Ref. No.3626
Oct.,1999

Integra SERVICE MANUAL

AUDIO VIDEO CONTROL RECEIVER MODEL DTR-7

Black model

BMD	120V AC, 60Hz

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.

TABLE OF CONTENTS

Specifications 2
Service procedures 3
Panel views 4
FL tube view 7
Microprocessor connection diagram 8
Microprocessor terminal descriptions 9
IC block diagrams and descriptions 10
Printed circuit board-part list 23
Adjustment and confirmation 29
Wiring view 31
Block diagram 33
Preamplifier PC board view .....
Preamplifier schematic diagram 37
Power/Input PC board view .....
Power/Input schematic diagram 41
Main circuit PC board view .....
Main circuit schematic diagram 45
DSP PC board view .....
DSP schematic diagram 49
Power amplifier PC board view .....
Power amplifier schematic diagram 53
Display PC board view .....
Display circuit schematic diagram 57
Video circuit PC board view .....
Video circuit schematic diagram 61
Exploded view 63
Parts list 65
Packing view 66

SPECIFICATIONS

AMPLIFIER SECTION

Continuous Average Power output (FTC)	
All channels:	**105 watts per channel min. RMS at 8 ohms, 2 channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.** **135 watts min. RMS at 6 ohms, 2 channels driven from 1 kHz with no more than 0.1% total harmonic distortion.**
Total Harmonic Distortion:	0.08% at rated power (Front)
IM Distortion:	0.08% at rated power (Front)
Damping Factor:	60 at 8 ohms (Front)
Input Sensitivity and Impedance	
PHONO:	2.5 mV, 50 kohms
LINE (CD, TAPE, DVD, VIDEO 1, 2, 3,4):	200 mV, 50 kohms
MULTICHANNEL INPUT (FRONT L/R, SURROUND L/R, CENTER):	200 mV, 50 kohms
(SUBWOOFER):	36 mV, 50 kohms
COAXIAL 1, 2 (DIGITAL):	0.5 Vp-p, 75 ohms
Output Level and Impedance	
Rec out (TAPE, VIDEO 1):	200 mV, 2.2 kohms
Pre out:	1 V, 470 ohms
Phono Overload:	110 mV RMS at 1 kHz, 0.5% T.H.D.
Frequency Response:	20 Hz to 100 kHz, +1/-3 dB(LINE INPUT)
RIAA Deviation:	20 Hz to 20 kHz, ±0.8 dB
Tone Control	
Bass:	±10 dB at 100 Hz
Treble:	±10 dB at 10 kHz
Signal-to-Noise Ratio	
Phono:	80 dB (IHF A, 5 mV input)
CD/Tape:	100 dB (IHF A)

VIDEO SECTION

Input sensitivity/Impedance (DVD, VIDEO 1, 2, 3,4)	
VIDEO (Composite):	1 Vp-p, 75 ohms
Output Level/Impedance (VIDEO 1, 2, MONITOR)	
VIDEO (Composite):	1 Vp-p, 75 ohms

TUNER SECTION

FM	
Tuning Range:	87.5 - 108.0 MHz (50 kHz steps)
Usable Sensitivity	
Mono:	11.2 dBf, 1.0 µV (75 ohms IHF)
Stereo:	17.2 dBf, 2.0 µV (75 ohms IHF)
50 dB Quieting Sensitivity	
Mono:	17.2 dBf, 2.0 µV (75 ohms)
Stereo:	37.2 dBf, 20 µV (75 ohms)
Capture Ratio:	2.0 dB
Image Rejection Ratio	40 dB
IF Rejection Ratio:	90 dB
Signal-to-Noise Ratio	
Mono:	76 dB
Stereo:	70 dB
Alternate Channel Attenuation:	55 dB
AM Suppression Ratio:	50 dB
Total Harmonic Distortion	
Mono:	0.2%
Stereo:	0.3%
Frequency Response:	30 Hz - 15 kHz, ±1.0 dB
Stereo Separation:	45 dB at 1 kHz 30 dB at 100 Hz - 10 kHz
AM	
Tuning Range	530 - 1,710 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:	AC 120 V, 60 Hz
Power Consumption:	6.2A
Dimensions (W × H × D):	435 × 175 × 453 mm 17-1/8" × 6-7/8" × 17-13/16"
Weight:	16.3 kg, 35.9 lbs.

REMOTE CONTROL

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


Ce symbole indique que le fusible utlise est a rapide. Pour une protection permanente, n'untiliser que fusibles de meme type. Ce darnier est la qu le present symbol est appse.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252196	12A-UL, Primary
F941,F942	252160	2.5A-UL/T237,Secondary

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 VIDEO-1 button, then press the SPEAKER A button.
2.After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting.

3. Safety-check out

(Only U.S.A. model)
After correcting the original service problem, perform the following safety check before releasing the set to the customer.
Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.
Specifications: 3.3Mohm±10% at 500V.

4. Memory Preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in order to charge the back-up system.
The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

5. Changing the AM band step

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 10kHz	To 9kHz
R8085	Open	10k
R8086	10k	Open

PRINTED CIRCUIT BOARD-PARTS LIST

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

NP:No spare parts

POWER AMPLIFIER PC BOARD (NAAF-6600-2)

CIRCUIT NO.	PART NO.		DESCRIPTION
	Transistors		
Q5001,Q5002	2210755,	*	2SC1775A-E,
Q5101,Q5102	2210756,	*	2SC1775A-F,
Q5201,Q5202	2211732 or	*	2SC1845-F or
Q5301,Q5302	2211733	*	2SC1845-E
Q5003,Q5103	2210755,		2SC1775A-E,
Q5203,Q5303	2210756,		2SC1775A-F,
Q5403	2211732 or		2SC1845-F or
Q5644,Q5645	2211733		2SC1845-E
Q5004,Q5104	2212115,		2SC2458-GR,
Q5204,Q5304	2213284 or		2SC1740S-R or
Q5404	2215864	NP	KTC3199-GR
Q5005-Q5007	2211353,		2SA949-O,
Q5105-Q5107	2211354,		2SA949-Y,
Q5205-Q5207	2215843 or	NP	KTA1024-O or
	2215844	NP	KTA1024-Y
Q5008,Q5108	2211633,		2SC2229-O,
Q5208,Q5211	2211634,		2SC2229-Y,
	2215853 or	NP	KTC3206-O or
	2215854	NP	KTC3206-Y
Q5209,Q5218	2213284		2SC1740S-R
Q5212,Q5312	2211353,		2SA949-O,
	2211354 or		2SA949-Y or
	2215843	NP	KTA1024-O
Q5213,Q5313	2203010 or	*	2SC5171 or
	2203434	NP	KTD2061-Y
Q5214,Q5314	2203000 or	*	2SA1930 or
	2203424	NP	KTB1369-Y
Q5215,Q5315	2202822 or	*	2SC5200-R or
	2202823	*	2SC5200-O
Q5216,Q5316	2202812 or	*	2SA1943-R or
	2202813	*	2SA1943-O
Q5217,Q5317	2214984 or		2SC2631-R or
	2214985		2SC2631-S
Q5219,Q5319	2212863 or		2SC3419-O or
	2212864		2SC3419-Y
Q5305-Q5307	2211353,		2SA949-O,
Q5405-Q5407	2211354,		2SA949-Y,
	2215843 or	NP	KTA1024-O or
	2215844	NP	KTA1024-Y
Q5308,Q5311	2211633,		2SC2229-O,
Q5408	2211634 or		2SC2229-Y or
	2215853	NP	KTC3206-O
Q5309,Q5318	2213284		2SC1740S-R
Q5401,Q5402	2210755,	*	2SC1775A-E,
	2210756,	*	2SC1775A-F,
	2211732 or	*	2SC1845-F or
	2211733	*	2SC1845-E
Q5601	2212445		2SK365-GR
Q5602-Q5604	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2215864	NP	KTC3199-GR
Q5605,Q5606	221282,		DTC144ES,
	2213560 or		RN1204 or
	2215820	NP	KRC104M
Q5607	2202115 or		2SD2061-E or
	2202116		2SD2061-F
Q5641,Q5642	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2215864	NP	KTC3199-GR
Q5643	2213640,		DTC123JS,
	2214660 or		RN1205 or
	2215830	NP	KRC105M

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q5646	2211792 or	2SA992-F or
	2211793	2SA992-E
	Diodes	
D5001,D5101	223163 or	1SS133 or
D5201,D5301	223205	1SS270A
D5401	223163 or	1SS133 or
D5601-D5607	223205	1SS270A
D5608	224471303	MTZJ13C,Zener
D5643,D5644	223163 or	1SS133 or
	223205	1SS270A
D5647	224470512	MTZJ5.1B,Zener
	Capacitors	
C5001,C5101	393884707	47 μF,50V,Elect.
C5004,C5104	354742219	220 μF,16V,Elect.
C5005,C5105	354722219	220 μF,6.3V,Elect.
C5010,C5110	354781009	10 μF,50V,Elect.
C5017,C5018	354794709	47 μF,100V,Elect.
C5117,C5118	354794709	47 μF,100V,Elect.
C5201,C5301	393884707	47 μF,50V,Elect.
C5204,C5304	354742219	220 μF,16V,Elect.
C5205,C5305	354722219	220 μF,6.3V,Elect.
C5210-C5212	354781009	10 μF,50V,Elect.
C5213,C5313	374721034	0.01 μF±5%,50V,Plastic
C5214,C5314	374724734	0.047 μF±5%,50V,Plastic
C5215-C5218	354794709	47 μF,100V,Elect.
C5310-C5312	354781009	10 μF,50V,Elect.
C5315-C5318	354794709	47 μF,100V,Elect.
C5401	393884707	47 μF,50V,Elect.
C5404	354742219	220 μF,16V,Elect.
C5405,C5645	354722219	220 μF,6.3V,Elect.
C5410	354781009	10 μF,50V,Elect.
C5417,C5418	354794709	47 μF,100V,Elect.
C5601-C5603	354761019	100 μF,35V,Elect.
C5646	354741009	10 μF,16V,Elect.
C5650	354780109	1 μF,50V,Elect.
	Resistors	
R5014,R5015	443521014	100Ω±5%,1/2W,Metal oxide
R5017,R5117	443526804	68Ω±5%,1/2W,Metal oxide
R5018,R5019	443521014	100Ω±5%,1/2W,Metal oxide
R5114,R5115	443521014	100Ω±5%,1/2W,Metal oxide
R5118,R5119	443521014	100Ω±5%,1/2W,Metal oxide
R5214,R5215	443521014	100Ω±5%,1/2W,Metal oxide
R5217,R5317	443526804	68Ω±5%,1/2W,Metal oxide
R5218,R5219	443521014	100Ω±5%,1/2W,Metal oxide
R5222,R5322	5210290	N06HR4.7KBE,Trimming
R5226,R5326	443524714	470Ω±5%,1/2W,Metal oxide
R5229,R5329	443521514	150Ω±5%,1/2W,Metal oxide
R5230,R5231	453530224	2.2Ω±5%,1/2W,Metal
R5232,R5332	4000132 or	0.22Ω*2,5.5W or
	4500245	0.22Ω*2,5.5W,Metal plate
R5240,R5340	453630824	8.2Ω±5%,1W,Metal
R5241,R5242	453530224	2.2Ω±5%,1/2W,Metal
R5314,R5315	443521014	100Ω±5%,1/2W,Metal oxide
R5318,R5319	443521014	100Ω±5%,1/2W,Metal oxide
R5330,R5331	453530224	2.2Ω±5%,1/2W,Metal
R5341,R5342	453530224	2.2Ω±5%,1/2W,Metal
R5414,R5415	443521014	100Ω±5%,1/2W,Metal oxide
R5417	443526804	68Ω±5%,1/2W,Metal oxide
R5418,R5419	443521014	100Ω±5%,1/2W,Metal oxide
R5643,R5644	453530224	2.2Ω±5%,1/2W,Metal

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
	Relays		
RL5643,RL5644	25065517,		NRL-2P5A-DC24-098,
	25065563 or		NRL-2P5A-DC24-129 or
	25065586		NRL-2P5A-DC24-142
	Plugs		
JL5623B	25055628		NPLG-7P590
P5201,P5301	25055038		NPLG-2P29
P5638	25055099		NPLG-2P83
P5641,P5642	25055038		NPLG-2P29
	Sockets		
JL5622B	25050271		NSCT-7P99
JL5624B	25050267		NSCT-3P95
JL5625A	25051088		NSCT-4P875
P3011A	200B3381830UL		NSAS-18P0729
P5002B,P5402B	25051426		NSCT-4P1213
P5102B	25051427		NSCT-5P1214
P5633B	25051428		NSCT-6P1215
P5634A	2009990550UL		NSAS-8P0727
	Clamp		
P5611	260224		CP-1S

FRONT/CENTER POWER AMPLIFIER PC BOARD (NAAF-6601-2)

CIRCUIT NO.	PART NO.		DESCRIPTION
	Transistors		
Q5009,Q5018	2213284		2SC1740S-R
Q5011,Q5111	2211633,	*	2SC2229-O,
Q5411	2211634,	*	2SC2229-Y,
	2215853 or	NP	KTC3206-O or
	2215854	NP	KTC3206-Y
Q5012,Q5112	2211353,	*	2SA949-O,
Q5412	2211354,	*	2SA949-Y,
	2215843 or	NP	KTA1024-O or
	2215844	NP	KTA1024-Y
Q5013,Q5113	2203010 or	*	2SC5171 or
Q5413	2203434	NP	KTD2061-Y
Q5014,Q5114	2203000 or	*	2SA1930 or
Q5414	2203424	NP	KTB1369-Y
Q5017,Q5117	2214984 or		2SC2631-R or
Q5417	2214985		2SC2631-S
Q5019,Q5119	2212863 or	*	2SC3419-O or
Q5419	2212864	*	2SC3419-Y
Q5109,Q5118	2213284		2SC1740S-R
Q5409,Q5418	2213284		2SC1740S-R
Q5015,Q5115	2202822 or	*	2SC5200-R or
Q5415	2202823	*	2SC5200-O
Q5016,Q5116	2202812 or	*	2SA1943-R or
Q5416	2202813	*	2SA1943-O
	Diodes		
D5621	22380044		RBV-1506
D5641,D5642	223163 or		1SS133 or
D5645,D5646	223205		1SS270A
	Capacitors		
C5011,C5012	354781009		10 μ F,50V,Elect.
C5013,C5113	374721034		0.01 μ F±5%,50V,Plastic
C5014,C5114	374724734		0.047 μ F±5%,50V,Plastic
C5023,C5123	354781009		10 μ F,50V,Elect.
C5111,C5112	354781009		10 μ F,50V,Elect.
C5411,C5412	354781009		10 μ F,50V,Elect.
C5413	374721034		0.01 μ F±5%,50V,Plastic
C5414	374724734		0.047 μ F±5%,50V,Plastic
C5423	354781009		10 μ F,50V,Elect.
C5623,C5624	3504352		18000 μ F,71V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R5022,R5122	5210261	N06HR5KBC,Trimming
R5026,R5126	443524714	470Ω±5%,1/2W,Metal oxide
R5029,R5129	443521514	150Ω±5%,1/2W,Metal oxide
R5030,R5031	453530224	2.2Ω±5%,1/2W,Metal
R5032,R5132	4000132 or	0.22Ω*2,5.5W or
R5432	4500245	0.22Ω*2,5.5W,Metal plate
R5040	453630824	8.2Ω±5%,1W,Metal
R5130,R5131	453530224	2.2Ω±5%,1/2W,Metal
R5140,R5440	453630824	8.2Ω±5%,1W,Metal
R5422	5210261	N06HR5KBC,Trimming
R5426	443524714	470Ω±5%,1/2W,Metal oxide
R5429	443521514	150Ω±5%,1/2W,Metal oxide
R5430,R5431	453530224	2.2Ω±5%,1/2W,Metal
	Relays	
RL5641	25065563,	NRL-2P5A-DC24-129,
	25065517 or	NRL-2P5A-DC24-098 or
	25065586	NRL-2P5A-DC24-142
RL5642	25065574	NRL-1P5A-DC24-134
	Plugs	
P5001,P5101	25055038	NPLG-2P29
P5002A,P5402A	25055783	NPLG-4P739
P5102A	25055784	NPLG-5P740
P5401	25055038	NPLG-2P29
P5633A	25055785	NPLG-6P741
	Sockets	
JL5621A	25051110	NSCT-6P897
JL5622A	25051111	NSCT-7P898
JL5624A	25051107	NSCT-3P894
P5631A	2009990549UL	NSAS-12P0726
P5635A	2009990551UL	NSAS-4P0728
	Retainer	
C5623A	27141723	Ground

THERMAL DETECTOR PC BOARD (NAETC-6602-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
R5613	4000150	PTH9M04BC222TS2F333,Thermistor
R5614	4000153	PTH9M04BF222TS2F333,Thermister
JL5625B	25051088	NSCT-4P875,Socket

SECONDARY CIRCUIT PC BOARD (NAETC-6606-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
C941,C942	374731044	0.1 μ F±5%,100V,Plastic capacitor
R941,R942	453530104	1Ω±5%,1/2W,Metal resistor
JL5621B	25051110	NSCT-6P897,Socket
JL942B	25050286	NSCT-9P114,Socket
P5612	260224	CP-1S,Clamp

DSP CIRCUIT PC BOARD (NADG-6608-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q1001	222740046R2TO	TC74HCU04F
Q1002	22241416	LC7824
Q101,Q102	22241383R2	NJM4565M-D
Q103	22241361R2	AK5383VS
Q104	22274157ER2TO	TC74VHC157FT
Q114	22241338R2	AK4110VF
Q115	222740046R2TO	TC74HCU04F
Q116	22274074ER2TO	TC74VHC74FT
Q707	22241340R9	CS492604-CL
Q708,Q709	22274574ER2TO	TC74VHC574FT
Q710	22241362R2	LC372100PF10-K35-TLM
Q713	22274244ER2TO	TC74VHC244FT
Q714	22274153ER2TO	TC74VHC153FT

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

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q715	22241219R3	DSPF56009FJ88
Q716	22241366R9	TC58128BJ-12
Q717,Q718	22274153ER2TO	TC74VHC153FT
Q801-Q804	22241360R2	AK4393VF
Q813-Q816	22241409R2	BA15532F
	Photo couplers	
U1001	24120031	TOTX178A
U1003,U1004	24120037	TORX178A
	Crystal	
X101	3010320	AT-49 12.288MHz
	Diodes	
D1002,D1003	224490330R2	UDZ3.3B
D101-D112	223234R2 or	1SS352 or
D701,D702	223233R1	1SS355
	Coils	
L1001	231237K470R2	NCH-1479
L1002,L1003	231237M022R2	NCH-1471
L101	231237M022R2	NCH-1471
L103	230921R2	BLM21B222SPT
L108-L110	231237M022R2	NCH-1471
L703-L706	231237M022R2	NCH-1471
L801,L802	231237M022R2	NCH-1471
R117,R118	230948R2	BLM21A102F
R122,R125	230921R2	BLM21B222SPT
R127,R131	230921R2	BLM21B222SPT
R797,R798	230948R2	BLM21A102F
	Capacitors	
C1005	356724709R2	47 μ F,6.3V,Elect.
C101,C102	356724709R2	47 μ F,6.3V,Elect.
C107-C110	356741009R2	10 μ F,16V,Elect.
C118	356724709R1	47 μ F,6.3V,Elect.
C120,C148	356724709R2	47 μ F,6.3V,Elect.
C158	356724709R2	47 μ F,6.3V,Elect.
C719	356721019R2	100 μ F,6.3V,Elect.
C737,C738	356724709R2	47 μ F,6.3V,Elect.
C742	356724709R2	47 μ F,6.3V,Elect.
C801-C804	356724709R2	47 μ F,6.3V,Elect.
C814,C816	356724709R2	47 μ F,6.3V,Elect.
C818,C820	356724709R2	47 μ F,6.3V,Elect.
C821,C823	356724709R2	47 μ F,6.3V,Elect.
C825,C827	356724709R2	47 μ F,6.3V,Elect.
C831,C832	356741009R2	10 μ F,16V,Elect.
C841-C846	356741009R2	10 μ F,16V,Elect.
	Terminals	
P1001,P1002	25045478	NPJ-1PDOR296
	Sockets	
P701	25051442	NSCT-20P1229
P702,P801	25051438	NSCT-16P1225
P803	25051430	NSCT-8P1217

PRIMARY CIRCUIT PC BOARD (NAPS-6610-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q921	2213640 or	DTC123JS or
	2215830 NP	KRC105M
	Diodes	
D921-D924	22380035,	GP104003E,
	22380032 or	1SR139-100 or
	22380260	RL1N4003
D925	223163 or	1SS133 or
	223205	1SS270A
	Power transformer	
T902	2300670A ⚠	NPT-1111D

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C901	3500196S	RE275V-103M
C922	354742219	220 μ F,16V,Elect.
	Resistors	
R901	431533355 ⚠	RC1/2GFKUL-3.3M,Solid
R921	453530824	8.2 Ω±5%,1/2W,Metal
	Relay	
RL901	25065584, ⚠	NRL-1P10A-DC12-140,
	25065248, ⚠	NRL-1P15A-DC12-29,
	25065516 or ⚠	NRL-1P10A-DC12-097 or
	25065588 ⚠	NRL-1P10A-DC12-143
	Fuse holders	
F911,F912	250113 ⚠	SN5051
	Inlet	
P903	25055960 ⚠	NPLG-2P913,AC
	Sockets	
JL9051b	25050267	NSCT-3P95
P902	25051126 ⚠	NSCT-4P913
	Fuse	
F901	252196 ⚠	12A-UL/T-314,Fuse

INPUT TERMINAL PC BOARD (NAAF-6611-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q301	22240829	TC9274N-008
Q302	22240799	TC9163AN
Q308,Q311	22240191	NJM4565D-D
	Transistors	
Q309,Q310	2213631 or	RN1241-A or
	2213632	RN1241-B
Q312	2213510 or	DTA114ES or
	2215770	KRA102M
	Capacitors	
C321,C322	354780229	2.2 μ F,50V,Elect.
C323,C324	354741009	10 μ F,16V,Elect.
C341,C343	354744709	47 μ F,16V,Elect.
C344,C346	354744709	47 μ F,16V,Elect.
C349,C351	353744709	47 μ F,16V,Elect.
C353,C354	393884707	47 μ F,50V,Elect.
C357,C358	393884707	47 μ F,50V,Elect.
C361	354741009	10 μ F,16V,Elect.
	Sockets	
P301b	25051438	NSCT-16P1225
P302b	25051429	NSCT-7P1216
	Plug	
P303b	25055234	NPLG-3P218
	Terminals	
P304-P306	25045583 or	NPJ-6PDRW394 or
	25045565	NPJ-6PDBL380

FRONT VIDEO TERMINAL PC BOARD (NAETC-6612-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
P212	25051749	NSCT-4P1536,Socket
P213	25045402	NPJ-3PDBL227,Terminal
P204a	2009990434UL	NSAS-10P0578,Socket
P303a	2009990513UL	NSAS-6P0675,Socket

SURROUND/FRONT B SPEAKER TERMINAL PC BOARD (NAETC-6614-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C5261,C5262	374724734	0.047 μ F±5%,50V,Plastic
C5361,C5362	374724734	0.047 μ F±5%,50V,Plastic

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

CIRCUIT NO.	PART NO.		DESCRIPTION
	Resistors		
R5261,R5262	453630824		8.2Ω±5%,1W,Metal
R5361,R5362	453630824		8.2Ω±5%,1W,Metal
	Terminal		
P5636	25060292		NTM-8PDMN223
	Plugs		
P5634b	25055167		NPLG-4P151
P5635b	25055165		NPLG-2P149

FRONT/CENTER SPEAKER TERMINAL PC BOARD (NAETC-6615-2)

CIRCUIT NO.	PART NO.		DESCRIPTION
	Capacitors		
C5061,C5161	374724734		0.047μF±5%,50V,Plastic
C5461	374724734		0.047μF±5%,50V,Plastic
	Resistors		
R5061,R5161	453630824		8.2Ω±5%,1W,Metal
R5461	453630824		8.2Ω±5%,1W,Metal
	Terminal		
P5632	25060291		NTM-6PDMN222
	Plug		
P5631b	25055169		NPLG-6P153

POWER SWITCH PC BOARD (NAETC-6619-2)

CIRCUIT NO.	PART NO.		DESCRIPTION
C906	3500196S	⚠	RE275V-103M,Capacitor IS
S906	25035550	⚠	NPS-111-L512P,Switch

DISPLAY CIRCUIT PC BOARD (NADIS-6621-2)

CIRCUIT NO.	PART NO.		DESCRIPTION
	FL tube		
Q8501	212199		16-BT-66GK
	IC		
Q8503	22240685R9		M66004FP
	Remote sensor		
U8501	241330		PIC-26043TE2
	Transistors		
Q8502,Q8505	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2215864	NP	KTC3199-GR
Q8504,Q8506	2213510,		DTA114ES,
	2214350 or		RN2202 or
	2215770	NP	KRA102M
Q8507	221282,		DTC144ES,
	2213560 or		RN1204 or
	2215820	NP	KRC104M
	Diodes		
D8501,D8505	223163 or		1SS133 or
	223205		1SS270A
D8502	225290		SEL4110R,LED
D8503	225291D		SEL4910D-D
D8504	224470823		MTZJ8.2C,Zener
	Capacitors		
C8506	354741009		10μF,16V,Elect.
C8510	354781009		10μF,50V,Elect.
C8514	375524744		0.47μF±5%,50V,Plastic
C8515	354721019		100μF,6.3V,Elect.
C8518	354780109		1μF,50V,Elect.
	Resistor		
R8542	49163103415		RM1/10IJ-10K*15,Array
	Switches		
S8501-S8531	25035652		NPS-111-S604,Push
S8532	25065507		EC11B15244,Rotary

CIRCUIT NO.	PART NO.		DESCRIPTION
	Sockets		
JL8501A	25051109		NSCT-5P896
JL8502A	25051107		NSCT-3P894
P8501B	25052071,		NSCT-25P1858,
	25050965,		NSCT-25P752,
	25051329,		NSCT-25P1118,
	25051869 or		NSCT-25P1656 or
	25052258		NSCT-25P2155
	Holder		
Q8501A	27191074		(FL)

S-VIDEO TERMINAL PC BOARD (NAVD-6622-2)

CIRCUIT NO.	PART NO.		DESCRIPTION
	ICs		
Q215-Q218	22241347		NJM2296D
Q219	22240800		TC9164AN
	Transistors		
Q201-Q214	2213631 or		RN1241-A or
	2213632		RN1241-B
	Capacitors		
C232,C233	354744719		470μF,16V,Elect.
	Plug		
P202B	25055236		NPLG-5P220
	Sockets		
JL201A	25051093		NSCT-9P880
JL202A	25051094		NSCT-10P881
P201B	25051428		NSCT-6P1215
P205,P206	25051957		NSCT-12P1744
P207	25051956		NSCT-8P1743

ON-SCREEN PC BOARD (NAVD-6623-2)

CIRCUIT NO.	PART NO.		DESCRIPTION
	ICs		
Q220	22241037		LC74761-9189
Q223,Q224	22241347		NJM2296D
	Transistors		
Q221	2212115,		2SC2458-GR,
	2213284 or		2SC1740S-R or
	2215864	NP	KTC3199-GR
Q222	2212125,		2SA1048-GR
	2213354 or		2SA933S-R
	2215975	NP	KTA1266-GR
Q225-Q231	2213631 or		RN1241-A or
	2213632		RN1241-B
	Diodes		
D213-D215	223163 or		1SS133 or
	223205		1SS270A
	Crystal		
X201	3010167		XTL-14.32M
	Coils		
L201	233454J056		NCH-1452 056J
L202	233454K220		NCH-1452 220K
	Capacitors		
C208,C219	354721019		100μF,6.3V,Elect.
C210,C221	375524744		0.47μF±5%,50V,Plastic
C211	354784799		0.47μF,50V,Elect.
C214	374722234		0.022μF±5%,50V,Plastic
C215,C225	354780109		1μF,50V,Elect.
C216	374726824		6800pF±5%,50V,Plastic
C217	374721224		1200pF±5%,50V,Plastic
C218	354783399		0.33μF,50V,Elect.
C223,C226	354721019		100μF,6.3V,Elect.
C224	354724719		470μF,6.3V,Elect.
C227	354744709		47μF,16V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C230,C231	354744719	470 μ F,16V,Elect.
	Terminals	
P209,P210	25045566	NPJ-4PDYE381
	Switch	
S201	25065581	NSS-22203
	Sockets	
JL201B	25051093	NSCT-9P880
JL202B	25051094	NSCT-10P881
P203B	25051431	NSCT-9P1218

HEADPHONE TERMINAL PC BOARD (NAETC-6624-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
JL8501B	25051109	NSCT-5P896,Socket
P8502	25045385	YKB26-5153,Headphone

MAIN VOLUME PC BOARD (NAETC-6625-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
JL8502B	25051107	NSCT-3P894,Socket
S8533	25065575	EC16B2425,Rotary encoder

MAIN CIRCUIT PC BOARD (NAAR-6627-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q6075	22240191	NJM4565D-D
Q8003	22241420	M30624MG-238FP
Q9051	22278033DNEC	MPC2933HF
Q9052-Q9054	222780055	78M05HF
Q9055	222790055	79M05FA
Q9056,Q9057	222780125	78M12HF
Q9059	222780565JRC	NJM78M56FA
Q9060	222780055	78M05HF
	Transistors	
Q2001,Q2002	2215410R2	RN1441
Q2003	2214530R2	RN2402
Q6071,Q6072	2215410R2	RN1441
Q6073	2214530R2	RN2402
Q6074,Q8001	2214490R2	RN1404
Q6171,Q6172	2215410R2	RN1441
Q8002,Q8102	2214530R2	RN2402
Q8101,Q8103	2214490R2	RN1404
Q8201,Q8202	2214470R2	RN1402
Q8203	24120043	ON3131
Q8204,Q8205	2214470R2	RN1402
Q9058	2211455	2SA1015-GR
	Photo couplers	
Q8203,Q8206	24120043	ON3131
	Diodes	
D8001	22380260,	RL1N4003,
D9052-D9057	22380032 or	1SR139-100 or
D9059-D9061	22380035	GP104003E
D8002	223234R2 or	1SS352 or
D8004-D8006	223233R1	1SS355
	Diodes	
D8003,D8007	224490560R2	UDZ5.6B,Zener
D8101,D8102	223234R2 or	1SS352 or
D8201	223233R1	1SS355
D9051	22380022F	RBV402
D9058	224493300R2	UDZ33B,Zener
	Coils	
L8001	231237K220R2	NCH-1477
R8034,R8036	230948R2	BLM21A102F
	Oscillator	
X8001	3010322	CST16.00MXW0C1,Ceramic

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

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C2001	354784799	0.47 μ F,50V,Elect.
C2002	354780339	3.3 μ F,50V,Elect.
C6071,C6171	354741009	10 μ F,16V,Elect.
C6072,C6172	354721019	100 μ F,6.3V,Elect.
C6073-C6075	354741009	10 μ F,16V,Elect.
C6173,C6175	354741009	10 μ F,16V,Elect.
C8001,C8002	354721019	100 μ F,6.3V,Elect.
C8003	354780109	1 μ F,50V,Elect.
C8007	3000078	DX-5R5L104,Super
C8008	375524744	0.47 μ F±5%,50V,Plastic
C8011	354780339	3.3 μ F,50V,Elect.
C8013	354741009	10 μ F,16V,Elect.
C8201,C8202	374722234	0.022 μ F±5%,50V,Plastic
C8203	354741019	100 μ F,16V,Elect.
C9053	354744729	4700 μ F,16V,Elect.
C9054	354741029	1000 μ F,16V,Elect.
C9056	354724719	470 μ F,6.3V,Elect.
C9058,C9060	354741009	10 μ F,16V,Elect.
C9062,C9064	354741009	10 μ F,16V,Elect.
C9063	354780229	2.2 μ F,50V,Elect.
C9065	354762229	2200 μ F,35V,Elect.
C9066	354761029	1000 μ F,35V,Elect.
C9068,C9070	354741009	10 μ F,16V,Elect.
C9069	354780229	2.2 μ F,50V,Elect.
C9071	354781019	100 μ F,50V,Elect.
C9072	354771019	100 μ F,63V,Elect.
C9076	354742229	2200 μ F,16V,Elect.
C9078,C9080	354741009	10 μ F,16V,Elect.
	Resistors	
R6078,R6178	453530224	2.2 Ω±5%,1/2W,Metal
R9051,R9052	452638294	0.82 Ω±5%,1W,Metal
R9053	452630154	1.5 Ω±5%,1W,Metal
R9054	452630154	1.5 Ω±5%,1W,Metal
R9055	452630334	3.3 Ω±5%,1W,Metal
R9056	452530334	3.3 Ω±5%,1/2W,Metal
R9057	452530104	1 Ω±5%,1/2W,Metal
R9058,R9059	452630474	4.7 Ω±5%,1W,Metal
R9060,R9066	452530474	4.7 Ω±5%,1/2W,Metal
R9061,R9062	452530824	8.2 Ω±5%,1/2W,Metal
R9067,R9068	442621014	100 Ω±5%,1W,Metal oxide
R9069	442521204	12 Ω±5%,1/2W,Metal oxide
R9070	452630684	6.8 Ω±5%,1W,Metal
	Fuse holders	
F943-F946	25052133 ⚠	NSCT-1P2031
	Sockets	
JL5623A	25051091	NSCT-7P878
JL9051A	25051107	NSCT-3P894
JL942A	25051113	NSCT-9P900
	Plugs	
P201A	25055785	NPLG-6P741
P203A	25055788	NPLG-9P744
P3012A,P3013A	25055799	NPLG-20P755
P301A,P702A	25055795	NPLG-16P751
P302A	25055786	NPLG-7P742
P701A	25055799	NPLG-20P755
P8002A	25052024,	NSCT-15P1811,
	25050955,	NSCT-15P742,
	25051281,	NSCT-15P1070,
	25051822 or	NSCT-15P1609 or
	25052211	NSCT-15P2108
P8003A	25055789	NPLG-10P745
P801A	25055795	NPLG-16P751
P803A	25055787	NPLG-8P743

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

CIRCUIT NO.	PART NO.		DESCRIPTION
	Terminals		
P8201-P8203	25045504		NPJ-1PDBL319,RI
P8501A	25052034,		NSCT-25P1821,
	25050965,		NSCT-25P752,
	25051291,		NSCT-25P1080,
	25051832 or		NSCT-25P1619 or
	25052221		NSCT-25P2118
	Fuses		
F941,F942	252160	⚠	2.5A-UL/T-237
	Screws		
Q9051B,Q9052B	82143010		3P+10FN(BC),Pan head
Q9054B,Q9055B	82143010		3P+10FN(BC),Pan head
	Heatsinks		
Q9054A,Q9055A	27160391		
Q9051A,Q9052A	27160209		RAD-67

PREAMPLIFIER PC BOARD (NAAF-6628-2)

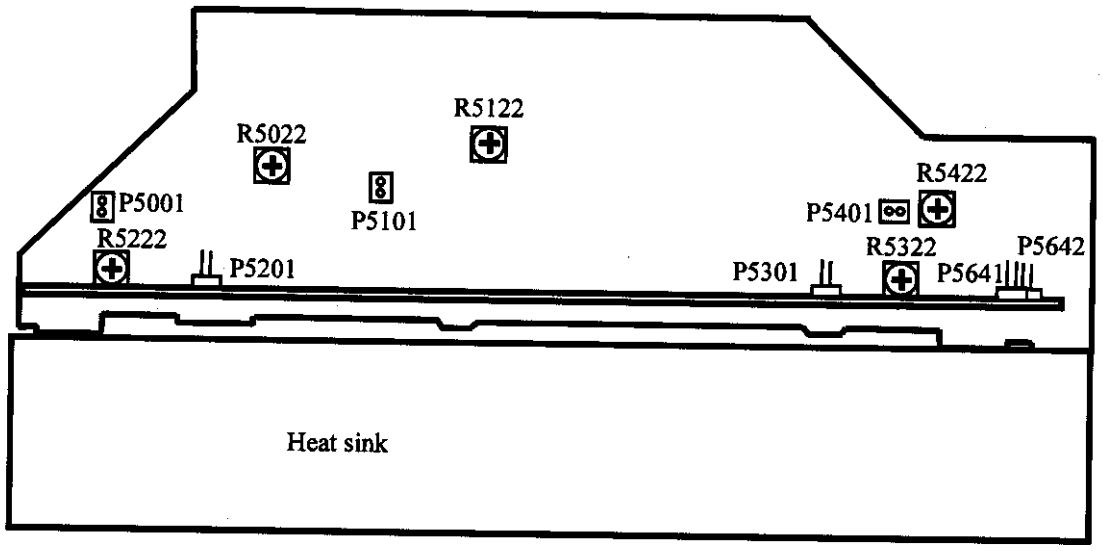
CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q3051,Q3061	22241383R2	NJM4565M-D
Q3071,Q3091	22241383R2	NJM4565M-D
Q4001,Q4101	22241383R2	NJM4565M-D
Q4201,Q4301	22241383R2	NJM4565M-D
Q4601	22240786	TC9274N-006
Q4602	22241221R2	TC9164AF
Q7001,Q7201	22241220R2	TC9459F
Q7011,Q7021	22241383R2	NJM4565M-D
Q7031,Q7431	22241253	TC9184AP
Q7041	22240025	LC4966
Q7211	22241383R2	NJM4565M-D
Q7401	22241220R2	TC9459F
Q7411,Q7421	22241383R2	NJM4565M-D
	Transistors	
Q6001,Q6002	2215410R2	RN1441
Q6101,Q6102	2215410R2	RN1441
Q6201-Q6203	2215410R2	RN1441
Q6301-Q6303	2215410R2	RN1441
Q6401-Q6403	2215410R2	RN1441
Q6501,Q6502	2215410R2	RN1441
Q6601	2214470R2	RN1402
Q6602	2214550R2	RN2404
Q6605	2214470R2	RN1402
	Diodes	
D7201,D7202	224490910R2	UDZ9.1B,Zener
	Capacitors	
C3053,C3054	354784709	47 μ F,50V,Elect.
C3063,C3064	354784709	47 μ F,50V,Elect.
C3067,C3077	374726224	6200pF±5%,50V,Plastic
C3068,C3078	374721824	1800pF±5%,50V,Plastic
C3069,C3070	354741009	10 μ F,16V,Elect.
C3073,C3074	354784709	47 μ F,50V,Elect.
C3079,C3080	354741009	10 μ F,16V,Elect.
C3093,C3094	354741009	10 μ F,16V,Elect.
C3097,C3098	354721019	100 μ F,6.3V,Elect.
C4005,C4105	374721244	0.12 μ F±5%,50V,Plastic
C4006,C4106	374724734	0.047 μ F±5%,50V,Plastic
C4602,C4604	354741009	10 μ F,16V,Elect.
C6051,C6151	374721015	100pF±10%,50V,Plastic
C6604	354781009	10 μ F,50V,Elect.
C7001,C7002	393884707	47 μ F,50V,Elect.
C7003,C7004	354744709	47 μ F,16V,Elect.
C7011,C7111	354741009	10 μ F,16V,Elect.
C7013,C7113	354780229	2.2 μ F,50V,Elect.
C7015,C7024	393884707	47 μ F,50V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C7033,C7034	374721534	0.015 μ F±5%,50V,Plastic
C7035,C7036	374724724	4700pF±5%,50V,Plastic
C7039,C7040	374721234	0.012 μ F±5%,50V,Plastic
C7041,C7042	374728234	0.082 μ F±5%,50V,Plastic
C7045,C7046	354744709	47 μ F,16V,Elect.
C7115,C7124	393884707	47 μ F,50V,Elect.
C7201,C7203	354744709	47 μ F,16V,Elect.
C7202,C7205	354784709	47 μ F,50V,Elect.
C7204,C7206	354741009	10 μ F,16V,Elect.
C7211,C7311	354741009	10 μ F,16V,Elect.
C7213,C7313	354744709	47 μ F,16V,Elect.
C7401,C7402	354744709	47 μ F,16V,Elect.
C7403,C7404	354784709	47 μ F,50V,Elect.
C7411,C7511	354741009	10 μ F,16V,Elect.
C7413,C7513	354780229	2.2 μ F,50V,Elect.
C7415,C7422	354784709	47 μ F,50V,Elect.
C7515,C7522	354744709	47 μ F,16V,Elect.
C7431	374721534	0.015 μ F±5%,50V,Plastic
C7432	374724724	4700pF±5%,50V,Plastic
C7434,C7534	374721234	0.012 μ F±5%,50V,Plastic
C7435	374728234	0.082 μ F±5%,50V,Plastic
C7524	374722734	0.027 μ F±5%,50V,Plastic
C7534	374721234	0.012 μ F±5%,50V,Plastic
C7535	374728234	0.082 μ F±5%,50V,Plastic
	Terminals	
P3051	25045584 or	NPJ-6PDBRW395 or
P7051	25045585	NPJ-6PDBRW396
P3052	25045565	NPJ-6PDBL380
	Plug	
P3011B	25055139	NPLG-9P123
	Sockets	
P3012B,P3013B	25051442	NSCT-20P1229

ADJUSTMENT AND CONFIRMATION

1. **Idling current adjustment**

Before Idling adjustment, turn the trimming resistors R5022, R5122, R5222, R5322 and R5422 to counter clockwise.
Connect the DC voltmeter to sockets P5001,P5101, P5201, P5301 and P5401.
After turn POWER to ON, adjust the trimming resistors R5022, R5122, R5222, R5322 and R5422 so that the reading of voltmeter becomes 1.0 mV.
After adjustment, attach the top cover.
Confirm the voltage of above points after five minutes.
When less than 6 mV, readjust the above resistors so that the voltage becomes 6.0 mV.
When 6 mV to 7.5 mV, you are not necessary to adjust.
When more than 7.5 mV, readjust the above resistors so that the voltage becomes 7.5 mV.
Note: No load and No signal



Confirmation of protection circuit

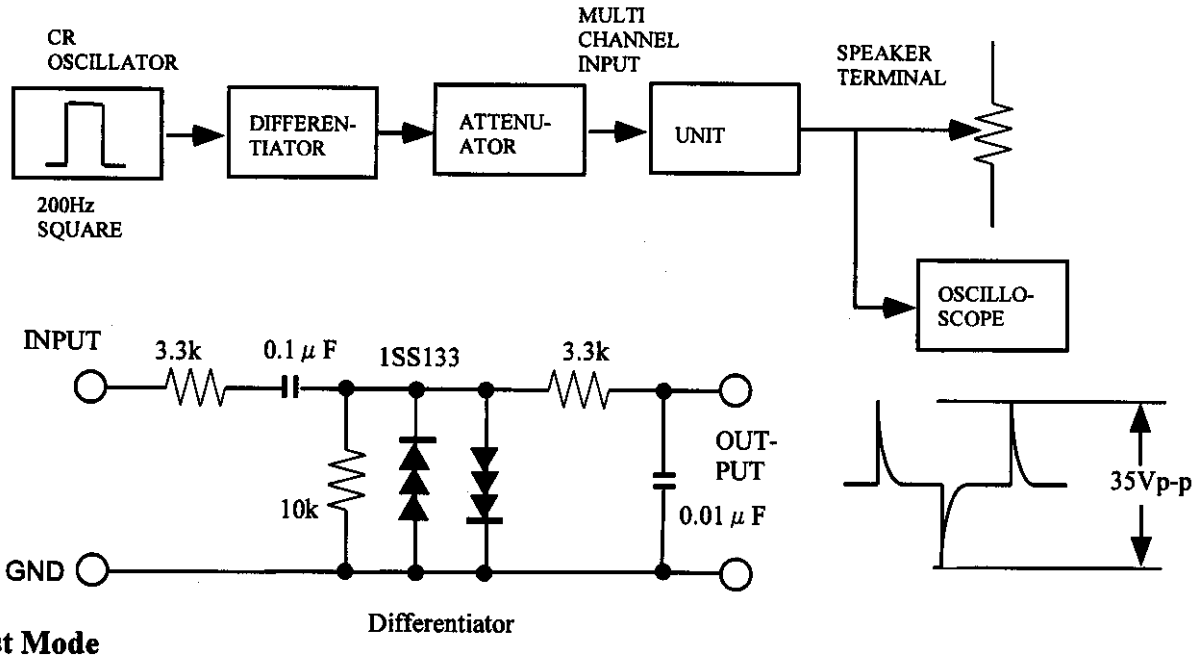
1. Confirmation of speaker relay
Confirm that the speaker relay turns ON approximate 5 seconds after the power switch is turned ON.
Confirm that the speaker relay turns OFF immediately after the power switch is turned OFF.

2. Confirmation of DC detection circuit
Press and hold down CD button, then press SPEAKERS-A and SPEAKERS-B buttons at the same time.
During "TEST-1-00" on the FL tube light on and off, press PRESET/MODE ADJ button.
Apply DC 1.5~3V to MULTI CHANNEL INPUT terminals with no load.
Confirm that the speaker relay turns OFF.
Apply DC -1.5~-3V to MULTI CHANNEL INPUT terminals with no load.
Confirm that the speaker relay turns OFF.

3. Confirmation of Current detection circuit
Press and hold down CD button, then press SPEAKERS-A and SPEAKERS-B buttons at the same time.
During "TEST-1-00" on the FL tube light on and off, press PRESET/MODE ADJ button.
Connect Differentiator below and apply the 200Hz square signal to the terminal of MULTI CHANNEL INPUT.
Adjust the attenuator or Volume so that the output level becomes 35V p-p.
Confirm that the speaker relay does not turn OFF when a 3.0 ohm load is connected.
Confirm that the speaker relay turns OFF when a 1.5 ohm load is connected.

Confirmation of Fan
Set the unit to "TEST-1-00" and apply the signal 1kHz, -30dB (32 mV) to Multi channel inputs except Sub Woofer with no load. Confirm that the fan turns after few seconds.
Connect the 22 ohm resistor between terminal P5642 with no input.
Confirm that the fan turns after few seconds.

Confirmation of thermal detection circuit
Set the unit to "TEST-1-00" and connect the 22 ohm resistor between terminal P5641.
Confirm that "Thermal Protect" on the fluorescent tube light on.

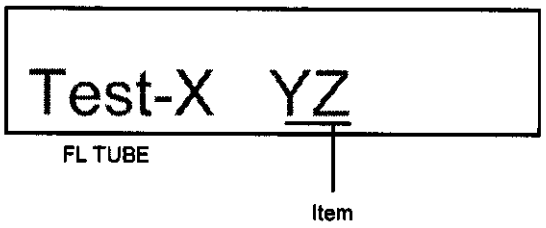


Differentiator

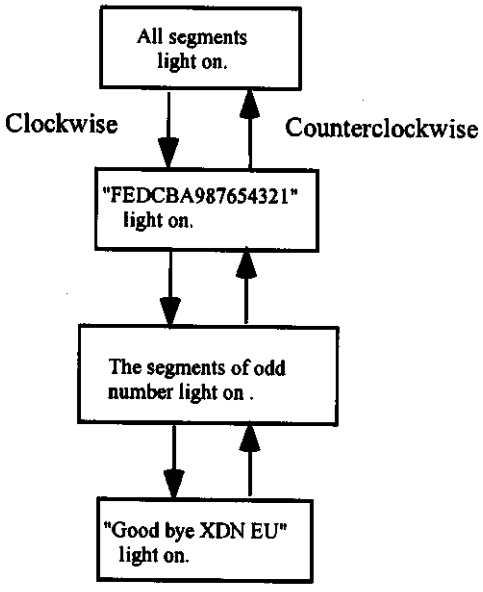
Test Mode

1. Turn POWER button on.
2. Press and hold down CD button, then press SPEAKERS-A and SPEAKERS-B buttons at the same time.
3. During "TEST-1-00" on the FL tube is displayed, press CD button to set the unit to the test mode of FL tube.

Test mode of FL tube



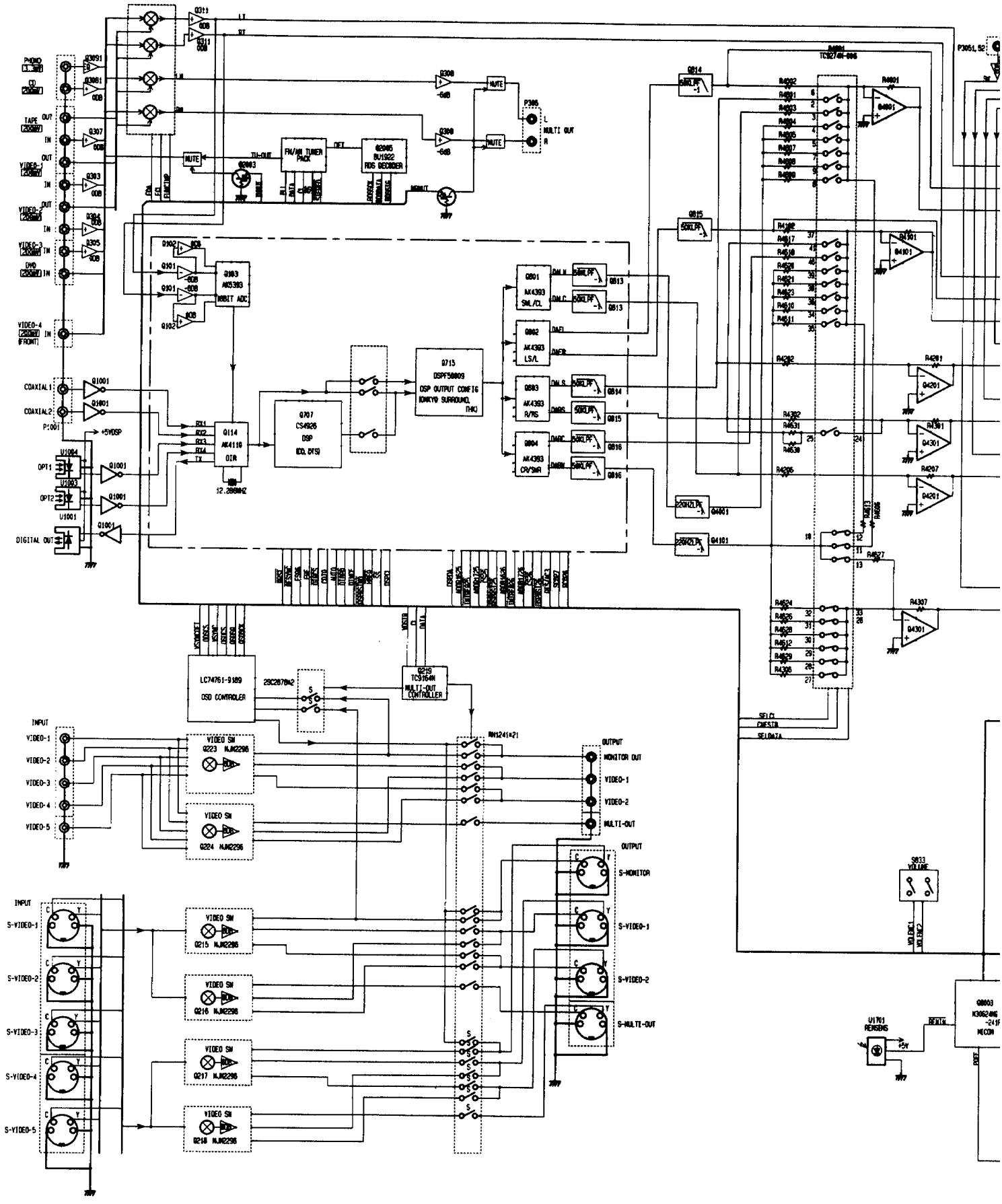
Turn PRESET/MODE ADJ button
to change the test mode of FL tube.

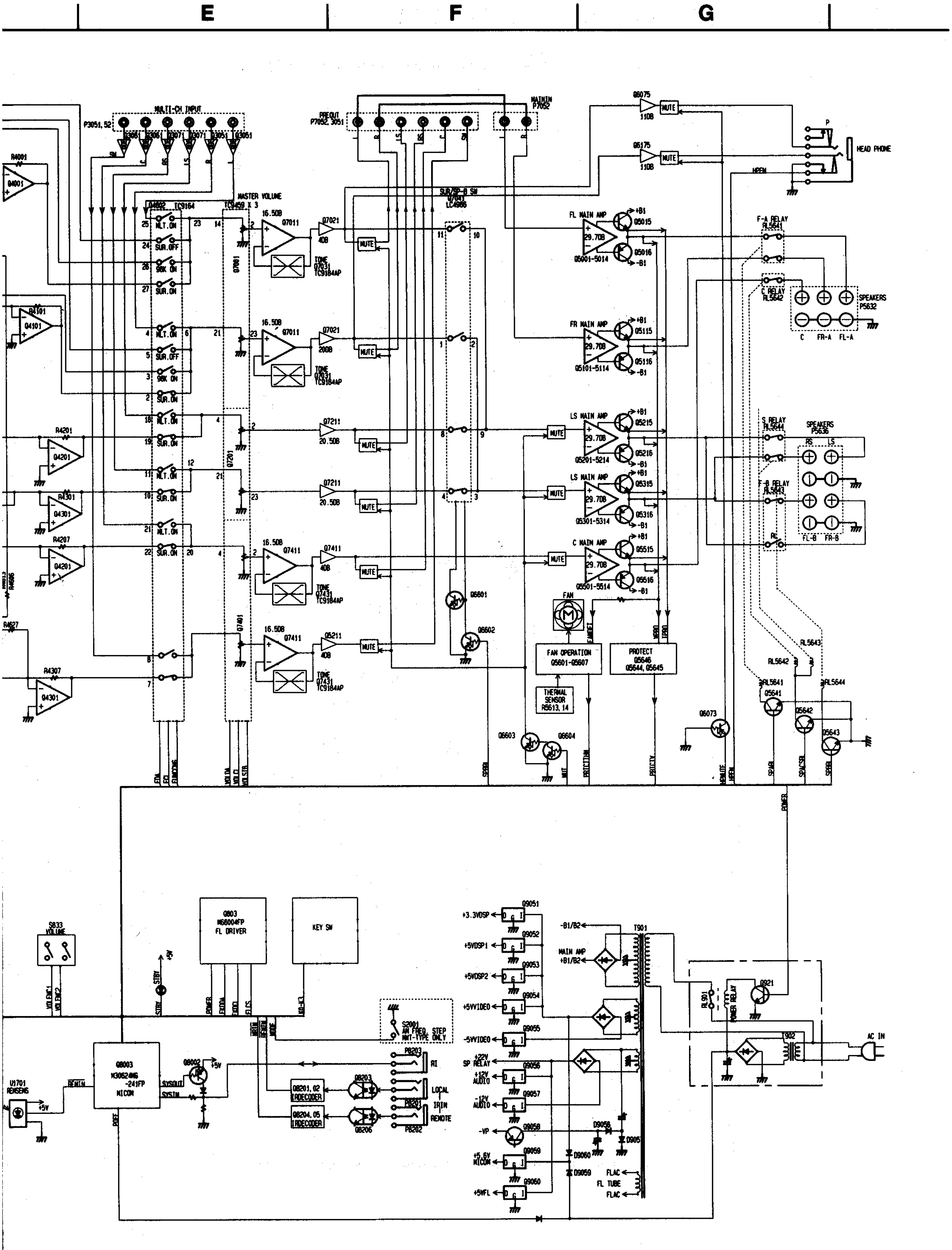


Press PRESET/MODE ADJ button
to finish the test mode of FL tube.

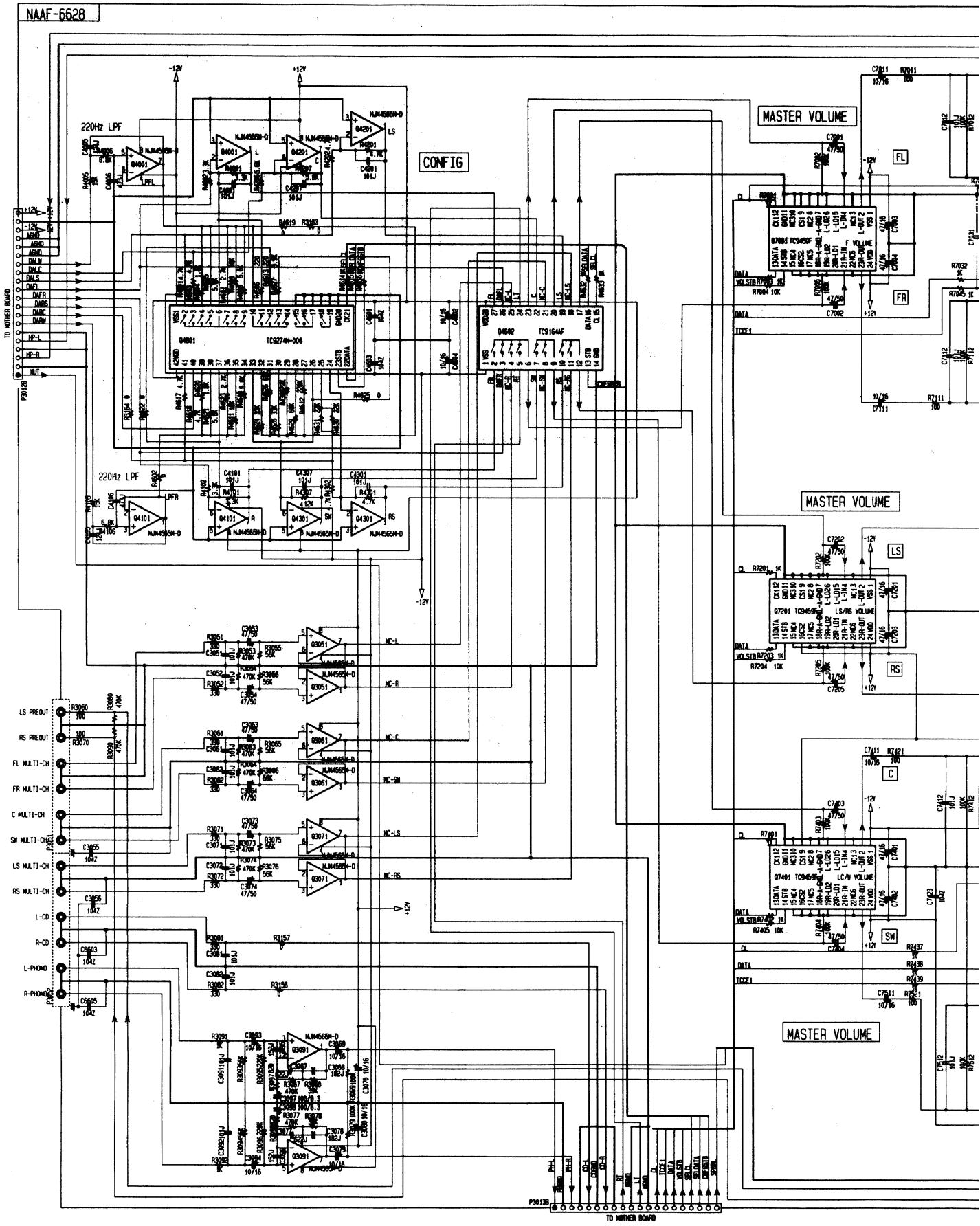
XDN EU
1 2 3 4
1. THX: 1.THX 0:None
2. Digital output:1.Yes 0:No
3. N: 1.NTSC/PAL: Auto PAL 0: NTSC
4. EU:Europe US: USA SA:Saudi JP:Japan

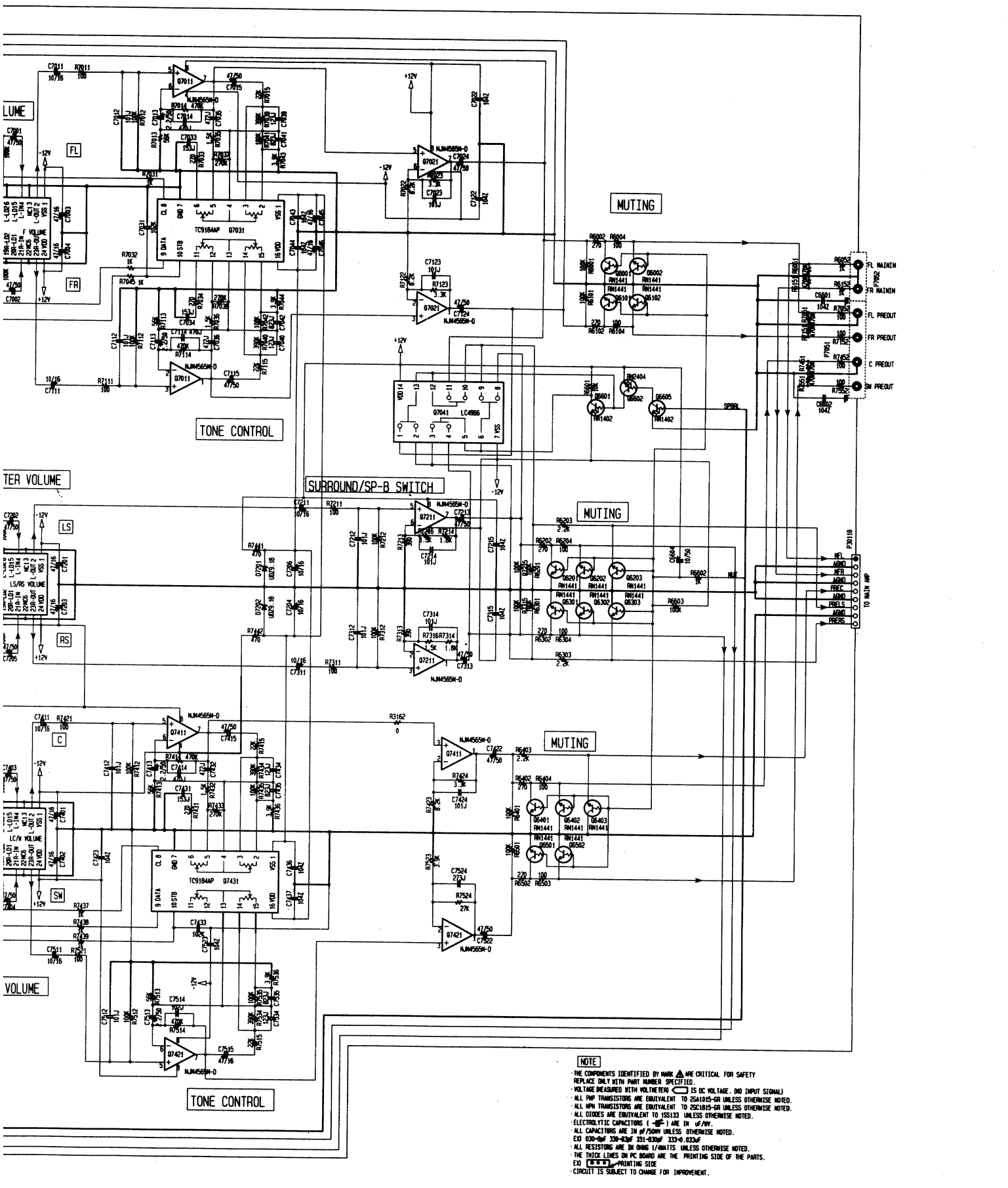
SCHEMATIC DIAGRAM 1



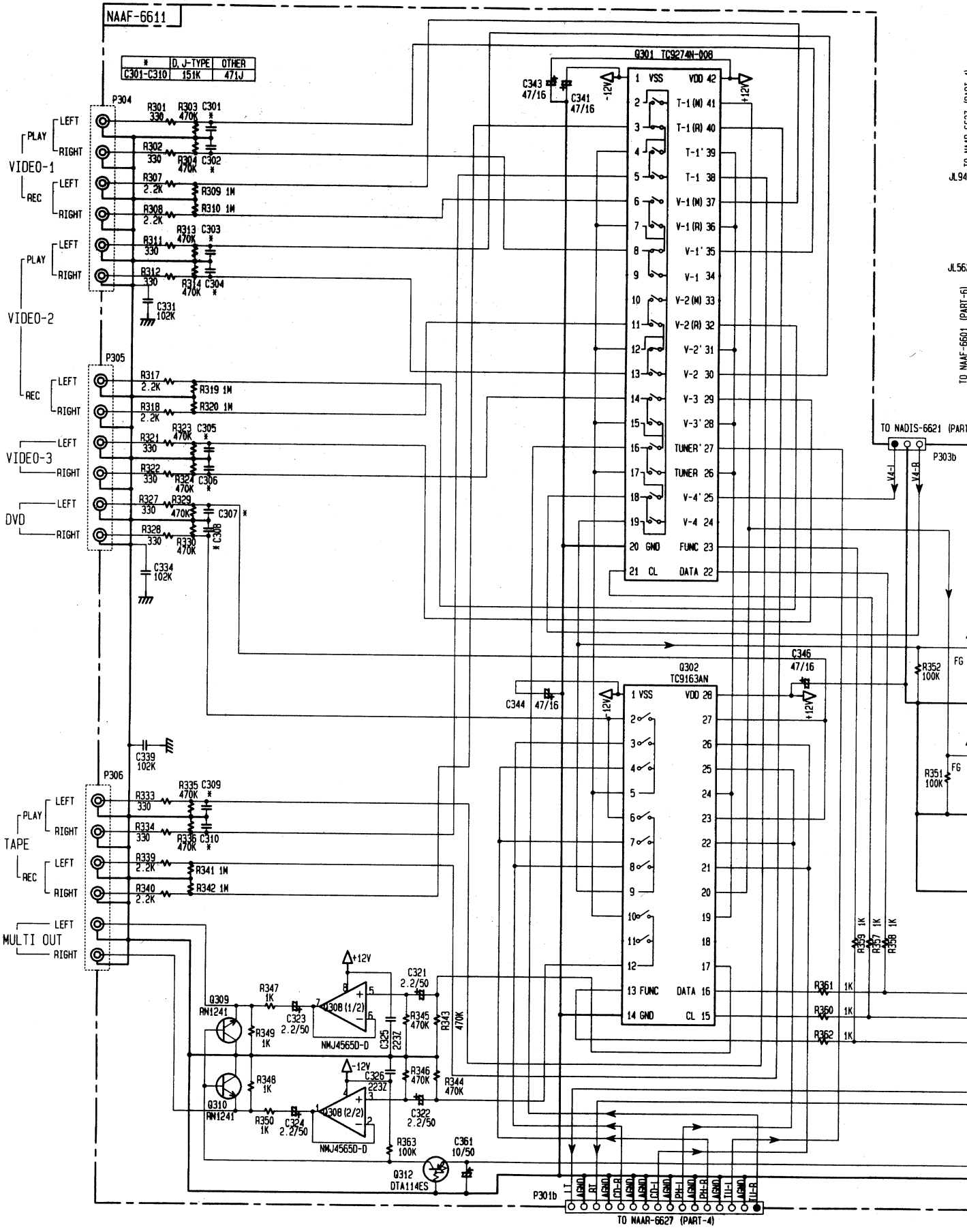

E
F
G
MULTI-CH INPUT
PREOUT
MAININ
HEAD PHONE
MASTER VOLUME
FL MAIN AMP
FR MAIN AMP
LS MAIN AMP
C MAIN AMP
F-A RELAY
C RELAY
S RELAY
F-B RELAY
SPEAKERS
FAN
FAN OPERATION
PROTECT
THERMAL SENSOR
FL DRIVER
KEY SW
MICOM
IRDECODER
AC IN
POWER RELAY

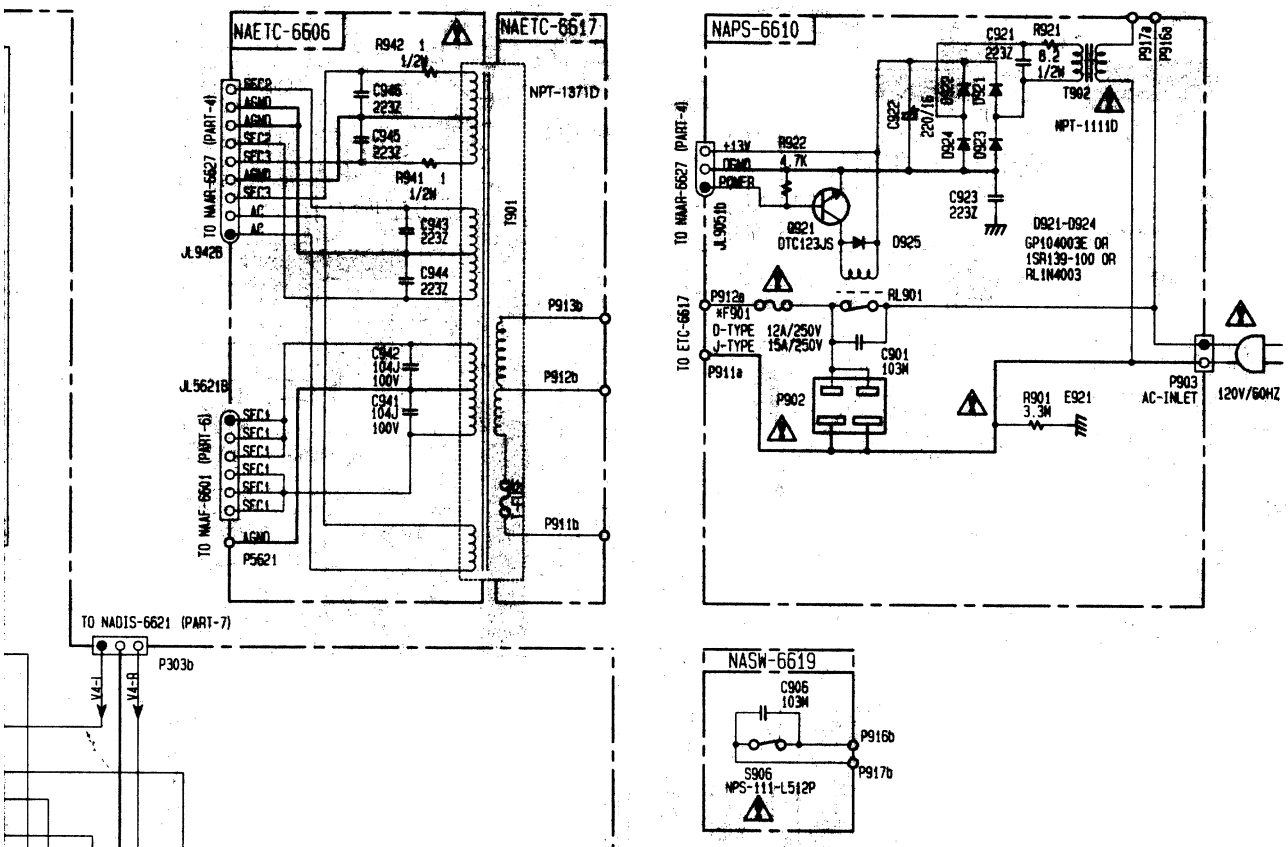
SCHEMATIC DIAGRAM 2

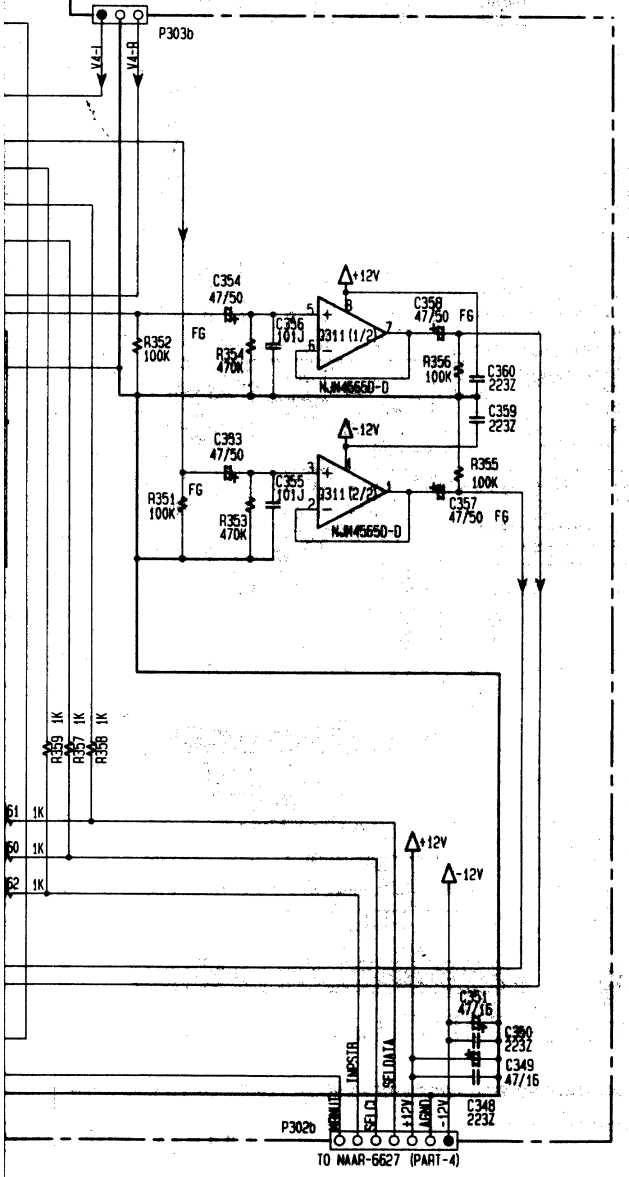



E
F
G
MUTING
TONE CONTROL
SURROUND/SP-B SWITCH
MUTING
MUTING
TONE CONTROL
TC9184AP Q7031
TC9184AP Q7431
LC4966
NJM4565M-D
FL MAININ
FR MAININ
FL PREOUT
FR PREOUT
C PREOUT
SW PREOUT
TO MAIN AMP
NOTE
· THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY REPLACE ONLY WITH PART NUMBER SPECIFIED.
· VOLTAGE MEASURED WITH VOLTMETER ⟨⟩ IS DC VOLTAGE. (NO INPUT SIGNAL)
· ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
· ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
· ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
· ELECTROLYTIC CAPACITORS (-|(-) ARE IN uF/WV.
· ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 030=0pF 330=33pF 331=330pF 333=0.033uF
· ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
· THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) ●●● PRINTING SIDE
· CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAM 3







ATTENTION

AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTLISE EST A LENT, E POUR UNE PROTECTION PERMANENTE, N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOL EST APPOSE.

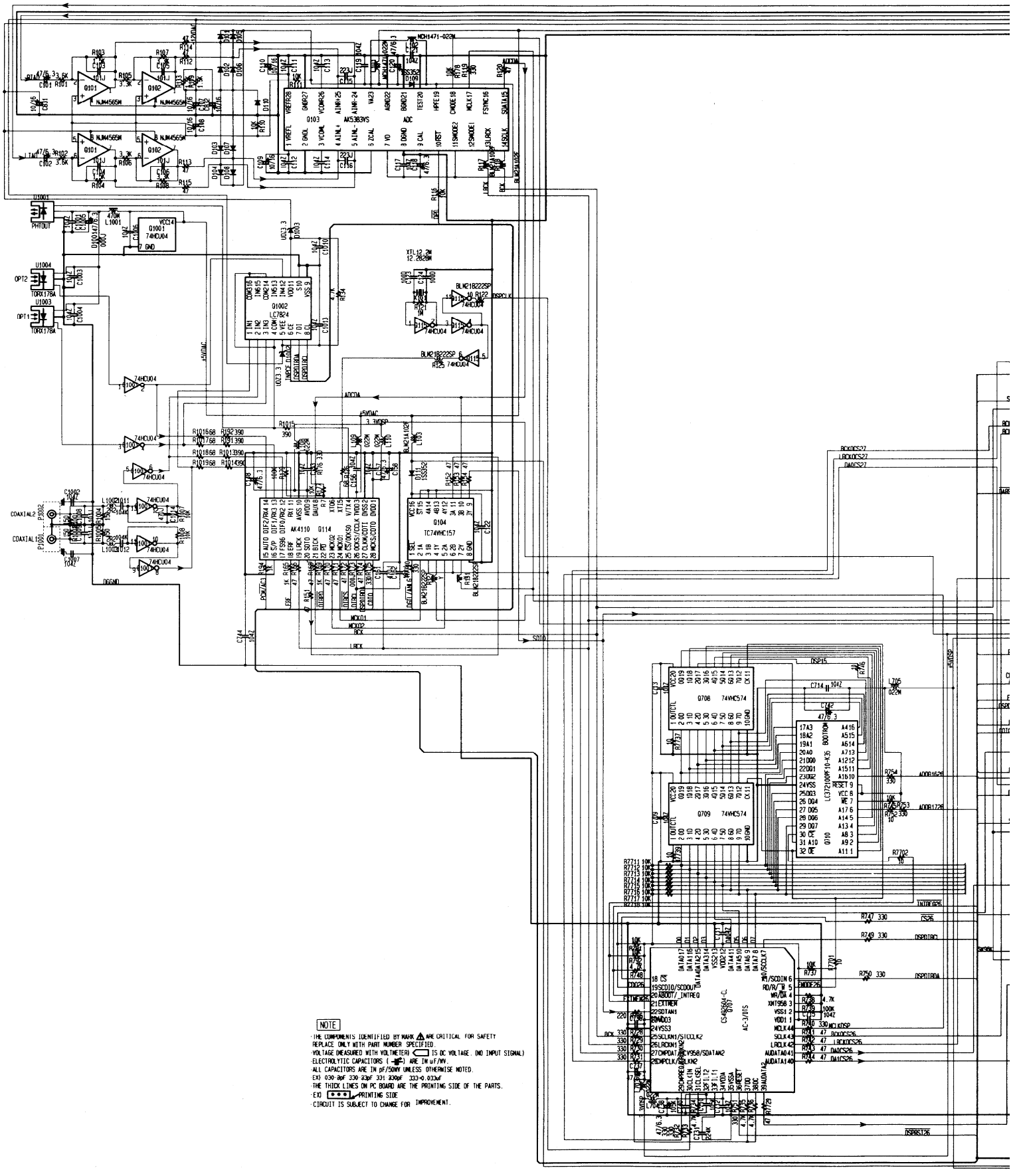
CAUTION

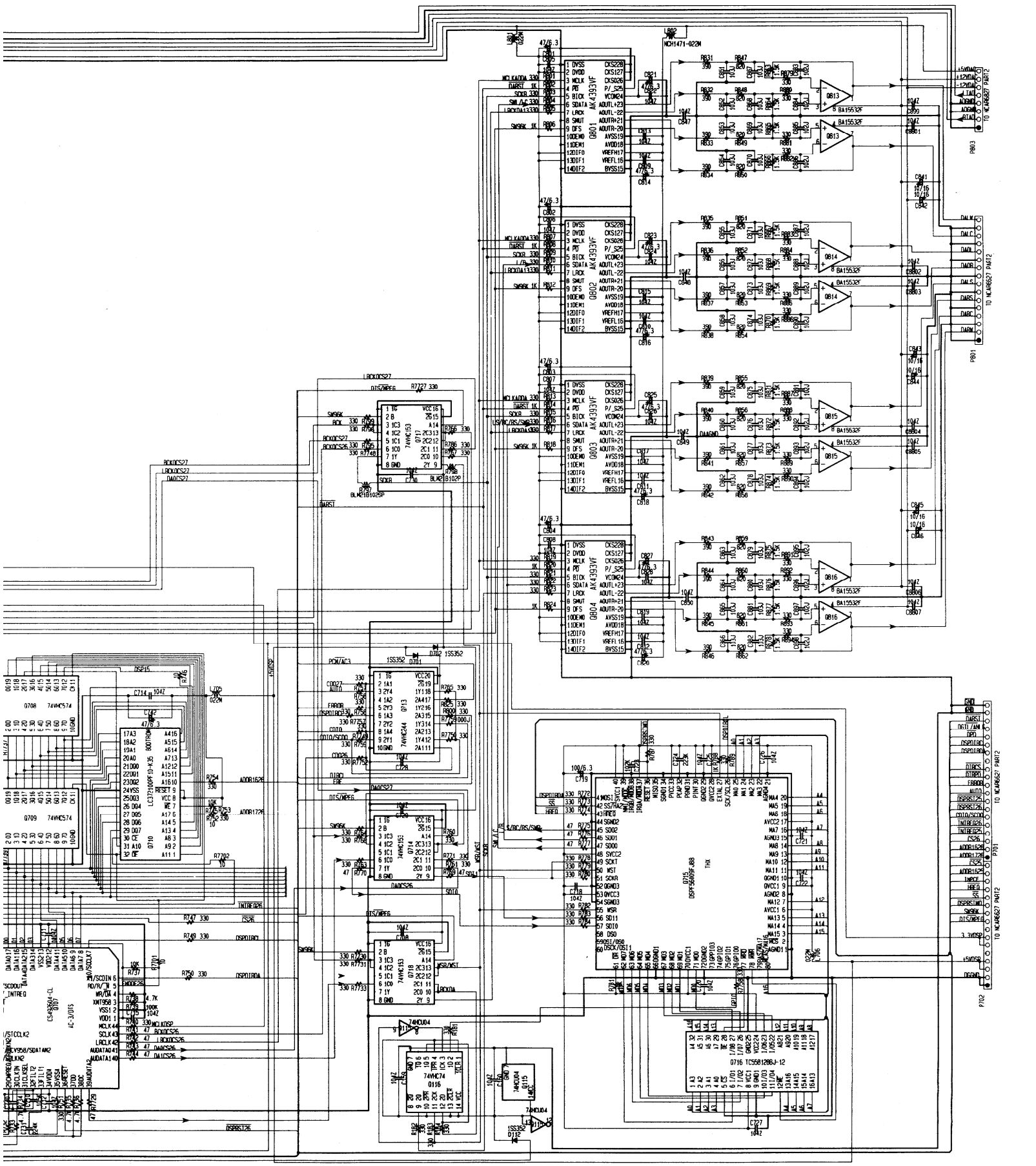
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE FUSE HAZARD, REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MAKING ADJACENT TO THE SYMBOL.

A | B | C | D

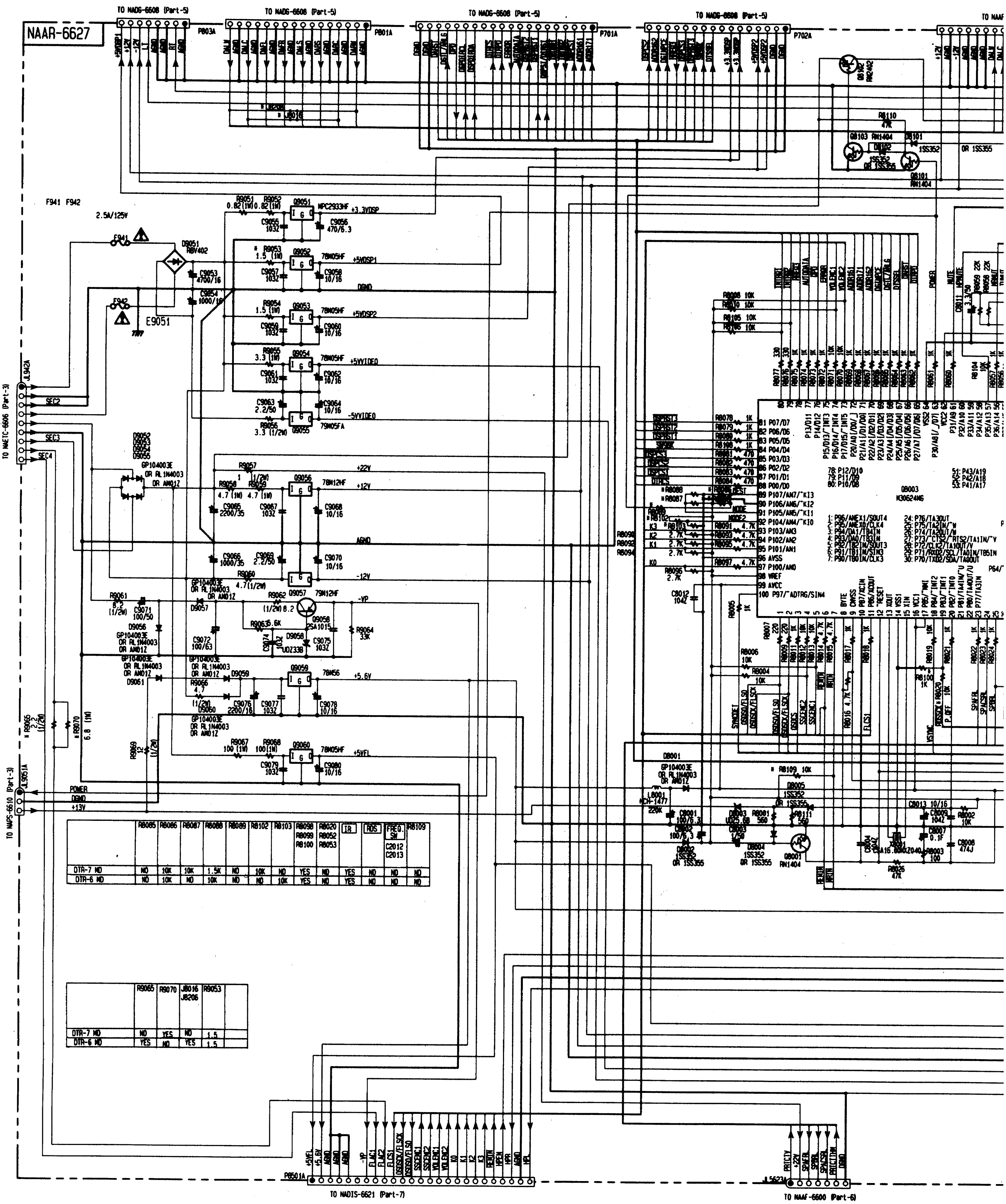
DIAGRAM 5





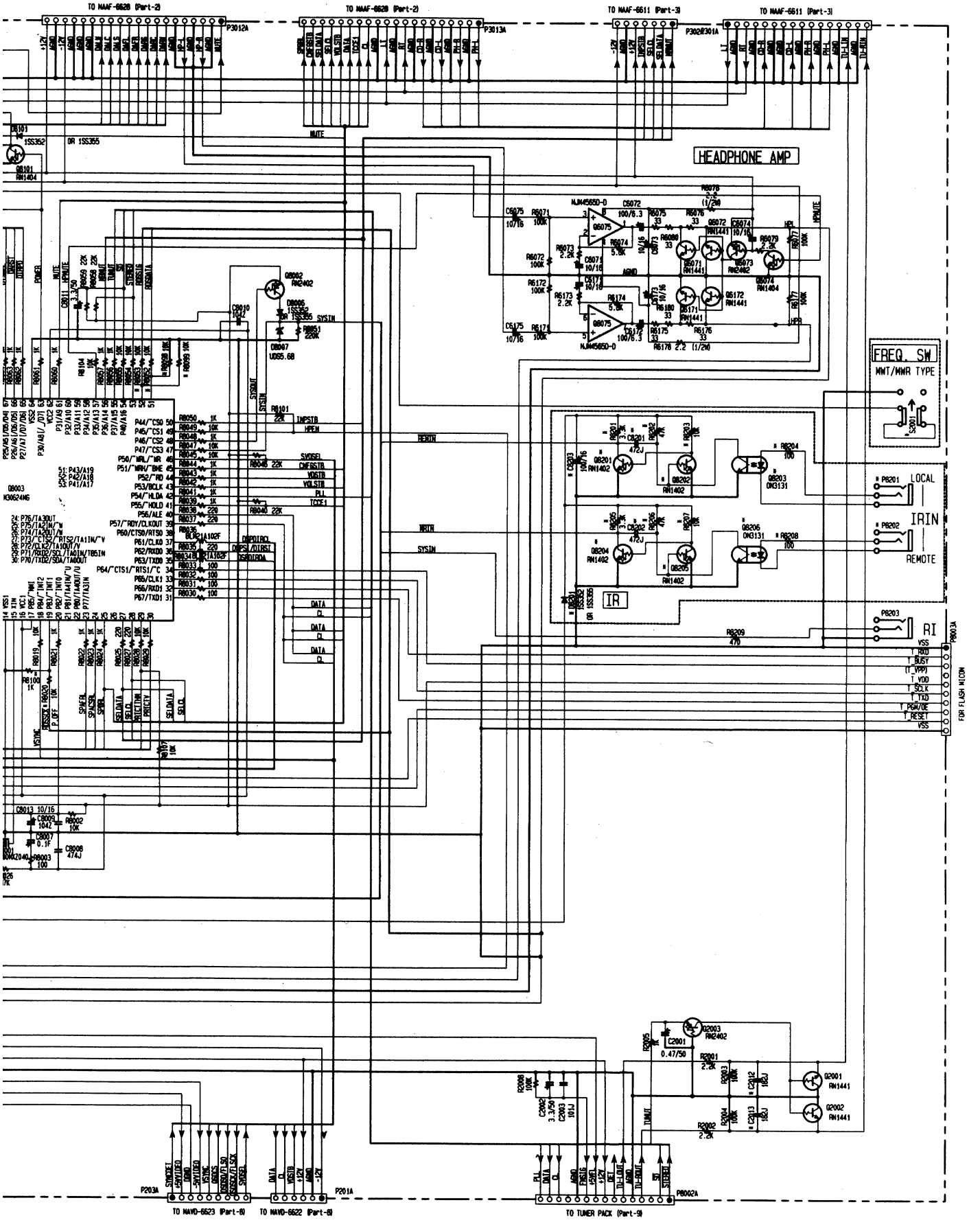
A	B	C	D

SCHEMATIC DIAGRAM 4

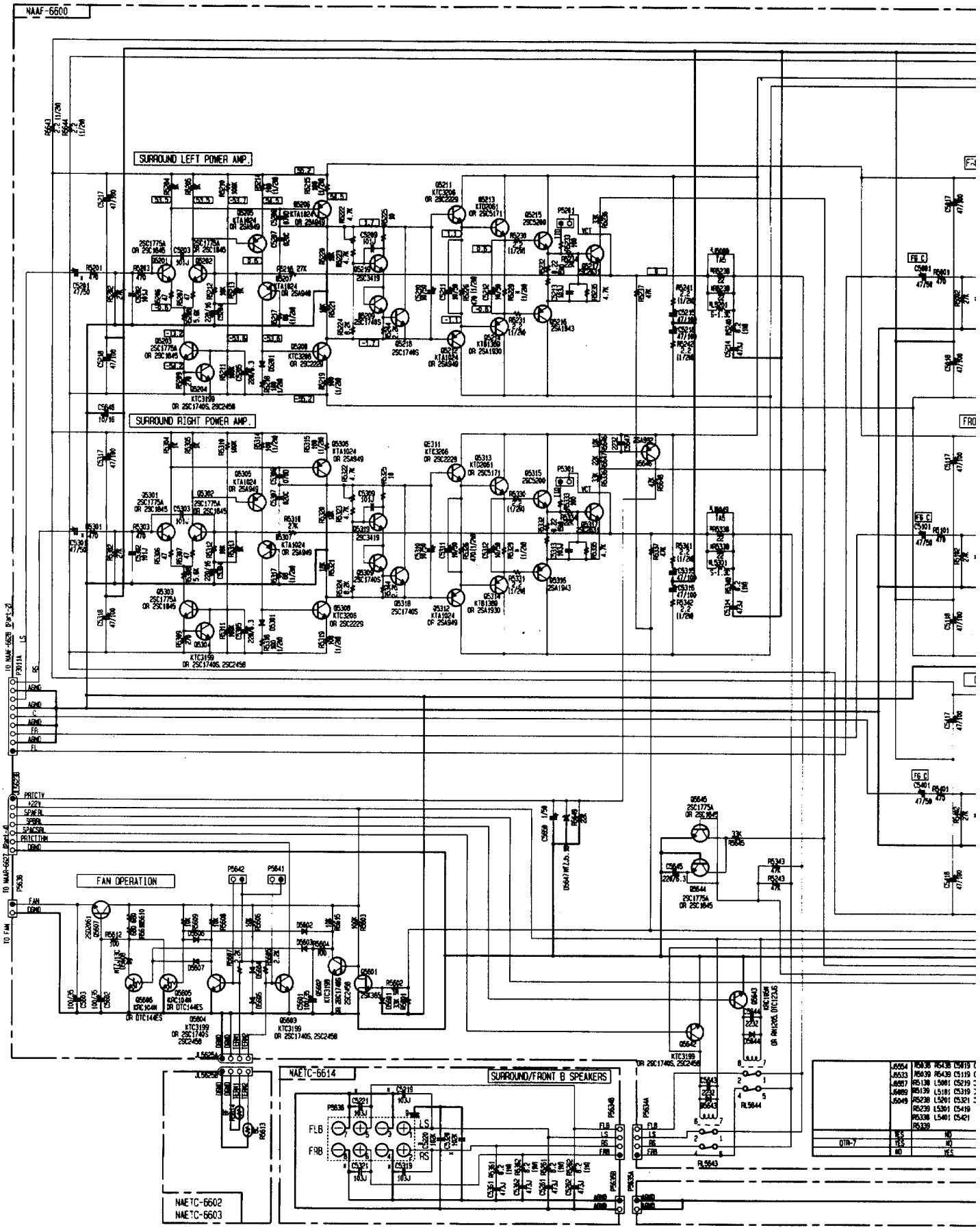


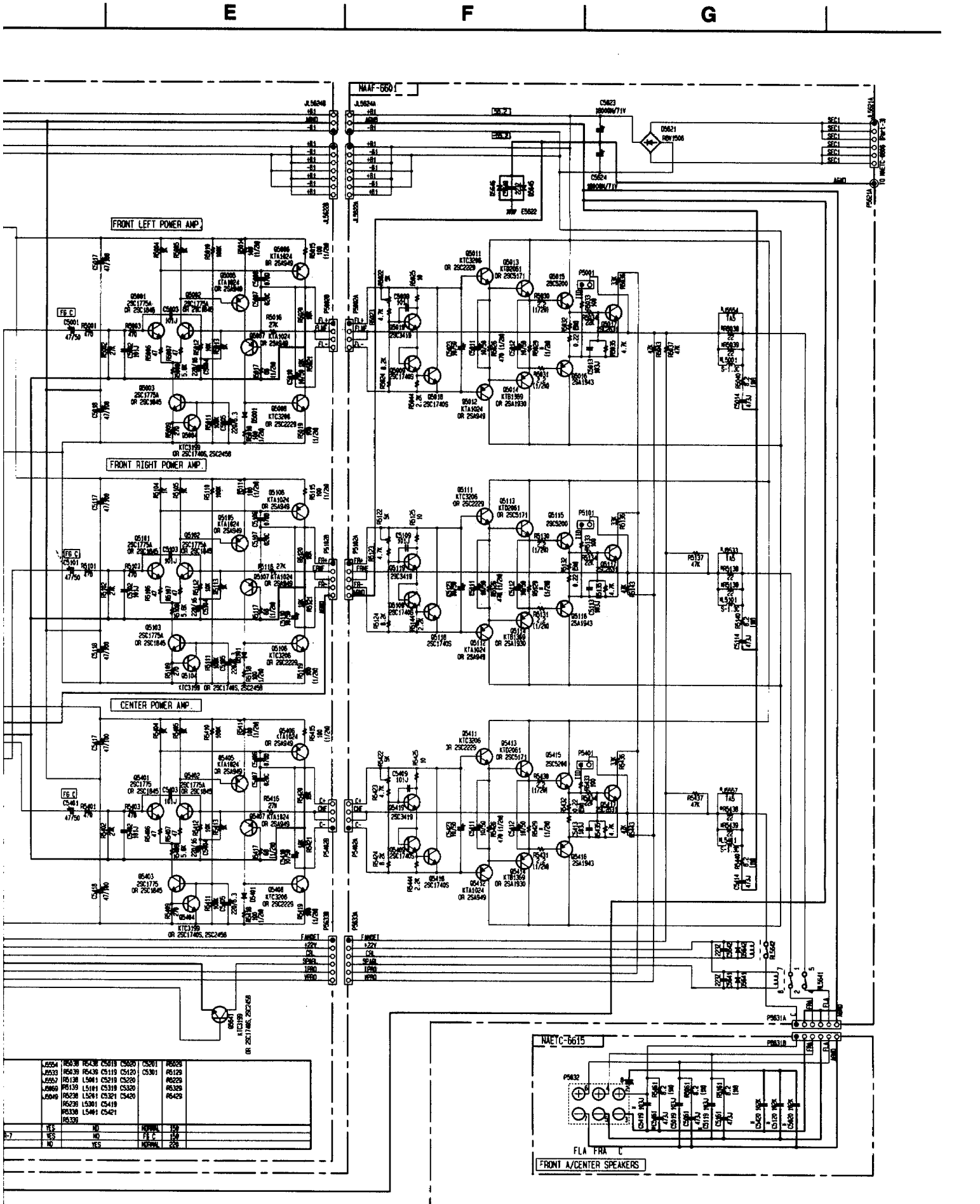
	R8085	R8086	R8087	R8088	R8089	R8102	R8103	R8098 R8099 R8100	R8020 R8052 R8053	IR	RDS	FREQ. SW C2012 C2013	R8109
DTR-7 MD	NO	10K	10K	1.5K	NO	10K	NO	YES	NO	YES	NO	NO	NO
DTR-6 MD	NO	10K	NO	10K	NO	NO	10K	YES	NO	YES	NO	NO	NO

	R9065	R9070	J8016 J8206	R9053	
DTR-7 MD	NO	YES	NO	1.5	
DTR-6 MD	YES	NO	YES	1.5	

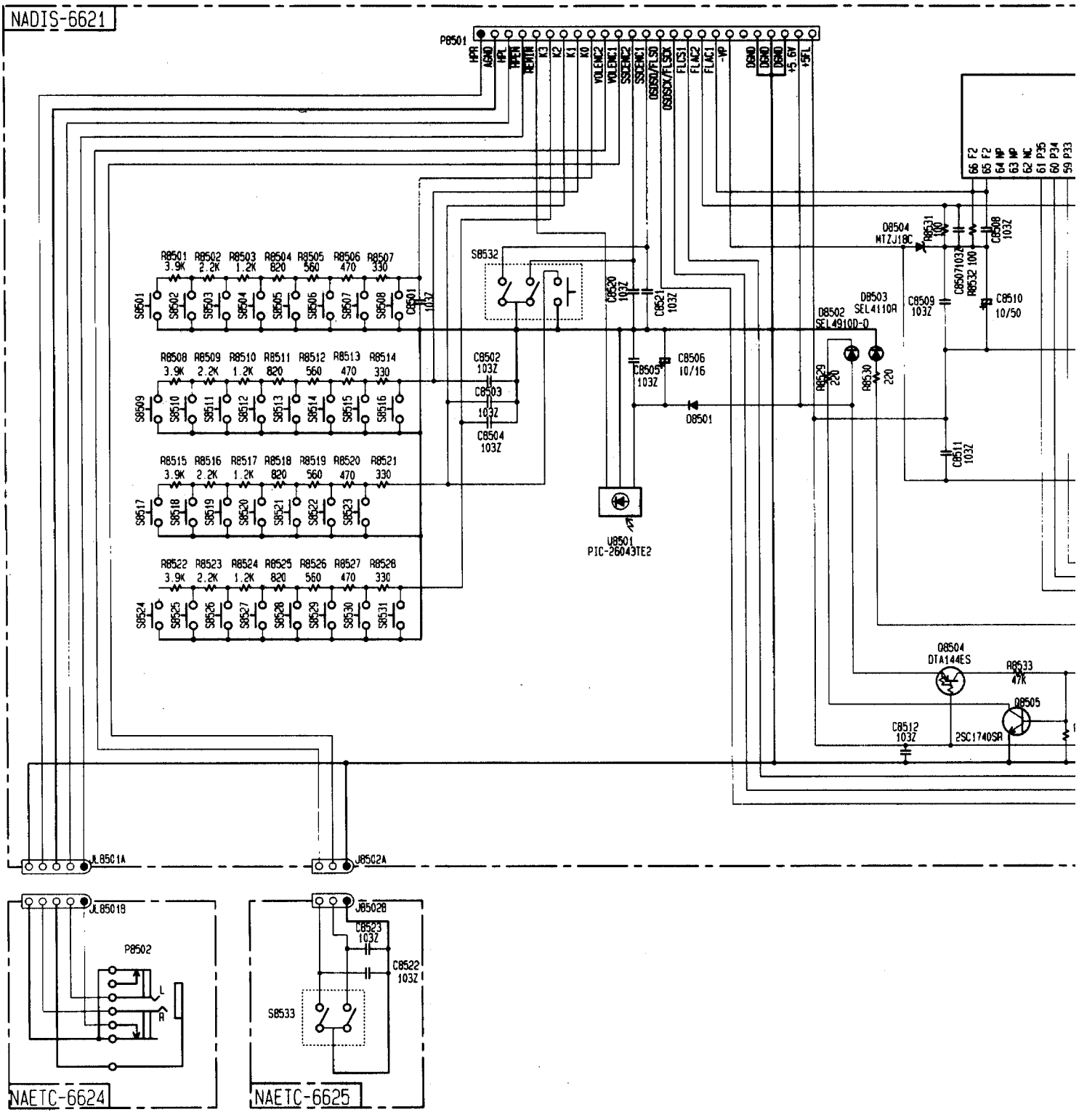

E
F
G
HEADPHONE AMP
FREQ. SW
MWT/MWR TYPE
LOCAL
IRIN
REMOTE
IR
RI
FOR FLASH MICON
TO NAAF-6628 (Part-2)
TO NAAF-6629 (Part-2)
TO NAAF-6611 (Part-3)
TO NAAF-6611 (Part-3)
TO NAVD-6623 (Part-8)
TO NAVD-6622 (Part-8)
TO TUNER PACK (Part-9)

SCHEMATIC DIAGRAM 6

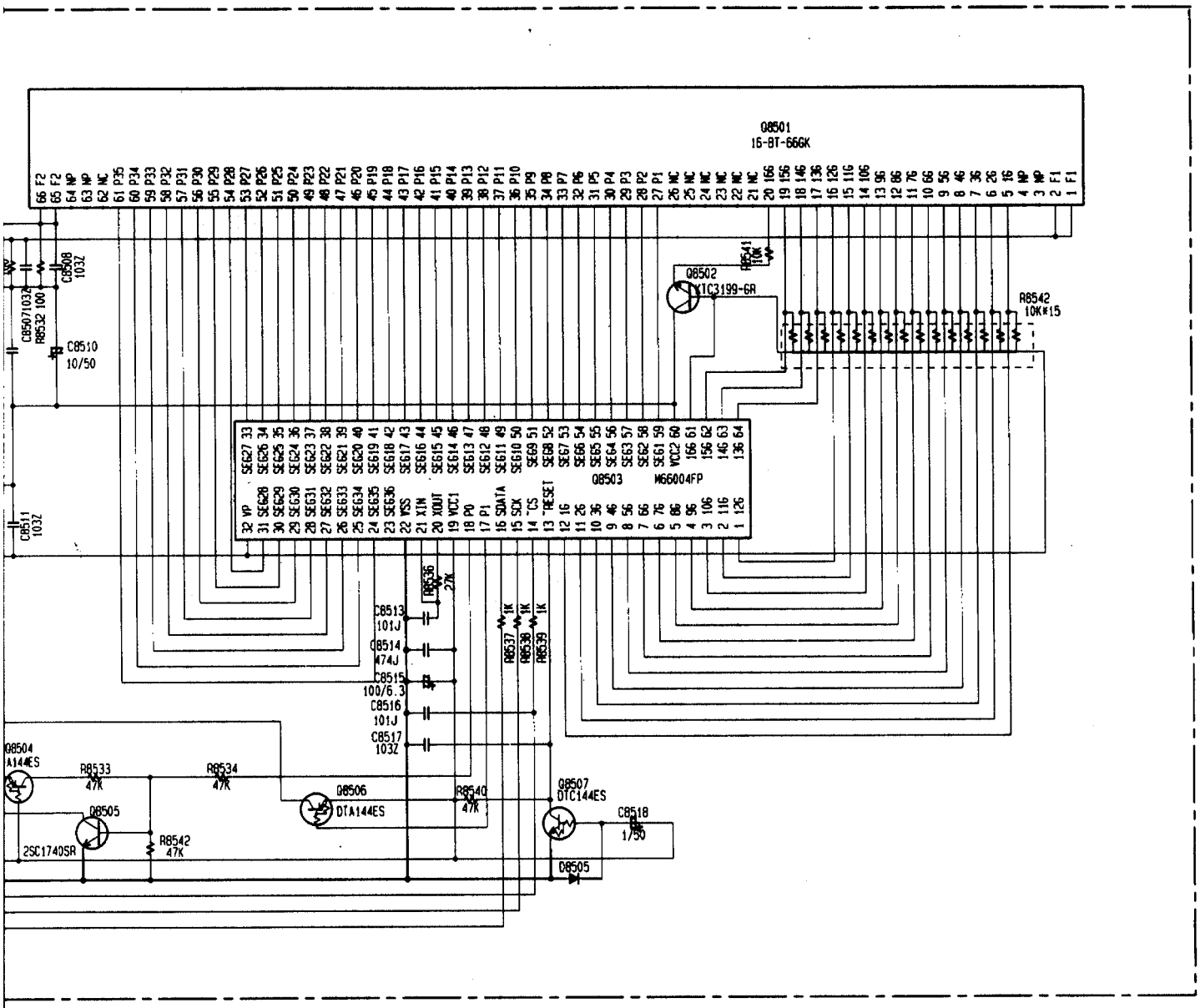



E
F
G
NAAF-6601
FRONT LEFT POWER AMP.
FRONT RIGHT POWER AMP.
CENTER POWER AMP.
NAETC-6615
FRONT A/CENTER SPEAKERS

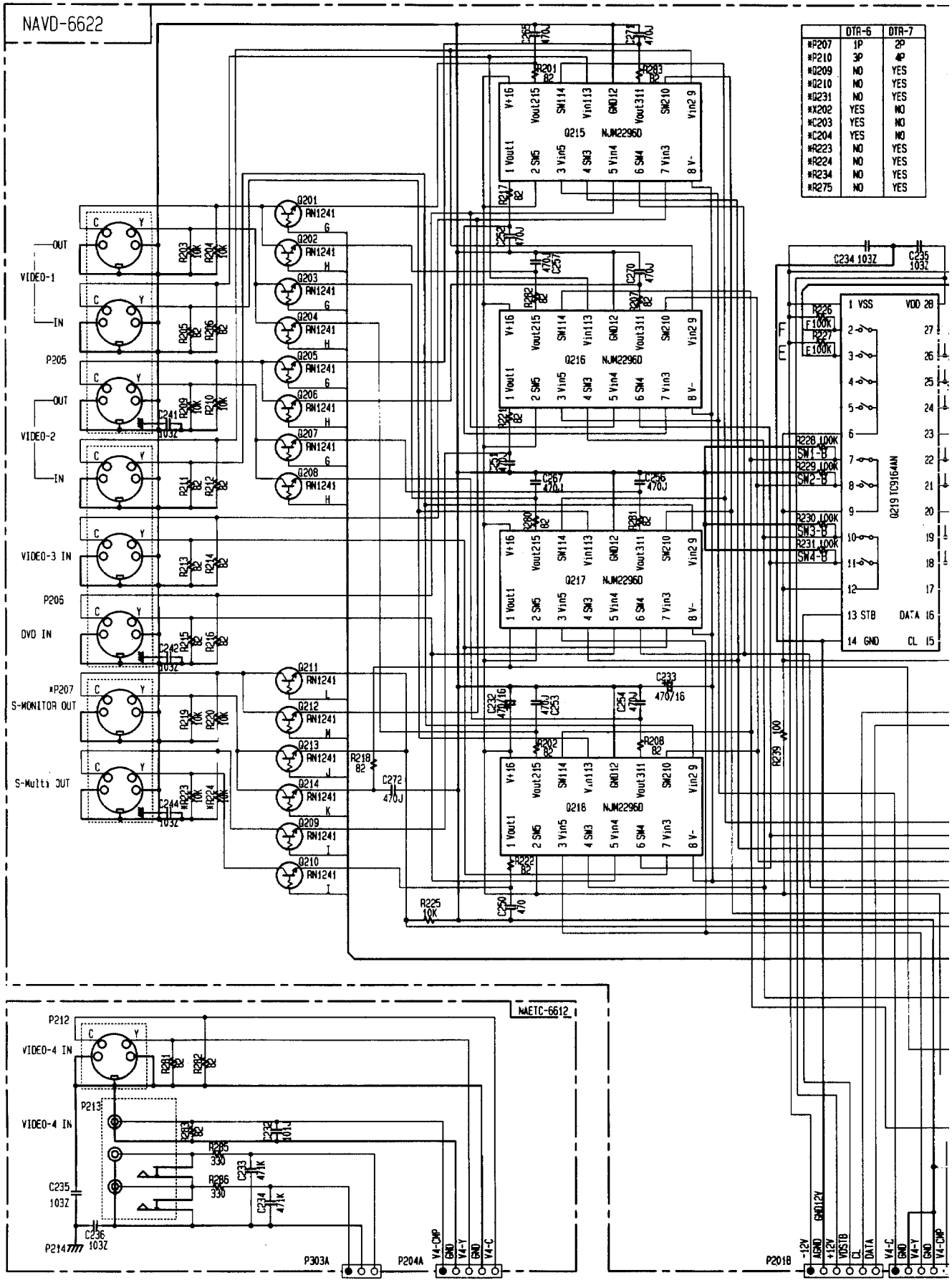
SCHEMATIC DIAGRAM 7



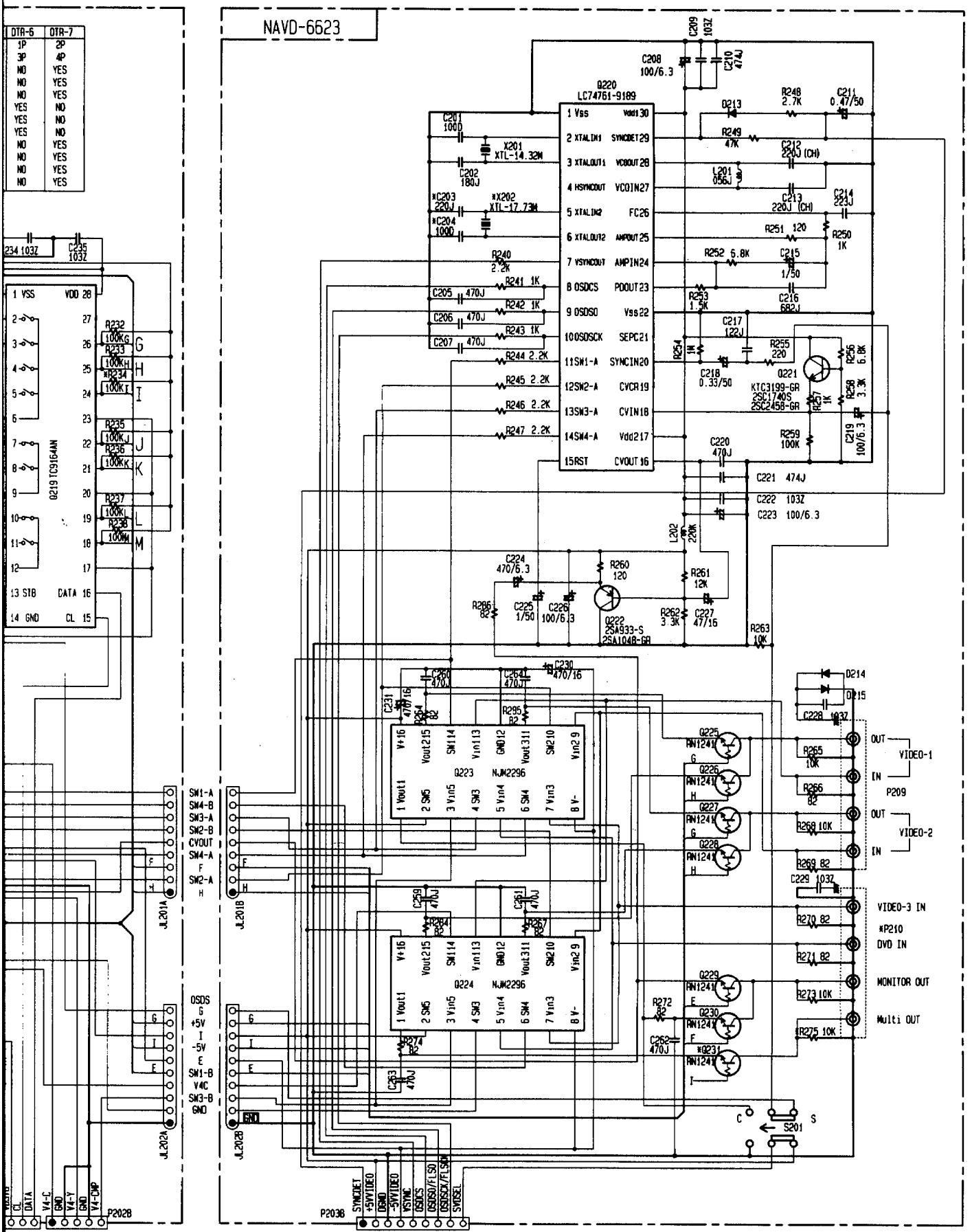
E F G


Q8501
16-BT-66GK
Q8502
KIC3199-GR
Q8503
M66004FP
R8541
10K
R8542
10K*15
C8508
1032
C8507
1032
R8532
100
C8510
10/50
C8511
1032
C8513
101J
C8514
474J
C8515
100/6.3
C8516
101J
C8517
1032
R8536
27K
R8537
1K
R8538
1K
R8539
1K
Q8504
A144ES
R8533
47K
R8534
47K
Q8506
DTA144ES
R8540
47K
Q8507
DTC144ES
C8518
1/50
Q8505
2SC1740SR
R8542
47K
Q8505

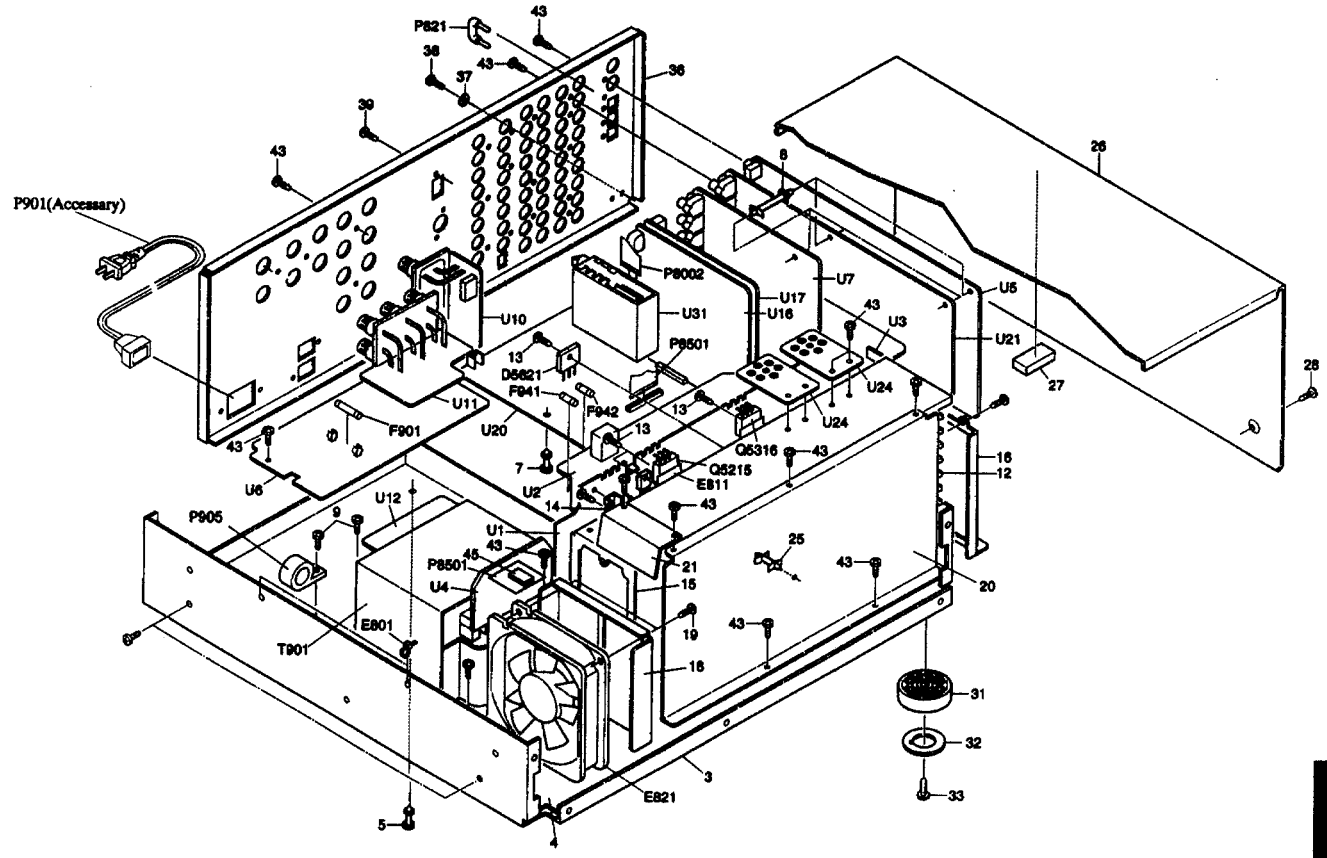
SCHEMATIC DIAGRAM 8

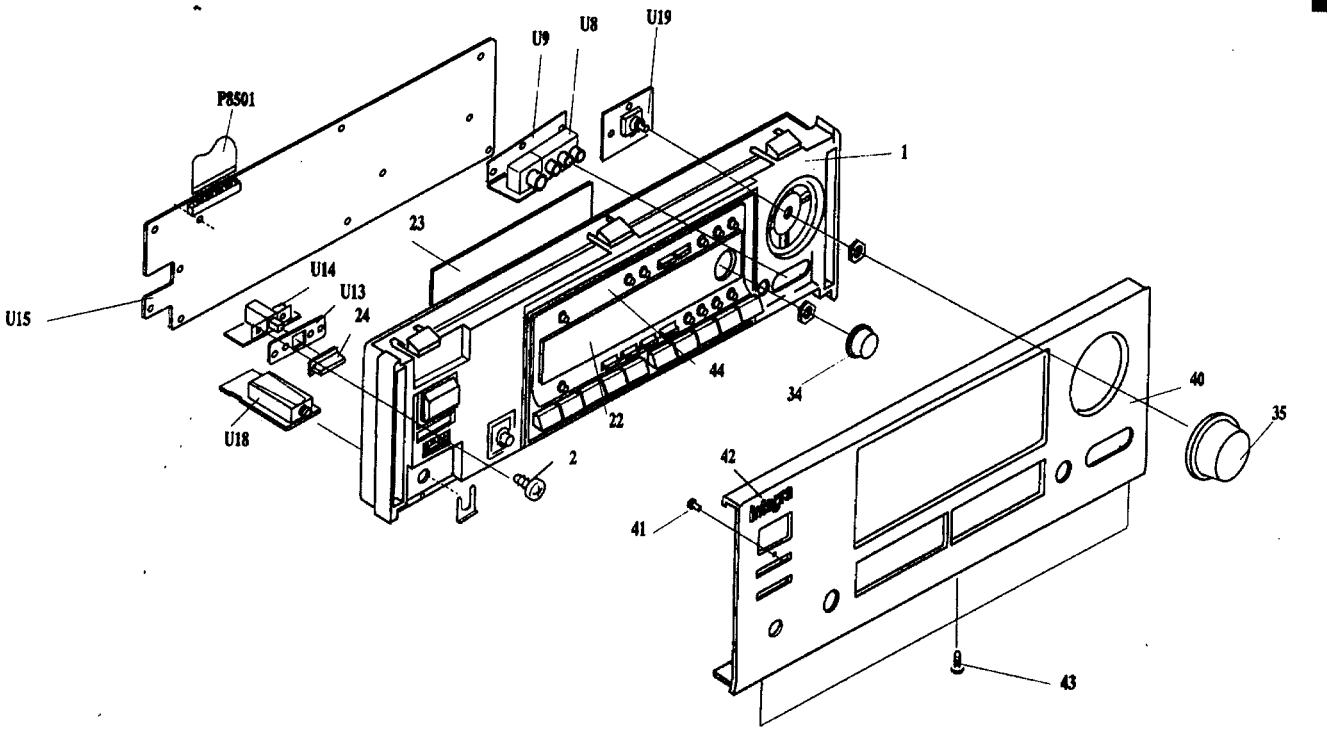


D E F G


NAVD-6623
DTR-6 DTR-7
1P 2P
3P 4P
NO YES
YES NO
Q220 LC74761-9189
Q219 TC9164AN
Q221 KTC3199-GR 2SC1740S 2SC2458-GR
Q222 2SA933-S 2SA104B-GR
Q223 NJM2296
Q224 NJM2296
Q225 RN1241
Q226 RN1241
Q227 RN1241
Q228 RN1241
Q229 RN1241
Q230 RN1241
Q231 RN1241
X201 XTL-14.32M
X202 XTL-17.73M
L201 056J
L202 220K
D213
D214
D215
S201
OUT VIDEO-1
IN
P209
OUT VIDEO-2
IN
VIDEO-3 IN
*P210
DVD IN
MONITOR OUT
Multi OUT
J1.201A
J1.201B
J1.202A
J1.202B
P202A
P202B
SW1-A
SW4-B
SW3-A
SW2-B
CVOUT
SW4-A
SW2-A
OSDS
+5V
-5V
SW1-B
V4C
SW3-B
GND
SYNCDET
+5VVIDEO
DGND
-5VVIDEO
VSYNC
OSDCS
OSDSO/FLSO
OSDSCK/FLSK
SWSEL
CL
DATA
V4-C
V4-Y
V4-CMP

EXPLODED VIEW





PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
1	27111116	Front bracket
2	82143010	3P+10FN(BC),Pan head screw
3	27100373A	Chassis
4	27130824B	Bracket PT
5	27190813	KGPS-10RF,Holder
6	27190965	Holder
7	27190428A	KGLS-10RF,Holder
8	27190470	KGLS-18S,Holder
9	830440089	4TTC+8C(BC),Self-tapping screw
11	27301396	HL-28-0,Clamp
12	27160446B	Heat sink
13	801433	3SMS8W.SW+14B(BC),Special screw
14	27141681	Retainer PWB
15	27141740	Retainer L
16	27141741	Retainer R
18	27141742	Retainer, fan
19	838150108	5TTB+10B,Self-tappping screw
20	27141743	Retainer F
21	27150439	Shield plate
22	28191851A	Clear plate
23	28133387	Back plate
24	28325497A	Knob,Power
25	27190902	KGPS-16S,Holder
26	28184757	Top cover
27	28141272Y	10x60x20,Cushion
28	838430088	3TTB+8B(BC), Self-tapping screw
31	27175319A	Leg
32	28141332	Cushion
33	831430088	3TTW+8B(BC),Self-tapping screw
34	28325668	Knob SS
35	28325669	Knob, Volume
36	27122595	Rear panel
37	87643010	W3*10F(BC),Flat washer
38	838930088	3TTB+8B(UN),Self-tapping screw
39	838430068	3TTB+6B(BC),Self-tapping screw
40	27212108	Front panel
41	28198778	Facet
42	28135275	Badge
43	838130088	3TTB+8B,Self-tapping screw
44	27215328	Decorative frame
45	28141336Y	Cushion
D5621	22380044	RBV-1506,Diode
E801	260208	Wire tie
E811	223025	⚠ AC262,Isolated sheet
E821	24502308	D09T-24PG07(EX),Fan
P905	230945	⚠ NFY-25,Core
F901	252196	⚠ 12A-UL/T-314,Fuse
F941,F942	252160	⚠ 2.5A-UL/T-237,Fuse
P8002	2047151512	NCFC7-151512,Flexible flat cable
P821	25055945	NPLG-2P898,Plug
P8501	2047255012	NCFC7-255012,Flexible flat cable
P901	253295KAW	⚠ AS-UC-1#18,Power supply cord
P905	230945	⚠ NFY-25,Core
Q5015,Q5115	2202822 or	* 2SC5200-R or
Q5215,Q5315	2202823	* 2SC5200-O,Transistor
Q5016,Q5116	2202812 or	* 2SA1943-R or
Q5216,Q5316	2202813	* 2SA1943-O,Transistor
Q5019,Q5119	2212863 or	2SC3419-O or
Q5419	2212864	2SC3419-Y,Transistor
Q5415	2202822 or	* 2SC5200-R or
	2202823	* 2SC5200-O,Transistor
Q5416	2202812 or	* 2SA1943-R or
	2202813	* 2SA1943-O,Transistor
T901	2301410	⚠ NPT-1371D,Power transformer
U1	1A840500-2	NAAF-6600-2,Power amplifier PC board ass'y
U2	1A840501-2	NAAF-6601-2,Front/center power amplifier PC board ass'y
U3	1A840502-2	NAETC-6602-2,Thermal detector PC board ass'y
U4	1A840506-2	NAETC-6606-2,Secondary circuit PC board ass'y
U5	1A840508-2	NADG-6608-2,DSP circuit PC board ass'y
U6	1A840510-2	NAPS-6610-2,Primary circuit PC board ass'y
U7	1A840511-2	NAAF-6611-2,Input terminal PC board ass'y
U8	1A840512-2	NAETC-6612-2,Front video terminal PC board ass'y
U9	1A840513-2	NAETC-6613-2,Holder for PC board
U10	1A840514-2	NAETC-6614-2,Surround/front B speaker terminal PC board ass'y
U11	1A840515-2	NAETC-6615-2,Front/center speaker terminal PC board ass'y
U12	1A840517-2	NAETC-6617-2,Power transformer terminal PC board ass'y
U13	1A840518-2	NASW-6618-2,Holder for PC board
U14	1A840519-2	NASW-6619-2,Power switch PC board ass'y
U15	1A840521-2	NADIS-6621-2,Display circuit PC board ass'y
U16	1A840522-2	NAVD-6622-2,S- video terminal PC board ass'y
U17	1A840523-2	NAVD-6623-2,On-screen PC board ass'y
U18	1A840524-2	NAETC-6624-2,Headphone terminal PC board ass'y
U19	1A840525-2	NAETC-6625-2,Mian volume PC board ass'y
U20	1A840527-2	NAAR-6627-2,Main circuit PC board ass'y
U21	1A840528-2	NAAF-6628-2,Preamplifier PC board ass'y
U24	25136607	NCETC-6607,Holder PC board
U25	25136723	NCETC-6723,Holder PC board
U31	240134	TFCE1U114A,Tuner pack

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