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OWNER'S MANUAL

HB-750

Digital PLL
Synthesized
23-Channel
Mobile
CB Transceiver

Lafayette
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HB-750

[Stock No. 99-33326W]

**DIGITAL PHASE LOCK LOOP
SYNTHESIZED
23 CHANNEL
MOBILE
CB TRANSCEIVER**

THIS TRANSCEIVER IS FCC TYPE ACCEPTED
FOR USE IN CITIZENS CLASS D SERVICE

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BECAUSE ITS PRODUCTS ARE SUBJECT TO CONTINUOUS IMPROVEMENT, THE LAFAYETTE RADIO ELECTRONICS CORPORATION RESERVES THE RIGHT TO MADE DESIGN CHANGES OR MODIFICATIONS AT ANY TIME WITHOUT INCURRING ANY OBLIGATION TO INCORPORATE THEM IN PRODUCTS PREVIOUSLY SOLD.

TECHNICAL SPECIFICATIONS

GENERAL

CIRCUITRY	Digital Phase Lock Loop Synthesizer
CHANNELS	23 channels in 27 MHz CB Band
MODE OF OPERATION	AM
POWER SOURCE	10.5 – 15.5V DC [neg or pos gnd]

RECEIVER SECTION

CIRCUIT TYPE	Dual conversion superheterodyne with RF stage and 455 KHz ceramic filter
SENSITIVITY	0.7 μ V for 10 dB S/N
SELECTIVITY	45 dB down at \pm 10 KHz
IMAGE REJECTION	40 dB
SPURIOUS REJECTION	50 dB
DELTA TUNE RANGE	Approx. \pm 1.2 KHz
AGC RANGE [for 10 dB level change]	80 dB
AUDIO OUTPUT POWER	3 Watts into EXT SPKR jack [at 8 ohms]
SQUELCH RANGE	0.7 μ V to 500 μ V
IF FREQUENCIES	1st: 10.695 MHz 2nd: 455 KHz

TRANSMITTER SECTION

RF POWER OUTPUT	Up to 4 Watts [at 13.8V DC]
EMISSION	6 A 3
HARMONIC AND SPURIOUS SUPPRESSION	Exceeds FCC and Canadian D. O. C. requirements
MODULATION	AM, 90% typical with Range Boost

MISCELLANEOUS

ANTENNA INPUT IMPEDANCE	Nominal 50 ohms
CURRENT DRAIN	Less than 1.2 amp at 12V DC
DIMENSIONS	7-1/8"W x 2-1/2"H x 9-1/4"D (overall) 181 mm x 64 mm x 235 mm (overall)
NET WEIGHT	3.7 lbs, 1.7 kg
ACCESSORIES	1. Push-to-Talk Dynamic Mic 2. DC power Cable [fused] 3. Mobile Mounting Bracket

GENERAL INSTRUCTIONS

The Lafayette HB-750 is a combination transmitter and receiver designed for use in Class "D" operation in the 27 MHz Citizens Radio Service. It is designed to meet the Federal Communications Commission requirements applicable to equipment in this service under Class D emission, and is not to be used for any other purpose. Rules Part 95 of the FCC regulations defines operation in this service and 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 are 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, as directed.

It is illegal to operate the transmitter section of this transceiver prior to receiving a valid station license and "call sign". A properly completed Identification Card, FCC Form 452-C, must be attached to the transmitter.

The HB-750 will provide efficient and reliable radio communication in its intended application if installed and operated in accordance with instructions contained herein.

GENERAL DESCRIPTION

This transceiver is an advanced solid-state 2-way CB radio designed primarily for mobile operation. It employs the very latest technology to provide 23 channels of operation by means of digital frequency synthesis with Phase Lock Loop [PLL] circuitry. Unlike units employing crystal frequency synthesis with 12 or more crystals, this transceiver uses only three crystals to produce 23 channel frequencies. Moreover, the use of PLL circuitry assures a precise on-frequency operation on every channel in both transmit and receive modes that is unmatched by conventional crystal frequency synthesis.

The transceiver also includes many features which will provide greater operating convenience and assure optimum communications under a wide range of conditions.

- * Illuminated Channel Indicator.
- * Delta Tune switch for "fine-tuning" on receive.
- * Variable Squelch control.
- * Switchable RF Noise Blanking and ANL circuit for effective reduction of noise.
- * Illuminated "S"/RF power meter.
- * External Speaker/Phones jack.
- * Built-in automatic modulation control circuit.
- * Transmit and Receive Indicator lights.
- * Variable Tone Control for receiver.
- * Provision for PA operation with volume control.
- * Push-to-talk dynamic mic with coiled cord and 5-pin DIN type plug.
- * "Floating" type chassis for negative or positive ground operation without switching.

OPERATING CONTROLS AND FEATURES

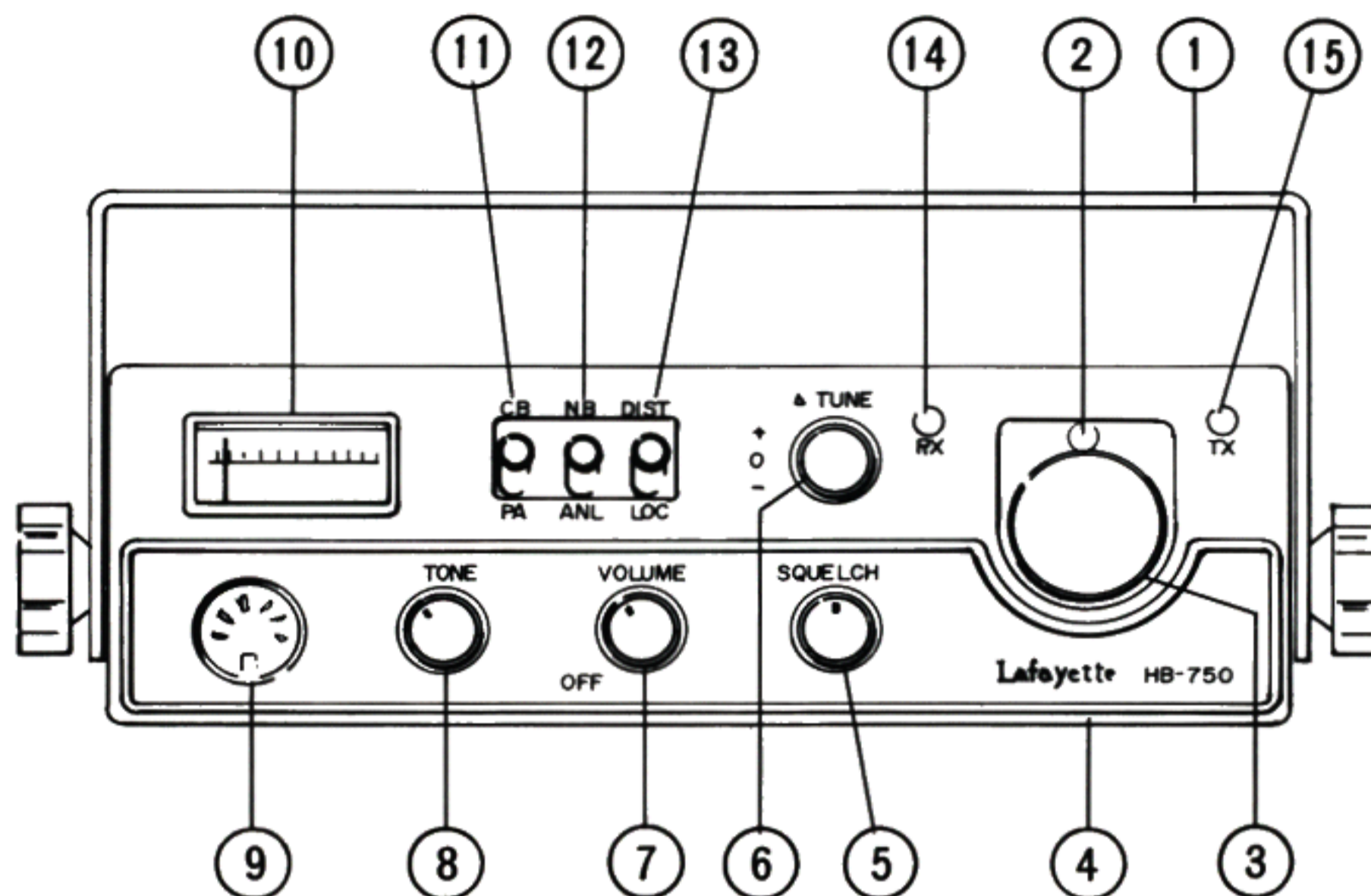


FIGURE 1. FRONT PANEL

- [1] **MOUNTING BRACKET**
Specially designed bracket simplifies mobile installation - has "quick-release" feature for fast removal of transceiver.
- [2] **CHANNEL INDICATOR LIGHT**
Shows channel selected.
- [3] **CHANNEL SELECTOR**
Rotary switch selects one of 23 channels for transmit and receive operation.
- [4] **SPEAKER**
Speaker located behind grille on underside.
- [5] **SQUELCH**
This control is used to "quiet" the receiver during "no-signal" conditions. degree of sensitivity to incoming signals is adjustable. Full counter-clockwise position provides minimum squelch.
- [6] **DELTA TUNE**
3-position switch [-1.2 KHz, Normal, +1.2 KHz] which permits "fine" tuning for reception of stations that are slightly off frequency.
- [7] **VOLUME/ON-OFF**
Varies the sound output from the speaker. Also incorporates an "on-off" power switch at the extreme counter-clockwise position.
- [8] **tone CONTROL**
Used to adjust tonal response of receiver.
- [9] **MICROPHONE SOCKET**
5-pin DIN socket for attachment of push-to-talk microphone [supplied].

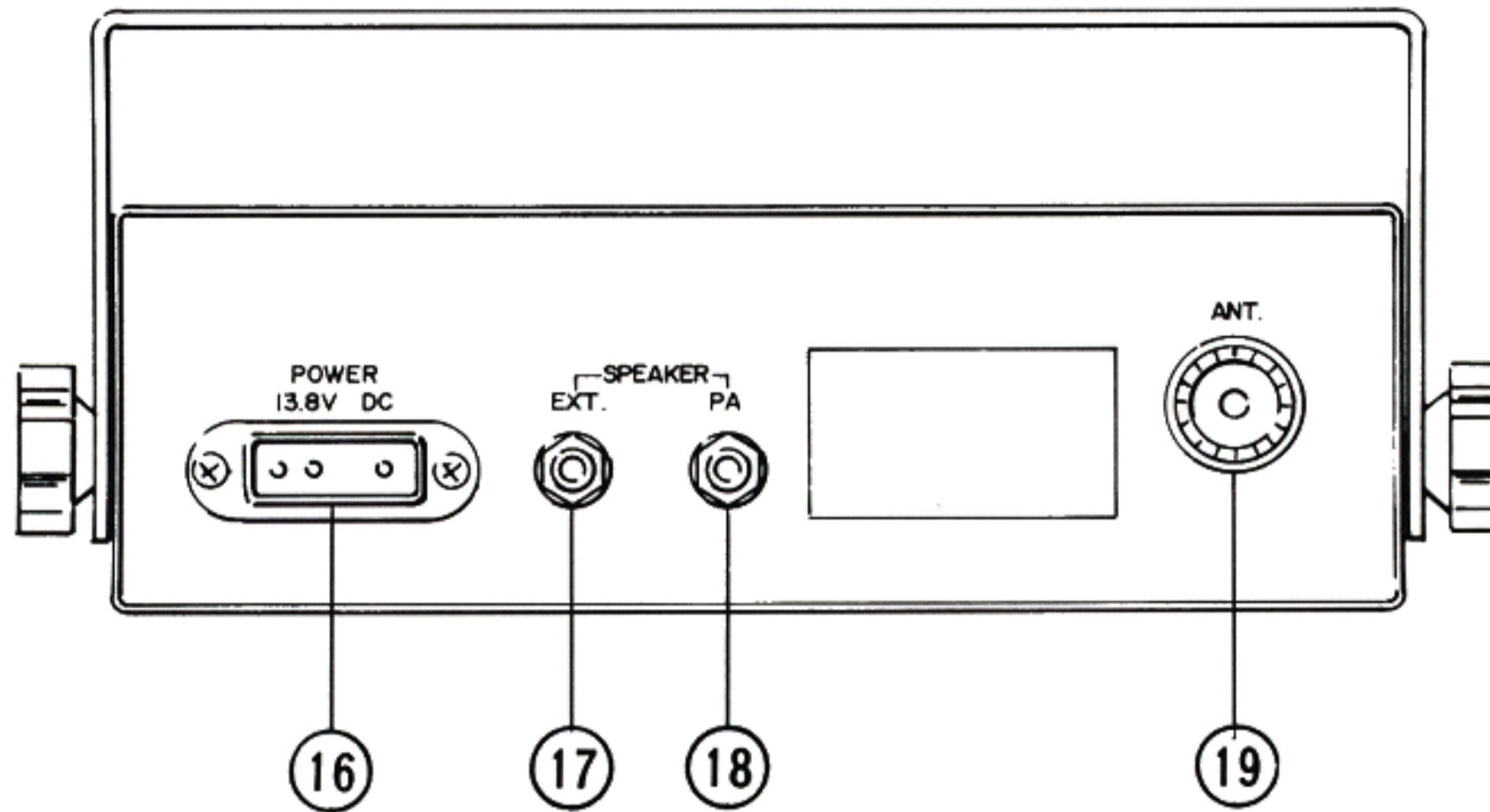


FIGURE 2. REAR PANEL

- [10] **S/P-RF METER**
Indicates signal strength of received signal and is automatically switched to indicate relative power output when in transmit mode.
- [11] **CB/PA MODE SWITCH**
Used to switch unit to CB or PA mode.
- [12] **NB/ANL SWITCH**
“NB” selects special RF noise silencing circuit to combat ignition noise; “ANL” selects standard ANL.
- [13] **LOC/DIST SWITCH**
“DIST” position used for maximum receiver sensitivity; “LOC” position used for reception of nearby stations [strong signals].
- [14] **RX INDICATOR**
Lights up in the receive mode.
- [15] **TX INDICATOR**
Lights up in the transmit mode and acts as modulation indicator.
- [16] **DC POWER SOCKET**
12V DC power for the transceiver supplied through this socket [using DC power cable supplied].
- [17] **EXT SPKR/PHONES**
Allows use of 8 ohm external speaker or headphone. Insertion of plug automatically silences internal speaker.
- [18] **PA JACK**
For connection of 8 ohms speaker for PA operation.
- [19] **ANTENNA INPUT [50 OHM]**
For antenna lead-in cable with matching PL-259 connector.

MOBILE INSTALLATION

TRANSCEIVER MOUNTING

Before installing the transceiver in a car, truck, boat, etc., be sure to choose a location which is convenient to the operating controls, and will not interfere with the normal functions of the driver. The transceiver may be mounted to the underside of the instrument panel or dashboard of a car, truck, etc., by means of the special bracket that is supplied with the transceiver [see Figure 3].

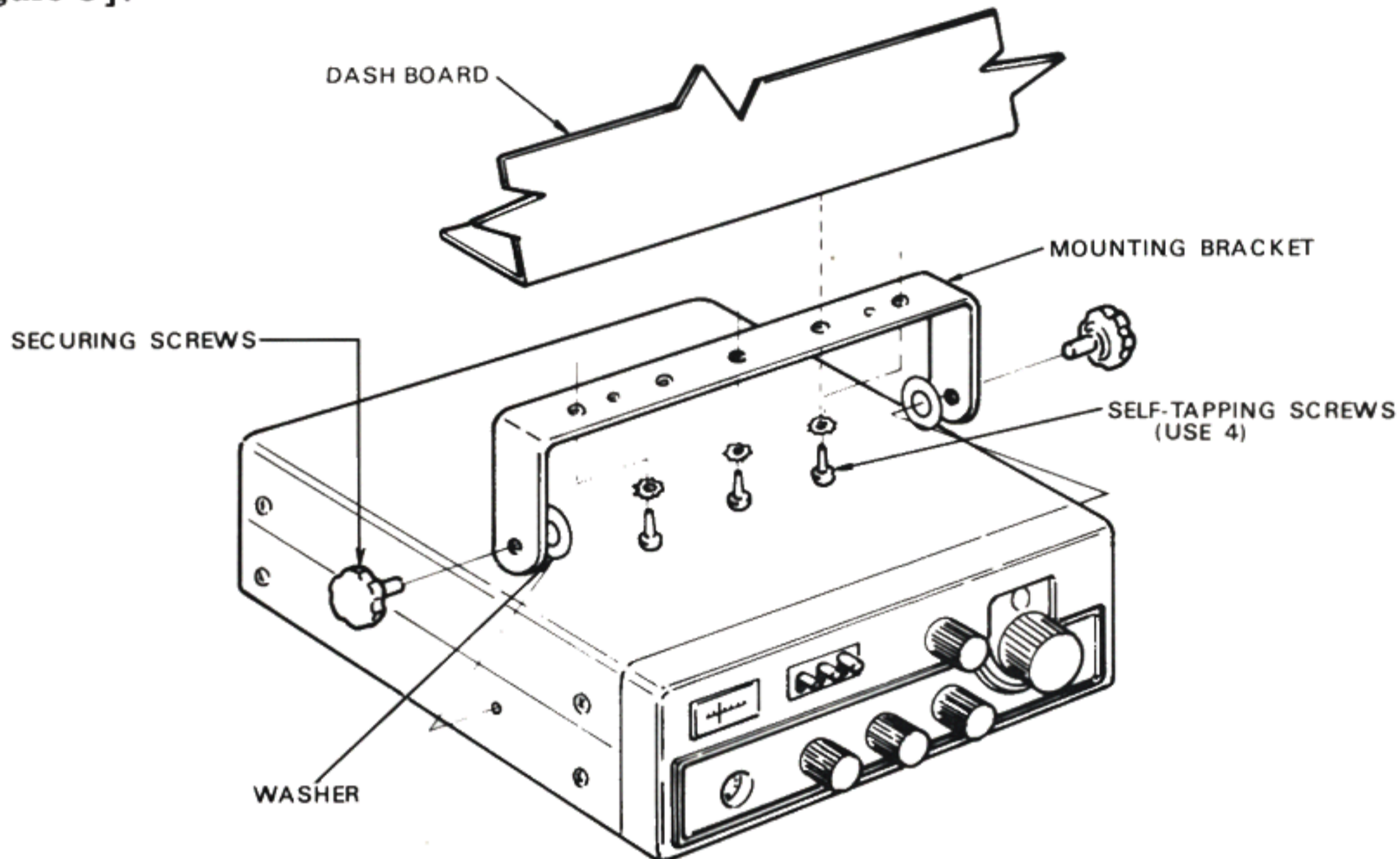


FIGURE 3. MOBILE INSTALLATION

Attach the bracket to the underside of the instrument panel or dashboard of the vehicle using the self-tapping screws supplied. Then attach the transceiver to the bracket by means of the two knurled securing screws at the sides.

Tilt the unit upward or downward to the desired angle before tightening the securing screws.

ATTACHING WASHERS TO MOUNTING BRACKET

Two special adhesive-backed rubber washers have been supplied for use with the mobile mounting bracket. Remove the paper backing, then attach the exposed adhesive side of each washer to the inside edge on each side of the bracket as shown in FIGURE 3 in the instruction manual. Make sure that the holes in the bracket and washer are perfectly aligned before attaching each washer.

DC POWER CONNECTIONS

The transceiver is designed to operate from a battery source of 10.5 to 15.5 volts DC, in vehicles [or boats] employing either negative or positive ground electrical systems.

The fused DC power cable supplied is used to make the necessary power connection to the transceiver. The red [fused] lead is connected to the positive [+] side of the electrical system in the vehicle, and the black lead is connected to the negative [-] side of the system.

In a negative ground vehicle, connect the Red lead to the "hot" point in the electrical system [battery positive], and the Black lead to the metal firewall or any other point that is con-

nected to the vehicle chassis [battery negative].

In a positive ground vehicle, connect the Black lead to the "hot" point in the electrical system [battery negative], and the Red lead to the metal firewall or any other point that is connected to the vehicle chassis [battery positive].

A suitable point in the vehicle for connection to the "hot" battery side can usually be found on the fuse block. Since the transceiver draws a maximum of only 1.2 ampere of current, you can use a terminal which supplies power to the Radio or other accessory [use the unfused input side since the DC power cable is equipped with its own fuse]. To simplify connection to this terminal, attach an alligator [spring] clip to the power lead first and then clamp it onto the terminal selected. Note that the connection to this point will ensure that DC power to the transceiver is automatically out off when the vehicle ignition is turned off.

NOTE: The transceiver requires 13.8 volts DC to develop full rated RF power output.

When you have completed the connections of the red and black leads of the DC power cables as just indicated, attach the 3-pin female plug at the other end of the power cable to the matching male power connector at the rear of the transceiver. Note that the plug can be inserted in only one direction due to the unequal spacing between pins.

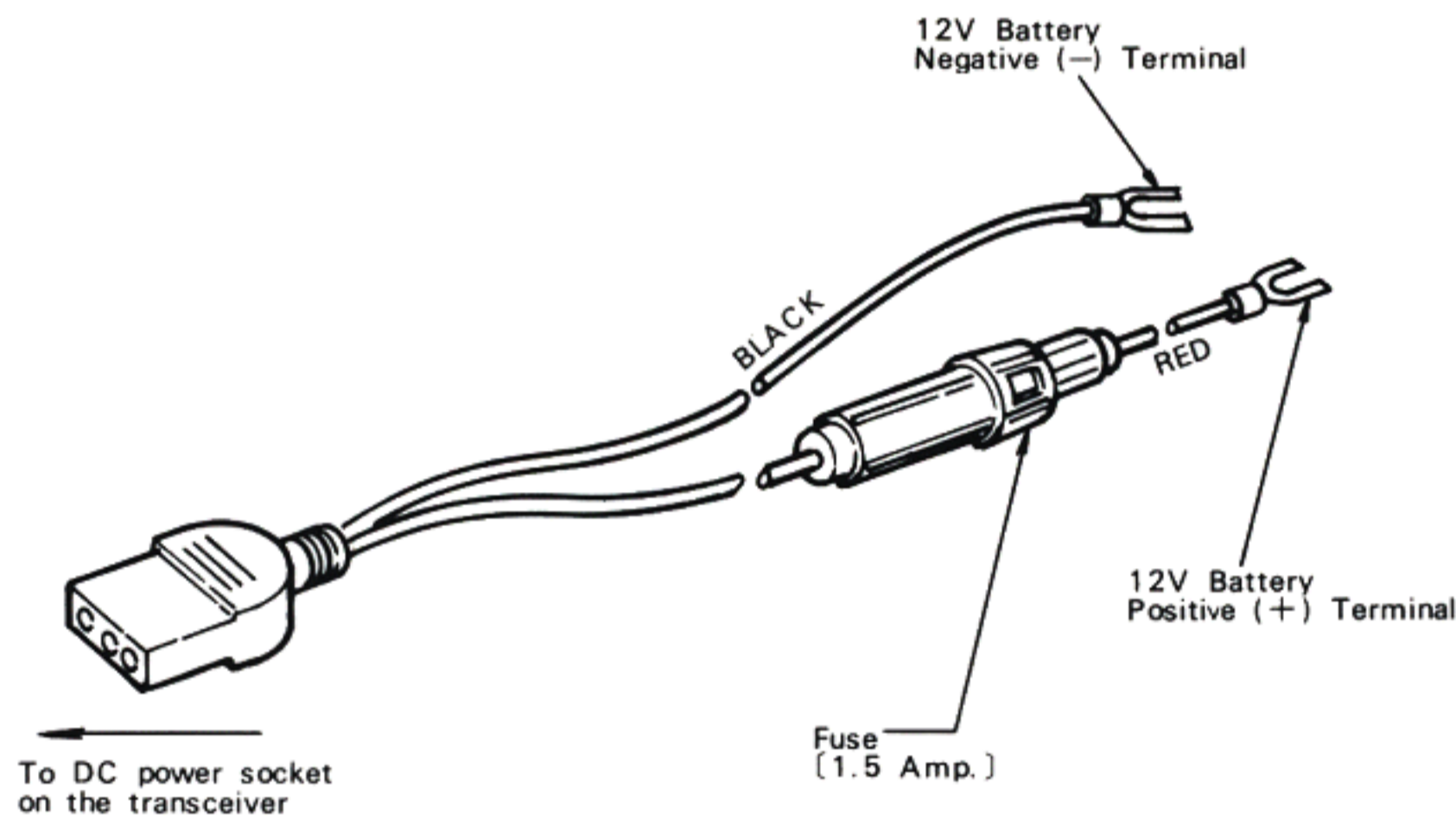


FIGURE 4. CONNECTING DC POWER CORD

ANTENNA CONNECTION

The lead-in cable from the CB antenna should be terminated with a PL-259 type male connector. Attach to the matching antenna input connector at the rear of the transceiver.

MICROPHONE BRACKET

The small size of the transceiver prohibits mounting a microphone bracket directly to the chassis. We recommend, therefore, that the microphone bracket be attached to the dashboard of the vehicle or in any other convenient location. If one desires to do this without drilling holes, a magnetic mounting plate may be used and the microphone bracket attached to it.

MICROPHONE CONNECTION

Insert the 5-pin plug at the end of the coiled cord into the microphone socket at the left front side of the transceiver.

AC OPERATION

As supplied, the Transceiver is designed to operate from a 12 volt DC battery source. For AC operation [house current], an optional solid state AC power supply unit Model PS-52 [No. 99-32864] is required.

The AC line cord from the power supply unit should be connected to an outlet supplying 105—120 volts, 50/60 Hz AC, and the DC output cable [from the AC power supply] plugged into the "POWER" socket at the rear of the transceiver.

CB ANTENNAS

The results obtained with your new Lafayette Citizens Band Transceiver will be greatly determined by the efficiency of the antenna system used.

Due to the complexity of the subject, it is not within the scope of this manual to provide detailed information on antenna systems. We suggest that you purchase one of the numerous books available which covers this subject in greater detail.

ANTENNA CABLE

RG-58/U cable is generally used to connect the CB antenna to the transceiver. The cable should be terminated with a PL-259 connector for connection to the antenna input on the transceiver.

In a base station installation, an exceptionally long lead-in cable may be required. When lengths of over 50 feet [15 meters] are necessary, RG-8/U coaxial cable is more suitable than RG-58/U since it offers lower loss.

AUTO IGNITION INTERFERENCE SUPPRESSION

Your transceiver is equipped with a full-time Automatic Noise Limiter designed to provide efficient reduction of ignition noise. Ignition interference should not therefore be a problem in most cases. However, sufficient noise may be generated by some vehicles to make it necessary to install additional suppression. Several noise suppressor kits are available which include all necessary parts and instructions. Alternatively, you can take the vehicle to a skilled auto radio technician who will be able to carry out the suppression for you.

OPERATING INSTRUCTIONS

Make sure the transceiver is properly installed as indicated previously, and that the antenna and power source are connected. If you have not already done so, plug in the microphone.

RECEIVING

1. Rotate "squelch" control to the counter clockwise position initially.
2. Set the CB/PA switch to the CB position.
3. Set the DIST/LOC switch to the DIST position.
4. Set the DELTA TUNE Switch to the center [normal] position.
5. Select desired channel by rotating the channel Selector Switch to the desired position.
6. Set the NB/ANL switch to the ANL position initially.
7. Rotate the "VOLUME/ON-OFF" switch clockwise to apply power to the transceiver. Since the transceiver is fully transistorized, operation will be instantaneous.

Continue rotating the "VOLUME/ON-OFF" switch clockwise to provide a comfortable listening level.

SQUELCH ADJUSTMENT

The Squelch control is used to eliminate annoying background noise when no signals are present. To adjust the SQUELCH control properly during reception, turn up VOLUME until background noise is heard [no signals should be present]. Rotate the SQUELCH slowly clockwise until the background noise just disappears. At this point, the receiver will be quiet under "no signal" conditions, but an incoming signal will overcome the squelch action and be heard. Since this control is variable, it can be used to provide varying degrees of sensitivity to incoming signals. As the control is advanced [from the extreme counter-clockwise position], the squelch action is progressively increased and progressively stronger incoming signals are needed to overcome it. To receive extremely weak signals or to disable the squelch circuit, simply turn the control fully counter-clockwise.

S/P-RF METER

When receiving, the built-in illuminated meter provides a relative indication of signal strength in "S" units on the top section of the scale and thus offers a means of comparison between one incoming signal and another.

LOC/DIST SWITCH

Normally, this switch should be placed in the DIST position to provide maximum receiver sensitivity for long-range reception. However, when communicating with a nearby station, you may find that the strong signal from this station may cause overloading of your receiver, even though a wide-range AGC system has been employed in the receiver.

In such a case, you can use the LOC position to reduce the receiver sensitivity and thus prevent any overloading and distortion that may occur as a result of the extremely strong incoming signal. For maximum receiver sensitivity, be sure to return the switch to the DIST position.

NOTE: Due to the change in audio level that will take place when switching from DIST to LOC, and from LOC to DIST, some re-adjustment of the Squelch and Volume controls may be required. Also, note that a much lower reading will be indicated on the "S" meter in the LOC position due to the reduced sensitivity of the receiver.

NOISE REDUCTION CIRCUITS

In addition to a standard ANL circuit, your transceiver is also equipped with a special RF noise blanker [NB] which will be found highly effective in combating auto ignition noise.

The RF noise blanker is a unique circuit which, when switched in, literally "chops out" ignition noise by silencing the receiver for the brief duration of each noise impulse. The period during which the receiver is silenced is of such short duration [10 micro-seconds or less] that there is virtually no audible effect on the output. You may notice a lower reading on the "S" meter when you switch the blanker into the circuit. This is caused by the reduction of noise passing through the receiver IF stages, and does not indicate a reduction in the actual signal which is virtually unaffected by the Noise Blanker [you may notice a slight "hissing" noise, however].

NOTE: The RF Noise Blanker is not designed for use against interference caused by neons, atomospherics and various types of electrical machinery. Switching the Blanker into the circuit when this type of interference is present may, in certain cases, actually product an increase in noise heard at the receiver output. If this occurs, simply switch the unit to "ANL" which should be effective in reducing this type of noise.

DELTA TUNING

The TUNE switch acts as a “fine tuning” control for the receiver [± 1.2 KHz] and may be used for reception of a station that is slightly off-frequency. Try all positions and select the one that provides best reception.

NOTE: Since your transceiver employs Phase-Lock-Loop [PLL] circuitry, it will always be precisely on-frequency [on transmit and receive]. However, transmitted signals from other units not employing PLL circuitry may be slightly off frequency, and the DELTA TUNE switch will enable you to “fine-tune” your receiver for best reception of such a signal.

TONE CONTROL

The high frequency tones may be reduced during reception by turning this control clockwise [this will emphasize the low tones]. Always use the position which produces the most intelligible quality to the received signal.

EXTERNAL SPEAKER JACK

The recommended plug for the EXT SPEAKER jack is a subminiature phone plug (1/8”). The impedance of earphones or speakers connected to this jack should be 8–16 ohms. Insertion of a plug into the jack automatically silences the internal speaker.

TRANSMITTING

WARNING: NEVER ATTEMPT TO TRANSMIT WITHOUT AN ANTENNA OR LOAD CONNECTED TO THE TRANSCEIVER.

Before operating the transmitter, the following **MUST** be done:

1. A valid Class “D” Citizens Band equipment license shall be posted at the main control [fixed] station location.
2. A properly filled out and SIGNED mobile identification card, 452C, must be affixed to the unit.
3. Rules Part 95 must be obtained, read and understood.

To transmit, simply depress the push-to-talk button on the microphone. The Red TX Indicator Light will come on and will “flicker” as you speak into the microphone.

Hold the microphone 3 to 4 inches from the mouth and slightly to one side so that the voice does not project directly into the microphone [this provides best results]. Speak at a normal level — there is no need to shout. A design feature of this transceiver is that high average modulation can be achieved easily at normal voice levels.

During periods of transmission, the receiver is silenced and reception is therefore impossible. In the same way, your signal cannot be heard by another station when he is transmitting — each must take turns. To receive again, simply release the microphone push-to-talk button.

PA [PUBLIC ADDRESS] OPERATION

Special provision has been made for Public Adress [PA] operation utilizing the microphone and audio stages in the transceiver. For PA operation, you should use an external 8–16 ohm

speaker connected to the "PA" jack [located at the rear of the transceiver]. The recommended plug for the "PA" jack is a subminiature phone plug (1/8"). To set the transceiver to the PA mode, set the CB/PA switch to the PA position to operate the PA circuit, then press the push-to-talk button on the microphone and talk into it — your voice will be heard from the external speaker [which may be mounted on the exterior of a car or building].

NOTE: During PA operation, the "VOLUME" control can be used to adjust the speaker output level.

To reduce acoustic feedback when the PA speaker is mounted on a car or truck, you may have to close the vehicle windows, or reduce the volume as necessary to stop any feedback that may occur.

OPERATING PROCEDURE

A Citizens Band station is NOT intended to be a replacement for a "ham" stations. Transmission of a "CQ" [calling any station] to alert any station that might be listening is in violation of Citizens Band Regulations [except in an emergency]. For information on proper operating procedures, refer to Part 95 Subpart D [Station Operating Requirements], of the FCC Rules and Regulations.

CITIZENS BAND FREQUENCIES

Your transceiver is capable of operation on all presently available U.S. and Canadian Citizens Band channels, frequencies for which are listed as follows:

CHANNEL	CHANNEL FREQUENCY	CHANNEL	CHANNEL FREQUENCY
1	26.965	16	27.155
2	26.975	17	27.165
3	26.985	18	27.175
4	27.005	19	27.185
5	27.015	20	27.205
6	27.025	21	27.215
7	27.035	22	27.225
8	27.055	23*	27.255
9	27.065		
	—Emergency		
10	27.075		
11	27.085		
12	27.105		
13	27.115		
14	27.125		
15	27.135		

*Channel 23 is shared with Class C Radio Control. This channel not available in Canada.

SERVICING THE TRANSCEIVER

Any unit requiring service should be returned to the Lafayette Store from which it was purchased or to any service organization qualified to make repairs or internal adjustments to the complex circuits in this unit.

NOTE: It should be noted that under the terms of the Warranty, units which show evidence of having been serviced by unauthorized personnel will be ineligible for free service.

SERVICE AND ALIGNMENT

As an aid to the service technician, this manual contains a layout diagram identifying transistors, transformers, coils, etc., a schematic diagram with voltages, a functional block diagram and PC board diagrams. Also included are instructions for aligning the receiver and transmitter sections.

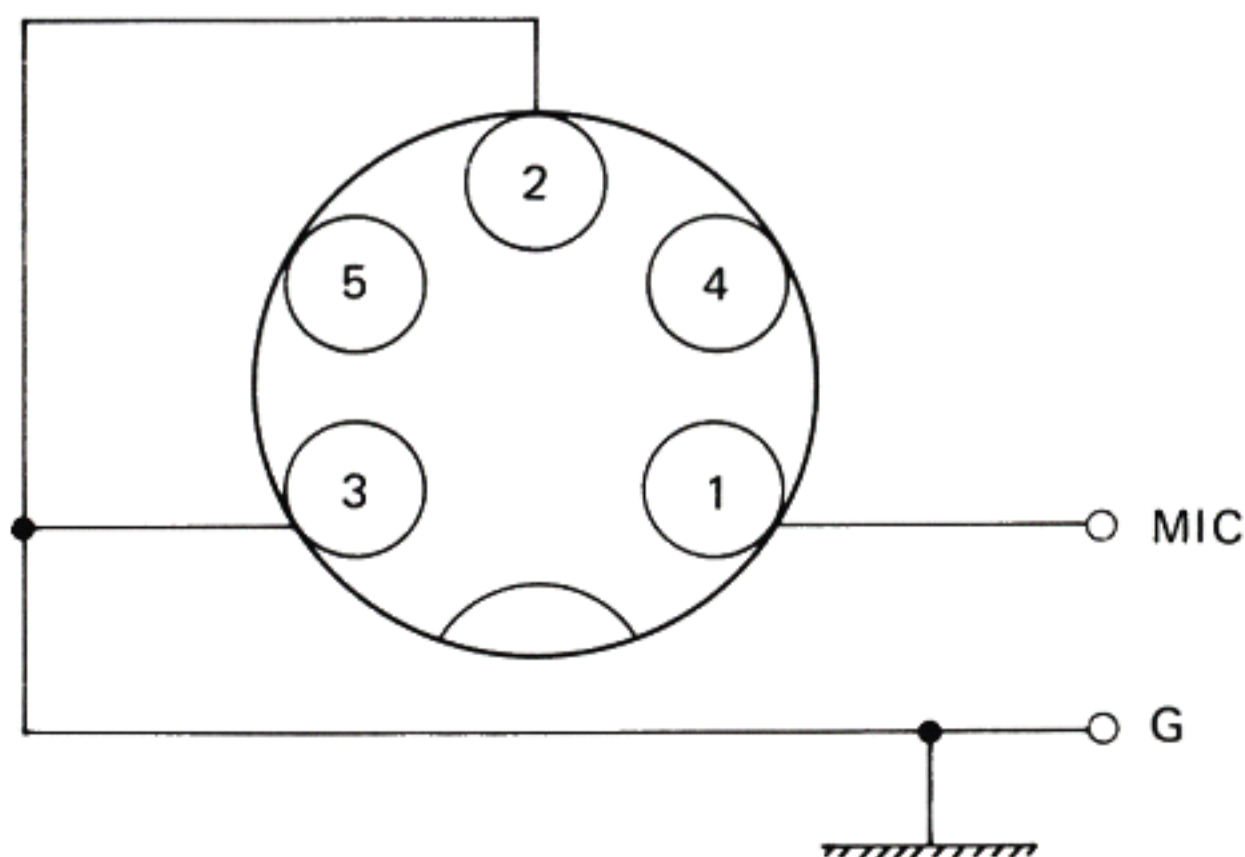
WARNING

As prescribed in Part 95.58, Paragraph [e] of the FCC Rules and Regulations, Lafayette, the manufacturer of this transceiver, is required to issue the following warnings:

1. 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 Radiotelephone Operators License [or equivalent in Canada], or by a person under the direct supervision of a holder of such a license. This applies particularly to those repairs or adjustments, such as replacement of crystals and transmitter oscillator components, which might affect the transmitter's ability to comply with FCC regulations.
2. Use only Lafayette approved replacement parts when servicing the transmitter. The use of a component [such as a crystal, semiconductor, capacitor, etc.] having different electrical characteristics and ratings than that originally used could result in a violation of the FCC Regulations and is therefore prohibited.

TRANSMITTER ALIGNMENT

NOTE: To set the transceiver into transmit mode without the microphone, insert the 5-pin plug wired as shown below into the MIC jack on the transceiver. When applying the audio modulation signal to the microphone input circuit, also use the same plug.



PLL CIRCUIT ALIGNMENT

Before processing alignment, make sure operating frequencies at the points which follow, using the frequency counter (through a 1000 pF coupling capacitor connected in series with counter input probe).

- a. 10.24 MHz Buffer 1 (Q104) collector frequency should be 10.239200 ± 0.13 KHz.
- b. VCO, Q108 base frequency should be 37.6592 ± 0.38 KHz at CH 1 position.
- c. 10.695 MHz OSC 2 (Q109) emitter frequency should be 10.694200 ± 0.12 KHz.
- d. DELTA TUNE Adjustment
Place the DELTA TUNE switch in the "0" position and connect the frequency counter to the base of Q108 base. The counter reading should be 37.659200 MHz with the channel selector placed in CH-1 position. If not, adjust CT101 to obtain the 37.659200 MHz.

VCO ALIGNMENT

1. Place the channel selector in CH1 position.
2. Connect the circuit tester (DC 3V range) between the ground and R114 (TP-8 side).
3. Adjust T101 core clockwise to obtain $1.5V \pm 0.1V$ on the tester (the tester should be calibrated and has an input impedance of $V/20K$ ohm or higher).
4. Place the channel selector in open channel position, the voltage reading of 5.1—5.4V will be obtained. Next, place the channel selector in 23 CH position, and read the value on the tester, it should be $2.7 \pm 0.6V$.

ALIGNMENT STAGES BEFORE RF POWER AMPLIFIER

1. Place the channel selector in CH 13 position.
2. Adjust Power Supply Voltage to 8.0V.
3. Connect oscilloscope to the base side of T102 (C141) and ground.
4. Adjust L103, L104 and T102 for maximum amplitude on the scopedisplay (27.115 MHz).
5. Next, connect the oscilloscope to the base of Q112 and adjust T102 and T103 for maximum amplitude.

ALIGNMENT OF RF POWER AMPLIFIER

1. Channel Selector Switch in 13 CH position, Power Supply voltage 13.8V.
2. Adjust L106 for maximum reading on the RF Watt Meter.
3. Adjust L109 for maximum RF Power Output.
4. Adjust L110 for maximum RF Power Output.
5. Adjust L109 for maximum RF Power Output again.
6. Turn L106 core clockwise so that RF Watt Meter should indicate 4.4W.
7. Turn L110 core counter clockwise until the power reading of 3.8W is obtained.

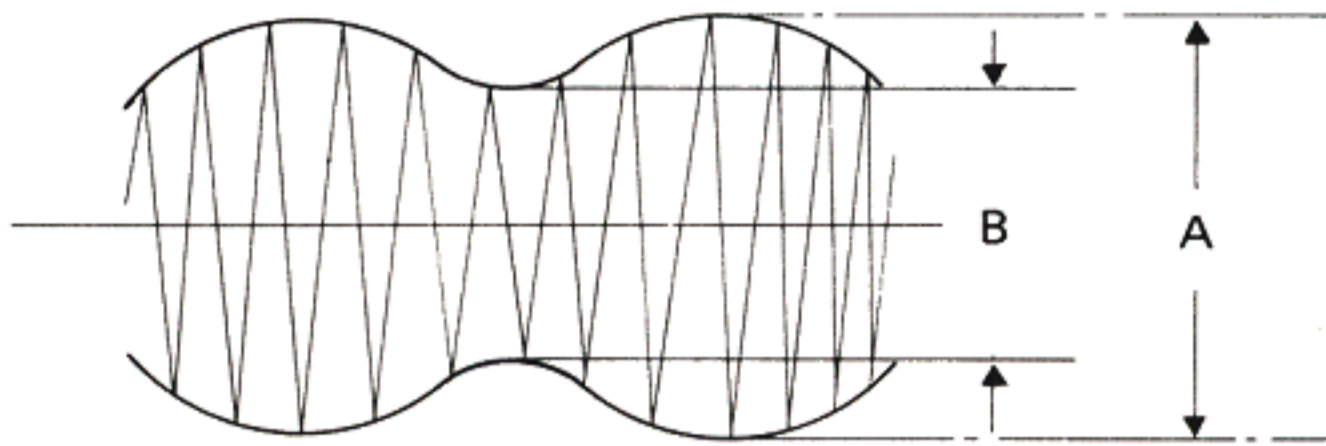
After completion of above alignment, read the total DC current flowing into the power cord, using ampere meter built-in power supply unit or ampere meter connected series in the power cord. The reading should be 900 mA or less.

TRANSMIT FREQUENCY CHECK

1. Set the transceiver into transmit mode, no modulation.
2. Connect the frequency counter to the ANT connector and read the frequency at each channel. The frequency should be within ± 800 Hz from each center channel frequency as tabulated in this manual.

MODULATION SENSITIVITY ALIGNMENT

1. Set the unit into transmit mode and apply 20 mV, 1 KHz signal to the MIC input circuit.
2. RV-102 should be adjusted to obtain 90% modulation at this condition.



$$\text{Modulation Ratio} = \frac{A - B}{A + B} \times 100 (\%)$$

3. Next, decrease signal input to 6 mV and observe that the modulation ratio is still keeping the value higher than 80%.

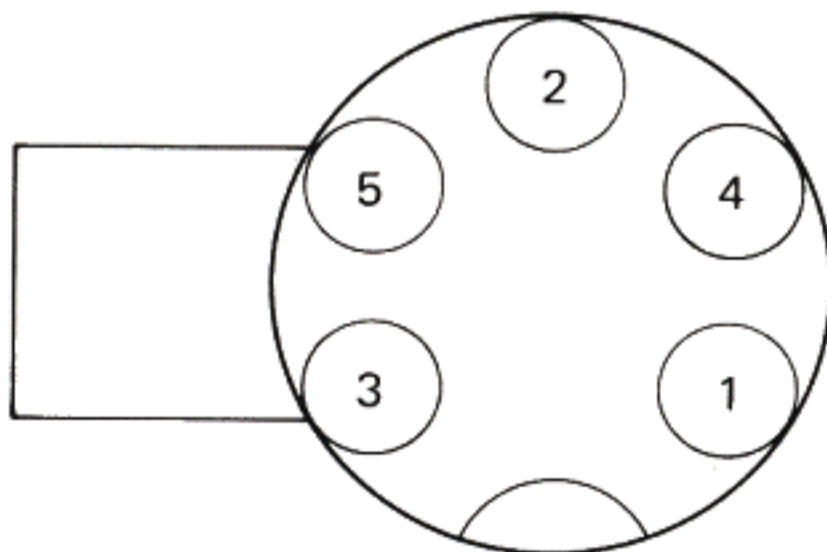
RF METER ALIGNMENT

Adjust RV-104 so that the meter pointer should indicate the same wattage as the reading obtained on the watt meter.

RECEIVER SECTION

NOTE: Unless otherwise noted, place the Δ TUNE switch in "0" position and ANL NB switch in the "ANL" position.

To make the transceiver into receiver mode, insert the 5-P plug wired as shown below into the MIC jack on the front panel.



1. Set the Signal Generator, 27.115 MHz, 1 KHz 30% modulation. Also set the transceiver into 13 CH position.

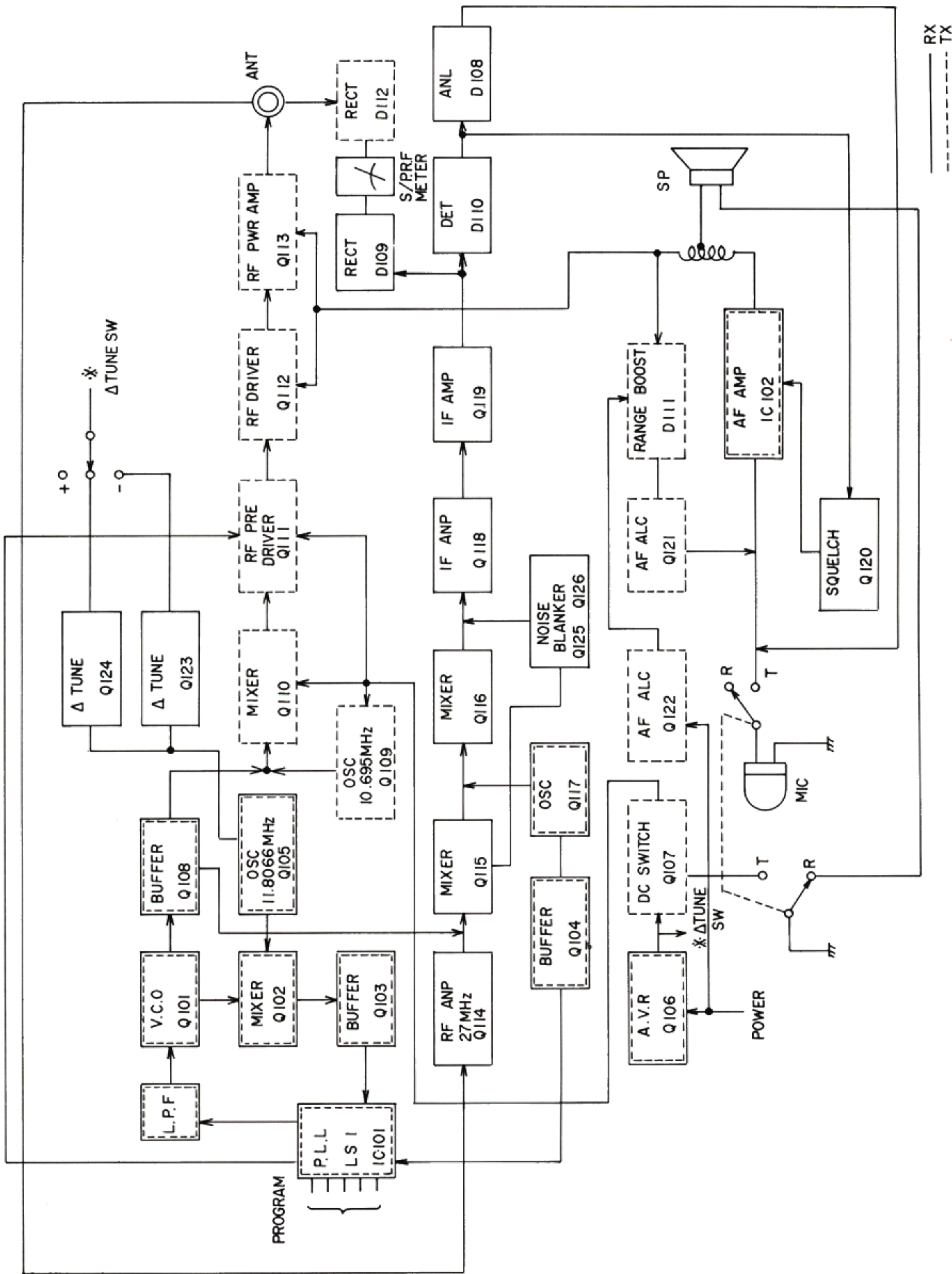
2. Tune the generator to the receiver, 13 CH.
3. Adjust T111, T104, T105, L112, T106, T107, T108 and T109 for maximum audio output between the 8 ohm dummy resistor.
This alignment should be performed with very small signal input from the signal generator to avoid inaccurate alignment due to agc action.

SQUELCH CIRCUIT ALIGNMENT

1. Set the signal generator to provide RF input signal of 54 dB (1 KHz, 30% mod.).
2. Rotate the Squelch control volume in full clockwise direction.
3. Temporarily adjust the RV-101 for maximum audio output, and note the audio output level. Then, adjust RV-101 so that the audio output level decreases by 6 dB.

S-METER ADJUSTMENT

1. Set the signal generator to provide 40 dB signal output.
2. Adjust RV-103 so that the S-meter pointer should read "9" on the meter provided on the front panel.



HB-750 FUNCTIONAL BLOCK DIAGRAM

RETURNING THE UNIT FOR SERVICE

In the event that repair is necessary [either in or out of warranty], we recommend that you return the unit to the store from which it was purchased. In most cases, this will be your fastest and most efficient method of obtaining service.

If you wish to ship the unit to our main service center, please read the instructions which follow.

SHIPPING INSTRUCTIONS

Pack the unit very carefully to avoid damage in transit, preferably in its original carton. If the original carton is not available, use a sturdy carton with at least 6 inches of crumpled newspaper or other packing material packed tightly around the unit to avoid any chance of damage in shipment. Be sure to use strong cord on tape around carton. If this unit is being returned under warranty, it must be accompanied by a copy of the original sales ticket or shipping documents to establish date of purchase. Also, include with the unit a letter explaining exactly what difficulties you have encountered [remember to add extra First Class postage and indicate on the outside of the carton that First Class Mail is enclosed]. Ship by prepaid express if possible and mark ELECTRONIC EQUIPMENT . . . FRAGILE. Clearly address the carton as follows:

SERVICE DIVISION
LAFAYETTE RADIO ELECTRONICS CORP.
150 Engineers Road
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