



VIDEO CASSETTE RECORDER

SV-7000W

SV-5000W

SAMSUNG

SERVICE MANUAL

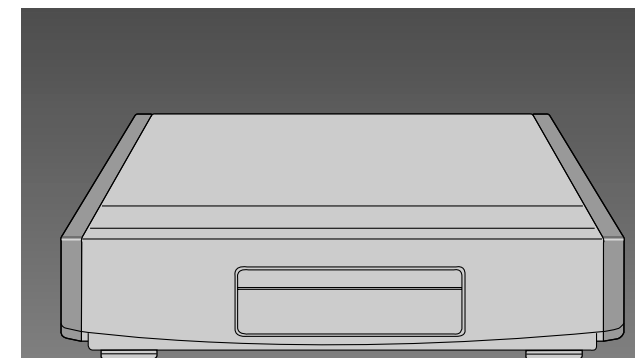
SV-7000W/SV-5000W

SERVICE Manual

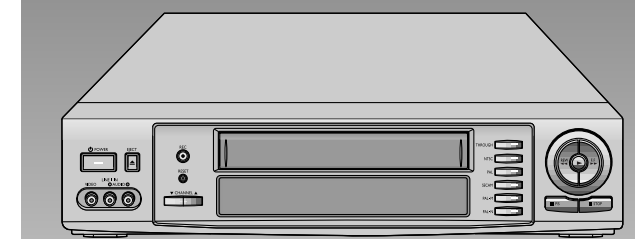
For mechanical disassembly and adjustment, refer to the "Mechanical Manual" (DX-9R → AC68-00001A).



VIDEO CASSETTE RECORDER



SV-7000W



SV-5000W

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1. Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including : control knobs and compartment covers.
3. Make sure that there are no cabinet openings through which people--particularly children --might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (See Fig. 1-1) :
Warning : Do not use an isolation transformer during this test. Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

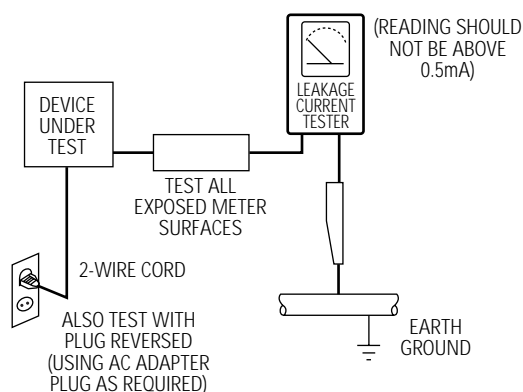


Fig. 1-1 AC Leakage Test

5. With the unit completely reassembled, plug the AC line cord directly the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including : antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.
6. Antenna Cold Check :
With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong.
Connect the other lead to the coaxial connector.
7. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.
8. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging Wrist-strap device. (Be sure to remove it prior to applying power--this is an electric shock precaution.)
9. Design Alteration Warning :
Never alter or add to the mechanical or electrical design of this unit. Example : Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
10. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

11. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.
12. Observe the original lead dress, especially near the following areas : Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.
13. Product Safety Notice :
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original—even if the replacement is rated for higher voltage, wattage, etc.

Components that are critical for safety are indicated in the circuit diagram by shading, (⚠ or ⚡).

Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

2. Reference Information

2-1 Important Service Guide

2-1-1 Mode switch (Program Switch) assembly point

- 1) When installing the ass'y full deck on the Main PCB, be sure to align the assembly point of mode switch.

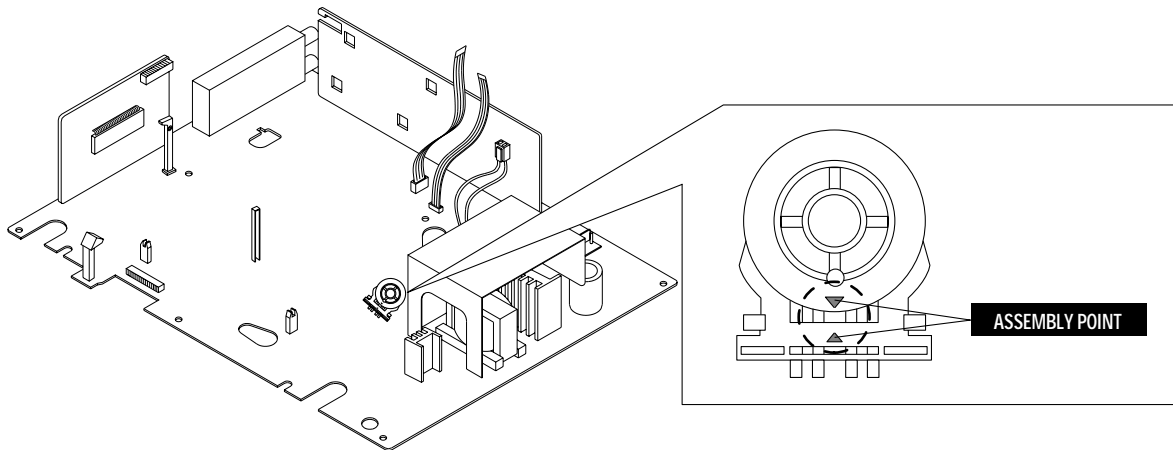


Fig. 2-1

2-1-2 How to eject the cassette tape

(If the unit does not operate on condition that tape is inserted into housing ass'y)

- 1) Remove the Holder Worm **①** and the gear worm **②**. (See Fig. 2-2)
- 2) Turn the Gear Worm Wheel **③** counterclockwise in the direction of arrow with screw driver. (See Fig. 2-2)
- 3) When Slider S, T are approached in the position of unloading, rotate holder Clutch counterclockwise after inserting screw driver in the hole of frame's bottom in order to wind the unwound tape. (Refer to Fig. 2-3)
(If you rotate Gear Worm Wheel continuously when tape is in state of unwinding, you may cause a tape contamination by grease and tape damage. Be sure to wind the unwound tape in the state of set horizontally.)
- 4) Rotate Gear Worm Wheel **③** counterclockwise using screw driver again up to the state of eject mode and then pick out the tape. (Refer to Fig. 2-2)

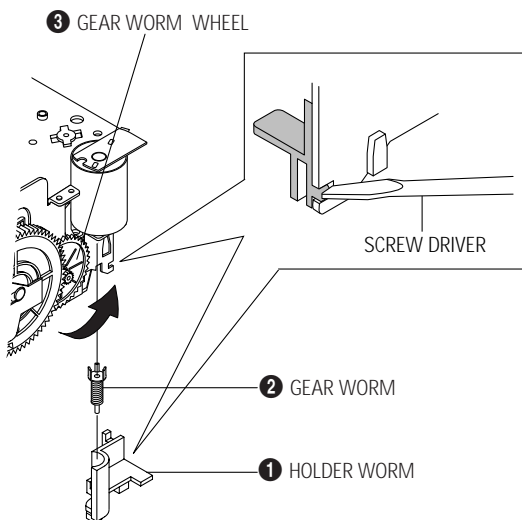


Fig. 2-2

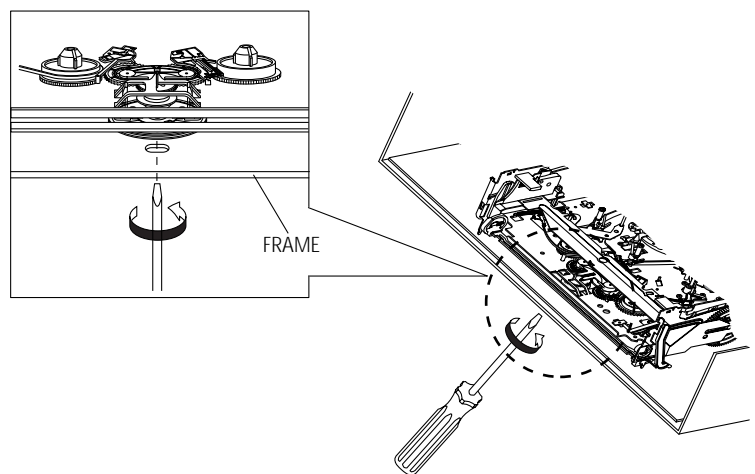


Fig. 2-3

2-2 Servicing Jigs and Special Tools (Only for SV-7000W)

2-2-1 Servicing Jig

Jig Item	Part No.	Use
E/Cable	68140-500-104	Use for Timer PCB (CN703, CN704) ↔ Joint PCB (CN8J01, CN8J02)

This is the same as the E/CABLE-2 used for Model SV-4000W.

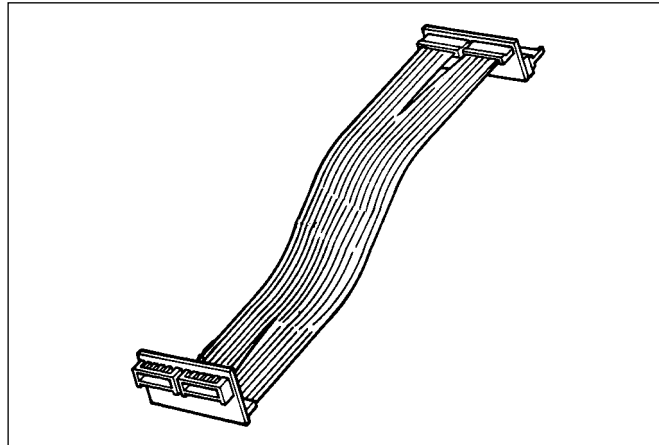


Fig. 2-4

2-2-2 How to Connection

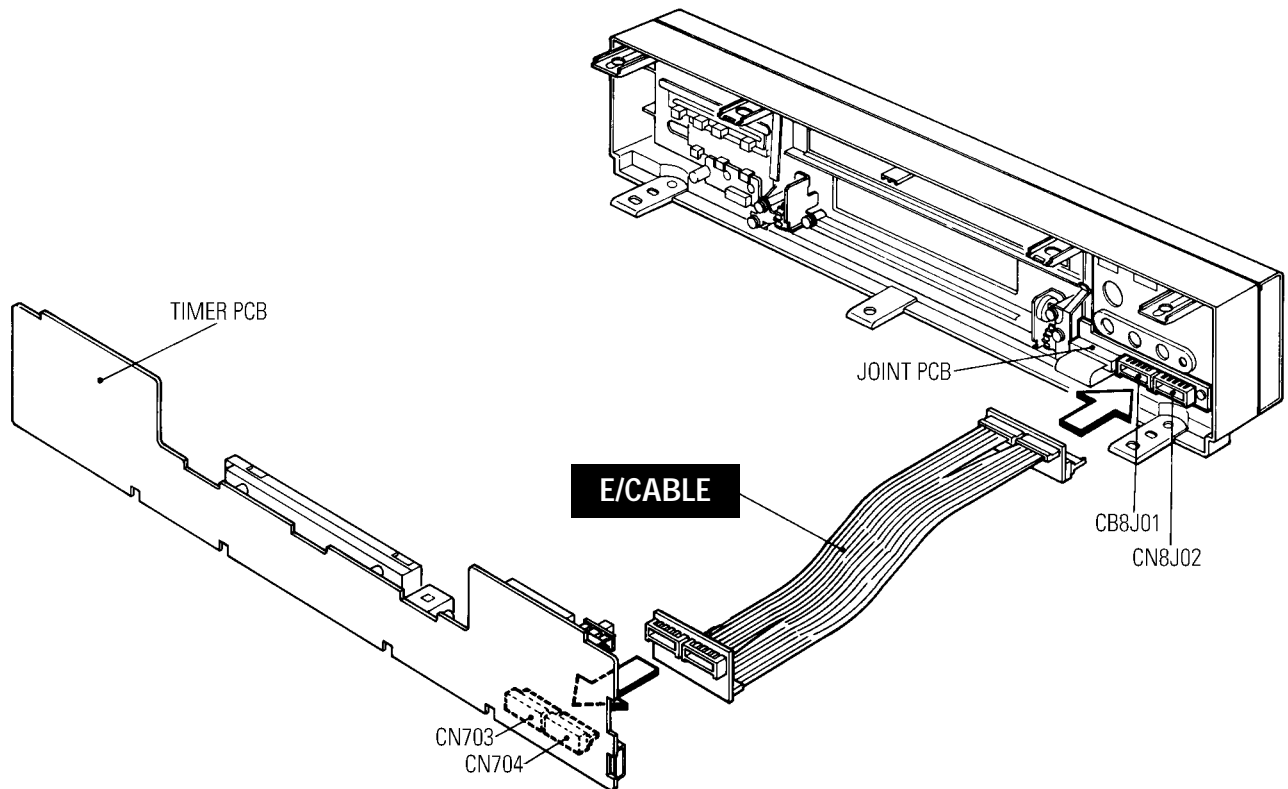


Fig. 2-5

3. Product Specifications

Design and specifications are subject to change without notice.

Operation	Description	
Recording system	Rotary head azimuth recording, luminance signal FM recording system	
	Crominance signal down converted phase shift recording system (NTSC, PAL, PAL-M)	
	Chrominance signal down converted direct recording system (MESECAM)	
	Chrominance signal 1/4 frequency countdown direct recording system (SECAM)	
Color system	NTSC3.58, NTSC4.43, PAL, PAL-M, PAL-N, SECAM	
Tuning system	SV-7000W/5000W ; B/G, D/K, I, M, N, L	SV-5000W NTSC System ; B/G, D/K, I, M, N
RF out	SV-7000W/5000W ; G/I/K/M/L, UHF CH21-CH69	SV-5000W NTSC System ; G/I/K/M, UHF CH21-CH69
Tape recording/playback	NTSC, PAL, PAL-M, SECAM, MESECAM	
Tape speed	NTSC	33.35mm/sec (standard recording : SP)
	PAL-M	11.12mm/sec (three times recording : SLP)
	PAL	23.39mm/sec (standard recording : SP)
	MESECAM	11.69mm/sec (double speed recording : LP)
	SECAM	
Tape format	VHS type video tape, S-VHS type video tape (Playback only)	
Recording time	Maximum 8 hours (with a T-160 tape or E-240tape)	
Rewinding time	within 3 minutes (high speed rewinding, T-120 or E-180 tpaee)	
Video input	1.0Vp-p (unbalanced) 75 ohm	
Video output	1.0Vp-p (unbalanced) 75 ohm	
Video S/N	Above 43dB (standard recording)	
Resolution	Above 220 (standard recording NTSC), 240 (standard recording PAL)	
Audio input	-8dBm, 47 Kohm unbalanced	
Audio output	-8 +/- 3 dBm, 1 Kohm unbalanced	
Audio S/N	Above 39dB (Mono), 68dB (Hi-Fi)	
Audio frequency characteristics	20Hz-20KHz	
Rated voltage	100V-240V AC, 100V AC (JAPAN)	
Rated frequency	50/60Hz	
Power consumption	ARP. 24 watts on recording ; 8 watts off	
Working ambient temperature	41°F-104°F (5°C-40°C)	
Installation conditions	Operation position : Horizontal, Relative humidity : Below 80%	
Outside dimensions	SV-7000W : Width 465mm X Length 310mm X Height 98mm	
	SV-5000W : Width 430mm X Length 295mm X Height 98mm	
Weight	SV-7000W : 4.8Kg	SV-5000W : 4.3Kg

MEMO

4. Disassembly and Reassembly

4-1 Cabinet Assembly

Note : Disassemble in the order shown. Reassemble in reverse order.

4-1-1 Cabinet Top removal

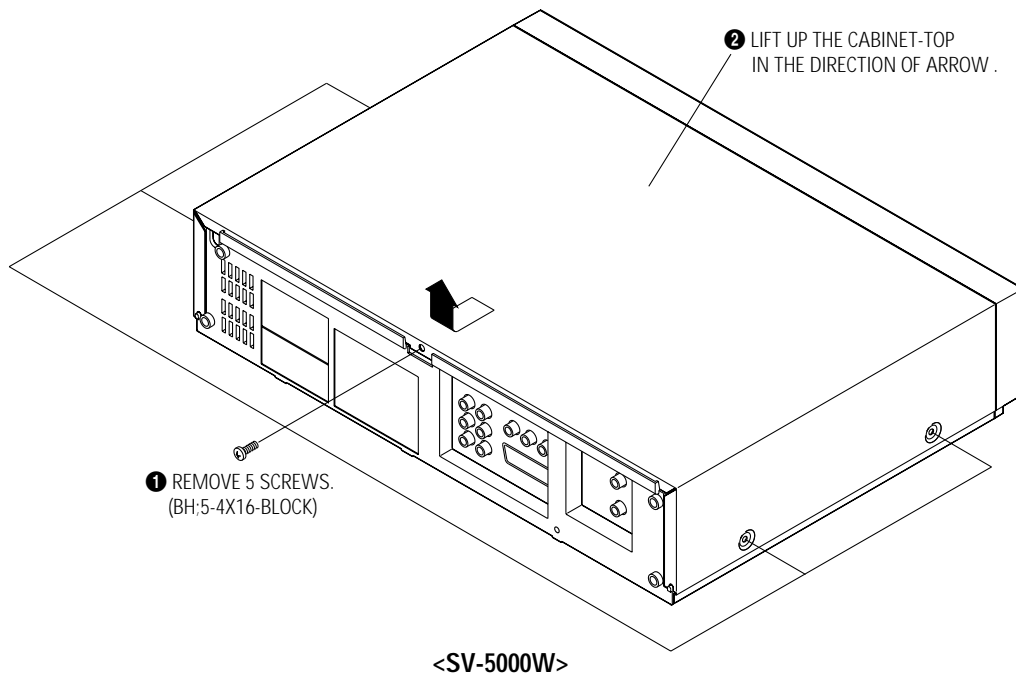
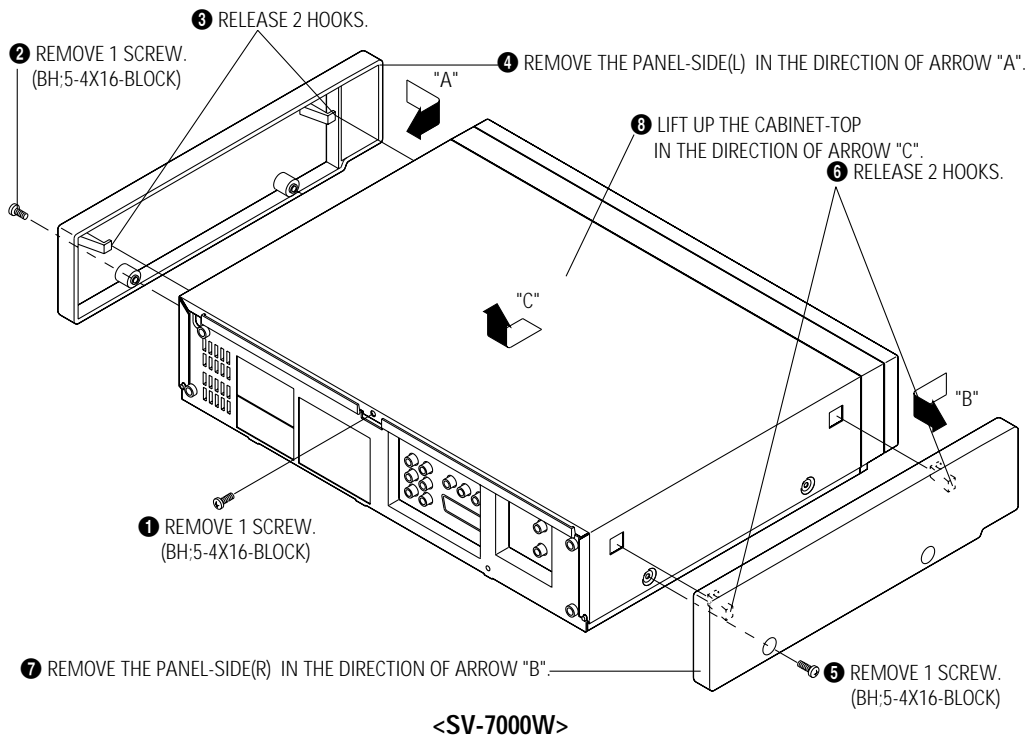


Fig. 4-1 Cabinet Top removal

4-1-2 Bottom Cover removal

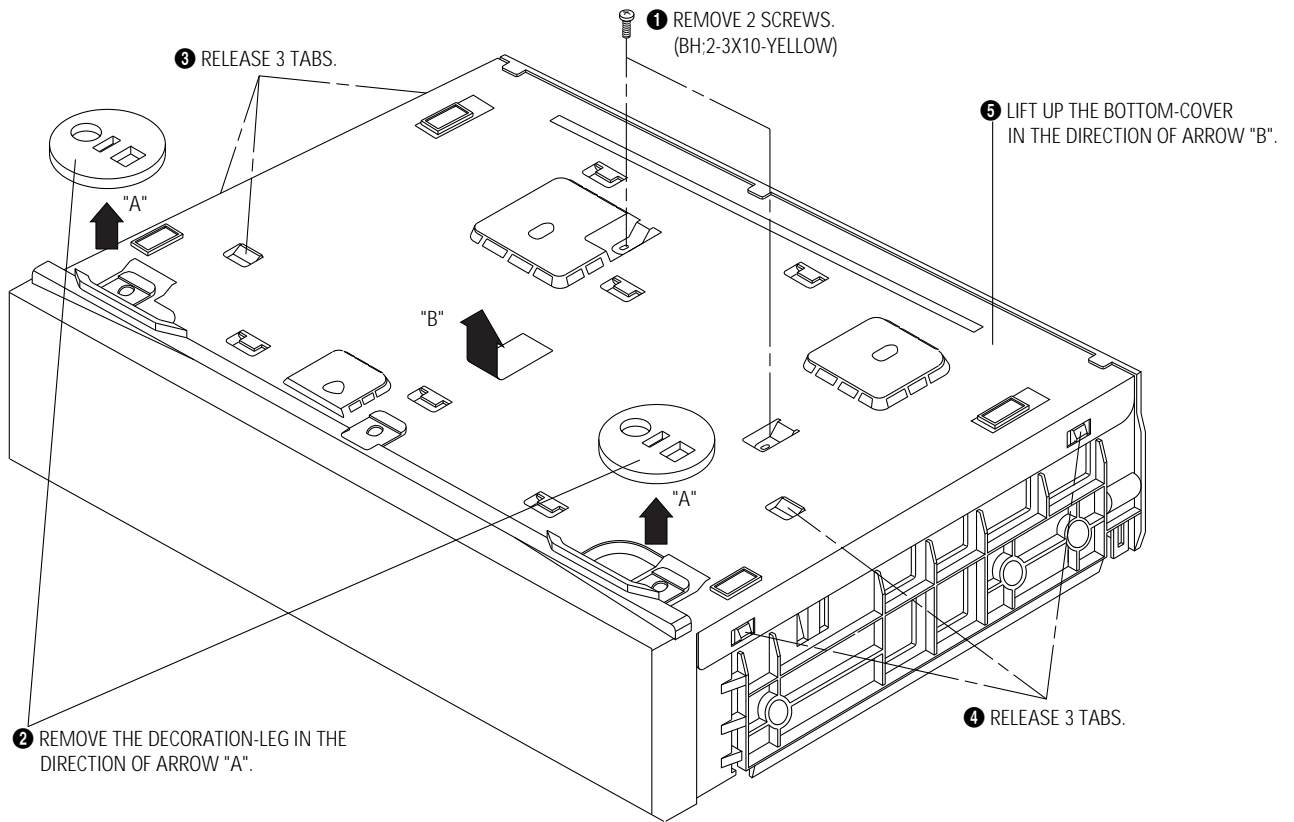
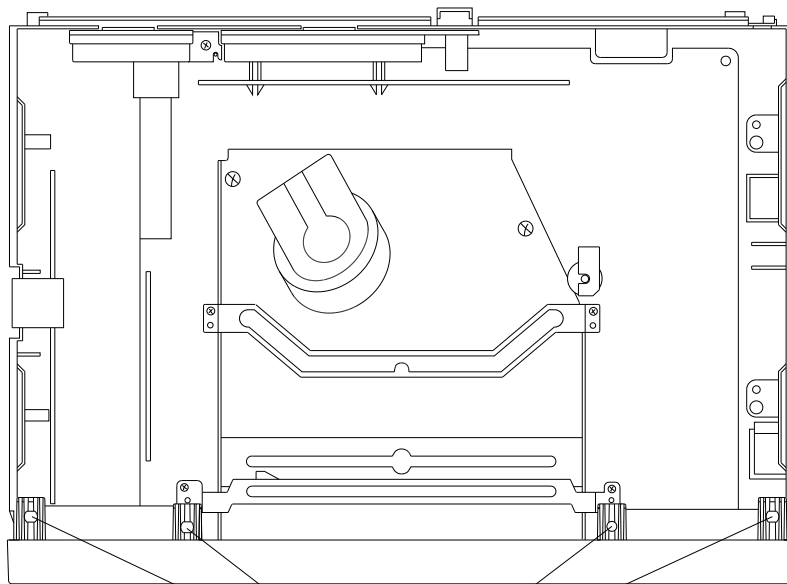


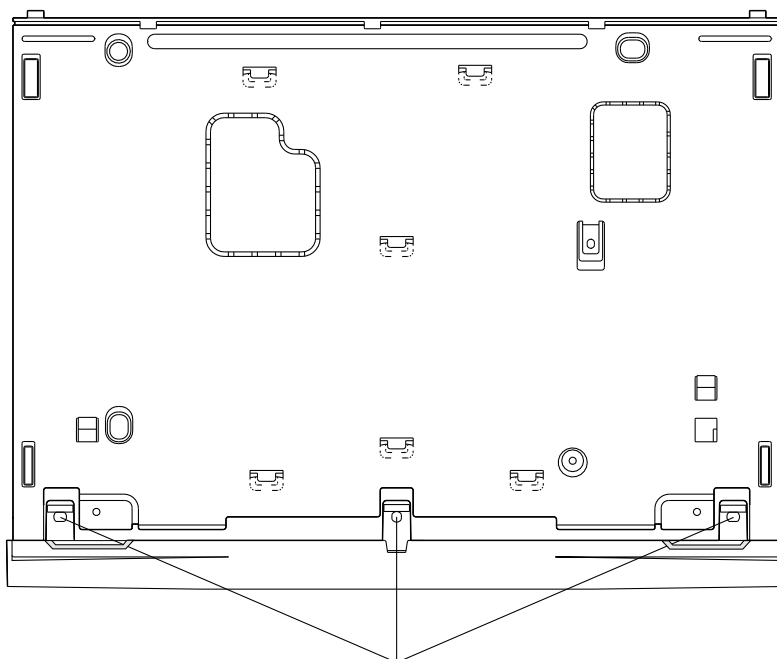
Fig. 4-2 Bottom Cover removal

4-1-3 Ass'y Front Panel removal



❶ RELEASE 4 HOOKS.

(Top view)



❷ RELEASE 3 HOOKS.

(Bottom view)

Fig. 4-3 Ass'y Front Panel removal

4-1-4 Ass'y Timer removal

Note : Take extreme care not to damage the PCB when removing it.

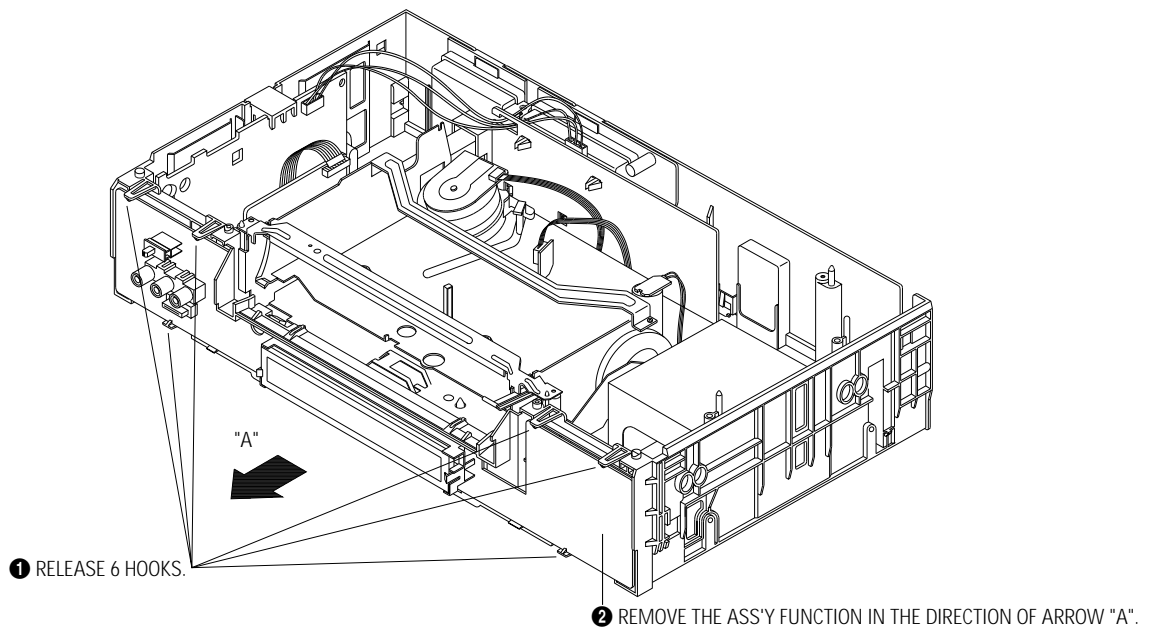


Fig. 4-4 Ass'y Timer removal

4-1-5 Ass'y Digital removal

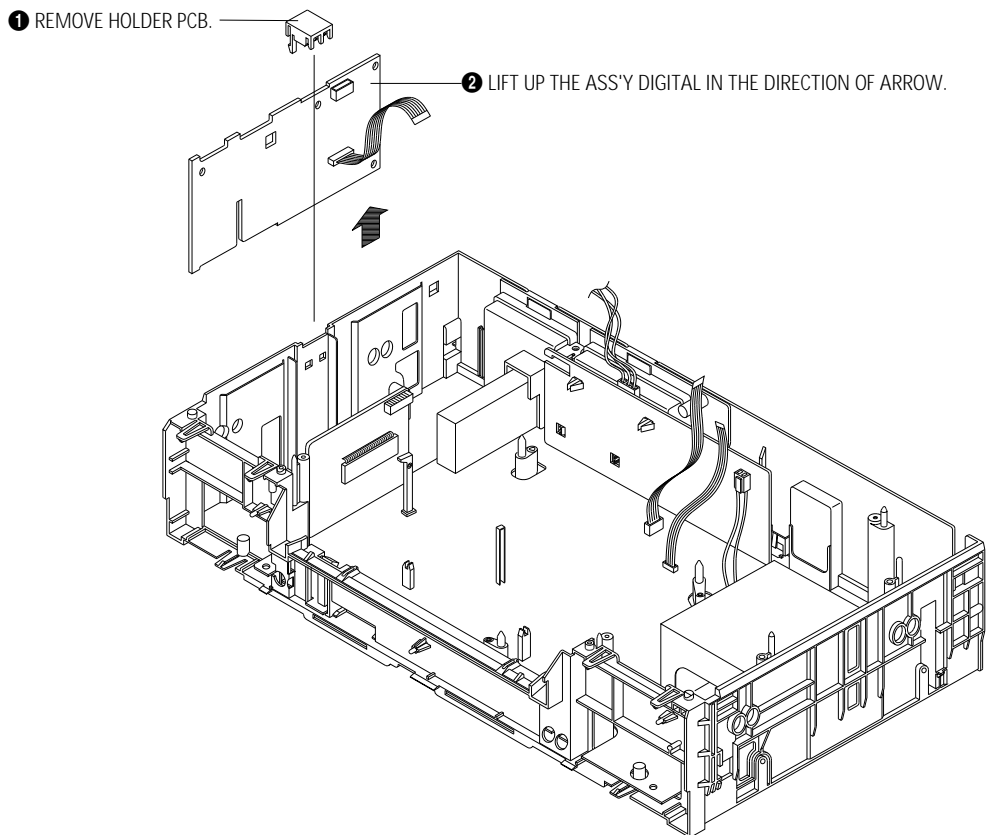


Fig. 4-5 Ass'y Digital removal

4-1-6 Chassis Unit removal

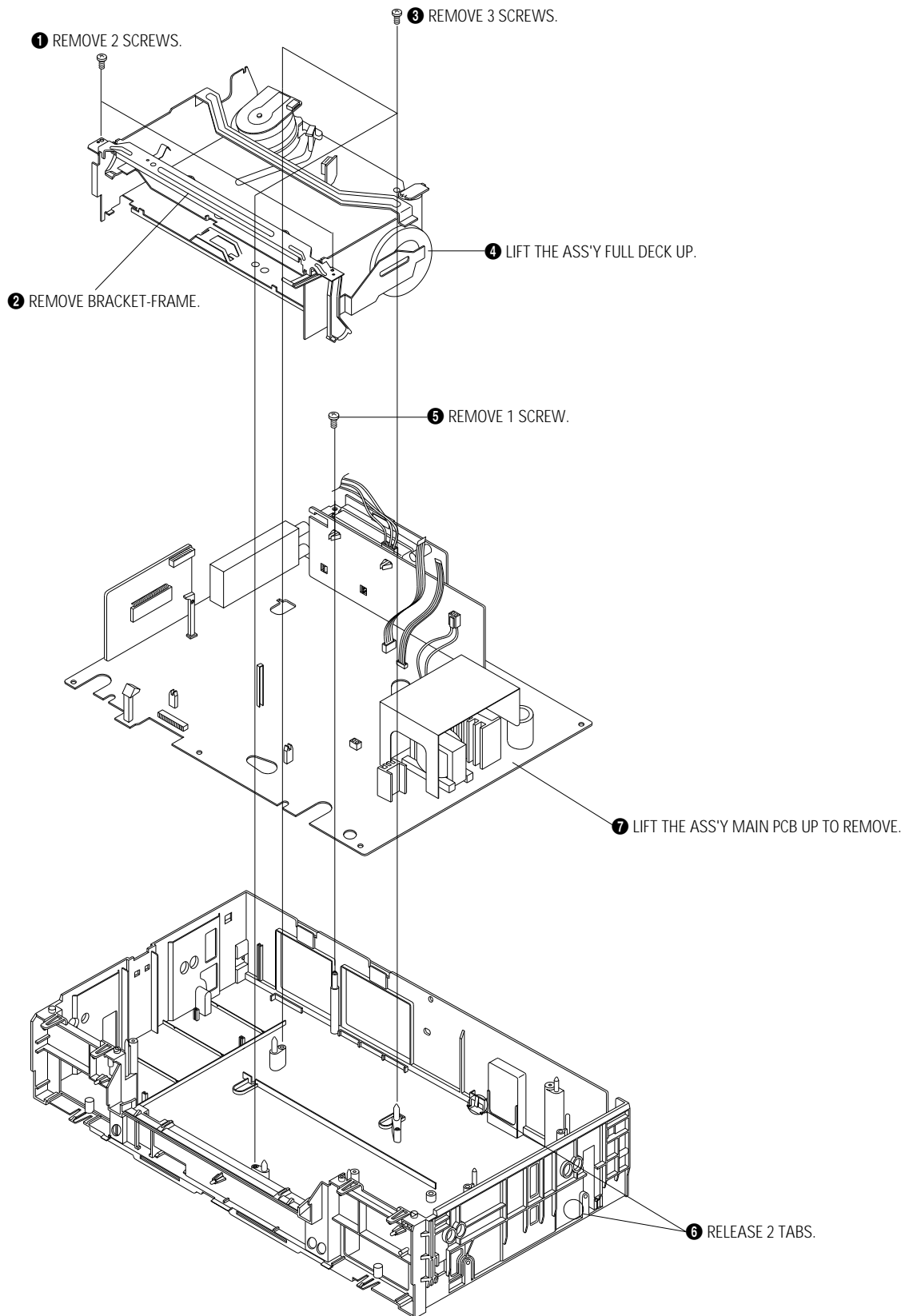


Fig. 4-6 Chassis Unit removal

4-2 Circuit Board Locations

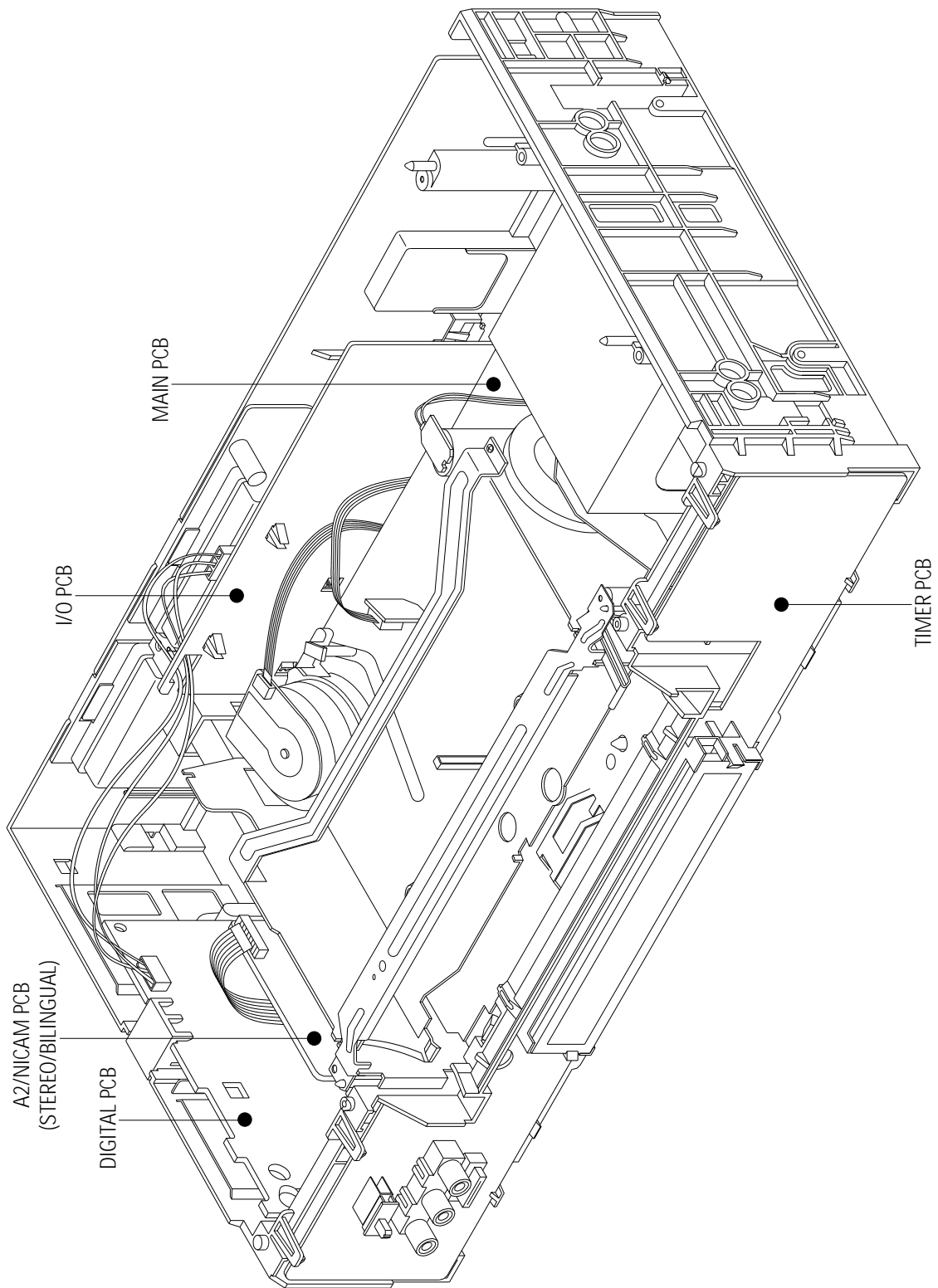
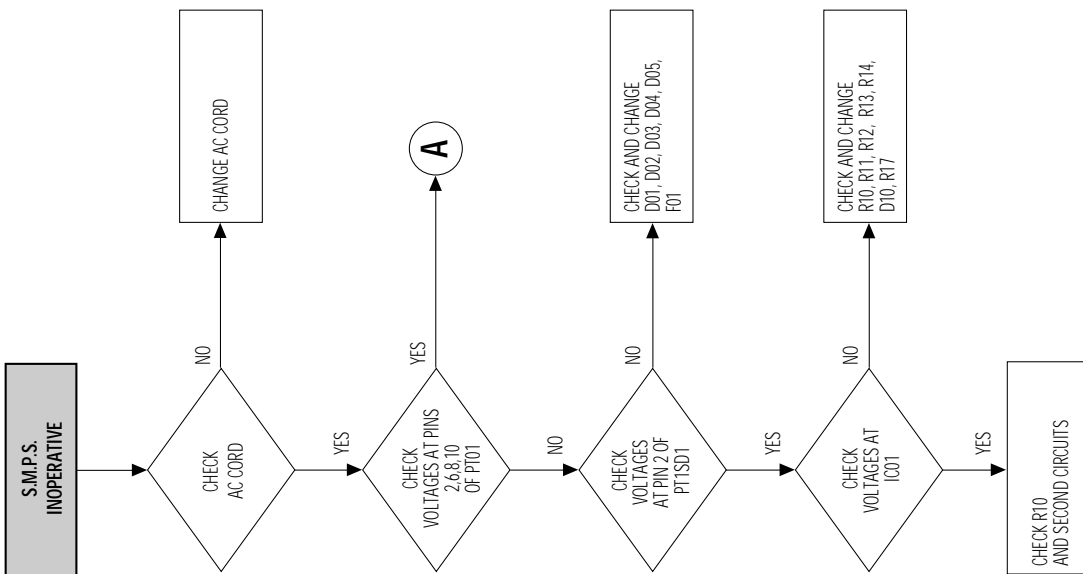
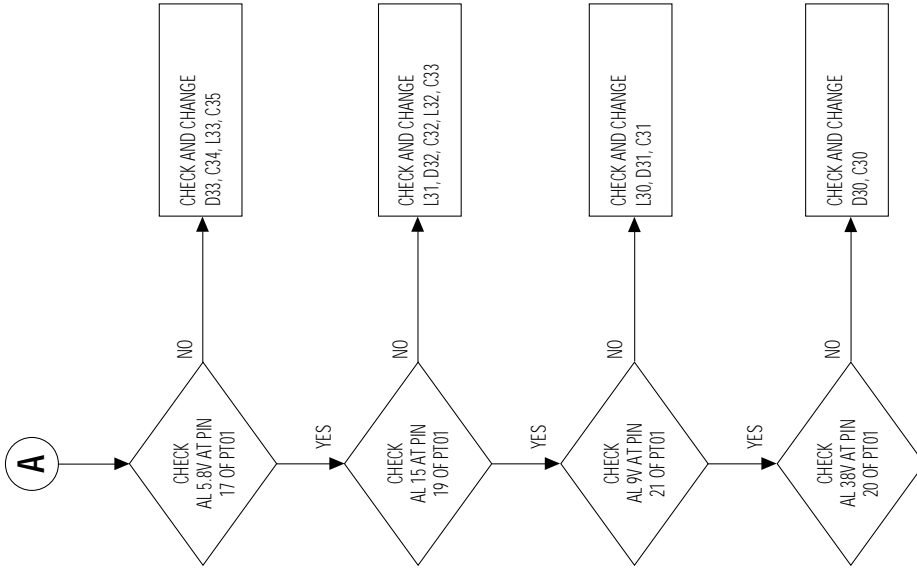
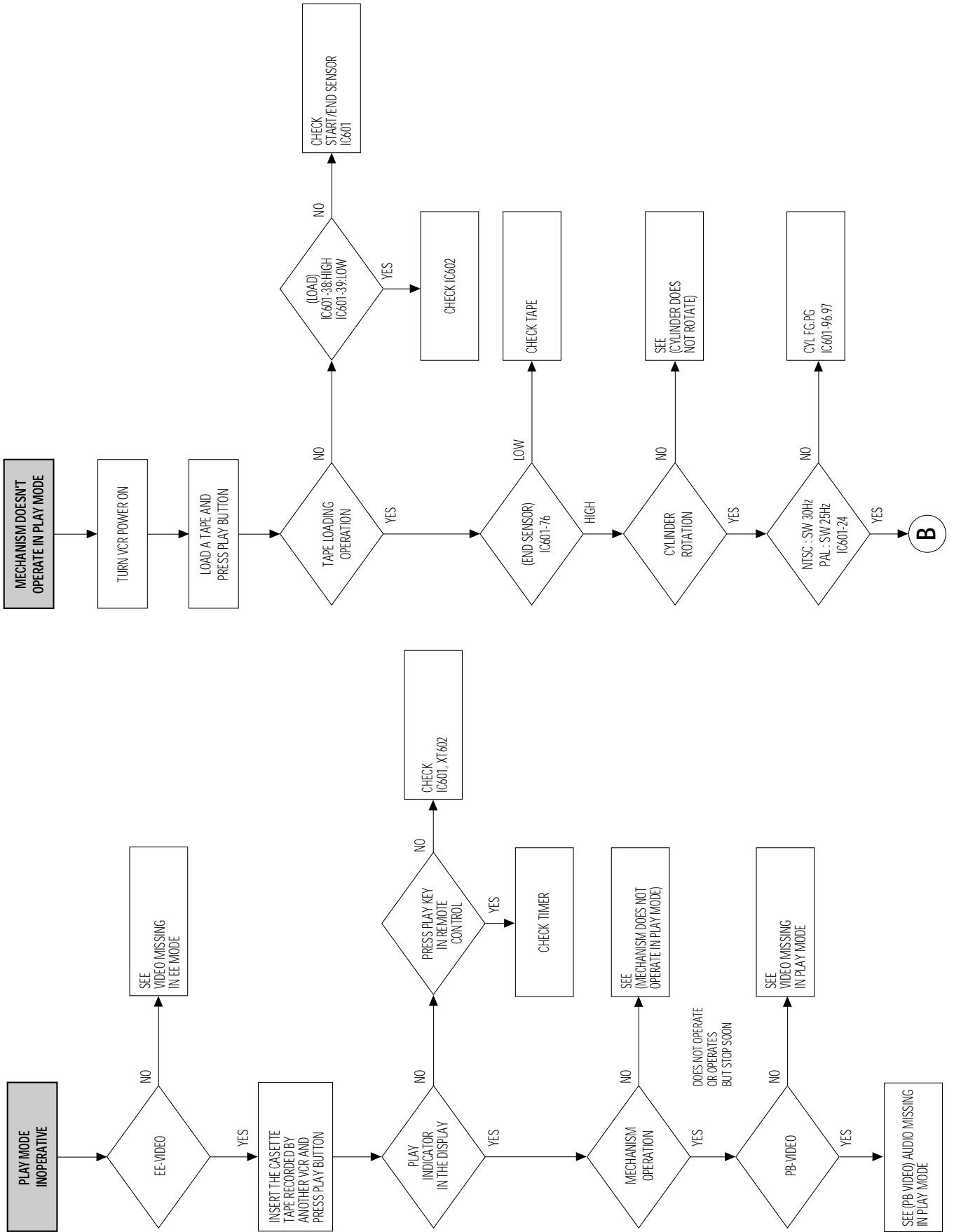
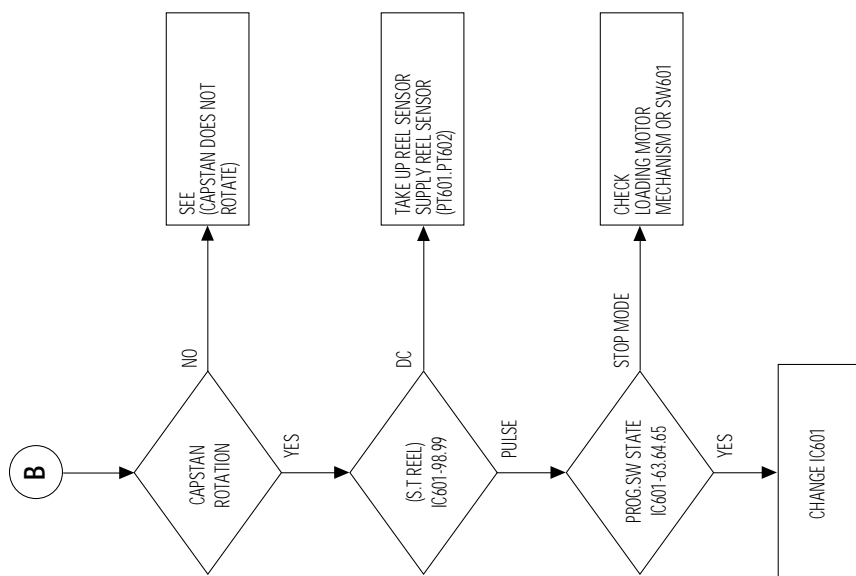
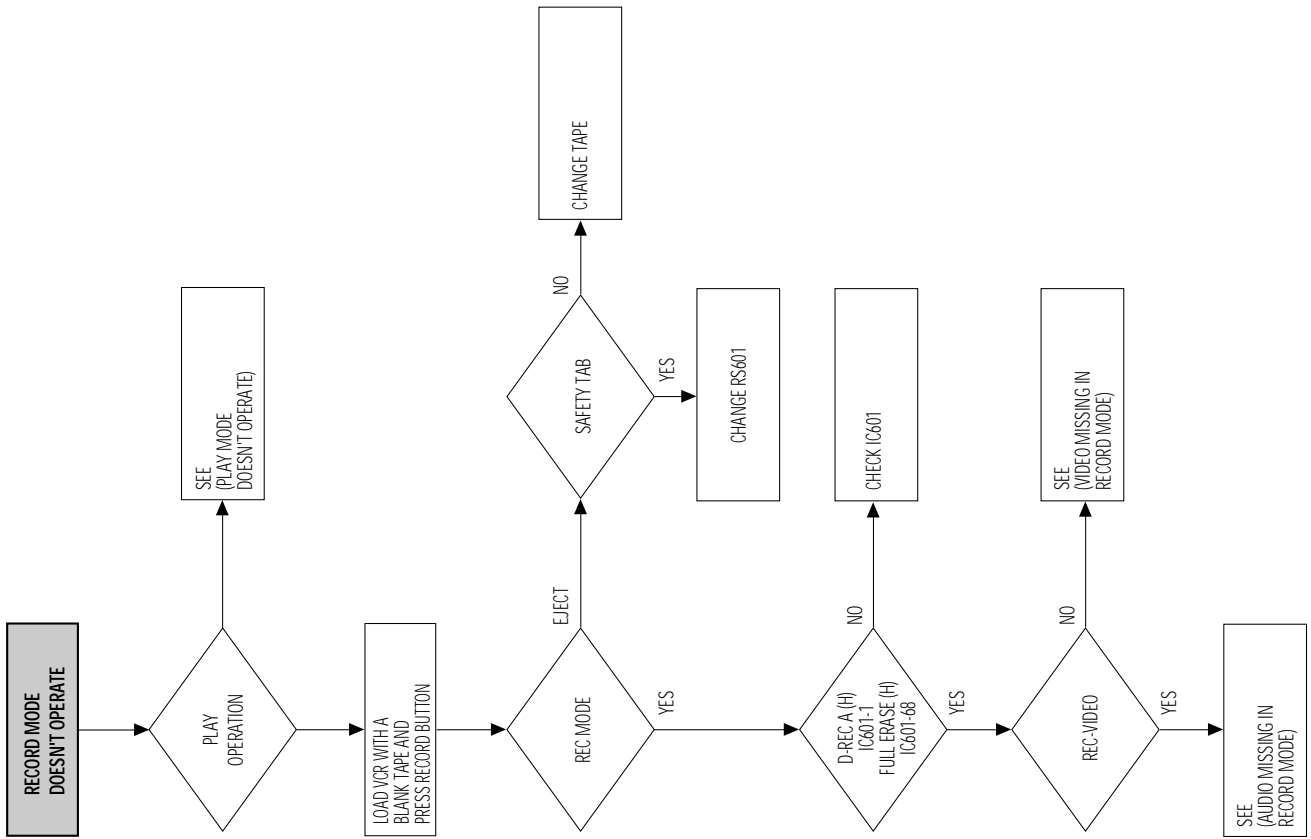


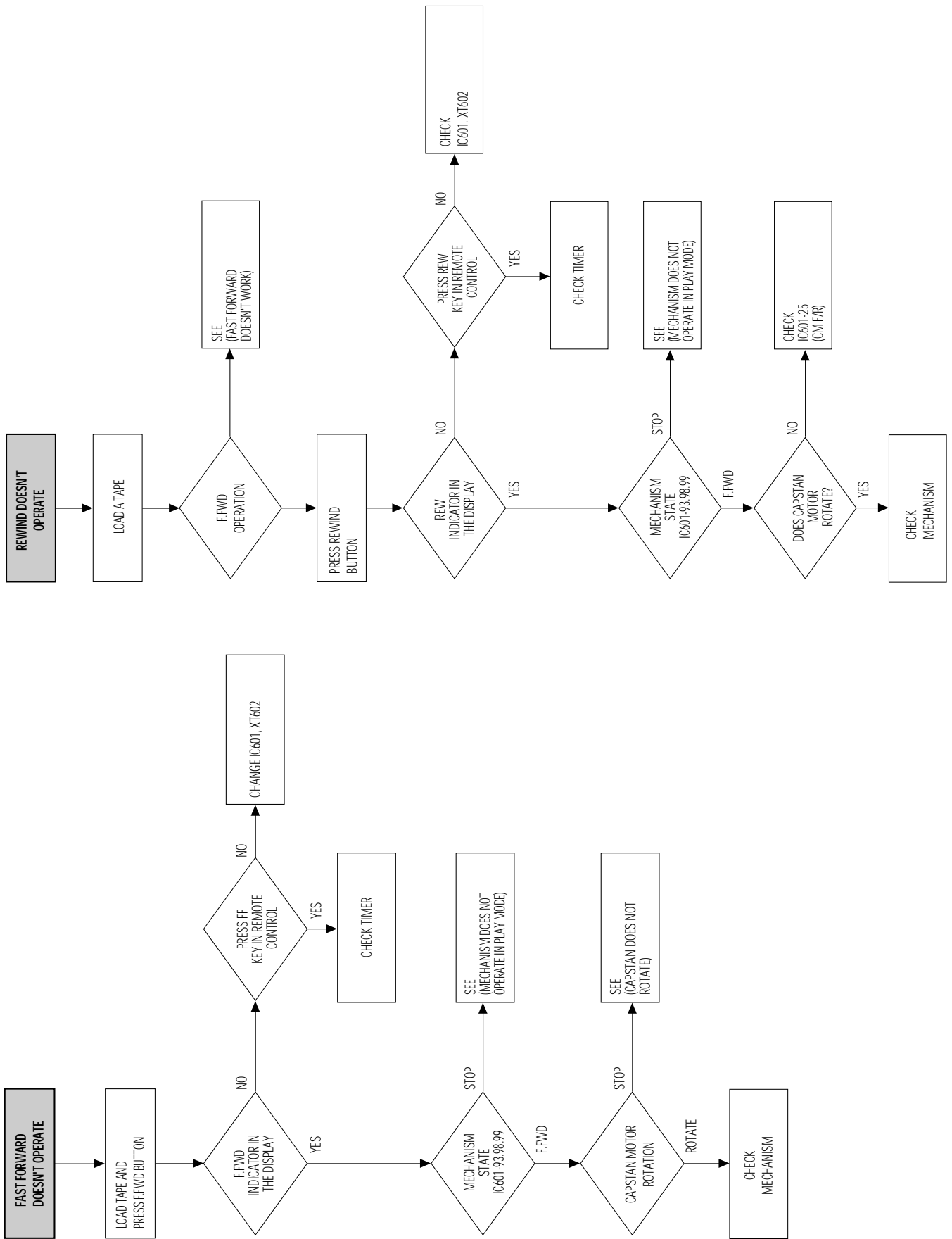
Fig. 4-7 Circuit Board Locations

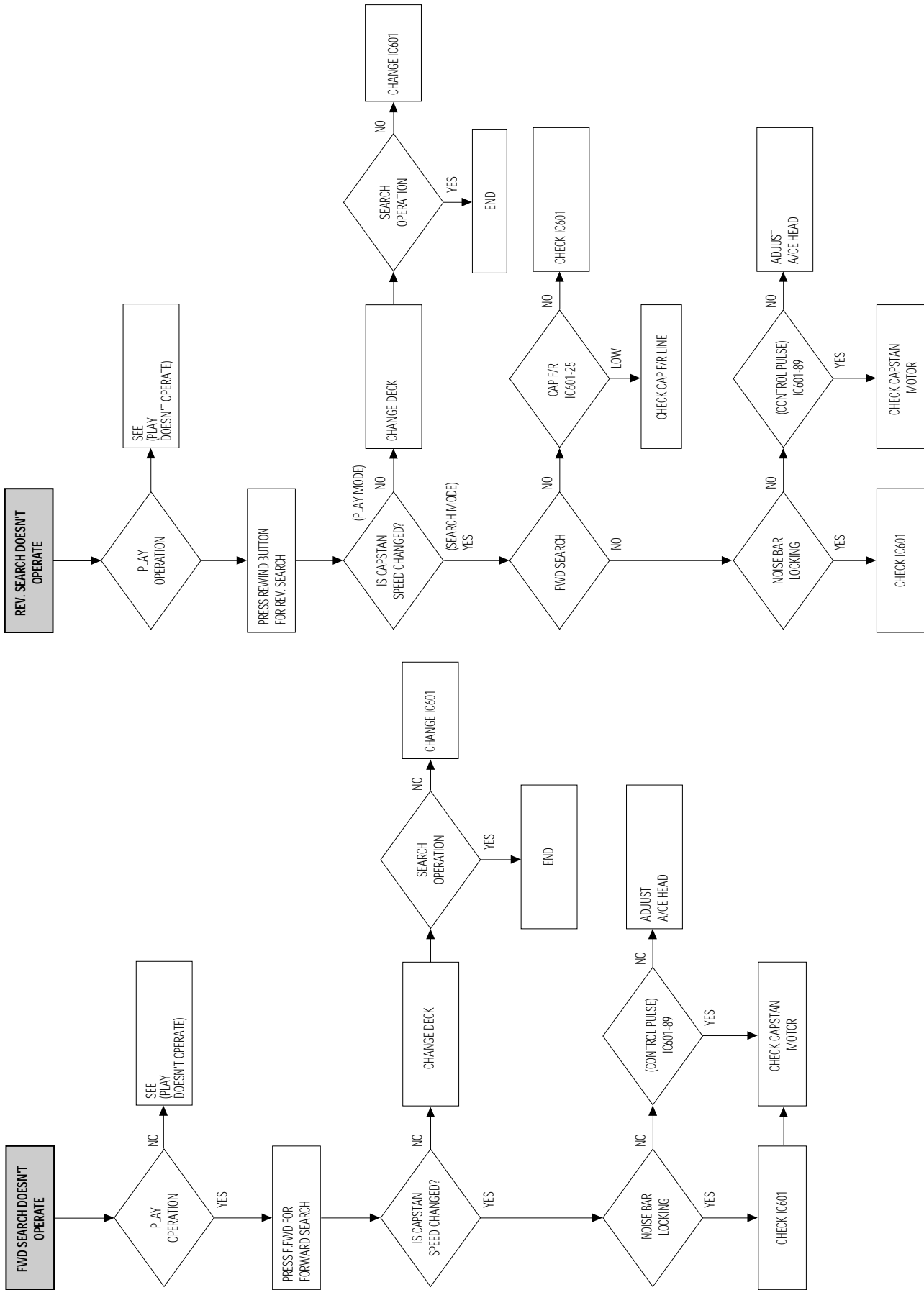
5. Troubleshooting

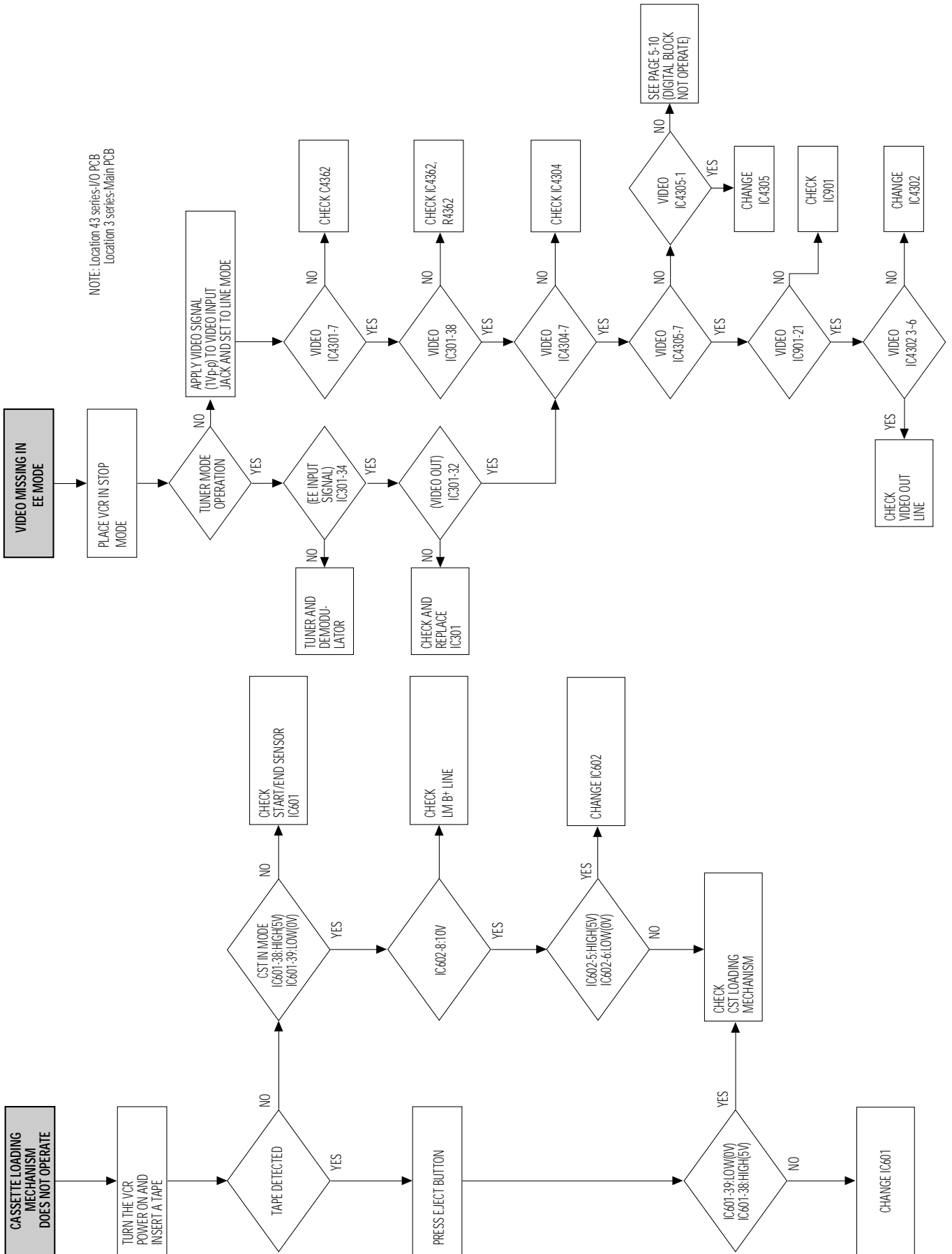




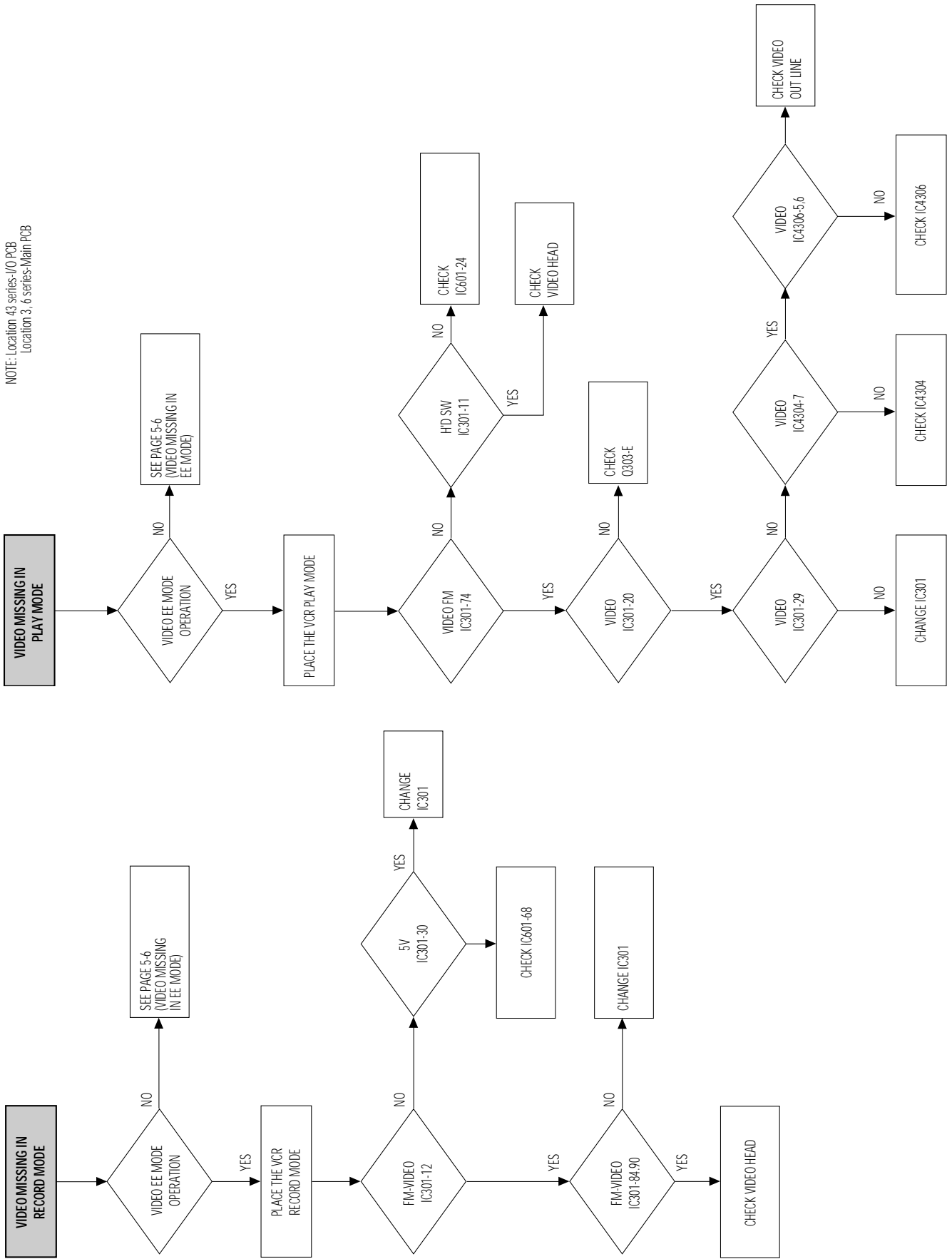




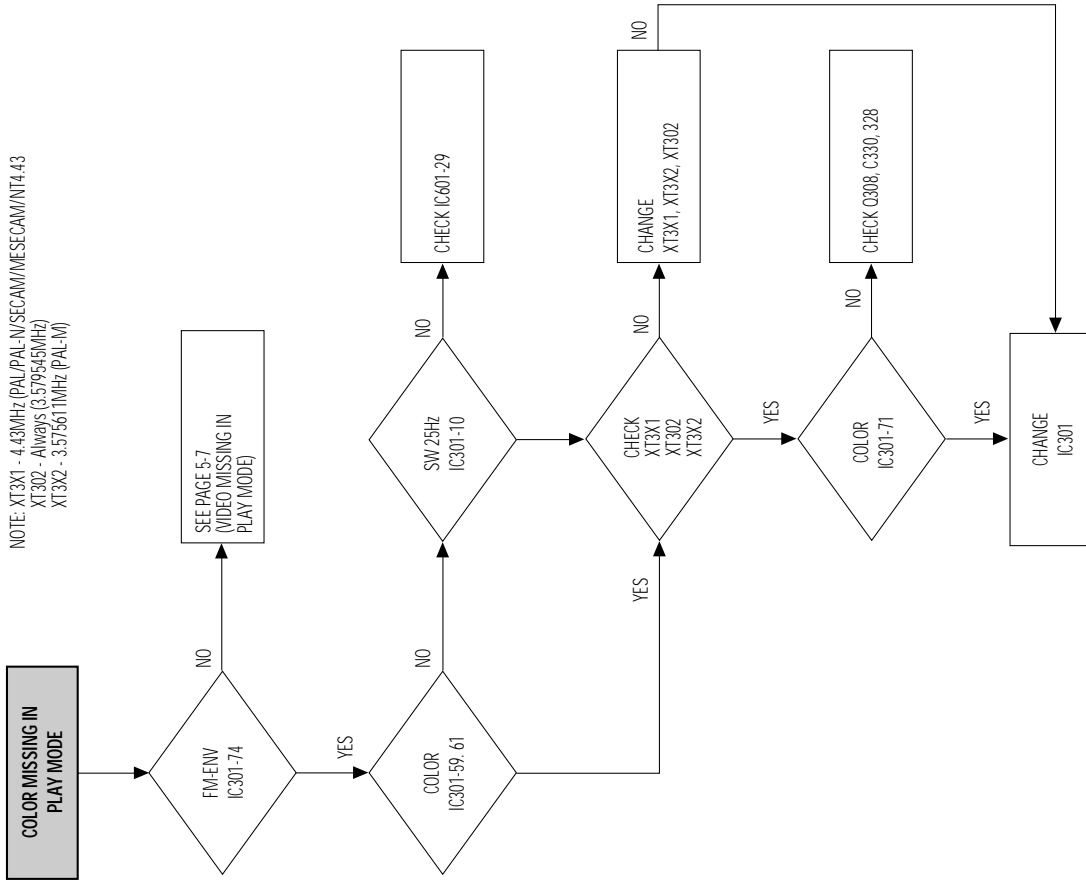




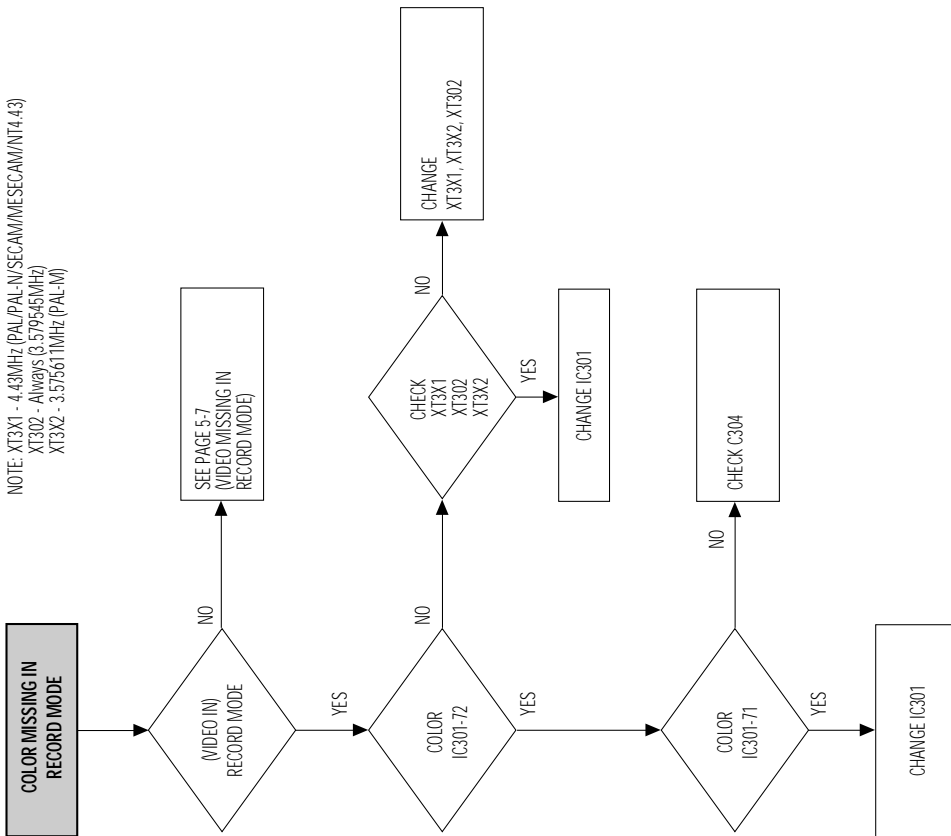
NOTE: Location 43 series-I/O PCB
Location 3, 6 series-Main PCB

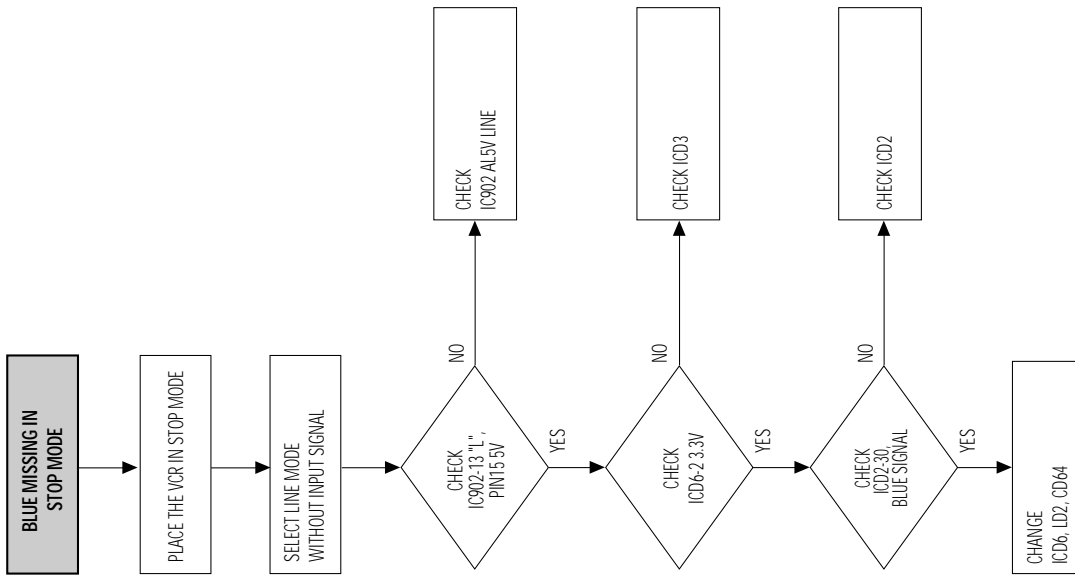
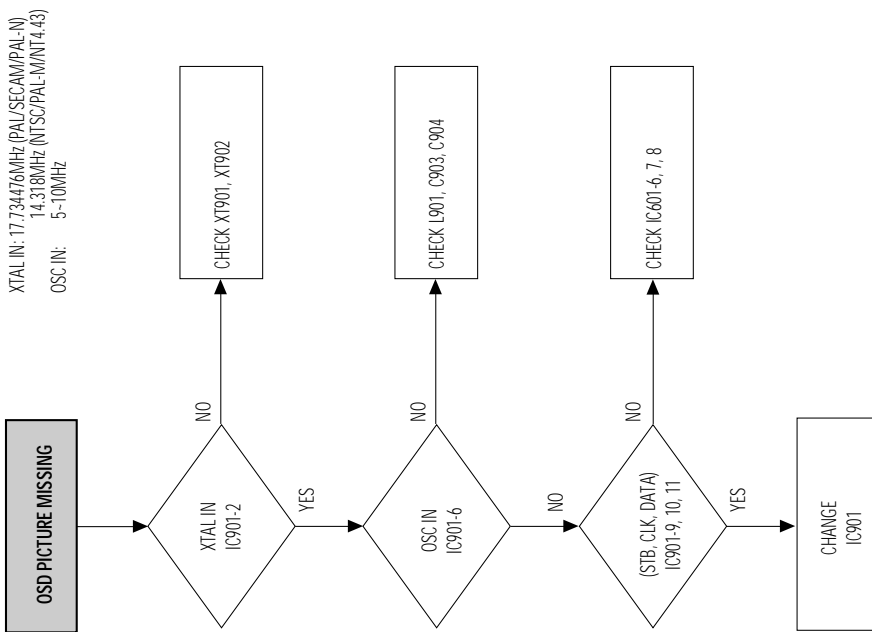


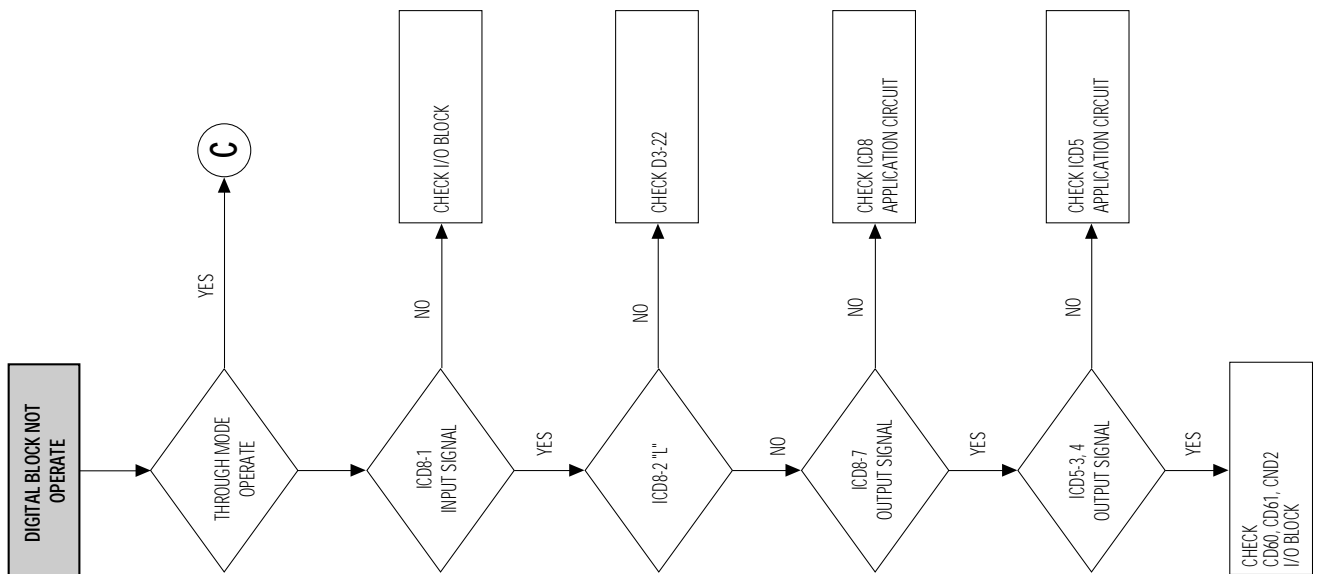
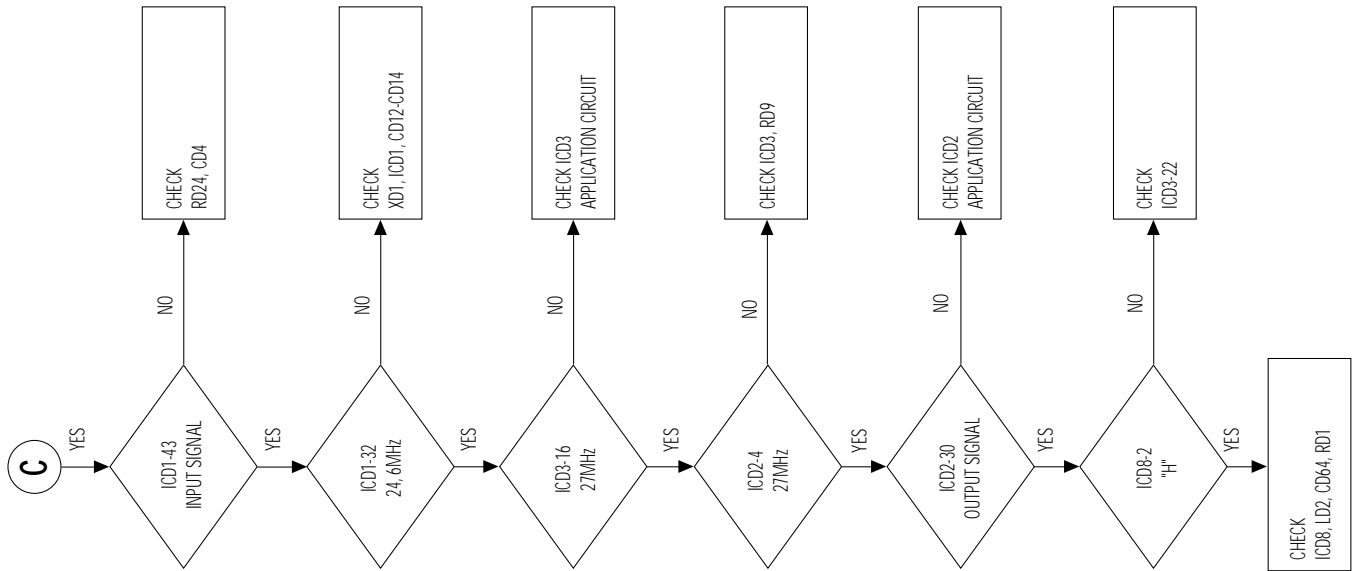
NOTE: XT3X1 - 4.43MHz (PAL/NTSC)/SECAM/NT4.43
 XT302 - Always (3.579545MHz)
 XT3X2 - 3.575611MHz (PAL-M)

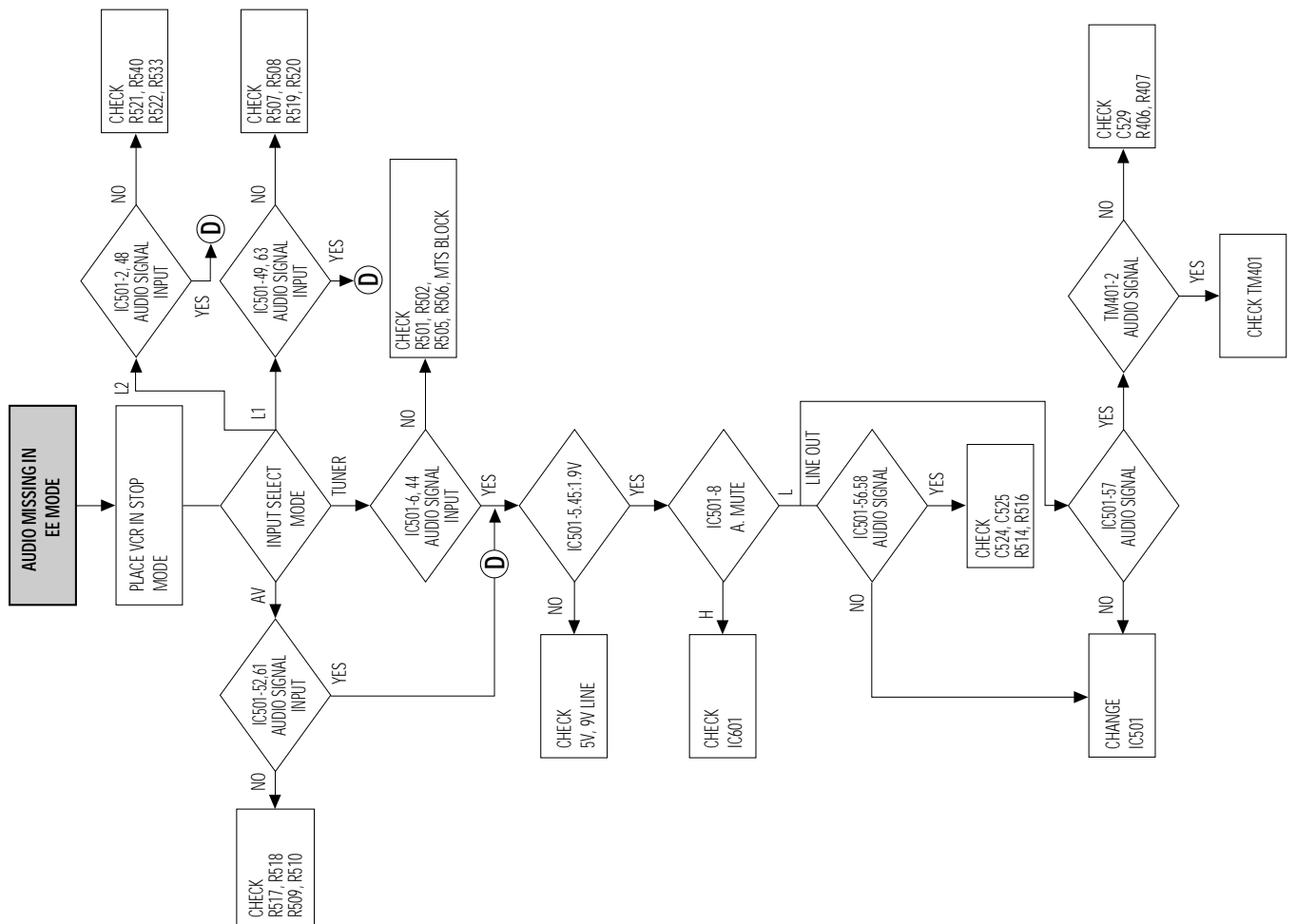
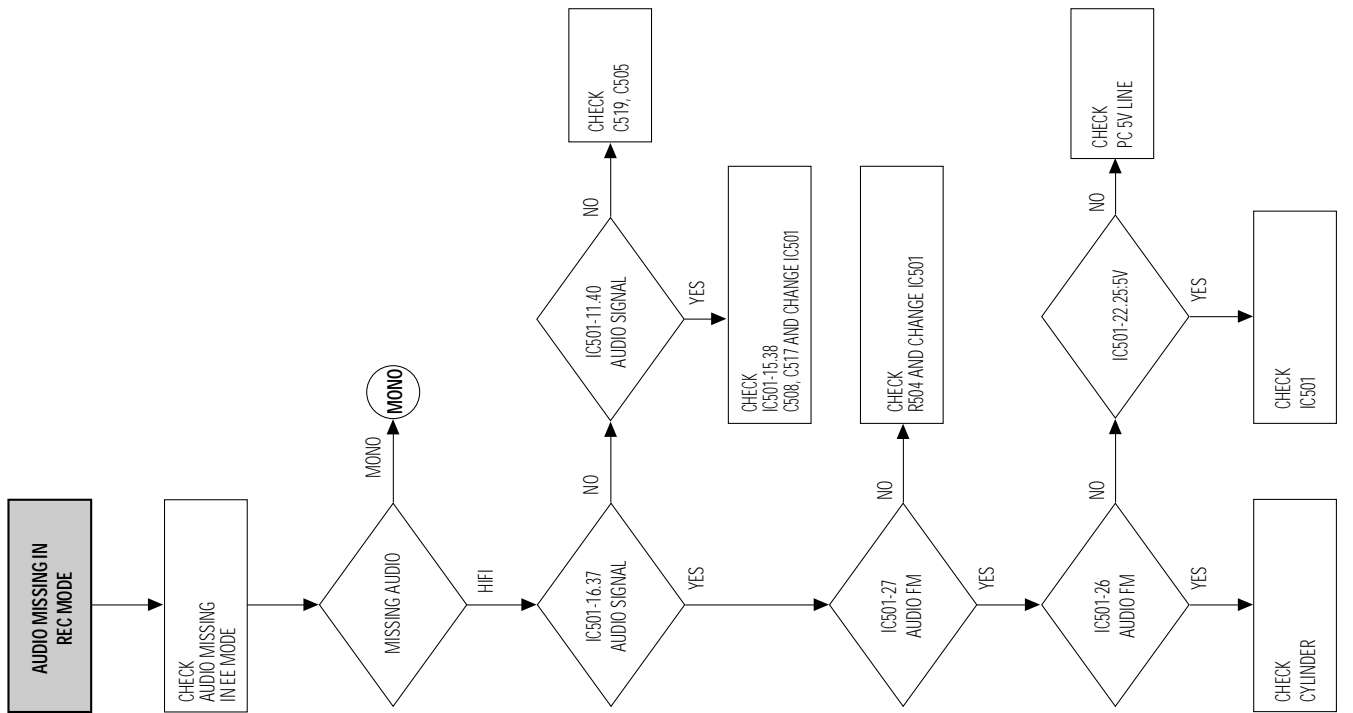


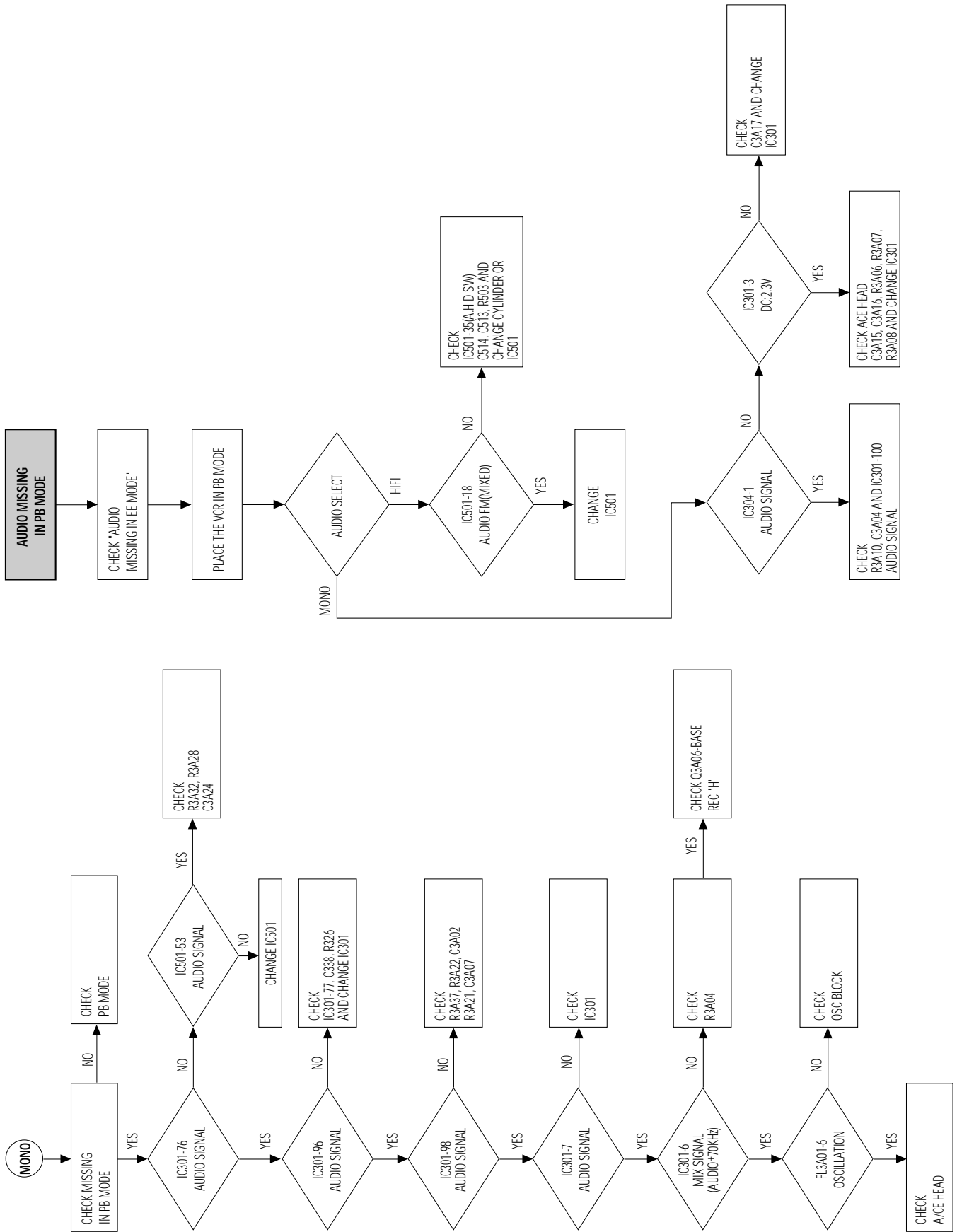
NOTE: XT3X1 - 4.43MHz (PAL/NTSC)/SECAM/NT4.43
 XT302 - Always (3.579545MHz)
 XT3X2 - 3.575611MHz (PAL-M)

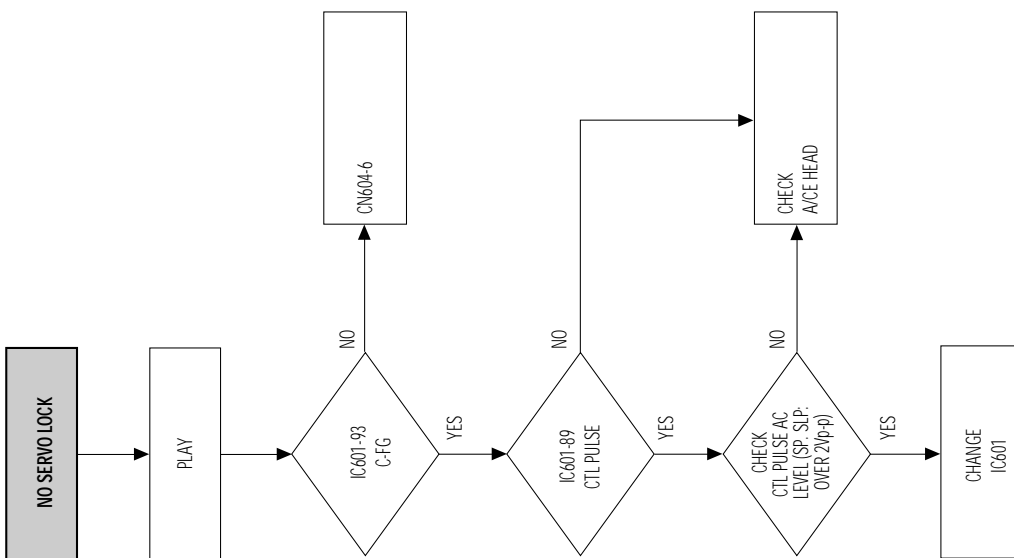
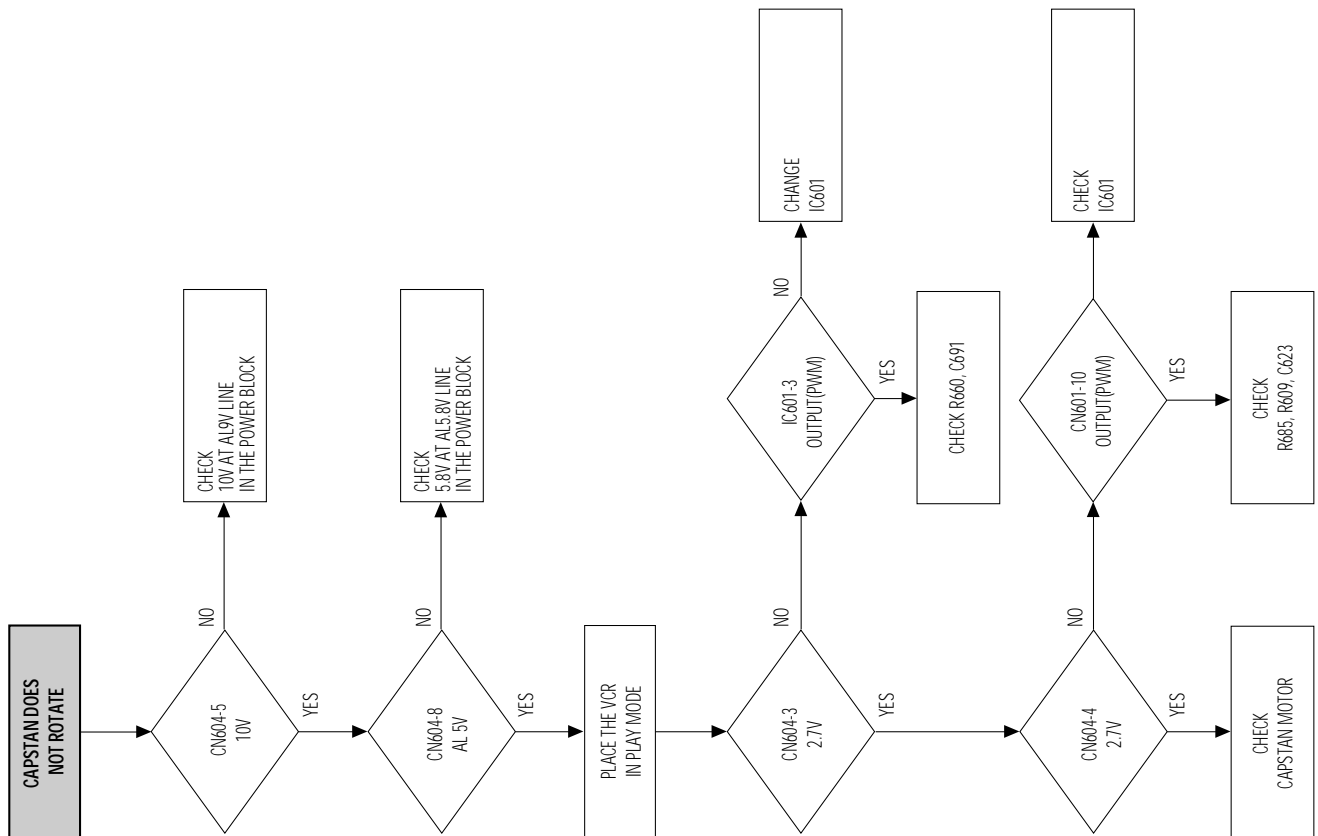


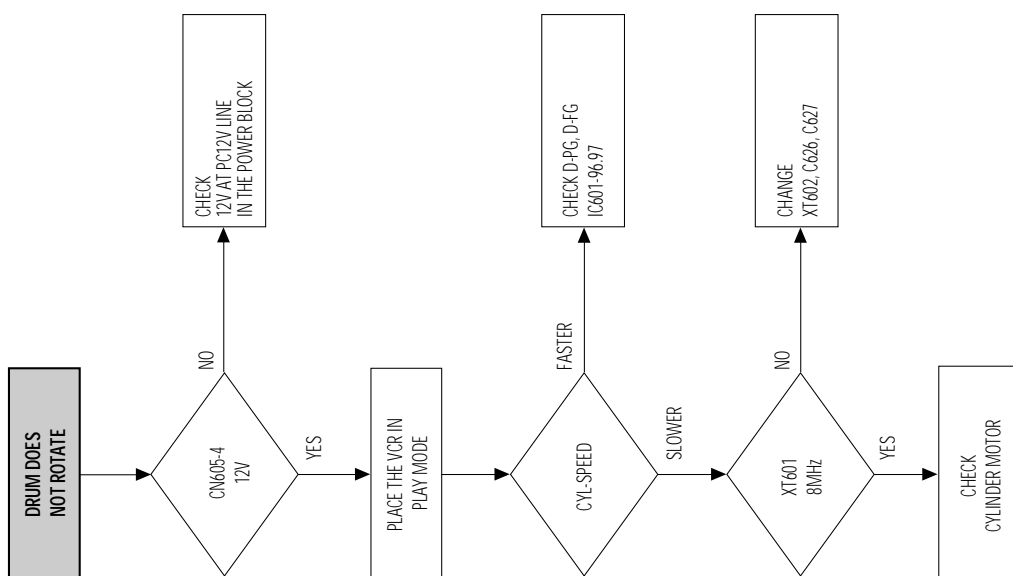










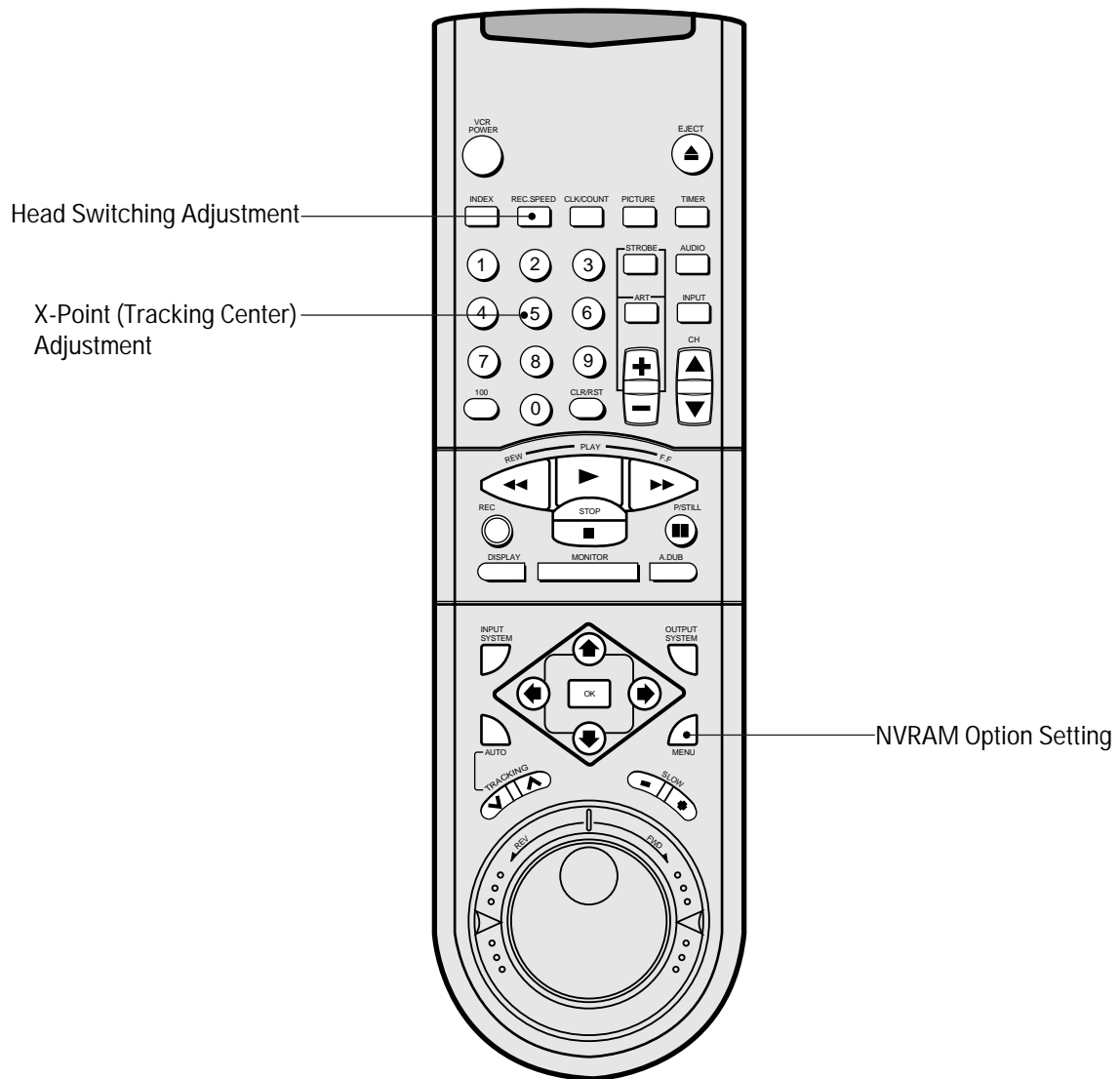


6. Alignment and Adjustment

6-1 Reference

- 1) X-Point (Tracking center) adjustment, "Head switching adjustment" and "NVRAM option setting" can be adjusted with remote control.
- 2) When replacing the Micom (IC601) and NVRAM (IC605 ; EEPROM) be sure to adjust the "Head switching adjustment" and "NVRAM option setting".
- 3) When replacing the cylinder ass'y, be sure to adjust the "X-Point" and "Head switching adjustment".
- 4) Among Samsung VCR remote control used for adjustment as a accessory, only the remote control that has figures buttons (0 ~ 9) is available for all adjustment regardless of chassis.
- 5) How to adjustment.
 - Press the "TEST" (SV-7000W ; SW711, SV-5000W ; SW718) button on Timer PCB to set the adjustment mode.
 - If the corresponding adjustment button is pressed, the adjustment is performed automatically.
 - If the adjustment is completed, be sure to turn the power off.

6-1-1 Location of adjustment button of remote control



Remote Control for adjustment is not supplied as a Service Jig.

Fig. 6-1

6-1-2 Test point location for adjustment mode setting

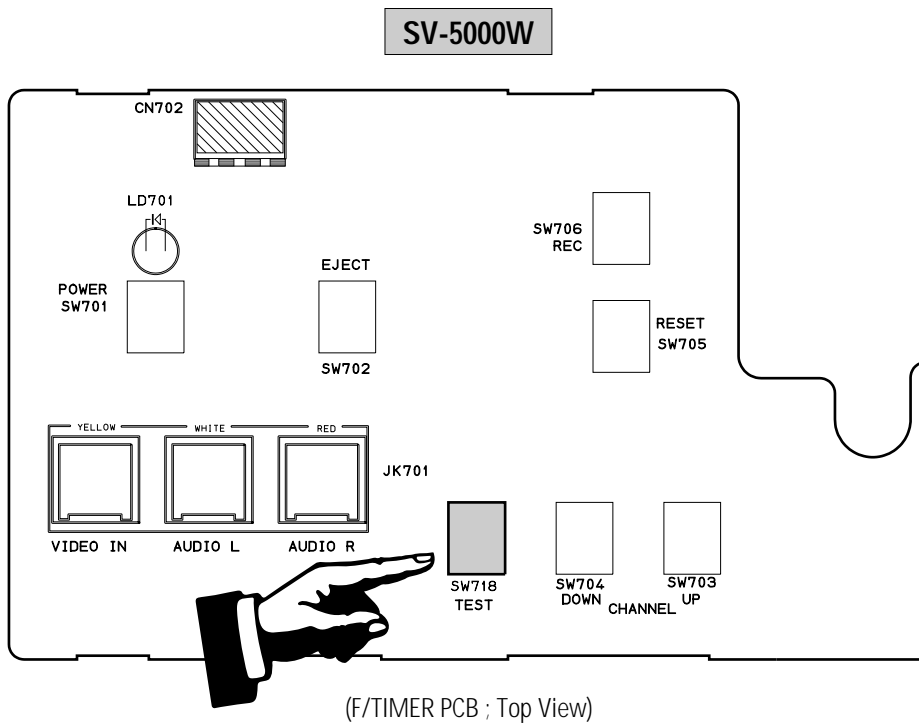
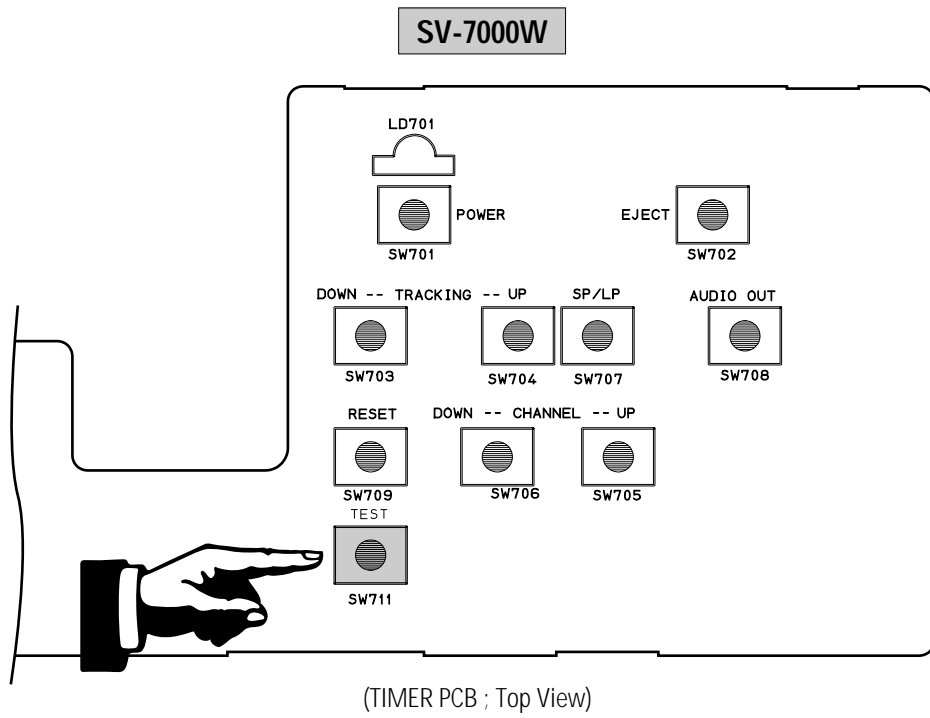


Fig. 6-2

6-2 Mechanical Adjustment

Note : Refer to the Mechanical Manual "DX-9R (AC68-00001A)" for the adjustment and confirmation of ass'y full deck.

6-2-1 The number and position of test point

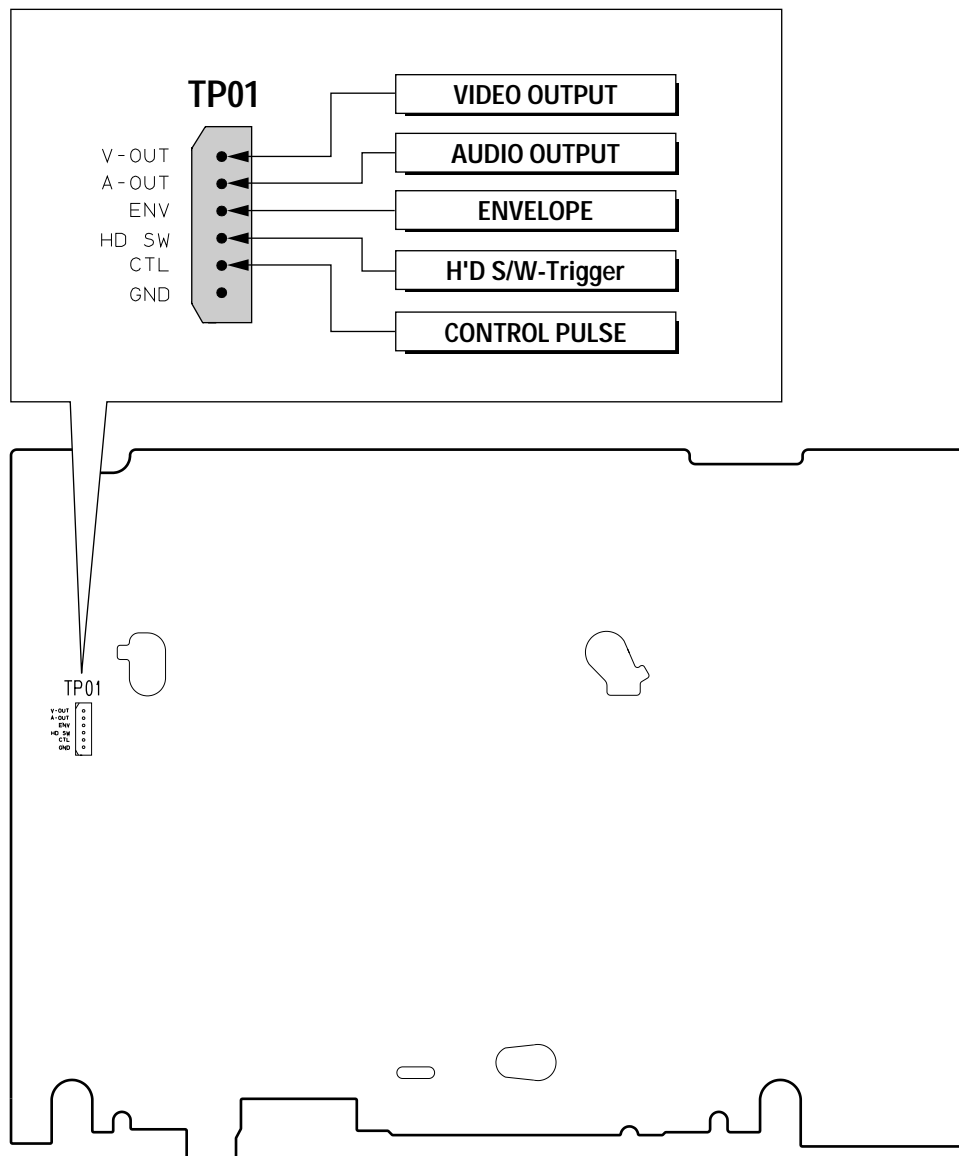


Fig. 6-3 Location of Test point (Main PCB-Top View)

6-2-2 ACE Head Position (X-Point) Adjustment (See the 2-2-1(d) ACE Head Position (X-Point) Adjustment on page 2-2 of the Mechanical Manual)

- 1) Playback the alignment tape (Color bar).
- 2) Press the "TEST" (SV-7000W ; SW711, SV-5000W ; SW718) button on Timer PCB to set the adjustment mode. (See Fig. 6-2)
- 3) Press the "5" button of remote control then adjustment is operated automatically. (See Fig. 6-1)
- 4) Connect the CH-1 probe to TP01 (Envelope) the CH-2 probe to TP01 (H'D switching pulse) and then trigger to CH-1.
- 5) Insert the (-) driver into the X-Point adjustment hole and adjust it so that envelope waveform is maximum.
- 6) Turn the Power off.

6-5 NVRAM Option Setting

- 1) NVRAM Option is adjusted at production line basically.
- 2) In case Micom (IC601) and NVRAM (IC605 ; EEPROM) is replaced, be sure to set the corresponding option number of the repaired model. (If the option is not set, the unit is not operated.)

- 1) Press the "TEST" (SV-7000W ; SW711, SV-5000W ; SW718) button on Timer PCB to set the adjustment mode. (See Fig. 6-2)
- 2) Press the "MENU" button on the remote control about 5 seconds then option setting display is appeared. (See Fig. 6-5)
- 3) Select the option number (See Table 6-1) of corresponding model with "▶" and "◀" button on the remote control.
- 4) If selecting the option number is completed, press the "▲" button of remote control. (If "STOP" button is pressed, the selected number is changes reversed color. ; See Fig. 6-5)
- 5) Press the "OK" button of remote control again to store the option number. ("PLEASE WAIT" is displayed for a second as shown Fig. 6-6 and this setting is completed.)
- 6) Turn the Power off.

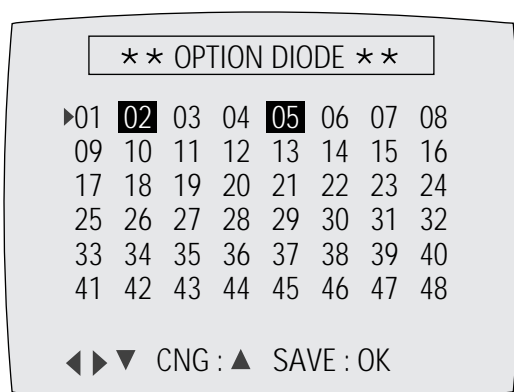


Fig. 6-5



Fig. 6-6

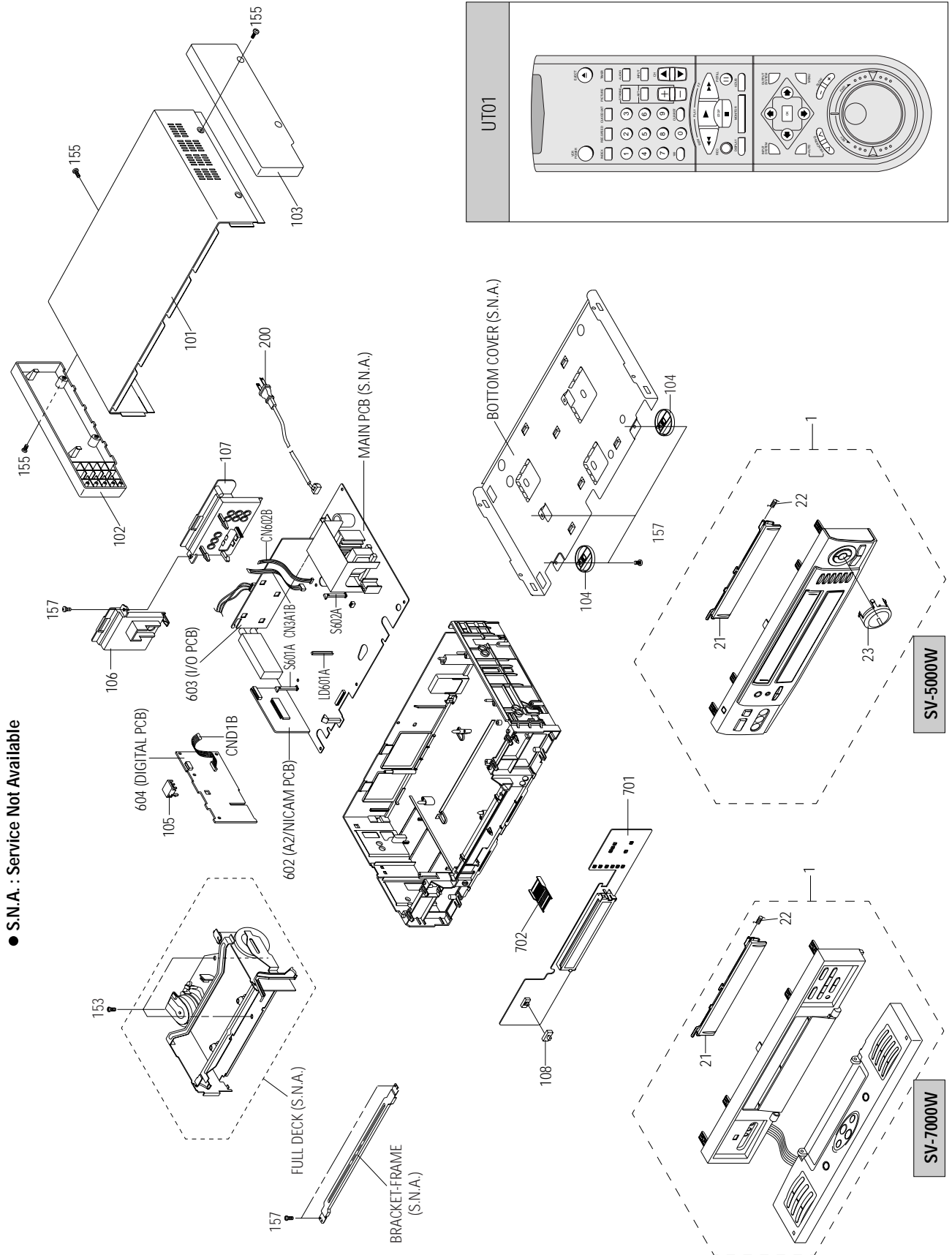
<Table 6-1>

MODELS	TV SYSTEM	OPTION NUMBER
SV-7000W	NTSC/PAL	1, 2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16
SV-5000W	NTSC	1, 2, 3, 4, 6, 8, 13, 14, 15
	PAL	1, 2, 3, 4, 5, 9, 10, 11, 13, 14, 15

7. Exploded View and Parts List

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7-3 Mechanical Parts (Bottom Side) - - - - -	7-6

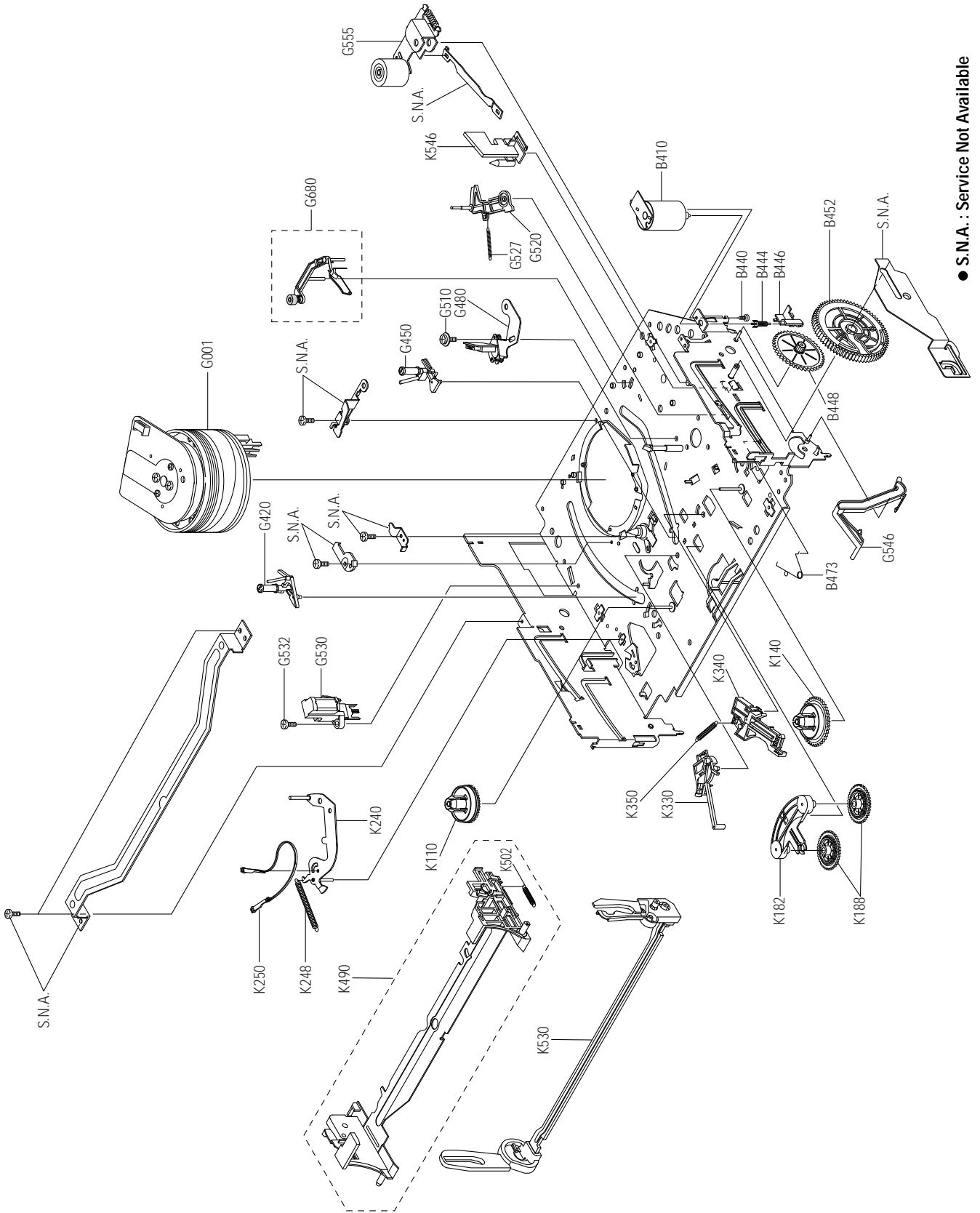
7-1 Cabinet Assembly



Loc. No	Parts No.	Description ; Specification	Remark
1	Refer to table below	ASSY-PANEL FRONT	
21	Refer to table below	DOOR-CASSETTE	
22	AC61-62003A	SPRING;-;SUS304,(GE/RCA),-,-,-,-	
23	AC64-00094A	DECORATION-RING;-;ABS94HB,-,-,BLK,-,SV-3	
101	Refer to table below	CABINET-TOP-ASSY	
102	AC97-00484A	ASSY-PANEL SIDE L	SV-7000W ONLY
103	AC97-00485A	ASSY-PANEL SIDE R	SV-7000W ONLY
104	Refer to table below	LEG-DECORATION	
105	AC61-20237A	HOLDER;ABS94HB,T2,BLK,23.1*18.5,-,-	
106	AC61-00029A	CONNECTOR-BOARD;-;HIPS94HB,-,T2,59,-,BLK	
107	AC61-00028A	CONNECTOR-BOARD;-;HIPS94HB,-,T2,128.5,-,	
108	AC64-11009A	KNOB-SLIDE;-;ABS,HB,BLK,-,SV-300W	SV-7000W ONLY
153	AC60-12126A	SCREW-BH;-;BH,-,4*12,FE,FZY,-,-,-	
155	AC60-12134A	SCREW-TAP BH;-;BH,-,2-4X16,-,FE	
157	AC60-10063A	SCREW-TAPTITE;BH,+,-,M3,L12,ZPC3,SWRCH18	
200	AC39-10200N	POWER-CORD;EP2	U.S.A./CANADA ONLY
	AC39-10014A	POWER-CORD;EP2	JAPAN ONLY
	AC39-12022K	POWER-CORD;FITTED	U.K./HONGHONG ONLY
	AC39-10015A	POWER-CORD;AP2	AUSTRALIA ONLY
	AC39-10019A	POWER-CORD;CP2	COMMOM
602	Refer to table below	ASSY-PCB-NICAM;SV-5000W	
603	AC92-00172A	ASSY-PCB-IO;SV-7000W/5000W	
604	AC92-00225A	ASSY-PCB-DIGITAL;SV-7000W/5000W	
701	Refer to table below	ASSY-PCB-TIMER;SV-7000W	
702	3711-003460	CONNECTOR-HEADER;NOWALL,20P,1R,1.5MM,STR	
CN3A1B	3809-001111	CABLE-FLAT;30V,80C,130mm,7P,1.25mm,UL289	
CN602B	3809-001149	CABLE-FLAT;30V,80C,120MM,5P,1.25MM,UL289	
CND1B	3809-001150	CABLE-FLAT;30V,80C,120MM,14P,1.25MM,UL28	
LD601A	AC61-21009A	HOLDER-LED;-;POM(M90-44),-;BLK,-,X-9	
S601A	AC61-21008A	HOLDER-SENSOR;-;POM(M90-44),-;BLK,-,X-9	
S602A	AC61-21008A	HOLDER-SENSOR;-;POM(M90-44),-;BLK,-,X-9	
UT01	Refer to table below	REMOCON-ASSY;-;NR4250,-,50KEY	

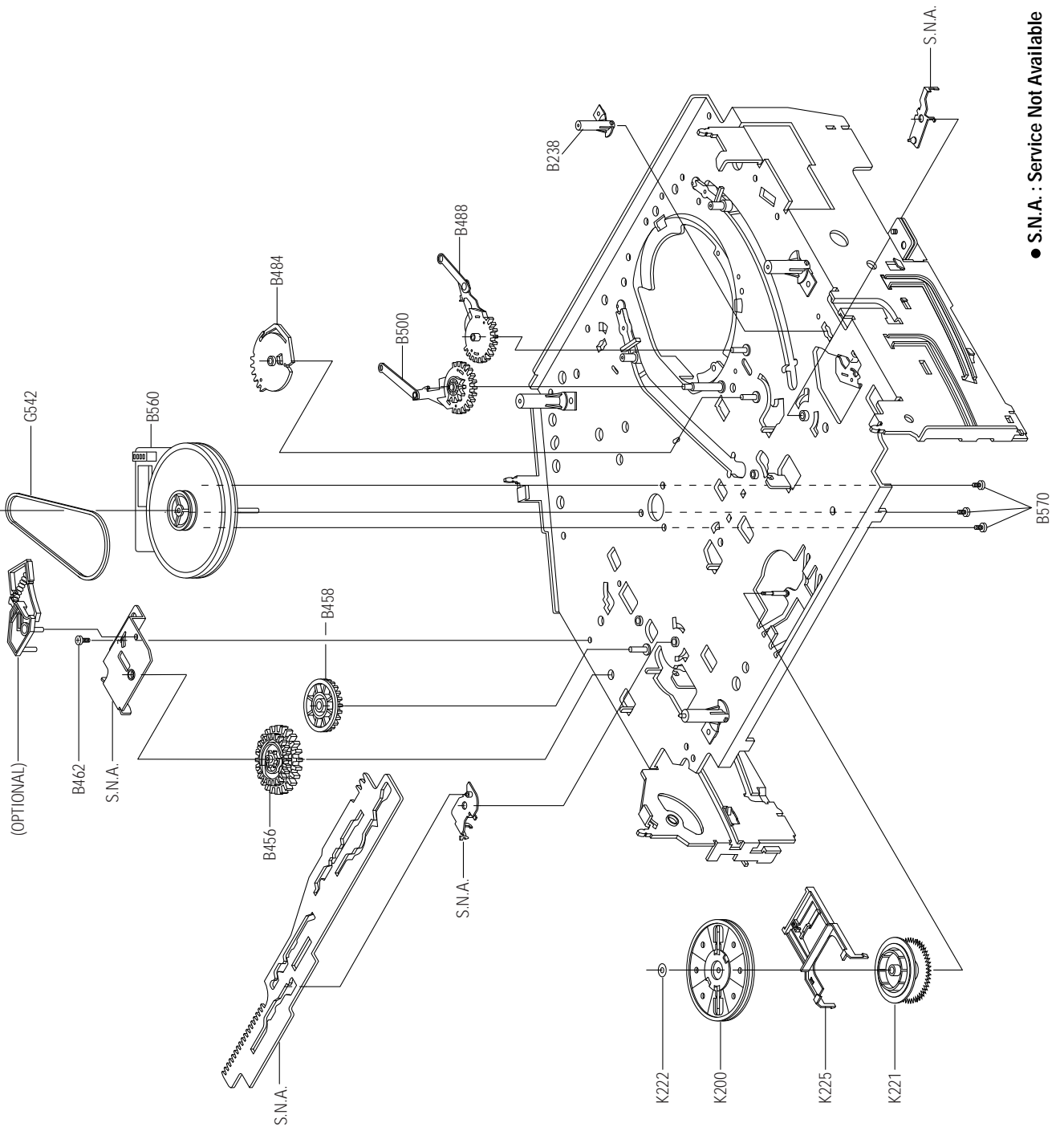
TV SYSTEM	LOCA-NO	1	21	101	104	602	701	UT01
	MODELS							
NTSC AREA	SV-7000W	AC97-00470E	AC64-00118A	AC64-30902E	AC64-80136A	AC92-00387A	AC92-00214A	AC59-00010D
	SV-5000W	AC97-00470C	AC64-00083B	AC64-30902D	AC6442114A	AC92-00226A	AC92-00239A	AC59-00010D
PAL/SECAM AREA	SV-7000W	AC97-00470D	AC64-00118A	AC64-30902F	AC64-80136A	AC92-00387A	AC92-00214A	AC59-00010D
	SV-5000W	AC97-00470B	AC64-00083C	AC64-30902G	AC64-80136A	AC92-00386A	AC92-00239A	AC59-00010F

7-2 Mechanical Parts (Top Side)



Loc. No	Parts No.	Description ; Specification	Remark
B410	AC31-12016A	MOTOR-LOADING ASSY;-,-,X-9	
B440	AC60-10515A	SCREW-MACHINE;-,-,PH,+,-,M3,L3,ZPC,-,YEL	
B444	AC66-20571A	GEAR-WORM;-,-,POM SW-01,0.5,2,-,4.5,X-9	
B446	AC61-21005A	HOLDER-WORM;-,-,POM M90-44,-,-,-,X-9	
B448	AC66-20573A	GEAR-WORM WHEEL;-,-,POM SW-01,0.6,11,-,6.6	
B452	AC66-20575A	GEAR-FL CAM;-,-,POM SW-01,M0.6,Z88,-,PCD58	
B473	AC61-60559A	SPRING-PINCH DRIVE;-,-,TS,SUS304,PI0.5,OD4	
G001	AC97-00476A	ASSY-DRUM;CX-9,-,PAL 6HD/DLC,W/W	
G420	AC66-80142A	SLIDER-SUPPLY ASSY;-,-,X-9(TS),-,-,-,X-9	
G450	AC66-80141A	SLIDER-TAKE UP ASSY;-,-,X-9(TS),-,-,-,X-9	
G480	AC33-00003A	HEAD-ACE ASSY;SHINHEUNG,-,-,-,-,X-9	
G510	AC60-10518A	SCREW-TAP TITE;-,-,PH,+,-,SW+ZW,M2.6,L5.6,ZP	
G520	AC66-30539A	LEVER-#9 GUIDE ASSY;-,-,X-9(TS),-,-,-,X-9	
G527	AC61-60553A	SPRING-#9 GUIDE;-,-,ES,SUS304-WPB,OD3.1,0.	
G530	AC33-00002A	HEAD-FE;-,-,HVFP0038A,-,-,-,-,X-9	
G532	AC60-10519A	SCREW-TAP TITE;-,-,PH,+,-,M2.6,L8,ZPC	
G546	AC66-30535A	LEVER-FL DOOR;-,-,POM M90-44,-,-,BLK,X-9	
G555	AC59-90403A	UNIT-PINCH ASSY;X-9,-	
G680	AC66-30557A	LEVER-H/CLEANER ASSY;-,-,POM+URETHANE,-,-,-	(OPTIONAL)
K110	AC66-10267A	REEL-DISK S;-,-,POM M90-44,-,-,-,X-9	
K140	AC66-10268A	REEL-DISK T;-,-,POM M90-44,-,-,-,X-9	
K182	AC66-30524A	LEVER-IDLER;-,-,POM9044,-,-,-,-	
K188	AC66-20577A	GEAR-IDLER;-,-,PEBAX 7033,-,-,-,-,X-9	
K240	AC66-30538A	LEVER-TENSION ASSY;-,-,X-9(TS),-,-,-,-,X-9	
K248	AC61-60554A	SPRING-TENSION LEVER;-,-,ES,SUS304-WPB,OD3	
K250	AC63-12029A	BAND-BRAKE ASSY;-,-,X-9(TS),-,-,-,-,X-9	
K330	AC66-30550A	LEVER-S.BRAKE ASSY;-,-,POM+SUS,-,-,-,-,X-9	
K340	AC66-30549A	LEVER-T.BRAKE ASSY;-,-,POM+SUS,-,-,-,-,X-9	
K350	AC61-60564A	SPRING-BRAKE;-,-,TENSION,SWP-A,0.25,3,-,X-	
K490	AC61-21010B	HOLDER-CASS ASSY;-,-,SECC+POM+SUS,-,-,-,SEIN	
K502	AC61-60561A	SPRING-FL.LEVER-LR;-,-,ES,SUS304 WPB,PI2.7	
K530	AC66-30546A	LEVER-FL.ARM ASSY;-,-,SECC+POM+SUS,-,-,-,-	
K546	AC61-50658A	GUIDE-CASS. DOOR;-,-,POM M90-44,-,-,-,NTR,-,	

7-3 Mechanical Parts (Bottom Side)



● S.N.A. : Service Not Available

Loc. No	Parts No.	Description ; Specification	Remark
B238	AC61-50660A	SLEEVE-TENSION;-;POM M90-44,-,-,ID3,-,-,	
B456	AC66-20576A	GEAR-JOINT 1;-;POM SW-01,M1.0,Z22,-,PCD2	
B458	AC66-20574A	GEAR-JOINT 2;-;POM SW-01,M1.0,Z14,-,PCD1	
B462	AC60-10517A	SCREW-TAP TITE;-;PH,+,-,M2.6,L5,ZPC,-,YE	
B484	AC66-20580A	GEAR-LOADING DRIVE;-;POM SW-01,M1.0,Z32,	
B488	AC66-30543A	LEVER-S LOAD ASSY;-,-,-,-,-,X-9	
B500	AC66-30542A	LEVER-T LOAD ASSY;-,-,-,-,-,X-9	
B560	AC31-12017A	MOTOR-CAPSTAN;DMVCMC07C,-,X-9	
B570	AC60-10514A	SCREW-CAPSTAN;-;PH,+,-,M2.6,L6,-	
G542	AC66-60051A	BELT-PULLEY;-;5CM-70,2 * 2,-,-,71.3,-,X-9	
K200	AC61-21012A	HOLDER-CLUTCH ASSY;-,-,-,-,-,X-9	
K221	AC66-20581A	GEAR-CENTER ASSY;-;POM,M=0.5,-,HIGHT T.,	
K222	AC60-30306A	WASHER-SLIT;-,-,ID2.1,OD5.0,T0.5,-,POLYS	
K225	AC66-30547A	LEVER-UP DOWN ASSY;-;POM+SUS,-,-,-,-,X-9	

MEMO

8. Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
-	-	ASSY-PCB-MAIN	S.N.A.	R19	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
S.M.P.S. PARTS				R20	2003-000105	R-METAL OXIDE:0.33ohm,5%,2W,AD,TP,6x16mm	
C01	2305-001021	C-FILM,MPEF;100nF,20%,275V,TP,17.5x7x13.	△	R21	2003-002092	R-METAL OXIDE:33Kohm,5%,3W,AE,BK,25x8mm	
C02	2305-001021	C-FILM,MPEF;100nF,20%,275V,TP,17.5x7x13.	△	R30	2001-000440	R-CARBON:10HM,5%,1/8W,AA,TP,1.8X3.2MM	
C03	2201-000934	C-CERAMIC,DISC:3.3nF,20%,400V,Y5U,TP,18x		R31	2001-000780	R-CARBON:470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
C04	2201-000934	C-CERAMIC,DISC:3.3nF,20%,400V,Y5U,TP,18x		R32	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
C05	2201-002044	C-CERAMIC,DISC:100pF,10%,400V,Y5P,TP,11x		R33	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
C07	2201-002044	C-CERAMIC,DISC:100pF,10%,400V,Y5P,TP,11x		R34	2004-000869	R-METAL:3Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
C10	2401-000342	C-AL:100uF,20%,400V,WT,-,33x30,10mm		R35	2004-000459	R-METAL:2.2Kohm,1%,1/8W,AA,TP,1.8x3.2m	
C11	2305-001029	C-FILM,MPEF;10nF,10%,630V,TP,12x9x12.5,5		VA01	1405-001026	VARISTOR:470V,600A,9x7mm,TP	△
C12	2401-001200	C-AL:33uF,20%,50V,WT,TP,6.3x11,5		POWER PARTS			
C13	2201-000376	C-CERAMIC,DISC:220pF,5%,50V,SL,TP,4x4,5		C1P102	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5	
C14	2201-000012	C-CERAMIC,DISC:220pF,10%,1KV,Y5P,TP,6x5,		C1P103	2401-001915	C-AL:1uF,20%,50V,GP,TP,3x5,5	
C30	2401-000392	C-AL:10uF,20%,100V,WT,TP,6.3x11,2.5		C1P104	2401-001250	C-AL:4.7uF,20%,35V,GP,TP,4x5,5	
C31	2401-003478	C-AL:100UF,20%,25V,LZ,TP,8X11.5MM,5		C1P105	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5	
C32	2401-003477	C-AL:330UF,20%,25V,LZ,TP,10X12.5MM,		C1P106	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5	
C33	2401-003477	C-AL:330UF,20%,25V,LZ,TP,10X12.5MM,		C1P107	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5	
C34	2401-003480	C-AL:1000UF,20%,10V,LZ,TP,10X16MM,5		C1P108	2401-001507	C-AL:47uF,20%,16V,GP,TP,6.3x5,5	
C35	2401-001479	C-AL:470uF,20%,10V,GP,-,TP		C1P110	2401-001915	C-AL:1uF,20%,50V,GP,TP,3x5,5	
C36	2401-001573	C-AL:47uF,20%,50V,GP,TP,6.3x11,2.5		C1P115	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7,5	
C37	2401-001479	C-AL:470uF,20%,10V,GP,-,TP		C1P116	2401-001915	C-AL:1uF,20%,50V,GP,TP,3x5,5	
C38	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m		C1P117	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7,5	
C39	2301-000129	C-FILM,PEF;100nF,5%,50V,TP,10X9X4.3X5,5m		D1P101	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
CN01	3711-000178	CONNECTOR-HEADER;1WALL,2P,1R,3.96mm,STRA		D1P103	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D01	0402-001196	DIODE-RECTIFIER:1T5,600V,1A,TS-1,TP		D1P104	0402-000165	DIODE-RECTIFIER:1N5819,40V,1A,DO-41,TP	
D02	0402-001196	DIODE-RECTIFIER:1T5,600V,1A,TS-1,TP		D1P105	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D03	0402-001196	DIODE-RECTIFIER:1T5,600V,1A,TS-1,TP		D1P108	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D04	0402-001196	DIODE-RECTIFIER:1T5,600V,1A,TS-1,TP		D1P109	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
D05	0402-001196	DIODE-RECTIFIER:1T5,600V,1A,TS-1,TP		D1P113	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D10	0402-000195	DIODE-RECTIFIER:F1T4,400V,1.0A,TS-1,TP		D1P114	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D11	0402-000276	DIODE-RECTIFIER:UF4007,1KV,1A,DO-41,TP		D1P116	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
D12	0402-001195	DIODE-RECTIFIER:F1T4,400V,1.0A,TS-1,TP		D1P117	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
D30	0402-001195	DIODE-RECTIFIER:F1T4,400V,1.0A,TS-1,TP		D1P118	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D31	0402-001195	DIODE-RECTIFIER:F1T4,400V,1.0A,TS-1,TP		D1P119	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D32	0402-001194	DIODE-RECTIFIER:UG2D,200V,2A,DO-204AC,TP		D1P30	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D33	0404-000128	DIODE-SCHOTTKY:FMB-G14L,45V,5A,TO-220F,T		D1P40	0402-000165	DIODE-RECTIFIER:1N5819,40V,1A,DO-41,TP	
D34	0402-001195	DIODE-RECTIFIER:F1T4,400V,1.0A,TS-1,TP		Q1P101	0501-000616	TR-SMALL SIGNAL:KSC2328A-Y,NPN,1W,TO-92L	
D35	0402-001195	DIODE-RECTIFIER:F1T4,400V,1.0A,TS-1,TP		Q1P102	0501-000616	TR-SMALL SIGNAL:KSC2328A-Y,NPN,1W,TO-92L	
F01	△	3601-001122	FUSE-FERRULE:250V,1.6A,FA,GLASS U.S.A./CANADA/JAPAN ONLY	Q1P103	0501-000616	TR-SMALL SIGNAL:KSC2328A-Y,NPN,1W,TO-92L	
	△	3601-001123	FUSE-FERRULE:250V,1.6A,5.2x20mm COMMOM	Q1P104	0501-000610	TR-SMALL SIGNAL:KSA928A-Y,PNP,1W,TO-92L,	
IC01	1203-001803	IC-PWM CONTROLLER:STR-F6552,TO-220,5P,-,		Q1P105	0504-000116	TR-DIGITAL:KSR1001,NPN,300MW,4.7K/4.7K,T	
IC02	0604-001028	PHOTO-COUPLER:TR,50-600%,250mW,DIP-4,ST	△	Q1P108	0501-000442	TR-SMALL SIGNAL:KTC3203-Y,NPN,400MW,TO-9	
IC03	AC14-12006D	IC:KA431Z,TO-92,TAPING		Q1P114	0501-000616	TR-SMALL SIGNAL:KSC2328A-Y,NPN,1W,TO-92L	
L01	AC29-30050B	FILTER-LINE NOISE:-,400uH,-,AC250V,TR12.	△	Q1P115	0504-000142	TR-DIGITAL:KSR2001,PNP,300MW,4.7K/4.7K,T	
L02	AC27-32001E	COIL-LINE FILTER:SHL030,25MH,1.5,STICK,-	△	Q1P116	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
L11	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-		Q1P117	0501-000442	TR-SMALL SIGNAL:KTC3203-Y,NPN,400MW,TO-9	
L30	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-		R1P103	2001-000034	R-CARBON:220OHM,5%,1/4W,AA,TP,2.4X6.4MM	
L31	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-		R1P105	2001-000273	R-CARBON:100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
L32	AC27-12001N	COIL-CHOKE:10UH-15%,RA,K-30,Q80,150KHZ,-		R1P106	2001-000611	R-CARBON:3.9KOHM,5%,1/4W,AA,TP,2.4X6.4M	
L33	AC27-12001N	COIL-CHOKE:10UH-15%,RA,K-30,Q80,150KHZ,-		R1P107	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
PT01	AC26-00001H	TRANS-SWITCHING:-,100V-240V,DEMKO,UL,EER	△	R1P108	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R01	2002-000322	R-COMPOSITION:2.7Mohm,10%,1/2W U.S.A./CANADA ONLY		R1P109	2001-000038	R-CARBON:390OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R10	2006-000262	R-CEMENT:2.7ohm,10%,2W,CB,TP,7.5x11x20.		R1P112	2001-000554	R-CARBON:270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R11	2001-001086	R-CARBON(S):18KOHM,5%,1/2W,AA,TP,2.4X6.4		R1P117	2001-000362	R-CARBON:150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R12	2001-001086	R-CARBON(S):18KOHM,5%,1/2W,AA,TP,2.4X6.4		R1P127	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R13	2001-001086	R-CARBON(S):18KOHM,5%,1/2W,AA,TP,2.4X6.4		R1P128	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R14	2001-000073	R-CARBON:33KOHM,5%,1/4W,AA,TP,2.4X6.4MM		R1P129	2001-000362	R-CARBON:150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R15	2001-000096	R-CARBON(S):1MOHM,5%,1/2W,AA,TP,2.4X6.4M		ZD1P01	0403-001211	DIODE-ZENER:MTZJ12B,11.44-12.03V,500MW,D	
R16	2001-000591	R-CARBON:3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M		ZD1P02	0403-000717	DIODE-ZENER:MTZJ5.1B,5.1V,4.94-5.2V,500m	
R17	2001-000527	R-CARBON:22OHM,5%,1/8W,AA,TP,1.8X3.2MM		ZD1P03	0403-000720	DIODE-ZENER:MTZJ9.1B,9.1V,8.57-9.01V,500	
R18	2003-002092	R-METAL OXIDE:33Kohm,5%,3W,AE,BK,25x8mm		ZD1P06	0403-001211	DIODE-ZENER:MTZJ12B,11.44-12.03V,500MW,D	

Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark
ZD1P07	0403-000388	DIODE-ZENER:UZP27B,27V,25.5-30V,1W,DO-41	
SYSTEM CONTROL/SERVO PARTS			
C601	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201	
C602	2202-002037	C-CERAMIC,MLC-AXIAL:100nF,80-20%,50V,Y5V	
C603	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5	
C604	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C605	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,	
C606	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,	
C607	2401-001775	C-AL:470nF,20%,50V,GP,TP,4x7,5	
C608	2401-002259	C-AL:0.1F,+80-20%,5.5V,-,TP,12.5x11	
C610	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201	
C611	2203-000374	C-CERAMIC,CHIP:15nF,10%,50V,X7R,TP,2012,	
C618	2401-002095	C-AL:47uF,20%,25V,GP,TP,6.3x5,5mm	
C619	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C620	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C621	2401-002095	C-AL:47uF,20%,25V,GP,TP,6.3x5,5mm	
C622	2301-000471	C-FILM,PEF:68nF,5%,50V,TP,9x12x4.5mm,5mm	
C623	2203-000609	C-CERAMIC,CHIP:22nF,10%,50V,X7R,TP,2012,	
C624	2203-000634	C-CERAMIC,CHIP:22pF,5%,50V,NPO,TP,2012,-	
C625	2203-000634	C-CERAMIC,CHIP:22pF,5%,50V,NPO,TP,2012,-	
C626	2203-000634	C-CERAMIC,CHIP:22pF,5%,50V,NPO,TP,2012,-	
C627	2203-000634	C-CERAMIC,CHIP:22pF,5%,50V,NPO,TP,2012,-	
C633	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C634	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C635	2203-001702	C-CERAMIC,CHIP:2.2NF,5%,50V,X7R,TP,2012	
C636	2203-001702	C-CERAMIC,CHIP:2.2NF,5%,50V,X7R,TP,2012	
C637	2203-000938	C-CERAMIC,CHIP:0.47nF,5%,50V,NPO,TP,2012	
C638	2401-000918	C-AL:22uF,20%,16V,GP,-,6.3x7,5	
C639	2203-000239	C-CERAMIC,CHIP:0.1nF,5%,50V,NPO,TP,2012	
C640	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201	
C641	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5	
C642	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5	
C643	2401-001507	C-AL:47uF,20%,16V,GP,TP,6.3x5,5	
C645	2401-001507	C-AL:47uF,20%,16V,GP,TP,6.3x5,5	
C646	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201	
C688	2401-001507	C-AL:47uF,20%,16V,GP,TP,6.3x5,5	
C690	2301-000471	C-FILM,PEF:68nF,5%,50V,TP,9x12x4.5mm,5mm	
C691	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C692	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201	
CN601	AC39-208175	LEAD CONNECTOR-ASSY:DP,SMH200-02,YBH200-	
CN602	3708-001163	CONNECTOR-FPC/FC/PIC:5P,1.25mm,STRAIGHT,	
CN603	3710-001146	CONNECTOR-SOCKET:20P,1R,1.5mm,ANGLE,SN	
CN604	3711-003749	CONNECTOR-HEADER-BOX,8P,2R,2mm,STRAIGHT,	
D603	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
D604	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
D613	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
D620	0402-000127	DIODE-RECTIFIER:1N4002,100V,1A,DO-41,TP	
IC601	AC09-00057A	IC MCU:784928GF-XXX-3BA,N120-XXX-3BA,	
IC602	1003-001162	IC-MOTOR DRIVER:KA3082,SIP,10PIN,25MIL,D	
IC604	AC14-12009VW	IC-RESET:PST572K,TO-92,R59-1766 2.5V	
IC605	1103-001171	IC-EEPROM:24L161,16KBIT,DIP,8P,300MIL,10	
IC608	1203-000515	IC-VOL. DETECTOR:7042,TO-92,3P,177MIL,PL	
L601	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
L603	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
L604	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
L605	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
LD601	0601-000517	LED-IR:RECTANGULA,4x6.0mm,75mW,6V,950	
PT601	0604-001122	PHOTO-INTERRUPTER:TR,0.065%,150mW,DIP-4,	
PT602	0604-001122	PHOTO-INTERRUPTER:TR,0.065%,150mW,DIP-4,	
Q602	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
R602	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R603	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R608	2007-001039	R-CHIP:56KOHM,5%,1/10W,DA,TP,2012	
R609	2001-000864	R-CARBON:56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R610	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc.No	Part No	Description ; Specification	Remark
R611	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R612	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R613	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
R614	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R641	2007-000931	R-CHIP:470OHM,5%,1/10W,DA,TP,2012	
R642	2007-000931	R-CHIP:470OHM,5%,1/10W,DA,TP,2012	
R644	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
R647	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
R650	2003-000259	R-METAL OXIDE:3.90HM,5%,2W,AE,TP,6X16MM	
R651	2001-000010	R-CARBON:68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R652	2001-000568	R-CARBON:270HM,5%,1/8W,AA,TP,1.8X3.2MM	
R654	2001-000812	R-CARBON:5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R655	2007-000941	R-CHIP:47KOHM,5%,1/10W,DA,TP,2012	
R656	2007-000241	R-CHIP:1.5KOHM,5%,1/10W,DA,TP,2012	
R657	2001-000010	R-CARBON:68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R660	2007-000941	R-CHIP:47KOHM,5%,1/10W,DA,TP,2012	
R661	2007-000774	R-CHIP:33KOHM,5%,1/10W,DA,TP,2012	
R666	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R667	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R668	2001-000780	R-CARBON:470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R669	2001-000780	R-CARBON:470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R670	2007-000872	R-CHIP:4.7KOHM,5%,1/10W,DA,TP,2012	
R671	2007-000872	R-CHIP:4.7KOHM,5%,1/10W,DA,TP,2012	
R672	2007-000872	R-CHIP:4.7KOHM,5%,1/10W,DA,TP,2012	
R673	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R674	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R675	2001-000032	R-CARBON:180OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R676	2007-000738	R-CHIP:30KOHM,5%,1/10W,DA,TP,2012	
R677	2001-000522	R-CARBON:22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R678	2001-000522	R-CARBON:22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R679	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R680	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
R681	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R682	2001-000522	R-CARBON:22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R685	2007-000774	R-CHIP:33KOHM,5%,1/10W,DA,TP,2012	
R687	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R690	2007-001039	R-CHIP:56KOHM,5%,1/10W,DA,TP,2012	
R691	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R694	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
R695	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
R696	2003-000346	R-METAL OXIDE:620ohm,5%,1W,AD,TP,4.3x12m	
R697	2003-000346	R-METAL OXIDE:620ohm,5%,1W,AD,TP,4.3x12m	
S601	0603-001011	PHOTO-TR:NPN,35V,6V,50mA,75mW,BK	
S602	0603-001011	PHOTO-TR:NPN,35V,6V,50mA,75mW,BK	
SW601	AC34-20100A	SWITCH-MODE:-,X-9,-	
SW602	AC34-20100B	SWITCH-REC:-,X-9,-	
XT601	2801-003318	CRYSTAL-UNIT:32.768KHz,20ppm,28-AAP,12.5	
XT602	2801-003139	CRYSTAL-UNIT:8MHz,50ppm,28-AAA,22pF,80oh	

AUDIO/VIDEO PARTS

C301	2401-000652	C-AL:2.2uF,20%,50V,GP,TP,3.5x5.5
C302	2203-000989	C-CERAMIC,CHIP:47nF,10%,50V,X7R,TP,2012,
C303	2401-001915	C-AL:1uF,20%,50V,GP,TP,3x5.5
C304	2203-000683	C-CERAMIC,CHIP:27pF,5%,50V,NPO,TP,2012,-
C306	2203-000839	C-CERAMIC,CHIP:390pF,5%,50V,NPO,TP,2012,
C307	2203-000392	C-CERAMIC,CHIP:15pF,5%,50V,SL,TP,2012,-
C308	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2
C309	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7,5
C310	2401-000407	C-AL:10uF,20%,16V,GP,TP,3.5x5.2,5
C311	2401-000918	C-AL:22uF,20%,16V,GP,-,6.3x7,5
C312	2203-000239	C-CERAMIC,CHIP:0.1nF,5%,50V,NPO,TP,2012
C313	2202-000173	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,1
C314	2401-001775	C-AL:470nF,20%,50V,GP,TP,4x7,5
C315	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5
C316	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201
C318	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
C320	2401-001915	C-AL:1uF,20%,50V,GP,TP,3x5,5		C3D04	2203-000891	C-CERAMIC,CHIP:4.7nF,10%,50V,X7R,TP,2012	
C321	2401-000407	C-AL:10uF,20%,16V,GP,TP,3.5x5,2.5		C3D05	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C322	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7,5		C3Q1	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2	
C323	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		C3Q2	2203-000818	C-CERAMIC,CHIP:0.033nF,5%,50V,NPO,TP,201	
C324	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		C3Q3	2203-001088	C-CERAMIC,CHIP:5pF,0.25pF,50V,NPO,TP,201	
C325	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,		CN301	3708-000391	CONNECTOR-FPC/FC/PIC;10P;1.25MM,STRAIGHT	
C326	2202-002037	C-CERAMIC,MLC-AXIAL:100nF,80-20%,50V,Y5V		CN3A01	3708-001302	CONNECTOR-FPC/FC/PIC;7P;1.25mm,STRAIGHT,	
C327	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		CN3A02	3711-002445	CONNECTOR-HEADER;BOX,2P,2R,1.5MM,STRAIGH	
C328	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,		D302	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
C329	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,		D3X1	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
C330	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,		D3X2	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
C331	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		FL3A01	AC27-80100A	COIL-OSC:126QN-K5272YH=K,-AM	
C332	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		FL3D01	AC27-82001C	COIL-BIAS OSC;B02,W(TOKO)VX1850,-	
C333	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7,5		IC301	1204-001403	IC-VIDEO PROCESS;LA71570M,OFF,100P,-PLA	
C334	2203-000989	C-CERAMIC,CHIP:47nF,10%,50V,X7R,TP,2012,		L301	2701-000206	INDUCTOR-AXIAL:56UH,5%,2.4X3.4MM	
C335	2401-001915	C-AL:1uF,20%,50V,GP,TP,3x5,5		L302	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C336	2401-001915	C-AL:1uF,20%,50V,GP,TP,3x5,5		L303	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C337	2203-000609	C-CERAMIC,CHIP:22nF,10%,50V,X7R,TP,2012,		L304	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C338	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		L305	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C339	2203-000989	C-CERAMIC,CHIP:47nF,10%,50V,X7R,TP,2012,		L306	2701-000119	INDUCTOR-AXIAL:120UH,5%,2.4X3.4MM	
C340	2203-000609	C-CERAMIC,CHIP:22nF,10%,50V,X7R,TP,2012,		L310	2702-000106	INDUCTOR-RADIAL:100uH,5%,6.2x7.4mm	
C341	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		L3A01	2702-000120	INDUCTOR-RADIAL:15mH,5%,6.2x7.4mm	
C342	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		L3A02	2702-000106	INDUCTOR-RADIAL:100uH,5%,6.2x7.4mm	
C343	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		L3A03	2702-000106	INDUCTOR-RADIAL:100uH,5%,6.2x7.4mm	
C345	2203-001088	C-CERAMIC,CHIP:5pF,0.25pF,50V,NPO,TP,201		L3A04	2702-000120	INDUCTOR-RADIAL:15mH,5%,6.2x7.4mm	
C346	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		L3D01	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C347	2203-001077	C-CERAMIC,CHIP:0.056nF,5%,50V,NPO,TP,201		L3Q1	2701-000206	INDUCTOR-AXIAL:56UH,5%,2.4X3.4MM	
C348	2203-001077	C-CERAMIC,CHIP:0.056nF,5%,50V,NPO,TP,201		L3Q2	2701-000131	INDUCTOR-AXIAL:15UH,5%,2.4X3.4MM	
C349	2203-000429	C-CERAMIC,CHIP:18pF,5%,50V,NPO,TP,2012,-		Q301	0504-000119	TR-DIGITAL:KSR1004,NPN,300MW,47K/47K,TO-	
C350	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		Q302	0501-000303	TR-SMALL SIGNAL:KSA733,PNP,250mW,TO-92,T	
C370	2401-000407	C-AL:10uF,20%,16V,GP,TP,3.5x5,2.5		Q303	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C380	2203-000316	C-CERAMIC,CHIP:120pF,5%,50V,NPO,TP,2012,		Q304	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C381	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		Q308	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C382	2203-001245	C-CERAMIC,CHIP:82pF,5%,50V,NPO,TP,2012,-		Q309	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C390	2202-002037	C-CERAMIC,MLC-AXIAL:100nF,80-20%,50V,Y5V		Q311	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C391	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		Q3A01	0501-000303	TR-SMALL SIGNAL:KSA733,PNP,250mW,TO-92,T	
C392	2203-000634	C-CERAMIC,CHIP:22pF,5%,50V,NPO,TP,2012,-		Q3A02	0504-000119	TR-DIGITAL:KSR1004,NPN,300MW,47K/47K,TO-	
C393	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		Q3A03	0501-000442	TR-SMALL SIGNAL:KTC3203-Y,NPN,400MW,TO-9	
C394	2203-001592	C-CERAMIC,CHIP:1nF,5%,50V,X7R,TP,2012		Q3A04	0501-000442	TR-SMALL SIGNAL:KTC3203-Y,NPN,400MW,TO-9	
C3A01	2401-003122	C-AL:4.7uF,20%,50V,LL,TP,4X7,1.5		Q3A05	0501-000442	TR-SMALL SIGNAL:KTC3203-Y,NPN,400MW,TO-9	
C3A02	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		Q3A06	0501-000303	TR-SMALL SIGNAL:KSA733,PNP,250mW,TO-92,T	
C3A04	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		Q3D01	0501-000442	TR-SMALL SIGNAL:KTC3203-Y,NPN,400MW,TO-9	
C3A06	2203-000374	C-CERAMIC,CHIP:15nF,10%,50V,X7R,TP,2012,		Q3D02	0504-000142	TR-DIGITAL:KSR2001,PNP,300MW,4.7K/4.7K,T	
C3A07	2203-000374	C-CERAMIC,CHIP:15nF,10%,50V,X7R,TP,2012,		Q3D03	0504-000119	TR-DIGITAL:KSR1004,NPN,300MW,47K/47K,TO-	
C3A08	2203-001105	C-CERAMIC,CHIP:6.8nF,10%,50V,X7R,TP,2012		Q3Q1	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C3A09	2203-001105	C-CERAMIC,CHIP:6.8nF,10%,50V,X7R,TP,2012		Q3Q2	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C3A10	2203-001214	C-CERAMIC,CHIP:8.2nF,10%,50V,X7R,TP,2012		Q3Q3	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C3A11	2301-000392	C-FILM,PEF:15nF,5%,50V,TP,6.5x8.5x3.2mm,		Q3Q4	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
C3A12	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		Q3Q5	0504-000142	TR-DIGITAL:KSR2001,PNP,300MW,4.7K/4.7K,T	
C3A13	2203-000323	C-CERAMIC,CHIP:12NF,10%,50V,X7R,TP,2012,		Q3X1	0504-000119	TR-DIGITAL:KSR1004,NPN,300MW,47K/47K,TO-	
C3A14	2203-001105	C-CERAMIC,CHIP:6.8nF,10%,50V,X7R,TP,2012		Q3X2	0504-000119	TR-DIGITAL:KSR1004,NPN,300MW,47K/47K,TO-	
C3A15	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		Q3X3	0504-000119	TR-DIGITAL:KSR1004,NPN,300MW,47K/47K,TO-	
C3A16	2401-003122	C-AL:4.7uF,20%,50V,LL,TP,4X7,1.5		R301	2007-000493	R-CHIP:2.2KOHM,5%,1/10W,DA,TP,2012	
C3A17	2401-000918	C-AL:22uF,20%,16V,GP,-6.3x7,5		R302	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
C3A18	2203-001592	C-CERAMIC,CHIP:1nF,5%,50V,X7R,TP,2012		R303	2001-000258	R-CARBON:1.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
C3A21	2203-001702	C-CERAMIC,CHIP:2.2NF,5%,50V,X7R,TP,2012		R304	2007-001177	R-CHIP:8.2KOHM,5%,1/10W,DA,TP,2012	
C3A23	2401-001169	C-AL:33UF,20%,16V,GP,-6.3X7,2.5MM		R306	2007-000493	R-CHIP:2.2KOHM,5%,1/10W,DA,TP,2012	
C3A24	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		R307	2001-000472	R-CARBON:2.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
C3A25	2401-000918	C-AL:22UF,20%,16V,GP,-6.3x7,5		R308	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
C3A29	2202-002037	C-CERAMIC,MLC-AXIAL:100nF,80-20%,50V,Y5V		R309	2007-000859	R-CHIP:4.3KOHM,5%,1/10W,DA,TP,2012	
C3A30	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		R311	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
C3A40	2201-000642	C-CERAMIC,DISC:680pF,10%,50V,Y5P,TP,5x3,		R312	2007-000241	R-CHIP:1.5KOHM,5%,1/10W,DA,TP,2012	
C3A50	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		R313	2007-000572	R-CHIP:220OHM,5%,1/10W,DA,TP,2012	
C3D01	2301-000283	C-FILM,PEF:47nF,5%,100V,TP,7.3X7X3.2X5,5		R314	2007-001118	R-CHIP:680OHM,5%,1/10W,DA,TP,2012	
C3D02	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		R315	2007-000518	R-CHIP:2.7KOHM,5%,1/10W,DA,TP,2012	
C3D03	2203-001388	C-CERAMIC,CHIP:10nF,5%,50V,X7R,TP,2012,2		R316	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
C4306	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		D4302	0407-000114	DIODE-ARRAY:DAN202K,80V,100mA,CA2-3,SOT-	
C4307	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7,5		D4304	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
C4308	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11,5		D4305	0407-000114	DIODE-ARRAY:DAN202K,80V,100mA,CA2-3,SOT-	
C4309	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		D4306	0407-000114	DIODE-ARRAY:DAN202K,80V,100mA,CA2-3,SOT-	
C4310	2203-000858	C-CERAMIC,CHIP:0.039nF,5%,50V,NPO,TP,201		D4307	0407-000114	DIODE-ARRAY:DAN202K,80V,100mA,CA2-3,SOT-	
C4311	2203-000634	C-CERAMIC,CHIP:22pF,5%,50V,NPO,TP,2012,-		IC4301	1001-000200	IC-VIDEO SWITCH:NJM2234M,3-INPUT,SOP,8P,	
C4312	2203-001164	C-CERAMIC,CHIP:68pF,5%,50V,SL,TP,2012,-		IC4302	AC14-12012W	IC-DRIVE:NJM2267D,DIP,-	
C4313	2401-002299	C-AL:4.7uF,20%,50V,GP,TP,5x7,5		IC4303	AC14-12014D	IC-CCD:TL8828P,0.32H,DIP	
C4314	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5		IC4304	1001-000200	IC-VIDEO SWITCH:NJM2234M,3-INPUT,SOP,8P,	
C4315	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		IC4305	1001-000200	IC-VIDEO SWITCH:NJM2234M,3-INPUT,SOP,8P,	
C4316	2203-001230	C-CERAMIC,CHIP:0.82nF,5%,50V,NPO,TP,2012		IC4306	AC14-12012W	IC-DRIVE:NJM2267D,DIP,-	
C4317	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11,5		JC4301	AC37-22002H	JACK-PIN:3.2mm,DPSE-9826,3P,10mm,ARREY	
C4318	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		JC4302	AC37-22002H	JACK-PIN:3.2mm,DPSE-9826,3P,10mm,ARREY	
C4319	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		JC4303	AC37-22002H	JACK-PIN:3.2mm,DPSE-9826,3P,10mm,ARREY	
C4321	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		JC4304	3710-000479	CONNECTOR-SOCKET;	
C4322	2401-003122	C-AL:4.7uF,20%,50V,LL,TP,4X7,1.5		L4302	2701-000138	INDUCTOR-AXIAL:18UH,5%,2.4X3.4MM	
C4323	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5		L4303	2701-000206	INDUCTOR-AXIAL:56UH,5%,2.4X3.4MM	
C4324	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		L4304	2701-000117	INDUCTOR-AXIAL:10uH,5%,2.4X3.4mm	
C4325	2401-000918	C-AL:22uF,20%,16V,GP,-,6.3x7,5		L4307	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C4326	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5		L4308	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C4327	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5		L4309	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm	
C4328	2401-000918	C-AL:22uF,20%,16V,GP,-,6.3x7,5		L4310	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4329	2401-003122	C-AL:4.7uF,20%,50V,LL,TP,4X7,1.5		L4311	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4332	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		L4312	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4334	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		L4313	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4335	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		L4314	3301-000297	CORE-FERRITE BEAD:AA,3.6x1.2x5.7mm,1400,	
C4336	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		L4315	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4338	2203-000661	C-CERAMIC,CHIP:270pF,5%,50V,NPO,TP,2012,		L4316	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4339	2203-000661	C-CERAMIC,CHIP:270pF,5%,50V,NPO,TP,2012,		L4317	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4340	2203-001702	C-CERAMIC,CHIP:2.2NF,5%,50V,X7R,TP,2012		L4318	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4341	2203-001702	C-CERAMIC,CHIP:2.2NF,5%,50V,X7R,TP,2012		L4330	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4342	2203-001164	C-CERAMIC,CHIP:68pF,5%,50V,SL,TP,2012,-		L4331	2701-000181	INDUCTOR-AXIAL:33UH,5%,2.4X3.4MM	
C4344	2203-000661	C-CERAMIC,CHIP:270pF,5%,50V,NPO,TP,2012,		Q4301	0504-000129	TR-DIGITAL:KSR1104,NPN,200MW,47K/47K,SOT	
C4345	2203-000661	C-CERAMIC,CHIP:270pF,5%,50V,NPO,TP,2012,		Q4302	0501-000344	TR-SMALL SIGNAL:KSC1623-G,NPN,200mW,SOT-	
C4347	2203-000661	C-CERAMIC,CHIP:270pF,5%,50V,NPO,TP,2012,		Q4303	0501-000312	TR-SMALL SIGNAL:KSA812,PNP,150mW,SOT-23,	
C4348	2203-000661	C-CERAMIC,CHIP:270pF,5%,50V,NPO,TP,2012,		Q4304	0501-000344	TR-SMALL SIGNAL:KSC1623-G,NPN,200mW,SOT-	
C4349	2203-001164	C-CERAMIC,CHIP:68pF,5%,50V,SL,TP,2012,-		Q4305	0501-000312	TR-SMALL SIGNAL:KSA812,PNP,150mW,SOT-23,	
C4350	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		Q4306	0504-000128	TR-DIGITAL:-,NPN,200MW,22K/22K,SOT-23,TP	
C4351	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		Q4307	0504-000128	TR-DIGITAL:-,NPN,200MW,22K/22K,SOT-23,TP	
C4352	2401-002299	C-AL:4.7uF,20%,50V,GP,TP,5x7,5		Q4308	0504-000142	TR-DIGITAL:KSR2001,PNP,300MW,4.7K/4.7K,T	
C4354	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		Q4310	0504-000129	TR-DIGITAL:KSR1104,NPN,200MW,47K/47K,SOT	
C4355	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5		Q4311	0501-000344	TR-SMALL SIGNAL:KSC1623-G,NPN,200mW,SOT-	
C4356	2401-000918	C-AL:22uF,20%,16V,GP,-,6.3x7,5		R4301	2007-000282	R-CHIP:100KOHM,5%,1/10W,DA,TP,2012	
C4357	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5		R4302	2007-000282	R-CHIP:100KOHM,5%,1/10W,DA,TP,2012	
C4358	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5		R4303	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
C4359	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		R4304	2007-000931	R-CHIP:470OHM,5%,1/10W,DA,TP,2012	
C4361	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		R4305	2007-000024	R-CHIP:1.3KOHM,5%,1/10W,DA,TP,2012	
C4362	2401-000407	C-AL:10uF,20%,16V,GP,TP,3.5x5,2.5		R4306	2007-001071	R-CHIP:6.8KOHM,5%,1/10W,DA,TP,2012	
C4363	2203-000429	C-CERAMIC,CHIP:18pF,5%,NPO,TP,2012,-		R4307	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
C4364	2401-000407	C-AL:10uF,20%,16V,GP,TP,3.5x5,2.5		R4308	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
C4365	2203-000244	C-CERAMIC,CHIP:100pF,5%,50V,SL,TP,2012,-		R4309	2007-000931	R-CHIP:470OHM,5%,1/10W,DA,TP,2012	
C4366	2203-000244	C-CERAMIC,CHIP:100pF,5%,50V,SL,TP,2012,-		R4310	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
C4367	2401-001905	C-AL:10uF,20%,16V,BP,BK,6x11mm,2.5m		R4311	2007-000822	R-CHIP:390OHM,5%,1/10W,DA,TP,2012	
C4369	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		R4312	2007-000822	R-CHIP:390OHM,5%,1/10W,DA,TP,2012	
C4370	2203-001702	C-CERAMIC,CHIP:2.2NF,5%,50V,X7R,TP,2012		R4313	2007-000766	R-CHIP:330OHM,5%,1/10W,DA,TP,2012	
C4371	2203-001702	C-CERAMIC,CHIP:2.2NF,5%,50V,X7R,TP,2012		R4314	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
C4372	2203-000858	C-CERAMIC,CHIP:0.039nF,5%,50V,NPO,TP,201		R4315	2007-000282	R-CHIP:100KOHM,5%,1/10W,DA,TP,2012	
C4375	2203-001077	C-CERAMIC,CHIP:0.056nF,5%,50V,NPO,TP,201		R4316	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
C4376	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		R4317	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
C4377	2203-000476	C-CERAMIC,CHIP:1000NF,+80-20%,16V,Y5V,TP		R4318	2001-000116	R-CARBON:820OHM,5%,1/4W,AA,TP,2.4X6.4MM	
C4378	2203-000595	C-CERAMIC,CHIP:0.22nF,5%,50V,NPO,TP,2012		R4328	2007-000401	R-CHIP:150OHM,5%,1/10W,DA,TP,2012	
CN4301	3711-002144	CONNECTOR-HEADER:NOWALL,15P,1R,2mm,ANGLE		R4329	2007-001166	R-CHIP:75OHM,5%,1/10W,DA,TP,2012	
CN4302	3711-002144	CONNECTOR-HEADER:NOWALL,15P,1R,2mm,ANGLE		R4330	2007-001166	R-CHIP:75OHM,5%,1/10W,DA,TP,2012	
CN4303	3711-002144	CONNECTOR-HEADER:NOWALL,15P,1R,2mm,ANGLE		R4331	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012	
CN4305	3711-001061	CONNECTOR-HEADER:BOX,6P,1R,2mm,ANGLE,SN		R4332	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012	
D4301	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,		R4333	2007-001166	R-CHIP:75OHM,5%,1/10W,DA,TP,2012	

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
R4338	2007-000565	R-CHIP:220KOHM,5%,1/10W,DA,TP,2012		Q902	0501-000303	TR-SMALL SIGNAL:KSA733,PNP,250mW,TO-92,T	
R4339	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		Q903	0501-000398	TR-SMALL SIGNAL:KSC945,NPN,250mW,TO-92,T	
R4340	2007-000565	R-CHIP:220KOHM,5%,1/10W,DA,TP,2012		Q904	0504-000128	TR-DIGITAL:-,NPN,200MW,22K/22K,SOT-23,TP	
R4341	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		Q905	0504-000128	TR-DIGITAL:-,NPN,200MW,22K/22K,SOT-23,TP	
R4342	2007-001166	R-CHIP:75OHM,5%,1/10W,DA,TP,2012		Q906	0504-000128	TR-DIGITAL:-,NPN,200MW,22K/22K,SOT-23,TP	
R4343	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		Q907	0501-000344	TR-SMALL SIGNAL:KSC1623-G,NPN,200mW,SOT-	
R4344	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		R901	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
R4345	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		R902	2007-000300	R-CHIP:10KOHM,5%,1/10W,DA,TP,2012	
R4346	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		R903	2007-000518	R-CHIP:2.7KOHM,5%,1/10W,DA,TP,2012	
R4347	2007-001201	R-CHIP:820OHM,5%,1/10W,DA,TP,2012		R904	2007-000981	R-CHIP:5.6KOHM,5%,1/10W,DA,TP,2012	
R4348	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012		R905	2007-000029	R-CHIP:0OHM,5%,1/10W,DA,TP,2012	
R4349	2007-000931	R-CHIP:470OHM,5%,1/10W,DA,TP,2012		R906	2007-000029	R-CHIP:0OHM,5%,1/10W,DA,TP,2012	
R4350	2007-000030	R-CHIP:560OHM,5%,1/10W,DA,TP,2012		R907	2007-000822	R-CHIP:390OHM,5%,1/10W,DA,TP,2012	
R4351	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012		R908	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
R4352	2007-000267	R-CHIP:1.8KOHM,5%,1/10W,DA,TP,2012		R909	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
R4353	2007-000615	R-CHIP:24KOHM,5%,1/10W,DA,TP,2012		R910	2007-000300	R-CHIP:10KOHM,5%,1/10W,DA,TP,2012	
R4354	2007-000300	R-CHIP:10KOHM,5%,1/10W,DA,TP,2012		R911	2007-000282	R-CHIP:100KOHM,5%,1/10W,DA,TP,2012	
R4355	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012		R912	2007-000282	R-CHIP:100KOHM,5%,1/10W,DA,TP,2012	
R4356	2007-000002	R-CHIP:75KOHM,5%,1/10W,DA,TP,2012		R913	2007-000872	R-CHIP:4.7KOHM,5%,1/10W,DA,TP,2012	
R4360	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		R914	2007-000872	R-CHIP:4.7KOHM,5%,1/10W,DA,TP,2012	
R4361	2007-000642	R-CHIP:270OHM,5%,1/10W,DA,TP,2012		R915	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
R4362	2007-000593	R-CHIP:22OHM,5%,1/10W,DA,TP,2012		R916	2007-000300	R-CHIP:10KOHM,5%,1/10W,DA,TP,2012	
R4363	2007-000593	R-CHIP:22OHM,5%,1/10W,DA,TP,2012		R917	2007-000300	R-CHIP:10KOHM,5%,1/10W,DA,TP,2012	
R4364	2007-000593	R-CHIP:22OHM,5%,1/10W,DA,TP,2012		R918	2007-000518	R-CHIP:2.7KOHM,5%,1/10W,DA,TP,2012	
R4365	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012		R932	2007-000300	R-CHIP:10KOHM,5%,1/10W,DA,TP,2012	
R4366	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012		R933	2007-000941	R-CHIP:47KOHM,5%,1/10W,DA,TP,2012	
VR4301	2103-000230	VR-SEMI:2.2Kohm,30%,1/10W,SIDE		R934	2007-000282	R-CHIP:100KOHM,5%,1/10W,DA,TP,2012	
XT4301	2801-001384	CRYSTAL-UNIT:14.31818MHz,30ppm,28-AAA,16		R935	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
ZD4301	0403-000339	DIODE-ZENER:UZ3.0B,3.0V,2.8-3.2V,500mW,D		R936	2007-001124	R-CHIP:68KOHM,1%,1/10W,DA,TP,2012	
				R937	2007-000029	R-CHIP:0OHM,5%,1/10W,DA,TP,2012	
				R938	2007-001113	R-CHIP:680KOHM,5%,1/10W,DA,TP,2012	
				R939	2007-000300	R-CHIP:10KOHM,5%,1/10W,DA,TP,2012	
				XT901	2801-003311	CRYSTAL-UNIT:17.734475MHz,20ppm,28-AAA,1	
				XT902	2801-001384	CRYSTAL-UNIT:14.31818MHz,30ppm,28-AAA,16	
O.S.D. PARTS				604	AC92-00225A	ASSY-PCB-DIGITAL:DIGITAL, SV-7000W/5000W	
C903	2203-000683	C-CERAMIC,CHIP:27pF,5%,50V,NPO,TP,2012,-		CD1	2203-001721	C-CERAMIC,CHIP:360pF,5%,50V,NPO,TP,2012,	
C904	2203-000683	C-CERAMIC,CHIP:27pF,5%,50V,NPO,TP,2012,-		CD10	2203-000609	C-CERAMIC,CHIP:22nF,10%,50V,X7R,TP,2012,	
C905	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11.5		CD11	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C906	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		CD12	2203-000444	C-CERAMIC,CHIP:1nF,10%,50V,X7R,TP,2012,-	
C907	2401-002299	C-AL:4.7uF,20%,50V,GP,TP,5x7.5		CD13	2203-000555	C-CERAMIC,CHIP:20pF,5%,50V,NPO,TP,2012,-	
C908	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11.5		CD14	2203-000555	C-CERAMIC,CHIP:20pF,5%,50V,NPO,TP,2012,-	
C909	2203-001002	C-CERAMIC,CHIP:0.047nF,5%,50V,NPO,TP,201		CD15	2203-000735	C-CERAMIC,CHIP:300pF,5%,50V,NPO,TP,2012,	
C910	2202-000286	C-CERAMIC,MLC-AXIAL:56pF,5%,50V,SL,TP,1.		CD16	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C911	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7.5		CD17	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C912	2401-000598	C-AL:1uF,20%,50V,GP,TP,4x7.5		CD18	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7.5	
C913	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11.5		CD19	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7.5	
C915	2203-001064	C-CERAMIC,CHIP:56nF,10%,50V,NPO,TP,2012,		CD2	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C916	2203-000429	C-CERAMIC,CHIP:18pF,5%,50V,NPO,TP,2012,-		CD20	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C917	2203-000429	C-CERAMIC,CHIP:18pF,5%,50V,NPO,TP,2012,-		CD21	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C918	2203-000429	C-CERAMIC,CHIP:18pF,5%,50V,NPO,TP,2012,-		CD22	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7.5	
C931	2301-000365	C-FILM,PEF:1.5nF,10%,50V,TP,5.5x7x2.8mm,		CD24	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C932	2401-002299	C-AL:4.7uF,20%,50V,GP,TP,5x7.5		CD25	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C933	2301-000402	C-FILM,PEF:1nF,5%,50V,TP,5x7x2.8mm,5mm		CD26	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C934	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7.5		CD27	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7.5	
C935	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11.5		CD28	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7.5	
C936	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		CD29	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C937	2301-000415	C-FILM,PEF:22nF,5%,50V,TP,6.5x10.5x4mm,5		CD3	2203-001077	C-CERAMIC,CHIP:0.056nF,5%,50V,NPO,TP,201	
C940	2203-000361	C-CERAMIC,CHIP:150pF,5%,50V,NPO,TP,2012,		CD30	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C941	2203-001088	C-CERAMIC,CHIP:5pF,0.25pF,50V,NPO,TP,201		CD31	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C942	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,201		CD32	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
C943	2203-000260	C-CERAMIC,CHIP:10NF,10%,50V,X7R,TP,2012		CD33	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
D901	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,		CD34	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7.5	
D902	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,		CD35	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
D903	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,		CD36	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012	
IC901	AC09-00050A	IC-OSD:LC74776M-9776,30P,ROLE,-,-,MFP		CD37	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7.5	
IC902	AC14-12002F	IC:NJM2229S,-,-					
L901	2701-000165	INDUCTOR-AXIAL:27uH,5%,2.4x3.4mm					
L902	2701-000160	INDUCTOR-AXIAL:22uH,5%,2.4x3.4mm					
L903	2701-000002	INDUCTOR-AXIAL:100uH,10%,4.2x9.8mm					
Q901	0501-000303	TR-SMALL SIGNAL:KSA733,PNP,250mW,TO-92,T					

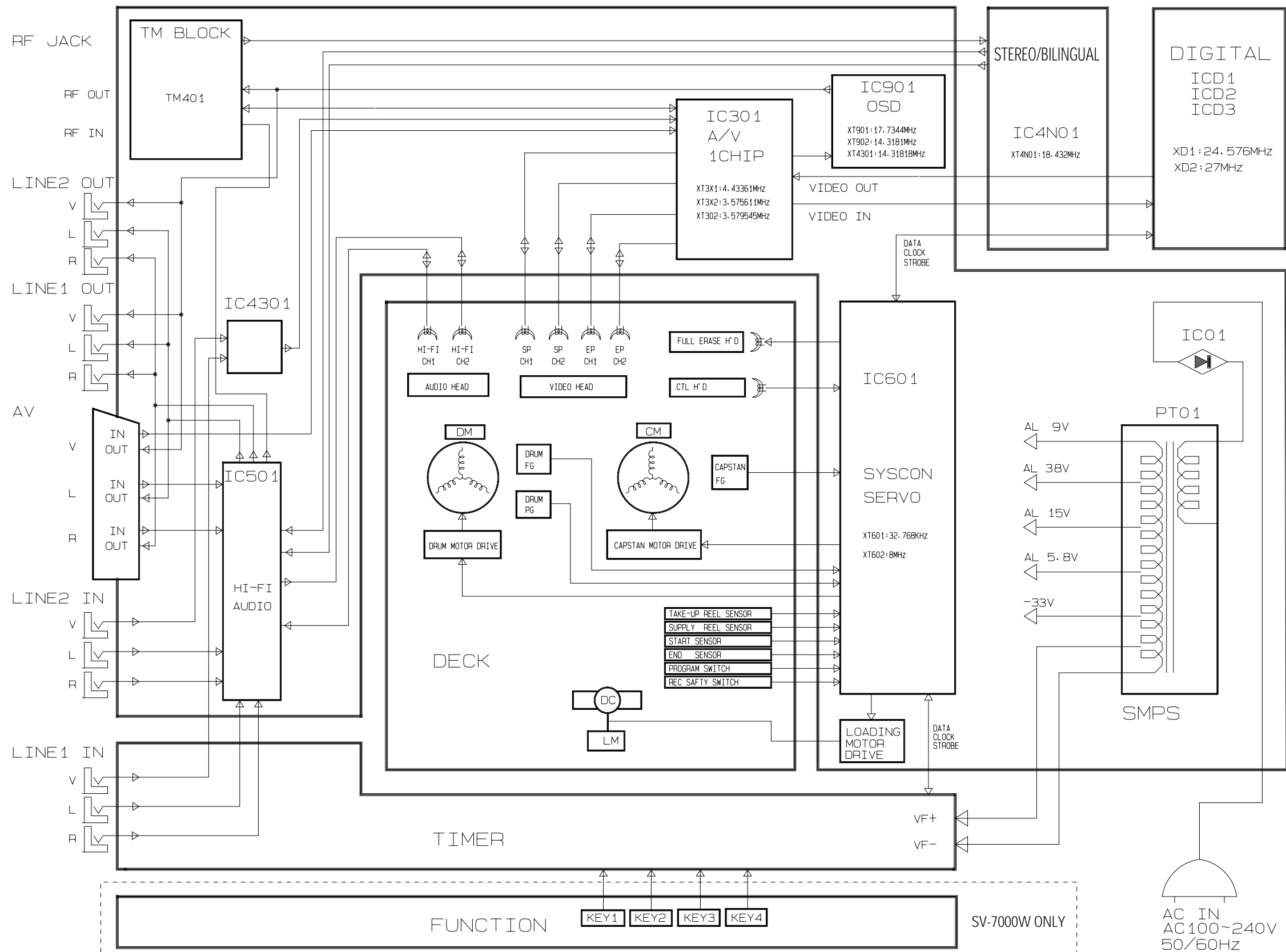
Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
CD38	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD16	2007-001071	R-CHIP:6.8KOHM,5%,1/10W,DA,TP,2012	
CD39	2401-000847	C-AL:220UF,20%,35V,GP,TP,10X12MM,5M		RD17	2007-001071	R-CHIP:6.8KOHM,5%,1/10W,DA,TP,2012	
CD4	2203-000609	C-CERAMIC,CHIP:22nF,10%,50V,X7R,TP,2012,		RD18	2007-001071	R-CHIP:6.8KOHM,5%,1/10W,DA,TP,2012	
CD40	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD19	2007-000002	R-CHIP:75KOHM,5%,1/10W,DA,TP,2012	
CD41	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD2	2007-000029	R-CHIP:00HM,5%,1/10W,DA,TP,2012	
CD42	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD20	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD43	2203-000444	C-CERAMIC,CHIP:1nF,10%,50V,X7R,TP,2012,-		RD21	2007-000593	R-CHIP:220HM,5%,1/10W,DA,TP,2012	
CD44	2203-001002	C-CERAMIC,CHIP:0.047nF,5%,50V,NPO,TP,201		RD22	2007-000030	R-CHIP:560OHM,5%,1/10W,DA,TP,2012	
CD45	2203-000555	C-CERAMIC,CHIP:20pF,5%,50V,NPO,TP,2012,-		RD23	2007-000477	R-CHIP:1MOHM,5%,1/10W,DA,TP,2012	
CD46	2203-000735	C-CERAMIC,CHIP:300pF,5%,50V,NPO,TP,2012,		RD24	2007-000029	R-CHIP:00HM,5%,1/10W,DA,TP,2012	
CD47	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD26	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD48	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD27	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD49	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD28	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD5	2203-000609	C-CERAMIC,CHIP:22nF,10%,50V,X7R,TP,2012,		RD29	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD50	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD3	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
CD51	2203-000735	C-CERAMIC,CHIP:300pF,5%,50V,NPO,TP,2012,		RD30	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD52	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		RD31	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD53	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD32	2007-000931	R-CHIP:470OHM,5%,1/10W,DA,TP,2012	
CD54	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5		RD33	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD55	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD34	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD56	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD35	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD57	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD36	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD6	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		RD37	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD60	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5		RD38	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD61	2401-000918	C-AL:22uF,20%,16V,GP,-6.3x7,5		RD39	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD63	2401-003107	C-AL:47uF,20%,16V,GP,TP,5x7,5		RD4	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
CD64	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5		RD40	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012	
CD65	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5		RD41	2007-000710	R-CHIP:3.9KOHM,5%,1/10W,DA,TP,2012	
CD7	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD42	2007-000710	R-CHIP:3.9KOHM,5%,1/10W,DA,TP,2012	
CD8	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD43	2007-000710	R-CHIP:3.9KOHM,5%,1/10W,DA,TP,2012	
CD9	2203-000206	C-CERAMIC,CHIP:100nF,10%,50V,X7R,TP,2012		RD44	2007-000710	R-CHIP:3.9KOHM,5%,1/10W,DA,TP,2012	
CND1	3708-001167	CONNECTOR-FPC/FC/PIC:14P,1.25mm,STRAIGHT		RD5	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
CND2	3711-001061	CONNECTOR-HEADER:BOX,6P,1R,2mm,ANGLE,SN		RD6	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
CND2B	AC39-00026A	LEAD CONNECTOR-ASSY:-,51004,60-9073-3018		RD7	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012	
ICD1	1204-001573	IC-VIDEO PROCESS:SAA7113H,OFF,44P,393MIL		RD8	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012	
ICD2	1204-001366	IC-VIDEO ENCODER:SAA7128,OFF,44P,-,PLAST		RD9	2007-000822	R-CHIP:390OHM,5%,1/10W,DA,TP,2012	
ICD3	AC09-00059A	IC-VIDEO SIG. CONVERTER:VIDEO CONVERSION		XD1	2801-003819	CRYSTAL-UNIT:24.576MHZ,10PPM,28-AAA,16PF	
ICD4	1105-001259	IC-DRAM:416S1020,16BIT,TSOP,50P,400MIL		XD2	2801-003348	CRYSTAL-UNIT:27MHZ,20PPM,28-AAM,20PF,200	
ICD5	AC14-12012W	IC-DRIVE:NJM2267D,DIP,-					
ICD6	1203-001586	IC-VOLTAGE REGULATOR:278R33,TO-220F,4P,-		701	AC92-00214A	ASSY-PCB-TIMER:SV-7000W	
ICD7	1203-001586	IC-VOLTAGE REGULATOR:278R33,TO-220F,4P,-		C701	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5	
ICD8	AC14-12004U	IC-FP:NJM 2235M(TET1),-,-		C702	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,	
LD1	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		C703	2202-000173	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,1	
LD10	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		C704	2401-002299	C-AL:4.7uF,20%,50V,GP,TP,5x7,5	
LD11	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-,-		C705	2401-002165	C-AL:100uF,20%,16V,GP,TP,6.3x7,5	
LD12	2702-000112	INDUCTOR-RADIAL:10uH,5%,6x6.4mm		C706	2202-000807	C-CERAMIC,MLC-AXIAL:22nF,+80-20%,25V,Y5V	
LD13	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-,-		C707	2202-000243	C-CERAMIC,MLC-AXIAL:33pF,5%,50V,SL,TP,3	
LD16	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-,-		C711	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,	
LD17	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-,-		C712	2202-000183	C-CERAMIC,MLC-AXIAL:2.2NF,20%,16V,Y5R,TP	
LD18	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-,-		C713	2202-000183	C-CERAMIC,MLC-AXIAL:2.2NF,20%,16V,Y5R,TP	
LD19	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		C714	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5	
LD2	2701-000105	INDUCTOR-AXIAL:1.5uH,10%,2.5x3.4mm		C715	2201-000681	C-CERAMIC,DISC:82pF,5%,50V,SL,TP,5x3,5	
LD3	2702-000112	INDUCTOR-RADIAL:10uH,5%,6x6.4mm		C716	2401-000414	C-AL:10uF,20%,16V,GP,TP,4x7,5	
LD4	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		CN701	3710-001145	CONNECTOR-SOCKET:20P,1R,1.5mm,STRAIGHT,S	
LD5	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		CN703	3711-002597	CONNECTOR-HEADER:NOWALL,9P,2R,1.5mm,STRA	
LD6	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		CN704	3711-002597	CONNECTOR-HEADER:NOWALL,9P,2R,1.5mm,STRA	
LD7	AC27-92001M	INDUCTOR:70UH-M RT BFS3565R2F,-,-,-,-		D701	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
LD8	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		D702	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
LD9	2702-000135	INDUCTOR-RADIAL:2.7uH,10%,6x6.4mm		D703	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
RD1	2007-000028	R-CHIP:390HM,5%,1/10W,DA,TP,2012		D704	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
RD10	2007-000822	R-CHIP:390OHM,5%,1/10W,DA,TP,2012		D705	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
RD11	2007-001239	R-CHIP:910OHM,5%,1/10W,DA,TP,2012		D710	0401-000101	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	
RD12	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012		DT701	AC07-20050Y	VF-DISPLAY:SVV-12MM09,16SEG,103 X 13.25,	
RD13	2007-000290	R-CHIP:100OHM,5%,1/10W,DA,TP,2012		IC701	1003-001039	IC-VFD:UPD16311GC-AB6,OFF,52P,-,-,40	
RD14	2007-000468	R-CHIP:1KOHM,5%,1/10W,DA,TP,2012		JK701	3722-000438	JACK-PIN:1P/1C,PI3.3,SN,YEL,-	
RD15	2007-001071	R-CHIP:6.8KOHM,5%,1/10W,DA,TP,2012		JK702	AC37-22001T	JACK-PIN:DSPS-8805-03W,PI4,3P,GLD,-	

Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark	Loc.No	Part No	Description ; Specification	Remark
-	-	ASSY-FUNCTION;SV-7000W ONLY	S.N.A.				
C802	2202-000797	C-CERAMIC,MLC-AXIAL:10NF,30%,16V,Y5S,TP,					
CN801	3708-000204	CONNECTOR-FPC/FC/PIC;20P,1.25mm,ANGLE,SN					
D801	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,					
D802	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,					
D803	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,					
F/CABL	3809-001100	CABLE-FLAT;30V,80C,60mm,20P,1.25mm,UL289					
IC801	AC14-12001X	IC;M5481,-,-					
LD801	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD802	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD803	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD804	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD805	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD806	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD807	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD808	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD811	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD812	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD813	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD814	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD815	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
LD816	0601-000497	LED;ROUND,GRN,3.1mm,565nm					
R801	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R802	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R803	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R804	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R805	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R806	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R807	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R808	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R809	2001-000302	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R811	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R812	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R813	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R814	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R815	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
R816	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM					
SW801	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW802	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW803	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW804	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW805	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW806	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW807	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW808	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW809	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW810	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW811	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW812	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW813	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW814	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW815	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW816	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW817	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW818	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW819	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
SW820	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm					
ZD801	0403-000558	DIODE-ZENER;MTZ5.6C,5.6V,5.61-5.91V,500m					
ZD802	0403-000558	DIODE-ZENER;MTZ5.6C,5.6V,5.61-5.91V,500m					
ZD803	0403-000558	DIODE-ZENER;MTZ5.6C,5.6V,5.61-5.91V,500m					
-	-	ASSY-JOINT;SV-7000W ONLY	S.N.A.				
CN8J00	3708-000209	CONNECTOR-FPC/FC/PIC;20P,1.25mm,					
CN8J01	3710-000531	CONNECTOR-HEADER;9P;1R,1.5MM,STRAIGHT,SN					
CN8J02	3710-000531	CONNECTOR-HEADER;9P;1R,1.5MM,STRAIGHT,SN;					

9. Block Diagram

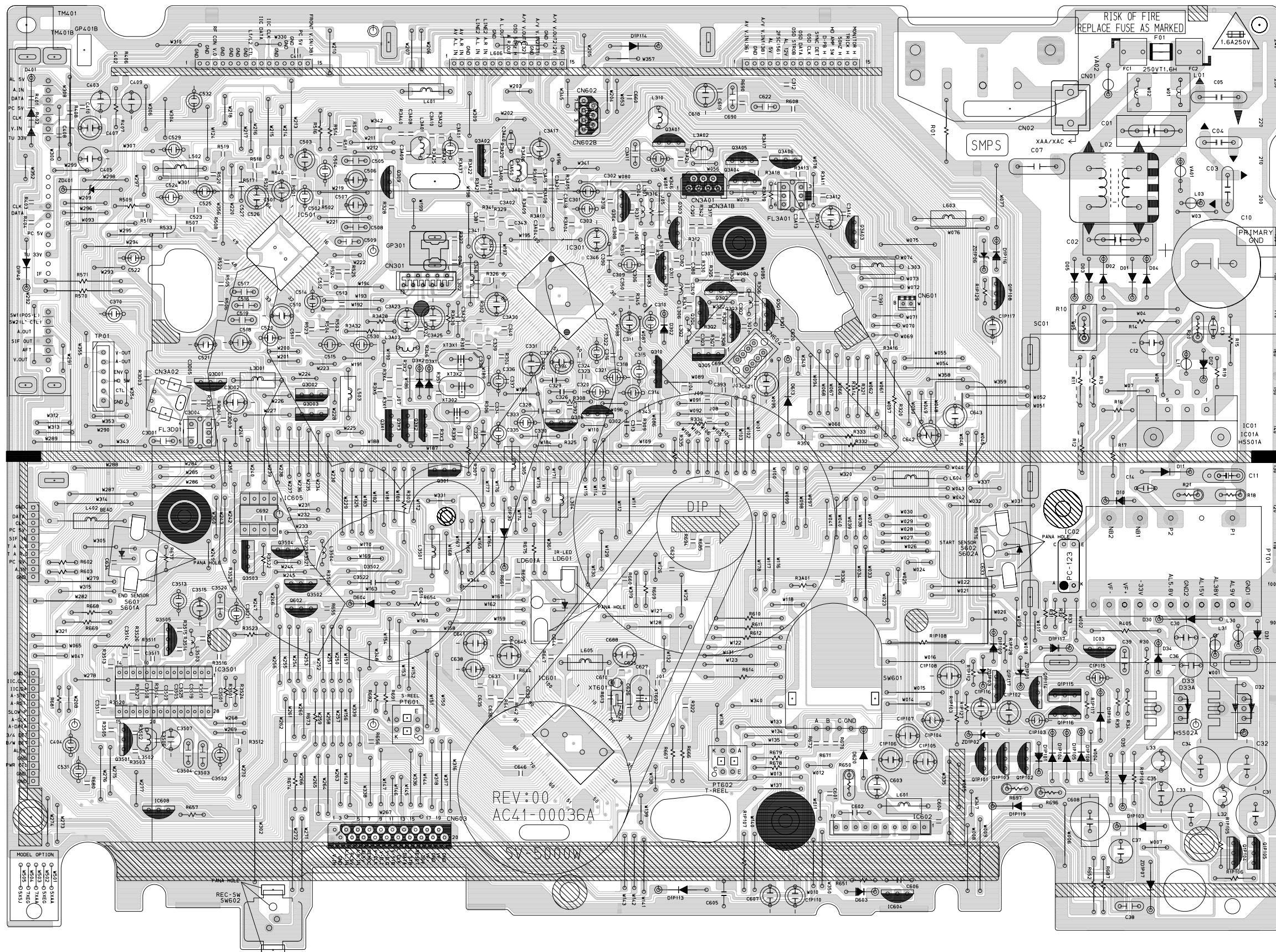


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10. PCB Diagrams

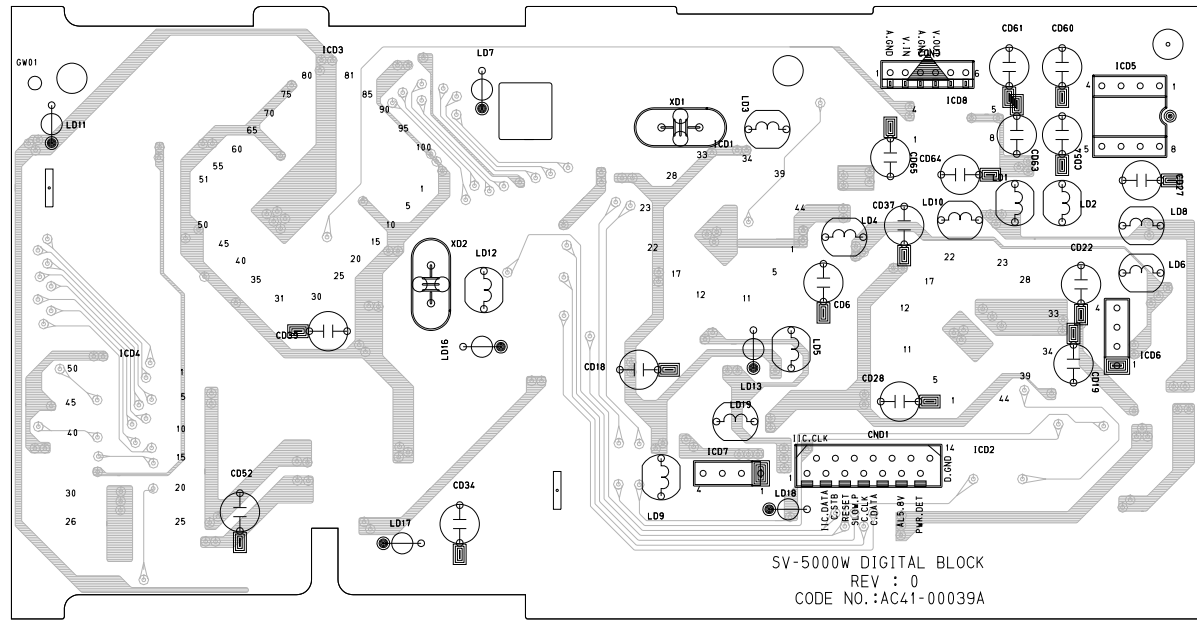
10-1 Main	10-2
10-2 Digital	10-3
10-3 A2/NICAM	10-3
10-4 I/O	10-4
10-5 Timer (SV-7000W)	10-5
10-6 Function (SV-7000W)	10-5
10-7 Function-Timer (SV-5000W)	10-6

10-1 Main

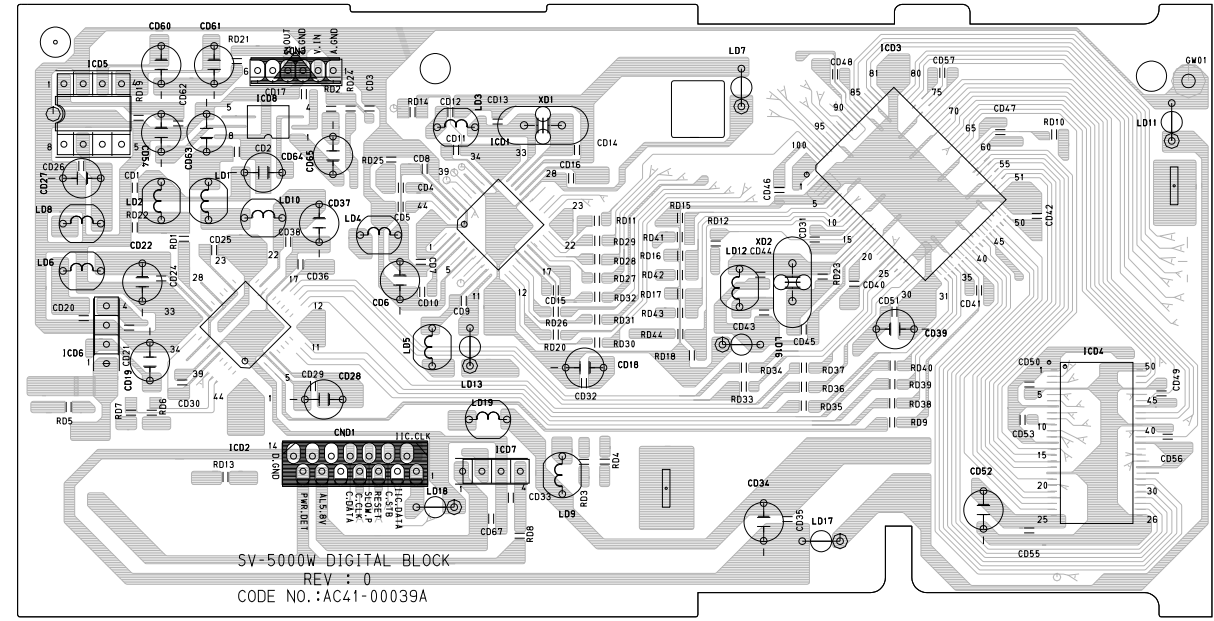


10-2 Digital

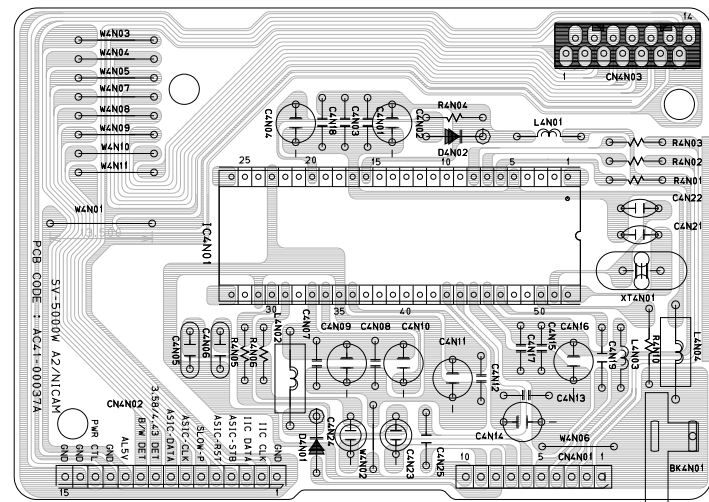
COMPONENT SIDE



SOLDER SIDE

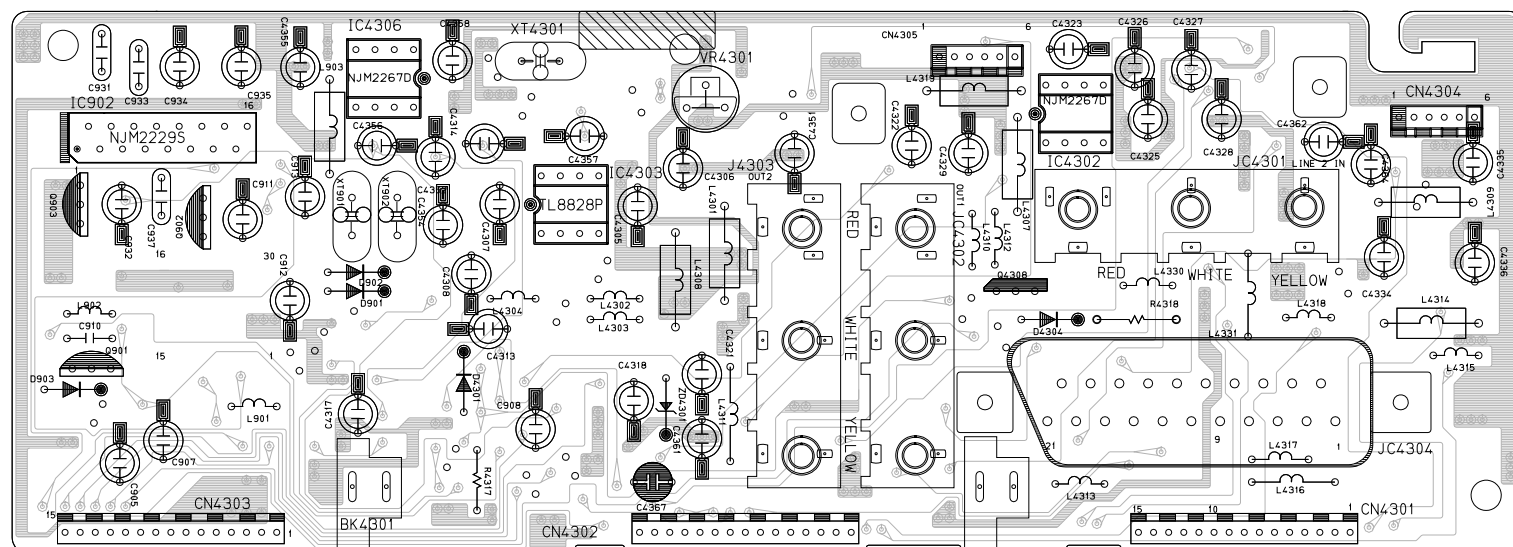


10-3 A2/NICAM

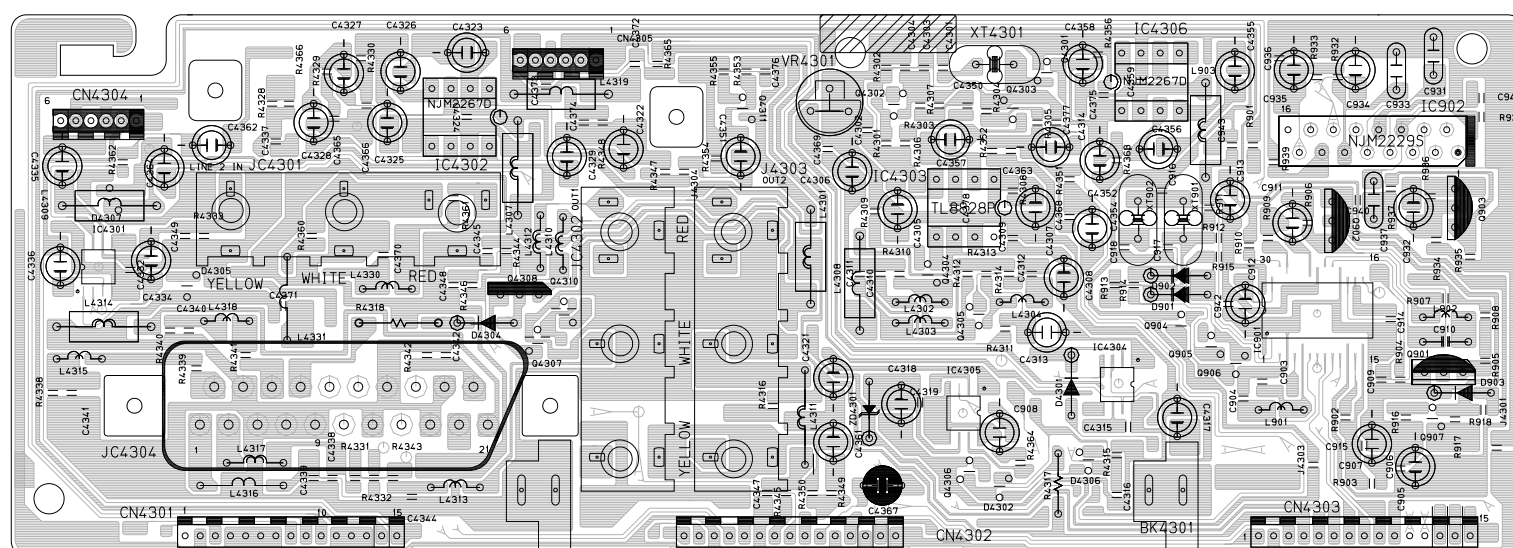


10-4 I/O

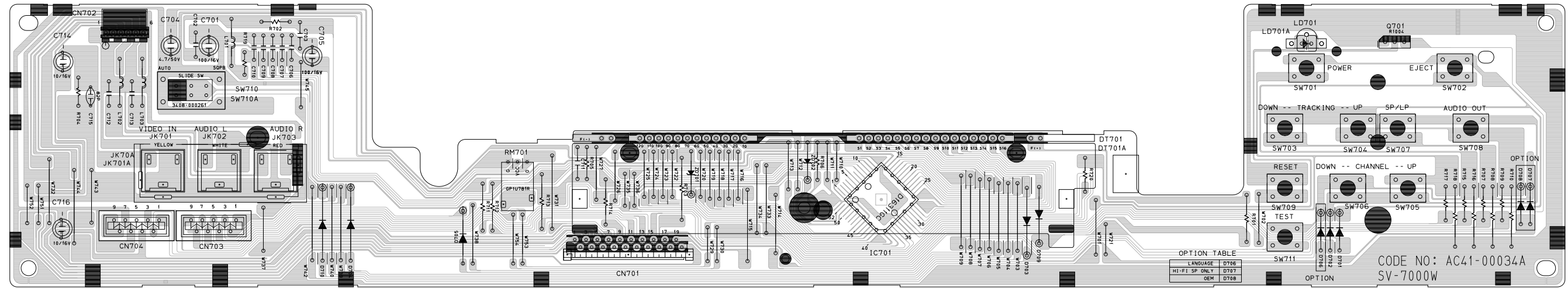
COMPONENT SIDE



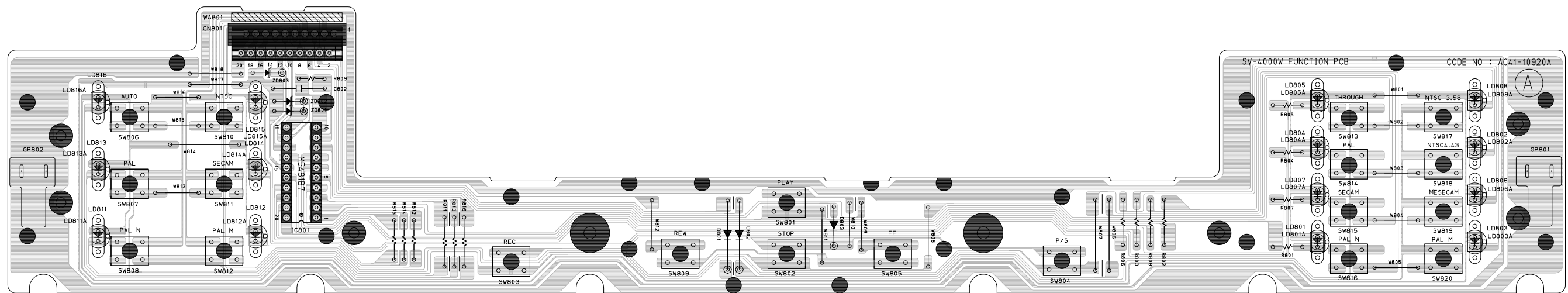
SOLDER SIDE



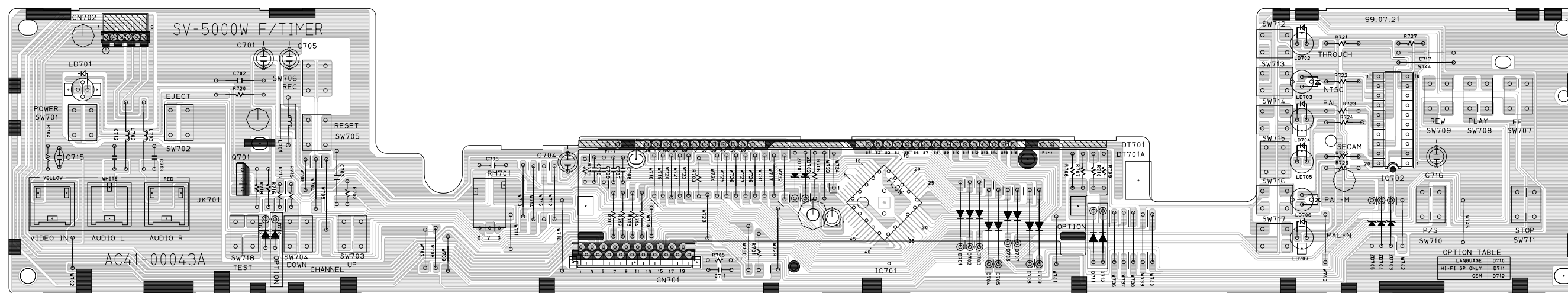
10-5 Timer (SV-7000W)



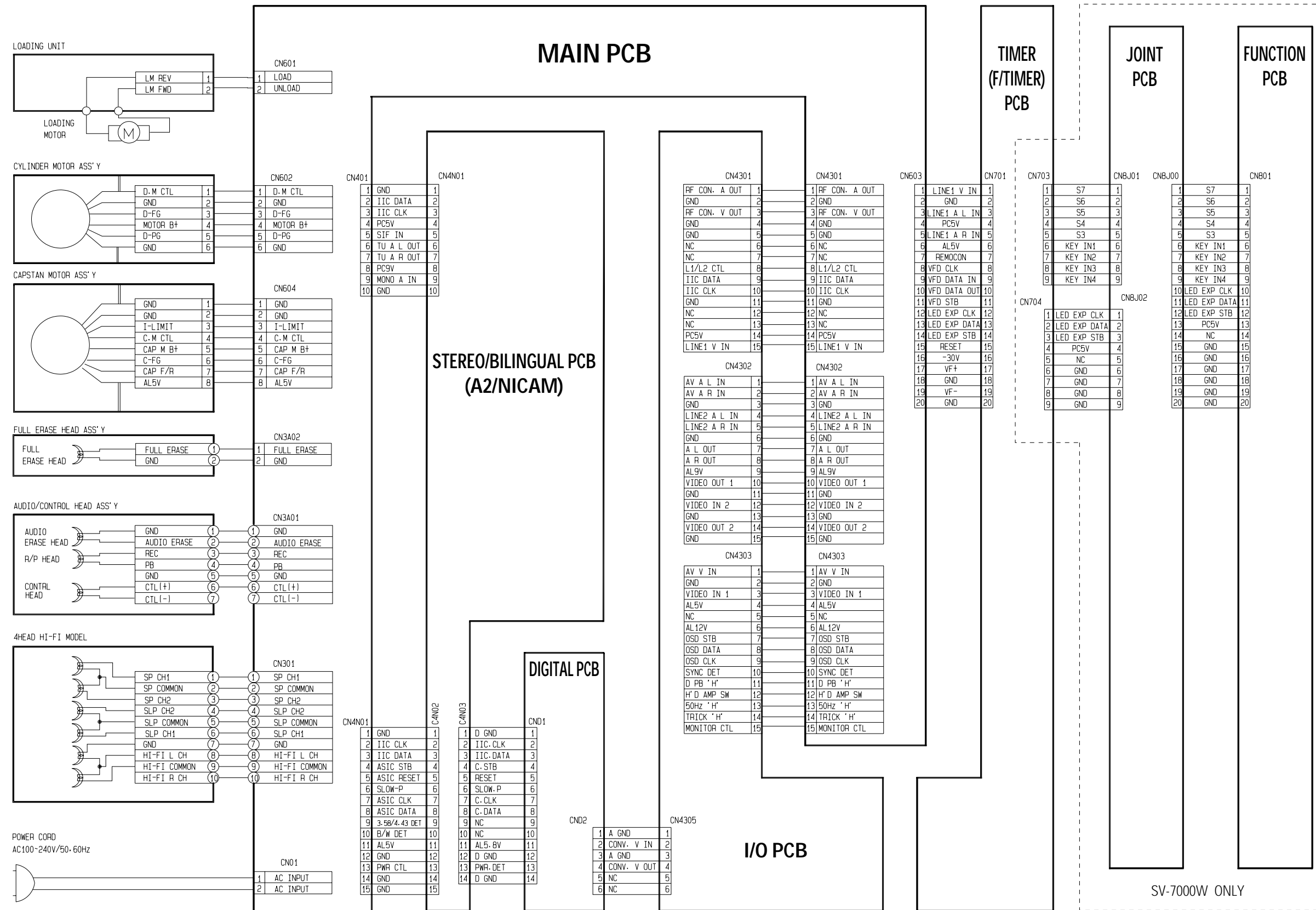
10-6 Function (SV-7000W)



10-7 Function-Timer (SV-5000W)



11. Wiring Diagram



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12. Schematic Diagrams

◆ Block Identification of Main PCB - - - - -	12-2
12-1 S.M.P.S. - - - - -	12-3
12-2 Power - - - - -	12-4
12-3 System Control/Servo - - - - -	12-5
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12-6 TM-Block - - - - -	12-8
12-7 Stereo/Bilingual (A2/NICAM) - - - - -	12-9
12-8 SECAM - - - - -	12-10
12-9 Digital - - - - -	12-11
12-10 O.S.D. - - - - -	12-12
12-11 Input-Output - - - - -	12-13
12-12 Timer (SV-7000W) - - - - -	12-14
12-13 Function/Joint (SV-7000W) - - - - -	12-15
12-14 Function-Timer (SV-5000W) - - - - -	12-16
12-15 Remote Control - - - - -	12-17

Note

For schematic Diagram
 - Resistors are in ohms, 1/8W unless otherwise noted.


Special note :

Most semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

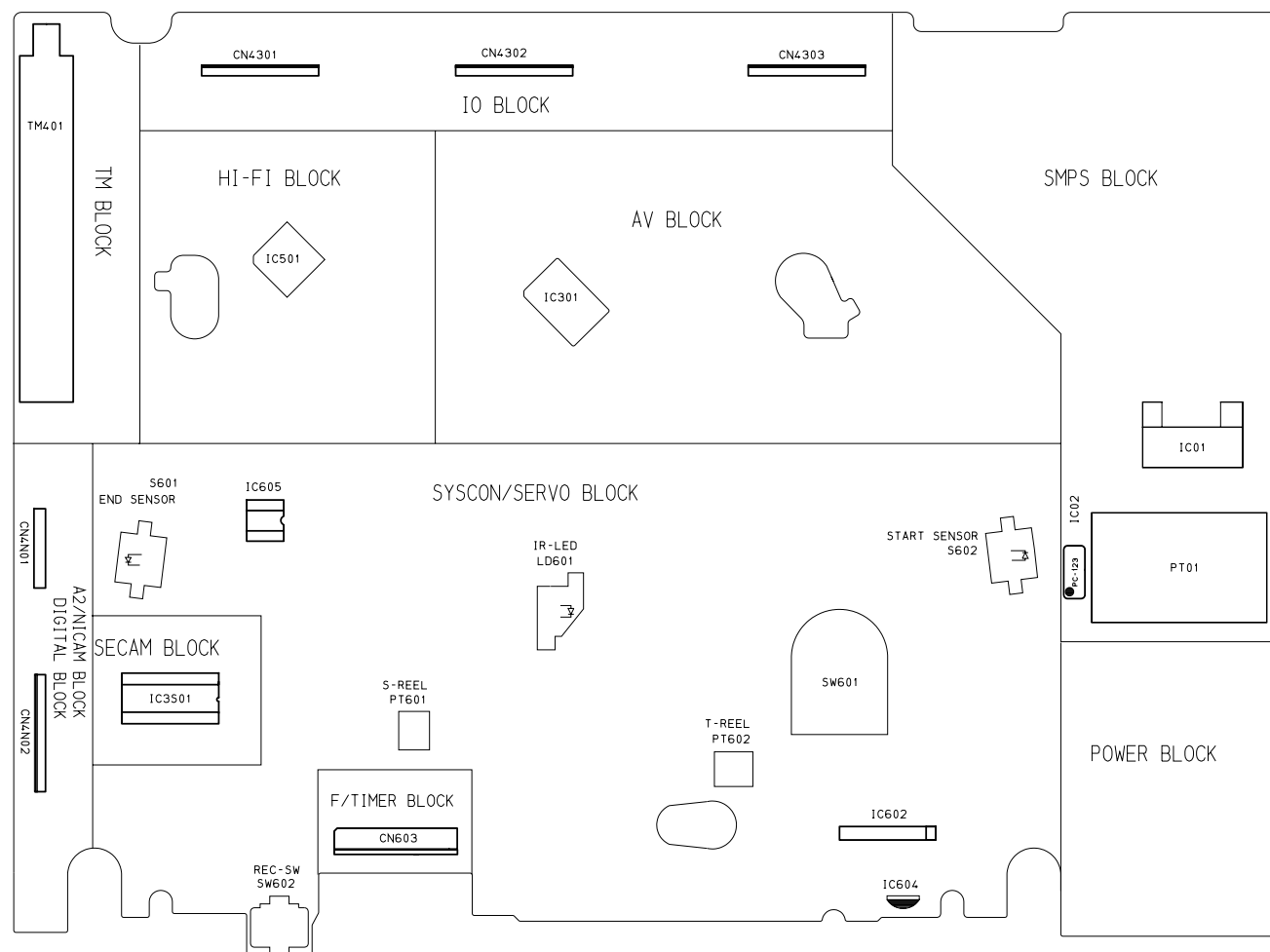
Note :

Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list (may be slightly different or amended since this drawing was prepared).

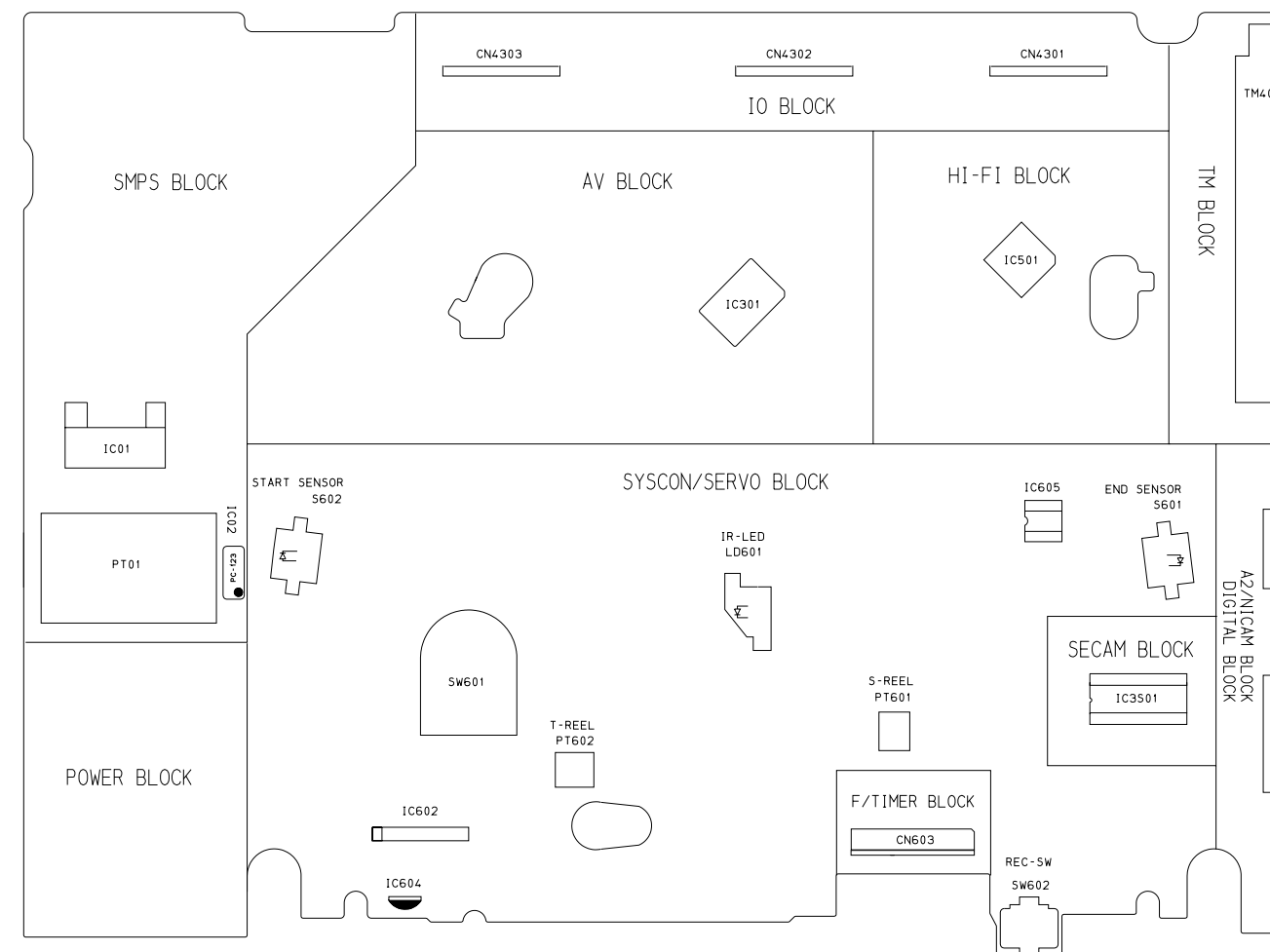
Important safety notices :

Components identified with the mark  have the special characteristics for safety. When replacing any of these components. Use only the same type.

◆ **Block Identification of Main PCB**

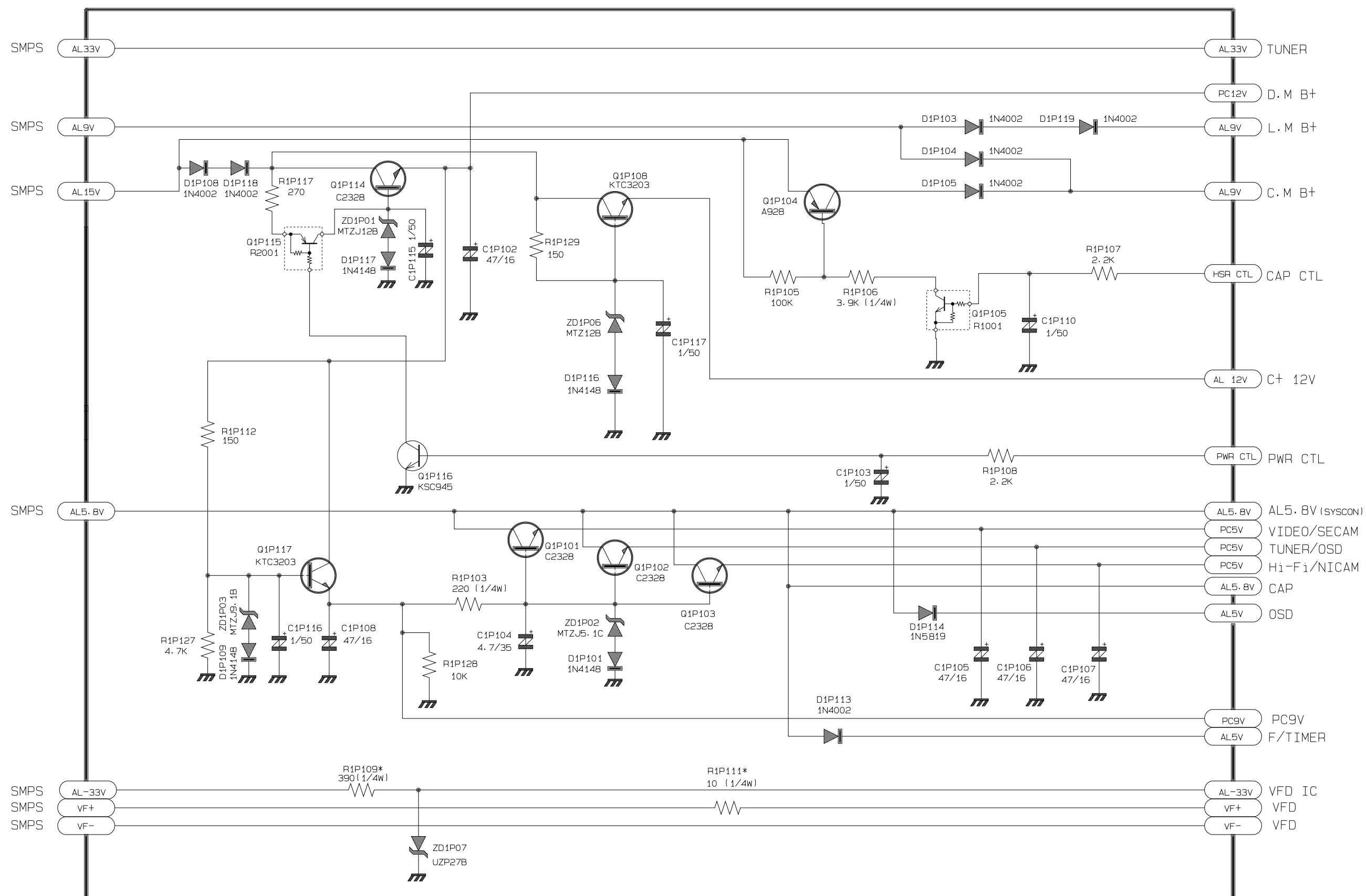


Component Side

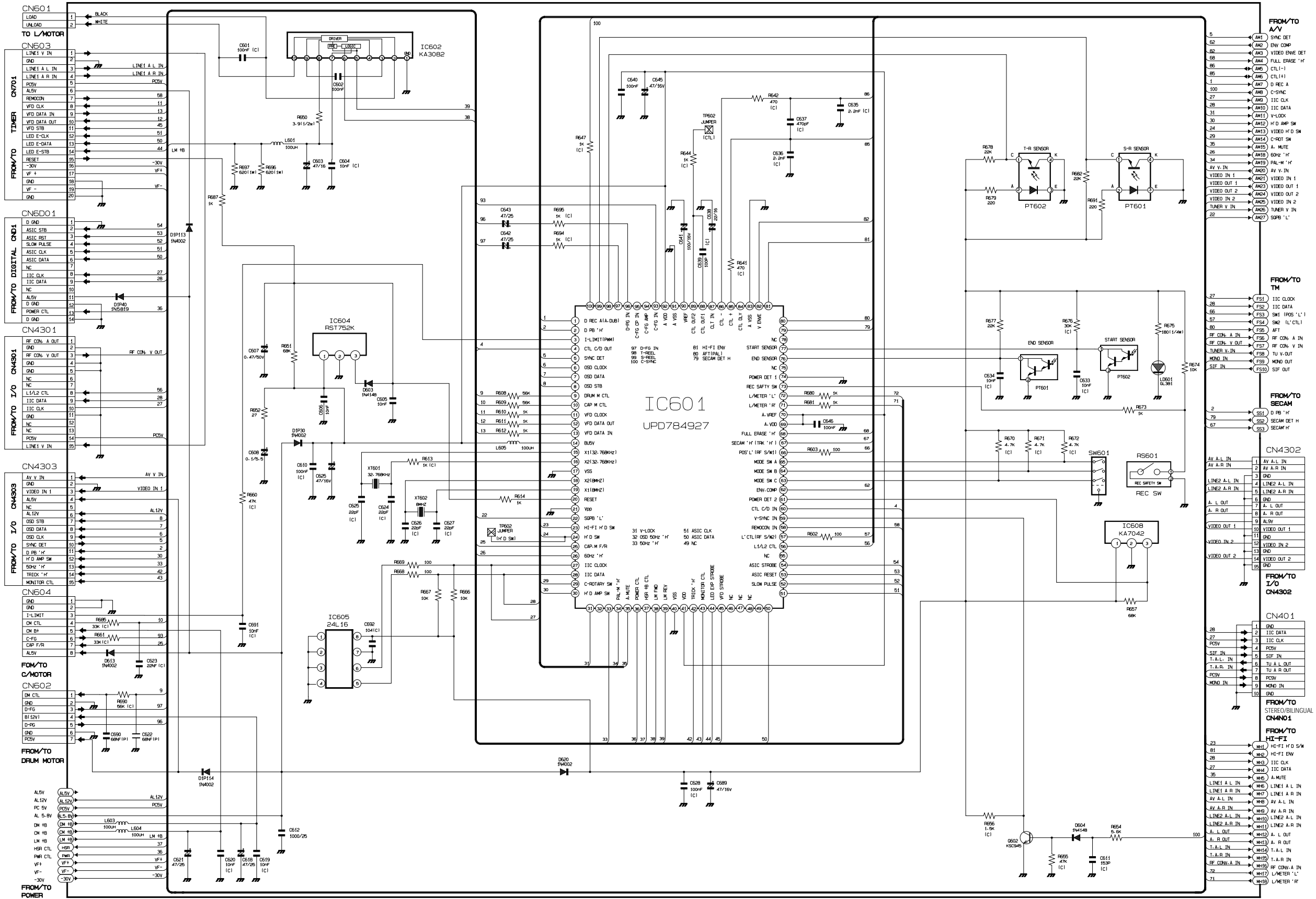


Conductor Side

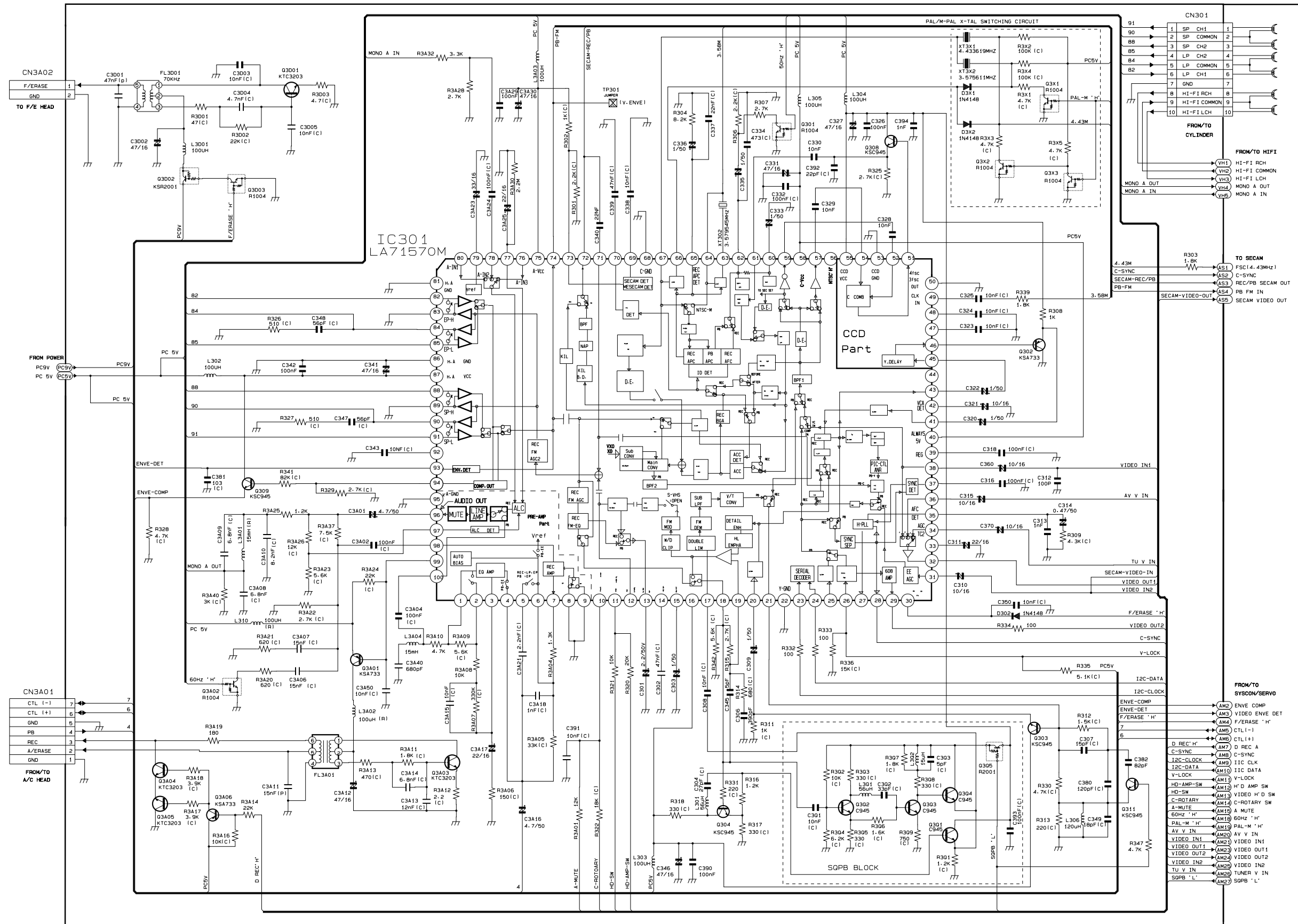
12-2 Power



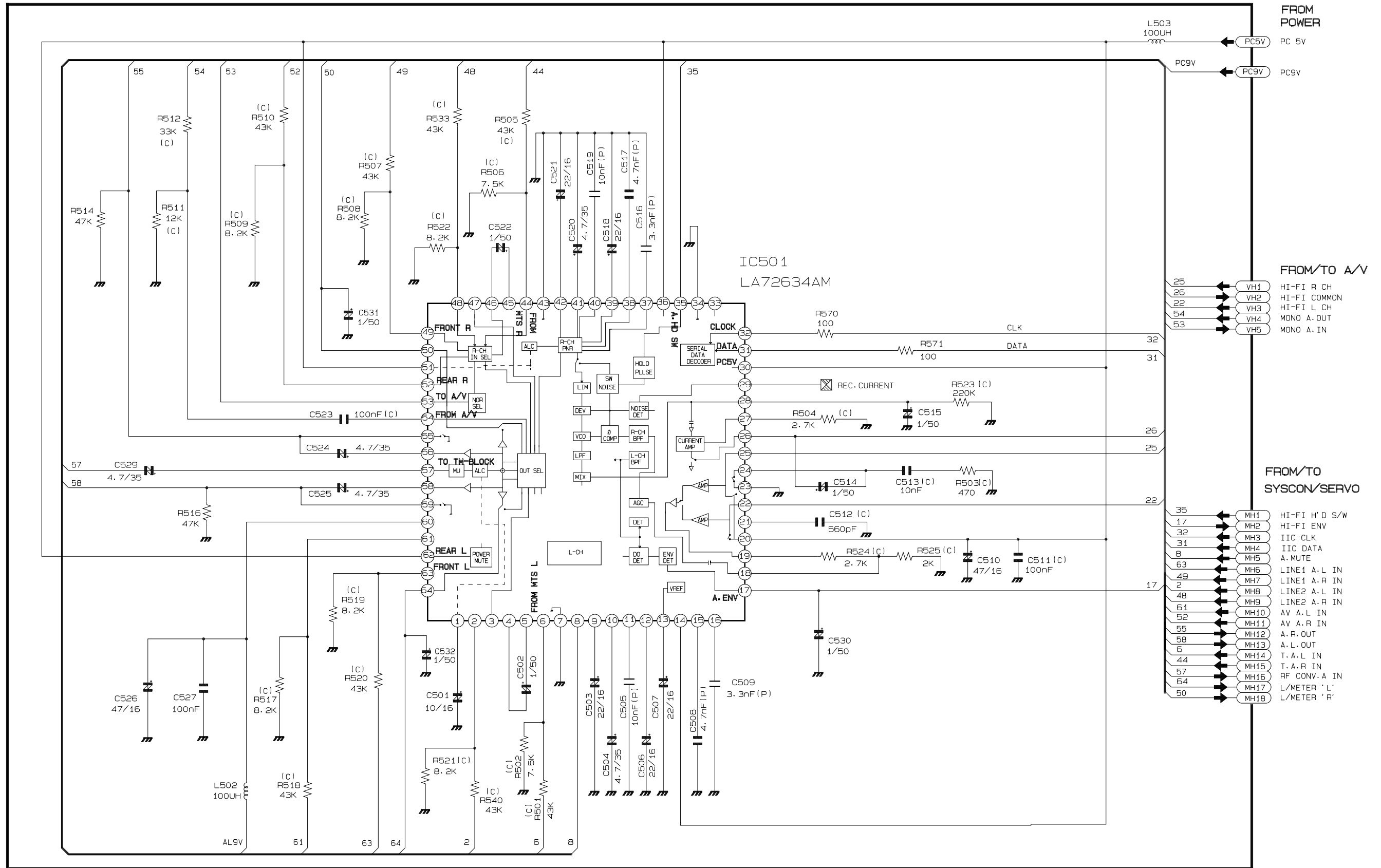
12-3 System Control/Servo



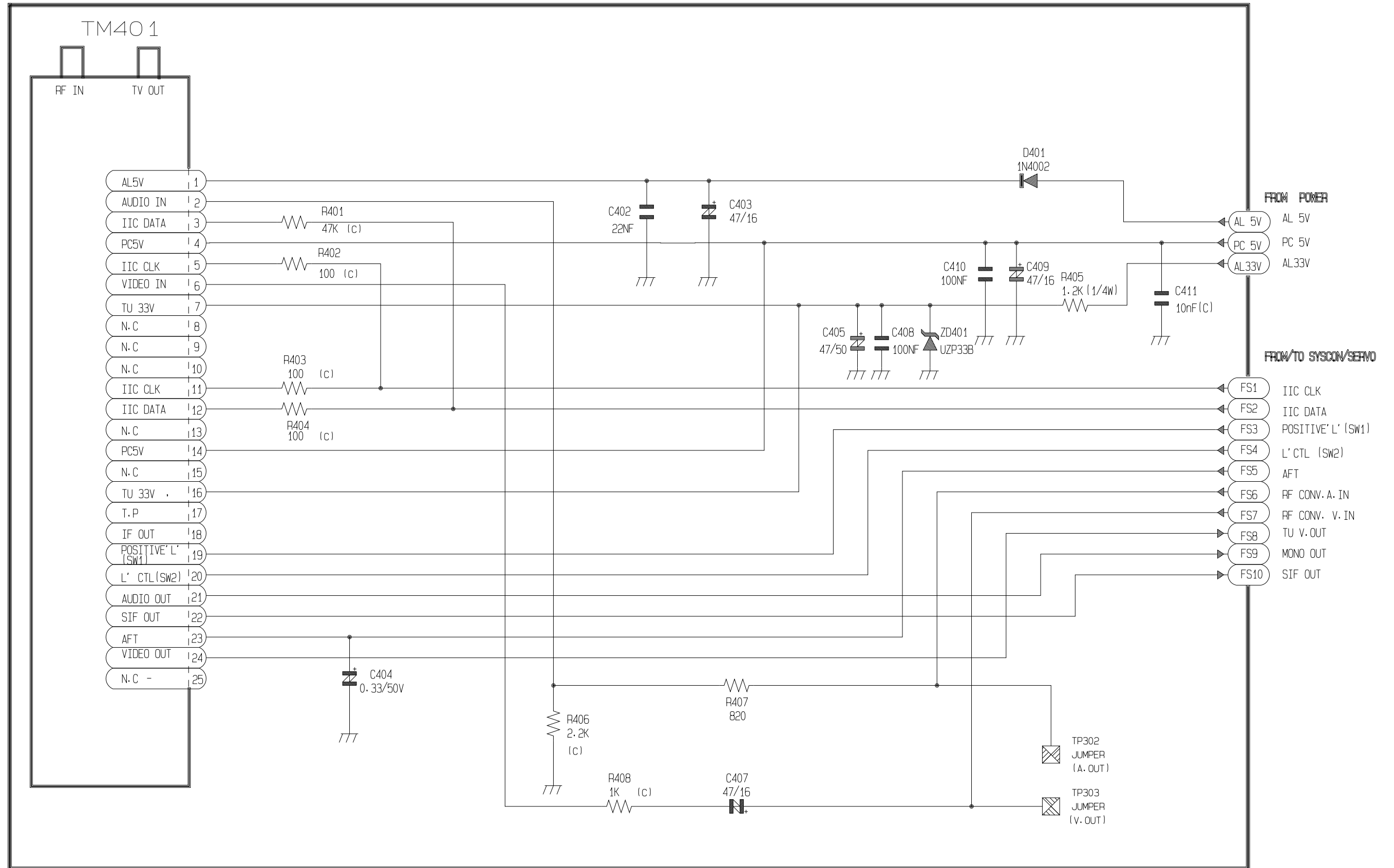
12-4 Audio/Video



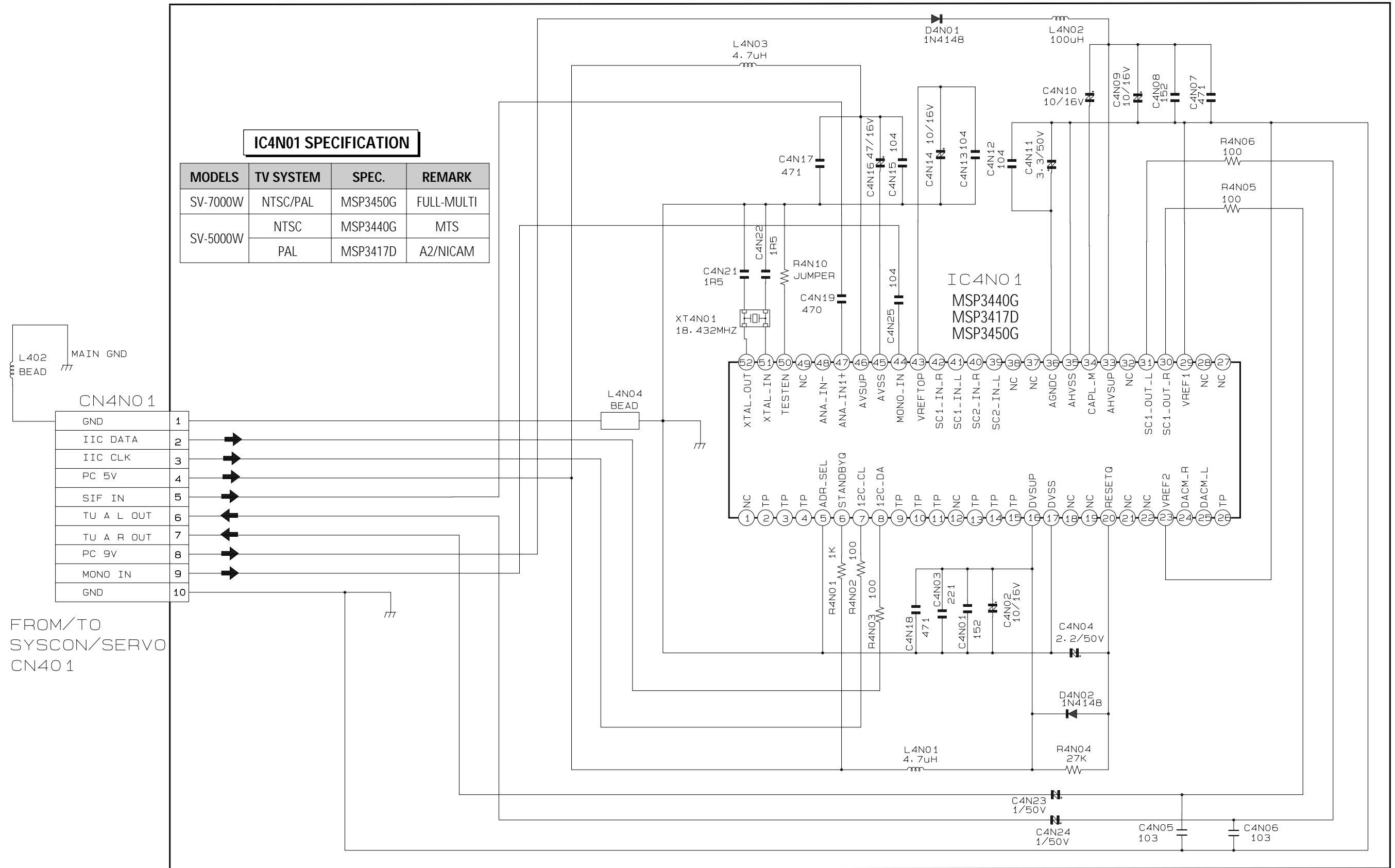
12-5 Hi-Fi



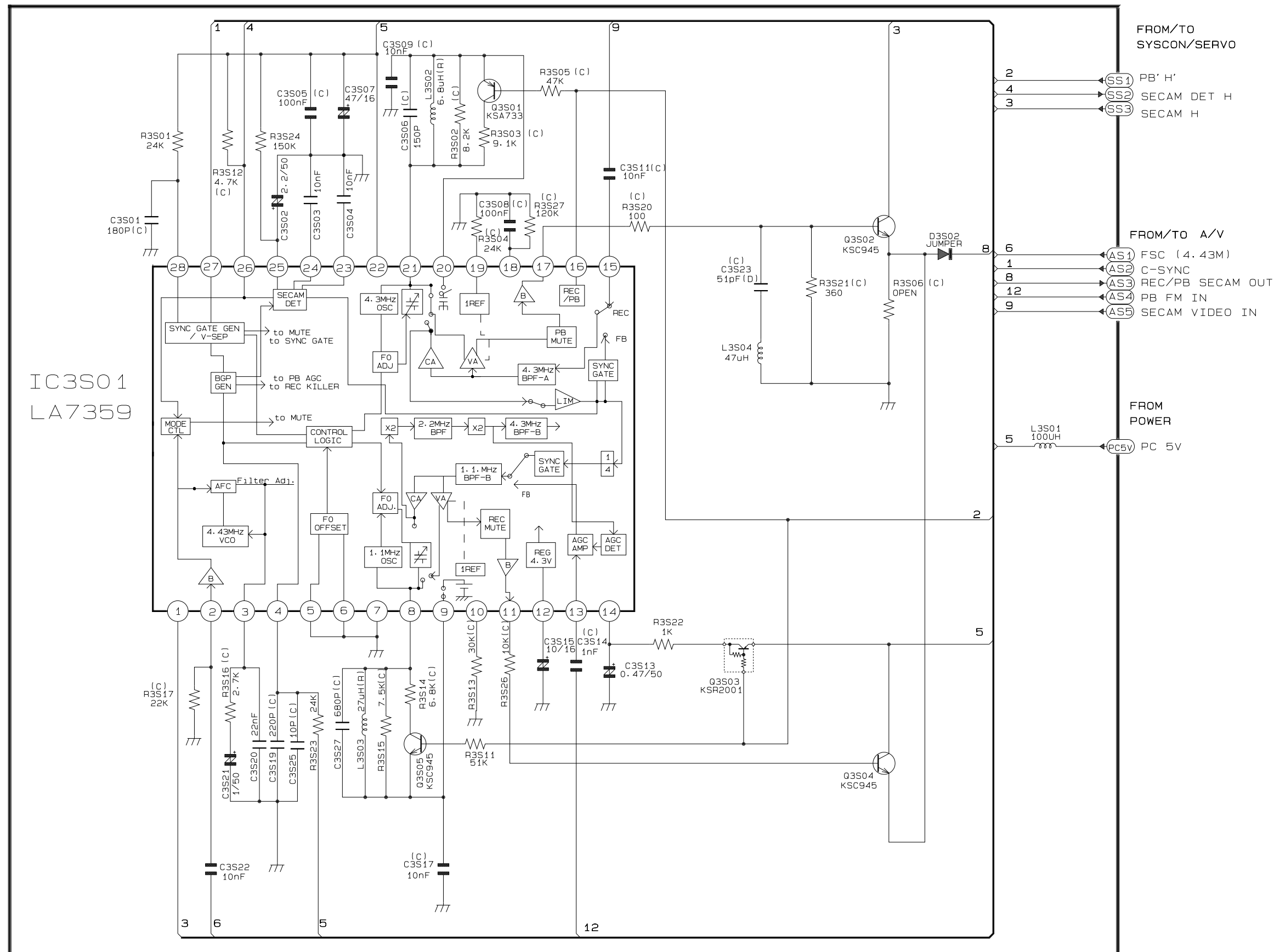
12-6 TM-Block



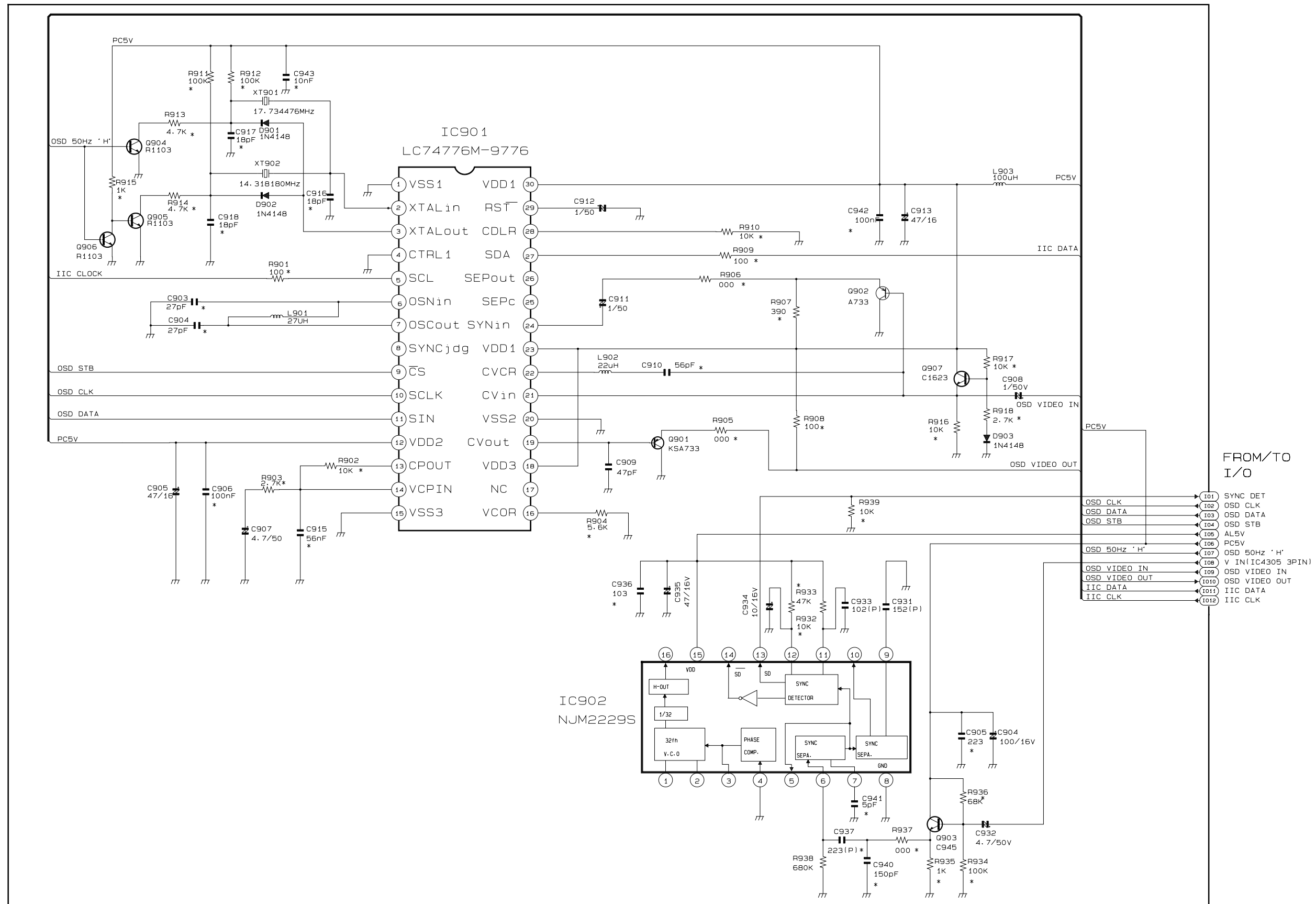
12-7 Stereo/Bilingual (A2/NICAM)



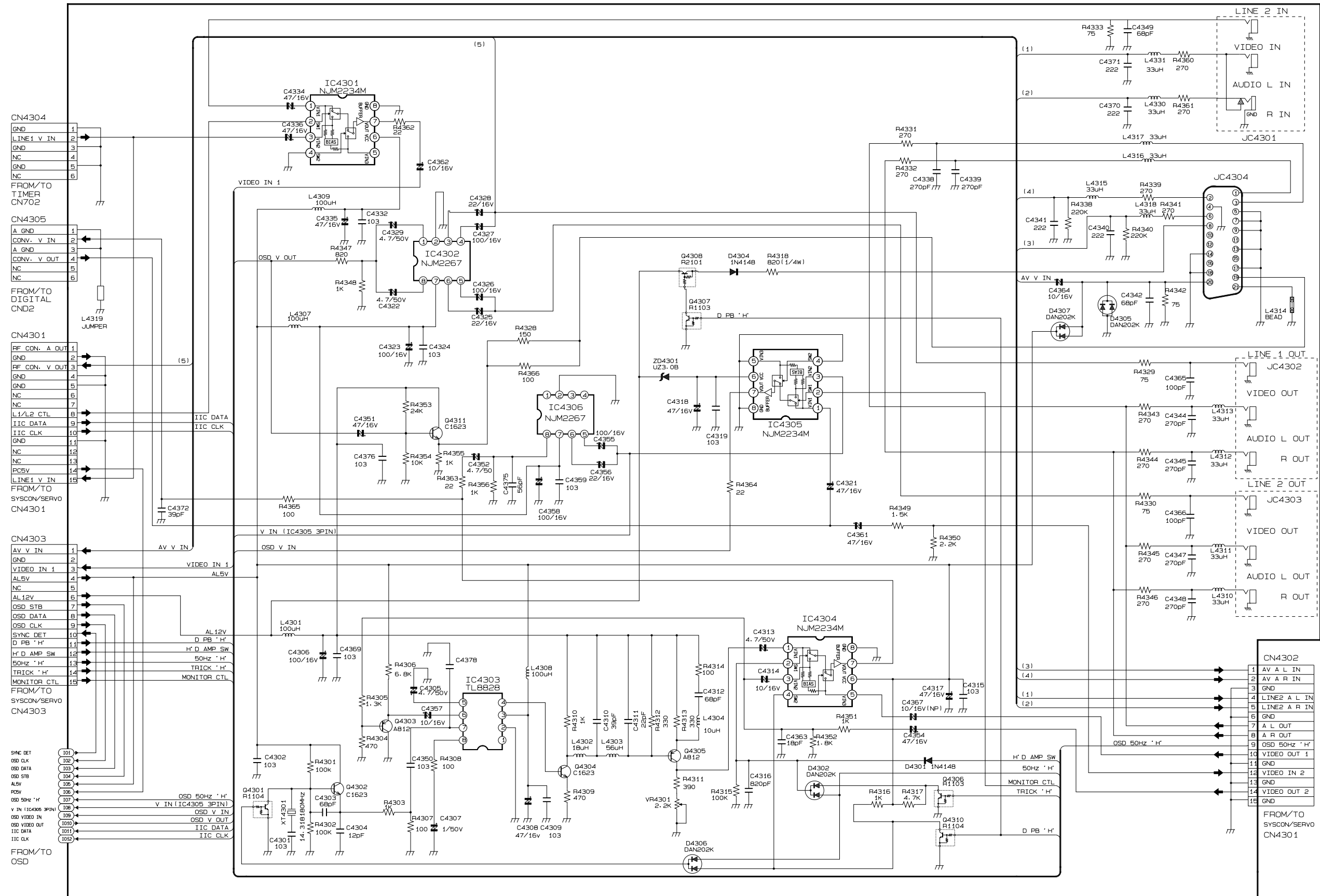
12-8 SECAM



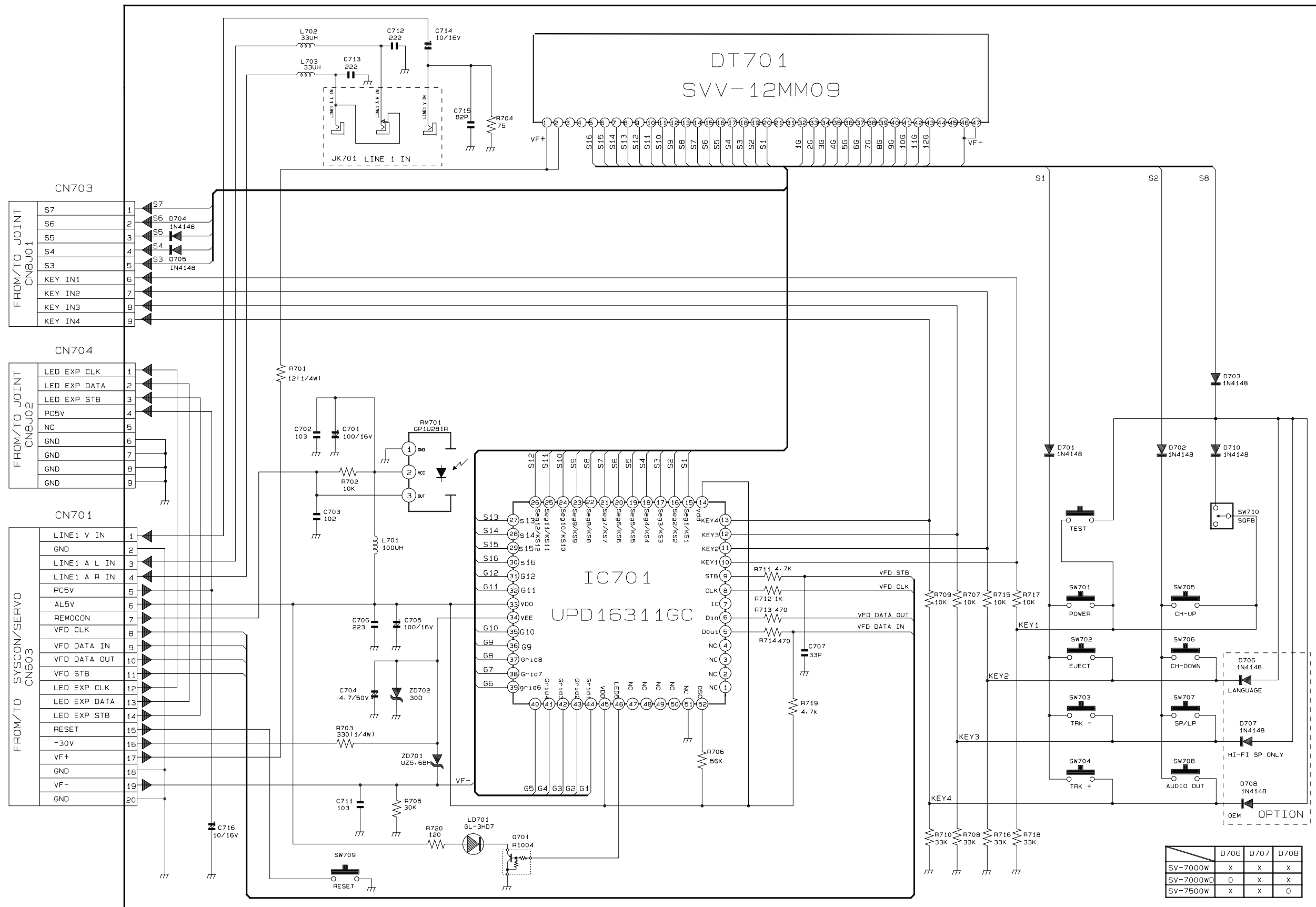
12-10 OSD



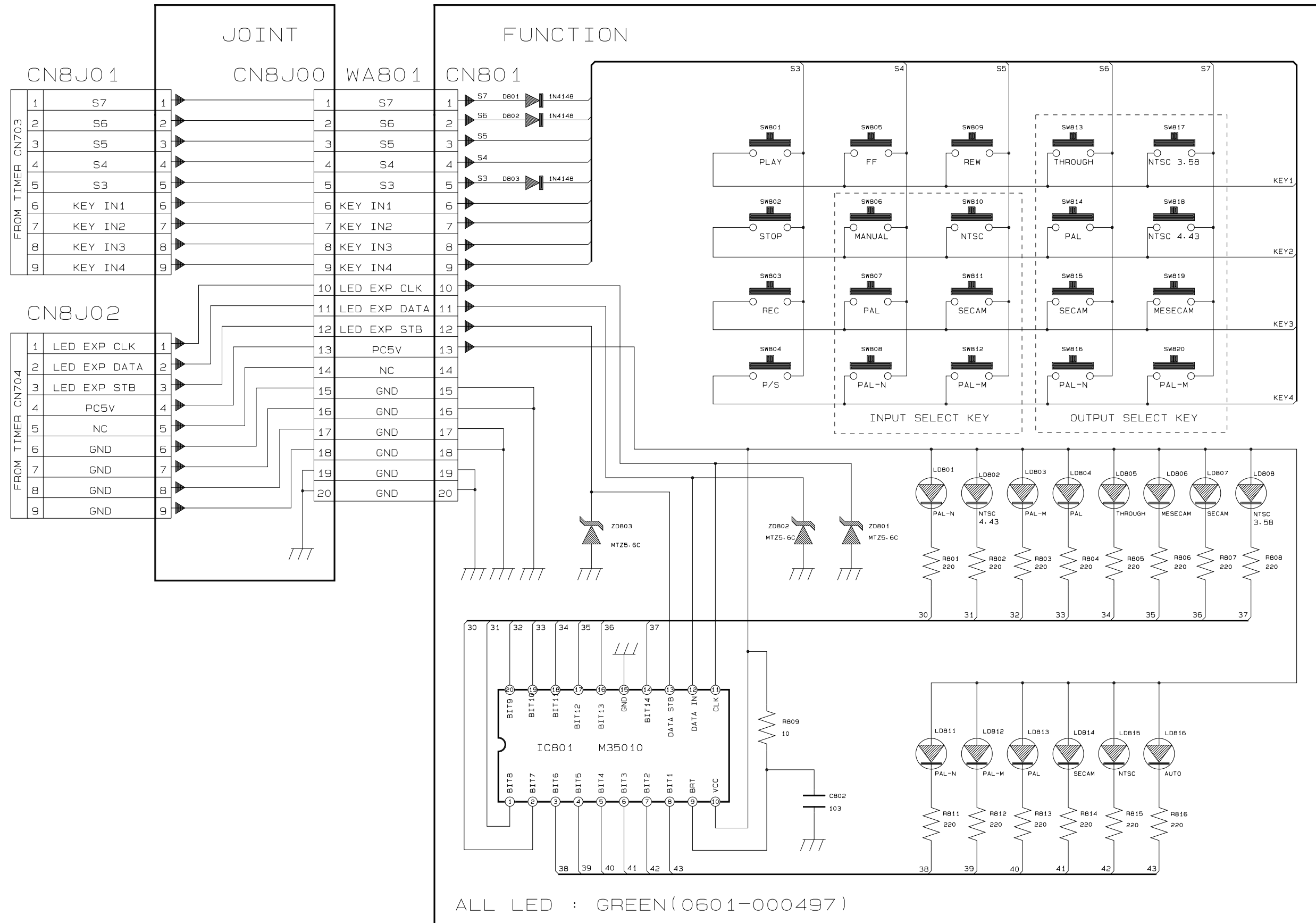
12-11 Input-Output



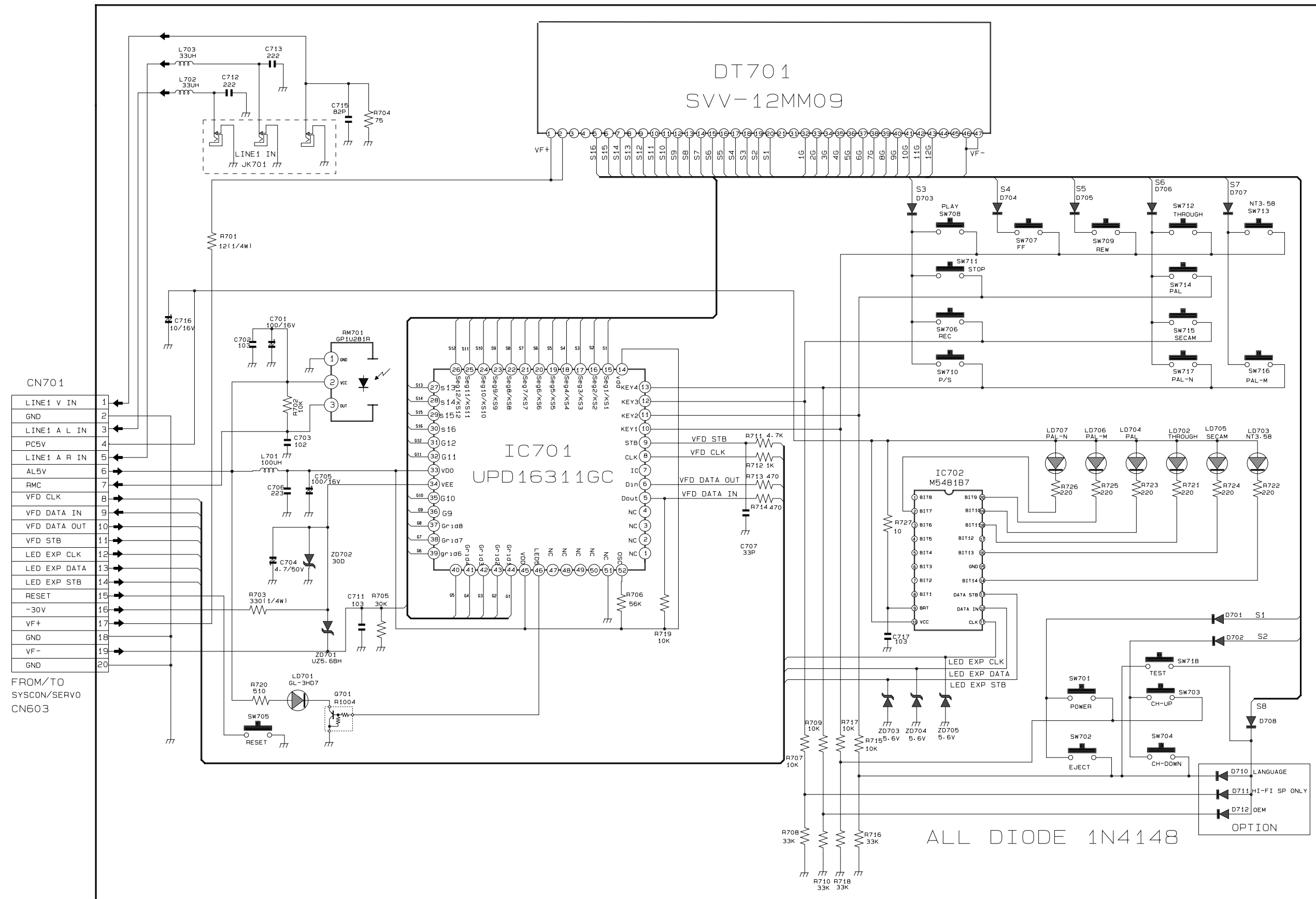
12-12 Timer (SV-7000W)



12-13 Function/Joint (SV-7000W)



12-14 Function-Timer (SV-5000W)



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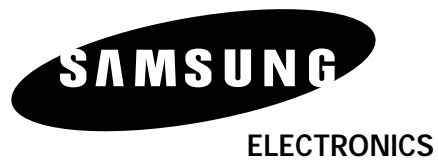
DX-9R

MECHANICAL MANUAL

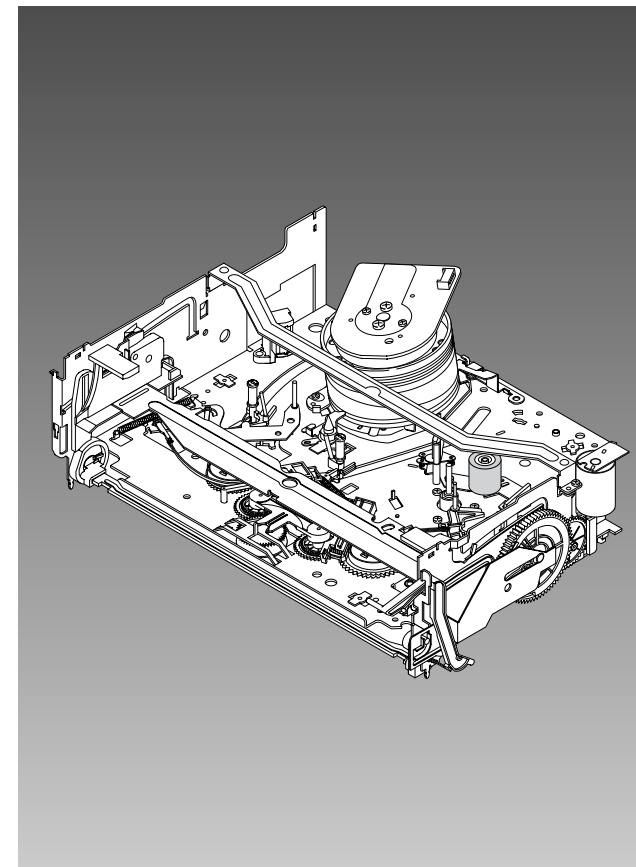
DX-9R

MECHANICAL *Manual*

◆ File with the SERVICE MANUAL.



VHS DECK



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1. Disassembly and Reassembly
2. Alignment and Adjustment

1. Disassembly and Reassembly

1-1 Deck Parts Locations

1-1-1 Top View

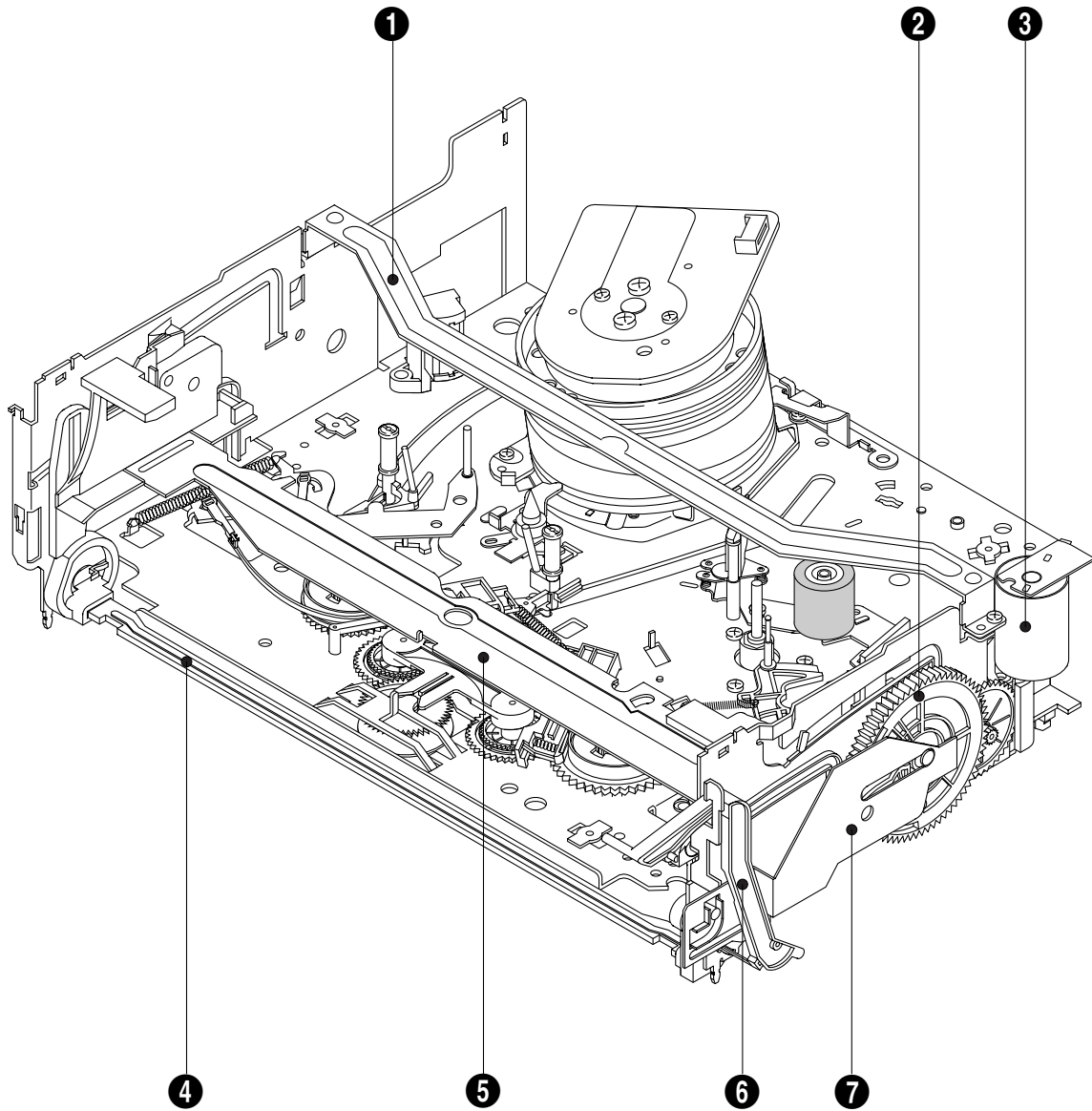


Fig. 1-1 Top parts Location-1

- ❶ BRACKET FL TOP
- ❷ GEAR FL CAM
- ❸ MOTOR LOADING ASS'Y
- ❹ LEVER FL ARM ASS'Y
- ❺ HOLDER FL CASSETTE ASS'Y
- ❻ LEVER FL DOOR
- ❼ SLIDER FL DRIVE

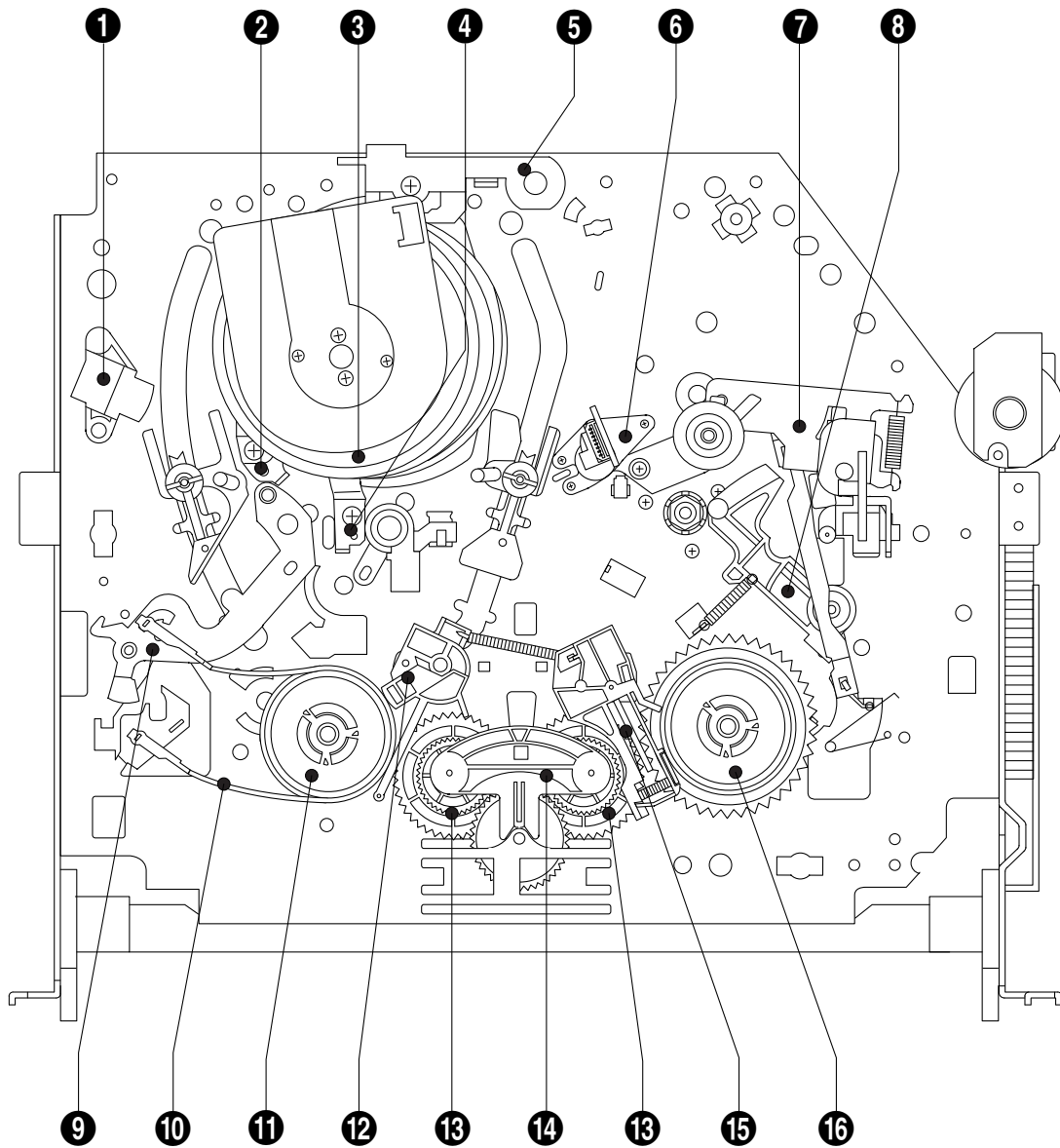


Fig. 1-2 Top Parts Location-2

- | | |
|------------------------|-----------------------|
| ① FE HEAD | ⑩ BAND BRAKE ASS'Y |
| ② PLATE CYLINDER C | ⑪ DISK S REEL |
| ③ CYLINDER ASS'Y | ⑫ LEVER S BRAKE ASS'Y |
| ④ PLATE CYLINDER B | ⑬ GEAR IDLE |
| ⑤ PLATE CYLINDER A | ⑭ LEVER IDLE |
| ⑥ ACE HEAD ASS'Y | ⑮ LEVER T BRAKE ASS'Y |
| ⑦ UNIT PINCH ASS'Y | ⑯ DISK T REEL |
| ⑧ LEVER #9 GUIDE ASS'Y | |
| ⑨ LEVER TENSION ASS'Y | |

1-1-2 Bottom View

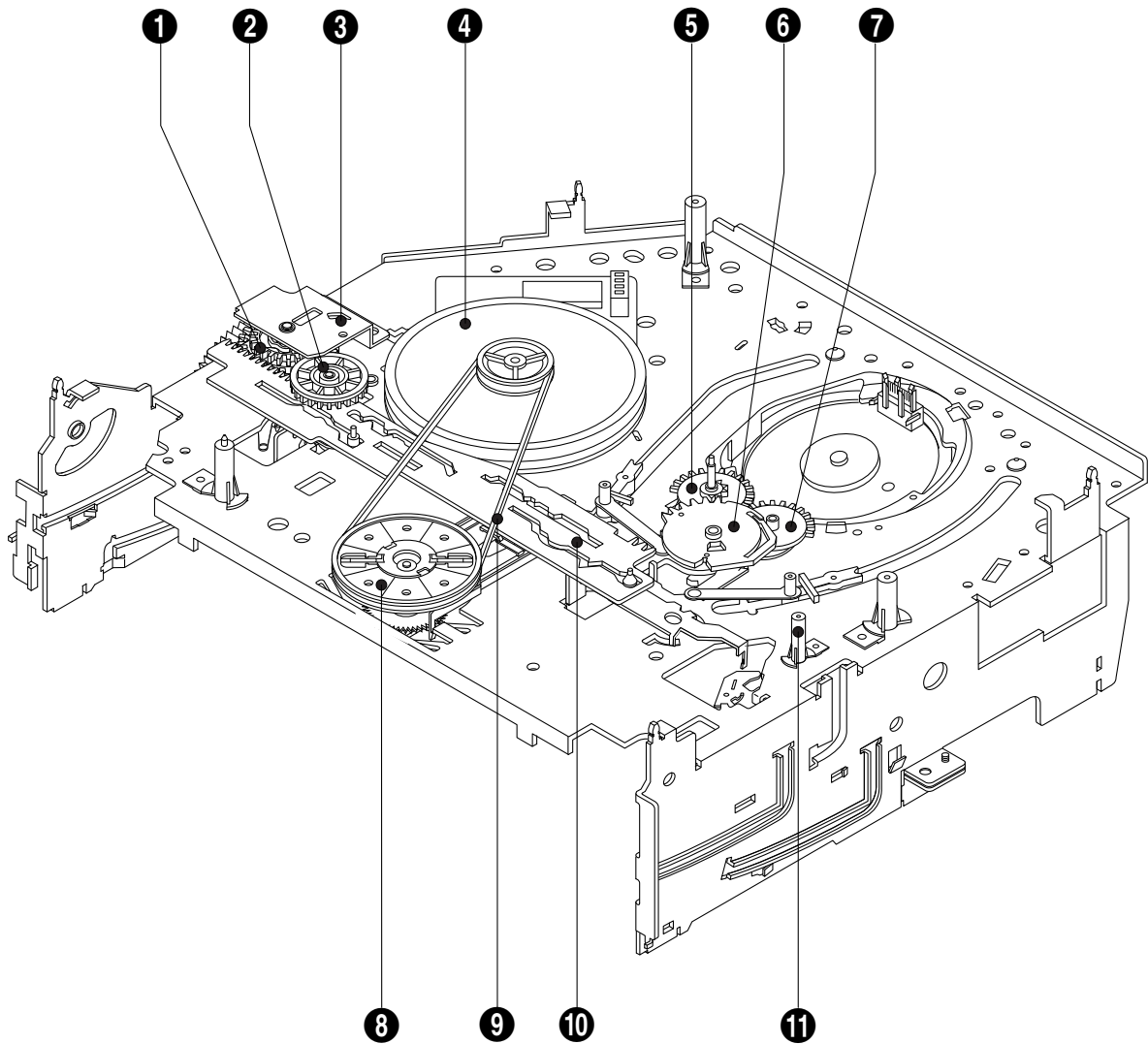


Fig. 1-3 Bottom Parts Location

- ❶ GEAR JOINT 1
- ❷ GEAR JOINT 2
- ❸ BRACKET GEAR
- ❹ MOTOR CAPSTAN ASS'Y
- ❺ LEVER T LOAD ASS'Y
- ❻ GEAR LOADING DRIVE
- ❼ LEVER S LOAD ASS'Y
- ❽ HOLDER CLUTCH ASS'Y
- ❾ BELT PULLEY
- ❿ SLIDER CAM
- ⓫ SLEEVE TENSION

1-2 Main Deck

1-2-1 Bracket FL Top Removal

- 1) Remove 2 screws ❶.
- 2) Remove the Bracket FL Top ❷.

Note : Take care not to change assembly direction.

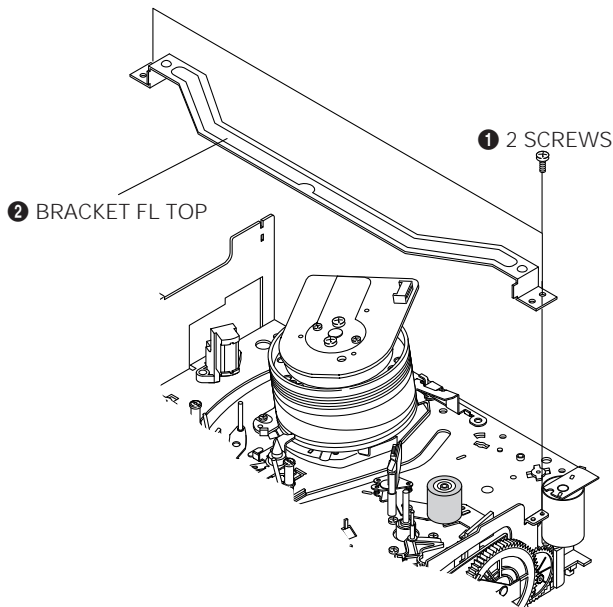


Fig. 1-4 Bracket FL Top Removal

1-2-2 Lever FL Door Removal

- 1) Rotate the Lever FL Door ❶ in the direction of arrow "A".
- 2) Release the Hook ❷, remove the Lever FL Door ❶ in the direction of arrow "B".

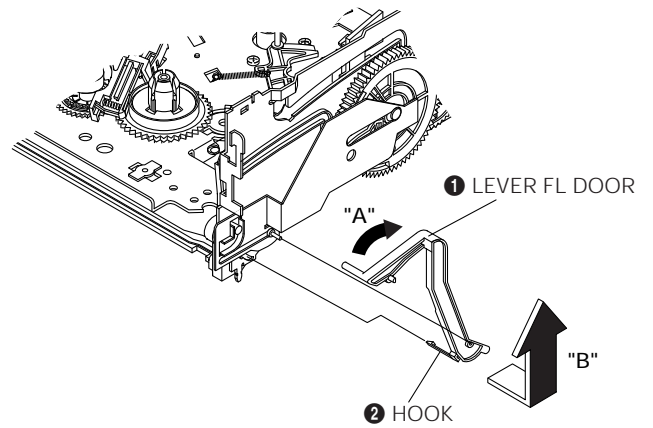


Fig. 1-5 Lever FL Door Removal

1-2-3 Holder FL Cassette Ass'y Removal

- 1) Remove the Lever FL Door. (Refer to Fig. 1-5)
- 2) Pull the Holder FL Cassette Ass'y ❶ to the eject position.
- 3) Pull the Holder FL Cassette Ass'y ❶ as grasping the Holder FL Cassette Ass'y ❶ and Lever FL Cassette-R ❷ in the same time to release hooking from Main Base until the Boss [A], [B] of Holder FL Cassette Ass'y ❶ is taken out from the Rail [C], [D].
- 4) Lift the Holder FL Cassette Ass'y ❶ in the direction of arrow "B" in this time, you have to grasp the Lever FL Cassette-R ❷ continuously until the Holder FL Cassette Ass'y ❶ is taken out completely.

Note : Be sure to insert Lever FL Cassette-R ❷ in the direction of "A" to prevent separation and breakage of the Lever FL Cassette-R ❷ at disassembling and reassembling.

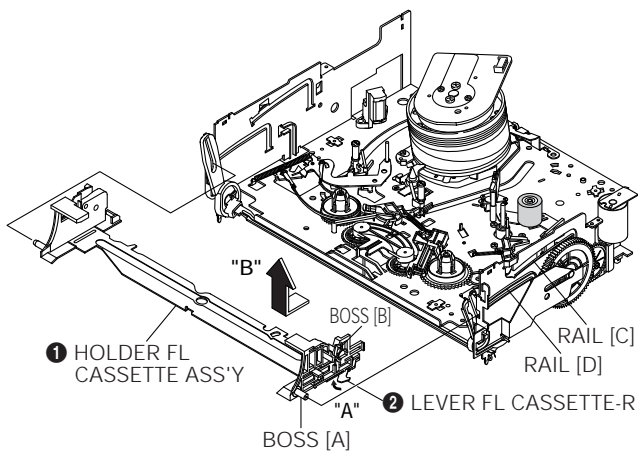


Fig. 1-6 Holder FL Cassette Ass'y Removal

1-2-4 Lever FL Arm Ass'y Removal

- 1) Remove the Lever FL Door. (Refer to Fig. 1-5)
- 2) Remove the Holder FL Cassette Ass'y. (Refer to Fig. 1-6)
- 3) Release the Hook ❶ in the direction of arrow "A", pull out the Lever FL Arm Ass'y ❷ from the Boss of Main Base.
- 4) Remove the Lever FL Arm Ass'y ❷ in the direction of arrow "B".

Assembly : When reinstalling, be sure to reassemble Lever FL Arm Ass'y ❷ after you insert the Boss ❷ in Groove [A] of Slider FL Drive ❸.

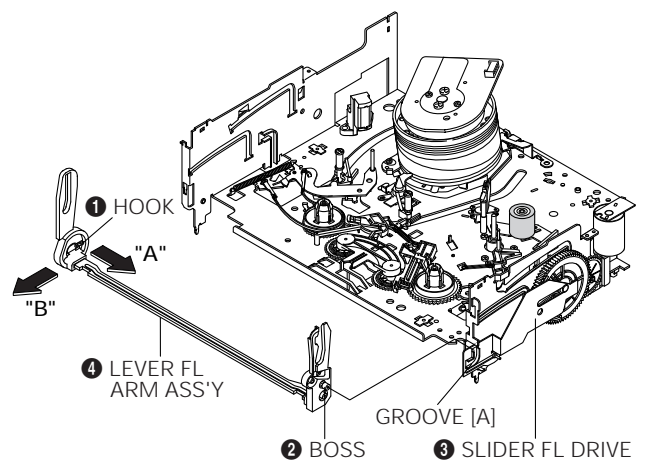


Fig. 1-7 Lever FL Arm Ass'y Removal

1-2-5 Slider FL Drive Removal

- 1) Pull the Slider FL Drive ❶ to the front direction.
- 2) Remove the Slider FL Drive ❶ in the direction of arrow. (Refer to Fig. 1-8)

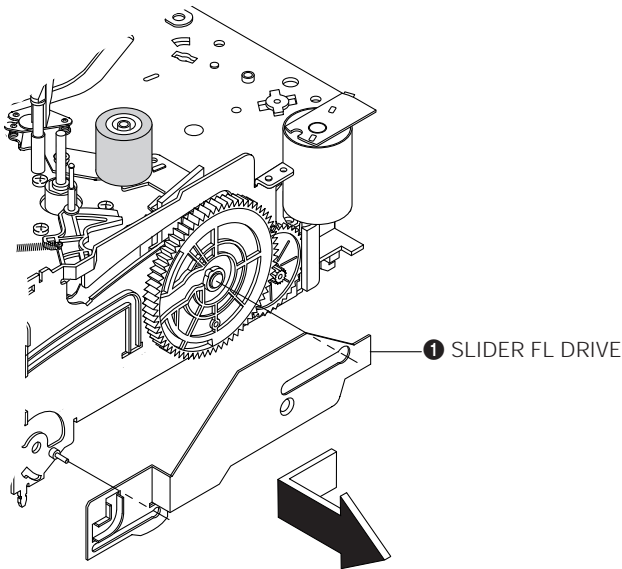


Fig. 1-8 Slider FL Drive Removal

1-2-6 Bracket Gear, Gear FL Cam, Gear Joint 1, 2 Removal

- 1) Remove screw ❶.
- 2) Lift the Bracket Gear ❷.
- 3) Remove the Gear FL Cam ❸.
- 4) Lift the Gear Joint 2 ❹, Gear Joint 1 ❺.

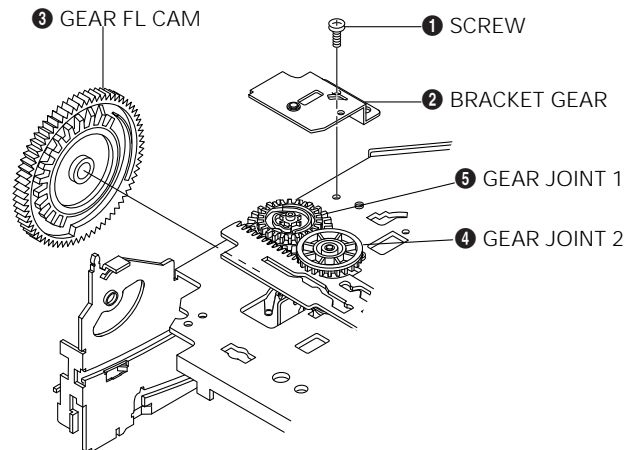


Fig. 1-9 Bracket Gear, Gear FL Cam, Gear Joint 1, 2 Removal

1-2-7 Assembly of Gear FL Cam, Gear Joint 1, 2

- 1) Be sure to align dot mark of Gear Joint 1 ❶ with dot mark of Gear Joint 2 ❷ as shown Fig. 1-10 (Refer to Timing Point 1), confirm the Timing Point 2 of the Gear Joint 2 ❷ and Slider Cam ❸.
- 2) Align the Gear FL Cam ❹ with the Gear Worm Wheel Post as shown detail drawing. (Refer to Timing Point 3)

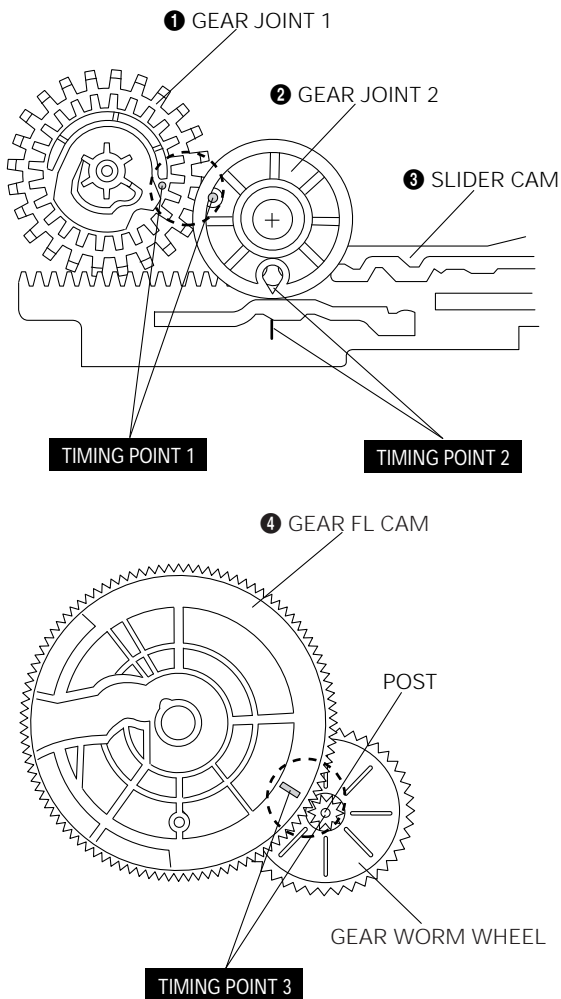


Fig. 1-10 Assembly of Gear FL Cam, Gear Joint 1,2

1-2-8 Holder Worm, Gear Worm, Gear Worm Wheel Removal

- 1) Release the Hook [A] in the direction of arrow and, remove the Holder Worm ❶.
- 2) Remove the Gear Worm ❷.
- 3) Remove the Gear Worm Wheel ❸. (After removing the Gear FL Cam as shown Fig. 1-9)

Note : Secure the Hook [A] after installing the Holder Worm ❶.

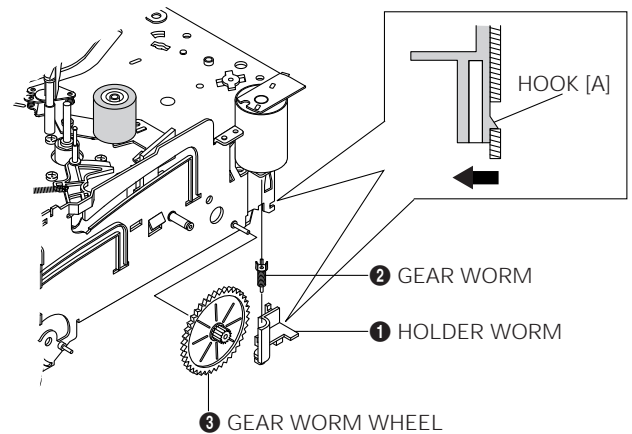


Fig. 1-11 Holder Worm, Gear Worm, Gear Worm Wheel Removal

1-2-9 Motor Loading Ass'y Removal

- 1) Remove the screw ❶.
- 2) Remove the Motor Loading Ass'y ❷.

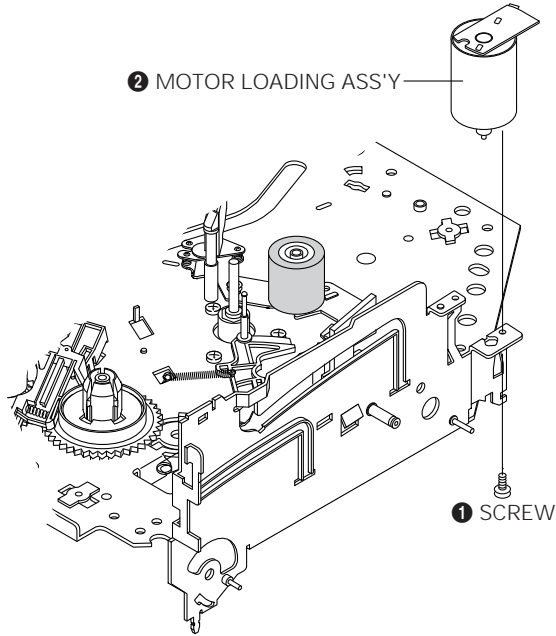


Fig. 1-12 Motor Loading Ass'y Removal

1-2-10 Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y Removal

- 1) Remove the Belt Pulley. (Refer to Fig. 1-29)
- 2) Remove the Gear Loading Drive ❶ after releasing Hook [A] in the direction arrow as shown in detail drawing.
- 3) Remove the Slider Cam ❷.
- 4) Remove the Lever T, S Load Ass'y ❸, ❹.

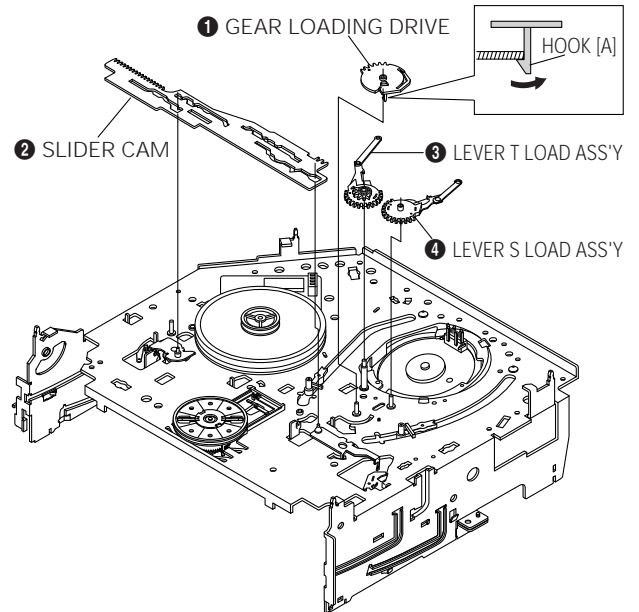


Fig. 1-13 Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y Removal

1-2-11 Assembly of Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y

- 1) When reinstalling, be sure to align dot of Lever T Load Ass'y ❶ with dot of Lever S Load Ass'y ❷ as shown in drawing. (Refer to Timing Point 1)
- 2) Insert the Pin A, B, C, D into the Slider Cam ❸ hole.
- 3) Be sure to align dot of Lever T Load Ass'y and dot of Gear Loading Drive ❹. (Refer to Timing Point 2)
- 4) Align dot of Gear Loading Drive with mark of Slider Cam as shown in drawing. (Refer to Timing Point 3)

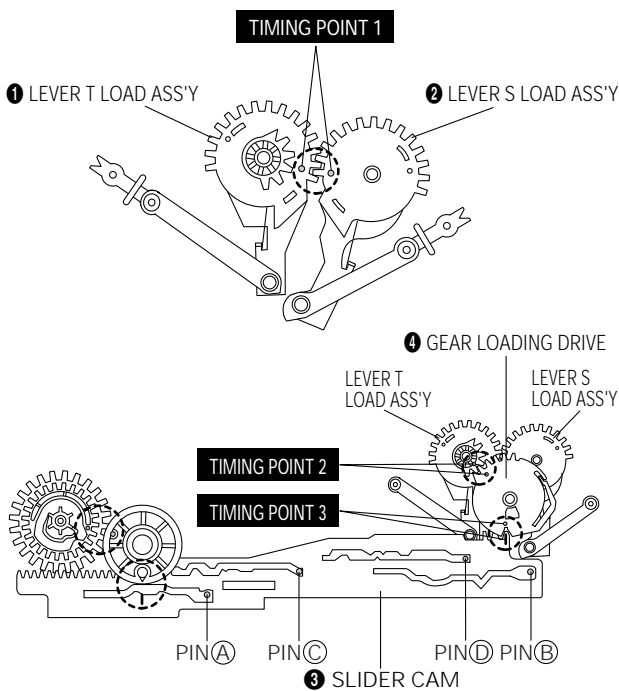


Fig. 1-14 Assembly of Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y

1-2-12 Lever Tension Ass'y, Band Brake Ass'y, Sleeve Tension Removal

- 1) Remove the Spring Tension ❶.
- 2) In bottom side of Deck, remove the Sleeve Tension ❷ after rotating it right or left as lifting locking edge of Sleeve Tension.
- 3) Remove the side "a" of the Band Brake Ass'y ❹ in the direction of arrow "A" from the Lever Tension Ass'y ❸.
- 4) Remove the side "b" of the Band Brake Ass'y ❹ in the direction of arrow "B" from the Main Base.

Note :

- 1) When replacing the Lever Tension Ass'y, be sure to apply oil in the Sleeve Tension.
- 2) Take care not to touch stain on the felt side, and not to be folded and broken Band Brake Ass'y.

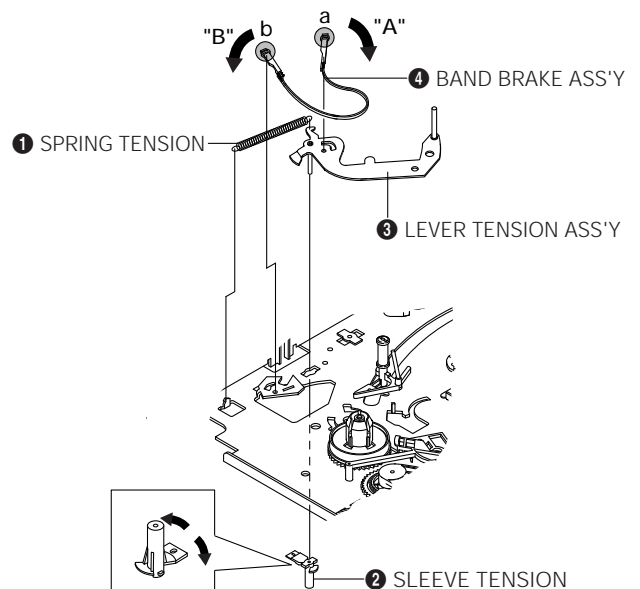


Fig. 1-15 Lever Tension Ass'y, Band Brake Ass'y, Sleeve Tension Removal

1-2-13 Lever S, T Brake Ass'y Removal

- 1) Release the Hook [A] and the Hook [B], [C] in the direction of arrow as shown in Fig. 1-16.
- 2) Lift the Lever S, T Brake Ass'y ❶, ❷ with Spring Brake ❸.

Assembly :

- 1) Assembly the Lever S Brake Ass'y ❶ on the Main Base.
- 2) Assembly the Lever T Brake Ass'y ❷ with Spring Brake ❸.

Note : Take extreme care not to be folded and transformed spring Brake at removing or reinstalling.

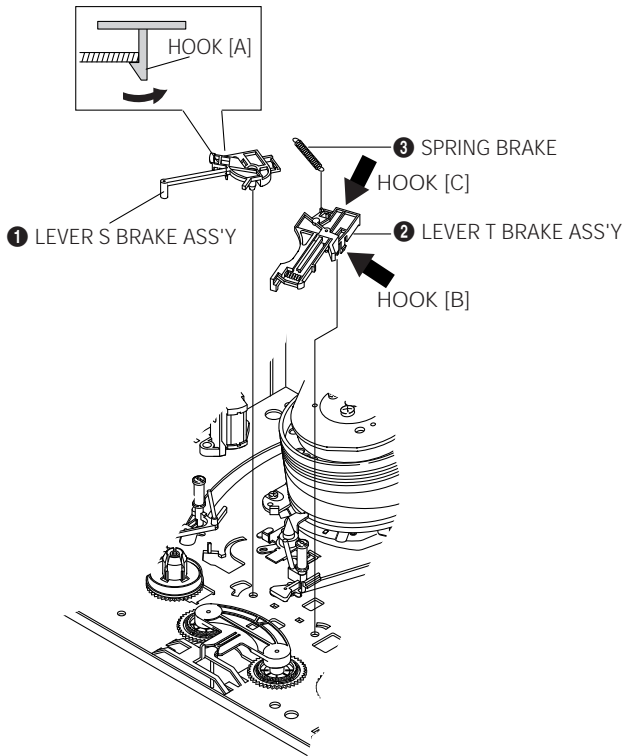


Fig. 1-16 Lever S, T Brake Ass'y Removal

1-2-14 Lever Idle Ass'y Removal

- 1) Push the Lever Idle ❶ in the direction of arrow "A", "B".
- 2) Lift the Lever Idle ❶.

Assembly :

- 1) Apply oil in two Bosses of Lever Idle ❶.
- 2) Assemble the Gear Idle ❷ with the Lever Idle ❶.

Note : When replacing the Gear Idle ❷, be sure to add oil in the boss of Lever Idle ❶.

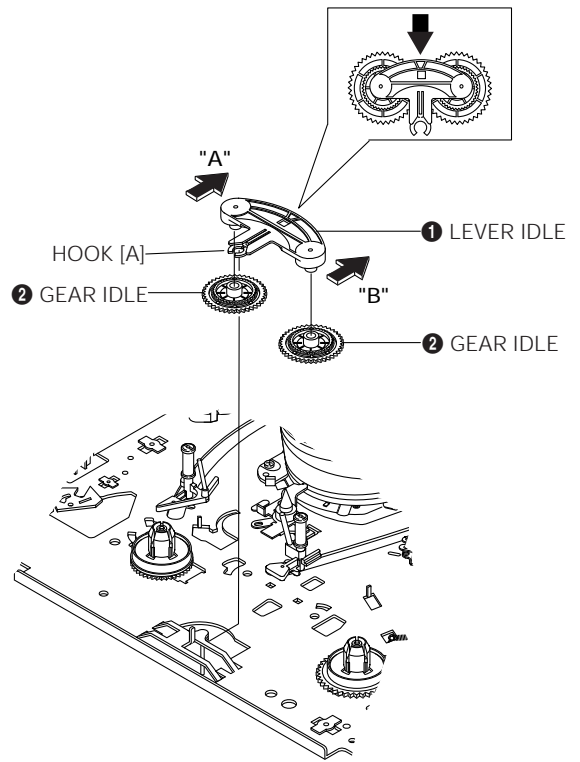


Fig. 1-17 Lever Idle Ass'y Removal

1-2-15 Disk S, T Reel Removal

- 1) Lift the Disk S, T Reel ❶, ❷.

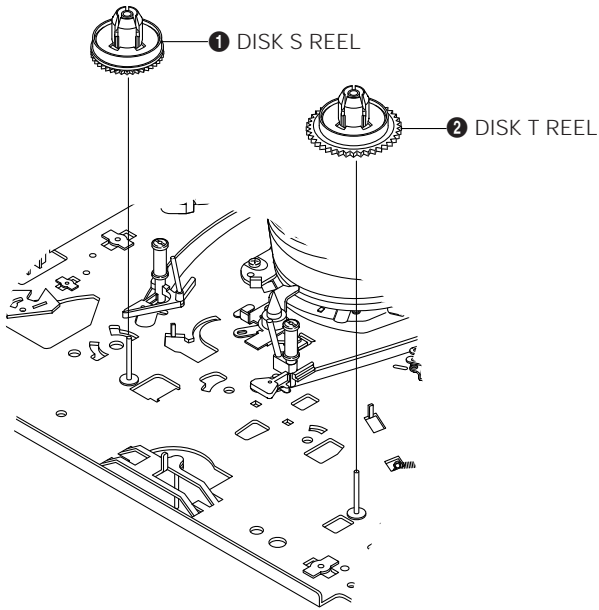


Fig. 1-18 Disk S, T Reel Removal

1-2-16 Holder Clutch Ass'y Removal

- 1) Remove the Washer Slit ❶.
- 2) Lift the Holder Clutch Ass'y ❷.

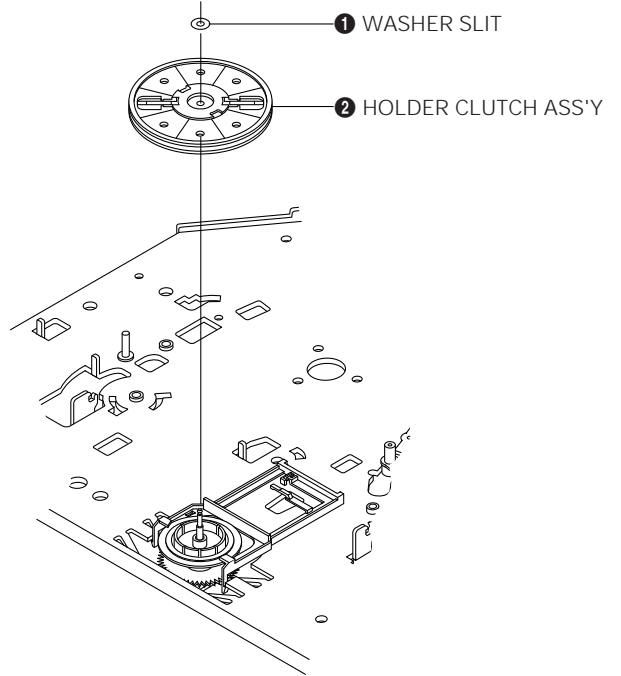


Fig. 1-19 Holder Clutch Ass'y Removal

1-2-17 Lever Up Down Ass'y, Gear Center Ass'y Removal

- 1) Remove the 2 hooks in the direction of arrow as shown Fig. 1-20 and lift the Lever Up Down Ass'y ①.
- 2) Lift the Gear Center Ass'y ②.

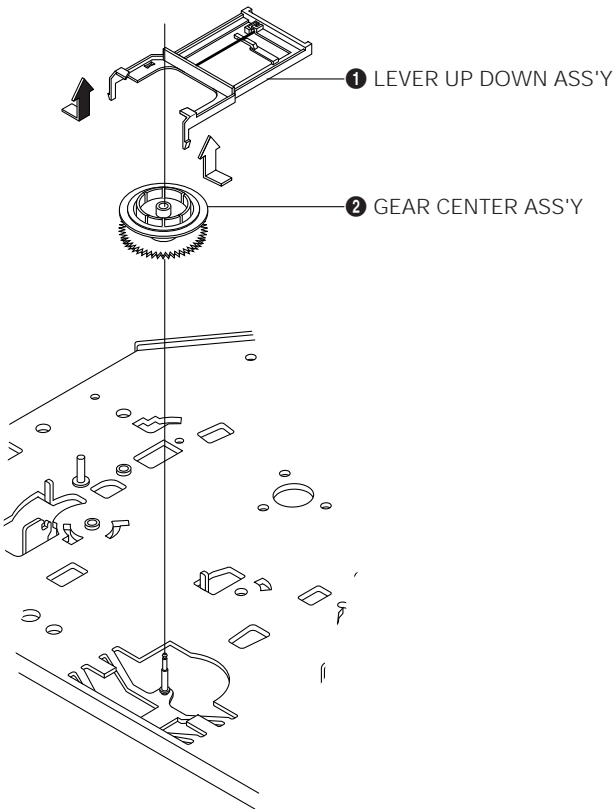


Fig. 1-20 Lever Up Down Ass'y, Gear Center Ass'y Removal

1-2-18 Assembly of Lever Up Down Ass'y, Gear Center Ass'y

- 1) Insert the Lever Up Down Ass'y ① in the 2 rectangular holes on Main Base.
- 2) Lift the Lever Up Down Ass'y ① about 35 degree. (Refer to Fig. 1-21)
- 3) Insert Ring ④ of the Gear Center Ass'y ② in the Guide ⑤ of the Lever Up Down Ass'y ①.
- 4) Insert the Gear Center Ass'y ② in the post ⑥ on Main Base.
- 5) Push down the Lever Up Down Ass'y ① for locking of the Hook ⑦.

Note :

- 1) Take care not to separate and loose the Spring Up Down.
- 2) When assembling the Gear Center Ass'y, don't push down too much.

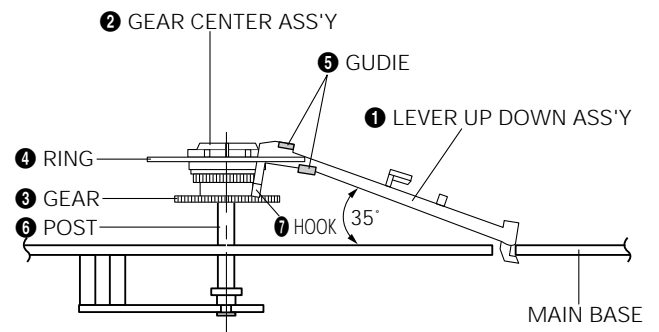


Fig. 1-21 Assembly of Lever Up Down Ass'y, Gear Center Ass'y

1-2-19 Guide Cassette Door Removal

- 1) Lift the Hook [A].
- 2) Rotate the Guide Cassette Door ❶ in the direction of arrow.

Note : After reinstalling the Guide Cassette Door ❶ secure the Hook [A].

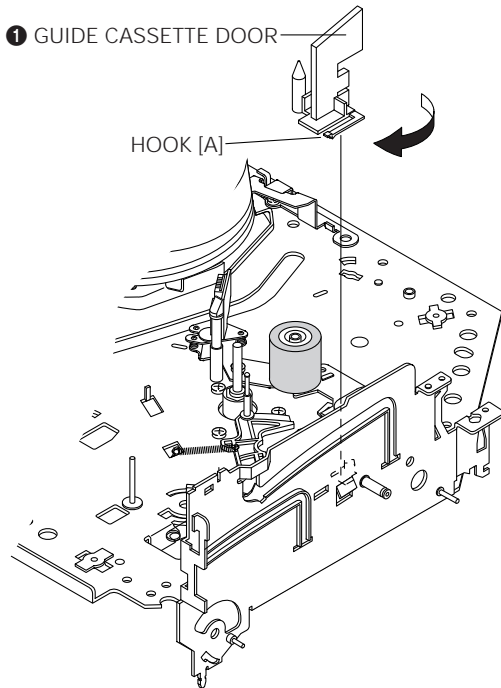


Fig. 1-22 Guide Cassette Door Removal

1-2-20 Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

- 1) Lift the Unit Pinch Ass'y ❶.
- 2) Remove the Plate Joint ❷ from Lever Pinch Drive.
- 3) Remove the Spring Pinch Drive ❸.

Note :

- 1) Take extreme care not to touch the grease on the Roller Pinch.
- 2) When reinstalling, be sure to apply grease on the post pinch roller.

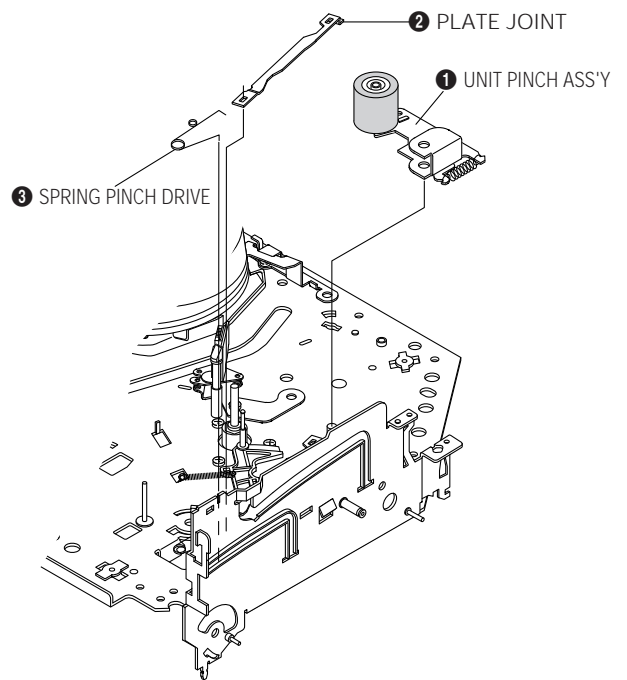


Fig. 1-23 Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

1-2-21 Lever #9 Guide Ass'y Removal

- 1) Remove the Spring #9 Guide ❶.
- 2) Lift the Lever #9 Guide Ass'y ❷ in the direction of arrow.

Note :

- 1) Take extreme care not to touch the grease on the tape Guide Post.
- 2) After reinstalling, check the bottom side of the Post #9 Guide to stick to the top side of Main Base.

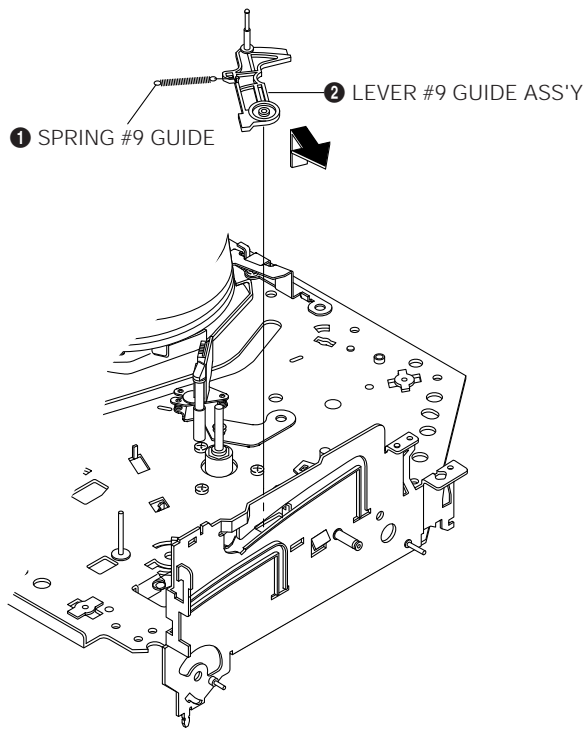


Fig. 1-24 Lever #9 Guide Ass'y Removal

1-2-22 FE Head Removal

- 1) Remove the screw ❶.
- 2) Lift the FE Head ❷.

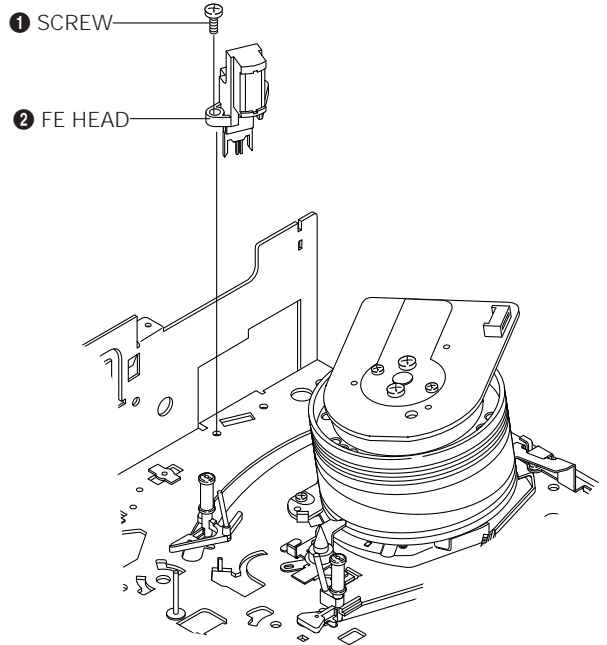


Fig. 1-25 FE Head Removal

1-2-23 ACE Head Removal

- 1) Pull out the FPC from connector of ACE Head Ass'y ②.
- 2) Remove the screw ①.
- 3) Lift the ACE Head Ass'y ②.

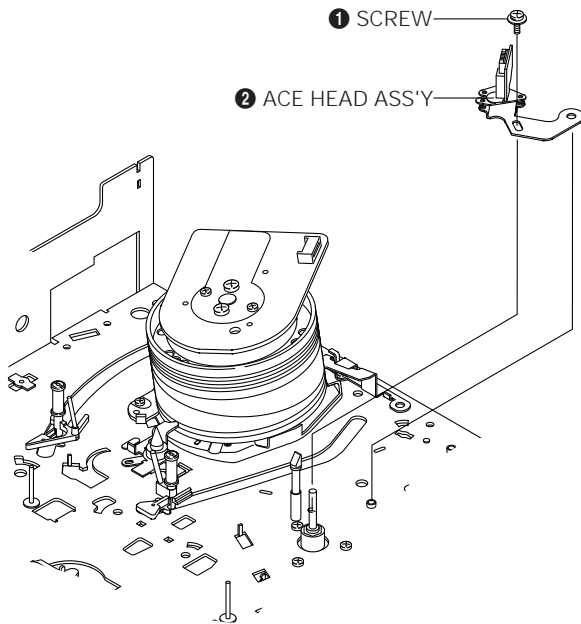


Fig. 1-26 ACE Head Removal

1-2-24 Slider S, T Ass'y Removal

- 1) Move the Slider S, T Ass'y ①, ② to slot, and then lift it to remove. (Refer to arrow)

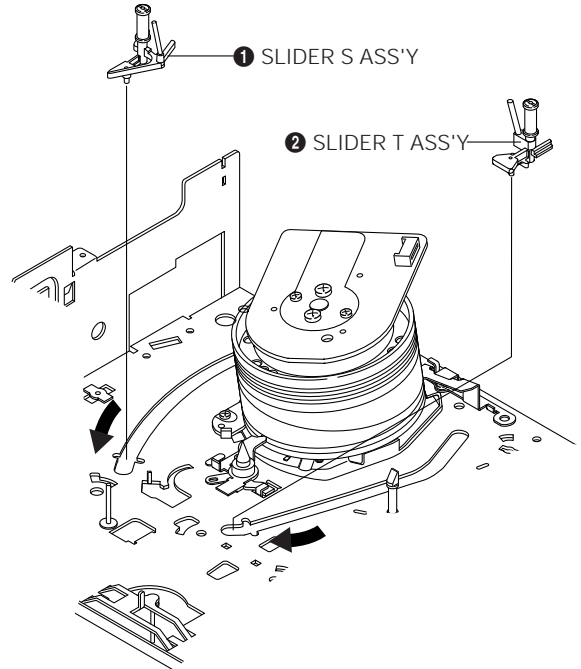


Fig. 1-27 Slider S, T Ass'y Removal

1-2-25 Cylinder Ass'y Removal

- 1) Remove the 3 Screws ❶, ❸, ❺.
- 2) Remove the Plate Cylinder A, B, C ❷, ❹, ❻ in the direction of arrow.
- 3) Lift the Cylinder Ass'y ❽.

Note :

- 1) When reinstalling, push the Plate Cylinder A, B ❹, ❻ in the reverse of arrow and then, tighten the 2 Screws ❸, ❺.
- 2) Take care not to touch the Cylinder Ass'y and the tape guide post at reinstalling Plate Cylinder C ❷.
- 3) Take care not to touch the Cylinder Ass'y with screw driver at reinstalling the Plate Cylinder C ❷.

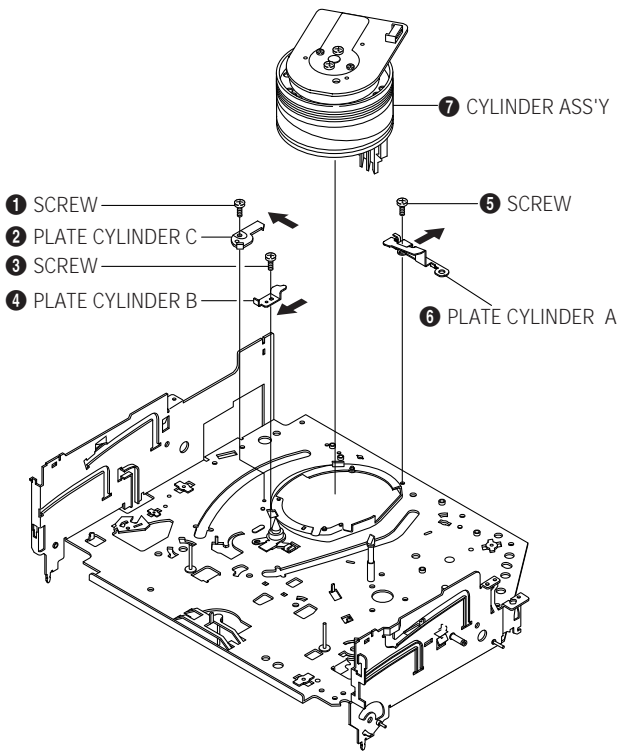


Fig. 1-28 Cylinder Ass'y Removal

1-2-26 Belt Pulley Removal

- 1) Remove the Belt Pulley ❶.

Note : Take extreme care not to touch the grease on Belt Pulley ❶ at assembling or reassembling.

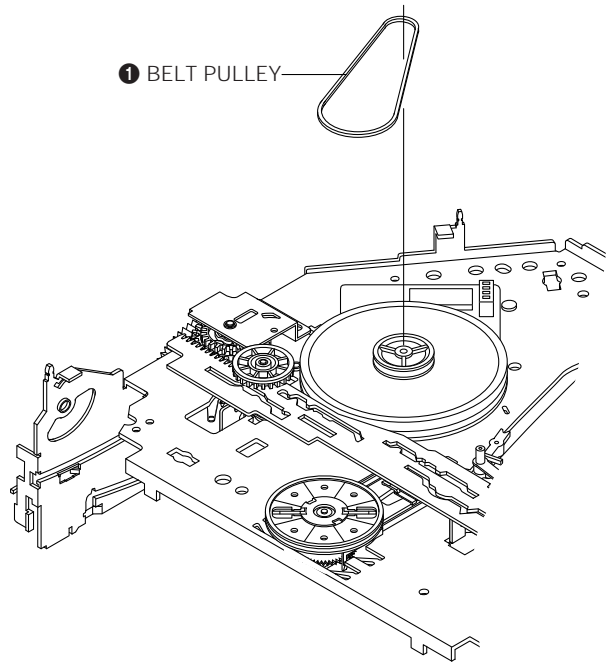


Fig. 1-29 Belt Pulley Removal

1-2-27 Lever Head Cleaner Ass'y Removal (Optional)

- 1) Release the Hook ❶.
- 2) Lift the Lever Head Cleaner Ass'y ❷.

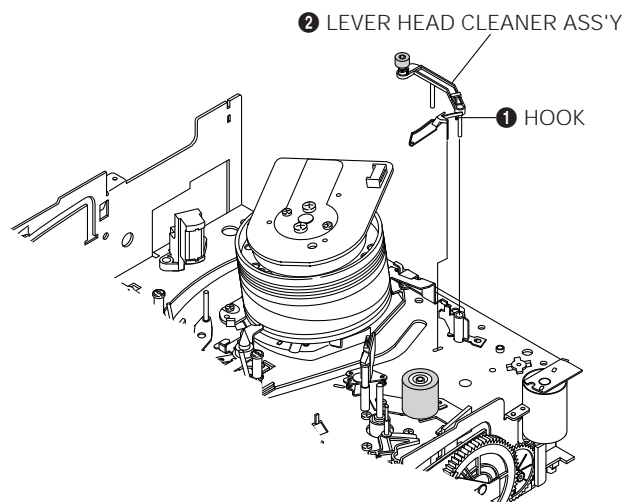


Fig. 1-30 Lever Head Cleaner Ass'y Removal

1-2-28 Motor Capstan Ass'y Removal

- 1) Remove the 3 Screws ❶.
- 2) Remove the Motor Capstan Ass'y ❷.

Assembly :

- 1) Match the 3 holes of Motor Capstan Ass'y ❷ to the 3 holes of Main Base as attending not to drop or knock the Motor Capstan Ass'y.
- 2) Tighten the 3 Screws in the direction of arrow as shown detail drawing.

Note :

- 1) Don't reuse the removed screws from Motor Capstan Ass'y.
- 2) After tightening screws, check if there is gap between the head of screws and the top side of Main Base. There should have no gap between the head of screws and the top side of Main Base.
- 3) After reinstalling, adjusting the tape transport system again.

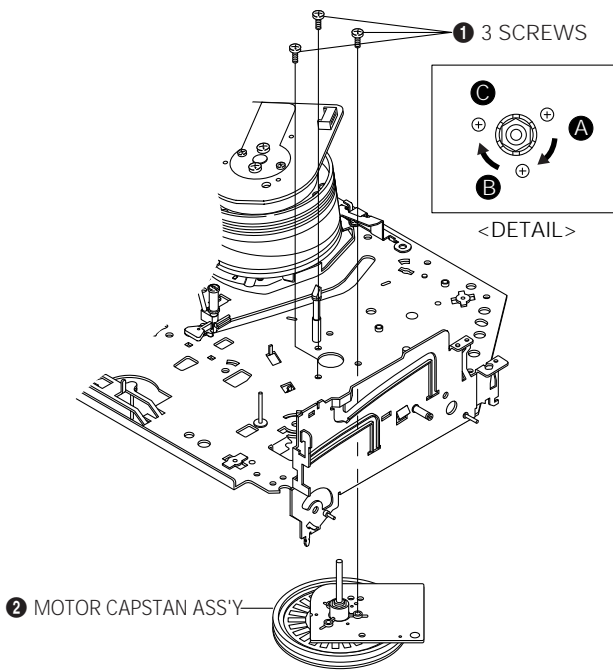


Fig. 1-31 Motor Capstan Ass'y Removal

1-2-29 How to Eject the Cassette Tape (If the unit does not operate on condition that is inserted into housing ass'y)

- 1) Remove the Holder worm ❶ and the Gear Worm ❷.
- 2) Turn the Gear Worm Wheel ❸ counterclockwise with screw driver. (Refer to arrow)

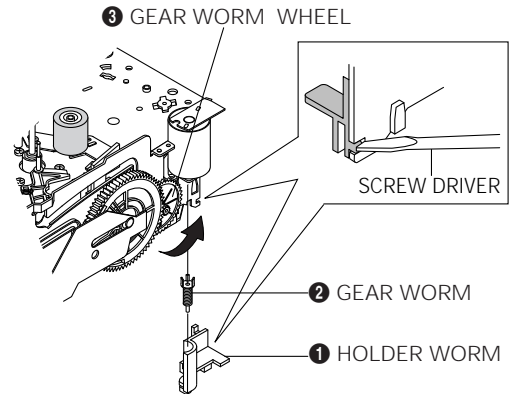


Fig. 1-32

- 3) When Slider S, T are approached in the position of unloading, rotate holder Clutch counterclockwise after inserting screw driver in the hole of frame's bottom in order to wind the unwound tape. (Refer to Fig. 1-33)
(If you rotate Gear Worm Wheel continuously when tape is in state of unwinding, you may cause a tape contamination by grease and tape damage. Be sure to wind the unwound tape in the state of set horizontally.)
- 4) Rotate Gear Worm Wheel ❸ counterclockwise using screw driver again up to the state of eject mode and then pick out the tape. (Refer to Fig. 1-32)

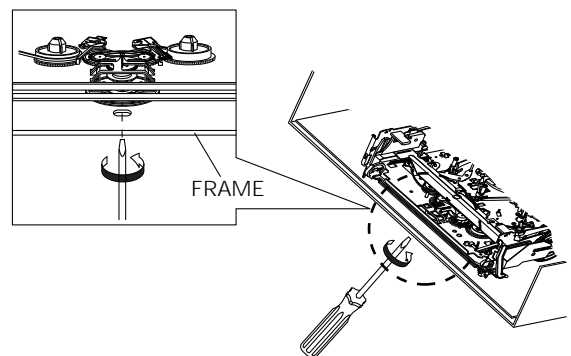


Fig. 1-33

1-3 The table of clearing, Lubrication and replacement time about principal parts

- 1) The replacement time of parts is not life of parts.
- 2) The table 1-1 is that the VCR Set is in normal condition (normal temperature, normal humidity).
The checking period may be changed owing to the condition of use, runtime and environmental conditions.
- 3) Life of the Cylinder Ass'y is depend on the condition of use.
- 4) See exploded view for location of each parts.

<Table 1-1>

*	Parts Name	Checking Period										Remark
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
T A P E P A T H S Y S T E M	POST TENSION	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- To clean the parts, use patch and alcohol (solvent). - After cleaning, use the video tape after alcohol is gone away completely. - We recommend to use oil [EP-56] or solvent. - One or two drops of oil should be applied after cleaning with alcohol. - Periodic time of applying oil (Apply oil after cleaning) - The excessive applying oil may be the cause of malfunction.
	SLANT POST S, T	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#8 GUIDE SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	CAPSTAN SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#9 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#3 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	GUIDE ROLLER S, T	Δ	Δ	Δ	○	○	○	○	○	○	○	
	CYLINDER ASS'Y	Δ	○	○	○	○	○	○	○	○	○	
	FE HEAD	Δ	Δ	Δ	○	○	○	○	○	○	○	
	ACE HEAD	Δ	○	○	○	○	○	○	○	○	○	
	PINCH ROLLER	Δ	○	○	○	○	○	○	○	○	○	
	POST REEL S, T		◆		◆		◆		◆		◆	
	SLEEVE TENSION		◆		◆		◆		◆		◆	
	POST CENTER		◆		◆		◆		◆		◆	
LEVER IDLE BOSS (2Point)		◆		◆		◆		◆		◆		
D R I V I N G S Y S T E M	CAPSTAN MOTOR PULLEY	Δ	Δ	Δ	Δ	Δ	○	○	○	○	○	
	BELT PULLEY				○	○	○	○	○	○	○	
	HOLDER CLUTCH ASS'Y	Δ	○	○	○	○	○	○	○	○	○	
	GEAR CENTER ASS'Y		○	○	○	○	○	○	○	○	○	
	GEAR IDLE (2Point)		○	○	○	○	○	○	○	○	○	
	LOADING MOTOR		○	○	○	○	○	○	○	○	○	
B R A K E S Y S T E M	BAND BRAKE ASS'Y		○	○	○	○	○	○	○	○	○	
	BRAKE T ASS'Y		○	○	○	○	○	○	○	○	○	

Δ : Cleaning ○ : Check and replacement in necessary ◆ : Add Oil

2. Alignment and Adjustment

2-1 Tape Transport System and Adjustment Locations

The tape transport system has been adjusted precisely in the factory. Alignment is not necessary except for the following :

- 1) Noise observed on the screen.
- 2) Tape damage.
- 3) Parts replacement in the tape transport system.

Lower flange height of tape guide is used as the reference for the transport adjustment.

To maintain the height of the tape guide and prevent damage, do not apply excessive force onto the main base.

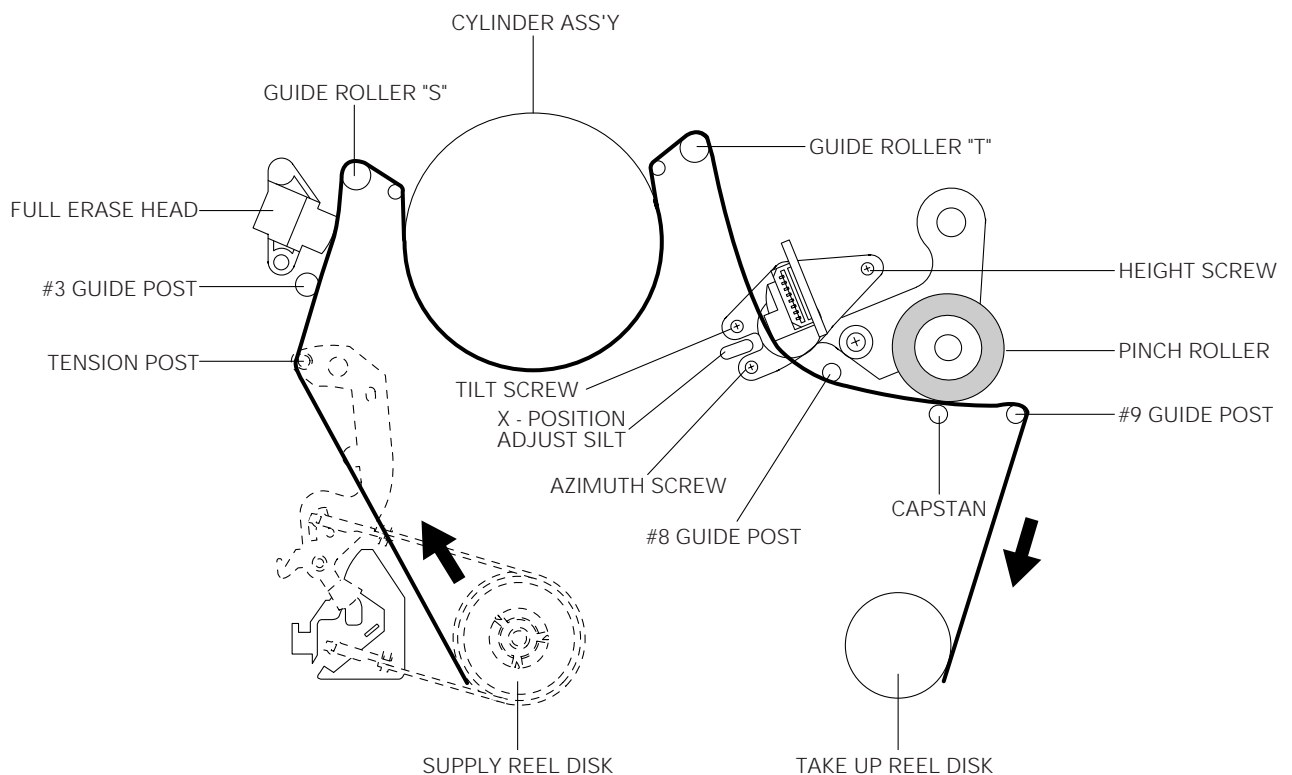


Fig. 2-1 Location of Tape Transport Adjustment

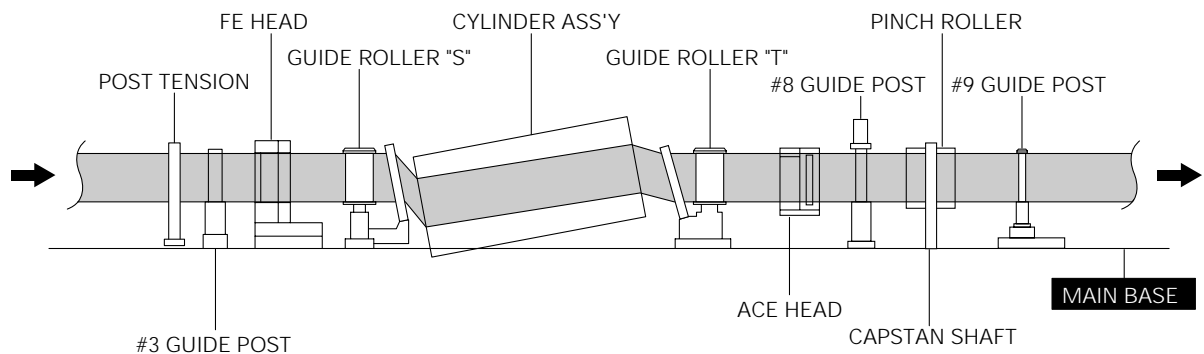


Fig. 2-2 Tape Travel Diagram

2-2 Tape Transport System Adjustment

When parts are replaced, perform the required adjustments by referring to procedures for the tape transport system. If there are any changes to the tape path, first run a T-120 tape and make sure excessive tape wrinkle does not occur at the tape guides.

- 1) If tape wrinkle is observed at the guide roller S, T, turn the guide roller S, T until wrinkle disappears.
- 2) If the tape wrinkle is still observed at the tape guide, perform the tilt adjustment of the ACE head. (See page 5-3 of the Service Manual for Test Point Locations.)

2-2-1 ACE Head Assembly Adjustment

2-2-1(a) ACE HEAD HEIGHT ADJUSTMENT

- 1) Run the alignment tape (Color bar) in the playback mode.
- 2) Observe surface of the audio head using a dental mirror.
- 3) Turn screw (C) clockwise or counterclockwise until the gap of lower tape edge and the lower edge of the control head is about 0.25mm. (Refer to Fig. 2-3 and 2-4)

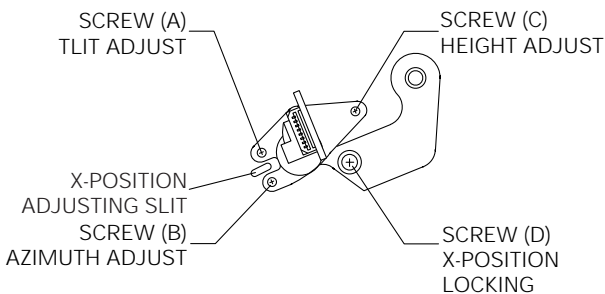


Fig. 2-3 Location of ACE Head Adjustment Screw

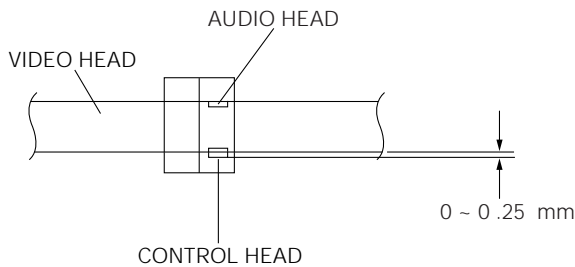


Fig. 2-4 ACE Head Height Adjustment

2-2-1(b) ACE HEAD TILT ADJUSTMENT

- 1) Playback a blank tape and observe the position of the tape at the lower flange of tape guide.
- 2) Confirm that there is no curl or wrinkle at the lower flange of tape guide as shown in Fig. 2-5 (B).
- 3) If a curl or wrinkle of the tape occurs, slightly turn the screw (A) tilt adjust on the ACE head ass'y.
- 4) Reconfirm the ACE head height.

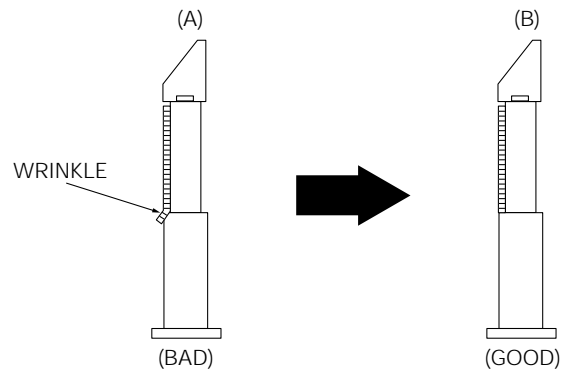


Fig. 2-5 Tape Guide Check

2-2-1(c) AUDIO AZIMUTH ADJUSTMENT

- 1) Load alignment tape (Mono scope) and playback the NTSC : 7KHz (PAL : 6KHz) signal.
- 2) Connect channel-1 scope probe to audio output test point.
- 3) Adjust screw (B) to achieve maximum audio level. (See Fig. 2-3)

2-2-1(d) ACE HEAD POSITION (X-POINT) ADJUSTMENT

- 1) See page 5-1 of the Service Manual for ACE Head position (X-Point) adjustment.


2-2-2 Linearity adjustment (Guide roller S, T adjustment)

- 1) Playback the Mono Scope alignment tape (SP mode).
- 2) Observe the video envelope signal on an oscilloscope (triggered by the video switching pulse).
- 3) Make sure the video envelope waveform (at its minimum) meets the specification shown in Fig. 2-6.
If it does not, adjust as follows :

Note :

- a=Maximum output of the video RF envelope.
- b=Minimum output of the video RF envelope at the entrance side.
- c=Minimum output of the video RF envelope at the center point.
- d=Maximum output of the video RF envelope at the exit side.

- 4) If the section A in Fig. 2-7 does not meet the specification, adjust the guide roller S up or down.
- 5) If the section B in Fig. 2-7 does not meet the specification, adjust the guide roller T up or down.

- 6) Play back the Mono Scope alignment tape (SP mode).
- 7) Connect an oscilloscope CH-1 to the Envelope and CH-2 to the H'D SW Pulse for triggering.
- 8) Turn the guide roller heads with a flat head () driver to obtain a flat video RF envelope as shown in Fig. 2-8.

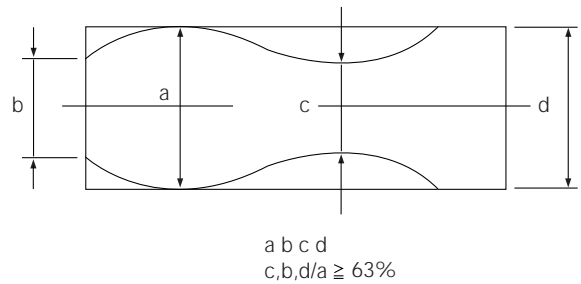


Fig. 2-6 Envelope Waveform Adjustment

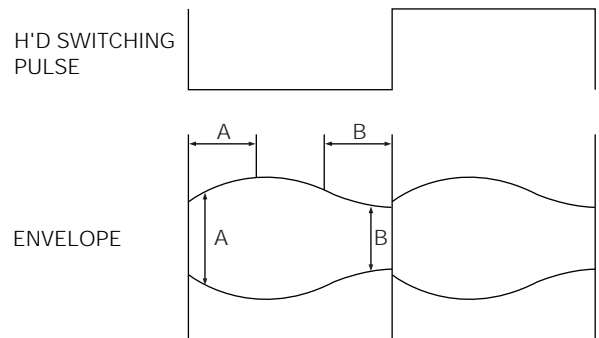


Fig. 2-7 Adjustment Points

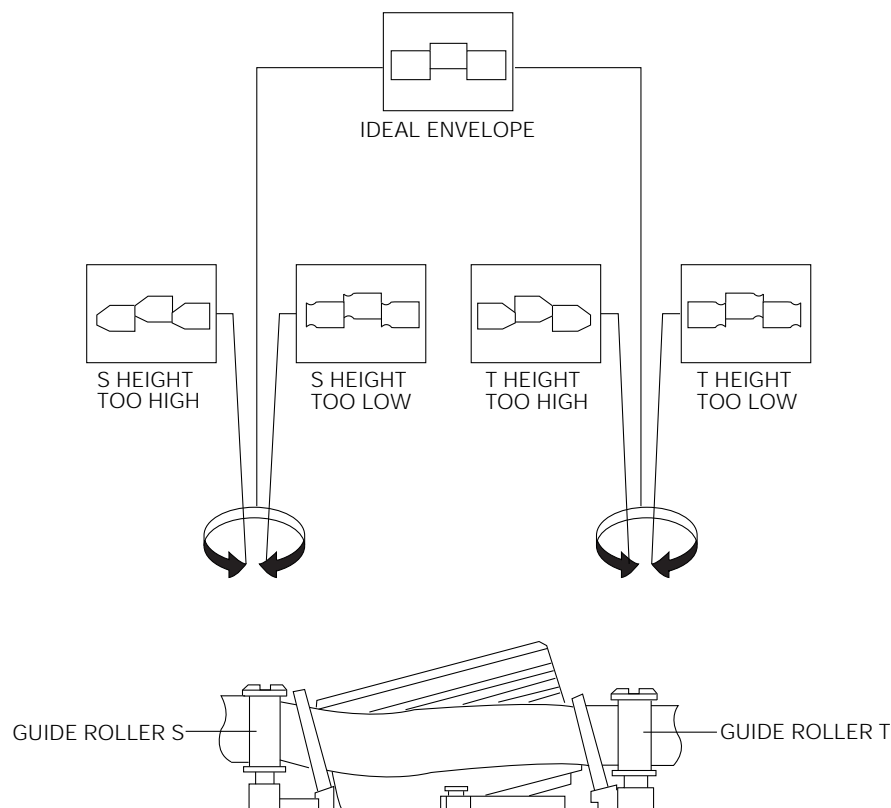


Fig. 2-8 Guide Roller S, T Height Adjustment

2-2-3 Check Transitional Operation from RPS to Play

Check transition from RPS mode to play mode :
 Using a pre-recorded SP tape, make sure the entry side of envelope comes to an appropriate steady state within 3 seconds (as shown in Fig. 2-9).
 If the envelope waveform does not reach specified peak-to-peak amplitude within 3 seconds, adjust as follows :

- 1) Make sure there is no gap between the supply roller lower flange and the tape.
 If there is a gap, adjust the supply guide roller again.
- 2) Change operation mode from the RPS to the play mode (again) and make sure the entry side of envelope rises within 3 second.

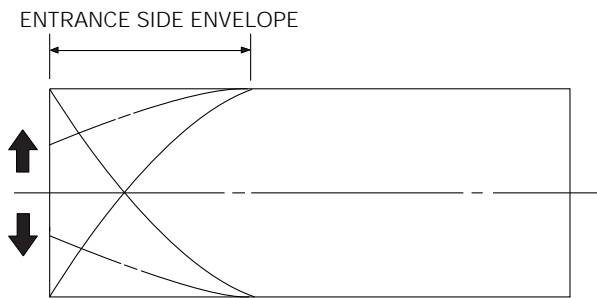


Fig. 2-9 Video Envelope Rising when Operation mode Changes from RPS to Play Mode

2-2-4 Envelope Check

- 1) Make recordings on T-120 (E-120) and T-160 (E-180) tape.
 Make sure the playback output envelope meets the specification as shown in Fig. 2-10.
- 2) Play back a self recorded tape (recording made on the unit using with T-120 (E-120)).
 The video envelope should meet the specification as shown in Fig. 2-10.
 In SP mode, (A) should equal (B).
 If the head gap is wide, upper cylinder should be checked.

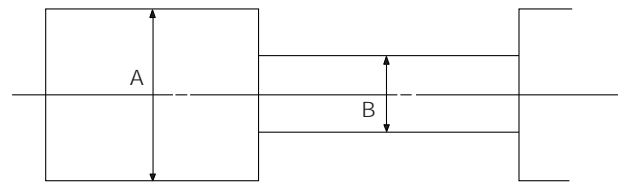


Fig. 2-10 Envelope Output and Output Level

2-2-5 Tape Wrinkle Check

- 1) Run the T-160 (E-180) tape in the playback, FPS, RPS and Pause modes and observe tape wrinkle at each guide.
- 2) If excessive tape wrinkle is observed, perform the following adjustments in Playback mode :
 - ◆ Tape wrinkle at the guide roller S, T section :
Linearity adjustment.
 - ◆ Tape wrinkle at tape guide flange :
ACE head assembly coarse adjustment.

2-3 Reel Torque

- 1) The rotation of the capstan motor causes the Holder Clutch Ass'y to rotate through the Belt Pulley.
- 2) The spring wrap PLAY/REV of holder clutch ass'y drives the disk reel S, T through gear idle by rotation of gear center ass'y.
- 3) Brake is operated by slider cam at FF/REW mode.
- 4) Transportation of accurate driving force is done by gears. (Gear Center Ass'y)

Note : If the spec. does not meet the followings specifications, replace the holder clutch ass'y and then recheck.

<Table 2-1>

MODE	TORQUE g/cm		GAUGE
PB	NTSC	82.5 ± 27.5	Cassette Torquemeter
	PAL	79 ± 27	
RPS	145 ± 30		Cassette Torquemeter

2-4 Location adjustment and Confirmation of Tension Post

- 1) Remove the holder cassette ass'y and then push the lever FL Arm-R to the direction of loading.
- 2) Push the lever tension drive ❶ in the direction of arrow. (See Fig. 2-11)
- 3) Turn the gear worm wheel ❷ clockwise so that "Timing Point" of the slider FL drive ❸ and gear FL cam ❹ can be aligned (See Fig. 2-12)

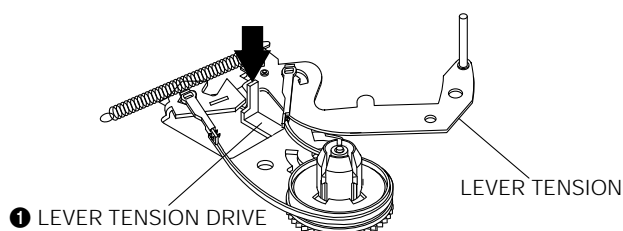


Fig. 2-11

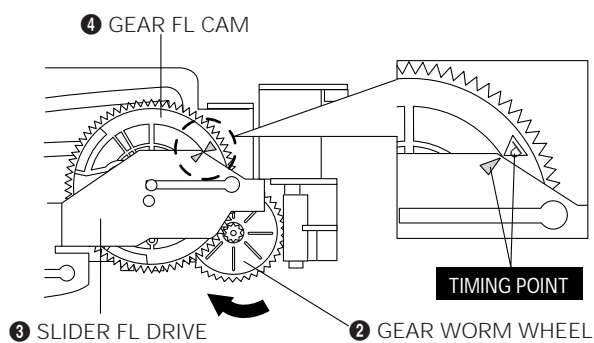


Fig. 2-12

- 4) As rotating Disk S Reel ❶ clockwise and the region of adjusting in the Main Base (in shape of slit) clockwise or counterclockwise after inserting screw driver in the slit on Main Base. Adjust the left end edge of Lever Tension Ass'y ❸ to $1.3 +1.5/-0.5\text{mm}$ from the location of mark in the Main Base.
- 5) As rotating Disk S Reel ❶, double-check the location of the left end edge of Lever Tension Ass'y and the quantity of crossing from mark on Main Base. ($+1.0/-0.5\text{mm}$)

Counterclockwise : Torque UP

Clockwise : Torque DOWN

Back Tension should be $56 \pm 15\text{g.cm}$ at inspecting it with Back Tension Meter.

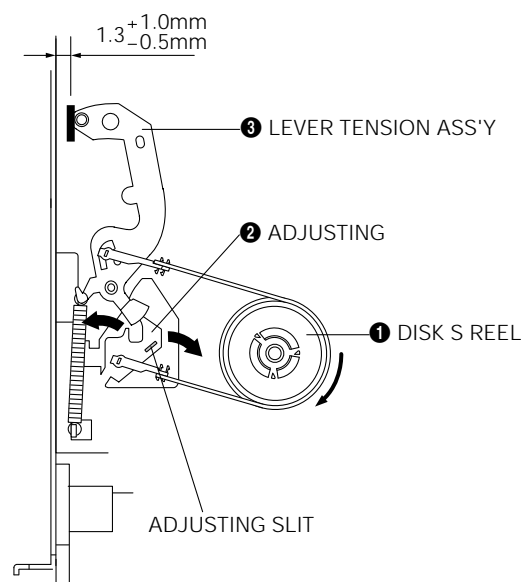


Fig. 2-13 Tension Pole and Back Tension Adjustment

Note :

- 1) Mark on Main Base is located in about 1.3mm from inside of bending line.
- 2) Be careful not to deform the region of adjusting on Main Base up and down at adjusting.

MEMO