

SHACK AND WORKSHOP

Conducted by A. DAVID MIDDLETON, W1CA*

Data on Surplus Frequency Meters

The following information may be useful to those of the gang owning various types of surplus military frequency meters.

Models BC-221 AA-AH-AE-AF-AG-AJ-AK-AL-B-M-N-O-P-Q-R- and T may be operated directly from an a-c power supply, without change.

Models BC-221 A-C-D-E-F-J-K-and L must be modified for use with an a-c power supply, as follows:

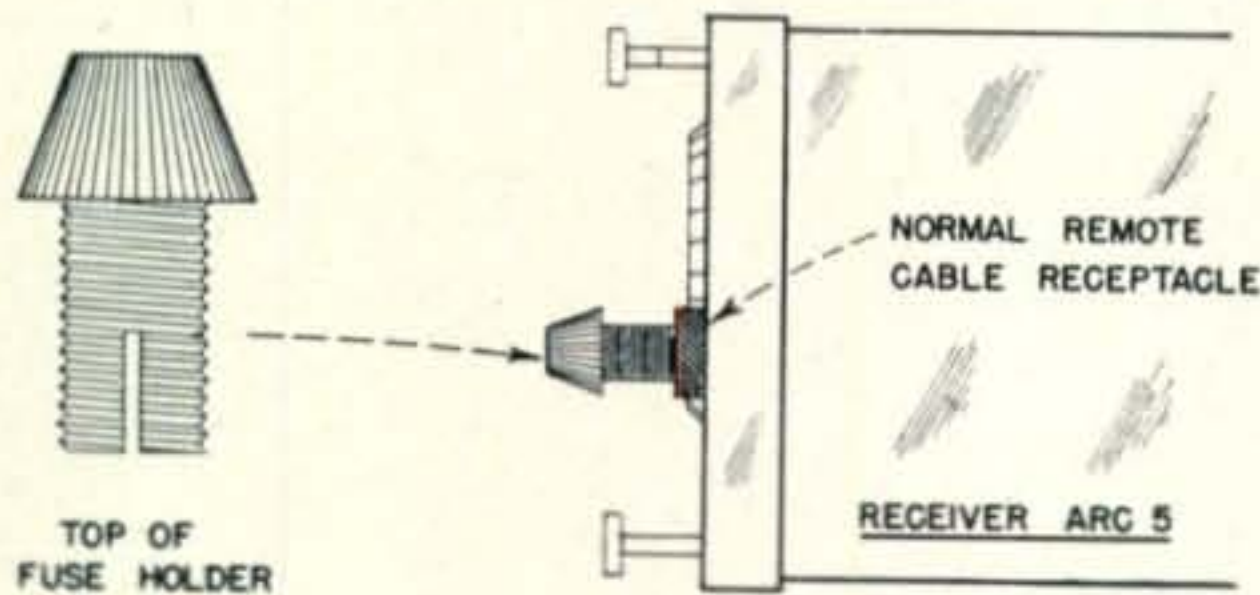
The cathode of the audio tube must be disconnected from the positive side of the "A" battery supply and a 400- or 500-ohm resistor inserted between the cathode and ground.

This change does not affect the operation of the meter but it does reduce the audio hum, present when the cathode is returned to the "A" battery circuit, on those models listed.

Felix W. Mullings, W5BVF, Galveston, Texas

Tuning Device for ARC-5

Probably a good many amateurs purchased SCR-274N receivers (ARC-5) without the tuning cables necessary for remote control. The mechanical construction of these receivers is such that they are difficult to tune locally without a key for the purpose.



This situation was solved at W2RAC by using the removable part of a fuse holder. The fuse holder is partially filled with Duco cement, and inserted in the receptacle for the tuning cable, making a convenient knob. The Duco cement must be allowed to dry overnight.

George Nelson, W2RAC

Tracing Circuits

It is good practice to "pencil out" lines in a circuit diagram when wiring up a set or instrument. By doing this, no connections get left out and repeats are prevented. But such pencilling mutilates the diagram.

To eliminate defacing the page, simply attach a sheet of draftsman's tracing paper to the diagram with paper clips and do your marking on this transparent paper.

Rufus P. Turner, W1AY

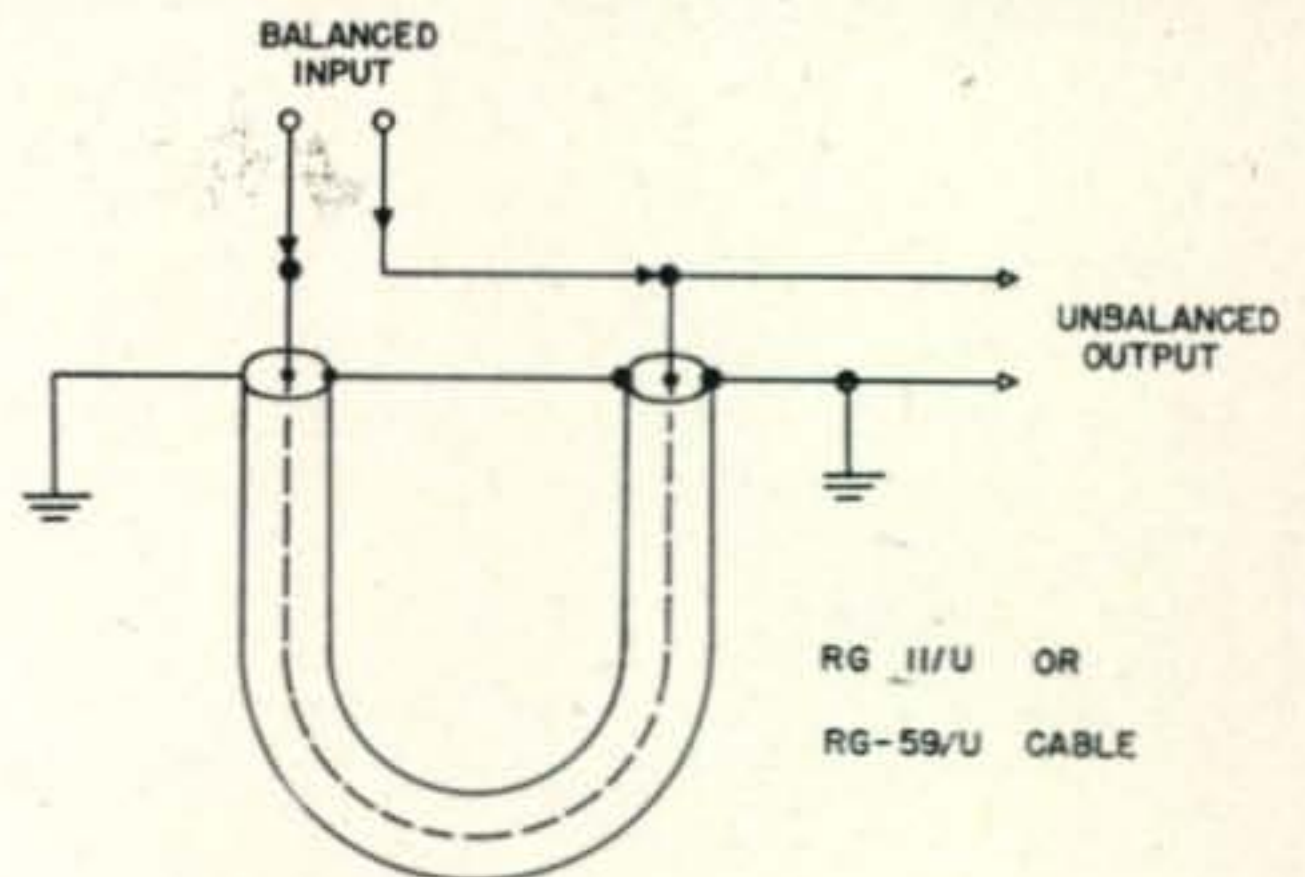
Connecting a Balanced Line to the R-9'er

When using an R-9'er preselector (or other similar device designed primarily for a symmetrical or "unbalanced" input) with 300-ohm Twin-Lead or a 400-600 ohm two-wire open line, the performance can be improved by incorporating a line balance

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converter or "phase inverter" section of coaxial line between the device and the balanced line.

A section of RG-11/U or RG-59/U coaxial cable, cut to exactly 67% of a "free space" half wavelength



(at the mid frequency) is connected as shown in the drawing. This length is 11'5" for the 28-mc band and 6'4" for the 50-mc band.

When the "phase inverter" section of line is employed, the line balance is maintained and the two-wire open line is prevented from acting as an antenna, thus minimizing noise pick-up by the line and affording improved discrimination when a directional antenna is employed.

W. W. Smith, W6BCX

Relays for Coaxial Cable

Many hams using coaxial cable do not like to introduce the mis-match that would be present when the old-style two-pole antenna change-over relay is used.

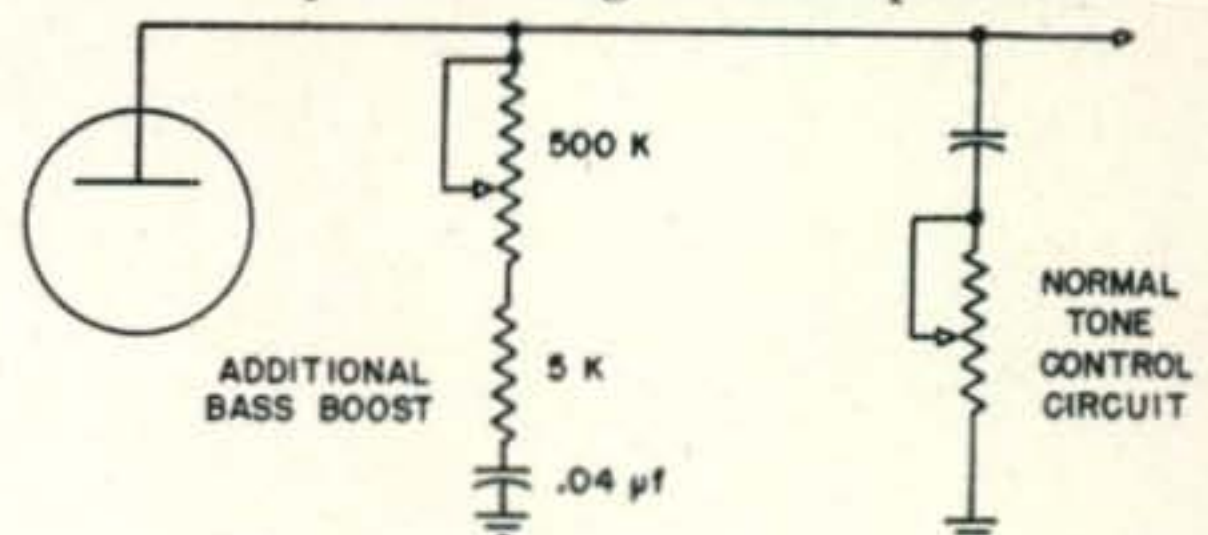
However, coax makes an excellent feed-line and I wanted to put it to use. This solution seems so simple that I wonder why I did not think of it before.

I decided that a simple antenna change-over relay would have to serve to switch the incoming antenna coax line from transmitter to receiver. So, I connected all the *outside* shields at one point directly at the relay, and connected each inner conductor, with real short leads, to the respective lugs on the relay. It worked!

Fred Craven

Bass Boost for SX-28 Receiver

When I installed a good coaxial speaker for use with my SX-28 I found I wanted more bass boost. After some experimenting I hit upon the circuit



shown, in which a 500,000-ohm variable and a 5,000-ohm fixed resistor were placed in series with a .04-μf paper capacitor between the plate of the 6SC7 phase inverter and ground.

F. B. Frank, W5HKH