

PRESS-TO-TALK MICROPHONE:

The receiver and transmitter are controlled by the press-to-talk switch on the microphone. Press in this switch and the transmitter is activated. Release this switch to receive. When transmitting, hold the microphone 3 to 4 inches from your mouth and speak clearly and in a normal voice.

GENERAL OPERATIONS INSTRUCTIONS

CAUTION:

Before operating this transceiver, you are required by law to read and thoroughly understand part 95 of the F. C. C. rules and regulations.

Check to see if the proper connections have been made on power cable, antenna system and microphone and that the correct cables have been used. Be sure that the transceiver is adequately grounded (if not mounted directly to a metal surface E).

To transmit, press the push-to-talk switch and hold it down. Speak directly into the microphone. Release this switch to receive. Actual receive and transmitting power should be monitored by watching the **SIGNAL-TRANSMIT POWER METER**.

Select the channel on which you wish to operate by rotating the Channel Selector Switch to the desired channel.

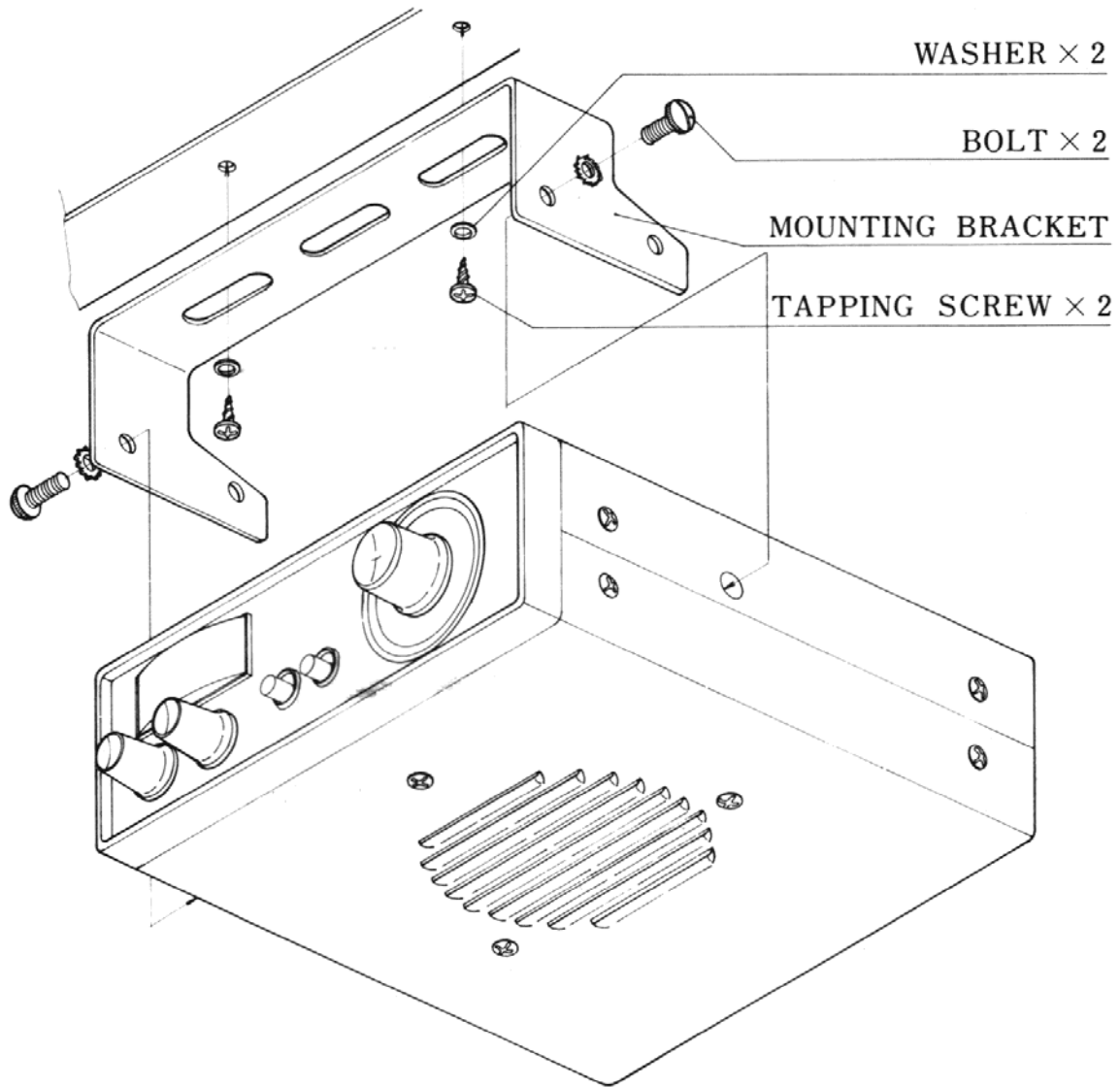
The microphone should be held approximately 3 to 4 inches away from your mouth. Use a normal speaking voice. Speak slowly and clearly. Talking louder does not increase transmitting power and may cause distortion. You will notice the **SIGNAL-TRANSMIT POWER** meter moving as you transmit. This indicates that you are transmitting. Always release the microphone switch when you complete your transmission.

SERVICING YOUR TRANSCEIVER

The technical information, diagrams and charts provided in this manual are supplied for the use of a qualified holder of a first or second class radiotelephone license in servicing this transceiver. It is the users responsibility to see that this unit is operating at all times in accordance with the F. C. C. citizens radio service regulations.

If you install your own transceiver, do not attempt to make any transmitter tuning adjustments. Adjustments are prohibited by the F. C. C. unless you hold or are in the presence and under the supervision of a first or second class radiotelephone licensed person. A Citizens Band or Amateur license is not sufficient.

MOUNTING INSTRUCTIONS



SPECIFICATIONS FOR 13-866

Circuitry : 21 transistors,
and 11 diodes

Receiver Section:

Sensitivity at 10 db S/N	:	1 μ V
Image Rejection Ratio	:	40 db
1st IF Rejection Ratio at 11.275 MHz	:	45 db
2nd IF Rejection Ratio at 455 KHz	:	100 db
Squelch sensitivity at maximum	:	300 μ V
Squelch sensitivity at threshold	:	0.5 μ V
A.G.C. (input 5,000 μ V, output 10 db down)	:	75 db
IF Response at 6 db down bandwidth	:	8 KHz
Adjacent channel selectivity	:	35 db
Audio output power at maximum (input 60 db)	:	4W
Audio output power at 10% distortion	:	2.8W
Distortion at input 60 db	:	10%
Audio fidelity at 1,000 Hz 0 db (6 db down)	:	300–2,000 Hz
Current drain at no signal	:	250 mA
Current drain at maximum output power	:	900 mA

Transmitter Section:

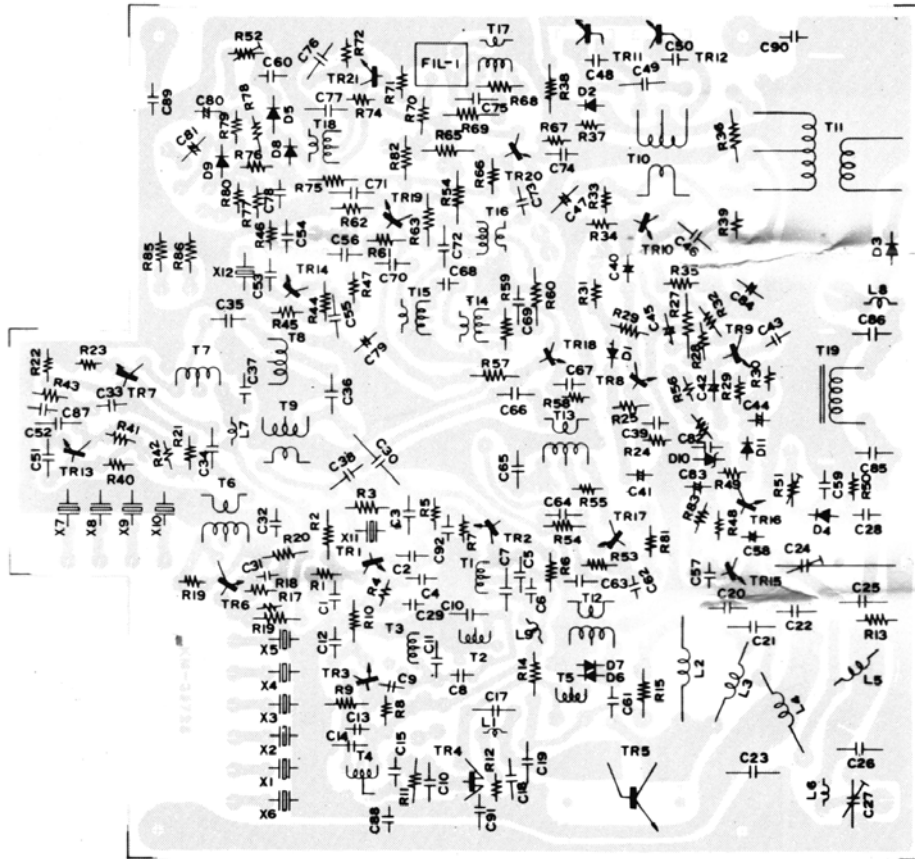
RF output power	:	4W
Modulation capability	:	85%
Frequency tolerance	:	0.005%
Spurious ratio	:	50 db
Current drain at no modulation	:	900 mA
Current drain at maximum modulation	:	1,500 mA

Measurement Condition:

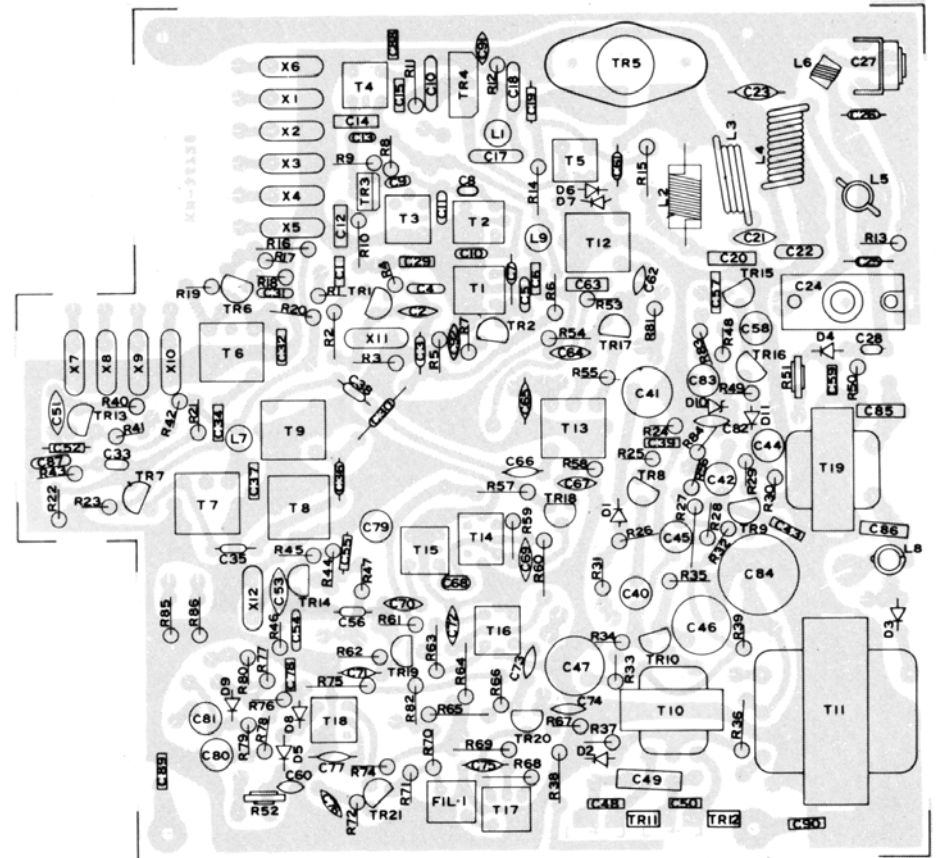
Audio output power	:	0.5W
Audio output load	:	8 ohm
Modulation frequency	:	1,000 Hz
Modulation	:	30%
Antenna impedance	:	50 ohm
Power source	:	13.8V DC

MODEL 13-866 PARTS LAYOUT

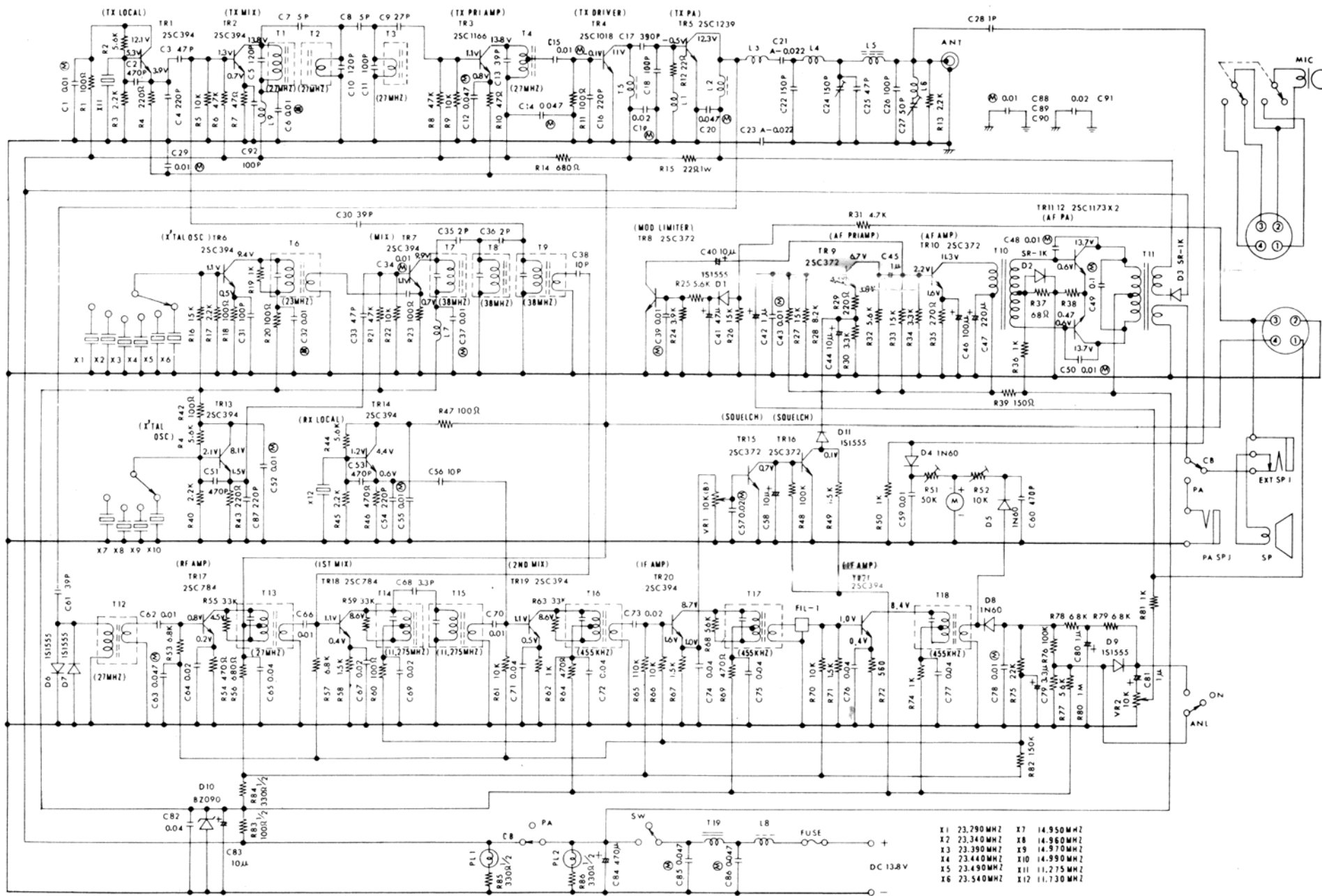
BACK VIEW



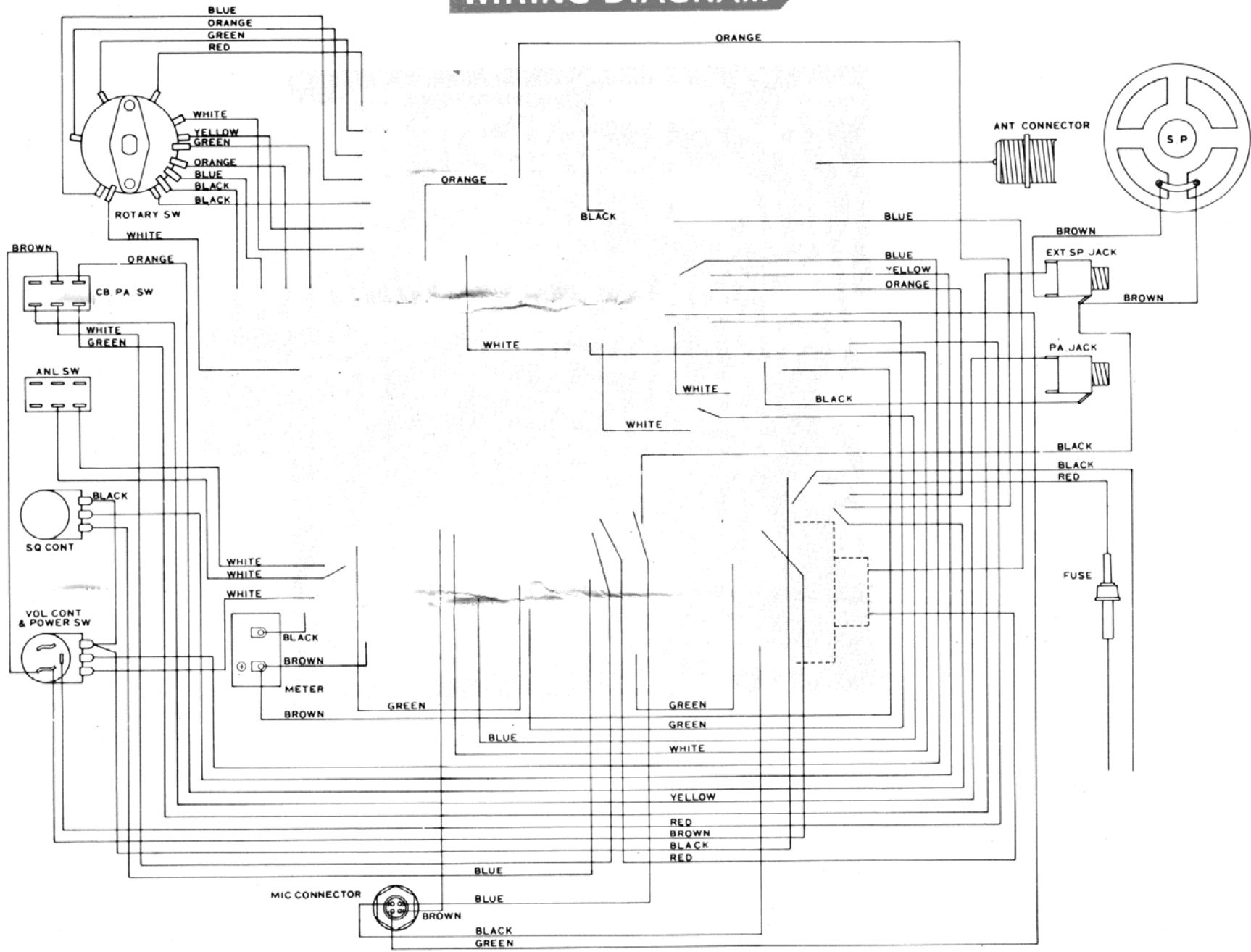
FRONT VIEW



MODEL 13-866 SCHEMATIC DIAGRAM



WIRING DIAGRAM



CRYSTAL FREQUENCY CHART

XTAL	CHANNEL																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
MASTER1																							
23.290	○	○	○	○																			
23.340					○	○	○	○															
23.390									○	○	○	○											
23.440													○	○	○	○							
23.490																	○	○	○	○			
23.540																					○	○	○
MASTER2																							
14.950	○				○				○				○				○				○		
14.960		○				○				○				○				○				○	
14.970			○				○				○				○				○				
14.990				○				○				○				○				○			○
XMTR																							
11.275	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
RCVR																							
11.730	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

WARRANTY POLICY

Midland Electronics Company warrants each new Midland product to be free from defects in material and workmanship under normal use and service for a period of 90 days after delivery to the ultimate user and will replace or repair the product at our option, at no charge should it become defective and which our examination shall disclose to be defective and under warranty.

This warranty shall not apply to any Midland product which has been subject to misuse, neglect, accident, incorrect wiring not of our own installation, or to use in violation or instructions furnished by us, nor extended to units which have been repaired or altered outside of our factory.

This warranty does not cover carrying cases, earphones, batteries, antenna, broken or cracked cabinets, or any other accessory used in connection with this product.

This warranty is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sales of our products.

Sales receipt must accompany product to validate the date of purchase.

MIDLAND ELECTRONICS COMPANY

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