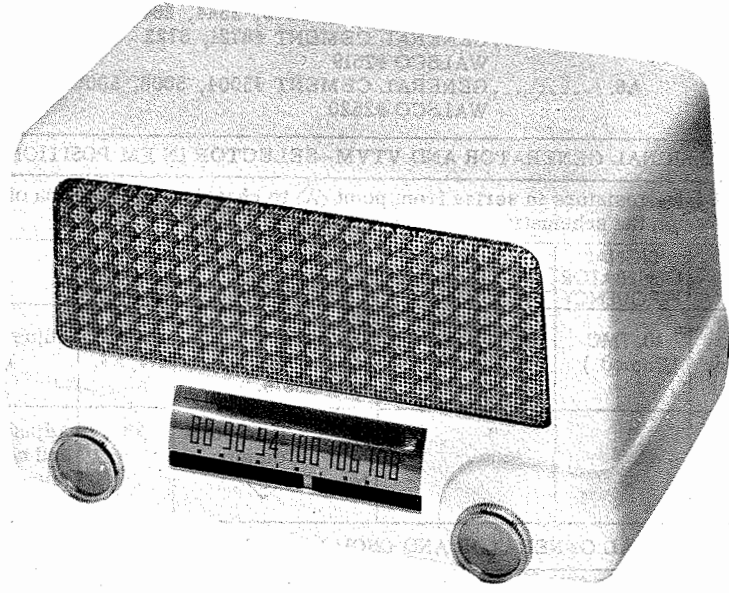


PHOTOFACT® Folder

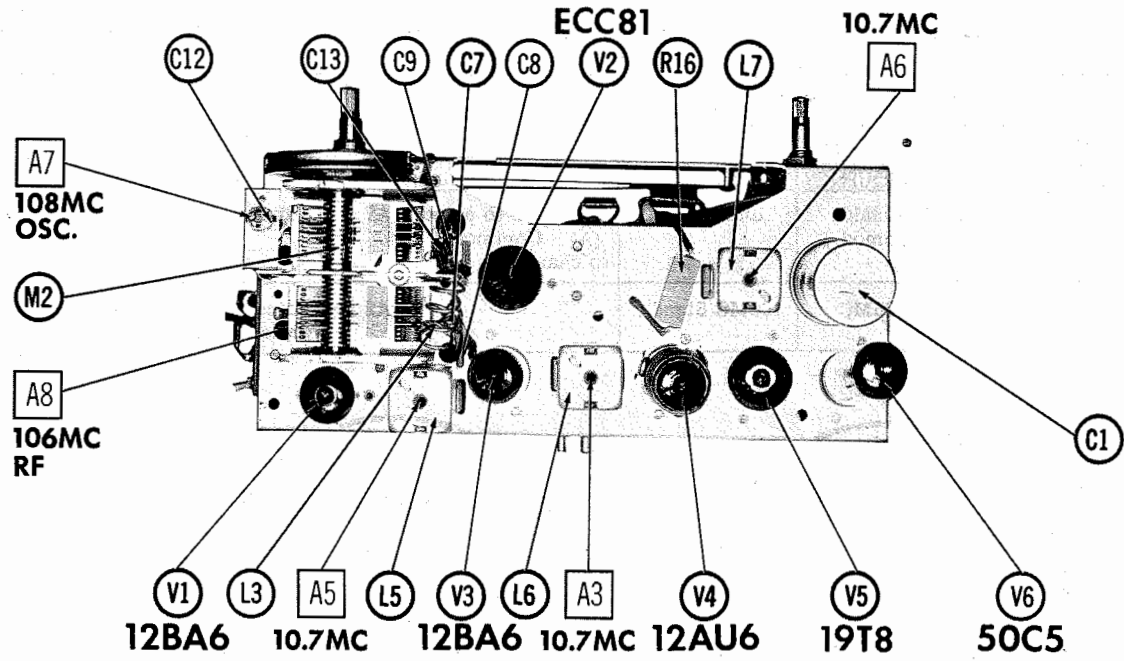
DEWALD
MODEL P-705



DEWALD
MODEL P-705

TRADE NAME	DeWald Model P-705		
MANUFACTURER	DeWald, A Div. of United Scientific Laboratories Inc., 35-15 37th Ave., Long Island City 1, N. Y.		
TYPE SET	AC-DC Operated 6 Tube FM Receiver		
POWER SUPPLY	105 - 125 Volts AC, 60 Cycles	RATING	30 Watts, .35 Amp. @117 Volts AC
TUNING RANGE-FREQ. MOD.	88 - 108MC		

DEWALD
MODEL P-705



HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of K1287

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DATE 1-61

SET 516

FOLDER 10

SET 516
FOLDER 10

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
Use only enough generator output to provide a usable indication.	
Suggested Alignment Tools: A1 thru A6....GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440	
WALSCO #2526, 2543, 2544, 2545	
A7.....GENERAL CEMENT #8721, 8722	
WALSCO #2519	
A8.....GENERAL CEMENT #5004, 5008, 5009	
WALSCO #2520	

IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM—SELECTOR IN FM POSITION

Connect two matched 100K (+1%) resistors in series from point A to chassis. The junction of these two resistors is alignment point C as shown on the schematic.					
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1. High side thru .001mfd to pin 2 (grid) of Mixer. Low side to chassis.	10.7MC (Unmod.)	Point of non-interference.	DC probe to point A. Common to chassis.	A1, A2, A3, A4, A5	Adjust for maximum deflection.
2. "	"	"	DC probe to point B. Common to point C.	A6	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE—SELECTOR IN FM POSITION

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.					
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
1. High side thru .001mfd to pin 2 (grid) of Mixer. Low side to chassis.	10.7MC (450KC Swp)	Point of non-interference.	Vert. amp. to point A. Low side to chassis.	A1, A2, A3, A4, A5	Disconnect stabilizing Capacitor C2. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C2.
2. "	"	"	Vert. amp. to point B. Low side to chassis.	A6	Adjust to place marker at the center of crossover lines similar to Fig. 2. SLIGHTLY retouch A1 for maximum amplitude and straightness of crossover lines.

RF ALIGNMENT—SELECTOR IN FM POSITION

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
3. Across antenna terminals with 120Ω in each lead.	108MC (Unmod.)	108MC	DC probe to point A. Common to chassis.	A7	Adjust for maximum deflection.
4. "	106MC	106MC Signal.	"	A8	Adjust for maximum deflection while rocking tuning gang.

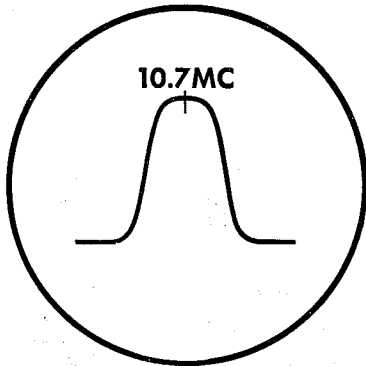


FIG. 1

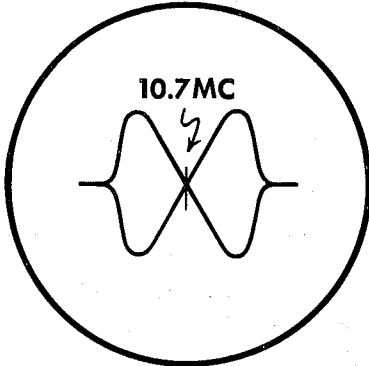


FIG. 2

PARTS LIST AND DESCRIPTIONS

TUBES

GENERAL ELECTRIC				RAYTHEON		SYLVANIA	
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	TYPE
V1	RF Amplifier	12BA6	V4	2nd IF Amplifier	12AU6		
V2	Mixer-Osc.	6X4	V5	Ratio Det. -AF Amp.	19T8		
V3	1st IF Amplifier	12BA6	V6	Output	50C5		

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		RESISTANCE	WATTS	DeWALD PART No.	CLAROSTAT PART No.	CTS-IRC PART No.
RIA	500K	Start Switch	1/2	V327-2	B-60-S Not Req.	Q13-133 Not Req.
B	500K	Start Switch	1/2	V327-2	B-60-S Not Req.	Q13-133 Not Req.
C	500K	Start Switch	1/2	V327-2	B-60-S Not Req.	Q13-133 Not Req.

ELECTROLYTIC CAPACITORS

ITEM No.	CAP.	VOLT.	REMARKS	REPLACEMENT DATA				NOTES
				AEROVOX PART No.	CORNEILL DUBILLIER PART No.	MALLORY PART No.	PYRAMID PART No.	
C1A	200	200		2005-11		FP216-6	TMD-2200	
C1B	200	200		2005-11		FP216-6	TMD-2200	
C2	2	25		2018-8	BBR2-50	TC302	TD-2-25	TVA-1201

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				SPRAGUE PART No.
			AEROVOX PART No.	CORNEILL DUBILLIER PART No.	ELMENDO PART No.	MALLORY PART No.	
C3	47 N750		N750-DI 47	DTN-47	CCTN-470	CNT-447	10TCU-Q47
C4	10 N750		N750-DI 10	DTN-10	CCTN-100	CNT-440	10TCU-Q10
C5	100 N750		N750-DI 100	DTN-100	CCTN-101	CNT-310	10TCU-T10
C6	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C7	220		DI-220	DD-221	CCD-221	GP322	5HK-D22
C8	100 N750		N750-DI 100	DTN-100	CCTN-101	CNT-310	10TCU-T10
C9	2		N750-DI 2	DTN-2	CCTN-2	CNT-2	10TCU-T2
C10	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C11	100 N750		N750-DI 100	DTN-100	CCTN-101	CNT-310	10TCU-T10
C12	10 N750		N750-DI 10	DTN-10	CCTN-100	CNT-440	10TCU-Q10
C13	910		DI-910	DD-911	CCD-911	GP910	5HK-D910
C14	10 N750		N750-DI 10	DTN-10	CCTN-100	CNT-440	10TCU-Q10
C15	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C16	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C17	20000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C18	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C19	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C20	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C21	2000		BPD-002	DD-202	CCD-202	GP220	5HK-D20
C22	20000		BPD-002	DD-202	CCD-202	GP220	5HK-D20
C23	20000		BPD-002	DD-202	CCD-202	GP220	5HK-D20
C24	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C25	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50
C26	5000		BPD-005	DD-502	CCD-502	GP250	5HK-D50

RESISTORS (IRC or EQUIVALENT)

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				RATING	REMARKS	ITEM No.	RATING	REMARKS
			DeWALD PART No.	Merit PART No.	Miller PART No.	Stancor PART No.					
R2	470K						470K		R4	6.8meg	
R3	330K						330K		R5	150K	
R4	2.2meg						2.2meg		R6	10000 5W	
R5	330K						330K		R7	100 1W	
R6	22K						22K		R8	68K	
R7	1500K						1500K		R9	33K	

* Alternate Value.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		DeWALD PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L1	Ant. Coil					
L2	RF Choke	1104C-14	4584	4584	RTC-8512	24uh
L3	RF Coil	1104C-9	4609	4609	RTC-8519	5.6uh
L4	Osc. Coil					
L5	1st IF Trans.	1106B-3	1463	1463	RTC-8599	
L6	2nd IF Trans.	1106B-2	1463	1463	RTC-8599	
L7	Ratio Detector	1106B-2	1465	1465	RTC-8600	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		DeWALD PART No.	Merit PART No.	Stancor PART No.	Thorndyke PART No.	
T1	2300K	3823-24	A-3025	A-3332	24S53	S-12X

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DeWALD PART No.	QUAM PART No.	
SP1	4"	7003C-10	4A07	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	DeWALD PART No.	REPLACEMENT DATA
K1	Diode RF Filter	100mmf, 100mmf, 47K		Aerovox Centralab PC-97 Cornell-Dubilier IUTMI Sprague D-1
K2	Audio Coup. Net.	150mmf, 250mmf, 5000mmf, 5000mmf, 470K, 470K, 6.8meg		Aerovox PA-113-2 Centralab PC-151 Cornell-Dubilier IUTMI Mallory MS-107 Sprague DT-2

RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		DeWALD PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
M1	.060A	SR-846 *	INI763 *	2F4 *	SR200 *	* Silicon Type

MISCELLANEOUS

ITEM No.	PART NAME	DeWALD PART No.	NOTES
M2	Tuning Cap.	V222C-4	2 Gang

CABINETS & CABINET PARTS

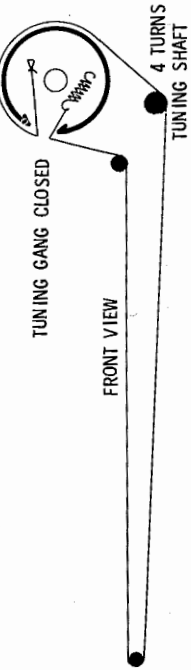
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob Cabinet	K-499 C-4001-1-2	Tuning, Volume

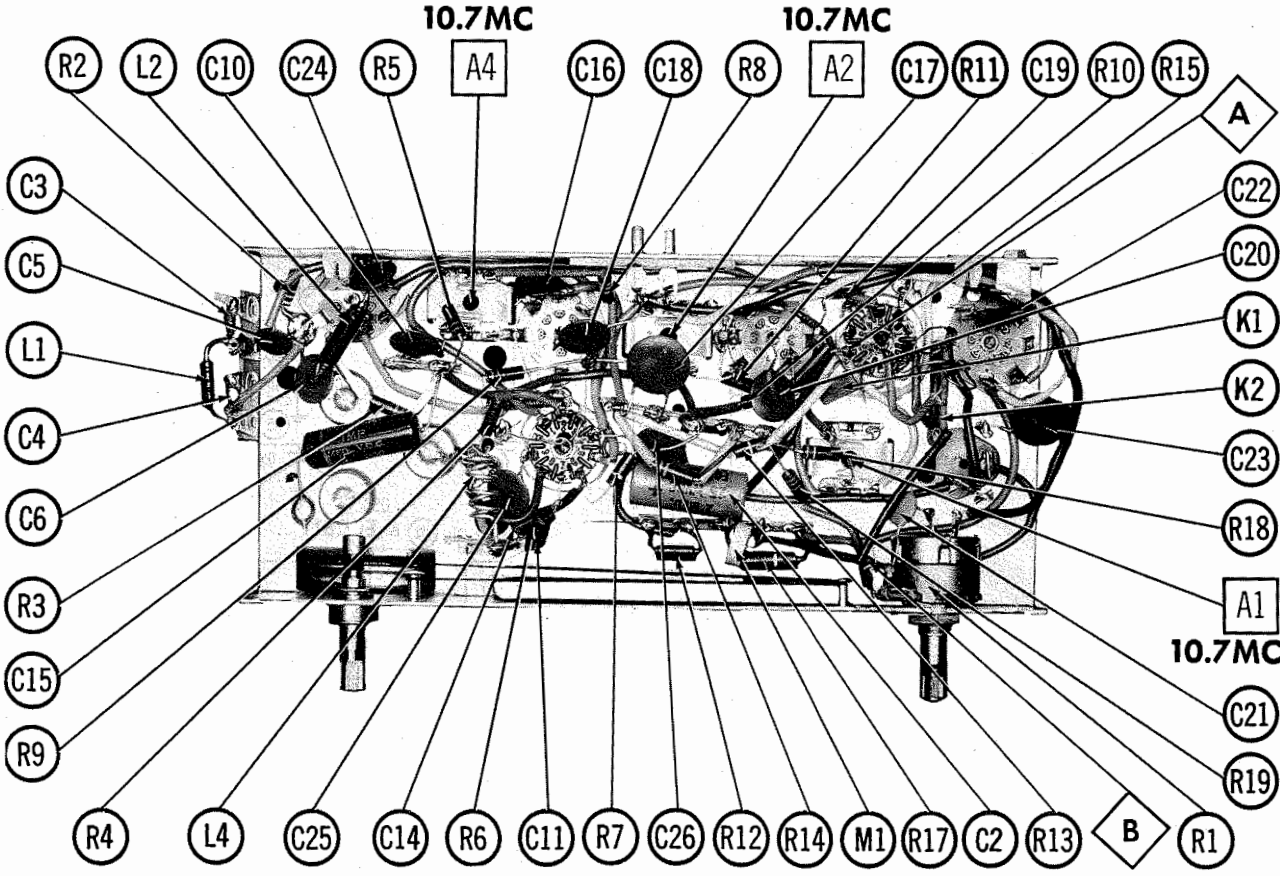
WIRING DATA

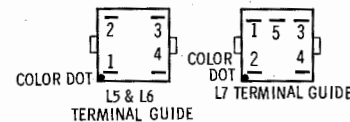
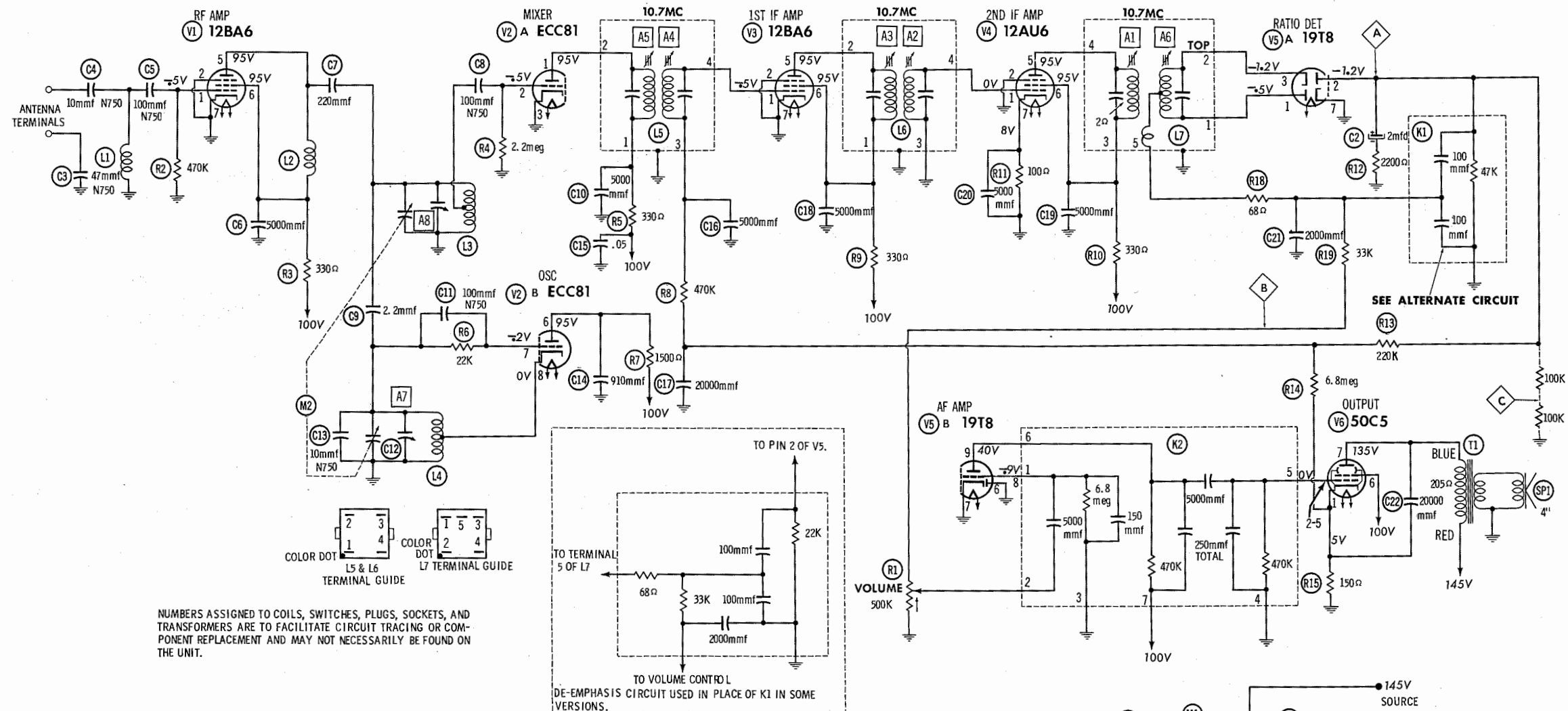
General-use Unshielded Hook-up Wire		Use BELDEN No. 8530 (Solid) Available in Ten Colors
Power Cord		Use BELDEN No. 8524 (Stranded) Available in Ten Colors
		Use BELDEN No. 1766-B (6 Ft. Length)
		1725-K (1 1/2 Ft. Length)

DIAL CORD STRINGING

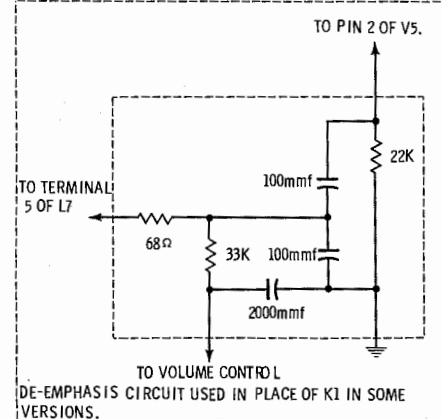


CHASSIS—BOTTOM VIEW





NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BA6	470K	0Ω	70Ω	55Ω	†1300Ω	†1300Ω	0Ω		
V2	ECC81 12AT7	†1300Ω	2.2meg	0Ω	25Ω	40Ω	†2500Ω	22K	0Ω	33Ω
V3	12BA6	700K	0Ω	40Ω	55Ω	†1300Ω	†1300Ω	0Ω		
V4	12AU6	1.5Ω	0Ω	85Ω	70Ω	†1300Ω	†1300Ω	100Ω		
V5	19T8	530K	47K	530K	0Ω	25Ω	0Ω	0Ω	6.8meg	†470K
V6	50C5	150Ω	NC	85Ω	140Ω	470K	†1000Ω	†205Ω		

† MEASURED FROM OUTPUT OF M1.

NC NO CONNECTION

- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common ground.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
- Volume control at maximum, no signal applied for voltage measurements.

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)