

TABLE 4. ALIGNMENT PROCEDURE

STEP	S. G. COUPLING AND INPUT SIGNAL	BAND SWITCH POS	RECEIVER DIAL SETTING	ADJUST	OUTPUT INDICATION	ADJUSTMENT LOCATION
Zero "S" meter	No Signal Input	---	---	Zero Adj at rear of re- ceiver	S Meter reads zero	See Figure 2
Align 2nd IF	455 Kc, Mod. 30% at 400 cps. Connect S. G. between pin 7 of V4 and chassis	---	---	Both mech- anical filters and IFT2	Adj for maxi- mum reading on S meter	See Figures 6 and 7
Align BFO (Set func- tion switch to SSB-CW)	Set S. G. to 455 Kc unmodula- ted. Connect S. G. between pin 7 of V4 and chassis	---	---	Core of BFO coil	Zero beat with BFO control set at center mark	See Figure 6
Align 1st IF	2.608 Mc. Connect S. G. be- tween pin 1 of V2 and chassis	---	---	IFT1	Adj for maxi- mum deflection on S meter	See Figures 6 and 7
Align 1st Oscillator	(1) Connect S.G. to ANT ter- minal. Set CAL adjust- ment (on front panel) to center mark. Do not move CAL adjustment for re- mainder of procedure					
	(2) Set S. G. to 3.5 Mc.	3.5	3.5 Mc	3.5 Mc OSC core	Adj for maxi- mum deflection on S meter	See Figure 7
	(3) Set S. G. to 4.0 Mc.	3.5	4.0	3.5 Mc OSC trimmer	"	See Figure 7
	(4) Repeat (2) and (3)					
	(5) Set S. G. to 7.0 Mc	7	7.0 Mc	7 Mc OSC trimmer	"	See Figure 7

(6) Set S. G. to 7.3 Mc	7	7.3	7 Mc OSC trimmer	Adj for maximum reading on S meter	See Figure 7
(7) Repeat (5) and (6)					
(8) Set S. G. to 14.0 Mc.	14	14.0 Mc	14 Mc OSC core	"	See Figure 7
(9) Set S. G. to 14.35 Mc.	14	14.35 Mc	14 Mc OSC trimmer	"	See Figure 7
(10) Repeat (8) and (9)					
(11) Set S. G. to 21.0 Mc	21	21.0 Mc	21 Mc OSC core	Adj for maximum reading on S meter	See Figure 7
(12) Set S. G. to 21.45 Mc	21	21.45 Mc	21 Mc OSC trimmer	"	See Figure 7
(13) Repeat (11) and (12)					
(14) Set S. G. to 28.0 Mc.	28	28.0 Mc	28 Mc OSC core	"	See Figure 7
(15) Set S. G. to 29.7 Mc.	28	29.7 Mc	28 Mc OSC trimmer	"	See Figure 7
(16) Repeat (14) and (15)					
(17) Set S. G. to 50.0 Mc.	50	50.0 Mc	50 Mc OSC core	"	See Figure 7
(18) Set S. G. to 54.0 Mc.	50	54.0 Mc	50 Mc OSC trimmer	"	See Figure 7
(19) Repeat (17) and (18)					

Align ANT and RF Coils	(1) Set S. G. to 3.7 Mc.	3.5	3.7 Mc	Cores of 3.5 Mc antenna and RF coils	Adj for maxi- mum reading on S meter	See Figure 7
	(2) Set S. G. to 7.15 Mc.	7	7.15 Mc	Cores of 7 Mc antenna and RF coils	"	See Figure 7
	(3) Set S. G. to 14.15 Mc.	14	14.15 Mc	Cores of 14 Mc antenna and RF coils	"	See Figure 7
	(4) Set S. G. to 21.2 Mc.	21	21.2 Mc	Cores of 21 Mc antenna and RF coils	"	See Figure 7
	(5) Set S. G. to 28.5 Mc.	28	28.5 Mc	Cores of 28 Mc antenna and RF coils	"	See Figure 7
	(6) Set S. G. to 51 Mc.	50	51.0 Mc	Cores of 50 Mc antenna and RF coils	"	See Figure 7

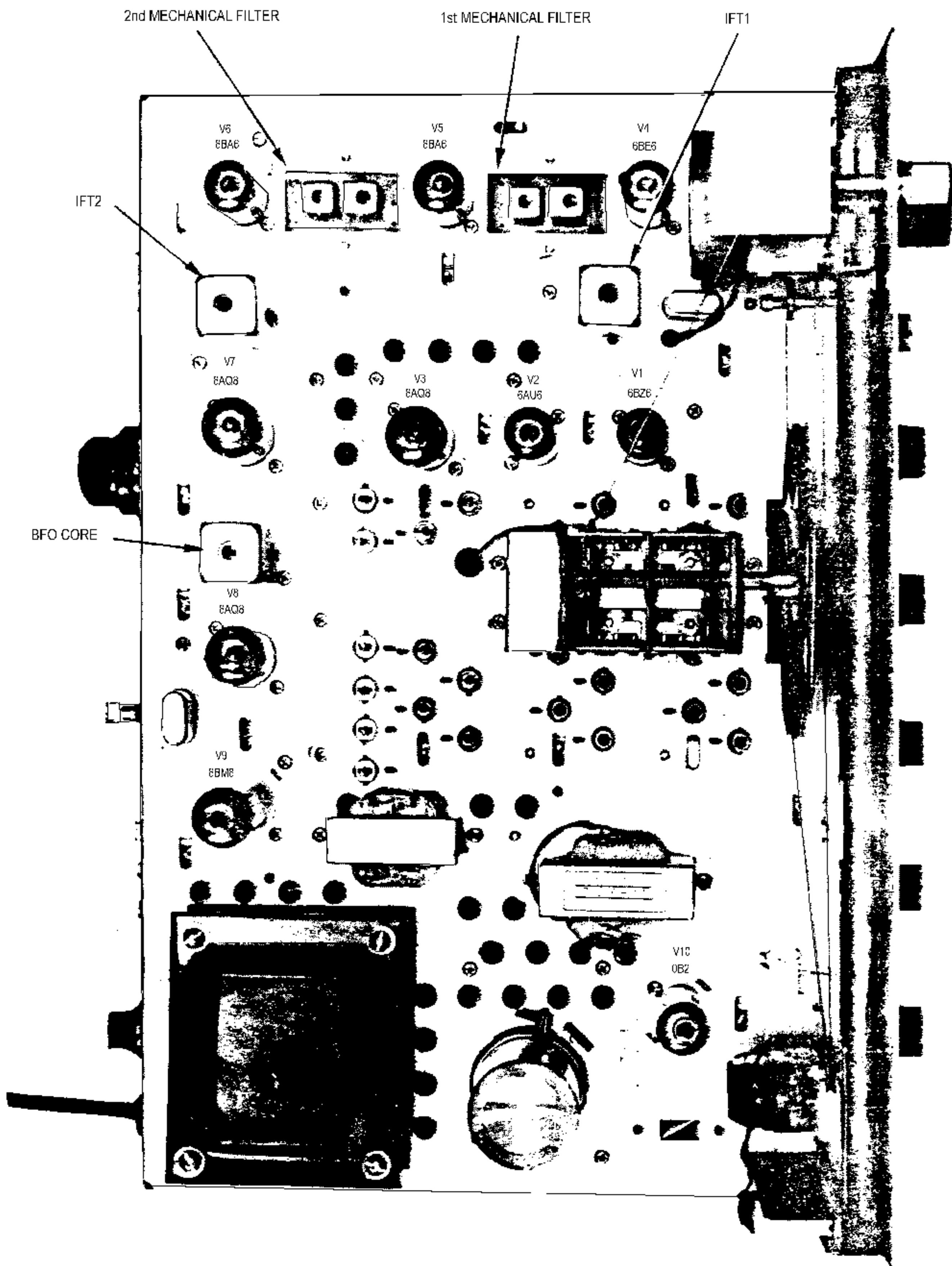


FIGURE 6. ALIGNMENT POINTS (TOP VIEW)

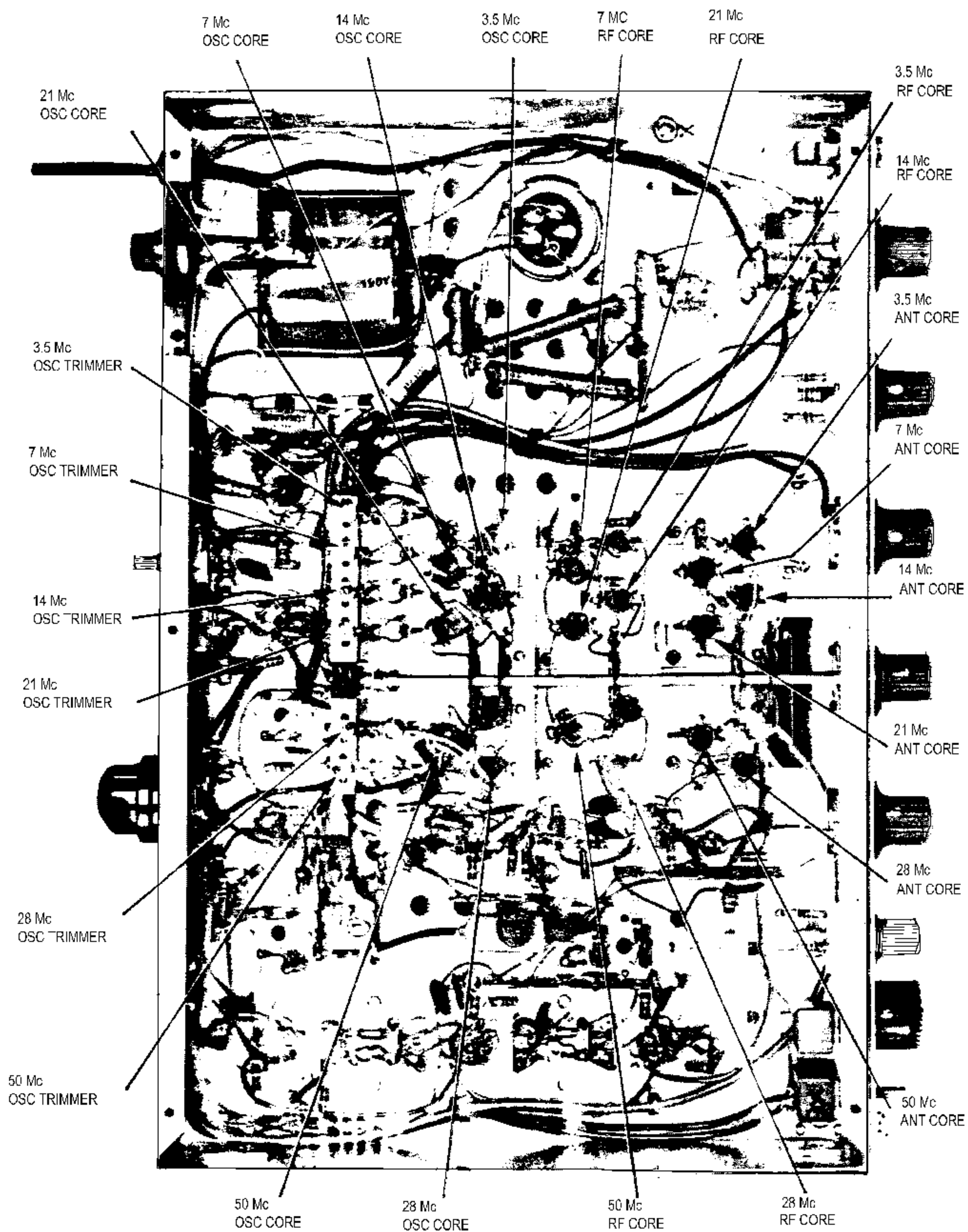
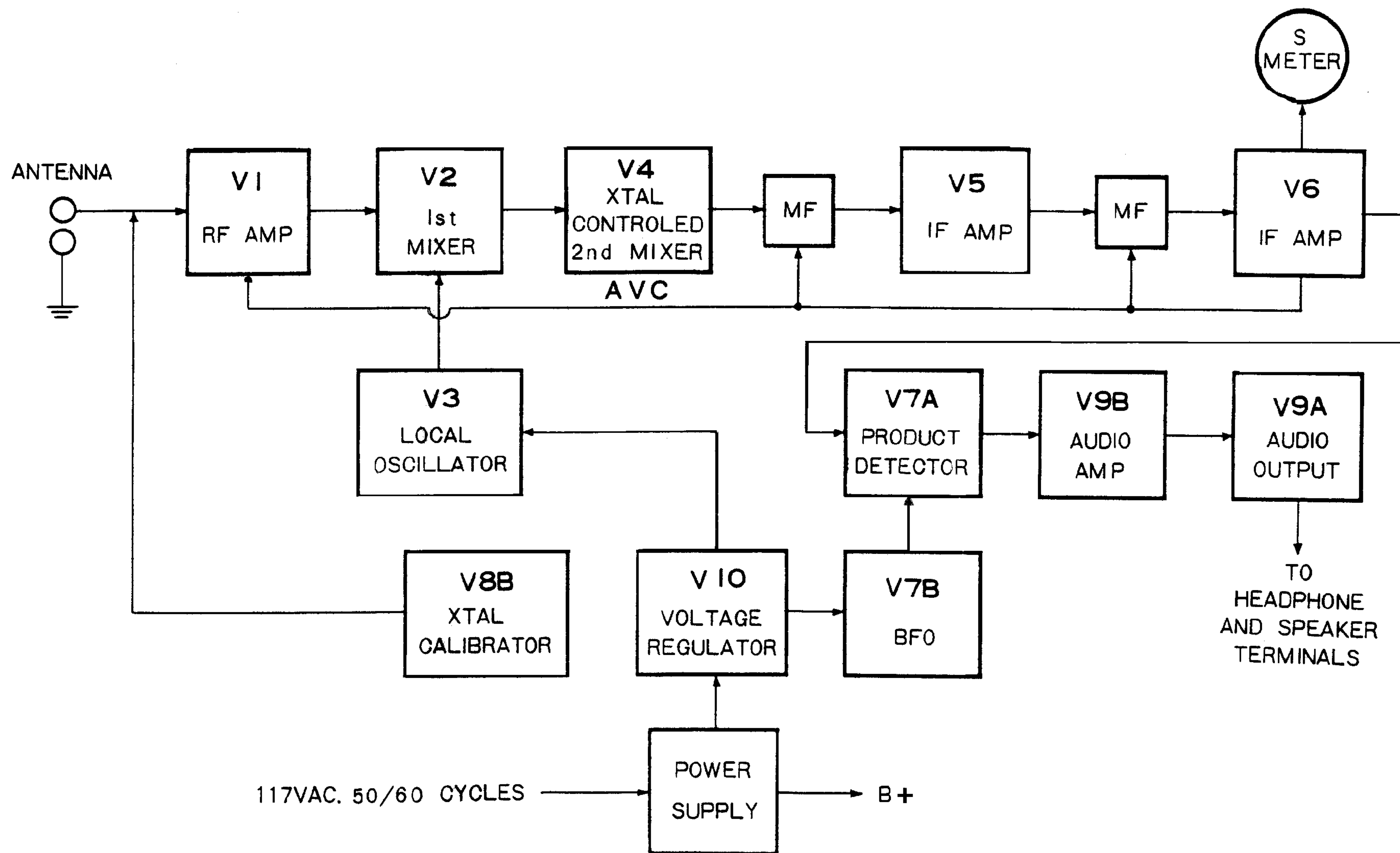


FIGURE 7. ALIGNMENT POINTS (BOTTOM VIEW)

FUNCTIONAL BLOCK DIAGRAM



RESISTANCE MEASUREMENTS

Table 3 lists the resistances measured at the tube socket pins. These measurements were

made using a VOM and they may be used as a reference when trying to locate a malfunction in the receiver. All measurements have a tolerance of $\pm 20\%$.

TABLE 3. RESISTANCE MEASUREMENTS

TUBE	PIN	RESISTANCE (Ohms)	TUBE	PIN	RESISTANCE (Ohms)
V1-6BZ6	1	1.4 meg	V6-6BA6	1	210K
	2	10K		2	0
	3	0		3	0
	4	0		4	0
	5	5.0 meg		5	5 meg
	6	10.0 meg		6	5 meg
	7	0		7	400
V2-6AU6	1	1.4 meg	V7-6AQ8	1	5 meg
	2	0		2	100K
	3	0		3	0
	4	0		4	0
	5	5.0 meg		5	0
	6	5.0 meg		6	5 meg
	7	500		7	50K
V3-6AQ8	1	5.0 meg		8	2 ohms
	2	110K		9	0
	3	550	V8-6AQ8	1	160K
	4	0		2	160K
	5	0		3	2 meg
	6	5.0 meg		4	0
	7	50K		5	0
	8	0		6	5 meg
	9	0		7	100K
V4-6BE6	1	22K		8	0
	2	0		9	0
	3	0	V9-6BM8	1	0 *
	4	0		2	330
	5	5 meg		3	45K
	6	5 meg		4	0
	7	1 meg		5	0
V5-6BA6	1	210K		6	5 meg
	2	0		7	5 meg
	3	0		8	2.2K
	4	0		9	5 meg
	5	5 meg	V10-OA5	1	5 meg
	6	5 meg		2	0
	7	10K	* Depends on pos of VC.		

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE MEASUREMENTS

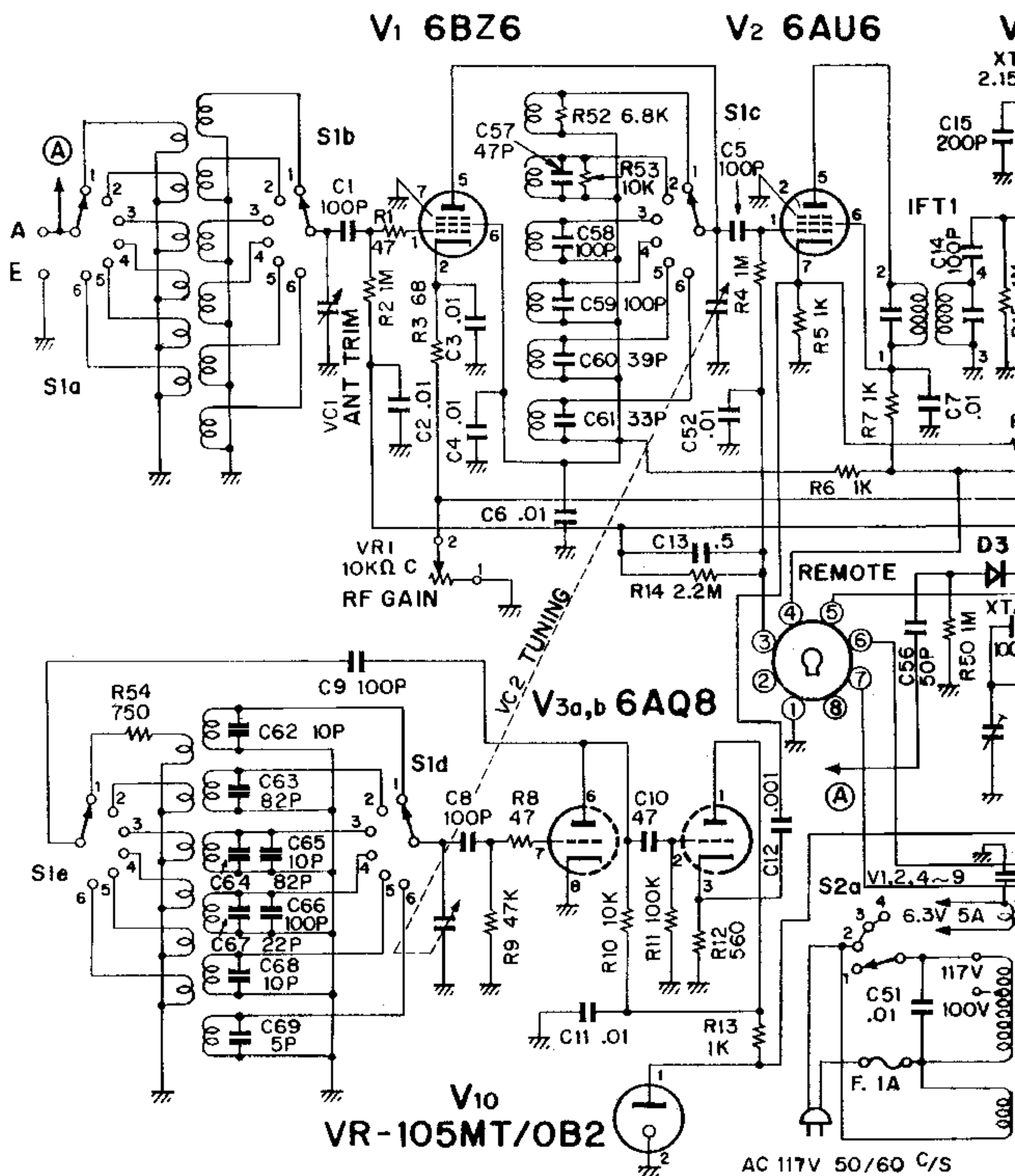
Table 2 lists the voltages measured at the tube socket pins of the receiver. These measurements can be used as a reference when trying to locate a malfunction in the receiver. The

measurements were made under the following conditions:

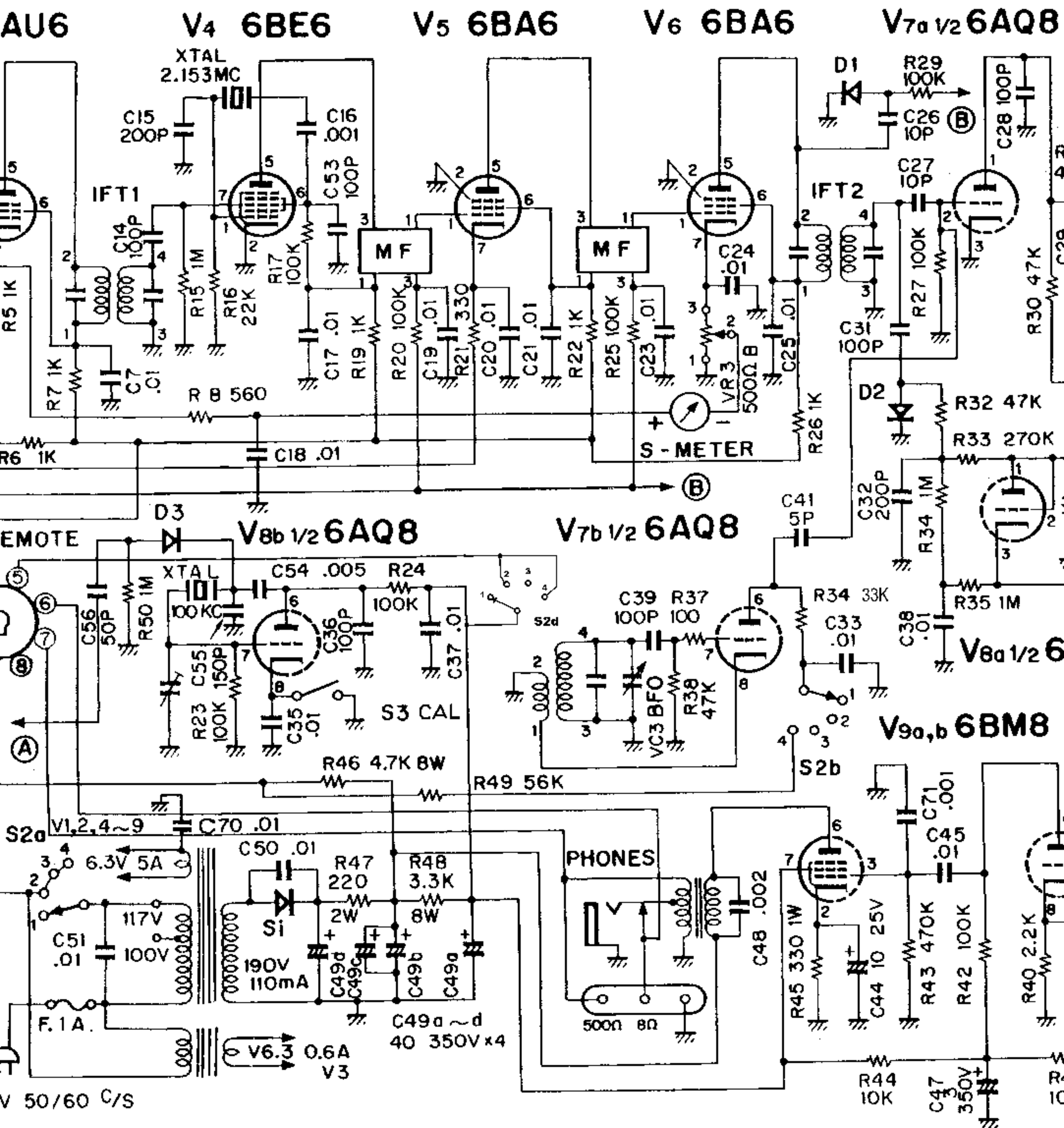
Meter used: VOM, 20,000/volt DC, 5,000 ohm volt AC. All measurements have a tolerance of $\pm 20\%$.

TABLE 2. VOLTAGE MEASUREMENTS

TUBE	PIN	VOLTAGE	TUBE	PIN	VOLTAGE
V1-6BZ6	1	0.0	V6-6BA6	1	NM
	2	18.5		2	0.0
	3	---		3	---
	4	---		4	---
	5	155.0		5	155.0
	6	155.0		6	155.0
	7	0.0		7	4.4
V2-6AU6	1	0.0	V7-6AQ8	1	55.0
	2	0.0		2	-0.09
	3	---		3	0.0
	4	---		4	---
	5	155.0		5	---
	6	155.0		6	34.0
	7	3.0		7	-0.035
V3-6AQ8	1	105.0		8	0.0
	2	0.0		9	---
	3	1.5	V8-6AQ8	1	-0.25
	4	---		2	-0.25
	5	---		3	0.0
	6	80.0		4	---
	7	-2.6		5	---
	8	0.0		6	50.0
	9	---		7	-4.8
V4-6BE6	1	-4.4		8	0.0
	2	0.0		9	---
	3	---	V9-6BM8	1	0.0
	4	---		2	10.2
	5	155.0		3	0.0
	6	32.0		4	---
	7	-1.1		5	---
V5-6BA6	1	NM		6	220.0
	2	0.0		7	155.0
	3	---		8	1.26
	4	---		9	75.0
	5	155.0	V10-0A2	1	110.0
	6	155.0		2	0.0
	7	19.0			

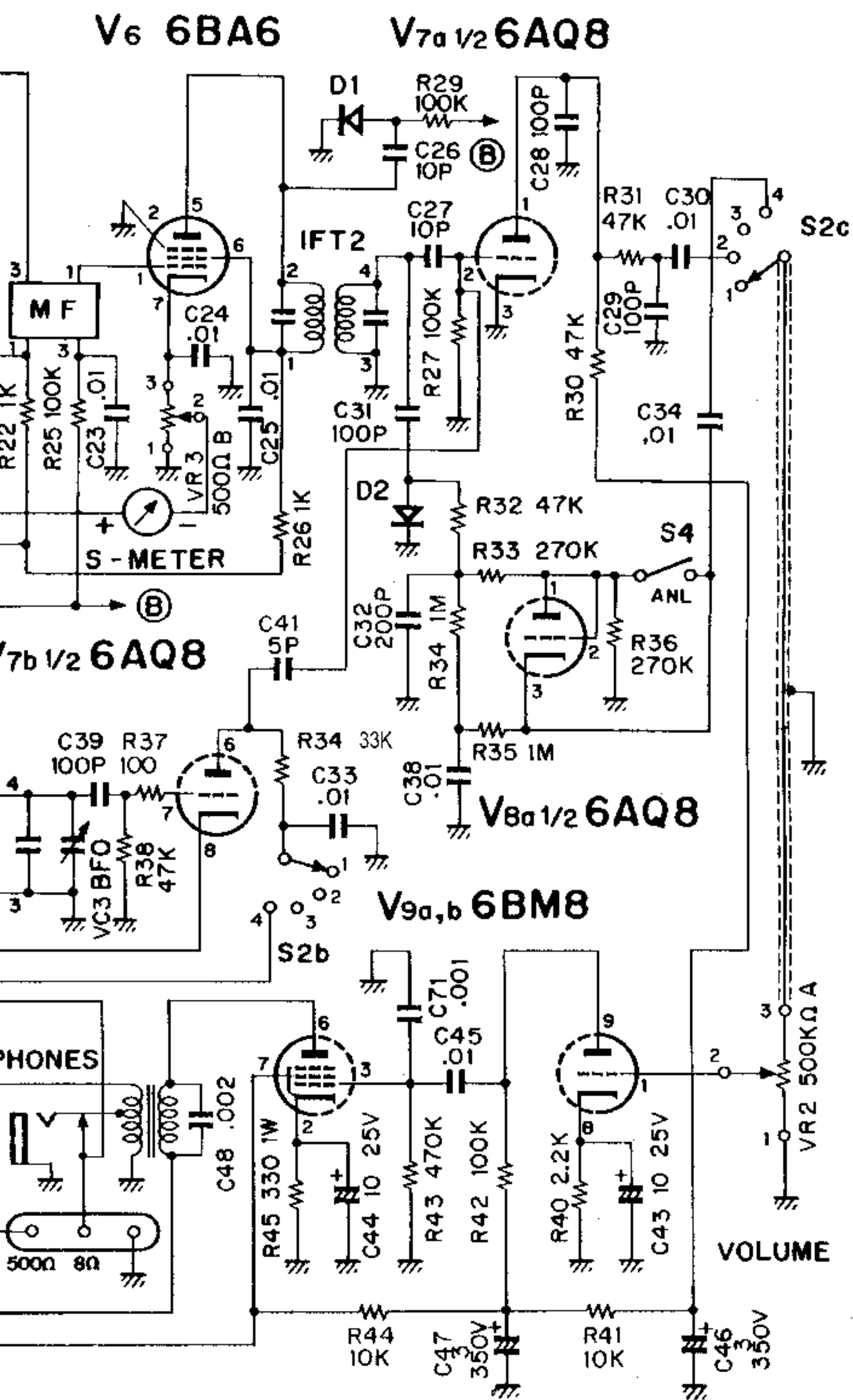


SCHEMATIC DIAGRAM



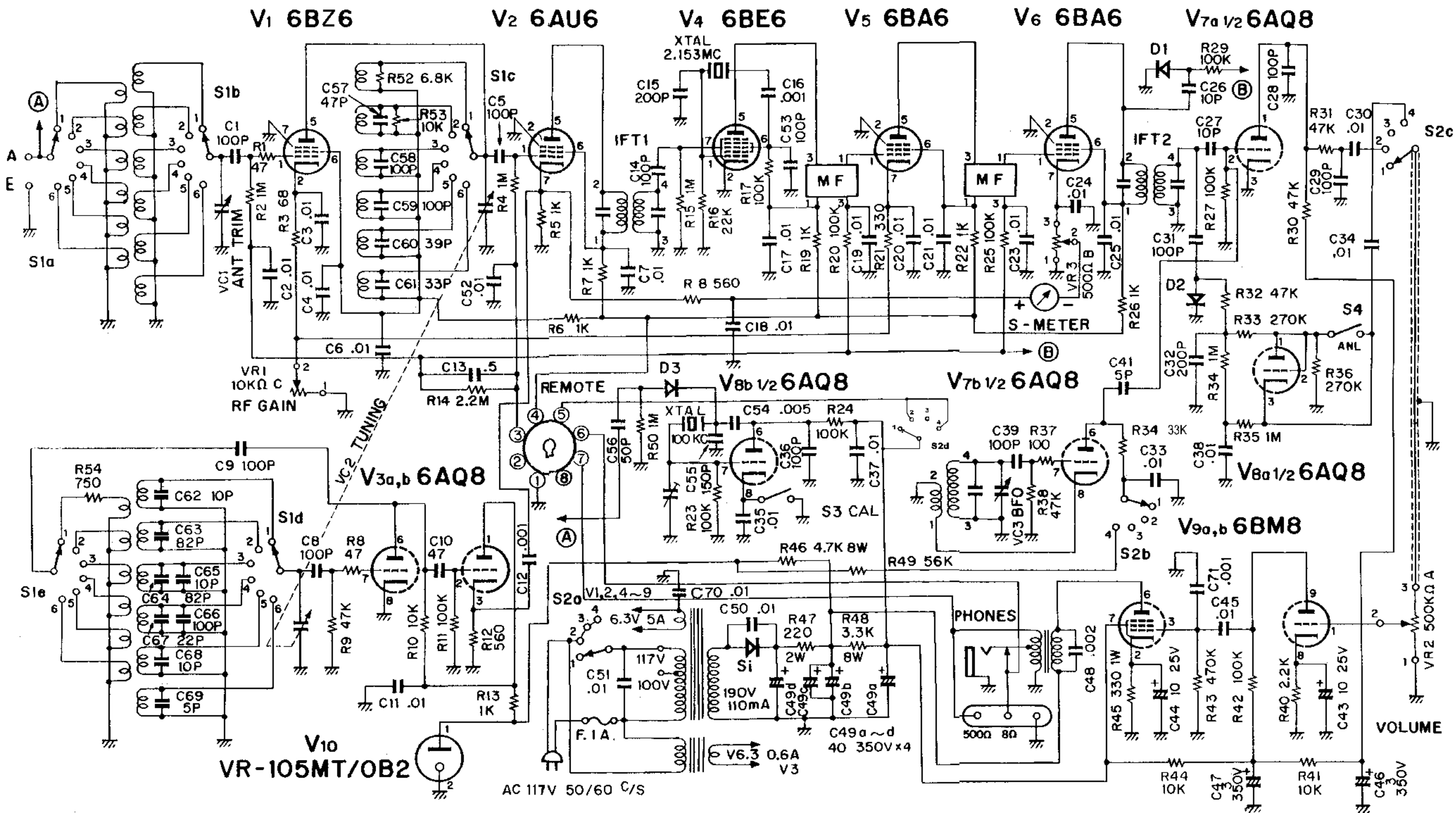
CIFIED.
 0,000
 -28MC, 6-50MC,
 -SSB CW,

SCHEMATIC OF THE LAF
 HAM BAND RECEIVER M



SCHEMATIC OF THE LAFAYETTE
HAM BAND RECEIVER MODEL HA-500

SCHEMATIC DIAGRAM



NOTE

ALL RESISTORS ARE 1/2WATT UNLESS OTHERWISE SPECIFIED.

ALL RESISTORS VALUE ARE IN OHMS. K=1,000 M=1,000,000

S1a~e BAND SW 1-3.5MC, 2-7MC, 3-14MC, 4-21MC, 5-28MC, 6-50MC,

S2a~d FUNCTION SW 1-OFF, 2-REC, 3-STAND BY, 4-SSB CW,

SCHEMATIC OF THE LAFAYETTE
HAM BAND RECEIVER MODEL HA-500