PHILCO MODEL 818

SPECIFICATIONS

A five tube all wave receiver with semi band spread on the S.W. bands; a pentagrid converter followed by high gain I.F. stage and diode/triode detector amplifier with a pentode output tube using inverse feedback.

CABINET:

Bakelite moulded.

SPEAKER: - P.M.

TUBES:

7Q7	-	Pentagrid Converter
7B7	-	I.F.
7C6	-	Diode/triode
6K6GT	-	Output
7Y4	-	Rectifier

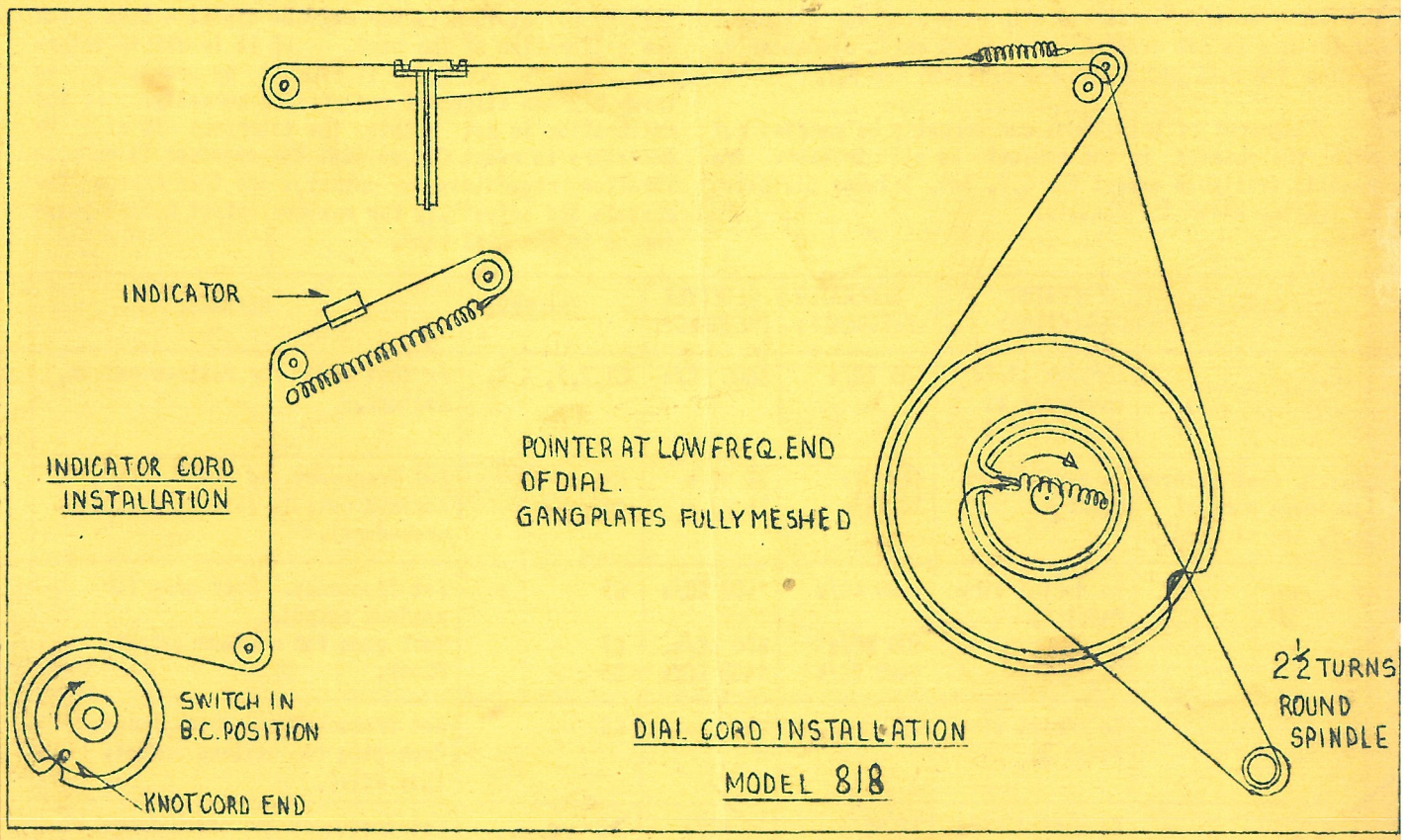
BAND COVERAGE:

BC	-	540 KC/s	-	1600 KC/s
S.W.1.	-	3 MC/s	-	10 MC/s
S.W.2.	-	9.3 MC/s	-	12 MC/s
S.W.3.	-	12 MC/s	-	22 MC/s

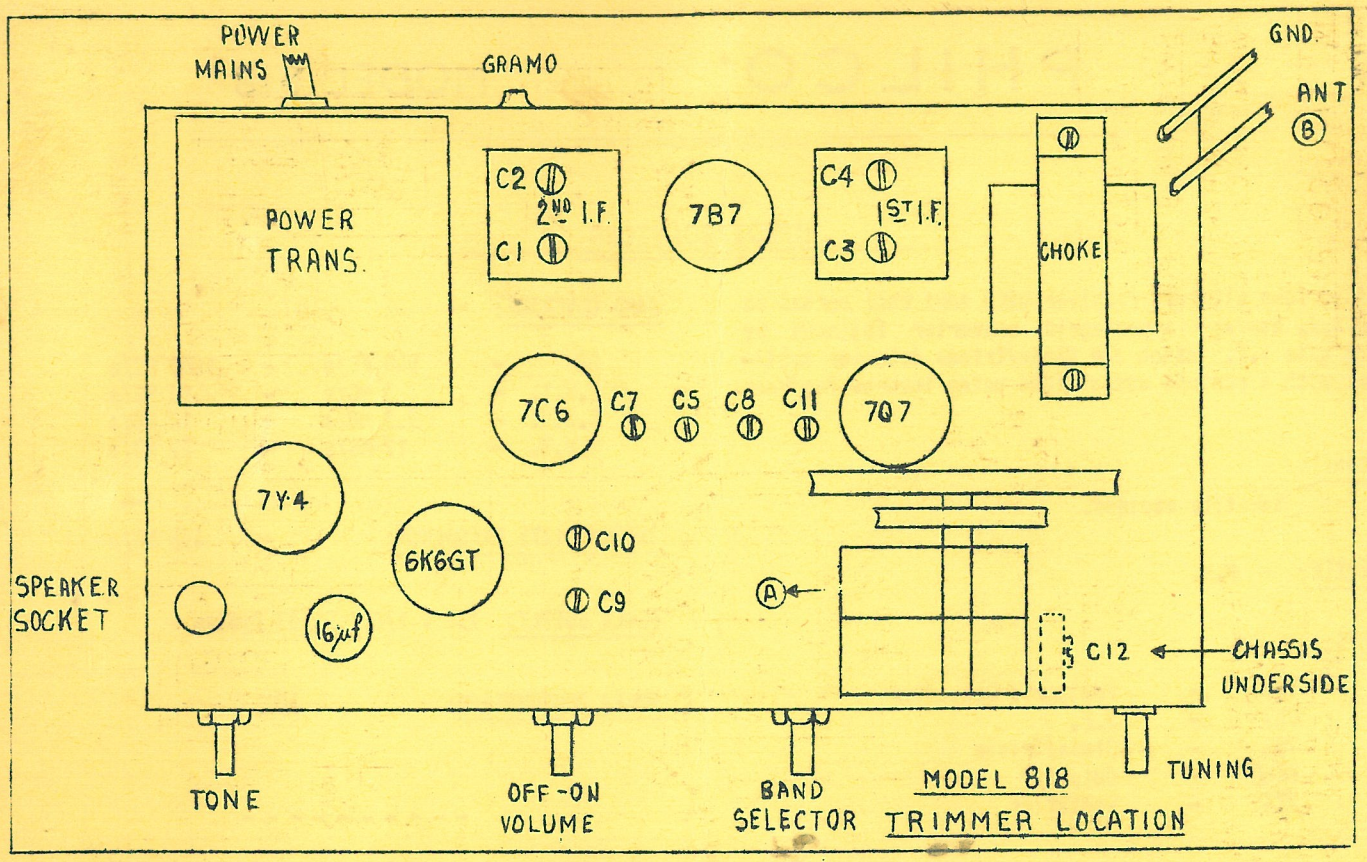
INTERMEDIATE FREQUENCY: - 455 KC/s

POWER SUPPLY: 230 V A/C. 50 Cycles -

POWER CONSUMPTION: 40W.



DIAL CORD INSTALLATION
MODEL 818



ALIGNMENT PROCEDURE

EQUIPMENT REQUIRED:

All wave signal generator and output indicator. Use dummy antenna in series with generator for alignment or if this is not available use a 200 mmfd. condenser in series for B.C. and a 400 ohm resistor for S.W.

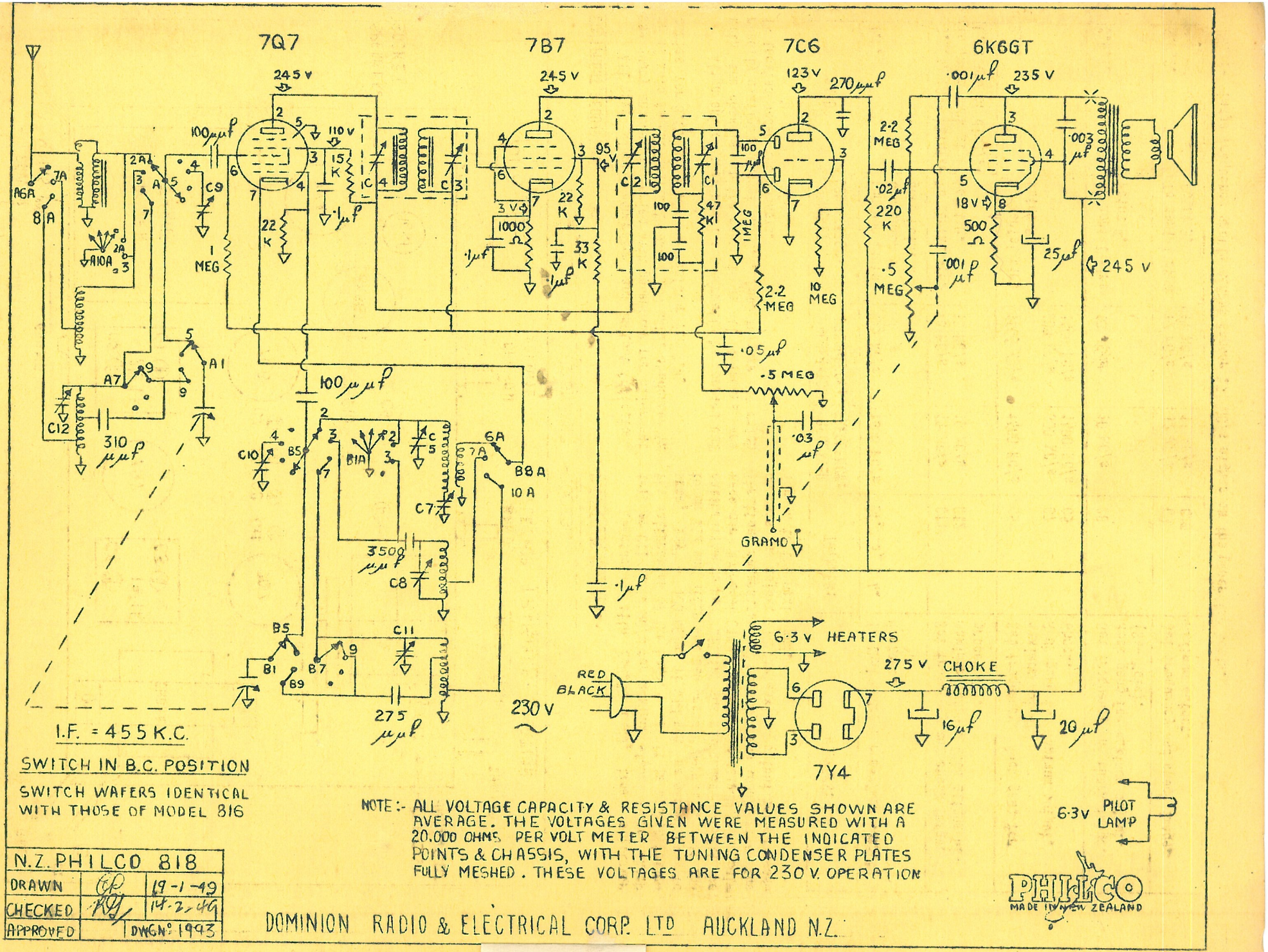
Alignment of this model can normally be carried out with the chassis in the cabinet as all trimmers are readily available except the S.W. Ant. trimmer C12 which is located under the chassis.

PROCEED AS FOLLOWS:-

Commencing with S.W.3. band, line oscillator trimmer C11 at 18 MC/s for maximum signal - then check the calibration of the band. If it is within tolerance, say - 100 KC/s it will not be necessary to touch C12 and alignment can proceed normally. If the calibration is not within the tolerance it will be necessary to reset C11 so that the receiver is on calibration regardless of output, and then remove the chassis and adjust C12 for maximum output before passing on to the next band.

BAND	GENERATOR CONNECTION:	GENERATOR FREQUENCY:	RECEIVER FREQUENCY:	TRIMMER:	REMARKS:
I.F.	Through .1mfd condenser to gang Point A	455 KC/s	1600 KC/s	C1, 2, 3, & 4.	In that order for maximum output. Recheck.
S.W.3. (Set pointer to index mark at L.F. end of dial).	To aerial wire Point B.	18 MC/s 18 MC/s	18 MC/s 18 MC/s	C11 C12	Set frequency and check image. Maximum output. (See alignment procedure).
B.C.	To aerial wire Point B,	1400 KC/s 600 KC/s 1400 KC/s	1400 KC/s 600 KC/s 1400 KC/s	C5 C7 C5	Set frequency. Rock gang for maximum output. Rock gang for maximum output. Chock.
S.W.1.	To aerial wire Point B.	10 MC/s	10 MC/s	C8	Set frequency and check image. Rock gang for maximum output. (See Note).
S.W.2.	To aerial wire Point B.	12 MC/s 11 MC/s	12 MC/s 11 MC/s	~~C9~~ C10 ~~C10~~ C9	Set frequency and check image. Maximum output.

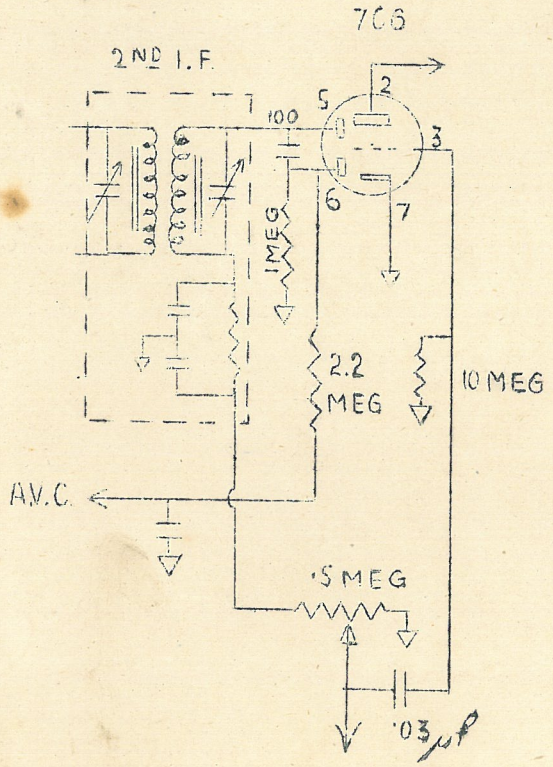
NOTE:- Image frequency should always appear .91 MC/s higher on the generator scale.


7Q7
7B7
7C6
6K6GT
245 V
245 V
123 V
235 V
270 μμf
100 μμf
110 V
15 K
95 V
22 K
3 V
1000 Ω
33 K
100
47 K
1 MEG
2·2 MEG
10 MEG
·5 MEG
·05 μf
·03 μf
·001 μf
·02 μf
220 K
·003 μf
18 V
500 Ω
25 μf
245 V
100 μμf
310 μμf
350 μμf
275 μμf
·1 μf
C1
C2
C3
C4
C5
C7
C8
C9
C10
C11
C12
A1
A6A
A7
A10A
B1
B5
B7
B8A
10 A
GRAMO
6·3 V HEATERS
275 V CHOKE
16 μf
20 μf
RED
BLACK
230 V
7Y4
6·3V PILOT LAMP
I.F. = 455 K.C.
SWITCH IN B.C. POSITION
SWITCH WAFERS IDENTICAL WITH THOSE OF MODEL 816
NOTE:- ALL VOLTAGE CAPACITY & RESISTANCE VALUES SHOWN ARE AVERAGE. THE VOLTAGES GIVEN WERE MEASURED WITH A 20.000 OHMS PER VOLT METER BETWEEN THE INDICATED POINTS & CHASSIS, WITH THE TUNING CONDENSER PLATES FULLY MESHED. THESE VOLTAGES ARE FOR 230 V. OPERATION
N.Z. PHILCO 818
DRAWN GP 19-1-49
CHECKED KG 14-2-49
APPROVED DWGN° 1993
DOMINION RADIO & ELECTRICAL CORP. LTD AUCKLAND N.Z.
PHILCO
MADE IN NEW ZEALAND

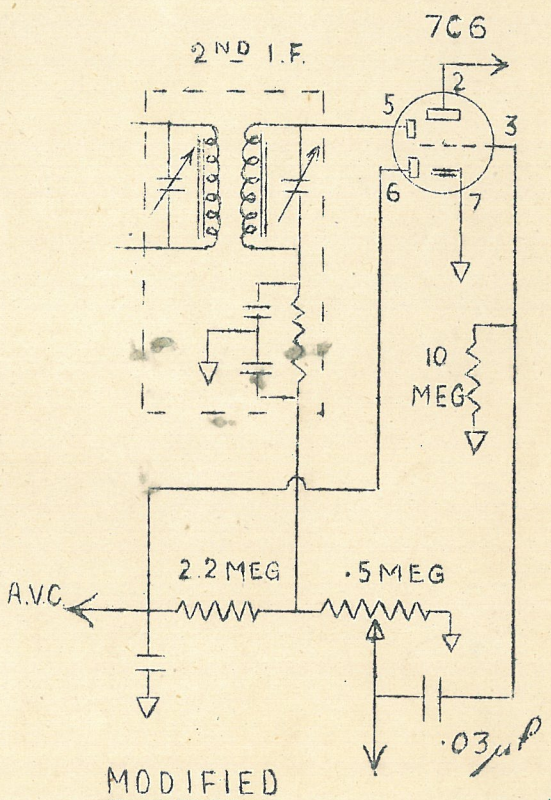
MODEL 818.

Loss of Sensitivity.

In some localities, due to excessive humidity, this model may suffer from loss of sensitivity. Slight leakage across terminal panels and I.F. bases may cause the A.V.C. line to develop a positive potential - in order to prevent this trouble occurring, a modification is being made to the next run and this can quite conveniently be made to any existing sets which may suffer from the trouble.



ORIGINAL



MODIFIED

Remove 100 mmfd condenser from between diodes of 706
Remove 1 meg diode load
Remove 2.2 meg filter resistor from diode and connect it to the top of the volume control
Connect the now spare diode to the A.V.C. line as shown.

The connecting of the diode to the A.V.C. line prevents this line from ever assuming a positive potential from any cause whatsoever.

(Note:- The positive voltage can usually only be detected by a very high impedance instrument such as an electronic voltmeter.)

MODEL 818

Intermittent operation on S.W. bands accompanied by squeals.

This trouble can usually be cured by inserting a 50 ohm stopper in the control grid lead of the 7Q7 tube. The S.W. circuits should be realigned.