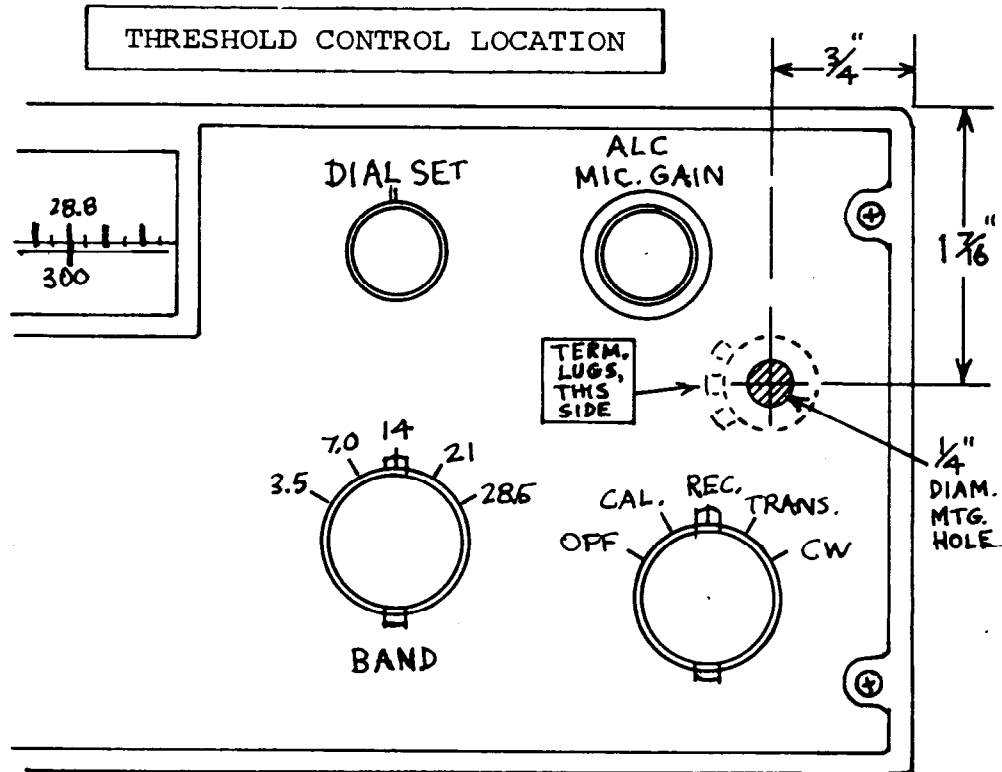


## ATLAS NOISE BLANKER, Model PC-120

The PC-120 Noise Blanker is a plug-in accessory which replaces the standard PC-100 R.F. board in Atlas transceivers.

A threshold control which is attached to the PC-120 by a 3 wire cable must be installed on the front panel. Later model transceivers have the necessary mounting hole with a plastic plug. Those that do not have this mounting hole will require drilling. Refer to the sketch below for location.

**PANEL DRILLING:** Measure carefully  $1 \frac{7}{16}$  in. down from the top edge of the panel, and  $\frac{3}{4}$  in. from the right hand edge. Center mark this point and drill a small hole first, about  $\frac{1}{16}$  in. diam. Then follow with a  $\frac{1}{4}$  in. diam. drill. Install the threshold control before plugging in the PC-120 board. Rotate the control so the terminal lugs face toward the transceiver center, as illustrated. Tighten the panel nut securely, and install the knob using a No. 4 Allen wrench.

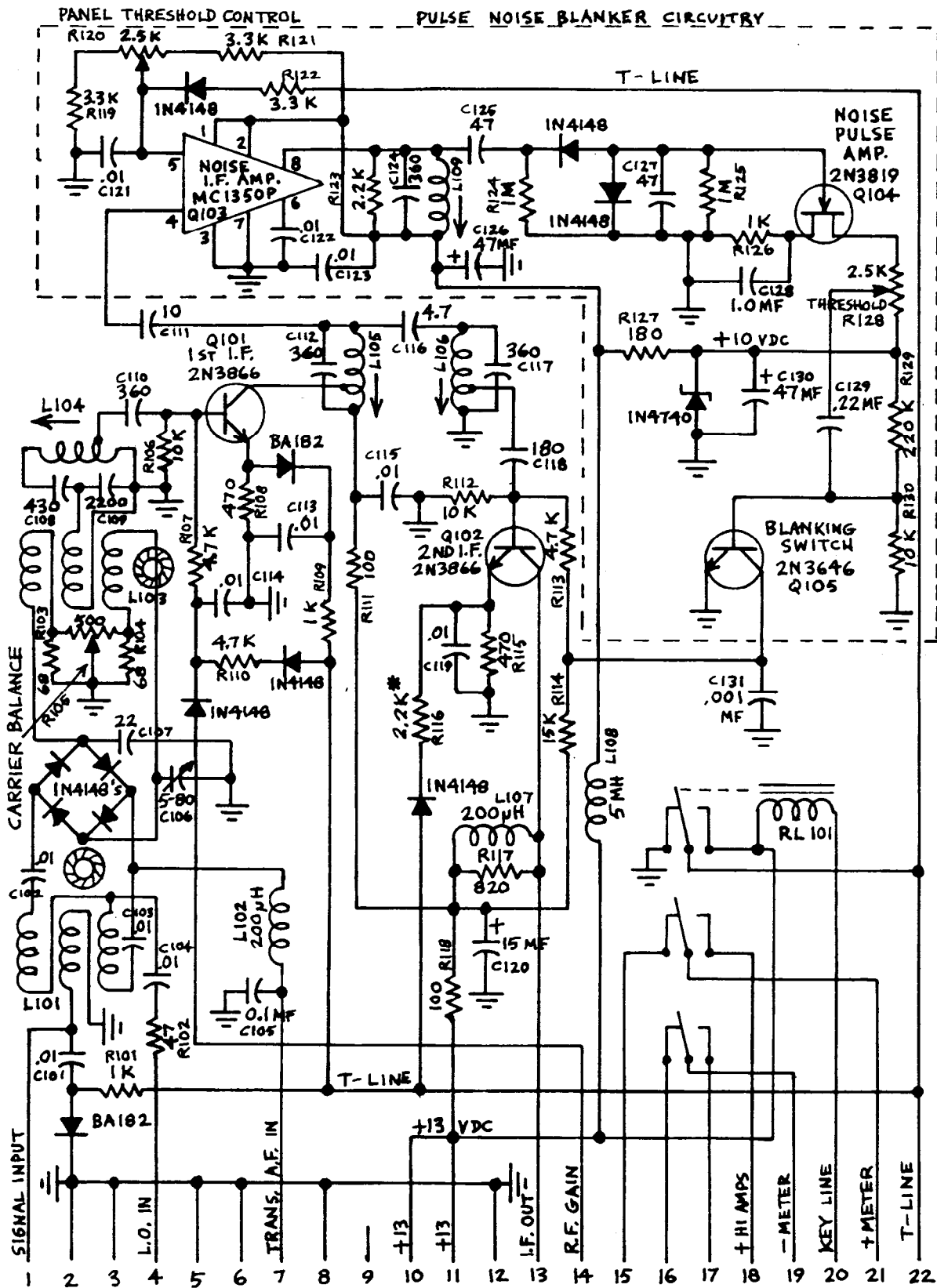


**CAUTION:** The Carrier Balance controls have been factory set. Do not alter the 500 ohm trim pot or mica trimmer. They are located in the upper right hand corner of the PC-120. Handle with care.

**CIRCUIT DESIGN:** The PC-120 noise blanker is designed specifically to blank out pulse type noise, the same as all other noise blankers. Pulse type noises, such as ignition noise will be effectively silenced, while other more continuous type noise signals will not be silenced or reduced as well. The PC-120 works on the same principle as the famous Lamb noise silencer. Noise pulses are amplified separately by Q121, rectified into DC pulses which are amplified by Q122, and then applied to Q123, the blanking switch. Q123 switches off Q124, the second I.F. amplifier, whenever a sharp noise pulse comes through from the antenna circuit. The threshold control, R122, is located on the front panel, and controls the gain of Q121. A second threshold control, R129, is a trimpot located on the PC-120 circuit board, and is factory adjusted so that noise pulses will switch Q123 completely, but not excessively.

### OPERATION:

- When the threshold control is in full counterclockwise position the noise blanker is OFF.
- Advancing the control clockwise will increase the gain of Q121 until noise pulses begin to control Q123. At this point the audible noise level will drop sharply.
- If the threshold control is advanced beyond this point, no further reduction in noise will be obtained. If the character of the noise is made up entirely of sharp pulses, it will be practically eliminated. If parts of the noise are continuous, they will still be audible. In other words, the degree of noise reduction will be directly related to what percentage of the noise is pulse type, and what percentage is of a continuous nature.
- CROSS MODULATION may result from higher settings of the threshold control. This is likely particularly on the lower frequency bands when a great many very strong signals are being received on a full size antenna system. Turning the threshold control down to the threshold level will eliminate this condition, while still retaining the pulse blanking action.
- A trim-pot, R151, will be found added to the back side of the PC-120. This is an adjustment for I.F. gain in transmit mode. It has been factory set, and should not require further adjustment. However, if indications are that more or less gain is required, it can be moved by using a small screwdriver blade, pushing on the knurled edge of the trim-pot.



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I.F. AMP. - PULSE NOISE BLANKER  
PC-120 SCHEMATIC DIAGRAM.

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