



VIDEO CASSETTE PLAYER

SV-A10G/SP-A10G

SV-A11G/SP-A11G

SVR-17A/SPR-17A

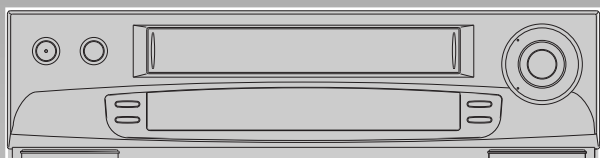
SVR-17B/SPR-17B



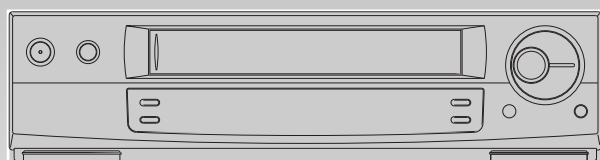
SERVICE Manual

For mechanical disassembly and adjustment, refer to the "Mechanical Manual" (DX7-R/DX-7RC, DX8-R/DX-8RC → AC68-20316A).

VIDEO CASSETTE PLAYER



SV-A10G/SP-A10G
SVR-17A/SPR-17A



SV-A11G/SP-A11G
SVR-17B/SPR-17B

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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) :
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 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.

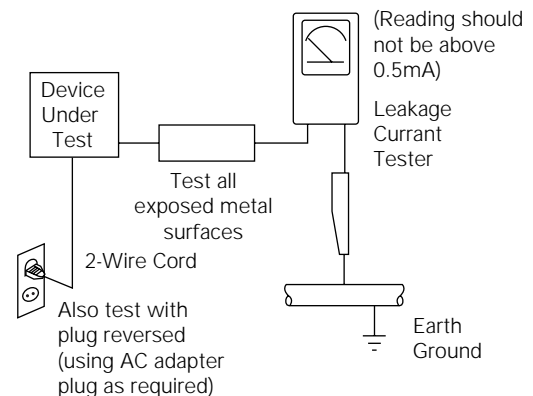




Fig. 1-1 AC Leakage Test

7. Antenna Cold Check :
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.
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. The following techniques will reduce the occurrence of component damage caused by static electricity.
10. Immediately before handling sny 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

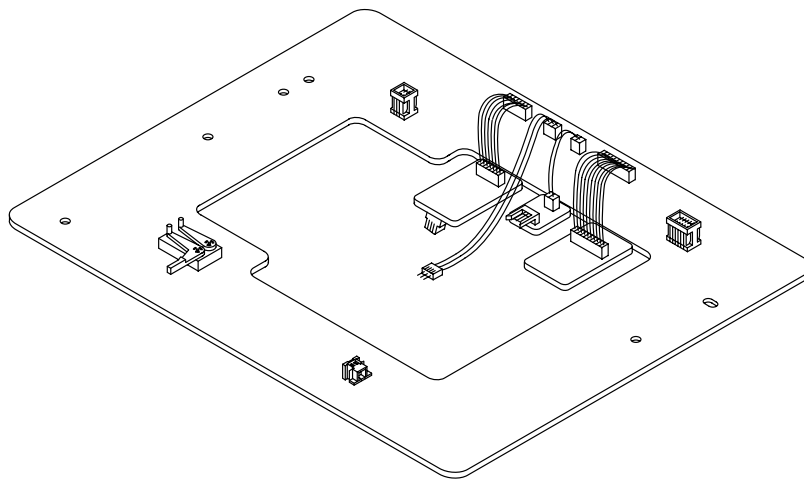
2-1-1 Servicing guide

1. For this VCP 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, plug the power cord to outlet with pressing SW711 on the function 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 : Accurate repair may not be possible due to external noise between the deck ass'y and main PCB.

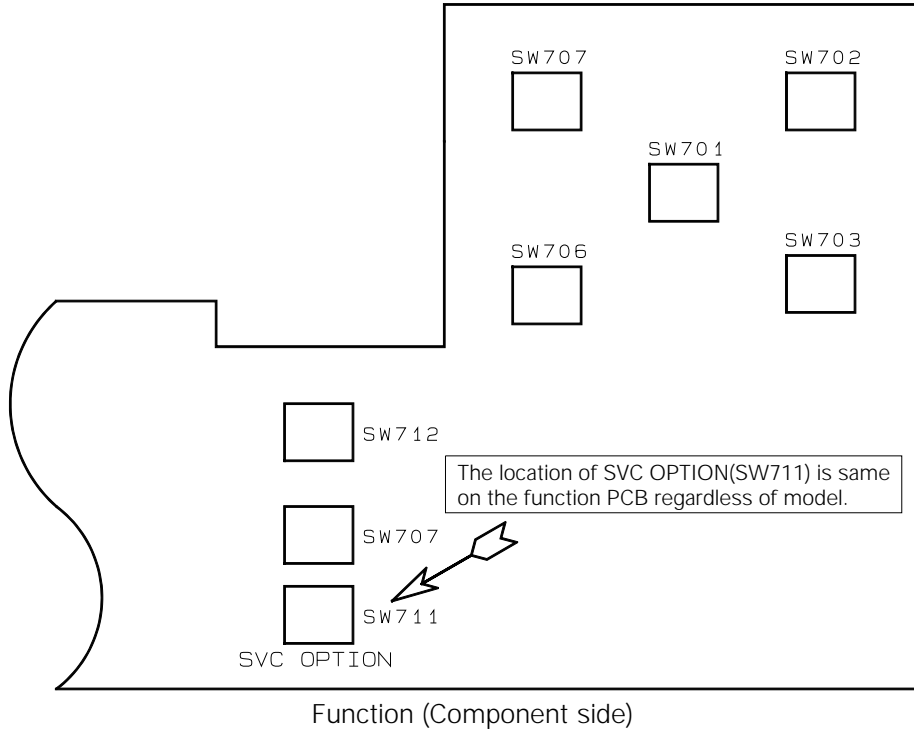
2-1-2 Servicing Jig

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

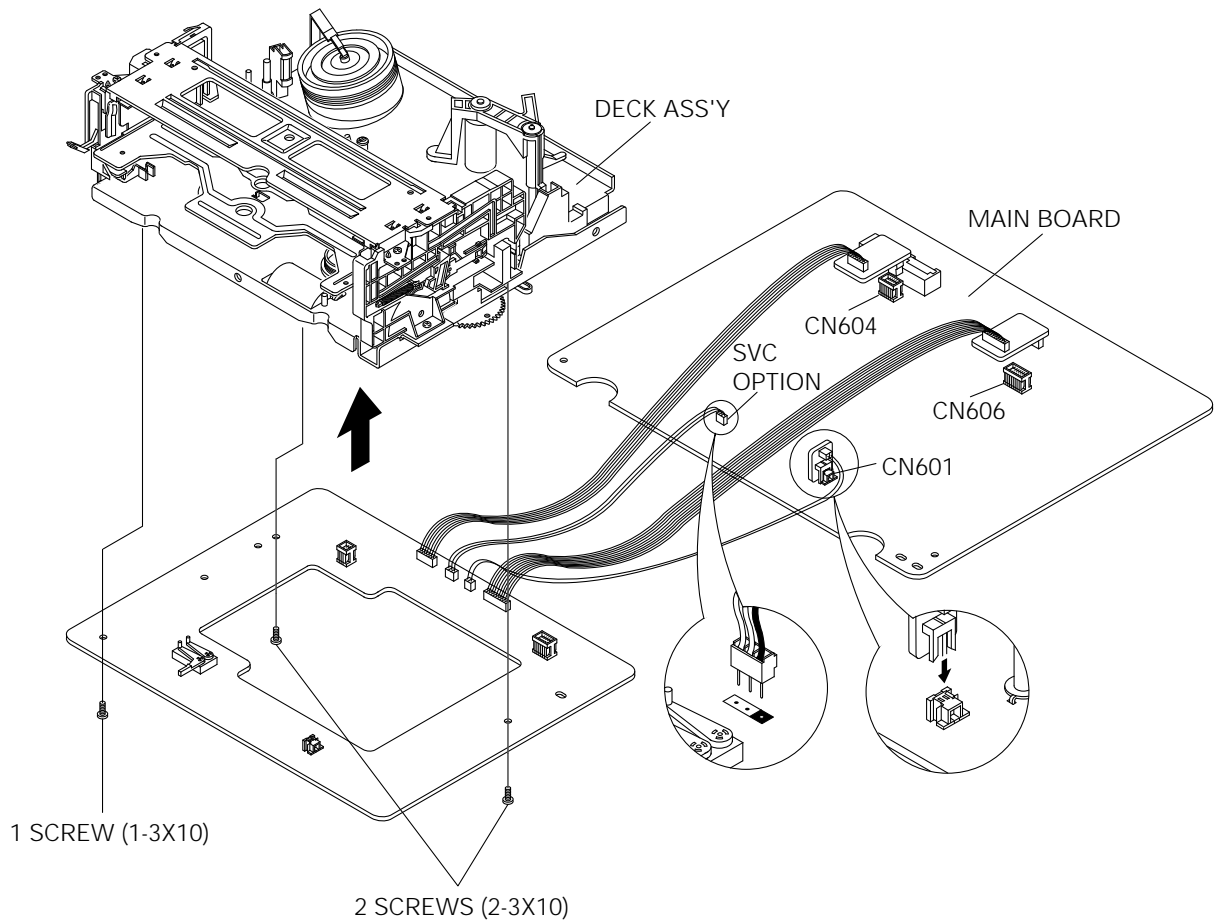
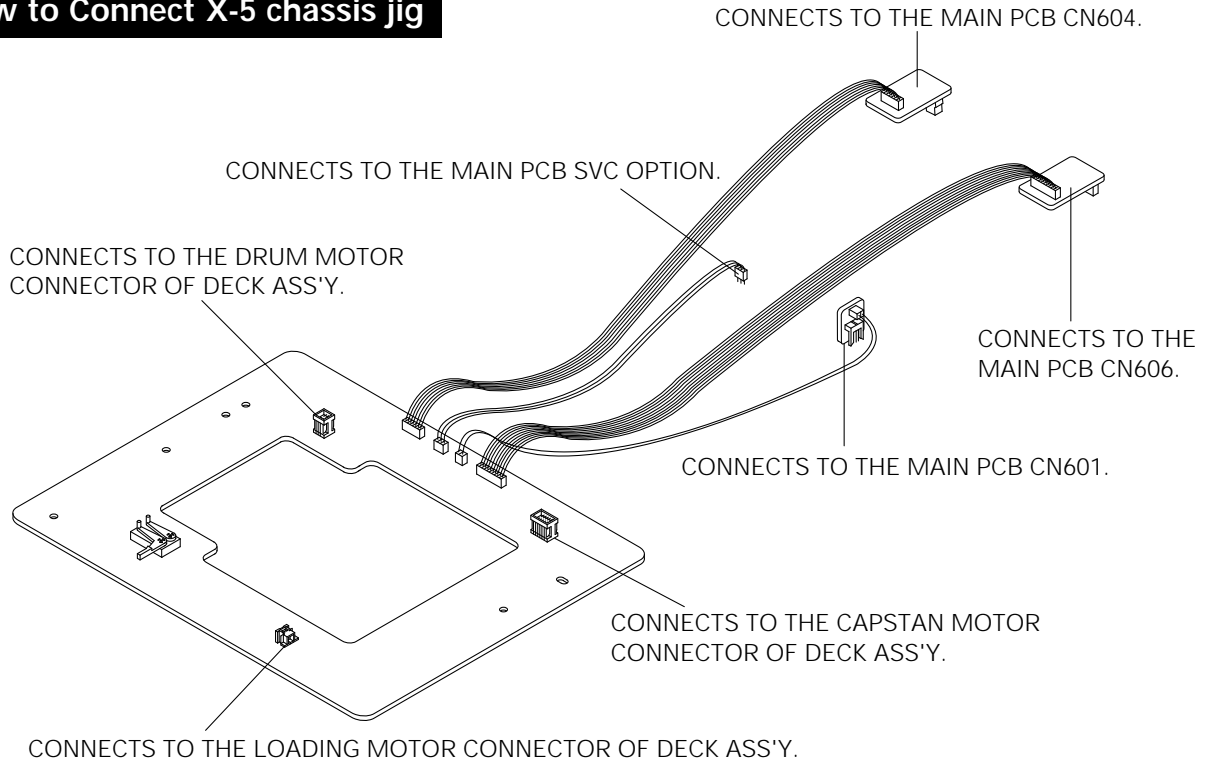
1. Unplug the power cord from AC outlet.
2. Remove the deck ass'y from main PCB (See Page 4-4 of service manual).
3. To emulate the function of the sensors, plug the power cord to outlet with pressing SW711 on the function PCB (See diagram below).



Note : After completing repairs, unplug and plug the power cord in order to reset.

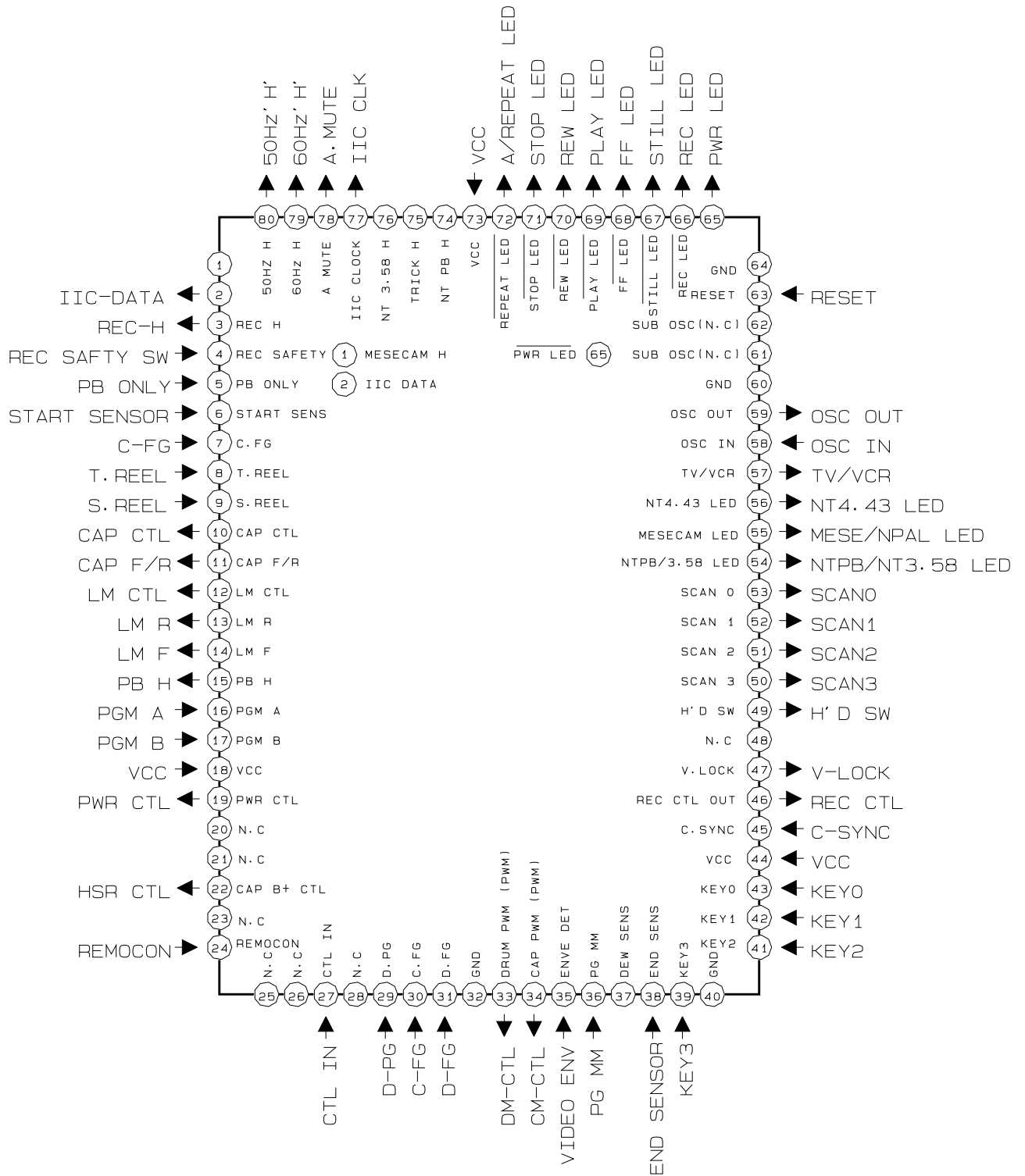
4. Insert wafers of drum motor, capstan motor and loading motor on X-5 chassis jig into each of the connectors of deck ass'y, and then secure with three screws.
5. Solder the 3 leads of the jig cable to "SERVICE OPTION" on the main PCB.
6. Apply power to the function PCB.
7. Insert a test tape into the housing ass'y.
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.

How to Connect X-5 chassis jig

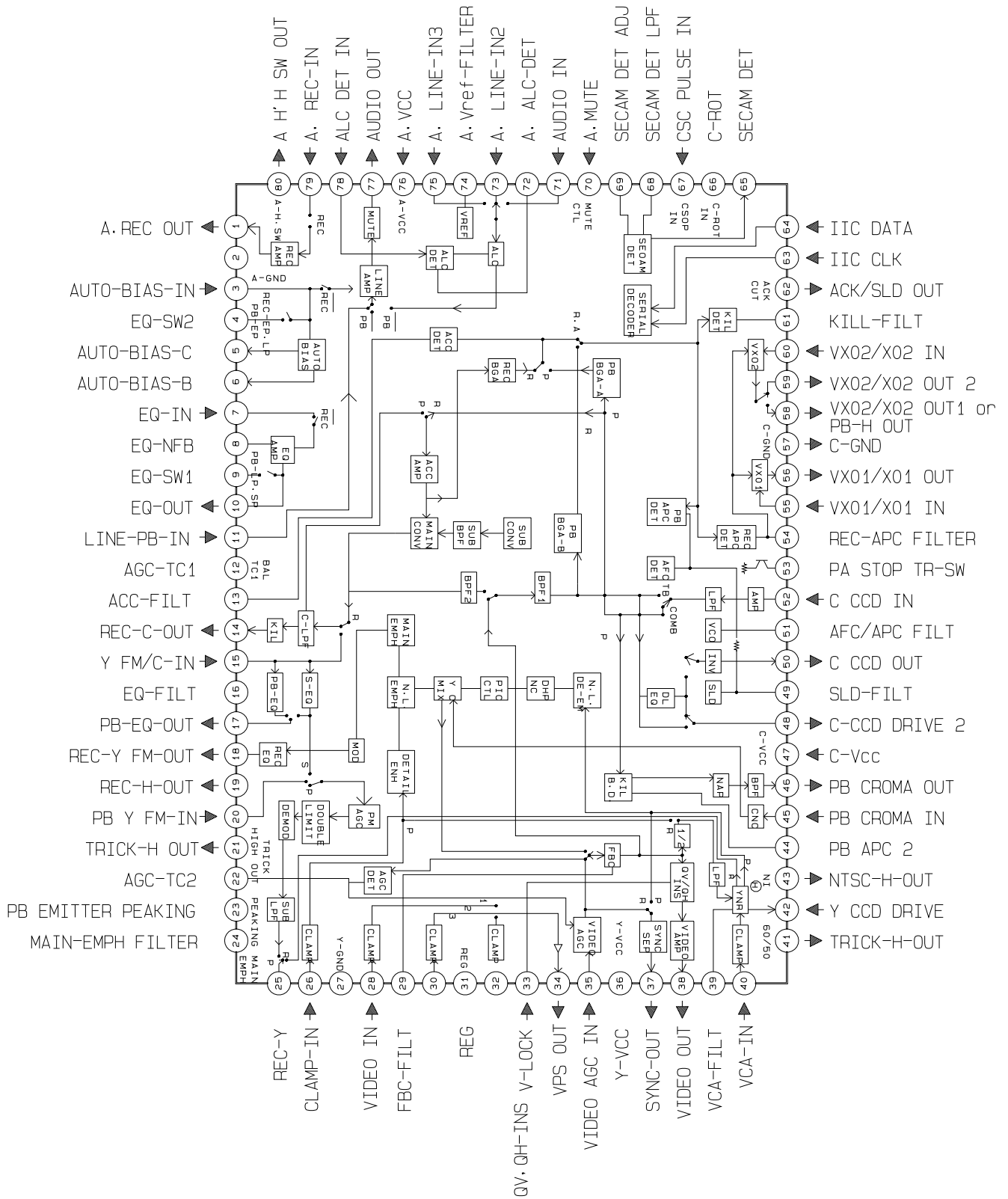


2-2 IC Blocks

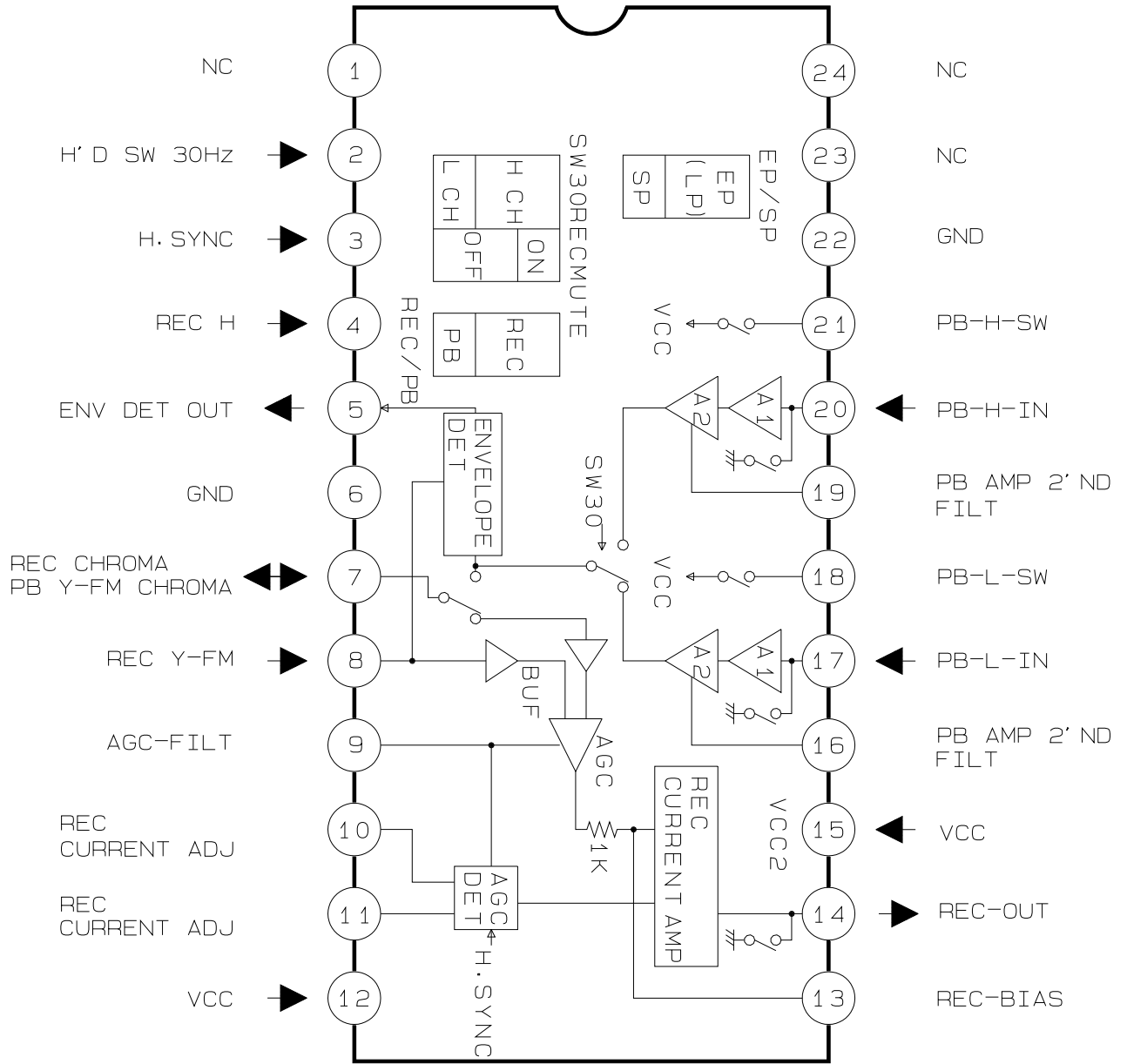
2-2-1 IC601 (KS88C8016)



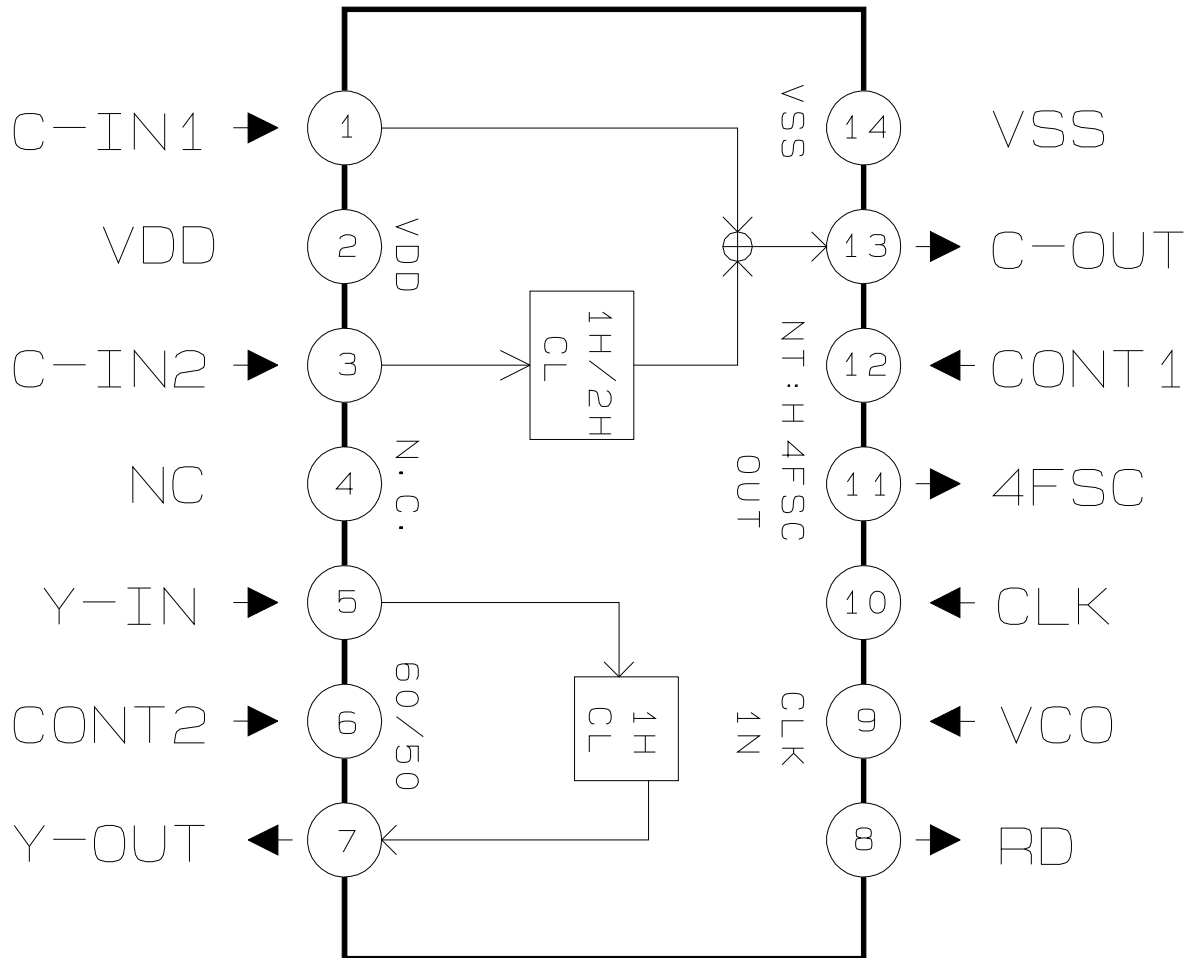
2-2-2 IC301 (SS11501M)



2-2-3 IC302 (LA7411)



2-2-4 IC303 (SS23378M)



MEMO

3. Product Specifications and Comparison Chart

3-1 Product Specifications

Design and specifications are subject to change without notice.

Operation	Description
Format	VHS PAL standard
Video Recording System	2 Rotary Heads, Helical Scanning System Luminance : FM azimuth recording Color : Down converted subcarrier phase shifted
Television System	CCIR Standard G, K
Color System	PAL, MESECAM, NT 4.43, NT PB (NT 3.58 REC)
Tape Width	12.65 mm (1/2 inch)
Tape Speed	SP : (PAL) 23.39 mm/sec, (NTSC) 33.35 mm/sec
Record/Playback Time	SP : 4 hours (E-240 Tape)
F.F/REW Time	100 sec ~ 4 min with E-180
Heads	Video : 2 Rotary Heads Audio/Control : 1 stationary head Erase : 1 full track erase head
VIDEO	
Input Output Signal-to-Noise Ratio Horizontal Resolution	0.5 to 2.0 Vp-p : 75 ohm unbalanced 1.0 Vp-p : 75 ohm unbalanced Better than 43 dB (SP) More than 240 lines (SP)
Audio	
Input Output Signal-to-Noise Ratio Frequency Response	Line : -8 dBm, 47 Kohm unbalanced Line : -8 ± 3 dBm, 1.5 Kohm unbalanced More than 39dB 100Hz ~ 8KHz(SP)
Output Channel	Channels 30 ~ 39 (preset CH 36)
Power Requirement	AC 100 ~ 240V 50/60Hz, DC 12V (CAR BATTERY ONLY)
Power Consumption	Approx. 17 watts
Operation Temperature	41°F-104°F (5°C-40°C)
Operation Humidity	10%-75%
Weight	4.0 Kg
Dimensions (W x H x D)	360 x 92 x 309 mm

3-2 Comparison Chart

FUNCTION MODEL	LINE RECORD	REMARK
SV-A10G	O	
SV-A11G	O	
SP-A10G	X	
SP-A11G	X	
SVR-17A	O	
SVR-17B	O	
SPR-17A	X	
SPR-17B	X	