


Integra® SERVICE MANUAL**AUDIO VIDEO
CONTROL RECEIVER
MODEL DTR-7.1**

Black model

BMDD

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 NUMBER 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

Continuous Average Power output (FTC)

All channels: 100 W per channel min. RMS at 8 Ω , 2 channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion. 130 W per channel min. RMS at 6 Ω , 2 channels driven from 1 kHz with no more than 0.1% total harmonic distortion.

Continuous Power output (DIN)	135 W at 6 Ω
Maximum Power output (EIAJ)	160 W at 6 Ω
Dynamic Power Output (Stereo)	2 \times 250 W at 3 Ω 2 \times 210 W at 4 Ω 2 \times 130 W at 8 Ω
Total Harmonic Distortion:	0.08% at rated power 0.08% at 1 W output
IM Distortion:	0.08% at rated power 0.08% at 1 W output
Damping Factor:	60 at 8 Ω
Input Sensitivity and Impedance	
PHONO:	2.5 mV, 50 k Ω
LINE (CD, TAPE, DVD, VIDEO 1-4):	200 mV, 50 k Ω
MULTICHANNEL INPUT (FRONT L/C/R, SURROUND L/R, SURROUND BACK L/R):	200 mV, 50 k Ω
(SUBWOOFER):	36 mV, 50 k Ω
COAXIAL 1, 2 (DIGITAL):	0.5 V _{p-p} , 75 Ω
DVD, VIDEO 1-4:	1 V _{p-p} , 75 Ω 1 V _{p-p} , 75 Ω (Y) 0.28 V _{p-p} , 75 Ω (C)
COMPONENT VIDEO 1, 2:	1 V _{p-p} , 75 Ω (Y) 0.7 V _{p-p} , 75 Ω (PB, PR)
Output Level and Impedance	
Rec out (TAPE, VIDEO 1, 2):	200 mV, 2.2 k Ω
Pre out:	1 V, 470 Ω
ZONE2 OUT:	100 mV, 470 Ω
VIDEO (VIDEO 1, 2, MONITOR OUT):	1 V _{p-p} , 75 Ω 1 V _{p-p} , 75 Ω (Y) 0.28 V _{p-p} , 75 Ω (C)
COMPONENT VIDEO OUT:	1 V _{p-p} , 75 Ω (Y) 0.7 V _{p-p} , 75 Ω (PB, PR)
Phono Overload:	110 mV RMS at 1 kHz, 0.5% T.H.D.
Frequency Response:	20 Hz to 30 kHz: \pm 1 dB (CD in Direct mode) 5 Hz to 100 kHz: +1 dB, -3 dB (CD in Direct mode)
RIAA Deviation:	20 to 20 kHz : \pm 0.8 dB
Tone Control	
Bass:	\pm 10 dB at 100 Hz
Treble:	\pm 10 dB at 10 kHz
Signal-to-Noise Ratio (Stereo)	
Phono:	80 dB (IHF A, 5 mV input)
CD/Tape:	100 dB (IHF A, 0.5 V input)
Muting:	-50 dB

TUNER SECTION

FM

Tuning Range:	87.5 to 108.0 MHz (50-kHz steps)
Usable Sensitivity	
Mono:	11.2 dBf, 1.0 μ V (75 Ω IHF) 0.9 μ V (75 Ω DIN)
Stereo:	17.2 dBf, 2.0 μ V (75 Ω IHF) 23 μ V (75 Ω DIN)
50 dB Quieting Sensitivity	
Mono:	17.2 dBf, 2.0 μ V (75 Ω)
Stereo:	37.2 dBf, 20 μ V (75 Ω)
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
Selectivity:	50 dB (DIN)
AM Suppression Ratio:	50 dB
Total Harmonic Distortion	
Mono:	0.2%
Stereo:	0.3%
Frequency Response:	30 Hz to 15 kHz, \pm 1.0 dB
Stereo Separation:	45 dB at 1 kHz 30 dB at 100 Hz to 10 kHz

AM

Tuning Range:	530 to 1,710 kHz (10 kHz steps)
Usable Sensitivity:	30 μ V
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:	5.5 A
Dimensions (W \times H \times D):	17-1/8" \times 6-7/8" \times 18-1/8"
Weight:	36.4 lbs.


REMOTE CONTROLLER


Transmitter:	Infrared
Signal range:	Approx. 16 ft.
Power supply:	Two "AA" batteries (1.5 V \times 2)

Specifications and features are subject to change without notice.

SERVICE RPOCEDURES

1. Replacing the fuses

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

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

CIRCUIT NO.	PART NO.	DESCRIPTION
F9001	252196	12A-UL/T-314,Fuse
F9201,F9202	252160	2.5A-UL/T-237,Fuse

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 \pm 10% at 500V.

4. Memory Preservation

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

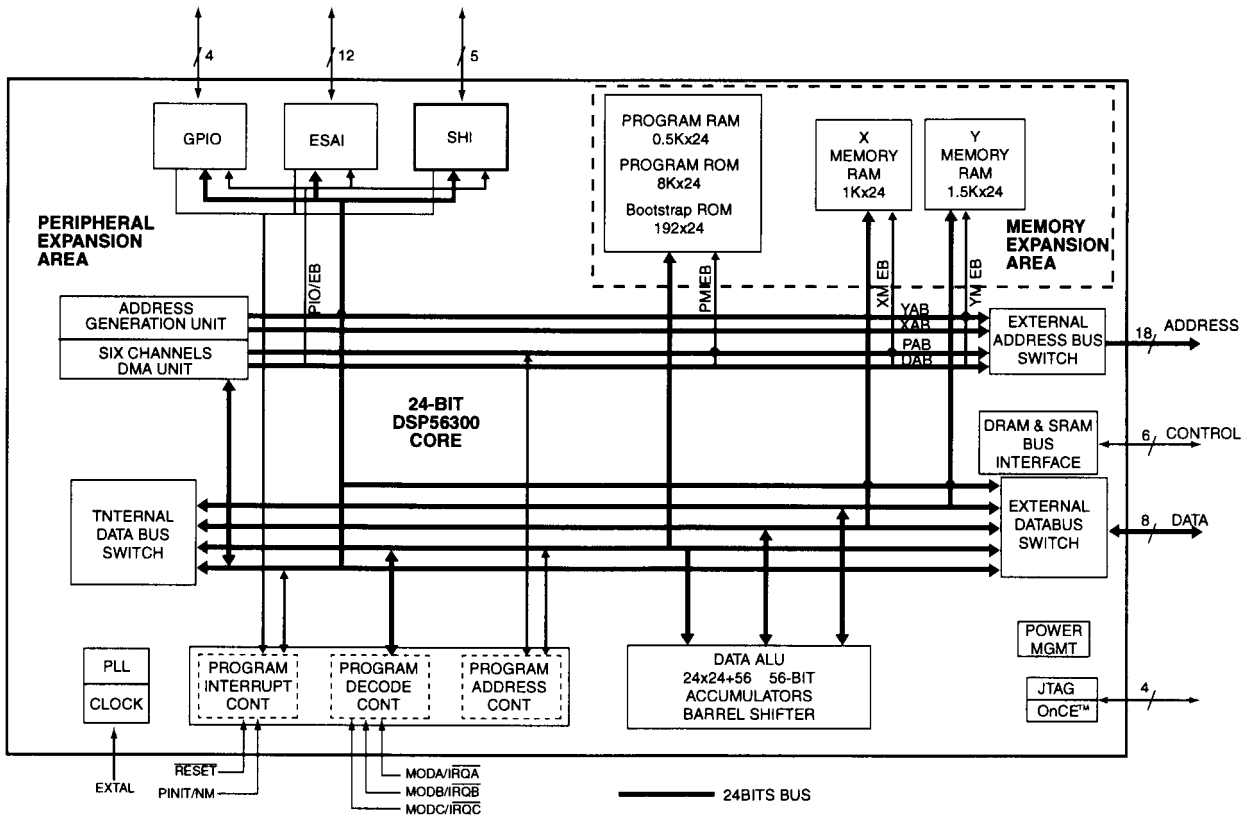
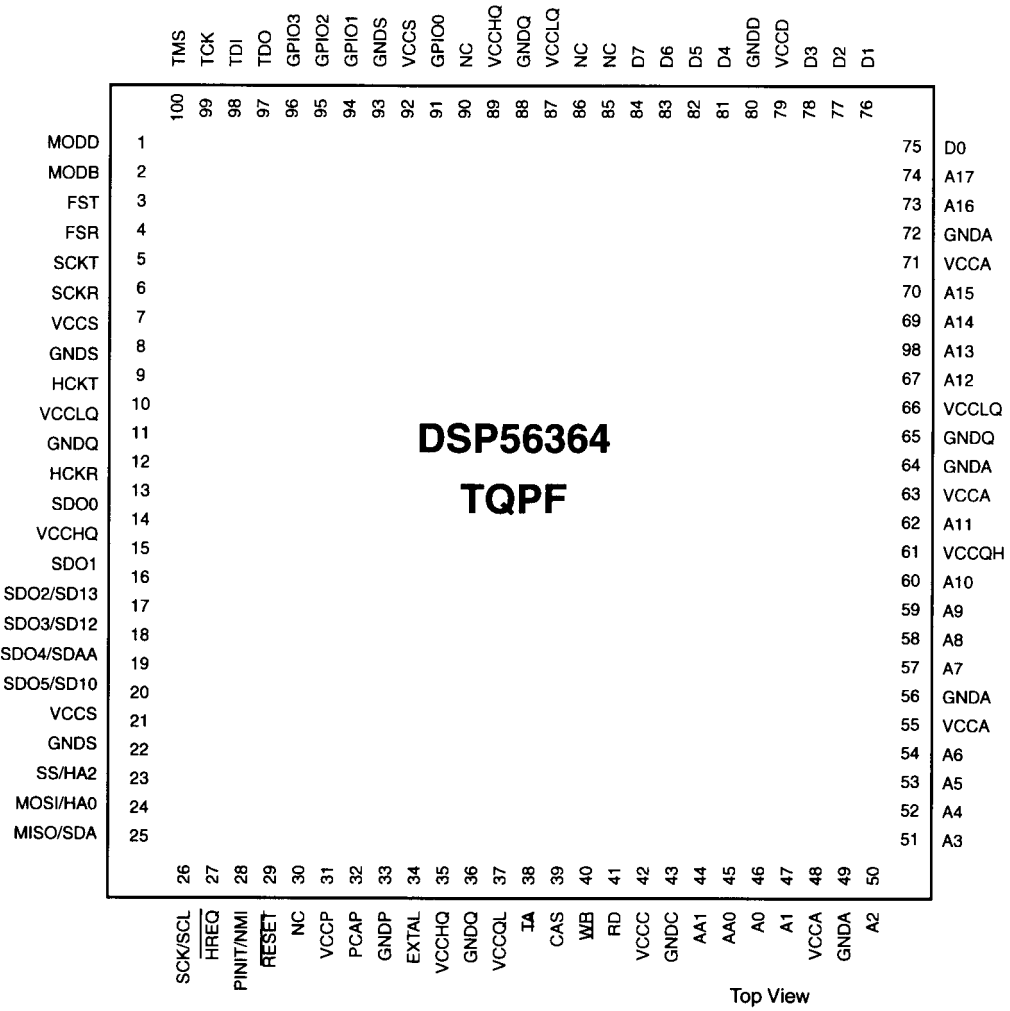
The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly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

5. Changing the AM band step

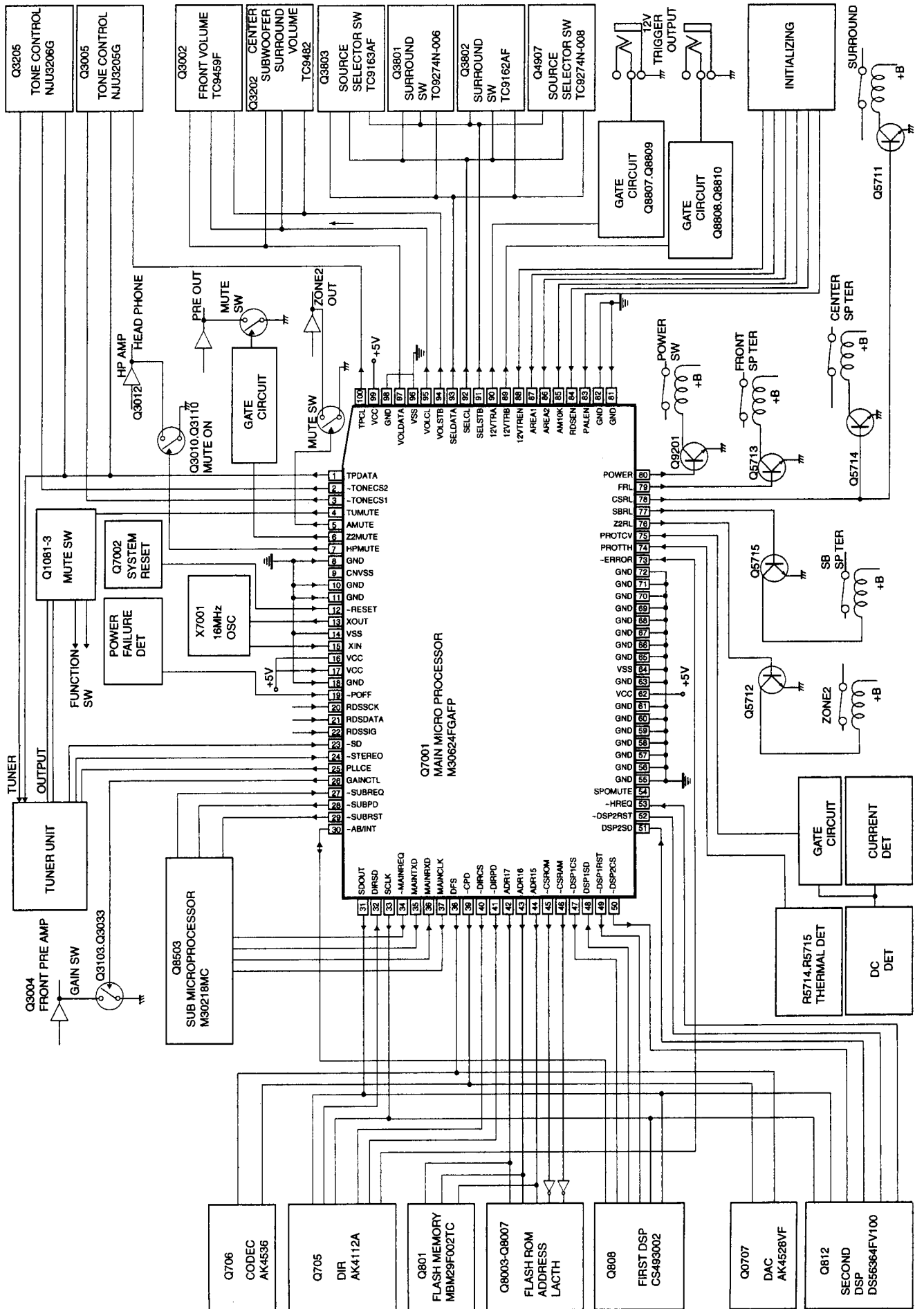
With the exception of the worldwide models,a tuning step selector switch is not provided. When you change the band step, change the parts as shown below.

	To 10kHz	To 9kHz
R7079	Open	1k
R7078	1k	Open

DSP56364FU100(DSP IC)



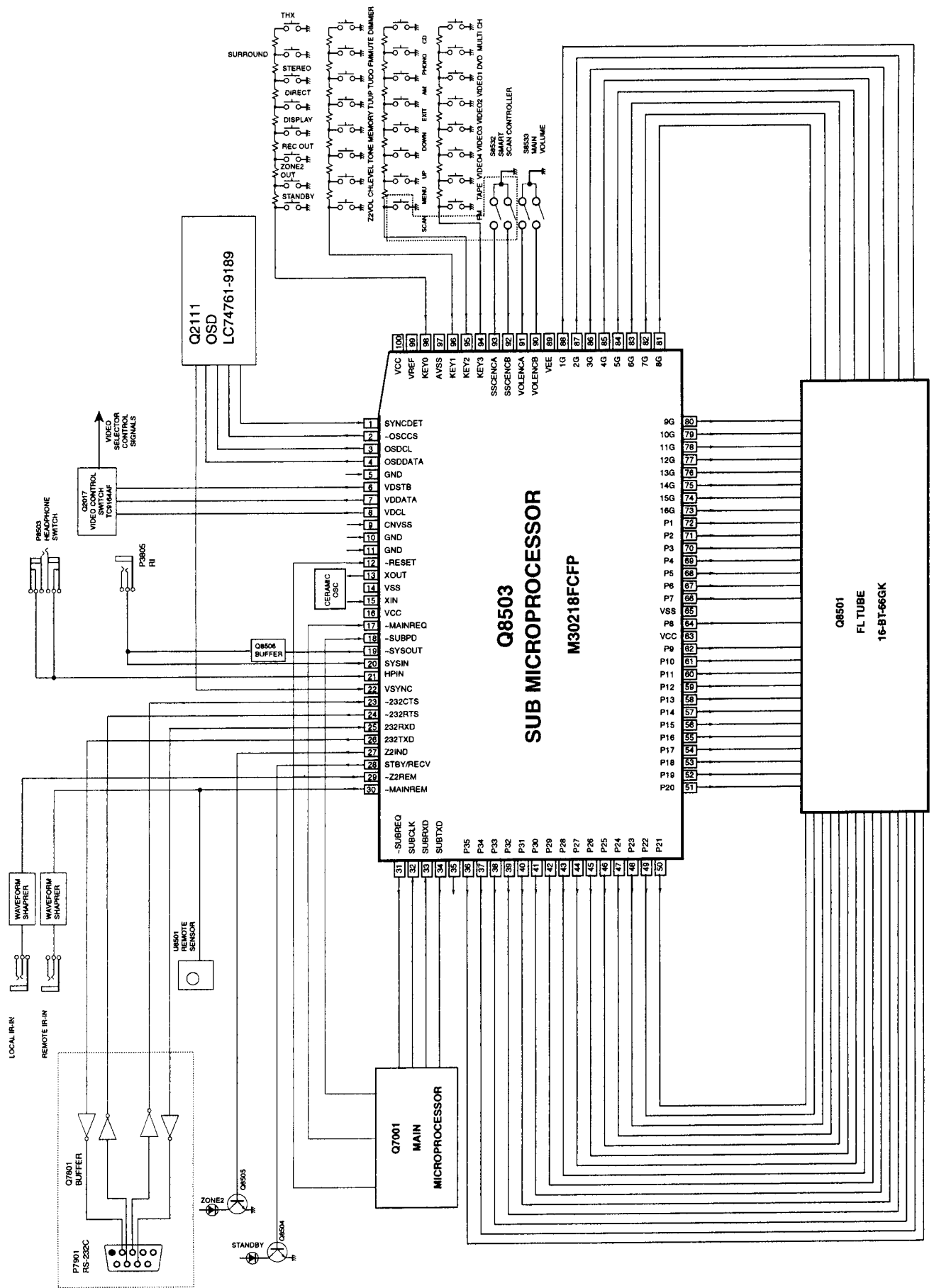
MAIN MICROPROCESSOR-CONNECTION VIEW



MAIN MICROPROCESSOR-TERMINAL DESCRIPTION

No.	Function	IO	Act	Description	No.	Function	IO	Act	Description
1	TPDATA	O	H	Data output terminal to the tone ICs and PLL IC.	45	-CSROM	O	L	Chop select output terminal to the mask ROM IC.
2	-TONECS2	O	L	Chip select output terminal for tone IC 2.	46	-CSRAM	O	L	Chip select signal output terminal for 1M bit SRAM.
3	-TONECS1	O	L	Chip select output terminal for tone IC 1.	47	-DSP1CS	O	L	Chip select output terminal of DSP IC 1.
4	TUMUTE	O	H	Muting control output terminal for tuner section	48	DSP1SD	I	H	Serial data input terminal from DSP IC 1.
5	AMUTE	O	H	Muting control output terminal for audio section	49	-DSP1RST	O	L	Reset signal output terminal to DSP IC 1.
6	Z2MUTE	O	H	Muting control output terminal for zone 2 section	50	-DSP2CS	O	L	Chip select output terminal to DSP IC 2.
7	HPMUTE	O	H	Muting control output terminal for headphone amplifier section	51	DSP2SD	I	H	Serial data input terminal from DSP IC 2.
8	GND	I		Select input terminal for external data buss width. Connect to the ground	52	-DSP2RST	O	L	Reset output terminal for DSP IC 2.
9	CNVSS	I		Input terminal to change the processor mode.	53	-HREQ	I	L	Request input terminal for DSP IC 2.
10,11	GND	I		Not used. Connect to the ground terminal.	54	SFOMUTE	O	H	Muting output terminal for surround pre output.
12	-RESET	I	L	Reset signal input terminal of microprocessor	55-61	GND	I		Not used. Connect to the ground terminal.
13	XOUT	O		Output terminal of main clock oscillator circuit. Connect the 16MHz ceramic	62	VCC			Power supply terminal. Apply +5V.
14	VSS			Power supply terminal. Connect to the ground terminal.	63	GND	I		Not used. Connect to the ground terminal.
15	XIN	I		Input terminal of main clock oscillator circuit. Connect to the 16MHz ceramic	64	VSS			Power supply terminal. Connect to the ground terminal.
16	VCC			Power supply terminal. Apply +5V.	65-72	GND	I		Not used. Connect to the ground terminal.
17	GND	I	L	Not used. Apply +5V.	73	-ERROR	I	L	Error detector input terminal of DIR IC.
18	VCC	I		Not used. Connect to the ground terminal.	74	PROTTH	I	L	Protect input terminal from the thermal detector circuit.
19	-POFF	I	L	Power failure detector input terminal.	75	PROTCV	I	H	Protect input terminal from the voltage and current detector circuits.
20	RDSSCK	I	CLK	Clock signal input terminal from RDS decoder.	76	Z2RL	O	H	Speaker relay control output terminal for ZONE 2.
21	RDSDATA	I	H	Data signal input terminal from RDS decoder	77	SBRL	O	H	Speaker relay control output terminal for the surround back channel.
22	RDSSIG	I	H	Quality check input terminal of data signal from RDS decoder.	78	CSRL	O	H	Speaker relay control output terminal for the center and the surround channels.
23	-SD	I	L	Broadcast detector input terminal	79	FRL	O	H	Speaker relay control output terminal for the front channel.
24	-STEREO	I	L	Stereo broadcast detection input terminal	80	POWER	O	H	Power control output terminal.
25	PLLEE	O	H	Chip enable signal output terminal to PLL IC.	81,82	GND	I		Not used. Connect to the ground terminal.
26	GAINCTL	O	H	Output terminal to control the gain of amplifier.	83	PALEN	I	H	Initializing input terminal for PAL. H=PAL/NTSC L=NTSC
27	-SUBREQ	I	L	Transfer request signal input terminal from sub microprocessor.	84	R0SEN	I	H	Initializing input terminal for RDS broadcast.
28	-SUBPDP	O	L	Signal output terminal to announce the power failure to the sub microprocessor.	85	AM10K	I	H	Initializing input terminal for AM band step. H=10 kHz
29	-SUBBRST	O	L	Reset output terminal to the sub microprocessor.	86	AREA2	I	H	Initializing input terminal for FM band region.
30	-AB/INT	IO	H	Interrupter signal of DSP IC 1 and abort signal terminal.	87	AREA1	I	H	Initializing input terminal for FM band region.
31	SDOUT	O	H	Serial data output terminal for DIR and DSP ICs.	88	12VTREN	I	H	Initializing input terminal for 12V trigger.
32	DIRSD	I	H	Serial data input terminal for DIR IC.	89	12VTRB	O	H	12V trigger output terminal B.
33	SCLK	O	CLK	Serial clock output terminal for DIR and DSP ICs.	90	12VTRA	O	H	12V trigger output terminal A.
34	-MAINREQ	O	L	Transfer request signal output terminal to main microprocessor.	91	SELSTB	O	H	Strobe output terminal for analog switch ICs.
35	MAINTXD	O	H	Transfer output terminal to main microprocessor.	92	SELCL	O	CLK	Clock output terminal to analog switch ICs.
36	MAINRXD	I	H	Transfer input terminal from main microprocessor	93	SELDATA	O	H	Data output terminal to analog switch ICs.
37	MAINCLK	O	CLK	Transfer clock output terminal to microprocessor	94	VOLSTB	O	H	Strobe output terminal to electrical volume IC.
38	DFS	O	H	DFS signal output terminal to Codec and D/A converter ICs.	95	VOLCL	O	CLK	Clock signal output terminal to electric volume IC.
39	-CPD	O	L	Data output terminal to DAC and Codec ICs.	96	VSS			Power supply terminal for A/D converter IC.
40	-DIRCS	O	L	Chip select output terminal for DIR IC.	97	VOLDATA	O	H	Data signal output terminal to electric volume IC.
41	-DIRPD	O	L	Data output terminal to the DIR IC.	98	GND			Reference voltage input terminal for A/D converter. Not used.
42	ADR17	O	H	External ROM address 17 for DSP IC 1.	99	VCC			Power supply terminal for A/D converter. Apply +5V.
43	ADR16	O	H	External ROM address 16 for DSP IC 1.	100	TPCL	O	CLK	Clock signal output terminal for tone and PLL ICs.
44	ADR15	O	H	External ROM address 15 for DSP IC 1.					

SUB MICROPROCESSOR-CONNECTION VIEW



SUB MICROPROCESSOR-TERMINAL DESCRIPTION

No.	Function	I/O	Act	Descriptions	No.	Function	I/O	Act	Descriptions
1	SYNCDET	I	H	Judge input terminal for external synchronizing of OSD. External synchronizing when high level.	31	-SUBREQ	O	L	Transfer request signal output terminal from sub microprocessor
2	-OSCCS	O	L	Chip select output pin of OSD IC	32	SUBCLK	I	CLK	Transfer clock input terminal between microprocessors .
3	OSDCL	O	CLK	Serial clock output terminal of OSD IC	33	SUBRXD	I	H	Transfer input terminal between microprocessors
4	OSDDATA	O	H	Serial data output terminal of OSD IC	34	SUBTXD	O	H	Transfer output terminal between microprocessors
5	GND	I		Not used. Connect to the ground terminal.	35		O	L	Not used.
6	VDSTB	O	H	Strobe output terminal of analog switch for video control.	36-62	P35-P9	O	H	Segment output terminals
7	VDDATA	O	H	Data output terminal of analog switch for video control	63	VCC			Power supply terminal. Connect to +5V.
8	VDCI	O	CLK	Clock output terminal of analog switch for video selector	64	P8	O	H	Segment output terminal
9	CNVSS	I		Input terminal to select the operation mode when the release of reset.	65	VSS			Power supply terminal. Connect to the ground terminal.
10	GND	I		Not used. Connect to the ground terminal.	66-72	P7-P1	O	H	Segment output terminals
11	GND	I		Not used. Connect to the ground terminal.	73-88	16G-1G	O	H	Grid output terminals
12	-RESET	I	L	Reset terminal of microprocessor	89	VEE			Power supply terminal for pull-down resistor.
13	XOUT	O		Output terminal of oscillator circuit for main clock. Connect the ceramic oscillator	90	VOLENCB	I	L	Rotary encoder input signal terminal B for main volume.
14	VSS			Ground terminal	91	VOLENCA	I	L	Rotary encoder input signal terminal A for main volume.
15	XIN	I		Input terminal of oscillator circuit for main clock. Connect the ceramic oscillator	92	SSCENCB	I	L	Rotary encoder signal input terminal B for SSC.
16	VCC			Power supply terminal (+5V)	93	SSCENCA	I	L	Rotary encoder signal input terminal A for SSC.
17	-MAINREQ	I	L	Transfer request signal input terminal from main microprocessor	94	KEY3	I	H	Operation key connection terminal
18	-SUBPD	I	L	Signal input terminal to announce the power stoppage from main microprocessor	95	KEY2	I	H	Operation key connection terminal
19	-SYSOUT	O	L	Output terminal for system code	96	KEY1	I	H	Operation key connection terminal
20	SYSIN	I	H	Input terminal for system code	97	AVSS			Power supply terminal for A/D converter
21	HPIN	I	H	Input terminal to detect the insertion of headphone jack.	98	KEY0	I	H	Operation key connection terminal
22	VSYNC	I	H	Vertical synchronizing signal input terminal. When there is the video signal, the negative vertical synchronizing signal is input to this terminal.	99	VREF			Reference voltage input terminal for A/d converter .
23	-232CTS	I	L	Judge input terminal for RS-232C data transfer	100	VCC			Power supply terminal for A/D converter. Connect to +5V.
24	-232RTS	O	L	RS-232C data transfer request terminal					
25	232RXD	I	H	RS-232C data input terminal					
26	232TXD	O	H	RS-232C data output terminal					
27	Z2IND	O	H	ZONE2 indicator control output terminal.					
28	STBY/RECV	O	H	STANDBY/RECEIVED indicator control output terminal					
29	-Z2REM	I	L	Remote control signal input terminal from ZONE 2 terminal.					
30	-MAINREM	I	L	Remote control input terminal.					

ADJUSTMENT AND CONFIRMATION

Idling current adjustment

Before Idling adjustment, turn the trimming resistors R5025, R5125, R5225, R5318, R5418 and R5518 to counter clockwise. Connect the DC voltmeter to sockets P5001, P5101, P5201, P5301, P5401 and P5501.

After turn POWER to ON, adjust the trimming resistors R5025, R5125, R5225, R5318, R5418 and R5518 so that the reading of voltmeter becomes 8.0 mV.

After adjustment, attach the top cover.

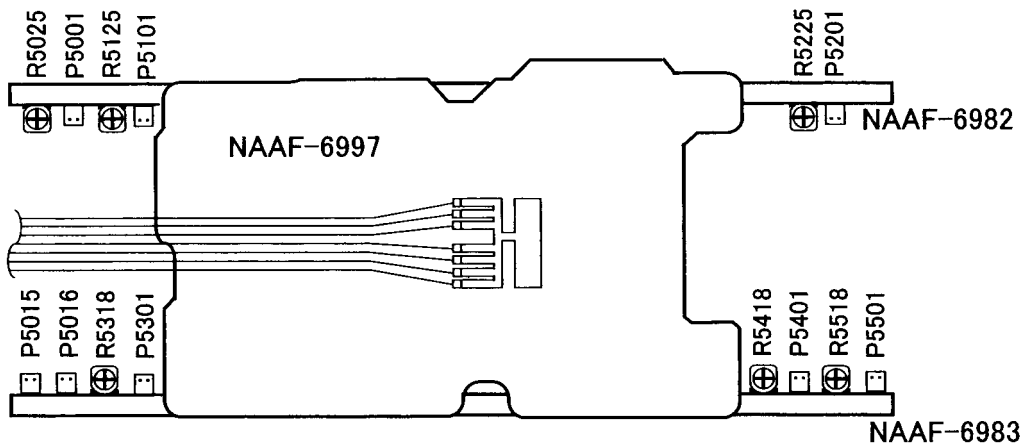
Confirm the voltage of above points after five minutes.

When less than 12 mV, readjust the above resistors so that the voltage becomes 12 mV.

When 12 mV to 15 mV, you are not necessary to adjust.

When more than 15 mV, readjust the above resistors so that the voltage becomes 15 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

Be short-circuited of the test terminal P5601 to prevent the protection circuit being fixed on with a short plug.
Press and hold down CD button, then press REC OUT and ZONE 2 buttons at the same time.

During "TEST-0" on the FL tube light on and off, press VIDEO 1 button to set the unit to TEST-1-00.

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.

Note: Don't apply DC voltage more than 1 second.

3. Confirmation of Current detection circuit

Be short-circuited of the test terminal P5601 to prevent the protection circuit being fixed on with a short plug.

Press and hold down CD button, then press REC OUT and ZONE 2 buttons at the same time.

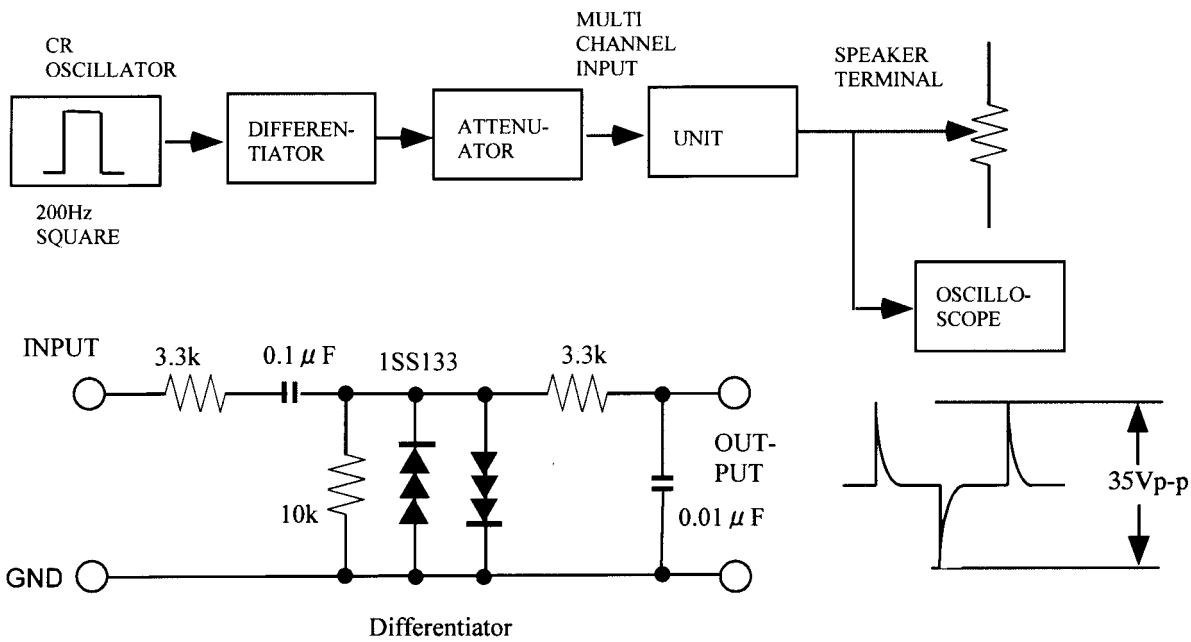
During "TEST-0" on the FL tube light on and off, press VIDEO 1 button to set the unit to TEST-1-00.

Connect Differentiator 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 resistor 2.7kohms, 1W between terminal P5015 with no input. Confirm that the fan turns after few seconds.

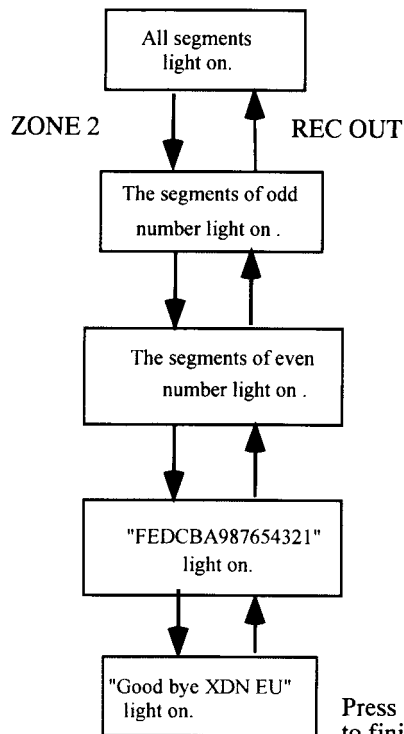
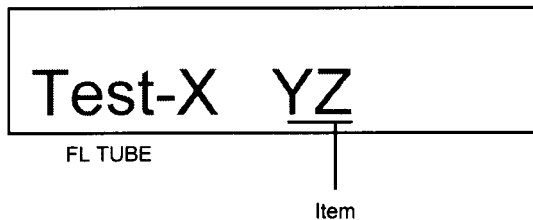
Test Mode

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

Note: VIDEO 1 TEST-1 VIDEO 2 TEST-2
 VIDEO 3 TEST-3 VIDEO 4 TEST-4

Test mode of FL tube

Press ZONE 2 or REC OUT button to change the test mode of FL tube.

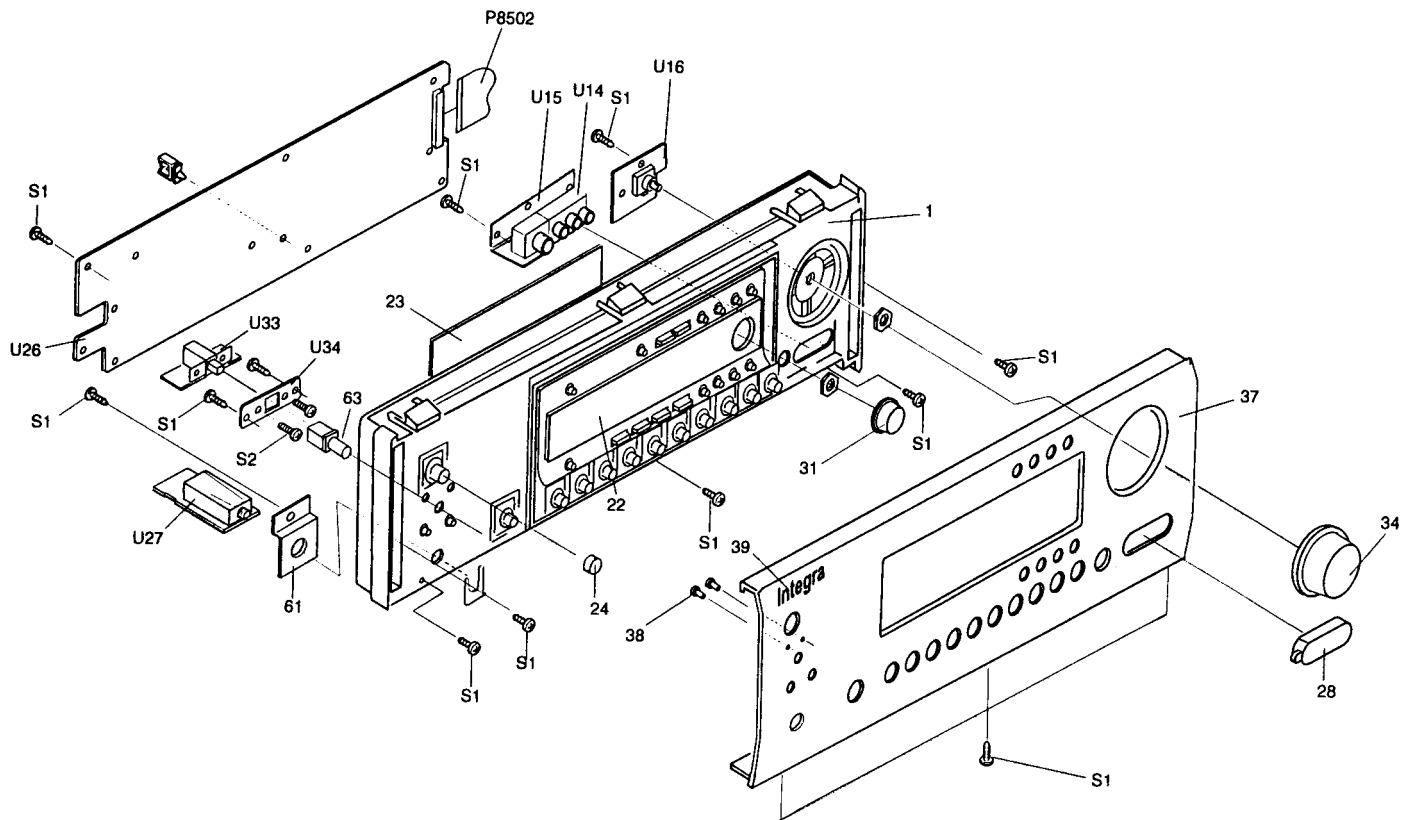


- XNO EU
 1 2 3 4
 1. 12V Trigger T: Use
 2. Video Mode N: NTSC P: PAL AUTO
 3. AM band step 9: 9 kHz step 0:10 kHz step
 4. Tuner band EU:Europe US: USA SA:Saudi JP:Japan

Press POWER button to finish the test mode of FL tube.



EXPLODED VIEW AND PARTS LIST FRONT PANEL SECTION

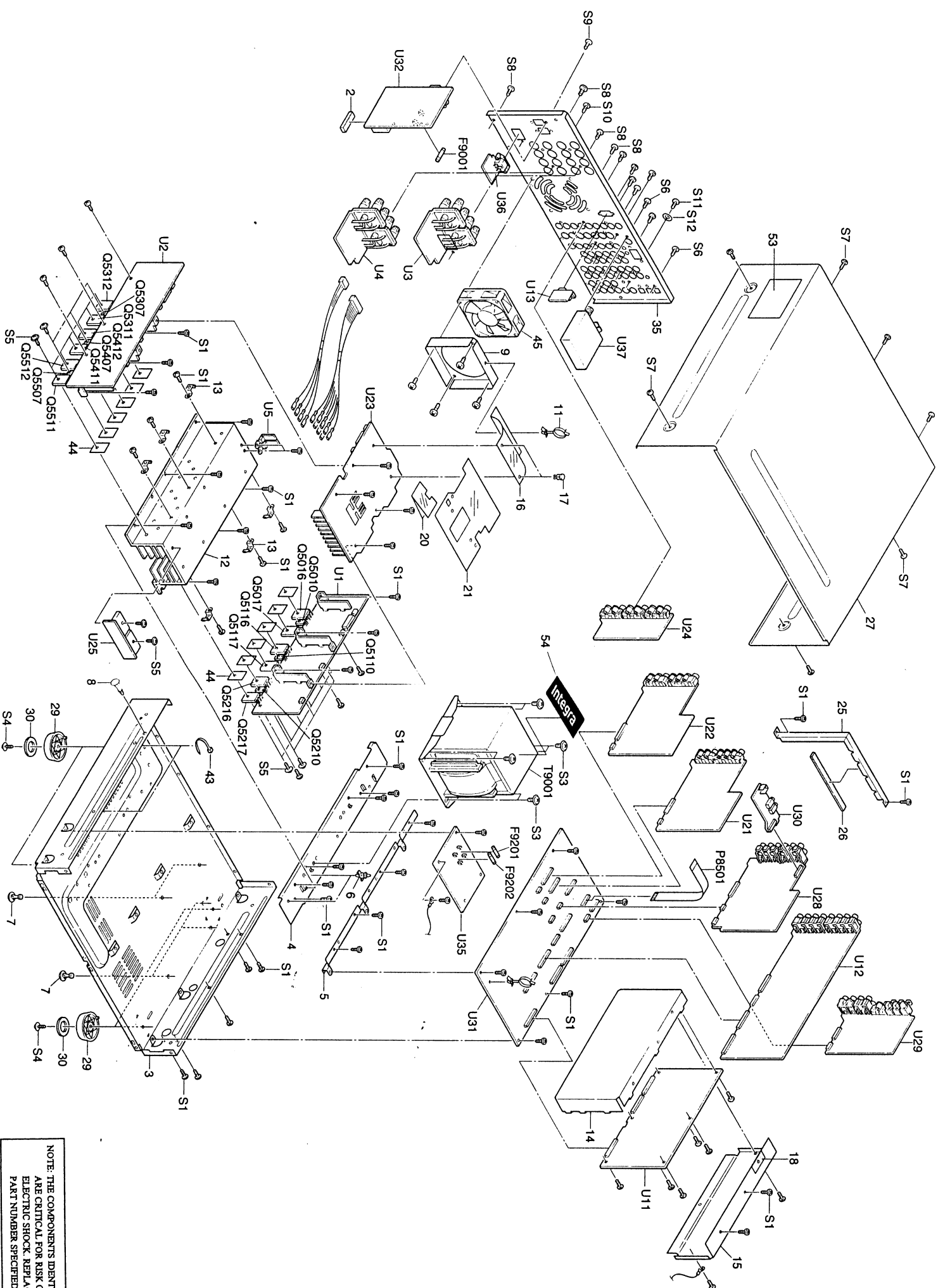



REF. NO.	PART NO.	DESCRIPTION
1	27111179A	Front bracket
22	28191898	Clear plate
23	28133387	Back plate
24	28325753	Knob, Power
28	28330137	Cap, front
31	28325828A	Knob SS
34	28325757	Knob, Volume
37	27212241	Front panel
38	28198905	Facet
39	28135278	Badge
61	27141756	Retainer HP
63	28325756	Knob, Standby
P8502	2047351512	NCFC7-351512, Flexible flat cable
S1	838130088	3TTB+8B, Self-tapping screw
S2	82143010	3P+10FN(BC), Pan head screw
U14	1A884592-1E	NAETC-6992-1E, Front terminal PC board ass'y
U15	25136993	NCETC-6993, Holder PC board
U16	1A884594-1E	NAETC-6994-1E, Volume PC board ass'y
U26	1A884502-1F	NADIS-7002-1F, Display circuit PC board ass'y
U27	1A884503-1F	NAETC-7003-1F, Headphone terminal PC board ass'y
U33	1A884511-1H	NASW-7011-1H, Power switch PC board ass'y
U34	25137012	NCETC-7012, Power switch holder PC board

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

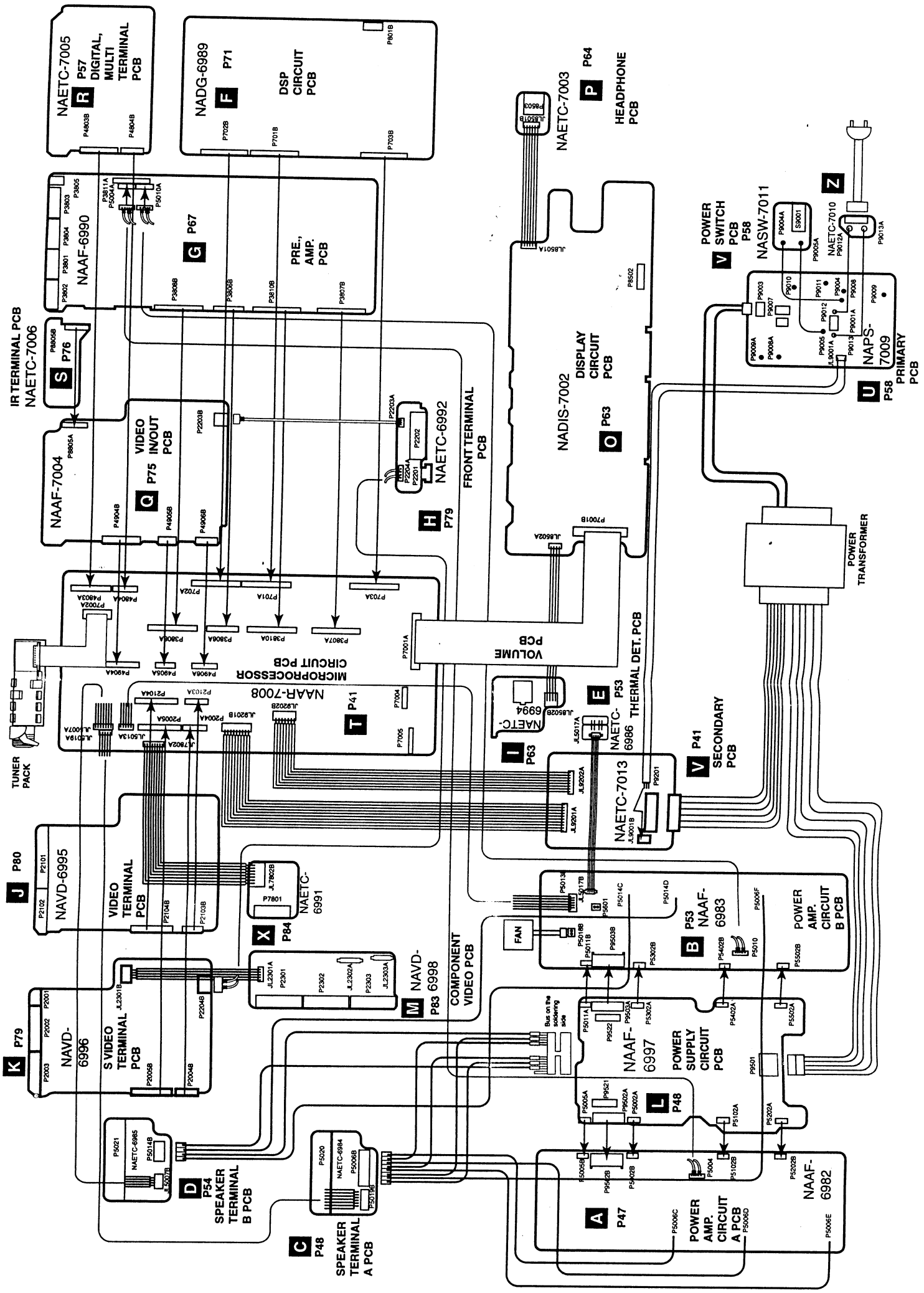
PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
2	28141448	Cushion	S1	838130088	3TTB+8B,Self-tapping screw
3	27100385	Chassis	S2	82143010	3P+10FN(BC),Pan head screw
4	27130840	Bracket PT	S3	830440089	4TTC+8C(BC),Self-tapping screw
5	27130841	Bracket PC	S4	831430088	3TTW+8B(BC), Self-taping screw
6	27190009	KGLS-4S,Holder	S5	801433	3SMS8W.SW+14B(BC),Special screw
7	27190813	KGPS-10RF,Holder	S6	838430068	3TTB+6B(BC),Self-tapping screw
8	27190266	KGLS-12RF,Holder	S7	838430088	3TTB+8B(BC),Self-tapping screw
9	27130857	Bracket F	S8	838450108	5TTB+10B(BC),Self-tapping screw
11	27301396	HL-28-0,Clamp	S10	838930088	3TTB+8B(UN),Self-tapping screw
12	27160473A	Heatsink	S11	838430107	3TTB+10S(BC),Self-tapping screw
13	27141764	Retainer PC	S12	87643010	W3*10F(BC),Flat washer
14	27130842	Bracket DSP-B	S13	838440089	4TTB+8C(BC),Self-tapping screw
15	27130843	Bracket DSP-A	T9001	2301483	△ NPT-1404D,Power transformer
16	27150460	Shield plate F	U1	1A884582-1A	NAAF-6982-1A,Power amplifier circuit A PC board ass'y
17	880048	P-3055B-8L,Plastic rivet	U2	1A884583-1A	NAAF-6983-1A,Power amplifier circuit B PC board ass'y
18	29110083	Tape, cloth	U3	1A884584-1A	NAETC-6984-1A,Speaker terminal A PC board ass'y
20	27150457	Shield plate E	U4	1A884585-1A	NAETC-6985-1A,Speaker terminal B PC board ass'y
21	27150459	Shield plate U	U5	1A884586-1A	NAETC-6986-1A,Thermal detector PC board ass'y
25	27130844	Bracket U	U11	1A884589-1E	NADG-6989-1E,DSP circuit PC board ass'y
26	28141433	Cushion	U12	1A884590-1E	NAAF-6990-1E,Preamplifier PC board ass'y
27	28184796B	Top cover	U13	1A884591-1E	NAETC-6991-1E, RS232 terminal PC board ass'y
29	27175319A	Leg	U21	1A884595-1D	NAVD-6995-1D,Video terminal PC board ass'y
30	28141332	Cushion	U22	1A884596-1D	NAVD-6996-1D,S video terminal PC board ass'y
33	28141446	Cushion BU	U23	1A884597-1D	NAAF-6997-1D, Power supply circuit PC board ass'y
35	27122754	Rear panel	U24	1A884598-1D	NAVD-6998-1D, Component video terminal PC board ass'y
41	260220	WS-3NS,Clamp	U25	1A884501-1D	NAETC-7001-1D, Bridge diode PC board ass'y
42	27301394	HL-18-0,Holder	U28	1A884504-1F	NAAF-7004-1F,Video input/output terminal PC board ass'y
43	260208	Wire tie	U29	1A884505-1F	NAETC-7005-1F,Digital and multi-channel terminal PC board ass'y
44	223025	AC262,Isolated sheet	U30	1A884506-1F	NAETC-7006-1F,IR terminal PC board ass'y
45	24502311	D08A-24TG(EX),Fan	U31	1A884508-1H	NAAR-7008-1H,Microprocessor circuit PC board ass'y
49	29110153	Tape, copper	U32	1A884509-1H	NAPS-7009-1H,Primary circuit PC board ass'y
52	28141439	Cushion	U35	1A884513-1H	NAETC-7013-1H, Secondary circuit PC board ass'y
53	29362743A	Label	U36	1A884510-1H	NAETC-7010,AC inlet PC board ass'y
54	29362609	Label PT	U37	240134 or	TFCE1U114A or
62	27191120	Holder PLT		240138A	ENG06501Q,Tuner unit
F9001	252196	△ 12A-UL/T-314,Fuse			
F9201,F9202	252160	△ 2.5A-UL/T-237,Fuse			
P8501	2047152012	NCFC7-152012,Flexible flat cable			
Q5010,Q5110	2212654 or	2SC3421-Y or			
Q5210	2212653	2SC3421-O,Transistor			
Q5307,Q5407	2212654 or	2SC3421-Y or			
Q5507	2212653	2SC3421-O,Transistor			
Q5016,Q5116	2202822 or	* 2SC5200-R or			
Q5216	2202823	* 2SC5200-O,Transistor			
Q5311,Q5411	2202822 or	* 2SC5200-R or			
Q5511	2202823	* 2SC5200-O,Transistor			
Q5017,Q5117	2202812 or	* 2SA1943-R or			
Q5217	2202813	* 2SA1943-O,Transistor			
Q5312,Q5412	2202812 or	* 2SA1943-R or			
Q5512	2202813	* 2SA1943-O,Transistor			



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

WIRING VIEW



TERMINAL CONNECTION VIEW

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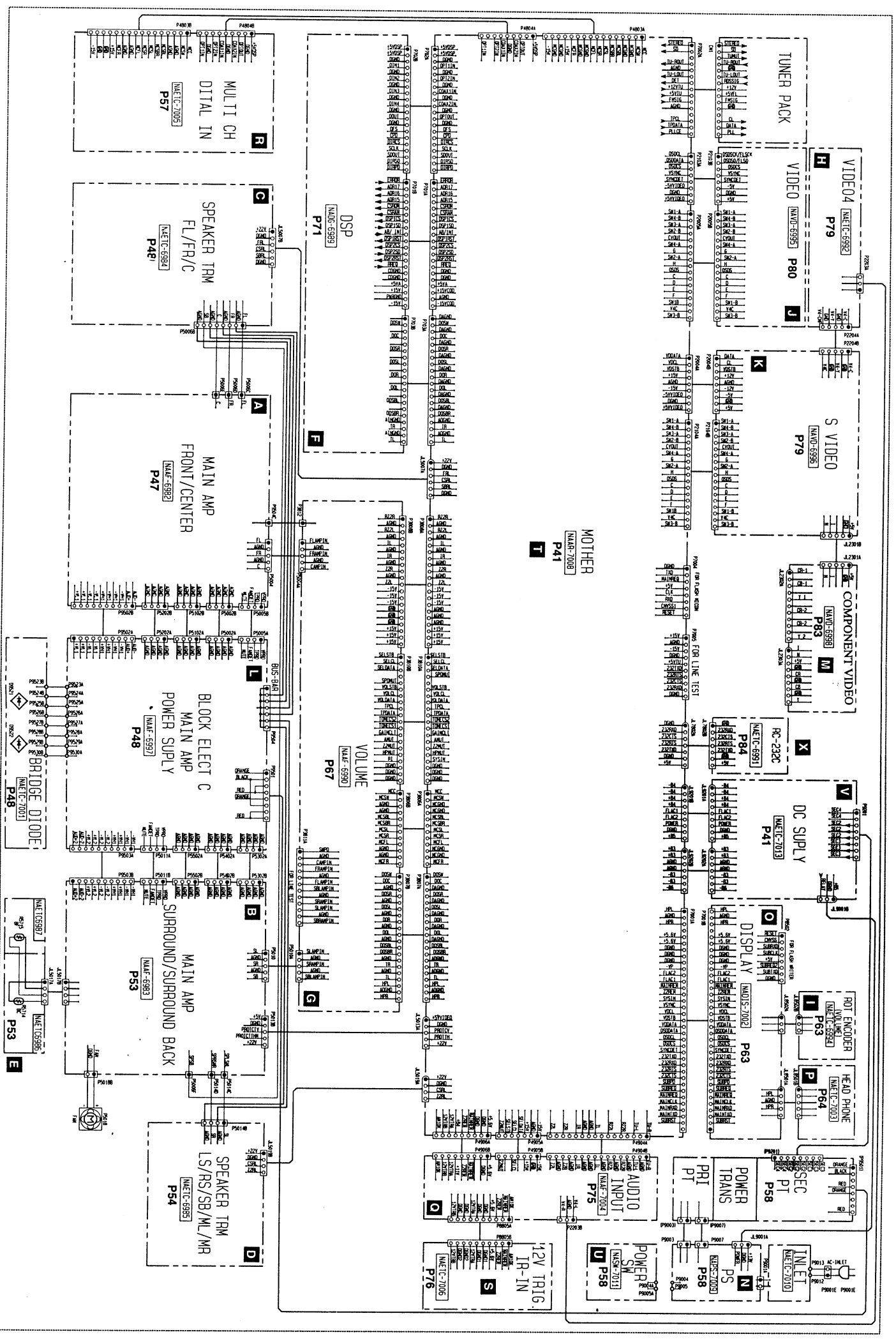
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BLOCK DIAGRAM

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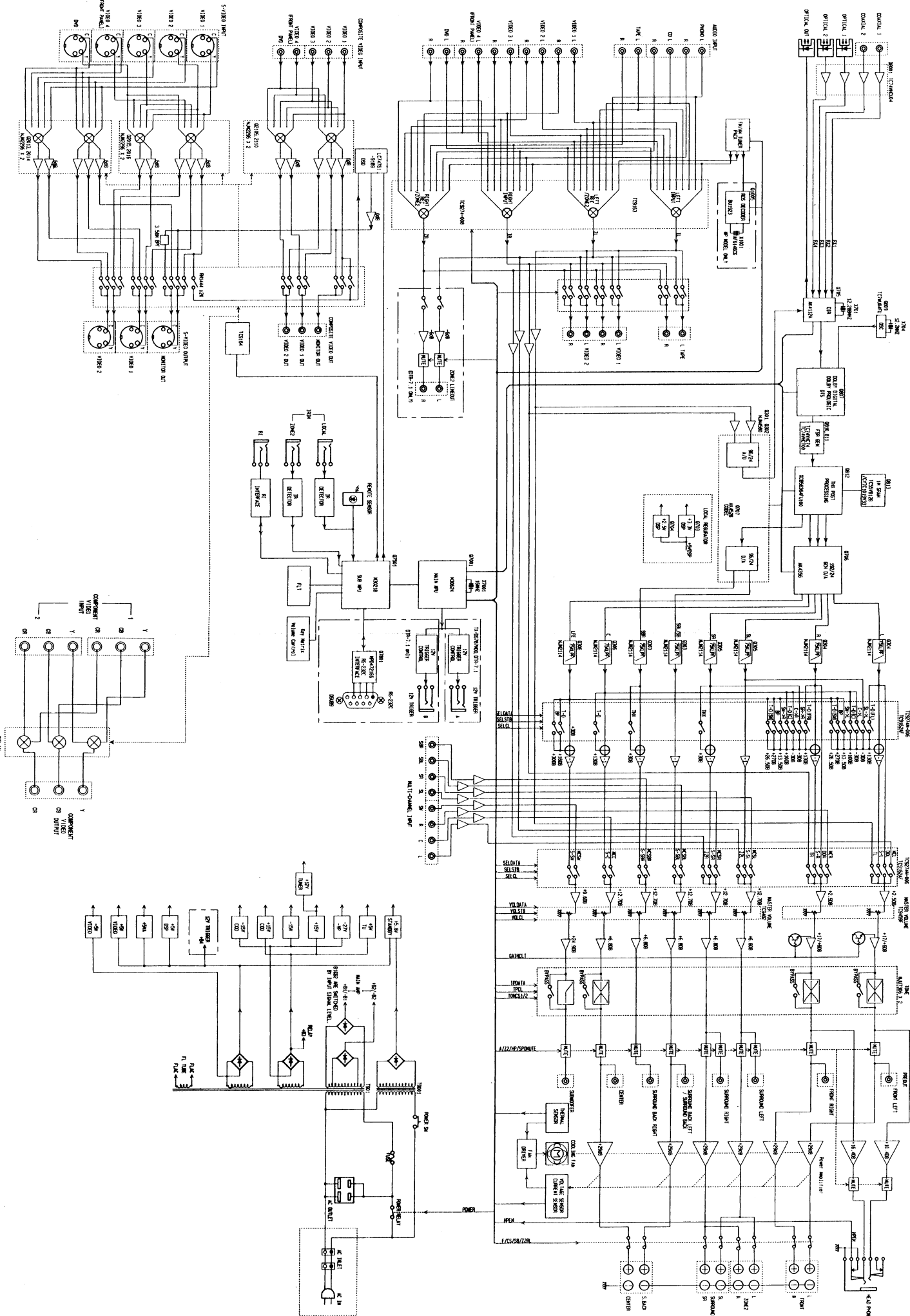
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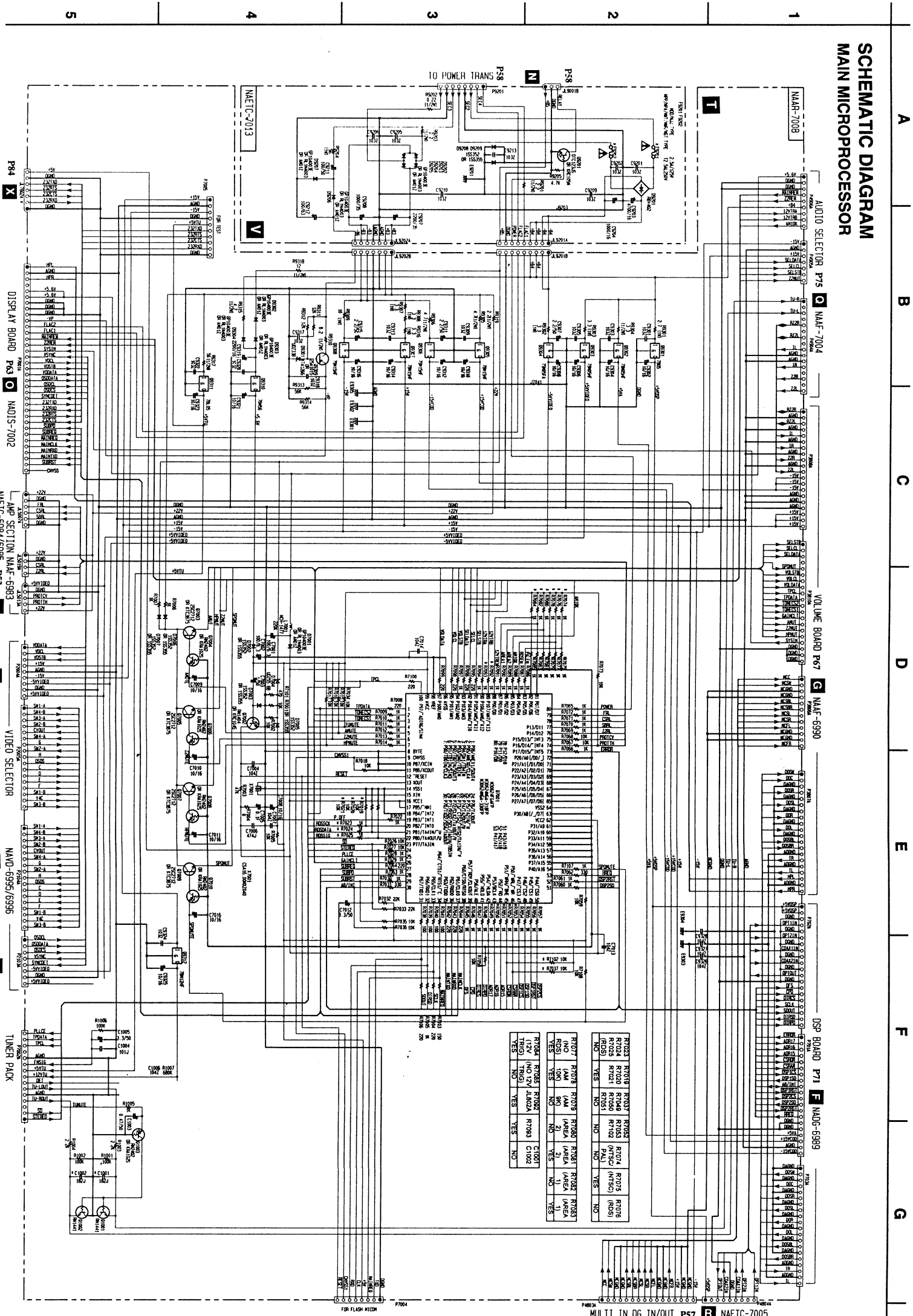
PRINTED CIRCUIT BOARD-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
SECONDARY CIRCUIT PC BOARD (NAETC-7013-1H)		
Q9201	Transistor	
	2213640 or 2215830	DTC123JS or KRC105M
D9201	Diodes	
	22380022 or 22380285	RBV402 or RS403M
D9202-D9207	22380260,	RL1N4003,
	22380032 or	ISR139-100 or
	22380035	GP104003E
D9208,D9209	223234R2 or	ISS352 or
	223233R1	ISS355

MICROPROCESSOR CIRCUIT PC BOARD

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
Capacitors					
C9203	354744729	4700 μ F, 16V, Elect.			
C9204	354741029	1000 μ F, 16V, Elect.	F9201, F9202	252160	Δ 2.5A-UL/T-237
C9207	354762229	2200 μ F, 35V, Elect.		Fuse holders	
C9208	354761029	1000 μ F, 35V, Elect.	F9211-F9214	25052133	Δ NSCT-1P2031
C9211	354781019	100 μ F, 50V, Elect.	JL9001B	25050267	Sockets
C9212	354771019	100 μ F, 63V, Elect.	JL9201A	25051113	NSCT-9P900
Resistors					
R9201, R9203	452530224	2.2 Ω \pm 5%, 1/2W, Metal	JL9202A	25051111	NSCT-7P898
R9202	452532294	0.22 Ω \pm 5%, 1/2W, Metal	P9201	Plug 2505171	NPLG-8P155
R9204	442625604	56 Ω \pm 5%, 1W, Metal oxide			

SCHEMATIC DIAGRAM MAIN MICROPROCESSOR



MICROPROCESSOR CIRCUIT PC BOARD (NAAR-7008-1H)

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
ICs					
Q7001	22241602	M30624MGA-345FP	C9308,C9310	354741009	10 μ F,16V,Elect.
Q9301	222780054NEC or 222780054JRC	MPC7805HF or NJM7805FA	C9312,C9314	354741009	10 μ F,16V,Elect.
Q9302,Q9303	222780055NEC, 222780055JRC or	MPC78M05HF, NJM78M05FA or	C9315	354780229	2.2 μ F,50V,Elect.
	222780055MIT	M5F78M05L	C9316,C9321	354741009	10 μ F,16V,Elect.
Q9304	222790055JRC or	NJM79M05FA or	C9319	354742229	2200 μ F,16V,Elect.
	222790055MIT	M5F79M05L	C9323,C9325	354741009	10 μ F,16V,Elect.
Q9305,Q9307	222780155MIT, 222780155JRC or	M5F78M15L, NJM78M15FA or	Resistors		
	222780155NEC	MPC78M15HF	R7101	443524714	470 Ω ±5%,1/2W,Metal oxide
Q9306,Q9308	222790155MIT or 222790155JRC	M5F79M15L or NJM79M15FA	R9301	452630274	2.7 Ω ±5%,1W,Metal
Q9310	222780565JRC	NJM78M56FA	R9302-R9304	452630334	3.3 Ω ±5%,1W,Metal
Q9311	222780053JRC	NJM78L05A	R9305,R9306	452530474	4.7 Ω ±5%,1/2W,Metal
Q9312	222780125JRC or 222780125MIT	NJM78M12FA or M5F78M12L	R9307,R9308	452630334	3.3 Ω ±5%,1W,Metal
Transistors					
Q1001,Q1002	2215410R2	RN1441	R9309	442621004	10 Ω ±5%,1W,Metal oxide
Q1003,Q7012	2214530R2 or 2216220R2	RN2402 or KRA102S	R9310	452530824	8.2 Ω ±5%,1/2W,Metal
Q7002	2214490R2 or 2216210R2	RN1404 or KRC104S	R9315	452530474	4.7 Ω ±5%,1/2W,Metal
Q7003,Q7005	2213145R2,	2SC2712-GR,	R9316	452630334	3.3 Ω ±5%,1W,Metal
Q7007,Q7009	2213143R2, 2213144R2, 2216173R2, 2216174R2 or 2216175R2	2SC2712-O, 2SC2712-Y, KTC3875-O, KTC3875-Y or KTC3875-GR	R9317	443525604	56 Ω ±5%,1/2W,Metal oxide
Q7004,Q7006	2214530R2 or	RN2402 or	R9318	442521204F	12 Ω ±5%,1/2W,Metal oxide
Q7008,Q7010	2216220R2	KRA102S	R9319	453530224	2.2 Ω ±5%,1/2W,Metal
Q9309	2211455 or 2215975	2SA1015-GR or KTA1266-GR	Sockets		
Diodes					
D7001	22380260,	RL1N4003,	JL5007A	25051110	NSCT-6P897
D9302-D9304	22380032 or 22380035	1SR139-100 or GP104003E	JL5013A	25051109	NSCT-5P896
D7002,D7003	223234R2 or	1SS352 or	JL5019A	25051108	NSCT-4P895
D7005-D7007	223233R1	1SS355	JL7802A	25051111	NSCT-7P898
D7004	224550560R2 or 224490560R2	UDZS5.6B or UDZ5.6B	JL9201B	25050273	NSCT-9P101
D9301	224493300R2	UDZ33B	JL9202B	25050271	NSCT-7P99
Coil					
L7001	231237K220R2	NCH-1477	P7001A	25052231, 25051842 or 25052044	NSCT-35P2128, NSCT-35P1629 or NSCT-35P1831
Oscillator					
X7001	3010322	CST16.00MXW0C1,Ceramic	P7002A	25052211, 25051822 or 25052024	NSCT-15P2108, NSCT-15P1609 or NSCT-15P1811
Capacitors					
C1003	354784799	0.47 μ F,50V,Elect.	P2103A	25055704	NPLG-8P660
C1005	354780339	3.3 μ F,50V,Elect.	P2104A	25055806	NPLG-17P762
C7001,C7002	354721019	100 μ F,6.3V,Elect.	P3806A	25055708	NPLG-12P664
C7003	354780109	1 μ F,50V,Elect.	P3807A,P3808A	25055712	NPLG-20P668
C7005	3000078 or 3000118	DX-5R5L104 or EECS5R5T104S	P3810A	25055712	NPLG-20P668
C7006	375524744	0.47 μ F±5%,50V,Plastic	P4803A,P4904A	25055805	NPLG-16P761
C7008-C7011	354741009	10 μ F,16V,Elect.	P4804A,P4906A	25055705	NPLG-9P661
C7012	354780339	3.3 μ F,50V,Elect.	P4905A	25055703	NPLG-7P659
C7016,C9302	354741009	10 μ F,16V,Elect.	P7004	25055704	NPLG-8P660
C9304,C9306	354741009	10 μ F,16V,Elect.	P7005	25055706	NPLG-10P662
C9307,C9311	354780229	2.2 μ F,50V,Elect.	P701A-P703A	25055712	NPLG-20P668
Capacitors					
C9308,C9310	354741009	10 μ F,16V,Elect.	Heatsinks		
C9312,C9314	354741009	10 μ F,16V,Elect.	Q9301A,Q9303A	27160391	
C9315	354780229	2.2 μ F,50V,Elect.	Q9302A	27160211	RAD-68
C9316,C9321	354741009	10 μ F,16V,Elect.	Q9307A	27160391	
C9319	354742229	2200 μ F,16V,Elect.	Screws		
C9323,C9325	354741009	10 μ F,16V,Elect.	Q9301B,Q9302B	82143010	3P+10FN(BC),Pan head
Resistors					
R7101	443524714	470 Ω ±5%,1/2W,Metal oxide	Q9304B,Q9308B	82143010	3P+10FN(BC),Pan head
R9301	452630274	2.7 Ω ±5%,1W,Metal			
R9302-R9304	452630334	3.3 Ω ±5%,1W,Metal			
R9305,R9306	452530474	4.7 Ω ±5%,1/2W,Metal			
R9307,R9308	452630334	3.3 Ω ±5%,1W,Metal			
R9309	442621004	10 Ω ±5%,1W,Metal oxide			
R9310	452530824	8.2 Ω ±5%,1/2W,Metal			
R9315	452530474	4.7 Ω ±5%,1/2W,Metal			
R9316	452630334	3.3 Ω ±5%,1W,Metal			
R9317	443525604	56 Ω ±5%,1/2W,Metal oxide			
R9318	442521204F	12 Ω ±5%,1/2W,Metal oxide			
R9319	453530224	2.2 Ω ±5%,1/2W,Metal			

PRINTED CIRCUIT BOARD-PARTS LIST

SPEAKER TERMINAL A PC BOARD (NAETC-6984-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors			Resistors	
Q5713-Q5715	2216156R2, 2216295R2 or 2216296R2	2SC1622A-L, KTC3911-GR or KTC3911-BL	R9509,R9520 R9531,R9542 R9545,R9546 R9553-R9556	443523324 443523324 453532294 443521014	3.3k Ω \pm 5%,1/2W,Metal oxide 3.3k Ω \pm 5%,1/2W,Metal oxide 0.22 Ω \pm 5%,1/2W,Metal 100 Ω \pm 5%,1/2W,Metal oxide
D5713-D5715	223233R1	1SS355		Plugs	
	Capacitors		P5002A,P5005A	25055804	NPLG-4P760
C5735-C5738	374721024	1000pF \pm 5%,50V,Plastic	P5011A,P5102A	25055804	NPLG-4P760
	Relays		P5202A,P5302A	25055804	NPLG-4P760
RL5713	25065563 or 25065586	NRL-2P5A-DC24-129 or NRL-2P5A-DC24-142	P5402A,P5502A	25055804	NPLG-4P760
RL5714,RL5715	25065574	NRL-1P5A-DC24-134	P9501	25056029	NPLG-8P979
	Terminal		P9502A,P9503A	25052559	NSCT-10P2456
P5020	25060296	NTM-8PDMN227		Bus bars	
	Sockets		P9511	27141772	BBL15
JL5007B	25050270	NSCT-6P98	P9516	27141773	BBL40
P5006	2009990627A	NSAS-8P0858		Heatsinks	
	Plug		D9503A,D9508A	27160227	HEAT-SINK(RAD-076)
P5006B	25055171	NPLG-8P155	D9513A,D9518A	27160227	HEAT-SINK(RAD-076)
	Tape			Screws	
RL5713A	29110083	Cloth	D9503B,P9508B	82143010	3P+10FN(BC),Pan head
			D9513B,D9518B	82143010	3P+10FN(BC),Pan head

POWER SUPPLY CIRCUIT PC BOARD (NAAF-6997-1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q9501-Q9503	2216156R2	2SC1622A-L
Q9504,Q9518	2216166R2	2SA811A-L
Q9505,Q9513	2216104R2	2SC2880-Y
Q9506,Q9512	2216094R2	2SA1200-Y
Q9507,Q9521	2203530	2SJ349
Q9508-Q9510	2216166R2	2SA811A-L
Q9511,Q9525	2216156R2	2SC1622A-L
Q9514,Q9528	2203540	2SK2232
Q9515-Q9517	2216156R2	2SC1622A-L
Q9519,Q9527	2216104R2	2SC2880-Y
Q9520,Q9526	2216094R2	2SA1200-Y
Q9522-Q9524	2216166R2	2SA811A-L
	Diodes	
D9501,D9502	224491200R2	UDZ12B
D9503,D9508	22380307 or	FML-22S or
D9513,D9518	22380306	D10L.C20U
D9504,D9505	223234R2 or	1SS352 or
D9509,D9510	223233R1	1SS355
D9506,D9507	224491200R2	UDZ12B
D9511,D9512	224491200R2	UDZ12B
D9514,D9515	223234R2 or	1SS352 or
D9519,D9520	223233R1	1SS355
D9516,D9517	224491200R2	UDZ12B
	Capacitors	
C9501	354771009	10 μ F,63V,Elect.
C9503,C9505	354771009	10 μ F,63V,Elect.
C9504,C9508	394571007	10 μ F,63V,Elect.
C9507,C9509	354771009	10 μ F,63V,Elect.
C9511,C9513	354771009	10 μ F,63V,Elect.
C9512,C9516	394571007	10 μ F,63V,Elect.
C9515,C9516	354771009	10 μ F,63V,Elect.
C9517,C9520	3504372	18000 μ F,35V,Elect.
C9518,C9519	3504371	18000 μ F,50V,Elect.
C9521-C9524	374791044	0.1 μ F \pm 5%,63V,Plastic
C9525-C9529	374721034	0.01 μ F \pm 5%,50V,Plastic

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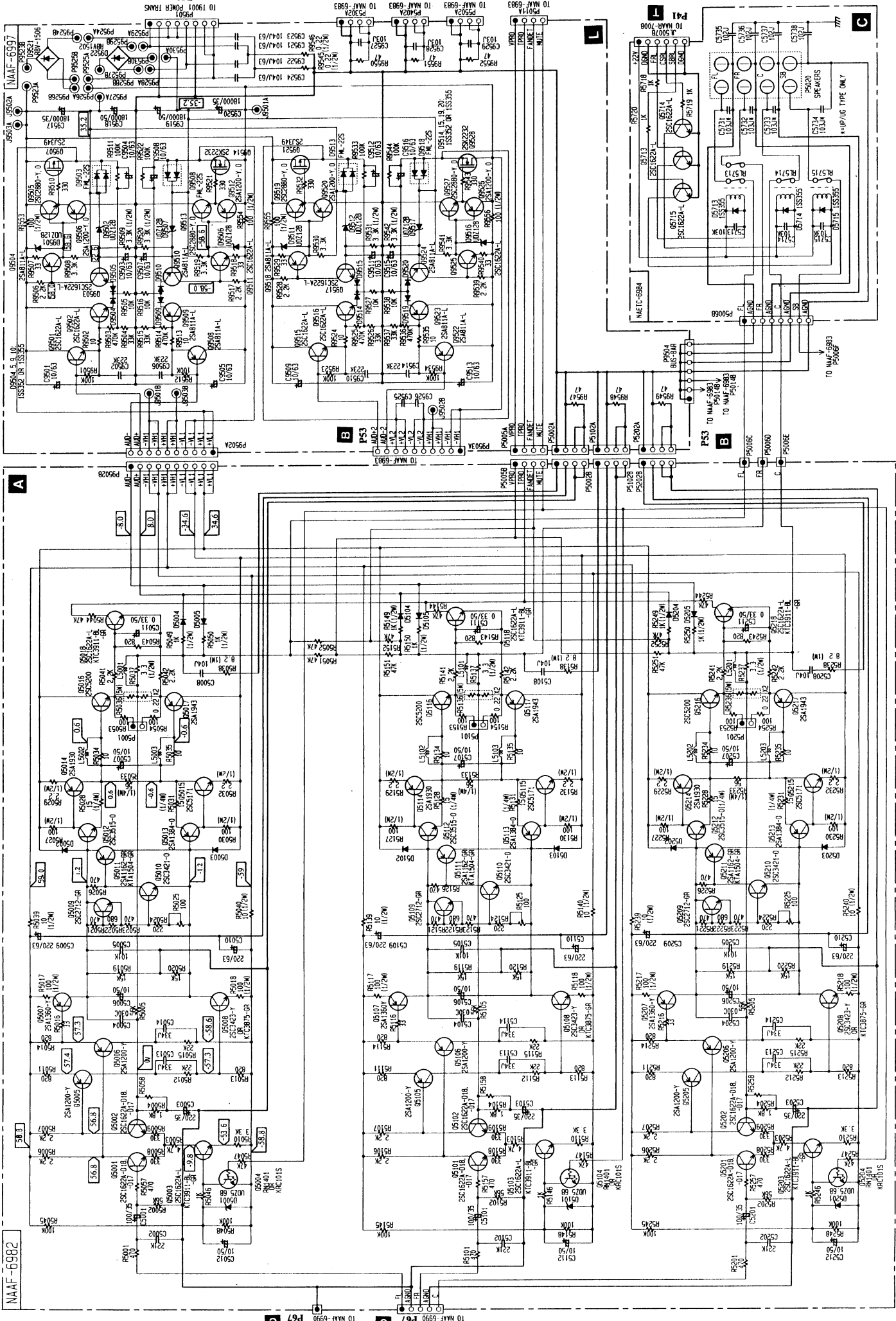
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SCHEMATIC DIAGRAM POWER AMPLIFIER SECTION A





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

POWER AMPLIFIER CIRCUIT A PC BOARD (NAAF-6982-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q5001,Q5002	2216154R2 or	* 2SC1622A(D18) or
Q5101,Q5102	2216153R2	* 2SC1622A(D17)
Q5003,Q5018	2216156R2,	2SC1622A-L,
Q5103,Q5118	2216295R2 or	KTC3911-GR or
Q5203,Q5218	2216296R2	KTC3911-BL
Q5004,Q5104	2214460R2 or	RN1401 or
Q5204	2216330R2	KRC101S
Q5005,Q5006	2216094R2	2SA1200-Y
Q5007,Q5107	2202094	2SA1360-Y
Q5008,Q5108	2202104	2SC3423-Y
Q5009,Q5109	2213145R2 or	2SC2712-GR or
Q5209	2216175R2	KTC3875-GR
Q5010,Q5110	2212654 or	2SC3421-Y or
Q5210	2212653	2SC3421-O
Q5016,Q5116	2202822 or	* 2SC5200-R or
Q5216	2202823	* 2SC5200-O
Q5017,Q5117	2202812 or	* 2SA1943-R or
Q5217	2202813	* 2SA1943-O
Q5011,Q5111	2214375R2 or	2SA1162-GR or
Q5211	2216185R2	KTA1504-GR
Q5012,Q5112	2215313R1	2SC3515-O
Q5013,Q5113	2216113R2	2SA1384-O
Q5014,Q5114	2203000	2SA1930
Q5015,Q5115	2203010	2SC5171
Q5105,Q5106	2216094R2	2SA1200-Y
Q5201,Q5202	2216154R2 or	* 2SC1622A(D18) or
	2216153R2	* 2SC1622A(D17)
Q5205,Q5206	2216094R2	2SA1200-Y
Q5207	2202094	2SA1360-Y
Q5208	2202104	2SC3423-Y
Q5212	2215313R1	2SC3515-O
Q5213	2216113R2	2SA1384-O
Q5214	2203000	2SA1930
Q5215	2203010	2SC5171
	Diodes	
D5001,D5101	224490560R2	UDZ5.6B
D5002-D5005	223163 or	1SS133 or
D5102-D5105	223205	1SS270A
D5201	224490560R2	UDZ5.6B
D5202-D5205	223163 or	1SS133 or
	223205	1SS270A
	Coils	
L5001,L5101	231176SY	S-1.3C
L5002,L5003	5597-45502	
L5102,L5103	5597-45502	
L5201	231176SY	S-1.3C
L5202,L5203	5597-45502	
	Capacitors	
C5001,C5101	354761019	100 μ F,35V,Elect.
C5002,C5102	374722215	220pF \pm 10%,50V,Plastic
C5003,C5103	354762219	220 μ F,35V,Elect.
C5005,C5105	374721015	100pF \pm 10%,50V,Plastic
C5006,C5007	354781009	10 μ F,50V,Elect.
C5008,C5108	374721044	0.1 μ F \pm 5%,50V,Plastic
C5009,C5010	3500201	220 μ F,63V,Elect.
C5011,C5111	354783399	0.33 μ F,50V,Elect.
C5012,C5112	354781009	10 μ F,50V,Elect.
C5013,C5014	374723344	0.33 μ F \pm 5%,50V,Plastic
C5106,C5107	354781009	10 μ F,50V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C5109,C5110	3500201	220 μ F,63V,Elect.
C5113,C5114	374723344	0.33 μ F \pm 5%,50V,Plastic
C5201	354761019	100 μ F,35V,Elect.
C5202	374722215	220pF \pm 10%,50V,Plastic
C5203	354762219	220 μ F,35V,Elect.
C5205	374721015	100pF \pm 10%,50V,Plastic
C5206,C5207	354781009	10 μ F,50V,Elect.
C5208	374721044	0.1 μ F \pm 5%,50V,Plastic
C5209,C5210	3500201	220 μ F,63V,Elect.
C5211	354783399	0.33 μ F,50V,Elect.
C5212	354781009	10 μ F,50V,Elect.
C5213,C5214	374723344	0.33 μ F \pm 5%,50V,Plastic
	Resistors	
R5017,R5018	443521014	100 Ω \pm 5%,1/2W,Metal oxide
R5025,R5125	5210280	N06HR100BE,Trimming
R5027,R5030	443521014	100 Ω \pm 5%,1/2W,Metal oxide
R5028,R5031	415471504	15 Ω \pm 5%,1/4W,Carbon
R5029,R5032	453530224	2.2 Ω \pm 5%,1/2W,Metal
R5033,R5133	415475604	56 Ω \pm 5%,1/4W,Carbon
R5036,R5136	4500031,	MPC722-5WK-0.22,
R5236	4000201 or	RF-5EGKR22 or
	4500245	BPR55FK0.22,Metal plate
R5037,R5137	453530334	3.3 Ω \pm 5%,1/2W,Metal
R5038,R5138	453630824	8.2 Ω \pm 5%,1W,Metal
R5039,R5040	443521004	10 Ω \pm 5%,1/2W,Metal oxide
R5049,R5050	443521024	1k Ω \pm 5%,1/2W,Metal oxide
R5117,R5118	443521014	100 Ω \pm 5%,1/2W,Metal oxide
R5127,R5130	443521014	100 Ω \pm 5%,1/2W,Metal oxide
R5128,R5131	415471504	15 Ω \pm 5%,1/4W,Carbon
R5129,R5132	453530224	2.2 Ω \pm 5%,1/2W,Metal
R5139,R5140	443521004	10 Ω \pm 5%,1/2W,Metal oxide
R5149,R5150	443521024	1k Ω \pm 5%,1/2W,Metal oxide
R5217,R5218	443521014	100 Ω \pm 5%,1/2W,Metal oxide
R5225	5210280	N06HR100BE,Trimming
R5227,R5230	443521014	100 Ω \pm 5%,1/2W,Metal oxide
R5228,R5231	415471504	15 Ω \pm 5%,1/4W,Carbon
R5229,R5232	453530224	2.2 Ω \pm 5%,1/2W,Metal
R5233	415475604	56 Ω \pm 5%,1/4W,Carbon
R5237	453530334	3.3 Ω \pm 5%,1/2W,Metal
R5238	453630824	8.2 Ω \pm 5%,W,Metal
R5239,R5240	443521004	10 Ω \pm 5%,1/2W,Metal oxide
R5249,R5250	443521024	1k Ω \pm 5%,1/2W,Metal oxide
	Plugs	
P5001,P5101	25055689	NPLG-2P645
P5201	25055689	NPLG-2P645
P9502B	25056036	NPLG-10P986
	Sockets	
P5002B,P5005B	25051526	NSCT-4P1313
P5102B,P5202B	25051526	NSCT-4P1313
P5004	2009990652UL	NSAS-10P0907
	Bus bars	
P9511-P9514	27141774	BBL75
P9515	27141775	BBL60
	Heatsinks	
Q5014A	27160475	(DR)144
Q5114A,Q5214A	27160470	(DR)139.
	Screws	
Q5014B,Q5015B	838430107	3TTB+10S(BC),Self-tapping
Q5114B,Q5115B	838430107	3TTB+10S(BC),Self-tapping
Q5214B,Q5215B	838430107	3TTB+10S(BC),Self-tapping

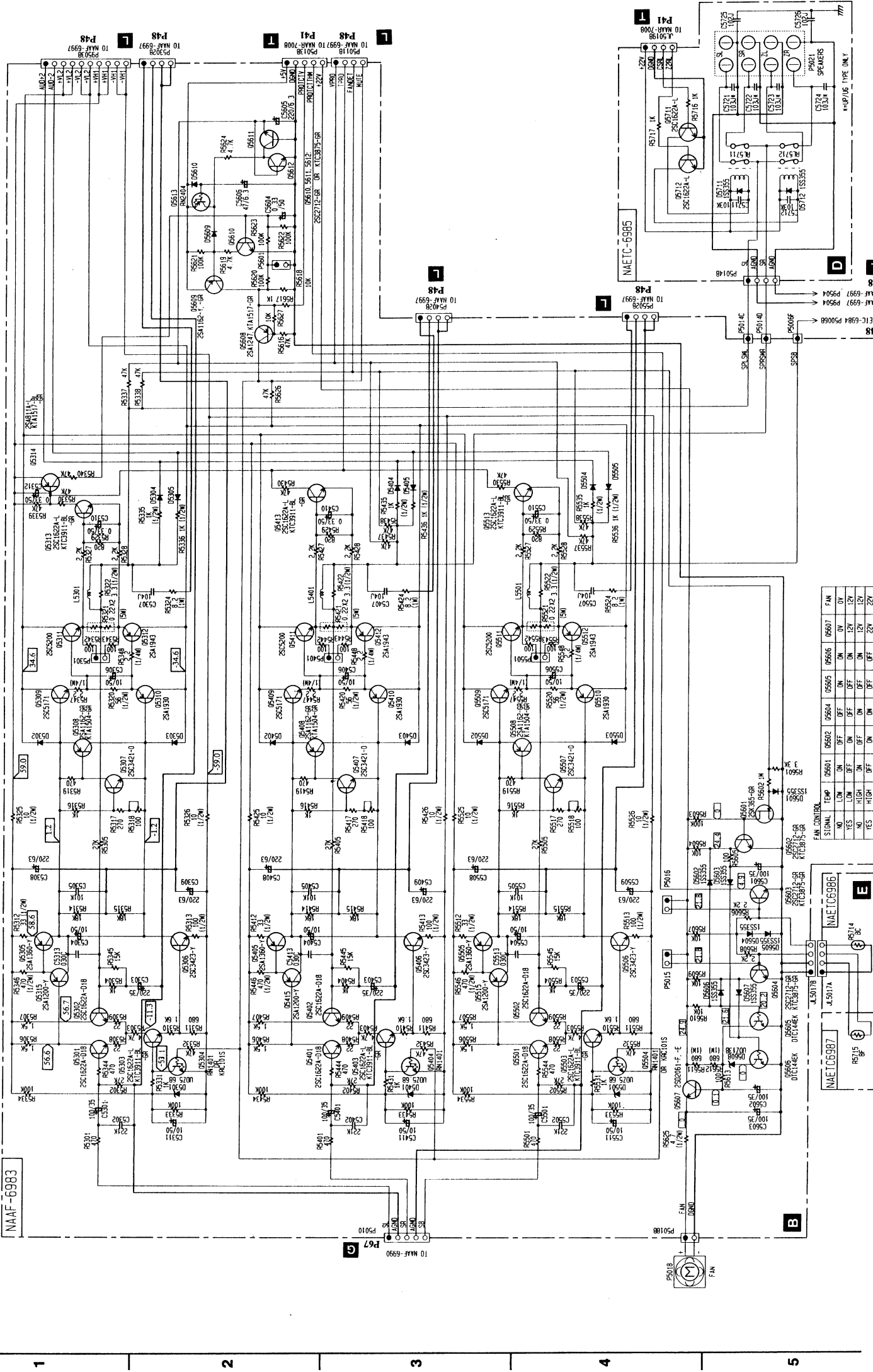
PRINTED CIRCUIT BOARD-PARTS LIST

POWER AMPLIFIER CIRCUIT B PC BOARD (NAAF-6983-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors			Capacitors	
Q5301,Q5302	2216154R2	2SC1622A(D18)	C5310,C5312	354783399	0.33 μ F,50V,Elect.
Q5303,Q5313	2216156R2,	2SC1622A-L,	C5311,C5404	354781009	10 μ F,50V,Elect.
Q5403,Q5413	2216295R2 or	KTC3911-GR or	C5406,C5411	354781009	10 μ F,50V,Elect.
Q5503,Q5513	2216296R2	KTC3911-BL	C5408,C5409	3500201	220 μ F,63V,Elect.
Q5304,Q5404	2214460R2 or	RN1401 or	C5410,C5510	354783399	0.33 μ F,50V,Elect.
Q5504	2216330R2	KRC101S	C5501	354761019	100 μ F,35V,Elect.
Q5305,Q5405	2202094	2SA1360-Y	C5502	374722215	220pF \pm 10%,50V,Plastic
Q5306,Q5406	2202104	2SC3423-Y	C5503	354762219	220 μ F,35V,Elect.
Q5307,Q5407	2212654 or	2SC3421-Y or	C5504,C5506	354781009	10 μ F,50V,Elect.
Q5507	2212653	2SC3421-O	C5505	374721015	100pF \pm 10%,50V,Plastic
Q5308,Q5408	2214375R2 or	2SA1162-GR or	C5507	374721044	0.1 μ F \pm 5%,50V,Plastic
Q5508	2216185R2	KTA1504-GR	C5508,C5509	3500201	220 μ F,63V,Elect.
Q5309,Q5409	2203010	2SC5171	C5511	354781009	10 μ F,50V,Elect.
Q5310,Q5410	2203000	2SA1930	C5601-C5603	354761019	100 μ F,35V,Elect.
Q5311,Q5411	2202822 or	* 2SC5200-R or	C5604	354783399	0.33 μ F,50V,Elect.
Q5511	2202823	* 2SC5200-O	C5605	354722219	220 μ F,6.3V,Elect.
Q5312,Q5412	2202812 or	* 2SA1943-R or	C5606	354724709	47 μ F,6.3V,Elect.
Q5512	2202813	* 2SA1943-O			Resistors
Q5314,Q5608	2216166R2,	2SA811A-L,	R5312,R5412	443523304	33 Ω \pm 5%,1/2W,Metal oxide
	2216305R2 or	KTA1517-GR or	R5313,R5413	443521014	100 Ω \pm 5%,1/2W,Metal oxide
	2216306R2	KTA1517-BL	R5318,R5418	5210280	N06HR100BE,Trimming
Q5315,Q5415	2216094R2	2SA1200-Y	R5320,R5420	443525604	56 Ω \pm 5%,1/2W,Metal oxide
Q5401,Q5402	2216154R2	2SC1622A(D18)	R5321,R5421	4500031,	MPC722-5WK-0.22,
Q5501,Q5502	2216154R2	2SC1622A(D18)	R5521	4000201 or	RF-5EGKR22 or
Q5505	2202094	2SA1360-Y		4500245	BPR55FK0.22,Metal plate
Q5506	2202104	2SC3423-Y	R5322,R5422	453530334	3.3 Ω \pm 5%,1/2W,Metal
Q5509	2203010	2SC5171	R5324,R5424	453630824	8.2 Ω \pm 5%,1W,Metal
Q5510	2203000	2SA1930	R5325,R5326	443521004	10 Ω \pm 5%,1/2W,Metal oxide
Q5515	2216094R2	2SA1200-Y	R5335,R5536	443521024	1k Ω \pm 5%,1/2W,Metal oxide
Q5601	2212445	2SK365-GR	R5346,R5446	443524714	470 Ω \pm 5%,1/2W,Metal oxide
Q5602-Q5604	2213145R2 or	2SC2712-GR or	R5347,R5348	4500171	2.2 Ω \pm 5%,1/4W,Metal
Q5610-Q5612	2216175R2	KTC3875-GR	R5425,R5426	443521004	10 Ω \pm 5%,1/2W,Metal oxide
Q5605,Q5606	2214770R2	DTC144EK	R5435,R5436	443521024	1k Ω \pm 5%,1/2W,Metal oxide
Q5607	2202116 or	2SD2061-F or	R5447,R5448	4500171	2.2 Ω \pm 5%,1/4W,Metal
	2202115	2SD2061-E	R5512	443523304	33 Ω \pm 5%,1/2W,Metal oxide
Q5609	2214374R2 or	2SA1162-Y or	R5513	443521014	100 Ω \pm 5%,1/2W,Metal oxide
	2214375R2	2SA1162-GR	R5518	5210280	N06HR100BE,Trimming
Q5613	2214550R2	RN2404	R5520	443525604	56 Ω \pm 5%,1/2W,Metal oxide
		Diodes	R5522	453530334	3.3 Ω \pm 5%,1/2W,Metal
D5301,D5401	224490560R2	UDZ5.6B	R5524	453630824	8.2 Ω \pm 5%,1W,Metal
D5302-D5305	223163 or	ISS133 or	R5525,R5526	443521004	10 Ω \pm 5%,1/2W,Metal oxide
D5402-D5405	223205	ISS270A	R5535,R5536	443521024	1k Ω \pm 5%,1/2W,Metal oxide
D5501	224490560R2	UDZ5.6B	R5546	443524714	470 Ω \pm 5%,1/2W,Metal oxide
D5502-D5505	223163 or	ISS133 or	R5547,R5548	4500171	2.2 Ω \pm 5%,1/4W,Metal
	223205	ISS270A	R5611,R5612	443626814	680 Ω \pm 5%,1W,Metal oxide
D5601-D5607	223233R1	ISS355	R5625	453530474	4.7 Ω \pm 5%,1/2W,Metal
D5608	224491300R2	UDZ13B			Sockets
D5609,D5610	223233R1	ISS355	P5011B,P5302B	25051526	NSCT-4P1313
		Coils	P5013B	25050269	NSCT-5P97
L5301,L5401	231176SY	S-1.3C	P5402B,P5502B	25051526	NSCT-4P1313
L5501	231176SY	S-1.3C	P5010	2009990575UL	NSAS-10P0784
		Capacitors	JL5017B	25051088	NSCT-4P875
C5301,C5401	354761019	100 μ F,35V,Elect.			Plugs
C5302,C5402	374722215	220pF \pm 10%,50V,Plastic	P5015,P5016	25055689	NPLG-2P645
C5303,C5403	354762219	220 μ F,35V,Elect.	P5018B	25055099	NPLG-2P83
C5304,C5306	354781009	10 μ F,50V,Elect.	P5301,P5401	25055689	NPLG-2P645
C5305,C5405	374721015	100pF \pm 10%,50V,Plastic	P5501	25055689	NPLG-2P645
C5307,C5407	374721044	0.1 μ F \pm 5%,50V,Plastic	P5601	25055038	NPLG-2P29
C5308,C5309	3500201	220 μ F,63V,Elect.	P9503B	25056036	NPLG-10P986

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SCHEMATIC DIAGRAM
POWER AMPLIFIER SECTION B



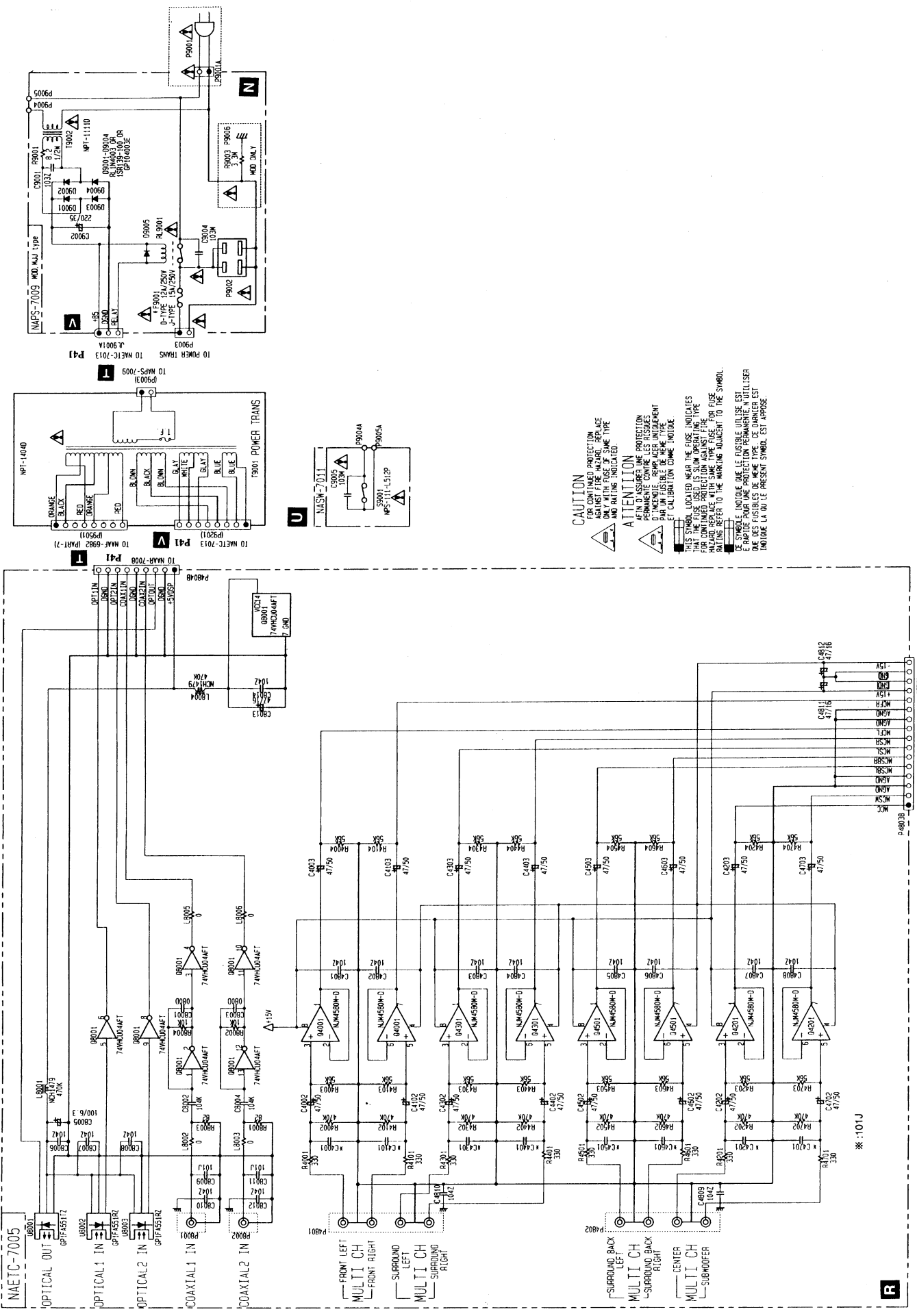
FAN CONTROL		FAN		FAN	
NO.	SIGNAL	TEMP.	FAN	TEMP.	FAN
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON
12V	ON	ON	ON	ON	ON

NAAF-6983

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A B C D E F G

SCHEMATIC DIAGRAM
DIGITAL, MULTI, AND POWER SOURCE



CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE FUSES WITH SAME TYPE AND RATING INDICATED.

ATTENTION
ATTENTION: PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE. REMPLACER UNiquement PAR UN FUSIBLE DE MEME TYPE ET CALIBRAGE IDENTIQUE.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW BLOW TYPE. HAZARD REPLACE WITH SAME TYPE FUSE FOR FUSE CALIBRATION. THIS SYMBOL IS NOT TO BE USED FOR FUSE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE. LA OU LE PRESENT SYMBOLE EST ADRESSE.

TO MAP-7008 P41

DIGITAL AND MULTI-CHANNEL TERMINAL PC BOARD (NAETC-7005-1F)

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q4001,Q4201	22241448R2,	NJM4580M-D,
Q4301,Q4501	22240489R1NE or 22241555R2	MPC4570G2-T1 or NJM4580M
Q8001	22274004HR2TO	TC74VHCU04FT
Photo couplers		
U8001	24120085	GP1FA551TZ
U8002,U8003	24120086	GP1FA551RZ
Coils		
L8001,L8004	231237K470R2	NCH-1479
Capacitors		
C4002,C4003	354784709	47 μ F,50V,Elect.
C4102,C4103	354784709	47 μ F,50V,Elect.
C4202,C4203	354784709	47 μ F,50V,Elect.
C4302,C4303	354784709	47 μ F,50V,Elect.
C4402,C4403	354784709	47 μ F,50V,Elect.
C4502,C4503	354784709	47 μ F,50V,Elect.
C4602,C4603	354784709	47 μ F,50V,Elect.
C4702,C4703	354784709	47 μ F,50V,Elect.
C4811,C4812	354741019	100 μ F,16V,Elect.
C8005	354721019	100 μ F,6.3V,Elect.
C8013	354744709	47 μ F,16V,Elect.
Terminals		
P4801	25045582 or 25045491	NPJ-4PDRW393 or NPJ-4PDBL308
P4802	25045587	NPJ-4PDBRW398
P8001,P8002	25045478	NPJ-1PDOR296
Sockets		
P4803B	25051527	NSCT-16P1314
P4804B	25051234	NSCT-9P1024
Plug		
P8805A	25055706	NPLG-10P662

PRIMARY CIRCUIT PC BOARD (NAPS-7009-1H)

CIRCUIT NO.	PART NO.	DESCRIPTION
Diodes		
D9001-D9004	22380260, 22380032 or 22380035	RL1N4003, 1SR139-100 or GP104003E
D9005	223234R2 or 223233R1	1SS352 or 1SS355
Capacitors		
C9002	354762219	220 μ F,35V,Elect.
C9004	3500196S	△ RE275V-103M,IS
Power transformer		
T9002	2300670A	△ NPT-1111D
Fuse		
F9001	252196	△ 12A-UL/T-314
Fuse holders		
F9008,F9009	250113	△ SN5051
Socket		
JL9001A	25051107	NSCT-3P894
AC outlet		
P9002	25051126	△ NSCT-4P913
Plug		
P9003	25055675 or 25056028	△ NPLG-2P631 or △ NPLG-2P0978
Resistors		
R9001	453530824	8.2 Ω \pm 5%,1/2W,Metal
R9003	431533355	△ RC1/2GFKUL-3.3M,Solid

CIRCUIT NO.	PART NO.	DESCRIPTION
Relay		
RL9001	25065584, 25065516, 25065588 or 25065248	△ NRL-1P10A-DC12-140, △ NRL-1P10A-DC12-097, △ NRL-1P10A-DC12-143 or △ NRL-1P15A-DC12-29
Tape		
RL9001	29110083	Cloth

AC INLET PC BOARD (NAETC-7010-1H)

CIRCUIT NO.	PART NO.	DESCRIPTION
P9001E	25055960	△ NPLG-2P913,Inlet

POWER SWITCH PC BOARD (NASW-7011-1H)

CIRCUIT NO.	PART NO.	DESCRIPTION
C9005	3500196	△ RE275V-103M,IS capacitor
S9001	25035550	△ NPS-111-L512P,Power switch

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

PRINTED CIRCUIT BOARD-PARTS LIST

DISPLAY CIRCUIT PC BOARD (NADIS-7002-1F)

CIRCUIT NO.	PART NO.	DESCRIPTION
	FL tube	
Q8501	212199A	16-BT-66GK
	Remote sensor	
U8501	241330	PIC-26043TE2
	Transistors	
Q8502	2213145R2, 2213143R2, 2213144R2, 2213146R2, 2216173R2, 2216174R2, 2216175R2 or 2216176R2	2SC2712-GR, 2SC2712-O, 2SC2712-Y, 2SC2712-BL, KTC3875-O, KTC3875-Y, KTC3875-GR or KTC3875-BL
Q8503	22241524	M30218MC-A206FP
Q8504,Q8505	2214480R2 or 2216200R2	RN1403 or KRC103S
Q8506	2214540R2 or 2216230R2	RN2403 or KRA103S
	Diodes	
D8501	223234R2 or	1SS352 or
D8505,D8506	223233R1	1SS355
D8502	225290	SEL4110R
D8503	225291D	SEL4910D-D
D8504	224490820R2	UDZ8.2B
D8507	224490510R2	UDZ5.1B
	Coils	
L8501	231237M022R2	NCH-1471
L8505	231237K470R2	NCH-1479
	Oscillator	
X8501	3010334	CSTS1000MG03,Ceramic
	Capacitors	
C8506	354744709	47 μ F,16V,Elect.
C8514	354784709	47 μ F,50V,Elect.
C8517	375524744	0.47 μ F \pm 5%,50V,Plastic
C8518	355722219	220 μ F,6.3V,Elect.
	Resistor	
R8547	49163104415	RM1/101J-100K*15,Array
	Switches	
S8501-S8531	25035652	NPS-111-S604
S8532	25065608	EC11B30C17
	Sockets	
JL8501A	25051109	NSCT-5P896
JL8502A	25051107	NSCT-3P894
P7001B	25052081, 25050941, 25051339, 25051879 or 25052268	NSCT-35P1868, NSCT-35P728, NSCT-35P1128, NSCT-35P1666 or NSCT-35P2165
	Holder	
Q8501A	27191074	(FL)

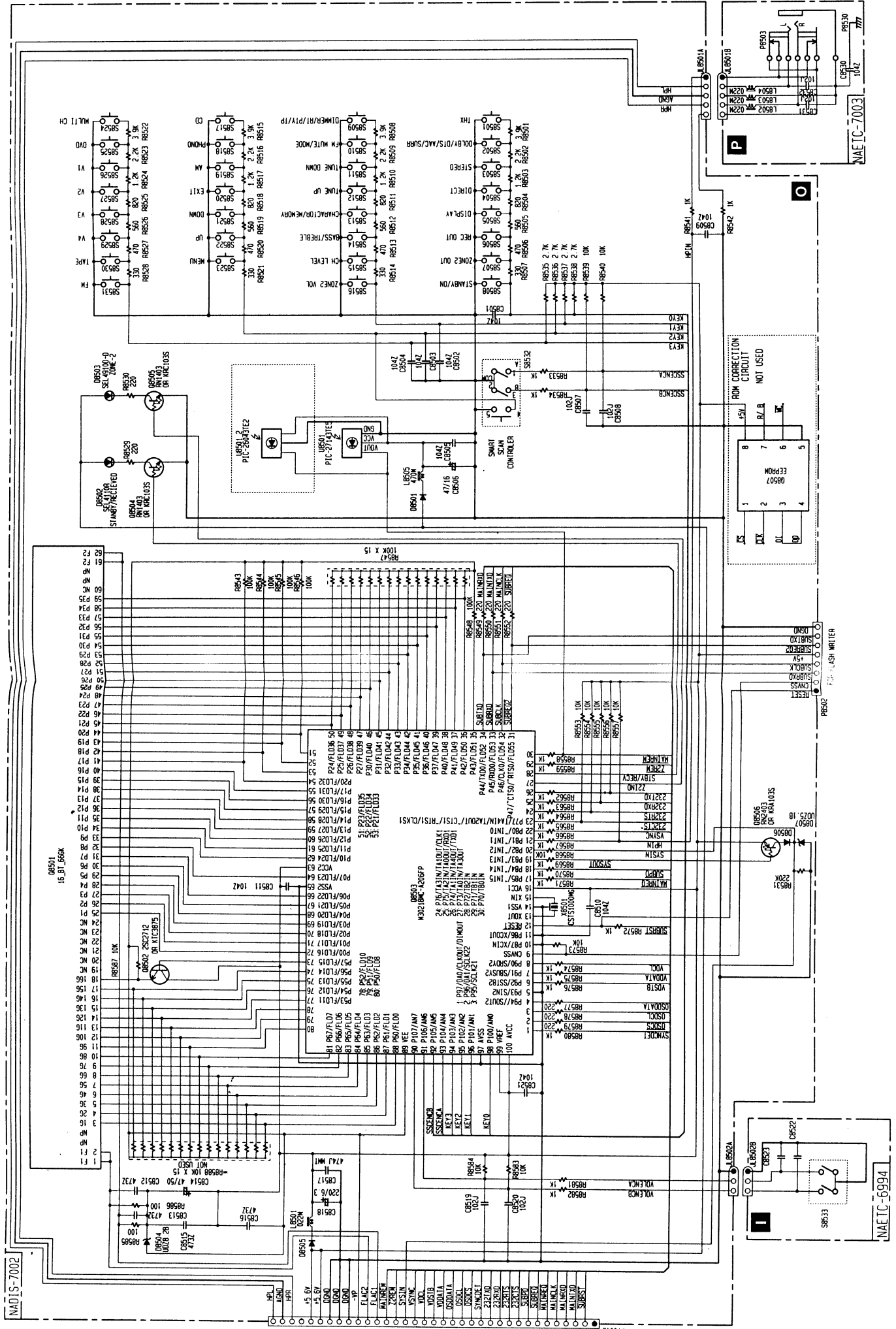
VOLUME PC BOARD (NAETC-6994-1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
S8533	25065575	EC16B2425,Encoder
JL8502B	25050280	NSCT-3P108,Socket

HEADPHONE TERMINAL PC BOARD (NAETC-7003-1F)

CIRCUIT NO.	PART NO.	DESCRIPTION
L8502-L8504	231237M022R2	NCH-1471,Coil
P8503	25045385	YKB26-5153,Headphone
JL8501B	25051109	NSCT-5P896,Socket

SCHEMATIC DIAGRAM
DISPLAY SECTION



PRINTED CIRCUIT BOARD-PARTS LIST

DTR-7.1

PREAMPLIFIER PC BOARD (NAAF-6990-1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q3001,Q3004	22241448R2,	NJM4580M-D,
Q3041,Q3201	22240489R1NE or	MPC4570G2-T1 or
Q3204,Q3251	22241555R2	NJM4580M
Q3002	22241220R2	TC9459F
Q3005	22241451R9	NJU7306G
Q3006,Q3206	22241450R2 or	NJM2082M-D or
	22241567R2	NJM2082M
Q3007,Q3207	22241472R2	NJM2114M-D
Q3012	22240191	NJM4565D-D
Q3051	22241472R2,	NJM2114M-D,
	22241409R2,	BA15532F,
	22241449R2 or	NJM5532M-D or
	22241556R2	NJM2114M
Q3202	22241371	TC9482N
Q3205	22241451R9	NJU7306G
Q3301,Q3304	22241448R2,	NJM4580M-D,
Q3351,Q3501	22240489R1NE or	MPC4570G2-T1 or
Q3504,Q3551	22241555R2	NJM4580M
Q3801	22240786	TC9274N-006
Q3802	22240981R2	TC9162AF
Q3803	22240943R2	TC9163AF
Q3807	22241448R2	NJM4580M-D

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q3003,Q3103	2215410R2	RN1441
Q3008-Q3011	2215410R2	RN1441
Q3108-Q3111	2215410R2	RN1441
Q3208,Q3209	2215410R2	RN1441
Q3308-Q3311	2215410R2	RN1441
Q3408-Q3411	2215410R2	RN1441
Q3508,Q3509	2215410R2	RN1441
Q3608,Q3609	2215410R2	RN1441
Q3708,Q3709	2215410R2	RN1441
Q3901	2214530R2 or	RN2402 or
	2216220R2	KRA102S
	Diodes	
D3901	224550510R2 or	UDZS5.1B or
	224490510R2	UDZ5.1B
D3902	223234R2 or	1SS352 or
	223233R1	1SS355
	Capacitors	
C3001,C3011	393884707	47 μ F,50V,Elect.
C3005,C3006	393881007	10 μ F,50V,Elect.
C3009,C3044	393881017	100 μ F,50V,Elect.
C3012,C3112	374724724	4700pF \pm 5%,50V,Plastic
C3017,C3117	374721044	0.1 μ F \pm 5%,50V,Plastic
C3018,C3105	393881007	10 μ F,50V,Elect.

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CIRCUIT NO.	PART NO.	DESCRIPTION
RL5711,RL5712	25065563 or	NRL-2P5A-DC24-129 or
	25065586	NRL-2P5A-DC24-142
	Terminal	
P5021	25060296	NTM-8PDMN227
	Sockets	
JL5019B	25050268	NSCT-4P96
P5014	2009990628A	NSAS-4P0859
	Plug	
P5014B	25055167	NPLG-4P151

THERMAL DETECTOR PC BOARD (NAETC-6986-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
R5714	4000150	PTH9M04BC222TS2F333,Thermister
R5715	4000153	PTH9M04BF222TS2F333,Thermister
JL5017A	25051088	NSCT-4P875,Socket

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CIRCUIT NO.	PART NO.	DESCRIPTION
	Bus bars	
P9516-P9517	27141753	BBL50
P9518-P9522	27141754	BBL60
	Heatsinks	
Q5309A,Q5409A	27160470	(DR)139.
Q5509A	27160475	(DR)144
	Screws	
Q5309B,Q5310B	838430107	3TTB+10S(BC),Self-tapping
Q5409B,Q5410B	838430107	3TTB+10S(BC),Self-tapping
Q5509B,Q5510B	838430107	3TTB+10S(BC),Self-tapping

SPEAKER TERMINAL B PC BOARD (NAETC-6985-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q5711,Q5712	2216156R2,	2SC1622A-L,
	2216295R2 or	KTC3911-GR or
	2216296R2	KTC3911-BL
	Diodes	
D5711,D5712	223233R1	1SS355 or
	Capacitors	
C5725,C5726	374721024	1000pF \pm 5%,50V,Plastic
	Relays	

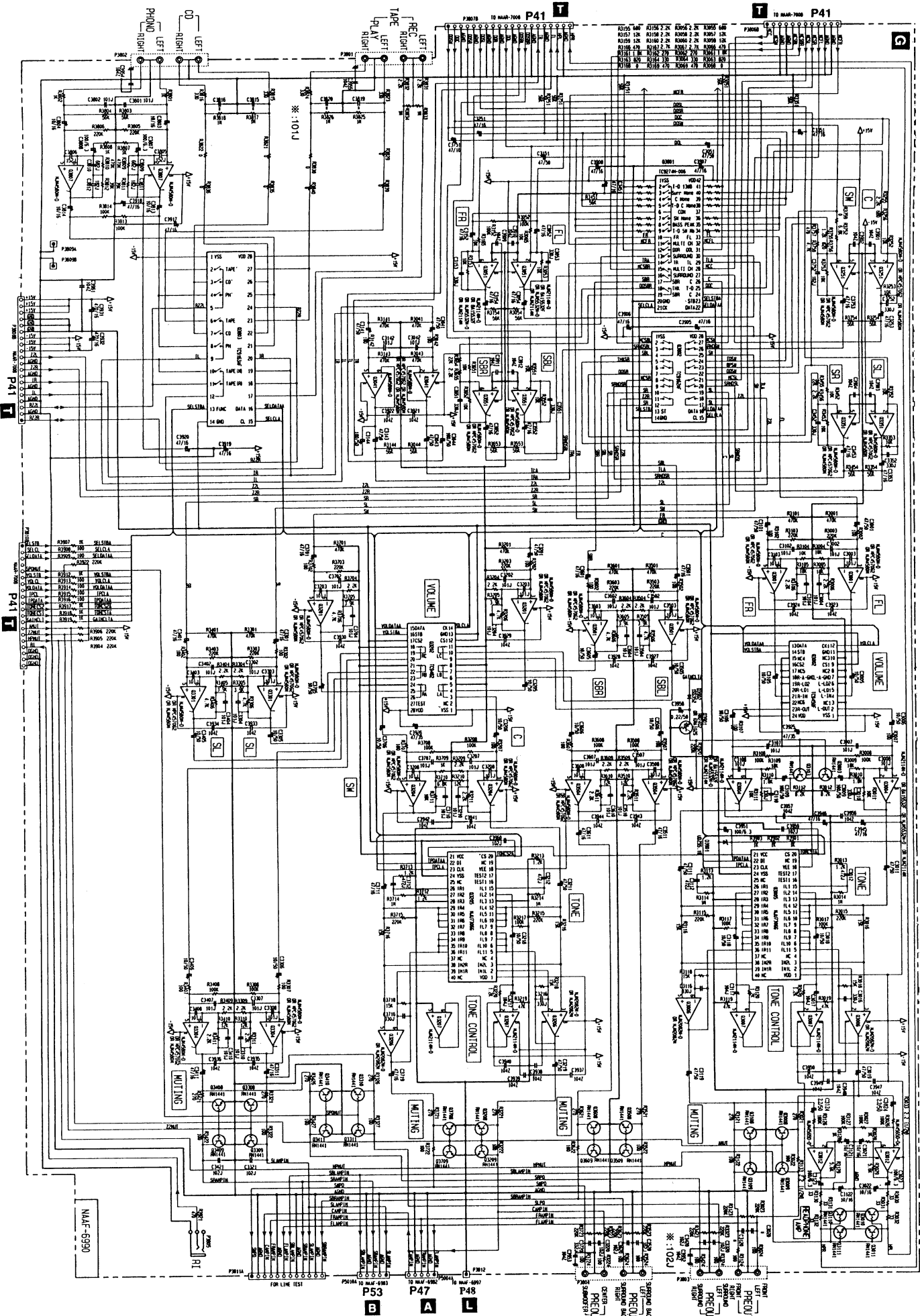
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CIRCUIT NO.	PART NO.	DESCRIPTION
C3019,C3041	393884707	47 μ F,50V,Elect.
C3020,C3120	374721024	1000pF \pm 5%,50V,Plastic
C3021,C3022	354741009	10 μ F,16V,Elect.
C3023,C3123	354721019	100 μ F,6.3V,Elect.
C3024,C3124	354780229	2.2 μ F,50V,Elect.
C3043,C3051	393884707	47 μ F,50V,Elect.
C3052,C3054	393884707	47 μ F,16V,Elect.
C3101,C3111	393884707	47 μ F,50V,Elect.
C3106,C3118	393881007	10 μ F,50V,Elect.
C3109,C3144	393881017	100 μ F,50V,Elect.
C3119,C3141	393884707	47 μ F,50V,Elect.
C3121,C3122	354741009	10 μ F,16V,Elect.
C3143,C3151	393884707	47 μ F,50V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
Capacitors		
C3152,C3154	393844707	47 μ F,16V,Elect.
C3201,C3211	393884707	47 μ F,50V,Elect.
C3205,C3206	393881007	10 μ F,50V,Elect.
C3212	374724724	4700pF \pm 5%,50V,Plastic
C3217	374721044	0.1 μ F \pm 5%,50V,Plastic
C3218	393881007	10 μ F,50V,Elect.
C3219	393884707	47 μ F,50V,Elect.
C3220,C3320	374721024	1000pF \pm 5%,50V,Plastic
C3251,C3253	393844707	47 μ F,16V,Elect.
C3301,C3311	393844707	47 μ F,16V,Elect.
C3305,C3306	393881007	10 μ F,50V,Elect.
C3321,C3420	374721024	1000pF \pm 5%,50V,Plastic
C3351,C3353	393844707	47 μ F,16V,Elect.
C3401,C3411	393844707	47 μ F,16V,Elect.
C3405,C3406	393881007	10 μ F,50V,Elect.
C3421,C3520	374721024	1000pF \pm 5%,50V,Plastic
C3451,C3453	393844707	47 μ F,16V,Elect.
C3501,C3511	393844707	47 μ F,16V,Elect.
C3505,C3506	393881007	10 μ F,50V,Elect.
C3552,C3601	393844707	47 μ F,16V,Elect.
C3605,C3606	393881007	10 μ F,50V,Elect.
C3611,C3652	393844707	47 μ F,16V,Elect.
C3620	374721024	1000pF \pm 5%,50V,Plastic
C3701,C3711	393844707	47 μ F,16V,Elect.
C3705,C3706	393881007	10 μ F,50V,Elect.
C3719	393844707	47 μ F,16V,Elect.
C3720	374723324	3300pF \pm 5%,50V,Plastic
C3751,C3753	393844707	47 μ F,16V,Elect.
C3803,C3804	354741009	10 μ F,16V,Elect.
C3805,C3806	374721524	1500pF \pm 5%,50V,Plastic
C3807,C3808	354721019	100 μ F,6.3V,Elect.
C3809,C3810	374726824	6800pF \pm 5%,50V,Plastic
C3811,C3812	374721824	1800pF \pm 5%,50V,Plastic
C3813,C3814	354741009	10 μ F,16V,Elect.
C3905-C3908	354744709	47 μ F,16V,Elect.
C3917-C3920	354744709	47 μ F,16V,Elect.
C3925,C3926	354764709	47 μ F,35V,Elect.
C3931,C3932	354744719	470 μ F,16V,Elect.
C3945,C3946	354744709	47 μ F,16V,Elect.
C3951	354721019	100 μ F,6.3V,Elect.
C3958	354782299	0.22 μ F,50V,Elect.
Resistors		
R3033,R3133	453530224	2.2 Ω \pm 5%,1/2W,Metal
Terminals		
P3801-P3803	25045582 or 25045491	NPJ-4PDRW393 or NPJ-4PDBL308
P3804	25045587	NPJ-4PDBRW398
P3805	25045504	NPJ-1PDBL319
Sockets		
P3806B	25051237	NSCT-12P1027
P3807B,P3808B	25051241	NSCT-20P1031
P3810B	25051241	NSCT-20P1031
Plugs		
P3811A	25055142	NPLG-12P126
P5004A,P5010A	25055135	NPLG-5P119

SCHEMATIC DIAGRAM
PREAMPLIFIER SECTION

A | B | C | D | E | F | G



A

B

C

D

E

F

G

SCHEMATIC DIAGRAM
DSP SECTION

This schematic diagram illustrates the DSP section of a system, organized into a grid with columns labeled A through G and rows labeled 1 through 5. The diagram features several key components:

- ICs and Chips:**
 - 0812 DSP5636F1100:** A central DSP chip with a detailed pinout table at the top left.
 - 0706 AK4356:** A chip located in the center-right area.
 - 0808:** A chip located in the middle-left area.
 - 74xx Series Logic:** Multiple 74xx series chips are distributed throughout the circuit, including 7400, 7401, 7402, 7403, 7404, 7405, 7406, 7407, 7408, 7409, 7410, 7411, 7412, 7413, 7414, 7415, 7416, 7417, 7418, 7419, 7420, 7421, 7422, 7423, 7424, 7425, 7426, 7427, 7428, 7429, 7430, 7431, 7432, 7433, 7434, 7435, 7436, 7437, 7438, 7439, 7440, 7441, 7442, 7443, 7444, 7445, 7446, 7447, 7448, 7449, 7450, 7451, 7452, 7453, 7454, 7455, 7456, 7457, 7458, 7459, 7460, 7461, 7462, 7463, 7464, 7465, 7466, 7467, 7468, 7469, 7470, 7471, 7472, 7473, 7474, 7475, 7476, 7477, 7478, 7479, 7480, 7481, 7482, 7483, 7484, 7485, 7486, 7487, 7488, 7489, 7490, 7491, 7492, 7493, 7494, 7495, 7496, 7497, 7498, 7499.
- Connectivity:** The diagram shows a dense network of signal lines connecting the various components. Labels such as 'JTAG PORT', 'CPU', 'MEM', 'DATA', 'ADDRESS', and 'CONTROL' are used to identify different signal paths.
- Power and Grounding:** Power supply lines and ground connections are clearly marked throughout the circuit.
- Grid and Labels:** The grid letters A-G and numbers 1-5 provide a reference system for locating components. Additional labels like 'NADG-6989' and 'P41' are present at the bottom and right edges.

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PRINTED CIRCUIT BOARD-PARTS LIST**VIDEO INPUT/OUTPUT TERMINAL PC BOARD (NAAF-7004-1F)**

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q4905	22241448R2, 22240489R1NE or 22241555R2	NJM4580M-D, MPC4570G2-T1 or NJM4580M
Q4906	22241448R2, 22240489R1NE or 22241555R2	NJM4580M-D, MPC4570G2-T1 or NJM4580M
Q4907	22240829	TC9274N-008
Transistors		
Q4909,Q4910	2215410R2	RN1441
Q8807,Q8808	2212855 or 2212853	2SB1068-U or 2SB1068-K
Q8809,Q8810	2214470R2 or 2216190R2	RN1402 or KRC102S
Capacitors		
C4917-C4922	354780229	2.2 μ F,50V,Elect.
C4925,C4926	354784709	47 μ F,50V,Elect.
C4961,C4962	354744709	47 μ F,16V,Elect.
C4967,C4968	354744709	47 μ F,16V,Elect.
C8803,C8804	353780109	1 μ F,50V,Elect.

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CIRCUIT NO.	PART NO.	DESCRIPTION
Terminals		
P4901	25045583 or 25045565	NPJ-6PDRW394 or NPJ-6PDBL380
P4902,P4903	25045582 or 25045491	NPJ-4PDRW393 or NPJ-4PDBL308
Sockets		
P4904B	25051527	NSCT-16P1314
P4905B	25051232	NSCT-7P1022
P4906B	25051234	NSCT-9P1024

IR TERMINAL PC BOARD (NAETC-7006-1F)

CIRCUIT NO.	PART NO.	DESCRIPTION
Transistors		
Q8803-Q8806	2214470R2 or 2216190R2	RN1402 or KRC102S
Photo couplers		
Q8801,Q8802	24120043, 24120044 or 24120045	ON3131, ON3131-R or ON3131-S
Diode		
D8801	223234R2 or 223233R1	1SS352 or 1SS355
Capacitors		
C8801,C8802	374722234	0.022 μ F \pm 5%,50V,Plastic
C8805	353721019	100 μ F,6.3V,Elect.
Terminals		
P8801,P8802	25045504	NPJ-1PDBL319
P8803,P8804	25045504	NPJ-1PDBL319
Socket		
P8805B	25051235	NSCT-10P1025

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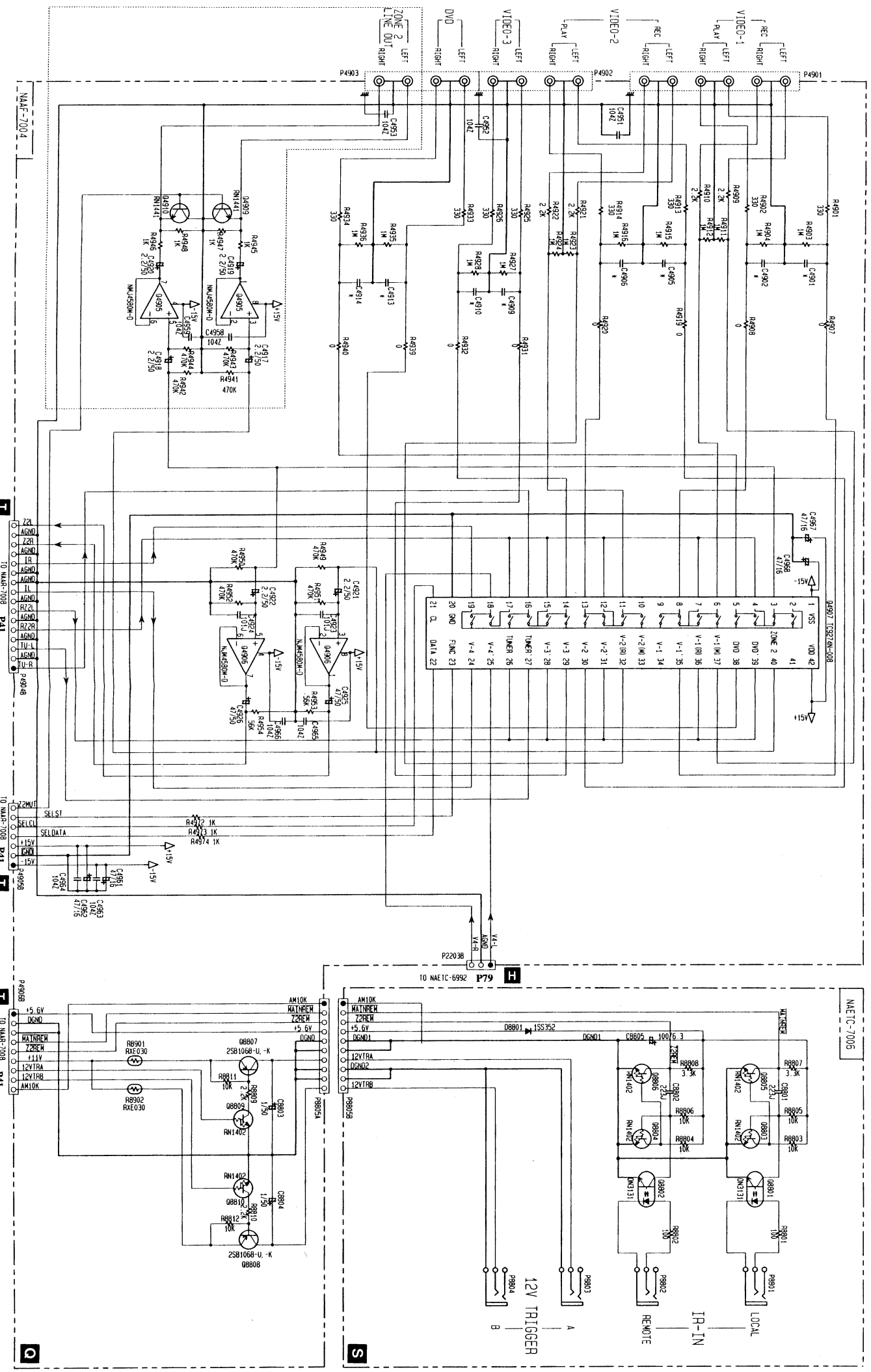
DSP CIRCUIT PC BOARD (NADG-6989-1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q301,Q302	22241448R2, 22240489R1NE or 22241555R2	NJM4580M-D, MPC4570G2-T1 or NJM4580M
Q303-Q306	22241472R2, 22241409R2, 22241449R2 or 22241556R2	NJM2114M-D, BA15532F, NJM5532M-D or NJM2114M
Q701	22274541ER2TO	TC74VHC541FT
Q702	222740077R2TO	TC74HCT7007AF
Q703	22278033DR2NEC	MPC2933T
Q704	22241515R2	PQ025EZ5MZP
Q705	22241520R2	AK4112AVF
Q706	22241521R3	AK4356VQ
Q707	22241522R2	AK4528VF
Q808	22241518R9	CS493263-CL
Q809	22240935R2	TC7WU04FU
Q810	22274074ER2TO	TC74VHC74FT
Q811	22274000GR2TO	TC74VHCT00AFT
Q812	22241519R3	XCB56364FU100
Q813	22241516R3, 22241612R2, 22241538R3 or 22241560R2	TC55V8128BFT-10, CY7C1019BV33-15VCT, TC55V8128BFT-12 or CY7C1019V33-15VCT
Q814	2227400GR2TO	TC74VHC00AFT
Diodes		
D301-D308	223234R2 or 223233R1	1SS352 or 1SS355
Coils		
L301,L302	231237M022R2	NCH-1471
L701,L702	231237M022R2	NCH-1471
L704,L705	230959R1	BK1608LL241-T
L706,L707	230958R1	BK1608LM182-T
L710,L720	231237M022R2	NCH-1471
L802-L808	231237M022R2	NCH-1471
Oscillators		
X701	3010320, 3010327 or 3010335	AT-4912.288MHz, AT-4912.288MHz or AT-49H12.288MHz,Crystal
X704	3010278	CST12.2MTW040,Ceramic
Capacitors		
C301,C302	354744709	47 μ F,16V,Elect.
C310	354744709	47 μ F,16V,Elect.
C311,C312	374721524	1500pF \pm 5%,50V,Plastic
C320,C322	354744709	47 μ F,16V,Elect.
C330 -C337	374722224	2200pF \pm 5%,50V,Plastic
C338-C345	374724724	4700pF \pm 5%,50V,Plastic
C346-C361	374726814	680pF \pm 5%,50V,Plastic
C370-C377	354744709	47 μ F,16V,Elect.
C388,C389	354742219	220 μ F,16V,Elect.
C390	354724719	470 μ F,6.3V,Elect.
C391,C857	354744709	47 μ F,16V,Elect.
C740,C744	354724719	470 μ F,6.3V,Elect.
C743,C747	354721019	100 μ F,6.3V,Elect.
C750,C757	354744709	47 μ F,16V,Elect.
C773,C783	354744709	47 μ F,16V,Elect.
C824,C830	354744709	47 μ F,16V,Elect.
C861	374725624	5600pF \pm 5%,50V,Plastic
Sockets		
P701B-P703B	25051241	NSCT-20P1031

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SCHEMATIC DIAGRAM VIDEO AUDIO SECTION

A B C D E F G



MANF-7004

TO NAEIC-7008 P41

TO NAEIC-7008 P41

TO NAEIC-7008 P41

TO NAEIC-7008 P41

NAEIC-7006

TO NAEIC-6992 P79

12V TRIGGER

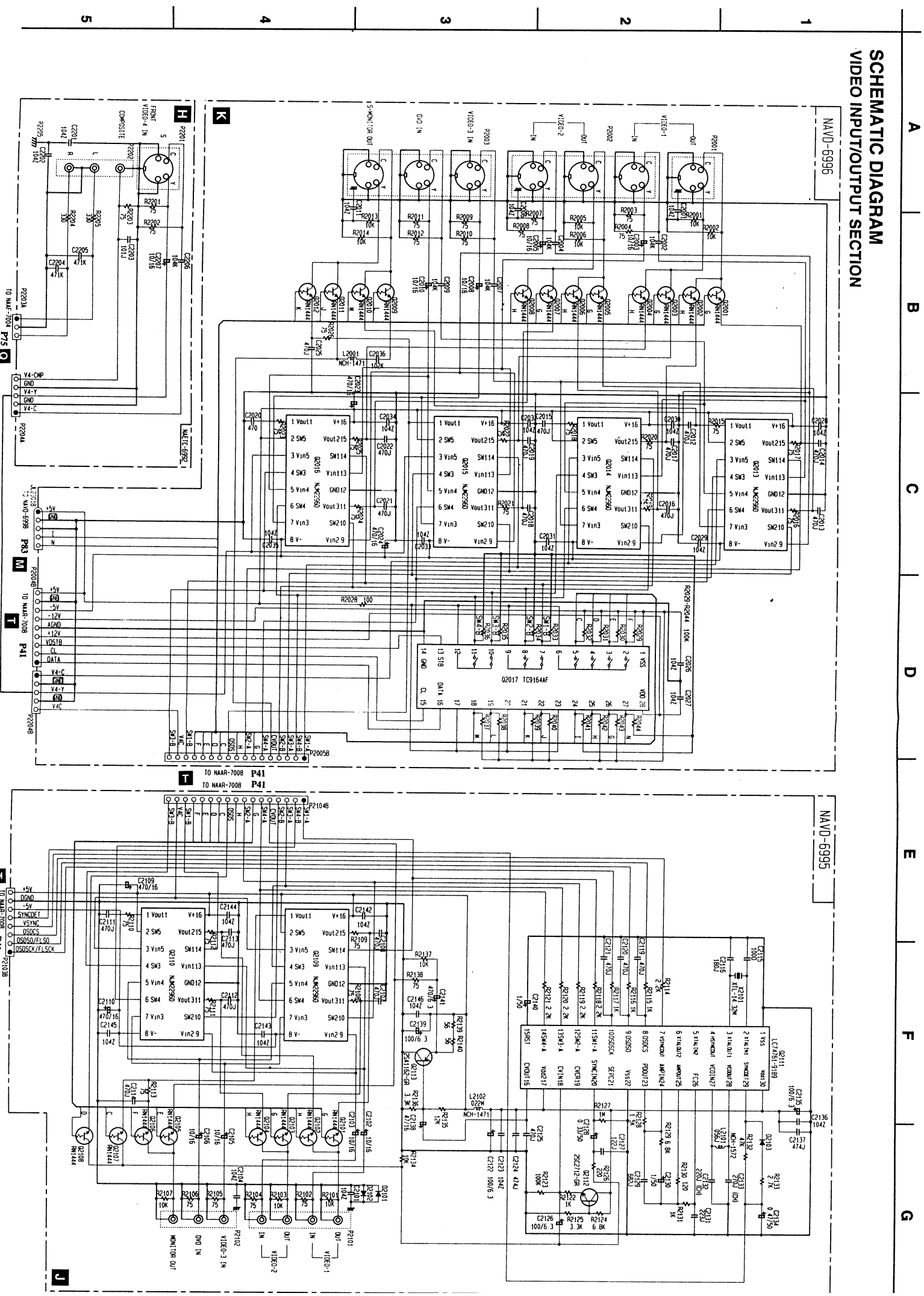
IR-IN

REMOTE

LOCAL

S

SCHEMATIC DIAGRAM VIDEO INPUT/OUTPUT SECTION



PRINTED CIRCUIT BOARD-PARTS LIST

FRONT TERMINAL PC BOARD (NAETC-6992-1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C2207	353741009	10 μ F, 16V, Elect.
	Terminal	
P2202	25045631	NPJ-3PDB438
	Sockets	
P2201	25051569	NSCT-4P1356
P2203A	2009990513UL	NSAS-6P0675
P2204A	2009990434UL	NSAS-10P0578

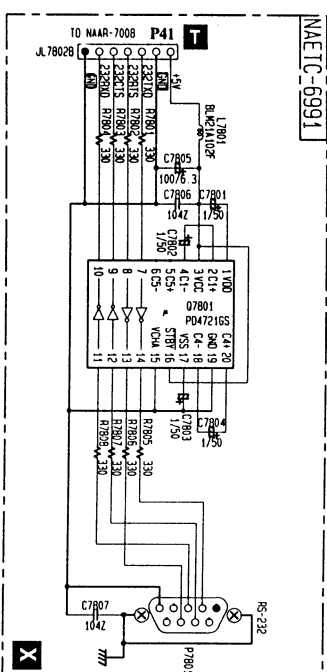
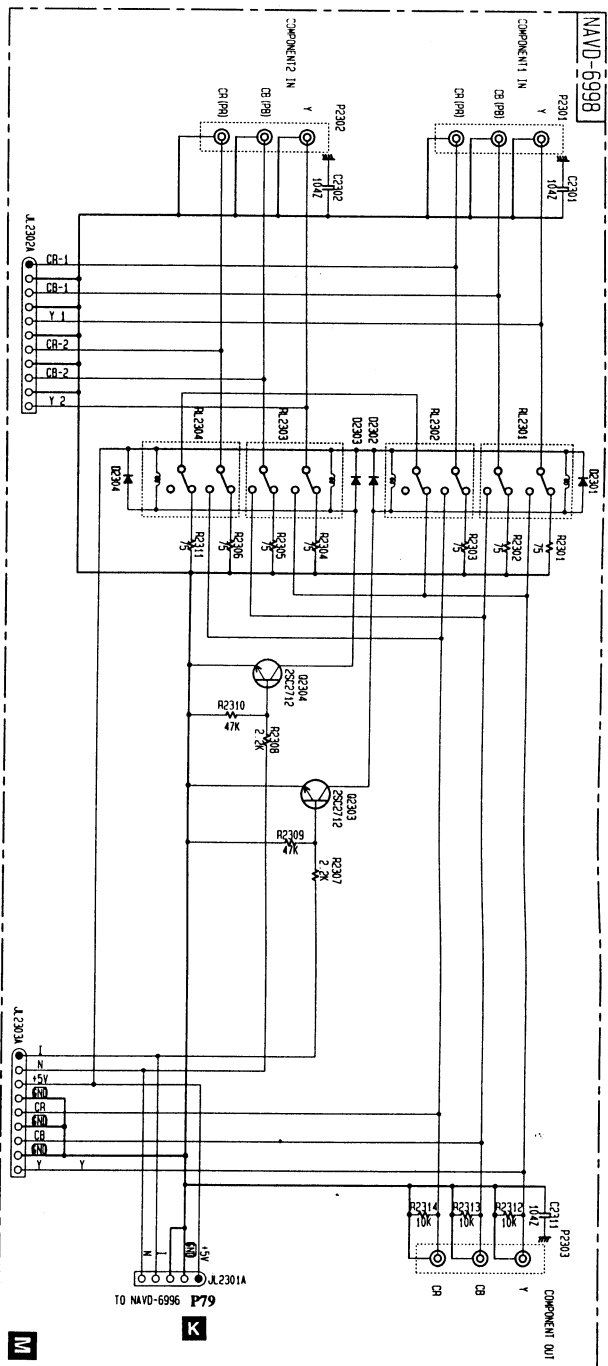
VIDEO TERMINAL PC BOARD (NAVD-6995-1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D2101-D2103	223234R2 or 223233R1	1SS352 or 1SS355
	Coils	
L2101	231292J056R2	NCH-1572
L2102	231237M022R2 or 231237K022R2	NCH-1471 or NCH-1471
	Oscillator	
X2101	3010167	XTL-14.32M
	Capacitors	
C2102, C2103	354741009	10 μ F, 16V, Elect.
C2105, C2106	354741009	10 μ F, 16V, Elect.
C2109, C2110	354744719	470 μ F, 16V, Elect.
C2122, C2126	354721019	100 μ F, 6.3V, Elect.
C2124, C2137	375524744	0.47 μ F \pm 5%, 50V, Plastic
C2127	374721224	1200pF \pm 5%, 50V, Plastic
C2128	354783399	0.33 μ F, 50V, Elect.
C2129	374726824	6800pF \pm 5%, 50V, Plastic
C2130, C2140	354780109	1 μ F, 50V, Elect.
C2131	374722234	0.022 μ F \pm 5%, 50V, Plastic
C2134	354784799	0.47 μ F, 50V, Elect.
C2135, C2139	354721019	100 μ F, 6.3V, Elect.
C2138	354744709	47 μ F, 16V, Elect.
C2141	354724719	470 μ F, 6.3V, Elect.
	Terminals	
P2101	25045566	NPJ-4PDYE381
P2102	25045363	NPJ-3PDYE208
	Sockets	
P2103B	25051233	NSCT-8P1023
P2104B	25051528	NSCT-17P1315
	Plugs	
P2004A	25055705	NPLG-9P661
P2005A	25055806	NPLG-17P762

S VIDEO TERMINAL PC BOARD (NAVD-6996-1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q2013-Q2016	22241347	NJM2296D
Q2017	22241221R2	TC9164AF
Q2109, Q2110	22241347	NJM2296D
Q2111	22241037	LC74761-9189
	Transistors	
Q2001-Q2012	2216031R2 or	RN1444-A or
Q2101-Q2108	2216032R2	RN1444-B
Q2112	2213145R2,	2SC2712-GR,
	2213143R2,	2SC2712-O,
	2213144R2,	2SC2712-Y,
	2216173R2,	KTC3875-O,
	2216174R2 or	KTC3875-Y or
	2216175R2	KTC3875-GR
Q2113	2214375R2,	2SA1162-GR,
	2214373R2,	2SA1162-O,
	2214374R2,	2SA1162-Y,
	2216183R2,	KTA1504-O,
	2216184R2 or	KTA1504-Y or
	2216185R2	KTA1504-GR
	Coil	
L2001	231237M022R2 or 231237K022R2	NCH-1471 or NCH-1471
	Capacitors	
C2003, C2005	354741009	10 μ F, 16V, Elect.
C2008, C2010	354741009	10 μ F, 16V, Elect.
C2023, C2024	354744719	470 μ F, 16V, Elect.
	Sockets	
JL2301B	25050269	NSCT-5P97
P2001	25051955	NSCT-4P1742
P2002, P2003	25051957	NSCT-12P1744
P2004B	25051234	NSCT-9P1024
P2005B	25051528	NSCT-17P1315
	Plug	
P2204B	25055236	NPLG-5P220

**SCHEMATIC DIAGRAM
COMPONENT VIDEO SECTION**

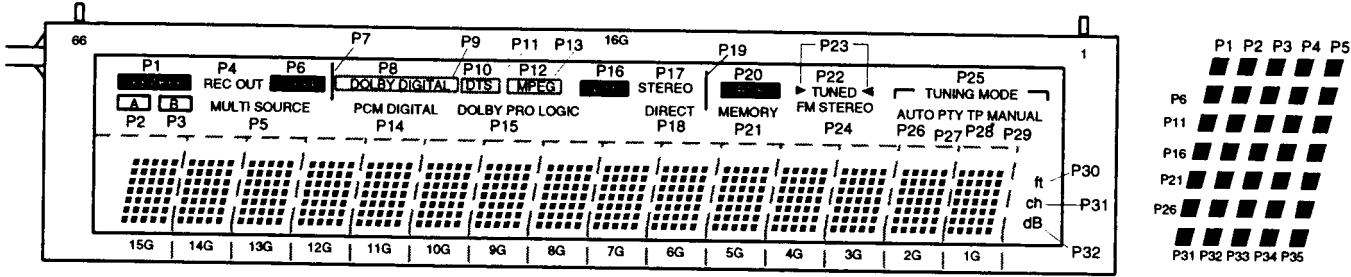


PRINTED CIRCUIT BOARD-PARTS LIST

RS232 TERMINAL PC BOARD (NAETC-6991-1E)		
CIRCUIT NO.	PART NO.	DESCRIPTION
Q7801	22241537R2	MPD4721QS,IC
L7801	230948R2	BLM21A102F,Coil
C7801-C7804	354780109	1 μ F,30V,Elect. capacitor
C7805	354721019	100 μ F,6.3V,Elect. Capacitor
JL7802B	25050271	NSCT-7P99,Socket
P7801	25052379	NSCT-9P2277,Socket

COMPONENT VIDEO TERMINAL PC BOARD (NAVD-6998-1D)		
CIRCUIT NO.	PART NO.	DESCRIPTION
Transistors		
Q2303,Q2304	2213145R2	2SC2712-QR
	2213143R2	2SC2712-Q
	2213144R2	2SC2712-Y
	2216173R2	KTC3875-Q
	2216174R2 or 2216175R2	KTC3875-Y or KTC3875-GR
Diodes		
D2301-D2304	223234R2 or 223233R1	1SS352 or 1SS335
Relays		
RL2301-RL2304	25065610	NRL-2P1A-DC4,5-156
P2301-P2303	25045607	NPJ-3PDDQLR414
JL2301A	25051109	NSCT-57896

FL TUBE VIEW



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PRINTED CIRCUIT BOARD-PARTS LIST

RS232 TERMINAL PC BOARD (NAETC-6991-1E)

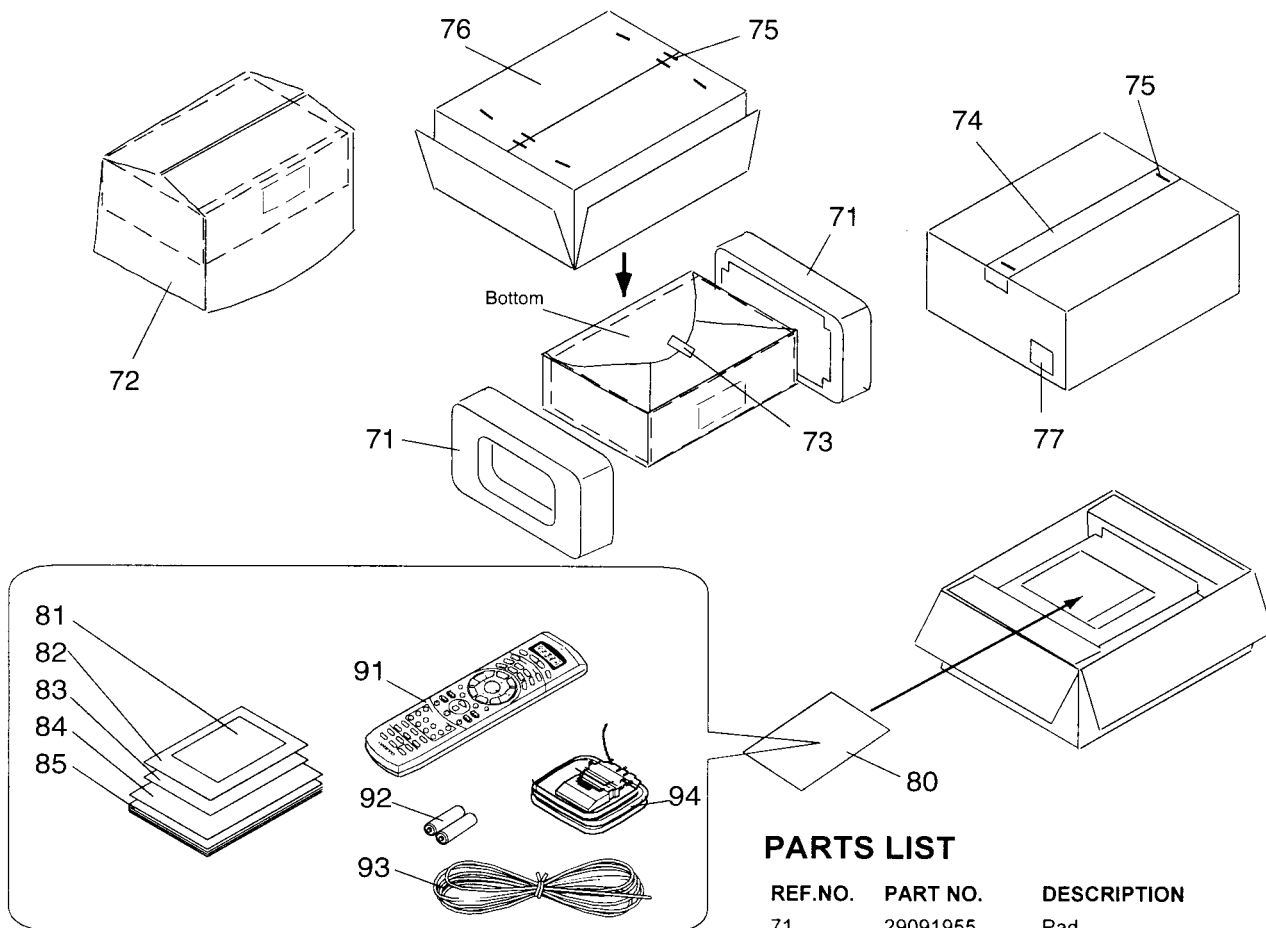
CIRCUIT NO.	PART NO.	DESCRIPTION
Q7801	22241537R2	MPD4721GS,IC
L7801	230948R2	BLM21A102F,Coil
C7801-C7804	354780109	1 μ F,50V,Elect. capacitor
C7805	354721019	100 μ F,6.3V,Elect. Capacitor
JL7802B	25050271	NSCT-7P99,Socket
P7801	25052379	NSCT-9P2277,Socket

COMPONENT VIDEO TERMINAL PC BOARD (NAVD-6998-1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
Transistors		
Q2303,Q2304	2213145R2,	2SC2712-GR,
	2213143R2,	2SC2712-O,
	2213144R2,	2SC2712-Y,
	2216173R2,	KTC3875-O,
	2216174R2 or	KTC3875-Y or
	2216175R2	KTC3875-GR
Diodes		
D2301-D2304	223234R2 or	1SS352 or
	223233R1	1SS355
Relays		
RL2301-RL2304	25065610	NRL-2P1A-DC4.5-156
Terminals		
P2301-P2303	25045607	NPJ-3PDGLR414
Socket		
JL2301A	25051109	NSCT-5P896

DTR-7.1

PACKING VIEW



PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
71	29091955	Pad
72	29100153	1020x720,Polybag
73	261504	Paper tape
74	29110098	PP tape
75	282301	Staple
76	29053633A	Carton box
77	29362742	Label UPC
80	29100097-1A	350*250, Polybag
81	29365080B	Warranty card
82	29095865	Sheet
83	29355349	Instruction sheet U10
84	29342974	Instruction manual, connection
85	29342973A	Instruction manual
91	24140418A	RC-418M,Remote controller
92	3010054	UM-3,Battery
93	292142	FM antenna
94	232140	NMA-3057,AM loop antenna

Integra Division of

ONKYO CORPORATION

Sales & Product Planning Div. : 2-1, Nisshin-cho, Neyagawa-shi, OSAKA 572-8540, JAPAN
Tel: 072-831-8111 Fax: 072-833-5222

Integra Division of

ONKYO U.S.A. CORPORATION

18 Park Way, Upper Saddle River, NJ 07458, U.S.A.
Tel: 201-785-2600 Fax: 201-758-2650 E-mail: Integra@onkyousa.com



PN 0M3669 NS103 Printed in Japan