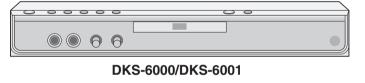




DVD KARAOKE SYSTEM **SERVICE MANUAL**







DKS-6100/DKS-6101

MODEL: DKS-6000/6001 DKS-6100/6101

LG Electronics Inc.

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SECTION 1. GENERAL

□ SERVICING PRECAUTIONS

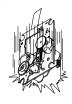
NOTES REGARDING HANDLING OF THE PICK-UP

1. Notes for transport and storage

- 1) The pick-up should always be left in its conductive bag until immediately prior to use.
- 2) The pick-up should never be subjected to external pressure or impact.

Storage in conductive bag





Drop impact

2. Repair notes

- 1) The pick-up incorporates a strong magnet, and so should never be brought close to magnetic materials.
- 2) The pick-up should always be handled correctly and carefully, taking care to avoid external pressure and impact. If it is subjected to strong pressure or impact, the result may be an operational malfunction and/or damage to the printed-circuit board.
- 3) Each and every pick-up is already individually adjusted to a high degree of precision, and for that reason the adjustment point and installation screws should absolutely never be touched.
- 4) Laser beams may damage the eyes!
 - Absolutely never permit laser beams to enter the eyes!

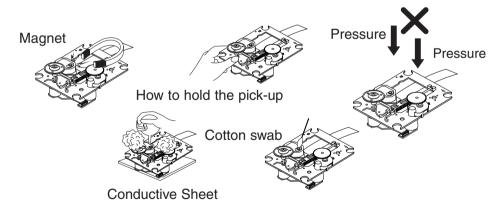
Also NEVER switch ON the power to the laser output part (lens, etc.) of the pick-up if it is damaged.



NEVER look directly at the laser beam, and don't let contact fingers or other exposed skin.

5) Cleaning the lens surface

If there is dust on the lens surface, the dust should be cleaned away by using an air bush (such as used for camera lens). The lens is held by a delicate spring. When cleaning the lens surface, therefore, a cotton swab should be used, taking care not to distort this.



6) Never attempt to disassemble the pick-up.

Spring by excess pressure. If the lens is extremely dirty, apply isopropyl alcohol to the cotton swab. (Do not use any other liquid cleaners, because they will damage the lens.) Take care not to use too much of this alcohol on the swab, and do not allow the alcohol to get inside the pick-up.

NOTES REGARDING COMPACT DISC PLAYER REPAIRS

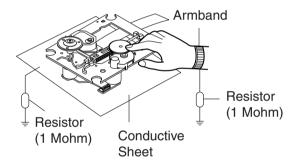
1. Preparations

- 1) Compact disc players incorporate a great many ICs as well as the pick-up (laser diode). These components are sensitive to, and easily affected by, static electricity. If such static electricity is high voltage, components can be damaged, and for that reason components should be handled with care.
- 2) The pick-up is composed of many optical components and other high-precision components. Care must be taken, therefore, to avoid repair or storage where the temperature of humidity is high, where strong magnetism is present, or where there is excessive dust.

2. Notes for repair

- 1) Before replacing a component part, first disconnect the power supply lead wire from the unit
- 2) All equipment, measuring instruments and tools must be grounded.
- 3) The workbench should be covered with a conductive sheet and grounded.

 When removing the laser pick-up from its conductive bag, do not place the pick-up on the bag. (This is because there is the possibility of damage by static electricity.)
- 4) To prevent AC leakage, the metal part of the soldering iron should be grounded.
- 5) Workers should be grounded by an armband (1M Ω)
- 6) Care should be taken not to permit the laser pick-up to come in contact with clothing, in order to prevent static electricity changes in the clothing to escape from the armband.
- 7) The laser beam from the pick-up should NEVER be directly facing the eyes or bare skin.



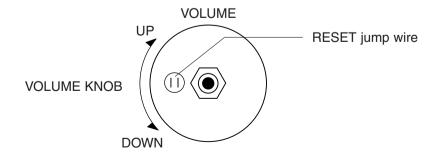
CLEARING MALFUNCTION

You can reset your unit to initial status if malfunction occur(button malfunction, display, etc.). Using a pointed good conductor(such as driver), simply short the RESET jump wire on the inside of the volume knob for more than 3 seconds.

If you reset your unit, you must reenter all its settings(stations, clock, timer)

NOTE: 1. To operate the RESET jump wire, pull the volume rotary knob and release it.

2. If you wish to operate the RESET jump wire, it is necessary to unplug the power cord.



□ ESD PRECAUTIONS

Electrostatically Sensitive Devices (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD 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 ESD 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 ESD devices.
- 4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESD devices.
- 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESD devices.
- 6. Do not remove a replacement ESD device from its protective package until immediately before you are ready to install it. (Most replacement ESD devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive materials).
- 7. Immediately before removing the protective material from the leads of a replacement ESD device, touch the protective material to the chassis or circuit assembly into which the device will by installed.

CAUTION: BE SURE NO POWER IS APPLIED TO THE CHASSIS OR CIRCUIT, AND OBSERVE ALL OTHER SAFETY PRECAUTIONS.

8. Minimize bodily motions when handing unpackaged replacement ESD devices. (Otherwise 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 ESD device).

CAUTION. 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.

□ SPECIFICATIONS

General

Power requirements AC 110-240V, 50/60 Hz

Power consumption 14W

Dimensions (approx.) 430 X 43 X 253 mm (w x h x d)

Mass (approx.) 2.54 kg

Operating temperature 5°C to 35°C (41°F to 95°F)

Operating humidity 5 % to 90 %

System

Laser Semiconductor laser, wavelength 650 nm

Signal system PAL/NTSC/AUTO

Frequency response DVD (PCM 96 kHz): 8 Hz to 44 kHz

DVD (PCM 48 kHz): 8 Hz to 22 kHz

CD: 8 Hz to 20 kHz

Signal-to-noise ratio More than 100dB (ANALOG OUT connectors only)

Harmonic distortion Less than 0.008%

Dynamic range More than 100 dB (DVD)

More than 95 dB (CD)

Outputs

VIDEO OUT 1 Vp-p 75 Ω, sync negative, RCA jack x 1

S-VIDEO OUT (Y) 1.0 V (p-p), 75 Ω, negative sync, Mini DIN 4-pin x 1

(C) 0.3 V (p-p) 75 Ω

COMPONENT VIDEO OUT (Y) 1.0 V (p-p), 75 Ω, negative sync, RCA jack x 1

(Pb)/(Pr) 0.7 V (p-p), 75 Ω, RCA jack x 2

Audio output (digital audio) 0.5 V (p-p), 75Ω , RCA jack x 1

Audio output (optical audio) 3 V (p-p), 75 Ω, Optical connector x 1

Audio output (analog audio) 2.0 Vrms (1 KHz, 0 dB), 600Ω, RCA jack (L, R) x 1

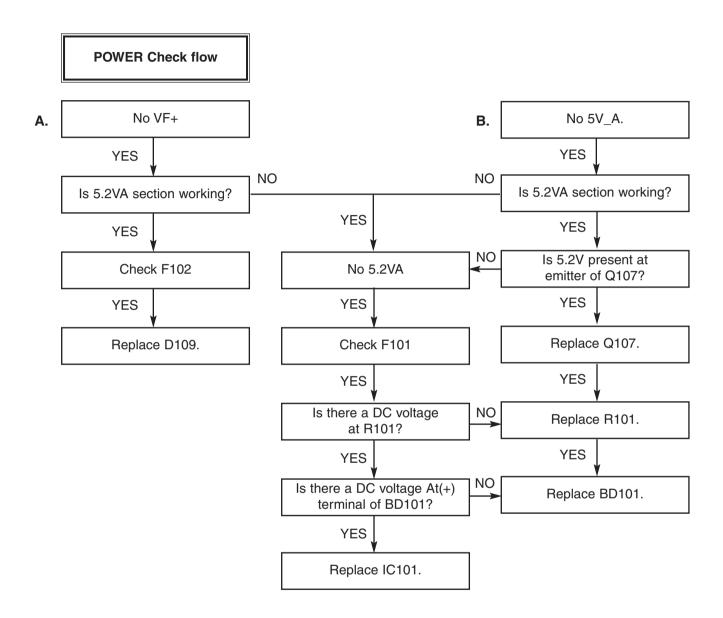
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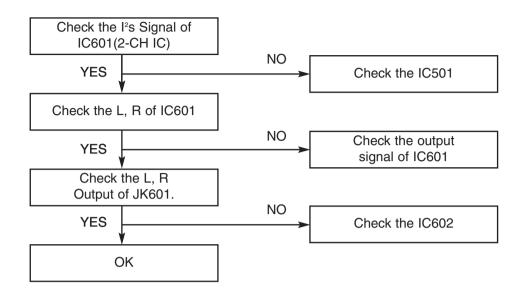
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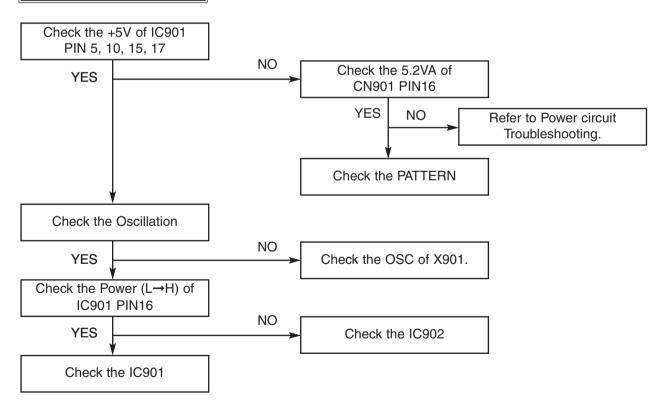
SECTION 2. ELECTRICAL

☐ ELECTRICAL TROUBLESHOOTING GUIDE

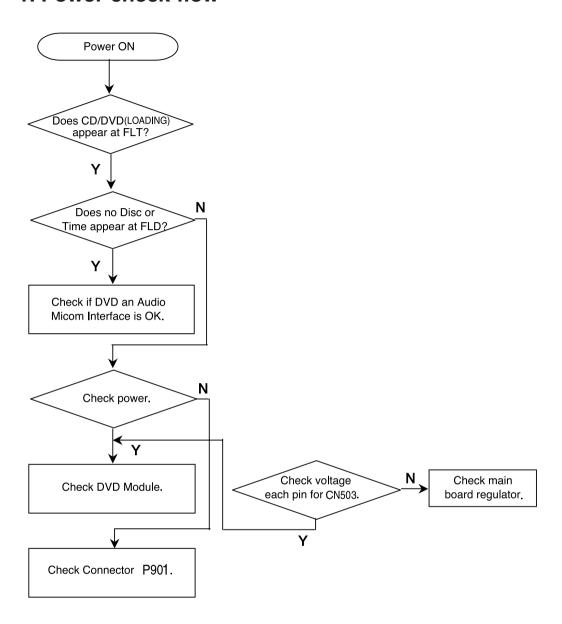




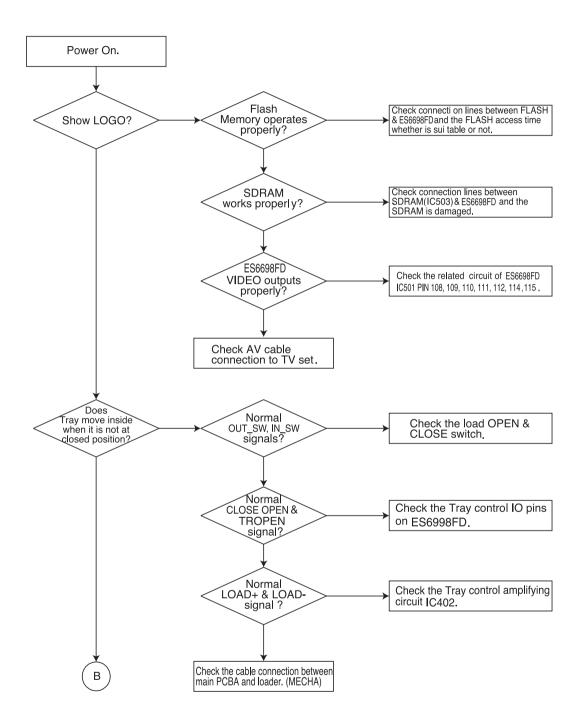
IC901 U-COM IC TROUBLESHHOTING

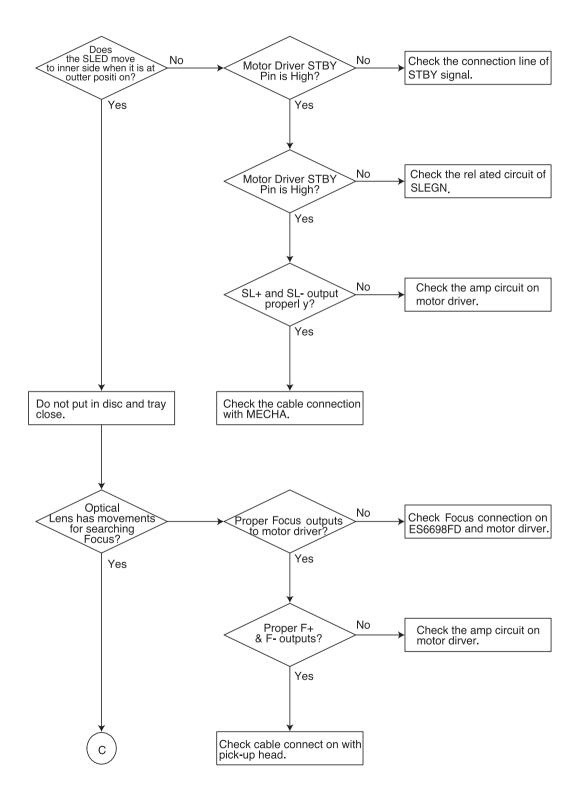


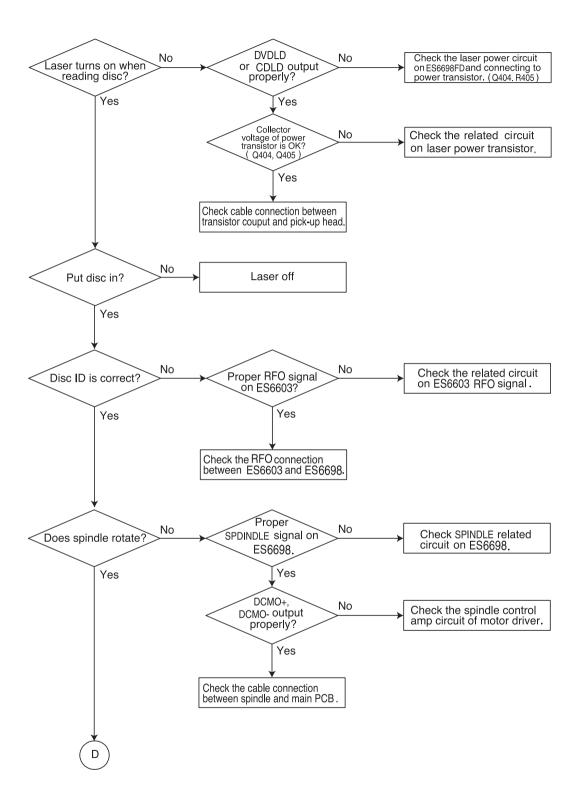
1. Power check flow

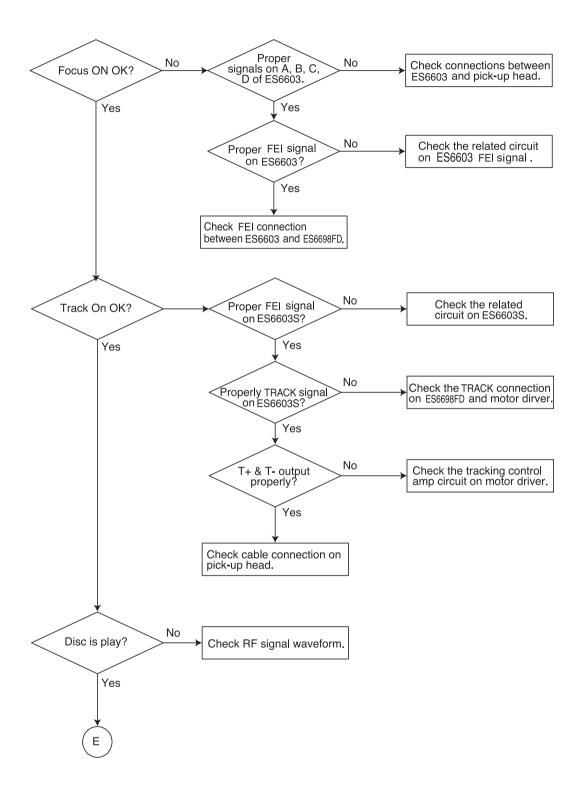


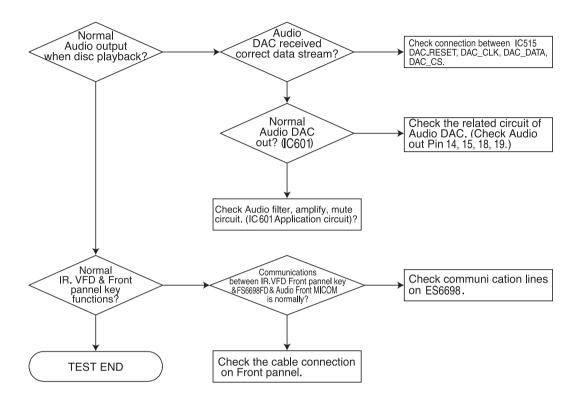
2. Test & debug flow

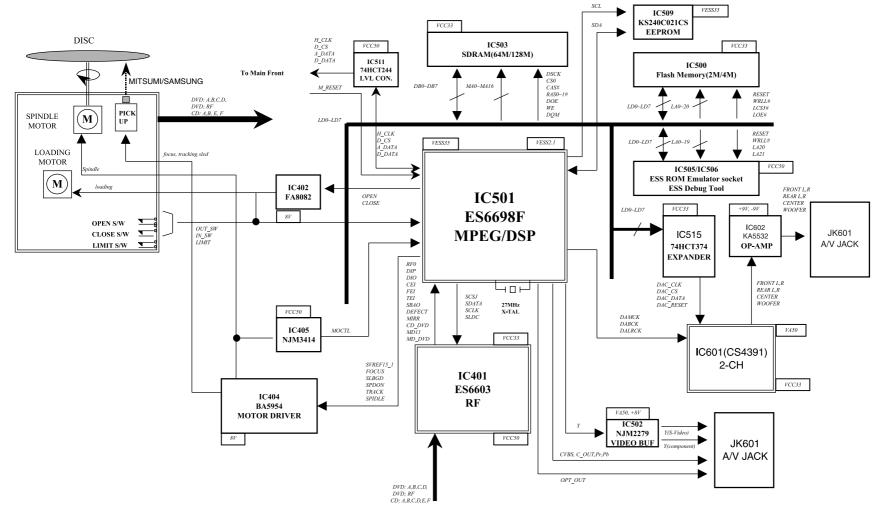


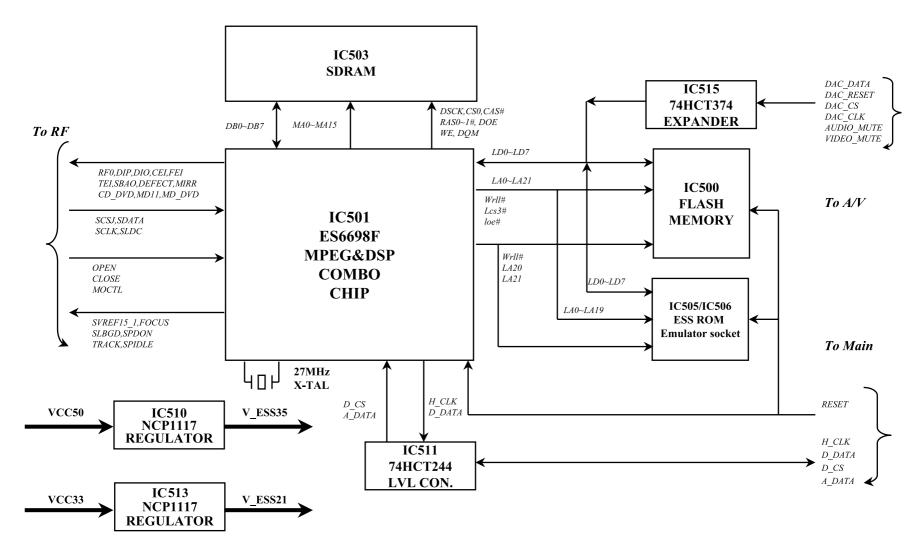


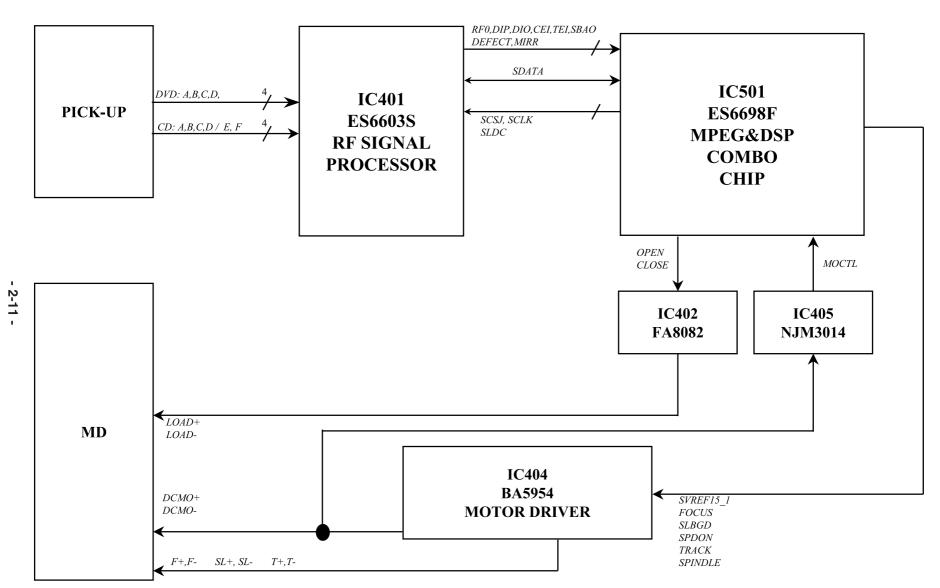


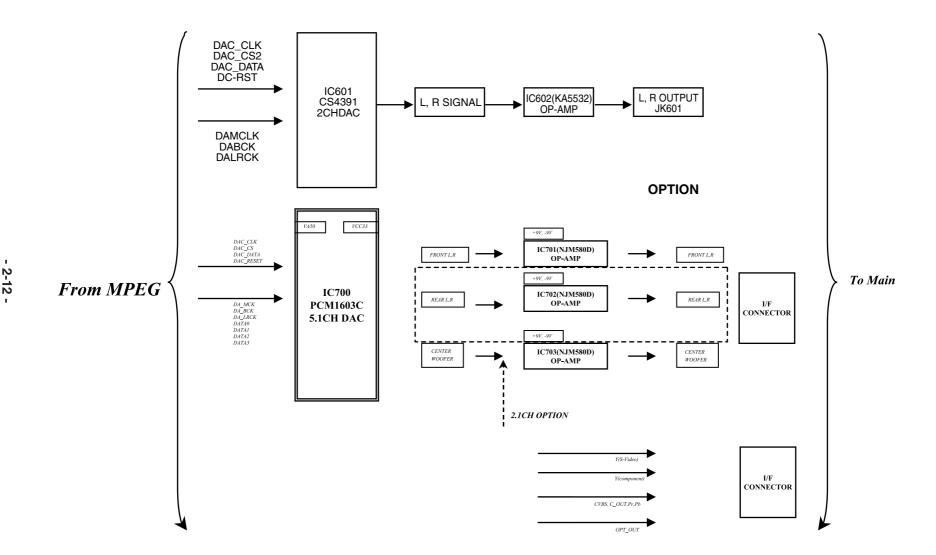






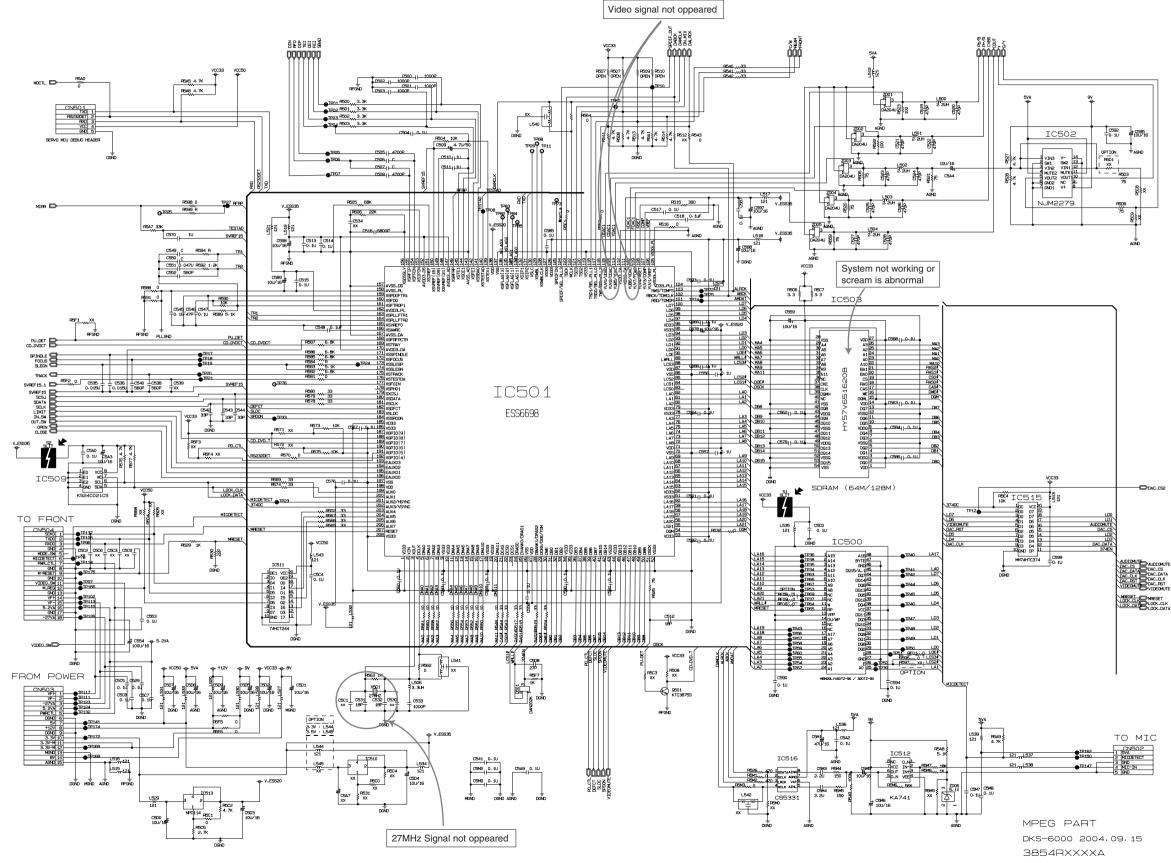




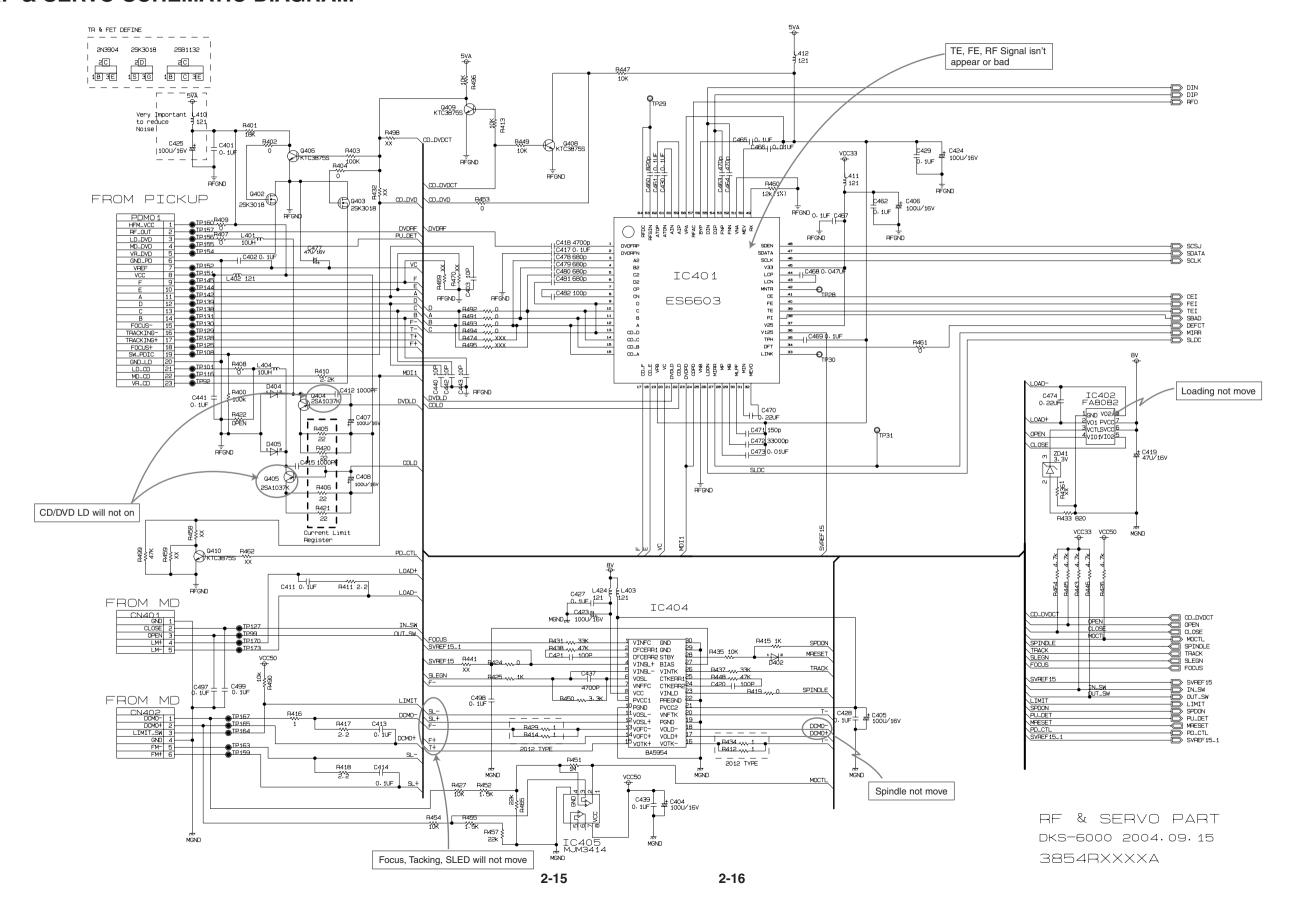


□ SCHEMATIC DIAGRAMS

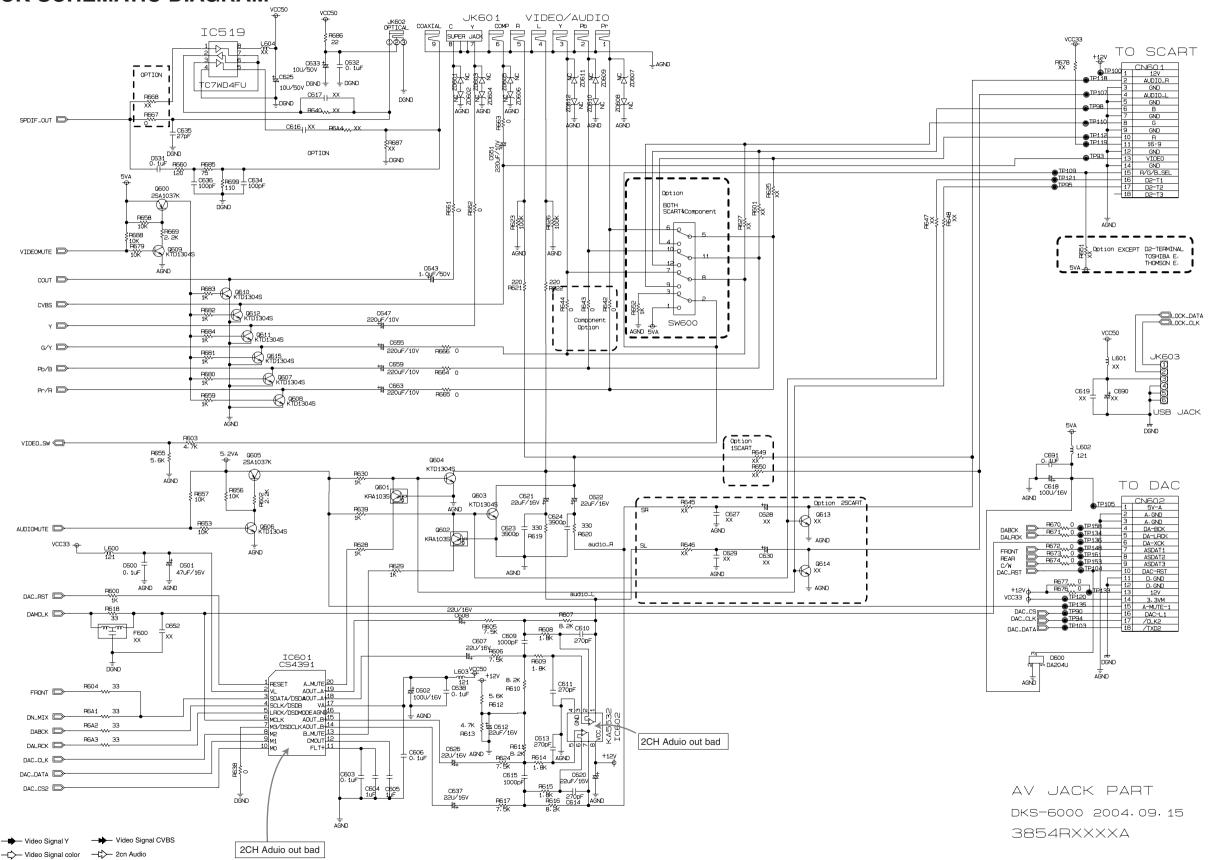
1. MPEG SCHEMATIC DIAGRAM



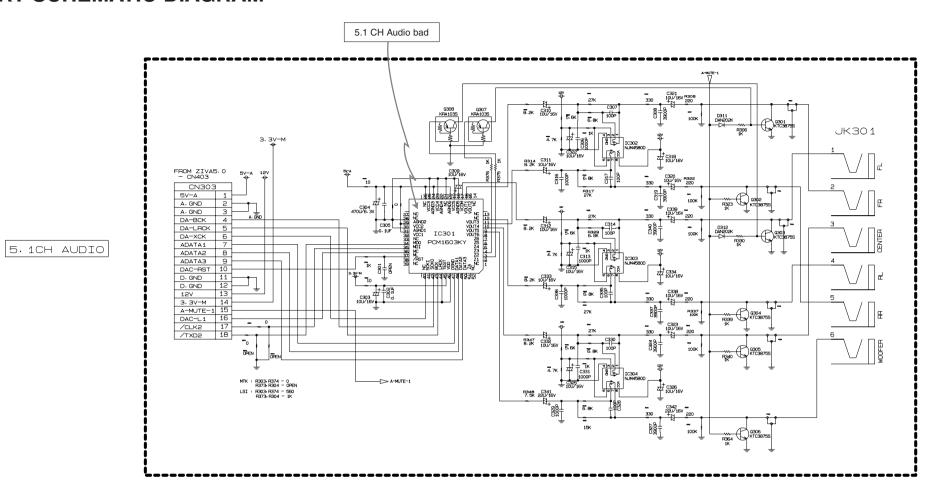
2. RF & SERVO SCHEMATIC DIAGRAM



3. AV JACK SCHEMATIC DIAGRAM

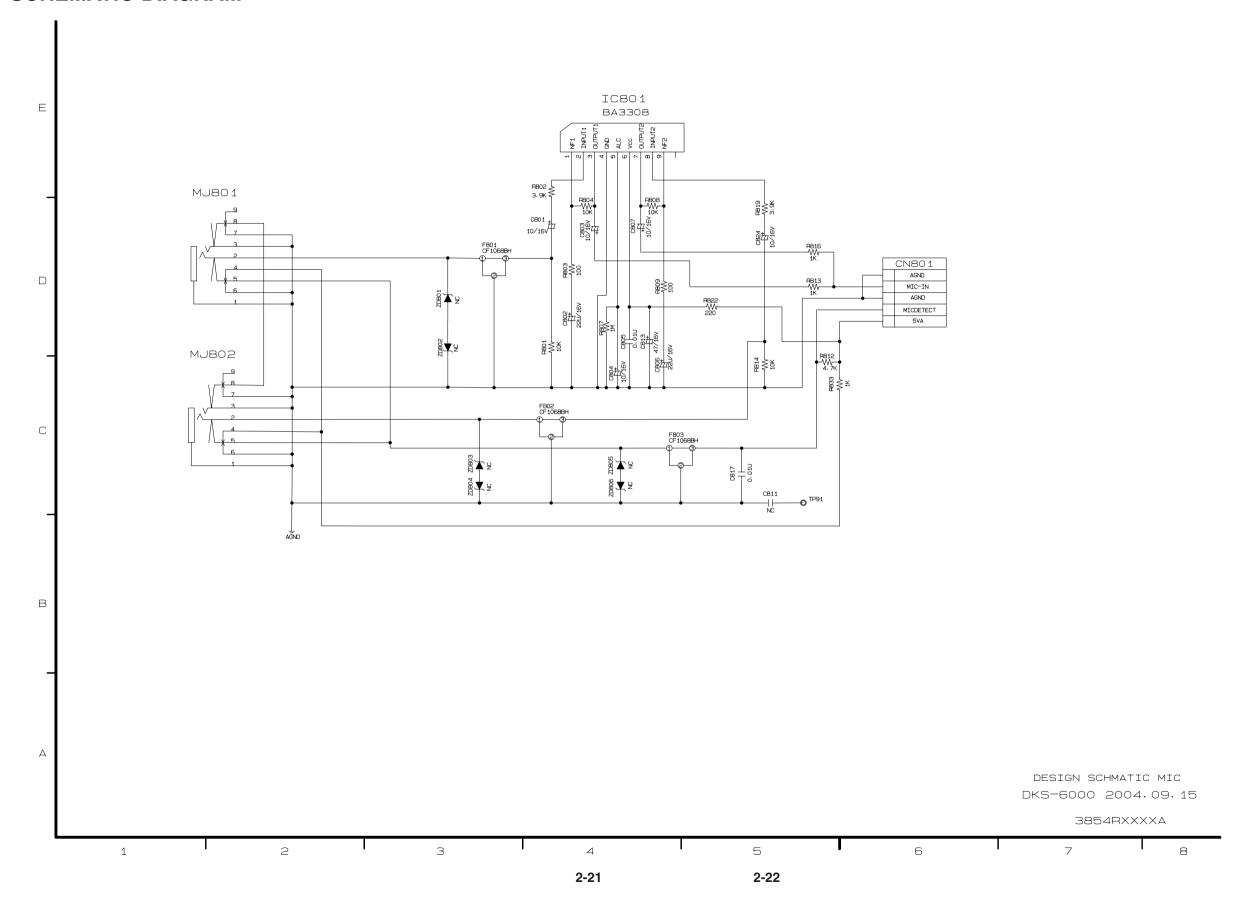


4. 5.1 CH & SCART SCHEMATIC DIAGRAM

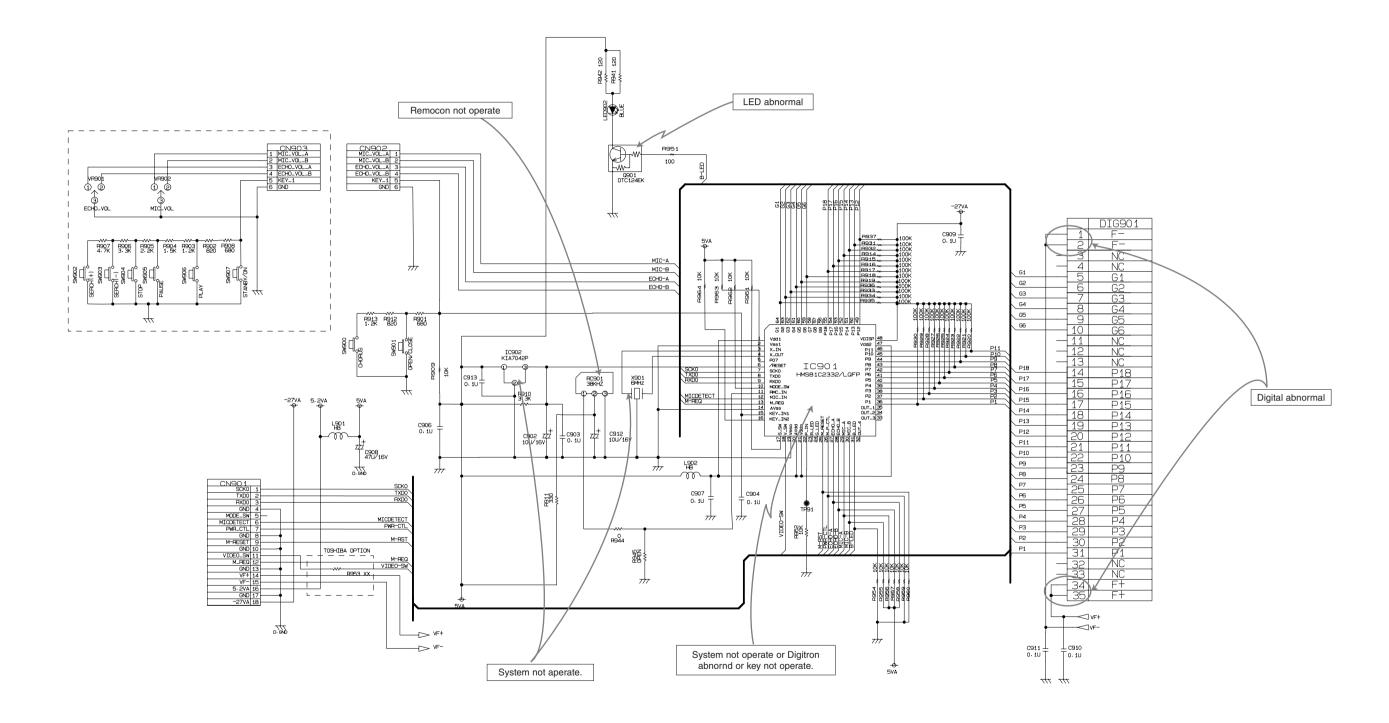


DESIGN SCHMATIC 5.1CH&SCART
DKS-6000 2004.09.15
3854RXXXXA

5. MIC SCHEMATIC DIAGRAM

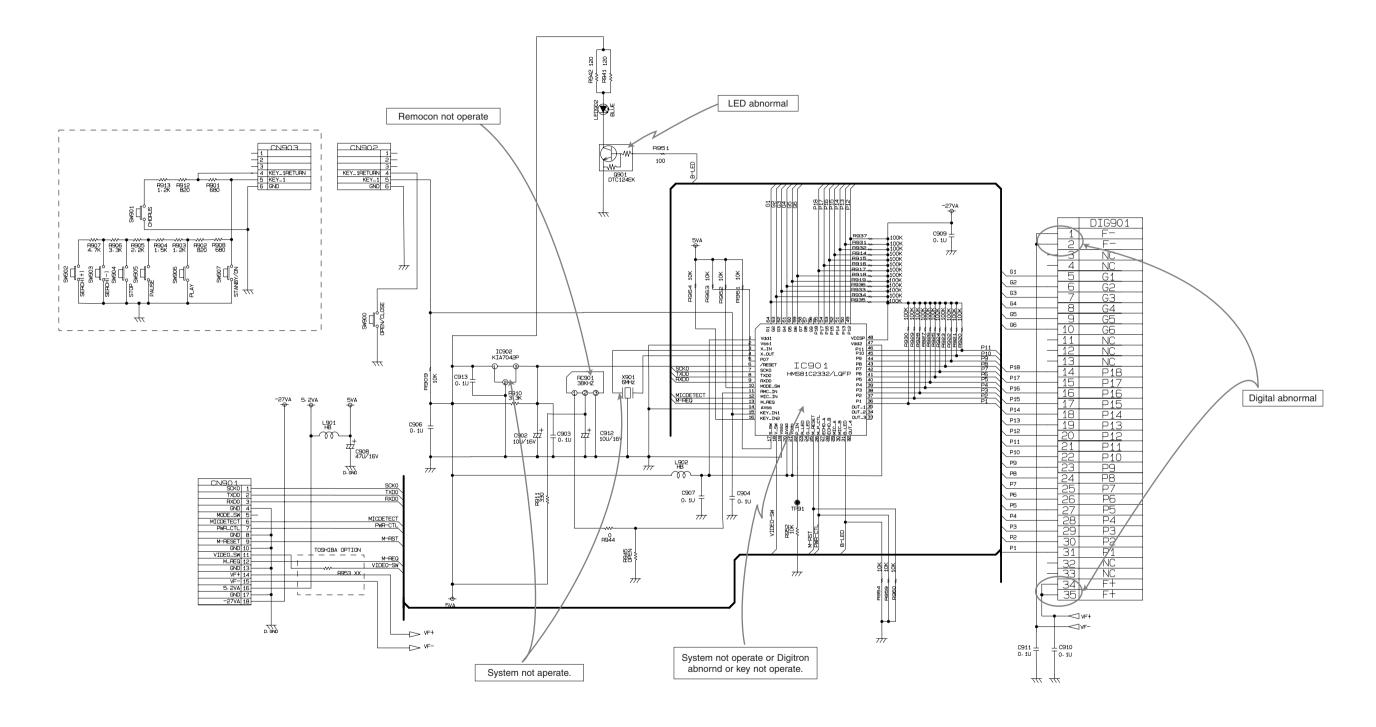


6. FRONT TIMER SCHEMATIC DIAGRAM (6000)



DESIGN SCHMATIC FRONT TIMER
DKS-6000_2 2004.09.15
3854RXXXXA

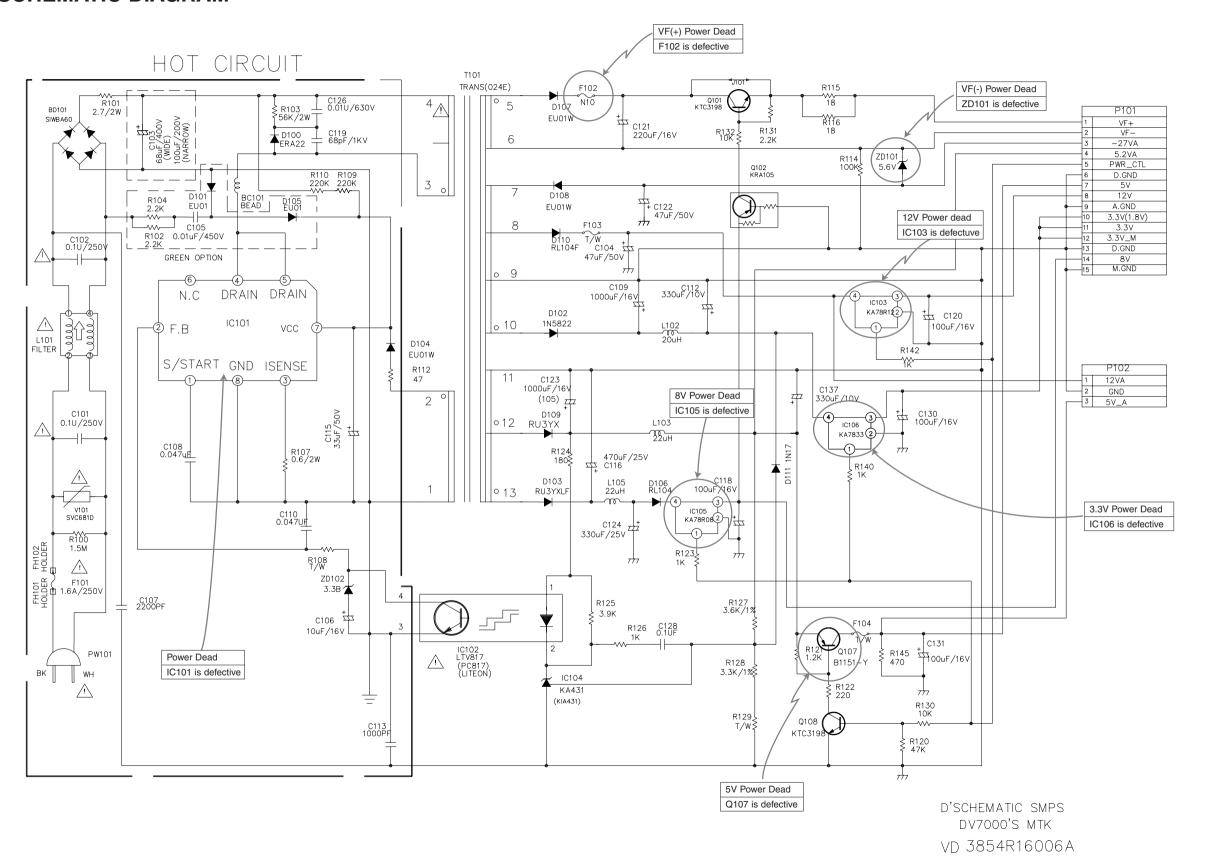
7. FRONT TIMER SCHEMATIC DIAGRAM (6100)



DESIGN SCHMATIC FRONT TIMER
DKS-6100 2004.09.15
3854RXXXXA

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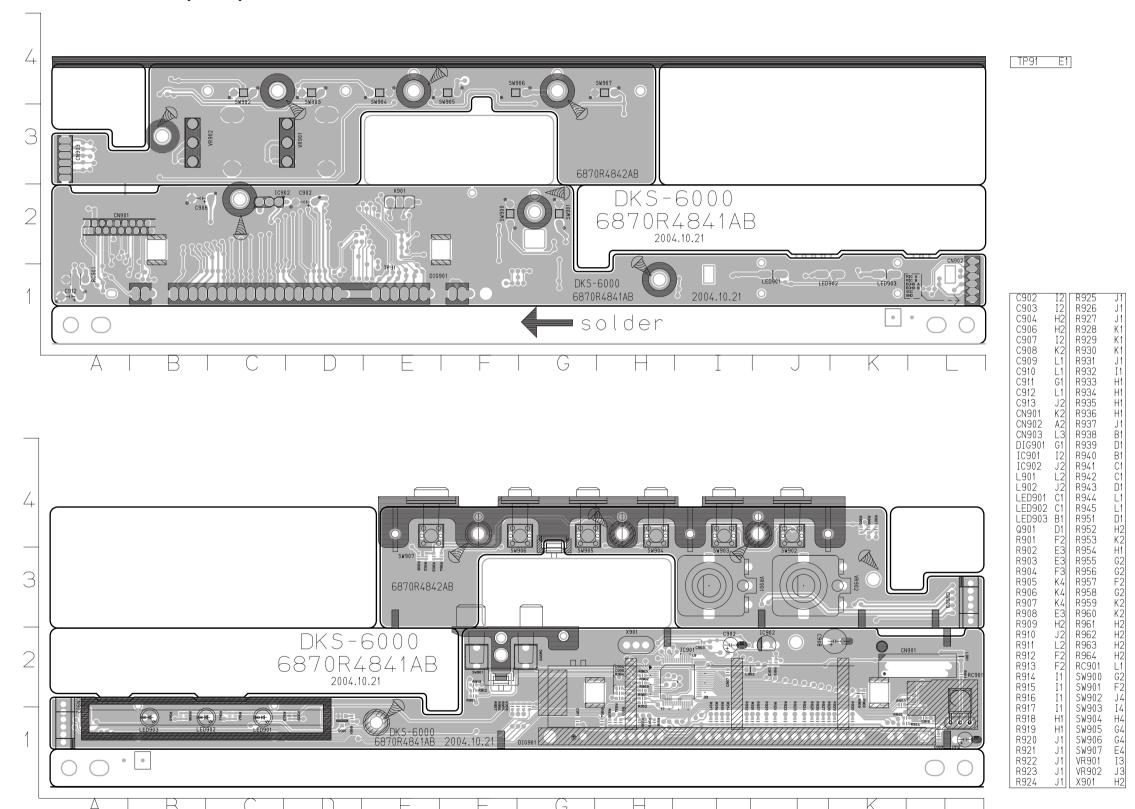
7. SMPS SCHEMATIC DIAGRAM



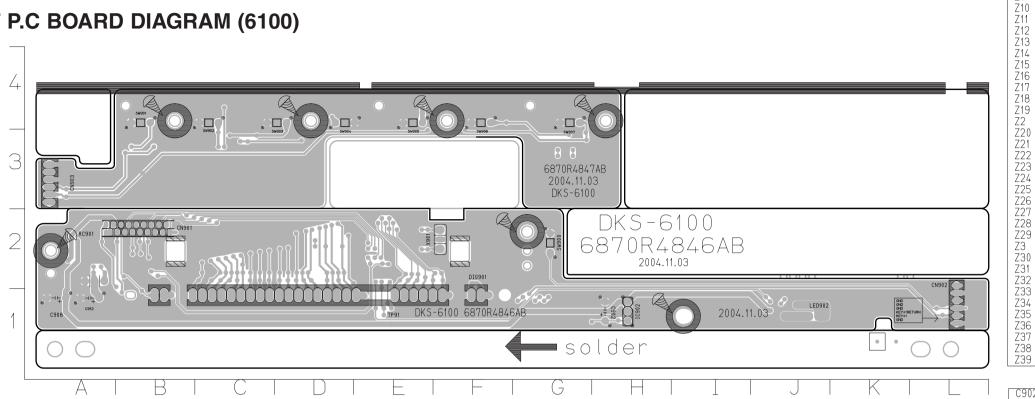
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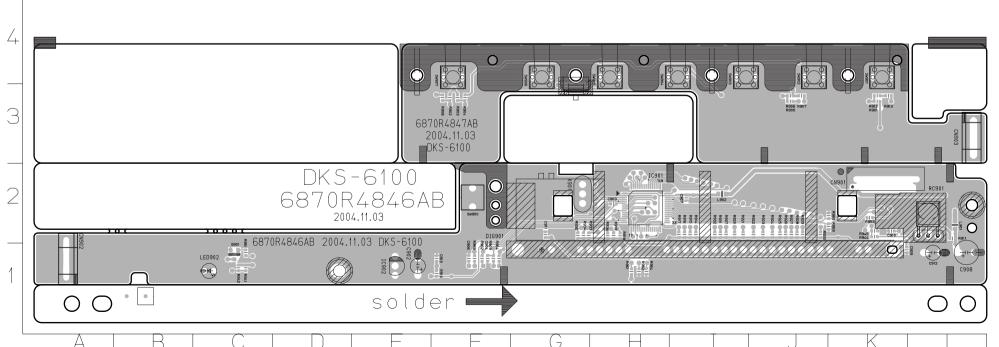
□ PRINTED CIRCUIT DIAGRAM

• FRONT P.C BOARD DIAGRAM (6000)



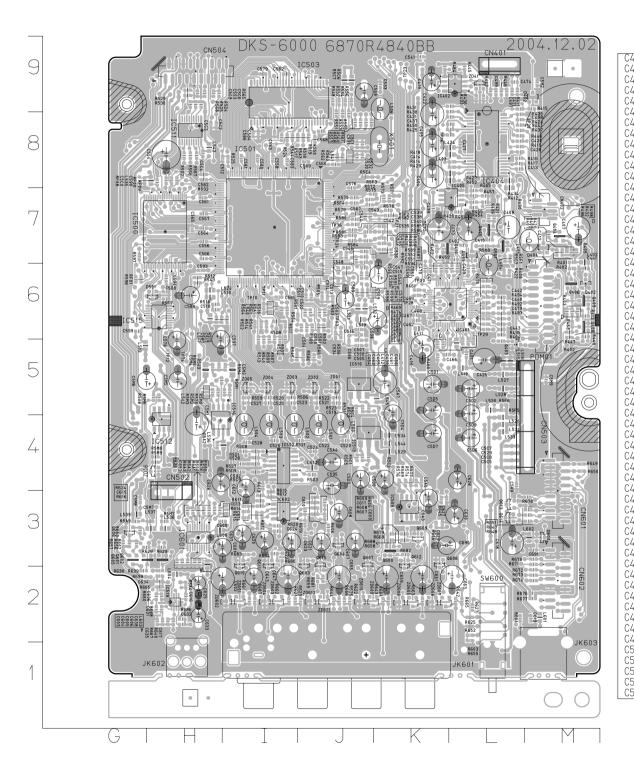
• FRONT P.C BOARD DIAGRAM (6100)





E2 F4 C3 B3 G3 E2 E2 C3 L1

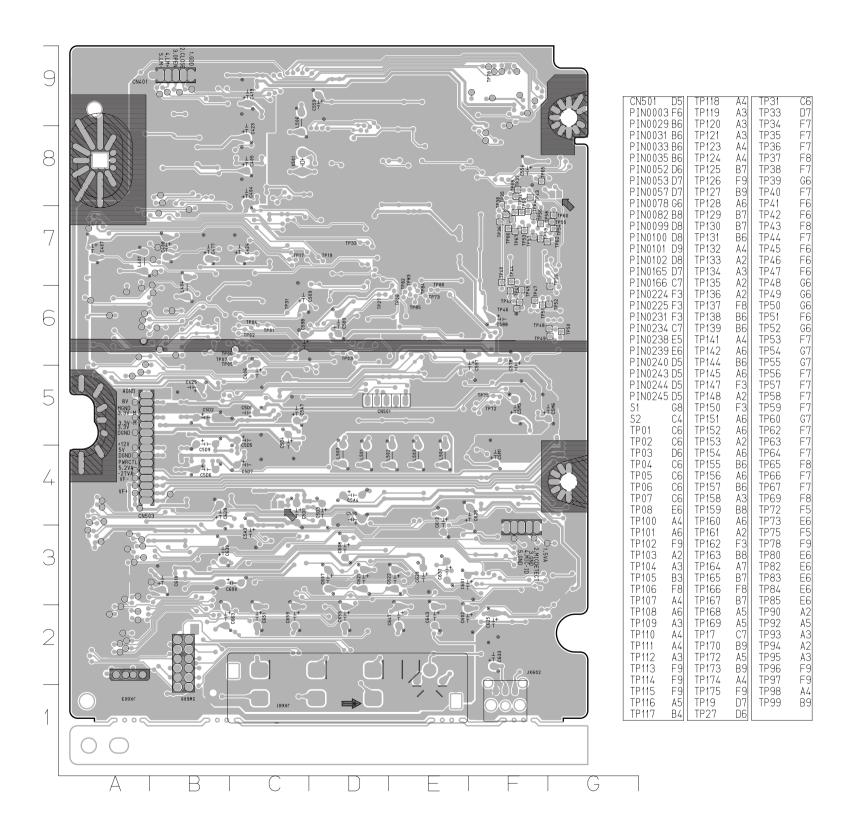
• MPEG P.C BOARD DIAGRAM



401 L5 C505 402 L7 C506 403 L6 C507 404 K8 C508 405 K8 C509 406 K5 C510 407 M7 C511 408 L7 C512 411 L9 C513 412 M7 C514 413 L8 C516 414 L8 C516 415 L7 C517 417 L6 C518 418 L6 C516 418 L6 C522 420 L8 C521 421 L8 C522 422 L8 C523 424 K7 C524 423 K8 C523 424 K7 C524 427 L8 C525 428 L8 C523 429 L6 C523 424 K7 C524 429 L6 C523 439 K7 C531 440 L6 C533 441 M6 C533 442 K6 C533 444 K7 C531 447 L8 C530 448 L8 C527 449 L6 C533 440 L5 C533 441 M6 C533 442 K6 C534 443 L6 C533 444 K7 C531 447 K6 C544 447 K6 C544 448 K6 C545 467 K6 C544 468 K6 C545 467 K6 C544 470 K6 C544 471 K6 C548 472 K6 C544 473 K6 C544 474 L9 C551 474 L9 C551 477 C552 478 L6 C553 479 L9 C566 470 K6 C547 471 K6 C548 472 K6 C546 473 K6 C546 474 L9 C556 474 L9 C556 475 C559 476 C559 477 C552 477 C552 478 L6 C553 479 L9 C566 480 L6 C557 471 K6 C546 472 K6 C546 473 K6 C546 474 L9 C556 475 C559 476 C559 477 L9 C559 477 C552 478 L6 C556 479 L9 C566 480 L6 C557 479 L9 C566 480 L6 C557 470 K6 C546 471 K6 C548 472 K6 C546 473 K6 C546 474 L9 C556 475 C559 476 C559 477 L9 C566 560 J6 C566 560 J6 C566 560 J6 C566 560 J6 C566 560 J6 C566 560 J6 C566
J5 C567 J5 C568 J5 C569 J5 C576 J6 C578 J6 C578 J6 C581 J6 C583 J6 C583 J6 C583 J6 C583 J6 C583 J6 C583 J6 C583 J6 C583 J6 C583 J6 C583 J7 C588 J7 C593 J4 C593 J4 C593 J4 C593 J4 C593 J4 C593 J4 C593 J4 C593 J4 C593 J4 C593 J7 C504 K7 C5C3 K7 C5C4 K7 C5C3 K7 C5C4 K7 C5C6 K7 C5C6
J7 C600 J8 C601 J8 C602 J6 C603 J7 C604 H5 C606 I8 C607 I8 C608 H8 C609 I8 C612 I8 C612 I8 C613 H6 C614 H6 C615 J6 C616 H8 C619 H6 C620 J4 C621 H5 C622 K6 C623 K4 C625 K4 C625 L4 C626 K3 C624 K4 C625 L4 C630 J8 C631 J8 C632 L4 C626 K5 C629 L4 C630 J8 C631 J8 C632 L4 C626 K5 C629 L4 C636 K5 C652 L4 C636 H8 C631 H8 C635 L4 C636 K5 C665 L4 C636 K5 C665 J4 C655 J4 C655 J4 C655 J4 C656 K5 C666 K5 C665 J4 C651 K5 C656 J6 C650 K5
2 M7 L530 2 H3 L531 3 M4 L532 4 H9 L533 M3 L534
H8 PIN0001 H4 PIN0004 J4 PIN0008 H6 PIN0008 H6 PIN0010 H7 PIN0011 H7 PIN0011 H7 PIN0011 H7 PIN0012 H8 PIN0022 H8 PIN0023 H6 PIN0024 H5 PIN0025 H6 PIN0024 H6 PIN0024 H6 PIN0024 H6 PIN0024 H6 PIN0025 H6 PIN0025 H6 PIN0025 H6 PIN0025 H6 PIN0046 H6 PIN0046 H6 PIN0046 H6 PIN0050
15
PIN0230 L7
R43334567881356788901123455678890112345567889011234556788132345567889011234556788132334567881323456788132345678818132345678818132345678818132345678818132345678818132345678818132345678818132345678818132456788181324567881813245678818181324567881818123456788181818181818181818181818181818181818
L9 R519 M6 R520 L9 R521 L8 R522 L9 R523 L9 R524 L8 R526 L8 R527 L9 R529 L9 R530 M6 R531 L8 R525 L9 R529 L9 R530 M6 R531 L8 R541 L7 R542 L7 R543 M6 R554 L7 R553 L6 R556 K7 R556 K7 R556 K7 R556 K7 R556 K6 R556 K7 R556 K7 R556 L6 R566 R566 R566 R566 R566 R566 R566 R56
J8 R590 J5 R591 J4 R594 J5 R599 J5 R599 J8 R599 I4 R5A3 H9 R5A3 H9 R5A3 H9 R5A3 H9 R5C2 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C3 J8 R5C3 J8 R5C3 J8 R5C6 J9 R5C5 R5C3 J8 R5C6 J9 R5C1 H5 R5C3 J8 R5C6 J9 R5C1 H6 R5C1 H7 R5F5 R5C1 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C4 J9 R5C5 R5C3 J8 R5C6 J9 R5C5 R5C6 J9 R5C7 R5C1 J8 R5C1 J8 R5C1 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C5 R5C1 J8 R5C3 J8 R5C4 J9 R5C5 R5C1 J8 R5C5 J8 R5C5 J8 R5C5 J8 R5C5 J8 R5C6 R5C1 J8 R5C6 R5C1 J8 R5C1 J8 R5C1 J8 R5C1 J8 R5C2 J8 R5C2 J8 R5C2 J8 R5C6 R5C1 J8 R5C1 J8 R5C1 J7 R5F4 K4 R5F7 R5F7 K7 R5F6 R5M1 K7 R5M6 J7 R5M6 J7 R5M6 J7 R601 J7 R601
J6 R605 J6 R606 R607 J6 R607 J6 R609 J7 R608 G6 R611 J6 R613 J6 R615 J6 R615 J6 R615 J7 R618 J7 R618 J7 R618 J7 R618 J7 R618 J7 R618 J7 R622 J7 R622 J
J3 R674 M2 J3 R676 M2 J3 R677 M2 J3 R678 M3 J3 R678 M3 J3 R679 K3 I3 R680 I3 I3 R681 J2 I3 R682 K3 I4 R683 I3 I3 R685 H2 I3 R686 H2 I3 R687 I2 H3 R688 K3 J3 R687 H2 I3 R687 H2 I3 R688 K3 J3 R689 H2 I3 R6A1 H3 I2 R6A2 H3 J2 R6A4 H2 I3 R6A4 H2 I3 RF09 H8 L2 RF09 H8 L2 RF09 H8 <t< td=""></t<>

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• MPEG P.C BOARD DIAGRAM

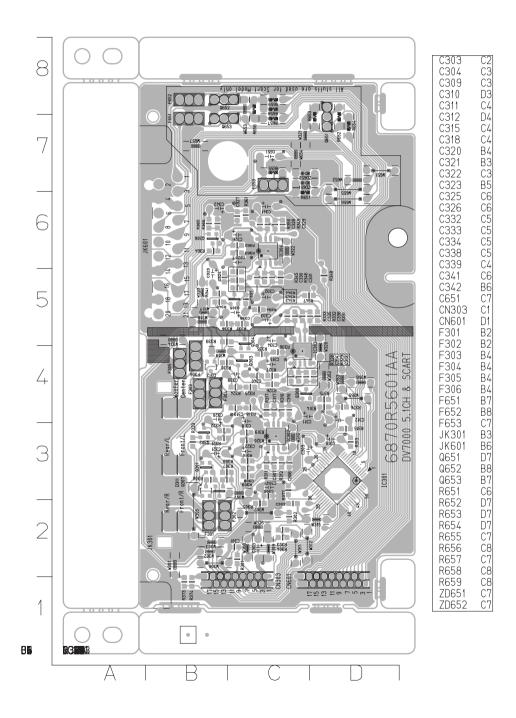


2-35 2-36

• MIC P.C BOARD DIAGRAM

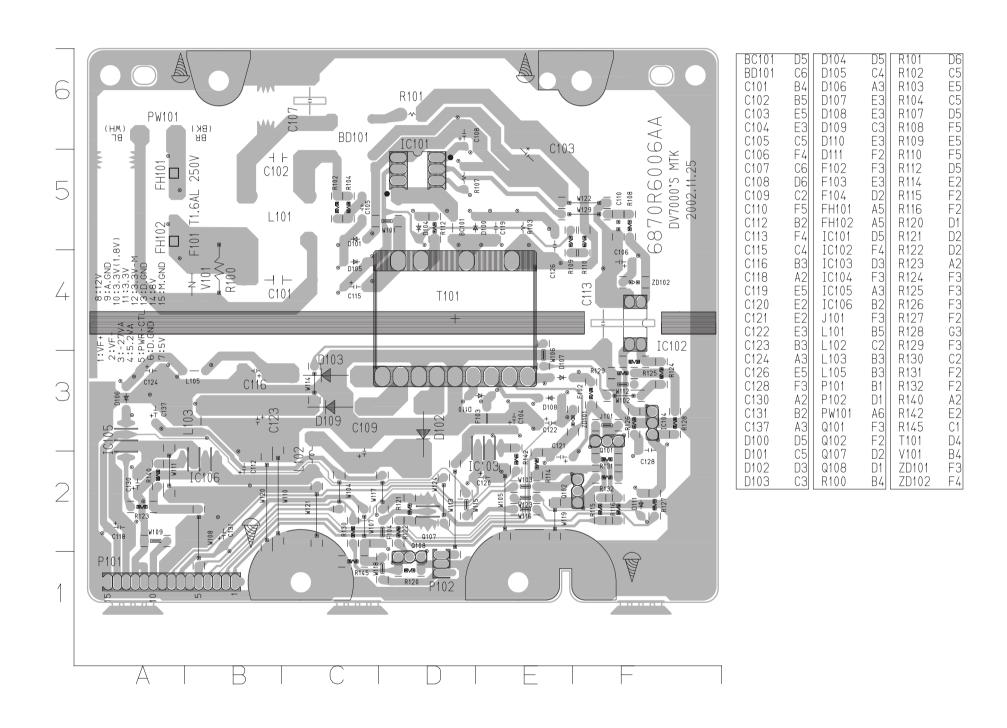
CR01 C3 (802 D3 (803 B4 C804 C3 (805 B3 C806 B4 C807 B4 C801 A3 C813 C3 C817 B4 C824 C3 (N801 A4 F801 B3 F802 D3 F803 B3 IC801 C2 MJ802 C2 R801 C3 R803 D3 R804 D3 R804 D3 R804 C3 R808 C4 R809 C4 R809 C4 R813 B3 R814 C3 R814 C3 R814 C3 R814 C3 R814 C3 R815 B3 R814 C3 R816 B3 R819 C3 R822 B3 R819 C3 R822 B3 R819 C3 R822 B3 R833 B4 ZD801 C3 ZD803 D3 ZD804 D3 ZD804 D3 ZD804 D3 ZD806 B3

• I/O P.C BOARD DIAGRAM



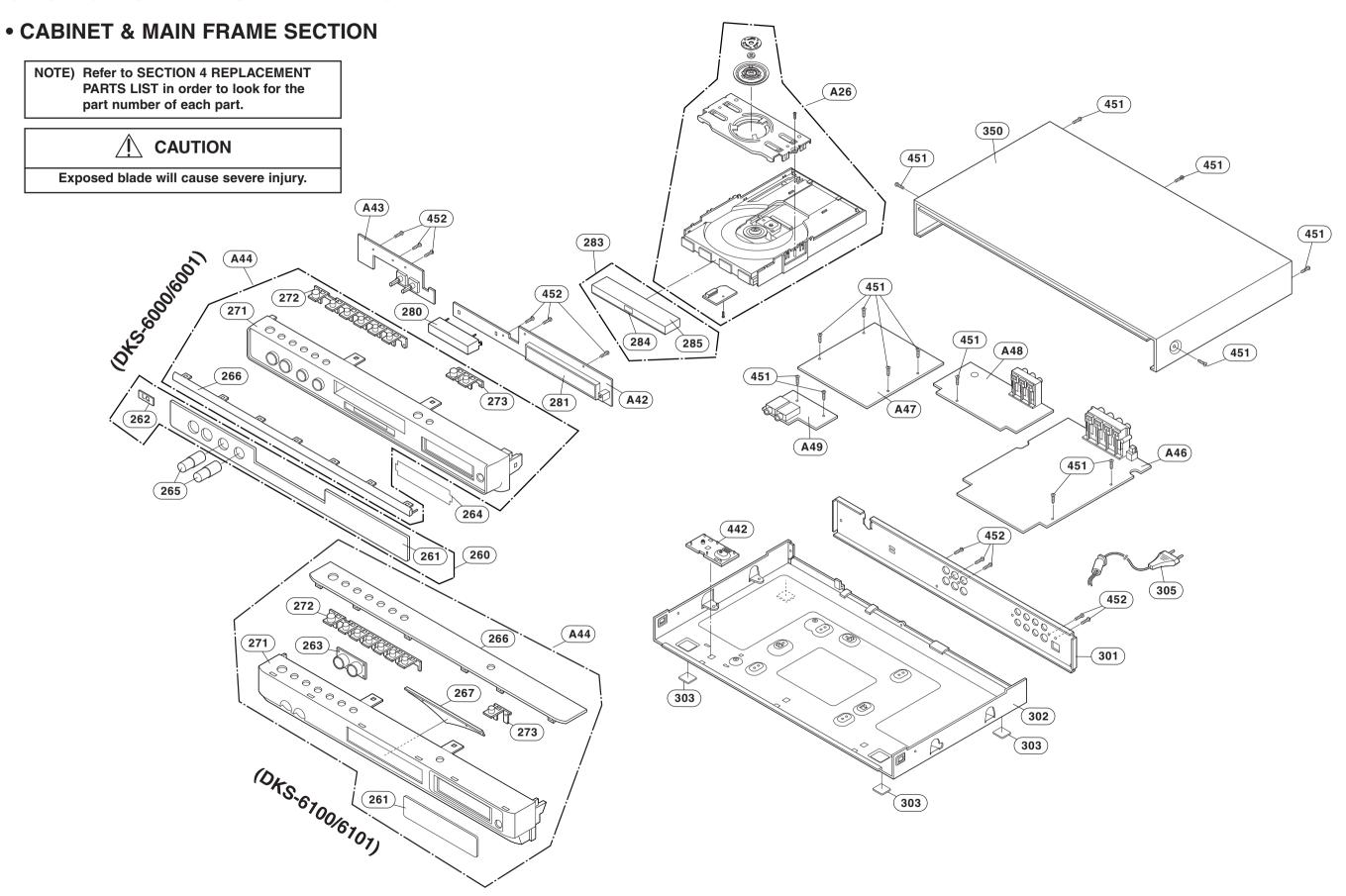
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• SMPS P.C BOARD DIAGRAM

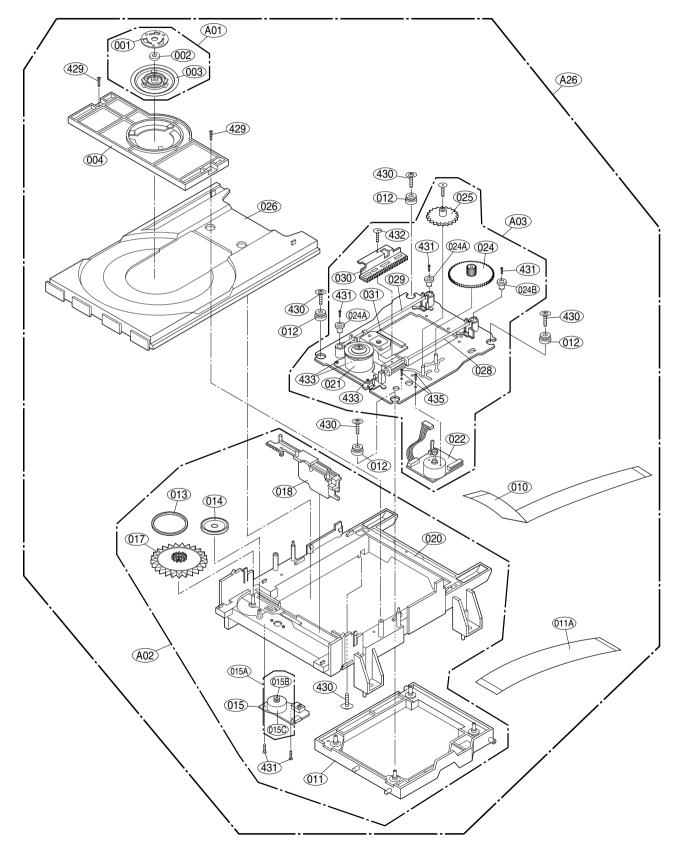


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SECTION 3. EXPLODED VIEWS



• Deck Mechanism Exploded View



LOCA. NO.	PART NO.	DESCRIPTION	SPECIFICATION
A26	6721RJ0372E	DECK ASSEMBLY, VIDEO	DECK/MECHA DP-7 (43MM)-ESS-MIT
A01	4861R-0016B	CLAMP ASSEMBLY	DISC DP7 - SH
A02	3041R-M009D	BASE ASSEMBLY	MAIN DP-7 (43) HZ
A03	3041R-M002M	BASE ASSEMBLY	SLED DP-7 (MIT VA9)-ESS-HZ
001	3300R-0547A	PLATE	CLAMP
002	5016H-1016B	MAGNET	CLAMP(LDM-R608,10*5,1*1.5T)
003	4860R-0021A	CLAMP	UPPER DP7
004	4930R-0365A	HOLDER	CLAMP DP7
010	6850R-GF10B	CABLE,FLAT	P=1.0 FFC UL2896(0.05X0.65) 6
011	3210R-M001A	FRAME	UP/DOWN DP7 MOLD
011A	6850R-JW24Y	CABLE,FLAT	P=1.0 FFC UL2896(0.035X0.7) 23
012	5040R-0075D	RUBBER	DAMPER DP7 (YAMAUCHI 30)
013	4400H-1009A	BELT	GM-RT1332A
014	4470R-0055A	GEAR	PULLEY
015	6871R-9248D	PWB(PCB) ASSEMBLY,TOTAL	DP-7 LOADING - HZ
015A	4681R-A003D	MOTOR ASSEMBLY	DECK/MECHA LOADING DP-7 HZ
015B	4560R-0008A	PULLEY	MOTOR
015C	4680R-E007A	MOTOR(MECH)	FEEDING BCZ3B01 SANKYO FOR DVD
017	4470R-0056A	GEAR	LOADING
018	4974R-0046A	GUIDE	UP/DOWN(DP-7)
020	3040R-M005A	BASE	MAIN (DP7-43MM) MOLD
021	4680R-C010A	MOTOR(MECH)	SPINDLE JCL9B78 SANKYO FOR DVD
022	4681R-B005D	MOTOR ASSEMBLY	DECK/MECHA FEEDING DP-7 HZ
022A	4680R-E008A	MOTOR(MECH)	FEEDING RF-300EA-1D390 MABUCHI
023	4470R-0119A	GEAR	FEED MOTOR
024	4470R-0124A	GEAR	PINION DP7
024A	5006R-0040A	CAP	SKEW (T) DP7
024B	5006R-0039A	CAP	SKEW (R) DP7
025	4470R-0122A	GEAR	MIDDLE A DP7
026	3390R-0015A	TRAY	DISC DP7
027	4470R-0123A	GEAR	MIDDLE B DP7
028	4370R-0083A	SHAFT	DECK/MECHA DP7 OTHER PU-T
029	4370R-0075A	SHAFT	PU
030	4471R-0010A	GEAR ASSEMBLY	RACK DP7
031	6716DPH005B	PICK UP,DVD	PVR-502W R52 0219 MITSUMI PLAY
032	6871R-9243D	PWB(PCB) ASSEMBLY,TOTAL	DP7 FEEDING - HZ
430	1SZZR-0046A	SCREW,DRAWING	+ 1 D2.0 L6.0 SWRCH16A/FZY
431	1SZZH-1007B	SCREW,DRAWING	+ D2.0 6MM SWRCH16A/ZNBK 4MM 1
433	1SZZR-0050A	SCREW,DRAWING	+ 1 D2.0 L4.5 SWRCH16A/ZNY S-T
434	1SZZR-0023B	SCREW,DRAWING	+ 1 D1.7 L6.0 SWRCH16A/FZY RAC
435	1SZZR-0011A	SCREW,DRAWING	MACHINE
436	1SZZR-0047A	SCREW,DRAWING	+ 1 D1.4 L4.5 SWRCH16A/FZY TAP

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