

Adjustment Procedure (for receivers equipped with noise silencer or squelch).

Before making any adjustments, be sure the basic elements of the system shown in figure 1 are operating satisfactorily and that the appropriate pads are installed. The receivers listed in chart No.2, figure 3, require a 15 db pad installed directly at the output terminals. Refer to chart No. 3, figure 4, for details concerning the construction of 15 and 20 db pads.

RECEIVER TYPE	OUTPUT PAD
AN/FRR-26-27 AN/FRR-30-31	15 DB
AN/FRR-49 AN/FRR-502 R-274B/URR	15 DB
RECEIVERS WITH MAX. OUTPUTS OF LESS THAN 60 MW IN 600 OHMS DO NOT REQUIRE PADS.	
INSTALL PADS DIRECTLY AT RECEIVER OUTPUT TERMINALS.	

Figure 3. Chart No. 2

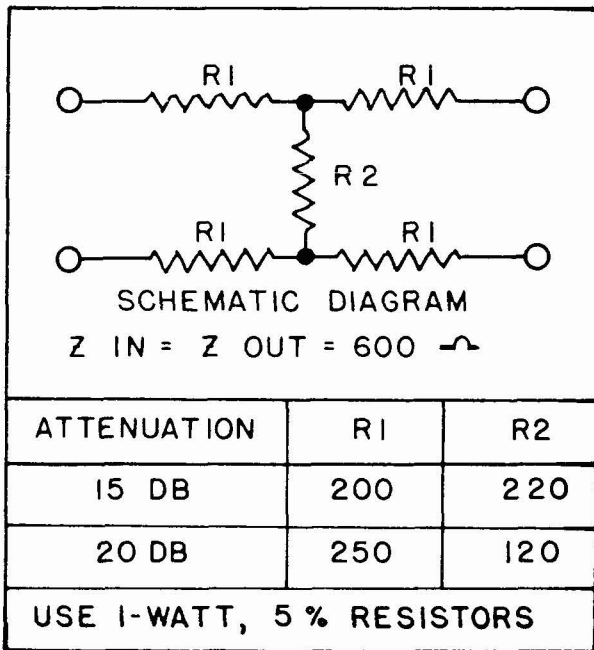


Figure 4. Chart No. 3

To simplify the adjustment procedure, receiver residual noise can be used as a signal source. A typical example of the proper adjustment procedure follows:

Step 1. Initial Control settings.

(a) Turn receiver and amplifier power switches ON.

(b) Turn receiver silencer or squelch OFF.

(c) Turn amplifier compressor switch ON and turn COMPRESSOR control maximum clockwise.

Step 2. Turn the receiver RF GAIN control maximum clockwise and adjust the receiver AF GAIN control for -10 vu noise output (in the absence of any signal) as measured on the line side of the receiver output pad. Use a bridging type vu meter, TS-629/U for example, to make this and subsequent measurements. Do not use a db meter.

Step 3. Adjust the amplifier LEVEL control for zero vu noise level as measured at the output of the amplifier. This is the final adjustment of this control.

Step 4. Adjust the amplifier COMPRESSOR control for a -10 vu noise level at the output of the amplifier. This is the final adjustment of the amplifier controls.

Step 5. Switch the receiver silencer or squelch ON, tune in a useable signal and adjust the silencer control in accordance with the procedures outlined in the receiver instruction book.

Step 6. Check the results achieved. When the above procedures have been followed, the levels in the system will be within the limits shown in chart No. 1, figure 2. The object is to set the receiver gain controls and the controls on the constant level amplifier in such a manner as to allow the receiver to operate at near optimum conditions. The weakest useable voice signal (approximately 10 db above the noise level) should appear at the output of the amplifier at approximately -4 to -6 vu, peaking near zero, and all signals of greater amplitude at the output of the receiver will be limited in the compression amplifier to approximately the same value. On some voice signals infrequent peaks may reach +1 or +2 vu.

It should be noted that it may be possible for signal levels measured at the input to the amplifier to exceed the levels measured at the output of the amplifier. This is merely indicative of the fact that the compression amplifier is performing its task in the system.

Adjustment Procedure (for receivers not equipped with squelch).

Step 1. Follow the procedures listed in paragraph 2 above with the following exceptions:

(a) Omit step 1 (b).

(b) In step 4, adjust the amplifier COMPRESSOR control for a -20 vu noise level at the output of the amplifier. It should be noted that a small movement of the COMPRESSOR control results in a considerable amount of attenuation, and, accordingly, adjustment of this control should be made precisely.

Step 2. Check your results. Tune the receiver to a weak signal and again to a moderately strong signal. In either case the levels at the various points in the system should agree closely with the levels shown in chart No. 1, figure 2. (SS)