

## ALIGNMENT PROCEDURES

### INSTRUMENTS REQUIRED

#### Signal Sources

1. RF Signal/Sweep Generator (RCA WR-50B or equivalent)
2. TV/FM Sweep Generator (RCA WR-69A or equivalent)
3. Marker Generator (RCA WR-99A or equivalent)

#### Output Indicators

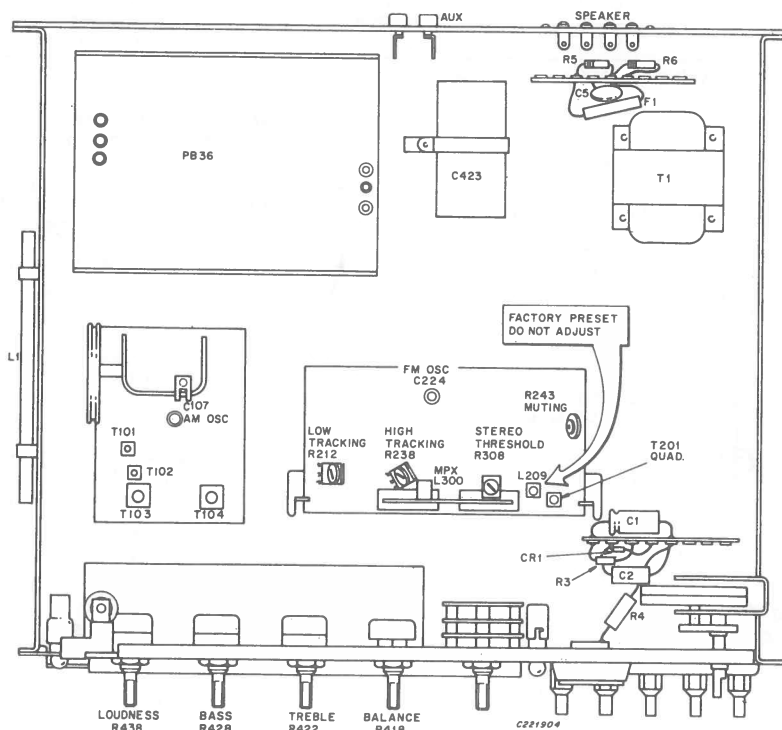
1. Electronic Voltmeter (RCA WV-98C or equivalent)
2. Oscilloscope (RCA WO-91C or equivalent)

### GENERAL ALIGNMENT CONDITIONS

1. Signal input must be kept as low as possible to avoid overload and clipping. (Use highest possible sensitivity of output indicator.)
2. Marker insertion must not distort the oscilloscope trace.
3. Standard modulation is 400 Hz at 30% amplitude.
4. A non-metallic alignment tool should be used for all adjustments.

## AM

Step	Connect Signal Source to—	Connect Output Indicator to—	Set Signal to—	Set Radio Dial to—	Adust	Adjust for—	Step
1	Set Radio Function Switch for "AM"						1
2	RF Generator to Point "A" on PB37	E.V.M.— Across Tape Output Jacks or Tuning Meter may be used as the output indicator	455 kHz (modulated)	Gang Fully Open	T104 Top & Bottom (2nd AM IF)	Maximum	2
3					T103 Top & Bottom (1st AM IF)		3
4	RF Generator— A standard radiating loop or short piece of wire placed near the AM antenna		1620 kHz (modulated)		C107 (Oscillator Trim)		4
5			1400 kHz (modulated)	1400 kHz			C101-1T (RF Trim)
6					C101-3T (Ant. Trim)		6
7			600 kHz (modulated)	600 kHz (rock gang)	T101 (RF Trans.)		7
8					T102 (Osc. Coil)		8
9	Repeat steps 4 through 9 as necessary to obtain Maximum sensitivity on stations						9



RC 1246 Chassis Layout

# FM

Step	Connect Signal Source to—	Connect Output Indicator to—	Set Signal to—	Set Radio Dial to—	Adjust	Adjust for—	Step
1	Set Function Switch for “FM”, Short Base of Q202 to Gnd.						1
2		Voltmeter from Arm of R200 to Gnd.		108.5 MHz	R238	9V	2
3				87.5 MHz	R212	4V	3
4	Repeat steps 2-3						4
5	Sweep Gen. to Ant. Terminals with marker Generator loosely coupled to Ant.	Scope to Base of Q203 Thru Probe Shown Figure 1.	98-108 MHz Range with 108.5 MHz marker.	108.5 MHz	Expand or Compress L204	Maximum Amplitude at 108.5 MHz	5
6					L206		6
7					L202		7
8					L203		8
9			88-98 MHz Range with 87.5 MHz marker.	87.5 MHz	R212	Center Response Curve on 87.5 MHz	9
10		Voltmeter from Arm of R200 to Gnd.		108.5 MHz	R238	9V	10
11	Repeat steps 9 & 10 until no further adjustment is required						11
12	Tune down the dial observing response curve amplitude thru out the Band. If any appreciable deviation in amplitude is observed repeat steps 5 thru 10.						12
13	Remove short from Base of Q202						13
14	Sweep Gen. to Ant. Terminals	Scope thru direct probe to Pin 15 of IC 201	98-108 MHz Range	Quiet Area on dial Near 108 MHz	C224 (OSC Trim)	A definite Peak in Amplitude	14
15			88-98 MHz Range	Quiet Area on Dial Near 88 MHz	Expand or Compress L207, L208		15
16	Repeat steps 14-15 until no further correction can be made						16
17	Sweep Gen. to Ant. Terminals	Scope thru direct probe to Pin 11 of J202 (Mplx Socket)	88-98 MHz Range Narrow Sweep Width	Tune to Center of “S” Curve	T201 (Quad. Coil)	Minimum Horizontal Movement of “S” Curve as AFC is switched on/off	17
18				Between Stations	R243 Muting	A point just before muting all noise*	18

\*May require adjustment to suit individual customer

## MULTIPLEX ALIGNMENT

1. Tune the receiver to a station known to be broadcasting a stereo signal.
2. Turn the core of the multiplex coil, L300, to the bottom.
3. Unlock the oscillator by momentarily switching the function switch to the "AM" position. The stereo indicator light should now be off. It may be necessary to disconnect the antenna from the chassis in strong signal areas.

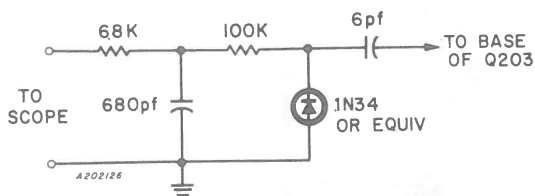


Fig. 1  
Detector Probe

4. Very carefully turn the core of L300 counterclockwise until the stereo indicator lights. Note the mechanical position of the core slot.
5. Resume turning the core in a counterclockwise direction while alternately switching the function switch to "AM" & "FM" positions. Note the mechanical position of the core slot when the stereo indicator fails to light as the receiver is returned to the "FM" position.
6. Adjust the core slot to center between the two positions determined in steps 4 & 5. See figure 2.

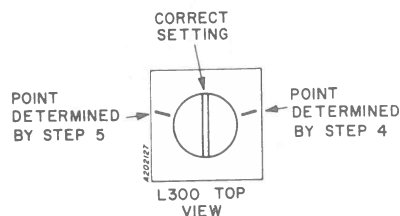
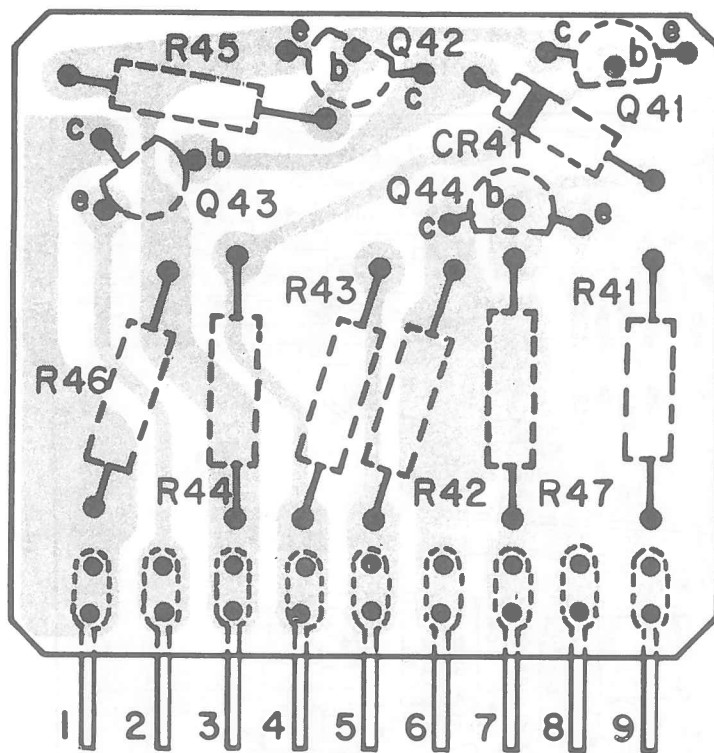
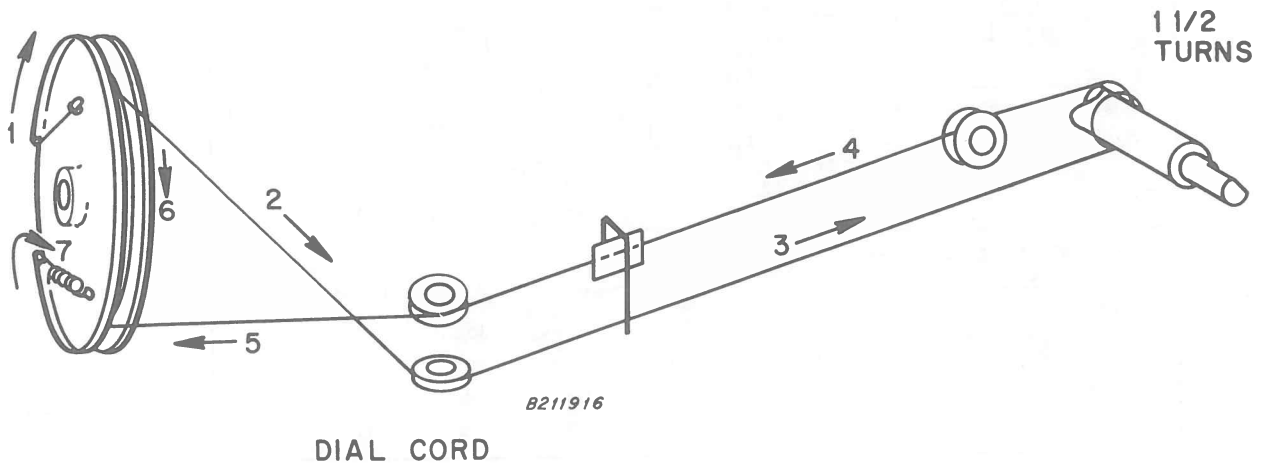


Fig. 2  
Multiplex Align.

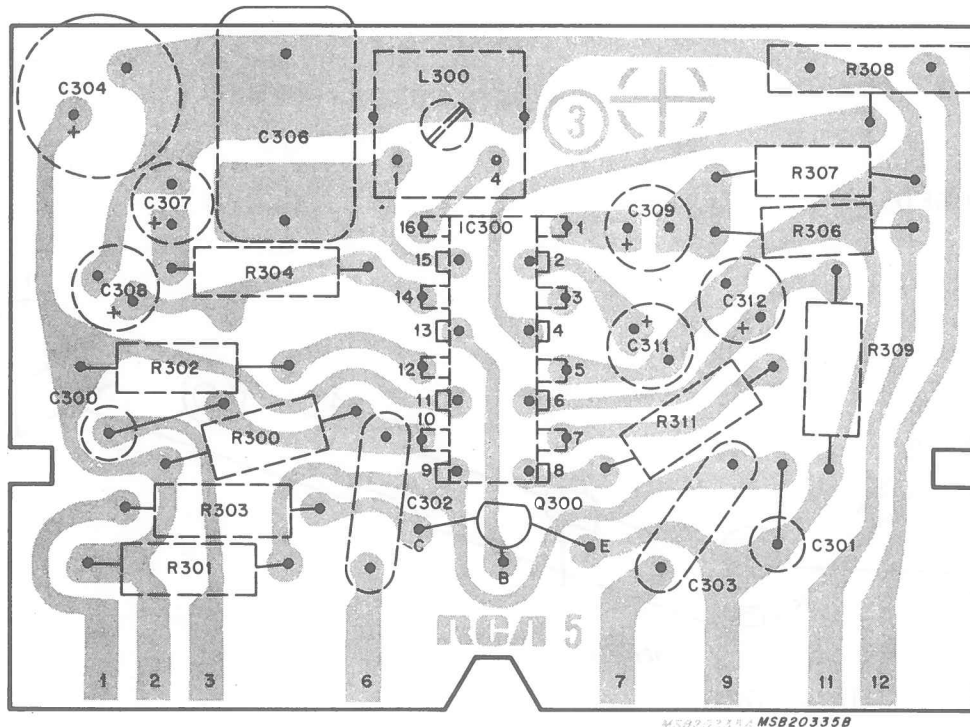
GANG FULLY CLOSED



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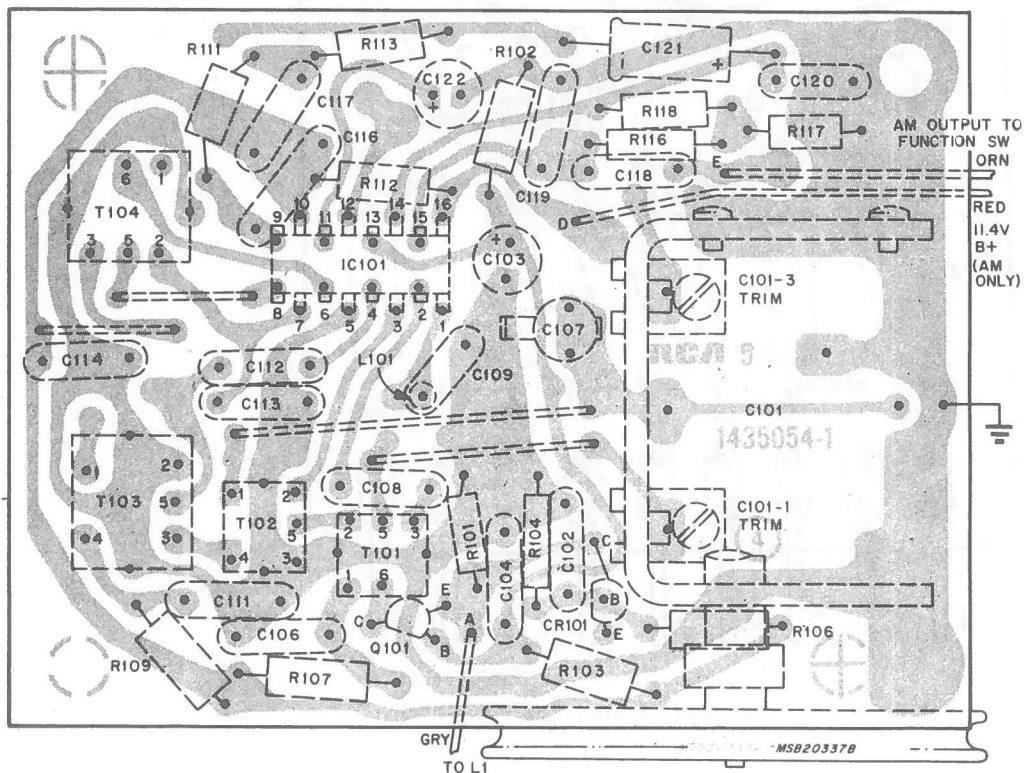
PB41—Component Location (Z401/402)

## MULTIPLEX



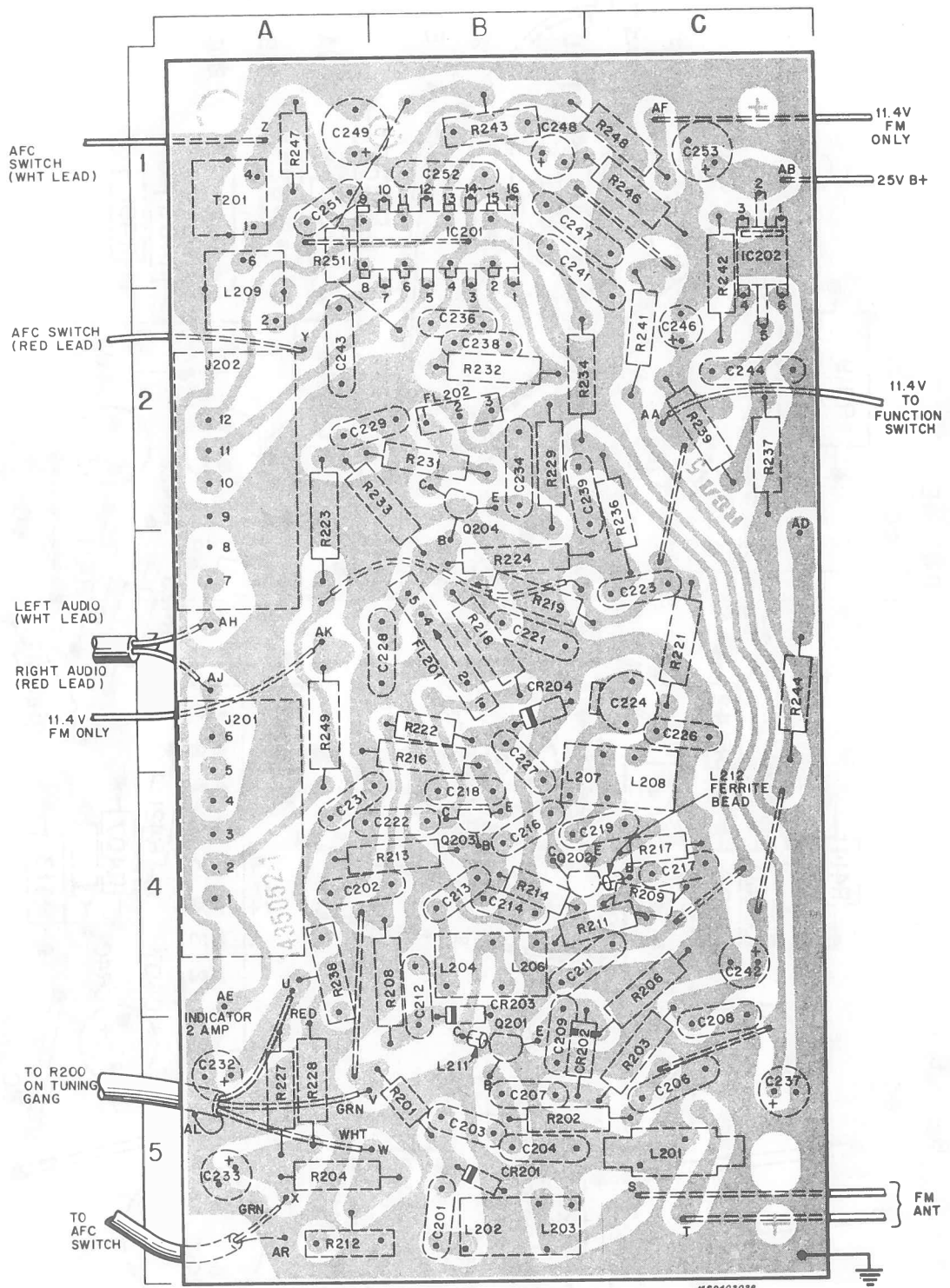
PB39—Component Location

## AM

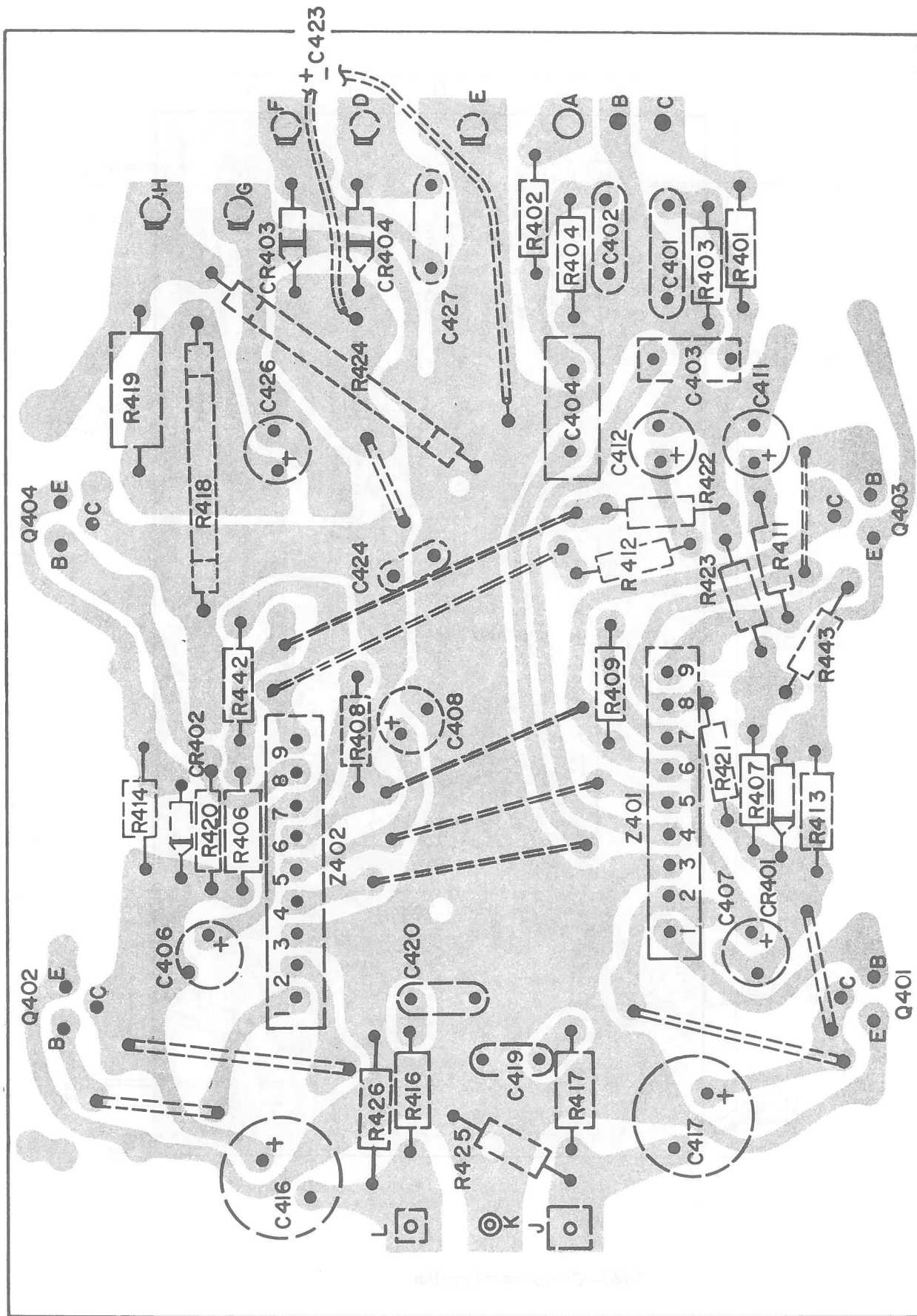


PB37—Component Location

# **RCA RK-344D, RK-348D, VS4001WZ, VS6026WZ (Ch. 1246A)**



PB40—Component Location



MSB20278C

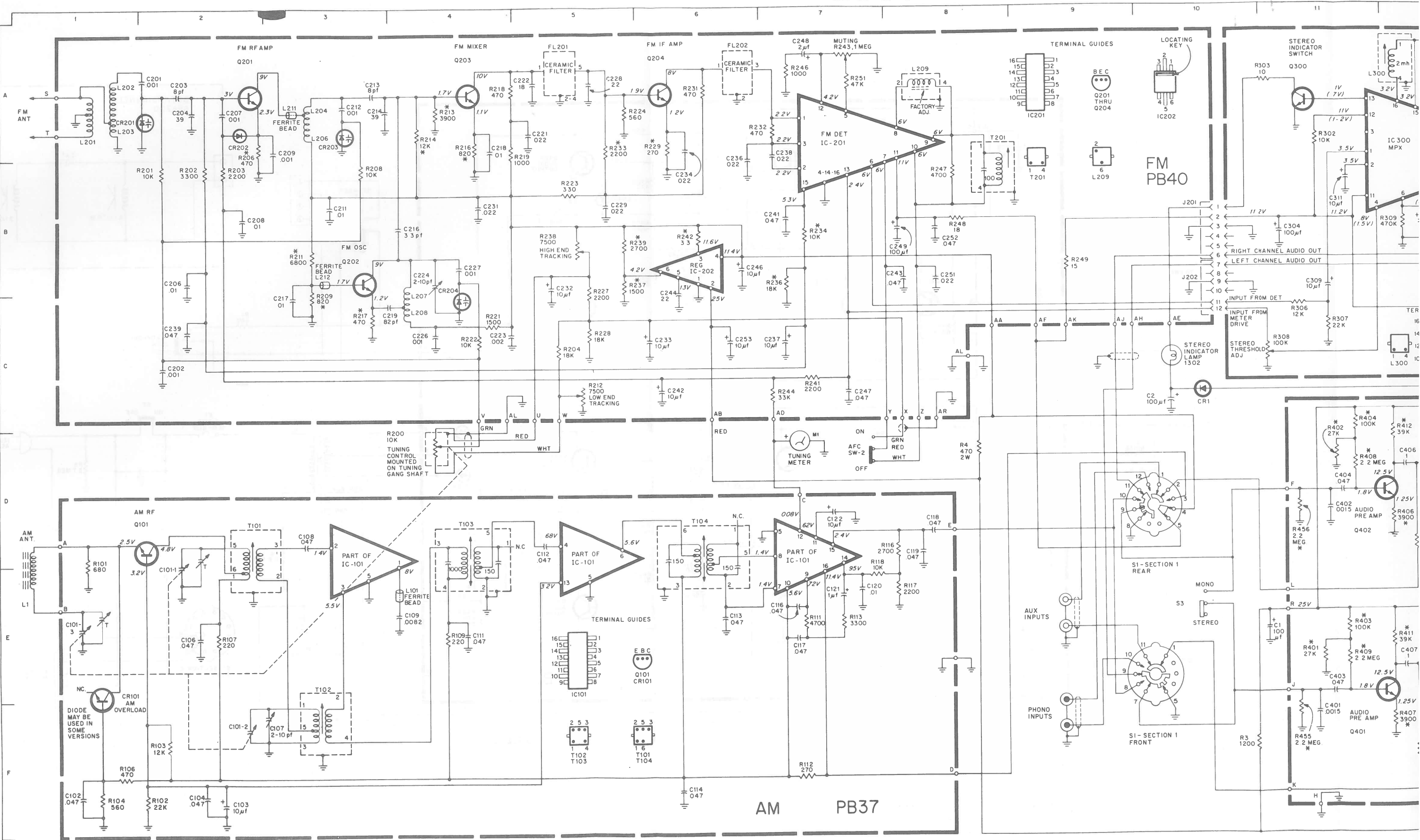
PB36—Component Location

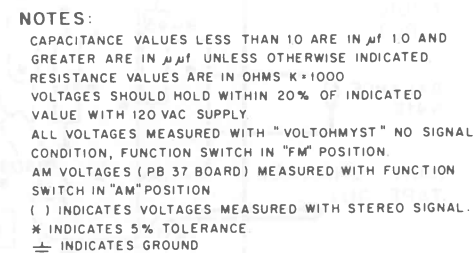


RC 1246A SCHEMATIC DIAGRAM

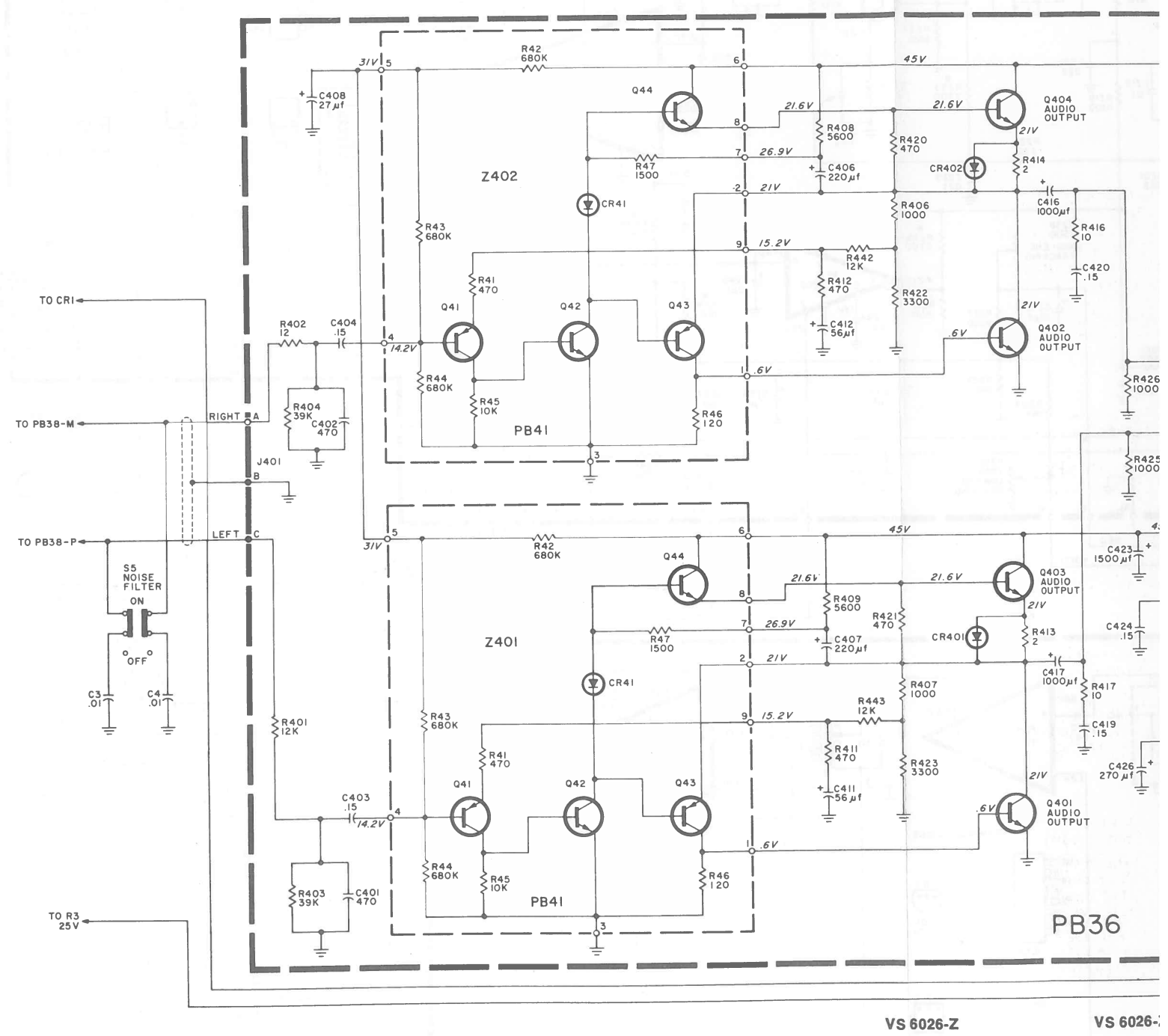
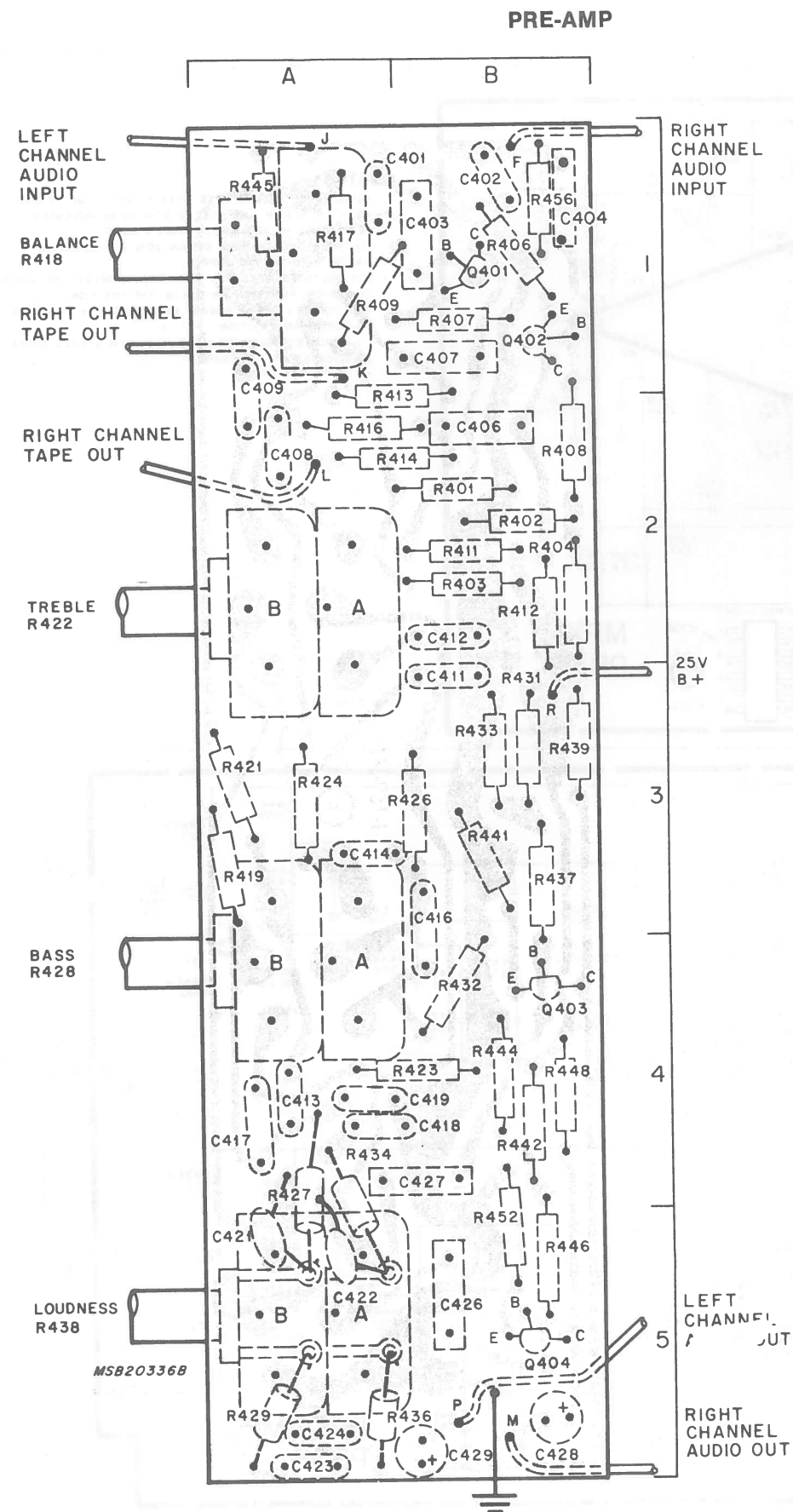
1972 No. 52

1972 No. 52

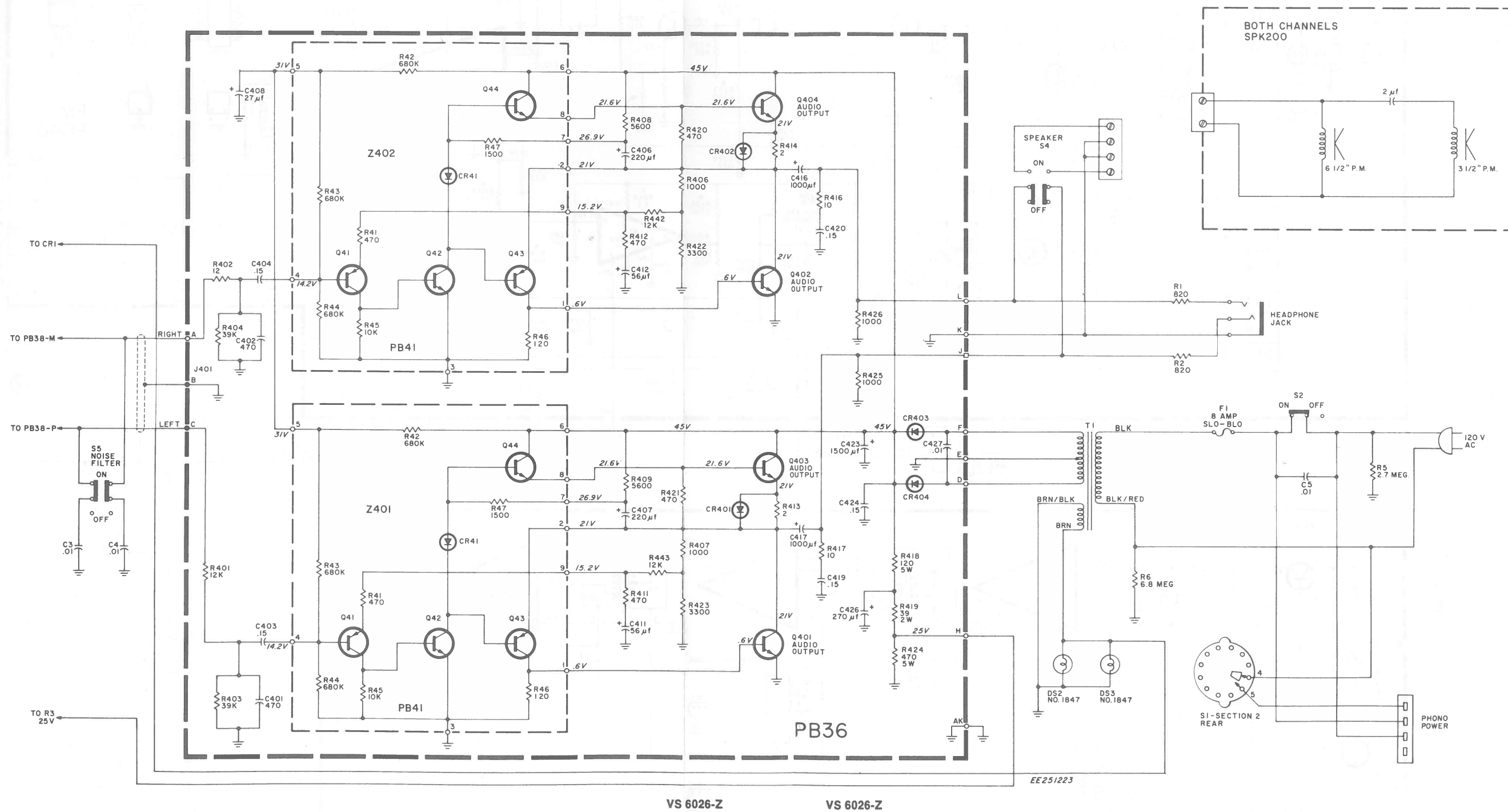








RCA RK-344D, RK-348D, VS4001WZ, VS6026WZ (Ch. 1246A)



# RCA RK-344D, RK-348D, VS4001WZ, VS6026WZ (Ch. 1246A)

(PB41) (Z401 & Z402)

CR41 (2)		131245(1472460-16)
Q41 (2)	112-8	131242 (147112-8)
Q42 (2)	120-8	131243(1471120-8)
Q43 (2)	112-7	131241(1471112-7)
Q44 (2)	120-7	131240(1471120-7)

(CHASSIS)

CRT	125105(973936-20)
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## ELECTROLYTICS/VARIABLE CAPS

ITEM	VALUE	PART NO.
(PB36)		
C406	220uF 10V	135249(1446668-231)
C407	220uF 10V	135249(1446668-231)
C408	27uF 50V	135247(1446666-981)
C411	56uF 25V	135248(1446667-461)
C412	56uF 25V	135248(1446667-461)
C416	1000uF 35V	134376(1096517-2)
C417	1000uF 35V	134376(1096517-2)
C423	1500uF 70V	134353(1445856-1)
C426	270uF 35V	132778(1472503-15)

(PB37)

C101	Tuning Gang	136161(1464434-1)
C103	10uF 15V	132543(1446656-441)
C107	Trimmer	116501(945366-5)
C121	1uF 50V	136158(1446650-181)
C122	10uF 15V	132543(1446656-441)

(PB38)

C423	2uF 50V	120083(1471882-10)
C429	2uF 50V	120083(1471882-10)

(PB39)

C304	100uF 15V	115803(1470494-9)
C307	2uF 50V	120083(1471882-10)
C308	2uF 50V	120083(1471882-10)
C309	10uF 15V	132543(1446656-441)
C311	10uF 15V	132543(1446656-441)
C312	2uF 50V	120083(1471882-10)

(PB40)

C224	Trimmer	13-129(1474578-5)
C232	10uF 15V	132543(1446656-441)
C233	10uF 15V	132543(1446656-441)
C237	10uF 15V	132543(1446656-441)
C242	10uF 15V	132543(1446656-441)
C246	10uF 15V	132543(1446656-441)
C248	2uF 50V	120083(1471882-10)
C249	100uF 15V	115803(1470494-9)
C253	10uF 50V	418689(1446656-481)

(CHASSIS)

C2	100uF 15V	119358(1443419-9)
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## SEMICONDUCTORS

ITEM	TYPE	PART NO.
(PB36)		
CR401		127993(1474778-7)
CR402		127993(1474778-7)
CR403		127835(1474778-8)
CR404		127835(1474778-8)
CR408		131245(1472460-16)
CR409		131245(1472460-16)
Q401	132-5	131161(1471132-5)
Q402	132-5	131161(1471132-5)
Q403	132-5	131161(1471 32-5)
Q404	132-5	131161(1471132-5)
Q406	112-8	131242(1471112-8)
Q407	112-8	131242(1471112-8)
Q408	120-8	131243(1471120-8)
Q409	120-8	131243(1471120-8)
Q412	112-7	131241(1471112-7)
Q413	112-7	131241(1471112-7)
Q414	120-7	131240(1471120-7)
Q415	120-7	131240(1471120-7)

(PB37)

CR101		136163(1471872-16)
IC101		136145(1464437-2)
Q101	115-13	136165(1471115-13)

(PB38)

Q401	122-6	136430(1471122-6)
Q402	122-6	136430(1471122-6)
Q403	122-6	136430(1471122-6)
Q404	122-6	136430(1471122-6)

(PB39)

IC300		136147(1464439-2)
Q300	115-4	136239(1471115-4)

(PB40)

CR201 & (1)		136164(1476689-1)
CR203 &		
CR204		
CR202		136162(1476690-1)
IC201		136146(1464438-2)
IC202		134340(1464295-2)
Q201	3657-1	136168(1473657-1)
Q202	3657-2	136240(1473657-2)
Q203	3657-2	136240(1473657-2)
Q204	3657-1	136168(1473657-1)

## CONTROLS/SPECIAL RESISTORS

ITEM	DESCRIPTION	PART NO.			
R200	Varactor Tuning	136152(1476675-1)	PB39	PCB, MPX (Complete)	136143(1454938-502)
R212	Tracking High End	137269(1473359-6)	PB40	PCB, FM (Complete)	136144(1454939-504)
R238	Tracking Low End	137269(1473359-6)	PB41	(1) Z401/Z402	136252(1454940-502)
R243	Muting	137270(1473359-9)		(Complete)	
R308	Threshold	137271(1473359-8)	S1	Switch, Function	137505(1476691-1)
R418	Balance	137272(1472223-2)	S2	Switch, On/Off	136717(146440-2)
			S3	Switch, Stereo/Mono	134921(1463166-8)
R418	120 ohms, 5W	131262(1444859-8)	S4	Switch, Speaker/Phono	134921(1463166-8)
	10% WW		S5	Switch, Noise Filter	134921(1463166-8)
R419	39 ohms, 2W 10%WW	116436(993022-254)	S6	Switch, AFC	134921(1463166-8)
R422A &	Treble	137273(1472229-7)		Cord, AC Power	136719(946264-1)
R422B				Changer Assembly	RP-234B-11
R424	470 ohms, 5W 10%W	134352(1444859-5)		Dial Pointer	134917(1445897-1)
R428A &	Bass	137274(1472229-6)		Meter, Tuning	130673(1475826-2)
R428B				Speaker, 6 1/2"	131143(1454687-503)
R438A &	Loudness	136148(14722219-5)		S6.8 ohms	
R438B				Speaker, 3 1/2"	132455(1454685-502)
				10 ohms	

## COILS/TRANSFORMERS

ITEM	PART NO.
L1	137504(1476692-1)
L101	119971(1443391-2)
L201	130291(1443286-2)
L209	137267(1445873-1)
L211	116761(1443391-1)
L212	119971(1443391-2)
L300	136169(1445867-1)
T1	137506(1461174-26)
T101	136174(962975-5)
T102	136173(962981-10)
T103	136172(1444829-7)
T104	136171(1444829-8)
T201	136170(1445872-1)

## MISCELLANEOUS

ITEM	NAME	PART NO.
DS2	Lamp, Dial(#1847)	103211(1401363-4)
DS3	Lamp, Dial(#1847)	103211(1401363-4)
	Lamp, Stereo Indicator(#1302)	130327(1401363-23)
F1	Fuse	130792(988794-7)
FL201	Ceramic Filter	170610(1410750-1)
FL202	Ceramic Filter	170610(1410750-1)
PB36	PCB, Power Amp (Complete)	135282(1454935-515)
PB37	PCB, AM (Complete)	136141(1454936-502)
PB38	PCB, Preamp (Complete)	136142(1454937-504)

## CABINET PARTS

NAME	PART NO.
Cabinet, Dust Cover	132302(1475894-502)
Crystal, Escutcheon	(3) 128311(1475894-501)
Escutcheon	136714(1476660-1)
	(3) 137596(1476645-2)
Dial Tuning	136715(1435031-504)
Foot	(3) 136724(1435031-506)
Knob, Control (4 used)	137596(1476645-2)
Knob, Function	134934(1446346-1)
Knob, Tuning	136701(1436623-501)
	136725(1436623-507)
	134306(1436634-503)
Speaker Cabinet	(3) 134206(1436634-503)
	SPK-200WA

- (1) Matched set of three.  
 (2) Two used per unit.  
 (3) Use only for VS4001WZ Models.