

FORD
MODEL 04BF

FORD MODEL 04BF (Late Prod), 14BF
MERCURY MODEL 14BM

TRADE NAME	Ford Models 04BF (Late Production) (COAF-18806, COA Z-18805) For 1960 Fords 14BF (CIAF-18805, CIAF-18806) For 1961 Fords Mercury Model 14BM (CIMF-18805, CIMF-18806) For 1961 Mercurys		
MANUFACTURER	The Bendix Corp., Bendix Radio Div., Baltimore 4, Maryland		
TYPE SET	Battery Operated 4 Tube, 2 Transistor Custom Built AM Automobile Receiver		
POWER SUPPLY	12 Volt Storage Battery	RATING	1.5 Amp. @12.6 Volts DC
TUNING RANGE	540 — 1600KC		

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1 Thru A4..... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545
A5, A6..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
WALSCO #2512, 2525, 2528
A8, A9, A10..... GENERAL CEMENT #8271, 8279, 8897, 9050-L, 9150
WALSCO #2521, 2524

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. High side thru .1mf to pin 7 (grid) of Converter. Low side to chassis.	262.5KC (400v Mod.)	High end stop.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2. Thru dummy (Fig. 1) to antenna receptacle.	1605KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuning cores or coils have been replaced or tampered with. If necessary, back tuning cores out of coils but not out of coil forms. Repeat Step 2.					
3. Thru dummy (Fig. 1) to antenna receptacle.	1200KC	Tuning carriage .285" from high freq. end stop.	Across voice coil.	A8, A9, A10	Adjust for maximum output. Repeat Steps 2 and 3 until no further improvement can be obtained.
4. With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.					

PUSHBUTTON ADJUSTMENT

1. Pull Pushbutton out.
2. Tune manually to desired station.
3. Press Pushbutton in firmly.
4. Repeat for remaining Pushbuttons.

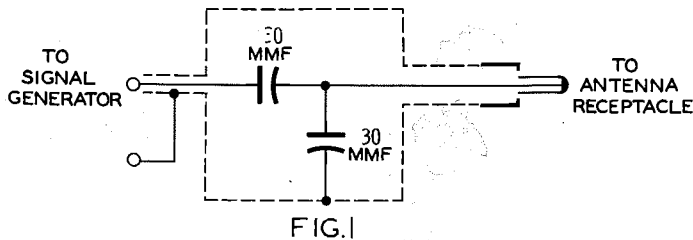


FIG. 1

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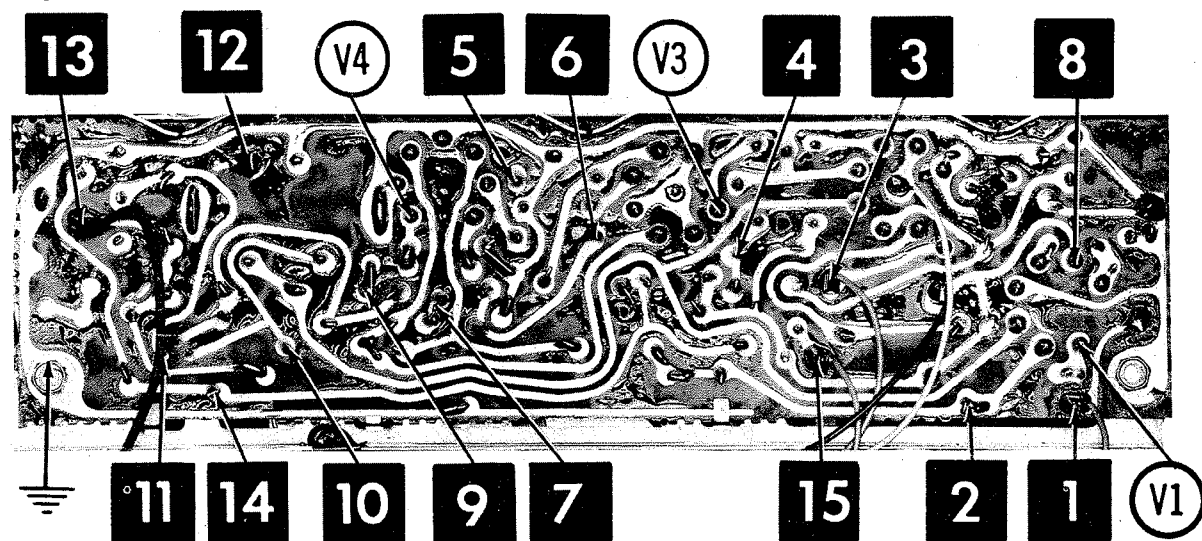


The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KD450

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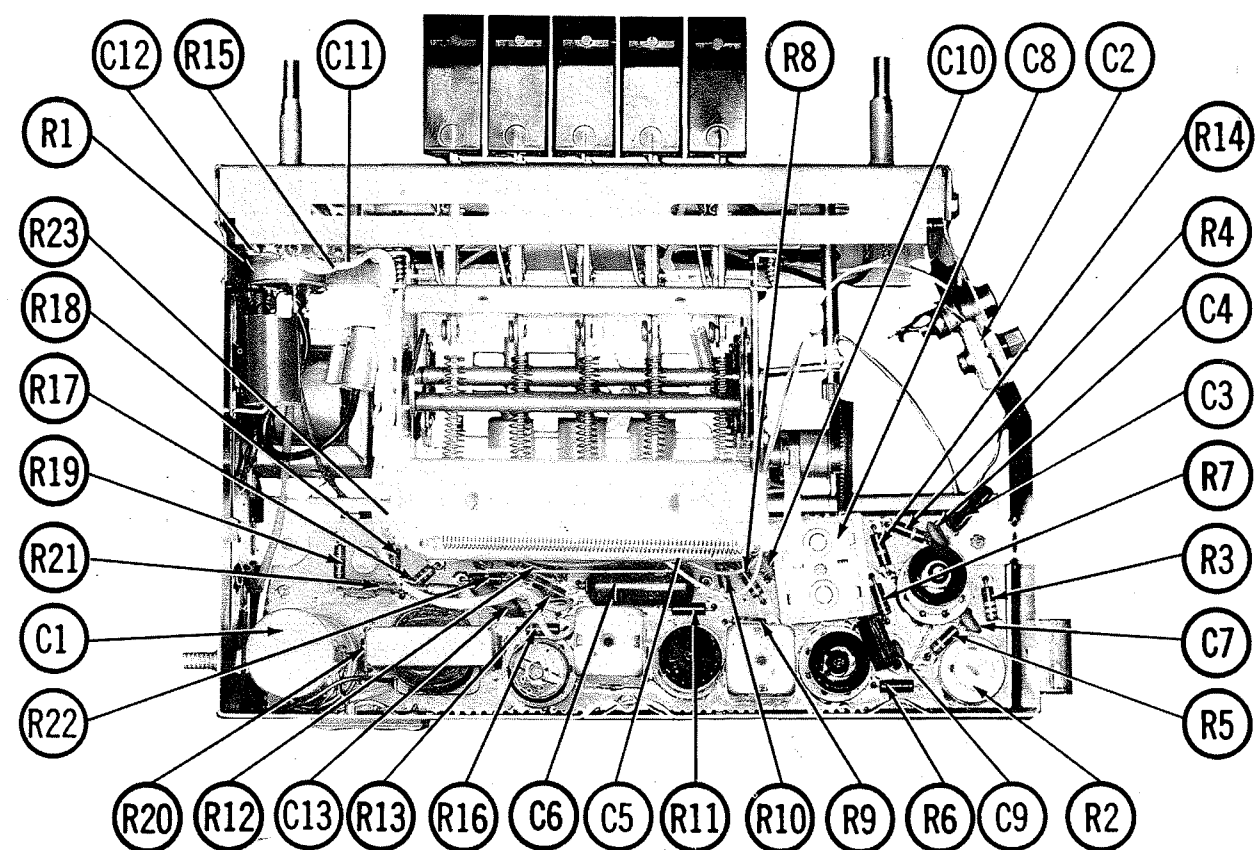
SET 529 FOLDER 6



A Howard W. Sams CIRCUITRACE® Photo

PRINTED BOARD

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



CHASSIS TOP VIEW—CAPACITOR AND RESISTOR IDENTIFICATION

PARTS LIST AND DESCRIPTIONS

TUBES

GENERAL ELECTRIC				RAYTHEON				SYLVANIA			
ITEM No.	USE	TYPE		ITEM No.	USE			ITEM No.	USE		TYPE
V1	RF Amplifier	12BL6		V3	IF Amplifier			V3	IF Amplifier		12EX6
V2	Converter	12AD6		V4	Det. -AVC-AF Amp.			V4	Det. -AVC-AF Amp.		12FK6 (12FM6) *

* Alternate

TRANSISTORS			
REPLACEMENT DATA			
ITEM No.	ORIG. TYPE	USE	NOTES
X1	2N1287	Driver	
X2	2N1227-3	Output	PNP Note 1

Note 1. Models 14BF and 14BM may use type 2N1283. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

REPLACEMENT DATA			
ITEM No.	RATING	REMARKS	SPRAGUE PART No.
C1A	450 16		
B	100 16		
C	50 16		

† Use printed circuit adaptor kit FPA. † Some versions may use 450-100-100mfd in this application (Part #2091503-2). * Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

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

REPLACEMENT DATA			
ITEM No.	RATING	REMARKS	SPRAGUE PART No.
C2	4-75		
C3	150		
C4	33 N750		
C5	1 100V		
C6	1 100V		
C7	470		
C8A	120-450		
B	100		
C	370-445		
C9	1000		
C10	51		
C11	10000		
C12	2700		

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

REPLACEMENT DATA			
ITEM No.	USE	REMARKS	NOTES
L1	Ant.		
L2	RF Choke		
L3	RF		
L4	Osc.		
L5	Input IF		
L6	Output IF		
L7	Hash Choke(450uh)		

TRANSFORMER (DRIVER)

REPLACEMENT DATA			
ITEM No.	URNS RATIO	REMARKS	NOTES
T1	3.8 1		

TRANSFORMER (AUDIO OUTPUT)

REPLACEMENT DATA			
ITEM No.	IMPEDANCE	REMARKS	NOTES
T2	12Ω Tap @ 6-8Ω		

SPEAKER

REPLACEMENT DATA			
ITEM No.	TYPE	REMARKS	NOTES
SPI	8"x 9" PM		

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner Assy.	2090383-2	
M2	Tuner Assy.	2090383-5	
M3	Spark Plate	220267-9	
	Printed Board	2090456-1	
	Printed Board	2091494-1	
	Printed Board	2091152-2	

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

NAME	PART NO.	DESCRIPTION
Dial Glass	2091387-1	Model 14BM
Dial Glass	2091501-1	Model 14BF
Dial Pointer	2090409-1	Model 04BF
Dial Pointer	2090129-17	(RCC)
Knob	2090129-18	GIC
Knob	2090413-1	Tuning, Volume
Knob	2090524-1	Tone, Model 14BM
Pushbutton	2090411-1	Tone, Model 04BF, 14BF
Pushbutton	2090381-2	Model 14BM, 14BF
Pushbutton	2090381-1	Model 04BF

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
Shielded Hook-up Wire Use BELDEN No. 8885
Bonding Strap Use BELDEN No. 8861

FIXED CAPACITORS (cont)			
ITEM No.	RATING	REMARKS	REPLACEMENT DATA
C13	.0068 100V		CORNELL-DUBILER PART No. P288N-0068 CENTRALAB PART No. D6-682 CTS-IRC PART No. IDP-1-682 ELMCO PART No. GEM-6268 MALLORY PART No. 8TM-D68 SPRAGUE PART No.

① Models 14BF and 14BM use 5-80mmf (Part #2091504-2).

② Models 14BF and 14BM use 330mmf

③ Value varies. Replace with original value.

* Bendix Part Number.

CONTROLS

REPLACEMENT DATA			
ITEM No.	RATING	REMARKS	INSTALLATION NOTES
R1A	3.4meg		
B	1.2meg		
C	240K Tap		
R2	600Ω		

Note 1. Models 14BF and 14BM use Part #2090405-1

† 'CONCENTRIKT' Equivalent: K-8 Kit with base elements and shafts:

B13-138X, R1-113 (Resistor)

76-2 (Switch)

R5 (Resistor)

■ 'STA-LOC' equivalent: FB361, RU125T254, OS1000A, IS1500, US42.

RESISTORS

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

REPLACEMENT DATA			
ITEM No.	RATING	REMARKS	REPLACEMENT DATA
R3	680K		
R4	220K		
R5	680Ω		
R6	1meg		
R7	33K		
R8	4700Ω		
R9	47meg		
R10	33meg		
R11	50Ω		
R12	1.2meg		
R13	150K		

* Models 14BF, 14BM.

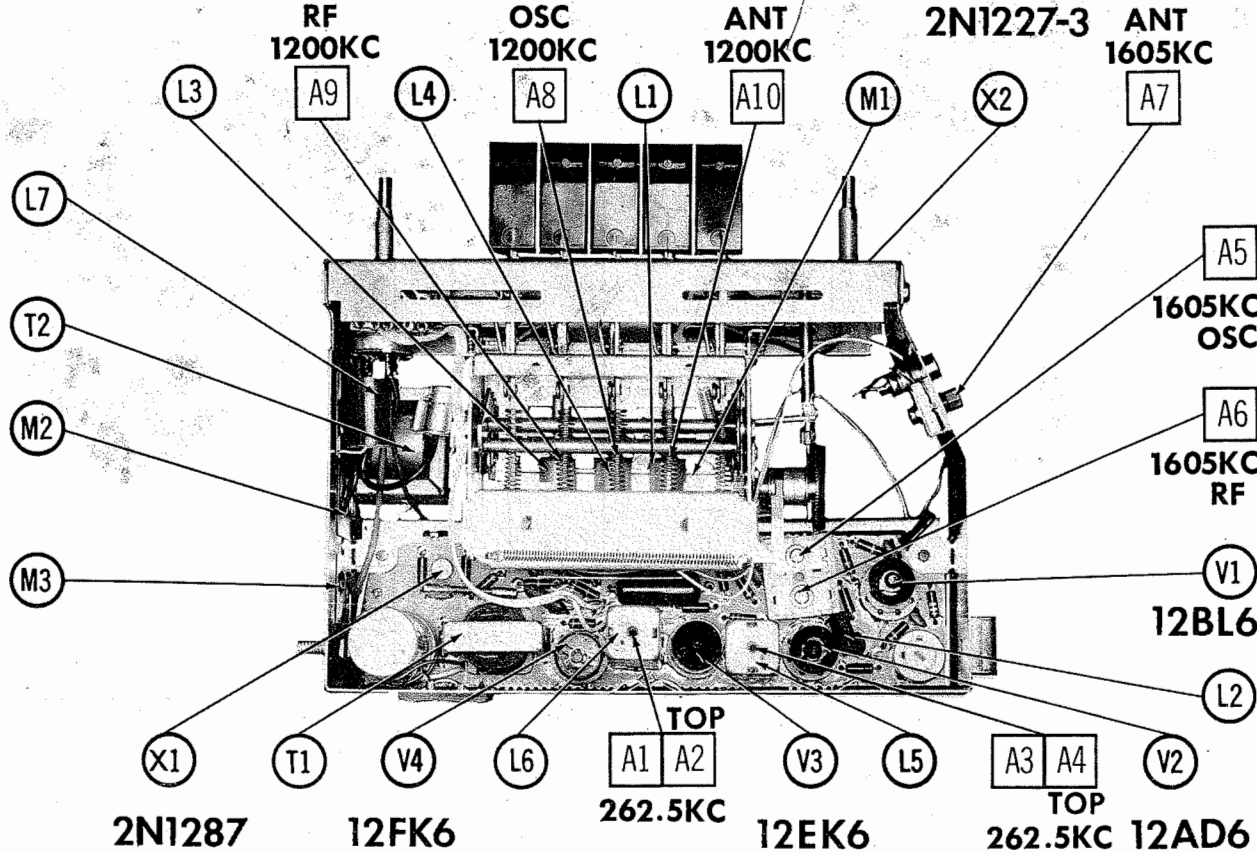
Note 1. Value varies 3.3meg-10meg. Replace with original value.

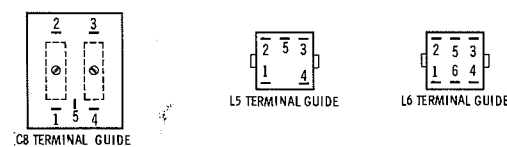
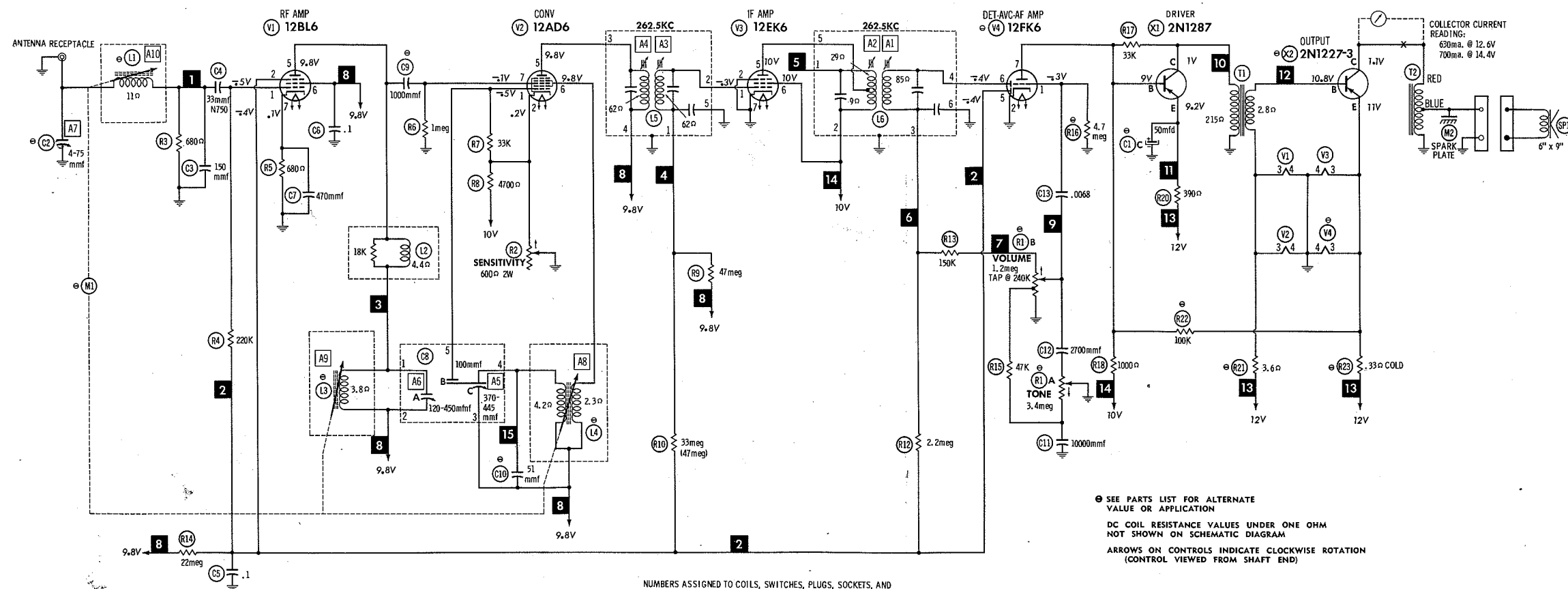
Note 2. Value varies 3-4Ω. Replace with original value.

Note 3. Value varies 47K-150K. Replace with original value.

Note 4. Value varies .3- .5Ω. Replace with original value.

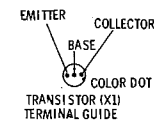
CHASSIS—TOP VIEW





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.

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.



RESISTANCE READINGS							
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6
V1	12BL6	3.5meg	3.3meg	2 Ω	0 Ω	1370 Ω	1370 Ω
V2	12AD6	33K	60 Ω	2 Ω	0 Ω	1430 Ω	1370 Ω
V3	12EK6	33meg	0 Ω	2 Ω	0 Ω	1250 Ω	1220 Ω
V4	12FK6	4.7meg	0 Ω	2 Ω	0 Ω	3.2meg	1.1meg

† MEASURED FROM JUNCTION OF C1A & R19.
TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

