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23-CHANNEL SOLID STATE AM/SSB MOBILE
CB TRANSCEIVER

MODEL KCB-2340 INSTRUCTION MANUAL

TECHNICAL SPECIFICATIONS

GENERAL

Circuitry	36 Transistors, 5 FETs, 1 IC
Frequency Control	Crystal synthesizing system
Channel	23 channels all installed
Mode of Operation	AM, LSB, USB
Power Source Voltage Range	11.5 – 14.5V DC
Speaker	3" dynamic, 8 ohms
Microphone	Dynamic type
Power Source	DC 13.8 volts

RECEIVER SECTION

Receiving System	Single conversion superheterodyne
Sensitivity	AM 1 μ V for 10 dB S/N SSB 0.25 μ V for 10 dB S/N
Selectivity	AM 4 kHz at 6 dB down SSB 2.4 kHz at 6 dB down
Fine Tune (Clarifier)	$\pm$ 600 Hz
Audio Output Power	3W at 8 ohms
Squelch Range	AM 1 μ V to 500 μ V SSB 0.7 μ V to 20 μ V
Intermediate Frequency	11.2735 MHz

SSB TRANSMITTER SECTION

SSB Generation	Balanced ring modulator with crystal lattice filter
RF Output Power	PEP 12 watts (Legal Maximum)
Carrier Suppression	40 dB down
Unwanted Sideband Suppression	50 dB down
Harmonic Suppression	50 dB down

AM TRANSMITTER SECTION

Modulation	High Level Class B
RF Output Power	4 watts (Legal Maximum)
Harmonic Suppression	50 dB down

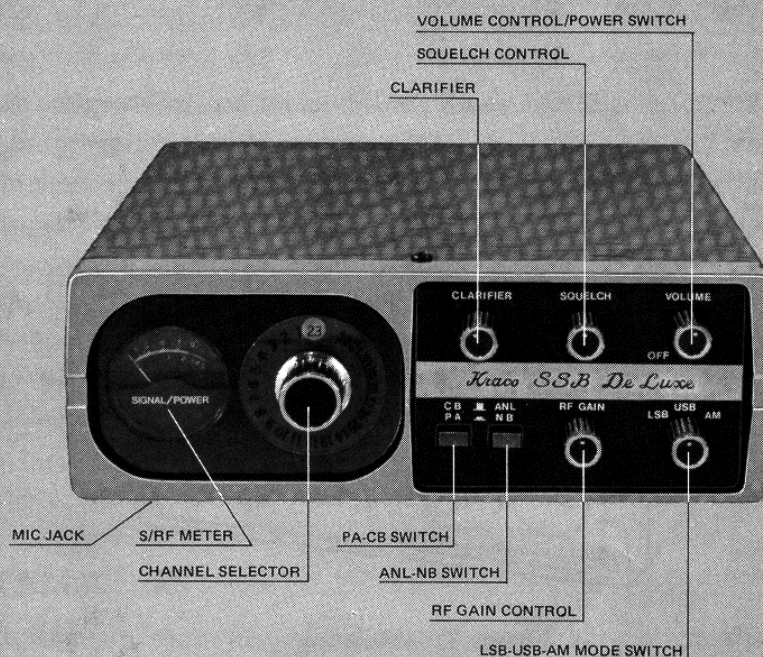


Figure 1

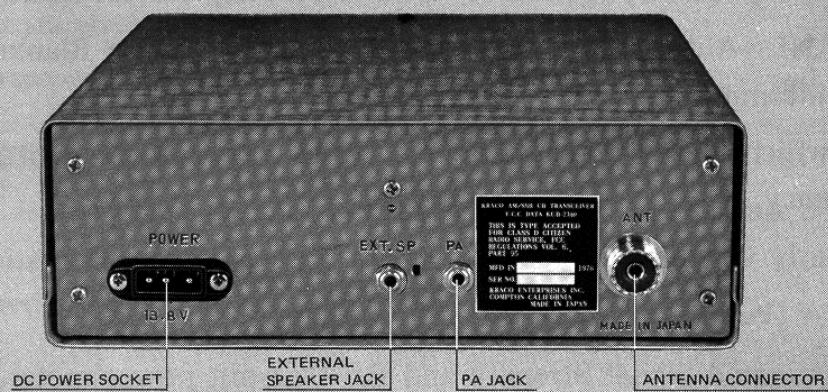


Figure 2

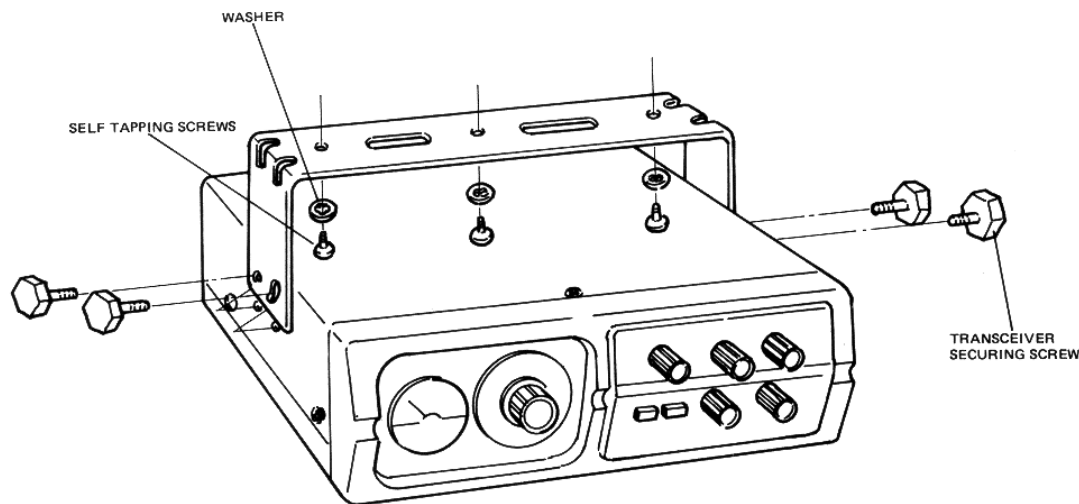


Figure 3. Mounting

The Model KCB-2340, is a full 23-channel, AM/SSB Citizens band mobile transceiver designed for use under the license of Class "D" operation.

The features of this transceiver are:

- * DC powered AM/SSB mobile station transceiver with the latest high performance.
- * Advanced frequency synthesizing circuitry assuring stable, reliable operation.
- * Built-in ANL (Automatic Noise Limiter) and NB (Noise Blanker) circuitries to reduce undesirable noises for quiet reception.
- * Clarifier which allows you to tune clearly to a station transmitting with slightly off frequency.
- * Continuously variable Squelch control for quiet stand-by operation.
- * Built-in PA (Public Address) operation system.
- * Large illuminated Signal Strength and RF transmit power meter.
- * High power, high efficiency in transmitting, and high sensitivity in reception.
- * All front mount controls and switches for easy use.
- * Versatile, compact, rugged design.
- * RF gain control for better reception sensitivity.

F.C.C. REQUIREMENTS

IMPORTANT

This transceiver is designed for use under F.C.C. Rules and Regulations, Vol. VI, Part 95 and you are prohibited from operating this transceiver until you obtain your Citizens Band Class D License. This license is obtained by filing Application Form 505 (supplied with the unit) with the F.C.C. along with the proper filing fee. You are also required to read and understand Part 95 of the F.C.C. Rules and Regulations and all licensees are required to maintain an up-to-date copy of these rules. Subscription(s) must be filed with the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Adjustments to the transmitter circuit of the transceiver may be made only by, or under the supervision of a person holding a current commercial first or second class radio operator license. Replacement or substitution of crystals or other components must be made only by components supplied by Kraco Enterprises, Inc., 505 East Euclid Avenue, Compton, California 90224.

MOBILE INSTALLATION

First choose a location for mounting. The location should be a place which 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. The transceiver will be mounted as illustrated in Figure 3. First drill three or four holes (diameter about $5/32''$; 3.6 mm) in the location to be mounted.
2. Attach the bracket, using selftapping screws and washers supplied.
3. A microphone hanger is also supplied with the unit. If desired, 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 a 12V DC battery on Negative or Positive Ground System.

A. Power Connection For Negative Ground System

1. Connect Black power lead from the transceiver to the metal chassis ground of the vehicle or negative battery terminal.
2. Connect Red power lead from the transceiver to any convenient hot (positive) side of the electrical system or Plus (+) battery terminal.

B. Power Connection For Positive Ground System

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

2. Connect Black power lead from the transceiver to any convenient hot (negative) side of the electrical system or Minus (–) battery terminal.

NOTE: If you are not sure of the electrical ground system employed in your vehicle, please consult with your car dealer. But when you cannot obtain the necessary information, directly connect the Red power lead to the Plus (+) battery terminal and Black power lead to the Minus (–) battery terminal to avoid damaging the transceiver.

ANTENNA CONNECTION

BEFORE OPERATING THE TRANSCEIVER, YOU MUST CONNECT A PROPER ANTENNA SYSTEM. OPERATING THE TRANSCEIVER WITHOUT AN ANTENNA OR A 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 in transmitting. The CB antenna and its mounting method will largely depend upon your type of vehicle, mounting position, etc. Also the antenna may be different according to your needs – using the transceiver as a mobile or base station transceiver. We recommend you consult the dealer from which you purchased the transceiver or any other CB/Amateur radio equipment supply shop. They will meet your specific needs.

DESCRIPTION ON FRONT & REAR PANEL FACILITIES

VOLUME/POWER SWITCH

This turns power on or off. To turn the power on, rotate the knob clockwise; and to turn off, rotate all the way counter clockwise until a click is heard. Turning the knob clockwise increases the volume from the built-in speaker. This volume does not affect the transmit power.

SQUELCH CONTROL

This silences undesirable background noise when no signal is received. The squelch level can be varied by adjusting the control knob. Usually this will be done as follows:

1. Turn the power on and rotate the VOLUME knob until a background noise is heard.
2. Then rotate the SQUELCH control knob clockwise until the background noise disappears.
3. Now you can receive signals without annoying background noises. However, rotating the squelch control too far clockwise direction decreases reception sensitivity and a very weak station would not be received, therefore when you want to communicate with such a station, rotate the squelch control all the way counter clockwise.

CLARIFIER

During AM operation, place the control in the “12” o’clock position. However, if a station received is not clear, adjust the control for clearer reception.

During SSB operation, this control operates as a voice clarifier: also rotate the control for clearer voice reception.

RF GAIN CONTROL

This control adjusts the RF gain of the receiver. To increase the RF gain (reception sensitivity), turn the knob clockwise; and to decrease, turn counter clockwise.

When your transceiver is operated in an excessively strong signal strength area, the reception may sound distorted due to the signal overload. To correct this, adjust the RF gain control to decrease the reception sensitivity.

ANL-NB SWITCH

This is the switch which actuates the ANL (Automatic Noise Limiter) and NB (Noise Blanker) circuits to reduce undesirable noises you may encounter during receive operation. The noise blanker is the circuit designed to blank out impulse noises such as ignition noises from vehicles for quiet reception. Place the switch in either position for minimum noise interference when the noise is excessive.

CB-PA SWITCH

This selects the mode of operation. For normal CB operation, place the switch in the CB (released out) position, and place in the PA (depressed) position when using the transceiver as a simple public address amplifier.

SIGNAL STRENGTH/RF POWER METER

During reception, this indicates a relative signal strength in S unit on the upper scale. During transmission, this indicates the transmit power from the antenna on the lower scale. The meter pointer flickers slightly when you are speaking into the microphone, indicating your voice is being transmitted.

CHANNEL SELECTOR

This selects one of full 23 channels you desire of AM, LSB and USB.

MIC JACK

This accepts 4-pin microphone plug from the Push-to-Talk Microphone supplied with the unit.

PA JACK

When you operate the transceiver as a simple Public Address amplifier, connect a PA speaker, 8–16 ohm, to this jack.

ANTENNA CONNECTOR

This accepts a standard PL-259 type coaxial antenna connector which should be connected to the antenna cable end.

EXTERNAL SPEAKER JACK

This will be used when connecting an earphone or external speaker having impedance of about 8–16 ohms. Connecting the earphone or speaker plug into this jack automatically silences the built-in speaker.

MODE SWITCH

This selects mode of operation; Lower Sideband (LSB), Upper Sideband (USB) and AM.

OPERATION

MAKE SURE YOUR ANTENNA SYSTEM IS CONNECTED TO THE ANTENNA CONNECTOR ON THE REAR PANEL. DO NOT OPERATE THE TRANSCEIVER WITHOUT CONNECTION OF YOUR ANTENNA SYSTEM.

A. AM Operation

1. Connect the Push-to-Talk microphone to the MIC jack.
2. Place the CB/PA switch in the "CB" position.
3. Turn the power on and increase the sound level.
4. If necessary, adjust the SQUELCH control.
5. Place the LSB-USB-AM switch in the AM position.
6. Select a channel you desire.
7. 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.
8. To receive: simply release the Push-to-Talk button.
9. If necessary, adjust the CLARIFIER control and ANL/NB switch for clearer reception.

B. SSB Reception

1. Turn the power on and rotate the VOLUME control to a proper sound level.
2. Temporarily place the LSB-USB-AM switch in the AM position. If the signal you received is a AM signal, clear voice reception will be obtained. But if the signal produces unintelligible sound, it may be the SSB signal. First place the LSB-USB-AM switch in the LSB or USB position, where clearer voice reception is obtained. Then adjust the CLARIFIER control slowly for better voice reception.
3. If necessary adjust SQUELCH and ANL/NB control.

C. SSB Transmit Operation

1. First select the channel you want.
2. Place the LSB-USB-AM switch in the LSB or USB position.

NOTE: If you want to communicate with the station transmitting in a mode of LSB (or USB) your transceiver must be set in the same mode LSB (or USB) of operation. To identify the mode of operation (LSB or USB) being transmitted, temporarily try to receive the station as stated under SSB reception (Paragraph "B" above).

3. To transmit depress the Push-to-Talk button on the microphone and speak into the microphone as stated in the step 7 under AM operation.
4. To receive, simply release the Push-to-Talk button.

When using the transceiver as a public address amplifier

1. Connect a PA speaker (8–16 ohms) to the PA jack on the rear panel.
2. Place the PA/CB Switch in the PA position.
3. Turn the power on.
4. Depress the Push-to-Talk button on the microphone and speak into the microphone.

INTERFERENCE NOISES IN MOBILE USE

During reception, you may find that your transceiver will pick up interference which makes 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 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 employ 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 will be available from CB/Amateur radio equipment supplying shops.

LIMITED WARRANTY

Kraco warrants this product to be free from defects in material and workmanship under normal use and service. This warranty is limited to the replacement of defective parts, provided that defect occurs within 90 days from date of purchase and provided that product is returned immediately to Kraco. We will repair free of charge or replace at no charge any unit which our examination shall disclose to be defective and under warranty.

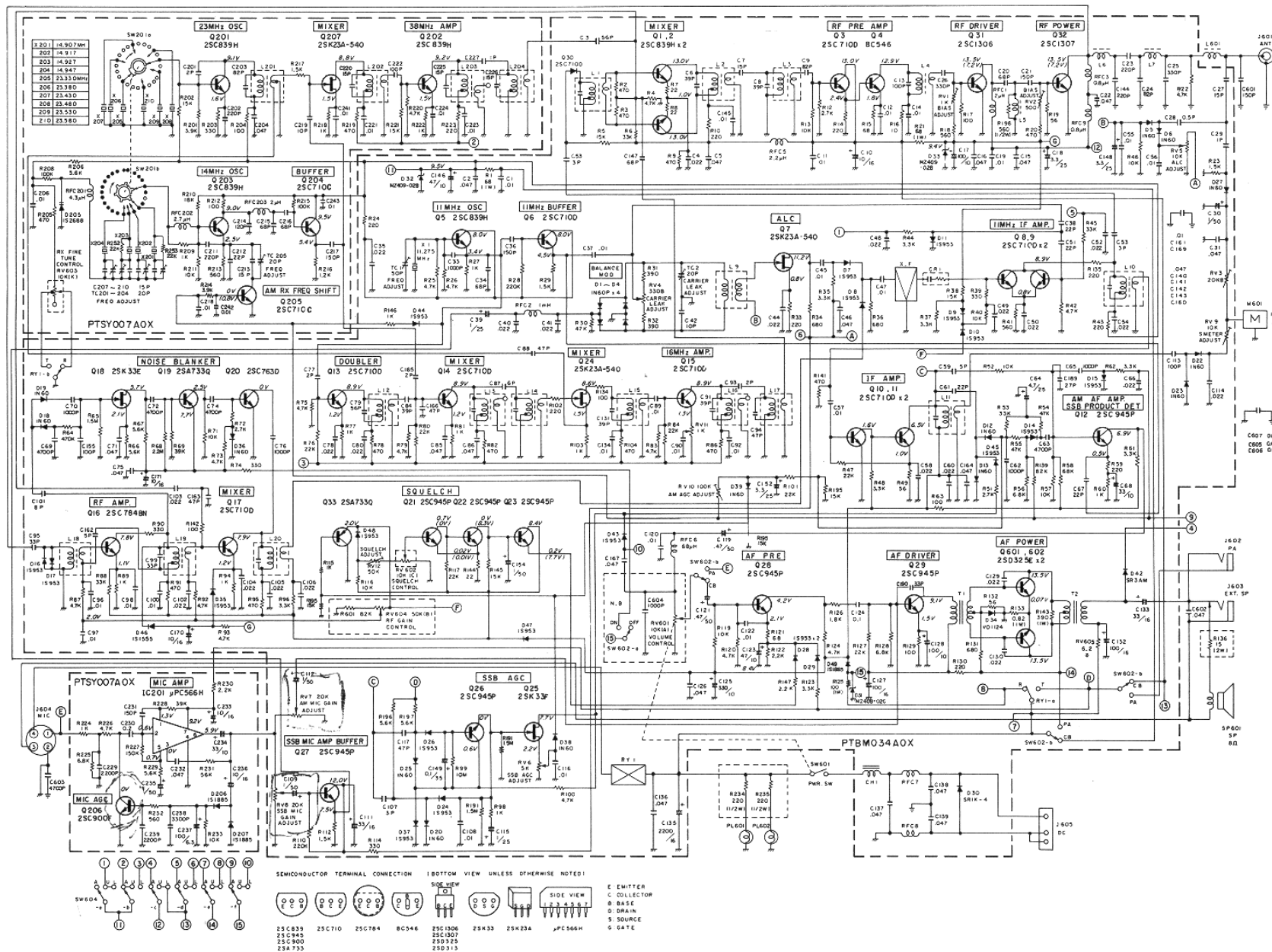
This warranty shall be valid only when a purchaser has filled in and has on file at the factory a warranty registration card. If no warranty card is on file, a sales receipt showing the date of purchase must accompany the article being returned.

The provisions of this warranty shall not apply to any part which is used for a purpose for which it is not designed, or which shall have been repaired or altered in any way, as to affect adversely its performance and reliability; nor shall this warranty apply to any part which has been subject to misuse, neglect or accident.

Kraco does not authorize any other person to assume any other liability in connection with its product and the implied warranty of mercantibility and fitness as limited to the duration of this warranty.

Your unit will be serviced on an in-warranty basis within the guarantee period for the correction of warranted defects if the unit is returned postage prepaid and packaged in the original shipping carton with \$5.00 to cover handling, return postage and insurance – check or money order only – no stamps. Do not return the set to your dealer. Return your unit with the description of the problem to:

KRACO STEREO WARRANTY DEPARTMENT, 505 East Euclid Avenue,
Compton, California 90224.



SCHEMATIC DIAGRAM OF MODEL KCB-2340