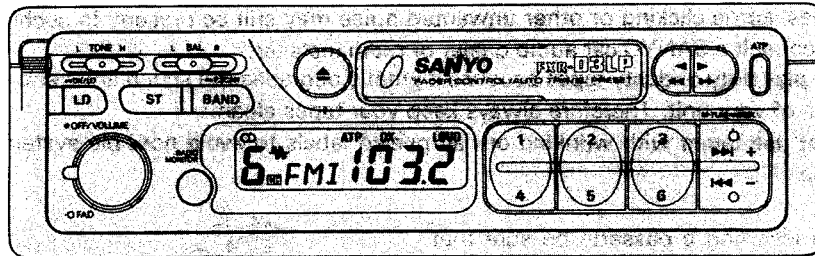


SERVICE MANUAL

Full Auto Reverse
CarFidelity Receiver/
Cassette Player

FXR-03LP (POLAND)



PRODUCT CODE No.
147 582 76

Specifications

Tape section

Tape.....Cassette
Tape speed.....4.75 cm/s
Wow & flutter (DIN)....0.15%
Output powerMaximum 7.5Wx2
Signal to noise
ratio.....50 dB
Cross talk
(1,000Hz).....35 dB
Frequency
response.....63 — 10000Hz

Tuner section

Frequency range..... LW:
153— 281kHz
MW:
522 — 1620kHz
FM1:
87.5 — 108MHz
FM2:
62 — 74MHz

Channel spacing

Manual..... LW: 1kHz
MW: 9 kHz
FM: 50 kHz

Auto..... LW: 9 kHz
MW: 9 kHz
FM: 100kHz

General

Power sourceDC 12V
(11~16V)
Negative
ground only
Speaker output
impedance.....4Ω
Dimensions178(W)x50(H)x
155(D) mm
Weight.....1.5 kg

Specifications are subject to change without notice.

REFERENCE No. SM590297

ALIGNMENT PROCEDURES

General

Test Conditions

Signal generator output;

Modulation frequency 1000 Hz

Modulation percentage 30%

Signal level just high enough to provide meter deflection.

Signal application;

Antenna receptacle through the dummy antenna.

Output meter connection;

Across the speaker or dummy load 4 ohms.

Setting of radio controls;

Volume control at proper level.

Tone controls at the high position.

Power supply 14.0V

- Location of the components for alignment are shown in MAIN PARTS IDENTIFICATION ILLUSTRATION (TOP VIEW).

Alignment of Head Azimuth

1. Insert a BASF 10kHz standard test tape and set the unit in play mode.
2. Tune the azimuth adjusting screw until you obtain maximum reading on the VTVM at the forward position.
3. Check at the reverse position.

MW RF Alignment

Step	Signal	Frequency	Dial Set	Test Equipment	Adjustment
1	MW		522 kHz	Connect a voltage meter to R322 and common GND	Adjust T305 for voltage to be 1.0V
2	Through Dummy ANT Fig. 1	603 kHz (20dBμ)	603 kHz	Connect VTVM to output terminal	Tune, T301,T302,,T303, T304 for maximum output.
3	MW	Stop Sens. 999 kHz (33dBμ)	999 kHz	TP800 ① ② short Connect a voltage meter to TP800 4pin and common GND	Adjust SVR301 for 2.5 ±0.5V

LW RF Alignment

Step	Signal	Frequency	Dial Set	Test Equipment	Adjustment
1	LW		522 kHz	Connect a voltage meter to R322 and common GND	Adjust T315 for voltage to be 1.0V
2	Through Dummy ANT Fig. 1	162 kHz (36dBμ)	162 kHz	Connect VTVM to output terminal	Tune, T311,T312 for maximum output.

Figure 1 DUMMY ANTENNA FOR MW ALIGNMENT

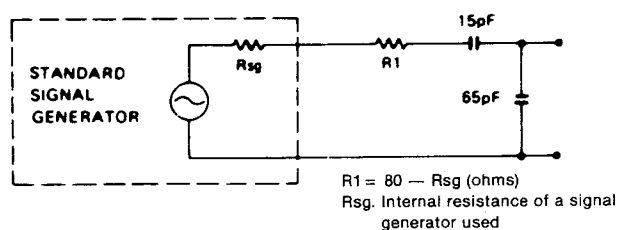
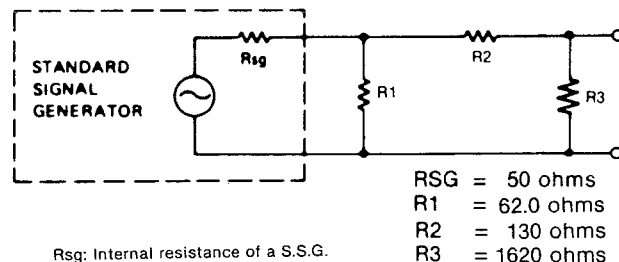


Figure 2 DUMMY ANTENNA FOR FM RF ALIGNMENT



FM RF ALIGNMENT

Step	Signal Input	Frequency of signal Generator	Dial Setting of Radio	Test Equipment Connection	Adjustment
1	Through dummy ANT Fig. 2	68.000MHz	68.000MHz	Connect VTVM to Speaker output leads.	T201 for maximum output
2		Stop Band width 68.000MHz (60dbμ)	68.000MHz		Adjust main VR for voltage to be 1.4V.
3		Stop Band width 68.045MHz (60dbμ)	68.000MHz		Adjust T201 for voltage to be 1.0V.
4		Stop Sense 68.000MHz (30dbμ)	68.000MHz	TP800 ① ② short Connect a voltage meter TP800 4 pin and common GND.	Adjust SVR202 for 3.0±0.5V

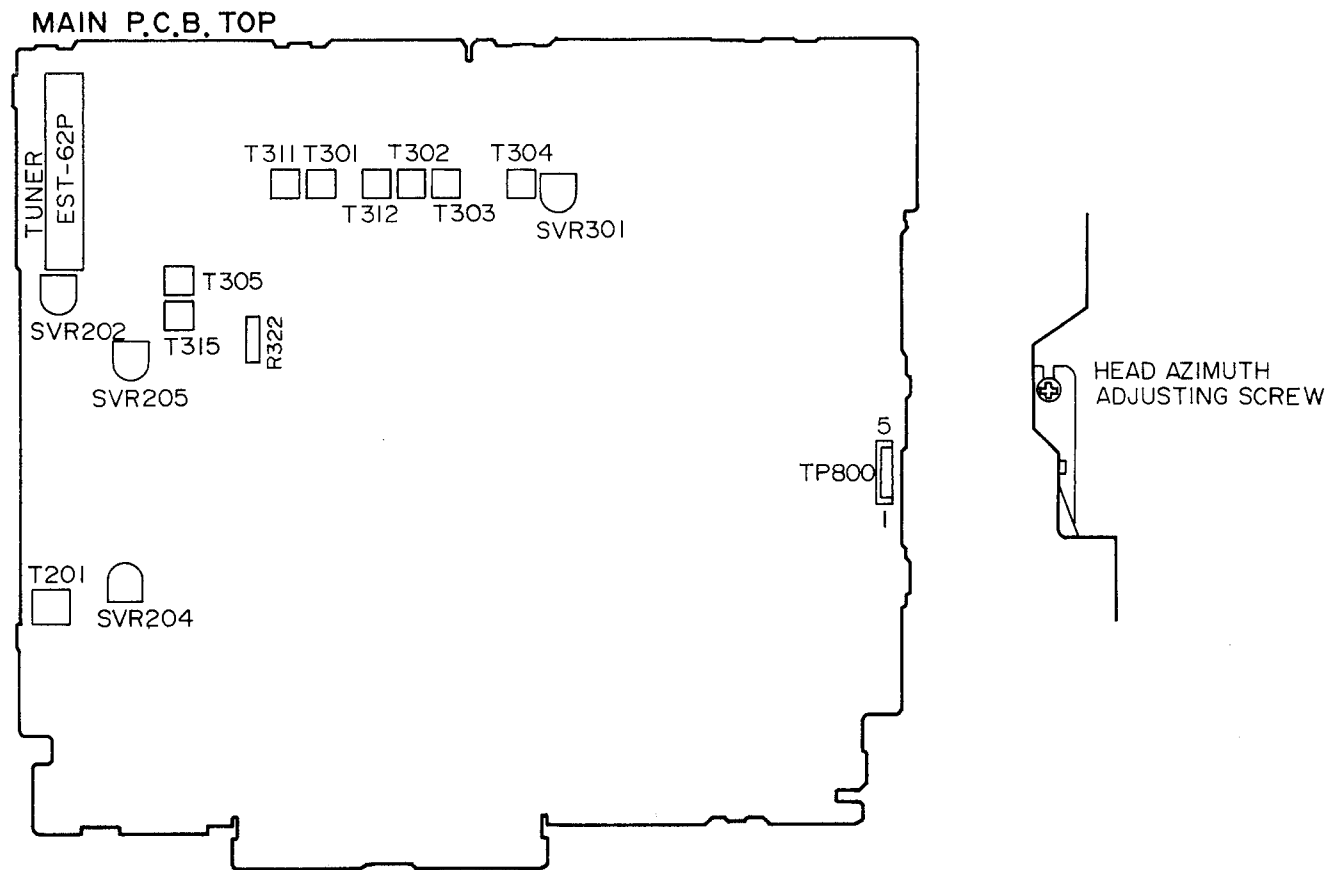
Multiplex Alignment (PLL)

PRELIMINARIES:

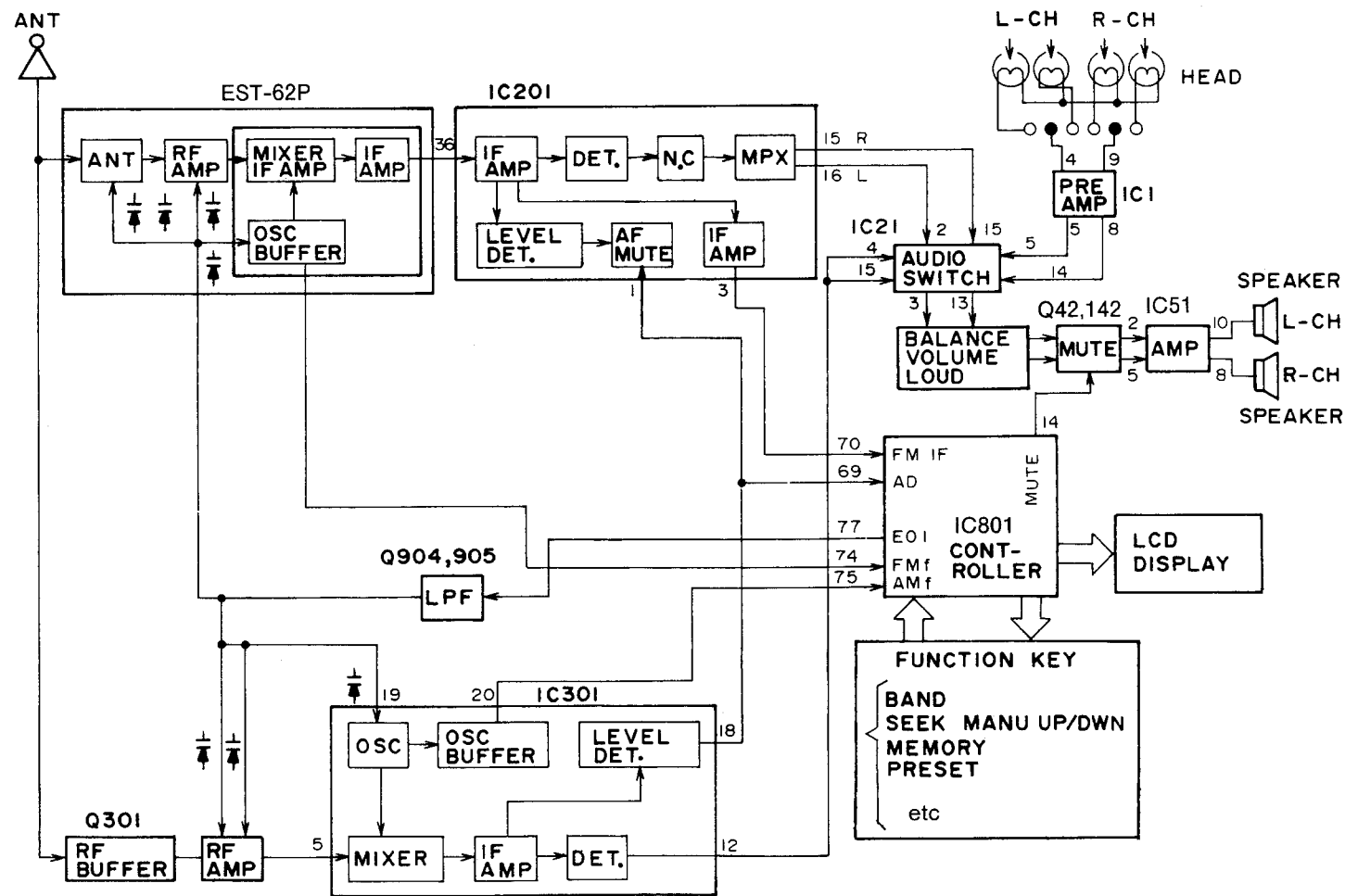
1. A stereo signal modulator (SSM) is necessary to perform this alignment.
2. All adjustments below must be done, setting the frequency at 68MHz on LCD display and applying 60dB FM signal modulated by specified signals as described below.

Step	Alignment	Instrument Connections		Adjustment
		Input	Output	
1	Maximum Separation control	Apply FM stereo signal modulated only by 10% pilot signal and 30% stereo signal through dummy ANT to antenna terminal. Set the output select switch of SSG to the Right mode. Input level of 60dB	Connect VTVM to the Left Speaker terminal	Adjust SVR204 to minimum output on VTVM.
2	10dB (SNC) Separation control	In addition Set the output signal under input level of 40dB	Connect VTVM to speaker output leads of Left and Right channel.	Adjust the SVR205 to make separation of 10dB ±3dB between Left and Right channel.
3				Repeat step 1, 2

MAIN PARTS IDENTIFICATION ILLUSTRATION



BLOCK DIAGRAM



IC AND TRANSISTOR VOLTAGE CHART

IC	PIN	1	2	3	4	5	6	7	8	9	10
IC1		1.3	0.8	2.6	7.6	0	2.6	0.8	1.3		

IC	PIN	1	2	3	4	5	6	7	8	9	10
IC21			3.0	3/2.6/0	0	2.6	0	0	0	5/0/5	0/5/5
FM/TA/MW-LW	1 1	1 2	1 3	1 4	1 5	1 6					
	0		3/2.6/0	2.6	3.0	5.6					

IC	PIN	1	2	3	4	5	6	7	8	9	10
IC41	ON/OFF	0	0	4.2/0	4.2/2.5	0/2.5	0	0	0	4.9/0	4.9/0
	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	2 0	
	ON/OFF	4.9/0	0	0	0	0	5.6				

IC	PIN	1	2	3	4	5	6	7	8	9	10	11	12
IC51		1.3	0.1	0	13.7	0.1	1.3	12.5	7.2	15.4	7.2	12.5	0

IC	PIN	1	2	3	4	5	6	7	8	9	10
IC301		6.3	0.2	0	0	2.1	8.3	5.6	1.6	2.4	8.3
	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	2 0	
	0.3	3.7	0.4	3.8	8.3	2.7	0.1	1.4	8.3	5.0	

IC	PIN	1	2	3	4	5	6	7	8	9	10
IC 832	ON/OFF		4.6/		4.6/	0/5.0	0/5.0	0	4.6/		4.6/
	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8	1 9	2 0	
	ON/OFF		0/5.0	0/5.0	5.0						

IC	PIN	1	2	3	4	5	6	7	8	9	10	11	12
IC201		0.2	2.2	0.1	0.1	4.8	3.0	0.8	8.3	0	5.0	5.0	3.0
	1 3	1 4	1 5	1 6	1 7	1 8	1 9	2 0	2 1	2 2	2 3	2 4	
	0.1	0.1	3.0	3.0	5.0	0	0	3.5	3.8	3.5	3.5	4.8	
	2 5	2 6	2 7	2 8	2 9	3 0	3 1	3 2	3 3	3 4	3 5	3 6	
	4.8	4.9	0	4.1	5.0	3.8	3.8	2.0	4.9	3.5	3.0	3.0	

PIN	TR	Q801	Q802	Q803	Q42	Q142	Q305	Q827
B	ON	6.2	0.7	0.1	2.5	2.5	0.7	1.0
	OFF	6.2	0	5.6	0	0	0	0
C	ON	11.9	0.1	5.6	0	0	0	
	OFF	13.4	5.6	0	0	0	5.0	
E	ON	5.6	0	5.6	0	0	0	5.0
	OFF	5.6	0	5.6	0	0	0	

PIN	TR	Q521	Q522	Q532
B	MW	0.3	8.3	7.6
	FM	3.5	7.6	8.3
C	MW	8.0	0.5	8.3
	FM	0.2	8.3	0
E	MW	0	8.3	8.3
	FM	0	8.3	8.3

PIN	TR	Q533	Q302	Q303	Q304	Q306	Q307	Q534
B	MW	0.2	6.3	0	0	8.2	8.2	0.2
	LW	8.3	6.3	0.7	0.8	0	0	8.3
C	MW	8.2	7.9	0	0	0	0	8.2
	LW	0	7.9	0	0	0	0	0
E	MW	0	5.6	0	0	0	0	8.3
	LW	0	5.6	0	0	0	0	8.3

PIN	TR	Q201
B	LO	4.5
	DX	0
C	LO	0
	DX	6.7
E	LO	0
	DX	0

PIN	TR	Q828
B	FWD	1.0
	REV	0
C	FWD	
	REV	
E	FWD	5.0
	REV	

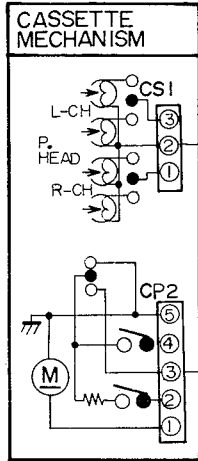
PIN	TR	Q829
B	TA	1.0
	RA	0
C	TA	
	RA	
E	TA	5.0
	RA	

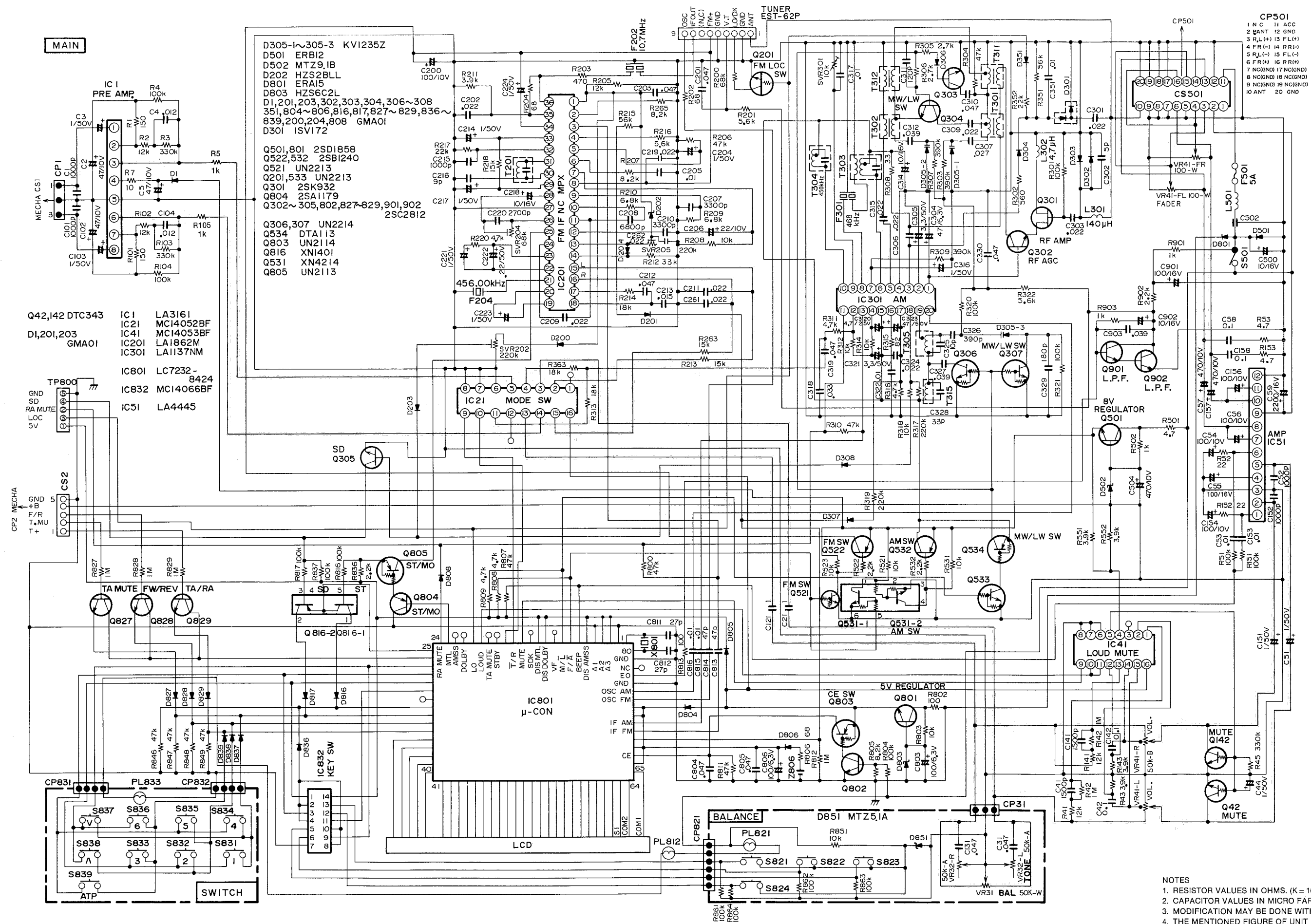
PIN	TR	Q804	Q805
B	ST	0	0.6
	MO	5.0	5.0
C	ST	0	1.0
	MO	0	0
E	ST	0.6	2.1
	MO	5.0	5.0

TR	PIN	1	2	3	4	5	6
Q816		5.0/	5.0/	0.1/5.0		2.1/5.0	
Q531		8.3/0	8.3/0	0	0/8.3	0.3/3.5	0

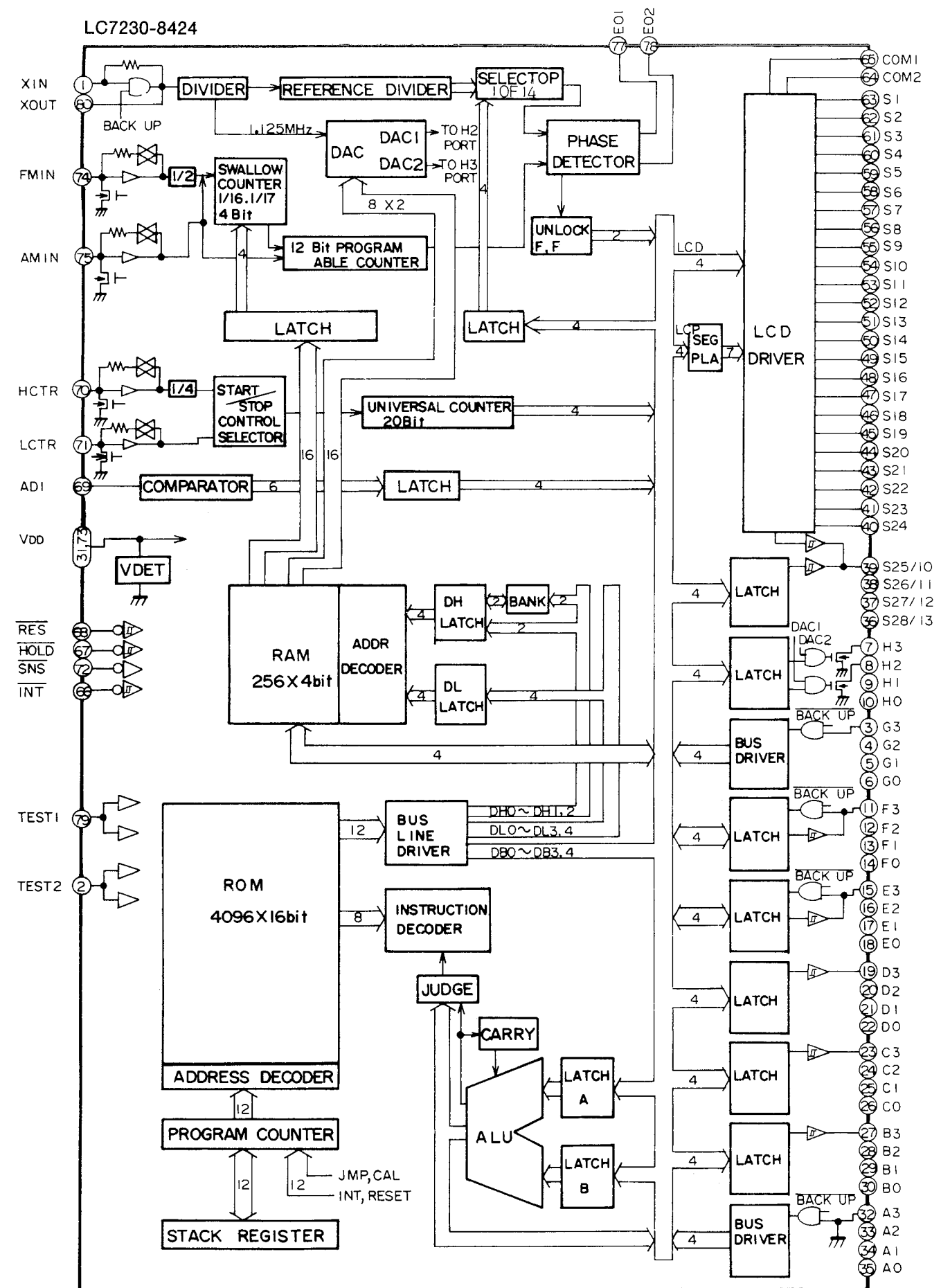
(ON/OFF)

(MW-LW/FM)

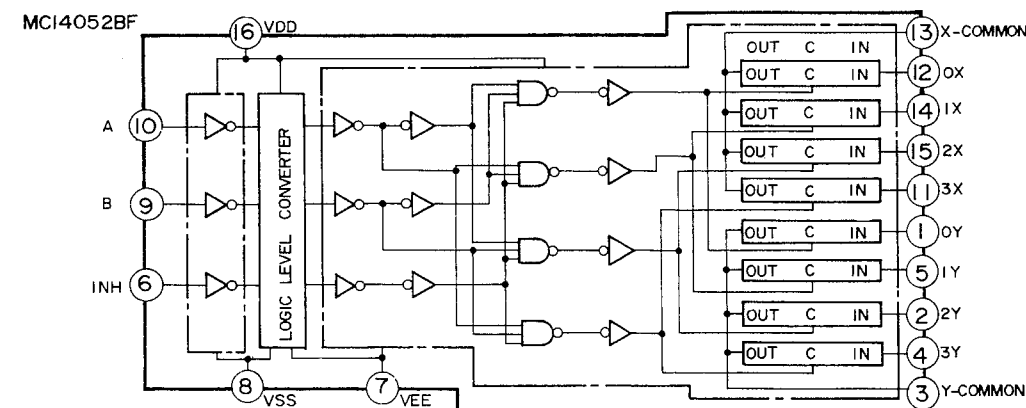
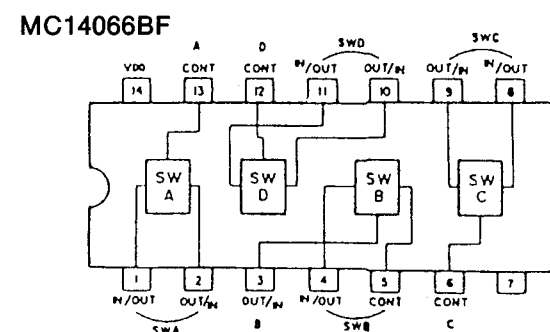
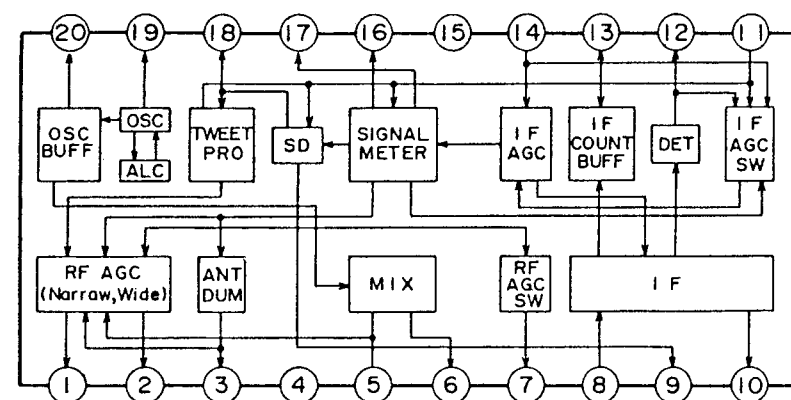




IC BLOCK DIAGRAM-



LA1137 NM



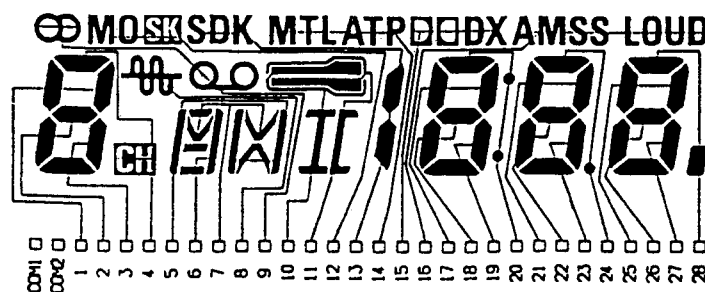
CIRCUIT OPERATION DESCRIPTION

DESCRIPTION (LC7230-8424)

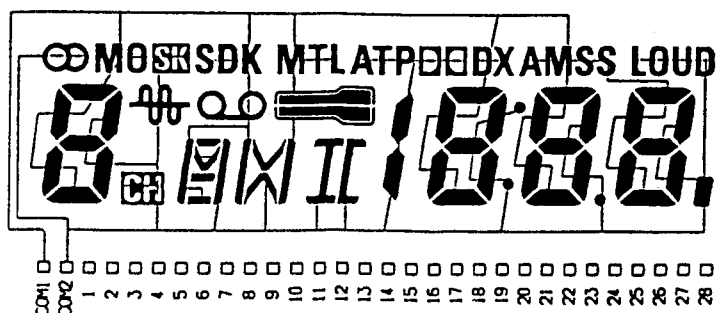
PIN NO.	SYMBOL		FUNCTIONAL EXPLANATION												
	IN	OUT													
1	XIN		Input side of inverter for OSC												
2	GND														
3	AREA3		Key return signal input												
4	AREA2		Key return signal input												
5	AREA1		Key return signal input												
6	AREA0		Key return signal input												
7		BEEP	BEEP signal output												
8		BEEP	BEEP signal output												
9		FM BAND	<table><tr><td></td><td>FM BAND</td><td>AM BAND</td><td>VF BAND</td></tr><tr><td>FM</td><td>1</td><td>0</td><td>1</td></tr><tr><td>AM</td><td>0</td><td>1</td><td>1</td></tr></table>		FM BAND	AM BAND	VF BAND	FM	1	0	1	AM	0	1	1
	FM BAND	AM BAND		VF BAND											
FM	1	0		1											
AM	0	1	1												
10		AM BAND													
11	NC														
12	NC														
13	NC														
14	NC														
15	K7		Key return signal input 7												
16	K6		Key return signal input 6												
17	K5		Key return signal input 5												
18	K4		Key return signal input 4												
19		$\overline{\text{TA/RA}}$	T/R signal output												
20		$\overline{\text{MUTE}}$	MUTE signal output												
21	NC														
22		LO	LO signal output												
23		MTL	MTL signal output												
24	NC														
25		KS5	Key matrix return signal output 5												
26		KS4	Key matrix return signal output 4												
27		KS3	Key matrix return signal output 3												
28		KS2	Key matrix return signal output 2												
29		KS1	Key matrix return signal output 1												
30		KS0	Key matrix return signal output 0												
31	VDD		VDD 5V												
32	K3		Key matrix return signal input 3												
33	K2		Key matrix return signal input 2												
34	K1		Key matrix return signal input 1												
35	K0		Key matrix return signal input 0												
36		S28	LCD 28 output for LCD												
37		S27	LCD 27 output for LCD												
38		S26	LCD 26 output for LCD												
39		S25	LCD 25 output for LCD												
40		S24	LCD 24 output for LCD												
41		S23	LCD 23 output for LCD												
42		S22	LCD 22 output for LCD												
43		S21	LCD 21 output for LCD												
44		S20	LCD 20 output for LCD												
45		S19	LCD 19 output for LCD												
46		S18	LCD 18 output for LCD												
47		S17	LCD 17 output for LCD												
48		S16	LCD 16 output for LCD												
49		S15	LCD 15 output for LCD												
50		S14	LCD 14 output for LCD												

PIN NO.	SYMBOL		FUNCTIONAL EXPLANATION
	IN	OUT	
51		S13	LCD 13 output for LCD
52		S12	LCD 12 output for LCD
53		S11	LCD 11 output for LCD
54		S10	LCD 10 output for LCD
55		S9	LCD 9 output for LCD
56		S8	LCD 8 output for LCD
57		S7	LCD 7 output for LCD
58		S6	LCD 6 output for LCD
59		S5	LCD 5 output for LCD
60		S4	LCD 4 output for LCD
61		S3	LCD 3 output for LCD
62		S2	LCD 2 output for LCD
63		S1	LCD 1 output for LCD
64		COM 2	COMMON signal 2 output for LCD
65		COM 1	COMMON signal 1 output for LCD
66	INT		VDD 5V
67	CE		Chip Enable (+5V)
68	$\overline{\text{RES}}$		RESET
69	ADC		Signal mater level input
70	FM IF		FM IF input
71	AM IF		AM IF input
72	$\overline{\text{SNS}}$		VDD 5V
73	VDD		VDD 5V
74	FM in		FM OSC input
75	AM in		AM OSC input
76	GND		GND
77		E01	Phase detector output 1
78		E02	Phase detector output 2
79	GND		
80		X OUT	Output side of inverter for OSC

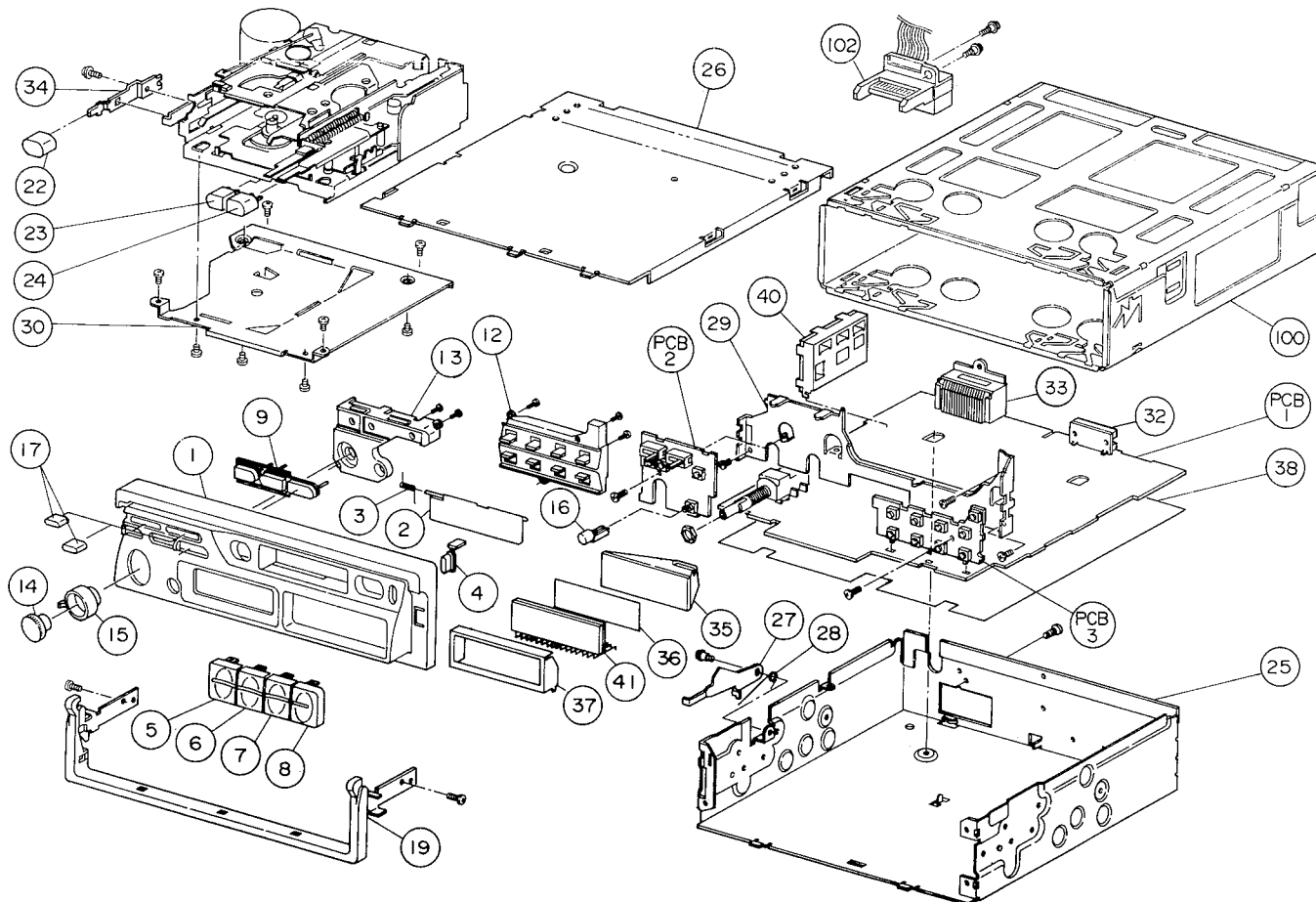
SEGMENT



COMMON



EXPLODED VIEW



PARTS LIST

Ref.No	PART No.	DESCRIPTION	Q'ty
INDIVIDUAL			
	632 663 0822	INNER CARTON	1
	632 548 2620	PAD,R	1
	632 548 2613	PAD,L	1
	632 645 2325	LABEL,BARCODE,TYPE D-1, (INNER CARTON,SET)	1
	632 298 3199	POLYETHYLENE BAG	1
ACCESSORY			
	632 663 0839	INSTRUCTION MANUAL	1
	632 283 4927	SPECIAL SCREW	1
	632 546 2943	BASE	1
	632 298 1683	POLYETHYLENE BAG	1
	411 031 4200	SCR BIN 3X12,SHIPPING	1
	632 624 1547	NOTICE,SHIPPING	1
CABINET			
1	632 607 8457	PANEL,NOSE	1
2	632 663 0846	LID,CASSETTE	1
3	632 558 0623	SPRING,TORS	1
9	632 614 3650	ASSY,BUTTON,E,LD-ST-BAND	1
13	632 600 1028	LUMINANT,VR	1
	411 138 9603	SCR S-TPG PAN PCS 1.7X5	2
5	632 600 1172	BUTTON,A,1-4	1
6	632 601 0129	BUTTON,B,2-5	1
7	632 601 0402	BUTTON,C,3-6	1
8	632 600 0984	BUTTON,D,UP-DOWN	1
	632 638 3155	SPACER,1,2,3,4,UP,ATP	6
	632 614 3421	SPACER,5,6,DOWN	3

Ref.No	PART No.	DESCRIPTION	Q'ty
12	632 600 0991	LUMINANT,P.SET	1
	411 138 9603	SCR S-TPG PAN PCS 1.7X5	3
4	632 600 0946	BUTTON,APT	1
14	632 610 5573	ASSY,KNOB,ROTARY	1
15	632 600 1042	KNOB,LEVER	1
17	632 609 2781	KNOB,SLIDE,TONE,BAL	2
16	632 617 2933	BUTTON,RADIO MONITOR	1
22	632 554 9316	BUTTON,EJECT	1
23	632 554 9323	BUTTON,REW	1
24	632 554 9330	BUTTON,FF	1
19	632 644 9387	ASSY,HANDLE	1
	411 028 5609	SCR S-TPG PAN 2.6X4	2
	632 663 0853	LABEL,RATING	1
CHASSIS			
25	632 628 6326	CHASSIS	1
38	632 564 2727	INSULATOR	1
27	632 624 1554	LEVER	1
28	632 558 0630	SPRING,TORS	1
	412 035 6207	SPECIAL SCREW	1
26	632 556 5354	CHASSIS,TOP	1
29	632 600 1080	CHASSIS,FRONT	1
	411 028 5609	SCR S-TPG PAN 2.6X4	2
		F.CHASSIS-CHASSIS	
	411 028 2905	SCR S-TPG PAN 2X4	1
		F.CHASSIS-CHASSIS	
	411 028 5609	SCR S-TPG PAN 2.6X4	2
		PCB-F.CHASSIS	
30	632 556 5361	BRACKET-E,MECHA.	1
	411 027 5204	SCR S-TPG FLT 2.6X5	4
		MECHA-BRACKET	

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PARTS LIST (CONTINUED)

Ref.No	PART No.	DESCRIPTION	Q'ty	Ref.No	PART No.	DESCRIPTION	Q'ty
33	411 028 5609	SCR S-TPG PAN 2.6X4	4	D200	407 012 4406	DIODE 1SS133	1
	632 628 6333	BRACKET-CHASSIS	1	D204	407 012 4406	DIODE 1SS133	1
	411 028 5609	BRACKET-E, SOCKET	1	D501	407 006 0902	DIODE ERB12-02	1
32	632 277 2892	SCR S-TPG PAN 2.6X4	1	D801	407 005 8602	DIODE ERA15-02	1
	411 001 4506	BRACKET	1	D202	407 100 5100	ZENER DIODE HZS2BLL	1
34	632 608 8685	BRACKET, IC	1	D803	407 098 1207	ZENER DIODE HZS6C2L	1
	411 152 6107	SCR S-TPG PAN 3X8	2	D502	407 053 8807	ZENER DIODE MTZ9.1B	1
	632 600 1110	LEVER,EJECT	1	L302	632 265 0343	CHOKO COIL, 4.7UH	1
36	632 600 1134	SCR PAN PCS 2.6X2.5,LEVE-	1	Q501	405 029 4501	TR 2SD1858-TV2-R	1
35	632 600 1110	R-MECHA	1	Q801	405 029 4501	TR 2SD1858-TV2-R	1
37	632 600 1127	SHEET,LCD	1	Q522	406 007 8801	TR 2SB1240-TV2-R	1
		MOUNT-E,LCD,HOLDER	1	Q532	406 007 8801	TR 2SB1240-TV2-R	1
		BRACKET-E,LCD,BARCKET	1	SVR301	632 530 7183	PRESET RESISTOR, 10K	1
BRACKET				SVR204	632 545 4153	PRESET RESISTOR, 68K	1
100	632 612 0804	ASSY,CASE	1	SVR205	632 538 8076	PRESET RESISTOR, 220K	1
102	632 647 9599	CORD	1	SVR202	632 538 8076	PRESET RESISTOR, 220K	1
	411 028 5609	SCR S-TPG PAN 2.6X4	1	C502	404 038 7909	CERAMIC 2200P M 50V	1
	412 036 8002	GROUND	1	IC21	409 222 5709	IC MC14052BF	1
		SPECIAL SCREW,PLUG	2	IC21	409 051 2702	IC TC4052BF	1
CHASSIS ELECTRICAL				IC41	409 211 7301	IC MC14053BF	1
CS1	632 563 8744	CASSETTE MECH.,FEC-1011P,	1	IC41	409 051 2900	IC TC4053BF	1
	632 548 6901	NO SERVICE PART	1	IC832	409 199 4705	IC MC14066BF	1
	632 611 3332	CORD,3P-50MM	1	IC201	409 272 9900	IC LA1862M	1
	632 644 7468	LCD	1	IC301	409 167 1101	IC LA1137NM	1
40		TUNER,FM,EST-62P	1	Q816	405 117 8503	TR XN1401	1
MAIN P.C.B. ASSEMBLY				Q531	405 114 9503	TR XN4214	1
PCB1	632 648 0106	ASSY,PCB,MAIN,	1	Q42	405 083 5209	TR DTC343TK	1
		PCB ASSY WILL NOT SUPPLY		Q142	405 083 5209	TR DTC343TK	1
		AFTER INITIAL LOT.		Q201	405 110 4700	TR UN2213	1
D1	407 007 9904	DIODE GMA01	1	Q533	405 110 4700	TR UN2213	1
D201	407 007 9904	DIODE GMA01	1	Q521	405 110 4700	TR UN2213	1
D203	407 007 9904	DIODE GMA01	1	Q301	405 068 0809	TR 2SK932-22	1
D302	407 007 9904	DIODE GMA01	1	Q804	405 002 6706	TR 2SA1179-M6	1
D303	407 007 9904	DIODE GMA01	1	Q302	405 015 8704	TR 2SC2812-L6	1
D304	407 007 9904	DIODE GMA01	1	Q303	405 015 8704	TR 2SC2812-L6	1
D306	407 007 9904	DIODE GMA01	1	Q304	405 015 8704	TR 2SC2812-L6	1
D307	407 007 9904	DIODE GMA01	1	Q305	405 015 8704	TR 2SC2812-L6	1
D308	407 007 9904	DIODE GMA01	1	Q802	405 015 8704	TR 2SC2812-L6	1
D351	407 007 9904	DIODE GMA01	1	Q827	405 015 8704	TR 2SC2812-L6	1
D804	407 007 9904	DIODE GMA01	1	Q828	405 015 8704	TR 2SC2812-L6	1
D805	407 007 9904	DIODE GMA01	1	Q829	405 015 8704	TR 2SC2812-L6	1
D806	407 007 9904	DIODE GMA01	1	Q901	405 015 8704	TR 2SC2812-L6	1
D808	407 007 9904	DIODE GMA01	1	Q902	405 015 8704	TR 2SC2812-L6	1
D816	407 007 9904	DIODE GMA01	1	Q306	405 035 2201	TR UN2214	1
D817	407 007 9904	DIODE GMA01	1	Q307	405 035 2201	TR UN2214	1
D827	407 007 9904	DIODE GMA01	1	Q534	405 096 9607	TR DTA113ZK	1
D828	407 007 9904	DIODE GMA01	1	Q803	405 035 2102	TR UN2114	1
D829	407 007 9904	DIODE GMA01	1	Q805	405 110 4304	TR UN2113	1
D836	407 007 9904	DIODE GMA01	1	D301	407 089 7904	DIODE DPA05	1
D837	407 007 9904	DIODE GMA01	1	D301	407 098 6905	DIODE 1SV172	1
D838	407 007 9904	DIODE GMA01	1	IC1	409 016 7902	IC LA3161	1
D839	407 007 9904	DIODE GMA01	1	IC51	409 017 8403	IC LA4445	1
D200	407 007 9904	DIODE GMA01	1	IC801	409 271 6504	IC LC7232-8424	1
D204	407 007 9904	DIODE GMA01	1	F204	632 559 5856	RESONATOR,CERAM,456.00KHZ	1
D1	407 012 4406	DIODE 1SS133	1	F202	632 605 3454	FILTER,CERAM,10.7MHZ	1
D201	407 012 4406	DIODE 1SS133	1	F301	632 251 2139	CERAMIC FILTER, 468KHZ	1
D203	407 012 4406	DIODE 1SS133	1	T201	632 578 3048	COIL,FERRITE,IFT	1
D302	407 012 4406	DIODE 1SS133	1	T301	632 527 8094	RF COIL	1
D303	407 012 4406	DIODE 1SS133	1	T311	632 527 8117	RF COIL	1
D304	407 012 4406	DIODE 1SS133	1	T302	632 527 8100	RF COIL	1
D306	407 012 4406	DIODE 1SS133	1	T312	632 527 8124	RF COIL	1
D307	407 012 4406	DIODE 1SS133	1	T303	632 265 7816	IF TRANSFORMER	1
D308	407 012 4406	DIODE 1SS133	1	T304	632 579 4396	TRANS,IF,450KHZ	1
D351	407 012 4406	DIODE 1SS133	1	T305	632 527 8131	OSC COIL	1
D804	407 012 4406	DIODE 1SS133	1	T315	632 527 8155	OSC COIL	1
D805	407 012 4406	DIODE 1SS133	1	L301	632 265 1166	CHOKO COIL, 140UH	1
D806	407 012 4406	DIODE 1SS133	1	L501	632 265 9605	CHOKO COIL	1
D808	407 012 4406	DIODE 1SS133	1	L501	632 568 3232	INDUCTOR,SK	1
D816	407 012 4406	DIODE 1SS133	1	X801	632 250 5148	CRYSTAL OSCILLATOR	1
D817	407 012 4406	DIODE 1SS133	1	Z806	632 564 0280	BATTERY,CR2032-1HF	1
D827	407 012 4406	DIODE 1SS133	1	PL812	632 559 7645	LAMP,5V,115MA	1
D828	407 012 4406	DIODE 1SS133	1	CP1	632 253 9983	PLUG, 3P	1
D829	407 012 4406	DIODE 1SS133	1	VR-41	632 629 7414	VR,ROTARY,100WX2 50KBX2	1
D836	407 012 4406	DIODE 1SS133	1	L,R,			
D837	407 012 4406	DIODE 1SS133	1	FL,FR,			
D838	407 012 4406	DIODE 1SS133	1	S501			
D839	407 012 4406	DIODE 1SS133	1	CS501	632 539 5647	SOCKET	1
				F501	424 001 0508	FUSE 32V 5A	1
					632 523 2317	TERMINAL, AUTO FUSE	2
				TP800	632 647 7298	PLUG,5P	1
				CS2	632 545 3347	CORD, 140MM 5P, MECHA	1
					632 647 3535	PC JOINER,6P-170MM,	1
						VR - SOCKET	

NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PARTS LIST (CONTINUED)

Ref.No	PART No.	DESCRIPTION	Q'ty
D305-1 -2,-3	407 000 1509	VARACTOR DI KV1235Z	.1
BALANCE P.C.B. ASSEMBLY			
PCB2	632 626 4973	ASSY,PCB,BALANCE, PCB ASSY WILL NOT SUPPLY AFTER INITIAL LOT.	1
D851	407 053 6209	ZENER DIODE MTZ5.1A	1
S821	632 539 9096	TACT SWITCH	1
S822	632 539 9096	TACT SWITCH	1
S823	632 539 9096	TACT SWITCH	1
VR32-L	632 587 7495	VR,SLIDE,50KAX2	1
VR32-R			
VR31	632 578 3055	VR,SLIDE,50KW	1
S824	632 613 1046	SWITCH,TACT,1P-1T	1
CP31	632 645 4671	PLUG,3P	1
CP821	632 645 4695	PLUG,6P	1
PL821	632 559 7645	LAMP,5V,115MA	1

Ref.No	PART No.	DESCRIPTION	Q'ty
SWITCH P.C.B. ASSEMBLY			
PCB3	632 626 4980	ASSY,PCB,SWITCH, PCB ASSY WILL NOT SUPPLY AFTER INITIAL LOT.	1
S831	632 539 9096	TACT SWITCH	1
S832	632 539 9096	TACT SWITCH	1
S833	632 539 9096	TACT SWITCH	1
S834	632 539 9096	TACT SWITCH	1
S835	632 539 9096	TACT SWITCH	1
S836	632 539 9096	TACT SWITCH	1
S837	632 539 9096	TACT SWITCH	1
S838	632 539 9096	TACT SWITCH	1
S839	632 539 9096	TACT SWITCH	1
CP831	632 645 4688	PLUG,4P	1
CP832	632 645 4688	PLUG,4P	1
PL833	632 559 7645	LAMP,5V,115MA	1

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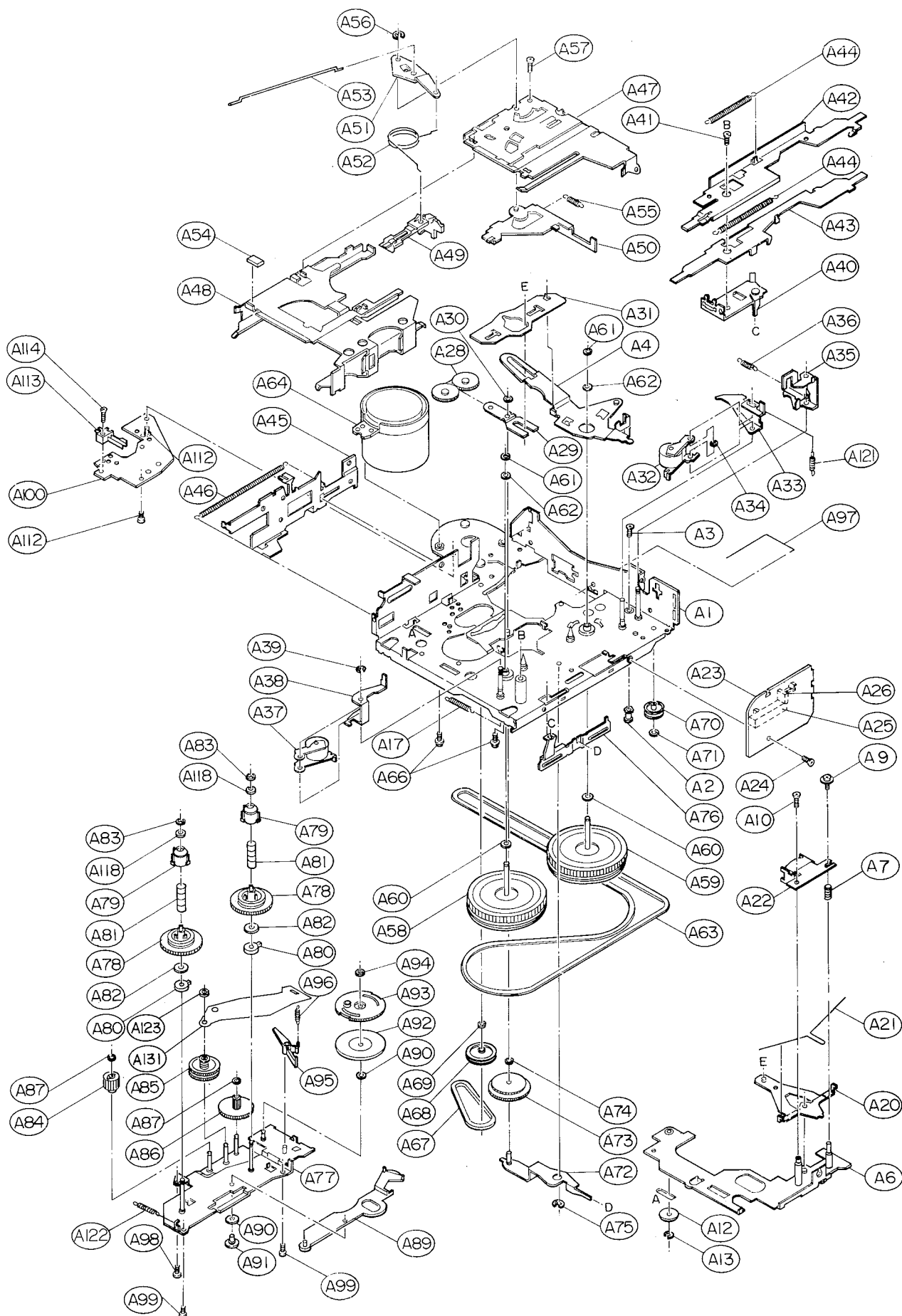
PARTS LIST (CASSETTE MECHANISM)

Ref.No	PART No.	DESCRIPTION	Q'ty
CASSETTE MECHANISM(632 563 8744)			
A1	632 531 7755	CHASSIS ASS'Y	1
A2	632 531 5089	SHAFT, MECHANISM	1
A3	412 044 4102	SPECIAL SCREW	1
A4	632 516 9804	LEVER, REVERSE A	1
A6	632 523 3734	LEVER ASS'Y	1
A7	632 517 0756	COMPRESSION SPRING	1
A9	632 638 5197	GUIDE,SPECIAL SCREW	1
A10	412 029 5902	SPECIAL SCREW	1
A12	632 543 9983	SLEEVE	1
A13	411 015 8309	RING E 1.5	1
A17	632 554 8234	SPRING,TENS	1
A122	632 554 8241	SPRING,TENS	1
A20	632 519 1348	LEVER ASS'Y, REVERSE C	1
A21	632 540 0174	WIRE SPRING	1
A22	632 602 6540	HEAD,PLAY	1
A23	632 536 7583	PC BOARD, MECHANISM	1
	632 254 0002	PLUG, 5P	1
	401 024 7400	CARBON 10K JA 1/6W	2
A24	411 027 1008	SCR S-TPG BIN 2X3	1
A25	632 256 9515	SLIDE SWITCH	1
A26	632 519 7784	LEAF SWITCH	1
A28	632 521 8854	LEVER ASS'Y, PLAY GEAR C	1
A29	632 516 9668	LEVER, PLAY GEAR B	1
A30	632 305 5987	SPECIAL WASHER	1
A31	632 624 7839	LEVER,PLAY GEAR,A	1
A32	632 519 1362	LEVER ASS'Y,PINCHPOLLER F	1
A33	632 544 9579	LEVER, REVERSE B	1
A34	411 000 9403	RING E 2	1
A35	632 523 3765	LEVER, FF LOCK	1
A36	632 517 0688	COIL SPRING	1
A37	632 519 1379	LEVER ASS'Y,PINCHROLLER R	1
A38	632 516 9767	LEVER, HEAD BACK	1
A39	632 567 6326	SPACER	1
A40	632 653 6988	ASSY,GUIDE,LEVER,FF	1
A41	412 046 5800	SPECIAL SCREW	1
A42	632 516 9927	LEVER, FF RIGHT	1
A43	632 516 9903	LEVER, FF LEFT	1
A44	632 543 2519	COIL SPRING	2
A45	632 543 0324	LEVER ASS'Y, EJECT	1
A46	632 517 0626	COIL SPRING	1
A47	632 541 8322	CASE, A	1
A54	632 580 6983	CUSHION	1
	632 644 5518	SHEET	1
A48	632 516 9965	CASE, B	1
	632 580 6976	CUSHION	2
A49	632 517 0190	GUIDE, CASSETTE	1
A50	632 519 1409	LEVER ASS'Y, CASE C	1
A51	632 516 9637	LEVER, CASE D	1
A52	632 648 2636	SPRING,TORS	1
A53	632 541 8490	WIRE SPRING	1

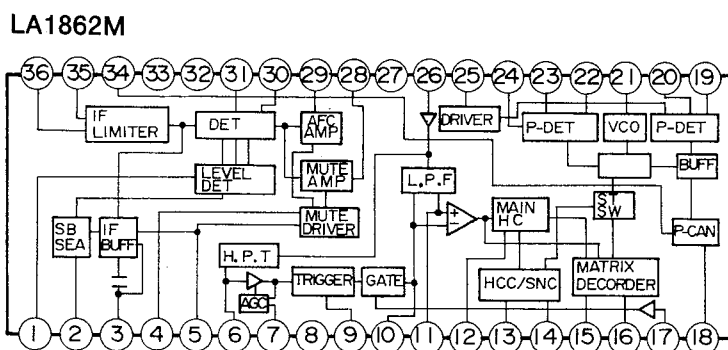
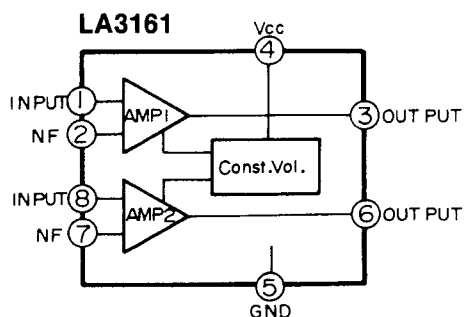
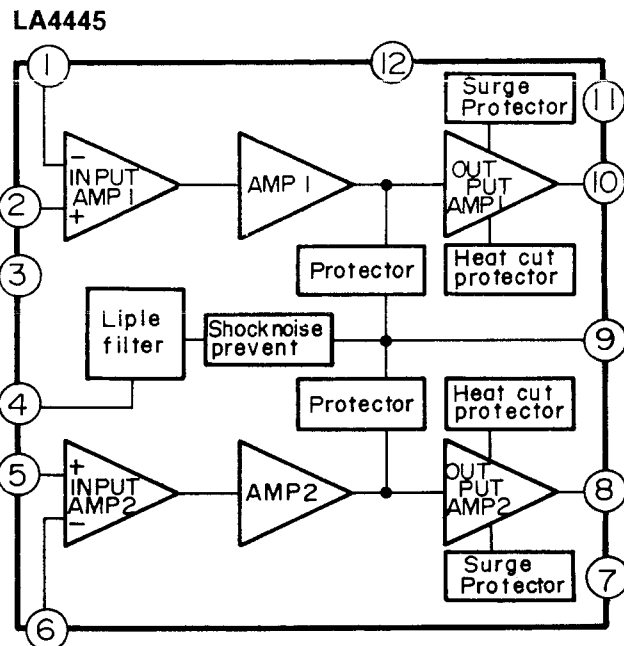
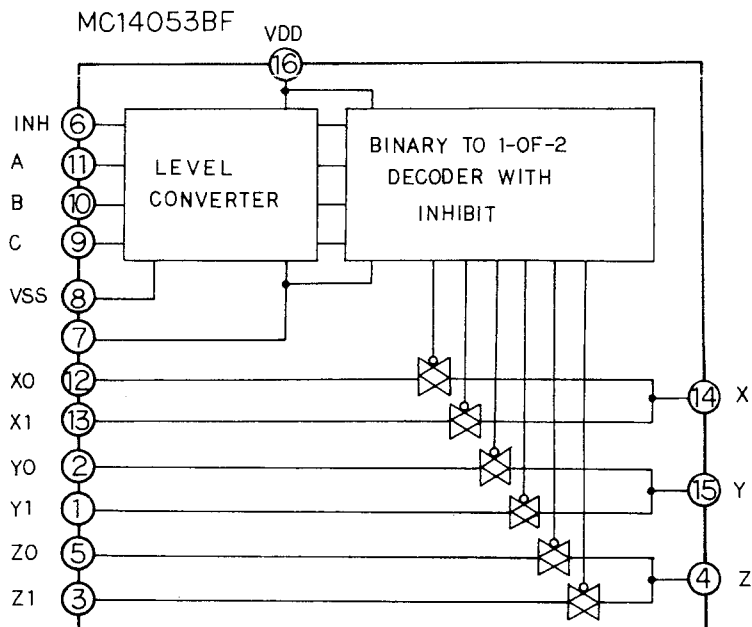
Ref.No	PART No.	DESCRIPTION	Q'ty
A55	632 518 5132	COIL SPRING	1
A56	411 015 8309	RING E 1.5	1
A57	412 016 4208	SPECIAL SCREW	1
A58	632 516 9842	FLYWHEEL	1
A59	632 536 1116	FLYWHEEL	1
A60	411 089 7000	WASHER Y 2X4X0.13	2
A61	632 310 2827	SPECIAL WASHER	2
A62	632 310 2834	SPECIAL WASHER	2
A63	632 536 9228	BELT, FLYWHEEL	1
A64	632 556 6795	ASSY,MOTOR,DC	1
A66	411 047 4201	SCR PAN+FLG 2.6X3	2
A67	632 517 0763	BELT, A	1
A68	632 653 5523	GEAR,PULLEY	1
A69	632 310 2827	SPECIAL WASHER	1
A70	632 624 9543	PULLEY,IDLER	1
A71	632 568 7414	MOUNT-M,SPECIAL WASHER	1
A72	632 519 1416	LEVER ASS'Y, FF GEAR	1
A73	632 543 1666	GEAR ASS'Y, FF	1
A74	632 568 7414	MOUNT-M,SPECIAL WASHER	1
A75	411 000 9908	RING E 3	1
A76	632 516 9729	LEVER, FF B	1
A77	632 519 1423	CHASSIS ASS'Y, GEAR	1
A78	632 517 0152	REEL, TAKE UP	2
A79	632 544 1221	REEL, RING	2
A80	632 540 0099	SENSOR, A	2
A81	632 543 2496	COMPRESSION SPRING	2
A82	632 536 9211	CUSHION, FELT	2
A83	412 036 6008	SPECIAL WASHER	2
A118	411 089 6508	WASHER Y 2X3.5X0.25	2
A84	632 517 0138	GEAR, B	1
A85	632 543 1642	GEAR ASS'Y, TAKE UP	1
A86	632 517 0107	GEAR, A	1
A87	632 568 7414	MOUNT-M,SPECIAL WASHER	2
A123	632 607 2288	MOUNT-M,SPECIAL WASHER	1
A89	632 517 0220	LEVER, SENSOR	1
A90	632 535 2169	PLATE SPRING	2
A91	632 531 7748	SHAFT	1
A92	632 517 0022	GEAR, SENSOR	1
A93	632 543 1673	GEAR ASS'Y, REVERSE	1
A94	632 568 7414	MOUNT-M,SPECIAL WASHER	1
A95	632 517 0176	LEVER, LOCK GEAR	1
A96	632 548 8196	SPRING,TENS	1
A121	632 548 8202	SPRING,TENS	1
A97	632 517 0565	WIRE SPRING	1
A98	411 027 1008	SCR S-TPG BIN 2X3	1
A99	411 131 9907	SCR FLT PCS 1.7X3	2
A131	632 589 6410	SHEET	1
A100	632 516 9606	CHASSIS, KEY OFF	1
A112	412 016 5601	SPECIAL SCREW	2
A113	632 257 5486	LEAF SWITCH	1
A114	412 029 5803	SPECIAL SCREW	1

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EXPLODED VIEW (CASSETTE MECHANISM)

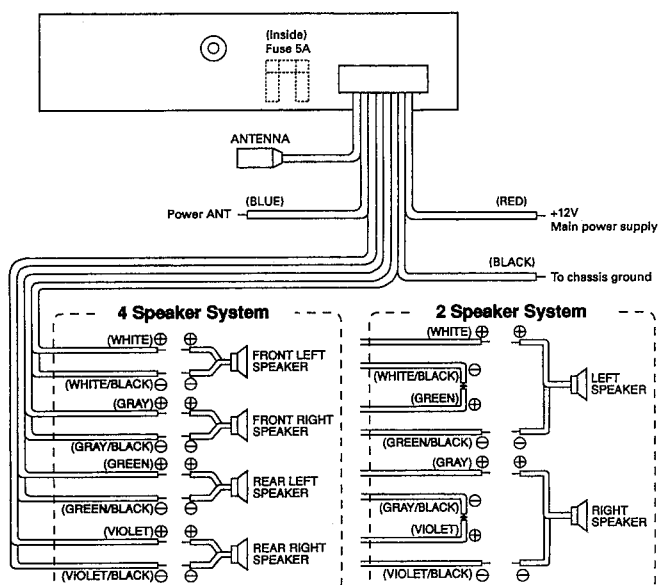


IC BLOCK DIAGRAM



ELECTRICAL CONNECTIONS

Do not connect the speaker wires to the metal body or chassis of the vehicle.
Connect them directly to each speaker.



SANYO

SANYO Electric Co., Ltd.
Osaka, Japan.