Ref. No.3583

ONKYO® SERVICE MANUAL

AUDIO VIDEO CONTROL AMPLIFIER MODEL A-SV640

Black models

BMDM	120V AC,60Hz
BMP,BMPT	230V AC,50Hz
BMWT	220-230V/120V AC,50/60Hz
BMGK	220V AC,50Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ 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.

ONKYO®
AUDIO COMPONENTS

TABLE OF CONTENTS

SPECIFICATIONS

AMPLIFIER SECTION

Power Output

U.S. & Canadian models:

Stereo mode

Front L/R channels: **120 watts per channel, min. RMS at 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.**

Surround mode

Front L/R and Center channels: **100 watts per channel, min. RMS at 8 ohms, three channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.**

Surround L/R channels: (Rear only driven) **30 watts per channel, min. RMS at 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.3% total harmonic distortion.**

Remote mode: 30 watts per channel, min. RMS at 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.

Other area models:

Stereo mode

Front L/R channels: 2 × 100 watts at 6 ohms, 1 kHz (DIN)

Surround mode

Front L/R and Center channels: 3 × 95 watts at 6 ohms, 1 kHz (DIN)

Surround L/R channels: (Rear only driven) 2 × 35 watts at 6 ohms, 1 kHz (DIN)

Remote mode: 2 × 35 watts at 6 ohms, 1 kHz (DIN)

IM Distortion: 0.08% at rated power (Front)

Damping Factor: 60 at 8 ohms (Front)

Input Sensitivity/Impedance

PHONO: 2.5 mV/50 kohms

CD/TAPE 1, 2/VIDEO-1, 2, 3: 200 mV/50 kohms

MULTI CHANNEL INPUT (FRONT L/R, SURROUND L/R, CENTER): 200 mV/50 kohms

MULTI CHANNEL INPUT (SUBWOOFER): 36 mV/50 kohms

Output Level/Impedance

REC OUT: 200 mV/2.2 kohms

PRE OUT: 1 V/ 470 ohms

Phono Overload: 120 mV RMS at 1 kHz, 0.5% T.H.D.

Frequency Response: 20 Hz to 30 kHz, ±1 dB (Surround OFF)

RIAA Deviation: 20 Hz to 20 kHz, ±0.8 dB

Tone Control

Bass: ±10 dB at 50 Hz

Treble: ±10 dB at 10 kHz

Signal-to-Noise Ratio (Surround OFF)

Phono: 80 dB (IHF A, 5 mV input)

CD/Tape: 100 dB (IHF A)

Muting: –∞ dB

VIDEO SECTION

Input Sensitivity and Impedance

Video (Composite): 1 Vp-p/75 ohms

Output Level and Impedance

Video (Composite): 1 Vp-p/75 ohms

GENERAL

Power Supply

AC 120 V, 60 Hz
AC 220 V, 60 Hz
AC 230 V, 50 Hz
AC 220-230 V and 120 V switchable, 50/60 Hz

Power Consumption

U.S. & Canadian models: 3.6 A

Other area models: 400 W

Dimensions (W × H × D): 435 × 175 × 390 mm
17-1/8" × 6-7/8" × 15-3/8"

Weight:

U.S. & Canadian models: 11.9 kg, 26.2 lbs.

Other area models: 12.5 kg, 27.6 lbs.

REMOTE CONTROLLER RC-344S

Transmitter: Infrared

Signal range: Approx. 5 meters, 16 ft.

Power supply: Two "AA" batteries (1.5 V × 2)

Specifications and features are subject to change without notice.

SERVICE PROCEDURES

1. Replacing the fuses

This symbol located near the fuse 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 utlise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce darnier est indique la qu le present symbol est appose.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252198	8A-UL, Primary fuse <D/W>
F902	252077	4A-SE-EAK,Primary fuse <P/T/W/K>
F903	252075	2.5A-SE-EAK, Fuse <P>
	252074	2A-SE-EAK,Fuse <T>
F915,F916	252166	6.3A-UL/T-237,Secondary fuse <D>
	252079	6.3A-SE-EAK,Secondary fuse <P/T/W/K>

NOTE: <D>: 120V model only
<P>: European model only
<T>: Asian model only
<W>: Wolrdwide model only
<K>: Korean model only

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 CD button, then press the POWER button.**
2. **After "clear" is displayed, the prest memory and each mode stored in the memory, such as surround, are initialized and will return to the factory settings.**

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 the screw on the back panel.

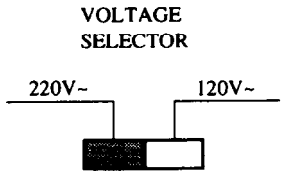
Specifications: More than 50MΩ.

4. Change of voltage

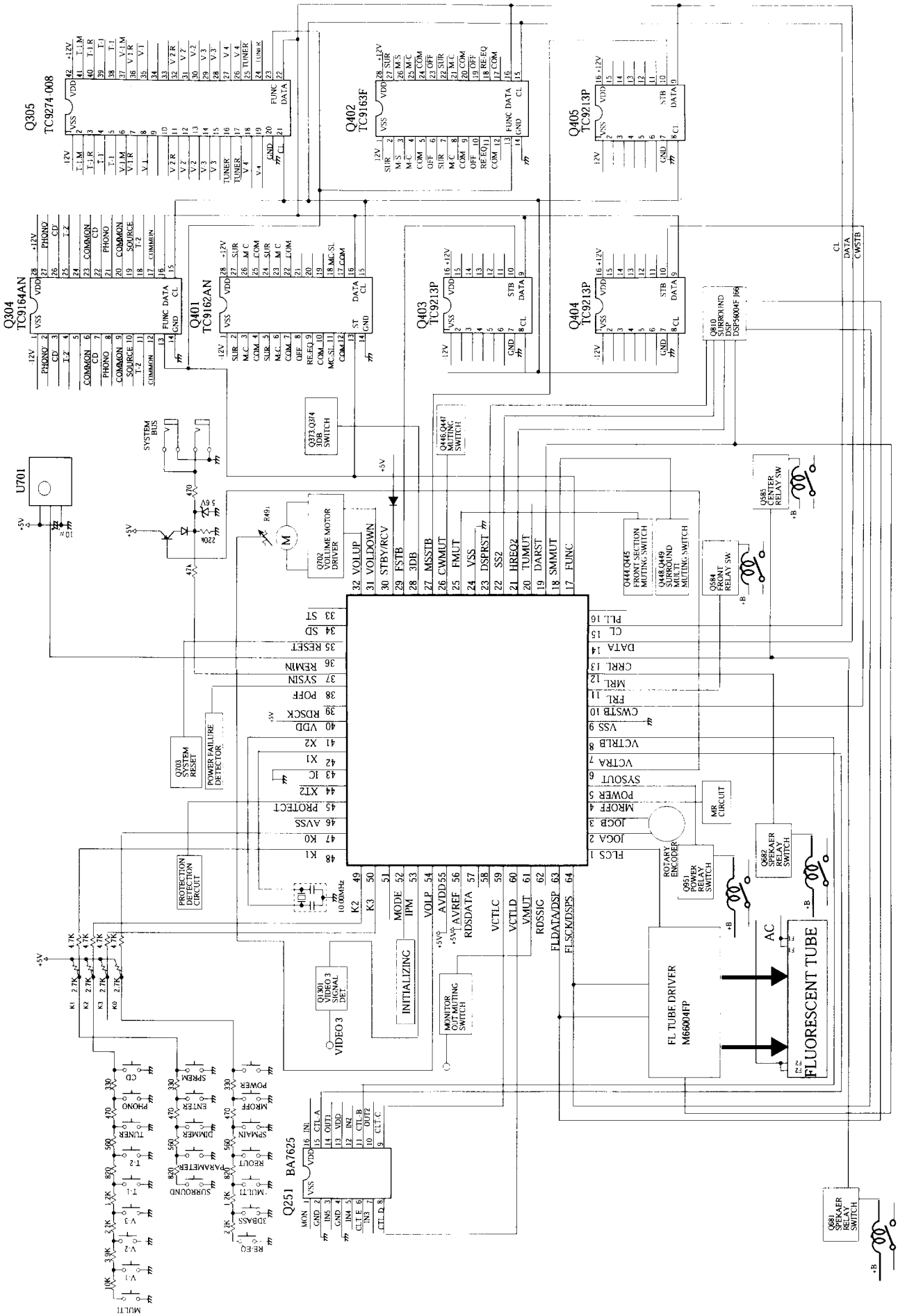
Worldwide models are equiptment with a voltage selector to conform with local power supplies. This switch is located on the back panel.

Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

This switch is set to 220V at the factory. Voltage is changed by sliding the groove in the switch witch the scewdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.



MICROPROCESSOR CONNECTION DIAGRAM

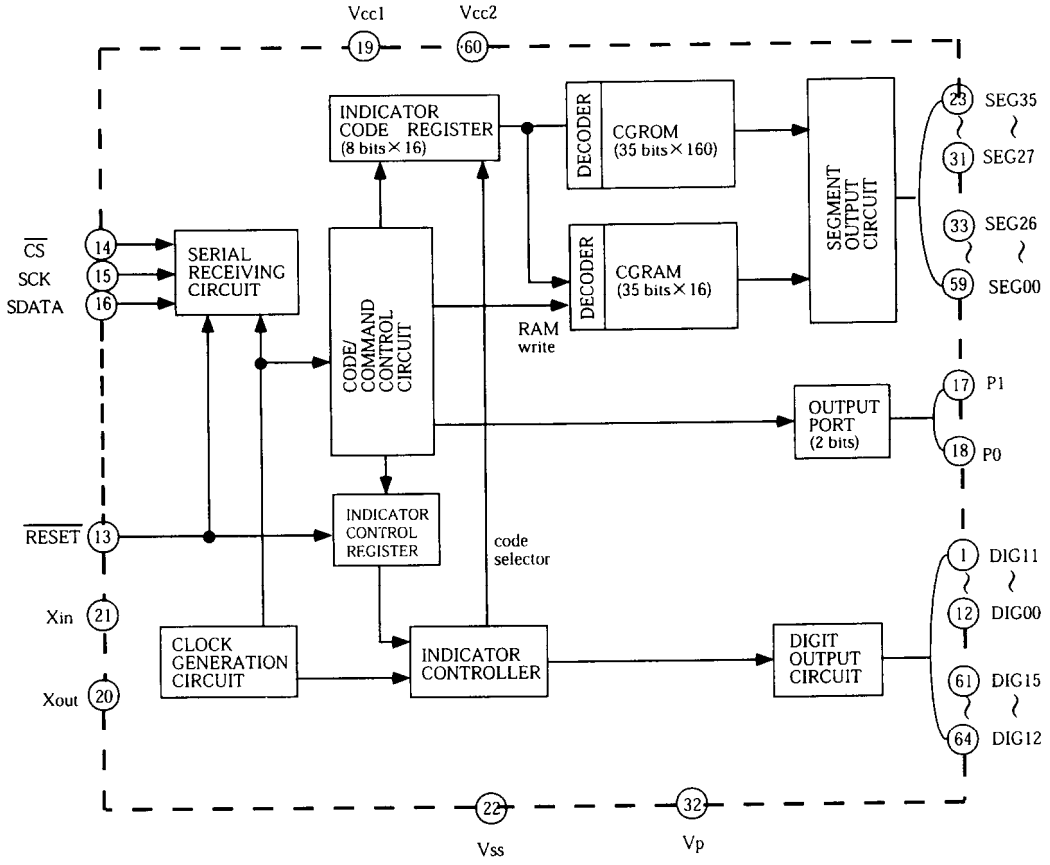


MICROPROCESSOR TERMINAL DESCRIPTIONS

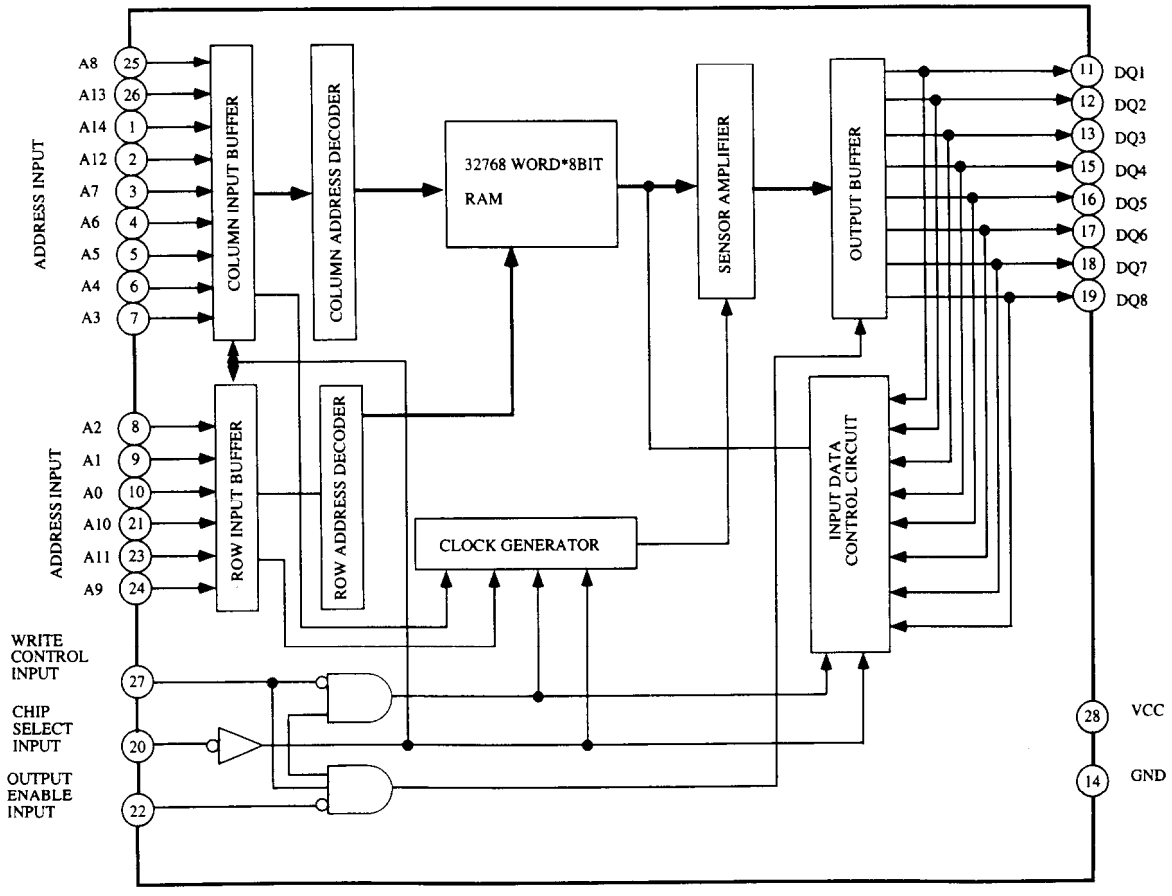
Pin No.	Symbol	Description
1	FLCS	Connect to the terminal CS of FL tube driver.
2	JOGA	Input pin of Jog A
3	JOGB	Input pin of Jog B
4	MROFF	Multi-Room control output pin
5	POWER	Power source control output pin
6	SYSOUT	System code output pin
7	VCTLA	Video output control pin
8	VCTLB	Video output control pin
9	VSS	Ground pin
10	CWSTB	Connect to the terminal STAB of electro volume IC
11	FRL	Front speaker relay control output pin
12	MRL	Multi speaker relay control output pin
13	CRRL	Center and surround speaker relay control output pin
14	DATA	Data output pin to Function switch, PLL and electro volume Ics.
15	CL	Clock output pin to Function switch, PLL and electro volume Ics.
16	PLL	Chip enable output pin to PLL IC.
17	FUNC	Strobe output pin to Function switch Ics
18	MSMUT	Muting output pin for surround multi amplifier.
19	DARST	Reset output pin for D/A converter
20	TUMUT	Muting output pin for tuner circuit
21	HREQ	Request input pin from terminal HREQ of DSP IC.
22	SS	Output pin to connect the terminal SS of DSP IC.
23	DSPRST	Output pin to connect the terminal RESET of DSP IC.
24	VSS	Ground pin
25	FMUT	Muting output pin for amplifier of front channels
26	CWMUT	Muting output pin for amplifier of center and sub woofer channels
27	MSSTB	Strobe output pin to Electro volume
28	3DB	3-D BASS control output pin
29	FSTB	Strobe output pin to Electro volume
30	STBY/RECV	STAND-BY and RECEIVED indicator output pin
31 32	VOLDOWN VOLUP	Volume control output pin Operation / VOLUP / VOLDOWN STOP / H / H UP / H / L DOWN / L / H
33	STEREO	Stereo broadcast detection input pin

Pin No.	Symbol	Description
34	SD	Broadcast detection input pin
35	RESET	System reset input pin
36	REMIN	Input pin from remote control
37	SYSIN	System code input pin
38	POFF	Power failure detection input pin
39	RDSSCK	Clock input pin from RDS decoder
40	VDD	Power supply pin (+5V)
41	X2	Ceramic oscillator connection pins of main system clock
42	X1	Connect the 10MHz ceramic oscillator.
43	IC	Internal connection pin
44	XT2	Not used.
45	PROTECT	Protect circuit detection input pin
46	AVSS	Ground pin of A/D converter
47 48 49 50	K0 K1 K2 K3	Operation key connection pins
51	BAND	Initializing input pin for band and RDS function
52	MODE	Initializing input pin for operation mode
53	IPM	Detection input pin of Intelligent Power Management operation
54	VOLP	Position detection input pin of master volume
55	AVDD	Analog power supply pin of A/D converter
56	AVREF	Reference voltage input pin of A/D converter
57	RDSDATA	Data input pin from RDS decoder
58	NC	Not connected
59	VCTLC	Video output control pin
60	VCTLD	Video output control pin
61	VMUT	Muting output pin of video
62	RDSSIG	RDS broadcast detection input pin
63	DSPSO FLDATA	Input pin from terminal MOSI of DSP IC Data output pin from terminal SDATA of FL tube
64	DSPSCK FLSCK	Clock input pin from terminal SCLK of DSP IC Clock output pin to connect to terminal SCK of FL tube driver

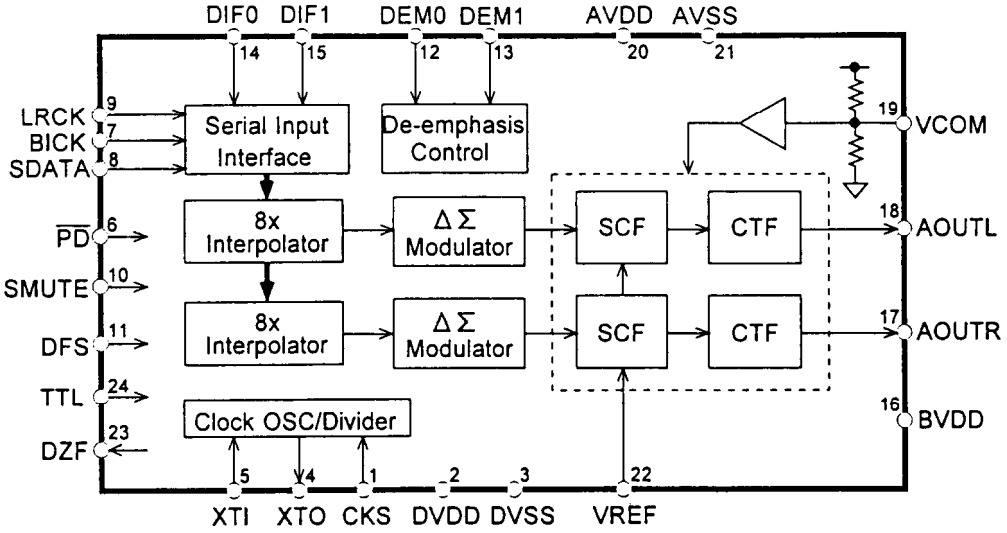
M6604FP (FL Tube Driver)



M5M5256FP-L(RAM)

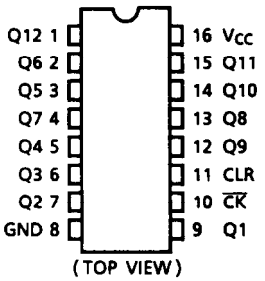


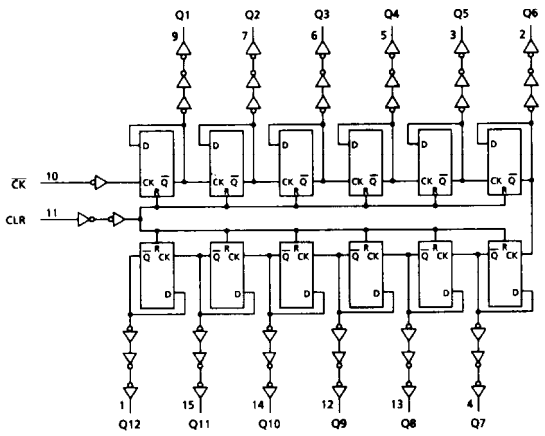
AK4321-VS(D/A Converter)



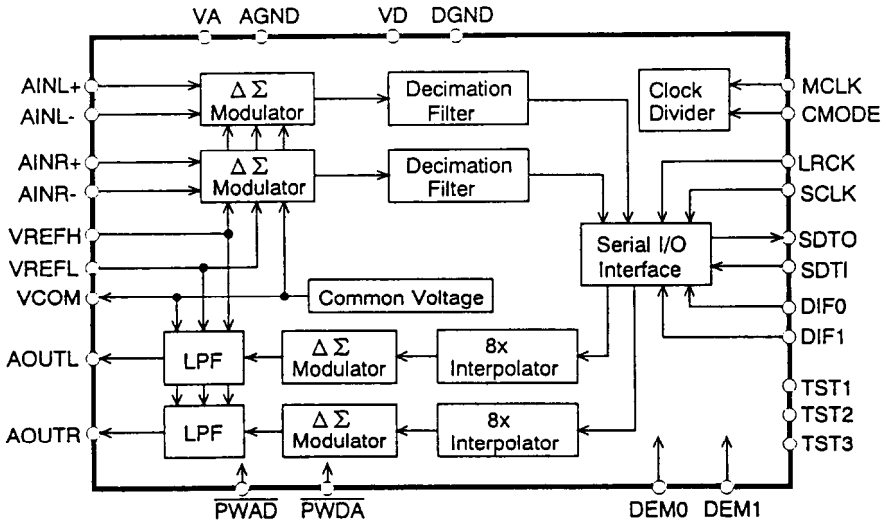
Pin No.	Symbol	I/O	Function
1	CKS	I	Clock Select Pin
2	DVDD	–	Digital Power Supply Pin
3	DVSS	–	Digital Ground Pin
4	XTO		Crystal Oscillator Output Pin
5	XTI	O	Crystal Oscillator Input Pin
6	PD	I	Power-Down Pin
7	BICK	I	Serial Bit Clock Pin
8	SDATA	I	Serial Data Input Pin
9	LRCK	I	L/R Clock Pin
10	SMUTE	I	Soft Muting Pin
11	DFS	I	Double Speed Sampling Mode Pin
12 13	DEM0 DEM1	I I	De-emphasis Mode Pins
14 15	DIF0 DIF1	I I	Input Format Pins
16	BVDD	I	Power Supply Pin
17	AOUTR	O	R ch. Analog Output Pin
18	AOUTL	O	L ch. Analog Output Pin
19	VCOM	O	Common Voltage Pin
20	AVDD	–	Analog Power Supply Pin
21	AVSS	–	Analog Ground Pin
22	VREF	I	Reference Voltage Input Pin
23	DZF	O	Zero-cross Input Detect Pin
24	TTL	I	I/F Level Select Pin

TC74HC4040(12-Stage Binary Counter)



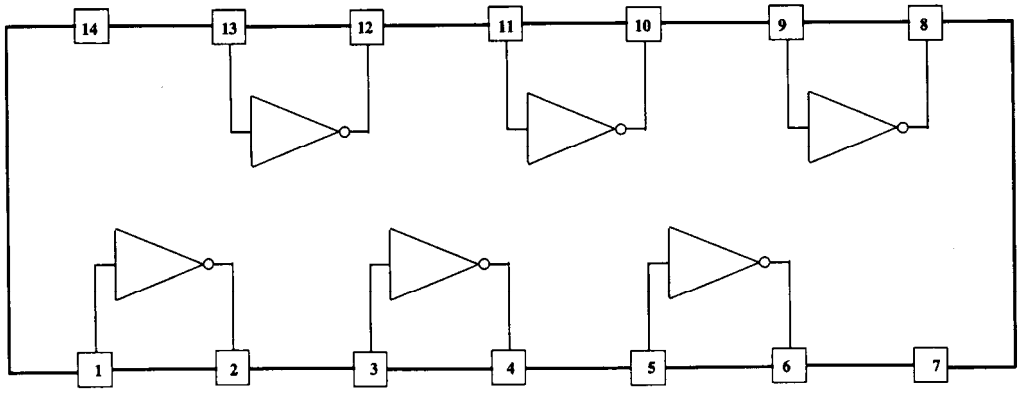


AK4520A-VS(A/D and D/A Converter)



No.	Symbol	I/O	Function
1	VREFH	I	Positive Voltage Reference Input Pin, VA
2	VREFL	I	Negative Voltage Reference Input Pin, AGND
3	AINR+	I	Rch Analog Positive Input pin
4	AINR−	I	Rch Analog Negative Input pin
5	AINL+	I	Lch Analog Positive Input pin
6	AINL−	I	Lch Analog Negative Input pin
7	VA	−	Analog Power Supply Pin
8	AGND	−	Analog Ground Pin
9	DIF0	I	Audio Data Interface Format Pin
10	DIF1	I	Audio Data Interface Format Pin
11	LRCK	I	Input/Output Channel Clock Pin
12	SCLK	I	Audio Serial Data Clock Pin
13	SDTI	I	Audio Serial Data Input Pin
14	SDTO	O	Audio Serial Data Output Pin
15	MCLK	I	Master Clock Input Pin
16	DEM0	I	De-emphasis Frequency Select Pin
17	DEM1	I	De-emphasis Frequency Select Pin
18	TST3	I/O	Test Pins (Pull down pins)
19	TST2	I/O	
20	TST1	I	
21	VD	−	Digital Power Supply Pin
22	DGND	−	Digital Ground Pin
23	PWDA	I	DAC Power-Down Mode Pin
24	PWAD	I	ADC Power-Down Mode Pin
25	CMODE	I	Master Clock Select Pin " H":384fs," L ":256fs
26	AOUTL	O	Lch Analog Output Pin
27	AOUTR	O	Rch Analog Output Pin
28	VCOM	O	Common Voltage Output Pin, VA/2

74HC04(Hex Inverter)



PRINTED CIRCUIT BOARD-PARTS LIST

MAIN CIRCUIT PC BOARD(NAAR-6095-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q1301,Q1371	22240293 or	NJM4558L-D or
Q303	22240247	BA15218N
Q301	22240191	NJM4565D-D
Q304	22240800	TC9164AN
Q305	22240829	TC9274N-008
Q371,Q372	22240293 or	NJM4558L-D or
	22240247	BA15218N
Q701	22241121	μPD78016FGC-
Q702	22240239	TA7291S
Q922	222780565JRC	78M56(NJM78M56FA)
Q923	222780125	78M12HF
Q924	222790125	79M12HF
Q925	222780075	78M07HF
Q926	222790075	79M07HF
	Transistors	
Q1372	2211945	2SK246-GR
Q1391	2213510 or	DTA114ES or
	2214350	RN2202
Q1392	2212600	DTA124ES
Q1393	2213816 or	2SD1450-T or
	2212356	2SD1302-T
Q373,Q374	2211945	2SK246-GR
Q703	221282 or	DTC144ES or
	2213560	RN1204
Q704	2213510 or	DTA114ES or
	2214350	RN2202
Q927	2211255	2SC1815-GR
Q928	2213640 or	DTC123JS or
	2214660	RN1205
Q929	2211455	2SA1015-GR
	Diodes	
D1301,D1302	223163 or	1SS133 or
D1371	223205	1SS270A
D371,D372	223163 or	1SS133 or
D701-D704	223205	1SS270A
D705	224470562	MTZJ5.6B
D706	224470623	MTZJ6.2C
D707,D708	223163 or	1SS133 or
D926-D929	223205	1SS270A
D921	22380022F,	RBV402,
	22380271F or	D3SBA20 or
	22380285F	RS403M
D922-D925	22380260,	RL1N4003,
D930-D933	22380032 or	1SR139-100 or
	22380035	GP104003E
D934	224473604	MTZJ36D
	Coil	
L701	233454K220	NCH-1452 220K
	Oscillator	
X701	3010239	CST10.0MTW
	Capacitors	
C1301-C1304	354741009	10μF,16V,Elect.
C1306	374721034	0.01μF±5%,50V,Plastic
C1307,C1372	354741009	10μF,16V,Elect.
C1375,C1376	374721044	0.1μF±5%,50V,Plastic
C303,C304	354741009	10μF,16V,Elect.
C305,C306	354721019	100μF,6.3V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C307,C308	374726824	6800pF±5%,50V,Plastic
C309,C310	374721824	1800pF±5%,50V,Plastic
C311,C312	354741009	10μF,16V,Elect.
C341,C342	354741009	10μF,16V,Elect.
C363,C364	354742209	22μF,16V,Elect.
C373,C374	354741009	10μF,16V,Elect.
C379-C382	374721044	0.1μF±5%,50V,Plastic
C383,C384	374721534	0.015μF±5%,50V,Plastic
C385,C386	354741009	10μF,16V,Elect.
C702	375524744	0.47μF±5%,50V,Plastic
C703	3000076 or	EECS5R5T104 or
	3000078	DX-5R5L104
C704,C705	354721019	100μF,6.3V,Elect.
C706	354741009	10μF,16V,Elect.
C707	354780109	1μF,50V,Elect.
C708	354721019	100μF,6.3V,Elect.
C921,C922	3504312 or	4700μF,40V,Elect. or
	3504316	4700μF,40V,Elect. <D>
	3504310 or	4700μF,35V,Elect. or
	3504314	4700μF,35V,Elect. <P/T/W/K>
C926	354754719	470μF,25V,Elect.
C928	354741009	10μF,16V,Elect.
C931	354782219	220μF,50V,Elect.
C932	354762219	220μF,35V,Elect.
C933	354754729S	4700μF,25V,Elect.
C934,C949	354751029S	1000μF,25V,Elect.
C937,C938	354741009	10μF,16V,Elect.
C941,C942	354741009	10μF,16V,Elect.
	Resistors	
R923,R929	443522204	22Ω±5%,1/2W, Metal oxide
R924	443523314	330Ω±5%,1/2W, Metal oxide
R925,R931	443621204	12Ω±5%,1W, Metal oxide
R932	443524704	47Ω±5%,1/2W, Metal oxide
R933,R936	453630684	6.8Ω±5%,1W, Metal
R934	443526804	68Ω±5%,1/2W, Metal oxide
R935	453530104	1Ω±5%,1/2W, Metal
	Sockets	
JL311a	25051087	NSCT-3P874
JL602a	25051090	NSCT-6P877
JL691a	25051107	NSCT-3P894
JL701a	25051847	NSCT-40P1634,
	25050980 or	NSCT-40P767 or
	25051306	NSCT-40P1095
JL922a	25051112	NSCT-8P899
JL971a,JL972a	25051090	NSCT-6P877
	Terminals	
P301-P303	25045458 or	NPJ-6PDBL279 or
	25045300	NPJ-6PDBL159
P304	25045460 or	NPJ-4PDBL281 or
	25045303	NPJ-4PDBL162
	Plugs	
P245a	25055133	NPLG-3P117
JL391b	25055628	NPLG-7P590
P401a	25055704	NPLG-8P660
P402a,P401A	25055808	NPLG-19P764
	Heatsinks	
Q925a	27160227	RAD-076
Q922a	27160209	RAD-67

DISPLAY CIRCUIT PC BOARD (NADIS-6100-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	FL tube	
Q1704	212163	14-ST-19GK
	Remote sensor	
U1701	241305	GP1U281X
	ICs	
Q1701	22240685R9	M66004FP
Q801-Q803	22240293 or	NJM4558L-D or
Q805	22240247	BA15218N
Q804	22241129R9	AK4520A-VF
Q807	22241130R9	AK4321-VFE1
Q808	222740046R9	74HCU04
Q809	22241126R9TO	TC74HC4040AF
Q810	22240831R3 or	DSP56004FJ50 or
	22240940R3	DSP56004FJ66
Q811	22241108R9	M5M5256DFP-70L
Q812,Q813	222780053	78L05
	Diodes	
D1701,D1702	223163 or	1SS133 or
D1704	223205	1SS270A
D1705,D1706	225291D	SEL4910D-D
D1703	224471803	MTZJ18C
D801,D802	223163 or	1SS133 or
	223205	1SS270A
	Coils	
L801-L808	233454K220	NCH-1452 220K
L810	233454M022	NCH-1452 022M
	Oscillator	
X801	3010278	CST12.2MTW040,Ceramic
	Capacitors	
C1705,C1711	375524744	0.47 μ F $\pm$ 5%,50V,Plastic
C1709	353721019	100 μ F,6.3V,Elect.
C1712	353781009	10 μ F,50V,Elect.
C1717	353741009	10 μ F,16V,Elect.
C801-C806	353741009	10 μ F,16V,Elect.
C811,C812	374721524	1500pF $\pm$ 5%,50V,Plastic
C813,C814	353741009	10 μ F,16V,Elect.
C815,C816	374721824	1800pF $\pm$ 5%,50V,Plastic
C817,C818	374721224	1200pF $\pm$ 5%,50V,Plastic
C819,C820	374721524	1500pF $\pm$ 5%,50V,Plastic
C821,C822	374721815	180pF $\pm$ 10%,50V,Plastic
C823,C824	353741009	10 μ F,16V,Elect.
C830	353741009	10 μ F,16V,Elect.
C831,C833	353721019	100 μ F,6.3V,Elect.
C835,C836	353741009	10 μ F,16V,Elect.
C837,C838	374721824	1800pF $\pm$ 5%,50V,Plastic
C839,C840	374721024	1000pF $\pm$ 5%,50V,Plastic
C841,C842	374721524	1500pF $\pm$ 5%,50V,Plastic
C843,C844	374721815	180pF $\pm$ 10%,50V,Plastic
C849,C850	353741009	10 μ F,16V,Elect.
C851,C852	353721019	100 μ F,6.3V,Elect.
C855	353721019	100 μ F,6.3V,Elect.
C858	375524744	0.47 μ F $\pm$ 5%,50V,Plastic
C859	374722234	0.47 μ F $\pm$ 5%,50V,Plastic
C861	375524744	0.47 μ F $\pm$ 5%,50V,Plastic
C864,C867	353721019	100 μ F,6.3V,Elect.
C868,C869	353741009	10 μ F,16V,Elect.
	Resistors	
R1741	49163103414	RM1/10IJ-10K*14,Array

CIRCUIT NO.	PART NO.	DESCRIPTION
	Sockets	
JL701b	25051884,	NSCT-40P1671,
	25050946 or	NSCT-40P733 or
	25051344	NSCT-40P1133
	Switches	
S1702-S1704	25035652	NPS-111-S604
S1706-S1708	25035652	NPS-111-S604
S1710-S1712	25035652	NPS-111-S604
S1714-S1716	25035652	NPS-111-S604
S1718-S1720	25035652	NPS-111-S604
S1722,S1724	25035652	NPS-111-S604
S1726,S1728	25035652	NPS-111-S604
S1730,S1734	25035652	NPS-111-S604
S1737	25065528	EC16B24104
	Holders	
U1701a	27191042	Remote sensor
Q1704a	27191001	FL tube

HEADPHONE TERMINAL PC BOARD(NAETC-6104-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
JL571a	25051107	NSCT-3P894,Socket
P571	25045255	YKB26-5009,Headphone terminal

FRONT/CENTER POWER AMP. PC BOARD (NAAF-6108-2A/2B/2C/2D/2E)

CIRCUIT NO.	PART NO.		DESCRIPTION
	Transistors		
Q1501-Q1503	2211733 or		2SC1845-E or
	2211732		2SC1845-F
Q1504	2213284 or		2SC1740S-R or
	2212115		2SC2458-GR
Q1505,Q1506	2211354 or		2SA949-Y
Q1508	2211353		2SA949-O
Q1507,Q1509	2211634 or		2SC2229-Y
	2211633		2SC2229-O
Q1511	2203010		2SC5171
Q1512	2203000		2SA1930
Q1513,	2202822 or	*	2SC5200-R or
Q525,Q526	2202823	*	2SC5200-O <D>
Q1513	2201653,	*	2SC3856-O,
Q525,Q526	2201655,	*	2SC3856-P,
	2201654,	*	2SC3856-Y,
	2202842 or	*	2SC5242-R or
	2202843	*	2SC5242-O <P/T/W/K>
Q1514	2202812 or	*	2SA1493-R or
Q527,Q528	2202813	*	2SA1943-O <D>
Q1514	2201663,	*	2SA1492-O,
Q527,Q528	2201665,	*	2SA1492-P,
	2201664,	*	2SA1492-Y,
	2202832 or	*	2SA1962-R or
	2202833	*	2SA1962-O <P/T/WK>
Q1516	2212654 or		2SC3421-Y or
	2212653		2SC3421-O
Q501-Q506	2211733 or		2SC1845-E or
	2211732		2SC1845-F
Q507,Q508	2213284 or		2SC1740S-R or
	2212115		2SC2458-GR
Q509-Q512	2211354 or		2SA949-Y
Q515,Q516	2211353		2SA949-O

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

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q513,Q514	2211634 or	2SC2229-Y
Q517,Q518	2211633	2SC2229-O
Q521,Q522	2203010	2SC5171
Q523,Q524	2203000	2SA1930
Q529,Q530	2214984 or	2SC2631-R or
	2214985	2SC2631-S
Q531,Q532	2212654 or	2SC3241-Y or
	2212653	2SC3241-O
Q581	2211793 or	2SA992-E
	2211792	2SA992-F
Q582,Q583	2213284 or	2SC1740S-R or
	2212115	2SC2458-GR
Q584,Q585	2213650	DTD113ZS
	Diodes	
D581	224470512	MTZJ5.1B
D582,D583	223163 or	1SS133 or
	223205	1SS270A
D961	22380070,	D5SBA60,
	22380038 or	RBV602 or
	22380274	RS603M, Diode
D962,D963	22380260,	RL1N4003,
	22380032 or	1SR139-100 or
	22380035	GP104003E
	Coils	
L1501	231176S	S-1.3C <P/W/T/K>
L501,L502	231176S	S-1.3C <P/W/T/K>
	Capacitors	
C1501	354742209	22 μ F,16V,Elect.
C1504	354742219	220 μ F,16V,Elect.
C1505	354744709	47 μ F,16V,Elect.
C1509,C1511	354781009	10 μ F,50V,Elect.
C1512	374721044	0.1 μ F ± 5%,50V,Plastic
C1515,C1516	354791009	10 μ F,100V,Elect. <D>
	354771009	10 μ F,63V,Elect. <P/T/W/K>
C501,C502	354742209	22 μ F,16V,Elect.
C507,C508	354742219	220 μ F,16V,Elect.
C509,C510	354744709	47 μ F,16V,Elect.
C517,C518	354781009	10 μ F,50V,Elect.
C521,C522	354781009	10 μ F,50V,Elect.
C523,C524	374721044	0.1 μ F ± 5%,50V,Plastic
C529,C530	354791009	10 μ F,100V,Elect. <D>
	354771009	10 μ F,63V,Elect. <P/T/W/K>
C541,C542	374721034	0.01 μ F ± 5%,50V,Plastic <P/T/W/K>
C582	354742219	220 μ F,16V,Elect.
C962,C963	374731044	0.1 μ F ± 5%,50V,Plastic
C964,C965	3504311 or	12000 μ F,71V or
	3504315	12000 μ F,71V,Elect. <D>
	3504309 or	12000 μ F,63V or
	3504313	12000 μ F,63V,Elect. <P/T/W/K>
C966,C967	354794719	470 μ F,100V,Elect. <D>
	354774719	470 μ F,63V,Elect. <P/T/W/K>
	Resistors	
R1512	443526804	68Ω ± 5%,1/2W, Metal oxide
R1513,R1514	443525604	56Ω ± 5%,1/2W, Metal oxide
R1515,R1516	443526804	68Ω ± 5%,1/2W, Metal oxide
R1519	5210288	N06HR2.2KBE,Trimming
R1522	443521514	150Ω ± 5%,1/2W, Metal oxide
R1523,R1524	453530224	2.2Ω ± 5%,1/2W, Metal
	Resistors	
R1525	4000132	RGC55 0.22,Thermistor
R1528	453630824	8.2Ω ± 5%,1W, Metal
R523,R524	443526804	68Ω ± 5%,1/2W, Metal oxide
R525-R528	443525604	56Ω ± 5%,1/2W, Metal oxide
R529-R532	443526804	68Ω ± 5%,1/2W, Metal oxide
R537,R538	5210288	N06HR2.2KBE,Trimming
R543,R544	443521514	150Ω ± 5%,1/2W, Metal oxide
R545-R548	453530224	2.2Ω ± 5%,1/2W, Metal
R549,R550	4000132	RGC55 0.22,Thermistor
R555,R556	453630824	8.2Ω ± 5%,1W, Metal
R571,R572	443623914	390Ω ± 5%,1W, Metal oxide
R962,R963	453530224	2.2Ω ± 5%,1/2W, Metal
	Sockets	
JL501a,JL501b	25051109	NSCT-5P896
JL502a,JL502b	25051088	NSCT-4P875
JL501A,JL921b	25051110	NSCT-6P897
JL551a	25051109	NSCT-5P896
JL571b	25050267	NSCT-3P95
	Plugs	
JL602b	25055627	NPLG-6P589
JL971b	25055627	NPLG-6P589
P1501	25055038	NPLG-2P29
P501,P502	25055038	NPLG-2P29
P551a	25055135	NPLG-5P119
	Relaies	
RL581,RL582	25065517 or	NRL-2P5A-DC24-098 or
	25065510	NRL-2P5A-DC24-095

SECONDARY CIRCUIT PC BOARD (NAETC-6110-2A/2B/2C/2D/2E)

CIRCUIT NO.	PART NO.		DESCRIPTION
F915,F916	252166	⚠	6.3A-UL/T-237,Fuse <D>
	252079	⚠	6.3A-SE-EAK,Fuse <P/T/W/K>
F915a,F916a	25050065	⚠	YSH403T,Fuseholder
JL921a	25051110		NSCT-6P897,Socket
JL922b	25050285		NSCT-8P113,Socket
R941,R942	453532294		0.22Ω ± 5%,1/2W, Metal resistor

PRIMARY CIRCUIT PC BOARD(NAPS-6113-2A/2B/2C/2D/2E)

CIRCUIT NO.	PART NO.		DESCRIPTION
	Transistor		
Q951	2213284 or		2SC1740S-R or
	2212115		2SC2458-GR
	Diodes		
D951-D954	22380035		GP104003E
	22380032 or		1SR139-100 or
	22380260,		RL1N4003,
D955	223163 or		1SS133 or
	223205		1SS270A
	Transfomer		
T902	2300670A	⚠	NPT-1111D <D>
	2300671A	⚠	NPT-1111P <P/T/K>
	2300672	⚠	NPT-1111DG <W>
	Capcitors		
C901	3500191		DE7150F-103M
C952	354742219		220 μ F,16V,Elect.

NOTE: THE COMPONENTS IDENTIFIDE BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

CIRCUIT NO.	PART NO.		DESCRIPTION
	Resistor		
R951	453530824		8.2Ω ±5%,1/2W, Metal
	Fuseholders		
F901a	25050065	⚠	YSH403T <D/W>
F902a	25050065	⚠	YSH403T <PT/W/K>
F903a	25050065	⚠	YSH403T <P>
	Fuses		
F901	252198	⚠	8A-UL <D/W>
F902	252077	⚠	4A-SE-EAK <P/T/W/K>
F903	252075	⚠	2.5A-SE-EAK <P>
	252074	⚠	2A-SE-EAK <T/K>
	Sockets		
JL942a	25051087		NSCT-3P874
	Plug		
P901a	25055675		NPLG-2P631
	Relay		
RL901	25065515 or	⚠	NRL-1P5A-DC12-096 or
	25065508	⚠	NRL-1P10A-DC12-093 <P/T/W/K>
	25065516 or	⚠	NRL-1P10A-DC12-097 or
	25065248	⚠	NRL-1P15A-DC12-29 <D>
	Switch		
S901	25065437	⚠	NSS-22157P <W>

AC OUTLET TERMINAL PC BOARD(NAETC-6116-2B/2C/2D)

CIRCUIT NO.	PART NO.		DESCRIPTION
P904	25051125	⚠	NSCT-4P912,Terminal <P/T/W>

FRONT/CENTER SPEAKER TERMINAL PC BOARD (NAETC-6115-2A/2B/2C/2D/2E)

CIRCUIT NO.	PART NO.	DESCRIPTION
C1541	374721034	0.01μF±5%,50V,Plastic capacitor <P/T/W/K>
C541,C542	374721034	0.01μF±5%,50V,Plastic capacitor <P/T/W/K>
JL503b	25051110	NSCT-6P897,Socket
P541	25060246	NTM-4PDMN166,Terminal
P542	25060114	NTM-2PDML048,Terminal <D>
	25060247	NTM-2PDMN167,Terminal <P/T/W/K>

POWER SWITCH PC BOARD(NASW-6117-2B/2C/2D/2E)
230V and Wolrdwide models

CIRCUIT NO.	PART NO.		DESCRIPTION
C931	3500191	⚠	DE7150F-103M, Capacitor IS
C931a	27301216	⚠	Cover,capacitor
S931	25035550	⚠	NPS-111-L512P,Push switch

AC OUTLET TERMINAL PC BOARD(NAETC-6118-2A)

CIRCUIT NO.	PART NO.		DESCRIPTION
P903	25051220	⚠	NSCT-6P1010,Terminal <D>

SPEAKER TERMINAL PC BOARD(NAETC-6098-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
C641-C644	374721034	0.01μF±5%,50V,Plastic capacitor<P/T/W/K>
JL601b	25051110	NSCT-6P897,Socket
P641	25060224 or	NTM-8PDML146 or
	25060158	NTM-8PDML084,Terminal

TUNER TERMINAL PC BOARD(NARF-6106-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
JL311b	25055624	NPLG-3P586, Plug
P1101	25045307	NPJ-2PDBL166, Terminal

MR/RI TERMINAL PC BOARD(NAETC-6096-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q981,Q982	221282 or	DTC144ES or
	2213560	RN1204
Q983	24120043	ON3131 <D>
Q984	2213510 or	DTA114ES or
	2214350	RN2202 <D>
Q985	2213284 or	2SC1740S-R or
	2212115	2SC2458-GR <D>
	Diodes	
D981,D982	223163 or	1SS133 or
	223205	1SS270A <P/T/W/K>
D983	223163 or	1SS133 or
	223205	1SS270A
D984	223163 or	1SS133 or
	223205	1SS270A <D>
	Capacitors	
C981	374724724	4700pF±5%,50V,Plastic
C982	353741009	10μF,16V,Elect.
C983	353741009	10μF,16V,Elect. <D>
	Socket	
JL242a	25051093	NSCT-9P880
	Plugs	
JL942b	25055624	NPLG-3P586
JL972b	25055627	NPLG-6P589
	Terminals	
P981	25045293	HSJ1003-01-012 <P/T/W/K>
	25045433	HSJ1003-01-013 <D>
P982	25045330 or	NPJ-2PDBL184 or
	25045481	NPJ-2PDBL299

SURROUND POWER AMPLIFIER PC BOARD (NAAF-6097-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q601-Q606	2211733 or	2SC1845-E
	2211732	2SC1845-F
Q607,Q608	2213284 or	2SC1740S-R or
	2212115	2SC2458-GR
Q609-Q612	2211354 or	2SA949-Y
	2211353	2SA949-O
Q613,Q614	2211634 or	2SC2229-Y
	2211633	2SC2229-O
Q615,Q616	2211354 or	2SA949-Y
	2211353	2SA949-O
Q617,Q618	2211634 or	2SC2229-Y
	2211633	2SC2229-O
Q619,Q620	2213284 or	2SC1740S-R or
	2212115	2SC2458-GR

NOTE: D : 120V model only
P : European model only
T : Asian model only
W: Wolrdwide model only
K : Korean model only

CIRCUIT NO.	PART NO.		DESCRIPTION
	Transistors		
Q621,Q622	2203010		2SC5171
Q623,Q624	2203000		2SA1930
Q625,Q626	2202922,	*	2SC5196-R,
	2202923,	*	2SC5196-O,
	2202373,	*	2SC4466-O,
	2202375 or	*	2SC4466-P or
	2202374	*	2SC4466-Y
Q627,Q628	2202912,	*	2SA1939-R,
	2202913,	*	2SA1939-O,
	2202363,	*	2SA1693-O,
	2202365 or	*	2SA1693-P or
	2202364	*	2SA1693-Y
Q629,Q630	2211733 or		2SC1845-E or
	2211732		2SC1845-F
Q681,Q682	2213650		DTD113ZS
	Diodes		
D601,D602	22380260,		RL1N4003,
	22380032 or		1SR139-100 or
	22380035		GP104003E
D681,D682	223163 or		1SS133 or
D681,D682	223205		1SS270A
	Coil		
L601,L602	231176S		S-1.3C <P/T/W/K>
	Capacitors		
C601,C602	354742209		22 μ F,16V,Elect.
C607,C608	354742219		220 μ F,16V,Elect.
C609,C610	354744709		47 μ F,16V,Elect.
C617,C618	354781009		10 μ F,50V,Elect.
C623,C624	374721044		0.1 μ F ± 5%,50V,Plastic
C629,C630	354784719		470 μ F,50V,Elect. <D>
	354764719		470 μ F,35V,Elect. <P/T/W/K>
C631	354781009		10 μ F,50V,Elect.
C632-C634	354784719		470 μ F,50V,Elect. <D>
	354764719		470 μ F,35V,Elect. <P/T/W/K>
	Resistors		
R623,R624	443526804		68 Ω ± 5%,1/2W, Metal oxide
R625-R628	443525604		56 Ω ± 5%,1/2W, Metal oxide
R629-R932	443526804		68 Ω ± 5%,1/2W, Metal oxide
R637,R638	5210288		N06HR2.2KBE,Trimming
R643,C644	443521514		150 Ω ± 5%,1/2W, Metal oxide
R645-R648	453530224		2.2 Ω ± 5%,1/2W, Metal
R649,R650	4000131		RGC22-0.22 OHMK,Metal plate
R655,R656	453630824		8.2 Ω ± 5%,1W, Metal
R669,R670	453530224		2.2 Ω ± 5%,1/2W, Metal
R675,R676	453532294		0.22 Ω ± 5%,1/2W, Metal
	Relaies		
RL681,RL682	25065517 or		NRL-2P5A-DC24-098 or
RL681,RL682	25065510		NRL-2P5A-DC24-095
	Sockets		
JL601a	25051110		NSCT-6P897
JL601A	25051091		NSCT-7P878
JL691b	25050267		NSCT-3P95
	Plugs		
P601,P602	25055038		NPLG-2P29
P611a	25055133		NPLG-3P117

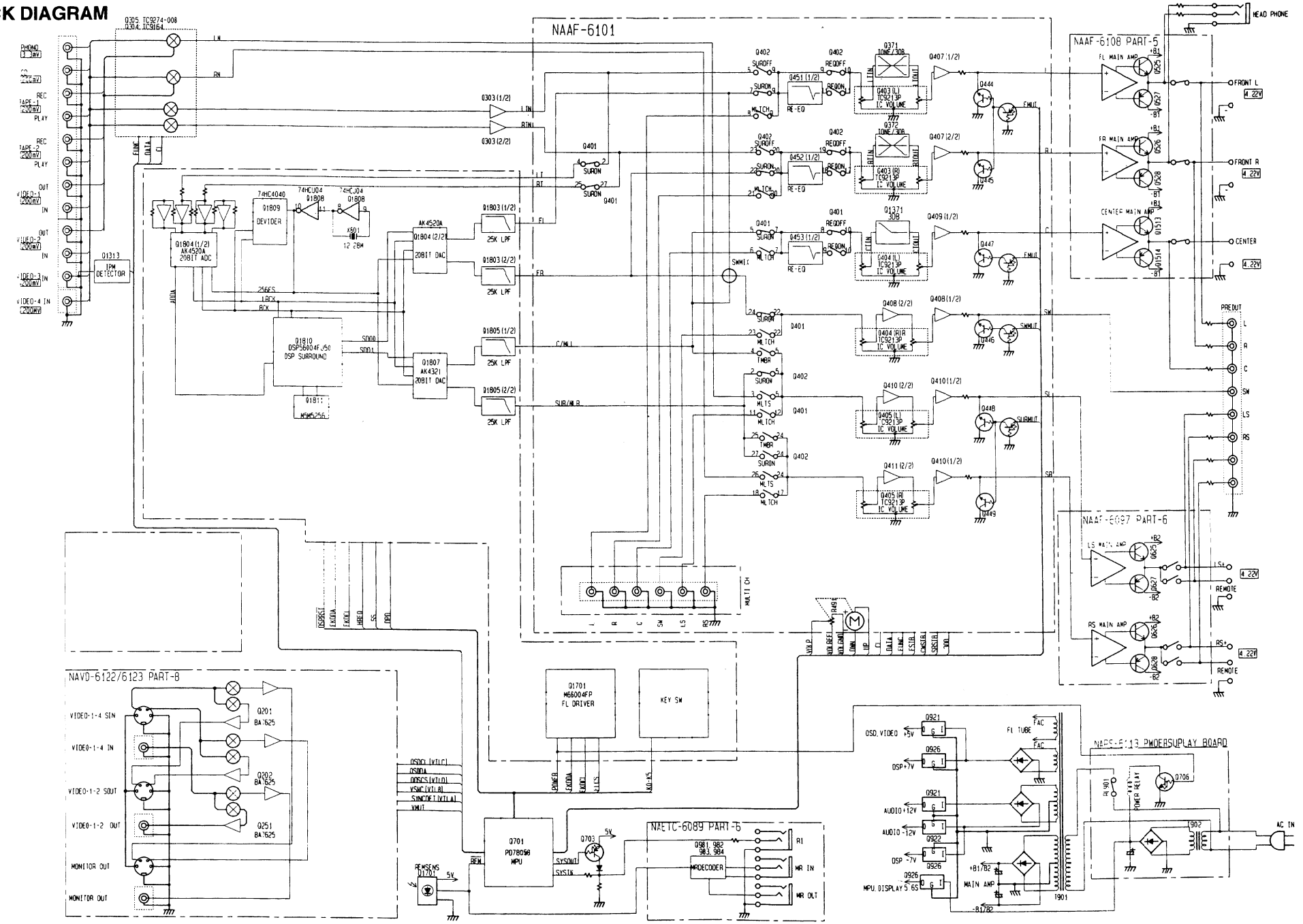
PREOUT/MAIN IN TERMINAL PC BOARD(NAETC-6102-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
C1414	374723344	0.33 μ F ± 5%,50V,Plastic capacitor
JL401b	25051087	NSCT-3P874,Socket
JL402a	25051093	NSCT-9P880,Socket
JL603b	25055628	NPLG-7P590,Plug
P1401	25045458 or	NPJ-6PDBL279 or
	25045300	NPJ-6PDBL159,Terminal
P1402	25045298 or	NPJ-2PDBL157 or
	25045456	NPJ-2PDBL277,Terminal
P1404	25045459 or	NPJ-1PDBL260 or
	25045302	NPJ-1PDBL161,Terminal

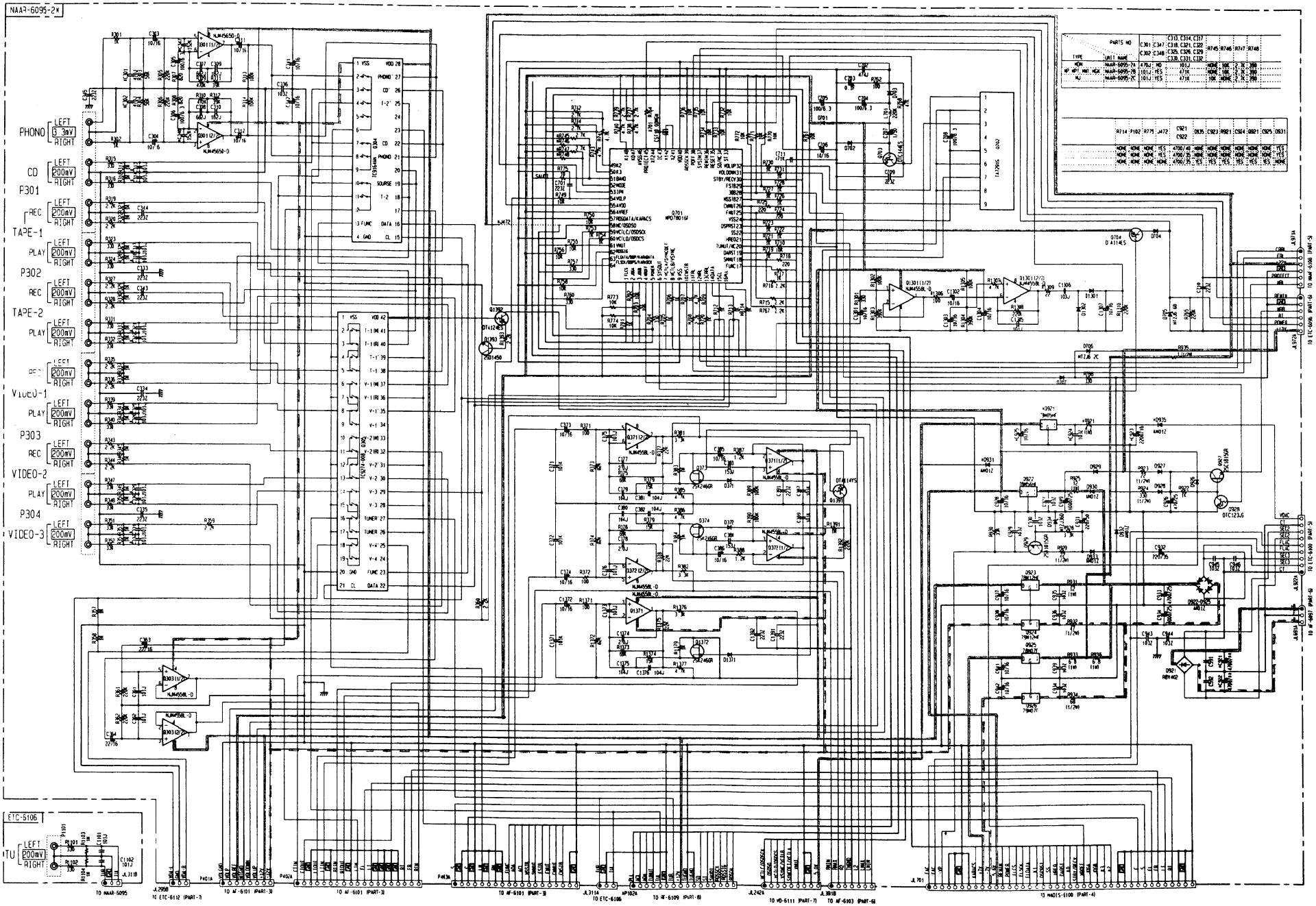
TONE VOLUME PC BOARD(NAAF-6103-2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
C395,C396	374721534	0.015 μ F ± 5%,50V,Plastic capacitor
JL391a	25051091	NSCT-7P878,Socket
R395,R396	5104356	N14RLC100KWT20Z, Variable resistor

BLOCK DIAGRAM



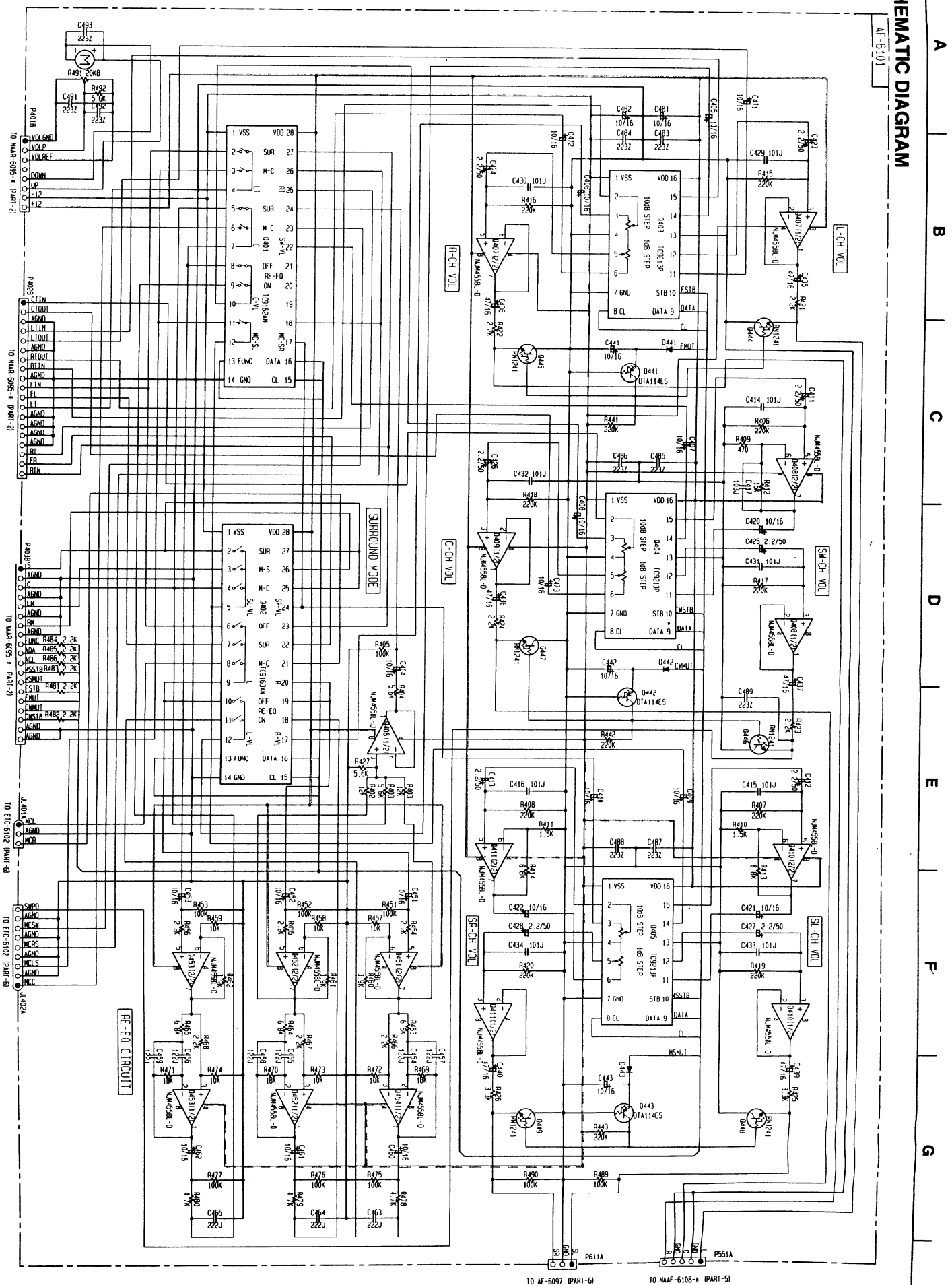
SCHEMATIC DIAGRAM



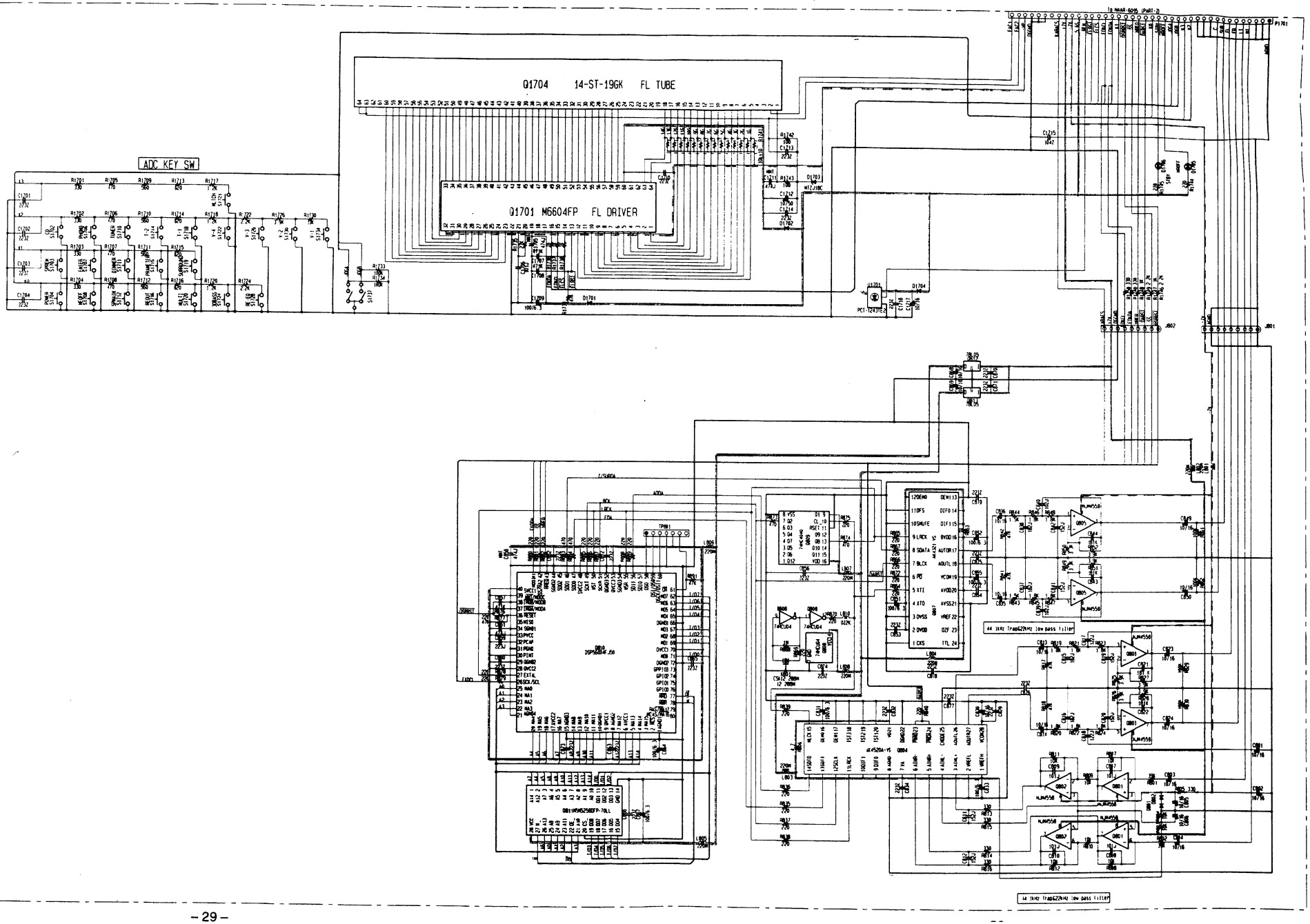
PRINTED CIRCUIT BOARD -PARTS LIST

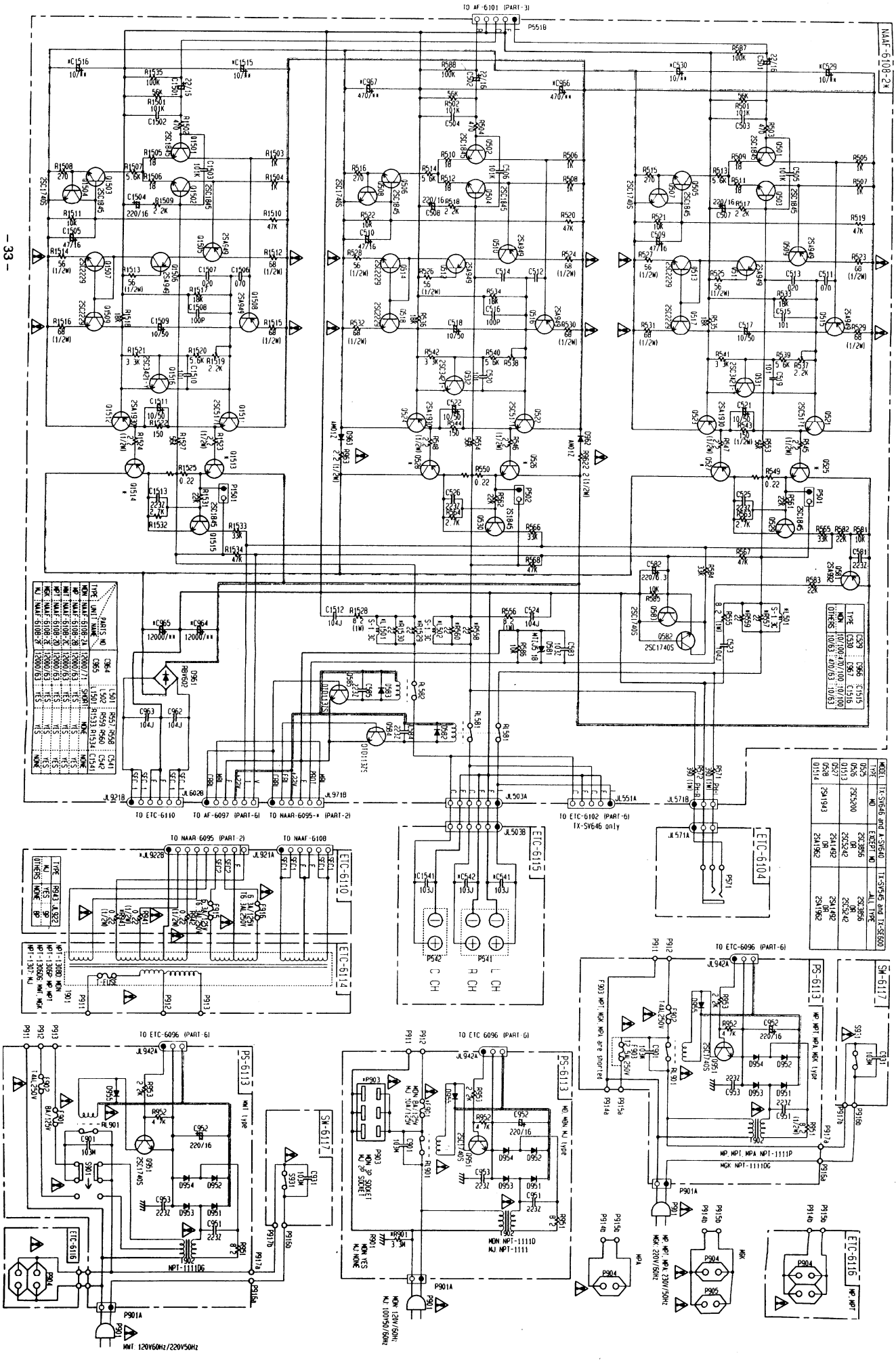
ELECTRO VOLUME CIRCUIT PC BOARD(NAAF-6101-1A/1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q401	22240798	TC9162AN
Q402	22240799	TC9161AN
Q403-Q405	22240266	TC9213P
Q406-Q411	22240293 or	NJM4558L-D or
Q451-Q453	22240247	BA15218N
	Transistors	
Q441-Q443	2213510 or	DTA114ES or
	2214350	RN2202
Q444-Q449	2213631 or	RN1241-A or
	2213632	RN1241-B
	Diodes	
D441-D443	223163 or	1SS133 or
	223205	1SS270A
	Capacitors	
C404-C410	354741009	10 μ F,16V,Elect.
C411-C413	354780229	2.2 μ F,50V,Elect.
C417	374721034	0.01 μ F $\pm$ 5%,50V,Plastic <D>
C420-C422	354741009	10 μ F,16V,Elect.
C423-C428	354780229	2.2 μ F,50V,Elect.
C435-C440	354744709	47 μ F,16V,Elect.
C441-C443	354741009	10 μ F,16V,Elect.
C451-C453	354741009	10 μ F,16V,Elect.
C454-C459	374721224	1200pF $\pm$ 5%,50V,Plastic
C460-C462	354741009	10 μ F,16V,Elect.
C463-C465	374722224	2200pF $\pm$ 5%,50V,Plastic
C471-C473	354741009	10 μ F,16V,Elect.
C481,C482	354741009	10 μ F,16V,Elect.
	Resistors	
R491	5146066	N16RGL20KB25F,Variable
	Sockets	
JL401a	25051087	NSCT-3P874
JL402b	25051093	NSCT-9P880
P401b	25051233	NSCT-8P1023
P402b	25051530	NSCT-19P1317
P403b	25051530	NSCT-19P1317
P551	2009990466UL	NSAS-10P0620
P611	2009990449UL	NSAS-6P0600


AF-6101
L-CH VOL
R-CH VOL
C-CH VOL
SW-CH VOL
SR-CH VOL
SL-CH VOL
SURROUND MODE
RF-EQ CIRCUIT
TO NAAF-6095-* (PART-2)
TO NAAF-6095-* (PART-2)
TO NAAF-6095-* (PART-2)
TO ETC-6102 (PART-6)
TO ETC-6102 (PART-6)
TO AF-6097 (PART-6)
TO NAAF-6108-* (PART-5)

SCHEMATIC DIAGRAM





ADJUSTMENT PROCEDURES

Idling Current Adjustment

Connect the DC voltmeter to the terminals P501, P502, and P1501 (V_{CT} and I_{ID}) on Front/Center power amp. pc board. After turn POWER on, adjust the trim resistors R537, R538, and R1519 so that the indicator of voltmeter becomes 0.5mV.

Connect the DC voltmeter to the terminals P601 and P602 (V_{CT} and I_{ID}) on Surround power amp. pc board. After turn POWER on, adjust the trim resistors R637, and R638 so that the indicator of voltmeter becomes 1.5mV.

Allow the unit to warm up for about 5 minutes and check the voltage of these terminals.

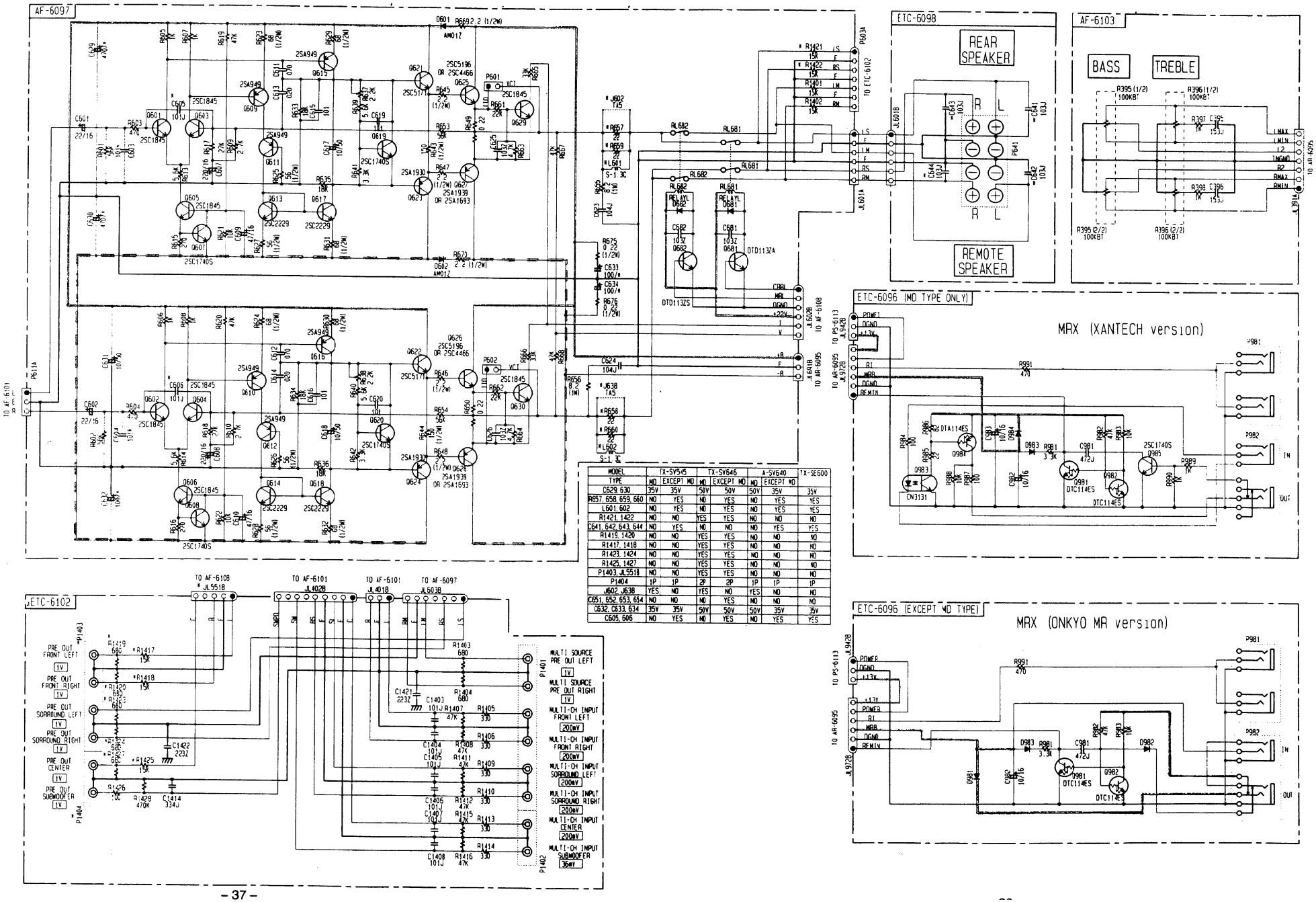
When the voltage is less than 4.0mV, adjust trim resistors so that the indicator of voltmeter becomes 4mV.

When the voltage is 4.0mV to 7.5mV, you are not neccesssary to adjust.

When the voltage is more than 7.5mV, adjust trim resistors so that the indicator of voltmeter becomes 7.5mV.

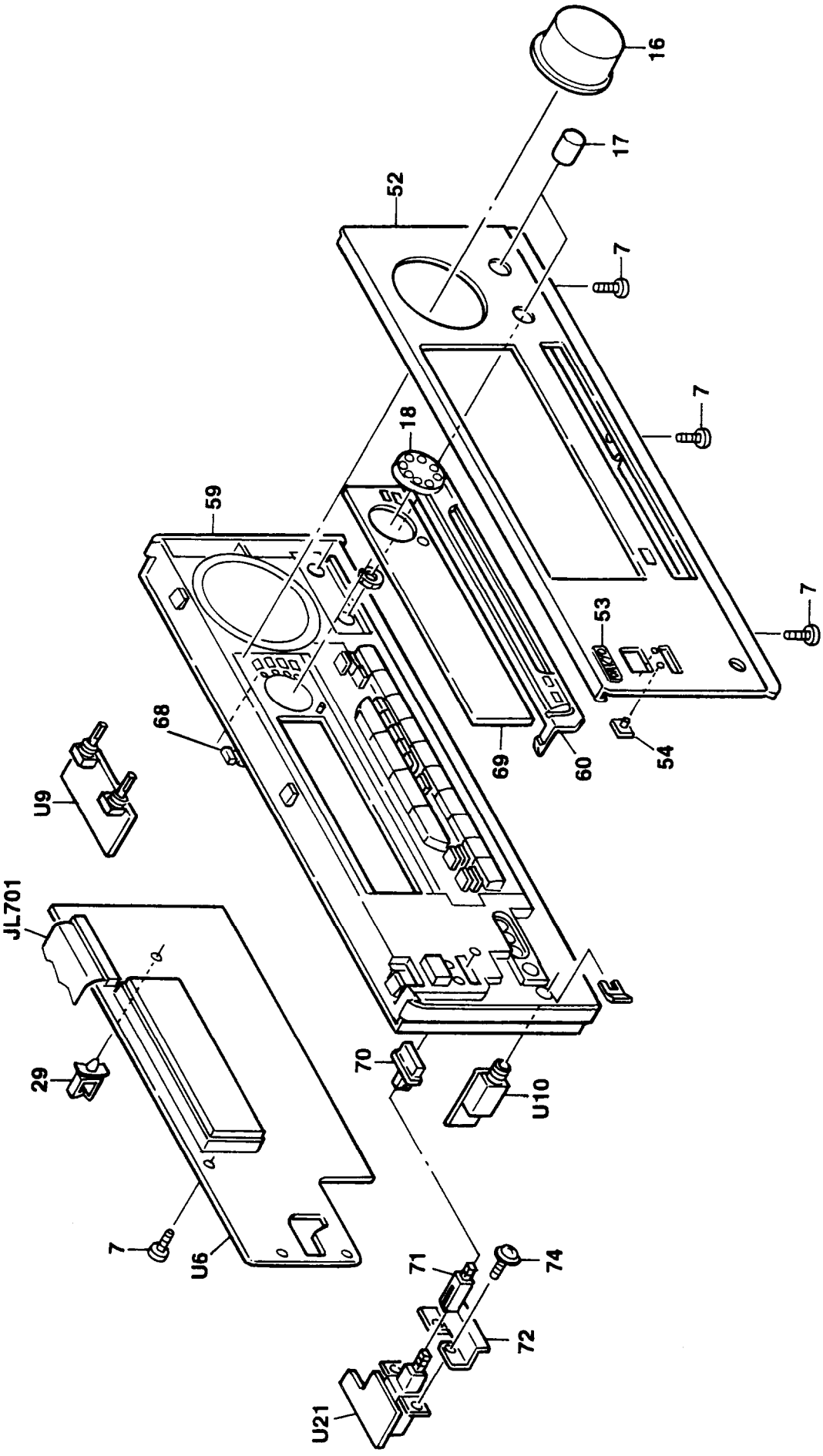
Note: No load, No signal

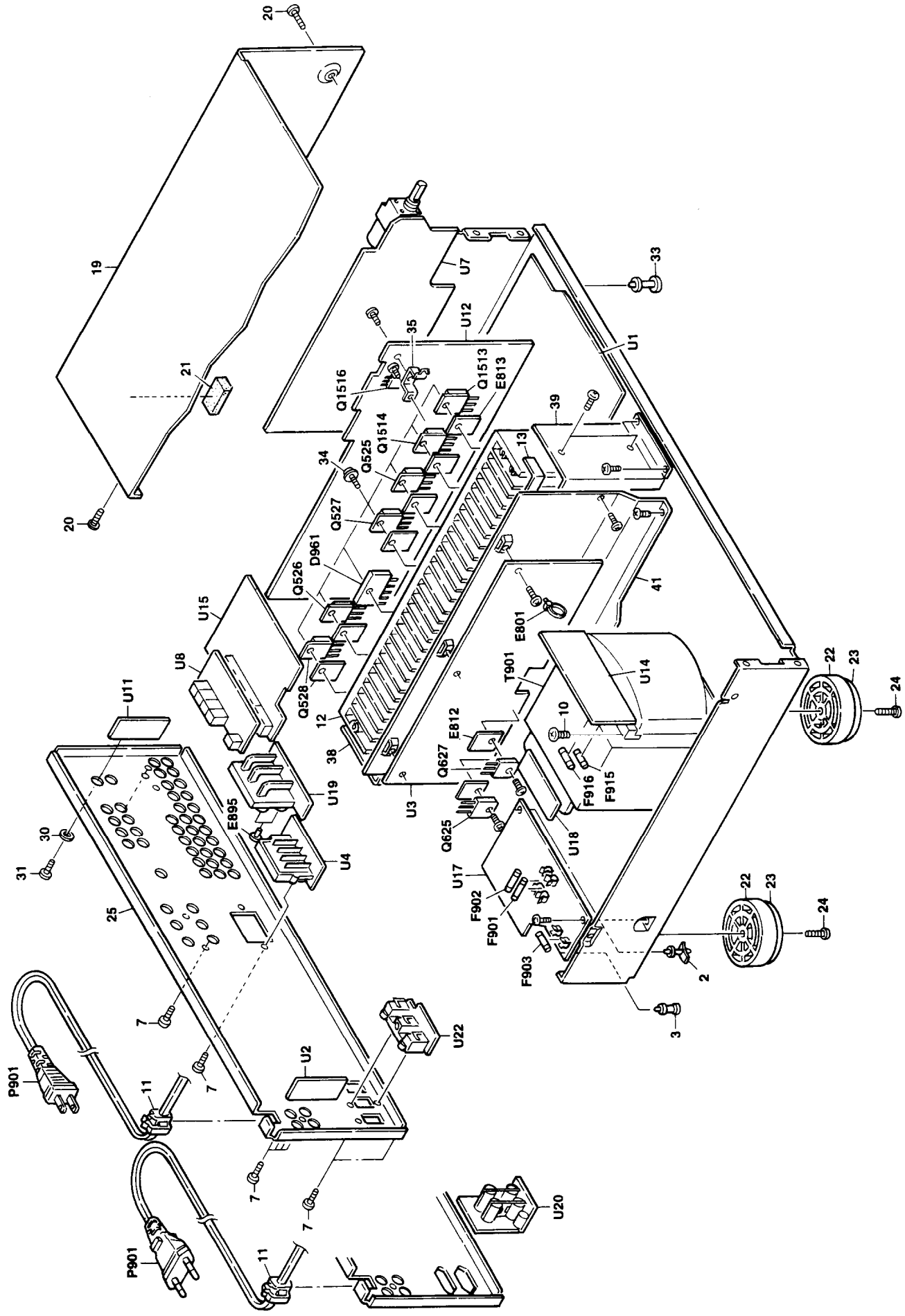
SCHEMATIC DIAGRAM



MODEL	TX-SV545		TX-SV646		A-SV640	TX-SE600
TYPE	MO	EXCEPT MO	MO	EXCEPT MO	MO	EXCEPT MO	
C629, 630	35V	35V	50V	50V	50V	35V	35V
R657, 658, 659, 660	NO	YES	NO	YES	NO	YES	YES
L601, 602	NO	YES	NO	YES	NO	YES	YES
R1421, 1422	NO	NO	YES	YES	NO	NO	NO
C641, 642, 643, 644	NO	YES	NO	NO	NO	YES	YES
R1419, 1420	NO	NO	YES	YES	NO	NO	NO
R1417, 1418	NO	NO	YES	YES	NO	NO	NO
R1423, 1424	NO	NO	YES	YES	NO	NO	NO
R1425, 1427	NO	NO	YES	YES	NO	NO	NO
P1403, JL5518	NO	NO	YES	YES	NO	NO	NO
P1404	1P	1P	2P	2P	1P	1P	1P
J602, J638	YES	NO	YES	NO	YES	NO	NO
C651, 652, 653, 654	NO	NO	NO	YES	NO	NO	NO
C632, C633, 634	35V	35V	50V	50V	50V	35V	35V
C605, 606	NO	YES	NO	YES	NO	YES	YES

EXPLODED VIEW




20
19
21
20
U7
33
U12
35
U1
Q1516
Q1513
E813
39
Q1514
13
Q525
34
Q527
D961
Q526
41
U15
E801
U8
T901
U14
22
23
24
Q528
12
10
E812
38
Q627
F916
F915
U11
U19
E895
U3
Q625
U18
30
31
U4
U17
F902
F901
F903
22
23
24
25
2
3
7
U22
P901
11
U2
7
7
7
U20
P901
11

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	27100328A	Chassis
2	27190503A	KGLS-8RF,Holder
3	27190428A	KGLS-10RF,Holder
5	27190062	KGLS-12S,Holder
7	838130088	3TTB+8B,Self-tapping screw
10	830440089	4TTC+8C(BC),Self-tapping screw
11	27300750	⚠ #2271, Bushing cord
12	27160388	Heatsink <D>
	27160387	Heatsink <P/T/W/K>
13	29110083	Tape
16	28325539	Knob, Volume
17	28325405	Knob, Tone
18	28325500	Knob, Jog
19	28184698	Top cover
20	838430088	3TTB+8B(BC),Self-tapping screw
21	28141277A	Cushion
22	27175319A	Leg
23	28141332	Cushion
24	831430088	3TTW+8B(BC),Self-tapping screw
25	27122368	Rear panel <D>
	27122369	Rear panel <P>
	27122370	Rear panel <T>
	27122371A	Rear panel <W>
	27122372	Rear panel <K>
26	27190470	KGLS-18S, Holder
29	27300243	WS-2W, Clamp
30	87643010	W3*10F(BC), Washer
31	838230088	3TTB+8B(NI), Nickel screw
33	27190813	KGPS-10RF, Holder
34	801433	3SMS8W.SW+14B(BC), Special screw
35	27141681	Retainer
36	28140680	Cushion
38	27141693	Retainer, Rear
39	27141694	Retainer, Front
41	27160386	Heatsink
52	27211945	Front panel <D>
	27211944	Front panel <P/T/W/K>
53	28135244	Badge
54	28198778	Facet
59	27111020	Front bracket
60	27215278	Decorative frame
63	27191014	Holder
68	28325545	Knob, Mode
69	28191794A	Clear plate
70	28325497A	Knob, Power <P/T/W/K>
71	27273164	Joint <P/T/W/K>
72	27141686A	Retainer <P/T/W/K>
74	838430107	3TTP+10S(BC), Self-tapping screw <P/T/W/K>
D961	22380070,	⚠ D5SBA60,
	22380038 or	⚠ RBV602 or
	22380274	⚠ RS603M, Diode
E801	260208	Wire tie
E812	223024	⚠ AC238, Isolation sheet
E813	223025	⚠ AC238, Isolation sheet <D>
	223024	⚠ AC238, Isolation sheet <P/T/W/K>
E895	880009	NRP-345,Plastic rivet <P/T>
F901	252198	⚠ 8A-UL, Primary fuse <D/W>
F902	252077	⚠ 4A-SE-EAK,Primary fuse <P/T/W/K>
F903	252075	⚠ 2.5A-SE-EAK, Fuse <P>
	252074	⚠ 2A-SE-EAK,Fuse <T>
F915,F916	252166	⚠ 6.3A-UL/T-237,Secondary fuse <D>
	252079	⚠ 6.3A-SE-EAK,Secondary fuse <P/T/W/K>
JL701	2047402512	NCFC7-402512,Flat cable
P901	253192HIT	⚠ AS-UC-6#18(SPT-2),Power supply cord <D>
	253193HIT	⚠ AS-CEE,Power supply cord <P/T>
	253233KAW	⚠ AS-CEE-2,Power supply cord <W>
	253213WSE	⚠ AS-KS,Power supply cord <K>
P904,P905	25051266	⚠ NSCT-2P1056,AC outlet <K>
Q1516	2212654 or	2SC3421-Y or
Q531,Q532	2212653	2SC3421-O,Transistor
Q625,Q626	2202922,	2SC5196-R,
	2202923,	2SC5196-O,
	2202373,	2SC4466-O,
	2202375 or	2SC4466-P or
	2202374	2SC4466-Y, Transistor
Q627,Q628	2202912,	2SA1939-R,
	2202913,	2SA1939-O,
	2202363,	2SA1693-O,
	2202365 or	2SA1693-P or
	2202364	2SA1693-Y, Transistor
Q1513	2202822 or	2SC5200-R or
Q525,Q526	2202823	2SC5200-O, Transistor <D>
Q1513	2201653,	2SC3856-O,
Q525,Q526	2201655,	2SC3856-P,
	2201654,	2SC3856-Y,
	2202842 or	2SC5242-R or
	2202843	2SC5242-O, Transistor <P/T/W/K>
Q1514	2202812 or	2SA1943-R or
Q527,Q528	2202813	2SA1943-O, Transistor <D>

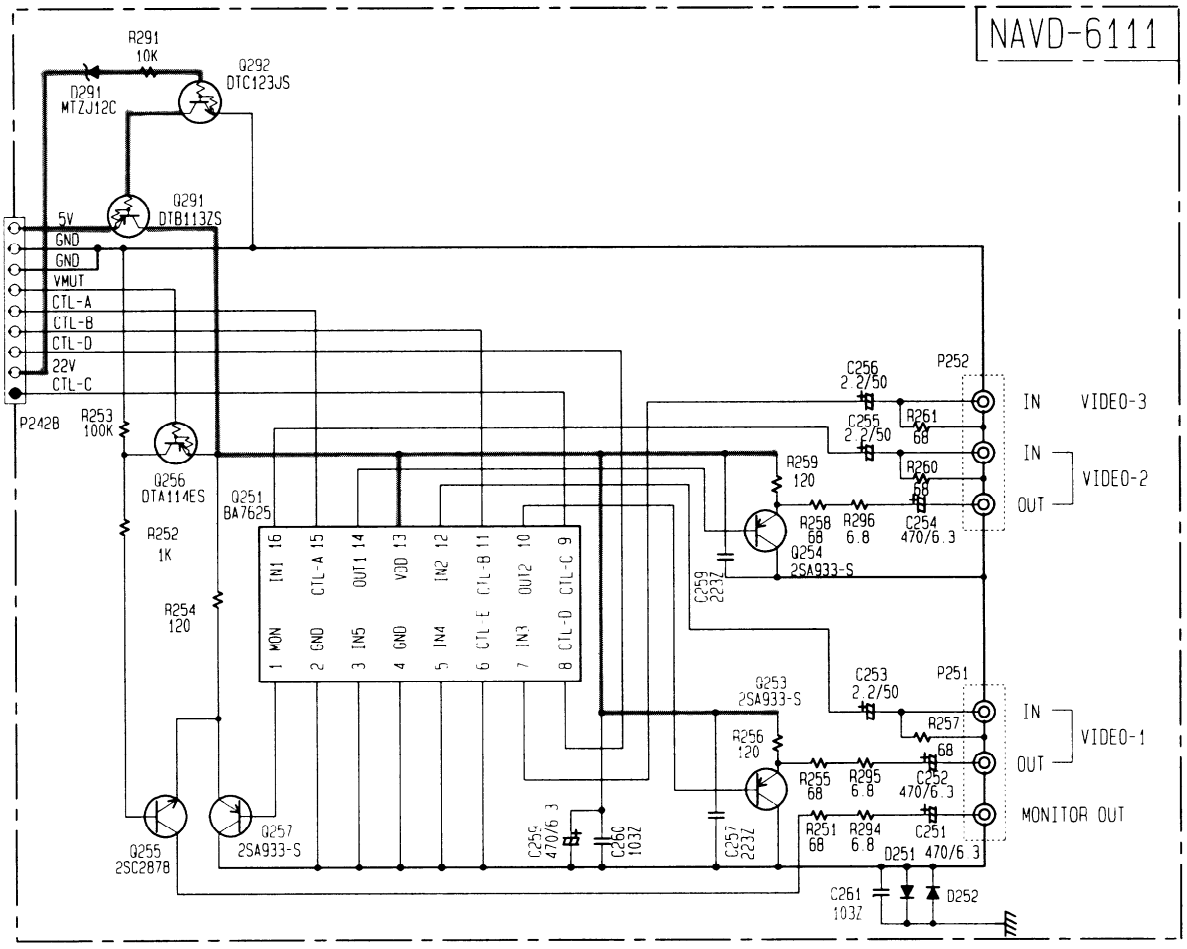
REF. NO.	PART NO.	DESCRIPTION
Q1514	2201663.	2SA1492-O.
Q527,Q528	2201665.	2SA1492-P.
	2201664.	2SA1492-Y.
	2202832 or	2SA1962-R or
	2202833	2SA1962-O,Transistor <P/T/W/K>
T901	2301286	⚠ NPT-1308D,Power transformer <D>
	2301281	⚠ NPT-1306P,Power transformer <P/T>
	2301282	⚠ NPT-1306DG,Power transformer <W/K>
U1	1A759595-2A	NAAR-6095-2A,Main circuit pc board ass'y <D>
	1A759595-2B	NAAR-6095-2B,Main circuit pc board ass'y <P/T/W/K>
U2	1A759596-2A	NAETC-6096-2A,RI/MR terminal pc board ass'y <D>
	1A759596-2B	NAETC-6096-2B,RI/MR terminal pc board ass'y <P/T/W/K>
U3	1A759597-2A	NAAF-6097-2A,Surround power amp. pc board ass'y <D>
	1A759597-2B	NAAF-6097-2B,Surround power amp. pc board ass'y <P/T/W/K>
U4	1A759598-2A	NAETC-6098-2A,Spekaer terminal pc board <D>
	1A759598-2B	NAETC-6098-2B,Spekaer terminal pc board <P/T/W/K>
U6	1A759500-2A	NADIS-6100-2A,Display circuit pc board <D>
	1A759500-2B	NADIS-6100-2B,Display circuit pc board <P/T/W/K>
U7	1A759501-2A	NAAF-6101-2A,Electro volume circuit pc board <D>
	1A759501-2B	NAAF-6101-2B,Electro volume circuit pc board <P/T/W/K>
U8	1A759502-2A	NAETC-6102-2A,Pre. out/Main in terminal pc board ass'y <D>
	1A759502-2B	NAETC-6102-2B,Pre. out/Main in terminal pc board ass'y <P/T/W/K>
U9	1A759503-2A	NAAF-6103-2A,Tone volume pc board ass'y <D>
	1A759503-2B	NAAF-6103-2B,Tone volume pc board ass'y <P/T/W/K>
U10	1A759504-2A	NAETC-6104-2A,Headphone terminal pc board ass'y <D>
	1A759504-2B	NAETC-6104-2B,Headphone terminal pc board ass'y <P/T/W/K>
U11	1A759506-2A	NAETC-6106-2A,Tuner terminal pc board ass'y <D>
	1A759506-2B	NAETC-6106-2B,Tuner terminal pc board ass'y <P/T/W/K>
U12	1A759508-2A	NAAF-6108-2A,Front/Center power amp. pc board ass'y <D>
	1A759508-2B	NAAF-6108-2B,Front/Center power amp. pc board ass'y <P>
	1A759508-2D	NAAF-6108-2D,Front/Center power amp. pc board ass'y <T>
	1A759508-2C	NAAF-6108-2C,Front/Center power amp. pc board ass'y <W>
	1A759508-2E	NAAF-6108-2E,Front/Center power amp. pc board ass'y <K>
U14	1A759510-2A	NAETC-6110-2A,Secondary circuit pc board ass'y <D>
	1A759510-2B	NAETC-6110-2B,Secondary circuit pc board ass'y <P>
	1A759510-2D	NAETC-6110-2D,Secondary circuit pc board ass'y <T>
	1A759510-2C	NAETC-6110-2C,Secondary circuit pc board ass'y <W>
	1A759510-2E	NAETC-6110-2E,Secondary circuit pc board ass'y <K>
U15	1A759512-2A	NAETC-6112-2A,Video circuit pc board ass'y <D>
	1A759512-2B	NAETC-6112-2B,Video circuit pc board ass'y <P>
	1A759512-2D	NAETC-6112-2D,Video circuit pc board ass'y <T>
	1A759512-2C	NAETC-6112-2C,Video circuit pc board ass'y <W>
	1A759512-2E	NAETC-6112-2E,Video circuit pc board ass'y <K>

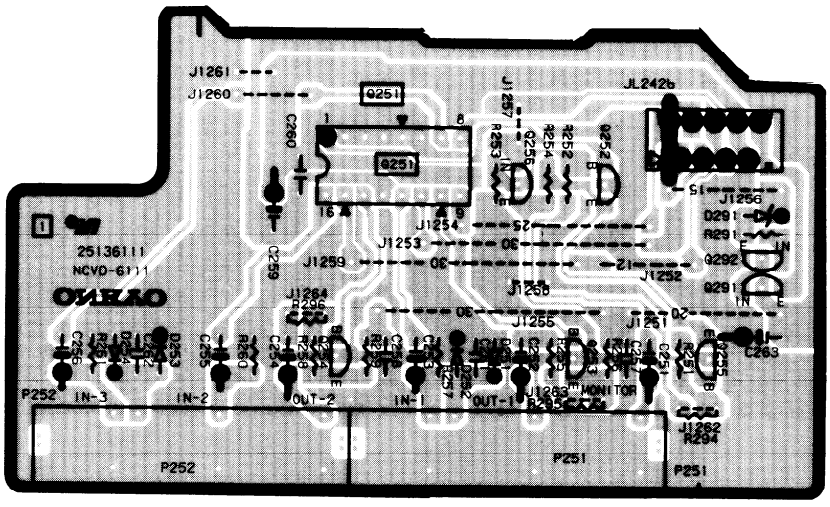
REF.NO.	PART NO.	DESCRIPTION
U17	1A759513-2A	NAPS-6113-2A,Primary circuit pc board ass'y <D>
	1A759513-2B	NAPS-6113-2B,Primary circuit pc board ass'y <P>
	1A759513-2D	NAPS-6113-2D,Primary circuit pc board ass'y <T>
	1A759513-2C	NAPS-6113-2C,Primary circuit pc board ass'y <W>
	1A759513-2E	NAPS-6113-2E,Primary circuit pc board ass'y <K>
U18	1A759514-2A	NAETC-6114-2A,Transformer terminal pc board ass'y <D>
	1A759514-2B	NAETC-6114-2B,Transformer terminal pc board ass'y <P>
	1A759514-2D	NAETC-6114-2D,Transformer terminal pc board ass'y <T>
	1A759514-2C	NAETC-6114-2C,Transformer terminal pc board ass'y <W>
	1A759514-2E	NAETC-6114-2E,Transformer terminal pc board ass'y <K>
U19	1A759515-2A	NAETC-6115-2A,Front/Center speaker terminal pc board ass'y <D>
	1A759515-2B	NAETC-6115-2B,Front/Center speaker terminal pc board ass'y <P>
	1A759515-2D	NAETC-6115-2D,Front/Center speaker terminal pc board ass'y <T>
	1A759515-2C	NAETC-6115-2C,Front/Center speaker terminal pc board ass'y <W>
	1A759515-2E	NAETC-6115-2E,Front/Center speaker terminal pc board ass'y <K>
U20	1A759516-2B	NAETC-6116-2B,AC outlet terminal pc board ass'y <P>
	1A759516-2D	NAETC-6116-2D,AC outlet terminal pc board ass'y <T>
	1A759516-2C	NAETC-6116-2C,AC outlet terminal pc board ass'y <W>
U21	1A759517-2B	NAPS-6117-2B,Power switch pc board <P>
	1A759517-2D	NAPS-6117-2D,Power switch pc board <T>
	1A759517-2C	NAPS-6117-2C,Power switch pc board <W>
	1A759517-2E	NAPS-6117-2E,Power switch pc board <K>
U22	1A759518-2A	NAETC-6118-2A,AC outlet terminal pc board ass'y <D>

NOTE: <D>: 120V model only
<P>: European model only
<T>: Asian model only
<W>: Wolrdwide model only
<K>: Korean model only

NOTE: THE COMPONENTS IDENTIFIDE BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIDE.

SCHEMATIC DIAGRAM





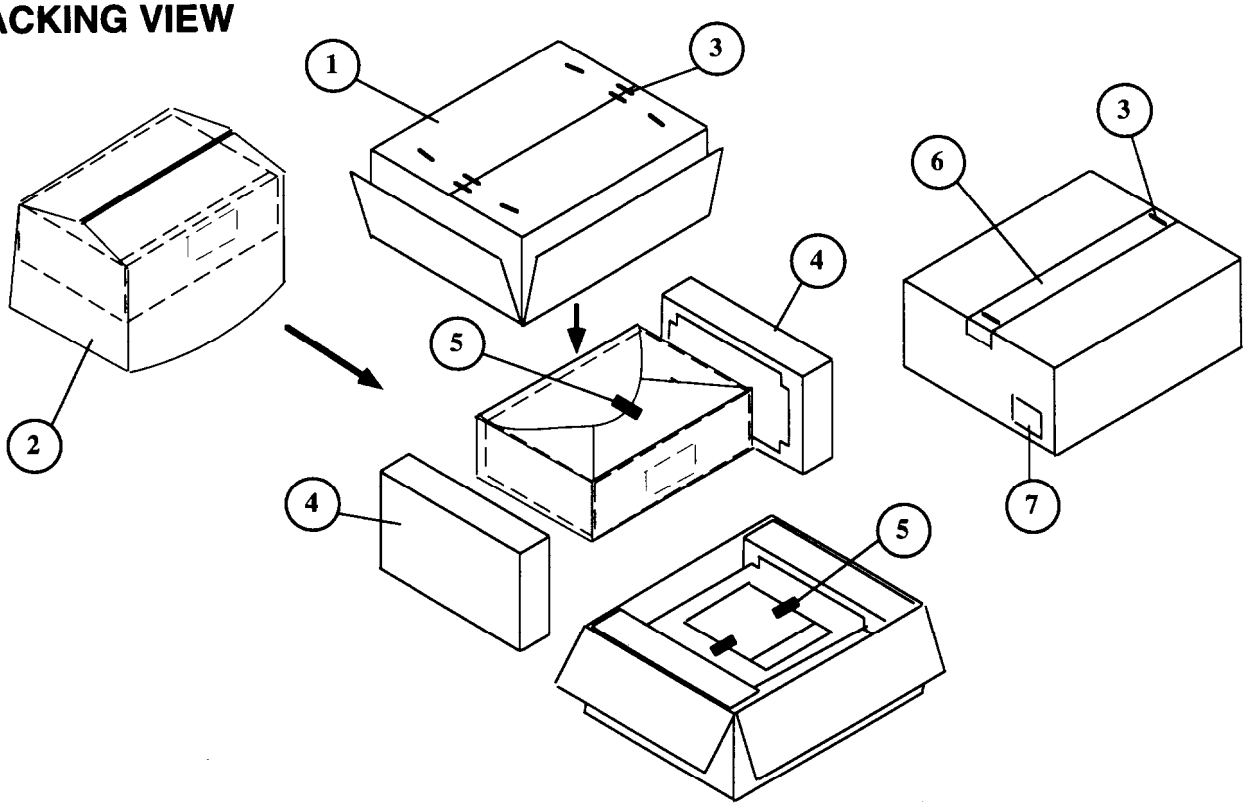
VIDEO CIRCUIT PC BOARD

PRINTED CIRCUIT BOARD -PARTS LIST

VIDEO CIRCUIT PC BOARD(NAETC-6112-2A/2B/2C/2D/2E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q251	22240373	BA7625
	Transistors	
Q252-Q254	2213354 or	2SA933S-R or
	2212125	2SA1048-GR
Q255	2212286 or	2SC2878-B or
	2212285	2SC2878-A
Q256	2213510 or	DTA114ES or
	2214350	RN2202
Q291	2213830	DTB113ZS
Q292	2213640	DTC123JS
	Diodes	
D251,D252	223205 or	1SS270A or
	223163	1SS133
D291	224471203	MTZJ12C
	Capacitors	
C251,C252	354724719	470 μ F,6.3V,Elect.
C253,C255	354780229	2.2 μ F,50V,Elect.
C254	354724719	470 μ F,6.3V,Elect.
C256	354780229	2.2 μ F,50V,Elect.
C259	354721029	1000 μ F,6.3V,Elect.
	Terminals	
P251,P252	25045457 or	NPJ-3PDYE278 or
	25045299	NPJ-3PDYE158
	Plug	
JL242c	25055630	NPLG-9P592

PACKING VIEW



PACKING-PARTS LIST

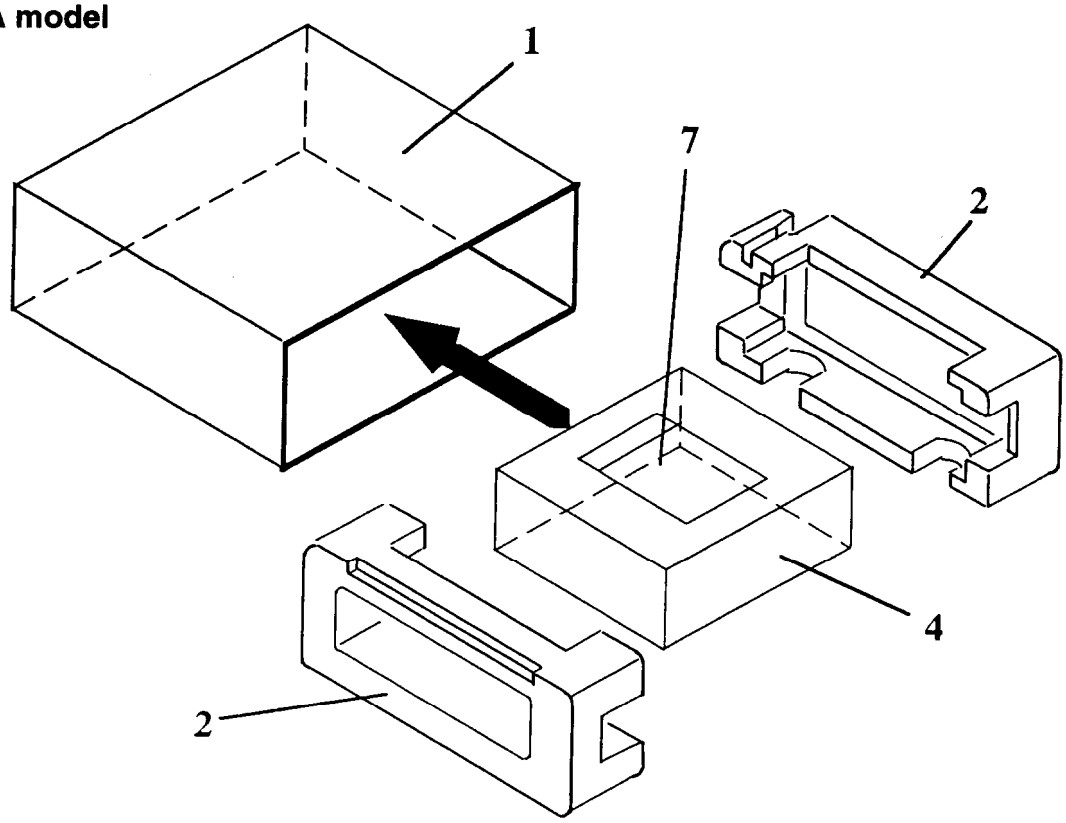
REF.NO.	PART NO.	DESCRIPTION
1	29053201	Carton <P>
	29053202	Carton <T/W/K>
2	29100034-1A	850*650,Poly bag
3	282301	Staple
4	29091796A	Pad
5	261504	Adhesive tape
6	29110071	PP tape
7	29362212	EAN label <P/T/W/K>

REF.NO.	PART NO.	DESCRIPTION
	Accessary bag ass y	
	24140344	RC-344S,Remote control
	25055018	CV-K-1,Conversion plug <W>
	29100097-1A	350*250,Poly bag <W>
	29342488	Instruction manual E
	29342489	Instruction manual FSI <P>
	29342490	Instruction manual GSwD <P>
	29342491	Instruction manual T <T/W>
	3010194	UM-3,Battery

NOTE: <P>: European model only
<T>: Asian model only
<W>: Wolrdwide model only
<K>: Korean model only

PACKING VIEW

U.S.A model



REF.NO.	PART NO.	DESCRIPTION
1	29053210	Carton
2,3	29091796A	Pad
4	29100034-1A	850*650,Poly bag
7	Accessary bag ass'y	
	24140344	RC-344S,Remote control
	29100097-1A	350*250,Poly bag <W>
	29342488	Instruction manual E
	29358002K	Service Station list
	29365019B	Warranty card
	3010194	UM-3,Battery

ONKYO CORPORATION

International Sales Div.: 31 Sankyo-bild. 3-8-5, Asakusabashi, Taito-ku, TOKYO 111, JAPAN
TEL : 03-5820-5865 FAX : 03-5820-5869

ONKYO U.S.A. CORPORATION
200 Williams Drive, Ramsey, N.J. 07446, U.S.A.
TEL : 201-825-7950 FAX : 201-825-8150

ONKYO EUROPE ELECTRONICS GmbH
Industriestrasse 18-20, 82110 Germering, GERMANY
TEL : 089 84 93 20 FAX : 089 84 93 226

ONKYO FRANCE
Immeuble Le Diamant, Domaine Technologique de Saclay, 4 Rue Rene Razel, 91892 SACLAY, FRANCE
TEL : (1) 69 33 1400 FAX : (1) 69 41 35 84

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