



TITAN

10 METRE MOBILE TRANSCEIVER

USER MANUAL



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NOTICE

It is recommended to carefully read this owner's manual before using the product. This will also help the user to prevent using the radio in violation of the regulations valid in the country where the product is used, as well as to avoid any possible interferences with other services.

This radio is an Amateur Radio HF transceiver, designed to work on the 28 MHz frequency band reserved to Amateur Radio communication. This transceiver has been manufactured and factory programmed, in order for the user to operate the radio immediately after purchase. The radio covers the 28 MHz (10512-Meter) Amateur Radio HF frequency band (frequency range 26.000-29.700 MHz). The manufacturer is not responsible any modification to the hardware or software of the product, which might possibly cause the radio to operate illegally and/or out of this frequency range.

Features, specifications, and availability of optional accessories are all subject to change without notice.

Our Thanks to You

Thank you for purchasing our radio. Properly used, this product will give you many years of reliable service. The radio is a 10-Meter band Amateur Radio transceiver using advanced hardware and software design radio which provides you with top performance. With the use of SMT technology to guarantee the best stability, reliability and unprecedented quality.

IMPORTANT

READ ALL INSTRUCTIONS

Carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL

This instruction manual contains important operating instructions for the T-RADIOVER.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ WARNING	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

PRECAUTIONS

WARNING! NEVER connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

WARNING! NEVER operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

NEVER connect the transceiver to a power source of more than 13.5 V DC. This will damage the transceiver.

NEVER connect the transceiver to a power source using reverse polarity. This will damage the transceiver.

NEVER cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting the transceiver may be damaged.

NEVER expose the transceiver and microphone to rain, snow or any liquids. The transceiver and microphone may be damaged.

NEVER operate or touch the transceiver and microphone with wet hands. This may result in an electric shock or damage the transceiver and microphone.

NEVER place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury.

DO NOT push the FTT when not actually desiring to transmit.

DO NOT allow children to play with any radio equipment containing a transmitter.

DO NOT operate the transceiver for extended periods without running the vehicle's engine. The transceiver's power consumption may soon exhaust the vehicle's battery.

DO NOT use or place the transceiver in direct sunlight or in areas with temperatures below -10°C or above +60°C.

DO NOT set the transceiver in a place without adequate ventilation. Heat dissipation may be affected, and the transceiver may be damaged.

DO NOT use the chemical agents such as benzene or alcohol when cleaning, as they can damage the transceiver's surfaces.

1. WHERE AND HOW TO MOUNT YOUR RADIO

- You should choose the most appropriate setting from a simple and practical point of view.
- Your radio should not interfere with the driver or the passengers.
- Remember to provide different wires for passing and protection (e.g. power, antenna, accessory cabling) so that they do not in any way interfere with the driving of vehicles.
- To install your equipment, use the cradle (1) and the self-tapping screws (2) provided (drilling diameter 5 mm). Take care not to damage the vehicle's electrical system while drilling the dash board.
- Do not forget to insert the rubber joints (3) between the radio and its support as these have a shock-absorbing effect which permits gentle orientation and tightening of the set.
- Choose where to place the microphone support and remember that the microphone cord must stretch to the driver without interfering with the controls of the vehicle.

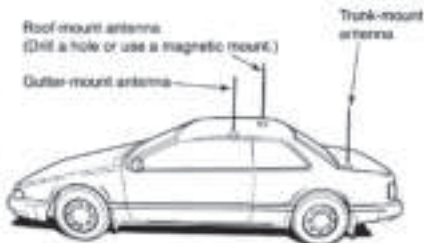


ANTENNA INSTALLATION

• Antenna location

To obtain maximum performance from the transceiver, select a high-quality antenna and mount it in a good location.

A non-radial antenna should be used when using a magnetic mount.



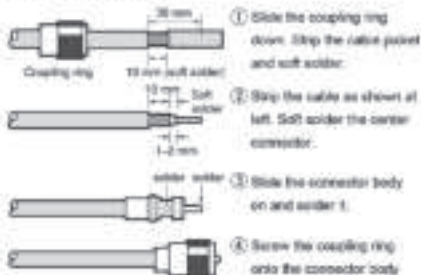
ANTENNA INFORMATION

For radio communications, the antenna is of critical importance, to maximize your output power and receiver sensitivity. The transceiver accepts a 50 Ω antenna and less than 1:1.5 of Voltage Standing Wave Ratio (VSWR). High SWR values not only may damage the transceiver

Antenna connector

The antenna uses a PL-259 connector.

PL-259 CONNECTOR



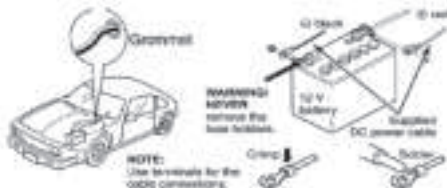
NOTE: There are many publications covering proper antennas and their installation. Check with your local dealer for more information and recommendations. Connect a 50Ω antenna with a PL-259 connector and a 50 Ω coaxial cable.

Battery connection

WARNING NEVER remove the fuse holders from the DC power cable.

DO NOT use the cigarette lighter socket for power connection. Attach a rubber grommet when passing the DC power cable through a metal plate to prevent a short circuit.

Connecting to a DC power source

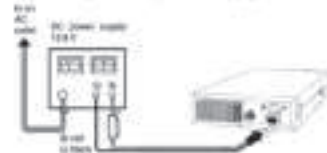


DC power supply connection

WARNING NEVER remove the fuse holders from the DC power cable.

Use a 13.8 V DC power supply with at least 10 A capacity. Make sure the ground terminal of the DC power supply is grounded.

Connecting to a DC power supply



CONTENT OF THE PACKAGING

Please check that all the following items are contained in the packaging:

Main unit (transceiver)

•DC power cord with fuse holder and fuse

•Dynamic microphone

•Car mounting bracket

•Car mounting bracket accessories (hardware, knobs, etc.)

•Microphone bracket

•Owner's manual

• one connect cable from microphone to back side of radio

RESET FUNCTION (Resume Factory Default)

This Radio introduces RESET FUNCTION to prevent accidents and provide a solution for customers who changed some functions unconsciously and do not know how to resume normal settings. The Radio will resume factory default once this function is activated.

How to Operate:

Step 1: Power off the radio.

Step 2: Press and hold FUNC and CW keys at the same time, followed by powering on the radio.

Step 3: Release the two keys when LCD displays "RES". All former settings would be replaced by Factory Default value when LCD displays "REND" it will take about 10 seconds.

WARNING: All former settings would be replaced by Factory Default value after operating the RESET FUNCTION.

BAND

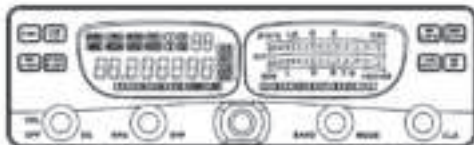
Band 10: 28.000-29.700MHz

Band 12H: 24.500-28.400MHz

Band HF: 25.615-30.100MHz

Band CB: EU MULTI BAND

Note: Only Band 10 allow to use in Europe



How to select Band

1. Press and hold "E382" "W3" "PTT of MIC speaker" keys and turn on the radio to enter the band select system.
2. Then use "CW/UP" keys to select band, finally push "PTT" button to enter.

How to operate when radio in the Menu status

Press "FUNC" key 2 seconds then the radio enter the menu system.

Then rotate the channels knob to change the menu, and when rotate CLAR knob, it is able to change the parameter at current menu.

Functions & Features and Operation

FUNCTIONS AND FEATURES

1. PA, OR, AM, FM, USE, LSE modes
2. SWR METER AND DUAL DIGITAL TUNE FOR CHANNEL DISPLAY
3. USE LOCK technology
4. Two Big LCD which displays frequency and all kinds of information
5. 8 bands in total, with 40 channels at most in each band to be programmed
6. Frequency Tuning Step can be 0.5%, 100Hz, 500Hz or 100KHz
7. Multiple CLARIFIER Operating Modes
8. ECHO Function
9. MIC GAIN AND RF GAIN AND RF PWR ADJUSTMENT
10. SCAN FUNCTION
11. RS FUNCTION
12. NBWAL FUNCTION
13. DV DUAL-WATCH FUNCTION
14. BEEP VOICE PROMPT
15. +100dB Function
16. SWR, SWR, DC Voltage display function
17. TOT function
18. HI-OUT FUNCTION
19. END CALL
20. SWR PROTECTION
21. POWER SUPPLIED VOLTAGE PROTECTION
22. Key-Lock Function
23. SQ Function
24. Noise Cancelling

BASIC OPERATIONS TO BE CARRIED OUT BEFORE USING YOUR SET FOR FIRST TIME (without transmitting or using the <<Push-To-Talk>> switch on the microphone)

- a) Connect the microphone;
- b) Check the antenna connections;
- c) Turn the set on by turning the volume knob clockwise;
- d) Turn the squelch knob to minimum;
- e) Adjust the volume to a comfortable level;
- f) Go to channel 2000 band by using either the UP or DN key on the microphone or the rotary knob.

ADJUSTMENT OF SWR (Standing Wave Ratio)

WARNING: This must be carried out when you use your radio for the first time (and whenever you re-position your antenna). The adjustment must be carried out in an obstacle-free area.

Adjustment with a built-in SWR meter or external SWR meter

- a) To connect the SWR meter:

Connect the SWR meter between the radio and the antenna as close as possible to the radio (use a maximum of 40cm cable).

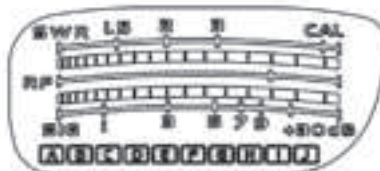
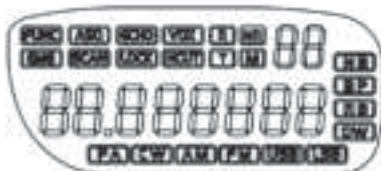
- b) To adjust the SWR meter:

- Set the radio to channel 2000 band in FM
- put the switch on the SWR meter to position CAL or TRU.
- Press the <<Push-To-Talk>> switch on the microphone to transmit.
- Bring the index needle  to by using the calibration key
- Change the switch to position SWR (reading of the SWR level)

The reading on the meter should be as near as possible to 1. If this is not the case, re-adjust your antenna to obtain a reading as close as possible to 1. (An SWR reading between 1 and 1.8 is acceptable).

- It will be necessary to re-calibrate the SWR meter after each adjustment of the antenna.

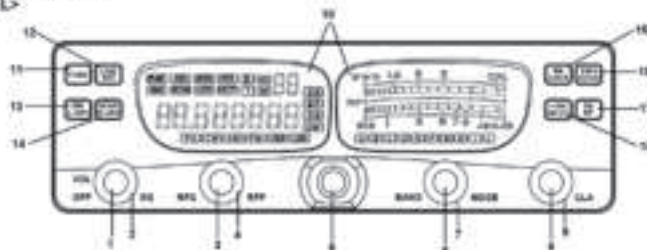
CONTROLS AND OPERATION



<LCD DISPLAY>

1. Eight digits display frequency and any other information.
2. FUNC : Appears after pressing FUNC key.
3. BEEP : Appears when BEEP function is started (optional).
4. SCAN : Appears after pressing SCAN key.
5. E, M : Appears after pressing E, M key.
6. EMG : Appears after pressing EMG key.
7. ASQ : Appears after pressing ASQ key (Optional).
8. ECHO : Appears after turn on ECHO mode.
9. DW : Appears after pressing DW key.
10. VOX : Appears after pressing VOX key (Optional).
11. TS : Appears when transmit the radio.
12. The first decimal point : Appears when current channel is filled with SCNN (S).
13. 1 : Appears when CLARIFIER function is FINE operation.
14. 2 : Appears when CLARIFIER FUNCTION is COARSE operation or RT operation.
15. Appears when CLARIFIER FUNCTION is transmitting frequency required.
16. When 16 display on LCD means the radio is MODE status, or the radio the radio on BAND status.
17. NBSAL : Appears when NBSAL function is started (optional).
18. HCUT : Appears when HI-CUT function is started.
19. SWR : Appears when SWR is used.
20. RF : Appears when RF is used.
21. PA, CW, AM, FM, LBS, LBS : Indicate different operating modes.
22. A, B, C, D, E, F, G, H, I, J are bands.
23. 58 shows the current channel number.

CONTROLS AND OPERATION <FRONT PANEL>



1. OFF/ON/VOLUME (Inner Dual Concentric)

Turn clockwise to switch on the radio and set desired volume level. Under normal operating state, the VOLUME control is used to adjust the output volume obtained either by the handset/speaker or the external speaker or the external PA speaker, if used.

2. SQUELCH (Outer Dual Concentric)

This control is used to cut off or eliminate receiver background noise in the absence of an incoming signal. For maximum receiver sensitivity, it is desired that the control be adjusted only to the point where the receiver background noise or ambient background noise is eliminated. Turn fully anticlockwise first slowly clockwise until the receiver noise disappears. Any signal to be received must now be slightly stronger than the strongest received noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard if a maximum clockwise setting.

3. RF GAIN (Inner Dual Concentric)

This switch is for adjusting sensitivity during reception. For long distance communications RF GAIN should be set to maximum. RF GAIN can be reduced to avoid distortion, when your correspondent is close by and when he does not have RF POWER. The normal setting of this function is so maximum (fully clockwise).

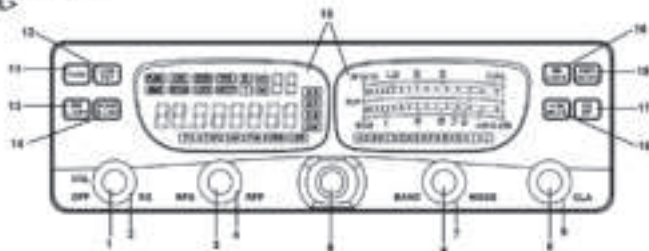
4. RF POWER (Inner Dual Concentric)

Adjustment of the output power is for AM and FM mode only. Reducing the power is allowed when communicating with a person who has no RF GAIN. The normal position of this function is set to maximum, fully clockwise.

5. CHANNEL SELECTOR

Rotate this switch to select any desired channel from eighty citizens band channels.

CONTROLS AND OPERATION <FRONT PANEL>



4. BAND SELECTION

Rotate this switch to select A, B, C, D, E, F, G, H, I, J based off operation.

7. MODE (PULSED/ANALOG/STILL/SH)

This switch allows selecting the modulation mode FM, CW, AM, PM, USB or LSB. This modulation mode has to correspond with the one of your counterpart. The mode selector changes the mode of operation of both transmitter and receiver simultaneously.

Amplitude Modulation (AM) - Communication on a band with noise and obstacles is really difficult (the most used)

Upper and Lower Side Band (USB-LSB): Used for long distance communications (subjected to the propagation conditions)

NOTED: PUSH THE SELECTOR TO SWITCH THE BAND OR MODE.
WHEN LCD DISPLAY "W" MEANS AT WIDE STATUS

B. CLARKE

This is frequency tuning knob which can be set as different modes (refer to CIA Specifications in Functions Menu for more details).

9. **PURCHASE**

This is PULSE key which can be set as different modes prior to PSON specifications under Functions Menu for more details.

19. LCD DISPLAY

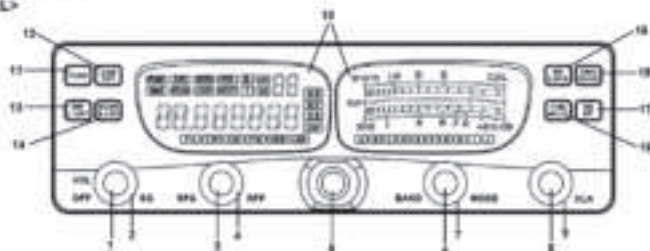
Display frequency, all kinds of information and icons.

14. PLUM

This is functional key. Press and hold this key for 2 seconds to enter into Function Menu (refer to Function Menu for more details).

Press FUNC key and other individual key to realize the second function indicated under the button. For example, press FUNC key followed by pressing PB key to realize the BP function. Press FUNC key followed by OFF to realize the LCD OFF function.

CONTROLS AND OPERATION «FRONT PANEL»



12. CONV TOT

This CON key is able to change LCD display color, the radio has seven colors, you can select them by this key.

FUNC = TOT it is able to switch the TOT function ON or OFF.

13. DW or LCD OFF

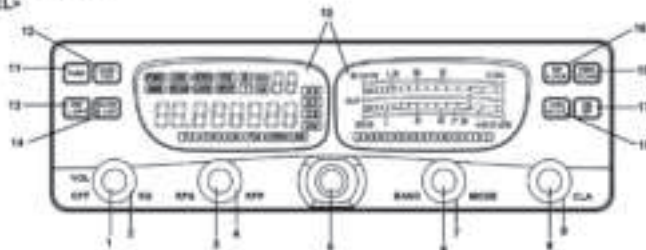
(1) The DW (dual watch) function allows automatic alternate monitoring of two channels. Refer to the following procedures to enable this function. To enable the DW function, firstly turn the SQ control clockwise until the background noise is cut out. Detect the first channel to be monitored by using the CHANNEL SELECTOR knob or the channel selector keys on the microphone. Press the DW key and the DW icon will flash on the LCD display. Secondly, follow the above procedures to select second channel to be monitored. Finally, press the DW key again and the two monitoring channels will be alternately indicated on the LCD. Radio will automatically

start monitoring (scanning) the two channels. When a signal is detected on one of the channels, scanning stops and it is possible to listen the communications on that channel. Press PTT to transmit on this channel. If there is no transmission or detected signal on that channel within 5 seconds (time to resume scanning can be programmed by IC software), radio will resume scanning. When the DW function is enabled, the DW icon appears on the LCD. To exit the DW function, press the DW key or the PTT key. The scan Type above is the SQ mode under SCA Selection in Function Menu. If TI mode is selected and valid signal is detected, the radio would still start scanning when it is time to resume scanning, whether there is signal or not in current channel.

(2) FUNC-DW

When this function is enabled, LCD display would be switched OFF (LCD OFF). Repeat the operation to switch ON/OFF the function.

CONTROLS AND OPERATION «FRONT PANEL»



14. SCAN OR S.LIST

(1) SCAN

Automatic Scanning of busy channels

Press the SCAN key to enable the SCAN function. Before enabling the SCAN function, firstly turn the SG control clockwise till the background color is red out. Then press the SCAN key, radio will automatically scan all channels continuously in the scan list and the SC icon will appear on the LCD. When a signal is detected on a channel, scanning stops on this channel. You can receive the calling, and also, run forward on this channel by pressing PTT key. If there is no transmission or detected signal on that channel within 5 seconds/time to resume scanning can be programmed by PC software, radio will start scanning again. To exit the SCAN function, press the SCAN key or the PTT key. The Scan Type above is the SG mode under SCAN Selection in Function Menu. If mode is selected and valid signal is

detected, the radio would still start scanning when it is time to resume scanning, whether there is signal exist in current channel.

(2) TUNING-SCAN

S.LIST (Scan ADD or Delete). Press FUNC+SCAN to delete current channel from scan list. The first digit on LCD would display. When Scan function is enabled, the radio would skip the deleted channel. Repeat this operation to ADD or Delete channels from scan list.

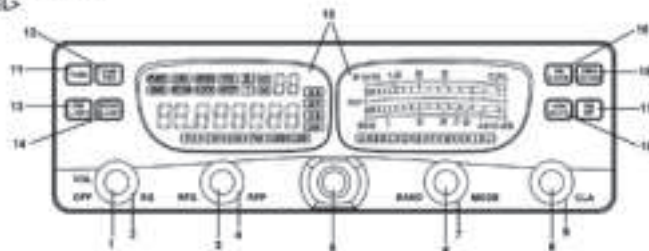
15. EMC

(1) EMC realizes Emergency Channel Call. When emergent situation happens, the radio would switch to the channel set in advance to communicate immediately. Then the "EMC" icon would display on the LCD. Press EMC key again to return to previous channel.

(2) FUNC+EMC

Press this key, it is able to open or close ECHO function.

CONTROLS AND OPERATION <FRONT PANEL>



10. MAIN/LOCK

(1) Press MAIN/LOCK key to enable MAIN/LOCK function with "MAIN/LOCK" icon appearing on the LCD display. Press the key repeatedly to switch on/off the function.

Note: Silence/Automatic Noise Limiter. These items allow reducing background noises and some reception interferences.

(2) FNC+MAIN/LOCK

Press FNC+MAIN/LOCK to realize the Keyboard Lock function. When this function is enabled, all keys are invalid except FTT, BAND SWITCH, and MODE SWITCH. When pressing any key except FTT, BAND SWITCH, MODE SWITCH, the LOCK icon will display on the LCD. These situations indicate that the keyboard has been locked.

Press FNC+MAIN/LOCK repeatedly to switch on/off the function.

17. +10KHZ or HI-CUT

(1) +10KHZ Press this key to shift frequency up by 10kHz.

When pressing this key, 10KHZ would appear on LCD and frequency of channel is shifted up by 10 KHZ. Repeat this operation to switch ON/OFF this function.

(2) FNC+ +10KHZ

Press FNC+10KHZ to realize HI-CUT function. Once this function is

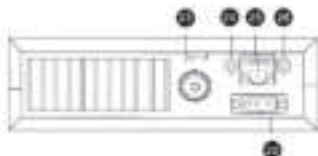
18. ROGER BEEP OR BEEP FUNCTION

(1) RS Press "RS" key to enable "ROGER BEEP" function with "RS" icon appearing on LCD display. Press the key repeatedly to switch on/off the function. When RS function is enabled, the radio will automatically transmit the audio signal at the end of your transmission. The listener can note easily that your transmission is over through the signal.

(2) FNC+RS Press FNC+RS to realize BP Function. It is a prompting function with "BP" icon appearing on LCD display. Speaker would emit a BEEP for prompting when press any key. Press FNC+RS repeatedly to switch on/off the function.

Controls & Operation - Function Menu Setup

<REAR PANEL>



22. POWER

Accept 12.8VDC power cable with built-in fuse (10 Amp) to be connected.

23. ANTENNA

Accept 50 ohm coaxial cable with a type PL-259 plug to be connected.

24. CW KEY

This jack is for Morse code operator. To operate, connect a CW key to this jack and place the MODE switch in the CW position (LCD display show "CW").

25. Microphone port

This port can be used for Microphone.

26. EXT SP or PA SP

EXT SP

Accept 4 to 8 ohm, 4 watt external speaker to be connected. When external speaker is connected to this jack, the built-in speaker is automatically disconnected.

PA SP

It is used to connect a PA speaker. Before operating PA, you must firstly connect a PA speaker to this jack.

FUNCTION MENU SETUP

The initial functions and parameter can be changed via the following settings and operations. Please read the following instruction before making any desired amendments.

To enter Function Menu under CW state, press and hold FUNC key for more than 2 seconds, and then release the FUNC key to enter into the Function Menu Setup. Under this condition, press FUNC key to select different functions menu, CHANNEL SELECTOR Switches to change the data of Function Menu.

(1) Echo-TIME



This menu is used to set the adjustment level by turning the "MODE" knob, there are "1-5 levels". This is to set the delay time of the echo.

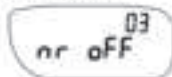
(2) Echo-"Depth"



This menu is used to set the adjustment level by turning the "MODE" knob, there are "1-5 levels". This is to set the depth of the echo.

Function Menu Setup

(3) NR (On/Off)



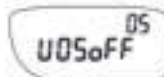
This menu is used to set noise reduction to be turned on or off by the "MODE" knob.

(4) NR LEVEL



This menu is used to set the noise reduction level from "1" to "6" adjusted by turning the "MODE" knob.

(5) UDS (Mute Switch)



This function will be treated as mute when the received volume is less than a certain level.

This menu is used to set the speaker volume to be turned on or off by the "MODE" knob.

(6) STP(Frequency Tuning Step)

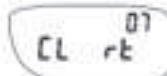


This menu is to set tuning step when adjusting frequency by MODE knob.

Options: 5 Hz, 100 Hz, 1 KHz, 10 KHz.

Default: 5Hz

(7) RT(transmitting and receiving)

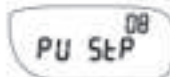


This menu is to set functions turned by CLA knob.

Options are as RT. When this option is selected, users can regulate the frequency of both transmitting and receiving. In tuning process, "2" icon will appear on the LCD.

Function Menu Setup

(8) PUS(PUSH Function Setting)



This menu is to set functions realized via PUSH knob. Options are as follows.

COA: When this option is selected press PUSH and turn CLARIFIER knob to realize COARSE function.

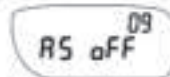
When pressing this key, "T" icon will appear on far left of the LCD. Under this condition rotate the CLARIFIER knob to change frequency of both transmitting and receiving.

T: When this option is selected press PUSH and turn CLARIFIER knob to change transmitting frequency. When pressing this key, "T" icon will display on the far left of the LCD. Under this condition rotate the CLARIFIER knob to change the transmitting frequency only.

STP: When this option is selected PUSH function will change Frequency Tuning Step of CLARIFIER knob. Press this key then the corresponding frequency bit would blink.

Default: STP

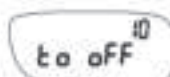
(9) ASQ(Automatic Squelch Control)



ASQ control setting. It has same function with AQ button on the microphone.

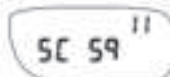
Default: OFF

(10) TOT (Time-Out-Time)



This menu is to turn on/off TOT time via MODE knob.

(11) SC Scanning Type Selection



This menu is to set Scan Type. Options are as follows:
SQ: When SQ is selected scan would stop when a valid signal is

detected. The radio would resume scanning after signal disappears for 5s.

T1: When T1 is selected, scan would stop when a valid signal is detected.

The radio would resume scanning 5 seconds later whether signal disappears or not.

Default: SQ

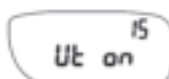
Function Menu Setup

(12) CW (SWR Protection)



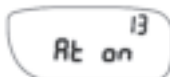
This menu is used to set SWR Protection to be turned on or off by the "MODE" knob;

(15) USB (USB SWR Protection)



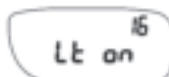
This menu is used to set USB SWR Protection to be turned on or off by the "MODE" knob;

(13) AM (AM SWR Protection)



This menu is used to set AM SWR Protection to be turned on or off by the "MODE" knob;

(16) LSB (LSB SWR Protection)



This menu is used to set LSB SWR Protection to be turned on or off by the "MODE" knob;

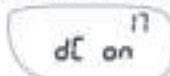
(14) FM (FM SWR Protection)



This menu is used to set FM SWR Protection to be turned on or off by the "MODE" knob;

Function Menu Setup

(17) TDC(Power Supplied Voltage Protection)

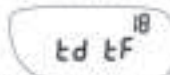


This menu is to choose whether to enable Power supplied Voltage Protection function or not.

ON: When ON is selected the radio will detect the supplied voltage. Once the voltage surpasses the voltage setup in advance, the radio would display "DC LO" or "DC HI" to remind you that the voltage is not in normal state. Meanwhile, the radio will prohibit transmitting and emit beep prompt.

OFF: When OFF is selected the Power Supplying Voltage is disabled. Default ON(DC10.5V-18V).

(18) TLD(Content displayed on the LCD when transmitting)



This menu is to set the content displayed on the LCD when transmitting. TF: When TF is selected LCD would display transmitting frequency when transmitting.

SR: When SR is selected LCD would display SWR value of antenna when transmitting, for example "1.2" on the LCD.

BAT: When BAT is selected LCD would display Supplied Voltage when transmitting, for example "13.8DC" on the LCD.

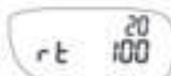
TOT: When TOT is selected LCD would display TOT remaining time when transmitting. And TOT would count down till remaining time is 0, for example "177" displayed on the LCD display. Default TF.

(19) RB (ROGER BEEP Frequency Setting)



This menu is to select frequency of Roger Beep. The frequency range is 300KHz-3KHz. The shift step is 10Hz. Default: 2000Hz.

(20) RBT(ROGER BEEP Holding Time)



This menu is to select Roger Beep Holding Time from 50ms-1000ms. The shift step is 50ms. Default: 500ms.

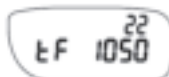
(21) CPT(CW transmission power)



This menu is to adjust the transmission power of the CW signal, ranging from level 1 to level 4. Default: 1.

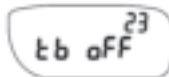
Function Menu Setup

(22) TON(Transmitting Single-Tone Frequency)



This menu is to select Transmitting Single-Tone Frequency from 300Hz-3KHz. The shift step is 10 Hz. Default: 1050Hz

(23) TALK BACK FUNCTION, on/off



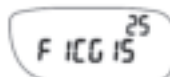
This menu is used to set TALK BACK FUNCTION to be turned on or off by the "MODE" knob;

(24) MIC gain level selection in AM mode



This menu is used to set MIC gain level selection in AM mode to be adjusted by the "MODE" knob;

(25) FM mode mic gain level selection



This menu is used to set MIC gain level selection in FM mode to be adjusted by the "MODE" knob;

(26) USB mode mic gain level selection



This menu is used to set MIC gain level selection in USB mode to be adjusted by the "MODE" knob;

(27) LSB mode mic gain level selection



This menu is used to set MIC gain level selection in LSB mode to be adjusted by the "MODE" knob;

(28) BEU



This menu is to set the volume of prompt voice. 4 grades in total. Default: 1

(29) SWR protection value setting



This menu is to select SWR protection value setting from 1.1 to 20. Default: 5.0

Specifications

GENERAL

Frequency	30 000 - 26 700 MHz (24 500 - 30 400 MHz) (*)
Frequency Bands	4B/C/D/E/F/G/H/I
Channels	40 Channels (programmable) in each band
Frequency Control	Phase-Locked-Loop Synthesizer
Frequency Step	50 kHz - 300 kHz - 1 kHz - 10 kHz
Frequency Tolerance	0.00%
Frequency Stability	0.001%
Temperature Range	-30°C to +50°C
Microphone	Plug-in Dynamic with PTT / LP / ON switch and coiled cord
Input Voltage	13.5V nominal / 15.0V max. / 11.7V min.
Current	Draw 5A (TX 4A Full Mod.) / 5A (SBS 30W PEP) 0.5A (RX Squelched)
Size / Weight	11.5 x 16.2 x 5.3 cm / 1.5 Kg
Antenna Connector	UHF - SO238

TRANSMITTER

RF output power	AM 12W FM/SSB/CW 40W
Modulation	High and Low level Class B Amplitude Modulation - AM Variable Capacitance Frequency Modulation - FM SSB - 2nd order, more than -25dB SB-order, more than -25dB
Inter-modul. Distortion	SSB - 2nd order, more than -25dB SB-order, more than -25dB
SSB Carrier Suppr.	55dB
Unwanted Sideband	50dB
Frequency Response	AM and FM: 450 to 2500 Hz
Impedance	50 Ohm, unbalanced

RECEIVER

Sensitivity (12dB Sinal)	-55dB: 0.25uV for 10dB (3+16%) at greater than 10W of audio output AM: 1.5uV for 10 dB (3+16%) at greater than 10W of audio output FM: 1.0uV for 20 dB (3+16%) at greater than 10W of audio output
Selectivity	AM/FM: 60dB at 3 kHz / 50dB at 90 kHz SSB: 50dB at 2.1 kHz / 60dB at 3.3 kHz
F Frequency	AM/FM: 10.000 MHz 1st IF, 455 KHz 2nd IF SSB: 10.695 MHz
Adjacent Channel	60dB AM/FM / 70dB SSB
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 100.00 uV Threshold less than 0.5uV (AM/FM only) 0.5uV Switchable
Squelch Adjustable	
Automatic Squelch Control	
RAI	Switchable
Noise Blanker	RF Type, effective on AM/FM and SSB
Audio Output Power	20 Watts 8 Ohm
Frequency Response	300 to 2500 Hz
Built-in Speaker	8 Ohm, round
External Speaker	8 Ohm, drives external speaker when connected (not included)





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