

24TH JUNE 1959
P.O. Box 2
GREEN BANK, WEST VIRGINIA

MR. LESLIE A. GALLOWAY
1713 EVERETT ST.
LAFAYETTE, INDIANA

DEAR MR. GALLOWAY:

THE TWO CASES CONTAINING THE THREE RADIOS ARRIVED IN GOOD ORDER A WEEK AGO. I HAVE EXAMINED THE SETS FAIRLY WELL AND AM QUITE IMPRESSED, PARTICULARLY WITH THE FINE MECHANICAL WORK. MR. BAIRD MUST HAVE HAD AN EXCELLECT WOOD WORKING SHOP AND HE ENJOYED MAKING CABINET WORK. ALL THREE CABINETS SHOW A LOT OF PAINSTAKING DETAIL. UNFORTUNATELY THEY HAVE BEEN ALLOWED TO STAND IN A DAMP PLACE SO THEY ARE NOW RATHER WARPED AND COMING APART IN THE JOINTS, BUT THEY MUST HAVE BEEN ELEGANT IN THEIR DAY. ALSO I NOTE THAT MR. BAIRD ENJOYED DRILLING AND TAPPING HARD RUBBER. EVERYTHING IS PUT TOGETHER WITH SCREWS TAPPED INTO THE HARD RUBBER PLATE, NO THRU HOLES WITH NUTS! HE LIKED FILAMENT VOLTMETERS. EACH TUBE IN EVERY SET HAS ITS OWN SEPARATE FILAMENT RHEOSTAT. ENOUGH FILAMENT VOLTMETERS AND SWITCHES ARE PROVIDED TO READ THE FILAMENT VOLTAGE ON EVERY TUBE! THE C BATTERIES HAVE LAST PATENT DATE AS FEB 28, 1922. THE BALLENTINE VARIOTRANSFORMERS ARE ADVERTISED IN EARLY 1923 ISSUES OF QST RADIO MAGAZINE. THE BRASS BASE TUBES WENT OUT IN FAVOR OF BAKELITE BASES ABOUT 1924. THUS, I DEDUCE THE RECEIVERS WERE BUILT IN 1923. ALL THREE SETS ARE REMARKABLY ALIKE IN CIRCUIT. I CAN'T UNDERSTAND WHY ANYONE WOULD BUILT THREE SETS SO NEAR ALIKE FOR HIS OWN USE. THE C BATTERIES STILL SHOW ABOUT ONE VOLT WHEN TESTED WITH A VERY HIGH RESISTANCE METER. RATING WAS $4\frac{1}{2}$ VOLTS. DETAILS ON THE SETS ARE AS FOLLOWS.

SET #7: THREE R.F. AND ONE A.F. TRANSFORMER OK. SECONDARY OF SECOND A.F. TRANSFORMER OPEN. THE REPLACEMENT YOU SENT OK. FOUR OF DUBILIER PAPER BYPASS CONDENSERS SHOW VERY LOW (200K OHM) LEAKAGE RESISTANCE DUE TO GREAT AGE. THE FEDERAL 1.5MFD STILL OK. PLATE CURRENT METER IN B- MISSING. GRID RETURNS OF ALL R.F. STAGES BROUGHT BACK TO FILAMENT POSITIVE BY MISTAKE. THIS PROBABLY CAUSED SHORT TUBE LIFE AND LOW GAIN.

SET #8: ONE R.F. TRANSFORMER OK. THREE R.F. AND BOTH A.F. TRANSFORMERS HAVE OPEN WINDINGS. DUBILIER PAPER BYPASS CONDENSERS BAD. FEDERAL OK. HAMMARLUND TUNER NEEDS MECHANICAL FREEING UP.

SET #9: ONE R.F. TRANSFORMER HAS OPEN SECONDARY. GRID RETURN ON 1ST R.F. TO NEGATIVE OK, OTHER TWO STAGES RETURN TO A+. ALL FIVE DUBILIER BYPASS CONDENSERS SHOW LOW LEAKAGE RESISTANCE. PECULIAR WIRING ON VOLUME CONTROL WHICH EFFECTIVELY SHORTS THE

SECONDARIES OF BOTH AUDIO TRANSFORMERS. THESE APPARENTLY DIDN'T WORK AS ONE HAS OPENED UP AND THE OTHER HAS A VERY HIGH RESISTANCE.

TUBES: SIX UV201A TUBES OK, ONE SLIGHTLY WEAK, ONE SOFT, ONE GRID-FILAMENT SHORT. SIX UV199 TUBES OK, TWO SLIGHTLY WEAK.

I PURCHASED THESE RECEIVERS MAINLY FOR THE R.F. TRANSFORMERS. UNFORTUNATELY FOUR OF THE TEN WERE BAD. HOWEVER, I BELIEVE I CAN OPEN THEM UP AND RESTORE CONTINUITY TO THE WINDINGS. THE TRANSFORMERS HAVE A RATHER NARROW RANGE AND THE GAIN DROPS BADLY BELOW 600 KC AND ABOVE 1300 KC; HOWEVER I BELIEVE THEY WILL SERVE MY PURPOSE, AT LEAST IN PART. THIS NARROW RANGE AND THE ERRORS IN WIRING PROBABLY MADE THESE SETS PERFORM RATHER POORLY. THESE MATTERS AND OTHERS MAKE ME SUSPECT THAT MR. BAIRD ONLY HAD AN ELEMENTARY KNOWLEDGE OF ELECTRICITY. MOST OF HIS ENJOYMENT WAS GAINED FROM THE CONSTRUCTION AND NOT THE USE OF THE RECEIVERS.

WHILE THERE WERE SOME DISAPPOINTMENTS IN THE ABOVE, PARTICULARLY THE OPEN R.F. TRANSFORMERS WHICH I WILL HAVE TO TRY TO FIX, I THINK I RECEIVED MY MONIES WORTH. OLD RADIOS ARE ALWAYS A GAMBLE. IF MR. SMITH WISHES TO SELL SOME OF THE OTHERS, I'LL OFFER THE SAME PRICE, NAMELY \$40.00 EACH FOR SETS #1, #2 & #3. I DON'T KNOW WHAT THE PERCENTAGE OF USABLE PARTS IS IN THESE, BUT IF NO WORSE THAN THE PREVIOUS THREE SETS, I'LL TAKE THE GAMBLE. PROVIDED THE ABOVE IS SATISFACTORY, PLEASE LET ME KNOW AND I'LL SEND MY CHECK.

WHAT KIND OF WESTERN ELECTRIC TUBES ARE THOSE YOU MENTIONED IN AN EARLIER LETTER?

VERY TRULY YOURS,

Grote Reber
GROTE REBER

Tubes for sets # 8+9 packed in # 8. They are

7 RCA UV201A (brass) made by Westinghouse and General Electric. They have plate currents of 1.9, 2.0, 2.2, 2.2, 2.3, 2.4, 3.8 The last one may be soft.

3 UV199 (brass) made by General Electric for RCA + Cunningham. Their plate current values are 1.7, 1.8, 2.2.

3 UV199 (bakelite) with plate current values of 2.4, 3.0, 3.4.