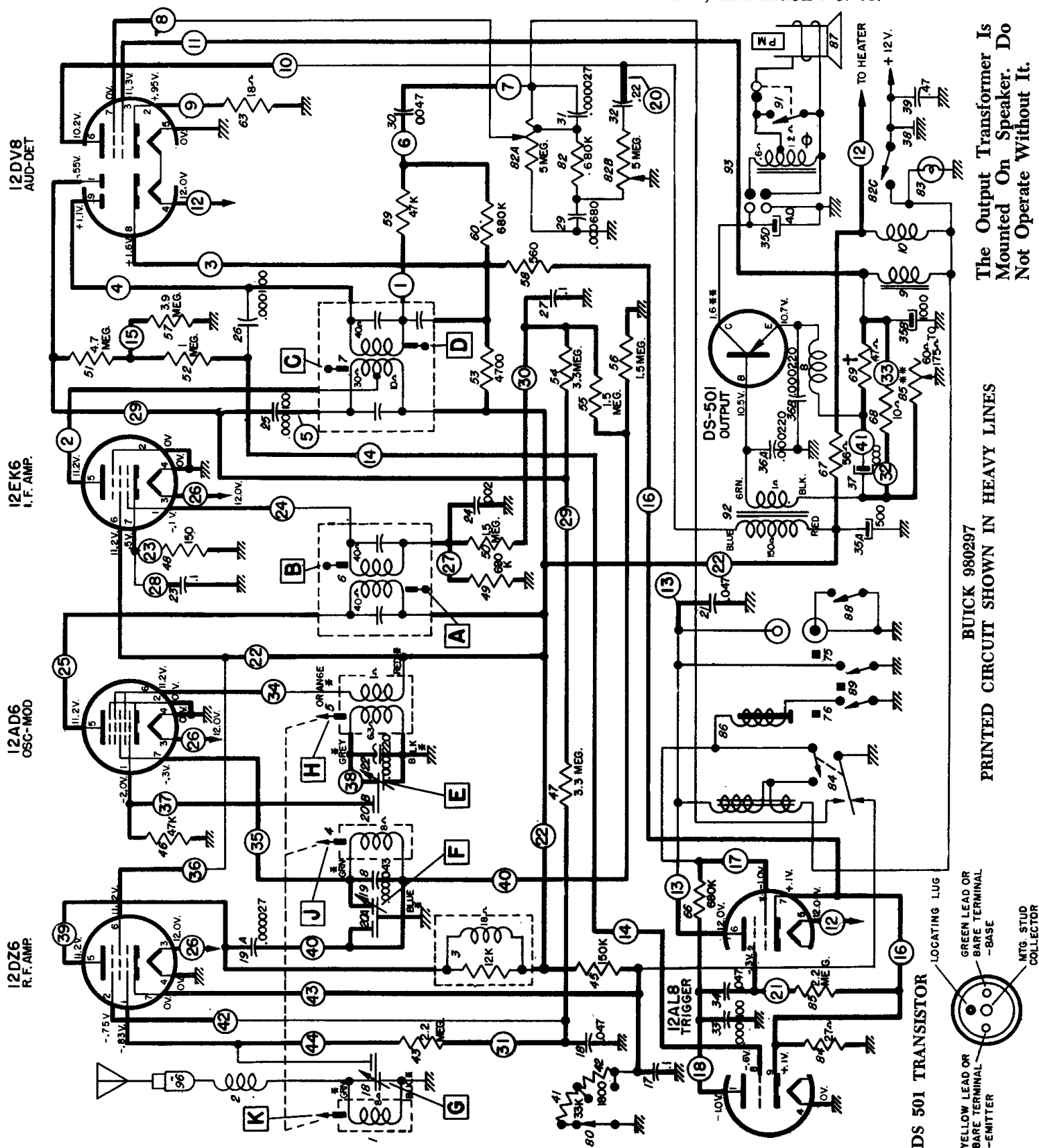


1. Put ear next to speaker and turn radio on. If slight "thump" is heard as this is done, trouble is in tube stages—try new tubes.
2. If no "thump" at all is heard, measure voltage

from transistor case to radio chassis. If 1-2 volts is present, transistor is operating normally and trouble is either in speaker, speaker interlock socket, or one of the tube circuits.

3. If no voltage is present in step 2, check transistor circuit and particularly the transistor fuse resistor, Illustration No. 69.



### SCHEMATIC DATA

Voltages measured terminal to chassis with a VTVM - No signal and 12.0 volts at Illustration 38.

Oscillator grid voltage taken with set tuned to 1000 kc.

Total "A" drain at 12 volts - 2.6 amps.

Tolerance on voltage  $\pm 10\%$ .

\* —Indicates lead from tuner coil assy.

\*\*—Before measuring transistor voltages, the shorting type speaker socket must be opened and a 4 ohm speaker connected. If transistor is replaced, adjust bias potentiometer (Illustration 85) to obtain proper collector voltage with 12 volts input to radio. Speaker must be connected.

+—Illustration 69 is a fuse resistor for the transistor.

⊖—Output transformer may appear shorted if shorting type speaker socket is not held open.

■—F-3 tuner uses combination switch (Illus. #89), F-4 tuner uses separate switches.

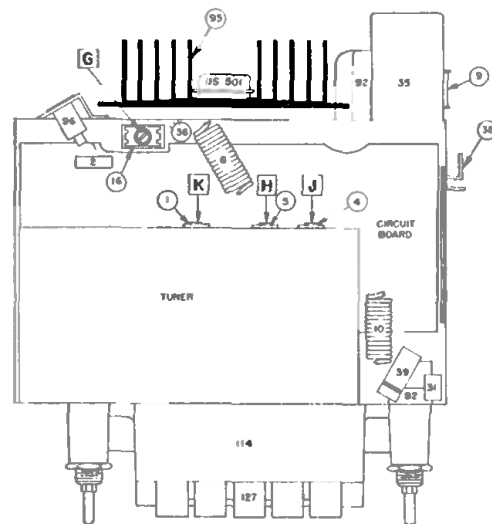
WHITE NUMBERS ON PRINTED CIRCUIT DRAWING CORRESPOND TO THE ENCIRCLED NUMBERS ON SCHEMATIC.

ILLUSTRATION #69 IS A FUSE RESISTOR. IF THIS IS OPEN, THE TRANSISTOR VOLTAGE WILL BE "O."

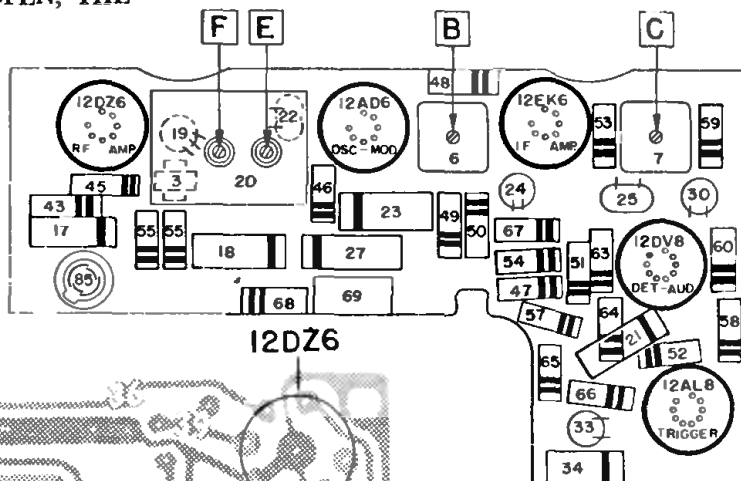
IF RADIO IS POWERED BY BATTERY ELIMINATOR, USE 16 VOLTS FOR PROPER SOLENOID ACTION.

### PUSHBUTTON SETUP PROCEDURE

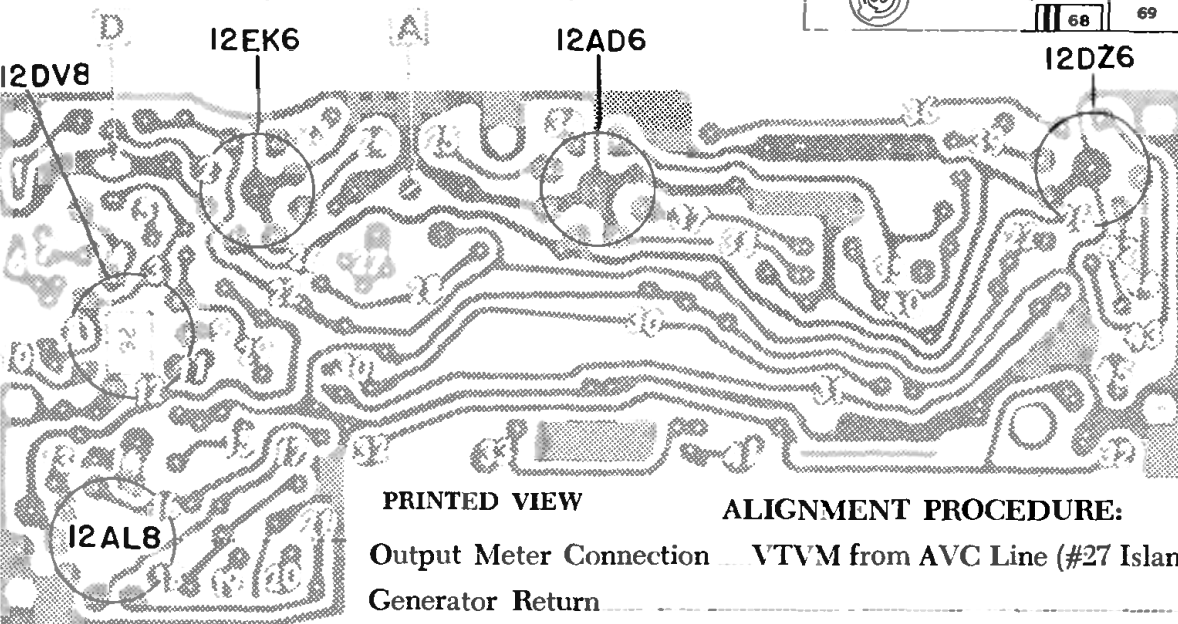
Pull Pushbutton out. Tune in desired station manually. Push button all the way in.



TUBE VIEW



COMPONENT VIEW



PRINTED VIEW

### ALIGNMENT PROCEDURE:

Output Meter Connection — VTVM from AVC Line (#27 Island-Circuit Board) To Chassis  
Generator Return — Receiver Chassis

Step	Dummy Antenna	Connect Signal Generator To	Signal Generator Frequency	Tune Receiver To	Adjust in Sequence For Output Indicated
1	0.1 Mfd.	12AD6 Grid (Pin 7)	262 KC	* High Frequency Stop	A, B, C (Max.), D (Min.)
2	.000082 Mfd.	Antenna Connector	1615 KC	High Frequency Stop	**E, F, G (Max.)
3	.000082 Mfd.	Antenna Connector	600 KC	Signal Generator Signal	J, K (Max.)
4	.000082 Mfd.	Antenna Connector	1615 KC	Signal Generator Signal	F, G (Max.)
5	.000082 Mfd.	Antenna Connector	1100 KC	Signal Generator Signal	***L

\*Tune manually towards the high frequency end of dial to the point where the solenoid switch closes.

\*\*Before making this adjustment, check the setting of oscillator core "H." The rear of the core should be  $1\frac{1}{8}$ " from the mounting end of the coil form. This measurement is readily made by inserting a suitable plug in the mounting end of the coil form. The core adjustment is made from the mounting end of the coil form with a non-metallic screw-driver.

\*\*\*"L" is the pointer adjustment in the middle of the core guide bar—adjust so pointer reads 1100 KC.

With the radio installed and the antenna plugged in, adjust the antenna trimmer "G" for maximum volume with the radio tuned to a weak station between 600 and 1000 KC (see sticker on case.)