Chisholm

SERVICE MANUAL

MODEL 1480
AM-FM TUNER
CHASSIS

Frequencies:
AM range: 530 kc to 1620 kc
AM I-F: 455 kc
FM range: 87.5 mc to 108.5 mc
FM I-F: 10.7 mc

ELECTRICAL RATINGS:
Line voltage: 110-120 volts, 60 cycles

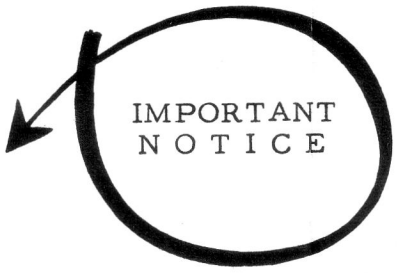
For tube complement, parts, etc., see parts list.

NOTICE: RE PARTS ORDERING

In order to assure correct parts shipped please supply the following information:

(1) Chisholm part number of part from Manual.
(2) Serial number of set.
(3) Model number of set.
(4) Date set was purchased, and the colour.

Your parts guarantee will be effective only when the parts warranty registration card, located on the rear of the receiver, is filled out and mailed to the factory within ten days of original purchase.



REGISTRATION CARD 44813

IMPORTANT
Warranty void unless mailed within ten days of original purchase. All information must be filled completely.

Chassis No. ..... Model No. .....

Serial No. ..... Date of Purchase .....

Gentlemen:
I have purchased the above Chisholm Television on the date indicated.

NAME .....

ADDRESS .....

DEALER'S NAME .....

ADDRESS .....

90 DAY PARTS WARRANTY - ONE YEAR PICTURE TUBE WARRANTY

adjustments

TUNER CONTROLS 1480

CONTROLS: Dual locking loudness-balance, dual locking treble, dual locking bass, selector switch, tuning knob, and dimension control.

The top knob of each dual control affects one set of speakers, and the bottom knob the other set. The top and bottom knobs rotate together. To free one knob from the other, push in on the top knob.

The selector switch has five positions. Three positions are for radio: AM, FM without AFC, and FM with AFC. The other two positions are for phono (either stereo or monaural) and for an auxiliary input (say an external tape deck).

The tuning knob is used for both AM and FM station selection.

The dimension control knob provides a gradual adjustment between stereo and monaural playback. In the ccw position the stereo effect is the greatest.

The on-off switch is a push-pull switch operated by the dimension control knob.

As previously mentioned, the AFC is controlled by the selector switch.

The tuner chassis contains connectors for the addition of a multiplex adapter.

REPLACEABLE PARTS

REFERENCE SYMBOL	CAPACITORS DESCRIPTION	PART NUMBER
C-1	Ceramic, 10,000 mmf, 500 v	15122
C-1.1	Ceramic, 10,000 mmf, 500 v	15122
C-2	Ceramic, 1000 mmf, 500 v	15109
C-3	Not used	
C-4	Ceramic, 47 mmf, 20%	15104
C-5 (A & B)	FM RF & trimmer)	
C-5 (C)	FM osc, trimmed by C-23)	Variable 18004
C-5 (E & F)	AM antenna & trimmer)	
C-5 (G & H)	AM osc, & trimmer)	
C-6	Ceramic, 1000 mmf, 500 v	15109
C-7	Ceramic, 1.5 mmf, 10%	15129
C-8	Ceramic, 10,000 mmf, 500 v	15122
C-9	Ceramic, 1000 mmf, 500 v	15109
C-10	Ceramic, 10,000 mmf, 500 v	15122
C-10.1	Same as C-10	15122
C-11	Ceramic, 10,000 mmf, 500 v	15122
C-12	Ceramic, 5000 mmf, 500 v	15120
C-13	Not used	
C-14	Ceramic, 100 mmf, 20%	15123
C-15	Ceramic, 2000 mmf, 20%	15118

Part No. 74001

Printed in Canada.

C-16	Ceramic, 10,000 mmf, 500 v	15122
C-17	Ceramic, 10,000 mmf, 500 v	15122
C-18	Ceramic, 100 mmf, 20%	15123
C-19	Electrolytic, 5 mfd/50 v	15201
C-20	Not used	
C-21	Ceramic RC network	15128
C-22	Ceramic, 68 mmf, 10%, NPO	15112
C-23	Trimmer, 1½ to 10 mmf (trims C-5C)	18003
C-24	Ceramic, 47 mmf, 20%	15104
C-25	Ceramic, 10 mmf, 10%, NPO	15102
C-26	Ceramic, 1.5 mmf, 10%	15129
C-27	Ceramic, 10,000 mmf, 500 v	15122
C-28	Ceramic, 50,000 mmf, 500 v	15127
C-29	Ceramic, 10,000 mmf, 500 v	15122
C-30	Ceramic, 2000 mmf, 20%	15118
C-31	Not used	
C-32	Not used	
C-33	Ceramic, 10,000 mmf, 500 v	15122
C-33.1	Same as C-33	15122
C-34	Same as C-33	15122
C-34.1	Same as C-33	15122
C-35	Electrolytic, 2 mfd/350 v	15202
C-36	Ceramic, 10,000 mmf, 500 v	15122
C-37	Same as C-36	15122
C-38	Ceramic, 220 mmf, 20%	15110
C-39	Same as C-38	15110
C-40	Not used	
C-41	Ceramic, 1000 mmf, 500 v	15109
C-42	Same as C-41	15109
C-43	Ceramic, 10,000 mmf, 500 v	15122
C-44	Same as C-43	15122
C-45	Ceramic, 47 mmf, 20%	15104
C-46	Ceramic, 10,000 mmf, 500 v	15122
C-47	Ceramic, 1000 mmf, 500 v	15109
C-48	Ceramic, 50,000 mmf, 500 v	15127

CONTROLS

R-15	5 megohms, dimension control, w/ sw	29138
R-18 (A & B)	Dual 1 megohm, loudness & balance	29139
R-24 (A & B)	Dual 1 megohm, treble	29140
R-29 (A & B)	Dual 1 megohm, bass	29141

COILS

L-1	Antenna, FM	03007
L-2	Choke, 1 uh	24432
L-3	RF, FM	24435
L-4	1st I-F, FM	81205
L-5	2nd I-F, FM	81206
L-6	2nd I-F, AM	81207
L-7	Ratio detector	81208
L-8	Osc, FM	24902
L-9	Choke, 1 uh	24432
L-10	1st I-F, AM	81209
L-11	Loop antenna, AM	03006
L-12	Osc, AM	24901

DIODES

X-1	1N541) matched pair, ratio detector	1N541
X-2	1N541)	1N541
X-3	1N295A, AFC diode	1N295A

RESISTORS
(10%, ½ w, unless specified)

R-1	68 ohms	69223
R-2	27,000 ohms	69254
R-3	3.3 megohms, 20%	69179
R-4	10 ohms	69213
R-5	68 ohms	69223
R-6	27,000 ohms	69254
R-7	220,000 ohms, 20%	69265
R-8	Same as R-7	69265
R-9	56,000 ohms	69258
R-10	Not used	
R-11	22,000 ohms	69253
R-12	1200 ohms	69250
R-13	10,000 ohms, 1 w	69349
R-14	4.7 megohms, 20%	69281
R-15	See CONTROLS	
R-16	33,000 ohms	69155
R-16.1	270,000 ohms	69266
R-17	33,000 ohms	69155
R-17.1	270,000 ohms	69266
R-18	See CONTROLS	
R-18.1	2.7 megohms	69278
R-18.2	Same as R-18.1	69278
R-19	3300 ohms	69143
R-20	Not used	
R-21	3300 ohms	69143
R-22	180,000 ohms	69264
R-23	Same as R-22	69264
R-24	See CONTROLS	
R-25	220,000 ohms, 20%	69265
R-26	Same as R-25	69265
R-27	22,000 ohms	69153
R-28	Same as R-27	69153
R-29	See CONTROLS	
R-30	Not used	
R-31	100,000 ohms	69261
R-32	Same as R-31	69261
R-33	56,000 ohms	69258
R-34	10 ohms	69231
R-35	22,000 ohms	69153
R-36	10,000 ohms, 1 w	69349
R-37	2.2 megohms, 20%	69277
R-38	68 ohms	69223

CABLES & CONNECTORS

PL-1) thru PL-5)	Phono skt	72311
PL-6	Lamp skt	57106
PL-7	Lamp skt	57106
PL-8	Cable, output, 3 ft, w/ 59125 plug at one end, red	
PL-9	Same as PL-8 except black	
PL-10	Multiplex adapter skt, 5-contact	72318
PL-11	Cable, pwr, w/ noval male plug	

SWITCH

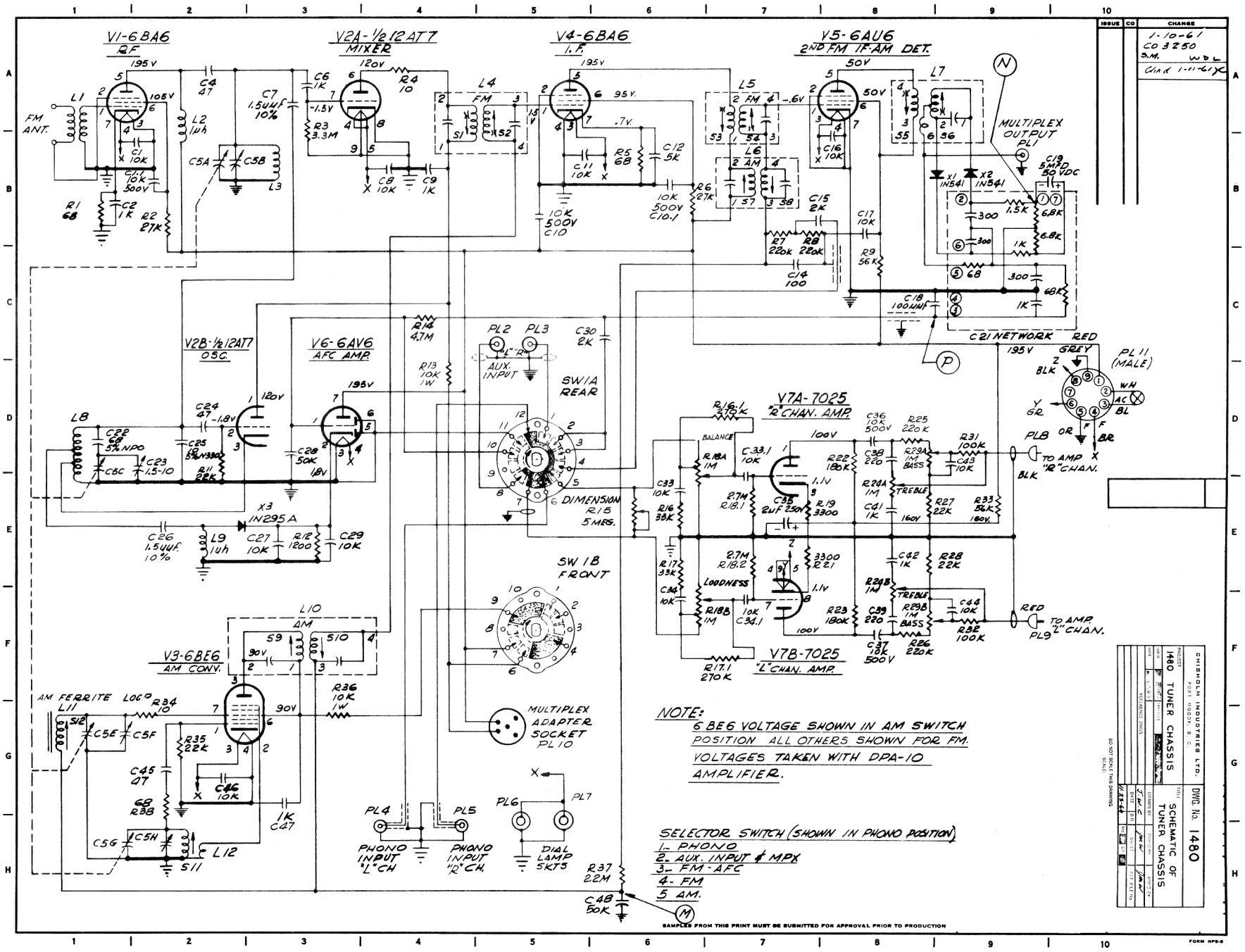
SW-1 (A & B)	Selector switch	75311

ELECTRON TUBES

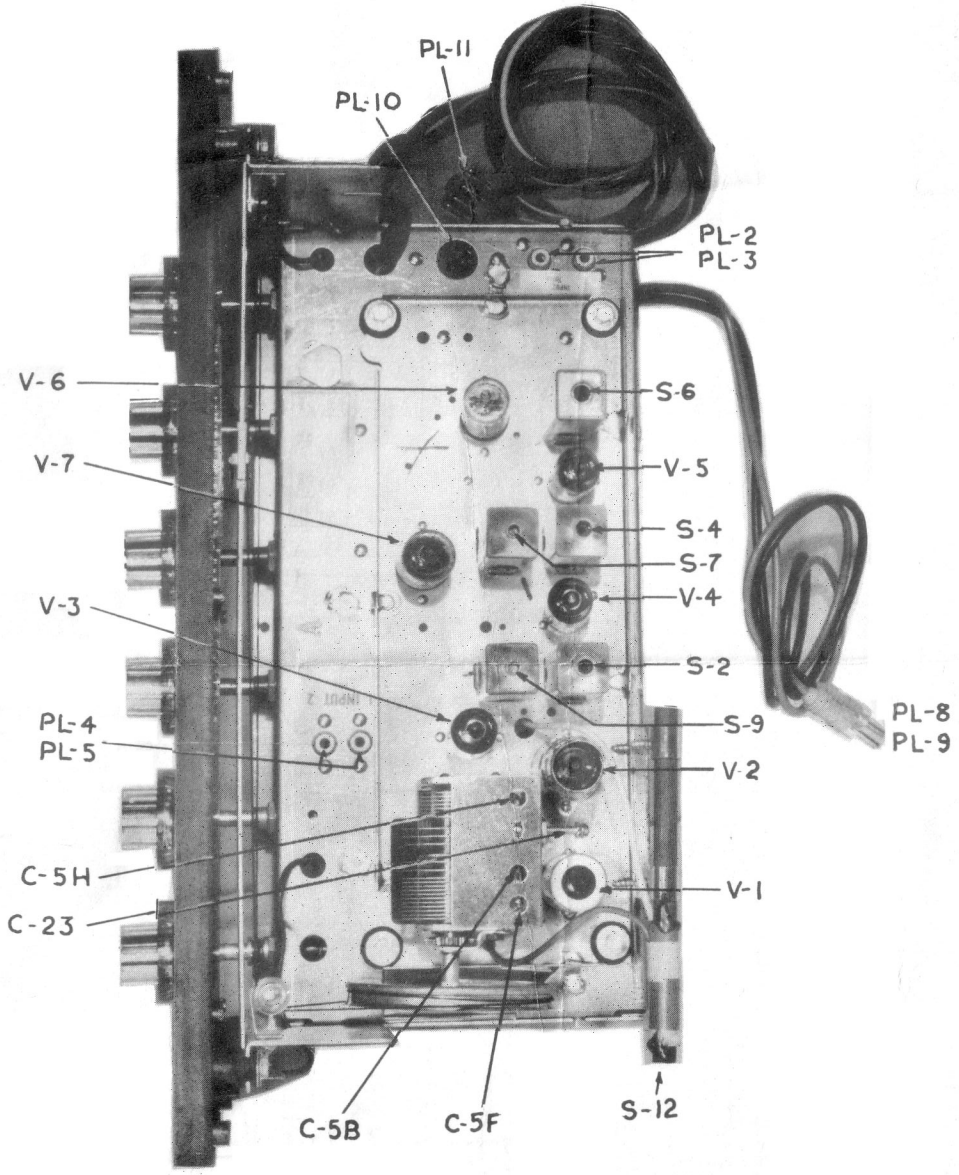
V-1	RF amplifier	6BA6
V-2A	FM mixer	½12AT7
V-2B	FM oscillator	½12AT7
V-3	AM converter	6BE6
V-4	I-F amplifier	6BA6
V-5	2nd I-F, FM; AM detector	6AU6
V-6	AFC amplifier	6AV6
V-7A	Right channel amplifier	½7025
V-7B	Left channel amplifier	½7025

MISCELLANEOUS PARTS, 1480

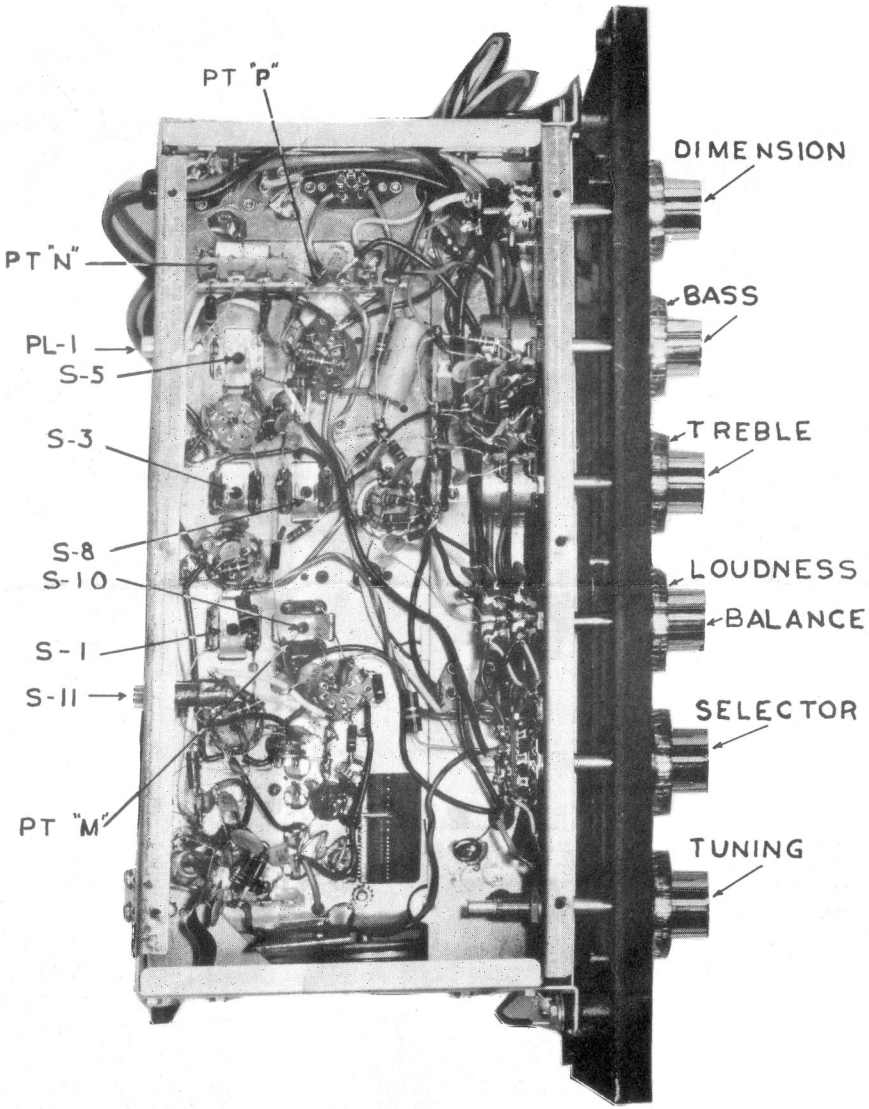
Drive cord (w/ spring 44764)	
Lamp, GE #12 (two)	57001
Pulley	44925
Shaft, tuning	44931



AM-FM TUNER 1480, SCHEMATIC



TUNER 1480 TOP



TUNER 1480 BOTTOM

BE SURE TO ALIGN AM SECTION FIRST

	DUMMY ANTENNA	SIGNAL GENERATOR CONNECTION	SIGNAL GENERATOR FREQUENCY	RADIO RECEIVER DIAL SETTING	VTVM CONNECTION	ADJUST	NOTES
ALIGNMENT OF I-F, AM SECTION							
1.	.01 mfd. in series with gen. output	Pin 7 of V-3 (grid 3, 6BE6)	455 kc, modulated with 400 cps	Low frequency end point	Negative to point "M", positive to ground	S-7, S-8, S-9, & S-10 for MAXIMUM	Reduce signal generator output to lowest usable level
ALIGNMENT OF R-F, AM SECTION							
2.	None	Loose couple to loop	1620 kc, modulated with 400 cps	High frequency end point	Ditto	C-5H for MAXIMUM	None
3.	None	Ditto	530 kc, modulated with 400 cps	Low frequency end point	Ditto	S-11 for MAXIMUM	Repeat steps 2 & 3 till no increase in maximums
4.	None	Ditto	1500 kc, modulated with 400 cps	Tune in signal	Ditto	C-5F for MAXIMUM	Also repeat 4 & 5 till no increase in maximums
5.	None	Ditto	610 kc, modulated with 400 cps	Tune in signal	Ditto	S-12 for MAXIMUM	Slide coil along ferrite rod for max. output
ALIGNMENT OF I-F, FM SECTION (AFC SWITCH PULLED OUT TO OFF POSITION)							
6.	.01 mfd. in series with gen. output	Pin 7 of V-2A (grid, FM mixer, ½ 12AT7)	10.7 mc, unmodulated	Low frequency end point	Negative to point "N", positive to ground	S-1, S-2, S-3, S-4, & S-5 for MAXIMUM	Reduce signal generator output to less than one volt at pt. "N"
7.	Ditto	Ditto	Ditto	Ditto	Negative to point "P", positive to ground	S-6 for ZERO	A plus or minus reading will be obtained on each side of setting.
ALIGNMENT OF R-F, FM SECTION (AFC SWITCH PULLED OUT TO OFF POSITION)							
8.	150 ohms in each lead	FM antenna terminal	106 mc, unmodulated	106 mc	Negative to point "N", positive to ground	C-23 for MAXIMUM	None
9.	Ditto	Ditto	Ditto	Ditto	Ditto	C-5B for MAXIMUM	None
10.	Ditto	Ditto	92 mc, unmodulated	92 mc	Ditto	Compress or expand L-8 for MAXIMUM	None
11.	Ditto	Ditto	Ditto	Ditto	Ditto	Compress or expand L-3 for MAXIMUM	None
12. REPEAT STEPS 8 THRU 11 UNTIL NO FURTHER INCREASE IN VTVM READING OCCURS.							

ALIGNMENT CHART, TUNER 1480

Equipment Required: Signal generator, AM-FM; two 150 ohm ½ watt resistors; one .01 mfd, 600 volt paper capacitor