Kraco KCB-2320 Owner's Manual

23-CHANNEL SOLID STATE 5-WATT MOBILE 2-WAY CB RADIO

MODEL KCB-2320 INSTRUCTION MANUAL

TECHNICAL SPECIFICATIONS, MODEL KCB 2320

GENERAL

Circuitry	19 Transistors, 1 IC 12 Diodes
Frequency Control	Crystal synthesizing system
Channels	23 channels all installed
Mode of Operation	AM
Power Source Voltage Range	11.5–14.5 V DC
Speaker	3" dynamic 8 ohm
Microphone	Dynamic 500 ohm
Power Source	DC 12.6 volts

RECEIVER SECTION

Receiving System		Dual conversion system
Sensitivity		0.7 μV for 10 dB S/N
Selectivity		More than 45 dB down at ±10 KHz
Delta Tune		About ±1 KHz
Spurious Rejection		–50 dB
Audio Output Power		3.0 watts at 8 ohm
Squelch Range		0.7 μV to 300 μV
IF	1st	11.275 MHz
	2nd	455 KHz

TRANSMITTER SECTION

Modulation System	High level class B
RF Output Power (at 13.8 V)	4 watts (F.C.C. Maximum)
Frequency Tolerance	±0.005%
Spurious Rejection	–50 dB

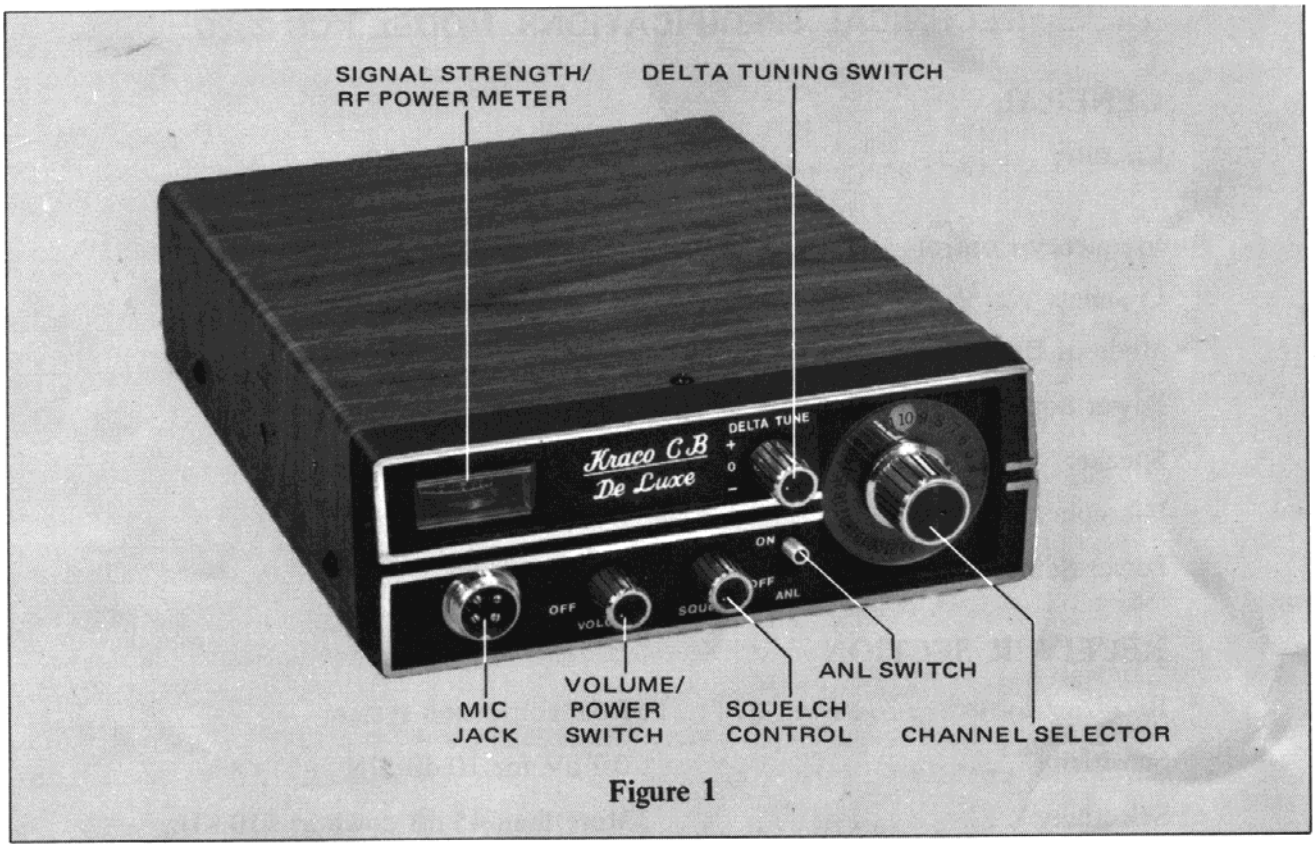


Figure 1

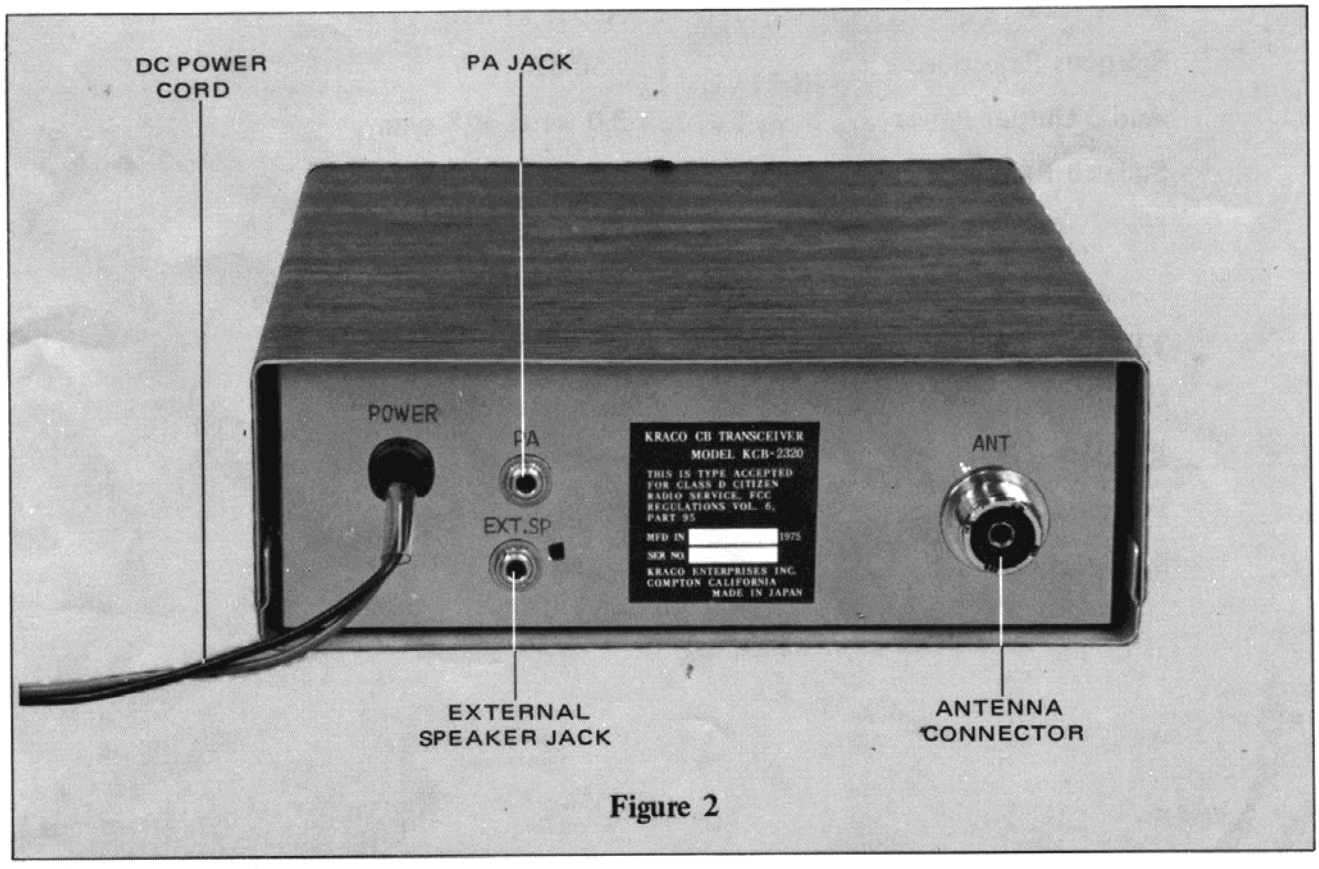


Figure 2

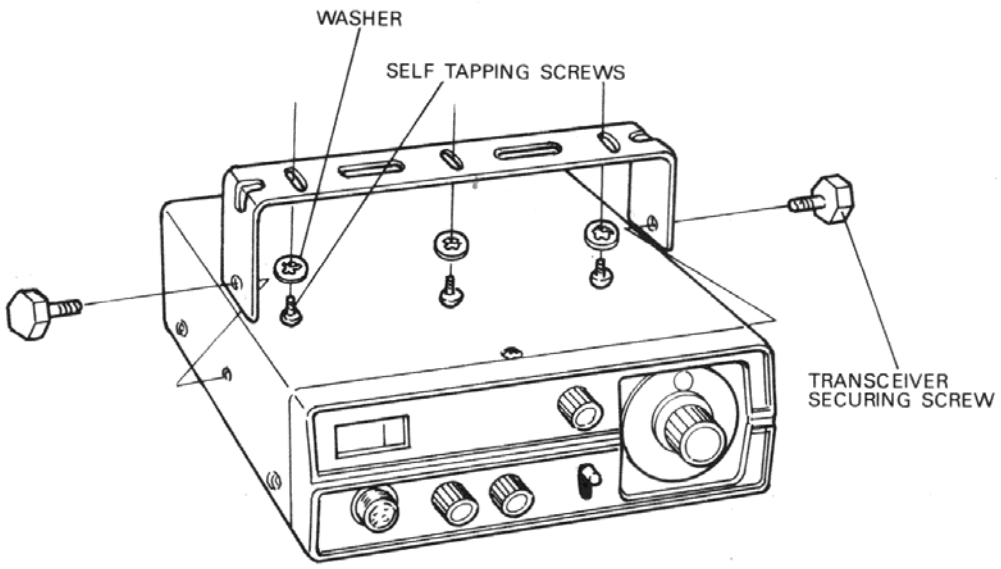


Figure 3. Transceiver Mounting

The Model KCB 2320 is a 23-channel 5 W, Frequency synthesized CB mobile transceiver designed for use under the license of Class "D" operation.
The features of this transceiver are:

* 12.6 V (11.5–14.5 V) DC powered mobile mount transceiver with the latest high performance design.
* Delta tuning control, which allows you to tune clearly to a station which is transmitting slightly off frequency.
* Versatile, Compact, Rugged Design.
* Simple in operation, suitable for mobile use.
* Built-in ANL (Automatic Noise Limiter) circuitry to reduce undesirable noises you may encounter in reception.
* Continuously variable squelch control for quiet stand-by operation.
* Advanced frequency synthesizing circuitry assuring stable, reliable operation.
* High power, high efficiency in transmitting, and high sensitivity in reception.
* Built-in PA (Public Address) system.
* Signal strength meter in S unit and a transmit power meter.
* All front mount controls and switches for easy use.

F.C.C. REQUIREMENTS

This transceiver is designed for use under F.C.C. Rules and Regulations Part 95 and you are prohibited to transmit with this transceiver until you obtain your citizens band class D license. The license may be obtained by submitting the F.C.C. license application form 505 (supplied with the unit) to the F.C.C. You are also required to read and understand Part 95 of the F.C.C. Rules and Regulations before operating the transceiver. The Part 95 regulations are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

It is prohibited by the F.C.C. to adjust the transmitter circuit of the transceiver unless you hold a current First or Second Class Radiotelephone License.

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 should 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. Attach the hanger to a place close to the transceiver, using the 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 12 V 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 Black power lead from the transceiver to any convenient hot (negative) side of the electrical system or Minus (–) battery terminal.
2. Connect Red power lead from the transceiver to the metal chassis ground of the vehicle or positive battery terminal.

NOTE: If you are not sure of the electrical ground system employed in your vehicle, please consult with your car dealer or directly connect the Red lead to the Plus (+) battery terminal and Black lead to the Minus (–) battery terminal to avoid any possible short circuit.

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 lowers the communication range in transmitting. The CB antenna and its mounting method will largely depend on the type of your 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 with your dealer from which you purchased the transceiver or any other CB/Amateur radio equipment supply shops. They will meet your specific needs.

DESCRIPTION ON FRONT AND REAR PANEL FACILITIES

VOLUME/POWER SWITCH

This turns the power on or off. To turn the power on, rotate the knob clockwise; to turn power off, rotate the knob 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. 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 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.

ANL SWITCH

This is the switch that actuates the ANL (Automatic Noise Limiter) circuit to reduce any undesirable noises you may encounter during the receive operation. Place the switch in ON position to switch in the ANL circuit.

CHANNEL SELECTOR

This selects one of 23-channels or operation of PA (Public Address).

DELTA TUNE SWITCH

When a station received is not clear, please place this switch in either the "+" or "–" position for clearer reception. For normal operation, place the switch in 0 position.

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.

MIC JACK

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

EXTERNAL SPEAKER JACK

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

PA JACK

When you operate the transceiver as a Public Address amplifier, connect a PA speaker (8 ohms) to this jack.

ANTENNA CONNECTOR

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

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.

1. Connect the Push-to-Talk microphone to the MIC jack.
2. Turn the power on and increase the sound level.
3. If necessary, adjust the squelch control.
4. Select the channel you desire.

5. 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.
6. To receive: simply release the Push-to-Talk button.

When using the transceiver as a public address amplifier

1. Connect a PA speaker to the PA jack on the rear panel.
2. Place the channel selector 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 RECEPTION

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 vehicle because 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 radio suppression type high voltage ignition wire and suppressor reistor 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 noise is to use additional noise suppressors which are available from CB/Amateur radio equipment supply 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.

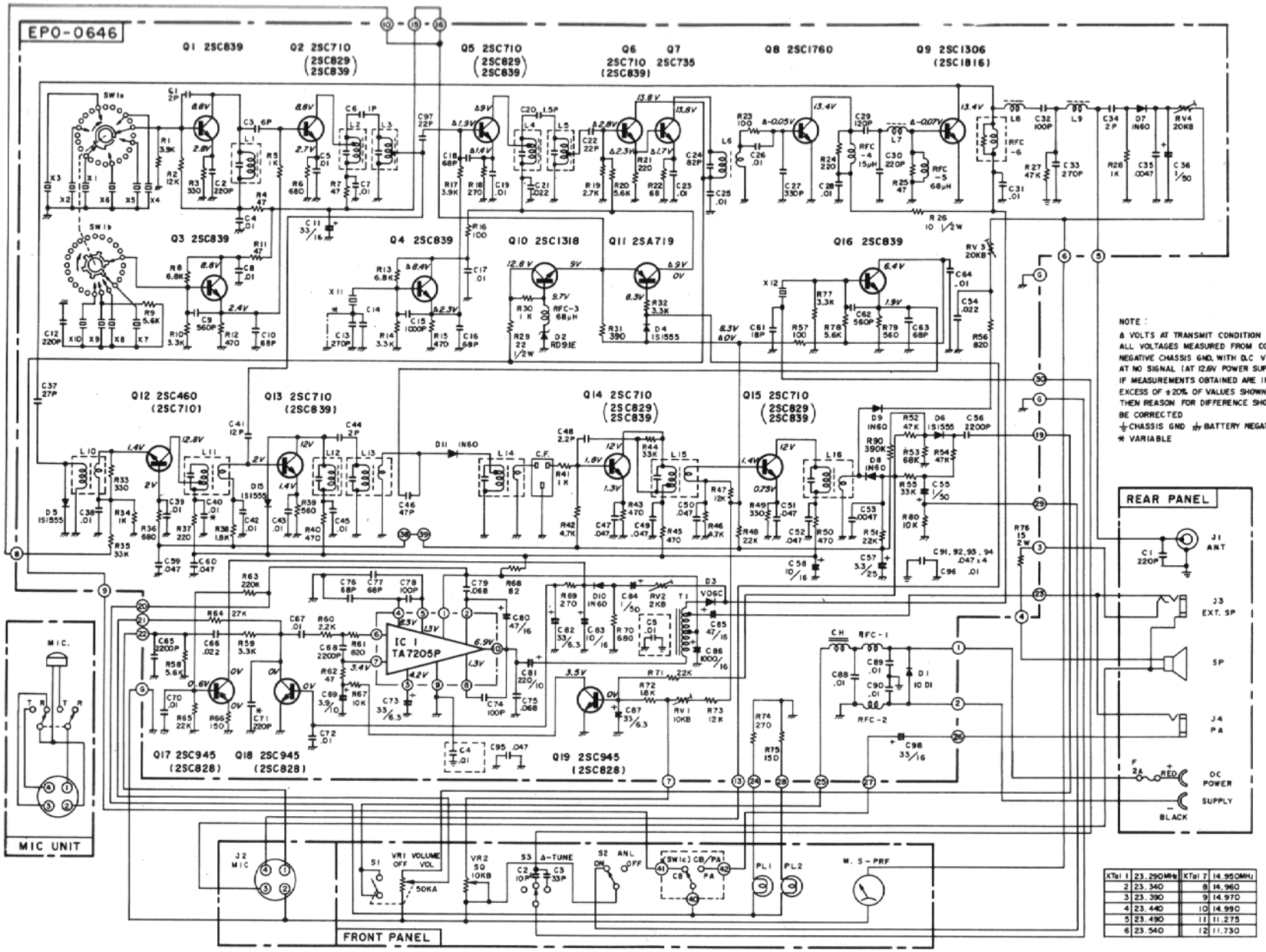
This warranty shall be valid only when a purchaser has filled in and has on file at the factory a warranty registration card. If no warranty card is on file, a sales receipt showing the date of purchase must accompany the article being returned.

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.

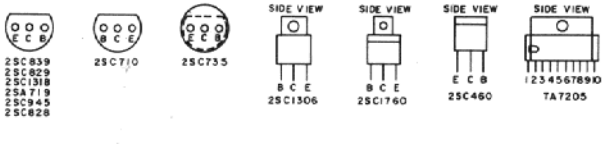
Your unit will be serviced on an in-warranty basis within the guarantee period for the correction of warranted defects if the unit is returned postage prepaid and packaged in the original shipping carton with $5.00 to cover handling, return postage and insurance-check or money order only-no stamps. Do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

KRACO STEREO WARRANTY DEPARTMENT, 2411 North Santa Fe Avenue,
Compton, California 90224



XTal 1	23.290MHz	XTal 7	14.950MHz
2	23.340	8	14.960
3	23.390	9	14.970
4	23.440	10	14.990
5	23.490	11	11.275
6	23.540	12	11.730

SEMICONDUCTOR TERMINAL CONNECTION (BOTTOM VIEW UNLESS OTHERWISE NOTED)



E: EMITTER
C: COLLECTOR
B: BASE

SCHEMATIC DIAGRAM OF MODEL KCB 2320

Kraco Enterprises Inc.

PRINTED IN JAPAN
EBP-0398