

FM ALIGNMENT

GENERAL INFORMATION - The factory alignment is performed with laboratory equipment. The circuits are quite stable and not ordinarily subject to drift. Therefore, before alignment is attempted, the set should be thoroughly checked for circuit troubles. An FM generator should be used for FM alignment.

ALIGNMENT CONDITIONS - Input level to the receiver +14.0V DC. During FM alignment, the generator signal amplitude must be set above or below the receiver limiting level depending on the adjustment made. The limiting level is the point where further increase in input does not increase the output level. During alignment then, either keep the RF level below this point (below limiting level) or above this point (into limiting) as pointed out in the alignment procedure. In addition, the signal generator leads must be short and carefully shielded. If noise voltage on the generator leads is high enough to cause limiting, it is almost impossible to align the receiver properly because tuning adjustments will not show up as variations in the VTVM reading.

FM ALIGNMENT USING FM GENERATOR - ALL MODELS EXCEPT - 3515

STEP	GENERATOR CONNECTION	GENERATOR FREQUENCY	RADIO FREQUENCY	OUTPUT INDICATOR	ADJUST	REMARKS
FM - IF ALIGNMENT						
1	Direct thru ant receptacle	10.7Mhz (75Khz deviation @ 400Hz Mod - into limiting, 100KuV or better)	108Mhz	VTVM-AC probe or scope across 3.2 ohm output load	T2	Adjust for max output.
2	"	10.7Mhz (75Khz deviation @ 400Hz Mod below limiting)	"	"	T1	Adjust for max output. Repeat steps 1 & 2 for optimum peak.
The following steps are required to bring the IF system into line with the ceramic filters in order to achieve maximum sensitivity.						
3	"	98Mhz (75Khz deviation @ 400Hz Mod - below limiting)	98Mhz	"	Radio freq.	Adjust for best Symmetry on scope, or max output on VTVM.
4	"	98Mhz (75Khz deviation @ 400Hz Mod - into limiting 100KuV or better)	"	"	T2	Adjust for max output.
5	"	98Mhz (75Khz deviation @ 400Hz Mod - below limiting)	"	"	T1	" Repeat steps 3,4 & 5 for optimum peak.

FM - RF ALIGNMENT - DO NOT perform Steps 6, 7, 8 & 9 unless the tuner has been tampered with or associated components have been replaced. Before proceeding with Step 6, back the FM tuning cores as far as possible out of the coils to eliminate their effect on trimmer adjustments.						
6	Antenna receptacle thru termination (Fig. 14)	108Mhz (22.5Khz deviation @ 400Hz Mod - use max sig)	108Mhz	VTVM-AC probe or scope across 3.2 ohm output load	C18	Adjust for max signal output.
7	"	108Mhz (22.5Khz deviation @ 400Hz Mod - below limiting)	"	"	C9, C4	"
8	"	98Mhz (22.5Khz deviation @ 400Hz Mod - use max sig)	98Mhz	"	L4	Adjust for max signal output. See "FM Alignment Locations" detail for core carriage note.
9	"	98Mhz (22.5Khz deviation @ 400Hz Mod - below limiting)	"	"	L3, L2	Adjust for max signal output. See Fig. 15 for core carriage note. Repeat steps 6 thru 9.

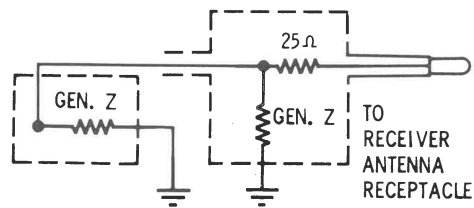


FIG. 14 - FM GENERATOR TERMINATION

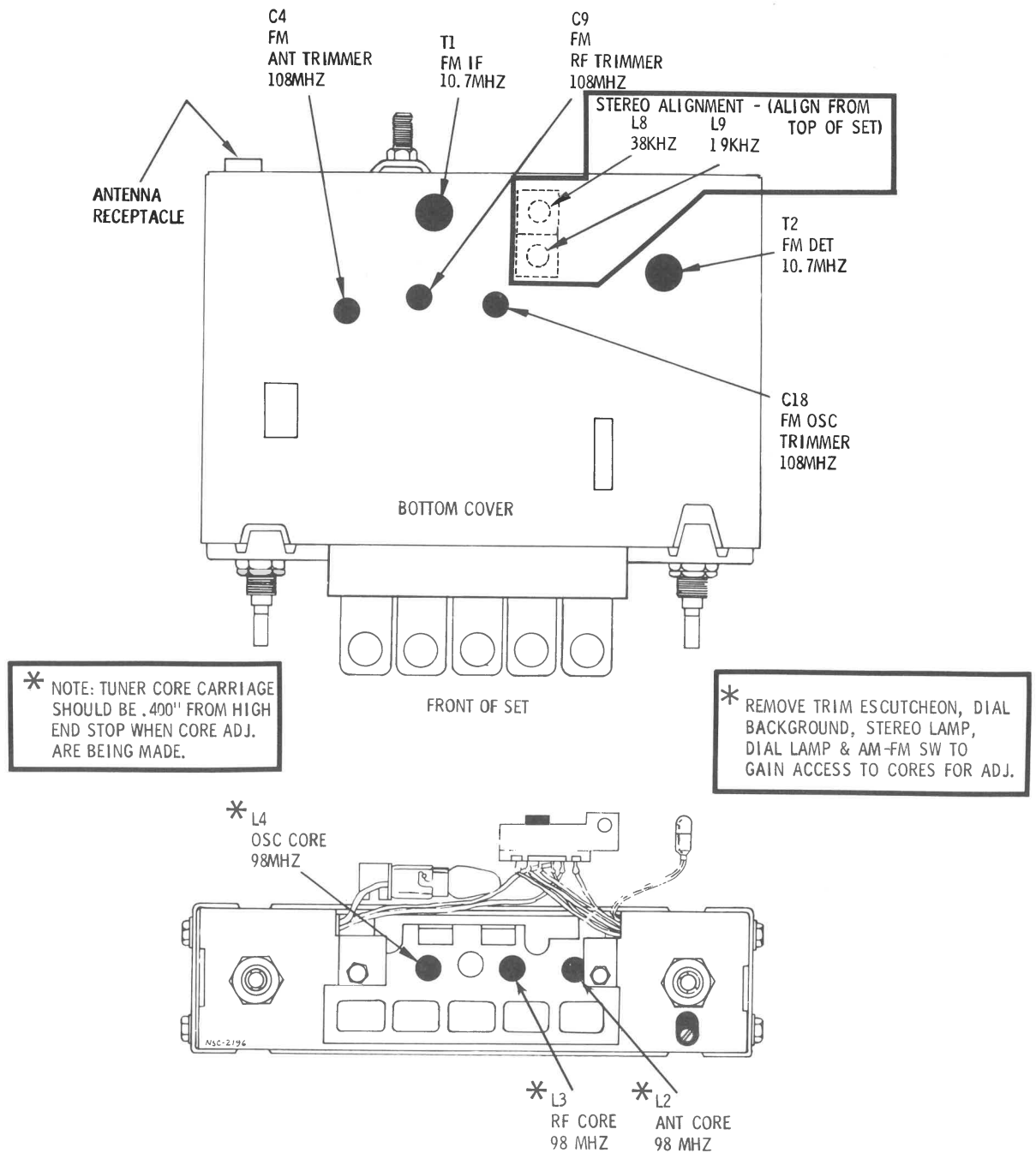


FIG. 15 - FM & MPX ALIGNMENT POINT LOCATION (ALL MODELS EXCEPT 2MM3515)

Mazda 5MM3406(0000-10-103)
Volvo 2VV3514(11281003-1), 2VV3609
(11281992-5), 5VV3404

FM STEREO RECEPTION

When the receiver is tuned to a sufficiently strong FM stereo station, the stereo indicator will become illuminated. As long as 25uV or better of signal strength is received, the indicator will remain illuminated.

A recovered stereo signal is inherently more noisy than a comparable monaural signal; the weaker the signal, the higher the resultant noise level. Typically, the signal/noise ratio for a demodulated stereo signal is 20db less than that of an equivalent monaural signal. Consequently, a 40db signal/noise ratio would be required in monaural operation, before switching to stereo, if adequate signal/noise and separation are to be realized.

To maintain an acceptable signal/noise ratio when tuned to a weak FM stereo station, the receiver switches to the mon-

aural mode of operation. (The stereo indicator light will go out, both speakers will operate, but without the stereo effect.) As the signal strength increases the noise level will drop and the receiver will switch back to a stereo mode of operation. This switching action from stereo to monaural and back to stereo is automatic and requires no adjustments by the customer.

Good stereo reception requires a relatively strong composite signal on pin 3 of IC2 in addition to a positive DC voltage on pin 4. The DC voltage varies with signal strength and is derived from IC1. The DC voltage will rise to 1.5 volts (representing a received signal of 25uV or more) and then drop down to 0.9 volts as the receiver switches to stereo operation. In this way, a good signal/noise ratio is assured during stereo operation.

STEREO ALIGNMENT

The FM stereo multiplex system should be aligned only with the use of an FM multiplex generator.

The following steps must be performed before starting to align an FM stereo multiplex system.

1. The "AM-FM" switch must be in the "FM" position.
2. The generator output must be at a high RF level (100uV

better.) The FM stereo light (E4) should be lit during the alignment procedure. If it is not, either the generator output is too low, the circuits are out of alignment or inoperative.

3. FM radio "IF's" must be properly aligned before beginning multiplex alignment. CAUTION should be observed when servicing the multiplex IC. Shorting or grounding of contact pins will cause damage to the IC.

ALL MODELS EXCEPT - 3515

STEP	GENERATOR CONNECTION	MODULATION	OUTPUT INDICATOR	ADJUST	REMARKS
1	Connect an RF signal modulated with multiplex signal to antenna input	19Khz pilot @ 10% modulation	Connect low capacity probe of AC voltmeter to pin 2 of L9. Use lowest possible range on AC voltmeter	L9, 19Khz coil	1. Accurately tune radio to RF frequency of stereo generator. 2. Turn off left and right channel multiplex signals. 3. Adjust L9 for max output.
2	"	"	Connect low capacity probe of AC voltmeter to pin 13 of multiplex chip IC2. Use lowest possible range on AC voltmeter	L8, 38Khz coil	1. Adjust L8 for max output.
3.	"	"	Connect receiver speaker leads to output indicators (either separate meters or part of multiplex generator)	L8, then L9	1. First turn on left and right channel multiplex signals and adjust audio output to 1 watt in each channel. Then turn off right channel multiplex signal and adjust L8 and L9 for a minimum in the right channel output indicator (max separation.) 2. Repeat procedure for left channel separation. 3. Remove all test equipment and check for proper stereo operation.

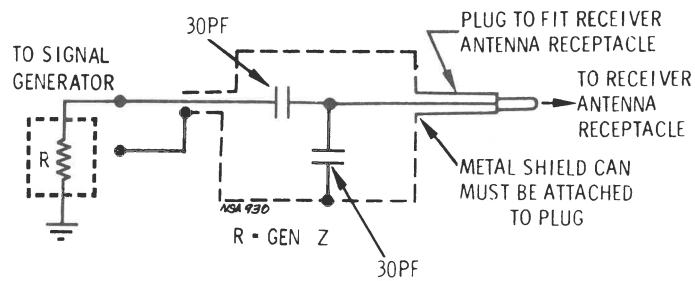
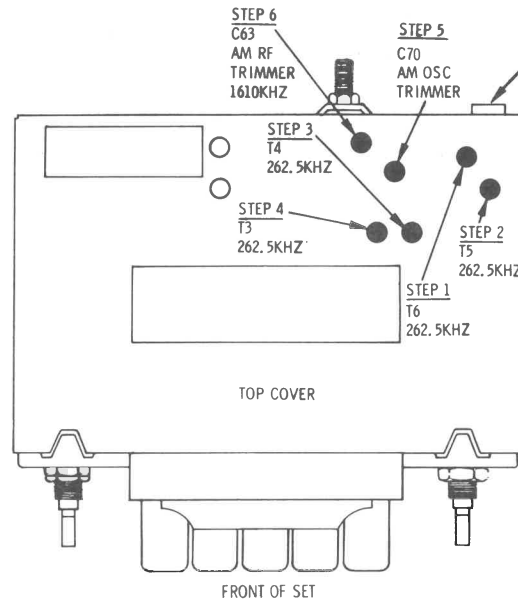


FIG. 21 - AM DUMMY ANTENNA DETAIL

AM ALIGNMENT
ADJUST ALL STEPS FOR MAX OUTPUT INDICATION ON A.C. METER, CONNECTED ACROSS SPEAKER LOAD. MAINTAIN APPROX. 1 WATT OUTPUT DURING ALIGNMENT PROCEDURE (1.79V) ACROSS 3.2Ω LOAD). REPEAT ALL ADJUSTMENTS AS REQUIRED UNTIL NO FURTHER IMPROVEMENT IS OBTAINED.



* CORE ADJUSTMENTS

NOTE: ADJUST ONLY IF NECESSARY-DUE TO POOR SENSITIVITY, AFTER ADJUSTMENT REPEAT STEPS 5,6&7 IF NECESSARY
NOTE: TUNER CORE CARRIAGE SHOULD BE 443" FROM HIGH END STOP WHEN CORE ADJUSTMENTS ARE BEING MADE.
NOTE: TRIM ESCUTCHEON, DIAL BACKGROUND, PILOT LIGHT, STEREO LIGHT, & SWITCH MUST BE REMOVED TO PERFORM CORE ADJUSTMENTS.

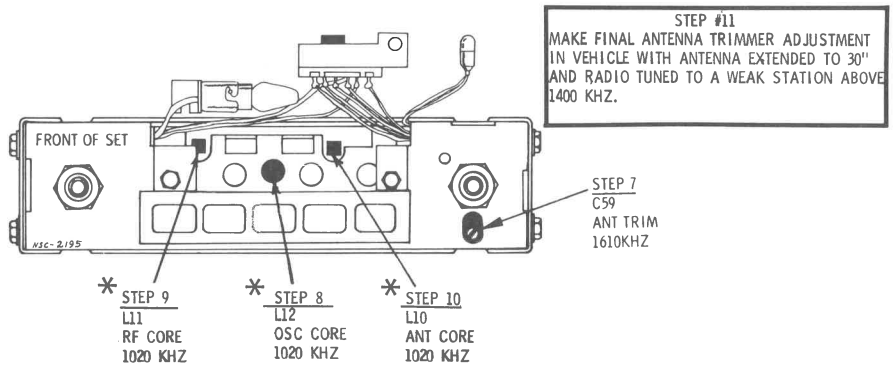


FIG. 22 - AM ALIGNMENT POINT LOCATION (ALL MODELS EXCEPT 2MM3515)



Mazda 5MM3406(0000-10-103)
Volvo 2VV3514(11281003-1), 2VV3609
(11281992-5), 5VV3404

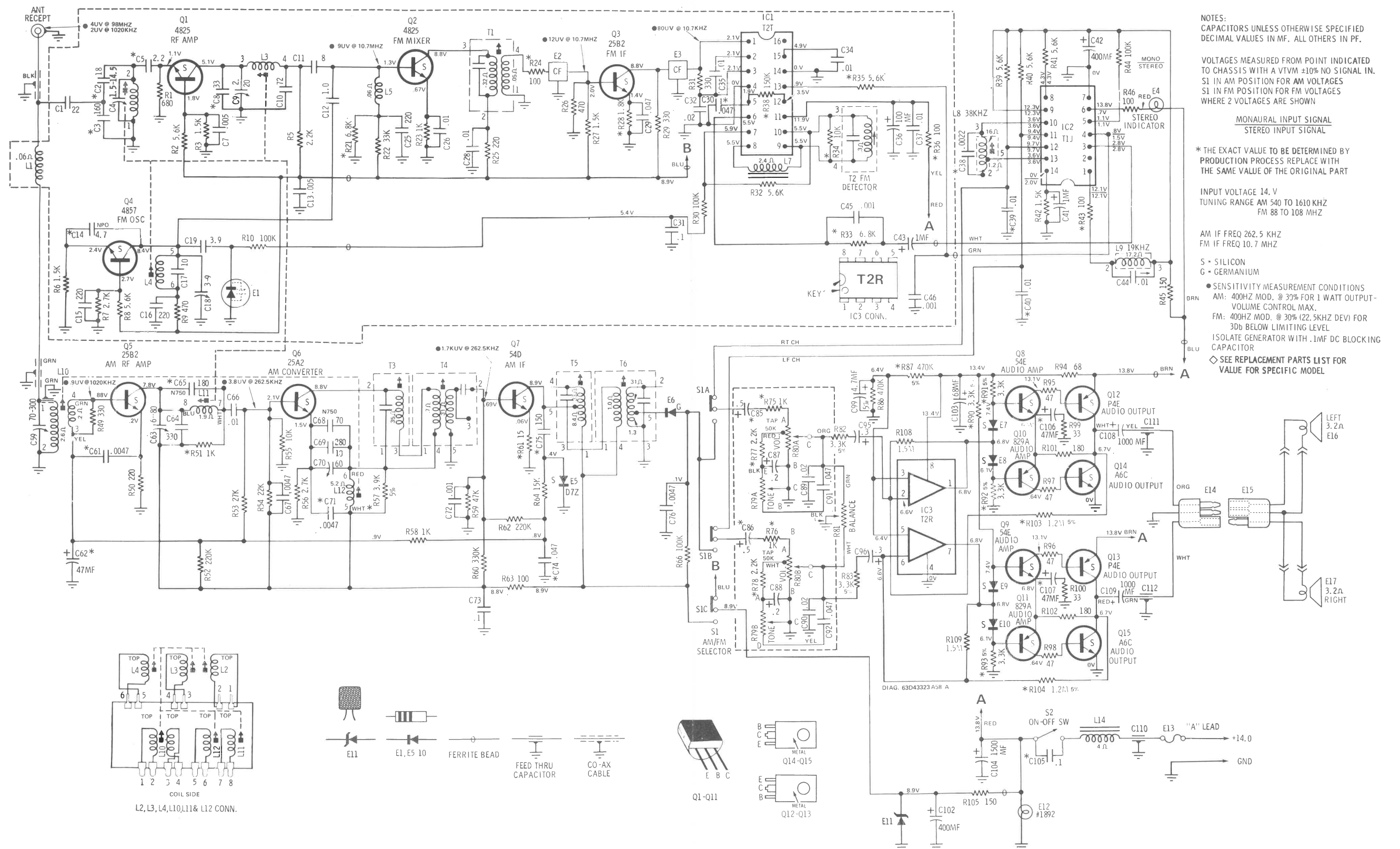
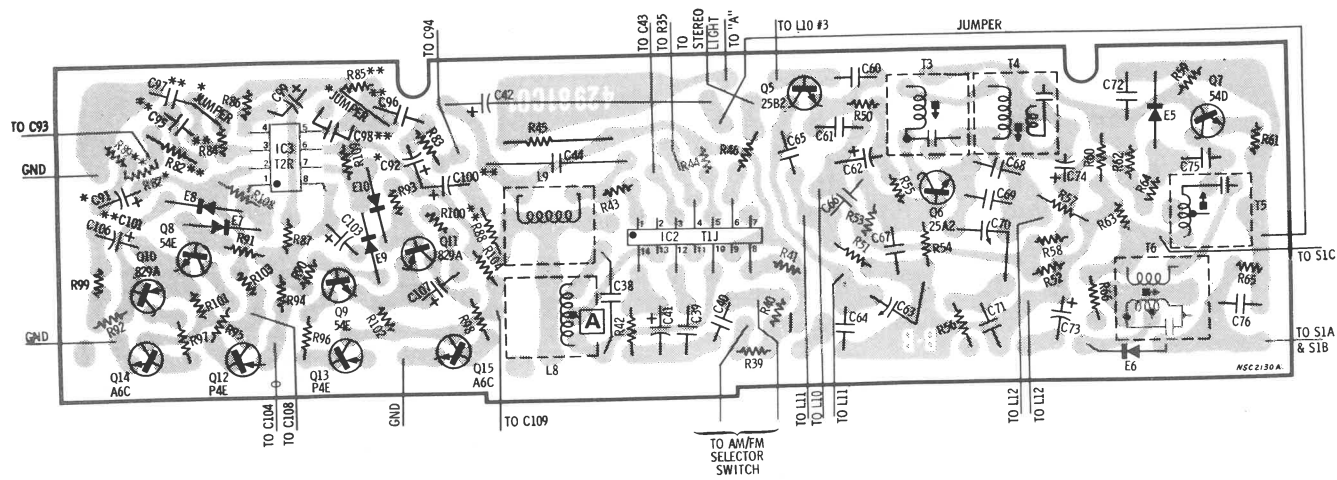


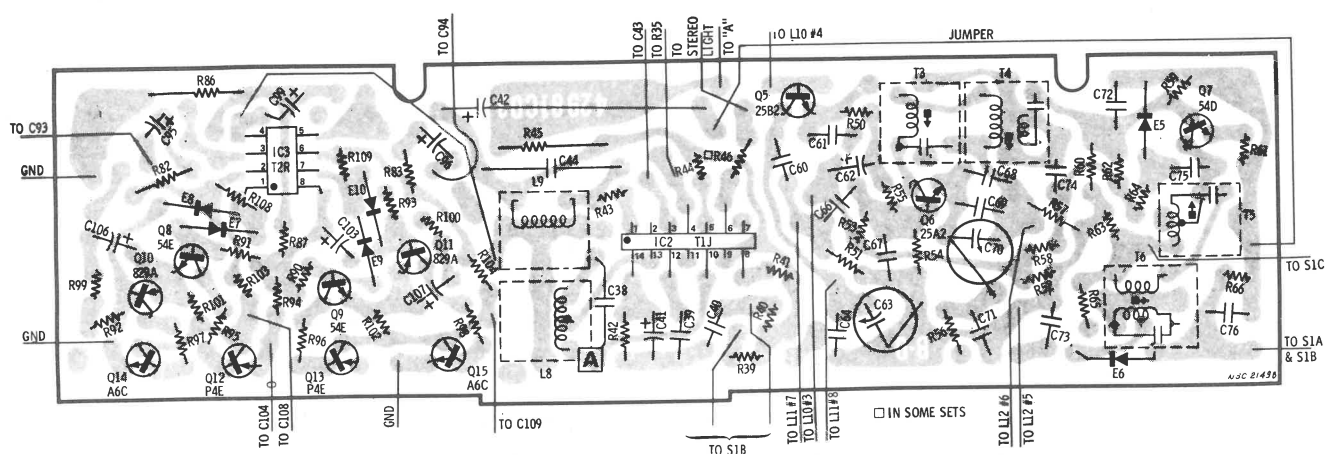
FIG. 23 - 2VV3514, 2VV3609 SCHEMATIC DIAGRAM

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Volvo 2VV3514(11281003-1), 2VV3609
(11281992-5), 5VV3404



BOTTOM VIEW - WIRING SIDE

FIG. 17 - AM/AUDIO/MPX PLATED BOARD DIAGRAM
(ALL MODELS EXCEPT 2VV3514, 2MM3515 & 2VV3609)



BOTTOM VIEW - WIRING SIDE

FIG. 18 - AM/AUDIO/MPX PLATED BOARD DIAGRAM (MODELS 2VV3514, 2VV3609)

Mazda 5MM3406(0000-10-103)
Volvo 2VV3514(11281003-1),2VV3609
(11281992-5),5VV3404

ALL MODELS EXCEPT 2MM3515

NOTE: ALL PARTS LISTED ARE RECOMMENDED REPLACEMENT PARTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRICAL PARTS					
CAPACITORS					
C1	21-43539A40	22PF 10% 100V NPO disc	C42	23-42674B10	400MF 16V lytic
C2	21-43539A51	18PF 10% 100V N150 disc (3514 & 3609)	C43	23-42582B03	1MF 25V lytic
	21-43539A70	4.7PF ±.25PF 100V N150 disc (All models except 3514&3609)	C44	8-10226A76	.01MF 5% 33V N150 poly
C3	21-40367A32	160PF 5% 100V mica(3514&3609)	C45	21-43538A45	330PF 10% 100V Z5F disc(All models except 3403,3514,3609)
	21-43539A24	47PF 10% 100V N220 disc (All models except 3514 & 3609)		21-43538A31	.001MF 10% 100V Z5F disc(3403, 3609)
C4	20-40392F04	TRIMMER,POLY:FM ANT 1.5-14.5PF		8-42208B08	.001MF 20% 50V mylar(3514)
C5	21-43539A14	2.2PF 10% 100V NPO disc	C46	21-43538A31	.001MF 10% 100V Z5F disc
C6	21-43538A43	.005MF 20% 100V Z5U disc (All models except 3514 & 3609)	C59	20-40647C01	TRIMMER,VARIABLE MICA:AM ANT 70-300PF
C7	21-43538A43	.005MF 20% 100V Z5U disc	C60	21-43538A45	330PF 10% 100V Z5F disc (All models except 3514 & 3609)
C8	21-40367A25	33PF 10% 100V mica		21-43539A57	180PF 5% 100V N750 disc(3514 & 3609)
C9	20-40392F02	TRIMMER,POLY:FM RF 2-20PF	C61	8-42208B16	.0047MF 10% 50V mylar
C10	21-40367A21	72PF 10% 100V mica(3514&3609)	C62	23-42674B23	47MF 10V lytic
	21-43539A89	72PF 10% 100V N150 disc(All models except 3514 & 3609)	C63	20-43646B02	TRIMMER,CERAMIC:AM RF 30-90PF (All models except 3514&3609)
C11	21-43539A25	8PF 10% 100V NPO disc		20-40391F02	TRIMMER,POLY:AM RF 6-80PF(3514 & 3609)
C12	21-43539A16	1PF ±.25PF 100V NPO disc	C64	21-40367A27	330PF 5% 100V mica
C13	21-43538A43	.005MF 20% 100V Z5U disc	C65	21-43539A57	180PF 5% 100V N750 disc(All except 3404)
C14	21-43539A74	4.7PF ±.25PF 100V NPO disc		21-43539A95	180PF 5% 100V N750 disc(3404)
C15,			C66	8-42208B15	.01MF 10% 50V mylar
16	21-40367A07	220PF 5% 100V mica	C67	8-42208B16	.0047MF 10% 50V mylar
C17	21-43539A66	10PF 5% 100V N220 disc	C68	21-43539A52	70PF 5% 100V N750 disc
C18	20-40429B04	TRIMMER,CERAMIC:FM OSC 3-9PF	C69	21-43842B08	280PF 5% 100V mica
			C70	20-43646B01	TRIMMER,CERAMIC:AM OSC 10-60PF
C19	21-43539A47	3.9PF 10% 100V N150 disc	C71	8-42208B16	.0047MF 10% 50V mylar
C20	21-43539A73	15PF 5% 100V N220 disc (All models except 3514 & 3609)	C72	21-43538A31	.001MF 10% 100V Z5F disc
C25	21-43538A60	220PF 10% 100V Y5F disc	C73	23-42582B01	33MF 10V lytic(All models except 3403,3404,3514,3609)
C26	21-43538A60	220PF 10% 100V Y5F disc(3514)		23-42674B23	47MF 10V lytic(3403,3404)
	8-42208B15	.01MF 10% 50V mylar(All models except 3514)		8-42208B03	.1MF 10% 50V mylar(3514,3609)
C28	8-42208B15	.01MF 10% 50V mylar	C74	23-42674B31	10MF 16V lytic(All models except 3514,3609)
C29	8-42208B15	.01MF 10% 50V mylar(All models except 3609)		8-42208B18	.047MF 10% 50V mylar(3514, 3609)
	8-42208B21	.047MF 20% 50V mylar(3609)	C75	21-43538A01	150PF 10% 100V Z5F disc
C30	8-42208B18	.047MF 10% 50V mylar(All models except 3609)	C76	8-42208B16	.0047MF 10% 50V mylar
	8-42208B21	.047MF 20% 50V mylar(3609)	C85,		
			86	23-43280A21	.5MF 15V lytic(use:23-43280A 25)
C31	8-42208B10	.1MF 20% 50V mylar	C87,		
C32	8-42208B11	.02MF 20% 50V mylar	88	23-43280A33	.2MF 15V lytic
C33	21-43538A50	100PF 10% 100V Z5F disc(All models except 3403,3514,3609)	C89	8-42208A11	.02MF 20% 50V mylar(All models except 3403)
C34	8-42208B15	.01MF 10% 50V mylar		8-42208B25	.015MF 10% 50V mylar(3403)
C35	8-42208B15	.01MF 10% 50V mylar	C90	8-42208A11	.02MF 20% 50V mylar(All models except 3403)
				8-42208B25	.015MF 10% 50V mylar(3403)
C36	23-42674B43	100MF 16V lytic	C91	8-42208B18	.047MF 10% 50V mylar
C37	8-42208B15	.01MF 10% 50V mylar	C92	8-42208B18	.047MF 10% 50V mylar
C38	8-10226A64	.0022MF 5% 63V N150 poly(use: 8-10226A63)	C95	8-42208B18	.047MF 10% 50V mylar(All models except 3514, 3609)
C39	8-42208B15	.01MF 10% 50V mylar(All models except 3403)		23-43280A32	.3MF 10V lytic(3514,3609)
	8-42208B16	.0047MF 10% 50V mylar(3403)	C96	8-42208B18	.047MF 10% 50V mylar(All models except 3514,3609)
C40	8-42208B15	.01MF 10% 50V mylar(All models except 3403)		23-43280A32	.3MF 10V lytic(3514,3609)
	8-42208B16	.0047MF 10% 50V mylar(3403)			
C41	23-43280A17	1.MF 15V lytic			

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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NOTE: ALL PARTS LISTED ARE RECOMMENDED REPLACEMENT PARTS

REF. NO	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRICAL PARTS (cont)			E15	30-40824C06	CABLE, STEREO ADAPTER:RX2,RX3, 808 (3406)
C97	8-42208B16	.0047MF 10% 50V mylar(All models except 3514, 3609)		30-43590C01	CABLE, STEREO ADAPTER-3407,3413
C98	8-42208B16	.0047MF 10% 50V mylar(All models except 3514, 3609)		*30-40824C08	CABLE, STEREO ADAPTER(3412)
C99	23-42582B01	33MF 10V lytic(All models except 3514, 3609)		30-40824C09	CABLE, STEREO ADAPTER(3514)
	23-42674B30	4.7MF 16V lytic(3514,3609)		30-40824C10	CABLE, STEREO ADAPTER(3609)
C100	23-42582B10	6.8MF 35V lytic(All models except 3514, 3609)	E16	50-40356F01	SPEAKER, FRONT:5"PM, 3.2ohm;RX2 RX3,808,B1800(3406)
C101	23-42582B10	6.8MF 35V lytic(All models except 3514, 3609)		50-40560C02	SPEAKER & HOUSING:WEDGE MTG:RX2 (3406)
C102	23-42674B10	400MF 16V lytic		50-40525C03	SPEAKER, 5X7"PM:3.2ohm (3412)
C103	23-42674B39	68MF 16V lytic		50-40168E01	SPEAKER, 5" Round spcl(3514)
C104	23-42674B41	1500MF 16V lytic	E17	30-40017F06	CABLE, REAR SPKR:REAR DECK"LTOR";RX2(3406)
C105	8-42208B10	.1MF 20% 50V mylar	E17	50-40560C02	SPEAKER & HSING:WEDGE MTG;RX2 (3406)
C106,				50-40356F01	SPEAKER, REAR:5"PM, 3.2ohm;RX2, RX3,808(3406)
C107,	23-42674B23	47MF 10V lytic		50-40525C03	SPEAKER, 5X7"PM:3.2ohm(3412)
C108,				*50-40168E01	SPEAKER, 5"Round spcl(3514)
C109,	23-42674B42	1000MF 10V lytic			
C110	21-560232	1000MF 500V FEED-THRU(3514, 3609)	E18	30-41195C07	CABLE, 4 way conn(3403)
C111	21-560232	1000MF 500V FEED-THRU	INTEGRATED CIRCUITS		
C112	21-560232	1000MF 500V FEED-THRU(3514, 3609)	IC1	51-10658A01	T2T:FM Det
C113	21-560232	1000MF 500V FEED-THRU(All models except 3514,3609)	IC2	51-10422A02	T1J:MPX
C115	21-560232	1000MF 500V FEED-THRU(All models except 3514,3609)	IC3	51-10650A01	T2R:Audio
	8-42938A02	IGNITION SWITCH(3412,3514, 3609)	COILS & CHOKES		
	8-40141C01	CAPACITOR, GENERATOR (3514)	L1	24-40788A08	COIL, IF TRAP
MISCELLANEOUS ELECTRICAL PARTS			L2-4	1-43000C06	COILS & MTG PLATE
E1	48-40516C01	DIODE, VARIABLE volt cap(All models except 3403,3404,3514, 3606)	L5	24-40788A08	COIL, IF TRAP
	48-137487	DIODE, SILICON:D7N(3403,3404, 3514,3609)	L7	24-42991C06	COIL, CHOKE
E2,3	91-41457C01	FILTER, CERAMIC(Replace as matched pairs)(use:91-43353A53)	L8	24-42814C02	MPX:38 KHZ
E4	65-40259C04	BULB, STEREO INDICATOR	L9	24-42814C02	MPX: 19 KHZ
E5	48-134816	DIODE, SILICON:DHD800(All models except 3609)	L10-12	1-43000C06	COILS & MTG PLATE
	48-137514	DIODE, SILICON:D7Z(3609)	L14	24-41694C04	CHOKE, FILTER
E6	48-134587	DIODE, GERMANIUM:1N139(All models except 3609)		24-43107C01	CHOKE, FILTER:INLINE (3609)
	48-137514	DIODE, SILICON:D7Z(3609)	TRANSISTORS		
E7-10	48-137514	DIODE, SILICON:D7Z	Q1	48-134825	4825 FM RF AMP
E11	48-41763C03	DIODE, ZENER:8.4-9V	Q2	48-134825	4825 FM MIXER
			Q3	48-137351	25B2 FM IF
			Q4	48-134857	4857 FM OSC
			Q5	48-137351	25B2 AM RF AMP
			Q6	48-137350	25A2 AM CONVERTER
			Q7	48-134811	54D AM IF
			Q8,9	48-134846	54E DRIVER
			Q10,11	48-134830	829A DRIVER
			Q12,13	48-137331	P4E OUTPUT
			Q14,15	48-137145	A6C OUTPUT
E12	65-538410	BULB #1892(All models except 3409)	RESISTORS		
	65-138044	BULB #1893(3409)	(THOSE LISTED, 5% OR BETTER, ALSO UNIQUE VALUES. REFER TO PL-76 FOR PARTS NO'S. OF OTHER VALUES.)		
E13	65-122345	FUSE, 5 amp(All models except 3402, 3403)	R53	6-129667	22K 5% 1/4W(3514,3609)
E14	30-42940A22	CABLE, 3 way conn(3403,3406, 3407,3412, 3413, 3514, 3609)	R57	6-129819	3900 5% 1/4W
	30-41270B09	CABLE, 3 way conn(3402)	R79, 80	18-42925C06	CONTROL, mult:vol 50K, tone30K incl S2 (3404,3514,3609)
	30-43081C03	CABLE, 3 way conn (3408)			

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(11281992-5),5VV3404

NOTE: ALL PARTS LISTED ARE RECOMMENDED REPLACEMENT PARTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRICAL PARTS (cont)			5	38-40242E03	BUTTON, AM/FM slide (3403)
R79, 80	18-42925C07	CONTROL,mult:vol 50K,tone 30K incl S2 (3403)	6	38-40242E05	BUTTON,AM/FM slide(3404,3514, 3609)
R81	18-43438C05	CONTROL,bal:15K	7	38-40242E13	BUTTON,AM/FM slide (3406)
R82, 83	6-129231	3300 5% 1/2W (3514)	8	38-40242E06	BUTTON,AM/FM slide(3407,12,13)
R86	6-129149	470K 5% 1/4W (3514, 3609)	9	38-40242E12	BUTTON,AM/FM slide(3408)
R87	6-129796	470K 5% 1/2W (3514, 3609)	10	38-41578C09	BUTTON,AM/FM slide(3409)
R90, 91	6-129981	3300 5% 1/4W (3514, 3609)	10A	38-40242E08	BUTTON,AM/FM slide (3410)
R92, 93	6-129231	3300 5% 1/2W (3514, 3609)	11	30-40134D01	CABLE,antenna ferrule(3403,09)
R103				30-42879B03	CABLE,antenna:ext(3402,3514, 3609)
104	* 6-124495	1.2M 5% 1/2W (3514, 3609)	11A	*30-40049C81	CABLE,grounding
R108			11B	30-40049C13	CABLE,grounding(3404,3514,3609)
109	6-127000	1.5M 5% 1/2W (3514, 3609)	11C	*30-40049C75	CABLE,grounding(3406)
SWITCHES			11D	*30-40049C40	CABLE,grounding(3407,12,13)
S1	40-43939B02	AM/FM SELECTOR		30-64375A05	CABLE,grounding:shielded braid (3514,3609)
S2		Part of R79 & R80	12	30-41270B09	CABLE,spkr(3402)
TRANSFORMERS				30-64375A09	CABLE,grounding:shielded braid (3514)
T1	24-41713C05	FM IF (All models except 3403, 3404, 3514, 3609)	13	30-42940A22	CABLE,spkr(3404,06,07,12,13, 3514,3609)
T1	24-41713C03	FM IF (3403,3404,3514,3609)	14	30-43081C03	CABLE,spkr(3408)
T2	24-42147C02	FM DETECTOR	15	30-43081C04	CABLE,spkr(3410)
T3	24-41714C01	AM 1st IF Primary	16	30-40017F06	CABLE,spkr:rear(3406)
T4	24-41714C02	AM 1st IF Secondary		*30-40093E01	CABLE,sterео adaptor(3402)
T5	24-41714C05	AM 2nd IF Primary		30-40824C06	CABLE,sterео adaptor(3406)
T6	24-41714C06	AM 2nd IF Secondary		*30-40824C10	CABLE,sterео adapter(3609)
MECHANICAL PARTS				30-43590C01	CABLE,sterео adaptor(3407,3413)
1	85-41524B03	ANTENNA (3412)	22	30-41195C07	CABLE,spkr & "A" lead(use: 30-41195C02)(3403) 4 way conn.
2	64-41798C05	BACKGROUND,dial scale		*30-40824C08	CABLE,sterео adaptor(3412)
	13-43066A01	BEZEL,trim (3609)		30-565440	CABLE,suppression (3514)
	84-42981C01	BOARD,plated:AM/MPX/AUDIO(less components)(All models except 3514, 3609)	23	49-42607B01	CLUTCH,disc
	84-42981C03	BOARD,plated:AM/MPX/AUDIO(less components)(3609,3514)		76-40553B26	CORE,tuning:AM ANT & RF
	84-43482C01	BOARD,plated:FM(less comp.)		76-40553B08	CORE,tuning:AM OSC
	84-43484C01	BOARD,plated:vol & tone(less comp.)		76-43567B21	CORE,tuning:FM ANT(All models except 3403)
	* 3-40730A07	BOLT,spcl:1/4-20(chassis mtg) (3402, 3403, 3409)		76-43567B16	CORE,tuning:FM RF (All models except 3403)
	3-40730A01	BOLT,spcl:1/4-20(chassis mtg) (All models except 3402,3,9)	24	77-43567B23	CORE,tuning:FM OSC(All models except 3403)
	7-43952B01	BRACKET,AM/FM slide sw mtg (All models except 3609)		45-40277E01	COUPLING,star shaped(on man. tun. shaft)(All models except 3403,3514,3609)
	* 7-40375F01	BRACKET, mtg chassis (3514)		15-43411C02	COVER,bottom
	7-43338C02	BRACKET, mtg:left hand (3406)	25	15-43412C03	COVER,top
	7-43338C01	BRACKET,mtg:right hand (3406)	26	61-41463C01	DIFFUSER,light(3403)
	64-42311C01	BRACKET,shaft ret(All models except 3403,3514,3609)	27	61-41742B02	DIFFUSER,light(3409)
	7-43491C01	BRACKET,sterео light	28	64-41629C06	ESCUTCHEON,sub
	7-41658C03	BRACKET,trimmer mtg		13-43526C01	ESCUTCHEON,trim:RX2(3406)
3	43-43611C01	BUSHING,spacer (3406)		13-43527C01	ESCUTCHEON,trim:RX3,808(3406)
4	38-40242E10	BUTTON,AM/FM slide (3402)		13-40350F01	ESCUTCHEON,trim:B1800(3406)
				13-43491B03	ESCUTCHEON,trim(3407,3413)
			30	76-544401	FERRITE BEAD
			31	44-42304C03	GEAR,crown & clutch
			32	44-42305C01	GEAR,pinion(3403)
				13-40357F01	GRILLE,spkr:rear flush mtg (3406)

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NOTE: ALL PARTS LISTED ARE RECOMMENDED REPLACEMENT PARTS

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
	MECHANICAL PARTS (cont)		55	1-43358A38	SCALE,dial:incl sel button-3402
	13-43169A06	GRILLE,spkr(3412)	56	1-43358A42	SCALE,dial:incl sel button-3403
	5-43388B01	GROMMET,core carriage arm(All models except 3403)	57	1-43358A39	SCALE,dial:incl sel button(3404 3514,3609)
	5-10115A24	GROMMET,kit inst. (3514)	58	1-43358A41	SCALE,dial:incl sel button-3406
	5-536918	GROMMET,mtg plate	59	1-43358A43	SCALE,dial:incl sel button(3407 3412,3413)
32A	*14-44699A01	INSULATOR,cable 4 way(3403)	60	1-43358A40	SCALE,dial:incl sel button (3408)
	14-43120C01	INSULATOR,transistor	61	1-43358A44	SCALE,dial:incl sel button (3409)
	1-40600F11	KIT,installation:mtg nuts;RX2, RX3,808,B1800(3406)	62	1-43358A45	SCALE,dial:incl sel button (3410)
	* 1-40600F16	KIT,installation:real flush mtg nuts;RX2,RX3,808(3406)	63	1-43200B05	SCREW & NUT adj
	* 1-40600F18	KIT,installation:wedge mtg sleeving;RX2 (3406)	64	3-563128	SCREW,set:4-40(disc clutch) (All models except 3403,3514, 3609)
	1-40600F28	KIT,installation:rear spkr & flush mtg sleeving;RX2,RX3,808 (3406)		3-138394	SCREW,tpg:3-48x3/4(trans mtg) (All models except 3514)
	1-43899C47	KIT,installation:incl knobs & mtg parts (3407)	65	47-43463B16	SHAFT,clutch
	1-40600F43	KIT,installation:incl knobs & mtg pts (3412)	66	47-41001C04	SHAFT,man tuning:incl coupling (All models except 3403,3514, 3609)
	* 1-40600F44	KIT,installation:incl knobs & mtg pts (3413)	67	47-42306C09	SHAFT,man tuning:incl socket (3514,3609)
	* 1-40600F83	KIT,installation:incl knobs & mtg pts (3514)	68	*47-42306C12	SHAFT,man tuning:incl socket (3403)
33	36-40039B01	KNOB,tone (3402,3409)		1-43800C05	SHUTTER & ACT. ARMS
	36-43219B02	KNOB,tone (3406)		9-42576A25	SOCKET,pilot light & lead
35	36-43219B01	KNOB,tone(3407,08,12,13)	69	44-42305C01	SHAFT,pinion(3514,3609)
36	36-43219B02	KNOB,tone(3609)	70	43-42603B04	SPACER,control mtg(3402,03,07, 08,09,10,13)
37	36-43681C01	KNOB,vol & sel(3402,3408)	71	43-42603B03	SPACER,control mtg(3404,3514, 3609)
	36-43401B01	KNOB,vol & sel(3406,07,12,13, 3609)		*43-43552C03	SPACER,rear mtg(3402,03,09)
39	36-40252B04	KNOB,vol & sel (3409)		41-40283E01	SPRING,bias:pinion shaft ret
	2-10054A29	NUT,clip-on(3514)	72	41-40648B01	SPRING,cam clutch
	2-565333	NUT,hex:1/4-20(chassis mtg)	74	41-42441B01	SPRING,link
	2-124821	NUT,hex:1/2-28(chassis mtg) (3609)	75	41-40650A01	SPRING,shaft ret
	2-121771	NUT,hex:3/8-32(control ret)		41-41805A01	SPRING,pointer tension
40	13-41525C06	OVERLAY(All models except 3409)		42-544845	STRAP,receiver mtg (3406)
41	13-41525C11	OVERLAY (3409)		42-485718	STRAP,receiver mtg(3407,3413)
42	44-42305C01	PINION(All models except(3403, 3514,3609)	77	46-565260	STUD,trimount(dial scale mtg)
43	64-40326F02	PLATE,front:radio mtg(3609)		29-40201E01	TERMINAL,adapter(3514,3609)
44	64-40456C02	PLATE,spkr mtg(3412)	78	*77-41900C78	TUNER,FS-361:comp.(3403)
			79	77-41900C66	TUNER,FS-331:comp(All models except 3403)
45	52-42479B38	POINTER & ARM		4-139052	WASHER,AM/FM slide button ret
46	38-42185B01	PUSHBUTTON		42-10113A07	WASHER,clutch shaft ret.(3403)
	9-42764B01	RECEPTACLE,ant(All models except 3403)		4-43176C01	WASHER,locating
48	9-42176A08	RECEPTACLE,fuse:incl fuse (3404,3514,3609)		4-43722B01	WASHER,spacer clutch shaft-3403
49	9-42176A13	RECEPTACLE,fuse:incl fuse(3406)		42-10219A10	WASHER,pointer ret (3403)
50	9-42176A15	RECEPTACLE,fuse:incl fuse(3407, 3412,3413)			
51	9-42176A14	RECEPTACLE,fuse:incl fuse(3408)			
52	9-41356C29	RECEPTACLE,fuse:incl fuse(3409)			
53	9-42176A10	RECEPTACLE,fuse:incl fuse(3410)			
	42-10219A10	RETAINER,"E"ring(pointer ret) (All models except 3403)			
54	42-10113A07	RING,ext.ret(clutch shaft) (All models except 3403)			

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