Philips Consumer Electronics Company
A Division of Philips Electronics North America Corp.

Technical Service Data

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MANUAL 1845

Philips Magnavox Model: MX940AHT01

File: 1998: 1845

(Includes Supplement 1 & 2)

MANUAL 1845 (MODEL MX940AHT01)

MX940AHT01 AUDIO SYSTEM

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MANUAL 1845 (MODEL MX940AHT01)

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CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING.

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MP/EM-298 GVL

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IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Philips Consumer Electronics Company Equipment. The service procedures recommended by Philips and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.**

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Philips could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Philips has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Philips must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

** **Hereafter throughout this manual, Philips Consumer Electronics Company will be referred to as Philips.**

WARNING

Critical components having special safety characteristics are identified with a ⚠ by the Ref. No. in the parts list and enclosed within a broken line* (where several critical components are grouped in one area) along with the safety symbol ⚠ on the schematics or exploded views.

Use of substitute replacement parts which do not have the same specified safety characteristics may create shock, fire, or other hazards.

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*** Broken Line** — · — · — · —

FOR PRODUCTS CONTAINING LASER:

DANGER - Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION - The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

SPECIFICATIONS
(Subject to modification)

AMPLIFIER SECTION

Power Output	45 Watts
Power Band Width	80Hz - 20kHz
Rated Impedance	8 Ohms
Signal to Noise Ratio	
AUX	40 dB
THD (1 KHz)	1 %
Head Room	> 15 dB

FM TUNER SECTION

Frequency Range	87.5MHz - 108.0MHz
30dB Usable Sensitivity	20 uV
Signal-to-Noise Ratio	50 dB
I-F Rejection	50 dB
Image Rejection	50 dB
Limiting (-3dB)	15 uV
Stereo Seperation (1 KHz)	25 dB

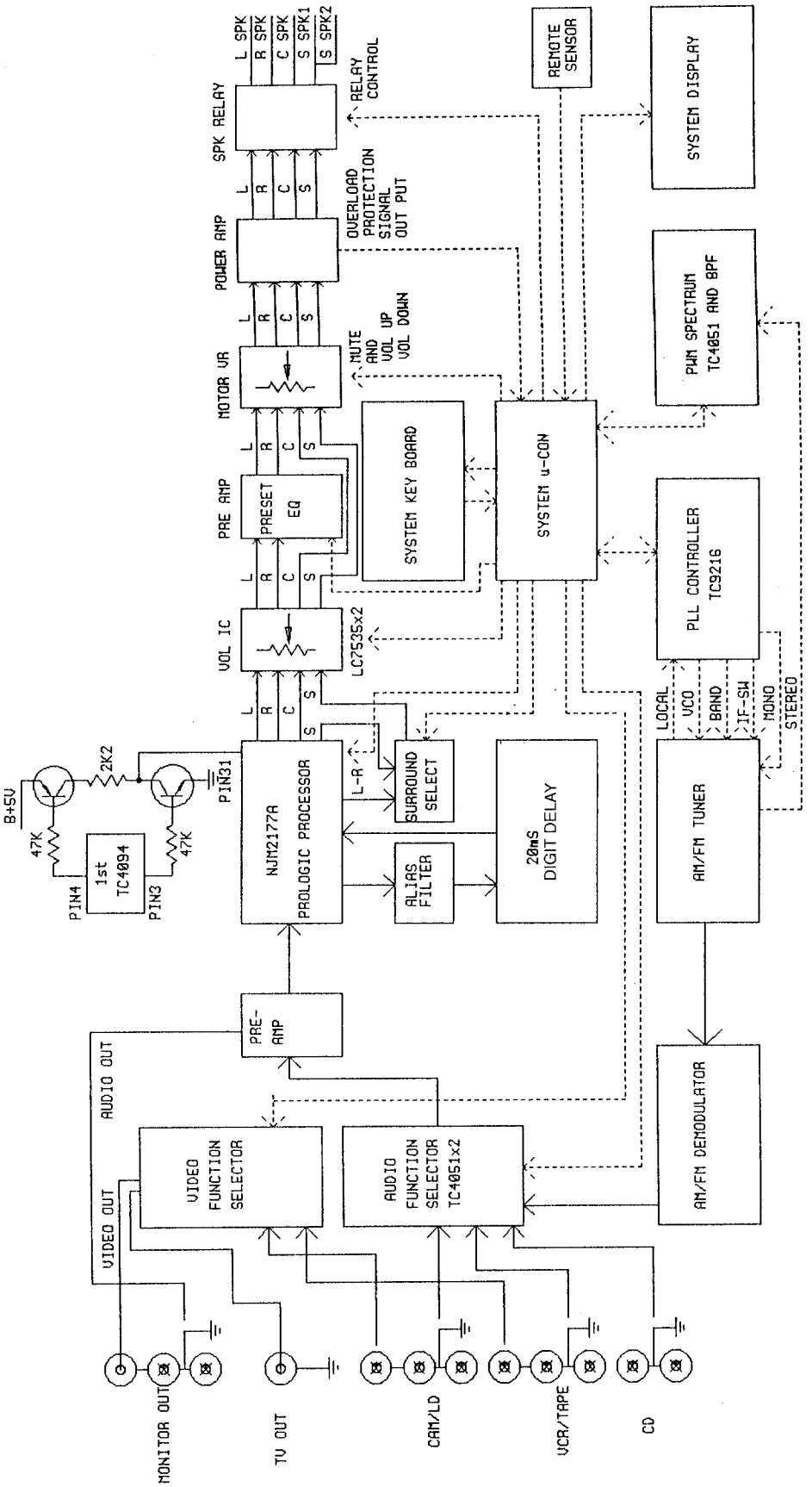
AM TUNER SECTION

Frequency Range	520kHz - 1710kHz
20dB Usable Sensitivity	1000 uV/m
Signal-to-Noise Ratio	40 dB
I-F Rejection	40 dB
Image Rejection	20 dB
AGC Figure of Merit	40 dB
Selectivity	15 dB
I-F Whistle	10 %

GENERAL

Power Supply	
AC Line	120V, 60Hz
Rated Watts	350 Watts
Weight	
Main Unit	15.0 lbs
Dimensions (L x W x H)	
Main Unit	17.4"x17.9"x24.2"

BLOCK DIAGRAM



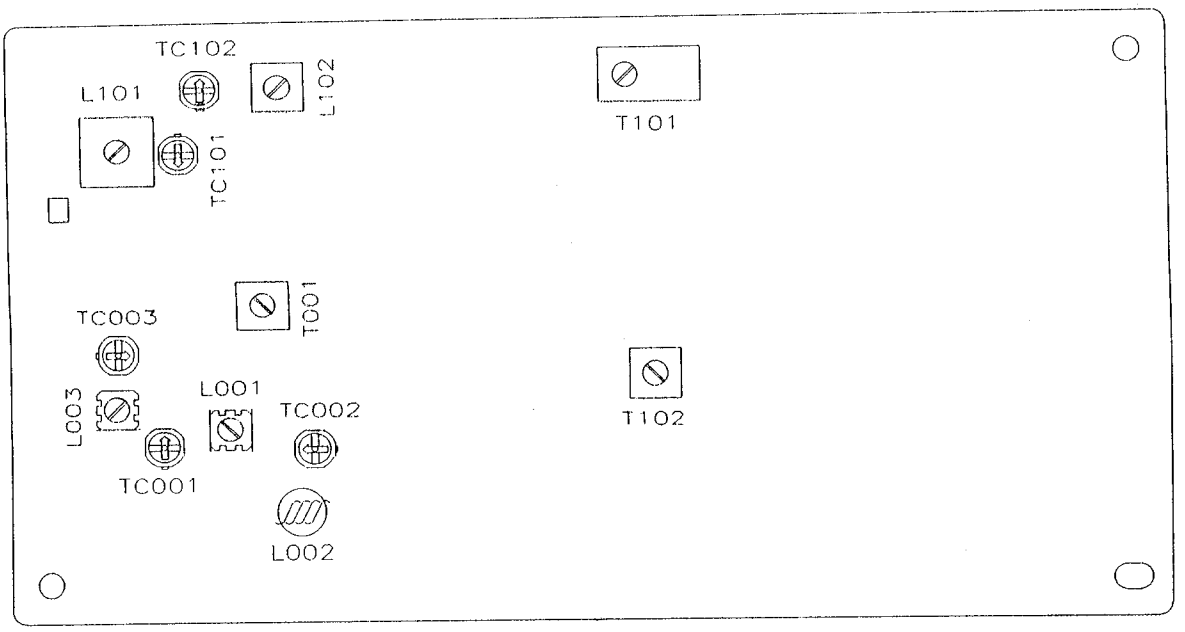
ELECTRICAL ADJUSTMENT PROCEDURES

Test Conditions
AM (Amplitude Modulation)
Function ..... AM
Input Level 74dB/m (5mV/m)
Generator ..... Modulation 30%,400Hz

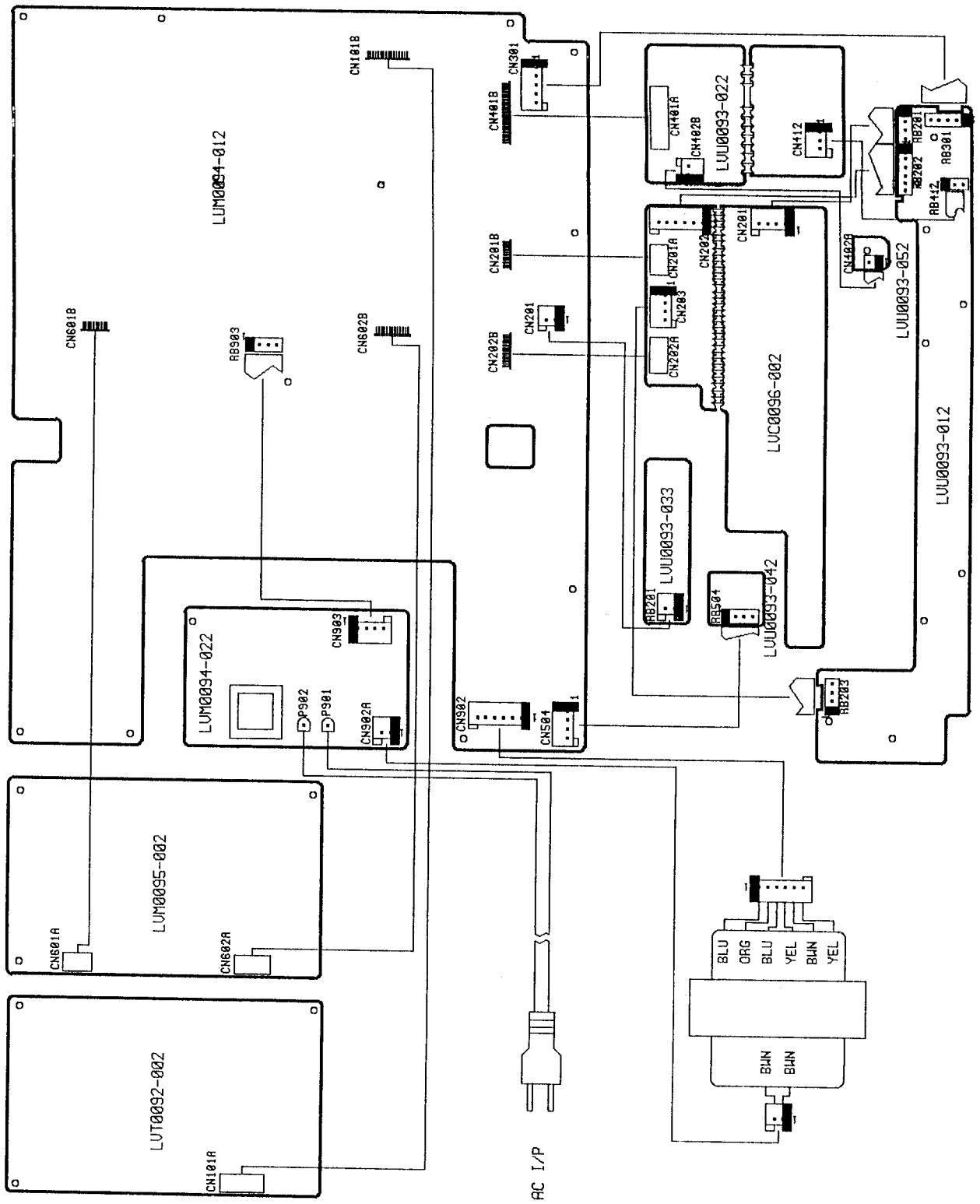
Test Conditions
FM (Frequency Modulation)
Function ..... FM
Input Level 60dB (1mV)
Generator ..... Deviation 22.5kHz, 1kHz

Step	Signal or Sweep Generator		Reception Frequency	Output Indicator / Connection	Adjustment	Adjust For
	Connection	Frequency				
AM TUNING VOLTAGE						
1	No Signal		1710kHz	DC Digital Voltmeter / TP1	TC102	8.0+/-0.1V
2	No Signal		520kHz	Same as Step 1	L102	1.0+/-0.1V
3	Repeat Steps 1 and 2 a few times					
AM IF						
4	AM Loop Antenna at a distance of 24 inch (60 cm) from the IRT Loop	450kHz	Point of noninterference	IF Sweep Generator / P101 (IC101 Pin 5)	T101	Flat and Max
AM TRACKING						
5	Same as Step 4	620kHz	620kHz	RF Sweep Generator / P101 (IC101 Pin 5)	L101	Max
6	Same as Step 4	1400kHz	1400kHz	Same as Step 5	TC101	Max
7	Repeat Steps 5 and 6 a few times					
FM TUNING VOLTAGE						
8	No Signal		108.0MHz	Same as Step 1	TC002	8.0+/-0.1V
9	No Signal		87.5MHz	Same as Step 1	L002	1.0+/-0.1V
10	Repeat Steps 8 and 9 a few times					
FM IF						
11	To the FM antenna terminals through a matching transformer	10.7MHz	Point of noninterference	IF Sweep Generator / P101 (IC101 Pin 5)	T001, T102	Flat and Max
FM TRACKING						
12	Same as Step 11	90.1MHz	90.1MHz	Same as Step 5	L001, L003	Max
13	Same as Step 11	106.1MHz	106.1MHz	Same as Step 5	TC001 TC003	Max
14	Repeat Steps 12 and 13 a few times					

ADJUSTMENT LOCATION

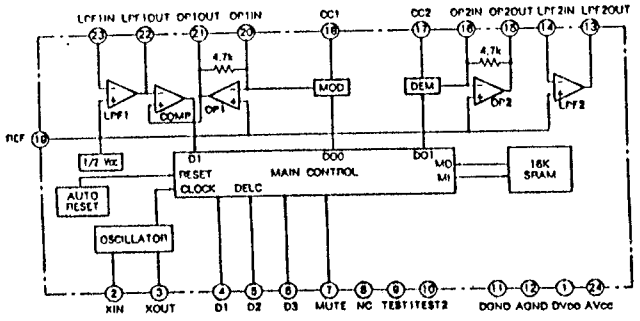


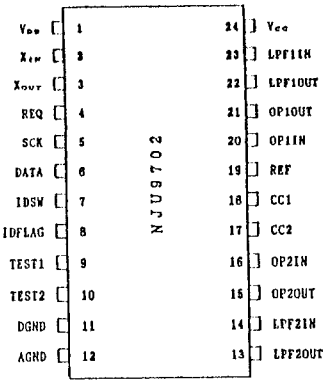
WIRING DIAGRAM



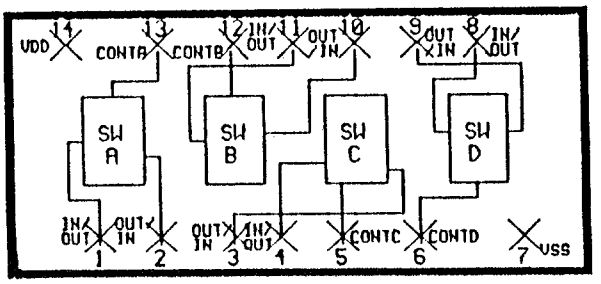
IC PIN CONFIGURATION & BLOCK DIAGRAM

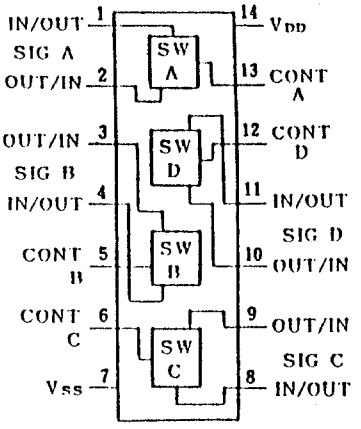
IC606 NJU9702D



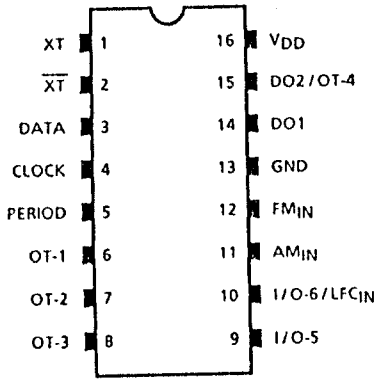


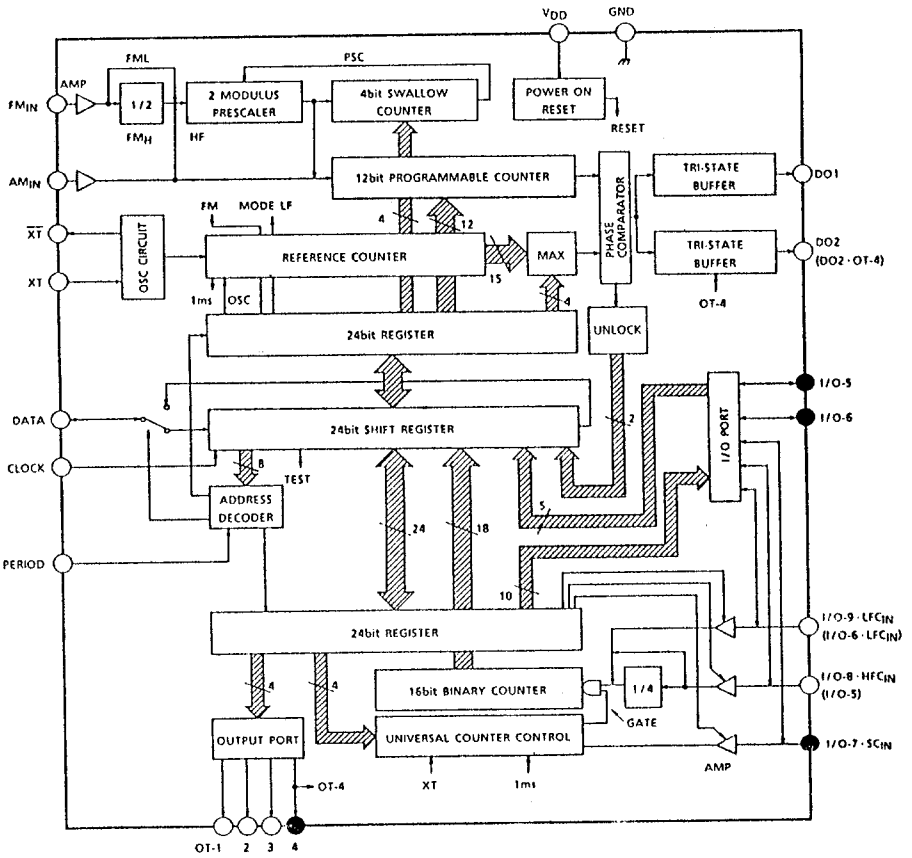
IC612 MC14066BCP





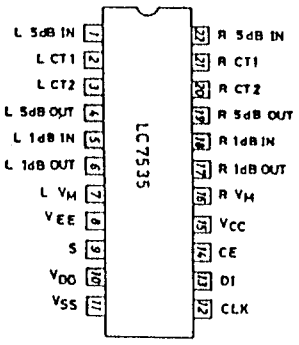
IC151 TC9216P

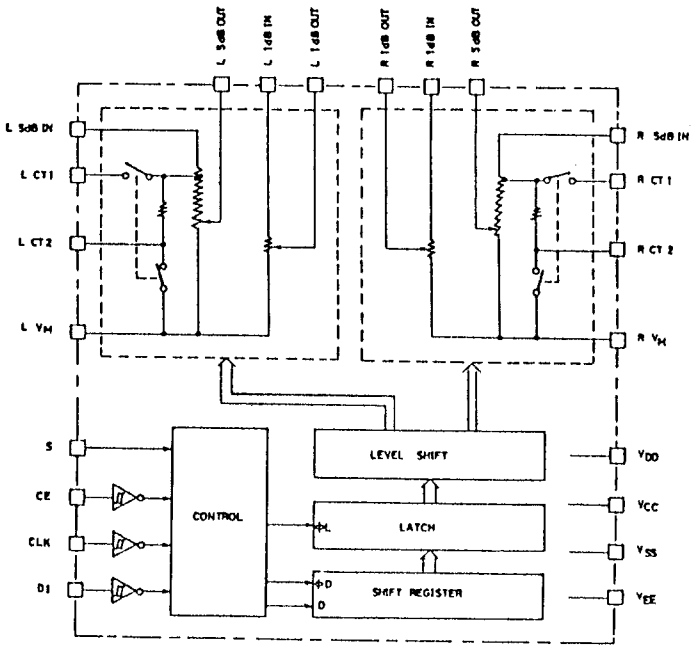




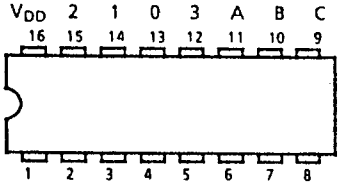
IC PIN CONFIGURATION & BLOCK DIAGRAM

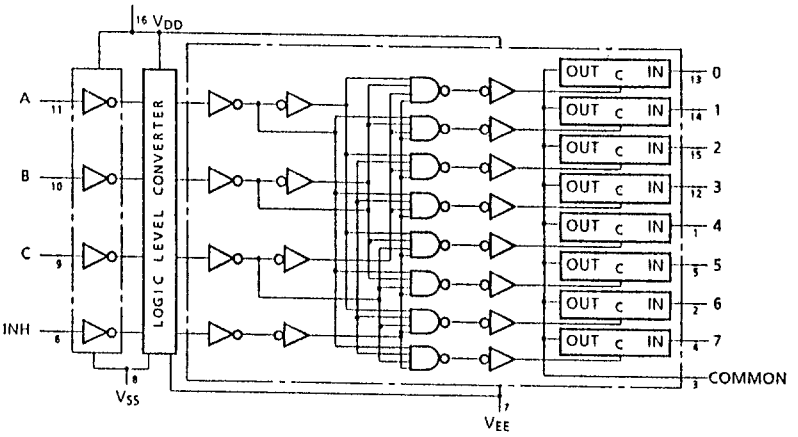
IC604 LC7535



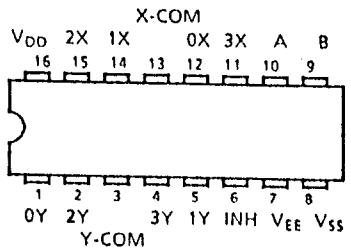


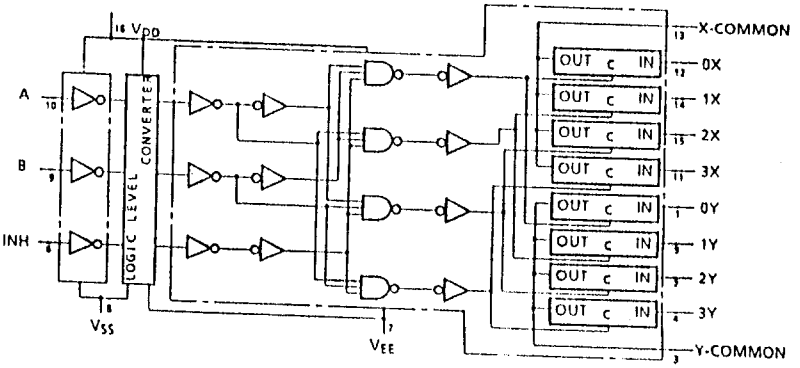
IC453 TC4051BP





IC351, IC602 TC4052BP

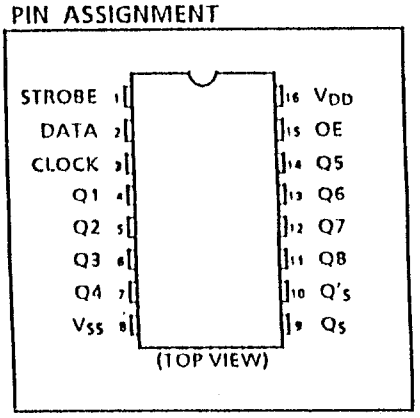




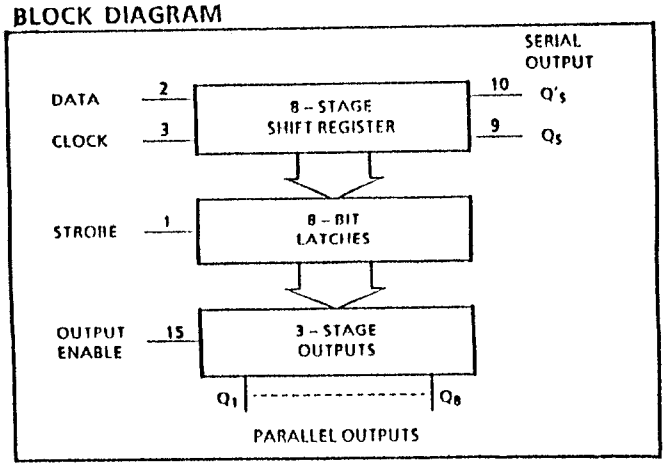
IC PIN CONFIGURATION & BLOCK DIAGRAM

IC403, IC605 TC4094BP

PIN ASSIGNMENT



BLOCK DIAGRAM



IC PIN FUNCTION DESCRIPTION

TC9216P IC151

Pin No.	Symbol	Pin Name	Function and Operation
1	XT	Crystal Oscillator Terminal	Crystal resonator of 7.2MHz or 4.5MHz shall be connected to this terminal to generate reference frequency and internal clock.
2	$\overline{XT}$		
3	DATA	Serial Data Input/Output	Serial I/O port. Serial data transfer is performed between controller and these terminals to control universal counter and I/O port, and sets frequency dividing numbers and frequency dividing mode.
4	CLOCK	Clock Signal Input	
5	PERIOD	Period Signal Input	
6	OT-1	General Purpose Output Port	These terminals are CMOS structure and used as output of control signal, etc. They are set to "L" level at power "ON." (OT-4 of TC9216P can be used by switching DO2.)
7	OT-2		
8	OT-3		
9 (-)	OT-4		
10 (9)	I/O-5	General Purpose I/O Port	These terminals are CMOS structure and can be used freely as input or output. It becomes input port at power "ON." (Exclusive terminal of I/O port is only I/O-5 in TC9216P.)
11 (-)	I/O-6		
12 (-)	I/O-7 SC-IN	General Purpose I/O Port/Universal Counter Periodic Measurement Input	This terminal is general purpose I/O port. It can also be used as signal input terminal which performs periodic measurement of low frequency signal by program control. (Note) It is set to input mode of I/O port at power "ON."
13 (-)	I/O-8 HFC-IN	General Purpose I/O Port/Universal Counter Frequency Measurement Input	These terminals are general purpose I/O ports. They can also be used as input terminals for frequency measurement of universal counter by program control. Frequency measurement is available for intermediate frequency measurement, etc. It includes a built-in amp and can operate small amplitude signal with capacitor coupling. (TC9216P does not have HFC-IN input.) (Note) It is set to input mode of I/O port at power "ON."
14 (10)	I/O-9 LFC-IN (I/O-6 LFC-IN)		
15 (11)	AM-IN	Programmable Counter Input	The local oscillator signal of each FM/AM band is input to these terminals. It includes a built-in amp and can operate small amplitude signal with capacitor coupling.
16 (12)	FM-IN		
18 (14)	DO1	Phase Comparator Output (General Purpose Output Port)	These terminals are tristate outputs of phase comparator. DO1 and DO2 are parallel output. (DO2 of TC9216P can be also used as general purpose output port by program control.)
19 (15)	DO2 (DO2 OT-4)		
17 (13)	GND	Power Supply Terminal	Power supply voltage of 5.0V ± 10% is applied to this terminal.
20 (16)	VDD		

IC PIN FUNCTION DESCRIPTION (CONTINUED)

LC7535 IC604

Number	Name	Description
1	L5dBIN	Left-channel 5 dB attenuation step input. Low-impedance drive. 75kohm total resistance.
2	LCT1	Left-channel loudness compensation inputs.
3	LCT2	
4	L5dBOUT	Left-channel 5 dB attenuation step output. Approximately 1 Mohm load resistance.
5	L1dBIN	Left-channel 1 dB attenuation step input. Low-impedance drive.
6	L1dBOUT	Left-channel 1 dB attenuation step output. 47 Kohm to 1 Mohm load resistance
7	LVM	Left-channel volume control common. Normally connected to ground.
8	VEE	-16 V supply.
9	S	Address select input.
10	VDD	16 V supply.
11	VSS	Ground.
12	CLK	Clock input.
13	DI	Serial data input.
14	GE	Chip enable input.
15	VCC	5 V supply.
16	RVM	Right-channel volume control common. Normally connected to ground.
17	R1dBOUT	Right-channel 1 dB attenuation step output. 47 Kohm to 1 Mohm load resistance.
18	R1dBIN	Right-channel 1 dB attenuation step input. Low-impedance drive.
19	R5dBOUT	Right-channel 5 dB attenuation step output. Approximately 1 Mohm load resistance.
20	RCT2	Right-channel loudness compensation inputs.
21	RCT1	
22	R5dBIN	Right-channel 5 dB attenuation step input. Low-impedance drive. 75kohm total resistance

IC PIN FUNCTION DESCRIPTION (CONTINUED)

NJU9702 IC606

Pin No.	Symbol	Name	I/O	Function
1	VDD	Digital Power Supply	-	
2	XIN	Oscillator Input	I	Connects to 2 MHz ceramic oscillator.
3	XOUT	Oscillator Output	O	Input to 2 Pin at using external clock.
4	REQ	Request	I	Data Request Input.
5	SCK	Shift Clock	I	Serial Data Shift Clock Input.
6	DATA	Data	I	Serial Data Input.
7	IDSW	ID Switch	I	ID code when connected to the common bus.
8	IDFLAG	ID Flag	O	Data Input Confirmation and Serial Data Output.
9	TEST 1	Test 1	-	L = Normal mode.
10	TEST 2	Test 2	-	L = Normal mode.
11	D GND	Digital GND	-	
12	A GND	Analog GND	-	
13	LPF2 OUT	Low-pass Filter 2 Output	O	Constitute a lowpass filter with external C and R (Output Side).
14	LPF2 IN	Low-pass Filter 2 Input	I	
15	OP2 OUT	Operational Amplifier 2 Output	O	Constitute an integrator with external C.
16	OP2 IN	Operational Amplifier 2 Input	I	
17	CC2	Current Control 2	-	Demodulator ADM Controller.
18	CC1	Current Control 1	-	Modulator ADM Controller.
19	REF	Reference	-	Analog Reference Voltage = 1/2 Vcc.
20	OP1 IN	Operational Amplifier 1 Input	I	Constitute an integrator with external C and R.
21	OP1 OUT	Operational Amplifier 1 Output	O	
22	LPF1 OUT	Low-pass Filter 1 Output	O	Constitute a lowpass filter with external C and R (lutput Side).
23	LPF1 IN	Low-pass Filter 1 Input	I	
24	VCC	Analog Voltage	-	

IC VOLTAGE CHART

PIN NO. REF.VOLT. P/NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC001	1.01	1.69	5.67	0.03	0.03	5.7	0.05	5.08	5.68																					
IC101	2.14	2.25	8.68	3.07	0.04	2.16	8.3	4.2	2.2	7.23	7.23	0.65	7	2.5	2.7	1.43	0.05	8.4	0.13	0.07	5.76	5.39	0.03	2.13	0.01	8.65	2.3	2.33	2.3	1.19
IC102	0	0	0	-14	0	0	0	14.16																						
IC151	2.7	2.8	0	5.91	5.91	5.55	0.03	0.03	0.05	2.67	0.03	2.67	0.03	0.12	0.15	5.56														
IC301	0	0	0	-14.1	0	0	0	14.2																						
IC302	0	0	0	-16	0	0	0	15.4																						
IC351	-0.01	0	-0.04	0	0	-0.01	-5.59	-0.02	1.38	1.44	1.48	1.4	1.43	0	0	7.08														
IC353	1.66	1.63	1.57	-13.48	1.35	1.48	1.71	16.6																						
IC401	6.59	6.63	6.58	6.55	6.43	1.31	15.3	1.69	1.84	6.16	1.58	6.71	6.75	6.77	6.8	6.64														
IC403	-0.03	5.83	0.06	-0.04	3.05	2.94	2.95	-0.04	0.18	0.18	-0.04	-0.04	5.97	5.95	6	5.98														
IC453	0	0	0	0	0	0	-6.4	0	0	0	0	0	0	0	0	6.3														
IC5001	0	0	0	-16	0	0	0	15.4																						
IC5002	-2.5	0	-1.1	-21.6	0	0	0	21.4																						
IC501	-2.5	0	-1.1	-21.6	-1.1	0	-2.5	21.4																						
IC501	-2.5	0	-1.1	-21.6	-1.1	0	-2.5	21.4																						
IC602	4.31	2.55	4.44	0.04	3.98	0.56	0.56	0.56	0.3	0	2.68	0.4	0.48	2.59	2.56	10.8														
IC603	0.22	0.28	0.22	-14	0.01	0.01	0	14.55																						
IC604	-0.45	0	-0.35	-0.33	-0.35	-0.01	-0.5	-14.5	6	15	-0.02	0.06	5.9	0.02	6	-0.02	-0.02	-0.02	-0.02	-0.02	0	6.7								
IC605	-0.03	5.9	0.06	5.85	0	5.85	5.85	-0.02	5.83	5.83	5.92	5.92	5.89	5.92	6	5.92														
IC606	6.51	2.24	3.32	5.96	1.2	5.95	0	0	0	0	0	0	3.01	3.01	3.01	3.01	0.79	0.78	3.01	4.02	3.01	3.01								
IC607	-0.02	0.03	0	-14.5	0.03	0.04	11.49																							
IC612	-0.04	-0.12	-0.12	0.04	-4.2	-4.2	-4.26	-4.26	4.17	0	0	0	4.2	4																
IC902	8.5	0	4.33																											

IC AND TRANSISTOR VOLTAGE CHART

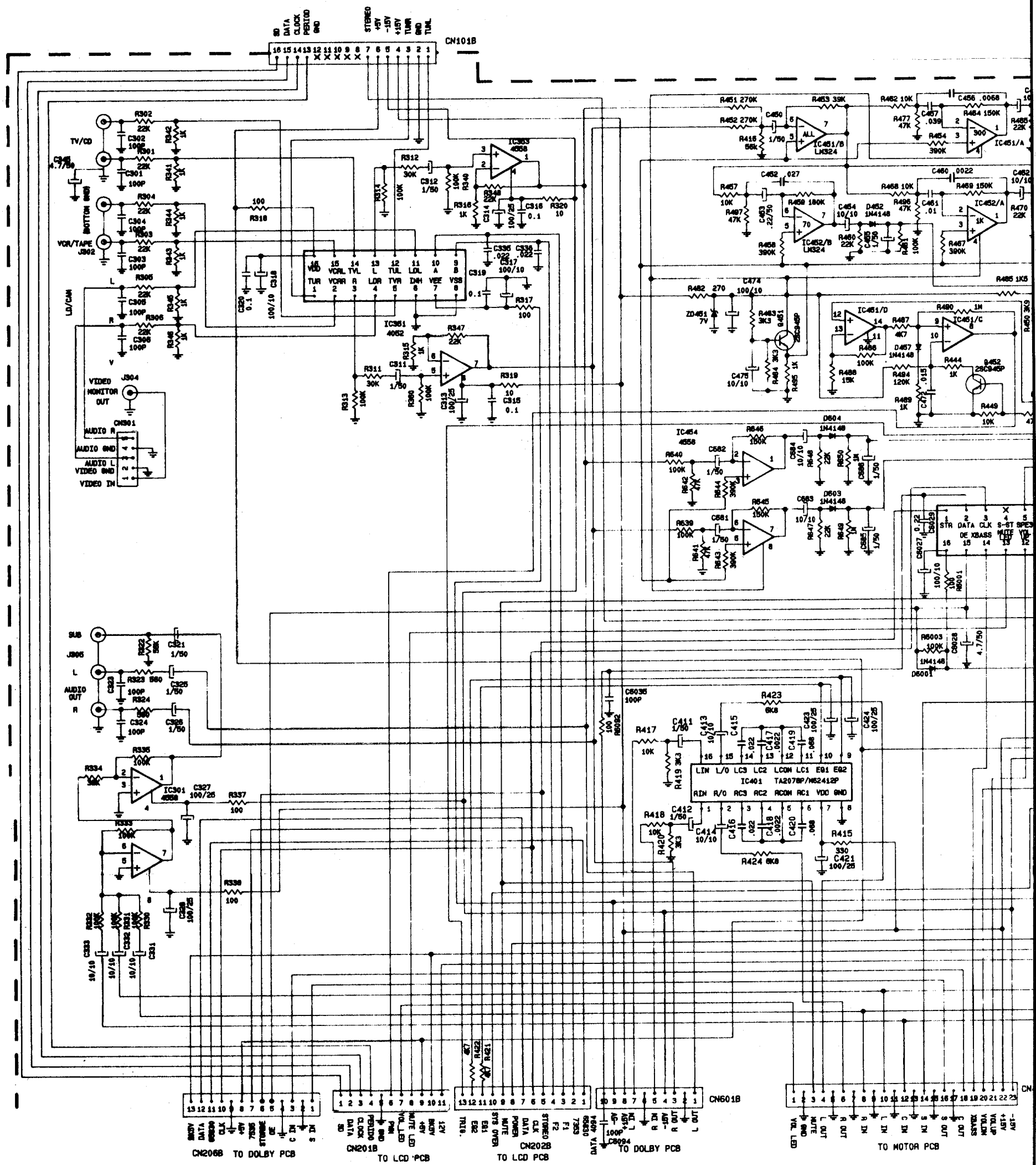
PIN NO. REF.VOLT. P/NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC201	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0	0	5.02	0	2.52	2.52	2.52	2.52	5.02	5.02	3.31	1.17	0.11	5.95
IC601	3.99	4.13	4.13	4.02	4	4	3.97	4	4	3.97	3.88	0	0	3.9	3.9	3.9	3.9	3.94	3.94	3.92	3.92	3.92	5.71	5.75	5.76	3.95	3.95	2.54	3.9	0.05

PIN NO. REF.VOLT. P/NAME	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
IC201	0.03	6.01	0	6.01	0.03	0.02	5.64	4.69	5.63	0.03	0.05	5.64	5.64	0.11	0.96	0.04	0.04	5.04	5.02	5.58	5.58	5.58	4.96	5.03	0	5.02	5.02	5.03	2.25	4.97
IC601	0.01	3.89	3.91	0	3.93	3.91	11.22	3.91	3.88	1.36	3.88	3.88	0	0	3.83	3.85	3.86	3.86	0.04	3.84	2.66	2.67	2.7	3.83	3.83	3.93				

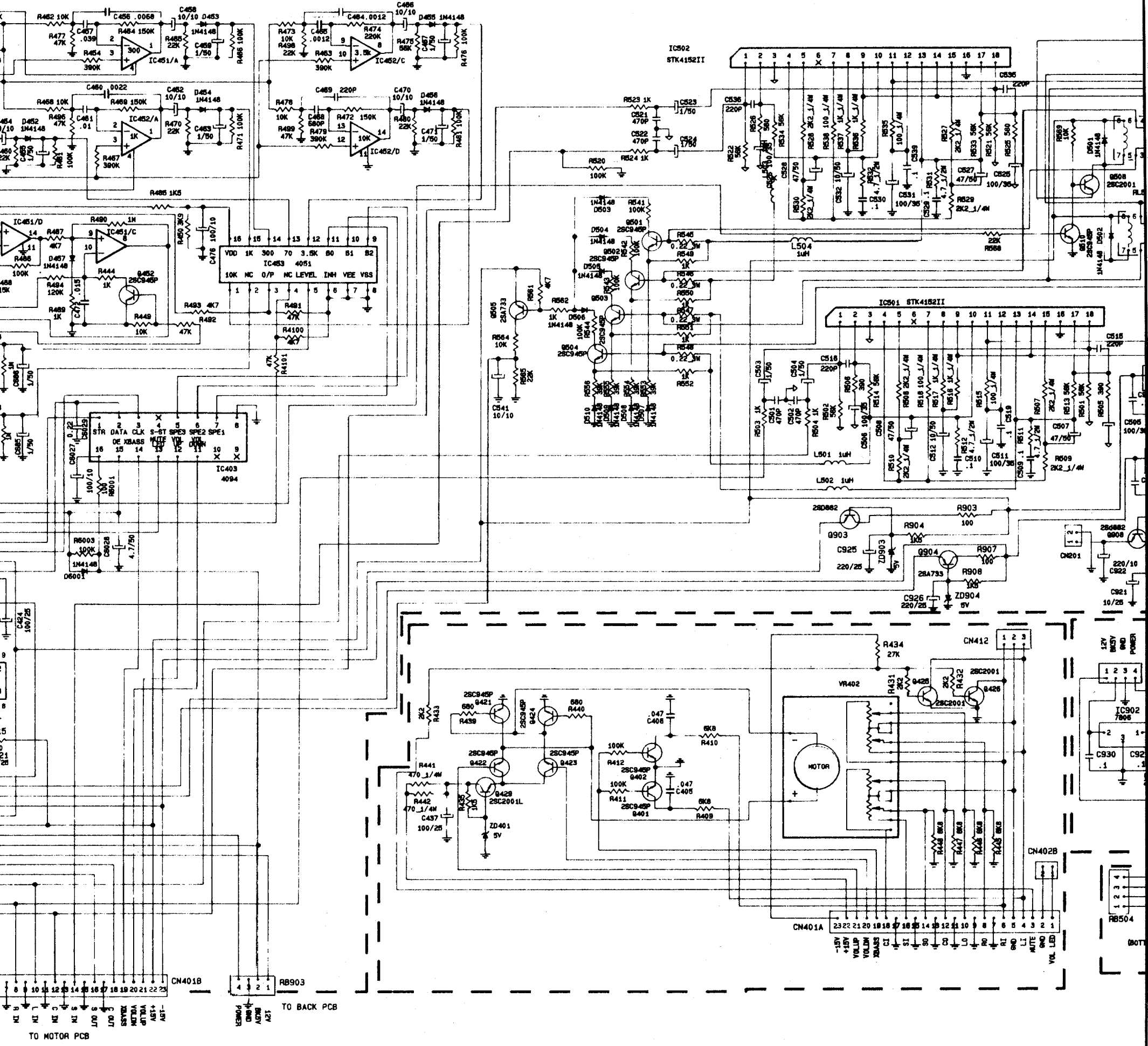
PIN NO. REF.VOLT. P/NAME	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
IC201	5.58	5.58	5.58	0.13	4.62	0.02	0.06	4.98	2.49	2.5	2.49	2.49	2.51	2.49	2.5	2.51	2.5	2.49	2.5	2.49

REF. VOLT. PIN NO.	Q001	Q002	Q003	Q004	Q005	Q103	Q104	Q151	Q152	Q201	Q202	Q401	Q402	Q421	Q422	Q423	Q424	Q425	Q426	Q451	Q501
E	0.04	0.03	8.65	0.04	3.66	0	8.62	0.65	0.02	4.87	6.63	0	0	0	-0.04	0	0	0	0	2.89	-0.01
C	7.76	7.77	8.58	0.16	0.03	8.4	7.11	7.45	7.44	15	5.05	0.51	0	0	14.95	14.95	0	0	0	7.1	14.37
B	0.77	0.77	7.85	0.7	0.03	0.04	8.4	1.11	0.64	5.29	6	0.58	0.59	0	0	-0.04	0	-1.37	-1.37	3.51	-0.01

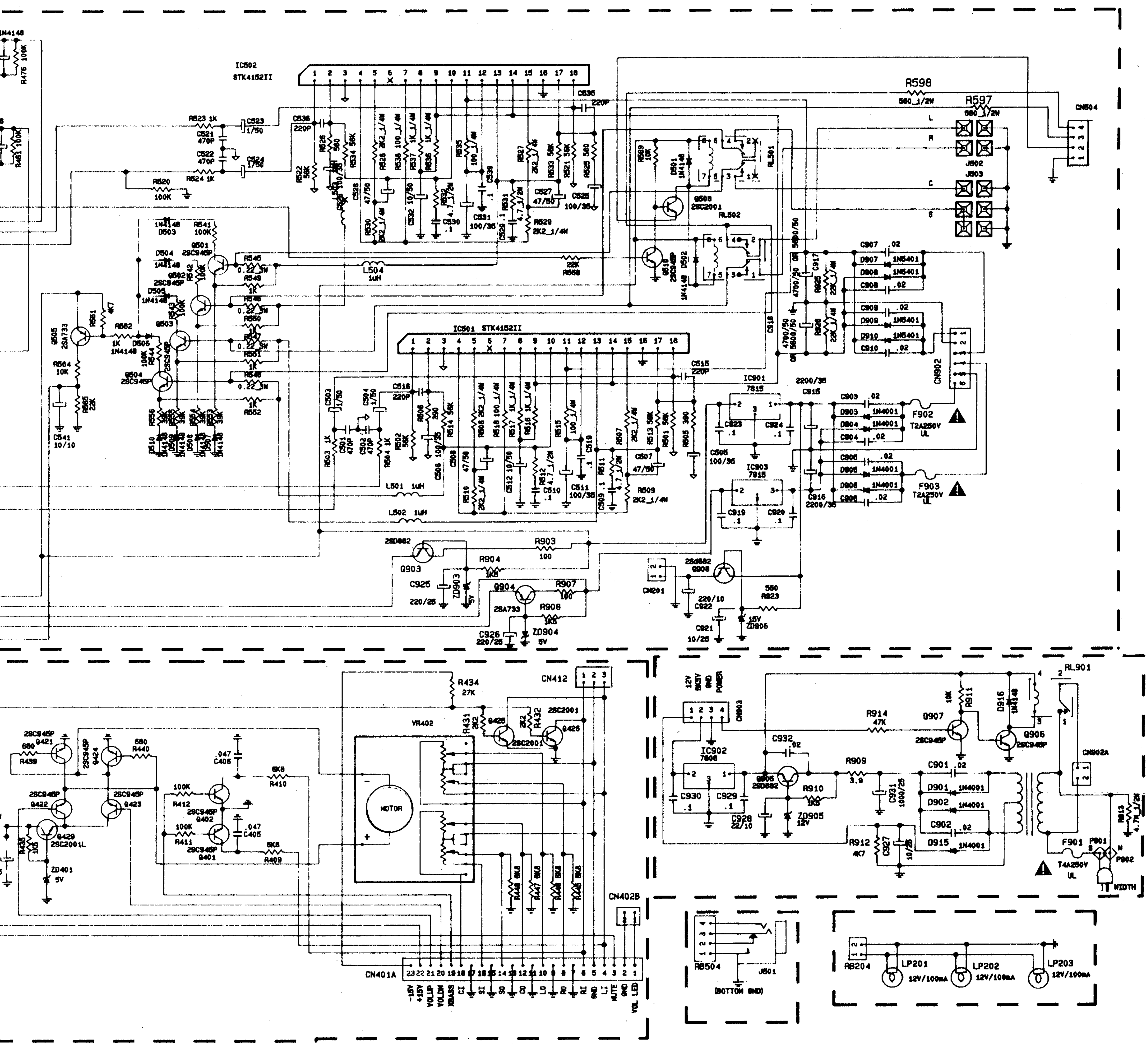
REF. VOLT. PIN NO.	Q502	Q504	Q505	Q601	Q602	Q603	Q604	Q605	Q902	Q905	Q906	Q907
E	0	0	14.95	4.27	0.24	0	-0.3	5.9	-0.04	8.04	-0.16	-0.15
C	14.37	14.36	0	-0.05	-0.05	-0.02	-0.01	-5.57	-20.5	10.57	-0.08	0.14
B	0	0	14.94	5.03	-0.03	0.21	0.18	5.9	-15.13	9.35	0.2	-0.15


CN101B
SD DATA CLOCK PERIOD GND STEREO +5V -15V +15V TUNR GND TUNL
TV/CD
VCR/TAPE
BOTTOM (MID)
LD/CAN
VIDEO MONITOR OUT
J304
CN301
AUDIO R
AUDIO GND
AUDIO L
VIDEO GND
VIDEO IN
SUB
AUDIO OUT
IC301 4558
IC361 4052
IC363 4558
IC454 4558
IC452/A LM324
IC452/B LM324
IC451/A
IC451/B LM324
IC451/C
IC451/D
IC401 TA2078P/M62412P
LIN L/O LC3 LC2 LCON LC1 EQ1 EQ2
RIN R/O RC3 RC2 RCON RC1 VDD GND
D452 1N4148
D457 1N4148
D603 1N4148
D604 1N4148
D6001 1N4148
ZD451 7V
2SC945P
STR DATA CLK S-ST SPEX
DE XBASS MUTE VOL
VOL LED GND MUTE L OUT R OUT R IN L IN C IN S IN S OUT C OUT XBASS VOLDN VOLUP +15V -15V
CN2068 TO DOLBY PCB
CN201B TO LCD PCB
CN202B TO LCD PCB
CN601B TO DOLBY PCB
TO MOTOR PCB

MAIN SCHEMATIC DIAGRAM

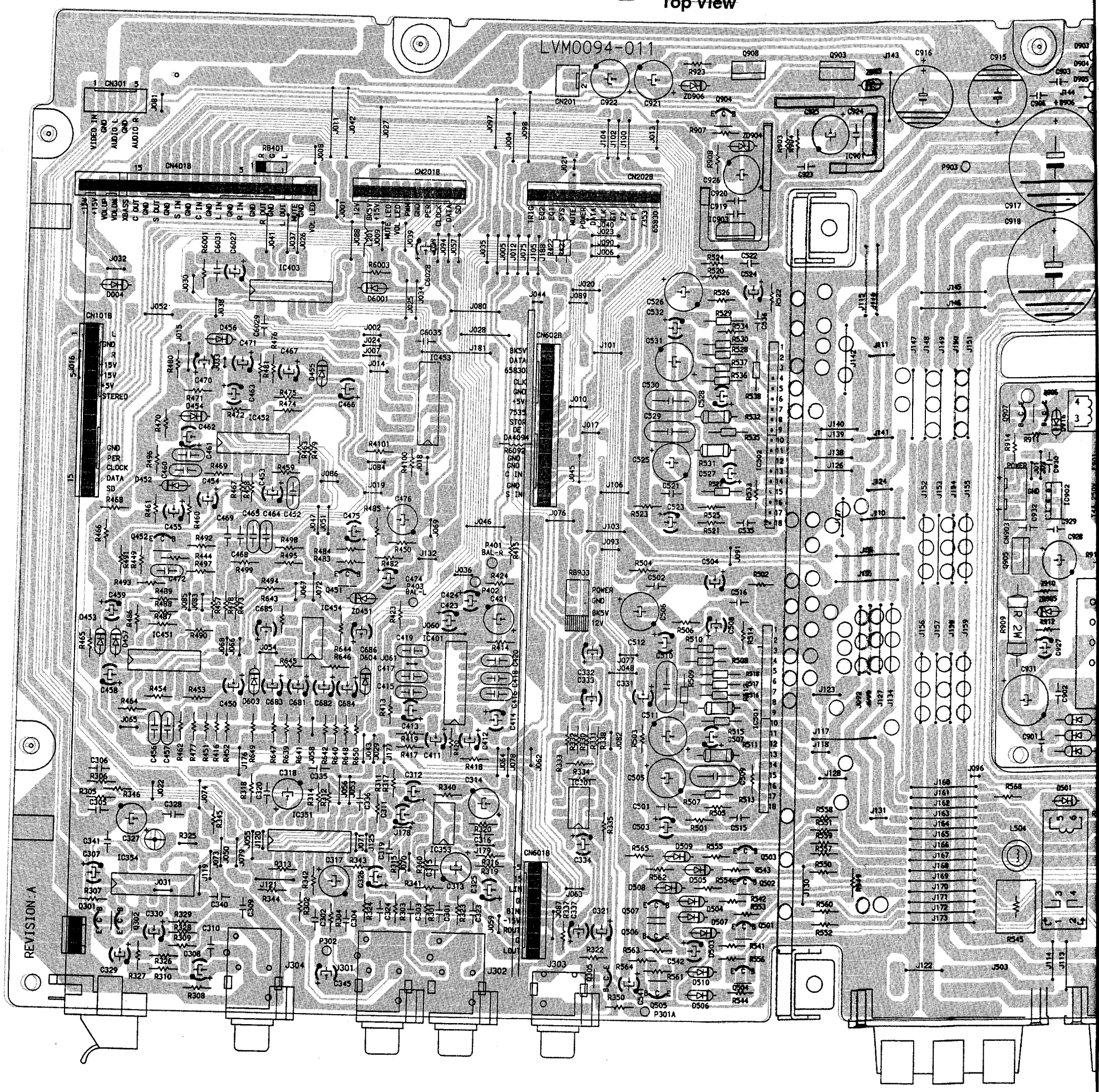


RAM

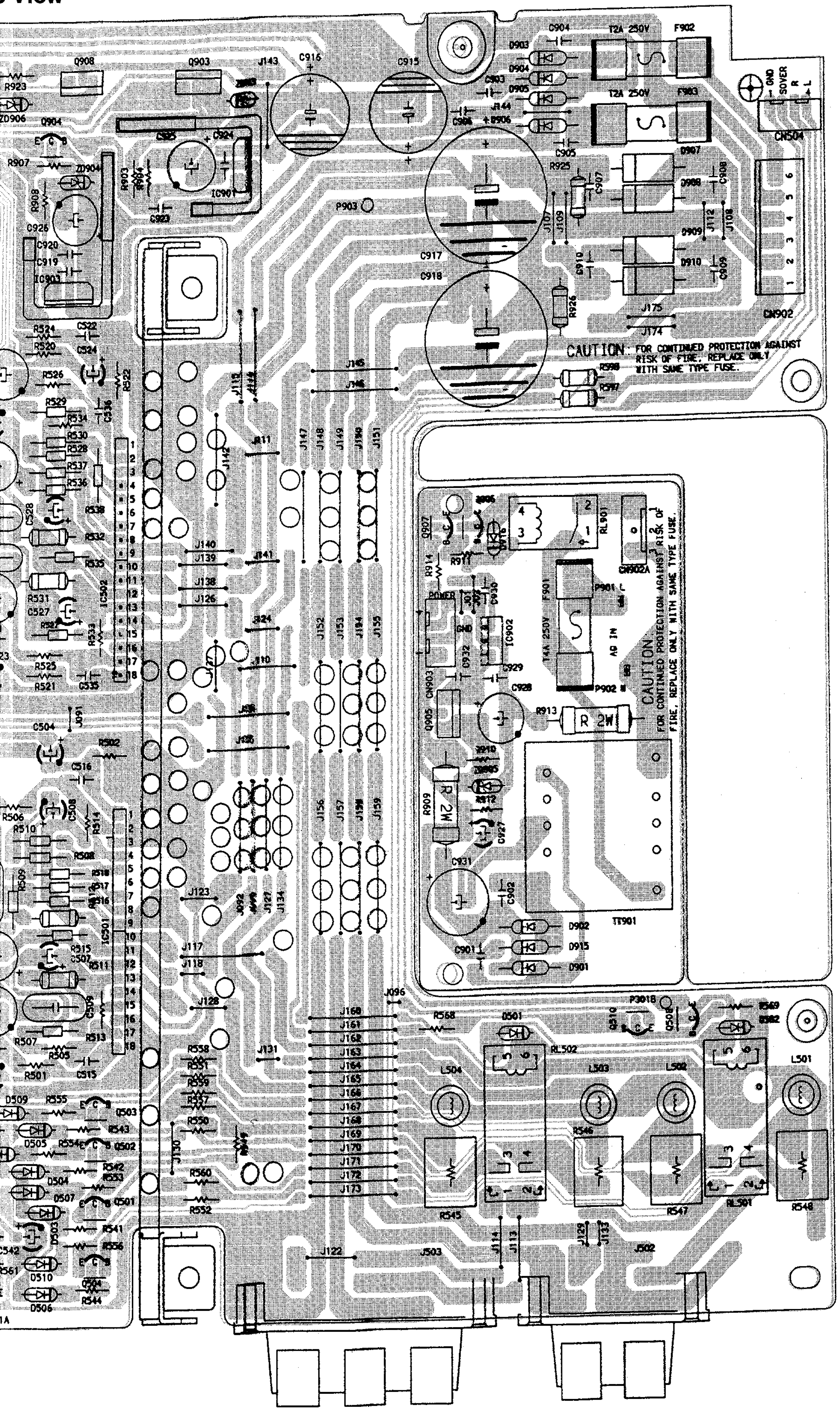

IC502
STK4152II
IC501 STK4152II
R598
560_1/2W
R597
560_1/2W
CN504
L
R
C
S
J502
J503
RL501
RL502
Q508
2SC2001
Q510
2SC945P
D501
1N4148
D502
R569
10K
L504
1uH
L501 1uH
L502 1uH
Q501
2SC945P
Q502
2SC945P
Q503
Q504
2SC945P
Q505
2SA733
R561
4K7
R562
1K
D506
1N4148
R564
10K
R565
22K
C541
10/10
C907 .02
D907 1N5401
D908 1N5401
C908 .02
C909 .02
D909 1N5401
D910 1N5401
C910 .02
CN902
IC901
7815
IC903
7915
C915
2200/35
C916
2200/35
C903 .02
D903 1N4001
D904 1N4001
C904 .02
C905 .02
D905 1N4001
D906 1N4001
C906 .02
F902
T2A250V
UL
F903
T2A250V
UL
2SD882
Q903
R903
100
R904
1K5
C925
220/25
ZD903
5V
Q904
2SA733
R907
100
R908
1K5
C926
220/25
ZD904
5V
CN201
Q908
R923
560
C922
220/10
C921
10/25
ZD906
15V
R434
27K
CN412
VR402
MOTOR
R431
2K2
R432
2K2
2SC2001
Q425
Q426
2SC945P
Q421
Q422
Q423
Q424
Q429
2SC2001L
ZD401
5V
R439
680
R440
680
C406
.047
C405
.047
R410
6K8
R409
6K8
R412
100K
R411
100K
Q401
Q402
CN401A
-15V
+15V
VOLUP
VOLDN
XBASS
CI
SI
SO
CO
LO
RO
RI
GND
LI
MUTE
VOL LED
CN402B
12V
BK5V
GND
POWER
CN903
IC902
7806
C930
.1
C929
.1
C928
22/10
C932
.02
Q906
2SD882
R910
1K5
ZD905
12V
R909
3.9
C931
1000/25
R914
47K
Q907
2SC945P
R911
10K
D916
1N4148
Q905
2SC945P
RL901
CN902A
C901 .02
D901 1N4001
D902 1N4001
C902 .02
D915 1N4001
R912
4K7
C927
10/25
R913
4.7M_1/2W
F901
T4A250V
UL
P901
P902
WIDTH
RB504
J501
(BOTTOM GND)
RB204
LP201
LP202
LP203
12V/100mA

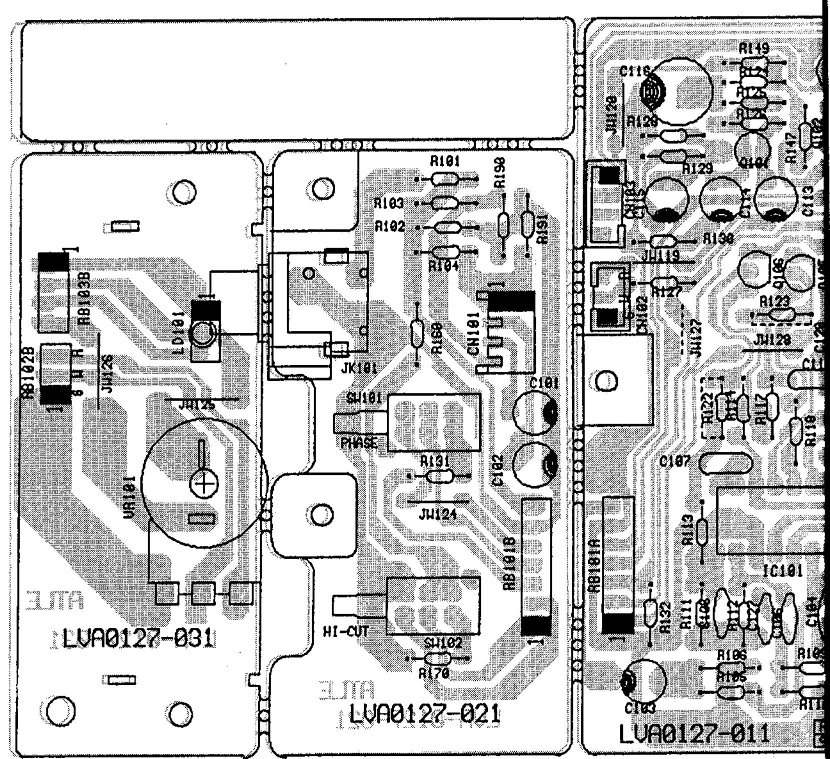
PREAMP BOARD

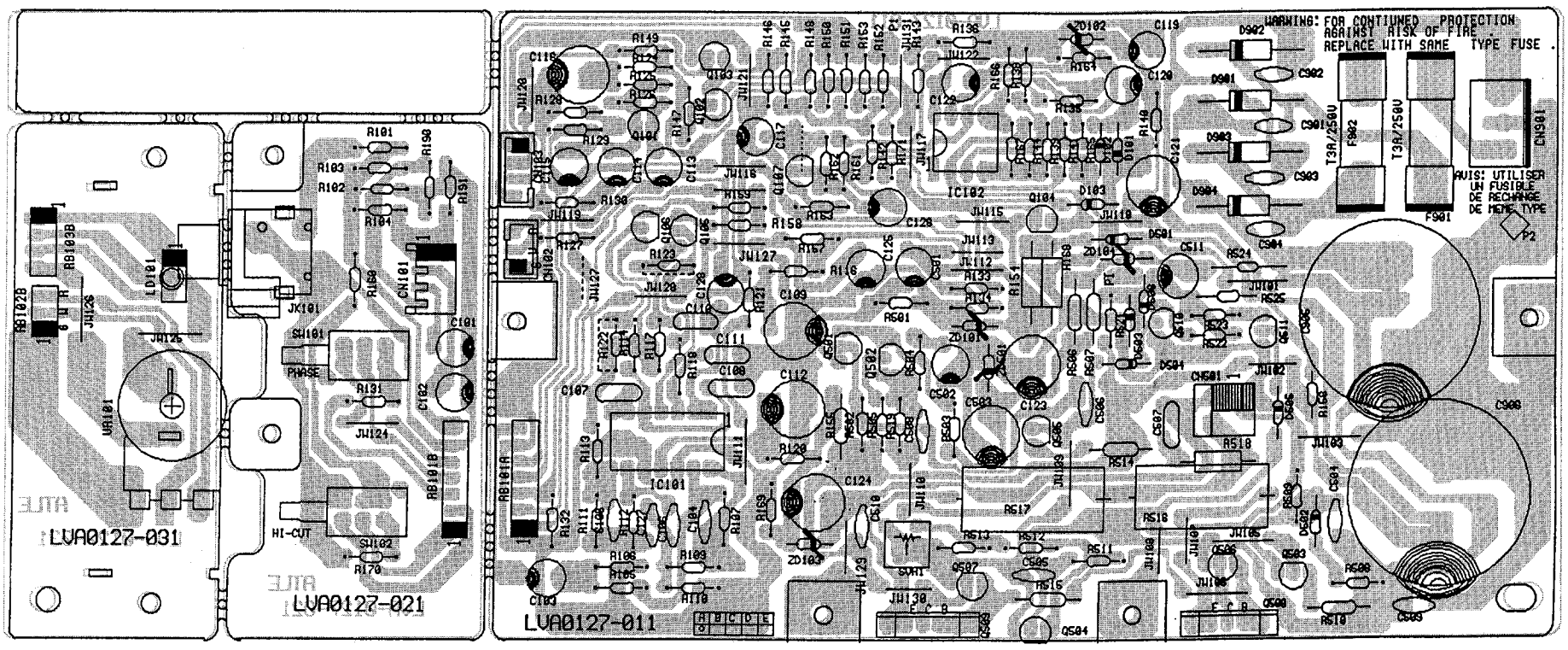
Top View



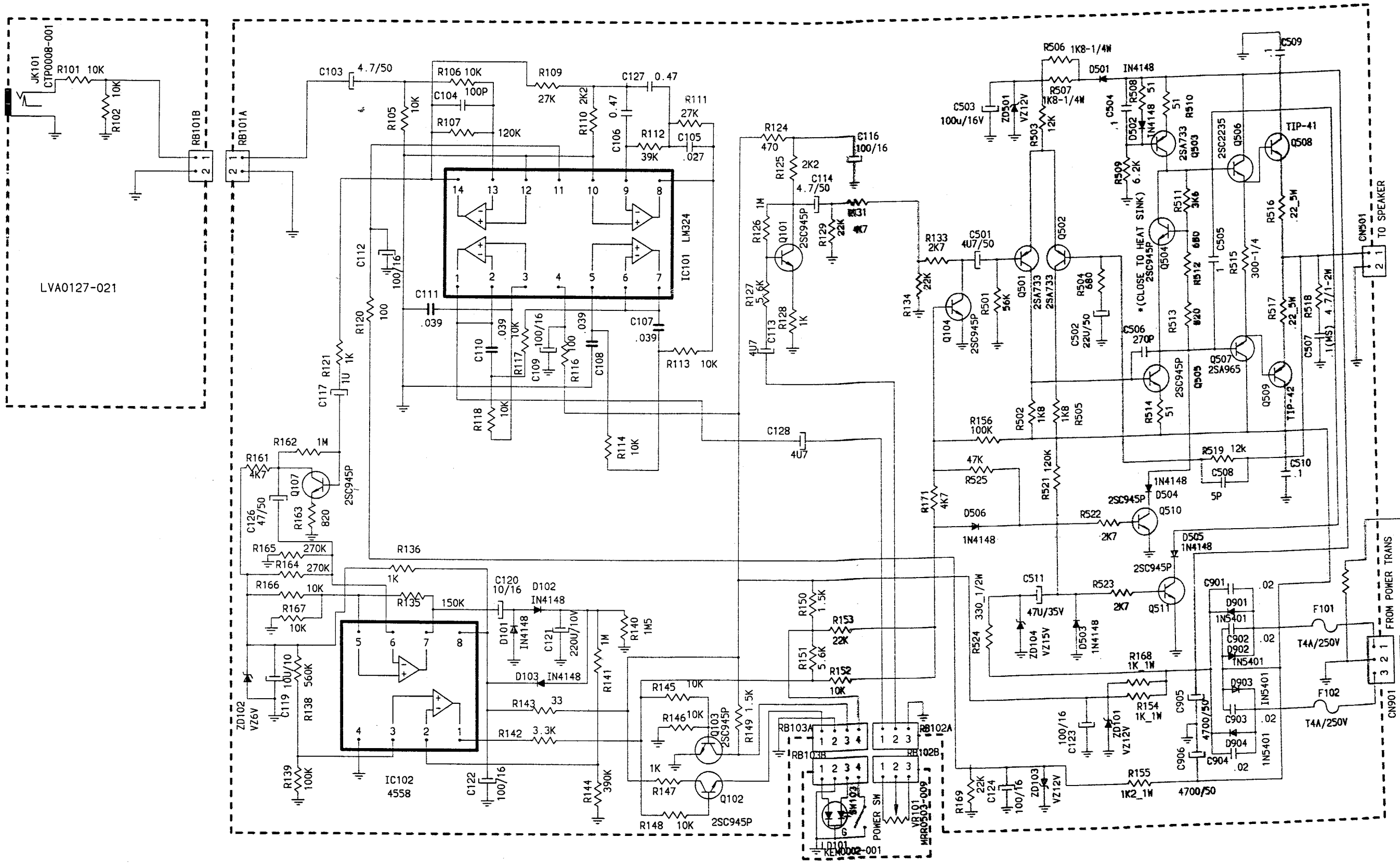
P BOARD
o View



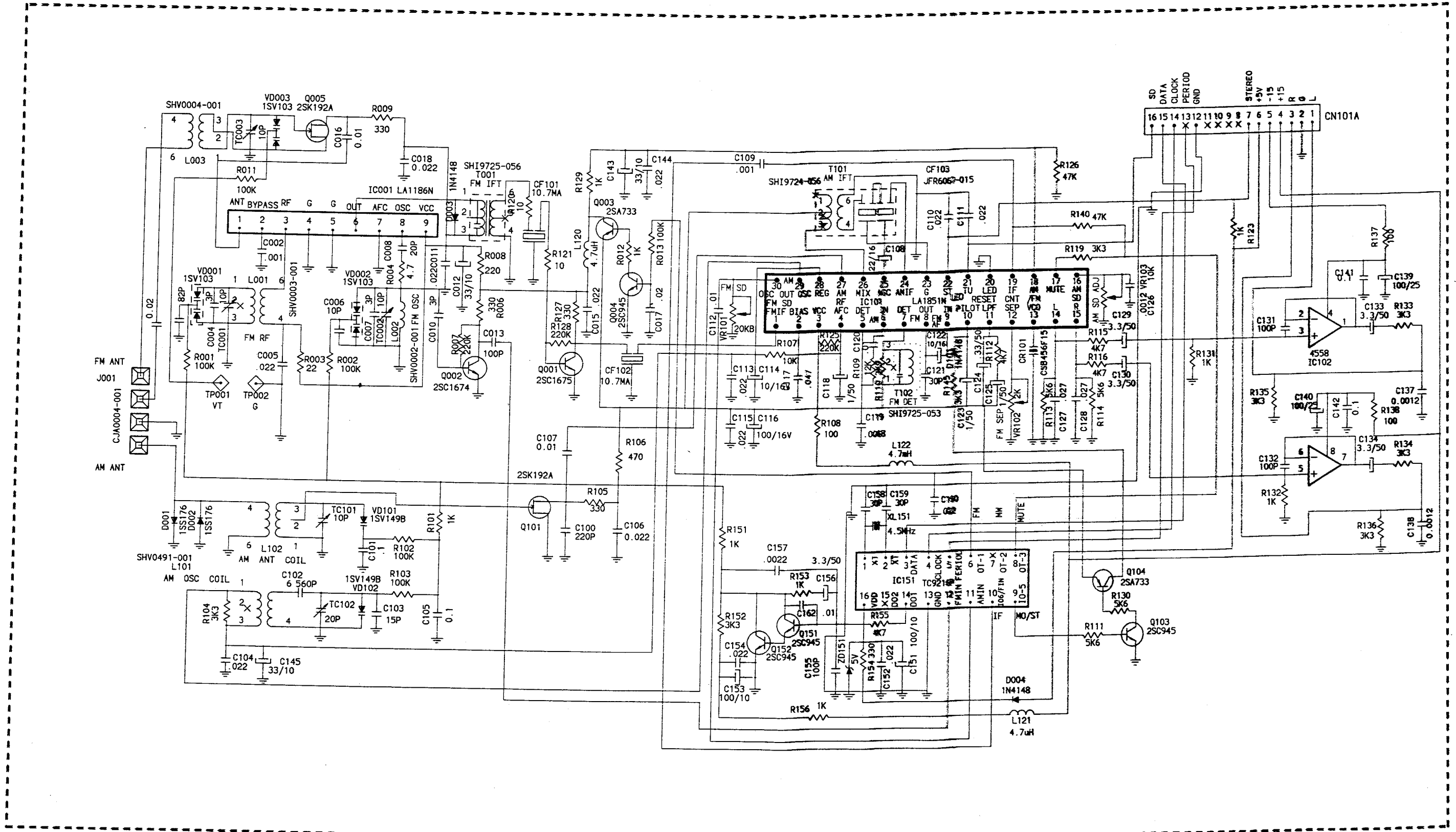



LVA0127-031
LVA0127-021
LVA0127-011
WARNING: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE FUSE.
AVIS: UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE
T3A/250V
T3A/250V
PHASE
HI-CUT

SUBWOOFER SCHEMATIC DIAGRAM

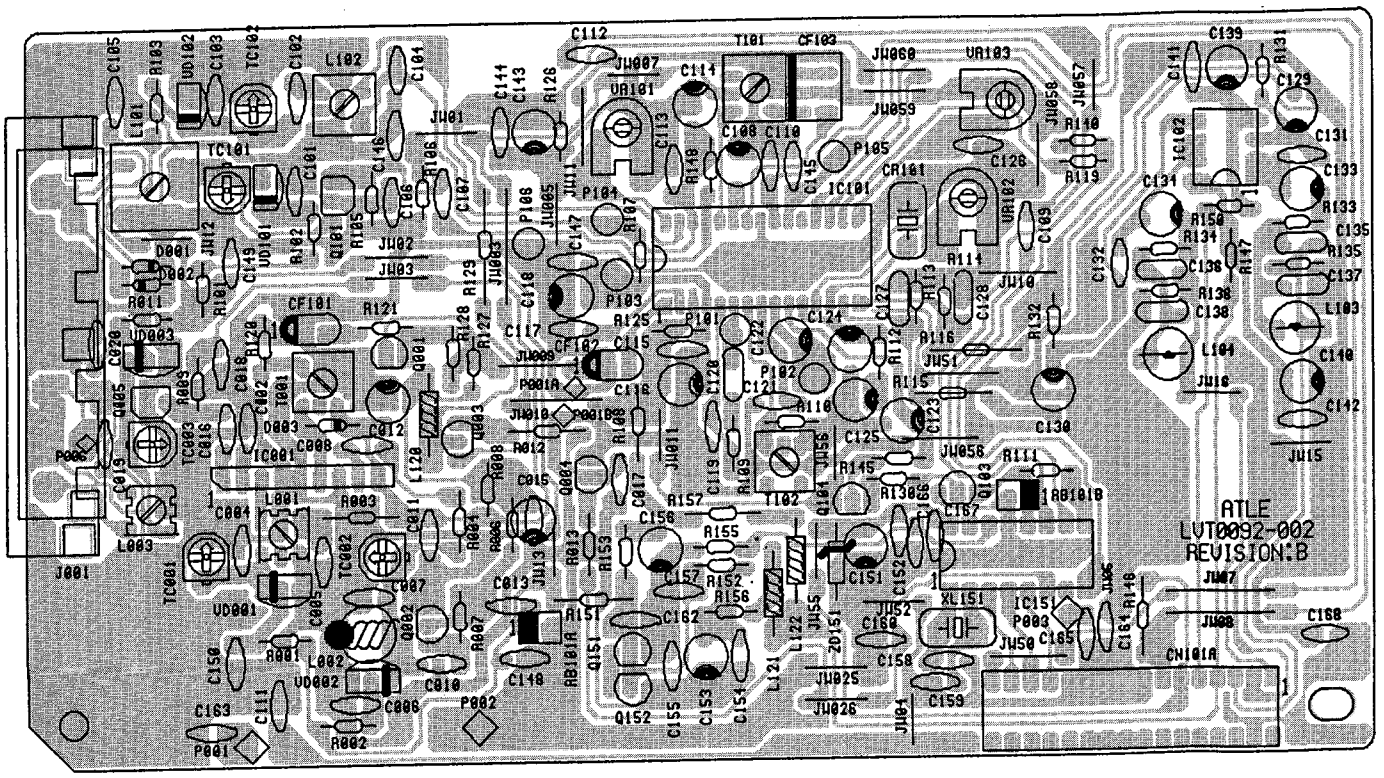


TUNER SCHEMATIC DIAGRAM



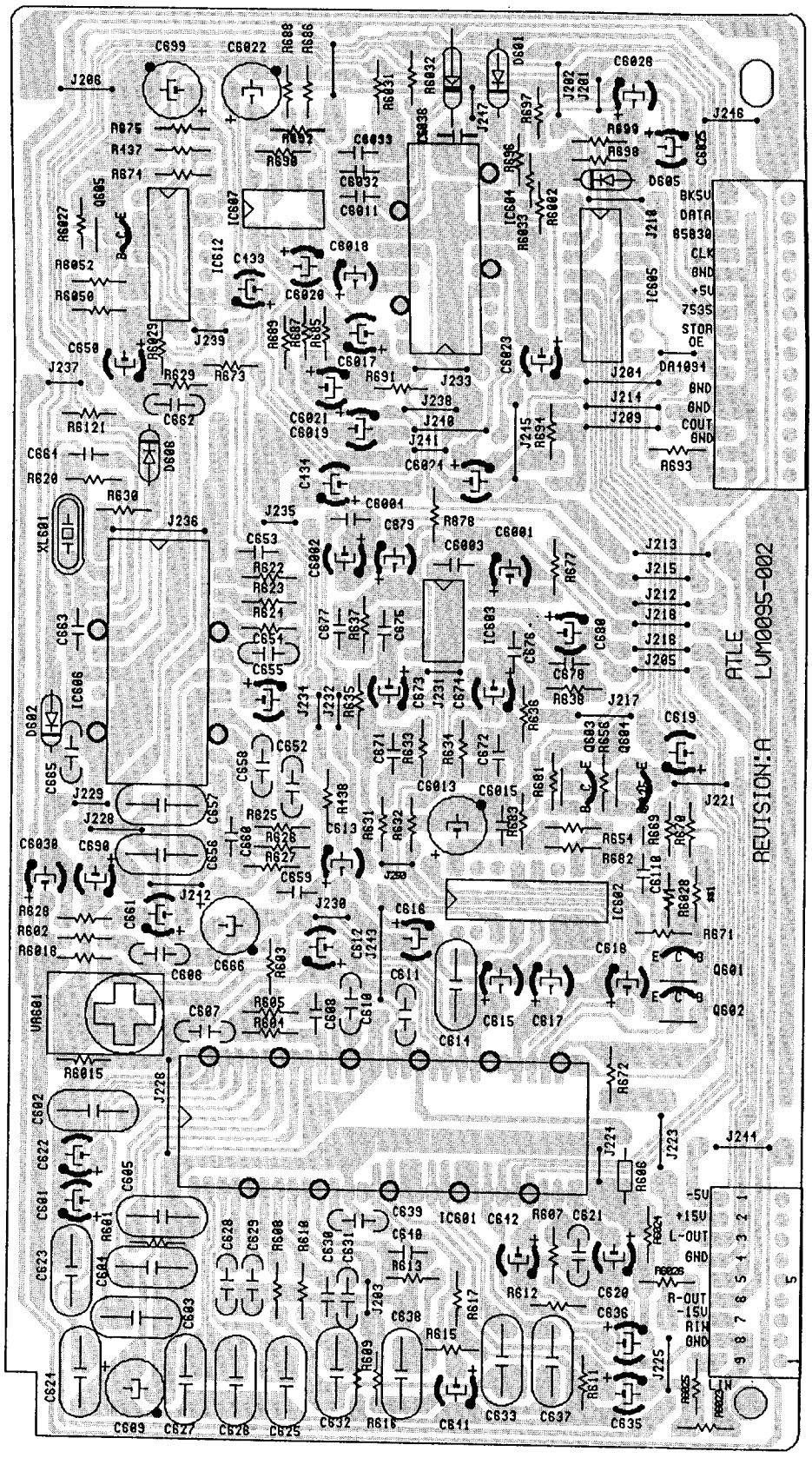
TUNER BOARD

Top View

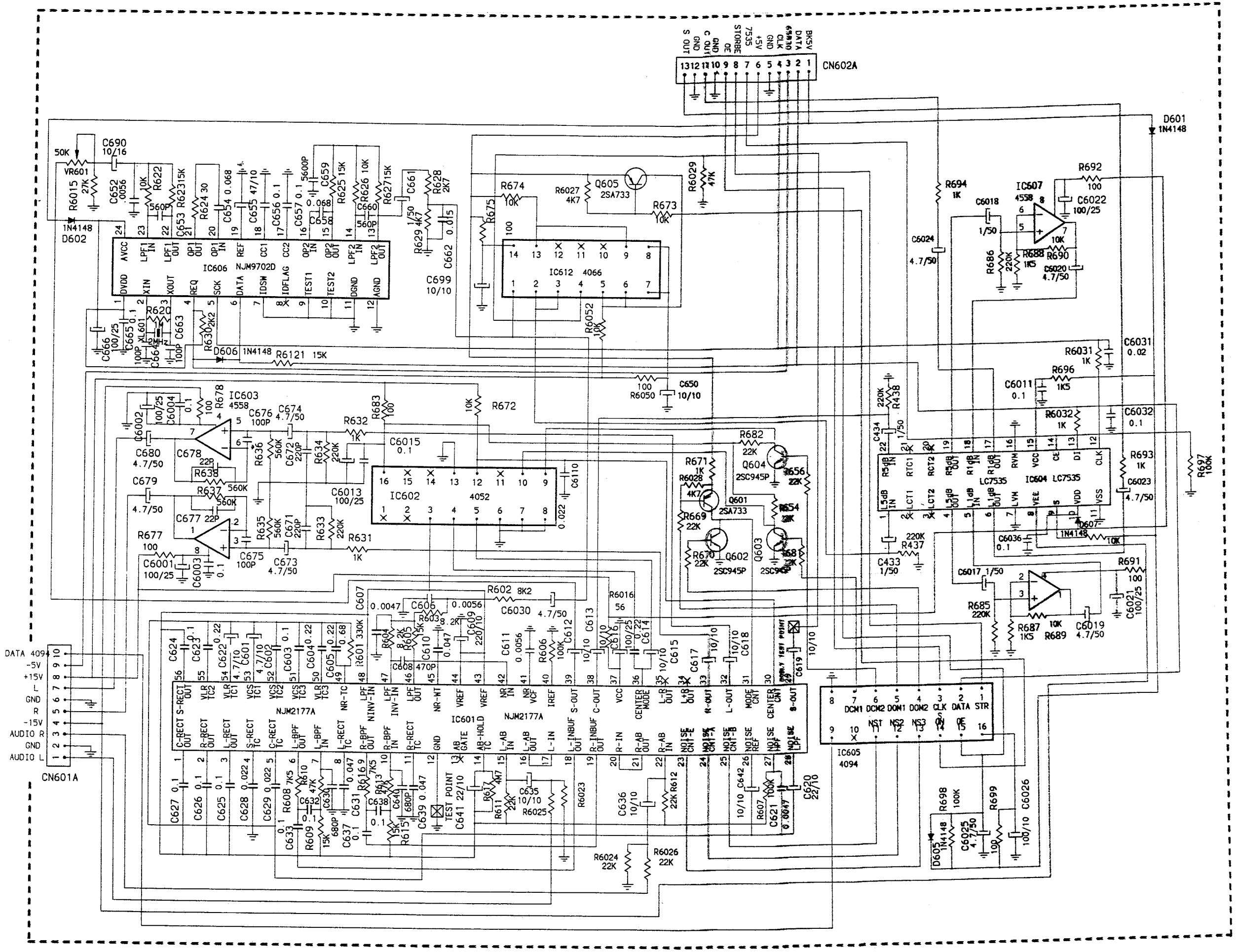


PRO LOGIC BOARD

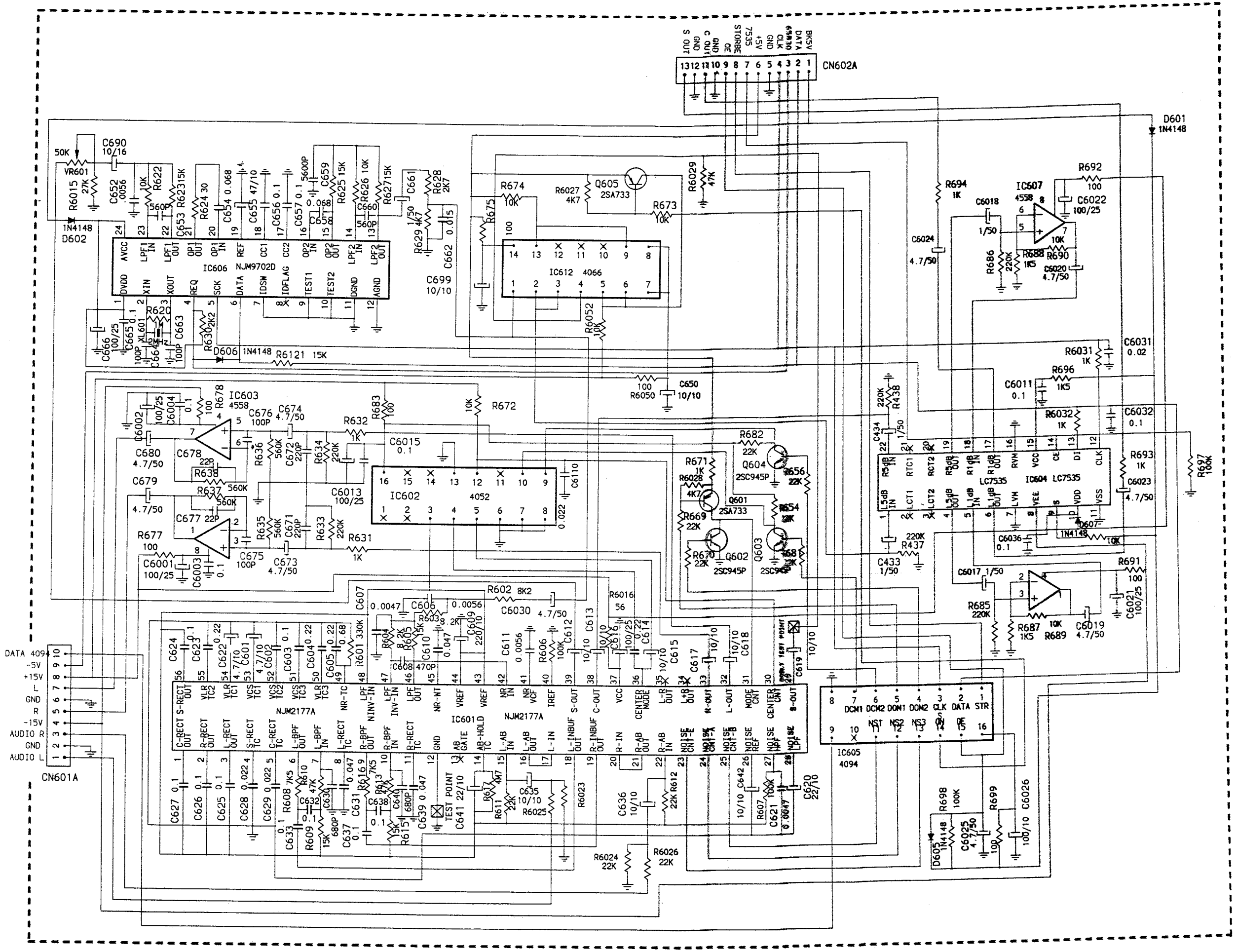
Top View



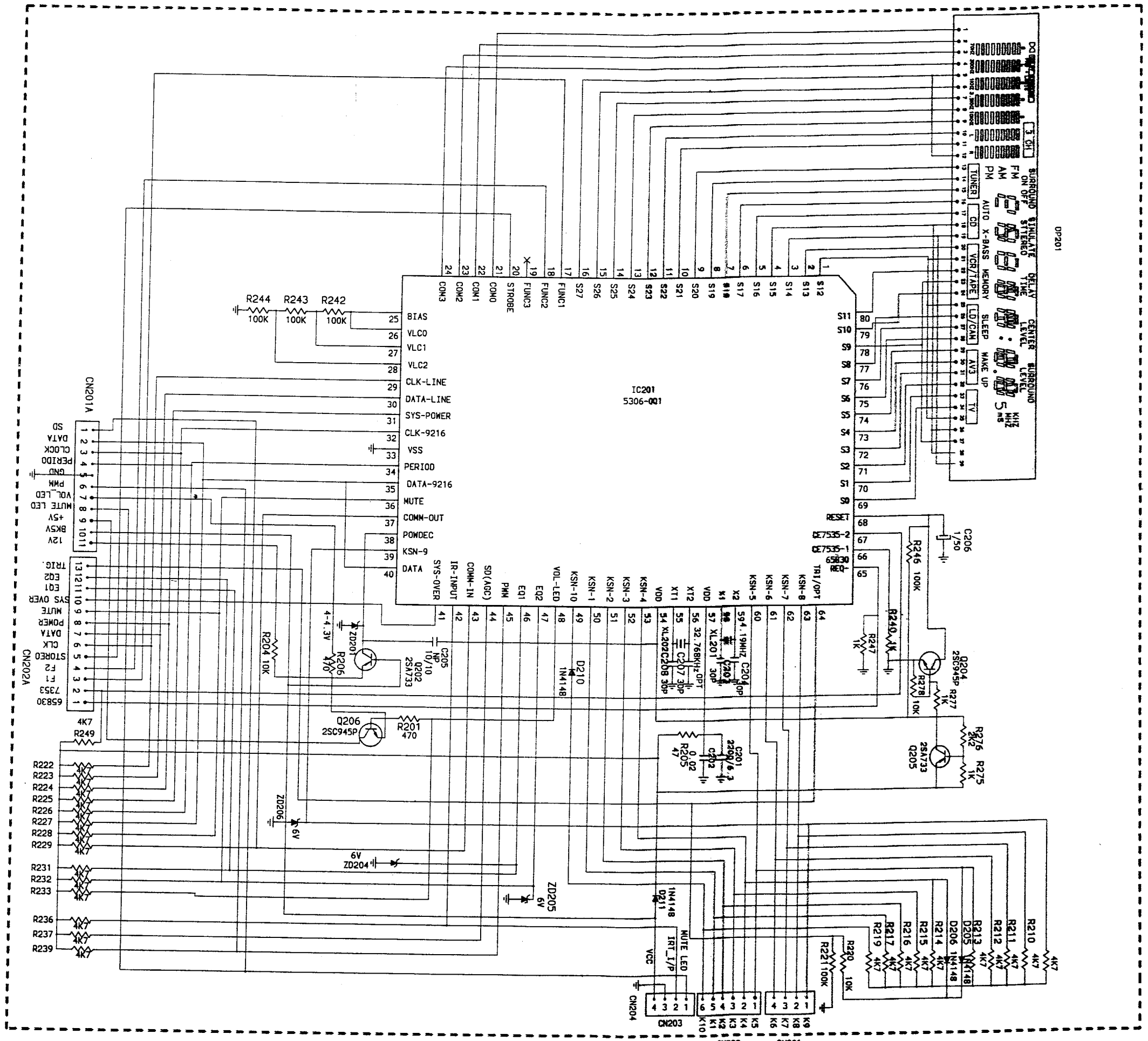
PRO LOGIC SCHEMATIC DIAGRAM



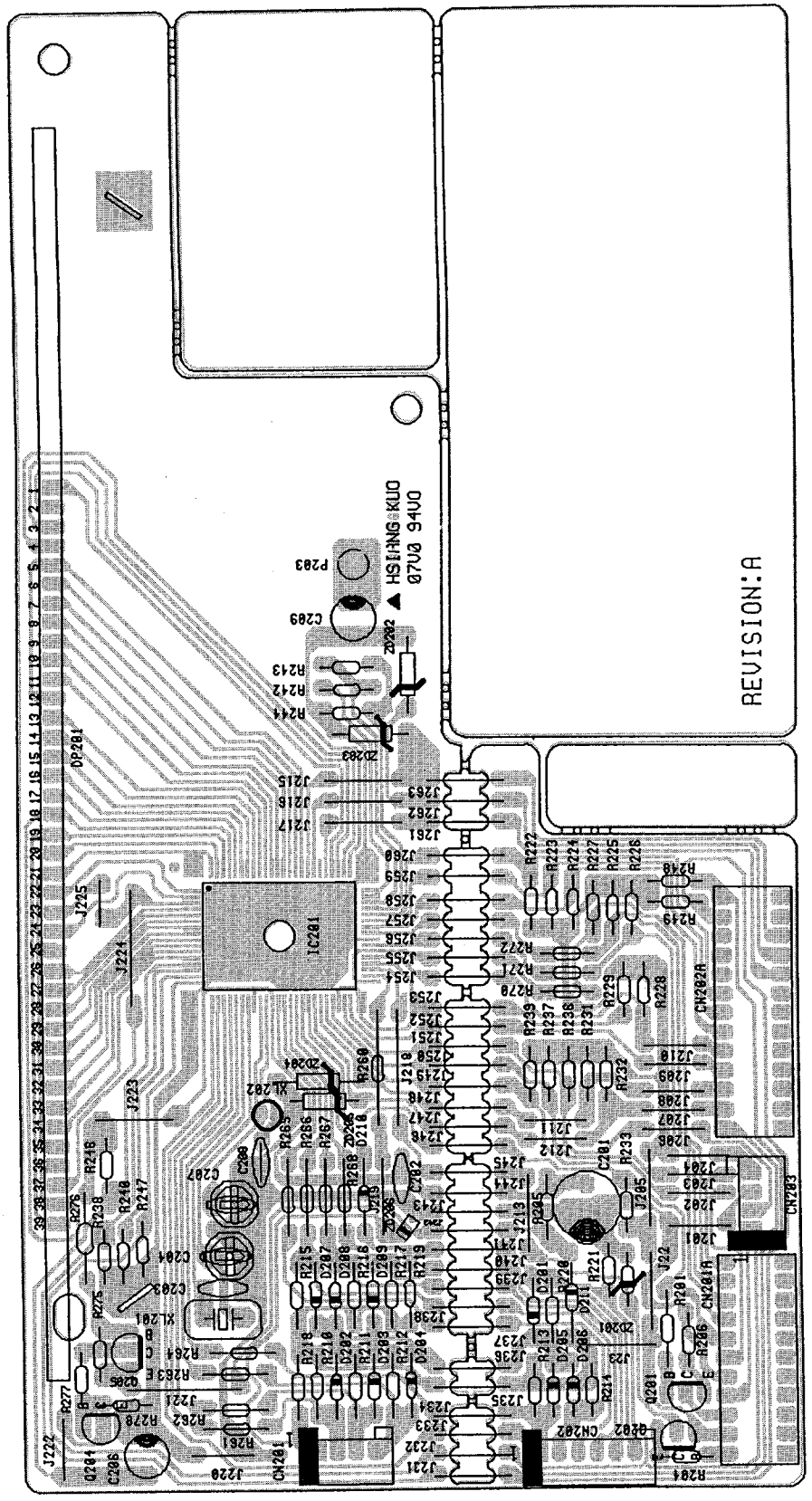
PRO LOGIC SCHEMATIC DIAGRAM



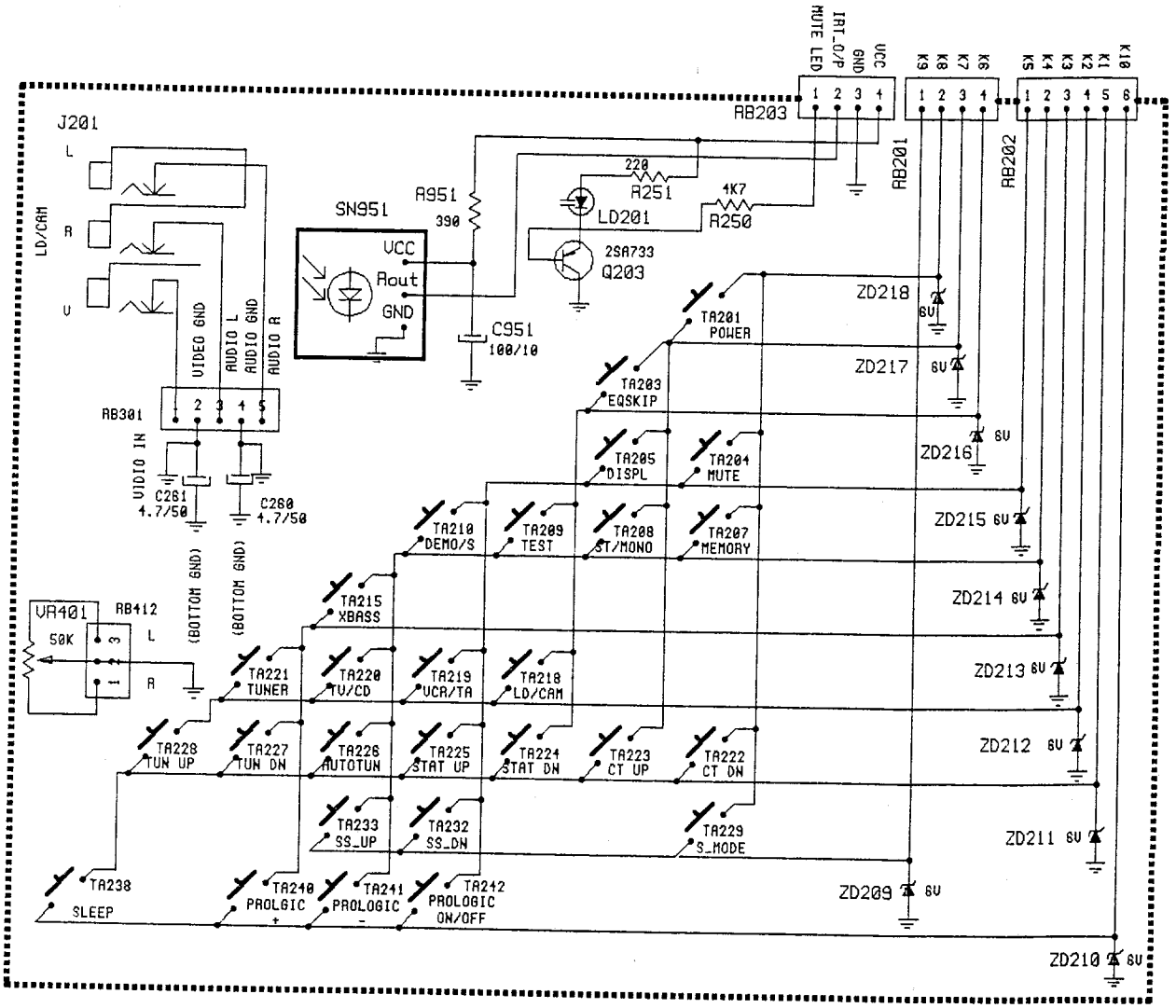
LCD SCHEMATIC DIAGRAM



LCD BOARD
Top View

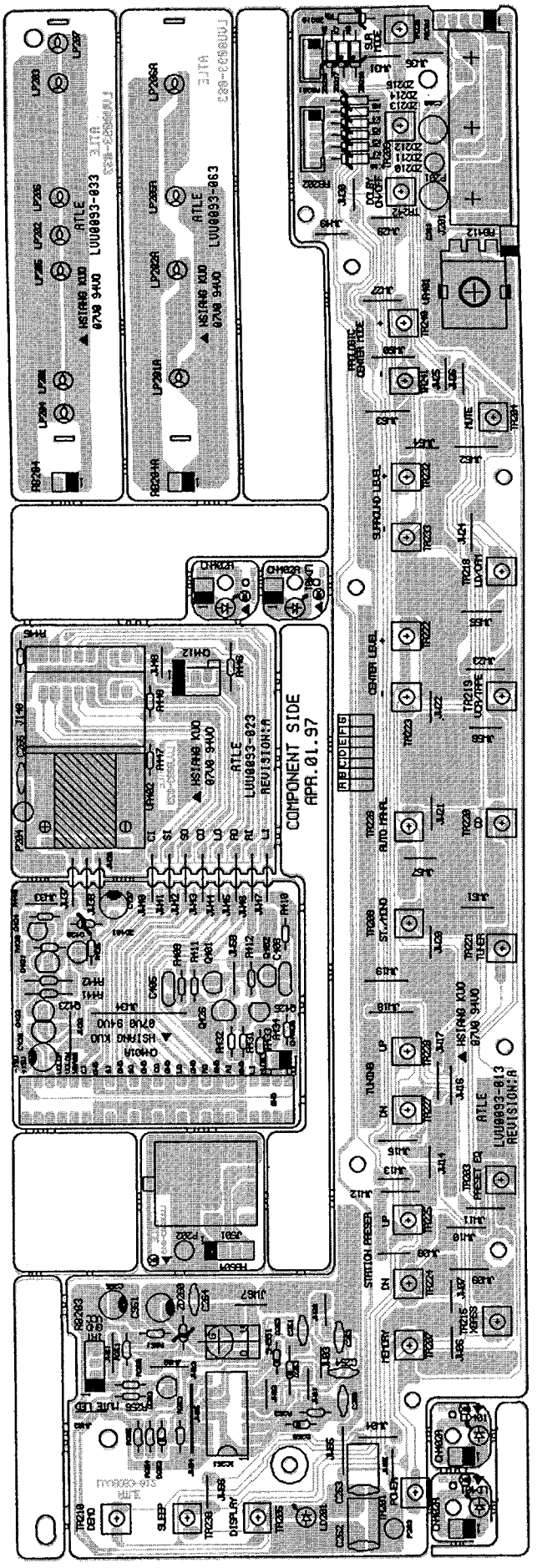


UPFRONT CONTROL SCHEMATIC DIAGRAM

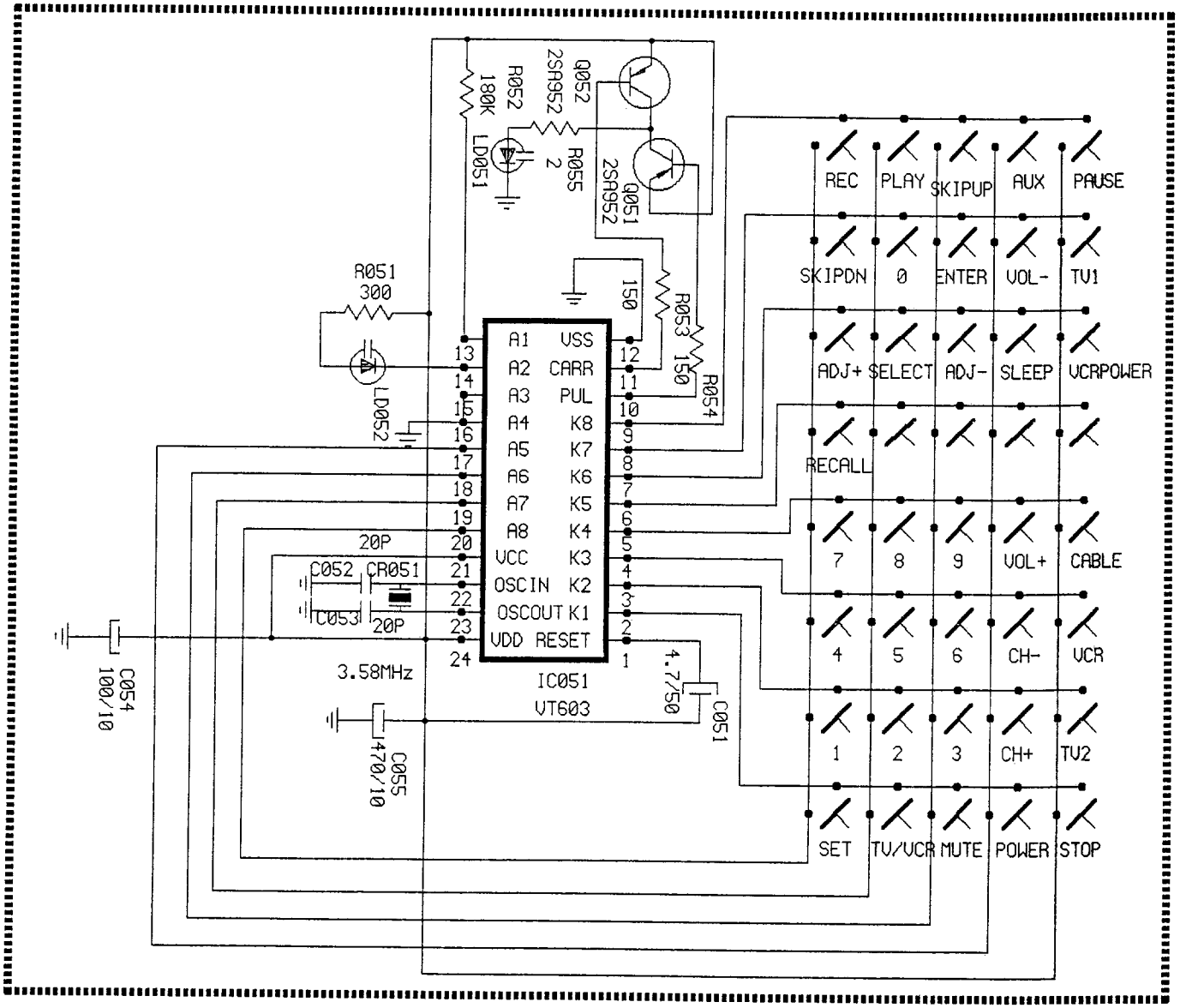


UPFRONT CONTROL BOARD

Top View

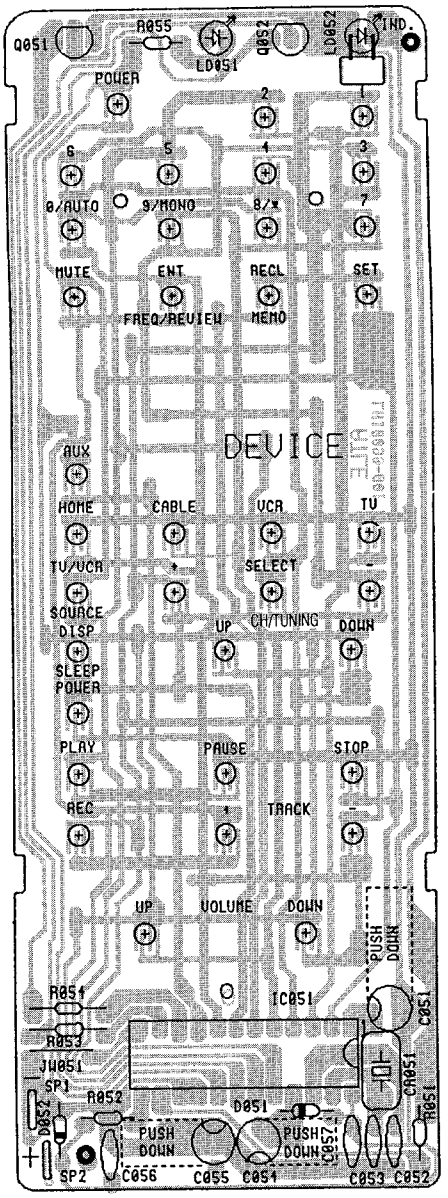


REMOTE SCHEMATIC DIAGRAM

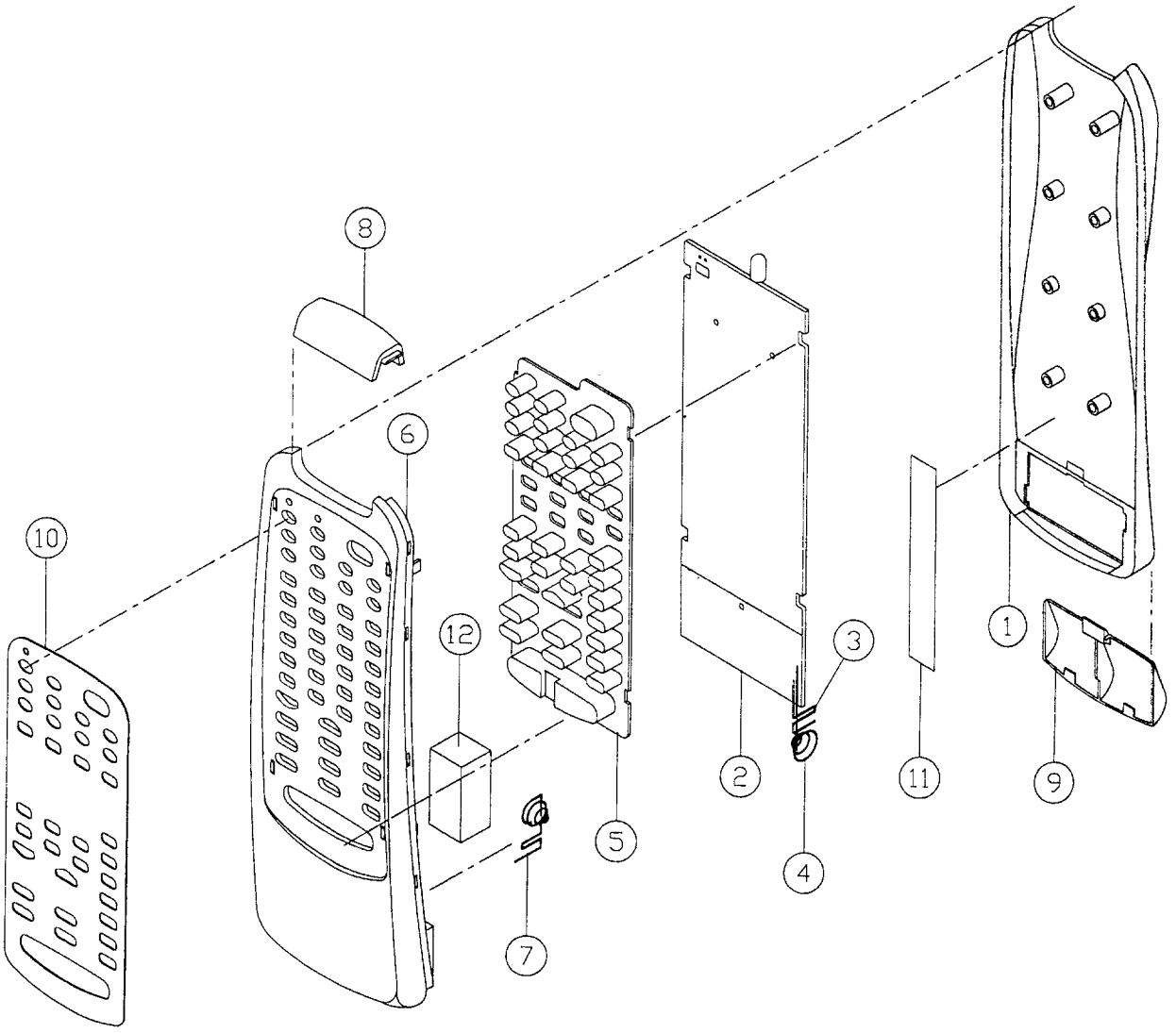


REMOTE BOARD

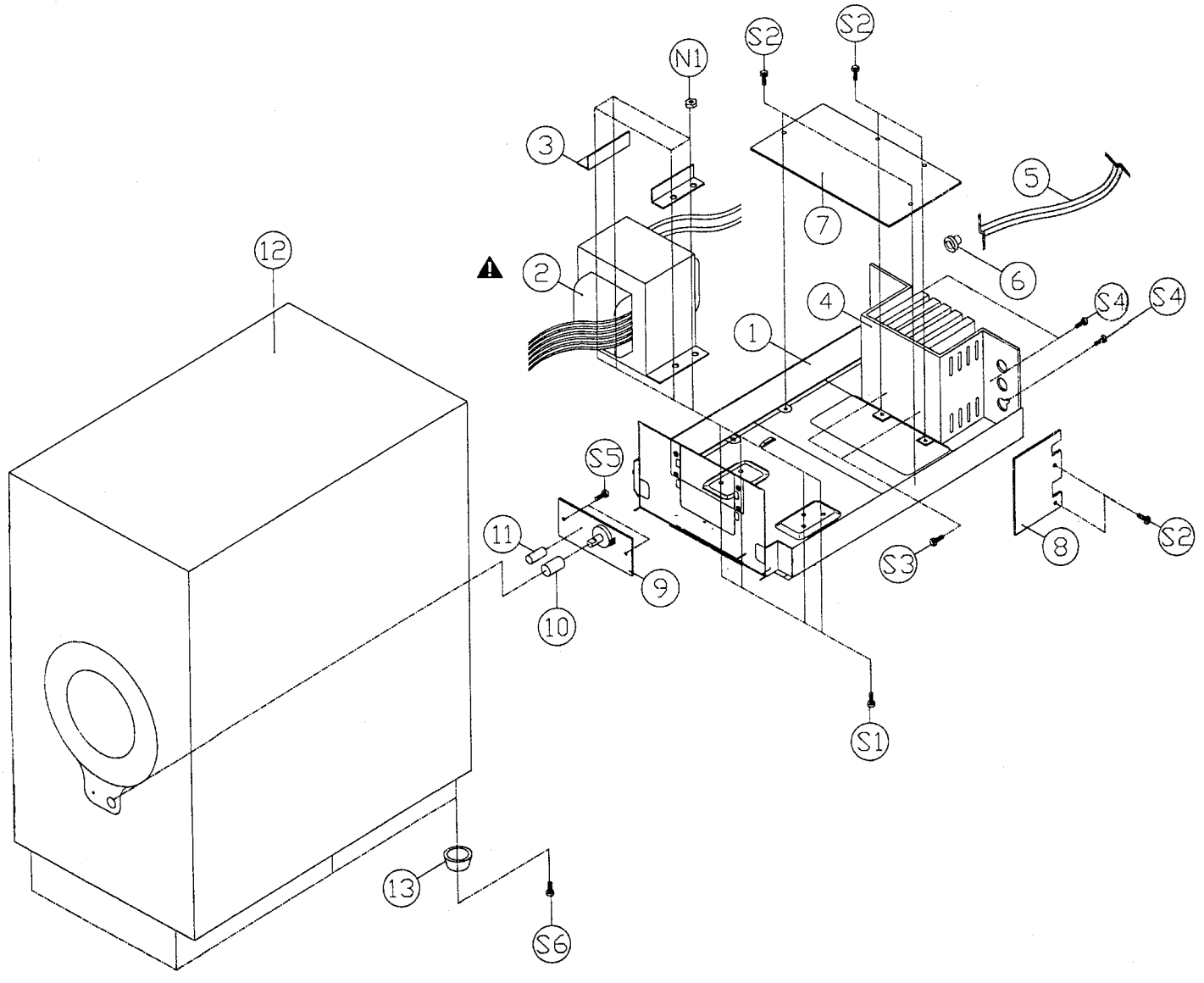
Top View



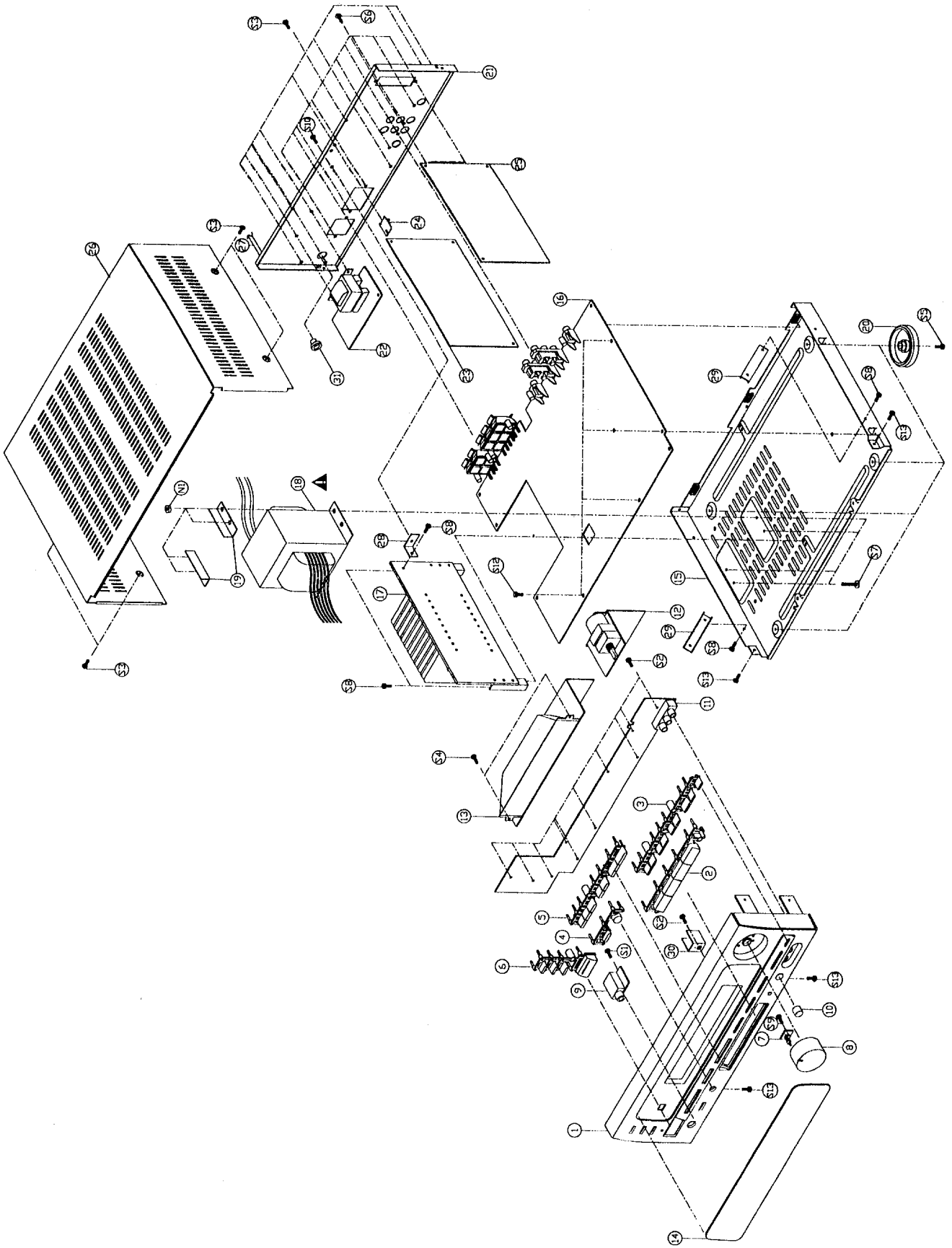
REMOTE CONTROL EXPLODED VIEW



SUBWOOFER EXPLODED VIEW



CABINET EXPLODED VIEW



CABINET AND ELECTRICAL REPLACEMENT PARTS LIST

Note that part numbers for standard components (e.g., resistors and capacitors) are not included.

Ref.	Part No.	Description
CABINET PARTS		
1	4822 459 04684	Cabinet Front
2	4822 410 11316	Knob f/Function Switch
3	4822 410 63933	Pushbutton f/Surround Switch
4	4822 411 62047	Cap f/EQ Switch
5	4822 410 11009	Tuning Knob
6	4822 410 11012	Pushbutton f/ Power Switch
8	4822 410 11011	Knob f/Volume Control
10	4822 413 31877	Knob f/Balance Control
14	4822 450 10285	Transparent Plate
18	⚠ 4822 146 10846	Power Transformer
20	4822 462 10884	Cabinet Foot
21	4822 426 10508	Rear Cover
31	4822 532 52701	Spacer
	4822 303 40063	Antenna T
	4822 303 40064	Antenna L
	4822 445 10677	Loudspeaker Box, L/R
	4822 445 10694	Loudspeaker Box, Center
	4822 445 10695	Loudspeaker Box, Surround
REMOTE CONTROL PARTS		
	4822 219 10326	Remote Control
	4822 410 63934	Pushbutton Assembly
	4822 442 01059	Battery Cover
SUBWOOFER PARTS		
2	⚠ 4822 146 10847	Power Transformer
6	4822 532 52701	Spacer
10	4822 410 11338	Balance Knob
13	4822 462 10966	Foot
SEMICONDUCTORS		
IC001	4822 209 73395	Analog IC
IC051	4822 209 13059	Analog IC
IC101	4822 209 31001	Analog IC
IC101	4822 209 80587	Analog Amplifier IC
IC102	4822 209 80401	Analog IC
IC102	4822 209 80401	Analog IC
IC151	4822 209 13055	Digital IC
IC201	4822 209 15485	Digital IC
IC301	4822 209 80401	Analog IC
IC351	4822 209 61677	Digital MOS IC
IC353	4822 209 80401	Analog IC
IC401	4822 209 90741	Analog IC
IC403	4822 209 32324	Digital IC
IC451	4822 209 80587	Analog Amplifier IC
IC452	4822 209 80587	Analog Amplifier IC
IC453	4822 209 63181	Digital IC
IC454	4822 209 80401	Analog IC
IC501	4822 209 30175	Hybrid Amplifier IC
IC502	4822 209 30175	Hybrid Amplifier IC
IC601	4822 209 12986	Analog IC
IC602	4822 209 61677	Digital IC
IC603	4822 209 80401	Analog IC
IC604	4822 209 72635	Analog/Digital Interface IC
IC605	4822 209 32324	Digital IC
IC606	4822 209 15423	Analog/Digital Interface IC
IC607	4822 209 80401	Analog IC
IC612	5322 209 14865	Digital IC, Standard Logic
IC901	4822 209 13056	Voltage/Current Reg. IC
IC902	4822 209 90746	Voltage/Current Reg. IC
IC903	4822 209 13057	Voltage/Current Reg. IC
Q001	4822 130 41596	Transistor
Q002	4822 130 41596	Transistor
Q003	4822 130 63876	Transistor
Q004	4822 130 41198	Transistor
Q005	4822 130 63173	Transistor, FET

Ref.	Part No.	Description
SEMICONDUCTORS (CONTINUED)		
Q051	4822 130 10211	Transistor
Q052	4822 130 10211	Transistor
Q101	4822 130 41198	Transistor
Q101	4822 130 63173	Transistor, FET
Q102	4822 130 41198	Transistor
Q103	4822 130 41198	Transistor
Q103	4822 130 41198	Transistor
Q104	4822 130 41198	Transistor
Q104	4822 130 63876	Transistor
Q107	4822 130 41198	Transistor
Q151	4822 130 41198	Transistor
Q152	4822 130 41198	Transistor
Q201	4822 130 41198	Transistor
Q202	4822 130 63876	Transistor
Q203	4822 130 63876	Transistor
Q204	4822 130 41198	Transistor
Q205	4822 130 63876	Transistor
Q305	4822 130 41198	Transistor
Q401	4822 130 41198	Transistor
Q402	4822 130 41198	Transistor
Q421	4822 130 41198	Transistor
Q422	4822 130 41198	Transistor
Q423	4822 130 41198	Transistor
Q424	4822 130 41198	Transistor
Q425	4822 130 41651	Transistor
Q426	4822 130 41651	Transistor
Q429	4822 130 41651	Transistor
Q451	4822 130 41198	Transistor
Q452	4822 130 41198	Transistor
Q501	4822 130 41198	Transistor
Q501	4822 130 63876	Transistor
Q502	4822 130 41198	Transistor
Q502	4822 130 63876	Transistor
Q503	4822 130 41198	Transistor
Q503	4822 130 63876	Transistor
Q504	4822 130 41198	Transistor
Q504	4822 130 41198	Transistor
Q505	4822 130 41198	Transistor
Q505	4822 130 63876	Transistor
Q506	4822 130 10235	Transistor
Q507	4822 130 63221	Transistor
Q508	4822 130 41651	Transistor
Q508	5322 130 44506	Transistor
Q509	5322 130 44523	Transistor
Q510	4822 130 41198	Transistor
Q510	4822 130 41198	Transistor
Q511	4822 130 41198	Transistor
Q601	4822 130 63876	Transistor
Q602	4822 130 41198	Transistor
Q603	4822 130 41198	Transistor
Q604	4822 130 41198	Transistor
Q605	4822 130 63876	Transistor
Q903	4822 130 60678	Transistor
Q904	4822 130 63876	Transistor
Q905	4822 130 60678	Transistor
Q906	4822 130 41198	Transistor
Q907	4822 130 41198	Transistor
Q908	4822 130 10207	Transistor
D001	4822 130 30621	Diode
D002	4822 130 30621	Diode
D003	4822 130 30621	Diode
D004	4822 130 30621	Diode
D101	4822 130 30621	Diode
D102	4822 130 30621	Diode
D103	4822 130 30621	Diode
D205	4822 130 30621	Diode
D206	4822 130 30621	Diode

CABINET AND ELECTRICAL REPLACEMENT PARTS LIST (CONTINUED)

Ref.	Part No.	Description
SEMICONDUCTORS (CONTINUED)		
D210	4822 130 30621	Diode
D211	4822 130 30621	Diode
D452	4822 130 30621	Diode
D453	4822 130 30621	Diode
D454	4822 130 30621	Diode
D455	4822 130 30621	Diode
D456	4822 130 30621	Diode
D457	4822 130 30621	Diode
D501	4822 130 30621	Diode
D501	4822 130 30621	Diode
D502	4822 130 30621	Diode
D502	4822 130 30621	Diode
D503	4822 130 30621	Diode
D503	4822 130 30621	Diode
D504	4822 130 30621	Diode
D504	4822 130 30621	Diode
D505	4822 130 30621	Diode
D505	4822 130 30621	Diode
D506	4822 130 30621	Diode
D506	4822 130 30621	Diode
D507	4822 130 30621	Diode
D508	4822 130 30621	Diode
D509	4822 130 30621	Diode
D510	4822 130 30621	Diode
D601	4822 130 30621	Diode
D601	4822 130 30621	Diode
D602	4822 130 30621	Diode
D603	4822 130 30621	Diode
D604	4822 130 30621	Diode
D605	4822 130 30621	Diode
D606	4822 130 30621	Diode
D607	4822 130 30621	Diode
D901	4822 130 31438	Diode, Power Rectifier
D901	5322 130 34939	Diode
D902	4822 130 31438	Diode, Power Rectifier
D902	5322 130 34939	Diode
D903	4822 130 31438	Diode, Power Rectifier
D903	5322 130 34939	Diode
D904	4822 130 31438	Diode, Power Rectifier
D904	5322 130 34939	Diode
D905	4822 130 31438	Diode, Power Rectifier
D906	4822 130 31438	Diode, Power Rectifier
D907	5322 130 34939	Diode
D908	5322 130 34939	Diode
D909	5322 130 34939	Diode
D910	5322 130 34939	Diode
D915	4822 130 31438	Diode, Power Rectifier
D916	4822 130 30621	Diode
DP201	4822 135 00139	Display, LCD
LD051	4822 130 83216	LED
LD052	4822 130 70015	LED
LD101	4822 130 10236	LED
LD201	4822 130 70015	LED
LD401	4822 130 70015	LED
VD101	4822 130 81673	Diode
VD102	4822 130 81673	Diode
ZD101	4822 130 34197	Diode, Reference
ZD102	4822 130 34167	Diode, Reference
ZD103	4822 130 34197	Diode, Reference
ZD104	4822 130 34281	Diode, Reference
ZD151	4822 130 34233	Diode, Reference
ZD201	4822 130 10209	Diode, Reference
ZD204	4822 130 34167	Diode, Reference
ZD205	4822 130 34167	Diode, Reference
ZD206	4822 130 34167	Diode, Reference
ZD210	4822 130 34167	Diode, Reference
ZD211	4822 130 34167	Diode, Reference
ZD212	4822 130 34167	Diode, Reference
ZD213	4822 130 34167	Diode, Reference
ZD214	4822 130 34167	Diode, Reference

Ref.	Part No.	Description
SEMICONDUCTORS (CONTINUED)		
ZD215	4822 130 34167	Diode, Reference
ZD216	4822 130 34167	Diode, Reference
ZD217	4822 130 34167	Diode, Reference
ZD218	4822 130 34167	Diode, Reference
ZD219	4822 130 34167	Diode, Reference
ZD401	4822 130 34233	Diode, Reference
ZD451	4822 130 80272	Diode, Reference
ZD501	4822 130 34197	Diode, Reference
ZD903	4822 130 34167	Diode, Reference
ZD904	4822 130 34167	Diode, Reference
ZD905	4822 130 34197	Diode, Reference
ZD906	4822 130 34281	Diode, Reference
COILS AND TRANSFORMERS		
L001	4822 157 71811	Coil
L002	4822 157 71809	Coil
L003	4822 157 71812	Coil
L101	4822 157 71813	Coil
L102	4822 157 71814	Coil
L120	4822 157 11069	Coil
L121	4822 157 11069	Coil
L122	4822 157 11069	Coil
L201	4822 157 11069	Coil
L501	4822 157 71807	Coil
L502	4822 157 71807	Coil
L503	4822 157 71807	Coil
L504	4822 157 71807	Coil
T001	4822 157 71805	Coil
T101	4822 157 11203	Coil
T102	4822 157 71804	Coil
TT901	4822 146 31497	Transformer
CONTROLS AND SWITCHES		
TA201	4822 276 13648	Switch, Pushbutton
TA203	4822 276 13648	Switch, Pushbutton
TA204	4822 276 13648	Switch, Pushbutton
TA205	4822 276 13648	Switch, Pushbutton
TA207	4822 276 13648	Switch, Pushbutton
TA208	4822 276 13648	Switch, Pushbutton
TA209	4822 276 13648	Switch, Pushbutton
TA210	4822 276 13648	Switch, Pushbutton
TA215	4822 276 13648	Switch, Pushbutton
TA218	4822 276 13648	Switch, Pushbutton
TA219	4822 276 13648	Switch, Pushbutton
TA220	4822 276 13648	Switch, Pushbutton
TA221	4822 276 13648	Switch, Pushbutton
TA222	4822 276 13648	Switch, Pushbutton
TA223	4822 276 13648	Switch, Pushbutton
TA224	4822 276 13648	Switch, Pushbutton
TA225	4822 276 13648	Switch, Pushbutton
TA226	4822 276 13648	Switch, Pushbutton
TA227	4822 276 13648	Switch, Pushbutton
TA228	4822 276 13648	Switch, Pushbutton
TA229	4822 276 13648	Switch, Pushbutton
TA232	4822 276 13648	Switch, Pushbutton
TA233	4822 276 13648	Switch, Pushbutton
TA238	4822 276 13648	Switch, Pushbutton
TA240	4822 276 13648	Switch, Pushbutton
TA241	4822 276 13648	Switch, Pushbutton
TA242	4822 276 13648	Switch, Pushbutton
TC001	4822 125 50692	Capacitor, Variable
TC002	4822 125 50692	Capacitor, Variable
TC003	4822 125 50692	Capacitor, Variable
TC101	4822 125 50692	Capacitor, Variable
TC102	4822 125 50693	Capacitor, Variable
VR101	4822 101 11377	Resistor, Variable
VR101	4822 273 10307	Switch, Rotary
VR102	4822 100 12278	Resistor, Variable
VR103	4822 100 12277	Resistor, Variable

CABINET AND ELECTRICAL REPLACEMENT PARTS LIST (CONTINUED)

Ref.	Part No.	Description
CONTROLS AND SWITCHES (CONTINUED)		
VR401	4822 100 12281	Resistor, Variable
VR402	4822 361 10811	Resistor, Variable
VR601	4822 101 11378	Resistor, Variable
MISCELLANEOUS		
CF101	4822 242 10614	Ceramic Filter
CF102	4822 242 10614	Ceramic Filter
CF103	4822 242 10708	Ceramic Filter
CR051	4822 242 10707	Ceramic Filter
CR101	4822 242 80223	Ceramic Filter
F901	⚠ 4822 070 34002	Fuse
F902	⚠ 4822 070 32002	Fuse
F903	⚠ 4822 070 32002	Fuse
J001	4822 267 31971	Connector, Cable/Wire
J201	4822 267 41242	Connector, Cable/Wire
J301	4822 267 41235	Connector, Cable/Wire
J302	4822 267 41237	Connector, Cable/Wire
MISCELLANEOUS (CONTINUED)		
J303	4822 267 41238	Connector, Cable/Wire
J304	4822 265 10454	Connector, Electrical
J501	4822 267 31972	Connector, Cable/Wire
J502	4822 267 41241	Connector, Cable/Wire
J503	4822 265 10794	Connector, Electrical
JK101	4822 267 41238	Connector, Cable/Wire
LP201	4822 134 10059	Lamp
LP202	4822 134 10059	Lamp
LP203	4822 134 10059	Lamp
RI501	4822 280 80792	Relay
RI502	4822 280 80792	Relay
RI901	4822 280 10319	Relay
SN901	4822 130 10752	Sensor
XI151	4822 242 82184	Crystal
XI201	4822 242 82183	Crystal
XI601	4822 242 82185	Ceramic Filter
	4822 492 71723	Connector, Electrical
	4822 492 71724	Connector, Electrical
	4822 492 71725	Connector, Electrical

To order parts call the TOLL FREE Philips Sales Center number:
(In U.S.A.) 1-800-851-8885 • 1-800-535-3715 (Fax)
(In Canada) 1-800-363-PART

WARNING

Critical components having special safety characteristics are identified with a ⚠ by the Ref. No. in the parts list and enclosed within a broken line * (where several critical components are grouped in one area) along with the safety symbol ⚠ on the schematics or exploded views.

Use of substitute replacement parts which do not have the same specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Philips Consumer Electronics Company. Philips assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.

* Broken Line: — - — - — - — - — - —

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

AUDIO SAFETY GUIDELINES FOR THE PROFESSIONAL SERVICE TECHNICIAN

Important

Proper service and repair is important to the safe, reliable operation of all Philips equipment. The service procedures recommended by Philips and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Philips could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Philips has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Philips must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

Safety Checks

After the original service problem has been corrected, a complete safety check should be made. Be sure to check over the entire set, not just the areas where you have worked. Some previous servicer may have left an unsafe condition, which could be unknowingly passed on to your customer. Be sure to check all of the following:

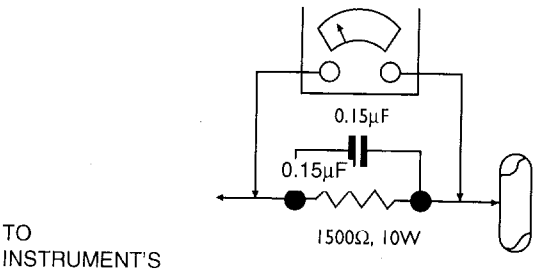
Fire and Shock Hazard

1. Be sure all components are positioned in such a way as to avoid the possibility of adjacent component shorts. This is especially important on those units which are transported to and from the service shop.
2. Never release a repaired unit unless all protective devices such as insulators, barriers, covers, strain reliefs, and other hardware have been installed according to the original design.
3. Soldering and wiring must be inspected to locate possible cold solder joints, solder splashes, sharp solder points, frayed leads, pinched leads, or damaged insulation (including the ac cord). Be certain to remove loose solder balls and all other loose foreign particles.
4. Check across-the-line components and other components for physical evidence of damage or deterioration and replace if necessary. Follow original layout, lead length, and dress.
5. No lead or component should touch a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces or edges must be avoided.
6. Critical components having special safety characteristics are identified with a ⚠ by the Ref. No. in the parts list and enclosed within a broken line* (where several critical components are grouped in one area) along with the safety symbol ⚠ on the schematic diagrams and/or exploded views. Replacement parts without the same safety characteristics may create shock, fire, or other hazards.
7. When servicing any unit, always use a separate Isolation transformer for the chassis. Failure to use a separate isolation transformer may expose you to possible shock hazard, and may cause damage to servicing instruments.
8. Many electronic products use a polarized ac line cord (one wide pin on the plug). Defeating this safety feature may create a potential hazard to the servicer and the user. Extension cords which do not incorporate the polarizing feature should never be used .
9. After reassembly of the unit, always perform an ac leakage test or resistance test from the line cord to all exposed metal parts of the cabinet. Also, check all metal control shafts (with knobs removed), antenna terminals, handles, screws, etc. to be sure the unit is safe to operate without danger of electrical shock .

*Broken line — · — · — · — · — · —

Leakage Current Cold Check

1. Unplug the ac line cord and connect a jumper between the two prongs of the plug.
2. Turn on the power switch.
3. Measure the resistance value between the jumpered ac plug and all exposed cabinet parts of the receiver, such as screw heads, antennas, and control shafts. When the exposed metallic part has a return path to the chassis, the reading should be between 1 megohm and 5.2 megohms. When the exposed metal does not have a return path to the chassis, the reading must be infinity. Remove the jumper from the ac line cord .



Leakage Current Hot Check

1. Do not use an isolation transformer for this test. Plug the completely reassembled unit directly into the ac outlet.
2. Connect a 1.5k, 10W resistor paralleled by a 0.1 5uF. capacitor between each exposed metallic cabinet part and a good earth ground such as a water pipe, as shown above.
3. Use an ac voltmeter with at least 5000 ohms/volt sensitivity to measure the potential across the resistor.
4. The potential at any point should not exceed 0.75 volts. A leakage current tester may be used to make this test; leakage current must not exceed 0.5 milliamps. If a measurement is outside of the specified limits, there is a possibility of shock hazard. The receiver should be repaired and rechecked before returning it to the customer.
5. Repeat the above procedure with the ac plug reversed. (Note: An ac adapter is necessary when a polarized plug is used. Do not defeat the polarizing feature of the plug.)

Parts Replacement

1. Many electrical and mechanical parts in Philips equipment have special safety related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. The use of a substitute part which does not have the same safety characteristics as the Philips recommended replacement part shown in this service manual may create shock, fire, or other hazards. Under no circumstances should the original design be modified or altered without written permission from Philips. Philips assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.
2. All ICs and many other semiconductor parts are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce the life of the part drastically.

FOR PRODUCTS CONTAINING LASER:

DANGER - Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION - The use of optical instruments with this product will increase eye hazard.

Philips Consumer Electronics Company
A Division of Philips Electronics North America Corp.

Technical Service Data

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401 East Old Andrew Johnson Highway
Jefferson City, TN 37760

MANUAL 1845
Supplement 1
Philips Magnavox Model: MX940AHT01
File: 1998: 1845

MX940AHT01 AUDIO SYSTEM

This supplement includes an updated replacement parts list for model MX940AHT01. The replacement parts list in original manual 1845 should be replaced by the list in this document.

MANUAL 1845 Supplement 1 (Model: MX940AHT01)

To order parts, call the TOLL FREE Philips Sales Center number:
(In USA) 1-800-851-8885 • (Facsimile) 1-800-535-3715 • (In Canada) 1-800-363-PART

REFER TO MANUAL 1845 FOR IMPORTANT SAFETY NOTICE/GUIDELINES

SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST BECOME FAMILIAR WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING

Visit our World Wide Web site at http://www.magnavox.com

CABINET AND ELECTRICAL REPLACEMENT PARTS LIST

Note that part numbers for standard components (e.g., resistors and capacitors) are not included.

Ref.	Part No.	Description
CABINET PARTS		
1	4822 459 04684	Cabinet Front
2	4822 410 11316	Knob f/Function Switch
3	4822 410 63933	Pushbutton f/Surround Switch
4	4822 411 62047	Cap f/EQ Switch
5	4822 410 11009	Tuning Knob
6	4822 410 11012	Pushbutton f/ Power Switch
8	4822 410 11011	Knob f/Volume Control
10	4822 413 31877	Knob f/Balance Control
14	4822 450 10285	Transparent Plate
18	⚠ 4822 146 10846	Power Transformer
20	4822 462 10884	Cabinet Foot
21	4822 426 10508	Rear Cover
31	4822 532 52701	Spacer
	4822 303 40063	Antenna T
	4822 303 40064	Antenna L
	4822 445 10677	Loudspeaker Box, L/R
	4822 445 10694	Loudspeaker Box, Center
	4822 445 10695	Loudspeaker Box, Surround
REMOTE CONTROL PARTS		
	4822 219 10326	Remote Control
	4822 410 63934	Pushbutton Assembly
	4822 442 01059	Battery Cover
SUBWOOFER PARTS		
2	⚠ 4822 146 10847	Power Transformer
6	4822 532 52701	Spacer
10	4822 410 11338	Balance Knob
13	4822 462 10966	Foot
SEMICONDUCTORS		
IC001	4822 209 73395	Analog IC
IC051	4822 209 13059	Analog IC
IC101	4822 209 31001	Analog IC (Tuner)
IC101	4822 209 80587	Analog Amplifier IC (Subwoofer)
IC102	4822 209 80401	Analog IC (Tuner)
IC102	4822 209 80401	Analog IC (Subwoofer)
IC151	4822 209 13055	Digital IC
IC201	4822 209 15485	Digital IC
IC301	4822 209 80401	Analog IC
IC351	4822 209 61677	Digital MOS IC
IC353	4822 209 80401	Analog IC
IC401	4822 209 90741	Analog IC
IC403	4822 209 32324	Digital IC
IC451	4822 209 80587	Analog Amplifier IC
IC452	4822 209 80587	Analog Amplifier IC
IC453	4822 209 63181	Digital IC
IC454	4822 209 80401	Analog IC
IC501	4822 209 30175	Hybrid Amplifier IC
IC502	4822 209 30175	Hybrid Amplifier IC
IC601	4822 209 12986	Analog IC
IC602	4822 209 61677	Digital IC
IC603	4822 209 80401	Analog IC
IC604	4822 209 72635	Analog/Digital Interface IC
IC605	4822 209 32324	Digital IC
IC606	4822 209 15423	Analog/Digital Interface IC
IC607	4822 209 80401	Analog IC
IC612	5322 209 14865	Digital IC, Standard Logic
IC901	4822 209 13056	Voltage/Current Reg. IC
IC902	4822 209 90746	Voltage/Current Reg. IC
IC903	4822 209 13057	Voltage/Current Reg. IC
Q001	4822 130 41596	Transistor
Q002	4822 130 41596	Transistor
Q003	4822 130 63876	Transistor
Q004	4822 130 41198	Transistor
Q005	4822 130 63173	Transistor, FET

Ref.	Part No.	Description
SEMICONDUCTORS (CONTINUED)		
Q051	4822 130 10211	Transistor
Q052	4822 130 10211	Transistor
Q101	4822 130 41198	Transistor (Subwoofer)
Q101	4822 130 63173	Transistor, FET (Tuner)
Q102	4822 130 41198	Transistor
Q103	4822 130 41198	Transistor (Subwoofer)
Q103	4822 130 41198	Transistor (Tuner)
Q104	4822 130 41198	Transistor (Subwoofer)
Q104	4822 130 63876	Transistor (Tuner)
Q107	4822 130 41198	Transistor
Q151	4822 130 41198	Transistor
Q152	4822 130 41198	Transistor
Q201	4822 130 41198	Transistor
Q202	4822 130 63876	Transistor
Q203	4822 130 63876	Transistor
Q204	4822 130 41198	Transistor
Q205	4822 130 63876	Transistor
Q305	4822 130 41198	Transistor
Q401	4822 130 41198	Transistor
Q402	4822 130 41198	Transistor
Q421	4822 130 41198	Transistor
Q422	4822 130 41198	Transistor
Q423	4822 130 41198	Transistor
Q424	4822 130 41198	Transistor
Q425	4822 130 41651	Transistor
Q426	4822 130 41651	Transistor
Q429	4822 130 41651	Transistor
Q451	4822 130 41198	Transistor
Q452	4822 130 41198	Transistor
Q501	4822 130 41198	Transistor (Main)
Q501	4822 130 63876	Transistor (Subwoofer)
Q502	4822 130 41198	Transistor (Main)
Q502	4822 130 63876	Transistor (Subwoofer)
Q503	4822 130 41198	Transistor (Main)
Q503	4822 130 63876	Transistor (Subwoofer)
Q504	4822 130 41198	Transistor (Main)
Q504	4822 130 41198	Transistor (Subwoofer)
Q505	4822 130 63876	Transistor (Main)
Q505	4822 130 41198	Transistor (Subwoofer)
Q506	4822 130 10235	Transistor
Q507	4822 130 63221	Transistor
Q508	4822 130 41651	Transistor (Main)
Q508	5322 130 44506	Transistor (Subwoofer)
Q509	5322 130 44523	Transistor
Q510	4822 130 41198	Transistor (Main)
Q510	4822 130 41198	Transistor (Subwoofer)
Q511	4822 130 41198	Transistor
Q601	4822 130 63876	Transistor
Q602	4822 130 41198	Transistor
Q603	4822 130 41198	Transistor
Q604	4822 130 41198	Transistor
Q605	4822 130 63876	Transistor
Q903	4822 130 60678	Transistor
Q904	4822 130 63876	Transistor
Q905	4822 130 60678	Transistor
Q906	4822 130 41198	Transistor
Q907	4822 130 41198	Transistor
Q908	4822 130 10207	Transistor
D001	4822 130 30621	Diode
D002	4822 130 30621	Diode
D003	4822 130 30621	Diode
D004	4822 130 30621	Diode
D101	4822 130 30621	Diode
D102	4822 130 30621	Diode
D103	4822 130 30621	Diode
D205	4822 130 30621	Diode
D206	4822 130 30621	Diode

CABINET AND ELECTRICAL REPLACEMENT PARTS LIST (CONTINUED)

Ref.	Part No.	Description
SEMICONDUCTORS (CONTINUED)		
D210	4822 130 30621	Diode
D211	4822 130 30621	Diode
D452	4822 130 30621	Diode
D453	4822 130 30621	Diode
D454	4822 130 30621	Diode
D455	4822 130 30621	Diode
D456	4822 130 30621	Diode
D457	4822 130 30621	Diode
D501	4822 130 30621	Diode (Main)
D501	4822 130 30621	Diode (Subwoofer)
D502	4822 130 30621	Diode (Main)
D502	4822 130 30621	Diode (Subwoofer)
D503	4822 130 30621	Diode (Main)
D503	4822 130 30621	Diode (Subwoofer)
D504	4822 130 30621	Diode (Main)
D504	4822 130 30621	Diode (Subwoofer)
D505	4822 130 30621	Diode (Main)
D505	4822 130 30621	Diode (Subwoofer)
D506	4822 130 30621	Diode (Main)
D506	4822 130 30621	Diode (Subwoofer)
D507	4822 130 30621	Diode
D508	4822 130 30621	Diode
D509	4822 130 30621	Diode
D510	4822 130 30621	Diode
D601	4822 130 30621	Diode
D602	4822 130 30621	Diode
D603	4822 130 30621	Diode
D604	4822 130 30621	Diode
D605	4822 130 30621	Diode
D606	4822 130 30621	Diode
D607	4822 130 30621	Diode
D901	4822 130 31438	Diode, Power Rectifier (Main)
D901	5322 130 34939	Diode (Subwoofer)
D902	4822 130 31438	Diode, Power Rectifier (Main)
D902	5322 130 34939	Diode (Subwoofer)
D903	4822 130 31438	Diode, Power Rectifier (Main)
D903	5322 130 34939	Diode (Subwoofer)
D904	4822 130 31438	Diode, Power Rectifier (Main)
D904	5322 130 34939	Diode (Subwoofer)
D905	4822 130 31438	Diode, Power Rectifier
D906	4822 130 31438	Diode, Power Rectifier
D907	5322 130 34939	Diode
D908	5322 130 34939	Diode
D909	5322 130 34939	Diode
D910	5322 130 34939	Diode
D915	4822 130 31438	Diode, Power Rectifier
D916	4822 130 30621	Diode
D6001	4822 130 30621	Diode
DP201	4822 135 00139	Display, LCD
LD051	4822 130 83216	LED
LD052	4822 130 70015	LED
LD101	4822 130 10236	LED
LD201	4822 130 70015	LED
LD401	4822 130 70015	LED
VD101	4822 130 81673	Diode
VD102	4822 130 81673	Diode
ZD101	4822 130 34197	Diode, Reference
ZD102	4822 130 34167	Diode, Reference
ZD103	4822 130 34197	Diode, Reference
ZD104	4822 130 34281	Diode, Reference
ZD151	4822 130 34233	Diode, Reference
ZD201	4822 130 10209	Diode, Reference
ZD204	4822 130 34167	Diode, Reference
ZD205	4822 130 34167	Diode, Reference
ZD206	4822 130 34167	Diode, Reference
ZD210	4822 130 34167	Diode, Reference
ZD211	4822 130 34167	Diode, Reference
ZD212	4822 130 34167	Diode, Reference
ZD213	4822 130 34167	Diode, Reference
ZD214	4822 130 34167	Diode, Reference

Ref.	Part No.	Description
SEMICONDUCTORS (CONTINUED)		
ZD215	4822 130 34167	Diode, Reference
ZD216	4822 130 34167	Diode, Reference
ZD217	4822 130 34167	Diode, Reference
ZD218	4822 130 34167	Diode, Reference
ZD219	4822 130 34167	Diode, Reference
ZD401	4822 130 34233	Diode, Reference
ZD451	4822 130 80272	Diode, Reference
ZD501	4822 130 34197	Diode, Reference
ZD903	4822 130 34167	Diode, Reference
ZD904	4822 130 34167	Diode, Reference
ZD905	4822 130 34197	Diode, Reference
ZD906	4822 130 34281	Diode, Reference
COILS AND TRANSFORMERS		
L001	4822 157 71811	Coil
L002	4822 157 71809	Coil
L003	4822 157 71812	Coil
L101	4822 157 71813	Coil
L102	4822 157 71814	Coil
L120	4822 157 11069	Coil
L121	4822 157 11069	Coil
L122	4822 157 11069	Coil
L201	4822 157 11069	Coil
L501	4822 157 71807	Coil
L502	4822 157 71807	Coil
L503	4822 157 71807	Coil
L504	4822 157 71807	Coil
T001	4822 157 71805	Coil
T101	4822 157 11203	Coil
T102	4822 157 71804	Coil
TT901	4822 146 31497	Transformer
CONTROLS AND SWITCHES		
TA201	4822 276 13648	Switch, Pushbutton
TA203	4822 276 13648	Switch, Pushbutton
TA204	4822 276 13648	Switch, Pushbutton
TA205	4822 276 13648	Switch, Pushbutton
TA207	4822 276 13648	Switch, Pushbutton
TA208	4822 276 13648	Switch, Pushbutton
TA209	4822 276 13648	Switch, Pushbutton
TA210	4822 276 13648	Switch, Pushbutton
TA215	4822 276 13648	Switch, Pushbutton
TA218	4822 276 13648	Switch, Pushbutton
TA219	4822 276 13648	Switch, Pushbutton
TA220	4822 276 13648	Switch, Pushbutton
TA221	4822 276 13648	Switch, Pushbutton
TA222	4822 276 13648	Switch, Pushbutton
TA223	4822 276 13648	Switch, Pushbutton
TA224	4822 276 13648	Switch, Pushbutton
TA225	4822 276 13648	Switch, Pushbutton
TA226	4822 276 13648	Switch, Pushbutton
TA227	4822 276 13648	Switch, Pushbutton
TA228	4822 276 13648	Switch, Pushbutton
TA229	4822 276 13648	Switch, Pushbutton
TA232	4822 276 13648	Switch, Pushbutton
TA233	4822 276 13648	Switch, Pushbutton
TA238	4822 276 13648	Switch, Pushbutton
TA240	4822 276 13648	Switch, Pushbutton
TA241	4822 276 13648	Switch, Pushbutton
TA242	4822 276 13648	Switch, Pushbutton
TC001	4822 125 50692	Capacitor, Variable
TC002	4822 125 50692	Capacitor, Variable
TC003	4822 125 50692	Capacitor, Variable
TC101	4822 125 50692	Capacitor, Variable
TC102	4822 125 50693	Capacitor, Variable
VR101	4822 101 11377	Resistor, Variable (Tuner)
VR101	4822 273 10307	Switch, Rotary (Subwoofer)
VR102	4822 100 12278	Resistor, Variable
VR103	4822 100 12277	Resistor, Variable

CABINET AND ELECTRICAL REPLACEMENT PARTS LIST (CONTINUED)

Ref.	Part No.	Description
CONTROLS AND SWITCHES (CONTINUED)		
VR401	4822 100 12281	Resistor, Variable
VR402	4822 361 10811	Resistor, Variable
VR601	4822 101 11378	Resistor, Variable
MISCELLANEOUS		
CF101	4822 242 10614	Ceramic Filter
CF102	4822 242 10614	Ceramic Filter
CF103	4822 242 10708	Ceramic Filter
CR051	4822 242 10707	Ceramic Filter
CR101	4822 242 80223	Ceramic Filter
F901	⚠ 4822 070 34002	Fuse
F902	⚠ 4822 070 32002	Fuse
F903	⚠ 4822 070 32002	Fuse
J001	4822 267 31971	Connector, Cable/Wire
J201	4822 267 41242	Connector, Cable/Wire
J301	4822 267 41235	Connector, Cable/Wire
J302	4822 267 41237	Connector, Cable/Wire
J303	4822 267 41238	Connector, Cable/Wire

Ref.	Part No.	Description
MISCELLANEOUS (CONTINUED)		
J304	4822 265 10454	Connector, Electrical
J501	4822 267 31972	Connector, Cable/Wire
J502	4822 267 41241	Connector, Cable/Wire
J503	4822 265 10794	Connector, Electrical
JK101	4822 267 41238	Connector, Cable/Wire
LP201	4822 134 10059	Lamp
LP202	4822 134 10059	Lamp
LP203	4822 134 10059	Lamp
RI501	4822 280 80792	Relay
RI502	4822 280 80792	Relay
RI901	4822 280 10319	Relay
SN901	4822 130 10752	Sensor
XI151	4822 242 82184	Crystal
XI201	4822 242 82183	Crystal
XI601	4822 242 82185	Ceramic Filter
	4822 492 71723	Connector, Electrical
	4822 492 71724	Connector, Electrical
	4822 492 71725	Connector, Electrical

To order parts, call the TOLL FREE Philips Sales Center number:
(In USA) 1-800-851-8885 • (Facsimile) 1-800-535-3715 • (In Canada) 1-800-363-PART

WARNING

Critical components having special safety related characteristics are identified with a ⚠ by the Ref. No. in the parts list and enclosed within a broken line* (where several critical components are grouped in one area) along with the safety symbol ⚠ on the schematics or exploded views.

Use of substitute replacement parts which do not have the same specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Philips. Philips assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.

* Broken Line: — — — — — — — —

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

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A Division of Philips Electronics North America Corp.

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MANUAL 1845
Supplement 2
Philips Magnavox Model: MX940AHT01
File: 1998: 1845

MX940AHT01 AUDIO SYSTEM

This supplement includes updated replacement parts list and servicing information for the model listed above.

Servicing Notes

The part number shown below has been assigned for the Subwoofer Speaker and should be added to the replacement parts list in manual 1845 and supplement one.

This model is capable of displaying two error codes. A keyboard error (such as when a key becomes stuck) will cause the error code "ER1" to be displayed. If error code "ER2" is displayed, the cause is system overload (either the output circuitry or the circuit which samples the output). These error codes should be added to manual 1845.

Updated Replacement Parts List

The item shown below should be added to the Replacement Parts List of manual 1845 and supplement one. For all other information, refer to manual 1845 and supplement one.

Ref.	Description	Part No.
–	Subwoofer Speaker	4822 445 10682

MANUAL 1845 Supplement 2

MANUAL 1845 Supplement 2

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REFER TO MANUAL 1845 FOR IMPORTANT SAFETY NOTICE/GUIDELINES

SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST BECOME FAMILIAR WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING

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