

MIDLAND
precision series 
Keeping you way out front.



7001

OWNER'S MANUAL

40-channel single-sideband CB transceiver.

SOLUTIONS:

COMMON CB PROBLEMS:

	Check CB/PA switch.	Check power cable connection.	Check 2-amp fuse.	Check Squelch adjustment.	Check on/off switch.	Change to active channel.	Check antenna connection.	Fully depress push-to-talk bar.	Check microphone connection.	Check metal-to-metal ground connection.	Check antenna cable and SWR adjustment.
No sound or channel light.		•	•	•					•		
Channel light but no sound.	•			•		•		•	•		•
No voice reception.			•		•						•
Poor reception.						•		•	•	•	
Transmission problems.						•	•	•	•	•	
Unclear reception.						•		•	•	•	
Poor PA Audio Frequency.	•										
Inoperative channel selector.	•										

Caution: The 2-amp fuse included with this unit is an important safety feature which must not be circumvented. Removal of this fuse or the use of a fuse greater than 2 amps may result in overheating and/or fire and consequential damage to the unit or vehicle. If a replacement 2-amp fuse burns out, have the unit inspected and repaired by a qualified service technician.

Midland 7001 Mobile CB Transceiver: Technical Specifications.

General Construction.

- Three-pin polarized jack for DC power.
- Four-pin screw connector for microphone.
- No mechanical relays. All switching is solid state using diodes and transistors for high reliability.
- Transmitter output stage is protected from mismatch, no-load or short-circuit conditions.
- Input power is suitably filtered and bypassed to deter alternator "whine" on transmit or receive.

Electrical Specifications.

General:

Voltage	13.8 V. Positive/Negative Ground Operating Range: 10 V to 16 V.
Frequency Stability	± 0.05%
Temperature Range	-30° to +50° C (Per FCC Part 15)
Humidity	5-90%
Vibration	EIA Standard RS-424
Shock	EIA Standard RS-424

Receiver (AM):

Sensitivity	Less than 0.7 μ v for 10 dB SN +N to N
Automatic Gain Control Figure of Merit	80 dB
Audio Squelch Sensitivity Threshold	Less than 10 dB SN +N to N
Tight	100 μ v minimum 500 μ v maximum

Adjacent Channel Selectivity and Desensitization.

60 dB (Two-generator method)

Spurious Response Attenuation

60 dB (excluding image at 50 dB)

Audio Power Output

3 W @ 10% distortion (load impedance 8 ohms resistive).

Audio Frequency Response (1 KHz, 0 dB reference).

300 Hz @ -5 dB
1000 Hz @ 0 dB
2000 Hz @ -3 dB

Hum and Noise, Squelched.

-45 dB

Noise Limiting.

Provided with Switchable ANL

S Meter Sensitivity at "S-9"

100 μ v.

RF Gain Range.

30 dB

Antenna Input Impedance

50 ohms, unbalanced.

Transmitter (AM):

Carrier Power, No Modulation

4 W maximum, 3.6 minimum

Conducted Spurious Emissions

-65 dB

Radiated Spurious Emissions

(Complies with FCC Part 95)

Audio Frequency Harmonic Distortion

10% maximum @ 80%

Audio Frequency Response (1 KHz, 0 dB reference).

300 Hz @ -5 dB
1000 Hz @ 0 dB
3000 Hz @ -5 dB

Hum and Noise.

-40 dB

Output Impedance

50 ohms, unbalanced.

Output Protection

Withstands for 5 minutes all VSWR around Smith Chart at 20:1 without damage or failure.

Output Stability

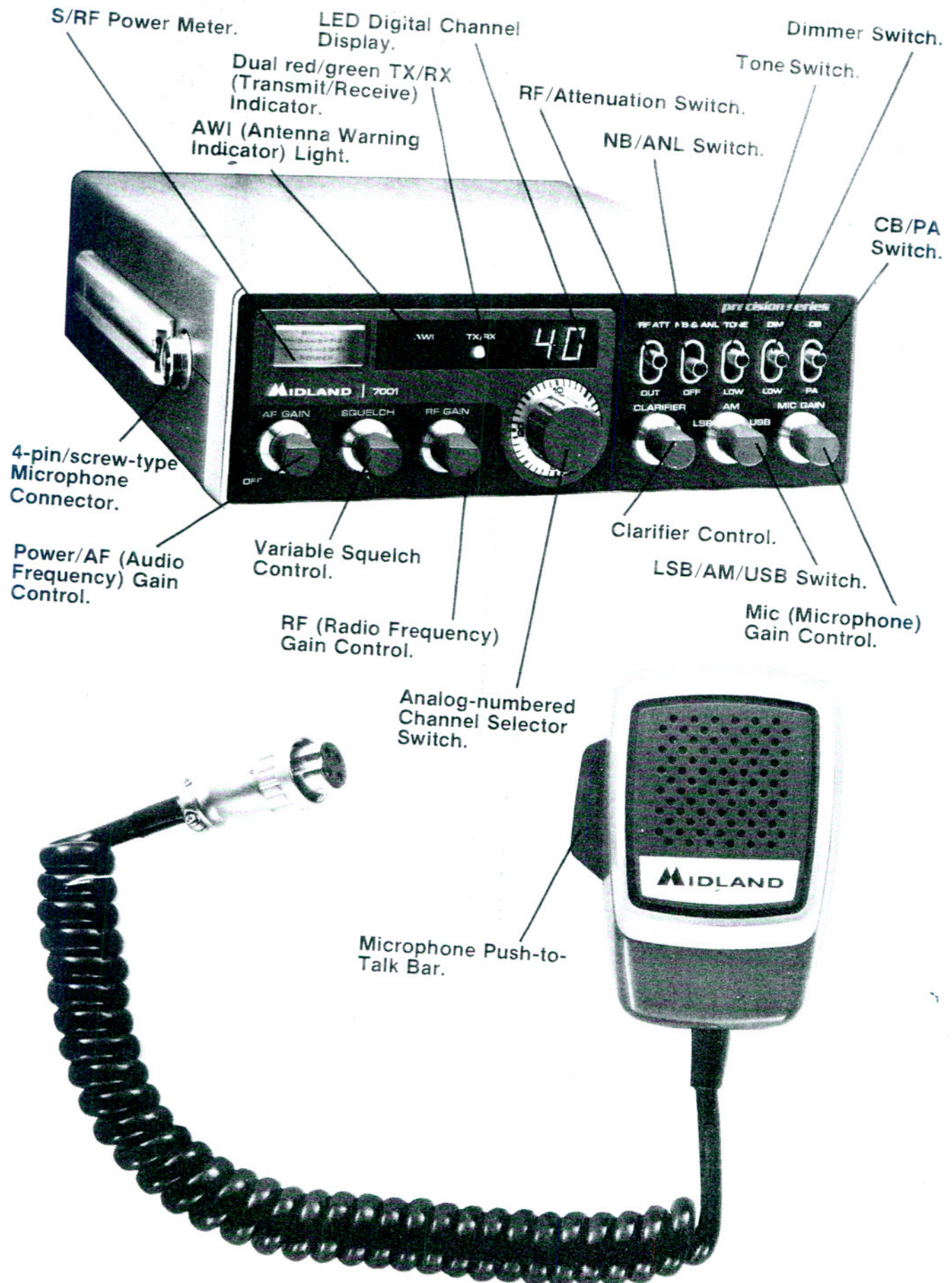
Does not exceed FCC Limits For Spurious Emissions when operated into a mismatch load with 5:1 VSWR at any point on the Smith Chart.

Controls: Off/AF gain control, Squelch control, RF gain control, Microphone Gain control, CB/PA switch, Hi/Lo Tone switch NB+ ANL-Off switch, S/RF/PWR Meter, Green color Numerical LED Channel indicator, Rotary Analog-Numerical Channel selector

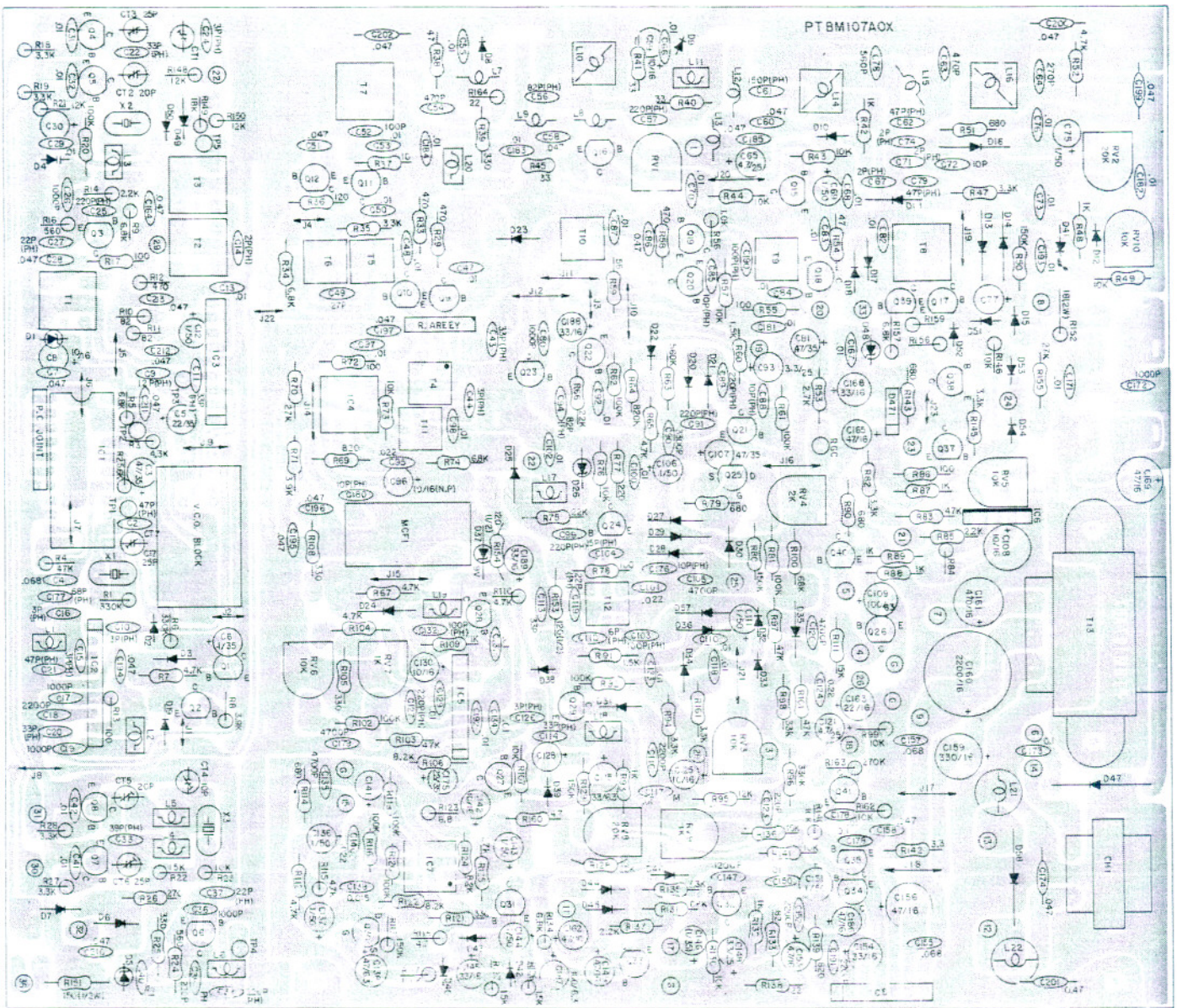
Jacks and Connections: 4-pin/screw-type Microphone Connector, 50-ohm antenna 8-ohm external speaker, PA speaker

Accessories included: 500-ohm push-to-talk microphone with coil cord and clip, 4-pin connector, Microphone clip, Mounting bracket and hardware, Owners manual, FCC forms 505, 555-B, Part 95

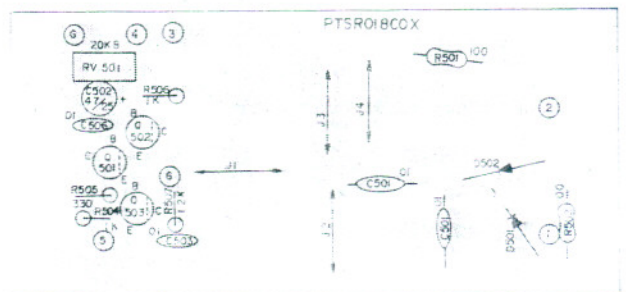
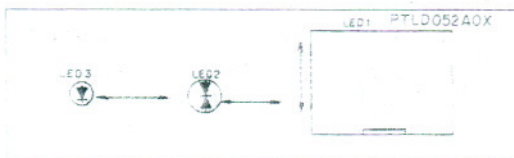
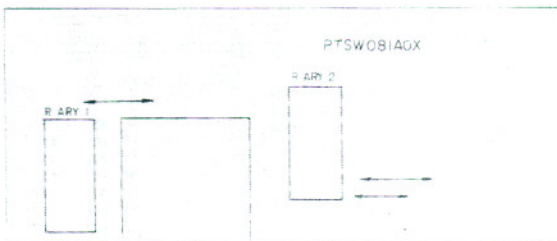
Midland 7001 Mobile CB Operating Controls.



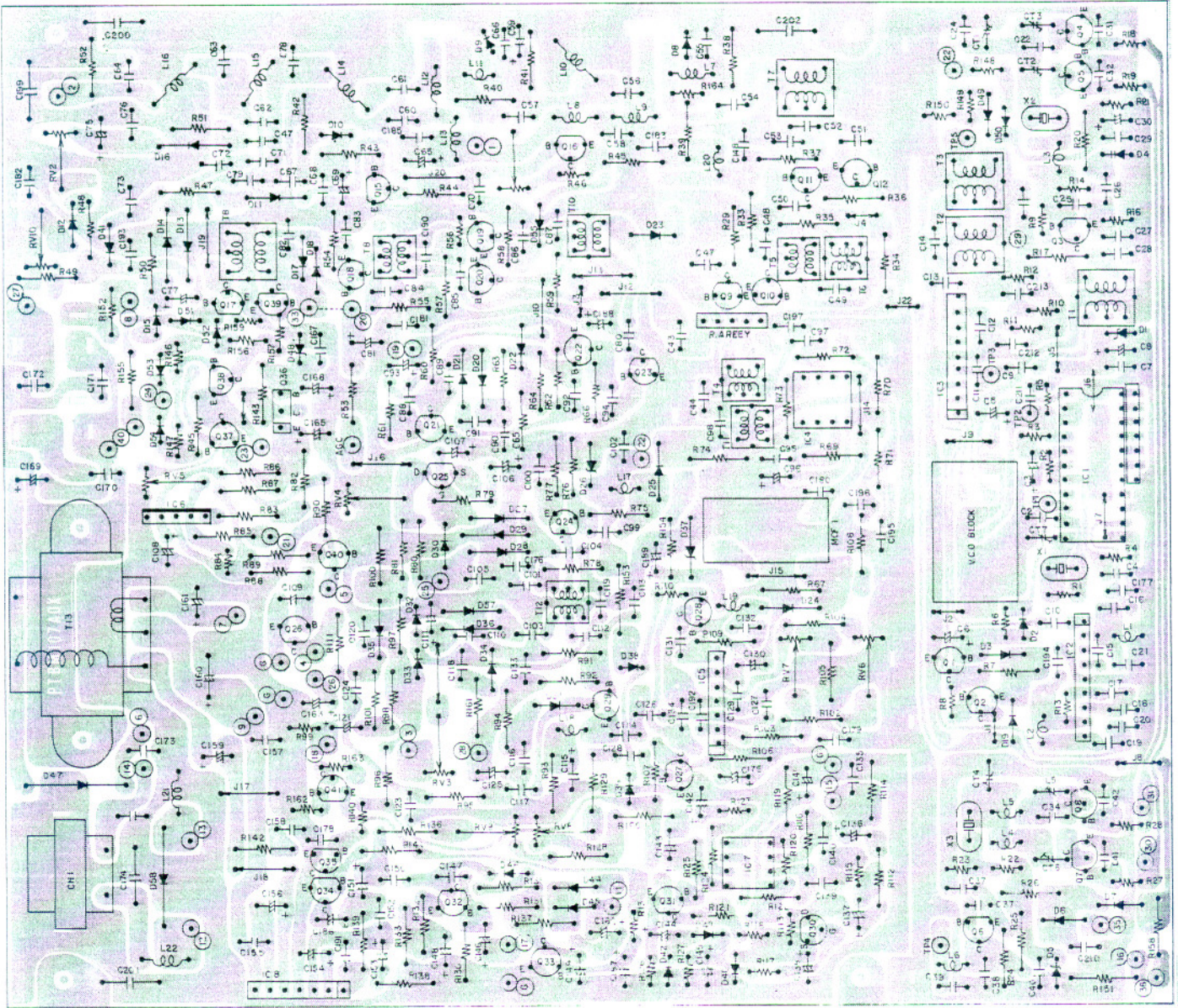
Parts Layout. Main PC Board.



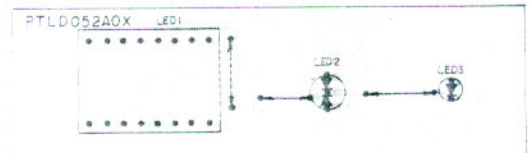
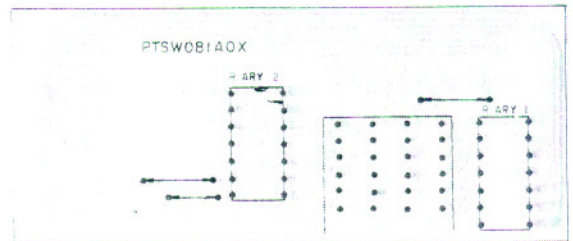
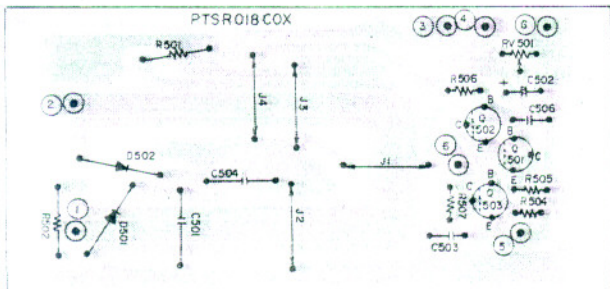
Component side.



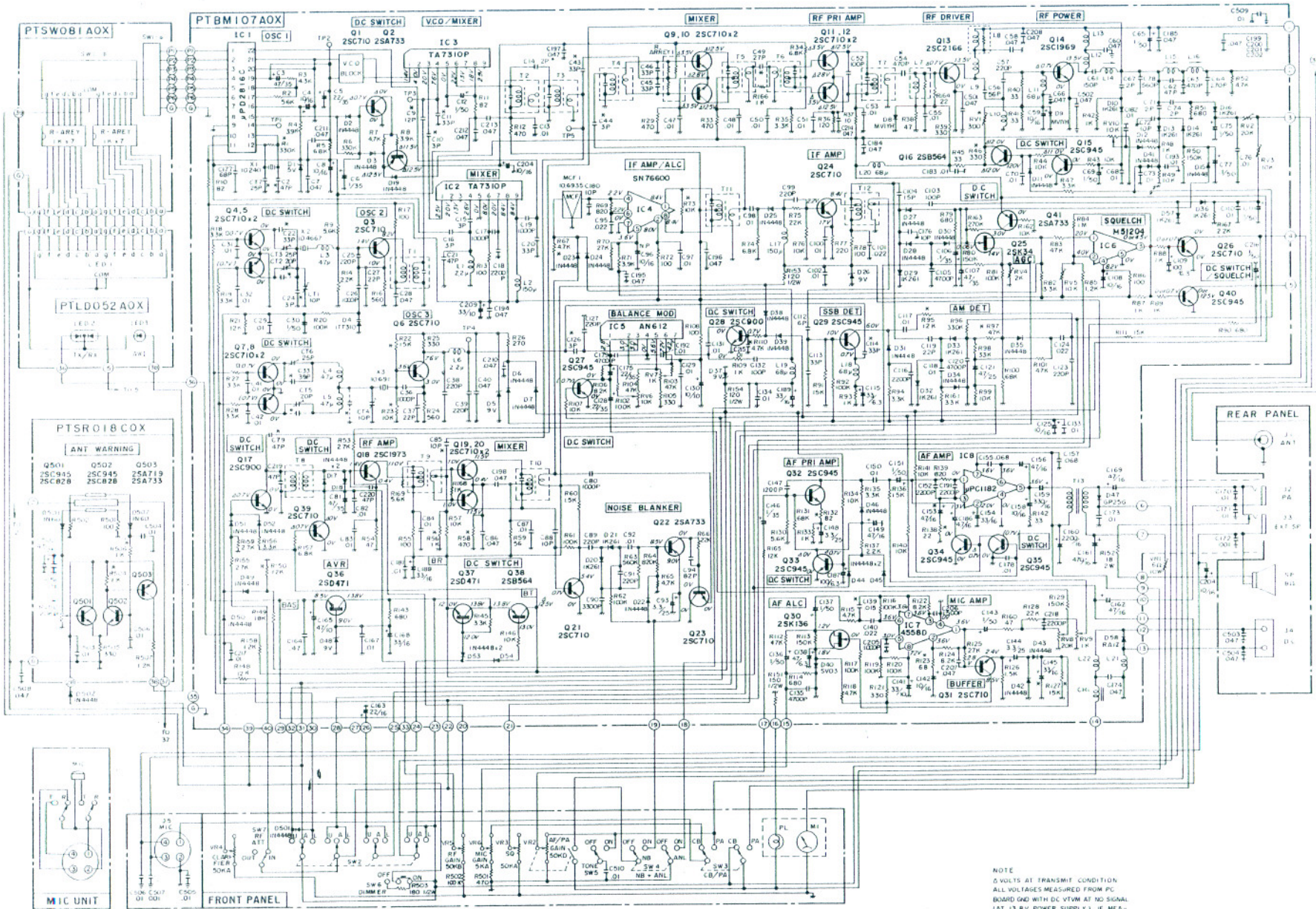
Parts Layout. Main PC Board.



Pattern side.



Schematic Diagram.



TRANSISTOR BASE INFORMATION E EMITTER C COLLECTOR B BASE S SOURCE G GATE D DRAIN SIDE VIEW



NOTE
 0 VOLTS AT TRANSMIT CONDITION
 ALL VOLTAGES MEASURED FROM PC BOARD GND WITH DC VTVM AT NO SIGNAL (AT 13.5V POWER SUPPLY) IF MEASUREMENT VALUES OBTAINED ARE IN EXCESS OF ±20% OF VALUES SHOWN THEN REASON FOR DIFFERENCE SHOULD BE CORRECTED
 † CHASSIS GND ‡ PC BOARD GND
 * VARIABLE