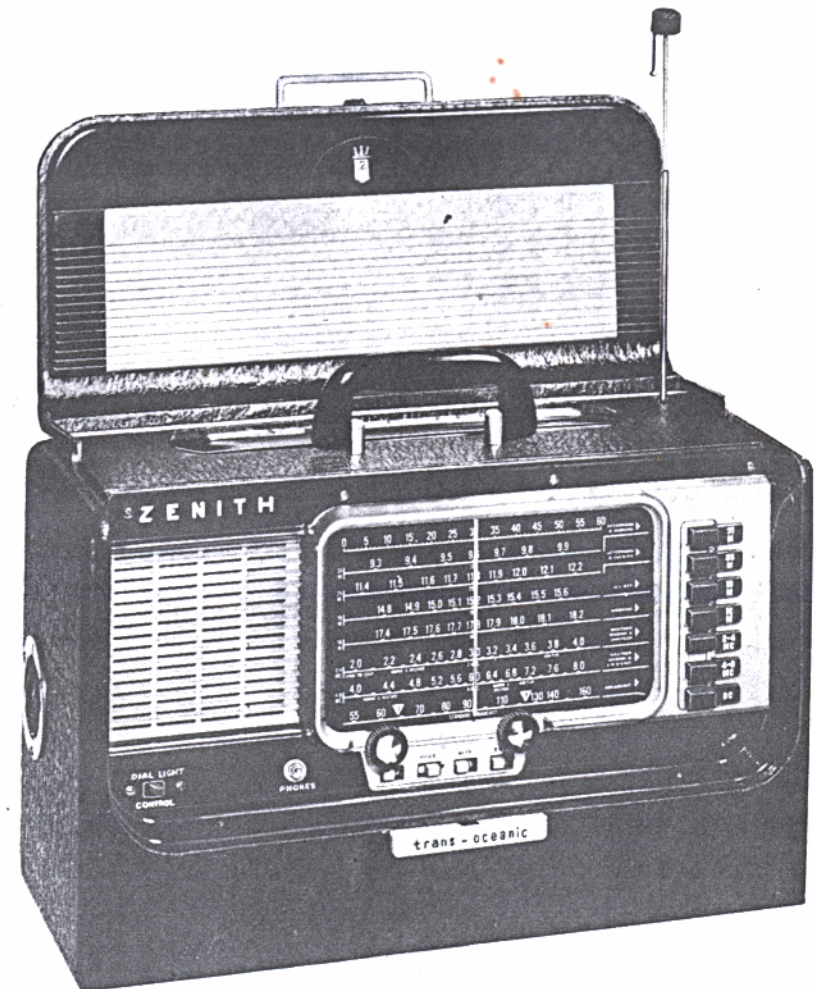


DOUG FREWIN  
26 ZITA AV  
WHANGAPARA OA

PH 09:424 8207

Oct 93

Model T600 - T600L  
Chassis 6T40 - 6T41



*Super De Luxe*

TRANS-OCEANIC

PORTABLE

## TO THE SERVICE MAN:

Chassis 6T40 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 4-8 megacycles.

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

The alignment of chassis 6T40 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 at the higher frequencies.

When reinstalling the chassis in the cabinet be careful not to disturb the cabling between the short wave coil assembly and chassis. Tune in a weak broadcast signal near 1400 Kc. and touch up trimmer C3B. This will insure maximum performance after alignment.

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 T600, 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.

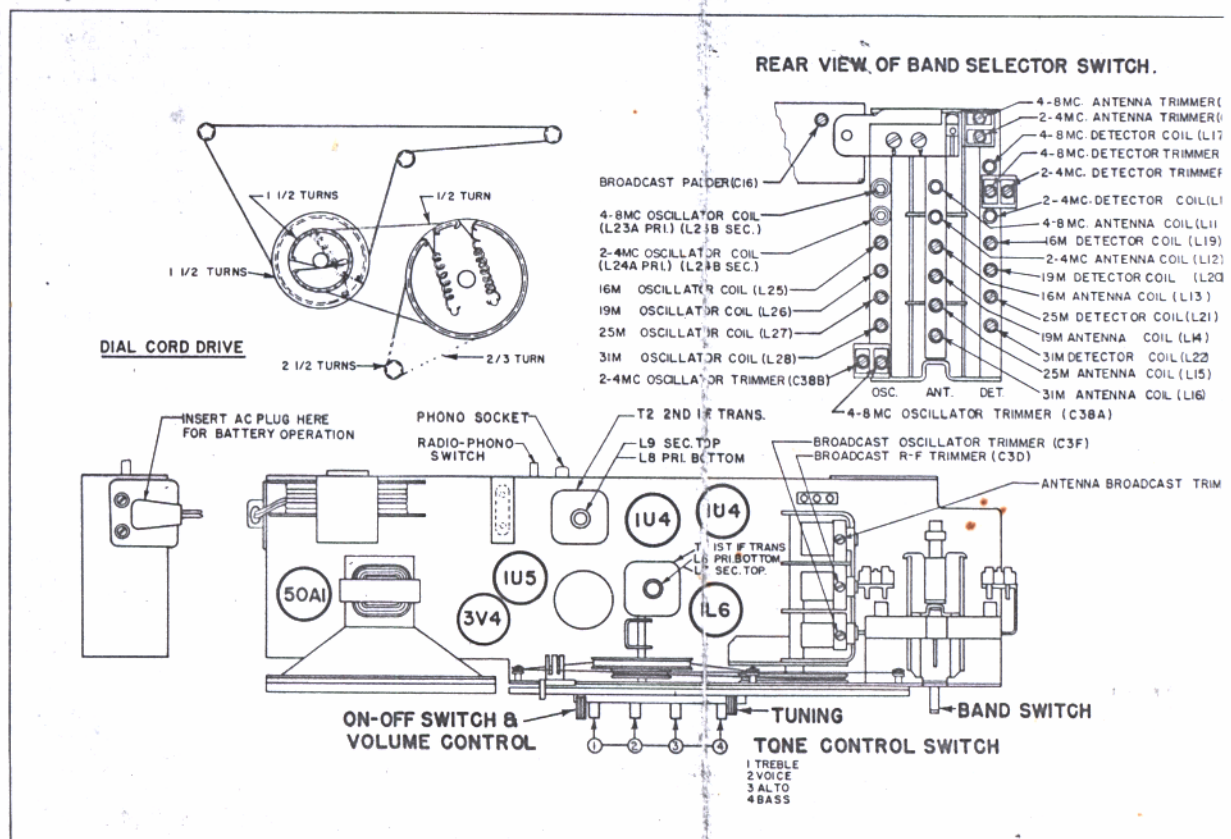
## ALIGNMENT PR

OPER.	CONNECT OSCILLATOR TO DUMMY ANTENNA	INPUT SIGNAL FREQ.	BAND	SET DI AT
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 K
2	One turn loop coupled loosely to broadcast wavemagnet	1600 Kc	BC	1600 K
3		1400 Kc	BC	1400 K
4		1400 Kc	BC	1400 K
5*		600 Kc	BC	600 K
6		7.8 Mc	4-8 Mc	7.8 Mc
7*	3 feet of wire approximately 1 foot from extended wave rod.	4.2 Mc	4-8 Mc	4.2 Mc
8		REPEAT OPERAT		
9		3.9 Mc	2-4 Mc	3.9 Mc
10*		2.1	2-4 Mc	2.1 Mc
11		REPEAT OPERAT		
12		17.8 Mc	16 Meters	17.8 Mc
13*		15.2	19 Meters	15.2
14		11.8 Mc	25 Meters	11.8
15*		9.6 Mc	31 Meters	9.6 M

\* NO T: Rock Tuning Condenser When Making Alignme

NOTE: If Trimmers C3F, C3D, C3B are adjusted after pr It will be necessary to repeat alignment procedur

## Tube, Trimmer Location and Dial Cable Drawing





part of S-17806)	.20	40-73	Cabinet back cover hinge (2 part of 14-1633 or 1675)	.25
	.05	40-147	Inside cover stop hinge	.15
	.15	43-233	Wavemagnet ant. housing (Model T600 - part of S-22865)	1.25
15715	.40	43-234	Cover housing (part of S-20815)	1.65
S-20821)	12.25	43-244	Wavemagnet ant. housing (Model T600L - part of S-22892)	1.60
ch	1.00		Cover housing (part of S-21426)	1.80
	1.40	43-245		

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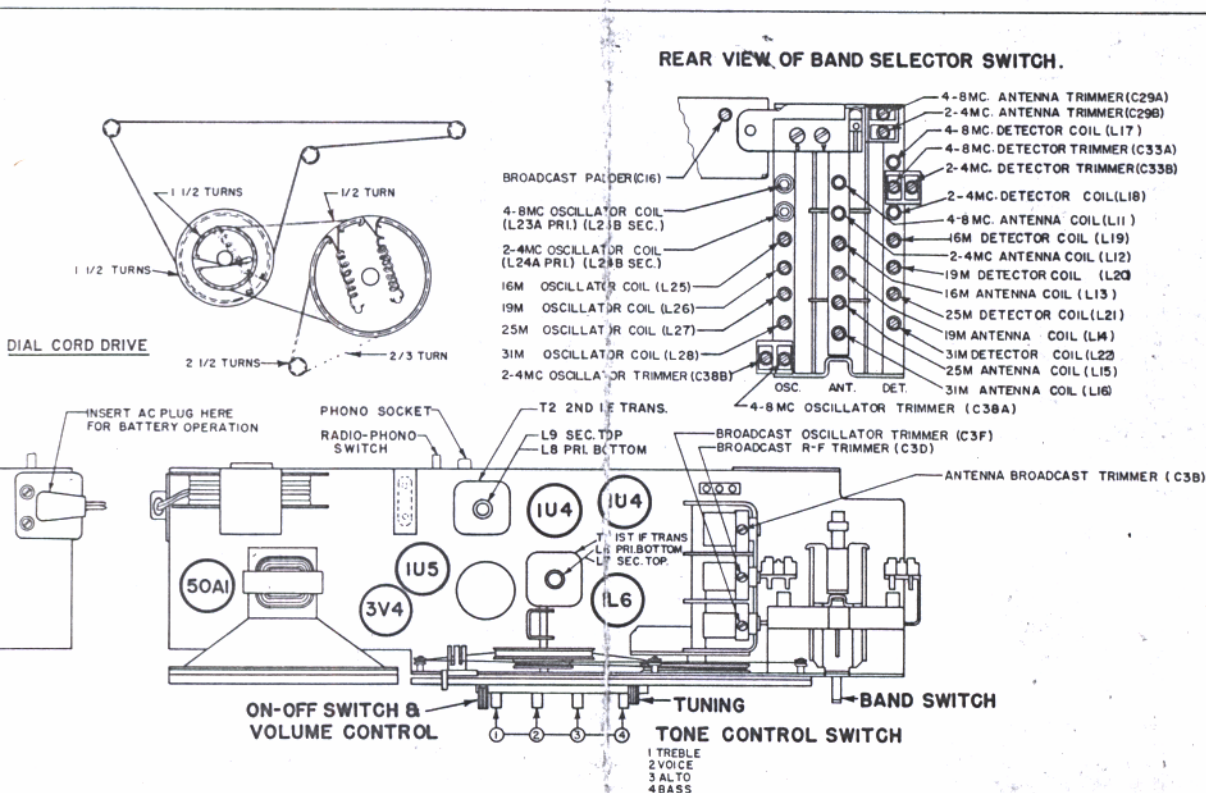
## ALIGNMENT PROCEDURE

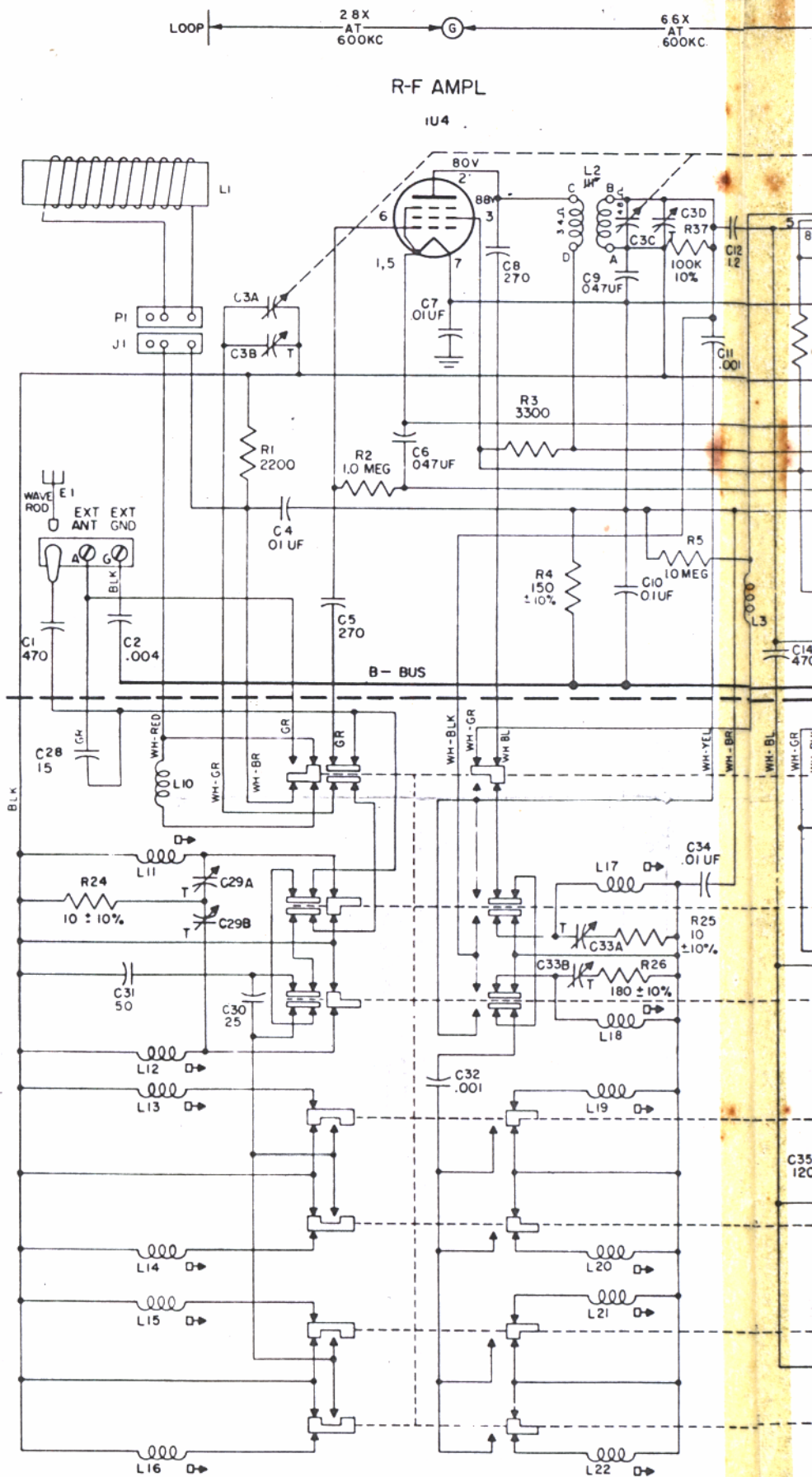
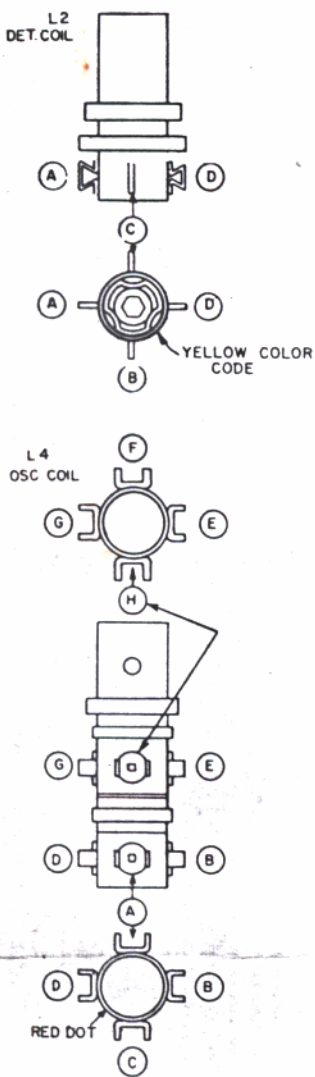
OPER.	CONNECT OSCILLATOR TO DUMMY ANTENNA	INPUT SIGNAL FREQ.	BAND	SET DIAL AT	TRIMMERS	PURPOSE	
1	Positive lead of signal generator to converter grid through a .1 Mfd. condenser & negative lead to negative filament of 1L6 tube.	455 Kc	BC	600 Kc	L 6,7,8,9	Align I.F.	
2	One turn loop coupled loosely to broadcast wavemagnet	1600 Kc	BC	1600 Kc	C3F	Set oscillator to scale	
3		1400 Kc	BC	1400 Kc	C3D	Alignment of BC Detector	
4		1400 Kc	BC	1400 Kc	C3B	Alignment of BC antenna	
5*		600 Kc	BC	600 Kc	Rock C16	Alignment of BC at 600	
6		3 feet of wire approximately 1 foot from extended wave rod.	7.8 Mc	4-8 Mc	7.8 Mc	C38A,C33A,C29A	Alignment of S.W. Oscillator Detector and Antenna.
7*	4.2 Mc		4-8 Mc	4.2 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		16Meters	17.8 Mc	L 25,L 19,L 13		
13*	15.2		19Meters	15.2	L 26,L 20,L 14		
14	11.8 Mc		25Meters	11.8	L 27,L 21,L 15		
15*	9.6 Mc		31Meters	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!

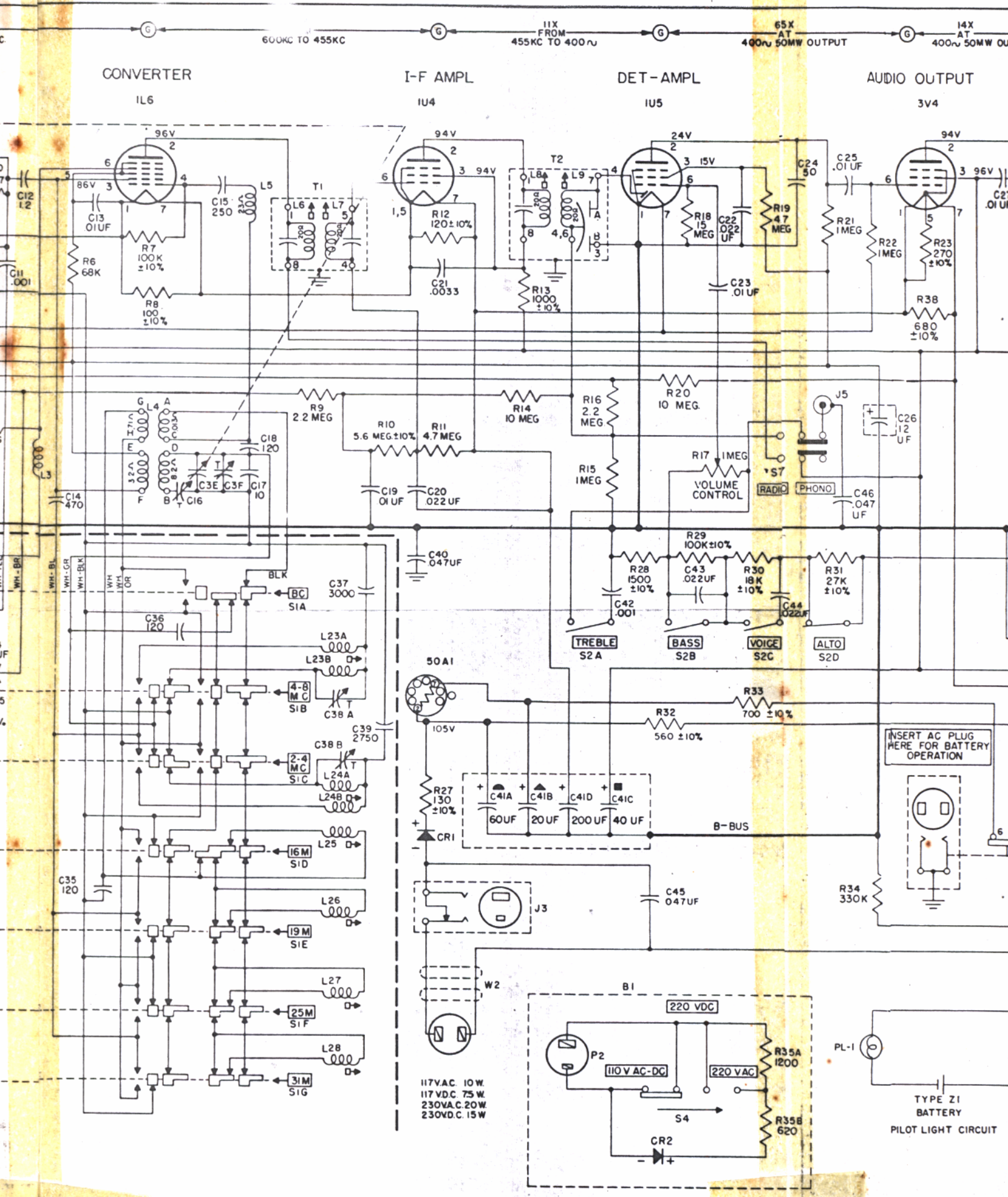
NOTE: If Trimmers C3F, C3D, C3B are adjusted after procedures No. 2 through No. 15 are completed, it will be necessary to repeat alignment procedures No. 2 through No. 15.

## Tube, Trimmer Location and Dial Cable Drawing











DET-AMPL

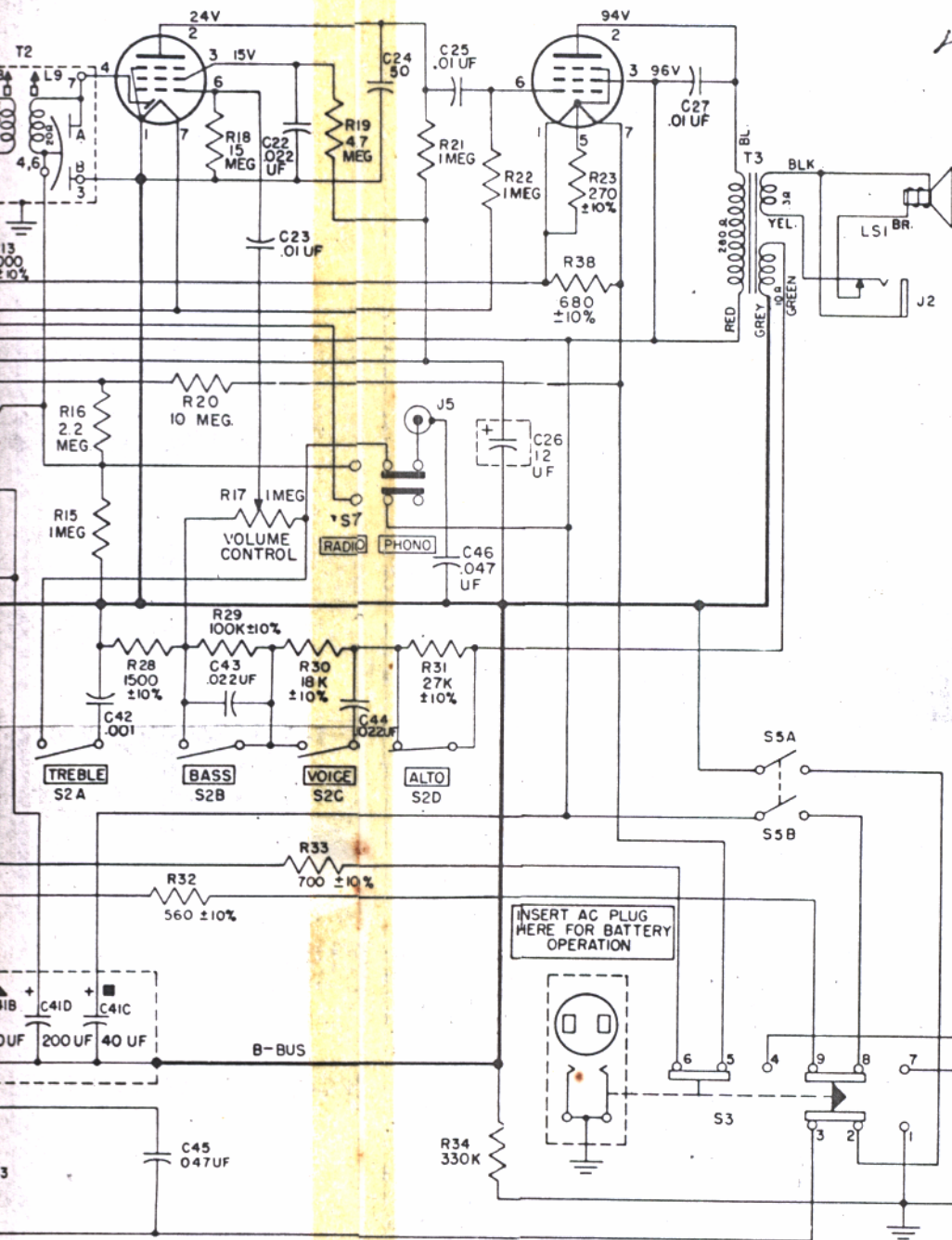
1U5

AUDIO OUTPUT

3V4

DOUG FREWIN  
26 ZITA AV  
WHANGAPARAUA

PH 09.42482



# NOTES

1. RESISTOR VALUES IN OHMS, CAPACITY VALUES IN UUF 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 VOLTS AC-DC POSITION.
7. ALL VOLTAGES MEASURED FROM COMMON RETURN TO POINTS INDICATED WITH A D.C. VACUUM TUBE VOLTMETER AND SET OPERATING ON 117V A.C.

## TUNING RANGES

540	1600 KC.
4MC	8 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

