

DOTS *and* DASHES

from

THE AMATEUR RADIO SECTION RCA MANUFACTURING CO., CAMDEN, N.J.

Compliments of

CAMERADIO COMPANY.


601-3 GRANT ST.

30 - 12th ST.

PITTSBURGH, PA.

WHEELING, W. VA.

ESTABLISHED 1919

 *de Forest* DISTRIBUTOR



No. 2.

Here's the second issue of this new publication. We hope you will like it as much as most people seemed to like the first one. We are counting on your suggestions to make this sheet as interesting and informative as possible for the amateur fraternity. Remember you can win a tube by submitting a "kink" acceptable for publication. See the first issue for details.

- 1 -

ANTENNA MATCHING NETWORKS - W9LIP suggests a way to improve the well-known "pi" antenna matching network. Instead of tapping directly off the tank coil, he says that another coil placed inside, or outside, of the tank coil will give better coupling. The coupling coil should have approximately one-third as many turns as the tank coil. The leads from the coupling coil go to the matching network in the regular way. W9LIP says it's FB. (♣)

- 2 -

GETTING MORE OUT OF A 46 - W8BAP says that he has found that the output of an RCA-46 as a buffer can be increased as much as 20% by connecting the tube as a screen-grid amplifier. The outer (No. 2) grid is run at approximately 40 volts positive. Using the RCA-46 in this manner in a moderately well-shielded circuit, no neutralization was required on 40, 80 or 160 meters.

- 3 -

HIGH-GAIN PREAMPLIFIERS - The triode section of an RCA-2A6 (75) resistance-coupled to an RCA-56 (76) makes a fine high-gain preamplifier for a velocity, crystal, or low-gain carbon microphone. It is quite easy to obtain a voltage gain of 400 to 500 with this combination.

Two RCA-57's (608) connected as high-mu triodes, with screen and suppressor grids tied to the plate, will give a voltage gain of 200 to 250 with resistance coupling. This is a good arrangement in cases where two 56's do not give quite enough gain.

If a very high a-f gain is desired, don't overlook the RCA-79. As a two stage resistance-coupled amplifier, the 79 is capable of a voltage gain of approximately 2000 with negligible distortion. See circuit No. 13 on page 147 of the RC-12 RCA Tube Manual.

DOOTS and DASHES

THE AMATEUR RADIO SECTION RCA MANUFACTURING CO. CAMDEN, N.J.



Company of
CAMERADIO COMPANY
501 CHERRY ST.
PITTSBURGH, PA.
ESTABLISHED 1913
RCA's Exclusive Distributor



- 4 -

A CHEAP NEUTRALIZING CONDENSER - W3AYS suggests this one. To make a low-capacity neutralizing condenser for such tubes as the RCA-47, solder two 1" x 1" square copper plates to the jaws and receiving fork of a single-pole single-throw porcelain-base switch. The two plates must be in parallel planes. By opening the blade a variable, low capacity can be had. By using larger size plates and opening the jaws wider, it should be possible to utilize this arrangement on higher voltages. Watch your step when using this device, since the parts may be at high potential. (§)

- 5 -

20 METER DOUBLER - It is surprising how much 20 meter "soup" can be obtained from an RCA-53 (646) in a "push-push" doubler circuit. The grids of the two triode sections of the 53 are connected in a BALANCED push-pull circuit and the plates are connected in parallel. The 53 with very little 40-meter excitation will drive a single RCA-800 with 100 watts input and quite respectable efficiency. A d-c grid current of 10-15 milliamperes on the 800 can be obtained through a 10,000-ohm grid leak.

- 6 -

RCA-866 vs. RCA-866-A - There seems to be some misunderstanding among amateurs as to the relative merits of these two tubes. The RCA-866-A has a higher maximum peak-inverse voltage rating (10,000 volts) than does the RCA-866 (7,500 volts). The plate current rating is the same for both types. However, the RCA-866-A is best under voltage conditions approaching the maximum ratings. At low voltages the anode shield on the 866-A tends to prevent ionization of the mercury and the tube may not start to rectify. Therefore, if you run your rectifiers at high voltages, use the RCA-866-A; if you run them at voltages considerably below the maximum rating of the 866-A use the RCA-866.

- 7 -

A CONVENIENT NEUTRALIZING INDICATOR - W3CXE has found that an old meter, such as a 0-6 voltmeter from a battery set, with the multiplier resistor removed, connected in series with a crystal detector and a pick-up coil makes a swell way to check the rig for neutralization. The pick-up coil is a one or two turn loop. Hold the pick-up coil near the tank of the stage being neutralized and note the meter reading. Adjust for minimum reading. W3CXE says that this method has the neon bulb, or loop and lamp method beat a mile since you don't have to hold the pick-up coil close enough to the tank to cause appreciable detuning. He further bets that once you try this you won't go back to the old method. (§)

Note: (§) after an item indicates a tube is being donated for the suggestion.

ARTICLES OF INTEREST
ON TUBE APPLICATIONS

"5 or 10 Meter Transceiver"
Frank C. Jones
"RADIO" - May, 1934 - P. 8

UY 5118
PK 1857