

QT80

10 Meter Amateur Radio



Instruction Manual



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1. FUNCTIONS & FEATURES

- 1. LCD display with 7 color options and back light dimming
- 2. FM, AM, USB, LSB, CW, PA modes
- 3. Frequency Tuning Steps: 10Hz, 100Hz, 1KHz, 5KHz, 10KHz, 100KHz, 1MHz
- 4. ± 500Hz, 5KHz Clarifier (R/T/R+T selectable)
- 5. Flexible menu functions and PC programming software
- 6. RX and TX NRC Noise Reduction
- 7. SQ, ASQ Function (FM and AM mode)
- 8. RF GAIN Adjustment
- 9. RF PWR Adjustment
- 10.VFO / BAND / Memory Channel Modes
- 11. Repeater Shift / Offset Frequency Function
- 12.CTCSS/DCS with RX/TX Split functions
- 13.SCAN Function
- 14.NB/ANL Function
- 15.DW DUAL-WATCH Function
- 16.SWR. S/RF meter Function
- 17. TOT function
- 18.HI-CUT Function
- 19.EMG CALL
- 20.SWR Protection
- 21. Power Supply Voltage Protection
- 22. Kev-Lock Function
- 23.DTMF Function
- 24.BEEP Prompt
- 25. Enhanced VOX Function (VOX.SPK can support digital mode operation)
- 26. FCHO Function
- 27. Programmable RB Function
- 28.AM TX NPC
- 29. User Defined (PF) key on microphone
- 30. Audio path select
- 31.+10KHz Function

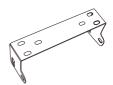
2. STANDARD ACCESSORIES



Radio



Microphone



Install bracket



Screws



Pads



Adjusting screws



Microphone Hanger



Adhesive Case Protectors

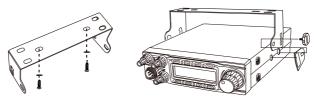


Fuse(15A 250V)

3. INSTALLATION

Choose the most appropriate location from a simple and practical point of view. If installed in a vehicle, care should be taken to ensure your radio does not obstruct the driver or passengers.

- 1. Use the Self-tapping Screws and Pads to fix the Bracket to a suitable location.
- 2. Attach the Adhesive Case Protectors to the inside ends of the Mounting Bracket and insert the Radio. Fit the Adjusting Screws loosely, and choose a suitable angle by moving the Adjusting Screws to one of the 3 positions on the Mounting Bracket.
- Tighten the Adjusting Screws firmly by hand. Make sure the radio and all accessories are securely mounted.

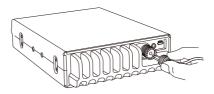


3.1 Antenna Installation

Before using this radio, please install an efficient and resonant antenna. Using an antenna that is correctly installed and tuned will enable excellent communication performance.

This radio requires an antenna impedance of 50 ohms, unbalanced.

- 1. Screw the antenna connector into the antenna jack.
- 2. Grounding of the antenna system is recommended to ensure best performance.



WARNING:

- ▲ NEVER transmit without a connected resonant antenna, or a suitable 50 ohm load being connected. Damage to the radio may result.
- ▲ To reduce the risk of electric shock, or radio damage, base station installations should include lightning protection devices.
- ▲ Ask your authorized dealer or an authorized service center for available antenna options.

3. INSTALLATION

3. A mobile antenna can be mounted in various locations, for example:



3.2 Power Connection

This radio requires a 13.8V (12V) DC power supply. Never connect the radio directly to a 24V DC battery system, as can be found in some vehicles. Please refer to the radio Specifications to ensure your 13.8V DC power supply can provide enough current (amps), otherwise poor performance may occur.

- 1. Connect the positive (red) power cable to the + terminal of the battery.
- 2. Connect the negative (black) power cable to the terminal of the battery.
 - ▲ Locate the power cable away from high temperature, moisture, and other electrical systems. Ensure it is installed where it cannot be damaged.
 - ▲ It is not recommended to use a vehicle cigar/cigarette lighter socket to power the radio, as it may not supply the correct voltage or current.
 - ▲ Do not remove the fuse holder from the cable.

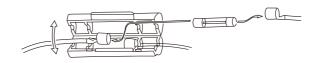
3.3 Replacing Fuse.....

This radio requires a 15A, 250V fuse.

If the fuse blows, determine the reason, then correct the problem.

After the problem is resolved, replace the fuse. If newly installed fuses continue to blow, disconnect the power cable and contact your authorized dealer or an authorized service center.

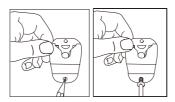
- 1. Pull the two fuse cover in opposite directions and open it.
- 2. Replace the blown fuse with a new one, and close the fuse holder.
- 3. Be sure to only use the correct fuse type, otherwise damage may occur.



3. INSTALLATION

3.4 Install Microphone Hanger

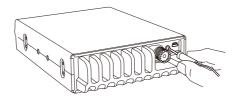
Choose a location which will not interfere with the driver. Use the supplied self-tapping screws and pads to install the hanger.



3.5 Install External Speaker

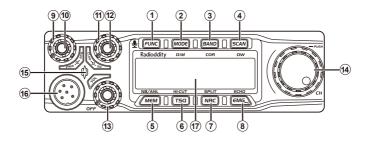
If using an external speaker, please choose an 8 ohm speaker with a 3.5mm mono (double cable) TS type plug.

- 1. Locate the external speaker in a suitable place.
- 2. Plug into the speaker jack.



4. GETTING ACQUAINTED

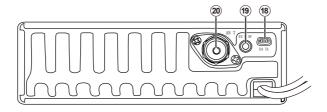
4.1 Front Panel.....



No.	Key	Functions	
1	FUNC	Function / Menu key	
2	MODE	Switch Mode: FM, AM, USB, LSB, CW, PA	
3	BAND	Switch Band: A-I / VFO mode	
4	SCAN	Scan / Scan add / Scan delete	
5	MEM	Use, Store or Delete memory channels	
6	TSQ	Activate / deactivate the CTCSS/DCS function	
7	NRC	Activate / deactivate the NRC function	
8	EMG	Emergency Channel; Keypad lock	
9	PWR	RF Power Control	
10	RFG	RF Gain Control	
11	SQ	Squelch Control	
12	CLAR	SSB/CW Clarifier Control	
13	VOL / OFF	Power On/Off; Volume Control	
14	CH / PUSH	Channel Switch; PUSH key	
15		RX/TX Indicator	
16		Microphone Jack	
17		LCD Display	

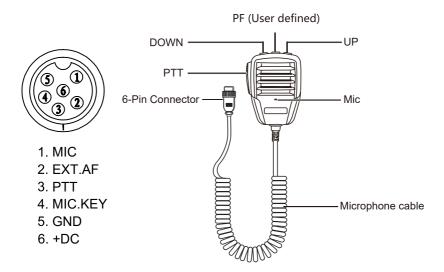
4. GETTING ACQUAINTED

4.2 Rear Panel



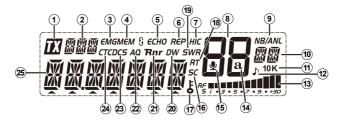
No.	Functions
18	PC Cable Jack
19	External Speaker Jack
20	Antenna Jack

4.3 Microphone



4. GETTING ACQUAINTED

4.4 LCD Display



1	<i>TX</i>	Appears during transmit (TX)	
2		Displays the working mode	
3	EMG	Appears when using Emergency channels	
4	МЄМ	Appears when using Memory channels	
5	<i>ЕСНО</i>	Appears when Echo function is ON	
6	REP	Appears when Repeater Offset function is ON	
7	HIC	Appears when Hi-Cut function is ON	
8	88	Displays the channel number	
9	NB/ANL	Appears when Noise Blanker / ANL is ON	
10		Displays the Band name	
11	10K	Appears when +10Khz function is ON	
12	>	Appears when the Roger Beep function is ON	
13	RF	Display of the TX/RX signal strength	
14	a	Not in use	
15	业	Appears when the VOX function is ON	
16	SC SC	Appears when the Scan function is ON	
17	£	Appears when the Keypad Lock function is ON	
18	RT	Appears when the SSB/CW clarifier is enabled	
19	SWR	Appears when the SWR level indication is enabled	
20	DW	Appears when Dual Watch function is ON	
21	Rnr	Appears when NRC Noise Reduction function in ON	
22	AQ	Appears when ASQ is enabled	
23	DC5	Appears when DCS is enabled	
24	стс	Appears when CTCSS is enabled	
25		Displays the Frequency and Channel information	

5. HOW TO USE YOUR RADIO

5.1 OFF/ON Radio

- 1. Turn **VOL** clockwise to switch the radio ON, the radio may emit a beep (if the BEEP Prompt function is enabled). The LCD display will show a frequency or a channel number.
- 2. Turn VOL anti-clockwise to switch off the radio OFF.

5.2 Volume Control

When the radio is turned on, turning **VOL** clockwise will increase the Volume level. Turning **VOL** anti-clockwise will reduce the Volume level. Adjust the volume during communication to get suitable level. *Note: On-screen display of the level can be enabled/disabled with PC software.*

5.3 RF Power Control

When the radio is transmitting, turn **PWR** outer shaft to adjust power. Turn it clockwise to increase power, anti-clockwise to reduce power. *Note: On-screen display of the level can be enabled/disabled with PC software.*

5.4 RF Gain Control

When the radio is receiving, turn **RFG** inner shaft to adjust RF gain. Turn it clockwise to increase gain, anti-clockwise to reduce gain. *Note: On-screen display of the level can be enabled/disabled with PC software.*

5.5 SQUELCH Control

When the radio is standby, turn **SQ** outer shaft clockwise to adjust squelch level. The LCD displays **SQ: XX**. (XX represents the squelch level, total 1-36 levels). *Note: Onscreen display of the level can be enabled/disabled with PC software.*

5.6 SSB Clarifier Control

When the radio is transmitting or receiving, turn **CLAR** inner shaft to adjust USB/LSB/CW TX or RX frequency. Turn it clockwise to increase frequency, or anticlockwise to reduce frequency. *Note: See Menu items #15 and #16 for CLAR* settings.

5.7 Channel Selection

When the radio is in channel mode, turn channel knob to select desired channel. Clockwise to increase, and anti-clockwise to reduce the channel number.

5.8 Frequency Control

- 1. When in channel mode, press [PUSH] key to temporarily adjust the VFO frequency.
- 2. When the frequency is flashing, press [PUSH] again to adjust frequency step size.
- **3.** When the desired frequency digit/step is flashing, turn **CH** clockwise to increase frequency, or anti-clockwise to reduce frequency.

Note: In channel mode, changing the VFO frequency is temporary, and is not saved to memory. The frequency will return to the default programmed channel after after changing channels.

6. KEYPAD FUNCTION

6.1 MEM or ANL/NB

6.1.1 Using memory channels:

- Short press MEM to enter memory channel, turn CH to choose memory channel. M1-M99, (total of 99 memory channels).
- 2. Short press / MEM again to exit memory channel mode.

6.1.2 Store/Delete memory channels:

1. Store memory channel:

When the radio is not in memory channel mode, choose the frequency to be stored, and hold MEM enter storage mode, the channel number flashes. Turn the CH switch to choose the location to be stored (M1-M99), then hold MEM until the channel number stops flashing. The memory is stored.

2. Delete memory channel:

In memory mode, hold MEM for over 2 seconds, the memory channel number flashes, turn the **CH** switch to choose the memory to be deleted, then hold MEM until the channel number stops flashing. The memory is deleted.

6.2 ANL/NB

Press FUNC + [NB/ANL] key to enable NB/ANL function. The "NB/ANL" icon will appear on the LCD display. Press the key repeatedly to switch on/off the function.

6.3 MODE or DIM.....

6.3.1 MODE

Short press MODE key to choose the mode FM-AM-USB-LSB-CW-PA.

Note: Modes can be enabled and disabled using the PC software.

6.3.2 DIM

Press FUNC+MODE key to adjust the backlight dimmer / brightness.

6.4 BAND or COLOR

6.4.1 BAND

Short press (BAND) key to choose band A-B-C-D-E-F-G-H-I.

6.4.2 COLOR

Press FUNC + EAND key switch LED backlight color, repeat this operation to switch between different color backlights.

6.4.3 VFO

Long press (BAND) key to turn on the VFO function. The LCD displays "VF".

6. KEYPAD FUNCTION

6.5 FUNC.....

- Long press FUNC for 2 seconds to enter the main Background Function menu (See section "9. BACKGROUND FUNCTION MENU OPERATION").
- Short press FUNC, "FUN" will appear at the top left of LCD display. Press [PUSH] to enter the Function menu list. (See section "7. CHANNEL FUNCTION MENU OPERATION").

6.6 SCAN or DW.....

6.6.1 SCAN

- 1. Short press [SCAN] to start scan function, " SC " flashes on the LCD.
- 2. In scan mode, turning the Channel switch will change the scan direction.
- 3. Short press (SCAN) again to exit scan.

Add/delete scan list

In channel mode, Long press SCAN for over 2 seconds to add or delete a channel from scan list.

- 1. When LCD displays " 5c ", the present channel is added to the scan list.
- When LCD does not display " 5C ", the present channel is not added to the scan list.

Note: This function is equal to the CHANNEL FUNCTION menu item, No.06.

6.6.2 DW

Press FUNC + SCAN key to turn on Dual watch function, LCD displays " **DW** "; Repeat this operation to switch ON/OFF the DW function.

6.7 TSQ or HI-CUT

6.7.1 TSQ

Short press so key to enable the CTCSS/DCS function, repeat this operation to switch ON/ OFF the function. Long press so key to quickly enter the CTCSS/DCS function setting.

6.7.2 HI-CUT

Press FUNC + TSO key to turn on HI-CUT function, LCD displays " HIC"; Repeat this operation to switch ON/OFF the function.

6. KEYPAD FUNCTION

6.8 NRC or SPLIT

6.8.1 NRC

Short press MRC key to start the RX noise reduction function. Repeat this operation to switch ON/OFF the function.

Short press [PTT]+ NRC key to start the TX noise reduction function. Repeat this operation to switch ON/OFF the function.

Long press (NRC) key to quickly enter the noise reduction level setting menu.

6.8.2 SPLIT

Press $\overline{\textit{FUNC}}$ + $\overline{\textit{NRC}}$ key to turn on SPLIT function, LCD displays " $\overline{\textit{REP}}$ "; Repeat this operation to switch ON/OFF the function.

Note: Refer to Menu items for additional TX Repeater SPLIT / Offset settings.

6.9 EMG

Choose EMG channel:

Short press Emergency channel, LCD displays "EMG".

- 1. Short press EMG_ once to choose CH9;
- 2. Short press EMG again to choose CH19;
- 3. Short press MG again to return to last normal channel.

Note: See Menu item #20 and #21 for EMG channel settings.

Keypad Lock Function:

- 1. Long press EMG_ to lock keys, LCD displays "\(\frac{1}{6}\)";
- 2. Long press EMG_ again to unlock the keys.

Note: When this function is turned on, only the [PTT] button is valid.

7. CHANNEL FUNCTION MENU OPERATION

- 1. Press FUNC, the top left of LCD displays "FUN", Press [PUSH] to enter the menu list;
- 2. Turn Channel switch to select menu No.1- No.7;
- 3. Press [PUSH] to choose the menu to modify;
- 4. Turn the Channel switch to modify the menu options;
- 5. Press [PUSH] to return to the previous menu. Press any other key or wait 5 seconds, and the menu will exit and the modified settings will be stored.

No.	Function	LCD Display	Values and Descriptions	
1	Busy Channel Lockout	<u> </u>	OFF: Disable Busy Channel Lockout function; ON: Enable Busy Channel Lockout function; Default: OFF.	
2	Repeater Offset Direction	REP	REP+: Enable offset + direction function, TX frequency > RX frequency; REP-: Enable offset - direction function, TX frequency < RX frequency; OFF: Disable offset direction function. Default: OFF.	
3	R-CDC	R[][CTCSS/DCS: RX setup OFF: Turn off CTCSS/DCS function; CTCSS: 67.0Hz~250.3Hz, Total 38 tones; DCS: D023N-D754N, Total 104 codes; Default: OFF Note: Press SCAN key to start CTCSS/DCS scanning.	
4	T-CDC	⁰⁴ 7[][CTCSS/DCS: TX setup OFF: Turn off CTCSS/DCS function; CTCSS: 67.0Hz~250.3Hz, Total 38 tones; DCS: D023N~D754N, Total 104 codes; Default: OFF	
5	C-CDC	C-CIC	CTCSS/DCS: RX+TX setup OFF: Turn off CTCSS/DCS function; CTCSS: 67.0Hz~250.3Hz, Total 38 tones; DCS: D023N~D754N, Total 104 codes; Default: OFF Note: Press SCAN key to start CTCSS/DCS scanning.	
6	Add/delete Scan list	SEAN	ADD: LCD displays "SC", present channel is added to scan list. DEL: LCD does not display "SC", present channel is not added to scan list. Default: OFF	

7. CHANNEL FUNCTION MENU OPERATION

7	Public Data	[P]	OFF: Choose independent channel menu; ON: Choose public channel menu; Default: ON Note: When OFF is selected, additional hidden Public channel menu items 8-13 will appear. These are the same as shown in 'Section 8'.
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Note: **Public Data** settings can be used to enable saving of individual settings (e.g. Mode, NB, etc) per individual channel.

For example:

- Channels with **PD=OFF** will remember the last used mode and settings, individually. When you return to the channel later, the last used mode and settings will be recalled.
- Channels with **PD=ON** will use the mode and settings from the global PUBLIC settings (e.g. if the radio is set to FM mode and NB, then all channels with PD=ON will follow this last used global PUBLIC mode and setting.

PC Software can also be used to configure the PUBLIC DATA option for individual channels, bands, or to apply these settings globally.

8. PUBLIC DATA FUNCTION MENU OPERATION

- 1. Hold [PUSH] for 2 seconds to enter the Public Data menu list;
- 2. Turn the Channel switch to select menu 1-6;
- 3. Press [PUSH] to choose the menu to modify;
- 4. Turn the Channel switch to modify the menu options;
- Press [PUSH] to return to the previous menu. Press any other key or wait 5 seconds, and the menu will exit and the modified settings will be stored.

No.	Function	LCD Display	Values and Descriptions
1	HI-CUT	н <u>іси</u> т	OFF: Disable HI-CUT function; ON: Enable HI-CUT function; Default: OFF
2	NB/ANL	JAREN JAREN	OFF: Disable NB/ANL function; ON: Enable NB/ANL function; Default: OFF
3	ЕСНО	ECHO	OFF: Disable ECHO function; ON: Enable ECHO function; Default: OFF
4	10KHz	1 <u>0</u> 1KHZ	OFF: Disable +10KHz function; ON: Enable +10KHz function; Default: OFF
5	ROGER	⁰⁵ R06ER	OFF- 5, Total 6 options. Default: OFF, (RB Disabled)
			BOT: Press PTT to send DTMF encode;
			EOT: Release PTT to send DTMF encode;
			CALL: Hold PTT+EMG to send DTMF
6	DTMF PTT	05 7(7 M)	encode;
	ID	ĪTMF	Note: If the M1-M16 memory storage has
			no PTT ID's set, the DTMF function will be
			defaulted to OFF. DTMF groups can only be
			selected once they have been programmed.

- 1. Hold [MENU] for 2 seconds to enter the Background Function menu list;
- 2. Turn the Channel switch to select menu 1-37;
- 3. Press [PUSH] to choose the menu to modify;
- 4. Turn the Channel switch to modify the menu options;
- 5. Press [PUSH] to return to the previous menu. Press any other key or wait 5 seconds, and the menu will exit and the modified settings will be stored.

No.	Function	LCD Display	Values and Descriptions	
1	KEY.BEEP	K <u>EABEE</u> b	1-5,OFF, Total 6 levels available. Default: 03.	
2	LCD TX DISPLAY	INIIL	OFF: Displays TX frequency when in TX; SWR: Displays SWR value when in TX; TOT: Displays TOT remaining time when in TX; DC: Displays DC voltage when in TX; Default: OFF.	
3	STEP	57EP	Adjust the default step size in VFO mode. Options: 10Hz, 100Hz, 1KHz, 5KHz, 10KHz, 100KHz, 1MHz Default: 1KHz.	
4	MIC.GAIN	MICGAIN	1-45, Total 45 levels of Microphone Gain available. Default: 33.	
5	MIC.TYPE	MICTUPE	ELEC: Electret Microphone DYNA: Dynamic Microphone Default: ELEC.	
6	AM.NPC	OS AMNP[OFF: Disable AM NPC function. ON: Enable AM NPC function. Default: OFF.	
7	VOL.PATH	VOLPATH	MAIN: The VOL knob controls the internal speaker volume; MIC.JACK: The VOL knob controls the microphone jack output volume; BOTH: The VOL knob controls both the internal speaker and microphone jack output volume; Default: MAIN	

8	Monitor Gain (Talkback)	NDGSET	1-32, OFF, Total 33 levels available; Default: OFF (Disable NOG function)	
9	ECHO volume level setting	ECHO-L	1-32, Total 32 levels available; Default: 28	
10	ECHO delay time setting	ЕЁНОТ	1-32, Total 32 levels available; Default: 28	
11	тот	TÜTSET	1-600s, OFF, Total of 10 minutes available; Default: 180s	
12	SWR Protection	TXZWA	OFF: Disable the SWR Protection function; ON: Enable the SWR Protection function; Default: ON	
13	Voltage Protection	TÜESET	OFF: Disable the Voltage Protection function; ON: Enable the Voltage Protection function; Default: ON	
14	Scan Type	SËNTYPE	SQ: Squelch based scan function; TI: Time based scan function; Default: SQ	
15	Clarifier	CL'ASET	OFF: Disable clarifier adjustment; R: Enable RX frequency adjustment; T: Enable TX frequency adjustment; RT: Enable both RX and TX frequency adjustment; Default: R	
16	Clarifier Freq Range	ELAFRO	500Hz: adjustable range ±500Hz; 5KHz: adjustable range ±5KHz; Default: 500Hz	
17	Dimmer	IIMSET	1-5, 5 backlight dimmer levels available; Off: Turn off the backlight; Default: 5	
18	Backlight Color	EOL OR	WHITE, BLUE, GREEN, YELLOW, RED, PURPLE, CYAN Default: WHITE	
19	DW Channel	INSET	Set the Dual Watch channel, mode and band: Turn channel knob to change channel, press MODE to choose the mode, press BAND to choose the band.	

20	EMG1 Channel	EMBEH I	Set Emergency Channel 1 and its mode. Turn channel knob to choose the channel, press MODE to choose the mode.	
21	EMG2 Channel	ЕМБЕН2	Set Emergency Channel 2 and its mode. Turn channel knob to choose the channel, press MODE to choose the mode.	
22	TX Repeater Shift	²² X.REP	100Hz-5MHz, Frequency Shift/Offset range. Default: 100KHz	
23	ASQ Level	#2 <u>0</u>	01-09: Total of 9 Automatic Squelch levels; OFF: Turn off ASQ Default: 05.	
24	vox	-24 1/∐X	OFF: Disable VOX function; ON: Enable VOX function; Default: OFF	
25	VOX Sensitivity	²⁵ 1∕ [] XL	01-09, Total of 9 VOX sensitivity levels; Default: 03	
26	VOX Delay Time	^{₹5} ''∐X Ţ	01-09, Total of 9 VOX Delay Time levels; Default: 03	
27	VOX Speaker	V [] X <u>S</u> PK	OFF: VOX PTT is disabled when squelch is open; ON: VOX PTT is enabled when squelch is open; Default: OFF	
28	RX Noise Reduction Level	^{≥8} R×NR	01-05: Total of 5 levels for RX noise reduction; OFF: Turn off RX noise reduction; Default: OFF	
29	TX Noise Reduction Level	ZS XNĀ	01-05: Total of 5 levels for TX noise reduction; OFF: Turn off TX noise reduction; Default: OFF	
30	FM Deviation	FMJEV	2K: 2KHz FM deviation 4K: 4KHz FM deviation Default: 2K	

31	SSB TX Audio	I INE	HI 4K: 4KHz SSB audio bandwidth; LO 3K: 3KHz SSB audio bandwidth; Default: HI 4K	
32	CW Volume (Sidetone)	EWJEEP	O1-63: Adjusts the CW Sidetone level (volume); OFF: CW Sidetone disabled; Default: 31	
33	CW FREQ	EWFRED	300Hz-3KHz: This menu is to select CW Sidetone; frequency. The frequency step is 10Hz; Default: 1050Hz	
34	AGC (S-Meter Response)	AGESET	SLOW: AGC SLOW response; FAST: AGC FAST response; Default: SLOW	
35	User Define PF Key	PFKEA	A total of 16 PF key functions are available. See 'Section 10. SELF DEFINE PF KEY' for options. Default: INDIC	
36	DTMF Encode	35 <u>I</u> ITMF	S TIME: DTMF transmit time; FDELAY: First digital delay time; C TIME: Pre-carrier time; *# TIME: * and # delay time; D CODE: D code setting time; TXDIS: Display setting for DTMF transmit; MEM: DTMF encode storage list; Note: In the DTMF encode storage list (M1-M16), press PUSH to edit DTMF code, then turn channel knob to choose desired value. Press PUSH again to edit next list. Hold PUSH to store any chnages and exit back to the main menu.	
37	Reset	RESET	OPT: Settings/Functions reset to defaults; ALL: Channels and Settings/Functions reset to defaults; Default: OPT	

10. SELF DEFINE PF KEY

- 1. Hold [MENU] for 2 seconds and enter the Background Function menu #35 PF.KEY;
- 2. Press [PUSH] to choose the menu to enter modify mode;
- 3. Turn the Channel switch to modify the PF.KEY menu options;
- **4.** Press [PUSH] to return to the previous menu. Press any other key or wait 5 seconds, and the menu will exit and the modified settings will be stored.

No.	LCD Display	1st Function (PF Short Press)	2nd Function (PF Long Press)
1	vox	VOX ON/OFF	Enter VOX setting menu
2	2 VFO VFO ON/OFF		Enter STEP setting menu
3	NB.ANL	NB.ANL ON/OFF. See below: → NB → ANL → ANL+NB → OFF	
4	10K	+10K ON/OFF	
5	ECHO ON/OFF		Enter ECHO setting menu
6	HI-CUT HI-CUT ON/OFF		
7	CALL	DTMF ON/OFF	Enter DTMF setting menu
8	CTCSS/DCS ON/OFF - If current channel no CTCSS DCS, the LCD will show "error"		Enter C-CDT setting menu
9	ASQ	Enter ASQ level setting menu	
10	MIC.GAIN Enter Mic Gain setting menu		
11	AM.NPC	AM TX NPC ON/OFF	
12	RXNR	RXNR ON/OFF	Enter RXNR setting menu

10. SELF DEFINE PF KEY

13	TXNR	TXNR ON/OFF	Enter TXNR setting menu
14	FM.DEV	Choose FM Deviation level	
15	TONE	Choose SSB TX bandwidth	
16	INDIC	Choose LCD meter display	When set to SWR, long press enters SWR setting menu.
17	CH.PUSH	Choose frequency STEP size	Enter Public Setting PD menu
18	AGC.SET	Choose AGC FAST/SLOW speed	

11. SPECIFICATIONS

GENERAL			
Frequency Range	28.000-29.700MHz (Programmable)		
Frequency Band	A/B/C/D/E/F/G/H/I + VFO		
Channel	40 channels (programmable) in each band		
Frequency Control	Phase-Locked-Loop Synthesizer		
Frequency Step	10Hz,100Hz,1KHz,5KHz,10KHz,100KHz,1MHz		
Frequency Tolerance	±5.0 ppm		
Temperature Range	-20℃~ +50℃		
Microphone	With Push-to-Talk / UP / DN / PF and coiled cord		
Input Voltage	13.8VDC		
	252(L) x 158(W) x 48(H)		
Dimensions (in mm)			
Weight	1.27kg		
Antenna Connector	UHF, SO239		
	TRANSMITTER		
Power Output	AM: 80W(PEP) / FM:50W / SSB: 80W(PEP)		
Drain	15A (with modulation)		
Modulation	FM/AM/USB/LSB/CW		
Inter-modulation Distortion	SSB: 3rd order, more than -25dB; 5th order, more than -35dB		
SSB Carrier Suppression	55dB		
Unwanted Sideband	50dB		
Frequency Response	AM/FM: 300 to 3000Hz		
	SSB: 450 to 2500Hz		
Output Impedance	50ohms, unbalanced		
	RECEIVER		
	SSB: 0.25µV for 10dB(S+N)/N		
Sensitivity	AM:1.0µV for 10dB(S+N)/N		
Constantly	FM: 1.0µV for 20 dB (S+N)/N		
	(All at greater than 1/2 watt of audio output)		
Adjacent-Channel Selectivity	AM/FM: 60dB SSB: 70dB		
Image Rejection	More than 65dB		
IF Frequency	AM/FM: 10.695MHz 1st IF, 455KHz 2nd IF		
- Troquency	SSB: 10.695MHz		
RF Gain Control	45dB adjustable for optimum signal reception		
Automatic Gain Control(AGC)	Less than 10dB change in audio output for inputs from 10 to 100,000 microvolt.		
Squelch	Adjustable; threshold less than 1.0µV. Automatic Squelch Control (AM/FM) 1.0µV		
Audio Output Power	3 watts into 8 ohms		
Frequency Response	AM/FM: 300 to 3000Hz SSB: 450 to 2500Hz		
Built-in Speaker	8 ohms, round.		
Duiit-iii Speakei	8 ohms, round.		



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