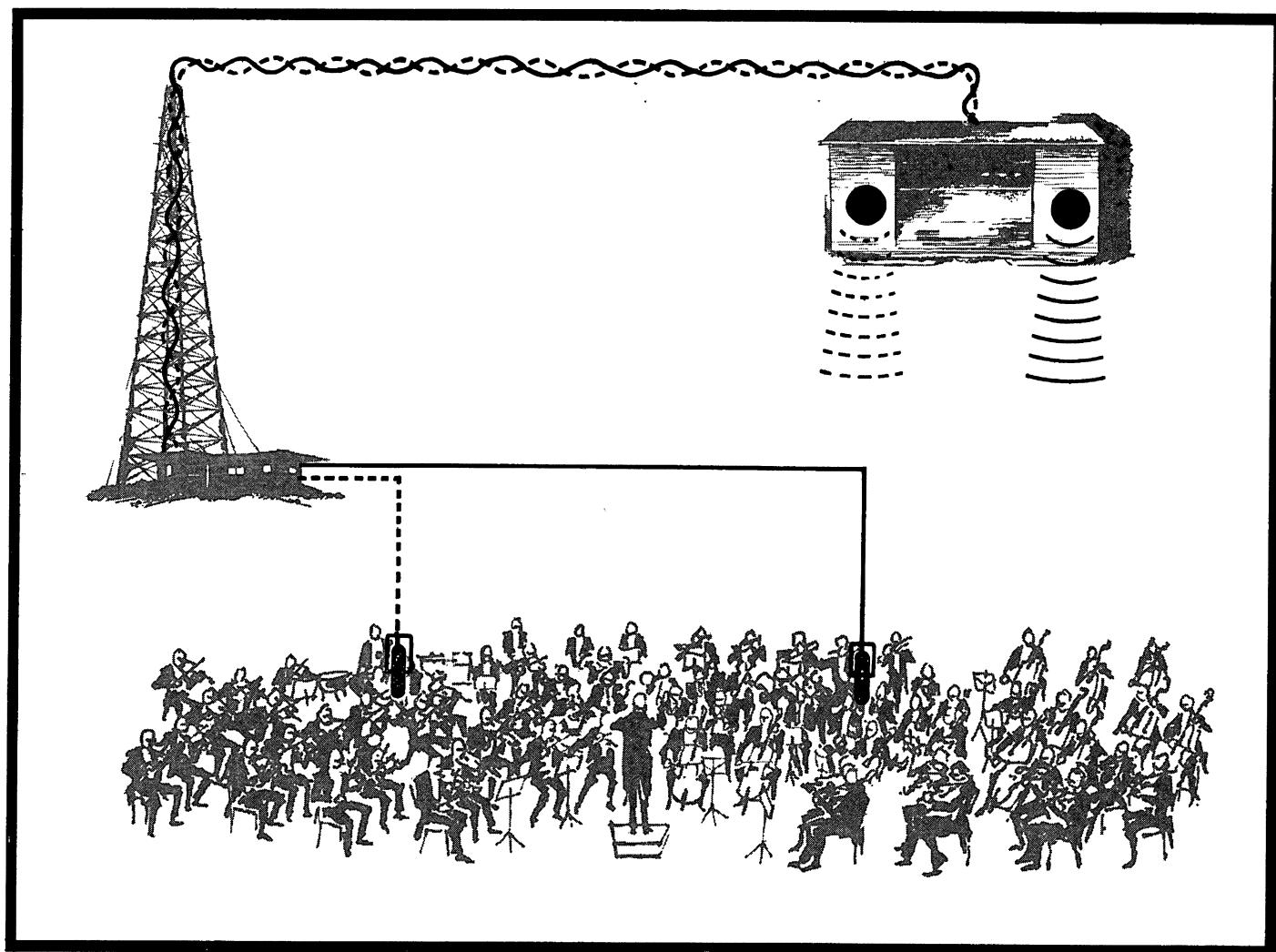


HF 29

HF 29

ZENITH

SERVICE MANUAL



HIGH FIDELITY AND STEREO FM MODELS

ZENITH RADIO CORPORATION
1900 N. AUSTIN AVENUE **CHICAGO, ILLINOIS 60639**

To the Service Technician

PRODUCT SAFETY SERVICING GUIDELINES FOR ALL AUDIO AMPLIFIERS AND RADIO RECEIVERS

CAUTION: No modification of the circuit should be attempted. Service work should be performed only after you are thoroughly familiar with all of the following precautions. To do otherwise increases the risk of potential hazards and injury to the user.

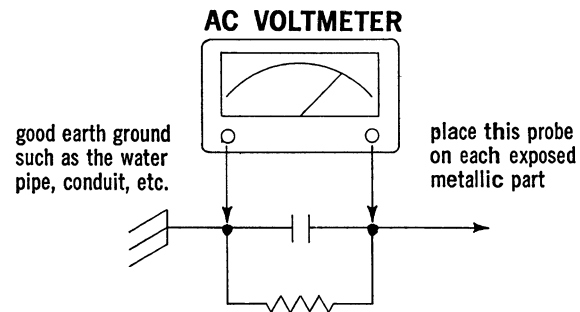
SAFETY CHECKS

SUBJECT: Fire & Shock Hazard

1. Be sure that all components are positioned in such a way to avoid possibility of adjacent components shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Always replace all protective devices such as insulators and barriers after working on a set.
3. Check for frayed insulation on wires including the AC cord.
4. Check across-the-line components for damage and replace if necessary.
5. After re-assembly of the set always perform an AC leakage test on the exposed metallic parts of the cabinet such as the knobs, antenna terminals, etc. to be sure the set is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this test. Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following

manner: Connect a 1500 ohm 10 watt resistor, paralleled by .15 mfd. AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination 1500 ohm resistor and .15 mfd. capacitor. Reverse the AC plug on the set and repeat AC voltage measurements again for each exposed metallic part. Voltage measured must not exceed .3 volts RMS. This corresponds to 0.2 milliamp AC.

Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



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HF 18 is Part No. 923-558

HF 19 is Part No. 923-606

HF 22 is Part No. 923-642

HF 25 is Part No. 923-669

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HF 18-1 is Part No. 923-576

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HF 21 is Part No. 923-626

HF 24 is Part No. 923-653

HF 27 is Part No. 923-707

Solid State Device Theory and Circuit Applications are found in the following Service Manuals

HF 18 Theory — Diodes (including Zener and SCR), Transistors (PNP, NPN, Darlington, and JFET) Applications — Chassis 29AT24 (JFET

FM-RF Multiplex, Electronic Touch Switching), Complementary Symmetry, Chassis 11ZT27 (Electronic Filter)

HF 22 Theory — JFET, IGFET, MOSFET, Applications — Dual Gate MOSFET FM-RF, JFET Biplex Detector, Quasi-Complementary Symmetry

HF 23 Applications — Model C9029/Chassis 15WCA10 Four Channel Decoder

HF 26 Applications — Chassis 15WDR51 (JFET Meter Circuit, Multiplex IC, Four Channel Decoding)

HF 27 Applications — Model SD2568 Speaker Switching Circuitry

HF 28 Applications — Model D9013W Allegro Speaker System

PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS

CABINET			CHASSIS			SPEAKERS		
MODEL	COLOR	STYLE NOTE A	MODEL	MPO OUTPUT NOTE B	TYPE	PART NUMBER	IMPED. (in Ohms)	QTY. AND SIZE (in Inches)
B505B B505F	Blue & White Green & White	P,RL	—	—	Phono Only	849-48B	8	1-3½
B505B2 B505F2	Blue & White Green & White	P,RL	—	—	Phono Only	849-48B	8	1-3½
B505B3 B505F3	Blue & White Green & White	P,RL	—	—	Phono Only	849-48B	8	1-3½
D507F11 D507L11	Green Beige	P,H,LL	3AT20Z1	1x1W	Phono Only	49-1184	32	1-2x6
D507F21 D507L21	Green Beige	P,H,LL	3AT20Z2	1x1W	Phono Only	49-1184	32	1-2x6
B525J	Brown & Beige	P,RL	—	—	AM/Phono	849-48B	8	1-3½
B525J2	Brown & Beige	P,RL	—	—	AM/Phono	849-48B	8	1-3½
B525J3	Brown & Beige	P,RL	—	—	AM/Phono	849-48B	8	1-3½
D535L1	Beige	P,H,LL,DS	1WDA10Z1	2x1W	Phono Only	49-1230	16	2-4
E540L E540V	Beige Orange	P,H,DS	1WEA10	2x1W	Phono Only	49-1246	16	2-4x6
E540L1 E540V1	Beige Orange	P,H,DS	1WEA10Z1	2x1W	Phono Only	49-1246	16	2-4x6
E540L2 E540V2	Beige Orange	P,H,DS	1WEA10	2x1W	Phono Only	49-1246	16	2-4x6
E541L	Beige	P,H,DS	1WEA11	2x1W	Phono Only	49-1247	16	2-4x6
E541L1	Beige	P,H,DS	1WEA11Z1	2x1W	Phono Only	49-1247	16	2-4x6
E541L2	Beige	P,H,DS	1WEA11	2x1W	Phono Only	49-1247	16	2-4x6
E543W	Walnut	M	—	2x2W	Phono Only	849-100	8	2-6
E543W1	Walnut	M	—	2x2W	Phono Only	849-100	8	2-6
E547W	Walnut	P,H,DS	3WEA10	2x5W	Phono Only	49-1167 49-1252	16 8	2-6x9 2-2
E547W1	Walnut	P,H,DS	3WEA10Z1	2x5W	Phono Only	49-1167 49-1252	16 8	2-6x9 2-2

PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS

RECORD CHANGER					OTHER FEATURES			
MOUNTING	PART NUMBER	CARTRIDGE	STYLUS NOTE C	45 RPM ADAPTER	TAPE PROVISION NOTE D	RECORD WELL OR STORAGE	SPEAKER PROV. NOTE E	MISC. NOTE F
Integral	Manual	942-8B	S 856-15B	827-18B	—	—	—	—
Integral	Manual	942-8B	S 856-15B	827-18B	—	—	—	—
Integral	Manual	942-8B	S 856-15B	827-18B	—	—	—	—
Integral	169-460	142-170	D-S 56-567	S-85021	—	—	—	—
Integral	169-460	142-170	D-S 56-567	S-85021	—	—	—	—
Integral	Manual	942-8B	S 856-15B	827-17B	—	—	—	—
Integral	Manual	942-8B	S 856-15B	827-17B	—	—	—	—
Integral	Manual	942-8B	S 856-15B	827-17B	—	—	—	—
Integral	169-459	142-178	D-S 56-560	S-72910	—	—	—	—
Hinged Shelf	169-462	142-179	D-S 56-629	S-72910	—	—	—	—
Hinged Shelf	169-462	142-179	D-S 56-629	S-72910	—	—	—	—
Hinged Shelf	169-476	142-179	D-S 56-629	S-72910	—	—	—	—
Hinged Shelf	169-470	142-167	D-S S-82621	S-72910	—	—	—	—
Hinged Shelf	169-470	142-167	D-S S-82621	S-72910	—	—	—	—
Hinged Shelf	169-475	142-167	D-S S-82621	S-72910	—	—	—	—
Shelf	169-477	142-179	D-S 56-629	S-72910	—	—	—	H
Shelf	169-477	142-179	D-S 56-629	S-72910	—	—	—	H
Hinged Shelf	169-470	142-167	D-S S-82621	S-72648	—	—	—	H
Hinged Shelf	169-470	142-167	D-S S-82621	S-72648	—	—	—	H

PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS

CABINET			CHASSIS			SPEAKERS		
MODEL	COLOR	STYLE NOTE A	MODEL	MPO OUTPUT NOTE B	TYPE	PART NUMBER	IMPED . (In Ohms)	QTY. AND SIZE (In Inches)
E584W	Walnut	M,LL	5WER51	2x5W	FM/AM/Phono	49-1168 49-1249	8 8	2-3½ 2-6½
E585J	Brown	M,LL	15WER56	2x15W	FM/AM/Phono	49-1168 49-1254	8 16	2-3½ 2-8
E587W	Walnut	M,LL	5WER51	2x5W	FM/AM/Phono/ Tape	49-1168 49-1249	8 8	2-3½ 2-6½
E588W	Walnut	M,LL	5WER51	2x5W	FM/AM/Phono/ Tape	49-1168 49-1249	8 8	2-3½ 2-6½
E589W	Walnut	M,LL	15WER56	2x15W	FM/AM/Phono/ Tape	49-1168 49-1240	8 16	2-3½ 2-10
E594W	Walnut	M,LL	15WER56	2x15W	FM/AM/Phono/ Tape	49-1168 49-1240	8 16	2-3½ 2-10
E680W	Walnut	M	5WER53	2x5W	FM/AM/Tape	49-1168 49-1249	8 8	2-3½ 2-6½
E685W	Walnut	M	5WER53	2x5W	FM/AM/Tape	49-1168 49-1249	8 8	2-3½ 2-6½
E725W	Walnut	M,LL	15WDR51	4x15W	FM/AM/Phono	49-1168 49-1240	8 8	4-3½ 4-10
D742W D742W1	Walnut	P,H,DS	—	2x4W	Phono Only	964-28872	8	4-6x9
E902W	Walnut	C,LL	5WER50	2x5W	FM/AM/Phono	49-1094 49-1224-01	45 8	2-3½ 2-6x9
ET902W	Walnut	C,LL	5WER50	2x5W	FM/AM/Phono/ Tape	49-1094 49-1224-01	45 8	2-3½ 2-6x9
E903M	Maple	C,LL	5WER50	2x5W	FM/AM/Phono	49-1094 49-1224-01	45 8	2-3½ 2-6x9
ET903M	Maple	C,LL	5WER50	2x5W	FM/AM/Phono/ Tape	49-1094 49-1224-01	45 8	2-3½ 2-6x9
E904DE	Dark Oak	C,LL	5WER50	2x5W	FM/AM/Phono	49-1094 49-1224-01	45 8	2-3½ 2-6x9
ET904DE	Dark Oak	C,LL	5WER50	2x5W	FM/AM/Phono/ Tape	49-1094 49-1224-01	45 8	2-3½ 2-6x9
E911W	Walnut	C,LL	15WER55	2x15W	FM/AM/Phono	49-1166 49-1245	8 16	2-3½ 2-8
E912M	Maple	C,LL	15WER55	2x15W	FM/AM/Phono	49-1166 49-1245	8 16	2-3½ 2-8
E913DE E913P	Dark Oak Pecan	C,LL	15WER55	2x15W	FM/AM/Phono	49-1166 49-1245	8 16	2-3½ 2-8

PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS

RECORD CHANGER					OTHER FEATURES			
MOUNTING	PART NUMBER	CARTRIDGE	STYLUS NOTE C	45 RPM ADAPTER	TAPE PROVISION NOTE D	RECORD WELL OR STORAGE	SPEAKER PROV. NOTE E	MISC. NOTE F
Shelf	169-466	142-167	D-S S-82621	S-82964	TM	—	2+2, A1	A1,DGL, H
Shelf	169-466	142-167	D-S S-82621	S-82964	TM	—	2+2, A1	A2,DGL, TT,H
Shelf	169-466	142-167	D-S S-82621	S-82964	8TK-P 169-458	—	2+2, A1	A1,DGL, H
Shelf	169-466	142-167	D-S S-82621	S-82964	Cass-R/P 169-463	—	2+2, A1	A1,DGL, H
Shelf	169-467	142-167	D-S S-82621	S-82964	8TK-P 169-458	—	2+2 A2,A3	A3,DGL, TT,H
Shelf	169-467	142-167	D-S S-82621	S-82964	8TK-R/P 169-469	—	2+2, A2,A3	A3,DGL, TT,H
—	—	—	—	—	8TK-P 169-458	—	2+2, A1	A1,DGL, H
—	—	—	—	—	8TK-R/P 169-472	—	2+2, A1	A1,DGL, H
Shelf	169-420	142-167	D-S S-82621	S-82964	TM	—	—	H
Hinged Shelf	169-457	142-167	D-S S-82621	S-72648	—	—	—	—
Shelf	169-461	142-167	D-S S-82621	S-72910	TM	Storage	Yes,D	H
Shelf	169-461	142-167	D-S S-82621	S-72910	8TK-P 169-464	Well	Yes,D	H
Shelf	169-461	142-167	D-S S-82621	S-72910	TM	Storage	Yes,D	H
Shelf	169-461	142-167	D-S S-82621	S-72910	8TK-P 169-464	Well	Yes,D	H
Shelf	169-461	142-167	D-S S-82621	S-72910	TM	Storage	Yes,D	H
Shelf	169-461	142-167	D-S S-82621	S-72910	8TK-P 169-464	Well	Yes,D	H
Shelf	169-466	142-167	D-S S-82621	S-82964	EM	Well	2+2,D	H
Shelf	169-466	142-167	D-S S-82621	S-82964	EM	Well	2+2,D	H
Shelf	169-466	142-167	D-S S-82621	S-82964	EM	Well	2+2,D	H

PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS

CABINET			CHASSIS			SPEAKERS		
MODEL	COLOR	STYLE NOTE A	MODEL	MPO OUTPUT NOTE B	TYPE	PART NUMBER	IMPED . (In Ohms)	QTY. AND SIZE (In Inches)
ET914W	Walnut	C,LL	15WER55	2x15W	FM/AM/Phono/ Tape	49-1166 49-1221	8 16	2-3½ 2-10
ET915DE ET915P	Dark Oak Pecan	C,LL	15WER55	2x15W	FM/AM/Phono/ Tape	49-1166 49-1221	8 16	2-3½ 2-10
E921DE E921P	Dark Oak Pecan	C,LL	15WER55	2x15W	FM/AM/Phono	49-1094 49-1166 49-1221	45 8 16	2-3½ 2-3½ 2-10
E922M	Maple	C,LL	15WER55	2x15W	FM/AM/Phono	49-1094 49-1166 49-1221	45 8 16	2-3½ 2-3½ 2-10
ET930W	Walnut	C,LL	15WDR50Z1	2x15W	FM/AM/Phono/ Tape	49-1162 49-1243	8 8	2-Horn 2-12
E931W	Walnut	C,LL	35WDR50Z1	2x35W	FM/AM/Phono	49-1094 49-1166 49-1217	45 8 8	2-3½ 2-3½ 2-10
E935M	Maple	C,LL	35WDR50Z1	2x35W	FM/AM/Phono	49-1094 49-1166 49-1217	45 8 8	2-3½ 2-3½ 2-10
E939P	Pecan	C,LL	35WDR50Z1	2x35W	FM/AM/Phono	49-1094 49-1166 49-1217	45 8 8	2-3½ 2-3½ 2-10
E945DE	Dark Oak	C,LL	35WDR50Z1	2x35W	FM/AM/Phono	49-1094 49-1166 49-1203	45 8 8	2-3½ 2-3½ 2-8x12
E966DE E966P	Dark Oak Pecan	C,LL	6AT24/ 29AT24Z2	2x80W	FM/AM/Phono	49-1094 49-1166 49-1073	45 8 8	4-3½ 2-3½ 2-15
SE2590X	White	C,LL	5WDR50X/ 25WDA10/ 25EC58	2x5W 2x25W	FM/AM/Tape/ TV	49-1094 49-1168 49-1238 49-1240	45 8 8 16	2-3½ 2-3½ 2-5 2-10
SE2595P	Pecan	C,2LL	6AT24/ 29AT24Z2 25EC58	2x80W	FM/AM/TV	49-1094 49-1190 49-1255	45 6.4 6.4	2-3½ 2-3½ 2-9x15
D9011W	Walnut	M,SP	—	—	—	49-1237 49-1239	8 8	1-3 1-6½
E9012W	Walnut	M,SP	—	—	—	49-1168 49-1249	8 8	1-3½ 1-6½
E9014W	Walnut	M,SP	—	—	—	49-1168 49-1254	8 16	1-3½ 1-8
D9016W	Walnut	M,SP	—	—	—	849-82 849-83	16 16	1-6x9 1-2½

PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS

RECORD CHANGER					OTHER FEATURES			
MOUNTING	PART NUMBER	CARTRIDGE	STYLUS NOTE C	45 RPM ADAPTER	TAPE PROVISION NOTE D	RECORD WELL OR STORAGE	SPEAKER PROV. NOTE E	MISC. NOTE F
Shelf	169-466	142-167	D-S S-82621	S-82964	8TK-P 169-464	Well	2+2, A1	A,H
Shelf	169-466	142-167	D-S S-82621	S-82964	8TK-P 169-464	Well	2+2, A1	A,H
Shelf	169-466	142-167	D-S S-82621	S-82964	EM	Well	2+2, A1	A,H
Shelf	169-466	142-167	D-S S-82621	S-82964	EM	Well	2+2, A1	A,H
Shelf	169-466	142-167	D-S S-82621	S-82964	8TK-P D631	Well	2+2	A,H
Shelf	169-467	142-167	D-S S-82621	S-82964	EM	Well	2+2, A1,A2, A3	A,H
Shelf	169-466	142-167	D-S S-82621	S-82964	EM	Well	2+2, A1,A2, A3	A,H
Shelf	169-466	142-167	D-S S-82621	S-82964	EM	Well	2+2, A1,A2, A3	A,H
Shelf	169-467	142-167	D-S S-82621	S-82964	EM	Well	2+2, A1,A2, A3	A,H
Shelf	169-468	142-167	D-S S-82621	S-82964	EM	Well	2+2, A1,A2, A3	A,H
—	—	—	—	—	8TK-P D631	—	—	H
Shelf	169-468	142-167	D-S S-82621	S-82964	—	—	—	H
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	A1
—	—	—	—	—	—	—	—	A2
—	—	—	—	—	—	—	—	—

PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS

CABINET			CHASSIS			SPEAKERS		
MODEL	COLOR	STYLE NOTE A	MODEL	MPO OUTPUT NOTE B	TYPE	PART NUMBER	IMPED. (In Ohms)	QTY. AND SIZE (In Inches)
E9018W	Walnut	M,SP	—	—	—	49-1168 49-1240	8 16	1-3½ 1-10

NOTES

NOTE A — CABINET STYLE:

C = Console, M = Modular, P = Portable, H = Handle,
DS = Detachable Speaker Enclosure, LL = Lift Lid,
2LL = Two Lift Lids, RL = Removable Lid, SP = Speaker
System.

NOTE B — POWER OUTPUT:

Indicates number of channels and Momentary Power Out-
put (MPO) per channel. Less than 5% Total Harmonic
Distortion (THD), all channels added.

NOTE C — STYLUS:

Stylus: D = Diamond, S = Manufactured Sapphire.

NOTE D — TAPE INPUT AND OUTPUT PROVISION:

Factory Installed: 8TK = Eight Track Cartridge,
Cass = Cassette, P = Play, R = Record.

Field Installed: EM = Easy Mount installation of the
following in the designated consoles. (may also use Top of
Set models listed below):

Model E633 - Cassette Recorder/Player.

Field Installed: TM = Top of Set Model for installation
with the designated console or modular models:

Model D635 - Cartridge Tape Player.

Model A636 - Cassette Tape Player/Recorder.

NOTE D — TAPE INPUT AND OUTPUT PROVISION: (Cont'd)

Model D638 - Cartridge Tape Player/Recorder.

Model D762 - Cartridge Tape Player.

NOTE E — SPEAKER PROVISIONS:

2+2 = Speaker Matrix or Conventional
Extension Speaker System Provisions.

A1 = Model E9012W Allegro 1000 Speaker System may
be used.

A2 = Model E9014W Allegro 2000 Speaker System may
be used.

A3 = Model E9018W Allegro 3000 Speaker System may
be used.

D = Model D9016W Speaker System may be used.

NOTE F — MISCELLANEOUS FEATURES:

A = Speaker System is Allegro.

A1 = Speaker System is Allegro 1000.

A2 = Speaker System is Allegro 2000.

A3 = Speaker System is Allegro 3000.

DGL = Digilite Dial Scale.

H = Headphone Jack.

PL = Power Indicator Light.

TT = Target Tuning (Three Light) Indicator.

*Refer to Master index for models not covered in this manual.

**PRODUCT FEATURES
SEE NOTES FOR FURTHER DETAILS**

RECORD CHANGER					OTHER FEATURES			
MOUNTING	PART NUMBER	CARTRIDGE	STYLUS NOTE C	45 RPM ADAPTER	TAPE PROVISION NOTE D	RECORD WELL OR STORAGE	SPEAKER PROV. NOTE E	MISC. NOTE F
—	—	—	—	—	—	—	—	A3

RECORD CHANGER FEATURES

Part No.	Mfg.	Baseplate	Turntable
169-420	VM	Black	Light Gray
169-457	VM	Black	Light Gray
169-459	BSR	Dark Brown	Black/White
169-460	BSR	Black	Black/White
169-461	BSR	Black	Light Gray
169-462	BSR	Black	Light Gray
169-466	VM	Black	Black
169-467	VM	Black	Black
169-468	VM	Black	Bright Aluminum
169-470	BSR	Black	Light Gray
169-475	BSR	Black	Light Gray
169-476	BSR	Black	Black
169-477	BSR	Beige	Black

SECTION TWO

GENERAL INFORMATION

THEORY

From time to time Zenith includes the use of new components and circuit applications in product design. Theory and explanation of such components and circuits is included in various manuals. Refer to the index for further information.

CIRCUIT BOARD COMPONENT IDENTIFICATION

As a special feature to aid the Service Technician, Zenith has identified the location of components which are mounted on certain circuit boards. This information is printed on the circuit boards and also appears on the schematic. We also have prepared a drawing of the foil side of the circuit board showing the relationship between the components and the foil. This will aid the Technician in quickly tracing circuits, as not only are the components shown, but also the voltages at various check points. Components are identified by a letter/number combination. A letter prefix to indicate the type of component: C=Capacitor, L=Coil, R=Resistor, CR=Diode, etc. The numbers are assigned in blocks to identify the circuit, in which it is used, as follows.

Block	Stage	Example
1 - 99	FM Tuner	R1, C1, L1.
101 - 199	AM Tuner	R101, C101, L101.
201 - 299	IF	R201, C201, L201.
301 - 399	Multiplex	R301, C301, L301.
401 - 449	Audio, Right Channel	R401, C401, L401.
451 - 499	Audio, Left Channel	R451, C451, L451.
501 - 599	Power Supply	R501, C501, L501.
601 - 699	Switching Circuits	R601, C601, L601.
701 - 799	Special Applications	R701, C701, L701.
801 - 849	Audio, Right Back Channel	R801, C801, L801.
851 - 899	Audio, Left Back Channel	R851, C851, L851.

POWER AMPLIFIERS

Power transistors and their circuits are unique in operation, therefore, repair procedure differs from those steps followed when repairing tube type-circuits.

1. Each channel of the following amplifiers use a pair of matched power transistors in the final output stage. Therefore, should one transistor fail, both transistors must be replaced simultaneously, since they will not perform properly unless matched. (In chassis using complementary symmetry circuits a matched pair consists of one NPN and one PNP transistor.): 3AT20Z1, 3AT20Z2, 5WER50, 5WER51, 5WER53, 6AT24, 15WDR50Z1, 15WDR51, 15WER55, 15WER56, 35WDR50, 35WDR50Z1.

2. When a power transistor is replaced the insulator (when used) between the transistor and the heat sink should also be replaced. On the following be certain to apply Dow Corning No. 340 heat conductive grease between the

transistor and the insulator. Also between the insulator and the chassis. The Dow Corning grease can be obtained in 1 c.c. quantities by ordering Part No. 205-51 = 5WER50, 5WER51, 5WER53, 6AT24, 15WDR50Z1, 15WDR51, 15WER55, 15WER56, 35WDR50, 35WDR50Z1.

3. Do not operate these amplifiers without their proper speaker load.
4. Do not short out the audio output of either channel when the amplifier is operating.
5. Should a power transistor fail (short) be certain to replace the emitter resistors for the specific channel. Also be certain to check the condition of the silicon diode rectifiers, and driver transistors.
6. Remove plug-in transistors from their sockets before doing any soldering to the socket lugs.

SIGNAL STRENGTH CHART

There are certain minimum voltages necessary for proper stereo FM reception. To help determine if there is sufficient signal available, the following developed AGC voltage versus micro-volt input voltage charts have been compiled. Since the desired FM Station may not always be operating in the stereo mode when an installation is made, these AGC voltage measurements have been taken with a monaural FM signal. The point "" of minimum AGC voltage necessary for good stereo FM reception has been indicated on these charts.

AGC voltages are to be measured with a V.T.V.M. connected to the following Test Points.

Chassis 5WER50, 5WER51, 5WER53 — Test Point "C" Located between Transistors Q101 (A.M. Converter) and Q201 (1st. I.F.).

Chassis 15WDR50Z1 — Test Point "C". Located between Transistor Q101 (A.M. Converter) and Q201 (1st. I.F.).

Chassis 15WDR51 — Test Point at Q101 end of purple wire going around pulley end of gang.

Chassis 15WER55, 15WER56 — Test Point at junction of R2 and R229; either end of orange wire at pulley end of gang.

Chassis 35WER50, 35WDR50Z1 — Test Point at junction of R2 and R229; either end of purple wire at pulley end of gang.

Chassis 29AT24Z2 — Test Point "C", RF Amplifier AGC Feed Thru on FM Tuner.

**Chassis 5WER50,
5WER51, 5WER53**

Micro Volts Input	Reverse AGC Voltage at Test Point "C"
0	1.23
25	1.10
100	0.88
200	0.79
500	0.71
1K	*0.67
5K	0.60
50K	0.12
100K	0.06

Chassis 15WDR50Z1

Micro Volts Input	Reverse AGC Voltage at Test Point "C"
0	1.34
25	1.23
100	0.91
200	0.82
500	0.73
1K	*0.70
5K	0.58
50K	0.10
100K	0.06

Chassis 29AT24Z2

Micro Volts Input	AGC Voltage At 1st I.F. (See Note)
0	1.50
25	1.40
100	1.10
200	.95
500	.80
1K	*.75
5K	.65
50K	.52
100K	.40

**Chassis 35WDR50,
35WDR50Z1**

Micro Volts Input	Reverse AGC Voltage At Gate 2 of FM RF
0	5.7
25	4.5
100	2.8
200	2.2
500	1.5
1K	*-0.96
5K	-0.22
50K	-1.10
100K	-1.20

Chassis 15WDR51

Micro Volts Input	Reverse AGC Voltage at Test Point "C"
0	5.00
25	4.20
100	2.80
200	2.40
500	1.70
1K	*1.10
5K	0.05
50K	-2.40
100K	-3.20

Chassis 15WER55, 15WER56

Micro Volts Input	Reverse AGC Voltage At Gate 2 of FM RF
0	5.4
25	4.5
100	3.3
200	2.85
500	2.5
1K	*2.1
5K	1.22
50K	0.15
100K	-0.08

AGC ADJUSTMENT NOTE

Chassis 29AT24Z2 — Adjust AGC control so that, under no signal conditions, a voltage of 1.5 volts is measured across the 820 ohm resistor connected from 1st IF emitter to "B." (-12.4V) when in A.M.

SECTION THREE

FM/AM ALIGNMENT

FM ALIGNMENT

Alignment of these chassis will, in most cases, not be necessary unless an RF or IF transformer is replaced or if someone has tampered with the adjustment.

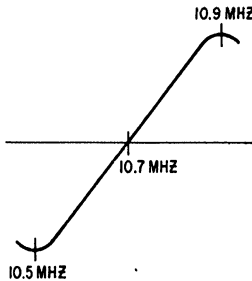
Because of the wide band pass required in the multiplex FM tuner, it is desirable to use an FM signal generator having a deviation of 400 kHz with a sweep rate of 60 Hertz as well as an oscilloscope when aligning both the IF and RF FM portions of this receiver. It is not only necessary to obtain maximum amplitude in the IF amplifier stages, but also necessary to

maintain symmetry. It is desirable to use 10.6, 10.7 and 10.8 Megahertz markers in obtaining IF curve symmetry.

Capacitors mentioned in the alignment procedure should be as small as possible and the ground lead of the generator must be connected to ground as close as possible to the point of injection.

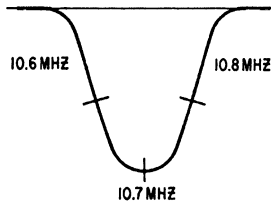
AM ALIGNMENT

A V.T.V.M. on low AC scale connected across the speaker voice coil output terminals (either left or right channels), will be satisfactory for all AM, IF and RF adjustments.



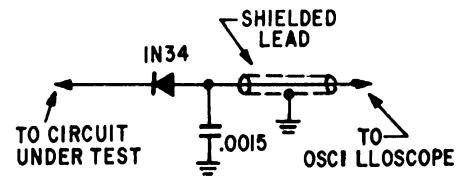
Scope Pattern - A

Adjust for maximum amplitude while maintaining linearity and symmetry. 10.7 MHz marker must be on the curve at base line.



Scope Pattern - B

10.6 and 10.8 MHz markers must be symmetrically positioned with 10.7 MHz at center of curve. This point must be adjusted for maximum.



Detector Probe -

If your oscilloscope is not equipped with a detector probe, one can easily be constructed. For best results the probe should be shielded.

RF AND IF ALIGNMENT PROCEDURE FOR CHASSIS 5WER50, 5WER51, 5WER53, 15WER55

STEP	CONNECT VTVM/ SCOPE TO	CONNECT GENERATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	SET DIAL TO	ADJUST	PURPOSE
NOTE: For AM Alignment Use A Signal With 400 Hertz Modulation, Bandswitch in AM.							
1	VTVM Speaker Voice Coil	One turn loosely coupled to wavemagnet.	None	455 KHz	600 KHz	L203, L204, L207, L210	Align IF channel for maximum output.
2				1600 KHz	1600 KHz	C1G	Set Oscillator to dial scale.
3				600 KHz	600 KHz	T101	
4				Repeat Steps No. 2 & 3			
5				1400 KHz	1400 KHz	C1D	Align Antenna stage.
NOTE: For FM Alignment Use A Signal With 400 KHz Deviation, Bandswitch in FM, AFC "Off".							
6	Scope Ratio Detector Test Point "H"	Term No. 5 of T205 3rd IF Trans. Test Point "G"	47 ohm in shunt with gen. output. Then from hot lead a 27 ohm in series with a .001 MFD capaci- tor.	10.7 MHz	Gang Closed	L212 (T207)	Adjust Primary and Secondary of Ratio Detector for maximum amplitude and symmetry as shown in Scope Pattern "A".
7		L214 (T207)					
8	Scope Last FM IF Test Point "G"	Term No. 3 of T203 2nd IF Trans. Test Point "F"				L208 & L209 (T205)	Align I.F. transformer for maximum output and symmetry. This pattern is not necessarily identical to the overall Scope Pattern "B".
9		Term. No. 3 of T201 1st IF Trans. Test Point "E"				L205 & L206 (T203)	
10		Connect to Test Point "D"				L201 & L202 (T201)	
11						Readjust L201, L202, L205, L206, L208, L209	Align I.F. transformer for maximum output and symmetry as indicated in Scope Pattern "B".
NOTE: In Steps 10 and 11 Generator ground Must be Connected On Braid As Close To Gang As Possible.							
12	Scope Last FM IF Test Point "G"	FM Antenna Post (Disconnect Antenna) Test Point "A"	300 ohm	106 MHz	106 MHz	C13	Set Oscillator to dial scale.
13				90 MHz	90 MHz	L4	
14				Repeat Steps 12 and 13			
15				106 MHz	106 MHz	C1A	Align FM Detector stage for maximum.
16				90 MHz	90 MHz	L2 if necessary	
17				106 MHz	106 MHz	C1H	Align FM Antenna stage for maximum.
18				90 MHz	90 MHz	L1 if necessary	
19				Repeat Steps 15 thru 18			

RF AND IF ALIGNMENT PROCEDURE FOR CHASSIS 15WDR50Z1

STEP	CONNECT VTVM/ SCOPE TO	CONNECT GENERATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	SET DIAL TO	ADJUST	PURPOSE	
NOTE: For AM Alignment Use A Signal With 400 Hertz Modulation, Bandswitch in AM.								
1	VTVM Speaker Voice Coil	One Turn Loosely coupled to Wavemagnet	None	455 KHz	600 KHz	L203, L204, L207, L210, L211	Align IF channel for maximum output.	
2				1600 KHz	1600 KHz	C1G	Set Oscillator to dial scale.	
3				600 KHz	600 KHz	T101		
4				Repeat Steps No. 2 & 3				
5				1400 KHz	1400 KHz	C1D	Align Antenna stage.	
NOTE: For FM Alignment Use A Signal With 400 Khz Deviation, Bandswitch in FM. AFC "Off".								
6	Scope Ratio Detector Test Point "H"	Term No. 5 of T205 3rd IF Trans. Test Point "G"	47 Ohm in shunt with gen. output. Then from hot lead a 27 Ohm in series with a .001 MFD capacitor.	10.7 MHz	Gang Closed	L212	Adjust Primary and Secondary of Ratio Detector for maximum amplitude and symmetry, as shown in Scope Pattern "A".	
7						L214		
8	Scope Last FM IF Test Point "G"	Term No. 3 of T203 2nd IF Trans. Test Point "F"				L208 & L209	Align I.F. Transformer for maximum output and symmetry. This pattern is not necessarily identical to the overall Scope Pattern "B".	
9		Term No. 3 of T201 1st IF Trans. Test Point "E"				L205 & L206		
10		Connect to Test Point "D"				L201 & L202	Align I.F. Transformer for maximum output and symmetry as indicated in Scope Pattern "B".	
11						Readjust L201, L202, L205, L206, L208, L209		
NOTE: In Steps 10 and 11 Generator Ground Must Be Connected On Braid As Close To Gang As Possible.								
12	Scope Last FM IF Test Point "G"	FM Antenna Post (Disconnect Antenna) Test Point "A".	300 Ohm	106 MHz	106 MHz	C13	Set Oscillator to dial scale.	
13				90 MHz	90 MHz	L4		
14				Repeat Steps 12 and 13				
15				106 MHz	106 MHz	C1A	Align FM Detector stage for maximum.	
16				90 MHz	90 MHz	L2 if necessary		
17				106 MHz	106 MHz	C1H	Align FM Antenna stage for maximum.	
18				90 MHz	90 MHz	L1 if necessary		
19				Repeat Steps 15 thru 18				

RF AND IF ALIGNMENT PROCEDURE FOR CHASSIS 15WDR51

STEP	CONNECT VTVM/ SCOPE TO	CONNECT GENERATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	SET DIAL TO	ADJUST	PURPOSE
NOTE: For AM Alignment Use A Signal With 400 Hertz Modulation, Bandswitch in AM.							
1	VTVM Speaker Voice Coil	One Turn Loosely coupled to Wavemagnet	None	455 KHz	600 KHz	L203,L204,L207, L208,L211,L212	Align IF channel for maximum output.
2				1600 KHz	1600 KHz	C1K	Set Oscillator to dial scale.
3				600 KHz	600 KHz	L103	
4				Repeat Steps No. 2 & 3			
5				1400 KHz	1400 KHz	C1H	Align RF stage.
6				600 KHz	600 KHz	L106	
7				Repeat Steps No. 5 & 6			
8				1400 KHz	1400 KHz	C1F	Align Antenna stage.
NOTE: For FM Alignment Use A Signal With 400 KHz Deviation, Bandswitch in FM, AFC "Off".							
9	Scope Ratio Detector Test Point "H"	Term No. 5 of T205 3rd IF Trans. Test Point "G"	47 Ohm in shunt with gen. output. Then from hot lead a 27 Ohm in series with a .001 MFD capacitor.	10.7 MHz	Gang Closed	L213	Adjust Primary and Secondary of Ratio Detector for maximum ampli- tude and symmetry as shown in Scope Pattern "A".
10						L215	
11		Term. No. 3 of T203 2nd IF Trans. Test Point "F". Term. No. 4 of T201 1st IF Trans. Test Point "E".				L209 & L210	Align I.F. Transformer for maximum output and symmetry. This pattern is not necessarily identical to the overall Scope Pattern "B".
12						L205 & L206	
13		Connect to Test Point "D"				L201 & L202	Align I.F. Transformer for maximum output and symmetry as indicated in Scope Pattern "B".
14						Readjust L201, L202,L205,L206 L209 & L210	
NOTE: In Steps 13 and 14 Generator Ground Must Be Connected On Braid As Close To Gang As Possible.							
15	Scope Last FM IF Test Point "G"	FM Antenna Post (Disconnect Antenna) Test Point "A"	300 Ohm	106 MHz	106 MHz	C13	Set Oscillator to dial scale.
16				90 MHz	90 MHz	L4	
17				Repeat Steps 15 & 16			
18				106 MHz	106 MHz	C1C	Align FM Detector stage for maximum.
19				90 MHz	90 MHz	L2 if necessary	
20				106 MHz	106 MHz	C1A	Align FM Antenna stage for maximum.
21				90 MHz	90 MHz	L1 if necessary	
22				Repeat Steps 15 thru 21			

RF AND IF ALIGNMENT PROCEDURE FOR CHASSIS 15WER56

STEP	CONNECT VTVM/SCOPE TO	CONNECT GENERATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	SET DIAL TO	ADJUST	PURPOSE
NOTE: For AM Alignment Use A Signal With 400 Hertz Modulation, Bandswitch in AM.							
1	VTVM Speaker Voice Coil	One turn loosely coupled to wavemagnet.	None	455 KHz	600 KHz	L203, L204, L207, L210	Align IF channel for maximum output.
2				1600 KHz	1600 KHz	C1G	Set Oscillator to dial scale.
3				600 KHz	600 KHz	T101	
4				Repeat Steps No. 2 & 3			
5				1400 KHz	1400 KHz	C1D	Align Antenna stage.
NOTE: For FM Alignment Use A Signal With 400 KHz Deviation, Bandswitch in FM. AFC "Off".							
6	Scope Ratio Detector Test Point "H"	Term No. 5 of T205 3rd IF Trans. Test Point "G"	47 ohm in shunt with gen. output. Then from hot lead a 27 ohm in series with a .001 MFD capacitor.	10.7 MHz	Gang Closed	L212 (T207)	Adjust Primary and Secondary of Ratio Detector for maximum amplitude and symmetry as shown in Scope Pattern "A".
7						L214 (T207)	
8	Scope Last FM IF Test Point "G"	Term No. 3 of T203 2nd IF Trans. Test Point "F"				L208 & L209 (T205)	Align I.F. Transformer for maximum output and symmetry. This pattern is not necessarily identical to the overall Scope Pattern "B".
9		Term No. 3 of T201 1st IF Trans. Test Point "E"				L205 & L206 (T203)	
10		Connect to Test Point "D"				L201 & L202 (T201)	
11						Readjust L201, L202, L205, L206, L208, L209	
NOTE: In Steps 10 and 11 Generator ground Must be Connected On Braid As Close To Gang As Possible.							
12	Scope Last FM IF Test Point "G"	FM Antenna Post (Disconnect Antenna) Test Point "A"	300 ohm	106 MHz	106 MHz	C13	Set Oscillator to dial scale.
13				90 Mhz	90 MHz	L4	
14				Repeat Steps 12 thru 13			
15				106 MHz	106 MHz	C1A	Align FM Detector stage for maximum.
16				90 MHz	90 MHz	L2 if necessary	
17				106 MHz	106 MHz	C1H	
18				90 MHz	90 MHz	L1 if necessary	Align FM Antenna stage for maximum.
19				Repeat Steps 15 thru 18			
20			One turn loosely coupled to Wavemagnet	None	1000 KHz	1000 KHz	T601
21							Red "low" and "high" lights CR605, CR606, will "turn-on" when detuned equal frequency above and below center frequency.
22							Readjust, if needed, so "high" and "low" lights will "turn-on" at equal frequency from center frequency.

RF AND IF ALIGNMENT PROCEDURE FOR CHASSIS 29AT24Z2

STEP	CONNECT VTVM/SCOPE TO	CONNECT GENERATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	SET DIAL TO	ADJUST	PURPOSE
NOTE: For FM Alignment Use A Signal With 400 KHz Deviation, Bandswitch in FM, AFC 'OFF'.							
1	Scope Ratio Detector Test Point "H"	Term No. 3 of T205 4th IF Trans.	47 ohm in shunt with gen. output. Then from hot lead a 27 ohm in series with a .001 MFD capacitor.	10.7 MHz	88 MHz	L212	Adjust Primary and Secondary of Ratio Detector for maximum amplitude and symmetry as shown in Scope Pattern "A".
2						L214	
3	Scope Last FM IF Test Point "G"	Term. No. 3 of T203 2nd IF Trans. Test Point "F".				L210, L211	Align I.F. transformers for maximum output and symmetry. This pattern is not necessarily identical to the overall Scope Pattern "B"
4		Term. No. 3 of T201 2nd IF Trans. Test Point "E"				L206, L207	
5		Connect to emitter of Q2 Mixer Test Point "K".				L202, L203	
6						L5, L6	
7						Readjust L5, L6, L202, L203, L206, L207, L210, L211	
8	FM Antenna Post (Disconnect Antenna)	300 ohm				98 MHz	98 MHz
9			L3,L2, L1	Align RF output, RF input and FM Antenna stages for maximum			
NOTE: For AM Alignment Use A Signal With 400 Hertz Modulation, Bandswitch in AM.							
10	VTVM Speaker Voice Coil	Base of Q101	.05 in series with hot lead of gen.	455 MHz	600 KHz	L108, L109, L204, L205, L208, L209	Align AM IF for maximum.
11		Two turn loop loosely coupled to wavemagnet		1600 KHz	1600 KHz	C101E	Set Oscillator to dial scale
12				1400 KHz	1400 KHz	C101B, C101D	Align Detector and Antenna stages.

RF AND IF ALIGNMENT PROCEDURE FOR CHASSIS 35WDR50 AND 35WDR50Z1

STEP	CONNECT VTVM/ SCOPE TO	CONNECT GENERATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	SET DIAL TO	ADJUST	PURPOSE
NOTE: For AM Alignment Use A Signal With 400 Hertz Modulation, Bandswitch in AM.							
1	VTVM Speaker Voice Coil	One turn loosely coupled to wavemagnet.		455 KHz	600 KHz	L203, L204, L207, L210, L215	Align IF channel for maximum output
2				1600 KHz	1600 KHz	C1K	Set Oscillator to dial scale
3				600 KHz	600 KHz	L103	
4				Repeat Steps No. 2 & 3			
5				1400 KHz	1400 KHz	C1H	Align RF stage
6				600 KHz	600 KHz	T101	
7				Repeat Steps No. 5 & 6			
8				1400 KHz	1400 KHz	C1F	Align antenna stage.
NOTE: For FM Alignment Use A Signal With 400 KHz Deviation, Bandswitch in FM, AFC "OFF".							
9	Scope Ratio Detector TestPoint"H"	Term. No. 5 of T205 3rd IF Trans. Test Point "G"	47 ohm in shunt with gen. output. Then from hot lead a 27 ohm in series with a .001 MFD capacitor.	10.7 MHz	Gang Closed	L212	Adjust Primary and Secondary of Ratio Detector for maximum amplitude and symmetry, as shown in Scope Pattern "A"
10						L214	
11	Scope Last FM IF TestPoint"G"	Term. No. 3 of T203 2nd IF Trans. Test Point "F"				L208 & L209	Align I.F. Transformer for maximum output and symmetry. This pattern is not necessarily identical to the overall Scope Pattern "B"
12		Term. No. 4 of T201 1st IF Trans. Test Point "E"				L205 & L206	
13		Connect to Test Point "D"				L201 & L202	
14						Readjust L201, L202, L205, L206, L208 & L209	
NOTE: In Steps 13B and 14B Generator ground Must be Connected On Braid As Close To Gang As Possible.							
15	Scope Last FM IF TestPoint"G"	FM Antenna Post (Disconnect Antenna) Test Point "A"	300 ohm	106 MHz	106 MHz	C13	Set Oscillator to dial scale
16				90 MHz	90 MHz	L4	
17				Repeat Steps 15 & 16			
18				106 MHz	106 MHz	C1C	Align FM Detector stage for maximum
19				90 MHz	90 MHz	L2 if necessary	
20				106 MHz	106 MHz	C1A	Align FM Antenna stage for maximum
21				90 MHz	90 MHz	L1 if necessary	
22				Repeat Steps 15 thru 21			

SECTION FOUR

MULTIPLEX ALIGNMENT

MULTIPLEX ALIGNMENT

These receivers have been properly aligned at the factory and will not require further adjustment. As a result, it is not recommended that any attempt be made to alter the multiplex stages. However, should any major components in these circuits require replacement or should anyone tamper with the multiplex adjustments then, of course, realignment will be necessary.

Before any attempt is made to align, or service, FM Multiplex circuitry, the technician must be certain that the RF, IF, and Ratio Detector alignment is correct, and that the receiver functions normally on monaural signals.

Most multiplex generators provide a composite multiplex signal as well as an RF signal; which is FM modulated by the composite multiplex signal. The composite signal is very useful since it is an excellent tool that can be used in signal tracing the multiplex portion of the receiver. We do not recommend that multiplex alignment be made using the composite signal injected at the output terminal of the ratio detector tertiary winding, since there is always some phase shift occurring in the RF, IF or Ratio Detector circuits. As a result, multiplex alignment made by a signal injected at the Ratio Detector would not be correct. For proper multiplex alignment the composite signal must FM modulate the RF carrier and then be fed into the FM antenna terminals. With the signal injected in this manner, the multiplex alignment would then be the best that could possibly be obtained, and separation would be at the maximum for this receiver.

The RF signal should be injected at a point in the FM band where no other signal is present. If at all possible this should be at a frequency near the middle of the FM band. Tune the FM receiver to this point and adjust the RF frequency adjustment on the generator to this same frequency. The AGC voltage developed in the receiver should be maximum. AGC voltage substantially less than this will indicate the RF frequency adjustment is tuned to an image.

GENERAL TROUBLE-SHOOTING PROCEDURE

Should a problem arise in aligning the FM multiplex portion of the receiver, the technician must determine whether the difficulty lies in the RF, IF, and Ratio Detector portions of the receiver, or whether the difficulty lies in the multiplex portion. A multiplex generator is an excellent signal tracing device to determine if the multiplex section of the receiver is functioning properly. The composite output of the multiplex generator can be injected at the output of the Ratio Detector.

To reduce possible extraneous signals coming through the Ratio Detector, short the Ratio Detector primary with a jumper lead. The wave forms and their magnitude may vary slightly from chassis to chassis, however, they are quite indicative of what will be seen when signal tracing the multiplex circuitry.

If all the waves are similar in form and magnitude to those indicated, then it can be assumed that the multiplex portion of the receiver is functioning properly and the problem lies ahead of this in the FM receiver. If any of the wave forms are missing at a latter point but are apparent at a previous point, then something is amiss in the circuitry between the two test points.

FM—MULTIPLEX ALIGNMENT PROCEDURE — CHASSIS 5WER50, 5WER51, 5WER53, 15WER55, 15WER56.

Before aligning or servicing Multiplex Circuits be certain that RF, IF, and Ratio Detector are correctly aligned and that operation is normal on monaural FM signals.

STEP	CONNECT SCOPE AND /OR VTVM	CONNECT GENERATOR	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	BAND	SET DIAL TO	ADJUST	PURPOSE
NOTE — PLACE BANDSWITCH IN FM STEREO POSITION. USES RF FREQUENCY NEAR CENTER SCALE.								
1	Test Point "M"	Test Point "A" FM Antenna	300 Ohm	98 MHz 10% Pilot	FM	98 MHz	T301	Adjust 19 KHz Amp for maximum.
2				98 MHz 5% Pilot			NOTE: — Stereo Indicator Lamp may be on or off during the above steps.	
3	"L" Tape Output			98 MHz 10% Pilot L+R, L-R, (Mod. L Only)			T302	Adjust for maximum L Channel reading.
4	"R" Tape Output						T302 if necessary	Adjust for minimum R Channel reading.
5							REPEAT STEPS 4 and 5 for MINIMUM CHANGE.	

FM – MULTIPLEX ALIGNMENT PROCEDURE – CHASSIS 15WDR51

Before aligning or servicing Multiplex Circuits be certain that RF, IF and Ratio Detector are correctly aligned and that operation is normal on monaural FM signals.

STEP	CONNECT SCOPE AND/OR VTVM	CONNECT GENERATOR	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	BAND	SET DIAL TO	ADJUST	PURPOSE
NOTE — PLACE BANDSWITCH IN FM STEREO POSITION. USE RF FREQUENCY NEAR CENTER SCALE.								
1	Test Point "M"	Test Point "A" FM Antenna	300 Ohm	98MHz 10% Pilot	FM	98MHz	T301	Adjust 19kHz Amp for maximum.
2				T302				
3				98MHz 5% Pilot			R302	Adjust mute control to point where stereo lamp lights up.
				98MHz 10% Pilot L+R, L — R, (Mod. L Only)			T303	Adjust for maximum L Channel reading.
4	"L" Tape Output	T303 if necessary	Adjust for minimum R Channel reading.					
5	"R" Tape Output	REPEAT STEPS 4 and 5 for MINIMUM CHANGE.					To provide max. separation.	
6								

FM – MULTIPLEX ALIGNMENT PROCEDURE CHASSIS – 15WDR50Z1, 29AT24Z2, 35WDR50, 35WDR50Z1.

Before aligning or servicing Multiplex Circuits be certain that RF, IF, and Ratio Detector are correctly aligned and that operation is normal on monaural FM signals.

is normal on monaural FM signals.

STEP	CONNECT SCOPE AND/OR VTVM	CONNECT GENERATOR	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	BAND	SET DIAL TO	ADJUST	PURPOSE
NOTE: PLACE BANDSWITCH IN FM POSITION AND STEREO/MONO SWITCH IN STEREO. USE RF FREQUENCY NEAR CENTER SCALE								
1**	Test Point "M" Composite Amp VTVM(AC)	Test Point "A" FM ANT.	300 Ohm	98MHz, 67kHz SCA	FM	98MHz	(T301**)	Adjust 67kHz Trap for minimum.
2	Test Point "N" Doubler VTVM(DC)			98MHz, 10% Pilot			T301, T302, R308 (T302, T303, R309**)	Adjust 19kHz Amp and Doubler for maximum.
3				98MHz, 5% Pilot			R308(R309**)	Adjust mute control to point where stereo lamp lights up.
4				98MHz, 10% Pilot L+R, L-R, (Mod. L Only)			T303(T304**)	Adjust 38kHz Detector for maximum at "L" Output. NOTE- "L" Output should be approximately 10 (or greater) times "R" Output.
5	"R" Audio Output (After 38kHz filter) VTVM(AC)			Check "R" channel output				

**FOR CHASSIS 29AT24Z2 ONLY.

SECTION FIVE

THEORY AND APPLICATION

Theory and application of various solid state devices have been covered previously in the following Service Manuals HF18 (Diodes — including Zener and SCR's; and Transistors — PNP, NPN, Darlington, and JFET); HF22 (JFET, IGFET, MOSFET).

At this time we will discuss another member of the solid state family, the Light Emitting Diode (LED). As its name indicates, this device has the unique ability to emit, or radiate, light (either invisible "infrared", or visible).

Light emission can be created by either incandescence or luminescence. Conventional incandescent lamps have a filament, and current passing thru the resistance of the filament will create heat. The higher the temperature, the greater the total energy radiation, with light emission increasing rapidly.

Luminescence on the other hand is the term applied to all forms of visible radiated energy due to other than temperature. Common examples of luminescence are:

1. In fluorescent lamps, the atoms of the fluorescent coating are excited when they absorb ultraviolet light provided by an electrical discharge through mercury vapor.
2. In CRT's, the fluorescent coating on the face glows as a result of electrons striking the coating.

A Light Emitting Diode (LED) is a PN junction which emits light when forward biased. This emission is the result of a low voltage direct current being applied to a doped crystal containing a PN junction, and is referred to as PN junction luminescence, or junction electroluminescence. By definition, luminescence is that emission resulting from the change in energy states (usually of electrons) when an external exciting source is applied.

Figure 1 illustrates the LED schematic symbol, while Figure 2 and 3 represent the cross section structure of typical devices. As you will note, the material has both P and N areas. The P layer is very thin compared to the N layer. It has been determined that some light radiation will be lost internally if the flat lens surface of Figure 2 is used. Light emission can be improved by using a dome shaped lens as illustrated in Figure 3.

Most of your past experience with diodes, or transistors, has been with those made of silicon and germanium. LED's however, are made of gallium combined with other elements. Different light frequencies (i.e., colors) can be obtained by controlling the impurities used in doping these materials.

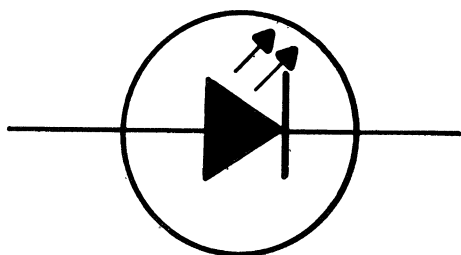


FIGURE 1

THREE LIGHT TUNING INDICATOR

Most tuning indicators currently used in consumer electronic products utilize zero center meters for FM, but only maximum reading meters for AM. Zero center meter circuits are normally not practical to incorporate in AM circuits.

Our engineers have devised a tuning indicator system which combines the advantages of zero center tuning, plus recent advances in developments of solid state Light Emitting Diodes. This system employs three LED's which are so small that they can be mounted on the dial pointer. One LED (in the center) will emit a green light when the set is properly tuned "on-station". The other two LED's function as "high" and "low" indicators. One of these LED's will be illuminated in red to indicate which way the receiver is detuned.

A partial schematic of the tuning indicator circuit (for Chassis 15WER56) is shown in Figure 4. Diode CR606 is the green "on-station" indicator, while CR605 and CR607 are the "high" and "low" indicators respectively.

Control voltages are sampled from Test Point "H+" (at the "+" side of C210) and Test Point "H", both in the FM Ratio Detector. AM signals are sampled from the primary of the last AM IF transformer.

First, let's look at the FM tuning action. The voltage at "H+" will be a positive DC which will reach maximum when the signal frequency is at resonance with the frequency of Ratio Detector transformer T207. The voltage will decrease when the signal is above, or below, resonance.

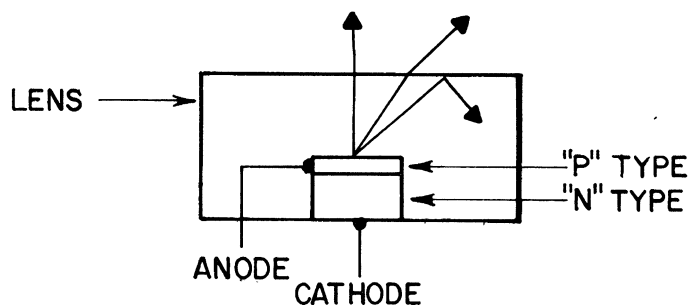


FIGURE 2

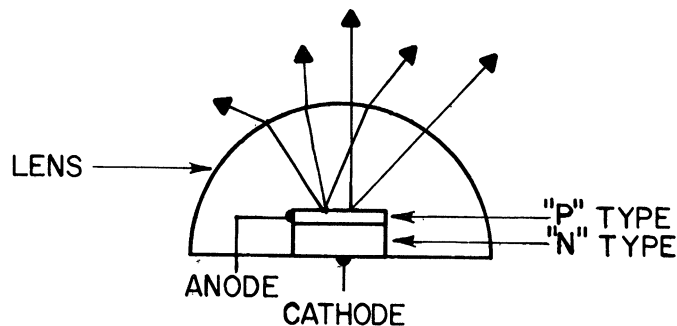


FIGURE 3

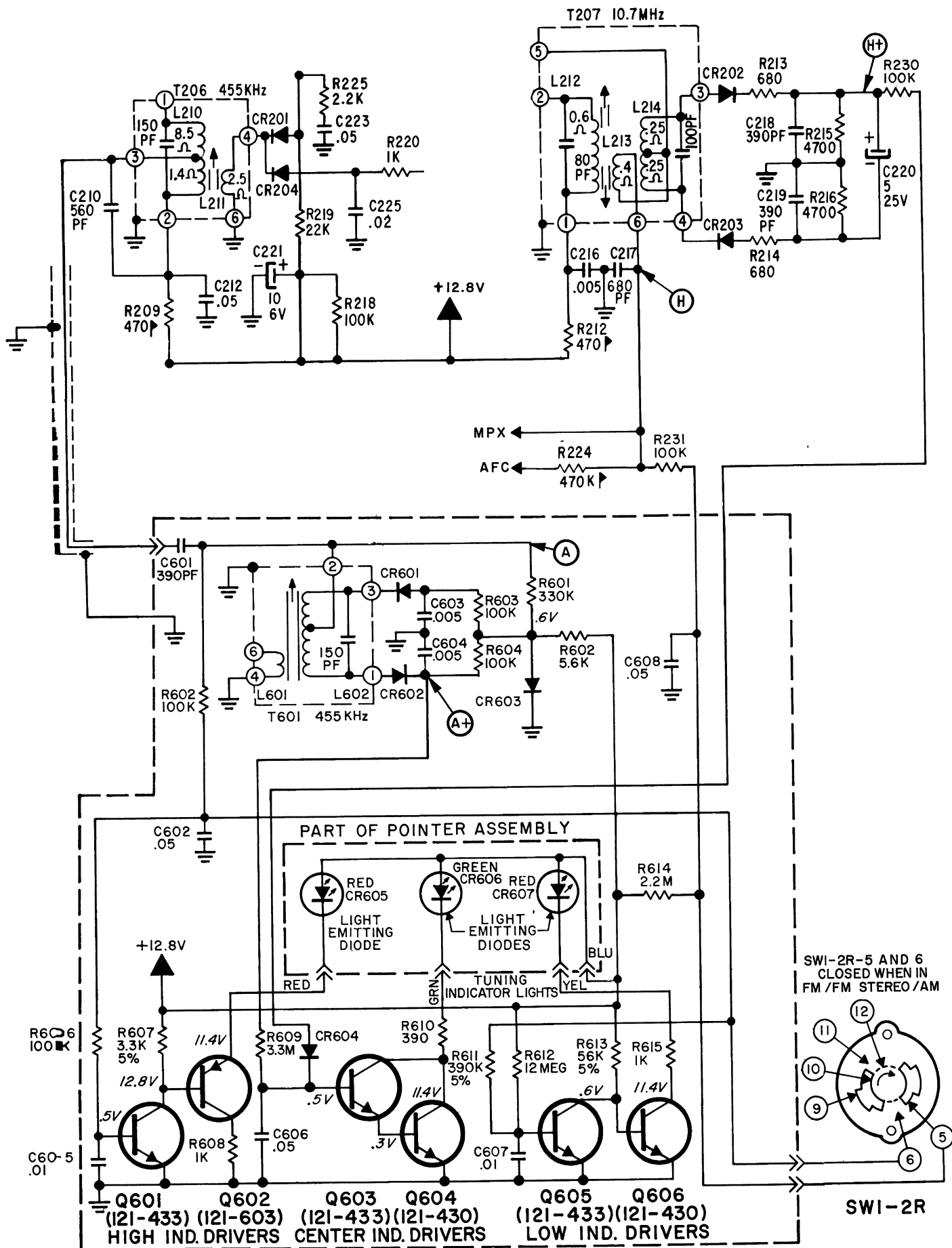


FIGURE 4

When sufficient signal level is applied to the input of the Ratio Detector, voltage at "H+" will forward bias diode CR604, causing current to flow from "H+", via R230, CR604, to the base of Q603. Capacitor C606 at the Q603 base bypasses any audio ripple which appears at that point. Diode CR604 functions as a one-way switch to prevent the flow of current from the base of Q603 back to "H+" when the bandswitch is in the AM position. With Q603 conducting, it will "turn-on" Q604 and complete a path from B+, through LED CR606, limiting resistor R610, and Q604 to ground, thus illuminating the green "on-station" indicator CR606.

Transformer T601, diodes CR601, CR602, load resistors R603, R604, and capacitors C603, C604 form a phase detector for AM tuning indication. Capacitor C601 couples a very small amount of signal from the last AM IF transformer T206 to point "A" at transformer T601. Resistors R601, R602 and R603 are connected to reference diode CR603 to pre-bias transistors Q601, Q603, Q605 for the desired threshold point. This also provides stabilized transistor operation with temperature changes on both FM and AM modes. Current will flow from "A+", through isolation resistor R609, to the base of transistor Q603, turning on Q603, in turn turning on Q604, providing a path for current to flow from B+, thru the LED CR606, limiting resistor R610, and Q604 to ground, turning on the LED. The basic operation of this portion of the circuit is the same as explained for FM, except for the source of control signal, that is either "H+" or "A+".

When the receiver is properly tuned to either a FM or AM station there will be no voltage developed at "H" or "A", respectively, leaving transistors Q601, Q602 biased to "cut-off". Transistor Q603 is biased in such a way that the base of Q606 is grounded, effectively cutting off Q606. Under these conditions the "high" and "low" indicators CR605, CR607 will also be "off".

If a receiver is detuned to the high side a positive voltage will exist at point "H" on FM, or "A" on AM, allowing current to flow, from their respective detectors (CR202 and CR203 for FM, CR601 and CR602 for AM), thru isolation resistors R602 (AM), or R231 (FM), and R606, to the base of Q601. Capacitors C602 and C605 bypass audio ripple as explained for C606 at Q603. When Q601 is "turned-on", Q602 will also be "turned-on", providing a current path thru limiting resistor R608, Q602, and CR605, illuminating the red "high" indicator. On the other hand, when the receiver is tuned "low" a negative voltage will develop at points "H" or "A". Current will flow via R612, R611 to the respective detectors (CR202, CR203 for FM, and CR601, CR602 for AM). This will "cut-off" Q605, causing Q606 to "turn on", providing a current path via Q606, R615 and the red "low" indicator CR607, turning it on.

A correctly tuned in receiver will have a zero voltage at "H" and "A" causing the "high" and "low" lights to remain "off". At the same time, the voltage of "H+" or "A+" will be at maximum resulting in only the "on-station" LED being illuminated.

While servicing these chassis it is very important to observe those precautions common to most circuits using solid state devices. Most important, *don't short* the LED terminals to either B+ or ground, since this will permit excessive current to flow through, or excessive voltage to appear across the LED, resulting in possible destruction of the LED.

Alignment of the tuning indicator circuit for AM is achieved as follows:

1. All FM RF and IF circuits must be properly aligned.
2. All AM RF and IF circuits must be properly aligned before alignment of T601.
3. Apply a modulated RF signal at a clear point on the AM band. (A weak station could be used if a generator is not available.)
4. Adjust T601 so green "on-station" indicator (CR606) will reach maximum intensity on minimum possible signal.
5. Red indicators CR605 and CR607 are checked by detuning the generator (or receiver) an equal distance above and below AM center frequency.
6. The red indicators should light when detuned an equal distance from center frequency.
7. If the red indicators do not turn-on at equal frequency distance above and below, make a very slight readjustment of T601 to equalize the turn-on points of CR605 and CR607.
8. Re-check the effect of your adjustment.

MULTIPLEX

Last year we introduced two chassis (4WDR50X and 15WDR51) which used Integrated Circuits in the multiplex decoder circuit (See Figure 5). The circuit used in Chassis 15WDR51 was explained in detail in Service Manual HF26.

This year, the use of IC decoder circuits is being expanded into a broader line of chassis. As was true in the last years "D" line, the current "E" chassis using IC's are included in both modular and console model applications.

Multiplex circuitry of chassis 15WER56, as shown in Figure 6, is representative of the 5WER50 and 15WER55 series chassis. The significant change is the elimination of one tuned circuit in the 19 kHz amplifier. This will reduce alignment time in the field, should realignment become necessary. Figure 5 shows the two 19 kHz tuned circuits (T301 and T302) used previously in chassis 15WDR51, while Figure 6 illustrates the revised circuit of chassis 15WER56. Keep in mind that pin 3 is the composite input to the chip, while pins 2 and 1 are the input (base) and output (collector) of the 19 kHz amplifier stage respectively.

As you will note in the partial circuit of Figure 7, the 19 kHz amplifier now contains only one tuned circuit and it is connected in the collector circuit. The signal at the collector of the 19 kHz amplifier is direct coupled to the 38 kHz doubler circuit (within the chip). In addition, a portion of the signal appearing at the high side of the 19 kHz collector load (T302, C304) is applied as positive feedback to the 19 kHz amplifier base, via C305. When a 19 kHz signal is first applied to this stage, the output is of low level.

Use of positive feedback around the 19 kHz amplifier will cause this stage to be driven into heavier conduction, causing the stage to "latch-up". This results in a stable, high level, 19kHz output, even though the input level may vary over a reasonable range.

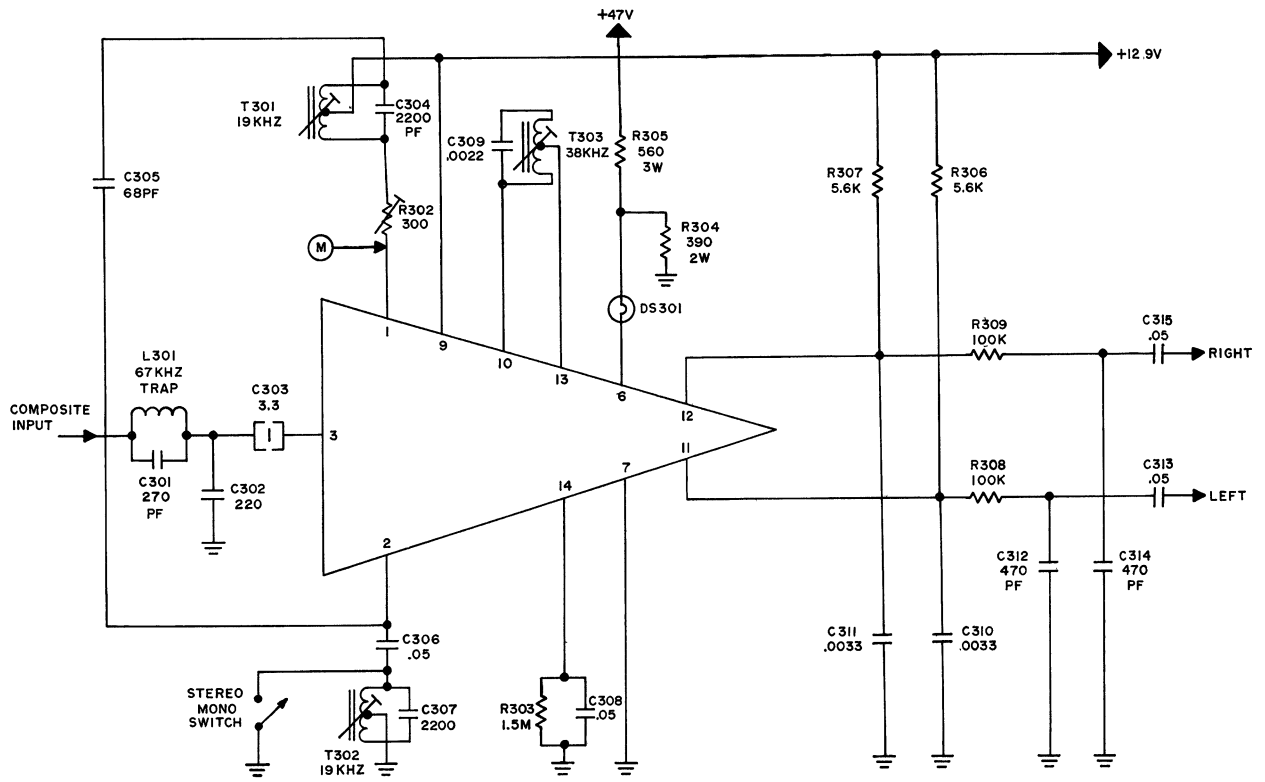


FIGURE 5 – IC EXTERNAL CIRCUIT – CHASSIS 15WDR51

IC 301 WAVE FORMS

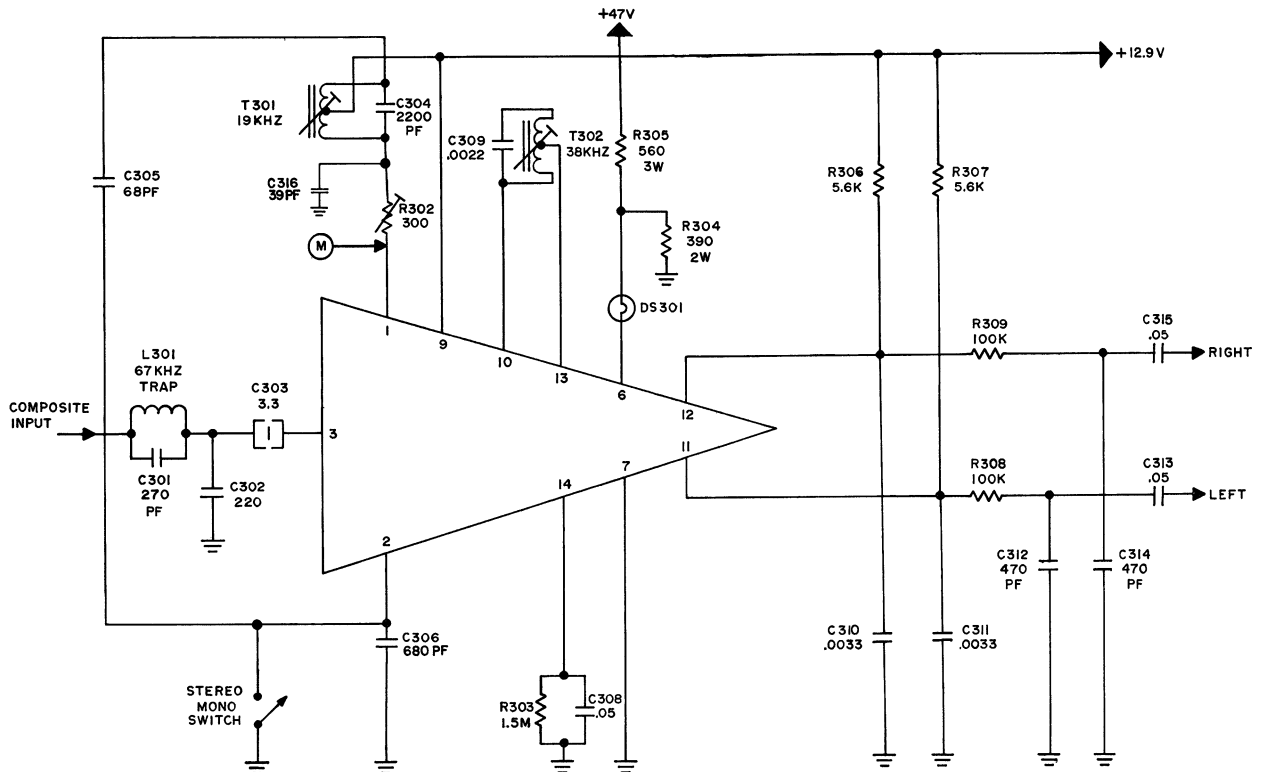
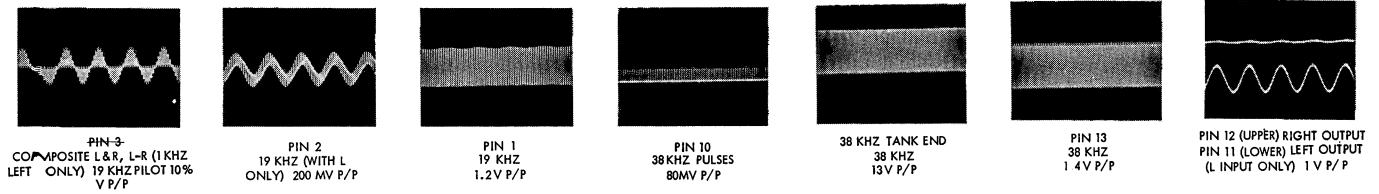


FIGURE 6 – IC EXTERNAL CIRCUIT WITH WAVEFORMS – CHASSIS 15WER56

It should also be noted that this circuit makes use of AC feedback for this purpose, as opposed to the DC feedback used in prior multiplex decoder circuits having discrete components (transistors, diodes, etc.). Chassis 25WDR50 (Figure 8) is an example of the discrete design using a DC feedback circuit. The feedback path is from Test Point "N" (at a tap on doubler coil T302), via R310, and the secondary of the 19 kHz input coil (T301), to the base of the 19 kHz amplifier (Q302).

There is also a new alignment procedure which is very similar to that specified for Chassis 15WDR51. In the new procedure:

1. Connect scope to Test Point "M" (at IC 301, pin 1) the output of the 19 kHz amplifier, (or connect a DC VTVM to Test Point M1 at pin 14).
2. Connect multiplex generator to the FM antenna terminals.
3. Apply a 10% Pilot signal at a clear point near the middle of the FM dial and adjust T301 for *maximum*.
4. Reduce Pilot to 5%.
5. Adjust mute control (R302) so the stereo indicator will light on the 5% Pilot.
6. Connect scope to Left Channel output.
7. Apply an input signal having 10% Pilot, L+R, L-R, (L modulated only).
8. Adjust T302 for *maximum*.
9. Connect scope to Right Channel output.

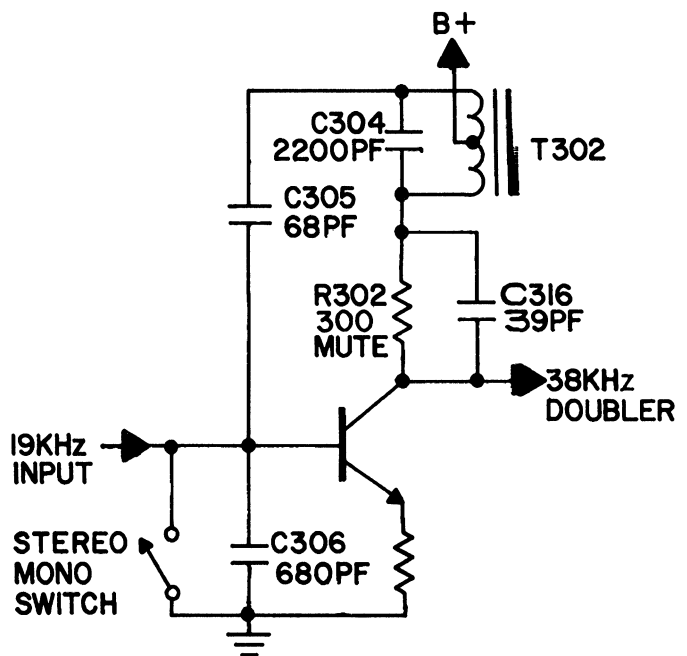


FIGURE 7

10. Check for *minimum* Right Channel output.
11. This concludes multiplex alignment.

Detailed alignment charts appear in the appropriate service manuals.

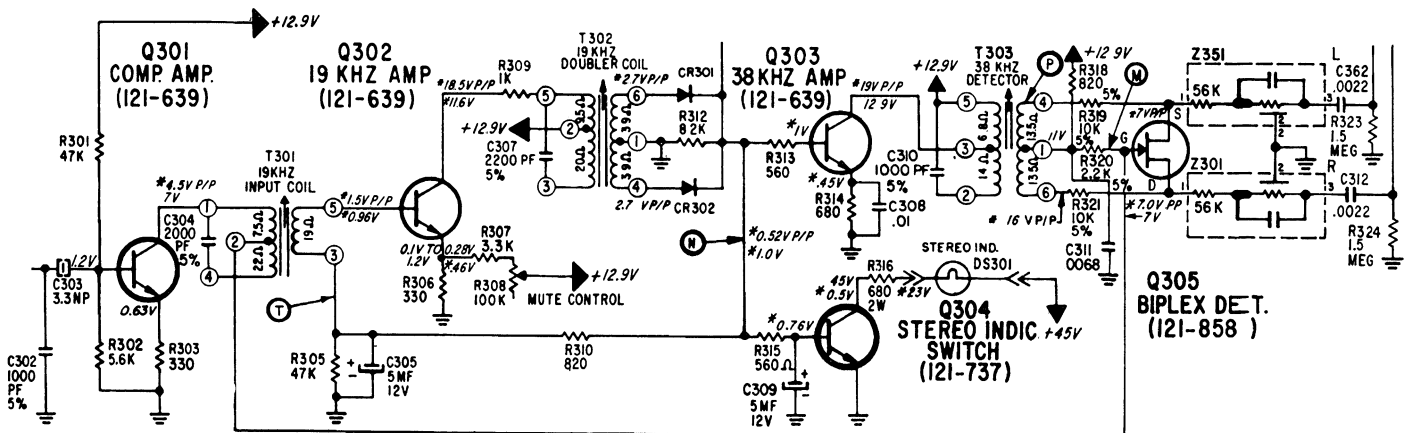


FIGURE 8

NOTES

CHASSIS 1WEA10

12-6205 METAL STAMPING BRACKET
22-3034 .05 MF CERAMIC CAPACITOR - 25V. +4100% -50% (2 REQ.)
22-3482 15 PF CERAMIC CAPACITOR - 500V. 5% (2 REQ.)
22-5167 1000 MF ELECTROLYTIC - 30V. +100% -10%
22-5439 .056 MF TUBULAR CAPACITOR - 50V. 10% (2 REQ.)
22-5483 1500 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-5688 1000 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-6134 .15 MF MYLAR CAPACITOR (2 REQ.)
22-7152-03 4.7 MF ELECTROLYTIC - 25V. +100% -10% (2 REQ.)
22-7152-08 100 MF ELECTROLYTIC - 25V. +100% -10% (3 REQ.)
22-7153 1 MF ELECTROLYTIC - 50V. +100% -10%
*52-2150 PHONE INPUT CABLE
63-1740 82 OHM RESISTOR - 1/2W. 10% (2 REQ.)
*63-1806 3300 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1848 33K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1897 470K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-4501 1 OHM RESISTOR - 1/2W. 10% (2 REQ.)
*63-9975 DUAL TONE CONTROL - 500K OHM
*63-10116 DUAL VOLUME CONTROL - 3 MEGOHM
*63-10169 BALANCE CONTROL - 1 MEGOHM
64-1033 GRIP EYELET (5 REQ.)
64-1046 GRIP EYELET (4 REQ.)
78-2080 INTEGRATED CIRCUIT SOCKET (2 REQ.)
86-500 CONNECTOR PIN (4 REQ.)
212-76 SILICON RECTIFIER
221-64 INTEGRATED CIRCUIT

CHASSIS 1WEA10Z1

12-6205 METAL STAMPING BRACKET
22-3034 .05 MF CERAMIC CAPACITOR - 25V. +4100% -50% (2 REQ.)
22-3482 15 PF CERAMIC CAPACITOR - 500V. 5% (2 REQ.)
22-5167 1000 MF ELECTROLYTIC - 30V. +100% -10%
22-5439 .056 MF TUBULAR CAPACITOR - 50V. 10% (2 REQ.)
22-5483 1500 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-5688 1000 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-6134 .15 MF MYLAR CAPACITOR (2 REQ.)
22-7152-03 4.7 MF ELECTROLYTIC - 25V. +100% -10% (2 REQ.)
22-7152-08 100 MF ELECTROLYTIC - 25V. +100% -10% (3 REQ.)
22-7153 1 MF ELECTROLYTIC - 50V. +100% -10%
*52-2150 PHONE INPUT CABLE
63-1740 82 OHM RESISTOR - 1/2W. 10% (2 REQ.)
*63-1806 3300 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1848 33K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1897 470K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-4501 1 OHM RESISTOR - 1/2W. 10% (2 REQ.)
*63-9975 DUAL TONE CONTROL - 500K OHM
*63-10116 DUAL VOLUME CONTROL - 3 MEGOHM
*63-10169 BALANCE CONTROL - 1 MEGOHM
64-1033 GRIP EYELET (5 REQ.)
64-1046 GRIP EYELET (4 REQ.)
78-2080 INTEGRATED CIRCUIT SOCKET (2 REQ.)
86-500 CONNECTOR PIN (4 REQ.)
136-87 FUSE .6 AMP. - 250V.
212-76 SILICON RECTIFIER
221-64 INTEGRATED CIRCUIT

CHASSIS 1WEA11

*12-6205 METAL STAMPING BRACKET
22-2481 8 PF CERAMIC CAPACITOR - 500V. ± 5 PF (2 REQ.)
*22-3034 .05 MF CERAMIC CAPACITOR - 25V. +100% -50% (2 REQ.)
22-5167 1000 MF ELECTROLYTIC - 30V. +100% -10%
22-5439 .056 MF TUBULAR CAPACITOR - 50V. 10% (2 REQ.)
22-5483 1500 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-5688 1000 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-6134 .15 MF MYLAR CAPACITOR - 100V. (2 REQ.)
*22-7151-04 10 MF ELECTROLYTIC - 16V. +100% -10% (2 REQ.)
*22-7152-08 100 MF ELECTROLYTIC - 25V. +100% -10% (3 REQ.)
*22-7153 1 MF ELECTROLYTIC - 50V. +100% -10%
*52-2150 PHONE INPUT CABLE
63-1733 56 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1803 2700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1897 470K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-4501 1 OHM RESISTOR - 1/2W. 10% (2 REQ.)
*63-9974 DUAL BASS CONTROL - 100K OHM
*63-9975 DUAL TREBLE CONTROL - 500K OHM
*63-10116 DUAL VOLUME CONTROL - 3 MEGOHM
*63-10169 SINGLE BALANCE CONTROL - 1 MEGOHM
64-1033 GRIP EYELET (5 REQ.)
64-1046 GRIP EYELET (4 REQ.)
78-2080 INTEGRATED CIRCUIT SOCKET (2 REQ.)
86-500 CONNECTOR PIN (4 REQ.)
212-76 SILICON RECTIFIER
221-64 INTEGRATED CIRCUIT (2 REQ.)

CHASSIS 1WEA11Z1

*12-6205 METAL STAMPING BRACKET
22-2481 8 PF CERAMIC CAPACITOR - 500V. ± 5 PF (2 REQ.)
*22-3034 .05 MF CERAMIC CAPACITOR - 25V. +100% -50% (2 REQ.)
22-5167 1000 MF ELECTROLYTIC - 30V. +100% -10%
22-5439 .056 MF TUBULAR CAPACITOR - 50V. 10% (2 REQ.)
22-5483 1500 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-5688 1000 PF CERAMIC CAPACITOR - 500V. 10% (2 REQ.)
22-6134 .15 MF MYLAR CAPACITOR - 100V. (2 REQ.)
*22-7151-04 10 MF ELECTROLYTIC - 16V. +100% -10% (2 REQ.)
*22-7152-08 100 MF ELECTROLYTIC - 25V. +100% -10% (3 REQ.)
*22-7153 1 MF ELECTROLYTIC - 50V. +100% -10%
*52-2150 PHONE INPUT CABLE

CHASSIS 1WEA11Z1 CONT'D

63-1733 56 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1803 2700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1897 470K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-4501 1 OHM RESISTOR - 1/2W. 10% (2 REQ.)
*63-9974 DUAL BASS CONTROL - 100K OHM
*63-9975 DUAL TREBLE CONTROL - 500K OHM
*63-10116 DUAL VOLUME CONTROL - 3 MEGOHM
*63-10169 SINGLE BALANCE CONTROL - 1 MEGOHM
64-1033 GRIP EYELET (5 REQ.)
64-1046 GRIP EYELET (4 REQ.)
78-2080 INTEGRATED CIRCUIT SOCKET (2 REQ.)
86-500 CONNECTOR PIN (4 REQ.)
136-87 FUSE .6 AMP. - 250V.
212-76 SILICON RECTIFIER
221-64 INTEGRATED CIRCUIT (2 REQ.)

CHASSIS 3WEA10

12-6205 METAL STAMPING BRACKET
22-2593 20 PF CERAMIC CAPACITOR ± 5 PF - 500V. (2 REQ.)
22-3034 .05 MF CERAMIC CAPACITOR +100% -50% - 25V. (2 REQ.)
22-5167 1000 MF ELECTROLYTIC +100% -10% - 30V.
22-5439 .056 MF TUBULAR CAPACITOR 10% - 50V. (2 REQ.)
22-5483 1500 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
22-5688 1000 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
22-6134 .15 MF MYLAR CAPACITOR - 100V. (2 REQ.)
22-7150-05 22 MF ELECTROLYTIC +100% -10% - 10V. (2 REQ.)
22-7152-08 100 MF ELECTROLYTIC +100% -10% - 25V.
22-7152-09 220 MFD ELECTROLYTIC - 25V.
22-7153 1 MF ELECTROLYTIC +100% -10% - 50V.
52-2150 PHONE INPUT CABLE
63-1722 33 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1743 100 OHM RESISTOR - 1/2W. 10%
63-1803 2700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1897 470K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-4501 1 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-9974 DUAL BASS CONTROL - 100K OHM
63-9975 DUAL TREBLE CONTROL - 500K OHM
63-10116 DUAL VOLUME CONTROL - 3 MEGOHM
*63-10169 SINGLE BALANCE CONTROL - 1 MEGOHM
64-1033 GRIP EYELET (5 REQ.)
64-1046 GRIP EYELET (4 REQ.)
78-2080 INTEGRATED CIRCUIT SOCKET (2 REQ.)
78-2137 PHONE SOCKET
86-500 CONNECTOR PIN (4 REQ.)
126-1631 IC HEAT SINK
149-311 IRON CORE
212-76 SILICON RECTIFIER
221-64 INTEGRATED CIRCUIT (2 REQ.)

CHASSIS 3WEA10Z1

12-6205 METAL STAMPING BRACKET
22-2593 20 PF CERAMIC CAPACITOR ± 5 PF - 500V. (2 REQ.)
22-3034 .05 MF CERAMIC CAPACITOR +100% -50% - 25V. (2 REQ.)
22-5167 1000 MF ELECTROLYTIC +100% -10% - 30V.
22-5439 .056 MF TUBULAR CAPACITOR 10% - 50V. (2 REQ.)
22-5483 1500 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
22-5688 1000 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
22-6134 .15 MF MYLAR CAPACITOR - 100V. (2 REQ.)
22-7150-05 22 MF ELECTROLYTIC +100% -10% - 10V. (2 REQ.)
22-7152-08 100 MF ELECTROLYTIC +100% -10% - 25V.
22-7152-09 220 MFD ELECTROLYTIC - 25V.
22-7153 1 MF ELECTROLYTIC +100% -10% - 50V.
52-2150 PHONE INPUT CABLE
63-1722 33 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1743 100 OHM RESISTOR - 1/2W. 10%
63-1803 2700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1897 470K OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-4501 1 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-9974 DUAL BASS CONTROL - 100K OHM
63-9975 DUAL TREBLE CONTROL - 500K OHM
63-10116 DUAL VOLUME CONTROL - 3 MEGOHM
*63-10169 SINGLE BALANCE CONTROL - 1 MEGOHM
64-1033 GRIP EYELET (5 REQ.)
64-1046 GRIP EYELET (4 REQ.)
78-2080 INTEGRATED CIRCUIT SOCKET (2 REQ.)
78-2137 PHONE SOCKET
86-500 CONNECTOR PIN (4 REQ.)
126-1631 IC HEAT SINK
136-87 FUSE .6 AMP. - 250V.
149-311 IRON CORE
212-76 SILICON RECTIFIER
221-64 INTEGRATED CIRCUIT (2 REQ.)

CHASSIS 3AT20Z1

12-5331 CHASSIS SUPPORT BRACKET
22-3177 390 PF CERAMIC DISC CAPACITOR - 500V.
22-3652 .01 MF CERAMIC DISC CAPACITOR - 10V.
22-3973 100 MF ELECTROLYTIC - 25V.
22-4568 100 MF ELECTROLYTIC - 15V.
22-6096 470 MF ELECTROLYTIC - 35V.
63-1742 100 OHM RESISTOR - 1/2W. 5%
63-1775 560 OHM RESISTOR - 1/2W. 10%
63-1841 22K OHM RESISTOR - 1/2W. 10%
63-1883 220K OHM RESISTOR - 1/2W. 10%
63-1908 820K OHM RESISTOR - 1/2W. 10%
63-1911 1 MEGOHM RESISTOR - 1/2W. 10%
63-5429 4.7 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-8321 VOLUME CONTROL
86-329 CONNECTOR TERMINAL (2 REQ.)
103-145 DIODE
121-433 TRANSISTOR - DRIVER
-OR-
121-764 TRANSISTOR - DRIVER
212-76 SILICON RECTIFIER
800-305 TRANSISTOR - OUTPUT (MATCH PAIRS) (PNP & NPN)

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 3AT2022

12-5331 CHASSIS SUPPORT BRACKET
 22-3177 390 PF CERAMIC DISC CAPACITOR - 500V.
 22-3652 .01 MF CERAMIC DISC CAPACITOR - 10V.
 22-3973 100 MF ELECTROLYTIC - 25V.
 22-4568 100 MF ELECTROLYTIC - 15V.
 22-6096 470 MF ELECTROLYTIC - 35V.
 63-1742 100 OHM RESISTOR - 1/2W. 5%
 63-1775 560 OHM RESISTOR - 1/2W. 10%
 63-1841 22K OHM RESISTOR - 1/2W. 10%
 63-1883 220K OHM RESISTOR - 1/2W. 10%
 63-1908 820K OHM RESISTOR - 1/2W. 10%
 63-1911 1 MEGOHM RESISTOR - 1/2W. 10%
 63-5429 4.7 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-8321 VOLUME CONTROL
 86-329 CONNECTOR TERMINAL (2 REQ.)
 103-145 DIODE
 121-433 TRANSISTOR - DRIVER
 -OR-
 121-764 TRANSISTOR - DRIVER
 136-87 FUSE .6 AMP. - 250V.
 212-76 SILICON RECTIFIER
 800-305 TRANSISTOR - OUTPUT (MATCH PAIRS) (PNP & NPN)

CHASSIS 6AT24 - LATER PRODUCTION

12-475 CHASSIS MTG. BRACKET (4 REQ.)
 19-546 CAPACITOR RETAINING CLIP (2 REQ.)
 22-2939 680 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3239 .1 MF CAPACITOR - 400V. (4 REQ.)
 22-3878 2000 MF ELECTROLYTIC CAPACITOR - 75V.
 22-3881 1500 MF ELECTROLYTIC CAPACITOR - 50V.
 22-4145 .1 MF MYLAR CAPACITOR - 200V. (2 REQ.)
 22-4415 .47 MF CAPACITOR - 200V.
 22-5162 3 SECTION ELECTROLYTIC CAPACITOR -
 500/50V. - 500/50V. - 300/25V.
 22-5262 100 MF ELECTROLYTIC CAPACITOR - 50V. (2 REQ.)
 22-5362 1000 MF ELECTROLYTIC CAPACITOR - 50V. (2 REQ.)
 22-5455 50 MF ELECTROLYTIC - 50V.
 22-5903 .0015 MF DISC CAPACITOR - 1.4KV.
 43-333 3 CONTACT HOUSING - AC POWER
 43-574 9 CONTACT HOUSING - LARGE - POWER
 43-874 9 CONTACT HOUSING - SMALL - AUDIO
 54-31 10-32 X 3/8 HEX NUT (1 USED ON EA. 212-62)
 62-30 FUSE HOLDER (3 AMP.)
 63-1747 120 OHM RESISTOR - 1/2W. 10%
 63-1820 6800 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1827 10K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1926 2.2 MEGOHM RESISTOR - 1/2W. 20%
 63-1954 10 MEGOHM RESISTOR - 1/2W. 20%
 63-5282 .39 OHM RESISTOR - 5W. 5% (2 REQ.)
 63-5367 .43 OHM RESISTOR - 5W. 5% (2 REQ.)
 63-5369 220 OHM RESISTOR - 5W. 10%
 63-5638 180 OHM RESISTOR - 2W. 10%
 63-5641 220 OHM RESISTOR - 2W. 20%
 63-5961 2.7 OHM RESISTOR - 1W. 10% (4 REQ.)
 63-6042 220 OHM RESISTOR - 1W. 10%
 63-6045 270 OHM RESISTOR - 1W. 10%
 63-6442 560 OHM RESISTOR - 3W. 10% (2 REQ.)
 63-8705 10 OHM RESISTOR - 15W. 10% WW (2 REQ.)
 63-8716 115 OHM RESISTOR - 10W. 10% WW
 63-8717 270 OHM RESISTOR - 5W. 10% WW (2 REQ.)
 64-4 1/8 DIA. X 1/4 LG. TUBULAR RIVET - N.P.
 (2 USED ON EA. 78-1812)
 64-5 1/8 DIA. X 7/32 LG. TUBULAR RIVET - CADMIUM
 (2 JOIN EA. 83-5052 & 83-5054, 3 JOIN
 83-4987 & 83-5038, 2 USE/ON 78-402,
 & 2 JOIN EA. 83-5284 & 83-5291) (13 REQ.)
 64-6 1/8 DIA. X 3/16 LG. TUBULAR RIVET - CADMIUM
 (1 USED ON EA. 12-475, 78-1347 & 1 USED
 ON EA. 86-328) (16 REQ.)
 64-7 1/8 DIA. X 5/32 LG. TUBULAR RIVET - CADMIUM
 (1 USED ON EA. 83-7330 & 83-6208, 2 USED
 ON 95-2736 & 95-2737) (7 REQ.)
 64-31 1/8 DIA. X 11/32 LG. TUBULAR RIVET - CADMIUM
 (4 USED ON EA. S-73152) (8 REQ.)
 78-402 4 CONTACT HOUSING - PHONO MOTOR A.C.
 78-1347 ELECTROLYTIC SOCKET (3 REQ.)
 78-1812 2 CONTACT TRANSISTOR SOCKET (2 PART OF EA.
 S-73152) (6 REQ.)
 79-174-12 #18 SLEEVING - YELLOW - 1 1/2"
 79-243 3/8" CLEAR SLEEVING (USED ON 136-106 FUSE)
 83-4633 RUBBER STRIP
 83-4987 12 LUG TERMINAL STRIP
 83-5038 INSULATING STRIP
 83-5052 6 LUG TERMINAL STRIP (2 REQ.)
 83-5054 INSULATING STRIP (2 REQ.)
 83-5277 TRANSISTOR INSULATING STRIP (6 REQ.)
 83-5284 5 LUG TERMINAL STRIP (2 REQ.)
 83-5291 INSULATING STRIP (2 REQ.)
 83-6208 1 LUG TERMINAL STRIP (2 REQ.)
 83-7330 8 LUG TERMINAL STRIP
 83-8066 TIE STRIP - 6" (2 REQ.)
 86-303 TERMINAL - MALE (3 USED ON 43-333)
 86-328 WIRE RETAINING TERMINAL (2 REQ.)
 86-389 TERMINAL - FEMALE (9 USED ON 43-574)
 86-484 CONNECTOR TERMINAL (9 USED ON 43-874)
 86-496 CONNECTOR TERMINAL
 93-2 RIVET WASHER (2 USED ON 95-2737)
 93-369 INTERNAL LOCKWASHER SHAKEPROOF (1 USED ON
 EA. 212-62)
 95-2425 POWER TRANSFORMER
 95-2736 TRANSFORMER - DRIVER (RIGHT CHANNEL)
 95-2737 TRANSFORMER - DRIVER (LEFT CHANNEL)
 101-4722 FUSE LABEL (4 AMP.)
 101-5467 FUSE LABEL (3 AMP.)
 114-601 10-16 X 1/2 X 5/16 HEX WASHER HD. SELF-TAP.
 SCREW-STAT. BRONZE (4 MT. 95-2425)
 114-801 8-18 X 5/16 X 1/4 HEX HD. SELF-TAP. SCREW-STAT.
 BRONZE (4 USED ON EA. S-73152) (8 REQ.)
 114-1001 6-32 X 1/2 HEX WASHER HD. SELF-TAP. SCREW -
 SPECIAL (2 USED ON EA. 121-793 & 121-382)
 (12 REQ.)

CHASSIS 6AT24 - LATER PRODUCTION CONT'D

121-382X TRANSISTOR - POWER - MATCHED PAIR (2 PAIR REQ.)
 121-793 TRANSISTOR - DRIVER (2 REQ.)
 136-61 FUSE - 3 AMP. - 250V. (TYPE C)
 136-106 FUSE - 4 AMP. - 125V. - 3AG - PIGTAIL
 212-62 SILICON RECTIFIER (2 REQ.)
 212-76 SILICON RECTIFIER
 S-73152 HEAT SINK ASSEM. (2 REQ.)
 CHASSIS 5WER50
 *11-305 CORD, LINE
 12-4901 BRACKET, BEARING (1 USED ON EA. 63-9254,
 63-9255, 63-9256 & 63-9257)
 *12-6061 BRACKET, CONTROL MTG.
 *12-6062 BRACKET, TRANSISTOR MTG.
 *12-6117 BRACKET, AFC SWITCH & JACK MTG.
 19-492 CLIP, WIRE RETAINING (2 REQ.)
 *19-765 CLAMP, CABLE
 20-1631 COIL, TRAP - 10.7MHZ
 20-1648 COIL, FM/RF
 20-3291 COIL, FM ANTENNA
 20-3597 COIL, FM OSCILLATOR
 22-13 3300 PF CERAMIC CAPACITOR 10% - 500V.
 (5 REQ.)
 22-14 4700 PF CERAMIC CAPACITOR 10% - 500V.
 22-16 470 PF CERAMIC CAPACITOR 10% - 500V.
 22-2428 1.8 PF GIMMICK CAPACITOR 10% - 500V.
 22-2481 8 PF CERAMIC CAPACITOR ±0.5 PF - 500V. (3 REQ.)
 *22-2729 1000 PF CERAMIC CAPACITOR +50% -30% - 25V.
 (3 REQ.)
 22-2939 680 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
 22-3033 .02 MF CERAMIC CAPACITOR +100% -30% - 25V.
 *22-3034 .05 MF CERAMIC CAPACITOR +100% -50% - 25V.
 (18 REQ.)
 22-3080 5000 PF CERAMIC CAPACITOR +100% -30% - 25V.
 22-3177 390 PF CERAMIC CAPACITOR 10% - 500V. (3 REQ.)
 22-3310 2.7 PF GIMMICK CAPACITOR 10% - 500V.
 22-3381 39 PF CERAMIC CAPACITOR 5% - 500V.
 22-3393 .01 MF CERAMIC CAPACITOR +80% -30% - 25V.
 (3 REQ.)
 22-3541 3.3 PF GIMMICK CAPACITOR 5% - 500V.
 22-3608 68 PF CERAMIC CAPACITOR 10% - 500V.
 22-3652 .1 MF CERAMIC CAPACITOR +80% -20% - 10V.
 22-3675 10 PF CERAMIC CAPACITOR 5% - 500V.
 *22-3751 20 PF CERAMIC CAPACITOR 5% - 500V.
 22-3770 5.5 PF CERAMIC CAPACITOR ±0.25 PF - 500V.
 22-3791 42 PF CERAMIC CAPACITOR 5% - 500V.
 22-3792 17 PF CERAMIC CAPACITOR 5% - 500V.
 22-4617 .01 MF CERAMIC CAPACITOR +80% -20% - 25V.
 (2 REQ.)
 22-4819 2 PF CERAMIC CAPACITOR ±0.25 PF - 500V.
 22-5481 560 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
 22-5482 680 PF CERAMIC CAPACITOR 10% - 500V. (7 REQ.)
 22-5483 1500 PF CERAMIC CAPACITOR 10% - 500V.
 22-5486 10 MF ELECTROLYTIC +100% -10% - 6V.
 *22-5782 2200 PF POLYSTYRENE CAPACITOR 5% - 50V.
 (2 REQ.)
 22-5863 .01 MF MYLAR CAPACITOR 10% - 100V.
 (2 REQ.)
 22-5878 5.5 PF CERAMIC CAPACITOR ±0.5 PF - 50V.
 22-5879 3.3 PF CERAMIC CAPACITOR ±0.25 PF - 50V.
 22-5972 390 POLYSTYRENE CAPACITOR 5% - 125V.
 22-6005 .01 MF CERAMIC CAPACITOR (2 REQ.)
 22-6048 .22 MF MYLAR CAPACITOR 10% - 50V. (2 REQ.)
 22-6246 3.3 MF ELECTROLYTIC +100% -20% - 15V.
 22-6447-01 .047 MF MYLAR CAPACITOR 20% - 100V. (2 REQ.)
 *22-6470 TRIMMER, FM OSCILLATOR
 *22-7134 5 SECTION GANG CAPACITOR - FM DETECTOR TRIMMER,
 FM DETECTOR TUNING, FM OSCILLATOR
 TUNING, AM OSCILLATOR TRIMMER, AM
 OSCILLATOR TUNING, AM ANTENNA TRIMMER,
 FM ANTENNA TRIMMER, AM ANTENNA TUNING,
 FM ANTENNA TUNING
 *22-7141-11 470 MF ELECTROLYTIC +100% -10% - 16V.
 22-7142-02 4.7 MFD ELECTROLYTIC - 25V.
 22-7142-12 1000 MF ELECTROLYTIC +100% -10% - 25V.
 22-7143 1 MF ELECTROLYTIC +100% -10% - 50V. (2 REQ.)
 *22-7150-07 47 MF ELECTROLYTIC +100% -10% - 10V.
 *22-7151-09 220 MF ELECTROLYTIC +100% -10% - 16V. (2 REQ.)
 22-7152-11 470 MF ELECTROLYTIC +100% -10% - 25V. (2 REQ.)
 22-7153 1 MF ELECTROLYTIC +100% -10% - 50V. (4 REQ.)
 33-445 FRAME, PRINTED CIRCUIT BOARD
 *43-519 HOUSING, CONTACT SOCKET (USED WITH 52-1500)
 *52-1290 CABLE, MULTI-CONDUCTOR (USED ON 78-2137)
 52-1500 3 CONDUCTOR CABLE
 52-1588 CABLE, 2 CONDUCTOR SHIELDED
 52-1589 CABLE, 2 CONDUCTOR SHIELDED
 52-1590 CABLE, 2 CONDUCTOR
 *52-2045 CABLE, MULTI-CONDUCTOR (PART OF S-91095)
 52-2147 CABLE, ANTENNA
 54-139 PALMUT - 3/8-32 X 9/16 (2 MT. S-93521, 1 MTS.
 USED)
 54-808 NUT, SPRING (4 REQ.)
 *54-914-01 CLIP, SPEED (2 PART OF S-93519)
 58-214 PLUG, PHONO (PART OF S-77233)
 59-1134 POINTER, DIAL
 61-222 PULLEY, IDLER (4 PART OF S-93519)
 *61-287 PULLEY, IDLER (PART OF S-93519)
 63-1701 10 OHM RESISTOR - 1/2W. 10%
 *63-1707 15 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 *63-1711 18 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1740 82 OHM RESISTOR - 1/2W. 10%
 63-1756 220 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1757 220 OHM RESISTOR - 1/2W. 10% (2 USED ON
 78-2137)
 63-1760 270 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1761 270 OHM RESISTOR - 1/2W. 10%
 63-1768 390 OHM RESISTOR - 1/2W. 10%
 63-1771 470 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1772 470 OHM RESISTOR - 1/2W. 20% (4 REQ.)
 63-1775 560 OHM RESISTOR - 1/2W. 10%
 63-1778 680 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1785 1K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1796 1800 OHM RESISTOR - 1/2W. 10%
 63-1798 2200 OHM RESISTOR - 1/2W. 5% (3 REQ.)

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 5WER50 CONT'D

63-1799 2200 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1806 3300 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1813 4700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1816 5600 OHM RESISTOR - 1/2W. 10%
 63-1827 10K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1831 12K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1834 15K OHM RESISTOR - 1/2W. 10%
 63-1840 22K OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1841 22K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1845 27K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1848 33K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1866 82K OHM RESISTOR - 1/2W. 10%
 63-1869 100K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1876 150K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1891 330K OHM RESISTOR - 1/2W. 20%
 63-1898 470K OHM RESISTOR - 1/2W. 20% (3 REQ.)
 63-1915 1.2 MEGOHM RESISTOR - 1/2W. 10%
 63-1918 1.5 MEGOHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1933 3.3 MEGOHM RESISTOR - 1/2W. 10%
 63-1950 8.2 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4185 1K OHM RESISTOR - 1/4W. 10%
 63-4196 1800 OHM RESISTOR - 1/4W. 10%
 63-4213 4700 OHM RESISTOR - 1/4W. 10%
 63-6042 220 OHM RESISTOR - 1/4W. 10%
 63-8328 CONTROL, MUTE
 63-9254 CONTROL, BALANCE
 -OR-
 *63-10159 CONTROL, BALANCE
 *63-9255 CONTROL, DUAL LOUDNESS
 -OR-
 *63-10160 CONTROL, DUAL LOUDNESS
 *63-9256 CONTROL, DUAL TREBLE
 -OR-
 *63-10161 CONTROL, DUAL TREBLE
 63-9257 CONTROL, DUAL BASS
 -OR-
 *63-10162 CONTROL, DUAL BASS
 *63-9982 1 OHM RESISTOR - 2W. 10% (2 REQ.)
 64-1046 EYELET, GRIP
 *76-2088 TUNING SHAFT
 78-2080 SOCKET, INTEGRATED CIRCUIT
 78-2137 JACK, PHONE
 *78-2151 SOCKET, LAMP
 79-174-8 #18 YELLOW SLEEVING (6 REQ.)
 80-2045 RETAINING SPRING (PART OF S-94170)
 80-2143 SPRING, CORD TENSION
 83-7417 STRIP, ANTENNA PROTECTIVE
 83-8066 STRIP, TIE - 6" (4 REQ.)
 83-8538 STRIP, BACKGROUND
 83-8592 STRIP, TERMINAL
 *85-1372 SWITCH, AFC
 86-334 TERMINAL (3 USED ON 43-519)
 86-344 TERMINAL SOCKET (3 PART OF S-91095 & 1 PART OF S-94014) (7 REQ.)
 86-357 TERMINAL, CONNECTOR (PART OF S-94014)
 86-500 PIN, CONNECTOR (9 REQ.)
 93-1195 FLAT WASHER (USED ON 78-2137)
 93-1833 WASHER, INSULATING (1 USED ON EA. 121-976 & 121-977)
 93-1984 WASHER, LOCK (2 REQ.)
 94-1453 BUSHING, NYLON SHAFT
 94-1586 BUSHING, PLAIN SHOULDER (1 USED ON EA. 121-976)
 95-2541 TRANSFORMER, AM 1ST. I.F. - 455 KHZ
 95-2542 TRANSFORMER, AM 2ND. I.F. - 455 KHZ
 95-2545 TRANSFORMER, FM RATIO DETECTOR - 10.7 KHZ
 95-2546 TRANSFORMER, FM 1ST. I.F. - 10.7 MHZ
 95-2547 TRANSFORMER, FM 2ND. I.F. - 10.7 MHZ
 95-2548 TRANSFORMER, FM 3RD. I.F. - 10.7 MHZ
 95-2651 TRANSFORMER, POWER
 95-2689 TRANSFORMER, AM 3RD. I.F. - 455 KHZ
 95-3021 TRANSFORMER, INPUT - 19 KHZ
 95-3023 TRANSFORMER, DETECTOR - 38 KHZ
 95-3077 TRANSFORMER, AM OSCILLATOR
 97-904-01 STUD, BALL
 100-249 LAMP, DIAL
 101-4710 LABEL, FUSE
 101-5584-02 LABEL, FUSE
 103-23 DIODE, GERMANIUM (2 REQ.)
 103-47 DIODE, AFC
 -OR-
 *103-189 DIODE, AFC
 103-90 DIODE, GERMANIUM - MATCHED PAIR
 103-96 DIODE, ZENER
 103-142 DIODE, GERMANIUM
 103-222 DIODE, SILICON (2 REQ.)
 112-1091 SCREW, MACHINE - 4-40 X 0.250 (2 MT. 85-1372)
 114-802 8-18 X 0.312 X 0.250 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (15 REQ.)
 114-1115 6-20 X 0.375 X 0.250 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (2 REQ.)
 114-1302 4-24 X 5/8 X 0.187 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (1 USED WITH EA. 121-976 & 121-977)
 121-433 TRANSISTOR (2 PRE-AMPLIFIER & 2 PRE-DRIVER)
 121-612 TRANSISTOR - FM/RF
 121-613 TRANSISTOR - FM CONVERTER
 121-614 TRANSISTOR - AM/FM 1ST. I.F.
 *121-735 TRANSISTOR - AM CONVERTER
 121-950 TRANSISTOR - AM/FM 2ND. I.F., FM 3RD. I.F. (2 REQ.)
 121-976 TRANSISTOR - OUTPUT (2 REQ.)
 121-977 TRANSISTOR - OUTPUT (2 REQ.)
 125-140 BUSHING, LINE CORD RETAINING
 *136-101 FUSE - 1/4 AMP. - 250V.
 136-107 FUSE - 0.05 AMP. - 250V.
 149-311 IRON CORE
 188-128 RETAINING RING (PART OF S-93521)
 199-319 SLEEVE (PART OF S-91095)
 212-76 RECTIFIER, SILICON (2 REQ.)
 221-65 INTEGRATED CIRCUIT PACKAGE
 S-77233 PHONO CABLE & PLUG ASSEM.
 S-88991 DIAL CORD ASSEM.

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 5WER50 CONT'D

3 CONDUCTOR CABLE (USED ON 78-2137)
 WAVEMAGNET ANTENNA ASSEM.
 IDLER PULLEY & BRACKET ASSEM. (PART OF S-93521)
 HANDSWITCH ASSEM. (5 POSITION)
 JACK & BRACKET ASSEM.
 ANTENNA CABLE & TERMINAL ASSEM.
 PULLEY & SPRING ASSEM.

CHASSIS 5WER51

*11-150 LINE CORD & PLUG
 12-4901 BRACKET, BEARING (1 USED ON EA. 63-9254, 63-9255, 63-9256 & 63-9257)
 *12-6061 BRACKET, CONTROL MTG. (PART OF S-95184)
 *12-6062 BRACKET, TRANSISTOR MTG.
 *12-6117 BRACKET, AFC SWITCH & JACK MTG.
 17-130 LOOP RETAINING CLAMP
 19-536 WIRE RETAINING CLIP (2 REQ.)
 *19-724 WIRE CLIP
 20-1631 COIL, TRAP - 10.7MHZ
 20-1648 COIL, FM/RF
 20-3291 COIL, FM ANTENNA
 20-3597 COIL, FM OSCILLATOR
 22-13 3300 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
 22-14 4700 PF CERAMIC CAPACITOR 10% - 500V. (3 REQ.)
 22-16 470 PF CERAMIC CAPACITOR 10% - 500V. (3 REQ.)
 22-2428 1.8 PF GIMMICK CAPACITOR 10% - 500V.
 22-2481 8 PF CERAMIC CAPACITOR ±0.5 PF - 500V. (3 REQ.)
 *22-2729 1000 PF CERAMIC CAPACITOR +50% -30% - 25V. (3 REQ.)
 22-3033 .02 MF CERAMIC CAPACITOR +100% -30% - 25V.
 *22-3034 .05 MF CERAMIC CAPACITOR +100% -50% - 25V. (18 REQ.)
 22-3080 5000 PF CERAMIC CAPACITOR +100% -30% - 25V.
 22-3177 390 PF CERAMIC CAPACITOR 10% - 500V. (3 REQ.)
 22-3310 2.7 PF GIMMICK CAPACITOR 10% - 500V. (2 REQ.)
 22-3362 560 PF CERAMIC DISC CAPACITOR - 500V. (2 REQ.)
 22-3381 39 PF CERAMIC CAPACITOR 5% - 500V.
 22-3393 .01 MF CERAMIC CAPACITOR +80% -30% - 25V. (3 REQ.)
 22-3541 3.3 PF GIMMICK CAPACITOR 5% - 500V.
 22-3608 68 PF CERAMIC CAPACITOR 10% - 500V.
 22-3652 .1 MF CERAMIC CAPACITOR +80% -20% - 10V.
 22-3675 10 PF CERAMIC CAPACITOR 5% - 500V.
 *22-3751 20 PF CERAMIC CAPACITOR 5% - 500V.
 22-3770 5.5 PF CERAMIC CAPACITOR ±0.25 PF - 500V.
 22-3791 42 PF CERAMIC CAPACITOR 5% - 500V.
 22-3792 17 PF CERAMIC CAPACITOR 5% - 500V.
 22-3896 5 MF ELECTROLYTIC CAPACITOR +100% -10% - 25V.
 22-4617 .01 MF CERAMIC CAPACITOR +80% -20% - 25V. (2 REQ.)
 22-4819 2 PF CERAMIC CAPACITOR ±0.25 PF - 500V.
 22-5481 560 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
 22-5482 680 PF CERAMIC CAPACITOR 10% - 500V. (8 REQ.)
 22-5483 1500 PF CERAMIC CAPACITOR 10% - 500V.
 22-5486 10 MF ELECTROLYTIC +100% -10% - 6V.
 *22-5782 2200 PF POLYSTYRENE CAPACITOR 5% - 50V - (2 REQ.)
 22-5863 .01 MF MYLAR CAPACITOR 10% - 100V. (2 REQ.)
 22-5878 5.5 PF CERAMIC CAPACITOR ±0.5 PF - 50V.
 22-5879 3.3 PF CERAMIC CAPACITOR ±0.25 PF - 50V.
 *22-5972 390 POLYSTYRENE CAPACITOR 5% - 125V.
 22-6005 .01 MF CERAMIC CAPACITOR (2 REQ.)
 22-6048 .22 MF MYLAR CAPACITOR 10% - 50V. (2 REQ.)
 22-6246 3.3 MF ELECTROLYTIC +100% -20% - 15V.
 22-6447-01 .047 MF MYLAR CAPACITOR 20% - 100V. (2 REQ.)
 *22-6470 TRIMMER, FM OSCILLATOR
 *22-7134 5 SECTION GANG CAPACITOR - FM DETECTOR TRIMMER, FM DETECTOR TUNING, FM OSCILLATOR TUNING, AM OSCILLATOR TRIMMER, AM OSCILLATOR TUNING, AM ANTENNA TRIMMER, FM ANTENNA TRIMMER, AM ANTENNA TUNING
 22-7141-11 470 MF ELECTROLYTIC +100% -10% - 16V.
 22-7142-12 1000 MF ELECTROLYTIC +100% -10% - 25V.
 22-7143 1 MF ELECTROLYTIC +100% -10% - 50V. (2 REQ.)
 *22-7150-07 47 MF ELECTROLYTIC +100% -10% - 10V.
 22-7151-08 100 MF ELECTROLYTIC +100% -10% - 16V. (2 REQ.)
 22-7152-11 470 MF ELECTROLYTIC +100% -10% - 25V. (2 REQ.)
 22-7153 1 MF ELECTROLYTIC +100% -10% - 50V. (4 REQ.)
 *30-526 DECORATIVE ITEM (DIAL BACKGROUND)
 33-443 FRAME, PRINTED CIRCUIT BOARD
 *43-519 HOUSING, CONTACT SOCKET (USED WITH 52-1500)
 52-1287 CABLE, 3 CONDUCTOR (USED ON 78-2137)
 52-1900 3 CONDUCTOR CABLE
 52-1900 CABLE, 2 CONDUCTOR (PART OF S-95209)
 52-1995 CABLE, MULTI-CONDUCTOR (USED ON 78-213 7)
 52-2147 CABLE, ANTENNA
 *52-2152 CABLE, 2 CONDUCTOR SHIELDED (USED ON S-93841)
 *52-2153 CABLE, 2 CONDUCTOR SHIELDED (USED ON S-93841)
 54-139 PALNUT - 3/8-32 X 9/16 (2 MT. S-95209, 1 MTS. 78-2137, USE 1 ONLY WHEN 63-10160 IS USED)
 54-808 NUT, SPRING (4 REQ.)
 *54-914-01 CLIP, SPEED (2 PART OF S-95184)
 58-214 PLUG, PHONO (PART OF S-77233)
 61-222 PULLEY, IDLER (4 PART OF S-95184)
 *61-287 PULLEY, IDLER (PART OF S-95184)
 63-1701 10 OHM RESISTOR - 1/2W. 10%
 *63-1707 15 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1708 15 OHM RESISTOR - 1/2W. 10%
 *63-1711 18 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1740 82 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1756 220 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1757 220 OHM RESISTOR - 1/2W. 10% (2 USED ON 78-2137)
 63-1760 270 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1761 270 OHM RESISTOR - 1/2W. 10%
 63-1768 390 OHM RESISTOR - 1/2W. 10%
 63-1771 470 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1772 470 OHM RESISTOR - 1/2W. 20% (4 REQ.)
 63-1775 560 OHM RESISTOR - 1/2W. 10%
 63-1778 680 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1785 1K OHM RESISTOR - 1/2W. 10% (3 REQ.)

CHASSIS 5WER51 CONT'D

*63-1796 1800 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1798 2200 OHM RESISTOR - 1/2W. 5% (3 REQ.)
 63-1799 2200 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1806 3300 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1813 4700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1816 5600 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1827 10K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1831 12K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1834 15K OHM RESISTOR - 1/2W. 10%
 *63-1840 22K OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1841 22K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1845 27K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1848 33K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1866 82K OHM RESISTOR - 1/2W. 10%
 63-1869 100K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1876 150K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1891 330K OHM RESISTOR - 1/2W. 20%
 *63-1898 470K OHM RESISTOR - 1/2W. 20% (3 REQ.)
 63-1915 1.2 MEGOHM RESISTOR - 1/2W. 10%
 63-1918 1.5 MEGOHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1950 8.2 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4185 1K OHM RESISTOR - 1/4W. 10%
 63-4196 1800 OHM RESISTOR - 1/4W. 10%
 63-4213 4700 OHM RESISTOR - 1/4W. 10%
 63-6003 27 OHM RESISTOR - 1W. 10%
 63-6042 220 OHM RESISTOR - 1W. 10%
 63-7314 5.6 OHM RESISTOR - 5W. 10% (2 REQ.)
 63-8328 CONTROL, MUTE
 63-9254 CONTROL, BALANCE
 -OR-
 *63-10159 CONTROL, BALANCE
 *63-9255 CONTROL, DUAL LOUDNESS
 -OR-
 *63-10160 CONTROL, DUAL LOUDNESS
 *63-9256 CONTROL, DUAL TREBLE
 -OR-
 *63-10161 CONTROL, DUAL TREBLE
 63-9257 CONTROL, DUAL BASS
 -OR-
 *63-10162 CONTROL, DUAL BASS
 63-9982 1 OHM RESISTOR - 2W. 10% (2 REQ.)
 63-10135 11 OHM RESISTOR - 5W. 10%
 *76-2088 TUNING SHAFT
 78-2080 SOCKET, INTEGRATED CIRCUIT
 78-2137 JACK, PHONE
 79-174-8 #18 YELLOW SLEEVE (6 REQ.)
 *79-243-12 SLEEVE - 3/8" (2 REQ.)
 80-2045 RETAINING SPRING (PART OF S-94170)
 80-2143 SPRING, CORD TENSION
 83-7417 STRIP, ANTENNA PROTECTIVE
 83-8066 STRIP, TIE - 6" (4 REQ.)
 83-8592 STRIP, TERMINAL
 *83-8611 7 CONTACT TERMINAL STRIP
 *85-1372 SWITCH, AFC
 *85-1410 SWITCH (PART OF S-96494)
 86-334 TERMINAL (3 USED ON 43-519)
 86-344 TERMINAL, SOCKET (1 PART OF S-94014) (4 REQ.)
 86-357 TERMINAL, CONNECTOR (PART OF S-94014)
 86-500 PIN, CONNECTOR (9 REQ.)
 93-1833 WASHER, INSULATING (1 USED ON EA. 121-976 & 121-977)
 94-1453 BUSHING, NYLON SHAFT
 94-1586 BUSHING, PLAIN SHOULDER (1 USED ON EA. 121-976)
 95-2541 TRANSFORMER, AM 1ST. I.F. - 455 KHZ
 95-2542 TRANSFORMER, AM 2ND. I.F. - 455 KHZ
 95-2545 TRANSFORMER, FM RATIO DETECTOR - 10.7 KHZ
 95-2546 TRANSFORMER, FM 1ST. I.F. - 10.7 MHZ
 95-2547 TRANSFORMER, FM 2ND. I.F. - 10.7 MHZ
 95-2548 TRANSFORMER, FM 3RD. I.F. - 10.7 MHZ
 95-2689 TRANSFORMER, AM 3RD. I.F. - 455 KHZ
 95-3022 TRANSFORMER, INPUT - 19 KHZ
 95-3023 TRANSFORMER, DETECTOR - 38 KHZ
 95-3077 TRANSFORMER, AM OSCILLATOR
 *95-3107 TRANSFORMER, POWER
 97-904-01 STUD, BALL (PART OF S-95184)
 100-604 1 AMP. SNAP-IN (2 REQ.)
 100-610 BULB - WITH LEADS
 100-625 BULB WITH LEADS (USED ON S-96092)
 101-4712 LABEL, FUSE
 101-5584-02 LABEL, FUSE
 103-23 DIODE, GERMANIUM (2 REQ.)
 103-47 DIODE, AFC
 -OR-
 *103-189 DIODE, AFC
 103-90 DIODE, GERMANIUM - MATCHED PAIR
 103-96 DIODE, ZENER
 103-142 DIODE, GERMANIUM
 103-222 DIODE, SILICON (2 REQ.)
 112-1091 SCREW, MACHINE - 4-40 X 0.250 (2 MT. 85-1372)
 114-802 8-18 X 0.312 X 0.250 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (16 REQ.)
 114-1115 6-20 X 0.375 X 0.250 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (2 REQ.)
 114-1302 4-24 X 5/8 X 0.187 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (1 USED WITH EA. 121-976 & 121-977)
 121-433 TRANSISTOR (2 PRE-AMPLIFIER & 2 PRE-DRIVER)
 121-612 TRANSISTOR - FM/RF
 121-613 TRANSISTOR - FM CONVERTER
 121-614 TRANSISTOR - AM/FM 1ST. I.F.
 *121-735 TRANSISTOR - AM CONVERTER
 121-768 TRANSISTOR - PRE-DRIVER (2 REQ.)
 121-950 TRANSISTOR - AM/FM 2ND. I.F., FM 3RD. I.F. (2 REQ.)
 121-976 TRANSISTOR - OUTPUT (2 REQ.)
 121-977 TRANSISTOR - OUTPUT (2 REQ.)
 125-140 BUSHING, LINE CORD RETAINING
 *136-101 FUSE - 1/4 AMP. - 250V.
 136-109 FUSE - 1.0 AMP. - 8 AG - 250V.
 149-311 IRON CORE
 188-128 RETAINING RING (USED ON S-95209)
 212-76 RECTIFIER, SILICON (2 REQ.)
 221-65 INTEGRATED CIRCUIT PACKAGE
 S-77233 PHONO CABLE & PLUG ASSEM. (PART OF S-95209)
 *S-88992 DIAL CORD ASSEM.

CHASSIS 5WER51 CONT'D

S-93518 WAVEMAGNET ANTENNA ASSEM.
 *S-93841 JACK & BRACKET ASSEM. (5 POSITION)
 *S-94014 ANTENNA CABLE & TERMINAL ASSEM.
 S-94170 PULLEY & SPRING ASSEM.
 *S-95182 LAMP HOLDER & BRACKET ASSEM.
 *S-95183 LAMP HOLDER & BRACKET ASSEM. (PART OF S-95184)
 *S-95184 PULLEY & BRACKET ASSEM.
 *S-95209 BANDSWITCH ASSEM. (5 POSITION)
 *S-96092 POINTER & MFG. BRACKET ASSEM.
 *S-96494 JACK & SWITCH ASSEM.

CHASSIS 5WER53

*11-122 CORD, DIAL (PART OF S-88992)
 11-150 LINE CORD & PLUG
 12-4901 BRACKET, BEARING (1 USED ON EA. 63-9254, 63-9255, 63-9256 & 63-9257)
 *12-6061 BRACKET, CONTROL MTG.
 *12-6062 BRACKET, TRANSISTOR MTG.
 *12-6093 'L' SHAPE JACK MTG. BRACKET - PLATE
 *12-6117 BRACKET, AFC SWITCH & JACK MTG.
 *12-6239 DIAL LIGHT BRACKET - RIGHT SIDE
 17-130 LOOP RETAINING CLAMP
 19-492 CLIP, WIRE RETAINING (2 REQ.)
 19-536 WIRE RETAINING CLIP (2 REQ.)
 19-724 WIRE CLIP
 *19-765 CLAMP, CABLE
 20-1631 COIL, TRAP - 10.7MHZ
 20-1648 COIL, FM/RF
 20-3291 COIL, FM ANTENNA
 20-3597 COIL, FM OSCILLATOR
 22-13 3300 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
 22-14 4700 PF CERAMIC CAPACITOR 10% - 500V. (3 REQ.)
 22-16 470 PF CERAMIC CAPACITOR 10% - 500V. (4 REQ.)
 22-2428 1.8 PF GIMMICK CAPACITOR 10% - 500V.
 22-2481 8 PF CERAMIC CAPACITOR ±0.5 PF - 500V. (3 REQ.)
 *22-2729 1000 PF CERAMIC CAPACITOR +50% -30% - 25V. (3 REQ.)
 22-2939 680 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
 22-3033 .02 MF CERAMIC CAPACITOR +100% -30% - 25V.
 *22-3034B .05 MF CERAMIC CAPACITOR +100% -50% - 25V. (18 REQ.)
 22-3080 5000 PF CERAMIC CAPACITOR +100% -30% - 25V.
 22-3177 390 PF CERAMIC CAPACITOR 10% - 500V. (3 REQ.)
 22-3310 2.7 PF GIMMICK CAPACITOR 10% - 500V. (2 REQ.)
 22-3362 560 PF CERAMIC DISC CAPACITOR ±10% - 500V. (2 REQ.)
 22-3381 39 PF CERAMIC CAPACITOR ±10% - 500V.
 22-3393 .01 MF CERAMIC CAPACITOR +80% -30% - 25V. (3 REQ.)
 22-3541 3.3 PF GIMMICK CAPACITOR 5% - 500V.
 22-3608 68 PF CERAMIC CAPACITOR 10% - 500V.
 22-3652 .1 MF CERAMIC CAPACITOR +80% -20% - 10V.
 22-3675 10 PF CERAMIC CAPACITOR 5% - 500V.
 *22-3751 20 PF CERAMIC CAPACITOR 5% - 500V.
 22-3770 5.5 PF CERAMIC CAPACITOR ±0.25 PF - 500V.
 22-3791 42 PF CERAMIC CAPACITOR 5% - 500V.
 22-3792 17 PF CERAMIC CAPACITOR 5% - 500V.
 22-3896 5MF ELECTROLYTIC +100% -10% - 25V.
 22-4617 .01 MF CERAMIC CAPACITOR +80% -20% - 25V. (2 REQ.)
 22-4819 2 PF CERAMIC CAPACITOR ±0.25 PF - 500V.
 22-5481 560 PF CERAMIC CAPACITOR 10% - 500V. (2 REQ.)
 22-5482 680 PF CERAMIC CAPACITOR 10% - 500V. (8 REQ.)
 22-5483 1500 PF CERAMIC CAPACITOR 10% - 500V.
 22-5486 10 MF ELECTROLYTIC +100% -10% - 6V.
 *22-5782 2200 PF POLYSTYRENE CAPACITOR 5% - 50V. (2 REQ.)
 22-5863 .01 MF MYLAR CAPACITOR 10% - 100V. (2 REQ.)
 22-5878 5.5 PF CERAMIC CAPACITOR ±0.5 PF - 50V.
 22-5879 3.3 PF CERAMIC CAPACITOR ±0.25 PF - 50V.
 22-5972 390 POLYSTYRENE CAPACITOR 5% - 125V.
 22-6005 .01 MF CERAMIC CAPACITOR (2 REQ.)
 22-6048 .22 MF MYLAR CAPACITOR 10% - 50V. (2 REQ.)
 22-6246 3.3 MF ELECTROLYTIC +100% -20% - 15V.
 22-6447-01 .047 MF MYLAR CAPACITOR 20% - 100V. (2 REQ.)
 *22-6470 TRIMMER, FM OSCILLATOR
 *22-7134 5 SECTION GANG CAPACITOR - FM DETECTOR TRIMMER, FM DETECTOR TUNING, FM OSCILLATOR TUNING, AM OSCILLATOR TRIMMER, AM OSCILLATOR TUNING, AM ANTENNA TRIMMER, FM ANTENNA TRIMMER, AM ANTENNA TUNING, FM ANTENNA TUNING
 *22-7141-11 470 MF ELECTROLYTIC +100% -10% - 16V.
 *22-7142-12 1000 MF ELECTROLYTIC +100% -10% - 25V.
 22-7143 1 MF ELECTROLYTIC +100% -10% - 50V. (2 REQ.)
 *22-7150-07 47 MF ELECTROLYTIC +100% -10% - 10V.
 *22-7151-08 100 MF ELECTROLYTIC +100% -10% - 16V. (2 REQ.)
 *22-7152-11 470 MF ELECTROLYTIC +100% -10% - 25V. (2 REQ.)
 22-7153 1 MF ELECTROLYTIC +100% -10% - 50V. (4 REQ.)
 *30-526 DIAL BACKGROUND OVERLAY (APPROX. 7 1/2" LG.)
 33-443 FRAME, PRINTED CIRCUIT BOARD
 44-72 SPEAKER JACK
 52-1149 3 CONDUCTOR CABLE
 52-1287 3 CONDUCTOR CABLE
 *52-1290 CABLE, MULTI-CONDUCTOR (USED ON 78-2137)
 52-1588 CABLE, 2 CONDUCTOR SHIELDED
 52-1589 CABLE, 2 CONDUCTOR SHIELDED
 52-1590 CABLE, 2 CONDUCTOR
 52-2147 CABLE, ANTENNA
 *52-2188 300 OHM TWIN LEAD CABLE ASSEM.
 *52-2189 2 CONDUCTOR SHIELDED CABLE
 *52-2190 2 CONDUCTOR SHIELDED CABLE
 *52-2191 2 CONDUCTOR SHIELDED CABLE
 54-139 PALNUT - 3/8-32 X 9/16 (2 MT. 85-1401, 1 MTS. 78-2137, USE 1 ONLY WHEN 63-10160 IS USED)
 54-808 NUT, SPRING (4 REQ.)
 *54-914-01 CLIP, SPEED (2 USED ON S-95184)
 59-1135 POINTER, DIAL - WITH CARRIAGE
 61-222 PULLEY, IDLER (4 PART OF S-95184)
 *61-287 PULLEY, IDLER (PART OF S-95184)
 62-111 LAMP HOLDER
 *63-1707 15 OHM RESISTOR - 1/2W. 5%
 63-1708 15 OHM RESISTOR - 1/2W. 10%
 *63-1711 18 OHM RESISTOR - 1/2W. 5% (2 REQ.)

CHASSIS 5WR53 CONT'D

63-1740 82 OHM RESISTOR - 1/2W. 10%
 63-1756 220 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1757 220 OHM RESISTOR - 1/2W. 10% (2 USED ON 78-2137)
 63-1760 270 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1761 270 OHM RESISTOR - 1/2W. 10%
 63-1768 390 OHM RESISTOR - 1/2W. 10%
 63-1771 470 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1772 470 OHM RESISTOR - 1/2W. 20% (4 REQ.)
 63-1775 560 OHM RESISTOR - 1/2W. 10%
 63-1778 680 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1785 1K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1796 1800 OHM RESISTOR - 1/2W. 10%
 63-1798 2200 OHM RESISTOR - 1/2W. 5% (3 REQ.)
 63-1799 2200 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1806 3300 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1813 4700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1816 5600 OHM RESISTOR - 1/2W. 10%
 63-1827 10K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1831 12K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1834 15K OHM RESISTOR - 1/2W. 10%
 *63-1840 22K OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1841 22K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1845 27K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1848 33K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1866 82K OHM RESISTOR - 1/2W. 10%
 63-1869 100K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1876 150K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1891 330K OHM RESISTOR - 1/2W. 20%
 *63-1898 470K OHM RESISTOR - 1/2W. 20% (3 REQ.)
 63-1915 1.2 MEGOHM RESISTOR - 1/2W. 10%
 63-1918 1.5 MEGOHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1933 3.3 MEGOHM RESISTOR - 1/2W. 10%
 *63-1950 8.2 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4185 1K OHM RESISTOR - 1/4W. 10%
 63-4196 1800 OHM RESISTOR - 1/4W. 10%
 63-4213 4700 OHM RESISTOR - 1/4W. 10%
 63-6042 220 OHM RESISTOR - 1/4W. 10%
 63-8328 CONTROL, MUTE
 63-9254 CONTROL, BALANCE
 -OR-
 *63-10159 CONTROL, BALANCE
 *63-9255 CONTROL, DUAL LOUDNESS
 -OR-
 *63-10160 CONTROL, DUAL LOUDNESS
 *63-9256 CONTROL, DUAL TREBLE
 -OR-
 *63-10161 CONTROL, DUAL TREBLE
 63-9257 CONTROL, DUAL BASS
 -OR-
 *63-10162 CONTROL, DUAL BASS
 *63-9982 1 OHM RESISTOR - 2W. 10% (2 REQ.)
 64-7 TUBULAR RIVET (4 REQ.)
 64-27 SHOULDER RIVET (3 REQ.)
 64-288 SHOULDER RIVET (5 REQ.)
 64-1033 GRIP EYELET (50 REQ.)
 64-1046 EYELET, GRIP (323 REQ.)
 *76-2088 TUNING SHAFT
 76-1449-01 AC CORD & SOCKET
 76-2080 SOCKET, INTEGRATED CIRCUIT
 76-2137 JACK, PHONE
 *76-2151 SOCKET, LAMP
 79-174-8 #18 YELLOW SLEEVING (6 REQ.)
 80-2045 RETAINING SPRING (PART OF S-94170)
 80-2143 SPRING, CORD TENSION
 83-7417 STRIP, ANTENNA PROTECTIVE
 83-8066 STRIP, TIE - 6" (4 REQ.)
 83-8592 STRIP, TERMINAL
 *83-8611 TERMINAL STRIP
 *83-8617 INSULATING STRIP - FLAT STOCK
 *85-1372 SWITCH, AFC
 85-1401 BANDSWITCH - 6 POSITION
 86-334 TERMINAL (3 USED ON 43-519)
 86-344 TERMINAL, SOCKET (7 REQ.)
 86-357 TERMINAL, CONNECTOR (PART OF S-94014)
 86-500 PIN, CONNECTOR (9 REQ.)
 93-1195 FLAT WASHER (USED ON 78-2137)
 93-1833 WASHER, INSULATING (1 USED ON EA. 121-976 & 121-977)
 93-1984 WASHER, LOCK (2 REQ.)
 94-1453 BUSHING, NYLON SHAFT
 94-1586 BUSHING, PLAIN SHOULDER (1 USED ON EA. 121-976)
 95-2541 TRANSFORMER, AM 1ST. I.F. - 455 KHZ
 95-2542 TRANSFORMER, AM 2ND. I.F. - 455 KHZ
 95-2545 TRANSFORMER, FM RATIO DETECTOR - 10.7 KHZ
 95-2546 TRANSFORMER, FM 1ST. I.F. - 10.7 MHZ
 95-2547 TRANSFORMER, FM 2ND. I.F. - 10.7 MHZ
 95-2548 TRANSFORMER, FM 3RD. I.F. - 10.7 MHZ
 95-2689 TRANSFORMER, AM 3RD. I.F. - 455 KHZ
 95-3022 TRANSFORMER, INPUT - 19 KHZ
 95-3023 TRANSFORMER, DETECTOR - 38 KHZ
 95-3077 TRANSFORMER, AM OSCILLATOR
 *95-3107 POWER TRANSFORMER
 97-904-01 STUD, BALL
 100-249 LAMP, DIAL
 100-604 SNAP-IN BULB (2 REQ.)
 100-610 BULB - WITH LEADS
 100-625 BULB - WITH LEADS
 101-4712 LABEL, FUSE
 101-5584-02 LABEL, FUSE
 103-23 DIODE, GERMANIUM (2 REQ.)
 103-47 DIODE, AFC
 -OR-
 *103-189 DIODE, AFC
 103-90 DIODE, GERMANIUM - MATCHED PAIR
 103-96 DIODE, ZENER
 103-142 DIODE, GERMANIUM
 103-222 DIODE, SILICON (2 REQ.)
 112-1091 SCREW, MACHINE - 4-40 X 0.250 (2 MT. 85-1372)

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 5WR53 CONT'D

114-802 8-18 X 0.312 X 0.250 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (16 REQ.)
 114-1115 6-20 X 0.375 X 0.250 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (2 REQ.)
 114-1302 4-24 X 5/8 X 0.187 AF HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (1 USED WITH EA. 121-976 & 121-977)
 121-433 TRANSISTOR (2 PRE-AMPLIFIER & 2 PRE-DRIVE R)
 121-612 TRANSISTOR - FM/RF
 121-613 TRANSISTOR - FM CONVERTER
 121-614 TRANSISTOR - AM/FM 1ST. I.F.
 *121-7358 TRANSISTOR - AM CONVERTER
 121-768 PRE-DRIVER TRANSISTOR (2 REQ.)
 121-950 TRANSISTOR - AM/FM 2ND. I.F., FM 3RD. I.F. (2 REQ.)
 121-976 TRANSISTOR - OUTPUT (2 REQ.)
 121-977 TRANSISTOR - OUTPUT (2 REQ.)
 125-140 BUSHING, LINE CORD RETAINING
 *136-101 FUSE - 1/4 AMP. - 250V.
 136-109 FUSE - 0.05 AMP. - 250V.
 149-311 IRON CORE
 188-128 RETAINING RING
 212-76 RECTIFIER, SILICON (2 REQ.)
 221-65 INTEGRATED CIRCUIT PACKAGE
 S-88992 DIAL CORD & EYELET ASSEM.
 S-92251-01 JACK & BRACKET ASSEM. (CADMIUM PLATED)
 S-93518 WAVEMAGNET ANTENNA ASSEM.
 *S-94014 ANTENNA CABLE & TERMINAL ASSEM.
 S-94170 PULLEY & SPRING ASSEM.
 S-95182 LAMP HOLDER & BRACKET ASSEM.
 S-95183 LAMP HOLDER & BRACKET ASSEM.
 S-95184 PULLEY & BRACKET ASSEM.
 S-96092 POINTER ASSEM.
 CHASSIS 15WDR5071
 *12-5425 PULLEY MTG. BRACKET (PART OF S-85563 & S-86475) (2 REQ.)
 *12-5524 CONTROL MTG. BRACKET
 12-5568 BACKGROUND BRACKET (DIAL SCALE)
 17-130 LOOP RETAINING CLAMP
 17-156 CABLE CLAMP
 19-480 WIRE RETAINING CLIP
 19-485 CABLE RETAINING CLIP (3 REQ.)
 19-614 CLIP (PART OF S-85104)
 *19-733-01 CABLE RETAINER (2 REQ.)
 20-1256 TRAP COIL - 10.7 MHZ
 20-1648 FM R.F. COIL
 20-1649 FM OSCILLATOR COIL
 20-2033 PEAKING COIL
 *20-3080 TRAP COIL - 67 KHZ
 -OR-
 S-79435 MULTIPLEX TRAP COIL ASSEM.
 20-3291 FM ANTENNA COIL
 .0033 MF DISC CAPACITOR - 500V.
 .0047 MF DISC CAPACITOR - 500V. (2 REQ.)
 .0022 MF DISC CAPACITOR - 500V. (2 REQ.)
 1.8 PF GIMMICK CAPACITOR - 500V.
 8 PF DISC CAPACITOR ±.25 PF - 500V. (3 REQ.)
 .001 MF DISC CAPACITOR - 25V. (3 REQ.)
 5 MF ELECTROLYTIC CAPACITOR - 12V. (4 REQ.)
 680 PF DISC CAPACITOR - 500V. (4 REQ.)
 .02 MF DISC CAPACITOR - 25V.
 .05 MF DISC CAPACITOR - 25V. (12 REQ.)
 .005 MF DISC CAPACITOR - 25V.
 390 PF DISC CAPACITOR - 500V. (2 REQ.)
 330 PF DISC CAPACITOR - 500V. (2 REQ.)
 2.7 PF GIMMICK CAPACITOR - 500V. (2 REQ.)
 .01 MF DISC CAPACITOR - 25V. (5 REQ.)
 .0068 MF DISC CAPACITOR - 25V.
 3.3 PF GIMMICK CAPACITOR ±.5% - 500V.
 16 PF DISC CAPACITOR ±.5% - 500V.
 .1 MF DISC CAPACITOR - 10V. (3 REQ.)
 .05 MF DISC CAPACITOR - 100V.
 10 PF DISC CAPACITOR ±.5% - 500V.
 1 MF ELECTROLYTIC CAPACITOR - 50V. (2 REQ.)
 200 MF ELECTROLYTIC CAPACITOR - 35V. (2 REQ.)
 5.5 PF DISC CAPACITOR ±.25 PF - 500V.
 42 PF DISC CAPACITOR ±.5% - 500V.
 17 PF DISC CAPACITOR ±.5% - 500V.
 100 MF ELECTROLYTIC CAPACITOR - 25V. (2 REQ.)
 500 MF ELECTROLYTIC CAPACITOR - 15V. (2 REQ.)
 .01 MF DISC CAPACITOR - 500V. (2 REQ.)
 2 PF CERAMIC CAPACITOR ±.25 PF - 500V.
 TRIMMER CAPACITOR - 1.7 TO 10 PF CERAMIC
 390 PF MICA CAPACITOR - 100V.
 560 PF DISC CAPACITOR - 500V. (2 REQ.)
 680 PF DISC CAPACITOR - 500V. (6 REQ.)
 .0015 MF DISC CAPACITOR - 500V.
 10 MF ELECTROLYTIC CAPACITOR - 6V.
 .47 MF DISC CAPACITOR - 3V. (2 REQ.)
 270 PF POLYSTYRENE CAPACITOR ±.5% - 500V.
 270 PF MICA CAPACITOR ±.5% - 100V.
 1000 PF POLYSTYRENE CAPACITOR ±.5% - 500V - (2 REQ.)
 1000 PF MICA CAPACITOR ±.5% - 100V. (2 REQ.)
 2200 PF POLYSTYRENE CAPACITOR ±.5% - 500V -
 2200 PF MICA CAPACITOR ±.5% - 100V.
 .022 MF MYLAR CAPACITOR ±10% - 100V. (4 REQ.)
 .056 MF MYLAR CAPACITOR ±10% - 100V. (2 REQ.)
 5.5 PF DISC CAPACITOR ±.5 PF - 50V.
 3.3 PF DISC CAPACITOR ±.25 PF - 50V.
 .22 MF DISC CAPACITOR ±10% - 50V. (2 REQ.)
 1000 MF ELECTROLYTIC CAPACITOR - 65V.
 2000 PF POLYSTYRENE CAPACITOR ±.5% - 100V -
 5 SECTION VARIABLE CAPACITOR - FM DETECTOR
 TRIMMER, FM DETECTOR TUNING - FM OSCILLATOR
 TUNING - AM ANTENNA TRIMMER - AM ANTENNA
 TUNING - AM OSCILLATOR TUNING - AM
 OSCILLATOR TRIMMER - FM ANTENNA TRIMMER
 FM ANTENNA TUNING

*22-6246 3.3 MF ELECTROLYTIC CAPACITOR - 15V.
 22-7142-03 4.7 MF ELECTROLYTIC CAPACITOR - 25V.
 *33-327 PC BOARD SUPPORT FRAME
 43-571 9 CONTACT HOUSING (USED ON 86-390)
 44-48 CONNECTOR JACK (4 PART OF EA. S-89969 & S-92170)
 52-1425 2 CONDUCTOR SHIELDED CABLE (USED ON 58-214)
 52-1443 4 CONDUCTOR CABLE (USED ON S-82104)
 52-1588 2 CONDUCTOR SHIELDED LEAD
 52-1589 2 CONDUCTOR SHIELDED LEAD
 52-1590 2 CONDUCTOR SHIELDED LEAD (USED ON 85-1343)
 *52-1884 2 CONDUCTOR SHIELDED CABLE
 *52-2022 2 CONDUCTOR SHIELDED CABLE (USED ON 58-338)
 *52-2023 2 CONDUCTOR SHIELDED CABLE (USED ON 58-338)
 52-2045 MULTI CONDUCTOR CABLE (PART OF S-91095)
 *52-2080 2 CONDUCTOR SHIELDED CABLE (USED ON S-92170)
 *52-2081 2 CONDUCTOR SHIELDED CABLE (USED ON S-92170)
 54-139 3/8-32 X 9/16 PALNUT (1 USED ON 63-7681, 63-7682, 63-7683, 63-7684 & 85-1343) (5 REQ.)
 54-808 TINNEDMAN SPEED NUT (4 REQ.)
 54-828 1/2-20 PALNUT
 57-7850 SIDE PLATE
 57-8147 SIDE PLATE (GANG)
 58-214 SINGLE PRONG PLUG (2 USED ON 52-1425)
 58-338 PLUG SHORTING BAR (2 REQ.) NOTE: (BARS MUST BE REMOVED WHEN 4 CHAN. AUDIO SYSTEM IS USED)
 *59-1103 POINTER (DIAL) BLADE W/CARRIAGE
 63-1701 10 OHM RESISTOR - 1/2W. 10%
 63-1708 15 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1740 82 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1761 270 OHM RESISTOR - 1/2W. 10%
 63-1764 3300 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1768 390 OHM RESISTOR - 1/2W. 10%
 63-1771 470 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1772 470 OHM RESISTOR - 1/2W. 20% (4 REQ.)
 63-1774 560 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1775 560 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1777 680 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1778 680 OHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1781 820 OHM RESISTOR - 1/2W. 5%
 63-1782 820 OHM RESISTOR - 1/2W. 10%
 63-1785 1000 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1796 1800 OHM RESISTOR - 1/2W. 10%
 63-1798 2200 OHM RESISTOR - 1/2W. 5% (3 REQ.)
 63-1799 2200 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1803 2700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1806 3300 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1810 3900 OHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1813 4700 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1817 5600 OHM RESISTOR - 1/2W. 10%
 63-1820 6800 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1824 8200 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1826 10K OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1827 10K OHM RESISTOR - 1/2W. 10% (6 REQ.)
 63-1831 12K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1835 15K OHM RESISTOR - 1/2W. 20%
 63-1841 22K OHM RESISTOR - 1/2W. 10%
 63-1845 27K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1848 33K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1855 47K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1860 62K OHM INSULATED RESISTOR - 1/2W. 5% (2 REQ.)
 63-1869 100K OHM RESISTOR - 1/2W. 10%
 63-1876 150K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1880 180K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1898 470K OHM RESISTOR - 1/2W. 20% (3 REQ.)
 63-1904 680K OHM RESISTOR - 1/2W. 10%
 63-1918 1.5 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4185 1000 OHM RESISTOR - 1/4W. 10%
 63-4196 1800 OHM RESISTOR - 1/4W. 10%
 63-4213 4700 OHM RESISTOR - 1/4W. 10%
 63-4501 1 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-5085 680 OHM RESISTOR - 3W. 10%
 *63-5663 680 OHM RESISTOR - 2W. 10%
 63-6495 MUTE CONTROL - 100K OHM
 63-7681 DUAL TREBLE CONTROL - 50K OHM
 63-7682 DUAL BASS CONTROL - 100K OHM
 63-7683 DIAL LOUDNESS CONTROL
 63-7684 BALANCE CONTROL & SWITCH
 64-78 PLAIN BRASS EYELET
 76-1987 TUNING SHAFT
 78-1988 LIGHT SOCKET & WIRE (USED ON 43-571)
 79-174-12 #18 SLEEVING - YELLOW - 1 1/2" (2 REQ.)
 80-2143 TENSION SPRING, CORD
 82-153 2ND. I.F. GROUNDING STRAP
 82-165 GROUNDING STRAP (PART OF S-85104)
 82-182 OSCILLATOR COIL GROUND STRAP
 83-1961 ANTENNA TERMINAL STRIP (PART OF S-89969)
 83-3320 RETAINING STRIP (USED ON S-92166)
 83-6173 PLASTIC TIE STRIP
 83-7417 ANTENNA PROTECTIVE STRIP
 83-7803 3 LUG TERMINAL STRIP
 83-8066 TIE STRIP - 6" (2 REQ.)
 *83-8163 ANTENNA MTG. STRIP (PART OF S-82104)
 *83-8571 INSULATING STRIP (2 REQ.)
 85-1343 SWITCH, ROTARY (6 POSITION)
 86-344 CONNECTOR TERMINAL (3 PART OF S-91095 & 2 PART OF S-92166)
 86-390 CONNECTOR TERMINAL (9 USED ON 43-571)
 86-500 CONNECTOR TERMINAL (15 REQ.)
 86-543 MINIATURE SPRING TERMINAL (51 REQ.)
 93-1833 TRANSISTOR INSULATING WASHER (2 REQ.)
 94-1532 NYLON SHAFT BUSHING
 94-1586 INSULATING BUSHING (4 REQ.)
 95-2541 TRANSFORMER - AM 1ST. I.F. 455 KHZ
 95-2542 TRANSISTOR - AM 2ND. I.F. 455 KHZ
 95-2543 TRANSFORMER - 3RD. I.F. 455 KHZ
 95-2544 TRANSFORMER - AM OSCILLATOR
 95-2545 TRANSFORMER - FM RATIO DETECTOR 10.7 MHZ

* DENOTES PARTS NOT PREVIOUSLY USED

95-2546 TRANSFORMER - FM 1ST. I.F. 10.7 MHZ
 95-2547 TRANSFORMER - FM 2ND. I.F. 10.7 MHZ
 95-2548 TRANSFORMER - FM 3RD. I.F. 10.7 MHZ
 95-2856 DOUBLER COIL 19 KHZ
 95-2857 DETECTOR COIL 38 KHZ
 95-2858 INPUT COIL 19 KHZ
 100-249 INDICATOR LAMP
 103-23 GERMANIUM DIODE (4 REQ.)
 103-47 SILICON DIODE - AFC
 -OR-
 103-189 SILICON DIODE
 103-74 GERMANIUM DIODE
 103-90 GERMANIUM DIODE - MATCHED PAIR
 103-96 DIODE
 103-222 DIODE, SILICON - LOW VOLTAGE GENERAL (2 REQ.)
 105-107 INTEGNET (2 REQ.) (38KHZ FILTER)
 114-801 8-18 X 5/16 X 1/4 HEX HD. SELF-TAP. SCREW-STAT. BRONZE (1 USED ON S-85563, S-85564, S-85569 & 83-7803, 2 USED ON S-85565 & 57-8147, 3 USED ON 33-327 & 12-5568) (14 REQ.)
 114-802 8-18 X 5/16 X 1/4 HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (1 MTS. 17-156 & 17-130, 2 MT. S-82104) (4 REQ.)
 114-816 8-18 X .312 X .250 HEX HD. SELF-TAP. SCREW - WITH WASHER - STAT. BRONZE (USED ON 83-7803)
 114-1302 4-24 X 5/8 X .187 HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (1 USED ON EA. 800-362 & 800-366)
 121-430 TRANSISTOR - PRE-DRIVER (2 REQ.)
 121-433 TRANSISTOR - PRE-AMP. (2 REQ.)
 121-546 TRANSISTOR - AM - FM 2ND. I.F., FM 3RD. I.F. (2 REQ.)
 121-612 TRANSISTOR - R.F. (FM)
 121-613 TRANSISTOR - AUTODYNE CONVERTER (FM)
 121-614 TRANSISTOR - 1ST. I.F. AMPLIFIER AM, FM
 121-639 TRANSISTOR - AMPLIFIER - COM. AMP., 19KHZ AMP., 38KHZ AMP. (3 REQ.)
 121-714 TRANSISTOR - AM - CONVERTER
 121-737 TRANSISTOR - STEREO INDICATOR SWITCH
 *121-858 TRANSISTOR - BIPLEX DETECTOR
 *121-889 TRANSISTOR - DRIVER - NPN (2 REQ.)
 126-1336 COIL SHIELD (USE ONLY WHEN S-79435 IS USED)
 *126-1534 HEAT SINK
 *126-1535 HEAT SINK
 149-311 IRON CORE
 188-140 RETAINING RING (USED ON 76-1987)
 188-155 CLAMPING RING (PART OF S-85569)
 199-319 SLEEVING (2 PART OF S-91095)
 212-76 SILICON RECTIFIER (2 REQ.)
 -OR-
 212-948 SILICON RECTIFIER (2 REQ.)
 *800-362 OUTPUT TRANSISTOR - MATCHED PAIR (2 REQ.)
 -OR-
 *800-366 OUTPUT TRANSISTOR - MATCHED PAIR (2 REQ.)
 S-82104 WAVE MAGNET ANTENNA ASSEM.
 S-85104 I.F. GROUNDING STRAP, BRAID & CLIP ASSEM.
 S-85562 DRIVE CORD & EYELET ASSEM.
 S-85563 PULLEY MTG. BRACKET ASSEM.
 S-85564 PULLEY MTG. BRACKET ASSEM.
 S-85565 POINTER GUIDE BRACKET ASSEM.
 S-85569 DRIVE PULLEY ASSEM.
 S-86475 PULLEY MTG. BRACKET ASSEM.
 *S-89969 JACK ASSEM. W/BRAKET
 *S-91095 CABLE ASSEM. - MULTI CONDUCTOR & TERMINAL
 *S-92166 LINE CORD & TERMINAL ASSEM.
 *S-92170 JACK & BRACKET ASSEM.
 *S-94014 ANTENNA CABLE & TERMINAL ASSEM.

CHASSIS 15WDR51

AC CORD
 CABLE RETAINING CLIP
 MTG. CLIP (2 REQ.)
 19-485 TRAP COIL (10.7 MHZ)
 *19-680 FM ANTENNA COIL
 20-1256 FM DETECTOR COIL (PART OF S-89122)
 20-3076 TRAP COIL (67KHZ)
 -OR-
 20-3077 TRAP COIL ASSEM. (USED WITH 126-1336)
 *20-3545 TURNTABLE RCF COIL
 22-13 .0033 MF CERAMIC CAPACITOR - 500V. $\pm 10\%$ (2 REQ.)
 22-16 470 PF CERAMIC CAPACITOR - 500V. $\pm 10\%$ (2 REQ.)
 22-2397 100 PF CERAMIC CAPACITOR - 500V. $\pm 10\%$ (2 REQ.)
 22-2428 1.8 PF CAPACITOR - 500V. $\pm 10\%$
 22-2592 3.4 PF CERAMIC CAPACITOR - 500V. ± 2.5 PF
 22-2729 1000 PF CERAMIC CAPACITOR - 25V. ± 50 -30% (5 REQ.)
 22-2884 5 MF ELECTROLYTIC - 12V. ± 100 -10% (2 REQ.)
 22-2976 220 PF CERAMIC CAPACITOR - 500V. $\pm 5\%$
 22-3034 .05 MF CERAMIC CAPACITOR - 25V. ± 100 -50% (19 REQ.)
 22-3080 5000 PF CERAMIC CAPACITOR - 25V. ± 100 -30% (2 REQ.)
 22-3177 390 PF CERAMIC CAPACITOR - 500V. $\pm 10\%$ (2 REQ.)
 22-3310 2.7 PF CAPACITOR - 500V. $\pm 10\%$ (2 REQ.)
 22-3381 39 PF CERAMIC CAPACITOR - 500V. $\pm 5\%$ (2 REQ.)
 22-3393 .01 MF CERAMIC CAPACITOR - 25V. ± 80 -30% (3 REQ.)
 22-3412 820 PF CERAMIC CAPACITOR - 500V. $\pm 10\%$
 22-3415 6800 PF CERAMIC CAPACITOR - 25V. $\pm 10\%$ (4 REQ.)
 22-3541 3.3 PF CAPACITOR - 500V. $\pm 5\%$ (PART OF S-89122)
 22-3652 .1 MF CERAMIC CAPACITOR (3 REQ.)
 22-3661 .05 MF CERAMIC CAPACITOR (2 REQ.)
 22-3675 10 PF CERAMIC CAPACITOR - 500V. $\pm 5\%$ (2 REQ.)
 22-3687 1 MF ELECTROLYTIC (15 REQ.)
 22-3721 200 MF ELECTROLYTIC (4 REQ.)
 22-3751 20 PF CERAMIC CAPACITOR - 500V. $\pm 5\%$
 22-3768 68 PF CERAMIC CAPACITOR - 500V. $\pm 5\%$
 22-3770 5.5 PF CERAMIC CAPACITOR - 500V. ± 2.5 PF
 22-3793 100 MF ELECTROLYTIC - 25V. $\pm 100\%$ -10% (4 REQ.)
 22-4819 2 PF CAPACITOR - 500V.
 22-4855 TRIMMER CAPACITOR
 22-5056 .02 MF CERAMIC CAPACITOR - 25V. $\pm 80\%$ -20%

CHASSIS 15WDR51 CONT'D

CHASSIS 15WDR51 CONT'D

22-5257 .1 MF DISC CAPACITOR (10 REQ.)
 22-5481 560 PF DISC CAPACITOR (2 REQ.)
 22-5482 680 PF DISC CAPACITOR (21 REQ.)
 22-5486 10 MF ELECTROLYTIC +100% -10% - 5V.
 22-5637 4700 PF MYLAR CAPACITOR - 200V. ±10% (2 REQ.)
 22-5638 .47 MF MYLAR CAPACITOR - 100V. ±5%
 22-5780 270 PF POLYSTYRENE CAPACITOR - 50V. ±5%
 22-5782 2200 PF POLYSTYRENE CAPACITOR - 50V. ±5% (3 REQ.)
 22-5862 .1 MF MYLAR CAPACITOR - 100V. ±10% (5 REQ.)
 22-5863 .01 MF MYLAR CAPACITOR - 100V. ±10% (2 REQ.)
 22-5903 1500 PF DISC CAPACITOR - 1400V.
 22-5972 390 PF POLYSTYRENE CAPACITOR - 125V.
 22-5989 .02 MF CERAMIC CAPACITOR (8 REQ.)
 22-6005 .01 MF CERAMIC DISC CAPACITOR (2 REQ.)
 22-6246 3.3 MF ELECTROLYTIC CAPACITOR +100% -20% - 15V.
 22-6276 4700 PF CAPACITOR - 150AC
 22-6344 7 PF CERAMIC CAPACITOR - 500V. ±7%
 *22-6752 GANG CAPACITOR - 6 SECTION (AM OSCILLATOR TRIMMER, FM ANTENNA TRIMMER, AM ANTENNA TRIMMER, FM ANTENNA TUNING, AM ANTENNA TUNING, FM DETECTOR TRIMMER, AM DETECTOR TRIMMER, FM DETECTOR TUNING, AM DETECTOR TUNING FM OSCILLATOR TUNING, AM OSCILLATOR TUNER)
 22-6905 .1 MF MYLAR CAPACITOR - 50V. 10% (2 REQ.)
 22-7071 .047 MF MYLAR CAPACITOR - 50V. 10% (2 REQ.)
 *22-7112 2000 MF ELECTROLYTIC - 15V. +100 -10%
 *22-7113 1500 MF ELECTROLYTIC - 65V. +100 -10%
 *22-7114 .47 MF TANTALUM CAPACITOR - 35V. ±20%
 *22-7142-01 2.2 MF ELECTROLYTIC +100% -10% - 25V. (4 REQ.)
 22-7142-03 4.7 MF ELECTROLYTIC CAPACITOR +100% -10% - 25V.
 22-7179 .022 MF MYLAR CAPACITOR - 50V. 10% (2 REQ.)
 22-7180 .056 MF MYLAR CAPACITOR - 50V. 10% (2 REQ.)
 33-408 P.C. BOARD FRAME
 43-1143 HOUSING CONNECTOR - FEMALE
 52-1500 CONDUCTOR CABLE (USED ON 43-1143)
 *52-1990 SHIELDED LEAD & PLUG (USED ON 85-1333)
 *52-2120 SHIELDED LEAD CABLE (2 CONDUCTOR)
 *52-2121 SHIELDED LEAD CABLE (2 CONDUCTOR)
 *52-2125 SHIELDED LEAD CABLE
 54-139 PALNUT - 3/8-32 X 9/16 (5 REQ.)
 54-349 NUT, MACHINE (4 USED ON 95-3027)
 54-808 NUT, SPRING (1 USED ON EA. 121-926 & 121-927)
 54-828 PALNUT - 1/2-20 (1 USED ON 94-1532)
 61-222 PULLEY, IDLER (2 PART OF S-92543 & S-93164)
 *61-263 PULLEY, IDLER (2 PART OF S-92544)
 *61-350 PULLEY
 *62-103 HOLDER, LAMP (2 PART OF S-93160)
 *63-1458 390 OHM RESISTOR - 2W. 10%
 63-1701 10 OHM RESISTOR - 1/2W. 10%
 63-1705 12 OHM RESISTOR - 1/2W. 10% (PART OF S-93160)
 63-1708 15 OHM RESISTOR - 1/2W. 10% (PART OF S-93160) (5 REQ.)
 63-1733 56 OHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1757 220 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1761 270 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1771 470 OHM RESISTOR - 1/2W. 10%
 63-1772 470 OHM RESISTOR - 1/2W. 20% (5 REQ.)
 63-1774 560 OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1775 560 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1777 680 OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1778 680 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1782 820 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1785 1K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1789 1200 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1790 1300 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1796 1800 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1798 2200 OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1799 2200 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1803 2700 OHM RESISTOR - 1/2W. 10%
 *63-1808 3600 OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1810 3900 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1813 4700 OHM RESISTOR - 1/2W. 10% (11 REQ.)
 63-1814 4700 OHM RESISTOR - 1/2W. 20%
 63-1816 5600 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1817 5600 OHM RESISTOR - 1/2W. 10%
 63-1820 6800 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1821 6800 OHM RESISTOR - 1/2W. 20%
 63-1824 8200 OHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1825 9100 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1827 10K OHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1831 12K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1834 15K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1838 18K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1841 22K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1844 27K OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1845 27K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1848 33K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 *63-1852 39K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1855 47K OHM RESISTOR - 1/2W. 10%
 63-1858 56K OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1859 56K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1860 62K OHM RESISTOR - 1/2W. 5% (4 REQ.)
 63-1861 68K OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1862 68K OHM RESISTOR - 1/2W. 10%
 63-1869 100K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1873 120K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1876 150K OHM RESISTOR - 1/2W. 10% (4 REQ.)
 *63-1880 180K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1890 330K OHM RESISTOR - 1/2W. 10%
 63-1897 470K OHM RESISTOR - 1/2W. 10%
 63-1898 470K OHM RESISTOR - 1/2W. 20%
 *63-1918 1.5 MEGOHM RESISTOR - 1/2W. 10% (5 REQ.)
 *63-1925 2.2 MEGOHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1932 3.3 MEGOHM RESISTOR - 1/2W. 10%
 63-1939 4.7 MEGOHM RESISTOR - 1/2W. 10%
 63-1943 5.6 MEGOHM RESISTOR - 1/2W. 10%
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4133 56 OHM RESISTOR - 1/4W. 10% (PART OF S-89122)
 63-4157 220 OHM RESISTOR - 1/4W. 10%

* DENOTES PARTS NOT PREVIOUSLY USED

63-4168 390 OHM RESISTOR - 1/4W. 10%
 63-4185 1K OHM RESISTOR - 1/4W. 10%
 63-4196 1800 OHM RESSITOR - 1/4W. 10%
 63-4231 12K OHM RESISTOR - 1/4W. 10%
 63-4241 22K OHM RESISTOR - 1/4W. 10% (2 REQ.)
 63-4255 47K OHM RESISTOR - 1/4W. 10%
 63-4269 100K OHM RESISTOR - 1/4W. 10%
 *63-4273 120K OHM RESISTOR - 1/4W. 10% (2 REQ.)
 63-4287 270K OHM RESISTOR - 1/4W. 10%
 63-4290 330K OHM RESISTOR - 1/4W. 10%
 63-6442 560 OHM RESISTOR - 3W. 10%
 63-8328 POTENTIOMETER - 300 OHMS
 *63-8982 CONTROL, DUAL SLIDE - BASS (2 REQ.)
 *63-8983 CONTROL, DUAL SLIDE - TREBLE (2 REQ.)
 *63-9250 CONTROL, BIAS ADJUSTMENT - 2K
 63-9784 .47 OHM RESISTOR - 2W. 10% (8 REQ.)
 *63-9841 CONTROL, ROTARY (4 SECTION)
 *63-9842 FRONT TO REAR BALANCE CONTROL
 *63-9860 LEFT TO RIGHT BALANCE CONTROL (2 REQ.)
 *63-9928 375 OHM RESISTOR - 7W. 5%
 73-123 SCREW, SET - 8-32 X 1/4" (USED ON 61-350)
 *76-2081 SHAFT, SOLID
 *78-2080 SOCKET, INTEGRATED CIRCUIT
 78-2137 PHONO JACK
 79-174-12 SLEEVEING - YELLOW #18 (11 REQ.)
 79-212 SLEEVEING - FIBRE GLASS
 78-243-12 #18 SLEEVEING - YELLOW
 *80-1140 SPRING, TENSION - DIAL CORD
 80-2069 SPRING, TENSION
 *82-235 STRAP, GROUND FORMED
 83-3588 STRIP, TERMINAL (PART OF S-93160)
 83-7803 STRIP, INSULATING (1 USED ON 121-927)
 83-8148 STRIP, INSULATING
 83-8298 STRIP, INSULATING (1 USED ON EA. 121-92 7)
 *83-8459 STRIP, INSULATING
 85-1274 SWITCH, ROCKER (AFC)
 *85-1309 SWITCH, ROCKER (DECODER)
 *85-1333 SWITCH, ROCKER (6 POSITION)
 *85-1352 SWITCH, ROCKER (AC)
 -OR-
 85-1349 SWITCH, ROCKER (AC)
 86-389 TERMINAL, FEMALE (4 USED ON 43-1143)
 86-543 TERMINAL, SPRING (49 REQ.)
 94-1532 BUSHING, NYLON SHAFT
 94-1586 BUSHING, PLAIN SHOULDER (8 REQ.)
 95-2543 TRANSFORMER - 3RD. I.F. AM - 455KHZ
 95-2544 TRANSFORMER - AM OSCILLATOR
 95-2750 TRANSFORMER - B.C. R.F.
 95-2751 TRANSFORMER - AM 1ST. I.F. AM - 455KHZ
 95-2752 TRANSFORMER - AM 2ND. I.F. AM - 455 KHZ
 95-2753 TRANSFORMER - FM 1ST. I.F. - 10.7 MHZ
 95-2754 TRANSFORMER - FM 2ND. I.F. - 10.7 MHZ
 95-2755 TRANSFORMER - FM 3RD. I.F. - 10.7 MHZ
 95-2756 TRANSFORMER - FM RATIO DETECTOR - 10.7 MHZ
 *95-3021 TRANSFORMER - INPUT - 19KHZ
 *95-3022 TRANSFORMER - FILTER - 19KHZ
 *95-3023 TRANSFORMER - DETECTOR - 38KHZ
 *95-3027 TRANSFORMER, POWER
 *100-604 LAMP, INDICATOR (2 REQ.)
 *100-610 LAMP, INDICATOR (2 REQ.)
 *100-611 LAMP, INDICATOR
 101-5584-01 FUSE LABEL
 103-23 DIODE, CRYSTAL (3 REQ.)
 103-90 DIODE, GERMANIUM - MATCHED PAIR
 103-96 DIODE, ZENER
 103-189 DIODE, SILICON
 103-222 DIODE, SILICON (4 REQ.)
 *112-801 SCREW, PHILLIPS HD. - 6-20 X 1/4" (2 REQ.)
 *112-2267 SCREW, MACH. - M3.0 X 0.5 X 5.0 (2 USED ON 63-8982 & 63-8983)
 *112-2268 SCREW, MACH. - M2.6 X 0.45 X 5.0 (2 USED ON EA. 63-9842 & 63-9860)
 114-802 SCREW, HEX WASHER SELF-TAP. - 8-18 X 5/16 X 1/4 (3 REQ.)
 114-803 SCREW, HEX WASHER SELF-TAP. - 6-20 X 0 - 250 (16 REQ.)
 114-816 SCREW, HEX WASHER SELF-TAP. - 8-18 X 0 - 312 (4 REQ.)
 114-1103 SCREW, HEX WASHER SELF-TAP. - 8-18 X 7/16 (2 USED ON EA. 126-1584)
 *114-1302 SCREW, HEX WASHER SELF-TAP. - 4-24 X 5/8 (1 USED ON EA. 121-926 & 121-927)
 121-430 TRANSISTOR - AUDIO - AM (2 REQ.)
 121-433 TRANSISTOR - PRE-AMP (11 REQ.)
 121-613 TRANSISTOR - AUTODYNE CONVERTER - FM
 121-614 TRANSISTOR - AM - FM 1ST. I.F.
 121-714 TRANSISTOR - AM CONVERTER
 121-826 TRANSISTOR - RM RF (FET)
 121-850 TRANSISTOR - AM RF
 121-858 TRANSISTOR - BIPLEX DETECTOR
 121-889 TRANSISTOR, SILICON - DRIVER (4 REQ.)
 121-926 TRANSISTOR, SILICON - OUTPUT (4 REQ.)
 121-927 TRANSISTOR, SILICON - OUTPUT (4 REQ.)
 *121-950 TRANSISTOR, SILICON - AM/FM 2ND. I.F., FM 3RD. I.F. (2 REQ.)
 125-140 BUSHING, CORD
 125-194 GROMMET, SYMMETRICAL
 126-1336 SHIELD, COIL (USED WITH S-79435)
 *126-1584 HEAT SINK (2 REQ.)
 *126-1603 SHIELD, RADIATION
 136-79 FUSE - 1.25 AMP.
 136-96 FUSE - 1 AMP.
 149-311 IRON CORE (2 REQ.)
 188-140 RETAINING RING (1 USED ON 76-2081)
 199-569 SLEEVE, SHIELDED
 212-76 RECTIFIER, SILICON
 *221-65 INTEGRATED CIRCUIT PACKAGE
 S-88463 ANTENNA ASSEM. (PART OF S-93163)
 S-88989 DIAL CORD & EYELET ASSEM.
 S-89122 COIL ASSEM. - FM DETECTOR
 S-92067 JACK & BRACKET ASSEM.
 S-92250 JACK & BRACKET ASSEM.
 S-92534 POINTER & MTG. BRACKET ASSEM.
 S-92543 PULLEY & BRACKET ASSEM. (2 REQ.)
 S-92544 BRACKET & BRACKET ASSEM.
 S-93160 BRACKET & TERMINAL ASSEM.
 S-93163 WAVEMAGNET ANTENNA ASSEM.
 S-93164 PULLEY & BRACKET ASSEM.

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*11-122 DIAL CORD
 *11-305 LINE CORD - 2 CONDUCTOR WITH SOCKET
 12-4901 BEARING BRACKET (1 USED ON EA. 63-9256, 63-9953, 63-9955, 63-9956)
 12-6062 TRANSISTOR MTG. BRACKET
 12-6117 SWITCH & JACK MTG. BRACKET
 17-130 RETAINING CLIP
 19-480 RETAINING CLIP
 19-485 CABLE RETAINING CLIP
 19-536 CABLE RETAINING CLIP (2 REQ.)
 19-724 WIRE CLIP
 19-763 CABLE RETAINING CLIP
 20-1631 TRAP COIL
 20-3076 FM ANTENNA COIL
 20-3080 67 KILLER HERST. COIL
 20-3535 FM RF TRAP COIL
 20-3597 FM OSCILLATOR COIL
 22-13 3300 PF CERAMIC DISC CAPACITOR +10% -10% - 500V. (2 REQ.)
 22-14 4700 PF CERAMIC DISC CAPACITOR +10% -10% - 500V.
 22-16 470 PF CERAMIC DISC CAPACITOR +10% -10% - 500V. (2 REQ.)
 22-18 2200 PF CERAMIC DISC CAPACITOR +10% -10% - 500V. (2 REQ.)
 22-2428 1.8 PF GIMMICK CAPACITOR +10% -10% - 500V.
 22-2729 1000 PF CERAMIC DISC CAPACITOR +50% -30% - 25V. (4 REQ.)
 22-2939 680 PF CERAMIC DISC CAPACITOR +10% -10% - 500V. (2 REQ.)
 22-2976 220 PF CERAMIC DISC CAPACITOR +5% -5% - 500V.
 22-3033 .02 MF CERAMIC DISC CAPACITOR +100% -30% - 25V.
 22-3034 .05 MF CERAMIC DISC CAPACITOR +100% -50% - 25V. (16 REQ.)
 22-3080 5000 PF CERAMIC DISC CAPACITOR +100% -30% - 25V.
 22-3177 390 PF CERAMIC DISC CAPACITOR +10% -10% - 500V. (3 REQ.)
 22-3310 2.7 PF GIMMICK CAPACITOR +10% -10% - 500V. (2 REQ.)
 22-3381 39 PF CERAMIC DISC CAPACITOR +5% -5% - 500V.
 22-3393 .01 MF CERAMIC DISC CAPACITOR +80% -30% - 25V. (3 REQ.)
 22-3541 3.3 PF GIMMICK CAPACITOR +5% -5% - 500V.
 22-3608 68 PF CERAMIC CAPACITOR +10% -10% - 500V.
 22-3652 .1 MF CERAMIC CAPACITOR +80% -20% - 10V. (3 REQ.)
 22-3675 10 PF CERAMIC CAPACITOR +5% -5% - 500V. (2 REQ.)
 *22-3751 20 PF CERAMIC DISC CAPACITOR +5% -5% - 500V.
 22-3770 5.5 PF CERAMIC DISC CAPACITOR +.25PFD - .25PFD - 500V.
 22-3791 42 PF CERAMIC DISC CAPACITOR +5% -5% - 500V.
 22-3896 5 MFD ELECTROLYTIC CAPACITOR +100% -10% - 25V.
 22-4617 .01 MF CERAMIC DISC CAPACITOR +80% -20% - 500V. (2 REQ.)
 22-4819 2 PF CERAMIC TUBULAR CAPACITOR +.25PFD - .25PFD - 500V.
 22-5481 560 PF CERAMIC DISC CAPACITOR +10% -10% - 500V. (2 REQ.)
 22-5482 680 PF CERAMIC DISC CAPACITOR +10% -10% - 500V. (8 REQ.)
 22-5483 1500 PF CERAMIC DISC CAPACITOR +10% -10% - 500V.
 22-5486 10 PF ELECTROLYTIC CAPACITOR +100% -10% - 6V.
 22-5487 .47 MF CERAMIC DISC CAPACITOR +100% -0% - 3V. (2 REQ.)
 22-5780 .270 PF TUBULAR CAPACITOR +5% -5% - 50V.
 22-5782 2200 PF TUBULAR CAPACITOR +5% -5% - 50V. (2 REQ.)
 22-5814 .022 MF MYLAR CAPACITOR +20% -20% - 100V. (2 REQ.)
 22-5878 5.5 PF CERAMIC DISC CAPACITOR +.5PFD - .5PFD - 50V.
 22-5879 3.3 PF CERAMIC DISC CAPACITOR +.25PFD - .25PFD - 50V.
 22-5884 .082 MF MYLAR CAPACITOR +10% -10% - 100V. (2 REQ.)
 22-5964 .27 MF MYLAR CAPACITOR +10% -10% - 50V. (2 REQ.)
 22-5972 390 PF TUBULAR CAPACITOR +5% -5% - 125V.
 22-6005 .01 MF CERAMIC DISC CAPACITOR (2 REQ.)
 22-6112 1000 MF ELECTROLYTIC CAPACITOR +100% -10% - 65V.
 22-6246 3.3 MF ELECTROLYTIC CAPACITOR +100% -20% - 15V.
 22-6447-01 .047 MYLAR CAPACITOR +20% -20% - 100V. (2 REQ.)
 *22-6470 SINGLE TERMINAL CAPACITOR
 22-7134 GANG CAPACITOR - 5 SECTION
 22-7141-11 470 MF ELECTROLYTIC CAPACITOR +100% -10% - 16V.
 22-4142-03 4.7 MF ELECTROLYTIC CAPACITOR +100% -10% - 25V. (2 REQ.)
 22-7150-07 47 MF ELECTROLYTIC CAPACITOR +100% -10% - 10V.
 22-1752-08 100 MF ELECTROLYTIC CAPACITOR +100% -10% - 25V. (2 REQ.)
 22-7153 1 MF ELECTROLYTIC CAPACITOR +100% -10% - 50V. (4 REQ.)
 22-7153-11 470 MF ELECTROLYTIC CAPACITOR +100% -10% - 50V. (2 REQ.)
 22-7202 .039 MF POLY. CAPACITOR +10% -10% - 50V. (2 REQ.)
 33-443 PRINTED CIRCUIT BOARD FRAME
 43-519 SOCKET CONTACT HOUSING
 *52-1290 3 CONDUCTOR CABLE
 52-1589 2 CONDUCTOR SHIELDED CABLE (PART OF S-94967)
 52-1590 2 CONDUCTOR SHIELDED CABLE
 52-1641 2 CONDUCTOR SHIELDED CABLE

* DENOTES PARTS NOT PREVIOUSLY USED

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52-1642 2 CONDUCTOR SHIELDED CABLE
 52-2132-02 3 CONDUCTOR SHIELDED CABLE
 52-2147 300 OHM CABLE (PART OF S-94014)
 52-2179 2 CONDUCTOR SHIELDED CABLE (PART OF S-94967)
 54-139 3/8-32 X 9/16 PALNUT (3 REQ.)
 54-808 SPRING NUT (4 REQ.)
 54-914-01 SPEED CLIP (2 REQ.)
 58-338 PLUG - SHORTENING BAR (2 PART OF S-94967)
 59-1134 POINTER BLADE - DIAL
 61-222 IDLER PULLEY (4 REQ.)
 61-287 IDLER PULLEY
 61-385 FLANGE PULLEY
 63-1458 390 OHM RESISTOR - 2W. 10%
 63-1701 10 OHM RESISTOR - 1/2W. 10%
 63-1707 15 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1733 56 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1757 220 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1761 270 OHM RESISTOR - 1/2W. 10%
 63-1771 470 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1772 470 OHM RESISTOR - 1/2W. 20% (4 REQ.)
 *63-1774 560 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1775 560 OHM RESISTOR - 1/2W. 10%
 63-1777 680 OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1778 680 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1785 1K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1796 1.8K OHM RESISTOR - 1/2W. 10%
 63-1798 2.2K OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1799 2.2K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1803 2.7K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1806 3.3K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1813 4.7K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1816 5.6K OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1820 6.8K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1827 10K OHM RESISTOR - 1/2W. 10% (6 REQ.)
 63-1831 12K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1834 15K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1838 18K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1841 22K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1845 27K OHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1884 33K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 *63-1852 39K OHM RESISTOR - 1/2W. 10%
 63-1855 47K OHM RESISTOR - 1/2W. 10%
 63-1860 62K OHM RESISTOR - 1/2W. 5% (2 REQ.)
 63-1862 68K OHM RESISTOR - 1/2W. 10%
 63-1866 82K OHM RESISTOR - 1/2W. 10%
 63-1869 100K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1873 120K OHM RESISTOR - 1/2W. 10%
 63-1883 220K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1887 270K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1890 330K OHM RESISTOR - 1/2W. 10% (4 REQ.)
 *63-1898 470K OHM RESISTOR - 1/2W. 20% (3 REQ.)
 63-1918 1.5 MEGOHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1922 1.8 MEGOHM RESISTOR - 1/2W. 10%
 63-1926 2.2 MEGOHM RESISTOR - 1/2W. 20%
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4129 47 OHM RESISTOR - 1/4W. 10%
 63-4157 220 OHM RESISTOR - 1/4W. 10%
 63-4185 1K OHM RESISTOR - 1/4W. 10%
 63-4196 1.8K OHM RESISTOR - 1/4W. 10%
 63-4255 47K OHM RESISTOR - 1/4W. 10%
 63-4269 100K OHM RESISTOR - 1/4W. 10%
 63-4287 270K OHM RESISTOR - 1/4W. 10%
 63-5085 680 OHM RESISTOR - 3W. 10%
 63-6442 560 OHM RESISTOR - 3W. 10%
 63-8328 MUTE CONTROL - 300 OHM
 63-9250 METER CONTROL - 2K OHM
 63-9256 DUAL TREBLE CONTROL - 50K OHM
 63-9953 BALANCE CONTROL - 250K OHM
 63-9955 DUAL LOUDNESS CONTROL - 50K OHM
 63-9956 DUAL BASS CONTROL - 100K OHM
 63-9982 1 OHM RESISTOR - 2W. 10% (2 REQ.)
 78-2080 INTEGRATED SOCKET
 *78-2088 SOLID SHAFT
 78-2137 PHONE JACK
 78-2151 LAMP SOCKET RETAINER - WITH LEADS
 79-174-34 SLEEVING (3 REQ.)
 *79-243-24 SLEEVING (2 REQ.)
 80-2045 RETAINING SPRING
 80-2143 CORD TENSION SPRING
 83-7417 PROTECTIVE STRIP - ANTENNA
 83-8066 TIE STRIP - 6" (4 REQ.)
 83-8538 BACKGROUND STRIP
 83-8540 2 TERMINAL STRIP
 *83-8571 INSULATION STRIP (2 REQ.)
 83-8592 2 TERMINAL STRIP
 85-1370 ROTARY SWITCH - 5 POSITION
 85-1372 SLIDE SWITCH
 86-334 SOCKET TERMINAL (3 REQ.)
 86-344 CONNECTOR TERMINAL (PART OF S-94014)
 86-357 CONNECTOR TERMINAL (PART OF S-94014)
 86-500 CONNECTOR PIN (3 REQ.)
 *93-1195 FLAT METAL WASHER
 93-1833 TRANSISTOR INSULATING WASHER (1 USED ON EA. 121-927)
 93-1984 METAL LOCKWASHER (2 REQ.)
 94-1453 NYLON SHAFT BUSHING
 94-1586 SHOULDER BUSHING (1 USED ON EA. 121-926, 121-927)
 95-2541 1ST. I.F. TRANSFORMER - AM
 95-2542 2ND. I.F. TRANSFORMER - AM
 95-2545 RADIO DETECTOR TRANSFORMER - FM
 95-2546 1ST. I.F. TRANSFORMER - FM
 95-2547 2ND. I.F. TRANSFORMER - FM
 95-2548 3RD. I.F. TRANSFORMER - FM
 95-2689 3RD. I.F. TRANSFORMER - AM
 95-3022 19KHZ TRANSFORMER
 95-3023 38KHZ TRANSFORMER
 95-3077 AM OSCILLATOR TRANSFORMER
 95-3091 POWER TRANSFORMER
 101-4710 WARNING OR CAUTION LABEL - FUSE REPLACEMENT
 101-5584-03 WARNING OR CAUTION LABEL - FUSE REPLACEMENT
 103-23 HIGH FREQUENCY DIODE (4 REQ.)
 103-47 DIODE
 -OR-
 103-189 DIODE
 103-90 DIODE - MATCH PAIR (2 REQ.)

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103-96 ZENER DIODE
 103-142 LOW VOLTAGE SILICON DIODE
 103-222 LOW SILICON DIODE (2 REQ.)
 112-1091 4-40 X .250 FLAT HD. PHILLIPS MACH. SCREW -
 NICKLE PLATE (2 REQ.)
 114-802 8-18 X .312 HEX WASHER HD. SCREW-STAT.
 BRONZE (1 REQ.)
 114-1115 6-20 X .375 HEX WASHER HD. SCREW-STAT.
 BRONZE (3 REQ.)
 114-1302 4-24 X 5/8 HEX WASHER HD. SCREW-STAT.
 BRONZE (1 USED ON 121-926, 3 USED ON
 121-927)
 121-433 TRANSISTOR (5 REQ.)
 121-613 AUDIO DIODE CONVERTER TRANSISTOR - FM
 121-614 1ST. I.F. TRANSISTOR
 121-735 CONVERTER TRANSISTOR - AM
 121-889 TRANSISTOR - NPN (2 REQ.)
 121-926 TRANSISTOR - PNP (2 REQ.)
 121-927 TRANSISTOR - NPN (2 REQ.)
 121-950 TRANSISTOR - NPN (2 REQ.)
 121-953 FIELD EFFECT GATE TRANSISTOR & CHANNEL
 125-140 LINE CORD RETAINING BUSHING
 136-107 FUSE - 250V. .50 AMP.
 136-108 FUSE - 25V. .6 AMP. - 3AG
 149-311 IRON CORE
 188-128 RETAINING RING
 212-76 SILICON RECTIFIER (2 REQ.)
 221-65 INTEGRATED CIRCUIT - MULTIPLEX
 S-77233 PLUG CABLE ASSEM.
 S-91095 CABLE & TERMINAL ASSEM.
 S-92170 JACK & BRACKET ASSEM.
 S-93518 DIAL CORD & EYELET ASSEM.
 *S-93519 CONTROL MTG. BRACKET ASSEM.
 S-94014 CABLE ASSEM.
 S-94143 JACK & BRACKET ASSEM.
 *S-94967 JACK & BRACKET ASSEM.
 S-96309 P.C. BOARD & EYELET ASSEM.

CHASSIS 15WER56

11-150 LINE CORD & PLUG
 12-6062 METAL BRACKET TRANSISTOR MOUNTING
 12-6273 METAL BACKGROUND BRACKET
 17-130 LOOP RETAINING CLAMP
 19-480 WIRE RETAINING CLAMP
 19-536 WIRE RETAINING CLIP (2 REQ.)
 20-1631 TRAP COIL
 20-3076 COIL - FM ANTENNA
 20-3080 COIL - 57 KHZ
 20-3535 COIL - FM RM TRAP
 20-3597 COIL - FM OSCILLATOR
 22-13 3300 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V. (2 REQ.)
 22-14 4700 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V.
 22-16 470 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V. (2 REQ.)
 22-18 2200 PFD CERAMIC DISC CAPACITOR
 500V. (2 REQ.)
 22-2428 1.8 PFD GIMMICK CAPACITOR +10% -10%
 500V.
 *22-2729 1000 PFD CERAMIC DISC CAPACITOR 25V. (4 REQ.)
 22-2939 680 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V. (4 REQ.)
 22-2976 220 PFD CERAMIC DISC CAPACITOR +5% -5%
 500V.
 22-3033 .02 MFD CERAMIC DISC CAPACITOR +100% -30%
 25V.
 22-3034 .05 MFD CERAMIC DISC CAPACITOR +100% -50%
 25V. (19 REQ.)
 22-3080 5000 PFD CERAMIC DISC CAPACITOR +100% -30%
 25V. (4 REQ.)
 22-3177 390 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V. (4 REQ.)
 22-3310 2.7 PFD GIMMICK CAPACITOR +10% -10%
 500V. (2 REQ.)
 22-3381 39 PFD CERAMIC DISC CAPACITOR +5% -5%
 500V.
 22-3393 .01 MFD CERAMIC DISC CAPACITOR +80% -30%
 25V. (5 REQ.)
 22-3541 3.3 PFD GIMMICK CAPACITOR +5% -5%
 500V.
 22-3608 68 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V.
 22-3652 .1 MFD CERAMIC DISC CAPACITOR +80% -20%
 10V. (2 REQ.)
 22-3675 10 PFD CERAMIC DISC CAPACITOR +5% -5%
 500V. (2 REQ.)
 22-3751 20 PFD CERAMIC DISC CAPACITOR +5% -5%
 500V.
 22-3770 5.5 PFD CERAMIC DISC CAPACITOR +.25 -.25
 500V.
 22-3791 42 PFD CERAMIC DISC CAPACITOR +5% -5%
 500V.
 22-3896 5 MFD ELECTROLYTIC CAPACITOR +100% -10%
 25V.
 22-4617 .01 MFD CERAMIC DISC CAPACITOR +80% -20%
 500V. (2 REQ.)
 22-4819 2 PFD CERAMIC TUBULAR CAPACITOR +.25 -.25
 500V.
 22-5481 560 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V. (2 REQ.)
 22-5482 680 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V. (8 REQ.)
 22-5483 1500 PFD CERAMIC DISC CAPACITOR +10% -10%
 500V.
 22-5486 10 MFD ELECTROLYTIC CAPACITOR +100% -10%
 6V.
 22-5487 .47 MFD CERAMIC DISC CAPACITOR +100% -0
 3V. (2 REQ.)
 22-5780 270 PFD TUBULAR CAPACITOR +5% -5%
 50V.
 22-5782 2200 PFD TUBULAR CAPACITOR +5% -5% 50V. (2 REQ.)

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 15WER56 CONT'D

22-5814 .022 MFD MYLAR CAPACITOR +20% -20%
 100V. (2 REQ.)
 22-5878 5.5 PFD CERAMIC DISC CAPACITOR +.5 -.5
 50V.
 22-5879 3.3 PFD CERAMIC DISC CAPACITOR +.25 -.25
 50V.
 22-5884 .082 MFD MYLAR CAPACITOR +10% -10%
 100V. (2 REQ.)
 22-5964 .27 MFD MYLAR CAPACITOR +10% -10%
 50V. (2 REQ.)
 22-5972 390 PFD TUBULAR CAPACITOR +5% -5%
 125V.
 22-6005 .01 MFD CERAMIC DISC CAPACITOR
 (2 REQ.)
 22-6112 1000 MFD ELECTROLYTIC CAPACITOR +100% -10%
 65V.
 22-6246 3.3 MFD ELECTROLYTIC CAPACITOR +100% -20%
 15V.
 22-647-01 .047 MFD MYLAR CAPACITOR +20% -20%
 100V. (2 REQ.)
 *22-6470 CAPACITOR - SINGLE TRIMMER
 22-7134 VARIABLE CAPACITOR
 22-7141-11 470 MFD ELECTROLYTIC CAPACITOR +100% -10%
 15V.
 22-7142-03 4.7 MFD ELECTROLYTIC CAPACITOR +100% -10%
 25V. (2 REQ.)
 22-7150-07 47 MFD ELECTROLYTIC CAPACITOR +100% -10%
 10V.
 22-7152-08 100 MFD ELECTROLYTIC CAPACITOR +100% -10%
 25V. (2 REQ.)
 22-7153 1 MFD ELECTROLYTIC CAPACITOR +100% -10%
 50V. (4 REQ.)
 22-7153-11 470 MFD ELECTROLYTIC CAPACITOR +100% -10%
 50V. (2 REQ.)
 22-7202 .039 POLYESTER CAPACITOR +10% -10%
 50V. (2 REQ.)
 33-443-01 PRINTED CIRCUIT BOARD FRAME
 43-519 SOCKET HOUSING
 52-1291 3 CONDUCTOR CABLE
 52-1425 2 CONDUCTOR SHIELDED CABLE
 52-1500 3 CONDUCTOR SHIELDED CABLE
 52-1590 2 CONDUCTOR SHIELDED CABLE
 52-2189 2 CONDUCTOR SHIELDED LEAD CABLE
 52-2191 3 CONDUCTOR SHIELDED LEAD CABLE
 52-2212 3 OHM TWIN LEAD CABLE
 52-2213 SHIELDED LEAD CABLE
 52-2217 SHIELDED LEAD CABLE
 54-808 FLAT RECTANGULAR SPRING NUT (4 REQ.)
 54-914-01 SPEED CLIP - 2 REQ. (PART OF S-96314)
 58-214 CONNECTOR PLUG (2 REQ.)
 61-222 IDLER PULLEY (4 REQ.)
 *61-358 FLANGED PULLEY
 62-111 LAMPHOLDER - SNAP TYPE (2 REQ.)
 63-1458 390 OHM RESISTOR 2W 10%
 63-1701 10 OHM RESISTOR 1/2W 10%
 *63-1707 15 OHM RESISTOR 1/2W 5% (2 REQ.)
 63-1708 15 OHM RESISTOR 1/2W 10%
 63-1715 22 OHM RESISTOR 1/2W 10%
 63-1733 56 OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1757 220 OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1761 270 OHM RESISTOR 1/2W 10%
 63-1771 470 OHM RESISTOR 1/2W 10% (3 REQ.)
 63-1772 470 OHM RESISTOR 1/2W 20% (4 REQ.)
 63-1774 560 OHM RESISTOR 1/2W 5% (2 REQ.)
 63-1775 560 OHM RESISTOR 1/2W 10%
 63-1777 680 OHM RESISTOR 1/2W 5% (2 REQ.)
 63-1778 680 OHM RESISTOR 1/2W 10% (3 REQ.)
 63-1785 1K OHM RESISTOR 1/2W 10%
 *63-1796 1.8K OHM RESISTOR 1/2W 10%
 63-1798 2.2K OHM RESISTOR 1/2W 5% (2 REQ.)
 63-1799 2.2K OHM RESISTOR 1/2W 10% (5 REQ.)
 63-1803 2.7K OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1806 3.3K OHM RESISTOR 1/2W 10% (3 REQ.)
 63-1813 4.7K OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1816 5.6K OHM RESISTOR 1/2W 5% (2 REQ.)
 63-1820 6.8K OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1827 10K OHM RESISTOR 1/2W 10% (5 REQ.)
 63-1831 12K OHM RESISTOR 1/2W 10%
 63-1834 15K OHM RESISTOR 1/2W 10%
 63-1838 18K OHM RESISTOR 1/2W 10% (3 REQ.)
 63-1841 22K OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1845 27K OHM RESISTOR 1/2W 10% (4 REQ.)
 63-1848 33K OHM RESISTOR 1/2W 10% (2 REQ.)
 *63-1852 39K OHM RESISTOR 1/2W 10%
 63-1855 47K OHM RESISTOR 1/2W 10%
 63-1860 62K OHM RESISTOR 1/2W 5% (2 REQ.)
 63-1866 82K OHM RESISTOR 1/2W 10%
 63-1869 100K OHM RESISTOR 1/2W 10% (5 REQ.)
 63-1873 120K OHM RESISTOR 1/2W 10%
 63-1883 220K OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1887 270K OHM RESISTOR 1/2W 10% (2 REQ.)
 63-1890 330K OHM RESISTOR 1/2W 10% (2 REQ.)
 *63-1898 470K OHM RESISTOR 1/2W 20% (3 REQ.)
 63-1918 1.5 OHM RESISTOR 1/2W 5% (3 REQ.)
 63-1926 2.2 OHM RESISTOR 1/2W 20%
 63-4122 33 OHM RESISTOR 1/4W 10%
 63-4129 47 OHM RESISTOR 1/4W 10%
 63-4157 220 OHM RESISTOR 1/4W 10%
 63-4185 1K OHM RESISTOR 1/4W 10% (3 REQ.)
 63-4196 1.8K OHM RESISTOR 1/4W 10%
 63-4255 47K OHM RESISTOR 1/4W 10%
 63-4269 100K OHM RESISTOR 1/4W 10%
 63-4287 270 OHM RESISTOR 1/4W 10%
 63-6442 560 OHM RESISTOR 3W 10%
 63-7314 5.6 OHM RESISTOR 5W 10% (2 REQ.)
 63-8328 300 OHM MUTE CONTROL
 63-8981 BALANCE CONTROL - 250K
 63-8982 DUAL BASS CONTROL - 100K
 63-8983 TREBLE CONTROL - 50K
 63-9982 1 OHM RESISTOR 2W 10% (2 REQ.)
 63-10135 11 OHM RESISTOR 5W 10%
 63-10189 DUAL LOUDNESS CONTROL
 63-10271 390 OHM RESISTOR 5W 10%
 76-2088 SOLID SHAFT
 78-2080 SOCKET - INTEGRATED CIRCUIT
 78-2137 PHONE JACK
 79-147-8 #18 YELLOW SLEEVING (3 REQ.)
 *79-243 3/8" SLEEVING

CHASSIS 15WER56 CONT'D

80-2045	RETAINING CLIP
80-2143	CORD TENSION SPRING
*83-2514	5 LOAD TERMINAL STRIP
83-7417	ANTENNA PROTECTIVE STRIP
83-8066	TIE STRIP - 6" (4 REQ.)
83-8592	2 TERMINAL STRIP
83-8655	WIRE RETAINING STRAP
85-1372	SLIDE SWITCH (PART OF S-96317)
85-1395	5 POSITION ROTARY SWITCH
86-344	CONNECTOR TERMINAL
86-357	CONNECTOR TERMINAL - WIRE MT. (6 REQ.)
93-1833	INSULATING WASHER (2 REQ.)
94-1586	PLAIN SHOULDER BUSHING (1 MT. EACH 121-926 AND 121-927)
95-2541	1ST IF TRANSFORMER - AM
95-2542	2ND IF TRANSFORMER - AM
95-2545	RATIO DETECTOR TRANSFORMER - FM
95-2546	1ST IF TRANSFORMER - FM
95-2547	2ND IF TRANSFORMER - FM
95-2548	3RD IF TRANSFORMER - FM
95-2689	3RD IF TRANSFORMER - AM
95-3022	19KHZ TRANSFORMER
95-3023	38KHZ TRANSFORMER
95-3077	AM OSCILLATING TRANSFORMER
*95-3108	POWER TRANSFORMER
100-610	BULB - W/LEADS
100-625	BULB - W/LEADS
101-4710	WARNING OR CAUTION LABEL FUSE REPLACEMENT
101-5584-03	WARNING OR CAUTION LABEL FUSE REPLACEMENT
103-23	HIGH FREQUENCY DIODE (4 REQ.)
103-47	VOLTAGE DEPENDENT CAPACITOR DIODE
103-90	DIODE - MATCHED PAIR (2 REQ.)
103-42	LOW VOLTAGE DIODE (5 REQ.)
103-222	LOW VOLTAGE DIODE (2 REQ.)
103-253	DIODE - RED LIGHT EMITTING (2 REQ.)
103-253-01	DIODE - GREEN LIGHT EMITTING
103-256	ZENER DIODE - 13.1V 3W
112-1091	4-40 X .250 FLAT HD. PHILLIP MACHINE SCREW - NICKLE PLATE (2 REQ.)
112-2267	3.0 X .5 X 5.0 RECESS FILLISTER HD. MACHINE SCREW - ZINC CHROMATE CROSS (8 REQ.)
114-802	8-18 X .312 HEX WASHER HEAD SCREW - STAT BRONZE (10 REQ.)
114-1115	6-20 X .375 HEX WASHER HD. SCREW - STAT BRONZE (7 REQ.)
114-1302	4-24 X 5/8 HEX WASHER HD. SCREW - STAT BRONZE (4 REQ.)
121-430	PHASE INVERTER SOUND AMP TRANSISTOR (2 REQ.)
121-433	TRANSISTOR (8 REQ.)
121-603	TRANSISTOR
121-613	TRANSISTOR - CONVERTER FM
121-614	1ST IF TRANSISTOR
121-735	CONVERTER TRANSISTOR - AM
121-889	SILICON TRANSISTOR - NPN (2 REQ.)
121-926	SILICON TRANSISTOR - PNP (2 REQ.)
121-927	SILICON TRANSISTOR - NPN (2 REQ.)
121-950	NPN SILICON TRANSISTOR (2 REQ.)
121-953	FIELD EFFECT, N CHANNEL, DUAL GATE TRANSISTOR
125-140	LINE CORD RETAINING BUSHING
125-193	GROMMET
*136-108	FUSE W/LEADS - 125V. .6 AMP 3AG
136-109	FUSE W/LEADS - 250V. 1.0 AMP 8AG
147-253	STANDOFF SPACER (3 REQ.)
149-311	IRON CORE
188-128	RETAINING RING
212-76	SILICON RECTIFIER (2 REQ.)
221-65	INTEGRATED CIRCUIT - MULTIPLEX DEMODULATOR
S-85564	PULLEY MOUNTING BRACKET ASSEMBLY
S-88992	DIAL CORD & EYELET ASSEMBLY
S-93518	WAVEMAGNET ASSEMBLY
S-96097	POINTER ASSEMBLY & MOUNTING BRACKET
S-96314	PULLEY & BRACKET ASSEMBLY
*S-96317	SLIDE SWITCH ASSEMBLY
S-96494	JACK ASSEMBLY
S-96502	JACK & BRACKET STAKING ASSEMBLY

CHASSIS 29AT24Z2

11-122	DIAL CORD
11-244	DRIVE CORD
12-4120	VARIABLE CAPACITOR MTG. BRACKET
12-4729	STEREO REFLECTOR BRACKET
12-4945	I.F. SHIELD BRACKET
12-5272	SWITCH MTG. BRACKET
12-5295	MTG. BRACKET
12-5335	TUNING METER MTG. BRACKET
12-5367	HEAT SINK BRACKET
*12-5552	SUPPORT BRACKET
17-143	NYLON CLAMP
19-238	MTG. STRIP (1 USED ON EA. S-82954 & S-82955)
19-448	GROUND CLIP
19-453	RESISTOR MTG. CLIP (2 REQ.)
19-464	COIL MTG. CLIP
19-480	WIRE RETAINING CLIP (2 REQ.)
19-492	WIRE RETAINING CLIP (4 REQ.)
19-561	CAPACITOR RETAINING CLIP
19-656	RETAINING CLIP (4 REQ.)
20-1422	TRAP COIL
20-2008	PEAKING COIL
20-2033	PEAKING COIL (2 REQ.)
22-9	100 MMFD CERAMIC DISC CAPACITOR $\pm 10\%$ - 500V.
22-13	.0033 MFD CERAMIC DISC CAPACITOR $\pm 10\%$ - 500V.
22-14	.0047 MFD DISC CAPACITOR - 500V. 20% (2 REQ.)
22-18	.0022 MFD CERAMIC DISC CAPACITOR $\pm 10\%$ - 500V. (3 USED ON CHASSIS WIRING ASSEM. & 6 USED ON PRINTED CIRCUIT BOARD)
22-2333	2.2 PFD GIMMICK CAPACITOR - 500V.
22-2374	6 PFD COMPENSATING CAPACITOR - 500V. (2 REQ.)
22-2424	1.5 PFD GIMMICK CAPACITOR - 500V.

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 29AT24Z2 CONT'D

22-2642	15 PF CERAMIC CAPACITOR - 5%
22-2715	1.2 PFD MOLDED GIMMICK CAPACITOR - 500V.
22-2720	1.0 PFD MOLDED GIMMICK CAPACITOR - 500V.
22-2729	.001 MFD CERAMIC DISC CAPACITOR - 25V. (1 USED ON EA. S-82954 & CHASSIS WIRING ASSEM.)
22-2884	5 MFD ELECTROLYTIC CAPACITOR - 12V. (3 REQ.)
22-2903	22 PFD CERAMIC DISC CAPACITOR - 500V.
22-3010	.01 MFD CERAMIC DISC CAPACITOR - 25V. (2 REQ.)
22-3034	.05 MFD CERAMIC DISC CAPACITOR (15 USED ON CHASSIS WIRING ASSEM., 10 USED ON PRINTED CIRCUIT BOARD & 1 USED ON EA. S-82954 & S-82955)
22-3080	.005 MFD CERAMIC DISC CAPACITOR - 25V. (2 USED ON PRINTED CIRCUIT BOARD)
22-3177	390 PFD CERAMIC DISC CAPACITOR - 500V. (2 REQ.)
22-3254	1 MFD CERAMIC DISC CAPACITOR - 25V. (2 REQ.)
22-3362	560 PFD DISC CAPACITOR - 500V. (2 REQ.)
22-3393	.01 MFD DISC CAPACITOR
22-3444	.018 MFD MOLDED CAPACITOR - 50V. (2 REQ.)
22-3448	10 MFD ELECTROLYTIC CAPACITOR - 15V.
22-3479	2.2 PF CAPACITOR
22-3527	.22 MFD DISC CAPACITOR - 12V. (USED ON S-82954)
22-3596	.1 MFD MYLAR CAPACITOR - 50V. (2 REQ.)
22-3599	.015 MFD MYLAR CAPACITOR - 50V. (2 REQ.)
22-3675	10 PFD DISC CAPACITOR - 500V.
22-3687	1 MFD ELECTROLYTIC CAPACITOR - 50V. (8 USED ON CHASSIS WIRING ASSEM. & 5 USED ON PRINTED CIRCUIT BOARD)
22-3826	.22 MFD MYLAR CAPACITOR - 100V. (5 REQ.)
22-3891	.0068 MFD CAPACITOR - 100V. (2 REQ.)
22-3896	5 MFD ELECTROLYTIC CAPACITOR - 25V. (2 REQ.)
22-3944	.0047 MFD DISC CAPACITOR - 25V. (PART OF S-76801)
22-4509	20 MFD ELECTROLYTIC CAPACITOR - 25V.
22-4515	1.8 PF GIMMICK CAPACITOR
22-4564	10 MFD CAPACITOR - 25V.
22-4617	.01 MFD CERAMIC CAPACITOR - 500V.
22-4817	3 SECTION VARIABLE CAPACITOR - AM ANTENNA TUNING - TRIMMER, AM DETECTOR TUNING - TRIMMER, AM OSCILLATOR TUNING - TRIMMER
22-4905	.01 MFD DISC CAPACITOR - 500V. (11 USED ON PRINTED CIRCUIT BOARD)
22-5012	.15 MFD DISC CAPACITOR - 50V. (4 REQ.)
22-5018	.47 MFD CAPACITOR - 50V.
22-5167	1000 MFD ELECTROLYTIC CAPACITOR - 30V.
22-5168	300 MFD ELECTROLYTIC CAPACITOR - 25V.
22-5188	.1 MFD MYLAR CAPACITOR - 50V. (2 REQ.)
22-5237	.01 MFD CAPACITOR - 100V. (2 REQ.)
22-5281	23 PF DISC CAPACITOR
22-5612	180 PFD DISC CAPACITOR - 500V. (2 USED ON PRINTED CIRCUIT BOARD)
22-5626	.0082 MFD DISC CAPACITOR - 500V. (2 REQ.)
22-5883	.033 MFD CAPACITOR - 100V. (2 USED ON PRINTED CIRCUIT BOARD)
22-5904	.15 MFD CAPACITOR - 50V. (2 USED ON PRINTED CIRCUIT BOARD)
22-5907	.1 MFD CAPACITOR - 50V. (12 USED ON PRINTED CIRCUIT BOARD)
26-2025	DIAL SCALE
43-571	CONTACT HOUSING - MALE
43-875	9 CONTACT HOUSING - FEMALE
43-878	CONTACT HOUSING - FEMALE (3 REQ.)
43-879	12 CONTACT HOUSING - MALE (3 REQ.)
43-1224	20 CONTACT HOUSING - MALE (2 REQ.)
46-7607	LOUDNESS, TREBLE, BALANCE & BASS KNOB (4 REQ.)
46-9092	STEREO - MONO - ON-OFF KNOB (2 REQ.)
52-1214	2 CONDUCTOR SHIELD
52-1644	2 CONDUCTOR CABLE
52-1645	SHIELDED CABLE
52-1646	SHIELDED CABLE
52-1647	2 CONDUCTOR CABLE
52-1648	SHIELDED CABLE
*52-2018	2 CONDUCTOR CABLE
*52-2021	SHIELDED LEAD CABLE
54-31	10-32 X 3/8 HEX NUT (USED ON 103-158)
54-139	3/8-32 X 9/16 PALNUT (USED ON 63-8244)
54-450	THREAD FORMING PALNUT (8 REQ.)
54-541	PALNUT (4 REQ.)
54-590	TINNERMAN SPEED NUT (2 REQ.)
54-652	PALNUT (3 REQ.)
54-793	MODIFIED SPRING NUT (10 REQ.)
54-835	CIRCULAR SPRING NUT (4 REQ.)
54-851	PALNUT (6 REQ.)
54-867	TINNERMAN NUT (4 REQ.)
56-426	ROLL PIN
57-5333	BEARING PLATE
57-7504	RETAINING PLATE (4 REQ.)
57-7551	SLIDE CLUTCH MTG. PLATE
57-7552	SLIDE MTG. PLATE
57-7553	FUNCTION PLATE & SOCKET
57-7573	BEARING PLATE
57-8086	BACKGROUND PLATE
57-8655	DIE-CAST ESCUTCHEON
58-315	CONNECTOR PLUG (USED ON 52-1644)
59-859	POINTER
61-222	IDLER PULLEY (PART OF S-84096, 4 PART OF S-84097 & 3 PART OF S-84098)
63-1701	10 OHM RESISTOR - 1/2W. 10%
63-1722	33 OHM RESISTOR - 1/2W. 10%
63-1733	56 OHM RESISTOR - 1/2W. 10%
63-1743	100 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1747	120 OHM RESISTOR - 1/2W. 10%
63-1764	330 OHM RESISTOR - 1/2W. 10% (4 REQ.)
63-1768	390 OHM RESISTOR - 1/2W. 10%
63-1771	470 OHM RESISTOR - 1/2W. 10% (4 REQ.)
63-1775	560 OHM RESISTOR - 1/2W. 10%
63-1778	680 OHM RESISTOR - 1/2W. 10% (7 REQ.)
63-1782	820 OHM RESISTOR - 1/2W. 10% (3 REQ.)
63-1785	1000 OHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD, 1 USED ON S-82954 & 5 USED ON CHASSIS WIRING ASSEM.)
63-1792	1500 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1796	1800 OHM RESISTOR - 1/2W. 10% (2 REQ.)
63-1799	2200 OHM RESISTOR - 1/2W. 10% (2 USED ON CHASSIS WIRING ASSEM. & 1 USED ON S-82955)
63-1803	2700 OHM RESISTOR - 1/2W. 10%

CHASSIS 29AT24Z2 CONT'D

63-1806 3300 OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1810 3900 OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1813 4700 OHM RESISTOR - 1/2W. 10% (9 USED ON CHASSIS WIRING ASSEM., 3 USED ON PRINTED CIRCUIT BOARD & 1 USED ON S-82954)
 63-1814 4700 OHM RESISTOR - 1/2W. 20%
 63-1817 5600 OHM RESISTOR - 1/2W. 10%
 63-1824 8200 OHM RESISTOR - 1/2W. 10%
 63-1825 9100 OHM RESISTOR - 1/2W. 5%
 63-1826 10K OHM RESISTOR - 1/2W. 5%
 63-1827 10K OHM RESISTOR - 1/2W. 10% (4 USED ON PRINTED CIRCUIT BOARD, 2 USED ON CHASSIS WIRING ASSEM. & 1 USED ON S-82954)
 63-1831 12K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1834 15K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1838 18K OHM RESISTOR - 1/2W. 10% (5 REQ.)
 63-1841 22K OHM RESISTOR - 1/2W. 10% (4 USED ON CHASSIS WIRING ASSEM. & 6 USED ON PRINTED CIRCUIT BOARD)
 63-1848 33K OHM RESISTOR - 1/2W. 10% (4 REQ.)
 63-1852 39K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1859 56K OHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1862 68K OHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1866 82K OHM RESISTOR - 1/2W. 10% (3 REQ.)
 63-1869 100K OHM RESISTOR - 1/2W. 10% (5 USED ON CHASSIS WIRING ASSEM. & 6 USED ON PRINTED CIRCUIT BOARD)
 63-1870 100K OHM RESISTOR - 1/2W. 20% (2 REQ.)
 63-1876 150K OHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1880 180K OHM RESISTOR - 1/2W. 10% (5 USED ON PRINTED CIRCUIT BOARD)
 63-1883 220K OHM RESISTOR - 1/2W. 10% (3 USED ON PRINTED CIRCUIT BOARD)
 63-1887 270K OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1890 330K OHM RESISTOR - 1/2W. 10% (1 USED ON EA. WIRING CHASSIS ASSEM. & PRINTED CIRCUIT BOARD)
 63-1894 390K OHM RESISTOR - 1/2W. 10%
 63-1897 470K OHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1911 1.0 MEGOHM RESISTOR - 1/2W. 10% (1 USED ON CHASSIS WIRING ASSEM. & 8 USED ON PRINTED CIRCUIT BOARD)
 63-1915 1.2 MEGOHM RESISTOR - 1/2W. 10%
 63-1918 1.5 MEGOHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1922 1.8 MEGOHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD & 2 USED ON CHASSIS WIRING ASSEM.)
 63-1925 2.2 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1929 2.7 MEGOHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1932 3.3 MEGOHM RESISTOR - 1/2W. 10% (6 USED ON PRINTED CIRCUIT BOARD & 6 USED ON S-82954)
 63-1936 3.9 MEGOHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1939 4.7 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1946 6.8 MEGOHM RESISTOR - 1/2W. 10% (2 USED ON PRINTED CIRCUIT BOARD)
 63-1953 10 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-3238 VERTICAL AMPLIFIER CONTROL
 63-4171 470 OHM RESISTOR
 63-4227 10K OHM RESISTOR
 63-4548 22 MEGOHM RESISTOR - 1/2W. 20% (18 USED ON PRINTED CIRCUIT BOARD)
 63-4561 47 MEGOHM RESISTOR - 1/2W. 10% (USED ON PRINTED CIRCUIT BOARD)
 63-8244 DUAL LOUDNESS CONTROL
 63-8258 POTENTIOMETER
 63-8259 BASS SLIDE CONTROL
 63-8260 TREBLE SLIDE CONTROL
 63-8282 BALANCE SLIDE CONTROL
 63-8298 200 OHM RESISTOR - 15W. 10%
 64-5 1/8" DIA X 7/32" TUBULAR RIVET
 64-27 1/8" DIA X 1/8" TUBULAR RIVET
 64-78 PLAIN EYELET
 64-88 TUBULAR RIVET
 64-151 .088" DIA X 3/32" LG. TUBULAR RIVET
 64-158 .088" DIA X 7/32" LG. TUBULAR RIVET
 64-296 SHOULDER RIVET (PART OF S-84096)
 64-862 STEEL EYELET (4 USED ON FM TUNER ASSEM.)
 64-1046 GRIP EYELET (242 USED ON PRINTED CIRCUIT BOARD)
 69-160 4-40 X 1/4 RD. HD. MACH. SCREW (4 MTS. 12-5272)
 78-1099 3 CONTACT SOCKET (USED ON S-89962)
 78-1761 STEREO INDICATOR SOCKET & WIRE
 78-1838 TRANSISTOR SOCKET (18 REQ.)
 78-1920 PILOT LIGHT SOCKET & WIRE
 79-28-6 PLASTIC SLEEVING (2 REQ.)
 79-55-6 PLASTIC SLEEVING
 79-169-6 PLASTIC SLEEVING
 79-174-1 #8 YELLOW SLEEVING (4 REQ.)
 79-174-3 #18 YELLOW SLEEVING
 79-174-4 #18 YELLOW SLEEVING
 79-174-5 #18 YELLOW SLEEVING
 79-174-7 #18 YELLOW SLEEVING
 80-1091 DIAL TENSION SPRING
 80-1140 DIAL CORD TENSION SPRING
 83-1475 LOOP FASTENING STRIP
 83-5164 4 LUG TERMINAL STRIP
 83-5165 INSULATING STRIP
 83-5170 3 LUG TERMINAL STRIP
 83-5171 INSULATING STRIP
 83-5288 13 LUG TERMINAL STRIP
 83-5290 19 LUG TERMINAL STRIP
 83-5391 20 LUG TERMINAL STRIP (3 REQ.)
 83-5392 32 LUG TERMINAL STRIP
 83-5736 3 LUG TERMINAL STRIP
 83-5737 INSULATING STRIP
 83-6430 3 LUG TERMINAL STRIP (PART OF S-84098)

CHASSIS 29AT24Z2 CONT'D

83-6800 RUBBER STRIP (2 REQ.)
 83-7206 SLIDE GUIDE (8 REQ.)
 83-7383 ESCUTCHEON STRIP
 83-7384 INDICATOR STRIP (3 REQ.)
 83-7385 INDICATOR STRIP (3 REQ.)
 83-7386 INDICATOR STRIP (3 REQ.)
 83-7387 INDICATOR STRIP (3 REQ.)
 83-7397 2 LUG TERMINAL STRIP
 83-7410 TERMINAL BOARD
 83-7411 30 LUG TERMINAL STRIP
 83-7412 8 LUG TERMINAL STRIP
 83-7557 INSULATING STRIP
 83-7567 2 LUG TERMINAL STRIP
 83-7575 DIAL CRYSTAL INSULATING STRIP (2 REQ.)
 83-7598 WIRE RETAINING STRIP
 83-7818 BOTTOM STRIP
 83-7951 TAPE STRIP (3 REQ.)
 83-7953 ADHESIVE STRIP (8 REQ.)
 83-8175 RETAINING STRIP (8 REQ.)
 83-8256 INSULATING STRIP
 83-8257 INSULATING STRIP
 84-105 POINTER SUPPORT
 85-1075 COUNTER SWITCH
 85-1077 AFC SWITCH
 85-1078 CONTACT FUNCTION SWITCH - AM/FM - PHONO - EXTERNAL BASS - TAPE - MONO
 86-388 CONNECTOR TERMINAL (2 USED ON 78-1761 & 1 USED ON 43-1224)
 86-390 CONNECTOR TERMINAL (9 USED ON 43-571)
 86-450 CONNECTOR TERMINAL (USED ON 78-1920)
 86-483 CONNECTOR TERMINAL (USED ON 43-875 & 22 USED ON 43-879)
 86-484 CONNECTOR TERMINAL - MALE (34 USED ON 43-878)
 86-496 INSERTION TERMINAL (7 REQ.)
 86-512 MINIATURE CONTACT (5 REQ.)
 86-543 MINIATURE SPRING TERMINAL (48 USED ON PRINTED CIRCUIT BOARD)
 86-579 CONNECTOR TERMINAL (29 USED ON 43-1224 & 1 USED ON S-84058)
 93-369 EXTERNAL SHAKEPROOF LOCKWASHER - CADMIUM (1 USED ON 103-158)
 93-502 #6 EXTERNAL SHAKEPROOF LOCKWASHER (7 REQ.)
 93-1455 .016 STEEL WASHER - CADMIUM
 93-1804 BRASS SLEEVE (2 JOINS ESCUTCHEON & CHASSIS)
 94-1379 INSULATING BUSHING (2 REQ.)
 95-2313 DOUBLE MIXER TRANSFORMER
 95-2314 DETECTOR MIXER TRANSFORMER
 95-2315 INPUT MIXER TRANSFORMER
 95-2316 TRAP COIL MIXER TRANSFORMER
 95-2322 1ST. I.F. TRANSFORMER - FM
 95-2324 RATIO DETECTOR TRANSFORMER
 95-2328 2ND. & 4TH. I.F. FM TRANSFORMER
 95-2387 3RD. I.F. TRANSFORMER - FM (2 REQ.)
 95-2721 1ST. I.F. AM TRANSFORMER
 95-2722 2ND. I.F. AM TRANSFORMER
 95-2723 3RD. I.F. AM TRANSFORMER
 100-249 PILOT LIGHT BULB (9 REQ.)
 100-384 INDICATOR LAMP - AM/FM - PHONO - TAPE - MONO STEREO - EXTERNAL BASS INDICATOR LIGHT (6 REQ.)
 103-23 CRYSTAL DIODE (8 REQ.)
 103-47 DIODE
 103-96 ZENER DIODE
 103-142 DIODE (2 USED ON PRINTED CIRCUIT BOARD)
 103-158 ZENER DIODE
 105-93 RC/NETWORK (2 REQ.)
 112-793 6-20 X 1/4" PHILLIPS RD. HD. SELF-TAP. SCREW (2 REQ.)
 112-1376 4-24 X 3/8 PHILLIPS PAN HD. SELF-TAP. SCREW (8 REQ.)
 113-8 6-32 X 1/4 X 1/4 AF HEX HD. MACH. SCREW
 114-26 8-18 X 1/4 X 1/4 AF HEX HD. SELF-TAP. SCREW-STAT. BRONZE (2 MTS. 12-4120 & 1 MTS. S-84096)
 114-77 6-20 X 5/16 X 1/4 AF HEX HD. SELF-TAP. SCREW-STAT. BRONZE
 114-344 6-20 X 1/4 X 1/4 HEX HD. SELF-TAP. SCREW-STAT. BRONZE (2 MTS. S-89962, 2 MTS. 126-1204 & 2 MTS. EA. 12-4729 & 12-5335)
 114-390 8 X 7/16 X 1/4 AF HEX HD. SELF-TAP. SCREW-STAT. BRONZE (6 JOINS ESCUTCHEON ASSEM. & CHASSIS)
 114-654 6-20 X 3/8 X 1/4 AF HEX HD. SELF-TAP. SCREW-STAT. BRONZE (2 MTS. 12-5272)
 114-801 8-18 X 5/16 X 1/4 AF HEX HD. SELF-TAP. SCREW-STAT. BRONZE (4 MTS. EA. S-84097 & S-84098, 2 MTS. 12-4945 & 1 MTS. 83-7397)
 114-804 8-18 X 1/2 HEX HD. SELF-TAP. SCREW-STAT. BRONZE - FLAT WASHER ATT. (4 MTS. FM TUNER ASSEM.)
 114-816 8-18 X 5/16 HEX HD. SELF-TAP. SCREW-STAT. BRONZE - 3/8" FLAT WASHER ATT. (1 MTS. 17-143)
 114-920 8-15 X 3/8 HEX HD. SELF-TAP. SCREW-STAT. BRONZE (2 MTS. PRINTED CIRCUIT BOARD & 2 JOINS PRINTED CIRCUIT BOARD & CHASSIS WIRING ASSEM.)
 121-430 PHASE INVERTER SOUND AMPLIFIER TRANSISTOR (2 REQ.)
 121-433 TRANSISTOR (2 USED ON PRINTED CIRCUIT BOARD)
 121-447 HORIZONTAL, AFC, NOISE GATE, SYNCS, AGC & OUTPUT TRANSISTOR
 121-496 TRANSISTOR (STEREO INDICATOR SWITCH - COM. AMP. 19KHZ AMP. - 38KHZ AMP.) (4 REQ.)
 121-497 TRANSISTOR (SWITCHING - A.M.)
 121-546 TRANSISTOR (FM/AM 2ND. & 3RD. I.F.) (3 REQ.)
 121-602 TRANSISTOR (1ST. AUDIO) (2 REQ.)
 121-603 TRANSISTOR - 3 AMP. (PRE-AMPLIFIER) (2 REQ.)
 121-614 1ST. I.F. TRANSISTOR - FM/AM 1ST. & 2ND. I.F. -OR-
 121-775 1ST. I.F. TRANSISTOR - FM/AM 1ST. & 2ND. I.F. CONVERTER TRANSISTOR - FM/AM 1ST. & 2ND. I.F.
 121-638 TRANSISTOR - BIPLEX DETECTOR
 121-734 TRANSISTOR (AM OSCILLATOR) (2 REQ.)
 121-753 TRANSISTOR - PHONO STEREO - MONO SWITCH
 121-756 TUNING METER
 122-43 -OR-
 122-42 -OR-
 122-51 TUNING METER

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 29AT24Z2 CONT'D

125-117 RUBBER GROMMET (4 USED ON FM TUNER ASSEM.)
 126-1204 SHIELD
 126-1281 DIAL LIGHT SHIELD
 126-1419 STEREO LIGHT SHIELD
 126-1430 LIGHT SHIELD (PART OF EA. S-84283)
 126-1437 PILOT LIGHT SHIELD (2 REQ.)
 149-211 IRON CORE (1 USED ON EA. S-82954 & S-82955)
 149-311 IRON CORE (2 REQ.)
 149-370 IRON CORE (PART OF S-76801)
 185-3 SILICONE CONTROLLED RECTIFIER (AM SWITCH -
 PHONO PEAK TAPE SWITCH) (4 REQ.)
 185-4 SILICONE CONTROLLED RECTIFIER - STEREO
 SWITCH (2 REQ.)
 185-5 SILICONE CONTROLLED RECTIFIER - EXTERNAL
 BASS SWITCH (2 REQ.)
 188-367 CLAMPING RING
 192-488 DIAL CRYSTAL
 22-72362 DRIVE CORD & EYELET ASSEM.
 22-74470 AM ANTENNA COIL (PART OF S-76801)
 22-76801 ANTENNA COIL & CAPACITOR ASSEM.
 22-79037 DRIVE CORD & EYELET ASSEM.
 22-82954 BROADCAST OSCILLATOR COIL ASSEM.
 22-82955 BROADCAST DETECTOR COIL ASSEM.
 22-83179 FM TUNER FINAL ASSEM.
 12-4192 TUNER GUIDE BRACKET
 (USED ON S-80123)
 12-4193 COIL MTG. BRACKET
 19-322 SPEED CLIP (4 REQ.)
 20-1256 TRAP COIL - 10.7 MHZ
 22-2374 6 PF CAPACITOR ±5% - 500V.
 22-2424 1.5 PF GIMMICK CAPACITOR - 500V.
 22-3393 .01 MF DISC CAPACITOR - 25V.
 (2 USED ON S-83179 & 1 USED ON
 S-8329)
 22-3675 10 PF DISC CAPACITOR - 500V.
 5% (USED ON S-83412)
 22-4613 .001 FEED-THRU CAPACITOR - 500V.
 (5 REQ.)
 22-4718 1000 PFD FEED-THRU CAPACITOR -
 500V.
 22-5164 1.2 PF GIMMICK CAPACITOR - 500V.
 5% (1 USED ON EA. S-83411 &
 S-83412)
 22-5318 34 PF DISC CAPACITOR - 500V.
 5% (1 USED ON EA. S-83411 &
 S-83412)
 24-1372 TUNER COVER
 44-48 CONNECTOR BASE
 56-426 ROLL PIN (2 USED ON S-83179 &
 4 USED ON S-80123)
 *57-5333 BEARING PLATE (USED ON S-80123)
 63-1778 680 OHM RESISTOR - 1/2W. 10%
 63-4122 33 OHM RESISTOR
 63-4157 220 OHM RESISTOR
 63-4175 560 OHM RESISTOR
 63-4185 1000 OHM RESISTOR
 63-4199 2200 OHM RESISTOR
 63-4210 3900 OHM RESISTOR
 63-4241 22K OHM RESISTOR
 63-4269 100K OHM RESISTOR
 63-4283 220K OHM RESISTOR (USED ON
 S-8329)
 63-4297 470K OHM RESISTOR
 64-318 PLAIN BRASS EYELET (6 REQ.)
 76-1541 GUIDE SHAFT
 76-1820 DRIVE SHAFT (USED ON S-80123)
 78-1227 TRANSISTOR SOCKET (2 REQ.)
 78-1378 TRANSISTOR SOCKET
 80-1467 RETAINING RING
 80-1853 TRANSFORMER RETAINING SPRING
 83-3829 2 LUG TERMINAL STRIP (USED ON
 S-69085)
 86-441 INSULATOR FEED-THRU TERMINAL
 (2 REQ.)
 94-613 IRON CORD INSULATING BUSHING
 (4 USED ON S-80123)
 94-1472 SHAFT BUSHING
 95-2322 FM - 1ST. 1.P. TRANSFORMER
 103-47 DIODE VOLTAGE DEPENDENT
 CAPACITOR (USED ON S-389)
 113-26 6-32 X 1/4 X 1/4 AF HEX HD.
 MACH. SCREW (4 REQ.)
 121-432 OSCILLATOR TRANSISTOR
 121-731 FM - RF TRANSISTOR
 121-732 FM MIXER TRANSISTOR
 126-1141 SIDE COIL SHIELD (2 REQ.)
 126-1142 CENTER SHIELD
 149-368 IRON CORE & SPRING (3 USED ON
 S-80123)
 149-385 IRON CORE & SPRING (USED ON
 S-80123)
 188-232 KNOB CLAMPING RING (4 USED ON
 S-80123)
 S-62887 FM COIL ASSEM. (1 USED ON EA.
 S-83411 & S-83412)
 S-69085 SHIELD & TERMINAL ASSEM.
 S-80123 BRACKET, SHAFT & ANTENNA ASSEM.
 S-83409 DETECTOR COIL ASSEM.
 S-83410 FM OSCILLATOR COIL ASSEM.
 S-83411 ANTENNA COIL ASSEM.
 S-83412 RF INPUT COIL ASSEM.
 98-84057 WIRE & TERMINAL ASSEM. - WHITE
 98-84058 WIRE & TERMINAL ASSEM. - WHITE/RED
 98-84096 BRACKET & PULLEY ASSEM.
 98-84097 RIGHT HAND ESCUTCHEON MTG. BRACKET ASSEM.
 98-84098 LEFT HAND ESCUTCHEON MTG. BRACKET ASSEM.
 98-84104 DRIVE CORD & EYELET ASSEM.
 98-84283 LIGHT SHIELD & BRACKET ASSEM. (2 REQ.)
 98-89962 SOCKET W/BRACKET ASSEM.
 98-92058 SWITCH & BRACKET ASSEM.
 -OR-
 85-1345 AC SWITCH

CHASSIS 35WDR50

*12-5425 PULLEY MTG. BRACKET (PART OF S-85563 & S-86475)
 *12-5508 HEAT SINK BRACKET
 12-5810 BRACKET, DIAL SCALE
 17-143 NYLON CLAMP (2 REQ.)
 19-480 WIRE RETAINING CLIP
 19-485 CABLE RETAINING CLIP (2 REQ.)
 19-733 CABLE RETAINER
 *20-1256 TRAP COIL (10.7 MHZ)
 *20-1649 FM OSCILLATOR COIL
 *20-3076 FM ANTENNA COIL
 *20-3077 FM DETECTOR COIL
 20-3080 TRAP COIL - 67 KHZ
 -OR-
 S-79435 TRAP COIL - 67 KHZ
 20-3545 FM OSCILLATOR COIL
 22-13 .0033 MF DISC CAPACITOR - 500V. 10% (2 REQ.)
 22-14 .0047 MF DISC CAPACITOR - 500V. (3 REQ.)
 22-2428 1.8 PF GIMMICK CAPACITOR - 500V.
 22-2592 3.4 MF CERAMIC DISC CAPACITOR - 500V.
 22-2729 .001 MF DISC CAPACITOR - 25V. (5 REQ.)
 22-2884 5 MF ELECTROLYTIC - 12V. (4 REQ.)
 22-3034 .05 MF DISC CAPACITOR - 25V. (14 REQ.)
 22-3080 .005 MF DISC CAPACITOR - 25V. (2 REQ.)
 22-3177 390 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3255 330 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3310 2.7 PF GIMMICK CAPACITOR - 500V. (2 REQ.)
 22-3362 560 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3381 39 PF CERAMIC DISC CAPACITOR - 500V. ±5%
 (2 REQ.)
 22-3393 .01 MF DISC CAPACITOR - 25V. (6 REQ.)
 22-3415 .0068 MF DISC CAPACITOR - 25V.
 22-3541 3.3 PF GIMMICK CAPACITOR - 500V.
 22-3652 .1 MF DISC CAPACITOR - 10V. (2 REQ.)
 22-3675 10 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3687 1 MF ELECTROLYTIC - 50V. (4 REQ.)
 22-3751 20 PF CAPACITOR - 500V. ±5%
 22-3770 5.5 PF DISC CAPACITOR - 500V.
 22-3896 5 MF ELECTROLYTIC - 25V.
 22-4573 1000 MF ELECTROLYTIC - 15V.
 22-4819 2 PF CAPACITOR - 500V. ±25%
 22-4855 TRIMMER CAPACITOR - 1.7 TO 10 PF CERAMIC
 22-5233 .015 MF MYLAR CAPACITOR - 50V. ±20% (2 REQ.)
 22-5316 500 MF ELECTROLYTIC CAPACITOR - 50V. (2 REQ.)
 22-5481 560 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-5482 680 PF DISC CAPACITOR - 500V. (7 REQ.)
 22-5486 10 MF ELECTROLYTIC CAPACITOR - 5V.
 22-5780 270 PF POLYSTYRENE CAPACITOR - 500V.
 22-5781 1000 PF POLYSTYRENE CAPACITOR - 500V. (2 REQ.)
 -OR-
 22-3613 1000 PF MICA CAPACITOR (2 REQ.)
 22-5782 2200 PF CAPACITOR - 500V. ±5%
 22-5862 .1 MF MYLAR CAPACITOR - 100V. (2 REQ.)
 22-5866 .047 MF MYLAR CAPACITOR - 100V. (6 REQ.)
 22-5883 .033 MF MYLAR CAPACITOR - 100V. (2 REQ.)
 22-5971 .0033 MF MYLAR CAPACITOR (2 REQ.)
 22-5972 390 PF POLYSTYRENE CAPACITOR - 125V.
 *22-5986 50 MF ELECTROLYTIC - 25V. (2 REQ.)
 22-6111 .001 MF MYLAR CAPACITOR - 50V. (2 REQ.)
 22-6246 3.3 MF ELECTROLYTIC - 15V. +100% -20%
 22-6343 .33 MF MYLAR CAPACITOR - 50V. ±20%
 22-6344 7 PF CERAMIC CAPACITOR - 500V. 7%
 22-6347 2000 PF POLYSTYRENE CAPACITOR - 50V. 5%
 -OR-
 22-6136 2000 PF POLYSTYRENE CAPACITOR - 50V. 5%
 22-6469 2.4 PF CAPACITOR - 500V. 5%
 *22-6752 GANG CAPACITOR, SIX SECTION (FM ANTENNA TRIMMER,
 FM ANTENNA TUNING, FM DETECTOR TRIMMER,
 FM DETECTOR TUNING, FM OSCILLATOR TUNING,
 FM ANTENNA TRIMMER, AM ANTENNA TUNING,
 AM DETECTOR TRIMMER, AM DETECTOR TUNING,
 AM OSCILLATOR TRIMMER, AM OSCILLATOR
 TUNING)
 33-375 FRAME - TUNER AMP. BOARD
 43-571 9 CONTACT HOUSING (USED WITH 86-390)
 44-48 CONNECTOR JACK (4 PART OF EA. S-89969 &
 S-92170)
 52-1425 2 CONDUCTOR SHIELDED PHONO CABLE - RED, WHITE
 (USED WITH 58-214)
 52-1501 3 CONDUCTOR CABLE - RED, BLACK, WHITE
 APPROX. 20" (PART OF S-87113)
 *52-1588 2 CONDUCTOR SHIELDED LEAD - RED, WHITE
 (USED ON S-89969)
 *52-1589 2 CONDUCTOR SHIELDED LEAD - YELLOW, GREEN
 (USED ON S-89969)
 *52-1590 2 CONDUCTOR SHIELDED LEAD - PURPLE, GRAY
 (USED ON BANDSWITCH)
 *52-2022 2 CONDUCTOR SHIELDED CABLE - BLUE, BLACK
 (USED ON S-89969)
 *52-2023 2 CONDUCTOR SHIELDED CABLE - BROWN, ORANGE
 (USED ON S-89969)
 *52-2080 SHIELDED LEAD CABLE
 *52-2081 SHIELDED LEAD CABLE
 52-2147 TWIN LEAD CABLE - 300 OHM
 54-139 3/8-32 X 9/16 PALNUT (1 USED ON EA. 63-8708,
 63-8964, 63-8965, 63-8977 & 85-1207)
 54-808 TINNEMAN SPEED NUT (1 USED ON EA. 114-1144)
 54-828 1/2-20 X 0.750 AF STAMPED LOCKING NUT
 (1 USED ON EA. 94-1532)
 58-214 SINGLE PRONG PLUG (2 USED ON 52-1425)
 58-338 PLUG SHORTING BAR (2 USED ON S-89969)
 59-1103 DIAL POINTER
 61-222 IDLER PULLEY (PART OF S-85563, S-85564 &
 2 PART OF S-86475, S-89890, S-91614 &
 S-85565)
 *61-349 DRIVE PULLEY (PART OF S-92496)
 63-1792 1500 OHM RESISTOR - 1/2W. 10%
 *63-1898 470K OHM RESISTOR - 1/2W. 20%
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4129 47 OHM RESISTOR - 1/4W. 10%
 63-4157 220 OHM RESISTOR - 1/4W. 10%
 63-4185 1000 OHM RESISTOR - 1/4W. 10%
 63-4196 1800 OHM RESISTOR - 1/4W. 10%
 63-4231 12K OHM RESISTOR - 1/4W. 10%
 63-4255 47K OHM RESISTOR - 1/4W. 10%
 63-4269 100K OHM RESISTOR - 1/4W. 10%
 63-4287 270K OHM RESISTOR - 1/4W. 10%

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 35WDR50 CONT'D

63-5663 680 OHM RESISTOR - 2W. 10%
 63-6424 1 OHM RESISTOR - 5W. 10% (2 REQ.)
 63-6495 MUTE CONTROL - 100K
 *63-8708 ROTARY CONTROL, SINGLE - 5K OHM 30% 1/4W.
 BIAS ADJUST.
 *63-8964 ROTARY CONTROL, DUAL TREBLE - 250K OHM 30% 1/8W.
 *63-8965 ROTARY CONTROL, DUAL BASS - 250K OHM 30% 1/8W.
 *63-8966 ROTARY CONTROL, SINGLE BALANCE W/SWITCH -
 500K OHM
 *63-8967 ROTARY CONTROL, DUAL LOUDNESS - 100K OHM
 *63-9261 ROTARY CONTROL, SINGLE BIAS ADJUST. (2 REQ.)
 64-6 1/8" DIA. X 3/16" LG. TUBULAR RIVET
 (2 PART OF S-89969)
 64-78 BRASS EYELET - PLAIN
 64-720 RIVET, SHOULDER (PART OF S-86475)
 64-288 SHOULDER RIVET (1 PART OF EA. S-85563, S-85564,
 2 PART OF S-89890, S-91614 & S-85565)
 64-1033 GRIP EYELET (42 REQ.)
 *76-2032 TUNING SHAFT
 78-1988 LIGHT SOCKET & WIRE
 79-174-8 #18 YELLOW SLEEVING
 80-1180 WIRE SPRING
 *82-195 GROUND STRAP
 82-208 GROUND STRAP
 83-1961 ANTENNA TERMINAL STRIP (PART OF S-89969)
 83-3320 RETAINING STRIP
 *83-7417 ANTENNA PROTECTIVE STRIP
 *83-7552 TRANSISTOR INSULATING WASHER (1 USED ON EA.
 121-853)
 83-8066 TIE STRIP - 6" (2 REQ.)
 83-8122 3 LUG TERMINAL STRIP
 83-8163 ANTENNA MTG. TERMINAL STRIP (2 PART OF
 S-88463)
 83-8216 INSULATING STRIP - CABLE RETAINING
 *83-8571 INSULATING TERMINAL (2 USED ON S-89969)
 85-1344 6 POSITION BANDSWITCH & ON-OFF SWITCH ASSEM.
 86-344 CONNECTOR TERMINAL (USED ON 52-2147 & 52-1501)
 (6 REQ.)
 86-357 CONNECTOR TERMINAL (PART OF S-94014)
 86-390 CONNECTOR TERMINAL (8 USED ON 43-571)
 86-500 TERMINAL (23 REQ.)
 86-543 MINIATURE SPRING TERMINAL (88 REQ.)
 94-1532 NYLON SHAFT BUSHING (1 USED ON 76-2032)
 94-1586 SHOULDER BUSHING (1 USED ON EA. 114-1144)
 95-2543 TRANSFORMER - 3RD. I.F. AM 455 KHZ
 95-2544 TRANSFORMER - AM OSCILLATOR
 *95-2750 TRANSFORMER - AM R.F.
 *95-2751 TRANSFORMER - AM 1ST. I.F. 455 KHZ
 *95-2752 TRANSFORMER - AM 2ND. I.F. 455 KHZ
 *95-2753 TRANSFORMER - FM 1ST. I.F. 10.7 MHZ
 *95-2754 TRANSFORMER - FM 2ND. I.F. 10.7 MHZ
 *95-2755 TRANSFORMER - FM 3RD. I.F. 10.7 MHZ
 *95-2756 TRANSFORMER - FM RADIO DETECTOR 10.7 MHZ
 *95-2856 MULTIPLEX DOUBLER COIL - 19 KHZ
 *95-2857 MULTIPLEX DETECTOR COIL - 38 KHZ
 *95-2858 MULTIPLEX INPUT COIL - 19 KHZ
 100-249 INDICATOR LAMP
 103-23 GERMANIUM DIODE (6 REQ.)
 103-47 DIODE AFC
 103-90 GERMANIUM DIODE - MATCHED PAIR (FM)
 103-96 DIODE, ZENER
 *105-107 INTEGNET - 38 KHZ FILTER (2 REQ.)
 114-801 8-18 X 5/16 HEX HD. SELF-TAP. SCREW-STAT.
 BRONZE (3 MT. CHASSIS, 12-5508, 1 MTS.
 S-85563 & 2 MT. 12-5810) (9 REQ.)
 114-802 8-18 X 5/16 X 1/4 HEX WASHER SELF-TAP.
 SCREW (2 USED ON 83-7417)
 114-809 8-18 X 3/16 X 1/4 AF HEX HD. SELF-TAP.
 SCREW (1 USED ON 83-8122)
 114-864 8-18 X 3/8 HEX WASHER HD. SELF-TAP. SCREW-
 STAT. BRONZE (1 MTS. EA. 17-143) (2 REQ.)
 114-1302 4-24 X 5/8 X 0.187 HEX WASHER HD. SCREW-
 STAT. BRONZE (1 USED ON EA. 121-880)
 121-430 TRANSISTOR - AUDIO AMP. (2 REQ.)
 121-433 TRANSISTOR - PRE-AMP. (2 REQ.)
 121-546 TRANSISTOR - AM/FM 2ND. I.F., FM 3RD. I.F.
 (2 REQ.)
 121-613 TRANSISTOR - FM CONVERTER
 121-614 TRANSISTOR - AM/FM 1ST. I.F.
 121-639 TRANSISTOR - COMP. AMP., 19 KHZ AMP., 38 KHZ
 AMP., TUNING METER CONTROL (4 REQ.)
 121-714 TRANSISTOR - AM CONVERTER
 *121-737 TRANSISTOR - STEREO INDICATOR SWITCH
 *121-767 TRANSISTOR - BIAS CONTROL (2 REQ.)
 121-826 TRANSISTOR - FM RF (FET)
 121-850 TRANSISTOR - AM RF
 121-858 TRANSISTOR - BIPLEX DETECTOR
 *121-877 TRANSISTOR - PRE-DRIVER (2 REQ.)
 *121-878 TRANSISTOR - DRIVER (2 REQ.)
 121-879 TRANSISTOR - DRIVER (2 REQ.)
 121-880 TRANSISTOR - OUTPUT (4 REQ.)
 126-1336 COIL SHIELD (USED ONLY WITH S-79435)
 149-311 FERRITE CORD (SLEEVE) (2 REQ.)
 *149-426 FERRITE CORD, ANTENNA ROD (PART OF S-88463)
 188-140 RETAINING RING (1 USED ON 76-2032)
 188-155 CLAMPING RING (PART OF S-92496)
 199-319 INSULATING SLEEVE (6 REQ.)
 *199-567 SLEEVING (PART OF S-88463)
 205-51 DOW CORNING HEAT CONDUCTIVE GREASE
 885-12 AC SWITCH ONLY SPST (PART OF 85-1344)
 885-13 AC SWITCH ONLY SPDT (PART OF 85-1344)
 S-85563 PULLEY & BRACKET ASSEM. - FLAT BRACKET
 S-85564 PULLEY & BRACKET ASSEM. - ANGLED BRACKET
 S-85565 GUIDE BRACKET & PULLEY ASSEM.
 S-86475 PULLEY MT. BRACKET ASSEM.
 S-87113 SPEAKER CABLE, TERMINAL & SLEEVE ASSFM.
 (3 WIRE - RED, BLACK, WHITE)
 *S-88463 WAVEMAGNET ANTENNA ASSEM. - AM
 S-88988 DIAL CORD & EYELET ASSEM. - APPROX. 44"
 S-89122 FM DETECTOR COIL ASSEM.
 S-89969 TAPE JACK & ANTENNA BRACKET ASSEM.
 S-92166 LINE CORD ASSEM.

* DENOTES PARTS NOT PREVIOUSLY USED

CHASSIS 35WDR50 CONT'D

S-92170
 *S-92496
 S-94014

JACK & BRACKET ASSEM.
 PULLEY & RING ASSEM.
 ANTENNA CABLE & TERMINAL ASSEM. - FM

CHASSIS 35WDR50Z1

*12-5425 PULLEY MTG. BRACKET (PART OF S-85563 & S-86475)
 *12-5508 HEAT SINK BRACKET
 12-5810 BRACKET, DIAL SCALE
 17-143 NYLON CLAMP (2 REQ.)
 19-480 WIRE RETAINING CLIP
 19-485 CABLE RETAINING CLIP (2 REQ.)
 19-733 CABLE RETAINER
 *20-1256 TRAP COIL (10.7 MHZ)
 *20-1649 FM OSCILLATOR COIL
 *20-3076 FM ANTENNA COIL
 *20-3077 FM DETECTOR COIL
 20-3080 TRAP COIL - 67 KHZ
 -OR-
 S-79435 TRAP COIL - 67 KHZ
 20-3545 TUNABLE COIL
 22-13 .0033 MF DISC CAPACITOR - 500V. 10% (2 REQ.)
 22-14 .0047 MF DISC CAPACITOR - 500V. (3 REQ.)
 22-2428 1.8 PF GIMMICK CAPACITOR - 500V.
 22-2729 .001 MF DISC CAPACITOR - 25V. (5 REQ.)
 22-2884 5 MF ELECTROLYTIC - 12V. (4 REQ.)
 22-3034 .05 MF DISC CAPACITOR - 25V. (14 REQ.)
 22-3080 .005 MF DISC CAPACITOR - 25V. (2 REQ.)
 22-3177 390 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3255 330 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3310 2.7 PF GIMMICK CAPACITOR - 500V. (2 REQ.)
 22-3362 560 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3381 39 PF CERAMIC DISC CAPACITOR - 500V. ±5%
 (2 REQ.)
 22-3393 .01 MF DISC CAPACITOR - 25V. (6 REQ.)
 22-3415 .0068 MF DISC CAPACITOR - 25V.
 22-3541 3.3 PF GIMMICK CAPACITOR - 500V.
 22-3652 .1 MF DISC CAPACITOR - 10V. (2 REQ.)
 22-3675 10 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-3687 1 MF ELECTROLYTIC - 50V. (4 REQ.)
 22-3751 20 PF CAPACITOR - 500V. ±5%
 22-3770 5.5 PF DISC CAPACITOR - 500V.
 22-3896 5 MF ELECTROLYTIC - 25V.
 22-4573 1000 MF ELECTROLYTIC - 15V.
 22-4819 2 PF CAPACITOR - 500V. ±25%
 22-4855 TRIMMER CAPACITOR - 1.7 TO 10 PF CERAMIC
 22-5233 .015 MF MYLAR CAPACITOR - 50V. ±20% (2 REQ.)
 22-5316 500 MF ELECTROLYTIC CAPACITOR - 50V. (2 REQ.)
 22-5481 560 PF DISC CAPACITOR - 500V. (2 REQ.)
 22-5482 680 PF DISC CAPACITOR - 500V. (7 REQ.)
 22-5486 10 MF ELECTROLYTIC CAPACITOR - 6V.
 22-5780 270 PF POLYSTYRENE CAPACITOR - 500V.
 22-5781 1000 PF POLYSTYRENE CAPACITOR - 500V. (2 REQ.)
 -OR-
 22-3613 1000 PF MICA CAPACITOR (2 REQ.)
 22-5782 2200 PF CAPACITOR - 500V. ±5%
 22-5862 .1 MF MYLAR CAPACITOR - 100V. (2 REQ.)
 22-5866 .047 MF MYLAR CAPACITOR - 100V. (6 REQ.)
 22-5971 .0033 MF MYLAR CAPACITOR (2 REQ.)
 22-5972 390 PF POLYSTYRENE CAPACITOR - 125V.
 *22-5986 50 MF ELECTROLYTIC - 25V. (2 REQ.)
 *22-6111 .001 MF MYLAR CAPACITOR - 50V. (2 REQ.)
 22-6246 3.3 MF ELECTROLYTIC - 15V. ±100% -20%
 22-6343 .33 MF MYLAR CAPACITOR - 50V. ±20% (2 REQ.)
 22-6344 7 PF CERAMIC CAPACITOR - 500V. 7%
 22-6347 2000 PF POLYSTYRENE CAPACITOR - 50V. 5%
 -OR-
 22-6136 2000 PF POLYSTYRENE CAPACITOR - 50V. 5%
 22-5469 2.4 PF CAPACITOR - 500V. 5%
 *22-6752 GANG CAPACITOR, SIX SECTION (FM ANTENNA TRIMMER,
 FM ANTENNA TUNING, FM DETECTOR TRIMMER,
 FM DETECTOR TUNING, FM OSCILLATOR TUNING,
 AM ANTENNA TRIMMER, AM ANTENNA TUNING,
 AM DETECTOR TRIMMER, AM DETECTOR TUNING,
 AM OSCILLATOR TRIMMER, AM OSCILLATOR
 TUNING)
 FRAME - TUNER AMP. BOARD
 43-571 9 CONTACT HOUSING (USED WITH 86-390)
 52-1425 2 CONDUCTOR SHIELDED PHONO CABLE - RED, WHITE
 (USED WITH 58-214)
 52-1501 3 CONDUCTOR CABLE - RED, BLACK, WHITE
 APPROX. 20" (PART OF S-87113)
 *52-1588 2 CONDUCTOR SHIELDED LEAD - RED, WHITE
 (USED ON S-89969)
 *52-1589 2 CONDUCTOR SHIELDED LEAD - YELLOW, GREEN
 (USED ON S-89969)
 *52-2022 2 CONDUCTOR SHIELDED CABLE - BLUE, BLACK
 (USED ON S-89969)
 *52-2023 2 CONDUCTOR SHIELDED CABLE - BROWN, ORANGE
 (USED ON S-89969)
 52-2147 TWIN LEAD CABLE - 300 OHM
 54-139 3/8-32 X 9/16 PALNUT (1 USED ON EA. 63-8708,
 63-8964 & 63-8965)
 54-808 TINNED SPEED NUT (1 USED ON EA. 114-1302)
 54-828 1/2-20 X 0.750 AF STAMPED LOCKING NUT
 (1 USED ON EA. 94-1532)
 58-214 SINGLE PRONG PLUG (2 USED ON 52-1425)
 58-338 PLUG SHORTING BAR (2 USED ON S-89969)
 59-1103 DIAL POINTER
 61-222 IDLER PULLEY (PART OF S-85563, S-85564 &
 2 PART OF S-86475 & S-85565)
 *61-349 DRIVE PULLEY (PART OF S-92496)
 63-1776 620 OHM RESISTOR 1/2W. 5% (2 REQ.)
 63-1792 1500 OHM RESISTOR - 1/2W. 10% (2 REQ.)
 63-1872 120K OHM RESISTOR 1/2W. 5% (2 REQ.)
 *63-1898 470K OHM RESISTOR - 1/2W. 20%
 63-4122 33 OHM RESISTOR - 1/4W. 10%
 63-4133 56 OHM RESISTOR - 1/4W. 10%
 63-4157 220 OHM RESISTOR - 1/4W. 10%
 63-4185 1000 OHM RESISTOR - 1/4W. 10%
 63-4196 1800 OHM RESISTOR - 1/4W. 10%
 63-4231 12K OHM RESISTOR - 1/4W. 10%
 63-4255 47K OHM RESISTOR - 1/4W. 10%
 63-4269 100K OHM RESISTOR - 1/4W. 10%
 63-4287 270K OHM RESISTOR - 1/4W. 10%
 63-5663 680 OHM RESISTOR - 2W. 10%

63-6424	1 OHM RESISTOR - 5W. 10% (2 REQ.)	*121-737	TRANSISTOR - STEREO INDICATOR SWITCH
63-6495	MUTE CONTROL - 100K	*121-767	TRANSISTOR - BIAS CONTROL (2 REQ.)
63-7011	1K OHM RESISTOR - 1/2W. 10% (4 REQ.)	121-826	TRANSISTOR - FM RF (FET)
63-7013	470 OHM RESISTOR - 1/2W. 10%	121-850	TRANSISTOR - AM RF
63-7020	4.7K OHM RESISTOR - 1/2W. 10% (6 REQ.)	121-858	TRANSISTOR - BIPLEX DETECTOR
63-7021	330K OHM RESISTOR - 1/2W. 10% (2 REQ.)	*121-877	TRANSISTOR - PRE-DRIVER (2 REQ.)
63-7022	820 OHM RESISTOR - 1/2W. 10%	*121-878	TRANSISTOR - DRIVER (2 REQ.)
63-7024	6.8K OHM RESISTOR - 1/2W. 10% (3 REQ.)	121-879	TRANSISTOR - DRIVER (2 REQ.)
63-7025	12K OHM RESISTOR - 1/2W. 10% (2 REQ.)	121-880	TRANSISTOR - OUTPUT (4 REQ.)
63-7026	22K OHM RESISTOR - 1/2W. 10%	149-311	FERRITE CORD (SLEEVE) (2 REQ.)
63-7027	100K OHM RESISTOR - 1/2W. 10%	*149-426	FERRITE CORD, ANTENNA ROD (PART OF S-88463)
63-7028	5.6K OHM RESISTOR - 1/2W. 10%	188-140	RETAINING RING (1 USED ON 76-2032)
63-7029	3.3K OHM RESISTOR - 1/2W. 10% (3 REQ.)	188-155	CLAMPING RING (PART OF S-92496)
63-7030	8.2K OHM RESISTOR - 1/2W. 10%	199-319	INSULATING SLEEVE (6 REQ.)
63-7031	15K OHM RESISTOR - 1/2W. 10% (4 REQ.)	*199-567	SLEEVE (PART OF S-88463)
63-7032	32K OHM RESISTOR - 1/2W. 10% (2 REQ.)	S-85563	PULLEY & BRACKET ASSEM. - FLAT BRACKET
63-7034	56K OHM RESISTOR - 1/2W. 10%	S-85564	PULLEY & BRACKET ASSEM. - ANGLED BRACKET
63-7037	270 OHM RESISTOR - 1/2W. 10% (2 REQ.)	S-85565	GUIDE BRACKET & PULLEY ASSEM.
63-7039	330 OHM RESISTOR - 1/2W. 10% (2 REQ.)	S-86475	PULLEY MTC, BRACKET ASSEM.
63-7041	47K OHM RESISTOR - 1/2W. 10% (4 REQ.)	S-87113	SPEAKER CABLE, TERMINAL & SLEEVE ASSEM. (3 WIRE - RED, BLACK, WHITE)
63-7043	68 OHM RESISTOR - 1/2W. 10% (3 REQ.)	*S-88463	WAVEMAGNET ANTENNA ASSEM. - AM
63-7045	560 OHM RESISTOR - 1/2W. 10% (3 REQ.)	S-88988	DIAL CORD & EYELET ASSEM. - APPROX. 44"
63-7046	10K OHM RESISTOR - 1/2W. 10%	S-89122	FM DETECTOR COIL ASSEM.
63-7054	27K OHM RESISTOR - 1/2W. 10% (4 REQ.)	*S-92496	PULLEY & RING ASSEM.
63-7055	680 OHM RESISTOR - 1/2W. 10% (5 REQ.)	S-94014	ANTENNA CABLE & TERMINAL ASSEM. - FM
*63-7057	2.2K OHM RESISTOR - 1/2W. 10% (4 REQ.)	*S-94143	JACK & BRACKET ASSEM.
63-7061	220K OHM RESISTOR - 1/2W. 10% (2 REQ.)		
63-7069	220 OHM RESISTOR - 1/2W. 10% (4 REQ.)		
*63-8708	ROTARY CONTROL, SINGLE - 5K OHM 30% 1/4W. BIAS ADJUST.		
63-8723	39K OHM RESISTOR - 1/2W. 10% (2 REQ.)		
63-8732	10 OHM RESISTOR - 1/2W. 10% (3 REQ.)	12-4193	COIL MOUNTING BRACKET
63-8733	22 OHM RESISTOR - 1/2W. 10% (2 REQ.)	19-322	SPEED CLIP (4 REQ.)
63-8734	740 OHM RESISTOR - 1/2W. 20% (5 REQ.)	20-1256	TRAP COIL
63-8736	820 OHM RESISTOR - 1/2W. 5%	22-2374	6 PF CAPACITOR - 500V.
63-8738	2.2K OHM RESISTOR - 1/2W. 5%	22-2424	1.5 PF GIMMICK CAPACITOR - 500V.
63-8739	3.3K OHM RESISTOR - 1/2W. 5% (2 REQ.)	22-2642	15 PF CERAMIC DISC CAPACITOR - 500V. (PART OF S-83409)
63-8740	3.9K OHM RESISTOR - 1/2W. 10% (2 REQ.)		
63-8741	10K OHM RESISTOR - 1/2W. 5% (2 REQ.)	22-3393	.01 MF DISC CAPACITOR - 25V. (1 USED ON S-69085, 1 PART OF S-83410)
63-8742	22K OHM RESISTOR - 1/2W. 20%		
63-8744	120K OHM RESISTOR - 1/2W. 10%	22-3479	2.2 PF CAPACITOR - 500V. (PART OF S-83410)
63-8745	270K OHM RESISTOR - 1/2W. 10% (2 REQ.)	22-3675	10 PF DISC CAPACITOR - 500V. (PART OF S-83412)
63-8746	470K OHM RESISTOR - 1/2W. 20% (2 REQ.)	22-4515	1.8 PF GIMMICK CAPACITOR - 500V. (PART OF S-83409)
63-8747	680K OHM RESISTOR - 1/2W. 10%	22-4613	1000 PF FEED-THRU CAPACITOR - 500V. (5 REQ.)
63-8748	1.5 MEGOHM RESISTOR - 1/2W. 10% (2 REQ.)	22-4718	1000 PF FEED-THRU CAPACITOR - 100V.
63-8749	3.3 MEGOHM RESISTOR - 1/2W. 20%	22-5164	1.2 PF GIMMICK CAPACITOR - 500V. (PART OF S-83412)
63-8754	1.3K OHM RESISTOR - 1/2W. 5% (2 REQ.)	22-5281	23 PF DISC CAPACITOR - 500V. (PART OF S-83410)
*63-8964	ROTARY CONTROL, DUAL TREBLE - 250K OHM 30% 1/8W.	22-5318	34 PF DISC CAPACITOR - 500V. (1 PART OF EACH S-83409, S-83411 & S-83412)
*63-8965	ROTARY CONTROL, DUAL BASS - 250K OHM 30% 1/8W.	24-1372	TUNER COVER
*63-8966	ROTARY CONTROL, SINGLE BALANCE W/SWITCH - 500K OHM	44-48	CONNECTOR JACK
*63-8967	ROTARY CONTROL, DUAL LOUDNESS - 100K OHM	56-426	ROLL PIN (6 REQ.)
*63-9261	ROTARY CONTROL, SINGLE BIAS ADJUST. (2 REQ.)	63-1778	680 OHM RESISTOR - 1/2W. 10%
64-1033	GRIP EYELET (42 REQ.)	63-4122	33 OHM RESISTOR - 1/4W. 10%
*76-2032	TUNING SHAFT	63-4157	220 OHM RESISTOR - 1/4W. 10%
80-1180	WIRE SPRING	63-4171	470 OHM RESISTOR - 1/4W. 10% (PART OF S-83410)
*82-195	GROUND STRAP	63-4175	560 OHM RESISTOR - 1/4W. 10%
82-208	GROUND STRAP	63-4185	1K OHM RESISTOR - 1/4W. 10%
*83-7417	ANTENNA PROTECTIVE STRIP	63-4199	2200 OHM RESISTOR - 1/4W. 10%
*83-7552	TRANSISTOR INSULATING WASHER	63-4210	3900 OHM RESISTOR - 1/4W. 10%
83-8066	TIE STRIP - 6" (2 REQ.)	63-4227	10K OHM RESISTOR - 1/4W. 10% (PART OF S-83410)
83-8122	3 LUG TERMINAL STRIP	63-4241	22K OHM RESISTOR - 1/4W. 10%
83-8163	ANTENNA MTC, TERMINAL STRIP (2 PART OF S-88463)	63-4269	100K OHM RESISTOR - 1/4W. 10%
*83-8571	INSULATING TERMINAL (2 REQ.)	63-4283	220K OHM RESISTOR - 1/4W. 10% (USED ON S-69085)
86-344	CONNECTOR TERMINAL (USED ON 52-2147 & 52-1501) (6 REQ.)	63-4297	470K OHM RESISTOR - 1/4W. 20%
86-357	CONNECTOR TERMINAL (PART OF S-94014)	76-1541	GUIDE SHAFT (2 REQ.)
86-390	CONNECTOR TERMINAL (8 USED ON 43-571)	76-1820	DRIVE SHAFT
86-500	TERMINAL (23 REQ.)	78-1227	TRANSISTOR SOCKET (2 REQ.)
86-542	MINIATURE SPRING TERMINAL (88 REQ.)	78-1378	TRANSISTOR SOCKET
86-543	MINIATURE SPRING TERMINAL (88 REQ.)	79-55-40	PLASTIC SLEEVING - EXTRUDED
94-1532	NYLON SHAFT BUSHING (1 USED ON 76-2032)	79-174-12	#18 SLEEVING - YELLOW (2 REQ.)
94-1586	SHOULDER BUSHING (1 USED ON EA. 114-1302)	80-1467	RETAINING SPRING
95-2543	TRANSFORMER - 3RD. I.F. AM 455 KHZ	80-1853	TRANSFORMER RETAINING SPRING
95-2544	TRANSFORMER - AM OSCILLATOR	86-441	INSULATED FEED-THRU TERMINAL (2 REQ.)
*95-2750	TRANSFORMER - AM R.F.	94-1472	SHAFT BUSHING
*95-2751	TRANSFORMER - AM 1ST. I.F. 455 KHZ	95-2322	1ST. I.F. TRANSFORMER - FM
*95-2752	TRANSFORMER - AM 2ND. I.F. 455 KHZ	103-47	DIODE (USED ON S-69085)
*95-2753	TRANSFORMER - FM 1ST. I.F. 10.7 MHZ	113-26	6-32 X 1/4 X 1/4 HEX HD. MACHINE SCREW (4 REQ.)
*95-2754	TRANSFORMER - FM 2ND. I.F. 10.7 MHZ	121-432	OSCILLATOR TRANSISTOR
*95-2755	TRANSFORMER - FM 3RD. I.F. 10.7 MHZ	121-731	RF TRANSISTOR - FM
*95-2756	TRANSFORMER - FM RADIO DETECTOR 10.7 MHZ	*121-732	MIXER TRANSISTOR - FM
*95-2856	MULTIPLEX DOUBLER COIL - 19 KHZ	126-1141	COIL SHIELD - SIDE
*95-2857	MULTIPLEX DETECTOR COIL - 38 KHZ	*126-1142	CENTER SHIELD
*95-2858	MULTIPLEX INPUT COIL - 19 KHZ	S-62887	FM OSCILLATOR COIL ASSEMBLY (1 PART OF EACH S-83409, S-83410, S-83411 & S-83412)
100-249	INDICATOR LAMP	S-69085	SHIELD AND TERMINAL STRIP ASSEMBLY
103-23	GERMANIUM DIODE (6 REQ.)	S-80123	BRACKET, SHAFT AND PIN ASSEMBLY
103-47	DIODE (APC)	S-83409	DETECTOR COIL ASSEMBLY
103-90	GERMANIUM DIODE - MATCHED PAIR (FM)	S-83410	FM OSCILLATOR COIL ASSEMBLY
103-96	DIODE, ZENER	S-83411	ANTENNA COIL ASSEMBLY
*105-107	INTEGNET - 38 KHZ FILTER (2 REQ.)	S-83412	RF INPUT COIL ASSEMBLY
114-801	8-18 X 5/16 HEX HD. SELF-TAP. SCREW-STAT. BRONZE (3 MTS. CHASSIS, 12-5508, 1 MTS. S-85563 & 2 MTS. 12-5810) (9 REQ.)		
114-802	8-18 X 5/16 X 1/4 HEX WASHER SELF-TAP. SCREW (2 USED ON 83-7417)		
114-809	8-18 X 3/16 X 1/4 AF HEX HD. SELF-TAP. SCREW (1 USED ON 83-8122)		
114-864	8-18 X 3/8 HEX WASHER HD. SELF-TAP. SCREW-STAT. BRONZE (1 MTS. EA. 17-143) (2 REQ.)		
114-1302	4-24 X 5/8 X 0.187 HEX WASHER HD. SCREW-STAT. BRONZE (1 USED ON EA. 121-880)		
121-430	TRANSISTOR - AUDIO AMP. (2 REQ.)		
121-433	TRANSISTOR - PRE-AMP. (2 REQ.)		
121-546	TRANSISTOR - AM/FM 2ND. I.F., FM 3RD. I.F. (2 REQ.)		
121-613	TRANSISTOR - FM CONVERTER		
121-614	TRANSISTOR - AM/FM 1ST. I.F.		
121-639	TRANSISTOR - COMP. AMP., 19 KHZ AMP., 38 KHZ AMP., TUNING METER CONTROL (4 REQ.)		
121-714	TRANSISTOR - AM CONVERTER		

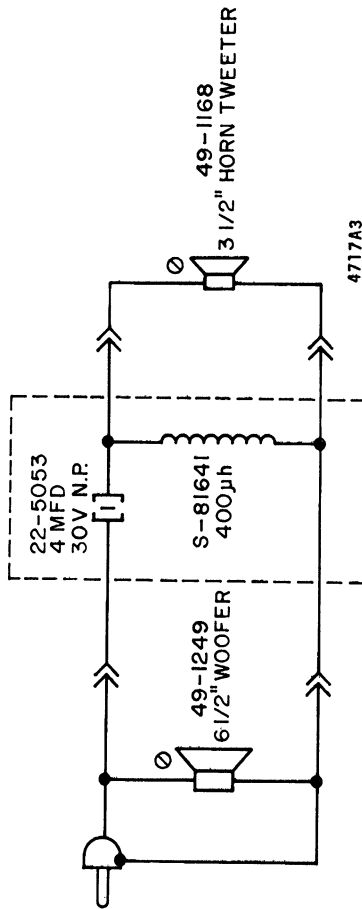
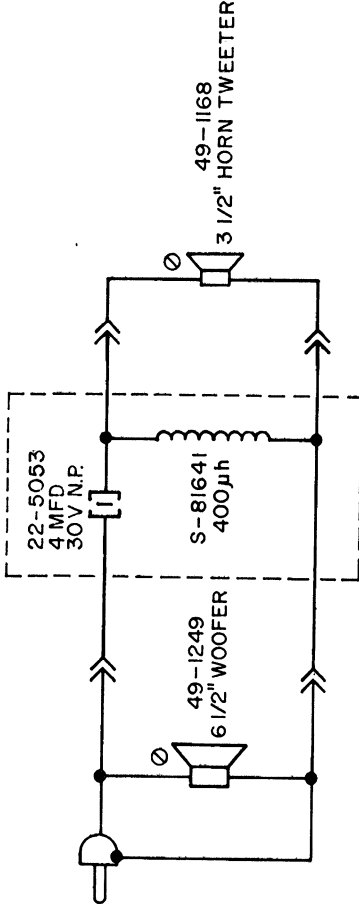
DENOTES PARTS NOT PREVIOUSLY USED

NOTES

NOTES

MODELS: E584W, E587W, E588W

LEFT SPEAKER
SPEAKER Crossover ASSEMBLY
S-95456

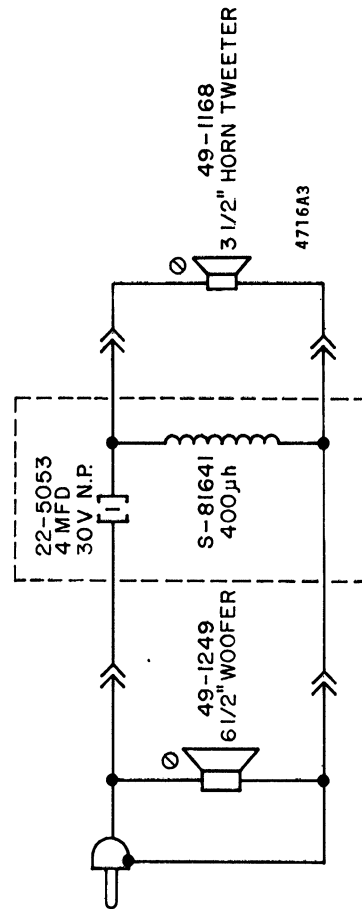
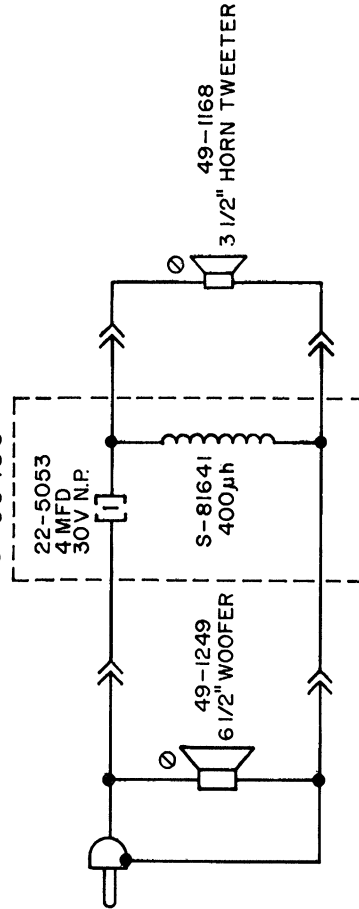


RIGHT SPEAKER
SPEAKER Crossover ASSEMBLY
S-95456

NOTE:
Ø INDICATES WHITE OR YELLOW VOICE COIL
POLARITY IDENTIFICATION DOT ON SPEAKER

MODELS: E445W, E680W, E685W

LEFT SPEAKER
SPEAKER Crossover ASSEMBLY
S-95456

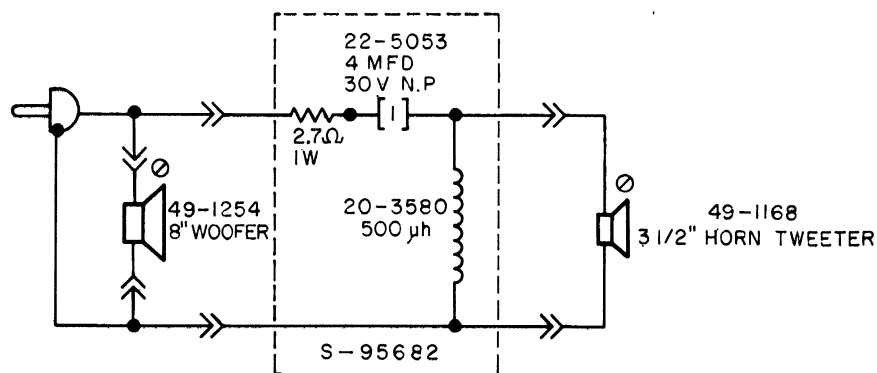


RIGHT SPEAKER
SPEAKER Crossover ASSEMBLY
S-95456

NOTE:
Ø INDICATES WHITE OR YELLOW VOICE COIL
POLARITY IDENTIFICATION DOT ON SPEAKER

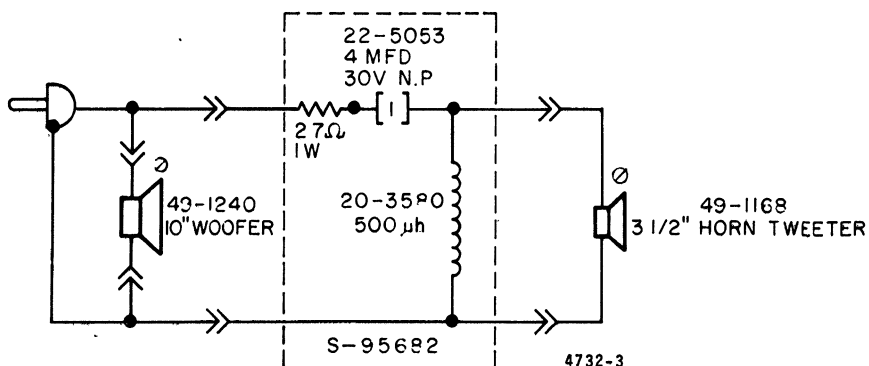
SPEAKER WIRING SCHEMATICS

MODELS: E585J, E586W



RIGHT / LEFT FRONT SPEAKER

MODELS: E589W, E594W

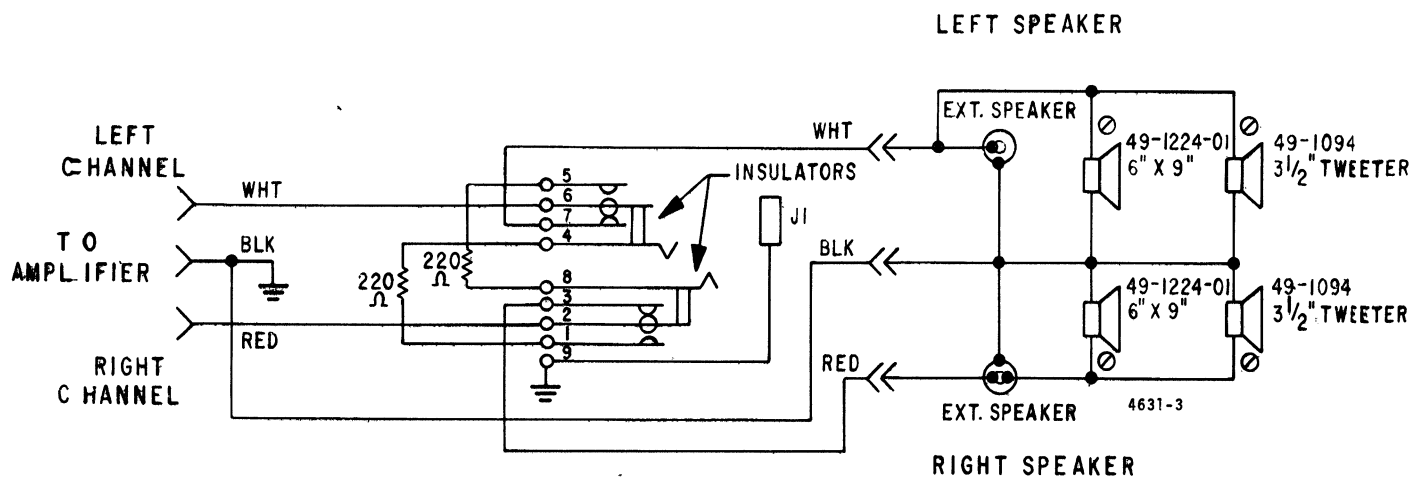


RIGHT / LEFT FRONT SPEAKER

NOTE

Ø INDICATES WHITE OR YELLOW VOICE COIL
POLARITY IDENTIFICATION DOT ON SPEAKER.

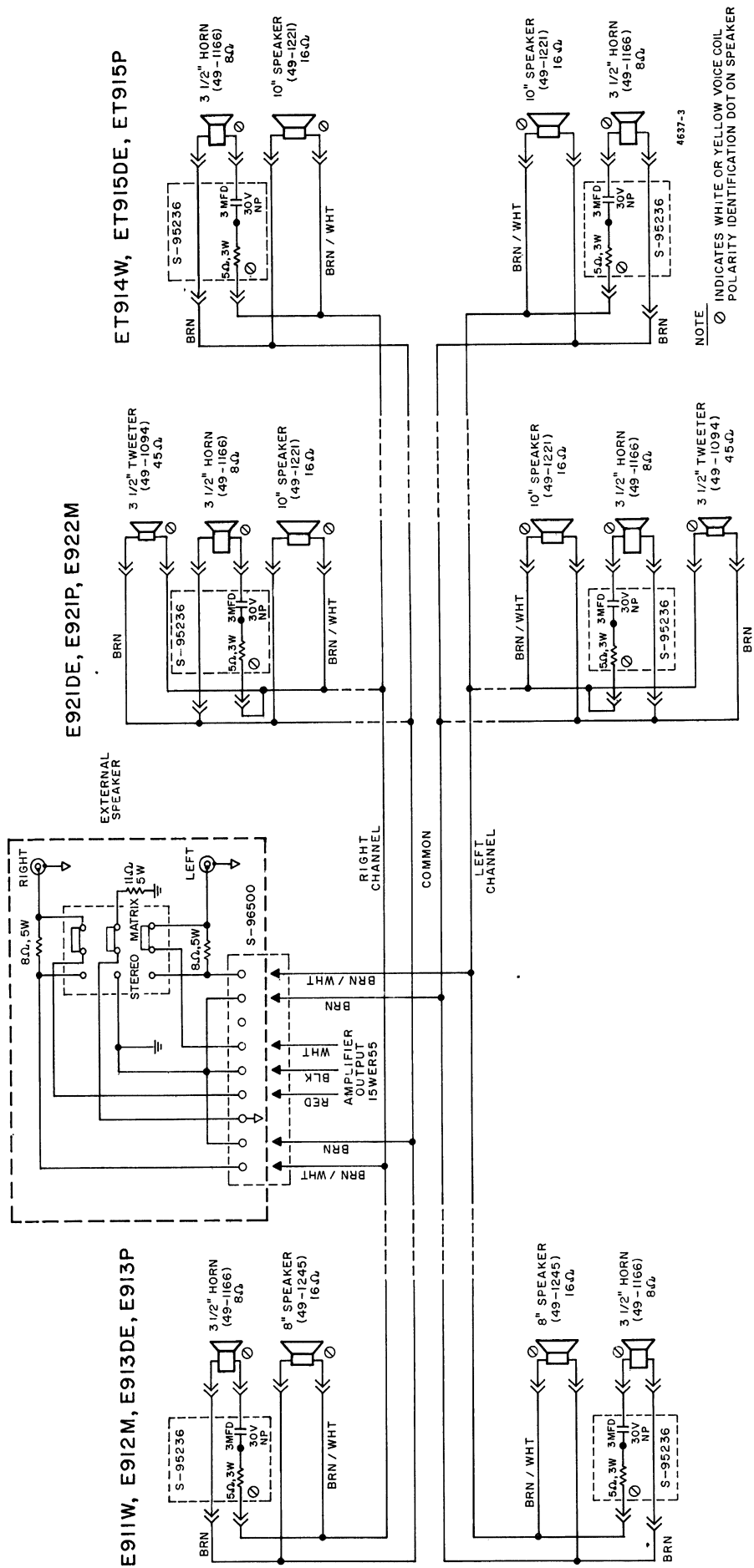
E902W, E903M, E904DE, ET902W, ET903M, ET904DE



NOTE:

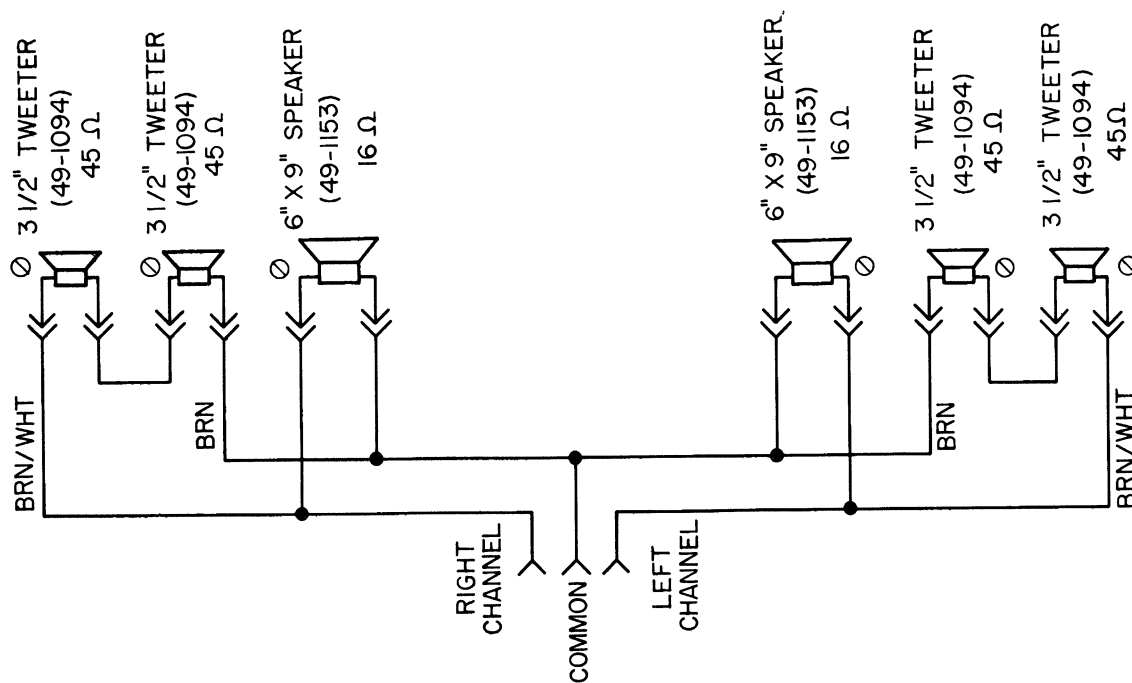
Ø INDICATES WHITE OR YELLOW VOICE COIL
POLARITY IDENTIFICATION DOT ON SPEAKER.

SPEAKER WIRING SCHEMATICS



SPEAKER WIRING SCHEMATICS

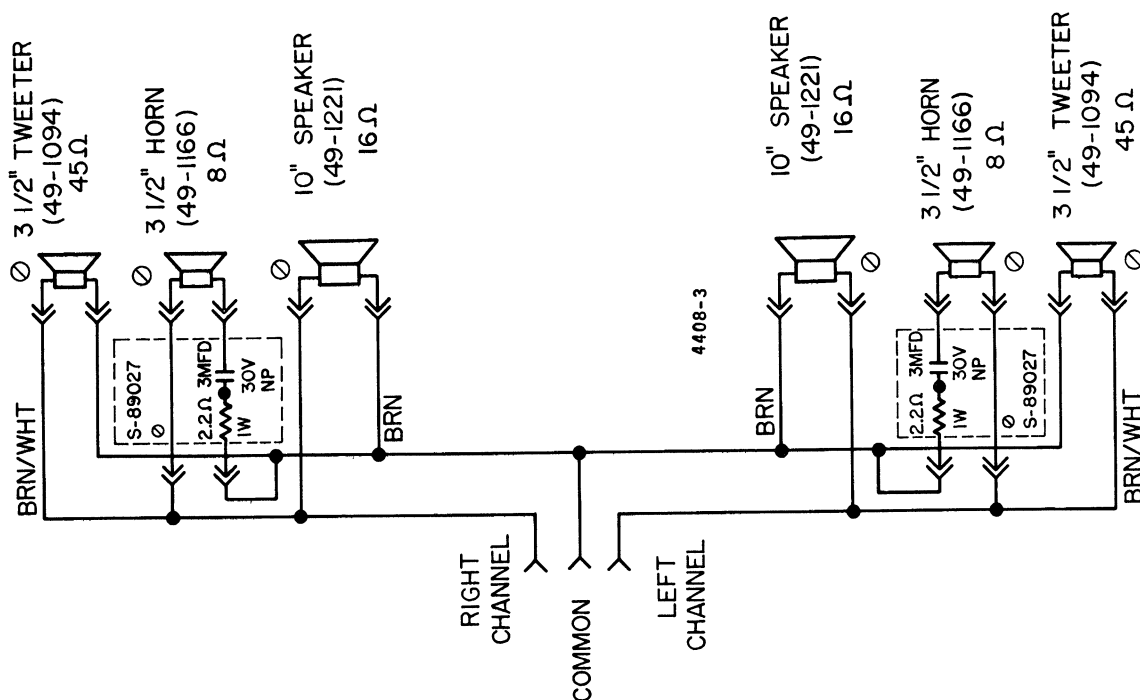
D907M, D908DE, D908P,
D91QW, D91IW



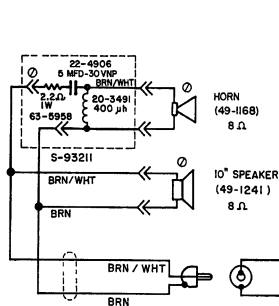
NOTE:

Ø INDICATES WHITE OR YELLOW VOICE COIL
POLARITY IDENTIFICATION DOT ON SPEAKER

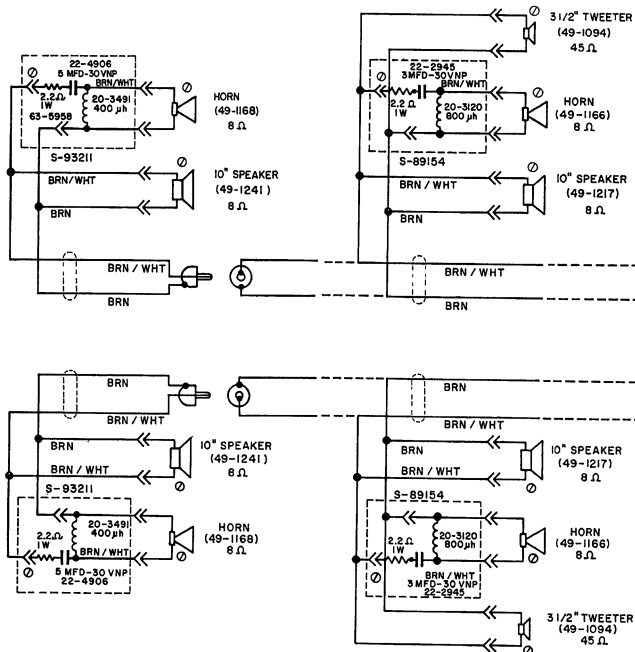
D920W, D92IDE, P, D922M,
D923W, D927DE



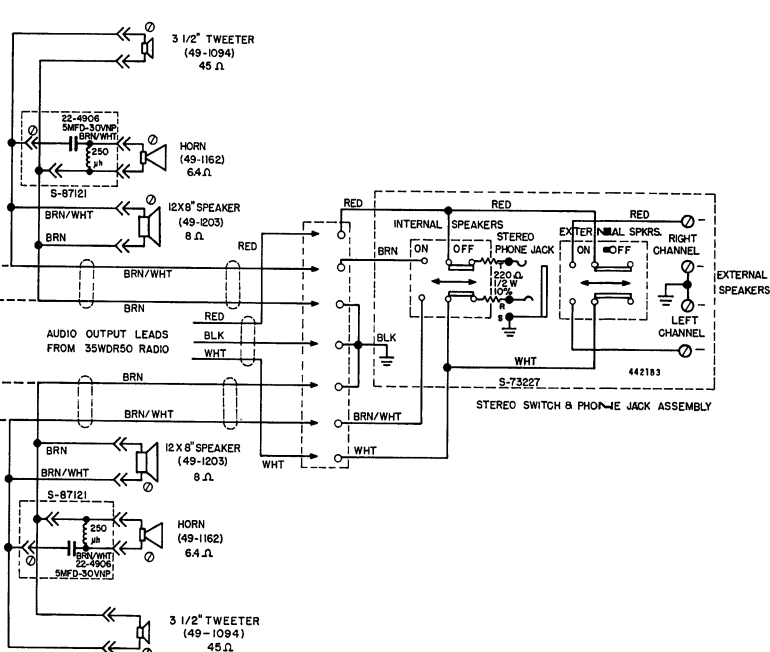
SPEAKER WIRING FOR MODEL D952X



SPEAKER WIRING FOR MODELS: D931W, D935M & D939P

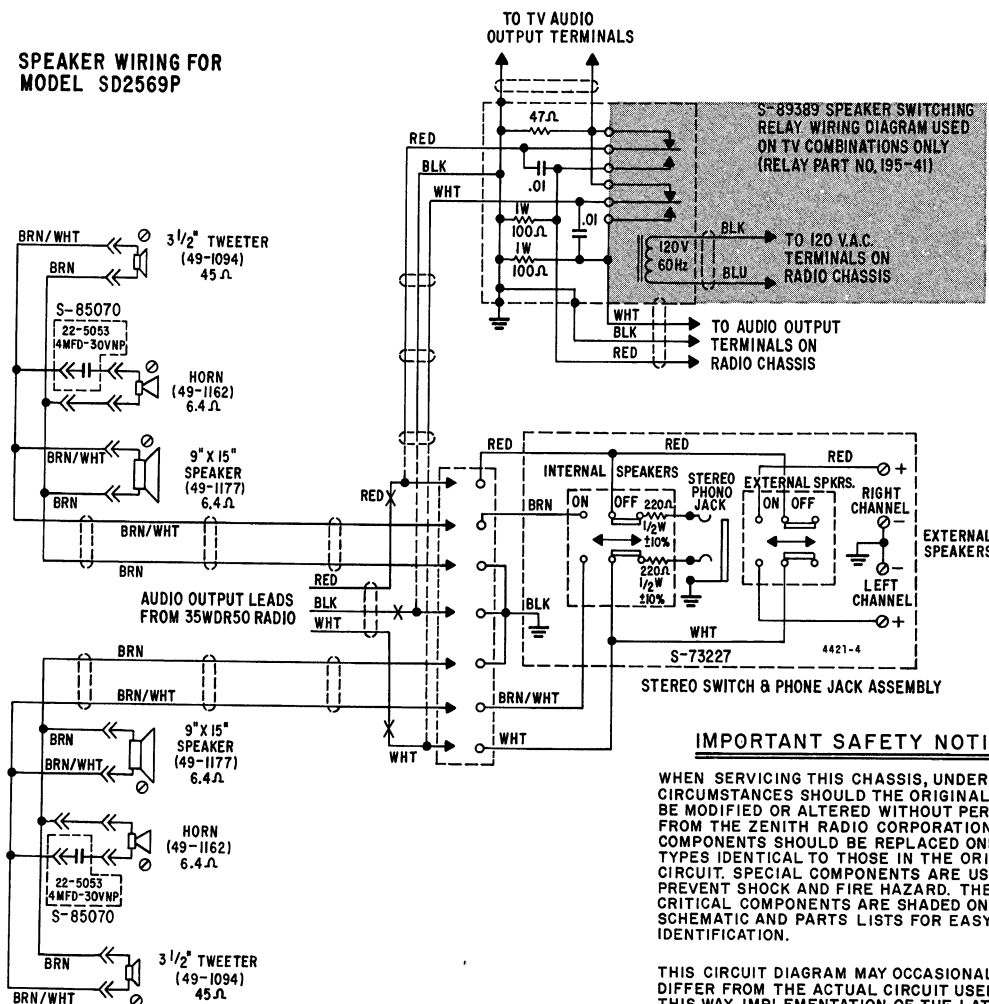


SPEAKER WIRING FOR MODELS: D941W, D945DE & D948W



⊙ INDICATES WHITE OR YELLOW VOICE COIL
POLARITY IDENTIFICATION DOT ON SPEAKER

SPEAKER WIRING FOR MODEL SD2569P



⊙ INDICATES WHITE OR YELLOW VOICE COIL
POLARITY IDENTIFICATION DOT ON SPEAKER

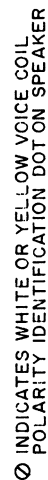
IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED ON THE SCHEMATIC AND PARTS LISTS FOR EASY IDENTIFICATION.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

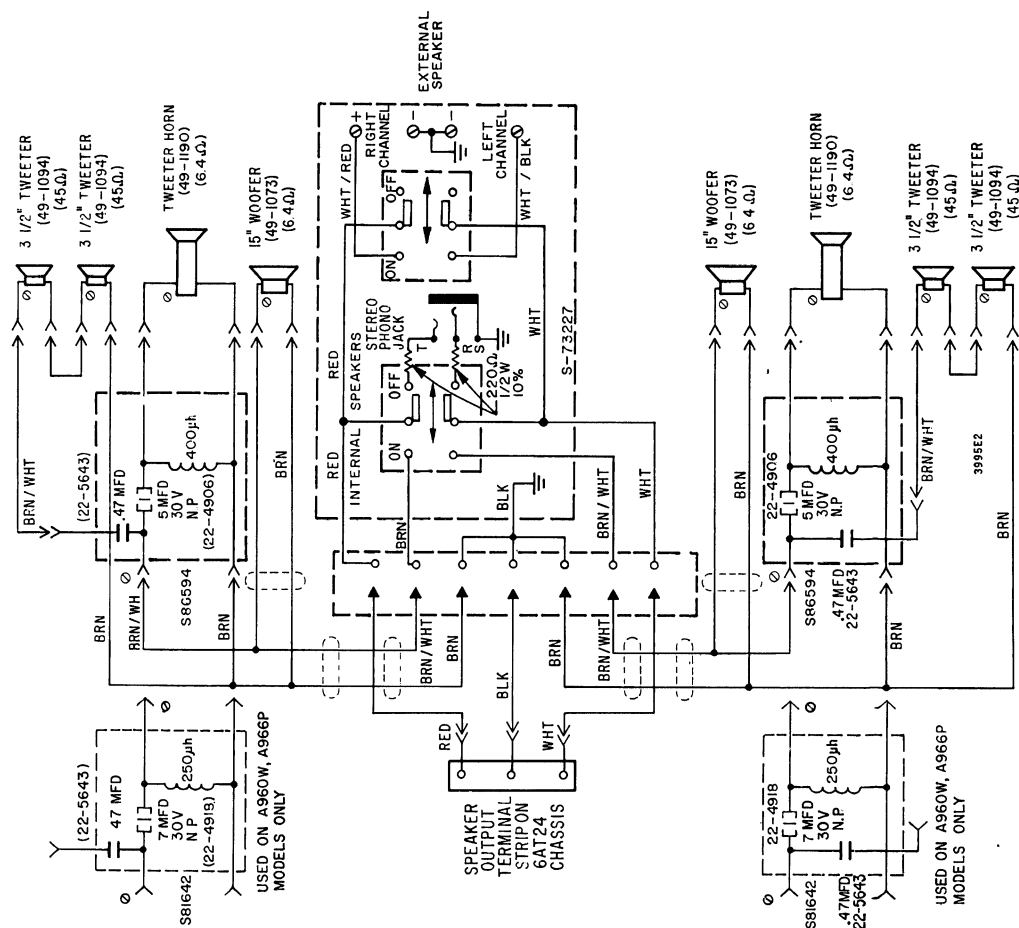
SPEAKER WIRING SCHEMATICS

SPEAKER WIRING FOR MODEL E945DE



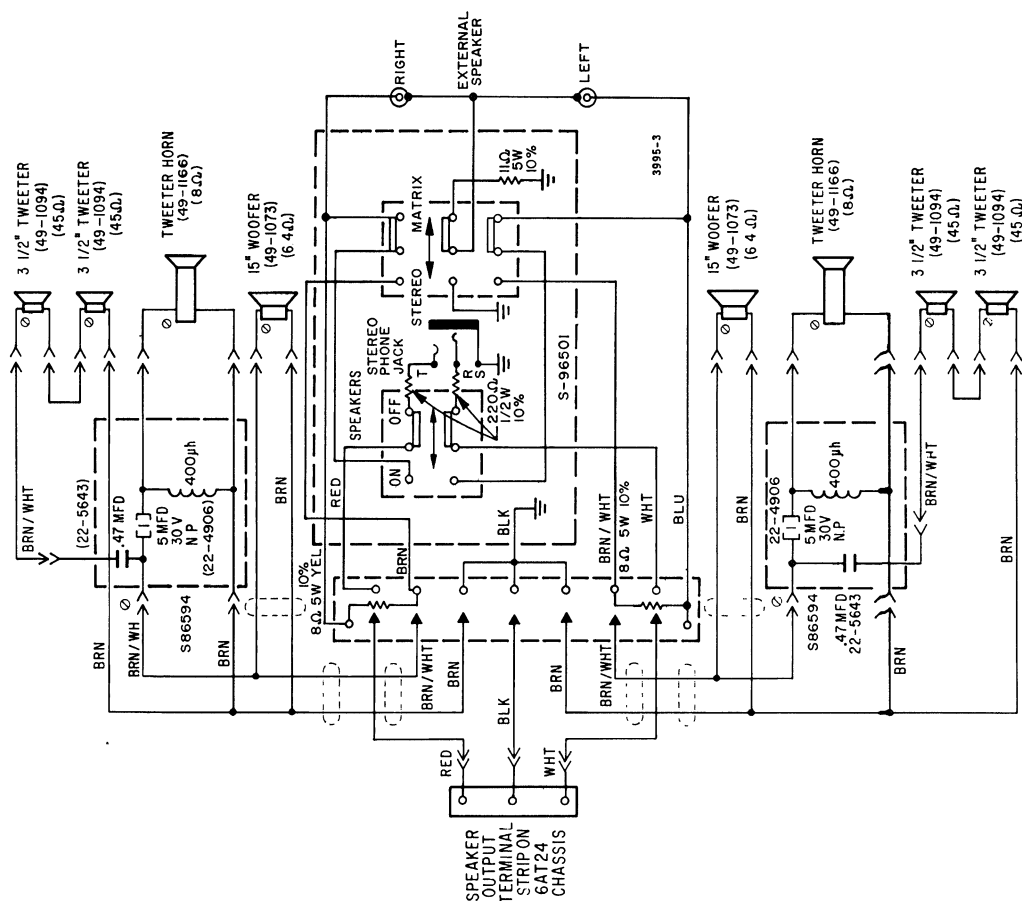
**SPEAKER HOOKUP
FOR MODELS:
A960, A964, A966.
B960W, B966P
C966DE, C966DEI
C966P, C966PI**

**BRACKET SOCKET &
CABLE ASSEMBLY**

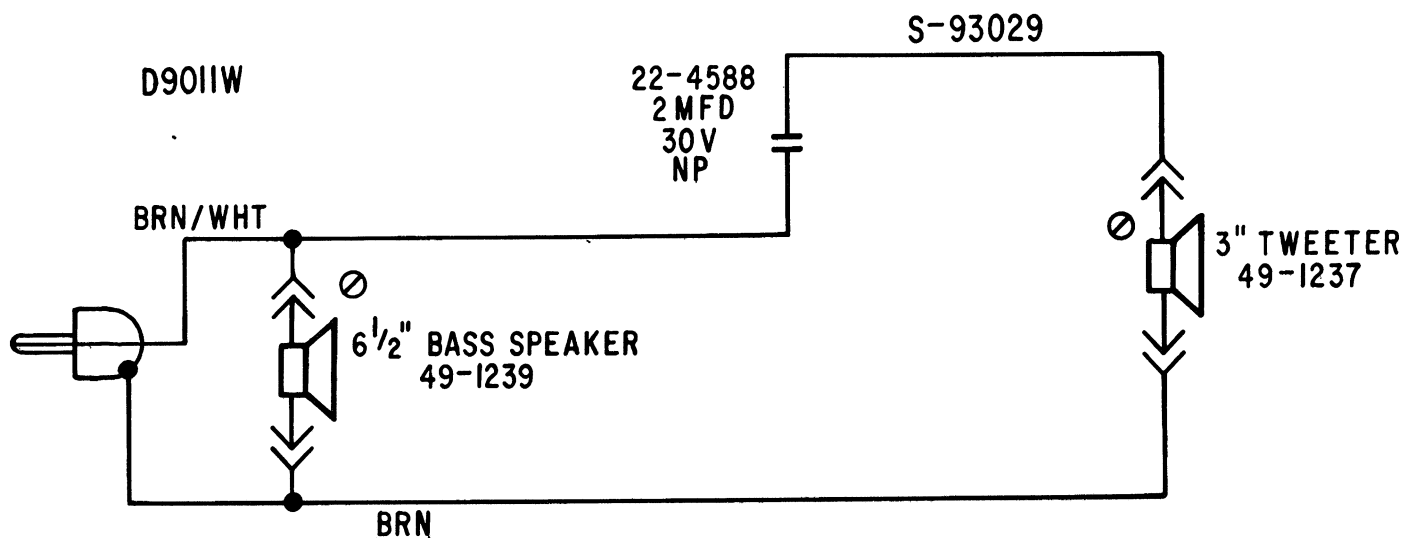


**SPEAKER HOOKUP
FOR MODELS:
E966DE, E966P**

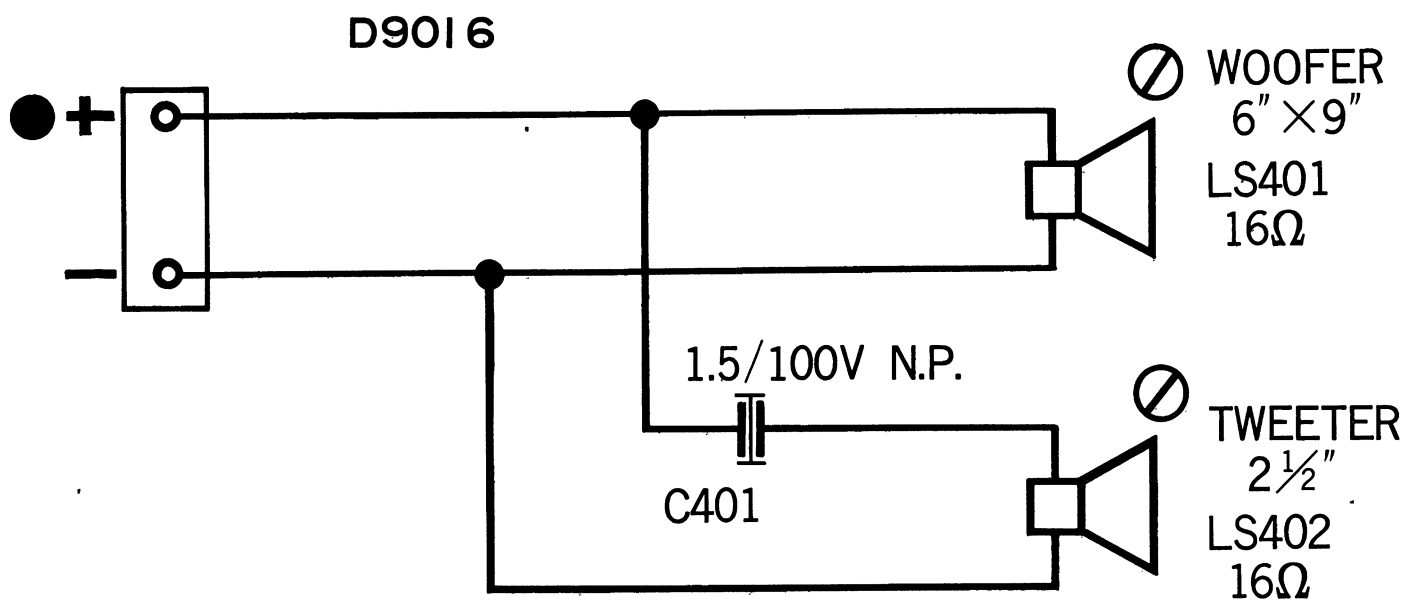
**BRACKET SOCKET &
CABLE ASSEMBLY**



SPEAKER WIRING SCHEMATICS



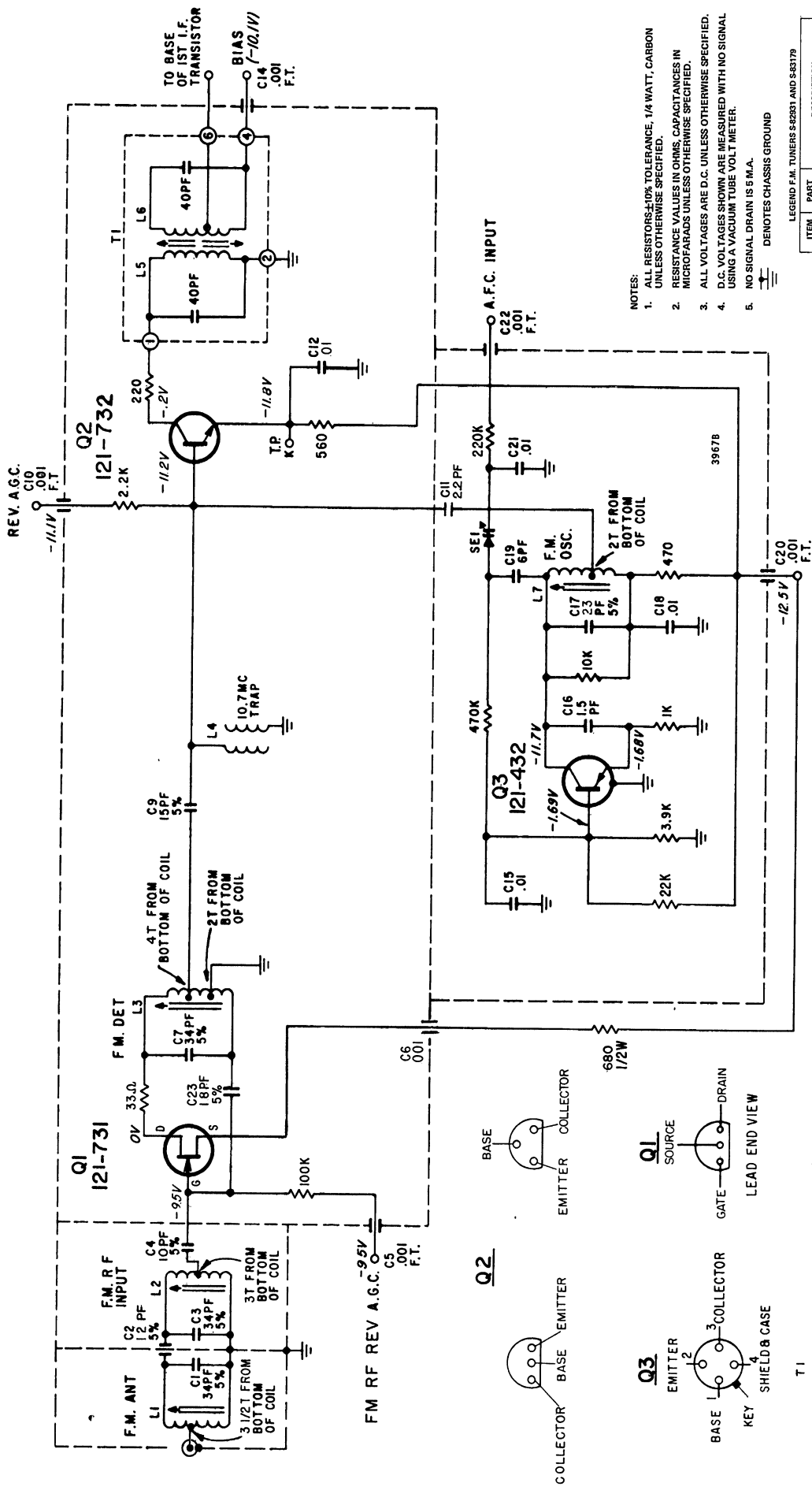
⊗ INDICATES SPEAKER POLARIZATION



⊗ INDICATES VOICE COIL POLARITY
IDENTIFICATION MARK ON SPEAKER

● COLOR DOT INDICATES SPEAKER SYSTEM POLARITY

REV. A.G.C.
C10
.001
F.T.

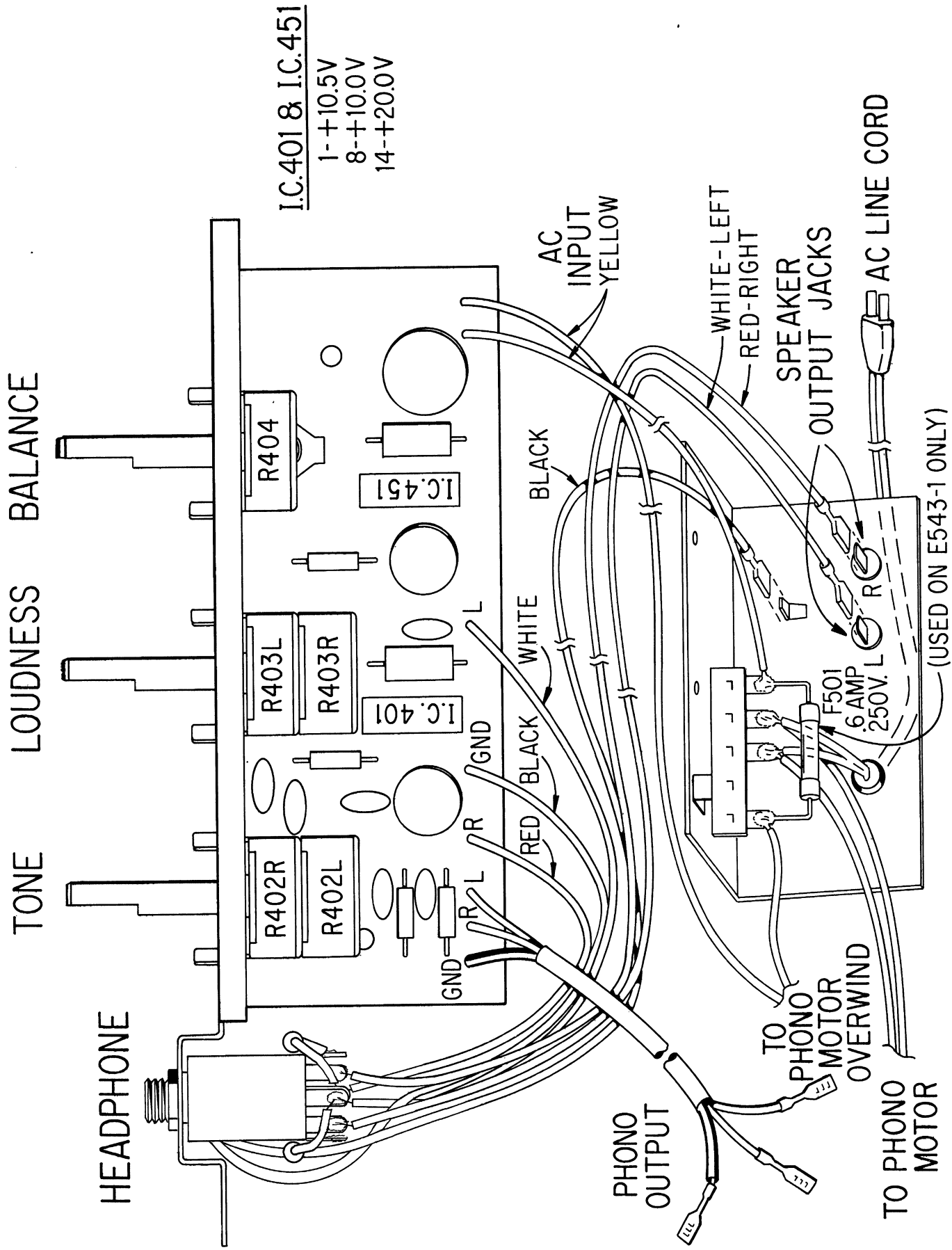


- NOTES:
1. ALL RESISTORS-10% TOLERANCE, 1/4 WATT, CARBON UNLESS OTHERWISE SPECIFIED.
 2. RESISTANCE VALUES IN OHMS, CAPACITANCES IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 3. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 4. D.C. VOLTAGES SHOWN ARE MEASURED WITH NO SIGNAL USING A VACUUM TUBE VOLT METER.
 5. NO SIGNAL DRAIN IS 5 M.A.

LEGEND F.M. TUNERS S-82831 AND S-83179

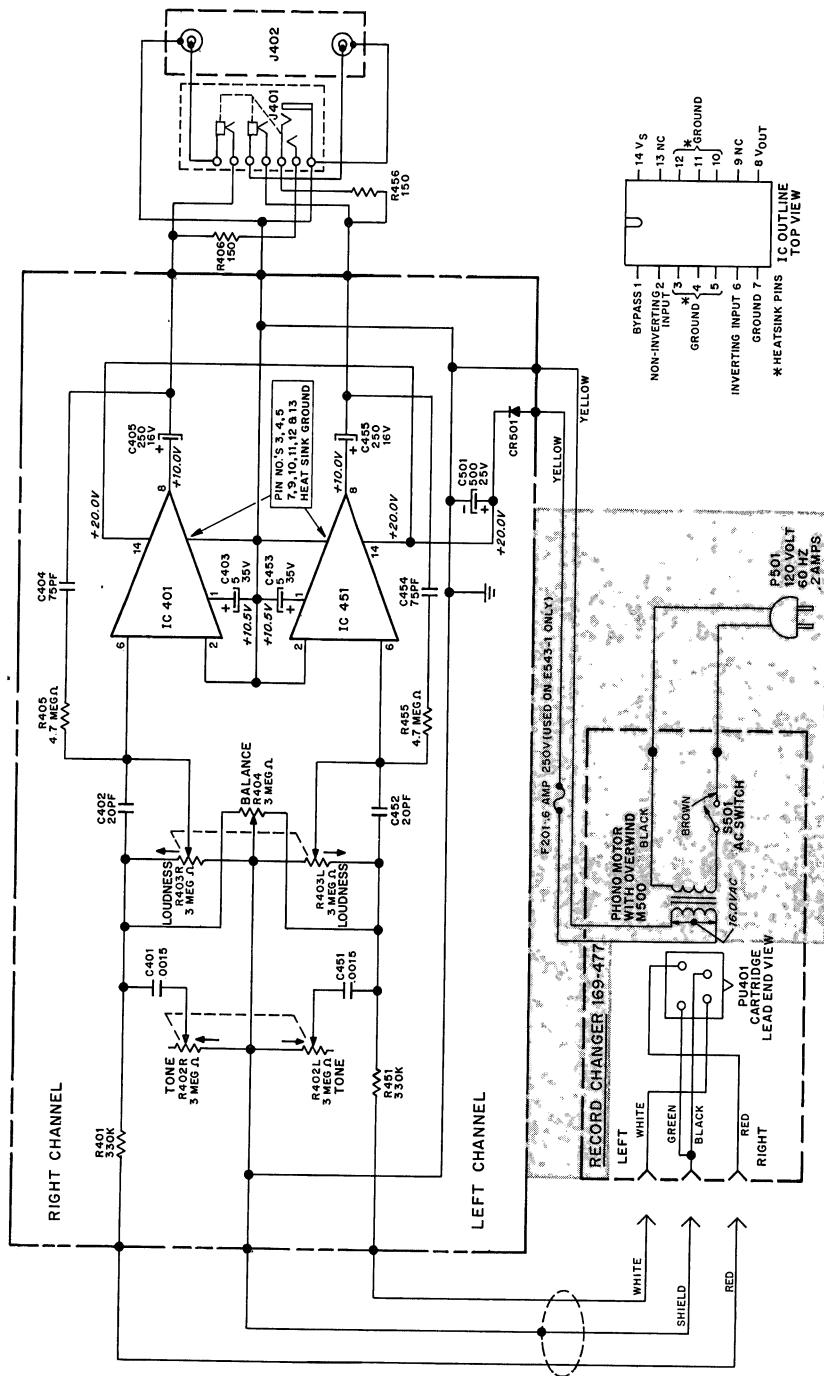
ITEM NO.	PART NO.	DESCRIPTION
C1	22-8318	34 PF DISC. 5% 500V
C2	22-8318	34 PF DISC. 5% 500V
C3	22-8318	34 PF DISC. 5% 500V
C4	22-8318	34 PF DISC. 5% 500V
C5	22-8318	34 PF DISC. 5% 500V
C6	22-8318	34 PF DISC. 5% 500V
C7	22-8318	34 PF DISC. 5% 500V
C8	22-8318	34 PF DISC. 5% 500V
C9	22-8318	34 PF DISC. 5% 500V
C10	22-8318	34 PF DISC. 5% 500V
C11	22-8318	34 PF DISC. 5% 500V
C12	22-8318	34 PF DISC. 5% 500V
C13	22-8318	34 PF DISC. 5% 500V
C14	22-8318	34 PF DISC. 5% 500V
C15	22-8318	34 PF DISC. 5% 500V
C16	22-8318	34 PF DISC. 5% 500V
C17	22-8318	34 PF DISC. 5% 500V
C18	22-8318	34 PF DISC. 5% 500V
C19	22-8318	34 PF DISC. 5% 500V
C20	22-8318	34 PF DISC. 5% 500V
C21	22-8318	34 PF DISC. 5% 500V
C22	22-8318	34 PF DISC. 5% 500V
C23	22-8318	34 PF DISC. 5% 500V
C24	22-8318	34 PF DISC. 5% 500V
C25	22-8318	34 PF DISC. 5% 500V
C26	22-8318	34 PF DISC. 5% 500V
C27	22-8318	34 PF DISC. 5% 500V
C28	22-8318	34 PF DISC. 5% 500V
C29	22-8318	34 PF DISC. 5% 500V
C30	22-8318	34 PF DISC. 5% 500V
C31	22-8318	34 PF DISC. 5% 500V
C32	22-8318	34 PF DISC. 5% 500V
C33	22-8318	34 PF DISC. 5% 500V
C34	22-8318	34 PF DISC. 5% 500V
C35	22-8318	34 PF DISC. 5% 500V
C36	22-8318	34 PF DISC. 5% 500V
C37	22-8318	34 PF DISC. 5% 500V
C38	22-8318	34 PF DISC. 5% 500V
C39	22-8318	34 PF DISC. 5% 500V
C40	22-8318	34 PF DISC. 5% 500V
C41	22-8318	34 PF DISC. 5% 500V
C42	22-8318	34 PF DISC. 5% 500V
C43	22-8318	34 PF DISC. 5% 500V
C44	22-8318	34 PF DISC. 5% 500V
C45	22-8318	34 PF DISC. 5% 500V
C46	22-8318	34 PF DISC. 5% 500V
C47	22-8318	34 PF DISC. 5% 500V
C48	22-8318	34 PF DISC. 5% 500V
C49	22-8318	34 PF DISC. 5% 500V
C50	22-8318	34 PF DISC. 5% 500V
C51	22-8318	34 PF DISC. 5% 500V
C52	22-8318	34 PF DISC. 5% 500V
C53	22-8318	34 PF DISC. 5% 500V
C54	22-8318	34 PF DISC. 5% 500V
C55	22-8318	34 PF DISC. 5% 500V
C56	22-8318	34 PF DISC. 5% 500V
C57	22-8318	34 PF DISC. 5% 500V
C58	22-8318	34 PF DISC. 5% 500V
C59	22-8318	34 PF DISC. 5% 500V
C60	22-8318	34 PF DISC. 5% 500V
C61	22-8318	34 PF DISC. 5% 500V
C62	22-8318	34 PF DISC. 5% 500V
C63	22-8318	34 PF DISC. 5% 500V
C64	22-8318	34 PF DISC. 5% 500V
C65	22-8318	34 PF DISC. 5% 500V
C66	22-8318	34 PF DISC. 5% 500V
C67	22-8318	34 PF DISC. 5% 500V
C68	22-8318	34 PF DISC. 5% 500V
C69	22-8318	34 PF DISC. 5% 500V
C70	22-8318	34 PF DISC. 5% 500V
C71	22-8318	34 PF DISC. 5% 500V
C72	22-8318	34 PF DISC. 5% 500V
C73	22-8318	34 PF DISC. 5% 500V
C74	22-8318	34 PF DISC. 5% 500V
C75	22-8318	34 PF DISC. 5% 500V
C76	22-8318	34 PF DISC. 5% 500V
C77	22-8318	34 PF DISC. 5% 500V
C78	22-8318	34 PF DISC. 5% 500V
C79	22-8318	34 PF DISC. 5% 500V
C80	22-8318	34 PF DISC. 5% 500V
C81	22-8318	34 PF DISC. 5% 500V
C82	22-8318	34 PF DISC. 5% 500V
C83	22-8318	34 PF DISC. 5% 500V
C84	22-8318	34 PF DISC. 5% 500V
C85	22-8318	34 PF DISC. 5% 500V
C86	22-8318	34 PF DISC. 5% 500V
C87	22-8318	34 PF DISC. 5% 500V
C88	22-8318	34 PF DISC. 5% 500V
C89	22-8318	34 PF DISC. 5% 500V
C90	22-8318	34 PF DISC. 5% 500V
C91	22-8318	34 PF DISC. 5% 500V
C92	22-8318	34 PF DISC. 5% 500V
C93	22-8318	34 PF DISC. 5% 500V
C94	22-8318	34 PF DISC. 5% 500V
C95	22-8318	34 PF DISC. 5% 500V
C96	22-8318	34 PF DISC. 5% 500V
C97	22-8318	34 PF DISC. 5% 500V
C98	22-8318	34 PF DISC. 5% 500V
C99	22-8318	34 PF DISC. 5% 500V
C100	22-8318	34 PF DISC. 5% 500V

S-83179 - SCHEMATIC



I.C.401 & I.C.451
 1-+10.5V
 8-+10.0V
 14-+20.0V

MODEL E543(-1) - CHASSIS LAYOUT



MODEL E543(-1) — SCHEMATIC

IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED ON THE SCHEMATIC AND PARTS LISTS FOR EASY IDENTIFICATION.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THERE MAY BE IMPROVEMENTS IN THE LATEST SAFETY IMPLEMENTATION OF THE LATEST CHANGES INTO THE SERVICE MANUAL. DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

NOTES:

ALL RESISTORS IN OHMS $\pm 10\%$, 1/2 WATT CARBON UNLESS OTHERWISE SPECIFIED.

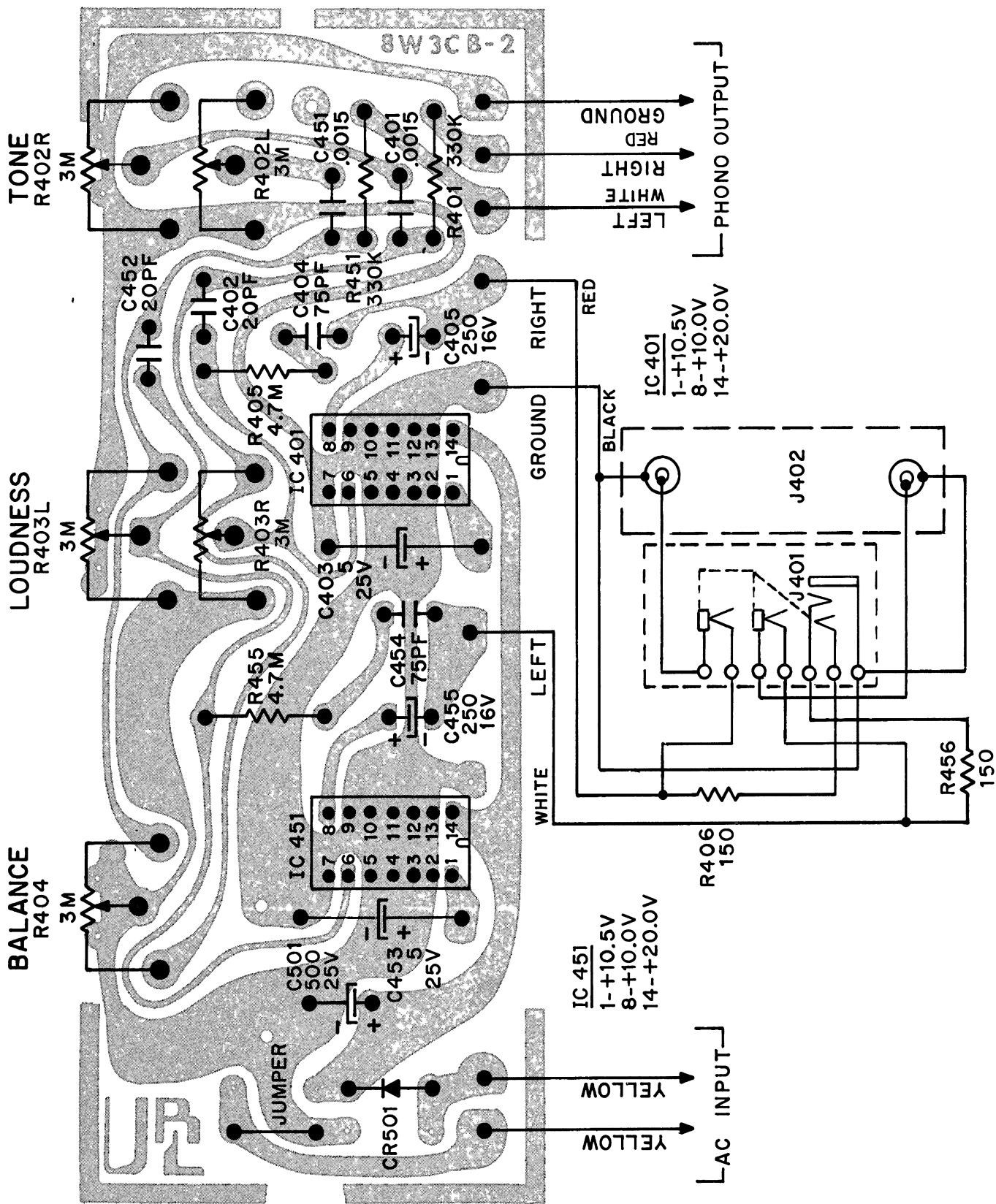
ALL CAPACITORS IN MICROFARADS UNLESS OTHERWISE SPECIFIED.

ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED. D.C. VOLTAGES ARE MEASURED FROM CHASSIS WITH NO SIGNAL AND VOLUME CONTROL AT MINIMUM USING A HIGH INPUT IMPEDANCE V.T.M. LINE VOLTAGE AT 120 V.D.C.

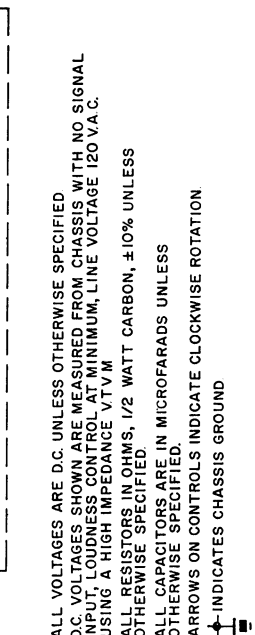
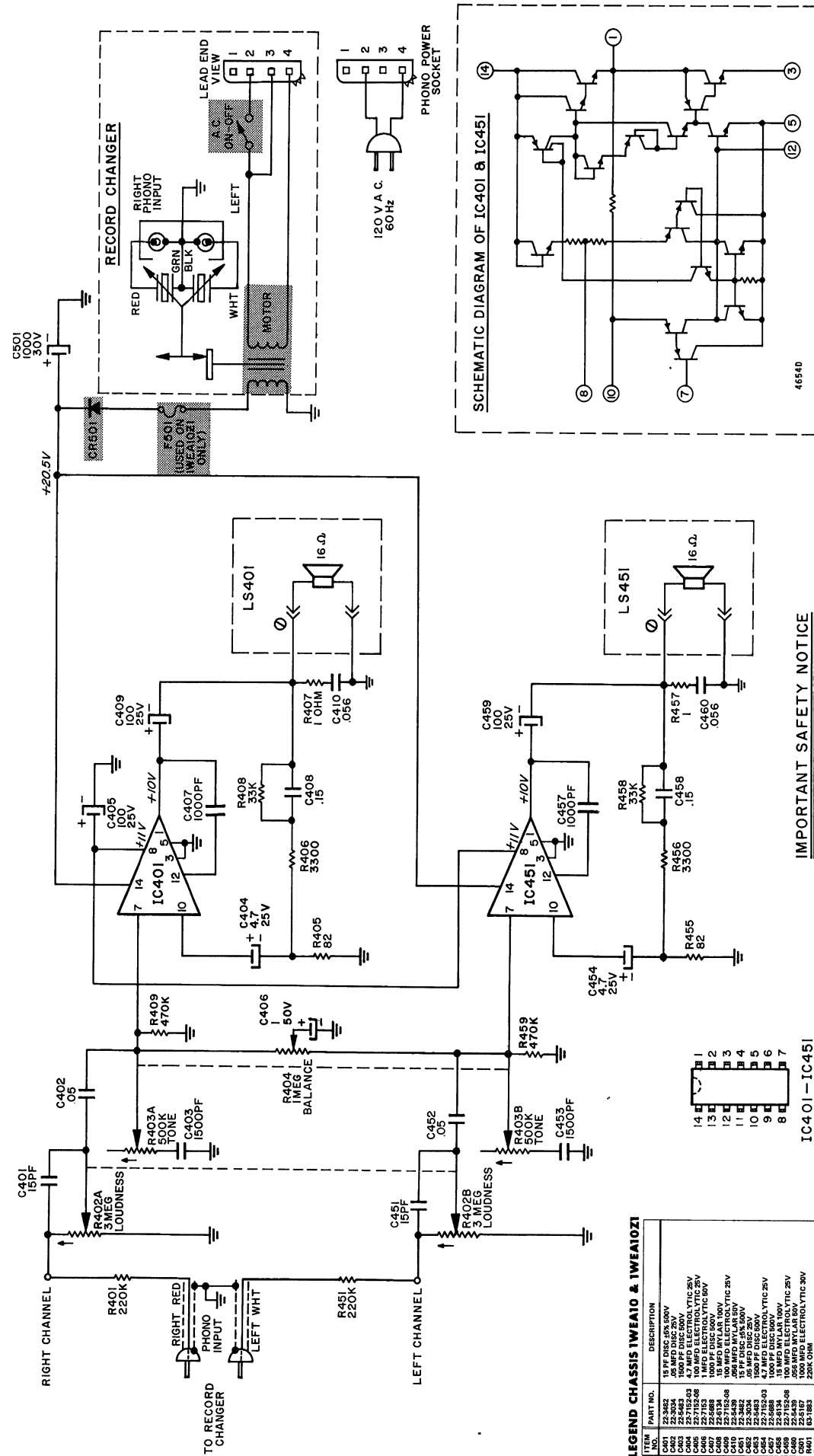
ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION.

— INDICATES CHASSIS GROUND

→ INDICATES CONNECTOR TIE POINTS.



MODEL E543(1) - CHASSIS WIRING AND COMPONENTS
VIEWED FROM FOIL SIDE



NOTES

- 1 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED
- 2 D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS WITH NO SIGNAL INPUT, LOUDNESS CONTROL AT MINIMUM, LINE VOLTAGE 120 V A.C. USING A HIGH IMPEDANCE V.T.V.M.
- 3 ALL RESISTORS IN OHMS, 1/2 WATT CARBON, $\pm 10\%$ UNLESS OTHERWISE SPECIFIED
- 4 ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED
- 5 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION
- 6 INDICATES CHASSIS GROUND

IMPORTANT SAFETY NOTICE

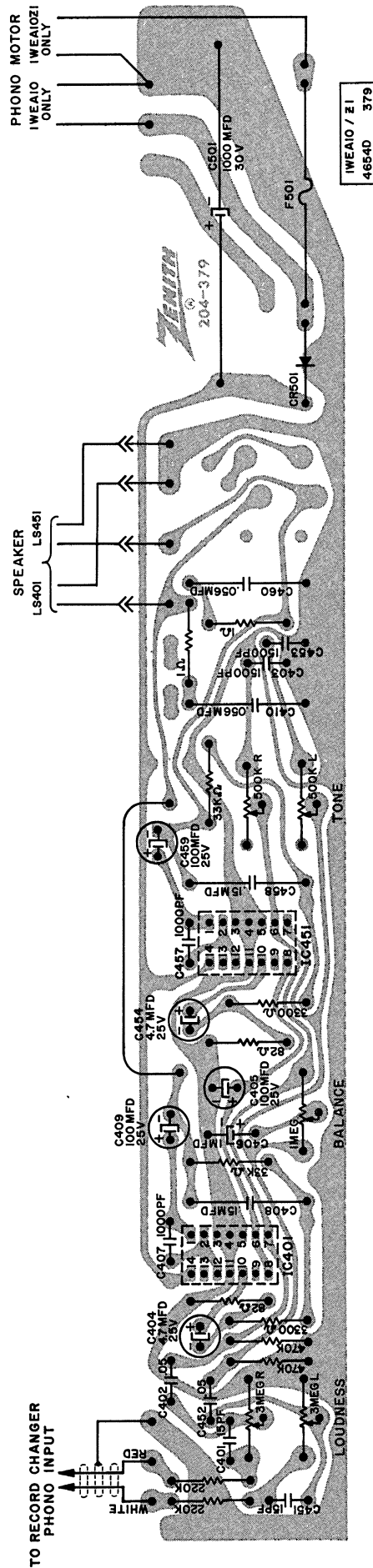
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THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

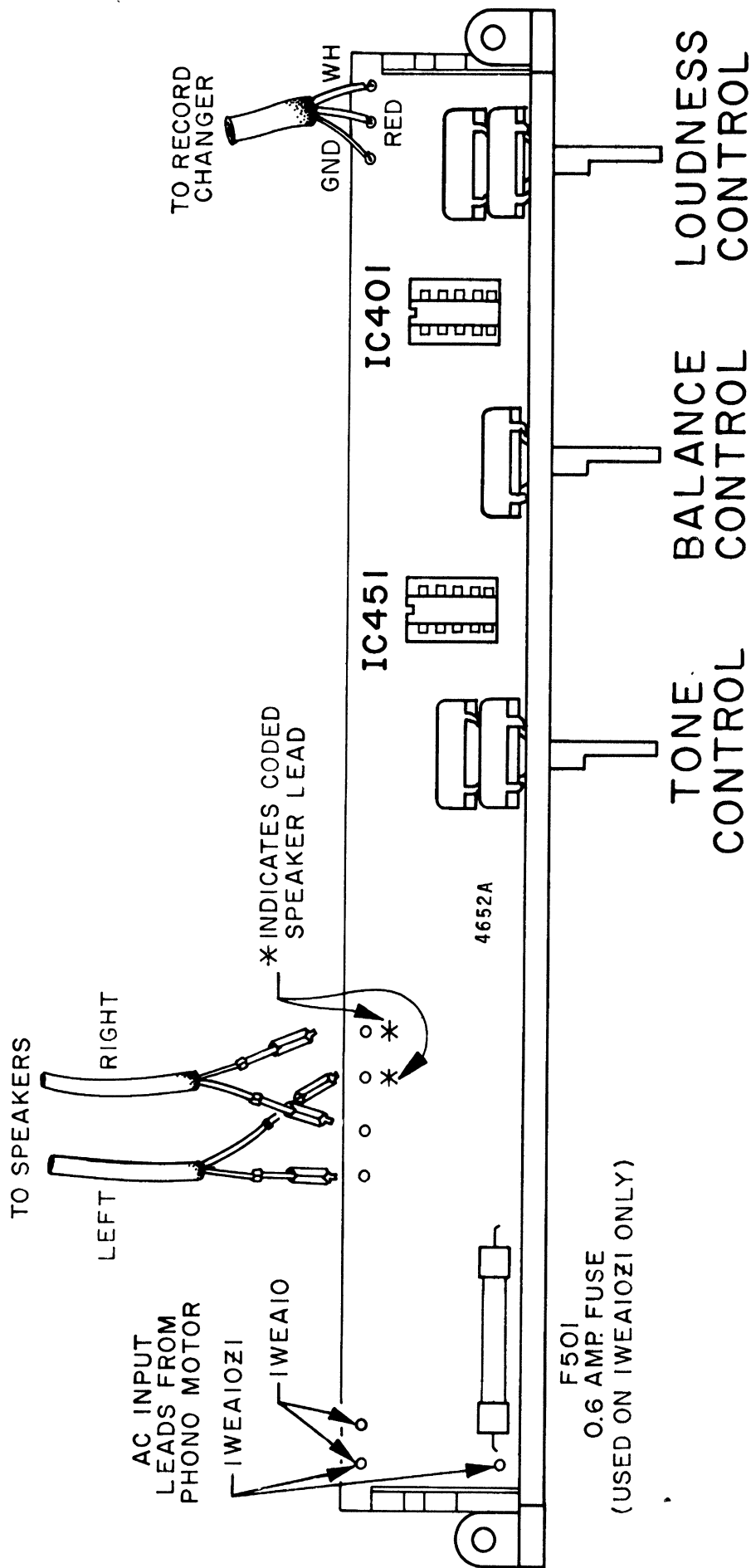
CHASSIS 1WEA10(Z1) — SCHEMATIC

LEGEND CHASSIS 1WEA10 & 1WEA10Z1

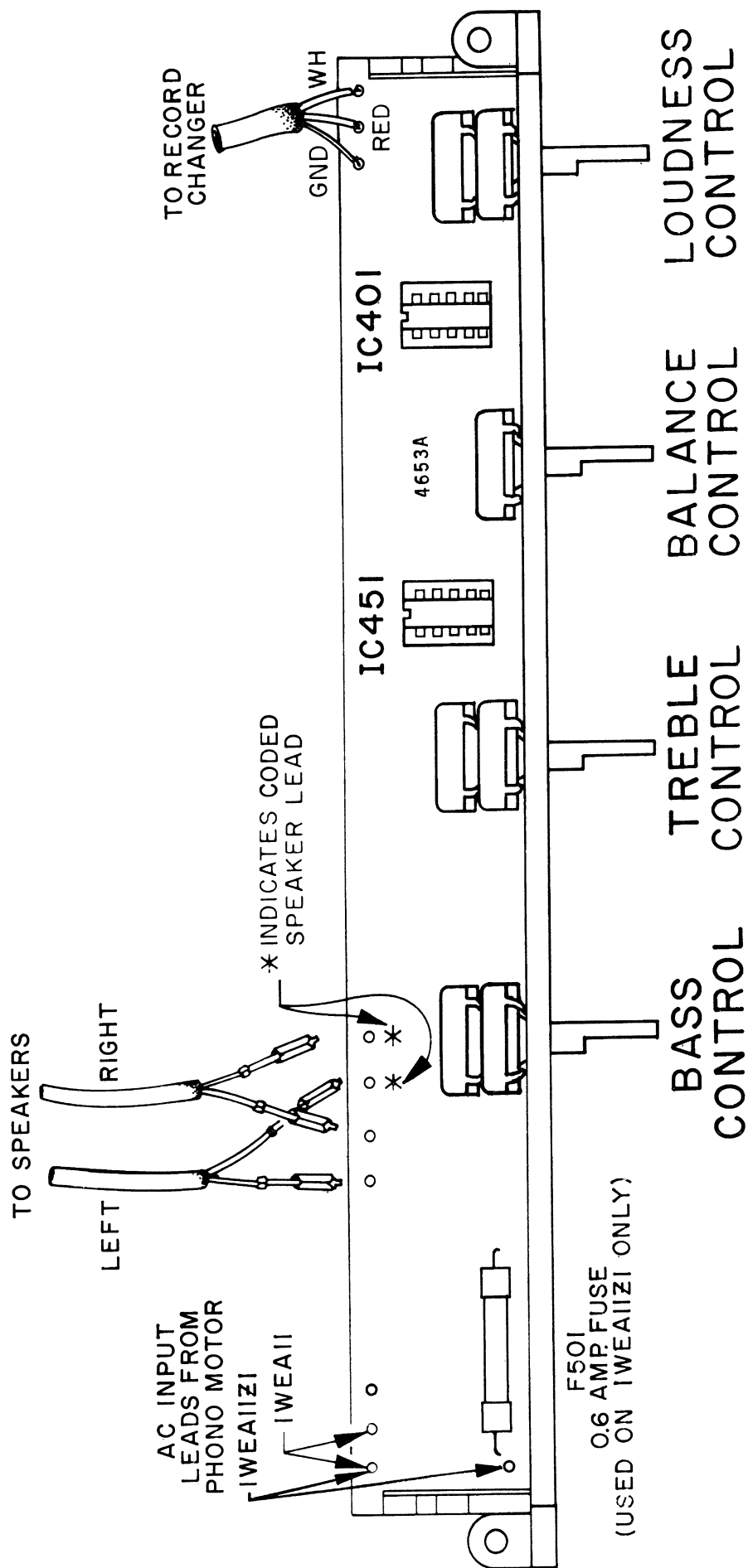
ITEM	PART NO.	DESCRIPTION
C401	22-3482	15 PF DISC .50V
C402	22-3034	.05 MFD DISC 25V
C403	22-7152-08	100 MFD ELECTROLYTIC 25V
C404	22-7152-08	100 MFD ELECTROLYTIC 25V
C405	22-5688	1000 PF DISC 500V
C406	22-7152-08	100 MFD ELECTROLYTIC 25V
C407	22-5688	1000 PF DISC 500V
C408	22-5688	1000 PF DISC 500V
C409	22-5688	1000 PF DISC 500V
C410	22-5688	1000 PF DISC 500V
C411	22-5688	1000 PF DISC 500V
C412	22-5688	1000 PF DISC 500V
C413	22-5688	1000 PF DISC 500V
C414	22-5688	1000 PF DISC 500V
C415	22-5688	1000 PF DISC 500V
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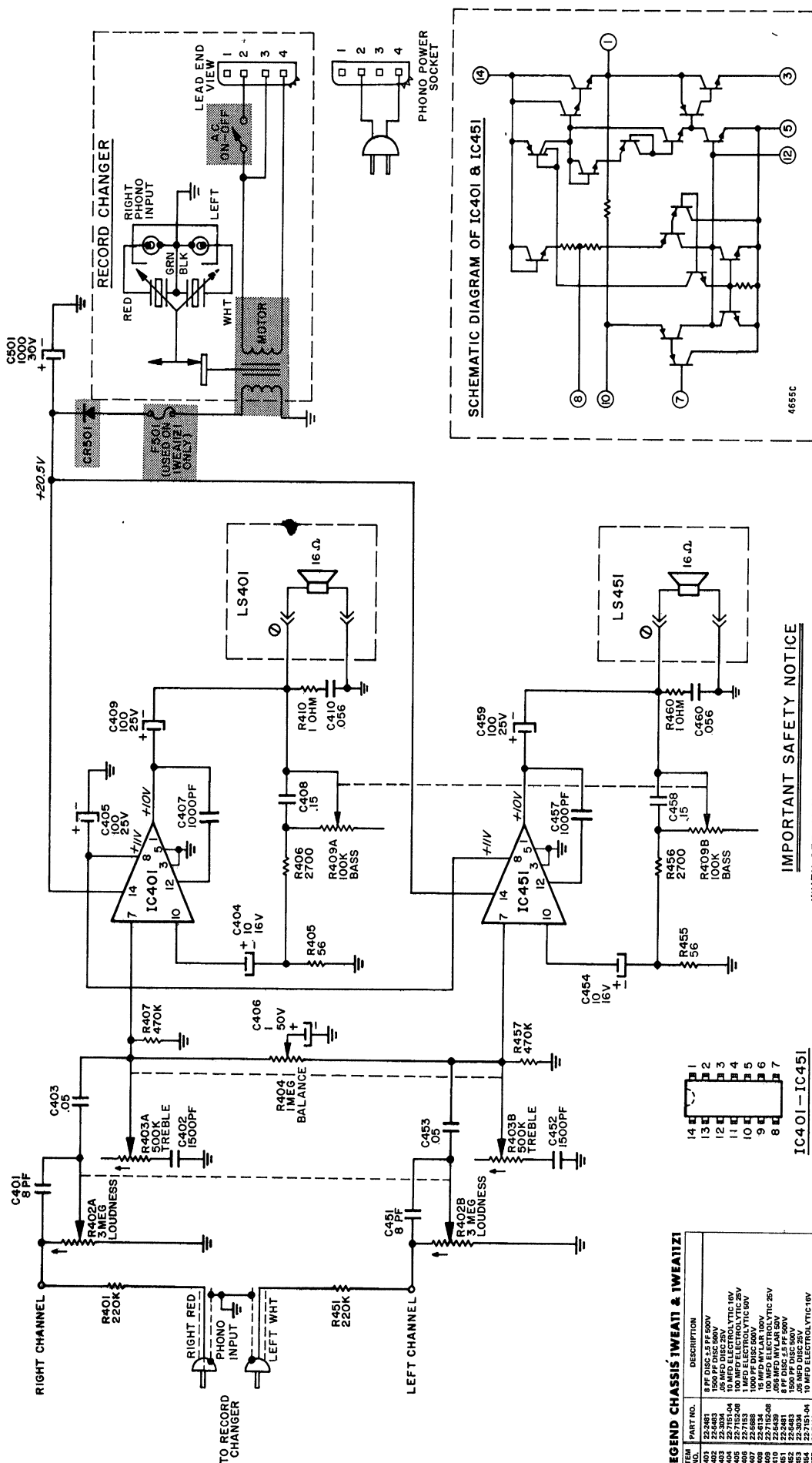
**CHASSIS IWEA10 (Z1) – CHASSIS WIRING AND COMPONENTS
VIEWED FROM FOIL SIDE**



CHASSIS IWEA10 (Z1) - CHASSIS LAYOUT



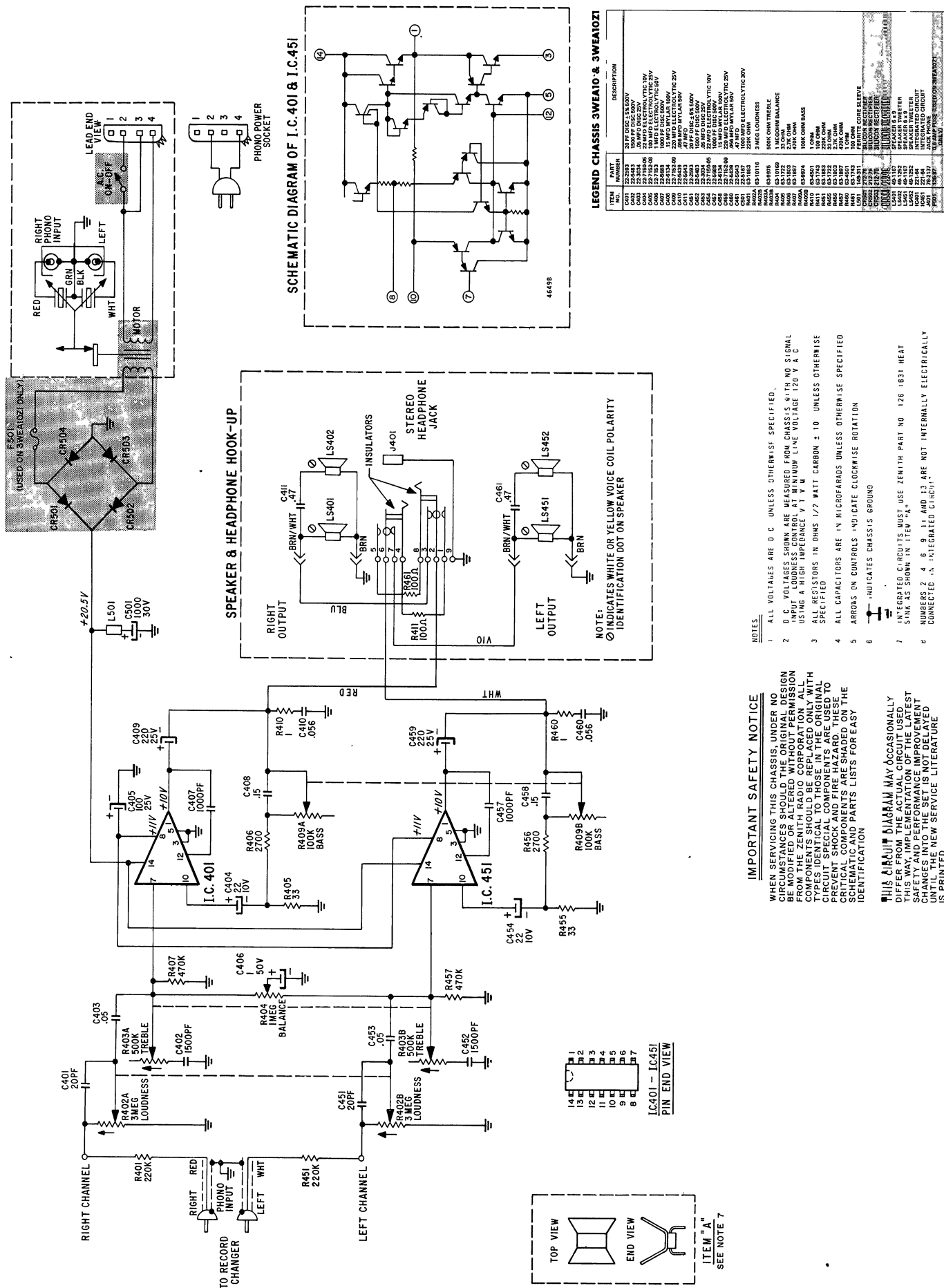
CHASSIS IWEA11(Z1) - CHASSIS LAYOUT



- IMPORTANT SAFETY NOTICE**
- WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADDED ON THE SCHEMATIC AND PARTS LISTS FOR EASY IDENTIFICATION.
- THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.
- NOTES**
- 1 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 - 2 D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS WITH NO SIGNAL INPUT. LOUDNESS CONTROL AT MINIMUM, LINE VOLTAGE 120 V.A.C. USING A HIGH IMPEDANCE V.T.V.M.
 - 3 ALL RESISTORS IN OHMS, 1/2 WATT CARBON, $\pm 10\%$ UNLESS OTHERWISE SPECIFIED.
 - 4 ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 - 5 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION.
 - 6 $\perp$ INDICATES CHASSIS GROUND.

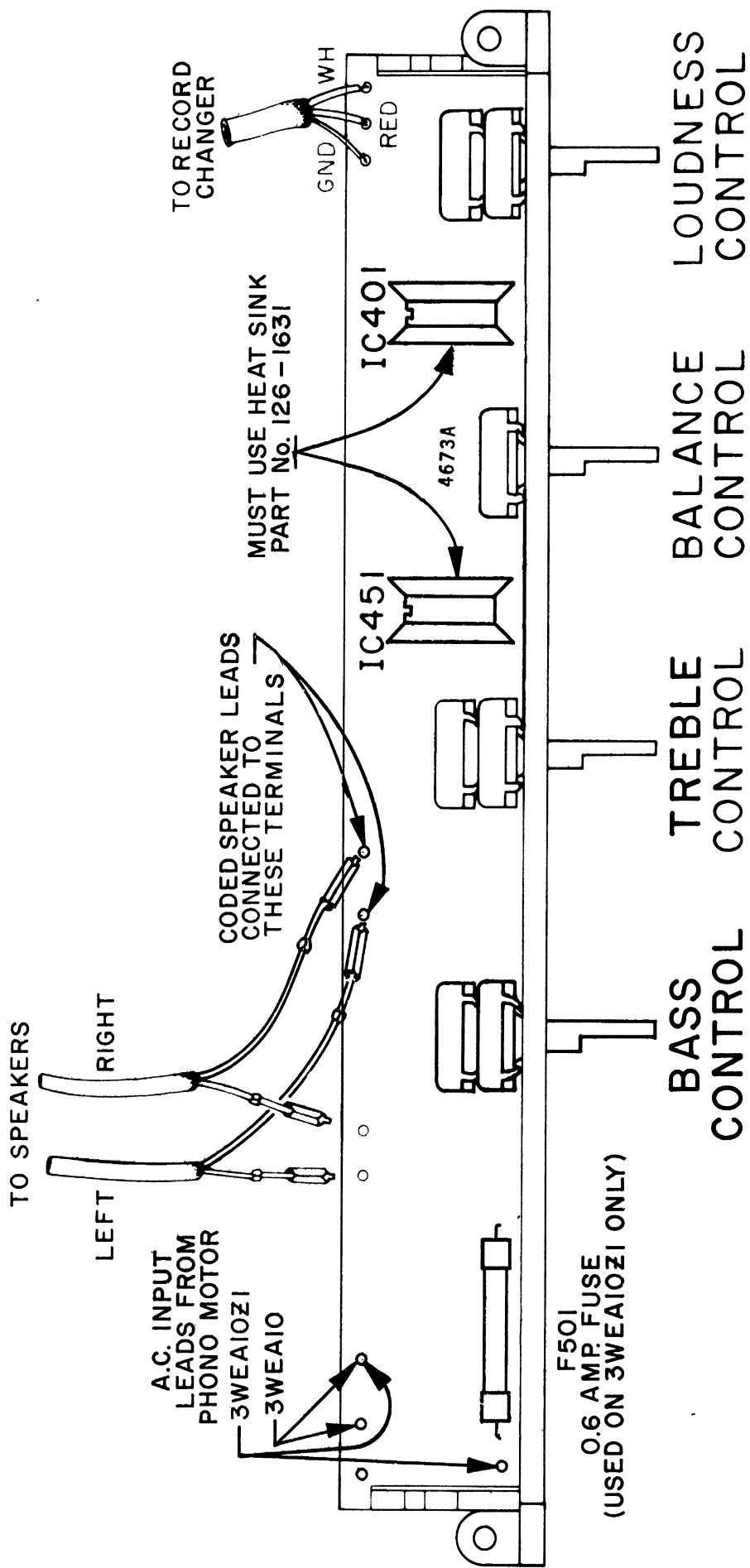
ITEM NO.	PART NO.	DESCRIPTION
C401	22-2481	8 PF DISC 2.5 PF 500V
C403	22-3034	100 PF DISC 25V
C405	22-3034	100 PF DISC 25V
C407	22-3034	100 PF DISC 25V
C409	22-3034	100 PF DISC 25V
C410	22-3034	100 PF DISC 25V
C451	22-2481	8 PF DISC 2.5 PF 500V
C453	22-3034	100 PF DISC 25V
C455	22-3034	100 PF DISC 25V
C457	22-3034	100 PF DISC 25V
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C770	22-3034	10



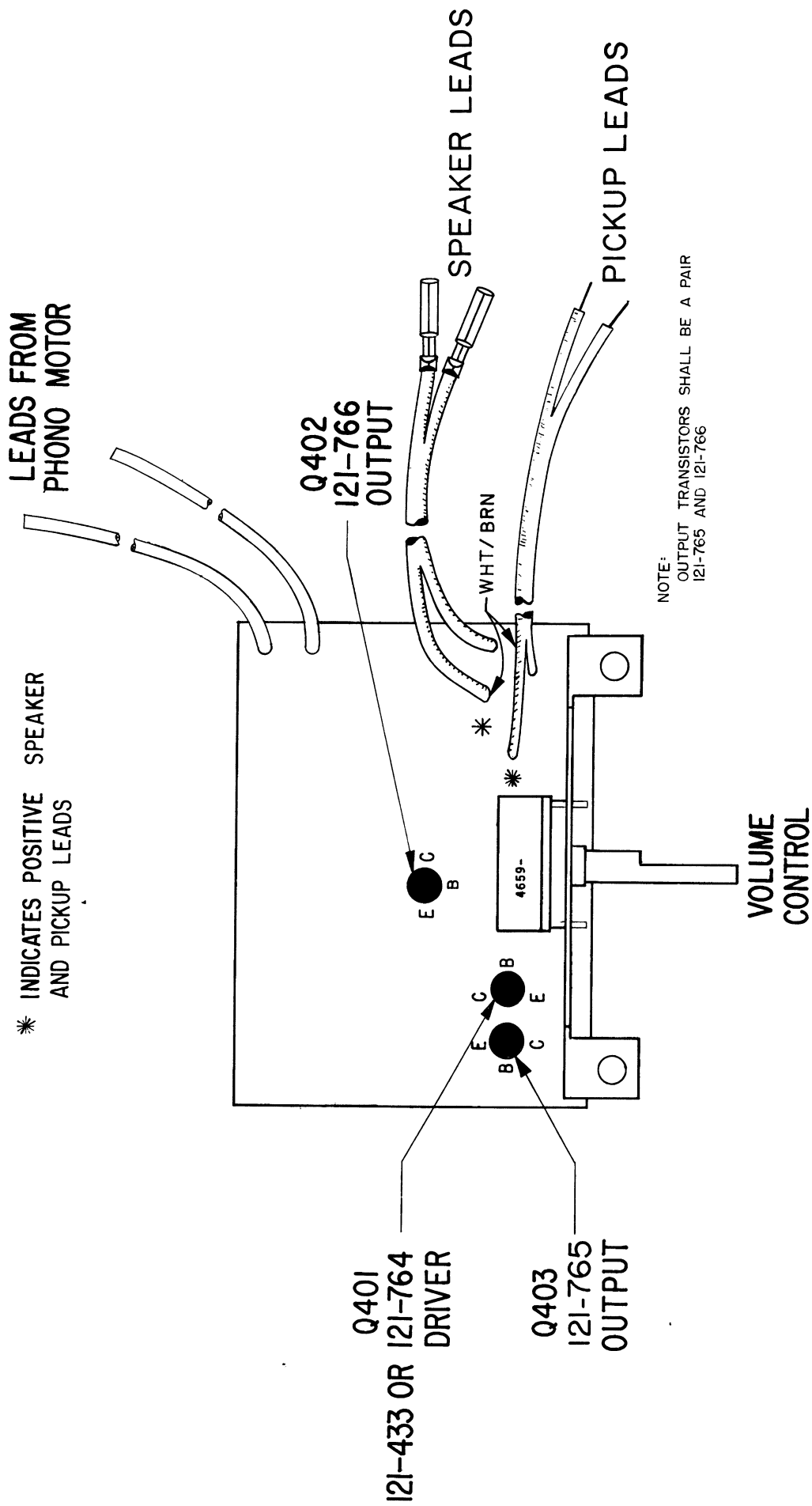




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CHASSIS 3WEA10 (Z1) - CHASSIS LAYOUT



CHASSIS 3AT2021 AND 3AT2022 - CHASSIS LAYOUT

ITEM NO.	PART NO.	DESCRIPTION
C401	22-3177	390 PF DISC. - 500V
C404	22-3652	1 MFD DISC. 10V
C403	22-3652	100 MFD ELECTROLYTIC 15V
C501	22-6098	470 MFD ELECTROLYTIC 35V
C406	22-3973	100 MFD ELECTROLYTIC 25V
C407	22-4581	5 MEG OHMS VOLUME CONTROL
R402	63-1841	22K
R403	63-1908	820K
R404	63-1775	560
R405	63-1775	560
R406	63-1742	100 -5%
R407	63-1742	100 -5%
R408	63-1742	4.7
R409	63-1911	1.0 MEG
R410	63-1911	1.0 MEG
R412	103-145	BIASING DIODE
CR401	405-184	1N4148
LS401	405-184	1N4148
F501	128-57	0.5 AMP FUSE (USED ON 3AT20Z2 ONLY) 4658A

7 Ø 3.0 MIL STYLUS

TERMINAL VIEW OF CARTRIDGE (142-170)

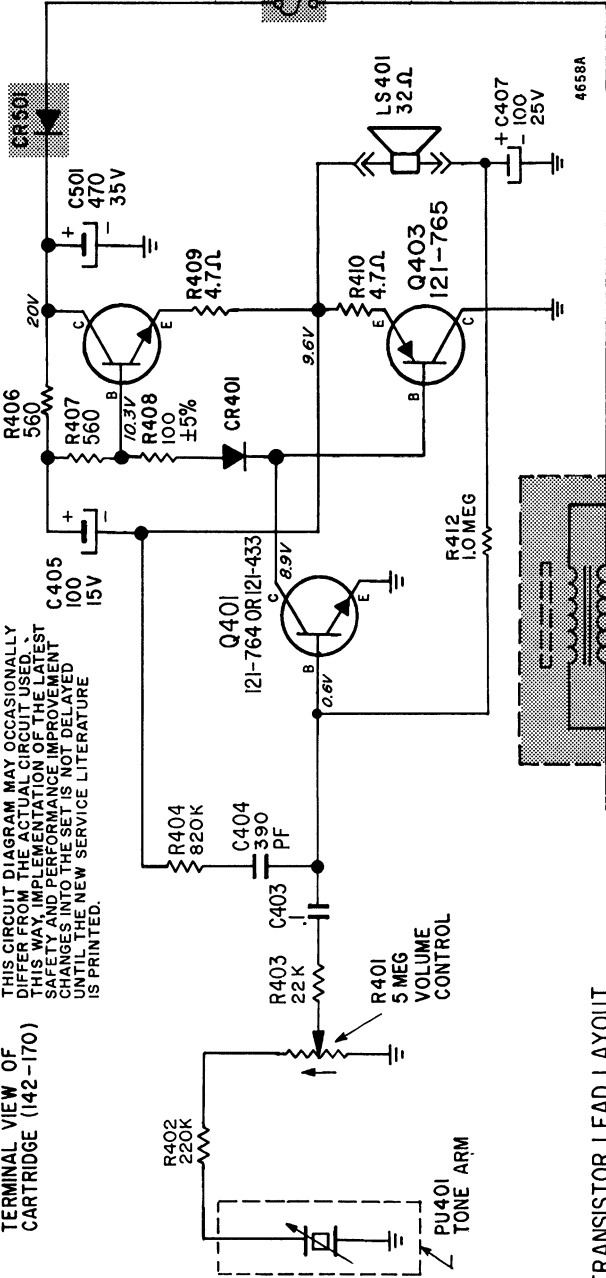


IMPORTANT SAFETY NOTICE

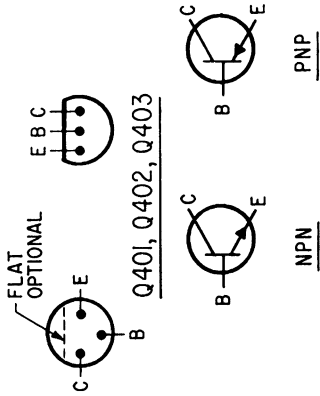
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS TO BE REPLACED MUST BE IDENTICAL TO THOSE IN THE ORIGINAL SET. REPLACEMENT COMPONENTS ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED ON THE SCHEMATIC AND PARTS LISTS FOR EASY IDENTIFICATION.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

Q402
121-766



TRANSISTOR LEAD LAYOUT LEAD END VIEWS

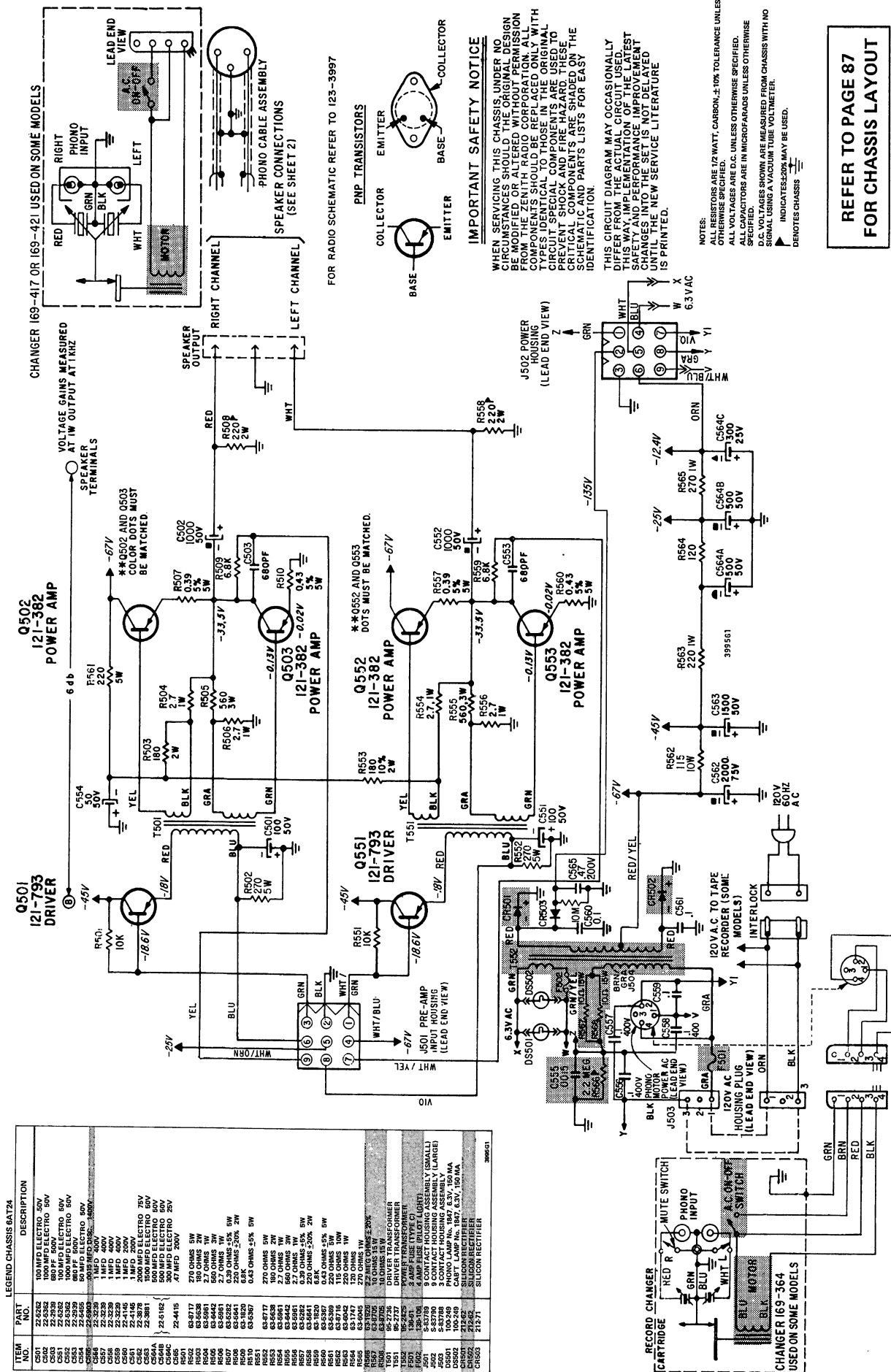


NOTES:

1. INDICATES CHASSIS GROUND.
2. ARROW ON CONTROL INDICATES CLOCKWISE POSITION.
3. ALL RESISTANCES IN OHMS. 1/2 WATT CARBON ± 10%.
4. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
5. D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS WITH NO SIGNAL USING A V.T.V.M. OF 11 MEGOHM INPUT RESISTANCE. LINE VOLTAGE 120 V.A.C.
6. ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
7. OUTPUT TRANSISTORS SHALL BE A PAIR 121-765 AND 121-766 OR 121-844 AND 121-845, FROM THE SAME MANUFACTURER.

CHASSIS 3AT20Z1 AND 3AT20Z2 – SCHEMATIC

ITEM NO.	PART NO.	DESCRIPTION
C501	22-6262	100MFD ELECTRO .50V
C502	22-6263	100MFD ELECTRO .50V
C503	22-6264	100MFD ELECTRO .50V
C504	22-6265	100MFD ELECTRO .50V
C505	22-6266	800 PF .50V
C506	22-6267	100MFD ELECTRO .50V
C507	22-6268	100MFD ELECTRO .50V
C508	22-6269	100MFD ELECTRO .50V
C509	22-6270	100MFD ELECTRO .50V
C510	22-6271	100MFD ELECTRO .50V
C511	22-6272	100MFD ELECTRO .50V
C512	22-6273	100MFD ELECTRO .50V
C513	22-6274	100MFD ELECTRO .50V
C514	22-6275	100MFD ELECTRO .50V
C515	22-6276	100MFD ELECTRO .50V
C516	22-6277	100MFD ELECTRO .50V
C517	22-6278	100MFD ELECTRO .50V
C518	22-6279	100MFD ELECTRO .50V
C519	22-6280	100MFD ELECTRO .50V
C520	22-6281	100MFD ELECTRO .50V
C521	22-6282	100MFD ELECTRO .50V
C522	22-6283	100MFD ELECTRO .50V
C523	22-6284	100MFD ELECTRO .50V
C524	22-6285	100MFD ELECTRO .50V
C525	22-6286	100MFD ELECTRO .50V
C526	22-6287	100MFD ELECTRO .50V
C527	22-6288	100MFD ELECTRO .50V
C528	22-6289	100MFD ELECTRO .50V
C529	22-6290	100MFD ELECTRO .50V
C530	22-6291	100MFD ELECTRO .50V
C531	22-6292	100MFD ELECTRO .50V
C532	22-6293	100MFD ELECTRO .50V
C533	22-6294	100MFD ELECTRO .50V
C534	22-6295	100MFD ELECTRO .50V
C535	22-6296	100MFD ELECTRO .50V
C536	22-6297	100MFD ELECTRO .50V
C537	22-6298	100MFD ELECTRO .50V
C538	22-6299	100MFD ELECTRO .50V
C539	22-6300	100MFD ELECTRO .50V
C540	22-6301	100MFD ELECTRO .50V
C541	22-6302	100MFD ELECTRO .50V
C542	22-6303	100MFD ELECTRO .50V
C543	22-6304	100MFD ELECTRO .50V
C544	22-6305	100MFD ELECTRO .50V
C545	22-6306	100MFD ELECTRO .50V
C546	22-6307	100MFD ELECTRO .50V
C547	22-6308	100MFD ELECTRO .50V
C548	22-6309	100MFD ELECTRO .50V
C549	22-6310	100MFD ELECTRO .50V
C550	22-6311	100MFD ELECTRO .50V
C551	22-6312	100MFD ELECTRO .50V
C552	22-6313	100MFD ELECTRO .50V
C553	22-6314	100MFD ELECTRO .50V
C554	22-6315	100MFD ELECTRO .50V
C555	22-6316	100MFD ELECTRO .50V
C556	22-6317	100MFD ELECTRO .50V
C557	22-6318	100MFD ELECTRO .50V
C558	22-6319	100MFD ELECTRO .50V
C559	22-6320	100MFD ELECTRO .50V
C560	22-6321	100MFD ELECTRO .50V
C561	22-6322	100MFD ELECTRO .50V
C562	22-6323	100MFD ELECTRO .50V
C563	22-6324	100MFD ELECTRO .50V
C564	22-6325	100MFD ELECTRO .50V
C565	22-6326	100MFD ELECTRO .50V
C566	22-6327	100MFD ELECTRO .50V
C567	22-6328	100MFD ELECTRO .50V
C568	22-6329	100MFD ELECTRO .50V
C569	22-6330	100MFD ELECTRO .50V
C570	22-6331	100MFD ELECTRO .50V
C571	22-6332	100MFD ELECTRO .50V
C572	22-6333	100MFD ELECTRO .50V
C573	22-6334	100MFD ELECTRO .50V
C574	22-6335	100MFD ELECTRO .50V
C575	22-6336	100MFD ELECTRO .50V
C576	22-6337	100MFD ELECTRO .50V
C577	22-6338	100MFD ELECTRO .50V
C578	22-6339	100MFD ELECTRO .50V
C579	22-6340	100MFD ELECTRO .50V
C580	22-6341	100MFD ELECTRO .50V
C581	22-6342	100MFD ELECTRO .50V
C582	22-6343	100MFD ELECTRO .50V
C583	22-6344	100MFD ELECTRO .50V
C584	22-6345	100MFD ELECTRO .50V
C585	22-6346	100MFD ELECTRO .50V
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C591	22-6352	100MFD ELECTRO .50V
C592	22-6353	100MFD ELECTRO .50V
C593	22-6354	100MFD ELECTRO .50V
C594	22-6355	100MFD ELECTRO .50V
C595	22-6356	100MFD ELECTRO .50V
C596	22-6357	100MFD ELECTRO .50V
C597	22-6358	

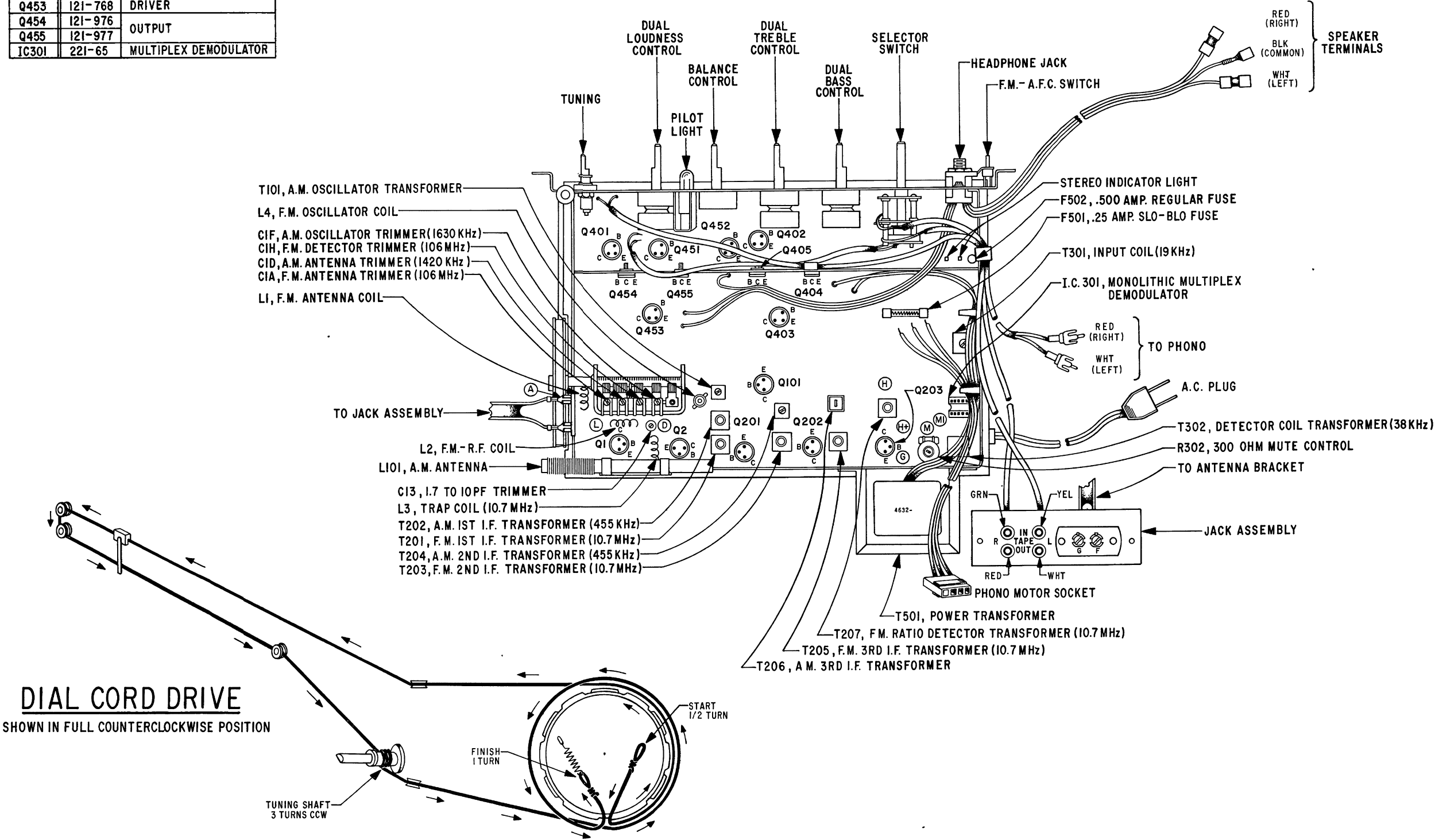
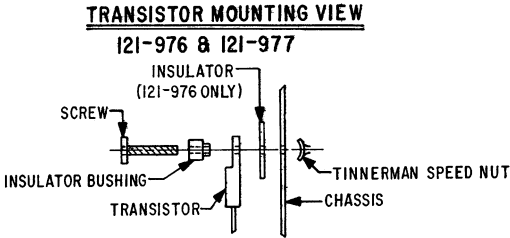


**REFER TO PAGE 87
FOR CHASSIS LAYOUT**

CHASSIS 6AT24 – SCHEMATIC

TRANSISTORS		
No.	PART No.	DESCRIPTION
Q1	I21-612	F.M.-R.F.
Q2	I21-613	F.M. CONVERTER
Q101	I21-735	A.M. CONVERTER
Q201	I21-614	A.M.-F.M. 1st I.F.
Q202	I21-950	A.M.-F.M. 2nd I.F.
Q203		F.M. 3rd I.F.
Q401		PRE-AMPLIFIER
Q402	I21-433	PRE-DRIVER
Q403	I21-768	DRIVER
Q404	I21-976	OUTPUT
Q405	I21-977	
Q451	I21-433	PRE-AMPLIFIER
Q452		PRE-DRIVER
Q453	I21-768	DRIVER
Q454	I21-976	OUTPUT
Q455	I21-977	
IC301	221-65	MULTIPLEX DEMODULATOR

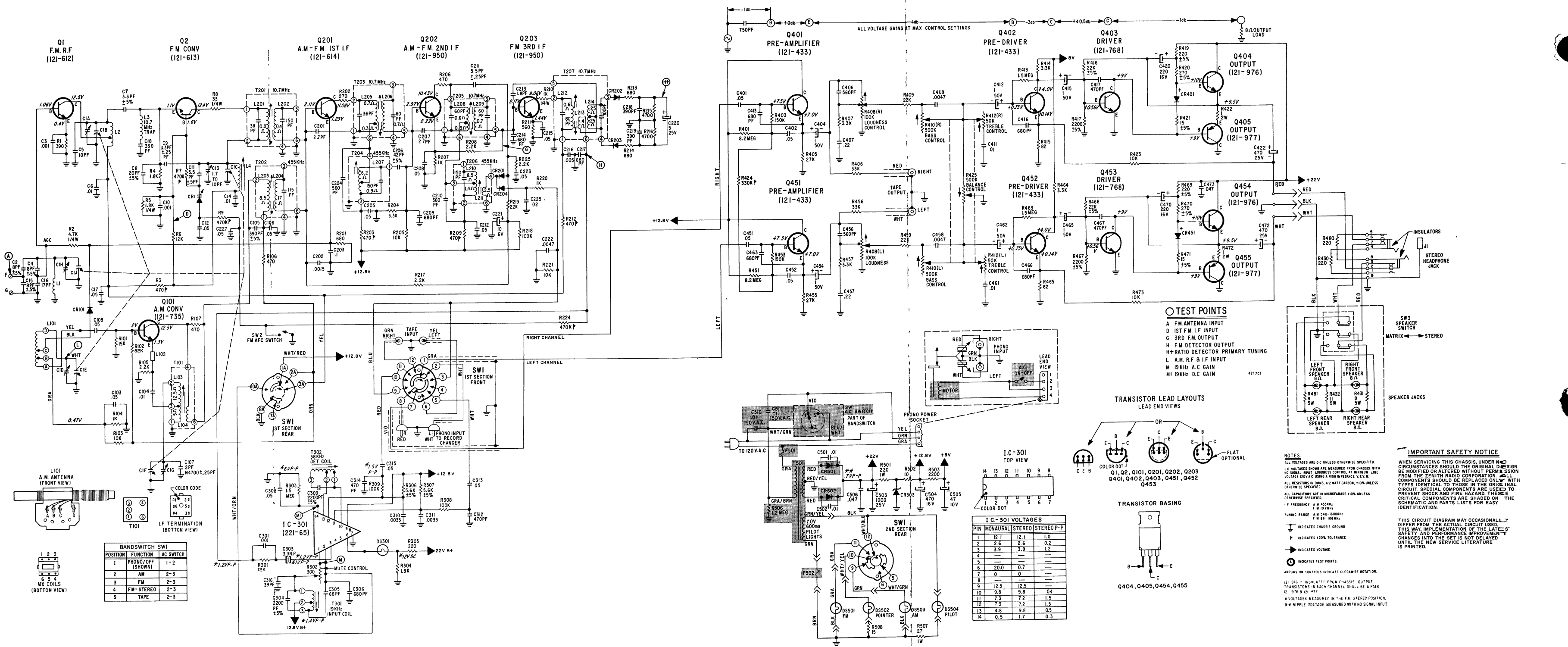
TEST POINTS	
A	F.M. ANTENNA INPUT
D	1st F.M. I.F. INPUT
G	3rd F.M. OUTPUT
H	F.M. DETECTOR OUTPUT
H+	RATIO DETECTOR PRIMARY TUNING
L	A.M. R.F. & I.F. INPUT
M	19KHz A.C. GAIN
M1	19KHz D.C. GAIN



CHASSIS 5WER50 - CHASSIS LAYOUT

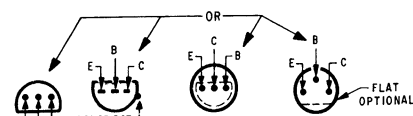
ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C18		F.M.P. DETECTOR TRIMMER	R208	63-1799	2.2K OHM
C19		F.M.P. DETECTOR TUNING	R209	63-1772	470 OHM 20%
C1C		F.M.P. OSCILLATOR TUNING	R210	63-4185	1 K OHM
C1D		A.M. ANTENNA TRIMMER	R211	63-1775	560 OHM 1/4W
C1E		A.M. ANTENNA TUNING	R212	63-1772	470 OHM 20%
C1F	22-1734	A.M. OSCILLATOR TUNING	R213	63-1778	180 OHM
C1G		A.M. OSCILLATOR TRIMMER	R214	63-1778	680 OHM
C1H		F.M.P. ANTENNA TRIMMER	R215	63-1813	4700 OHM
C1J		F.M.P. ANTENNA TUNING	R216	63-1813	4700 OHM
C2	22-2481	8 P.F. DISC .5% 500V	R217	63-1789	100K OHM
C3	22-2729	.001 MFD DISC 25V	R218	63-1869	100K OHM
C4	22-2481	8 P.F. DISC .5% 500V	R219	63-1841	22K OHM
C5	22-3075	10 P.F. DISC .5% 500V	R220	63-1785	100K OHM
C6	22-3393	.01 MFD DISC 25V	R221	63-1827	10K OHM
C7	22-3541	3.3 PF GIMMICK .5% 500V	R224	63-1898	470K OHM 20%
C8	22-3751	20 P.F. DISC .5% 500V	R225	63-1799	2.2K OHM
C9	22-5879	8 P.F. DISC .5% 500V	R301	63-1851	1K OHM
C10	22-2729	.001 MFD DISC 25V	R302	63-8328	300 OHM MUTE CONTROL
C11	22-5878	5.5 PF DISC .5% P	R303	63-1918	1.5 MEG OHM
C12	22-3034	.05 MFD DISC 25V	R304	63-1796	1.8K OHM
C13	22-6470	1 TO 10 PF CERAMIC TRIMMER	R305	63-1869	100K OHM
C14	22-3393	.01 MFD DISC 25V	R306	63-1816	5.6K OHM 5%
C15	22-2481	8 P.F. DISC .5% 500V	R307	63-1816	5.6K OHM 5%
C16	22-3752	17 P.F. DISC .5% 500V	R308	63-1869	100K OHM
C17	22-3034	.05 MFD DISC 25V	R309	63-1869	100K OHM
C18	22-3177	390P PF DISC 500V	R401	63-1950	8.2 MEG OHM
C103	22-3034	.05 MFD DISC 25V	R403	63-1876	160K OHM
C104	22-3034	.01 MFD DISC 25V	R405	63-1845	3K OHM
C105	22-5972	390P PF .5% POLYSTYRENE 125V	R406	63-1848	35K OHM
C106	22-3034	.05 MFD DISC 25V	R407	63-1806	3.3K OHM
C107	22-4819	2 P.F. N4700 .25 PF 500V	R408R	63-9255	100K DUAL LOUDNESS CONTROL
C108	22-3034	.05 MFD DISC 25V	R408L	63-9255	100K DUAL LOUDNESS CONTROL
C202	22-3310	2.7 PF GIMMICK .1% 500V	R409	63-1841	22K OHM
C202	22-5483	.0015 MFD DISC 500V	R410R	63-9257	500K DUAL BASS CONTROL
C203	22-3034	.05 MFD DISC 25V	R410L		(ALTERNATE 63-1012)
C204	22-5481	500P PF DISC 500V	R412R	63-9256	50K DUAL TREBLE CONTROL
C205	22-3034	.05 MFD DISC 25V	R412L		(ALTERNATE 63-1012)
C206	22-3791	42 P.F. DISC .5% 500V	R413	63-1918	1.5 MEG OHM
C207	22-3310	2.7 PF GIMMICK .1% 500V	R414	63-1806	3.3K OHM
C208	22-3034	.05 MFD DISC 25V	R415	63-1740	12 OHM
C209	22-5482	680P PF DISC 500V	R416	63-1840	22K OHM 5%
C210	22-5481	680P PF DISC 500V	R417	63-1798	220 OHM 5%
C211	22-3770	5.5 PF DISC .25 PF 500V	R418	63-1856	220 OHM 5%
C212	22-3034	.05 MFD DISC 25V	R420	63-1790	70 OHM 5%
C213	22-2428	1.8 PF GIMMICK .1% 500V	R421	63-1707	15 OHM 5%
C214	22-5482	680P PF DISC 500V	R422	63-9882	1 OHM 2W
C215	22-3034	.05 MFD DISC 25V	R423	63-1827	10K OHM
C216	22-3080	.005 MFD DISC 25V	R424	63-1891	330K OHM 20%
C217	22-5482	680P PF DISC 500V	R425	63-9254	500K BALANCE CONTROL
C218	22-3177	390P PF DISC 500V			(ALTERNATE 63-1019)
C219	22-3177	390P PF DISC 500V	R451	63-1950	8.2 MEG OHM
C220	22-3896	5 MFD ELECTROLYTIC 25V	R453	63-1876	150K OHM
C221	22-5486	10 MFD ELECTROLYTIC 6V	R455	63-1845	27K OHM
C222	22-4819	.00487 MFD DISC 500V	R456	63-1840	33K OHM
C223	22-3034	.05 MFD DISC 25V	R457	63-1806	3.3K OHM
C225	22-3033	.02 MFD 25V	R459	63-1841	



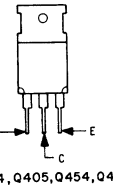


- TEST POINTS**
- A FM ANTENNA INPUT
 - D 1ST F.M. I.F. INPUT
 - G 3RD F.M. OUTPUT
 - H F.M. DETECTOR OUTPUT
 - L RATIO DETECTOR PRIMARY TUNING
 - M 19 KHZ. A.C. GAIN
 - MI 19 KHZ. D.C. GAIN

TRANSISTOR LEAD LAYOUTS



TRANSISTOR BASING



NOTES

ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.

VOLTAGES SHOWN ARE MEASURED FROM CHASSIS, WITH NO SIGNAL INPUT, LOUDNESS CONTROL AT MINIMUM, LINE VOLTAGE 120V A.C. USING A HIGH IMPEDANCE 100K OHM METER.

ALL RESISTORS IN OHMS, 1/2 WATT CARBON, 5% UNLESS OTHERWISE SPECIFIED.

ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.

* FREQUENCY: A.M. 455 KHZ; F.M. 107.9 KHZ.

TUNING RANGE: A.M. 540-1600 KHZ; F.M. 88-108 KHZ.

INDICATES CHASSIS GROUND.

INDICATES 100% TOLERANCE.

INDICATES VOLTAGE.

INDICATES TEST POINTS.

ARROWS ON CONTROLS INDICATE COUNTERCLOCKWISE ROTATION.

(2) 976 " " ISOLATED FROM CHASSIS. OUTPUT TRANSISTORS IN EACH CHANNEL SHALL BE A PAIR (2) 976 & 2) 977.

* VOLTAGES MEASURED IN THE F.M. STEREO POSITION.

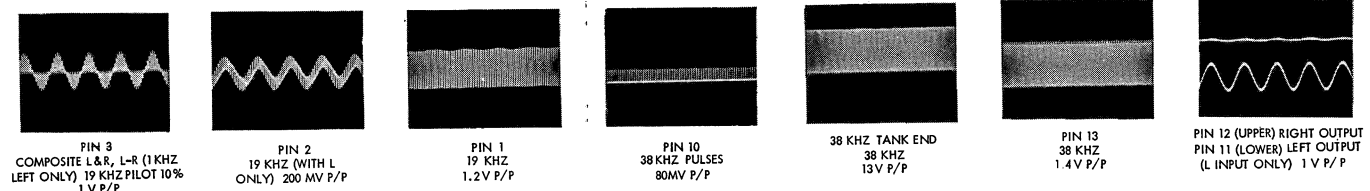
N.W. RIPPLE VOLTAGE MEASURED WITH NO SIGNAL INPUT.

IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHOWN ON THE SCHEMATIC AND PARTS LISTS FOR EASY IDENTIFICATION.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS MAY BE IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENTS. CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

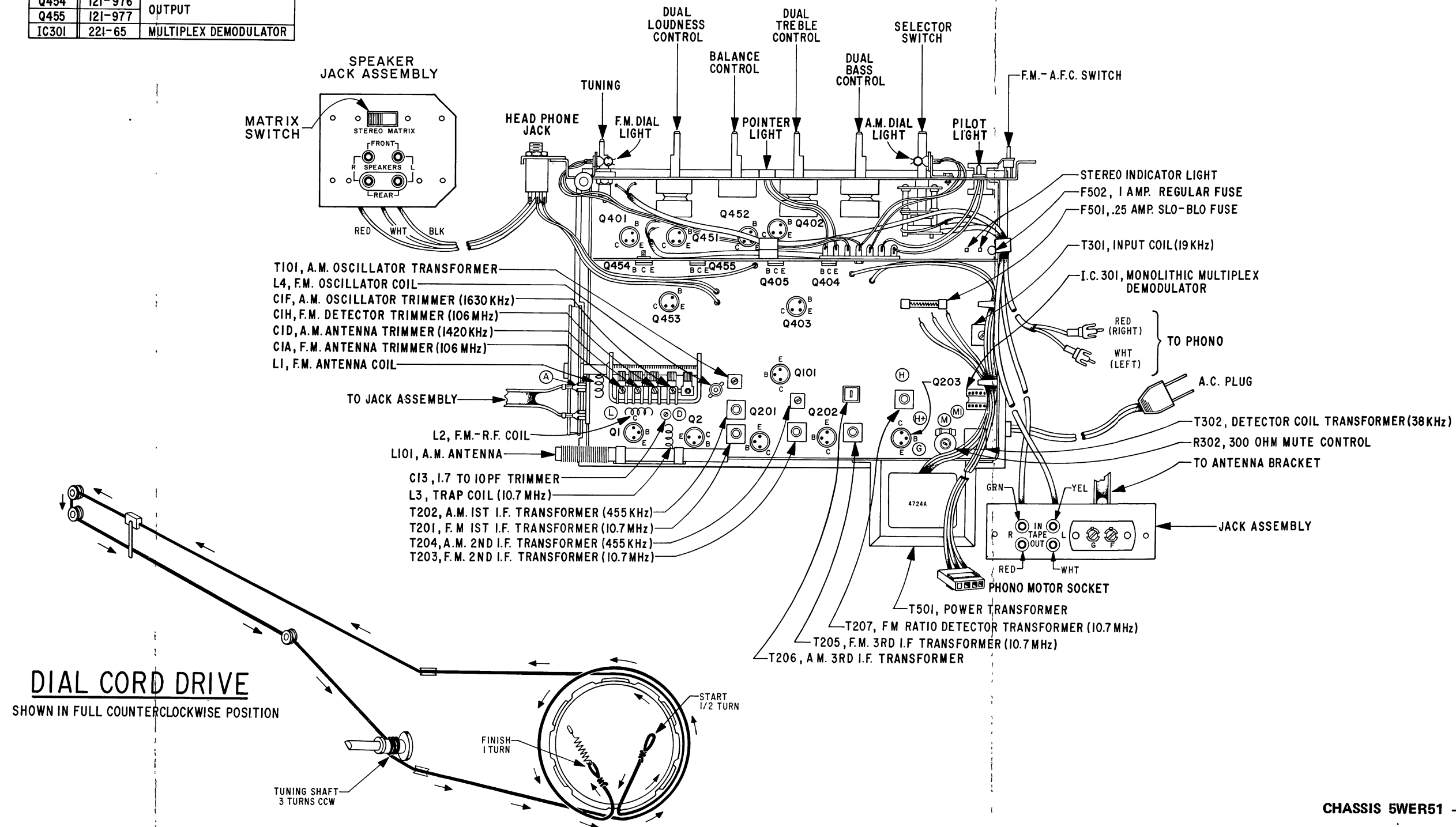
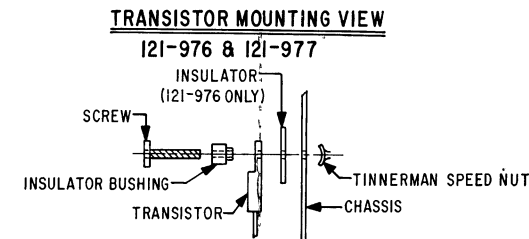
IC 301 WAVE FORMS



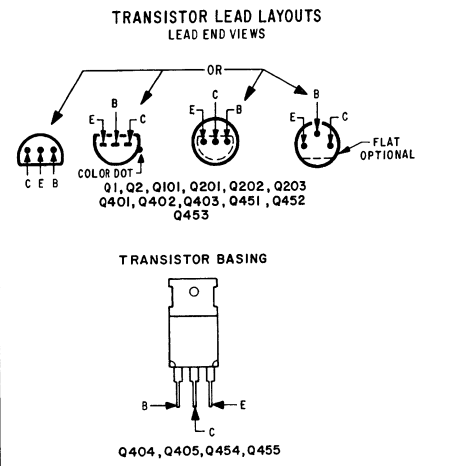
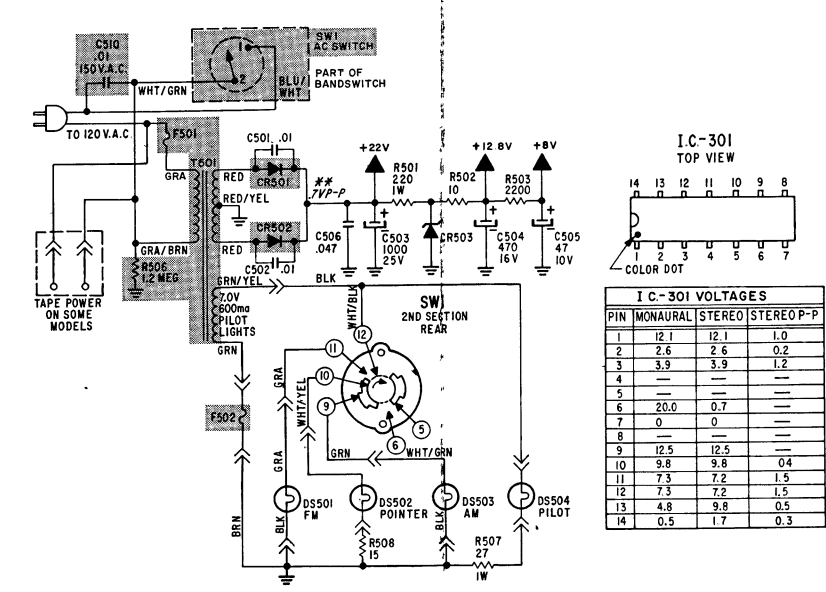
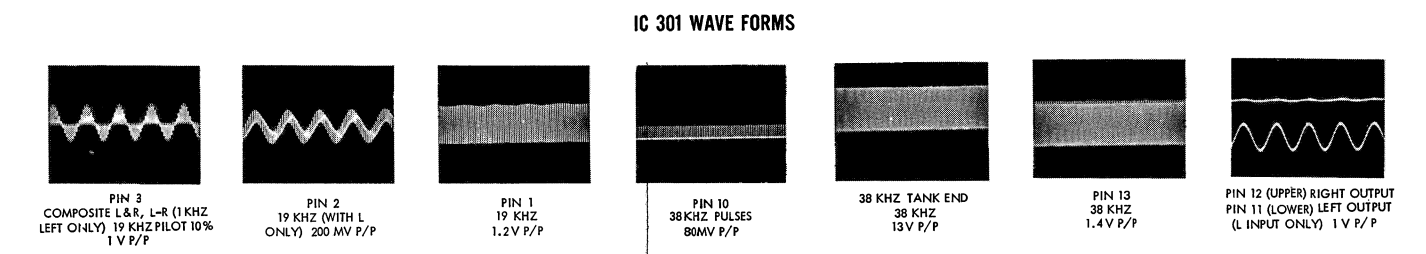
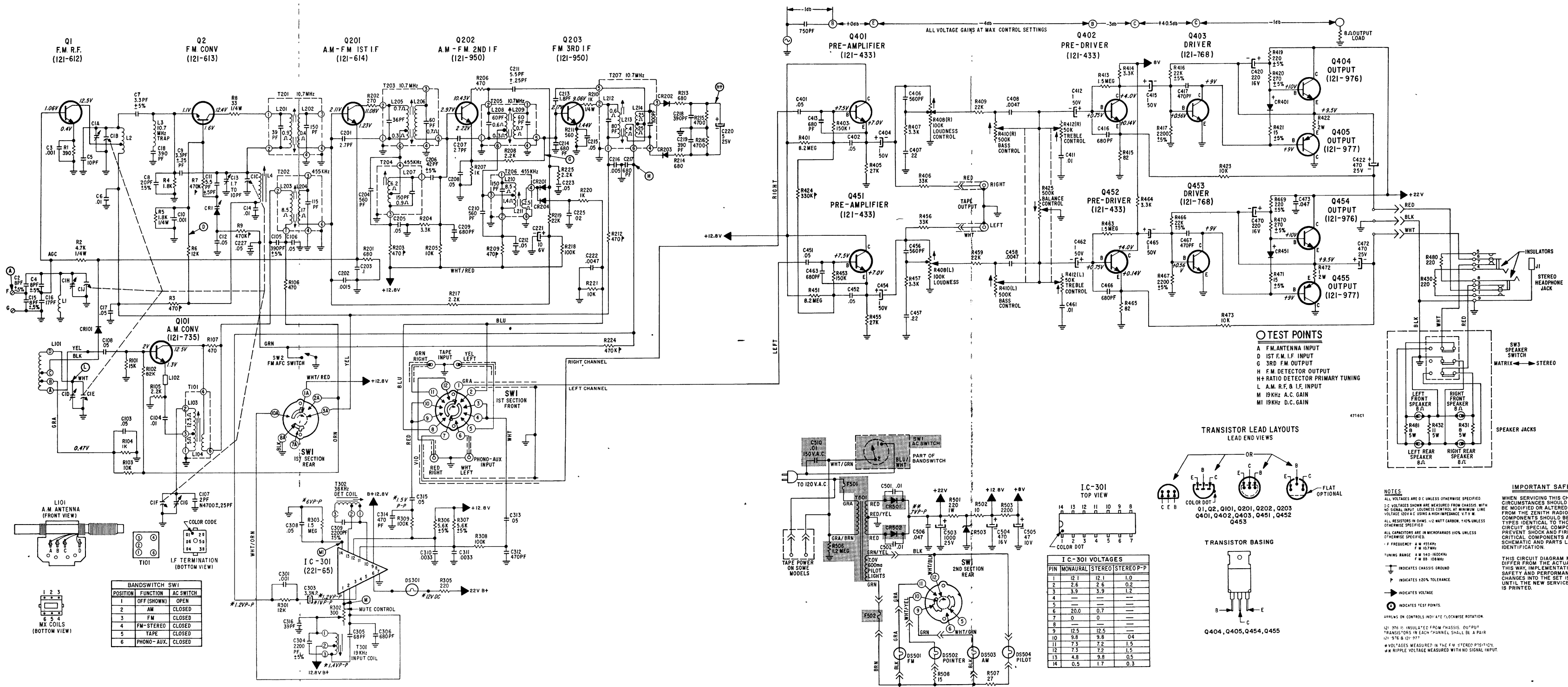
LEGEND CHASSIS 5WER51					
ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C1A		F.M. DETECTOR TRIMMER	R211	63-1775	560 OHM
C1B		F.M. DETECTOR TUNING	R212	63-1772	470 OHM 20%
C1C		F.M. OSCILLATOR TUNING	R213	63-1778	680 OHM
C1D		A.M. ANTENNA TRIMMER	R214	63-1778	680 OHM
C1E		A.M. ANTENNA TUNING	R215	63-1813	4700 OHM
C1F	22-7134	A.M. OSCILLATOR TUNING	R216	63-1813	4700 OHM
C1G		A.M. OSCILLATOR TRIMMER	R217	63-1799	2.2K OHM
C1H		F.M. ANTENNA TRIMMER	R218	63-1869	100K OHM
C1J		F.M. ANTENNA TUNING	R219	63-1841	22K OHM
C2	22-2481	8 PF DISC ± 0.5% 500V	R220	63-1785	1K OHM
C3	22-2729	.001 MFD DISC 25V	R221	63-1827	10K OHM
C4	22-2481	8 PF DISC ± 0.5% 500V	R224	63-1898	470K OHM 20%
C5	22-3675	10 PF DISC ± 5% 500V	R225	63-1799	2.2K OHM
C6	22-3393	.01 MFD DISC 25V	R301	63-1831	12K OHM
C7	22-3541	3.3 PF GIMMICK ± 5% 500V	R302	63-1828	300 OHM MUTE CONTROL
C8	22-3751	20 PF DISC ± 5% 500V	R303	63-1918	1.5 MEG OHM
C9	22-5879	3.3 PF DISC ± 25 PF 25V	R304	63-1798	1.8K OHM
C10	22-2729	.001 MFD DISC 25V	R305	63-1757	220 OHM
C11	22-5879	5.5 PF DISC ± 0.5 PF 25V	R306	63-1816	5.6K OHM 5%
C12	22-3034	.05 MFD DISC 25V	R307	63-1816	5.6K OHM 5%
C13	22-4470	1.7 "O" 10 PF CERAMIC TRIMMER	R308	63-1869	100K OHM
C14	22-3393	.01 MFD DISC 25V	R309	63-1869	100K OHM
C15	22-2481	8 PF DISC ± 0.5% 500V	R309	63-1869	100K OHM
C16	22-3752	17 PF DISC ± 5% 500V	R403	63-1876	150K OHM
C17	22-3034	.05 MFD DISC 25V	R405	63-1845	27K OHM
C18	22-3177	390 PF DISC 500V	R406	63-1848	33K OHM
C19	22-3034	.05 MFD DISC 25V	R407	63-1806	100K DUAL LOUDNESS CONTROL
C20	22-3393	.01 MFD DISC 25V	R408R	63-9255	(ALTERNATE 63-10180)
C21	22-5972	.30 MFD ± 5% POLYSTYRENE 125V	R409	63-1841	22K OHM
C22	22-3034	.05 MFD DISC 25V	R410R	63-9257	500K DUAL BASS CONTROL
C23	22-4810	2 PF DISC ± 0.5% 500V	R410R	63-9257	500K DUAL TREBLE CONTROL
C24	22-3034	.05 MFD DISC 25V	R411	63-1918	1.5 MEG OHM
C25	22-3310	2.7 PF GIMMICK ± 10% 500V	R412	63-1806	3.3K OHM
C26	22-4483	.001 MFD DISC 500V	R413	63-1740	82 OHM
C27	22-3682	1 MFD DISC 10V	R414	63-1840	22K OHM 5%
C28	22-5481	560 PF DISC 500V	R415	63-1798	2200 OHM 5%
C29	22-3034	.05 MFD DISC 25V	R416	63-1758	220 OHM 5%
C30	22-3034	.05 MFD DISC 25V	R417	63-1758	270 OHM 5%
C31	22-5482	880 PF DISC 500V	R418	63-1758	15 OHM 2W
C32	22-5481	560 PF DISC 500V	R419	63-1827	10K OHM
C33	22-3770	5.5 PF DISC ± 25 PF 500V	R420	63-1827	10K OHM
C34	22-3034	.05 MFD DISC 25V	R421	63-1827	330K OHM 20%
C35	22-4482	1.8 PF GIMMICK ± 10% 500V	R422	63-1881	500K BALANCE CONTROL
C36	22-5482	880 PF DISC 500V	R423	63-1757	220 OHM
C37	22-3034	.05 MFD DISC 25V	R424	63-1757	220 OHM
C38	22-3034	.05 MFD DISC 25V	R425	63-1757	220 OHM
C39	22-3034	.05 MFD DISC 25V	R426	63-1757	220 OHM
C40	22-3034	.05 MFD DISC 25V	R427	63-1757	220 OHM
C41	22-3034	.05 MFD DISC 25V	R428	63-1757	220 OHM
C42	22-3034	.05 MFD DISC 25V	R429	63-1757	220 OHM
C43	22-3034	.05 MFD DISC 25V	R430	63-1757	220 OHM
C44	22-3034	.05 MFD DISC 25V	R431	63-1757	220 OHM
C45	22-3034	.05 MFD DISC 25V	R432	63-1757	220 OHM
C46	22-3034	.05 MFD DISC 25V	R433	63-1757	220 OHM
C47	22-3034	.05 MFD DISC 25V	R434	63-1757	220 OHM
C48	22-3034	.05 MFD DISC 25V	R435	63-1757	220 OHM
C49	22-3034	.05 MFD DISC 25V	R436	63-1757	220 OHM
C50	22-3034	.05 MFD DISC 25V	R437	63-1757	220 OHM
C51	22-3034	.05 MFD DISC 25V	R438	63-1757	220 OHM
C52	22-3034	.05 MFD DISC 25V	R439	63-1757	220 OHM
C53	22-3034	.05 MFD DISC 25V	R440	63-1757	220 OHM
C54	22-3034	.05 MFD DISC 25V	R441	63-1757	220 OHM
C55	22-3034	.05 MFD DISC 25V	R442	63-1757	220 OHM
C56	22-3034	.05 MFD DISC 25V	R443	63-1757	220 OHM
C57	22-3034	.05 MFD DISC 25V	R444	63-1757	220 OHM
C58	22-3034	.05 MFD DISC 25V	R445	63-1757	220 OHM
C59	22-3034	.05 MFD DISC 25V	R446	63-1757	220 OHM
C60	22-3034	.05 MFD DISC 25V	R447	63-1757	220 OHM
C61	22-3034	.05 MFD DISC 25V	R448	63-1757	220 OHM
C62	22-3034	.05 MFD DISC 25V	R449	63-1757	220 OHM
C63	22-3034	.05 MFD DISC 25V	R450	63-1757	220 OHM
C64	22-3034	.05 MFD DISC 25V	R451	63-1757	220 OHM
C65	22-3034	.05 MFD DISC 25V	R452	63-1757	220 OHM
C66	22-3034	.05 MFD DISC 25V	R453	63-1757	220 OHM
C67	22-3034	.05 MFD DISC 25V	R454	63-1757	220 OHM
C68	22-3034	.05 MFD DISC 25V	R455	63-1757	220 OHM
C69	22-3034	.05 MFD DISC 25V	R456	63-1757	220 OHM
C70	22-3034	.05 MFD DISC 25V	R457	63-1757	220 OHM
C71	22-3034	.05 MFD DISC 25V	R458	63-1757	220 OHM
C72	22-3034	.05 MFD DISC 25V	R459	63-1757	220 OHM
C73	22-3034	.05 MFD DISC 25V	R460	63-1757	220 OHM
C74	22-3034	.05 MFD DISC 25V	R461	63-1757	220 OHM
C75	22-3034	.05 MFD DISC 25V	R462	63-1757	220 OHM
C76	22-3034	.05 MFD DISC 25V	R463	63-1757	220 OHM
C77	22-3034	.05 MFD DISC 25V	R464	63-1757	220 OHM
C78	22-3034	.05 MFD DISC 25V	R465	63-1757	220 OHM
C79	22-3034	.05 MFD DISC 25V	R466	63-1757	220 OHM
C80	22-3034	.05 MFD DISC 25V	R467	63-1757	220 OHM
C81	22-3034	.05 MFD DISC 25V	R468	63-1757	220 OHM
C82	22-3034	.05 MFD DISC 25V	R469	63-1757	220 OHM
C83	22-3034	.05 MFD DISC 25V	R470	63-1757	220 OHM
C84	22-3034	.05 MFD DISC 25V	R471	63-1757	220 OHM
C85	22-3034	.05 MFD DISC 25V	R472	63-1757	220 OHM
C86	22-3034	.05 MFD DISC 25V	R473	63-1757	220 OHM
C87	22-3034	.05 MFD DISC 25V	R474	63-1757	220 OHM
C88	22-3034	.05 MFD DISC 25V	R475	63-1757	220 OHM
C89	22-3034	.05 MFD DISC 25V	R476	63-1757	220 OHM
C90	22-3034	.05 MFD DISC 25V	R477	63-1757	220 OHM
C91	22-3034	.05 MFD DISC 25V	R478	63-1757	220 OHM
C92	22-3034	.05 MFD DISC 25V	R479	63-1757	220 OHM
C93	22-3034	.05 MFD DISC 25V	R480	63-1757	220 OHM
C94	22-3034	.05 MFD DISC 25V	R481	63-1757	220 OHM
C95	22-3034	.05 MFD DISC 25V	R482	63-1757	220 OHM
C96	22-3034	.05 MFD DISC 25V	R483	63-1757	220 OHM
C97	22-3034	.05 MFD DISC 25V	R484	63-1757	220 OHM
C98	22-3034	.05 MFD DISC 25V	R485	63-1757	220 OHM
C99	22-3034	.05 MFD DISC 25V	R486	63-1757	220 OHM
C100	22-3034	.05 MFD DISC 25V	R487	63-1757	220 OHM
C101	22-3034	.05 MFD DISC 25V	R488	63-1757	220 OHM
C102	22-3034	.05 MFD DISC 25V	R489	63-1757	220 OHM
C103	22-3034	.05 MFD DISC 25V	R490	63-1757	220 OHM
C104	22-3034	.05 MFD DISC 25V	R491	63-1757	220 OHM
C105	22-3034	.05 MFD DISC 25V	R492	63-1757	220 OHM
C106	22-3034	.05 MFD DISC 25V	R493	63-1757	220 OHM
C107	22-3034	.05 MFD DISC 25V	R494	63-1757	220 OHM
C108	22-3034	.05 MFD DISC 25V	R495	63-1757	220 OHM
C109	22-3034	.05 MFD DISC 25V	R496	63-1757	220 OHM
C110	22-3034	.05 MFD DISC 25V	R497	63-1757	220 OHM
C111	22-3034	.05 MFD DISC 25V	R498	63-1757	220 OHM
C112	22-3034	.05 MFD DISC 25V	R499	63-1757	220 OHM
C113	22-3034	.05 MFD DISC 25V	R500	63-1757	220 OHM
C114	22-3034	.05 MFD DISC 25V	R501	63-1757	220 OHM
C115	22-3034	.05 MFD DISC 25V	R502	63-1757	220 OHM
C116	22-3034	.05 MFD DISC 25V	R503	63-1757	220 OHM
C117	22-3034	.05 MFD DISC 25V	R504	63-1757	220 OHM
C118	22-3034	.05 MFD DISC 25V	R505	63-1757	220 OHM
C119	22-3034	.05 MFD DISC 25V	R506	63-1757	220 OHM
C120	22-3034	.05 MFD DISC 25V	R507	63-1757	220 OHM
C121	22-3034	.05 MFD DISC 25V	R508	63-1757	220 OHM
C122	22-3034	.05 MFD DISC 25V	R509	63-1757	220 OHM
C123	22-3034	.05 MFD DISC 25V	R510	63-1757	220 OHM
C124	22-3034	.05 MFD DISC 25V	R511	63-1757	220 OHM
C125	22-3034	.05 MFD DISC 25V	R512	63-1757	220 OHM
C126	22-3034	.05 MFD DISC 25V	R513	63-1757	220 OHM
C127	22-3034	.05 MFD DISC 25V	R514	63-1757	220 OHM
C128	22-3034	.05 MFD DISC 25V	R515	63-1757	220 OHM
C129	22-3034	.05 MFD DISC 25V	R516	63-1757	220 OHM
C130	22-3034	.05 MFD DISC 25V	R517	63-1757	220 OHM
C131	22-3034	.05 MFD DISC 25V	R518	63-1757	220 OHM
C132	22-3034	.05 MFD DISC 25V	R519	63-1757	220 OHM
C133	22-3034	.05 MFD DISC 25V	R520	63-1757	220 OHM
C134	22-3034	.05 MFD DISC 25V	R521	63-1757	220 OHM
C135	22-3034	.05 MFD DISC 25V	R522	63-1757	220 OHM
C136	22-3034	.05 MFD DISC 25V	R523	63-1757	220 OHM
C137	22-3034	.05 MFD DISC 25V	R524	63-1757	220 OHM
C138	22-3034	.05 MFD DISC 25V	R525	63-1757	220 OHM
C139	22-3034	.05 MFD DISC 25V	R526	63-1757	220 OHM
C140	22-3034	.05 MFD DISC 25V	R527	63-1757	220 OHM
C141	22-3034	.05 MFD DISC 25V	R528	63-1757	220 OHM
C142	22-3034	.05 MFD DISC 25V	R529	63-1757	220 OHM
C143	22-3034	.05 MFD DISC 25V	R530	63-1757	220 OHM
C144	22-3034	.05 MFD DISC 25V	R531	63-1757	220 OHM
C145	22-3034	.05 MFD DISC 25V	R532	63-1757	220 OHM
C146	22-3034	.05 MFD DISC 25V	R533	63-1757	220 OHM
C147	22-3034	.05 MFD DISC 25V	R534	63-1757	220 OHM
C148	22-3034	.05 MFD DISC 25V	R535	63-1757	220 OHM
C149	22-3034	.05 MFD DISC 25V	R536	63-1757	220 OHM
C150	22-3034	.05 MFD DISC 25V	R537	63-1757	220 OHM
C151	22-3034	.05 MFD DISC 25V	R538	63-1757	220 OHM
C152	22-3034	.05 MFD DISC 25V	R539	63-1757	220 OHM
C153	22-3034	.05 MFD DISC 25V	R540	63-1757	220 OHM
C154	22-3034	.05 MFD DISC 25V	R541	63-1757	220 OHM
C155	22-3034	.05 MFD DISC 25V	R542	63-1757	220 OHM
C156	22-3034	.05 MFD DISC 25V	R543	63-1757	220 OHM
C157	22-3034	.05 MFD DISC 25V	R544	63-1757	220 OHM
C158	22-3034	.05 MFD DISC 25V	R545	63-1757	220 OHM
C159	22-3034	.05 MFD DISC 25V	R546	63-1757	220 OHM
C160	22-3034	.05 MFD DISC 25V	R547	63-1757	220 OHM
C161	22-3034	.05 MFD DISC 25V	R548	63-1757	220 OHM
C162	22-3034	.05 MFD DISC 25V	R549	63-1757	220 OHM
C163	22-3034	.05 MFD DISC 25V	R550	63-1757	220 OHM
C164	22-3034	.05 MFD DISC 25V	R551	63-1757	220 OHM
C165	22-3034	.05 MFD DISC 25V	R552	63-1757	220 OHM
C166					

TRANSISTORS		
No.	PART No.	DESCRIPTION
Q1	I21-612	F.M.-R.F.
Q2	I21-613	F.M. CONVERTER
Q101	I21-735	A.M. CONVERTER
Q201	I21-614	A.M.-F.M. 1st I.F.
Q202	I21-950	A.M.-F.M. 2nd I.F.
Q203		F.M. 3rd I.F.
Q401	I21-433	PRE-AMPLIFIER
Q402		PRE-DRIVER
Q403	I21-768	DRIVER
Q404	I21-976	OUTPUT
Q405	I21-977	
Q451	I21-433	PRE-AMPLIFIER
Q452		PRE-DRIVER
Q453	I21-768	DRIVER
Q454	I21-976	
Q455	I21-977	OUTPUT
IC301	221-65	MULTIPLEX DEMODULATOR

TEST POINTS	
A	F.M. ANTENNA INPUT
D	1st F.M. I.F. INPUT
G	3rd F.M. OUTPUT
H	F.M. DETECTOR OUTPUT
H+	RATIO DETECTOR PRIMARY TUNING
L	A.M. R.F. & I.F. INPUT
M	19KHz A.C. GAIN
M1	19KHz D.C. GAIN



CHASSIS 5WER51 — CHASSIS LAYOUT



NOTES

ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.

D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS WITH NO SIGNAL INPUT. LOUDNESS CONTROL AT MINIMUM. LINE VOLTAGE 120V A.C. USING A HIGH IMPEDANCE V.T.V.M.

ALL RESISTORS IN OHMS: 1/2 WATT CARBON, ±10% UNLESS OTHERWISE SPECIFIED.

ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.

F. FREQUENCY: A.M. 455 KHz; F.M. 10.7 MHz.

TUNING RANGE: A.M. 540-1600 KHz; F.M. 88-108 MHz.

⊥ INDICATES CHASSIS GROUND.

± INDICATES ±20% TOLERANCE.

→ INDICATES VOLTAGE.

⊙ INDICATES TEST POINTS.

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION.

121-976: INSULATED FROM CHASSIS. OUTPUT TRANSISTORS IN EACH CHANNEL SHALL BE A PAIR 121-976 B 121-977.

* VOLTAGES MEASURED IN THE F.M. STEREO POSITION.

** RIPPLE VOLTAGE MEASURED WITH NO SIGNAL INPUT.

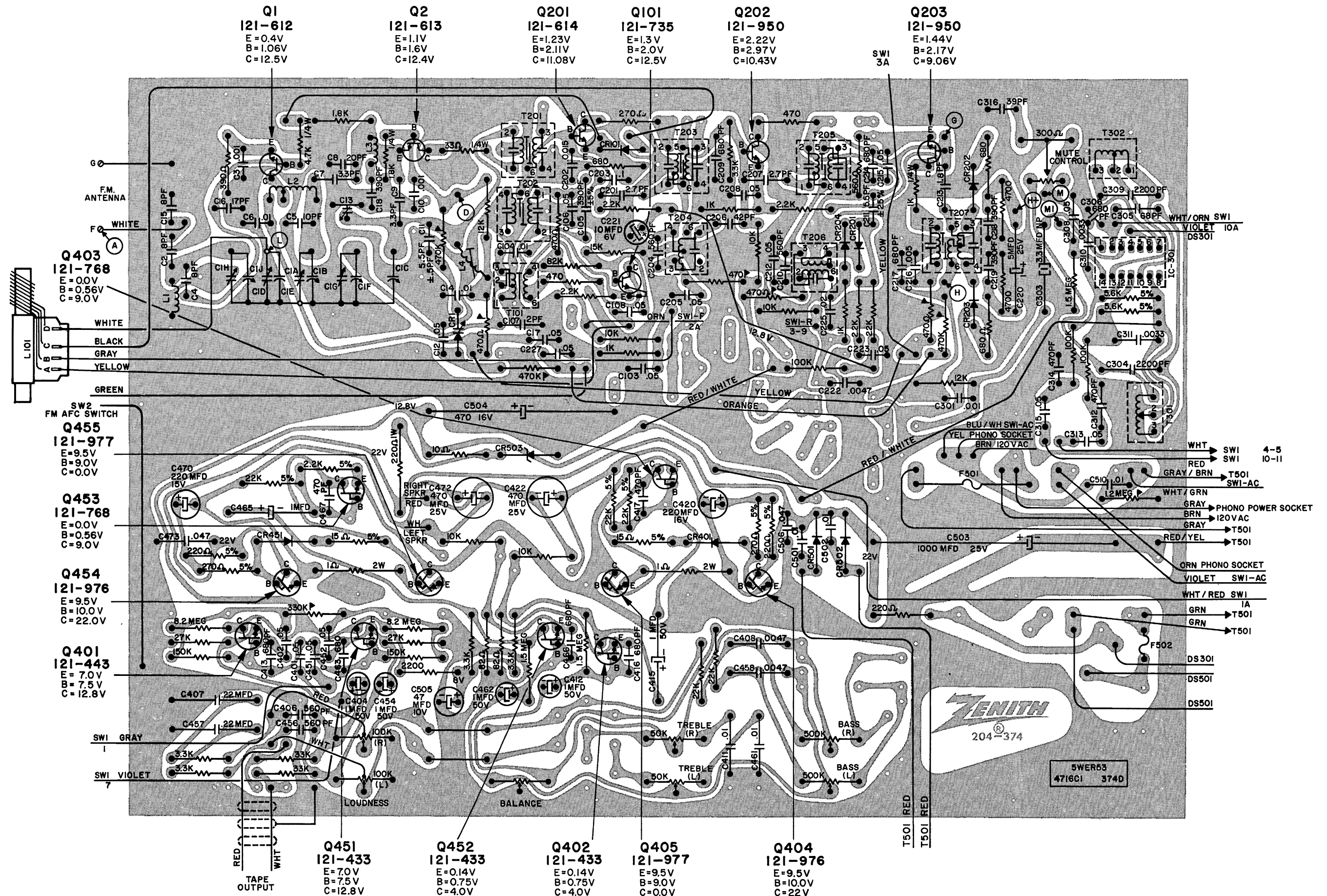
IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THE SE CRITICAL COMPONENTS ARE SHADED ON THE SCHEMATIC AND PARTS LISTS FOR EASY IDENTIFICATION.

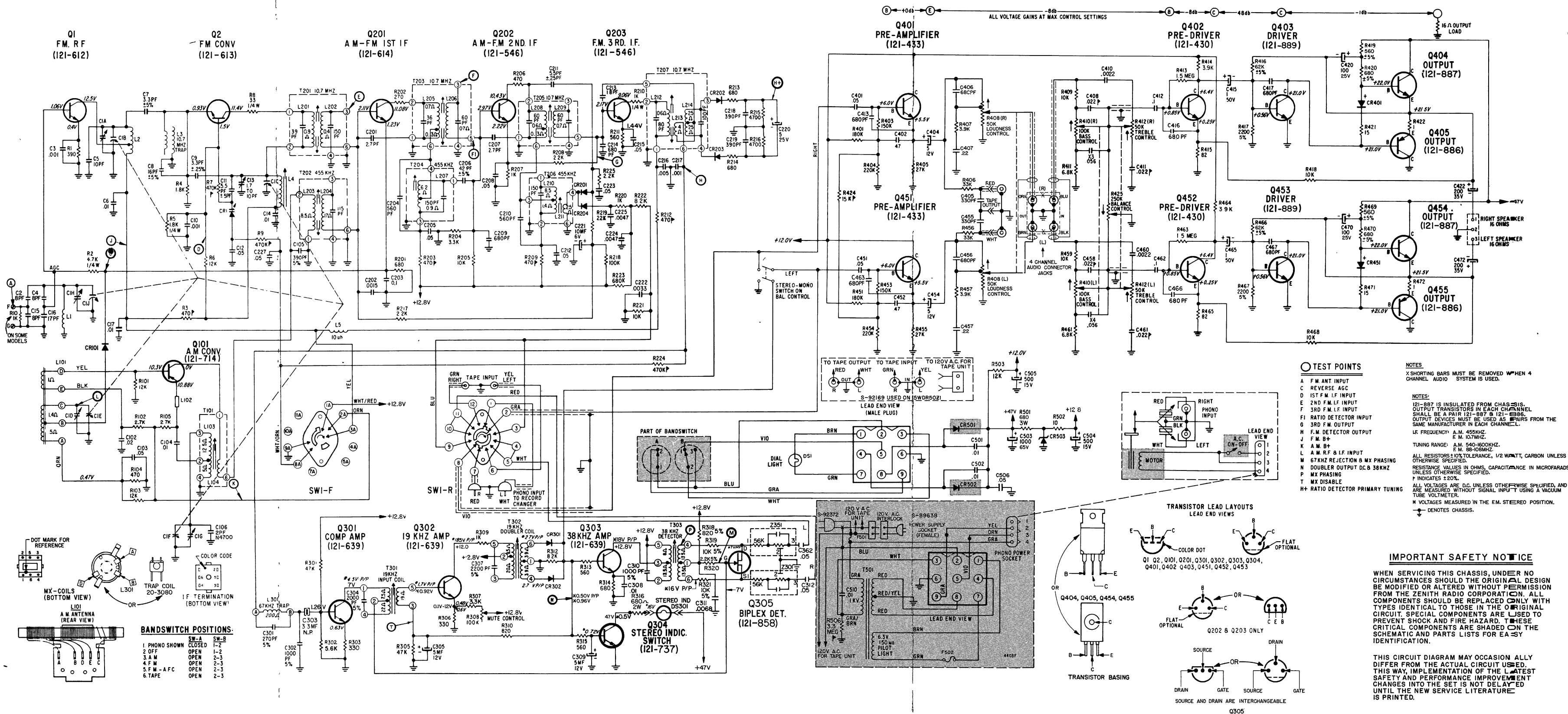
THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

LEGEND CHASSIS 5WER53

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C1A		F.M. DETECTOR TRIMMER	R211	63-1775	560 OHM
C1B		F.M. DETECTOR TUNING	R212	63-1772	470 OHM 20%
C1C		F.M. OSCILLATOR TUNING	R213	63-1778	880 OHM
C1D		A.M. ANTENNA TRIMMER	R214	63-1778	880 OHM
C1E		A.M. ANTENNA TUNING	R215	63-1513	4700 OHM
C1F		A.M. OSCILLATOR TUNING	R216	63-1513	4700 OHM
C1G	22-7134	A.M. OSCILLATOR TRIMMER	R217	63-1799	2.2K OHM
C1H		F.M. ANTENNA TRIMMER	R218	63-1509	100K OHM
C1J		F.M. ANTENNA TUNING	R219	63-1841	22K OHM
C2	22-2481	8 PF DISC ± 0.5% 500V	R220	63-1785	1K OHM
C3	22-2729	.001 MFD DISC 25V	R221	63-1827	10K OHM
C4	22-2481	8 PF DISC ± 0.5% 500V	R222	63-1038	470K OHM 20%
C5	22-3675	10 PF DISC ± 5% 500V	R225	63-1799	2.2K OHM
C6	22-3393	.01 MFD DISC 25V	R301	63-1831	12K OHM
C7	22-3541	3.3 PF DISC ± 5% 500V	R302	63-8328	300 OHM MUTE CONTROL
C8	22-5751	3.3 PF DISC ± 25 PF 25V	R303	63-1919	1.5 MEG OHM
C9	22-5879	3.3 PF DISC ± 25 PF 25V	R305	63-1757	220 OHM
C10	22-2729	.001 MFD DISC 25V	R306	63-1818	5.6K OHM 5%
C11	22-5879	3.3 PF DISC ± 0.5% 500V	R307	63-1818	5.6K OHM 5%
C12	22-3034	.05 MFD DISC 25V	R308	63-1809	100K OHM
C13	22-6470	1.7 TO 10 PF CERAMIC TRIMMER	R309	63-1809	100K OHM
C14	22-3393	.01 MFD DISC 25V	R401	63-1950	8.2 MEG OHM
C15	22-2481	8 PF DISC ± 0.5% 500V	R403	63-1878	150K OHM
C16	22-3792	17 PF DISC ± 5% 500V	R406	63-1945	27K OHM
C17	22-3034	.05 MFD DISC 25V	R406	63-1948	33K OHM
C18	22-3177	390 PF DISC 500V	R407	63-1808	3.3K OHM
C19	22-3034	.05 MFD DISC 25V	R408	63-1808	3.3K OHM
C20	22-3393	.01 MFD DISC 25V	R408	63-1808	3.3K OHM
C21	22-5972	390 PF ± 5% POLYSTYRENE 125V	R409	63-1841	22K OHM
C22	22-3034	.05 MFD DISC 25V	R410	63-9257	500K DUAL BASS CONTROL
C23	22-4319	2 PF DISC ± 5% 500V	R410	63-9257	500K DUAL BASS CONTROL
C24	22-3034	.05 MFD DISC 25V	R412	63-9257	500K DUAL TREBLE CONTROL
C25	22-3310	2.7 PF GIMMICK ± 10% 500V	R412	63-9257	500K DUAL TREBLE CONTROL
C26	22-5483	.001 MFD DISC 10V	R413	63-1918	1.5 MEG OHM
C27	22-3682	1.1 MFD DISC 10V	R414	63-1906	3.3K OHM
C28	22-5481	560 PF DISC 500V	R415	63-1740	82 OHM
C29	22-3791	42 PF DISC ± 5% 500V	R416	63-1840	22K OHM 5%
C30	22-3310	2.7 PF GIMMICK ± 10% 500V	R417	63-1798	2200 OHM 5%
C31	22-3034	.05 MFD DISC 25V	R418	63-1750	270 OHM 5%
C32	22-5482	680 PF DISC 500V	R421	63-1707	15 OHM 5%
C33	22-5481	560 PF DISC 500V	R422	63-9882	1 OHM 2W
C34	22-3770	5.6 PF DISC ± 25 PF 500V	R423	63-1827	82K OHM
C35	22-3034	.05 MFD DISC 25V	R424	63-1891	330K OHM 20%
C36	22-2428	1.8 PF GIMMICK ± 10% 500V	R425	63-9254	500K BALANCE CONTROL
C37	22-5482	680 PF DISC 500V	R425	63-9254	500K BALANCE CONTROL
C38	22-3034	.05 MFD DISC 25V	R430	63-1757	220 OHM
C39	22-3034	.05 MFD DISC 25V	R431	63-10282	8 OHM 5W
C40	22-5482	680 PF DISC 500V	R432	63-10135	11 OHM 5W
C41	22-5481	560 PF DISC 500V	R433	63-1950	8.2 MEG OHM
C42	22-3177	390 PF DISC 500V	R434	63-1878	150K OHM
C43	22-3177	390 PF DISC 500V	R435	63-1878	150K OHM
C44	22-3896	5 MFD ELECTROLYTIC 25V	R455	63-1845	27K OHM
C45	22-5486	10 MFD ELECTROLYTIC 6V	R456	63-1848	33K OHM
C46	22-14	.0007 MFD 500V	R457	63-1806	2.2K OHM
C47	22-3034	.05 MFD DISC 25V	R459	63-1841	22K OHM
C48	22-3034	.05 MFD DISC 25V	R463	63-1918	1.5 MEG OHM
C49	22-3034	.05 MFD DISC 25V	R464	63-1806	3.3K OHM
C50	22-3034	.05 MFD DISC 25V	R465	63-1740	82 OHM
C51	22-6246	3.3 MFD N.P. 15V	R466	63-1840	22K OHM 5%
C52	22-5782	220 MFD PF POLYSTYRENE ± 5% 500V	R467	63-1798	2200 OHM 5%
C53	22-3686	88 PF DISC 500V	R469	63-1756	220 OHM 5%
C54	22-3686	88 PF DISC 500V	R470	63-1760	270 OHM 5%
C55	22-3034	.05 MFD DISC 25V	R471	63-1707	15 OHM 5%
C56	22-5782	220 MFD PF POLYSTYRENE ± 5% 500V	R472	63-9882	1 OHM 2W
C57	22-3177	390 PF DISC 500V	R473	63-1827	10K OHM
C58	22-13	.0033 MFD 500V	R480	63-1757	220 OHM
C59	22-16	470 PF DISC 500V	R481	63-10282	8 OHM 5W
C60	22-3034	.05 MFD DISC 25V	R501	63-6042	220 1W
C61	22-16	470 PF DISC 500V	R502	63-1701	10 OHM
C62	22-3034	.05 MFD DISC 25V	R503	63-1789	2.2K OHM
C63	22-3381	39 PF ± 5% DISC 500V	R508	63-1918	1.2 MEG OHM
C64	22-3034	.05 MFD DISC 25V	R507	63-6003	27 OHM 1W
C65	22-3034	.05 MFD DISC 25V	R508	63-1708	15 OHM
C66	22-7153	1 MFD ELECTROLYTIC 50V	R509	20-3291	FM ANTENNA COIL
C67	22-6048	.22 MFD MYLAR 50V	L1	20-1648	FM RF COIL
C68	22-14	.0007 MFD 500V	L2	20-1648	FM RF COIL
C69	22-5883	.01 MFD MYLAR 100V	L3	20-1631	TRAP COIL 10.7 MHz
C70	22-7153	1 MFD ELECTROLYTIC 50V	L4	20-3057	FM OSCILLATOR COIL
C71	22-5482	680 PF DISC 500V	L101	9-9322	AM ANTENNA ASSEMBLY
C72	22-5482	680 PF DISC 500V	L102	149-311	FERRITE CORE SLEEVE
C73	22-7143	1 MFD ELECTROLYTIC 50V	L103	IN T101	AM OSCILLATOR TRANS. PRI.
C74	22-5482	680 PF DISC 500V	L104	IN T101	AM OSCILLATOR TRANS. SEC.
C75	22-5482	680 PF DISC 500V	L201	IN T201	1ST IF TRANSFORMER 10.7 MHz PRI.
C76	22-16	.00047 MFD DISC 500V	L202	IN T201	1ST IF TRANSFORMER 10.7 MHz SEC.
C77	22-7151-09	220 MFD ELECTROLYTIC 16V	L203	IN T202	2ND IF TRANSFORMER 10.7 MHz PRI.
C78	22-7152-11	470 MFD ELECTROLYTIC 25V	L204	IN T202	2ND IF TRANSFORMER 10.7 MHz SEC.
C79	22-3034	.05 MFD DISC 25V	L205	IN T203	3RD IF TRANSFORMER 10.7 MHz PRI.
C80	22-3034	.05 MFD DISC 25V	L206	IN T203	3RD IF TRANSFORMER 10.7 MHz SEC.
C81	22-7153	1 MFD ELECTROLYTIC 50V	L207	IN T204	2ND IF TRANSFORMER 10.7 MHz PRI.
C82	22-3382	.22 MFD MYLAR 50V	L208	IN T205	3RD IF TRANSFORMER 10.7 MHz PRI.
C83	22-6048	.22 MFD MYLAR 50V	L209	IN T205	3RD IF TRANSFORMER 10.7 MHz SEC.
C84	22-14	.00047 MFD DISC 500V	L210	IN T206	3RD IF TRANSFORMER 10.7 MHz PRI.
C85	22-5883	.01 MFD MYLAR 100V	L211	IN T206	3RD IF TRANSFORMER 10.7 MHz SEC.
C86	22-7153	1 MFD ELECTROLYTIC 50V	L212	IN T207	RATIO DET. TRANS. 10.7 MHz PRI.
C87	22-5482	680 PF DISC 500V	L213	IN T207	RATIO DET. TRANS. 10.7 MHz SEC.
C88	22-7143	1 MFD ELECTROLYTIC 50V	L214	IN T207	RATIO DET. TRANS. 10.7 MHz SEC.
C89	22-5482	680 PF DISC 500V	T101	95-3077	AM OSCILLATOR TRANSFORMER
C90	22-5482	680 PF DISC 500V	T201	95-2546	FM 1ST IF TRANSFORMER 10.7 MHz
C91	22-7151-09	220 MFD ELECTROLYTIC 16V	T202	95-2541	AM 1ST IF AM 455 KHz
C92	22-7152-11	470 MFD ELECTROLYTIC 25V	T203	95-2547	FM 2ND IF TRANSFORMER 10.7 MHz
C93	22-6447-01	.047 MFD MYLAR ± 20% 100V	T204	95-2542	AM 2ND IF AM 455 KHz
C94	22-4617	.01 MFD DISC 500V	T205	95-2548	FM 3RD IF TRANSFORMER 10.7 MHz
C95	22-4617	.01 MFD DISC 500V	T206	95-2549	AM 3RD IF AM 455 KHz
C96	22-7142-12	100 MFD ELECTROLYTIC 25V	T207	95-2545	FM RATIO DETECTOR 10.7 MHz
C97	22-7141-11	470 MFD ELECTROLYTIC 16V	T301	95-3022	INPUT COIL 10 KHz
C98	22-7150-07	47 MFD ELECTROLYTIC 10V	T302	95-3023	DETECTOR COIL 38 KHz
C99	22-6447-01	.047 MFD MYLAR ± 20% 100V	T301	95-3107	POWER TRANSFORMER
C100	22-6048	.22 MFD MYLAR 50V	SW1	85-1401	BAIRD SWITCH
R1	63-1702	470 OHM	SW2	85-1372	AFC SWITCH (SLIDE SP-DT)
R2	63-4213	4.7K OHM 1/4W	SW3	85-1410	SPEAKER SWITCH (SLIDE SP-DT)
R3	63-1772	470 OHM 20%	J1	78-2137-0	STEREO HEADPHONE JACK
R4	63-1796	1.8K OHM	CR1	103-189	AFC DIODE
R5	63-4186	1.8K OHM 1/4W			
R6	63-1831	12K OHM	CR101	103-142	SILICON DIODE
R7	63-1898	470K OHM 20%	CR201	103-23	GERMANIUM DIODE
R8	63-4122	470 OHM 1/4W	CR202	103-60	GERMANIUM DIODE
R9	63-1898	470K OHM 20%	CR203	103-90	GERMANIUM DIODES (MATCHED PAIR)
R10	63-1834	15K OHM	CR204	103-23	GERMANIUM DIODE
R101	63-1866	82K OHM	CR401	103-222	DIODE
R102	63-1866	82K OHM	CR401	103-222	DIODE
R103	63-1827	1K OHM	CR401	103-222	DIODE
R104	63-1799	2.2K OHM	CR501	212-76	SILICON RECTIFIER
R105	63-1799	2.2K OHM	CR502	212-76	SILICON RECTIFIER
R106	63-1771	470 OHM	CR503	103-96	DIODE
R107	63-1771	470 OHM	IC301	221-65	MONOLITHIC MULTIPLEX DEMOD.
R201	63-1778	880 OHM	DS501	100-604	FM DIAL LIGHT
R202	63-1761	270 OHM	DS502	100-625	PILOT LIGHT
R203	63-1772	470 OHM 20%	DS503	100-604	PILOT LIGHT
R204	63-1806	3.3K OHM	DS504	100-610	PILOT LIGHT
R205	63-1827	10K OHM	DS301	100-611	STEREO INDICATOR LIGHT
R206	63-1771	470 OHM	PC	204-374	PRINTED CIRCUIT BOARD
R207	63-1785	1K OHM	F501	136-101	25 AMP SLO-BLO FUSE
R208	63-1799	2.2K OHM	F502	136-105	1 AMP REGULAR FUSE
R209	63-1772	470 OHM 20%			
R210	63-4185	1K OHM 1/4W			



CHASSIS 5WER53 - CHASSIS WIRING AND COMPONENTS
VIEWED FROM FOIL SIDE



CHASSIS 15WDR50Z1 - SCHEMATIC

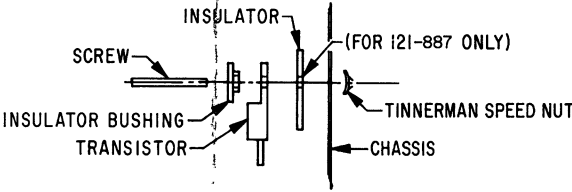
LEGEND CHASSIS 15WDR50Z1

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C1A		F.M. DETECTOR TRIMMER	R212	63-1772	470 OHM 20%
C1B		F.M. DETECTOR TUNING	R213	63-1778	680 OHM
C1C		F.M. OSCILLATOR TUNING	R214	63-1778	680 OHM
C1D		A.M. ANTENNA TRIMMER	R215	63-1813	4700 OHM
C1E		A.M. ANTENNA TUNING	R216	63-1813	4700 OHM
C1F		A.M. OSCILLATOR TUNING	R217	63-1799	2.2K OHM
C1G		A.M. OSCILLATOR TRIMMER	R218	63-1889	100K OHM
C1H		F.M. ANTENNA TRIMMER	R219	63-1841	22K OHM
C1I		F.M. ANTENNA TUNING	R220	63-1785	1K OHM
C2	22-2481	5 PF DISC ± .25 PF 500V	R221	63-1827	10K OHM
C3	22-2729	.001 MFD DISC 25V	R222	63-1824	8.2K
C4	22-2581	5 PF DISC ± .25 PF 500V	R223	63-1904	680K OHM
C5	22-3676	10 PF DISC ± .5% 500V	R224	63-1898	470K OHM 20%
C6	22-3393	.01 MFD DISC 25V	R225	63-1799	2.2K OHM
C7	22-3641	3.3 PF GIMMICK ± .5% 500V	R301	63-1855	47K OHM
C8	22-3596	16 PF DISC ± .5% 500V	R302	63-1817	5.6K OHM
C9	22-6879	3.3 PF DISC ± .25PF 25V	R303	63-1764	380 OHM
C10	22-2729	.001 MFD DISC 25V	R305	63-1855	47K OHM
C11	22-6878	5.5 PF DISC ± .5 PF 25V	R306	63-1764	380 OHM
C12	22-3034	.05 MFD DISC 25V	R307	63-1806	3.3K OHM
C13	22-4855	1.7 TO 10PF CERAMIC TRIMMER	R308	63-6495	100K MUTE CONTROL
C14	22-3393	.01 MFD DISC 25V	R309	63-1785	1K OHM
C15	22-2481	5 PF DISC ± .25 PF 500V	R310	63-1782	820 OHM
C16	22-3792	17 PF DISC ± .5% 500V	R312	63-1824	8.2K OHM
C17	22-3393	.02 MFD DISC 25V	R313	63-1775	560 OHM
C18	22-3034	.05 MFD DISC 25V	R314	63-1778	680 OHM
C19	22-3034	.05 MFD DISC 25V	R315	63-1775	560 OHM
C20	22-3393	.01 MFD DISC 25V	R316	63-6663	680 OHM 2W
C21	22-5480	390 PF MICA ± .5% 100V	R318	63-1701	620 OHM 5%
C22	22-5972	22 PF N2200 500V	R319	63-1826	10K OHM 5%
C23	22-3310	2.7 PF GIMMICK 500V	R320	63-1798	2.2K OHM 5%
C24	22-6483	.0015 MFD DISC 500V	R321	63-1826	10K OHM 5%
C25	22-3652	.1 MFD DISC 10V	R401	63-1880	180K OHM
C26	22-5481	560 PF DISC 500V	R403	63-1876	150K OHM
C27	22-3034	.05 MFD DISC 25V	R404	63-1883	220K OHM
C28	22-3791	42 PF DISC ±.5% 500V	R405	63-1845	27K OHM
C29	22-3310	2.7 PF GIMMICK 500V	R406	63-1848	33K OHM
C30	22-3034	.05 MFD DISC 25V	R407	63-1810	3.9K OHM
C31	22-5482	680 PF DISC 500V	R408L	63-7683	50K DUAL LOUDNESS CONTROL
C32	22-5481	560 PF DISC 500V	R409	63-1827	10K OHM
C33	22-3770	5.5 PF DISC ±.25PF 500V	R410R	63-7682	100K DUAL BASS CONTROL
C34	22-3034	.05 MFD DISC 25V	R410L	63-1820	6.8K OHM
C35	22-2428	1.8 PF GIMMICK 500V	R411	63-7681	50K DUAL TREBLE CONTROL
C36	22-5482	680 PF DISC 500V	R412R	63-1918	1.5 MEGOHM
C37	22-3034	.05 MFD DISC 25V	R412L	63-1810	3.9K OHM
C38	22-3034	.05 MFD DISC 25V	R413	63-1740	82 OHM
C39	22-2729	.001 MFD DISC 25V	R414	63-1860	62K OHM 5%
C40	22-3177	390 PF DISC 500V	R415	63-1798	2200 OHM 5%
C41	22-3177	390 PF DISC 500V	R416	63-1827	10K OHM
C42	22-3896	5 MFD ELECTROLYTIC 25V	R417	63-1774	560 OHM 5%
C43	22-5486	10 MFD ELECTROLYTIC 6V	R420	63-1777	680 OHM 5%
C44	22-13	.0033 25V	R421	63-1708	15 OHM
C45	22-3034	.05 MFD DISC 500V	R422	63-4501	1 OHM
C46	22-14	.0047 MFD 500V	R423	63-1835	15K OHM 20%
C47	22-14	.0047 MFD DISC 25V	R425	63-7684	250K BALANCE CONTROL & SWITCH
C48	22-6780	270PF POLYSTYRENE 15% 500V	R451	63-1880	180K OHM
C49	22-3424	270PF MICA ±.5% 100V	R453	63-1878	150K OHM
C50	22-5731	1000PF POLYSTYRENE ± .5% 500V	R454	63-1883	220K OHM
C51	22-3613	1000PF MICA ± .5% 100V	R455	63-1845	27K OHM
C52	22-6245	3.3MFD N.P. 15V	R456	63-1848	33K OHM
C53	22-6347	2000PF ± .5% 500V	R457	63-1810	3.9K OHM
C54	22-6136	2000PF ± .5% 100V	R458	63-1827	10K OHM
C55	22-2884	5 MFD ELECTROLYTIC 12V	R459	63-1820	8.8K OHM
C56	22-5782	2000PF POLYSTYRENE ± .5% 500V	R461	63-1918	1.5 MEGOHM
C57	22-3635	2200 PF MICA ± .5% 100V	R463	63-1810	3.9K OHM
C58	22-3393	.01 MFD DISC 25V	R464	63-1740	82 OHM
C59	22-2884	5 MFD ELECTROLYTIC 12V	R465	63-1860	62K OHM 5%
C60	22-6181	1000 PF POLYSTYRENE ± .5% 500V	R467	63-1798	2200 OHM 5%
C61	22-3613	1000 PF MICA ± .5% 100V	R468	63-1827	10K OHM
C62	22-3415	.0068 MFD DISC 25V	R469	63-1774	560 OHM 5%
C63	22-3034	.05 MFD DISC 25V	R470	63-1777	680 OHM 5%
C64	22-5487	47 MFD DISC 2V	R471	63-1708	15 OHM
C65	22-2884	5 MFD ELECTROLYTIC 12V	R472	63-4501	1 OHM
C66	22-3255	330 PF DISC 500V	R501	63-5085	180 OHM 3W
C67	22-2835	680 PF DISC 500V	R502	63-1701	10 OHM
C68	22-6048	22 MFD ±.10% 50V	R503	63-1831	12K OHM
C69	22-5814	.022 MFD ±.20% 100V	R504	63-5085	180 OHM 3W
C70	22-5815	.066 MFD ±.10% 100V	L1	20-3291	F.M. ANTENNA COIL
C71	22-18	.0022 MFD DISC 500V	L2	20-1648	F.M. RF COIL
C72	22-5814	.022 MFD ±.20% 100V	L3	20-1255	TRAP COIL 10.7 MHz
C73	22-3652	1 MFD DISC 10V	L4	20-1649	F.M. OSCILLATOR COIL
C74	22-5482	680 PF DISC 500V	L5	20-2033	PEAKING COIL
C75	22-2935	100 PF DISC 500V	L101	20-2104	AM ANTENNA ASSEMBLY
C76	22-3673	100 MFD ELECTROLYTIC 25V	L102	149-311	FERRITE CORE SLEEVE
C77	22-3721	200 MFD ELECTROLYTIC 35V	L103	IN T101	AM OSCILLATOR TRANS. PRI
C78	22-3034	.05 MFD DISC 25V	L104	IN T101	AM OSCILLATOR TRANS. SEC
C79	22-5487	47 MFD DISC 2V	L201	IN T201	1ST IF TRANSFORMER 10.7 MHz PRI.
C80	22-2884	5 MFD ELECTROLYTIC 12V	L202	IN T201	1ST IF TRANSFORMER 10.7 MHz SEC.
C81	22-3255	330 PF DISC 500V	L203	IN T202	1ST IF AM 455 KHz PRI.
C82	22-2935	100 PF DISC 500V	L204	IN T202	1ST IF AM 455 KHz SEC.
C83	22-6048	22 MFD ±.10% 50V	L205	IN T203	2ND IF TRANSFORMER 10.7 MHz PRI.
C84	22-5814	.022 MFD ±.20% 100V	L206	IN T203	2ND IF TRANSFORMER 10.7 MHz SEC.
C85	22-5815	.066 MFD ±.10% 100V	L207	IN T204	2ND IF AM 455 KHz
C86	22-18	.0022 MFD DISC 500V	L208	IN T205	3RD IF TRANSFORMER 10.7 MHz PRI.
C87	22-5814	.022 MFD ±.20% 100V	L209	IN T205	3RD IF TRANSFORMER 10.7 MHz SEC.
C88	22-3652	1 MFD DISC 10V	L210	IN T206	3RD IF AM 455 KHz PRI.
C89	22-3687	1 MFD ELECTROLYTIC 50V	L211	IN T206	3RD IF AM 455 KHz SEC.
C90	22-5482	680 PF DISC 500V	L212	IN T207	RATIO DETECTOR TRANS. 10.7 MHz PRI.
C91	22-2939	680 PF DISC 500V	L213	IN T207	RATIO DETECTOR TRANS. 10.7 MHz SEC.
C92	22-5482	680 PF DISC 500V	L214	IN T207	RATIO DETECTOR TRANS. 10.7 MHz SEC.
C93	22-3673	100 MFD ELECTROLYTIC 25V	L301	5-70435	67 KHz TRAP COIL (ALTERNATE)
C94	22-3721	200 MFD ELECTROLYTIC 35V	L302	20-3080	67 KHz TRAP COIL (PREFERRED)
C95	22-4617	.01 MFD DISC 500V	T101	95-2544	AM OSCILLATOR TRANSFORMER
C96	22-6112	1000 MFD ELECTROLYTIC 65V	T202	95-2546	F.M. 1ST IF TRANSFORMER 10.7 MHz
C97	22-4572	500 MFD ELECTROLYTIC 15V	T203	95-2541	AM 1ST IF AM 455 KHz
C98	22-4572	500 MFD ELECTROLYTIC 15V	T204	95-2547	F.M. 2ND IF TRANSFORMER 10.7 MHz
C99	22-3661	.05 MFD 100V	T205	95-2542	AM 2ND IF AM 455 KHz
C100	22-6045	.01 MFD DISC 500V	T206	95-2548	F.M. 3RD IF TRANSFORMER 10.7 MHz
C101	22-6045	.01 MFD DISC 500V	T207	95-2543	AM 3RD IF AM 455 KHz
C102	63-4213	4.7K OHM 1/4W	T208	95-2545	F.M. RATIO DETECTOR 10.7 MHz
C103	63-1772	470 OHM 20%	T301	95-2858	INPUT COIL 19 KHz
C104	63-1798	1.8K OHM	T302	95-2856	DOUBLER COIL 19 KHz
C105	63-4196	1.8K OHM 1/4W	T303	95-2857	DETECTOR COIL 38 KHz
C106	63-1831	12K OHM	T401	95-2858	POWER TRANSFORMER
C107	63-1831	12K OHM	SW1	65-1343	BAND SWITCH
C108	63-1831	12K OHM	CR1	103-47	AFD DIODE
C109	63-1831	12K OHM	OR	103-89	
C110	63-1831	12K OHM	CR101	103-74	GERMANIUM DIODE
C111	63-1831	12K OHM	CR201	103-23	GERMANIUM DIODE
C112	63-1831	12K OHM	CR202	103-90	GERMANIUM DIODES (MATCHED PAIR)
C113	63-1831	12K OHM	CR203	103-90	GERMANIUM DIODES (MATCHED PAIR)
C114	63-1831	12K OHM	CR204	103-23	GERMANIUM DIODE
C115	63-1831	12K OHM	CR301	103-23	GERMANIUM DIODES
C116	63-1831	12K OHM	CR302	103-23	GERMANIUM DIODES
C117	63-1831	12K OHM	CR401	103-222	DIODE
C118	63-1831	12K OHM	CR451	103-222	DIODE
C119	63-1831	12K OHM	CR501	103-222	DIODE
C120	63-1831	12K OHM	CR502	103-222	DIODE
C121	63-1831	12K OHM	CR503	103-222	DIODE
C122	63-1831	12K OHM	CR504	103-222	DIODE
C123	63-1831	12K OHM	CR505	103-222	DIODE
C124	63-1831	12K OHM	CR506	103-222	DIODE
C125	63-1831	12K OHM	CR507	103-222	DIODE
C126	63-1831	12K OHM	CR508	103-222	DIODE
C127	63-1831	12K OHM	CR509	103-222	DIODE
C128	63-1831	12K OHM	CR510	103-222	DIODE
C129	63-1831	12K OHM	CR511	103-222	DIODE
C130	63-1831	12K OHM	CR512	103-222	DIODE
C131	63-1831	12K OHM	CR513	103-222	DIODE
C132	63-1831	12K OHM	CR514	103-222	DIODE
C133	63-1831	12K OHM	CR515	103-222	DIODE
C134	63-1831	12K OHM	CR516	103-222	DIODE
C135	63-1831	12K OHM	CR517	103-222	DIODE
C136	63-1831	12K OHM	CR518	103-222	DIODE
C137	63-1831	12K OHM	CR519	103-222	DIODE
C138	63-1831	12K OHM	CR520	103-222	DIODE
C139	63-1831	12K OHM	CR521	103-222	DIODE
C140	63-1831	12K OHM	CR522	103-222	DIODE
C141	63-1831	12K OHM	CR523	103-222	DIODE
C142	63-1831	12K OHM	CR524	103-222	DIODE
C143	63-1831	12K OHM	CR525	103-222	DIODE
C144	63-1831	12K OHM	CR526	103-222	DIODE
C145	63-1831	12K OHM	CR527	103-222	DIODE
C146	63-1831	12K OHM	CR528	103-222	DIODE
C147	63-1831	12K OHM	CR529	103-222	DIODE
C148	63-1831	12K OHM	CR530	103-222	DIODE
C149	63-1831	12K OHM	CR531	103-222	DIODE
C150	63-1831	12K OHM	CR532	103-222	DIODE
C151	63-1831	12K OHM	CR533	103-222	DIODE
C152	63-1831	12K OHM	CR534	103-222	DIODE
C153	63-1831	12K OHM	CR535	103-222	DIODE
C154	63-1831	12K OHM	CR536	103-222	DIODE
C155	63-1831	12K OHM	CR537	103-222	DIODE
C156	63-1831	12K OHM	CR538	103-222	DIODE
C157	63-1831	12K OHM	CR539	103-222	DIODE
C158	63-1831	12K OHM	CR540	103-222	DIODE
C159	63-1831	12K OHM	CR541	103-222	DIODE
C160	63-1831	12K OHM	CR542	103-222	DIODE
C161	63-1831	12K OHM	CR543	103-222	DIODE
C162	63-1831	12K OHM	CR544	103-222	DIODE
C163	63-1831	12K OHM	CR545	103-222	DIODE
C164	63-1831	12K OHM	CR546	103-222	DIODE
C165	63-1831	12K OHM	CR547	103-222	DIODE
C166	63-1831	12K OHM	CR548	103-222	DIODE
C167	63-1831	12K OHM	CR5		

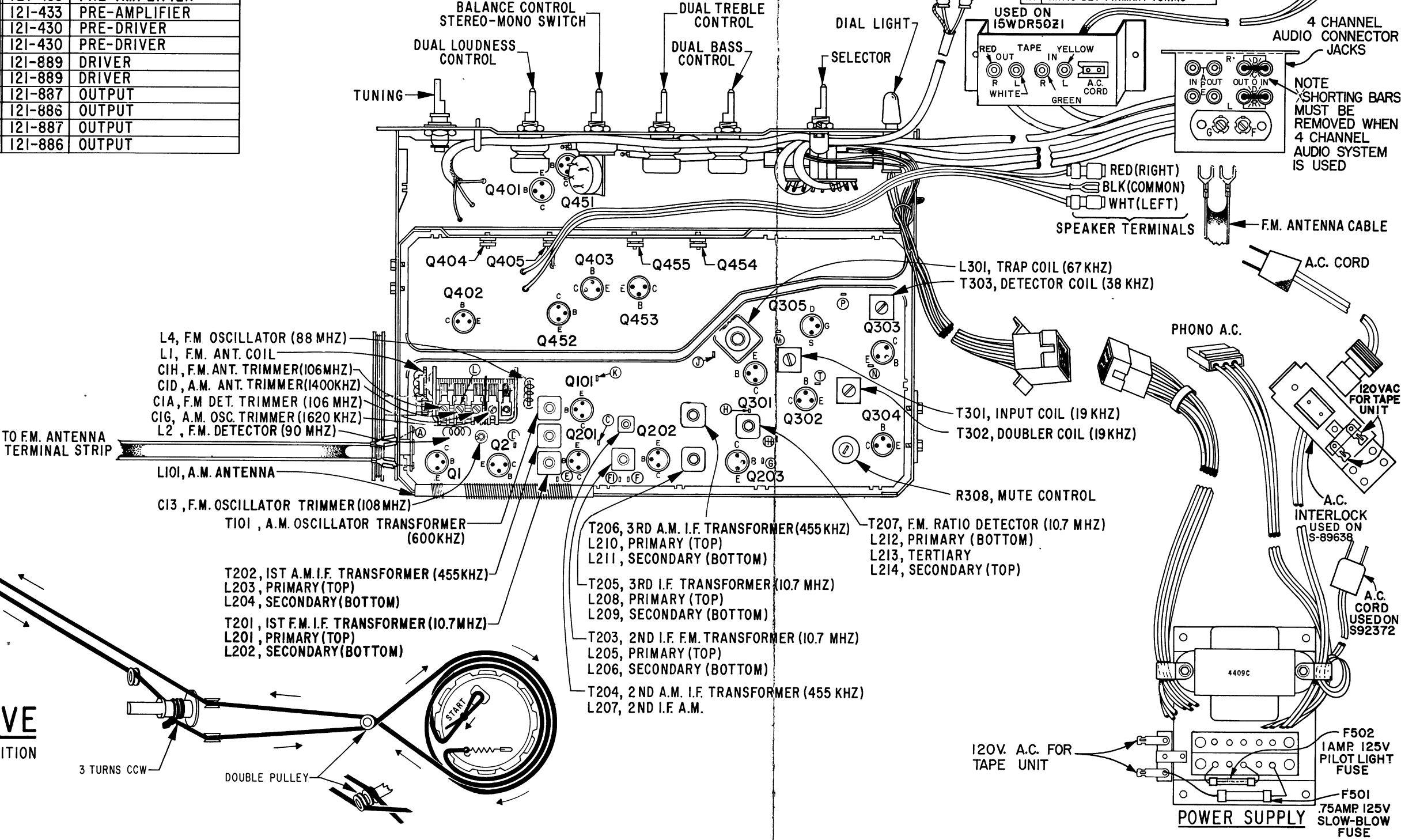
TRANSISTORS		
No.	PART No.	DESCRIPTION
Q1	121-612	F.M.-R.F.
Q2	121-613	F.M. CONVERTER
Q101	121-714	A.M. CONVERTER
Q201	121-614	A.M.-F.M. 1st I.F.
Q202	121-546	A.M.-F.M. 2nd I.F.
Q203	121-546	F.M. 3rd I.F.
Q301	121-639	COMP. AMPLIFIER
Q302	121-639	19 KHZ AMPLIFIER
Q303	121-639	38 KHZ
Q304	121-737	STEREO IND. SWITCH
Q305	121-858	BI-PLEX DET.
Q401	121-433	PRE-AMPLIFIER
Q451	121-433	PRE-AMPLIFIER
Q402	121-430	PRE-DRIVER
Q452	121-430	PRE-DRIVER
Q403	121-889	DRIVER
Q453	121-889	DRIVER
Q404	121-887	OUTPUT
Q405	121-886	OUTPUT
Q454	121-887	OUTPUT
Q455	121-886	OUTPUT

TRANSISTOR MOUNTING VIEW

(121-886 & 121-887)

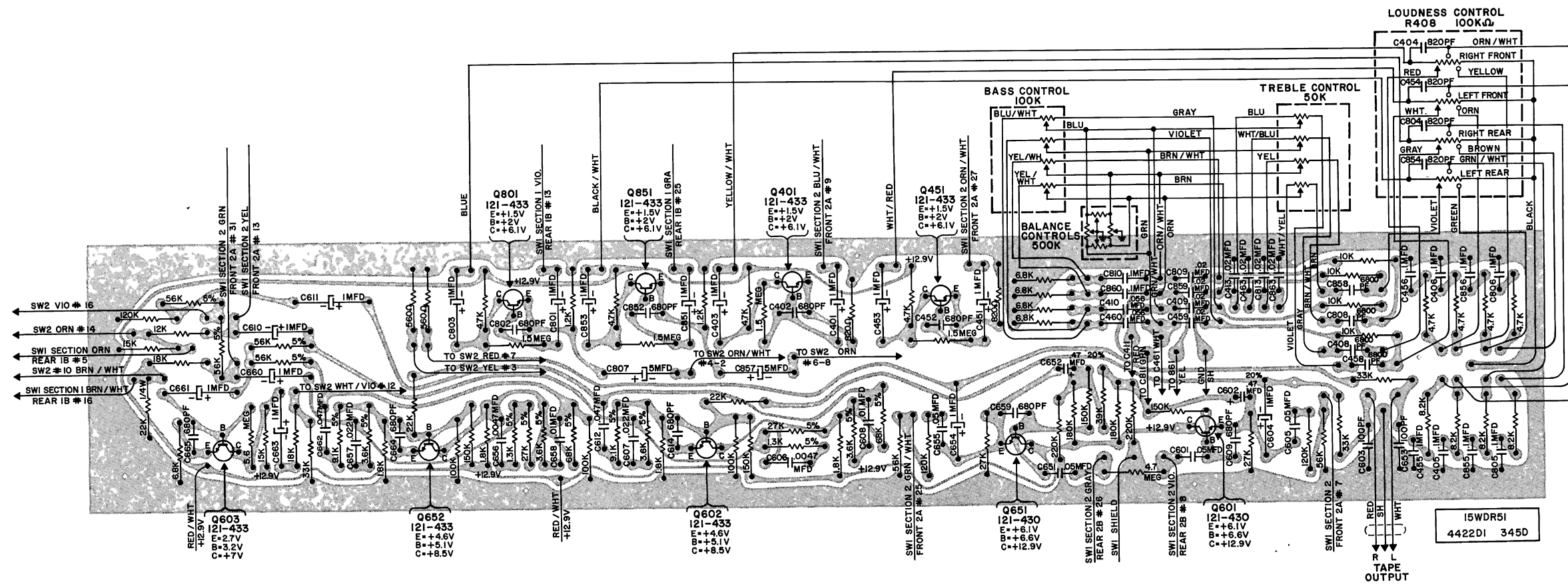


TEST POINTS	
A	F.M. ANT. INPUT
C	REVERSE AGC
D	1ST F.M. I.F. INPUT
E	2ND F.M. I.F. INPUT
F	3RD F.M. I.F. INPUT
FI	RATIO DETECTOR INPUT
G	3RD F.M. OUTPUT
H	F.M. DETECTOR OUTPUT
J	F.M. B+
K	A.M. B+
L	A.M. R.F. & I.F. INPUT
M	67KHZ REJECTION & MX. PHASING
N	DOUBLER OUTPUT DC & 38KHZ
P	MX. PHASING
T	MX. DISABLE
H+	RATIO DET. PRIMARY TUNING

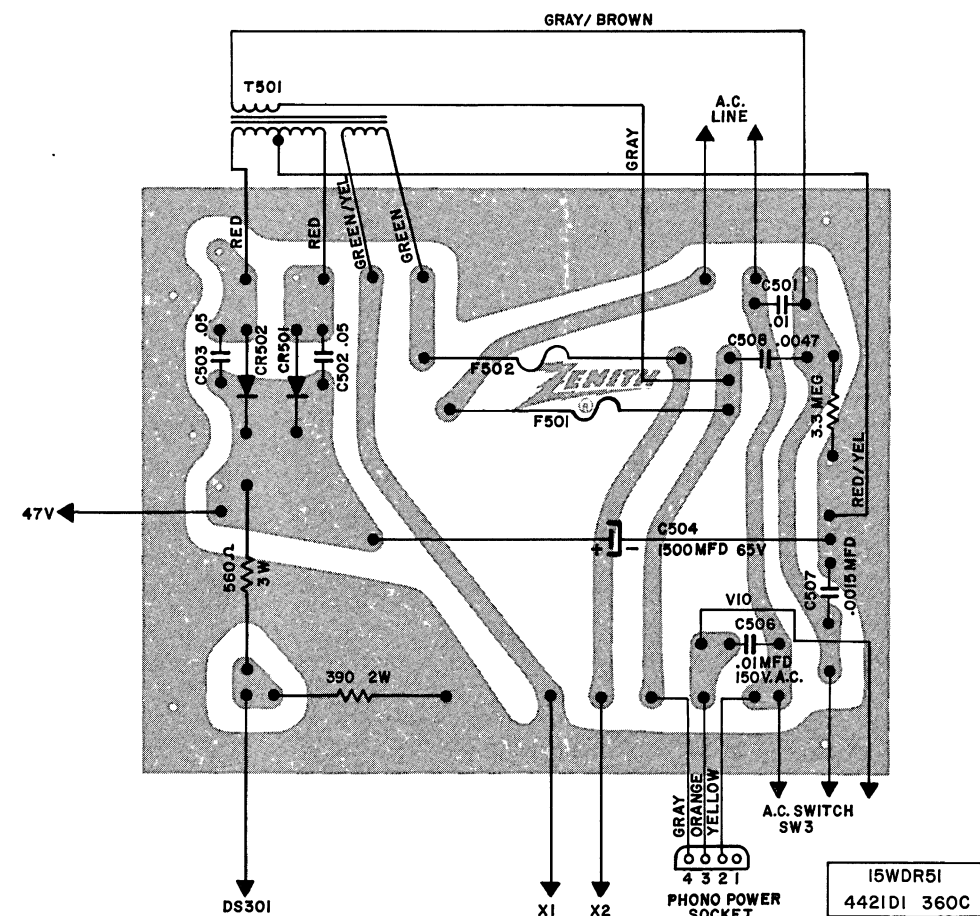


DIAL CORD DRIVE
SHOWN IN FULL CLOCKWISE POSITION

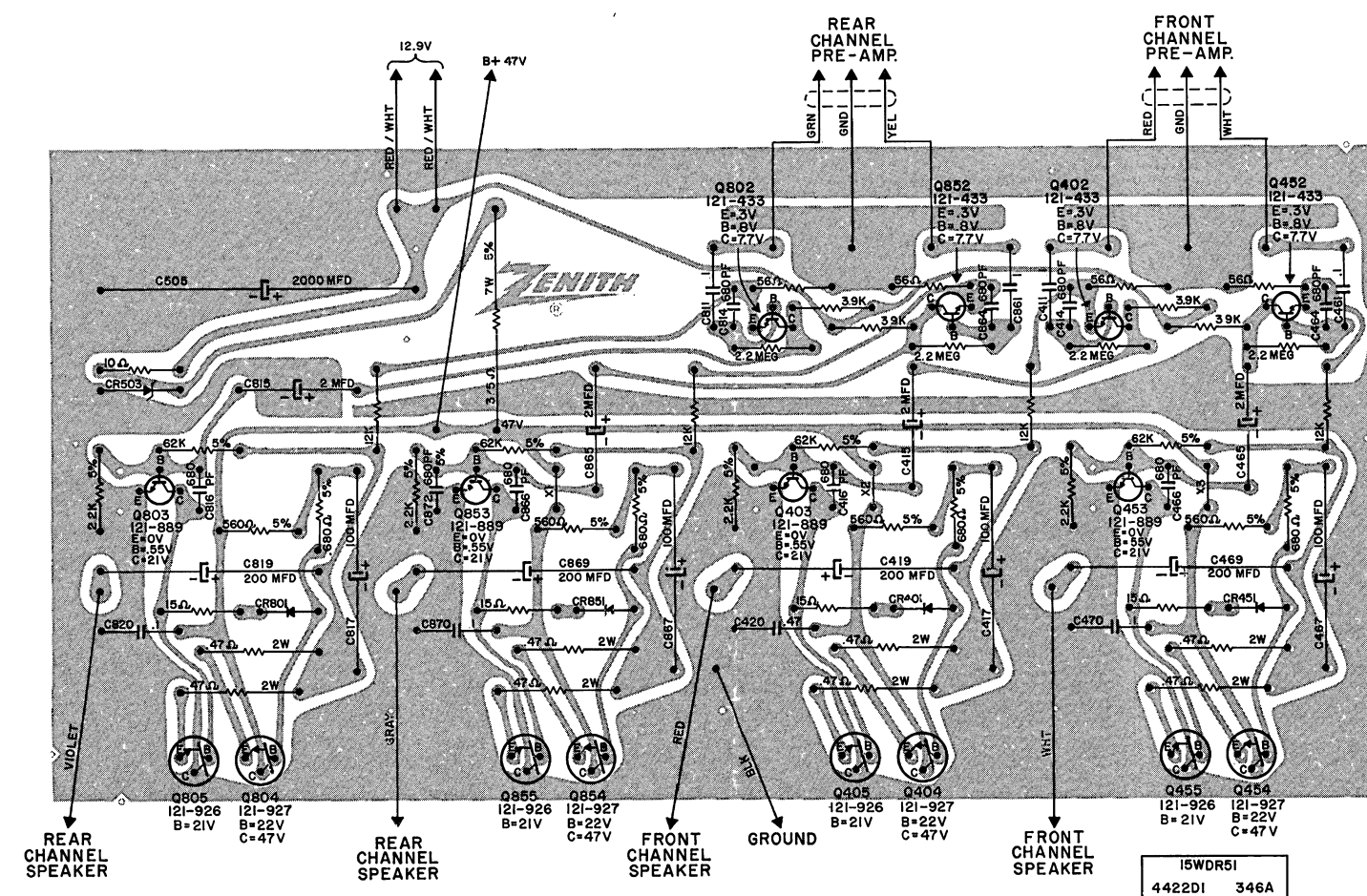
3 TURNS CCW
DOUBLE PULLEY



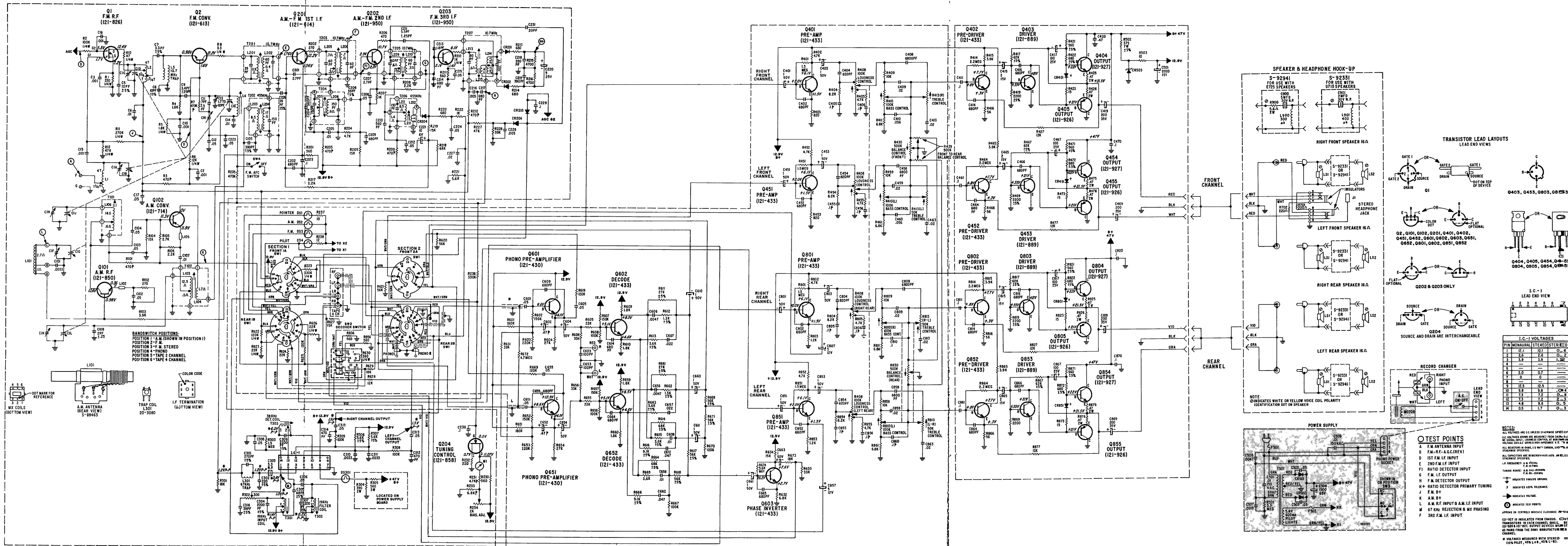
CHASSIS 15WDR51 – PREAMP – CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



CHASSIS 15WDR51 – POWER SUPPLY – CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



CHASSIS 15WDR51 – POWER AMP – CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE

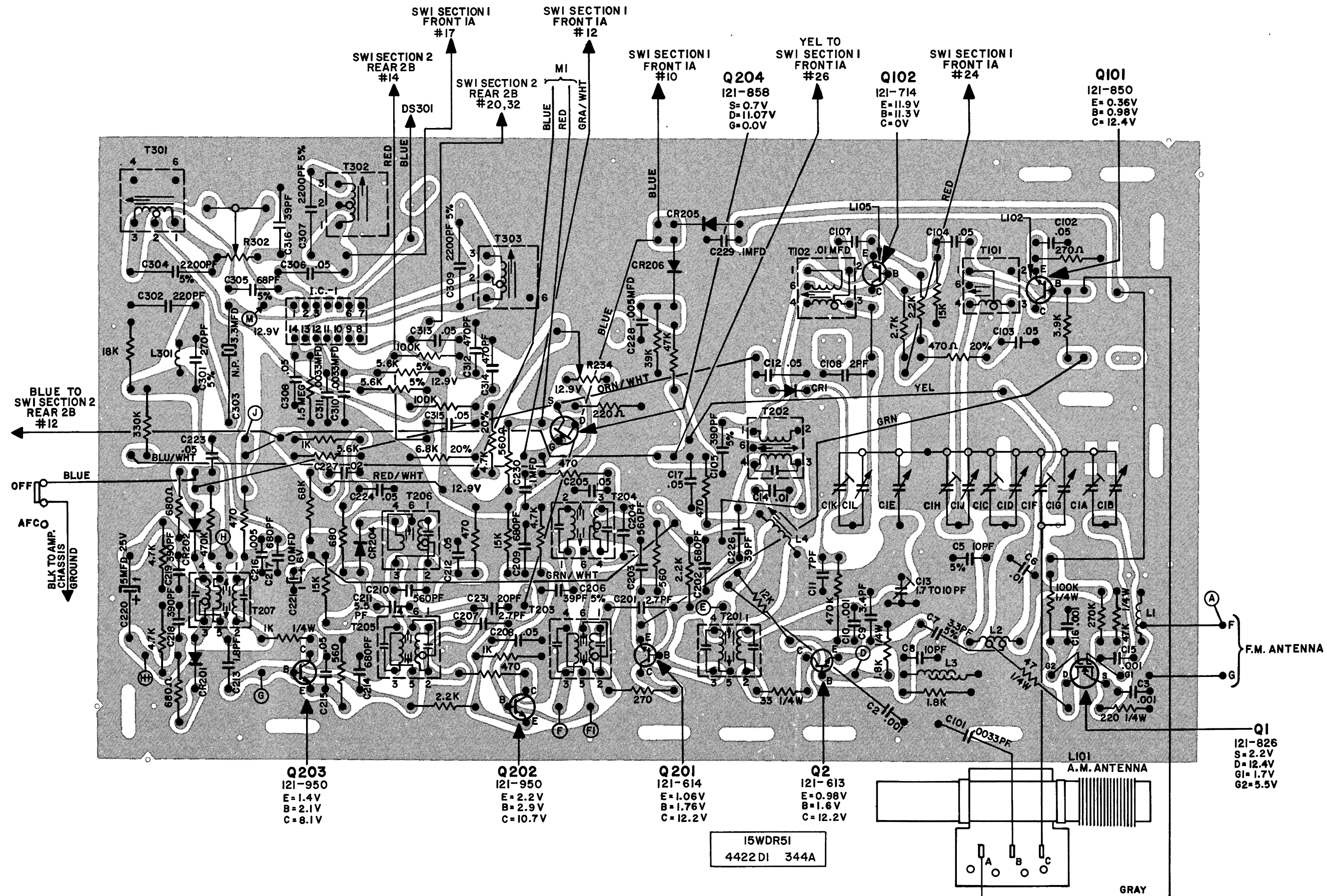


IMPORTANT SAFETY NOTICE

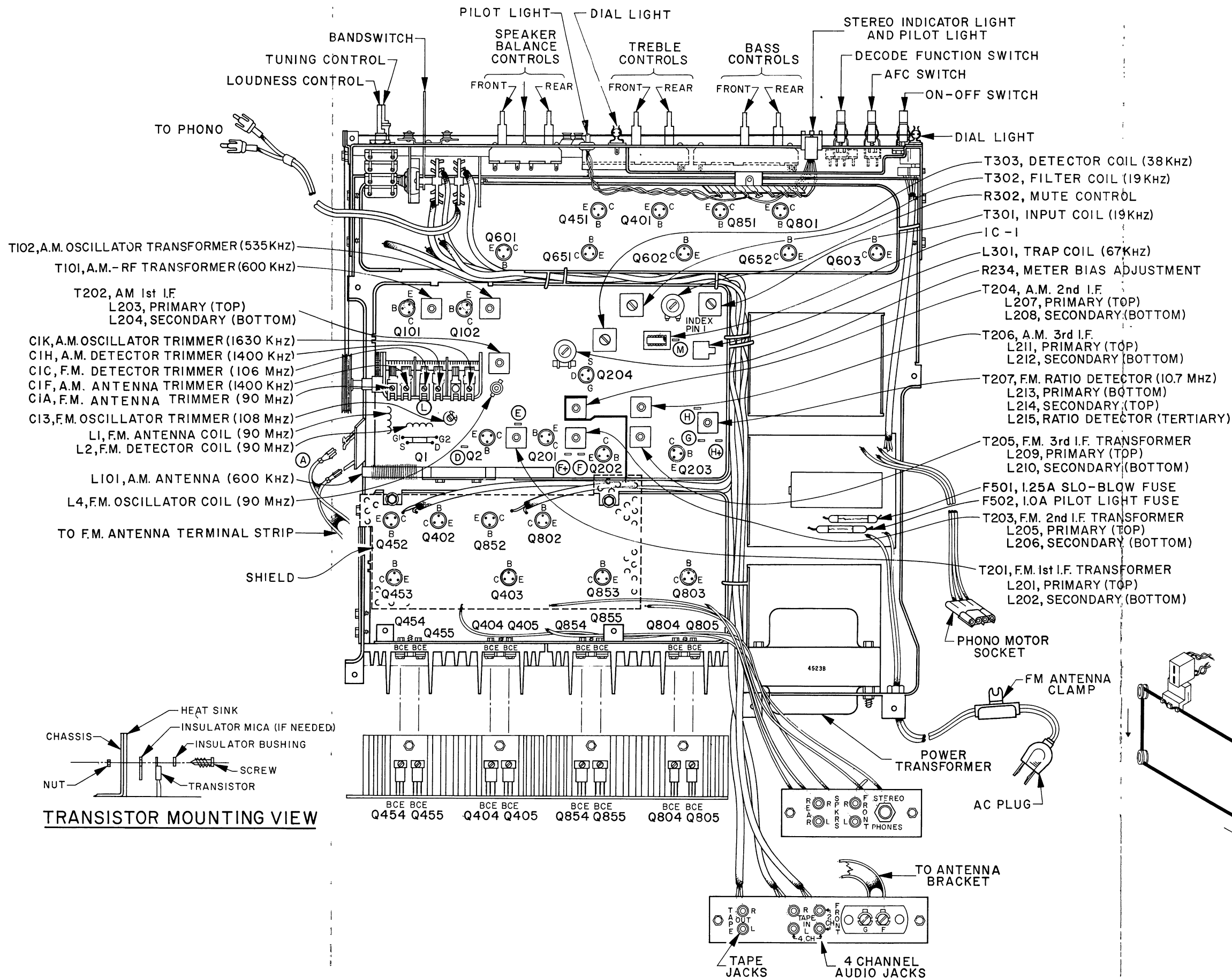
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED ON THE SCHEMATIC AND PARTS LISTS FOR EASY IDENTIFICATION.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C1A		PM ANTENNA W/ TRIMMER	C810	22-927	1.02 DCR 20K 1/2W	R624	63-4541	22K OHM 1/4W
C1B		PM ANTENNA W/ TRIMMER	C811	22-928	1.02 DCR 20K 1/2W	R625	63-4541	22K OHM 1/4W
C1C		PM DETECTOR COIL	C812	22-929	1.02 DCR 20K 1/2W	R626	63-4541	22K OHM 1/4W
C1D		PM OSCILLATOR TUNING	C813	22-930	1.02 DCR 20K 1/2W	R627	63-4541	22K OHM 1/4W
C1E		PM ANTENNA W/ TRIMMER	C814	22-931	2.00 DCR 20K 1/2W	R628	63-4541	22K OHM 1/4W
C1F		PM ANTENNA W/ TRIMMER	C815	22-932	2.00 DCR 20K 1/2W	R629	63-4541	22K OHM 1/4W
C1G		PM ANTENNA W/ TRIMMER	C816	22-933	2.00 DCR 20K 1/2W	R630	63-4541	22K OHM 1/4W
C1H		PM ANTENNA W/ TRIMMER	C817	22-934	2.00 DCR 20K 1/2W	R631	63-4541	22K OHM 1/4W
C1I		PM ANTENNA W/ TRIMMER	C818	22-935	2.00 DCR 20K 1/2W	R632	63-4541	22K OHM 1/4W
C1J		PM ANTENNA W/ TRIMMER	C819	22-936	2.00 DCR 20K 1/2W	R633	63-4541	22K OHM 1/4W
C1K		PM ANTENNA W/ TRIMMER	C820	22-937	2.00 DCR 20K 1/2W	R634	63-4541	22K OHM 1/4W
C1L		PM ANTENNA W/ TRIMMER	C821	22-938	2.00 DCR 20K 1/2W	R635	63-4541	22K OHM 1/4W
C1M		PM ANTENNA W/ TRIMMER	C822	22-939	2.00 DCR 20K 1/2W	R636	63-4541	22K OHM 1/4W
C1N		PM ANTENNA W/ TRIMMER	C823	22-940	2.00 DCR 20K 1/2W	R637	63-4541	22K OHM 1/4W
C1O		PM ANTENNA W/ TRIMMER	C824	22-941	2.00 DCR 20K 1/2W	R638	63-4541	22K OHM 1/4W
C1P		PM ANTENNA W/ TRIMMER	C825	22-942	2.00 DCR 20K 1/2W	R639	63-4541	22K OHM 1/4W
C1Q		PM ANTENNA W/ TRIMMER	C826	22-943	2.00 DCR 20K 1/2W	R640	63-4541	22K OHM 1/4W
C1R		PM ANTENNA W/ TRIMMER	C827	22-944	2.00 DCR 20K 1/2W	R641	63-4541	22K OHM 1/4W
C1S		PM ANTENNA W/ TRIMMER	C828	22-945	2.00 DCR 20K 1/2W	R642	63-4541	22K OHM 1/4W
C1T		PM ANTENNA W/ TRIMMER	C829	22-946	2.00 DCR 20K 1/2W	R643	63-4541	22K OHM 1/4W
C1U		PM ANTENNA W/ TRIMMER	C830	22-947	2.00 DCR 20K 1/2W	R644	63-4541	22K OHM 1/4W
C1V		PM ANTENNA W/ TRIMMER	C831	22-948	2.00 DCR 20K 1/2W	R645	63-4541	22K OHM 1/4W
C1W		PM ANTENNA W/ TRIMMER	C832	22-949	2.00 DCR 20K 1/2W	R646	63-4541	22K OHM 1/4W
C1X		PM ANTENNA W/ TRIMMER	C833	22-950	2.00 DCR 20K 1/2W	R647	63-4541	22K OHM 1/4W
C1Y		PM ANTENNA W/ TRIMMER	C834	22-951	2.00 DCR 20K 1/2W	R648	63-4541	22K OHM 1/4W
C1Z		PM ANTENNA W/ TRIMMER	C835	22-952	2.00 DCR 20K 1/2W	R649	63-4541	22K OHM 1/4W
C2A		PM ANTENNA W/ TRIMMER	C836	22-953	2.00 DCR 20K 1/2W	R650	63-4541	22K OHM 1/4W
C2B		PM ANTENNA W/ TRIMMER	C837	22-954	2.00 DCR 20K 1/2W	R651	63-4541	22K OHM 1/4W
C2C		PM ANTENNA W/ TRIMMER	C838	22-955	2.00 DCR 20K 1/2W	R652	63-4541	22K OHM 1/4W
C2D		PM ANTENNA W/ TRIMMER	C839	22-956	2.00 DCR 20K 1/2W	R653	63-4541	22K OHM 1/4W
C2E		PM ANTENNA W/ TRIMMER	C840	22-957	2.00 DCR 20K 1/2W	R654	63-4541	22K OHM 1/4W
C2F		PM ANTENNA W/ TRIMMER	C841	22-958	2.00 DCR 20K 1/2W	R655	63-4541	22K OHM 1/4W
C2G		PM ANTENNA W/ TRIMMER	C842	22-959	2.00 DCR 20K 1/2W	R656	63-4541	22K OHM 1/4W
C2H		PM ANTENNA W/ TRIMMER	C843	22-960	2.00 DCR 20K 1/2W	R657	63-4541	22K OHM 1/4W
C2I		PM ANTENNA W/ TRIMMER	C844	22-961	2.00 DCR 20K 1/2W	R658	63-4541	22K OHM 1/4W
C2J		PM ANTENNA W/ TRIMMER	C845	22-962	2.00 DCR 20K 1/2W	R659	63-4541	22K OHM 1/4W
C2K		PM ANTENNA W/ TRIMMER	C846	22-963	2.00 DCR 20K 1/2W	R660	63-4541	22K OHM 1/4W
C2L		PM ANTENNA W/ TRIMMER	C847	22-964	2.00 DCR 20K 1/2W	R661	63-4541	22K OHM 1/4W
C2M		PM ANTENNA W/ TRIMMER	C848	22-965	2.00 DCR 20K 1/2W	R662	63-4541	22K OHM 1/4W
C2N		PM ANTENNA W/ TRIMMER	C849	22-966	2.00 DCR 20K 1/2W	R663	63-4541	22K OHM 1/4W
C2O		PM ANTENNA W/ TRIMMER	C850	22-967	2.00 DCR 20K 1/2W	R664	63-4541	22K OHM 1/4W
C2P		PM ANTENNA W/ TRIMMER	C851	22-968	2.00 DCR 20K 1/2W	R665	63-4541	22K OHM 1/4W
C2Q		PM ANTENNA W/ TRIMMER	C852	22-969	2.00 DCR 20K 1/2W	R666	63-4541	22K OHM 1/4W
C2R		PM ANTENNA W/ TRIMMER	C853	22-970	2.00 DCR 20K 1/2W	R667	63-4541	22K OHM 1/4W
C2S		PM ANTENNA W/ TRIMMER	C854	22-971	2.00 DCR 20K 1/2W	R668	63-4541	22K OHM 1/4W
C2T		PM ANTENNA W/ TRIMMER	C855	22-972	2.00 DCR 20K 1/2W	R669	63-4541	22K OHM 1/4W
C2U		PM ANTENNA W/ TRIMMER	C856	22-973	2.00 DCR 20K 1/2W	R670	63-4541	22K OHM 1/4W
C2V		PM ANTENNA W/ TRIMMER	C857	22-974	2.00 DCR 20K 1/2W	R671	63-4541	22K OHM 1/4W
C2W		PM ANTENNA W/ TRIMMER	C858	22-975	2.00 DCR 20K 1/2W	R672	63-4541	22K OHM 1/4W
C2X		PM ANTENNA W/ TRIMMER	C859	22-976	2.00 DCR 20K 1/2W	R673	63-4541	22K OHM 1/4W
C2Y		PM ANTENNA W/ TRIMMER	C860	22-977	2.00 DCR 20K 1/2W	R674	63-4541	22K OHM 1/4W
C2Z		PM ANTENNA W/ TRIMMER	C861	22-978	2.00 DCR 20K 1/2W	R675	63-4541	22K OHM 1/4W
C3A		PM ANTENNA W/ TRIMMER	C862	22-979	2.00 DCR 20K 1/2W	R676	63-4541	22K OHM 1/4W
C3B		PM ANTENNA W/ TRIMMER	C863	22-980	2.00 DCR 20K 1/2W	R677	63-4541	22K OHM 1/4W
C3C		PM ANTENNA W/ TRIMMER	C864	22-981	2.00 DCR 20K 1/2W	R678	63-4541	22K OHM 1/4W
C3D		PM ANTENNA W/ TRIMMER	C865	22-982	2.00 DCR 20K 1/2W	R679	63-4541	22K OHM 1/4W
C3E		PM ANTENNA W/ TRIMMER	C866	22-983	2.00 DCR 20K 1/2W	R680	63-4541	22K OHM 1/4W
C3F		PM ANTENNA W/ TRIMMER	C867	22-984	2.00 DCR 20K 1/2W	R681	63-4541	22K OHM 1/4W
C3G		PM ANTENNA W/ TRIMMER	C868	22-985	2.00 DCR 20K 1/2W	R682	63-4541	22K OHM 1/4W
C3H		PM ANTENNA W/ TRIMMER	C869	22-986	2.00 DCR 20K 1/2W	R683	63-4541	22K OHM 1/4W
C3I		PM ANTENNA W/ TRIMMER	C870	22-987	2.00 DCR 20K 1/2W	R684	63-4541	22K OHM 1/4W
C3J		PM ANTENNA W/ TRIMMER	C871	22-988	2.00 DCR 20K 1/2W	R685	63-4541	22K OHM 1/4W
C3K		PM ANTENNA W/ TRIMMER	C872	22-989	2.00 DCR 20K 1/2W	R686	63-4541	22K OHM 1/4W
C3L		PM ANTENNA W/ TRIMMER	C873	22-990	2.00 DCR 20K 1/2W	R687	63-4541	22K OHM 1/4W
C3M		PM ANTENNA W/ TRIMMER	C874	22-991	2.00 DCR 20K 1/2W	R688	63-4541	22K OHM 1/4W
C3N		PM ANTENNA W/ TRIMMER	C875	22-992	2.00 DCR 20K 1/2W	R689	63-4541	22K OHM 1/4W
C3O		PM ANTENNA W/ TRIMMER	C876	22-993	2.00 DCR 20K 1/2W	R690	63-4541	22K OHM 1/4W
C3P		PM ANTENNA W/ TRIMMER	C877	22-994	2.00 DCR 20K 1/2W	R691	63-4541	22K OHM 1/4W
C3Q		PM ANTENNA W/ TRIMMER	C878	22-995	2.00 DCR 20K 1/2W	R692	63-4541	22K OHM 1/4W
C3R		PM ANTENNA W/ TRIMMER	C879	22-996	2.00 DCR 20K 1/2W	R693	63-4541	22K OHM 1/4W
C3S		PM ANTENNA W/ TRIMMER	C880	22-997	2.00 DCR 20K 1/2W	R694	63-4541	22K OHM 1/4W
C3T		PM ANTENNA W/ TRIMMER	C881	22-998	2.00 DCR 20K 1/2W	R695	63-4541	22K OHM 1/4W
C3U		PM ANTENNA W/ TRIMMER	C882	22-999	2.00 DCR 20K 1/2W	R696	63-4541	22K OHM 1/4W
C3V		PM ANTENNA W/ TRIMMER	C883	23-000	2.00 DCR 20K 1/2W	R697	63-4541	22K OHM 1/4W
C3W		PM ANTENNA W/ TRIMMER	C884	23-001	2.00 DCR 20K 1/2W	R698	63-4541	22K OHM 1/4W
C3X		PM ANTENNA W/ TRIMMER	C885	23-002	2.00 DCR 20K 1/2W	R699	63-4541	22K OHM 1/4W
C3Y		PM ANTENNA W/ TRIMMER	C886	23-003	2.00 DCR 20K 1/2W	R700	63-4541	22K OHM 1/4W
C3Z		PM ANTENNA W/ TRIMMER	C887	23-004	2.00 DCR 20K 1/2W	R701	63-4541	22K OHM 1/4W
C4A		PM ANTENNA W/ TRIMMER	C888	23-005	2.00 DCR 20K 1/2W	R702	63-4541	22K OHM 1/4W
C4B		PM ANTENNA W/ TRIMMER	C889	23-006	2.00 DCR 20K 1/2W	R703	63-4541	22K OHM 1/4W
C4C		PM ANTENNA W/ TRIMMER	C890	23-007	2.00 DCR 20K 1/2W	R704	63-4541	22K OHM 1/4W
C4D		PM ANTENNA W/ TRIMMER	C891	23-008	2.00 DCR 20K 1/2W	R705	63-4541	22K OHM 1/4W
C4E		PM ANTENNA W/ TRIMMER	C892	23-009	2.00 DCR 20K 1/2W	R706	63-4541	22K OHM 1/4W
C4F		PM ANTENNA W/ TRIMMER	C893	23-010	2.00 DCR 20K 1/2W	R707	63-4541	22K OHM 1/4W
C4G		PM ANTENNA W/ TRIMMER	C894	23-011	2.00 DCR 20K 1/2W	R708	63-4541	22K OHM 1/4W
C4H		PM ANTENNA W/ TRIMMER	C895	23-012	2.00 DCR 20K 1/2W	R709	63-4541	22K OHM 1/4W
C4I		PM ANTENNA W/ TRIMMER	C896	23-013	2.00 DCR 20K 1/2W	R710	63-4541	22K OHM 1/4W
C4J		PM ANTENNA W/ TRIMMER	C897	23-014	2.00 DCR 20K 1/2W	R711	63-4541	22K OHM 1/4W
C4K		PM ANTENNA W/ TRIMMER	C898	23-015	2.00 DCR 20K 1/2W	R712	63-4541	22K OHM 1/4W
C4L		PM ANTENNA W/ TRIMMER	C899	23-016	2.00 DCR 20K 1/2W	R713	63-4541	22K OHM 1/4W
C4M		PM ANTENNA W/ TRIMMER	C900	23-017	2.00 DCR 20K 1/2W	R714	63-4541	22K OHM 1/4W
C4N		PM ANTENNA W/ TRIMMER	C901	23-018	2.00 DCR 20K 1/2W	R715	63-4541	22K OHM 1/4W
C4O		PM ANTENNA W/ TRIMMER	C902	23-019	2.00 DCR 20K 1/2W	R716	63-4541	22K OHM 1/4W
C4P		PM ANTENNA W/ TRIMMER	C903	23-020	2.00 DCR 20K 1/2W	R717	63-4541	22K OHM 1/4W
C4Q		PM ANTENNA W/ TRIMMER	C904	23-021	2.00 DCR 20K 1/2W	R718	63-4541	22K OHM 1/4W
C4R		PM ANTENNA W/ TRIMMER	C905	23-022	2.00 DCR 20K 1/2W	R719	63-4541	22K OHM 1/4W
C4S		PM ANTENNA W/ TRIMMER	C906	23-023	2.00 DCR 20K 1/2W	R720	63-4541	22K OHM 1/4W
C4T		PM ANTENNA W/ TRIMMER	C907	23-024	2.00 DCR 20K 1/2W	R721	63-4541	22K OHM 1/4W
C4U		PM ANTENNA W/ TRIMMER	C908	23-025	2.00 DCR 20K 1/2W	R722	63-4541	22K OHM 1/4W
C4V		PM ANTENNA W/ TRIMMER	C909	23-026	2.00 DCR 20K 1/2W	R723	63-4541	22K OHM 1/4W
C4W		PM ANTENNA W/ TRIMMER	C910	23-027	2.00 DCR 20K 1/2W	R724	63-4541	22K OHM 1/4W
C4X		PM ANTENNA W/ TRIMMER	C911	23-028	2.00 DCR 20K 1/2W	R725	63-4541	22K OHM 1/4W
C4Y		PM ANTENNA W/ TRIMMER	C912	23-029	2.00 DCR 20K 1/2W	R726	63-4541	22K OHM 1/4W
C4Z		PM ANTENNA W/ TRIMMER	C913	23-030	2.00 DCR 20K 1/2W	R727	63-4541	22K OHM 1/4W
C5A		PM ANTENNA W/ TRIMMER	C914	23-031	2.00 DCR 20K 1/2W	R728	63-4541	22K OHM 1/4W
C5B		PM ANTENNA W/ TRIMMER	C915	23-032	2.00 DCR 20K 1/2W	R729	63-4541	22K OHM 1/4W
C5C		PM ANTENNA W/ TRIMMER	C916	23-033	2.00 DCR 20K 1/2W	R730	63-4541	22K OHM 1/4W
C5D		PM ANTENNA W/ TRIMMER	C917	23-034	2.00 DCR 20K 1/2W	R731	63-4541	22K OHM 1/4W
C5E		PM ANTENNA W/ TRIMMER	C918	23-035	2.00 DCR 20K 1/2W	R732	63-4541	22K OHM 1/4W
C5F		PM ANTENNA W/ TRIMMER	C919	23-036	2.00 DCR 20K 1/2W	R733	63-4541	22K OHM 1/4W
C5G		PM ANTENNA W/ TRIMMER	C920	23-037	2.00 DCR 20K 1/2W	R734	63-4541	22K OHM 1/4W
C5H		PM ANTENNA W/ TRIMMER	C921	23-038	2.00 DCR 20K 1/2W	R735	63-4541	22K OHM 1/4W
C5I		PM ANTENNA W/ TRIMMER	C922	23-039	2.00 DCR 20K 1/2W	R736	63-4541	22K OHM 1/4W
C5J		PM ANTENNA W/ TRIMMER	C923	23-040	2.00 DCR 20K 1/2W	R737	63-4541	22K OHM 1/4W
C5K		PM ANTENNA W/ TRIMMER	C924	23-041	2.00 DCR 20K 1/2W	R738	63-4541	22K OHM 1/4W
C5L		PM ANTENNA W/ TRIMMER	C925	23-042	2.00 DCR 20K 1/2W	R739	63-4541	22K OHM 1/4W
C5M		PM ANTENNA W/ TRIMMER	C926	23-043	2.00 DCR 20K 1/2W	R740	63-4541	22K OHM 1/4W
C5N		PM ANTENNA W/ TRIMMER	C927	23-044	2.00 DCR 20K 1/2W	R741	63-4541	22K OHM 1/4W
C5O		PM ANTENNA W/ TRIMMER	C928	23-045	2.00 DCR 20K 1/2W	R742	63-4541	22K OHM 1/4W
C5P		PM ANTENNA W/ TRIMMER	C929	23-046	2.00 DCR 20K 1/2W			

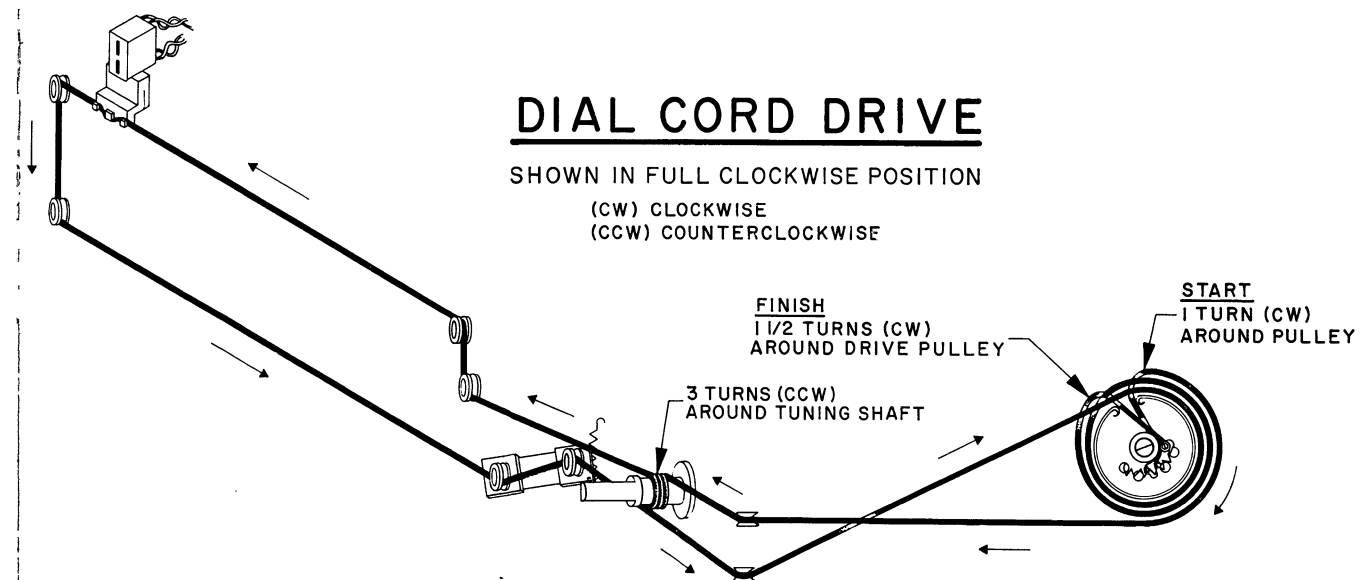


CHASSIS 15WDR51 – RF/IF – CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



TRANSISTORS		
No.	PART No.	DESCRIPTION
Q1	121-826	FM.-R.F.
Q2	121-613	FM. CONVERTER
Q101	121-850	A.M.-R.F.
Q102	121-714	A.M. CONVERTER
Q201	121-614	A.M.-F.M. 1st I.F.
Q202		A.M.-F.M. 2nd I.F.
Q203	121-950	F.M. 3rd I.F.
Q204	121-858	TUNING METER CONTROL
Q401	121-433	PRE-AMPLIFIER
Q402		PRE-DRIVER
Q403	121-889	DRIVER
Q404	121-927	OUTPUT (NPN)
Q405	121-926	(PNP)
Q451	121-433	PRE-AMPLIFIER
Q452		PRE-DRIVER
Q453	121-889	DRIVER
Q454	121-927	OUTPUT (NPN)
Q455	121-926	(PNP)
Q601	121-430	PRE-AMPLIFIER
Q602	121-433	DECODE
Q603		PHASE INVERTER
Q651	121-430	PRE-AMPLIFIER
Q652		DECODE
Q801	121-433	PRE-AMPLIFIER
Q802		PRE-DRIVER
Q803	121-889	DRIVER
Q804	121-927	OUTPUT (NPN)
Q805	121-926	(PNP)
Q851	121-433	PRE-AMPLIFIER
Q852		PRE-DRIVER
Q853	121-889	DRIVER
Q854	121-927	OUTPUT (NPN)
Q855	121-926	(PNP)
IC-1	221-65	MULTIPLEX INTEGRATED CIRCUIT

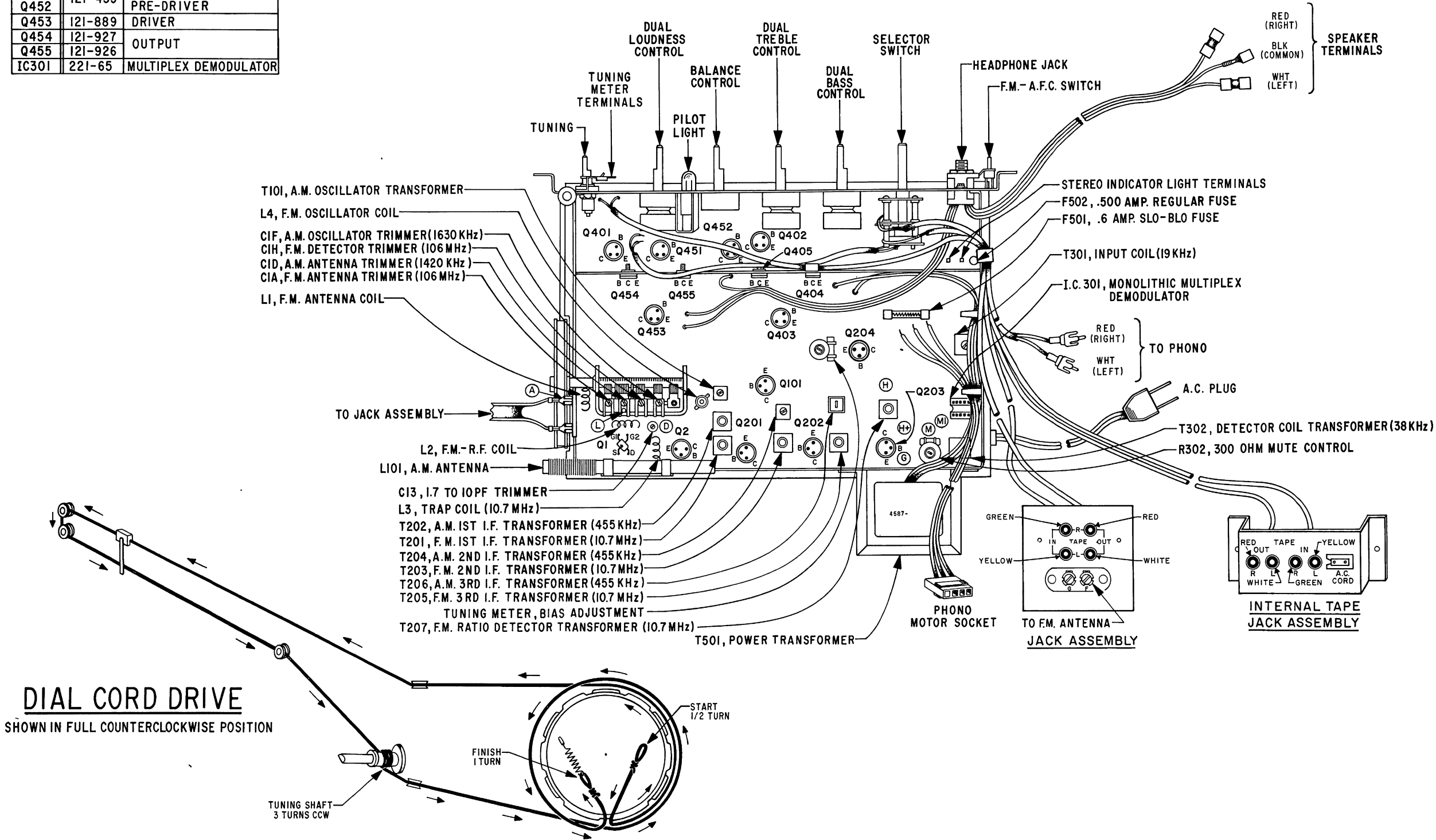
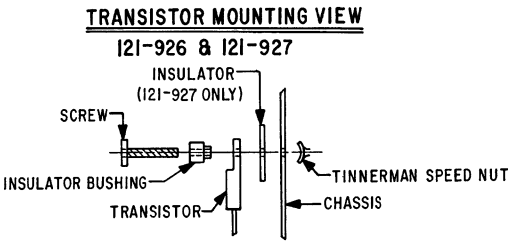
TEST POINTS	
A	F.M. ANTENNA INPUT
D	1st F.M. I.F. INPUT
E	2nd F.M. I.F. INPUT
F	3rd F.M. I.F. INPUT
Fi	RATIO DETECTOR INPUT
G	3rd F.M. OUTPUT
H	F.M. DETECTOR
H+	RATIO DETECTOR PRIMARY TUNING
L	A.M.-R.F. & I.F. INPUT
M	19 KHz ALIGNMENT

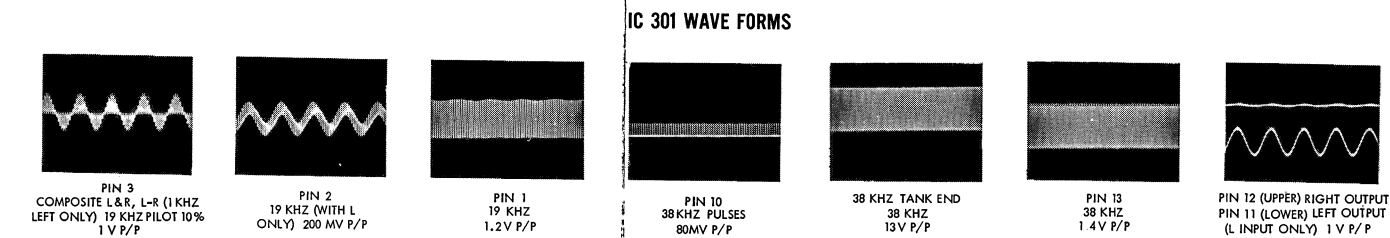
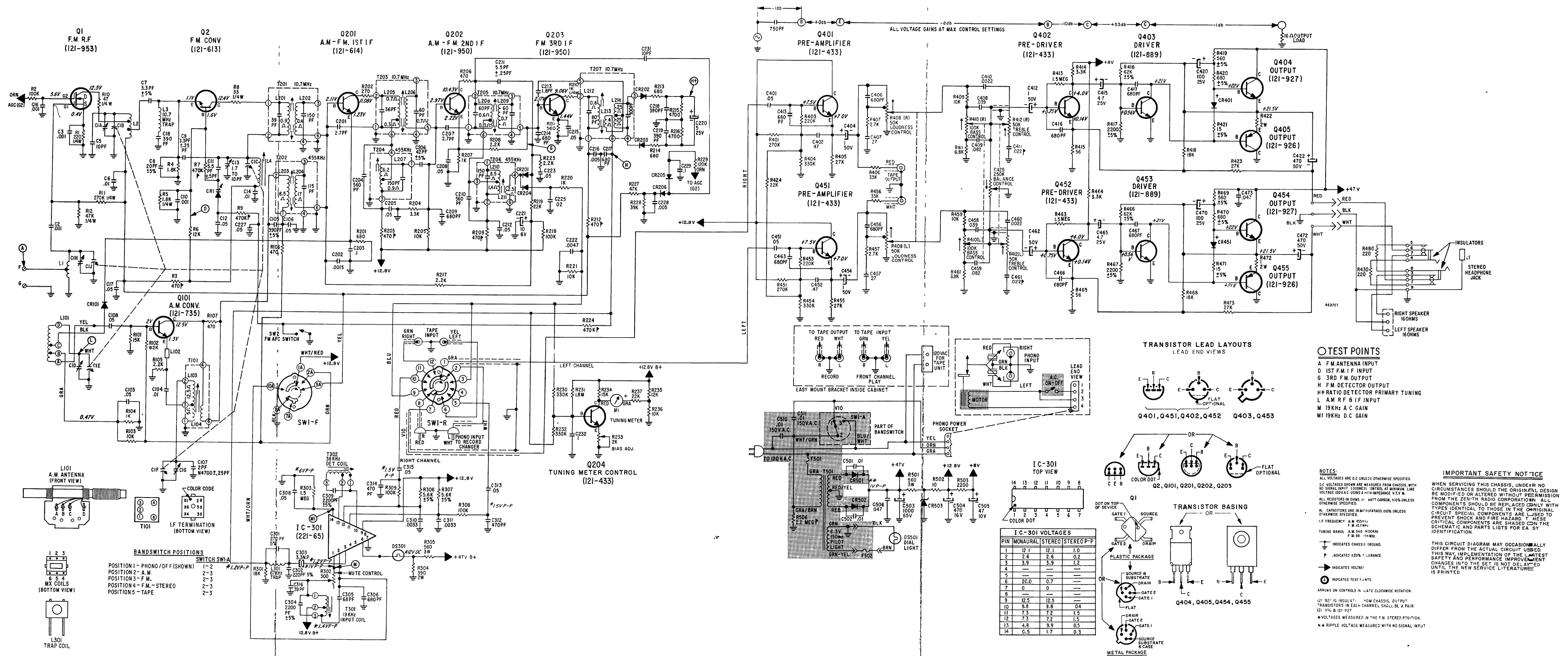


CHASSIS 15WDR51 - CHASSIS LAYOUT

TRANSISTORS		
No.	PART No.	DESCRIPTION
Q1	I21-953	F.M.-R.F.
Q2	I21-613	F.M. CONVERTER
Q101	I21-735	A.M. CONVERTER
Q201	I21-614	A.M.-F.M. 1st I.F.
Q202	I21-950	A.M.-F.M. 2nd I.F.
Q203		F.M. 3rd I.F.
Q204	I21-433	TUNING METER CONTROL
Q401		PRE-AMPLIFIER
Q402	I21-889	PRE-DRIVER
Q403		DRIVER
Q404	I21-927	OUTPUT
Q405	I21-926	OUTPUT
Q451	I21-433	PRE-AMPLIFIER
Q452		PRE-DRIVER
Q453	I21-889	DRIVER
Q454	I21-927	OUTPUT
Q455	I21-926	OUTPUT
IC301	221-65	MULTIPLEX DEMODULATOR

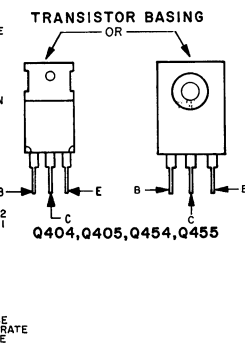
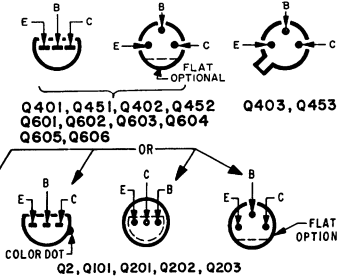
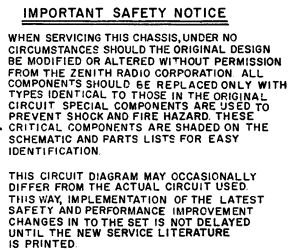
TEST POINTS	
A	F.M. ANTENNA INPUT
D	1st F.M. I.F. INPUT
G	3rd F.M. OUTPUT
H	F.M. DETECTOR OUTPUT
H+	RATIO DETECTOR PRIMARY TUNING
L	A.M. R.F. & I.F. INPUT
M	19KHz A.C. GAIN
M1	19KHz D.C. GAIN





LEGEND CHASSIS 15WER55

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C1A	22-7134	F.M. DETECTOR TRIMMER	R211	63-1775	500 OHM
C1B		F.M. DETECTOR TUNING	R212	63-1772	470 OHM 20%
C1C		F.M. OSCILLATOR TUNING	R213	63-1773	800 OHM
C1D		A.M. ANTENNA TRIMMER	R214	63-1778	800 OHM
C1E		A.M. ANTENNA TUNING	R215	63-1813	4700 OHM
C1F		A.M. OSCILLATOR TUNING	R216	63-1813	4700 OHM
C1G		A.M. OSCILLATOR TRIMMER	R217	63-1799	2.2K OHM
C1H		F.M. ANTENNA TRIMMER	R218	63-1889	100K OHM
C1J		F.M. ANTENNA TUNING	R219	63-1841	22K OHM
C2	22-2729	.001 MFD DISC 25V	R220	63-1785	1K OHM
C3	22-2729	.001 MFD DISC 25V	R221	63-1827	10K OHM
C4	22-3675	10 PF DISC ±5% 500V	R222	63-1889	470K OHM 20%
C5	22-3393	.01 MFD DISC 25V	R223	63-1789	2.2K OHM
C6	22-3541	3.3 PF GIMMICK ±5% 500V	R224	63-1855	47K OHM
C7	22-3751	20 PF DISC ±5% 500V	R225	63-1852	39K OHM
C8	22-5879	3.3 PF DISC ±.25 PF 25V	R226	63-1873	100K OHM
C9		.001 MFD DISC 25V	R227	63-1890	330K OHM
C10	22-2729	.001 MFD DISC 25V	R228	63-1922	1.8 MEG OHM
C11	22-5879	5.5 PF DISC ±.5 PF 500V	R229	63-1890	330K OHM
C12	22-3034	.05 MFD DISC 25V	R230	63-1827	10K OHM
C13	22-6470	1.7 TO 10 PF CERAMIC TRIMMER	R231	63-1820	50K OHM
C14	22-3393	.01 MFD DISC 25V	R232	63-1834	15K OHM
C15	22-3034	.05 MFD DISC 25V	R233	63-1831	12K OHM
C16	22-3034	.05 MFD DISC 25V	R234	63-1827	10K OHM
C17	22-3034	.05 MFD DISC 25V	R235	63-1841	22K OHM
C18	22-3177	390 PF DISC 500V	R236	63-1838	18K OHM
C19	22-3034	.05 MFD DISC 25V	R237	63-1828	300 OHM MUTE CONTROL
C20	22-3393	.01 MFD DISC 25V	R238	63-1918	1.5 MEG OHM
C21	22-5972	390 PF ±5% POLYSTYRENE 125V	R239	63-1458	390 OHM 2W
C22	22-3034	.05 MFD DISC 25V	R240	63-5442	500 OHM 3W
C23	22-4819	10 PF DISC ±.25 PF 500V	R241	63-1916	5.6K OHM 5%
C24	22-3034	.05 MFD DISC 25V	R242	63-1816	5.6K OHM 5%
C25	22-3310	2.7 PF GIMMICK ±10% 500V	R243	63-1889	100K OHM
C26	22-5482	680 PF DISC 500V	R244	63-1887	270K OHM
C27	22-5482	680 PF DISC 500V	R245	63-1883	220K OHM
C28	22-5482	680 PF DISC 500V	R246	63-1884	27K OHM
C29	22-5482	680 PF DISC 500V	R247	63-1848	33K OHM
C30	22-5482	680 PF DISC 500V	R248	63-1803	15 OHM 2W
C31	22-5482	680 PF DISC 500V	R249	63-9882	1 OHM 2W
C32	22-5482	680 PF DISC 500V	R250	63-1845	27K OHM
C33	22-5482	680 PF DISC 500V	R251	63-1841	220K OHM
C34	22-5482	680 PF DISC 500V	R252	63-1757	220 OHM
C35	22-5482	680 PF DISC 500V	R253	63-1887	270K OHM
C36	22-5482	680 PF DISC 500V	R254	63-1880	330K OHM
C37	22-5482	680 PF DISC 500V	R255	63-1845	27K OHM
C38	22-5482	680 PF DISC 500V	R256	63-1848	33K OHM
C39	22-5482	680 PF DISC 500V	R257	63-1803	15 OHM 2W
C40	22-5482	680 PF DISC 500V	R258	63-9882	1 OHM 2W
C41	22-5482	680 PF DISC 500V	R259	63-1845	27K OHM
C42	22-5482	680 PF DISC 500V	R260	63-1841	220K OHM
C43	22-5482	680 PF DISC 500V	R261	63-1757	220 OHM
C44	22-5482	680 PF DISC 500V	R262	63-1887	270K OHM
C45	22-5482	680 PF DISC 500V	R263	63-1880	330K OHM
C46	22-5482	680 PF DISC 500V	R264	63-1845	27K OHM
C47	22-5482	680 PF DISC 500V	R265	63-1848	33K OHM
C48	22-5482	680 PF DISC 500V	R266	63-1803	15 OHM 2W
C49	22-5482	680 PF DISC 500V	R267	63-9882	1 OHM 2W
C50	22-5482	680 PF DISC 500V	R268	63-1845	27K OHM
C51	22-5482	680 PF DISC 500V	R269	63-1841	220K OHM
C52	22-5482	680 PF DISC 500V	R270	63-1757	220 OHM
C53	22-5482	680 PF DISC 500V	R271	63-1887	270K OHM
C54	22-5482	680 PF DISC 500V	R272	63-1880	330K OHM
C55	22-5482	680 PF DISC 500V	R273	63-1845	27K OHM
C56	22-5482	680 PF DISC 500V	R274	63-1848	33K OHM
C57	22-5482	680 PF DISC 500V	R275	63-1803	15 OHM 2W
C58	22-5482	680 PF DISC 500V	R276	63-9882	1 OHM 2W
C59	22-5482	680 PF DISC 500V	R277	63-1845	27K OHM
C60	22-5482	680 PF DISC 500V	R278	63-1841	220K OHM
C61	22-5482	680 PF DISC 500V	R279	63-1757	220 OHM
C62	22-5482	680 PF DISC 500V	R280	63-1887	270K OHM
C63	22-5482	680 PF DISC 500V	R281	63-1880	330K OHM
C64	22-5482	680 PF DISC 500V	R282	63-1845	27K OHM
C65	22-5482	680 PF DISC 500V	R283	63-1848	33K OHM
C66	22-5482	680 PF DISC 500V	R284	63-1803	15 OHM 2W
C67	22-5482	680 PF DISC 500V	R285	63-9882	1 OHM 2W
C68	22-5482	680 PF DISC 500V	R286	63-1845	27K OHM
C69	22-5482	680 PF DISC 500V	R287	63-1841	220K OHM
C70	22-5482	680 PF DISC 500V	R288	63-1757	220 OHM
C71	22-5482	680 PF DISC 500V	R289	63-1887	270K OHM
C72	22-5482	680 PF DISC 500V	R290	63-1880	330K OHM
C73	22-5482	680 PF DISC 500V	R291	63-1845	27K OHM
C74	22-5482	680 PF DISC 500V	R292	63-1848	33K OHM
C75	22-5482	680 PF DISC 500V	R293	63-1803	15 OHM 2W
C76	22-5482	680 PF DISC 500V	R294	63-9882	1 OHM 2W
C77	22-5482	680 PF DISC 500V	R295	63-1845	27K OHM
C78	22-5482	680 PF DISC 500V	R296	63-1841	220K OHM
C79	22-5482	680 PF DISC 500V	R297	63-1757	220 OHM
C80	22-5482	680 PF DISC 500V	R298	63-1887	270K OHM
C81	22-5482	680 PF DISC 500V	R299	63-1880	330K OHM
C82	22-5482	680 PF DISC 500V	R300	63-1845	27K OHM
C83	22-5482	680 PF DISC 500V	R301	63-1848	33K OHM
C84	22-5482	680 PF DISC 500V	R302	63-1803	15 OHM 2W
C85	22-5482	680 PF DISC 500V	R303	63-9882	1 OHM 2W
C86	22-5482	680 PF DISC 500V	R304	63-1845	27K OHM
C87	22-5482	680 PF DISC 500V	R305	63-1841	220K OHM
C88	22-5482	680 PF DISC 500V	R306	63-1757	220 OHM
C89	22-5482	680 PF DISC 500V	R307	63-1887	270K OHM
C90	22-5482	680 PF DISC 500V	R308	63-1880	330K OHM
C91	22-5482	680 PF DISC 500V	R309	63-1845	27K OHM
C92	22-5482	680 PF DISC 500V	R310	63-1848	33K OHM
C93	22-5482	680 PF DISC 500V	R311	63-1803	15 OHM 2W
C94	22-5482	680 PF DISC 500V	R312	63-9882	1 OHM 2W
C95	22-5482	680 PF DISC 500V	R313	63-1845	27K OHM
C96	22-5482	680 PF DISC 500V	R314	63-1841	220K OHM
C97	22-5482	680 PF DISC 500V	R315	63-1757	220 OHM
C98	22-5482	680 PF DISC 500V	R316	63-1887	270K OHM
C99	22-5482	680 PF DISC 500V	R317	63-1880	330K OHM
C100	22-5482	680 PF DISC 500V	R318	63-1845	27K OHM
C101	22-5482	680 PF DISC 500V	R319	63-1848	33K OHM
C102	22-5482	680 PF DISC 500V	R320	63-1803	15 OHM 2W
C103	22-5482	680 PF DISC 500V	R321	63-9882	1 OHM 2W
C104	22-5482	680 PF DISC 500V	R322	63-1845	27K OHM
C105	22-5482	680 PF DISC 500V	R323	63-1841	220K OHM
C106	22-5482	680 PF DISC 500V	R324	63-1757	220 OHM
C107	22-5482	680 PF DISC 500V	R325	63-1887	270K OHM
C108	22-5482	680 PF DISC 500V	R326	63-1880	330K OHM
C109	22-5482	680 PF DISC 500V	R327	63-1845	27K OHM
C110	22-5482	680 PF DISC 500V	R328	63-1848	33K OHM
C111	22-5482	680 PF DISC 500V	R329	63-1803	15 OHM 2W
C112	22-5482	680 PF DISC 500V	R330	63-9882	1 OHM 2W
C113	22-5482	680 PF DISC 500V	R331	63-1845	27K OHM
C114	22-5482	680 PF DISC 500V	R332	63-1841	220K OHM
C115	22-5482	680 PF DISC 500V	R333	63-1757	220 OHM
C116	22-5482	680 PF DISC 500V	R334	63-1887	270K OHM
C117	22-5482	680 PF DISC 500V	R335	63-1880	330K OHM
C118	22-5482	680 PF DISC 500V	R336	63-1845	27K OHM
C119	22-5482	680 PF DISC 500V	R337	63-1848	33K OHM
C120	22-5482	680 PF DISC 500V	R338	63-1803	15 OHM 2W
C121	22-5482	680 PF DISC 500V	R339	63-9882	1 OHM 2W
C122	22-5482	680 PF DISC 500V	R340	63-1845	27K OHM
C123	22-5482	680 PF DISC 500V	R341	63-1841	220K OHM
C124	22-5482	680 PF DISC 500V	R342	63-1757	220 OHM
C125	22-5482	680 PF DISC 500V	R343	63-1887	270K OHM
C126	22-5482	680 PF DISC 500V	R344	63-1880	330K OHM
C127	22-5482	680 PF DISC 500V	R345	63-1845	27K OHM
C128	22-5482	680 PF DISC 500V	R346	63-1848	33K OHM
C129	22-5482	680 PF DISC 500V	R347	63-1803	15 OHM 2W
C130	22-5482	680 PF DISC 500V	R348	63-9882	1 OHM 2W
C131	22-5482	680 PF DISC 500V	R349	63-1845	27K OHM
C132	22-5482	680 PF DISC 500V	R350	63-1841	220K OHM
C133	22-5482	680 PF DISC 500V	R351	63-1757	220 OHM
C134	22-5482	680 PF DISC 500V	R352	63-1887	270K OHM
C135	22-5482	680 PF DISC 500V	R353	63-1880	330K OHM
C136	22-5482	680 PF DISC 500V	R354	63-1845	27K OHM
C137	22-5482	680 PF DISC 500V	R355	63-1848	33K OHM
C138	22-5482	680 PF DISC 500V	R356	63-1803	15 OHM 2W
C139	22-5482	680 PF DISC 500V	R357	63-9882	1 OHM 2W
C140	22-5482	680 PF DISC 500V	R358	63-1845	27K OHM
C141	22-5482	680 PF DISC 500V	R359	63-1841	220K OHM
C142	22-5482	680 PF DISC 500V	R360	63-1757	220 OHM
C143	22-5482	680 PF DISC 500V	R361	63-1887	270K OHM
C144	22-5482	680 PF DISC 500V	R362	63-1880	330K OHM
C145	22-5482	680 PF DISC 500V	R363	63-1845	27K OHM
C146	22-5482	680 PF DISC 500V	R364	63-1848	33K OHM
C147	22-5482	680 PF DISC 500V	R365	63-1803	15 OHM 2W
C148	22-5482	680 PF DISC 500V	R366	63-9882	1 OHM 2W
C149	22-5482	680 PF DISC 500V	R367	63-1845	27K OHM
C150	22-5482	680 PF DISC 500V	R368	63-1841	220K OHM
C151	22-5482	680 PF DISC 500V	R369	63-1757	220 OHM
C152	22-5482	680 PF DISC 500V	R370	63-1887	270K OHM
C153	22-5482	680 PF DISC 500V	R371	63-1880	330K OHM
C154	22-5482	680 PF DISC 500V	R372	63-1845	27K OHM
C155	22-5482	680 PF DISC 500V	R373	63-1848	33K OHM
C156	22-5482	680 PF DISC 500V	R374	63-1803	15 OHM 2W
C157	22-5482	680 PF DISC 500V	R375	63-9882	1 OHM 2W
C158	22-5482	680 PF DISC 500V	R376	63-1845	27K OHM
C159	22-5482	680 PF DISC 500V	R377	63-1841	220K OHM
C160	22-5482	680 PF DISC 500V	R378	63-1757	220 OHM
C161	22-5482	680 PF DISC 500V	R379	63-1887	270K OHM
C162	22-5482	680 PF DISC 500V	R380	63-1880	330K OHM
C163	22-5482	680 PF DISC 500V	R381	63-1845	27K OHM
C1					



PIN	MONAURAL	STEREO	STEREO-P-P
1	12.1	12.1	1.0
2	2.6	2.6	0.2
3	3.9	3.9	1.2
4	—	—	—
5	—	—	—
6	20.0	0.7	—
7	0	—	—
8	—	—	—
9	12.5	12.5	—
10	9.8	9.8	0.4
11	7.3	7.2	1.5
12	7.3	7.2	1.5
13	4.8	9.8	0.5
14	0.5	1.7	0.3

NOTES:

- ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
- D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS, WITH 10% TOLERANCE, UNLESS OTHERWISE SPECIFIED.
- ALL RESISTORS ARE 1/2 WATT CARBON, 10% UNLESS OTHERWISE SPECIFIED.
- ALL CAPACITORS ARE 10 MICROFARADS 10% UNLESS OTHERWISE SPECIFIED.
- F.1 FREQUENCY = 4.44 KHZ/F.1 = 0.7 MHz.
- TUNING RANGE 1.45-1600 KHZ/F.1 = 0.8 MHz.
- INDICATES CHASSIS GROUND
- INDICATES $\pm 20\%$ TOLERANCE
- INDICATES VOLTAGE
- INDICATES TEST POINTS.
- ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION.

121 927 I. INSULATED FROM CHASSIS. OUTPUT TRANSISTORS IN EACH CHANNEL SHOULD BE PAIR 121 927 I. 9 121 927 I.

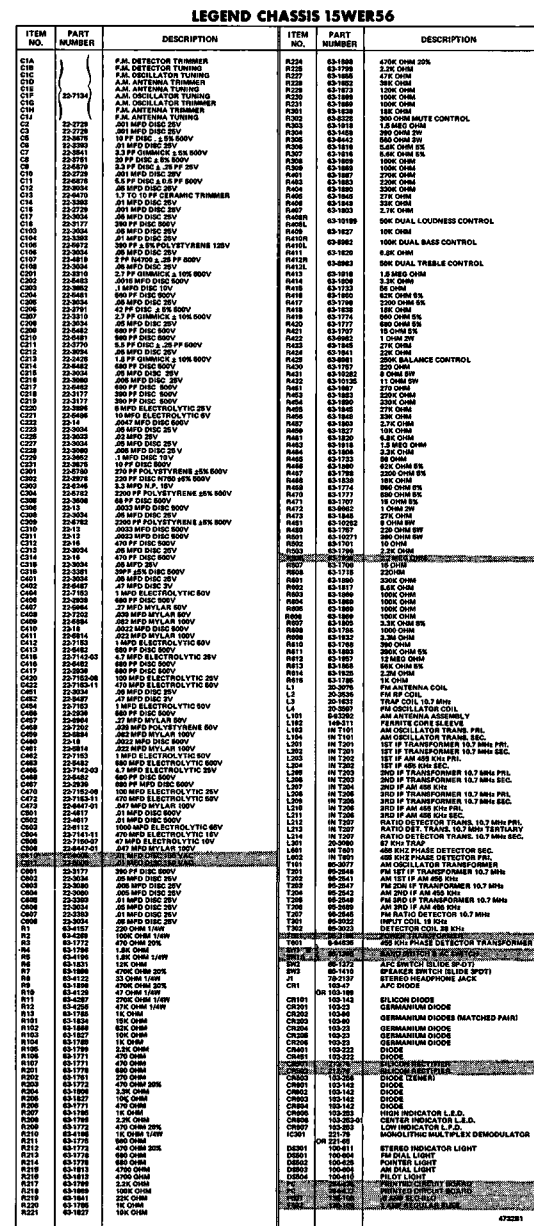
* RIPPLE VOLTAGE MEASURED IN THE F.M. STEREO SIGNAL

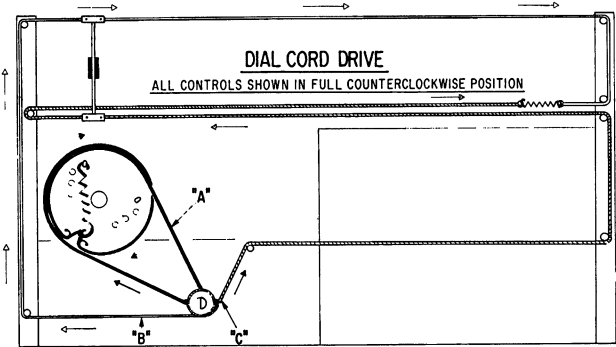
* RIPPLE VOLTAGE MEASURED WITH NO SIGNAL

○ TEST POINTS

- A FM. ANTENNA IN PUT
- D 1st FM. I.F INPUT
- G 3rd FM. OUTPUT
- H FM. DETECTOR OUTPUT
- H+ RATIO DETECTOR PRIMARY
- L A.M. R.F & I.F IN PUT
- M 19KHz A.C. GAIN
- MI 19KHz D.C. GAIN

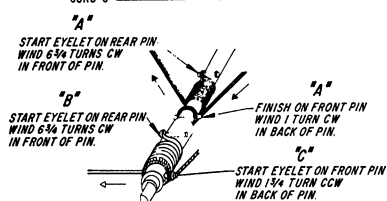




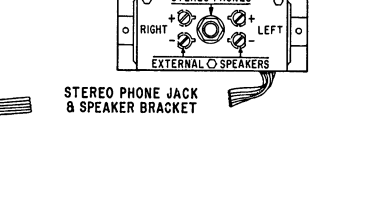
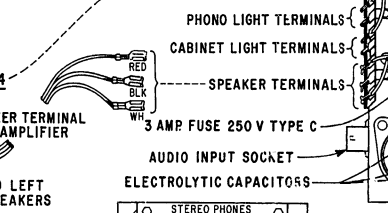
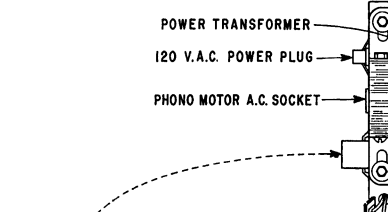
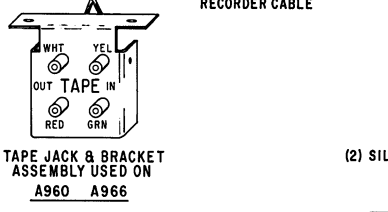
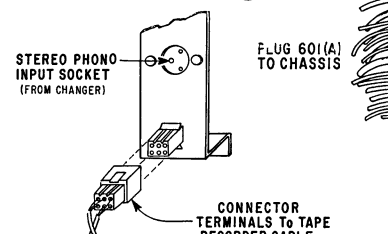
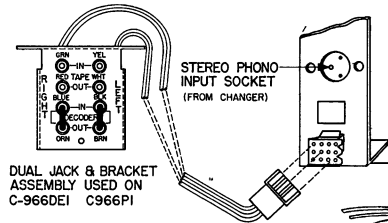
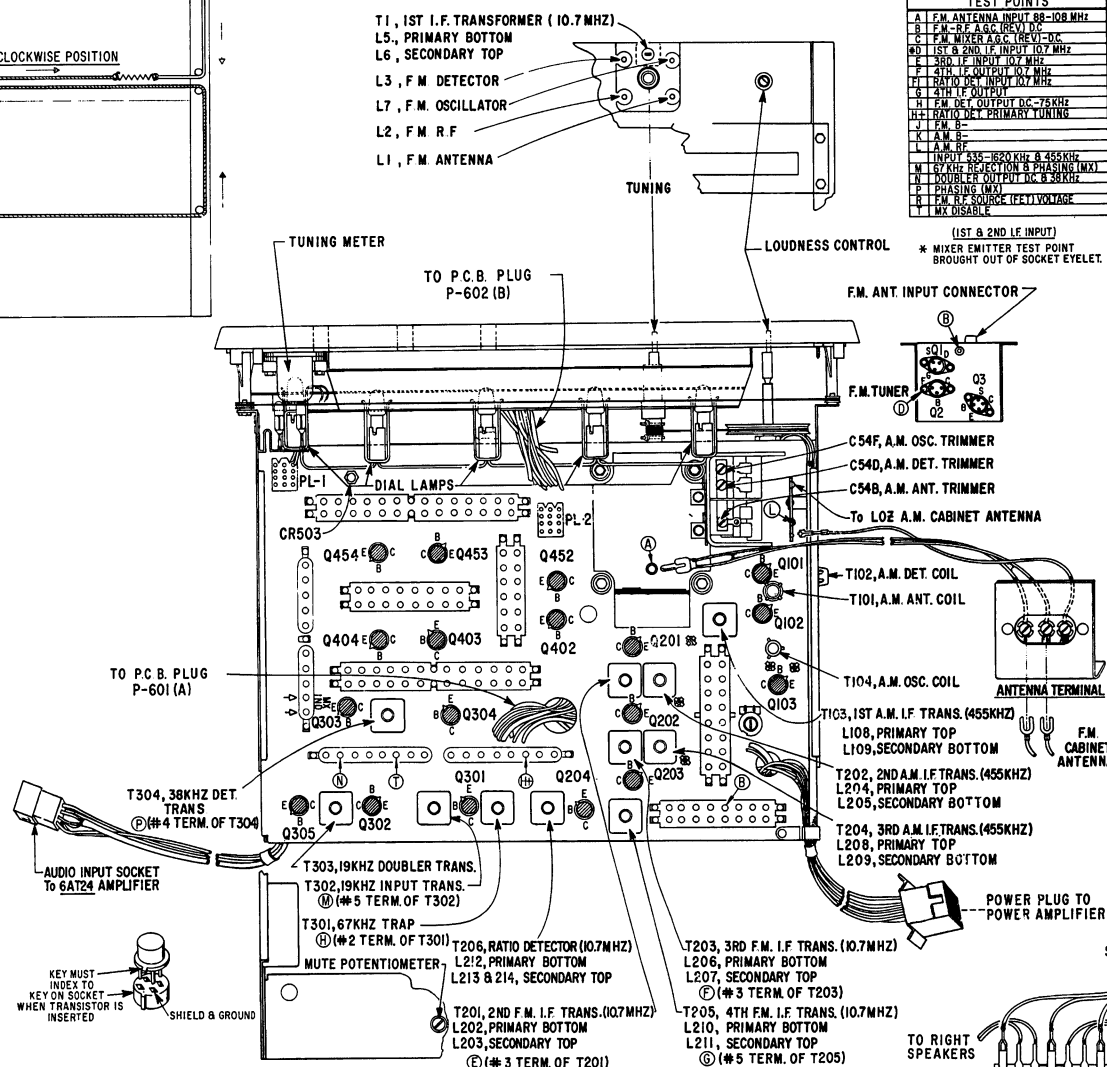


CORD A
CORD B
CORD C

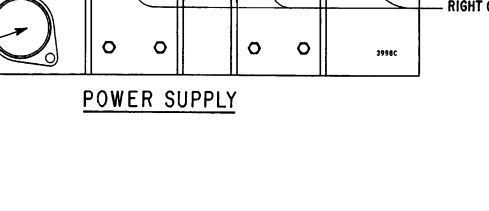
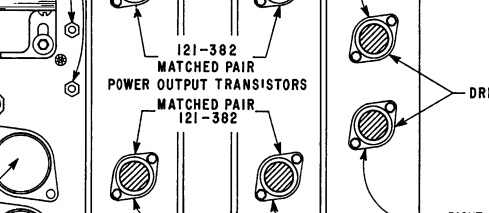
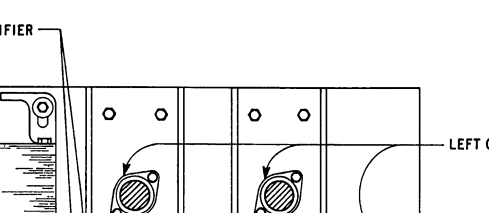
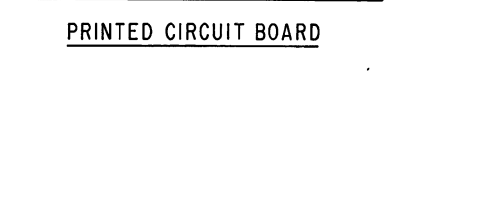
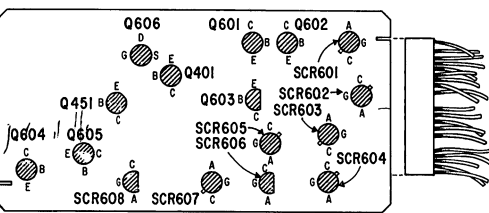
(CW) CLOCKWISE
(CCW) COUNTERCLOCKWISE



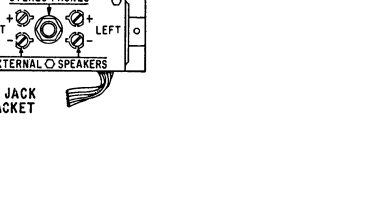
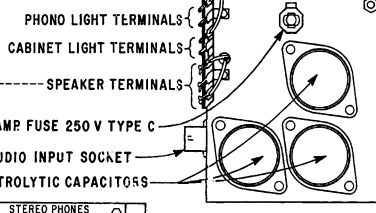
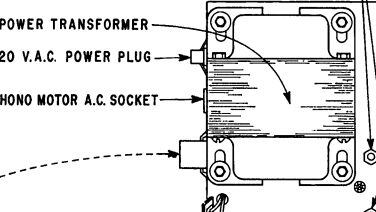
TRANSISTORS	DESCRIPTION
Q1	12-741 F.M. RF
Q2	12-742 F.M. MIXER
Q3	12-743 A.M. RF
Q4	12-744 A.M. MIXER
Q5	12-745 A.M. OSC.
Q6	12-746 F.M. A.M. 1st IF
Q7	12-747 F.M. A.M. 2nd IF
Q8	12-748 F.M. A.M. 3rd IF
Q9	12-749 F.M. A.M. 4th IF
Q10	12-750 COMPOSITE AMP
Q11	12-751 19KHZ. AMP
Q12	12-752 19KHZ. AMP
Q13	12-753 19KHZ. AMP
Q14	12-754 19KHZ. AMP
Q15	12-755 19KHZ. AMP
Q16	12-756 19KHZ. AMP
Q17	12-757 19KHZ. AMP
Q18	12-758 19KHZ. AMP
Q19	12-759 19KHZ. AMP
Q20	12-760 19KHZ. AMP
Q21	12-761 19KHZ. AMP
Q22	12-762 19KHZ. AMP
Q23	12-763 19KHZ. AMP
Q24	12-764 19KHZ. AMP
Q25	12-765 19KHZ. AMP
Q26	12-766 19KHZ. AMP
Q27	12-767 19KHZ. AMP
Q28	12-768 19KHZ. AMP
Q29	12-769 19KHZ. AMP
Q30	12-770 19KHZ. AMP
Q31	12-771 19KHZ. AMP
Q32	12-772 19KHZ. AMP
Q33	12-773 19KHZ. AMP
Q34	12-774 19KHZ. AMP
Q35	12-775 19KHZ. AMP
Q36	12-776 19KHZ. AMP
Q37	12-777 19KHZ. AMP
Q38	12-778 19KHZ. AMP
Q39	12-779 19KHZ. AMP
Q40	12-780 19KHZ. AMP
Q41	12-781 19KHZ. AMP
Q42	12-782 19KHZ. AMP
Q43	12-783 19KHZ. AMP
Q44	12-784 19KHZ. AMP
Q45	12-785 19KHZ. AMP
Q46	12-786 19KHZ. AMP
Q47	12-787 19KHZ. AMP
Q48	12-788 19KHZ. AMP
Q49	12-789 19KHZ. AMP
Q50	12-790 19KHZ. AMP
Q51	12-791 19KHZ. AMP
Q52	12-792 19KHZ. AMP
Q53	12-793 19KHZ. AMP
Q54	12-794 19KHZ. AMP
Q55	12-795 19KHZ. AMP
Q56	12-796 19KHZ. AMP
Q57	12-797 19KHZ. AMP
Q58	12-798 19KHZ. AMP
Q59	12-799 19KHZ. AMP
Q60	12-800 19KHZ. AMP
Q61	12-801 19KHZ. AMP
Q62	12-802 19KHZ. AMP
Q63	12-803 19KHZ. AMP
Q64	12-804 19KHZ. AMP
Q65	12-805 19KHZ. AMP
Q66	12-806 19KHZ. AMP
Q67	12-807 19KHZ. AMP
Q68	12-808 19KHZ. AMP
Q69	12-809 19KHZ. AMP
Q70	12-810 19KHZ. AMP
Q71	12-811 19KHZ. AMP
Q72	12-812 19KHZ. AMP
Q73	12-813 19KHZ. AMP
Q74	12-814 19KHZ. AMP
Q75	12-815 19KHZ. AMP
Q76	12-816 19KHZ. AMP
Q77	12-817 19KHZ. AMP
Q78	12-818 19KHZ. AMP
Q79	12-819 19KHZ. AMP
Q80	12-820 19KHZ. AMP
Q81	12-821 19KHZ. AMP
Q82	12-822 19KHZ. AMP
Q83	12-823 19KHZ. AMP
Q84	12-824 19KHZ. AMP
Q85	12-825 19KHZ. AMP
Q86	12-826 19KHZ. AMP
Q87	12-827 19KHZ. AMP
Q88	12-828 19KHZ. AMP
Q89	12-829 19KHZ. AMP
Q90	12-830 19KHZ. AMP
Q91	12-831 19KHZ. AMP
Q92	12-832 19KHZ. AMP
Q93	12-833 19KHZ. AMP
Q94	12-834 19KHZ. AMP
Q95	12-835 19KHZ. AMP
Q96	12-836 19KHZ. AMP
Q97	12-837 19KHZ. AMP
Q98	12-838 19KHZ. AMP
Q99	12-839 19KHZ. AMP
Q100	12-840 19KHZ. AMP

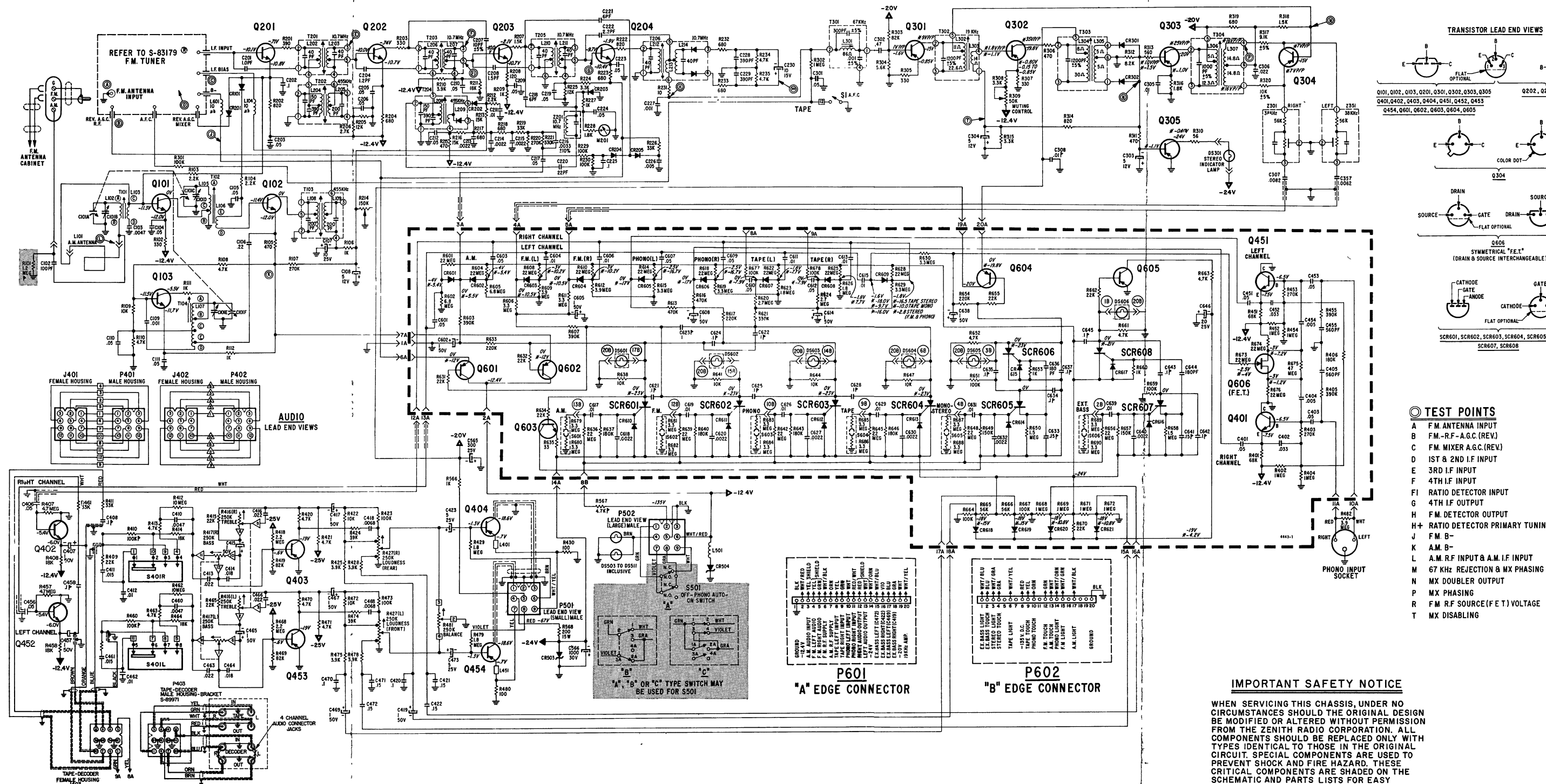


ITEM	PART	DESCRIPTION	ITEM	PART	DESCRIPTION	ITEM	PART	DESCRIPTION	ITEM	PART	DESCRIPTION
1001	12-741	F.M. RF	1002	12-742	F.M. MIXER	1003	12-743	A.M. RF	1004	12-744	A.M. MIXER
1005	12-745	A.M. OSC.	1006	12-746	F.M. A.M. 1st IF	1007	12-747	F.M. A.M. 2nd IF	1008	12-748	F.M. A.M. 3rd IF
1009	12-749	F.M. A.M. 4th IF	1010	12-750	COMPOSITE AMP	1011	12-751	19KHZ. AMP	1012	12-752	19KHZ. AMP
1013	12-753	19KHZ. AMP	1014	12-754	19KHZ. AMP	1015	12-755	19KHZ. AMP	1016	12-756	19KHZ. AMP
1017	12-757	19KHZ. AMP	1018	12-758	19KHZ. AMP	1019	12-759	19KHZ. AMP	1020	12-760	19KHZ. AMP
1021	12-761	19KHZ. AMP	1022	12-762	19KHZ. AMP	1023	12-763	19KHZ. AMP	1024	12-764	19KHZ. AMP
1025	12-765	19KHZ. AMP	1026	12-766	19KHZ. AMP	1027	12-767	19KHZ. AMP	1028	12-768	19KHZ. AMP
1029	12-769	19KHZ. AMP	1030	12-770	19KHZ. AMP	1031	12-771	19KHZ. AMP	1032	12-772	19KHZ. AMP
1033	12-773	19KHZ. AMP	1034	12-774	19KHZ. AMP	1035	12-775	19KHZ. AMP	1036	12-776	19KHZ. AMP
1037	12-777	19KHZ. AMP	1038	12-778	19KHZ. AMP	1039	12-779	19KHZ. AMP	1040	12-780	19KHZ. AMP
1041	12-781	19KHZ. AMP	1042	12-782	19KHZ. AMP	1043	12-783	19KHZ. AMP	1044	12-784	19KHZ. AMP
1045	12-785	19KHZ. AMP	1046	12-786	19KHZ. AMP	1047	12-787	19KHZ. AMP	1048	12-788	19KHZ. AMP
1049	12-789	19KHZ. AMP	1050	12-790	19KHZ. AMP	1051	12-791	19KHZ. AMP	1052	12-792	19KHZ. AMP
1053	12-793	19KHZ. AMP	1054	12-794	19KHZ. AMP	1055	12-795	19KHZ. AMP	1056	12-796	19KHZ. AMP
1057	12-797	19KHZ. AMP	1058	12-798	19KHZ. AMP	1059	12-799	19KHZ. AMP	1060	12-800	19KHZ. AMP
1061	12-801	19KHZ. AMP	1062	12-802	19KHZ. AMP	1063	12-803	19KHZ. AMP	1064	12-804	19KHZ. AMP
1065	12-805	19KHZ. AMP	1066	12-806	19KHZ. AMP	1067	12-807	19KHZ. AMP	1068	12-808	19KHZ. AMP
1069	12-809	19KHZ. AMP	1070	12-810	19KHZ. AMP	1071	12-811	19KHZ. AMP	1072	12-812	19KHZ. AMP
1073	12-813	19KHZ. AMP	1074	12-814	19KHZ. AMP	1075	12-815	19KHZ. AMP	1076	12-816	19KHZ. AMP
1077	12-817	19KHZ. AMP	1078	12-818	19KHZ. AMP	1079	12-819	19KHZ. AMP	1080	12-820	19KHZ. AMP
1081	12-821	19KHZ. AMP	1082	12-822	19KHZ. AMP	1083	12-823	19KHZ. AMP	1084	12-824	19KHZ. AMP
1085	12-825	19KHZ. AMP	1086	12-826	19KHZ. AMP	1087	12-827	19KHZ. AMP	1088	12-828	19KHZ. AMP
1089	12-829	19KHZ. AMP	1090	12-830	19KHZ. AMP	1091	12-831	19KHZ. AMP	1092	12-832	19KHZ. AMP
1093	12-833	19KHZ. AMP	1094	12-834	19KHZ. AMP	1095	12-835	19KHZ. AMP	1096	12-836	19KHZ. AMP
1097	12-837	19KHZ. AMP	1098	12-838	19KHZ. AMP	1099	12-839	19KHZ. AMP	1100	12-840	19KHZ. AMP



PLUG 602 (B)
TO FUNCTION SWITCHES & LIGHTS
(FRONT PANEL)





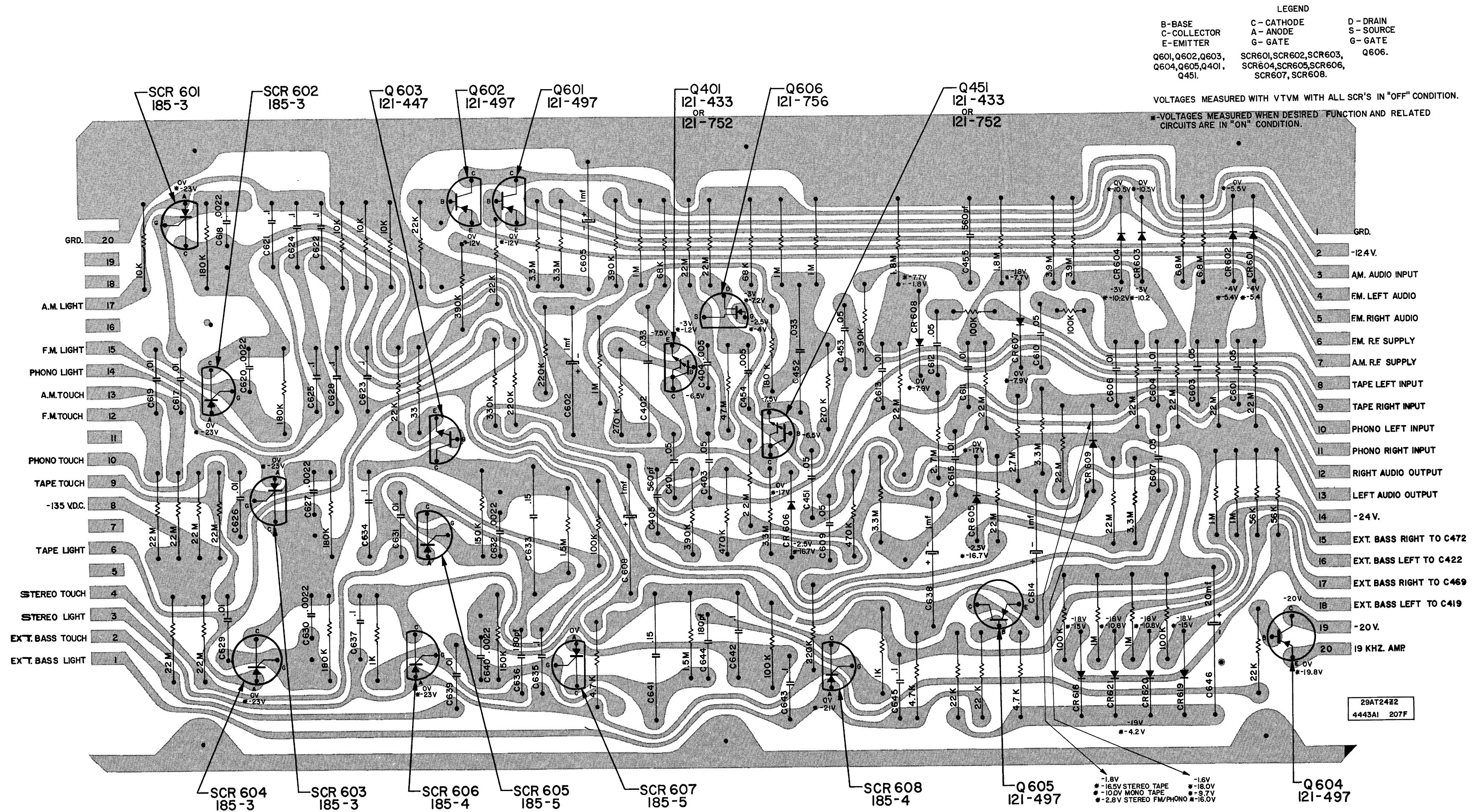
TRANSISTORS		
No.	PART No.	DESCRIPTION
Q101	121-753	A.M. R.F.
Q102	121-638	A.M. MIXER
Q103	121-753	A.M. OSCILLATOR
Q201	121-644 OR 121-775	F.M. & A.M. 1ST I.F.
Q202	121-546	F.M. & A.M. 2ND I.F.
Q203	121-546	F.M. 3RD I.F.
Q204	121-546	F.M. 4TH I.F.
Q301	121-496	COMP. AMPLIFIER
Q302	121-496	19KHz AMPLIFIER
Q303	121-496	38KHz AMPLIFIER
Q304	121-734	BI-PLEX DETECTOR
Q305	121-496	STEREO INDICATOR SWITCH
Q401	121-433	PRE-AMPLIFIER
Q402	121-430	PRE-AMPLIFIER
Q403	121-603	PRE-AMPLIFIER
Q404	121-602	PRE-DRIVER
Q451	121-433	PRE-AMPLIFIER
Q452	121-430	PRE-AMPLIFIER
Q453	121-603	PRE-AMPLIFIER
Q454	121-602	PRE-DRIVER
Q601	121-497	F.M. B- SWITCHING
Q602	121-497	A.M. B- SWITCHING
Q603	121-447	STEREO-MONO SWITCH SUPPLY
Q604	121-497	STEREO B- SWITCH
Q605	121-497	EXT. BASS SWITCH
Q606	121-756	PHONO STEREO-MONO SWITCH
SCR601	185-3	A.M. SWITCH
SCR602	185-3	F.M. SWITCH
SCR603	185-3	PHONO SWITCH
SCR604	185-3	TAPE SWITCH
SCR605	185-5	STEREO-MONO SWITCH
SCR606	185-4	STEREO-MONO SWITCH
SCR607	185-5	EXT. BASS SWITCH-ON-OFF
SCR608	185-4	EXT. BASS SWITCH-ON-OFF

NOTES:
 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS, WITH NO SIGNAL INPUT, LOUDNESS CONTROL AT MINIMUM, LINE VOLTAGE 100V A.C. USING A HIGH IMPEDANCE, 1.5 V.M.
 ALL RESISTORS IN OHMS, 1/2 WATT CARBON, 10% UNLESS OTHERWISE SPECIFIED.
 ALL CAPACITORS ARE IN MICROFARADS 10% UNLESS OTHERWISE SPECIFIED.
 I.F. FREQUENCY: A.M. 455KHz; F.M. 10.7MHz
 TUNING RANGE: A.M. 540-1600KHz; F.M. 88-108MHz
 ⚡ INDICATES CHASSIS GROUND.
 ⚡ INDICATES 20% TOLERANCE.
 ➔ INDICATES VOLTAGE.
 Ⓢ INDICATES TEST POINTS.
 # INDICATES VALUES PRESENT ONLY WITH STEREO SIGNAL.
 □ AND △ INDICATE INTERCONNECTING HOUSING FOR TONE CONTROL.
 ARROWS ON CONTROLS INDICATE COUNTERCLOCKWISE ROTATION.
 FOR AUDIO AND POWER SUPPLY SCHEMATIC REFER TO 123-3995.
 ON PRINTED CIRCUIT BOARD ONLY.
 VOLTAGES MEASURED WITH I.C.A. V.T.M., TYPE WV-96C, WITH ALL SCR IN OFF CONDITION.
 # INDICATES VOLTAGES PRESENT ONLY WHEN DESIRED FUNCTION AND RELATED CIRCUITS ARE IN "ON" CONDITION.
 ➔ INDICATES "A" EDGE CONNECTOR TEST POINTS.
 Ⓢ INDICATES "B" EDGE CONNECTOR TEST POINTS.
 F.E.T. - FIELD EFFECT TRANSISTOR.

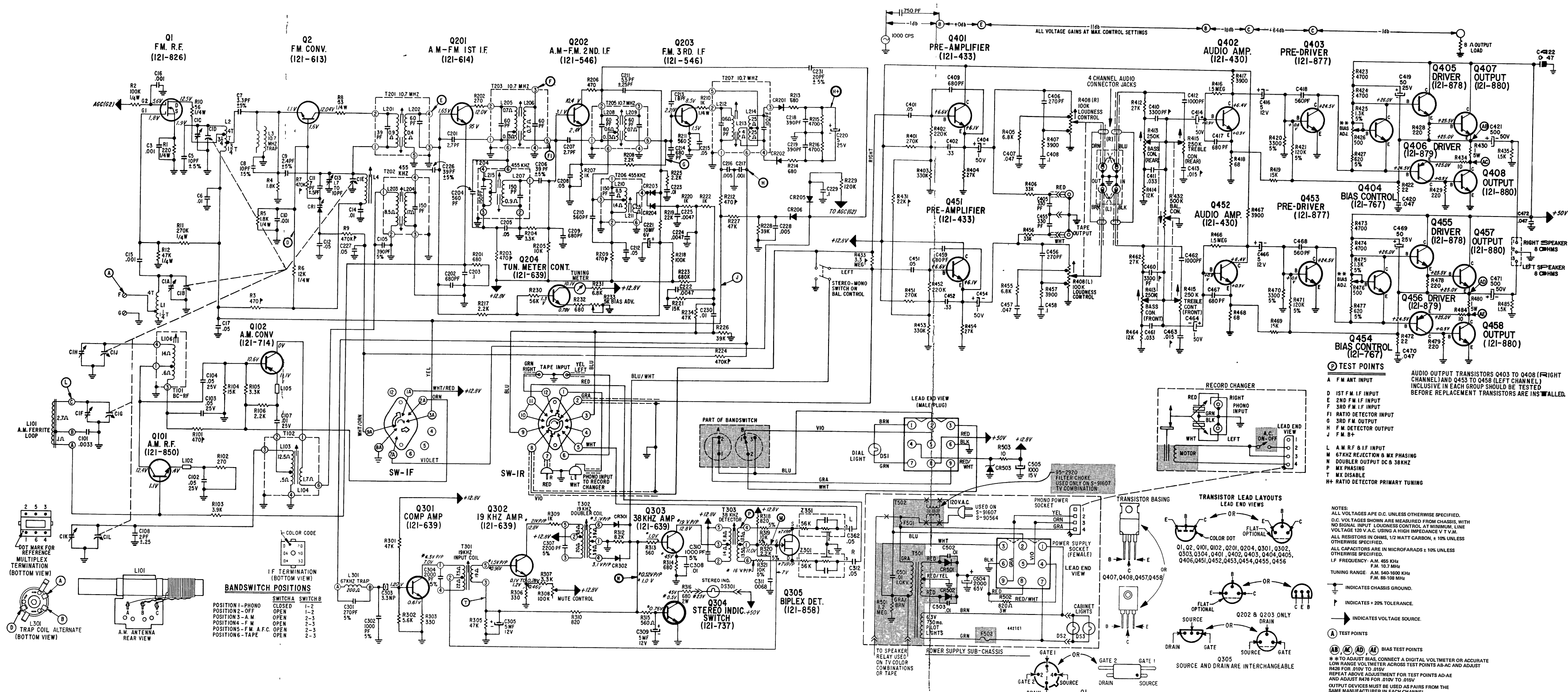
IMPORTANT SAFETY NOTICE

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THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.



CHASSIS 29AT24Z2 - CHASSIS WIRING AND COMPONENTS
 VIEWED FROM FOIL SIDE



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THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

TEST POINTS

- A F.M. ANT. INPUT
- D 1ST F.M. IF INPUT
- E 2ND F.M. IF INPUT
- F 3RD F.M. IF INPUT
- F1 RATIO DETECTOR INPUT
- G 3RD F.M. OUTPUT
- H F.M. DETECTOR OUTPUT
- J F.M. B+

AUDIO OUTPUT TRANSISTORS Q403 TO Q408 (RIGHT CHANNEL) AND Q453 TO Q458 (LEFT CHANNEL) INCLUSIVE IN EACH GROUP SHOULD BE TESTED BEFORE REPLACEMENT TRANSISTORS ARE INSTALLED.

- L A.M. R.F. & IF INPUT
- M 67KHZ REJECTION & MX PHASING
- N DOUBLER OUTPUT DC & 38KHZ
- P MX PHASING
- T MX DISABLE
- H+ RATIO DETECTOR PRIMARY TUNING

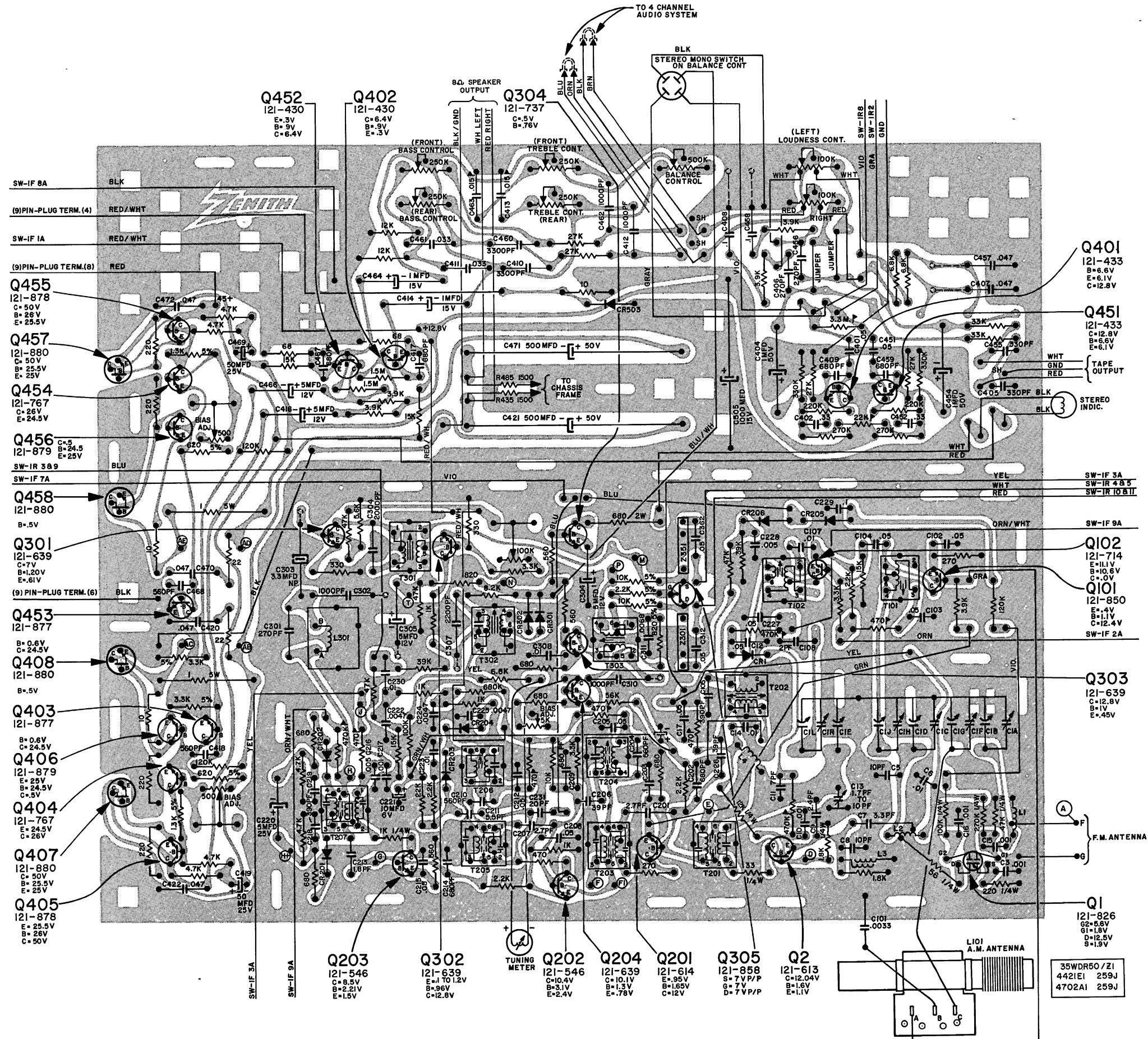
NOTES:
ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS, WITH NO SIGNAL INPUT. LOUDNESS CONTROL AT MINIMUM. LINE VOLTAGE 120 V.A.C. USING A HIGH IMPEDANCE V.T.M.
ALL RESISTORS IN OHMS, 1/2 WATT CARBON, $\pm 10\%$ UNLESS OTHERWISE SPECIFIED.
ALL CAPACITORS ARE IN MICROFARADS, $\pm 10\%$ UNLESS OTHERWISE SPECIFIED.
TUNING RANGE: A.M. 540-1600 KHz
F.M. 88-108 MHz

- INDICATES CHASSIS GROUND.
- INDICATES $\pm 20\%$ TOLERANCE.
- INDICATES VOLTAGE SOURCE.

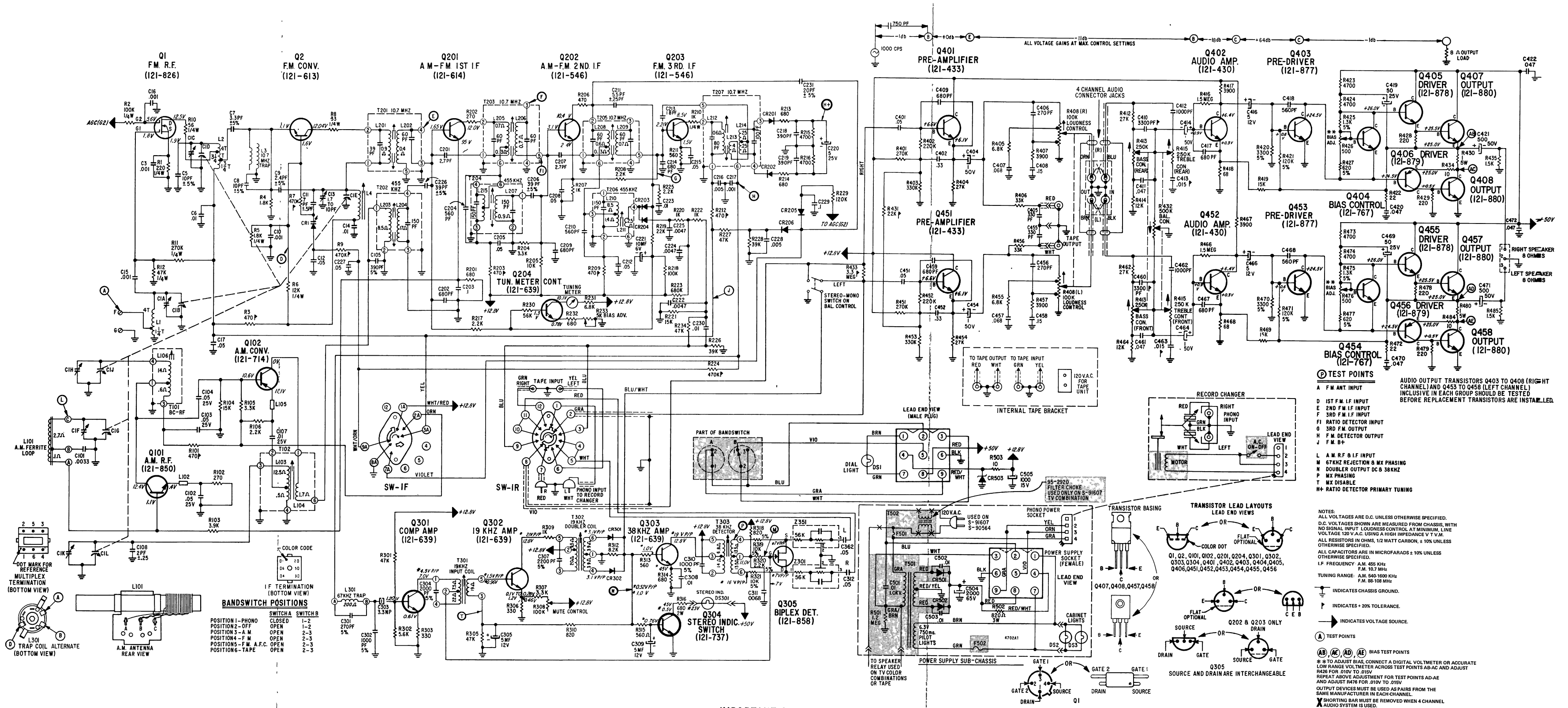
TEST POINTS

BIAS TEST POINTS
* TO ADJUST BIAS, CONNECT A DIGITAL VOLTMETER OR ACCURATE LOW RANGE VOLTMETER ACROSS TEST POINTS A-B AND ADJUST R426 FOR .010V TO .015V
REPEAT ABOVE ADJUSTMENT FOR TEST POINTS A-D AND ADJUST R476 FOR .010V TO .015V
OUTPUT DEVICES MUST BE USED AS PAIRS FROM THE SAME MANUFACTURER IN EACH CHANNEL.
* SHORTING BAR MUST BE REMOVED WHEN 4 CHANNEL AUDIO SYSTEM IS USED.

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C1A		FM ANT. TRIMMER	R223	63-1904	680K OHM
C1B		FM ANT. TUNING	R224	63-1898	470K OHM 20%
C1C		FM DETECTOR TRIMMER	R225	63-1799	2.2K OHM
C1D		FM DETECTOR TUNING	R226	63-1828	30K OHM
C1E		FM OSC. TUNING	R227	63-1855	47K OHM
C1F		AM ANT. TRIMMER	R228	63-1831	39K OHM
C1G	22-6762	AM ANT. TUNING	R229	63-1872	30K OHM
C1H		AM DETECTOR TRIMMER	R230	63-1859	56K OHM
C1I		AM DETECTOR TUNING	R231	63-1828	30K OHM
C1J		AM OSC. TUNING	R232	63-1778	680 OHM
C1K		AM OSC. TUNING	R233	63-6708	5% BIAS ADJUST
C2	22-7229	.001 MFD DISC 25V	R234	63-1831	47K OHM
C3	22-3375	10 PF DISC 5% 500V	R301	63-1855	47K OHM
C6	22-3363	.01 MFD DISC 25V	R302	63-1817	20K OHM
C7	22-3441	3.3 PF GIMMICK ± 5% 500V	R303	63-1764	320 OHM
C8	22-3575	10 PF DISC 5% 500V	R304	63-1855	47K OHM
C9	22-3499	2.2 PF GIMMICK 500V	R306	63-1764	300 OHM
C10	22-7229	.001 MFD DISC 25V	R307	63-1850	3.3K OHM
C11	22-6344	7 PF ± 5 PF 500V	R308	63-6455	300K MUTE CONTROL
C12	22-3032	.05 MFD DISC 25V	R309	63-1785	1K OHM
C13	22-4855	1.7 TO 10 PF CERAMIC TRIMMER	R310	63-1782	820 OHM
C14	22-3393	.01 MFD DISC 25V	R311		
C15	22-7229	.001 MFD DISC 25V	R312	63-1824	8.2K OHM
C16	22-7229	.001 MFD DISC 25V	R313	63-1773	30K OHM
C17	22-3313	.05 MFD DISC 25V	R314	63-1778	680 OHM
C18	22-3313	.0033 MFD DISC ± 10%	R315	63-1773	450 OHM
C102	22-3034	.05 MFD DISC 25V	R316	63-5663	680 OHM 2W
C103	22-3034	.05 MFD DISC 25V	R317		
C104	22-3034	.05 MFD DISC 25V	R318	63-1781	820 OHM 5%
C105	22-5872	390 PF MICA ± 5% 125V	R319	63-1826	10K 5%
C107	22-3352	.01 MFD DISC	R320	63-1786	2.2K 5%
C108	22-4818	2.2 PF GIMMICK 500V	R321	63-1826	10K 5%
C202	22-8482	680 PF DISC 500V	R322		
C203	22-3662	.01 MFD DISC 10V	R401	63-1857	270K OHM
C204	22-6481	560 PF DISC 500V	R402	63-1883	220K OHM
C205	22-3034	.05 MFD DISC 25V	R403	63-1890	390K OHM
C206	22-3381	39 PF DISC 500V	R404	63-1845	47K OHM
C207	22-5210	2.7 PF GIMMICK 500V	R405	63-1820	6.8K OHM
C208	22-3034	.05 MFD DISC 25V	R406	63-1845	33K OHM
C209	22-6482	560 PF DISC 500V	R407	63-1810	200K OHM
C210	22-5481	560 PF DISC 500V	R408R	63-6967	100K DUAL LOUDNESS CONTROL
C211	22-3747	5.6 PF DISC ± .25 PF 500V	R408L		
C212	22-3034	.05 MFD DISC 25V	R412	63-1846	27K OHM
C213	22-2428	1.8 PF GIMMICK 500V	R413R	63-6966	250K DUAL BASS CONTROL
C214	22-3316	.05 MFD DISC 25V	R414L		
C216	22-3034	.05 MFD DISC 25V	R414	63-1831	12K OHM
C217	22-3680	.005 MFD DISC 25V	R416R	63-6964	250K DUAL TREBLE CONTROL
C218	22-7229	.001 MFD DISC 25V	R417	63-1918	1.5 MEG
C219	22-3177	390 PF DISC 500V	R418	63-1810	3900 OHM
C220	22-3177	390 PF DISC 500V	R419	63-1736	68 OHM
C221	22-4878	5 MFD ELECTROLYTIC 25V	R418	63-1831	10K OHM
C222	22-4878	10 MFD ELECTROLYTIC 25V	R419	63-1831	10K OHM
C223	22-3393	.01 MFD DISC 25V	R420	63-1831	120K OHM 5%
C224	22-14	.0047 MFD 500V	R421	63-1831	120K OHM 5%
C225	22-14	.0047 MFD 500V	R422	63-1831	470K OHM
C226	22-3811	39 PF DISC 5%	R423	63-1831	470K OHM
C227	22-3034	.05 MFD DISC 25V	R424	63-1782	300 OHM
C228	22-3034	.05 MFD DISC 25V	R425	63-6251	500 OHM BIAS ADJUST
C229	22-3662	.01 MFD DISC 10V	R		



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LEGEND CHASSIS 35WDR50Z1

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
C1A	22-6752	FM ANT. TRIMMER	R223	63-1904	680K OHM
C1B		FM ANT. TUNING	R224	63-1898	470K OHM 20%
C1C		FM DETECTOR TRIMMER	R225	63-1789	2.2K OHM
C1D		FM DETECTOR TUNING	R226	63-1882	39K OHM
C1E		FM OSC. TUNING	R227	63-1885	47K OHM
C1F		AM ANT. TRIMMER	R228	63-1882	39K OHM
C1G		AM ANT. TUNING	R229	63-1873	1.2K OHM
C1H		AM DETECTOR TRIMMER	R230	63-1889	56K OHM
C1I		AM DETECTOR TUNING	R231	63-1820	6.8K OHM
C1J		AM OSC. TRIMMER	R232	63-1778	680 OHM
C1K		AM OSC. TUNING	R233	63-8708	5K BIAS ADJUST
C1L		AM OSC. TUNING	R234	63-1885	47K OHM
C2	22-2729	.001 MFD DISC 25V	R301	63-1895	47K OHM
C3	22-3675	10 PF DISC ± 5% 500V	R302	63-1817	5.6K OHM
C4	22-3393	.01 MFD DISC 25V	R303	63-1764	330 OHM
C5	22-3641	3.3 PF GIMMICK ± 5% 500V	R304		
C6	22-3675	10 PF DISC ± 5% 500V	R305	63-1895	47K OHM
C7	22-3641	3.3 PF GIMMICK ± 5% 500V	R306	63-1764	330 OHM
C8	22-3675	10 PF DISC ± 5% 500V	R307	63-1896	3.3K OHM
C9	22-3641	3.3 PF GIMMICK ± 5% 500V	R308	63-1896	100K MUTE CONTROL
C10	22-2729	.001 MFD DISC 25V	R309	63-1785	1K OHM
C11	22-3644	7 PF ± 5% 500V	R310	63-1782	520 OHM
C12	22-3634	.05 MFD DISC 25V	R311		
C13	22-4895	1.7 TO 10 PF CERAMIC TRIMMER	R312	63-1824	8.2K OHM
C14	22-3393	.01 MFD DISC 25V	R313	63-1778	560 OHM
C15	22-2729	.001 MFD DISC 25V	R314	63-1778	680 OHM
C16	22-3634	.05 MFD DISC 25V	R315	63-1778	450 OHM
C17	22-13	.0023 MFD DISC ± 10%	R316	63-1778	680 OHM 2W
C18	22-3634	.05 MFD DISC 25V	R317		
C19	22-3634	.05 MFD DISC 25V	R318	63-1781	820 OHM 5%
C20	22-3634	.05 MFD DISC 25V	R319	63-1826	10K 5%
C21	22-3634	.05 MFD DISC 25V	R320	63-1786	2.2K 5%
C22	22-3634	.05 MFD DISC 25V	R321	63-1826	10K 5%
C23	22-3634	.05 MFD DISC 25V	R322		
C24	22-3634	.05 MFD DISC 25V	R323	63-1887	270K OHM
C25	22-3634	.05 MFD DISC 25V	R324	63-1883	220K OHM
C26	22-3634	.05 MFD DISC 25V	R325	63-1880	330K OHM
C27	22-3634	.05 MFD DISC 25V	R326	63-1885	27K OHM
C28	22-3634	.05 MFD DISC 25V	R327	63-1820	6.8K OHM
C29	22-3634	.05 MFD DISC 25V	R328	63-1848	33K OHM
C30	22-3634	.05 MFD DISC 25V	R329	63-1810	390K OHM
C31	22-3634	.05 MFD DISC 25V	R330		
C32	22-3634	.05 MFD DISC 25V	R331	63-8967	100K DUAL LOUDNESS CONTROL
C33	22-3634	.05 MFD DISC 25V	R332	63-3770	27K OHM
C34	22-3634	.05 MFD DISC 25V	R333	63-1845	27K OHM
C35	22-3634	.05 MFD DISC 25V	R334	63-8965	250K DUAL BASS CONTROL
C36	22-3634	.05 MFD DISC 25V	R335	63-1831	12K OHM
C37	22-3634	.05 MFD DISC 25V	R336	63-8964	250K DUAL TREBLE CONTROL
C38	22-3634	.05 MFD DISC 25V	R337		
C39	22-3634	.05 MFD DISC 25V	R338	63-1818	1.5 MEG
C40	22-3634	.05 MFD DISC 25V	R339	63-1810	390K OHM
C41	22-3634	.05 MFD DISC 25V	R340	63-1736	68 OHM
C42	22-3634	.05 MFD DISC 25V	R341	63-1834	15K OHM
C43	22-3634	.05 MFD DISC 25V	R342	63-1820	5.3K OHM 5%
C44	22-3634	.05 MFD DISC 25V	R343	63-1820	120K OHM 5%
C45	22-3634	.05 MFD DISC 25V	R344	63-1820	22 OHM
C46	22-3634	.05 MFD DISC 25V	R345	63-1820	470K OHM
C47	22-3634	.05 MFD DISC 25V	R346	63-1780	1300 OHM 5%
C48	22-3634	.05 MFD DISC 25V	R347	63-1780	500 OHM BIAS ADJUST
C49	22-3634	.05 MFD DISC 25V	R348	63-1780	520 OHM 5%
C50	22-3634	.05 MFD DISC 25V	R349	63-1780	220 OHM
C51	22-3634	.05 MFD DISC 25V	R350	63-1780	1 OHM SW
C52	22-3634	.05 MFD DISC 25V	R351	63-1842	22K 20%
C53	22-3634	.05 MFD DISC 25V	R352	63-1842	10 OHM
C54	22-3634	.05 MFD DISC 25V	R353	63-1842	3.3 MEG OHM 20%
C55	22-3634	.05 MFD DISC 25V	R354	63-1842	1500 OHM
C56	22-3634	.05 MFD DISC 25V	R355	63-1842	270K
C57	22-3634	.05 MFD DISC 25V	R356	63-1842	220K OHM
C58	22-3634	.05 MFD DISC 25V	R357	63-1842	330K
C59	22-3634	.05 MFD DISC 25V	R358	63-1842	27K OHM
C60	22-3634	.05 MFD DISC 25V	R359	63-1842	33K OHM
C61	22-3634	.05 MFD DISC 25V	R360	63-1842	390K OHM
C62	22-3634	.05 MFD DISC 25V	R361	63-1842	27K OHM
C63	22-3634	.05 MFD DISC 25V	R362	63-1842	12K
C64	22-3634	.05 MFD DISC 25V	R363	63-1842	1.5 MEG
C65	22-3634	.05 MFD DISC 25V	R364	63-1842	390K OHM
C66	22-3634	.05 MFD DISC 25V	R365	63-1842	68 OHM
C67	22-3634	.05 MFD DISC 25V	R366	63-1842	15K OHM
C68	22-3634	.05 MFD DISC 25V	R367	63-1842	5.3K OHM 5%
C69	22-3634	.05 MFD DISC 25V	R368	63-1842	120K OHM 5%
C70	22-3634	.05 MFD DISC 25V	R369	63-1842	22 OHM
C71	22-3634	.05 MFD DISC 25V	R370	63-1842	470K OHM
C72	22-3634	.05 MFD DISC 25V	R371	63-1842	1300 OHM 5%
C73	22-3634	.05 MFD DISC 25V	R372	63-1842	500 OHM BIAS ADJUST
C74	22-3634	.05 MFD DISC 25V	R373	63-1842	520 OHM 5%
C75	22-3634	.05 MFD DISC 25V	R374	63-1842	220 OHM
C76	22-3634	.05 MFD DISC 25V	R375	63-1842	1 OHM SW
C77	22-3634	.05 MFD DISC 25V	R376	63-1842	22K 20%
C78	22-3634	.05 MFD DISC 25V	R377	63-1842	10 OHM
C79	22-3634	.05 MFD DISC 25V	R378	63-1842	3.3 MEG OHM 20%
C80	22-3634	.05 MFD DISC 25V	R379	63-1842	1500 OHM
C81	22-3634	.05 MFD DISC 25V	R380	63-1842	270K
C82	22-3634	.05 MFD DISC 25V	R381	63-1842	220K OHM
C83	22-3634	.05 MFD DISC 25V	R382	63-1842	330K
C84	22-3634	.05 MFD DISC 25V	R383	63-1842	27K OHM
C85	22-3634	.05 MFD DISC 25V	R384	63-1842	33K OHM
C86	22-3634	.05 MFD DISC 25V	R385	63-1842	390K OHM
C87	22-3634	.05 MFD DISC 25V	R386	63-1842	27K OHM
C88	22-3634	.05 MFD DISC 25V	R387	63-1842	12K
C89	22-3634	.05 MFD DISC 25V	R388	63-1842	1.5 MEG
C90	22-3634	.05 MFD DISC 25V	R389	63-1842	390K OHM
C91	22-3634	.05 MFD DISC 25V	R390	63-1842	68 OHM
C92	22-3634	.05 MFD DISC 25V	R391	63-1842	15K OHM
C93	22-3634	.05 MFD DISC 25V	R392	63-1842	5.3K OHM 5%
C94	22-3634	.05 MFD DISC 25V	R393	63-1842	120K OHM 5%
C95	22-3634	.05 MFD DISC 25V	R394	63-1842	22 OHM
C96	22-3634	.05 MFD DISC 25V	R395	63-1842	470K OHM
C97	22-3634	.05 MFD DISC 25V	R396	63-1842	1300 OHM 5%
C98	22-3634	.05 MFD DISC 25V	R397	63-1842	500 OHM BIAS ADJUST
C99	22-3634	.05 MFD DISC 25V	R398	63-1842	520 OHM 5%
C100	22-3634	.05 MFD DISC 25V	R399	63-1842	220 OHM
C101	22-3634	.05 MFD DISC 25V	R400	63-1842	1 OHM SW
C102	22-3634	.05 MFD DISC 25V	R401	63-1842	22K 20%
C103	22-3634	.05 MFD DISC 25V	R402	63-1842	10 OHM
C104	22-3634	.05 MFD DISC 25V	R403	63-1842	3.3 MEG OHM 20%
C105	22-3634	.05 MFD DISC 25V	R404	63-1842	1500 OHM
C106	22-3634	.05 MFD DISC 25V	R405	63-1842	270K
C107	22-3634	.05 MFD DISC 25V	R406	63-1842	220K OHM
C108	22-3634	.05 MFD DISC 25V	R407	63-1842	330K
C109	22-3634	.05 MFD DISC 25V	R408	63-1842	27K OHM
C110	22-3634	.05 MFD DISC 25V	R409	63-1842	33K OHM
C111	22-3634	.05 MFD DISC 25V	R410	63-1842	390K OHM
C112	22-3634	.05 MFD DISC 25V	R411	63-1842	27K OHM
C113	22-3634	.05 MFD DISC 25V	R412	63-1842	12K
C114	22-3634	.05 MFD DISC 25V	R413	63-1842	1.5 MEG
C115	22-3634	.05 MFD DISC 25V	R414	63-1842	390K OHM
C116	22-3634	.05 MFD DISC 25V	R415	63-1842	68 OHM
C117	22-3634	.05 MFD DISC 25V	R416	63-1842	15K OHM
C118	22-3634	.05 MFD DISC 25V	R417	63-1842	5.3K OHM 5%
C119	22-3634	.05 MFD DISC 25V	R418	63-1842	120K OHM 5%
C120	22-3634	.05 MFD DISC 25V	R419	63-1842	22 OHM
C121	22-3634	.05 MFD DISC 25V	R420	63-1842	470K OHM
C122	22-3634	.05 MFD DISC 25V	R421	63-1842	1300 OHM 5%
C123	22-3634	.05 MFD DISC 25V	R422	63-1842	500 OHM BIAS ADJUST
C124	22-3634	.05 MFD DISC 25V	R423	63-1842	520 OHM 5%
C125	22-3634	.05 MFD DISC 25V	R424	63-1842	220 OHM
C126	22-3634	.05 MFD DISC 25V	R425	63-1842	1 OHM SW
C127	22-3634	.05 MFD DISC 25V	R426	63-1842	22K 20%
C128	22-3634	.05 MFD DISC 25V	R427	63-1842	10 OHM
C129	22-3634	.05 MFD DISC 25V	R428	63-1842	3.3 MEG OHM 20%
C130	22-3634	.05 MFD DISC 25V	R429	63-1842	1500 OHM
C131	22-3634	.05 MFD DISC 25V	R430	63-1842	270K
C132	22-3634	.05 MFD DISC 25V	R431	63-1842	220K OHM
C133	22-3634	.05 MFD DISC 25V	R432	63-1842	330K
C134	22-3634	.05 MFD DISC 25V	R433	63-1842	27K OHM
C135	22-3634	.05 MFD DISC 25V	R434	63-1842	33K OHM
C136	22-3634	.05 MFD DISC 25V	R435	63-1842	390K OHM
C137	22-3634	.05 MFD DISC 25V	R436	63-1842	27K OHM
C138	22-3634	.05 MFD DISC 25V	R437	63-1842	12K
C139	22-3634	.05 MFD DISC 25V	R438	63-1842	1.5 MEG
C140	22-3634	.05 MFD DISC 25V	R439	63-1842	390K OHM
C141	22-3634	.05 MFD DISC 25V	R440	63-1842	68 OHM
C142	22-3634	.05 MFD DISC 25V	R441	63-1842	15K OHM
C143	22-3634	.05 MFD DISC 25V	R442	63-1842	5.3K OHM 5%
C144	22-3634	.05 MFD DISC 25V	R443	63-1842	120K OHM 5%
C145	22-3634	.05 MFD DISC 25V	R444	63-1842	22 OHM
C146	22-3634	.05 MFD DISC 25V	R445	63-1842	470K OHM
C147	22-3634	.05 MFD DISC 25V	R446	63-1842	1300 OHM 5%
C148	22-3634	.05 MFD DISC 25V	R447	63-1842	500 OHM BIAS ADJUST
C149	22-3634	.05 MFD DISC 25V	R448	63-1842	520 OHM 5%
C150	22-3634	.05 MFD DISC 25V	R449	63-1842	220 OHM
C151	22-3634	.05 MFD DISC 25V	R450	63-1842	1 OHM SW
C152	22-3634	.05 MFD DISC 25V	R451	63-1842	22K 20%
C153	22-3634	.05 MFD DISC 25V	R452	63-1842	10 OHM
C154	22-3634	.05 MFD DISC 25V	R453	63-1842	3.3 MEG OHM 20%
C155	22-3634	.05 MFD DISC 25V	R454	63-1842	1500 OHM
C156	22-3634	.05 MFD DISC 25V	R455	63-1842	270K
C157	22-3634	.05 MFD DISC 25V	R456	63-1842	220K OHM
C158	22-3634	.05 MFD DISC 25V	R457	63-1842	330K
C159	22-3634	.05 MFD DISC 25V	R458	63-1842	27K OHM
C160	22-3634	.05 MFD DISC 25V	R459	63-1842	33K OHM
C161	22-3634	.05 MFD DISC 25V	R460	63-1842	390K OHM
C162	22-3634	.05 MFD DISC 25V	R461	63-1842	27K OHM
C163	22-3634	.05 MFD DISC 25V	R462	63-1842	12K
C164	22-3634	.05 MFD DISC 25V	R463	63-1842	1.5 MEG

TRANSISTORS		
No.	PART No.	DESCRIPTION
Q1	121-826	F.M.-R.F.
Q2	121-613	F.M. CONVERTER
Q101	121-850	A.M.-R.F.
Q102	121-714	A.M. CONVERTER
Q201	121-614	A.M.-F.M. 1ST I.F.
Q202	121-546	A.M.-F.M. 2ND I.F.
Q203	121-546	F.M. 3RD I.F.
Q204	121-639	TUN. METER CONT.
Q301	121-639	COMP. AMPLIFIER
Q302	121-639	19 KHz AMPLIFIER
Q303	121-639	38 KHz AMPLIFIER
Q304	121-737	STEREO INDICATOR
Q305	121-858	BI-PLEX DETECTOR
Q401	121-433	PRE AMPLIFIER
Q451		
Q402		
Q452	121-430	AUDIO AMPLIFIER
Q403		
Q453	121-877	PRE DRIVER
Q404		
Q454	121-767	BIAS CONTROL
Q405		
Q455	121-878	DRIVER
Q406		
Q456	121-879	DRIVER
Q407		
Q457		
Q408	121-880	OUTPUT
Q458		

TEST POINTS	
A	FM ANTENNA INPUT
D	1ST FM I.F. INPUT
E	2ND FM I.F. INPUT
F	3RD FM I.F. INPUT
FI	RATIO DETECTOR INPUT
G	3RD FM OUTPUT
H	FM DETECTOR OUTPUT
J	FM B+
L	A.M. RF & I.F. INPUT
M	67 KHz REJECTION & MX PHASING
N	DOUBLER OUTPUT D.C. & 38 KHz
P	MX PHASING
T	MX DISABLE
HH	RATIO DETECTOR PRIMARY TUNING
AB	
AC	AUDIO BIAS
AD	
AE	

