

### 6.3 2-NB NOISE BLANKER

Solid state circuitry is used exclusively in the 2-NB and provides true noise blanking by quieting the receiver during the interval of the noise pulse.

A portion of the 455 KHz signal is applied to the Noise Blanker where it is amplified to a level sufficient to operate a pulse detector and separation circuit. Noise pulses received at the antenna will cause the Noise Blanker circuitry to produce a low impedance load to the signal in the I.F. amplifier during the duration of the pulse thus quieting the receiver to the noise pulse.

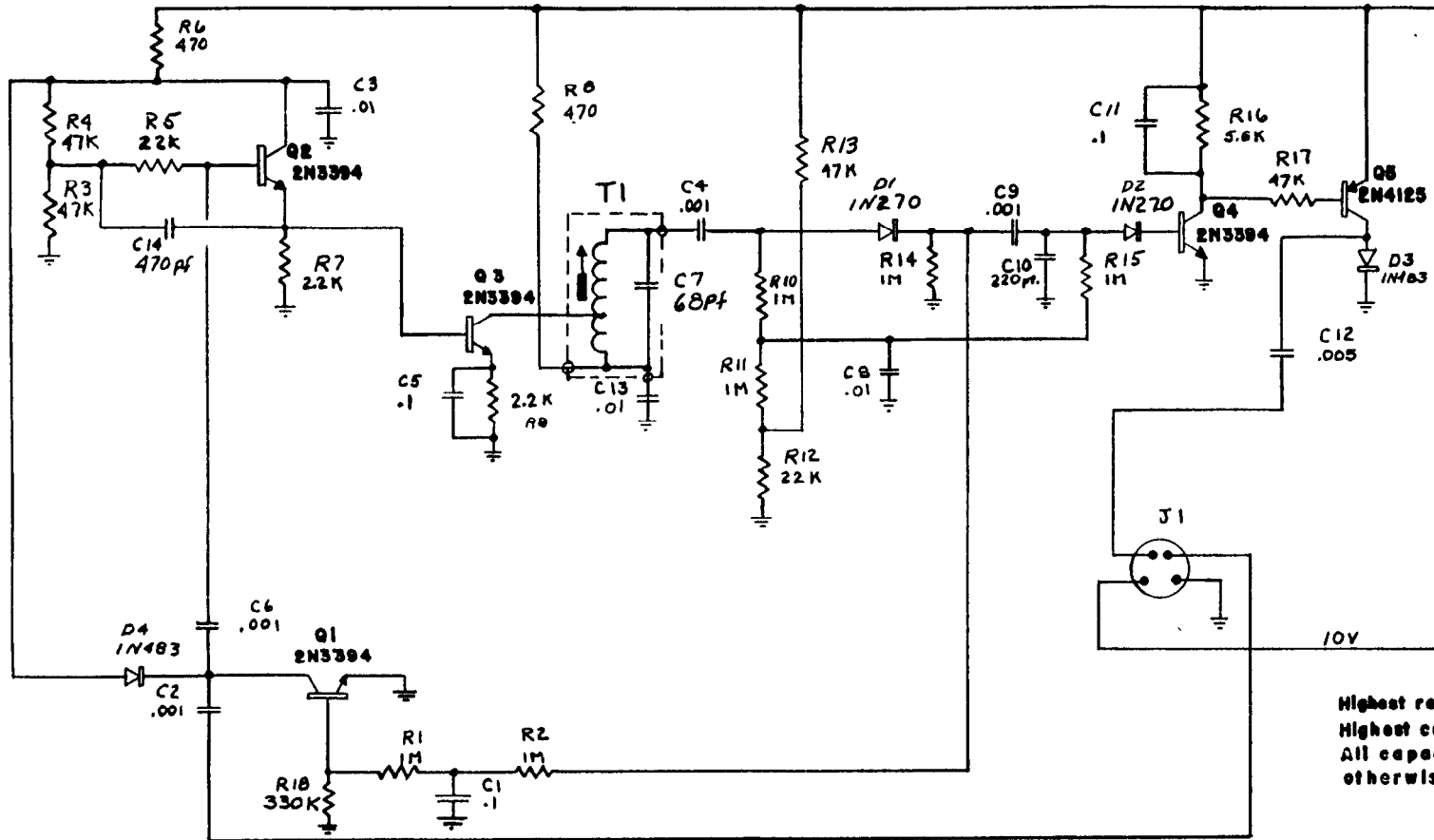
The superior Noise Blanker operation is obtained by putting the noise blanker circuitry ahead of the high selectivity stages of the receiver thereby preventing ringing of the hi-Q circuits by the noise pulses.

#### Operation

The Noise Blanker is an I.F. device which turns off the receiver I.F. amplifier during a noise pulse. It is effective on all modes of operation and greatly attenuates most impulse type noise. It will be noted that the noise blanker works best on noise pulses which are very short in duration and are separated widely in time (i.e. automobile ignition type noise). The closer the pulses are together, the less effective the noise blanker will be since the noise detector circuitry has more difficulty distinguishing the noise from the desired signal.

For normal operation under "no noise" conditions, the FUNCTION switch should be positioned in other than the NB position. The noise blanker functions only when the amplitude of the noise pulses exceed the amplitude of the signal. It will be noted that the S-meter will decrease when the noise blanker is switched on. This is due to the noise pulses causing AVC action when the blanker is off causing the S-meter to read high. When the noise blanker is switched on, the I.F. is turned off during the impulse period and the AVC is now activated by the signal rather than the noise pulse and the receiver gain increases. Due to the effect of AVC in giving constant audio output, the noise may not appear to decrease when the blanker is switched on. However, switching the blanker on increases the gain as described above and signals that were buried under the noise will now increase.

Very strong signals (30 or 35 dB over S9) will cause a slight distortion in the audio quality of the signal due to the dynamic range capability of the noise blanker circuitry. This should cause no detrimental effects since signals of this strength should far exceed noise conditions.



Highest resistor is R18  
 Highest capacitor is C14  
 All capacitors are in mfd. unless  
 otherwise noted.

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