

SERVICE MANUAL



L56
DVD/VIDEO CD/CD
PLAYER

L56

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PLAYER

SECTION 1

SUMMARY

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PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

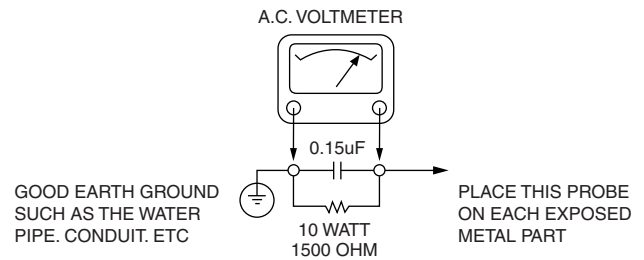
SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS. FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD). AND REPLACE IF NECESSARY FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFETY TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD, 150.V A.C TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART.

VOLTAGE MEASURE MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS A.C ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT : GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, 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.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE. OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM, BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

SERVICING PRECAUTIONS

CAUTION : Before servicing the DVD player covered by this service data and its supplements and addends, read and follow the **SAFETY PRECAUTIONS**. **NOTE :** if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.

Remember Safety First:

General Servicing Precautions

1. Always unplug the DVD player's AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.

Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this DVD player or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cottontipped swab, or comparable soft applicator.
Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this DVD player and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical Es devices are integrated circuits and some field effect transistors and semiconductor chip components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freonpropelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

SPECIFICATIONS

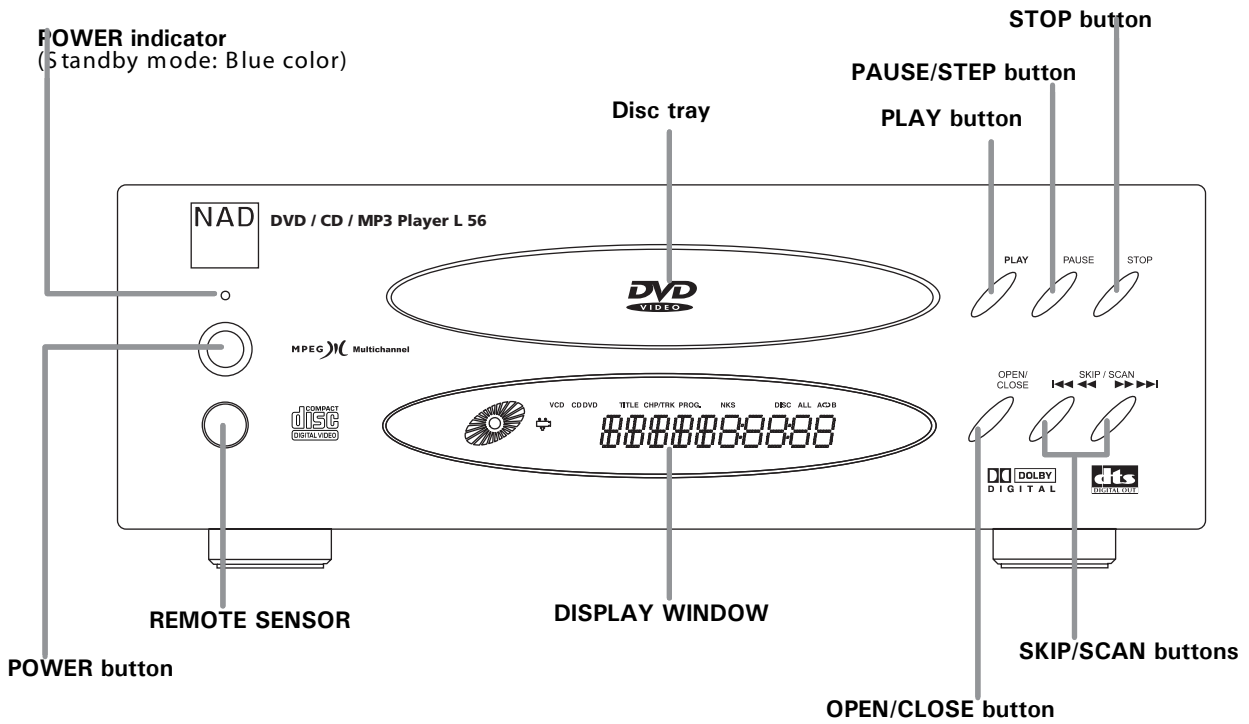
DVD player/Outputs/Supplied Accessories

[DVD player]	Power supply	AC 230V / 50 Hz (EUROPE), AC 110V/60Hz (USA / CANADA)
	Power consumption	15 W
	Mass	3.3 kg
	External dimensions (W X H X D)	285 x 103x 291 mm
	Signal system	PAL (EUR) , NTSC (USA / CANADA)
	Laser	Semiconductor laser, wavelength 650 nm
	Frequency range (audio)	4 Hz to 20 kHz
	Signal-to-noise ratio (audio)	More than 100 dB (EIAJ)
	Dynamic range (audio)	More than 95 dB (EIAJ)
	Harmonic distortion (audio)	0.008 %
	Wow and flutter	Below measurable level (less than + 0.001 % (W.PEAK)) (EIAJ)
	Operating conditions	Temperature: 41°F to 95°F, Operation status: Horizontal
[Outputs]	Video output	1.0 V (p-p), 75 Ω , negative sync., RCA jack x 1
	S-video output	(Y) 1.0 V (p-p), 75 Ω , negative sync., Mini DIN 4-pin x 1 (C) 0.286 V (p-p), 75 Ω ,
	SCART video output	CVBS 1.0 V (p-p), 75 Ω , negative sync., RCA jack x 1 (RGB) 0.63 V (p-p), 75 Ω
	Audio output (digital audio)	0.5 V (p-p), 75 Ω , RCA jack x 1
	Audio output (optical audio)	Optical connector x 1
	Audio output (analog audio)	2.0 Vrms(1 KHz, 0 dB), 330 Ω , RCA jack (L, R) x 1
[Supplied Accessories]	<ul style="list-style-type: none"> ● Video cable. 1 ● Audio cable. 1 	

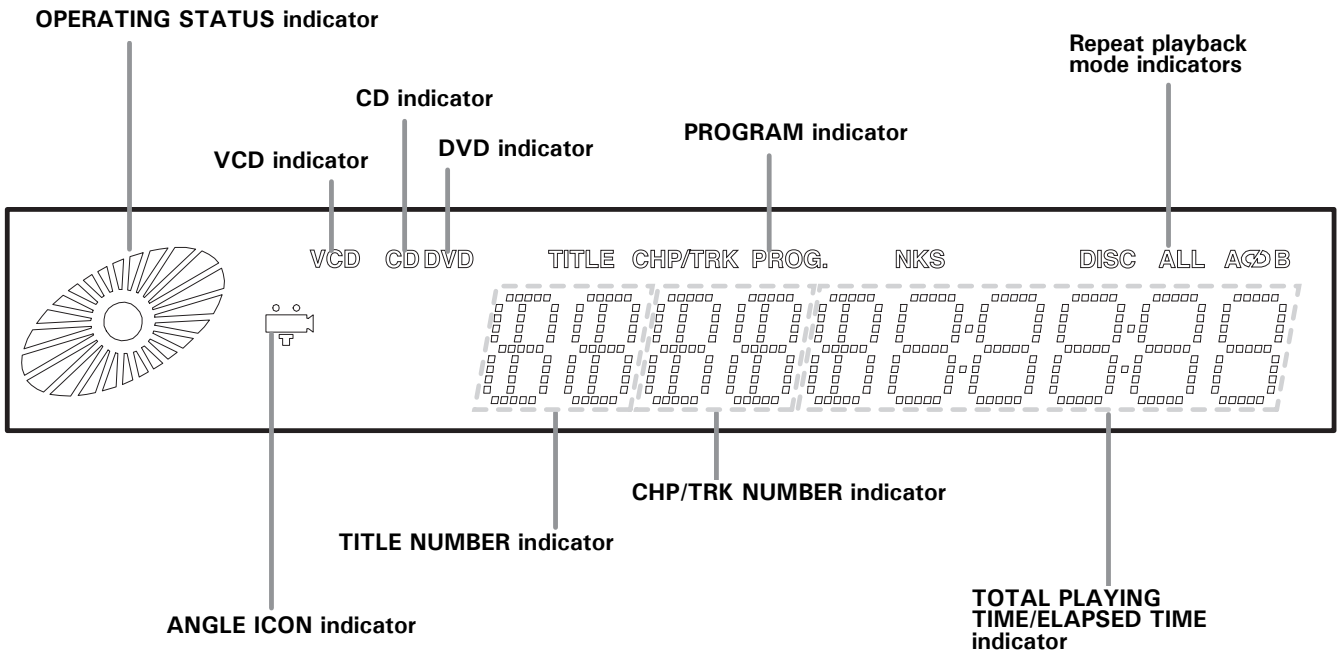
* Designs and specifications are subject to change without notice.

LOCATION OF CUSTOMER CONTROLS

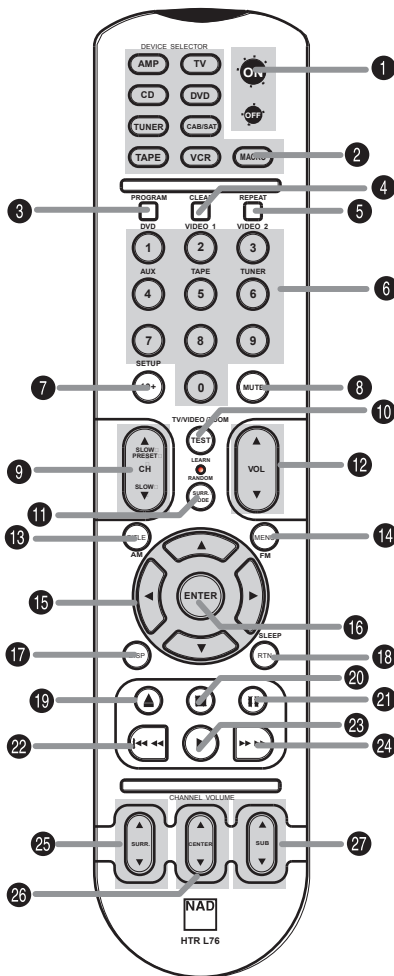
Front Panel



Display Window

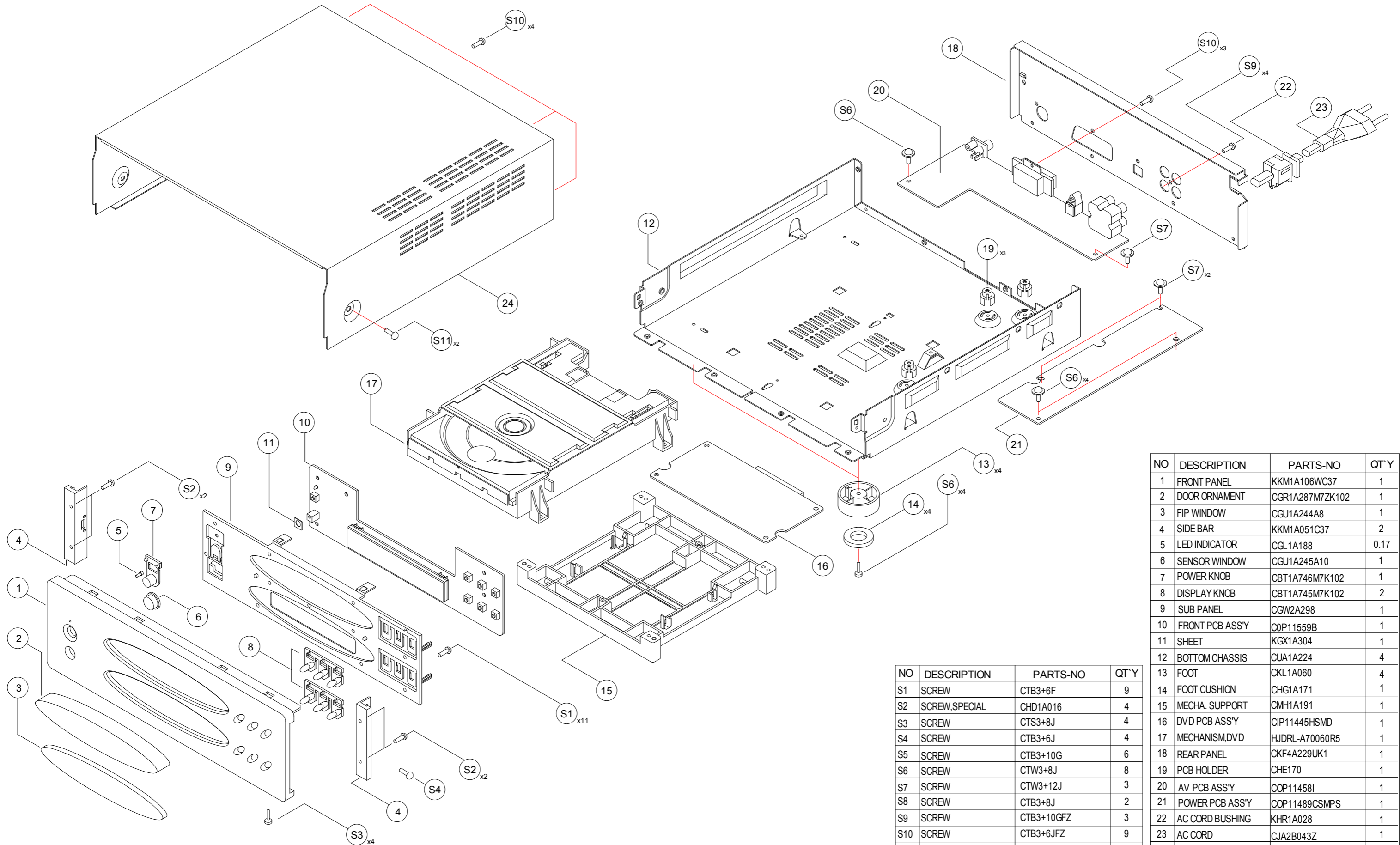


REMOTE CONTROL



1. POWER ON/OFF button (L76/L56)
2. DEVICE SELECTOR buttons
3. PROGRAM buttons (L56)
4. CLEAR button (L56)
5. REPEAT button (L56)
6. INPUT SOURCE SELECTOR buttons(L76), NUMERIC buttons (L76/L56)
7. OSD ON/OFF buttons (L76), DVD SET UP button (L56)
8. MUTE button (L76)
9. PRESET UP/DOWN buttons (L76), SLOW buttons (L56)
10. TEST TONE button (L76), ZOOM button (L56)
11. SURROUND MODE button (L76), RANDOM button (L56)
12. VOLUME UP/DOWN buttons (L76)
13. AM button (L76), TITLE button (L56)
14. FM button (L76), MENU button (L56)
15. ARROW buttons (L76/L56)
16. ENTER button (L76/L56)
17. DIGITAL INPUT/ RDS button (L76), DVD DISPLAY button (L56)
18. SLEEP button (L76), RETURN button (L56)
19. OPEN/CLOSE button (L56)
20. STOP button (L56)
21. PAUSE button (L56)
22. REV SCAN/SKIP button (L56)
23. PLAY button (L56)
24. FOR SCAN/ SKIP button (L56)
25. SURROUND LEVEL UP/DOWN buttons (L76)
26. CENTER LEVEL UP/DOWN buttons (L76)
27. SUBWOOFER LEVEL UP/DOWN buttons (L76)

EXPLODED VIEW(L56C)



NO	DESCRIPTION	PARTS-NO	QTY
S1	SCREW	CTB3+6F	9
S2	SCREW,SPECIAL	CHD1A016	4
S3	SCREW	CTS3+8J	4
S4	SCREW	CTB3+6J	4
S5	SCREW	CTB3+10G	6
S6	SCREW	CTW3+8J	8
S7	SCREW	CTW3+12J	3
S8	SCREW	CTB3+8J	2
S9	SCREW	CTB3+10GFZ	3
S10	SCREW	CTB3+6JFZ	9
S11	SCREW	CTB4+6JFZ	2

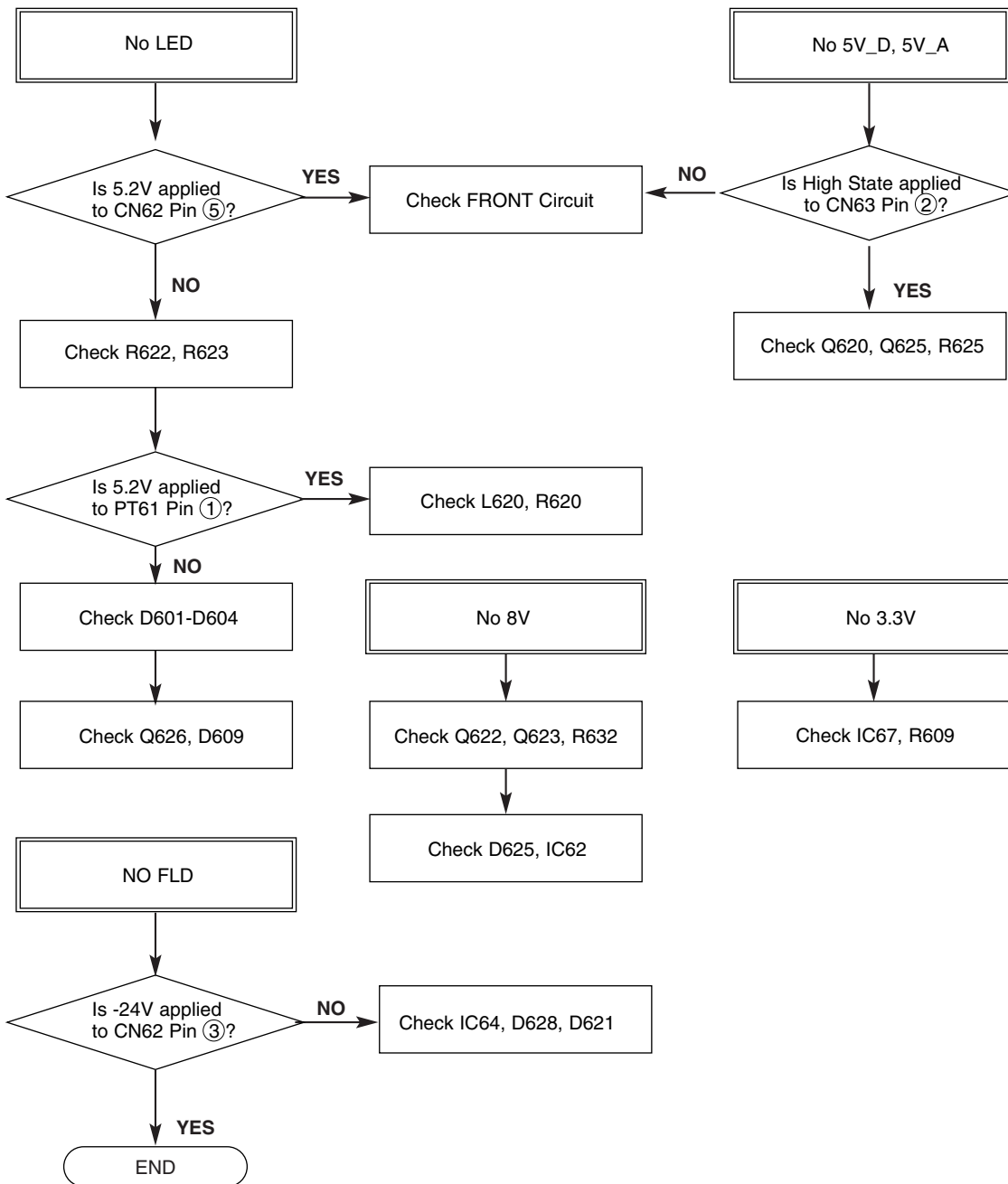
NO	DESCRIPTION	PARTS-NO	QTY
1	FRONT PANEL	KKM1A106WC37	1
2	DOOR ORNAMENT	CGR1A287M7ZK102	1
3	FIP WINDOW	CGU1A244A8	1
4	SIDE BAR	KKM1A051C37	2
5	LED INDICATOR	CGL1A188	0.17
6	SENSOR WINDOW	CGU1A245A10	1
7	POWER KNOB	CBT1A746M7K102	1
8	DISPLAY KNOB	CBT1A745M7K102	2
9	SUB PANEL	CGW2A298	1
10	FRONT PCB ASS'Y	COP11559B	1
11	SHEET	KGX1A304	1
12	BOTTOM CHASSIS	CUA1A224	4
13	FOOT	CKL1A060	4
14	FOOT CUSHION	CHG1A171	1
15	MECHA. SUPPORT	CMH1A191	1
16	DVD PCB ASS'Y	CIP11445HSMD	1
17	MECHANISM,DVD	HJDRL-A70060R5	1
18	REAR PANEL	CKF4A229UK1	1
19	PCB HOLDER	CHE170	1
20	AV PCB ASS'Y	COP11458I	1
21	POWER PCB ASS'Y	COP11489CSMPS	1
22	AC CORD BUSHING	KHR1A028	1
23	AC CORD	CJA2B043Z	1
24	TOP CABINET	CKC1B127S35	1

SECTION 2 ELECTRICAL CONTENTS

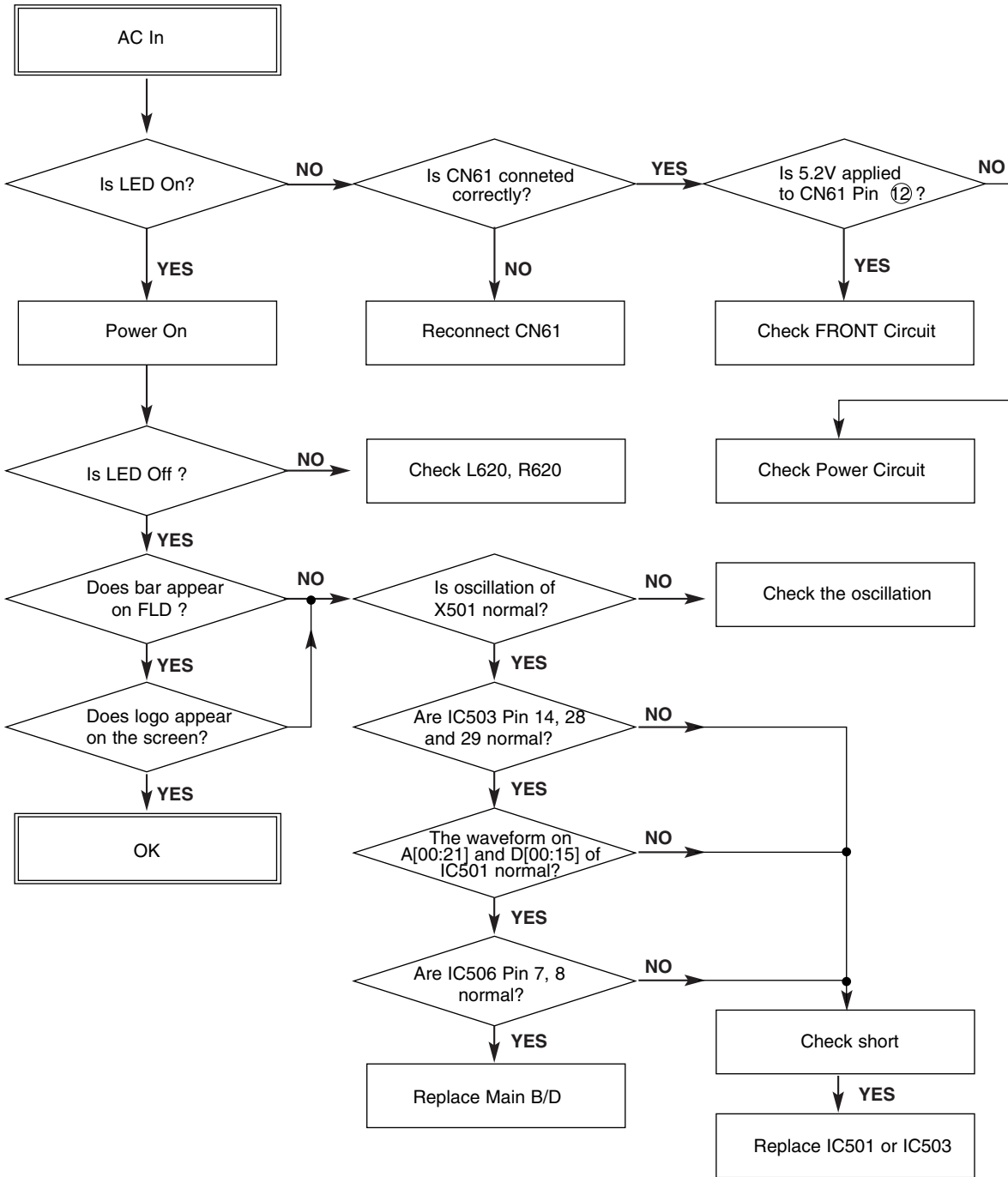
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ELECTRICAL TROUBLESHOOTING GUIDE

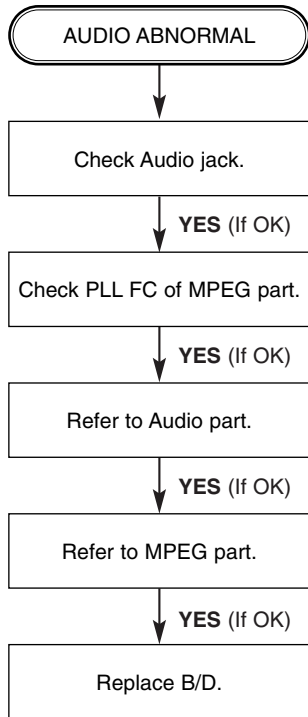
1. POWER (SMPS) Circuit



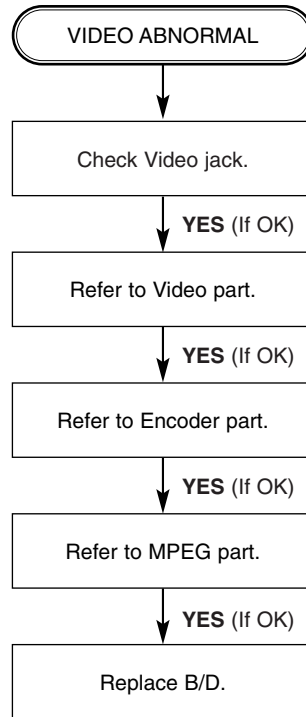
2. u-COM Circuit
A. NO Power



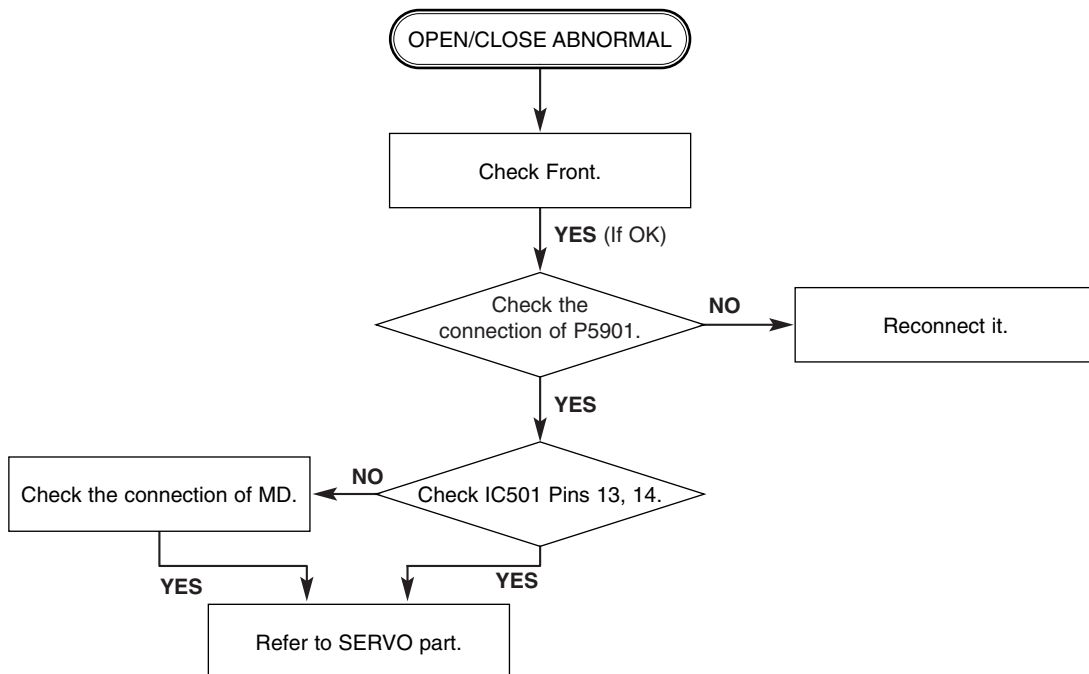
B. Audio abnormal



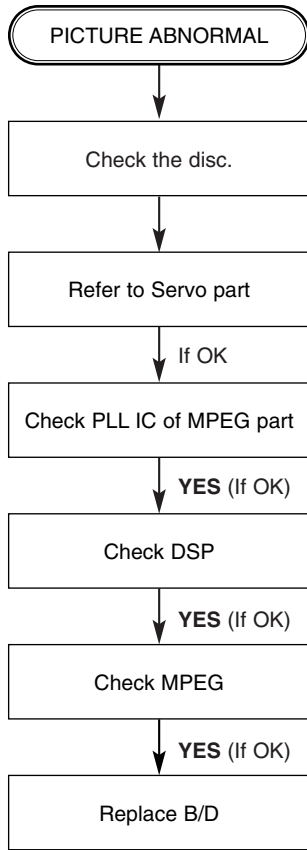
C. Video abnormal



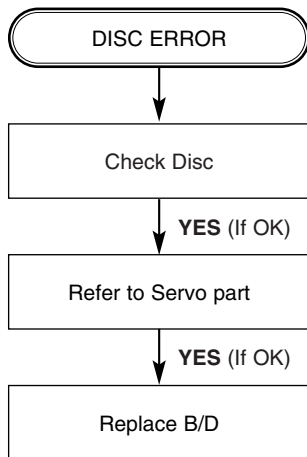
D. Open/Close abnormal



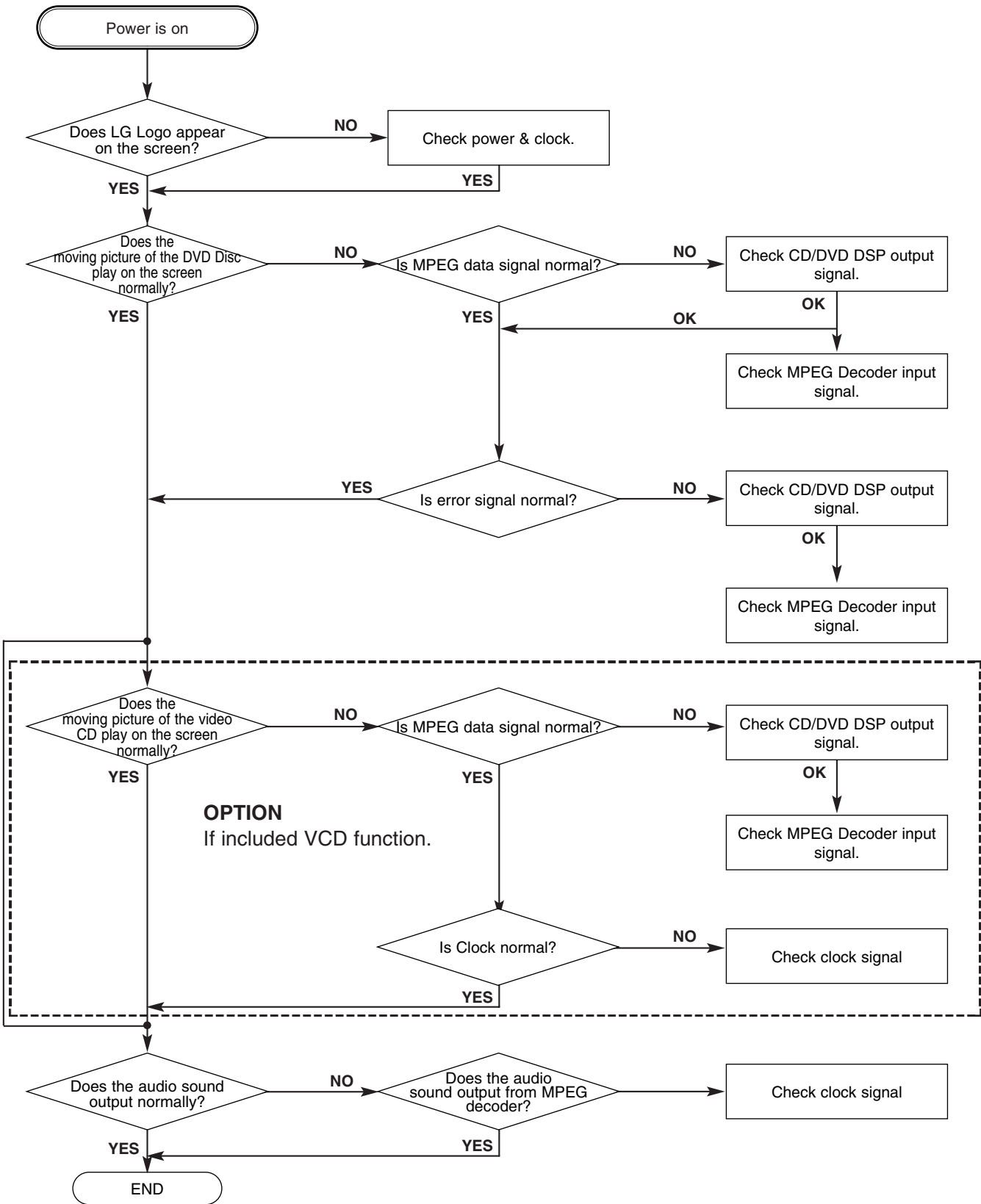
E. Picture abnormal



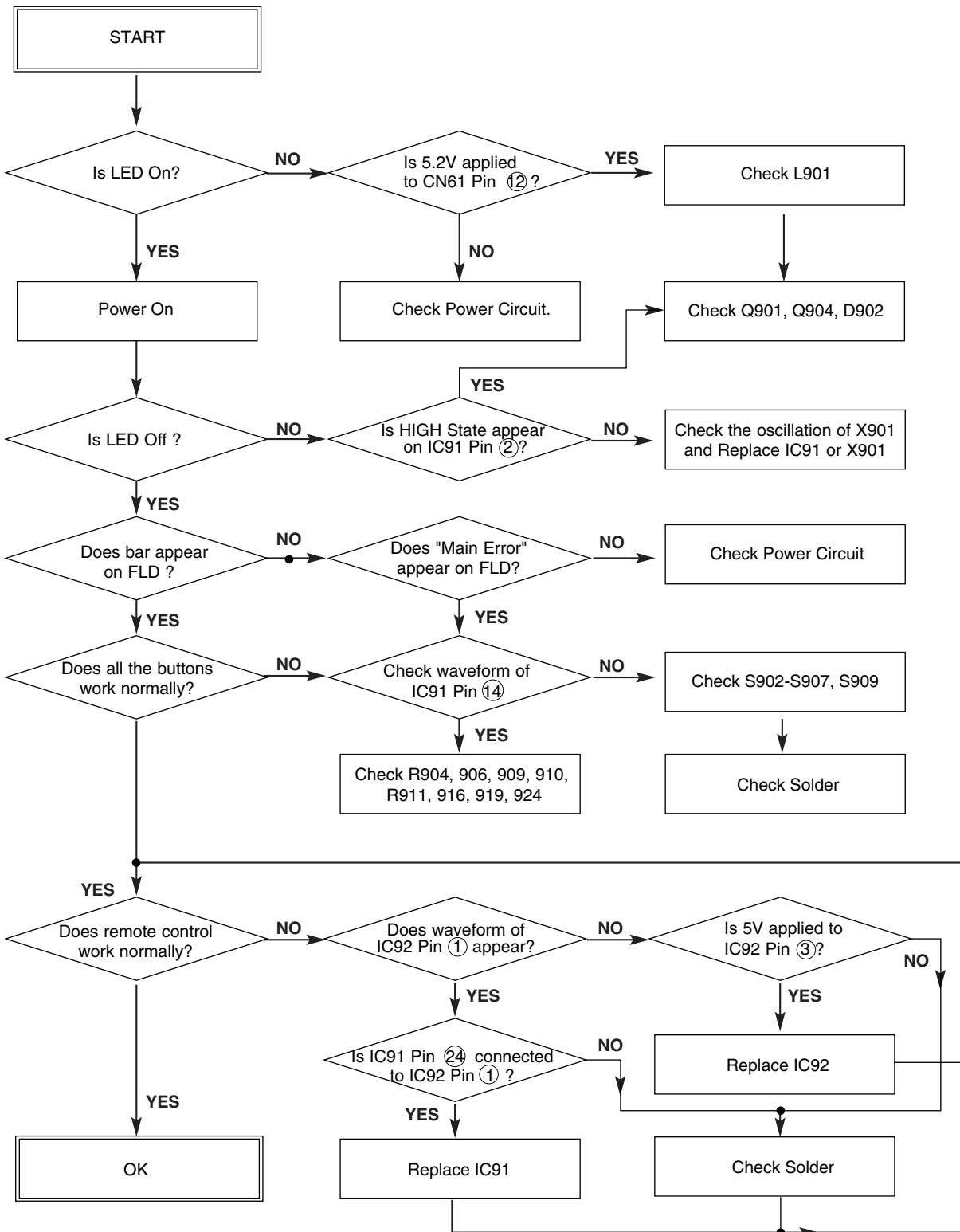
F. Disc Error



3. MPEG Circuit

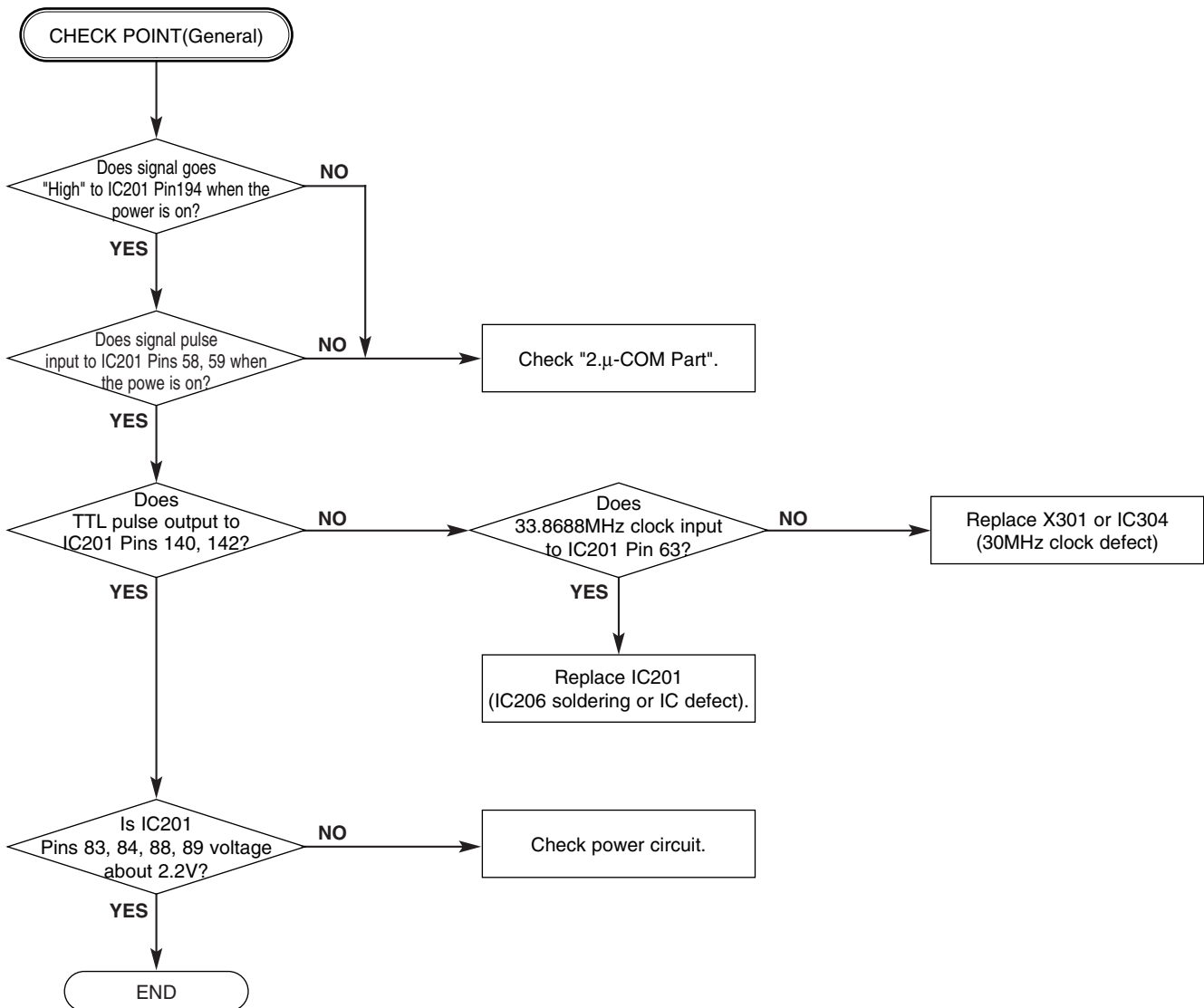


4. Front Circuit (Digitron & Key)

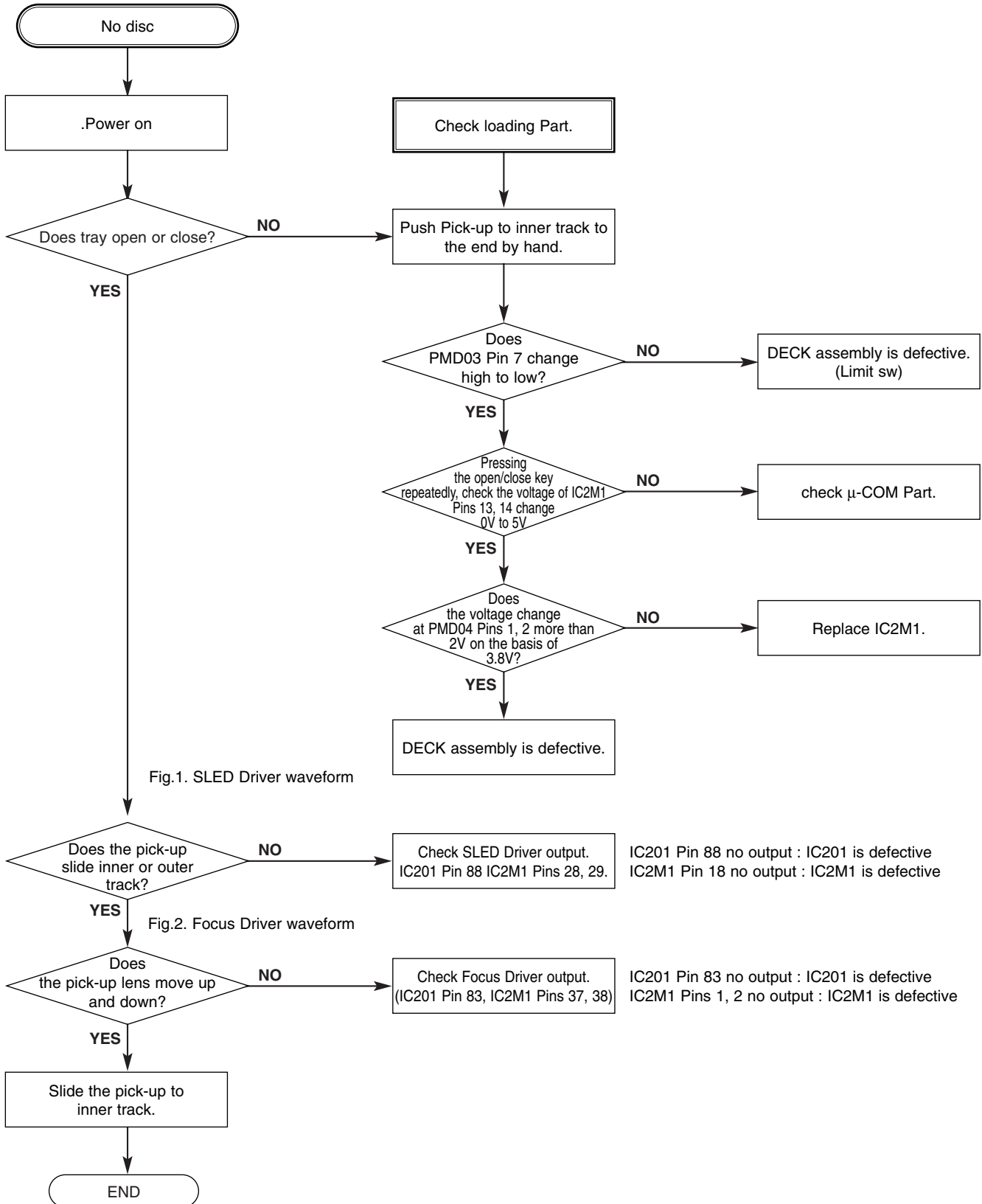


5. RF/Servo Circuit

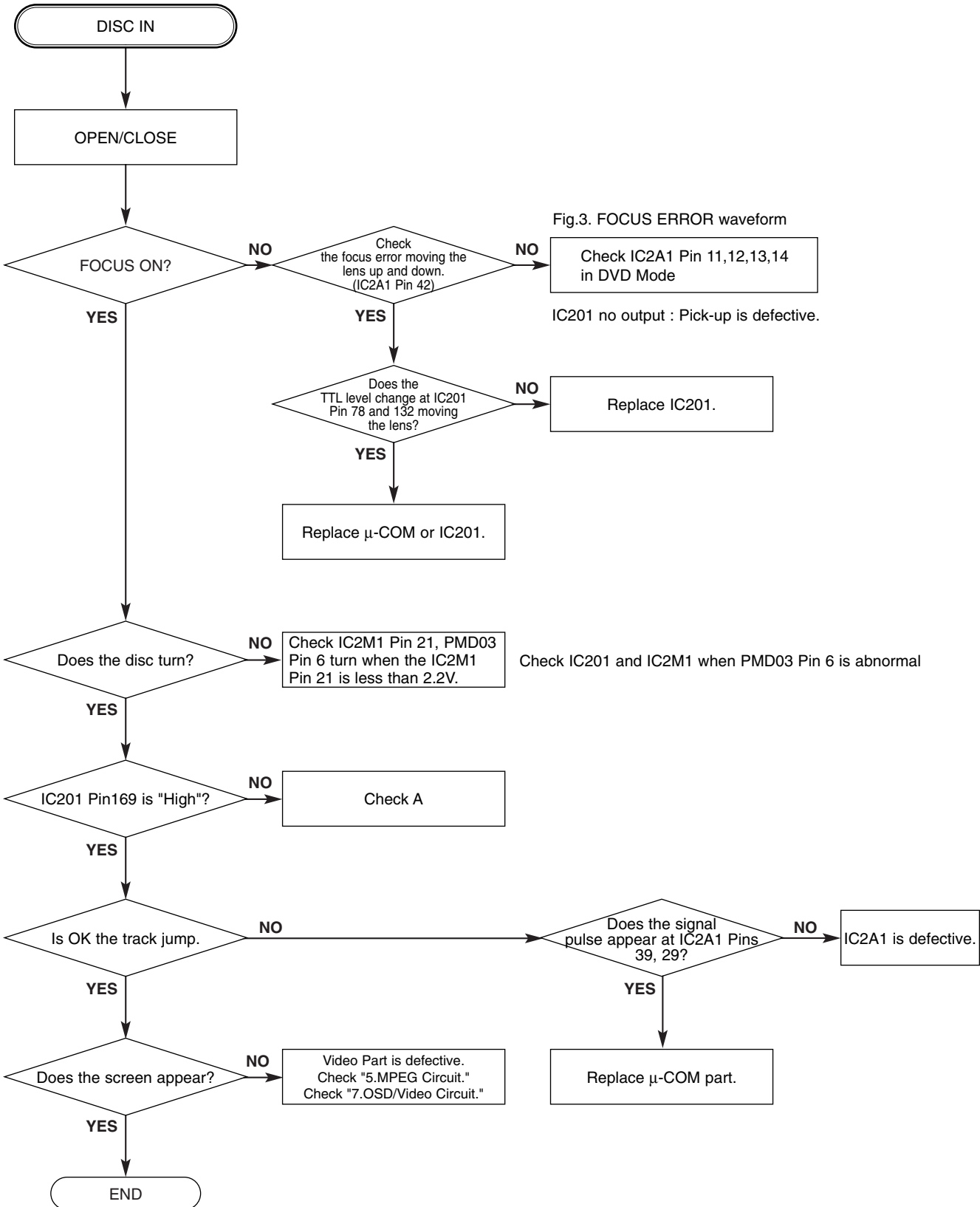
A.



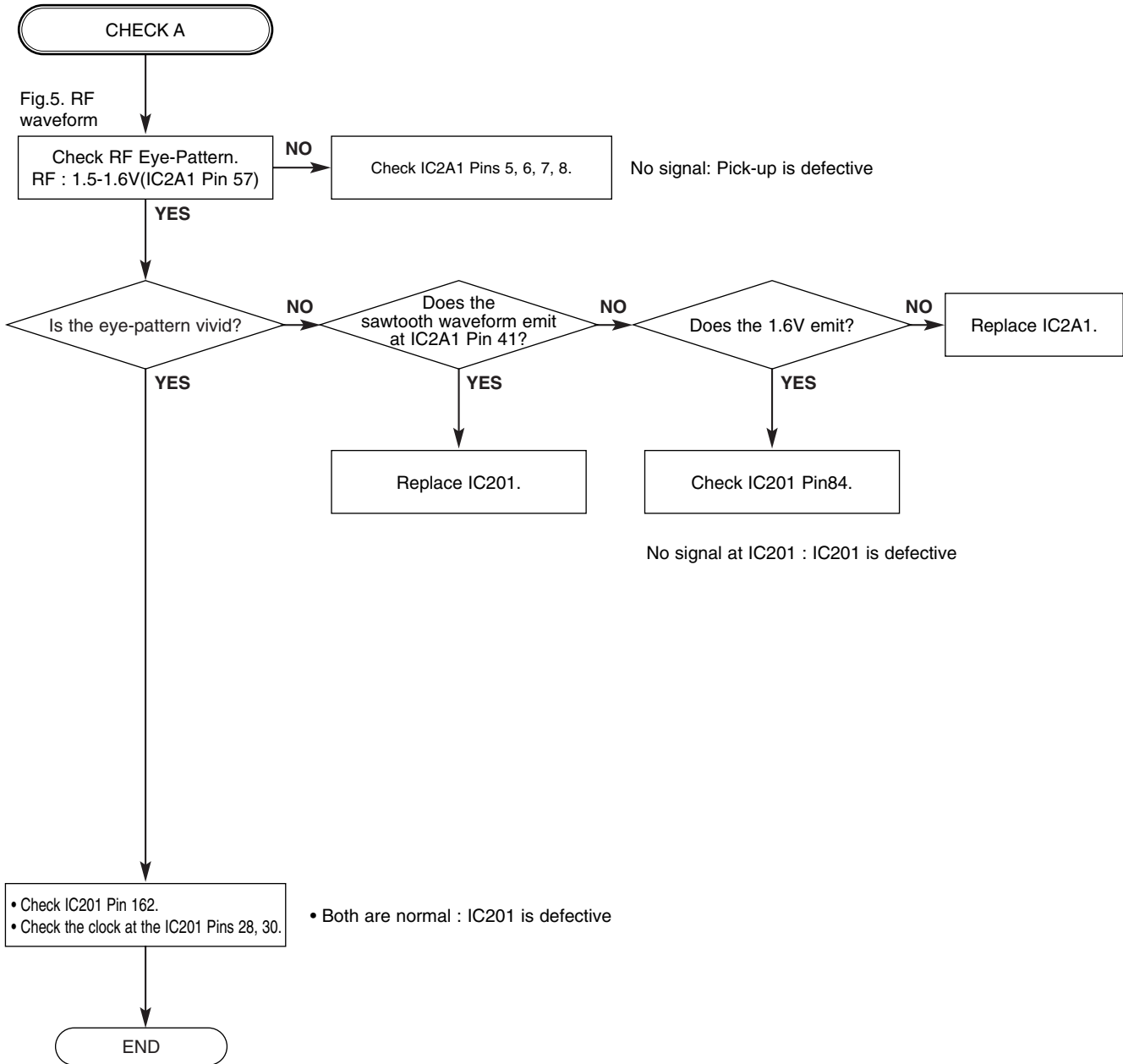
B.



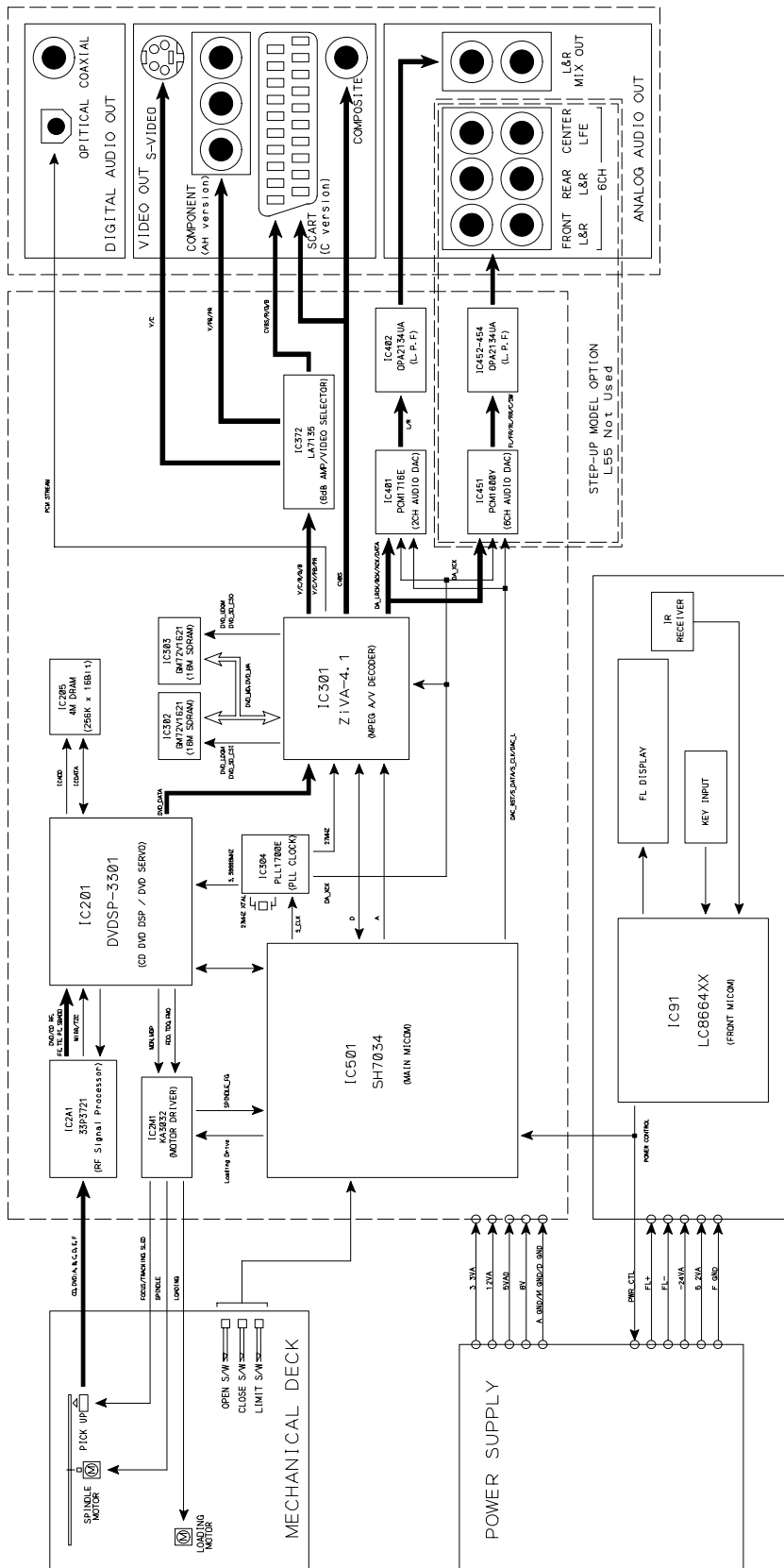
C.



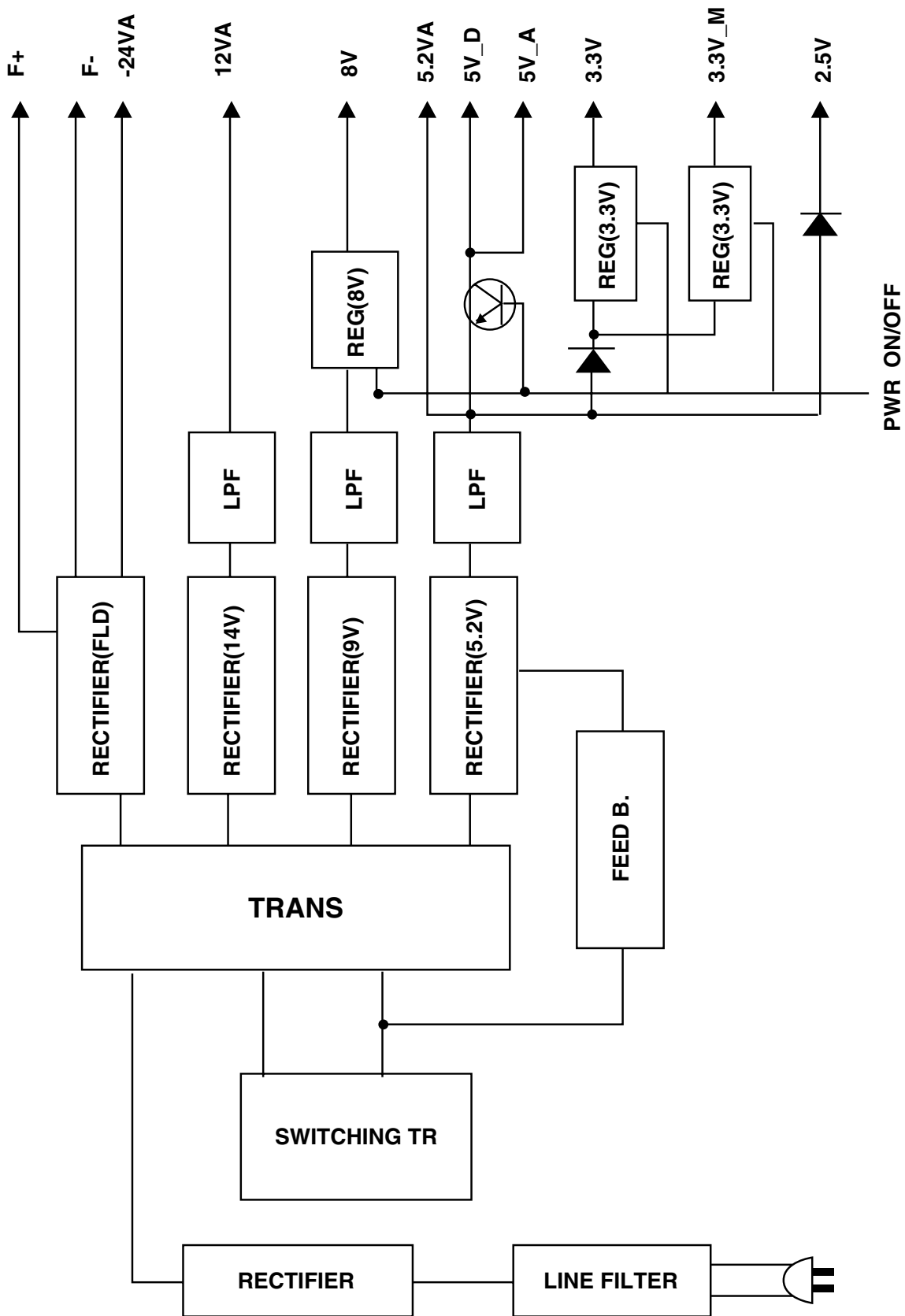
D.



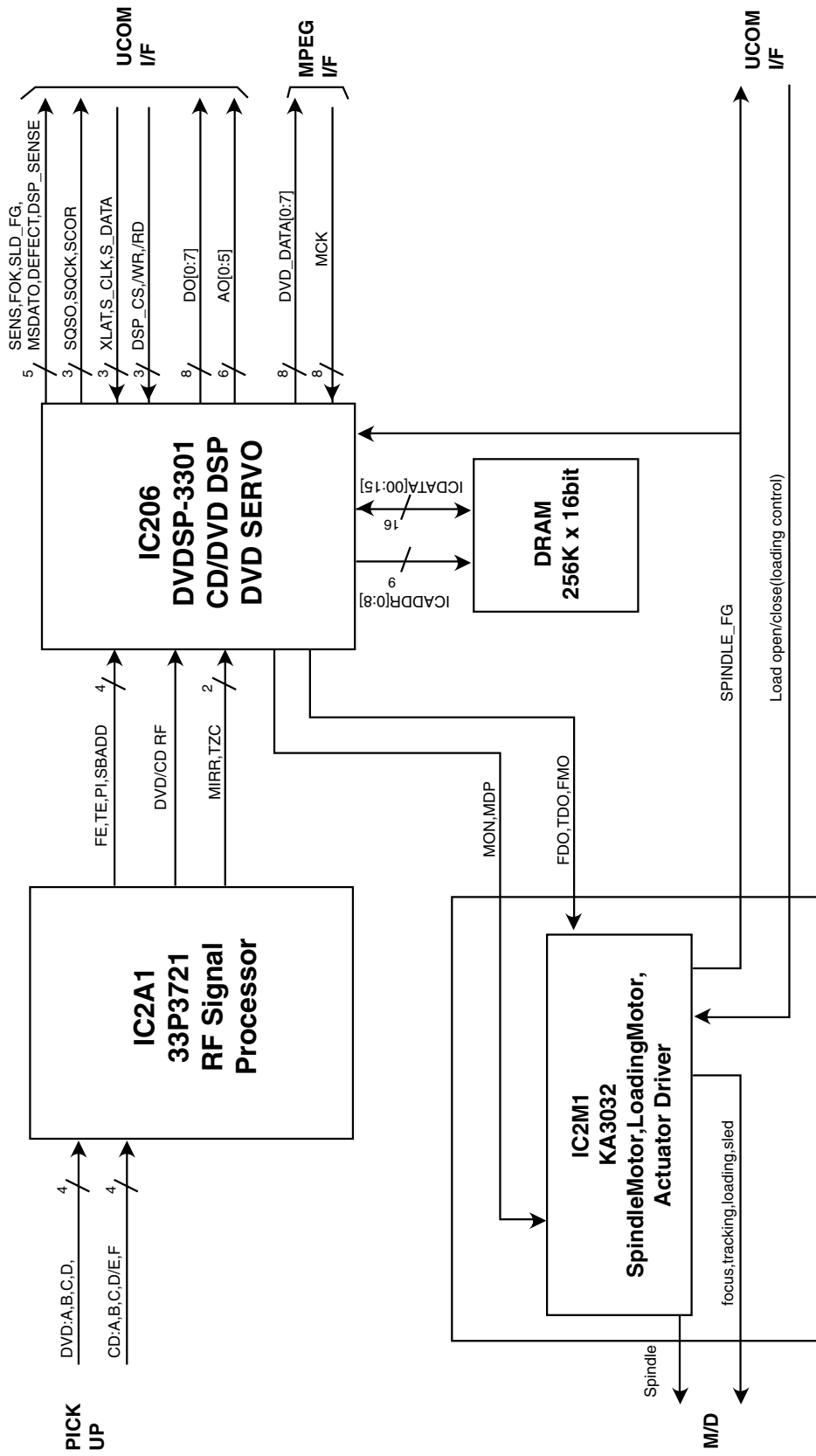
BLOCK DIAGRAM



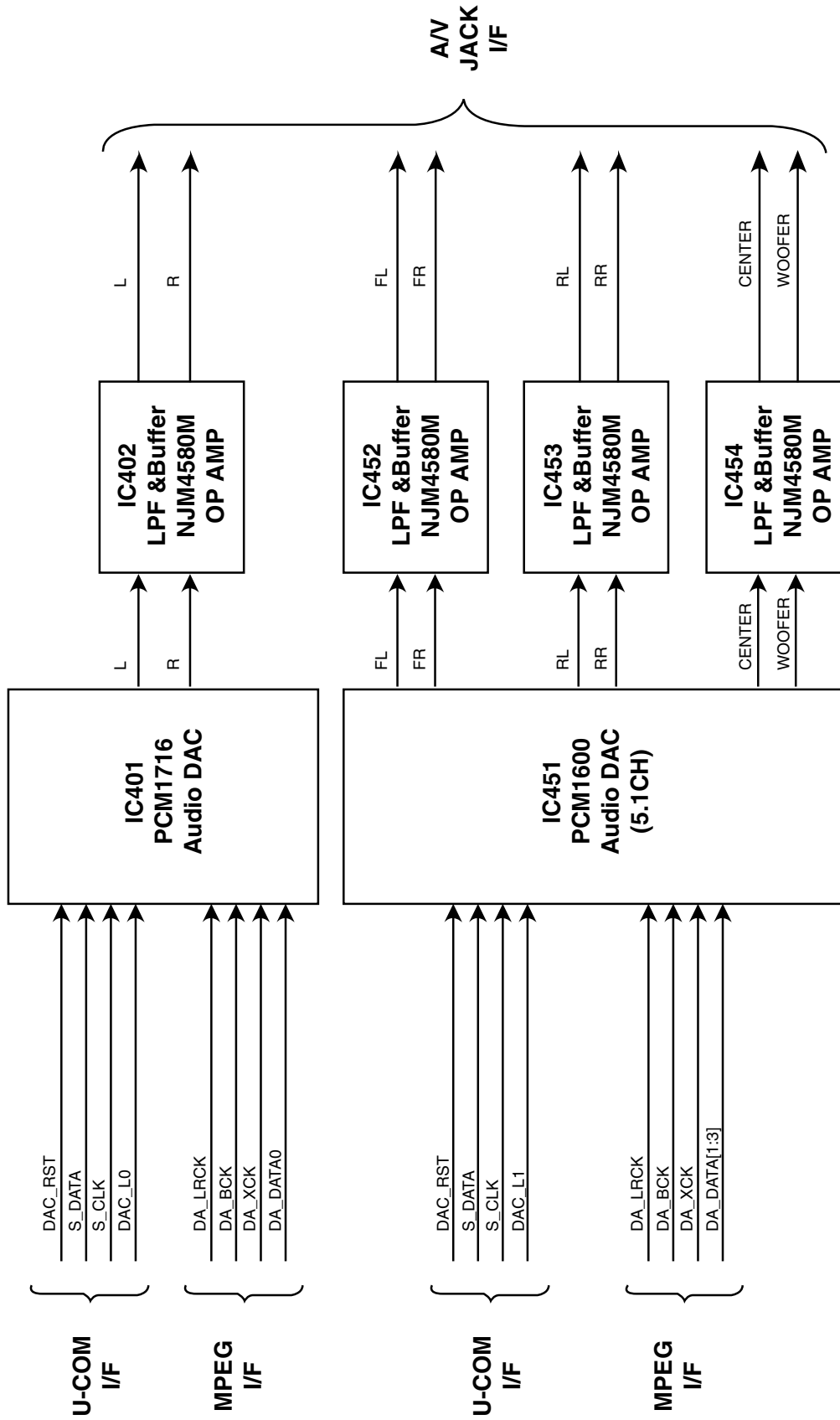
2. Power(SMPS) Block Diagram



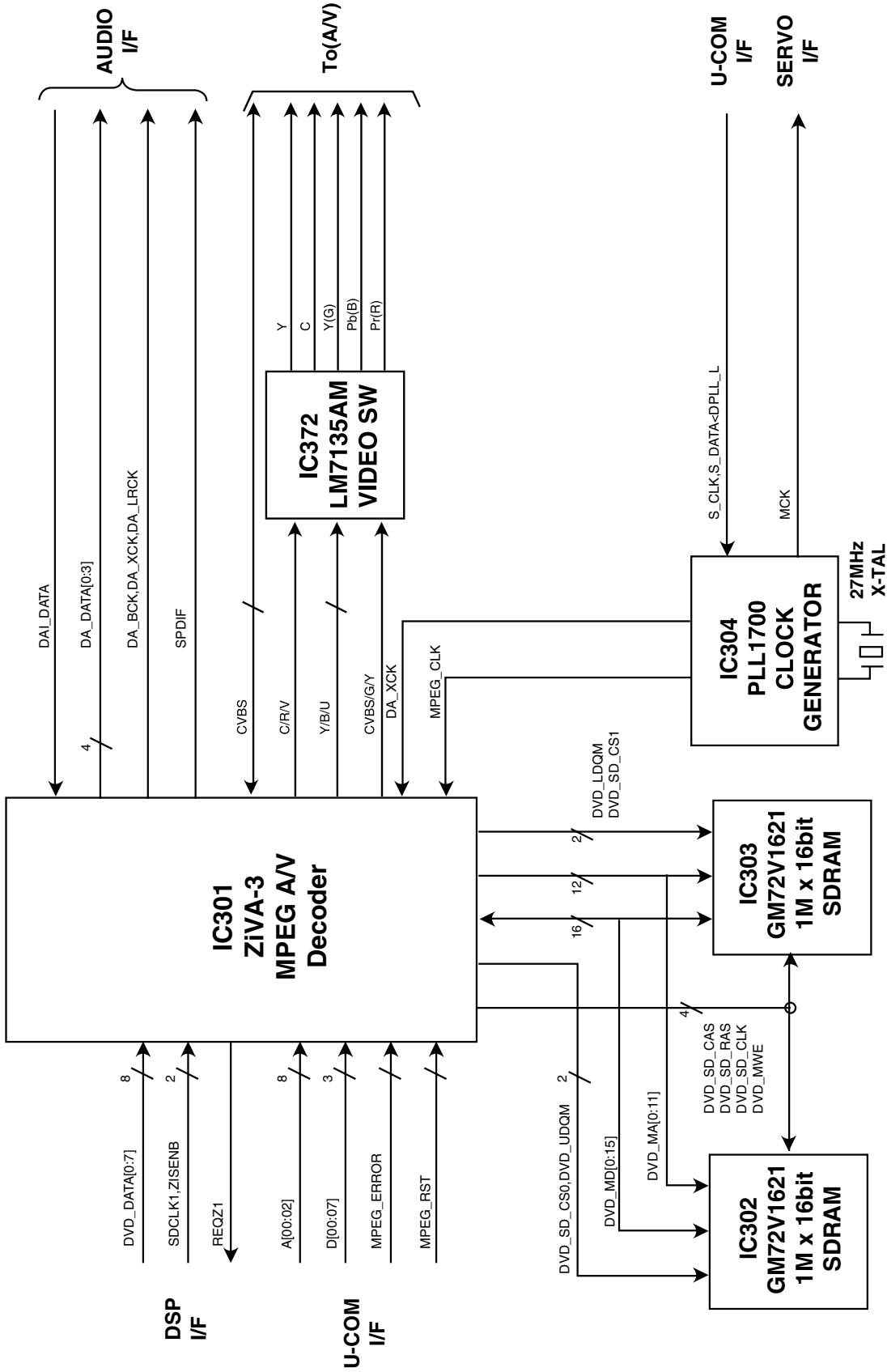
3. RF/CD DSP/DVD DSP/DVD SERVO Block Diagram



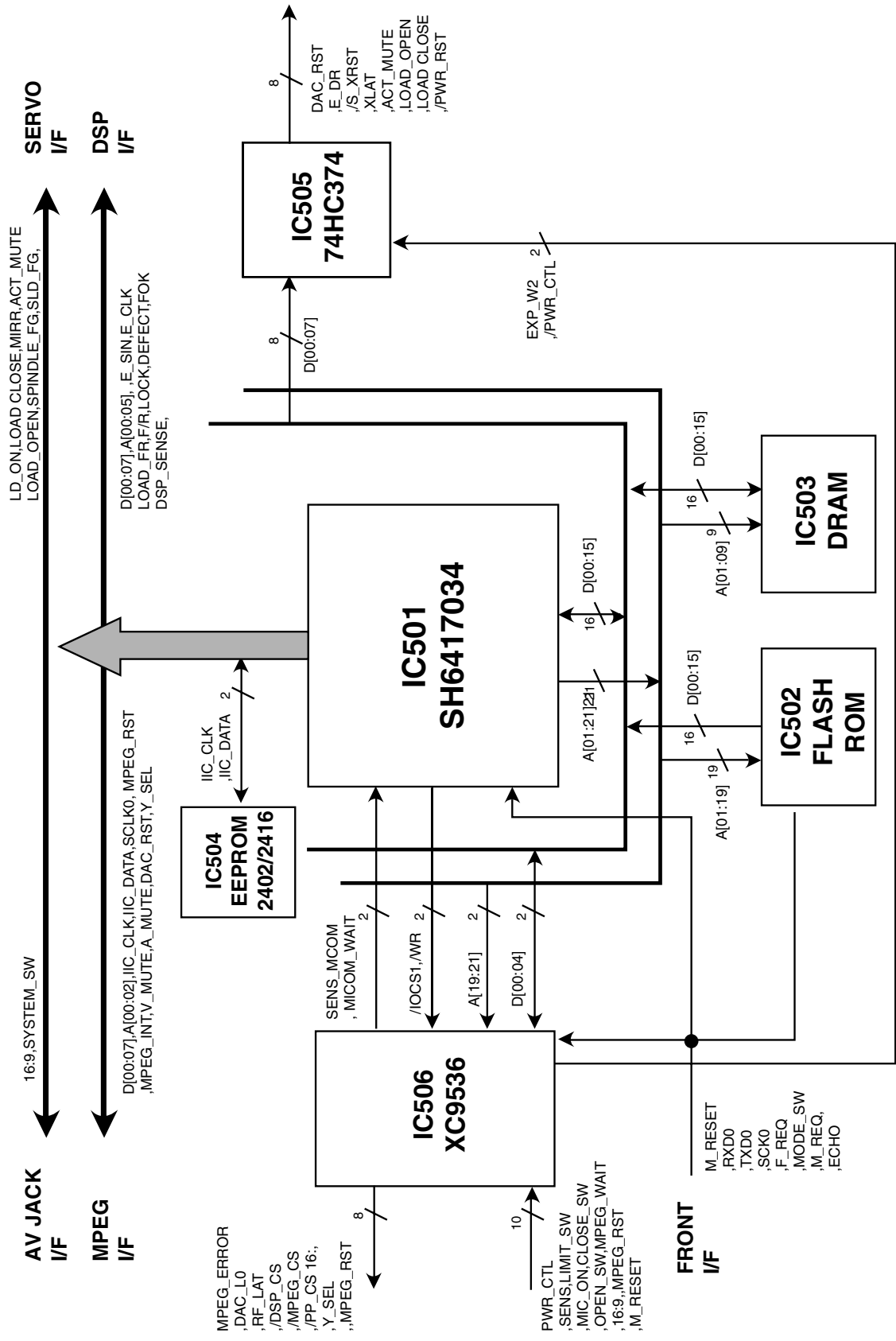
4. Audio Block Diagram



5. MPEG Block Diagram

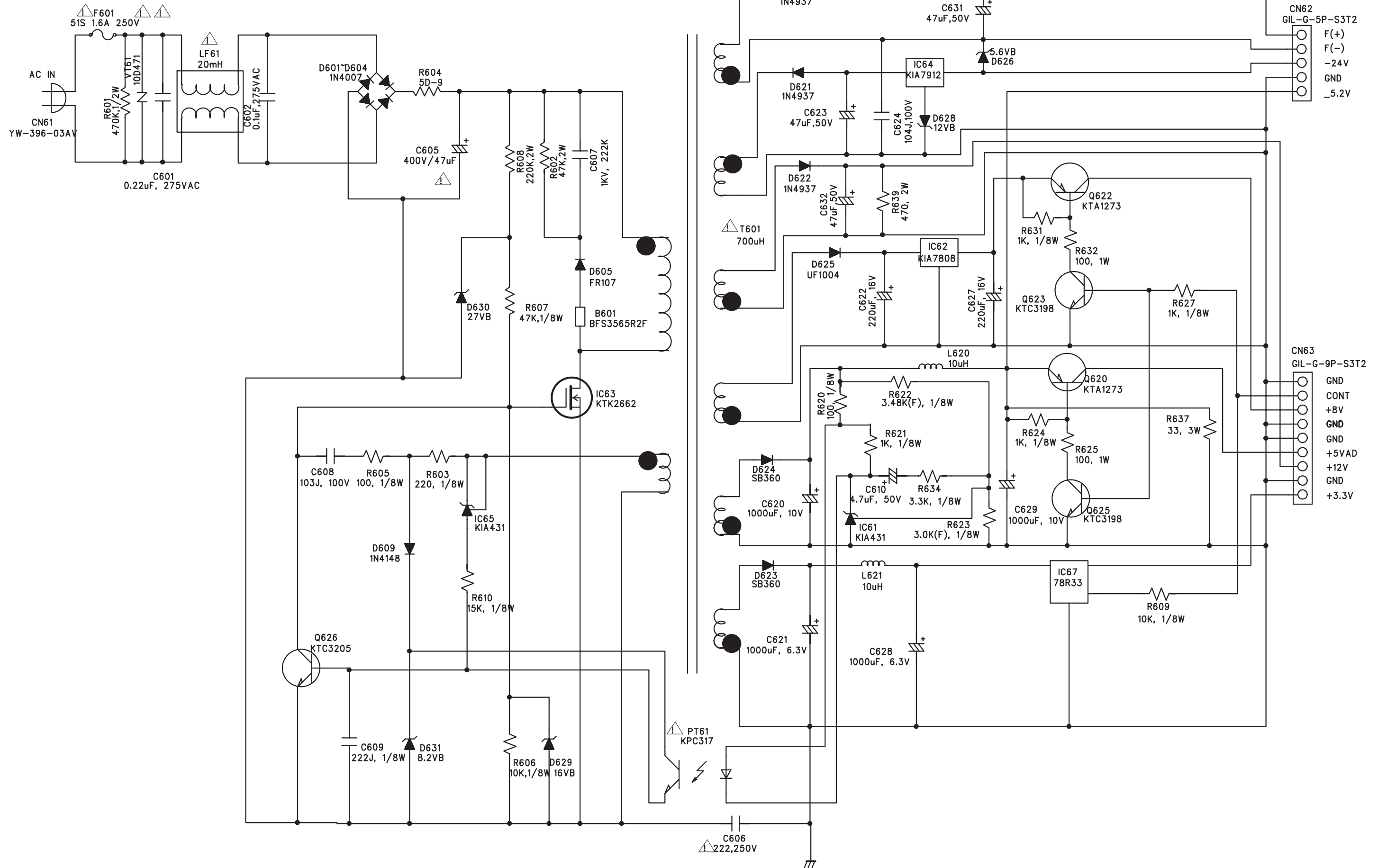


6. μ -COM Block Diagram



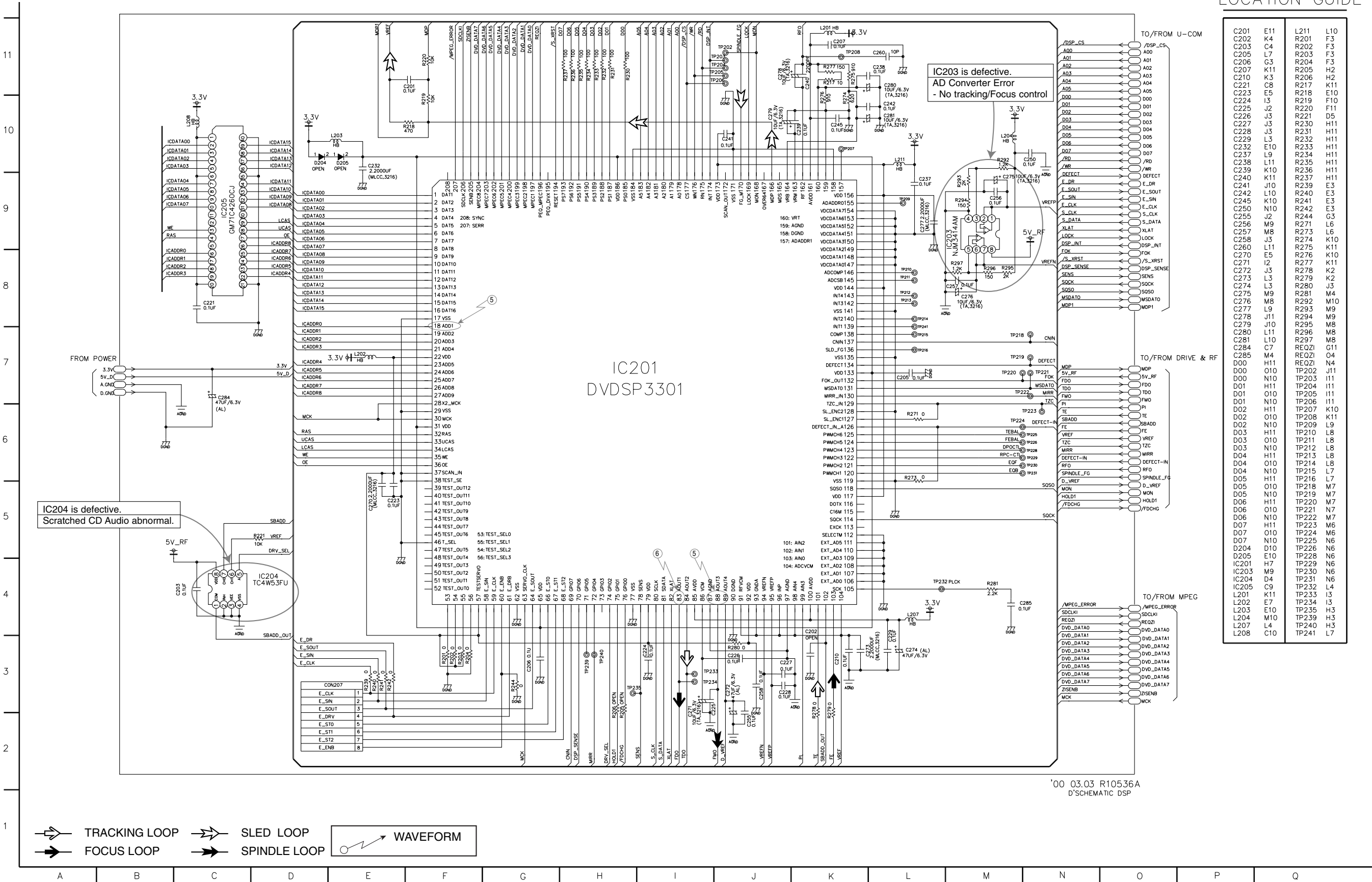
CIRCUIT DIAGRAM

1. POWER (SMPS) CIRCUIT DIAGRAM

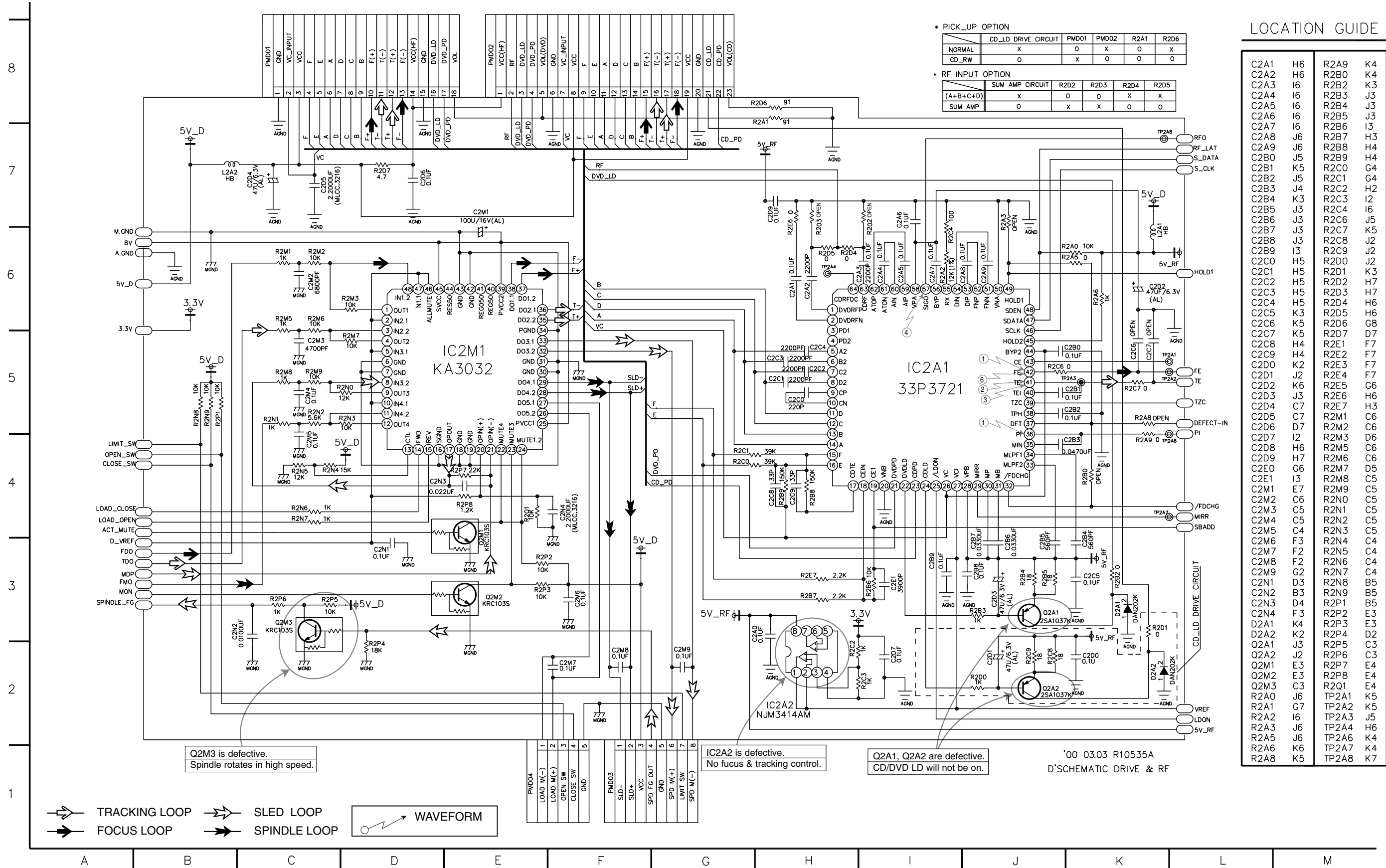


2. DVD DSP CIRCUIT DIAGRAM

LOCATION GUIDE



3. DRIVE & RF CIRCUIT DIAGRAM



PICK_UP OPTION

	CD_LD DRIVE CIRCUIT	PMD01	PMD02	R2A1	R2D6
NORMAL	X	0	X	0	X
CD_RW	0	X	0	0	0

RF INPUT OPTION

	SUM AMP CIRCUIT	R2D2	R2D3	R2D4	R2D5
(A+B+C+D)	X	0	0	X	X
SUM AMP	0	X	X	0	0

LOCATION GUIDE

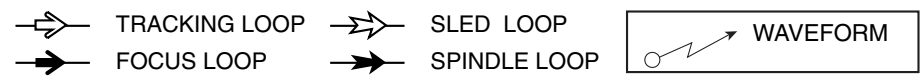
C2A1	H6	R2A9	K4
C2A2	H6	R2B0	K4
C2A3	I6	R2B2	K3
C2A4	I6	R2B3	J3
C2A5	I6	R2B4	J3
C2A6	I6	R2B5	J3
C2A7	I6	R2B6	J3
C2A8	J6	R2B7	H3
C2A9	J6	R2B8	H4
C2B0	J5	R2B9	H4
C2B1	K5	R2C0	G4
C2B2	J5	R2C1	G4
C2B3	J4	R2C2	H2
C2B4	K3	R2C3	I2
C2B5	J3	R2C4	I6
C2B6	J3	R2C6	J5
C2B7	J3	R2C7	K5
C2B8	J3	R2C8	J2
C2B9	I3	R2C9	J2
C2C0	H5	R2D0	J2
C2C1	H5	R2D1	K3
C2C2	H5	R2D2	H7
C2C3	H5	R2D3	H7
C2C4	H5	R2D4	H6
C2C5	K3	R2D5	H6
C2C6	K5	R2D6	G8
C2C7	K5	R2D7	D7
C2C8	H4	R2E1	F7
C2C9	H4	R2E2	F7
C2D0	K2	R2E3	F7
C2D1	J2	R2E4	F7
C2D2	K6	R2E5	G6
C2D3	J3	R2E6	H6
C2D4	C7	R2E7	H3
C2D5	C7	R2M1	C6
C2D6	D7	R2M2	C6
C2D7	I2	R2M3	D6
C2D8	H6	R2M5	C6
C2D9	H7	R2M6	C6
C2E0	G6	R2M7	D5
C2E1	I3	R2M8	C5
C2M1	E7	R2M9	C5
C2M2	C6	R2N0	C5
C2M3	C5	R2N1	C5
C2M4	C5	R2N2	C5
C2M5	C4	R2N3	C5
C2M6	F3	R2N4	C4
C2M7	F2	R2N5	C4
C2M8	F2	R2N6	C4
C2M9	G2	R2N7	C4
C2N1	D3	R2N8	B5
C2N2	B3	R2N9	B5
C2N3	D4	R2P1	B5
C2N4	F3	R2P2	E3
D2A1	K4	R2P3	E3
D2A2	K2	R2P4	D2
Q2A1	J3	R2P5	C3
Q2A2	J2	R2P6	C3
Q2M1	E3	R2P7	E4
Q2M2	E3	R2P8	E4
Q2M3	C3	R2O1	E4
R2A0	J6	TP2A1	K5
R2A1	G7	TP2A2	K5
R2A2	I6	TP2A3	J5
R2A3	J6	TP2A4	H6
R2A5	J6	TP2A6	K4
R2A6	K6	TP2A7	K4
R2A8	K5	TP2A8	K7

Q2M3 is defective.
Spindle rotates in high speed.

IC2A2 is defective.
No focus & tracking control.

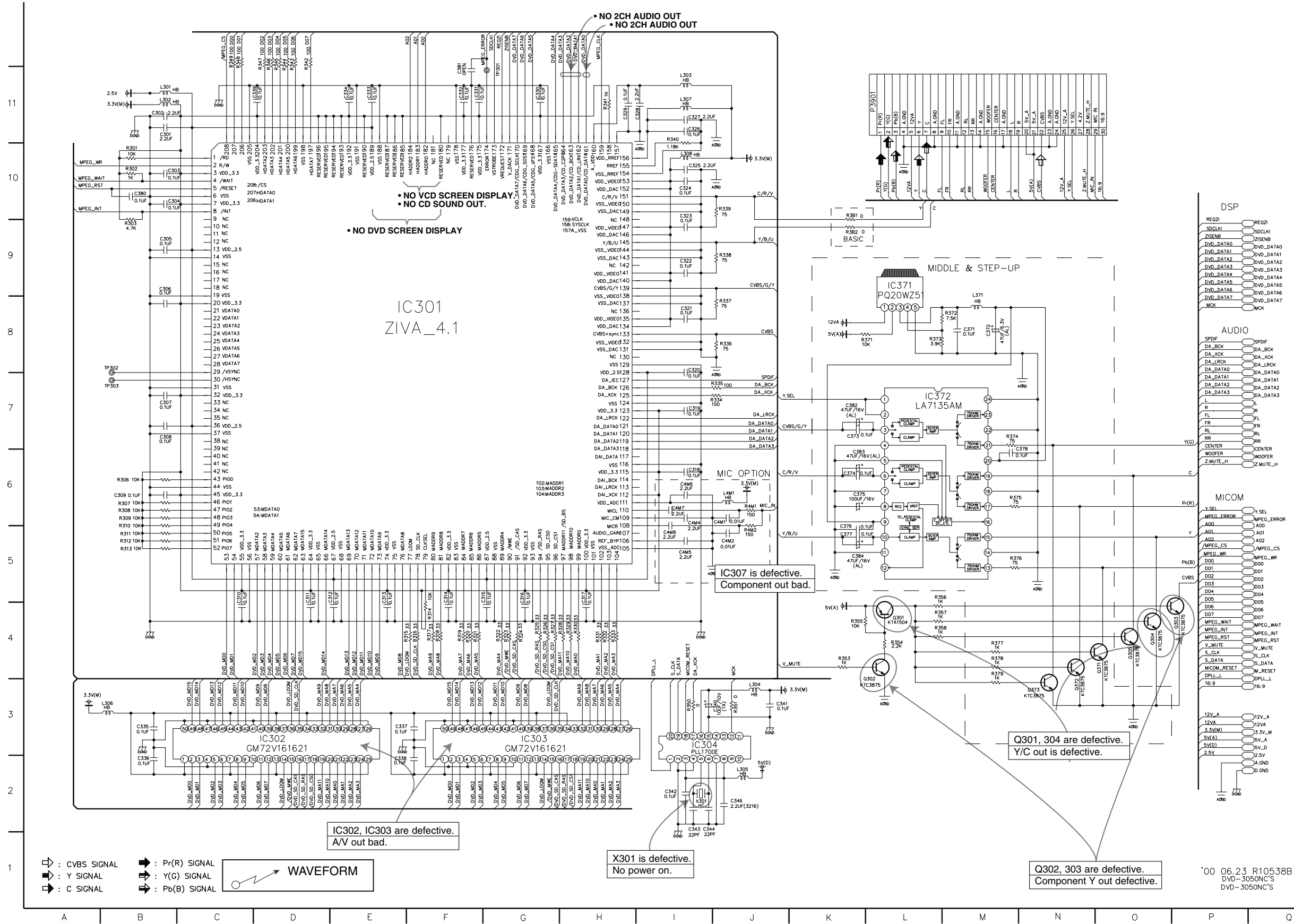
Q2A1, Q2A2 are defective.
CD/DVD LD will not be on.

'00 03.03 R10535A
D'SCHEMATIC DRIVE & RF



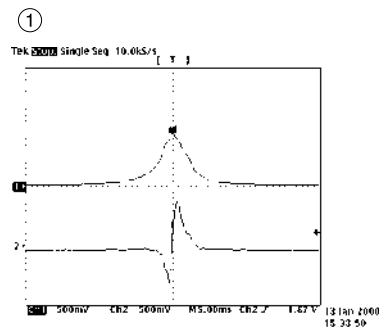
4. MPEG CIRCUIT DIAGRAM

LOCATION GUIDE

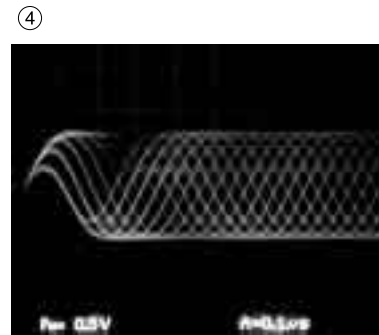


C301	B11	Q301	L4
C302	B11	Q302	K3
C303	B10	Q303	P4
C304	B10	Q304	O4
C305	B9	Q305	O4
C306	B9	Q371	O4
C307	B7	Q372	N3
C308	B7	Q373	N3
C309	B6	R301	B10
C310	C4	R302	B10
C311	D4	R303	B9
C312	E4	R306	B6
C313	E4	R307	B6
C314	F4	R308	B6
C315	G4	R309	B6
C316	G4	R310	B5
C317	H4	R311	B5
C318	I6	R312	B5
C319	I7	R313	B5
C320	I8	R314	F4
C321	I8	R315	F4
C322	I9	R316	F4
C323	I10	R317	F4
C324	I10	R318	F4
C325	I10	R319	F4
C326	I11	R320	F4
C327	I11	R321	F4
C328	I11	R322	G4
C329	H11	R323	G4
C330	G11	R324	G4
C331	F11	R325	G4
C332	F11	R326	G4
C333	E11	R327	G4
C334	E11	R328	H4
C335	B5	R329	H4
C336	B2	R330	H4
C337	E3	R331	H4
C338	E2	R332	H4
C339	D11	R333	H4
C340	J3	R334	I7
C341	J3	R335	I7
C342	I2	R336	J8
C343	I2	R337	J8
C344	I2	R338	J9
C346	J2	R339	J10
C371	M8	R340	I11
C372	M8	R341	H11
C373	K7	R342	D11
C374	K6	R343	D11
C375	K6	R344	D11
C376	K5	R345	D11
C377	K5	R346	D11
C378	M6	R347	D11
C380	B10	R348	C11
C381	F11	R349	C11
C382	K7	R350	J3
C383	K6	R351	J3
C384	K5	R353	K4
C3K1	L2	R354	L4
C4M1	J6	R355	K4
C4M2	J5	R356	L5
C4M4	I6	R357	L4
C4M5	I5	R358	L4
C4M6	I6	R371	K8
C4M7	I6	R372	M8
C4M8	I5	R373	L8
IC301	E8	R374	M7
IC302	D3	R375	M6
IC303	G3	R376	M5
IC304	I3	R377	M4
IC371	L9	R378	M4
IC372	L7	R379	M4
IC3K1	K3	R381	K10
L301	B11	R382	K9
L302	B11	R3K1	K3
L303	I11	R3K2	L2
L304	J3	R4M1	J6
L305	J2	R4M2	J5
L306	B3	REOZ1	G12
L307	I11	REOZ1	O9
L308	I10	REOZ1	P9
L371	M8	TP301	G11
L4M1	J6	TP302	B8
P3901	L10	TP303	B7
Pb(B)	L11		
Pb(B)	P5		

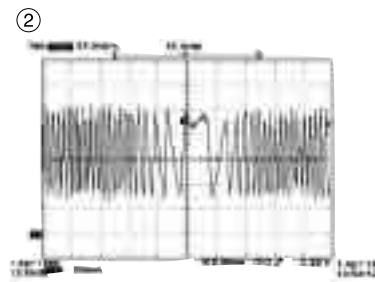
4-1. WAVEFORMS (RF/SERVO)



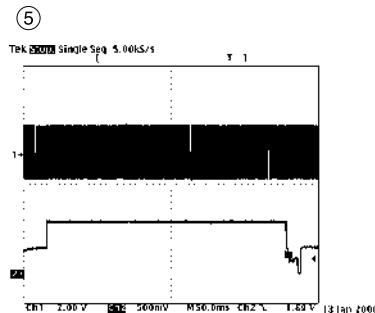
IC2A1 Pin 42, Focus Error
IC2A1 Pin 36, Pi



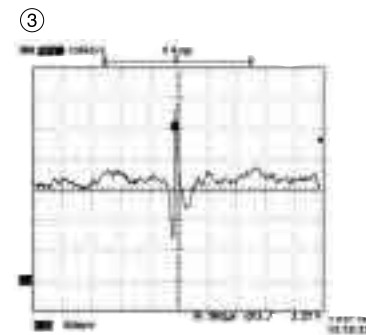
IC2A1 Pin 57,
RF



IC2A1 Pin 41
Tracking Error



IC201 Pin 88, SLED Drive(FMO)
IC201 Pin 18, SLED FG

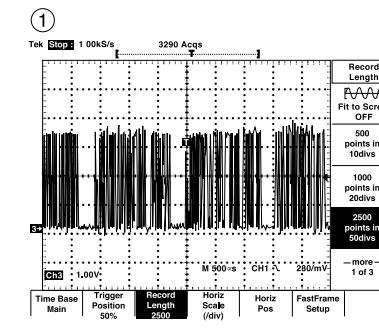


IC2A1 Pin 41
VBR TRACKING Error

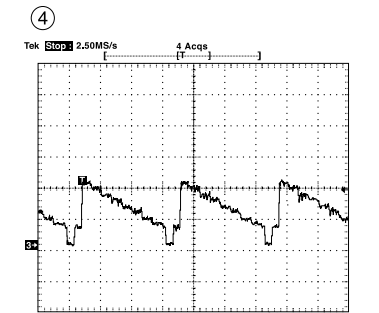


IC2A1 Pin42, Focus Error(in Focus Search)
IC201 Pin 83, Focus Drive(FDO)

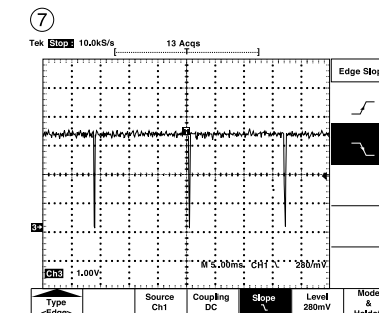
(VIDEO ENCODER)



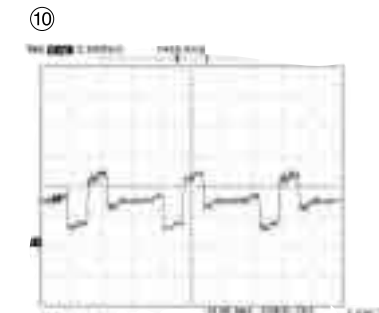
IC305 Pins 9~16, MPEG Data



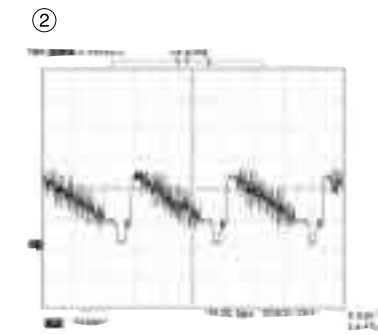
IC305 Pin 27, Luminance



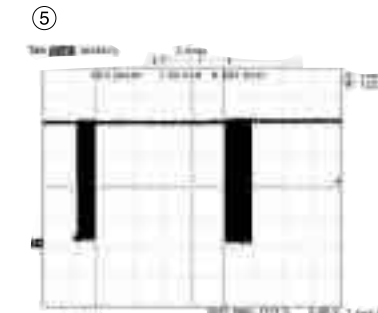
IC305 Pin 7, Vertical SYNC



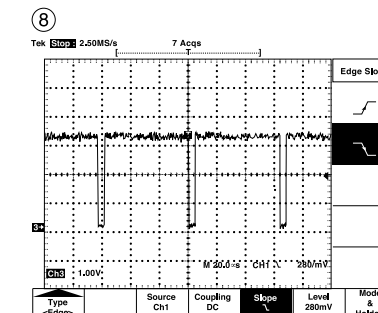
IC305 Pin 23 Component Pr



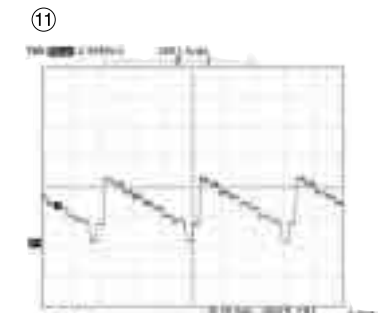
IC305 Pin 30, Composite



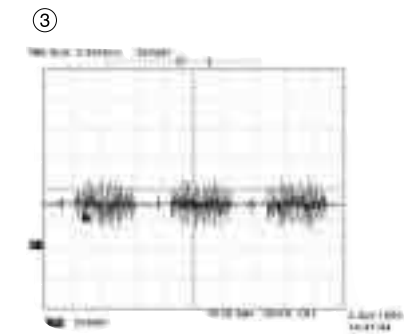
IC305 Pins 40, 41 SDA/SCL



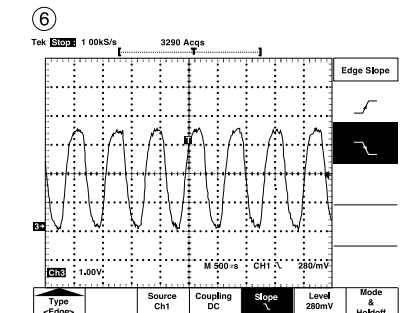
IC305 Pin 8 Horizontal SYNC



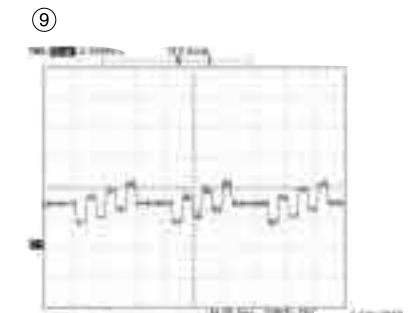
IC305 Pin 27 Component Y



IC305 Pin 24, Chrominance

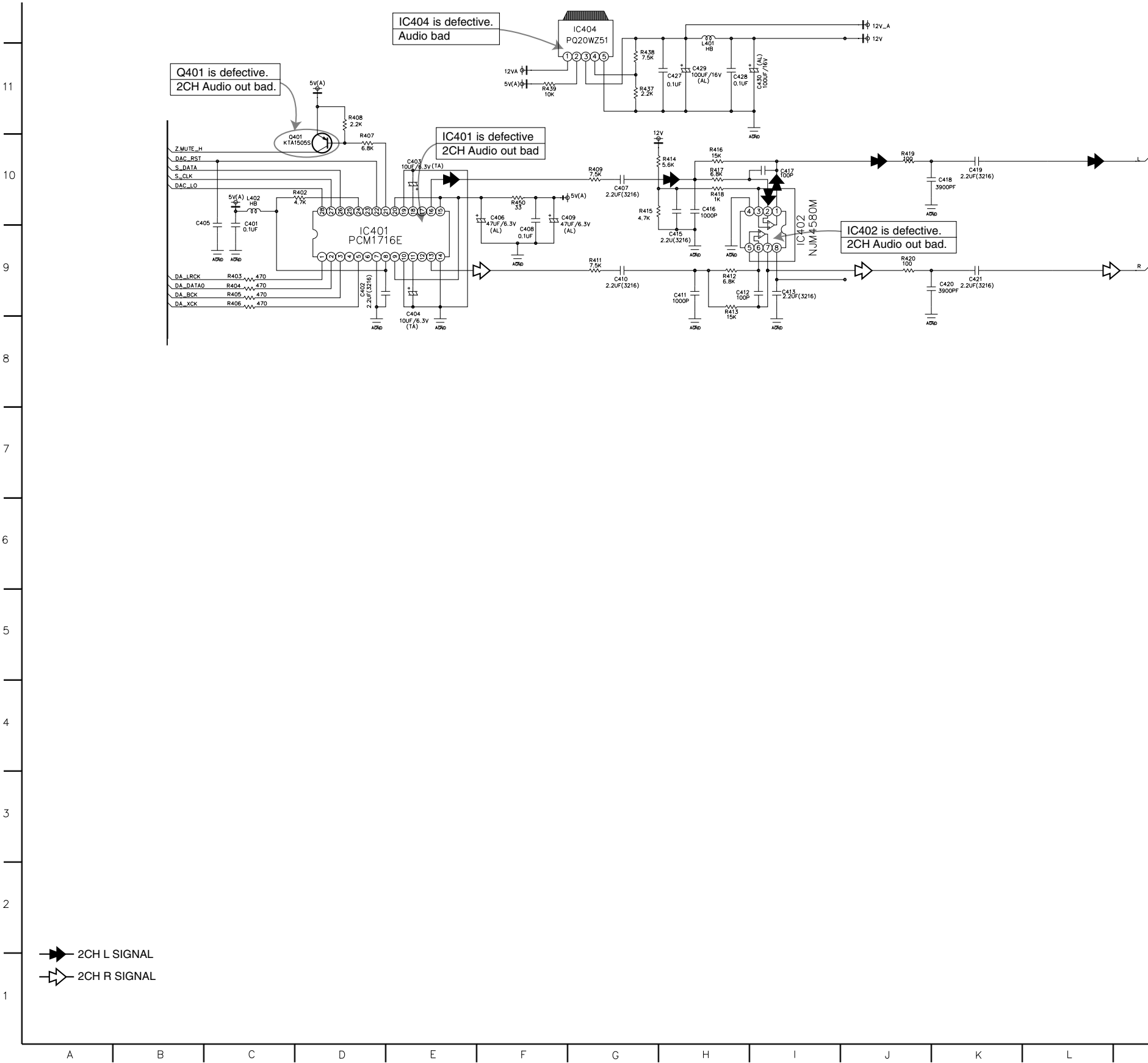


IC305 Pin 4, MPEG Clock(27MHz)

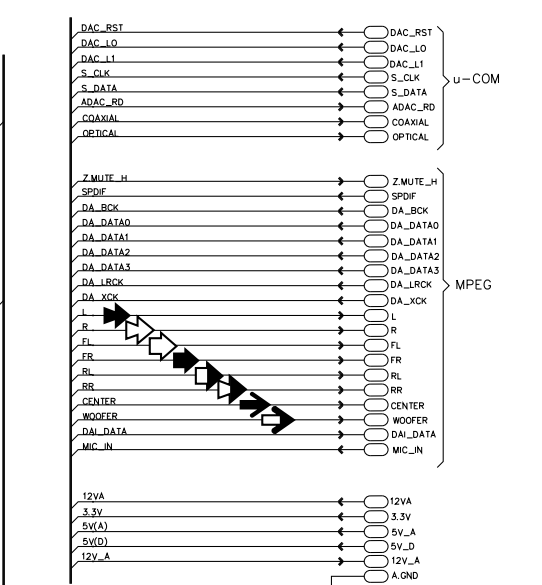


IC305 Pin 29 Component Pb

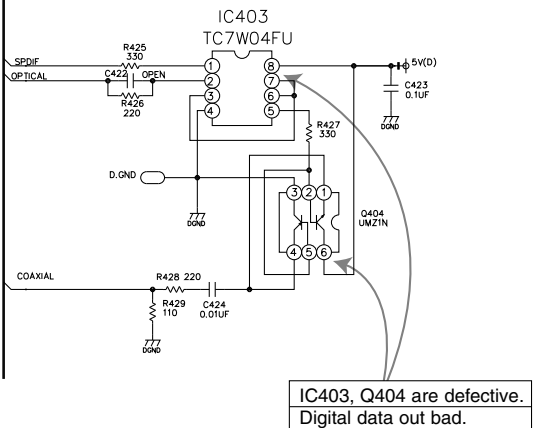
5. Audio DM & 5.1CH Circuit Diagram



LOCATION GUIDE



IC4M1 is defective.
Mic input bad.

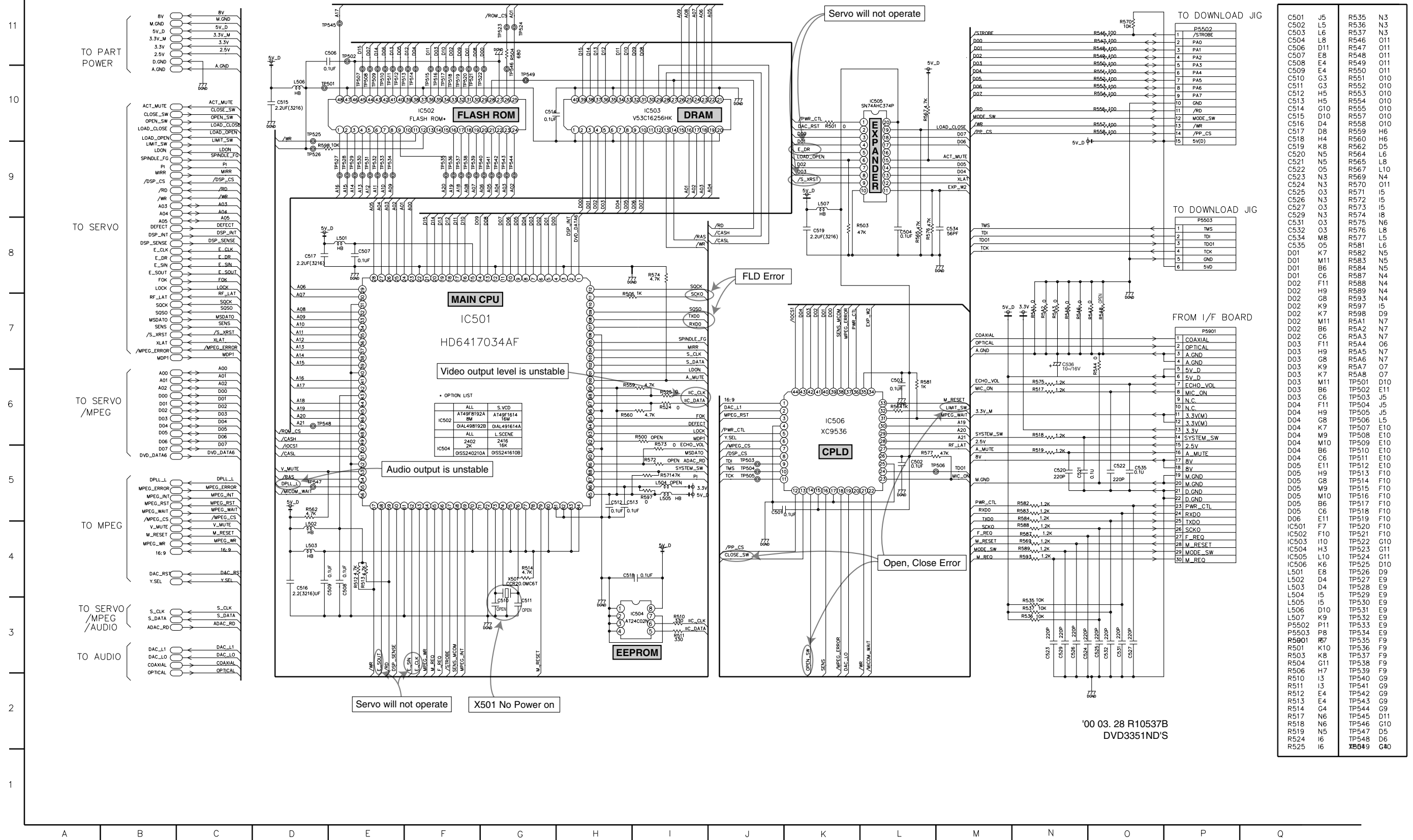


C401	C9	Q401	C10
C402	D9	Q404	O4
C403	E10	R402	C10
C404	E9	R403	C9
C405	B10	R404	C9
C406	F10	R405	C9
C407	G10	R406	C9
C408	F9	R407	D10
C409	F10	R408	D11
C410	G9	R409	G10
C411	H9	R411	C9
C412	H9	R412	H9
C413	I9	R413	H9
C415	H9	R414	H10
C416	H10	R415	G10
C417	I10	R416	H10
C418	K10	R417	H10
C419	K10	R418	H10
C420	K9	R419	J10
C421	K9	R420	J9
C422	N5	R425	N5
C423	P4	R426	N4
C424	N3	R427	O4
C427	H11	R428	N3
C428	H11	R429	N3
C429	H11	R437	G11
C430	I11	R438	G11
C450	B6	R439	F11
C451	C6	R450	F10
C452	E7	R451	C4
C453	F6	R452	C4
C454	D4	R453	C4
C455	G8	R454	C4
C456	H7	R455	C3
C457	H7	R456	C3
C458	I8	R457	G8
C459	K8	R458	H8
C460	K8	R459	G7
C461	G7	R460	H8
C462	H7	R461	H8
C463	H7	R462	H8
C464	I7	R463	J8
C465	K7	R465	K8
C466	K7	R466	L8
C467	G6	R467	G7
C468	H5	R468	H7
C469	H5	R469	H6
C470	I6	R470	J7
C471	K6	R472	L7
C472	K6	R473	L7
C473	G5	R474	G6
C474	H4	R475	H6
C475	H4	R476	G5
C476	I4	R477	H6
C478	K5	R478	H6
C479	K5	R479	H6
C480	G3	R480	J6
C481	H3	R482	L6
C482	H3	R483	L6
C483	I4	R484	G5
C484	K4	R485	H5
C485	K4	R486	H4
C486	G2	R487	J5
C487	H2	R489	L5
C488	H2	R490	L5
C490	K2	R491	G4
C491	K2	R492	H4
C492	I2	R493	G3
C4M1	O6	R494	H4
C4M2	O5	R495	H4
C4M3	O6	R496	H4
C4M4	O6	R497	J4
IC401	D9	R499	L4
IC402	I9	R4A1	L4
IC403	N5	R4A2	G3
IC404	G12	R4A3	H3
IC451	D6	R4A4	H2
IC452	I7	R4A6	J3
IC453	I5	R4A8	L3
IC454	I3	R4A9	L2
IC4M1	N6	R4M1	N6
L401	H11	R4M2	N6
L402	C10	R4M3	N6
L451	C5	R4M4	N5
L452	C7	R4M5	O6
L4M1	O6	R4M6	O5

'00 01.17 R10539B
DVD3351ND'S

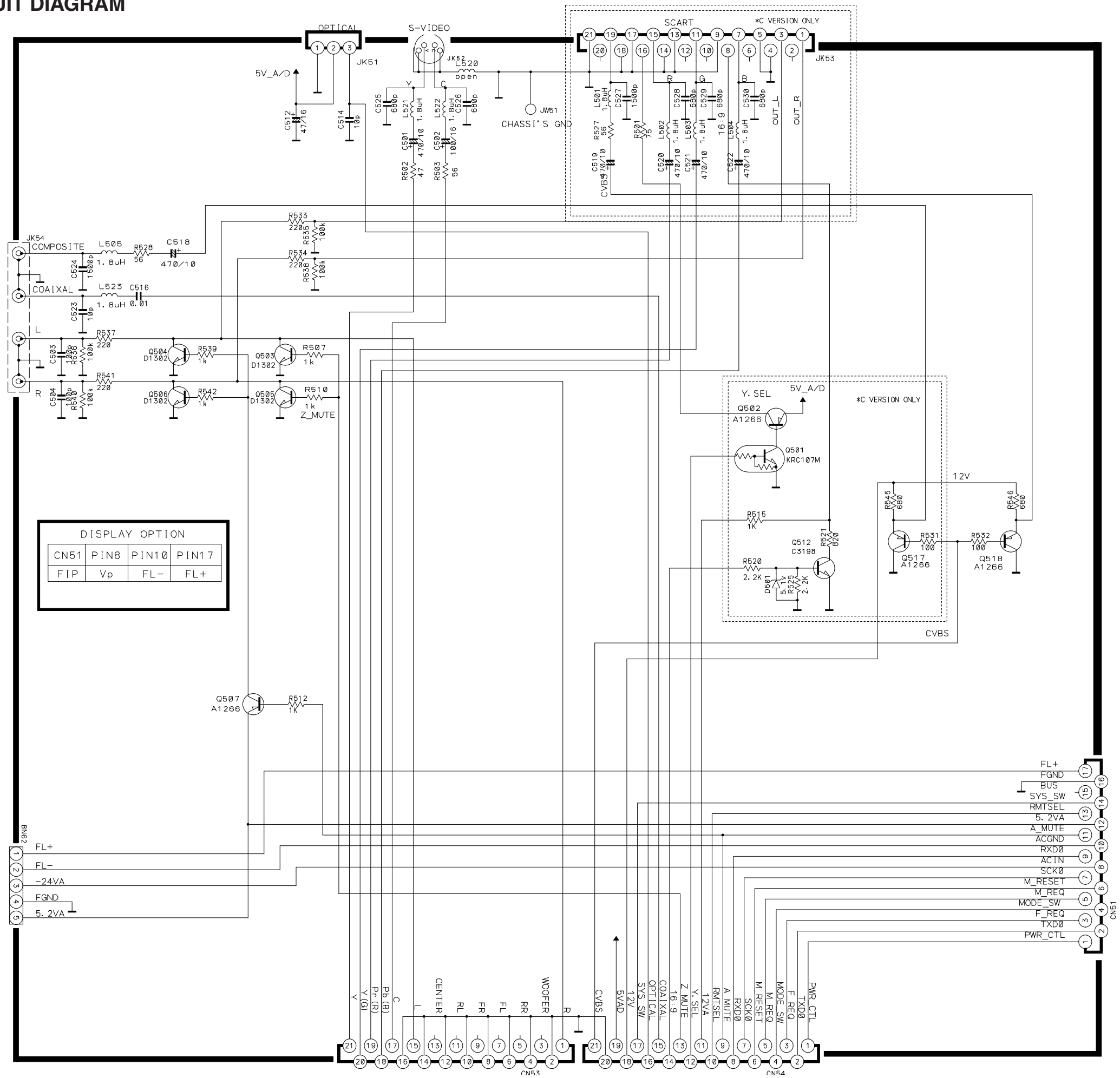
6. μ -com/ Expander

LOCATION GUIDE

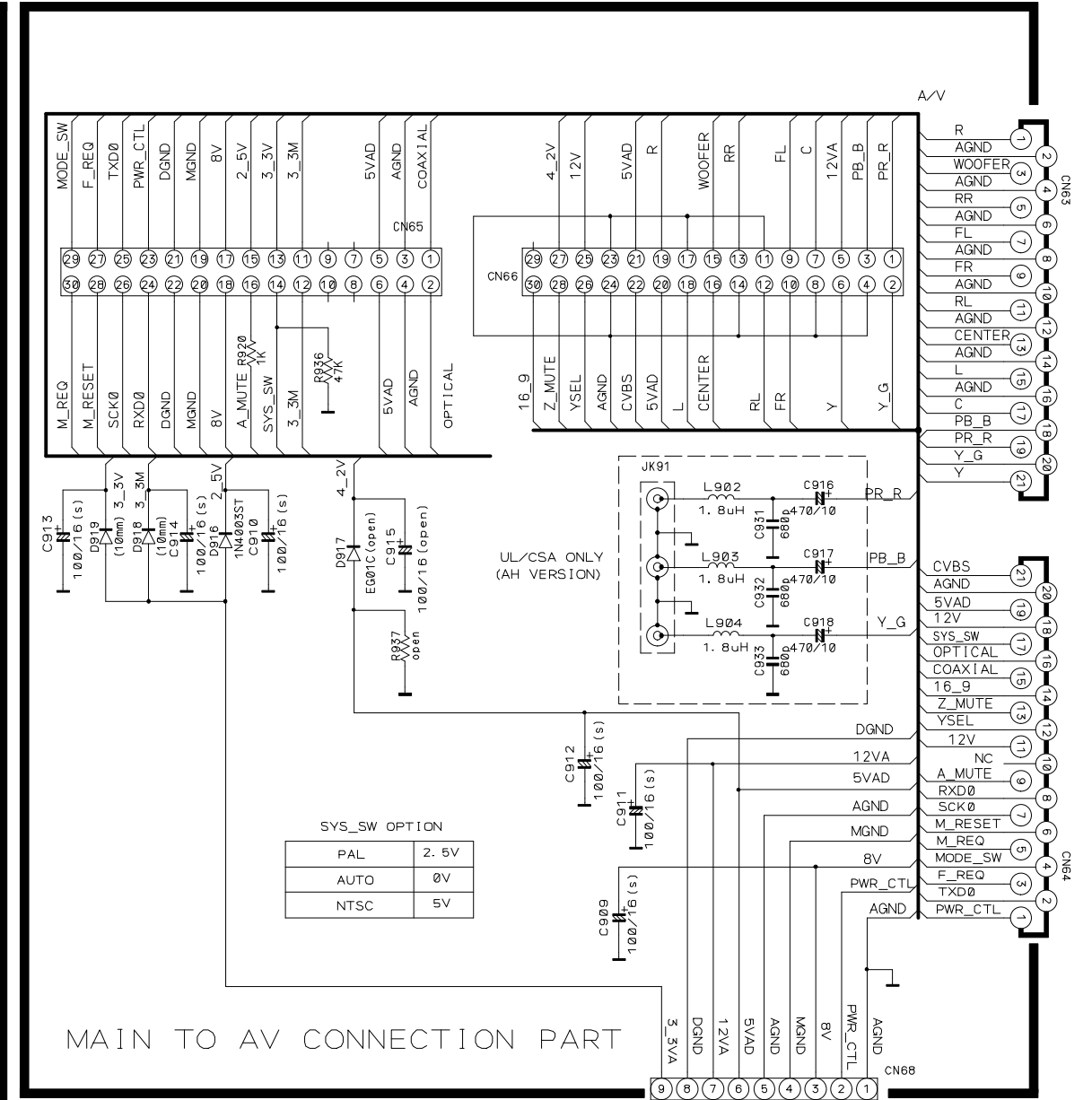
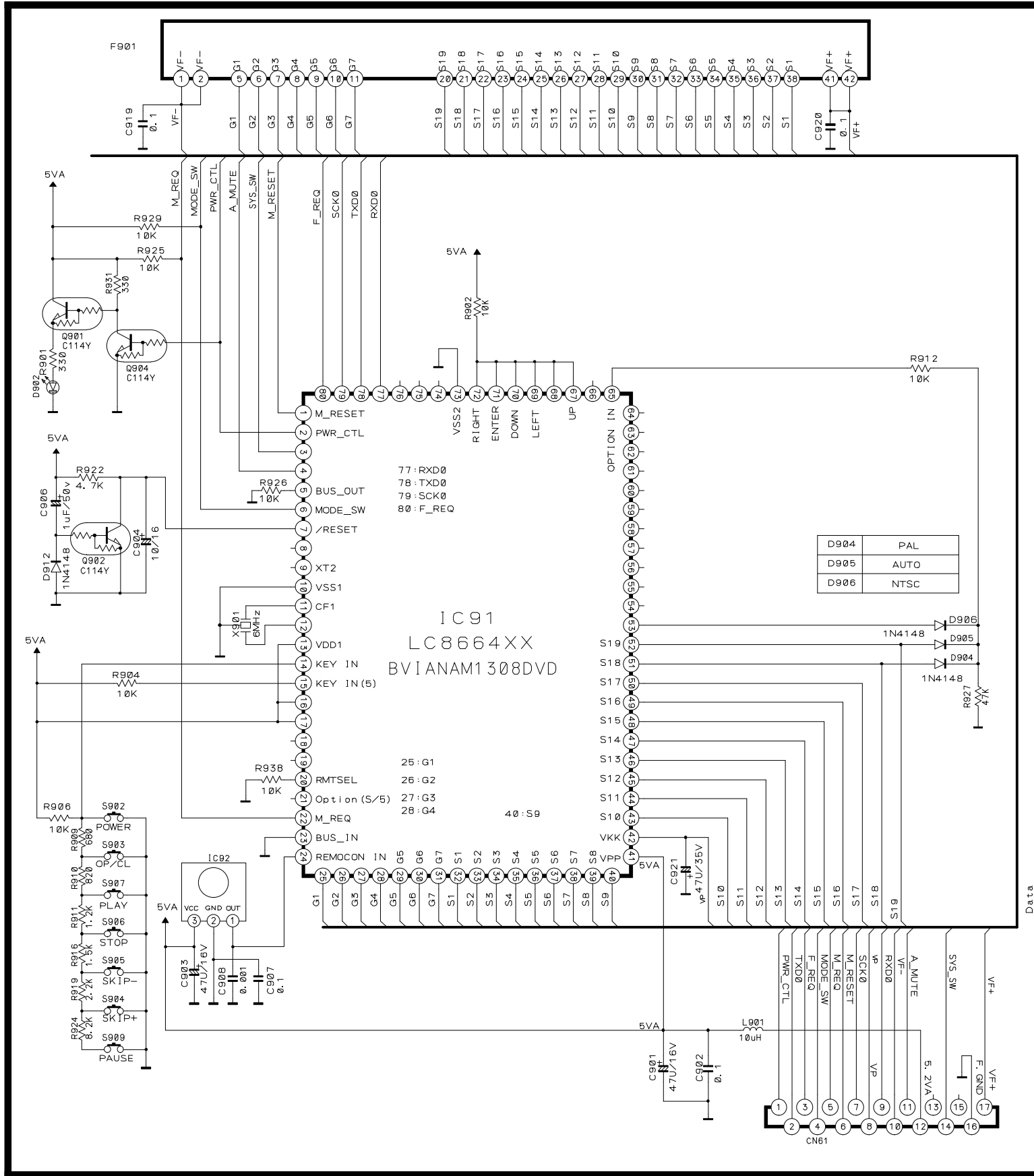


C501	J5	R535	N3
C502	L5	R536	N3
C503	L6	R537	N3
C504	L8	R546	O11
C506	D11	R547	O11
C507	E8	R548	O11
C508	E4	R549	O11
C509	E4	R550	O11
C510	G3	R551	O10
C511	G3	R552	O10
C512	H5	R553	O10
C513	H5	R554	O10
C514	G10	R555	O10
C515	D10	R557	O10
C516	D4	R558	O10
C517	D8	R559	H6
C518	H4	R560	H6
C519	K8	R562	D5
C520	N5	R564	L6
C521	N5	R565	L8
C522	O5	R567	L10
C523	N3	R569	N4
C524	N3	R570	O11
C525	O3	R571	I5
C526	N3	R572	I5
C527	O3	R573	I5
C529	N3	R574	I8
C531	O3	R575	N6
C532	O3	R576	L8
C534	M8	R577	L5
C535	O5	R581	L6
D01	K7	R582	N5
D01	M11	R583	N5
D01	B6	R584	N5
D01	C6	R587	N4
D02	F11	R588	N4
D02	H9	R589	N4
D02	G8	R593	N4
D02	K9	R597	I5
D02	K7	R598	D9
D02	M11	R5A1	N7
D02	B6	R5A2	N7
D02	C6	R5A3	N7
D03	F11	R5A4	O6
D03	H9	R5A5	N7
D03	G8	R5A6	N7
D03	K9	R5A7	O7
D03	K7	R5A8	O7
D03	M11	TP501	D10
D03	B6	TP502	E11
D03	C6	TP503	J5
D04	F11	TP504	J5
D04	H9	TP505	J5
D04	G8	TP506	L5
D04	K7	TP507	E10
D04	M9	TP508	E10
D04	M10	TP509	O10
D04	B6	TP510	E10
D04	C6	TP511	E10
D04	E11	TP512	E10
D05	H9	TP513	F10
D05	G8	TP514	F10
D05	M9	TP515	F10
D05	M10	TP516	F10
D05	B6	TP517	F10
D05	C6	TP518	F10
D06	E11	TP519	F10
IC501	F7	TP520	F10
IC502	F10	TP521	F10
IC503	I10	TP522	G10
IC504	H3	TP523	G11
IC505	L10	TP524	G11
IC506	K6	TP525	D10
L501	E8	TP526	D9
L502	D4	TP527	E9
L503	D4	TP528	E9
L504	I5	TP529	E9
L505	I5	TP530	E9
L506	D10	TP531	E9
L507	K9	TP532	E9
P5502	P11	TP533	E9
P5503	P8	TP534	E9
R5801	R7	TP535	F9
R501	K10	TP536	F9
R503	K8	TP537	F9
R504	G11	TP538	F9
R506	H7	TP539	F9
R510	I3	TP540	G9
R511	I3	TP541	G9
R512	E4	TP542	G9
R513	E4	TP543	G9
R514	G4	TP544	G9
R517	N6	TP545	D11
R518	N6	TP546	G10
R519	N5	TP547	D5
R524	I6	TP548	D6
R525	I6	XB049	G40

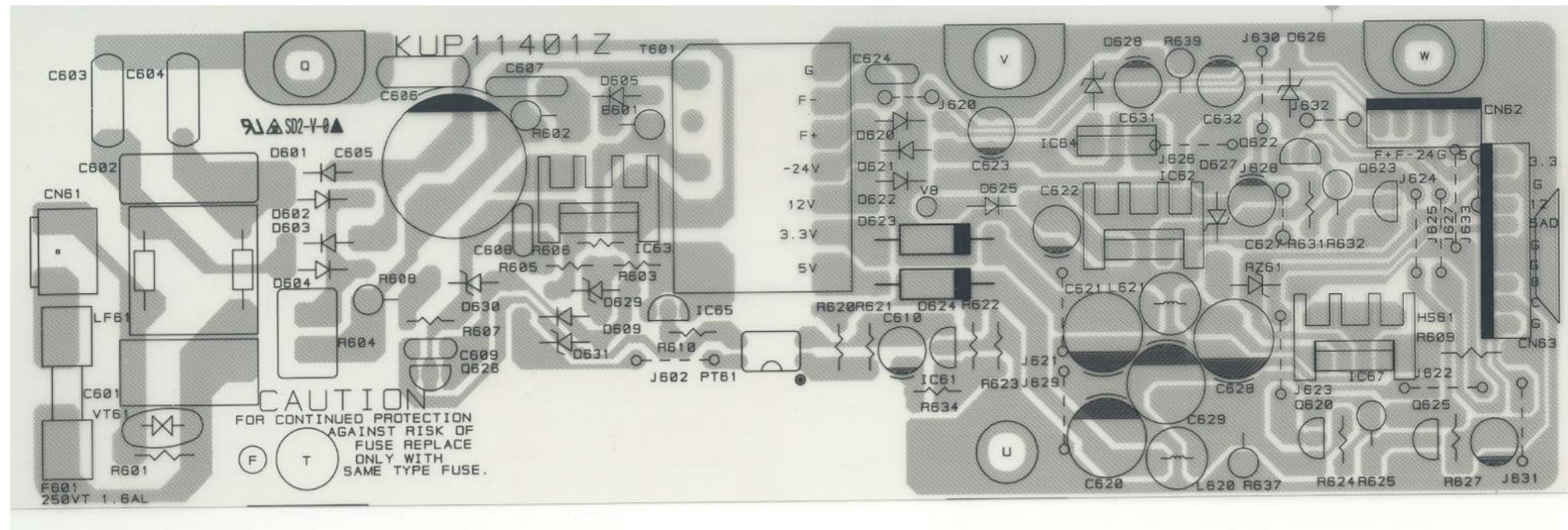
7. DIGITRON & KEY CIRCUIT DIAGRAM



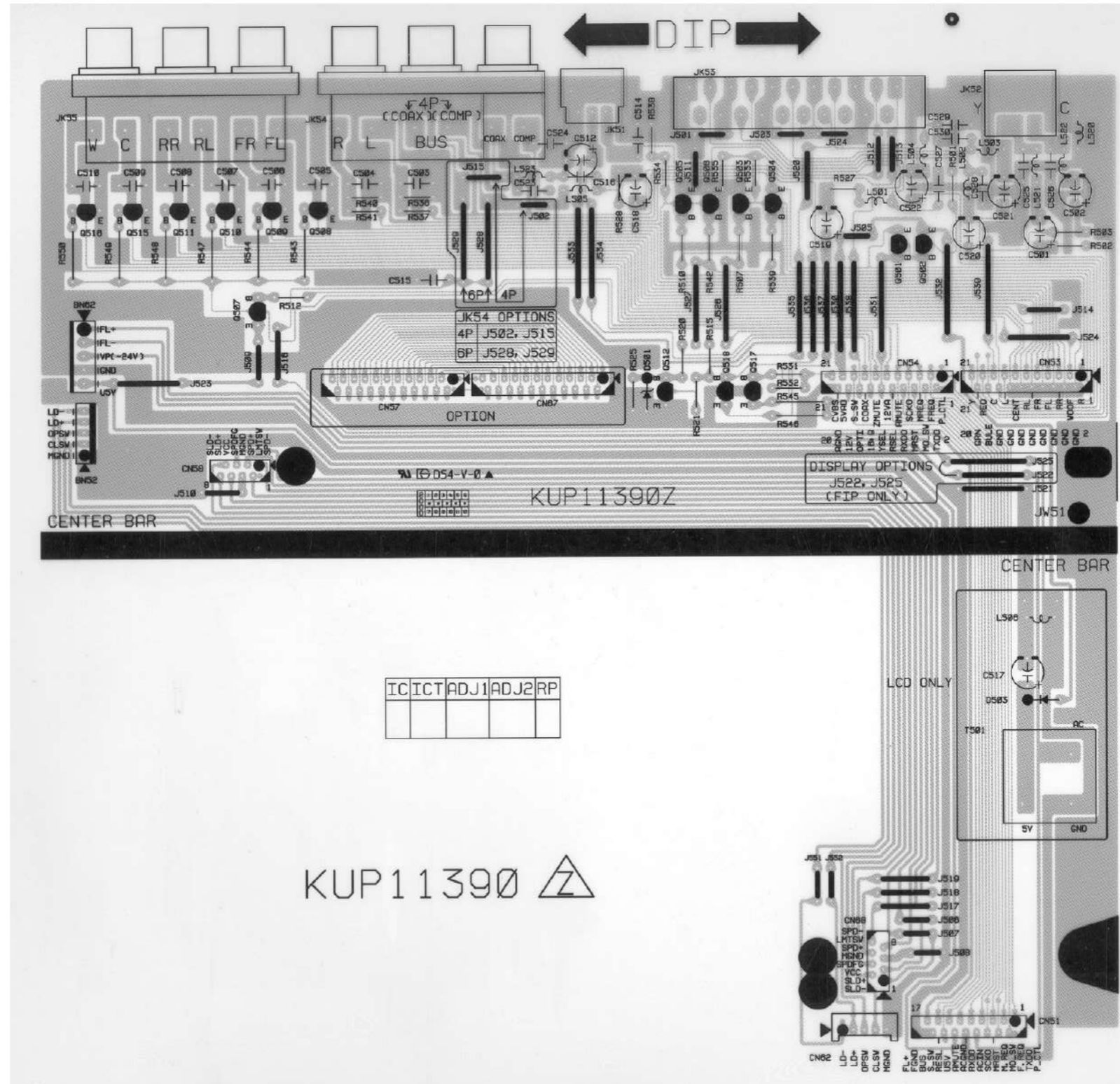
8. JACK CIRCUIT DIAGRAM



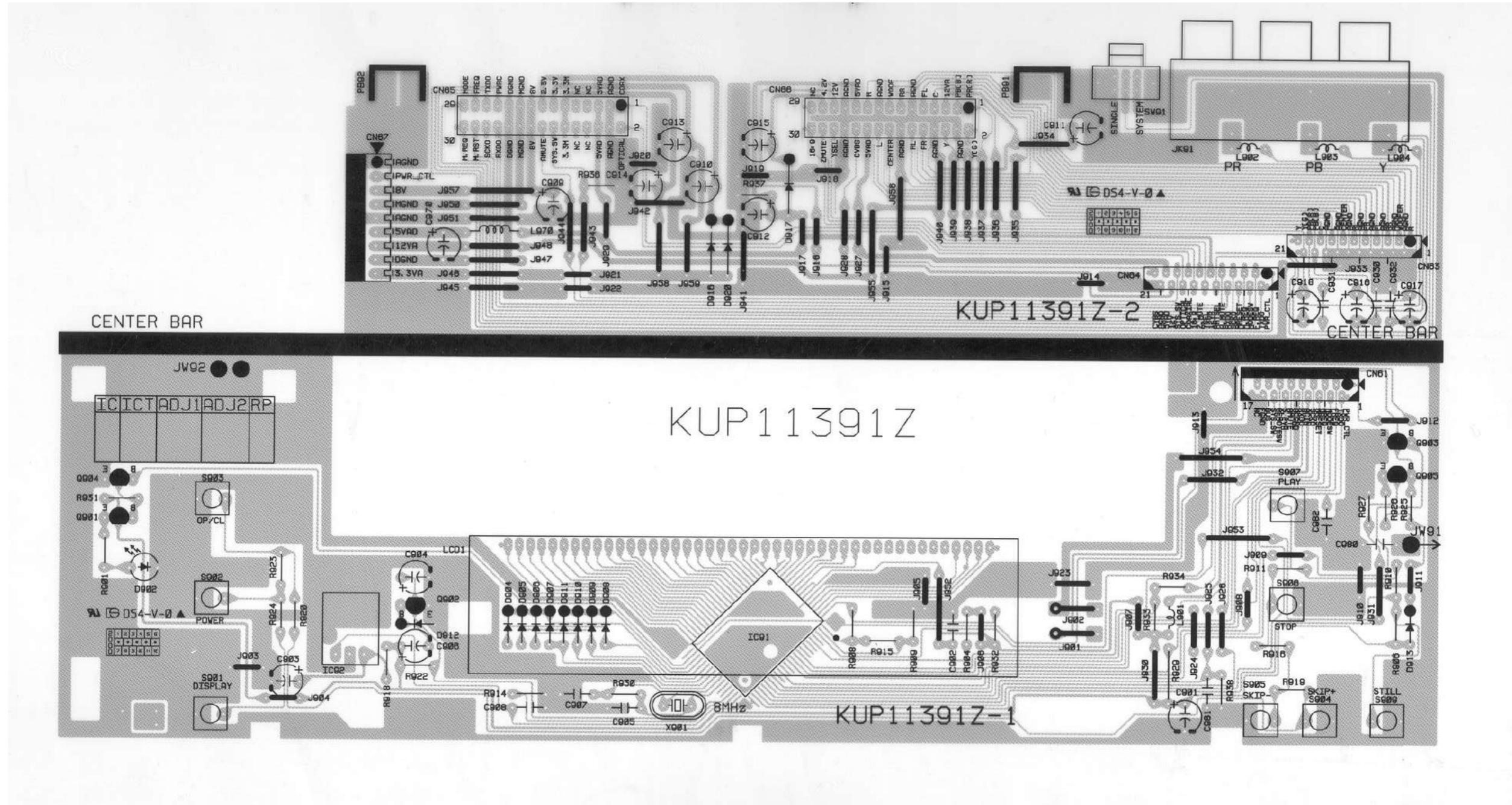
2. POWER P.C.BOARD



3. AV P.C.BOARD



4. FRONT P.C.BOARD



SECTION 4 MECHANISM

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DECK MECHANISM PARTS LOCATIONS

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DECK MECHANISM DISASSEMBLY

1. Holder Clamp.....4-2

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 - 1-1-1. Plate Clamp4-2
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 - 1-1-3. Clamp Upper.....4-2

2. Tray Disc4-2

3. Base Assembly Sled4-3

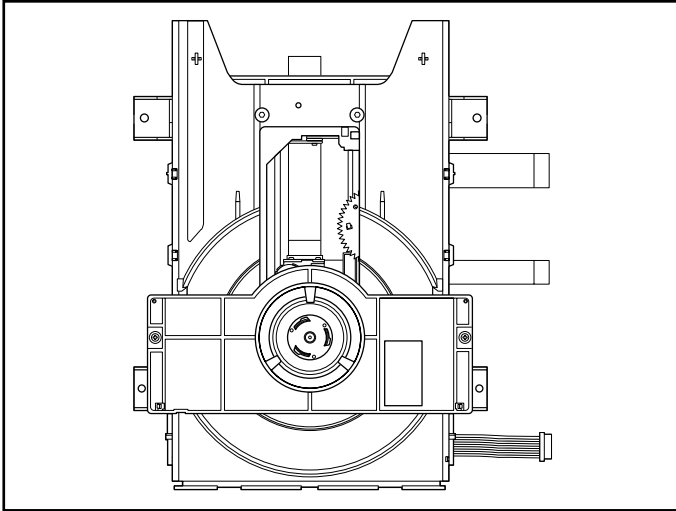
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4. Rubber Rear.....4-3

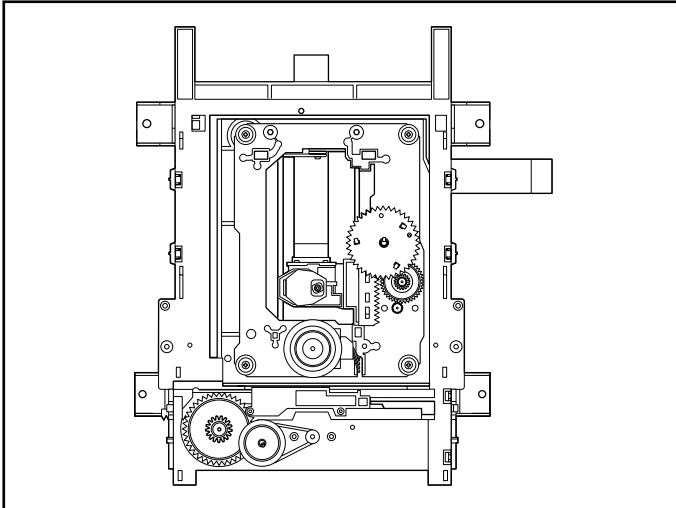
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- 7. Gear Pulley4-4
- 8. Gear Loading4-4
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- 10. PWB Assembly Loading4-4
- 11. Base Main.....4-4

DECK MECHANISM PARTS LOCATION

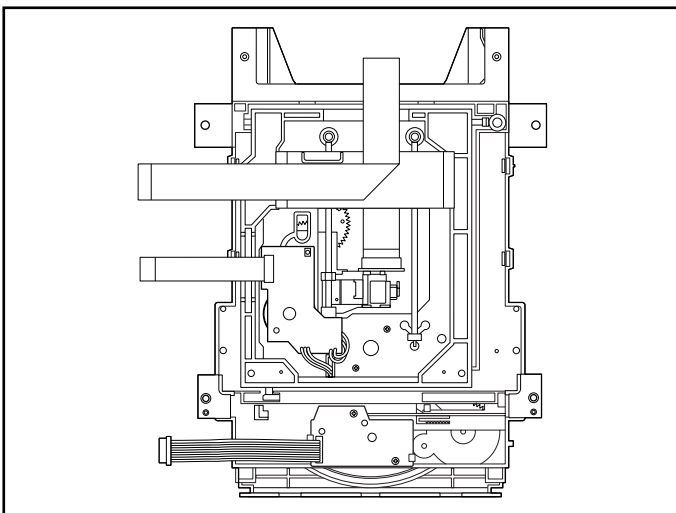
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure		Parts	Fixing Type	Disassembly	Figure
Starting No.					
	1	Holder Clamp	2 Screws, 2 Locking Tabs		4-1
1	2	Clamp Assembly Disc			4-1
1, 2	3	Plate Clamp			4-1
1, 2, 3	4	Magnet Clamp			4-1
1, 2, 3, 4	5	Clamp Upper			4-1
1	6	Tray Disc			4-2
1, 6	7	Base Assembly Sled			4-3
1, 2, 6	8	Gear Assembly Feed	4 Screws, 1 Connector 1 Locking Tabs		4-3
1, 2, 6, 8	9	Gear Middle			4-3
1, 2, 6, 8, 9	10	Gear Assembly Rack	1 Screw		4-3
1, 2, 7	11	Rubber Rear			4-3
1, 2, 7	12	Frame Assembly Up/Down	1 Screw	Bottom	4-4
1, 2	13	Belt Loading	1 Locking Tab		4-4
1, 2, 13	14	Gear Pulley			4-4
1, 2, 13, 14	15	Gear Loading	1 Locking Tab		4-4
1, 2, 7, 12, 13, 14	16	Guide Up/Down			4-4
1, 2, 13	17	PWB Assembly Loading	1 Locking Tab 1 Hook 2Screw	Bottom	4-4
1, 2, 7, 12, 13, 14, 15, 16, 17	18	Base Main	2 Locking Tabs		4-4

Note

When reassembling, perform the procedure in reverse order.

The "Bottom" on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY

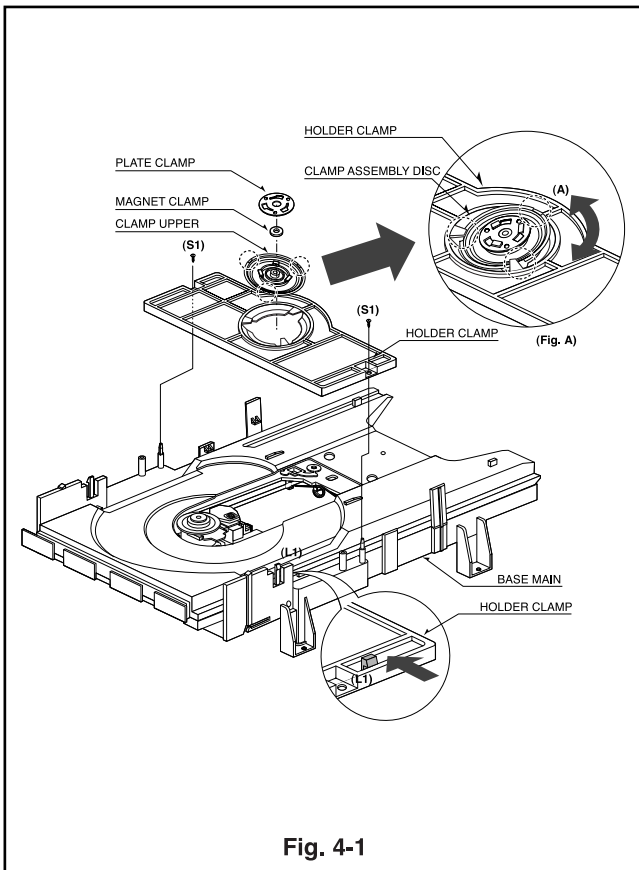


Fig. 4-1

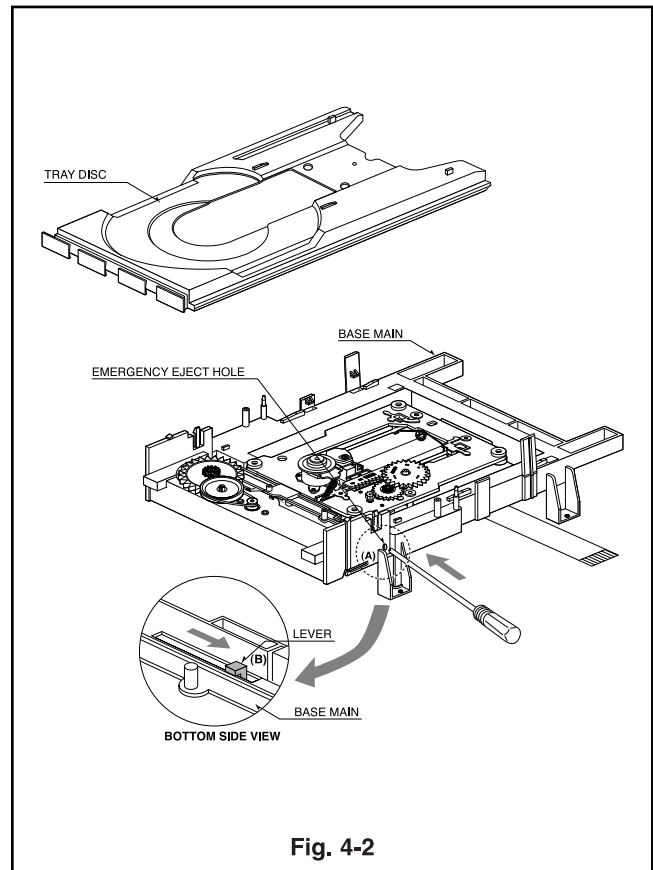


Fig. 4-2

1. Holder Clamp (Fig. 4-1)

- 1) Release 2 Screws(S1).
- 2) Unhook 2 Locking Tabs(L1).
- 3) Lift up the Holder Clamp and then separate it from the Base Main.

1-1. Clamp Assembly Disc

- 1) Place the Clamp Assembly Disc as Fig. (A)
- 2) Lift up the Clamp Assembly Disc in direction of arrow(A).
- 3) Separate the Clamp Assembly Disc from the Holder Clamp.

1-1-1. Plate Clamp

- 1) Turn the Plate Clamp to counterclockwise direction and then lift up the Plate Clamp.

1-1-2. Magnet Clamp

1-1-3. Clamp Upper

2. Tray Disc (Fig. 4-2)

- 1) Insert and push a Driver in the emergency eject hole(A) at the right side, or put the Driver on the Lever(B) of the Gear Emergency and pull the Lever(B) in direction of arrow so that the Tray Disc is ejected about 15~20mm.
- 2) Pull the Tray Disc until it is separated from the Base Main completely.

DECK MECHANISM DISASSEMBLY

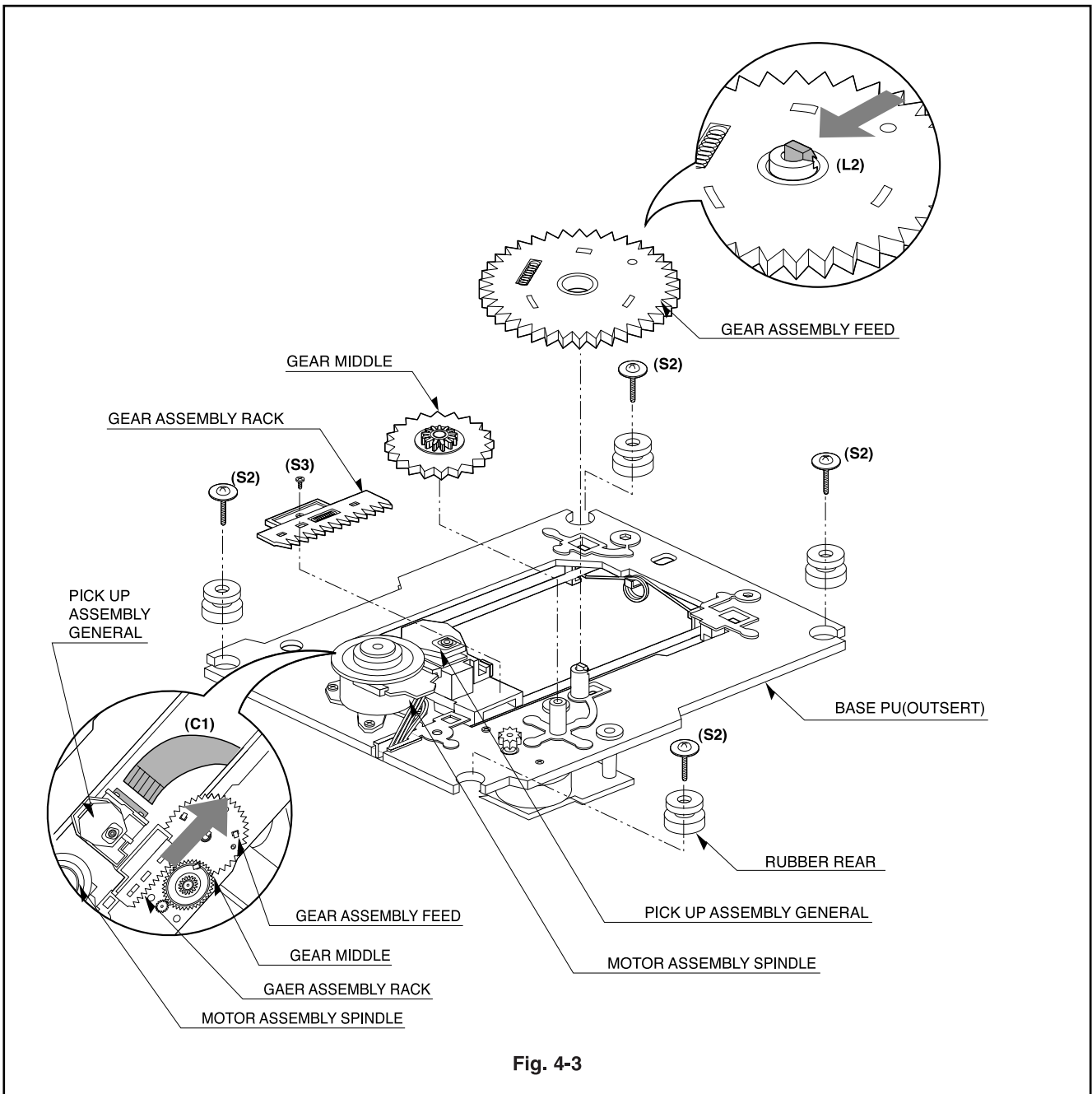


Fig. 4-3

3. Base Assembly Sled (Fig. 4-3)

- 1) Release 4 Screw(S2).
- 2) Disconnect the FFC Connector(C1)

3-1. Gear Assembly Feed

- 1) Unhook the Locking Tab(L2) in direction of arrow.

3-2. Gear Middle

3-3. Gear Assembly Rack

- 1) Release the Scerw(S3)

4. Rubber Rear (Fig. 4-3)

DECK MECHANISM DISASSEMBLY

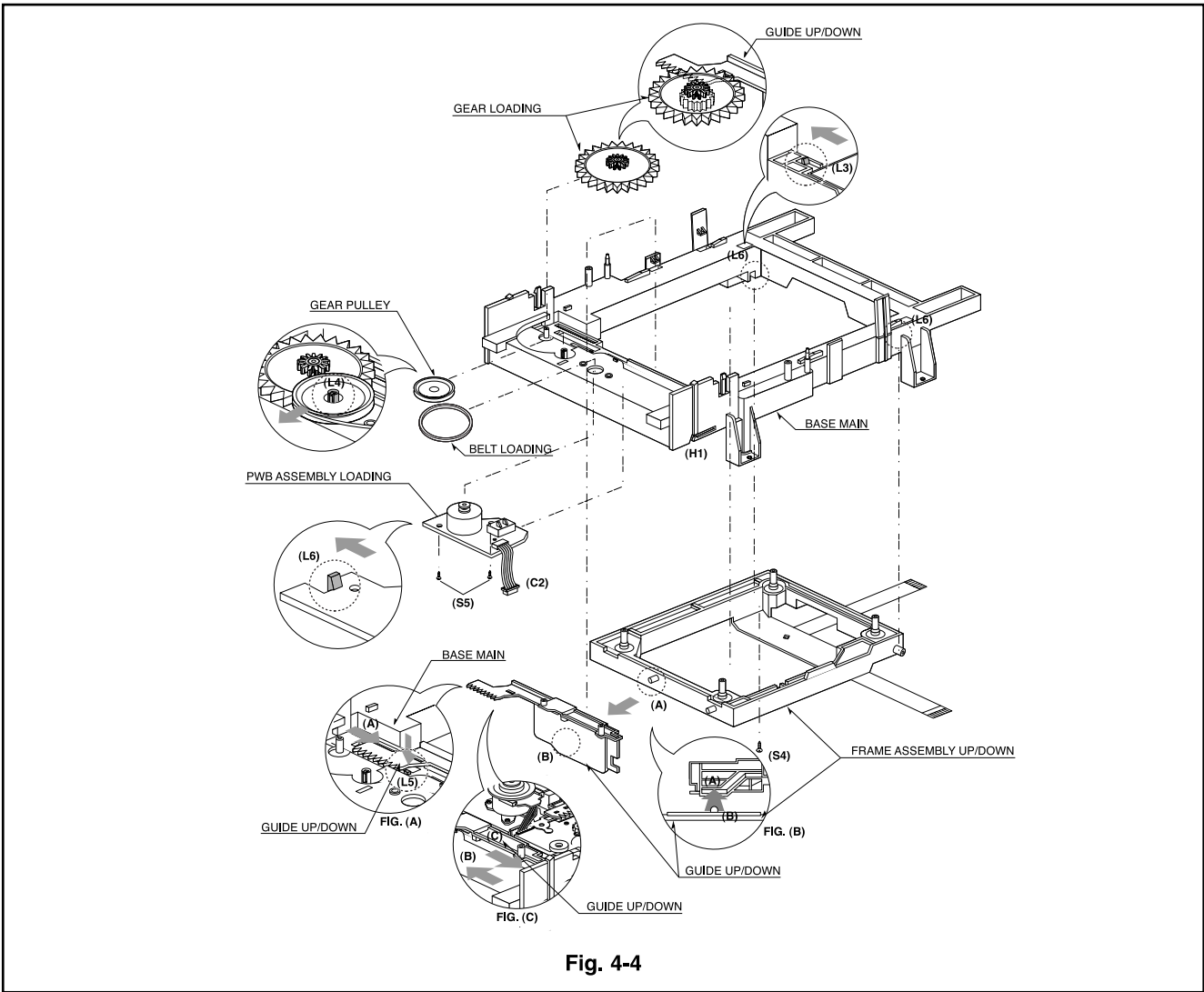


Fig. 4-4

5. Frame Assembly Up/Down

Note

Put the Base Main face down(Bottom Side)

- 1) Release the Screw(S4)
- 2) Unlock the Locking Tab(L3) in direction of arrow and then lift up the Frame Assembly Up/Down to separate it from the Base Main.

Note

- When reassembling move the Guide Up/Down in direction of arrow(C) until it is positioned as Fig.(C).
- When reassembling insert (A) portion of the Frame Assembly Up/Down in the (B) portion of the Guide Up/Down as Fig.(B)

6. Belt Loading(Fig. 4-4)

Note

Put the Base Assembly Main on original position(Top Side)

7. Gear pulley (Fig. 4-4)

- 1) Unlock the Locking Tab(L4) in direction of arrow(B) and then separate the Gear Pulley from the Base Main.

8. Gear Loading (Fig. 4-4)

9. Guide Up/Down (Fig. 4-4)

- 1) Move the Guide Up/Down in direction of arrow(A) as Fig.(A)
- 2) Push the Locking Tab(L5) down and then lift up the Guide Up/Down to separate it from the Base Main.

Note

When reassembling place the Guide Up/Down as Fig.(C) and move it in direction arrow(B) until it is locked by the Locking Tab(L5). And confirm the Guide Up/Down as Fig.(A)

10. PWB Assembly Loading

Note

Put the Base Main face down(Bottom Side)

- 1) Release 2 Screws(S5)
- 2) Unhook the Loading Motor Connector (C2) from the Hook (H1) on the Base Main.
- 3) Unlock 2 Locking Tabs(L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main(Fig. 4-4)

SERVICE MANUAL

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