

A. INTERNAL NOISE.

Others working with the ARC-5 have reported that the 12K8 mixer-oscillator was the culprit creating internally generated noise. This was checked and found to be true. Replacing the 12K8 with a 6U8 was suggested as a possible solution. This was tried, and although it resulted in better overall output, it did not improve the signal to noise ratio, or increase weak signals at maximum RF gain.

The 12AT7 twin-triode was tried and proved to be the first real break-through in the battle against internal noise. Locally generated noise is vastly reduced, and since filament current requirements for the 12AT7 are identical to those for the 12K8, no series or shunt resistors are required for tube substitution.

The following steps were taken to make this improvement:

1. Make up an adapter by wiring a 9-pin miniature socket to an octal plug. A hole is drilled through the center of the octal plug center-guide pin, then a short tubular spacer and a 2" long 4-40 or 6-32 machine screw is used to hold the assembly together.

