ELECTROPHONE

Model TX-550 Instruction Manual

Mobile 18-Channel 2-way CB radio AM/SSB Deluxe

General Description

Your TX-550 is an 18-channel AM/SSB CB transceiver, skillfully constructed by employing the latest frequency synthesizing technology.
The TX-550 features the following:
Compact, light weight, and suitable for mobile use.
Digital PLL frequency synthesizer.
Clarifier.
Noise blanker and noise limiter incorporated.
Compatible with three modes of operation, LSB, USB, or AM.
Lighted S/RF meter.
Digital LED channel readout.
Capable of public address operation.
Reversible ground polarity.
External speaker jack.
Deluxe detachable microphone.
All mounting brackets and hardware included.

Warranty

Standard Components Pty. Limited warrants this product to be free from defects in material and workmanship for a period of ninety days from the date of purchase.
We reserve the right to determine whether damage has been occassioned by accident, misuse or improper installation whereby the warranty would be void.
For under warranty service the equipment should be returned to your supplier with a full description of the fault. Only authorised service agents will be authorised to repair equipment under warranty and these charges would be accepted by the distributor.
Retailers or Suppliers who do not have an authorised service section must return this equipment to Standard Components Pty. Limited for under-warranty service.
If any authorised repair work has been attempted on the equipment, the guarantee will be void.
All equipment returned to the distributor for under warranty must be sent freight pre-paid.
Standard Components Pty. Limited reserves the right not to repair or replace during the under-warranty period free of charge output transistors which may have been damaged due to incorrect aerial installation.

Technical Specification

General

Frequency. 27.015 to 27.225 MHz.
Channels. 18.
Frequency Tolerance. ±0.005%.
Channel Composition. PLL [phase-locked-loop] synthesizer.
Operating Temperature Range. −30°C to +50°C.
Power Supply. 13.8 volts DC, negative or positive ground.
Mode of Operation. LSB, USB, AM.

Receiver

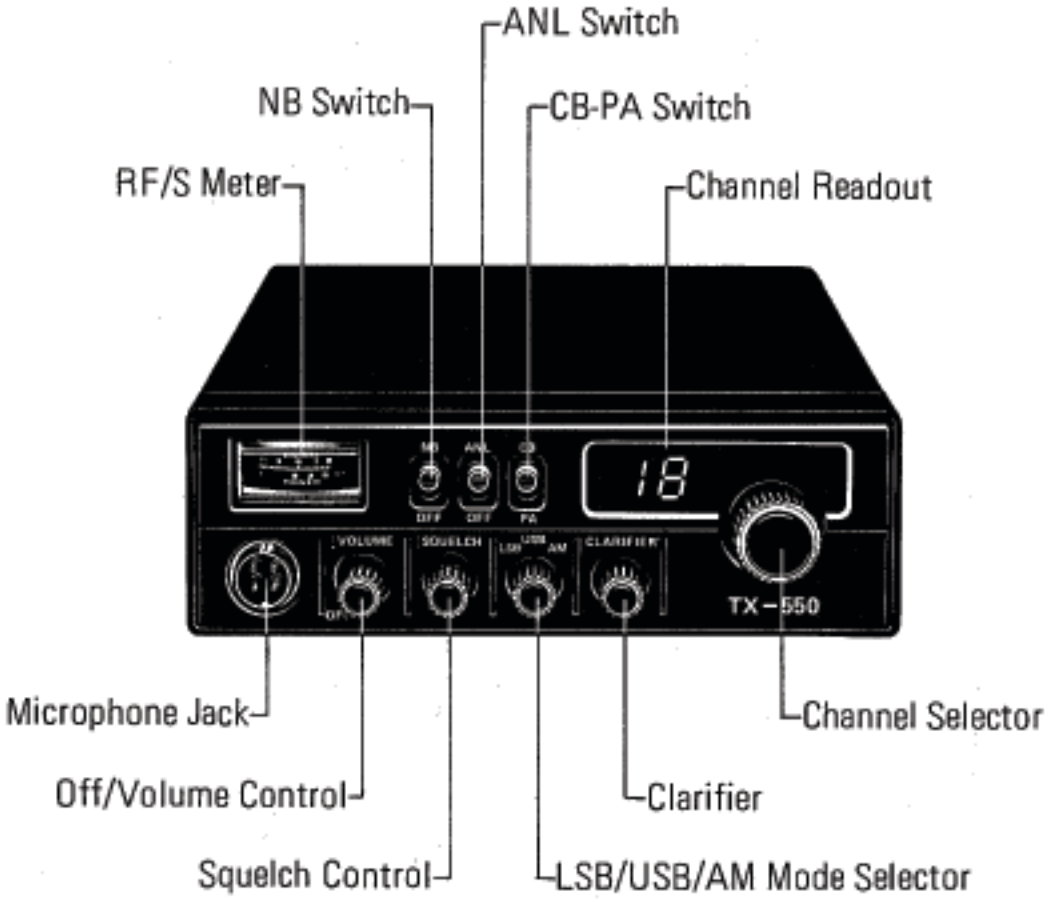
System. SSB. Single conversion superheterodyne. AM. Dual conversion superheterodyne.
Sensitivity. SSB. 0.25 microvolt for 10 dB S/N. AM. 1 microvolt for 10 dB S/N.
Selectivity. SSB. 2 kHz at 6 dB down. AM. 6 kHz at 6 dB down.
Clarifier. ±800 Hz range.
Audio Output. 3 watts at 8 ohms.
Squelch Range. SSB. 0.7 to 500 microvolts. AM. 1 to 500 microvolts.
IF. SSB. 10.695 MHz. AM. 1st; 10.695 MHz, 2nd; 0.455 MHz.

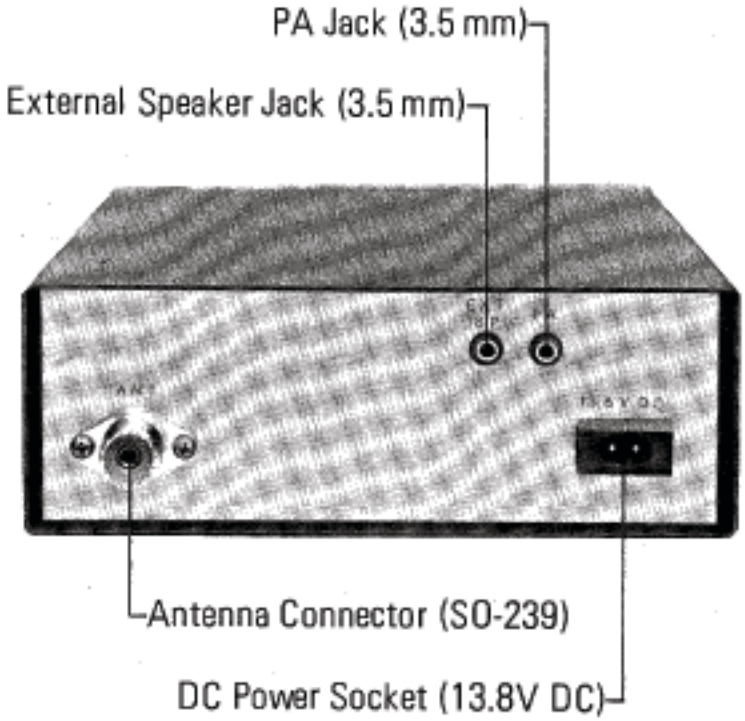
SSB Transmitter

Generation. Double balanced modulator with crystal latice filter.
RF Output Power. 12W PEP at 13.8V DC.
Carrier Suppression. More than 40 dB down.
Unwanted Side Band Suppression. More than 60 dB down.
Harmonic Suppression. More than 60 dB down.

AM Transmitter

RF Output Power. 4W at 13.8V DC.
Harmonic Suppression. More than 60 dB down.
Modulation. High level class B.


ANL Switch
NB Switch
CB-PA Switch
RF/S Meter
Channel Readout
18
TX-550
Microphone Jack
Off/Volume Control
Squelch Control
Clarifier
LSB/USB/AM Mode Selector
Channel Selector


PA Jack (3.5 mm)
External Speaker Jack (3.5 mm)
Antenna Connector (SO-239)
DC Power Socket (13.8V DC)

Control Functions

RF/S Meter. When receiving this gives the relative signal strength of incoming signals; when transmitting RF power output.

Clarifier Control. If a station received is not clear during AM reception, adjust this control for maximum S meter indication. During SSB reception, rotate this control so that the received signal sounds intelligible.

Channel Indicator. An LED digital readout to show the channel you desired. Turned off when operating the PA.

Channel Selector. Selects one of 18 channels.

CB-PA Switch. Your radio has been equipped with a PA (Public Address) amplifier system. Setting this switch to PA position actuates the PA system. Press the push-to-talk bar on the microphone and speak at a normal tone of voice, then your voice will be heard through the PA speaker connected to the PA SP jack on the rear panel. For normal CB operation, place the switch in CB position.

Squelch Control. Turn the knob clockwise until background noise disappears. Now you can hear signals without annoying background noises. Rotating the Squelch too far clockwise direction decreases reception sensitivity, and very weak station would not be received. Therefore, when you are in communication with a distant or weak station, rotate the Squelch all the way counterclockwise.

Volume Control/Power Switch. Turns the power on and controls the sound output from the speaker.

LSB/USB/AM Switch. Selects a mode of operation – LSB, USB, or AM.

NB Switch. If you encounter the impulse type noise interference, place this in NB position.

ANL Switch. Place in On (ANL) position if you encounter atmospheric noise interference.

DC Power Connector. Used for connecting the DC power cord supplied. See 'DC Power Connection' instructions. Do not force the DC power cord plug onto the pins. Align it properly to insert the connector.

PA SP Jack. Used for connecting the PA speaker (impedance: 8 to 16 ohm). Matches 3.5 mmϕ standard type phone plug. Insertion of an external speaker into this jack will automatically silences the built-in speaker.

Antenna Connector. Used for connecting the antenna and matches PL-259 type coaxial plug.

Mounting Instruction

First choose a location to be mounted. The location should be a place where is convenient to use the transceiver, and does not interfere with the driver. Usually, the underside of the instrument panel or dashboard of a vehicle will be selected. A special bracket for this purpose is supplied with the unit.

1 Drill three or four holes (diameter: about 3.6 mm or 1/8") to the location to be mounted.

2 Attach the bracket, using self-tapping screws and washers supplied.

3 A microphone hanger is also supplied with the unit. If necessary attach the bracket on a place close to the transceiver, using two screws included.

4 Secure the transceiver to the bracket by means of the large thumb screws and washers supplied.

DC Power Connection

This transceiver is designed to be operated from 12 volts DC battery, on either negative or positive ground system.

Power Connection for Negative Ground System.

1 Connect the **black** lead from the transceiver to the metal chassis ground of the vehicle or **negative** battery terminal.

2 Connect the **red** lead from the transceiver to any convenient hot **(positive)** side of the electrical system or **plus (+)** battery terminal.

Power Connection for Positive Ground System.

1 Connect the **red** lead from the transceiver to the metal chassis ground of the vehicle or **positive** battery terminal.

2 Connect the **black** lead from the transceiver to any convenient hot **(negative)** side of the electrical system or **minus (–)** battery terminal.

If you can not determine the electrical polarity in your vehicle, consult with your car dealer. However, when you can not obtain the necessary information, directly connect the **red** lead to the **plus (+)** battery terminal and the **black** lead to the **minus (–)** battery terminal, to avoid damaging the transceiver.

Antenna Connection

Warning. Before operating your transceiver, you must connect a proper antenna system. Operating the transceiver without an antenna or dummy load may cause damage to the expensive RF power transistors. The antenna is one of the most important factors in the operation of the transceiver with its full efficiency. An improper antenna may decrease reception sensitivity and lower the communication range. The CB antenna and its mounting method will largely depend upon the type of your vehicle, mounting position, etc. Also, the antenna may be different according to your needs – using your transceiver as a mobile or base station transceiver. We recommend you to consult with the dealer from which you purchased the transceiver or any other CB/amateur radio equipment supply shop. They will meet your specific needs.

Operating Instruction

Make sure your antenna system is connected to the antenna connector on the rear panel. Do not operate the transceiver without the antenna.

AM Reception

1 Connect the push-to-talk microphone to the mic jack.
2 Place the CB-PA switch to CB.
3 Turn the power on and rotate the Volume control to increase the sound level.
4 Rotate the Squelch control to 9 o'clock position.
5 Place the LSB/USB/AM switch in the AM position.
6 Select the channel you desire.
To transmit: Depress the push-to-talk button on the microphone and speak into the microphone at a normal voice, holding the microphone 3 to 6 inches from the mouth. Do not shout or move the microphone too close to your mouth.
To receive: Simply release the push-to-talk button.
7 Adjust the clarifier control for clearer reception.

SSB Reception

1 Turn the power on and rotate the Volume control to a proper sound level.

2 Place the LSB/USB/AM switch in the LSB or USB position in which clearer voice reception is obtained. If you want to communicate with the station transmitting in LSB mode, your transceiver must be set in the same mode (LSB) of operation. This also applys to USB operation. Then adjust the clarifier control slowly for clearest voice reception.

Transmission

1 To transmit depress the push-to-talk button on the microphone and speak at the microphone.

2 To receive, simply release the push-to-talk button.

Interference Noises

During reception, you may find that your transceiver will pick up interference noises which make the reception of weaker stations difficult. The most common source of these noises is the ignition system of your own vehicle, since your transceiver is placed relatively close to your ignition system (engine). In such a case, we recommend you to consult with your car dealer to eliminate the ignition noise. Usually the ignition noise will be suppressed considerably by using a proper radio suppression type high voltage ignition wire and suppressor resistor in the ignition system. (Most vehicles are equipped with this wire and resistor, but it may be necessary to check them for correct operation). Another method to suppress the noises is to use additional noise suppressor which is available at your local CB radio shops.

AUSTRALIAN 40/18 CHANNEL CONVERSION CHART

40 Ch.	Frequency	18 Ch.	Suggested Usage
1	26.965 MHz.	—	General A.M.
2	26.975 MHz.	—	" "
3	26.985 MHz.	—	" "
4	27.005 MHz.	—	" "
5	27.015 MHz.	1	" "
6	27.025 MHz.	2	" "
7	27.035 MHz.	3	" "
8	27.055 MHz.	4	" " (3)
9	27.065 MHz.	5	Emergency Channel (1)
10	27.075 MHz.	—	General A.M.
11	27.085 MHz.	6	Call Channel A.M. (1)
—	27.095 MHz.	7	General A.M.
12	27.105 MHz.	8	" "
13	27.115 MHz.	9	" "
14	27.125 MHz.	10	" "
15	27.135 MHz.	11	" "
16	27.155 MHz.	12	Call Channel S.S.B. (1)
17	27.165 MHz.	13	General SSB.
18	27.175 MHz.	14	" "
19	27.185 MHz.	15	" "
—	27.195 MHz.	16	" "
20	27.205 MHz.	17	General SSB.
21	27.215 MHz.	—	" "
22	27.225 MHz.	18	" "
23	27.255 MHz.	—	" "
24	27.235 MHz.	—	" "
25	27.245 MHz.	—	" "
26	27.265 MHz.	—	" "
27	27.275 MHz.	—	" "
28	27.285 MHz.	—	" "
29	27.295 MHz.	—	" "
30	27.305 MHz.	—	" "
31	27.315 MHz.	—	" "
32	27.325 MHz.	—	" "
33	27.335 MHz.	—	" "
34	27.345 MHz.	—	" "
35	27.355 MHz.	—	" " (2)
36	27.365 MHz.	—	" "
37	27.375 MHz.	—	" "
38	27.385 MHz.	—	" "
39	27.395 MHz.	—	" "
40	27.405 MHz.	—	" "

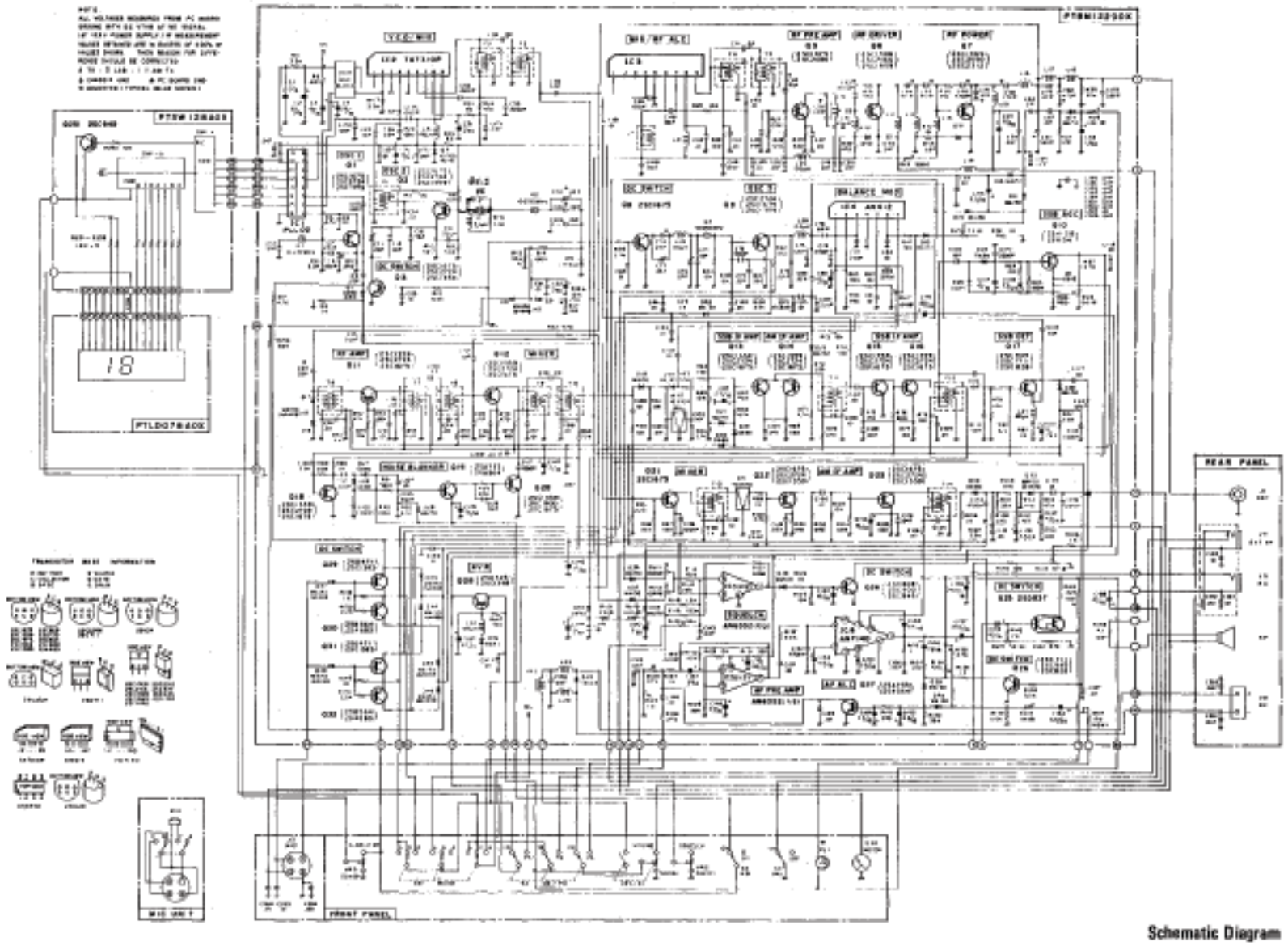
1. Legally Designated. 2. Suggested 2nd SSB Call Channel. 3. Suggested Road Channel.

License Requirements

It is necessary for a person operating a citizen band radio to obtain a license for an equipment. There is a license fee per annum for each unit.
Applications for licenses should be lodged at any of the Postal and Telecommunications Department's State and District offices.
It will be necessary to advise:
(1) Name and address of lincensee,
(2) Make,
(3) Model and Serial No.
and pay the fee in order to obtain the license.
The license No. will also be the call sign.

For service on this equipment please first contact your local retailer.
Full service and spare parts supplies are available to your retailer through the Distributor:

Standard Components Pty. Limited,
10 Hill Street, Leichhardt. NSW.



Schematic Diagram

KTTX550•AX
Printed in Japan