

SERVICE MANUAL



T 743

AV Receiver

T 743

AV Receiver

SAFETY INFORMATION

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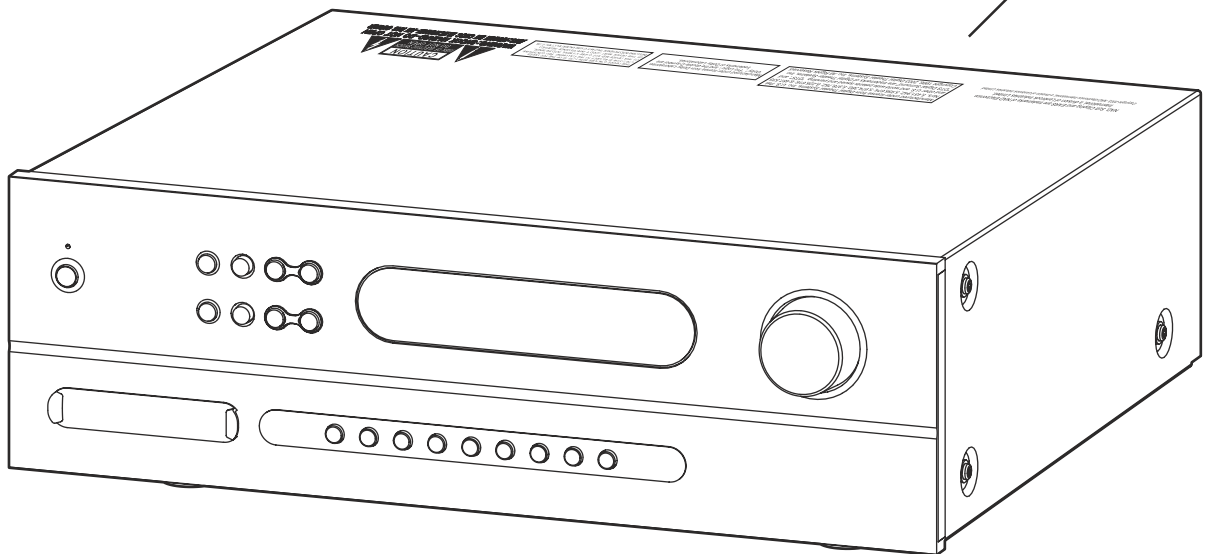
Manufactured under license from Digital Theater Systems, Inc. U.S. Pat. No's, 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535 and other U.S. and world-wide patents issued and pending. "DTS", and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. Copyright 1996, 2003 Digital Theater Systems, Inc. All Rights Reserved.

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THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.
(2) THIS DEVICE MUST ACCEPT INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: SHOCK HAZARD - DO NOT OPEN
AVIS: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR



SERVICE SAFETY PRECAUTIONS

1. Replacing the fuses

CAUTION:

FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE REPLACE ONLY WITH SAME TYPE OF FUSE.

<u>Reference Designator</u>	<u>Part Number</u>	<u>Description</u>
F751*AH ⚠	33-0101001-00-48	FUSE 7A 250V TIME-LAG5 X 20mm SIC UL/CSA
F751*C ⚠	33-0141002-00-48	FUSE 4A 250V TIME-LAG 5 X 20mm VDE/UL TSD
F752*AH ⚠	33-0111006-00-48	FUSE 1.6A 250V TIME LAG LBC 5x20mm TSD UL/CSA/VDE/SEMKO
F752*C ⚠	33-0151006-00-48	FUSE 800mA 250V TIME LAG LBC 5x20mm TSD UL/CSA/VDE/SEMKO
FH751-FH752 ⚠	33-1000000-00-88	FUSE CLIP 0.05mm FC-53-11

NOTE: <*AH > : USA, CANADIAN MODEL ONLY.
<*C > : EUROPEAN MODEL ONLY.

2. Safety check out

(Only U.S.A. model)

Before returning the product to the customer, make leakage current or resistance measurements to determine that exposed parts are acceptably insulated from supply circuit.

Parts marked with the symbol ⚠ are critical with regard to the risk of fire and electric shock.
Replace only with parts recommended by the manufacturer.

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SPECIFICATIONS

POWER AMPLIFIER SECTION

Rated distortion	(Rated power level into 8 ohms, THD 20 Hz-20 kHz FL/C/FR)	≤ 0.1 %
	(Rated power level into 8 ohms, THD 20 Hz-20 kHz SL/SR/BS)	≤ 0.1 %
Power output Surround Mode	5 x 50W (16.98 dBW)	
Input Sensitivity	(ref. 8 ohms, 1 kHz)	150 ± 20 mV
S/N Ratio	(A-wtd, 1kHz, 1 W, 8 ohm, SL/SR/BL)	≥ - 72 dB
Frequency Response	(20 Hz - 20 kHz)	0 ± 1.0 dB
Channel Balance	(1 dB to -40 dB, 1 kHz)	≤ 2 dB
	(-41 dB to -50 dB, 1 kHz)	≤ 3 dB
Audio muting at 1 kHz		≥ 55 dB
Subwoofer out, 500 mV in	(THD at 2 V O/P, 100 Hz)	≤ 0.5 %
Crosstalk	(500 mV input, 10 W, 1 kHz)	≥ -57 dB

Controls

Bass	(at 500 mV in, 1 W out, 100 Hz)	± 10 dB ± 2 dB
Treble	(at 500 mV in, 1 W out, 10 kHz)	± 10 dB ± 2 dB

DOLBY DIGITAL SECTION

Channel Difference(FL ref. Track 30)		± 1.2 dB
Frequency Response at Dolby config.2	SL Track 46 200 - 20 kHz	± 0.8 dB
	SR Track 47 200 - 20 kHz	± 0.8 dB
	C Track 44 200 - 20 kHz	± 0.8 dB
Harmonic Distortion	(1 W, Audio LPF, Dolby Congfig 1)	FL Track 65 997 Hz
		FR Track 67 997 Hz
		SL Track 68 997 Hz
		SR Track 69 997 Hz
		C Track 66 997 Hz
S/N Ratio	(TRACK 30 for O/P 1 W, FAUSE)	CCIR / ARM
		Audio LPF
		A-WTD
Channel Separation	(1 W, A-WTD FILTER)	Track 65 997 Hz

DOLBY PRO LOGIC II SECTION

Frequency Response

I/P mode : L, R	: 1 V in, 1 W, Ch L/R	40 Hz	0 ± 2.0 dB
		20 kHz	0 ± 2.0 dB
I/P mode : L=R	: 1 V in, 1 W, Ch /L/R	40 Hz	0 ± 2.0 dB
	Ch C	20 kHz	0 ± 2.0 dB
I/P mode : L=-R	: 1 V in, 1 W, Ch SL/SR	40 Hz	0 ± 2.0 dB
		20 kHz	0 ± 2.0 dB
S/N Ratio (200 mV in, 1 W, A-WTD w/ 1 k termination)			
I/P mode : L, R	: 1 kHz, Ch L/R		≥ 65 dB
I/P mode : L=R	: 1 kHz, Ch C		≥ 65 dB
I/P mode : L=-R	: 1 kHz, Ch SL/SR		≥ 65 dB
THD (2.2 V in, 1 W, w/ 80 kHz LPF, 1 kHz)			≤ 0.2 %

DTS SECTION

Output Level (Vol 0 dB) : FL/FR/C/SL/SR	Track 6 1 kHz	0.9 ± 1.3 W
Channel Difference (FL ref): FL/FR/C/SL/SR	Track 6 1 kHz	± 1.0 dB
Harmonic Distortion (Audio Filter) : FL/FR/C/SL/SR	Track 10-14 1 kHz	≤ 0.08 %
Frequency Response (20 Hz to 20 kHz)	Track 26-30	+2/-1.5
Subwoofer Output Level 1 kHz ref at pre-out (FL)	Play Track 10, charge to 15	12.5 ± 2 dB

AM TUNER SECTION

Input level is expressed as the reading in open circuit of 75-ohm source impedance signal generator

Usable sensitivity (999/1000 kHz)		≤ 30 dBuV
S/N Ratio (5 mV in)		≥ 38 dB
THD (5 mV in)		≤ 3 %
IF Rejection (450 kHz)		≥ 36 dB
Image Rejection (F+2xIF)		≥ 28 dB
Selectivity		≥ 17 dB
Output		170 ± 20 mV
Loop sensitivity (20 dB S/N)		
999/1000 kHz		≤ 66 dB
603/600 kHz		≤ 66 dB
1404/1400 kHz		≤ 66 dB
Frequency Response (100 - 2.3 kHz, 5 mV)		± 6 dB

FM TUNER SECTION

*C

*AH

Input level is expressed as the reading in open circuit of 75-ohm source impedance signal generator

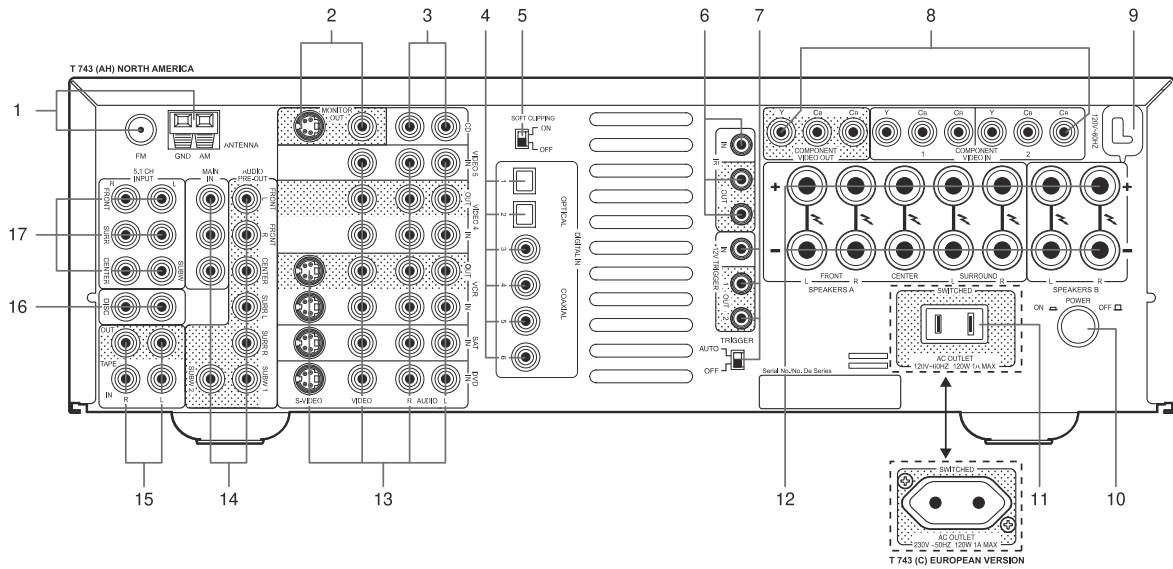
Usable sensitivity (98 MHz)		≤ 15 dBμV	≤ 15 dBuV
S/N Ratio (60 dB, IHF wtd)	Mono	≥ 63 dB	≥ 63 dB
	Stereo	≥ 63 dB	≥ 63 dB
Frequency Response (20 Hz - 15 kHz, 60 dBμ)		0 ± 1.5 dB	0 ± 1.5 dB
Channel Separation (60 dBμ)	100 Hz	≥ 30 dB	≥ 30 dB
	1 k	≥ 38 dB	≥ 38 dB
	10 kHz	≥ 30 dB	≥ 30 dB
Alternate Channel Selectivity (40 dBμ, ± 400 kHz)		≥ 60 dB	≥ 45 dB
Capture Ratio (40 dBμ)		≤ 3 dB	≤ 3 dB
AM Suppression (60 dBμ, 100% Mod. FM, 30% Mod. AM)		≥ 48 dB	≥ 48 dB
Image Rejection (119.4 MHz)		-	≥ 65 dB
I.F. Rejection (10.7 MHz)		≥ 78 dB	-
Pilot Suppression (98 MHz)		≥ 60 dB	≥ 60 dB
THD (60 dBμ, L=R 75 kHz for AH, 40 kHz Dev for C)	Mono	≤ 0.25 %	≤ 0.25 %
	Stereo	≤ 0.35 %	≤ 0.35 %
Auto-Search Sensitivity	On	≥ 24 dBμ	≥ 24 dBμ
	Off	≤ 15 dBμ	≤ 15 dBμ
RDS decode Sensitivity		≤ 26 dBμ	-

PHYSICAL SPECIFICATIONS

Dimensions (Width x Height x Depth)	435 x 167 x 382 mm
Net Weight	18.50 Kg (40.70 lbs)
Shipping Weight	22.20 Kg (48.84 lbs)

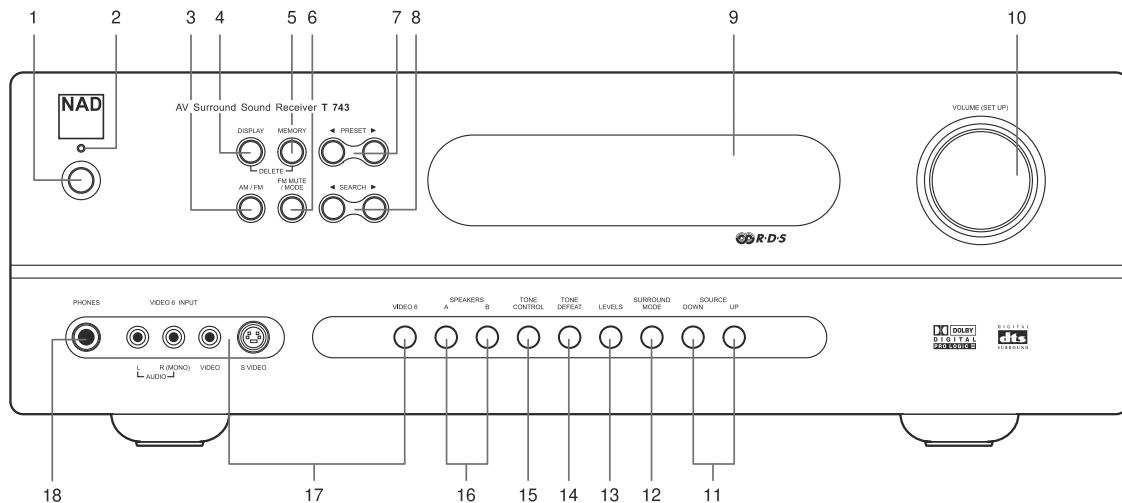
REAR PANEL / FRONT PANEL VIEW

REAR PANEL



- | | |
|---|--|
| 1. FM & AM ANTENNA | 9. AC POWER CORD |
| 2. MONITOR OUT | 10. POWER SWITCH |
| 3. CD INPUT | 11. SWITCHED AC OUTLETS |
| 4. DIGITAL AUDIO INPUT & DIGITAL AUDIO OUTPUT | 12. SPEAKERS A & B |
| 5. SOFT CLIPPING ON/OFF | 13. DVD, SAT, VCR, VIDEO 4 & VIDEO 5 |
| 6. IR INPUT & OUTPUT | 14. MAIN IN / AUDIO PRE-OUTS / SUBWOOFER OUT |
| 7. +12V TRIGGER INPUT & OUTPUT | 15. TAPE INPUT & OUTPUT |
| 8. COMPONENT VIDEO IN & COMPONENT VIDEO OUT | 16. DISC INPUT |
| | 17. 5.1 CH. INPUTS |

FRONT PANEL



- | | | |
|-------------------|----------------------|--------------------|
| 1. STANDBY SWITCH | 7. PRESET DOWN / UP | 13. LEVELS |
| 2. STANDBY LED | 8. SEARCH DOWN / UP | 14. TONE DEFEAT |
| 3. AM / FM | 9. VFL DISPLAY | 15. TONE CONTROLS |
| 4. DISPLAY | 10. VOLUME (SETUP) | 16. SPEAKERS A & B |
| 5. MEMORY | 11. SOURCE DOWN / UP | 17. VIDEO 6 INPUT |
| 6. FM MUTE / MODE | 12. SURROUND MODE | 18. PHONES |

DISASSEMBLY INSTRUCTIONS

1. Remove machine screws M4.0 x 8.0 (1 to 6) from the side panels. Remove tapping screw 3.0 x 8.0 (7 to 10) from the back panel. Refer to **Figure No. 1**.

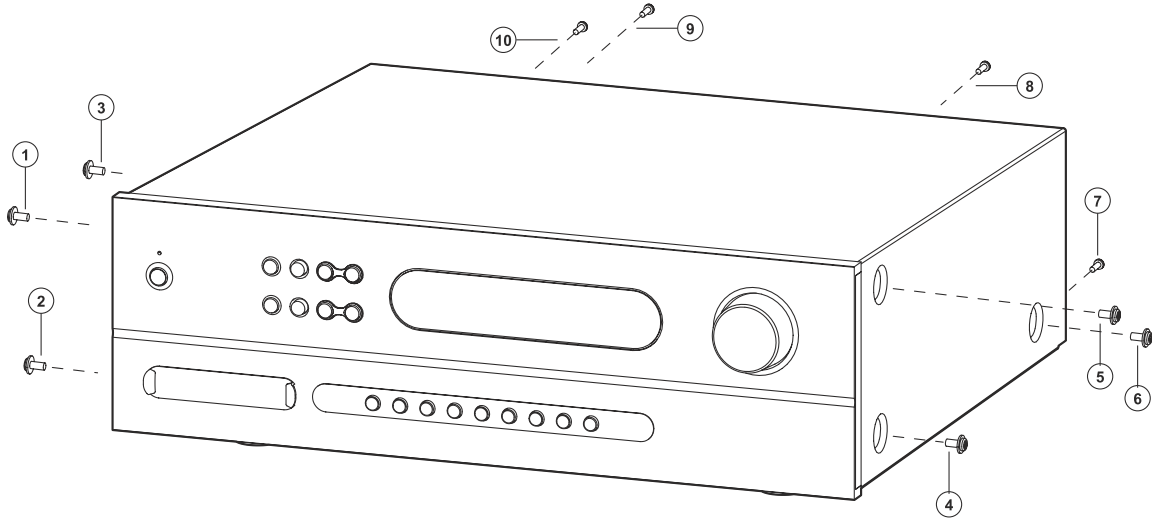


Figure No. 1

2. Pull both sides of the TOP COVER slightly outwards **11** and tilt approx. 35 ° and then remove in the direction as indicated by the arrow **12**. Refer to **Figure No. 2**.

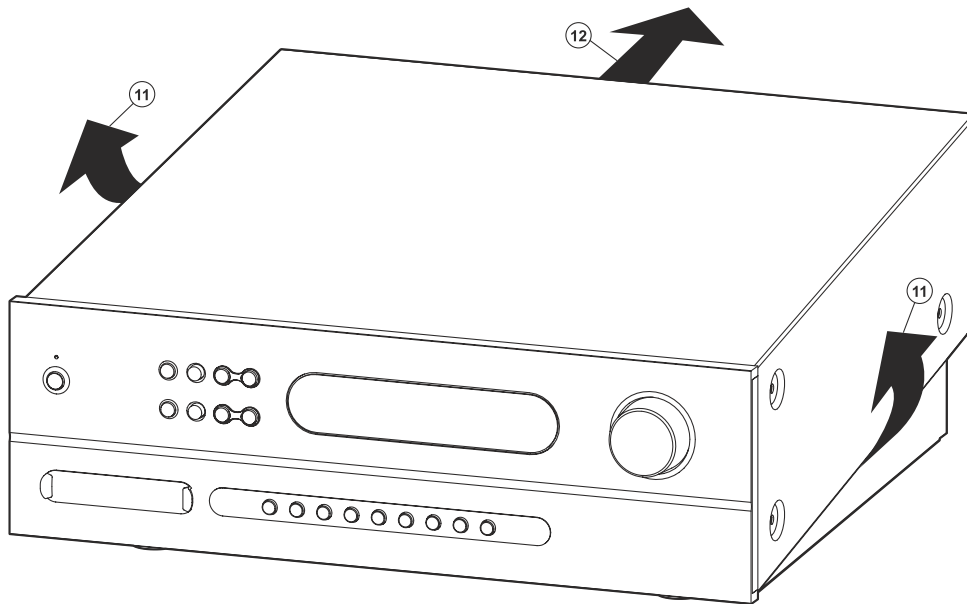
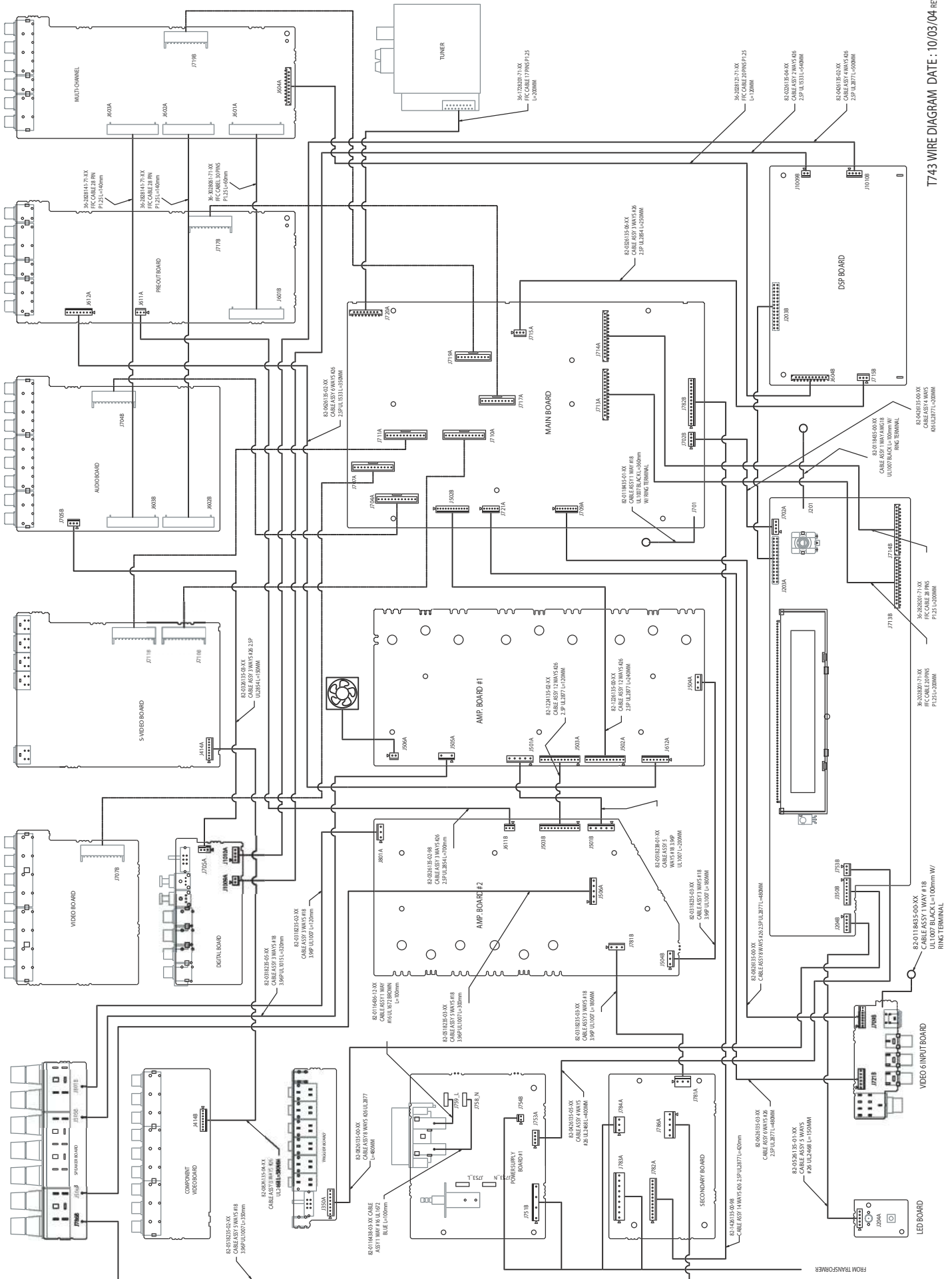


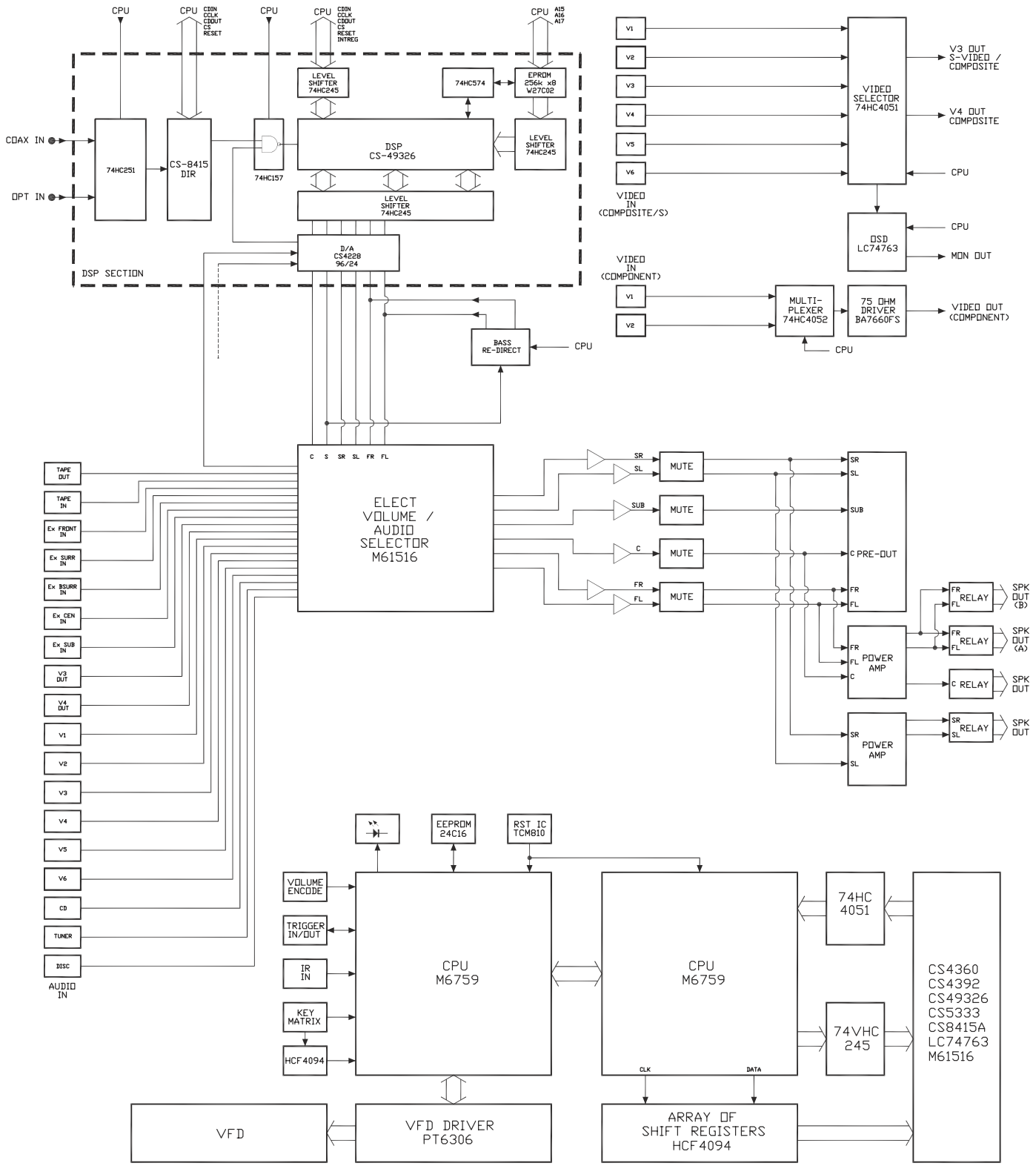
Figure No. 2

WIRING DIAGRAM



1743 WIRE DIAGRAM DATE : 10/03/04 REV.A

BLOCK DIAGRAM



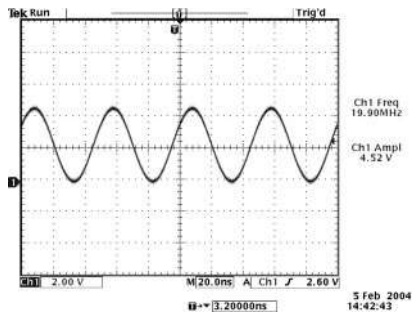
T743 Block Diagram
Issue : 01

SPECIAL FUNCTION

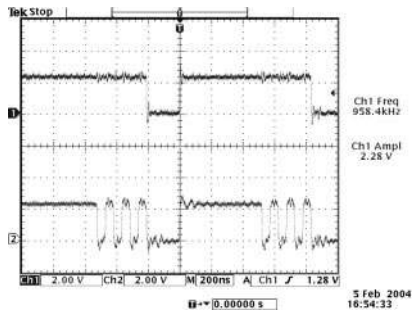
FEATURE	KEYS PRESS ON FRONT PANEL
RESET FOR AH VERSION	VIDEO 6 + SOURCE UP
RESET FOR C VERSION	VIDEO 6 + SOURCE DOWN
NTSC / PAL SELECTION	VIDEO + MEMORY
VFD ALL DISPLAY	AUDIO 6 + TONE DEFEAT
AM FREQ. STEP	AM/FM + FM MUTE

DETAILS & WAVEFORMS ON SYSTEM TEST & DEBUGGING

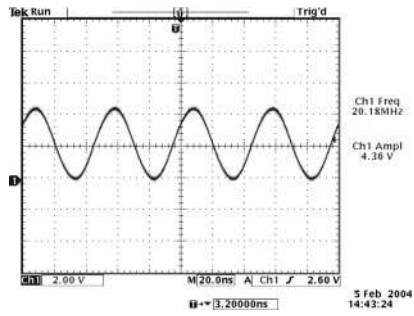
T89C51RD2 (U202) main clock is at 20MHz (X202)



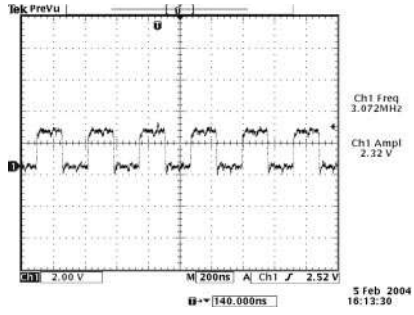
UPPER - OUTPUT ENABLE (pin 24) of EPROM (W27C02) when changing SURROUND MODES
 LOWER - CHIP ENABLE (pin 22) of EPROM (W27C02) when changing SURROUND MODES



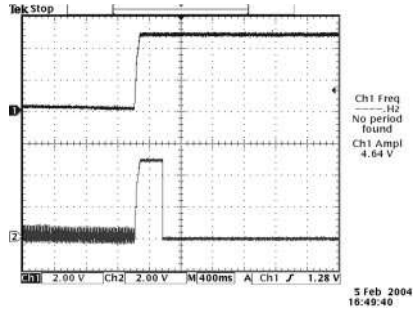
T89C51RD2 (U201) main clock is at 20MHz (X201)



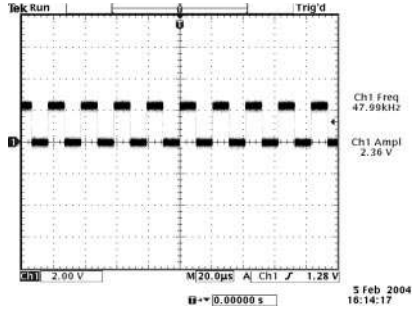
SCLK (pin 43 of CS49326)



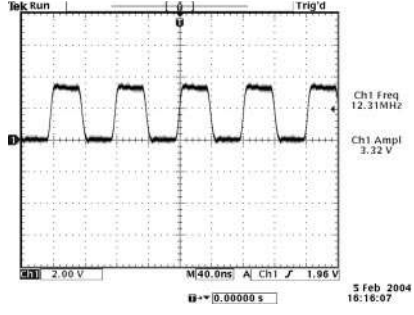
UPPER - +5V supply to KEYBOARD when power up
 LOWER - RESET line (TCM810LENB713) when power up



LRCLK (pin 42 of CS49326)

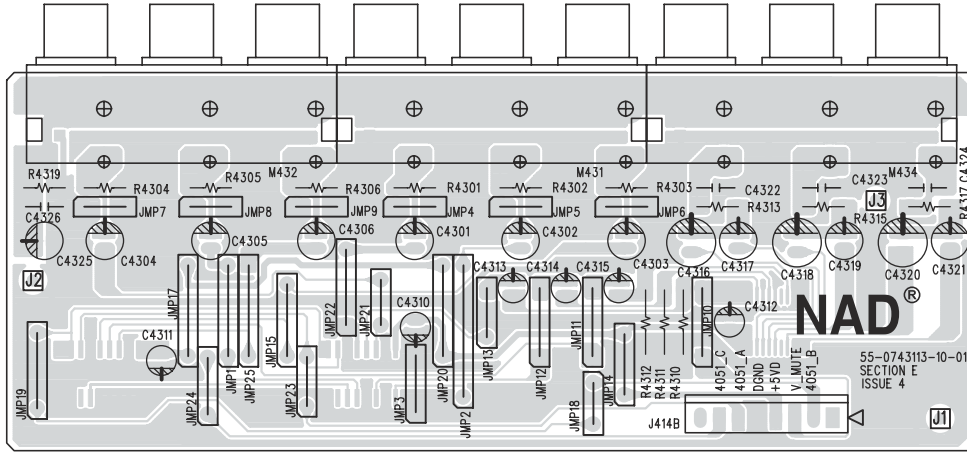


MCLK (pin 30 of CS49326)

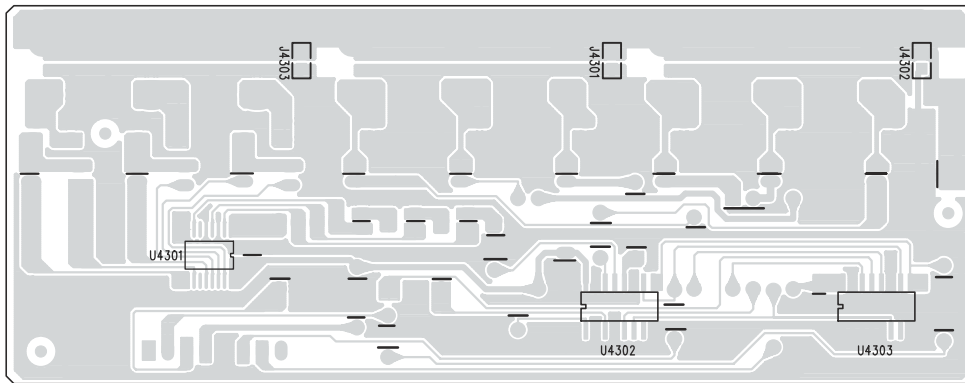


NOTE: The waveforms are based on software version V1.27.

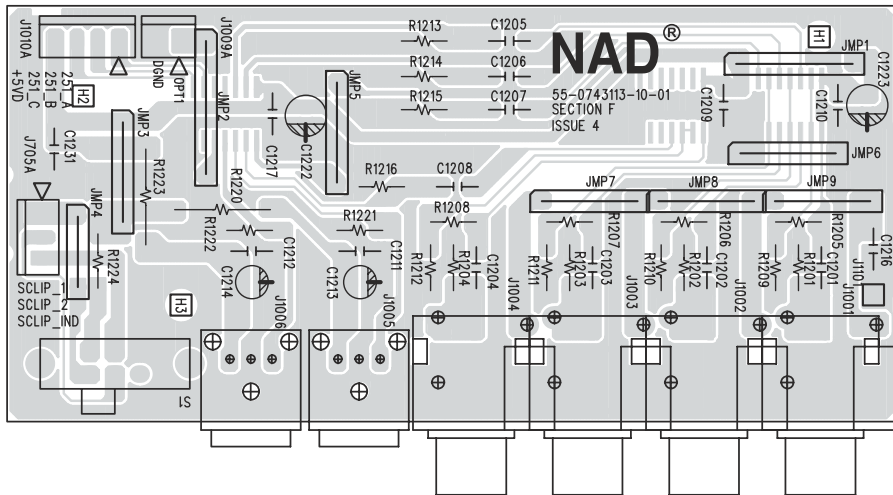
COMPONENT VIDEO BOARD - COMPONENT SIDE



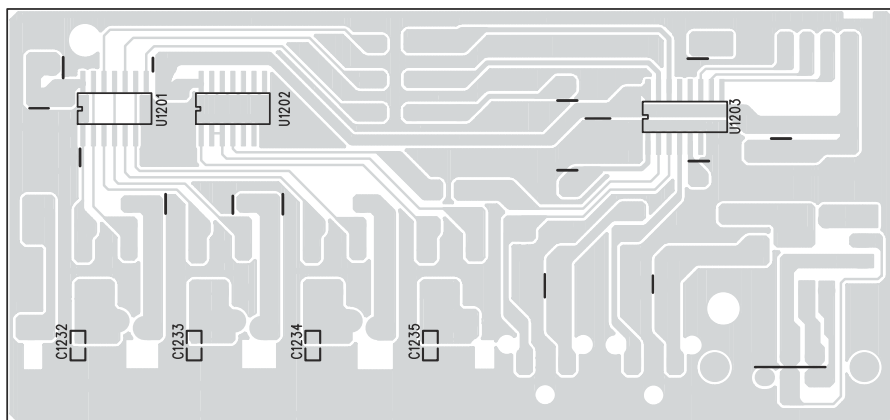
COMPONENT VIDEO BOARD - COPPER SIDE



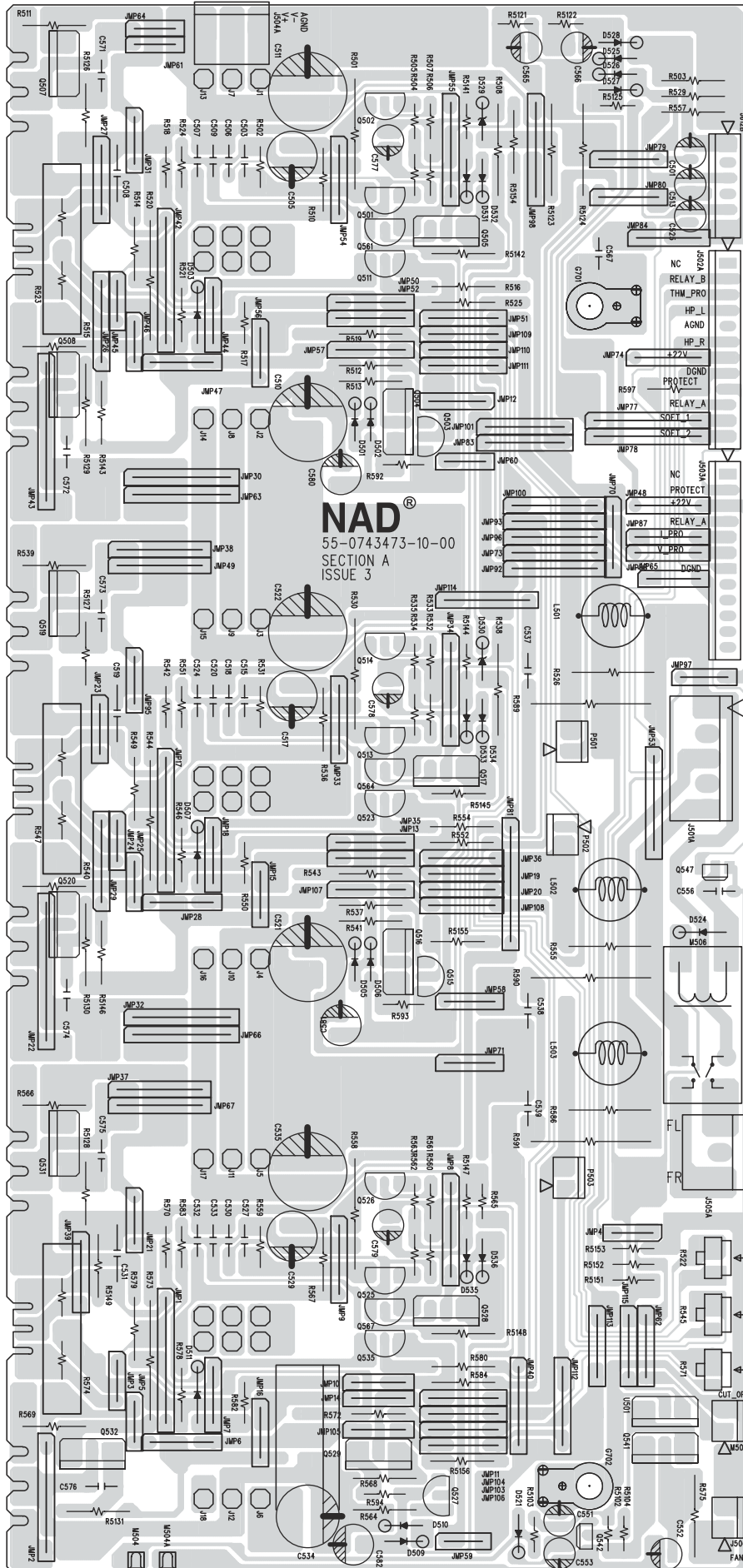
DIGITAL BOARD - COMPONENT SIDE



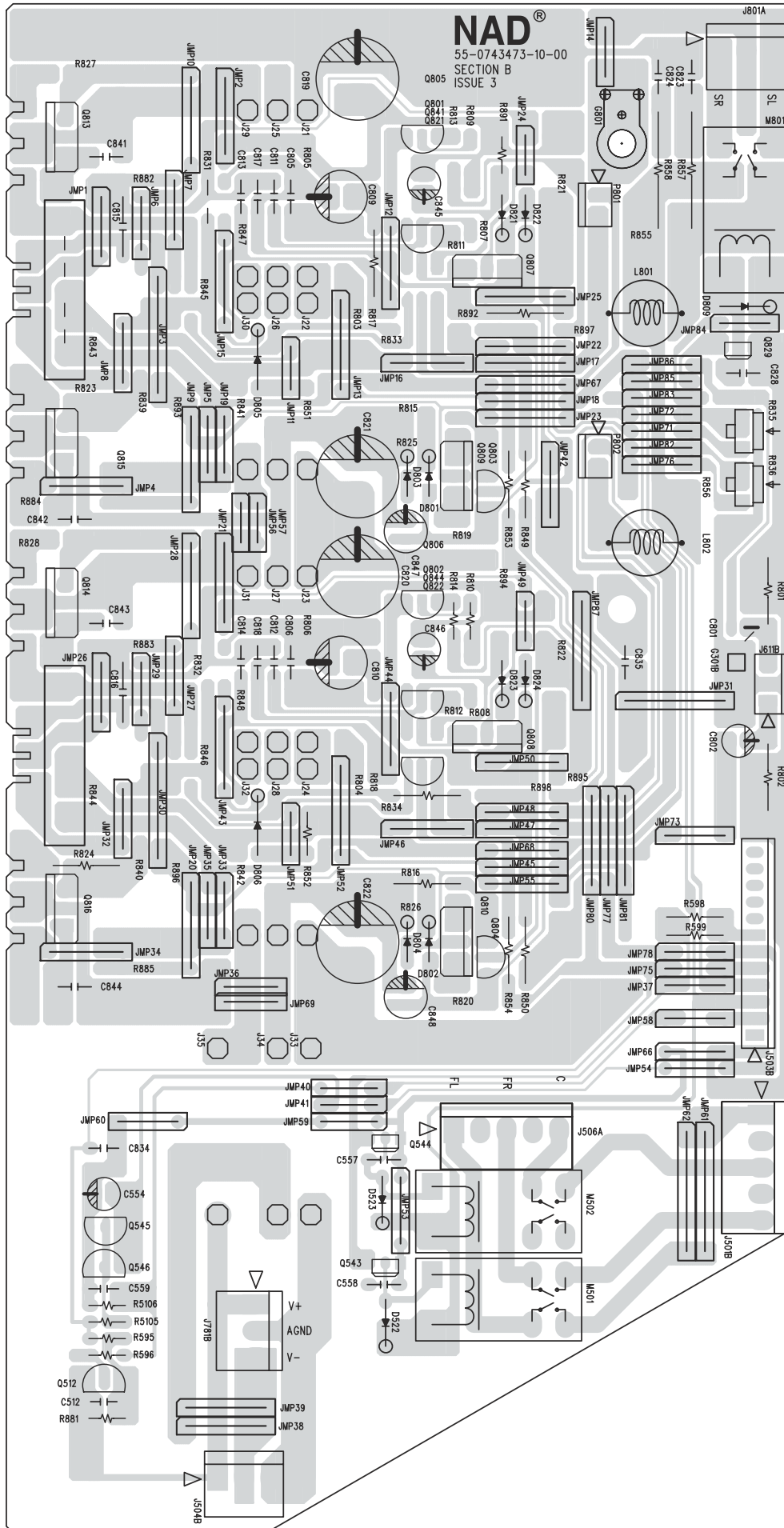
DIGITAL BOARD - COPPER SIDE



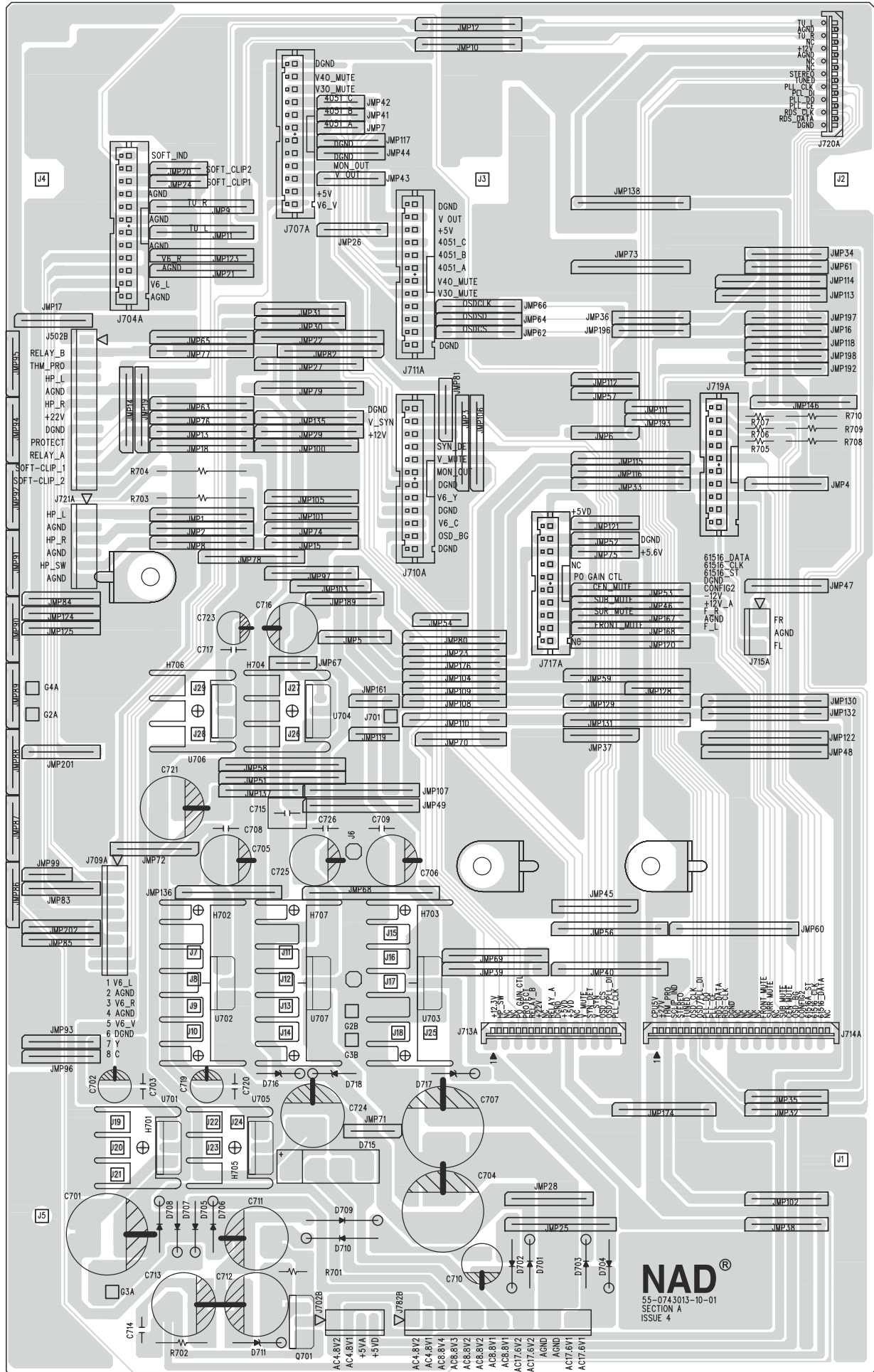
FRONT / CENTER AMPLIFIER BOARD



SURROUND AMPLIFIER BOARD



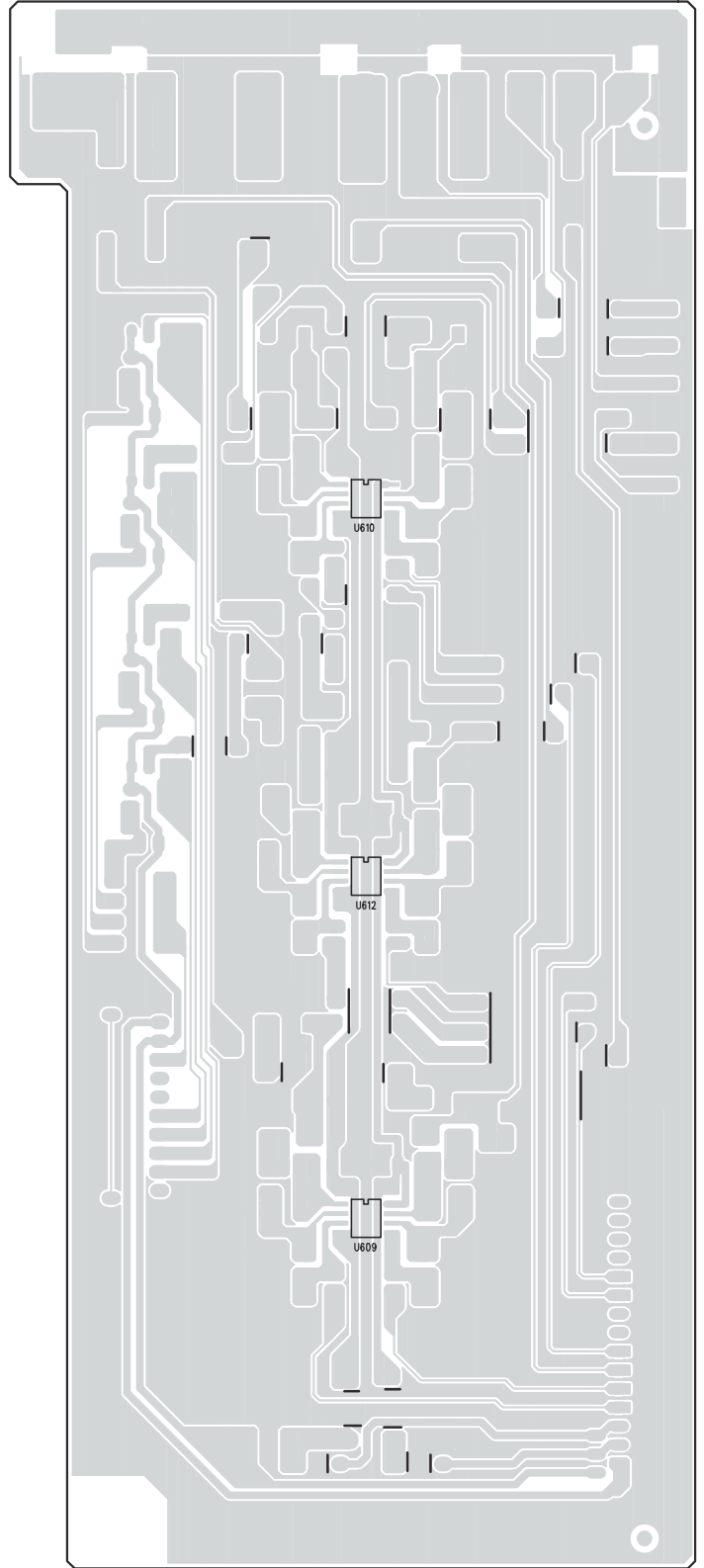
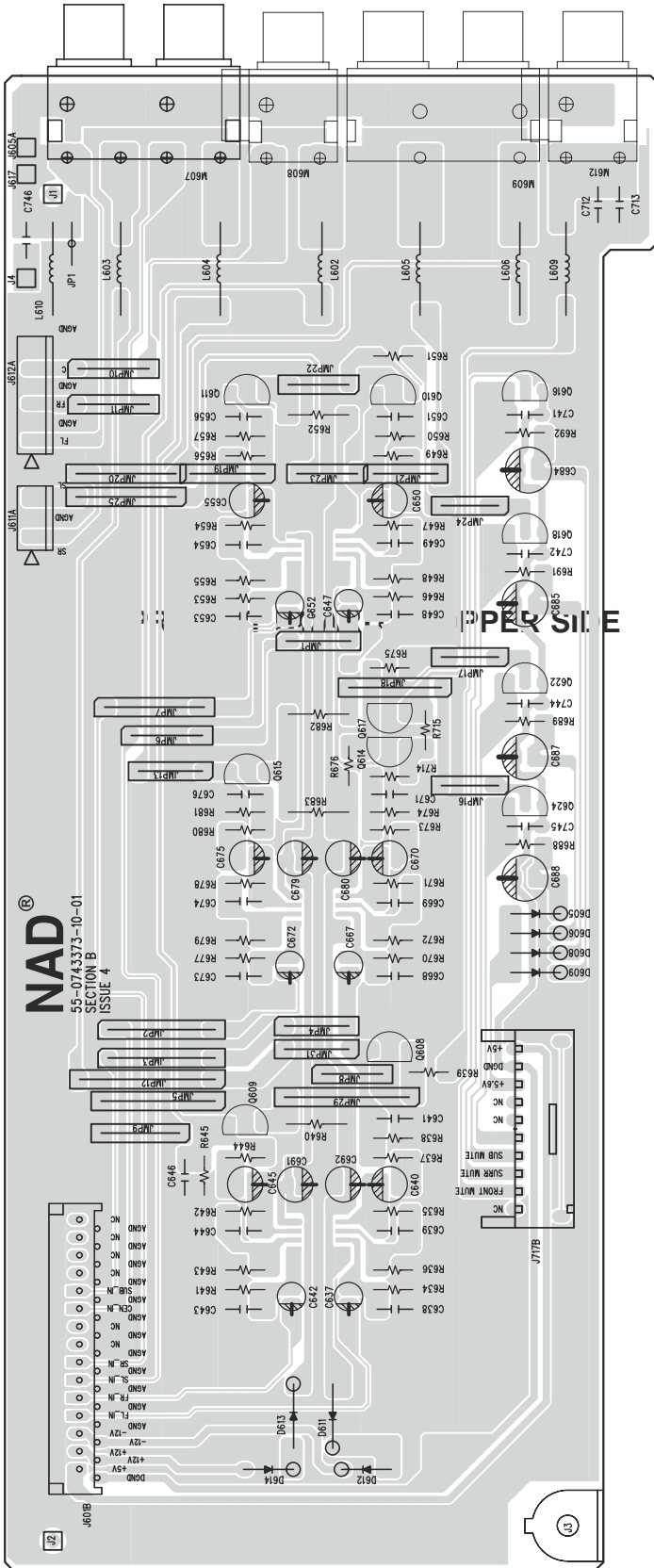
MAIN BOARD



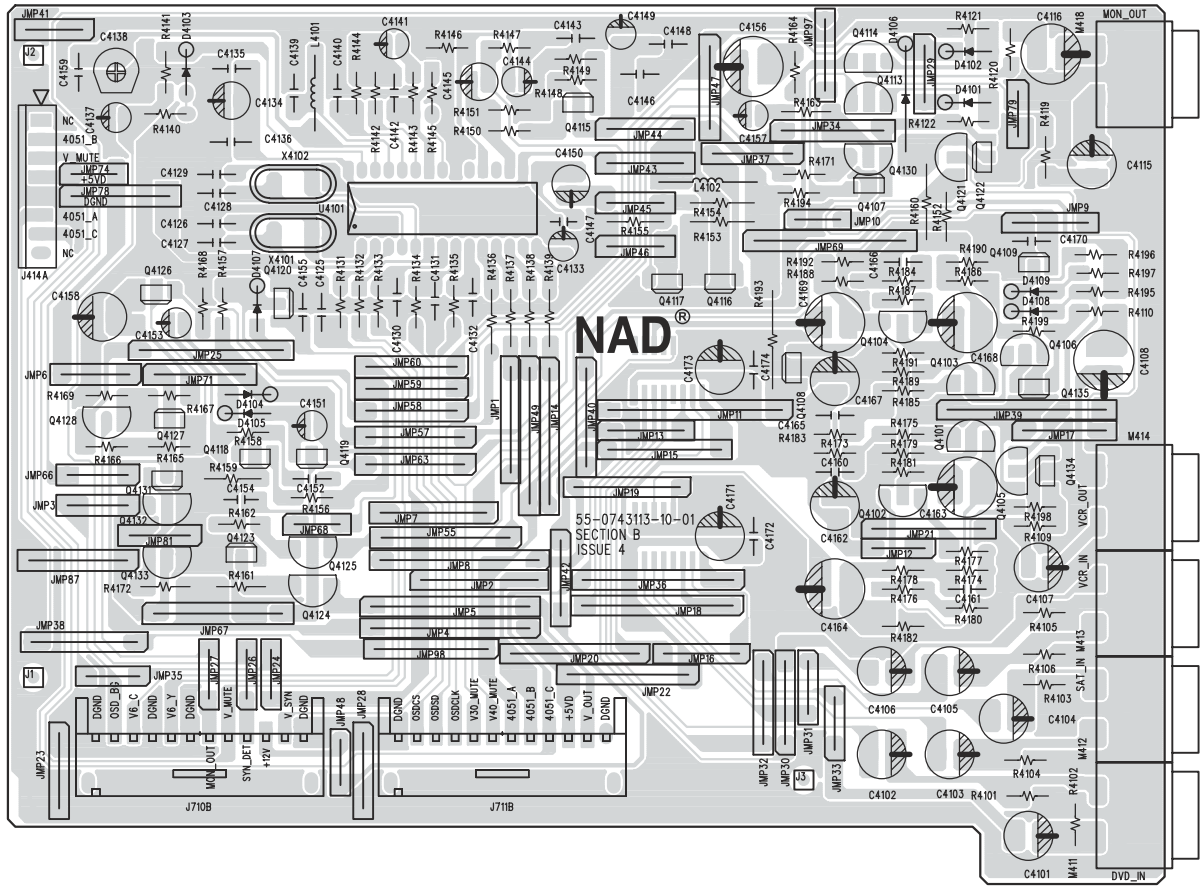
NAD[®]
 55-0743013-10-01
 SECTION A
 ISSUE 4

**PRE-OUT BOARD
- COMPONENT SIDE**

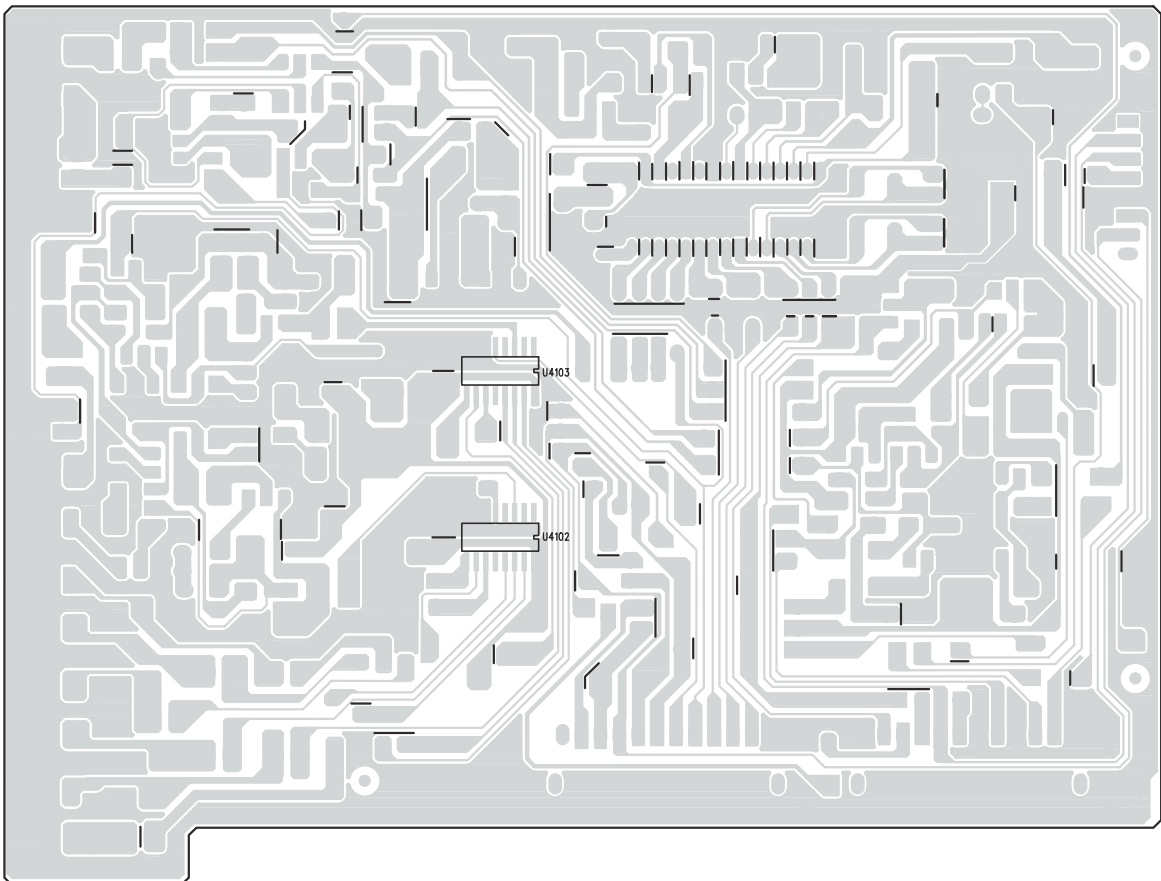
- COPPER SIDE



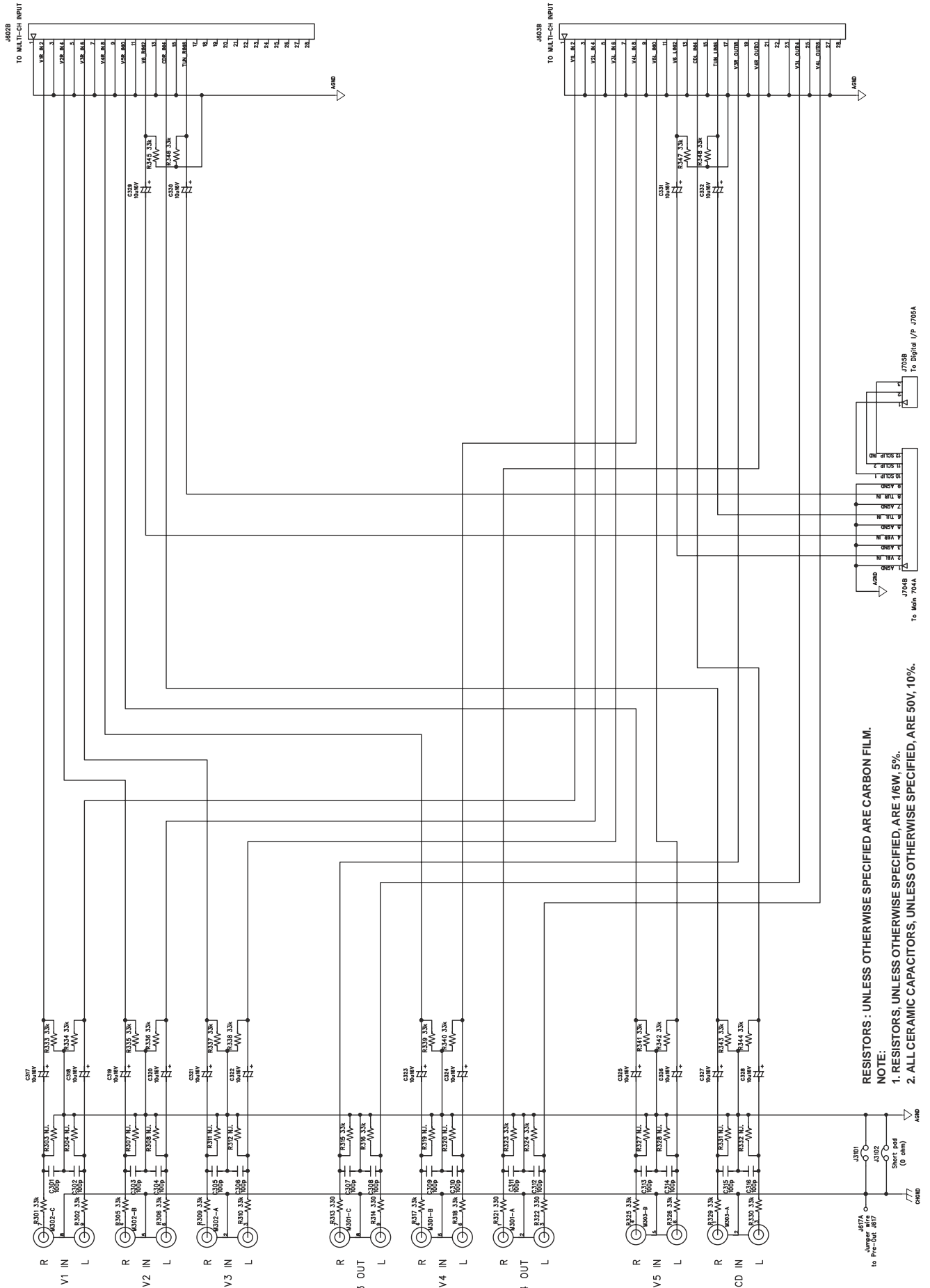
S-VIDEO BOARD - COMPONENT SIDE



S-VIDEO BOARD - COPPER SIDE

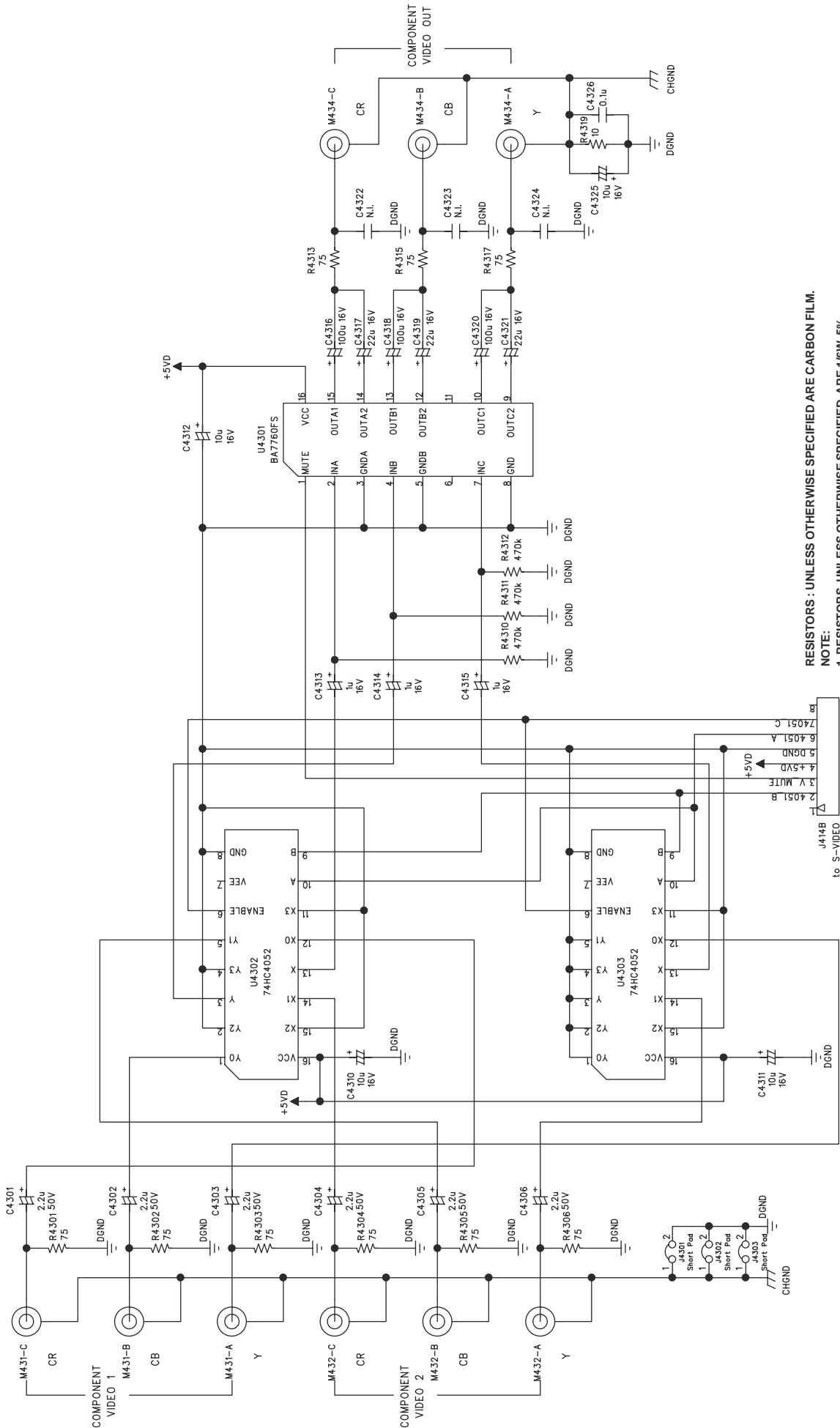


SCHEMATIC DIAGRAM AUDIO SWITCH



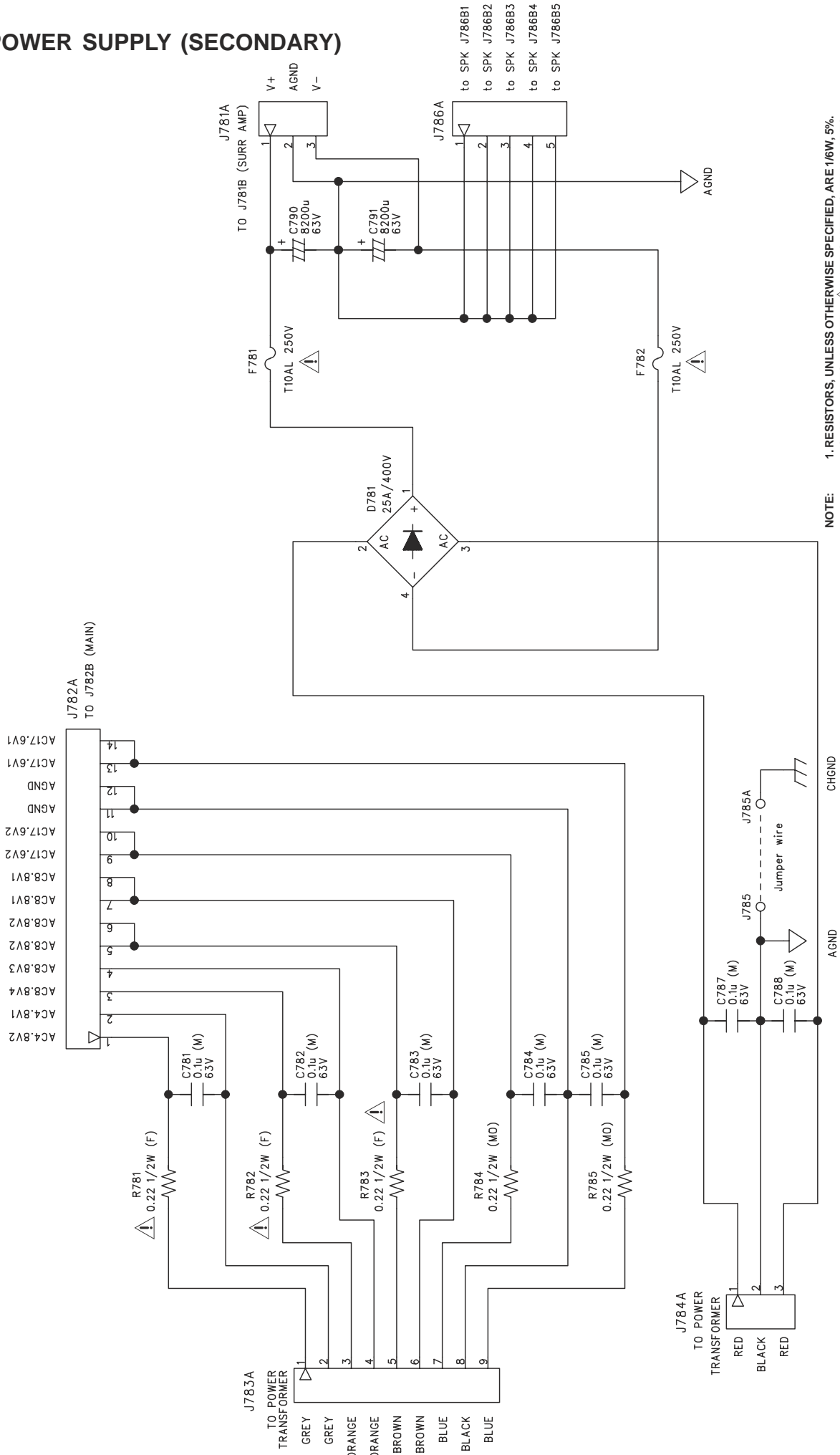
RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.
 NOTE:
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

COMPONENT VIDEO



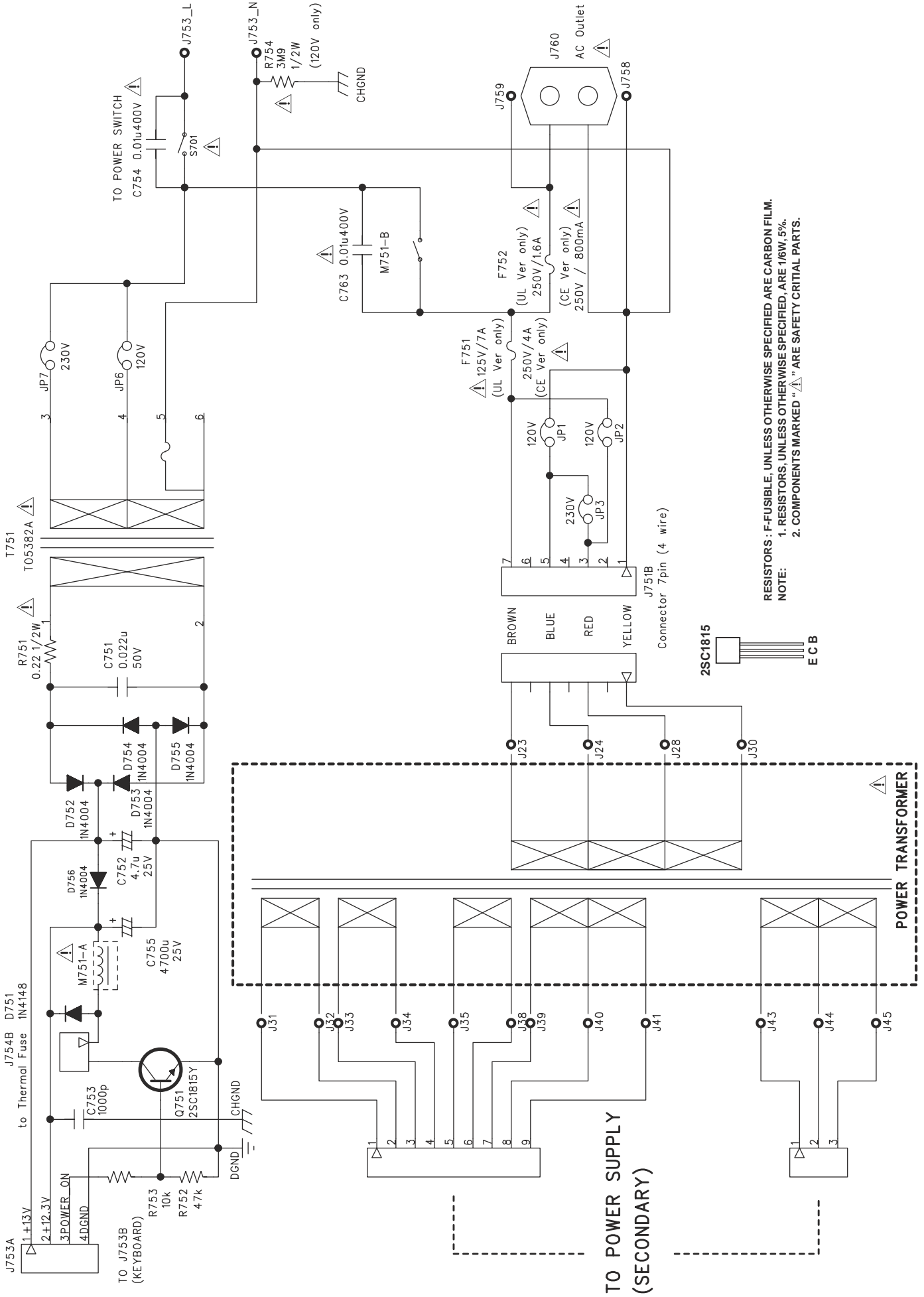
RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.
 NOTE:
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8W, 5%.
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

POWER SUPPLY (SECONDARY)

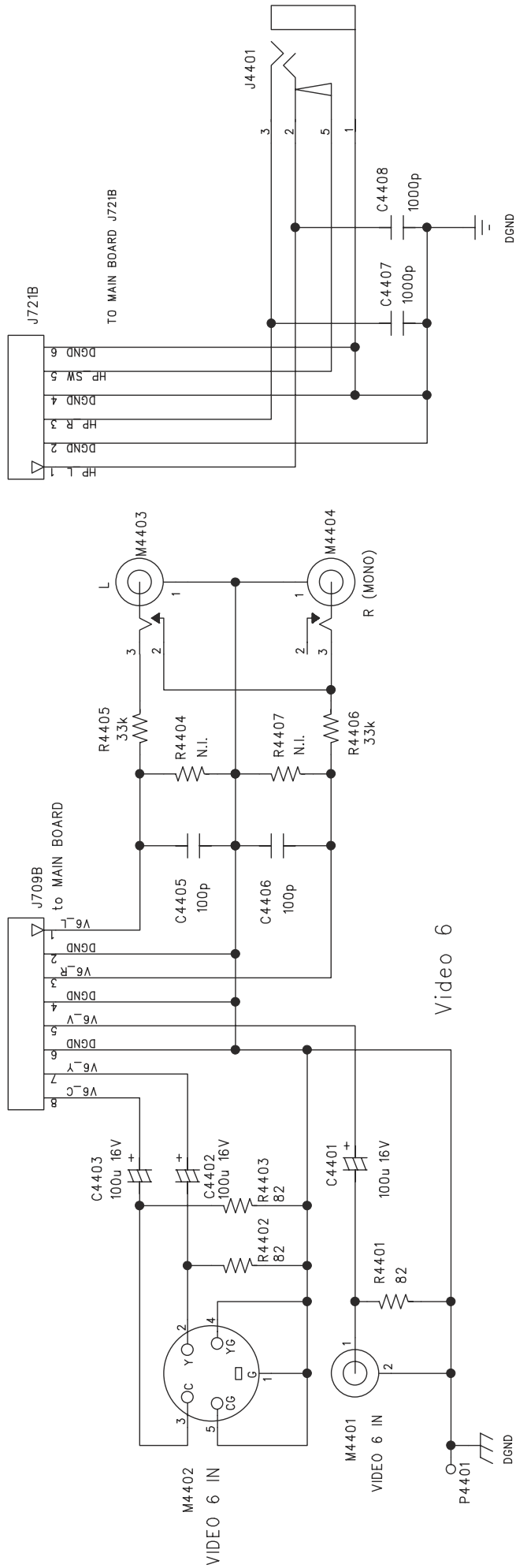


NOTE: 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
 2. COMPONENTS MARKED "A" ARE SAFETY CRITICAL PARTS.

POWER SUPPLY (STAND BY)



VIDEO 6



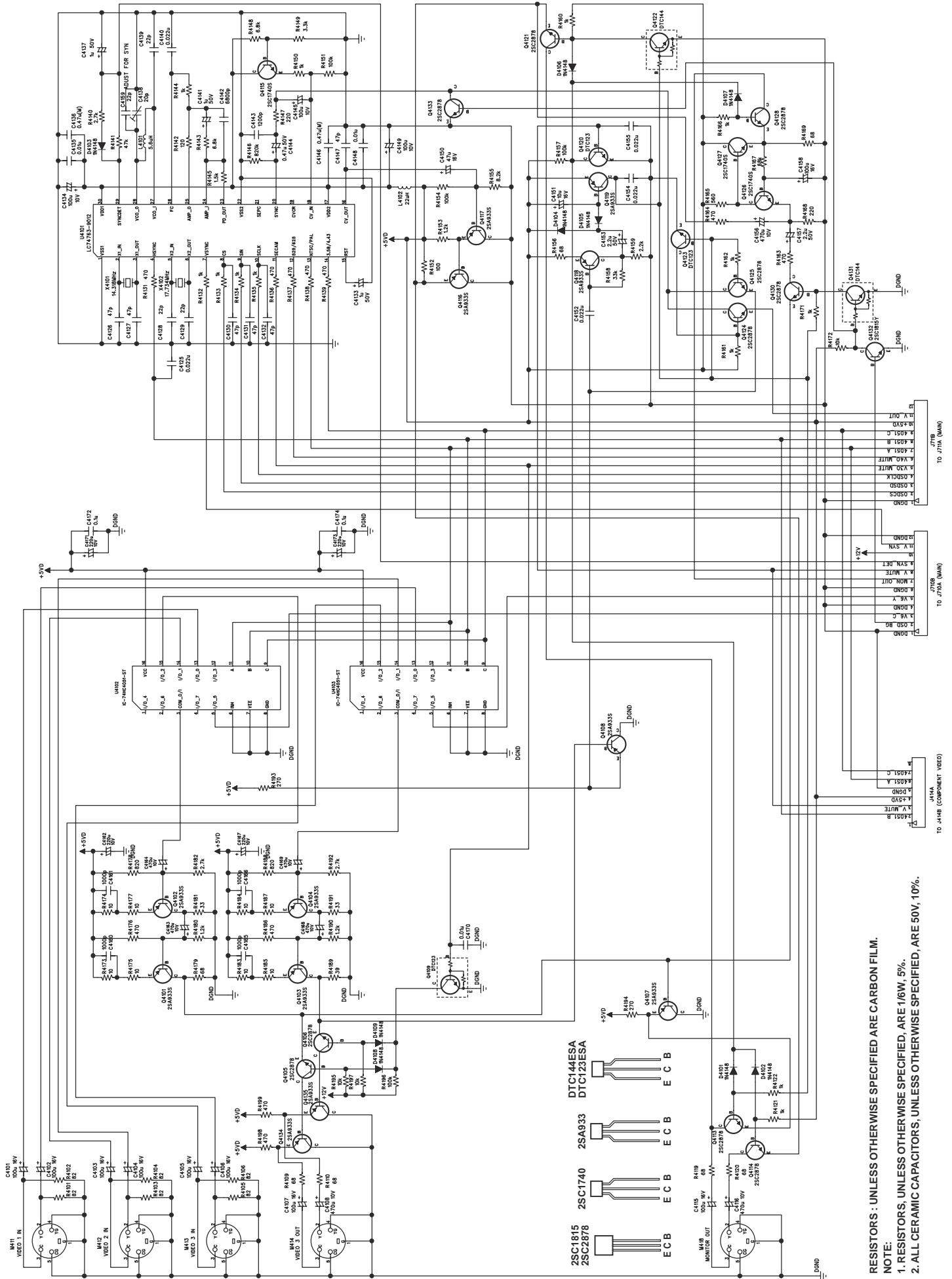
RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.

NOTE:

1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.

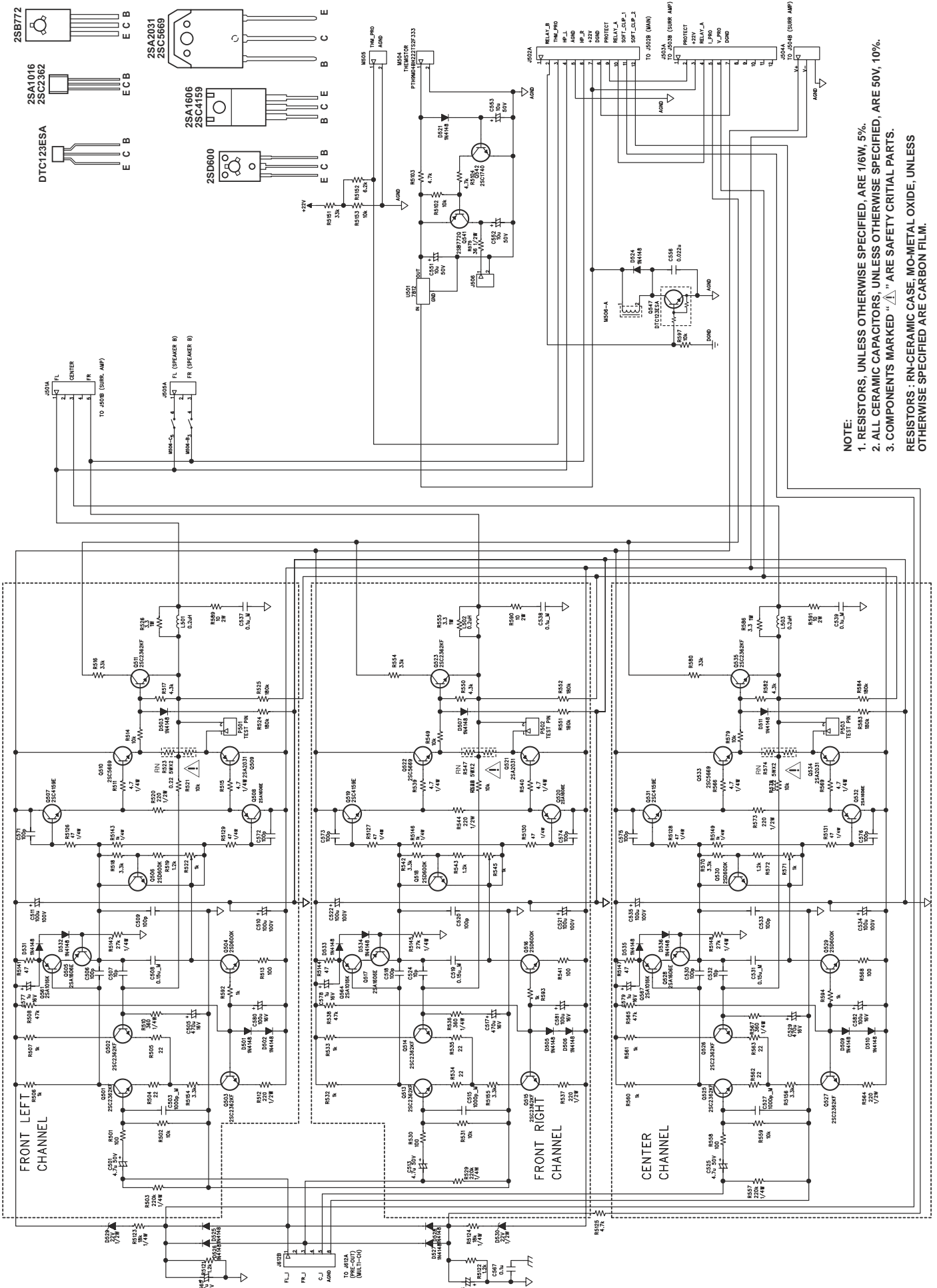
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

S-VIDEO



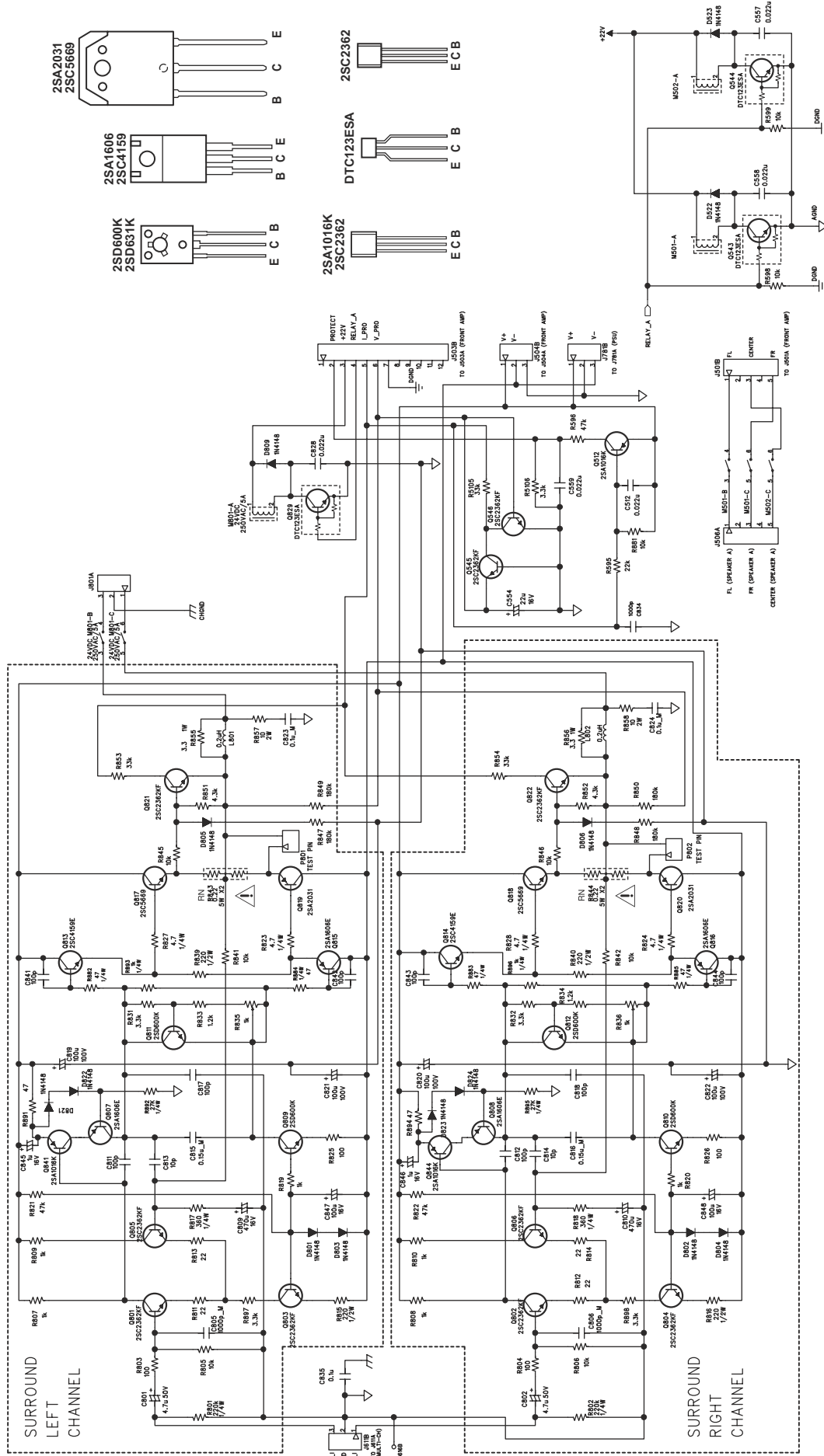
RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.
 NOTE:
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8W, 5%.
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

FRONT / CENTER AMPLIFIER



- NOTE:**
1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.
 3. COMPONENTS MARKED '△' ARE SAFETY CRITICAL PARTS.
- RESISTORS: RN-CERAMIC CASE, MO-METAL OXIDE, UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.

SURROUND AMPLIFIER

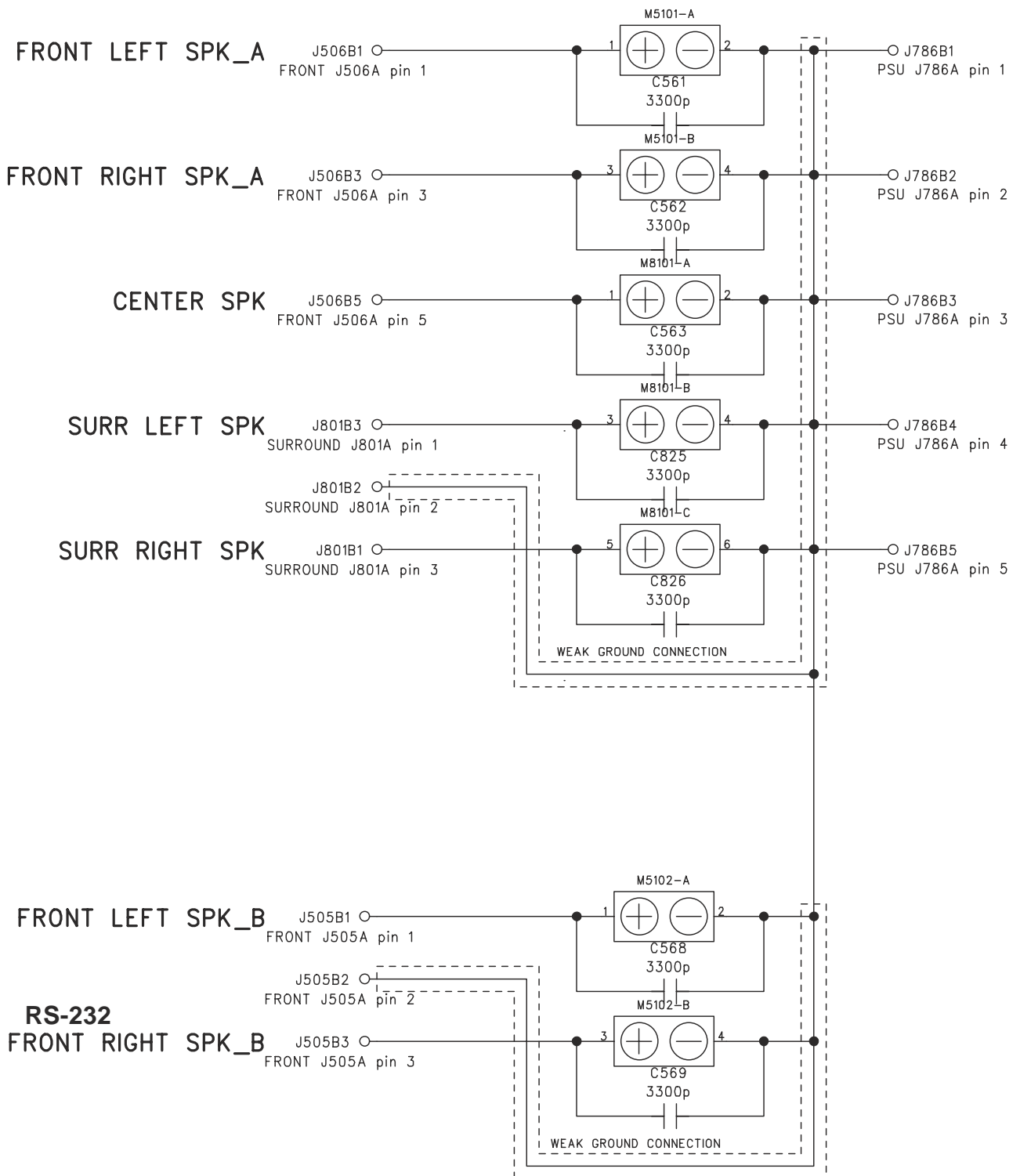


NOTE:

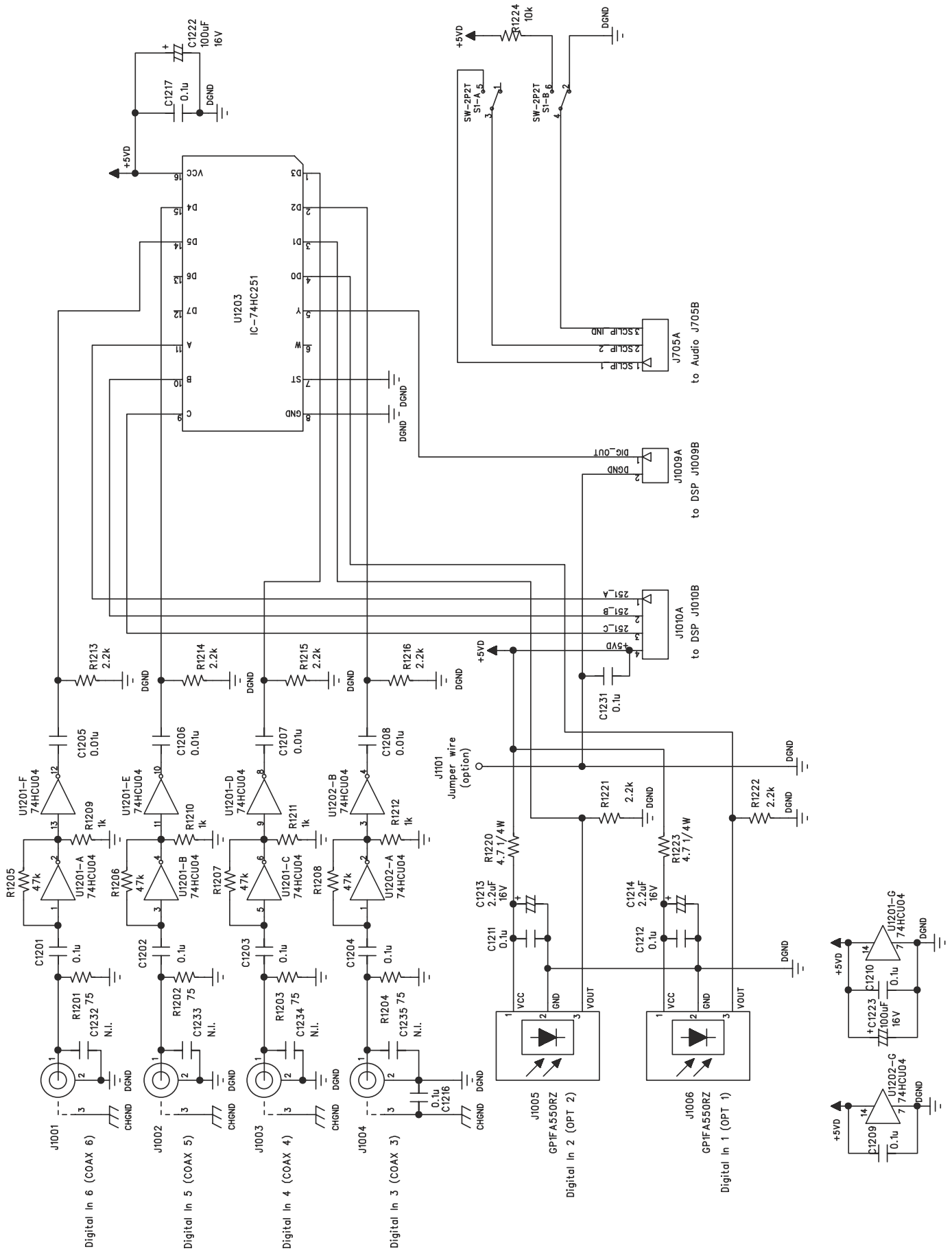
1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8W, 5%.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.
3. COMPONENTS MARKED "▲" ARE SAFETY CRITICAL PARTS.

RESISTORS: RN-CERAMIC CASE, MO-METAL OXIDE, UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.

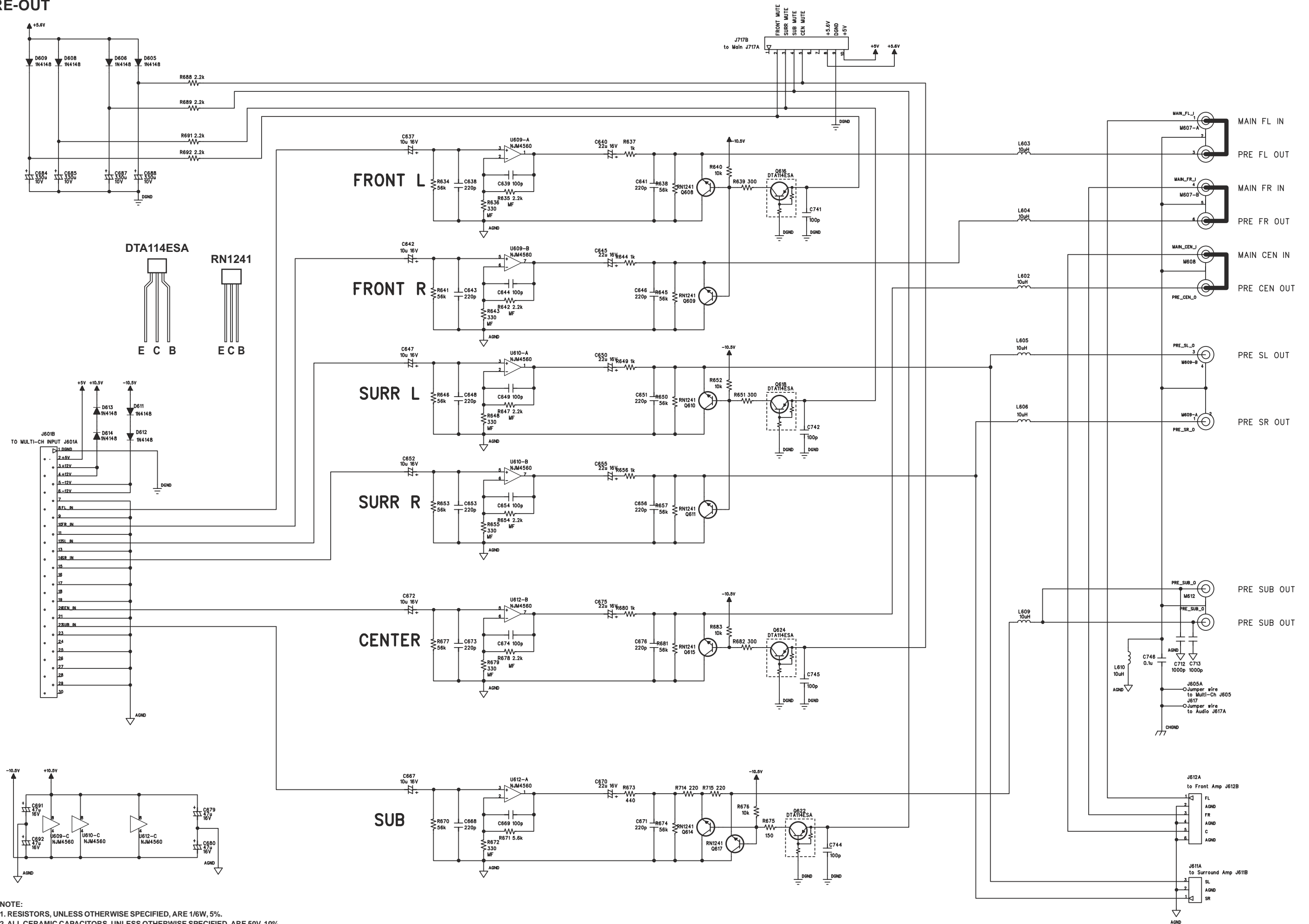
SPEAKER A & B



DIGITAL IN & OUT

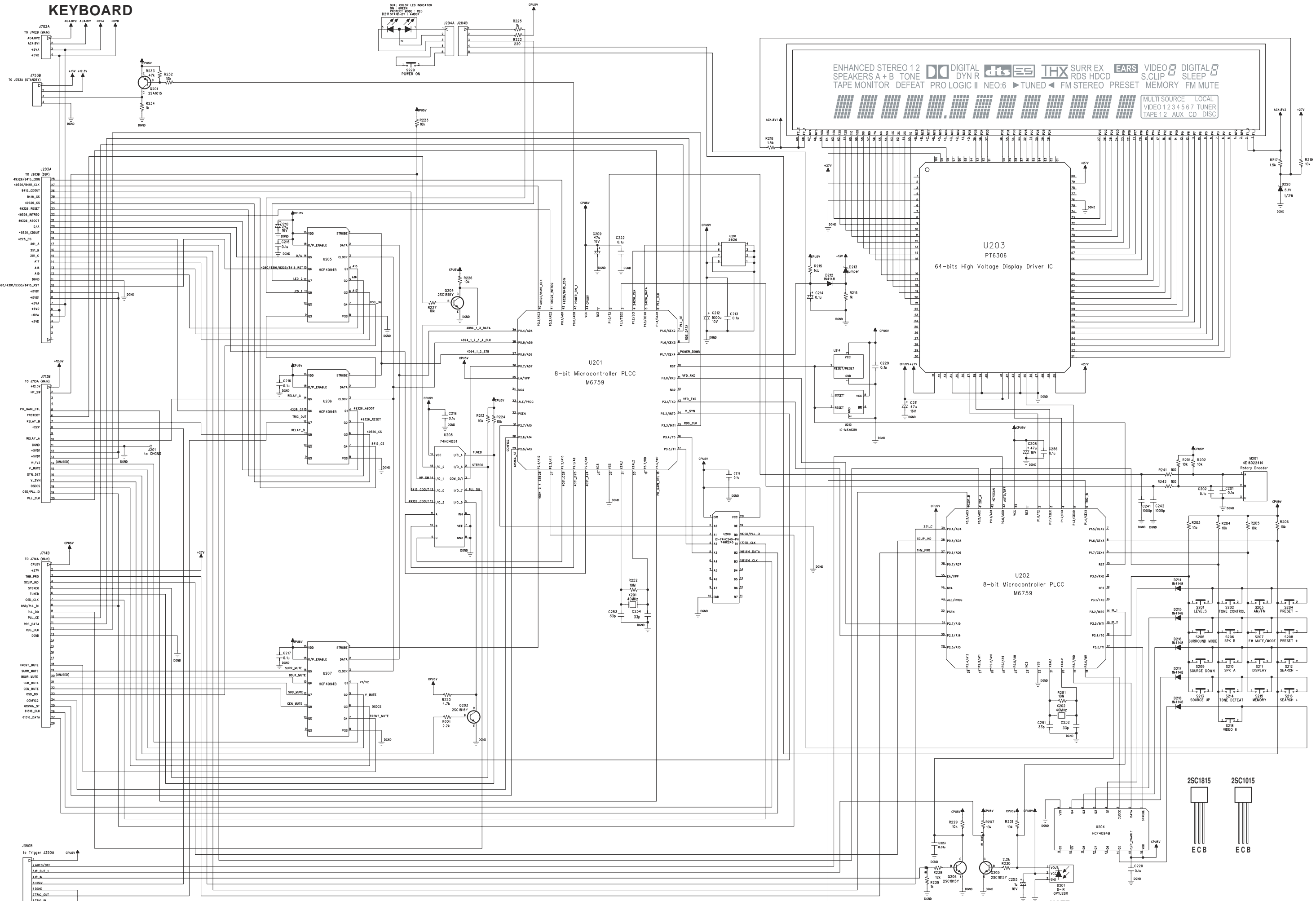


PRE-OUT



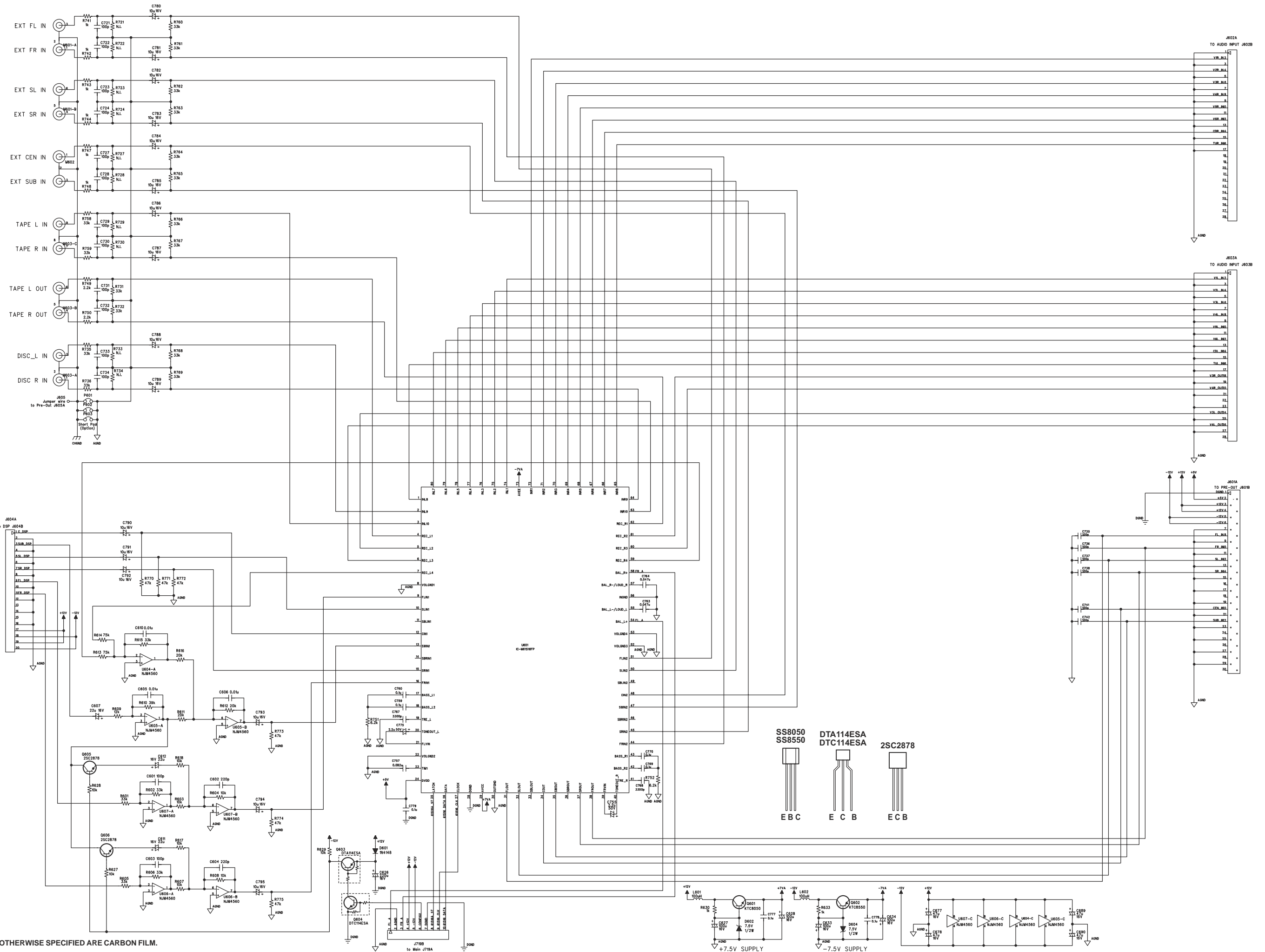
NOTE:
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

KEYBOARD



NOTE:
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 5%.

MULTI-CH



RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.
NOTE:

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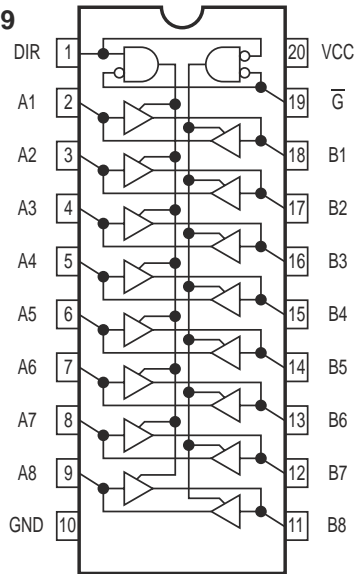
IC BLOCK DIAGRAM

74LVC245

DSP BOARD: U1002, U1003, U1014

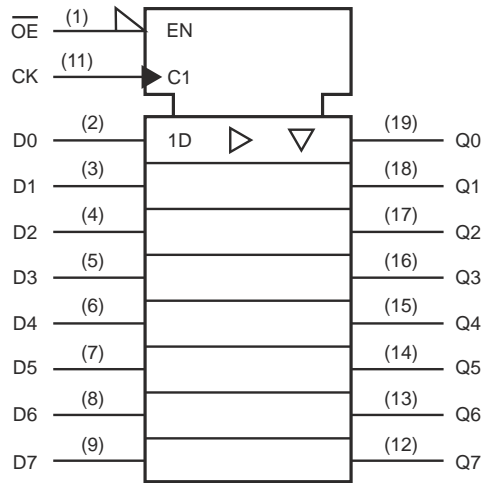
74VHC245

KEYBOARD: U209



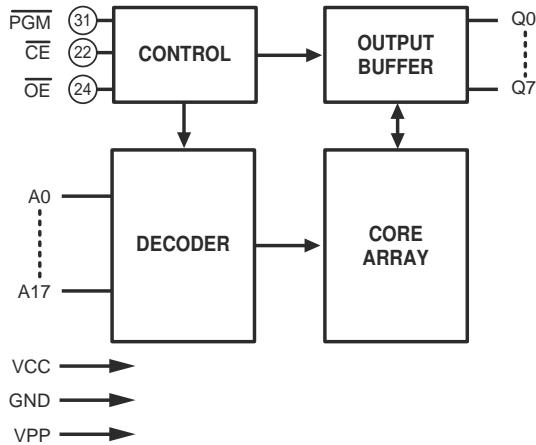
74LVQ574

DSP BOARD: U1008, U1009



W27C020

DSP BOARD: U1007

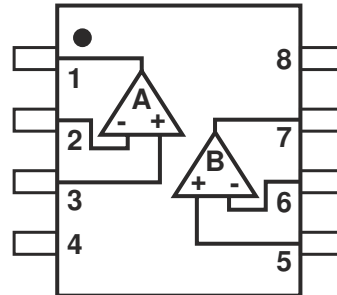


NJM4560

DSP BOARD: U1011~U1013, U1023 & U1025

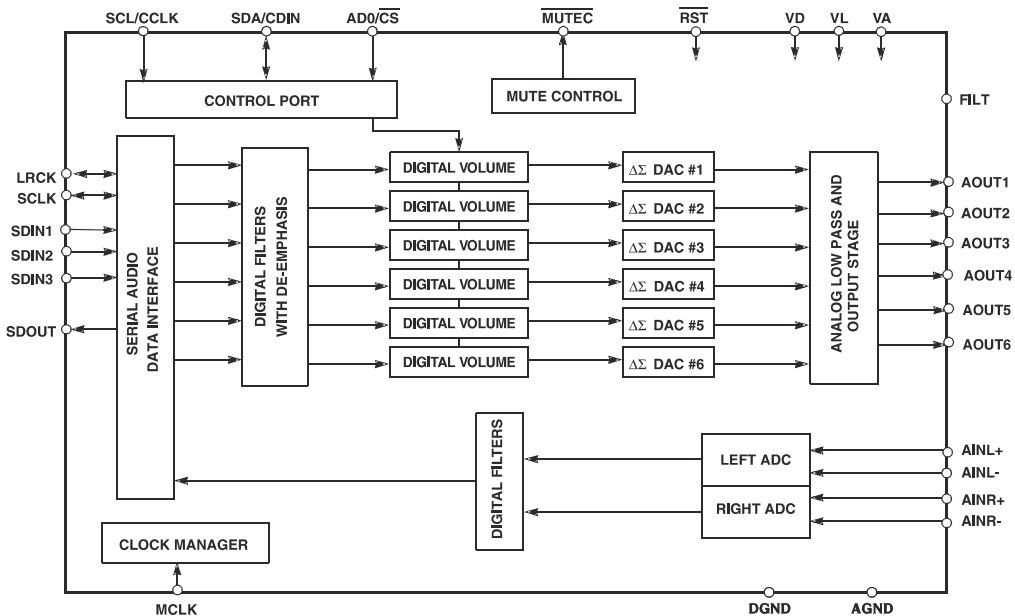
MULTI-CHANNEL: U604~U607

PRE-OUT BOARD: U609~U612

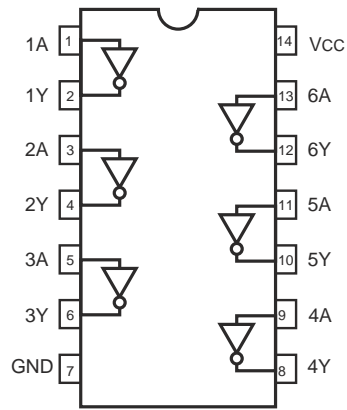


CS4228AKS

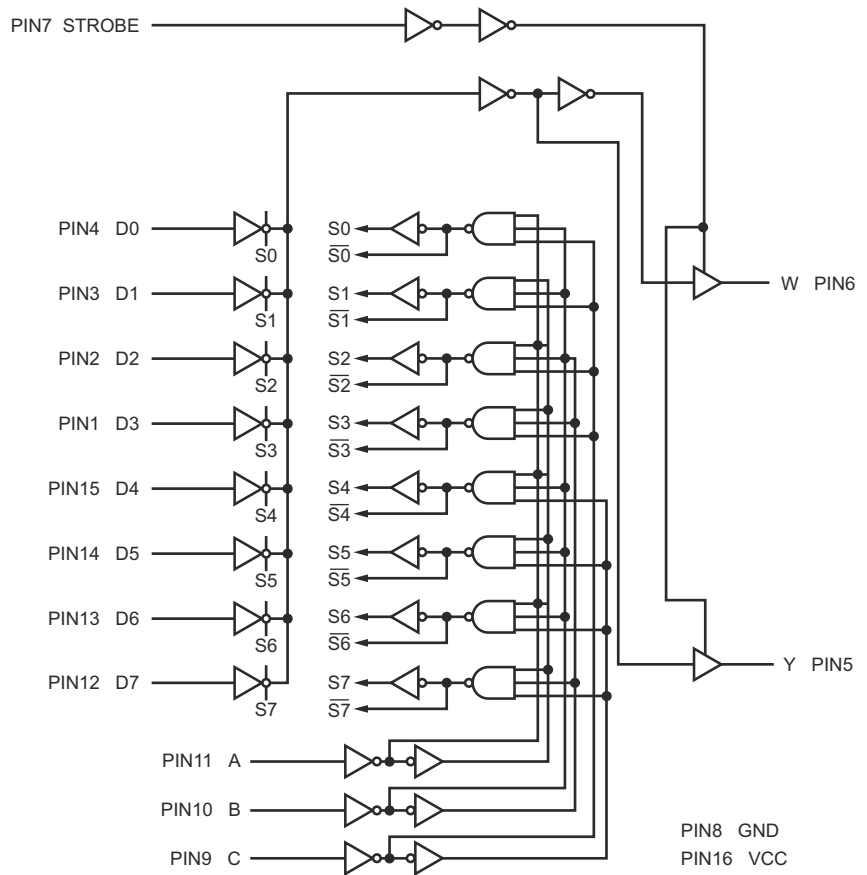
DSP BOARD: U1021



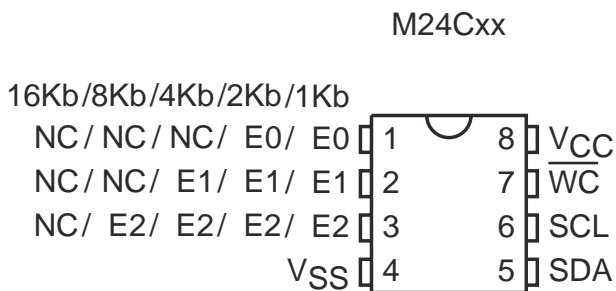
74HCU04
DIGITAL BOARD: U1201 & U1202



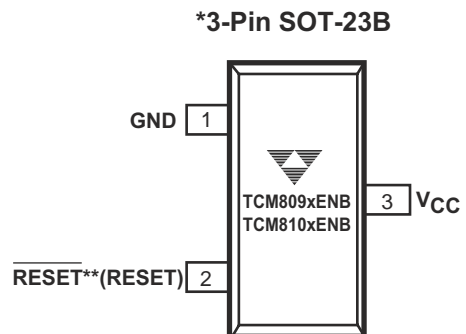
74HC251
DIGITAL BOARD: U1203



AT24C16
KEYBOARD: U210

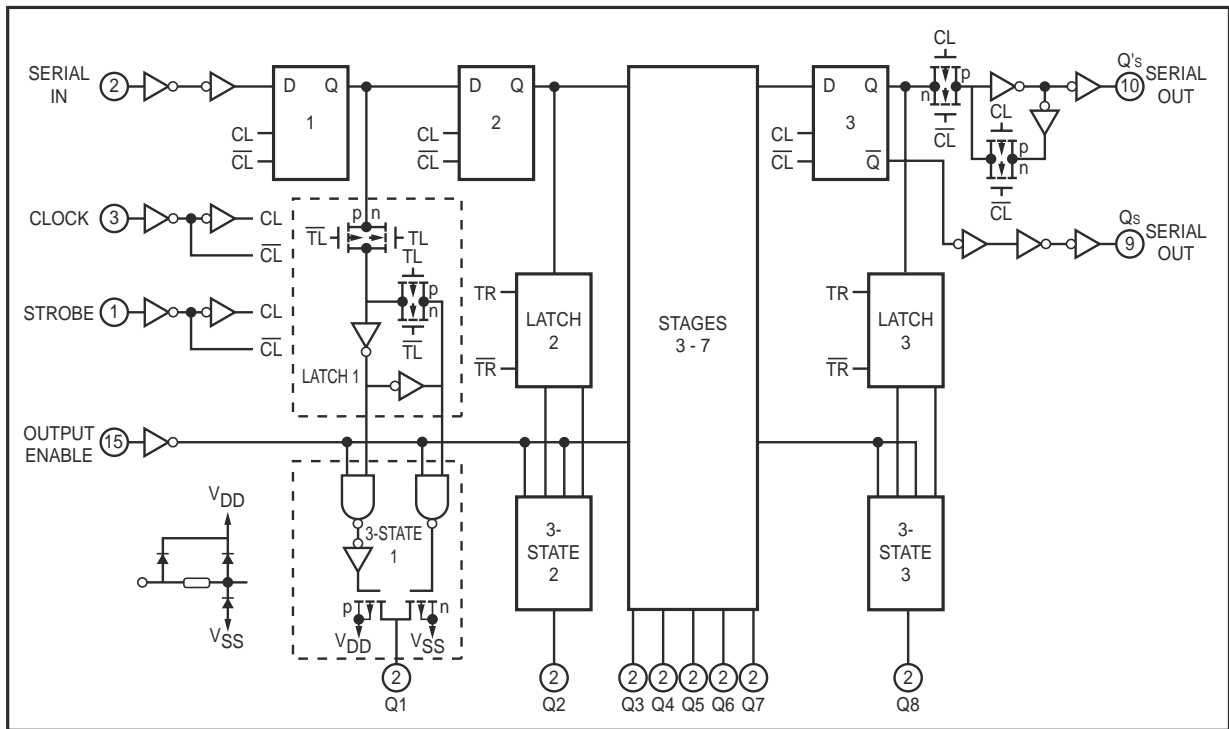


TCM810
KEYBOARD: U214

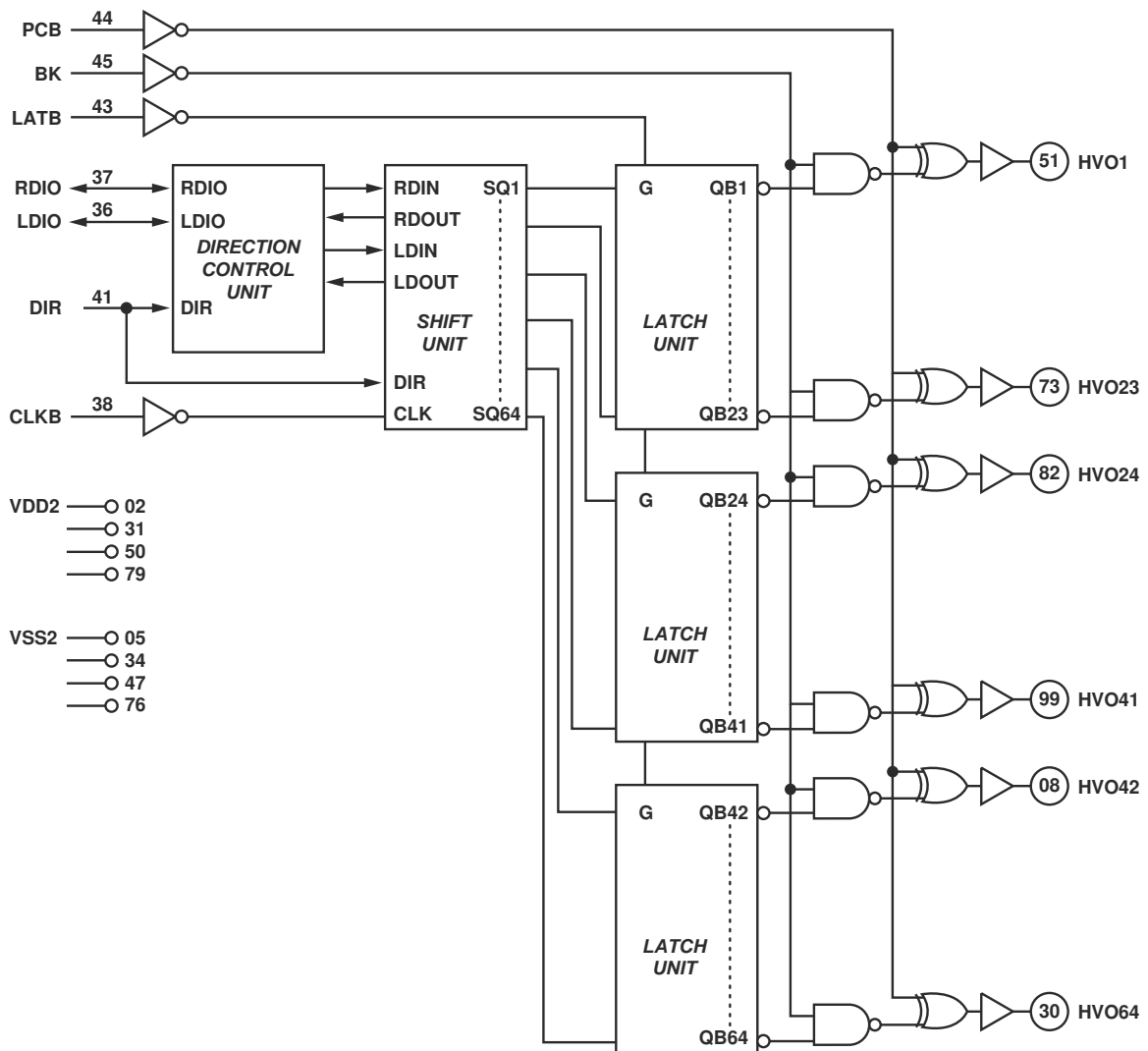


NOTE: *3-Pin SOT-23B is equivalent to JEDEC TO-236
** () is for TCM810

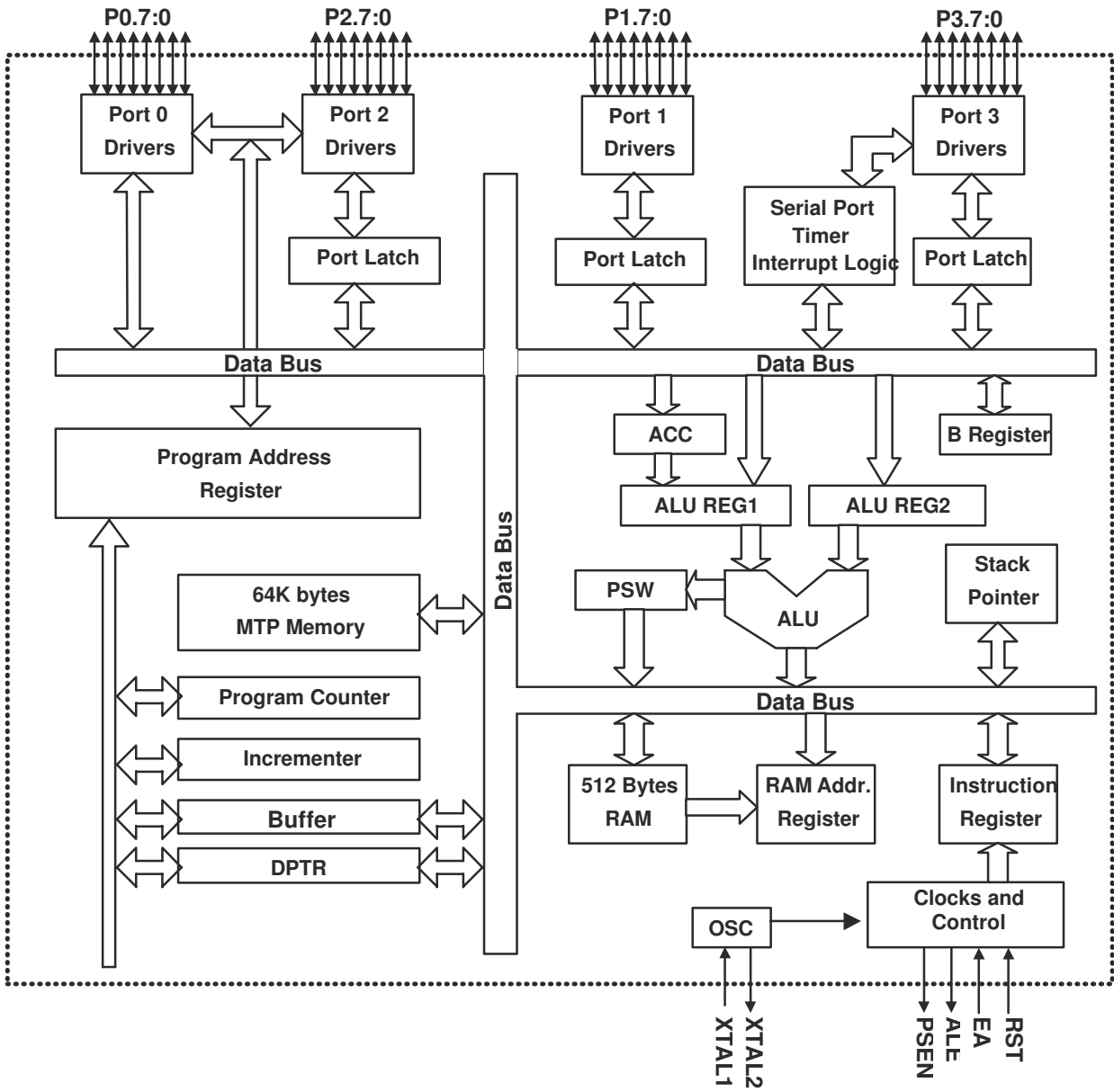
HCF4094B
KEYBOARD: U204~U207



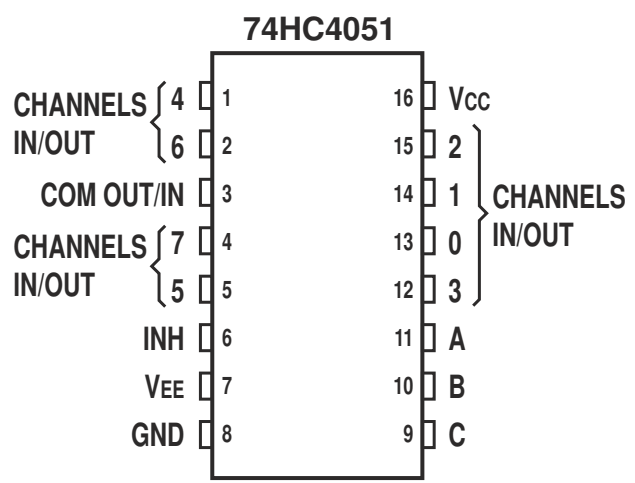
PT6306
KEYBOARD: U203



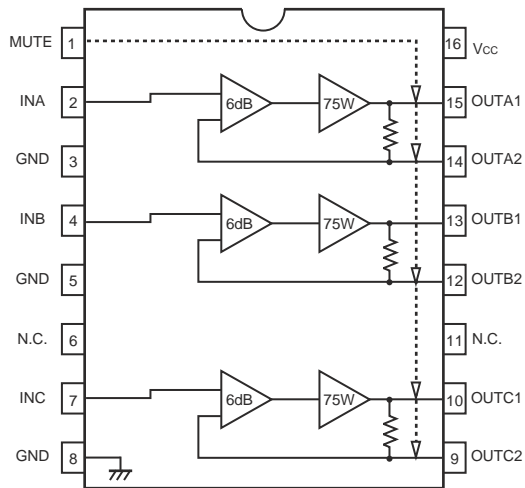
M6759
KEYBOARD: U201 & U202



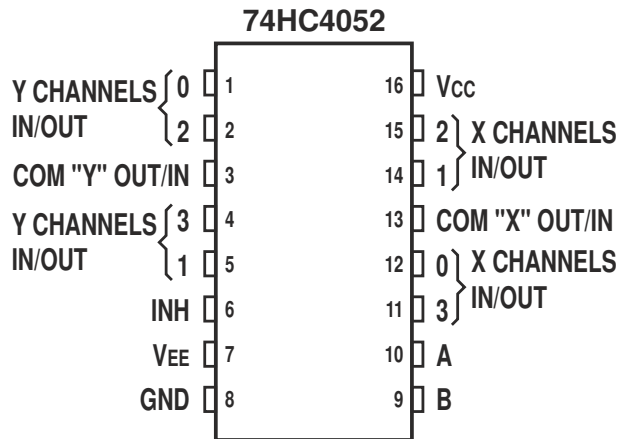
74HC4051
KEYBOARD: U208
S-VIDEO BOARD: U4102, U4103
COMPOSITE VIDEO: U4201



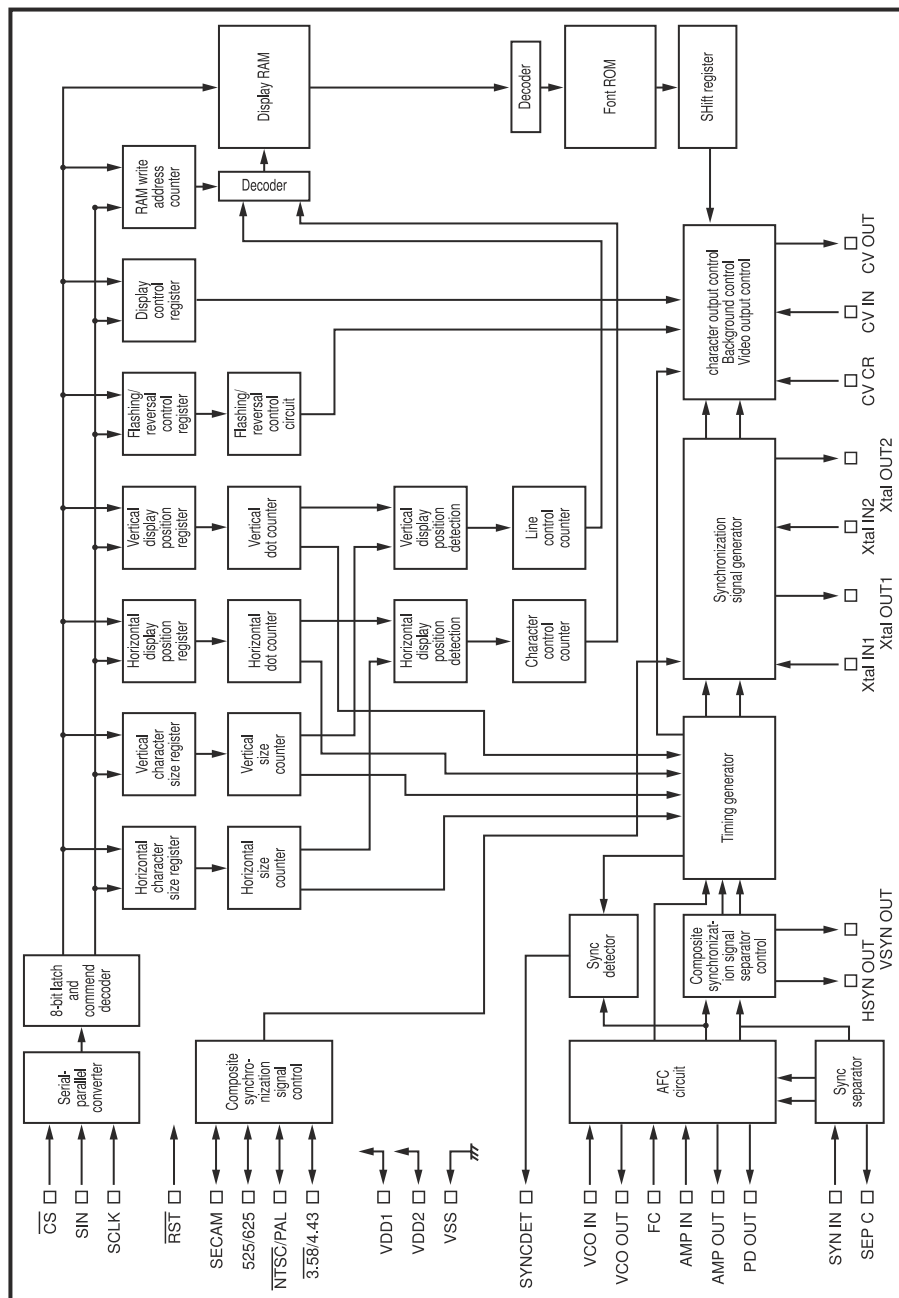
BA7660FS
COMPONENT VIDEO BOARD: U4301



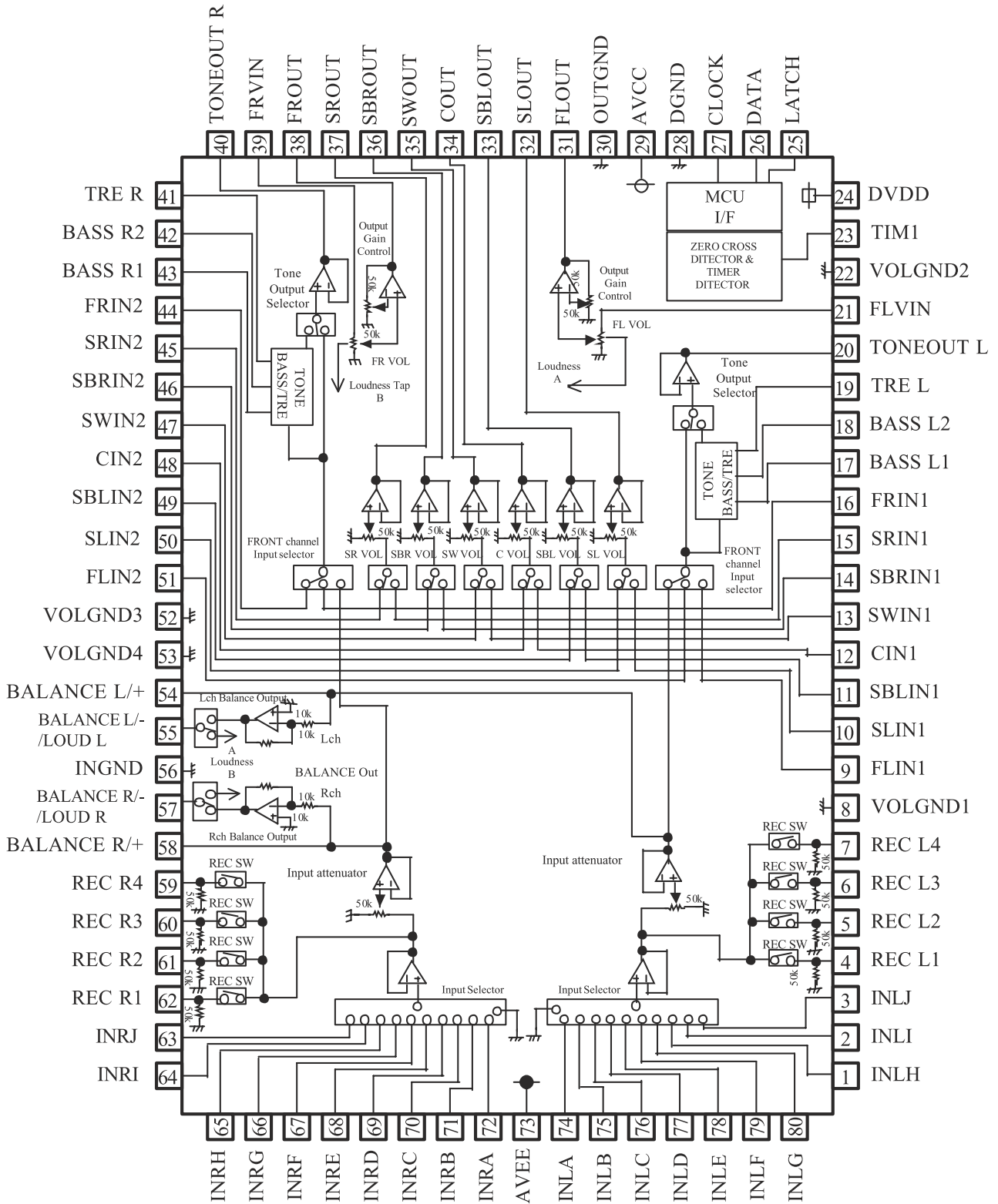
74HC4052
COMPONENT VIDEO BOARD: U4302 & U4303



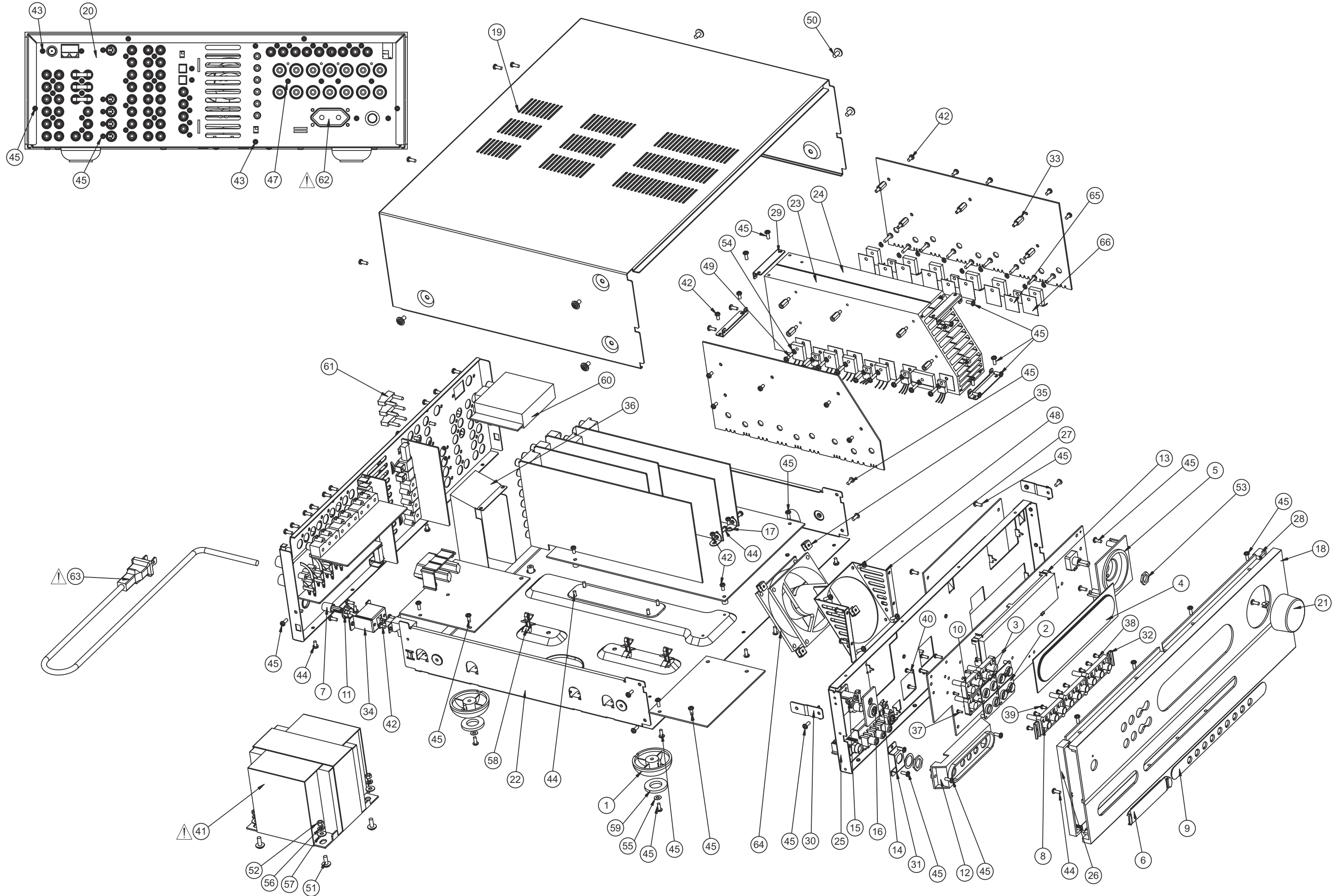
LC74763
S-VIDEO BOARD:
U4101



M61516FP
MULTI-CHANNEL BOARD: U601



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
1	10-0163017-01-00	PLASTIC FOOT DOME SHAPE	4
2*AH,*C	10-0163045-72-00	LINKED GOGGLE BEZEL (GREY)	2
2*T	10-0163045-73-00	LINKED GOGGLE BEZEL (TITANIUM)	2
3*AH,*C	10-0163055-72-01	DUO GOGGLE BEZEL (GREY)	2
3*T	10-0163055-73-01	DUO GOGGLE BEZEL (TITANIUM)	2
4	10-0752001-00-10	WINDOW LENS	1
5*AH,*C	10-0752005-72-00	VOLUME BEZEL (GREY)	1
5*T	10-0752005-73-00	VOLUME BEZEL (PAINT TITANIUM)	1
6*AH,*C	10-0752007-72-00	VIDEO COVER (GREY)	1
6*T	10-0752007-73-00	VIDEO COVER (TITANIUM)	1
7	10-0752022-02-00	POWER BUTTON BLACK	1
8*AH,*C	10-0752032-72-01	INPUT BUTTON (GREY)	3
8*T	10-0752032-73-01	INPUT BUTTON (TITANIUM)	3
9*AH,*C	10-0752035-71-00	INPUT BUTTON LOZENGE	1
9*T	10-0752035-73-00	INPUT BUTTON LOZENGE (TITANIUM)	1
10*AH,*C	10-0752042-72-01	DUO BUTTON (GREY)	4
10*T	10-0752042-73-01	DUO BUTTON (TITANIUM)	4
11	10-0752045-01-00	POWER BUTTON BEZEL	1
12	10-0752065-01-00	VIDEO HOUSING	1
13	10-0752075-00-00	DISPLAY BRACKET	1
14	10-0772011-00-00	LED LENS ROUND	1
15*AH,*C	10-0772022-72-01	POWER BUTTON TACT ACTIVATE (GREY)	1
15*T	10-0772022-73-01	POWEER BUTTON TACT ACTIVATE (TITANIUM)	1
16*AH,*C	10-0772045-72-01	POWER BUTTON BEZEL (GREY)	1
16*T	10-0772045-73-01	POWER BUTTON BEZEL (TITANIUM)	1
17	11-0570075-80-01	L BRACKET	3
18*AH,*C	11-0743000-95-10	FASCIA (GREY)	1
18*C	11-0743000-94-10	FASCIA (TITANIUM)	1
19*AH,*C	11-0743003-95-12	TOP COVER (GREY)	1
19*T	11-0743003-97-12	TOP COVER (SILVER)	1
20*AH	11-0743006-94-10	REAR PANEL	1
20*C,*T	11-0743016-94-10	PEAR PANEL	1
21*AH,*C	11-0752002-72-00	VOLUME KNOB ASSY (GREY)	1
21*T	11-0752002-73-00	VOLUME KNOB ASSY (TITANIUM)	1
22	11-0752004-80-05	BOTTOM CHASSIS	1
23	11-0752008-94-02	EXTRUDED HTSK L BLACK	1
24	11-0752018-94-02	EXTRUDED HTSK R BLACK	1
25	11-0752025-80-04	SUBFASCIA	1
26*AH,*C	11-0752028-95-01	SIDE CAP L (GREY)	1
26*T	11-0752028-94-01	SIDE CAP L (TITANIUM)	1
27	11-0752035-80-02	FAN MOUNTING BRACKET	1
28*AH,*C	11-0752038-95-01	SIDE CAP R (GREY)	1
28*T	11-0752038-94-01	SIDE CAP R (TITANIUM)	1
29	11-0752045-80-00	HEATSINK MOUNTING BRACKET	4
30	11-0752055-80-00	SIDE MOUNTING BRACKET	2
31	11-0752065-80-00	PHONE BRACKET	1
32	11-0752075-80-00	DUMMY BRACKET	2
33	11-0762005-80-00	HEX SPACER AF5.5 H8+6	10
34	11-0772065-80-00	POWER BUTTON BRACKET	1
35	11-0743085-80-00	FAN SCREW BRACKET	4
36	12-0743001-70-00	FIBRE INSULATOR	1

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
37	13-0200502-22-00	SELF TAP SCREW 2X5 TYPE iBî NI PLT	8
38	13-0260500-02-00	SELF TAP SCREW 2.6 X 5 P/H TYPE iAî NI PLT	2
39	13-0260600-02-00	SELF TAP SCREW 2.6 X 6 P/H TYPE iAî NI PLT	6
40	13-0260803-02-00	SELF TAP SCREW 2.6 X 8 B/H TYPE iAî NI PLT	16
41 ⚠	25-0210058-30-20	XFORMER PW EI-96 115V/230V T96-0313002-21	1
42	14-0300600-02-00	MACHINE SCREW M3 X 6 P/H NI PLT	23
43	14-0300600-04-00	MACHINE SCREW M3 X 6 P/H BLK	4
44	14-0300600-52-00	SELF TAP SCREW 3 X 6 P/H NI-PLT TYPE iBî	12
45	14-0300800-53-00	SELF TAP SCREW 3 X 8 B/B ZINC PLATED	38
46	14-0300803-54-00	TAPTITE SCREW 3 X 8 B/H TYPE iBî BLK PLT	44
47	14-0301000-54-00	TAPTITE SCREW 3 X 10 P/H TYPE iBî BLK	6
48	14-0301003-04-00	MACHINE SCREW M3 X 10 B/H BLK	4
49	14-0301203-02-00	MACHINE SCREW M3 X 12 B/H NI-PLT	15
50	14-0400802-04-00	MACHINE SCREW M4 X 8 WASHER HEAD BLK	6
51	14-0501205-02-02	HEX HEAD SCREW M5 X 12 NI PLT	4
52	15-0500340-08-20	NUT M5X3.4 NI PLT	4
53	15-0900220-11-30	NUT ZINC PLATED M9.0 X 2.2mm 11p	1
54	16-0320560-09-20	SPRING WASHER I/D 3.2 X O/D 5.6 0.9mm	15
55	16-0350080-04-35	STEEL WASHER I/D 3.5 X O/D 8.0 0.4mm ZINC	4
56	16-0520080-12-30	SPRING WASHER I/D 5.2 X O/D 8 X 1.2 ZINC	4
57	16-0561200-10-20	STEEL WASHER I/D 5.6 X O/D 12 X 1 NI	8
58	17-0500960-00-01	PCB SUPPORTER H=9.6mm PCB HOLE 4mm	3
59	17-1402603-30-22	RUBBER FOOT I/D14 X O/D26 X 3	4
60*AH	29-4000004-00-38	AM/FM TUNER MODULE KST-MB114MA0-23	1
60*C,*T	29-4000002-00-38	AM/FM TUNER MODULE KST-MB114MA1-23	1
61	34-0061030-00-67	JUMPER PLUG PITCH 14mm	3
62*AH ⚠	34-0101001-00-70	AC OUTLET US POLARIZED 3512-MITIBKUC	1
62*C,*T ⚠	34-0100002-00-78	AC OUTLET EURO CEE 7 2.5A/250V A302D0060P	1
63*AH ⚠	36-2060010-00-97	POWER CORD 125V 10A POLARIZED PLUG UL/CSA	1
63*C,*T ⚠	36-2213110-07-97	POWER CORD 250V 2.5A EURO-PLUG VDE	1
64	37-2011225-00-63	FAN DC 80mm 12V 0.12A CHA8012CB W/CONNECTOR	1
65	38-1001500-00-65	SILICONE RUBBER TO-220 R.0	5
66	38-1030100-00-56	INSULATOR TO-3P MICA 1.5KV 22 X 27 X 0.125 SK023A	10

NOTE:


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

<*AH > : USA, CANADIAN MODEL ONLY.

<*C > : EUROPEAN MODEL ONLY.

<*T > : EUROPEAN MODEL WITH TATANUM COLOUR ONLY,
ALL ELECTRICAL ARE SAME AS *C VERSION.

ELECTRICAL PARTS LIST (refer to schematic diagram for non critical component values)

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
POWER AMP MODULE	95-0907435-12-01	POWER AMPLIFIER MODULE
<u>FRONT LEFT/RIGHT AMP BOARD PCB ASSEMBLY</u>	80-0907430-40-00	FRONT LEFT/RIGHT AMP ASSEMBLY
<u>CAPACITORS</u>		
C501,C513,C525	22-3476052-00-28	CAP ELEC GR 4.7uF 50V 20%
C503,C515,C527	22-4110203-10-28	CAP MYLAR MCC-R 1000P 100V 10%
C505,C517,C529	22-3471022-00-28	CAP ELEC GR 470uF 16V 20%
C510,C521,C511,C522,C534,C535	22-3101082-00-28	CAP ELEC GR 100uF 100V 20%
C519,C531,C508	22-4115403-10-10	CAP MYLAR KT-G 150nF 100V 10%
C537-C539	22-4210402-00-31	CAP MPF 0.1uF 63V 5% DMF 5 SERIES
C551-C553	22-3100052-00-43	CAP ELEC SS 10uF 50V 20%
C565,C566	22-3470022-00-43	CAP ELEC SS 47uF 16V 20%
C577-C579	22-3106052-00-43	CAP ELEC SS 1uF 50V 20%
C580-C582	22-3101022-00-43	CAP ELEC SS 100uF 16V 20%
<u>DIODES</u>		
D501-D503,D505-D507,D509-D511, D521,D524-D528,D531-D536	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
D530,D529	20-3222002-02-01	DIODE ZENER BZX55 22V 1/2W 5%
<u>COILS</u>		
L501-L503	24-1000001-00-28	AIR COIL 0.2uH 10% 1 X 9 X 13.5 TURNS
<u>THERMISTOR</u>		
M504	23-6110100-00-08	PTC 100 OHM PTH9MO4BH471TS2F333
<u>THERMAL PROTECTOR</u>		
M505 	39-0000007-00-15	THERMAL CUT OFF SWITCH 90C UP72
<u>RELAY</u>		
M506	32-3124051-03-40	RELAY POWER DC24V 5A/250V 2P1T
<u>TRANSISTORS</u>		
Q504,Q506,Q516,Q518,Q529,Q530	21-1011210-50-12	XTR PW PNP 1A/100V TO-126 2SD600KE
Q505,Q508,Q517,Q520,Q528,Q532	21-1011611-30-12	XTR PW PNP 1.5A/160V TO-220ML 2SA1606E
Q507,Q519,Q531	21-1011610-30-12	XTR PW NPN 1.5A/160V TO-220ML 2SC4159E
Q509,Q521,Q534	21-1152311-10-12	XTR PW PNP 15A/230V TO-3PB 2SA2031
Q510,Q522,Q533	21-1152310-10-12	XTR PW NPN 15A/230V TO-3PB 2SC5669
Q501-Q503,Q511,Q513-Q515,Q523, Q525-Q527,Q535	21-0000410-00-12	XTR SS NPN HFE160-320 130MHz 2SC2362KF
Q541	21-1036003-50-06	XTR PW 3A/60V TO-126 2SB772Q
Q542	21-0000390-70-14	XTR SS NPN HFE270-560 180MHz 2SC1740S
Q547	21-0000380-70-14	XTR SS NPN HFE20 250MHz DTC-123ESA

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
Q561,Q564,Q567	21-0100410-00-12	XTR SS PNP HFE 280-560 110MHz 2SA1016KG-AA
RESISTORS		
R522,R545,R571	30-0102106-01-64	VR SEMI-FIX RES CF 1K OHM B 30%
R523,R547,R574	23-4228280-08-20	RES RN 0.22 OHM 5% 5W SIL 3 PIN
REGULATOR		
U501	27-3001201-17-14	I.C. VOLT REG 12V 1A TO-220 NJM7812
<u>SURROUND LEFT/RIGHT/CENTER AMP BOARD</u>		
PCB ASSEMBLY	80-0907430-18-00	SURROUND LEFT/RIGHT/CENTER AMP ASSEMBLY
CAPACITORS		
C554	22-3220022-00-43	CAP ELEC GS 22uF 16V 20%
C801,C802	22-3476052-00-43	CAP ELEC SS 4.7uF 50V 20%
C806,C805	22-4110203-10-28	CAP MYLAR MCC-R 1000P 100V 10%
C809,C810	22-3471022-00-28	CAP ELEC GR 470uF 16V 20%
C815,C816	22-4115403-10-10	CAP MYLAR KT-G 150nF 100V 10%
C819-C822	22-3101082-00-28	CAP ELEC GR 100uF 100V 20%
C824,C823	22-4210402-00-31	CAP MPF 0.1uF 63V 5% DMF 5 SERIES
C845,C846	22-3106052-00-43	CAP ELEC SS 1uF 50V 20%
C847,C848	22-3101022-00-43	CAP ELEC SS 100uF 16V 20%
DIODES		
D522,D523,D801-D806,D809,D821-D824	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
COILS		
L801,L802	24-1000001-00-28	AIR COIL 0.2uH 10% 1 X 9 X 13.5 TURNS
RELAYS		
M501,M502,M801	32-3124051-03-40	RELAY POWER DC24V 5A/250V 2P1T
TRANSISTORS		
Q543,Q544,Q829	21-0000380-70-14	XTR SS NPN HFE20 250MHz DTC-123ESA
Q801-Q806,Q545,Q546,Q821,Q822	21-0000410-00-12	XTR SS NPN HFE160-320 130MHz 2SC2362KF
Q807,Q808,Q815,Q816	21-1011611-30-12	XTR PW PNP 1.5A/160V TO-220ML 2SA1606E
Q809-Q812	21-1011210-50-12	XTR PW PNP 1A/100V TO-126 2SD600KE
Q813,Q814	21-1011610-30-12	XTR PW NPN 1.5A/160V TO-220ML 2SC4159E
Q818,Q817	21-1152310-10-12	XTR PW NPN 15A/230V TO-3PB 2SC5669
Q820,Q819	21-1152311-10-12	XTR PW PNP 15A/230V TO-3PB 2SA2031
Q844,Q512,Q841	21-0100410-00-12	XTR SS PNP HFE 280-560 110MHz 2SA1016KG-AA

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
RESISTORS R836,R835 R843,R844	30-0102106-01-64 23-4228280-08-20	VR SEMI-FIX RES CF 1K OHM B 30% RES RN 0.22 OHM 5% 5W SIL 3 PIN
DSP BOARD PCB ASSEMBLY	80-0907430-65-00	DSP ASSEMBLY
CAPACITORS C1004,C1002 C1005 C1011 C1030,C1031,C1040,C1041,C1051,C1050 C1060,C1073 C1137-C1140,C1092 C1096,C1098,C1100 C1109-C1113 C1012,C1072,C1117 C1145-C1148 C1119,C1133,C1157 C1103-C1108 C1132 C1010,C1007 C1001,C1003,C1017-C1019,C1074- C1076,C1095,C1097,C1099,C1123- C1128,C1141,C1142 C1006,C1121 C1032,C1036,C1042,C1046,C1052, C1056,C1130,C1131,C1134-C1136, C1144,C1143 C1035,C1039,C1045,C1049,C1055, C1059,C1114 C1034,C1038,C1044,C1048,C1054,C1058	22-3106052-00-43 22-3226052-00-43 22-4210402-00-31 22-3336052-00-43 22-3471012-00-28 22-3100022-00-43 22-4210502-00-31 22-3470022-00-43 22-3101022-00-43 22-3220022-00-43 22-3102022-00-28 45-0101055-55-57 45-0102055-55-57 45-0103055-55-57 45-0104056-57-57 45-0221055-55-57 45-0222055-55-57 45-0472055-55-57 45-0561055-55-57	CAP ELEC SS 1uF 50V 20% CAP ELEC SS 2.2uF 50V 20% CAP MPF 0.1uF 63V 5% DMF 5 SERIES CAP ELEC SS 3.3uF 50V 20% CAP ELEC GR 470uF 10V 20% CAP ELEC SS 10uF 16V 20% CAP MPF 1uF 63V 5% DMF 5 SERIES CAP ELEC SS 47uF 16V 20% CAP ELEC SS 100uF 16V 20% CAP ELEC GS 22uF 16V 20% CAP ELEC GR 1000uF 16V 20% CAP CER SMD 100pF 50V 10% X7R 0603 CAP CER SMD 1nF 50V 10% X7R 0603 CAP CER SMD 10nF 50V 10% X7R 0603 CAP CER SMD 0.1uF 50V 20% Y5V 0603 CAP CER SMD 220pF 50V 10% X7R 0603 CAP CER SMD 2.2nF 50V 10% X7R 0603 CAP CER SMD 4.7nF 50V 10% X7R 0603 CAP CER SMD 560pF 50v 10% X7R 0603
INDUTCORS L1001-L1007	24-0100127-00-28	IND CHOKE 10uH 10% EC36
TRANSISTORS Q1001-Q1003	21-0000010-00-46	XTR SS NPN HEF 100 200MHz TO-92 C1815Y
RESISTORS R1007 R1009 R1013 R1008,R1020,R1021,R1036,R1040, R1050,R1054,R1064,R1068,R1095, R1096,R1099,R1100,R1114,R1117- R1120,R1131-R1138,R1230	44-0330920-51-00 44-0200320-51-00 44-0120120-51-00 44-0100220-51-00	RES SMD 33 OHM 5% 1/16W 0603 RES SMD 200K OHM 5% 1/16W 0603 RES SMD 1.2K OHM 5% 1/16W 0603 RES SMD 10K OHM 5% 1/16W 0603




Reference No.	Part No.	Description
R1037,R1041,R1042,R1044,R1047, R1049,R1051,R1055,R1056,R1058, R1061,R1065,R1069,R1070,R1072, R1075,R1077	44-0150120-51-00	RES SMD 1.5K OHM 5% 1/16W 0603
R1003-R1006,R1081	44-0330120-51-00	RES SMD 3.3K OHM 5% 1/16W 0603
R1082	44-0180120-51-00	RES SMD 1.8K OHM 5% 1/16W 0603
R1078,R1080,R1084	44-0220120-51-00	RES SMD 2.2K OHM 5% 1/16W 0603
R1090,R1091	44-0270120-51-00	RES SMD 2.7K OHM 5% 1/16W 0603
R1001,R1002,R1079,R1083,R1097, R1098,R1101,R1102	44-0470120-51-00	RES SMD 4.7K OHM 5% 1/16W 0603
R1115	44-0100020-51-00	RES SMD 100 OHM 5% 1/16W 0603
R1121-R1124	44-0150020-51-00	RES SMD 150 OHM 5% 1/16W 0603
R1143-R1148	44-0620020-51-00	RES SMD 620 OHM 5% 1/16W 0603
R1151	44-0100120-51-00	RES SMD 1K OHM 5% 1/16W 0603
J1001,R1010	44-0000020-51-00	RES SMD 0 OHM 5% 1/16W 0603
ICs		
U1001	27-9493260-04-70	I.C. DD DTS & MPEG DECODER PLCC CS49326
U1002,U1003,U1014	27-0324590-24-00	I.C. OCTAL BIDIRECTIONAL TRANS CEIVER SMD 74LVC245ATTR
U1004	27-0115790-25-00	I.C. QUAD 2-INPUT SELECTOR SOIC 74HC157MIR
U1005	27-9841500-25-53	I.C. 96KHz DIGITAL AUDIO INTERFACE RECEIVER SMD CS8415A-CS
U1007	27-2325607-00-88	I.C. EEPROM 256 X 8 BYTE 70nS PDIL W27C02-70
U1008,U1009	27-0657490-18-00	I.C. OCTAL D-FLIP FLOPS 3-STAGE O/P SMD 74LVQ574M
U1011-U1013,U1023,U1025	27-9456000-18-14	I.C. NJM4560M SO 8 PIN DUAL OP AMP SMD NJM4560M
U1015,U1020	27-3031710-06-00	I.C. REG 1A TO-220(T) LM317T
U1021	27-9422800-24-53	I.C. 24BIT 96KHz SUR SOUND CODE SSOP CS4228AKS
OSCILLATOR		
X1001	28-5122200-04-19	SCILLATOR 12.288MHz 50ppm
AUDIO BOARD PCB ASSEMBLY		
	80-0907430-11-00	AUDIO ASSEMBLY
CAPACITORS		
C317-C319,C320-C332	22-3100022-00-43	CAP ELEC SS 10uF 16V 20%
RCA JACKS		
M303	34-4040420-00-60	RCA JACK 4 R-R/W-W PCB MOUNT
M301,M302	34-4060420-00-60	RCA JACK 6 R-R-R/W-W-W PCB MOUNT
RESISTORS		
J3101,J3102	44-0000020-51-00	RES SMD 0 OHM 5% 1/16W 0603

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
<u>COMPONENT VIDEO BOARD</u> <u>PCB ASSEMBLY</u>	80-0907430-42-00	COMPONENT VIDEO ASSEMBLY
<u>CAPACITORS</u> C4310-C4312,C4325 C4316,C4318,C4320 C4313-C4315 C4317,C4319,C4321 C4301-C4306	22-3100022-00-43 22-3101022-00-43 22-3106052-00-43 22-3220022-00-43 22-3226052-00-43	CAP ELEC SS 10uF 16V 20% CAP ELEC SS 100uF 16V 20% CAP ELEC SS 1uF 50V 20% CAP ELEC GS 22uF 16V 20% CAP ELEC SS 2.2uF 50V 20%
<u>ICs</u> U4301 U4302,U4303	27-5176600-18-23 27-0140520-18-00	I.C. VIDEO 3-CH75 OHM DRIVER BA7660FS I.C. SINGLE DUAL TRIPLE M74HC4052MIR
<u>RCA JACKS</u> M431,M432,M434	34-4032020-00-60	RCA 3 G-BL-R PCB MOUNT
<u>RESISTORS</u> J4301-J4303	44-0000020-51-00	RES SMD 0 OHM 5% 1/16W 0603
<u>DIGITAL BOARD</u> <u>PCB ASSEMBLY</u>	80-0907430-47-00	DIGITAL ASSEMBLY
<u>CAPACITORS</u> C1213,C1214 C1222,C1223	22-3226052-00-43 22-3101022-00-43	CAP ELEC SS 2.2uF 50V 20% CAP ELEC SS 100uF 16V 20%
<u>RCA JACKS</u> J1001-J1004	34-4010320-00-60	RCA JACK 1 BLACK PCB MOUNT
<u>FIBRE OPTICAL</u> J1005,J1006	26-6701380-01-16	OPTIC RECEIVING UNIT GP1FA550RZ
<u>SLIDE SWITCH</u> S1	35-4102209-00-67	SW SLIDE 2P2T RIGHT
<u>ICs</u> U1201,U1202 U1203	27-0804990-18-00 27-0125190-18-00	I.C. HEX INVERTER M74HCU04MIR I.C. 8-CH MULTIPLEXER 74HC251M1R
<u>KEYBOARD</u> <u>PCB ASSEMBLY</u>	80-0907430-02-00	KEYBOARD ASSEMBLY
<u>CAPACITORS</u> C208-C211 C212 C214 C255	22-3470022-00-43 22-3102012-00-28 22-3107052-00-43 22-3106052-00-43	CAP ELEC SS 47uF 16V 20% CAP ELEC GR 1000uF 10V 20% CAP ELEC SS 0.1uF 50V 20% CAP ELEC SS 1uF 50V 20%

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
C242,C241	45-0102055-55-57	CAP CER SMD 1nF 50V 10% X7R 0603
C201,C202,C213,C215-C220,C222,C229,C256	45-0104056-57-57	CAP CER SMD 0.1uF 50V 20% Y5V 0603
C251-C254	45-0330055-55-57	CAP CER SMD 33pF 50V 10% X7R 0603
IR RECEIVER		
D201	26-0941380-00-00	IR RX 940nm 37.9KHz SHIELD
DIODES		
D212,D214-D218	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
D220	20-3251902-00-01	DIODE ZENER BZX55 5.1V 1/2W 5%
ENCODER		
M201	35-6001219-00-08	ENCODER ROTATRY L=20mm VER W/O CLICK
TRANSISTORS		
Q201	21-0100100-00-46	XTR SS PNP HFE 100 200MHZ TO-92 A1015Y
Q203-Q206	21-0000010-00-46	XTR SS NPN HEF 100 200MHZ TO-92 C1815Y
RESISTORS		
R201-R207,R213,R219,R223-R227,R229,R231,R232	44-0100220-51-00	RES SMD 10K OHM 5% 1/16W 0603
R217,R218	44-0150120-51-00	RES SMD 1.5K OHM 5% 1/16W 0603
R220	44-0470120-51-00	RES SMD 4.7K OHM 5% 1/16W 0603
R222	44-0220020-51-00	RES SMD 220 OHM 5% 1/16W 0603
R221,R230	44-0220120-51-00	RES SMD 2.2K OHM 5% 1/16W 0603
R233	44-0470220-51-00	RES SMD 47K OHM 5% 1/16W 0603
R216,R225,R234	44-0100120-51-00	RES SMD 1K OHM 5% 1/16W 0603
R238	44-0120220-51-00	RES SMD 12K OHM 5% 1/16W 0603
R241,R242	44-0100020-51-00	RES SMD 100 OHM 5% 1/16W 0603
R251,R252	44-0100520-51-00	RES SMD 10M OHM 5% 1/16W 0603
TACT SWITCHES		
S201-S218	35-1001117-00-67	SW TACT NO 1P1T 50mA/12V
ICs		
U201,U202	27-1086400-04-87	I.C. MCU 8 BIT 64KROM 512 BYTE SRAM PLCC M6759-A1F
U203	27-9630600-14-62	I.C. VFD DRIVER SMD QFP PT6306
U204-U207	27-0540940-18-00	I.C. 8-STAGE SHIFT-AND-STORE BUS REGISTER HCF4094BM1
U208	27-0140510-18-00	I.C. SINGLE 8 CH ANALOG MUX/DEMUX SMD M74HC4051MIR
U209	27-0324591-18-00	I.C. OCTAL BUS TRANSCEIVER 74VHC245M
U210	27-2300225-00-25	I.C. EEPROM 2K BYTE 250nS AT24C16
U214	27-9810000-28-36	I.C. MCU RESET MONITORS TCM810LENB713
VFD		
VD201	41-4340100-00-13	VFD 16-BT-93GNK

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
CRYSTALS X201,X202	28-5400200-06-33	CRYSTAL 40MHz 30ppm HC-49S
LED BOARD PCB ASSEMBLY	80-0907430-32-00	LED ASSEMBLY
LED D211	26-0012587-01-10	LED RED-GREEN CIRCULAR 5X807mm COMMON ANODE
TACT SWITCH S220	35-1001117-00-67	SW TACT NO 1P1T 50mA/12V VER H=7mm
MAIN BOARD PCB ASSEMBLY	80-0907430-00-00	MAIN ASSEMBLY
CAPACITORS C701,C704 C702,C719,C723 C705,C706,C716,C725 C707 C710 C711-C713 C715 C724,C721	22-3332042-30-35 22-3101022-30-13 22-3102032-30-28 22-3222042-30-49 22-3470052-00-43 22-3102052-30-28 22-4210502-00-31 22-3222032-30-28	CAP ELEC KM 3300uF 35V 20% 105C CAP ELEC KM 100uF 16V 20% 105C CAP ELEC KM 1000uF 25V 20% 105C CAP ELEC KM 2200uF 35V 20% 105C CAP ELEC SS 47uF 50V 20% 85C CAP ELEC KM 1000uF 50V 20% 105C CAP MPF 1uF 63V 5% DMF 5 SERIES CAP ELEC KM 2200uF 25V 20% 105C
DIODES D701-D710 D711 D715 D716,D717 D718	20-1001401-20-44 20-3203102-00-01 20-5004700-50-02 20-3951943-50-01 20-3939943-50-01	DIODE RECT 1A/400V DO41 1N4004 DIODE ZENER BZX55 30V 1/2W 5% DIODE BRI 4A/70V RS402L DIODE ZENER ZY5.1 2W 10% DIODE ZENER ZY3.9 2W 10%
TRANSISTORS Q701	21-1011210-50-12	XTR PW PNP 1A/100V TO-126 2SD600KE
REGULATORS U701,U704-U706 U702,U707 U703	27-3000501-17-14 27-3001201-17-14 27-3101201-13-14	I.C. VOLT REG 5V 1A TO-220 NJM7805FA I.C. VOLT REG 12V 1A TO-220 NJM7812 I.C. VOLT REG TO-220F NJM7912
MULTI-CH BOARD PCB ASSEMBLY	80-0907430-64-00	MULTI-CHANNEL ASSEMBLY

Reference No.	Part No.	Description
CAPACITORS		
C607,C611,C612	22-3220022-00-43	CAP ELEC GS 22uF 16V 20% 85C
C626	22-3221022-00-43	CAP ELEC SS 220uF 16V 20% 85C
C627,C628,C633,C634	22-3101022-00-43	CAP ELEC SS 100uF 16V 20% 85C
C677,C678,C689,C690	22-3470022-00-43	CAP ELEC SS 47uF 16V 20% 85C
C755,C775	22-8226052-00-28	CAP ELEC 2.2uF 50V 20% NON-POLAR
C757	22-4282302-00-31	CAP MPF 0.082uF 63V 5% DMF 5 SERIES
C759,C760,C769,C770,C777-C779	22-4210402-00-31	CAP MPF 0.1uF 63V 5% DMF 5 SERIES
C763,C764	22-4247302-00-31	CAP MPF 0.047uF 63V 5% DMF 5 SERIES
C767,C768	22-4233202-00-31	CAP MPF 0.0033uF 63V 5% DMF 5 SERIES
C780-C795	22-3100022-00-43	CAP ELEC SS 10uF 16V 20% 85C
DIODES		
D601	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
D602,D604	20-3275902-00-01	DIODE ZENER BZX55 7.5V 1/2W 5%
INDUCTORS		
L601,L602	24-0101108-00-28	IND CHOKE 100uH 10%
RCA JACK		
M601	34-4040420-00-60	RCA JACK 4 R-R/W-W PCB MOUNT
M602	34-4020320-00-60	RCA JACK 2 B/B PCB MOUNT
M603	34-4060420-00-60	RCA JACK 6 R-R-R/W-W-W PCB MOUNT
TRANSISTORS		
Q601	21-0000140-00-11	XTR SS NPN HFE 120 100MHz TO-92 SS8050C
Q602	21-0100131-00-11	XTR SS PNP HFE 170 1.5A TO-92 SS8550C
Q603	21-0100390-70-14	XTR SS PNP HFE 30 250MHz SPT DTA 114ESA
Q604	21-0000400-70-14	XTR SS NPN HFE30 250MHz SPT DTC114ESA
Q605,Q606	21-0000360-00-00	XTR SS NPN HFE200-700 30MHz 2SC2878A
ICs		
U601	27-7661516-14-01	I.C. SOUND PROCESSOR 7.1CH VOL+TONE SMD QFP M61516FP
U604-U607	27-9456000-18-14	I.C. NJM4560M SO 8 PIN DUAL OP NJM4560M
PRE-OUT BOARD PCB ASSEMBLY		
	80-0907430-63-00	PRE-OUT ASSEMBLY
CAPACITORS		
C637,C642,C647,C652,C672	22-3100022-00-43	CAP ELEC SS 10uF 16V 20% 85C

Reference No.	Part No.	Description
C640,C645,C650,C655,C675 C667,C670	22-3220022-00-43 22-8226052-00-28	CAP ELEC GS 22uF 16V 20% 85C CAP ELEC 2.2uF 50V 20% NON-POLAR
C684,C685,C687,C688 C679,C680,C691,C692	22-3331022-00-28 22-3470022-00-43	CAP ELEC GR 330uF 16V 20% 85C CAP ELEC SS 47uF 16V 20% 85C
DIODES D605,D606,D608,D609,D611-D614	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
INDUCTORS L602-L606,L609,L610	24-0100127-00-28	IND CHOKE 10uH 10%
RCA JACKS M607 M608,M612 M609	34-4040500-00-60 34-4020300-00-60 34-4020400-00-60	RCA JACK 4 R-W/R-W PCB MOUNT RCA JACK 2 B/B PCB MOUNT RCA JACK 2 R-W PCB MOUNT
TRANSISTORS Q608-Q611,Q614,Q615,Q617 Q616,Q618,Q622,Q624	21-0000350-70-00 21-0100390-70-14	XTR SS NPN HFE200-700 30MHz SPT RN1241A XTR SS PNP HFE 30 250MHz SPT DTA 114ESA
RESISTORS R635,R642,R647,R654,R678 R636,R643,R648,R655,R672,R679	23-1220102-00-00 23-1330002-00-00	RES MF 2.2K OHM 1% 1/6W RES MF 330 OHM 1% 1/6W
ICs U609,U610,U612	27-9456000-18-14	I.C. NJM4560M SO 8 PIN DUAL OP AMP NJM4560M
PSU BOARD PSU ASSEMBLY*AH PSU ASSEMBLY*C	80-0907430-01-00 80-0907430-01-01	PSU ASSEMBLY PSU ASSEMBLY
CAPACITORS C752 C753 C754,C763  C755	22-3476052-00-00 22-4210202-00-31 22-1103470-35-45 22-3472032-00-28	CAP ELEC GS 4.7uF 50V 20% 85C CAP MPF 0.001uF 63V 5% DMF 5 SERIES CAP CER ECKDRS 10nF 400VAC +80/-20% CAP ELEC GR 4700uF 25V 20% 85C
DIODES D751 D752-D756	20-0000000-00-13 20-1001401-20-44	DIODE SW 4NS DO35 1N4148 DIODE RECT 1A/400V DO41 1N4004
FUSES F751*AH  F751*C 	33-0101001-00-48 33-0141002-00-48	FUSE 7A 250V TIME-LAG5 X 20mm SIC UL/CSA FUSE 4A 250V TIME-LAG 5 X 20mm VDE/UL TSD

Reference No.		Part No.	Description
F752*AH	⚠	33-0111006-00-48	FUSE 1.6A 250V TIME LAG LBC 5x20mm TSD UL/CSA/VDE/SEMKO
F752*C	⚠	33-0151006-00-48	FUSE 800mA 250V TIME LAG LBC 5x20mm TSD UL/CSA/VDE/SEMKO
FH751-FH752	⚠	33-1000000-00-88	FUSE CLIP 0.05mm FC-53-11
RELAY			
M751*AH	⚠	32-3112210-00-40	RELAY POWER DC12V 20A 220VAC 1P1T PCB UL/CUL
M751*C	⚠	32-1012100-01-97	RELAY MINIATURE 12VDC 10A 1P1T VDE
TRANSISTOR			
Q751		21-0000010-00-46	XTR SS NPN HEF 100 200MHz TO-92 C1815Y
RESISTORS			
R751	⚠	23-5228330-00-00	RES FUSIBLE 0.22 OHM 10% 1/2W
R754*AH	⚠	23-8395232-00-25	COND PATH RESISTOR 3.9M OHM 1/2W 5%
POWER SWITCH			
S701	⚠	35-0101109-00-67	SW POWER TV-8 10A 250VAC
STANDBY TRANSFORMER			
T751	⚠	25-0040020-31-18	XFORMER PW EI-35 100V/220V T05382A
SECONDARY BOARD			
PCB ASEMBLY			
		80-0907430-27-00	SECONDARY ASSEMBLY
CAPACITORS			
C788,C784,C787,C783,C781,C782,C785		22-4210402-00-31	CAP MPF 0.1uF 63V 5% DMF 5 SERIES
C790,C791		22-3822062-00-41	CAP ELEC LP 8200uF 63V 20% 85C
BRIDGE RECTIFIER			
D781		20-5125401-50-02	BRIDGE RECTIFIER 25A 400V MP254W BR-25W
FUSES			
F781-F782*AH	⚠	33-0191001-00-88	FUSE 10A 250VAC TIME-LAG 5X20mm UL/CSA 5T
F781-F782*C	⚠	33-0161006-00-88	FUSE 10A/250VAC TIME-LAG 5 X 20mm UL/VDE 5D
FH781-FH782	⚠	33-1000000-00-88	FUSE CLIP 0.05mm FC-53-11
RESISTORS			
R781-R783	⚠	23-5228330-00-00	RES FUSIBLE 0.22 OHM 10% 1/2W
R784,R785		23-2228232-00-00	RES MO 0.22 OHM 5% 1/2W
SPEAKER BOARD			
PCB ASSEMBLY			
		80-0907430-67-00	SPEAKER A ASSEMBLY

Reference No.	Part No.	Description
SPEAKER TERMINAL		
M8101	34-3000021-00-80	SPEAKER TERMINAL 6P BINDING
M5101,M5102	34-3000022-00-80	SPEAKER TERMINAL 4P BINDING
S-VIDEO BOARD		
PCB ASSEMBLY	80-0907430-26-00	S-VIDEO ASSEMBLY
CAPACITORS		
C4101-C4107,C4115,C4158	22-3101022-00-43	CAP ELEC SS 100uF 16V 20% 85C
C4108,C4116,C4156,C4163,C4164, C4168,C4169	22-3471012-00-28	CAP ELEC GR 470uF 10V 20% 85C
C4133,C4137,C4141	22-3106052-00-43	CAP ELEC SS 1uF 50V 20% 85C
C4138	22-7200210-00-09	CAP TRIMMER 20pF 20%
C4144	22-3477052-00-43	CAP ELEC SS 0.47uF 50 20% 85C
C4146,C4136	22-4247402-00-31	CAP MPF 0.47uF 63V 5% DMF 5 SERIES
C4134,C4145,C4149	22-3101012-00-43	CAP ELEC SS 100uF 10V 20% 85C
C4150	22-3470022-00-43	CAP ELEC SS 47uF 16V 20% 85C
C4151	22-3100022-00-43	CAP ELEC SS 10uF 16V 20% 85C
C4153,C4157	22-3226052-00-43	CAP ELEC SS 2.2uF 50V 20% 85C
C4162,C4167,C4171,C4173 C4175	22-3221012-00-43 22-4247302-00-31	CAP ELEC SS 220uF 10V 20% 85C CAP MPF 0.047uF 63V 5% DMF 5 SERIES
DIODES		
D4101-D4109	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
INDUCTORS		
L4101	24-0569107-00-28	IND CHOKE 5.6uH 10%
L4102	24-0220107-00-28	IND CHOKE 22uH 10%
DIN JACKS		
M411-M414,M418	34-4110300-00-60	DIN JACK 1 BLACK PCB MOUNT
TRANSISTOR		
Q4101-Q4104,Q4107,Q4108,Q4116- Q4119,Q4134,Q4135	21-0100370-70-14	XTR SS PNP HFE 270-560 140MHz 2SA933AS
Q4105,Q4106,Q4113,Q4114,Q4121, Q4124,Q4125,Q4128,Q4130,Q4133	21-0000360-00-00	XTR SS NPN HFE200-700 30MHz 2SC2878A
Q4109,Q4120,Q4123	21-0000380-70-14	XTR SS NPN HFE20 250MHz DTC-123ESA
Q4115,Q4126,Q4127	21-0000390-70-14	XTR SS NPN HFE270-560 180MHz 2SC1740S
Q4122,Q4131	21-0000120-70-14	XTR SS NPN HFE 68 30MHz SPT DTC144ES
Q4132	21-0000010-00-46	XTR SS NPN HEF 100 200MHz TO-92 C1815Y
ICs		
U4101	27-5574763-21-02	I.C. OSD DIP30SD LC74763-9012
U4102,U4103	27-0140510-18-00	I.C. SINGLE 8 CH ANALOG MUX/DEMUX SMD M74HC4051MIR

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
CRYSTAL		
X4101	28-5143200-06-19	CRYSTAL 14.318MHz 30ppm
X4102	28-5177200-06-19	CRYSTAL 17.73447MHz 30ppm
TRIGGER BOARD		
PCB ASSEMBLY	80-0907430-68-00	TRIGGER ASSEMBLY
DIODES		
D351-D353	20-3251902-00-01	DIODE ZENER BZX55 5.1V 1/2W 5%
D354,D355,D357,D359-D361	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
PHONE JACKS		
M351-M355,M357	34-4310300-00-60	PHONE JACK 1 BLACK PCB MOUNT
TRANSISTOR		
Q351	21-0000380-70-14	XTR SS NPN HFE20 250MHz DTC-123ESA
RESISTORS		
R358,R359	23-2121250-00-00	RES MO 120 OHM 5% 2W
SLIDE SWITCH		
S351	35-4102209-00-67	SW SLIDE 2P2T RIGHT L=9
REGULATORS		
U352	27-3001201-07-85	I.C. VOLT REG 12V 0.1A TO-92 LM78L12
U353	27-3001201-17-14	I.C. VOLT REG 12V 1A TO-220 NJM7812
VIDEO-6 BOARD		
PCB ASSEMBLY	80-0907430-45-00	VIDEO-6 BOARD
CAPACITORS		
C4401-C4403	22-3101022-00-43	CAP ELEC SS 100uF 16V 20% 85C
JACKS		
M4401	34-4010000-01-60	RCA JACK 1 YELLOW PCB MOUNT
M4404	34-4010100-01-60	RCA JACK 1 RED PCB MOUT
M4403	34-4010200-01-60	RCA 1 WHITE PCB MOUNT
M4402	34-4110300-00-60	DIN JACK 1 BLACK PCB MOUNT
J4401	34-4510302-01-80	PHONE JACK D6.3 1 PCB MOUNT
COMPOSITE VIDEO BOARD		
PCB ASSEMBLY	80-0907430-66-00	COMPOSITE VIDEO ASSEMBLY
CAPACITORS		
C4201-C4203,C4205,C4207	22-3101022-00-43	CAP ELEC SS 100uF 16V 20% 85C
C4204,C4206,C4208,C4222,C4223	22-3471012-00-28	CAP ELEC GR 470uF 10V 20% 85C

Reference No.	Part No.	Description
C4219,C4220 C4221,C4224	22-1102150-09-41 22-3221012-00-43	CAP CER KT 1000pF 50V 10% CAP ELEC SS 220uF 10V 20% 85C
DIDOES D4201,D4202 J4201,J4202	20-0000000-00-13 44-0000027-11-00	DIODE SW 4NS DO35 1N4148 RES SMD 0 OHM 5% 1/10W 0805
RCA JACKS M421,M422	34-4040020-00-60	RCA JACK 4 Y-Y/Y-Y PCB MOUNT
TRANSISTORS Q4201,Q4205 Q4202,Q4206 Q4203,Q4204,Q4207,Q4209,Q4210	21-0000360-00-00 21-0000380-70-14 21-0100370-70-14	XTR SS NPN HFE200-700 30MHZ 2SC2878A XTR SS NPN HFE20 250MHZ DTC-123ESA XTR SS PNP HFE 270-560 140MHZ 2SA933AS
ICs U4201	27-0140510-18-00	I.C. SINGLE 8 CH ANALOG MUX/DEMUX SMD M74HC4051MIR

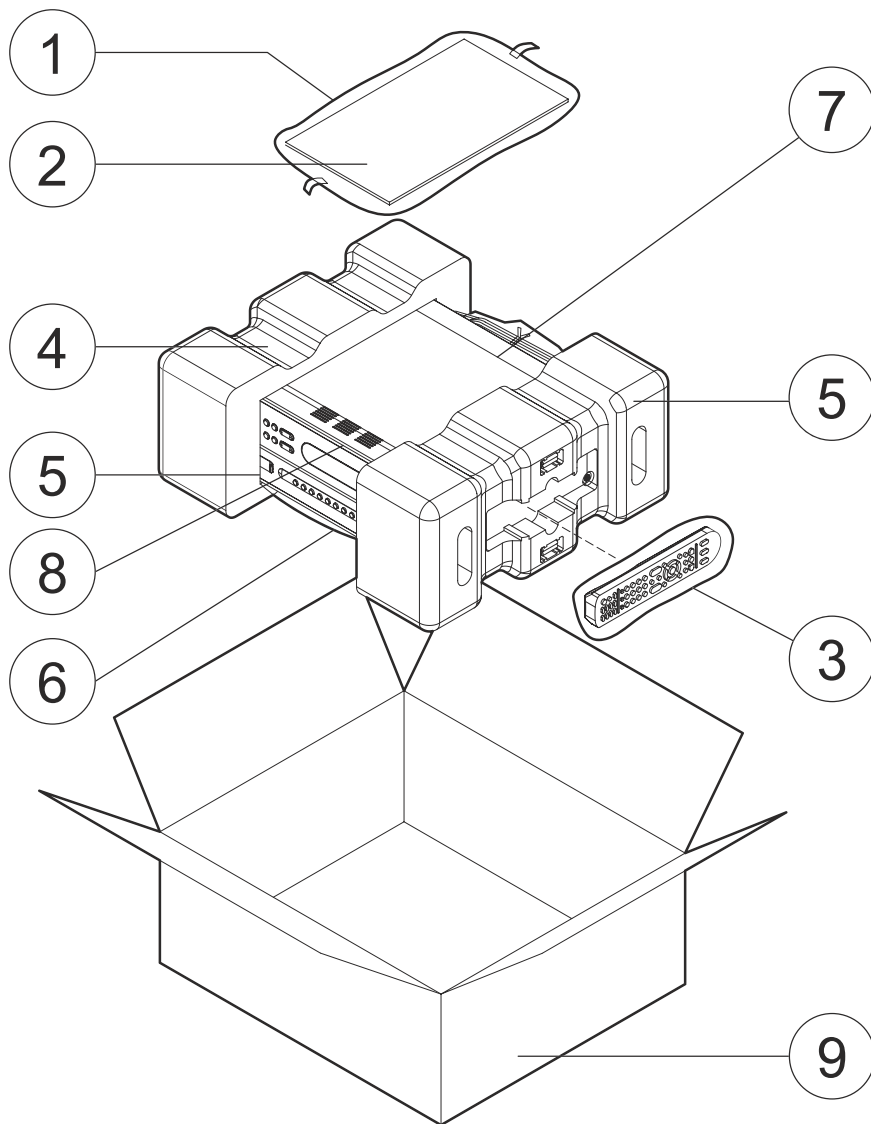
NOTE: THE COMPONENTS IDENTIFIED BY ⚠ MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRICAL SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

<*AH > : USA, CANADIAN MODEL ONLY.

<*C > : EUROPEAN MODEL ONLY.

RESISTORS: MO-METAL OXIDE, RN-CERAMIC CASE, MF-METAL FILM.

PACKING DIAGRAM & PARTS LIST



<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
1	64-0200001-01-00	POLYBAG MANUAL	1
2	31-6407520-00-98	FM WIRE ANTENNA	1
	31-6472801-00-28	AM LOOP ANTENNA W/STAND	1
	34-0081004-00-67	300 TO 75 OHM ADAPTER	1
	61-0743004-42-99	OWNER'S MANUAL T743 GB/F/D/NL	1
	61-0743004-43-99	OWNER'S MANUAL T743 E/I/P/S	1
	37-0020200-00-79	BATTERY AAA 1.5V ER03X	4
	65-0752000-00-98	WARRANTY CARD	1
3	83-0752000-01-04	REMOTE CONTROLLER NAD HTR-2	1
4	63-0743001-00-00	POLYFOAM ENDCAP LEFT T743	1
5	63-0743002-00-01	POLYFOAM ENDCAP RIGHT T743	1
6	64-0700001-00-00	POLYBAG MAIN UNIT	1
7	65-0752070-00-99	A3 WHITE PAPER	1
8	64-0743000-00-00	EPE PROTECTIVE COVER	1
9	67-0743000-10-99	MASTER CARTON BOX T743	1

VERSION HISTORY

<u>SERIAL NO</u>	<u>SOFTWARE VER.</u>	<u>PCB ASSEMBLY VERSION</u>
R3XT74300186-R3XT74300200	V1.26	ONLY POWER AMP BOARD ISSUE 3, ALL OTHER ISSUE 4.
R3XT74300001-R3XT74300185, R3XT74300201-R3XT74300500	V1.27	ONLY POWER AMP BOARD ISSUE 3, ALL OTHER ISSUE 4.
R3XT74301035-R3XT74301234	V1.27	ALL ARE ISSUE 3
R3XT74300501-R3XT74301034, R3XT74301235-R3XT74301500	V1.27	ONLY POWER AMP BOARD ISSUE 3, ALL OTHER ISSUE 4.
R3YT74301501-R3YT74303000	V1.27	ONLY POWER AMP BOARD ISSUE 3, ALL OTHER ISSUE 4.
R3YT74303001-R3YT74305400	V1.27	ALL ARE ISSUE 4
R3ZT74305401-R3ZT74306400	V1.27	ALL ARE ISSUE 4
R41T74306401-R41T74306600	V1.27	ALL ARE ISSUE 4
R44T74306601-R44T74307600	V1.27	ALL ARE ISSUE 4

REMARK: PCB Number 55-0743XXX-XX-**00** = ISSUE 3,
PCB Number 55-0743XXX-XX-**01** = ISSUE 4.

SERVICE MANUAL

T 743

AV Receiver