NAD ELECTRONICS INTERNATIONAL
TORONTO

SERVICE MANUAL

MODELS : T512C/T532C/T512AH/T532AH

SERVICE MANUAL

T512C/T532C/
T512AH/T532AH

DVD VIDEO PLAYER

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T512C/T532C/
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DVD VIDEO PLAYER

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SECTION 1

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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.

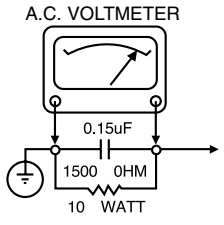
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRCTED. 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 RECIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUNING 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 SAFE 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 MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMP A.C ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT: GRAPHIC SYMBOLS

THE LIGHTNING FLASH WITH APROWHEAD SYMBOL. WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" 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 SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

SUBJECT : X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC. OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T. ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS X-RAY SHIELD IN COLOR SETS, ALWAYS RE-INSTALL THEM.
3. IT IS ESSNTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRA TION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD, SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED. THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY, WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE. AND THAT THE HIGH VOLTAGE READING BE RECORDER ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IS NECESSARY TO LOCATE THE CAUSE OF EXCES SIVE VOLTAGE.
6. REFER TO HV. B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

SUBJECT: IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTE GRAL IMPLOSION PROTECTION SYSTEM, BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION, AVOID SCRATCHING THE TUBE. IF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

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 PALCEMENT 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 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 publications, always follow the safety precautions.
Remembers Safety First:

General Servicing Precautions

1. Always unplug the DVD AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnection 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 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, cotton-tipped 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 whitch instruments covered by this service manual might be equipped.

5. Do not apply AC power to this DVD and/or any of its electrical assemblies unless all solid-state device heat sinks are cerrectly installed.

6. Always connect test instrument ground lead to the appropriate ground before connection 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 grouned-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static 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 freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protec tive 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

• GENERAL

Power requirements	AC 120V, 60Hz(USA), AC 110~220V, 60Hz(EUROPE)
Power consumption	14W
Dimensions(approx.)	430 x 69 x 230mm (W/h/d)
Mass(approx.)	3.4kg
Operating temperature	5˚C to 35˚C (41˚F to 95˚F)
Operating humidity	5% to 9%

• SYSTEM

Laser	Semiconductor laser, wavelength 650nm
Signal system	NTSC(USA), NTSC/PAL(EUROPE)
Frequency response	DVD (PCM 96kHz): 2Hz to 44kHz
	DVD (PCM 48kHz): 2Hz to 22kHz
	CD: 2Hz to 20kHz
Signal-to-noise ratio	More than 100dB (ANALOG OUT connectors only)
Harmonic distortion	Less than 0.008%
Dynamic range	More than 95dB(DVD)
	More than 95dB(CD)
Wow and flutter	Less than detected value (±0.001% W PEAK)

• OUTPUTS

VIDEO OUTPUTS	1V p-p, 75 ohms, sync negative
S-V IDEO OUTPUTS	(Y)1.0V(p-p), 75Ω, negative sync., Mini DIN 4-pin x 1
	(C)0.286V(p-p), 75 ohms(USA),
	(C)0.3V(p-p), 75 ohms(EUROPE)
Audio output(digital audio)	0.5V(p-p), 75Ω, RCA jack X 1 (TO TV)
Audio output(optical audio)	Optical connector x 1
Audio output(analog audio)	2.0Vrms (1kHz, 0dB),
	330Ω, RCA jack (L, R) x 1 (TO TV)

SECTION 2

CABINET & MAIN CHASSIS

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DISASSEMBLY

CAUTION BEFORE STARTING SERVICING

Electronic parts are susceptible to static electricity and may easily and damaged, so do not forget to take a proper grounding treatment as required.

Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screw driver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded parts and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

CABINET DISASSEMBLY

1. Top Case

1. Release 7 screws (A). (See Fig. 2-1)
2. Lift the top case with holding the back of it, and remove it in the direction of the arrow

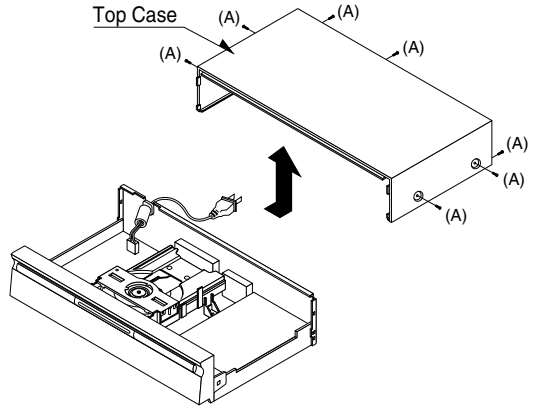


Fig. 2-1

2. Tray Door

1. Eject the disc tray.
2. Lift up the tray door in the direction of the arrow.

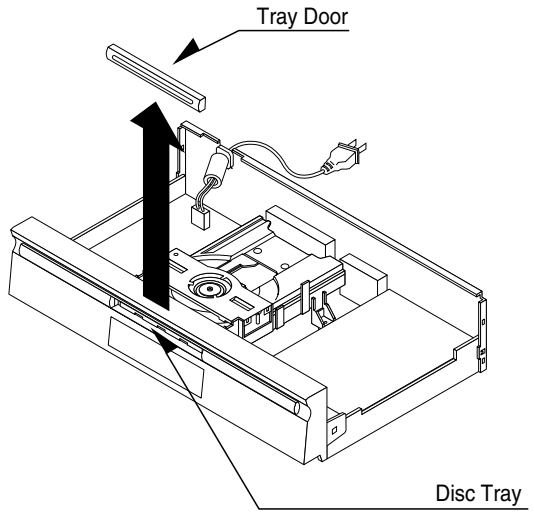


Fig. 2-2

3. Front Panel

1. Eject the disc tray. (See Fig. 2-2)
2. Remove the tray door. (See Fig. 2-2)
3. Pull the front panel toward you while pressing 7 stoppers to disengage, and remove the front panel. (See Fig. 2-3)

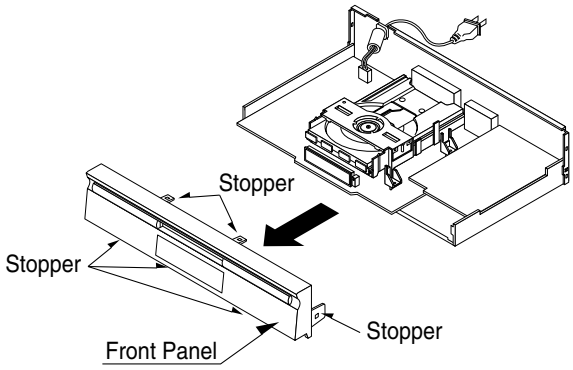


Fig. 2-3

CIRCUIT BOARD DISASSEMBLY

Note: Before removing the main circuit board, be sure to shortcircuit the laserdiode output land. After replacing the main circuit board, open the land after inserting the flexible connector. (Refer to Mechanism Disassembly)

1. Disassembling of Main Circuit Board and Interface Board

1. Remove the top case.(See Fig. 2-1)
2. Remove 14 screw (B).
3. Remove the Deck from Main Circuit Board.
4. Remove Main Circuit Board from Interface Board.
5. Remove 2 screw (C).
6. Remove Interface Board from the chassis.

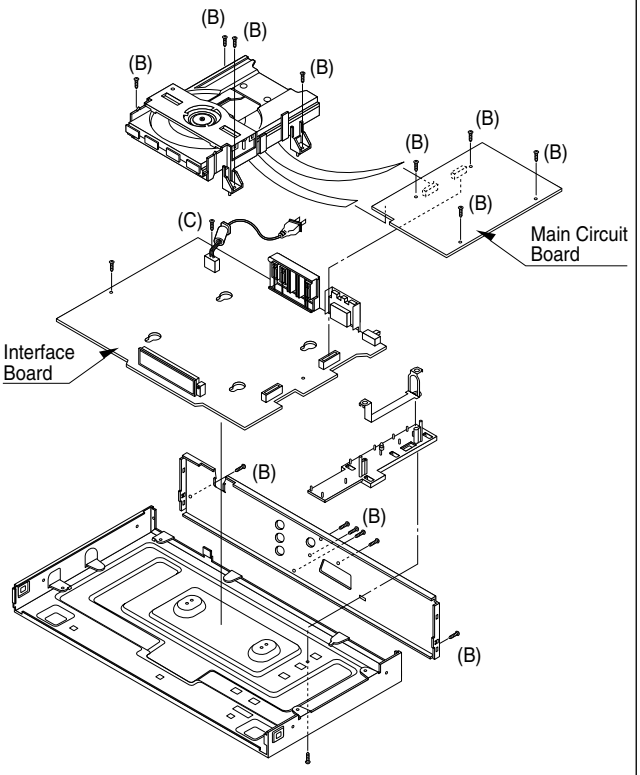


Fig. 2-4

2. Digitron and Key Circuit Board

1. Remove the front panel.(See Fig. 2-3)
2. Release 3 screws (D), and remove the digitron circuit board.

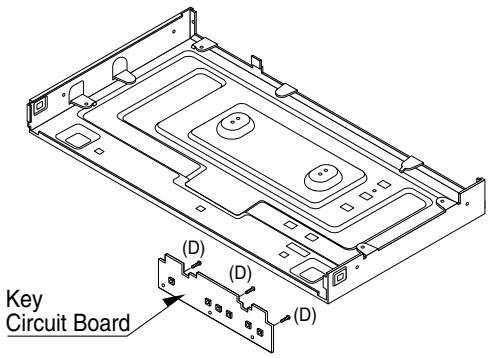
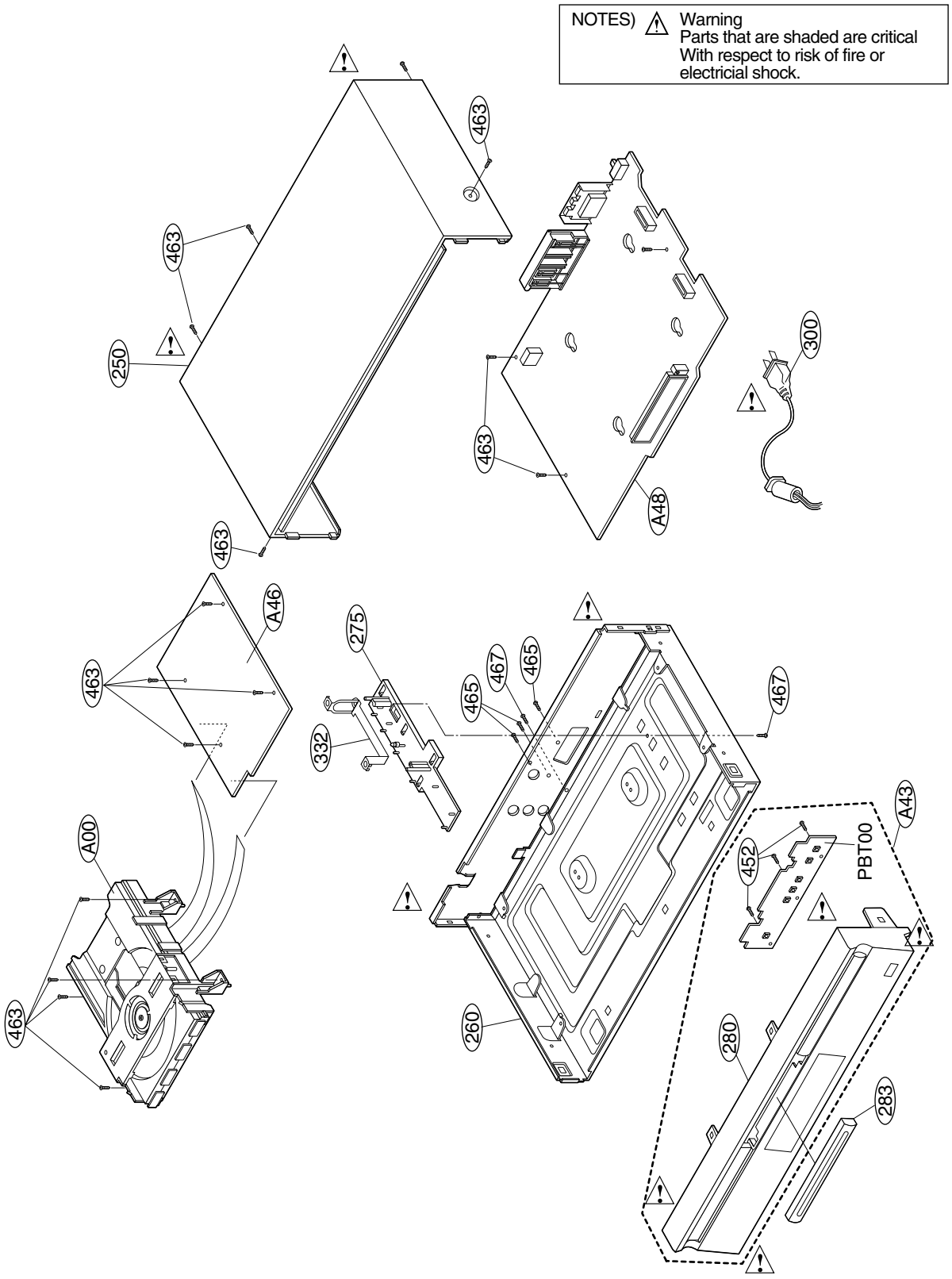


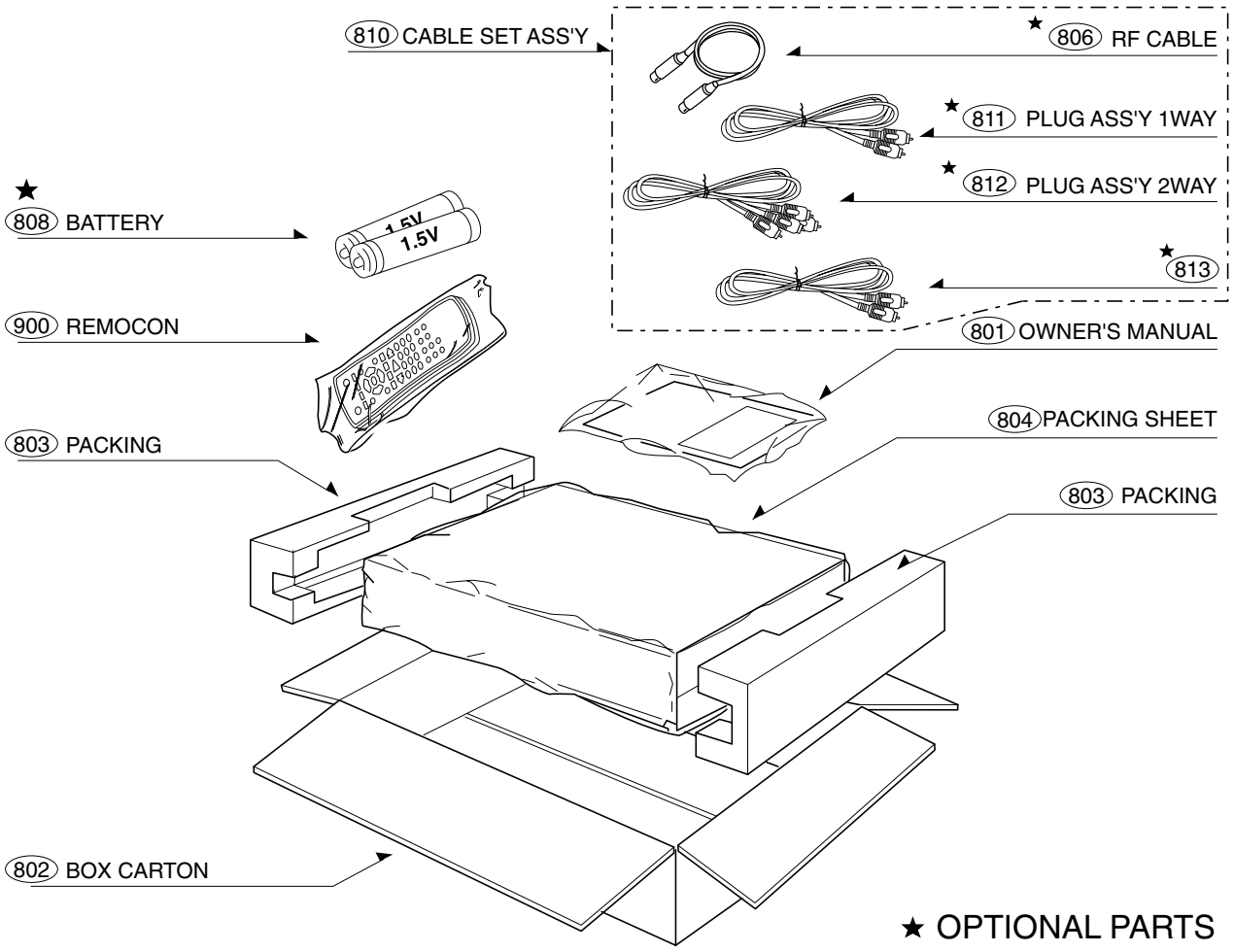
Fig. 2-5

EXPLODED VIEWS

1. Cabinet and Main Frame Section



2. Packing Accessory Section



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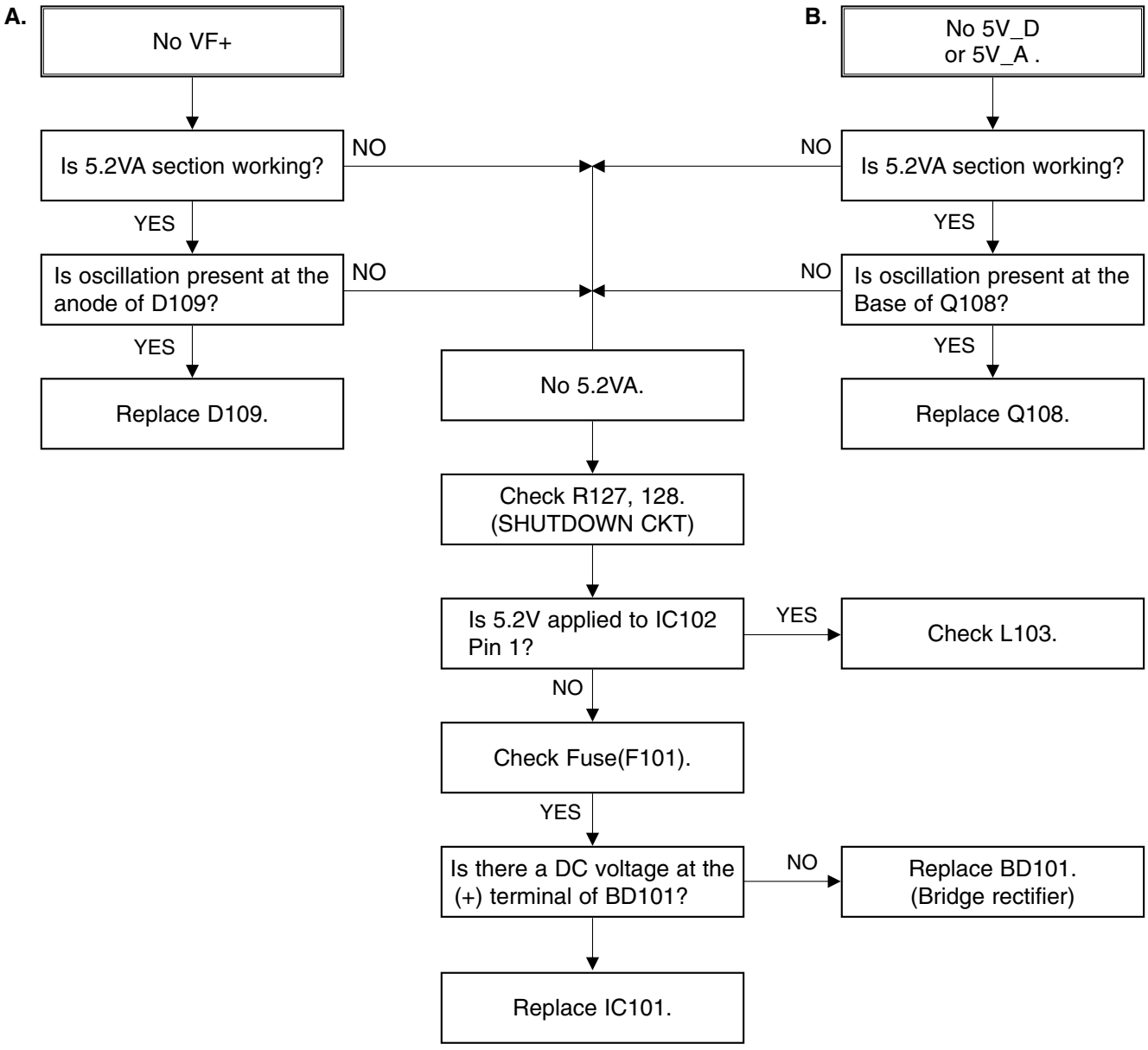
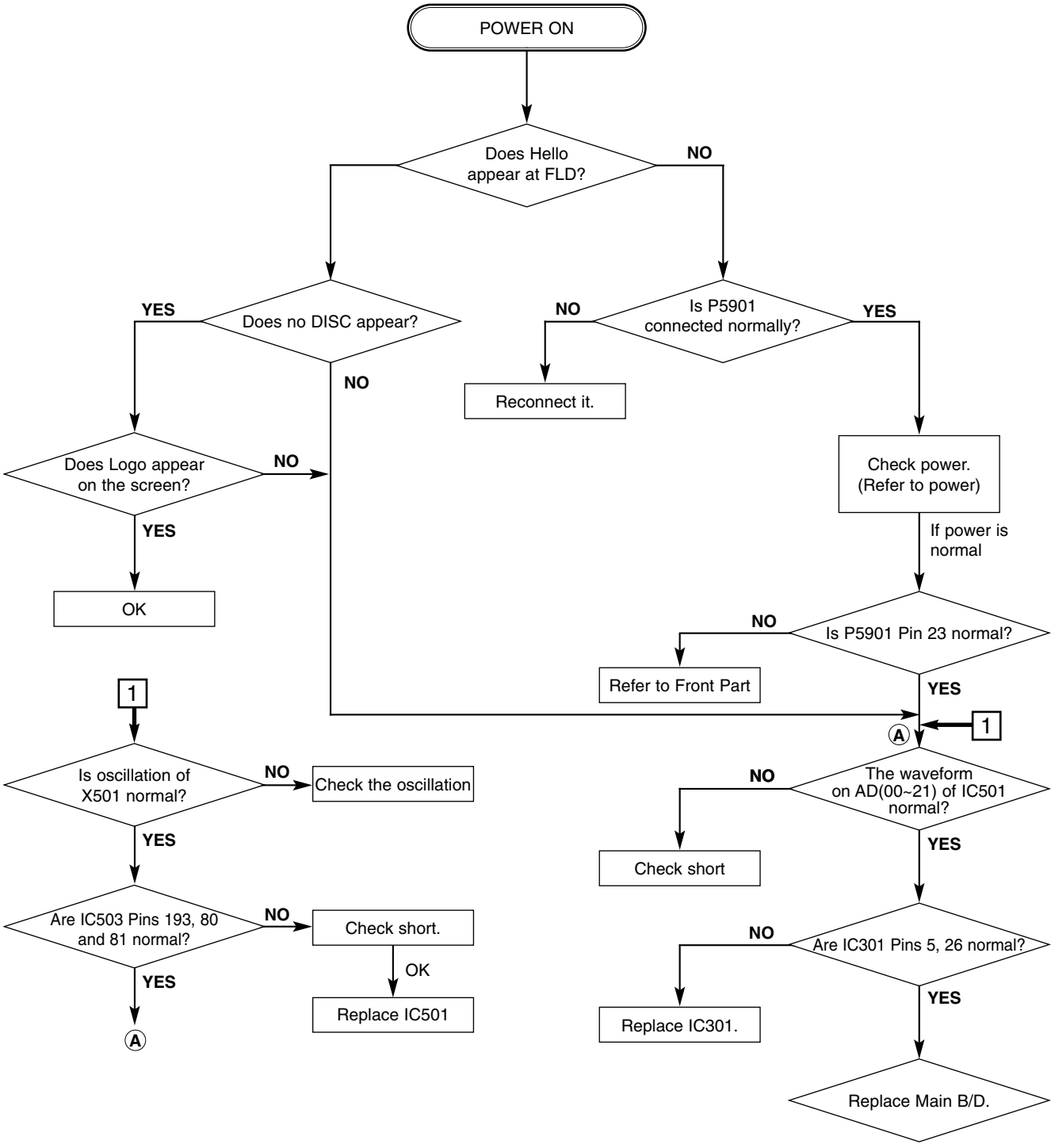
ELECTRICAL TROUBLESHOOTING GUIDE

1. Power(SMPS) Circuit

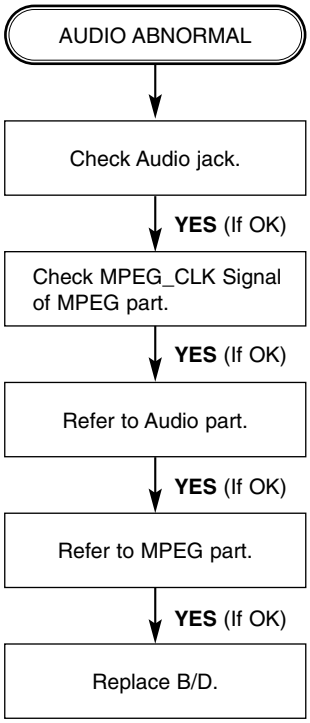


2. µ-COM Circuit

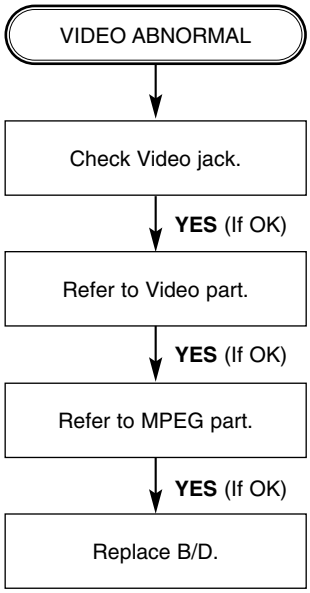
A. No Power



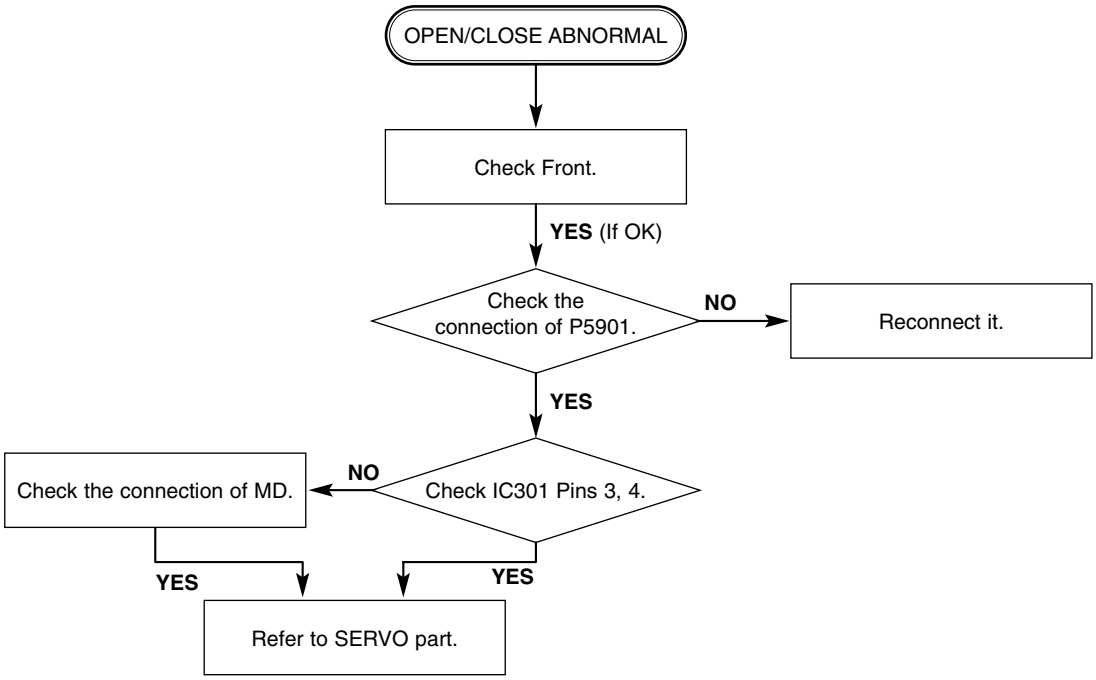
B. Audio abnormal



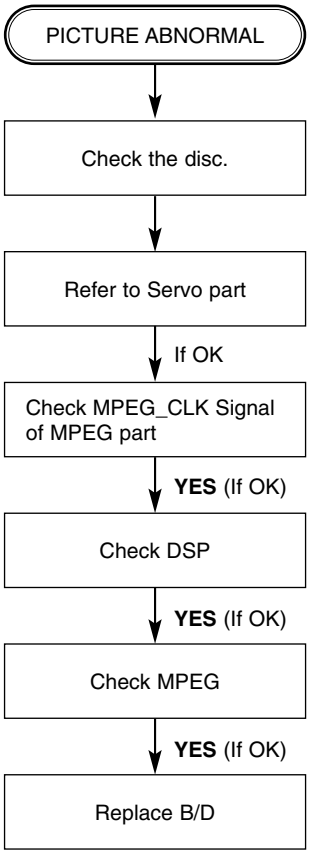
C. Video abnormal



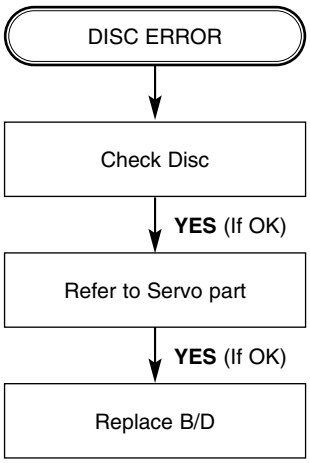
D. Open/Close abnormal



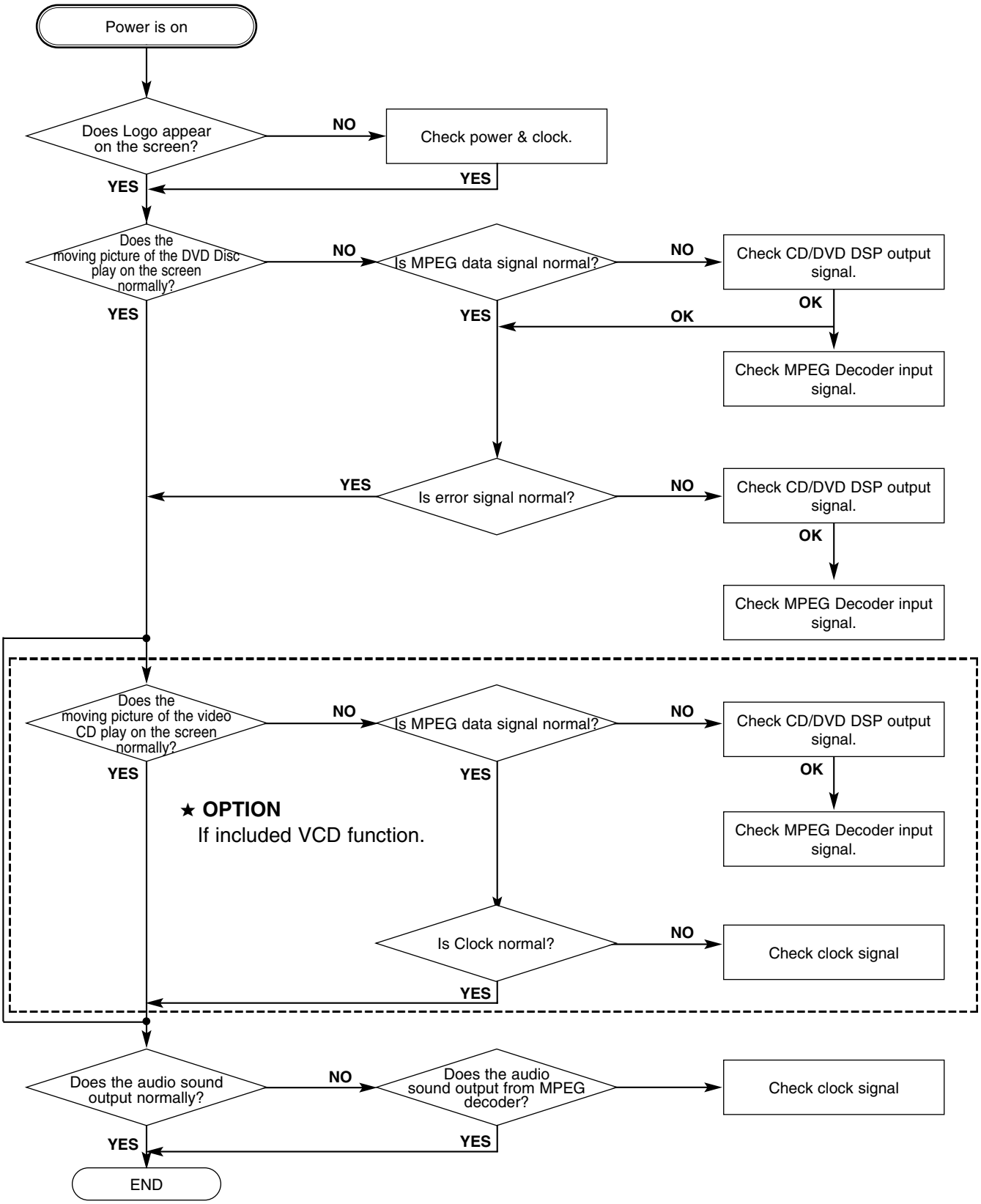
E. Picture abnormal



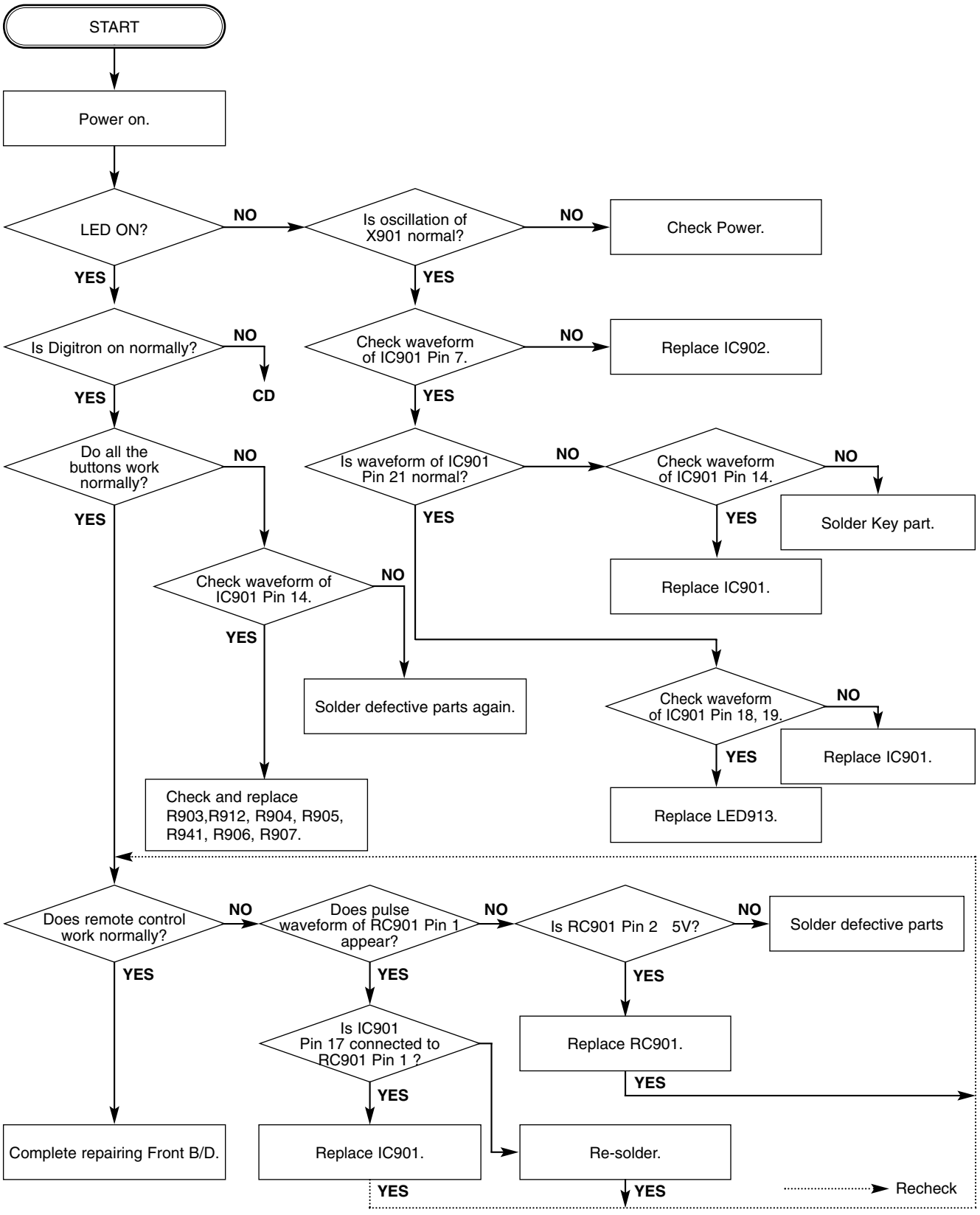
F. Disc Error



3. MPEG Circuit

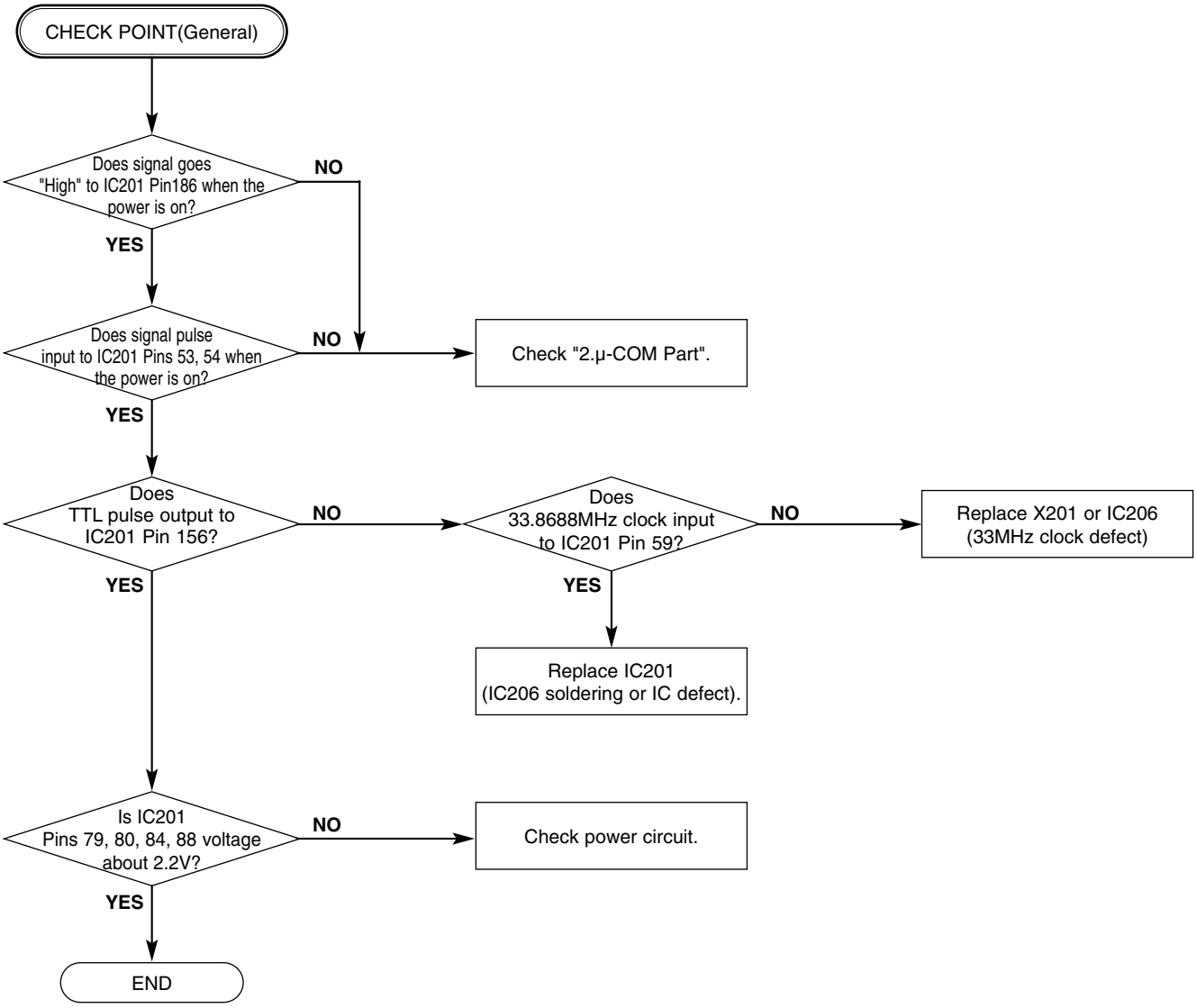


4. Front Circuit (Digitron & key)



5. RF/Servo Circuit

A.



B.

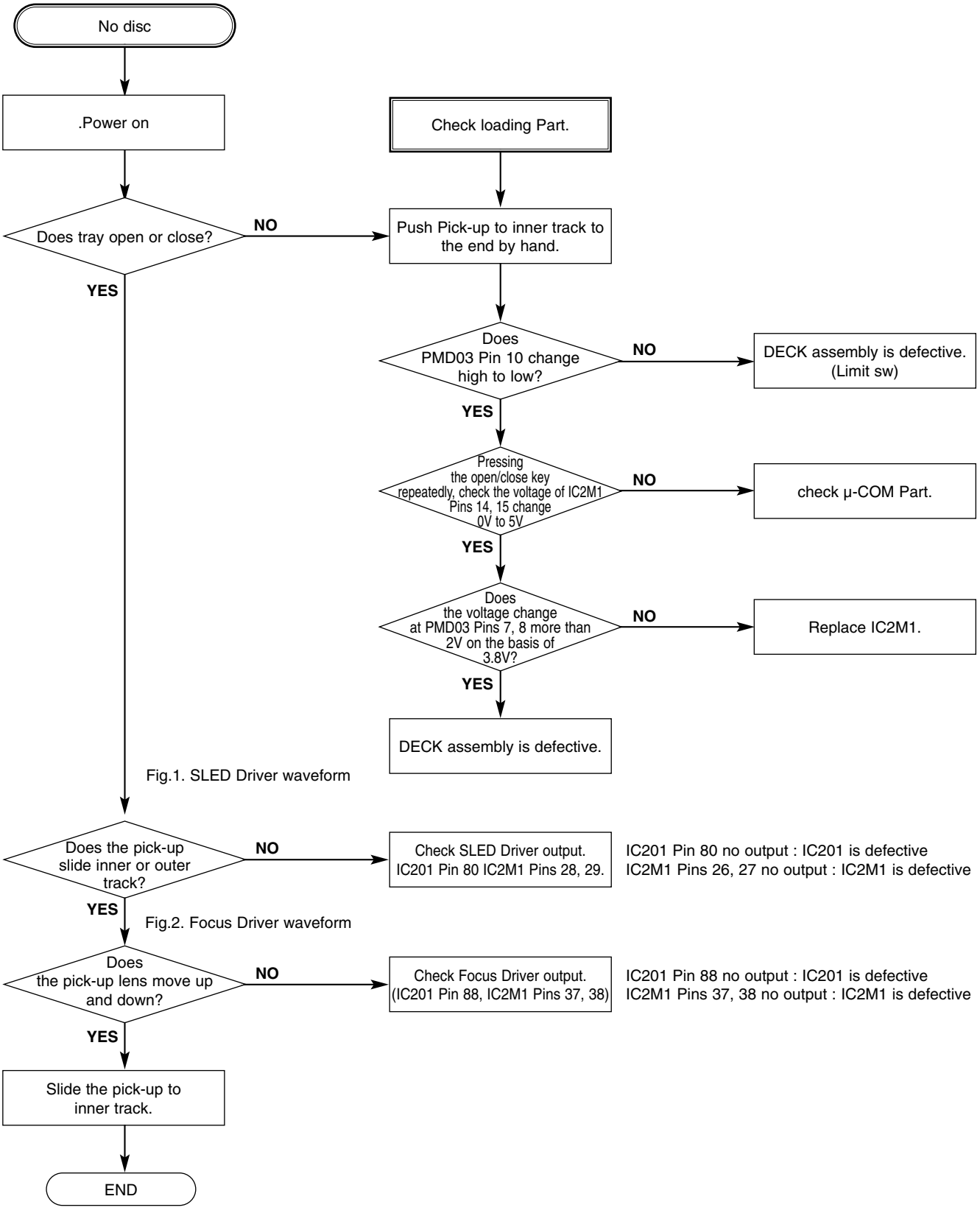


Fig.1. SLED Driver waveform

Fig.2. Focus Driver waveform

C.

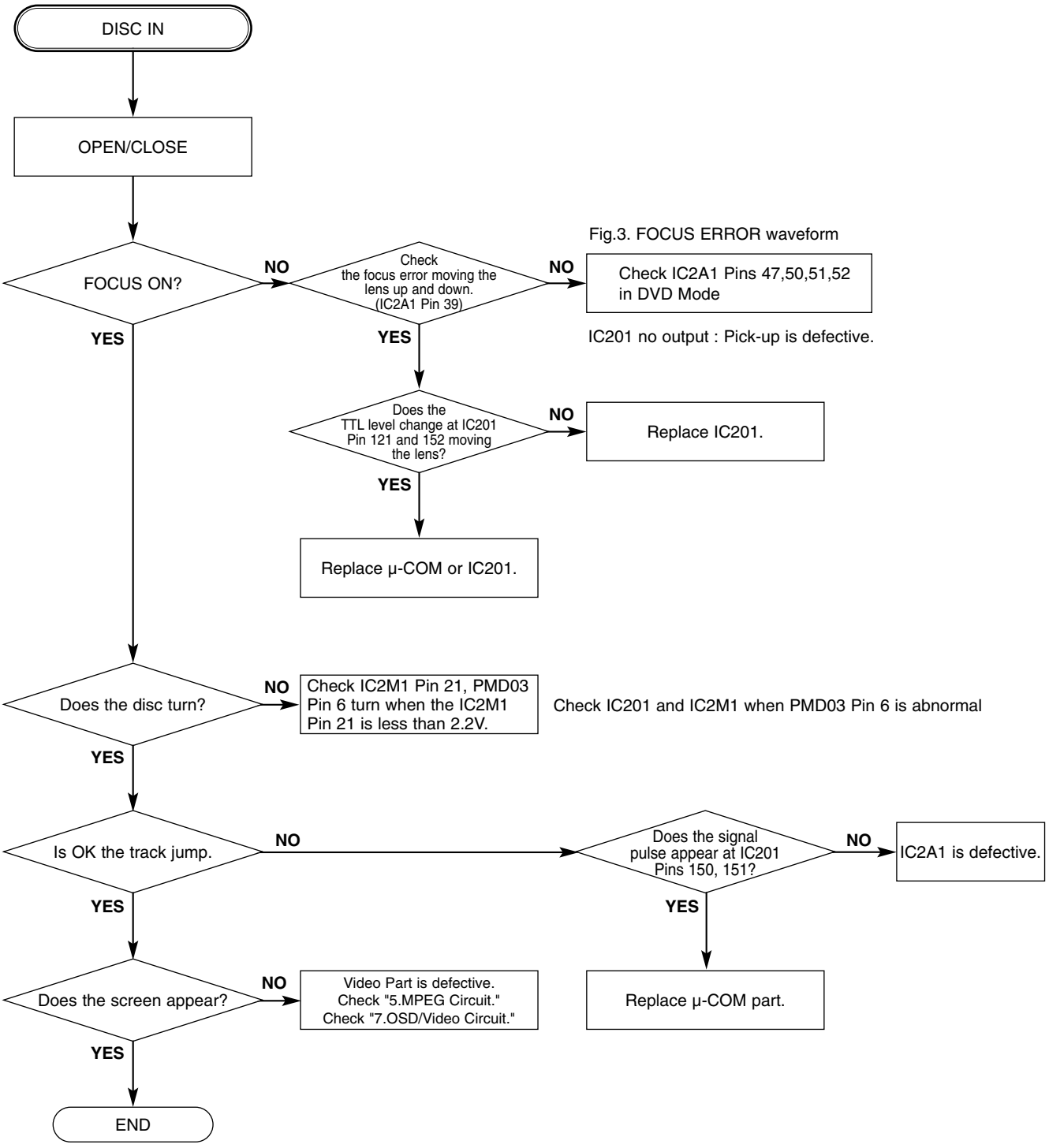
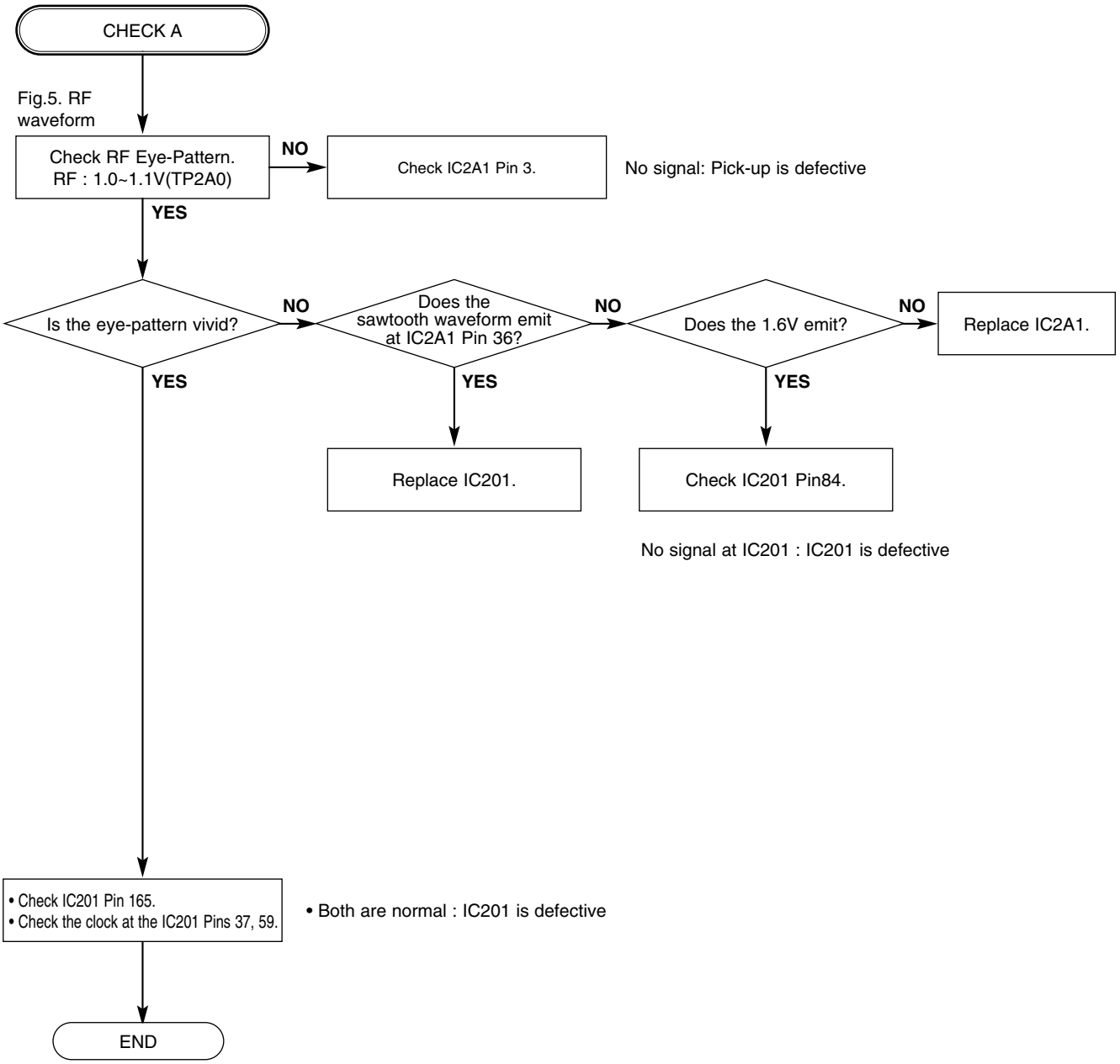


Fig.3. FOCUS ERROR waveform

IC201 no output : Pick-up is defective.

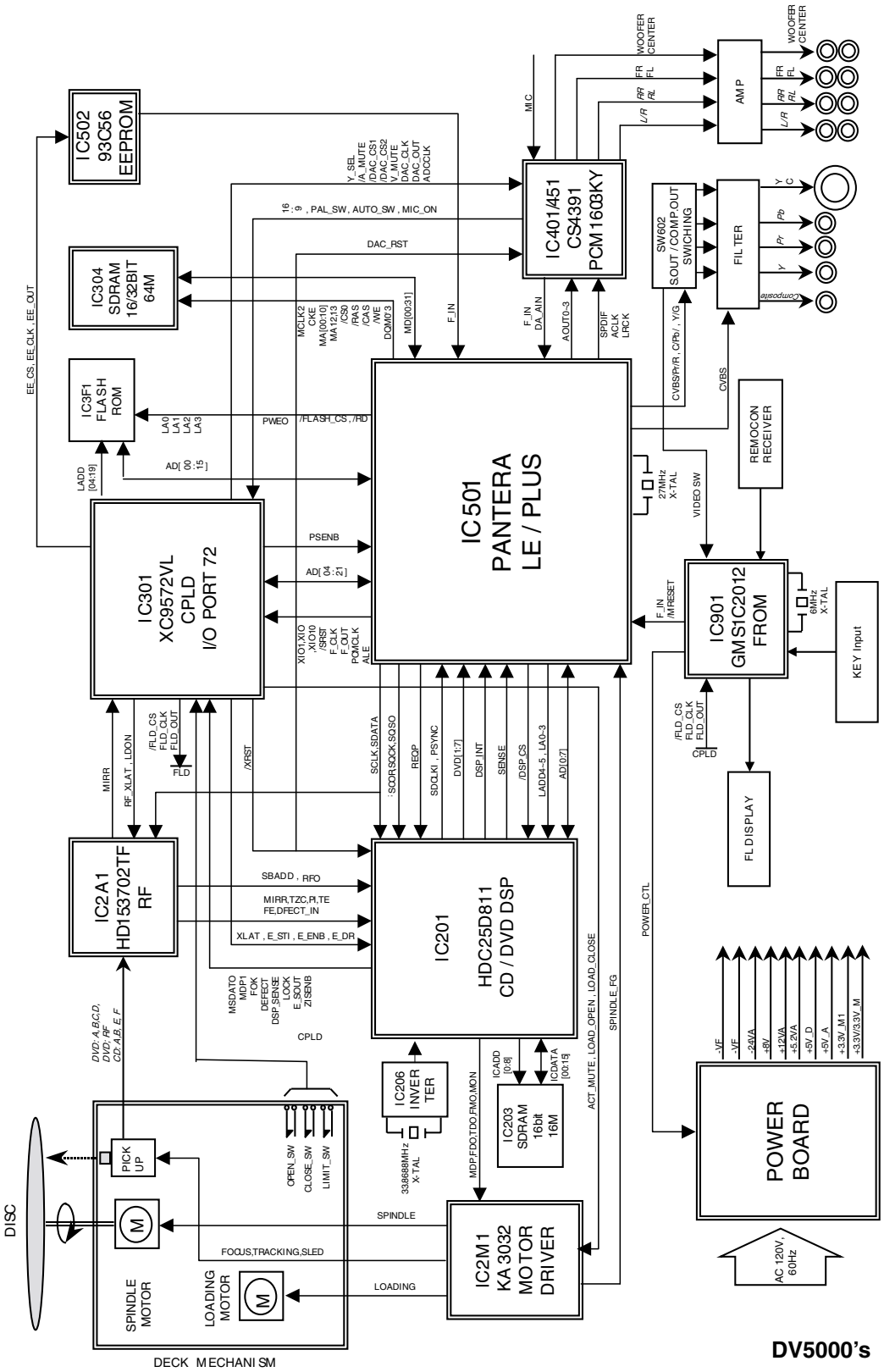
Check IC201 and IC2M1 when PMD03 Pin 6 is abnormal

D.

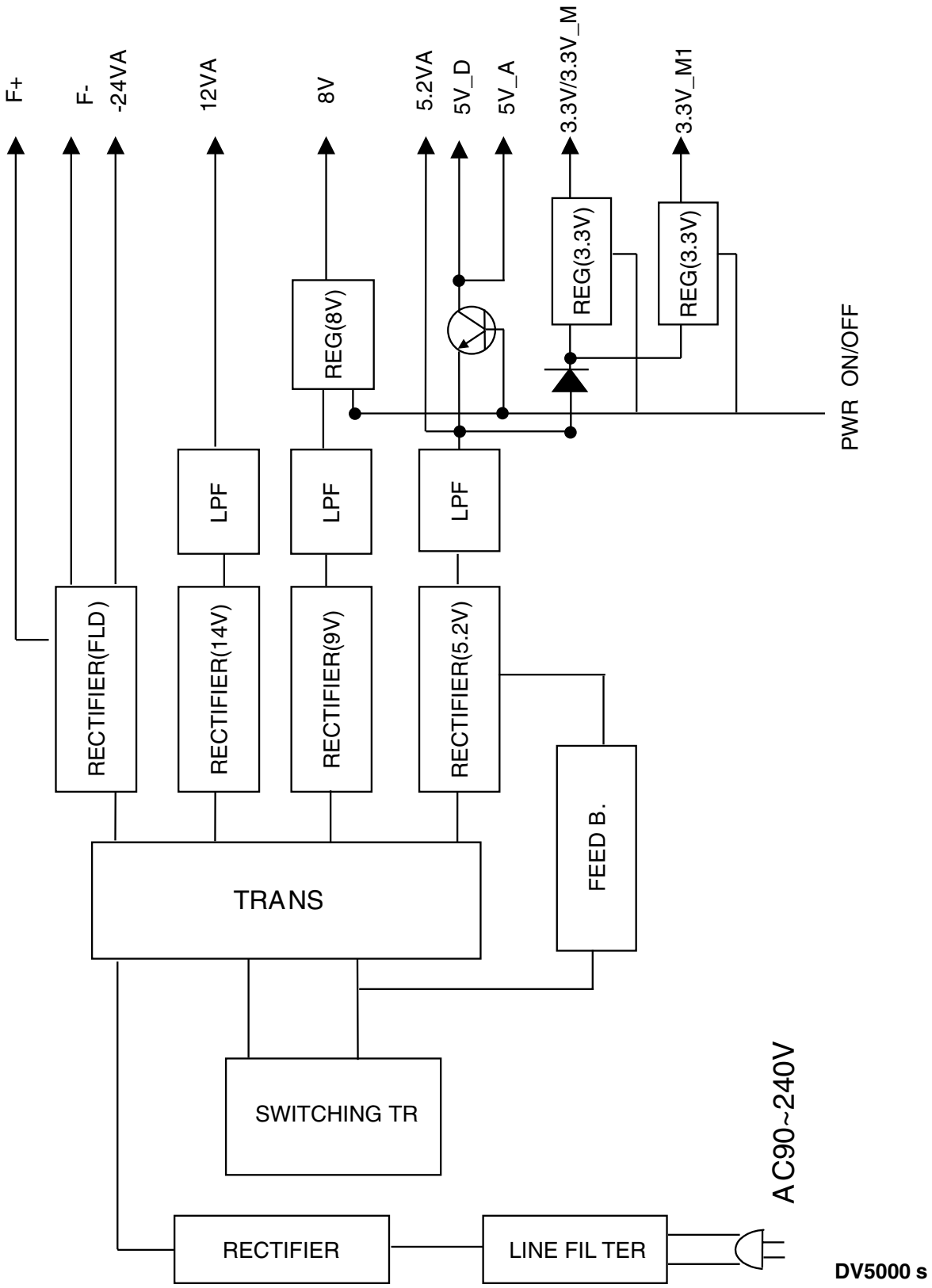

CHECK A
Fig.5. RF waveform
Check RF Eye-Pattern.
RF : 1.0~1.1V(TP2A0)
NO
Check IC2A1 Pin 3.
No signal: Pick-up is defective
YES
Is the eye-pattern vivid?
NO
Does the sawtooth waveform emit at IC2A1 Pin 36?
NO
Does the 1.6V emit?
NO
Replace IC2A1.
YES
YES
YES
Replace IC201.
Check IC201 Pin84.
No signal at IC201 : IC201 is defective
• Check IC201 Pin 165.
• Check the clock at the IC201 Pins 37, 59.
• Both are normal : IC201 is defective
END

BLOCK DIAGRAMS

1. Overall Block Diagram

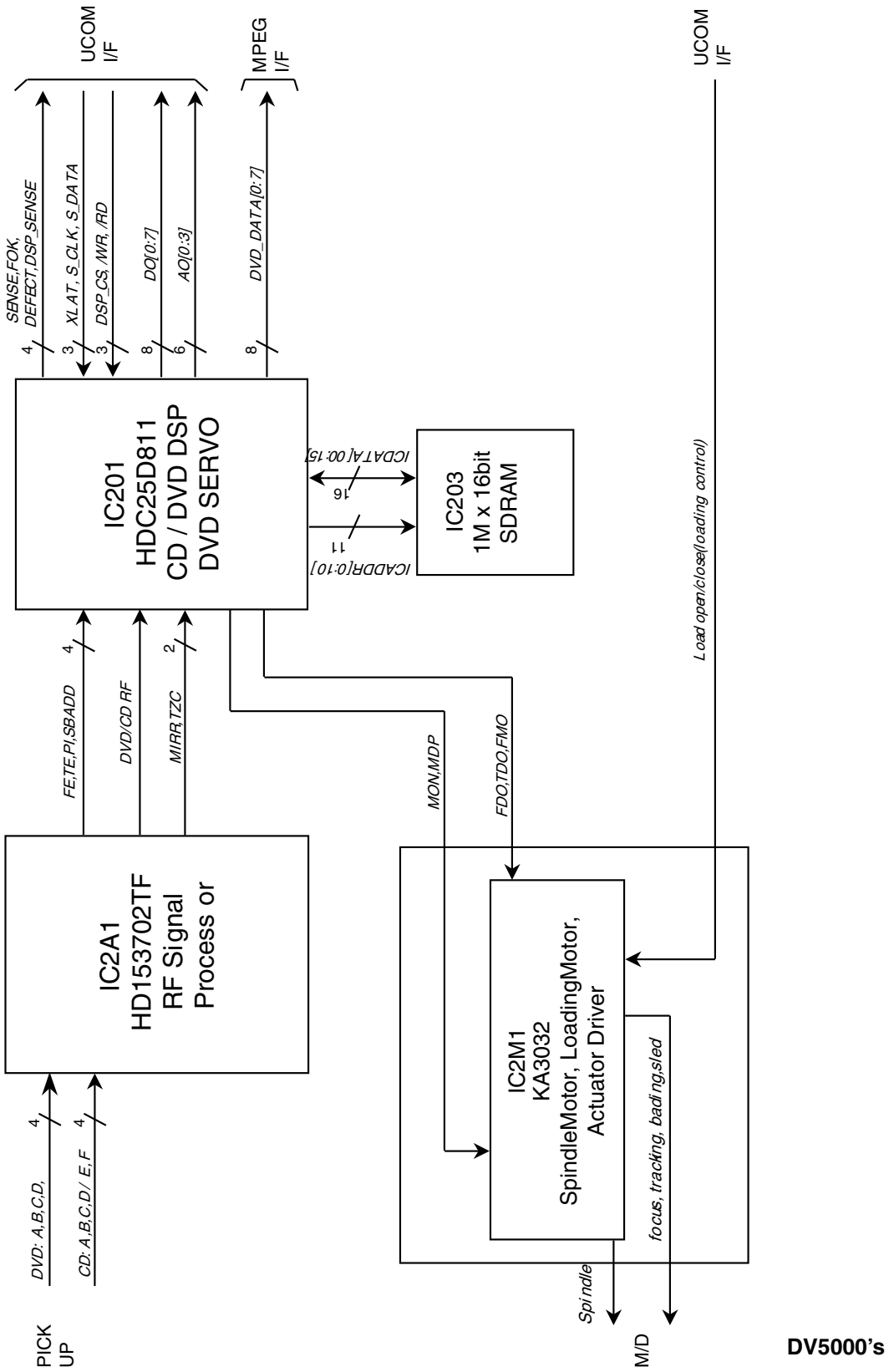


2. Power(SMPS) Block Diagram



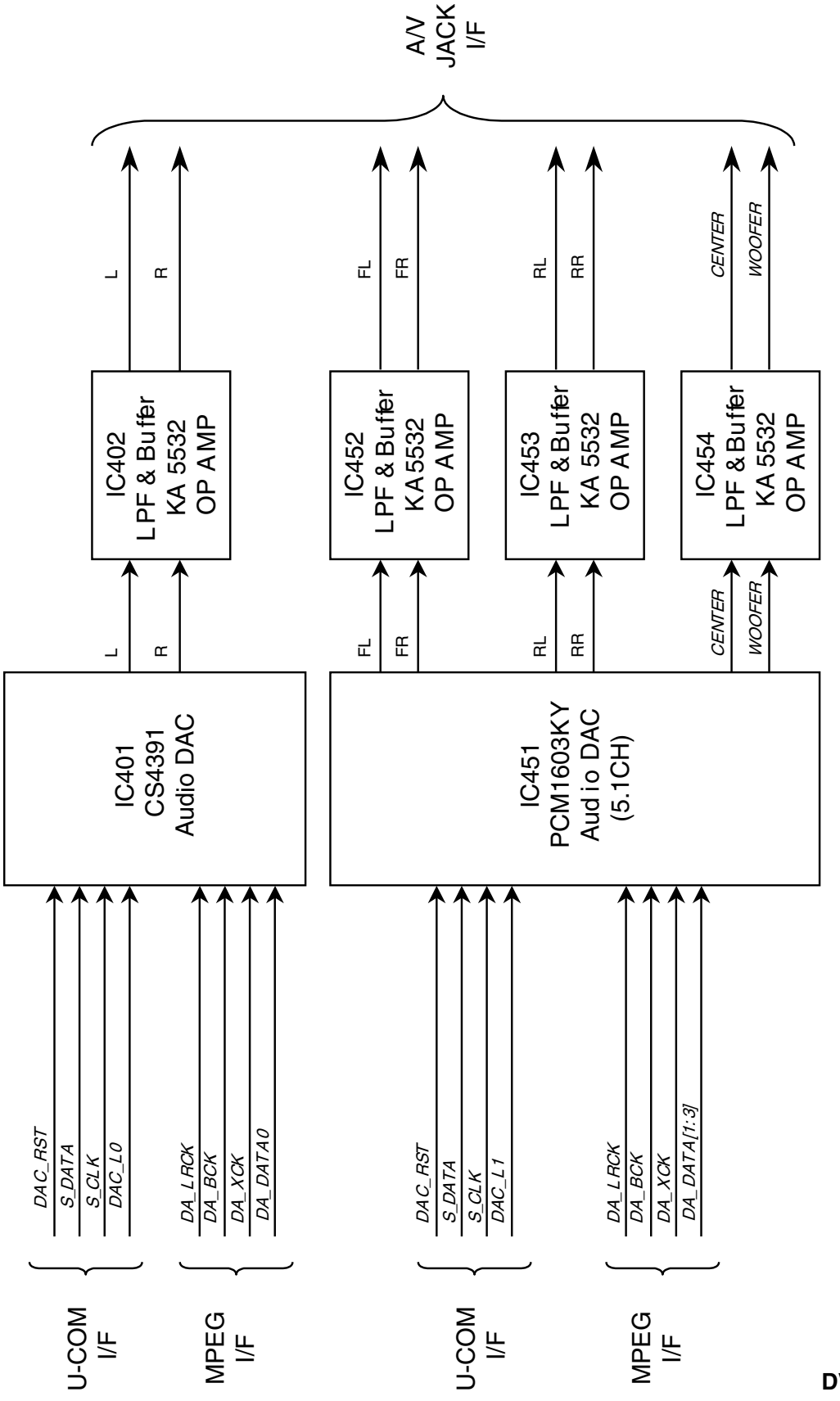
DV5000 s

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

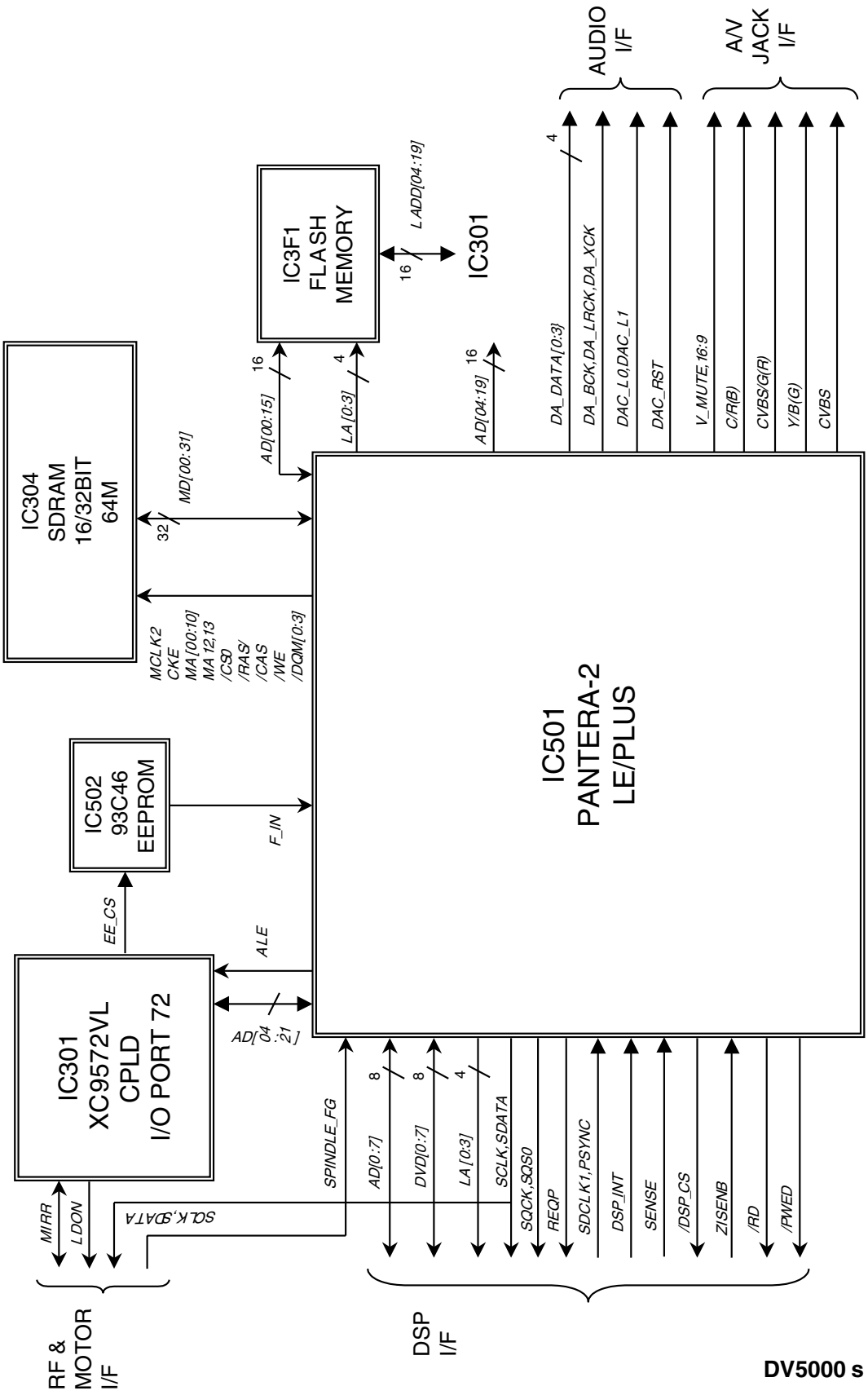


DV5000's

4. Audio Block Diagram



5. MPEG & MEMORY Block Diagram



DV5000 s

SECTION 4 MECHANISM

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- **Top View(without Tray Disc) 4-1**
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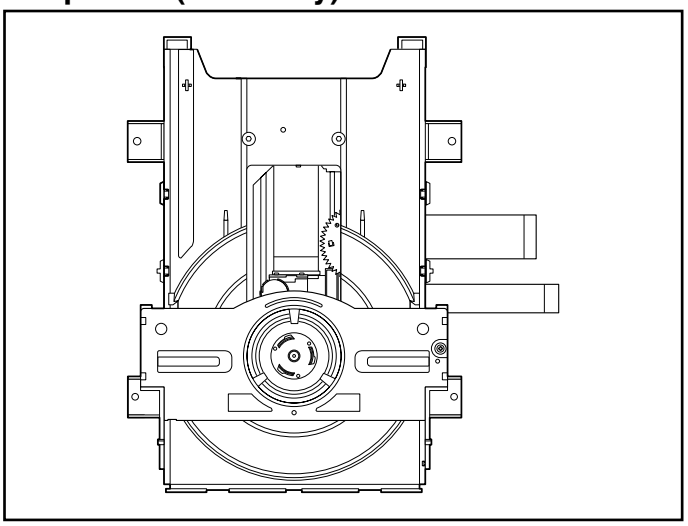
EXPLODED VIEW

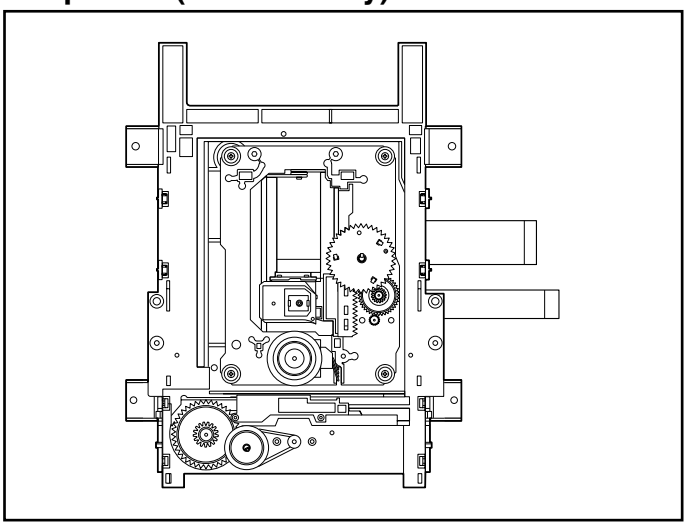
1. Deck Mechanism Exploded View....4-5

DECK MECHANISM PARTS LOCATION

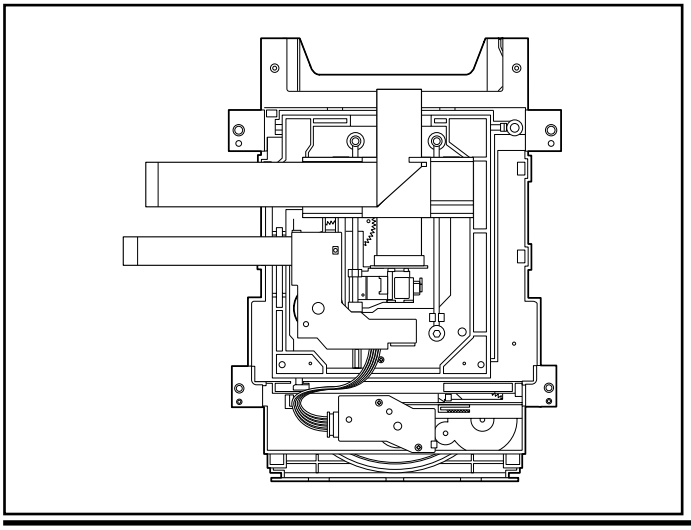
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.		Parts	Fixing Type	Disassembly	Figure
	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

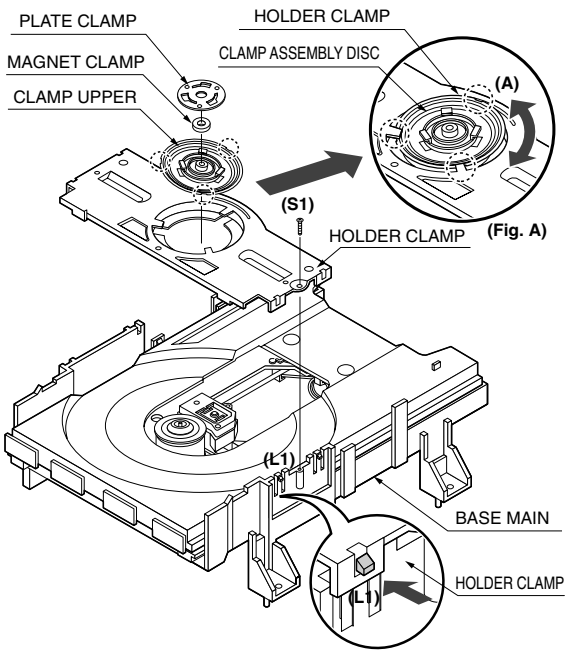


Fig. 4-1

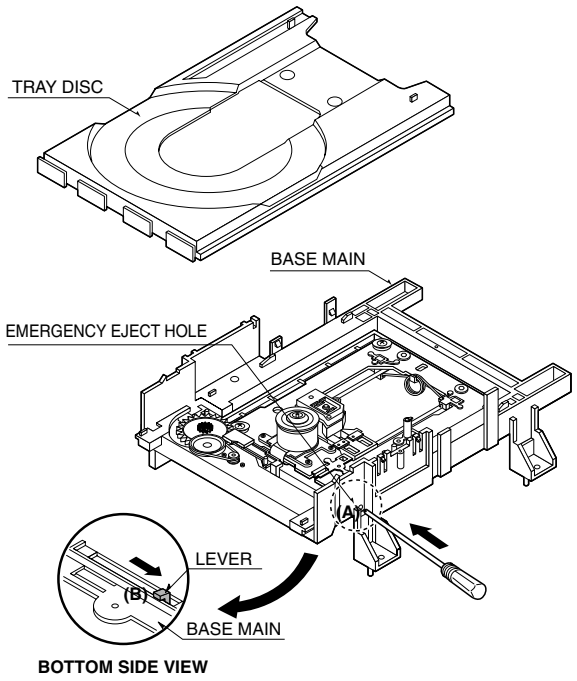


Fig. 4-2

1. Holder Clamp (Fig. 4-1)

1) Release 1 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

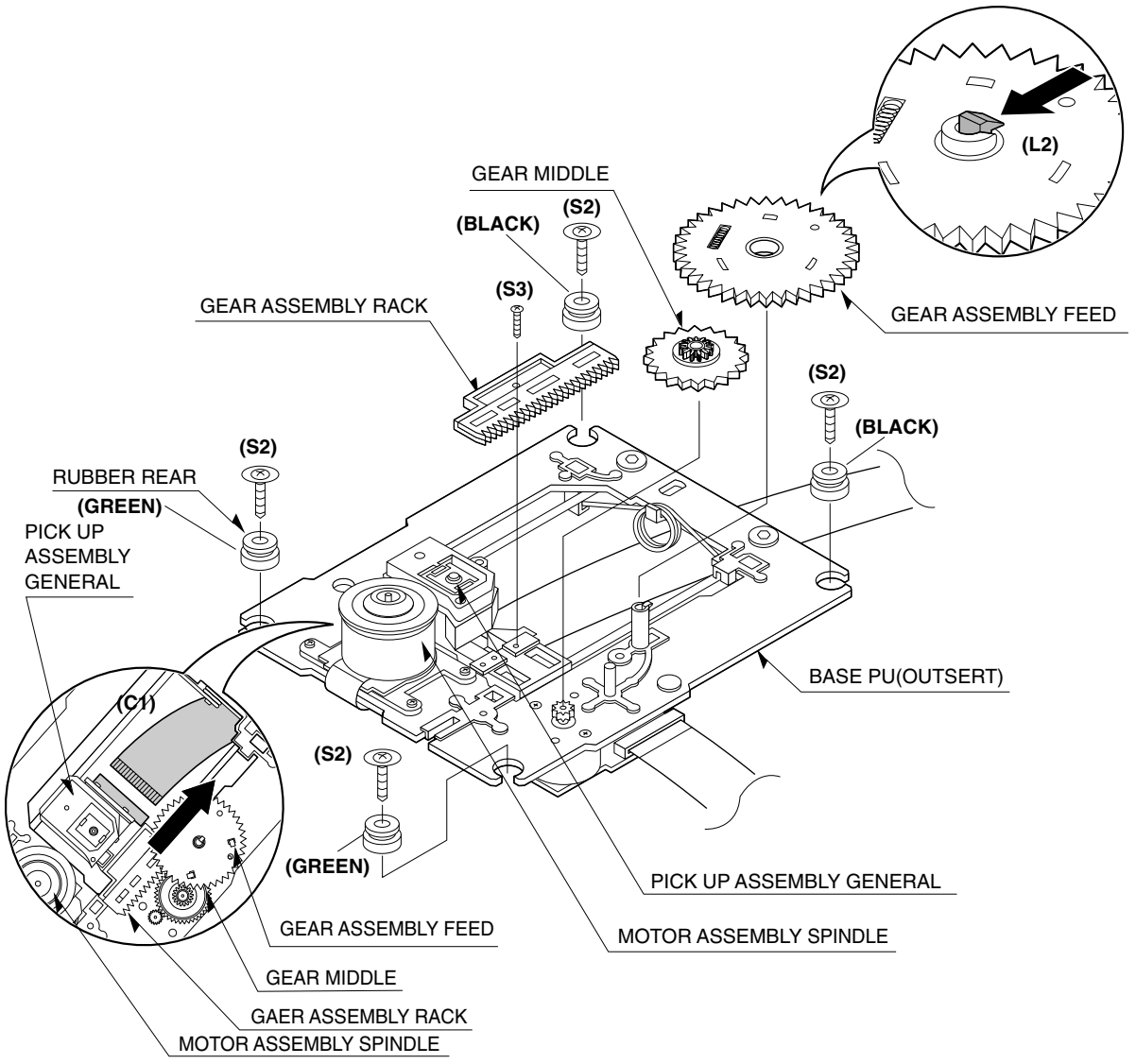


Fig. 4-3

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

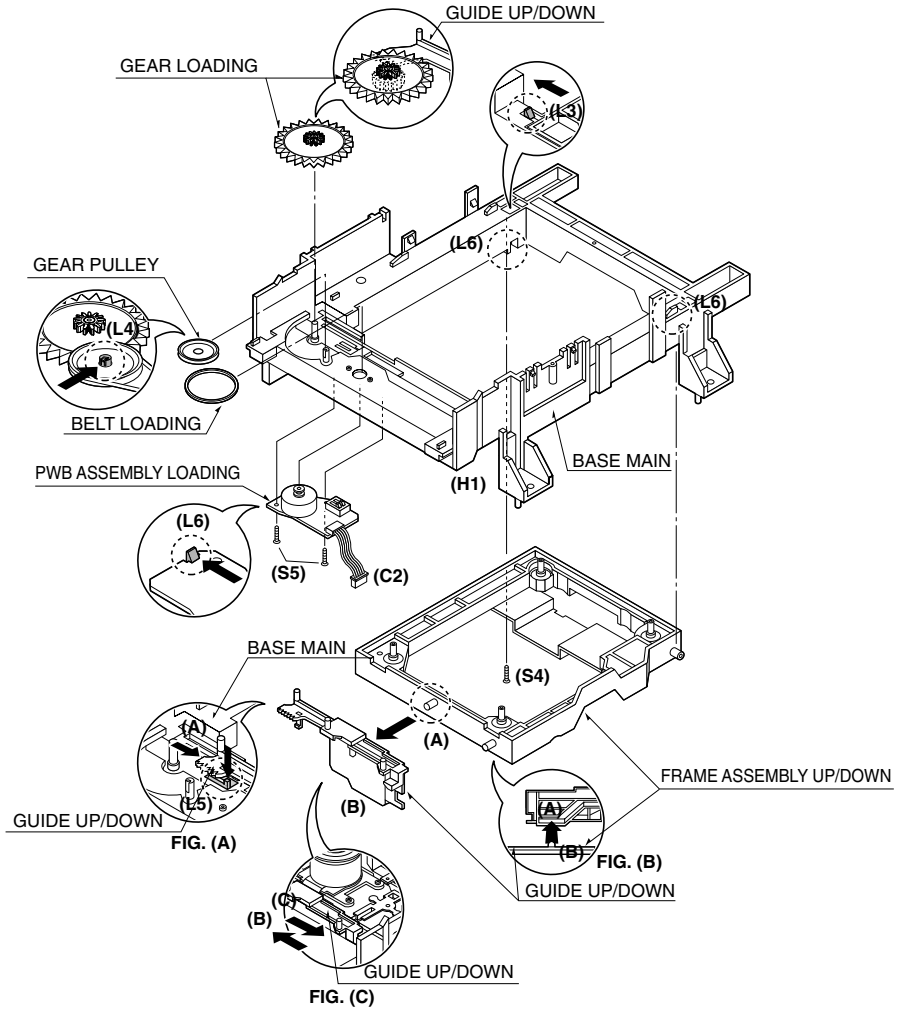


Fig. 4-4

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)

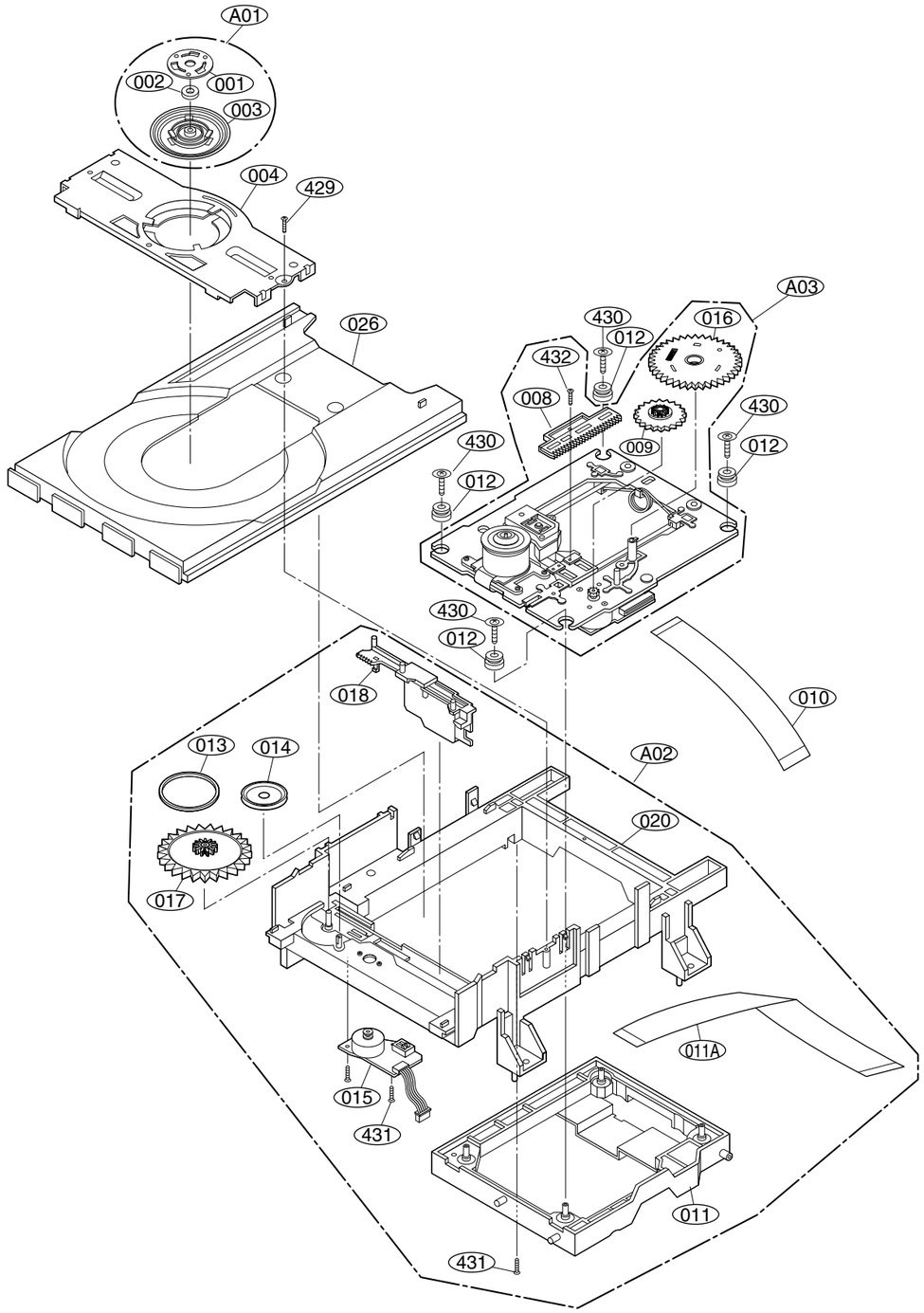
1) Release 2 Screws(S5)
2) Unkool the Loading Motor Connector (C2) from the Hook (H1) on the Base Main.
3) Unlock 2 Locking Tabs(L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main(Fig. 4-4)

MEMO

EXPLODED VIEWS

1. Deck Mechanism Exploded View



MEMO

MEMO

CIRCUIT DIAGRAM

1. POWER(SMPS) CIRCUIT DIAGRAM

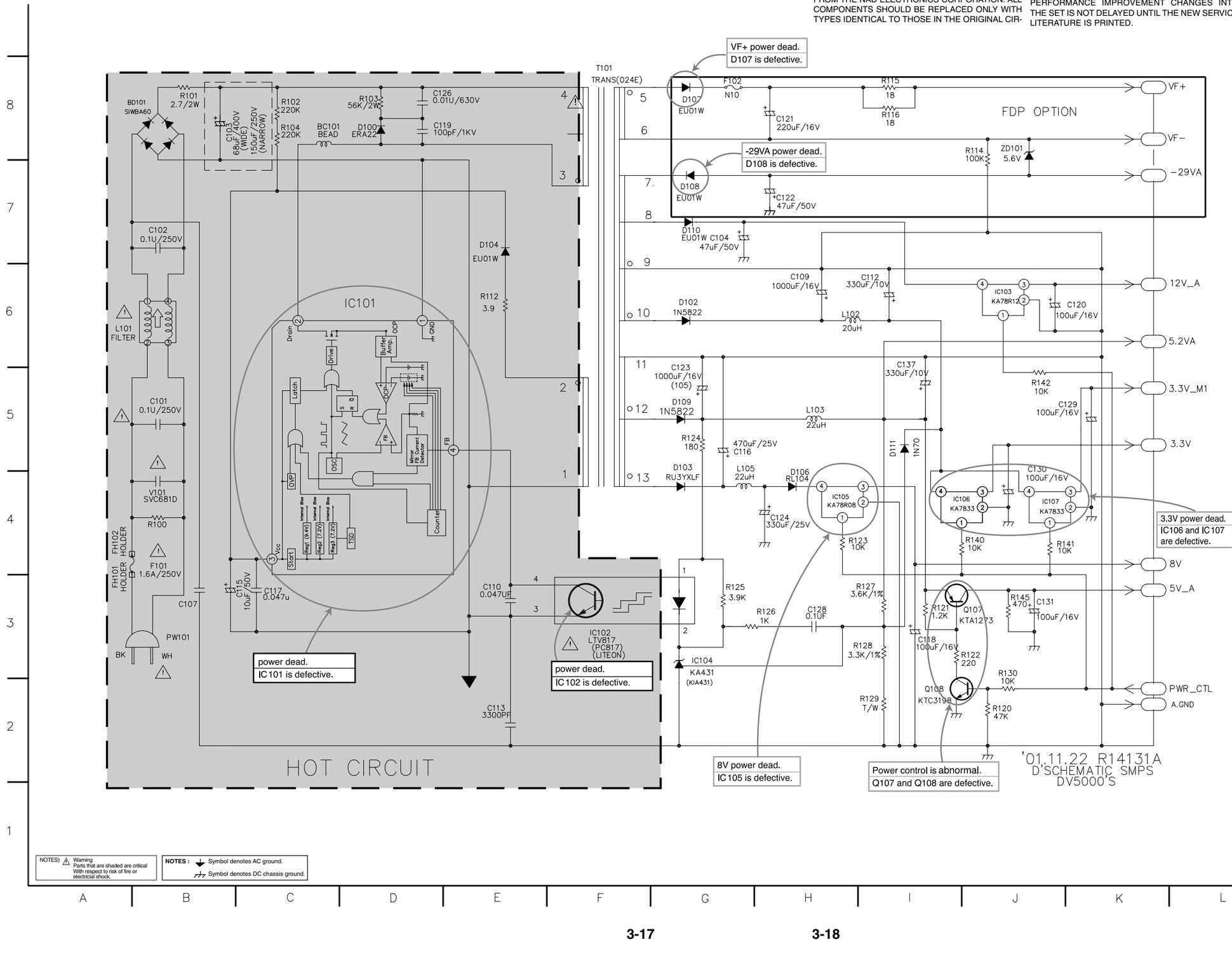
IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE NAD ELECTRONICS CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

NOTE :

1. Shaded(■) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.



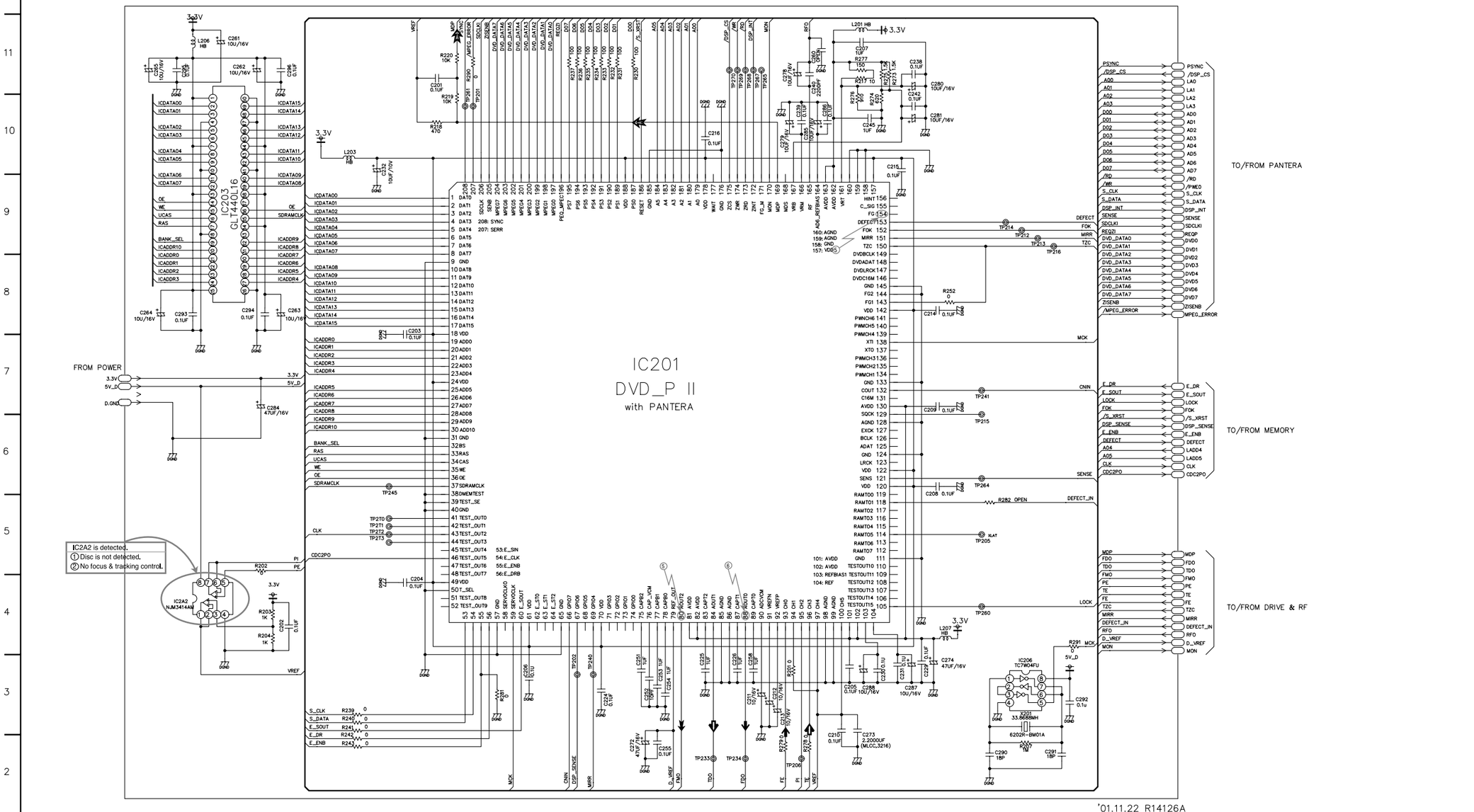
LOCATION GUIDE

BC101	C8	R129	I2
BD101	A8	R130	J3
C101	B5	R140	J4
C102	B7	R141	J4
C103	B8	R142	J5
C104	G7	R145	J3
C107	B3	T101	F8
C109	H6	V101	B4
C110	E3	VF+	K8
C112	I6	VF−	K8
C113	E2	ZD101	J8
C115	C3		
C116	G5		
C117	C3		
C118	I3		
C119	D8		
C120	K6		
C121	H8		
C122	H7		
C123	G5		
C124	H4		
C126	D8		
C128	H3		
C129	J5		
C130	J4		
C131	J3		
C137	I6		
D100	D8		
D102	G6		
D103	G5		
D104	E7		
D106	H4		
D107	G8		
D108	G7		
D109	G5		
D110	G7		
D111	I5		
F102	G8		
FH101	A3		
FH102	A4		
IC101	D6		
IC102	F3		
IC103	J6		
IC104	G3		
IC105	H4		
IC106	I4		
IC107	J4		
L101	A6		
L102	H6		
L103	H5		
L105	G5		
PW101	B3		
PWR_CTL	J2		
Q107	J3		
Q108	I2		
R100	B4		
R101	B8		
R102	C8		
R103	D8		
R104	C8		
R112	E6		
R114	J8		
R115	I8		
R116	I8		
R120	J2		
R121	I3		
R122	J3		
R123	H4		
R124	G5		
R125	G3		
R126	H3		
R127	H3		
R128	H3		

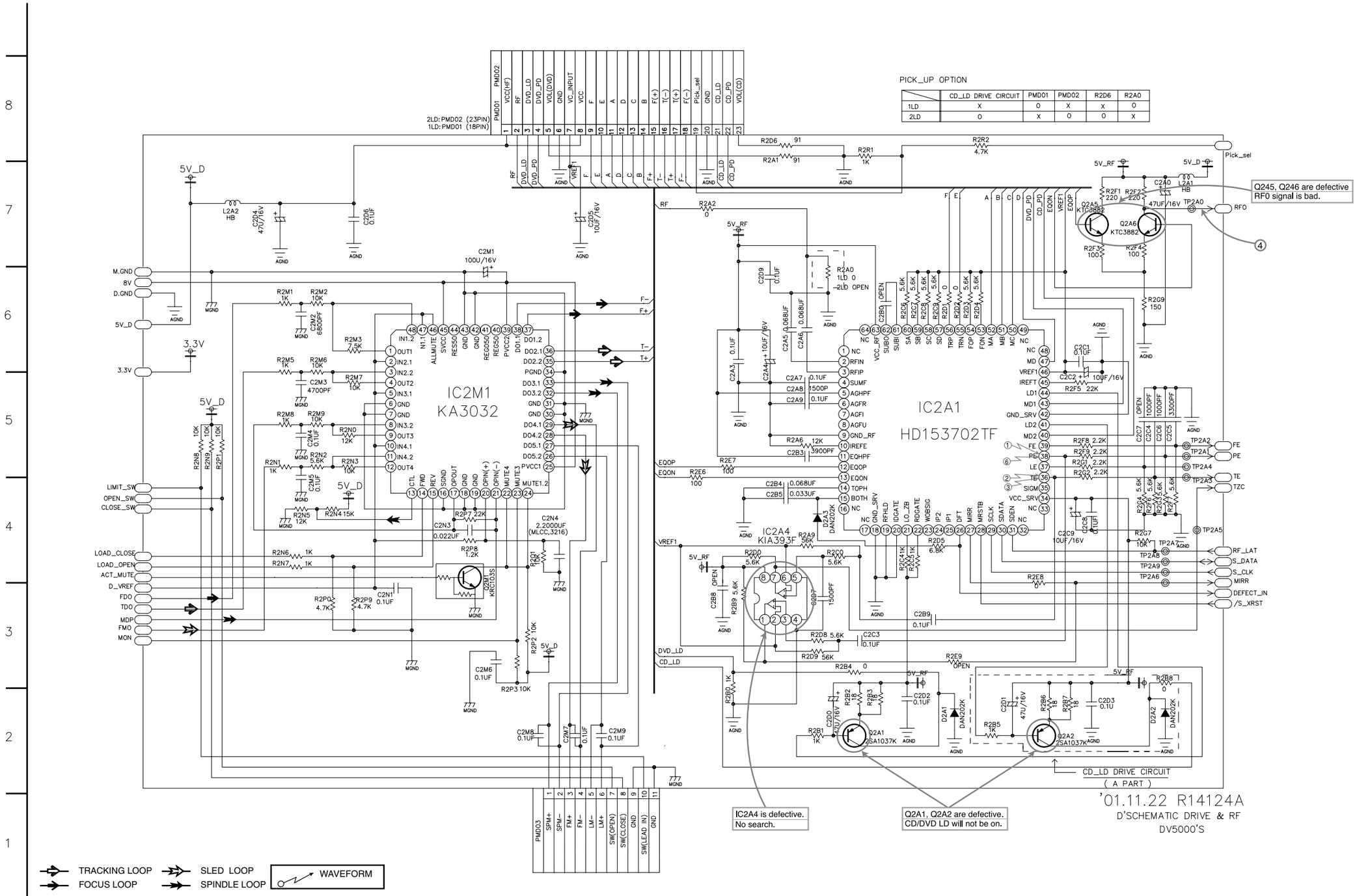
NOTES) ⚠ Warning
Parts that are shaded are critical
With respect to risk of fire or
electricial shock.

NOTES : ⏚ Symbol denotes AC ground.
⏚ Symbol denotes DC chassis ground.

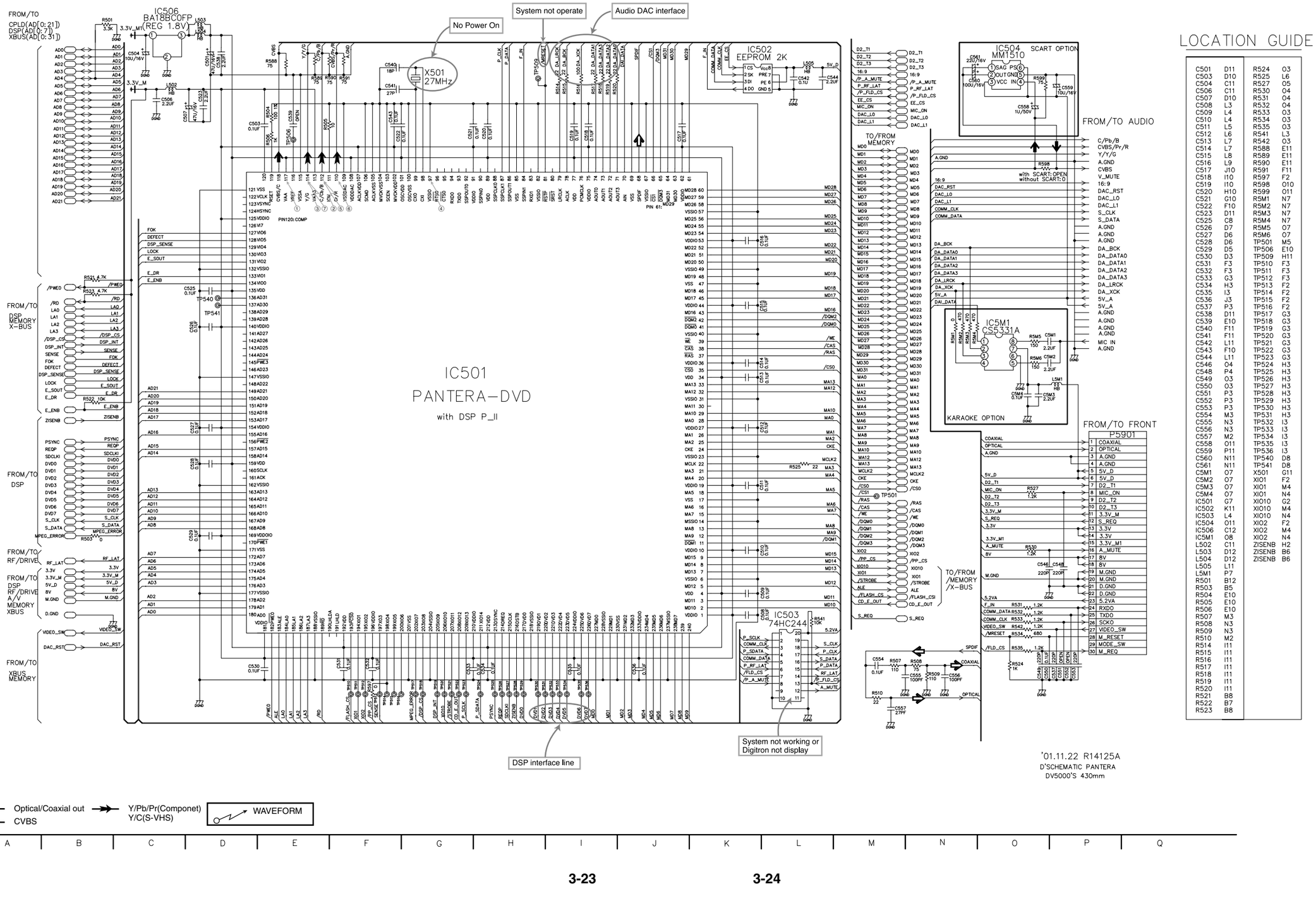
2. DVD DSP CIRCUIT DIAGRAM



3. DRIVE & RF CIRCUIT DIAGRAM



4. MPEG CIRCUIT DIAGRAM

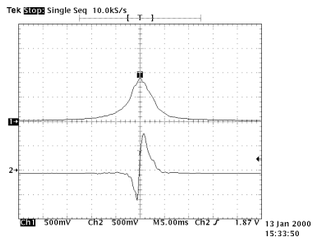


LOCATION GUIDE

C501	D11	R524	O3
C503	D10	R525	L6
C504	C11	R527	O5
C506	C11	R530	O4
C507	D10	R531	O4
C508	L3	R532	O4
C509	L4	R533	O3
C510	L4	R534	O3
C511	L5	R535	O3
C512	L6	R541	L3
C513	L7	R542	O3
C514	L7	R588	E11
C515	L8	R589	E11
C516	L9	R590	E11
C517	J10	R591	F11
C518	I10	R597	F2
C519	I10	R598	O10
C520	H10	R599	O11
C521	G10	R5M1	N7
C522	F10	R5M2	N7
C523	D11	R5M3	N7
C525	C8	R5M4	N7
C526	D7	R5M5	O7
C527	D6	R5M6	O7
C528	D6	TP501	M5
C529	D5	TP506	E10
C530	D3	TP509	H11
C531	F3	TP510	F3
C532	F3	TP511	F3
C533	G3	TP512	F3
C534	H3	TP513	F2
C535	I3	TP514	F2
C536	J3	TP515	F2
C537	P3	TP516	F2
C538	D11	TP517	G3
C539	E10	TP518	G3
C540	F11	TP519	G3
C541	F11	TP520	G3
C542	L11	TP521	G3
C543	F10	TP522	G3
C544	L11	TP523	G3
C546	O4	TP524	H3
C548	P4	TP525	H3
C549	O3	TP526	H3
C550	O3	TP527	H3
C551	P3	TP528	H3
C552	P3	TP529	H3
C553	P3	TP530	H3
C554	M3	TP531	H3
C555	N3	TP532	I3
C556	N3	TP533	I3
C557	M2	TP534	I3
C558	O11	TP535	I3
C559	P11	TP536	I3
C560	N11	TP540	D8
C561	N11	TP541	D8
C5M1	O7	X501	G11
C5M2	O7	XIO1	F2
C5M3	O7	XIO1	M4
C5M4	O7	XIO1	N4
IC501	G7	XIO10	G2
IC502	K11	XIO10	M4
IC503	L4	XIO10	N4
IC504	O11	XIO2	F2
IC506	C12	XIO2	M4
IC5M1	O8	XIO2	N4
L502	C11	ZISENB	H2
L503	D12	ZISENB	B6
L504	D12	ZISENB	B6
L505	L11		
L5M1	P7		
R501	B12		
R503	B5		
R504	E10		
R505	E10		
R506	E10		
R507	M3		
R508	N3		
R509	N3		
R510	M2		
R514	I11		
R515	I11		
R516	I11		
R517	I11		
R518	I11		
R519	I11		
R520	I11		
R521	B8		
R522	B7		
R523	B8		

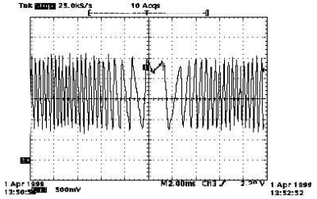
• WAVEFORMS

①



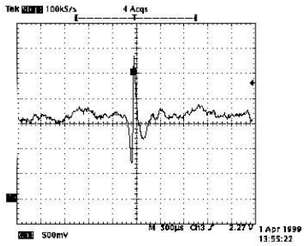
IC2A1 Pin 39, Focus Error
IC2A1 Pin 38, PE

②



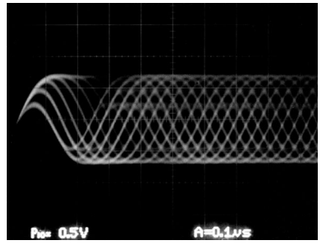
IC2A1 Pin 36
Tracking Error

③



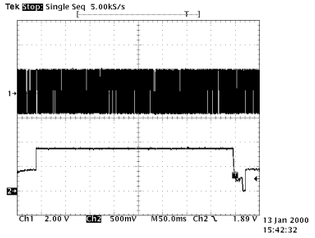
IC2A1 Pin 36
VBR TRACKING Error

④



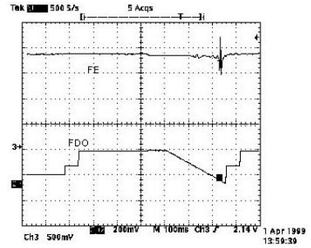
Q2A6 Collector output(TP2AO)
RF

⑤



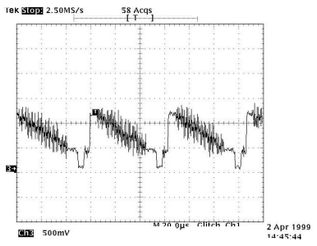
IC201 Pin 80, SLED FG
IC201 Pin 154, SLED FMO

⑥



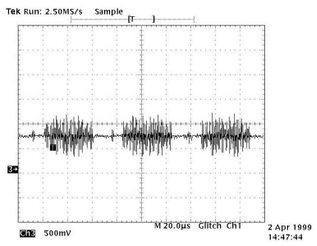
IC2A1 Pin39, Focus Error(in Focus Search)
IC201 Pin 88, Focus Drive(FDO)

①



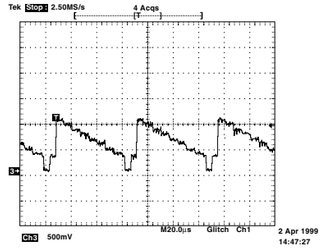
IC501 Pin 118, Composite

②



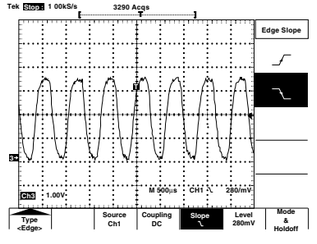
IC501 Pin 112, Chrominance
(Super video out Mode)

③



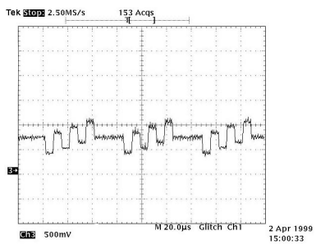
IC501 Pin 114, Luminance
(Super video out Mode)

④



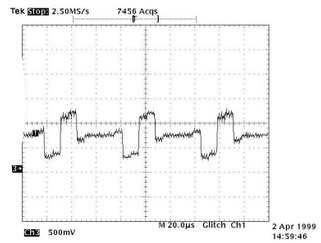
IC501 Pin 98,
MPEG Clock(27MHz)

⑤



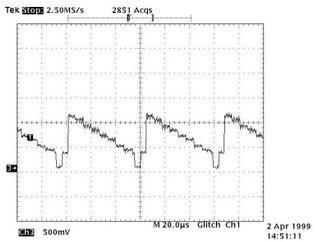
IC501 Pin 112
Component Pb

⑥



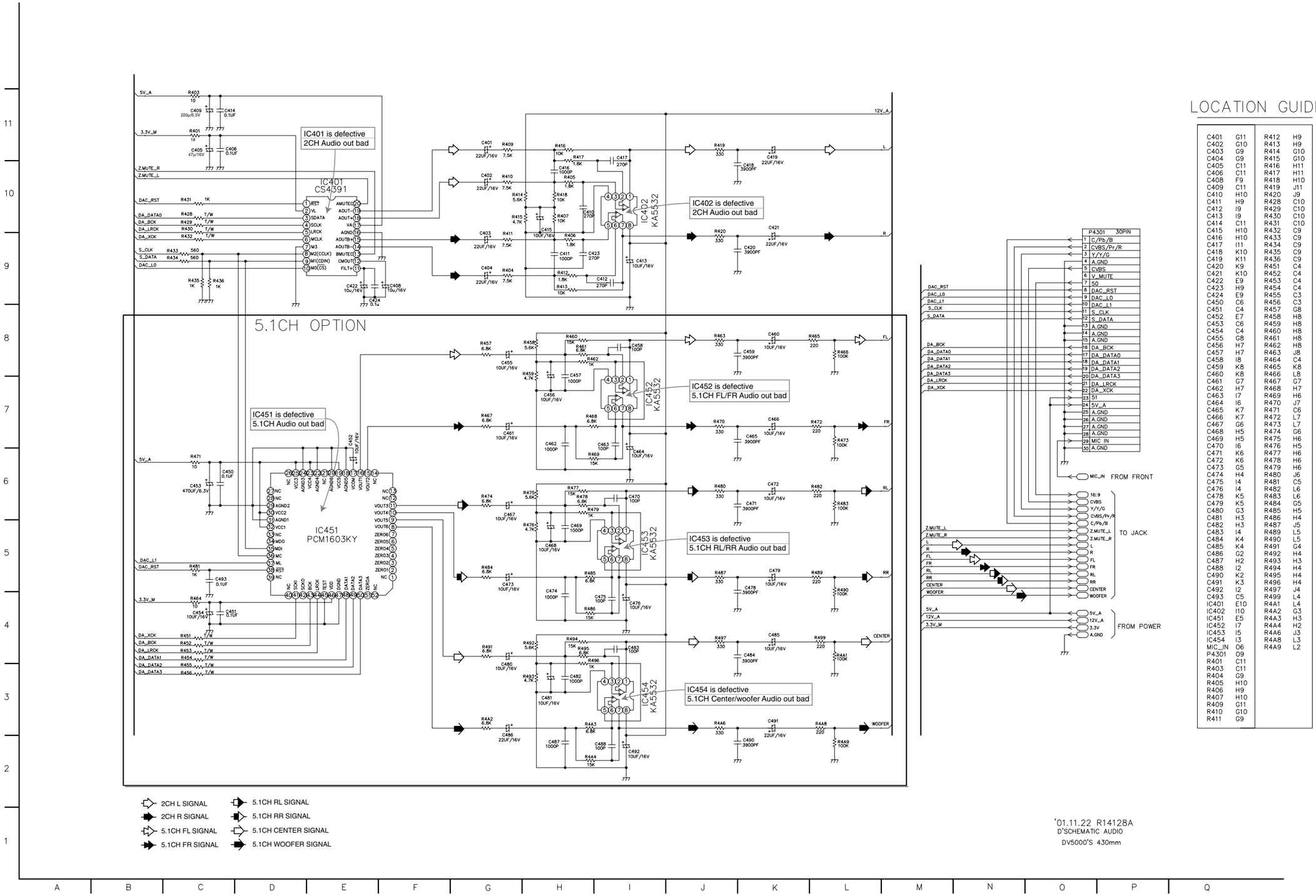
IC501 Pin 110
Component Pr

⑦



IC501 Pin 114
Component Y

5. AUDIO CIRCUIT DIAGRAM

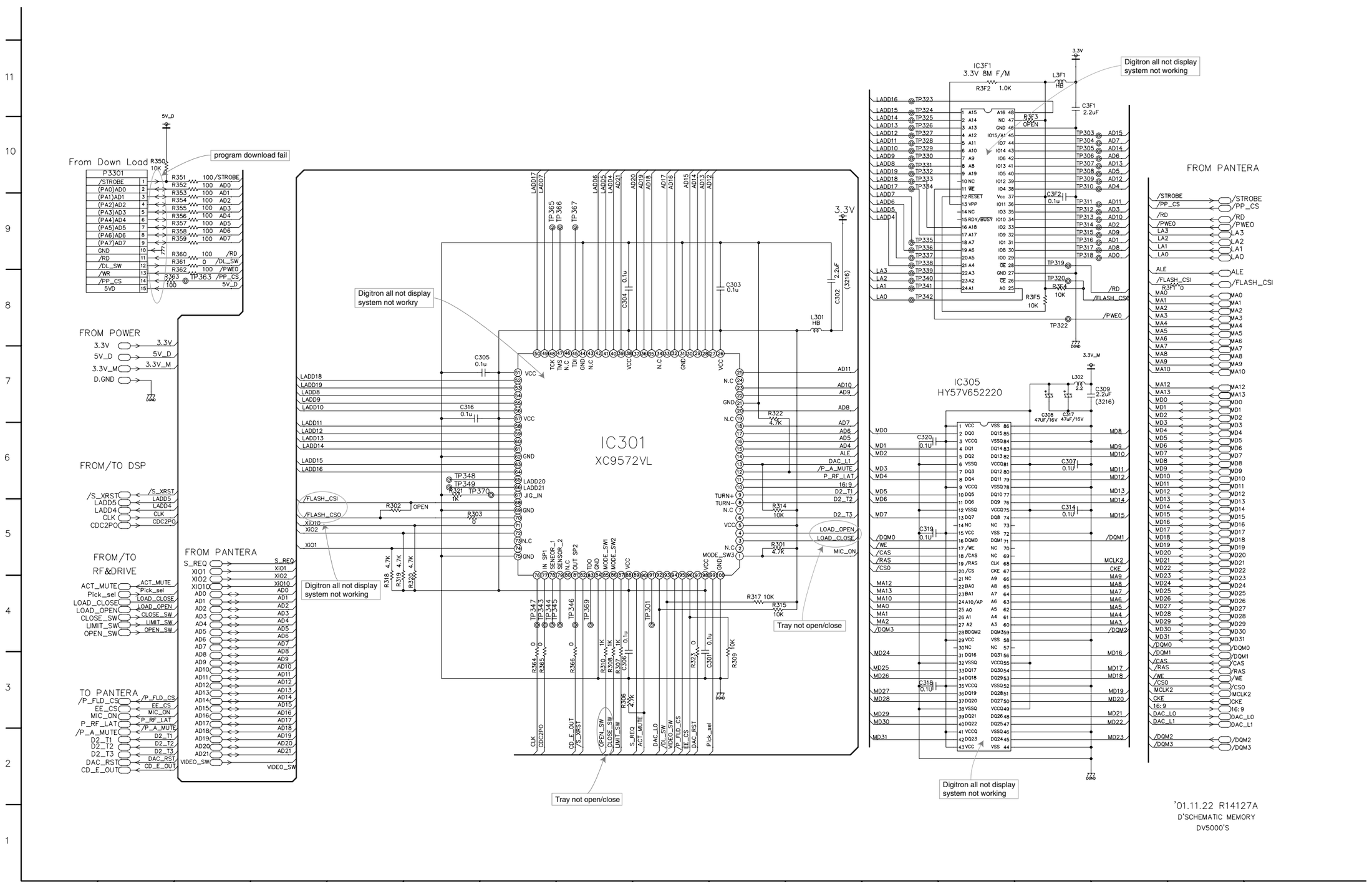


LOCATION GUIDE

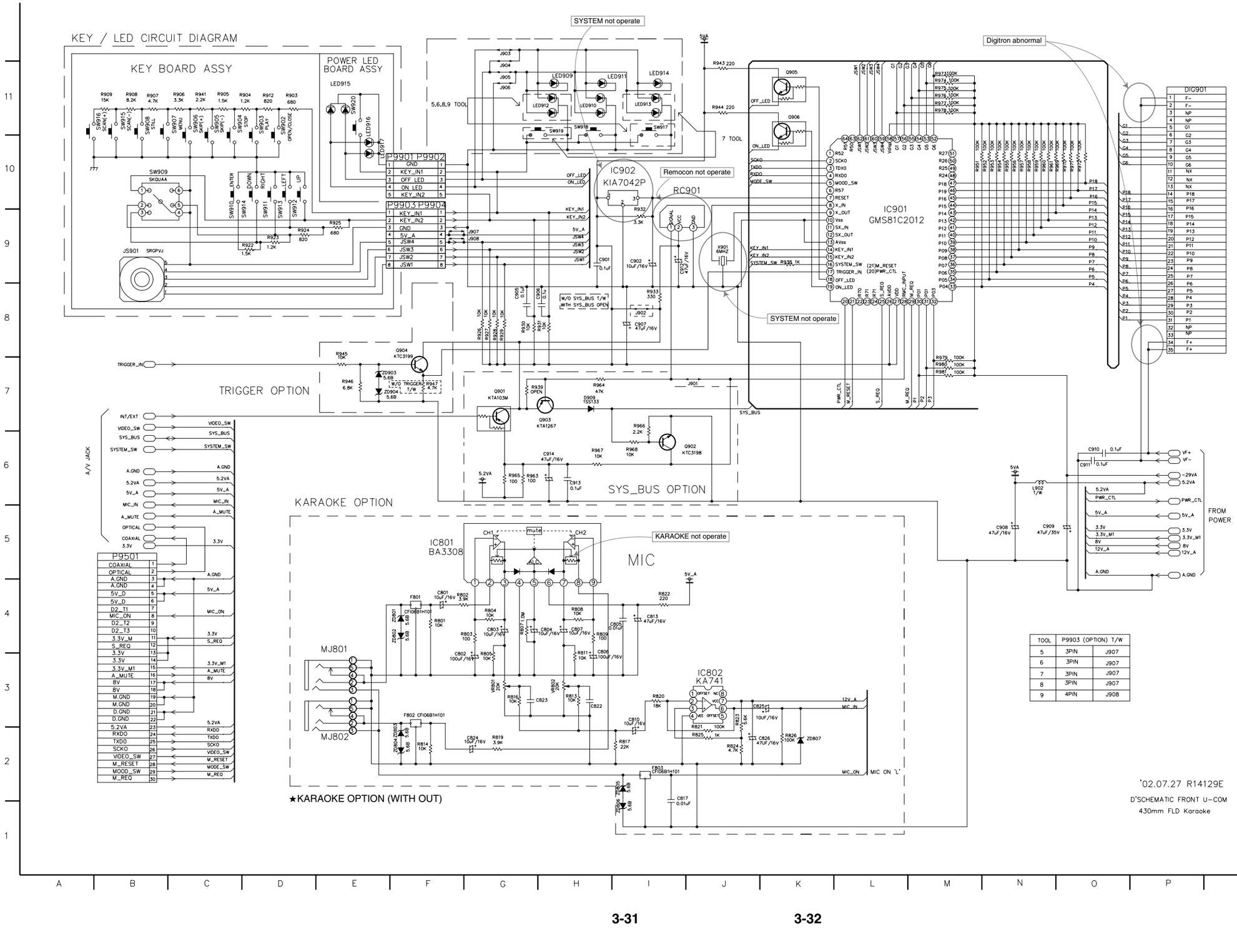
C401	G11	R412	H9
C402	G10	R413	H9
C403	G9	R414	G10
C404	G9	R415	G10
C405	C11	R416	H11
C406	C11	R417	H11
C408	F9	R418	H10
C409	C11	R419	J11
C410	H10	R420	J9
C411	H9	R428	C10
C412	I9	R429	C10
C413	I9	R430	C10
C414	C11	R431	C10
C415	H10	R432	C9
C416	H10	R433	C9
C417	I11	R434	C9
C418	K10	R435	C9
C419	K11	R436	C9
C420	K9	R451	C4
C421	K10	R452	C4
C422	E9	R453	C4
C423	H9	R454	C4
C424	E9	R455	C3
C450	C6	R456	C3
C451	C4	R457	G8
C452	E7	R458	H8
C453	C6	R459	H8
C454	C4	R460	H8
C455	G8	R461	H8
C456	H7	R462	H8
C457	H7	R463	J8
C458	I8	R464	C4
C459	K8	R465	K8
C460	K8	R466	L8
C461	G7	R467	G7
C462	H7	R468	H7
C463	I7	R469	H6
C464	I6	R470	J7
C465	K7	R471	C6
C466	K7	R472	L7
C467	G6	R473	L7
C468	H5	R474	G6
C469	H5	R475	H6
C470	I6	R476	H5
C471	K6	R477	H6
C472	K6	R478	H6
C473	G5	R479	H6
C474	H4	R480	J6
C475	I4	R481	C5
C476	I4	R482	L6
C478	K5	R483	L6
C479	K5	R484	G5
C480	G3	R485	H5
C481	H3	R486	H4
C482	H3	R487	J5
C483	I4	R489	L5
C484	K4	R490	L5
C485	K4	R491	G4
C486	G2	R492	H4
C487	H2	R493	H3
C488	I2	R494	H4
C490	K2	R495	H4
C491	K3	R496	H4
C492	I2	R497	J4
C493	C5	R499	L4
IC401	E10	R4A1	L4
IC402	I10	R4A2	G3
IC451	E5	R4A3	H3
IC452	I7	R4A4	H2
IC453	I5	R4A6	J3
IC454	I3	R4A8	L3
MIC_IN	O6	R4A9	L2
P4301	O9		
R401	C11		
R403	C11		
R404	G9		
R405	H10		
R406	H9		
R407	H10		
R409	G11		
R410	G10		
R411	G9		

'01.11.22 R14128A
D'SCHEMATIC AUDIO
DV5000'S 430mm

6. MEMORY CIRCUIT DIAGRAM



7. FRONT CIRCUIT DIAGRAM

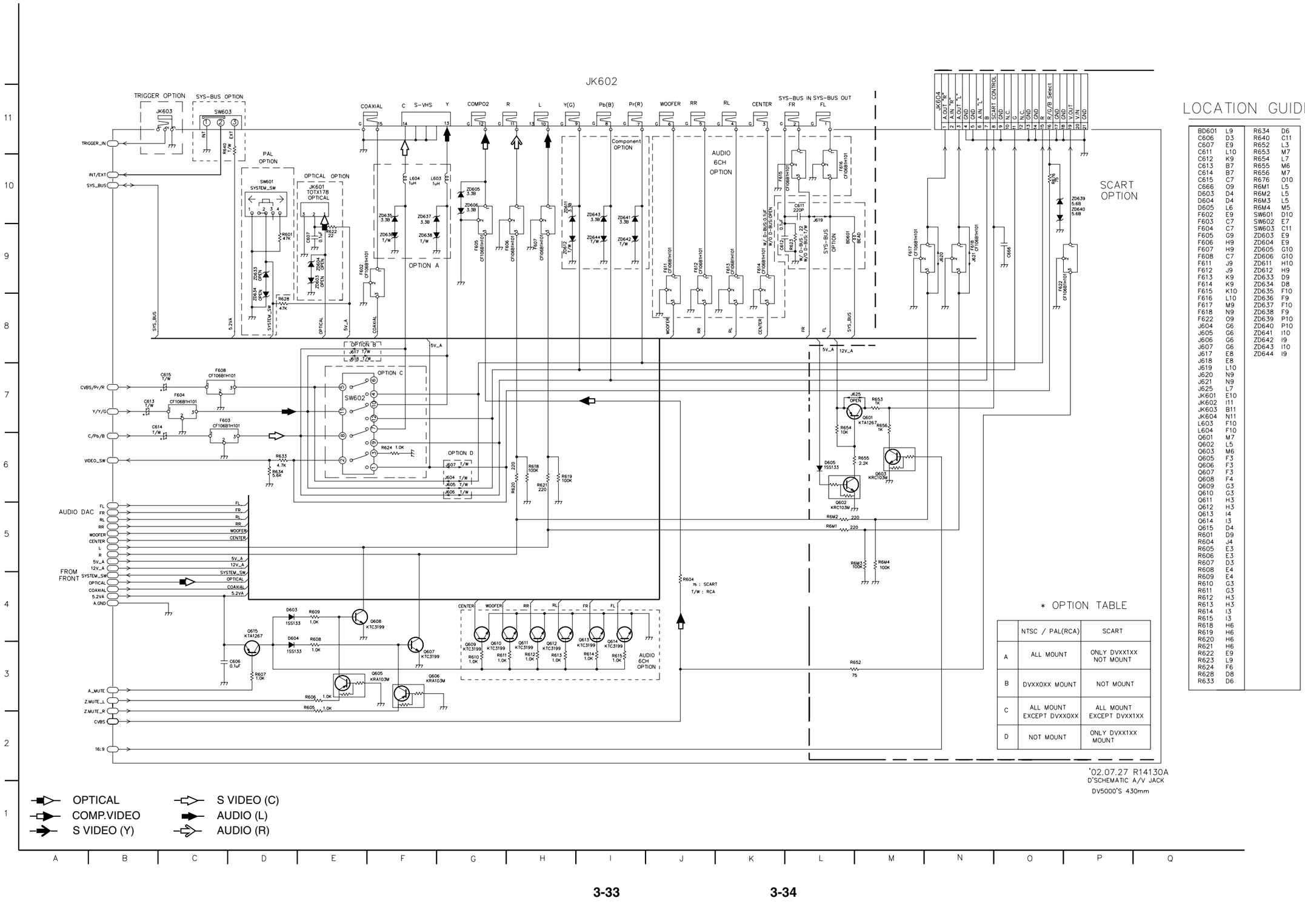


TOOL	P9903 (OPTION) T/W	
5	3PIN	J907
6	3PIN	J907
7	3PIN	J907
8	3PIN	J907
9	4PIN	J908

LOCATION GUIDE

C801	F4	R904	C11
C802	F3	R905	C11
C803	G4	R906	C11
C804	H4	R907	B11
C805	H4	R908	B11
C806	H3	R909	B11
C807	H4	R912	D11
C810	I3	R922	D9
C813	I4	R923	D9
C817	I2	R924	D9
C822	H3	R925	E9
C823	G3	R926	G8
C824	G2	R927	G8
C825	J3	R928	G8
C826	J2	R929	G8
C901	H9	R930	G8
C902	I9	R931	H8
C905	G8	R932	I9
C906	H8	R933	I8
C907	I8	R938	K9
C908	N5	R939	G7
C909	N5	R941	C11
C910	O6	R943	J11
C911	O6	R944	J11
C912	I9	R945	E8
C913	H6	R946	E7
C914	H6	R947	F7
		R951	M10
D909	H7	R952	N10
DIG901	P11	R953	N10
F801	F4	R954	N10
F802	F3	R955	N10
F803	F5	R956	N10
IC802	J3	R957	N10
IC901	L9	R958	N10
IC902	H10	R959	N10
INT/EXT	B7	R960	N10
J901	J7	R961	N10
J902	I8	R963	G6
J903	G12	R964	H7
J904	G11	R965	G6
J905	G11	R966	I7
J906	G11	R967	H6
J907	G9	R968	I6
J908	G9	R969	O10
JS901	B9	R970	O10
JSW1	L11	R971	O10
JSW1	H9	R972	O10
JSW2	L11	R973	M11
JSW2	H9	R974	M11
JSW3	L11	R975	M11
JSW3	H9	R976	M11
JSW4	L11	R977	M11
JSW4	H9	R978	M11
L902	N6	R979	M7
LED909	H11	R980	M7
LED910	H11	R981	M7
LED911	H11	RC901	I10
LED912	G11	RXDO	C2
LED913	I11	RXDO	J10
LED914	I11	SCKO	C2
LED915	E11	SCKO	J10
LED916	E10	SW902	D11
LED917	E10	SW903	D11
MJ801	E4	SW904	C11
MJ802	E2	SW905	C11
P9501	B5	SW906	C11
P9901	E10	SW907	C11
P9902	F10	SW908	B11
P9903	E10	SW909	B10
P9904	F10	SW910	C9
Q901	G7	SW911	D9
Q902	I6	SW912	D9
Q903	H7	SW913	D9
Q904	F8	SW914	D9
Q905	K11	SW915	B11
Q906	K11	SW916	B11
R801	F4	SW917	I11
R802	F4	SW918	H11
R803	F4	SW919	H11
R804	G4	SW920	E11
R805	G3	VR801	G3
R807	G4	VR802	H3
R808	H4	X901	J9
R809	H4	ZD801	F4
R811	H3	ZD802	F4
R813	H3	ZD803	F2
R814	F2	ZD804	F2
R816	G3	ZD805	I2
R817	I2	ZD806	I1
R819	G2	ZD807	K2
R820	I3	ZD903	E7
R821	J2	ZD904	E7
R822	I4		
R823	J3		
R824	J2		
R825	J2		
R826	K2		
R903	D11		

8. A/V JACK CIRCUIT DIAGRAM



LOCATION GUIDE

BD601	L9	R634	D6
C606	D3	R640	C11
C607	E9	R652	L3
C611	L10	R653	M7
C612	K9	R654	L7
C613	B7	R655	M6
C614	B7	R656	M7
C615	C7	R676	O10
C666	O9	R6M1	L5
D603	D4	R6M2	L5
D604	D4	R6M3	L5
D605	L6	R6M4	M5
F602	E9	SW601	D10
F603	C7	SW602	E7
F604	C7	SW603	C11
F605	G9	ZD603	E9
F606	H9	ZD604	E9
F607	H9	ZD605	G10
F608	C7	ZD606	G10
F611	J9	ZD611	H10
F612	J9	ZD612	H9
F613	K9	ZD633	D9
F614	K9	ZD634	D8
F615	K10	ZD635	F10
F616	L10	ZD636	F9
F617	M9	ZD637	F10
F618	N9	ZD638	F9
F622	O9	ZD639	P10
J604	G6	ZD640	P10
J605	G6	ZD641	I10
J606	G6	ZD642	I9
J607	G6	ZD643	I10
J617	E8	ZD644	I9
J618	E8		
J619	L10		
J620	N9		
J621	N9		
J625	L7		
JK601	E10		
JK602	I11		
JK603	B11		
JK604	N11		
L603	F10		
L604	F10		
Q601	M7		
Q602	L5		
Q603	M6		
Q605	F3		
Q606	F3		
Q607	F3		
Q608	F4		
Q609	G3		
Q610	G3		
Q611	H3		
Q612	H3		
Q613	I4		
Q614	I3		
Q615	D4		
R601	D9		
R604	J4		
R605	E3		
R606	E3		
R607	D3		
R608	E4		
R609	E4		
R610	G3		
R611	G3		
R612	H3		
R613	H3		
R614	I3		
R615	I3		
R618	H6		
R619	H6		
R620	H6		
R621	H6		
R622	E9		
R623	L9		
R624	F6		
R628	D8		
R633	D6		

* OPTION TABLE

	NTSC / PAL(RCA)	SCART
A	ALL MOUNT	ONLY DVXX1XX NOT MOUNT
B	DVXX0XX MOUNT	NOT MOUNT
C	ALL MOUNT EXCEPT DVXX0XX	ALL MOUNT EXCEPT DVXX1XX
D	NOT MOUNT	ONLY DVXX1XX MOUNT

• CIRCUIT VOLTAGE CHART

	IC203		IC201		IC301		IC3F1		IC501		IC305		IC2A1		IC2M1	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
1	3.18	3.16	3.12	0	3.17	3.16	0	0	3.12	3.1	3.06	3.05	0	0	2.11	2.14
2	3.12	2.69	3.12	0	0	0	0	0	0	0.41	0.29	0.35	3.16	3.13	2.1	2.12
3	3.12	2.69	3.12	0	3.16	0	0	0	0	0.47	3.06	3.05	3.16	3.13	2.11	2.11
4	0	0	3.12	0	3.16	0	0	0	1.75	1.73	3.06	0.33	0.75	1.55	2.1	2.15
5	3.12	2.74	3.12	3.12	3.17	3.16	0	0	0	0.49	0	0	2.04	3.02	2.1	2.12
6	3.12	2.71	3.12	3.12	3.17	3.16	0	0	0	0	0	0	0	0	0	0
7	3.18	3.17	3.12	0	0	0	0	0	0	0.37	0	0.34	0	0	0	0
8	3.12	2.68	3.12	3.12	3.17	3.16	0	0	0	0.35	0.4	0	0	0.33	2.11	2.12
9	3.12	2.63	0	0	0	0	3.13	2.92	0	0.33	0	3.05	0	0	2.02	1.99
10	0	0	3.12	3.12	0	0	0	0	3.22	3.19	0.33	0	0.44	0	2.1	2.12
11	3.12	2.7	3.12	3.12	0	0	3.13	3.12	0	0	0.41	0	1.72	1.19	2.11	2.12
12	3.12	2.7	3.12	0	0	0	3.2	3.2	0	0	0	0	2.06	2.3	2.09	2.13
13	3.18	3.17	3.12	3.12	3.17	3.16	3.2	3.2	0	0	0	0.46	2.25	3.08	3.25	2.23
14	0	0	3.12	0	0	0	0	0	0	0	0	0	1.32	3.13	2.51	0
15	3.12	3.04	3.12	0	0	0	0	0	0	0.79	3.06	3.05	1.46	2.27	2.51	0
16	3.12	0	3.12	0	2.17	2.18	3.19	0	0	0.74	0	0	0	2.4	0	0
17	3.12	3.02	3.12	0	0.38	2.21	0	0	0	0	3.09	3.07	0	0	2.18	0
18	0	0	3.13	3.12	0.41	0.61	0	0	0	0.71	0	2.82	0	0	0	0
19	0	0	3.13	0	0	0	0	0	3.22	3.1	2.84	3.03	0	0	0	0
20	0	3.12	0	0	0	0	0	0	3.22	3.13	3.05	2.76	0	0	1.52	1.89
21	3.13	0	3.13	0	0	0	0	0	3.22	3.13	0	0	3.01	5.01	1.88	1.89
22	3.13	3.17	0	0	0	0	0	0	1.64	0	0	1.38	3.85	5.01	0	0
23	3.13	0	0	0	0	0	0	0	0	0	0.8	0.79	0	0	3.13	0
24	0	0	3.13	0	0	0	0	0	3.22	3.13	0	0	0	0	0	0
25	3.18	0	3.12	0	0	0	3.11	3.11	0	3.13	1.14	1.1	0	0	7.95	7.92
26	0	0	0	0	3.21	3.16	3.17	3.2	0	3.13	0.38	1.54	3.31	3.63	3.92	3.71
27	0	0	0	3.12	0	0	0	0	3.22	3.11	0	0	0	0	3.92	3.71
28	3.12	0	0	0	0	0	3.11	0	0	1.1	0	0	3.14	3.16	3.9	3.74
29	0	3.12	0	0	0	0	0.61	1.07	0	0	0	0.05	5.15	5.14	3.95	3.68
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	3.17	0	3.12	0	0	0.6	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	3.22	1.39	0	0	0	0	1.18	4.2
33	3.1	0	3.12	0	0	0	0.59	0	3.22	0.8	0	0	0	0	1.18	3.43
34	3.18	0	3.12	0	0	0	0	0	1.75	1.52	0.34	0	5.03	4.99	0	0
35	1.5	0	3.12	0	0	0	0.61	0	3.22	2.76	3.03	3.05	2.29	2.34	3.92	3.75
36	0	3.12	0	0	0	0	0	0	3.22	3.11	0	0.34	2.2	2.3	3.93	3.73
37	0	0	1.51	0	0	0	3.18	0	3.22	3.03	0	0	2.2	2.2	3.92	3.73
38	3.18	0	0	0	3.17	3.16	0	0	3.22	2.83	0	0	2.29	2.26	3.92	3.68
39	3.12	3.12	0	0	0	0	0	0	3.22	3.08	0.56	0	2.24	2.24	7.95	7.94
40	3.12	3.12	0	0	0	0	2.17	0	0	0	0.56	0	0	0	7.91	7.87
41	0	3.17	0	0	0	0	0	0	0	0	0	3.05	5.03	5.01	0	0
42	3.12	0	0	0	0	0	0.38	2.28	0	0	3.03	0.45	0	0	0	0
43	3.12	0	0	0	0	0	0	0	0	0.34	3.03	3.05	0	0	0	0
44	3.18	0	0	0	0	0	0.41	0.65	3.22	3.11	0	0	5.03	1.59	0	0
45	3.12	3.12	0	0	3.17	3.15	0	0	0.45	0.33	0	0.44	2.3	2.3	7.95	7.94
46	2.76	3.12	1.56	0	0	0	0	0	0	0	0	0	2.3	2.3	2.11	2.12
47	0	0	0.91	0	3.17	3.15	0	0	0	0	0.38	0	1.74	2.3	2.1	2.12
48	3.12		1.65	0	2.19	0	0	0	0	0	0	0	0	0	2.11	2.12
49	3.12		3.14	0.53	0	0			0	0	3.03	0	0	0		
50	0		0	0	0	0			0.43	0.39	0.36	3.05	2.3	2.3		
51			0.64	0	3.17	0			0.42	0.45	0	0.34	2.3	2.3		
52			0.43	0	3.17	3.19			0.43	0.35	0	0	2.3	2.3		
53			0	0	3.11	2.91			3.12	3.11	0	0	2.3	2.3		
54			2.58	0	0	0			0	0	0.41	0	2.3	2.3		
55			0	0	0	0			0	0.33	3.03	3.05	2.3	2.3		
56			3.11	0	0	0			0.39	0.36	0	0.34	2.3	2.3		
57			0	0	3.17	3.19			0	0	0	0	2.3	2.3		
58			1.65	0	0	0			0	0	0	0	2.3	2.3		
59			1.79	0	0	0			0	0.42	0	0	2.29	2.3		
60			0	0	0	0			0.44	0.4	0	0.79	2.29	2.3		
61			3.13	0	0	0			0.44	0.47	0	0.79	0.36	0.56		
62			0	0	0	0			3.12	3.11	0	2.26	0.37	0.62		
63			3.13	0	0	0			0.45	0.35	0	0.74	5.03	5.02		
64			0	0	0	0			0	0	0	0.78	0	0		
65			0	0	0	0			0	0	0	0				
66			3.12	0	0	0			0	0	0	0				
67			0	0	0	0			0	0.31	3.11	3.1				
68			3.13	3.12	3.11	3.1			1.51	0	1.6	1.59				
69			4.08	0	0	0			0	1.5	0	0				
70			3.13	0	0	3.16			1.47	0	0	0				
71			0	0	3.11	3.1			0	0	0	0				
72			3.13	3.13	0	0			0	0	0	0				
73			0	0	0	0			0	0	0	0				
74			0	0	3.11	3.1			0	0	0	0.45				
75			0.78	0	0	0			3.12	3.11	3.04	3.05				
76			1.41	0	0	0			1.48	1.26	0	0				
77			0.77	0	0	0			1.74	1.74	0	0				
78			0.77	0	0	0			1.54	1.54	0	0				
79			2.1	2.11	3.17	0			1.56	1.55	0	0				
80			2.12	2.11	0	0			3.11	3.1	0	0.34				
81			3.18	0	3.17	0			3.01	3.01	1.69	0				

	IC203		IC201		IC301		IC3F1		IC501		IC305		IC2A1		IC2M1	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
82			3.18	0	3.17	3.19			0	0	0	0				
83			1.93	1.93	2.12	2.27			0	0.33	0	0				
84			2.11	2.11	0	0			1.74	5.12	0	0				
85			0	0	4.41	4.41			0	0	0	0.33				
86			0	0	0	0			0	0	0	0				
87			1.93	0	0	0			1.42	3.11						
88			2.1	0	3.17	3.19			1.87	3.11						
89			1.93	1.92	2.66	0			1.67	1.74						
90			1.59	0	0	3.17			0	0						
91			0.8	0	3.19	0			3.11	3.11						
92			2.36	2.36	3.19	3.19			0	3.11						
93			2.24	1.6	3.19	3.19			3.11	3.11						
94			1.58	1.56	0	0			0	0.34						
95			1.64	1.62	3.13	3.13			0	0.34						
96			1.58	1.62	0	0			2.82	3.11						
97			1.58	1.56	3.19	3.19			0	0						
98			0	0	3.19	3.19			0.85	0.92						
99			0	0	0.36	0.36			0.89	0.93						
100			1.58	0	0	0			0	0						
101			3.18	0					1.79	1.74						
102			3.18	0					3.23	3.1						
103			2.01	2.01					0	0						
104			2.01	2.01					0	0						
105			0	0					0	0						
106			3.12	0					0	0						
107			2.07	3.12					3.23	3.09						
108			0.41	0					1.74	1.74						
109			0	0					0	0						
110			2.15	0					1.75	1.3						
111			0	0					0.34	0.74						
112			0	0					0	1.39						
113			0	0					3.2	3.1						
114			0	0					0.49	0.64						
115			0	0					0	0						
116			0	0					1.17	1.29						
117			0	0					1.79	1.74						
118			0	0					0	0.74						
119			0	0					1.17	1.28						
120			3.12	0					2.04	1.82						
121			0	0					0	0						
122			3.12	3.12					0	0						
123			3.12	3.12					0	0.36						
124			0	0					0	0.36						
125			3.12	3.12					3.16	3.1						
126			3.12	0					0	0.36						
127			2.42	0					0	0						
128			0	0					0	0						
129			2.41	0					0	0						
130			3.18	3.17					0	0						
131			3.12	3.12					0	0						
132			3.12	0					0	0						
133			0	0					3.13	0						
134			3.12	3.12					0	0						
135			3.12	3.12					1.74	1.74						
136			2.45	2.33					0	0						
137			1.68	1.65					0	0						
138			1.77	1.87					0	0						
139			2.45	2.33					0	0						
140			2.61	0.32					3.13	3.1						
141			2.54	0					0	0						
142			3.12	0					0	0						
143			0	0					0	0						
144			0	0					0	0						
145			0	0					3.13	3.09						
146			2.54	0					0	0						
147			2.54	0					0	0						
148			2.54	0					0	0						
149			2.54	0					0	0						
150			4.76	0					0	0						
151			4.13	0					0	0						
152			0	0					0	0						
153			0	0					0	0						
154			0	0					3.13	3.1						
155			3.12	0					0	0						
156			3.12	0					3.13	3.09						
157			3.12	0					0	0						
158			0	0					0	1.73						
159			0	0					1.74	1.73						
160			0	0					1.12	1.83						
161			2.64	2.62					3.13	0						
162			3.18	3.16					0	0						

	IC203		IC201		IC301		IC3F1		IC501		IC305		IC2A1		IC2M1	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
163			3.18	3.15					0	0						
164			2.02	0					0	0						
165			2.08	0					0	0						
166			2.09	0					0	0						
167			1.57	0					0	0						
168			2.51	0					0	0						
169			1.6	1.57					3.13	3.1						
170			3.13	3.01					3.13	0						
171			2.53	0					0	0						
172			0	0					0.44	0.6						
173			3.11	0					0.4	2.15						
174			3.11	0					2.2	2.15						
175			3.11	3.1					0	0						
176			0	0					0.66	0.8						
177			3.12	0					0	0						
178			3.12	2.59					0.65	0.83						
179			3.11	3.03					0.65	0.79						
180			0	0					0.67	0.79						
181			0	0					0	3.1						
182			0	0					3.13	3.1						
183			0	0					0	0						
184			0	0					3.13	3.1						
185			0	0					0	0						
186			3.17	0					0	0						
187			0.69	0					0	0						
188			3.18	3.12					0	0						
189			0.66	0.77					0	3.1						
190			0.65	0					0	0						
191			0.67	0.87					0	0						
192			0	0					0	1.75						
193			2.21	2.17					3.13	3.09						
194			0.41	0					3.13	3.16						
195			0.45	0					0	0						
196			0	0					3.13	3.1						
197			0	0					0	0						
198			0	0					3.13	0						
199			0	3.12					3.13	3.1						
200			0	0					0	3.1						
201			0	0					0	0						
202			0	1.22					3.18	0						
203			0	1.22					3.18	3.1						
204			0	0					0	0						
205			3.11	3.11					0	0						
206			1.53	3.11					0	3.1						
207			3.12	0					0	0						
208			3.12	3.12					0.37	0						
209									0	0						
210									3.13	3.1						
211									0	0						
212									0	0						
213									0	0						
214									0	0						
215									0	0						
216									0	0						
217									0	0						
218									0	0						
219									0	0						
220									0	3.12						
221									0	0						
222									0	0						
223									0	0						
224									0	0						
225									3.13	0						
226									0	0						
227									0	0.41						
228									0	0						
229									0	0						
230									0	0						
231									0	0						
232									0	0.43						
233									3.24	0						
234									0	0.45						
235									0	0.34						
236									0	0						
237									0	0						
238									0	0						
239									0	0						
240									0	0.36						
241																
242																
243																

	IC901		IC451		IC401		IC454		IC453		IC452		IC402		IC801	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
1	0	0	0	0	2.98	2.98	5.51	5.51	5.41	5.42	5.49	0	5.47	5.47	1.83	1.81
2	5.1	5.05	3.15	3.15	3.26	3.26	5.51	5.51	5.41	5.42	5.49	5.51	5.47	5.47	0	0
3	0	0	3.15	3.15	0	0	5.51	5.51	5.41	5.41	5.49	5.51	5.47	5.47	1.83	1.81
4	5.14	5.14	3.15	3.14	1.57	0	0	0	0	0	0	0	0	0	0	0
5	0.48	0	3.15	3.15	1.58	1.58	5.51	5.51	5.41	5.41	5.49	5.51	5.47	5.47	0	0
6	0.48	0	3.15	3.15	1.3	0	5.51	5.51	5.41	5.42	5.49	5.51	5.47	5.47	4.59	4.57
7	5.17	5.17	3.15	3.15	0	0	5.51	5.51	5.41	5.41	5.49	0	5.47	5.47	1.84	1.82
8	2.22	2.21	2.43	2.42	3.24	3.24	11.95	11.95	11.95	11.95	11.95	11.95	11.95	11.95	0	0
9	2.35	2.35	2.48	2.46	0	0									1.84	1.82
10	0	0	2.43	2.42	3.2	3.19										
11	2.26	2.24	2.48	0	4.85	4.84										
12	2.46	2.45	0	0	2.31	0										
13	0	0	0	0	2.35	0										
14	5.17	5.16	0	0	2.35	0										
15	5.17	5.16	2.43	2.43	0	0										
16	5.1	5.06	2.47	3.14	0	0										
17	0	0	2.45	0	4.91	0										
18	0	0	0	0	2.34	2.34										
19	5.16	5.16	4.91	4.88	2.34	2.33										
20	5.14	5.14	0	0	0	0										
21	5.01	5.02	0	0												
22	0	0	0	0												
23	0	0	4.91	0												
24	0	0	0	0												
25	2.68	2.68	4.9	4.88												
26	5.17	5.17	0	0												
27	5.17	5.17	0	0												
28	4.77	4.87	0	0												
29	5.07	5.06	0	0												
30	21.58	18	4.91	4.88												
31	23.58	18	0	0												
32	23.6	23	4.91	4.88												
33	27.54	21.21	0	0												
34	23.6	17.18	0.36	0												
35	23.6	22.91	0	0												
36	21.6	19.14	3.24	3.23												
37	21.61	25.01	3.19	3.19												
38	23.65	23.06	2.93	3.92												
39	23.65	23.09	0	0												
40	23.57	23.08	0	0												
41	25.6	23.07	1.3	1.31												
42	25.6	25.03	1.48	1.47												
43	25.6	25.03	1.57	0												
44	25.6	23.07	1.58	1.58												
45	27.6	25.07	0	0												
46	27.6	21.16	3.15	3.15												
47	27.5	25.11	0	0												
48	27.5	24.76	0	0												
49	27.5	27.86	0	0												
50	27.5	26.88	0	0												
51	6.73	6.69	3.15	3.14												
52	25.7	25.13	0	0												
53	25.6	25.08														
54	25.6	25.16														
55	25.6	25.15														
56	25.6	25.08														
57	25.6	25.13														
58	27.7	27.08														
59	5.16	5.15														
60	5.16	5.16														
61	5.16	5.16														
62	5.16	5.16														
63	0	0														
64	0	0														

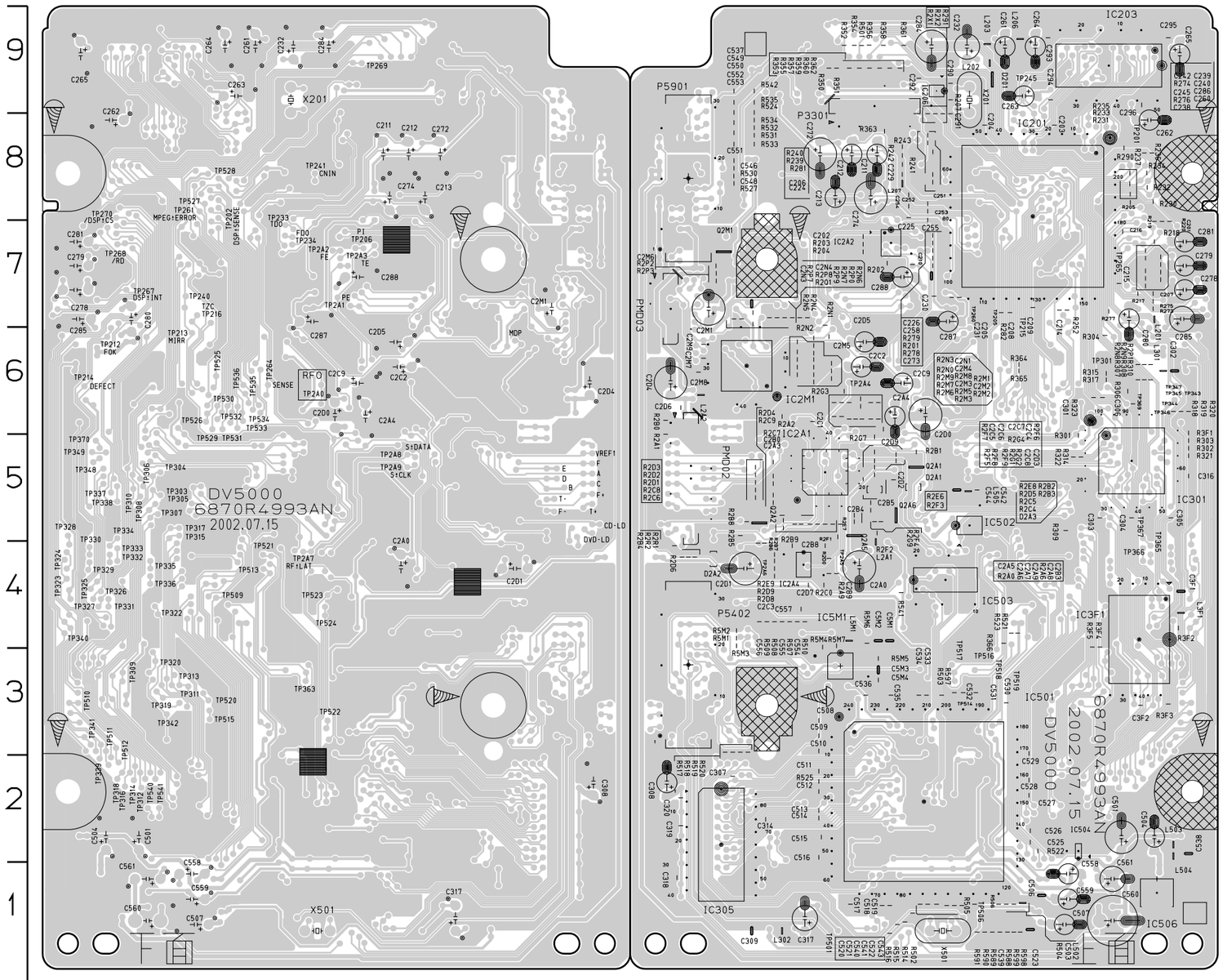
	IC503		IC502		IC2A4		IC2A2		IC206		IC504		IC506	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
1	0	0	0	0	4.87	4.39	1.57	1.56	2.63	2.64	2.11	2.19	(IN)0	0
2	3.1	3.1	5.03	5.03	2.3	2.31	1.57	1.56	2.74	0	5.05	5.05	(OUT)1.80	0
3	5.03	5.03	0	0	2.29	2.29	1.57	0	2.74	2.76	2.37	2.44		
4	0	0	5.1	5.1	0	0	0	0	0	0	0	0		
5	0	0	0	0	2.29	2.29	1.62	1.62	1.92	1.88				
6	0	0	5.04	5.04	2.3	2.31	1.62	1.62	2.28	0				
7	5.05	5.05	0	0	2.51	2.45	1.62	1.62	2.28	0				
8	0	3.15	5.03	5.04	5.02	5.02	5.04	4.99	5.04	0				
9	0	0												
10	0	0												
11	0	0.46												
12	0	0.15												
13	3.11	3.1												
14	0	0												
15	0	0												
16	0	0												
17	3.09	3.09												
18	5.15	5.14												
19	0	0												
20	5.15	5.15												

	Q2M1		Q2A1		Q2A6		Q2A5		Q2A2	
	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
E	0	0	5.02	0	0	2.41	2.34	2.35	5.02	4.95
B	0	0	0	0	3.62	3.72	3.82	0	0	0
C	0	3.14	0	0	0	3.1	0	0	5.01	4.94

	Q610		Q611		Q609		Q613		Q614		Q612	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
Emitter	0	0	0	0	0	0	0	0	0	0	0	0
Collector	0	0	0	0	0	0	0	0	0	0	0	
Base	0.77	0.78	0.77	0.77	0.76	0.77	0.76	0.77	0.77	0.77	0.76	0.79

PRINTED CIRCUIT DIAGRAMS

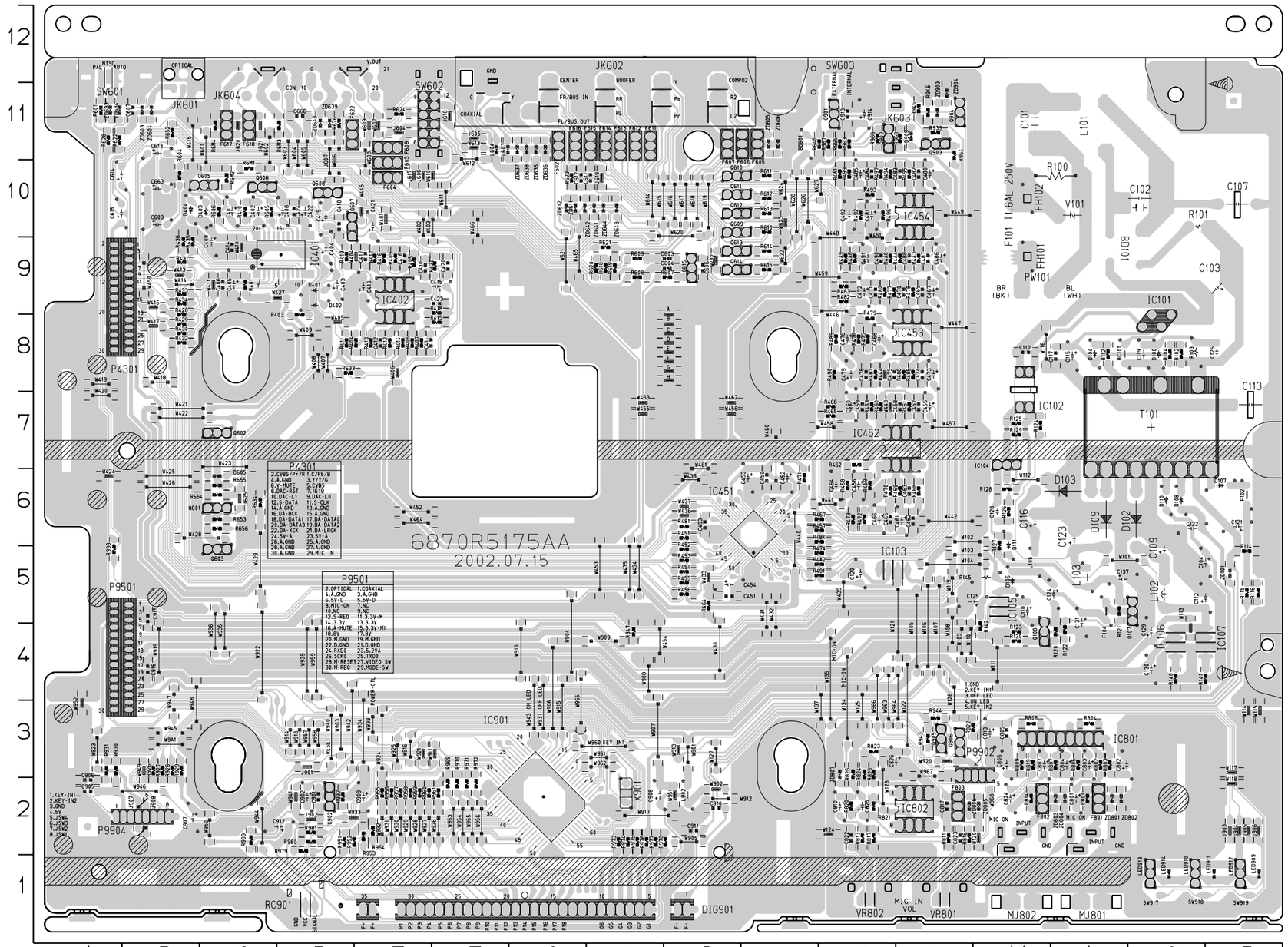
1. MAIN P.C.BOARD



LOCATION GUIDE

TP202	B8	TP327	A4	C201	K7	C296	K9	C319	F2	C560	K1	R217	K7	R2D8	G4	R309	J5	R532	G8
TP206	C7	TP328	A5	C202	H7	C2A0	H4	C320	F2	C561	K1	R218	K7	R2D9	G4	R310	K6	R533	G8
TP212	A6	TP329	A4	C203	J8	C2A3	G5	C3F1	K4	C5M1	H4	R219	K7	R2E6	H5	R314	J5	R534	G8
TP213	B6	TP330	A4	C204	I8	C2A4	H6	C3F2	K3	C5M2	H4	R220	K7	R2E7	H5	R315	J6	R535	G9
TP214	A6	TP331	A4	C205	I7	C2A5	G5	C501	K2	C5M3	H3	R230	K8	R2E8	H5	R317	J6	R541	I4
TP216	B7	TP332	A4	C206	I8	C2A6	H5	C503	J1	C5M4	H3	R231	K8	R2E9	G4	R318	K6	R542	G9
TP233	C7	TP333	A4	C207	K7	C2A7	H5	C504	K2	D201	I9	R232	K8	R2F1	H5	R319	K6	R588	J1
TP234	C7	TP334	A5	C208	J7	C2A8	H5	C506	J1	D2A1	I5	R233	K8	R2F2	H5	R320	K6	R589	I1
TP240	B7	TP335	B4	C209	J7	C2A9	H5	C507	J1	D2A2	G4	R234	K8	R2F3	H5	R321	K5	R590	I1
TP241	C8	TP336	B4	C210	I7	C2B0	G5	C508	H3	D2A3	H5	R235	K8	R2F4	H5	R322	J5	R591	I1
TP261	B8	TP337	A5	C211	H8	C2B3	H5	C509	H3	IC201	J8	R236	K8	R2F5	H6	R323	J6	R597	I3
TP264	C6	TP338	A5	C212	H8	C2B4	H5	C510	H3	IC203	J9	R237	K8	R2F6	H6	R350	H9	R598	J1
TP267	A7	TP339	A2	C213	H8	C2B5	H5	C511	H2	IC206	I9	R239	I8	R2F7	H6	R351	H9	R599	J1
TP268	A7	TP340	A4	C214	J7	C2B8	H4	C512	H2	IC2A1	H5	R240	I8	R2F8	H6	R352	H9	R5M1	G4
TP269	C9	TP341	A3	C215	K7	C2B9	H4	C513	H2	IC2A2	H7	R241	I8	R2F9	H6	R353	H9	R5M2	G4
TP270	A7	TP342	B3	C216	K7	C2C1	H6	C514	H2	IC2A4	H4	R242	I8	R2G1	H6	R354	H9	R5M3	G4
TP2A0	C6	TP348	A5	C224	I8	C2C2	H6	C515	H2	IC2M1	G6	R243	I8	R2G2	H6	R355	H9	R5M4	H4
TP2A1	C7	TP349	A5	C225	I8	C2C3	G4	C516	H2	IC301	K5	R252	J7	R2G3	H6	R356	H9	R5M5	H3
TP2A2	C7	TP363	C3	C226	I7	C2C4	H6	C517	H1	IC305	G2	R273	K7	R2G4	H6	R357	H9	R5M6	H4
TP2A3	C7	TP370	A5	C229	I8	C2C5	H6	C518	H1	IC3F1	K4	R274	K7	R2G7	H5	R358	H9	R5M7	H4
TP2A7	C4	TP509	B4	C230	I7	C2C6	H6	C519	H1	IC501	I2	R275	K7	R2G9	H5	R359	H9	TP201	K8
TP2A8	D5	TP510	A3	C231	I7	C2C7	H6	C520	I1	IC502	I5	R276	K7	R2M1	H6	R360	H9	TP205	I7
TP2A9	D5	TP511	A2	C232	I9	C2C8	H6	C521	I1	IC503	I4	R277	J7	R2M2	H6	R361	I9	TP215	J7
TP303	B5	TP512	A2	C238	K7	C2D0	I6	C523	J1	IC504	J2	R278	I7	R2M3	H6	R362	I9	TP245	J9
TP304	B5	TP513	C4	C239	K7	C2D1	G4	C525	J2	IC506	K1	R279	I7	R2M5	H6	R363	H8	TP260	I7
TP305	B5	TP515	B3	C240	K7	C2D2	H5	C526	J2	IC5M1	H3	R281	I8	R2M6	H6	R364	J6	TP265	K7
TP306	A5	TP520	B3	C242	K7	C2D3	H6	C527	J2	L201	K7	R282	I7	R2M7	H6	R365	J6	TP2A4	H6
TP307	B5	TP521	C4	C245	K7	C2D4	F6	C528	J2	L202	I9	R290	K8	R2M8	H6	R366	I4	TP2A5	H4
TP308	A5	TP522	C3	C251	I8	C2D5	H6	C529	J3	L203	I9	R291	I8	R2M9	H6	R3F1	K6	TP2A6	G4
TP309	A3	TP523	C4	C252	I8	C2D6	H6	C530	J3	L206	J9	R2A0	G5	R2N0	H6	R3F2	K4	TP2T0	I8
TP310	A5	TP524	C4	C253	I8	C2D8	F6	C531	I3	L207	I8	R2A1	F5	R2N1	H7	R3F3	K3	TP2T1	I9
TP311	B3	TP525	B6	C254	I8	C2D7	H4	C532	I3	L2A1	H4	R2A2	G6	R2N2	H6	R3F4	J4	TP2T2	I9
TP312	A2	TP526	B6	C255	I7	C2D9	H6	C533	I3	L2A2	G6	R2A6	H5	R2N3	H6	R3F5	J4	TP2T3	I9
TP313	B3	TP527	B8	C258	I7	C2M1	G7	C534	I3	L301	K6	R2A9	H4	R2N4	H7	R501	H9	TP301	K6
TP314	A2	TP528	B8	C260	K7	C2M2	H6	C535	H3	L302	G1	R2B0	F6	R2N5	H7	R502	I1	TP343	K6
TP315	B5	TP529	B6	C261	J9	C2M3	H6	C536	H3	L3F1	K4	R2B1	I5	R2N6	H7	R503	I3	TP344	K6
TP316	A2	TP530	B6	C262	K8	C2M4	H6	C537	G9	L502	J1	R2B2	H5	R2N7	G7	R504	J1	TP345	K6
TP317	B5	TP531	B6	C263	J9	C2M5	H6	C538	K2	L503	K2	R2B3	H5	R2N8	K6	R505	I1	TP346	K6
TP318	A2	TP532	B6	C264	J9	C2M6	G7	C539	I1	L504	K2	R2B4	F4	R2N9	K6	R506	I1	TP347	K6
TP319	B3	TP533	B6	C265	K9	C2M7	G6	C540	I1	L505	I5	R2B5	G5	R2P0	G7	R507	G4	TP365	K5
TP320	B3	TP534	B6	C272	H8	C2M8	G6	C541	I1	L5M1	H4	R2B6	G4	R2P1	K6	R508	G4	TP366	K4
TP322	B4	TP535	B6	C273	I7	C2M9	G6	C542	I5	P3301	H9	R2B7	G4	R2P2	G7	R509	G4	TP367	K5
TP323	A4	TP536	B6	C274	H8	C2N1	H6	C543	I1	P5402	G8	R2B8	G5	R2P3	G7	R510	H4	TP369	K6
TP324	A4	TP540	A2	C278	K7	C2N3	G7	C544	I5	P5901	G8	R2B9	H4	R2P7	G7	R514	I1	TP501	H1
TP325	A4	TP541	B2	C279	K7	C2N4	G7	C546	G8	PMD01	G5	R2C0	H4	R2P8	G7	R515	I1	TP506	I1
TP326	A4			C280	K7	C301	J6	C548	G8	PMD02	G5	R2C4	H5	R2P9	G7	R516	H1	TP514	I3
				C281	K7	C302	K6	C548	G8	PMD03	F7	R2C5	H5	R2Q1	G7	R517	G3	TP516	I3
				C284	I9	C303	J5	C549	G9	Q2A1	I5	R2C6	G5	R2R1	G4	R518	G3	TP517	I3
				C285	K7	C304	K5	C550	G9	Q2A2	G5	R2C7	G5	R2R2	G4	R519	G3	TP518	J3
				C286	K7	C305	K5	C551	G8	Q2A5	H5	R2C8	G5	R2X1	I8	R520	G3	TP519	J3
				C287	I7	C306	K6	C552	G8	Q2A6	H5	R2C9	G5	R2X2	I8	R521	J4	X201	I9
				C288	I7	C307	G2	C553	G8	Q2M1	G7	R2D0	H4	R301	J5	R522	J2	X501	I1
				C290	I9	C308	F2	C554	H4	R201	I7	R2D1	G5	R302	K5	R523	J4		
				C291	I8	C309	G1	C555	G4	R202	H7	R2D2	G5	R303	K5	R524	G9		
				C292	I9	C314	G2	C556	G4	R203	H7	R2D3	G5	R304	J6	R525	H2		
				C293	J9	C316	K5	C557	H4	R204	H7	R2D4	G5	R306	K6	R527	G8		
				C294	J9	C317	H1	C558	J1	R205	K8	R2D5	H5	R307	K6	R530	G8		
				C295	K9	C318	F1	C559	J1	R207	I9	R2D6	F4	R308	K6	R531	G8		

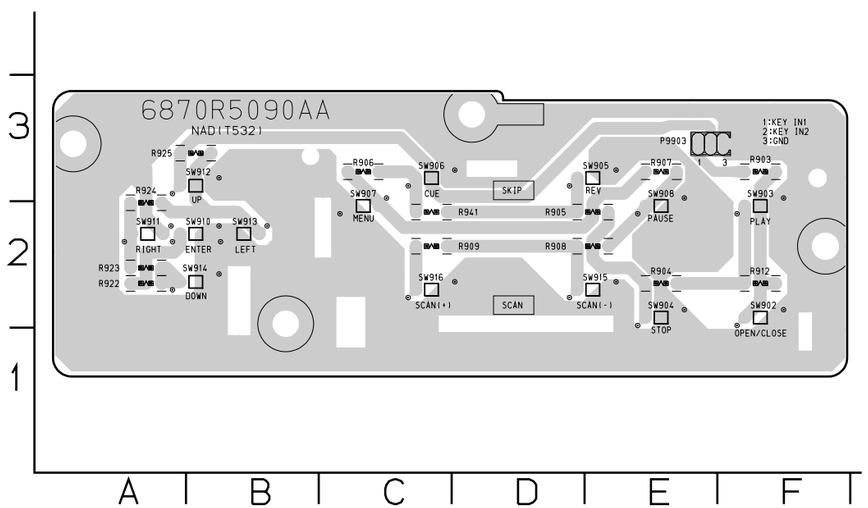
2. POWER, A/V, FRONT P.C.BOARD



LOCATION GUIDE

BC101	N8	C470	L9	D402	D9	L604	F11	R414	E8	R605	C10	R955	E2
BD101	N9	C471	K9	D403	C10	L902	J2	R415	F8	R606	C10	R956	E2
BD601	J11	C472	K9	D404	B10	LED909	P1	R416	E9	R607	I9	R957	E2
C101	M11	C473	L8	D603	I9	LED910	O1	R417	E9	R608	H9	R958	E2
C102	O10	C474	L8	D604	I9	LED911	O1	R418	F9	R609	H9	R959	E2
C103	P9	C475	K8	D605	C6	LED912	P1	R419	D9	R610	J10	R960	E2
C104	P5	C476	K8	D909	L11	LED913	O1	R420	F9	R611	J10	R961	F2
C107	P10	C478	K8	DIG901	I1	LED914	O1	R428	B8	R612	J10	R963	K11
C109	O5	C479	K8	F102	P6	MJ801	N1	R429	B8	R613	J10	R964	L11
C110	M8	C480	L10	F104	N5	MJ802	M1	R430	B8	R614	J9	R965	K11
C112	P5	C481	K10	F602	G11	P4301	A9	R431	B9	R615	J9	R966	K11
C113	P7	C482	L10	F603	E10	P9501	A4	R432	B8	R618	H9	R967	K11
C115	N8	C483	L10	F604	E10	P9902	L3	R433	B9	R619	H9	R968	L11
C116	M6	C484	K10	F605	J11	P9904	A2	R434	B9	R620	H9	R969	F2
C117	N8	C485	K10	F606	J11	PW101	M9	R435	B9	R621	H9	R970	F2
C118	M5	C486	L9	F607	I11	Q107	O5	R436	B9	R622	A11	R971	F2
C119	O8	C487	L9	F608	E11	Q108	M4	R451	I6	R623	G10	R972	F2
C120	K5	C488	L9	F611	H11	Q601	C6	R452	I5	R624	E11	R973	H2
C121	P6	C490	K9	F612	H11	Q602	C7	R453	I5	R628	A11	R974	H2
C122	O6	C491	K9	F613	H11	Q603	C5	R454	I5	R633	D8	R975	H2
C123	N6	C492	K10	F614	H11	Q605	C10	R455	I5	R634	C6	R976	H2
C124	N5	C493	I6	F615	H11	Q606	C10	R456	I5	R640	K11	R977	H2
C125	M5	C603	B10	F616	G11	Q607	D10	R457	K6	R652	B11	R978	I2
C126	P8	C606	I9	F617	C11	Q608	D10	R458	K6	R653	C6	R979	D2
C128	M6	C607	B11	F618	C11	Q609	I10	R459	K6	R654	C6	R980	D2
C129	O4	C611	H10	F622	D11	Q610	I10	R460	K7	R655	C6	R981	D2
C130	O4	C612	G10	F801	N2	Q611	I10	R461	L7	R656	C6	RC901	D1
C131	N5	C613	B11	F802	M2	Q612	I10	R462	K7	R676	D11	SW601	A12
C137	N5	C614	A10	F803	L2	Q613	I9	R463	K7	R6M1	C10	SW602	E11
C401	C10	C615	A10	FH101	M9	Q614	I9	R464	I5	R6M2	C10	SW603	K12
C402	C10	C663	B10	FH102	M10	Q615	I9	R465	K7	R6M3	D11	SW917	O1
C403	D9	C666	D11	IC101	O8	Q901	K11	R466	K7	R6M4	C11	SW918	O1
C404	D9	C801	N2	IC102	M7	Q902	K11	R467	K6	R801	N2	SW919	P1
C405	C9	C802	N3	IC103	L5	Q903	L11	R468	L6	R802	N3	T101	O7
C406	C9	C803	N3	IC104	M7	Q904	L11	R469	L6	R803	N3	V101	N10
C408	D10	C804	N3	IC105	M5	Q905	L3	R470	K6	R804	N3	VR801	L1
C409	C9	C805	M3	IC106	O4	Q906	L3	R471	J6	R805	N3	VR802	K1
C410	E9	C806	M3	IC107	P4	R100	N10	R472	K6	R807	N3	X901	H2
C411	E8	C807	M3	IC402	E9	R101	O10	R473	K6	R808	M3	ZD101	P5
C412	E8	C810	K2	IC452	K7	R102	O8	R474	K5	R809	M3	ZD603	B11
C413	E9	C813	M3	IC453	L8	R103	O8	R475	K8	R811	L2	ZD604	B11
C414	C9	C817	L2	IC454	L10	R104	O8	R476	K8	R813	K2	ZD605	J11
C415	F9	C822	K2	IC801	N3	R112	N8	R477	K9	R814	M2	ZD606	J11
C416	E9	C823	L2	IC802	L2	R114	P5	R478	L9	R816	L2	ZD611	G10
C417	E9	C824	M2	IC902	D2	R115	P5	R479	K8	R817	K2	ZD612	G10
C418	D10	C825	K2	J604	E11	R116	P5	R480	K9	R819	M3	ZD633	A11
C419	D10	C826	L3	J605	F11	R120	N4	R481	I6	R820	K2	ZD634	A11
C420	F9	C901	D2	J606	E10	R121	N5	R482	K9	R821	K2	ZD635	G11
C421	E10	C902	D2	J607	D10	R122	N4	R483	K9	R822	M3	ZD636	G11
C422	D10	C905	A2	J617	E10	R123	M4	R484	K6	R823	K9	ZD637	G11
C423	F9	C906	A2	J618	F11	R124	M7	R485	L8	R824	K3	ZD638	G11
C424	D10	C907	B2	J619	H10	R125	M7	R486	L8	R825	K3	ZD639	D11
C450	J6	C908	H2	J620	C11	R126	M6	R487	K8	R826	K3	ZD640	D11
C451	I5	C909	E2	J621	C11	R127	M6	R489	K8	R926	B3	ZD641	H10
C452	J6	C910	I2	J625	C6	R128	M6	R490	K8	R927	B3	ZD642	G10
C453	J6	C911	I2	J901	D3	R129	M7	R491	K5	R928	B3	ZD643	H10
C454	I5	C912	D2	J902	D2	R130	M4	R492	K10	R929	B3	ZD644	H10
C455	L7	C913	K11	J903	P2	R140	O4	R493	K10	R930	A3	ZD801	N2
C456	K6	C914	K11	J904	P2	R141	P4	R494	K10	R931	A3	ZD802	N2
C457	L7	C915	B5	J905	P2	R142	M4	R495	L10	R932	D2	ZD803	N2
C458	L7	C916	B4	J906	P2	R145	M5	R496	K10	R933	C2	ZD804	N2
C459	K7	D100	Q8	J907	B2	R401	C9	R497	K10	R938	A5	ZD805	M2
C460	K7	D102	O6	J908	B2	R403	D8	R499	K10	R939	L11	ZD806	L2
C461	L6	D103	N6	JK601	B11	R404	E8	R4A1	K10	R943	L3	ZD807	K3
C462	L6	D104	N8	JK602	H12	R405	E9	R4A2	K5	R944	L3	ZD903	L11
C463	L6	D106	M5	JK603	L11	R406	E8	R4A3	L9	R945	L11	ZD904	L11
C464	K6	D107	P6	JK604	D12	R407	E8	R4A4	L9	R946	L11		
C465	K6	D108	Q6	L101	N11	R409	E9	R4A6	K9	R947	H4		
C466	K6	D109	M6	L102	O5	R410	C10	R4A8	K9	R951	D2		
C467	L9	D110	O6	L103	N5	R411	D8	R4A9	K9	R952	E2		
C468	K8	D111	M6	L105	M5	R412	E8	R601	A11	R953	E2		
C469	L9	D401	D9	L603	F11	R413	E8	R604	B10	R954	E2		

3. KEY P.C.BOARD



LOCATION GUIDE

P9903	E3
R903	F3
R904	E2
R905	E2
R906	C3
R907	E3
R908	E2
R909	C2
R912	F2
R922	A2
R923	A2
R924	A2
R925	B3
R941	C2
SW902	F2
SW903	F2
SW904	E2
SW905	E3
SW906	C3
SW907	C2
SW908	E2
SW910	B2
SW911	A2
SW912	B3
SW913	B2
SW914	B2
SW915	E2
SW916	C2