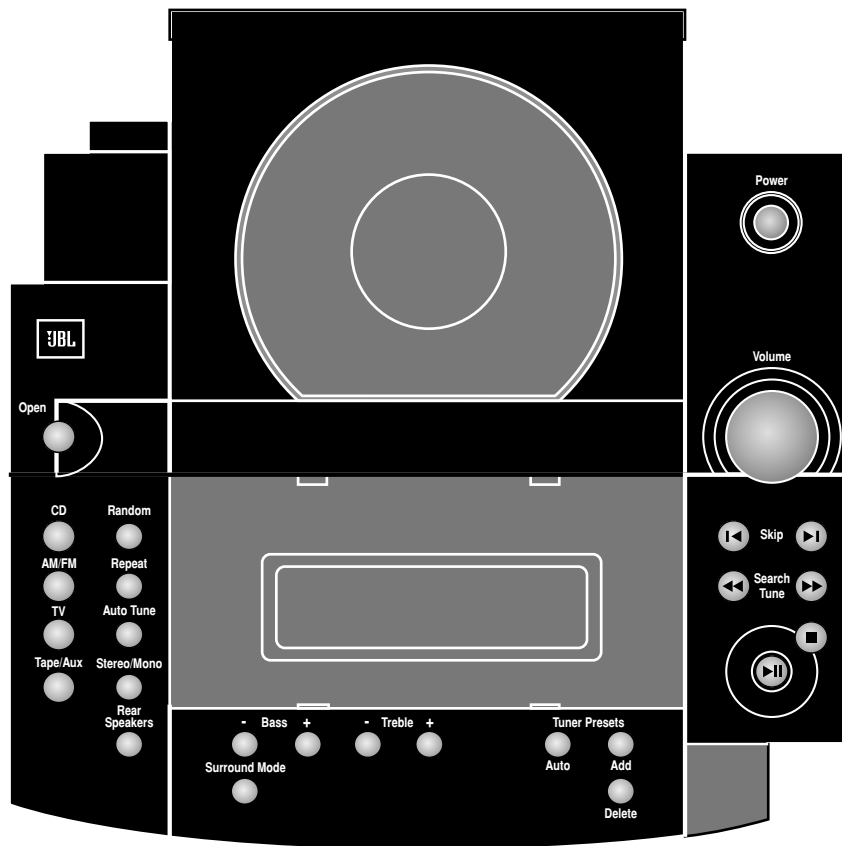


# SOURCE

Dolby Pro-Logic® Surround  
Processor/CD Player/Tuner  
(Part of the ESC350 & 550 Systems)

## SERVICE MANUAL



JBL Consumer Products Inc.  
250 Crossways Park Drive  
Woodbury, N.Y. 11797  
1-800-336-4JBL in the USA

**H** A Harman International Company

Part No.: 1112-SOURCE Rev A 4/99

### LASER BEAM SAFETY PRECAUTIONS

#### CLASS 1 LASER PRODUCT

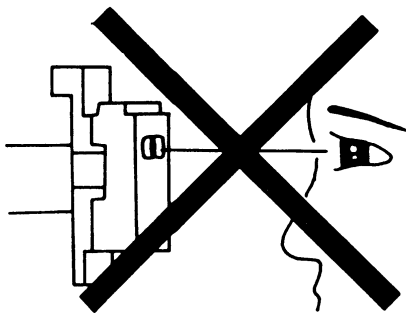
**CLASS 1  
LASER PRODUCT**

**CAUTION**

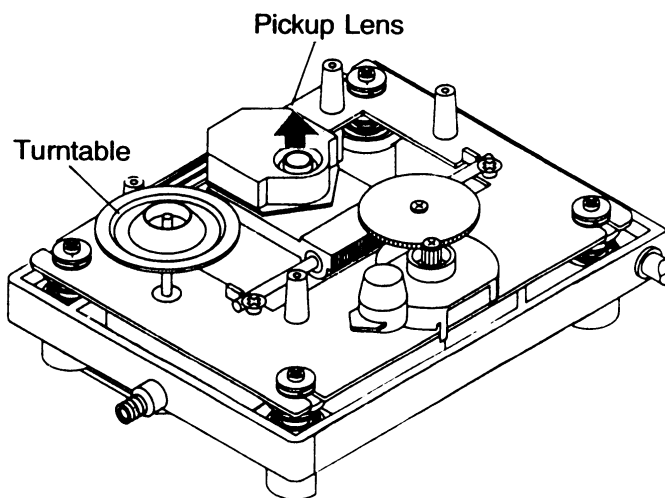
Invisible laser radiation when the unit is open. **DO not stare into beam.**

CAUTION: USE OF ANY CONTROLS, ADJUSTMENT, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.



This compact disc player uses a pickup that emits a laser beam. The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 1 foot away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.



**CAUTION:**

Using controls and adjustment, or doing procedures other than those specified herein, may result in hazardous radiation exposure.

## SAFETY PRECAUTIONS

**WARNING**

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

**HANDLING LASER PICKUP**

The laser diode in the optical system of this player can be damaged by electrostatic discharge from your clothes or your body. Proper electrostatic grounding for service personal is required during servicing.

**BEFORE REPAIRING THE COMPACT DISC PLAYER****Preparation**

## • Human Body Grounding:

Many of the components used in this compact disc player, including the laser pickup, are sensitive to electrostatic discharge. Service personal should be grounded with an electrostatic armband (1 Mohm).

## • Caution:

Static charge on clothing does not escape through a body grounding wrist band. Be careful not to contact the pickup or electrical components with your clothing.

## • Workbench and Tool Grounding:

A properly-grounded electroconductive plate (1 Mohm) or metal sheet should be fitted to the workbench surface. Tools and instruments (such as soldering irons and scopes) should be grounded to prevent AC leakage.

Incorrect



Fig. 1

Correct

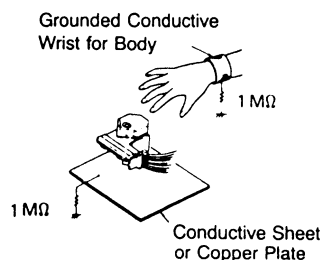


Fig. 2



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attention: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

**Note:** Laser diodes are so susceptible to damage from static electricity that, even if a static discharge does not ruin a diode, it can shorten its life or cause it to work improperly.

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**FEATURES**

- Built-in CD player with: *Dolby Pro Logic surround processor, Dolby 3 stereo, 8x Oversampling*
- AM/FM tuner with *32 presets, Auto-preset function.*

**SERVICE NOTE: THE ESC350 or 550 SUBWOOFER IS REQUIRED TO TEST OR PLAY “THE SOURCE” IN EITHER SYSTEM.**

**SPECIFICATIONS**

**AMPLIFIER SECTION**

Signal to Noise Ratio	
AUX . . . . .	70 dB
THD (1 KHz) . . . . .	0.1%
Head Room . . . . .	> 15 dB

**FM TUNER SECTION**

Frequency Range . . . . .	87.5MHz - 108.0MHz
26dB Usable Sensitivity . . . . .	10 uV
Signal-to-Noise Ratio. . . . .	55 dB
I-F Rejection . . . . .	65 dB
Image Rejection . . . . .	40 dB
Limiting (-3 dB) . . . . .	15 uV
Stereo Separation (1 KHz) . . . . .	30 dB

**AM TUNER SECTION**

Frequency Range . . . . .	520MHz - 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. . . . .	25 dB
I-F Whistle. . . . .	10 %

## SERVICE BULLETIN

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Service bulletin JBL9704 - July 1997

To: All JBL Service Centers

Models: ESC550 - The Source

Subject: Surround level changes during CD search mode

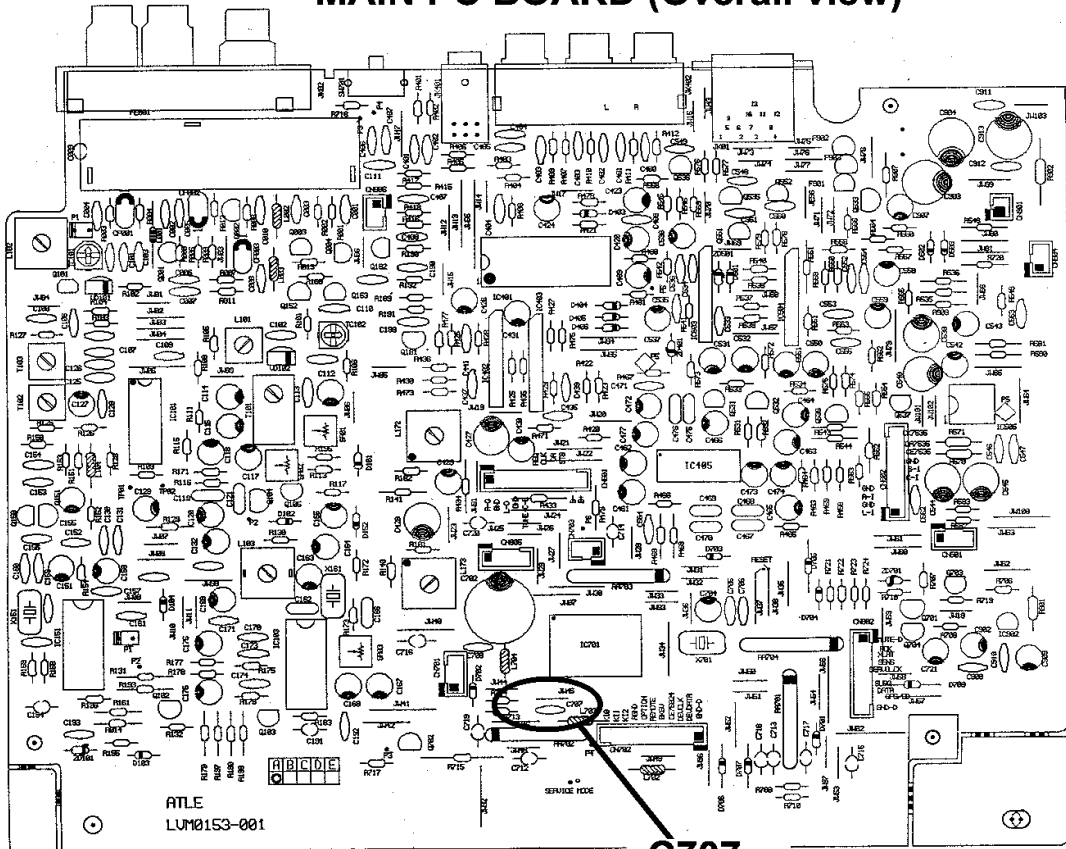
**In the event you receive a ESC550 system (including the Source) with the complaint that the surround level (rear channel volume) changes during the CD search mode:**

**Procedure:**

- 1) Lay unit face down. Remove the 5 Phillips screws holding the upper & lower case together; separate cases.
- 2) Locate C707 (.022uf 50v cap.) on the main PCB in the bottom case.; replace with 470uf 10v electrolytic capacitor (JBL# 3479347121). Observe polarity; negative terminal should be closest to connector CN702. It should be possible to cut the original cap off the board and re-solder the replacement without removal of the main PCB. See drawing.
- 3) Locate solder pads for connector CN702 on the Control PCB in the upper case, near the headphone jack. Adjacent to the slot cut in the PCB for the 11 conductor cable, solder a .01uf ceramic cap (JBL# 3519103935) to pins 8 and 11 on the solder pads. See drawing.
- 4) Re-assemble unit; test as follows:
  - a) Plug in unit, assure all cable and speaker connections are intact. Insert CD of choice.
  - b) Turn power ON to the Source and the Bass550 subwoofer; (display on the Source should now be active).
  - c) Toggle "surround mode" button on front panel or with remote control until "NORMAL" appears.
  - e) Adjust volume (on the Source) so display reads "VOLUME 30".
  - d) Press PLAY button on the Source or the remote control.
  - e) Press the SEARCH/TUNE button on the Source or the remote control to search up or down selected track.

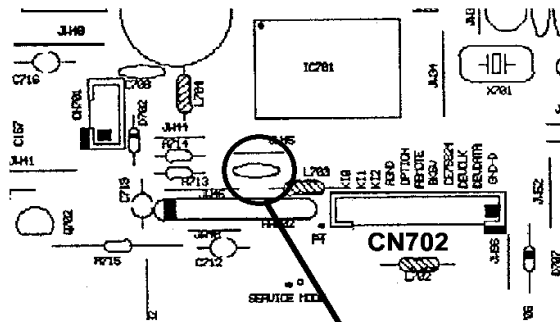
Model	Serial number	Action	Correction
ESC550 (Source)	Under 11500	Jumps randomly to surround (rear) channel level during CD search mode	Replace C707 with 470uf 10v cap. Add .01uf cap. to pins 8 & 11 of CN702
ESC550 (Source)	11500 and higher	Modified by factory	NONE REQUIRED

**MAIN PC BOARD (Overall view)**



**C707**

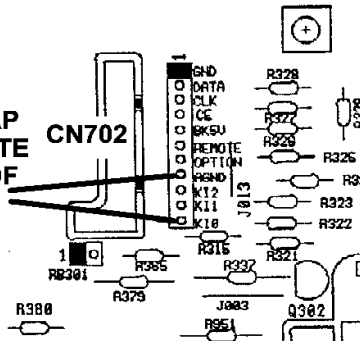
**ENLARGEMENT OF MAIN PC BOARD**



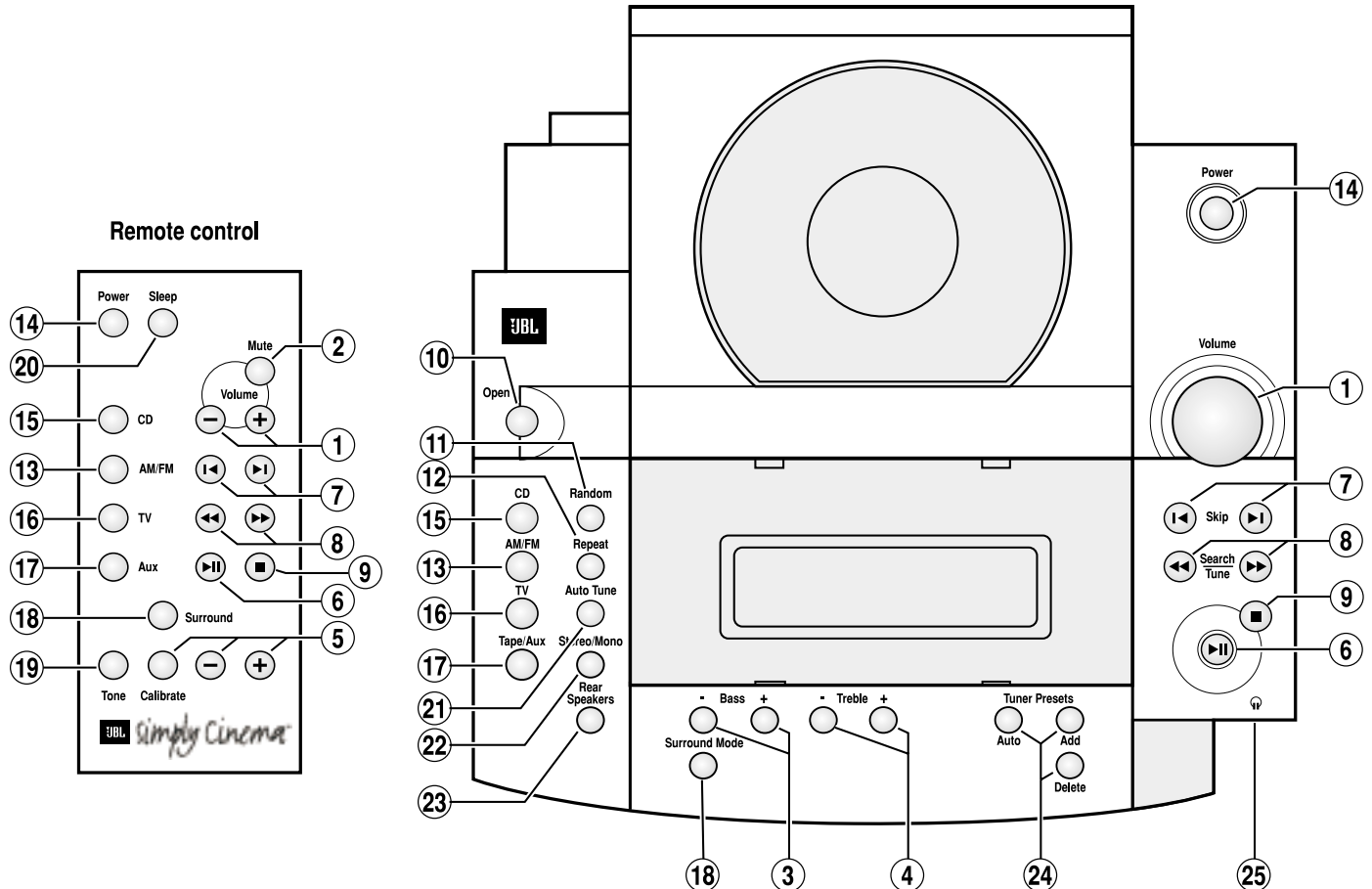
**C707**

**CONTROL BOARD (Top View)**

**SOLDER .01uf CAP  
HERE ON OPPOSITE  
(SOLDER SIDE) OF  
CONTROL PCB**



## CONTROLS AND THEIR FUNCTION



**1. Volume** - Turning this knob clockwise or pressing “+” on the remote will increase the volume. Turning the knob counter clockwise or pressing “-” on the remote will decrease the volume.

**2. Mute** - Pressing this button will mute the volume.

**3. Bass** - To raise and lower the bass level press these “+” and “-” buttons. See number “5. Calibration” for the same adjustments via the remote.

**4. Treble** - To raise and lower the treble level press these “+” and “-” buttons. See number “5. Calibration” for the same adjustments via the remote.

**5. Calibration** - This button operates the calibration of the “Bass”, “Treble”, Balance and Center Channel Volume. Press this button until the desired object for calibration (e.g. Bass) appears in the display. Press the “+” to increase and the “-” to decrease.

**6. Play/Pause** - Pressing this button will cause the CD to begin playing. Pressing it while a CD is playing will pause the CD until it is pressed again allowing the CD to continue playing.

**7. Skip** - Pressing “Back” or “Forward” will cause the CD to skip backward or forward to the next track.

**8. Scan** - Pressing “Back” or “Forward” will cause the CD to scan backward or forward within the existing track being played. In the tuner mode these buttons tune the receiver to the next station, backwards or forwards.

**9. Stop** - Pressing this button will stop the CD operation.

**10. Open** - This button will open the CD holder door.

**11. Random** - Pressing this button will cause the CD to be played in random order.

**12. Repeat** - Pressing this button will cause the CD to begin again when finished.

**13. AM/FM** - This button allows the switching between the AM and FM selection of the tuner. This button also switches the unit back to the tuner mode when in the CD, TV or Aux modes.

**14. Power** - Press this button to turn on the "Source".  
**NOTE:** The Source must be connected to the Bass550 subwoofer with its main power switch ON to operate.

**15. CD Operation** - Pressing this button will place the "Source" in CD playing mode.

**16. TV Operation** - Pressing this button will place the "Source" in TV operation mode.

**17. Tape/Aux** - Pressing this button will place the "Source" in Auxiliary mode. This is used when you have another input source connected such as a tape player.

**18. Surround Mode** - Pressing this button will allow you to pick between 3 different mode settings: Dolby Pro-Logic, Dolby Pro-Logic Phantom mode and 2-channel (stereo) mode.

**19. Tone** - This button is used to test and calibrate the performance of the system.

**20. Sleep** - This Button is used to turn the unit off automatically after a selected amount of time in 10 minute increments up to 90 minutes.

**21. Auto Tune** - Pressing this button, and then pressing either of the "Search/Tune" buttons (See #8) backward or forward will cause the "Source" to tune to the next strong signal.

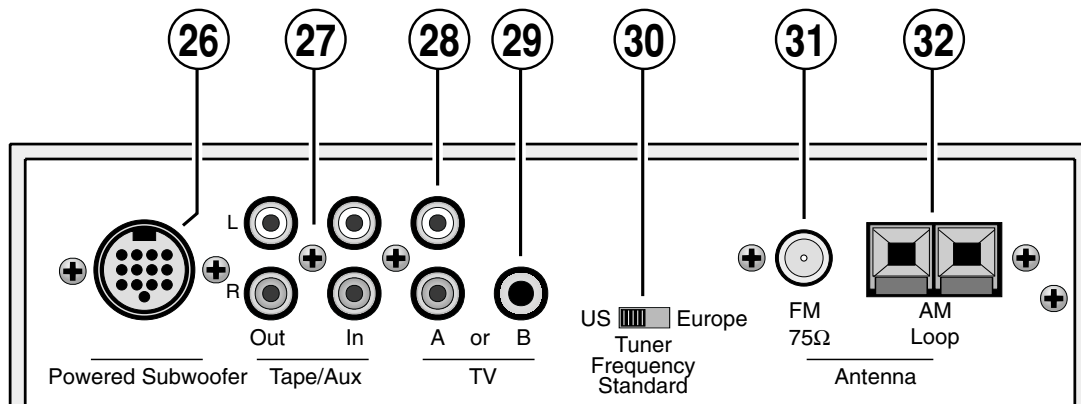
**22. Stereo/Mono** - Pressing this button will play the selected station without any stereo separation.

**23. Rear Speakers** - Pressing this button while listening in either Surround Modes will turn off the surround speakers.

**24. Tuner Presets** - Pressing "Auto" for a full second will cause the tuner to scan for strong signals and place up to 32 stations in memory as preset stations. To move across these preset stations press "Skip" (See #7) either forward or backward. Pressing "Add" will add to the preset stations the signal presently tuned. Pressing "Delete" will delete from the preset stations the signal presently tuned.

**25. Headphone Jack** - Connect a set of headphones with stereo mini-phono plug here for private listening.

## CONNECTIONS



**26. ESC550 Cable Connector** - Plug the ESC550 cable in here and the other end into the Bass550 subwoofer.

**27. Tape/Aux In/Out** - Connect Tape Player or Auxiliary equipment here. The Output jacks are a Stereo fixed level signal.

**28. (A) TV Connection** - Connect the dual RCA stereo cable from the output of a television set here.

**29. (B) TV Connection** - Connect the stereo mini-phono jack from the output of a television set here.

**30. Tuning Frequency** - This switch determines whether the tuning standard is set for US or European standard reception.

**31. FM Antenna** - This is the connection for the FM cable antenna.

**32. AM Antenna** - This is the connection for the AM loop antenna.



## DISASSEMBLY PROCEDURE

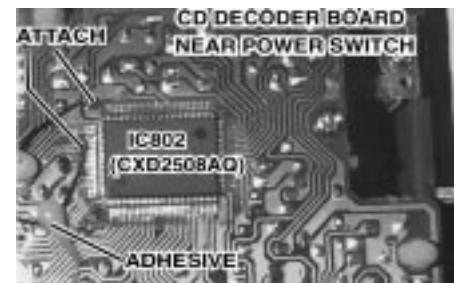
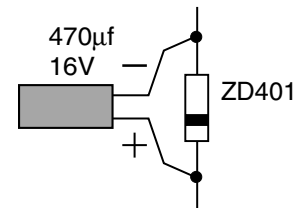
1) Lay unit face down. Remove the 5 Phillips screws holding the upper & lower case together; separate cases.

2) Remove as many molex connectors as necessary to separate case halves; do not mix up connectors during reassembly. Label if necessary.

## TROUBLESHOOTING

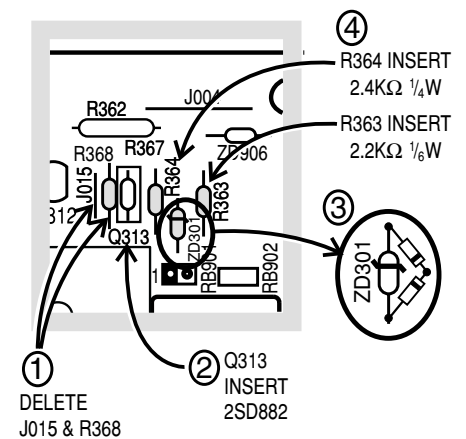
PROBLEM	SOLUTION
DISPLAY BRIGHTNESS UNEVEN	Cut out R364 & R367 on CONTROL PCB
HUM IN CD MODE	(1) Add 470uf 16v Cap. (PRE3952-471) in parallel with ZD401 on MAIN PCB; observe polarity (see drawing)
	(2) Replace C472 (47uf 16v) with 470uf 16v cap. (PRE3952-471)
CD PLAY INTERMITTENT - ONE CHANNEL DEAD	Add insulated jumper wire near IC802 on CD DECODER PCB pin #67 and pad exiting from corner of IC - ground. (see illustration)

### DETAILS



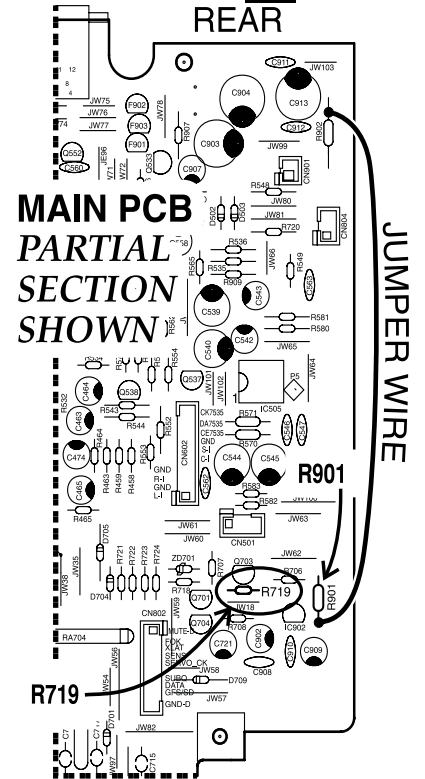
CD PLAY INTERMITTENT	On MAIN PCB, cut out C721
----------------------	---------------------------

CD PLAY INTERMITTENT - DISPLAY BLINKING	On CONTROL PCB, (1) Cut out jumper J015 and R368
	(2) Replace existing part Q313 with 2SD882P NPN Transistor (RHN0882-001)
	(3) Solder 2 pcs. Diode IN41418 (RAD4148-001) in parallel with ZD301 (see illustration). Observe all polarities.
	(4) R364 insert and solder a 2.4 ohm resistor (or two 4.7 ohm [QAF0450-479] in parallel)
	(5) R363 insert and solder a 2.2K ohm resistor (QAF0650-222)



**Dolby Pro-Logic® Surround Processor/CD Player/Tuner**

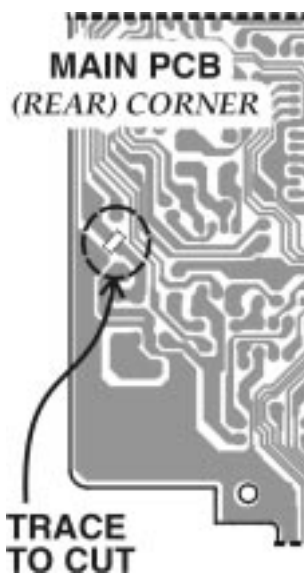
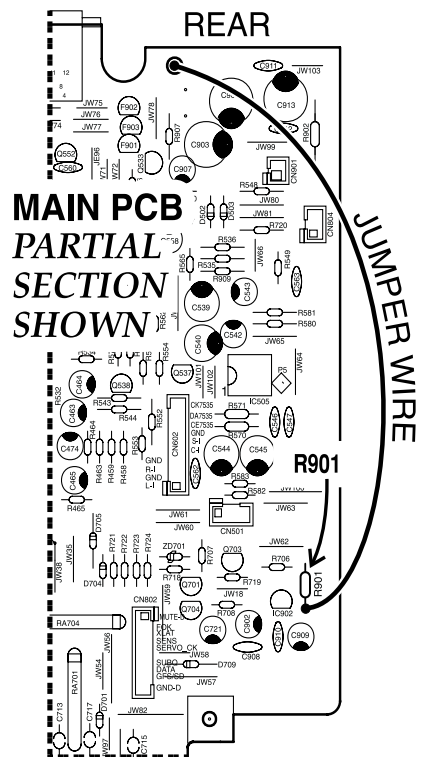
<p>LCD DISPLAY FLICKERS &amp; CD TRACKS ADVANCE BY THEM SELVES</p>	<p>(1) On the MAIN PCB, add insulated jumper from R901 (nearest C909)(+) to R902 (nearest jumper J103).</p>
	<p>(2) Cut out R901 (1 ohm resistor)</p>



<p>DISPLAY STAYS ON WHEN POWER OFF</p>	<p>On the MAIN PCB, change R719 (10k ohm resistor) to 1k ohm (QAF0650-102)</p>
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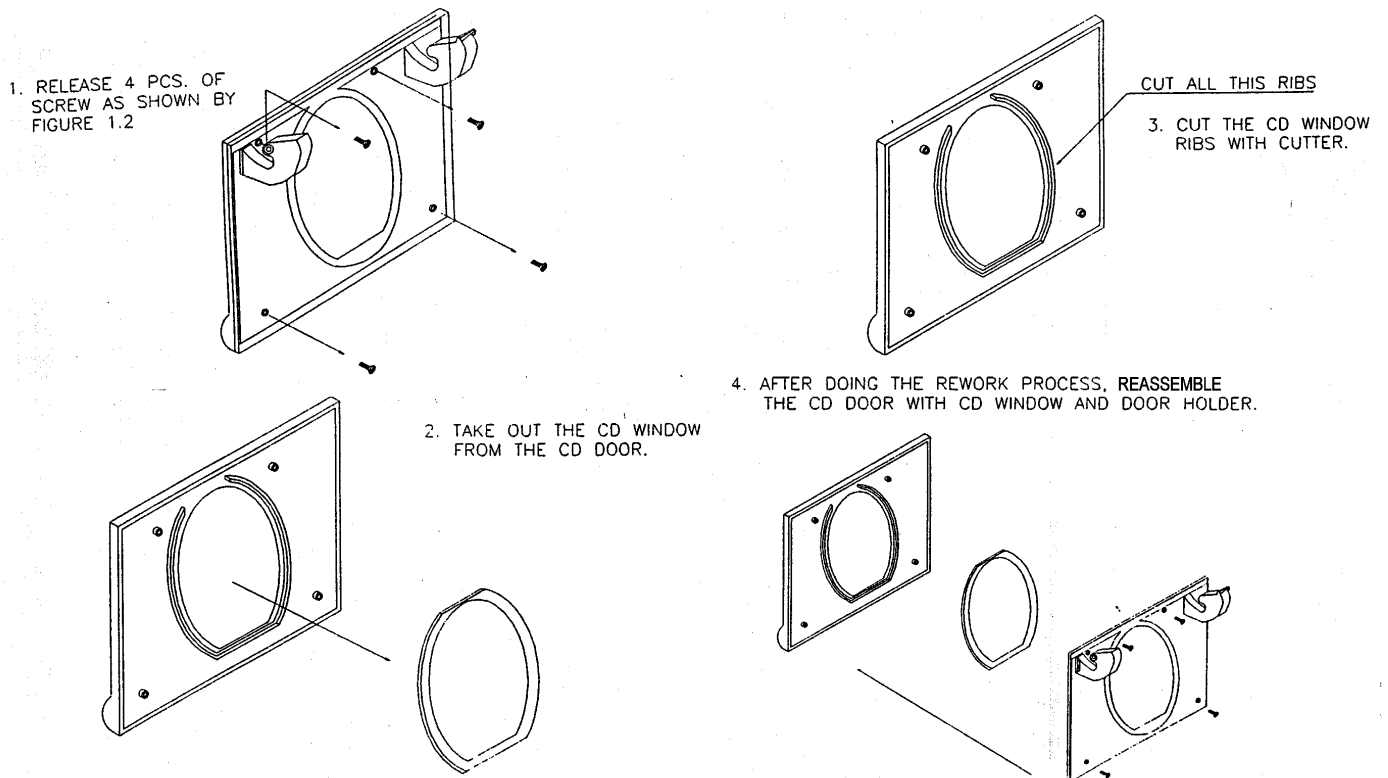
<p>CD FUNCTION (PLAY, TRACK UP) CHANGES TO TV BY ITSELF</p>	<p>On the MAIN PCB, short pins 60 &amp; 61 on IC701 together by solder or jumper wire.</p>
---	--

<p>GOES TO STANDBY MODE BY ITSELF WHEN PLAYING CD's</p>	<p>(1) On the MAIN PCB, add insulated jumper from R901 (nearest C909)(+) to upper hole in PCB (near C912 and nearest plastic rivet) PCB will have to be removed and soldered at the rear.</p>
	<p>(2) Cut copper trace joining JW100 and CN804 at rear of PCB (see illustration)</p>



WHEN CD PLAYER WARMS UP IT STOPS IN PLAY MODE	<p>(1) On CD DECODER PCB, attach a heatsink (w/adhesive) to IC803 (KA9258D)</p> <p>(2) To avoid contact with heatsink on the MAIN PCB, cut TP01 &amp; TP02 shorter (same height as IC101); push down C129, C119, &amp; C120.</p>
---	--

GAP BETWEEN CD DOOR AND TOP OF CABINET	FOLLOW DIRECTIONS IN ILLUSTRATION
RUBBING NOISE DURING CD PLAY MODE	
CD STUCK DURING PLAY MODE	



## ADJUSTMENT PROCEDURE

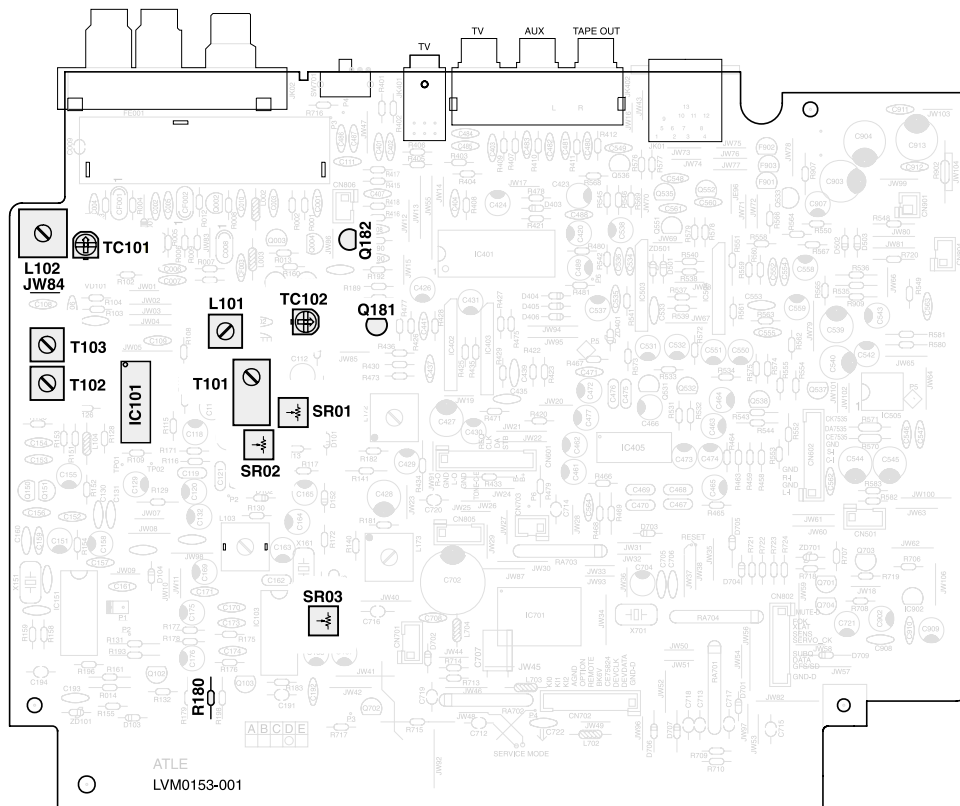
### Test Conditions

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

### Test Condition

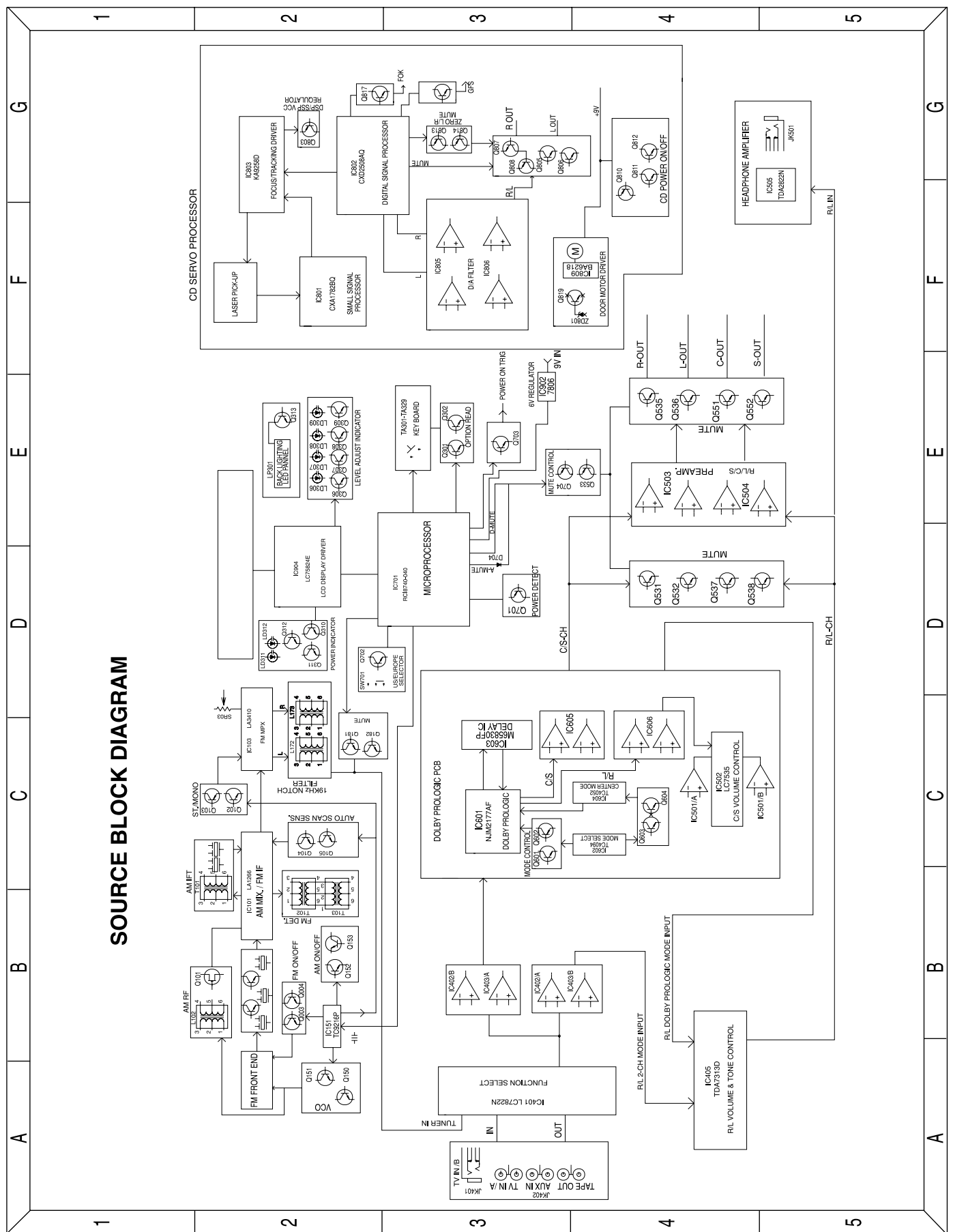
**FM** (Frequency Modulation)  
 Function.....FM  
 Input Level .....60dB/m (1mV)  
 Generator .....Deviation 22.5kHz, 1kHz

Step	Signal or Sweep Generator		Reception Frequency	Output Indicator Connection	Adjustment	Adjust For
	Connection	Frequency				
<b>AM TUNING VOLTAGE</b>						
1	No Signal		1710kHz	DC Digital Voltmeter JW84	TC102	10.5+/-0.1V
2	No Signal		520kHz	Same as Step 1	L101	1.2+/-0.1V
3	Repeat Step 1 and 2 a few times					
<b>AM IF</b>						
4	AM Loop Antenna at a distance of 24 inch (60cm) from the IRT Loop	450kHz	Point of noninterference	IF Sweep Generator IC101 Pin 12	T101	Flax and Max
<b>AM TRACKING</b>						
5	Same as Step 4	620kHz	620kHz	RF Sweep Generator R180	L102	Max
6	Same as Step 4	1400kHz	1400kHz	Same as Step 5	TC101	Max
7	Repeat Step 5 and 6 a few times					
<b>FM IF</b>						
8	To the FM antenna terminals through a matching transformer	10.7MHz	Point of noninterference	IF Sweep Generator IC101 Pin 12	T102 T103	Flat and Max Check Voltage Between R109=0V+/-30mV
<b>FM MPX</b>						
9	Same as Step 8	98.1MHz	98.1MHz	RF Generator Q181, Q182 "C"	SR03	Max Separation

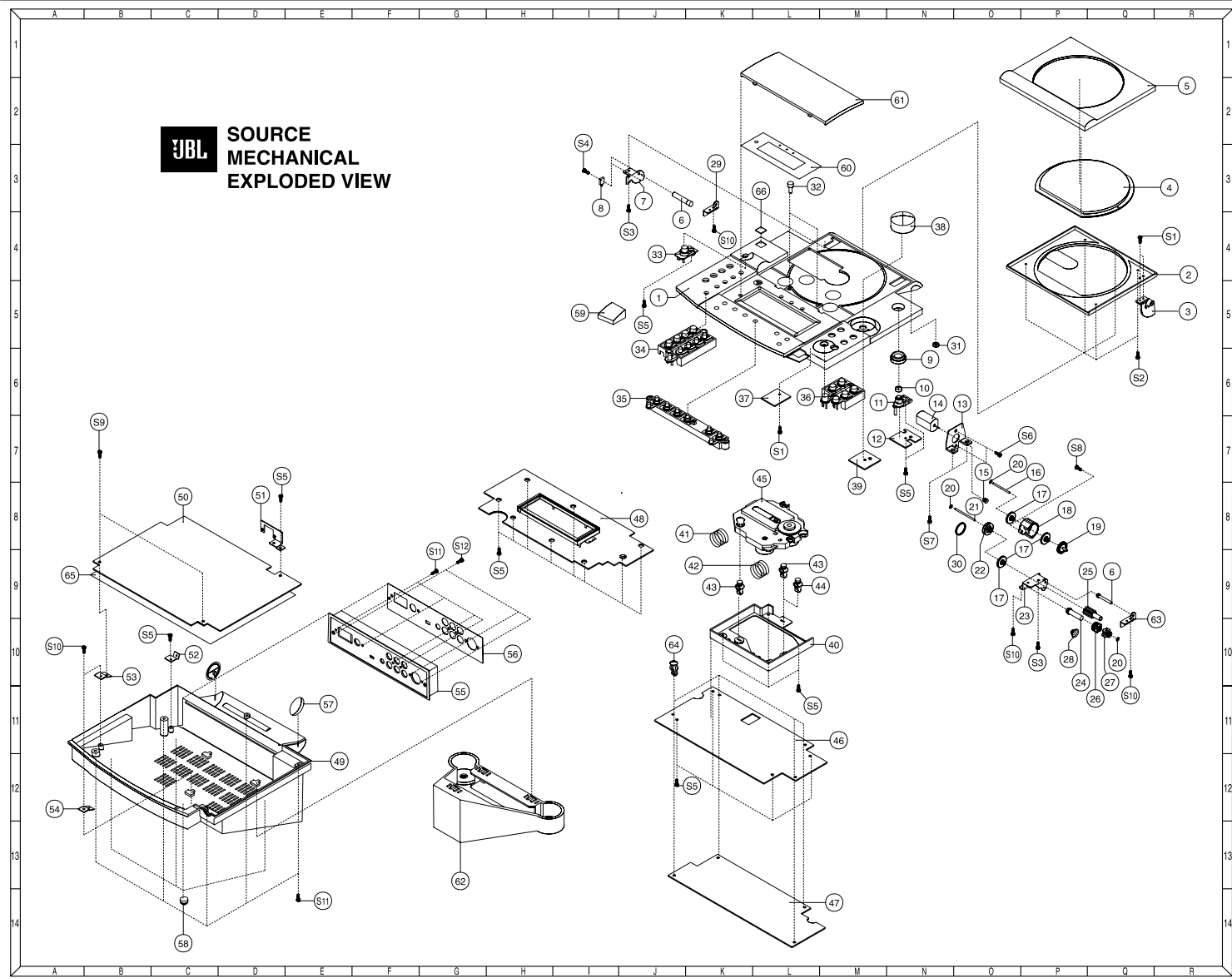


SOURCE BLOCK DIAGRAM

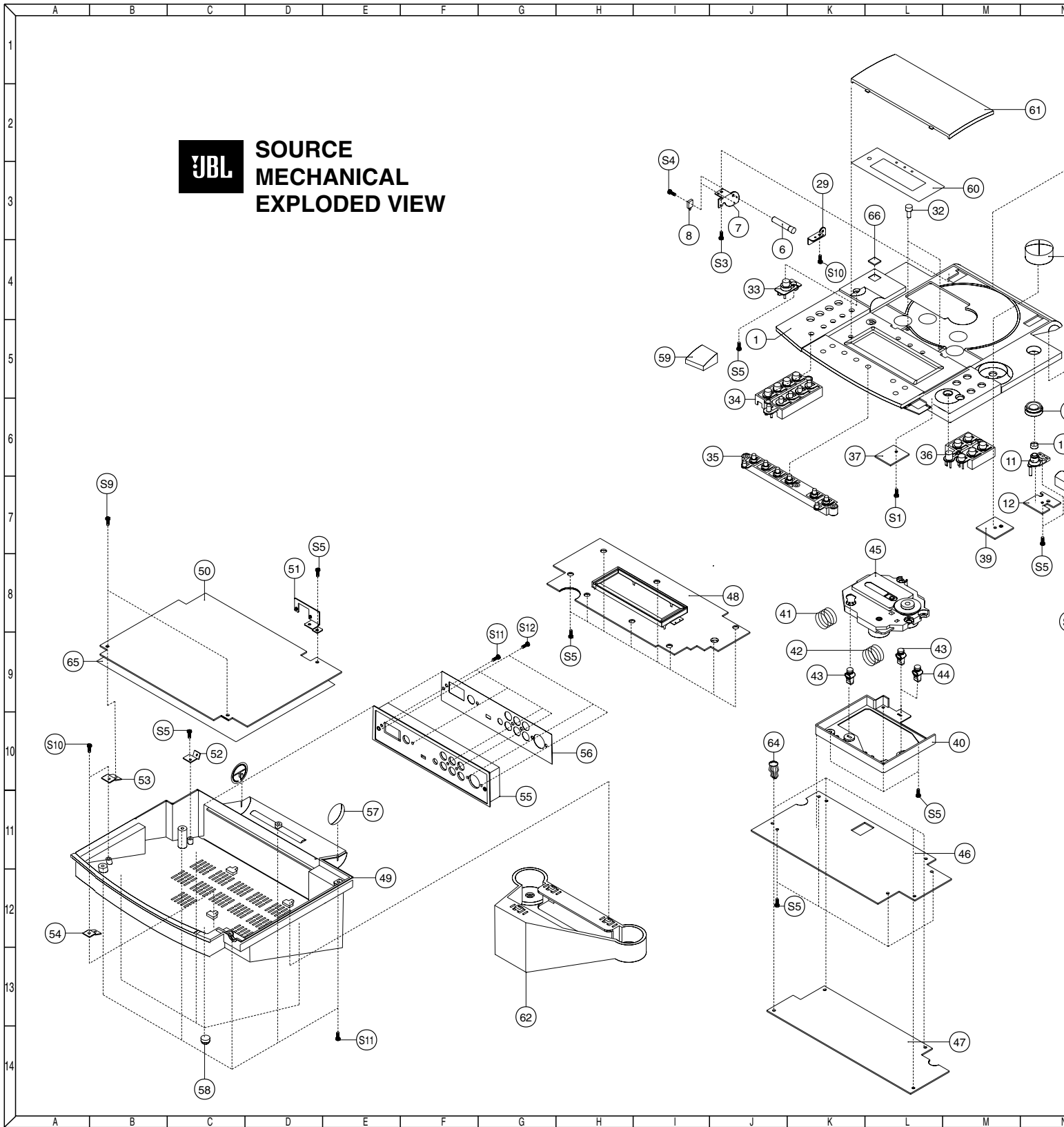
SOURCE BLOCK DIAGRAM



SOURCE MECHANICAL EXPLODED VIEW

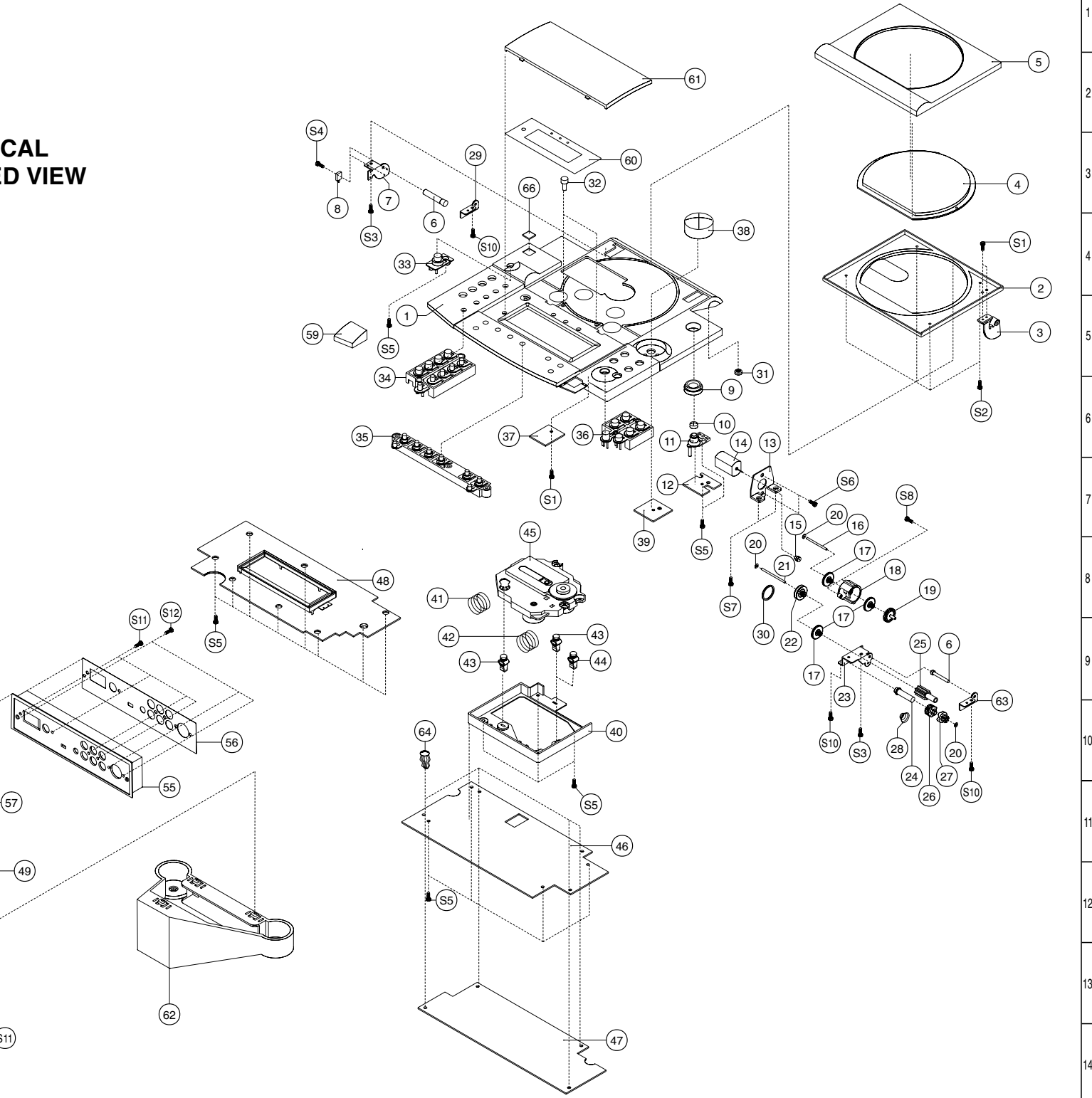


**JBL** SOURCE  
MECHANICAL  
EXPLODED VIEW



E F G H I J K L M N O P Q R

CAL  
D VIEW



1  
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E F G H I J K L M N O P Q R

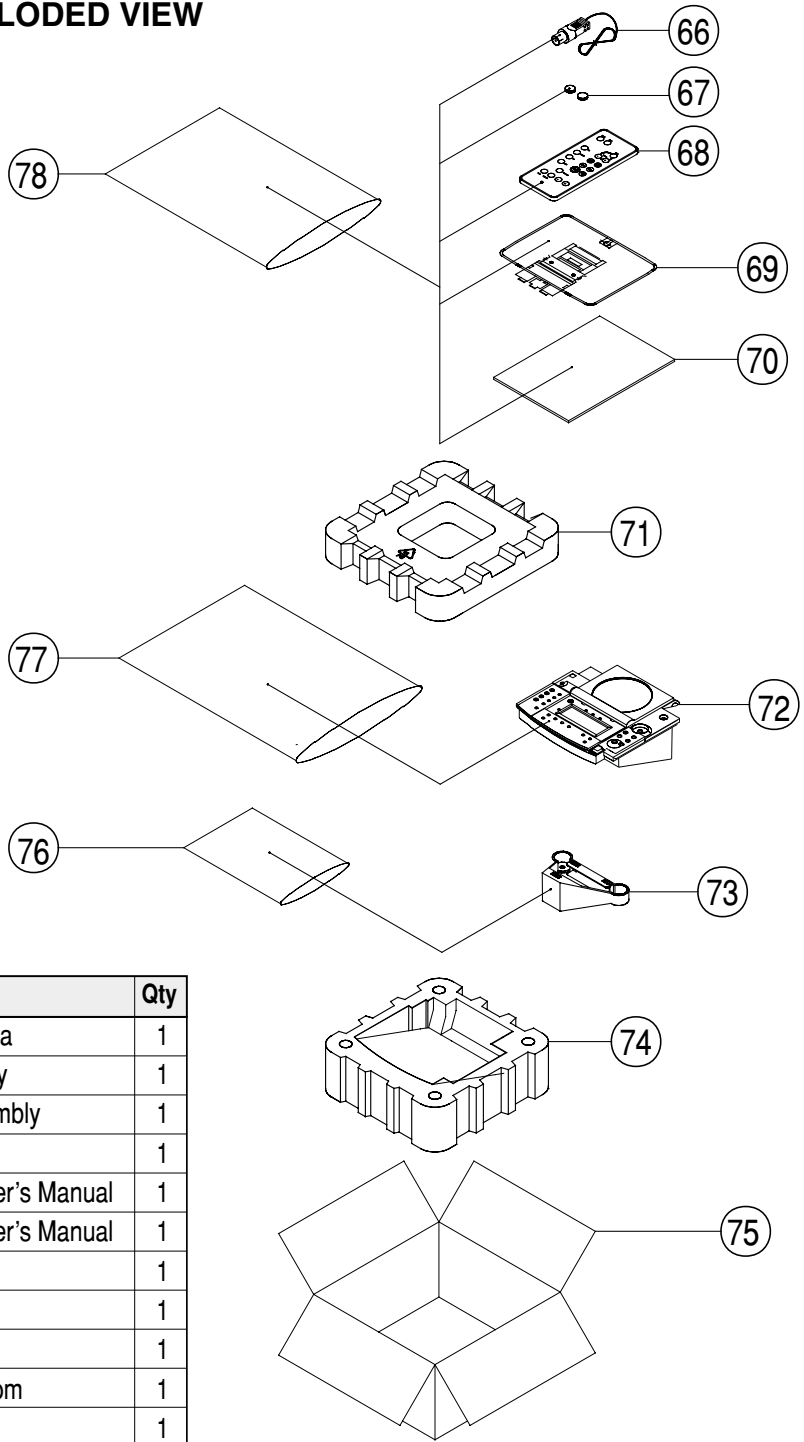


## MECHANICAL PARTS LIST

Ref. #	Part Number	Description	Qty	Ref. #	Part Number	Description	Qty
1	BPT0011-AG1	TOP CABINET	1	47	APE0154-001	PRO-LOGIC PCB ASSEMBLY	1
2	BPH0018-001	DOOR HOLDER	1	48	APE0151-011	CONTROL PCB ASSEMBLY	1
3	BPG1017-001	DOOR LEG	1	49	BPB0010-AGI	BOTTOM CAB	1
4	BPN0051-002	DISC WINDOW	1	50	APE0153-001	MAIN PCB ASSEMBLY	1
5	BPD1016-AG1	CD DOOR	1	51	GSE0135-001	MAIN BRACKET BACK RIGHT	1
6	DSF0002-001	DOOR SHAFT	2	52	GSE0136-001	MAIN BRACKET BACK LEFT	1
7	GSE0131-001	DOOR BRACKET (LEFT)	1	53	GSE0133-001	MAIN BRACKET FRONT LEFT	1
8	MSV0002-001	LEVER SWITCH	1	54	GSE0134-001	MAIN BRACKET FRONT RIGHT	1
9	BPN0052-001	POWER LENS	1	55	BPH0020-AG0	JACK PLATE	1
10	BPC0015-001	KNOB CAP	1	56	BPN0032-001	NAME PLATE FOR ESC550	1
11	BPK6020-000	POWER KNOB	1		BPN0032-002	NAME PLATE FOR ESC350	1
12	APE0153-031	POWER LED PCB ASSEMBLY	1	57	BPC0012-001	CABINET CAP	2
13	GSE0130-001	MOTOR BRACKET 1	1	58	BRF0008-001	FOOT	4
14	FMD0004-001	MOTOR	1	59	BPN0054-001	SENSOR WINDOW	1
15	BPG1029-001	GEAR F	1	60	BNP0032-001	DISPLAY SHEET	1
16	DSF0001-001	SHAFT GEAR 2	1	61	BPN0053-002	DISPLAY WINDOW	1
17	BPG1027-001	GEAR D	3	62	BPH0019-AG0	WALL BRACKET	1
18	BPH0027-001	HOLDER (GEAR)	1	63	GSE0143-001	BRACKET DOOR 1	1
19	BPG1026-001	GEAR C	1	64	DSS0010-001	SPACER SUPPORT	4
20	HWC4016-302	WASHER OD4.0xID1.6xT0.2 mm MYLAR	3	65	GTN0026-001	SHIELD PLATE MAIN PCB TO BOTTOM CABINET	1
21	DSF0005-001	SHAFT GEAR 1	1	66	CLJ0007-001	JBL LOGO PLATE	1
22	BPG1028-001	GEAR E	1	S1	H101501-105	SCREW T2.6xL5.0mm TAPPING HEAD PHONE TO TOP	3
23	GSE0130-001	MOTOR BRACKET	1	S2	H101508-306	SCREW T2.6xL6.0 mm FLAT HEAD DOOR TO HOLDER	4
24	DSF0003-001	STUD (GEAR)	1	S3	H060301-104	SCREW M3.0xL4.0xP0.5 mm NICKEL DOOR BRACKET	2
25	BPG1030-001	GEAR G	1	S4	H060001-106	SCREW M1.7xL6.0 mm NICKEL SLIDE SW-2	2
26	BPG1025-001	GEAR B	1	S5	H101001-110	"SCREW T3.0xL10.0 mm NICKEL AM/FM KNOB TO TOP-2 BRKT TO BOTTOM-2, FUNCTION KNOB TO TOP-3 SKIP KNOB TO TOP-2, FUNCTION PCB TO TOP-1, CD PCB TO TOP-4, OPEN/CLOSE KNOB TO TOP-1, CD HOLDER TO TOP-4, POWER KNOB TO TOP-1, POWER PCB-1"	21
27	BPG1024-001	GEAR A	1	S6	H060101-304	SCREW M2.0xP0.4xL4.0 mm' BLACK	2
28	DSU0018-002	SPRING GEAR 800g	1	S7	H101501-508	SCREW T2.6xP1.058xL8.0 mm PAN HEAD ZINC MOTOR BRACKET TO TOP	2
29	GSE0129-001	DOOR BRKT RIGHT	1	S8	H060201-116	SCREW M2.6xP0.45xL16.0 mm NICKEL MOTOR CASE	2
30	BRW0001-001	MOTOR BELT	1	S9	H100301-306	SCREW TAPPING 3.0 x 6 BLACK MAIN PCB TO BRACKET	2
31	DSF0006-001	INSERT	2	S10	H101001-108	"SCREW T3.0x1.27P-2RHxL8 mm NICKEL (PAN HEAD) DOOR BRACKET TO TOP-3, BRACKET TO BOTTOM-2	5
32	BRF0012-001	DOOR CUSHION	2	S11	H101001-310	"SCREW T3.0xL10.0 mm PAN HEAD BLACK TOP TO BOTTOM-5, JACK TO HOLDER-4"	9
33	BPK4019-000	OPEN/CLOSE KNOB	1	S12	H120301-308	SCREW M3x0.5Px8 mm BLACK DIN JACK TO HOLDER-3	3
34	BPK2032-000	AM/FM KNOB	1				
35	BPK2033-000	FUNCTION. KNOB	1				
36	BPK1046-001	SKIP KNOB	1				
37	APE0151-021	PHONE JACK PCB ASSEMBLY	1				
38	BPK5030-AG0	VOLUME KNOB	1				
39	APE0152-021	VR PCB ASSEMBLY	1				
40	BPH0021-001	CD HOLDER	1				
41	DSU0016-001	CD SPRING LEFT	1				
42	DSU0015-001	CD SPRING RIGHT	1				
43	BRF0009-001	CD CUSHION WHITE	2				
44	BRF0009-002	CD CUSHION BLACK	1				
45	WCD0010-001	CD PLAYER CD93V4BF	1				
46	APE0152-011	CD DECODER PCB ASSEMBLY	1				

**SOURCE PACKING EXPLODED VIEW**

**JBL SOURCE PACKING EXPLODED VIEW**



Ref.#	Part Number	Description	Qty
66	VTA9300-012	F Plug Antenna	1
67	FBL0030-001	Lithium Battery	1
68	WIR0020-432	Remote Assembly	1
69	VTA9300-009	Loop Antenna	1
70	332358-001	ESC550 Owner's Manual	1
	YOM0188-001	ESC350 Owner's Manual	1
71	ITF0102-001	End Cap Top	1
72		SOURCE	1
73	BPH0019-AG0	Wall Bracket	1
74	ITF0101-001	End Cap Bottom	1
75	ICC0104-001	Gift Box	1
76	IVP0001-046	Poly Bag L290xW200mm	1
77	IVP0001-045	Poly Bag L350xW350mm	1
78	IVP0001-047	Poly Bag L70xW50mm	1

**NOTE: THIS PACKAGE IS PART OF THE ESC350 AND ESC550 SYSTEM PACKAGE.**

## SOURCE ELECTRICAL PART LISTS

Ref. #	Part Number	Description	Qty	Ref. #	Part Number	Description	Qty
<b>APE0151-011 CONTROL PCB</b>				<b>Transistors</b>			
<b>Capacitors</b>				Q301, 302, 306, 307, 308, 309, 310, 311, 312	RAN0945-001	XISTR NPN 2SC945P NEC	9
C301	PRD4965-223	DISC .022 uF 50V +80-20% 11 Z5V	1	Q313	RHN0882-001	XISTR NPN 2SD882P	1
C913, 951	PRA3952-101	COND ELECT 100 uF 16V 20% MINI SIZE	2	<b>Integrated Circuit</b>			
C932	PRA3952-220	COND ELECT 22 uF 16V 20% MINI SIZE	1	IC904	RCI5824-001	IC 64 PIN LC75824E SANYO 204 SEG LCD DRIVER	1
C933	PRD3545-101	COND DISC 100 pF 50V 10% Y5P	1	<b>Miscellaneous</b>			
	PRD3545-103	COND DISC 0.01 uF 50V 10% Y5P KIO TO GND	1	DP201	KLD0020-001	DISPLAY LC CT-100P-AT PICVUE	1
C934, C935	PRD3545-104	COND DISC 0.1 uF 50V 10% Y5P	2	LD306-309	BPH0024-001	LED HOLDER CU-100	4
<b>Resistors</b>				LP301	KDG0050-001	LED ARRAY GREEN 50 LED 108x39x6 mm	1
R301, 315, 365	QAF0650-151	RESISTOR 150 OHM 1/6W 5% CF	3	LD306-309	KER0205-001	LED 2DIA x 5DIA; 5.6DIA	4
R302, 321	QAF0650-331	RESISTOR 330 OHM 1/6W 5% CF	2	JK501	CJM9380-035	PHONE JACK JYE TAI JY-3535 3.5 DIA	1
R303, 304, 322, 323	QAF0650-391	RESISTOR 390 OHM 1/6W 5% CF	4	RB702	4999A-301	CON/WIRE 11 COND 120 mm WHITE	1
R305, 324	QAF0650-561	RESISTOR 560 OHM 1/6W 5% CF	2	RB901	4999A-302	CON/WIRE 2 COND 230 mm BLACK	1
R306, 325	QAF0650-681	RESISTOR 680 OHM 1/6W 5% CF	2	RB301	500322008B0	CON/WIRE 2 COND 200 mm	1
R307, 326	QAF0650-751	RESISTOR 750 OHM 1/6W 5% CF	2	RB302	500331508B0	CON/WIRE 3 150 mm BLACK	1
R308, 327	QAF0650-821	RESISTOR 820 OHM 1/6W 5% CF	2	SN951	RHO0638-005	IRT SENSOR PIC-12043TM KODENSHI	1
R309, 328	QAF0650-122	RESISTOR 1.2K OHM 1/6W 5% CF	2	TA301-315 321-329	MAT2029-001	AI TACT 5W SKHVBE3520 5.0 mm 160 gf	24
R310, 329	QAF0650-152	RESISTOR 1.5K OHM 1/6W 5% CF	2	BPH0023-001		HOLDER SENSOR CU-100	1
R311	QAF0650-202	RESISTOR 2K OHM 1/6W 5% CF	1	GTN0021-001		LCD BRKT CU-100	1
R312	QAF0650-302	RESISTOR 3K OHM 1/6W 5% CF	1	<b>APE0151-021 HEADPHONE PCB</b>			
R313	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1	<b>Miscellaneous</b>			
R314	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	1	C565, 566	PAU3652-102	COND TUBUL 0.001 uF 16V	2
R317, 363	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	2	L501, L502	SCC0155-100	CHOKE SMD 10 uH 5% ldc 155 mA	2
R318, 337, 338	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	3	L503	SLF0201-011	BEAD FERIT 15 DIAx9.5x6 mm 2500 nH/N	1
R346, 347, 348, 349	QAF0650-471	RESISTOR 470 OHM 1/6W 5% CF	4	RB501	500342408B0	CON/WIRE 4 240 mm BLACK PITCH=2.0 mm	1
R356-360, 361, 366, 379, 380	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	9	<b>APE0152-001 CD DECODER PCB</b>			
R364	QAF0450-249	RESISTOR 2.4 OHM 1/4W 5% CF	1	<b>Capacitors</b>			
R362	QAF0450-470	RESISTOR 47 OHM 1/4W 5% CF	1	C801	PRA3951-470	COND ELECT 47 uF 10V 20% MINI SIZE	1
R919	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1	C802, 806, 813, 814, 822, 823, 824, 839, 856, 887, 889	PRD3965-104	COND DISC 0.1 uF 50V +80-20% Y5V/Z5V	11
R920	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	1	C805, 807, 818, 820, 827, 830, 831, 835	PRM3737-103	COND MYLAR 0.01 uF 100V 5%	8
R921	QAF0650-564	RESISTOR 560K OHM 1/6W 5%CF	1				
R922, 923, 924	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	3				
R951	QAF0650-100	RESISTOR 10 OHM 1/6W 5% CF	1				
<b>Diode</b>							
D915-917	RAD4148-001	DIODE SW 1N4148	3				
ZD905	RAZ0859-066	DIODE ZENR 4.4-4.6V .5W HITACHI	1				
ZD906	RAZ0859-071	DIODE ZENR 6.0-6.3V .5W HITACHI HZ6C-2	1				

Ref. #	Part Number	Description	Qty	Ref. #	Part Number	Description	Qty
C808, 838, 840, 859, 864, 865	PRE3951-101	COND ELECT 100 uF 10V 20%	6	R817	QAF0650-100	RESISTOR 10 OHM 1/6W 5% CF	1
C809, 812	PRM3737-222	COND MYLAR 0.0022 uF 100V 5%	2	R818	QAF0650-273	RESISTOR 27K OHM 1/6W 5% CF	1
C810, 861, 862	PRM3737-102	COND MYLAR 0.001 uF 100V 5%	3	R820	QAF0650-203	RESISTOR 20K OHM 1/6W 5% CF	1
C811, 832	PRM3737-473	COND MYLAR 0.047 uF 100V 5%	2	R821	QAF0650-824	RESISTOR 820K OHM 1/6W 5% CF	1
C815	PRD3545-102	COND DISC 1000 pF 50V 10% Y5P	1	R823	QAF0650-514	RESISTOR 510K OHM 1/6W 5% CF	1
C816, 853, 874, C876	PRA3951-101	COND ELECT 100 uF 10V 20% MINI SIZE	4	R825	QAF0650-753	RESISTOR 75K OHM 1/6W 5% CF	1
C819, 821, 826	PRM3737-333	COND MYLAR 0.033 uF 100V 5%	3	R827, 864, 865	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	3
C825	PRE3955-479	COND ELECT 4.7 uF 50V 20%	1	R828, 830, 849, 850, 851, 852, 889	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	7
C828	PRE3955-108	COND ELECT 0.1 uF 50V 20%	1	R829	QAF0650-124	RESISTOR 120K OHM 1/6W 5% CF	1
C829, 851, 852	PRA3952-100	COND ELECT 10 uF 16V 20% MINI SIZE	3	R831, 896	QAF0650-562	RESISTOR 5.6K OHM 1/6W 5% CF	2
C833	PRD3545-221	COND DISC 220 pF 50V 10% 11 Y5P D=5	1	R832	QAF0650-332	RESISTOR 3.3K OHM 1/6W 5% CF	1
C834, 854	PRE3955-478	COND ELECT 0.47 uF 50V 20%	2	R845, 846, 847, 848	QAF0650-363	RESISTOR 36K OHM 1/6W 5% CF	4
C836, 837	PRD1335-300	COND DISC 30 pF 50V 5% NP0 T.C.	2	R866, 867	QAF0650-224	RESISTOR 220K OHM 1/6W 5% CF	2
C841, 842	PRD1335-820	COND DISC 82 pF 50V 5% NP0	2	R872	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1
C843, 844, 845, 846	PRD1335-390	COND DISC 39 pF 50V 5% NP0	4	R890, 891	QAF0650-683	RESISTOR 68K OHM 1/6W 5% CF	2
C847, 848	PRD3545-331	COND DISC 330 PF 50V 10% Y5P	2	R899	QAF0650-682	RESISTOR 6.8K OHM 1/6W 5% CF	1
C849, 850	PRD3545-152	COND DISC 1500 pF 50V 10% 11 Y5P D=6	2	<b>Diodes</b>			
C857	PRD3545-201	COND DISC 200 pF 50V 10% Y5P	1	D801, 802, 803, 804, 809	RAD4148-001	DIODE SW IN4148	5
C863, 875	PRM3737-104	COND MYLAR 0.1 uF 100V 5%	2	ZD801	RAZ0859-068	DIODE ZENR 5.0-5.2V .5W HITACHI HZ5C-2	1
C873	PRD4965-203	DISC .02 uF 50V +80-20% 11 Z5V D=7	1	<b>Transistors</b>			
C890	PRM3737-152	COND MYLAR 0.0015 uF 100V 5%	1	Q801, 802, 803, 813, 814, 818	RAP0952-001	XISTR PNP 2SA952 NEC	6
C891, 892, 894, 895	PRE3952-221	COND ELECT 220 uF 16V 20%	4	Q805, 806	RAN2878-001	XISTR NPN 2SC2878	2
C893	PRN1052-470	COND ELECT 47 uF 16V 20% N.P.	1	Q807, 811, 812, 815, 816, 817	RAN0945-001	XISTR NPN 2SC945P NEC	6
<b>Resistors</b>				Q808	RAP0733-001	XISTR PNP 2SA733Q,P NEC	1
R801, 837, 859, 860, 894, 895	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	6	Q810	RHP0772-001	XISTR PNP 2SB772P/Q NEC	1
R802, 803, 826, 868, 884, 885	QAF0650-333	RESISTOR 33K OHM 1/6W 5% CF	6	Q819	RAN2001-001	XISTR NPN 2SC2001L NEC	1
R804	QAF0650-105	RESISTOR 1.0M OHM 1/6W 5% CF	1	<b>Integrated Circuits</b>			
R805	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	1	IC801	RCI1782-001	IC 48 PIN CXA1782BQ SONY RF AMP + S.S.P	1
R806, 822, 870, 873, 874, 877, 879, 880	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	8	IC802	RCI2508-001	IC 80 PIN CXD2508AQ SONY D.S.P + D.A.C	1
R810, 811, 824, 834, 835, 871, 875, 876	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	8	IC803	RCI9258-001	IC 28 PIN KA9258D SAMSUNG POWER DRIVE IC	1
R812, 838	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	2	IC805, 806	RHI5218-002	IC 8 PIN M5218AL MITSUBISHI OP AMP or 4558L OP-AMP	2
R813	QAF0650-334	RESISTOR 330K OHM 1/6W 5% CF	1	IC809	RHI6218-001	IC 9 PIN BA6218 MOTOR DRIVER IC1	1
R814	QAF0650-474	RESISTOR 470K OHM 1/6W 5% CF	1	<b>MISCELLANEOUS</b>			
R815, 878, 893	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	3	CN801	CCN0122-018	CONNECTOR 18 PIN PD18-1810D P=1.0 mm	1
J811, R816, 833, R836, 840, 841, R842, 843, 844, R853, 854, 855, R856, 857, 858, R861, 862, 892	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	18	CN301, 81, 82, 83	CCN7879-022	CONNECTOR J.S.T. 2.0mm PH B2B-PH-K TOP SIZE	4
				CN802	CCN7879-036	CONN 90DEG 2 PIN PITCH=2.0mm SIDE ENTRY TYPE	1

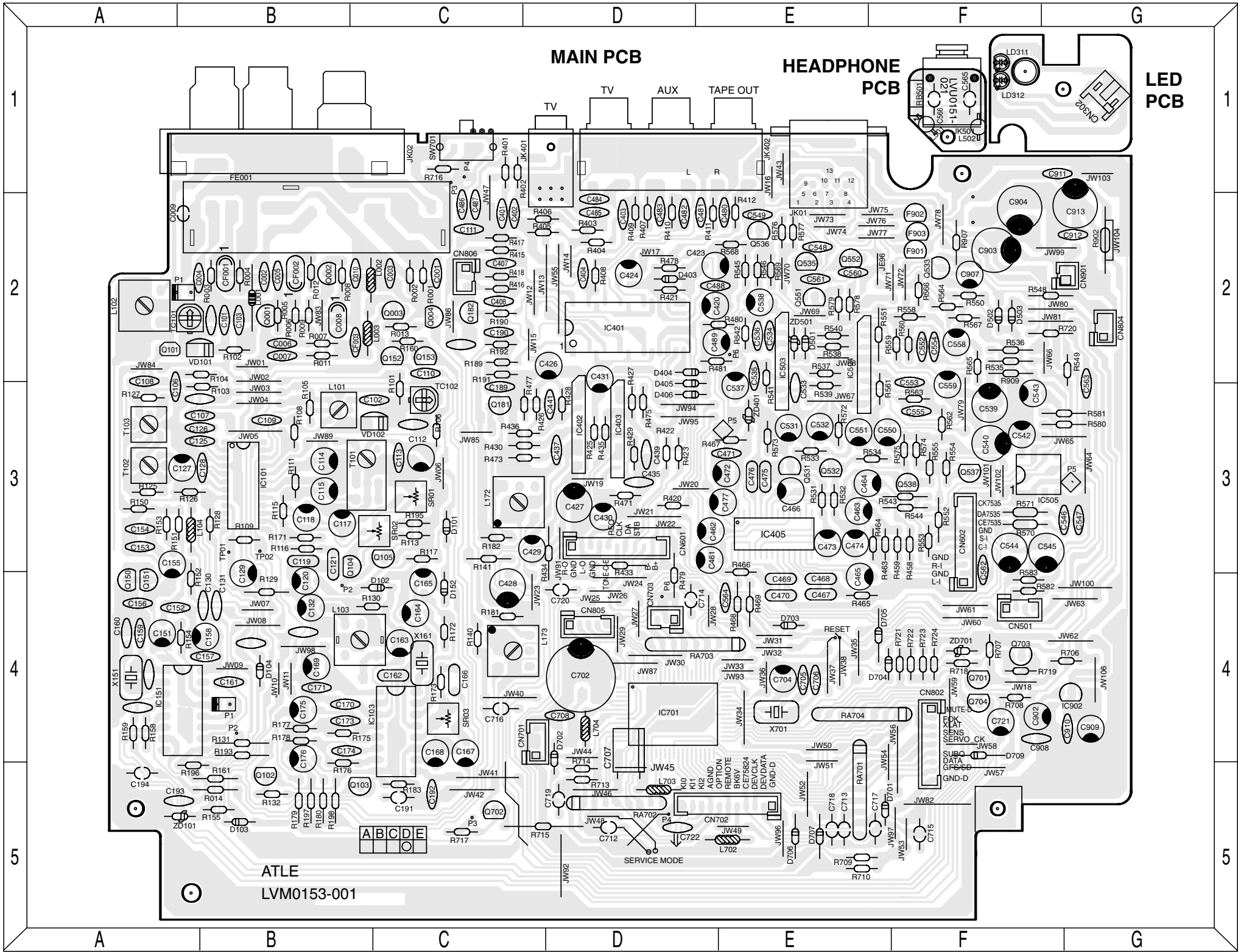
Ref. #	Part Number	Description	Qty	Ref. #	Part Number	Description	Qty
	GTN0011-001	HEAT SINK for IC803 1.0(T)x20(L)x20(W)mm TN	1	C119	PRM3737-153	COND MYLAR 0.015 uF 100V 5%	1
XL801	JQC6071-338 /U L=5.0 mm	CRYSTAL 33.8688 MHZ	1	C120, 163, 477	PRA3952-220	COND ELECT 22 uF 16V 20% MINI SIZE	3
L801, 802, 803	SHC7414-100	CHOKE 10	3	C121, 162	PRM3737-473	COND MYLAR 0.047 uF 100V 5%	2
RB802	4999A-303	CON/WIRE 9 COND 120 mm PITCH=2.0 mm	1	C129, 132, 165, 168, 169, 175, 176, 426, 431, 461, 462, 463, 464, 465, 466, 531, 532, 550, 551, 704	PRA3955-109	COND ELECT 1 uF 50V 20% MINI SIZE	20
RB805	4999A-304	CON/WIRE 5 COND 280 mm PITCH=2.0 mm	1	C130, 131, 161	PRD3545-102	DISC 1000 pF 50V 10% Y5P	3
RB804	4999A-305	CON/WIRE 3 COND 380 mm	1	C151, 158, 428, 542, 543	PRA3951-101	COND ELECT 100 uF 10V 20% MINI SIZE	5
RB806	4999A-306	CON/WIRE 3 COND 250 mm PITCH=2.0 mm	1	C155, 164, 489, 907	PRA3955-339	COND ELECT 3.3 uF 50V 20% MINI SIZE	4
TA330	MAT2029-001	AI TACT SW SKHVBE3520 5.0 mm 160 gf	1	C156, 189, 190, 535, 536, 548, 549, 554, 555, 560, 561	PRD3545-101	COND DISC 100 pF 50V 10% Y5P	11
P1 TO P1'	5820-110BB	WIRE 26 GA 110 mm BLACK	1	C159, 160	PRD1335-300	COND DISC 30 pF 50V 5% NP0 T.C.	2
P2-P2'	5820-200BB	WIRE 26 GA 200 mm BLACK	1	C173, 174	PRD3545-681	COND DISC 680 pF 50V 10% Y5P	2
<b>APE0152-021 VOLUME PCB</b>				C401, 402, 403, 404, 407, 408, 421, 422 478, 479, 480, 481, 488, 533, 534, 552, 553, 705, 706	PRD1335-470	COND DISC 47 pF 50V 5% NP0	19
C709, 710	PRD3545-102	COND DISC 1000 pF 50V 10% Y5P	2	C420, 423, 424, 427, 539, 540	PRA3952-101	COND ELECT 100 uF 16V 20% MINI SIZE	6
RB703	4999A-307	CON/WIRE 3 240 mm PITCH=2.0 mm	1	C467, 468, 469, 470	PEP2635-104	COND METAL 0.1 uF 50V 5% MINI SIZE (Al)	4
VR401	MSR1624-202	R-ENCODER EC16B24202 ALPS 16 mm WITH DETENT	1	C472, 903, 904, 913	PRE3952-471	COND ELECT 470 uF 16V 20%	4
<b>APE0153-001 MAIN PCB</b>				C475, 476	PRM3737-272	COND MYLAR 0.0027 uF 100V 5%	2
<b>Capacitors</b>				C482, 483, 484, 485, 486, 487	PRD3545-471	COND DISC 470 pF 50V 10% 11 Y5P D=5	6
C001, 002, 006, 007, 008, 010, 103, 106, 110, 113, 125, 126, 128, 152, 157, 171, 192, 193, 563, 564, 708, 908, 910	PRD4965-223	COND DISC .022 uF 50V +80-20% II Z5V	23	C544, 545	PRA3952-470	COND ELECT 47 uF 16V 20% MINI SIZE	2
C003, 107, 153, 154	PRD4965-103	COND DISC .01 uF 50V +80-20% II Z5V D=6	4	C702	PHG3950-107	MEMORY 0.1 F 5.5V 20%	1
C004	PRD1335-100	COND DISC 10 pF 50V 5% NP0	1	C707	PRE3951-471	COND ELECT 470 uF 10V 20%	1
C005	PRD3545-222	COND DISC 2200 pF 50V 10% Y5P	1	C713, 716, 717, 718	PAU3545-470	COND TUBUL 47 pF 50V 10% B(Y5P)	4
C009, 191, 194, 712, 714, 715, 719, 720	PAU3545-101	COND TUBUL 100 pF 50V 10% B(Y5P)	8	C902, 909	PRA3951-221	ELECT 220 uF 10V 20% MINI SIZE	2
C011	PRD1395-509	COND DISC 5 pF 50V +-0.5pF NP0 D=5	1	<b>Diodes</b>			
C101, 546, 547, 911, 912	PRD3965-104	COND DISC 0.1 uF 50V +80-20% Y5V/Z5V	5	D101, 102, 103, 104, 152, 403, 404, 405, 406, 501, 502, 503, 701, 702, 703, 704, 705, 706, 707, 709	RAD4148-001	DIODE SW 1N4148	20
C102	PRP3935-561	COND POLY 560 pF 50V 5%	1	VD101, 102	RHT6066-011	DIODE TUNG AM TOSHIBA 1SV149B	2
C108, 111, 170, 562	PRD3545-221	COND DISC 220 pF 50V 10% 11 Y5P D=5	4	ZD101, 501, 701	RAZ0859-068	DIODE 5.0-5.2V .5W HITACHI HZ5C-2	3
C109	PRD3545-473	COND DISC 0.047 uF 50V 10% Y5P	1				
C112, 117, 127, 167, 429, 430, 473, 474	PRA3952-100	COND ELECT 10 uF 16V 20% MINI SIZE	8				
C114, 115	PRA3955-479	COND ELECT 4.7 uF 50V 20% MINI SIZE	2				
C118	PRA3955-478	COND ELECT 0.47 uF 50V 20% MINI SIZE	1				

Ref. #	Part Number	Description	Qty	Ref. #	Part Number	Description	Qty
<b>Resistors</b>				R550, 580, 581	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	3
R001, 005, 117, 126, 181, 182, 576, 577, 578, 579, 715	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	11	R570, 571	QAF0650-479	RESISTOR 4.7 OHM 1/6W 5% CF	2
R002, 101, 102, 130, 141, 161, 171, 175, 176, 405, 406, 409, 410, 429, 430, 435, 436, 463, 464, 533, 534, 537, 538, 543, 544, 554, 555, 559, 561, 909	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	30	R716, 717	QAF0650-273	RESISTOR 27K OHM 1/6W 5% CF	2
R003, 004, 006, 009, 012, 103, 106, 155, 706	QAF0650-331	RESISTOR 330 OHM 1/6W 5% CF	9	R902	QHM1050-159	RESISTOR 1.5 OHM 1W 5% METAL FILM P=12.5 mm	1
R007	QAF0650-470	RESISTOR 47 OHM 1/6W 5% CF	1	R907	QAF0650-100	RESISTOR 10 OHM 1/6W 5% CF	1
R008, 109, 191, 192, 541, 542, 551, 560, 563	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	9	RA701, 702, 703, 704	QVP0859-472	RES ARRAY 4.7K OHM 1/8W 5% 9 PIN	4
R013, 014, 111, 115, 125, 127, 131, 132, 140, 193, 196, 197, 198, 422, 423, 479, 574, 575, 707, 708, 721, 722, 723, 724	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	24	<b>Fuses</b>			
R104	QAF0650-471	RESISTOR 470 OHM 1/6W 5% CF	1	F902	RAF0508-001	DIODE FUSE 0.8A 50V ROHM ICP-N20	1
R105	QAF0650-330	RESISTOR 33 OHM 1/6W 5% CF	1	F901, 903	RAF0515-001	DIODE FUSE 1.5A 50V ROHM ICP-N38	2
R108, 128, 150, 152, 153, 158, 159, 183, 189, 190, 401, 402, 403, 404, 407, 408, 415, 416, 421, 425, 426, 458, 459, 468, 469, 545, 546, 548, 549, 564, 565, 566, 567, 568, 569, 719	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	36	<b>Transistors</b>			
R113, 195	QAF0650-821	RESISTOR 820 OHM 1/6W 5% CF	2	Q001, 002	RAN1675-001	XISTR NPN 2SC1675L NEC	2
R116	QAF0650-220	RESISTOR 22 OHM 1/6W 5% CF	1	Q003, 103, 152, 533, 701, 703	RAP0733-001	XISTR PNP 2SA733Q,P NEC	6
R129	QAF0650-392	RESISTOR 3.9K OHM 1/6W 5% CF	1	Q004, 102, 104, 105, 150, 151, 153, 702, 704	RAN0945-001	XISTR NPN 2SC945P NEC	9
R151	QAF0650-332	RESISTOR 3.3K OHM 1/6W 5% CF	1	Q101	RAM0192-001	FET 2SK192A-Y/GR TOSHIBA	1
R154, 172, 572, 573, 709, 710, 713, 714, 718	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	9	Q181, 182, 531, 532, 535, 536, 537, 538, 551, 552	RAN2878-001	XISTR NPN 2SC2878	10
R160, 427, 428	QAF0650-123	RESISTOR 12K OHM 1/6W 5% CF	3	<b>Integrated Circuits</b>			
R177, 178	QAF0650-823	RESISTOR 82K OHM 1/6W 5% CF	2	IC101	RHI1266-001	IC 24 PIN LA1266 AM/FM IF	1
R179, 180, 531, 532, 552, 553, 582, 583, 720	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	9	IC103	RHI3410-001	IC 16 PIN LA3410 MULTIPLEXER	1
R411, 412, 481	QAF0650-221	RESISTOR 220 OHM 1/6W 5% CF	3	IC151	RHI9216-001	IC 16 PIN TC9216P TOSHIBA PLL WITH PRESCALER	1
R420, 433, 434, 467, 478, 535, 536	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	7	IC401	RHI7822-001	IC 30 PIN LC7822N AUDIO SWITCHER	1
R465, 466	QAF0650-682	RESISTOR 6.8K OHM 1/6W 5% CF	2	IC402, 403, 503, 504	RHI5218-002	IC 8 PIN M5218AL MITSUBISHI OP AMP or 4558L OP-AMP	4
R480	QAF0650-151	RESISTOR 150 OHM 1/6W 5% CF	1	IC405	RCI7313-001	IC 28 PIN TDA7313D STEREO AUDIO PROCESSOR	1
R539, 540, 558, 562	QAF0650-122	RESISTOR 1.2K OHM 1/6W 5% CF	4	IC505	RHI2822-001	IC 8 PIN TDA2822 POWER AMP	1
				IC701	RCI8740-040	IC 64 PIN TMP87M-040 TOSHIBA MICROPROCESSOR	1
				IC902	RAI7806-002	IC 3 PIN REGULATOR 6V 100 mA 78L06	1
				<b>Miscellaneous</b>			
				CN501, 701	CCN7879-024	CONNECTOR J.S.T. 2.0mm PH B4B-PH-K TOP SIZE	2
				CN601, 702	CCN7879-031	CONNECTOR J.S.T. 2.0mm PH B11B-PH-K TOP SIZE	2
				CN602	CCN7879-030	CONNECTOR J.S.T. 2.0mm PH B10B-PH-K TOP SIZE	1
				CN703, 804, 806	CCN7879-023	CONNECTOR J.S.T. 2.0mm PH B3B-PH-K TOP SIZE	3
				CN802	CCN7879-029	CONNECTOR J.S.T. 2.0mm PH B9B-PH-K TOP SIZE	1
				CN805	CCN7879-025	CONNECTOR J.S.T. 2.0mm PH B5B-PH-K TOP SIZE	1

Ref. #	Part Number	Description	Qty	Ref. #	Part Number	Description	Qty
CN901	CCN7879-022	CONNECTOR J.S.T. 2.0mm PH B2B-PH-K TOP SIZE	1	<b>APE0154-001 PRO-LOGIC PCB</b>			
CF001	JFR7047-011	CER FILTER MURATA .7MJ 10.7MHZ	1	<b>Capacitors</b>			
CF002, 003	JFR7047-007	CER FILTER MURATA .7MS2-A10.7MHZ	2	C501, 502, 507, 509, 662	PRA3955-109	COND ELECT 1 uF 50V 20% MINI SIZE	5
JK02	CJA0005-001	ANT JACK FM/AM ANT JACK FM SCREW TYPE INPUT	1	C503, 504, 505, 506, 611, 612, 631, 636, 637, 672, 678, 679, 687, 688	PRA3955-479	COND ELECT 4.7 uF 50V 20% MINI SIZE	14
JK01	CJD0001-001	DIN JACK TCS5003-01-4151 13 PIN	1	C508, 512, 515, 664, 691, 692	PRA3952-470	COND ELECT 47 uF 16V 20% MINI SIZE	6
JK401	CJM9380-034	PHONE JACK TAI JY-3531 3.5 DIA BLACK	1	C510, 511	PRD3545-221	COND DISC 220 pF 50V 10% II Y5P D=5	2
JK402	CJR6506-001	RCA JACK 3 INPUT TYPE RED WHITE COLOR	1	C513	PRD3545-222	COND DISC 2200 pF 50V 10% Y5P	1
X151	JQC6071-450	CRYSTAL 4.5000 MHZ /U L=5.0mm	1	C601, 602	PRD3545-681	COND DISC 680 pF 50V 10% Y5P	2
X701	JQC6071-800	CRYSTAL 8.0 MHZ L=5.0 mm	1	C603, 604, 626	PDP2635-473	COND METAL 0.047 uF 50V 5% MINI SIZE	3
X161	JRN6078-010	RESONATOR MURATA 456F18	1	C605, 615	PRA3951-220	COND ELECT 22 uF 10V 20% MINI SIZE	2
CN302	CCN7879-037	CONN 90DEG 3 PIN PITCH=2.0 mm SIDE ENTRY TYPE	1	C606, 639, 640, 641, 642, 645, 646, 657, 658, 665	PEP2635-104	COND METAL 0.1 uF 50V 5% MINI SIZE (AI)	10
EF01	WTP0001-001	TUNER PACK MITSUMI FE415-G11A	1	C609, 610, 613	PRA3951-100	COND ELECT 10 uF 10V 20% MINI SIZE	3
L001, 002, 003, 104, 702, 703, 704	SHC7414-100	CHOKO 10 uH	7	C614, 627	PRM3737-472	COND MYLAR .0047 uF 100V 5%	2
L101	SHV2020-001	OSC AM 108uH (796 KHz)	1	C616, 618, 621, 622, 623	PRA3952-100	COND ELECT 10 uF 16V 20% MINI SIZE	5
L102	SHV0491-001	ANT OSC AM SUMIDA SM-10C	1	C617, 663, 673	PRD4965-223	COND DISC .022 uF 50V +80-20% II Z5V	3
L103	SHV1492-001	FILTER SUMIDA KM-10DF	1	C620, 650, 670, 680, 681, 689, 690, 693	PRA3952-101	COND ELECT 100 uF 16V 20% MINI SIZE	8
L172, 173	SHV1492-002	FILTER SUMIDA TWS-358-760 19 KHz NOTCH FILTER	2	C624	PRM3737-153	COND MYLAR 0.015 uF 100V 5%	1
P-P1'	CC128JCJJCJ	SHLD CABLE 120MM GRAY	1	C625	PRA3951-221	ELECT 220 uF 10V 20% MINI SIZE	1
P2-P2'	5820-060BB	WIRE 26 GA 60 mm BLACK	1	C628	PRD3545-471	COND DISC 470 pF 50V 10% II Y5P D=5	1
P3-P3'	5820-174BB	WIRE 26 GA 170 mm YELLOW	1	C629	PDP2635-684	COND METAL 0.68 uF 50V 5% MINI SIZE	1
P4-P4'	5820-180BB	WIRE 26 GA 180 mm BLACK	1	C630, 647	PRD3545-562	DISC 5600 pF 50V 10% Y5P	2
P5-P5'	5820-103BB	WIRE 26 GA 100 mm ORANGE	1	C632	PRM3737-103	COND MYLAR 0.01 uF 100V 5%	1
P6-P6'	5820-082BB	WIRE 26 GA 80 mm RED	1	C633, 634, 635, 638	PEP2635-224	COND METAL 0.22 uF 50V 5% MINI SIZE (AI)	4
SR01, 02	MRT0103-003	TRIMR 10KB 30% P=5x5mm RH0611C14J	2	C643, 644	PDP2635-223	COND METAL 0.022 uF 50V 5% MINI SIZE	2
SR03	MRT0503-003	CNTL TRIMR 50KB 30% P=5x5 mm RH0611C54J	1	C648, 661	PRD3545-561	COND DISC 560 pF 50V 10% II Y5P D=5	2
SW701	MSS9477-029	SW SLIDE SK-12E12-G7 DC 50V 0.5A	1	C649	PRD3965-104	COND DISC 0.1 uF 50V +80-20% Y5V/Z5V	1
T101	SHI9724-056	AM IFT CF-0816 SUMIDA	1	C651, 652	PRD1335-300	COND DISC 30 pF 50V 5% NP0 T.C.	2
T102	SHI9725-057	FM IFT 10.7MHz TWS-358-637 QU7 SUMIDA	1	C654	PRD1335-470	COND DISC 47 pF 50V 5% NP0	1
T103	SHI9725-058	FM IFT 10.7MHz TWS-358-636 QU7 SUMIDA	1	C655, 659	PDP2645-683	COND METAL 0.068 uF 50V 10% MINI SIZE	2
TC101	MCT0510-006	COND TRIM 3 - 10 PF NP0	1	C656	PRA3951-470	COND ELECT 47 uF 10V 20% MINI SIZE	1
TC102	MCT0520-005	TRIM 4.2 - 20 PF N450	1	C660	PRM3737-562	COND MYLAR .0056 uF 100V 5%	1
<b>APE151-031 LED PCB</b>							
LD311, 312	KEM0002-002	LED 3 LED TWO COLORS GREEN/AMBER CHANGE	2				

Ref. #	Part Number	Description	Qty	Ref. #	Part Number	Description	Qty
C671	PRD3965-224	DISC 0.22 uF 50V +80-20% Y5V/Z5V	1	IC502	RHI7535-011	IC 22 PM LC7535 VOLUME CONTROL	1
<b>Diodes</b>				IC601	RCI2177-001	IC 64 PIN NJM2177AFB3 DOLBY DECODER	1
D601, 602, 604	RAD4148-001	DIODE SW 1N4148	3	IC602	RHI4094-001	IC 16 PIN TC4094BP TOSHIBA 8 BIT SHIFT REGISTER	1
ZD602	RAZ0859-064	DIODE ZENR 3.8-4.0V .5W HITACHI HZ4B-2	1	IC603	RCI6583-001	IC 24 PIN M65830BFP DIGITAL DELAY	1
ZD601	RAZ0859-070	DIODE ZENR 5.6-5.9V .5W HITACHI HZ6B-2	1	IC604	RHI4052-001	IC 16 PIN TC4052BP DIP 4 CH MULTIPLEXER	1
<b>Resistors</b>				<b>Miscellaneous</b>			
R501, 502, 510, 619, 637, 638, 689, 690	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	8	P1-P1'	5820-104BB	WIRE 26 GA 100 mm YELLOW	1
R503, 504, 654, 655, 665, 666	QAF0650-224	RESISTOR 220K OHM 1/6W 5% CF	6	RB602	4999A-308	CON/WIRE 10 COND 200 mm PITCH=2.0 mm	1
R505, 506, 507, 617, 623, 662, 663, 673, 674	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	9	RB601	4999A-309	CON/WIRE 11 COND 100 mm PITCH=2.0 mm	1
R508, 509, 620, 632, 633, 641, 681, 691, 692	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	9	VR601	MRT0503-003	TRIMR 50KB 30% P=5x5 mm RHO611C54J	1
R512	QAF0650-471	RESISTOR 470 OHM 1/6W 5% CF	1	XL601	JRN6078-200	RESONATOR 2 MHz	1
R601, 603, 640, 649	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	4				
R602, 605	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	2				
R604, 625	QAF0650-752	RESISTOR 7.5K OHM 1/6W 5% CF	2				
R606	QAF0650-475	RESISTOR 4.7M OHM 1/6W 5% CF	1				
R607, 608, 616	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	3				
R609, 610, 614, 615, 650, 651, 652, 653	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	8				
R613, 618, 631, 660, 661, 671, 672	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	7				
R621	QAF0650-474	RESISTOR 470K OHM 1/6W 5% CF	1				
R629	QAF0650-560	RESISTOR 56 OHM 1/6W 5% CF	1				
R634	QAF0650-300	RESISTOR 30 OHM 1/6W 5% CF	1				
R635	QAF0650-105	RESISTOR 1.0M OHM 1/6W 5% CF	1				
R636, 677, 678, 679, 680	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	5				
R642	QAF0650-183	RESISTOR 18K OHM 1/6W 5% CF	1				
R643	QAF0650-272	RESISTOR 2.7K OHM 1/6W 5% CF	1				
R644	QAF0650-683	RESISTOR 68K OHM 1/6W 5% CF	1				
R645, 647, 648	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	3				
R646	QAF0650-334	RESISTOR 330K OHM 1/6W 5% CF	1				
R675	QAF0450-271	RESISTOR 270 OHM 1/4W 5%	1				
R676	QAF0650-100	RESISTOR 10 OHM 1/6W 5% CF	1				
<b>Transistors</b>							
Q601, 603, 604	RAN0945-001	XISTR NPN 2SC945P NEC	3				
Q602	RAP0733-001	XISTR PNP 2SA733Q,P NEC	1				
<b>Integrated Circuits</b>							
IC501, 605, 606	RHI5218-002	IC 8 PIN M5218AL MITSUBISHI OP AMP 8 PIN L TYPE	3				





**MAIN PCB**

**HEADPHONE PCB**

**LED PCB**

TV AUX TAPE OUT

ATLE  
LVM0153-001

SERVICE MODE

1

2

3

4

5

1

2

3

4

5

A

B

C

D

E

F

G

A

B

C

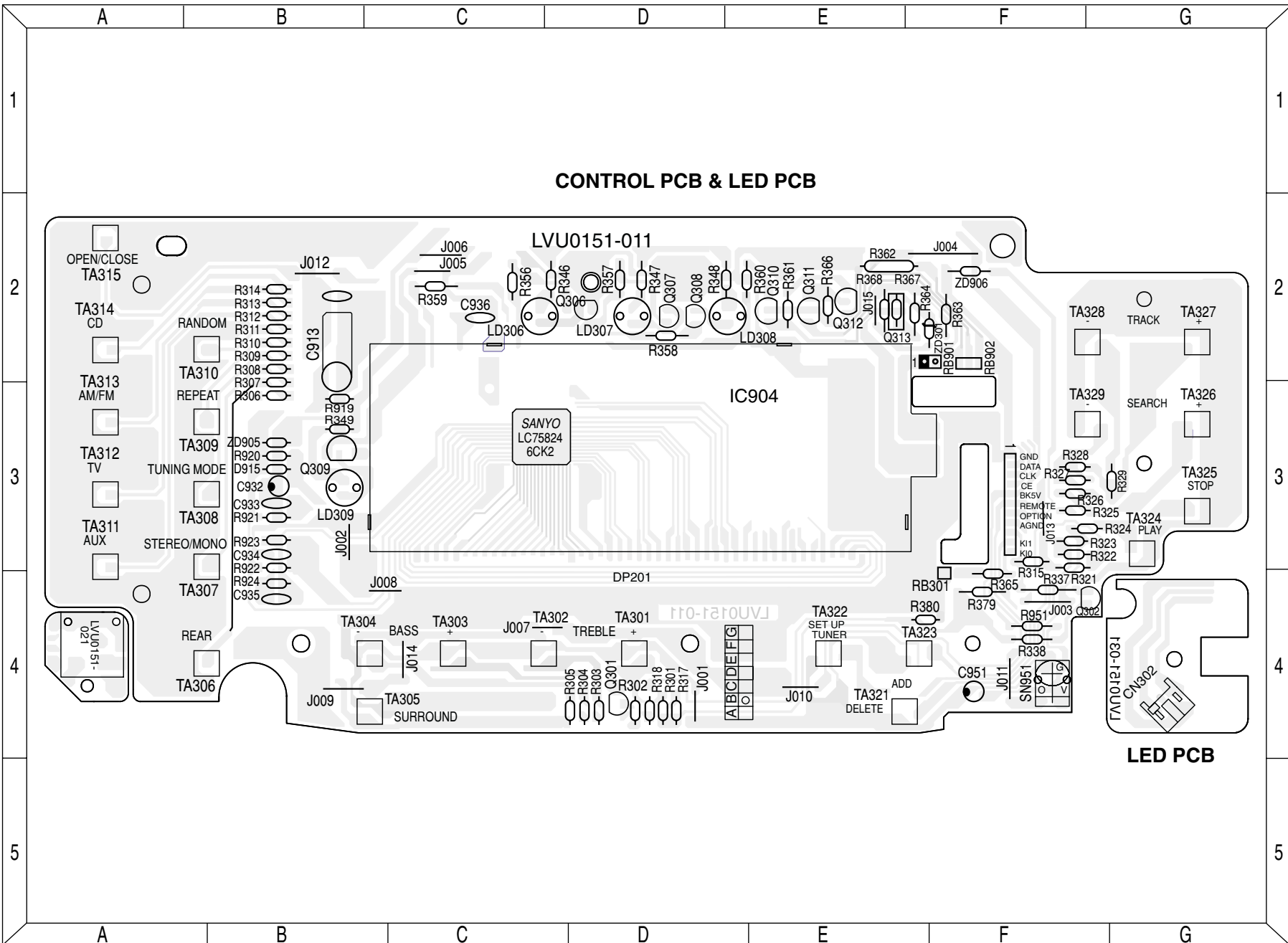
D

E

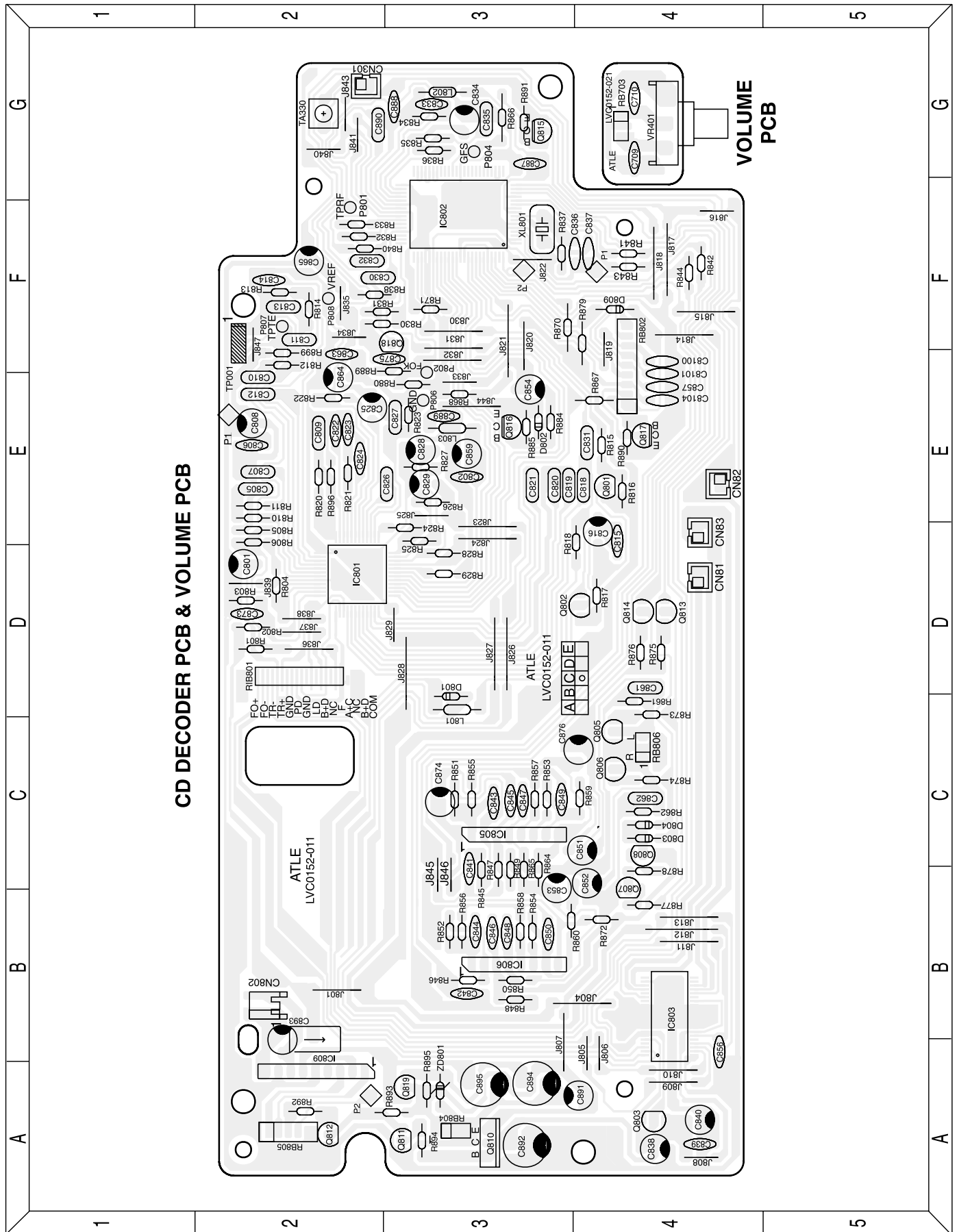
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G

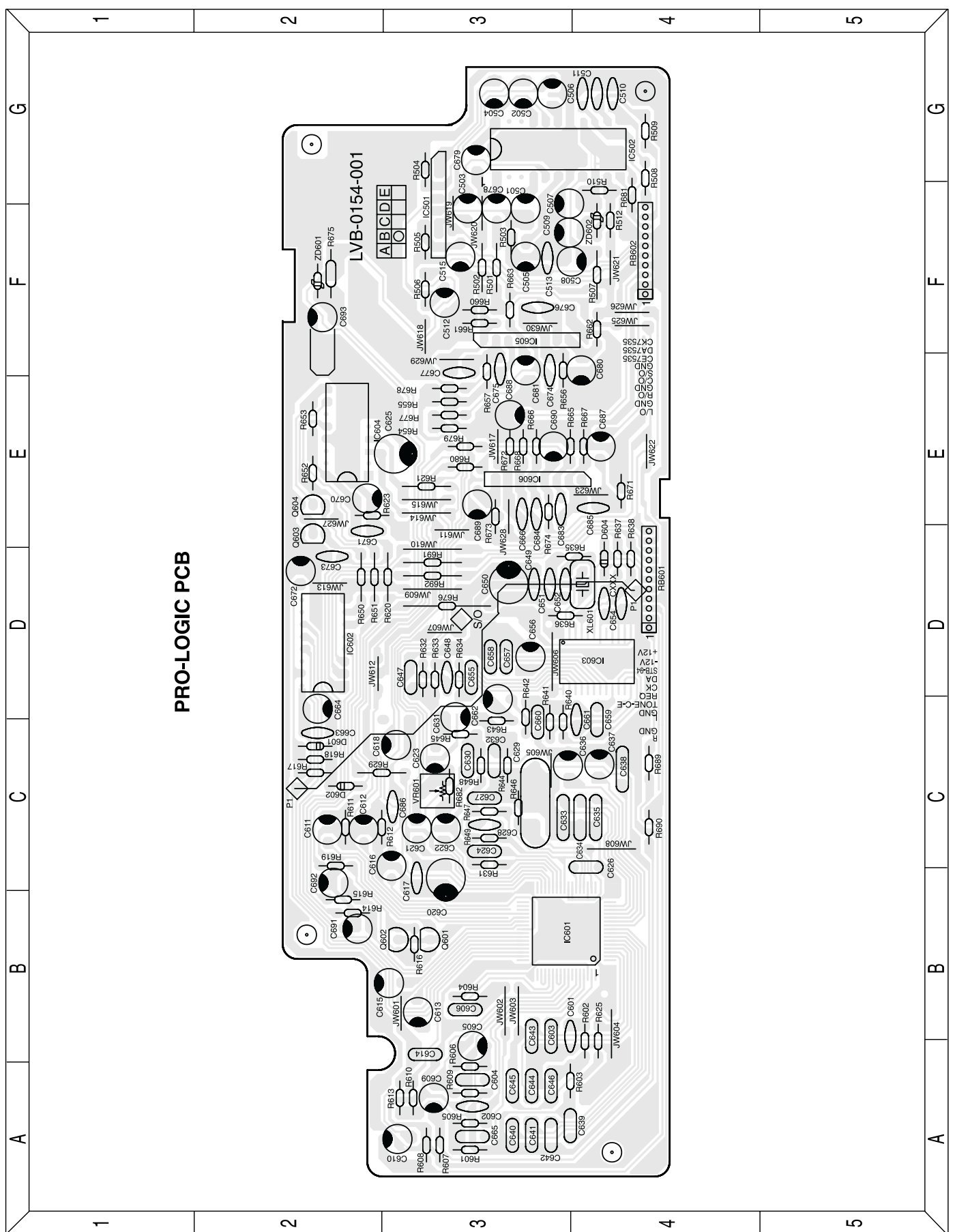
SOURCE CONTROL PCB, LED PCB



SOURCE CD DECODER PCB, VOLUME PCB



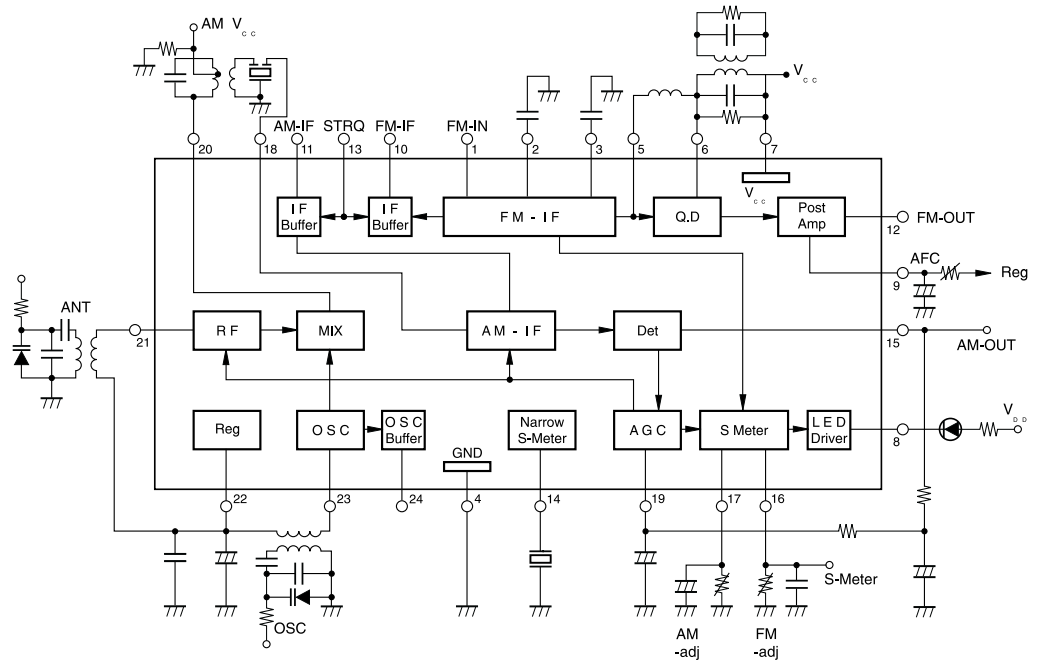
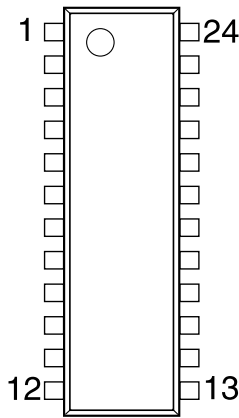
# SOURCE PRO-LOGIC PCB



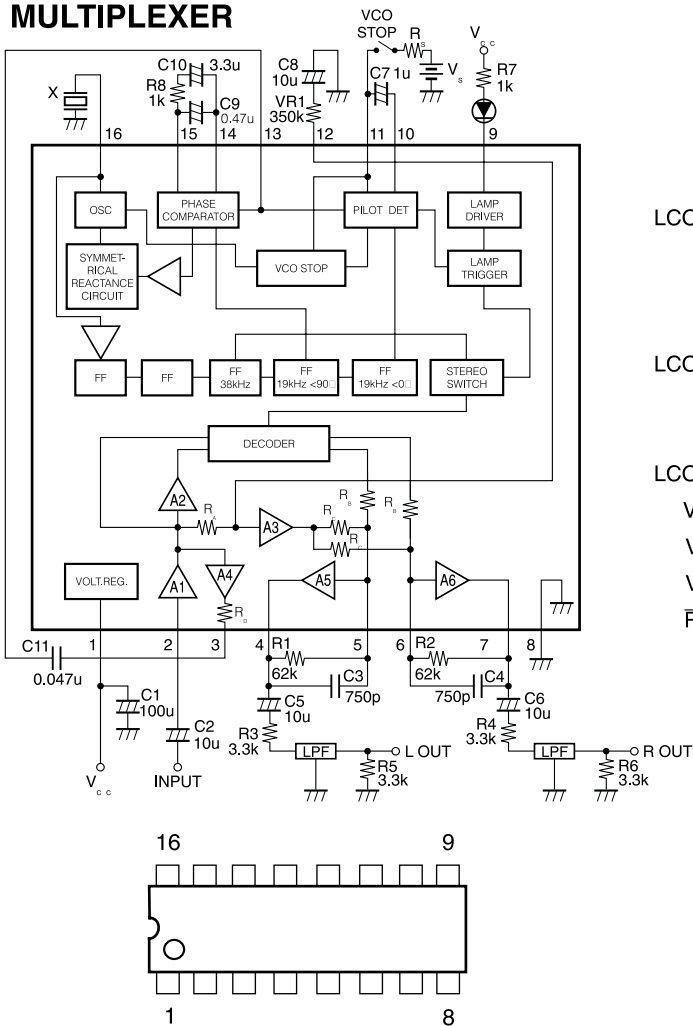
PRO-LOGIC PCB

SOURCE INTEGRATED CIRCUIT DIAGRAMS

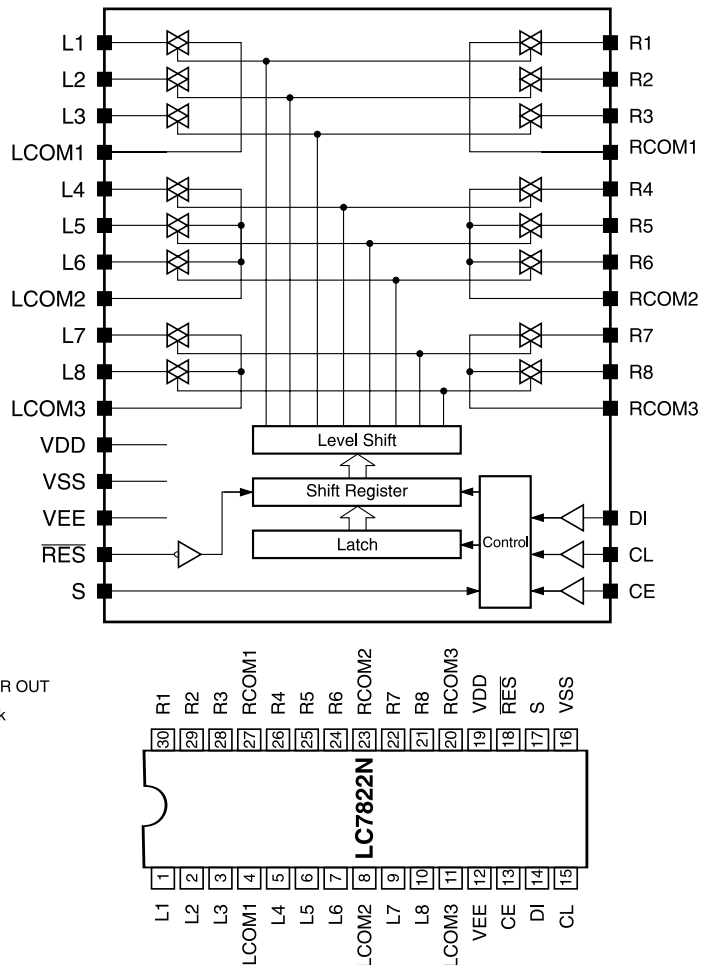
**IC101 - LA1266**  
**AM/FM IF**



**IC103 - LA3410**  
**MULTIPLEXER**

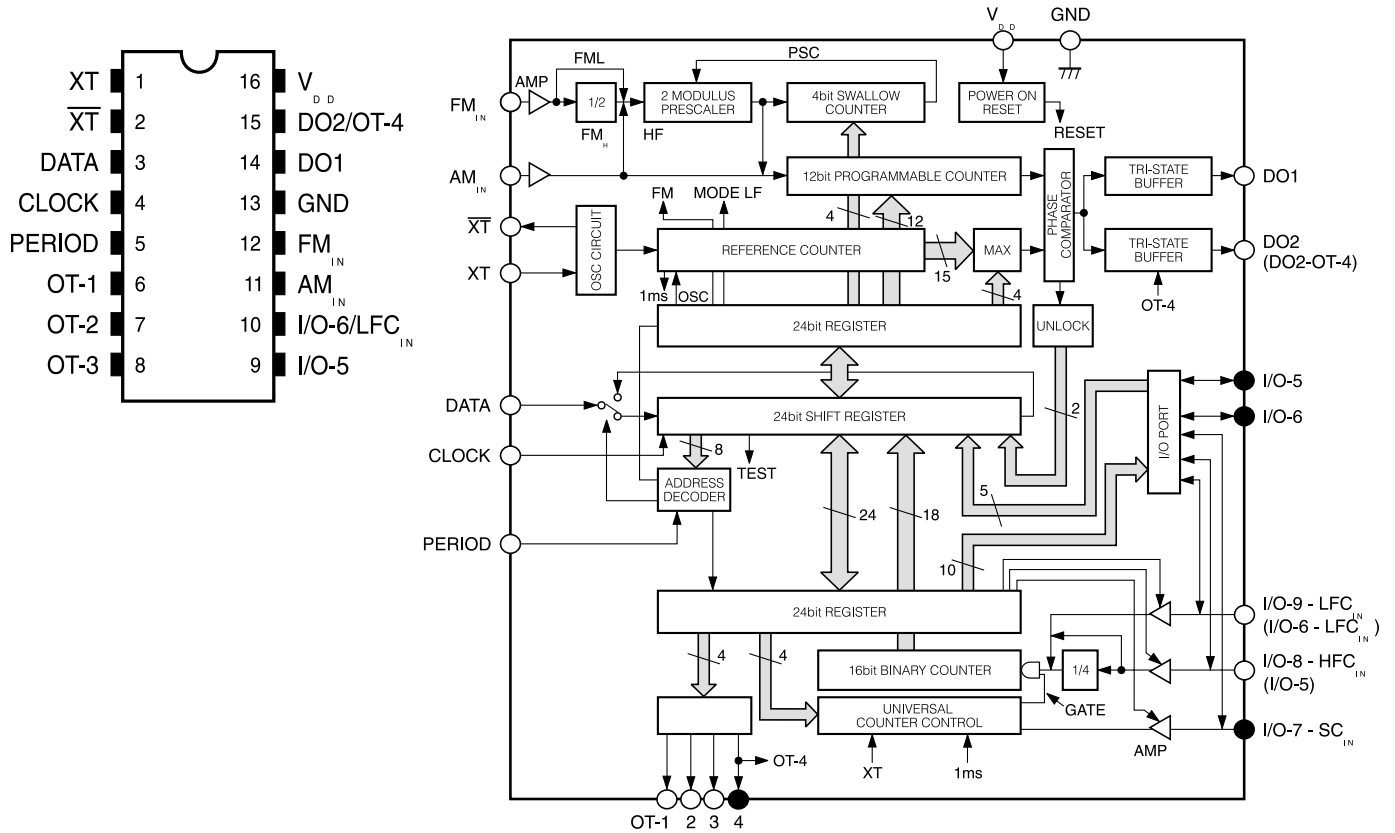


**IC401 - LC7822N** AUDIO SWITCHER

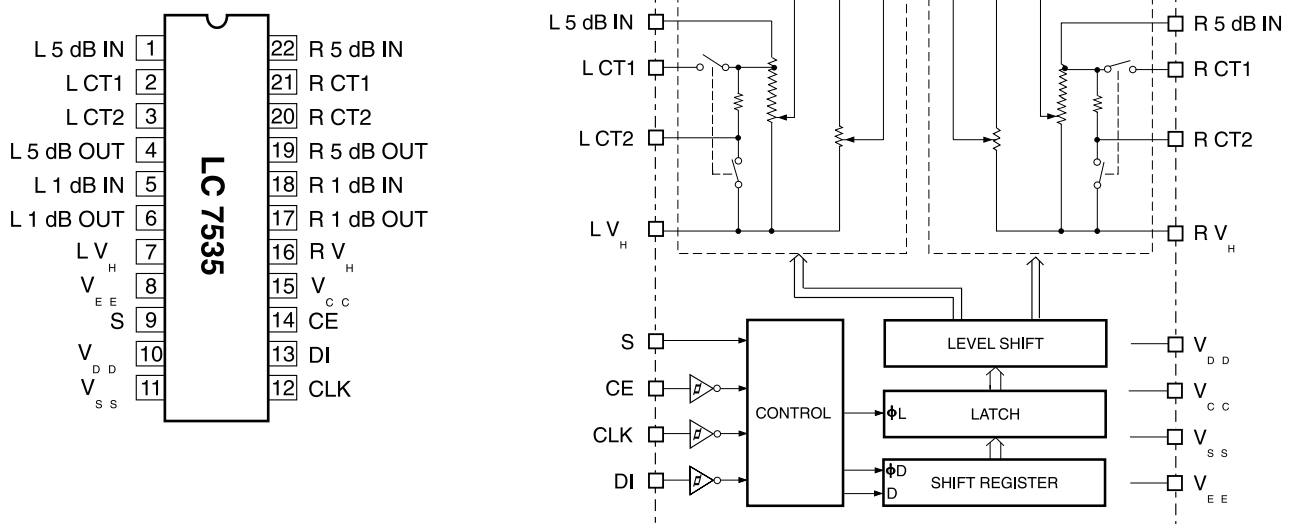


SOURCE INTEGRATED CIRCUIT DIAGRAMS (continued)

IC151 - TC9216P PPL w/PRESCALER

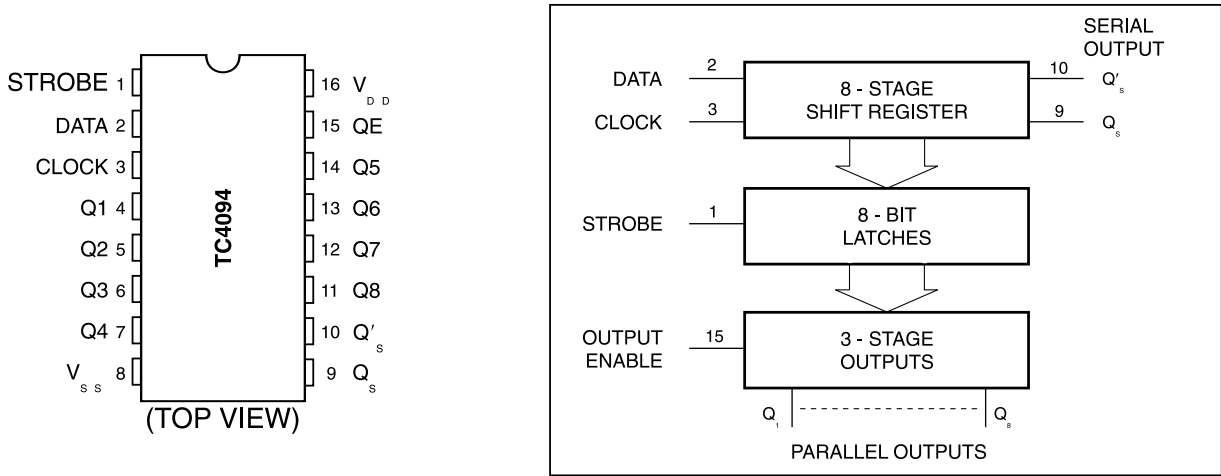


IC502 - LC7535 VOLUME CONTROL

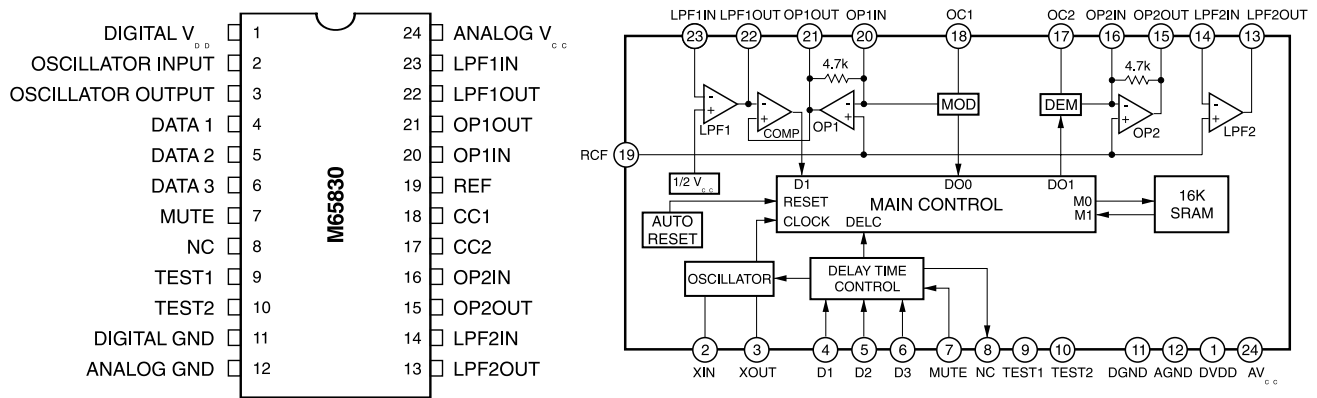


**SOURCE INTEGRATED CIRCUIT DIAGRAMS (continued)**

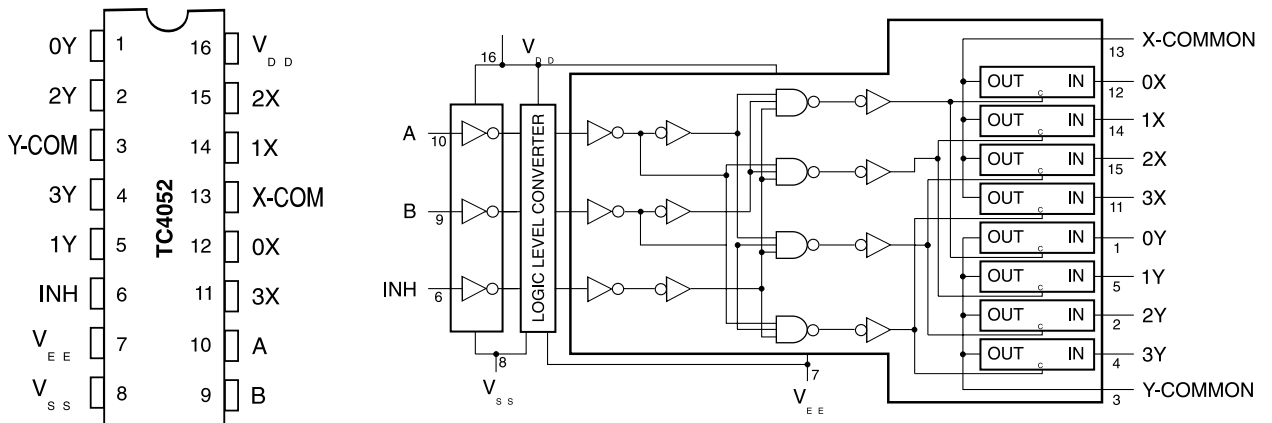
**IC602 - TC4094BP 8 BIT SHIFT REGISTER**



**IC603 - M65830FP DIGITAL DELAY**

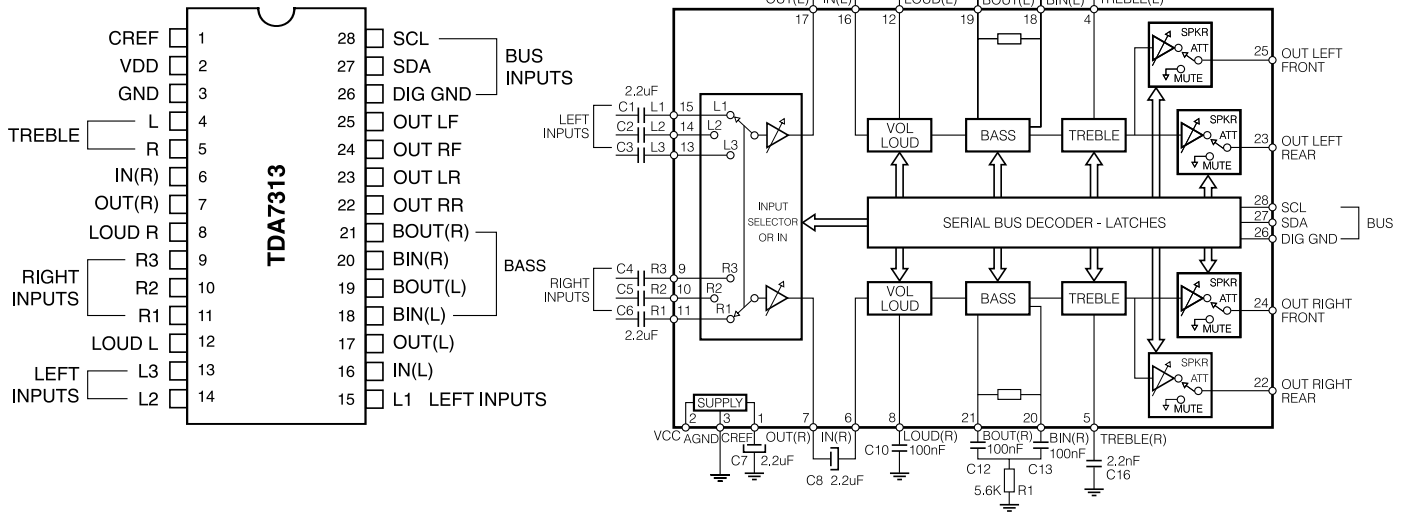


**IC604 - TC4052BP 4 CH MULTIPLEXER**

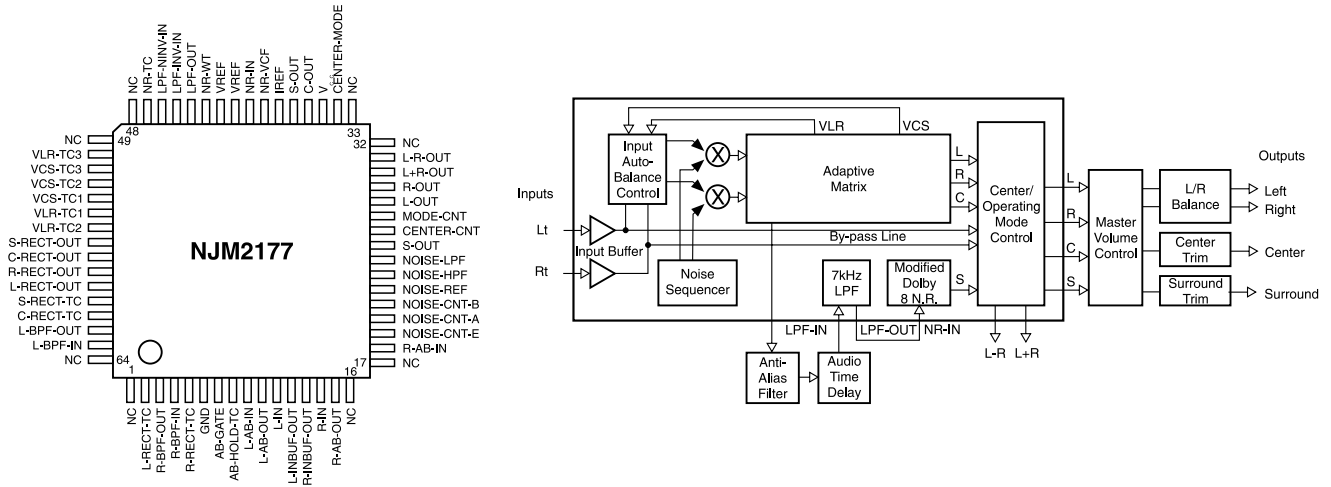


SOURCE INTEGRATED CIRCUIT DIAGRAMS (continued)

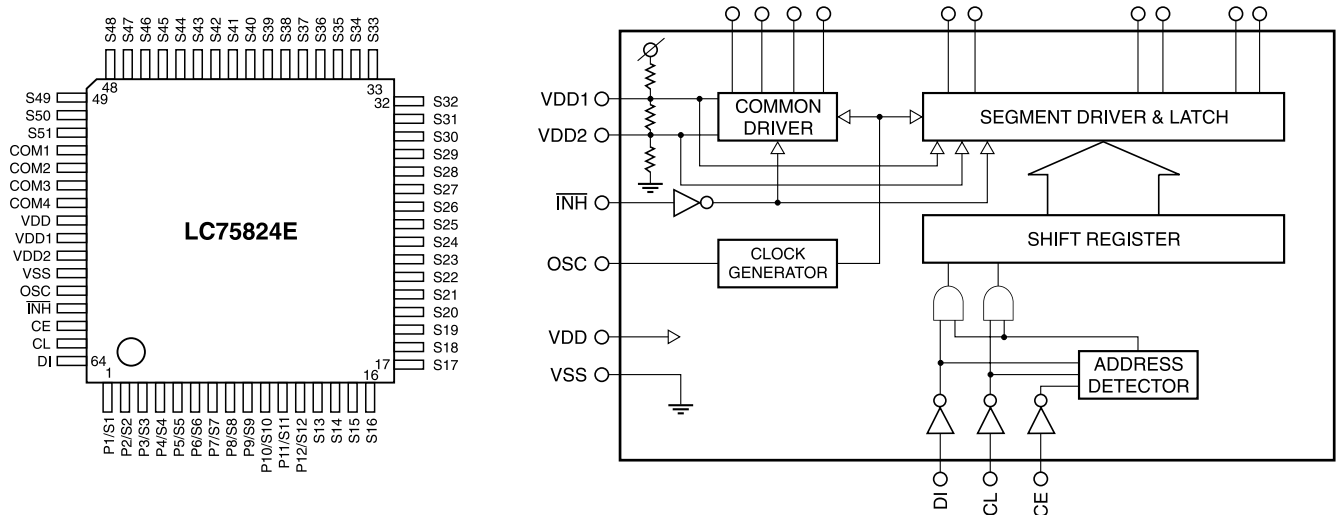
IC405 - TDA7313D  
STEREO AUDIO PROCESSOR



IC601 - NJM2177AF DOLBY PRO LOGIC DECODER



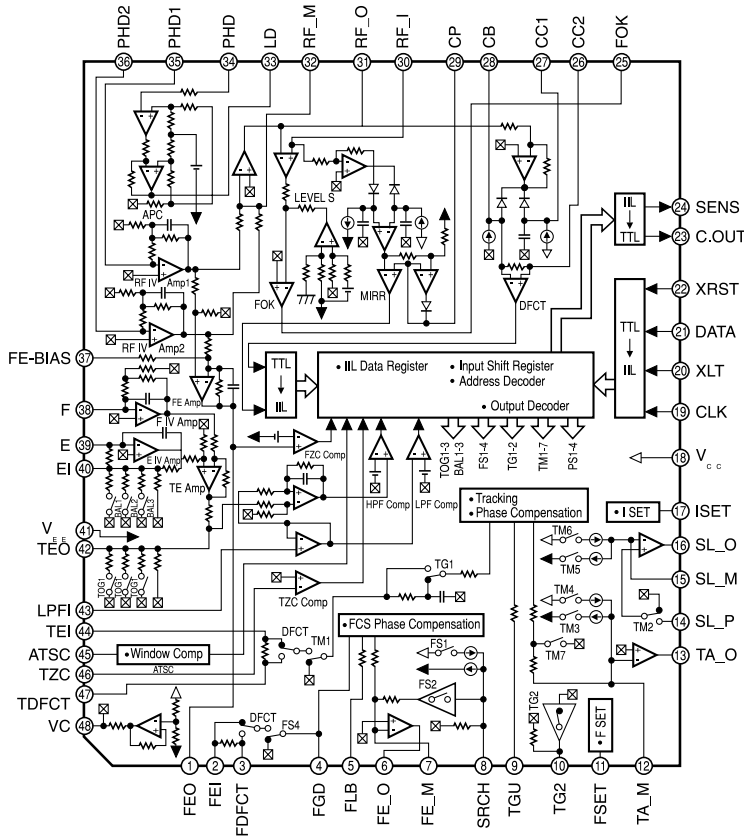
IC904 - LC75824E SEG LCD DRIVER



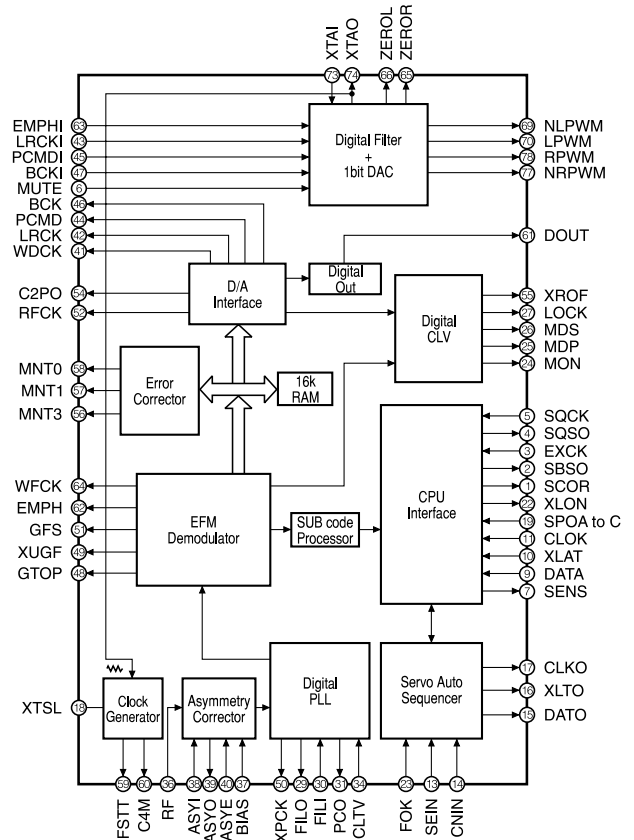


SOURCE INTEGRATED CIRCUIT DIAGRAMS (continued)

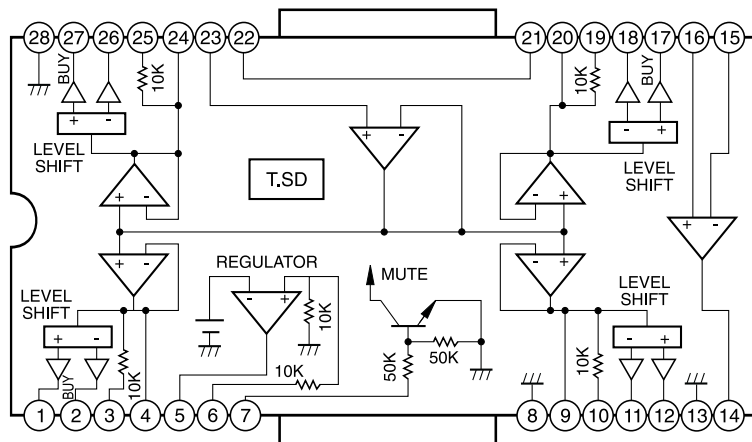
**IC801 - CXA1782AQ**  
R.F. AMP + S.S.P.



**IC802 - CXD2508AQ**  
D.S.P. + D.A.C.

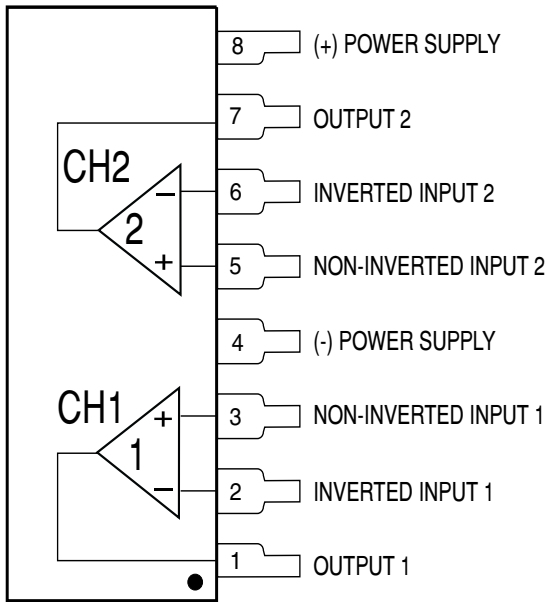


**IC803 - KA9258D FOCUS/TRACKING DRIVER**

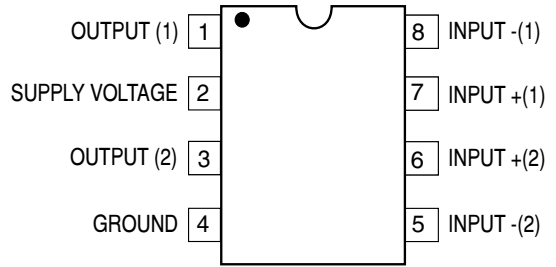


SOURCE INTEGRATED CIRCUIT DIAGRAMS (continued)

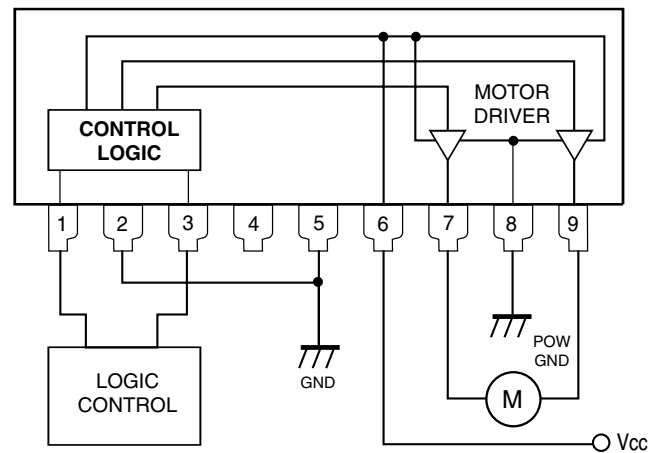
IC402, 403, 501, 503, 504, 605, 606, 805, 806  
M5218AL or 4558L OP-AMP



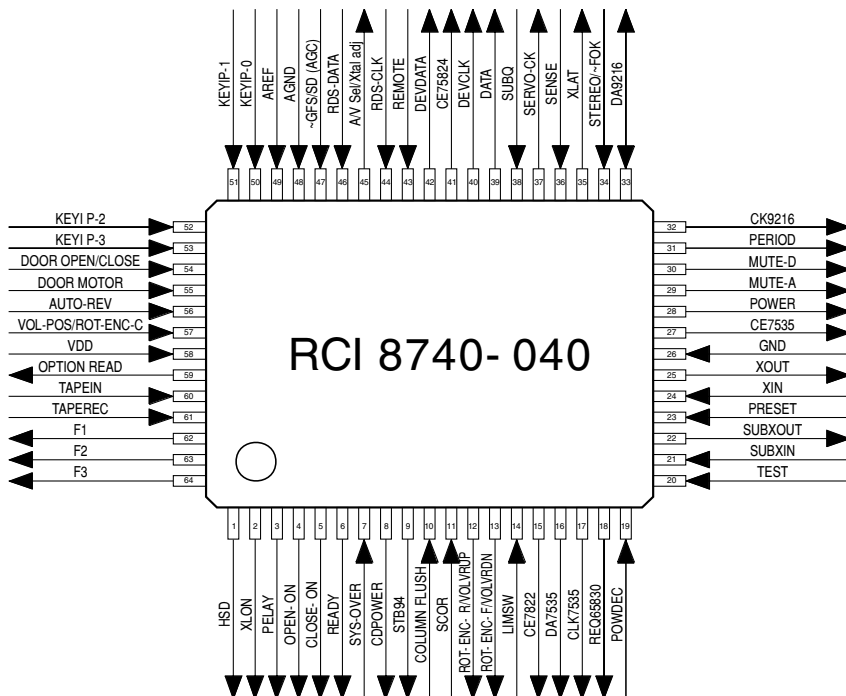
IC505 - TDA2822 POWER AMP



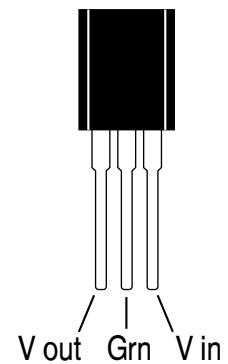
IC809 - BA6218 MOTOR DRIVER



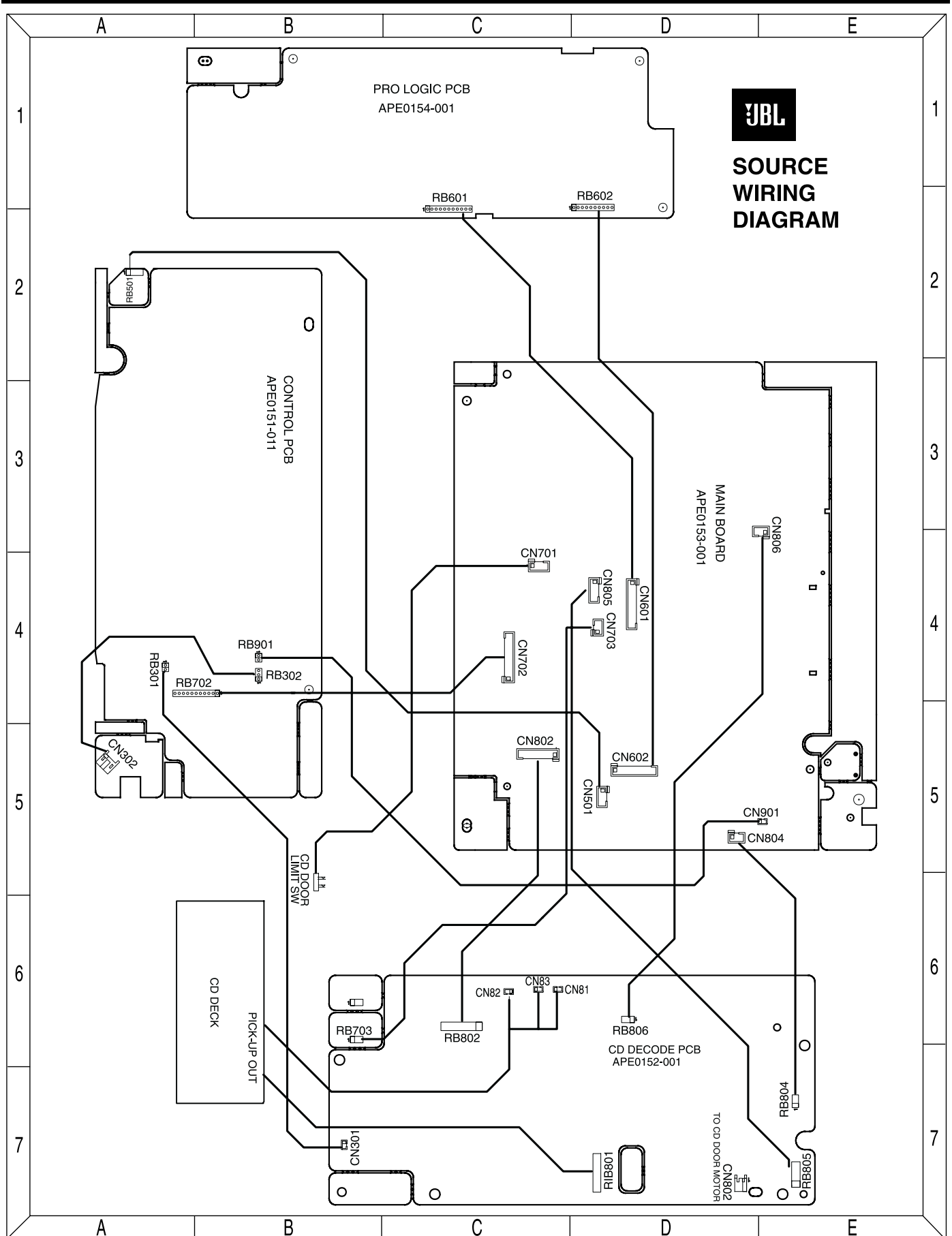
IC701, - TMP87M-040 MICROPROCESSOR

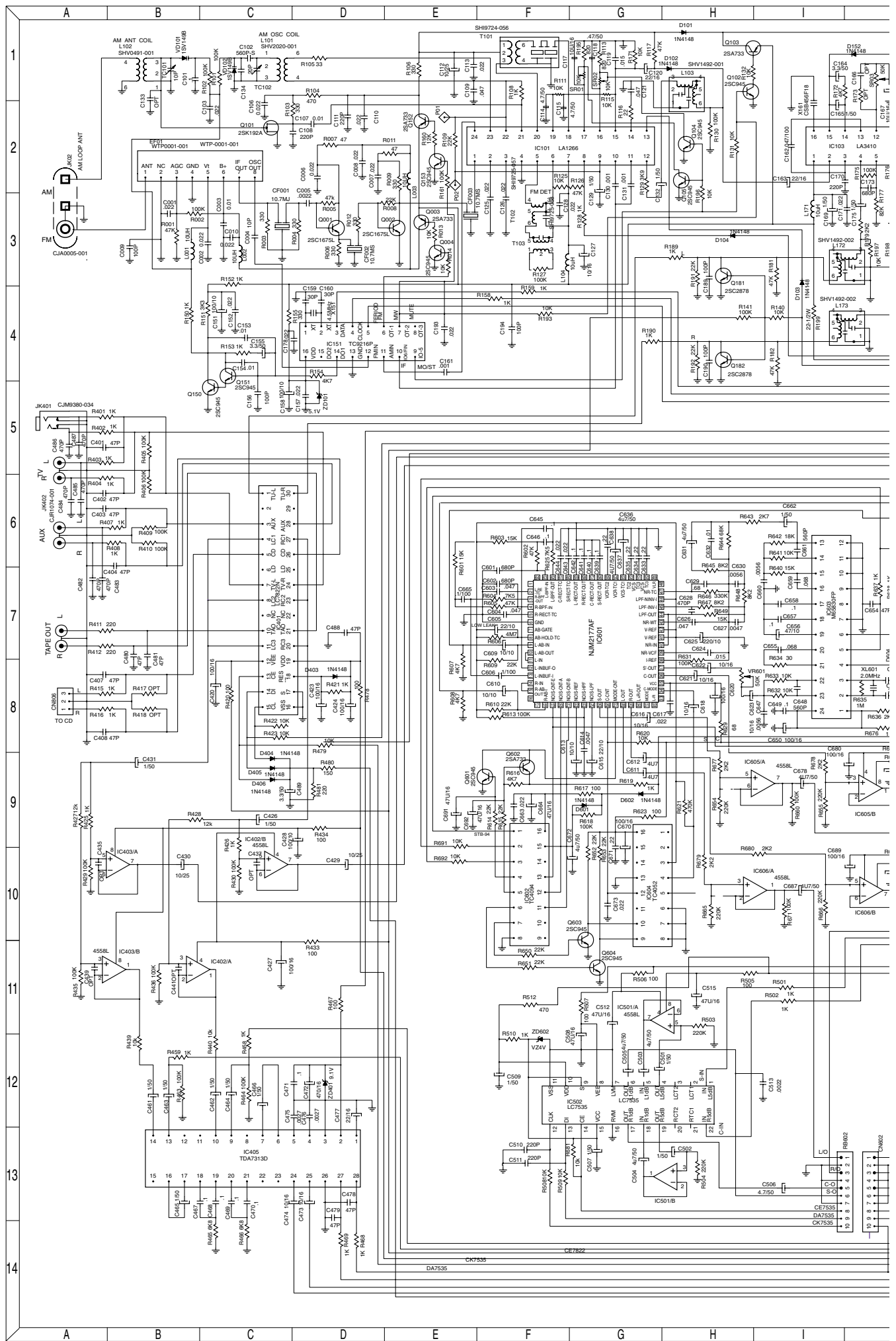


IC902 - 78106  
+6V REGULATOR



### SOURCE WIRING DIAGRAM

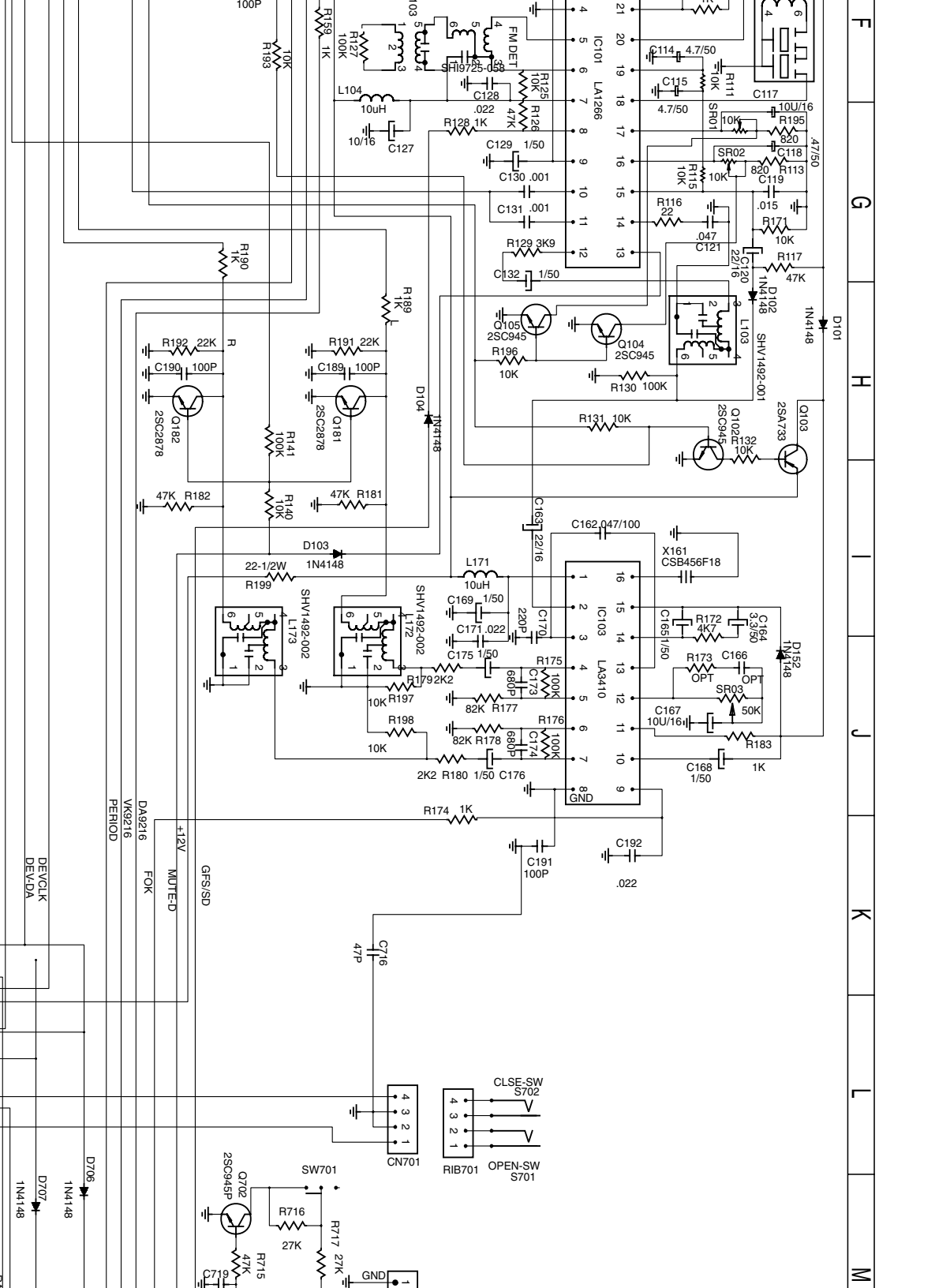
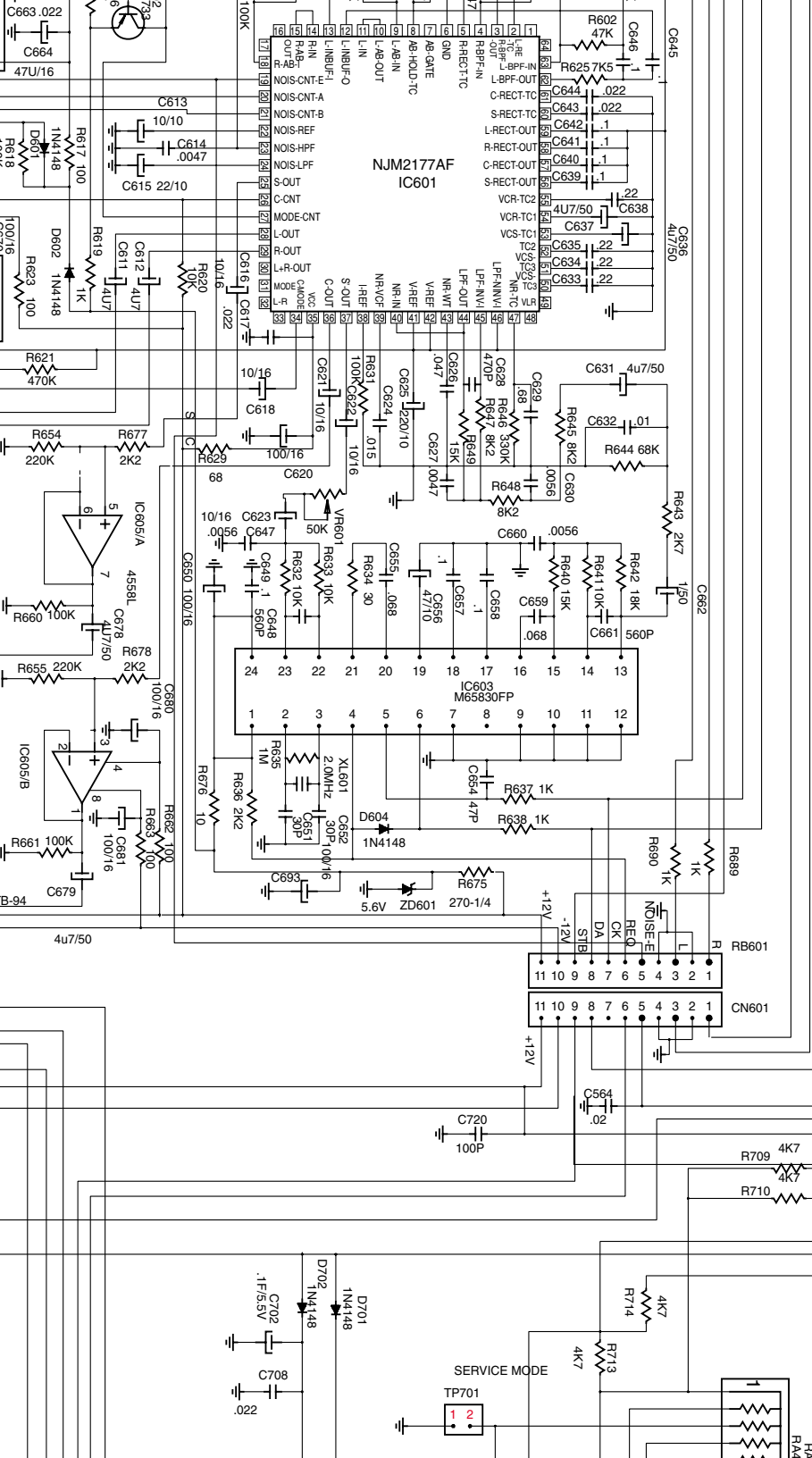






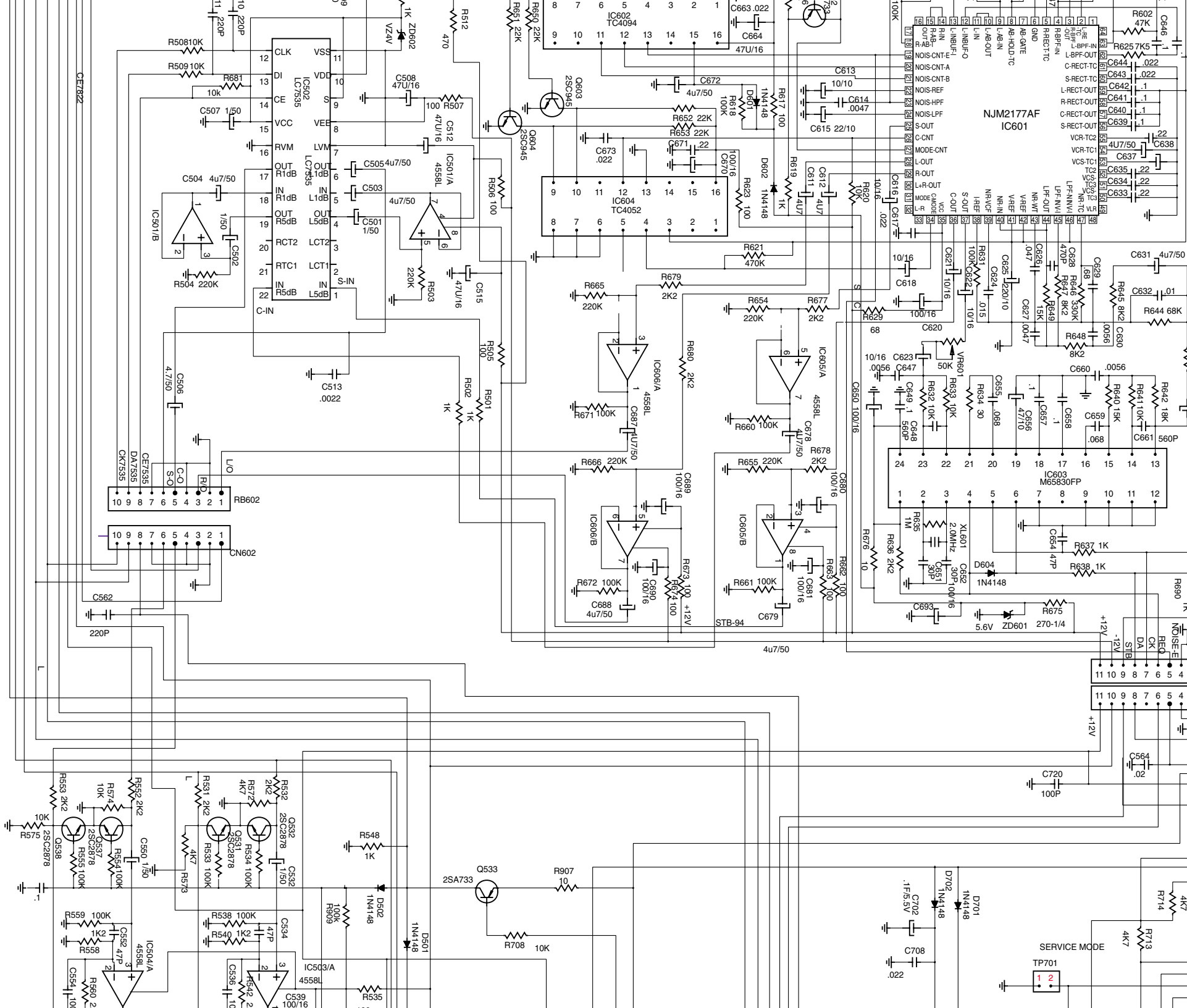








F  
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H  
I  
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L  
M



NJM2177AF  
IC601

IC602  
TC4094

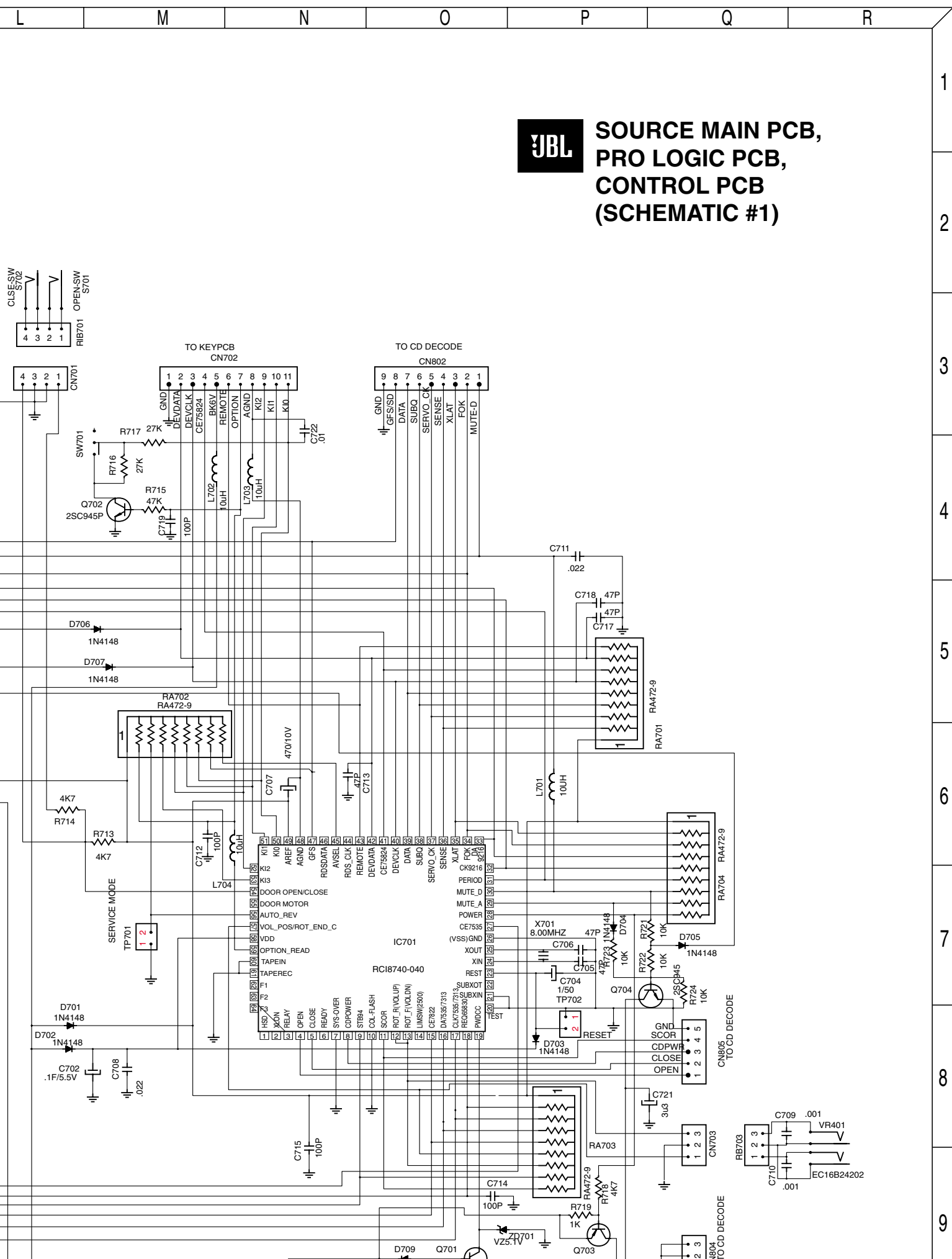
IC603  
M655830FP

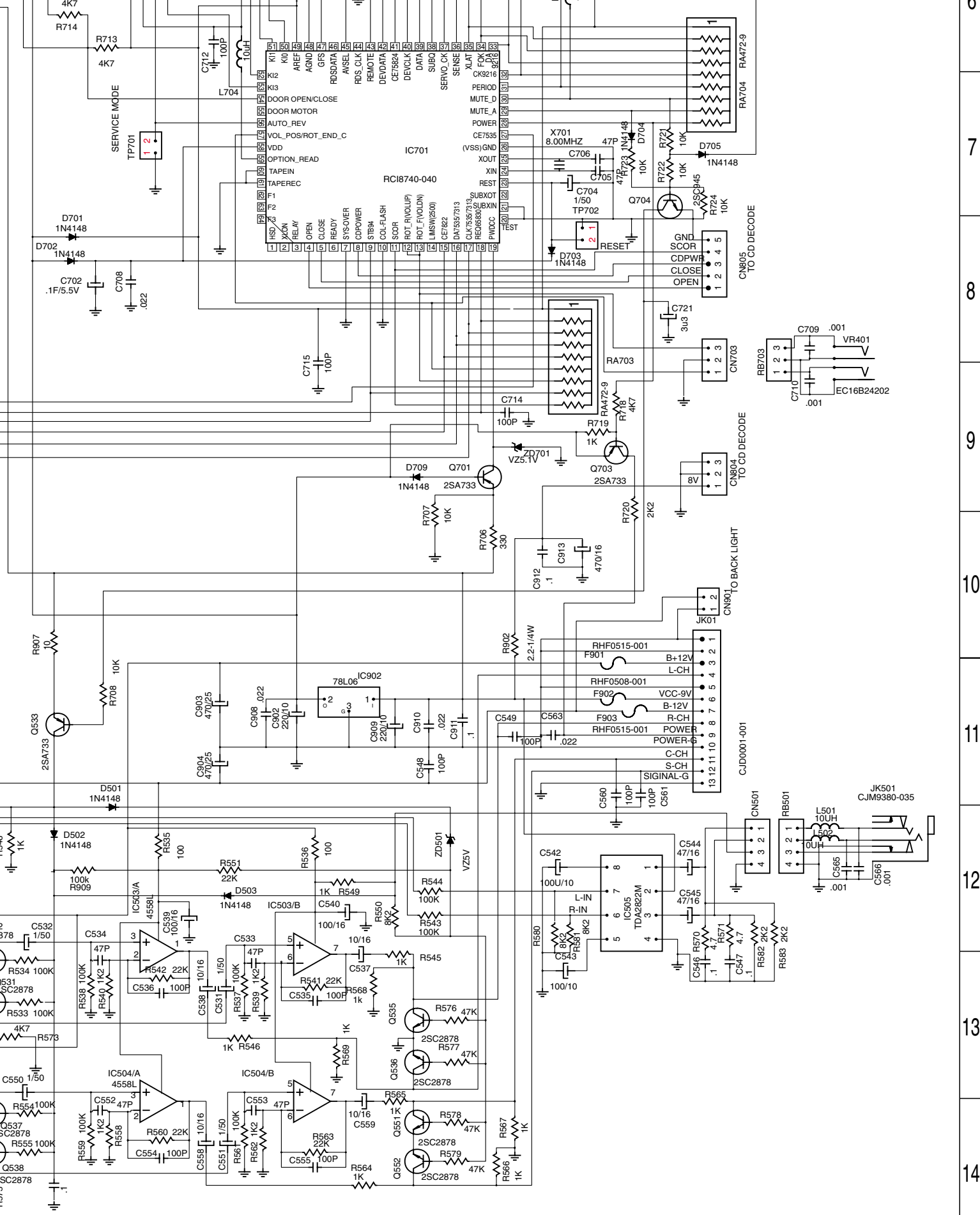
RB602  
CN602

SERVICE MODE  
TP701



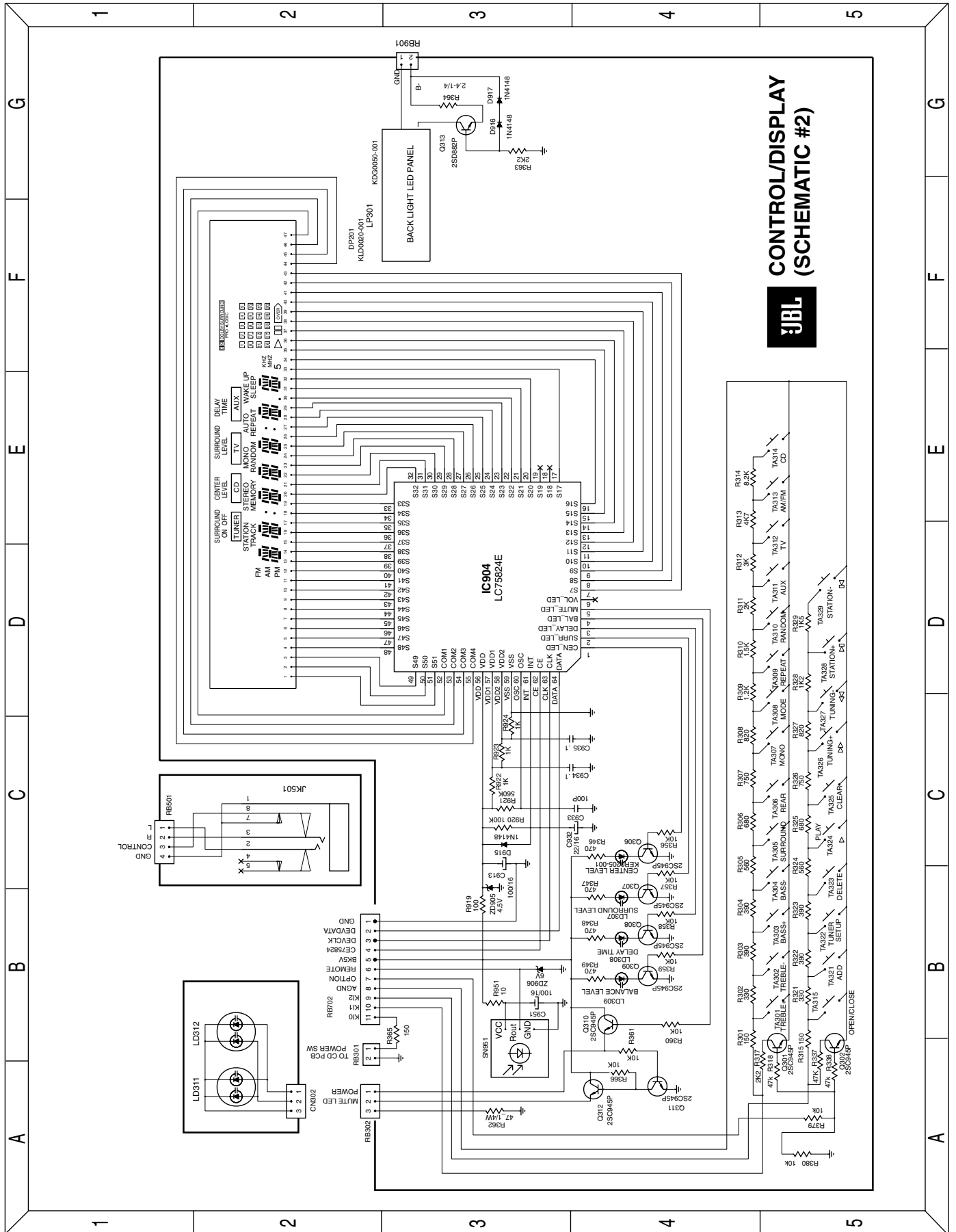
# SOURCE MAIN PCB, PRO LOGIC PCB, CONTROL PCB (SCHEMATIC #1)





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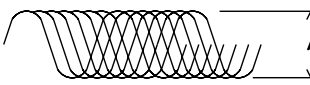
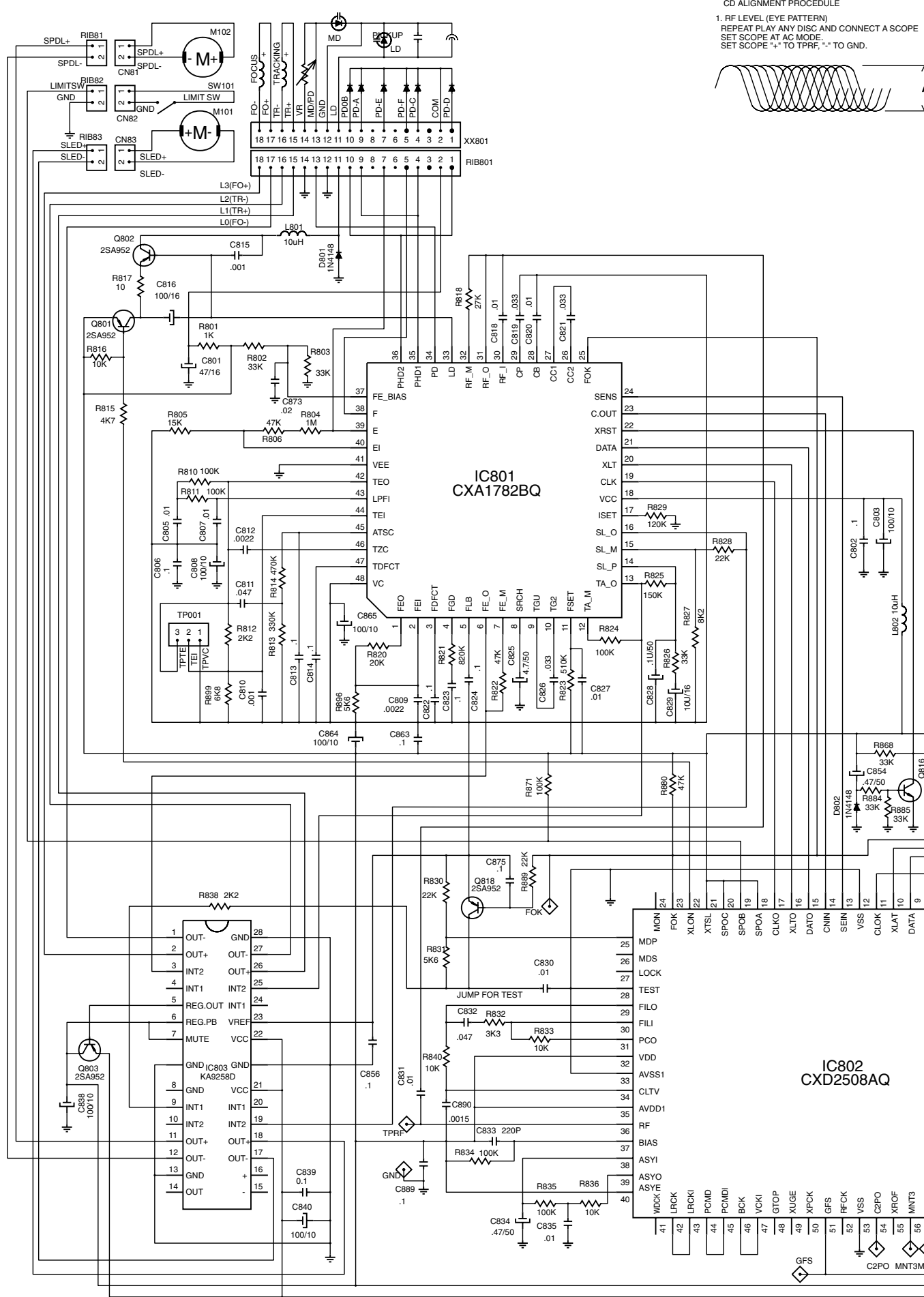
CONTROL/DISPLAY SCHEMATIC #2



A B C D E F G

1  
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3  
4  
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6  
7  
8  
9

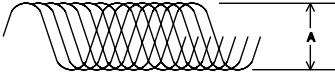
CD ALIGNMENT PROCEDURE  
 1. RF LEVEL (EYE PATTERN)  
 REPEAT PLAY ANY DISC AND CONNECT A SCOPE  
 SET SCOPE AT AC MODE  
 SET SCOPE "+" TO TPRF, "-" TO GND.

A B C D E F G

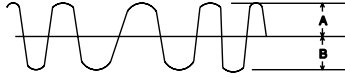
CD ALIGNMENT PROCEDURE

1. RF LEVEL (EYE PATTERN)  
REPEAT PLAY ANY DISC AND CONNECT A SCOPE  
SET SCOPE AT AC MODE  
SET SCOPE "+" TO TPREF, "-" TO GND.

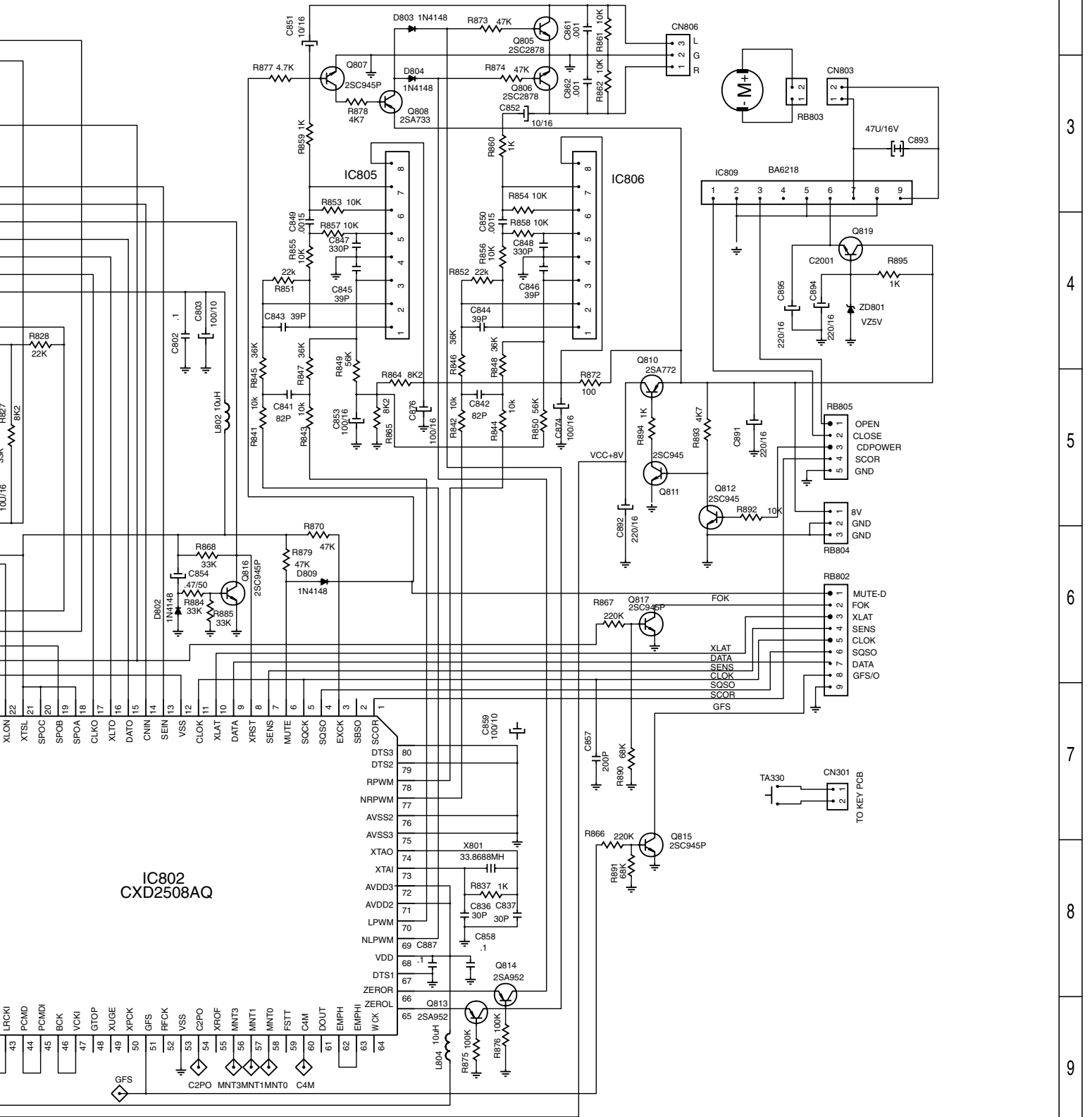


2. EF BALANCE

2. EF BALANCE  
SET SCOPE AT DC MODE.  
SET SCOPE "+" TO TPTE, "-" TO VREF.  
TEI SHORT WITH TPVC.  
CHECK DC BALANCE ON SCOPE (A B)



**JBL** SOURCE  
CD DECODER  
(SCHEMATIC #3)



1  
2  
3  
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SOURCE SCHEMATIC DIAGRAM #3

