

TECHNICAL INFORMATION

BULLETIN No. 113.

(TYPE)

"CROMWELL" 5 A.V., SERIES 1, & 2.

RECEIVER

COLLIER & BEALE LTD.

WELLINGTON

MODEL 5 A.V. COMPACT RECEIVER.

1936 model (Series 2)

CONDENSERS.

- C.1. Oscillator grid condenser .00025 mfd.
- C.2. A.V.C. Filter, .05 mfd.
- C.3. Screen bypass, .25 mfd.
- C.4. Cathode bypass, .25 mfd.
- C.5. Diode load bypass, .00025 mfd.
- C.6. Detector screen bypass, .1 mfd.
- C.7. Plate filter R.F., .00025 mfd.
- C.8. Plate filter A.F., .25 mfd.
- C.9. Grid filter A.F., .1 mfd.
- C.10. Tone control, .05 mfd.
- C.11.)
- C.12.) Dual 8 mfd. Dry Electrolytic.
- C.13. Coupling condenser, .01 mfd.
- C.14. '42 Plate filter, .004 mfd.

RESISTORS.

- R.1. Oscillator grid leak, 75,000 ohm.
- R.2. Bias resistor, 300 ohm.
- R.3. Volume control .5 meg. (72-105)
- R.4. 2nd. Detector screen, 1 meg.
- R.5. A.V.C. filter, 1 meg.
- R.6. Plate filter 75,000 ohms.
- R.7. Grid filter, .5 meg.
- R.8. Plate load resistance .25 meg.
- R.9. Grid leak, 1 meg.
- R.10. Tone Control, 100,000 (807)
- R.11. Pentode Bias Potentiometer, .5 meg.
- R.12. " " " 75,000 ohm.
R15 10000
- R.13. Screen resistor, 15,000 ohm.
- R.14. Screen bleeder, 15,000 ohm.

VOLTAGE DETAILS.

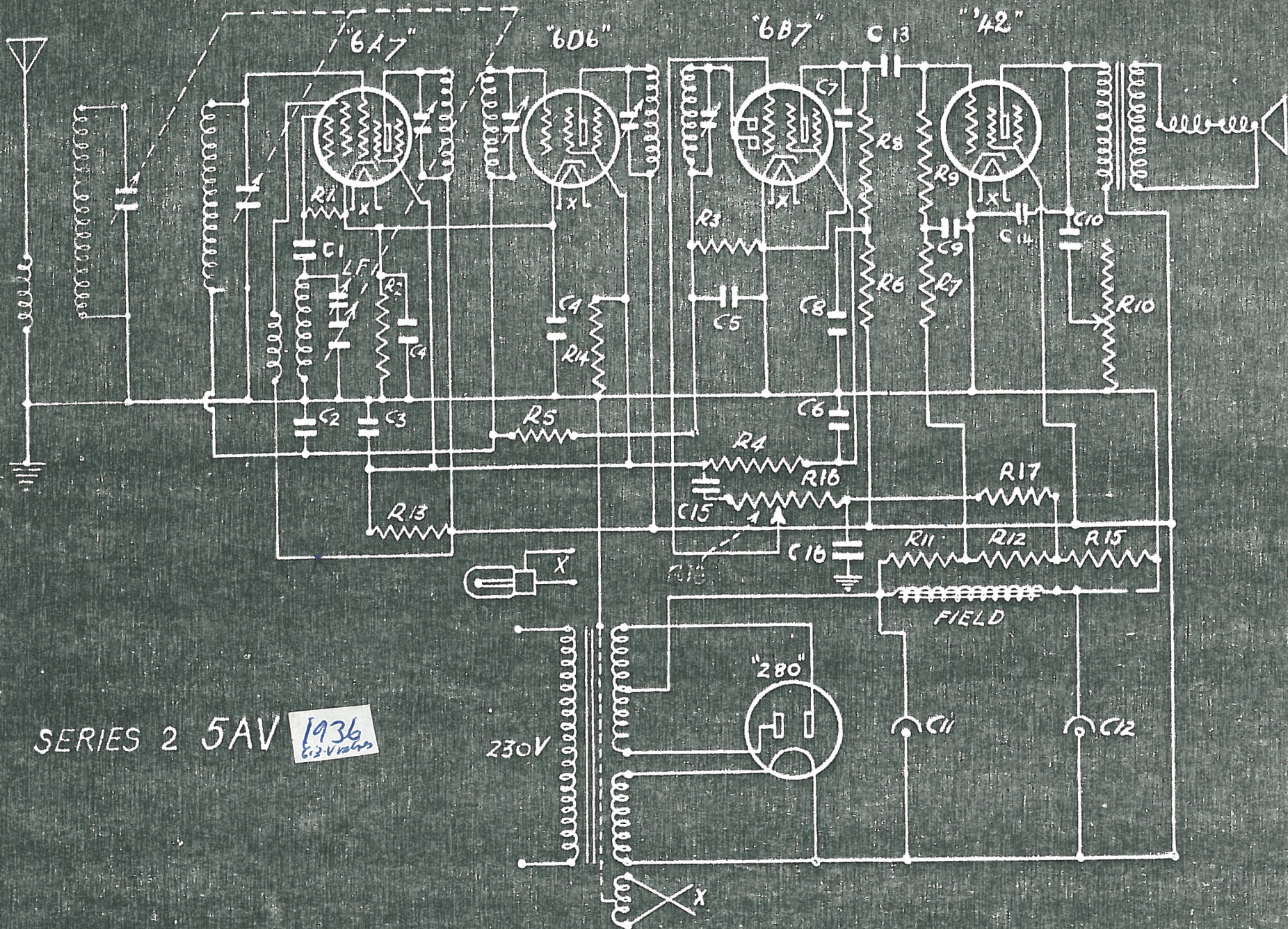
- Anode volts, normal 250.
- Screen volts, normal 100.
- Detector screen volts (6B7) 10.
- Speaker field volts 135.

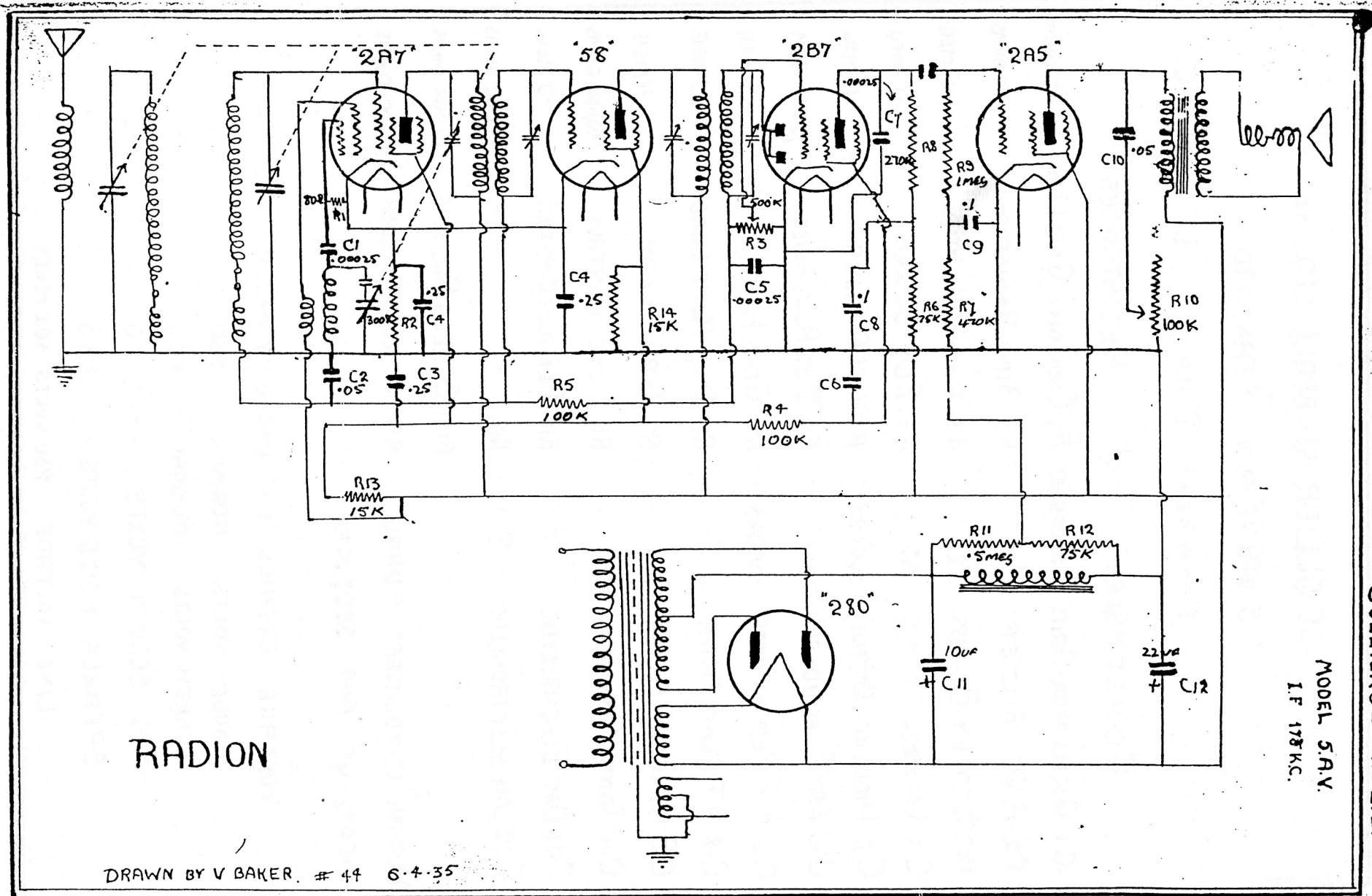
ALL VOLTAGES MEASURED ON 1000 O. P.V. VOLTMETER.

Note: replace H7 on p.c.c. plate (G2) by installing 20K dropping resistor & 85 type

Series 2 used
2.5 volt tubes
280V 287

SERIES 2 5AV 1936 6.3V 12W





COLLIER & BEALE LTD. N.Z.

5 VALVE A.V. STANDARD

COMPONENT DATA I.F. = 175 K.C.

CONDENSERS

RESISTANCES

C1. OSCILLATOR GRID	.000254F.	R1 OSCILLATOR GRID LEAK	75-100 OHMS
C2. A.V.C. FILTER	.05 "	R2 BIAS RESISTOR	300 OHMS
C3 SCREEN BY-PASS	.25 "	R3 VOLUME CONTROL	.5 MEG.
C4 CATHODE BY-PASS	.25 "	R4 2BY SCREEN	.1 MEG.
C5 DIODE LOAD BY-PASS	.00025"	R5 A.V.C. FILTER	.1 MEG.
C6 2BY SCREEN BY-PASS	.05 "	R6 2BY PLATE FILTER	75,000 OHM
C7 R.F. PLATE FILTER	.00025"	R7 GRID FILTER	.5 MEG.
C8 A.F. PLATE FILTER	.1 "	R8 2BY PLATE LOAD	.25 MEG.
C9 A.F. GRID FILTER	.1 "	R9 GRID LEAK	1 MEG.
C10 TONE CONTROL	.05 "	R10 TONE CONTROL	100,000 OHMS
C11 DRY ELECTROLYTIC	8. "	R11 PENTODE BIAS POT.	.5 MEG.
C12 DRY ELECTROLYTIC	8. "	R12 " " "	75,000 OHMS
		R13 SCREEN RESISTOR	15,000 OHMS
		R14 SCREEN BLEEDER	15,000 OHMS
TUNING CONDENSERS 3 GANG			
.000374F PER SECTION			

VOLTAGE DETAILS ON 1,000 O.P.V. METER

ANODE VOLTS NORMAL 250

SCREEN VOLTS NORMAL 100

2BY SCREEN VOLTS 10

SPEAKER FEILD VOLTS 135

LINE VOLTAGE 230 VOLTS 50 CYCLES

MODIFICATIONS FOR SERIES 2:5 A.V. RECEIVER.

(NEW NOISELESS VOLUME CONTROL SYSTEM)

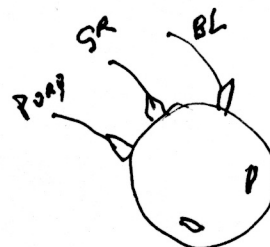
Change R.3 to Diode Load.

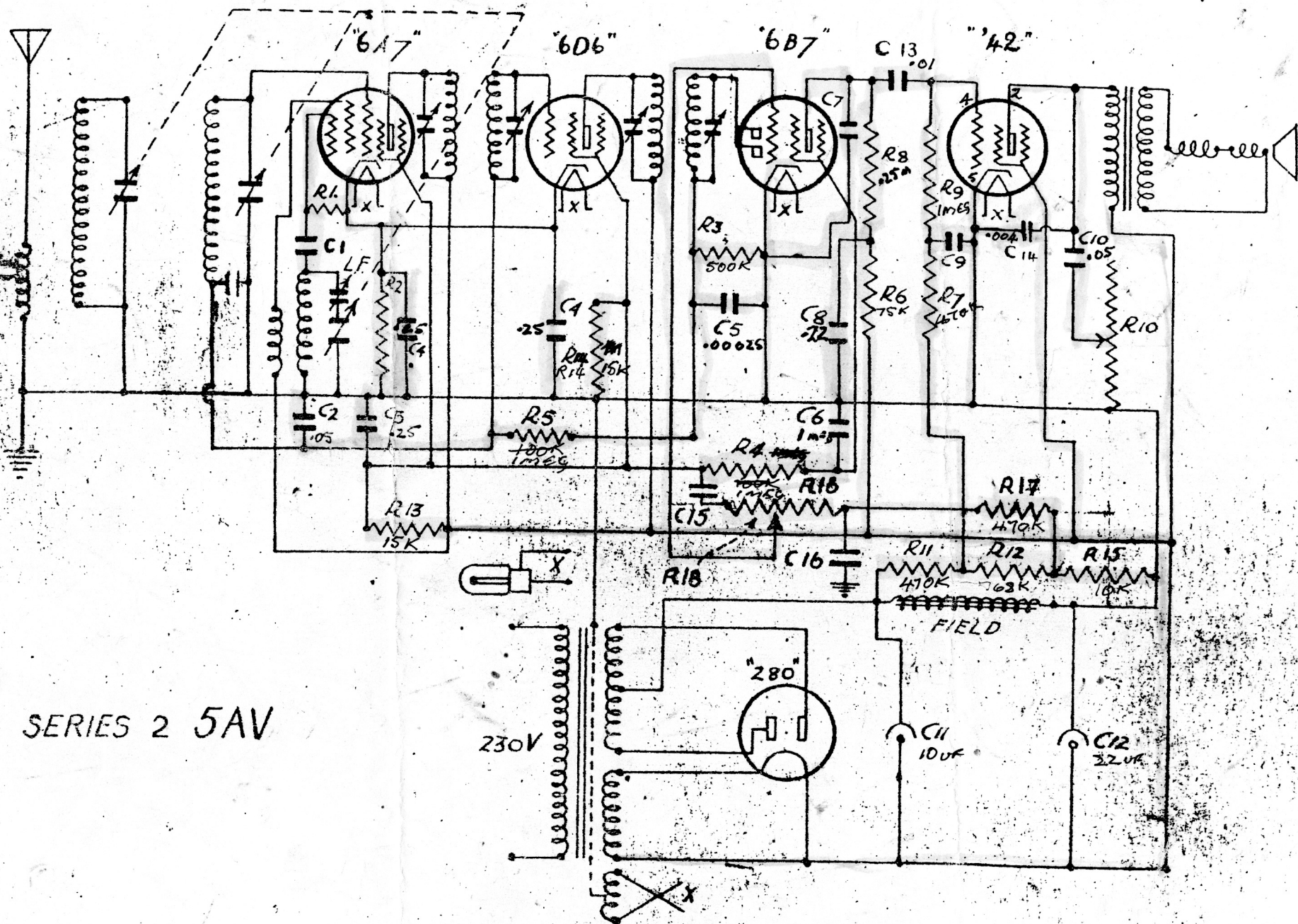
R.15 - 10,000 Bias Potentiometer
R.16 - 500,000-Ohm Volume Control
R.17 - 500-000-Ohm Bias Filter.

C.15 - .01 Coupling Condenser
C.16 - 25-mfd. Filter Condenser

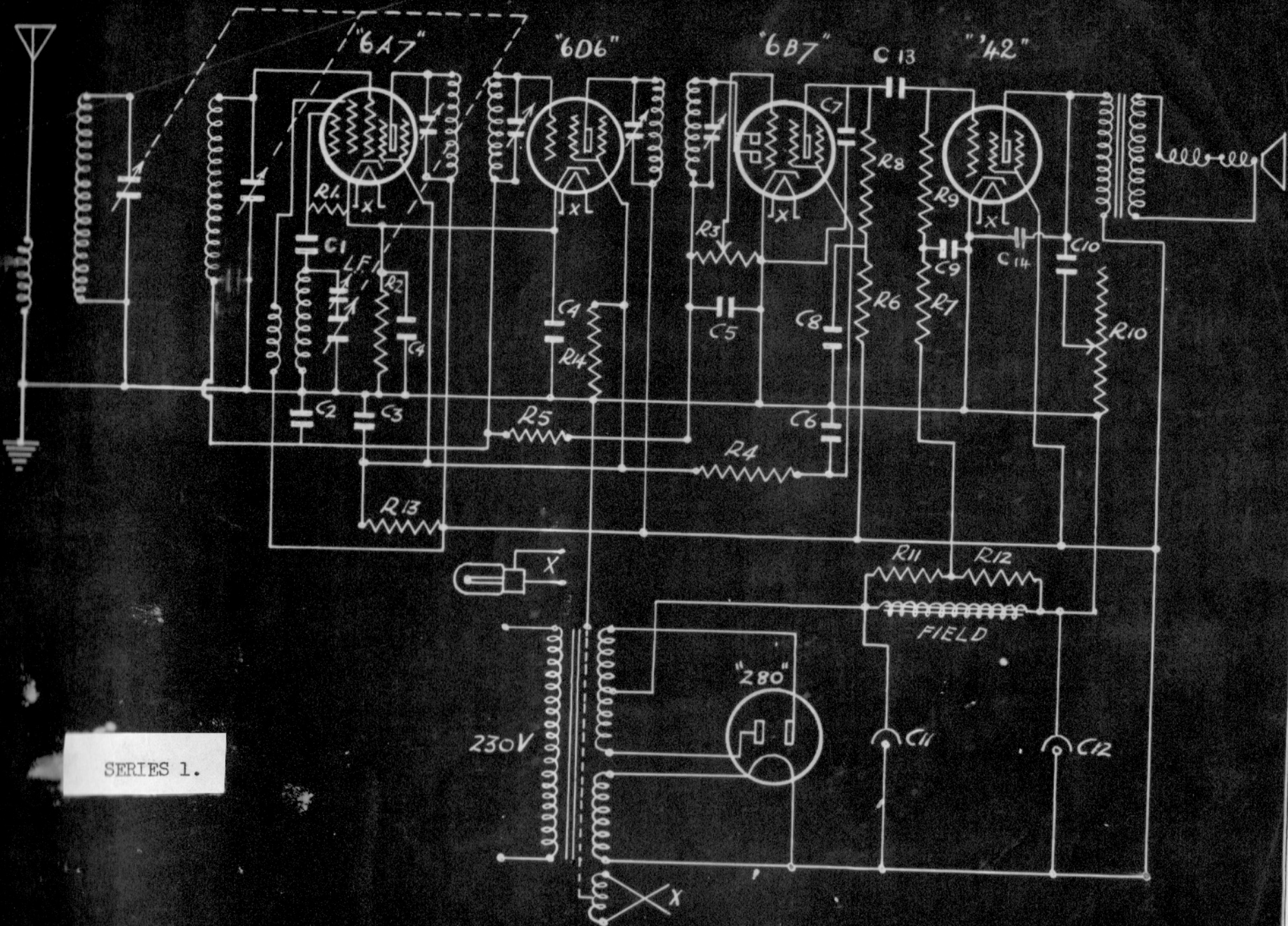
COLLIER & BEALE LIMITED,
66 CHURCH STREET,
WELLINGTON, C.2

19th. May, 1936





SERIES 2 5AV



SERIES 1.