

ONKYO® SERVICE MANUAL

AUDIO VIDEO CONTROL RECEIVER MODEL TX-SV646

Black and Golden models

BMP,BMPT,BMPA,GMPT	230V AC, 50Hz
BMWT, GMWT	220-230V/120V AC, 50/60Hz
BMD	120V AC, 60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle 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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SPECIFICATIONS

AMPLIFIER SECTION

Power Output (U.S. and Canadian model):

Stereo mode

Front L/R channels

90 watts per channel min. RMS. at 8 ohms, both channels driven, from 20 Hz to 20,000 Hz, with no more than 0.08% total harmonic distortion.

Continuous power output:

2 × 100 watts at 8 ohms (DIN)

Surround mode and Multi source mode

Front L/R and Center channels

80 W + 80 W + 80 W (1 kHz 0.08 % 8 ohms)

Rear channels (Rear only driven)

30 W + 30 W (1 kHz 0.8 % 8 ohms)

Remote channels

30 W + 30 W (1 kHz 0.08 % 8 ohms)

Power Output (Other models):

Stereo mode

Continuous power output:

2 × 100 watts at 6 ohms (DIN)

Surround mode and Multi source mode

Continuous power output:

Front L/R and Center channels

3 × 95 watts at 6 ohms (DIN)

Rear channel

2 × 40 watts at 6 ohms (DIN)

Remote channels

2 × 40 watts at 6 ohms (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 1,000 Hz, 0.5% THD.

Frequency Response: 20 to 30,000 Hz, +/-1 dB

RIAA Deviation: 20 to 20,000 Hz, +/-0.8 dB

Tone Control: BASS: +/-10 dB at 100 Hz

TREBLE: +/-10 dB at 10,000 Hz

Signal to Noise Ratio: PHONO: 80 dB (IHF A, 5 mV input)

CD/TAPE: 100 dB (IHF A)

Muting: -∞ dB

VIDEO SECTION

Television Format: NTSC (U.S. and Canadian models)

NTSC/PAL (Other models)

Input Sensitivity/Impedance

VIDEO (Composite):

1 Vp-p/75 ohms

S-VIDEO (Y signal):

1 Vp-p/75 ohms (except U.S. and Canadian models)

S-VIDEO (C signal):

0.28 Vp-p/75 ohms (except U.S. and Canadian models)

Output Level/Impedance

VIDEO (Composite):

1 Vp-p/75 ohms

S-VIDEO (Y signal):

1 Vp-p/75 ohms (except U.S. and Canadian models)

S-VIDEO (C signal):

0.28 Vp-p/75 ohms (except U.S. and Canadian models)

TUNER SECTION

FM:

Tuning Range: 87.5 — 108.0 MHz (50 kHz steps)

Usable Sensitivity: Mono: 11.2 dBf, 1.0 μV (75 ohms)

0.9 μV (26 dB S/N, 40 kHz Div.) 75 ohm DIN

Stereo: 17.2 dBf, 2.0 μV (75 ohms)

23 μV (46 dB S/N, 40 kHz Div.) 75 ohm DIN

50dB Quieting Sensitivity: Mono: 17.2 dBf, 2.0 μV (75 ohms)

Stereo: 37.2 dBf, 20 μV (75 ohms)

Capture Ratio: 1.5 dB

Image Rejection Ratio: U.S. & Canadian models: 40 dB

Other area models: 85 dB

IF Rejection Ratio: 90 dB

Signal-to-Noise Ratio: Mono: 73 dB

Stereo: 70 dB

Alternate Channel Attenuation: 55 dB, 50 dB (DIN)

AM Suppression Ratio: 50 dB

Total Harmonic Distortion: Mono: 0.1%

Stereo: 0.2%

Frequency Response: 30 — 15,000 Hz +/-1.5 dB

Stereo Separation: 45 dB at 1 kHz/30 dB at 100 — 10,000 Hz

Muting Level: 17.2 dBf, 2.0 μV (75 ohms)

AM:

Tuning Range:

European models

522 — 1611 kHz (9 kHz steps)

U.S. & Canadian models

530 — 1710 kHz (10 kHz steps)

Worldwide model

531 — 1602 kHz (9 kHz steps)

530 — 1710 kHz (10 kHz steps)

Usable Sensitivity: 30 μV

Image Rejection Ratio: 40 dB

IF Rejection Ratio: 40 dB

Signal-to-Noise Ratio: 40 dB

Total Harmonic Distortion: 0.7%

GENERAL

Power Supply: AC120 V, 60 Hz

AC230 V, 50 Hz

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

Dimensions (W × H × D): 435 × 175 × 390 mm

17-1/8" × 6-7/8" × 15-3/8"


Mass: 12.2 kg (26.9 lbs) (AC 120 V, 60 Hz model)


13.0 kg (28.7 lbs) (Other models)

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 utilise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce dernier 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/A>
F903	252075	△ 2.5A-SE-EAK, Fuse <P>
	252074	△ 2A-SE-EAK, Fuse <T/A>
F915, F916	252166	△ 6.3A-UL/T-237, Secondary fuse <D>
	252079	△ 6.3A-SE-EAK, Secondary fuse <P/T/W/A>

NOTE: <D>: 120V model only
<P>: 230V model only
<T>: Asian model only
<W>: Worldwide model only
<A>: Australian 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: 3.3 Mohm±10% at 500V.

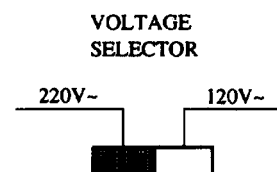
4. Change of voltage

Worldwide models are equipment 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 with the screwdriver 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.



5. Memory preservation

This unit does not require memory preservation batteries.

A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged.

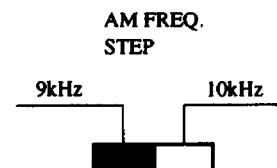
The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month the keep the back-up system operative.

The period of the time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorted when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

6. Setting the tuning step frequency

Worldwide models are equipped with a step band selector switch. This switch is located on the back panel. This switch is set to 9 kHz at the factory, but may have to be reset to 10 kHz depending on the area where the unit is used.

AM band step
Europe: 9 kHz
U.S.A.: 10 kHz



7. Changing the band step

With the exception of the worldwide models, a tuning step selector switch is not provided. When you change the band step, change the parts as shown below.

	To 10 kHz	To 9 kHz
R745	No connection	2.7 kohm
R746	10 kohm	1.5 kohm

ADJUSTMENT PROCEDURES

FM

Item	Step	Connection of instrument	FM SG output	Stereo modulator output	Tuning frequency	Output indicator	Adjustment point	Adjust for	Remarks
FM IF/RF	1	Fig.1	99.0MHz 1kHz 75kHz devi. 65dBf(60dB)	—	99.0MHz	DC voltmeter	L101	0±20mV	FM MUTE/MODE switch:ON/STEREO Repeat the steps 1 and 3 until no further adjustment is necessary.
	AC voltmeter					IFT on the front end	Maximum		
	Distortion analyzer					L102	Minimum		
Stereo Distortion		Fig.2	99.0MHz Ext. mod.65dBf(60dB)	Channel L or R 1kHz	99.0MHz	Distortion analyzer	IFT on the front end	Minimum	Don't turn more than ±180°
Stereo Separation	1	Fig.2	99.0MHz Ext. mod.65dBf(60dB)	Channel L 1kHz	99.0MHz	Channel R AC voltmeter	R150	Minimum	Maximum and same separation
	2			Channel R 1kHz				Minimum	
Muting Level		Fig.3	99.0MHz 19.2dBf(14dB)	—	99.0MHz	TUNED indicator	R158	Light on	

AM

120V model

Step	AM SG output	Tuning Frequency	Output Indicator	Adjustment point	Adjust for
1		530kHz	Digital DC voltmeter	OSC coil on RF block L105	1.4±0.2V
2	600kHz 400Hz 30% mod. 60dB/m	600kHz	AC voltmeter	RF coil on RF block L105	Maximum
3	990kHz 400Hz 30% mod. 60dB/m	990kHz	AC voltmeter	L106	Maximum

Reference Specification
 FM tuned voltage:87.50MHz~108.00MHz
 More than 1.3V~Less than 9V
 AM tuned voltage:530kHz~1710kHz
 1.4±0.4~Less than 9.0V

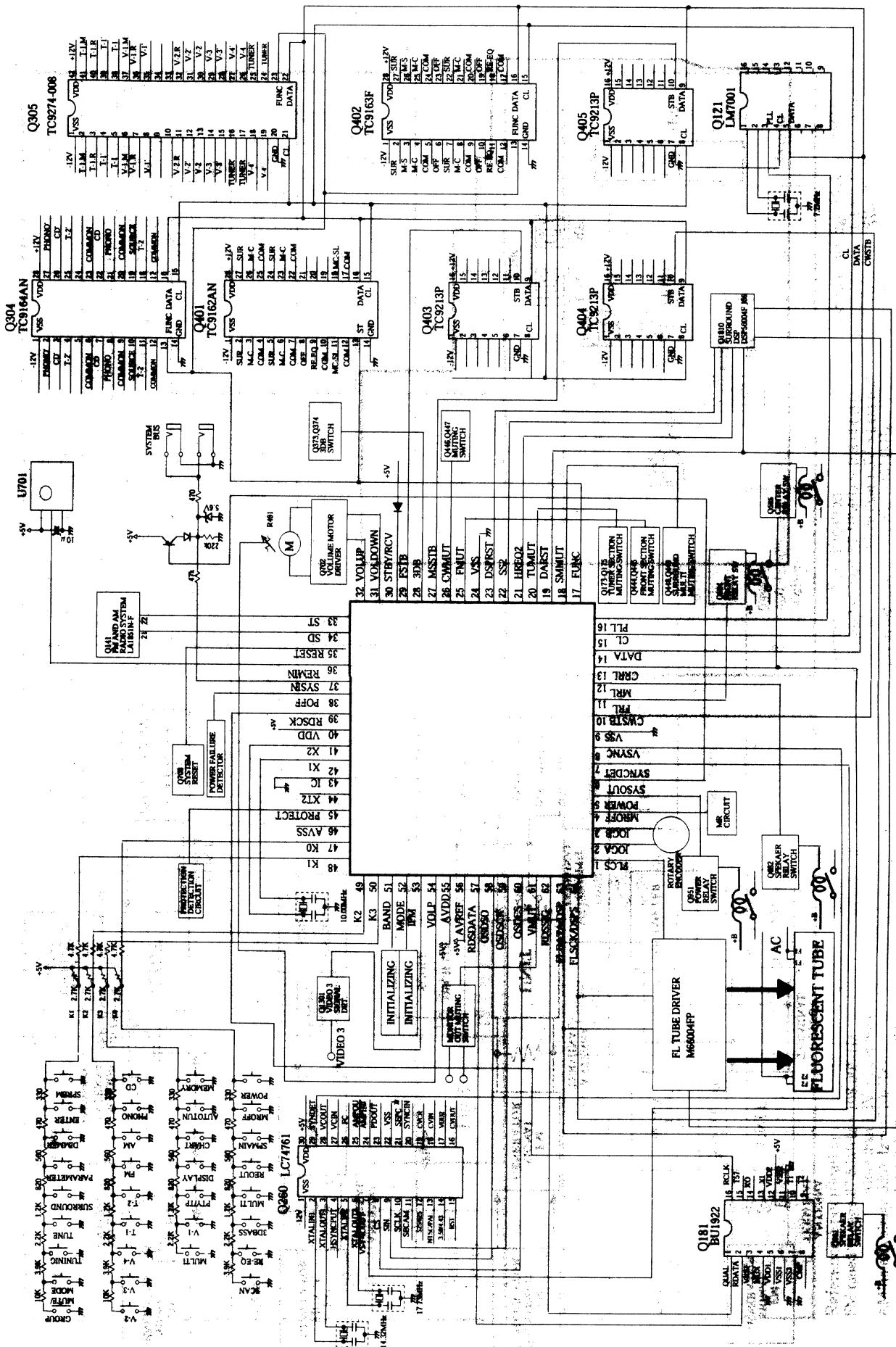
230V and Worldwide models

Step	AM SG output	Tuning Frequency	Output Indicator	Adjustment point	Adjust for
1		522kHz or 531kHz	Digital DC voltmeter	OSC coil on RF block L105	1.4±0.2V
2	603kHz 400Hz 30% mod. 60dB/m	603kHz	AC voltmeter	RF coil on RF block L105	Maximum
3	999kHz 400Hz 30% mod. 60dB/m	999kHz	AC voltmeter	L106	Maximum

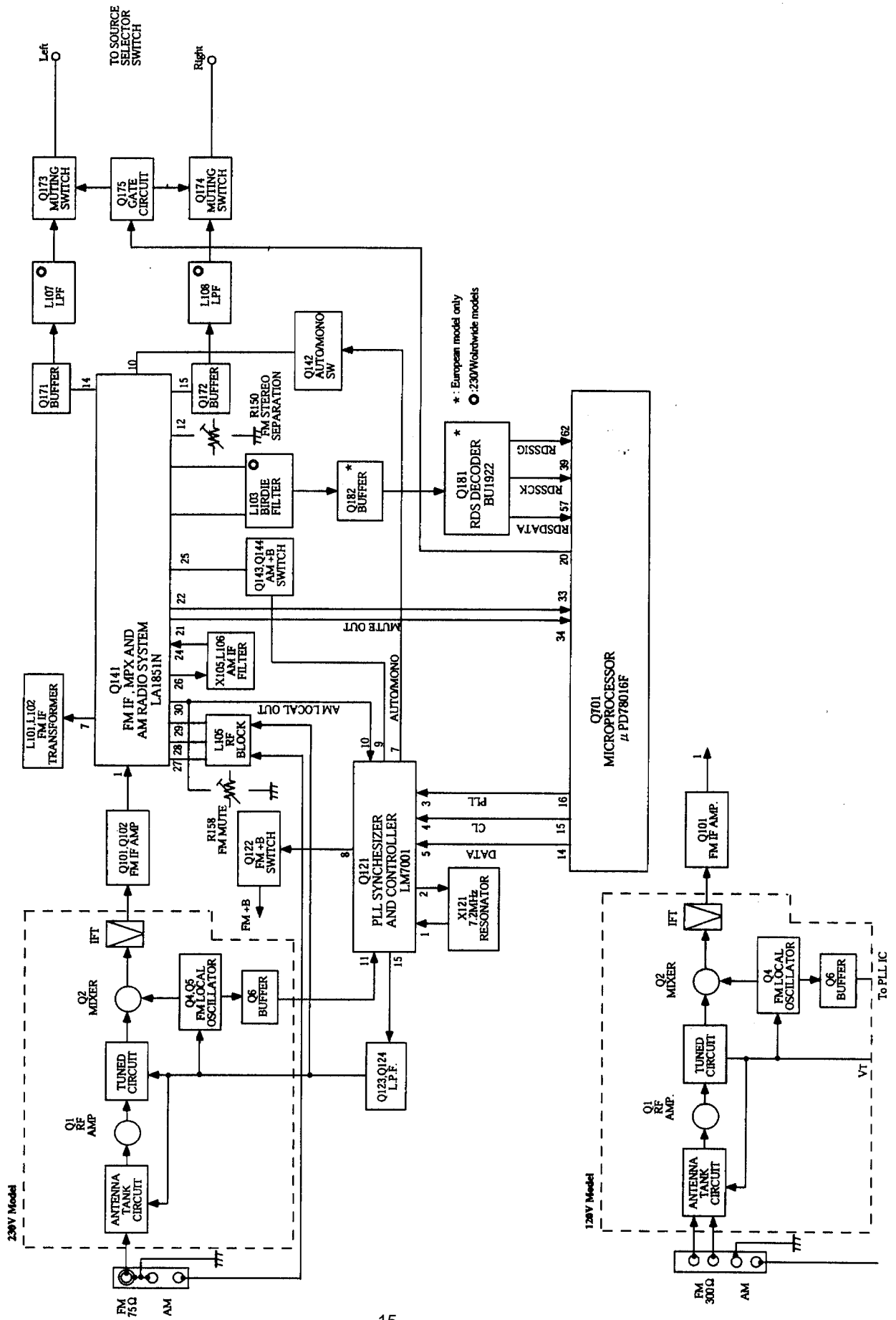
Reference Specification
 FM tuned voltage:87.50MHz~108.00MHz
 More than 1.3V~Less than 9V
 AM tuned voltage:522kHz~1611kHz
 1.4±0.4~Less than 9.0V
 (230V model)

AM tuned voltage:531kHz~1602kHz
 1.4±0.4~Less than 9.0V
 (Worldwide model)

MICROPROCESSOR CONNECTION DIAGRAM



BLOCK DIAGRAM TUNER SECTION



PRINTED CIRCUIT BOARD-PARTS LIST

MAIN CIRCUIT PC BOARD(NAAR-6095-3A/3B/3C/3D)

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	22241204	MPD78018FGC-531
Q702	22240239	TA7291S
Q921	222780055	78M05HF
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
Q929	2211455	2SA1015-GR
Q928	2213640 or	DTC123JS or
	2214660	RN1205
	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,D932	22380032 or	1SR139-100 or
D933,D935	22380035	GP104003E
D934	224473604	MTZJ36D
	Coil	
L701	233454K220	NCH-1452 220K
	Oscillator	
X701	3010239	CST10.0MTW
	Capacitors	
C1301-C1304	354741009	10 μ F,16V,Elect.
C1306	374721034	0.01 μ F \pm 5%,50V,Plastic
C1307,C1372	354741009	10 μ F,16V,Elect.
C1375,C1376	374721044	0.1 μ F \pm 5%,50V,Plastic
C303,C304	354741009	10 μ F,16V,Elect.
C305,C306	354721019	100 μ F,6.3V,Elect.
C307,C308	374726824	6800pF \pm 5%,50V,Plastic

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C309,C310	374721824	1800pF \pm 5%,50V,Plastic
C311,C312	354741009	10 μ F,16V,Elect.
C341,C342	354741009	10 μ F,16V,Elect.
C363,C364	354742209	22 μ F,16V,Elect.
C373,C374	354741009	10 μ F,16V,Elect.
C379-C382	374721044	0.1 μ F \pm 5%,50V,Plastic
C383,C384	374721534	0.015 μ F \pm 5%,50V,Plastic
C385,C386	354741009	10 μ F,16V,Elect.
C702	375524744	0.47 μ F \pm 5%,50V,Plastic
C703	3000076 or	EECS5R5T104 or
	3000078	DX-5R5L104
C704,C705	354721019	100 μ F,6.3V,Elect.
C706	354741009	10 μ F,16V,Elect.
C707	354780109	1 μ F,50V,Elect.
C708	354721019	100 μ F,6.3V,Elect.
C921,C922	3504312 or	4700 μ F,40V,Elect. or
	3504316	4700 μ F,40V,Elect.
C923	354742229	2200 μ F,16V,Elect.
C925,C928	354741009	10 μ F,16V,Elect.
C926	354754719	470 μ F,25V,Elect.
C931	354782219	220 μ F,50V,Elect.
C932	354762219	220 μ F,35V,Elect.
C933	354754729	4700 μ F,25V,Elect.
C934,C949	354751029	1000 μ F,25V,Elect.
C937,C938	354741009	10 μ F,16V,Elect.
C941,C942	354741009	10 μ F,16V,Elect.
	Resistors	
R921	453630474	4.7 Ω \pm 5%,1W, Metal
R923,R929	443522204	22 Ω \pm 5%,1/2W, Metal oxide
R924	443523314	330 Ω \pm 5%,1/2W, Metal oxide
R925,R931	443621204	12 Ω \pm 5%,1W, Metal oxide
R932	443524704	47 Ω \pm 5%,1/2W, Metal oxide
R933,R936	453630684	6.8 Ω \pm 5%,1W, Metal
R934	443526804	68 Ω \pm 5%,1/2W, Metal oxide
R935	453530104	1 Ω \pm 5%,1/2W, Metal
	Sockets	
JL602a	25051090	NSCT-6P877
JL691a	25051107	NSCT-3P894
JL701a	25051847	NSCT-40P1634
JL701aor	25050980	NSCT-40P767
JL701aor	25051306	NSCT-40P1095
JL922a	25051113	NSCT-9P900
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	
P102a	25055652	NPLG-14P608 <D/T/W/A>
	25055653	NPLG-16P609 <P>
P245a	25055133	NPLG-3P117
JL391b	25055628	NPLG-7P590
P401a	25055704	NPLG-8P660
P402a,P403a	25055808	NPLG-19P764
	Heatsinks	
Q921a,Q925a	27160227	RAD-076
Q922a	27160209	RAD-67
	Screws	
Q921b,Q922b	838430107	3TTP+10S(BC)
Q925b	838430107	3TTP+10S(BC)

**DISPLAY CIRCUIT PC BOARD (NADIS-6100-3A/3B/3C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	FL tube	
Q1704	212163	14-ST-19GK
	Remote sensor	
U1701	241305	GPU281X
	IC	
Q1701	22240685R9	M66004FP
	Diodes	
D1701,D1702	223163 or	ISS133 or
D1704	223205	ISS270A
D1705,D1706	225291D	SEL4910D-D
D1703	224471803	MTZJ18C
	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.
	Resistors	
R1741	49163103414	RM1/10UJ-10K*14,Array
	Sockets	
JL701b	25051884,	NSCT-40P1671,
	25050946 or	NSCT-40P733 or
	25051344	NSCT-40P1133
JL801a,JL802a	25051093	NSCT-9P880
	Switches	
S1701-S1716	25035652	NPS-111-S604
S1717	25035652	NPS-111-S604 <P>
S1718-S1728	25035652	NPS-111-S604
S1730-S1732	25035652	NPS-111-S604
S1734,S1735	25035652	NPS-111-S604
S1737	25065528	EC16B24104
	Holders	
U1701a	27191042	Remote sensor
Q1704a	27191001	FL tube

DSP CIRCUIT PC BOARD(NADG-6125-3A/3B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q1801-Q1803	22240293 or	NJM4558L-D or
Q1805	22240247	BA15218N
Q1804	22241128R9	CS4222-KS
Q1807	22241127R9	CS4327-KS
Q1808	222740046R9	74HCU04
Q1809	22241126R9O	TC74HC4040AF
Q1810	22240831R3 or	DSP56004FJ50 or
	22240940R3	DSP56004FJ66
Q1811	22241108R9	M5M5256DFP-70L
Q1812,Q1813	222780053	78L05
	Diodes	
D1801,D1802	223205 or	ISS270A or
	223163	ISS133
	Oscillators	
X1801	3010278	CST12.2MTW040
	Coils	
L1801-L1808	233454K220	NCH-1452 220K
L1809,L1810	233454M022	NCH-1452 022M
L251,L253	233454K220	NCH-1452 220K
L252	233454K056	NCH-1452 056K

CIRCUIT NO. PART NO. DESCRIPTION

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C1801-C1806	354741009	10 μ F,16V,Elect.
C1811,C1812	374722224	2200pF \pm 5%,50V,Plastic
C1813-C1816	374721015	100pF \pm 10%,50V,Plastic
C1817-C1820	374721824	1800pF \pm 5%,50V,Plastic
C1821-C1824	374722224	2200pF \pm 5%,50V,Plastic
C1825-C1828	374722715	270pF \pm 10%,50V,Plastic
C1829,C1830	354741009	10 μ F,16V,Elect.
C1831,C1833	354721019	100 μ F,6.3V,Elect.
C1832,C1858	375524744	0.47 μ F \pm 5%,50V,Plastic
C1835,C1836	354741009	10 μ F,16V,Elect.
C1837,C1838	374721824	1800pF \pm 5%,50V,Plastic
C1839,C1840	374721224	1200pF \pm 5%,50V,Plastic
C1841,C1842	374721524	1500pF \pm 5%,50V,Plastic
C1843,C1844	374721815	180pF \pm 10%,50V,Plastic
C1849,C1850	353741009	10 μ F,16V,Elect.
C1851,C1852	353721019	100 μ F,6.3V,Elect.
C1855,C1864	354721019	100 μ F,6.3V,Elect.
C1859	374722234	0.022 μ F \pm 5%,50V,Plastic
C1861	375524744	0.47 μ F \pm 5%,50V,Plastic
C1867	354721019	100 μ F,6.3V,Elect.
C1868,C1869	354741009	10 μ F,16V,Elect.
	Plugs	
JL801b,JL802b	25055630	NPLG-9P592
	Shield case	
Q1801a	27150428	(PC)

HEADPHONE TERMINAL PC BOARD(NAETC-6104-3A/3B/3C)

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

FRONT/CENTER POWER AMP. PC BOARD (NAAF-6108-3A/3B/3C/3D/3F)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q1501-Q1503	2211733 or	2SC1845-E or
Q1515	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
	2202823	* 2SC5200-O <D>
Q1513	2201653,	* 2SC3856-O,
	2201655,	* 2SC3856-P,
	2201654,	* 2SC3856-Y,
	2202842 or	* 2SC5242-R or
	2202843	* 2SC5242-O <P/T/W/A>
Q1514	2202812 or	* 2SA1943-R or
	2202813	* 2SA1943-O,Transistor <D>
Q1514	2201663,	* 2SA1492-O,
	2201665,	* 2SA1492-P,
	2201664,	* 2SA1492-Y,
	2202832 or	* 2SA1962-R or
	2202833	* 2SA1962-O <P/T/W/A>
Q1516	2212654 or	2SC3421-Y or
	2212653	2SC3421-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	CIRCUIT NO.	PART NO.	DESCRIPTION
Transistors			Resistors		
Q501-Q506	2211733 or	2SC1845-E or	R1512	443526804	△ 68Ω ± 5%, 1/2W, Metal oxide
Q529,Q530	2211732	2SC1845-F	R1513,R1514	443525604	△ 56Ω ± 5%, 1/2W, Metal oxide
Q507,Q508	2213284 or	2SC1740S-R or	R1515,R1516	443526804	△ 68Ω ± 5%, 1/2W, Metal oxide
Q582,Q583	2212115	2SC2458-GR	R1519	5210288	N06HR2.2KBE,Trimming
Q509-Q512	2211354 or	2SA949-Y	R1522	443521514	150Ω ± 5%, 1/2W, Metal oxide
Q515,Q516	2211353	2SA949-O	R1523,R1524	453530224	2.2Ω ± 5%, 1/2W, Metal
Q513,Q514	2211634 or	2SC2229-Y	R1525	4000132	RGC55 0.22Ω Thermistor
Q517,Q518	2211633	2SC2229-O	R1528	453630824	8.2Ω ± 5%, 1W, Metal
Q521,Q522	2203010	2SC5171	R523,R524	443526804	△ 68Ω ± 5%, 1/2W, Metal oxide
Q523,Q524	2203000	2SA1930	R525-R528	443525604	△ 56Ω ± 5%, 1/2W, Metal oxide
Q525,Q526	2202822 or	* 2SC5200-R or	R529-R532	443526804	△ 68Ω ± 5%, 1/2W, Metal oxide
	2202823	* 2SC5200-O <D>	R537,R538	5210288	N06HR2.2KBE,Trimming
Q525,Q526	2201653,	* 2SC3856-O,	R543,R544	443521514	150Ω ± 5%, 1/2W, Metal oxide
	2201655,	* 2SC3856-P,	R545-R548	453530224	2.2Ω ± 5%, 1/2W, Metal
	2201654,	* 2SC3856-Y,	R549,R550	4000132	RGC55 0.22Ω Thermistor
	2202842 or	* 2SC5242-R or	R555,R556	453630824	8.2Ω ± 5%, 1W, Metal
	2202843	* 2SC5242-O <P/T/W/A>	R571,R572	443623914	390Ω ± 5%, 1W, Metal oxide
Q527,Q528	2202812 or	* 2SA1943-R or	R962,R963	453530224	△ 2.2Ω ± 5%, 1/2W, Metal
	2202813	* 2SA1943-O <D>	Sockets		
Q527,Q528	2201663,	* 2SA1492-O,	JL501a,JL501b	25051109	NSCT-5P896
	2201665,	* 2SA1492-P,	JL502a,JL502b	25051088	NSCT-4P875
	2201664,	* 2SA1492-Y,	JL503a,JL921b	25051110	NSCT-6P897
	2202832 or	* 2SA1962-R or	JL551a	25051109	NSCT-5P896
	2202833	* 2SA1962-O <P/T/W/A>	JL571b	25050267	NSCT-3P95
Q531,Q532	2212654 or	2SC3421-Y or	Plugs		
	2212653	2SC3421-O	JL602b	25055627	NPLG-6P589
Q581	2211793 or	2SA992-E or	JL971b	25055627	NPLG-6P589
	2211792	2SA992-F	P1501	25055038	NPLG-2P29
Q584,Q585	2213650,	DTD113ZS	P501,P502	25055038	NPLG-2P29
	Diodes		P551a	25055135	NPLG-5P119
D581	224470512	MTZJ5.1B	Relays		
D582,D583	223163 or	1SS133 or	RL581,RL582	25065517 or	NRL-2P5A-DC24-098 or
	223205	1SS270A		25065510	NRL-2P5A-DC24-095
D961	22380038 or	RBV602 or	SECONDARY CIRCUIT PC BOARD		
	22380274	RS603M	(NAETC-6110-3A/3B/3C/3D/3F)		
D962,D963	22380260,	RL1N4003,	CIRCUIT NO.	PART NO.	DESCRIPTION
	22380032 or	1SR139-100 or	F915,F916	252166	△ 6.3A-UL/T-237,Fuse <D>
	22380035	GP104003E		252079	△ 6.3A-SE-EAK,Fuse <P/T/W/A>
	Coils		F915a,F916a	25050065	△ YSH403T,Fuseholder
L1501	231176S	S-1.3C <P/W/T/A>	JL921a	25051110	NSCT-6P897,Socket
L501,L502	231176S	S-1.3C <P/W/T/A>	JL922b	25050286	NSCT-9P114,Socket
	Capacitors		R941-943	453532294	0.22Ω ± 5%, 1/2W, Metal resistor
C1501	354742209	22 μ F, 16V, Elect.	VIDEO 4 TERMINAL PC BOARD(NAETC-6112-3A/3B/3C/3D/3F)		
C1504	354742219	220 μ F, 16V, Elect.	CIRCUIT NO.	PART NO.	DESCRIPTION
C1505	354744709	47 μ F, 16V, Elect.	P241	2009990433UL	NSAS-10P0577, Socket<P/W/T/A>
C1509,C1511	354781009	10 μ F, 50V, Elect.	P242	25051961	NSCT-4P1748,Socket
C1512	374721044	0.1 μ F ± 5%, 50V, Plastic	P243	2009990281	NSAS-4P0409,Socket <D>
C1515,C1516	354772209S	22 μ F, 63V, Elect.	P296	25045405	NPJ-3PDBL230,Terminal
C501,C502	354742209	22 μ F, 16V, Elect.	PRIMARY CIRCUIT PC BOARD(NAPS-6113-3A/3B/3C/3D/3F)		
C507,C508	354742219	220 μ F, 16V, Elect.	CIRCUIT NO.	PART NO.	DESCRIPTION
C509,C510	354744709	47 μ F, 16V, Elect.	Q951	2213284 or	2SC1740S-R or
C517,C518	354781009	10 μ F, 50V, Elect.		Diodes	
C521,C522	354781009	10 μ F, 50V, Elect.	D951-D954	22380035	GP104003E
C523,C524	374721044	0.1 μ F ± 5%, 50V, Plastic		22380032 or	1SR139-100 or
C529,C530	354772209S	22 μ F, 63V, Elect.		22380260,	RL1N4003,
C582	354742219	220 μ F, 16V, Elect.	D955	223163 or	1SS133 or
C962,C963	374731044	0.1 μ F ± 5%, 50V, Plastic		223205	1SS270A
C964,C965	3504309	12000 μ F, 63V, Elect.			
C964,C965	3504313	12000 μ F, 63V, Elect.			
C966,C967	354774719S	470 μ F, 63V, Elect.			

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

CIRCUIT NO.	PART NO.	DESCRIPTION
T902	2300670A	Δ NPT-1111D <D>
	2300671A	Δ NPT-1111P <P/T/A>
	2300672	Δ NPT-1111DG <W>
Capacitors		
C901	3500191	Δ DE7150F-103M
C952	354742219	220 μ F, 16V, Elect.
Resistors		
R901	431533355	Δ 3.3M Ω , 1/2W, Solid <D>
R951	453530824	8.2 Ω \pm 5%, 1/2W, Metal
Fuseholders		
F901a	25050065	Δ YSH403T <DW>
F902a	25050065	Δ YSH403T <PT/W/A>
F903a	25050065	Δ YSH403T <P>
Fuses		
F901	252198	Δ 8A-UL <D/W>
F902	252077	Δ 4A-SE-EAK <P/T/W/A>
F903	252075	Δ 2.5A-SE-EAK <P>
	252074	Δ 2A-SE-EAK <T/A>
Sockets		
JL942a	25051087	NSCT-3P874
Plug		
P901a	25055675	NPLG-2P631
Relay		
RL901	25065516 or	Δ NRL-1P5A-DC12-096 or
	25065248	Δ NRL-1P15A-DC12-29 <D>
	25065515 or	Δ NRL-1P10A-DC12-097 or
	25065508	Δ NRL-1P10A-DC12-093 <P/T/W/A>
Switch		
S901	25065437	NSS-22157P <W/T>

FRONT/CENTER SPEAKER TERMINAL PC BOARD (NAETC-6115-3A/3B/3C/3D/3F)

CIRCUIT NO.	PART NO.	DESCRIPTION
C1541	374721034	0.01 μ F \pm 5%, 50V, Plastic capacitor <P/T/W/A>
C541, C542	374721034	0.01 μ F \pm 5%, 50V, Plastic capacitor <P/T/W/A>
JL503b	25051110	NSCT-6P897, Socket
P541	25060246	NTM-4PDMN166, Terminal
P542	25060247	NTM-2PDMN167, Terminal

AC OUTLET TERMINAL PC BOARD (NAETC-6116-3B/3C/3D)

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

POWER SWITCH PC BOARD (NASW-6117-3B/3C/3D/3F)

CIRCUIT NO.	PART NO.	DESCRIPTION
C931a	27301216	Δ Cover, capacitor <P/T/W/A>
C931	3500191	Δ DE7150F-103M, Capacitor IS <P/T/W/A>
S931	25035550	Δ NPS-111-L512P, Push switch <P/T/W/A>

AC OUTLET TERMINAL PC BOARD (NAETC-6118-3A)

CIRCUIT NO.	PART NO.	DESCRIPTION
P902	25051639	Δ NSCT-4P1426, Terminal <D>

TONE VOLUME PC BOARD (NAAF-6103-3A/3B/3C)

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

PREOUT/MAIN IN TERMINAL PC BOARD (NAETC-6102-3A/3B/3C)

CIRCUIT NO.	PART NO.	DESCRIPTION
C1414	374723344	0.33 μ F \pm 5%, 50V, Plastic capacitor
JL401b	25051087	NSCT-3P874, Socket
JL402a	25051093	NSCT-9P880, Socket
JL551b	25050269	NSCT-5P97, Socket
JL603b	25055628	NPLG-7P590, Plug
P1401	25045458 or	NPJ-6PDBL279 or
	25045300	NPJ-6PDBL159, Terminal
P1402, P1404	25045298 or	NPJ-2PDBL157 or
	25045456	NPJ-2PDBL277, terminal
P1403	25045460 or	NPJ-4PDBL281 or
	25045303	NPJ-4PDBL162, Terminal

MR/RI TERMINAL PC BOARD (NAETC-6096-3A/3B/3C/3D)

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	ISS133 or
	223205	ISS270A <P/T/W/K/A>
D983	223163 or	ISS133 or
	223205	ISS270A
D984	223163 or	ISS133 or
	223205	ISS270A <D>
Capacitors		
C981	374724724	4700pF \pm 5%, 50V, Plastic
C982	353741009	10 μ F, 16V, Elect.
C983	353741009	10 μ F, 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/A/K>
	25045433	HSJ1003-01-013 <D>
P982	25045330 or	NPJ-2PDBL184 or
	25045481	NPJ-2PDBL299
JL391b	25055628	NPLG-7P590

SURROUND POWER AMPLIFIER PC BOARD (NAAF-6097-3A/3B/3C/3D)

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

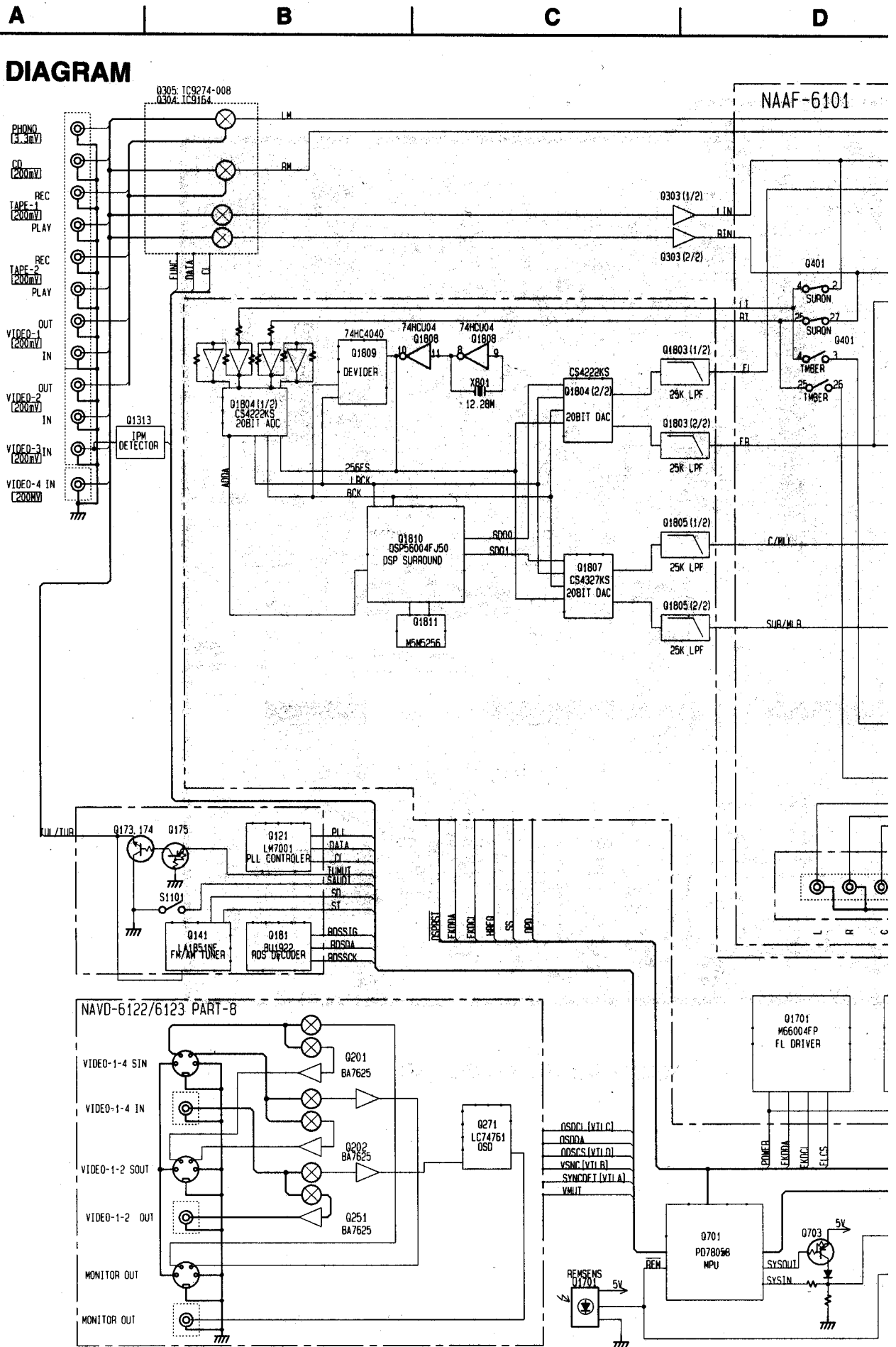
CIRCUIT NO.	PART NO.	DESCRIPTION
Transistors		
Q619,Q620	2213284 or 2212115	2SC1740S-R or 2SC2458-GR
Q621,Q622	2203010	2SC5171
Q623,Q624	2203000	2SA1930
Q625,Q626	2202922. 2202923. 2202373. 2202375 or 2202374	* 2SC5196-R. * 2SC5196-O. * 2SC4466-O. * 2SC4466-P or * 2SC4466-Y, Transistor
Q627,Q628	2202912. 2202913. 2202363. 2202365 or 2202364	* 2SA1939-R. * 2SA1939-O. * 2SA1693-O. * 2SA1693-P or * 2SA1693-Y, Transistor
Q629,Q630	2211733 or 2211732	2SC1845-E or 2SC1845-F
Q681,Q682	2213650	DTD113ZS
Diodes		
D601,D602	22380260. 22380032 or 22380035	RL1N4003, 1SR139-100 or GP104003E
D681,D682	223163 or 223205	1SS133 or 1SS270A
Coil		
L601,L602	231176S	S-1.3C <P/T/W/A>
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 \pm 5%,50V,Plastic
C629,C630	354784719S	470 μ F,50V,Elect.
C631	354781009	10 μ F,50V,Elect.
C632-C634	354781019	100 μ F,50V,Elect.
Resistors		
R623,R624	443526804	68 Ω \pm 5%,1/2W, Metal oxide
R625-R628	443525604	56 Ω \pm 5%,1/2W, Metal oxide
R629-R932	443526804	68 Ω \pm 5%,1/2W, Metal oxide
R637,R638	5210288	N06HR2.2KBE,Trimming
R643,C644	443521514	150 Ω \pm 5%,1/2W, Metal oxide
R645-R648	453530224	2.2 Ω \pm 5%,1/2W, Metal
R649,R650	4000131	RGC22-0.22 OHMK,Metal plate
R655,R656	453630824	8.2 Ω \pm 5%,1W, Metal
R669,R670	453530224	2.2 Ω \pm 5%,1/2W, Metal
R675,R676	453532294	0.22 Ω \pm 5%,1/2W, Metal
Relaies		
RL681,RL682	25065517 or 25065510	NRL-2P5A-DC24-098 or NRL-2P5A-DC24-095
Sockets		
JL601a	25051110	NSCT-6P897
JL603a	25051091	NSCT-7P878
JL691b	25050267	NSCT-3P95
Plugs		
P601,P602	25055038	NPLG-2P29
P611a	25055133	NPLG-3P117

SPEAKER TERMINAL PC BOARD(NAETC-6099-3A/3B/3C/3D)

CIRCUIT NO.	PART NO.	DESCRIPTION
C651-C654	374721034	0.01 μ F \pm 5%,50V,Plastic capacitor <P/T/W/A>
JL601c	25051110	NSCT-6P897,Socket
P651	25060248	NTM-8PDMN168,Terminal

NOTE: D : 120V model only
P : European model only
T : Asian model only
W : Worldwide model only
A : Australian model only

BLOCK DIAGRAM

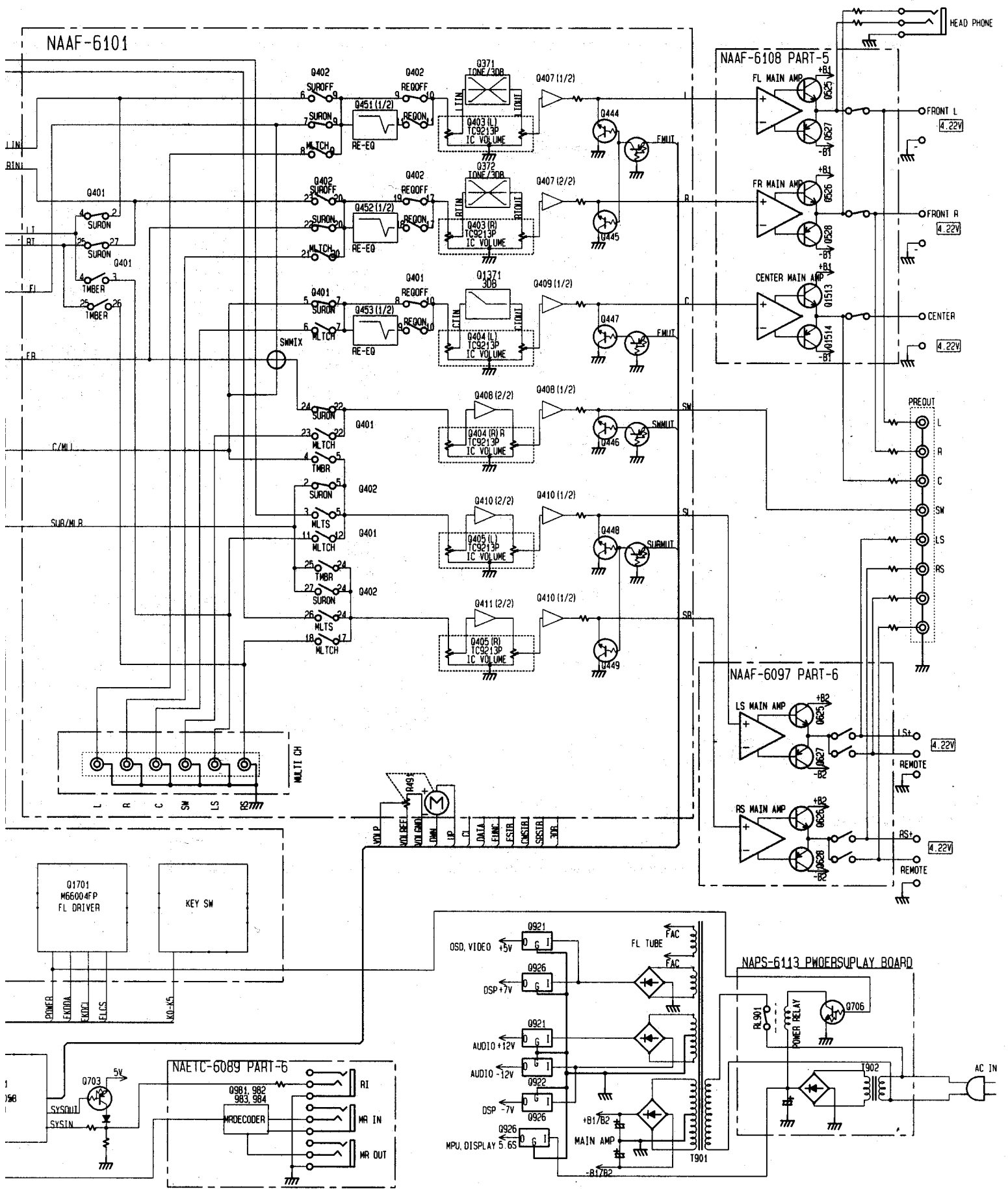


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SCHEMATIC DIAGRAM

NAAR-6095-3X

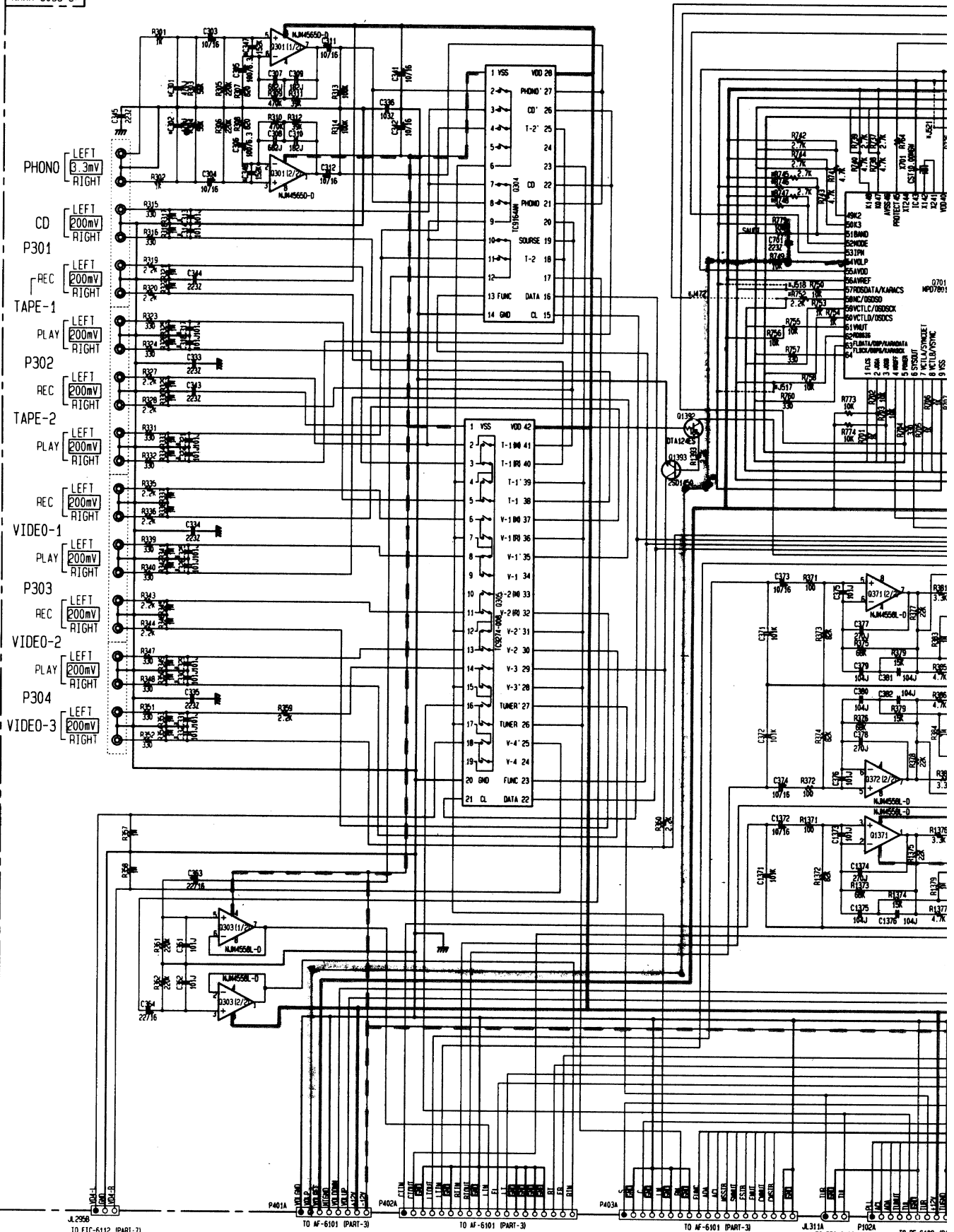
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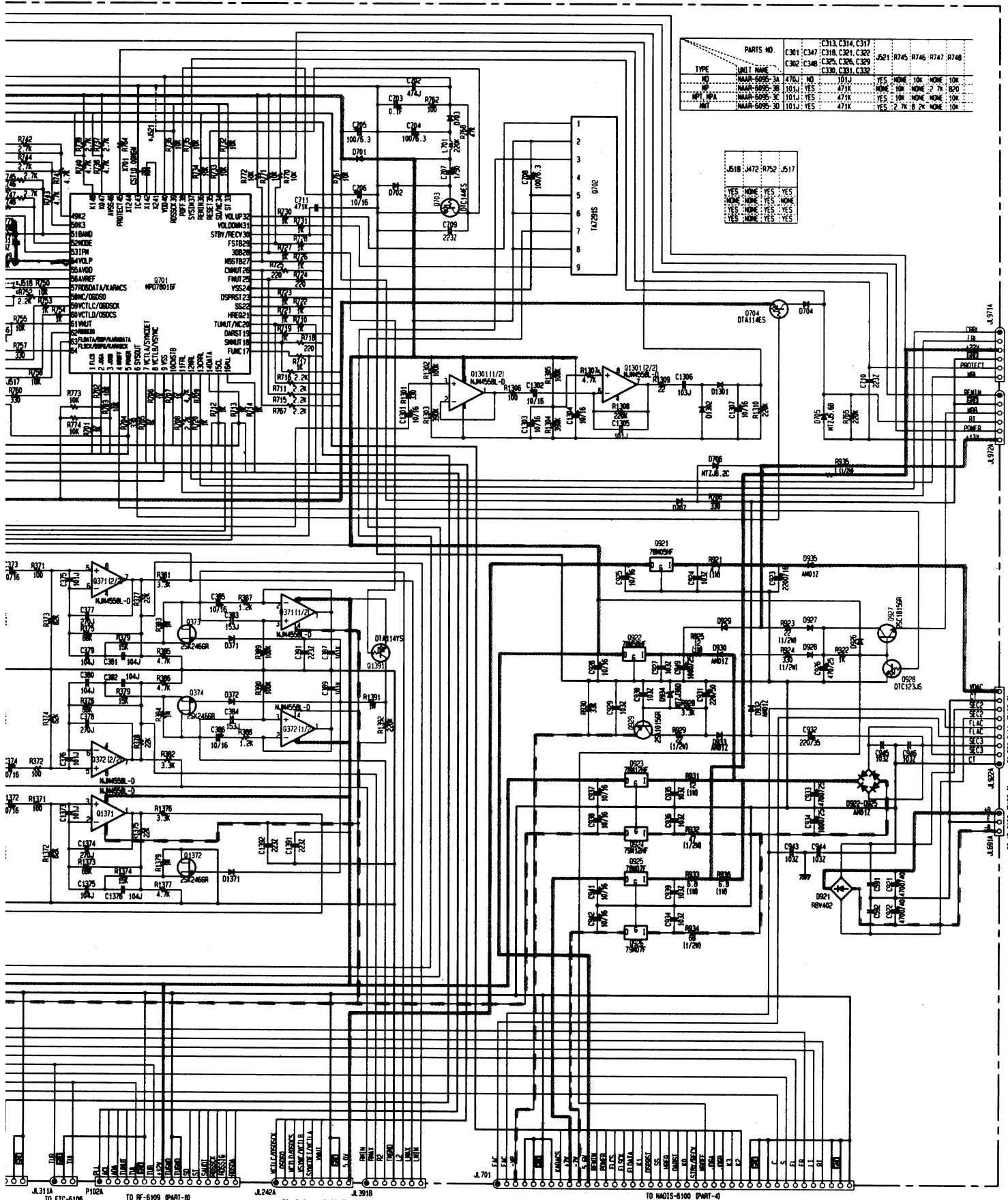
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J.2598 TO ETC-6112 (PART-7)
 P401A TO AF-6101 (PART-3)
 P402A TO AF-6101 (PART-3)
 P403A TO AF-6101 (PART-3)
 P102A TO AF-6109 (PART-3)
 J.311A TO ETC-6106
 P102A TO AF-6109 (PART-3)



TYPE	UNIT NAME	C301	C347	C318, C321, C322	C302	C348	C325, C326, C327	C330, C331, C332	521	R745	R746	R747	R748
NO	NAAR-6095-3A	470K	NO	101J	YES	NONE	10K	NONE	10K	NONE	10K	NONE	10K
NO	NAAR-6095-3B	101J	YES	471K	NONE	10K	NONE	2.7K	820	NONE	2.7K	820	NONE
NO	NAAR-6095-3C	101J	YES	471K	YES	10K	NONE	NONE	10K	NONE	NONE	10K	NONE
NO	NAAR-6095-3D	101J	YES	471K	YES	2.7K	8.2K	2K	10K	NONE	10K	NONE	10K

TYPE	UNIT NAME	.518	.472	.752	.517
YES	NONE	YES	YES	YES	YES
NO	NONE	NO	NO	NO	NO
NO	NONE	NO	NO	NO	NO
NO	NONE	NO	NO	NO	NO

PRINTED CIRCUIT BOARD-PARTS LIST

ELECTRO VOLUME CIRCUIT PC BOARD(NAAF-6101-3A/3B/3C)

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q401	22240798	TC9162AN
Q402	22240799	TC9163AN
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	5142017	N16RGL20KB25F, Variable
Sockets		
JL245	2009990449UL	NSAS-6P0600
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

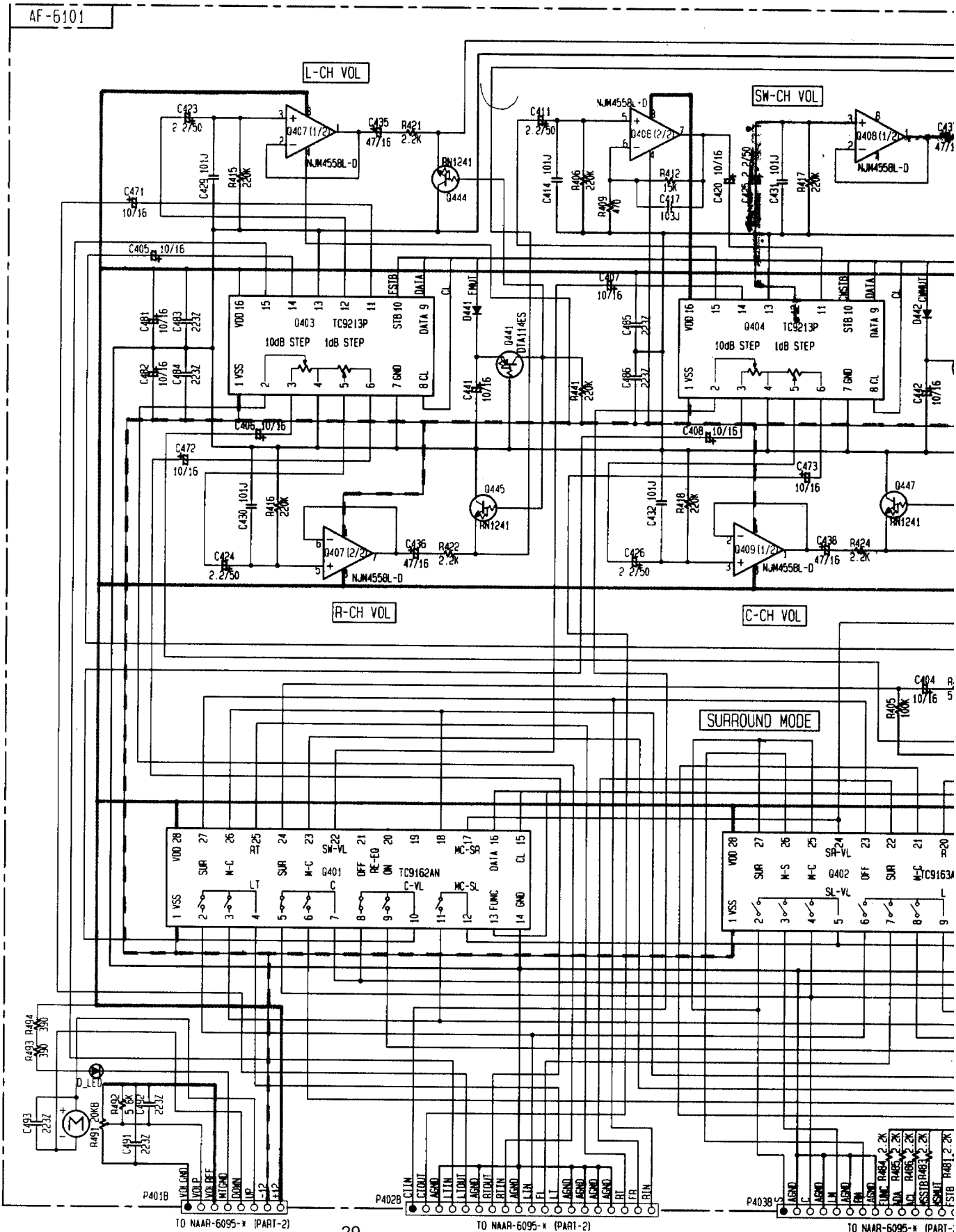
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SCHEMATIC DIAGRAM



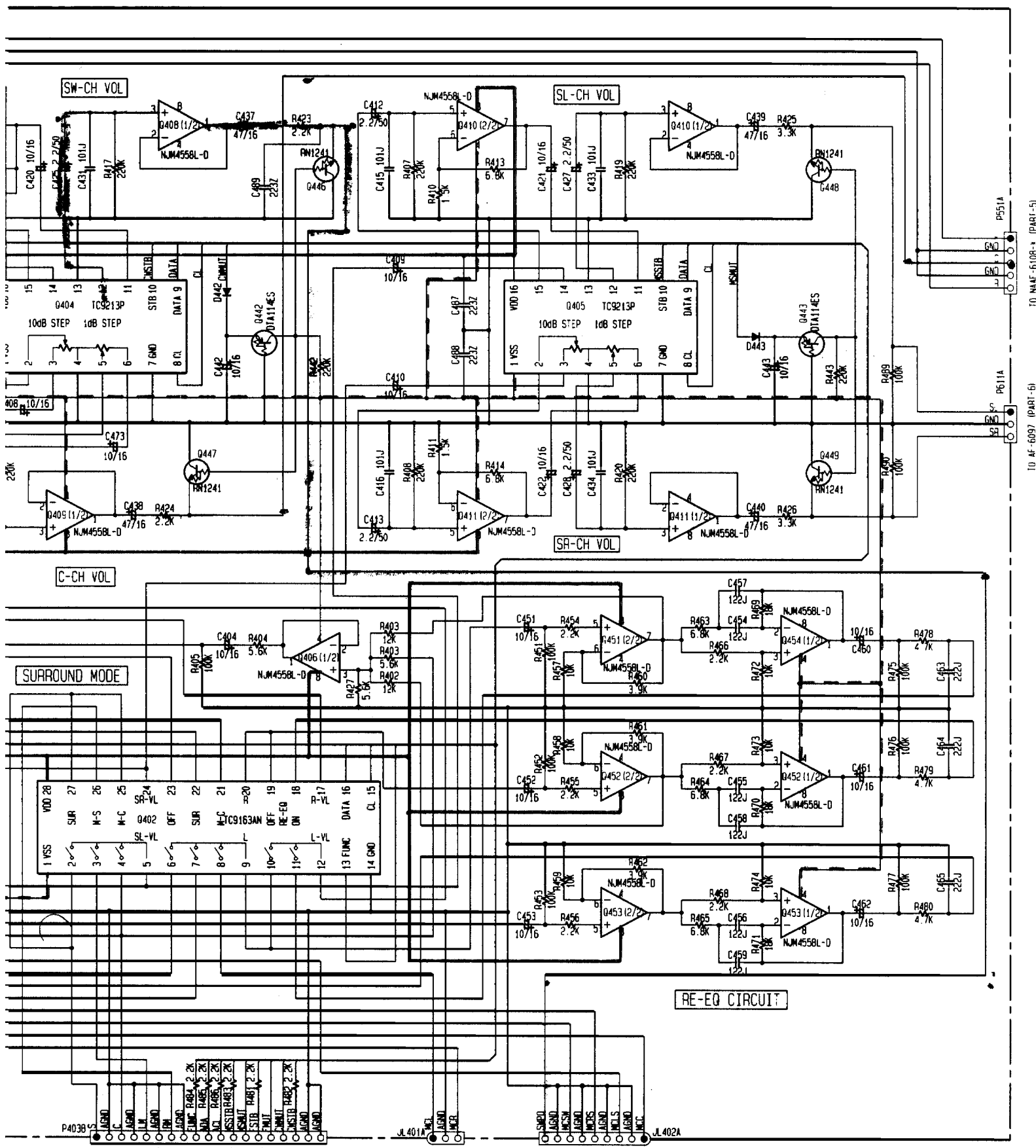
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TO NAAR-6095-* (PART-2)

TO ETC-6102 (PART-6)

TO ETC-6102 (PART-6)

TO NAAR-6108-* (PART-5)
TO AF-6097 (PART-6)

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SCHEMATIC DIAGRAM

NADIS-6100

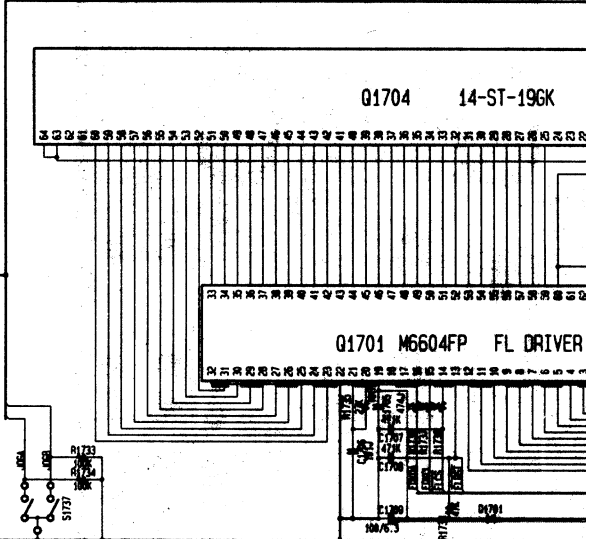
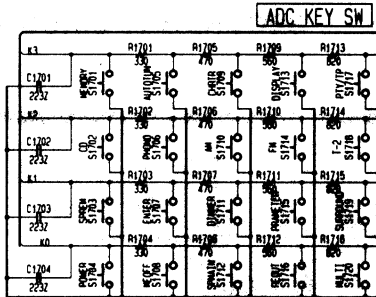
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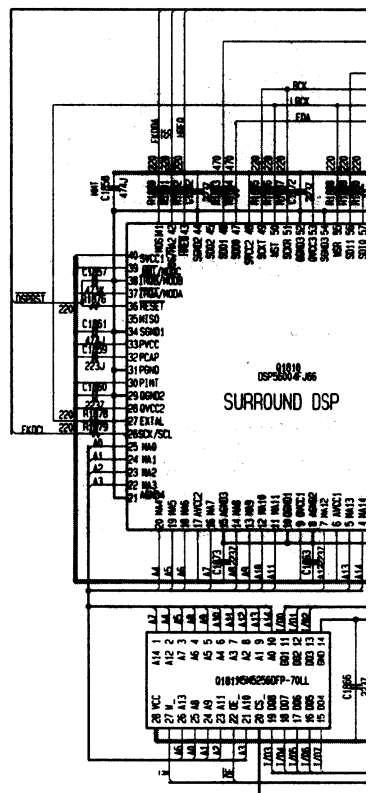
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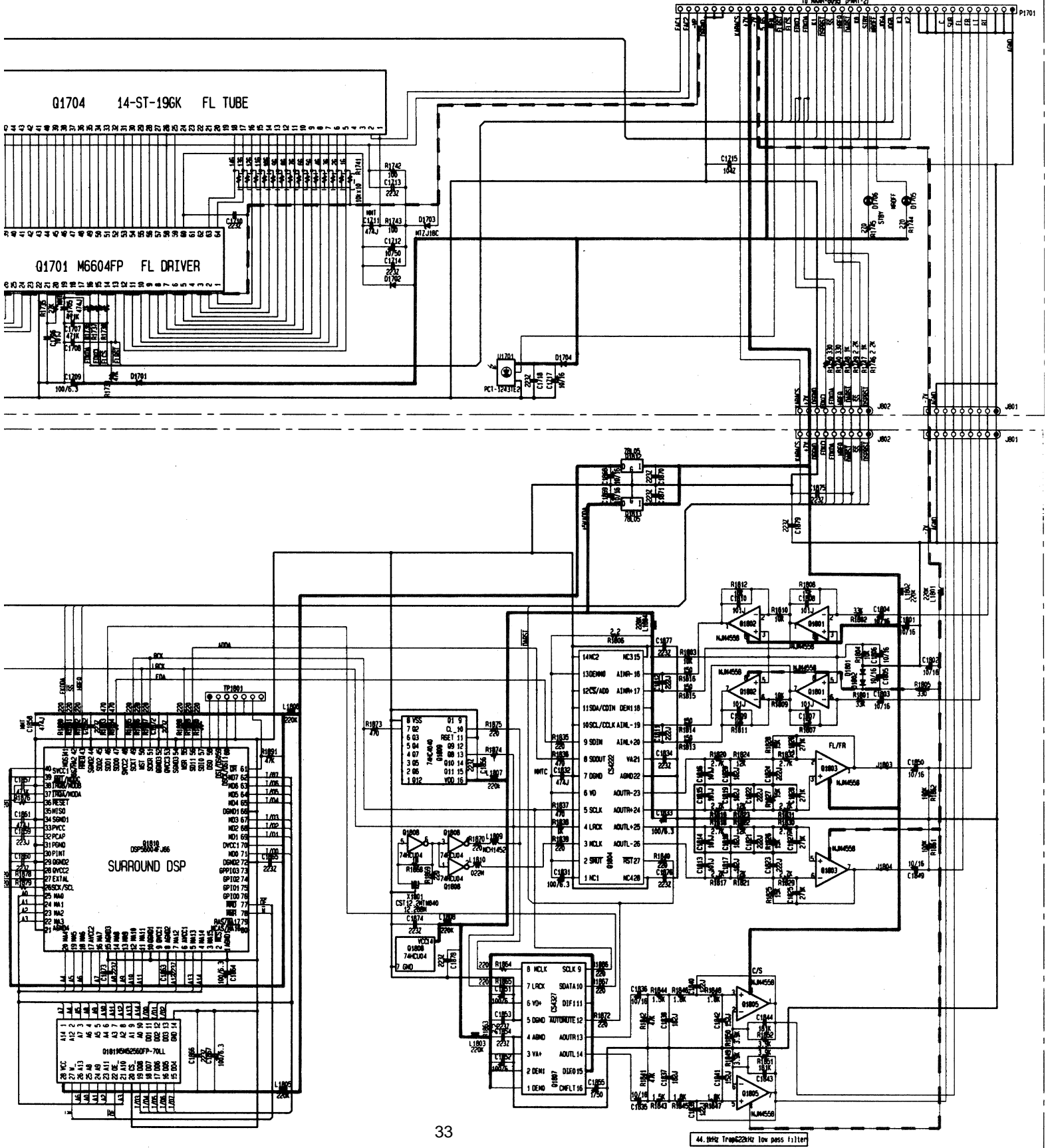
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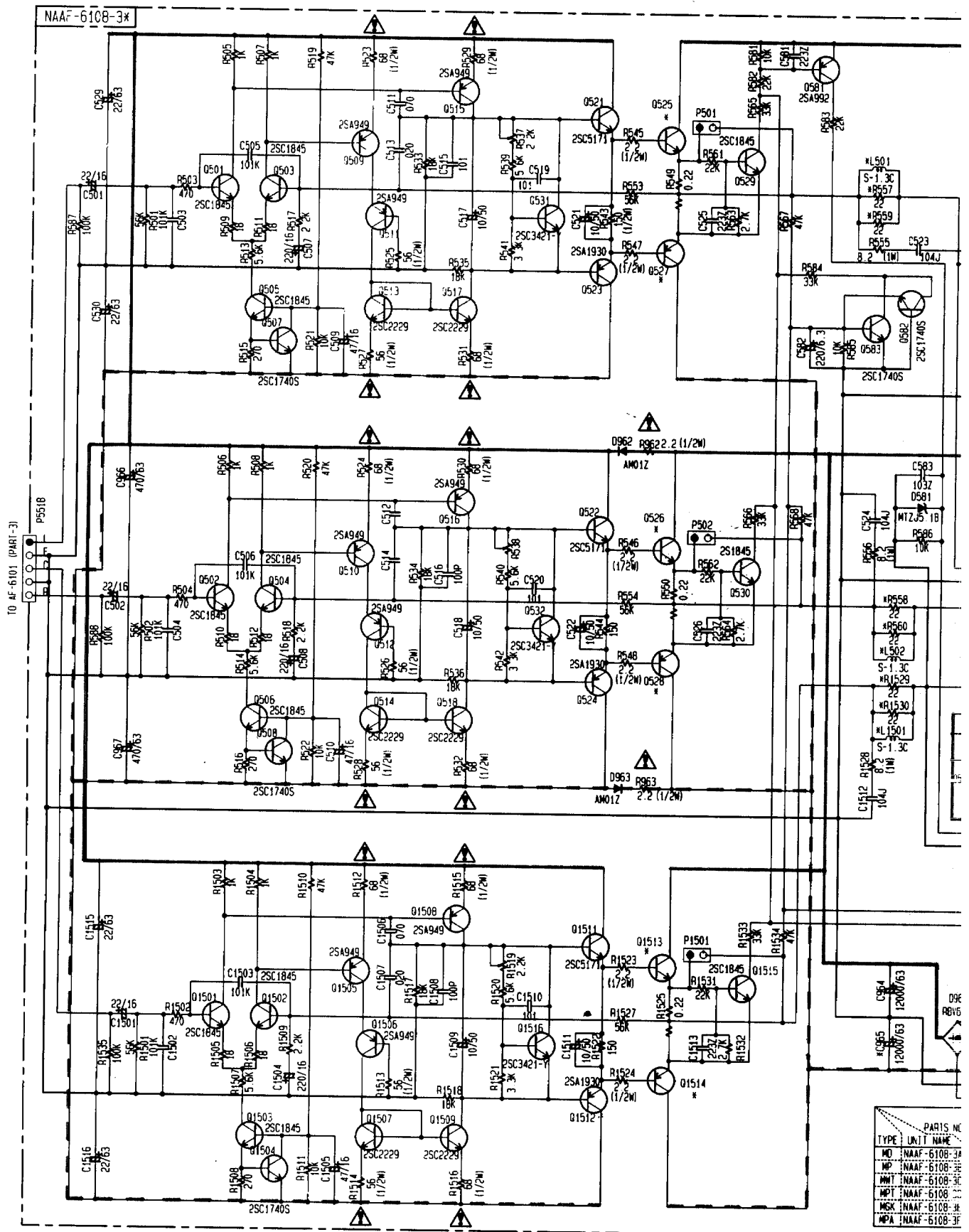
NADG6125



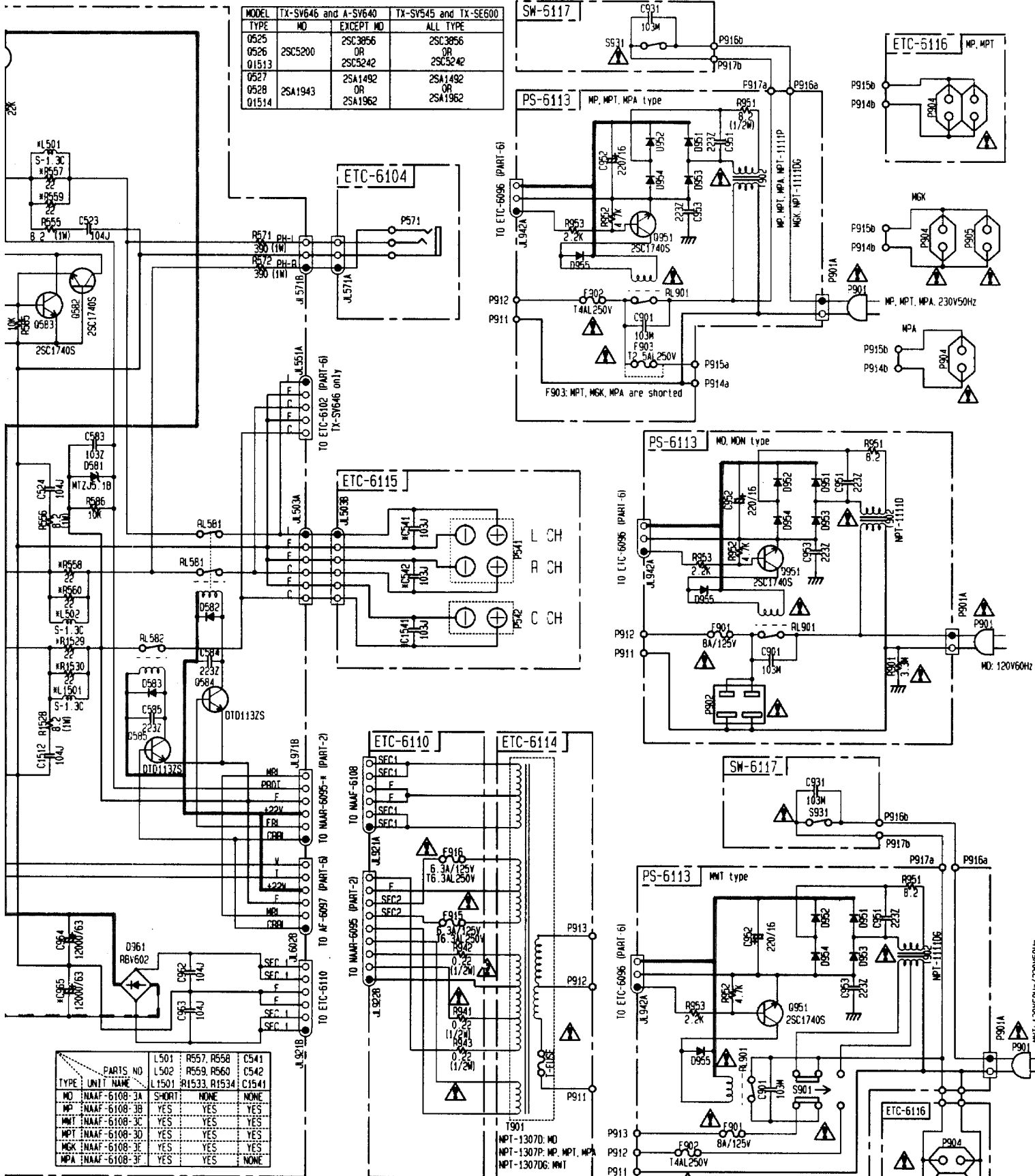


A **B** **C** **D**

SCHEMATIC DIAGRAM



MODEL	TX-SV646 and A-SV640	TX-SV545 and TX-SE600
TYPE	EXCEPT MD	ALL TYPE
0525	2SC3056	2SC3056
0526	OR	OR
01513	2SC5242	2SC5242
0527	2SA1492	2SA1492
0528	OR	OR
01514	2SA1962	2SA1962

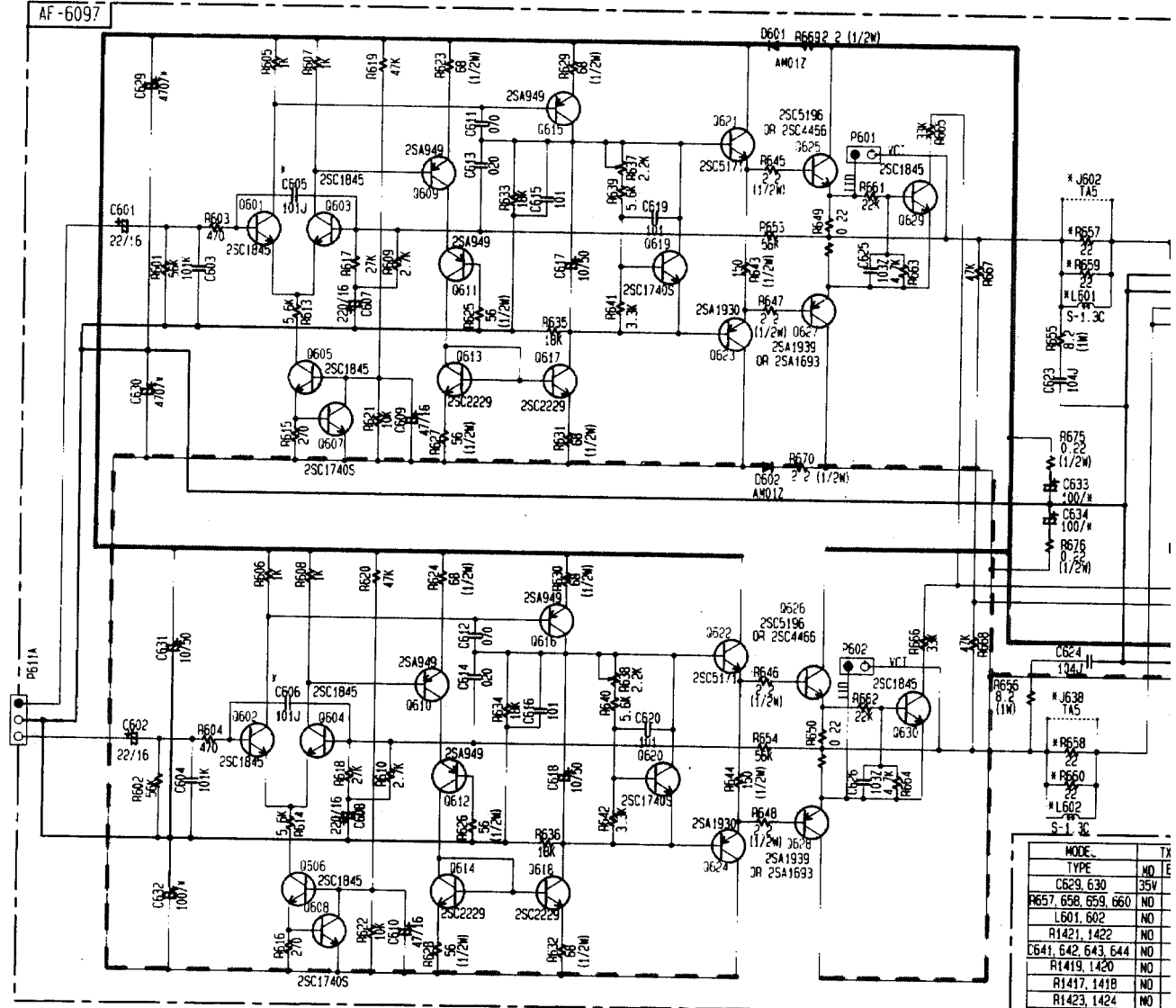


PARIS NO	L501	R557, R558	C541
TYPE	L502	R559, R560	C542
MD	L501	R1533, R1534	C1541
MP	NAAF-6108-3A	SHORT	NONE
MP	NAAF-6108-3B	YES	YES
MPT	NAAF-6108-3C	YES	YES
MPT	NAAF-6108-3D	YES	YES
MCK	NAAF-6108-3E	YES	YES
MPA	NAAF-6108-3F	YES	NONE

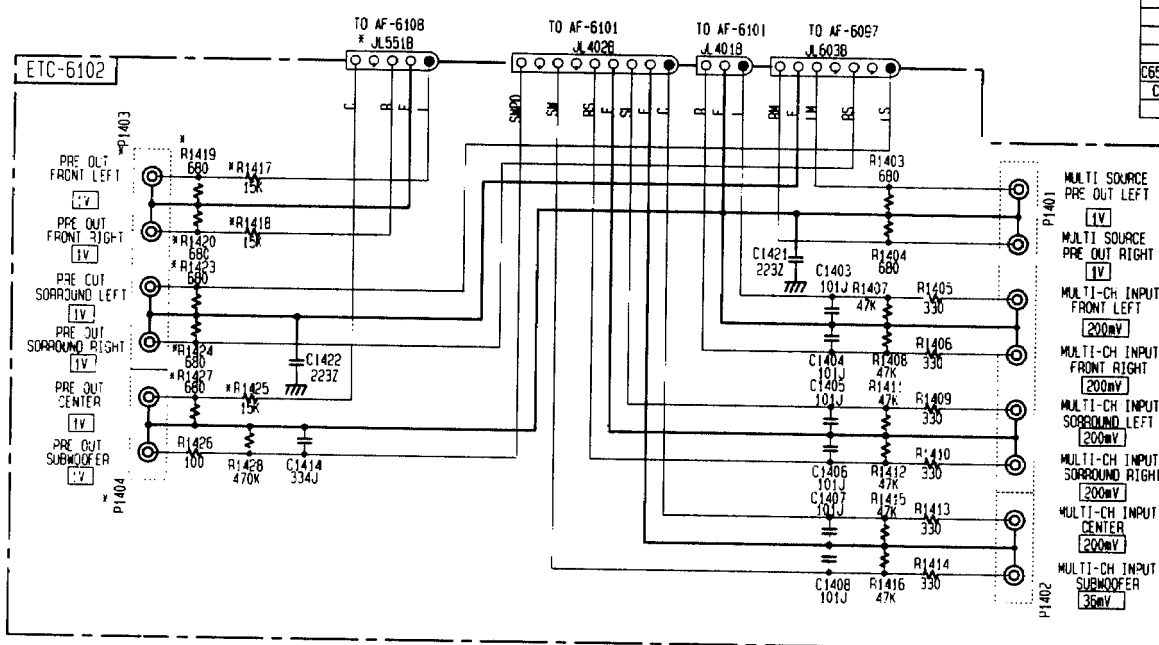
MPT-11110G/230V50HZ

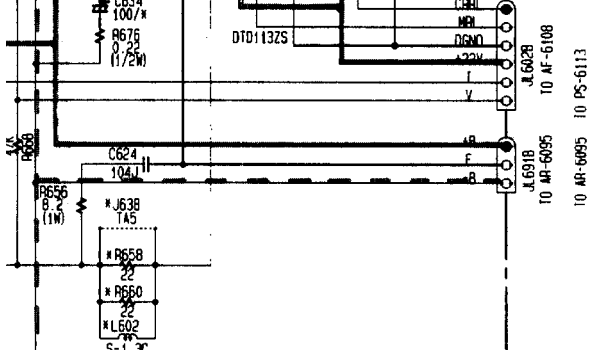
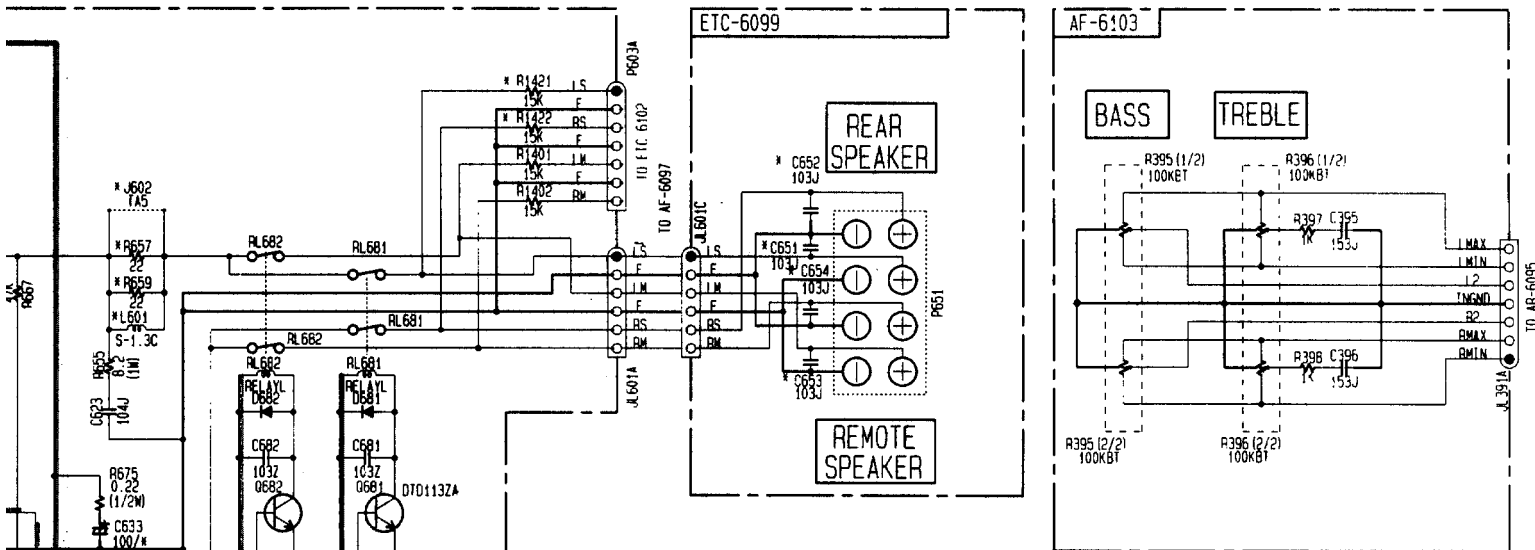
A **B** **C** **D**

SCHEMATIC DIAGRAM



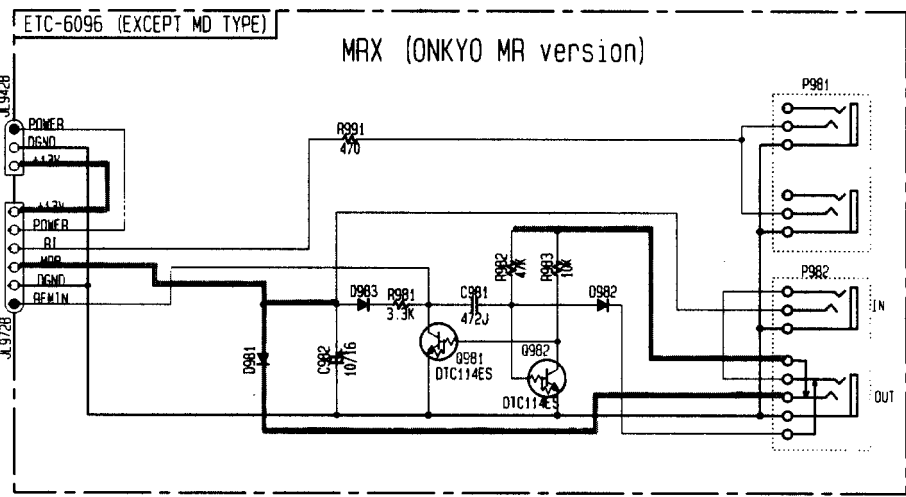
MODE	TX
C629, 630	35V
R657, 658, 659, 660	NO
L601, 602	NO
R1421, 1422	NO
C641, 642, 643, 644	NO
R1419, 1420	NO
R1417, 1418	NO
R1423, 1424	NO
R1425, 1427	NO
P1403, J1551B	NO
P1464	JP
J602, J638	YES
C651, 652, 653, 654	NO
C632, C633, 634	35V
C605, 606	NO





MODEL	TX-SV545		TX-SV646		A-SV640		TX-SE600
	NO	EXCEPT	NO	EXCEPT	NO	EXCEPT	
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, J.551B	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

- MULTI SOURCE PRE OUT LEFT [1V]
- MULTI SOURCE PRE OUT RIGHT [1V]
- MULTI-CH INPUT FRONT LEFT [200mV]
- MULTI-CH INPUT FRONT RIGHT [200mV]
- MULTI-CH INPUT SURROUND LEFT [200mV]
- MULTI-CH INPUT SURROUND RIGHT [200mV]
- MULTI-CH INPUT CENTER [200mV]
- MULTI-CH INPUT SUBWOOFER [36mV]



PRINTED CIRCUIT BOARD-PARTS LIST

TUNER CIRCUIT PC BOARD(NARF-6109-3A/3B/3C/3D/3F)

CIRCUIT NO.	PART NO.	DESCRIPTION
TU001	240099	ENV172A0G1 <P/T/W/A>
	240107	TFFJ2U552A <D>
		ICs
Q121	22241076 or 22240090	LM7001J or LM7001
Q141	22240983	LA1851N-F
Q181	22241124	BU1922 <P>
		Transistors
Q101	2210746	2SC945A-P <P/W/T/A>
Q102	2211723	2SC1923-O
Q122,Q142	2213510 or	DTA114ES or
Q122,Q142	2214350	RN2202
Q123	2212445	2SK365-GR
Q124	2213284 or	2SC1740S-R or
Q171,Q172	2212115	2SC2458-GR
Q143	221282 or 2213560	DTC144ES or RN1204
Q144	2213640 or 2214660	DTC123JS or RN1205
Q173,Q174	2215024	2SD1468S-R
Q175	2213510 or 2214350	DTA114ES or RN2202
Q182	2213284 or 2212115	2SC1740S-R or 2SC2458-GR <P>
		Diodes
D165	224470512	MTZJ5.1B
		Transformers and coils
L101	233457	NFIF-4081
L102	233458	NFIF-4082
L103	233501	NMC-3088 <P/T/W/A>
L104	233454M022	NCH-1452 022M
L105	232174	NMRF-5077
L106	232176	NMIF-6094
L107,L108	233484	NMC-4085 <P/T/W/A>
L109,L110	231092	NCH-2140 <D>
L181	233454K220	NCH-1452 220K <P>
		Ceramic filters
X101	3010071	SFE-10.7MA5 RED
X102	3010071	SFE-10.7MA5 RED <P/T/W/A>
X103	3010071	SFE-10.7MA5 RED <D>
X103	3010130	SFE10.7MZZK <P/T/W/A>
X104	3010268	CSB456F23
		Oscillators
X121	3010141	XTL-7.2M
X181	3010203	AF6146CC <P>

CIRCUIT NO.	PART NO.	DESCRIPTION
		Capacitors
C101,C128	354741019	100 μ F, 16V, Elect.
C130,C159	354780229	2.2 μ F, 50V, Elect.
C131	374722234	0.022 μ F \pm 5%, 50V, Plastic
C132,C153	354783399	0.33 μ F, 50V, Elect.
C133,C142	354741019	100 μ F, 16V, Elect.
C145,C149	354780479	4.7 μ F, 50V, Elect.
C146	374723324	3300pF \pm 5%, 50V, Plastic
C147	374721034	0.01 μ F \pm 5%, 50V, Plastic <P/T/W/A>
C147	374721534	0.015 μ F \pm 5%, 50V, Plastic <D>
C151,C152	354780109	1 μ F, 50V, Elect.
C154,C162	354741009	10 μ F, 16V, Elect.
C155,C156	374721034	0.01 μ F \pm 5%, 50V, Plastic <D>
C155,C156	374724724	4700pF \pm 5%, 50V, Plastic <P/T/A>
C155,C156	374725624	5600pF \pm 5%, 50V, Plastic <W>
C160	354784799	0.47 μ F, 50V, Elect.
C166	354741009	10 μ F, 16V, Elect.
C168	374724734	0.047 μ F \pm 5%, 50V, Plastic
C171,C172	354741009	10 μ F, 16V, Elect.
C173,C174	374722724	2700pF \pm 5%, 50V, Plastic <P/T/W/A>
C175,C176	374721024	1000pF \pm 5%, 50V, Plastic <D>
C177	354780229	2.2 μ F, 50V, Elect.
C183	354721019	100 μ F, 6.3V, Elect. <P>
C184	354780229	2.2 μ F, 50V, Elect. <P>
C186	374725614	560pF \pm 5%, 50V, Plastic <P>
		Resistors
R001	431533355	3.3M Ω , 1/2W, Solid <D>
R150	5210261	N06HR5KBC, Trimming
R158	5210263	N06HR20KBC, Trimming
		Terminals
P101	25060222	NTM-2PDML144 or
P101	25060239	NTM-4PDML161 or
P101 or	25060117	NTM-2PDML051 <P/T/W/A>
P101 or	25060195	NTM-4PDML117 <D>
		Sockets
P102b	25050986	NSCT-14P773 <D/T/W/A>
P102b	25050987	NSCT-16P774 <P>
		Switch
S101	25065286	NSS-22112 <W>
		Plug
TP101	25055038	NPLG-2P29
		Shield plate
TU001a	27150397	Front end <P/T/W/A>

A

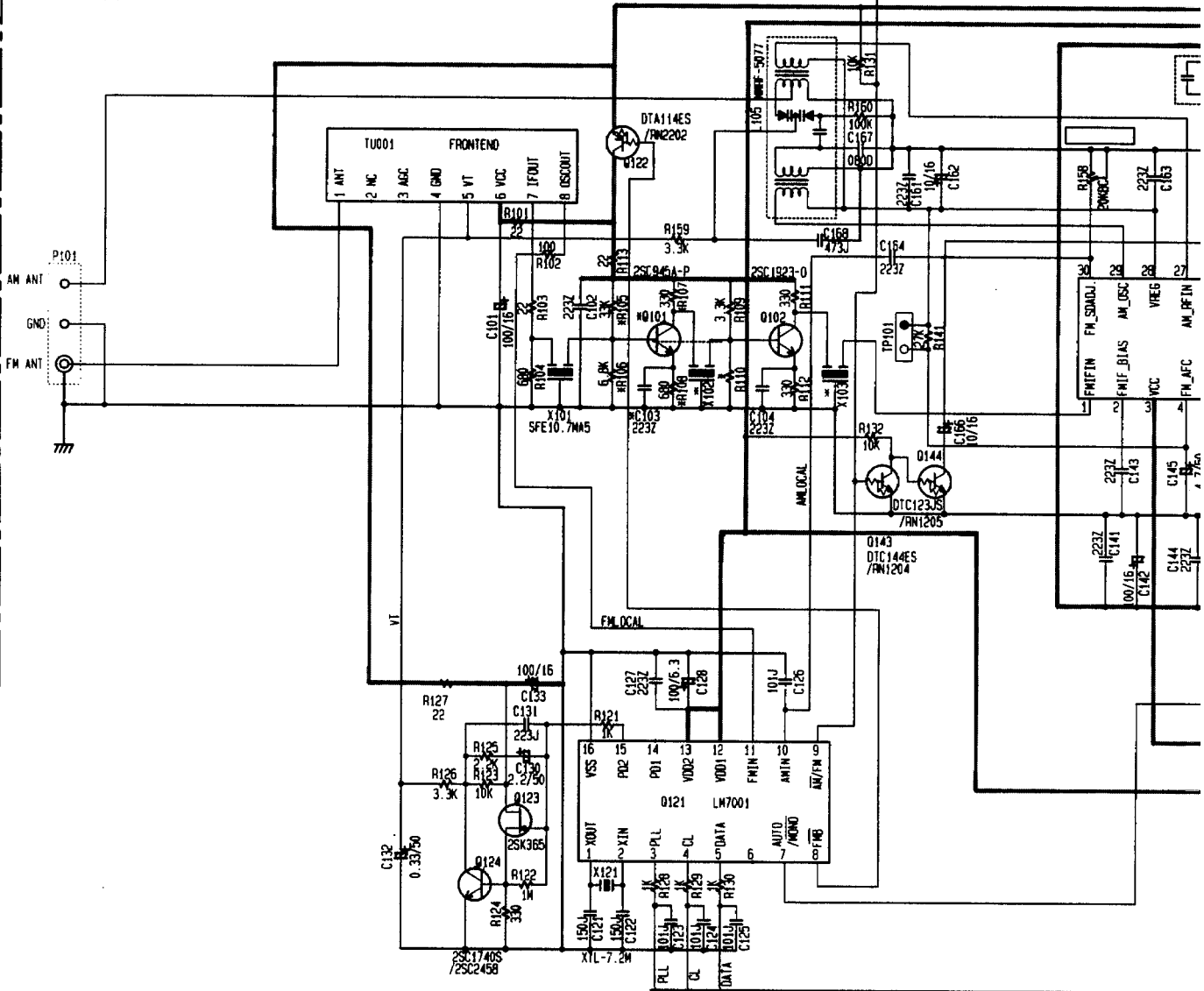
B

C

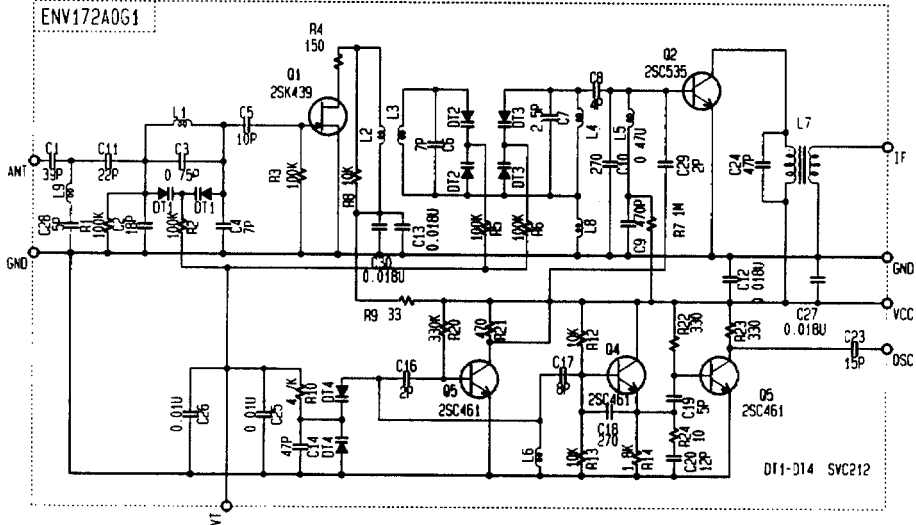
D

SCHEMATIC DIAGRAM

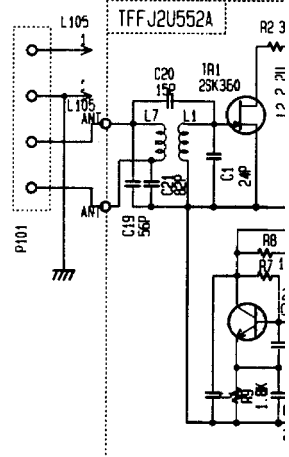
NARF-6109

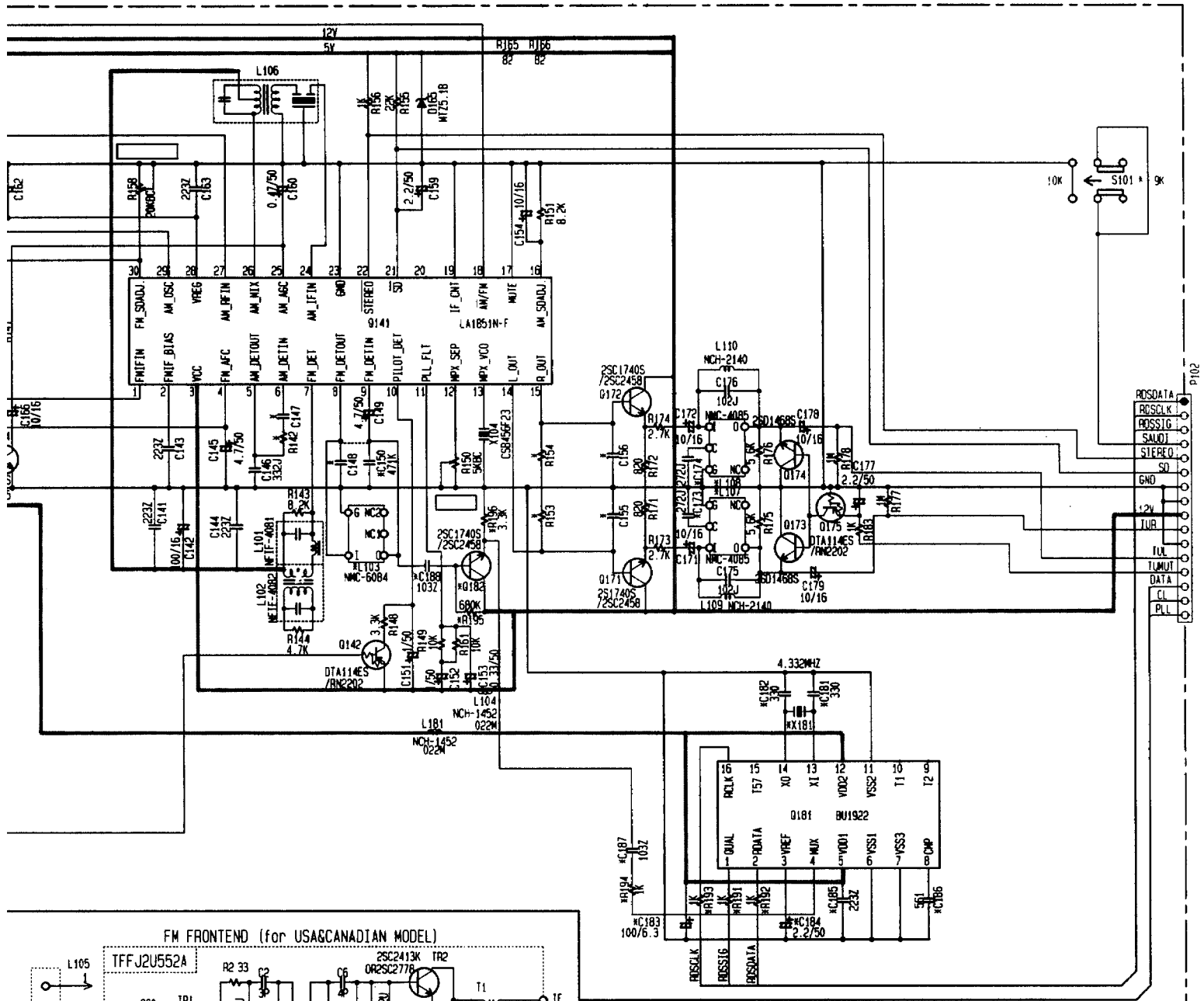


FM FRONTEND (for EUROPEAN MODEL)

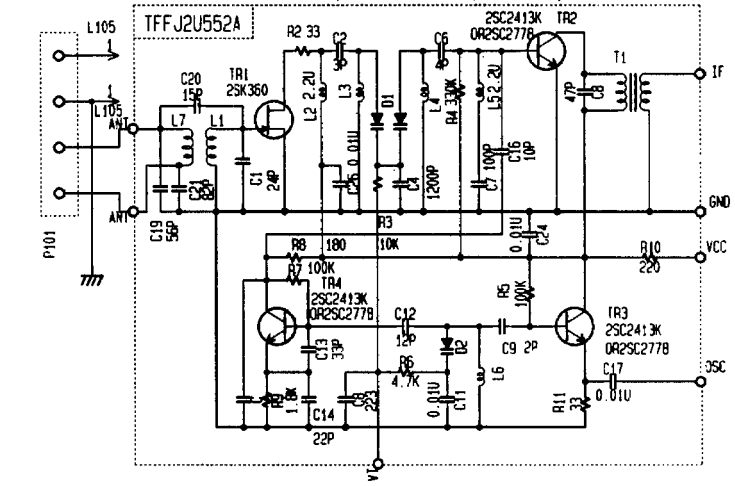


FM FRONTEND





FM FRONTEND (for USA&CANADIAN MODEL)



PARTS										
#	T0001	R105	R106	R107	R108	C103	Q101	X102	R110	
DTYPE	TFFJ2U552A	NONE	NONE	NONE	NONE	NONE	NONE	NONE	1K	
PTYPE	ENV1729961	33K	6.8K	330	580	223J	2SC945AP	SFE10.7MA5	470	
WTYPE	ENV1729961	33K	6.8K	330	580	223J	2SC945AP	SFE10.7MA5	470	
#	X103	R142	C147	C148	C150	R153/154	C155/156	L107/108	L109/110	
DTYPE	SFE10.7MA5	47K	153J	101J	NONE	8.2K	103J	NONE	NCH-2140	
PTYPE	SFE10.7MA2A	56K	103J	470J	471K	15K	472J	NMC4085	NONE	
WTYPE	SFE10.7MA2A	56K	103J	470J	471K	15K	562J	NMC4085	NONE	
#	C173/174	C175/176	Q181	X181	C181-C188	R191-196	S101			
DTYPE	NONE	101J	NONE	NONE	NONE	NONE	NONE			
PTYPE	272J	NONE	YES	YES	YES	YES	NONE			
WTYPE	272J	NONE	NONE	NONE	NONE	NONE	YES			

PRINTED CIRCUIT BOARD - PARTS LIST

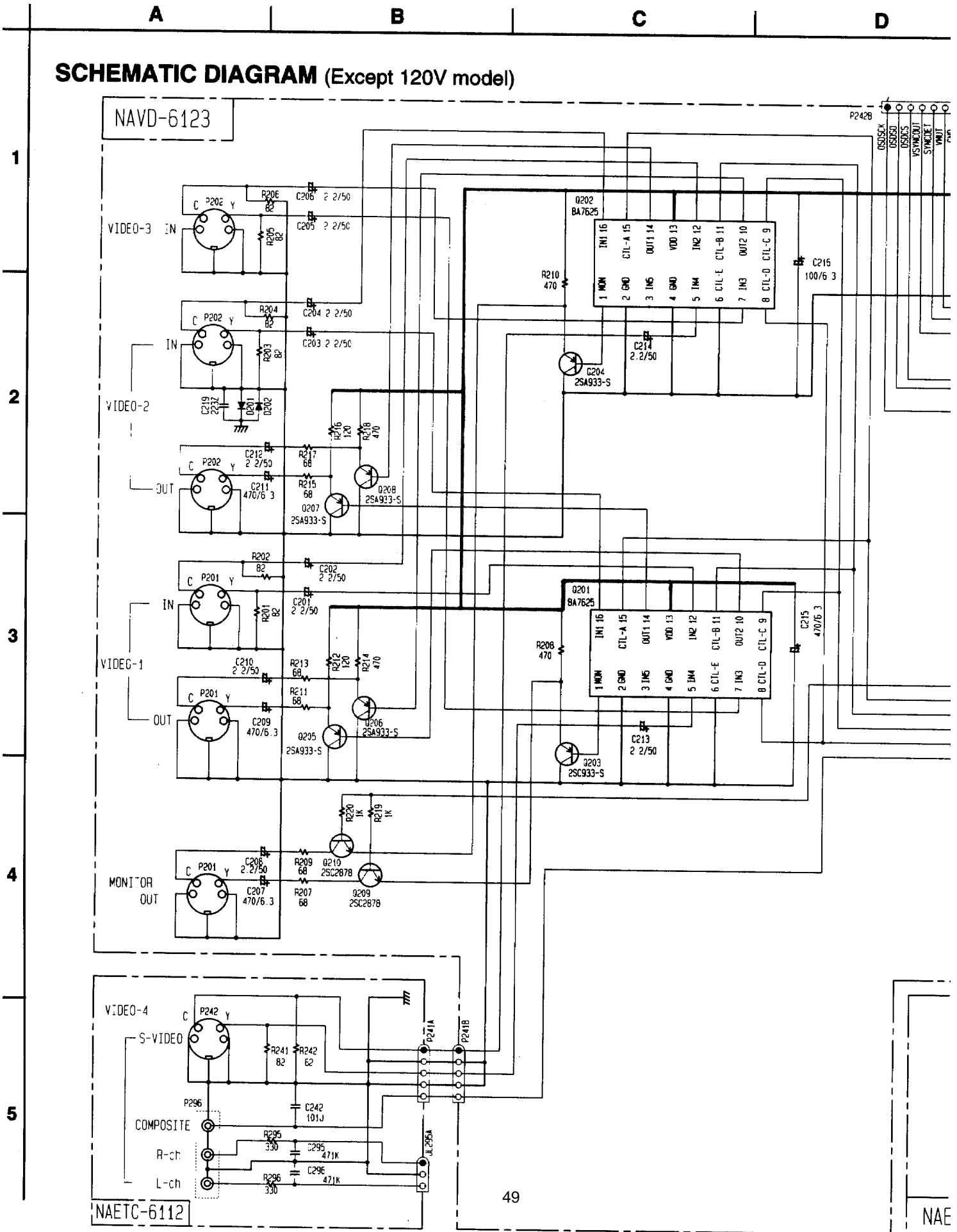
VIDEO CIRCUIT PC BOARD(NAVD-6122-3A/3B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q251	22240373	BA7625
Q260	22241037	LC74761-****
	Transistors	
Q252-Q254	2213354 or	2SA933S-R or
Q257,Q258	2212125	2SA1048-GR
Q255	2212286 or	2SC2878-B or
	2212285	2SC2878-A
Q256	2213510 or	DTA114ES or
	2214350	RN2202
Q259	2213284	2SC1740S-R
Q262	2213510	DTA114ES
Q263	221282	DTC144ES
	Diodes	
D251,D252	223205 or	1SS270A or
D256	223163	1SS133
	Oscillators	
X251	3010167	XTL-14.32M
X252	3010238	XTL-17.73M <P/T/W/A>
	Capacitors	
C251,C252	354724719	470 μ F,6.3V,Elect.
C253,C255	354780229	2.2 μ F,50V,Elect.
C254,C259	354724719	470 μ F,6.3V,Elect.
C256,C288	354780229	2.2 μ F,50V,Elect.
C269,C277	354780109	1 μ F,50V,Elect.
C272,C281	354784799	0.47 μ F,50V,Elect.
C273,C284	354721019	100 μ F,6.3V,Elect.
C275	374721224	1200pF \pm 5%,50V,Plastic
C278	374722234	0.022 μ F \pm 5%,50V,Plastic
C282,C285	375524744	0.47 μ F \pm 5%,50V,Plastic
C287,C291	354721019	100 μ F,6.3V,Elect.
C290	354744709	47 μ F,16V,Elect.
C296	354781099	0.1 μ F,50V,Elect.
	Terminals	
P251,P252	25045457 or	NPJ-3PDYE278 or
	25045299	NPJ-3PDYE158
	Plugs	
JL212c	25055630	NPLG-9P592 <D>
P213a	25055233	NPLG-2P217 <D>

S VIDEO CIRCUIT PC BOARD(NAVD-6123-3B)

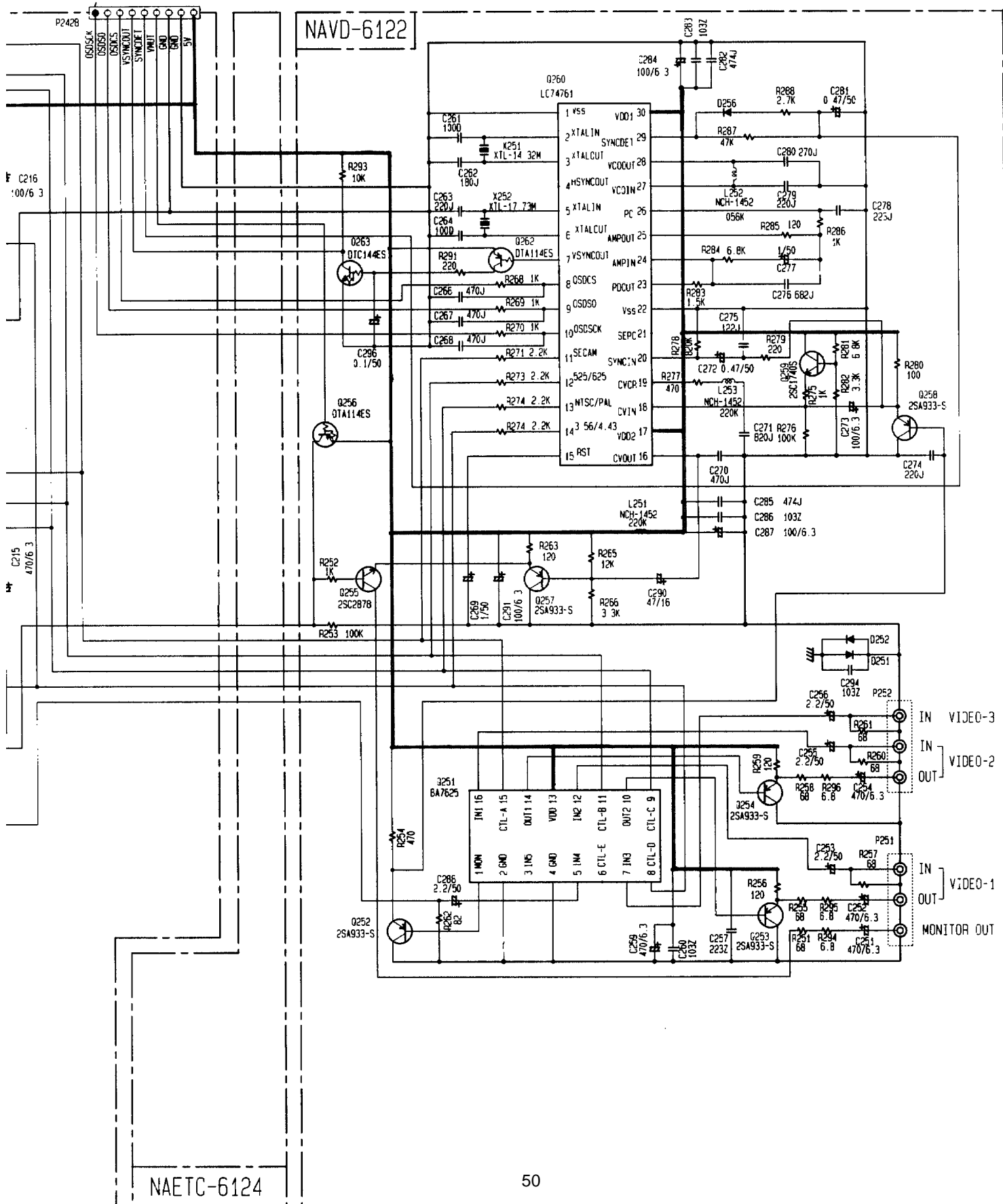
CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q201,Q202	22240373	BA7625
	Transistors	
Q203-Q208	2213354 or	2SA933S-R or
	2212125	2SA1048-GR
Q209,Q210	2212286 or	2SC2878-B or
	2212285	2SC2878-A
	Diodes	
D201,D202	223205 or	1SS270A or
	223163	1SS133
	Capacitors	
C201-C206	354780229	2.2 μ F,50V,Elect.
C207,C209	354724719	470 μ F,6.3V,Elect.
C208,C210	354780229	2.2 μ F,50V,Elect.
C211,C215	354724719	470 μ F,6.3V,Elect.
C212-C214	354780229	2.2 μ F,50V,Elect.
C216	354721019	100 μ F,6.3V,Elect.
	Sockets	
P201,P202	25051568	NSCT-12P1355
	Plugs	
JL242b	25055630	NPLG-9P592
P241a	25055135	NPLG-5P119

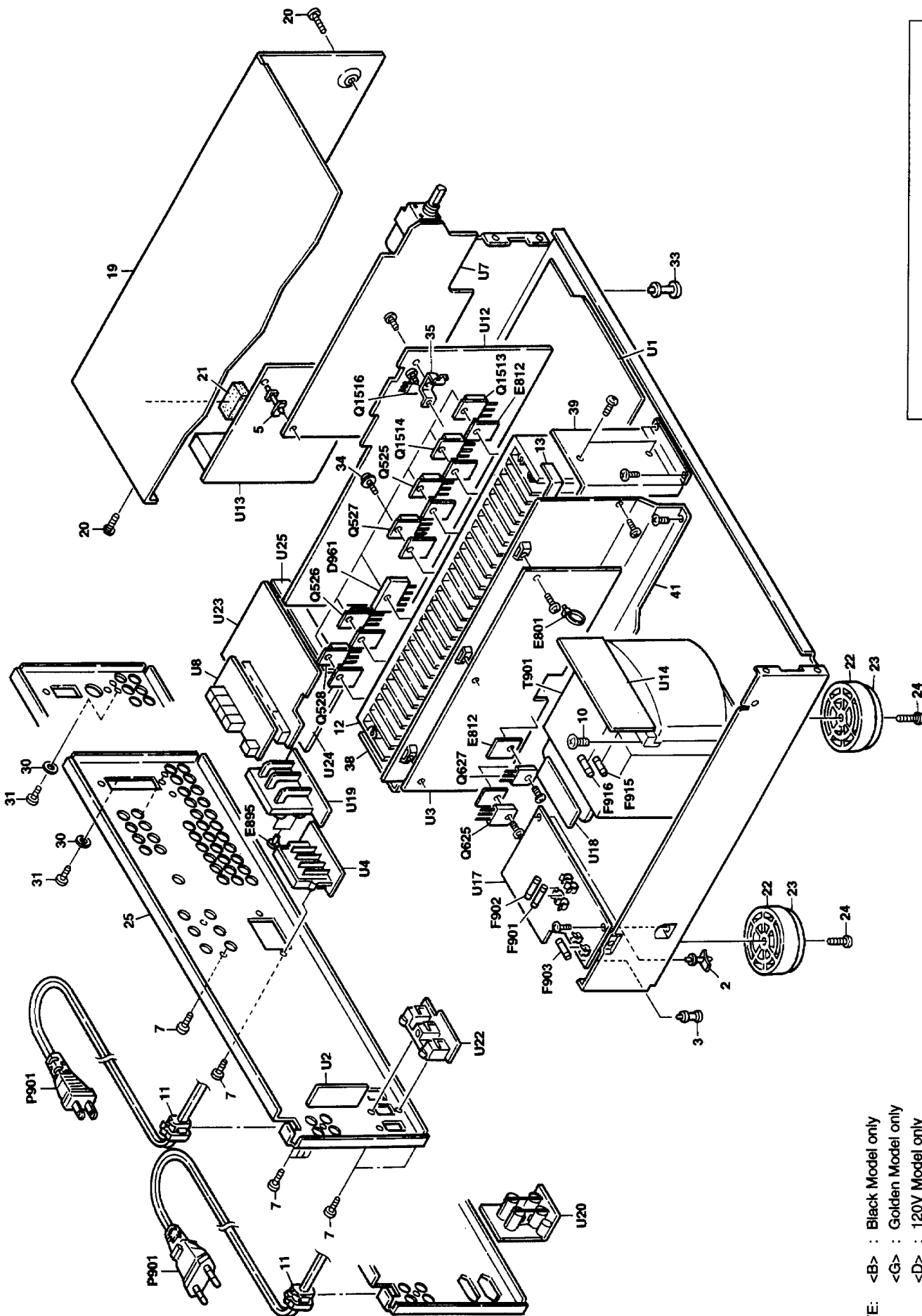
SCHEMATIC DIAGRAM (Except 120V model)



NAVD-6122

NAETC-6124





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

- NOTE: : Black Model only
 <G> : Golden Model only
 <D> : 120V Model only
 <P> : 230V Model only
 <T> : Asian Model only
 <W> : Worldwide Model only
 <A> : Australian model only

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	27100328A	Chassis	59	27111022	Front bracket <D/T/W/A>
2	27190503A	KGLS-8RF,Holder		27111023	Front bracket <P>
3	27190428A	KGLS-10RF,Holder	60	27111024	Front bracket <G>
5	27190062	KGLS-12S,Holder		27215278	Decorative frame
7	838130088	3TTB+8B,Self-tapping screw		27215280	Decorative frame <C>
10	830440089	4TTC+8C(BC),Self-tapping screw	63	27191014	Holder
11	27300750	#2271, Bushing cord	68	28325542	Knob, Mode
12	27160388	Heatsink		28325544	Knob, Mode <G>
13	29110083	Tape	69	28191792A	Clear plate
16	28325509	Knob, Volume 		28191793A	Clear plate <G>
	28325511	Knob, Volume <G>	70	28325497A	Knob, Power <P/T/W/A>
17	28325405	Knob, Tone 		28325499A	Knob, Power <G>
	28325407	Knob, Tone <G>	71	27273164	Joint <P/T/W/A>
18	28325500	Knob, Jog 	72	27141686A	Retainer <P/T/W/A>
	28325502	Knob, Jog <G>	74	838430107	3TTP+10S(BC), Self-tapping screw
19	28184698	Top cover 	D961	RBV602 or	
	28184701	Top cover <G>		RS603M, Diode	
20	838430088	3TTB+8B(BC),Self-tapping screw 		Wire tie	
	838230080	3TTB+8B(NI),Self-tapping screw <G>	E801	AC238, Isolation sheet	
21	28141235	Cushion	E812	NRP-345,Plastic rivet <P/T/A>	
22	27175319A	Leg	E895	8A-UL, Primary fuse <D/W>	
23	28141332	Cushion	F901	4A-SE-EAK,Primary fuse <P/T/W/A>	
24	831430088	3TTW+8B(BC),Self-tapping screw	F902	2.5A-SE-EAK, Fuse <P>	
25	27122374	Rear panel <D>	F903	2A-SE-EAK,Fuse <T/A>	
	27122376	Rear panel <P>	F915,F916	6.3A-UL/T-237,Secondary fuse <D>	
	27122378	Rear panel <W>		6.3A-SE-EAK,Secondary fuse <P/T/W/A>	
26	27190470	Rear panel <A>	JL701	NCFC7-402512,Flat cable	
29	27300243	KGLS-18S, Holder	P901	AS-UC-6#18(SPT-2),Power supply cord <D>	
30	87643010	WS-2W, Clamp		AS-CEE-2,Power supply cord <P/T/W>	
31	838230088	W3* 10F(BC), Washer	P904	AS-SAA,Power supply cord <A>	
33	27190813	3TTB+8B(NI), Nickel screw	Q1516	NSCT-2P1357,AC outlet <A>	
34	801433	KGPS-10RF, Holder	Q531,Q532	25C3421-Y or	
35	27141681	Retainer	Q625,Q626	25C3421-O,Transistor	
36	28140680	Cushion		* 25C5196-R,	
38	27141693	Retainer, Rear		* 25C5196-O,	
39	27141694	Retainer, Front		* 25C4466-O,	
41	27160386	Heatsink	Q627,Q628	* 25C4466-P or	
52	27211947	Front panel <D>		* 25C4466-Y, Transistor	
	27211948	Front panel <P>		* 2SA1939-R,	
	27211949	Front panel <T/W/A>		* 2SA1939-O,	
	27211950	Front panel <G>		* 2SA1693-O,	
53	28135244	Badge 		* 2SA1693-P or	
	28135245	Badge <G>		* 2SA1693-Y, Transistor	
54	28198778	Facet		* 2SC5200-R or	
				* 2SC5200-O,Transistor <D>	
				* 2SA1943-R or	

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
Q527,Q528	2202813	* 25A1943-O,Transistor <D>	U12	1A743508-3A	NAAF-6108-3A,Front/Center power amp. pc board ass'y <D>
Q1513	2201653,	* 25C3856 O,		1A743508-3B	NAAF-6108-3B,Front/Center power amp. pc board ass'y <P>
Q525,Q526	2201655,	* 25C3856-P,		1A743508-3C	NAAF-6108-3C,Front/Center power amp. pc board ass'y <T>
	2201654,	* 25C3856-Y,		1A743508-3F	NAAF-6108-3F,Front/Center power amp. pc board ass'y <W>
	2202842 or	* 25C5242-R or	U13	1A743509-3A	NARF-6109-3A,Tuner circuit pc board ass'y <D>
Q1514	2202843	* 25C5242-O, Transistor <P/T/W/A>		1A743509-3B	NARF-6109-3B,Tuner circuit pc board ass'y <P>
Q527,Q528	2201663,	* 25A1492-O,		1A743509-3D	NARF-6109-3D,Tuner circuit pc board ass'y <T>
	2201665,	* 25A1492-P,		1A743509-3C	NARF-6109-3C,Tuner circuit pc board ass'y <W>
	2201664,	* 25A1492-Y,		1A743509-3F	NARF-6109-3F,Tuner circuit pc board ass'y <A>
	2202832 or	* 25A1962-R or	U14	1A743510-3A	NAETC-6110-3A,Secondary circuit pc board ass'y <D>
	2202833	* 25A1962-O,Transistor <P/T/W/A>		1A743510-3B	NAETC-6110-3B,Secondary circuit pc board ass'y <P>
T901	2301283	Δ NPT-1307D,Power transformer <D>		1A743510-3D	NAETC-6110-3D,Secondary circuit pc board ass'y <T>
	2301284	Δ NPT-1307P,Power transformer <P/T/A>		1A743510-3C	NAETC-6110-3C,Secondary circuit pc board ass'y <W>
	2301285	Δ NPT-1307D/G,Power transformer <W>	U16	1A743510-3F	NAETC-6110-3F,Secondary circuit pc board ass'y <A>
U1	1A743595-3A	NAAR-6095-3A,Main circuit pc board ass'y <D>		1A743512-3A	NAETC-6112-3A,Video 4 terminal pc board ass'y <D>
	1A743595-3B	NAAR-6095-3B,Main circuit pc board ass'y <P>		1A743512-3B	NAETC-6112-3B,Video 4 terminal pc board ass'y <P>
	1A743595-3C	NAAR-6095-3C,Main circuit pc board ass'y <T/A>		1A743512-3D	NAETC-6112-3D,Video 4 terminal pc board ass'y <T>
	1A743595-3D	NAAR-6095-3D,Main circuit pc board ass'y <W>		1A743512-3C	NAETC-6112-3C,Video 4 terminal pc board ass'y <W>
U2	1A743596-3A	NAETC-6096-3A,R/M/R terminal pc board ass'y <D>	U17	1A743512-3F	NAETC-6112-3F,Video 4 terminal pc board ass'y <A>
	1A743596-3B	NAETC-6096-3B,R/M/R terminal pc board ass'y <P>		1A743513-3A	NAPS-6113-3A,Primary circuit pc board ass'y <D>
	1A743596-3C	NAETC-6096-3C,R/M/R terminal pc board ass'y <T/A>		1A743513-3B	NAPS-6113-3B,Primary circuit pc board ass'y <P>
	1A743596-3D	NAETC-6096-3D,R/M/R terminal pc board ass'y <W>		1A743513-3D	NAPS-6113-3D,Primary circuit pc board ass'y <T>
U3	1A743597-3A	NAAF-6097-3A,Surround power amp. pc board ass'y <D>		1A743513-3C	NAPS-6113-3C,Primary circuit pc board ass'y <W>
	1A743597-3B	NAAF-6097-3B,Surround power amp. pc board ass'y <P>	U18	1A743514-3F	NAPS-6114-3F,Transformer terminal pc board ass'y <A>
	1A743597-3C	NAAF-6097-3C,Surround power amp. pc board ass'y <T/A>		1A743514-3A	NAETC-6114-3A,Transformer terminal pc board ass'y <D>
	1A743597-3D	NAAF-6097-3D,Surround power amp. pc board ass'y <W>		1A743514-3B	NAETC-6114-3B,Transformer terminal pc board ass'y <P>
U5	1A743599-3A	NAETC-6099-3A,Speaker terminal pc board <D>		1A743514-3D	NAETC-6114-3D,Transformer terminal pc board ass'y <T>
	1A743599-3B	NAETC-6099-3B,Speaker terminal pc board <P>		1A743514-3C	NAETC-6114-3C,Transformer terminal pc board ass'y <W>
	1A743599-3C	NAETC-6099-3C,Speaker terminal pc board <T/A>		1A743515-3A	NAETC-6115-3A,Front/Center speaker terminal pc board ass'y <D>
	1A743599-3D	NAETC-6099-3D,Speaker terminal pc board <W>	U19	1A743515-3F	NAETC-6115-3F,Front/Center speaker terminal pc board ass'y <A>
U6	1A743500-3A	NADIS-6100-3A,Display circuit pc board <D>		1A743515-3B	NAETC-6115-3B,Front/Center speaker terminal pc board ass'y <P>
	1A743500-3C	NADIS-6100-3C,Display circuit pc board <P>		1A743515-3C	NAETC-6115-3C,Front/Center speaker terminal pc board ass'y <W>
	1A743500-3B	NADIS-6100-3B,Display circuit pc board <T/W/A>		1A743515-3D	NAETC-6115-3D,Front/Center speaker terminal pc board ass'y <T>
	1A743501-3A	NAAF-6101-3A,Electro volume circuit pc board <D>		1A743515-3E	NAETC-6115-3E,Front/Center speaker terminal pc board ass'y <W>
	1A743501-3C	NAAF-6101-3C,Electro volume circuit pc board <P>	U20	1A743516-3B	NAETC-6116-3B,AC outlet terminal pc board ass'y <P>
	1A743501-3B	NAAF-6101-3B,Electro volume circuit pc board <T/W/A>		1A743516-3D	NAETC-6116-3D,AC outlet terminal pc board ass'y <T>
	1A743502-3A	NAETC-6102-3A,Pre. out/Main in terminal pc board ass'y <D>		1A743516-3C	NAETC-6116-3C,AC outlet terminal pc board ass'y <W>
	1A743502-3C	NAETC-6102-3C,Pre. out/Main in terminal pc board ass'y <P>	U21	1A743517-3B	NAPS-6117-3B,Power switch pc board <P>
	1A743502-3B	NAETC-6102-3B,Pre. out/Main in terminal pc board ass'y <T/W/A>		1A743517-3D	NAPS-6117-3D,Power switch pc board <T>
U9	1A743503-3A	NAAF-6103-3A,Tone volume pc board ass'y <D>		1A743517-3C	NAPS-6117-3C,Power switch pc board <W>
	1A743503-3C	NAAF-6103-3C,Tone volume pc board ass'y <P>		1A743517-3F	NAPS-6117-3F,Power switch pc board <A>
	1A743503-3B	NAAF-6103-3B,Tone volume pc board ass'y <T/W/A>	U22	1A743518-3A	NAETC-6118-3A,AC outlet terminal pc board ass'y <D>
	1A743504-3A	NAETC-6104-3A,Headphone terminal pc board ass'y <D>	U23	1A743522-3A	NAVD-6122-3A,Video circuit pc board ass'y <D>
	1A743504-3C	NAETC-6104-3C,Headphone terminal pc board ass'y <P>		1A743522-3B	NAVD-6122-3B,Video circuit pc board ass'y <P/T/W/A>
	1A743504-3B	NAETC-6104-3B,Headphone terminal pc board ass'y <T/W/A>		1A743522-3F	NAVD-6122-3F,Video circuit pc board ass'y <A>
U10	1A743505-3A	NAETC-6105-3A,Headphone terminal pc board ass'y <D>	U24	1A743524-3B	NAVD-6124-3B,Video circuit pc board ass'y <P/T/W/A>
	1A743505-3C	NAETC-6105-3C,Headphone terminal pc board ass'y <P>	U25	1A743525-3A	NADG-6125-3A,DSP circuit pc board ass'y <D>
	1A743505-3B	NAETC-6105-3B,Headphone terminal pc board ass'y <T/W/A>	U26	1A743525-3B	NADG-6125-3B,DSP circuit pc board ass'y <P/T/W/A>

A

B

C

D

SCHEMATIC DIAGRAM (120V model)

