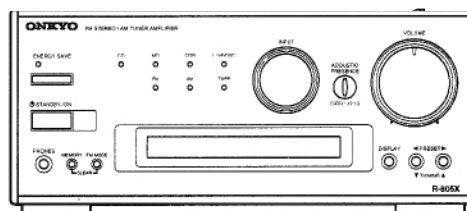


ONKYO® SERVICE MANUAL

FM STEREO/AM TUNER AMPLIFIER

MODEL R-805X



Black model

BUDD	120VAC, 60Hz
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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Amplifier Section

Power output

20 watts per channel, min RMS, at 4 ohms, both channels driven 1 kHz, with no more than 0.6% THD

15 watt per channel, min RMS, at 8 ohms, both channels driven 1 kHz, with no more than 0.6% THD

2 X 20 watts at 4 ohms, 1 kHz, DIN

2 X 17 watts at 6 ohms, 1 kHz, DIN

2 X 15 watts at 8 ohms, 1 kHz, DIN

2 X 29 watts at 4 ohms, 1 kHz, EIAJ

Dynamic power output

2 X 24 watts at 4 ohms

2 X 17 watts at 8 ohms

Total harmonic distortion

0.6% at rated power

IM distortion

0.6% at rated power

Damping factor

30 at 8 ohms

Input Sensitivity and Impedance

TAPE/MD PLAY: 150 mV, 50 kohms

LINE IN: 150 mV, 50 kohms

Frequency and response

10 to 50,000 Hz +0 / -3 dB

Tone control

ACOUSTIC PRESENCE 1

+4 dB at 82 Hz

ACOUSTIC PRESENCE 2

+3 dB at 20.5 Hz, + 3 dB at 82 Hz

ACOUSTIC PRESENCE 3

+3 dB at 20.5 Hz, + 6 dB at 82 Hz

BASS

±8 dB at 100 Hz

TREBLE

±8 dB at 10 kHz

Signal to noise ratio

TAPE: 100 dB (IHF-A)

Muting

- ∞ dB

Tuner Section

Tuning range

FM: 87.9 to 107.9 MHz (200 kHz steps)

AM: 530 to 1710 kHz (10 kHz steps)

Usable sensitivity

FM: Mono 11.2 dBf,

1.0 μV (75 ohms IHF)

0.9 μV (75 ohms DIN)

Stereo 17.2 dBf,

2.0 μV (75 ohms IHF)

23.0 μV (75 ohms DIN)

AM: 30 μV

50 dB Quieting sensitivity

FM: Mono 17.2 dBf, 2.0 μV (75 ohms)

Stereo 37.2 dBf, 20.0 μV (75 ohms)

Capture ratio

FM: 2.0 dB

Image rejection ratio

FM: 40 dB

AM: 40 dB

IF rejection ratio

FM: 90 dB

AM: 40 dB

Signal to noise ratio

FM: Mono 73 dB, IHF

Stereo 67 dB, IHF

AM: 40 dB

Selectivity

FM: 50 dB DIN

(±300 kHz at 40 kHz Devi.)

AM Suppression Ratio

50 dB

Harmonic distortion

FM: Mono 0.2%

Stereo 0.3%

AM: 0.7 %

Frequency response

FM: 30 to 15,000 Hz (±1.5 dB)

Stereo separation

FM: 45 dB at 1,000 Hz

30 dB at 100 to 10,000 Hz

Stereo threshold

FM: 17.2 dBf, 2.0 μV (75 ohms)

General

Clock precision

monthly error: +/-30 seconds

(at 25 degrees Celsius)

Power supply

AC 120 V, 60 Hz

Power consumption

61 W (120 V, 60 Hz)

Dimensions (W X H X D)

205 X 91 X 302 mm

8-1/16" X 3-9/16" X 11-7/8"

Weight

3.4 kg, 7.5 lbs

Specifications and external appearance are subject to change without notice as a result of product improvement.

SERVICE PROCEDURES

1. Replacing the fuses

 This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

 Ce symbole indique que le fusible utilise est a rapide. Pour une protection permanente, n'utiliser que fusibles de meme type. Ce d'arnier est la qu le present symbol est appse.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252157	1.25A-UL/T237, Primary

2. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.

To perform a result, please follow the procedure below.

1. Press and hold down the MEMORY button, then press the DISPLAY button.
2. Press the STANDBY/ON button.

After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting.

3. Safety-check out

(Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.
Specifications: 3.3Mohm $\pm$ 10% at 500V.

4. Memory Preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in order to charge the back-up system.

The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

5. Changing the AM band step

The tuning step selector switch is not provided in this model. When you change the band step, change the parts as shown below.

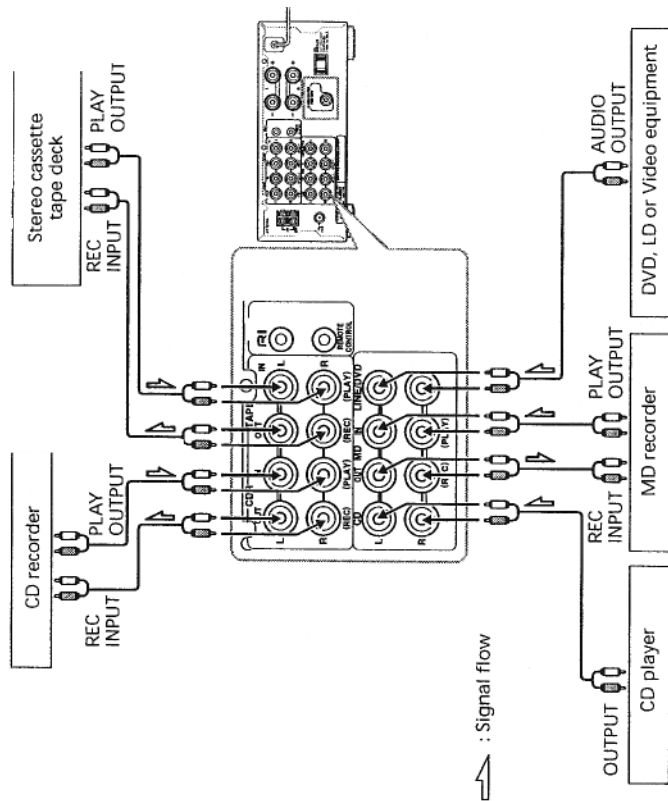
	To 10kHz	To 9kHz
R715	3.3k	Open
R716	5.6k	10k

6. Adjustment of clock frequency

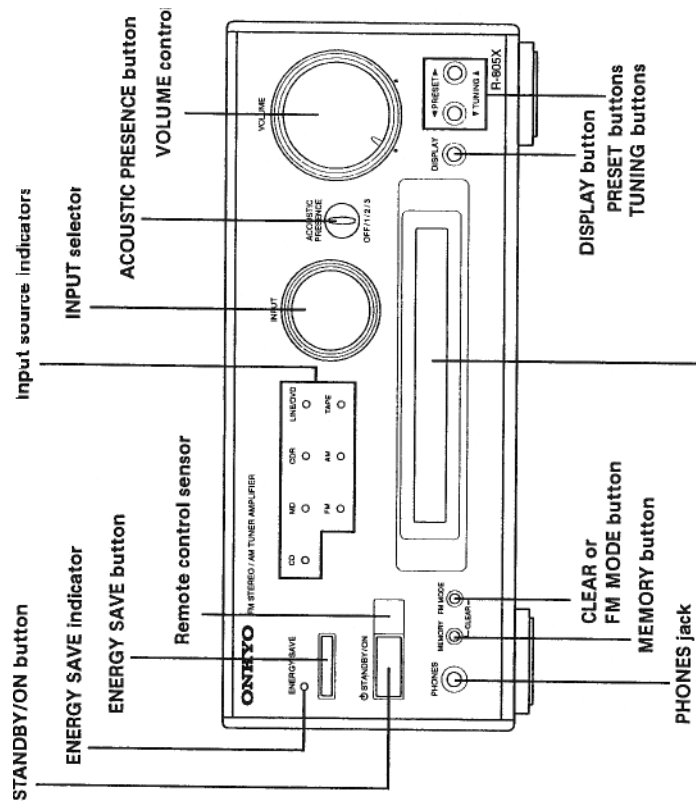
1. Connect the frequency counter to the terminal TP701.
2. Press and hold down the MEMORY button, then press the DISPLAY button. (All segments on FL tube light on)
3. Adjust the trimmer capacitor C707 so that the reading of frequency counter becomes 524.288 kHz $\pm$ 1Hz.

PANEL VIEWS

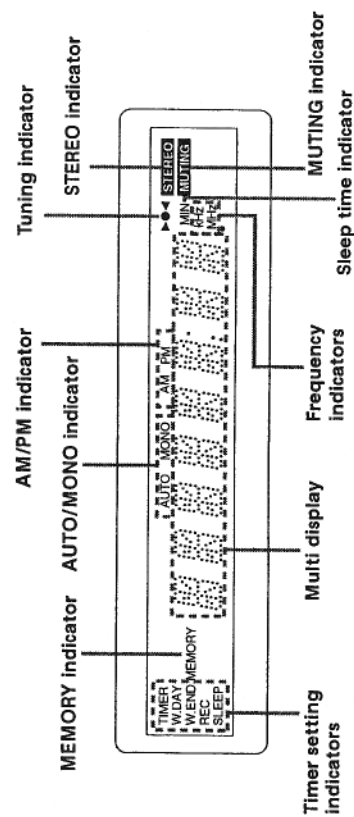
REAR PANEL



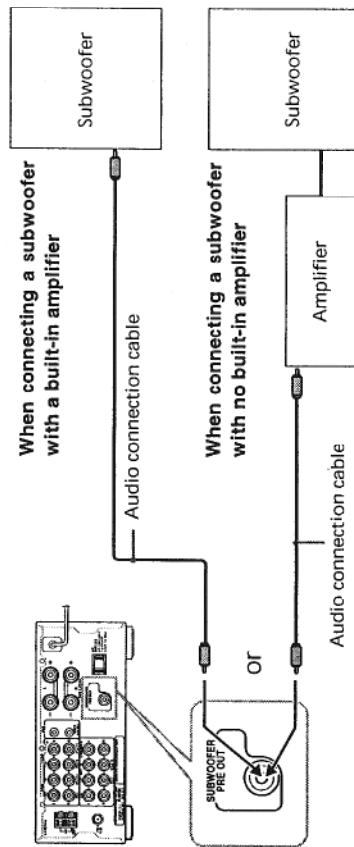
FRONT PANEL



Display



Connections



REMOTE CONTROLLER

- You can control the other **PI**-connected components with the supplied remote controller.
- The remote controller buttons operate in the same way as the buttons on each component with the same indication.
- For actual operations, please refer to the Instruction Manual for each component.

POWER button

Toggles between **STANDBY** and **ON**.

Tuner control

◀PRESET▶: Tuner preset select buttons

FM : FM band select button
AM : AM band select button

TONE button

Enables you to set the tone.

Mode Select buttons

TIMER : Pressing this button repeatedly to select one of the following eight settings.

WEEKDAY : Timer playback on the specified day(s) of the week

WEEKEND : Timer playback on the specified day(s) of the week

REC : Timer record setting

DAYSET : Sets the day of the week (**WEEKDAY & WEEKEND**)

ADJUST : Sets the current time and the day of the week.

24H/12H: Enables you to select 24-hour display or 12-hour display by pressing the **ENTER** button and using the **UP ▲/DOWN ▼** buttons.

UP ▲/DOWN ▼ : Enables you to select a parameter after you press the **TIMER** or **TONE** button. Press the **ENTER** button to confirm the selection.

ENTER : Press this button to confirm the selection made via the **TIMER**, **TONE**, **UP ▲** or **DOWN ▼** button.

CLOCK button

Press this button to display the current time.

SLEEP button

Enables you to make the Sleep time setting.

INPUT button

Enables you to select a listening source.

MUTING button

Mutes the sound temporarily.

VOLUME ▲/▼ buttons

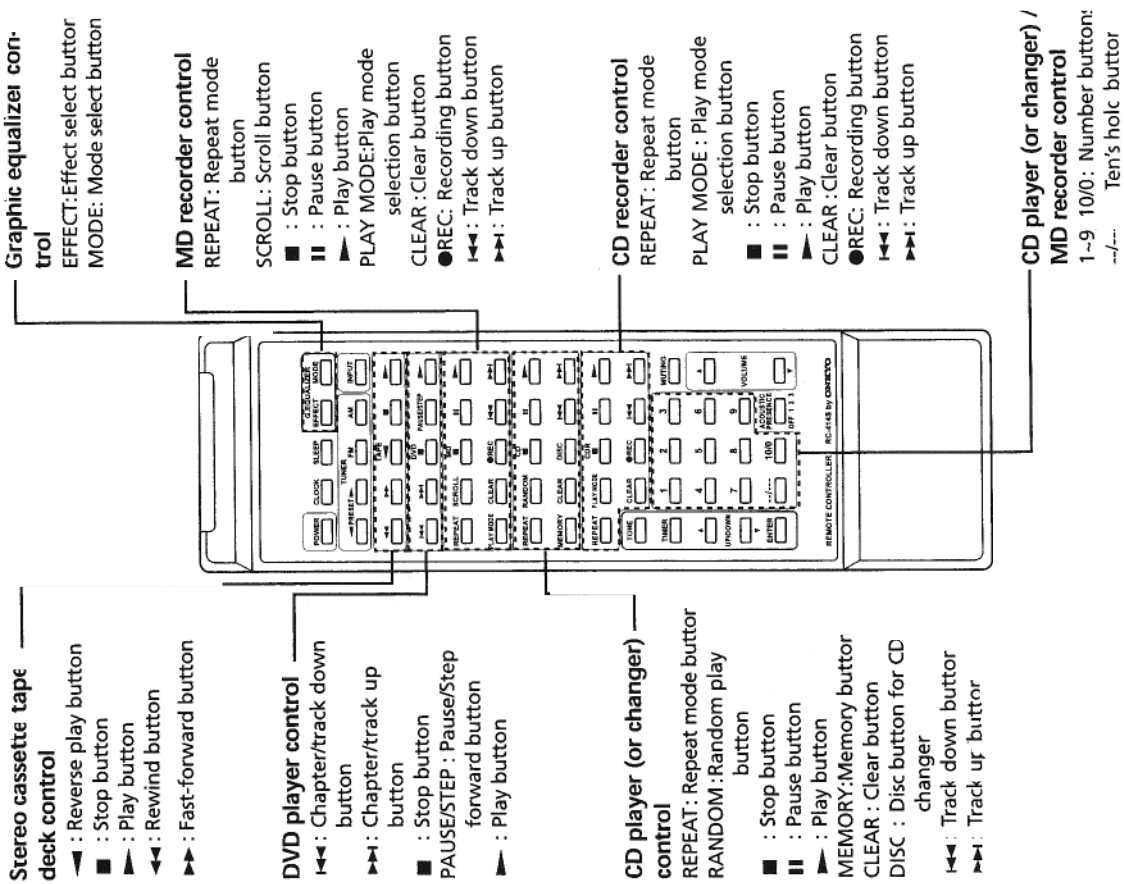
Enables you to increase or decrease the volume level.

ACOUSTIC PRESENCE button

Switches acoustic presence off and types.

Number buttons

Used to set the time/day and select the **PRESET** stations





PARTS LIST

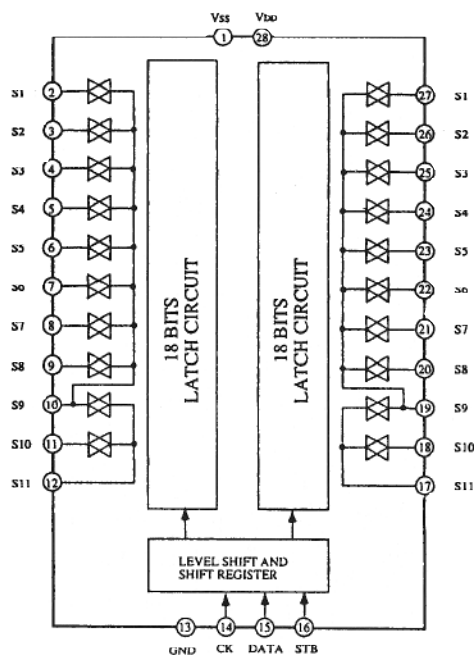
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	27111170	Front bracket	E901	260208	Wire tie
2	28325755	Knob, acoustic	F901	252157	△ 1.25A-UL/T-237,Fuse
3	838130088	3TTB+8B,Self-tapping screw	P901	253277MIL	△ AS-UC-2#18,Power supply cord
4	27100375C	Chassis	P953	2047150512	NCFC7-150512,Flexible flat cable
5	27175323	Leg	P965	27150448A	Shield plate
6	27141530A	Retainer	P966	880009	NRP-345,Plastic rivet
8	801433	3SMS8W.SW+14B(BC),Special screw	P967	27301779	HL-38-O, Clamp
10	27300750	△ Bushing, cord	Q525,Q526	2202064,	* 2SC4511-Y,
11	830440089	4TTC+8C(BC),Self-tapping screw		2202066 or	* 2SC4511-P or
12	27122682B	Rear panel		2202063	* 2SC4511-O, Transistor
14	838430068	3TTB+6B(BC),Self-tapping screw	Q527,Q528	2202054,	* 2SA1725-Y,
15	27160451B	Heat sink		2202056 or	* 2SA1725-P or
17	28198901	Facet		2202053	* 2SA1725-O, Transistor
19	28191798	Clear plate, remote control	T901	2301443	△ NPT-1385D,Power transformer
20	28191892	Clear plate	U1	1A872501-1B	NAAF-6801-1B,Main circuit PC board ass'y
21	28184784	Top cover	U2	1A872502-1B	NAETC-6802-1B,Input/output terminal PC board ass'y
23	28141409A	Cushion	U3	1A872503-1B	NAPS-6803-1B,Secondary circuit PC board ass'y
24	838430088	3TTB+8B(BC), Self-tapping screw	U4	1A872504-1B	NADG-6804-1B,Indicator circuit PC board ass'y
25	28325776	Knob, input	U5	1A872505-1B	NAAF-6805-1B,Tone circuit PC board ass'y
26	28325777	Knob, volume	U6	1A872506-1B	NAPS-6806-1B,Primary circuit PC board ass'y
31	27212223	Front panel	U8	1A872507-1B	NAETC-6807-1B,Speaker terminal PC board ass'y
32	28135279	Badge	U9	1A872518-1B	NAETC-6918-1B,Subwoofer PC board ass'y
33	29362572A	Label	U10	240134	TFC-E1U114A, Tuner pack

NOTE: THE COMPONENTS IDENTIFIED BY MARK

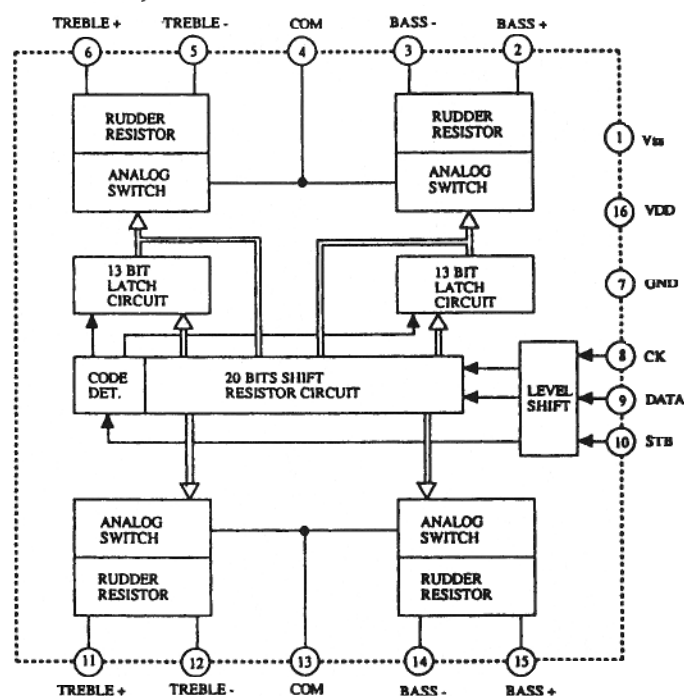
△ ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH
PART NUMBER SPECIFIED.

IC BLOCK DIAGRAMS AND DESCRIPTIONS

TC9273N-010 (Analog Switch)

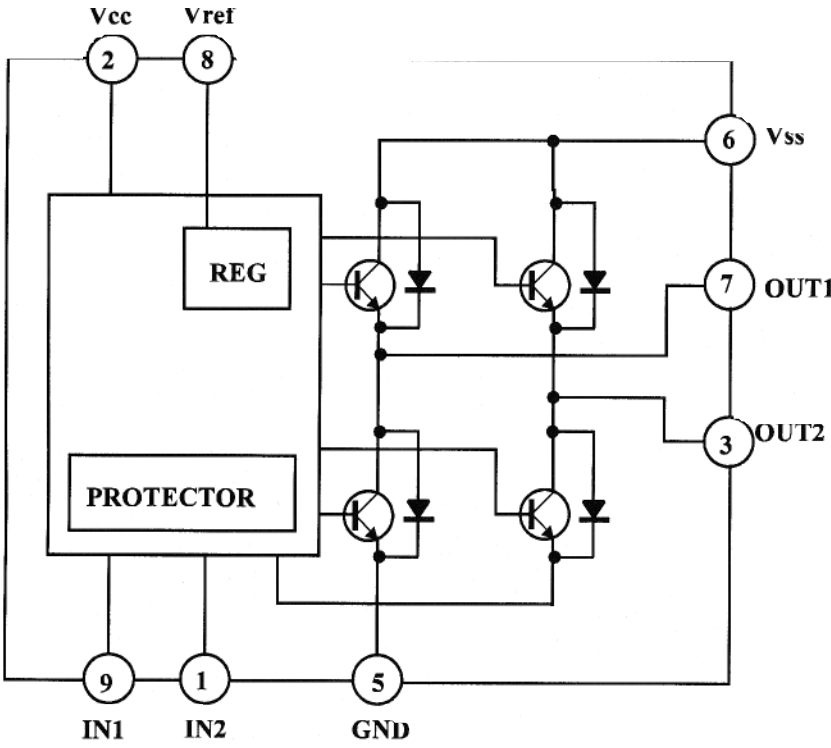


TC9184P (Electro Tone Volume)



No.	Symbol	Function
1	Vss	Power supply terminal for analogue section
16	VDD	
2,15	BASS +	Volume terminals
3,14	BASS -	
5,12	TREBLE -	
6,11	TREBLE +	
4,13	COM	
7	GND	Ground terminal for digital section
8	CK	Clock input terminal to take in the data of terminal DATA.
9	DATA	Data input terminal
10	STB	Strobe input terminal

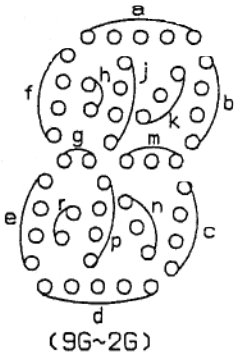
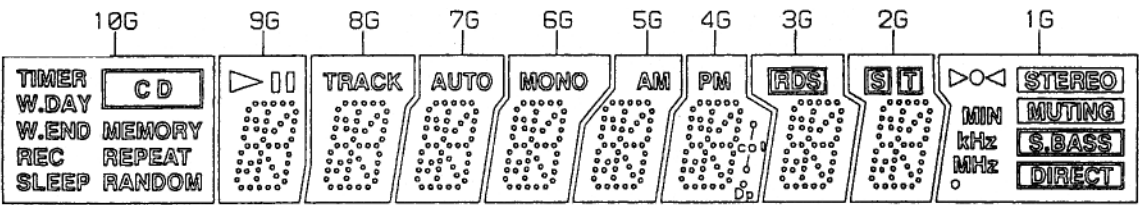
TA7291S (VOLUME MOTOR DRIVER)



INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

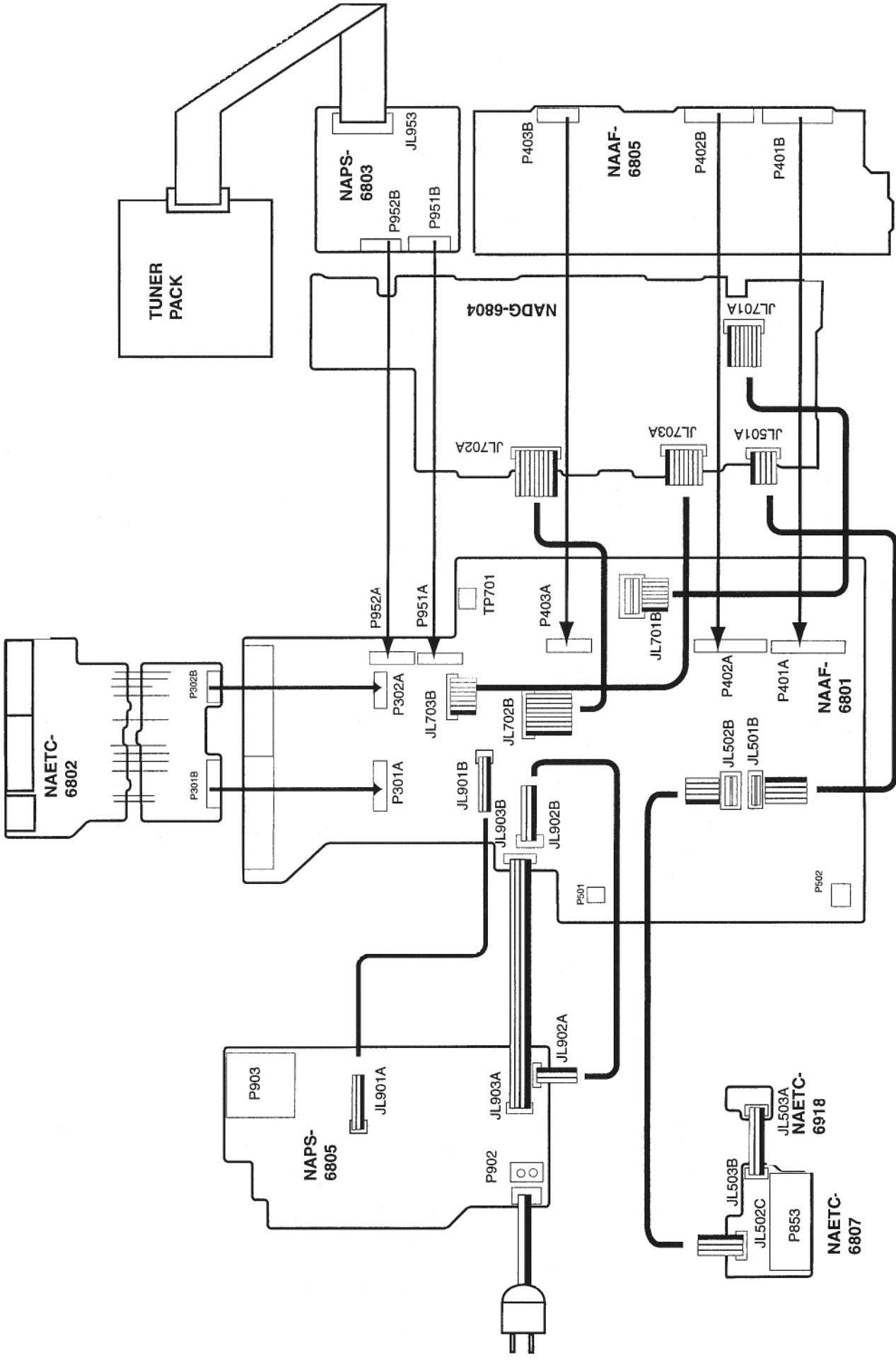
CCW:Counter-clockwise direction
CW:Clockwise direction

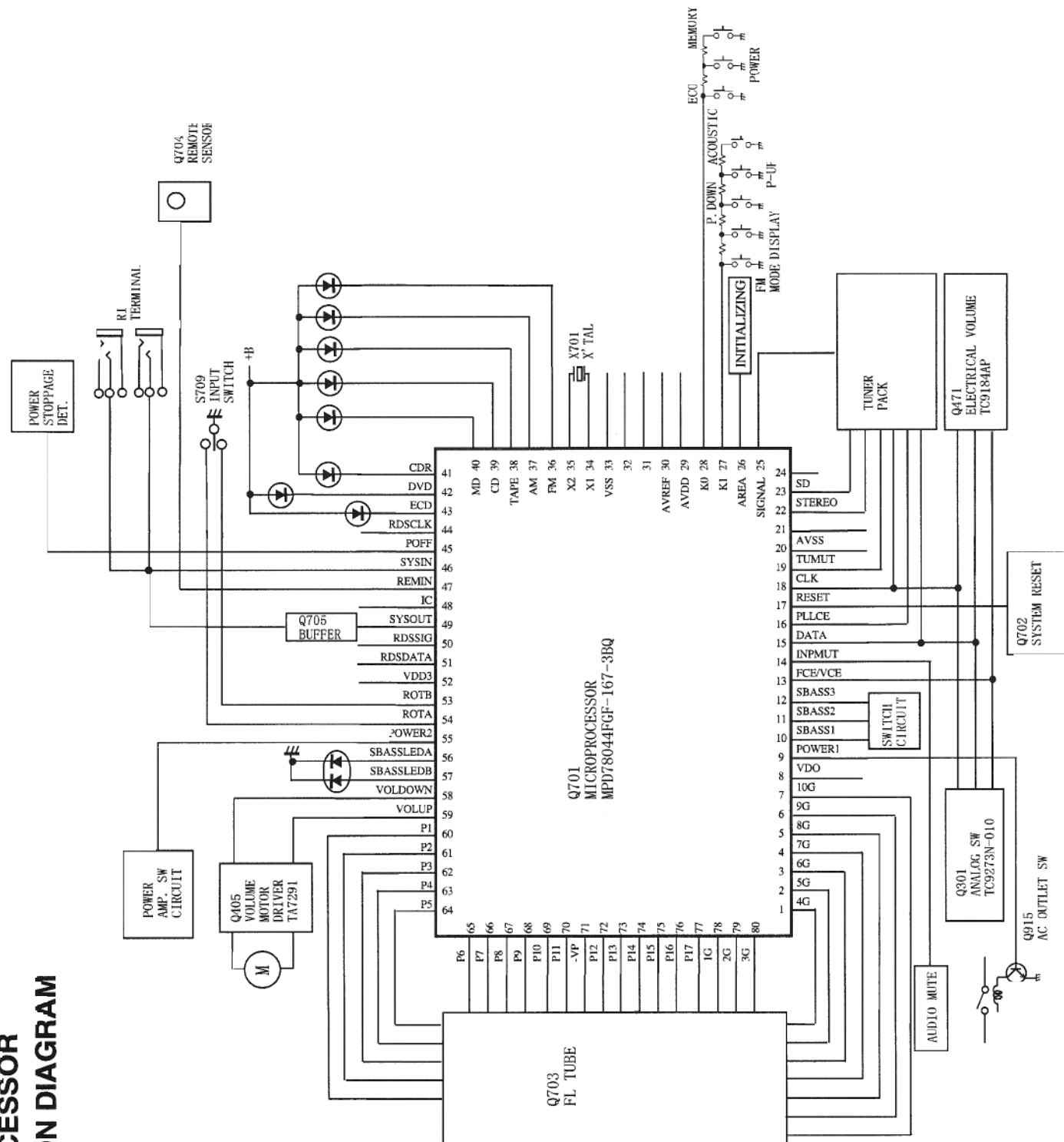
10-BT-167GK (FL TUBE)



	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	—	a	a	a	a	a	a	a	a	—
P2	W.DAY	j	j	j	j	j	j	j	j	MUTING
P3	W.END	h	h	h	h	h	h	h	h	MIN
P4	MEMORY	k	k	k	k	k	k	k	k	S.BASS
P5	—	b	b	b	b	b	b	b	b	—
P6	—	f	f	f	f	f	f	f	f	—
P7	—	g	g	g	g	g	g	g	g	—
P8	REC	m	m	m	m	m	m	m	m	MHz
P9	—	c	c	c	c	c	c	c	c	—
P10	—	e	e	e	e	e	e	e	e	—
P11	REPEAT	n	n	n	n	n	n	n	n	kHz
P12	RANDOM	r	r	r	r	r	r	r	r	DIRECT
P13	—	p	p	p	p	p	p	p	p	—
P14	—	d	d	d	d	d	d	d	d	—
P15	TIMER	▷	TRACK	AUTO	MONO	AM	PM	RDS	S	▷ ○ ◁
P16	CD	□ □	—	—	—	—	Col	—	T	STEREO
P17	SLEEP	—	—	—	—	—	Dp	—	—	○

WIRING VIEW





TERMINAL DESCRIPTION

Pin No.	Symbol	Function	I/O	Description
1~7	P94/FIP6	4G~10G	O	Grid output pins for FL tube.
8	Vdd	+5V		Positive power supply pin
9	P27/SCK0	POWER1	O	Power supply control pin for AC outlet and FL tube.
10	P26/SO0/SB1	SBASS-3	O	Acoustic presence control output pin
11	P25/SI0/SB0	SBASS-2	O	Acoustic presence control output pin
12	P24/BUSY	SBASS-1	O	Acoustic presence control output pin
13	P23/STB	FCE/VCE	O	Latch output pin of the function switch and strobe output pin of the tone control
14	P22/SCK1	INPMUT	O	Audio muting control output pin
15	P21/SO1	DATA	O	Data output pin for function switch, tone control and PLL ICs.
16	P20/SI1	PLLCE	O	Chip enable output pin for PLL IC.
17	~RESET	~RESET	I	System reset input pin.
18	P74	CLK	O	Clock signal output pin for function switch, tone control and PLL ICs.
19	P73	TUMUT	O	Muting output pin for tuner section.
20	AVss	GND		Ground pin for A/D converter.
21	P17/ANI7	NC		Not used.
22	P16/ANI6	STEREO	I	Stereo broadcast detection pin.
23	P15/ANI5	SD	I	Broadcast detection input pin
24	P14/ANI4	NC		Not used.
25	P13/ANI3	SIGNAL	I	Signal strength input pin
26	P12/ANI2	AREA	I	Initializing input pin for region
27	P11/ANI1	K1	I	Operation key connection pin
28	P10/ANI0	K0	I	Operation key connection pin
29	AVdd	+5V		Analog power supply for A/D converter
30	AVref	+5V		Reference voltage input pin for A/D converter
31	P04/XT1	XT1		Oscillator connection pin for sub system. Not used.
32	XT2	XT2		Oscillator connection pin for sub system. Not used.
33	Vss	GND		Ground pin
34	X1	X1		Crystal oscillator connection pin for main system clock
35	X2	X2		Crystal oscillator connection pin for main system clock
36	P37	FM	O	FM indicator output pin
37	P36/BUZ	AM	O	AM indicator output pin
38	P35/PCL	TAPE	O	TAPE indicator output pin
39	P34/TI2	CD	O	CD indicator output pin
40	P33/TI1	MD	O	MD indicator output pin
41	P32/TO2	CDR	O	CDR indicator output pin
42	P31/TO0	LINE/DVD	O	LINE/DVD indicator output pin
43	P30/TO0	ENERGY	O	ENERGY SAVE indicator output pin
44	P03/INTP3/CI0	RDSSCK	I	Clock input pin from RDS decoder
45	P02/INTP2	~POFF	I	Power failure detection pin
46	P01/INTP1	SYSIN	I	System code input pin
47	P00/INTP0/TI0	REMIN	I	Signal input from remote controller
48	IC(Vpp)	IC		Inner connection pin
49	P72	SYSOUT	O	System code output pin
50	P71	RDSSIG	I	Quality check signal from RDS decoder.
51	P70	RDSDATA	I	Data input pin from RDS decoder.
52	Vdd	+5V		Positive power supply pin
53	P127/FIP33	ROTB	I	Rotary encoder connection pin for Input selector
54	P126/FIP32	ROTA	I	Rotary encoder connection pin for Input selector
55	P125/FIP31	POWER2	O	Power supply control pin for Power amplifier
56	P124/FIP30	SBASS A	O	Acoustic presence indicator output pin
57	P123/FIP29	SBASS B	O	Acoustic presence indicator output pin
58	P122/FIP28	VOLDOWN	O	DOWN signal output pin for Master volume
59	P121/FIP27	VOL UP	O	UP signal output pin for Master volume
60~70	P120/FIP26	P1~P11	O	Segment output pin for FL tube
71	Vload	Vload		Pull down resistor connection pin for FL tube
72~77	P105/FIP15	P12~P17	O	Segment output pins for FL tube
78~80	P97/FIP9	1G~3G	O	Grid output pins for FL tube.

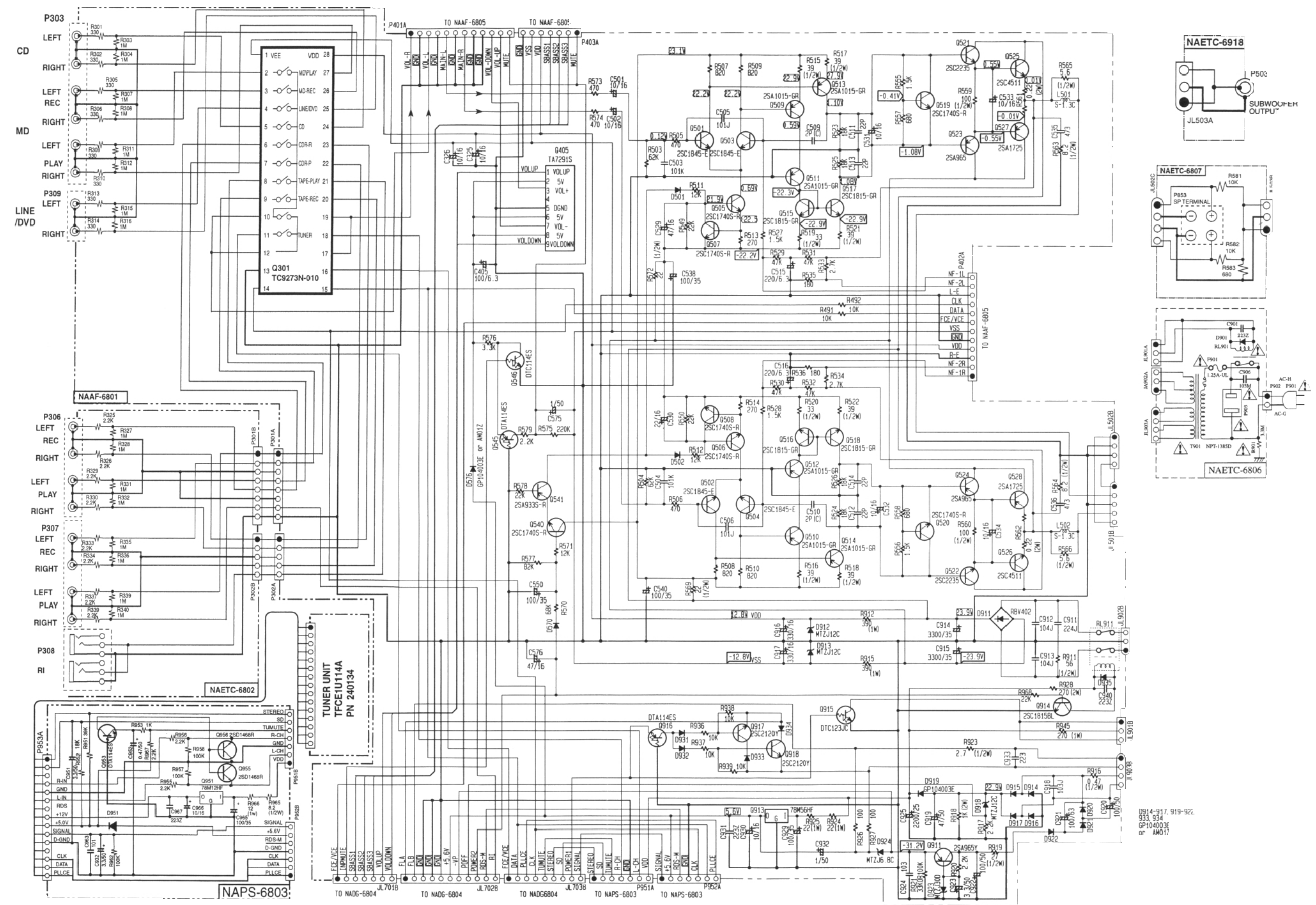
PRINTED CIRCUIT BOARD-PARTS LIST

NOTE: THE COMPONENTS IDENTIFIED BY MARK
△ ARE CRITICAL FOR RISK OF FIRE AND
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PART NUMBER SPECIFIED.

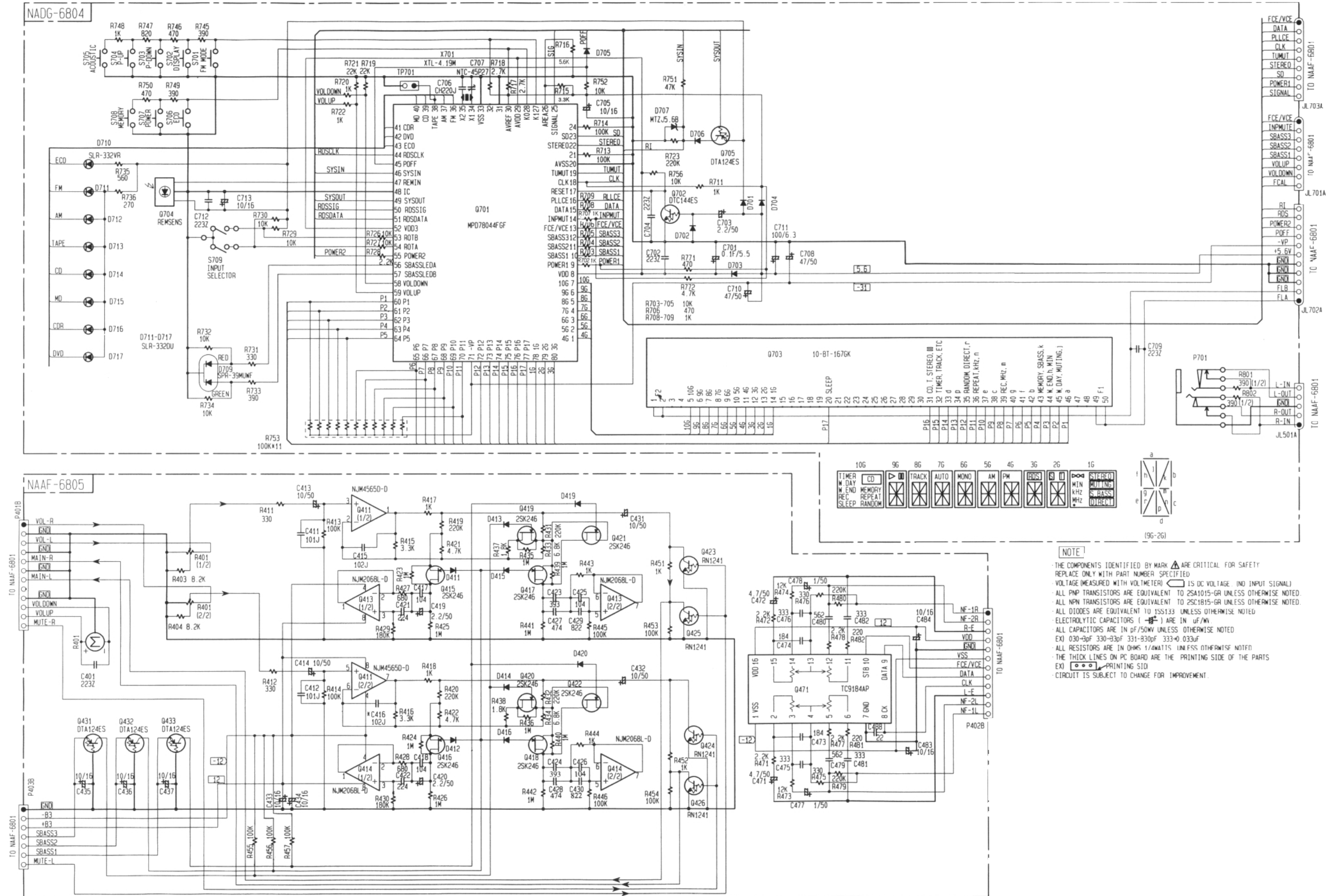
CAUTION: Replacement of the transistor of mark *, if necessary,
must be made from the same beta group (HFE) as the
original type.

MAIN CIRCUIT PC BOARD (NAAF-6801-1B)			CIRCUIT NO. PART NO. DESCRIPTION			CIRCUIT NO. PART NO. DESCRIPTION			CIRCUIT NO. PART NO. DESCRIPTION		
CIRCUIT NO. PART NO. DESCRIPTION			CIRCUIT NO. PART NO. DESCRIPTION			CIRCUIT NO. PART NO. DESCRIPTION			CIRCUIT NO. PART NO. DESCRIPTION		
ICs			Capacitors			Resistors			Diodes		
Q301	22240881	TC9273N-010	C930	393341007	10 μ F, 16V, Elect.	R965	453530824	8.2 Ω ±5%, 1/2W, Metal	D411-D416	223163 or	1SS133
Q405	22240239	TA7291S	C932	393380107	1 μ F, 50V, Elect.	R966	443621204	12 Ω ±5%, 1W, Metal oxide	D419, D420	223205	1SS270A
Q913	222780565JRC	NJM78M56FA	C933, C940	374722234	0.022 μ F ±5%, 50V, Plastic	Sockets			Capacitors		
Transistors			Resistors			P951B, P952B	25051232	NSCT-7P1022	C401	374722234	0.022 μ F ±5%, 50V, Plastic
Q501-Q504	2211733	2SC1845-E	R515-R522	443523904	39 Ω ±5%, 1/2W, Metal oxide	P953A	25052248	NSCT-15P2145	C413, C414	393381007	10 μ F, 50V, Elect.
Q505-Q508	2213284	2SC1740S-R	R519, R520	443523304	33 Ω ±5%, 1/2W, Metal oxide	Heat sink			C415, C416	374721024	1000pF ±5%, 50V, Plastic
Q509-Q514	2211455	2SA1015-GR	R521, R522	443523904	39 Ω ±5%, 1/2W, Metal oxide	Q951A	27160145-1	RAD-51	C417, C418	374721044	0.1 μ F ±5%, 50V, Plastic
Q515-Q518	2211255	2SC1815-GR	R559, R560	443521014	100 Ω ±5%, 1/2W, Metal oxide	Screw			C419, C420	353780229	2.2 μ F, 50V, Elect.
Q519, Q520	2211183	2SC1740-R	R561, R562	4500027	0.22 Ω, 2W, Metal plate	Q951B	838430107	3TTB+10S(BC)	C421, C422	374722244	0.22 μ F ±5%, 50V, Plastic
Q521, Q522	2211654 or	2SC2235-Y or	R563, R564	453530824	8.2 Ω ±5%, 1/2W, Metal	DISPLAY CIRCUIT PC BOARD (NADG-6804-1B)					
	2211653	2SC2235-O	R565, R566	453530564	5.6 Ω ±5%, 1/2W, Metal	CIRCUIT NO. PART NO. DESCRIPTION			C423, C424	374723934	0.039 μ F ±5%, 50V, Plastic
Q523, Q524	2211644 or	2SA965-Y or	R569, R572	443522204	22 Ω ±5%, 1/2W, Metal oxide	Q701	22241508NEC or	MPD78044FGF-175-3B9 or	C425, C426	374721044	0.1 μ F ±5%, 50V, Plastic
	2211643	2SA965-O	R911	443525604	56 Ω ±5%, 1/2W, Metal oxide		IC		C427, C428	374724744	0.47 μ F ±5%, 50V, Plastic
Q525, Q526	2202064,	* 2SC4511-Y,	R912, R915	441623914F	390 Ω ±5%, 1W, Metal oxide		MPD78044FGF-183-3B9		C429, C430	374728224	8200pF ±5%, 50V, Plastic
	2202063 or	* 2SC4511-O or	R916	453534794	0.47 Ω ±5%, 1/2W, Metal		FL tube		C431, C432	393381007	10 μ F, 50V, Elect.
	2202066	* 2SC4511-P	R918	443721024U	1k Ω ±5%, 2W, Metal oxide	Q703	212141	10BT-167GK	C433-C437	393341007	10 μ F, 16V, Elect.
Q527, Q528	2202054,	* 2SA1725-Y,	R919	443522704	27 Ω ±5%, 1/2W, Metal oxide		Remote sensor		C471, C472	393380477	4.7 μ F, 50V, Elect.
	2202053 or	* 2SA1725-O or	R923	453530274	2.7 Ω ±5%, 1/2W, Metal	Q704	241329	PIC-26043TH2	C473, C474	374721844	0.18 μ F ±5%, 50V, Plastic
	2202056	* 2SA1725-P	R924, R925	443622204HT	22 Ω ±5%, 1W, Metal oxide		Transistors		C475, C476	374723334	0.033 μ F ±5%, 50V, Plastic
Q540	2213284	2SC1740S-R	R928	443722714	270 Ω ±5%, 2W, Metal oxide	Q702	221282 or	DTC144ES or	C477, C478	393380107	1 μ F, 50V, Elect.
Q541	2213354	2SA933S-R	R945	443622714HT	270 Ω ±5%, 1W, Metal oxide		2213560	RN1204	C479, C480	374725624	5600pF ±5%, 50V, Plastic
Q545	2213510 or	DTA114ES or	Relay			Q705	2212600 or	DTA124ES or	C481, C482	374723334	0.033 μ F ±5%, 50V, Plastic
	2214350	RN2202	RL911	25065537	NRL-2P5A-DC12-107		2213580	RN2203	C483, C484	393341007	10 μ F, 16V, Elect.
Q546	2213290	DTC114ES	Terminals			Diodes			Resistor		
Q911	2211644	2SA965-Y	P303	25045300	NPJ-6PDBL159	D701-D706	223163 or	1SS133 or	R401	5104383	N16RGL100KBT20F, Variable
Q914	2211256	2SC1815-BL	P309	25045307	NPJ-2PDBL166		223205	1SS270A	Socket		
Q915	2213640	DTC123JS	Sockets			D707	224470562	MTZJ5.6B	P401B, P402B	25051237	NSCT-12P1027
Q916	2213510	DTA114ES	JL501B	25050269	NSCT-5P97	D709	225339	SPR-39MVWF	P403B	25051232	NSCT-7P1022
Q917, Q918	2211164	2SC2120-Y	JL502B	25050268	NSCT-4P96	D710	225338	SLR-332VR	PRIMARY CIRCUIT PC BOARD (NAPS-6806-1B)		
Diodes			JL702B	25051095	NSCT-11P882	D711-D717	225340	SLR-332DU	CIRCUIT NO. PART NO. DESCRIPTION		
D501, D502	223163 or	1SS133 or	JL703B	25051093	NSCT-9P880	X701	3010224	XTL-4.19M	D901	223163 or	1SS133 or
D570	223205	1SS270A	JL901B	25051087	NSCT-3P874	Capacitors				223205	1SS270A
D576	22380035 or	GP104003E or	JL902B	25051107	NSCT-3P894	C701	3000078	DX-5R5L104	Resistor		
D933, D934	22380046	AM01Z	JL903B	25051108	NSCT-4P895	C703	353780229	2.2 μ F, 50V, Elect.	R901	431533355	△ 3.3M Ω, 1/2W, Solid
D911	22380022	RBV402	Plugs			C705	353741009	10 μ F, 16V, Elect.	Relay		
D912, D913	224471203	MTZJ12C	JL701B	25055629	NPLG-8P591	C707	3060011	NTC-45P10, Trimmer	RL901	25065594	△ NRL-1P10A-DC12-146
D914-D917	22380035 or	GP104003E or	P301A	25055704	NPLG-8P660	C708, C710	393384707	47 μ F, 50V, Elect.	Capacitors		
D919-D922	22380046	AM01Z	P302A	25055701	NPLG-5P657	C711	353721019	100 μ F, 6.3V, Elect.	C906	3500191	△ DE7150F-103M
D918	224471203	MTZJ12C	P401A, P402A	25055708	NPLG-12P664	C713	353741009	10 μ F, 16V, Elect.	Fuse holders		
D923	224473004	MTZJ30D	P403A	25055703	NPLG-7P659	Resistor			F901A	25050065	△ YSH403T
D924	224470683	MTZJ6.8C	P501, P502	25055038	NPLG-2P29	R801, R802	443523914	390 Ω ±5%, 1/2W, Metal oxide	Sockets		
D931, D932	223163 or	1SS133 or	P951A, P952A	25055703	NPLG-7P659	Switches			JL901A	25051087	NSCT-3P874
D935	223205	1SS270A	Q913A	27160145-1	RAD-51	S701-S708	25035652	NPS-111-S604	JL902A	25051107	NSCT-3P894
Coils			INPUT/OUTPUT TERMINAL PC BOARD (NAETC-6802-1B)			S709	25065534	REB161PVB	JL903A	25051108	NSCT-4P895
L501, L502	231176SY	S-1.3C	CIRCUIT NO. PART NO. DESCRIPTION			Terminal			P903	25051990	△ NSCT-2P1777
Capacitors			Terminals			P701	25045396	LGT1516-0101, Phones	Plug		
C325, C326	393341007	10 μ F, 16V, Elect.	P306, P307	25045303	NPJ-4PDBL162	Plug			P902	25055676	NPLG-2P632
C405	393321017	100 μ F, 6.3V, Elect.	P308	25045330	NPJ-2PDBL184	TP701	25055038	NPLG-2P29	SPEAKER TERMINAL PC BOARD (NAETC-6807-1B)		
C501, C502	393341007	10 μ F, 16V, Elect.	Sockets			JL501A	25051109	NSCT-5P896	CIRCUIT NO. PART NO. DESCRIPTION		
C503, C504	374721015	100pF ±10%, 50V, Plastic	P301B	25051233	NSCT-8P1023	JL701A	25051092	NSCT-8P879	P853	25060295	NTM-4PDMN226
C515, C516	393322217	220 μ F, 6.3V, Elect.	P302B	25051230	NSCT-5P1020	JL702A	25051095	NSCT-11P882	Socket		
C529, C530	393344707	47 μ F, 16V, Elect.	SECONDARY CIRCUIT PC BOARD (NAPS-6803-1B)			JL703A	25051093	NSCT-9P880	JL502C	25051108	NSCT-4P895
C531-C534	393341007	10 μ F, 16V, Elect.	CIRCUIT NO. PART NO. DESCRIPTION			Holder			JL503B	25051087	NSCT-3P874
C535, C536	374724734	0.047 μ F ±5%, 50V, Plastic	Q951	222780125	78M12HF	Q703A	27191093A	FL	SUBWOOFER PC BOARD (NAETC-6918-1B)		
C538, C540	393361017	100 μ F, 35V, Elect.	Transistors			TONE CIRCUIT PC BOARD (NAAF-6805-1B)			CIRCUIT NO. PART NO. DESCRIPTION		
C550	393361017	100 μ F, 35V, Elect.	Q953	2213510	DTA114ES	ICs			P503	25045302	NPJ-1PDBL161
C575	393380107	1 μ F, 50V, Elect.	Q955, Q956	2215024	2SD1468S-R	Q411	22240191	NJM4565D-D	Socket		
C576	353744709	47 μ F, 16V, Elect.	D951	223163 or	1SS133 or	Q413, Q414	22240250	NJM2068L-D	JL503A	25051087	NSCT-3P874
C911	374722244	0.22 μ F ±5%, 50V, Plastic	Capacitors			Q471	22241253	TC9184AP	Transistors		
C912, C913	374721044	0.1 μ F ±5%, 50V, Plastic	C951, C962	354780339	3.3 μ F, 50V, Elect.	Q415-Q422	2211945	2SK246-GR	2213631 or		
C914, C915	393363327	3300 μ F, 35V, Elect.	C952	393384797	0.47 μ F, 50V, Elect.	Q423-Q426	2213632	RN1241-A or	2213632		
C916, C917	393343317	330 μ F, 16V, Elect.	C965	393361017	100 μ F, 35V, Elect.	Q431-Q433			DTA124ES		
C918	374721034	0.01 μ F ±5%, 50V, Plastic	C966	393341007	10 μ F, 16V, Elect.						
C919	393384707	47 μ F, 50V, Elect.									
C920, C922	393381017	100 μ F, 50V, Elect.									
C921	354771019	100 μ F, 63V, Elect.									
C923	393380337	3.3 μ F, 50V, Elect.									
C925	393352227	2200 μ F, 25V, Elect.									
C929	393361017	100 μ F, 35V, Elect.									

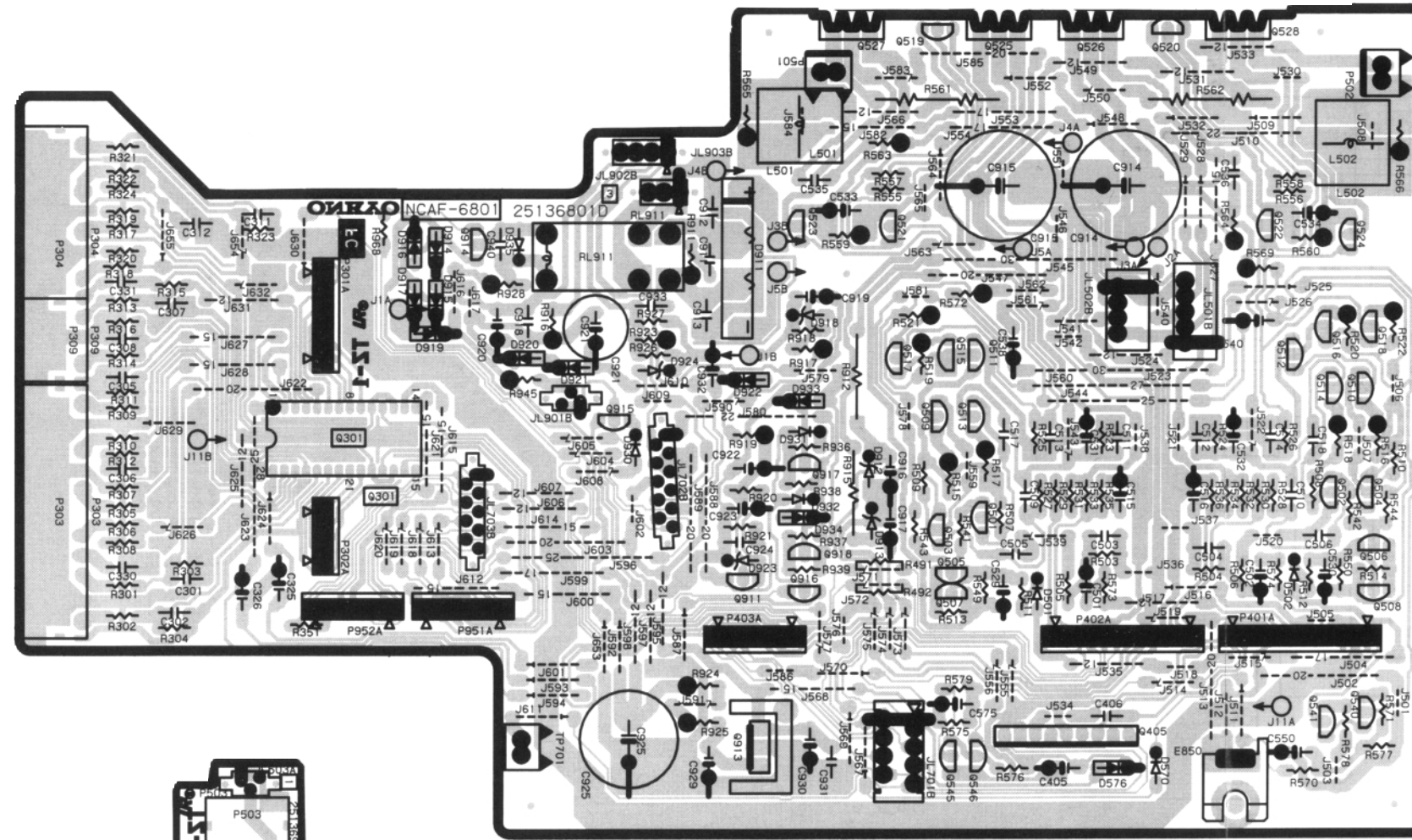
SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM

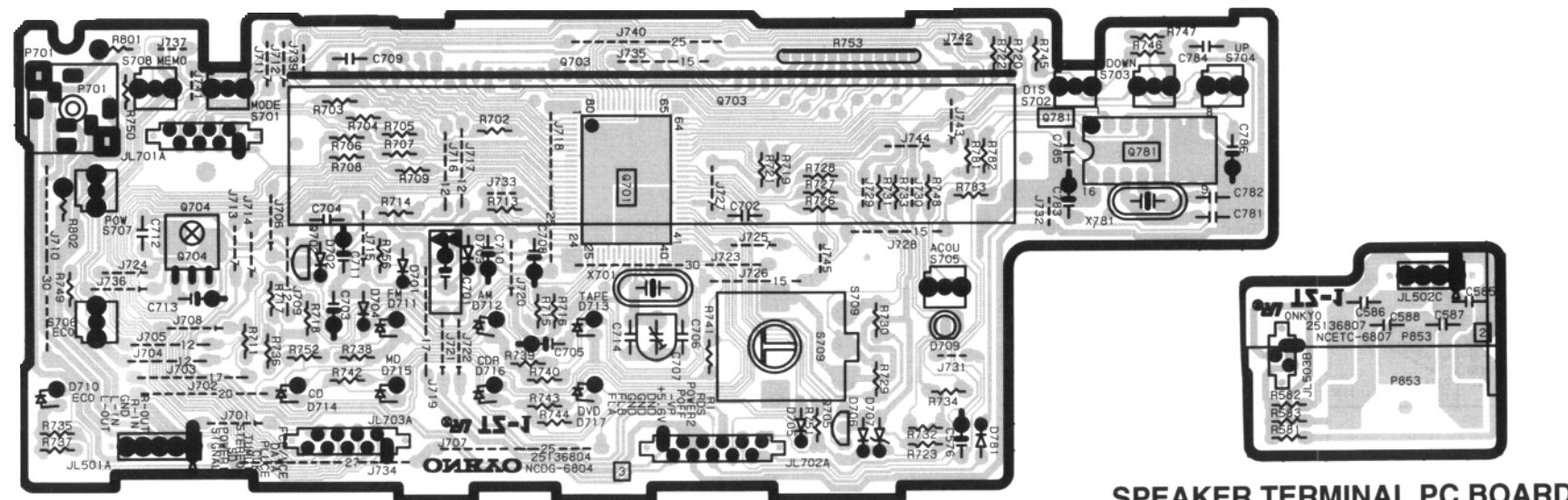


PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE



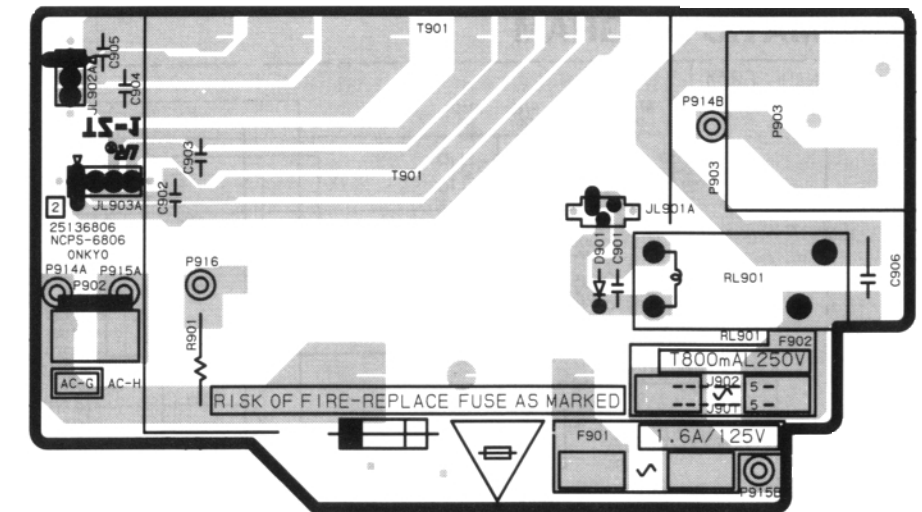
SUBWOOFER PC BOARD

MAIN CIRCUIT PC BOARD

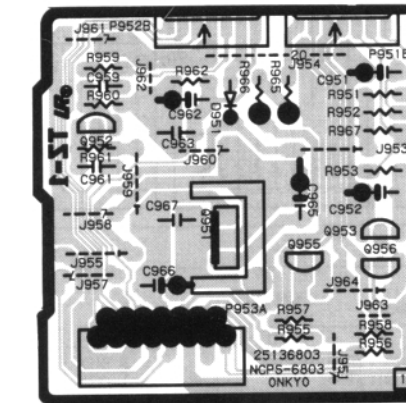


SPEAKER TERMINAL PC BOARD

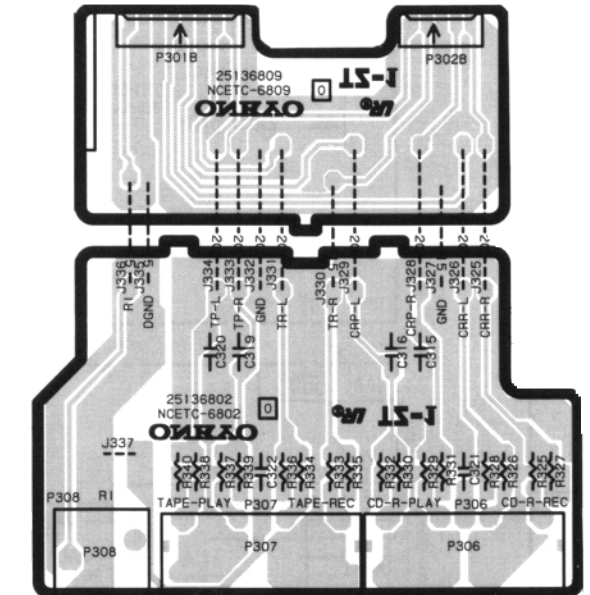
DISPLAY CIRCUIT PC BOARD



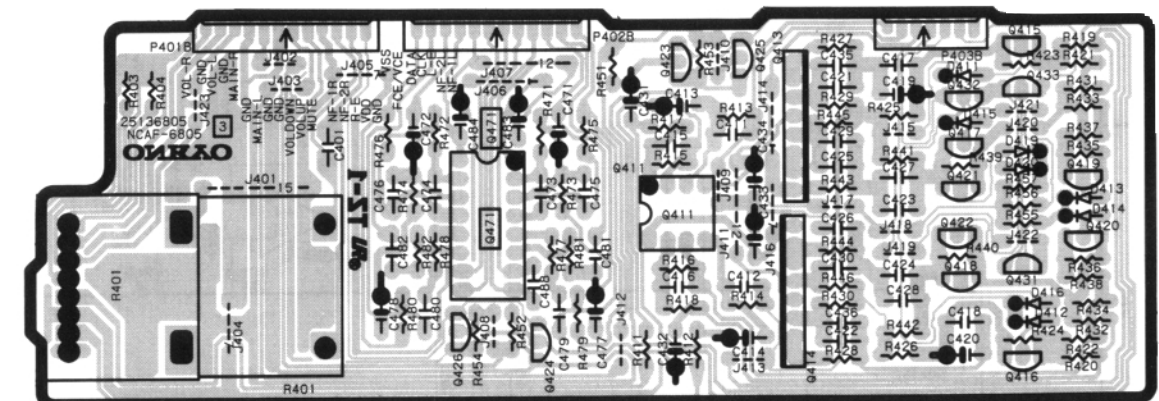
PRIMARY CIRCUIT PC BOARD



POWER SUPPLY PC BOARD



INPUT/OUTPUT PC BOARD

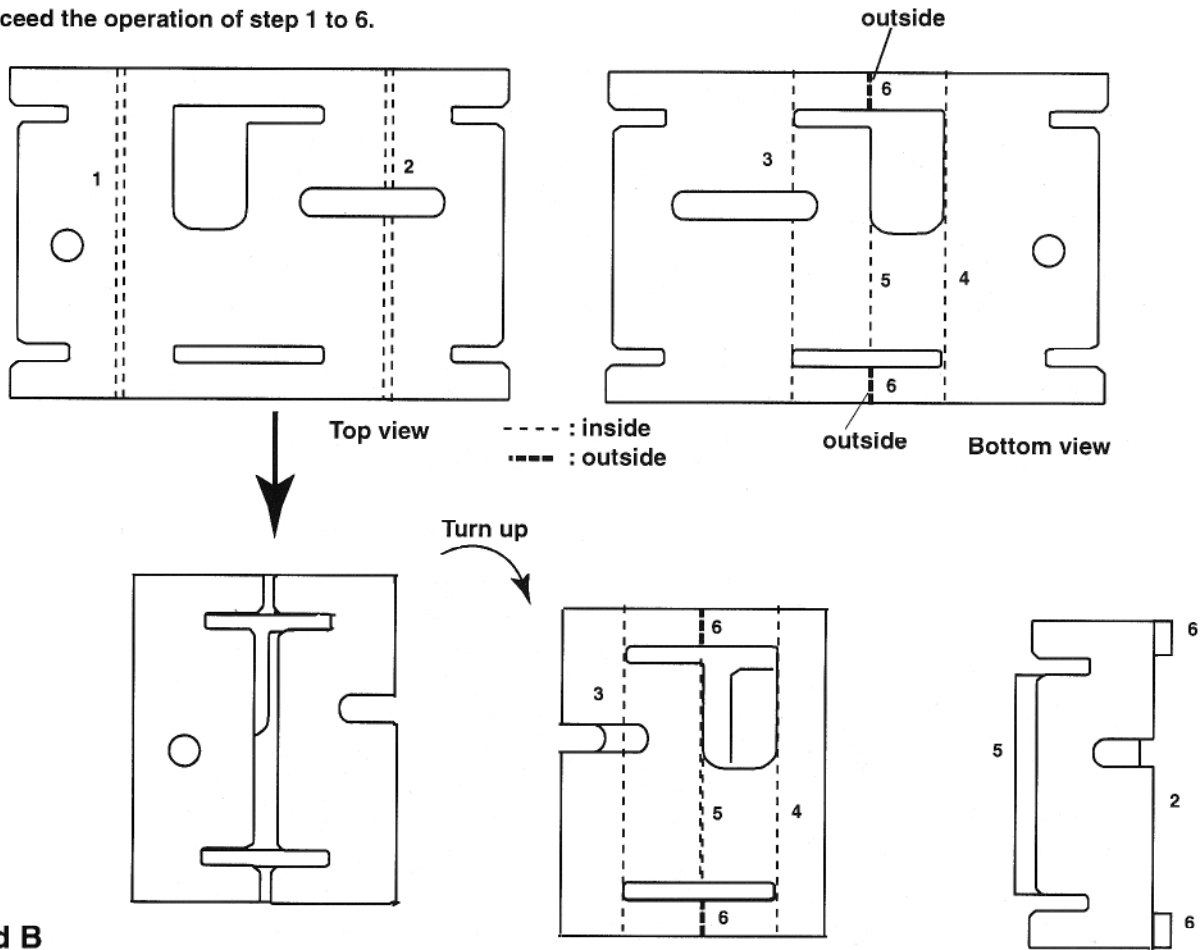


TONE CIRCUIT PC BOARD

PACKING PROCEDURES

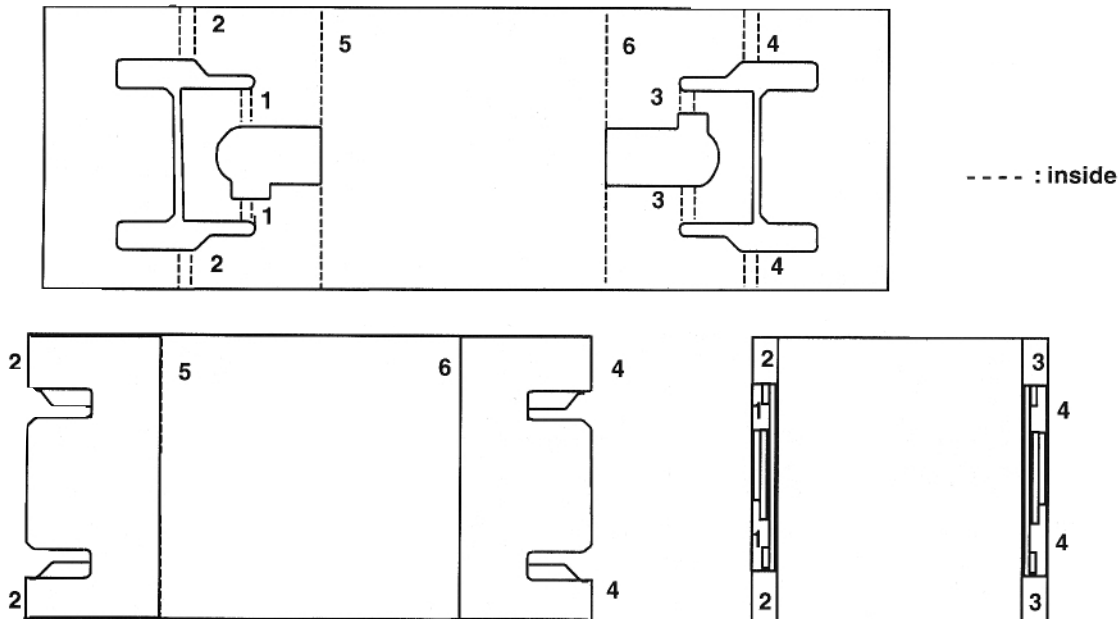
1. Pad A

Proceed the operation of step 1 to 6.

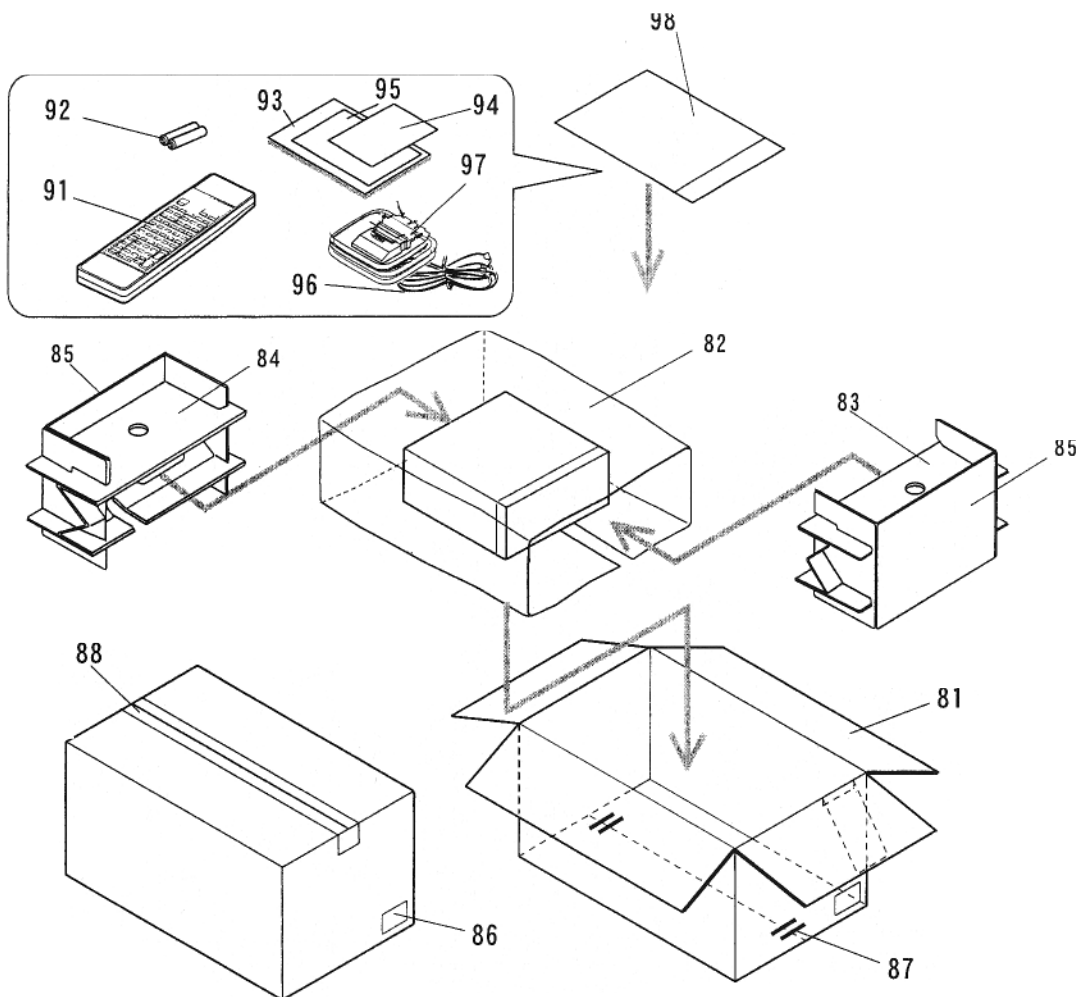


2. Pad B

Proceed the operation of step 1 to 6.



PACKING VIEW



PARTS LIST

REF. NO.	PART NO.	DESCRIPTION			
81	29053616	Carton box	92	3010054	UM-3,Battery
82	29095835	0.515*650*550,Protection sheet	93	29342838A	Instruction manual
83	29091901B	Pad A	94	29365083A	Warranty card
84	29091886	Pad A	95	29095866	Sheet for warranty
85	29091887	Pad B	96	292142	FM antenna
86	29362685	Label UPC	97	232140	NMA-3057,AM loop antenna
87	282301	Staple	98	29100097-1A	350*250,Poly bag
88	29110071	PP tape			
91	24140414	RC-414S,Remote controller			

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