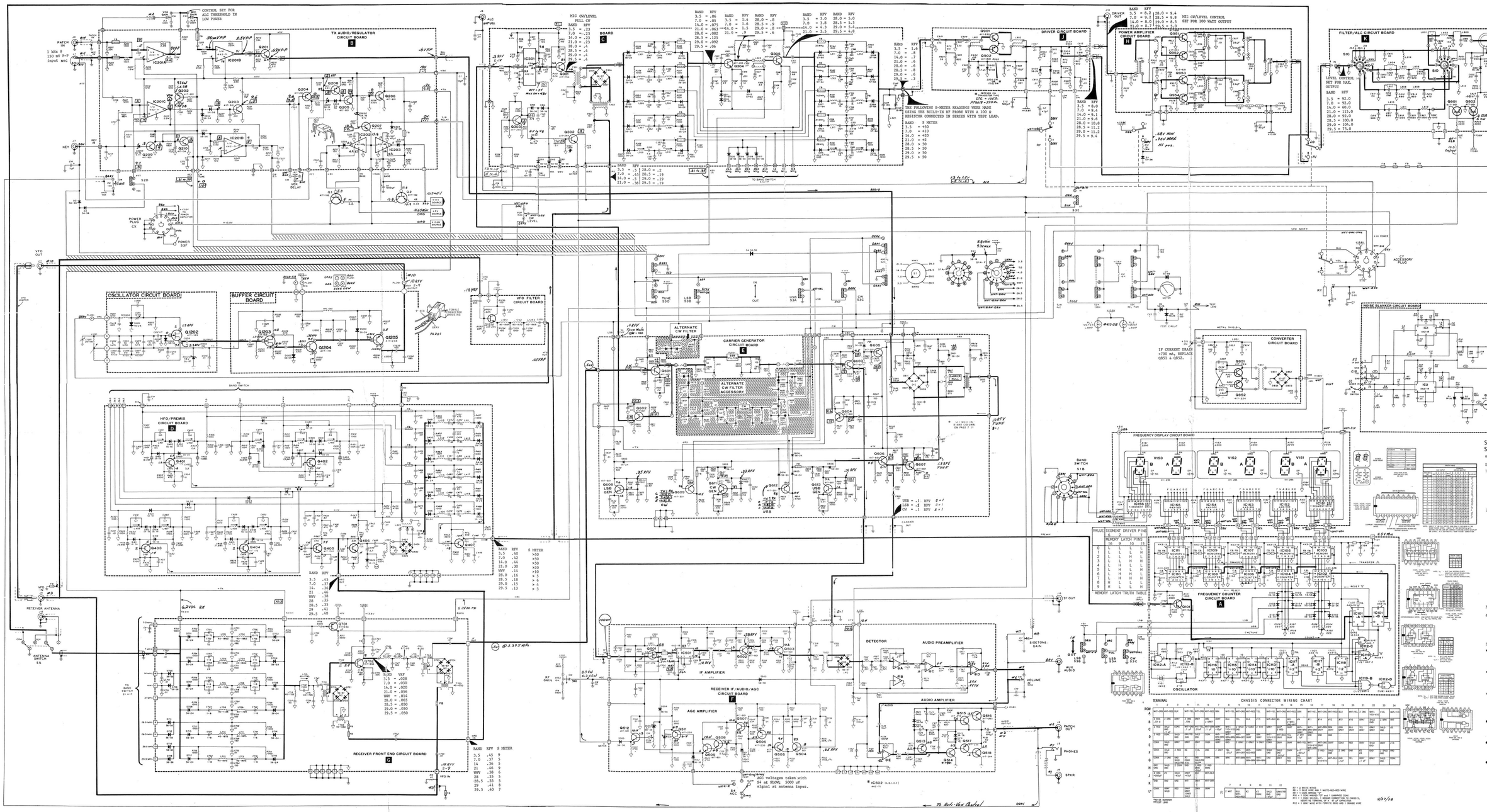

SB-104A
SSB TRANSCEIVER

and SBA-104-1 NOISE BLANKER

SCHEMATIC NOTES:

1. The voltages were taken with transceiver in the following mode:

Receiver Measurements	Transmitter Measurements
USB Mode 3.700 MHz, unless indicated.	TUNE 3.700 MHz, unless indicated.

2. Measurement indications are:

   2.5 - Indicates 2.5 VDC in receive mode.

   (2.5) - Indicates 2.5 VDC in transmit mode.

   2.5 RFV - Indicates 2.5 V measured with a PKM-3 RF probe and a VTVM.

   (.5 uV) - Indicates a .5 uV signal injected for a 10 dB S + N/N. Output of generator coupled through 130 pf capacitor. Noise level set with generator lead connected to injection point.

   S = 2 - Indicates a "2" reading on the S meter when built-in RF probe is used. These measurements included to assist when troubleshooting with customer by telephone.

3. Heavy line indicates primary signal paths.

4. Color of wiring at chassis connectors are shown on "Chassis Connector Wiring Chart". Wire colors at controls, switches, and other connectors are shown at each component symbol.

SERVICE NOTES

- When VOX DELAY control is set to FCCW, negative spikes can be seen on the +11 volt line. This is considered a normal condition.
- The AC line current, when operating UUT into a 50 Ω dummy load, will be:
  Transmit - 9.5 amperes (typical)
  Receive - 3.0 amperes (typical)
- A Board: If the premix input cable is unplugged and this board is on an extender, a ground must be connected from this board to chassis. This board is grounded through a chassis connector pin.
- C Board: If low in ALC on Voice, increase R321 to 4700 Ω.
  This board will oscillate on 10 M when extended.
- F Board: The F Board and G Board or the F Board and E Board will oscillate if they are op extender boards at the same time.
- E and F Boards: The sensitivity of the IF can be checked by injecting a 3.395 MHz signal at G1. A .2 to .5 uV signal injected at this point should produce a 10 dB S + N/N. Be sure the output of the G Board, pin 1, is not connected to the input of the E Board when making this test. To disconnect the G Board, simply shift the 6-pin male plug on the extender board one pin to the left. Inject signal at pin 1 of the extender board.
- H Board: A wattmeter connected directly to the output of this board should indicate ≥175 watts on 80 M through 20 M and ≥125 watts on 15 M and 10 M. This test will determine if problem is in ALC circuit or amplifiers on "Insufficient power output" problems.