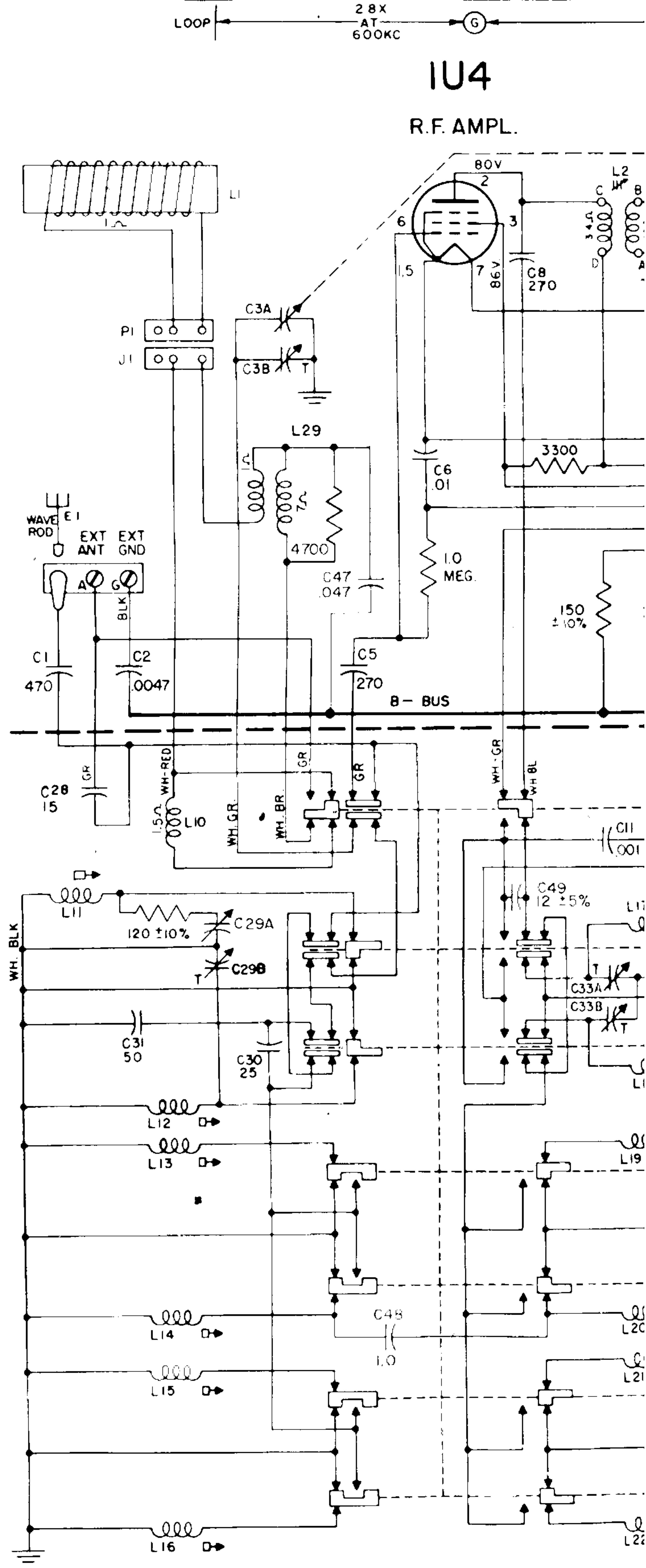
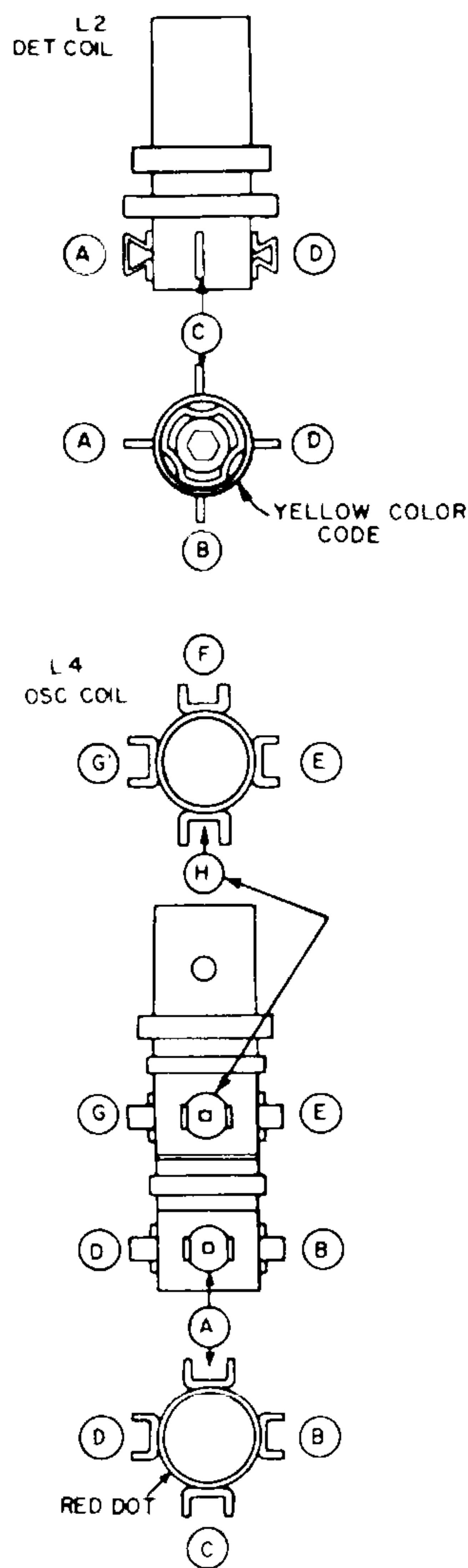


ZENITH RADIO CORPORATION MODELS B600 AND B600L CHASSIS 6A40 AND 6A41



66X
AT
600KC.

35X
FROM
600KC TO 455KC

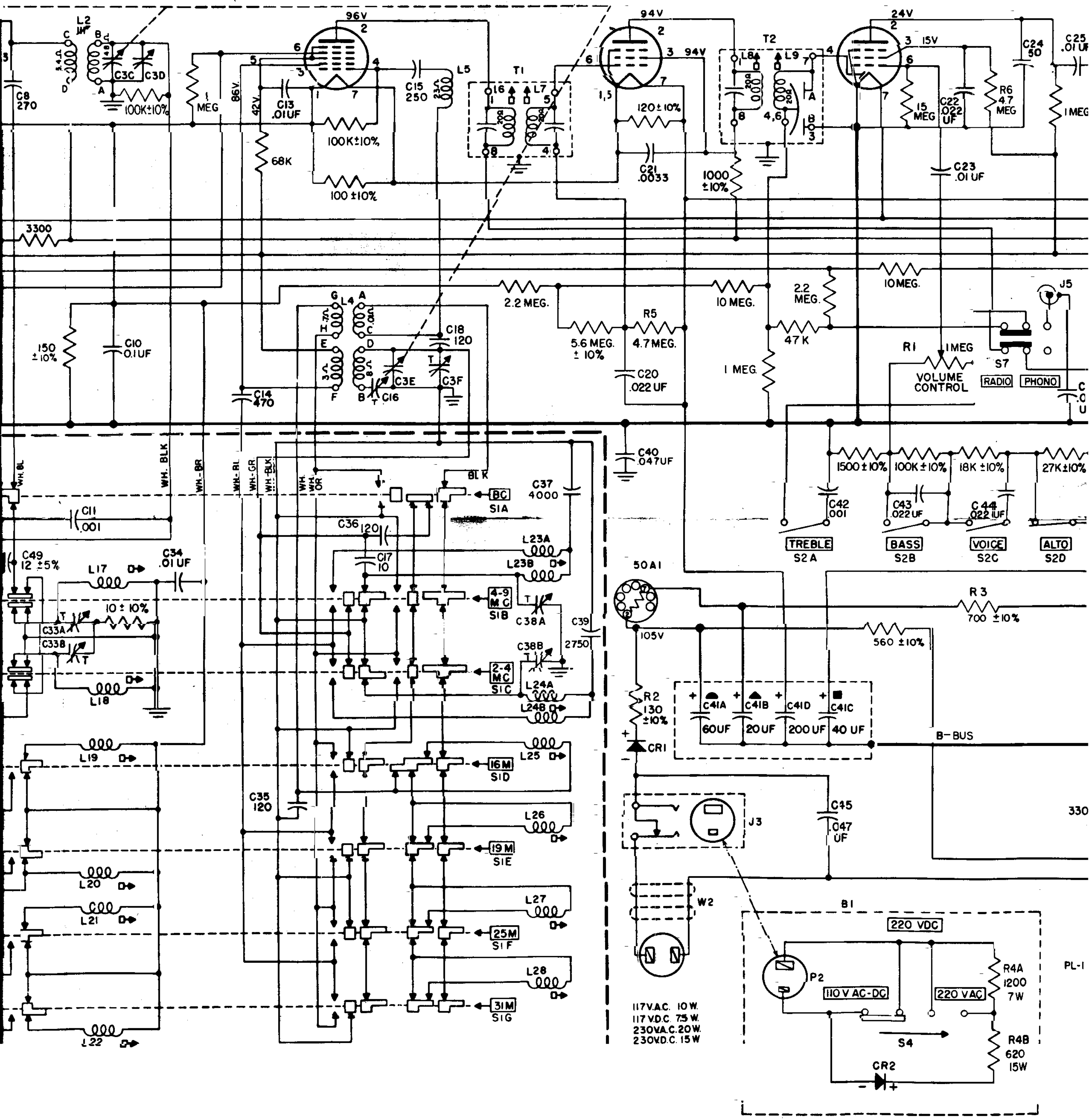
11X
FROM
455KC TO 400~

65X
AT
400~ 50MW OUTPUT

IL6 CONVERTER

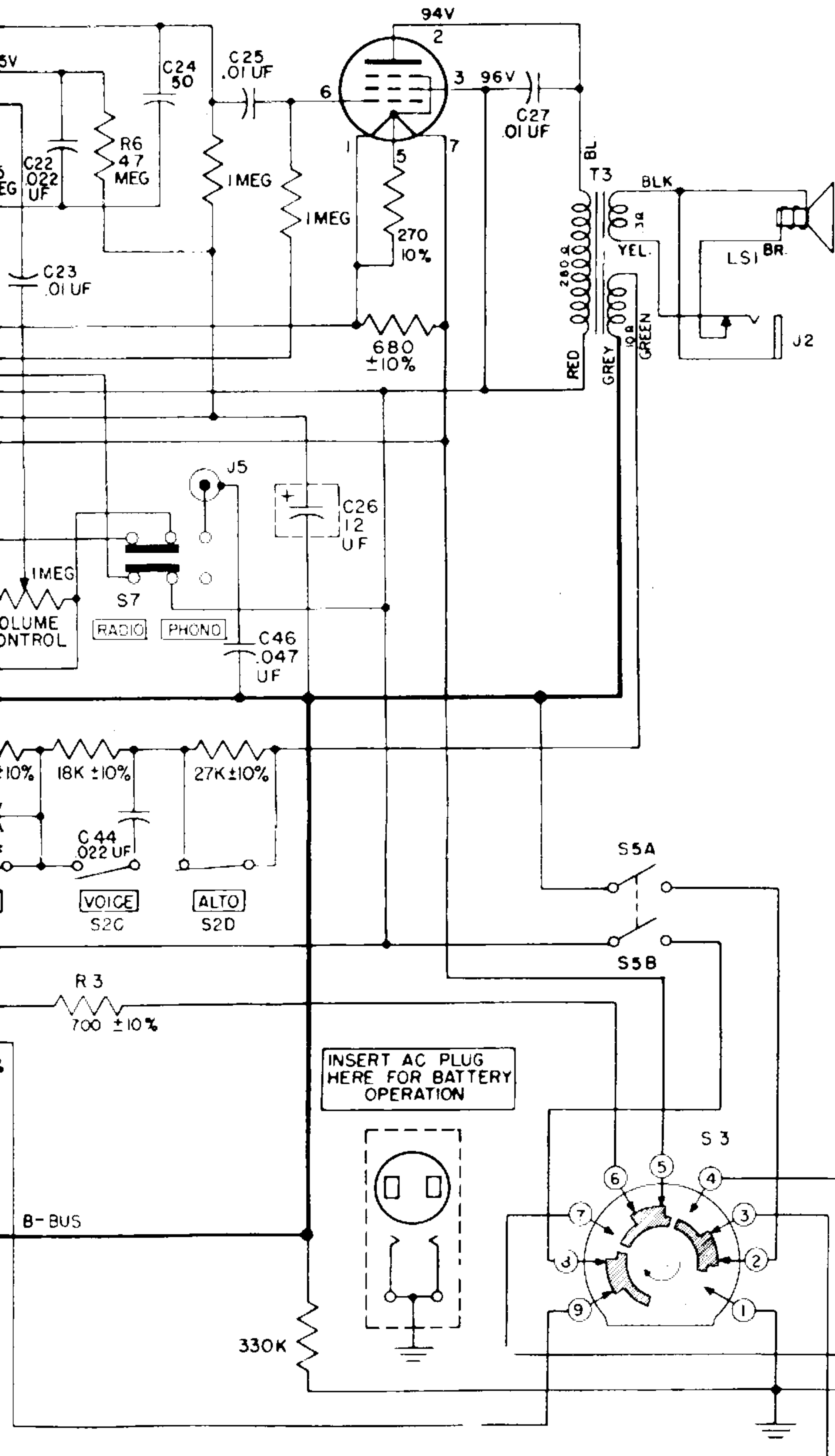
IU4 I.F. AMPL.

IU5 DET. AMPL.



65X AT 400~ 50MW OUTPUT (G) 14X AT 400~ 50MW OUTPUT (P)

3V4 AUDIO OUTPUT



NOTES

1. RESISTANCE VALUES IN OHMS, CAPACITANCE IN MMF. UNLESS OTHERWISE SPECIFIED.
2. IF TRANSFORMER NUMBERING STARTS WITH #1 TERMINAL AS FIRST TERMINAL CLOCKWISE AND ADJACENT TO MARKER, AS VIEWED FROM THE BOTTOM OF CHASSIS
3. ALL SECTIONS OF BAND SELECTOR SWITCH S1 SHOWN IN NONOPERATING POSITION. IN OPERATING POSITIONS SLIDING CONTACTS MOVE TO THE LEFT.
4. ALL TONE BUTTONS S2 SHOWN IN RIGHT POSITION AS VIEWED FROM THE FRONT OF CABINET.
5. S3 POWER CHANGEOVER SWITCH SHOWN IN POSITION FOR POWER LINE OPERATION.
6. POWER ADAPTER SWITCH S4 SHOWN IN 110 VOLT AC-DC POSITION.
7. ALL VOLTAGES MEASURED FROM COMMON RETURN TO POINTS INDICATED WITH A VACUUM TUBE VOLTMETER. — SET OPERATING ON 117V A.C.
8. ALL RESISTORS ARE ± 20% TOLERANCE, 1/2 WATT CARBON UNLESS OTHERWISE SPECIFIED.
9. RADIO PHONO SWITCH S7 SHOWN IN RADIO POSITION.

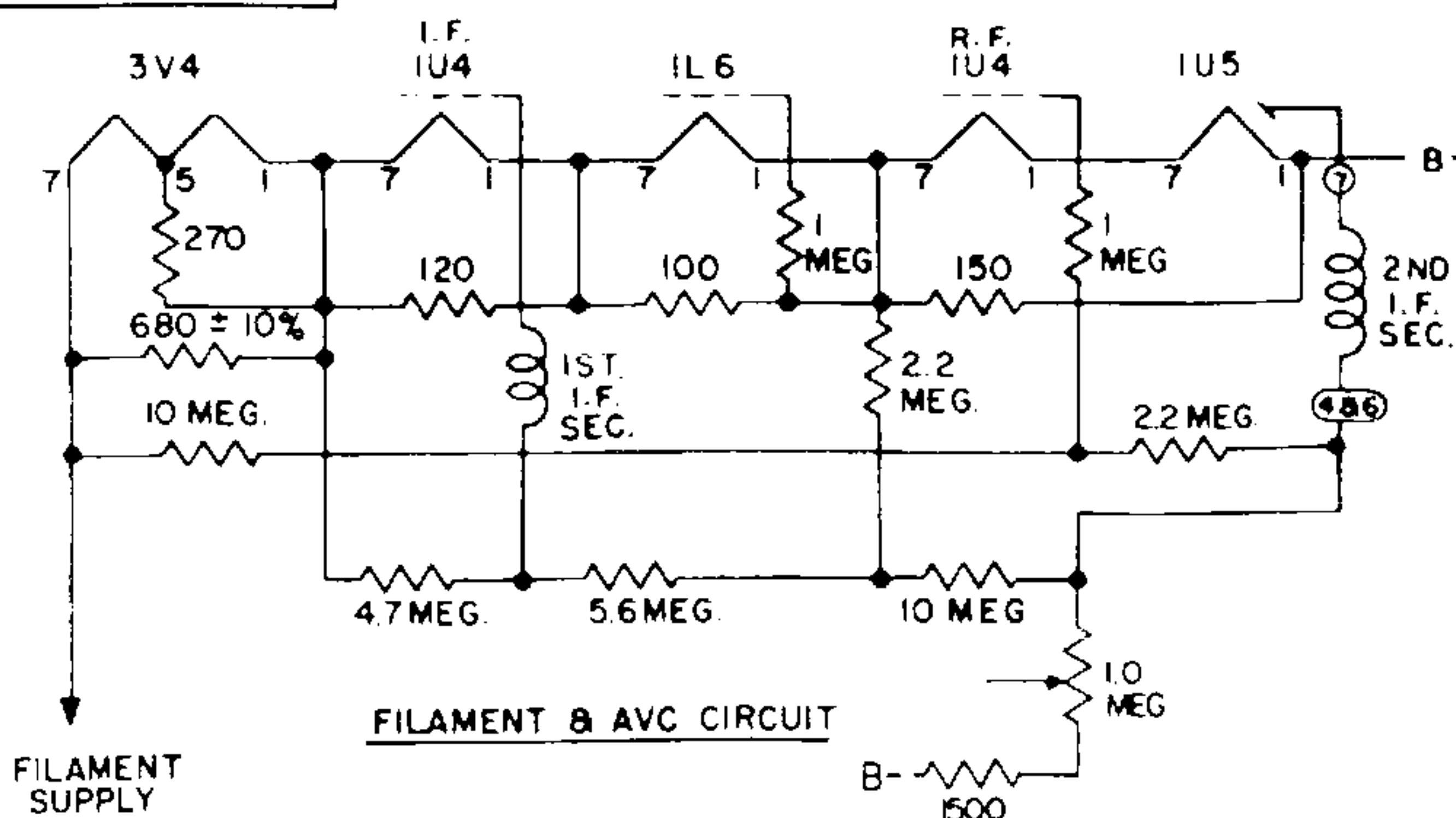
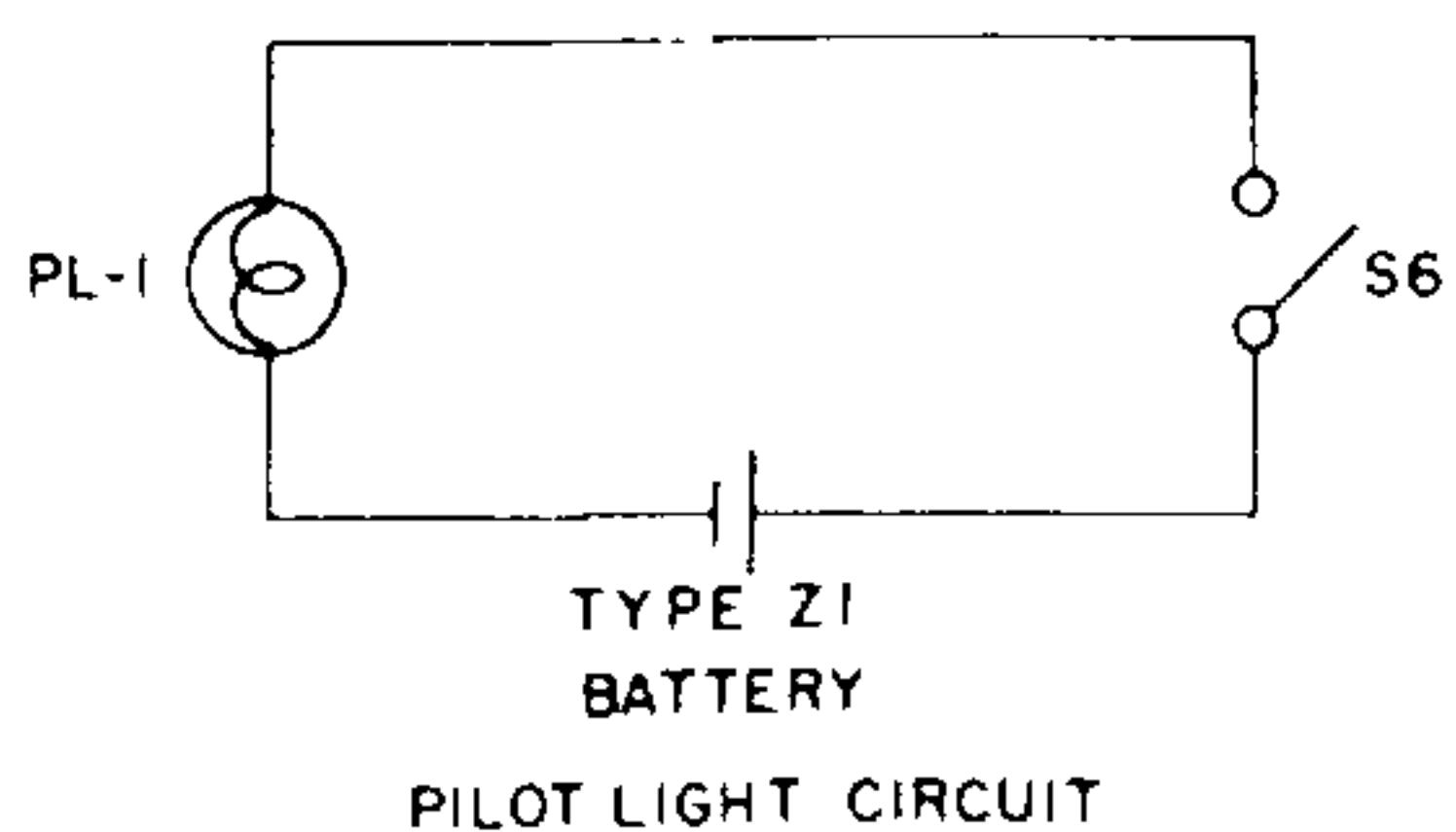
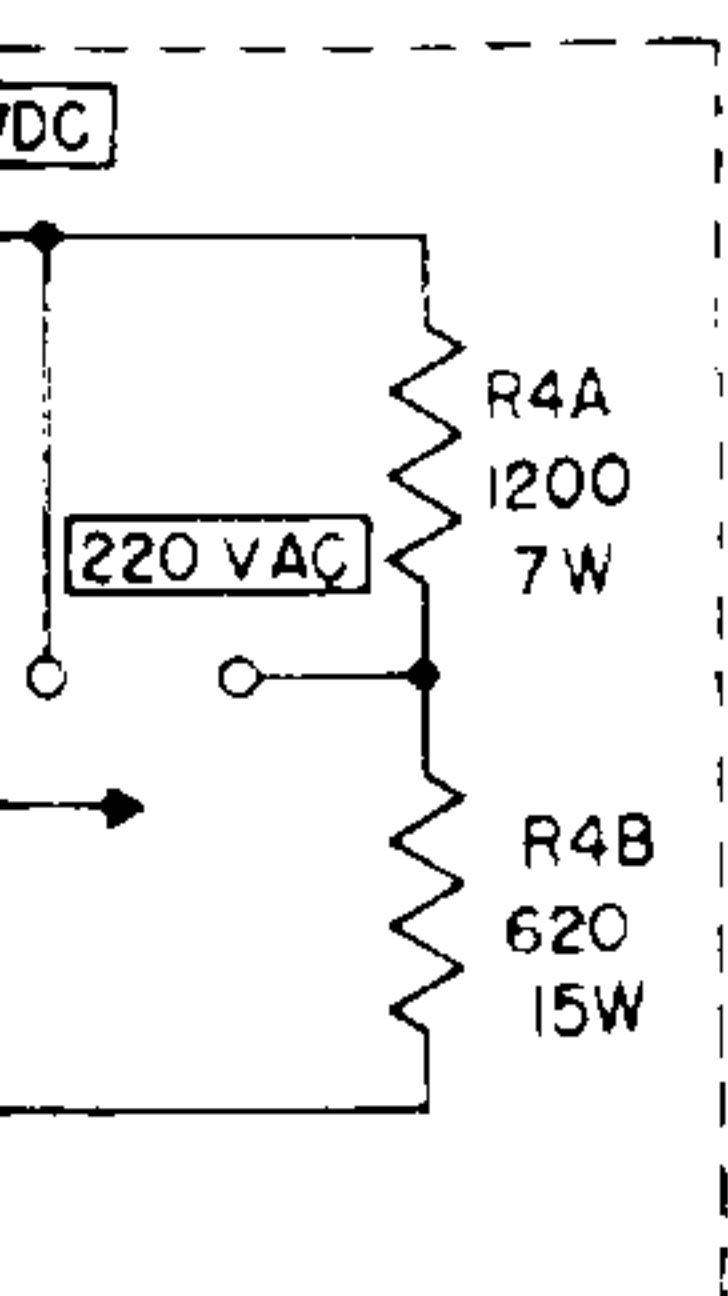
TUNING RANGES

540	1600 KC
4MC	9 MC
2MC	4 MC
174	18.2 MC
148	15.6 MC
115	12.1 MC
94	9.8 MC

I.F. FREQUENCY 455 KC.

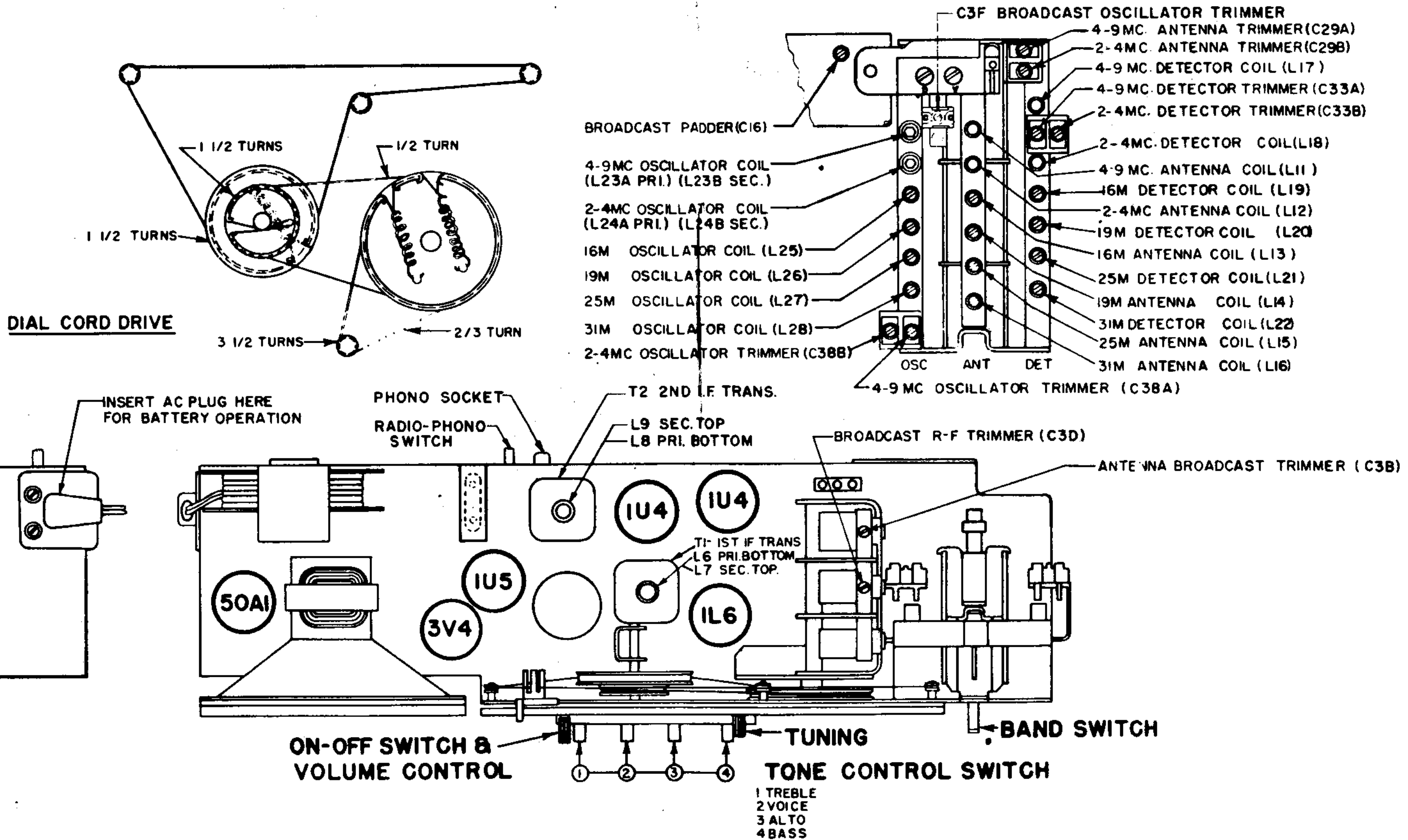
BATTERY PACK NO Z-985

⏏
DENOTES
CHASSIS



Tube, Trimmer Location and Dial Cable Drawing

REAR VIEW OF BAND SELECTOR SWITCH.



S-20811		Wavemagnet Ant. wdg. Assem. (part of S-22892)	2.00
S-21424		Front Cover Hinge Assem. - Left (part of 14-1675)	.85
S-21425		Front Cover, Hinge, Assem. - Right (part of 14-1675)	.85
S-21432		Ant. Knob & Latch Spring Assem. (part of S-21433)	.60
S-21433		Telescoping Ant. Assem. (used on Model B600L only)	8.80
S-22864		Wavemagnet Ant. Cover Riveting Assem. (part of S-22865)	1.70
S-22865	L1	Wavemagnet Ant. - Complete (used on Model B600 only)	6.00
S-22866		Wavemagnet Ant. Mtg. Strip Assem. (used on Model B600 only)	.65
S-22891		Wavemagnet Ant. Cover Assem. (part of S-22892)	1.95
S-22892		Wavemagnet Ant. - Complete (used on Model B600L only)	6.65
S-22893		Wavemagnet Ant. Mtg. Strip Assem. (used on Model B600L only)	.65

TO THE SERVICE MAN:

Chassis 6A40 features a high gain tuned RF stage ahead of a conventional superheterodyne circuit with band spread tuning on the 31, 25, 19 and 16 meter bands. There are two continuous coverage bands, one covering 2-4 megacycles and one covering 4-9 megacycles.

If removal of the chassis from the cabinet ever becomes necessary this should be done with care.

The alignment of chassis 6A40 is conventional. However, care must be exercised when making adjustments, and the alignment procedure must be followed exactly. Set the chassis over a metal plate approximately the same distance the battery pack is from the bottom of the chassis when it is in the cabinet. This procedure will introduce the approximate amount of metal in the field of the RF and oscillator coils as when the chassis is in the cabinet. A signal generator of reasonable accuracy and good attenuation must be used. An output meter (AC) of the copper oxide rectifier type with a range of 1 to 30 volts in several steps is necessary to get accurate output readings. Alignment wrenches should be of the non-metallic type, especially when making adjustments of the higher frequencies.

The I.F. transformers incorporated in this receiver are of the new permeability tuned type. The advantage of an I.F. transformer of this type is its extreme stability under various humidity and temperature conditions. The upper coil is the secondary and the lower the primary. When adjusting these I.F. transformers the tuning wrench 68-19 can be inserted into the top slug, rotated until maximum output is obtained and then dropped down to the lower slug and the same operation repeated. The tuning wrench is so designed that tuning one slug does not affect the adjustment of the other.

Thermal Regulator Tube 50A1 is an automatic rheostat designed to keep the current in a circuit at a definite value. Should the supply voltage change, either upward or downward, the Thermal Regulator will automatically increase or decrease its resistance to compensate for this change and keep the current thru the controlled circuit at a constant value.

As used in the A600, the controlled circuit consists of the filament of the five vacuum tubes connected in series. A constant current thru these filaments is equivalent to a constant voltage applied across them.

The Thermal Regulator tube is capable of performing its function because of its peculiar electric thermal characteristics. Basically the tube consists of a fine iron wire filament hermetically sealed in a hydrogen atmosphere. By balancing the temperature resistance curve of the wire against the thermal conductivity curve of the gas, it is possible to make a unit that automatically changes its resistance to keep a constant current flowing over a large range of voltage variation.

By keeping the filament current of the vacuum tubes constant at 50 milliamperes we extend the line voltage range over which the set will operate from 90 to 130 volts and increase tube life by an indefinite amount.

ALIGNMENT PROCEDURE

OPER.	CONNECT OSCILLATOR TO DUMMY ANTENNA	INPUT SIGNAL FREQ.	BAND	SET DIAL AT	TRIMMERS	PURPOSE
1	Positive lead of signal generator to converter grid through a .1 Mfd. condenser & negative lead to negative filament of 1L6 tube.	455 Kc	BC	600 Kc	L 6,7,8,9	Align I.F.
2	One turn loop coupled loosely to broadcast wavemagnet	1600 Kc	BC	1600 Kc	C3F	Set oscillator to scale
3		1400 Kc	BC	1400 Kc	C3D	Alignment of BC Det.
4		1400 Kc	BC	1400 Kc	C3B	Alignment of BC ant.
5*		600 Kc	BC	600 Kc	Rock C16	Alignm't of BC at 600 Kc
6		3 feet of wire approximately 1 foot from extended wave rod.	8.75 Mc	4-9 Mc	8.75 Mc	C38A, C33A, C29A
7*	4.25 Mc		4-9 Mc	4.25 Mc	Rock L 23B	
8	REPEAT OPERATIONS 6 & 7					
9	3.9 Mc		2-4 Mc	3.9 Mc	C38B, C33B, C29B	
10*	2.1		2-4 Mc	2.1 Mc	Rock L 24B	
11	REPEAT OPERATIONS 9 & 10					
12	17.8 Mc		16 Meters	17.8 Mc	L 25, L 19, L 13	
13*	15.2		19 Meters	15.2	L 26, L 20, L 14	
14	11.8 Mc		25 Meters	11.8	L 27, L 21, L 15	
15*	9.6 Mc		31 Meters	9.6 Mc	L 28, L 22, L 16	

* NOTE: Rock Tuning Condenser When Making Alignment Under Operations 5, 7, 10, 12, 13, 14 & 15.
 NOTE: If Trimmers C3F, C3D, C3B are adjusted after procedures No. 2 through No. 15 are completed, it will be necessary to repeat alignment procedures No. 2 through No. 15.