

also ahead to V304 in the 6 mc i-f section. Note that the avc voltage is derived from V303, amplified and delayed by its own avc amplifier (V310) and detected by its own detector (V308B); the developed avc voltage is then applied to almost all stages in front of V303 and also to V304. Such a system is called an amplified, delayed avc with forward feed.

#### 2.15 Power Supply (V311 and V312)

A full-wave rectifier circuit is used for the power supply. V311 and V312 are connected in parallel to provide the current and voltage requirements for the receiver. A capacitor input filter network consisting of C347, C348 and L305 is used in the B+ line to reduce the ripple voltage. A high frequency capacitor input filter is incorporated in each side of the a-c line to reduce radiation.

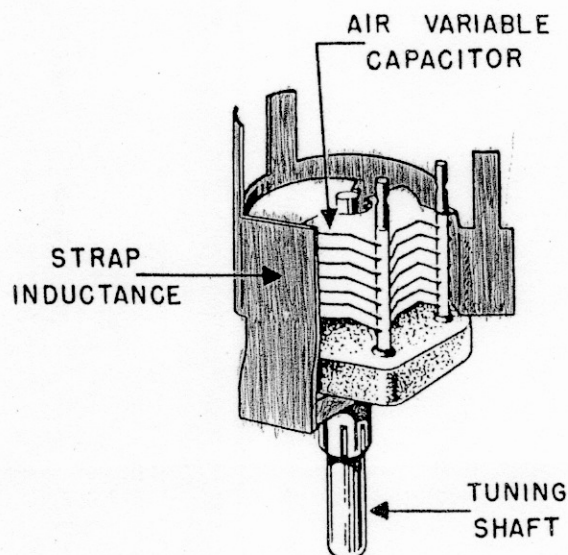


Figure 2-1. Radio Receiver R-361/GR, R-F Tuning Unit

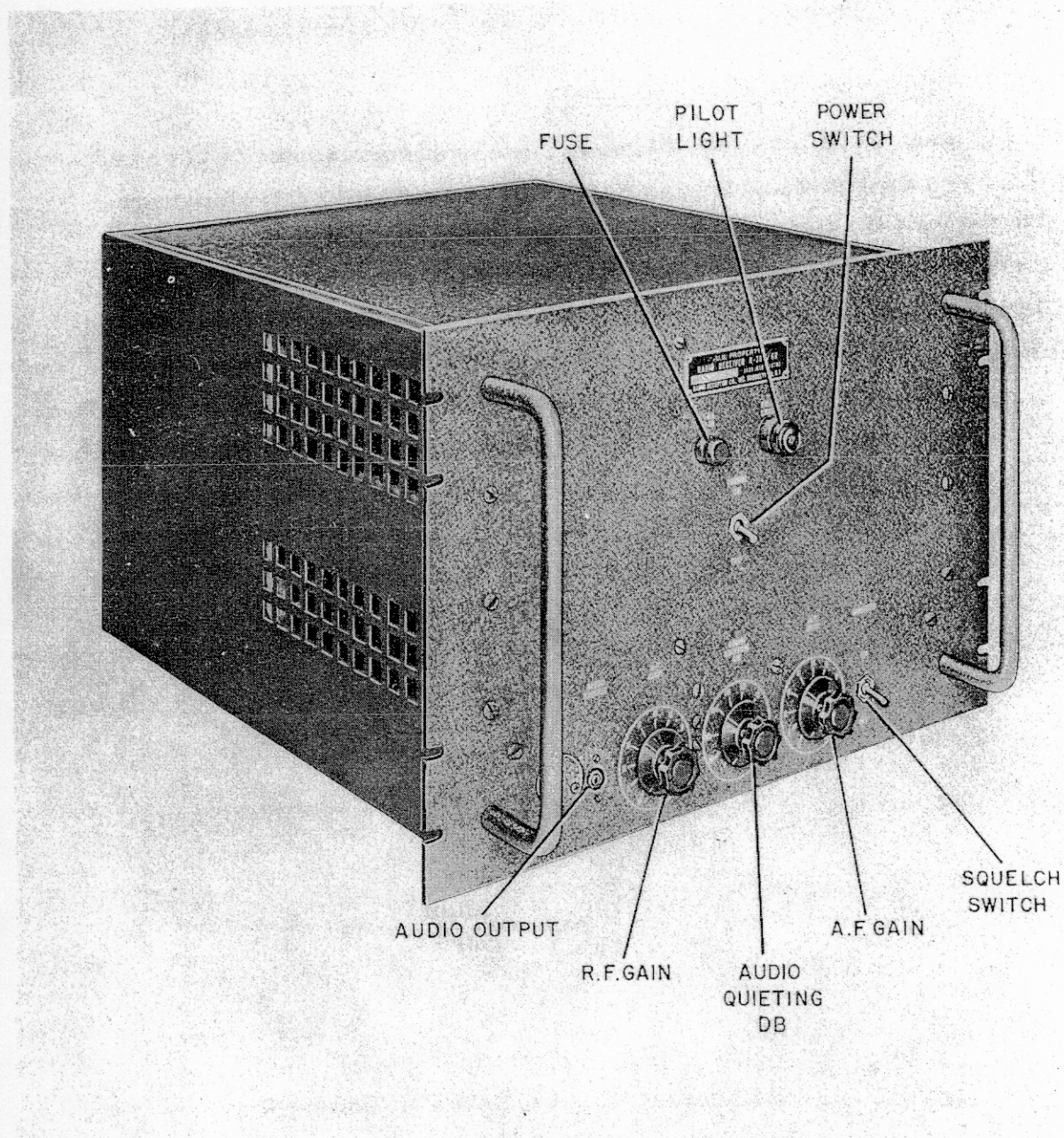


Figure 2-2. Radio Receiver R-361/GR, Front View



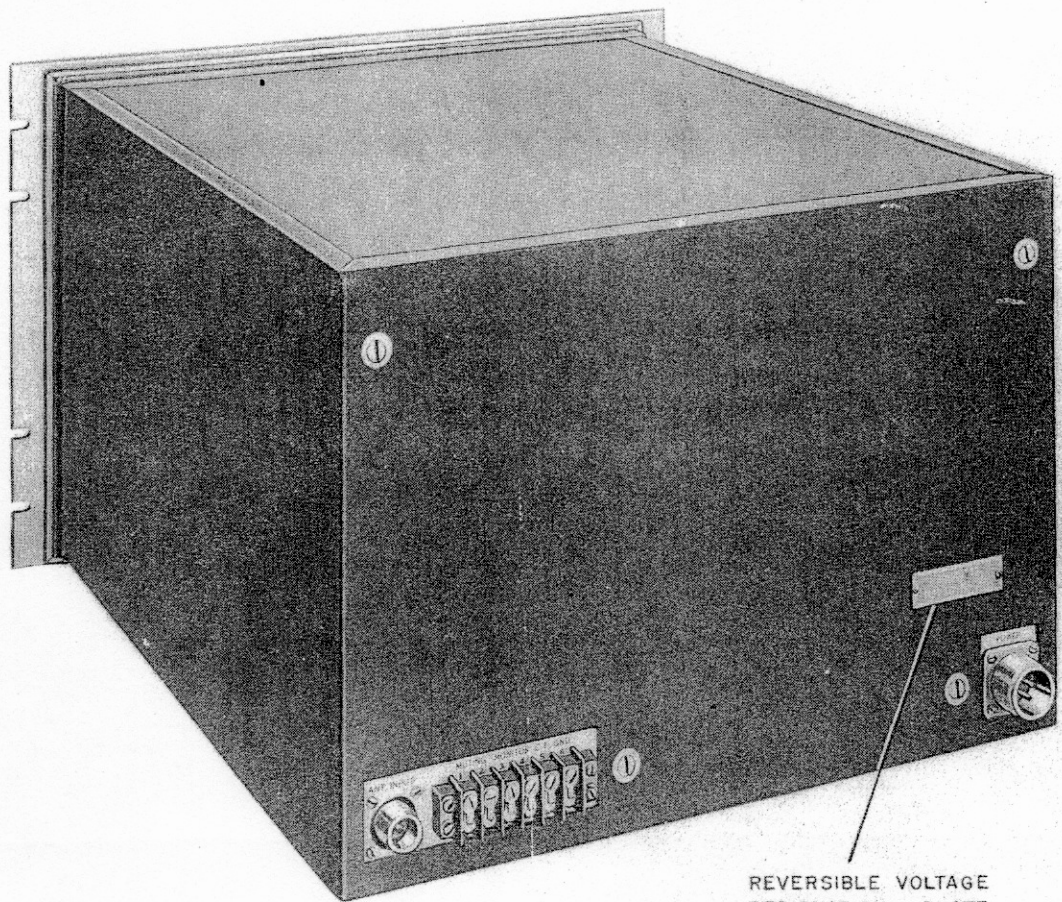


Figure 2-3. Radio Receiver R-361/GR, Rear View, Dust Cover On

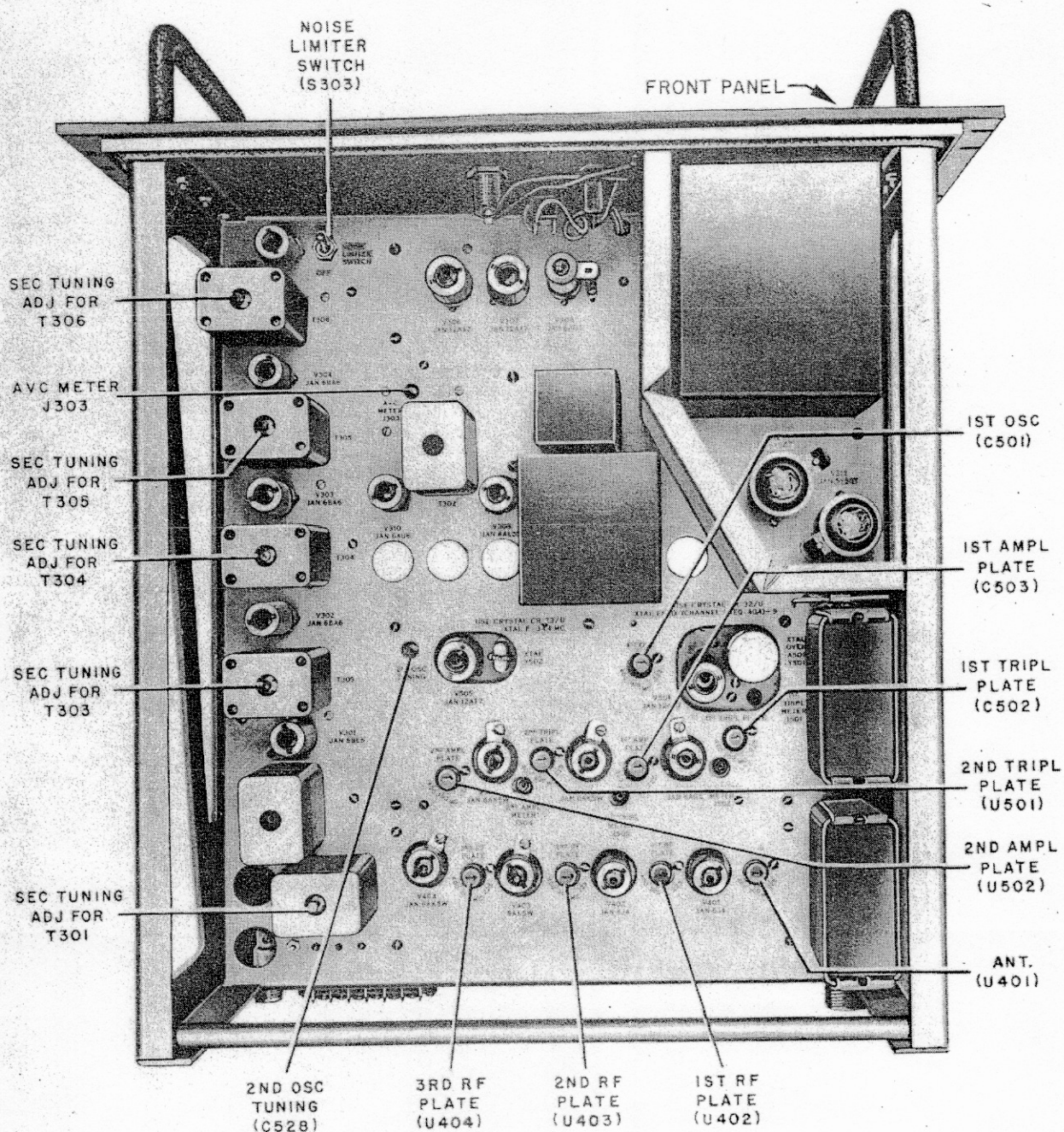


Figure 2-4. Radio Receiver R-361/GR, Top View, Dust Cover Removed



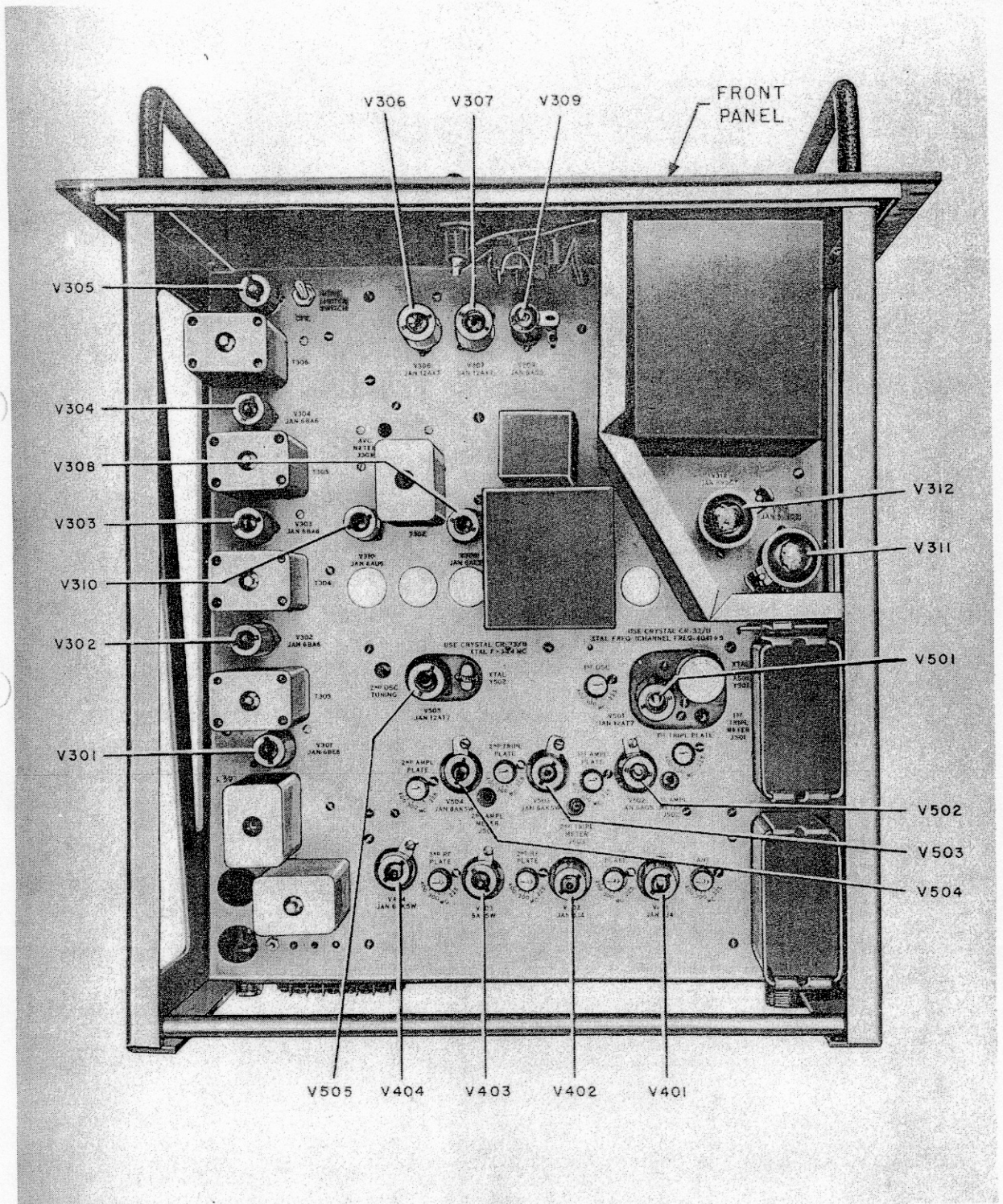


Figure 2-5. Radio Receiver R-361/GR, Top View, Tube Location



359.  
80.8

40.4  
80.8

2-16

UHF MILITARY EQUIPMENT

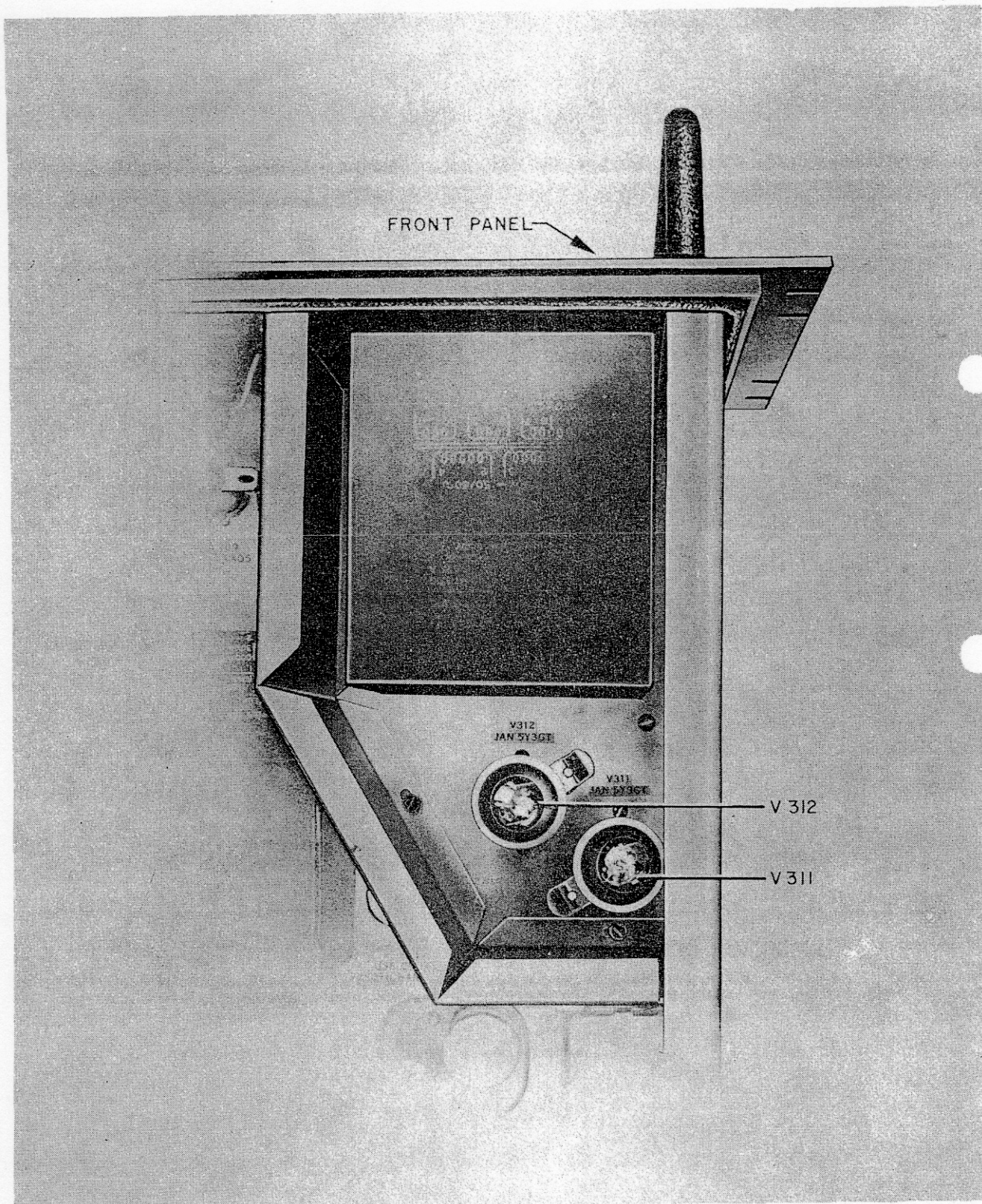
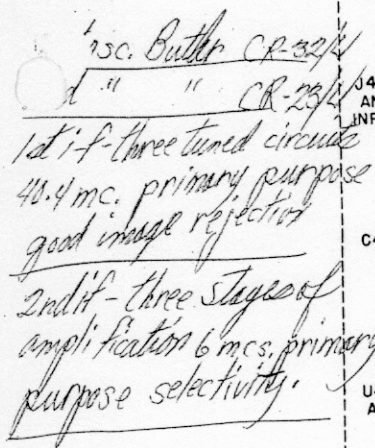


Figure 2-6. Radio Receiver R-361/GR, Power Supply Section, Dust Cover Removed

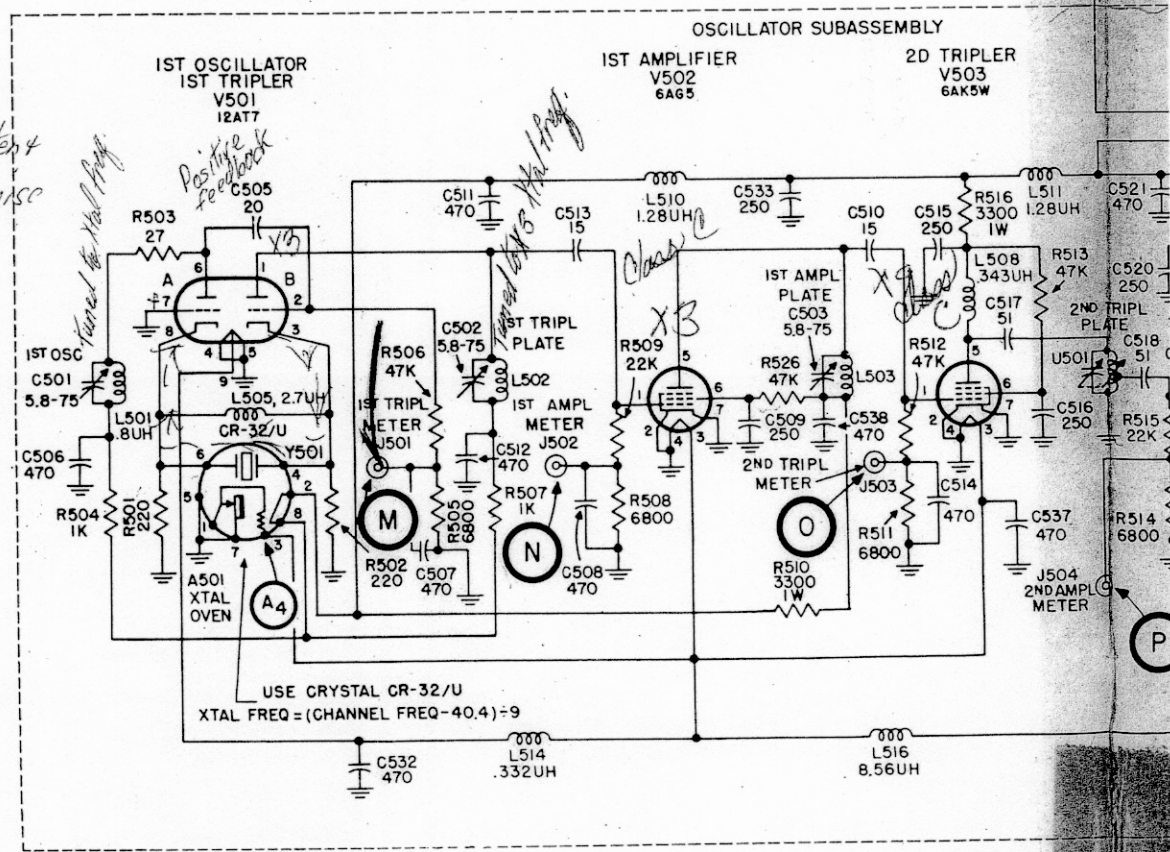


RF SUBASSEMBLY


$$\frac{r-f}{9} \text{ minus } 1 \text{ st } i f = \text{Xtal freq.}$$

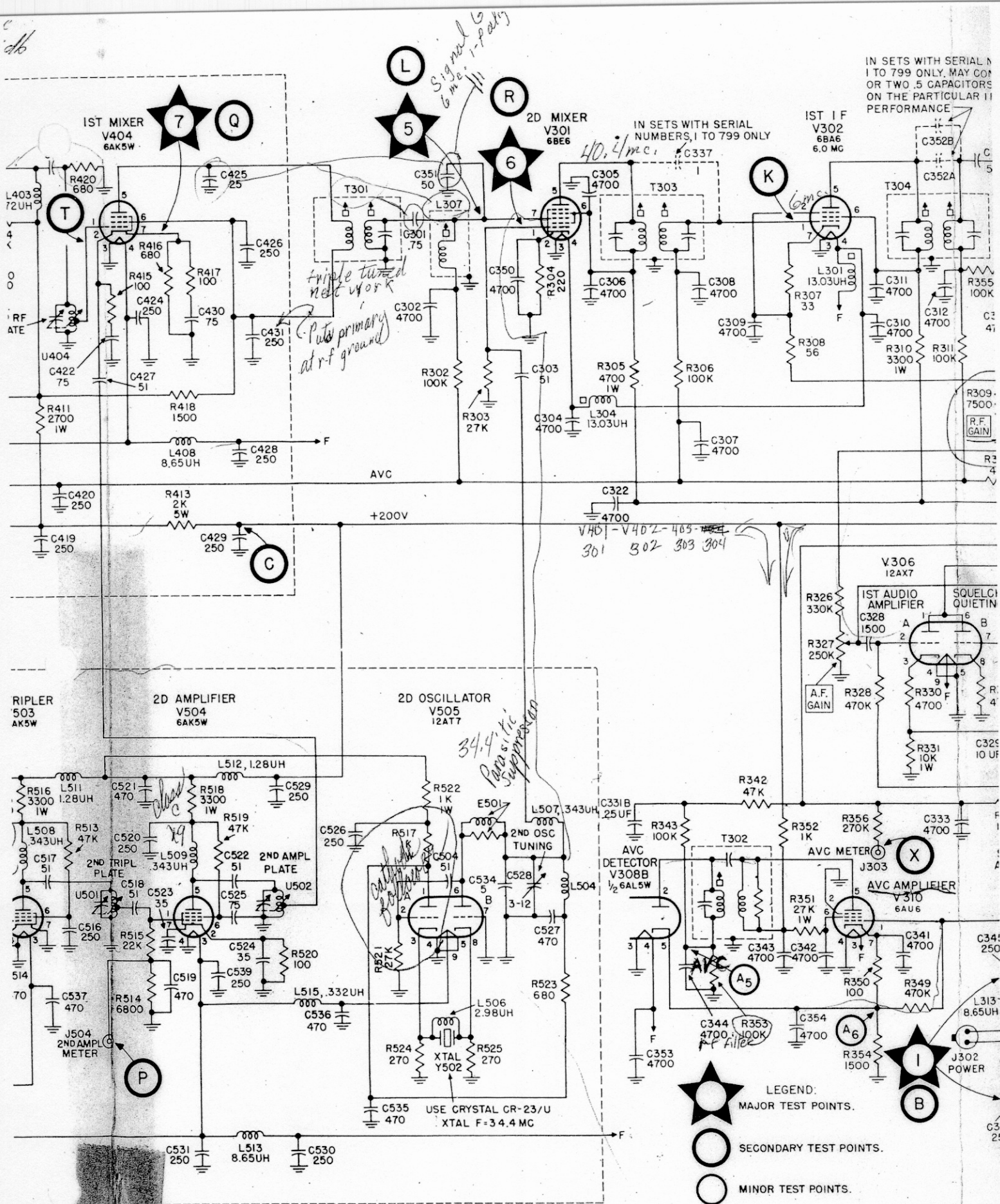
$$\text{image freq} = r-f \pm (2if)$$
$$1-f = (f_s - f_0)$$
$$f_s - 2(f_s - f_0)$$
$$f_1 = 2f_0 - f_5$$

uses series Noise Limiter & squelch circuit for noise control













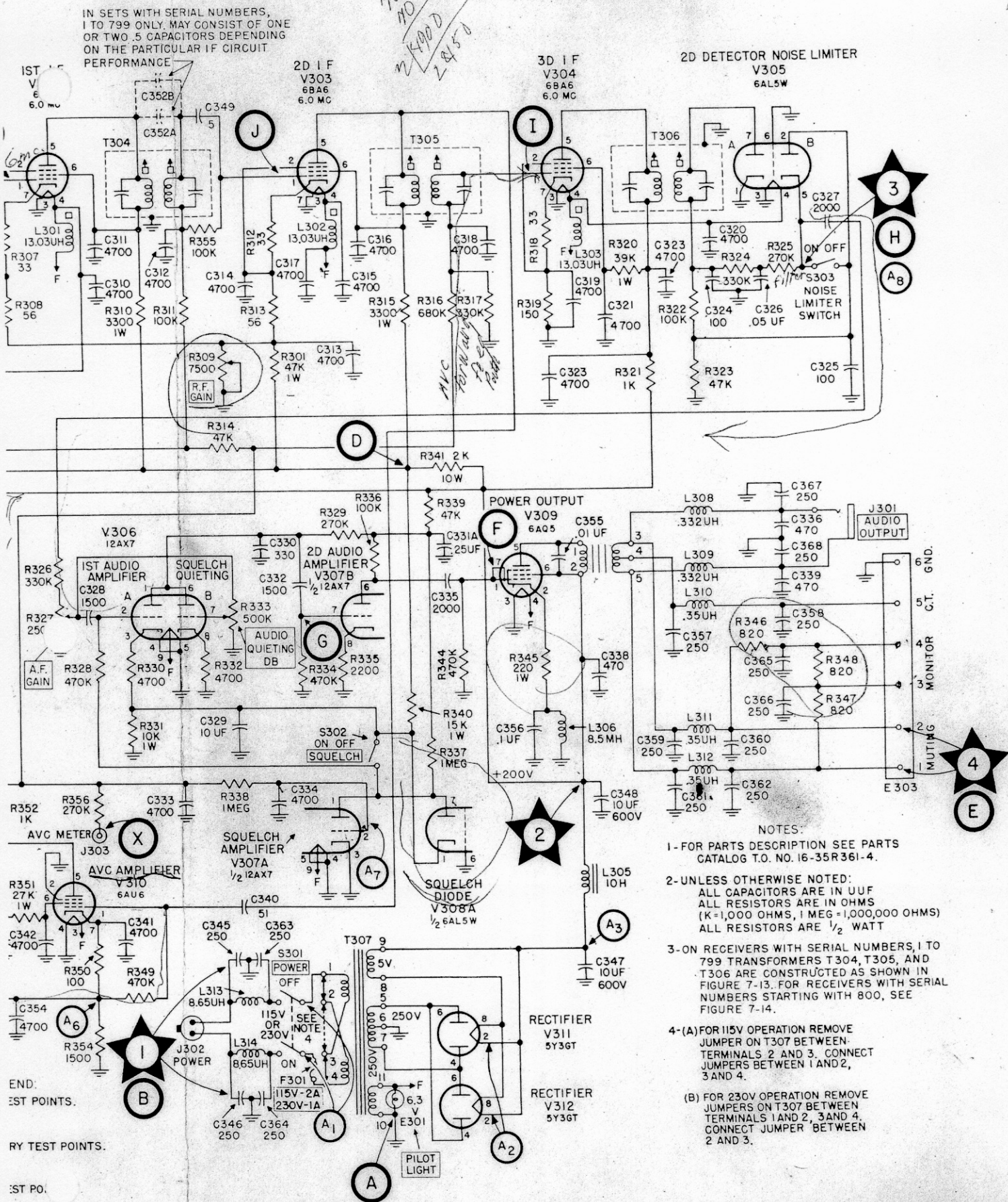


Figure 2-7 Radio Receiver R-361/GR





UHF MILITARY EQUIPMENT  
CHAPTER THREE  
T-282/GR TRANSMITTER  
MD-141/GR MODULATOR-POWER SUPPLY

1.0 GENERAL

1.1 T-282/GR Transmitter

The T-282/GR Transmitter (Figure 3-1) is a single channel crystal-controlled transmitter capable of supplying 100 watts into a 52 ohm load. The transmitter circuitry consists of a crystal-controlled oscillator-tripler, 1st doubler, 2nd doubler, buffer amplifier, driver-tripler amplifier, and power amplifier. An antenna change-over relay, receiver muting, push-to-talk voice operation, and monitoring facilities are also provided. The frequency range of the transmitter is <sup>220</sup>225.0 mc to <sup>400</sup>399.9 mc. The transmitter can be tuned to any frequency in this band by using the proper crystal and tuning the r-f circuits. The output coupling circuit is unbalanced, one side being grounded, and it is designed to work into a 52 ohm transmission line of the coaxial type. The power output and percentage modulation of the transmitter may be checked on a calibrated meter on the transmitter. Side tone output permits the operator to aurally monitor the audio component of the transmitted signal.

The over-all frequency stability for the entire frequency range is + 10 kc. The equipment will be ready for operation five minutes after it is turned on and should be within 10 kc of the required frequency after twenty minutes. The transmitter may be operated continuously at temperatures ranging from -29° C (-20° F) to +55° C (+131° F).

All tubes used in the transmitter are listed in Table 3-2 and all fuses are listed in Table 3-4. The various panel controls and adjustment points of the transmitter are shown in Table 3-6 and Figure 3-2.