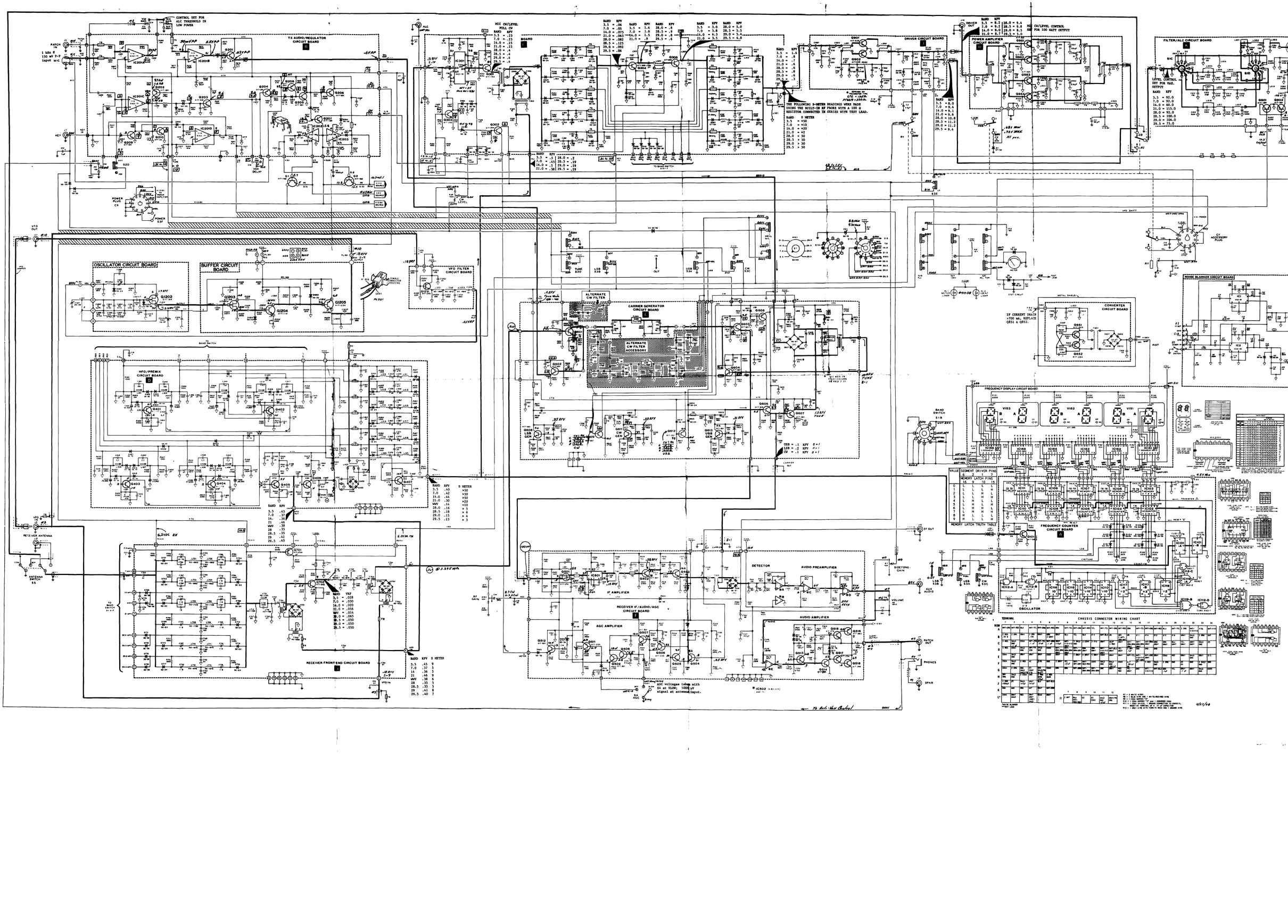

SB-104A
SSB TRANSCEIVER
and SBA-104-1 NOISE BLANKER

SCHEMATIC NOTES:

1. The voltages were taken with a Hewlett-Packard 410B VTVM. In the following mode:

Receiver Measurements	Transmitter
USB Mode 3.700 Mhz. Unless Indicated.	3 Mhz. unless indicated.

2. Measurement indications are as follows:
   - 2.5 - Indicates 2.5 VDC with respect to chassis in receive mode.
   - (2.5) - Indicates 2.5 VDC in transmit mode.
   - 2.5 RFV - Indicates 2.5 VDC on RF probe with a Pin-1 RF probe used with the VTVM.
   - (2.5) - Indicates a -5 volt bias voltage injected for a 10 uA collector current. Output of generator is fed through 150 pF capacitor. Generator level set with generator probe connected to injection point.
   - S = 2 - Indicates a "2" S meter reading with 5 meter when built-in RF probe used. These measurements are to assist when troubleshooting with customer by telephone.
3. Heavy line indicates primary circuit path.
4. Color of wiring at chassis connectors is shown on "Chassis Connector Wiring Chart". Wire colors at controls, switches and other connectors are shown by component symbol.

SERVICE NOTES

- When VOX DELAY control is set to maximum counterclockwise position a negative voltage can be seen at the junction of R320 and C320 with a VTVM. This is considered normal under these conditions.
- The AC line current, when operating into a 50 Ω dummy load, will be as follows:
  Transmit - 5.5 amperes maximum.
  Receive - 3.0 amperes maximum.
- A Board: If the premix input is unplugged and this board is removed from this board to chassis ground. If board is not grounded to the chassis connector pin.
- C Board: If low in ALC on this board, R321 to 4700 Ω.

  This board will oscillate when extended.
- F Board: The F Board and G Board or F Board and E Board will oscillate if they are on extender boards at the same time.
- E and F Boards: The sensitivity of these can be checked by injecting a 3.7 Mhz signal at G1. A .2 to .5 uV signal injected at this point should produce a 10 dB S + N/N. Be sure that the pin of the G Board, pin 1, is disconnected to the input of the F Board when making this test. To disconnect the G Board, simply short the female plug on the extender board pin to the left. Inject the signal at pin 1 of the extender board.
- H Boards: A wattmeter connected to the output of this board should indicate ≥175 watts on 80 M and ≥125 watts on 20 M and ≥125 watts on 10 M. This test will determine whether the fault is in ALC circuit or one of the "Insufficient power out" circuits.