

SAMSUNG

VIDEO CASSETTE RECORDER

SV-A20XK/SV-200X

SV-A21XK/SV-201X

SV-A30XK/SV-203X

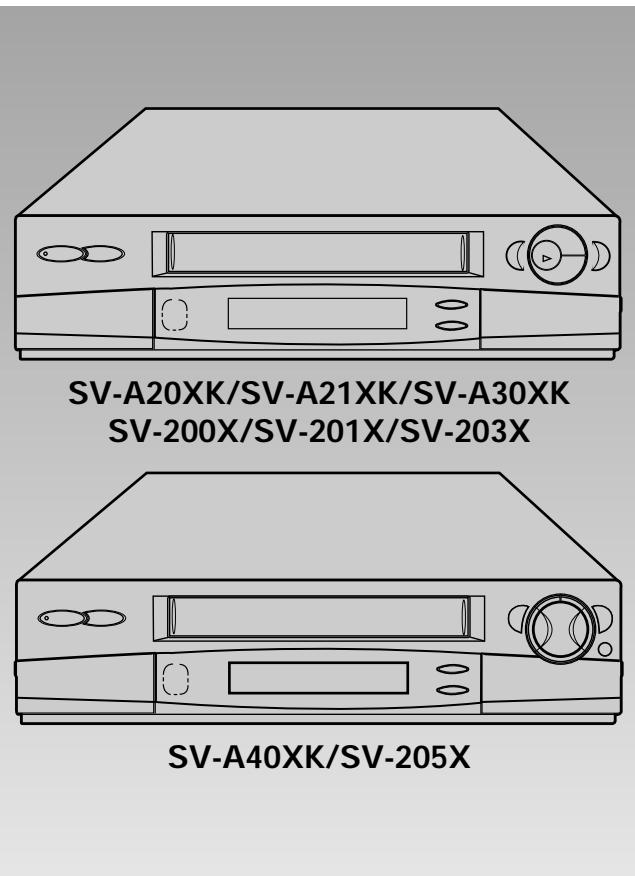
SV-A40XK/SV-205X



SERVICE Manual

For mechanical disassembly and adjustment, refer to the "Mechanical Manual" (DX7-R/RC, DX8-R/RC → AC68-20316A).

VIDEO CASSETTE RECORDER



SV-A20XK/SV-A21XK/SV-A30XK
SV-200X/SV-201X/SV-203X

SV-A40XK/SV-205X

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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--can touch 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) :
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).5. With the unit completely reassembled, plug the AC line cord directly into 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. X-ray Limits :

The picture tube is designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original.

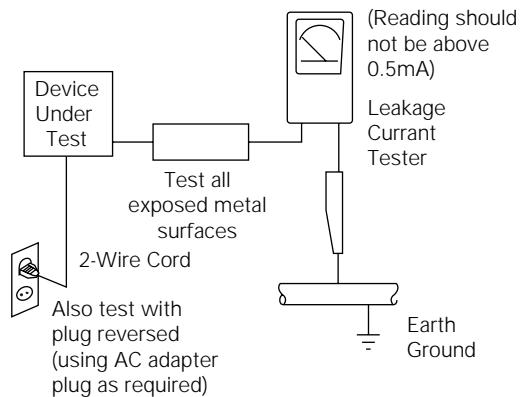


Fig. 1-1 AC Leakage Test

7. Antenna Cold Check :

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.

8. High Voltage Limit :

High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits.

Heed the high voltage limits. These include the *X-ray protection Specifications Label*, and the *Product Safety and X-ray Warning Note* on the service data schematic.

9. 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. Reduce the occurrence of component damage caused by static electricity.

10. 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.)

11. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.
12. 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.
13. Hot Chassis Warning :
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

To confirm that the AC power plug is inserted correctly, do the following : Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.
14. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, *regardless of the AC plug polarity*. These units can be safely serviced *only* if an isolation transformer inserted between the receiver and the power source.
15. 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.
16. 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.
17. 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.
18. Picture Tube Implosion Warning :
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.
19. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.
20. 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 Servicing Jigs and Special Tools

2-1-1 Servicing guide

1. For this VCR chassis, the program switch and the sensors (start/end/reel) are located on the main PCB, not on the deck ass'y.

2. As long as the deck ass'y is connected to the main PCB, all repairs are possible.

Important : In order to repair the main PCB without the deck ass'y connected, the X-5 chassis jig should be used.

3. To emulate the function of the sensors, connect a jumper or solder land (two point) at service option(W750) on the function-timer PCB.

4. The X-5 chassis jig can be used for the following :

- 1) When repairing or confirming the operation of the deck ass'y.
- 2) When replacing or repairing the components located under the deck ass'y.
- 3) When repairing the function PCB.

5. The X-5 chassis jig can not be used for the following :

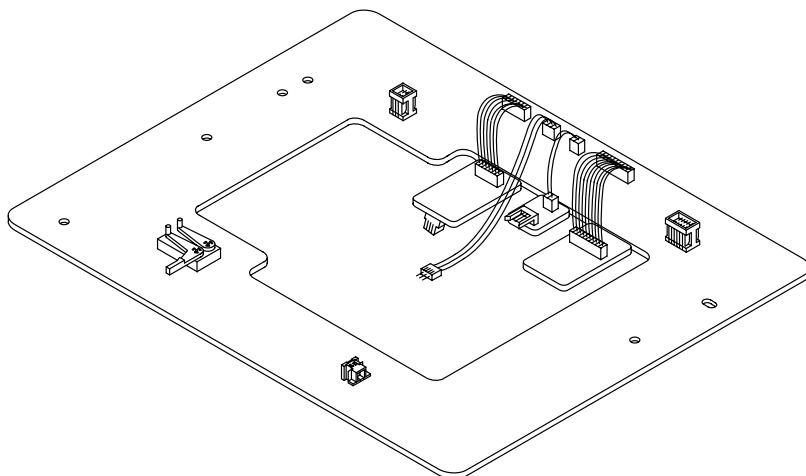
- 1) Repairing defects in the video section.
- 2) Repairing defects in the audio section.
- 3) If the defect is related to tape speed.

Note :

- 1) Repair may not be possible if there is external noise between the deck ass'y and main PCB.
- 2) If tape control signal is not connected to the jig, the VCR must be operated in SP mode.

2-1-2 Servicing Jig

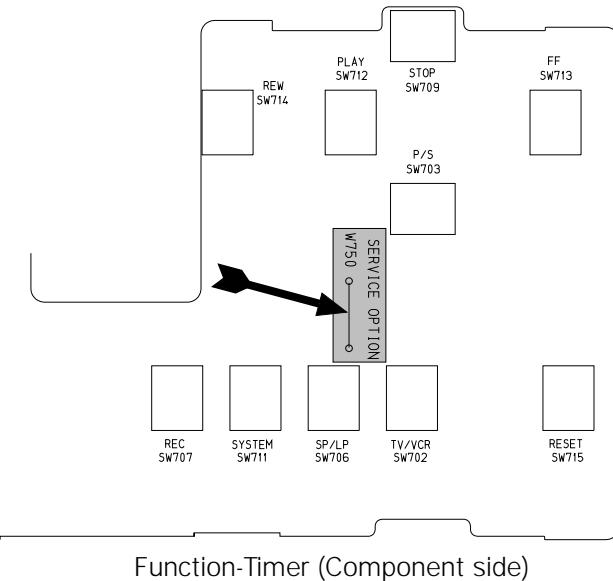
Jig Item	Part No.	Use
X-5 Chassis Jig	68140-500-013	Connects the deck ass'y to the main PCB connecting cable.



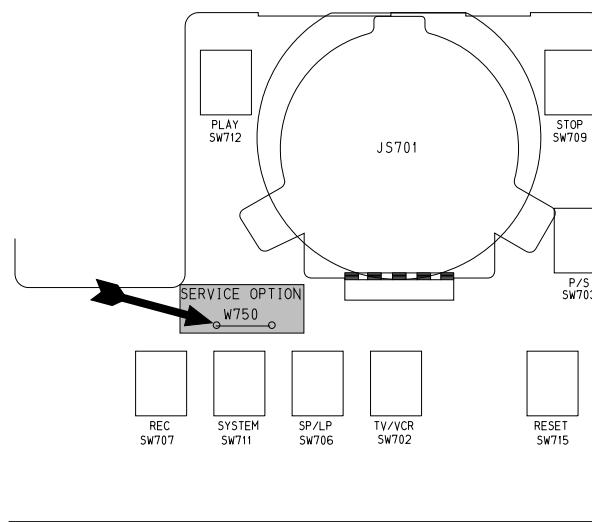
2-1-4 How to Connect X-5 chassis jig

1. Unplug the power cord from AC outlet.
2. Remove the deck ass'y from main PCB (See Page 4-5 of service manual).

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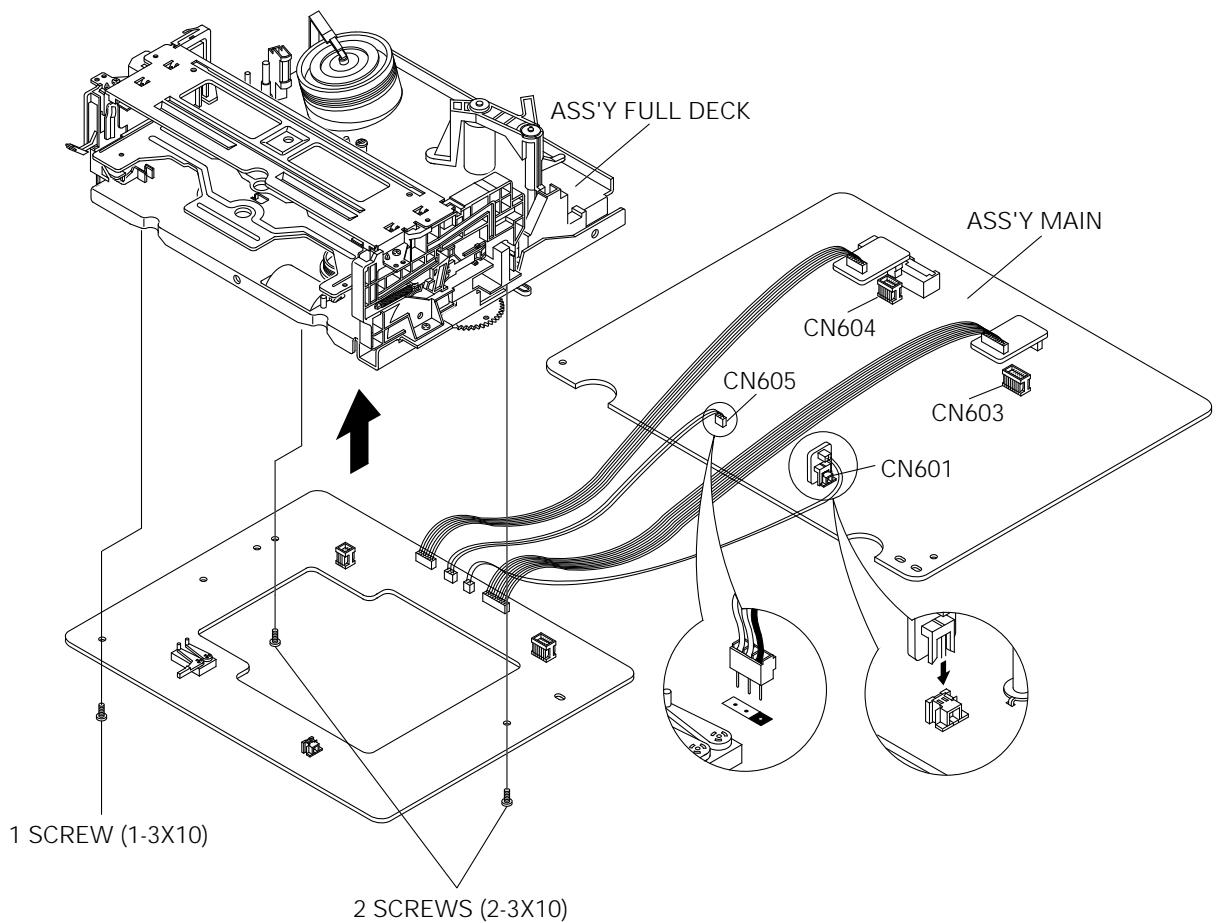
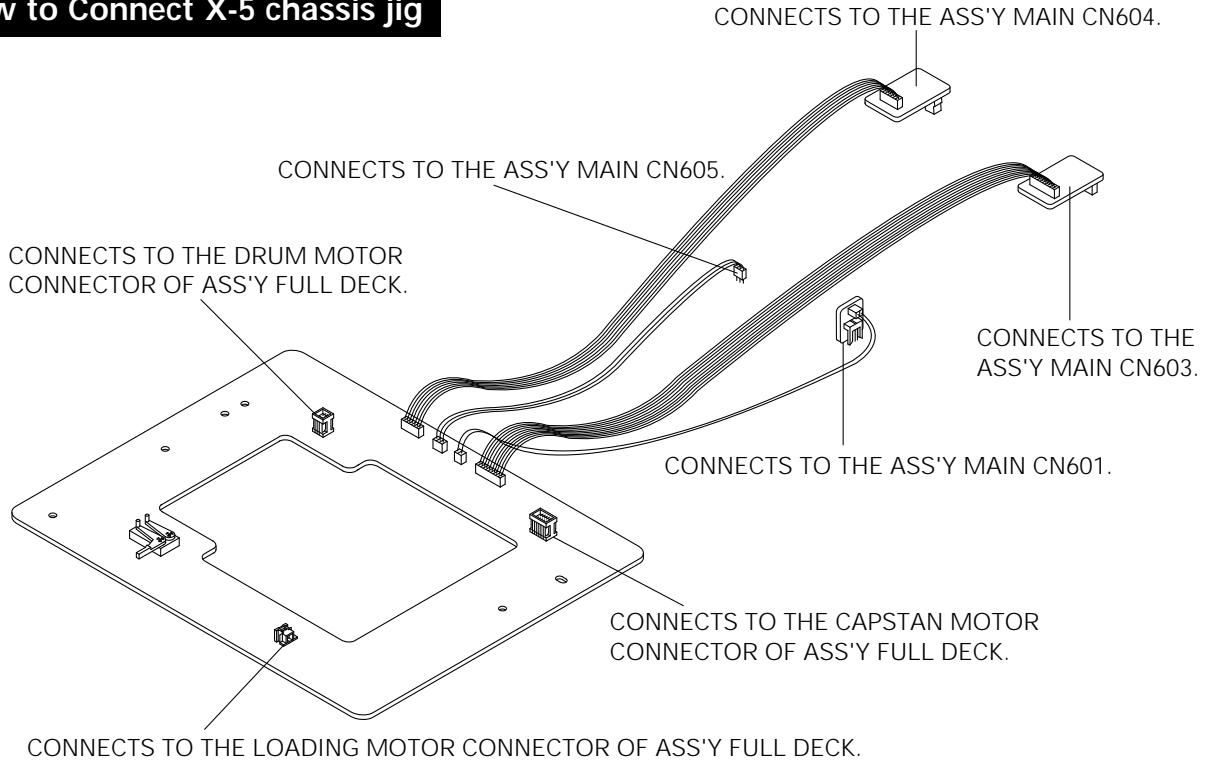
SV-A40XK/SV-205X



Note : After completing repairs, SW715 on the function PCB in order to reset.

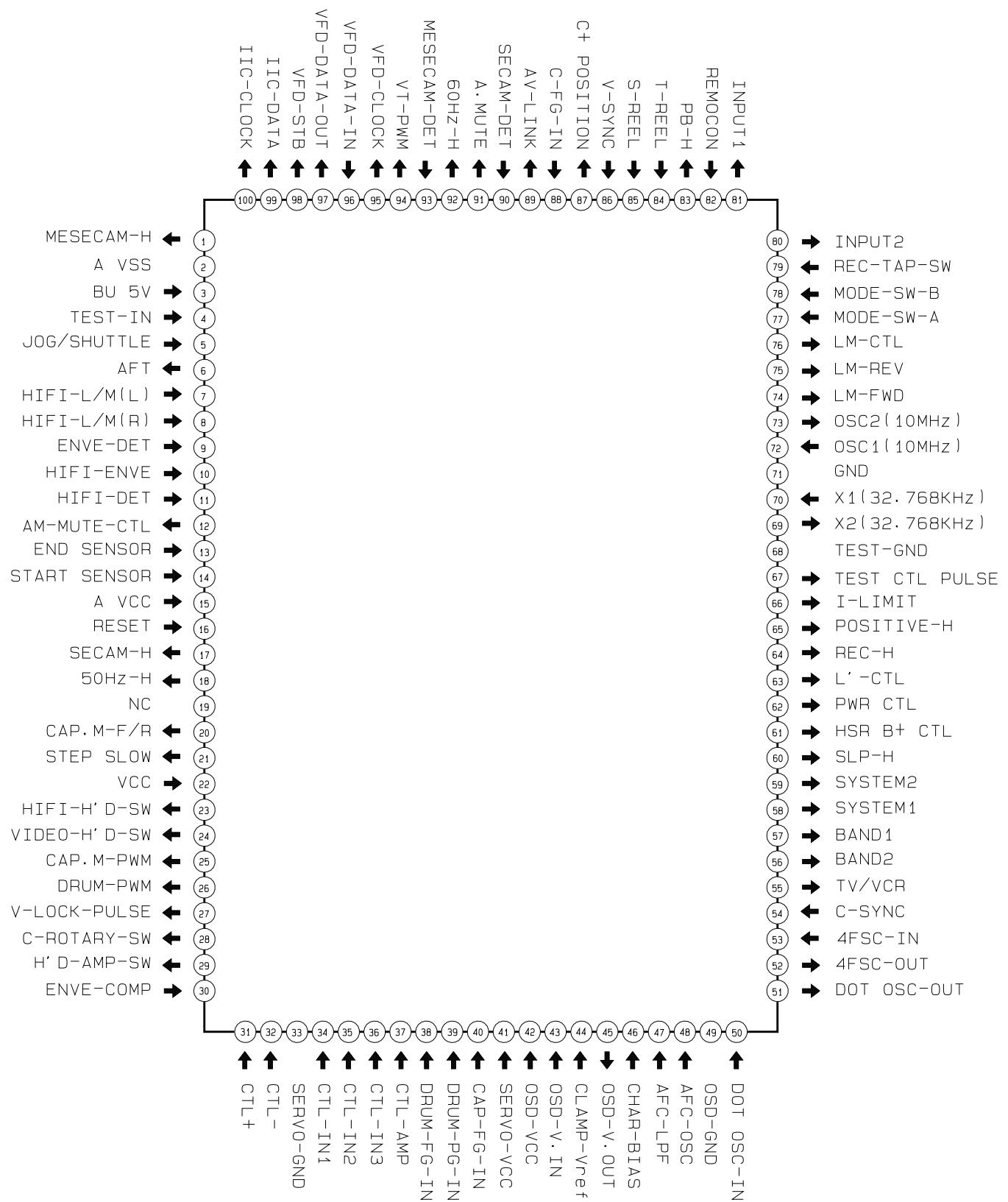
4. Insert wafers of drum motor, capstan motor and loading motor on X-5 chassis jig into each of the connectors of deck ass'y, and then secure with three screws.
5. Solder the 3 leads of the jig cable to "CN605" on the main PCB.
6. Apply power to the function PCB.
7. Insert a test tape into the housing ass'y.
3. To emulate the function of the sensors, place a jumper or solder land (two point) at service option(W750) on the function-timer PCB. (see diagram below).
8. Simultaneously touch the start and end sensor LEDs on the PCB, so that the tape loads automatically. After the tape is loaded, all of the function buttons on the function PCB can be used.
9. If the test tape is ejected while the jig is in use, attempt to re-load the tape by simultaneously touching the start and end sensor LEDs. If the tape still does not load, reset the function PCB by pressing SW715.

How to Connect X-5 chassis jig

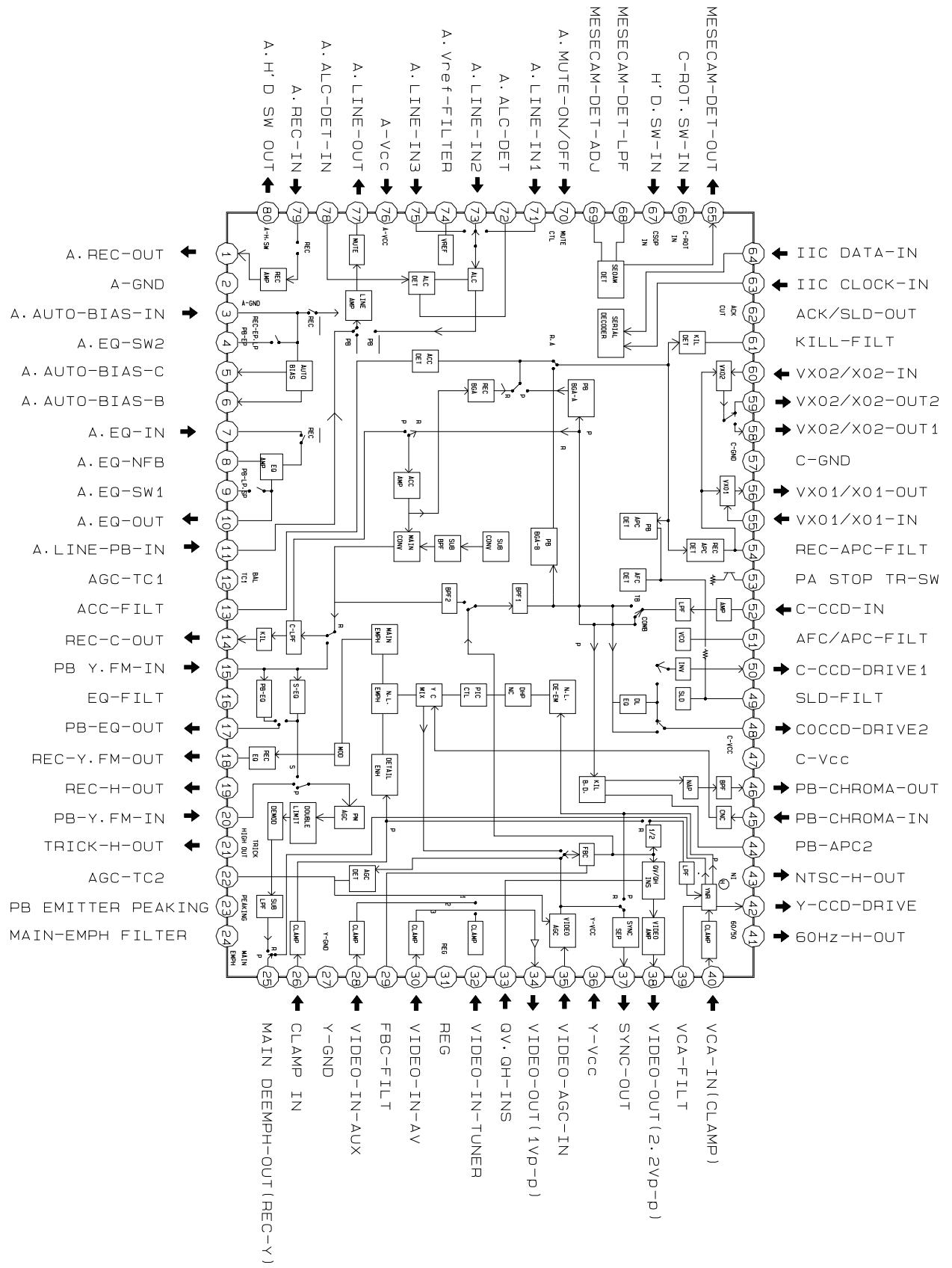


2-2 IC BLOCK

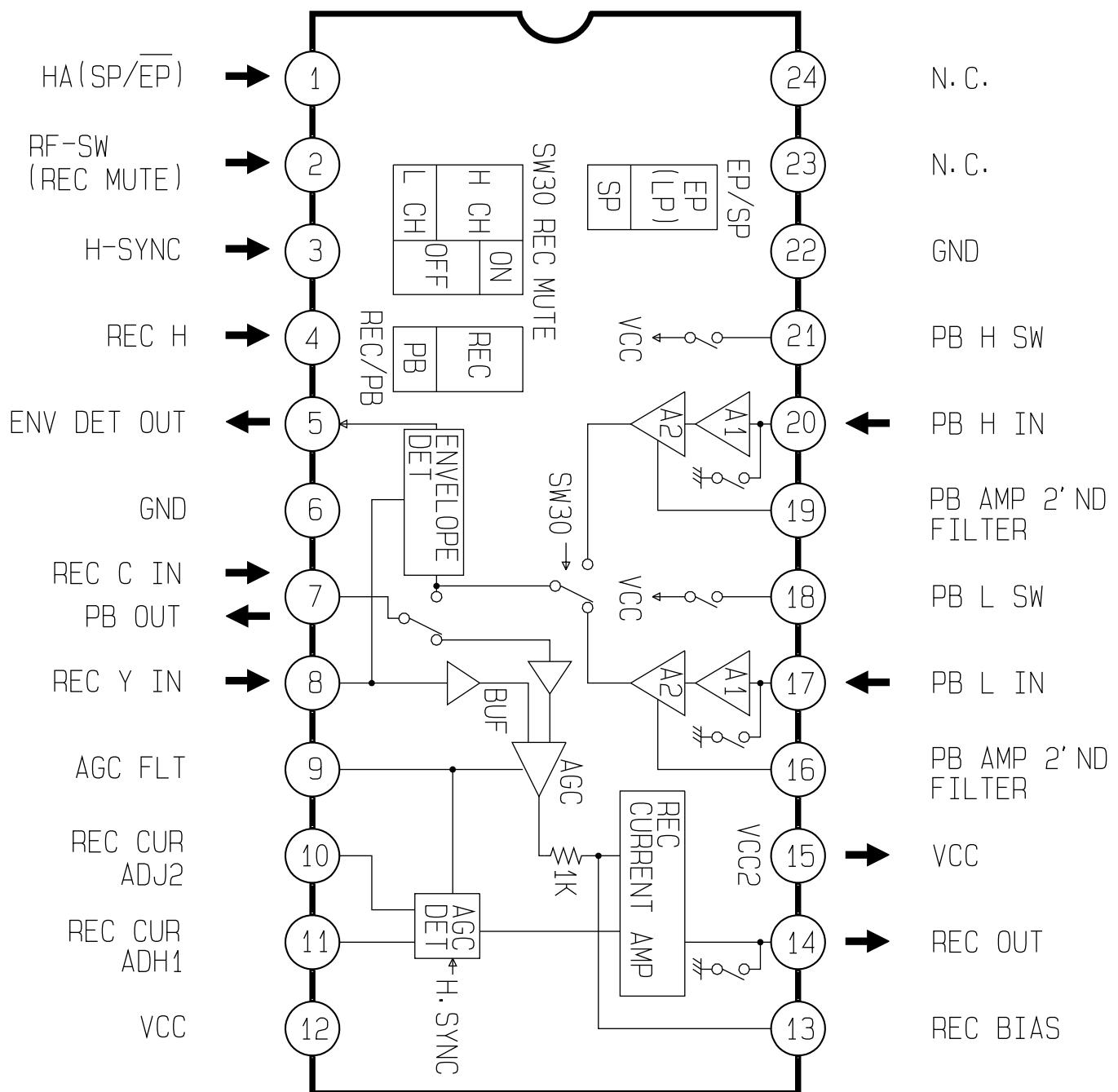
2-2-1 IC601 (HD6473977)



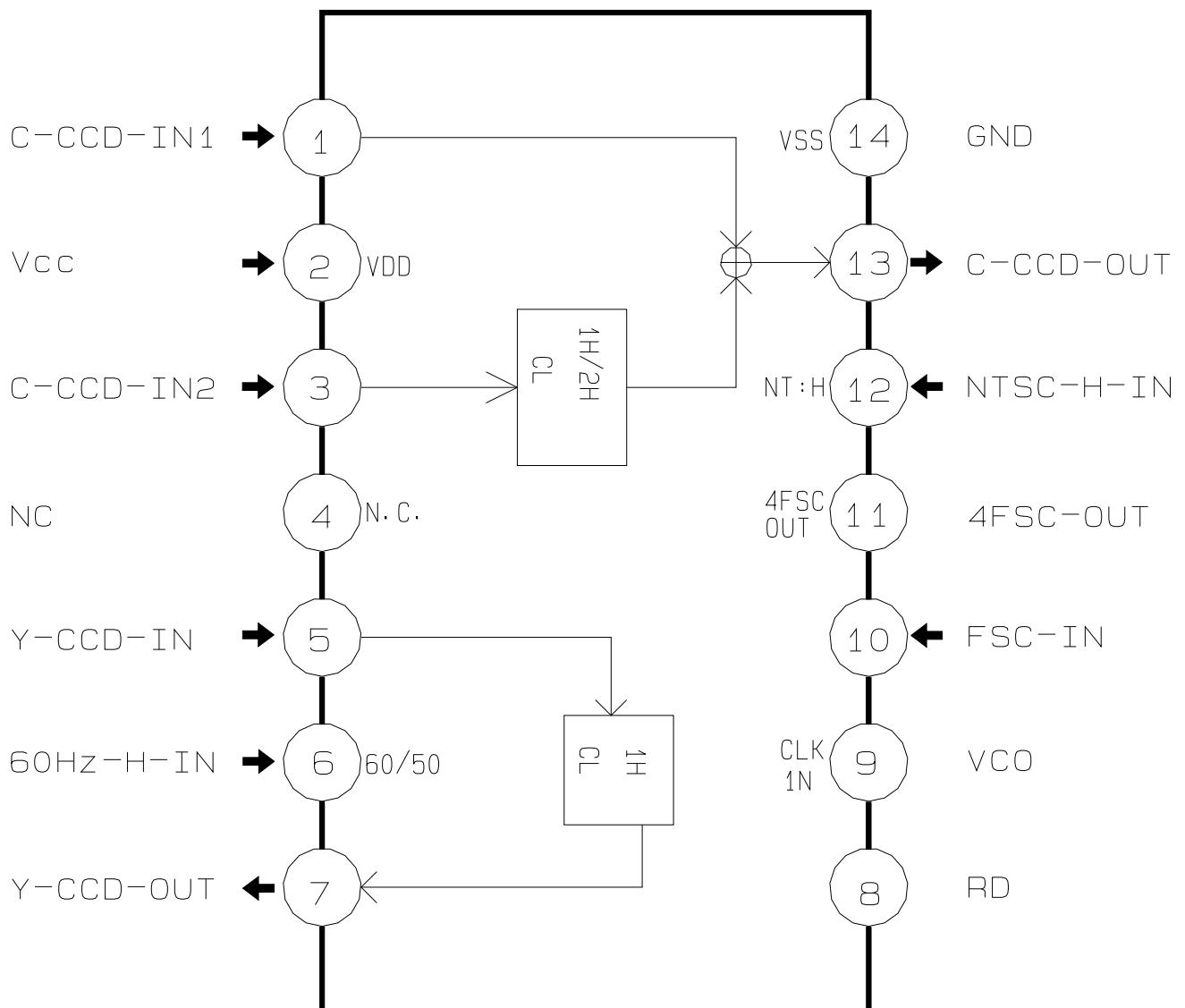
2-2-2 IC301 (SS11501M)



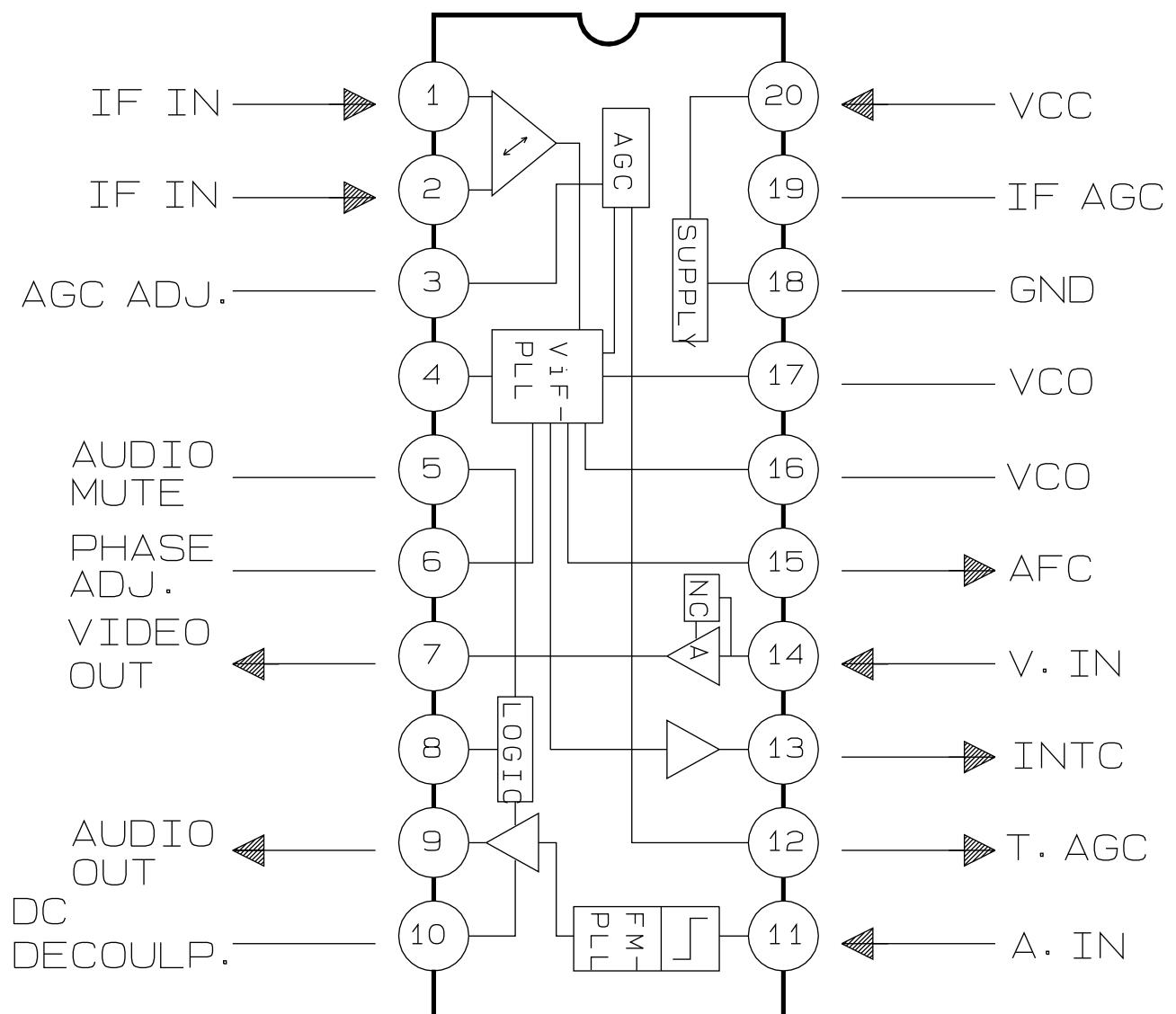
2-2-3 IC302 (LA7411)



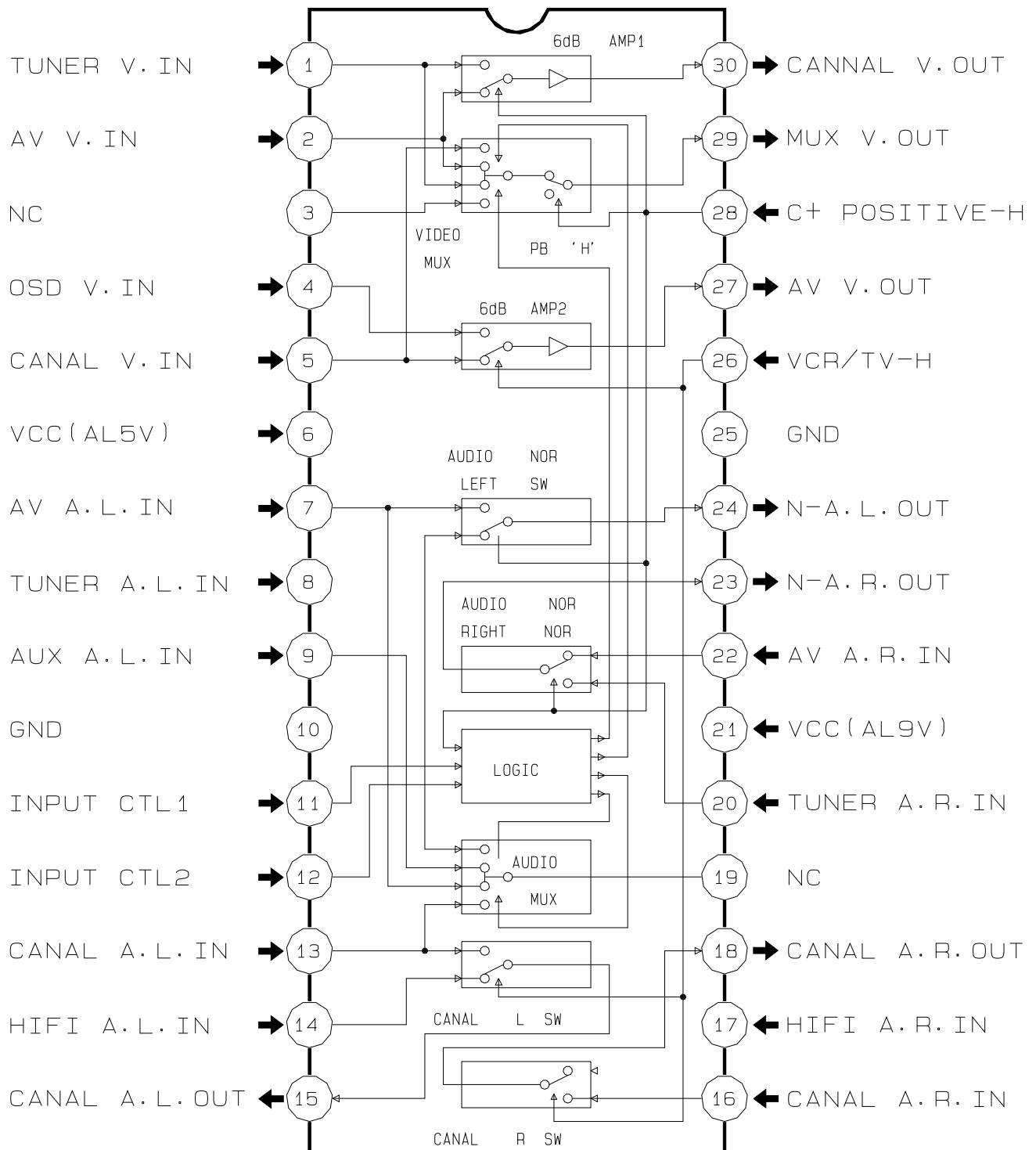
2-2-4 IC303 (SS23478M)



2-2-5 IC401 (TDA9800)



2-2-6 IC801 (KA8119)



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3. Product Specifications and Comparison Chart

3-1 Product Specifications

Design and specifications are subject to change without notice.

Operation	Description
Format	VHS PAL/MESECAM standard
Heads	Video : 2 rotary heads Audio/Control : 1 stationary head Erase : 1 full track erase head
Receiving channel	VHF-I, VHF-III, UHF, Hyperband
Television system	STANDARD B/G
Luminance	FM azimuth recording
Colour system	PAL/MESECAM : Down converted subcarrier phase shifted direct recording NTSC PB on PAL TV
Tape speed	SP : 23.39 mm/sec
Recording/playback time	SP : 3 hours (E-180 Tape)
F.F/REW time	About 100-190 sec in REW/F.F with E-180
VIDEO	
Input Output Signal-to-noise ratio Horizontal resolution	0.5 to 2.0 Vp-p : 75 ohm unbalanced 1.0 ± 0.2 Vp-p : 75 ohm unbalanced Better than 43 dB (SP) More than 240 lines (SP)
Audio	
Input Output Wow and flutter (WTD) Signal-to-noise ratio Frequency response	-8 dBm, 47 Kohm unbalanced -8 ± 3 dBm, 1 Kohm unbalanced 0.4% max (SP) 42 dB min (IHF A filter) 100Hz-8KHz
Power requirement	230V (AC 50/60 Hz)
Power consumption	Approx. 18 watts
Operation temperature	41°F-104°F (5°C-40°C)
Operation humidity	10%-75%
Weight	4.4 Kg (net)
Dimensions (W x H x D)	380 x 90.5 x 310 mm

3-2 Comparison Chart

MODEL FUNCTION	SHUTTLE	AUDIO DUBBING	VPS	PDC	SHOW VIEW	ATS	AUTO CLOCK	FRONT A/V	REAR JACK	CANAL+ P/MIERE	VCR/ TV	REMARK
SV-A20XX/EDI (SV-200X)	X	X	X	X	X	X	X	X	1 SCART	X	X	
SV-A20XX/NSI (SV-200X)	X	X	X	X	X	X	X	X	1 SCART	X	X	
SV-A20XX/AMF (SV-200X)	X	X	X	X	X	X	X	X	1 SCART	X	X	
SV-A20XX/SEI (SV-200X)	X	X	X	X	X	X	X	X	1 SCART	X	X	
SV-A20XX/SEC (SV-200X)	X	X	X	X	X	X	X	X	1 SCART	X	X	
SV-A21XX/SEI (SV-201X)	X	X	X	X	X	X	X	X	2 SCART	CANAL+	O	
SV-A21XX/SEC (SV-201X)	X	X	X	X	X	X	X	X	2 SCART	CANAL+	O	
SV-A30XX/SEG (SV-203X)	X	X	O	X	O	O	O	X	1 SCART	X	X	
SV-A40XX/EDI (SV-205X)	O	O	X	O	O	O	O	O	2 SCART	CANAL+	O	
SV-A40XX/NSI (SV-205X)	O	O	X	O	O	O	O	O	2 SCART	CANAL+	O	
SV-A40XX/AMF (SV-205X)	O	O	X	O	O	O	O	O	2 SCART	CANAL+	O	
SV-A40XX/SEI (SV-205X)	O	O	X	O	O	O	O	O	2 SCART	CANAL+	O	
SV-A40XX/SEC (SV-205X)	O	O	X	O	O	O	O	O	2 SCART	CANAL+	O	
SV-A40XX/SEG (SV-205X)	O	O	O	X	O	O	O	O	O	P/MIERE	O	

4. Disassembly and Reassembly

4-1 Cabinet Assembly

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

4-1-1 Cabinet Top removal

1. Remove 5 screws and slide the top cabinet to the rear to remove.

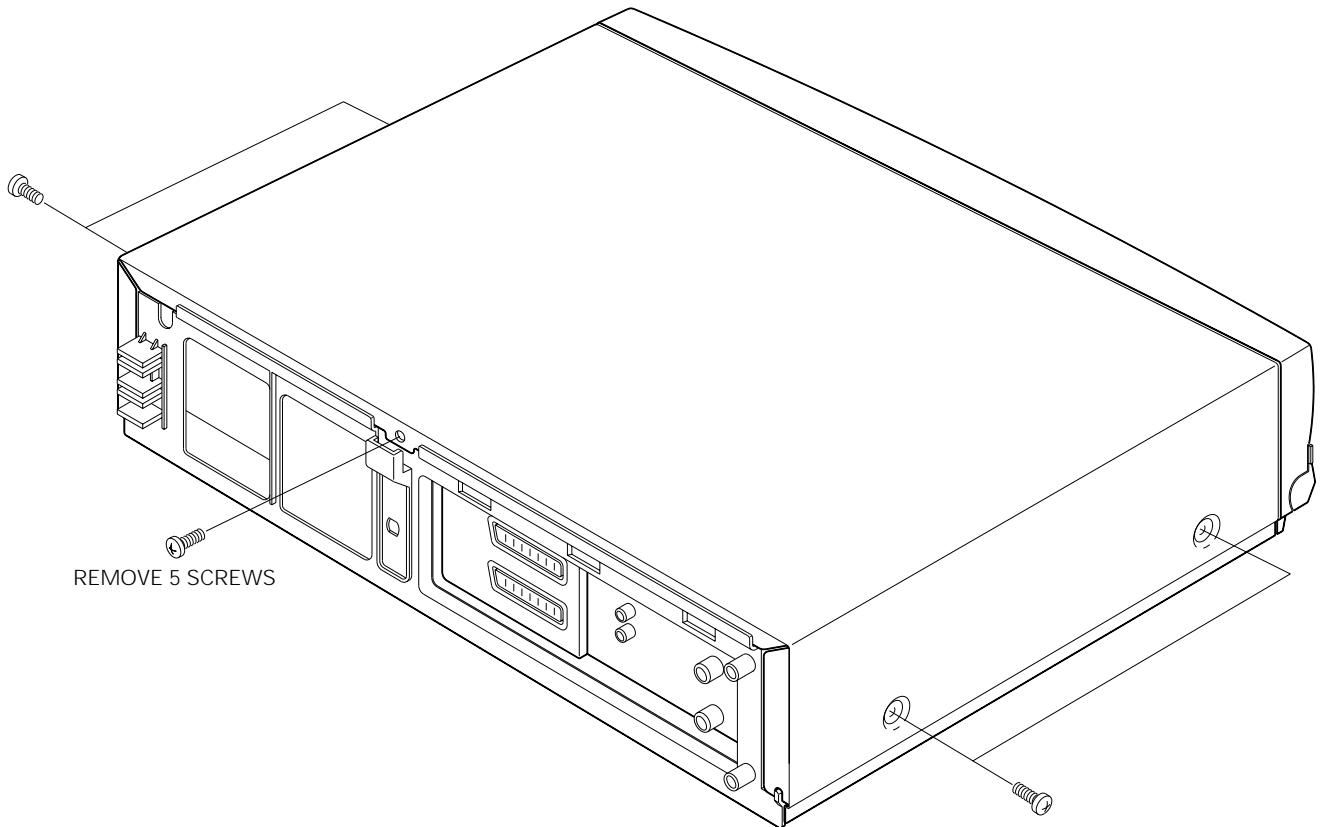


Fig. 4-1 Cabinet Top removal

4-1-2 Bottom cover removal

1. Remove 2 screws.
2. Lift up the bottom cover toward arrow "A".

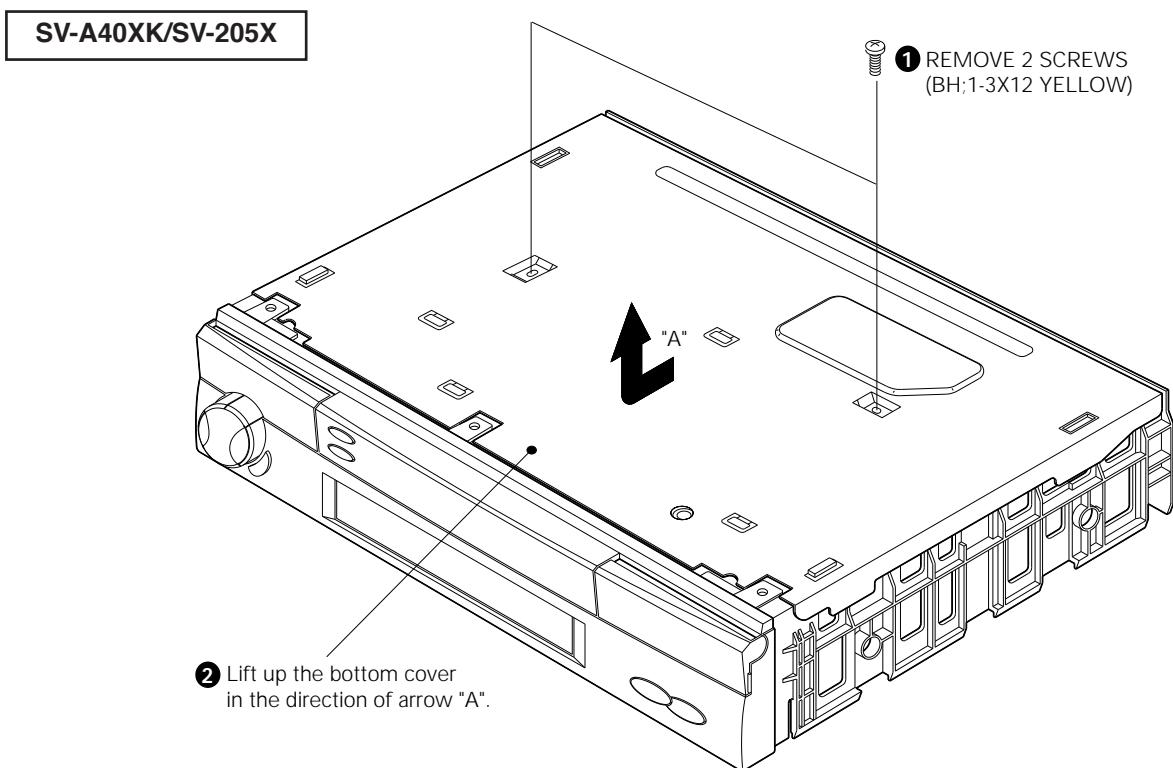
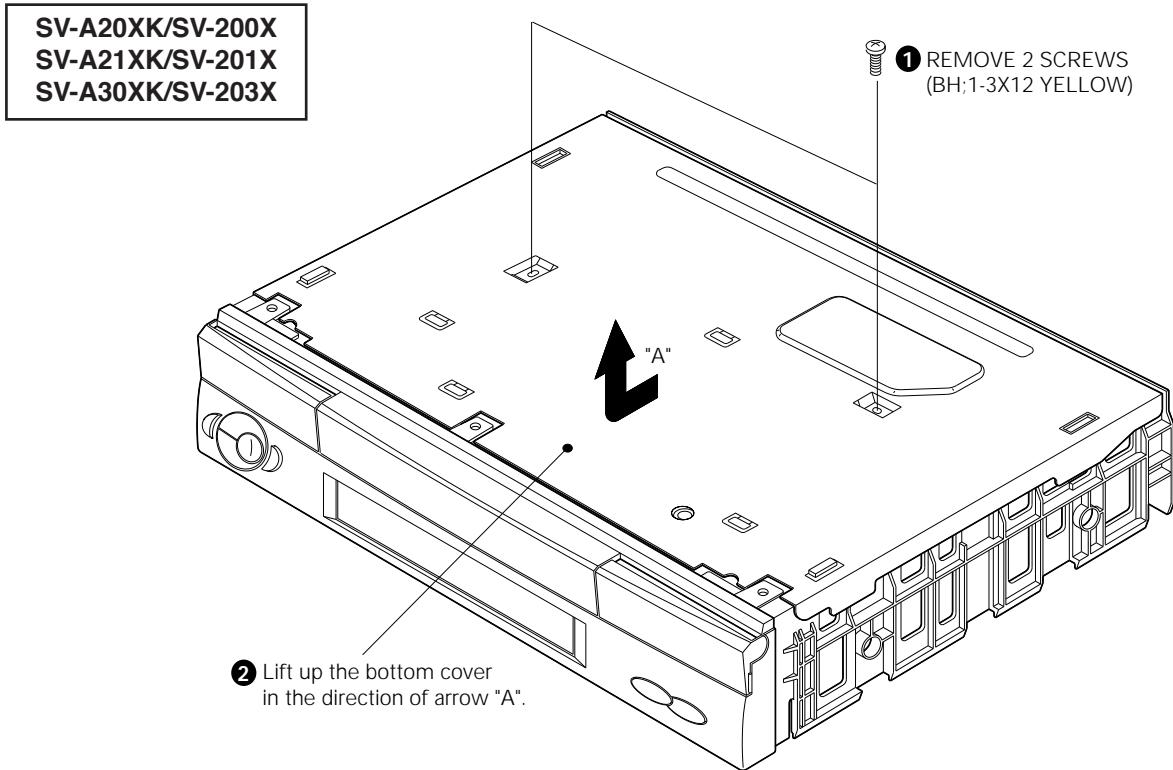
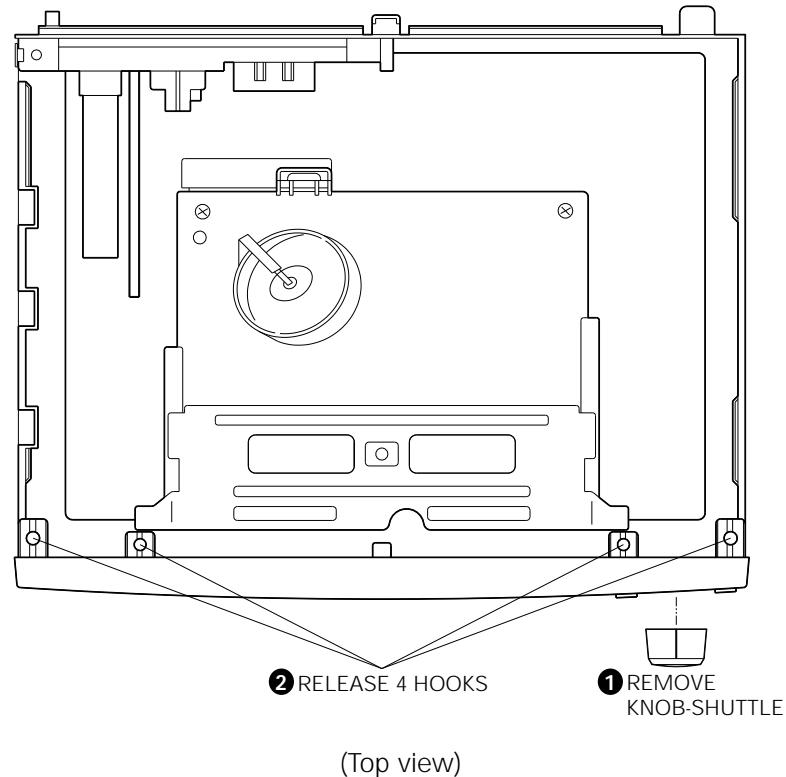


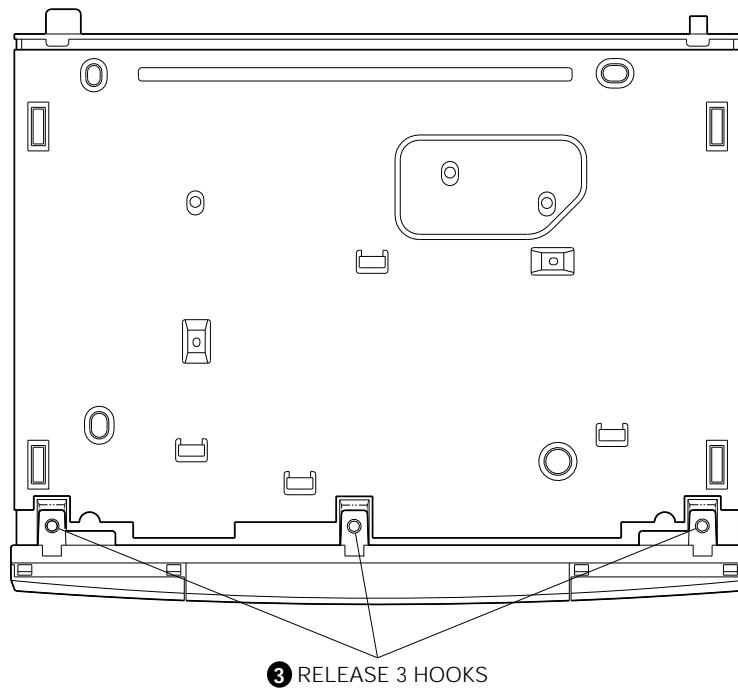
Fig. 4-2 Bottom Cover removal

4-1-3 Ass'y Front Panel removal

1. Remove the knob-shuttle.
2. Release 4 hooks on the top side and 3 hooks on the bottom side and then, pull the ass'y front panel to remove.



(Top view)



(Bottom view)

Fig. 4-3 Ass'y Front Panel removal

4-1-4 Ass'y Function-Timer removal

1. Release 5 hooks and remove the ass'y function-timder.

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

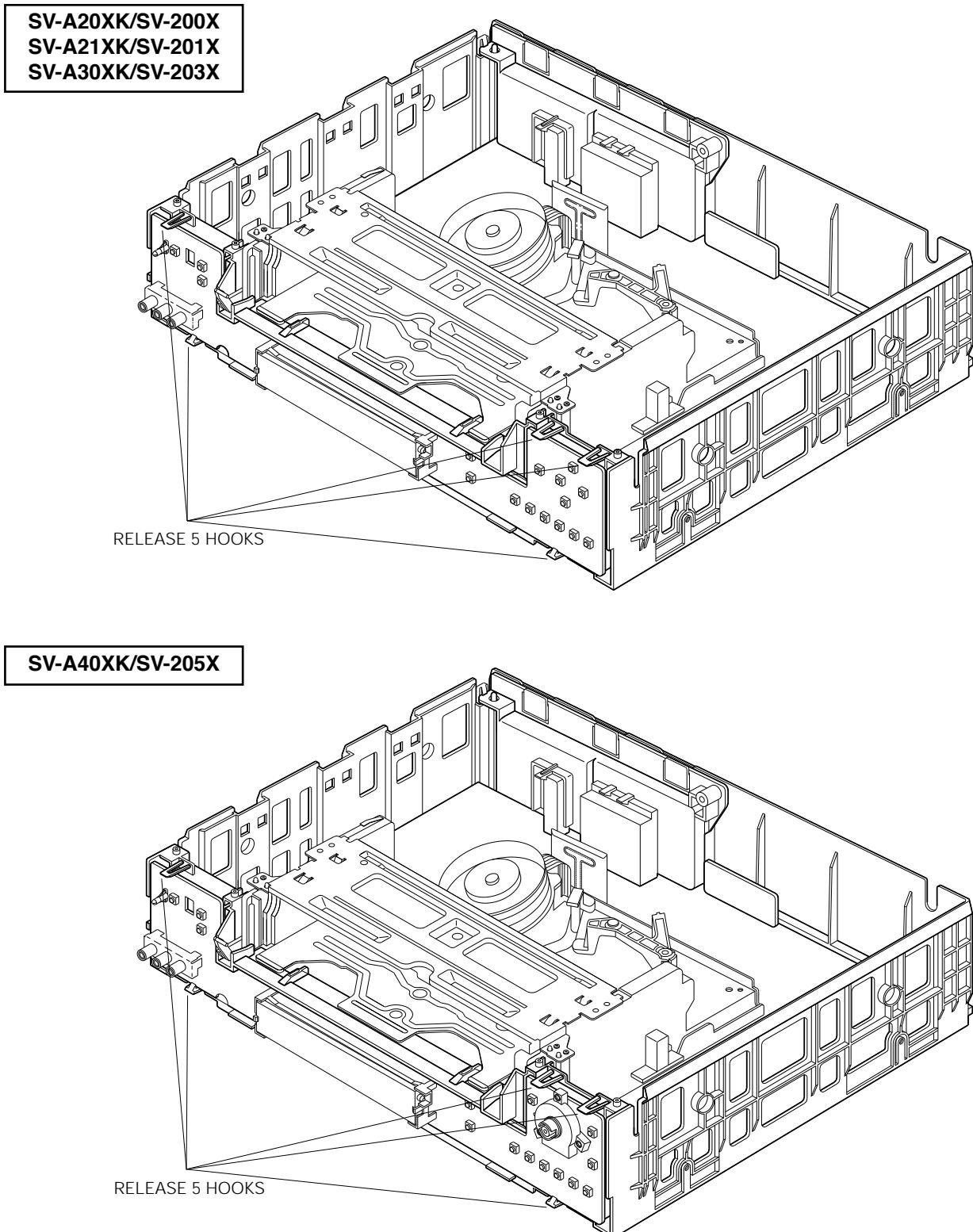


Fig. 4-4 Ass'y Function-Timer removal

4-1-5 Chassis removal

1. Remove 2 screws holding the bottom cover.
2. Remove 2 screws holding the frame.
3. Remove 2 screws holding the housing ass'y.
4. Remove 2 screws holding the ass'y full deck.
5. Lift the ass'y full deck up.
6. Release 1 tab holding the connector board ass'y.
7. Release 1 hook holding the ass'y main.
8. Lift the ass'y main up to remove.

Note : 1. When removing chassis, take extreme care not to damage the main PCB front.
 2. When reinstalling the deck on the main PCB, take extreme care not to damage the sensor.

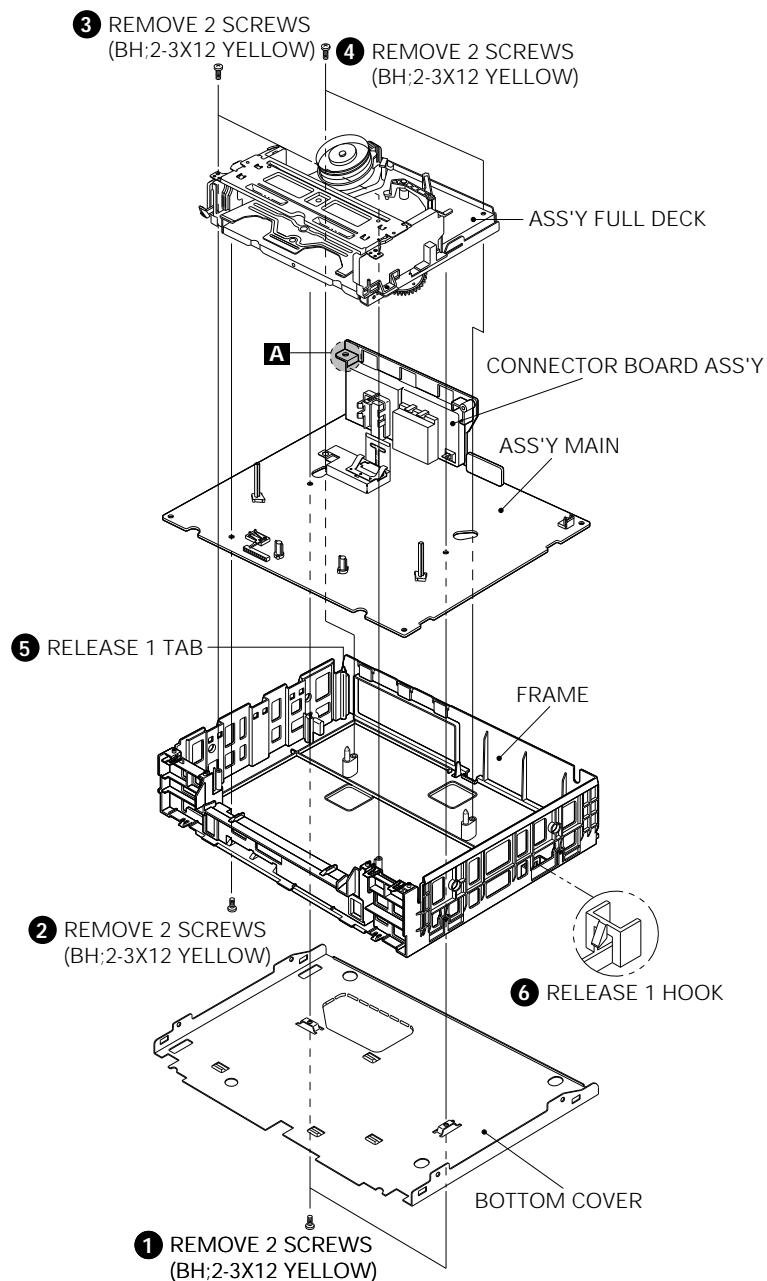


Fig. 4-5 Chassis Removal

4-2 Circuit Board Locations

**SV-A20XK/SV-200X
SV-A21XK/SV-201X
SV-A30XK/SV-203X**

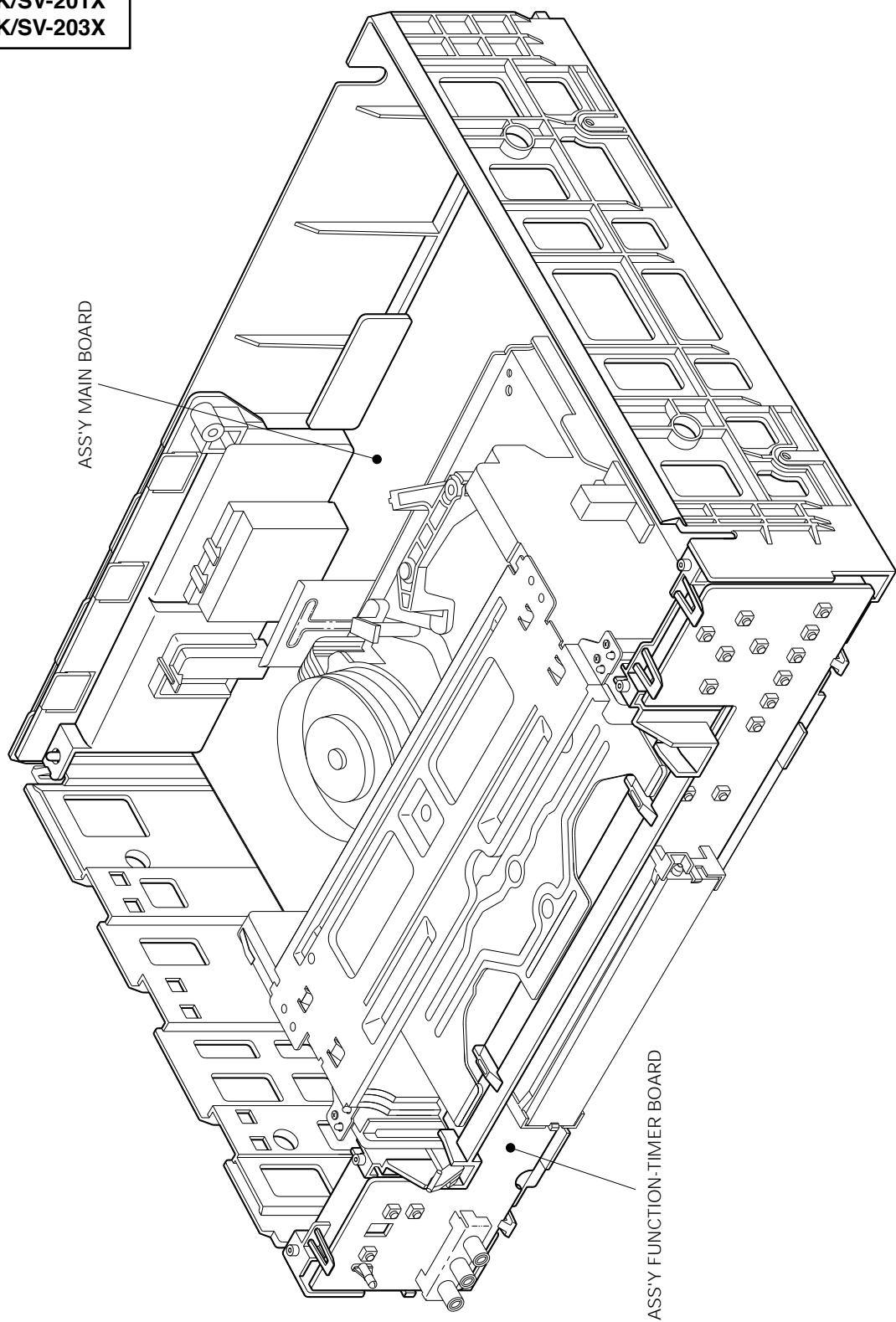


Fig. 4-6 Circuit Board Locations

SV-A40XK/SV-205X

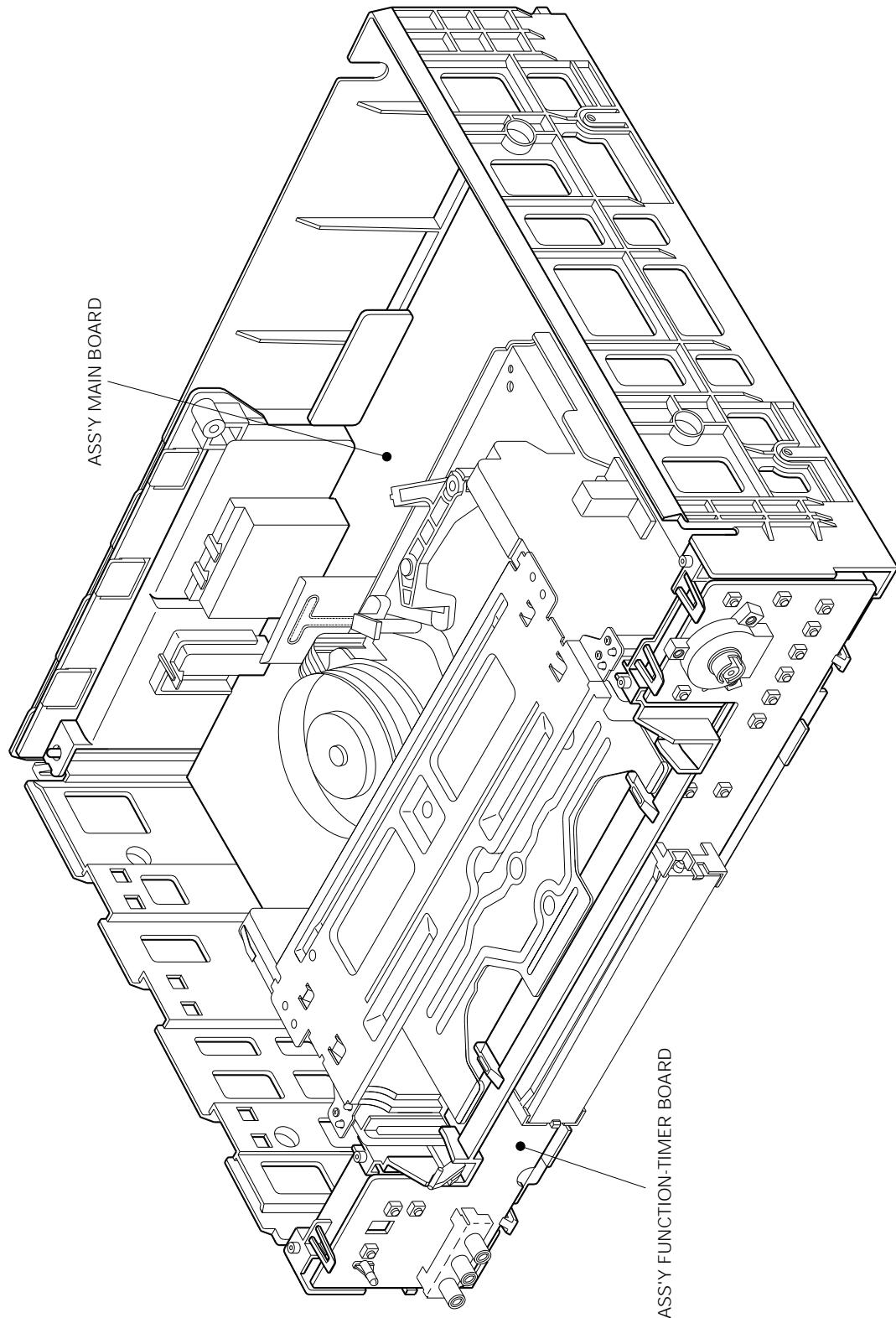


Fig. 4-6 Circuit Board Locations

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5. Alignment and Adjustment

Note : After replacing the ass'y full deck, the ass'y main, the cylinder ass'y and the micom(IC601), the remote control ass'y can be used to adjust the "X-point (tracking center) adjustment" and "Head S/W point" adjustment.

5-1 Reference

5-1-1 The type of remote control ass'y

1. Remote control ass'y (AC93-10039Y/69099-633-252) is specified as a service jig in the service manual of X-5/X-6(DX5-R/DX5-RC/DX6-R/DX6-RC) chassis. (See Fig. 5-1)
2. Normal remote control ass'y for X-7/X-8 (DX7-R/DX7-RC/DX8-R/DX8-RC) chassis. (See Fig. 5-2)

5-1-2 How to identify between normal remote control ass'y and multi remote control ass'y for X-7/X-8 chassis (See Fig. 5-2)

1. The color of some buttons related to TV function are gold.
2. Audio button is added instead of the test button hidden behind of inlay.
3. The positions of some buttons are different.

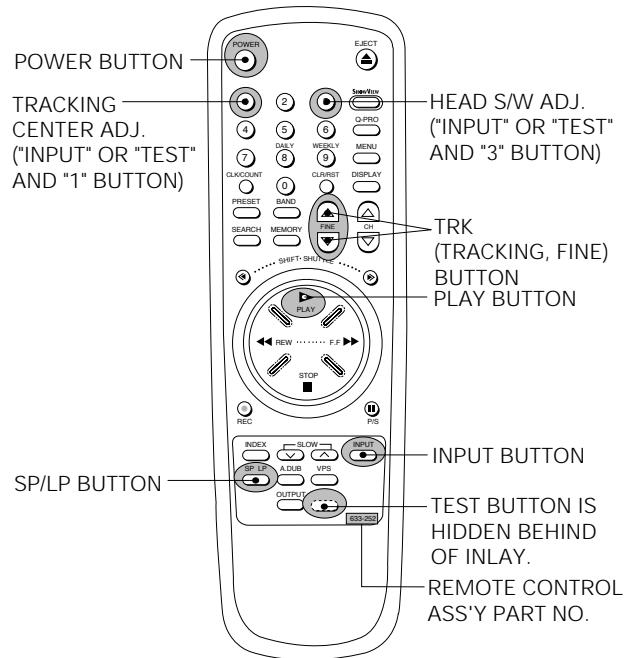


Fig. 5-1 Remote Control Ass'y Jig for X-5/X-6 Chassis (AC93-10039Y/69099-633-252)

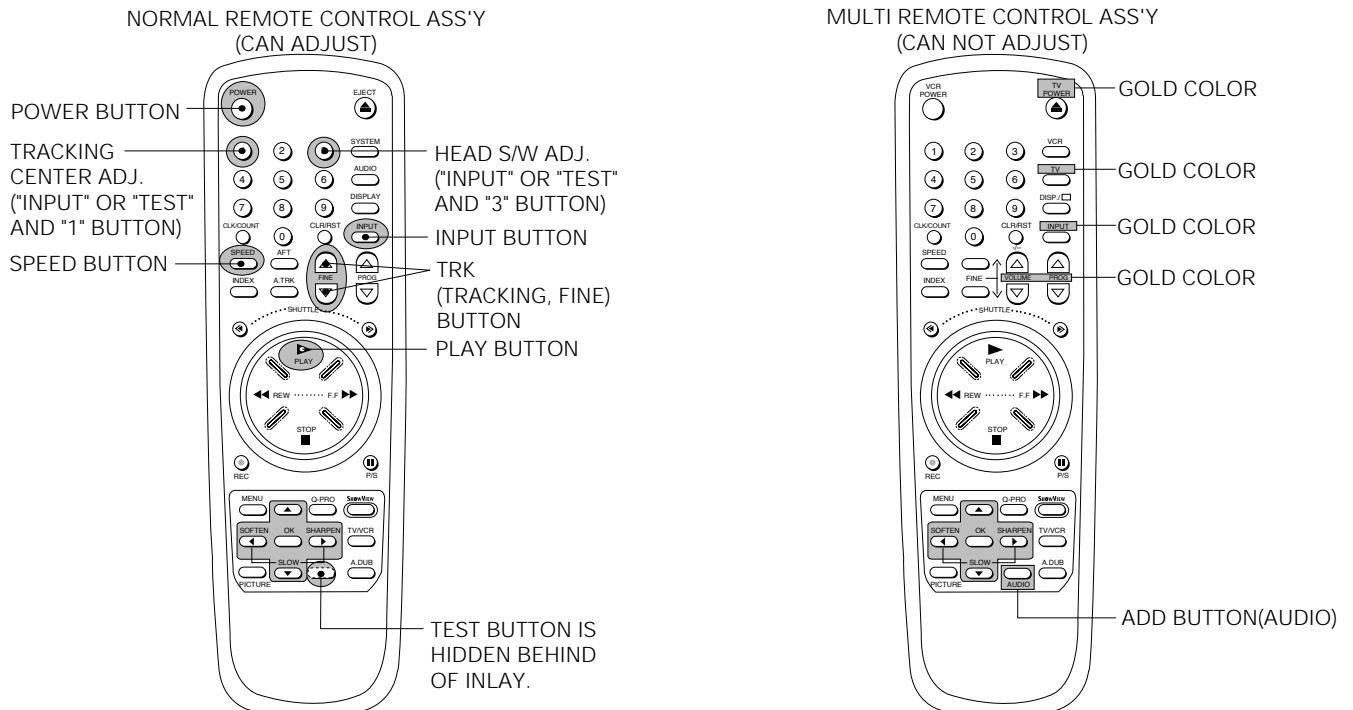


Fig. 5-2 Remote Control Ass'y for X-7/X-8 Chassis

5-2 Mechanical Adjustment

Note : Refer to the Mechanical Manual "DX7-R/DX7-RC/DX8-R/DX8-RC (AC68-20316A)" for the adjustment and confirmation of ass'y full deck.

5-2-1 The number and position of test point

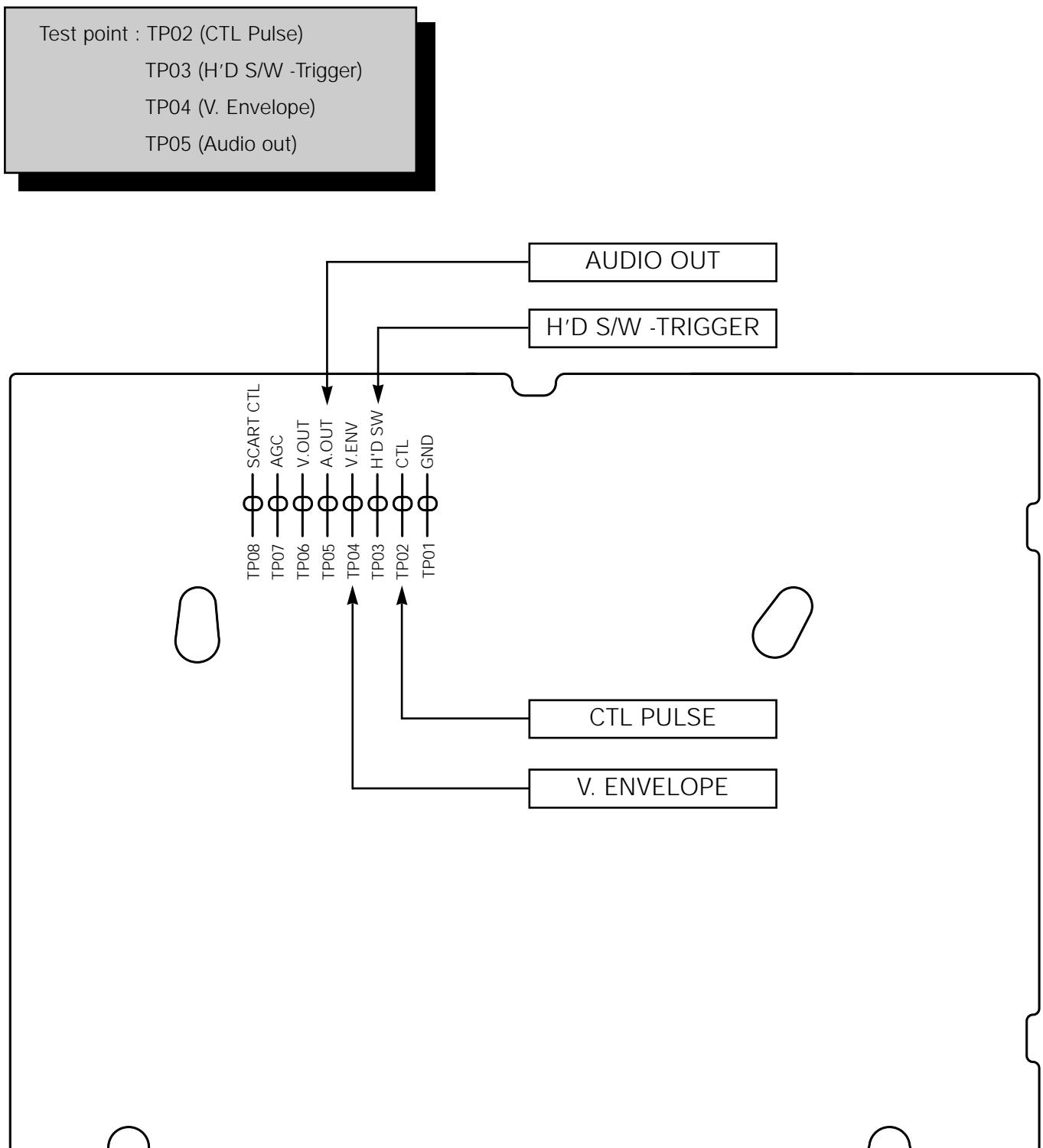


Fig. 5-3 The position of test point (Main PCB-Component side)

5-2-2 X-Point(Tracking center) adjustment (See the 2-2-1 (d) AC HEAD POSITION(X-POINT) ADJUSTMENT on page 2-3 of the mechanical manual)

5-2-2 (a) IF THE REMOTE CONTROL ASS'Y IS NOT AVAILABLE

1. Playback the colorbar alignment tape.
2. Connect CH-1 scope probe to "TP02" and CH-2 scope probe to "TP03". And then, trigger head switching pulse.
3. Set tracking preset to 15msec (2head : 0.5msec, 4head : 14.5msec) using the "FINE(Tracking, TRK)" button ▲ / ▼ of remote control ass'y.
4. Connect CH-1 scope probe to "TP02" and the CH-2 to "TP03" trigger on CH-1.
5. Insert the adjusting driver (+) into X-position adjusting gear. Adjust the driver in either direction for maximum envelope waveform.

Note : Since the adjusting gear unit may be damaged, do not adjust by force when adjusting the X-point using the adjusting driver (+). After turn the X-point adjusting screw (D) counterclockwise a little, perform the adjustment. After adjustment is completed, tighten the screw.

<Setting of scope>

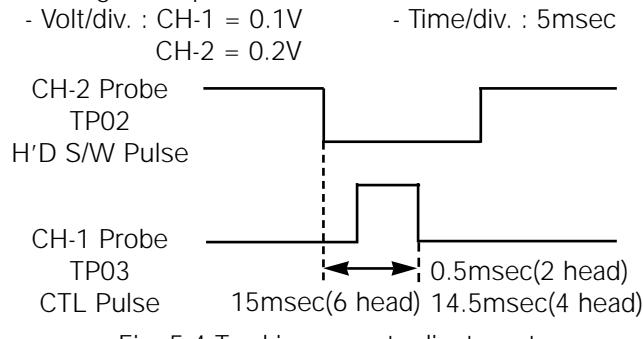


Fig. 5-4 Tracking preset adjustment

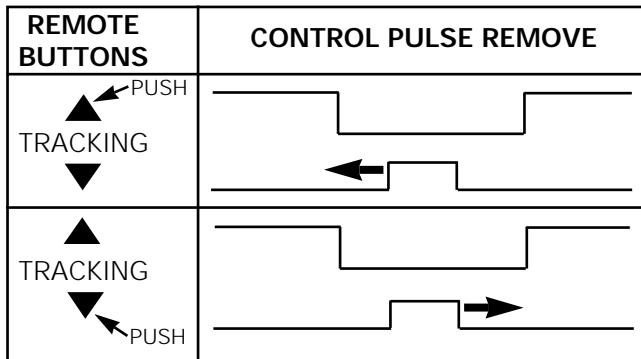


Fig. 5-5 Tracking preset adjustment

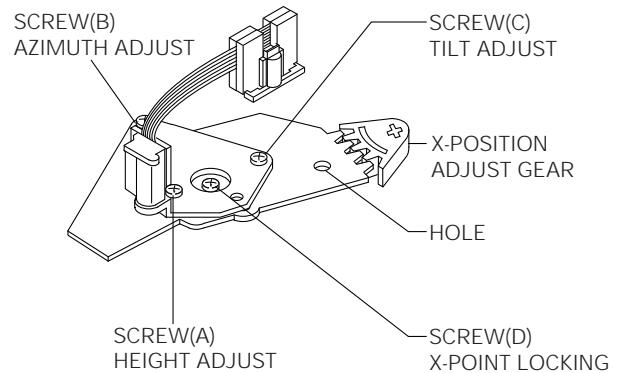


Fig. 5-6 Location of A/C Head adjustment screw

5-2-2 (b) IF THE REMOTE CONTROL ASS'Y (AC93-10039Y/69099-633-252) IS AVAILABLE

Note : How to use the "TEST" button.

1. Disattach the inlay of remote control ass'y.
(See Fig. 5-1 and Fig. 5-2)
2. Press the "TEST" button with the pincers and the precise driver as shown in Fig. 5-1 and 5-2)
3. When using the "INPUT" button of remote control ass'y;
 - 1) Simultaneously press the "INPUT" button and "1" button in PB mode.
This will adjust the tracking center automatically.
 - 2) Set the tracking preset using the "FINE(Tracking, TRK)" button of remote control.
 - 3) After adjustment is completed, press the "POWER" button to release.
2. When using the "TEST" button of remote control ass'y ;
 - 1) Simultaneously press the "TEST" button and "5" button in PB mode.
This will adjust the tracking center automatically.
 - 2) Set the tracking preset using the "FINE (Tracking, TRK) button of remote control.
 - 3) After adjustment is completed, press the "POWER" button to release.

5-2-2 (b) IF THE NORMAL REMOTE CONTROL
ASS'Y OF X-7/X-8(DX7-R/DX7-RC/
DX8-R/DX8-RC) CHASSIS IS
AVAILABLE

Note 1 : Two kinds of remote control ass'y are used
for X-7/X-8(DX7-R/DX7-RC/DX8-R/
DX8-RC) chassis.

1. One is a normal remote control ass'y, the other is a multi remote control ass'y
2. All adjustments are adjusted by normal remote control ass'y only.
3. For the identification of normal remote control ass'y and multi remote control ass'y, See page 5-1.

Note 2 : How to use the "TEST" button.

1. Disattach the inlay of remote control ass'y.
(See Fig. 5-1 and Fig. 5-2)
2. Press the "TEST" button with the pincers and the precise driver as shown in Fig. 5-1 and 5-2)
1. When using the "INPUT" button of remote control ass'y;
 - 1) Simultaneously press the "INPUT" button and "1" button in PB mode.
This will adjust the tracking center automatically.
 - 2) Set the tracking preset using the "FINE(Tracking, TRK)" button of remote control.
 - 3) After adjustment is completed, press the "POWER" button to release.
2. When using the "TEST" button of remote control ass'y ;
 - 1) Simultaneously press the "TEST" button and "5" button in PB mode.
This will adjust the tracking center automatically.
 - 2) Set the tracking preset using the "FINE (Tracking, TRK) button of remote control.
 - 3) After adjustment is completed, press the "POWER" button to release.

5-3 Electrical Adjustment

5-3-1 Head S/W Adjustment

Note : Only remote control ass'y can adjust.

5-3-1 (a) IF REMOTE CONTROL ASS'Y
(AC93-10039Y/69099-633-252) IS
AVAILABLE

1. When using the "INPUT" button of remote control
ass'y ;

- 1) Insert an SP tape into the housing ass'y.
- 2) Set the unit to stop mode.
- 3) Press the "INPUT" button and "3" button simultaneously.
- 4) Press the "PLAY" button.
- 5) This will adjust the head S/W point adjustment automatically.
- 6) After the adjustment is completed, press the "POWER" button to release.

2. When using the "TEST" button of remote control
ass'y ;

- 1) Insert an SP tape into the housing ass'y.
- 2) Set the unit to stop mode.
- 3) Press the "TEST" button and "SP/LP" button simultaneously.
- 4) Press the "PLAY" button.
- 5) This will adjust the head S/W point adjustment automatically.
- 6) After adjustment is completed, press the "POWER" button to release.

5-3-1 (b) IF NORMAL REMOTE CONTROL
ASS'Y FOR X-7/X-8(DX7-R/DX7-RC/
DX8-R/DX8-RC) CHASSIS IS
AVAILABLE

1. When using the "INPUT" button of remote control
ass'y ;

- 1) Insert an SP tape into the housing ass'y.
- 2) Press the "PLAY" button.
- 3) Press the "INPUT" button and "3" button simultaneously.
- 4) This will adjust the head S/W point adjustment automatically.
- 5) After the adjustment is completed, press the "POWER" button to release.

2. When using the "TEST" button of remote control
ass'y ;

- 1) Insert an SP tape into the housing ass'y.
- 2) Press the "PLAY" button.
- 3) Press the "TEST" button and "SPEED" button simultaneously.
- 4) This will adjust the head S/W point adjustment automatically.
- 5) After adjustment is completed, press the "POWER" button to release.

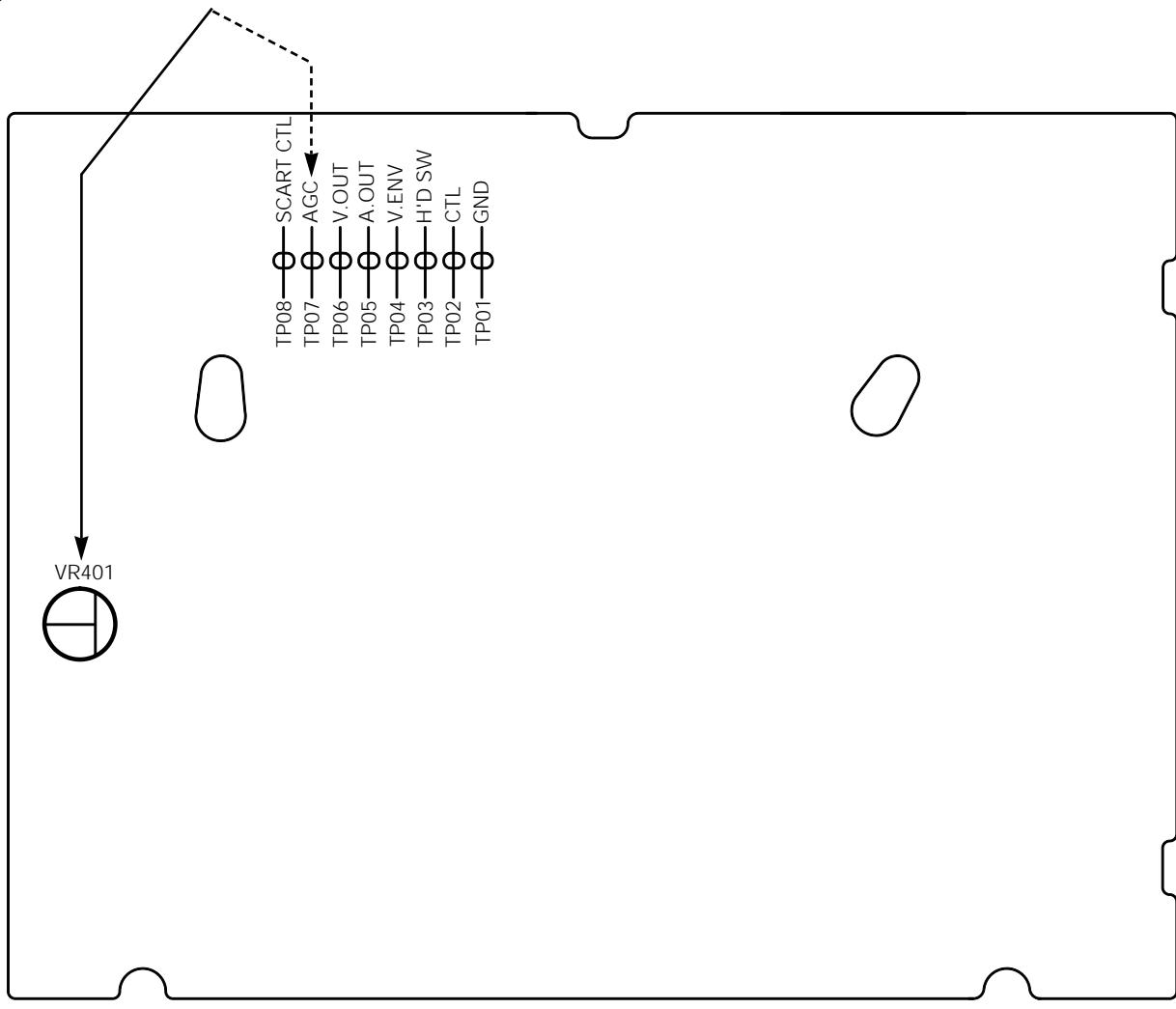
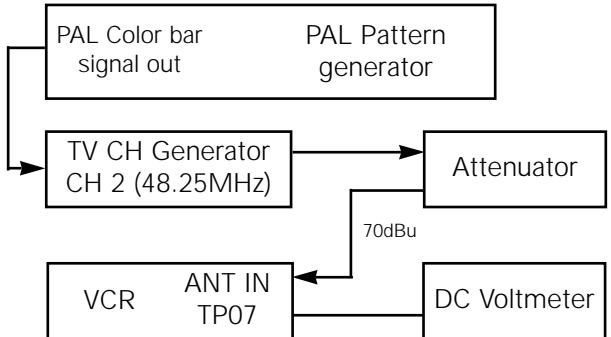
5-3-2 RF AGC Adjustment

Step	Adjustment Item
1.	Mode and input signal/ alignment tape
2.	Test point and ADJ. part
3.	Result and Remarks

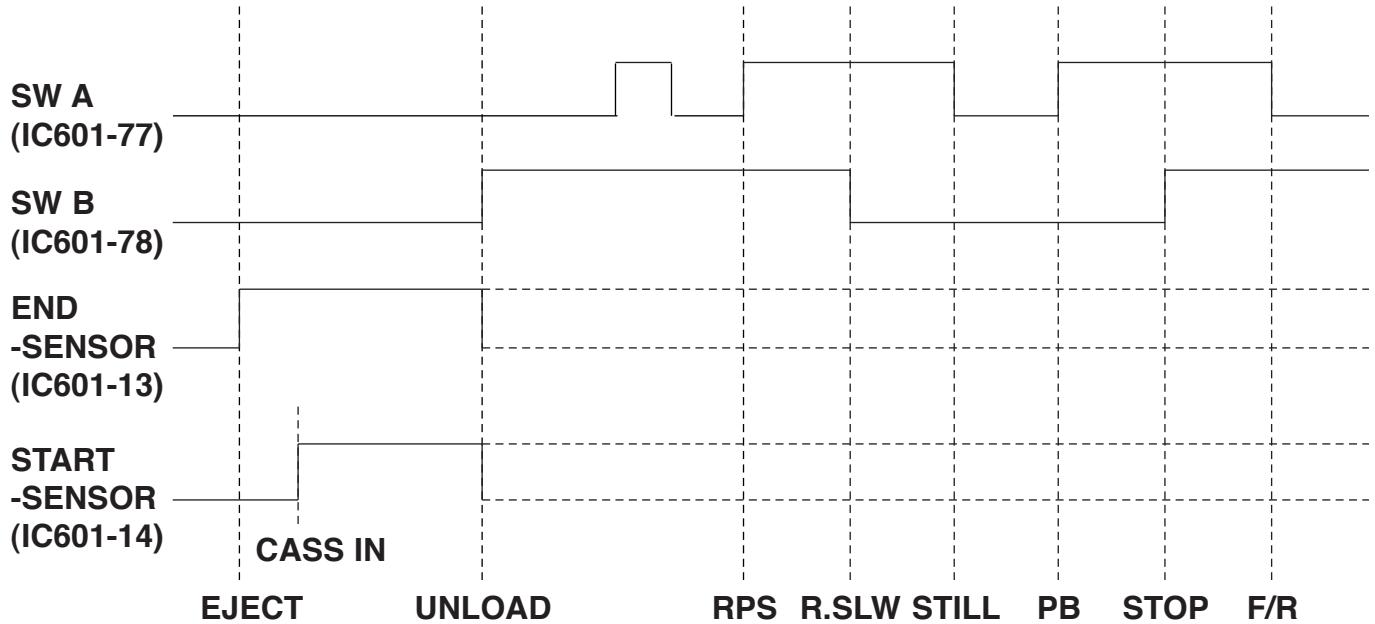
5-3-2 (a) ADJUSTMENT PROCEDURES

1. "E-E" (stop mode), RF signal.
2. TP07 and VR401.
3. Apply PAL color bar signal to the video input terminal of the TV channel generator and set channel selector to CH 2 (48.25MHz).
4. Adjust the point signal level so that the output of attenuator is 70dBu.
5. Apply the output of attenuator to the ANT IN terminal of VCR.
6. Set the channel of VCR to CH 2.
7. Connect DC voltmeter to TP07.
8. Adjust VR401 for DC $3.7 \pm 0.1V$.

* Composition for RF AGC adjustment



5-4 Timing Chart of Program S/W



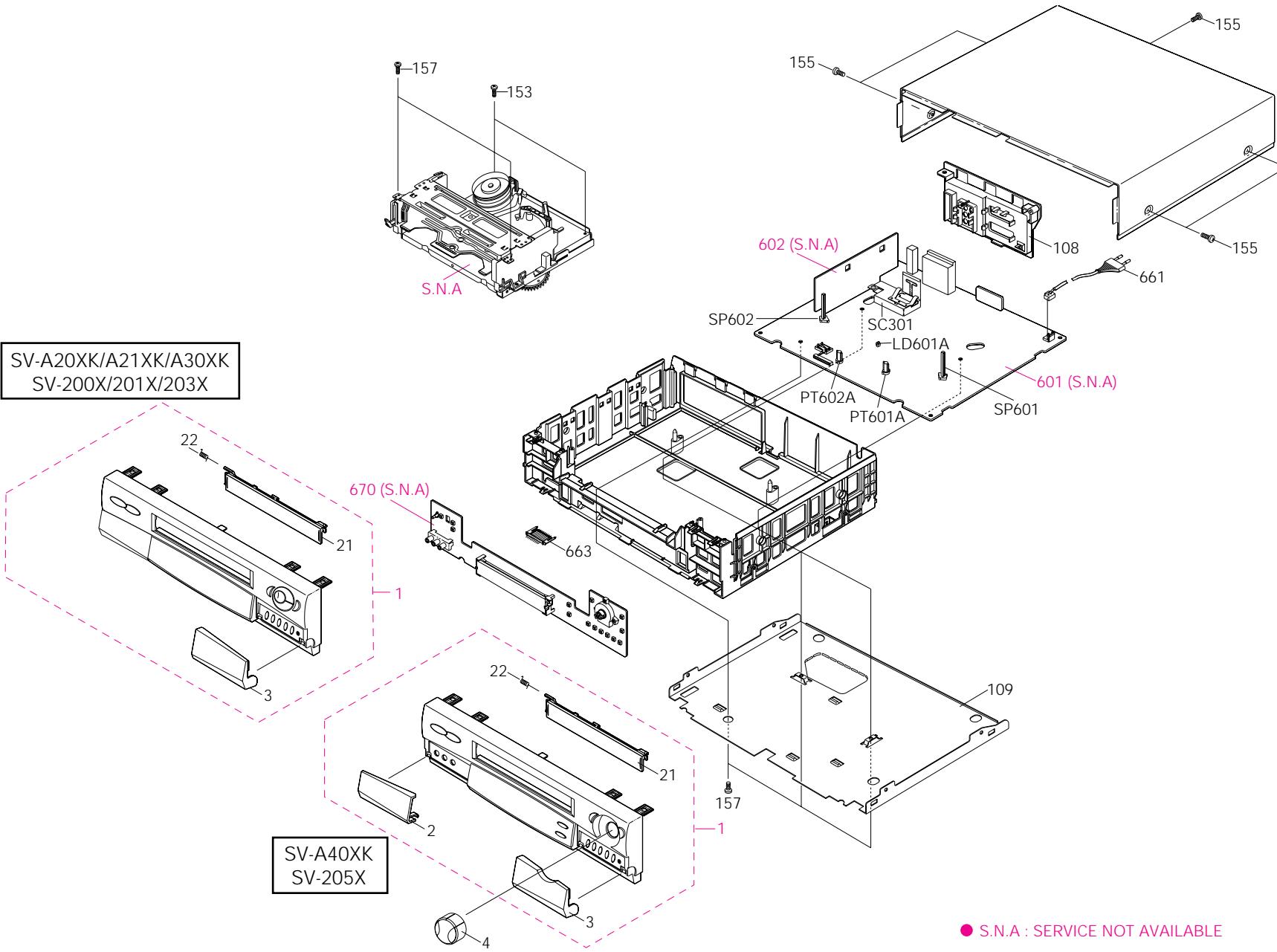
Position	Program S/W (SW601)				Action Mode
	E/S	E/S	E/S	E/S	
Eject	L	L	L	L	Eject
Cassette IN	H	L H	L	L	Cassette IN
Unload	-	-	L	L H	Unload
R. PS	-	-	L H	H	R. PS, Z-R. PS
R. Slow	-	-	H	H L	Pinch Roller off Position
Still	-	-	H L	L	Still, Slow, F-ADV
Play	-	-	L H	L	PB, T-Stop, REC, Pause, F. PS, Z-FPS
Stop	-	-	H	L H	Stop, Power off
FF/REW	-	-	H L	H	FF, REW

MEMO

6. Exploded View and Parts List

	Page
6-1 Cabinet Assembly	6-2
6-2 Mechanical Parts (Top Side)	6-4
6-3 Mechanical Parts (Bottom Side)	6-6
6-4 Housing Assembly	6-8

6-1 Cabinet Assembly

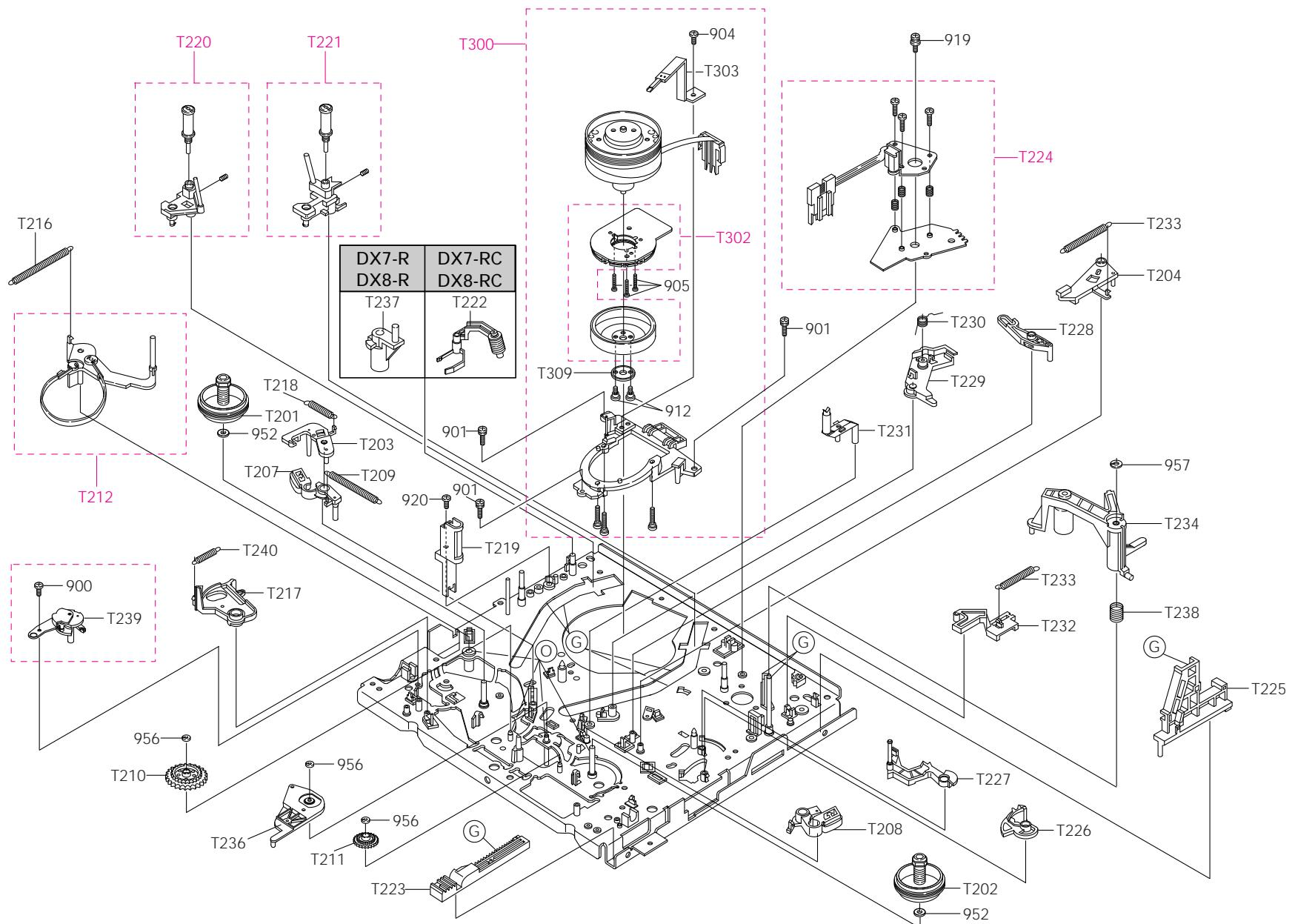


Loc. No	New Part No	Description and Specification	Remark
-	DO NOT ORDER	ASSY-FULL DECK (DX7-R)	(S.N.A)
1	AC98-11208J	ASSY-PANEL FRONT;SV-A30XK/SEG,IS PAL 2HD,D1	SESA LOCAL
3	AC64-50886F	DOOR-FRONT(R);SV-A30XK/SEG,ABS94,HB,--,GRY,	SESA LOCAL
4	AC64-10856A	KNOB-SHUTTLE;ABS94,HB,GRY (SV-A40XK/SV-205X ONLY)	SESA LOCAL
21	AC64-50883B	DOOR-CASSETTE;-,ABS,HB,--,GRY,--,SV-A30XK/SE	SESA LOCAL
22	AC61-62003A	SPRING;-, SUS304,(GE/RCA),--, -	SESA LOCAL
108	AC61-10972K	CONNECTOR BOARD-ASSY;SV-A70XK,HIPS94,HB,T2.5,L20	SME LOCAL
109	AC63-32126A	COVER-BUTTON;SV-D140F,-	SME LOCAL
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,SWRCH18A	
601	DO NOT ORDER	ASSY-MAIN	(S.N.A)
661	AC39-10019A	POWER CORD;KKP-419C,H03VVH2-F,VDE/KEMA-KE	SESA LOCAL
663	3711-002603	CONNECTOR-HEADER;NOWALL,20P,1R,1.5MM,STRAIGHT,SN	
670	DO NOT ORDER	ASSY-FUNCTION	(S.N.A.)
LD601A	AC61-22345A	HOLDER-LED;POM,--,--, -,	SME LOCAL
PT601A	AC61-22344A	HOLDER-PHOTO;POM,--,--, -,	SME LOCAL
PT602A	AC61-22344A	HOLDER-PHOTO;POM,--,--, -,	SME LOCAL
SC301	AC98-12023J	ASSY-SH/CASE TOP;SV-A140F,IS-PAL ASSY S/C TOP	SME LOCAL
SP601	AC61-22321A	HOLDER-TR;POM,--,--, -,	SME LOCAL
SP602	AC61-22321A	HOLDER-TR;POM,--,--, -,	SME LOCAL

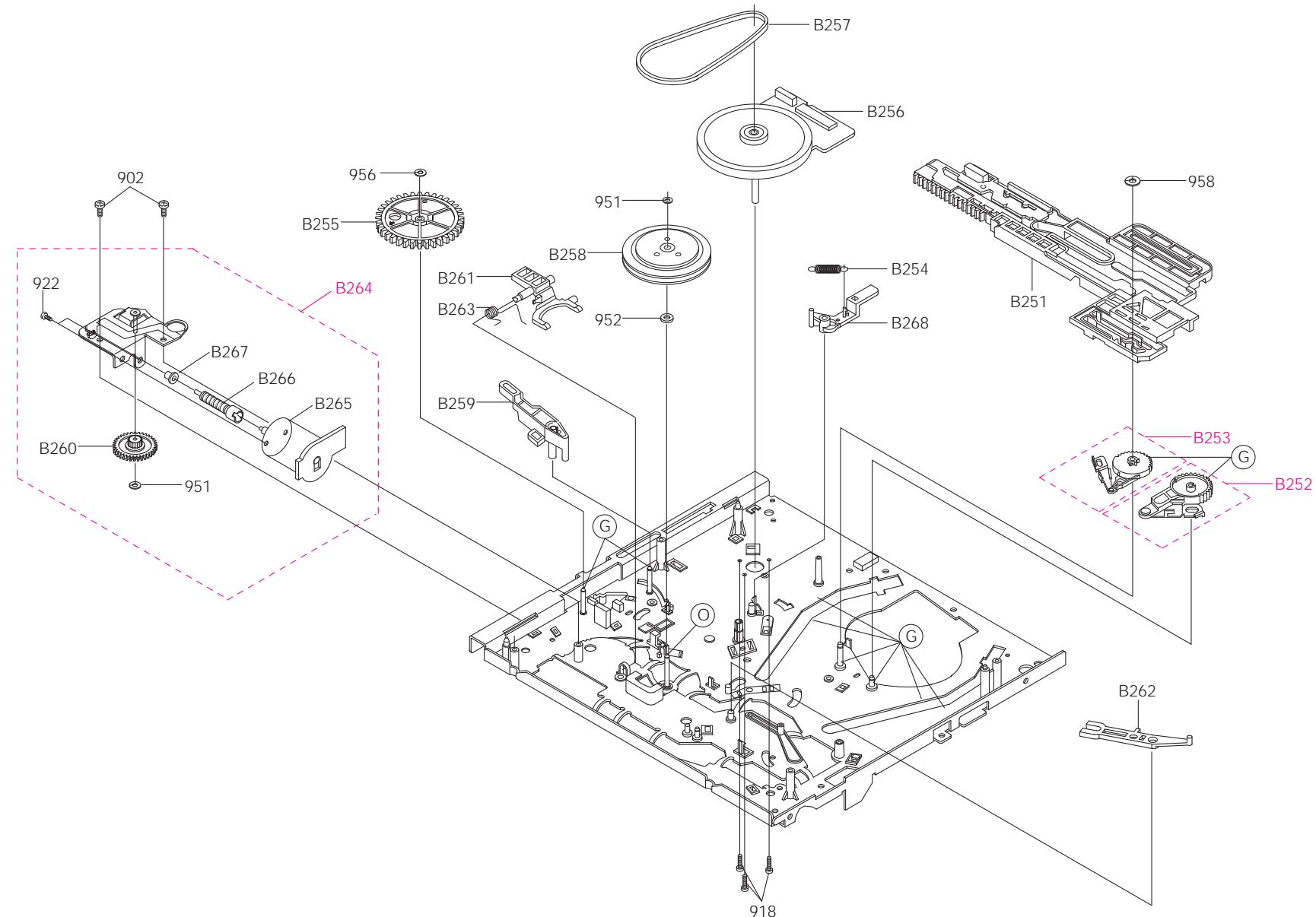
Note : Location number 1, 3,21 are only for model SV-A30XK / SEG, SV-203X / SEG.
Please, refer to the separate information for the other models combined.

6-2 Mechanical Parts (Top Side)

6-4

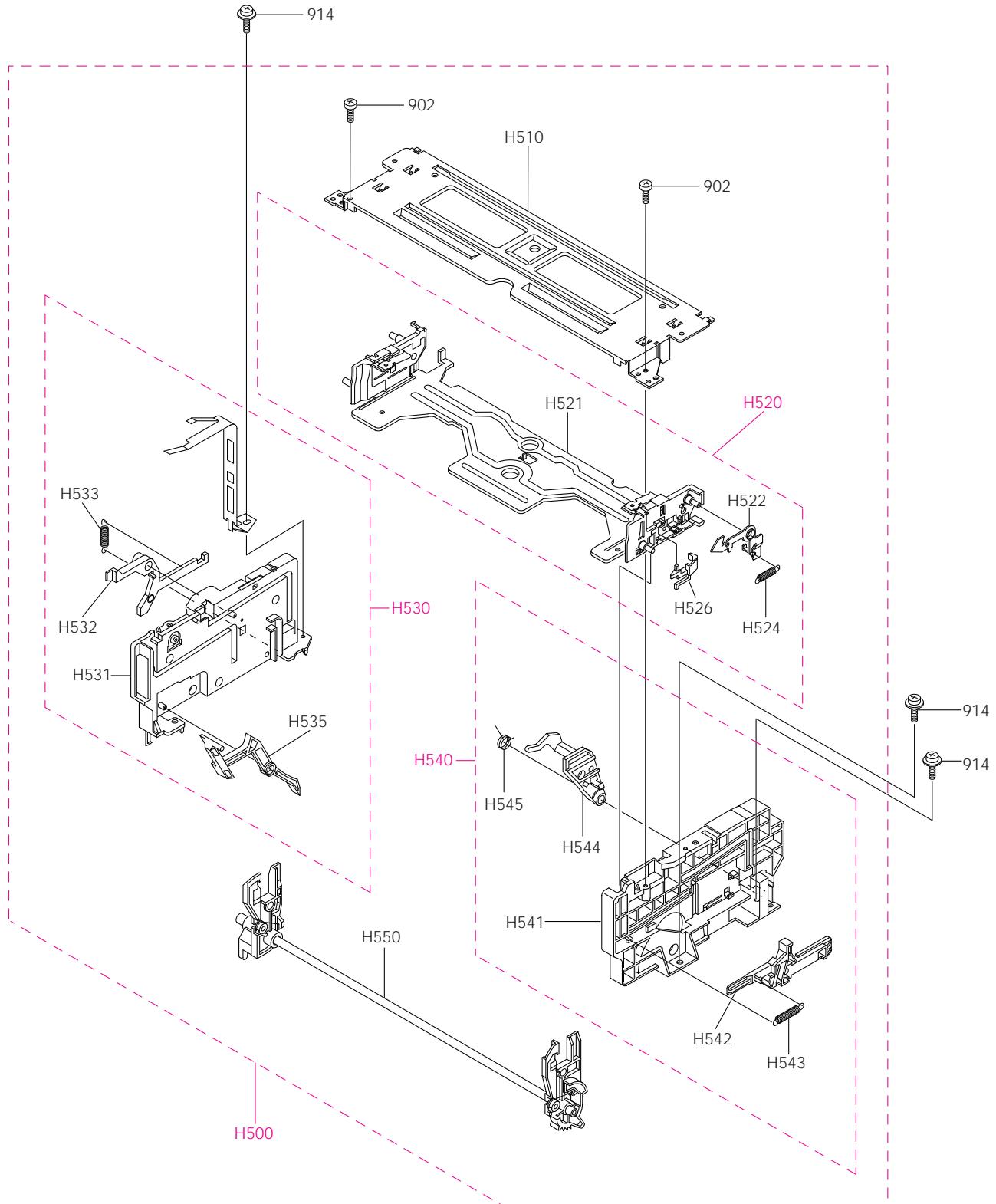


6-3 Mechanical Parts (Bottom Side)



Loc. No	New Part No	Description and Specification	Remark
902	AC60-10051A	SCREW-TAPPING;BH,-,M3,L8,FZY	
918	AC60-10006A	SCREW-MACHINE;BH,+I90,M2.6,L7,ZPC,SWRCH18A,-	
922	67008-130-171	SCREW PH;+M3X3 FE FZY	
951	AC60-30025A	WASHER-SLIT;-,ID2.5,OD5.0,T0.5,POLY SLIDE,	
952	AC60-30018A	WASHER-PLAIN;PLAIN,M3.2,D6,T0.5,POLYSLIDER,	
956	AC60-30007A	WASHER-SLIT;PLAIN,ID2.5,OD7,T0.5,SPC1,-,-	
958	AC60-30028A	WASHER-SLIT;-,D2.5,D9.0,T0.5,NUMIRROR,-,-	
B251	AC66-80001A	SILDER- MAIN;PBT2002K,T12.4,L206.2,NAT,DX-5	
B252	AC66-20019A	GEAR-LOADING L ASSY;-, -, PACKAGE,-,X-5,-	
B253	AC66-20069A	GEAR LOADING R;-, -, -, X5,-	
B254	AC61-60115A	SPRING-BRAKE CAPSTAN;ES,SUS304WPB,PI0.4,D22,L16.1(
B255	AC66-20004A	GEAR-MASTER;POM (M90-44),M 1,Z 60,SP,-,X-5	
B256	AC31-12003A	MOTOR-D.D CAPSTAN;F2QTB26,250MAX,-	
B257	AC66-62007A	BELT-CAPSTAN;5CM-70 FR,W2 T2 L88.6,-,-,-,	
B258	AC66-20066A	CLUTCH-ASSY;-, -, -, X5,-	
B259	AC66-32185A	LEVER-SLIDER PINCH;PBT,T4,NAT,-,-,-	
B260	AC66-20016A	GEAR- WORM WHEEL;POM SW-01,M0.55/M1,Z57/Z10,GEA	
B261	AC66-30011A	LEVER- SHIFT;PBT2002K,T10.9,L35,-,-,-	
B262	AC66-30012A	LEVER- IDELR CHANGE;PBT330,T3.3,L50,-,W6.0,-	
B263	AC61-60111A	SPRING-LEVER SHIFT;TS,SWPB,PI0.7,D5.5,L13.8(OD6.9	
B264	AC59-90001A	UNIT-LOADING ASSY;X-5,-,-	
B265	66823-0060-00	MOTOR-LOADING ASSY;POM+RF370C X-5	
B266	AC66-20039A	GEAR- WORM LO;PBT 2002K,-,-,-,D4.5,3,-	
B267	AC61-20224A	HOLDER SHAFT;POM M90-44,T1.25,NAT,PI5XH5.5,	
B268	AC66-30149A	BRAKE CAPSTAN-ASSY;POM,-,-,-,X5,-	

6-4 Housing Assembly



Loc. No	New Part No	Description and Specification	Remark
902	AC60-10051A	SCREW-TAPPING;BH,-,-,M3,L8,FZY	
914	AC60-10067A	SCREW-TAPTITE;PWH,+,-,M3,L8,MFZN2-C,SWCH1018	
H500	AC61-82014A	HOUSING-ASSY;-,X7FL26280A,230X130X60,-,X-7	
H510	AC61-10006A	CHASSIS- UPPER;SECC 20/20,-,T1.0,BLK,-,X5,-	
H520	AC61-20932A	HOLDER-CASSETTE ASSY;-,X5FL06080A,-,-,-,X-7	
H521	AC61-20922A	HOLDER-CASSETTE;-,SECC T1.2,-,NAT,-,(X-5/IS)	
H522	AC66-30018A	LEVER-LOCK R;SECC 20/20,T1.2,L44,W32,-,-	
H524	AC61-60121A	SPRING-LEVER LOCK;ES,SUS304 WPB,PI0.2,D2.6,L9.9(
H526	AC66-30019A	LEVER-KEY CASSETTE;LUCEL N109-LD,T2.5,L20,W15.2,-	
H530	62203-0105-00	CHASSIS-SIDE L(ASSY);ABS X5FL0505A X-5	
H531	AC61-10004A	CHASSIS- SIDE L;ABS HF-380,-,T10,BLK,-,X5,BLK	
H532	AC66-30004A	LEVER- LIGHT SHUTTER;LUCEL N109-LD,T2.5,L61.7,BLK,	
H533	AC61-60142A	SPRING- LIGHT;ES,SUS304WPB,PI0.2,L11.4(OD3.7	
H535	AC66-30017A	LEVER- DOOR;LUCELN109-LD,T5,L74.3,W21.1,-,	
H540	62203-0104-00	CHASSIS-SIDE R(ASSY);ABS X5FL0505A X-5	
H541	AC61-10003A	CHASSIS- SIDE R;ABS HF-380,-,T10,BLK,-,X5,BLK	
H542	AC66-80008A	SLIDER DAMPER;LUCEL N109-LD,T4,L87,-,-,-	
H543	AC61-60120A	SPRING-SLIDE DAMPER;ES,SUS 304WPB,PI0.4,D3.8,L25(O	
H544	AC66-30016A	LEVER- LID OPENER;LUCEL N109-LD,T5.0,L34.7,W16.6	
H545	AC61-60123A	SPRING-LID OPENER;TS,SWPB,PI0.55,D8.9,L15(OD10),	
H550	61403-0073-00	SHAFT-ARM(ASSY);SUM24L X5FL0405A X-5	

MEMO

Loc. No	New Part No	Description and Specification	Remark
REMOCON-ASSY			
	AC59-10329N	SV-A20XK/SV-200X	
	AC59-10329P	SV-A21XK/SV-201X	
	AC59-10329K	SV-A30XK/SV-203X	
	AC59-10329F	SV-A40XK/SV-205X	
	64043-0166-00	DOOR-BATTERY;ABS94HB T2 D/GRY NR-3346	
CT1	2401-001954	C-AL;4.7UF,20%,50V,GP,BK,5X11MM,5	SME LOCAL
CT2	2203-000239	C-CERAMIC,CHIP;100PF,5%,50V,NPO,TP,2012,-	SME LOCAL
CT3	2203-000239	C-CERAMIC,CHIP;100PF,5%,50V,NPO,TP,2012,-	SME LOCAL
ICT1	AC09-12014C	IC-MCU;KS51810-76,QFP,V-PAL	SME LOCAL
LDT1	A4150-0168	LED-INFRARED;SI5312-H NTR 940NM/1.4V	SME LOCAL
QT1	0501-000534	TR-SMALL SIGNAL;2SC2412K,NPN,200MW,SOT-23,TP,1	SME LOCAL
RT1	2007-000483	R-CHIP;10OHM,5%,1/10W,DA,TP,2012	SME LOCAL
XT01	64539-102-311	CERAMIC RESONATOR;CSB455EBL/KBR455BKTL	

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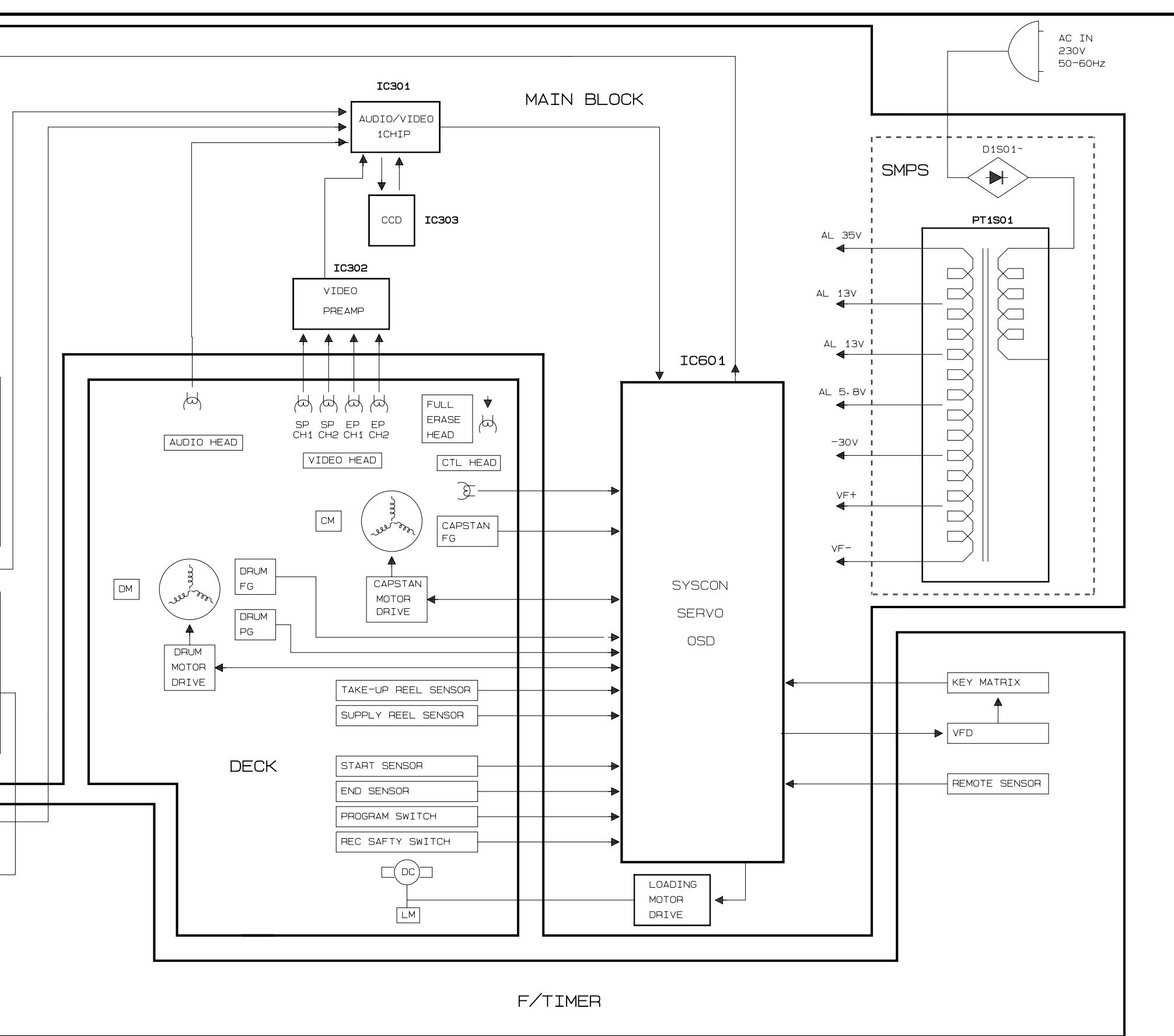
Diagrams

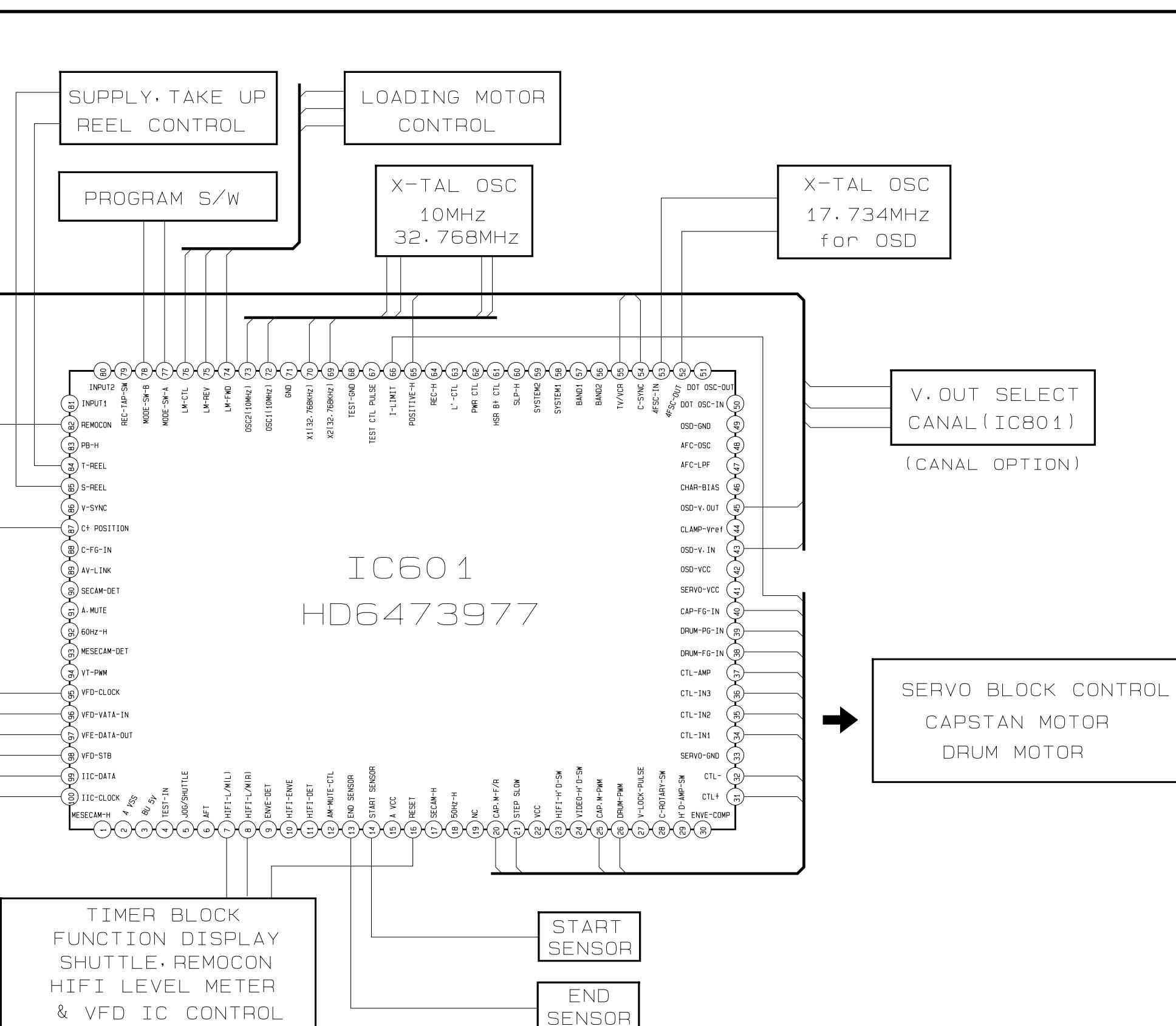
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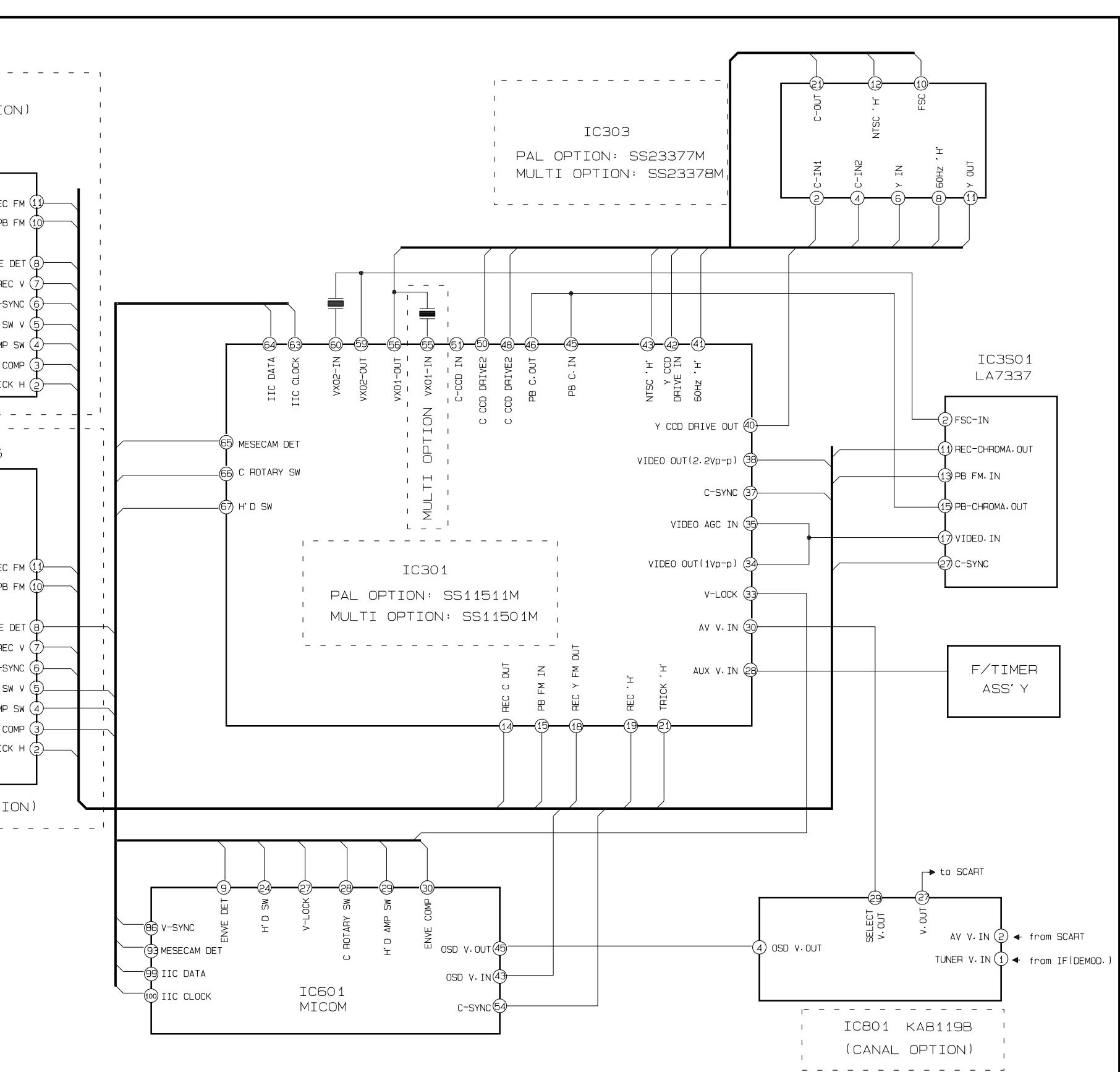
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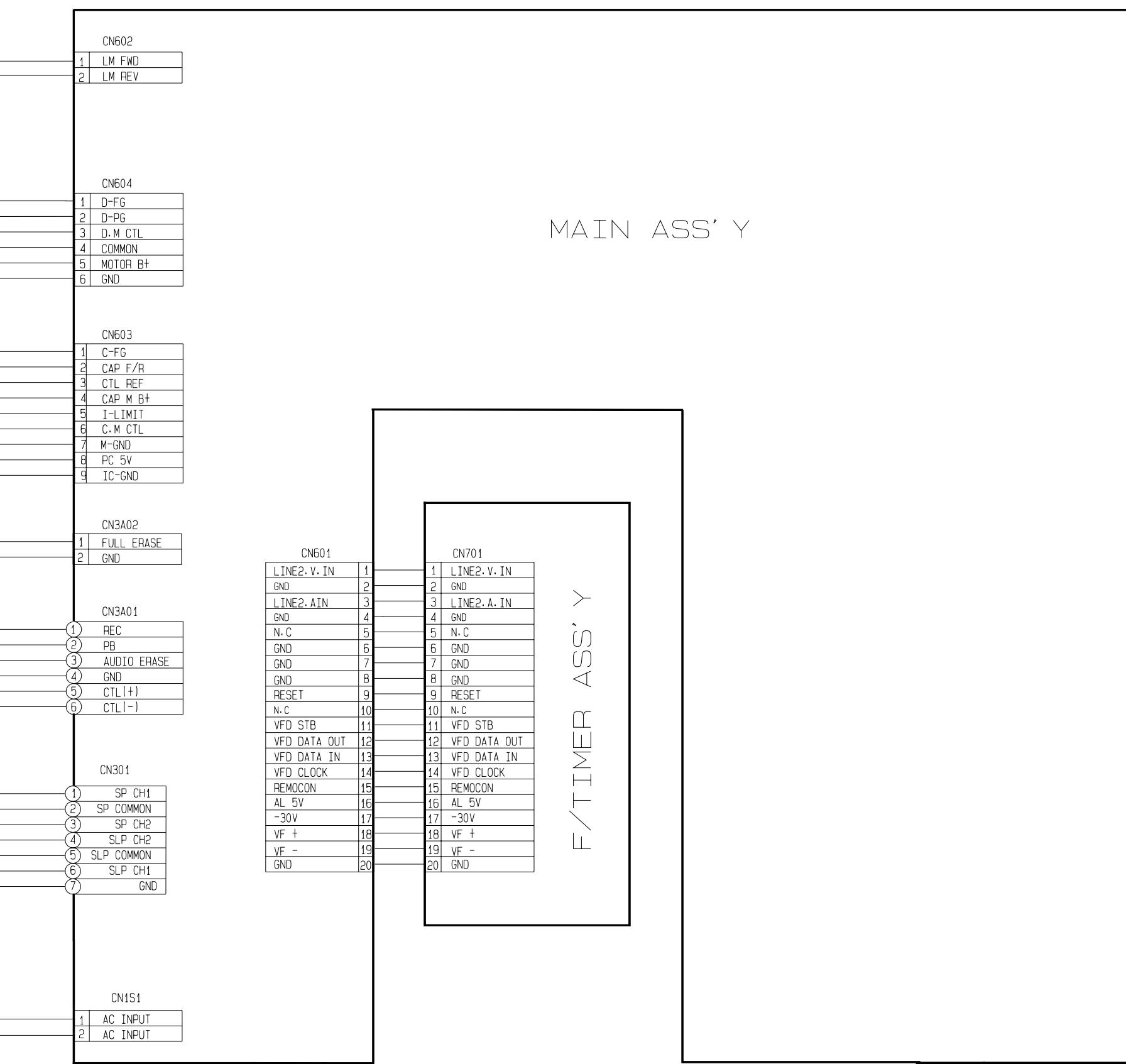
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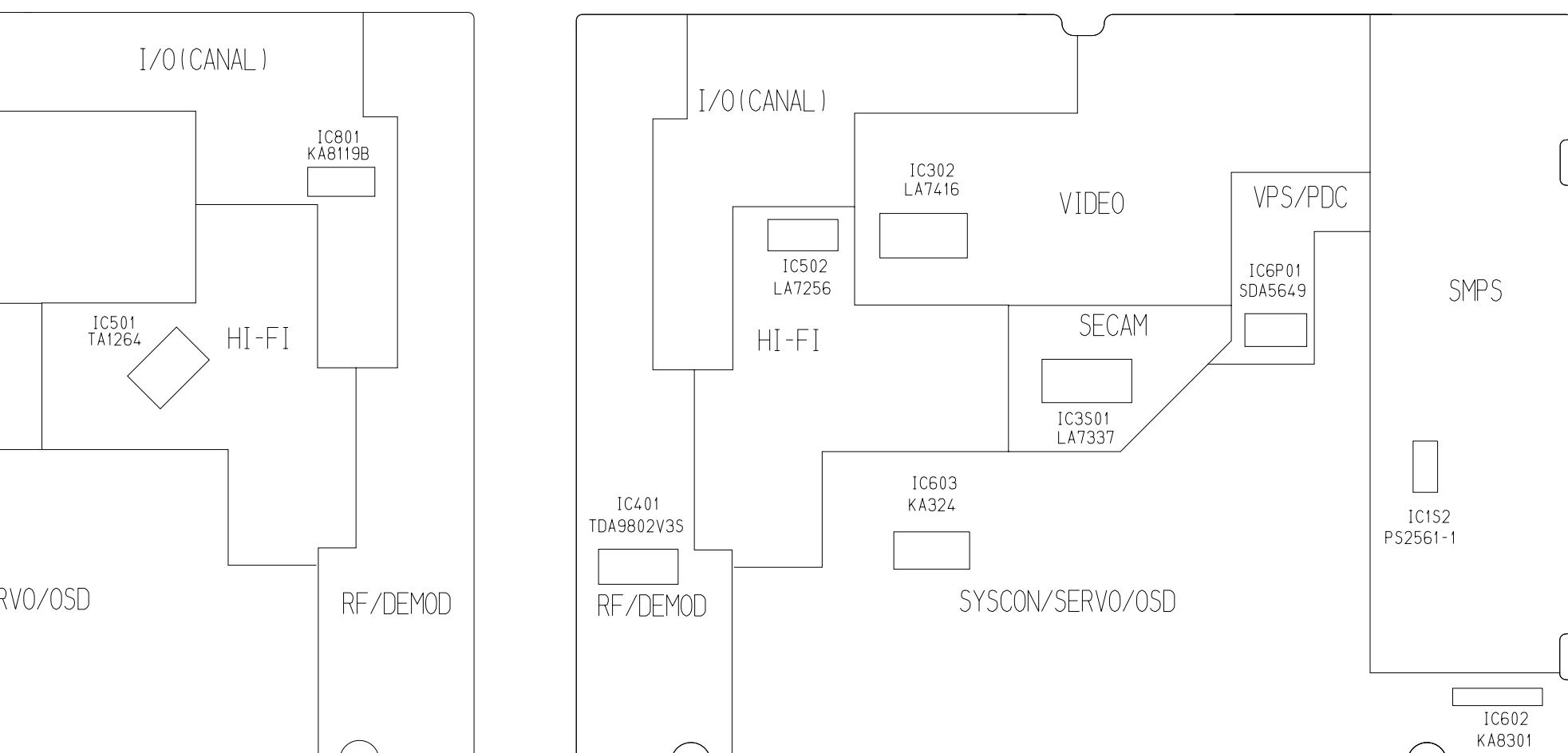
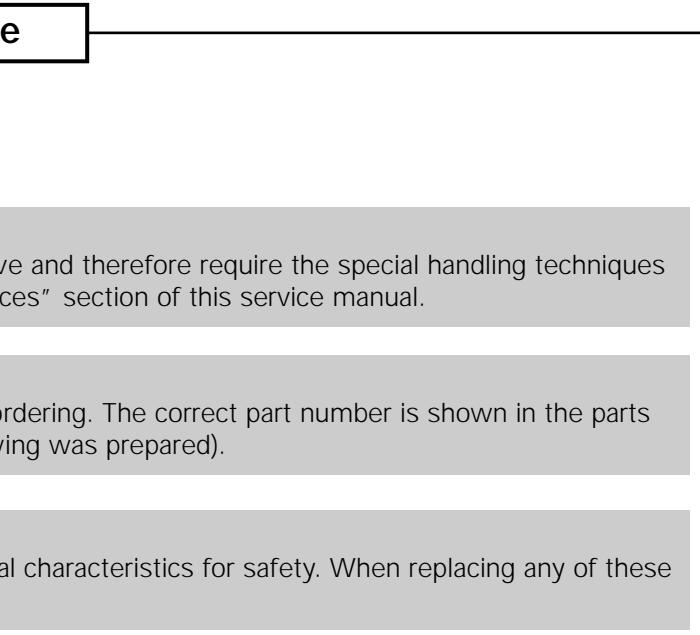






c Diagrams

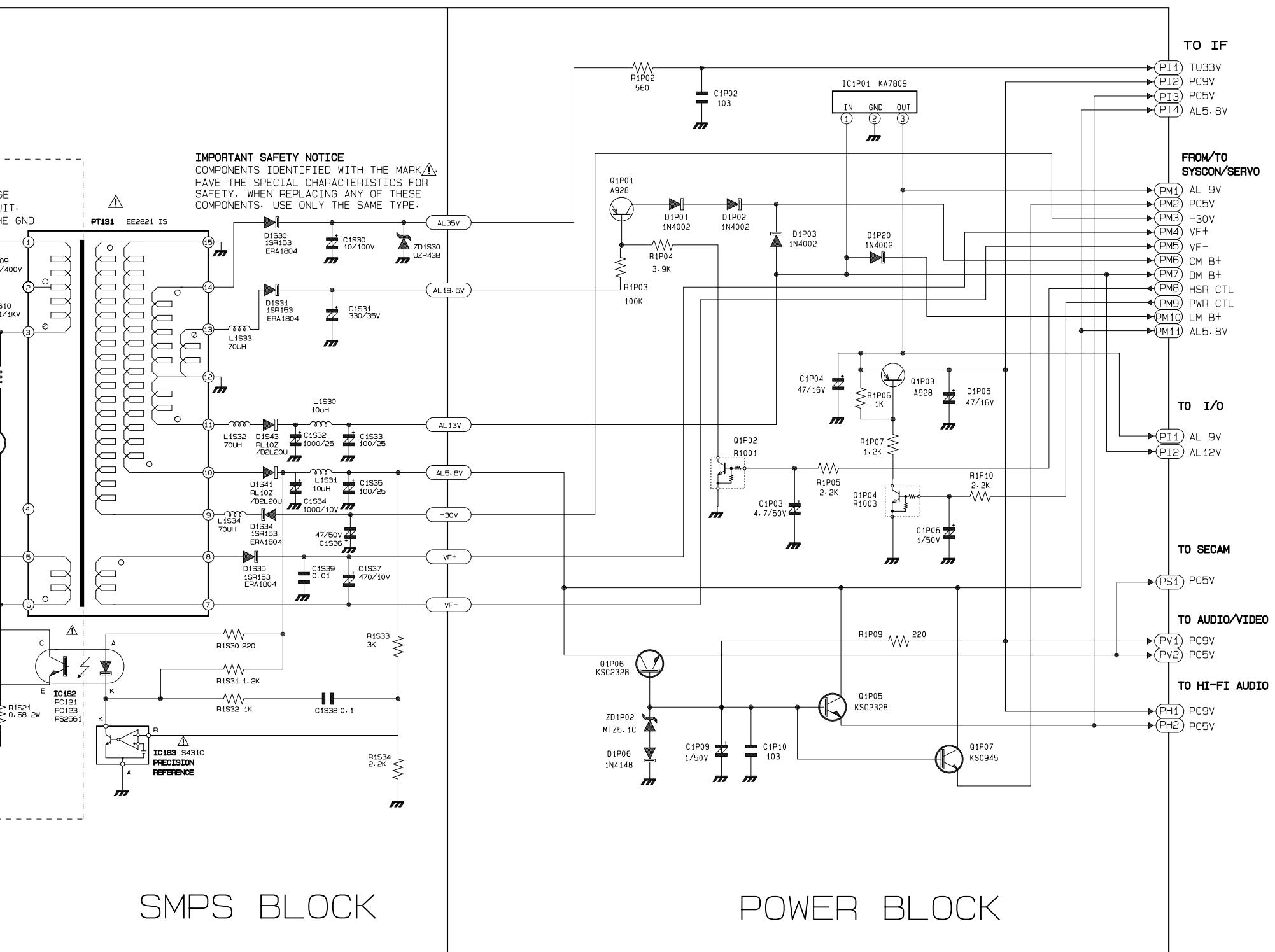
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-----	11-10
/A30XK/SV-200X/201X/203X) -----	11-11
5X) -----	11-12
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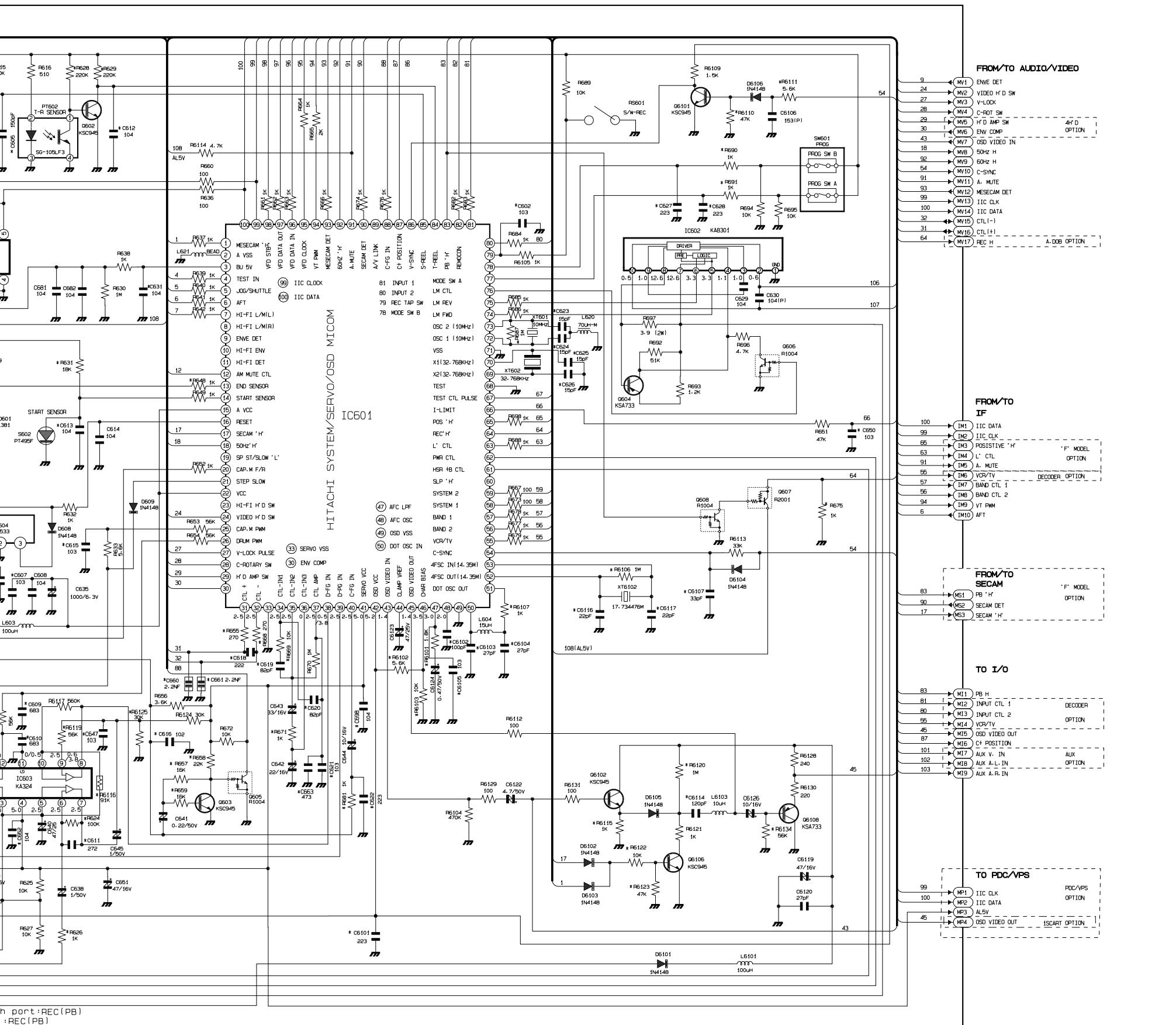


nt Side)

(Conductor Side)

Schematic Diagrams



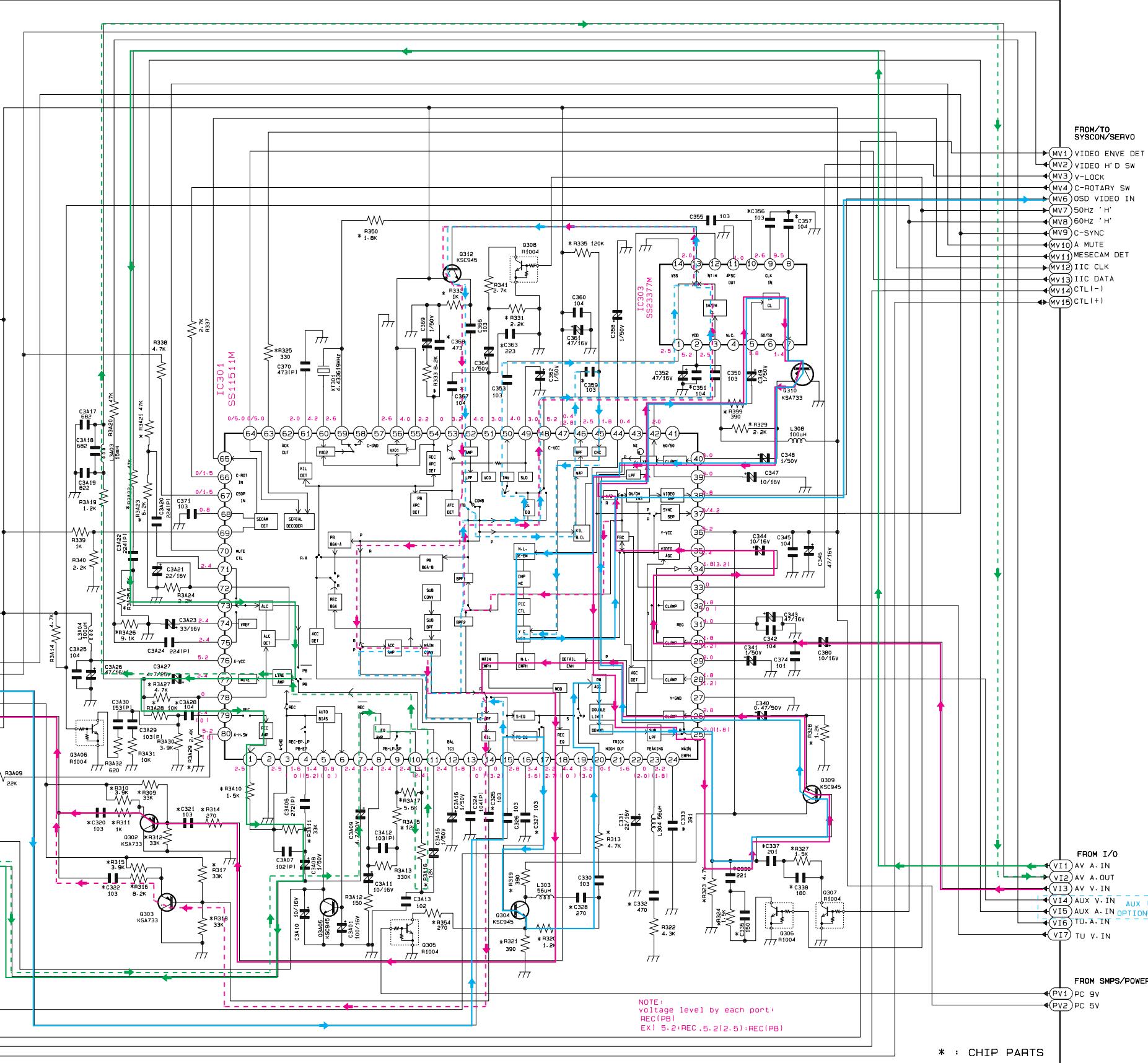


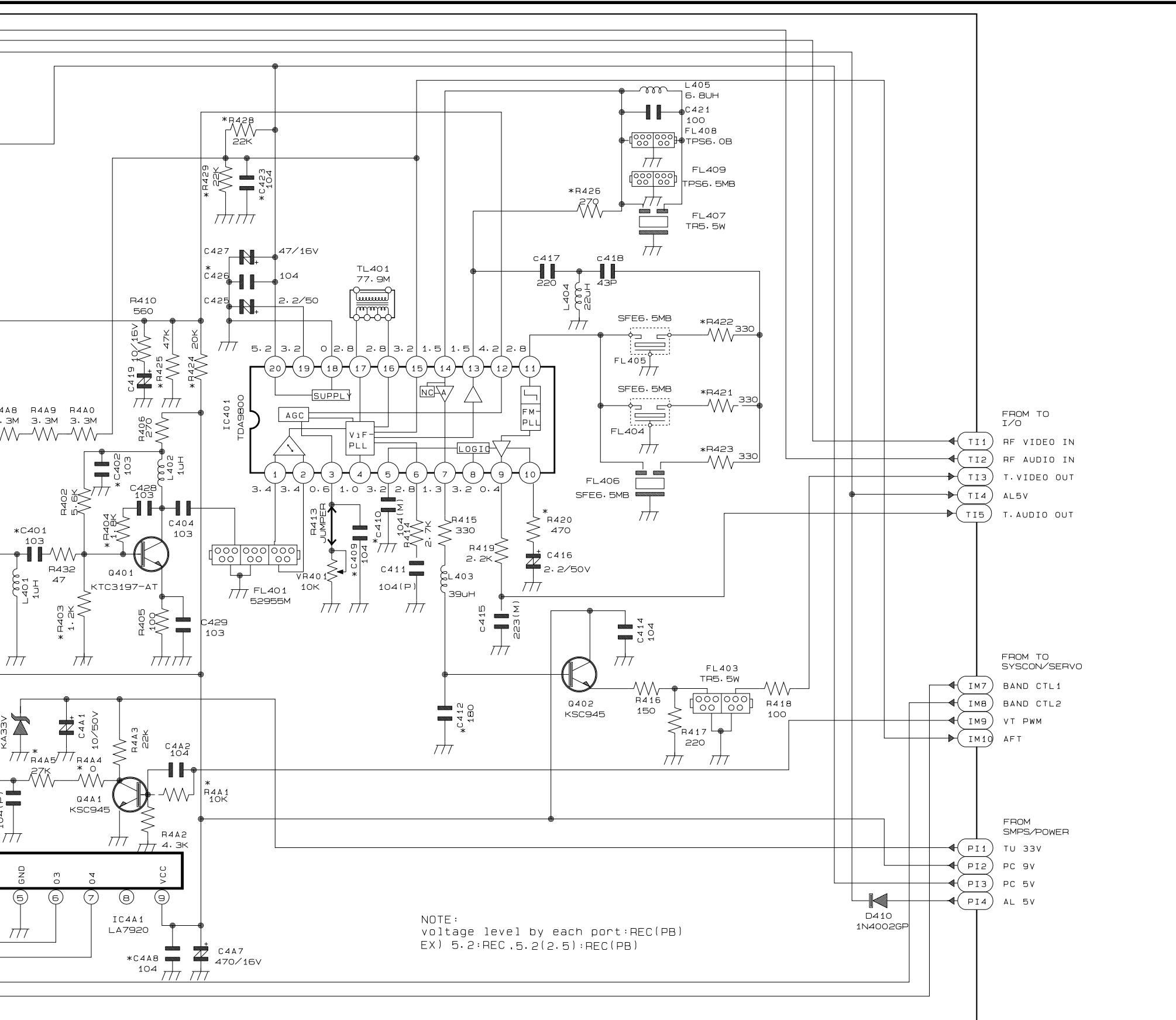
Schematic Diagrams

— REC Y PROCESS
--- REC C PROCESS

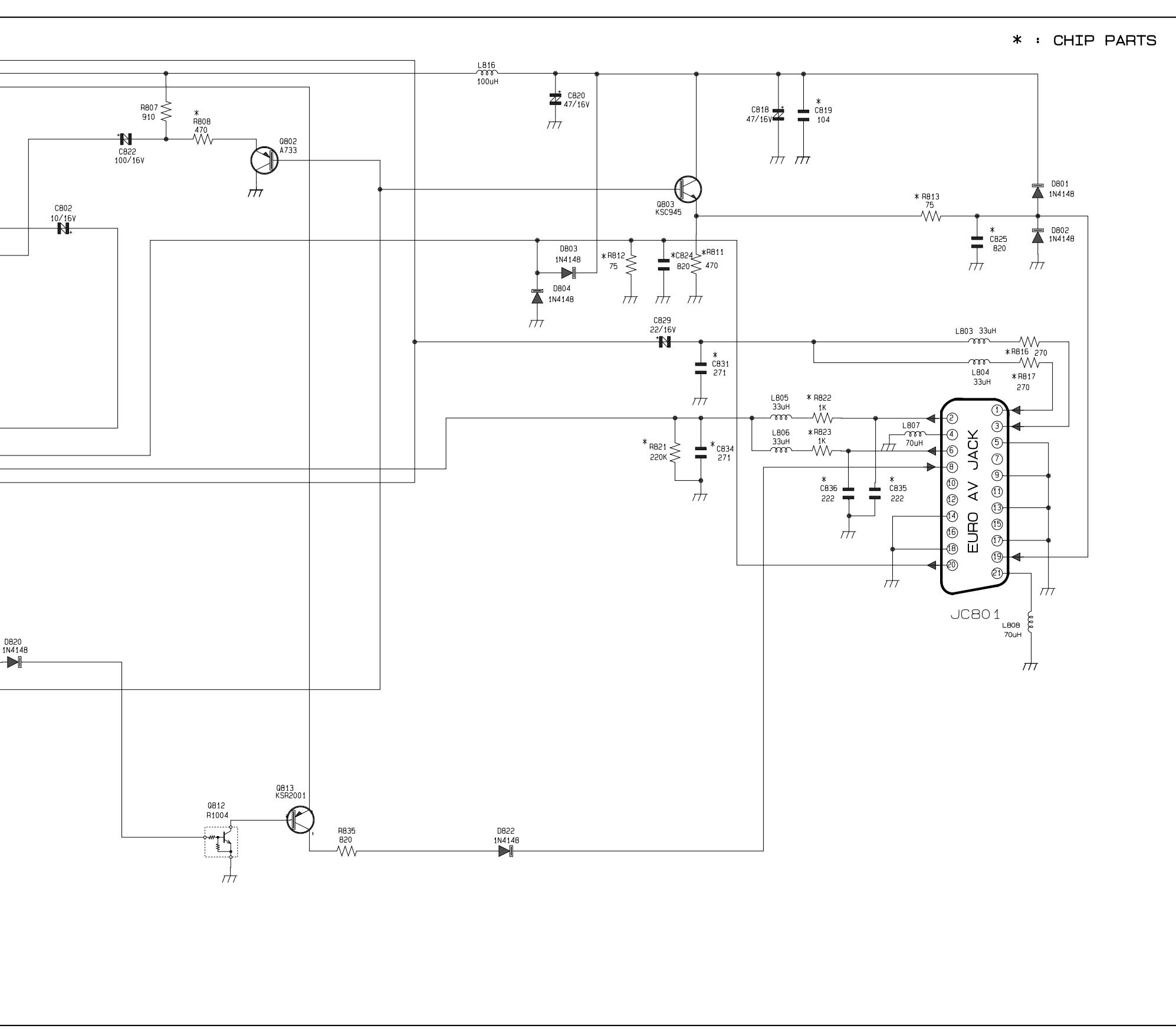
— PB Y PROCESS
--- PB C PROCESS

— REC LINEAR AUDIO
--- PB LINEAR AUDIO

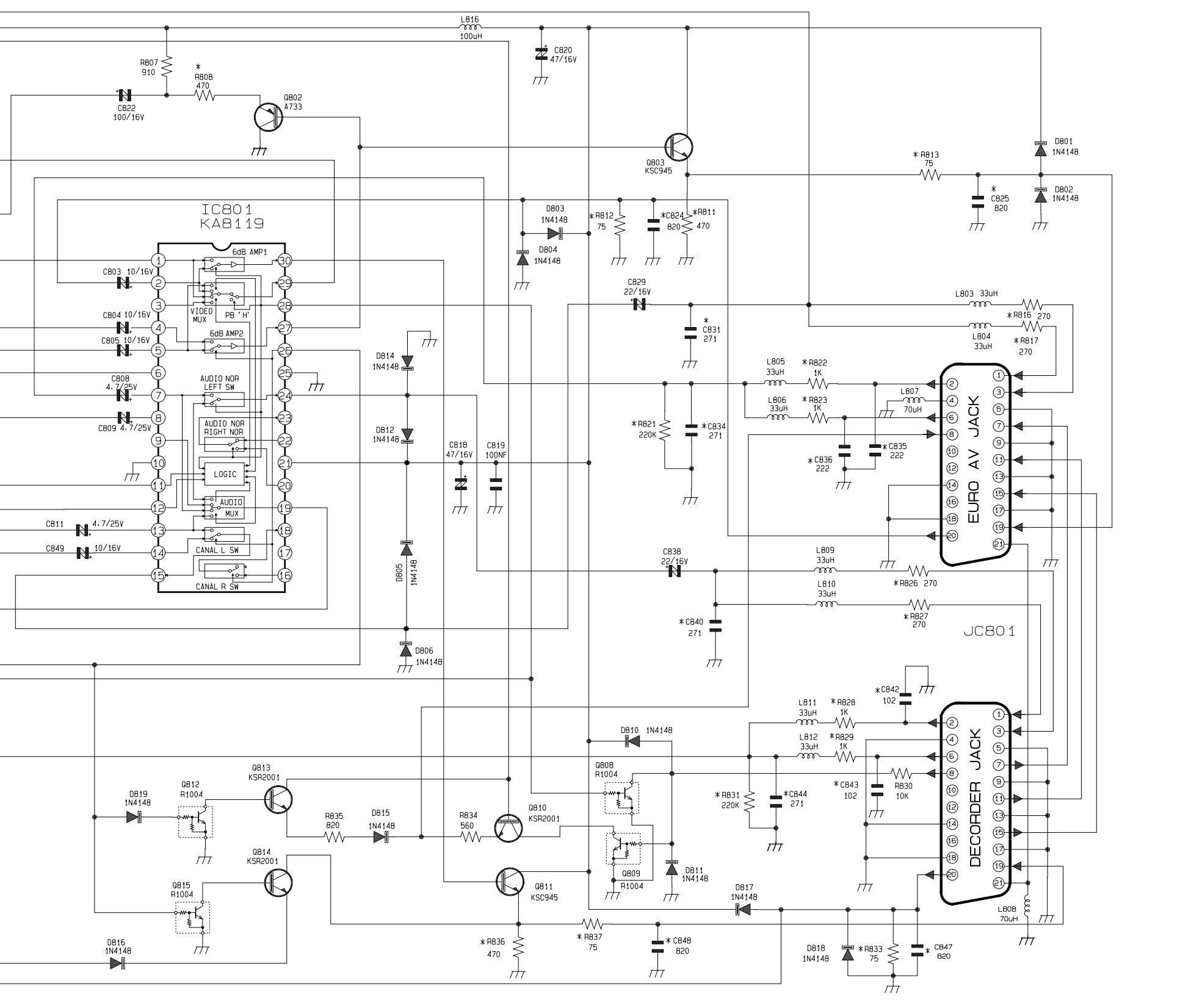


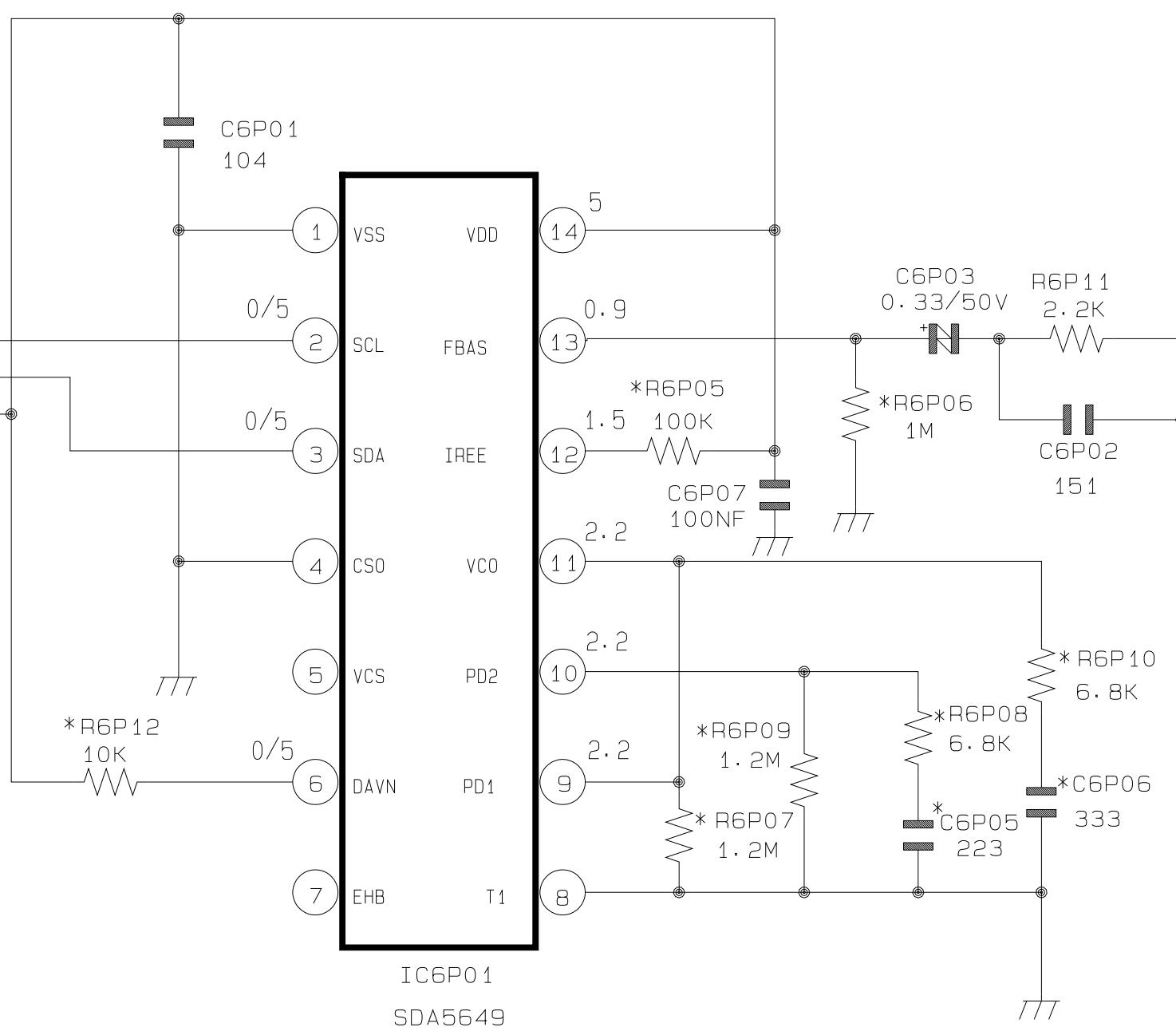


Schematic Diagrams



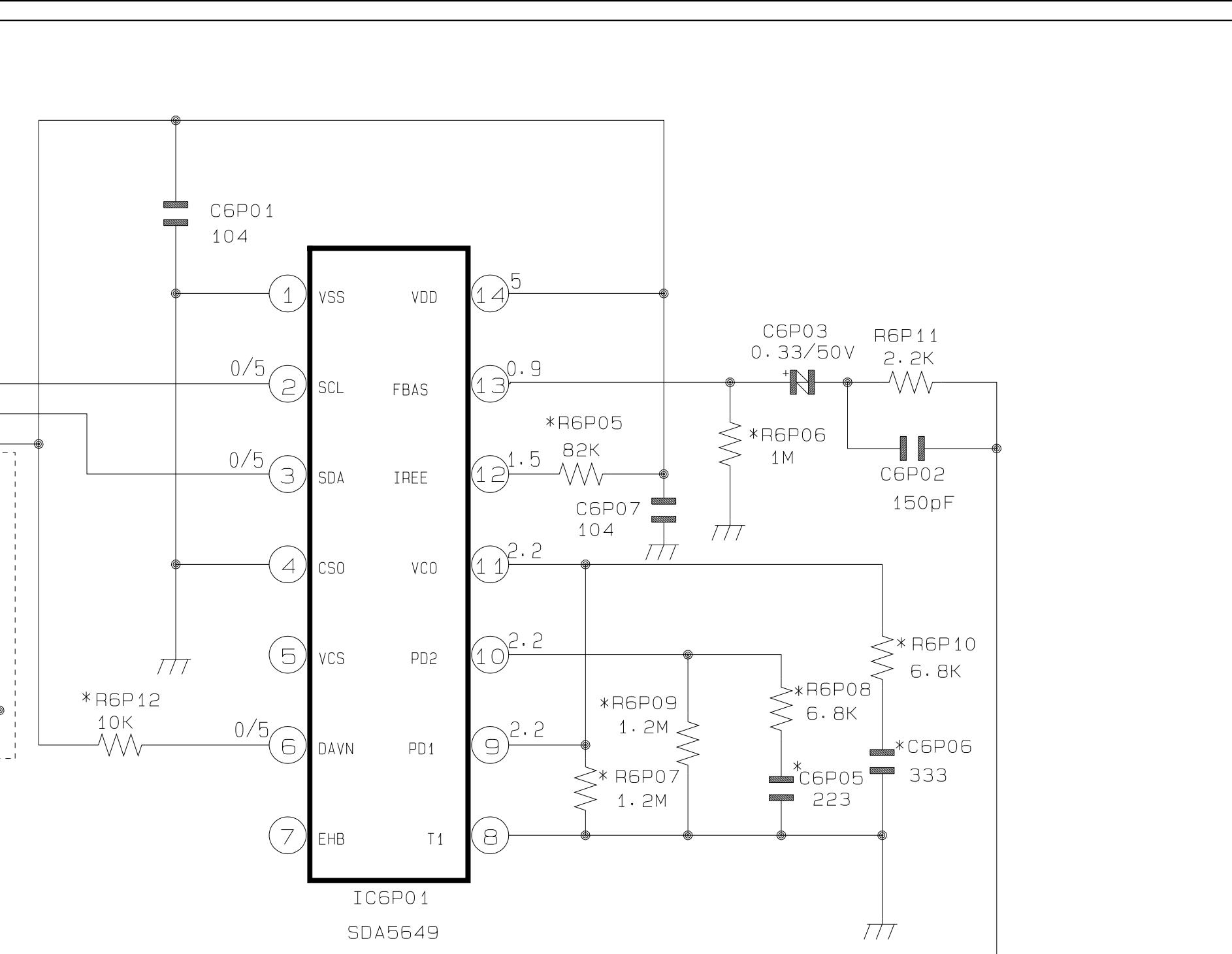
* : CHIP PARTS





age level by each port:REC(PB)
5.2:REC,5.2(2.5):REC(PB)

* : CHIP PARTS

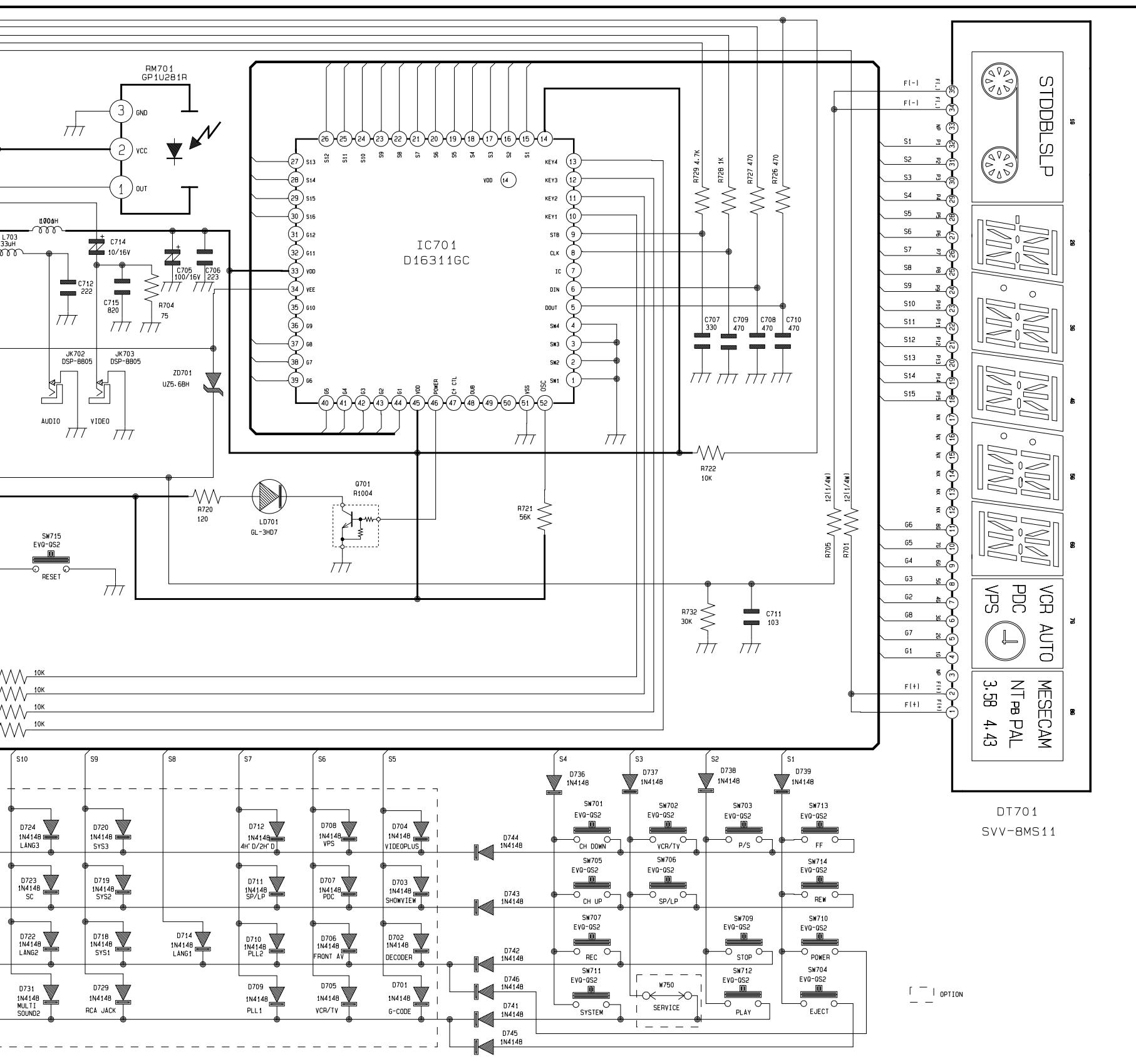


age level by each port :REC(PB)
5.2:REC, 5.2(2.5):REC(PB)

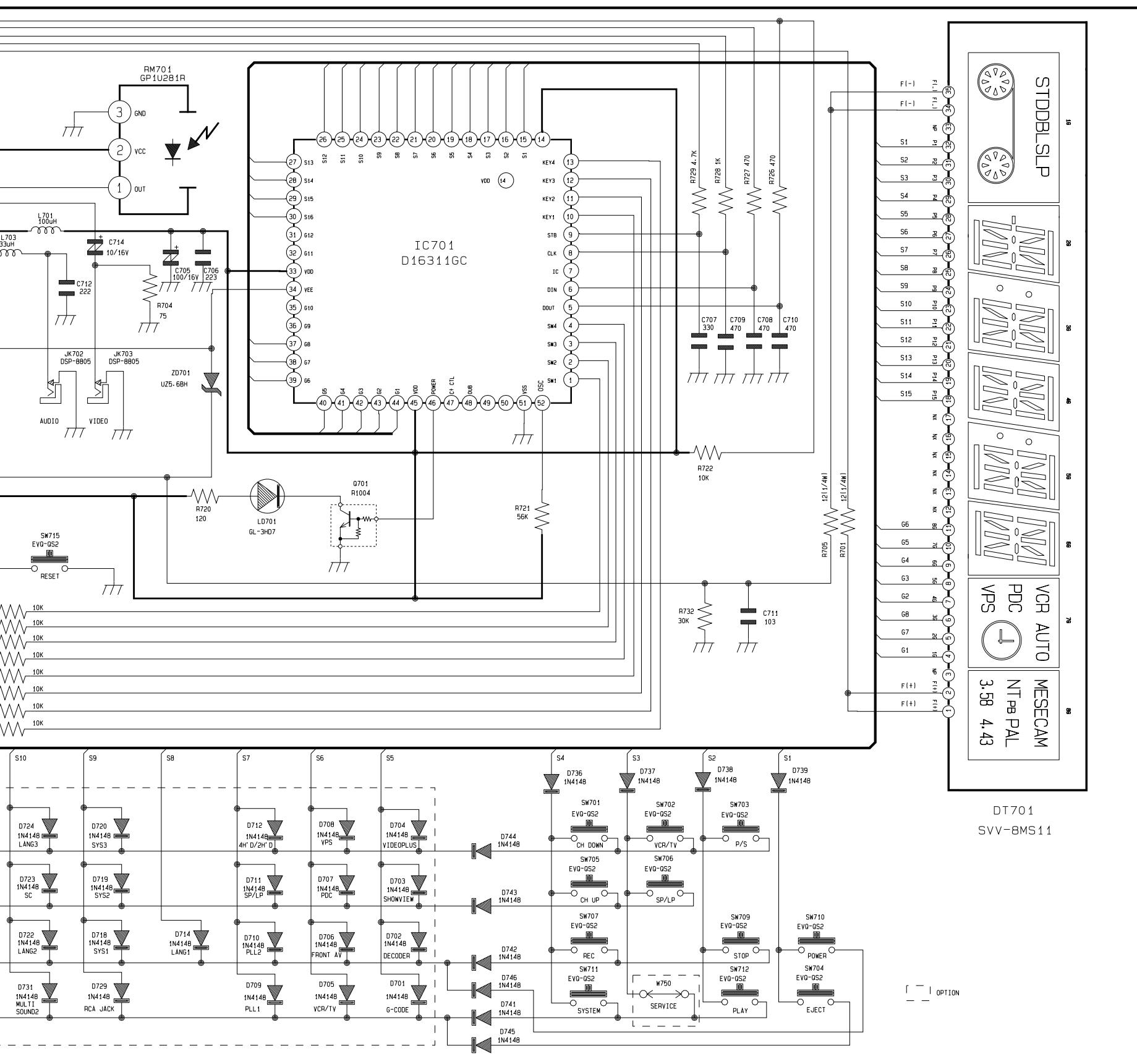
* : CHIP PARTS

Schematic Diagrams

(K/A30XK/SV-200X/201X/203X)



205X



Schematic Diagrams

