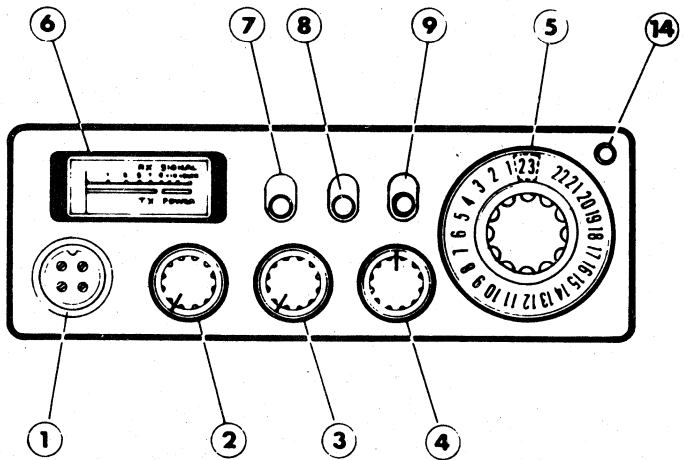


**23 Channel
Citizens Band Transceiver
Operation Manual**

Shakespeare
GBS 2500A



GENERAL DESCRIPTION

This unit is a transceiver employing a frequency synthesizer circuit to provide 3 crystal-controlled transmit and receive channels in the 27 MHz citizens band. This unit is an all solid state and high capacity transceiver. It is designed for mobile operation such as automobiles, boats or ships, and its standard power supply is DC 12V.

SPECIFICATIONS

GENERAL

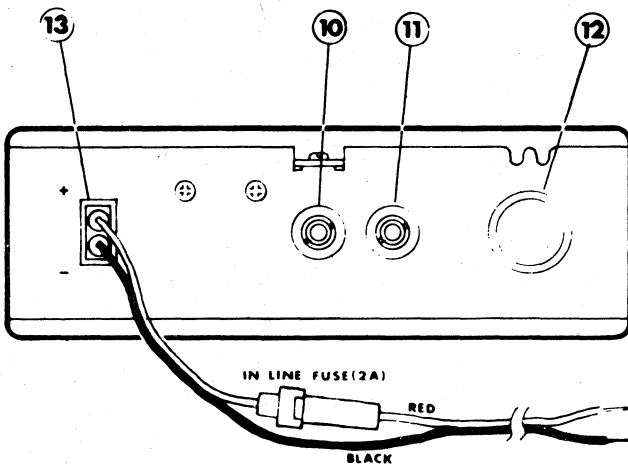
• Frequency Range	26.965 to 27.255 MHz
• Channels	23
• Channel Composition	PLL synthesizer type
• Frequency Tolerance	0.005%
• Operating Temperature Range	-30°C to +50°C
• Polarity of Power Supply	Negative or positive ground DC 13.8V
• Size	6" W x 2" H x 8 $\frac{3}{4}$ " D

TRANSMITTER

• RF Power output	4 watt
• Modulation Capability	100%
• Output Impedance	50 or 51 ohm
• Spurious and Harmonics	-50 dB

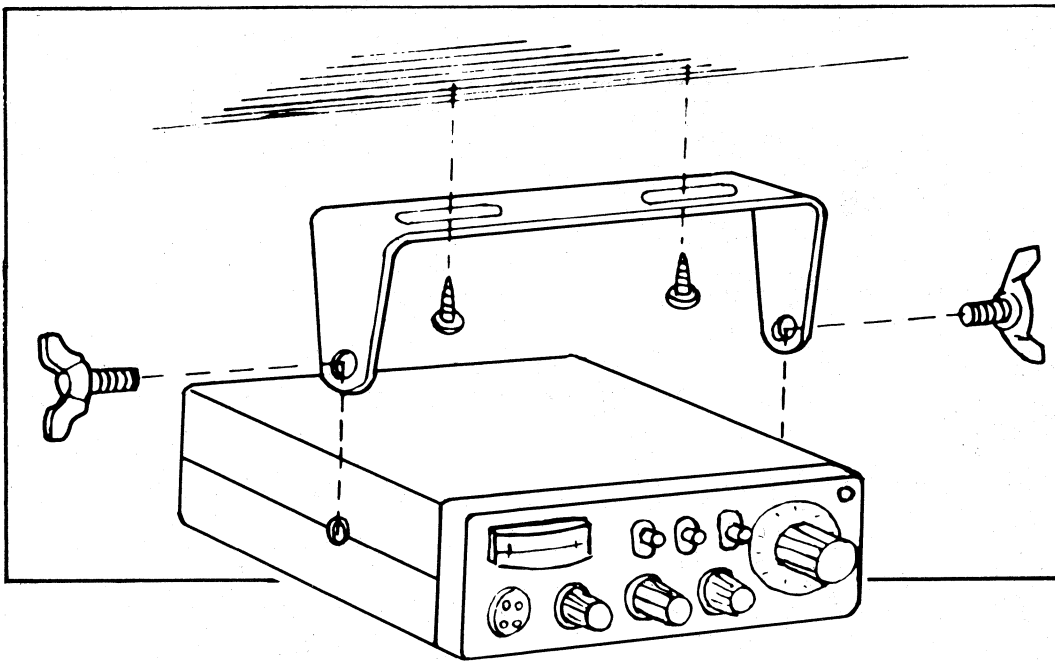
RECEIVER

• Sensitivity	0.7 u V for 10 dB S + N/N
• Selectivity	-6 dB Bandwidth 6kHz -60 dB Bandwidth 20kHz at least 60 dB
• Image Rejection	less than -50 dB
• Spurious Response	1st IF: 10.695 MHz 2nd IF: 455 kHz
• IF Frequency	0.5 u V to 1000 u V
• Squelch	75 dB
• AGC Figure of Merit	3 watt (8 ohm)
• Audio Output	



OPERATING CONTROLS AND FEATURES

1. Microphone socket: Four-pin socket for Push-to-Talk dynamic microphone with curl cord and dependable screw-on connector.
2. VOL.: This control varies the sound output from the speaker. Also incorporates an "ON-OFF" power switch at the extreme counter-clockwise position.
3. SQUELCH: This control is used to "quiet" the receiver during no-signal conditions. Turn fully counter-clockwise then slowly clockwise until the receiver noise disappears. Any signal to be received must now be slightly stronger than the average receiver noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard.
4. RF Gain: When close-in station overloads your speaker the RF switch allows you to reduce the load on your speaker.
5. Channel selector: This switch selects any one of the Citizens Band channels.
6. S-RF P Meter: This meter is automatically switched to indicate incoming signal strength in the receive mode and relative RF power output in the transmit mode. "S" scale to be adjusted at "S9" on input 100 u V.
7. ANL: This switch is activated whenever it is desired to reduce ignition noise or other man-made impulse noise.
8. PA/CB: CB position provides normal CB operations. PA position lets you use transceiver as PA amplifier with external speaker connected to PHONE jack. (speaker impedance 8 ohm)
9. INTERNAL/EXTERNAL SPKR. In UP position built-in (internal) speaker operates. In EXT position the external speaker, when plugged into the EXT jack (10), is activated.
10. EXT. SPKR.: Jack for connection of external devices such as headphone or speaker.
11. PA SPKR.: Special speaker jack for Loud Hailer. When in PA speaker position, internal speaker is disconnected.
12. ANTENNA: For antenna lead-in cable with matching PL-259 connector.
13. POWER line: Power supply available for DC operation only. Red cord is hot (plus) and black is cold (minus).
14. TX Light: It operates when the unit is in the transmit position.



OPERATING INSTRUCTIONS

Microphone must be connected in for receiver to operate. Because, the receiver and transmitter are controlled by the press-to-talk switch on the microphone. Press the switch and the transmitter is activated. Release switch to receive.

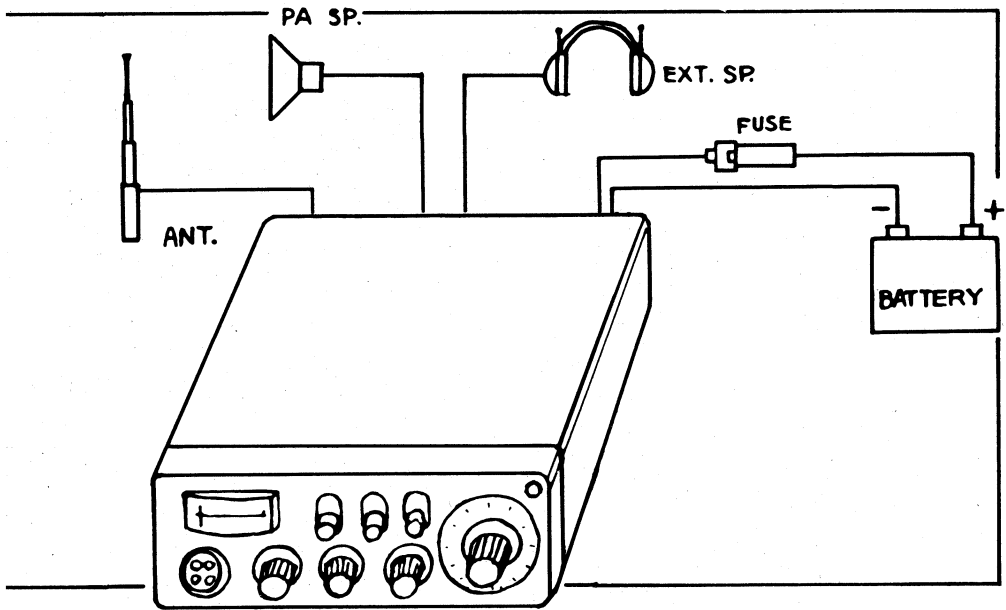
TO RECEIVE:

1. Place the PA/CB switch in the CB position.
2. Rotate the squelch control to the extreme counter-clockwise position, and select desired channel.
3. Rotate clockwise to switch on, and increase for desired volume. Adjust the volume control to a comfortable listening level.
4. Turn the squelch control slowly clockwise, until the noise just disappears. Do not advance the control so far that some of the weaker signals will not be heard.
5. Set the channel selector switch to the desired channel.

TO TRANSMIT:

Never attempt to transmit without an antenna connected to the transceiver.

1. Select the desired channel of transmission.
2. If the channel is clear, depress the push-to-talk switch on the microphone and speak in a normal voice. The modulation indication lamp will be lighted by your voice.



PUBLIC ADDRESS OPERATION

Special provision has been made in this unit for public address (PA) operation. For PA, connect an external 8 ohm speaker into the phone jack in the rear of the rear of the unit. Set INT/EXT switch to EXT. Set the "PA/CB" switch to PA, and press the push-to-talk switch on the microphone and talk into it as you would when transmitting on a CB channel. Your voice will be heard on external speaker. It will not radiate into your antenna.

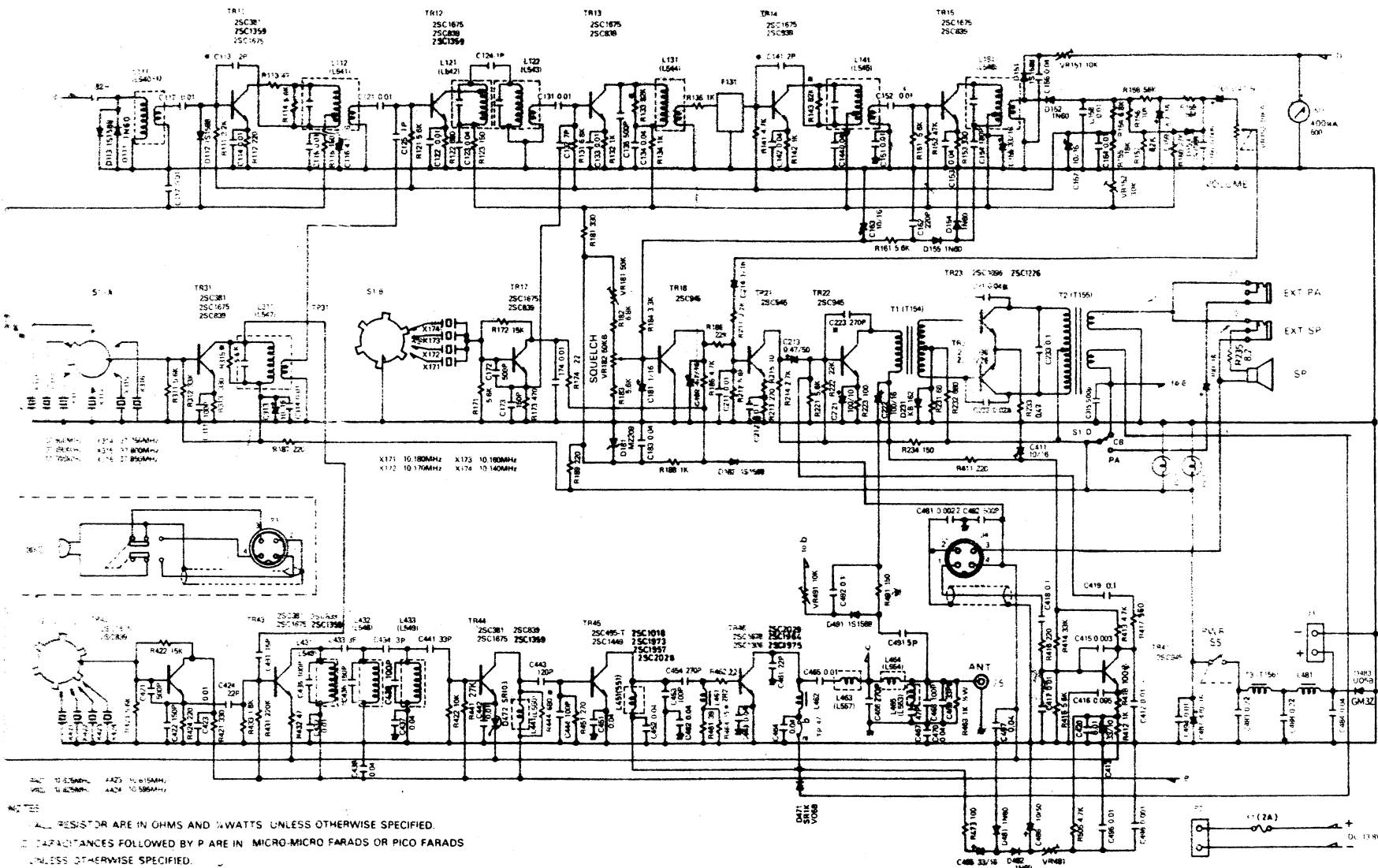
WARNING

Certain repairs and adjustments to this transceiver may be made legally only by a person in possession of a valid First or Second Class FCC Radio Telephone Operator License, or by a person under the direct supervision of a holder of such a license. This applies particularly to these repairs or adjustments, such as replacement or substitution of crystals, and semiconductors or other components, which might affect the transmitter's ability to comply with FCC technical regulations of Part 95, Part 2.

FCC LICENSING REQUIREMENT

You are required to obtain Class D Citizens Band Radio station license before operating the transmitter.

Part 95 of the FCC regulations state, prior to operation in this service the licensee is required to read and understand these regulations prior to operating a CB transmitter. Copies of Manual VI covering the FCC regulations for the Citizens Band Radio Service include Part 95 and is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. A station license must be obtained by submitting a properly completed Station License Application, Form 505.



SCHEMATIC DIAGRAM (1)

*SHAKE SPEAR
 23 CWAN. AM.*

WARRANTY

Shakespeare Company, Inc. (Shakespeare) warrants your radio for **6 months** from date of original purchase against manufacturing defects in material and workmanship in accordance with the following terms and conditions.

- 1 During Warranty Period, Shakespeare will repair without charge valid defects in materials and workmanship. Warranty does not apply to units that have been damaged through accident, misuse, negligence, modification, alteration, abuse, or normal expected wear.
- 2 Repairs or adjustments covered under this warranty are to be determined by Shakespeare and/or its warranty station. All repairs or adjustments are to be performed at either the Shakespeare factory or the Shakespeare authorized warranty station closest to you. No warranty claims or warranty expenses will be honored from unauthorized sources.
- 3 For your protection, we require proof of original purchase date for warranty determination — sales invoice or cancelled check is satisfactory evidence. This procedure insures that you receive full-term warranty from the date of original purchase so that the time unit remains in dealer stock is not deducted.
- 4 All packing and shipping charges to return units for repair are the responsibility of the customer. Please pack units carefully to eliminate shipping damage. It is wise to insure shipments against loss or damage. Return units to the nearest authorized warranty station or to: Shakespeare Company, 2295 N.W. 14th Street, Miami, FL 33156, Attn: Warranty Repair Department. Please include a detailed description of the problem you are experiencing along with your proof of purchase. Shakespeare will return the repaired unit to you pre-paid.



Shakespeare



ELECTRONICS AND FIBERGLASS DIVISION

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