the belt clip.

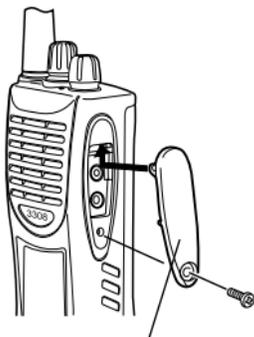
NOTE: Do not use glue which is designed to prevent screws from loosening when installing the belt clip, it may cause damage to the transceiver. As glue contains Acrylic acid, it may crack the transceiver's back panel.



(((Installing Speaker/Microphone Jacks

If you do not want to use speaker/microphone, please install the jack cover over the speaker/microphone jacks with the supplied 3 × 6mm screws.

Note: To keep the transceiver waterproof, you must cover the speaker/microphone jacks with the supplied jack cover.



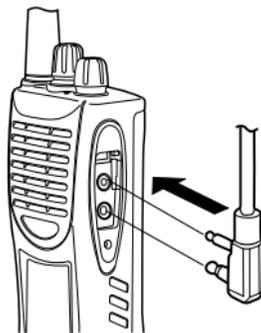
Speaker/microphone
jack cover

◦ ACCESSORIES INSTALLATION

(((• Installing Speaker/Microphone (Headset)

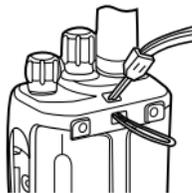
Insert speaker/microphone (headset) plug into the speaker/microphone jack.

NOTE: The transceiver is not completely waterproof while using the speaker/microphone.



(((• Installing the Optional Hand Strap

1. Slide the loop of the hand strap through the eyelet on the upper rear of the transceiver.
2. Pull the entire hand strap through the loop to secure the hand strap in place.





◦ GETTING ACQUAINTED

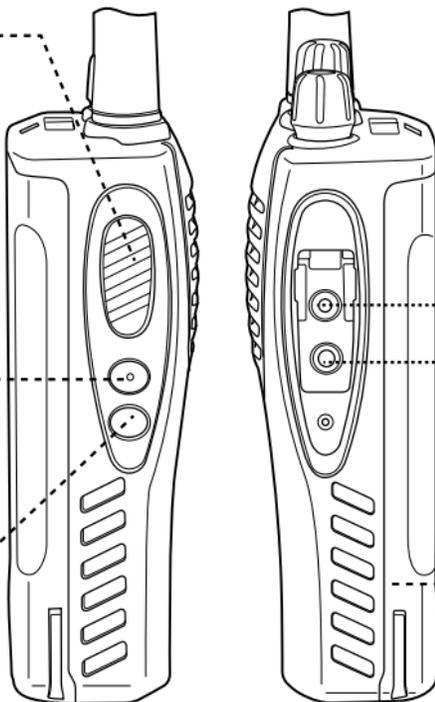
PTT (Push to talk)
Press it and speak to the
microphone to make a call.
Release it to receive.

Side key 1

Press to activate its programmable
function (refer to page 12)
Default setting: None (no function)

Side key 2

Press to activate its programmable
function (refer to page 12) Default
setting: "squelch off momentary"
function



Speaker/
Microphone jacks

Battery

◦ PROGRAMMABLE AUXILIARY FUNCTIONS

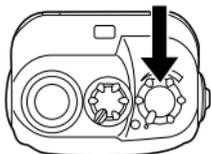


Dealer can program Side key 1 and Side key 2 as one of following auxiliary functions:

Please refer to description from page 16.

- ◆ Keypad Lock
- ◆ Keypad Lock (with Backup)
- ◆ Monitor
- ◆ Monitor Momentary
- ◆ None (Default setting : Side key 1)
- ◆ Scan
- ◆ Scan + Temporary Deletion
- ◆ Squelch Off
- ◆ Squelch Off Momentary (Default setting : Side key 2)
- ◆ Temporary Deletion

• BASIC OPERATIONS

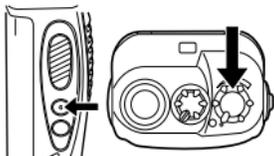


1. Switch On/Off

Turn the [Power/Volume Switch] clockwise to switch on the transceiver.

Turn the [Power/Volume Switch] anticlockwise to switch off the transceiver.

Transceiver will be switched on with a sound of beep if dealers has set up voice prompt function.

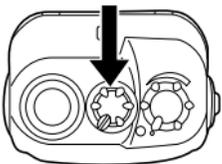


2. Volume Adjustment

Press the key programmed with [Squelch Off] or [Squelch Off Momentary] function to hear background noise, then turn [Power/Volume Switch] key to adjust the volume.

Clockwise–up, anticlockwise–down.

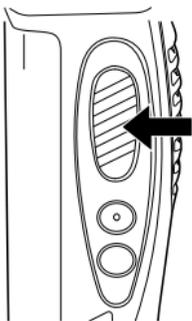
When communicating with others, you can adjust the volume as you need more accurate.



3. Channel Selection

Rotate the key [Channel Selector] to select your desired channel.

Available channels (from 1 to 16).



4. Transmitting

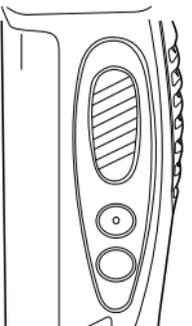
To make a call, press and hold the [PTT] key, then speak to the microphone.

Hold the microphone about (3–4cm) from your lips, so as to make the receiver obtain the best tone quality.

Press [PTT], the LED red indicating lamp lightens.

Release [PTT] switch to receive.

Note: The caller should be in communication range. The receiver's frequency should be same as transmitting frequency. It can only hear the calling while you set up the same signaling or none (no signaling).



5. Receiving

When the channel you are operating is called, LED Kelly lights, then you can hear the call from transmitting part.

Note: If the calling signal is weak, and your transceiver has been set at higher squelch level, it may failed to hear the call. If current channel has been programmed with a signal, you can only hear the call from the same signal, instead of other calls .

◦ ADVANCED OPERATIONS

(((Voice Operated Transmission(VOX)

VOX operation allows you to do the hand-free transmission.

This function must be activated firstly by dealer. It can only be available with supported headset.

When operating VOX, you must set a VOX Gain level. If microphone's Gain is higher than VOX Gain, the transceiver switch to transmitting mode automatically; and the transceiver will return to receiving mode within set time if microphone's Gain is lower than VOX Gain.

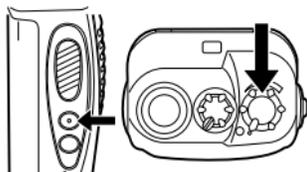
Adjust the VOX Gain level to an appropriate sensitivity according to surrounding noise, so as to keep smooth transmission.

To activate VOX and set the VOX Gain level, do as the following steps:



1. Connect the headset with the transceiver (refer to the page 8)

★ The VOX function can't be activated if headset is not connected with the speaker/microphone of transceiver.



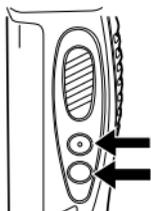
2. Turn off the transceiver, press and hold the [Side key 1] to turn on transceiver. Continue to hold the [Side key 1] until a beep sounds.

★ LED indicator light is orange.

★ Release [Side key 1], the transceiver announces the VOX Gain level.

◦ ADVANCED OPERATIONS

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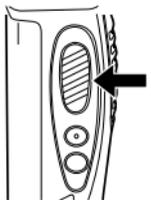


3. Press the [Side key 1] to increase the VOX Gain level.

Press the [Side key 2] to decrease the VOX Gain level.

The VOX Gain can be adjusted in level 1, level 10 and OFF.

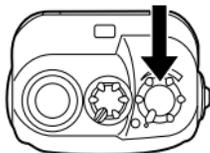
★ The transceiver announces the VOX Gain level while you adjusting it. If OFF is selected, a beep sounds.



4. Press the [PTT] switch to save the setting.

★ A beep will sound.

★ The transceiver announces the new VOX Gain level.



5. Turn the transceiver off and restart to activate VOX.

NOTE: When you operate the VOX function, you must use an optional accessory QME-01 or QME-02.

◦ **ADVANCED OPERATIONS**

The following programmable auxiliary functions are programmed by dealer (referring to page 12).

(((◦ **Keypad Lock**

Press and hold the key programmed as [Keypad Lock] for 1 second to lock/unlock the transceiver keys. The following keys/functions are still be workable when Keypad Lock is activated: Keypad Lock, Monitor, Monitor Momentary, PTT, Squelch Off, Squelch Off Momentary and Volume. After the transceiver is rebooted, the Keypad Lock function is cancelled.

(((◦ **Keypad Lock(with Backup)**

Press and hold the key programmed as [Keypad Lock(Backup)]for 1 second to lock/unlock the transceiver keys.

The following keys/functions are still workable when Keypad Lock is activated: Keypad Lock, Monitor, Monitor Momentary, PTT, Squelch Off, Squelch Off Momentary and Volume. After the transceiver is rebooted, the keys remain locked.

(((◦ **Monitor/Monitor Momentary**

This function can deactivate channel signal.

Monitor:

Press to enter into Monitor function, the transceiver will ignore CTCSS,DCS signals under this function; It can monitor the other sides signal as long as receiving the matched carrier wave. Press the key again to return to normal operation.

◦ ADVANCED OPERATIONS



Monitor Momentary:

Press and hold to enter into Monitor Momentary function, the transceiver will ignore CTCSS,DCS signals under this function; It can monitor the other sides signal as long as receiving the matched carrier wave. Release the key to return to normal operation.

(((Squelch Off/Squelch Off Momentary

You can use the key programmed as Squelch Off or Squelch Off Momentary to receive the weak signals that you cannot hear during normal operation, or to adjust the volume when no signals on your selected channel.

Squelch off:

Press to hear background noise. Press the key again to return to normal operation.

Squelch off Momentary:

Press and hold to hear background noise. Release to return to normal operation.

(((Scan

Scan function can be used in monitoring every channel of transceiver. When scanning, the transceiver checks for a signal on each channels and only stops in the channel where a signal is checked, until the signal disappears. Dealer has programmed the lingering time between signal disappear and scan resumption. If a signal is received during the lingering time, the transceiver will keep stay in the same channel.

NOTE: You can only use scan function if dealer has programmed at least 2 channels and also they are not

◦ **ADVANCED OPERATIONS**

locked out of scan range.

To start scanning, press the key programmed as Scan or Scan +Temporary Deletion.

Scanning starts from the current channel to the up one through the channel numbers.

The Kelly LED indicator light flashes.

When a matching signal is received on a channel, the LED indicator light turns into Kelly.

To end Scan, press key [Scan] or [Scan +Temporary Deletion] again.

(((**Priority Scan**

If enabled, a priority channel can be set by following two ways:

Dealers set a fixed priority channel on the transceiver.

Priority+Talkback: Dealer has programmed a priority channel, it is main channel, however, the transceiver also transmit on the channel where scan is currently stop.

Before scanning, you can use the key[Channel Selector] to choose your own priority channel and the dealer programmed the lingering time between signal disappearance and scan resumption.

(((**Main Channel**

During scanning, when press [PTT], transceiver will transmit in main channel.

Dealer can program the main channel as following ways:

Selection: The last selected channel is assigned as new main channel.

Selection+Talkback: If the channel has been changed during scanning, the new selected channel is assigned as the new main channel. However, the transceiver also transmit on the channel where scan is

currently stop.

Priority: If dealer has programmed a priority channel, it is main channel.

(((Temporary Deletion

If a key is programmed as [Temporary Deletion] or [Scan+Temporary Deletion] function, you can temporarily remove assigned channels from the scanning list during scanning. When scan stops at a channel, press and hold the key programmed as [Temporary Deletion] or [Scan+Temporary Deletion] for 1 second to remove this channel from the scanning list, then scan re-start again.

You cannot delete it while it has been set as a Priority Channel.

You cannot delete any channel if the available channels are less than 2 for scanning.

To add the channel back into the scan list, simply exit from the scan mode or switch the transceiver off and restart it.

◦ **BACKGROUND OPERATIONS**

Program through QPS3308 software and PC-03 cable.

(((**Time-out-Timer (TOT)**

The purpose of Time-out-timer is to restrict transceiver for continuous long term transmission. When the transceiver of continuous transmission time beyond the due time (Default:3m), transceiver is force to stop transmitting and make a sound of beeping. Release the PTT switch to stop the sound.

Dealer can program a warning function to alert you before the TOT expire.

The warning tone will sound while continuously transmitting during the TOT time which set by dealer.

(((**Busy Channel Lockout (BCL)**

BCLO is to disable transmitting while RX signal is received. Once the channel is busy and you press PTT, the radio will beep as warning and get back to receiving mode.

NOTE: Ask your dealer for an explanation on BCL functions when using CTCSS, DCS.

(((**Low Battery Warning**

Low Battery Warning alerts you when the battery needs to be recharged or replaced.

While operating the transceiver without enough battery power, an alert tone will sound every 30 seconds and the LED indicator light will flash red. Please replace or recharge the battery.

(((Channel Announcement

When **using** the [Channel Selector] to change the channel, after selecting a channel, there will be a voice reports the channel number you choose in Chinese/English/Russian. (Language in Chinese, English, Russian or off this function which is set up by dealer).

(((Voice Prompt Level

Dealers will set on/off Voice Prompt functions.

(((Squelch

It is used to mute the loudspeaker when there is no signal.

When squelch on, you will hear the background noise. If squelch off, you can't hear the background noise.

(((Battery Saving

If activated by dealer, the transceiver will automatically switch on battery saving function when it is without receiving any signals or making any operations. The battery saving function can reduce the power consumption. While the channel is not busy and no operation is performed for 5 seconds, battery saving function switch on. But when the transceiver receiving matched signals or make operations, it will automatically exit this function.

◦ BACKGROUND OPERATIONS

(((◦ Wide/Narrow Band

On the basis of different national conditions, users can set 25KHz(wide band) or 12.5KHz (narrow band) to communicate.

NOTE:High volume but big distortion when the transceiver with wide band talk to the transceiver with narrow band, and squelch will be easily switch off as the increasing of volume. Low volume but large noise when the transceiver with narrow band talk to the transceiver with wide band.

(((◦ High/Low Power

As the much exhaustion in battery while transceiver transmitting under high power, choose low power transmitting to save battery during the short distance communication.

Choose high power transmitting when low power cannot transmitting under the long distance communication.

Dealer set each channels of the transceiver with high/low power when transmitting.

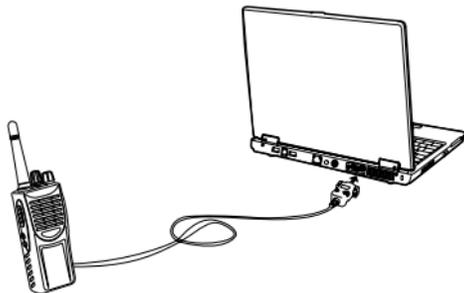
(((◦ CTCSS/DCS

Dealers may have programmed CTCSS or DCS signaling on your transceiver channels. CTCSS/DCS is a subaudible tone/code which allows you to ignore (not hear) calls from other parties who are using the same frequency but different signal code. You will not hear the call with a different signal code.

NOTE: Although you will not hear the calls which you don't like to hear when the channel is set with CTCSS or DCS, but this not means that your call is secret.

(((Programming Software Starting

1. Double click “QPS3308” setup.exe” to install as indication.
2. Click start menu in computer, under “ALL PROGRAMS” menu, choose and click “USB to Comport” in QPS3308 program, install “USB to Comport” drivers as indication.
3. Connect the PC-03 programming cable to USB port in PC with transceiver.
4. Double click “QPS3308” short cut, choose serial “COM Port” as indication, then click “OK ” to start programming software. (you should install software before connecting the USB cable .)



TECHNICAL SPECIFICATIONS

General

Frequency Range	66–88MHz 136–174MHz 350–390MHz 400–480MHz 470–512MHz etc.
Number of Channel	16 channels
Channel Spacing	25KHz (Wide Band) 12.5KHz (Narrow Band)
Phase-locked Step	5KHz, 6.25KHz
Operating Voltage	7.4V DC ± 20%
Frequency Stability	± 2.5ppm
Operating Temperature	-20~ +55°C
Size	142 × 57 × 41mm
Weight	355g

Receiving Part (ETSI EN 300 086 standard test)

	Wide band	Narrow band
Sensitivity(12dB SINAD)	< 0.25 μ V	< 0.28 μ V
Adjacent Channel Selectivity	\geq 70dB	\geq 60dB
Intermodulation	\geq 65dB	\geq 60dB

◦ TECHNICAL SPECIFICATIONS



Spurious Rejection	$\geq 70\text{dB}$	$\geq 70\text{dB}$
Hum & Noise	$\geq 40\text{dB}$	$\geq 36\text{dB}$
Audio Response	+1~ -3dB(0.3~3KHz)	+1~ -3dB(0.3~2.55KHz)
Audio Power Output	1000mW (10%)	
Audio Distortion	$\leq 5\%$	

Transmitting Part (ETSI EN 300 086 standard test)		
	Wide band	Narrow band
Power Output	5W/1W	
Modulation	16K Φ F3E	11K Φ F3E
Adjacent Channel Power	$\geq 70\text{dB}$	$\geq 60\text{dB}$
Hum & Noise	$\geq 40\text{dB}$	$\geq 36\text{dB}$
Spurious Emission	$\leq -36\text{dB}$	$\leq -36\text{dB}$
Audio Response	+1~ -3dB(0.3~3KHz)	+1~ -3dB(0.3~2.55KHz)
Max Frequency Deviation	$\leq \pm 5\text{KHz}$	$\leq \pm 2.5\text{KHz}$
Audio Distortion	$\leq 5\%$	

NOTE: Specifications is adjusted for technology improvement. Excuse there is no further notice.

◦ TROUBLESHOOTING GUIDE

Problem	Corrective Action
No Power	A.The battery may be exhausting, recharge or replace the battery . B.The battery may not be installed correctly, remove the battery and install it again. C.The power switch is broken, send it to local dealers to repair it. D.Battery touch is broken, send it to local dealers to repair it.
Unlocked alarm	The programmed frequency is out of transceiver frequency range, please rewrite the correct data.
Battery power runs out shortly after correctly charging	The battery life is finished, replace the battery with a new one.
The transceiver cannot scan	The channels are not in scan list. (Professionals set it).
All band noisy after programmed or green light all the time	Turn on squelch when programmed. (Non-professionals are advised not to adjust this function) .
Regular “DA DA DA” sounds after programmed.	Error programmed, the programmed frequency range is out of the transceiver regular frequency range.
No sound after using microphone for a while	Earphone jack is broken. (Please contact with local dealers to repair it.)
Communication distance becomes short and sensitivity becomes weak	A.Check whether the antenna is in good condition and the antenna base is tight and stable. B.Programming frequency range which you select is not match to transceiver’ s frequency. C.Whether it was set as low power output.(please contact with local dealers to repair it .)

◦ TROUBLESHOOTING GUIDE



Cannot talk to or hear other members in your group	A.Different frequency or channel, please adjust it. B.Different CTCSS/DCS, please reset again. C.Out of communication range.
Cannot power on or frequent automatically power off	Check whether the battery touch is distorted or broken.
The other communicating party gets low or intermittent receiving sound.	Check whether the MIC is stoppage. (otherwise, please contact with local dealers to repair it.)
Intermittent receiving with big noise	Out of communication range or obstructed by tall buildings or in basement and so on.
Loudspeaker becomes lower or with “ka ka” sound after using a certain time	Check whether the loudspeaker is broken, iron powder or sundries is in the loudspeaker. (Please contact with local dealers to repair it.)
Receive voice from the other party but cannot transmit	Check [PTT] key. (Please contact with local dealers to repair it.)
Receiving indicating lamp (green light) lightens but no sound	A.Low volume, please clockwise to turn on. B.Loudspeaker is broken. (please contact with local dealers to repair it.) C.Earphone jack is broken. (please contact with local dealers to repair it.) D.Volume switch is broken. (please contact with local dealers to repair it.) E.Different CTCSS/DCS.

◦ ATTACHED CHART

(((CTCSS Frequency Chart

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

◦ ATTACHED CHART



(((DCS Chart

1	017	18	074	35	174	52	271	69	413	86	526	103	731
2	023	19	114	36	205	53	274	70	423	87	532	104	732
3	025	20	115	37	212	54	306	71	431	88	546	105	734
4	026	21	116	38	223	55	311	72	432	89	565	106	743
5	031	22	122	39	225	56	315	73	445	90	606	107	754
6	032	23	125	40	226	57	325	74	446	91	612		
7	036	24	131	41	243	58	331	75	452	92	624		
8	043	25	132	42	244	59	332	76	454	93	627		
9	047	26	134	43	245	60	343	77	455	94	631		
10	050	27	143	44	246	61	346	78	462	95	632		
11	051	28	145	45	251	62	351	79	464	96	645		
12	053	29	152	46	252	63	356	80	465	97	654		
13	054	30	155	47	255	64	364	81	466	98	662		
14	065	31	156	48	261	65	365	82	503	99	664		
15	071	32	162	49	263	66	371	83	506	100	703		
16	072	33	165	50	265	67	411	84	516	101	712		
17	073	34	172	51	266	68	422	85	523	102	723		