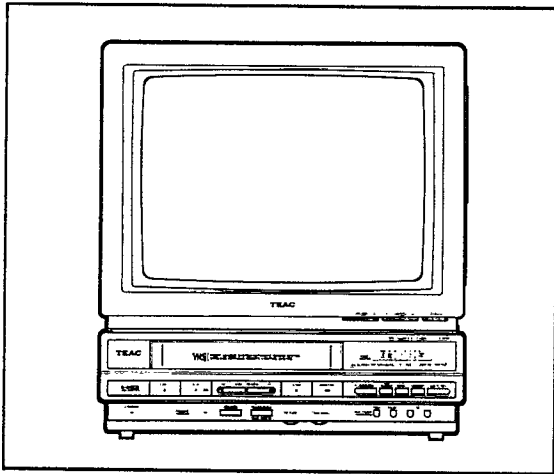


# TEAC®



**VHS**  
PAL

# MV-1440TV

**HQ**

**COLOR TV/VCR COMBINATION**

**HQ**

Video cassette recorders bearing the "HQ" mark incorporate VHS high quality technology. Note that there is interchangeability with former VHS video cassette recorder.

# SERVICE MANUAL

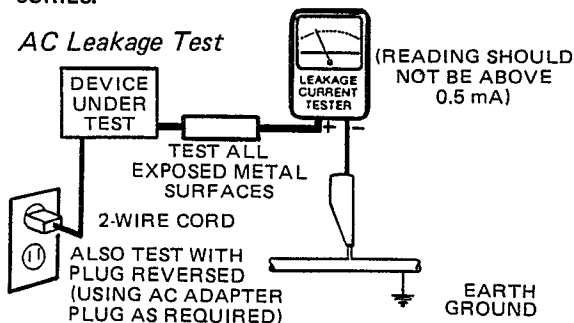
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# SAFETY PRECAUTIONS

1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including, but not limited to, the following items:

- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**
- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.
- c. **Antenna Cold Check** — With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.
- d. **Leakage Current Hot Check** — With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (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) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test. **ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.**



- e. **X-Radiation and High Voltage Limits** — Because the picture tube is the primary potential source of X-radiation in solid-state TV receivers, it is specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as the original. Also, because the picture tube shields and mounting hardware perform an X-radiation protection function, they must be correctly in place. High voltage must be measured each time servicing is performed that involves B+, horizontal deflection or high


voltage. Correct operation of the X-radiation protection circuits also must be reconfirmed each time they are serviced. (X-radiation protection circuits also may be called "horizontal disable" or "hold-down.") Read and apply the high voltage limits and, if the chassis is so equipped, the X-radiation protection circuit specifications given on instrument labels and in the *Product Safety & X-radiation Warning* note on the service data chassis schematic.

High voltage is maintained within specified limits by close-tolerance safety-related components/adjustments in the high-voltage circuit. If high voltage exceeds specified limits, check each component specified on the chassis schematic and take corrective action.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.
3. **Design Alteration Warning** — Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or property damage resulting therefrom.
4. **Picture Tube Implosion Protection Warning** — The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safety away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; because of potential hazard, do not try to remove such "permanently attached" yokes from the picture tube.
5. **Hot Chassis Warning** — a. Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safety serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the *ground* side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground. b. Some TV receiver chassis normally have 85V AC (RMS) between chassis and earth ground regardless of the AC plug polarity. These chassis can be safety serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.
6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges. b. near thermally hot parts — be sure that leads and components do not touch thermally hot parts, c. the AC supply, d. high voltage, and e. antenna wiring. Always inspect in all areas for pinched, out-of-place, or trayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.
7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
8. **PRODUCT SAFETY NOTICE** — Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by *shading* on schematics and by a (\*) in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. Products Safety is under review continuously and new instructions are issued whenever appropriate.

Prior to shipment from the factory, our products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

### ● Precautions during Servicing

1. Parts identified by the  symbol are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.  
Examples: RF converters, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
  - 1) Wires covered with PVC tubing
  - 2) Double insulated wires
  - 3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
  - 1) Insulation Tape
  - 2) PVC tubing
  - 3) Spacers
  - 4) Insulators for transistors.
5. When replacing AC primary side components (transformers, power cords, etc.), wrap ends of wires securely about the terminals before soldering.
6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.
9. Also check areas surrounding repaired locations.
10. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.
11. Crimp type wire connector  
When replacing the power transformer, in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, in order to prevent safety hazards, perform carefully and precisely the following steps.  
Replacement procedure
  - 1) Remove the old connector by cutting the wires at a point close to the connector.  
Important: Do not re-use a connector (discard it).
  - 2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
  - 3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
  - 4) Use the crimping tool to crimp the metal sleeve at the center position.  
Be sure to crimp fully to the complete closure of the tool.
12. When connecting or disconnecting the VCR connectors at first disconnect the AC plug from AC supply socket.

### ● Safety Check after Servicing

1. **Insulation resistance test**  
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, video and audio output terminals, etc.).
2. **Dielectric strength test**  
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio output terminals, etc.).
3. **Clearance distance**  
When replacing primary circuit components, confirm specified clearance distance.
4. **Leakage current test**

## SPECIFICATIONS

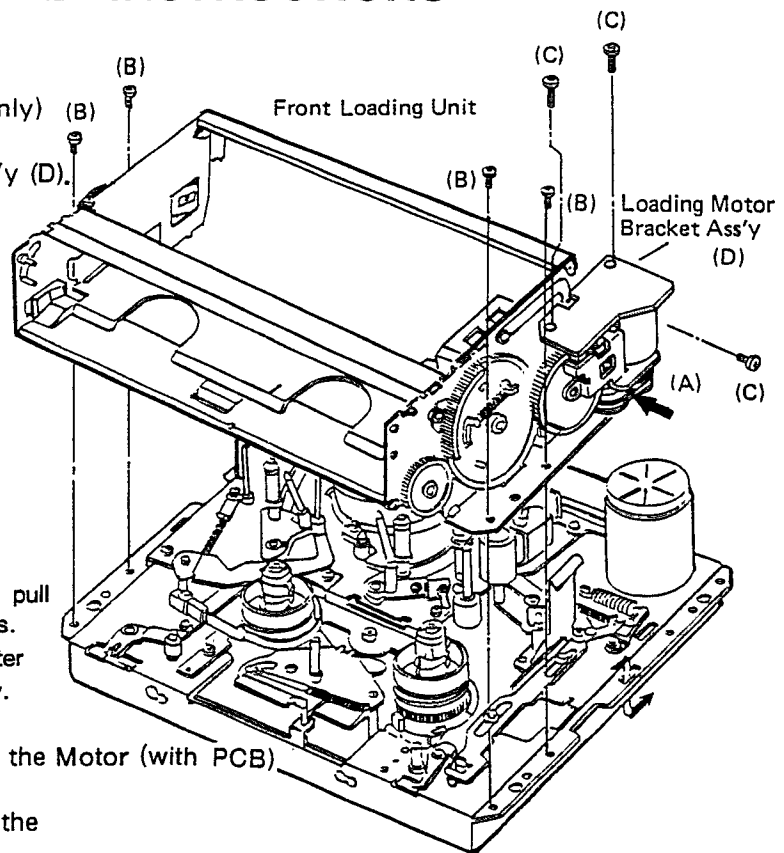
VCR Section						[Deflection]								
Conditions *Mode.....SP mode unless otherwise specified *Test output.....Video out (75 ohm load) Audio out (100kohm load) *Test input.....Video in (1Vp-p) Audio in (300mVrms)						1		Deflection frequency		Horizont	kHz	15.625		
										Vertical	Hz	50		
						2		H. Sync pull in range				Hz	±400	
						3		Linearity		Horizont	%	±10		
										Vertical	%	±6		
4		High voltage				kV	22							
[Playback mode]						[Video & Chroma]								
1		Video output level		F6A	Vp-p	1								
2		Horizontal resolution		F6M	Line			230						
3		Video S/N ratio		F6D	dB	43		40						
4		Audio output level		F6A	mV	500								
5		Audio S/N ratio (W/15K LPF)		F6A	dB	40		34						
6		Audio Freq. resp.		200Hz 6 kHz		F6K	dB	-1	±5					
								0	±8					
7		Wow & Flutter CCIR/WTD		F6L	%	0.25		0.45						
8		Jitter		F6N	uS	0.25		0.35						
[Overall mode]						[Audio]								
1		Video output level				Vp-p	1							
2		Video S/N ratio				dB	43		40					
3		Audio output level				mV	500							
4		Audio S/N ratio (W/15K LPF)				dB	37		34					
5		Audio freq. resp.		200Hz 6 kHz		30mV-in	dB	0	+3,-6					
								0	±8					
TV Section						*All items are measured at audio output terminal and across 100K ohm resistive load unless other wise specified. *Item 3~5 are measured across 8 ohm resistor at speaker output terminal.								
1		Audio output level		100kohm	mV					500				
2		Audio max. output								W	1.5		1	
3		Audio output power		10%THD	W					1.2		0.8		
4		Audio distortion		500mW	%					3		5		
5		Audio freq. response		-6dB	Hz			100-7K						
[Tuner]														
1		Peak picture sens				dBu	20		30					
2		Intermediate freq.		Picture		MHz		36.875						
				Sound		MHz		31.375						
3		Intercarrier freq.				MHz	5.5							
4		AFT pull-in range				MHz	±1		±0.7					
5		IF rejection ratio				dB	60		45					
6		Image rejection ratio				dB	50		40					
[Tuner]														
1		Peak picture sens				dBu	20		30					
2		Intermediate freq.		Picture		MHz		36.875						
				Sound		MHz		31.375						
3		Intercarrier freq.				MHz	5.5							
4		AFT pull-in range				MHz	±1		±0.7					
5		IF rejection ratio				dB	60		45					
6		Image rejection ratio				dB	50		40					

# (VCR SECTION)

## DISASSEMBLY INSTRUCTIONS

### [1] FRONT LOADING UNIT

1. Remove 4 screws (B).
2. Take off the hook (A). (Right side only)
3. Remove 3 screws (C).
4. Take off Loading Motor Bracket Ass'y (D).



### [2] PHOTO SENSOR

1. Replacement of Lamp Holder Ass'y.  
(Sensor Lamp)

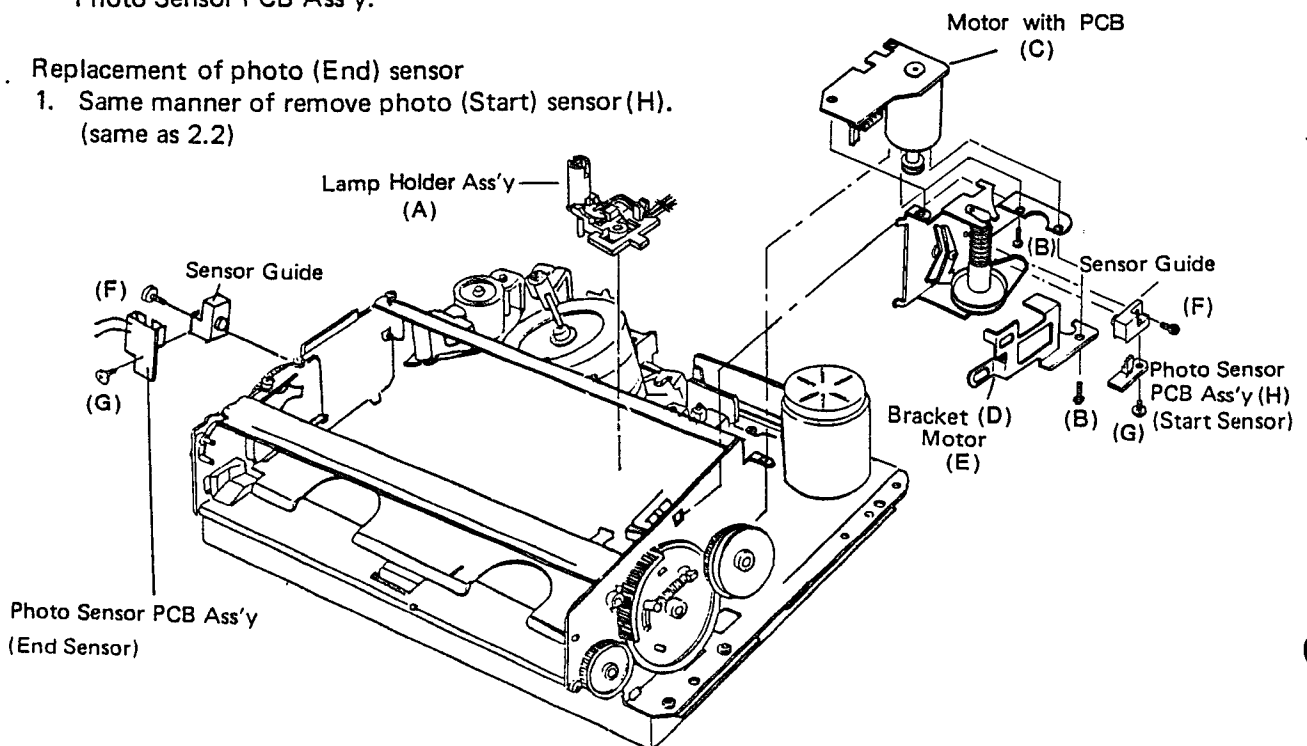
1. Hold lamp holder ass'y body(A) and pull up to remove the hook from chassis.
2. Turn the lamp holder ass'y to counter clockwise and take out holder ass'y.

2. Replacement of photo (Start) sensor

1. Remove 2 screws (B) and take off the Motor (with PCB) (C) and Bracket (D), Motor (E).
2. Remove 1 screw (F) and take off the Sensor Guide.  
Remove 1 screw (G) and take off the Photo Sensor PCB Ass'y.

3. Replacement of photo (End) sensor

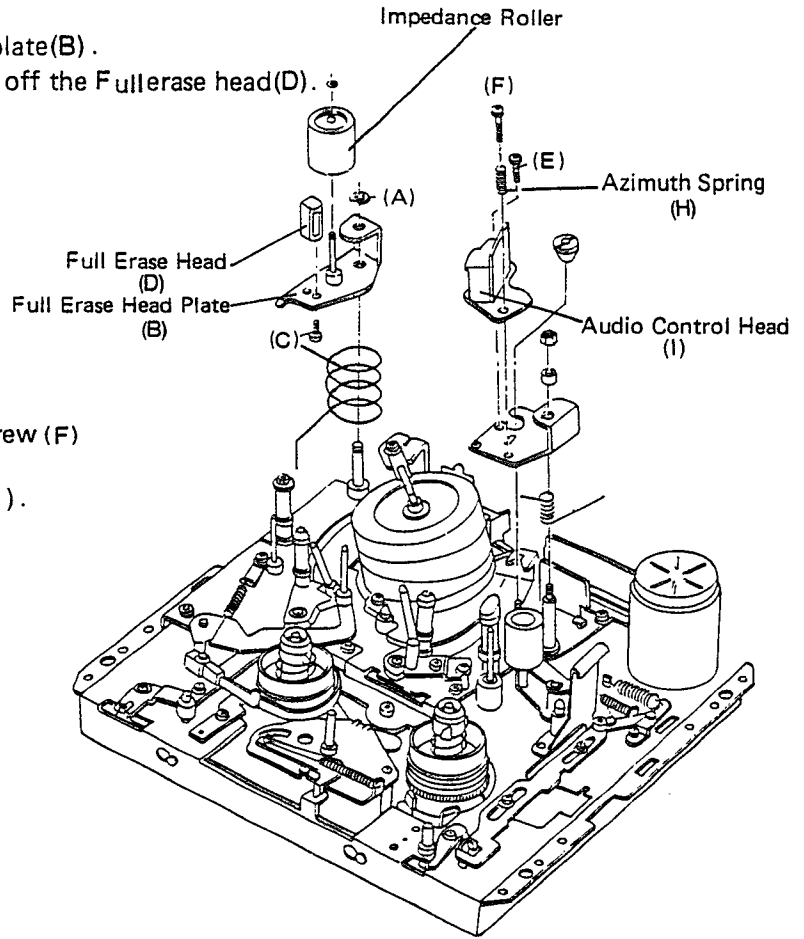
1. Same manner of remove photo (Start) sensor (H).  
(same as 2.2)



[3] FULL ERASE HEAD/AUDIO CONTROL HEAD

Erase Head

1. Remove E-ring (A).
2. Pull out the Full Erase head plate (B).
3. Remove 1 screw (C) and take off the Full Erase head (D).

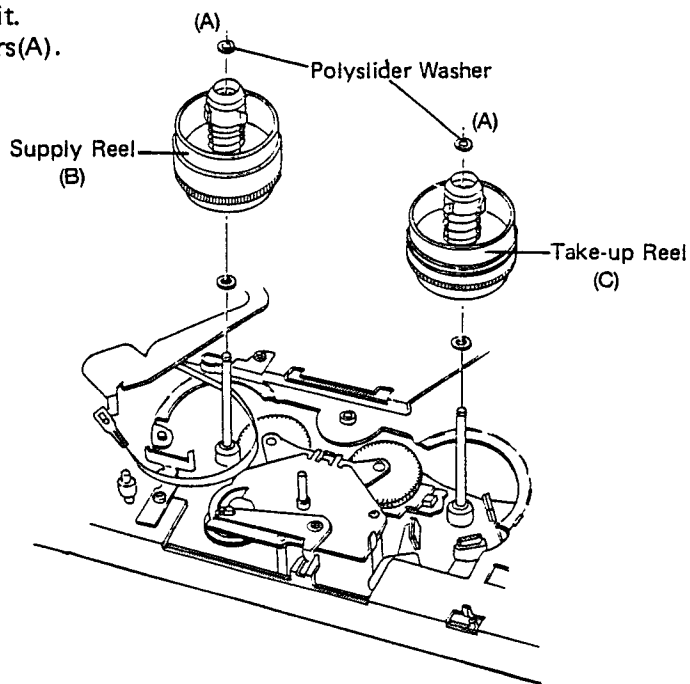


Audio Control Head

1. Remove 1 screw (E) and 1 screw (F) and azimuth spring (H).
2. Remove audio control head (I).

[4] REEL (SUPPLY & TAKE-UP)

- (a) Remove front loading unit.
1. Remove polyslider washers (A).
  2. Remove the reels (B), (C).



[5] GEAR HOLDER ASS'Y/CLUTCH

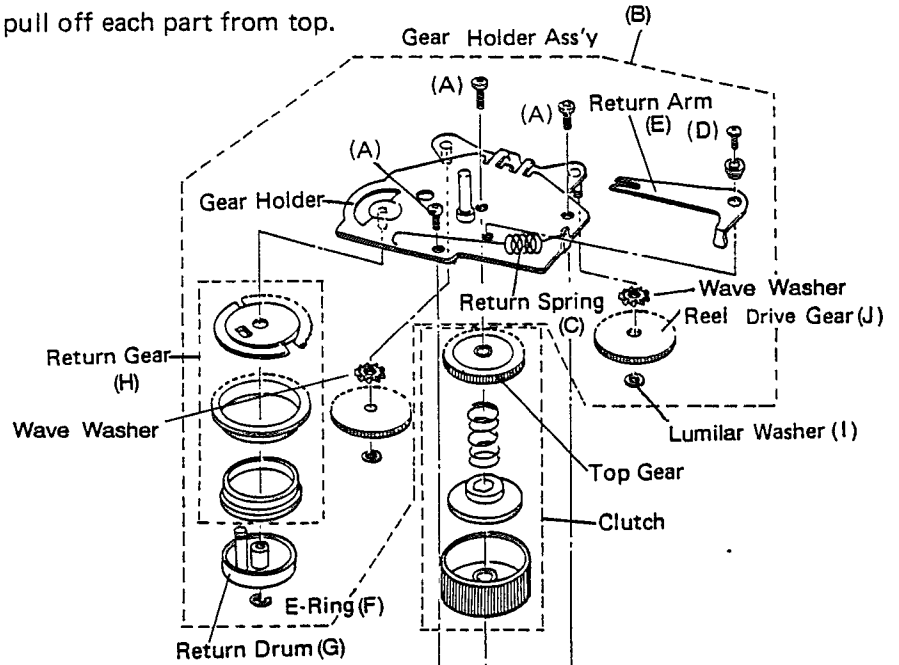
Gear Holder Ass'y

(a) Remove front loading unit.

1. Remove 3 screws (A), and gear holder ass'y(B).
2. Remove return spring(C).
3. Remove 1 screw (D) and return arm(E).
4. Remove E-Ring (F) and return drum(G)and return gear (H).
5. Remove polyslider washer (I) and then take off the reel drive gear (J) .

Clutch

Top gear is pressed to insert so pull off each part from top.

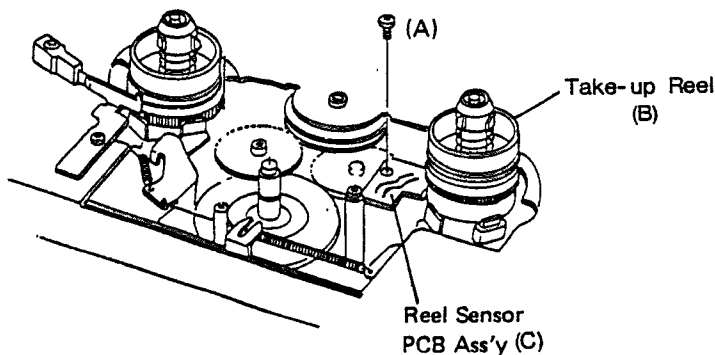
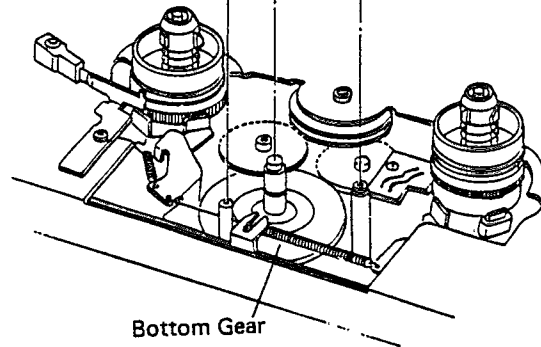


[6] REEL SENSOR

(a) Remove front loading unit.

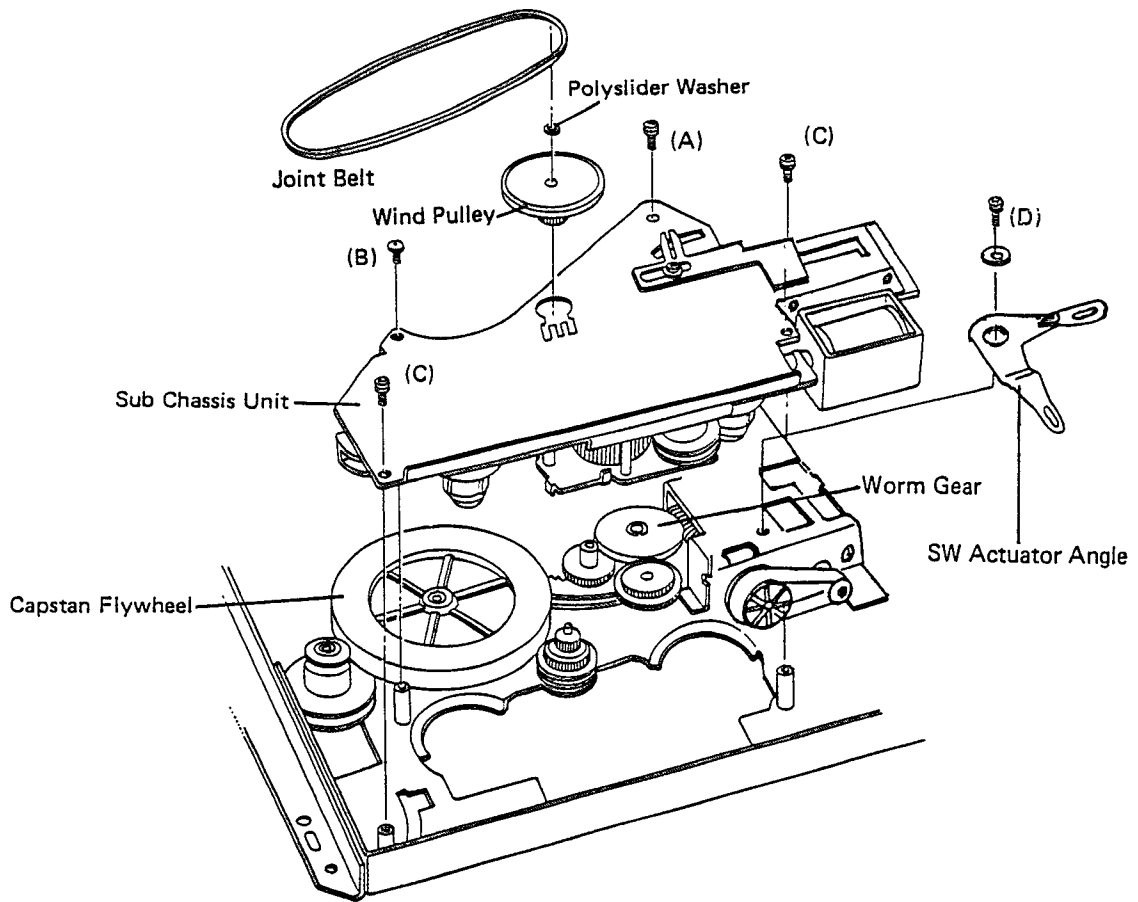
(b) Remove gear holder ass'y.

1. Remove 1 screw (A).
2. Remove take-up reel(B).
3. Remove reel sensor PCB ass'y(C).





[7] SUB CHASSIS

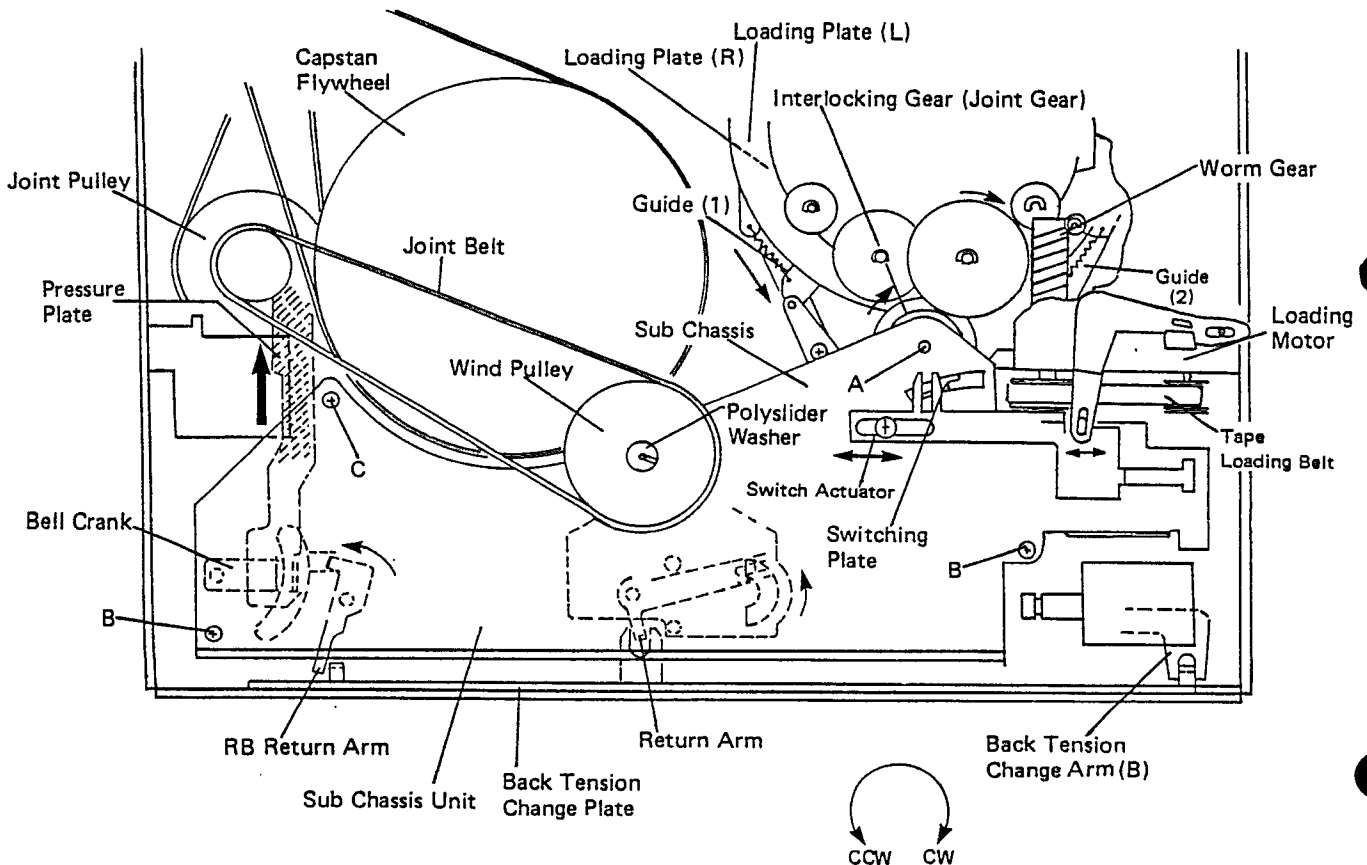


Take out of Sub Chassis Unit

1. Turn the Capstan Flywheel clockwise more than three times. (Because the levers, etc. are set at neutral.)
2. Remove the Joint Belt.
3. Remove the Polyslider Washer.
4. Pull out the Wind Pulley.
5. Remove 1 screw (D) and take off the SW Actuator Angle.
6. Remove 4 mount screws from sub chassis. (Ax1, Bx1 Cx2)
7. Take out the Sub Chassis Unit.

## Mounting of Sub Chassis Unit

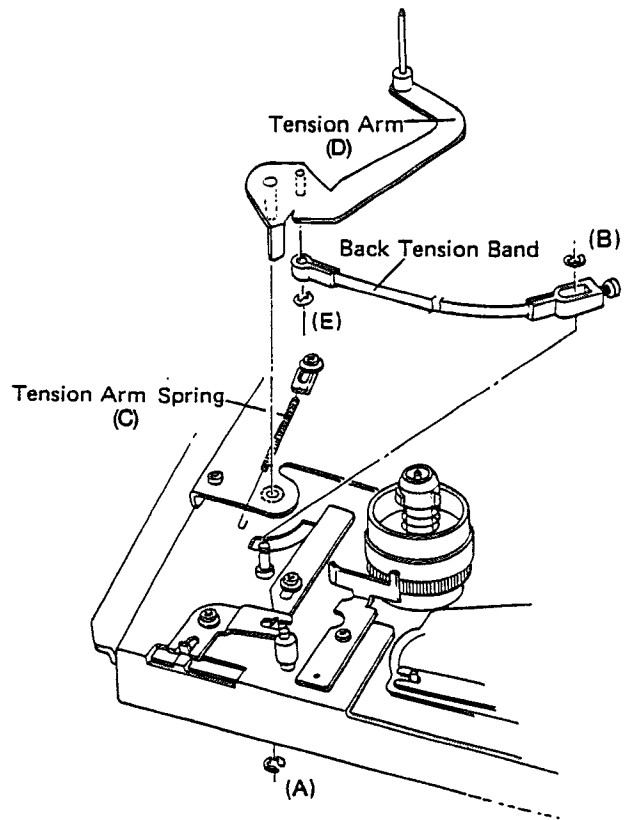
1. Turn the Return Arm in the direction of arrow mark.
2. Move the Back Tension Change Plate to the right direction extremely.
3. Turn the RB return arm to the direction of arrow mark extremely.
4. Turn the Loading Plates (L) and (R), and stop them at the position of hitting the wall of groove or just stop.  
This work is done by turning the pulley of the Worm Gear jointed to the Loading Motor.
5. Turn the Interlocking Gear in the direction of arrow mark (counterclockwise) extremely.
6. Mount the Sub Chassis Unit. At this time, make the band brake of back tension fit to the supply reel. (Top side)
7. Shake the Switch Actuator to right and left in order to confirm the engagement of interlocking gear.
8. Slide the Pressure Plate in the direction of arrow mark in order to connect the Pressure Plate with the Bell Crank.
9. Mount the Sub Chassis Unit with 4 small screws.  
(A x 1, B x 2, C x 1)
10. Insert the Wind Pulley.
11. Set the Polyslider Washer.
12. Mount the Joint Belt.
13. Confirm that the Return Arm is set to the calw of the Back Tension Change Plate.  
It is OK that following two operations are confirmed by turning the capstan flywheel.  
(1) When the Capstan Flywheel is turned counterclockwise (CCW), the Back Tension Change Arm moves to the left.  
(2) When the Capstan Flywheel is turned clockwise (CW), the Back Tension Change Arm moves to the right.



[8] TENSION ARM ASS'Y

Remove front loading unit.

1. Remove E-ring (A).
2. Remove E-ring (B).
3. Remove tension arm spring (C).
4. Remove tension arm (D).
5. Remove E-ring (E).

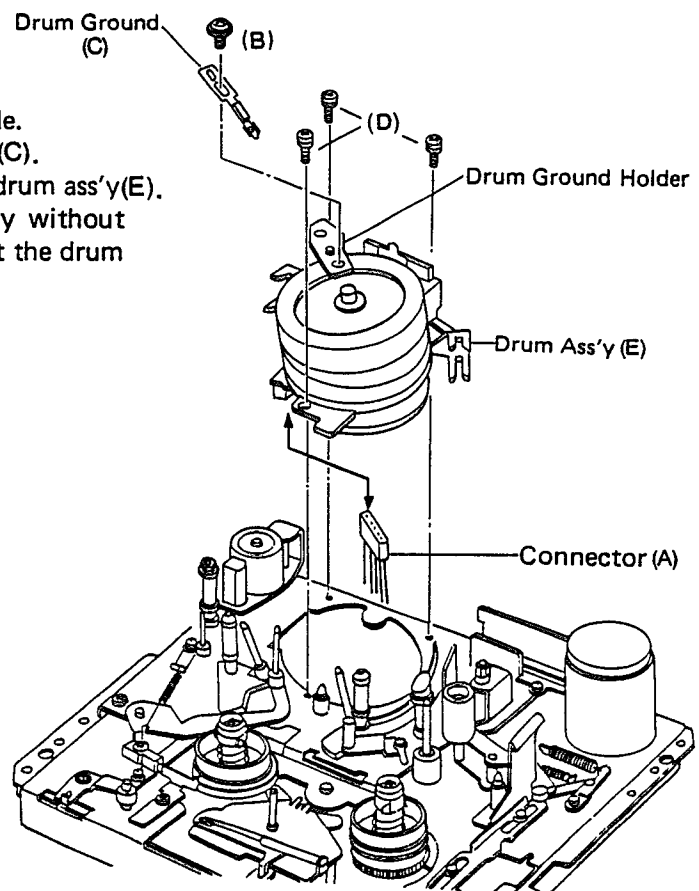


[9] DRUM ASS'Y

(a) Remove front loading unit.

1. Remove connector (A) from bottom side.
2. Remove a screw (B), and drum ground (C).
3. Remove 3 screws (D) and take off the drum ass'y (E).

Remark: Remove the drum ass'y carefully without any damage. Especially do not hit the drum ground holder.



[10] UPPER DRUM

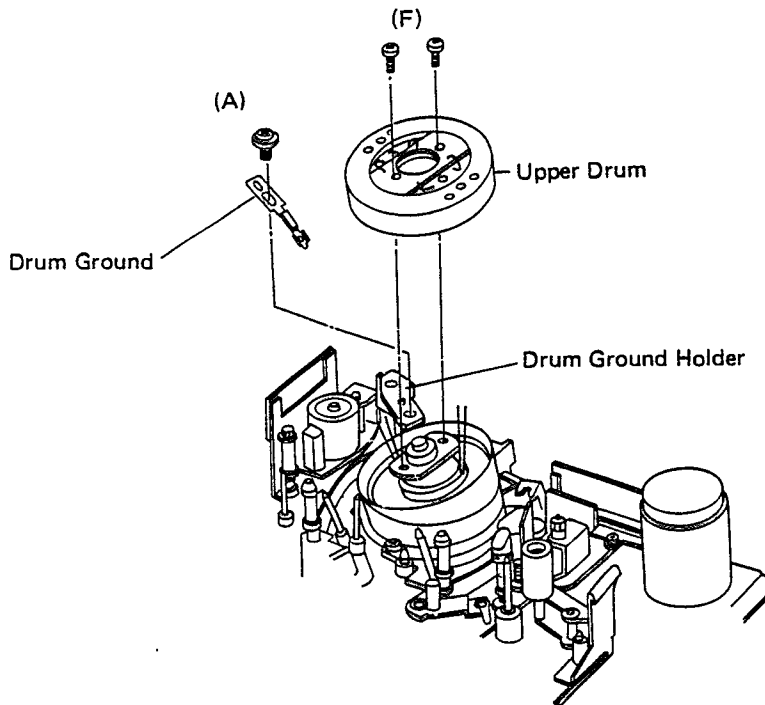
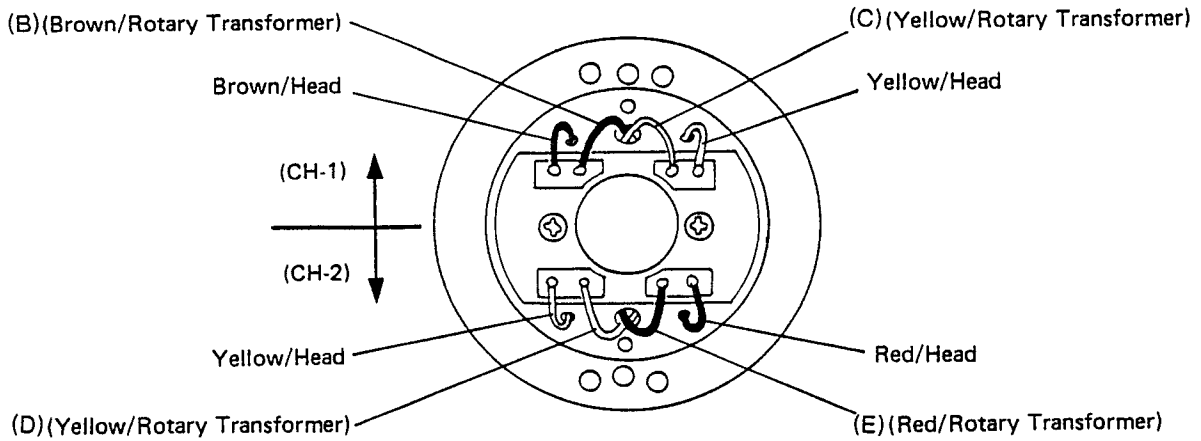
Remove front loading unit.

1. Remove 1 screw (A), and drum ground.
2. Resolder rotary transformer wires (B).(C), (D) and (E).  
Do not unsolder head wires.

3. Remove 2 screws (F).

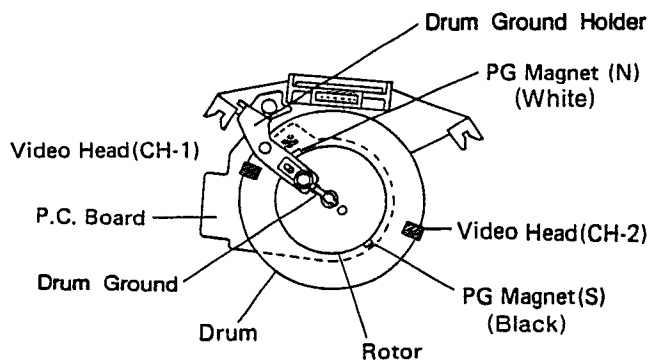
Remarks: 1) Use gloves and do not touch with bare finger or dust to drum face.

- 2) If the video head is defective, replace the complete upper drum with head.

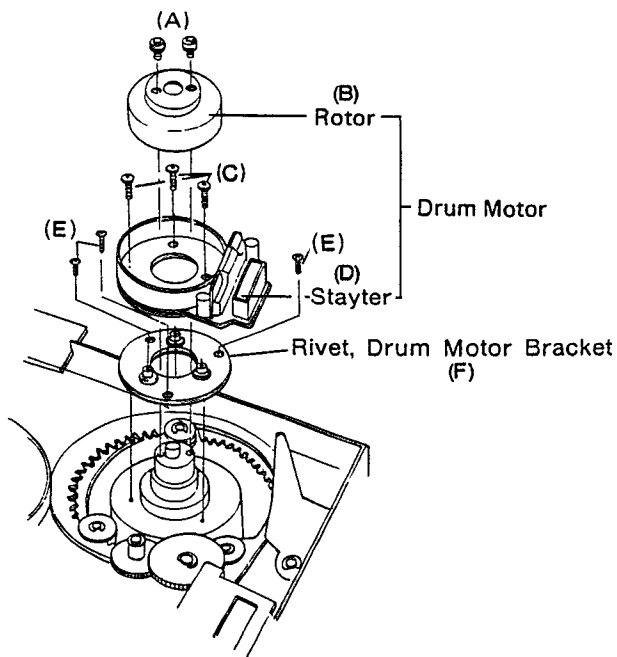


[11] DRUM MOTOR

1. Remove 2 screws (A).
2. Remove the rotor (B).
3. Remove 3 screws (C).
4. Remove stayter(D).
5. Remove 3 screws (E).
6. Remove Rivet, Drum Motor Bracket(F).

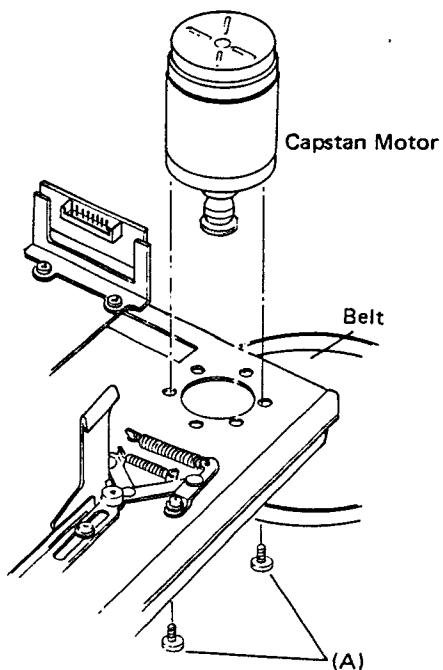


DRUM Ass'y (Top View)



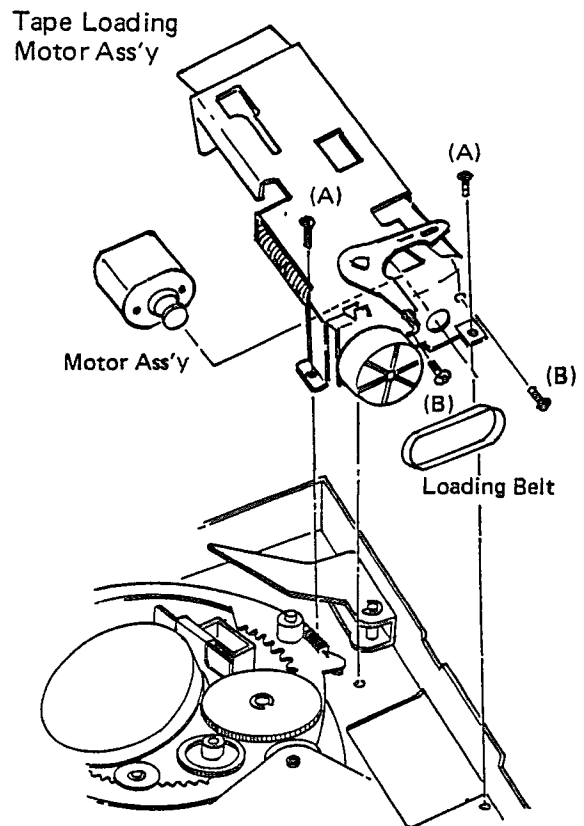
[12] CAPSTAN MOTOR

1. Take off the belt from capstan motor.
2. Remove 2 screws (A).



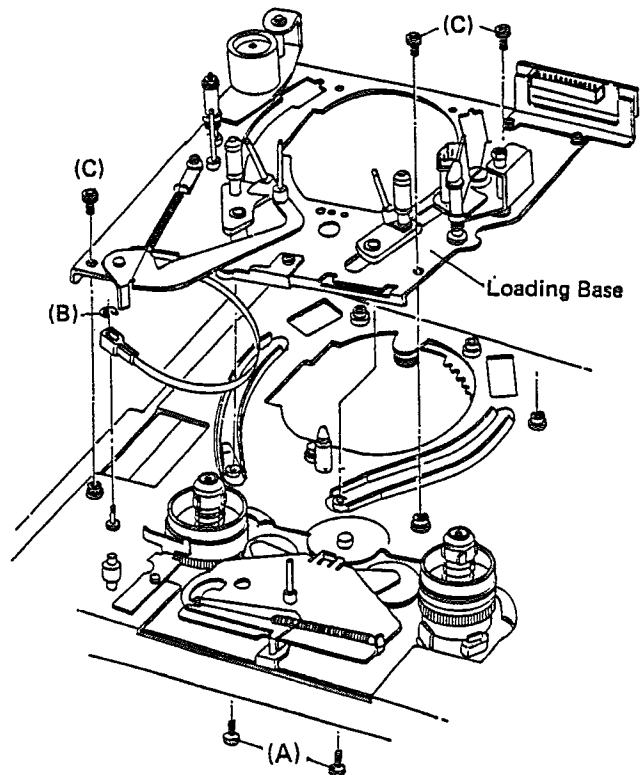
[13] TAPE LOADING MOTOR

1. Remove 2 screws (A).
2. Take off Tape Loading Motor Ass'y .
3. Take off Loading Belt.
4. Remove 2 screws (B) and take off Motor Ass'y.



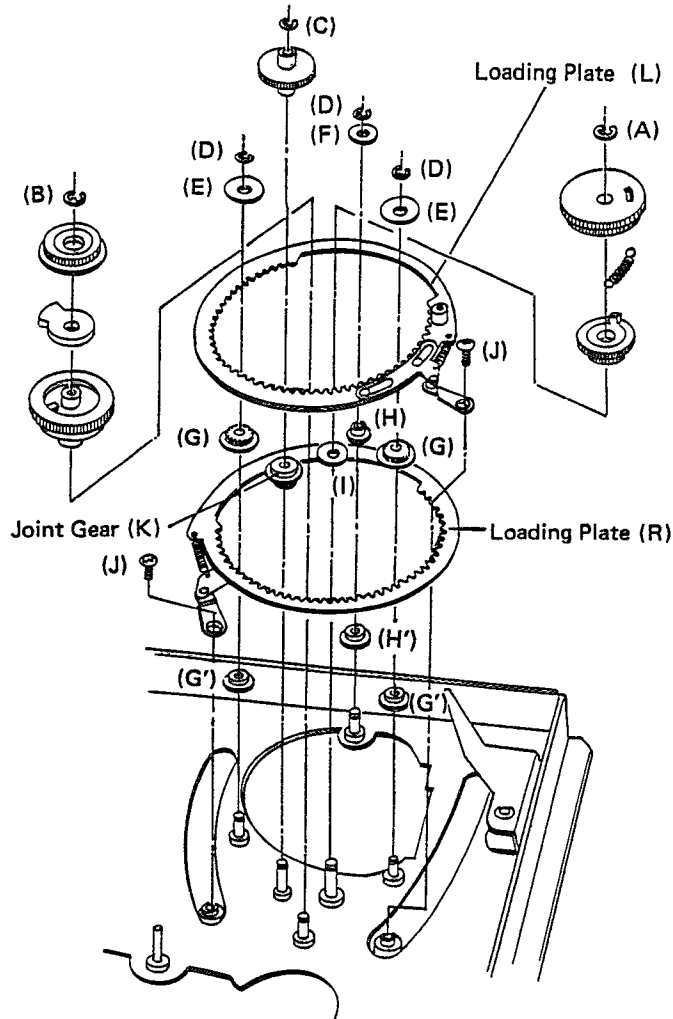
[14] LOADING BASE

1. Remove Motor Ass'y and Drum Ass'y.
2. Remove 2 screws (A) from bottom.
3. Remove E-ring (B).
4. Remove 3 screws (C).
5. Take off the Loading Base.



[15] LOADING GEAR

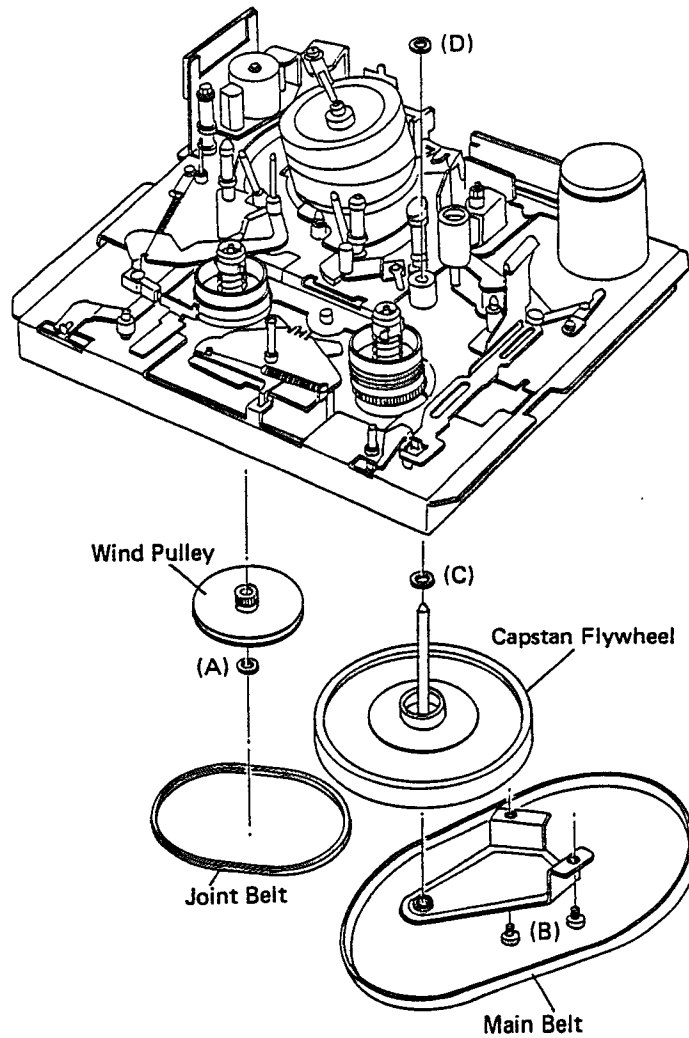
1. Remove Sub-Chassis Unit Flywheel and Front Loading Motor Ass'y.
2. Remove E-ring (A) and take off Gear Ass'y.
3. Remove E-ring (B) and take off Gear Ass'y.
4. Remove E-ring (C) and take off Gear Ass'y.
5. Remove 3 E-rings (D), 2 Plate Washers (E) and 1 Plate Washer (F).
6. Remove 2 screws (J).
7. Take off the Loading Plate (L).
8. Take off the Joint Gear (K), 2 Guide Gears (G), Guide Roller (H) and Plate Washer (I).
9. Take off the Loading Plate (R).
10. Take off 2 Guide Gears (G') and Guide Roller (H').



[16] CAPSTAN FLYWHEEL

1. Remove Front Loading Unit.
2. Take off the Joint Belt and Main Belt.
3. Take off the Polyslide Washer (A) and Wind Pulley.
4. Remove 2 screws (B).

Remark: Do not miss the washer (C) and (D) when pull out the capstan flywheel.





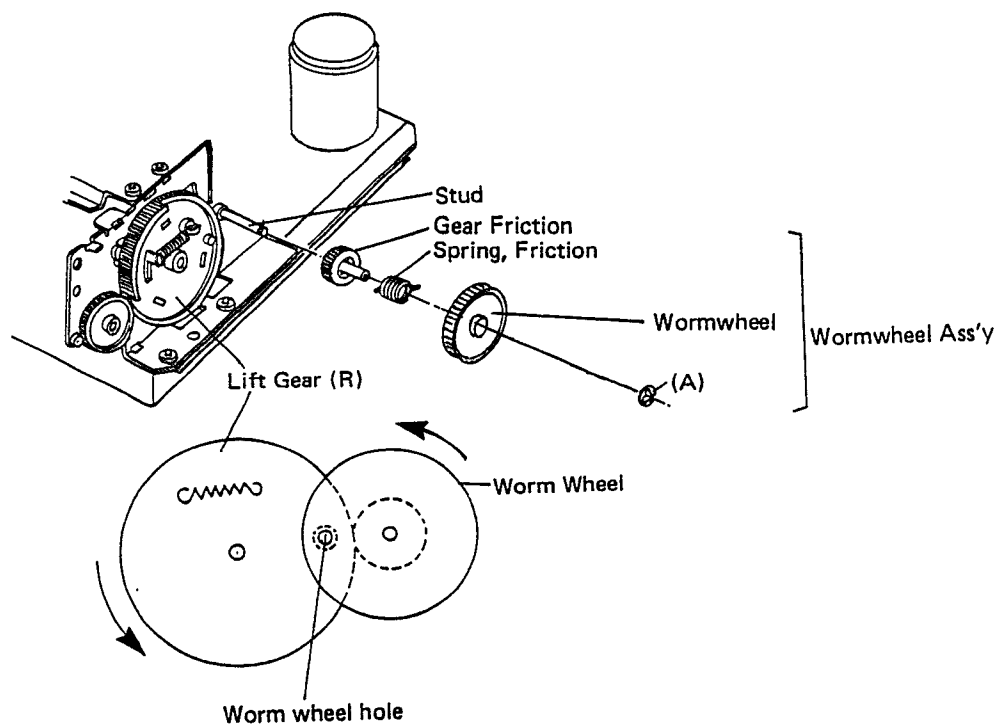
## [18] FRONT LOADING WORMWHEEL UNIT

- DISASSEMBLY

1. Remove E-ring (A).
2. Remove Wormwheel Ass'y. (Wormwheel, Spring Friction, Gear Friction.)

- ASSEMBLY

1. Turn Lift Gear (R) fully counterclockwise.
2. Restore Wormwheel Ass'y to Stud.  
Match Lift Gear (R) to Wormwheel Hole as illustrated.



## MECHANICAL ADJUSTMENT JIG AND TOOLS

Item	Part No.	Adjustment
Torque Meter Driver (Special)	VHT-063	Back Tension Control Head Tape Guide Height Guide Roller Setting
Wrench M2 Hexagon		
Wrench M3 Hexagon		A/C Head Tilt
Mirror		Tape Transportation Check
Box Driver M3		Guide Pole A/C Head Height
Alignment Tape	F6-N	FM Output Level/Azimuth Adjustment
Alignment Tape	F6-A	Audio Output Adjustment

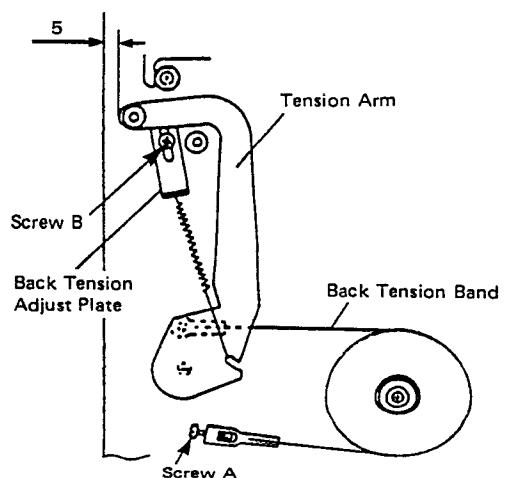
### 1) Tension Arm Position

1. Push Play button and start without video cassette tape.
2. Turn screw A and match a tip of tension arm to marking on the loading base.

### 2) Back Tension

1. Load cassette torque gauge (VHT-063) and push PLAY button.
2. Loosen screw B and slide back tension plate, until gauge indicates  $24 \pm 5$  g-cm.
3. Confirm proper operations of Interlocking Gear and switching plate and Mounting position of Loading switch.

**Note:** Removal of the front loading ass'y is not necessary at both disassembly and assembly.



# DECK ADJUSTMENT

1. Audio/control head height and azimuth adjustment.
  1. Connect CH1 of oscilloscope to AUDIO OUT. (Fig.1)

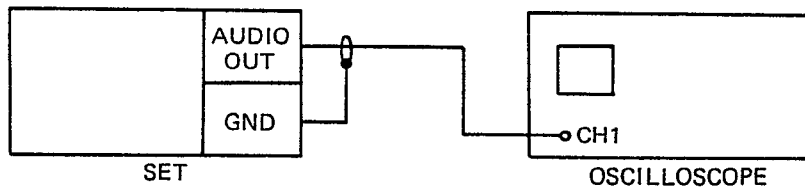
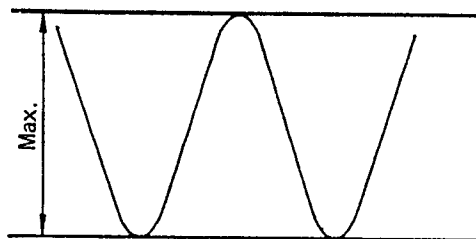


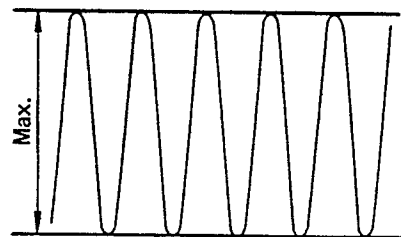
Fig. 1

2. Playback test tape F6-A 1kHz Audio Signal.
3. Adjust nut (A) to obtain maximum audio output level (Fig. 4)
4. First, decline the head toward the nut (A) by turning screw (C). Then turn the screw (C) reversely and slowly to obtain the maximum audio output level (Fig. 4).
5. Check that smooth tape transportation at the take-up guide pole. Especially inspect no tape slack and wrinkling. If these problem occur re-adjust (A) and (C). (Fig. 4)  
Playback test tape F6-N (6 kHz Audio Signal)
6. Adjust screw (B) to obtain maximum audio output level. (Fig. 4)



1 kHz

Fig. 2



6 kHz

Fig. 3

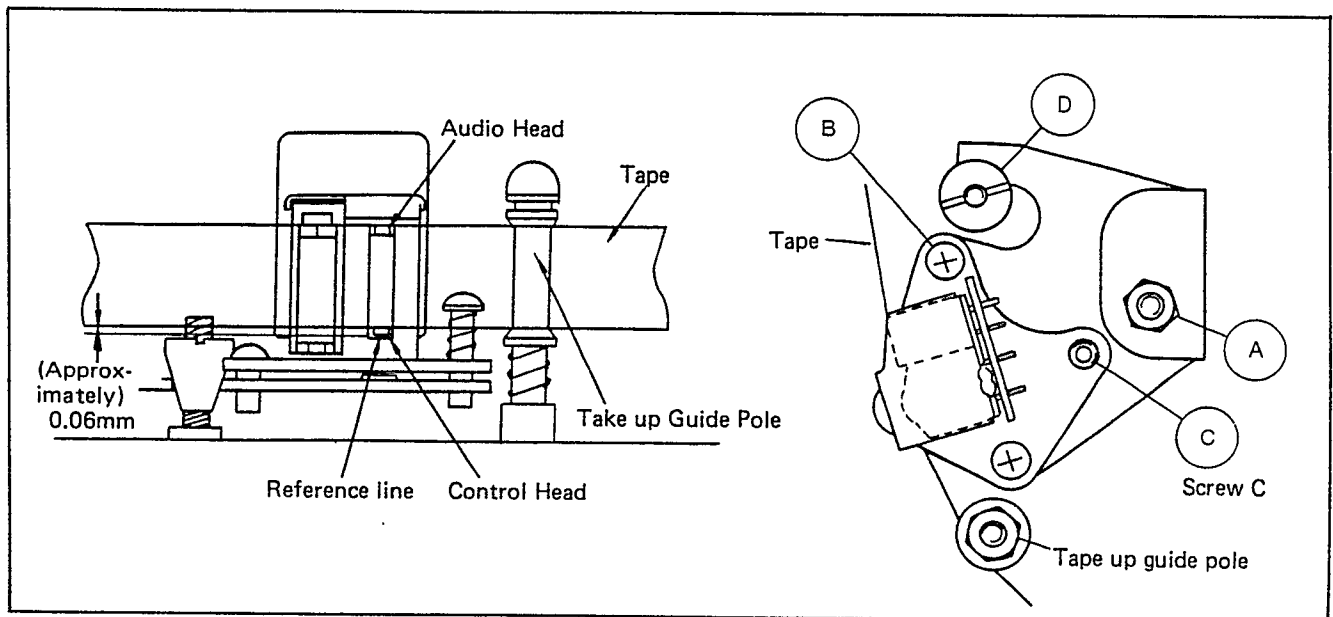


Fig. 4 A/C Head Adjustment

2. FM peak adjustment (Fig. 5)

1. Connect CH1 of oscilloscope to TP5.
2. Connect CH2 of oscilloscope across TP13 and Ground.
3. Set oscilloscope to TRIGGER mode.

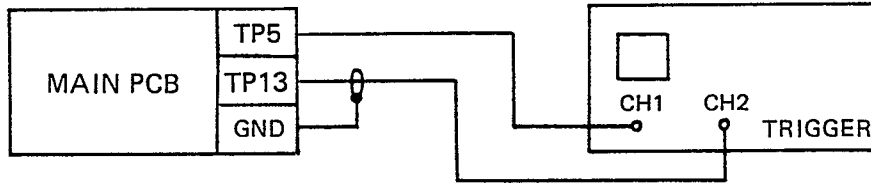


Fig. 5

4. Playback test tape F8-N (stair step without color signal).
5. Adjust screw (D) to obtain maximum FM output level. (Fig. 4,6).

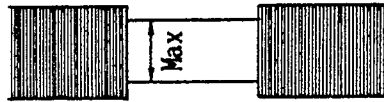


Fig. 6

3. FM waveform adjustment (Fig. 5)

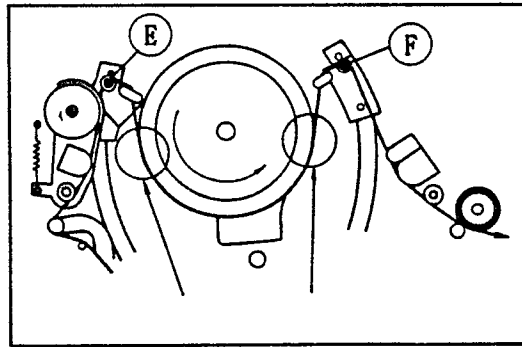


Fig. 7

1. Connect CH1 of oscilloscope to TP5.
2. Connect CH2 of oscilloscope across TP13 and GND.
3. Set oscilloscope to TRIGGER mode.

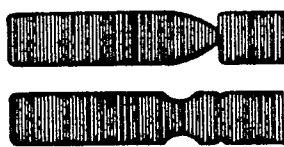


Fig. 8

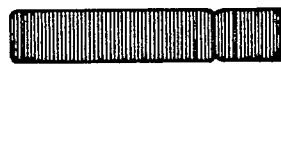


Fig. 9

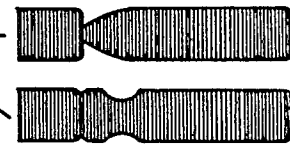


Fig. 10

4. Playback test tape F6-N (stair step without color signal).
5. If the FM waveform observed by oscilloscope is as same as shown in Fig. 8, adjust screw (F) until waveform becomes as shown in Fig. 9.
6. If the FM waveform observed by oscilloscope is as same as shown in Fig. 10, adjust screw (E) until wave form becomes as shown in Fig. 9.

NOTE: 1. Confirm that Electrical Adjustment (Video Head Switching Point and CTL Preset) has been done before Deck Adjustment.  
 2. Deck Adjustment should be done with Tracking Volume at the center position.

## SERVICE SCHEDULE OF COMPONENT

○: Check    ●: Replace

Deck		Periodic Service Schedule			
Ref. No.	Parts Name	1000 hr	2000 hr	3000 hr	4000 hr
2	Drum, upper with video head	○	●	○	●
224	Pinch Roller (A)		●		●
301	Ass'y, Clutch		●		●
392	Motor Ass'y, Capstan		●		
651	Motor with Pulley			●	
702	Motor Ass'y, Loading			●	
373	Belt, Main		●		●
393	Belt, Drive		●		●
394	Belt, Joint		●		●
659	Belt, TL		●		●
338	Shoe, Brake		●		●
193	Flat Ass'y, Back Tension		●		●
16	Ground, Drum			●	
142	Head, Audio/Control			●	
178	Head, Full Erase			●	
281	Reel Ass'y, Supply			●	
282	Reel Ass'y, Take-up (B)			●	
311	Clutch Ass'y, RF (B)		●		●

— How to service the defective units. —

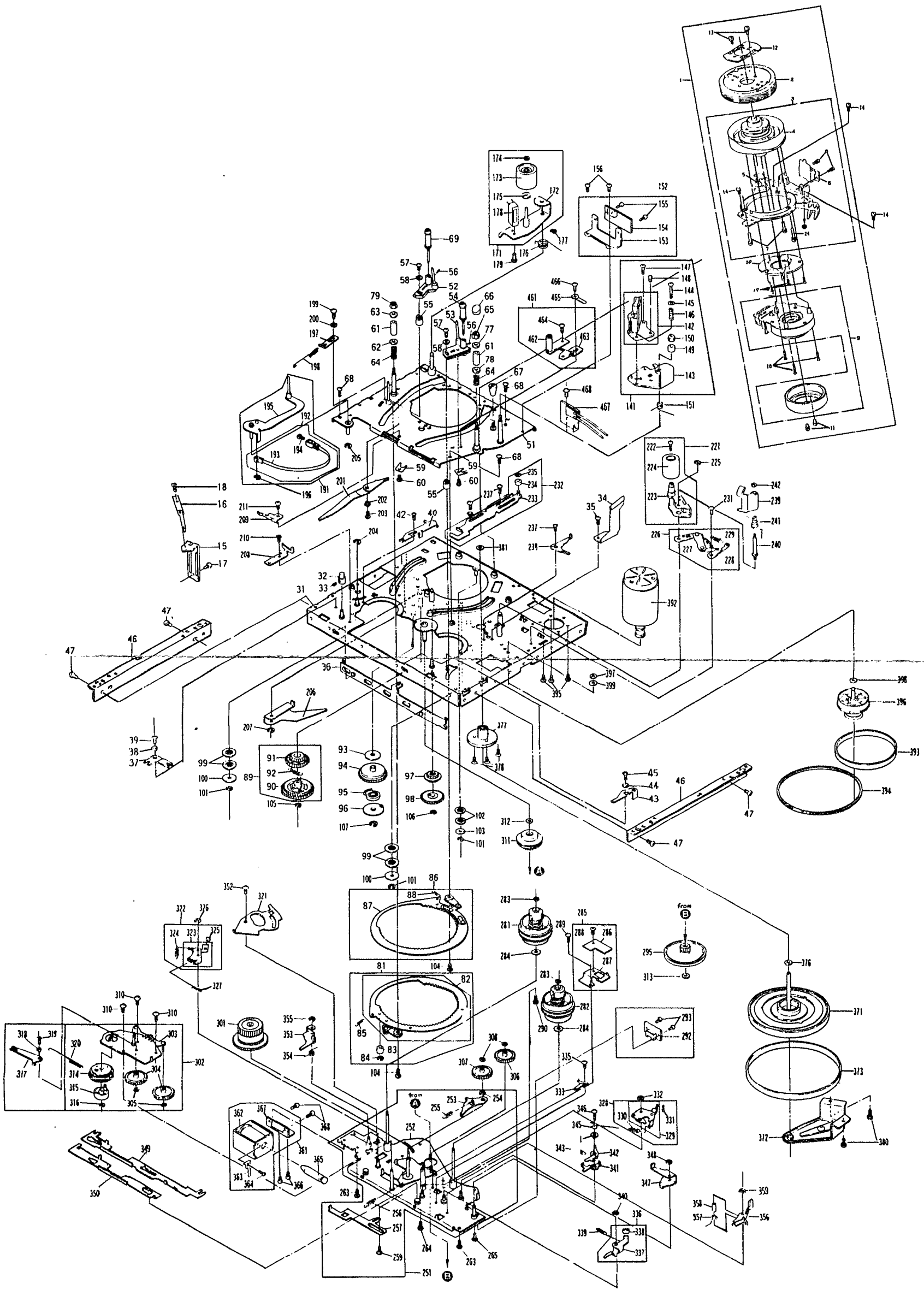
1. Clean, all parts for the tape transportation.

Drum, upper with video head/Pinch Roller

Audio/Control head/Full erase head

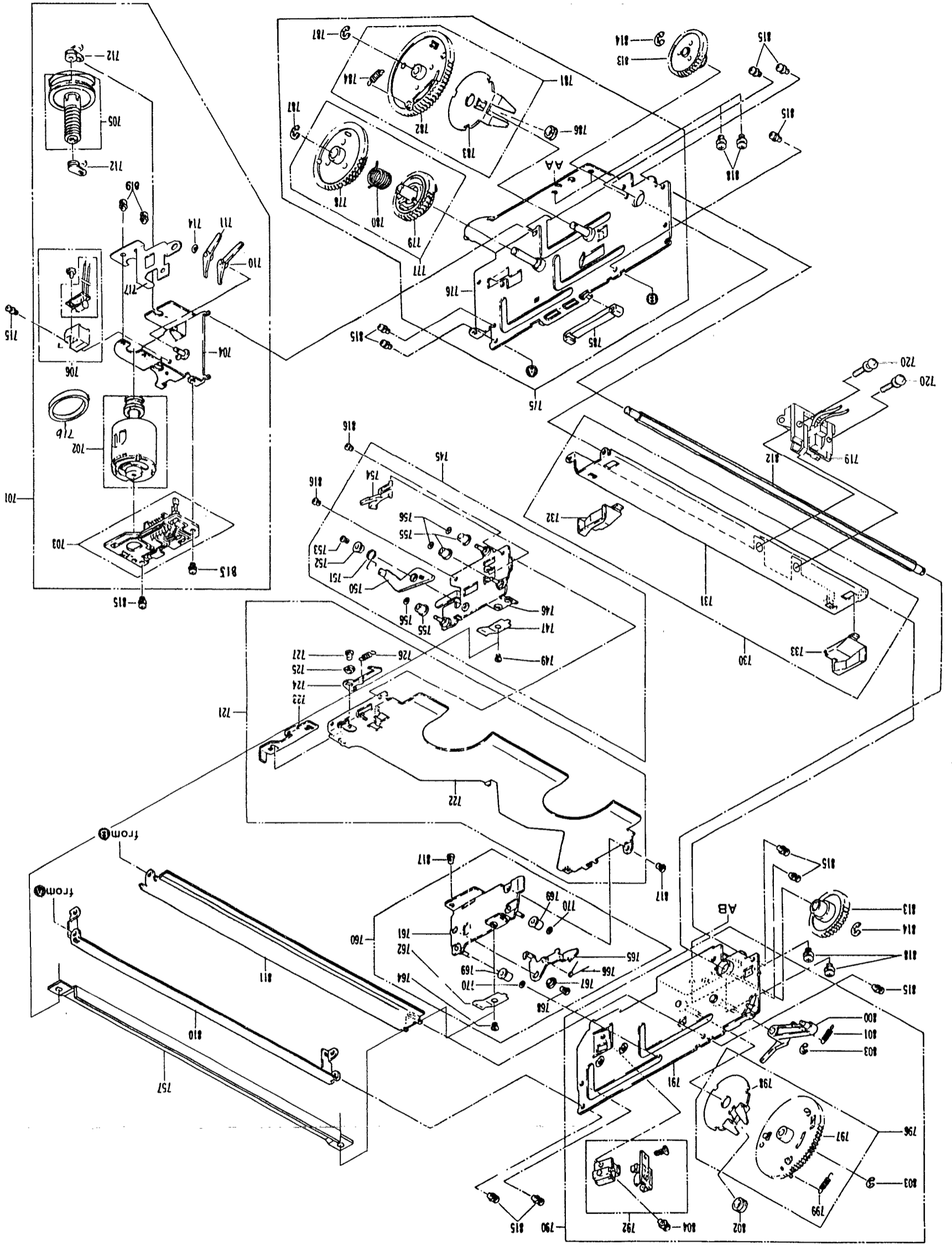
2. After clean up the parts must be confirmed all DECK ADJUSTMENT.





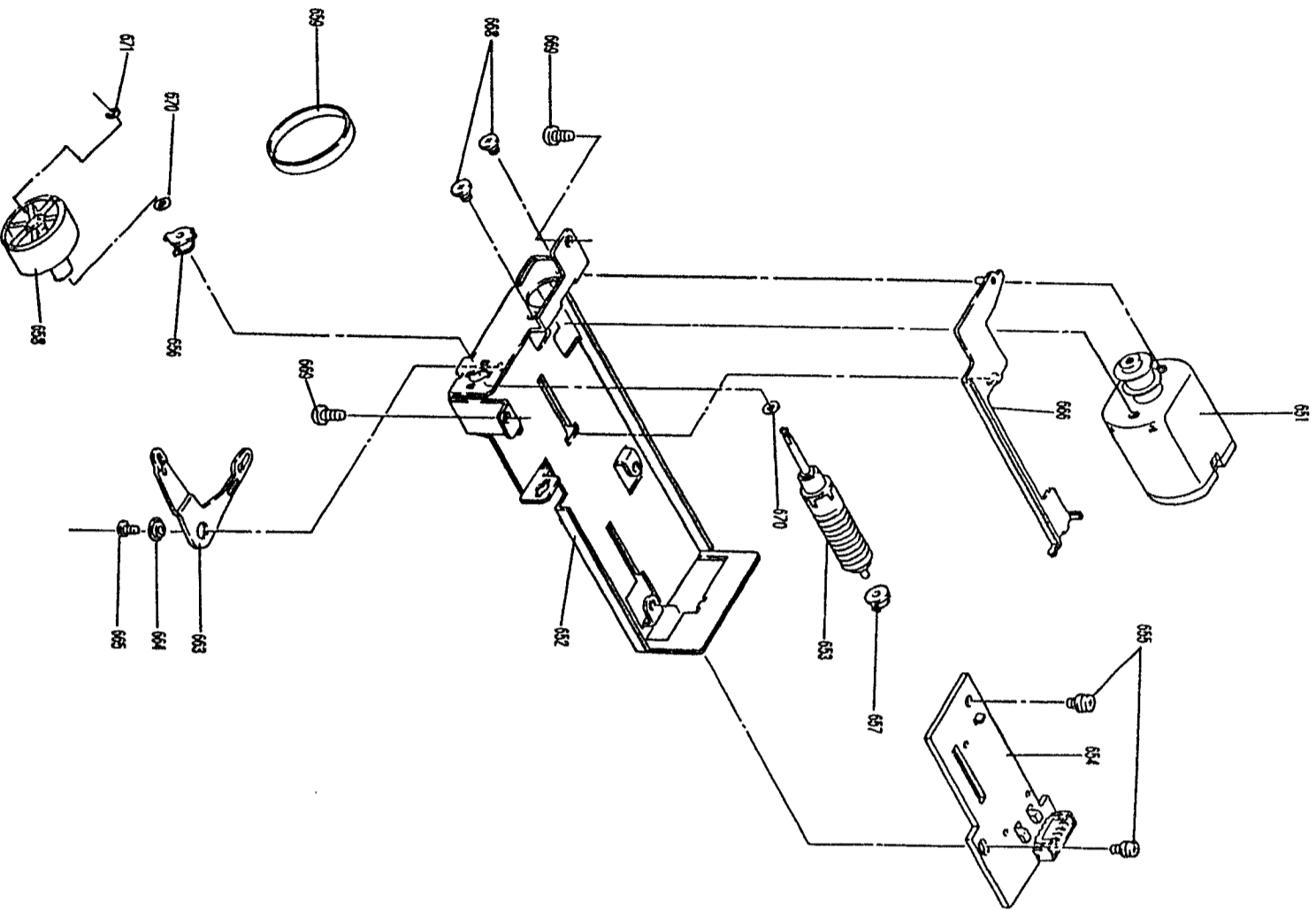
EXPLODED VIEW (DECK 1)

EXPLODED VIEW (DECK 2)

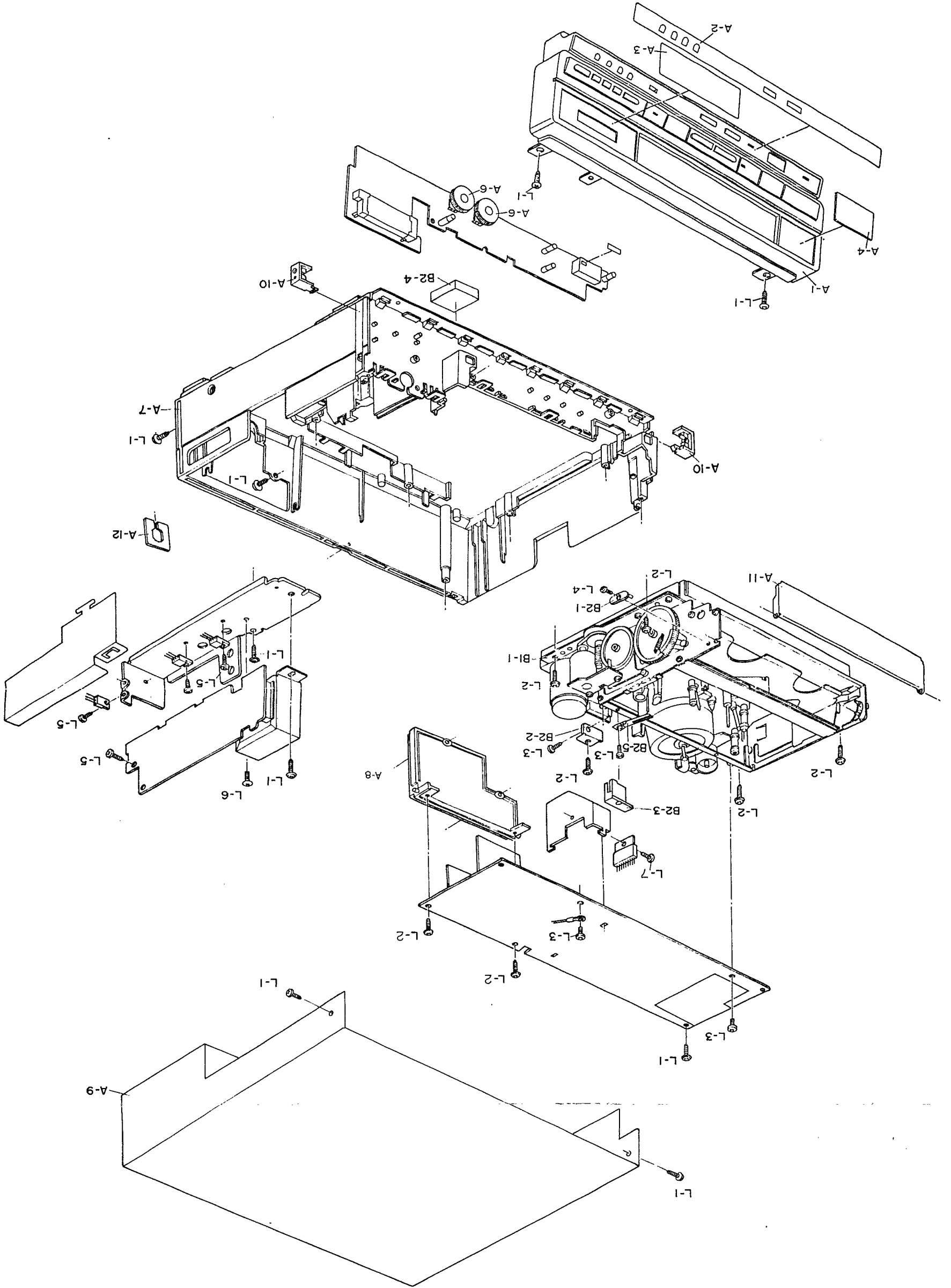




EXPLODED VIEW (DECK 3)



EXPLODED VIEW (CABINET)



# ALIGNMENT INSTRUCTIONS

## PREPARATION

Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.

## REQUIRED TEST EQUIPMENT

1. Oscilloscope : Dual-trace with 10 : 1 probe.
2. Frequency Counter
3. Color Monitor
4. Pattern Generator (Color bar with 100% white)
5. AC Voltmeter (RMS)
6. Alignment Tape F6-A (Color bar with 100% white)

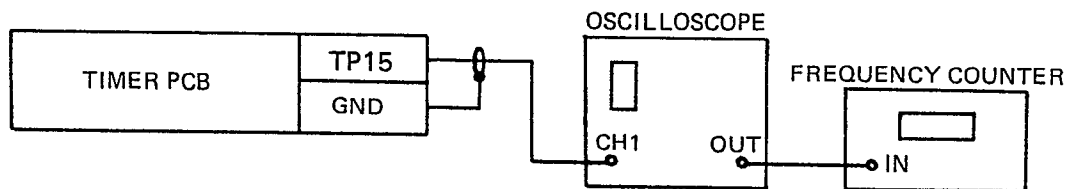


Fig. 1

No.	Item	Test point	Adjustment point	Method	Connection Figure
1	Timer clock E-E Mode	TP15 Ground	TC500	<ol style="list-style-type: none"> <li>1. Connect the oscilloscope across TP15 and Ground.</li> <li>2. Connect the frequency counter to oscilloscope out.</li> <li>3. Make adjustment by TC500 so that the indication of frequency counter becomes 524.288 kHz <math>\pm</math> 1Hz.</li> </ol>	Fig. 1

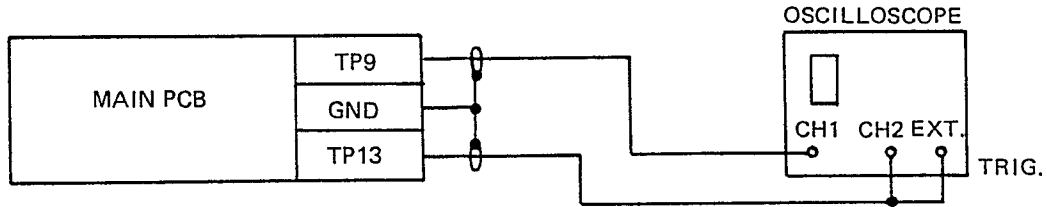


Fig. 2

No.	Item	Test point	Adjustment point	Method	Connection Figure
2	Switching point Adjustment Test Tape (F6-A)	TP9 TP13	VR301	<ol style="list-style-type: none"> <li>1. Connect CH1 to TP9 of VIDEO-OUT and CH2 to TP13, and set EXT. Trigger mode control to (+) Trigger.</li> <li>2. Playback the tape and adjust by VR301 so that the Vsync front edge of CH1 video output waveform is delayed 6.5H (412.7 <math>\mu</math>s) from the rising of CH2 Head Switching Pulse waveform.</li> </ol>	Fig. 2

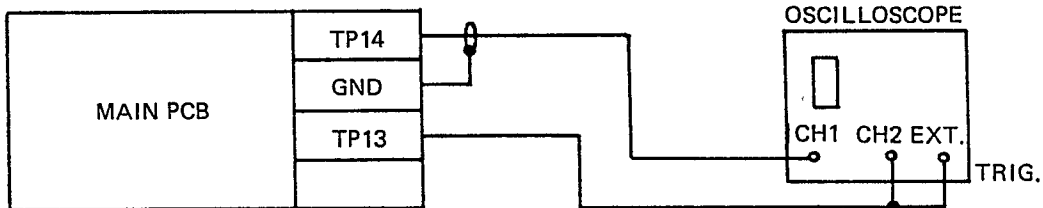
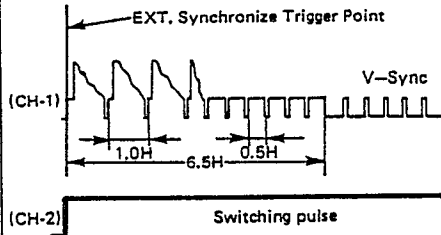
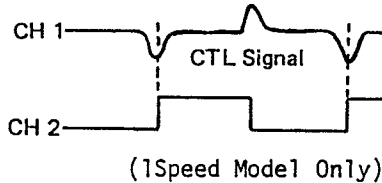
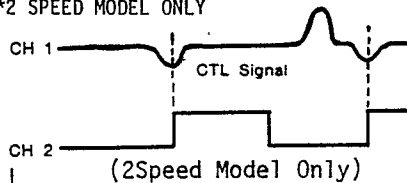


Fig. 3

No.	Item	Test point	Adjustment point	Method	Connection Figure
3	CTL Preset Adjustment (P.B. mode) Test tape F6-A	TP14 TP13	VR300	<ol style="list-style-type: none"> <li>1. Connect CH1 of oscilloscope across TP14 and Ground.</li> <li>2. Connect CH2 of oscilloscope across TP13 and Ground.</li> <li>3. Set the EXT. Trigger mode control of the oscilloscope to (+) trigger.</li> <li>4. Playback the tape by setting tracking volume at center click position.</li> <li>5. Adjust VR300 so that the falling of CTL waveform of CH1 becomes same position with rising of switching pulse of CH2.</li> </ol>	Fig. 3

\*\*  
5. Adjust VR302 so that the falling of CTL waveform of CH1 becomes same position with rising of switching pulse of CH2.

\*\*2 SPEED MODEL ONLY



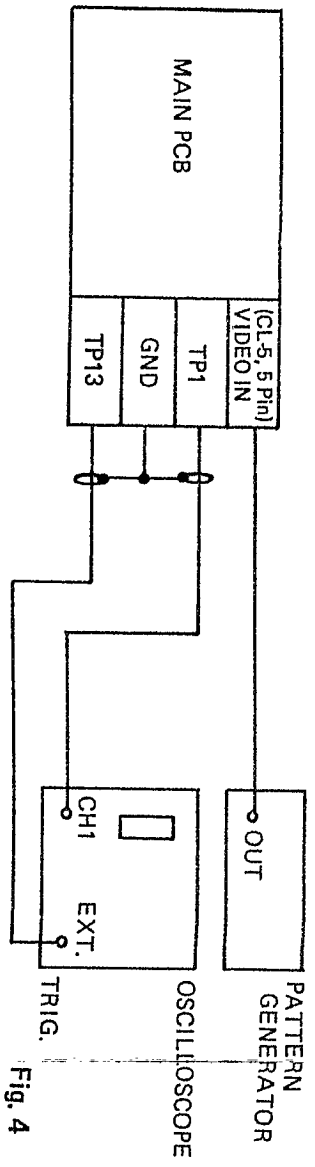


Fig. 4

No.	Item	Test point	Adjustment point	Method	Connection Figure
4	Rec. Current Adjustment SP Mode Blank tape	TP1 (GND) TP13	VR2 VR1	<ol style="list-style-type: none"> <li>1. Connect CH1 of oscilloscope across TP1 and Ground.</li> <li>2. Connect EXT. Trig. of oscilloscope across TP13 and Ground.</li> <li>3. Turn VR2 to fully counter clockwise.</li> <li>4. Input color bar with 100% white signal to VIDEO INPUT.</li> <li>5. Adjust VR1 so that chrome level becomes 35m Vp-p.</li> <li>6. Adjust VR2 so that V-Sync level becomes 150mVp-p ± 10mV.</li> </ol>	Fig. 4

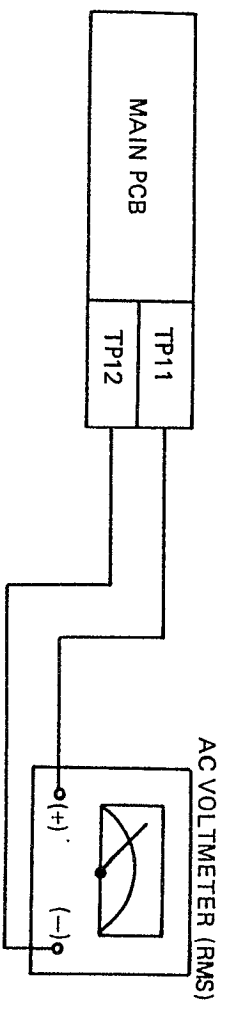


Fig. 5

No.	Item	Test point	Adjustment point	Method	Connection Figure
5	REC Bias Current	TP11 TP12	VR200	<ol style="list-style-type: none"> <li>1. Set the REC status by the blank tape. (Do not set the PAUSE. In PAUSE mode, the bias oscillation is stopped.)</li> <li>2. Connect the AC voltmeter to TP11 and TP12.</li> <li>3. Adjust by VR200 so that the voltage becomes 21mV.</li> </ol>	Fig. 5

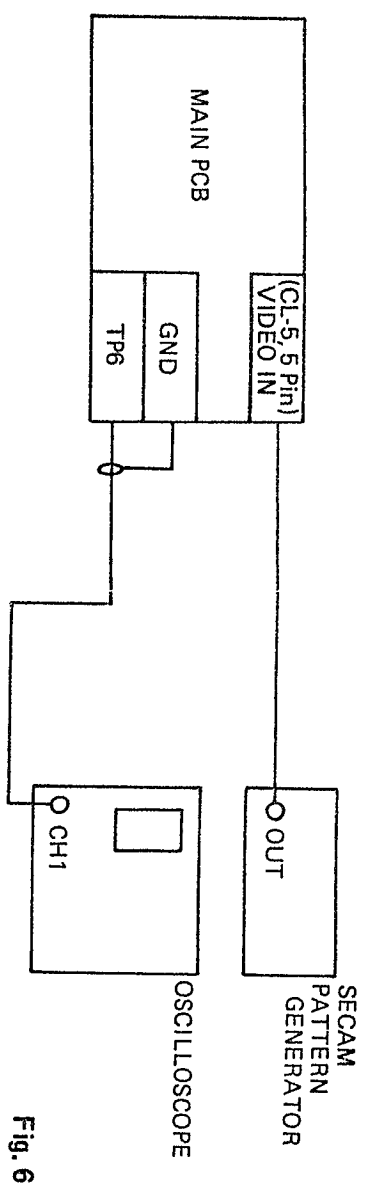


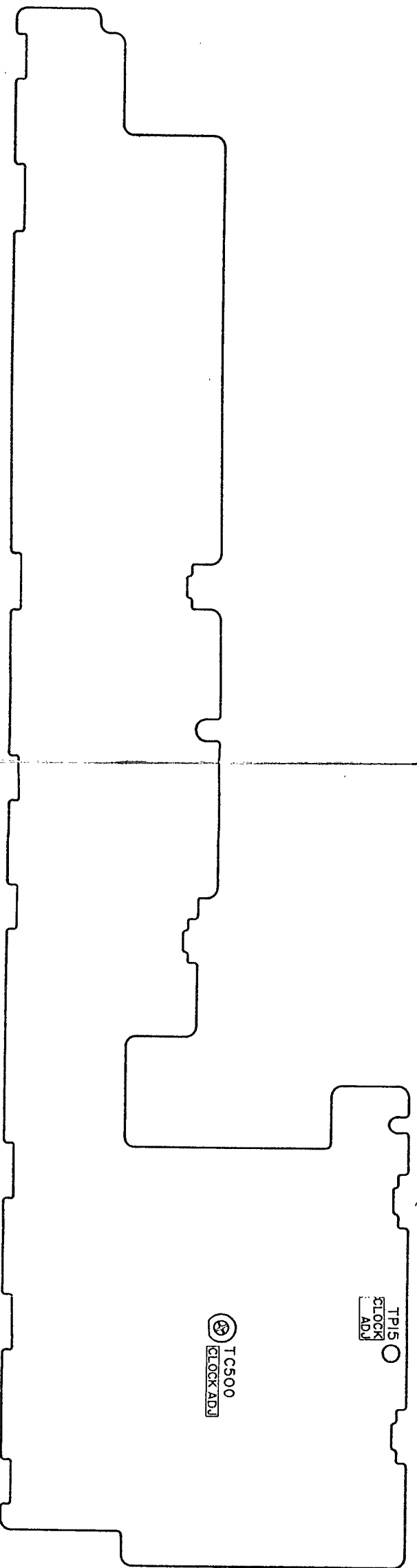
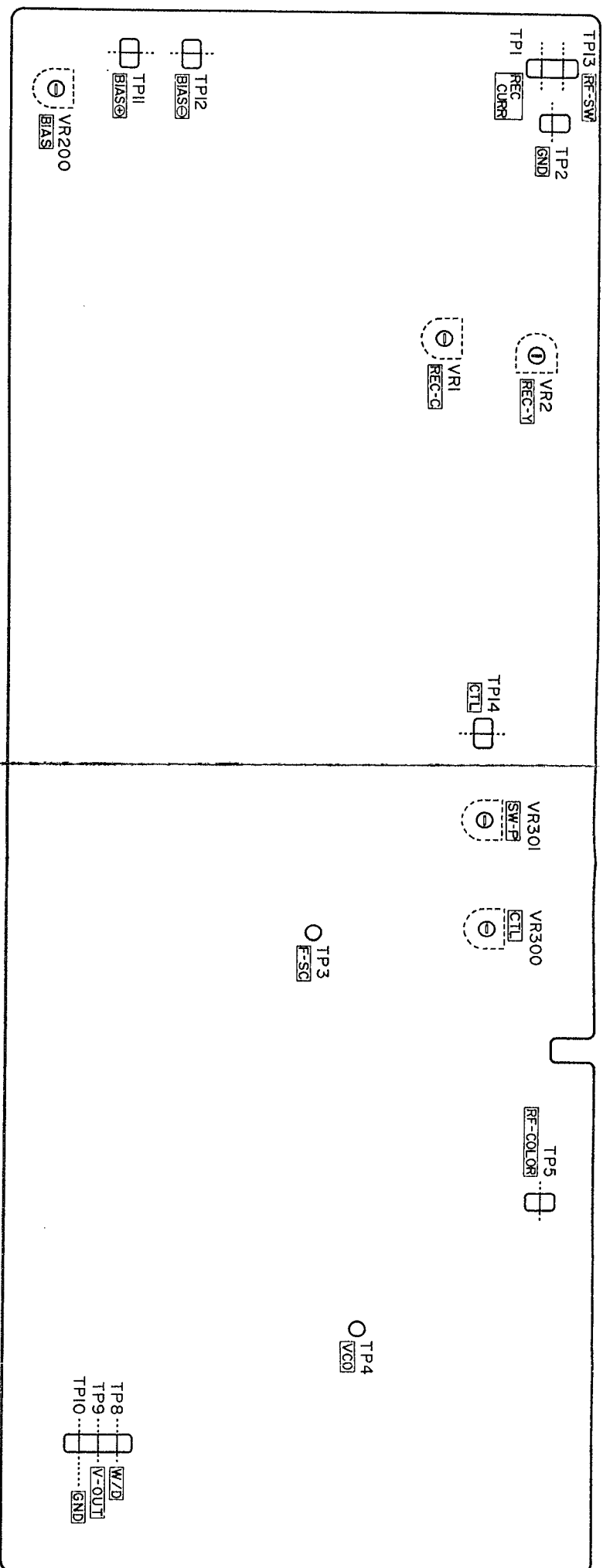
Fig. 6

No.	Item	Test point	Adjustment point	Method	Connection Figure
6	SECAM 1/2 fH Tune Adjustment (Rec. Mode) Blank tape	TP6 GND	L15	<ol style="list-style-type: none"> <li>1. Connect the equipment as shown in Fig. 6.</li> <li>2. Input SECAM color bar to VIDEO IN.</li> <li>3. Adjust L15 to make maximum output level.</li> </ol>	Fig. 6

\* Note: Require this adjustment for ME-SECAM model only.

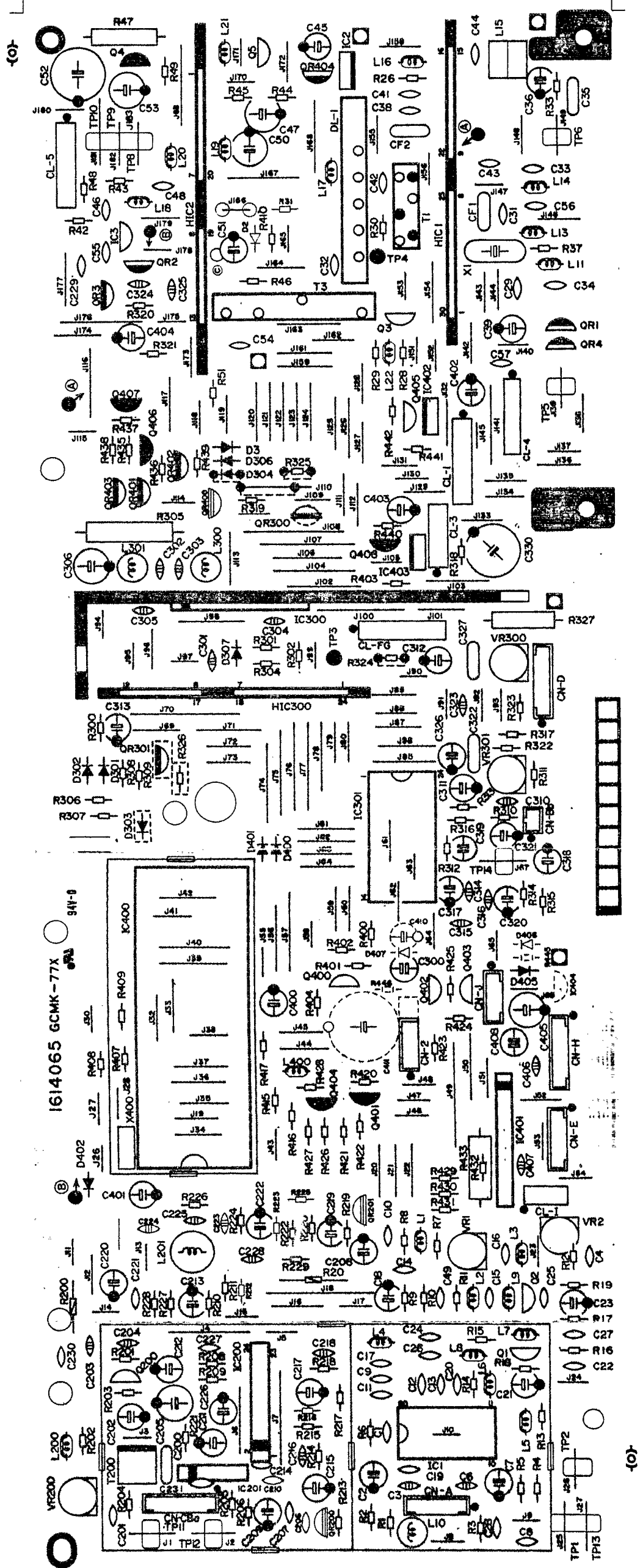


# TEST POINTS AND ALIGNMENT POINTS



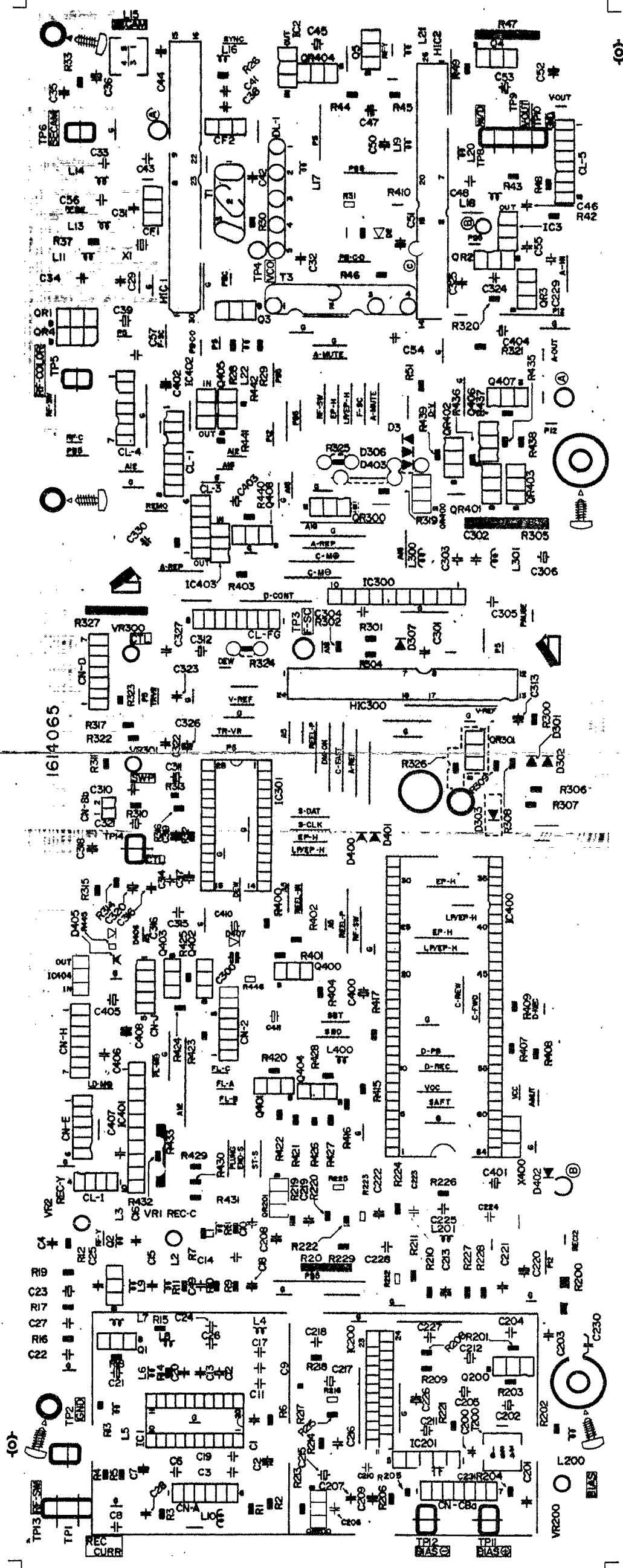
P.C. BOARD TOP AND BOTTOM VIEWS

Main PCB (Top View)





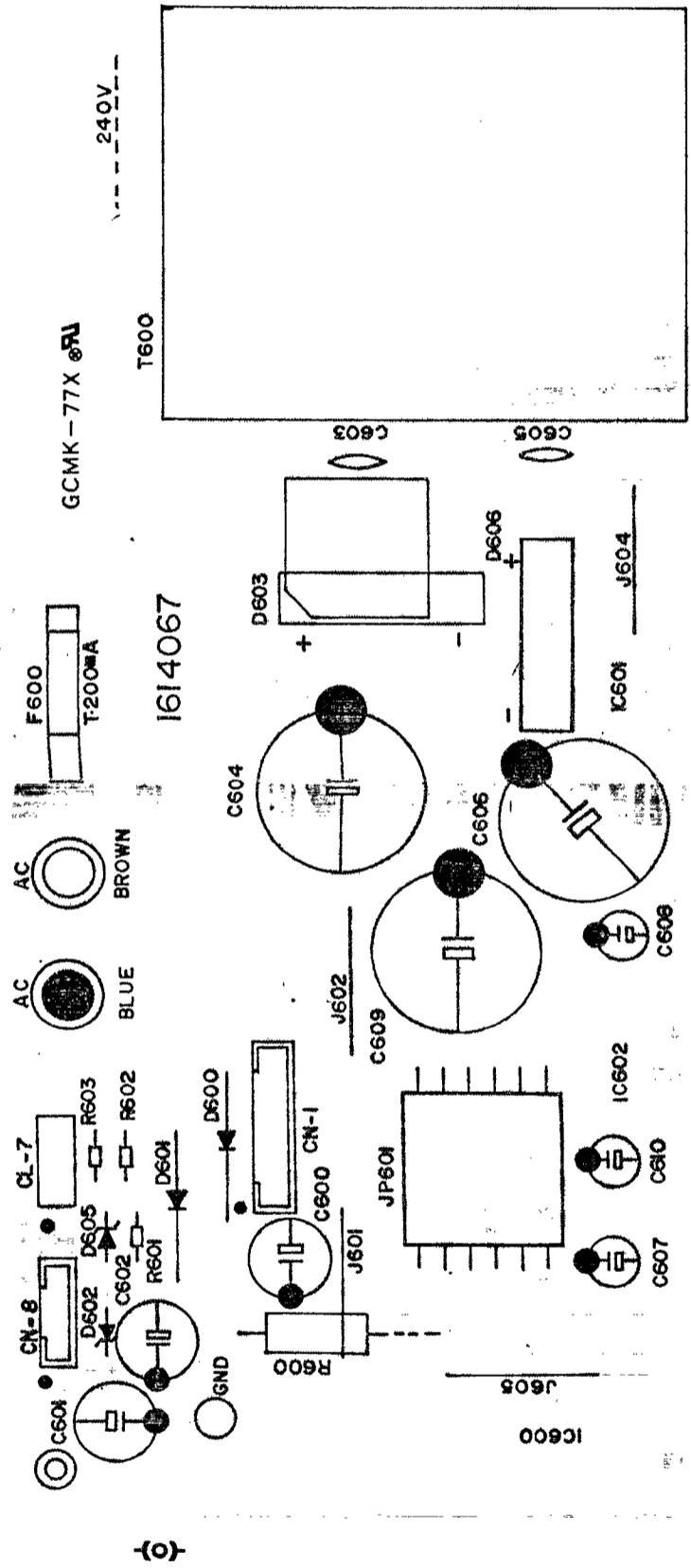
Main PCB (Bottom View)



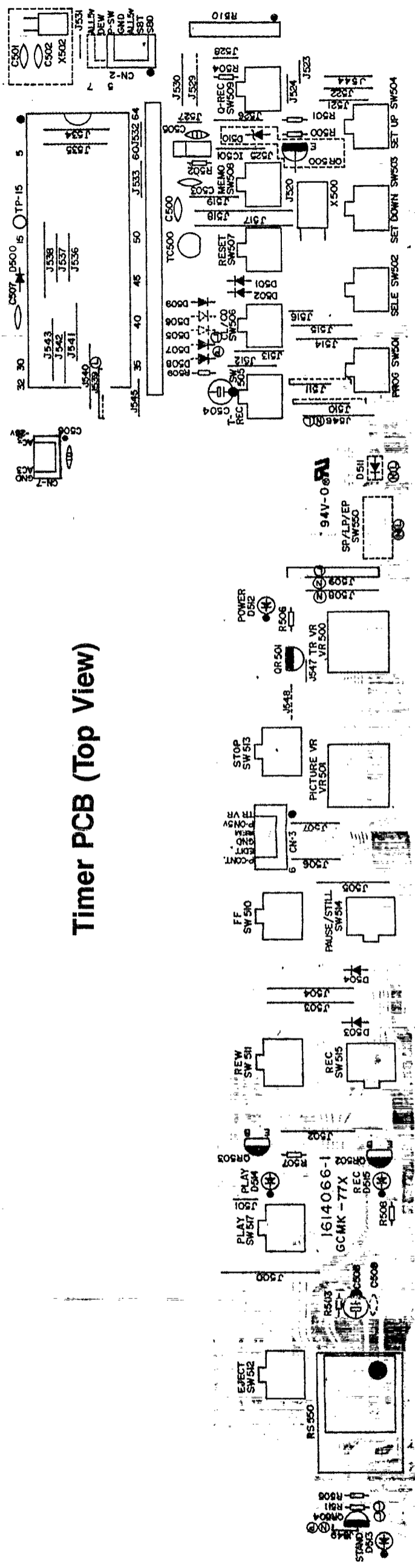
(01)

(01)

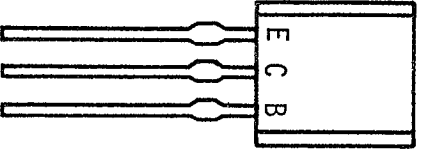
# Power Supply PCB (Top View)



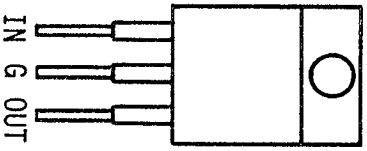
# Timer PCB (Top View)



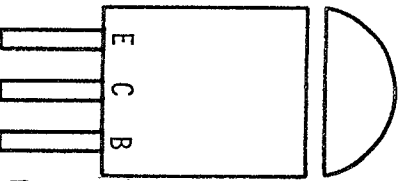
# LEAD IDENTIFICATION (IC, TRANSISTOR)



2SA933  
2SC1740  
2SA608SP  
2SA536SP



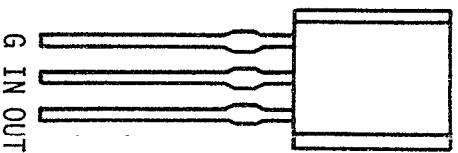
AN7812F  
NJM7812FA  
AN7818F  
NJM7818FA



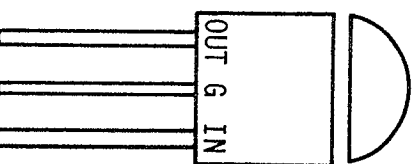
2SC2058  
2SC2839



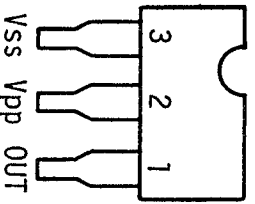
2SC2060  
2SB1010  
2SD1384  
2SB892  
2SD400  
2SD1207



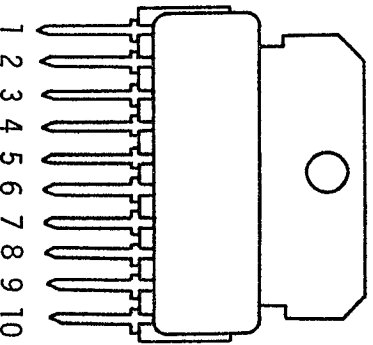
DTA124  
DTA124  
2SC3400  
2SC1346  
DTA144WS



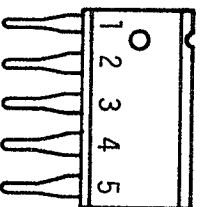
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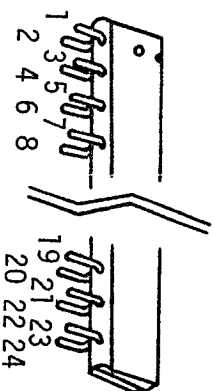
MN1208-Q



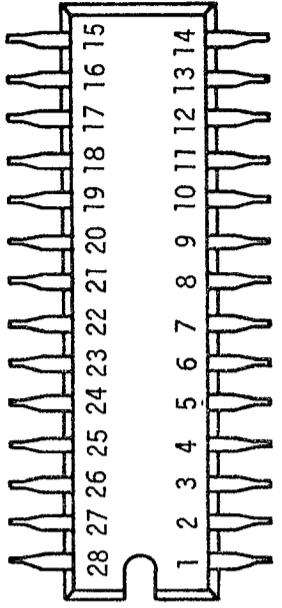
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BA6238A  
TA7288P



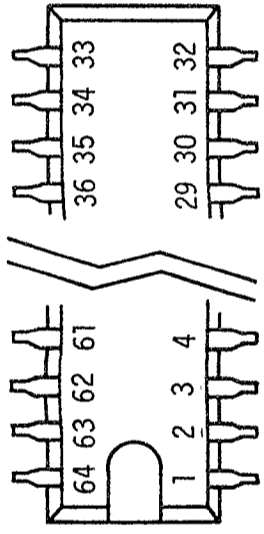
BA7755



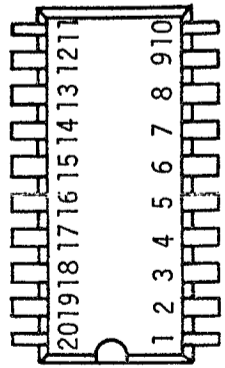
BA7751ALS



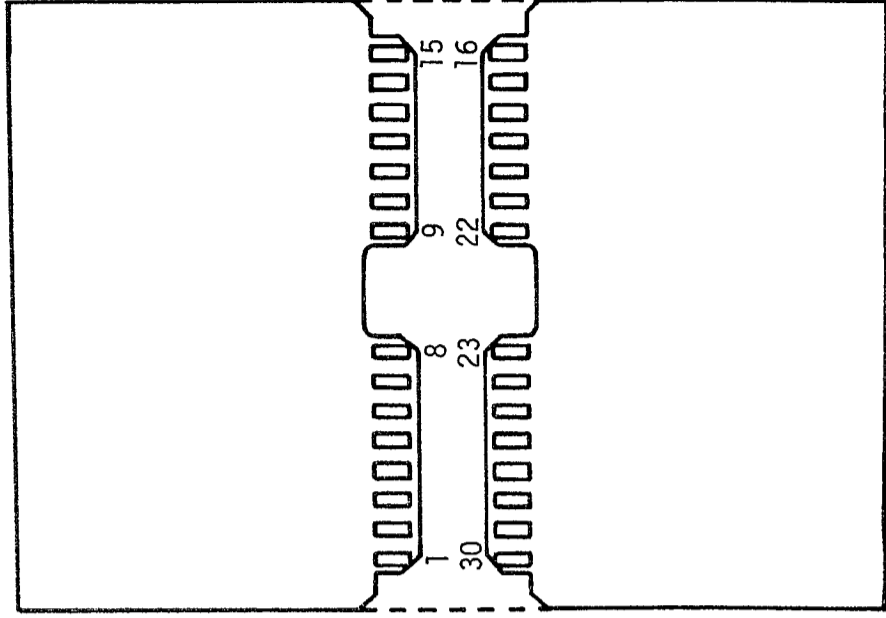
14DN300



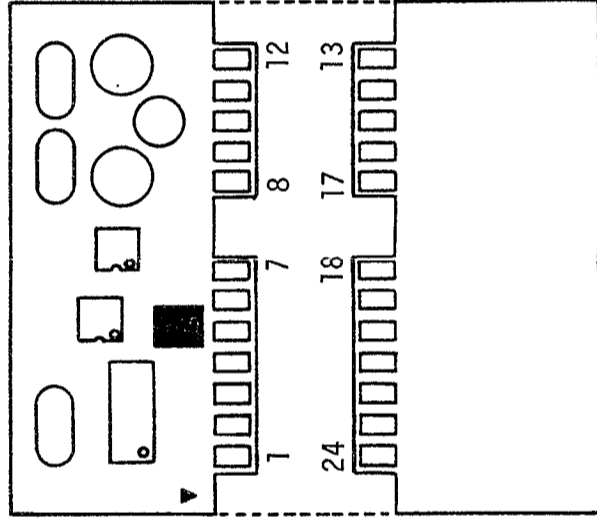
14DN244C  
14DN323



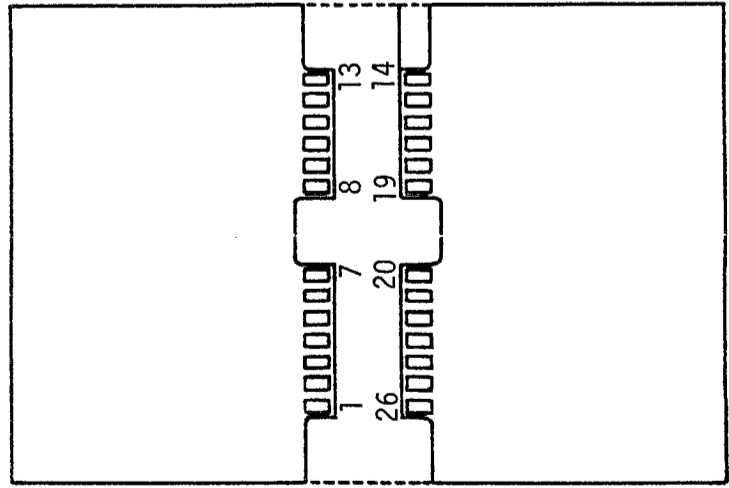
AN3331K



1812421  
(VIDEO-C)

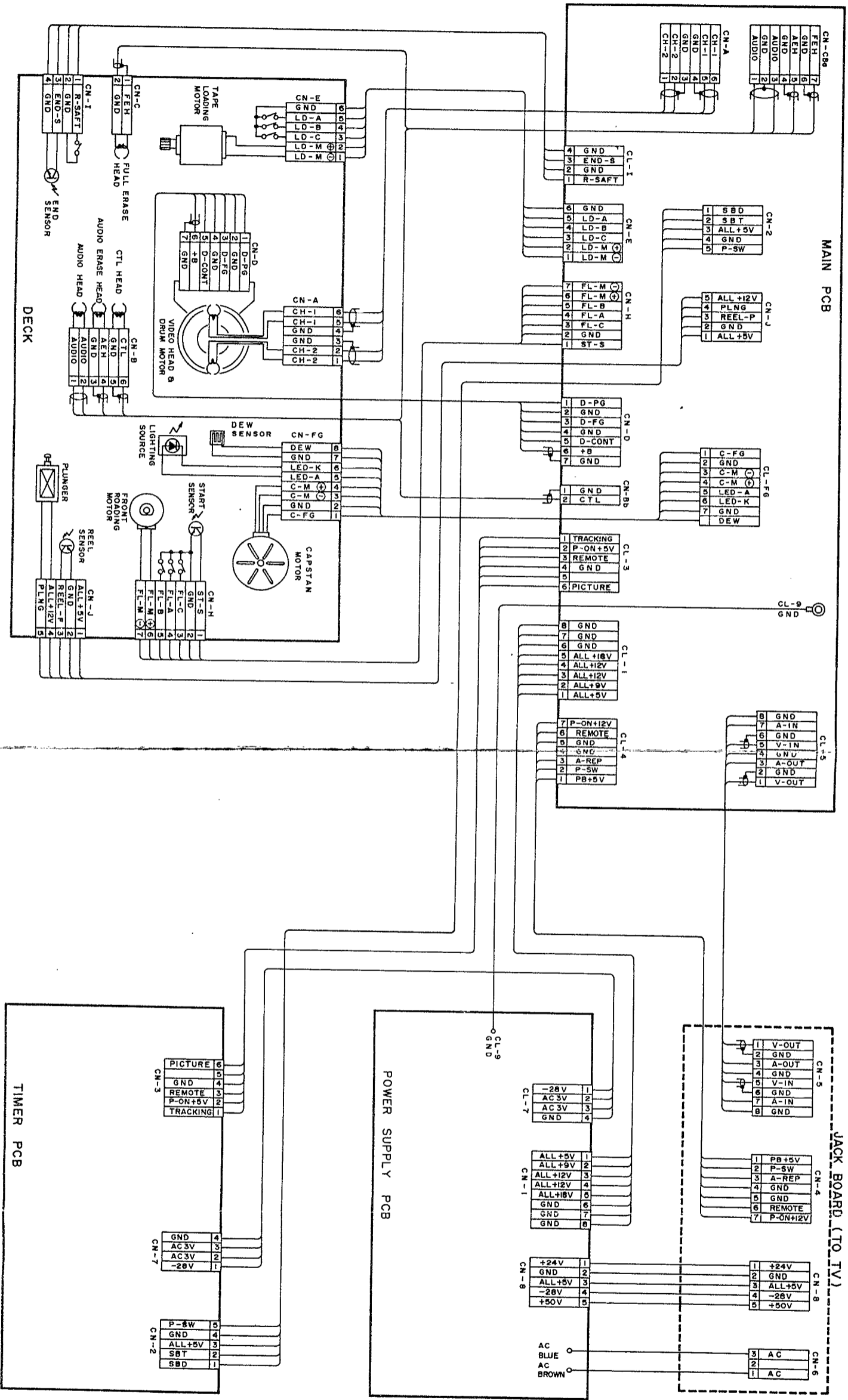


1812120  
(SERVO)

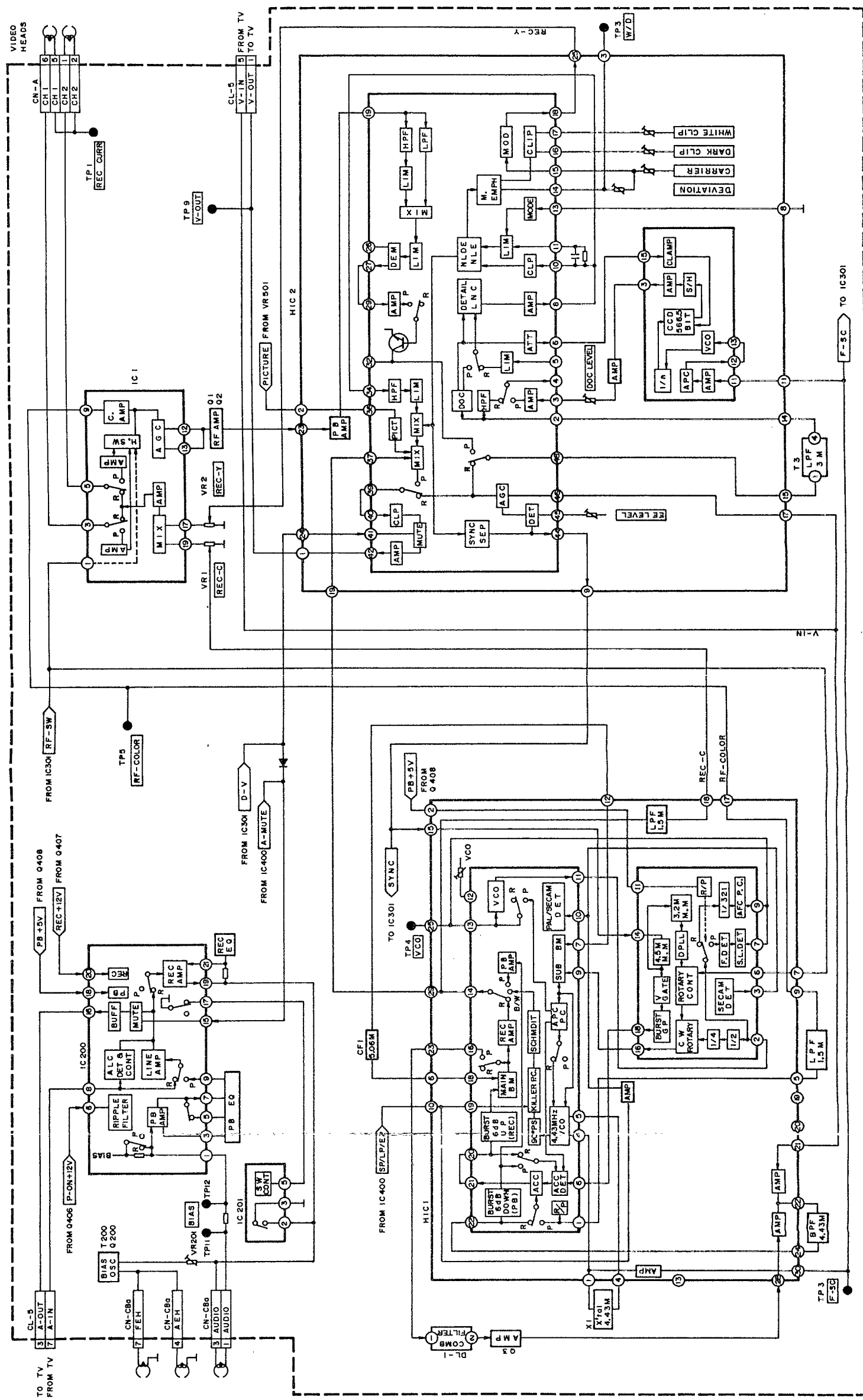


1812119  
(VIDEO-Y)

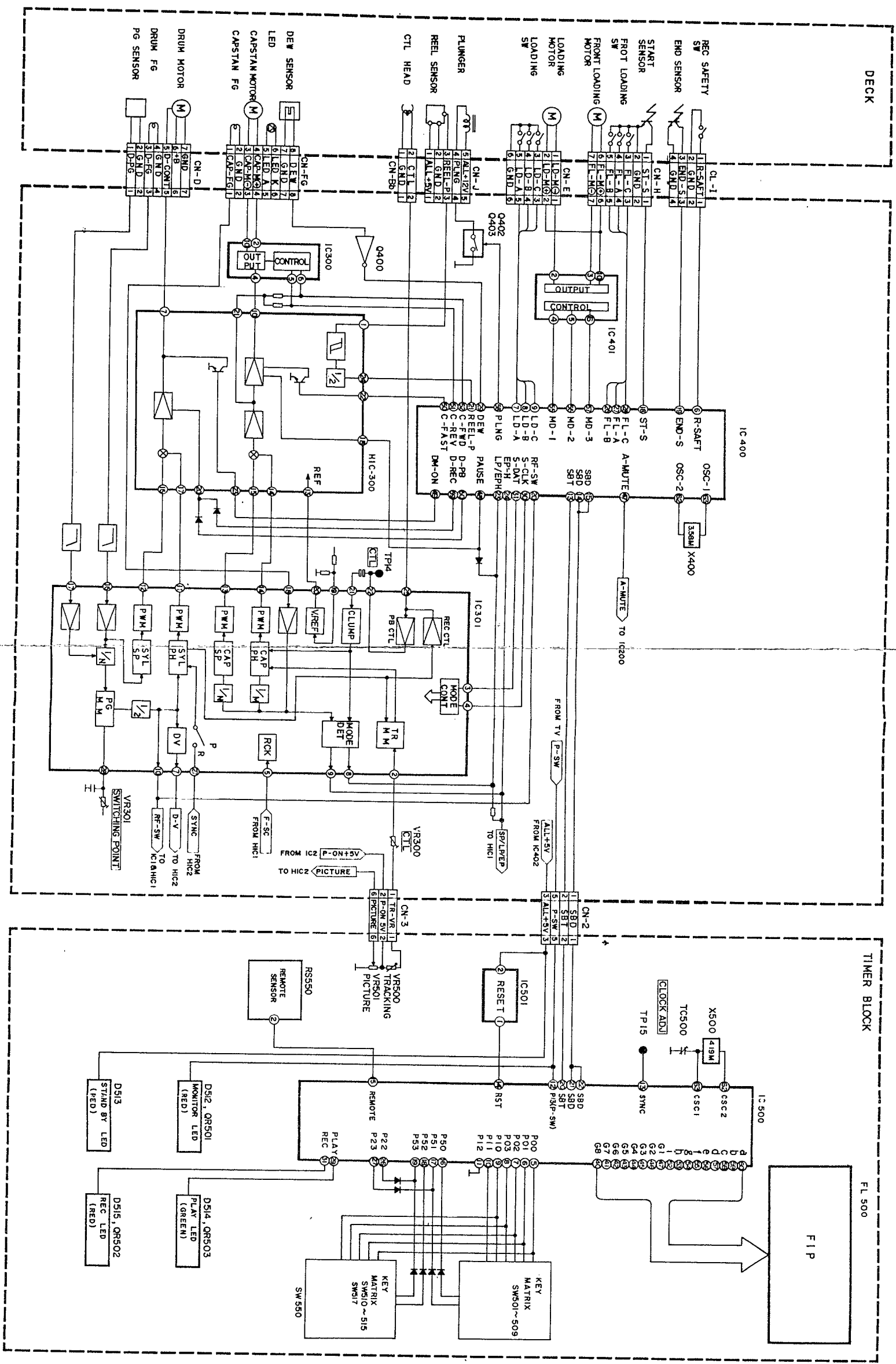
# WIRING DIAGRAM



# BLOCK DIAGRAM (VIDEO/AUDIO)



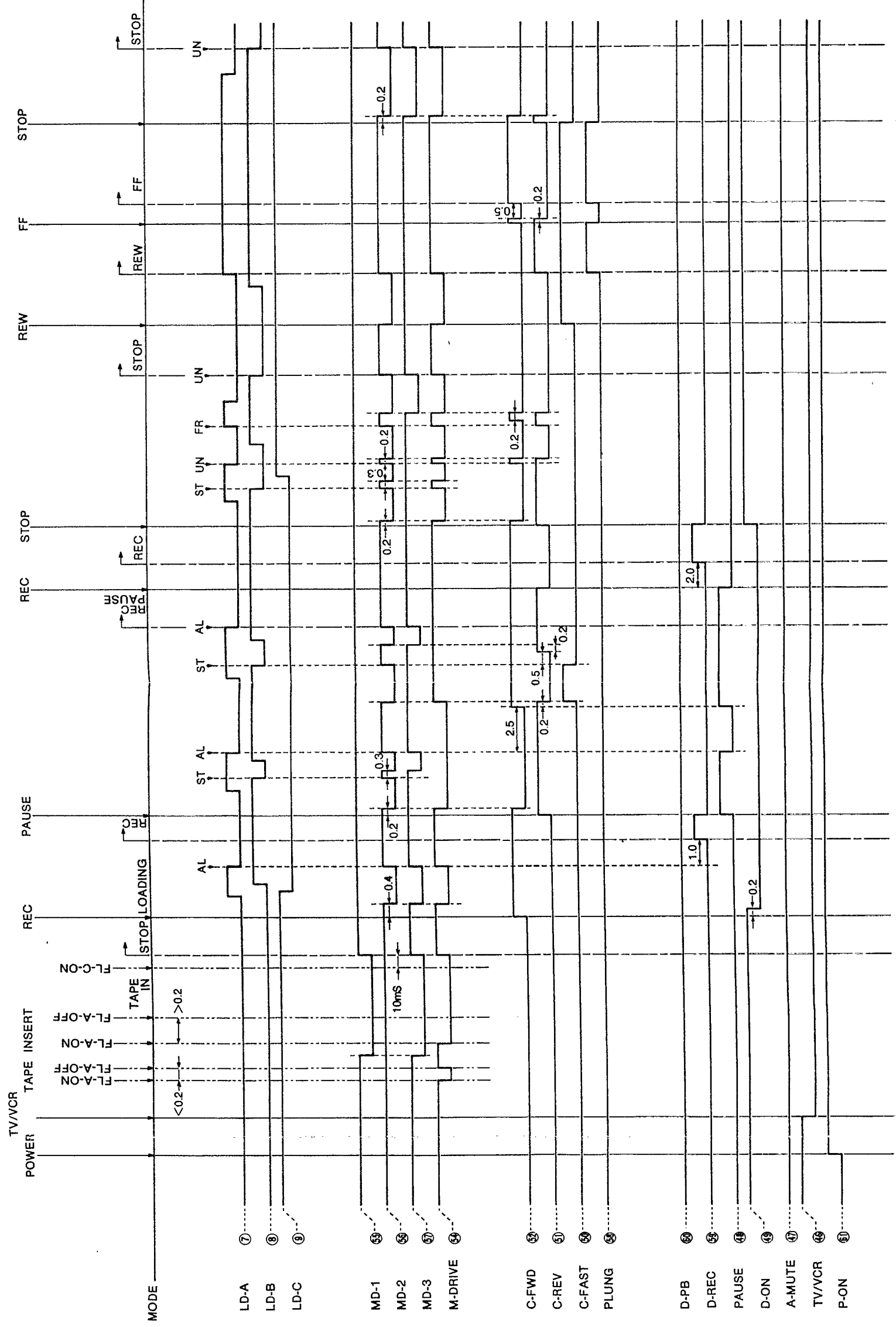
# BLOCK DIAGRAM (SERVO/SYSCON/TIMER)



# TIMING CHARTS

## SYSTEM CONTROL SERVO

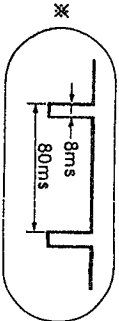
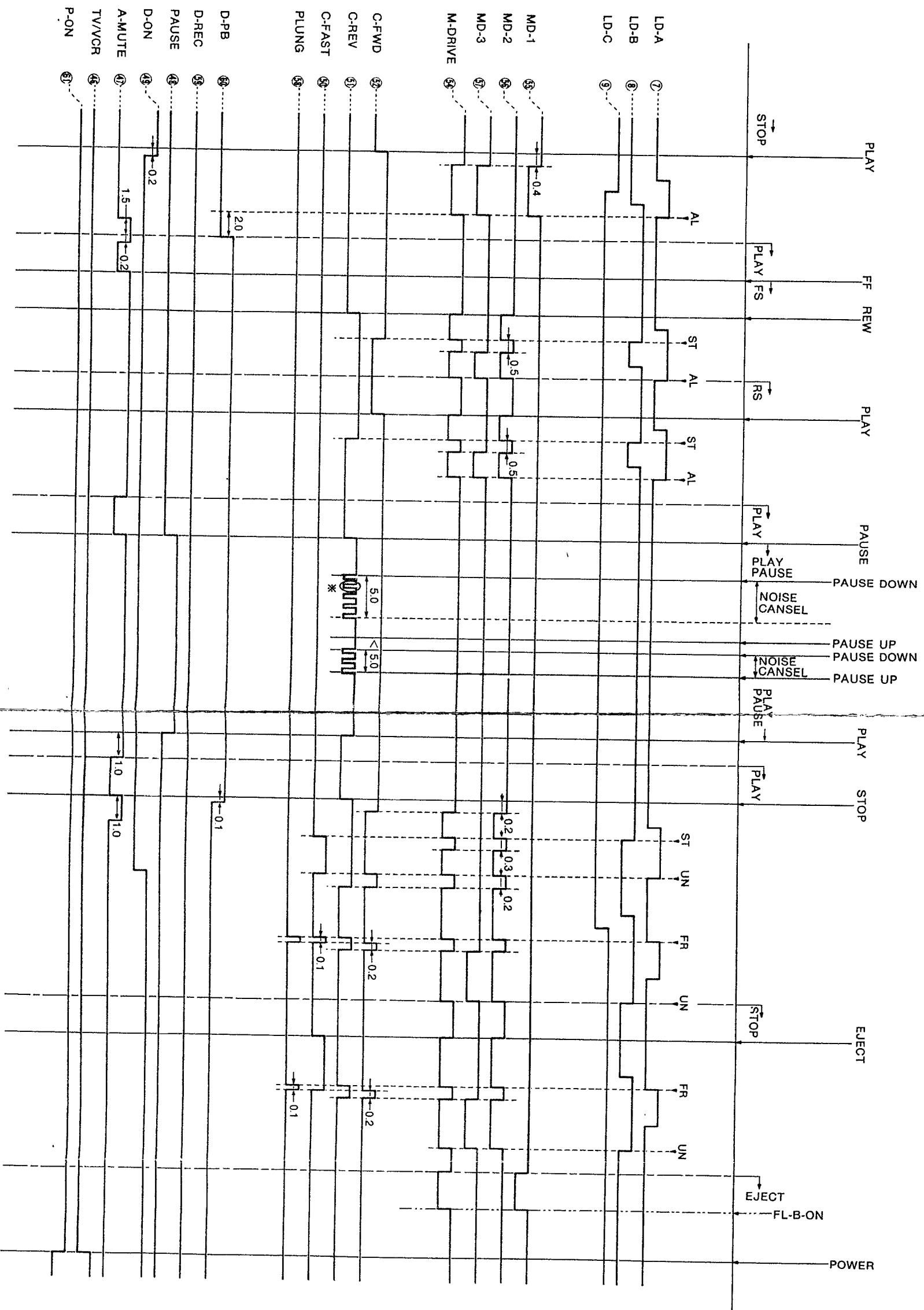
1 POWER → TV/VCR → TAPE INSERT → REC → PAUSE → REC → STOP → REW → FF → STOP



**NOTICE**  
All time values are in second.

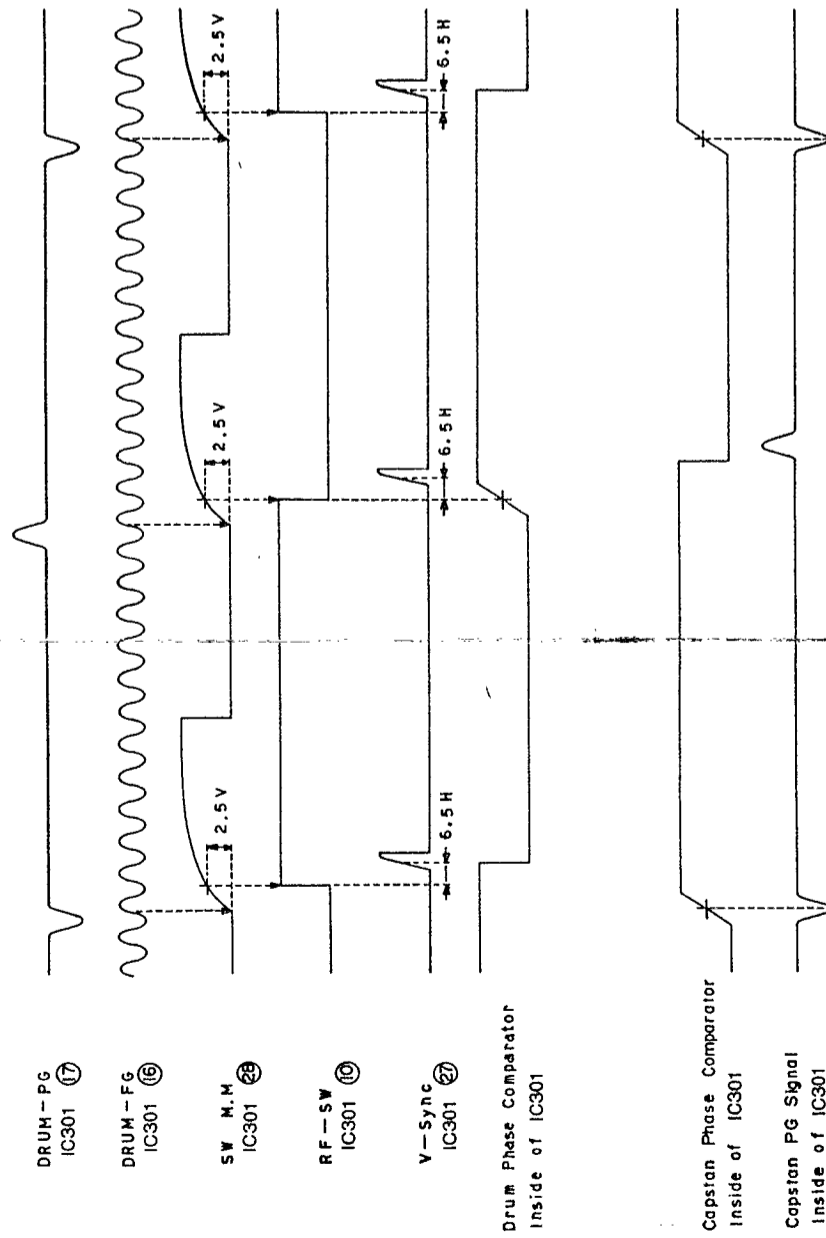


2 STOP → PLAY → FF(FS) → REW(RS) → PLAY → PAUSE → NOISE CANCEL → PAUSE → PLAY → STOP → EJECT → POWER

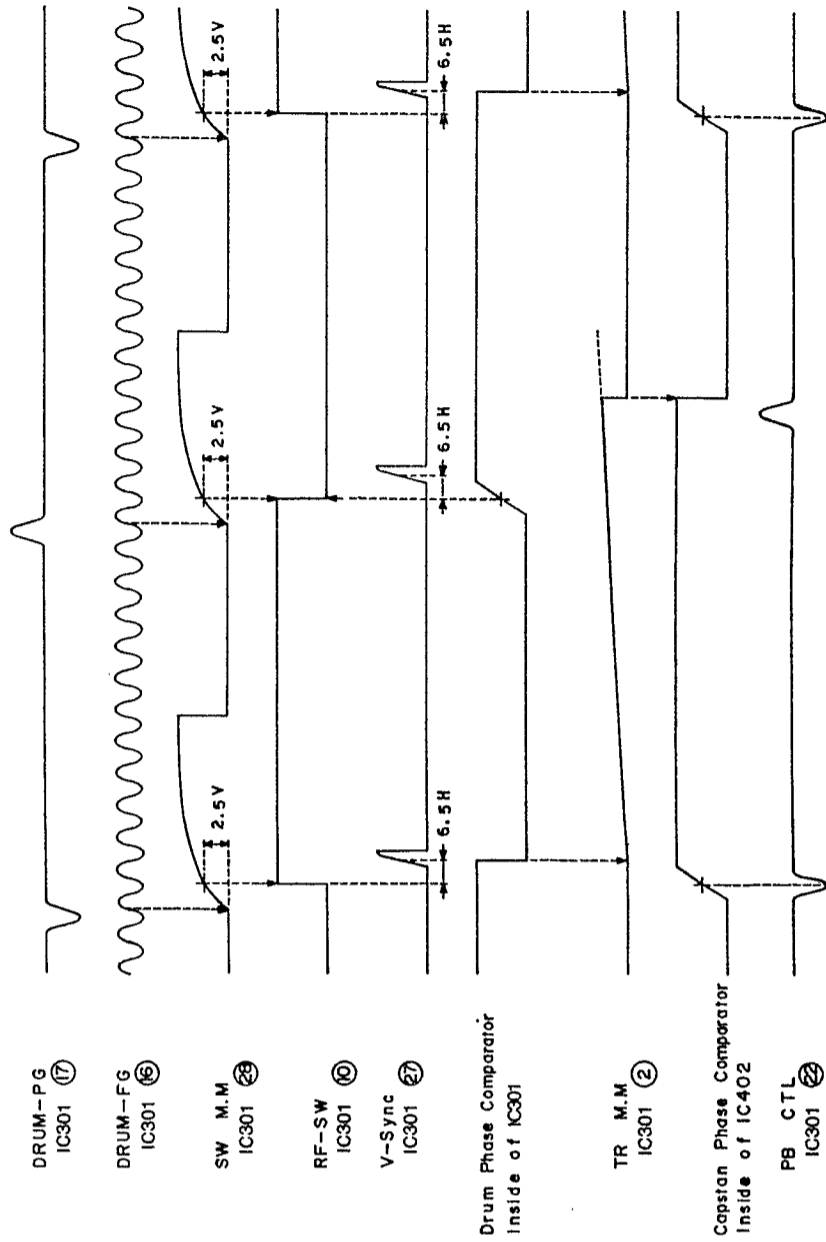


Under "NOISE CANCEL MODE"  
If "NOISE CANCEL MODE" is more than "5"sec. it will  
transfer to "PAUSE MODE" automatically.

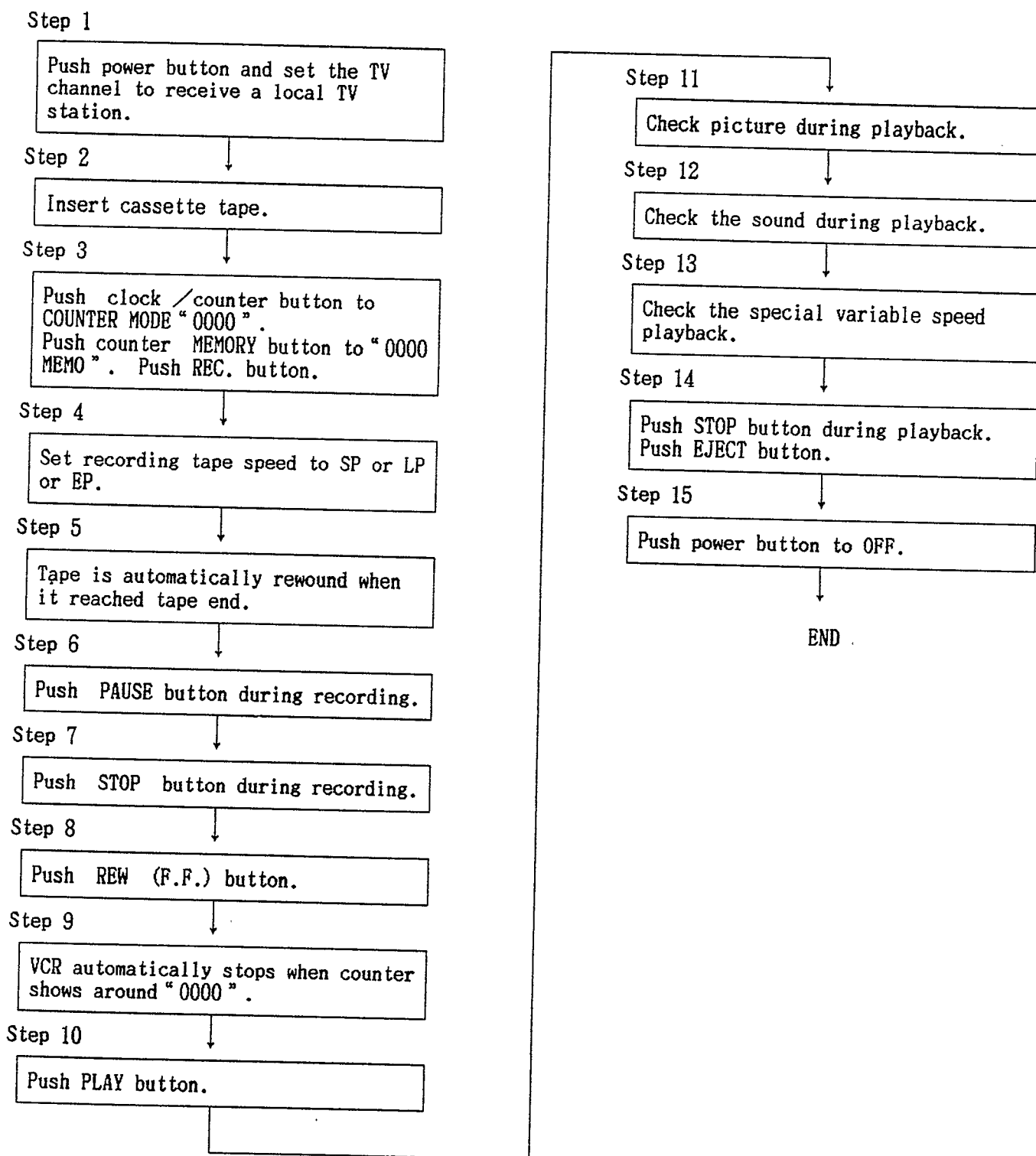
## DRUM AND CAPSTAN SERVO (RECORD MODE)



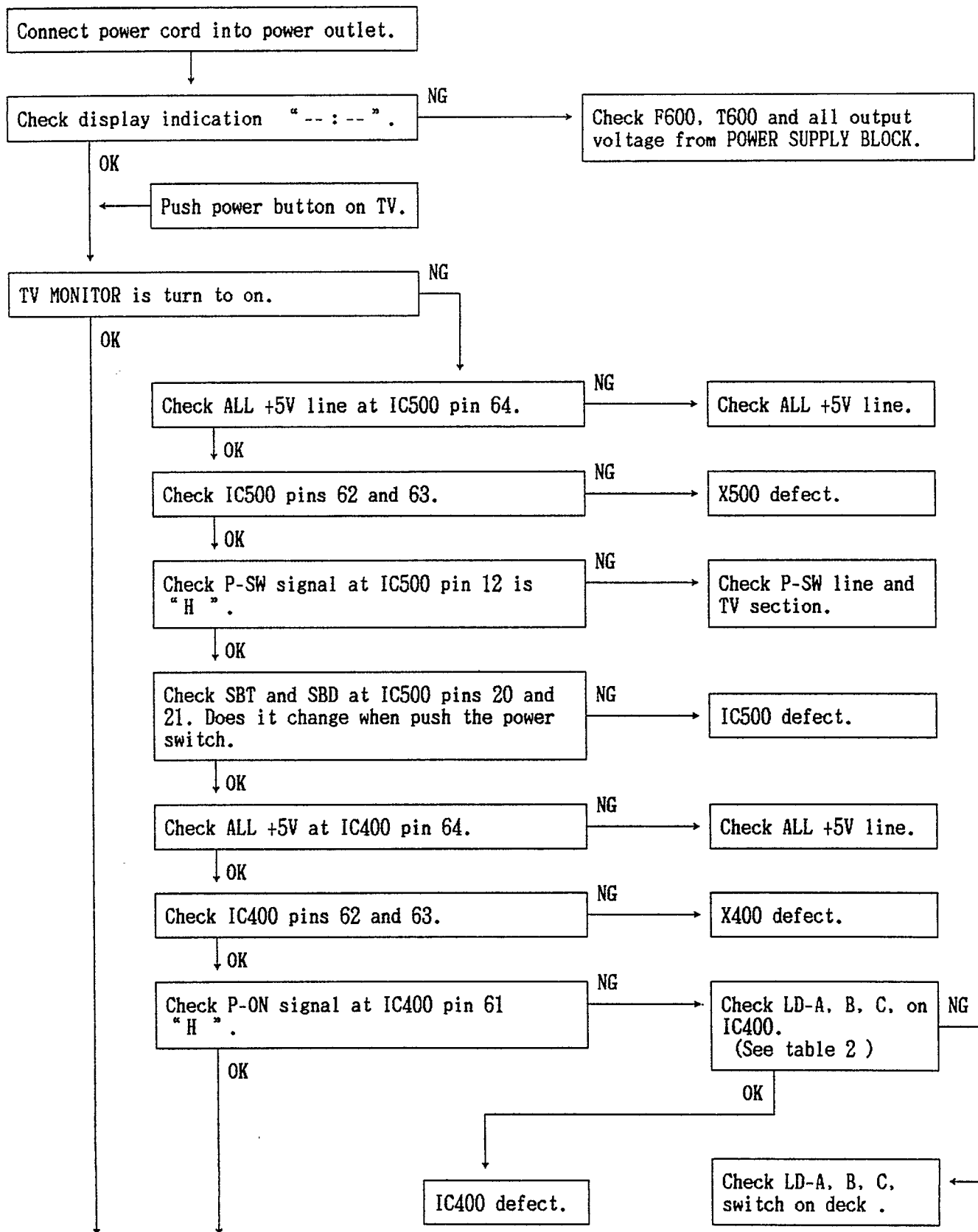
## DRUM AND CAPSTAN SERVO (PLAYBACK MODE)



# TROUBLESHOOTING GUIDE



Step 1



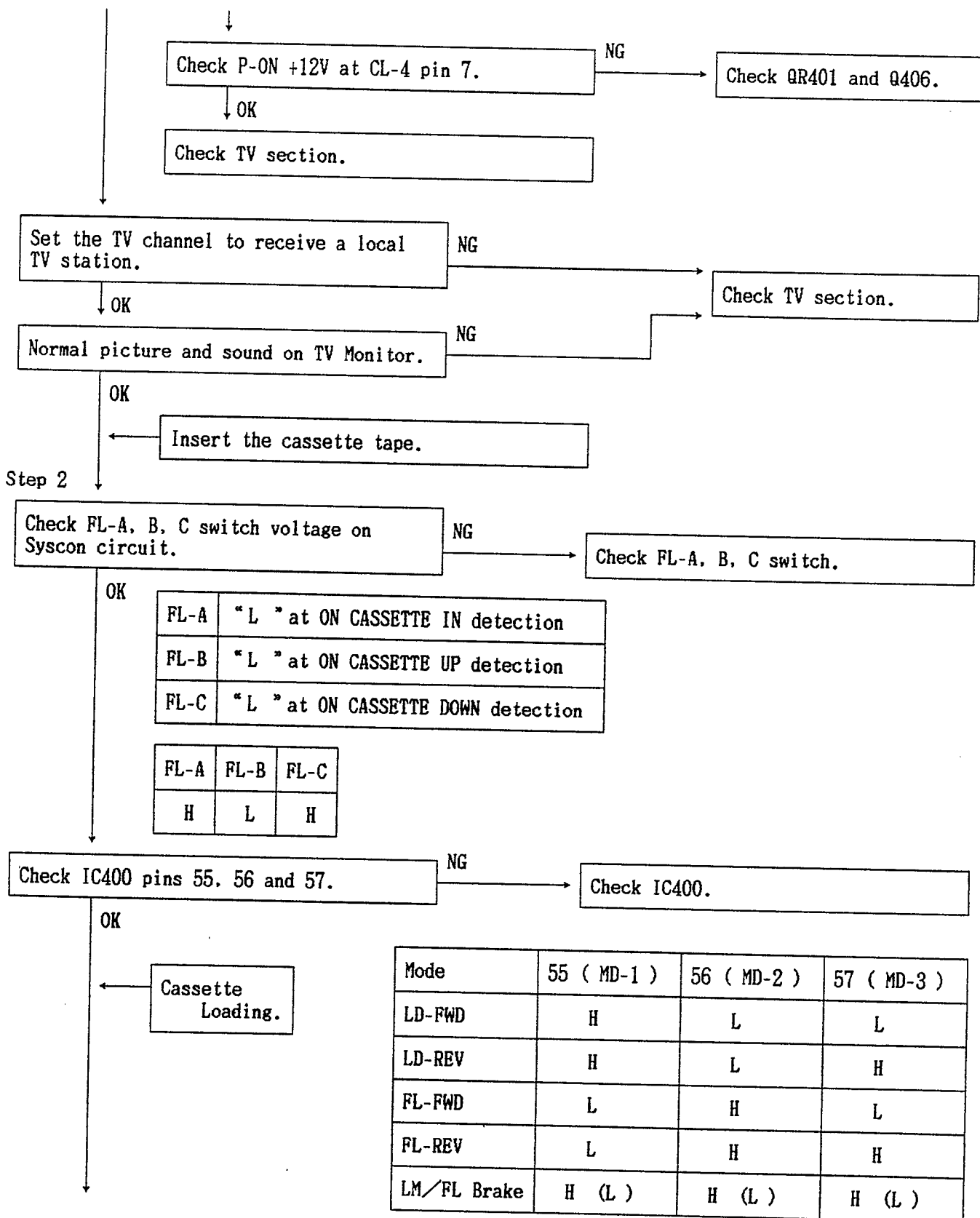
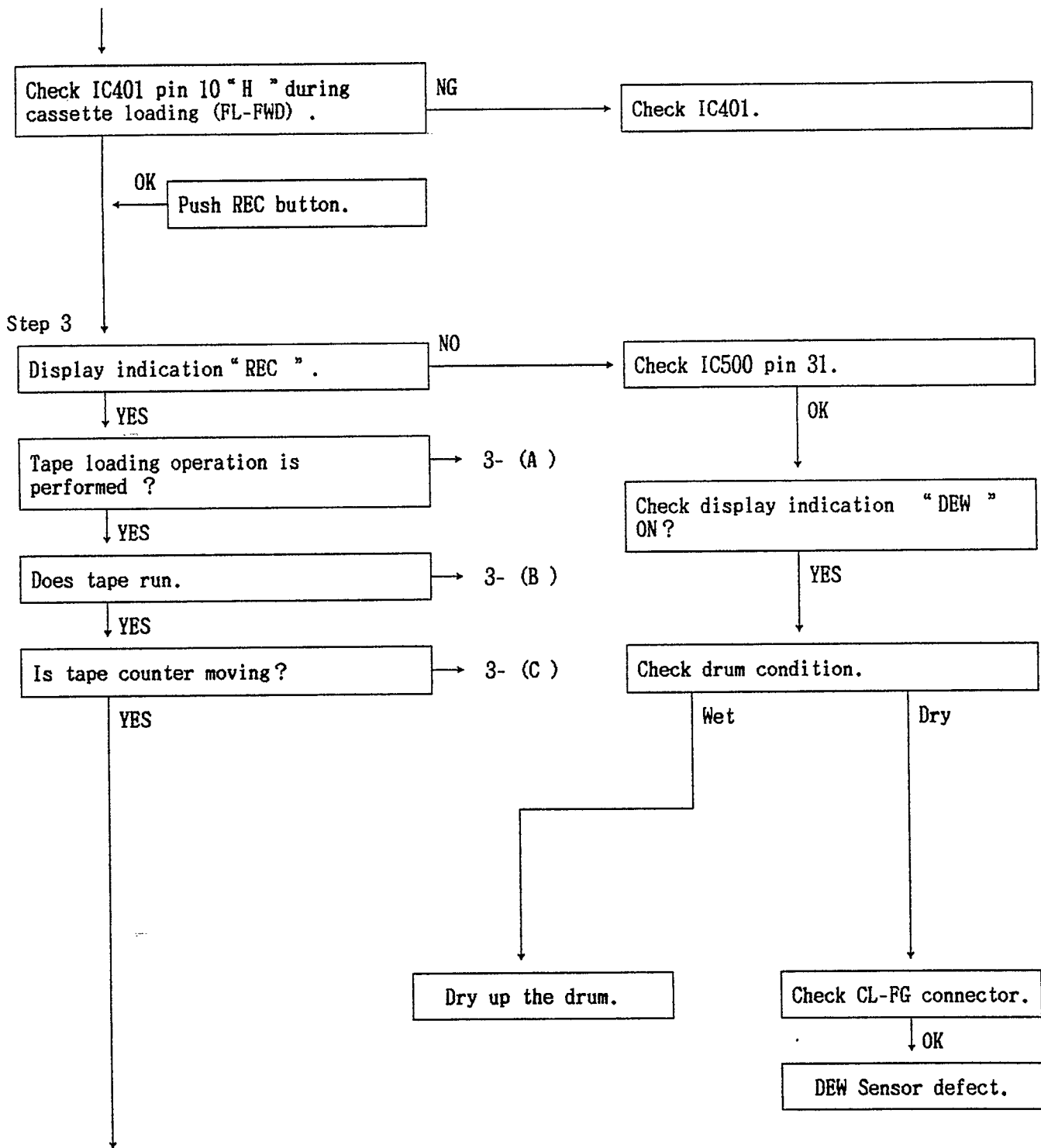


Table 1.



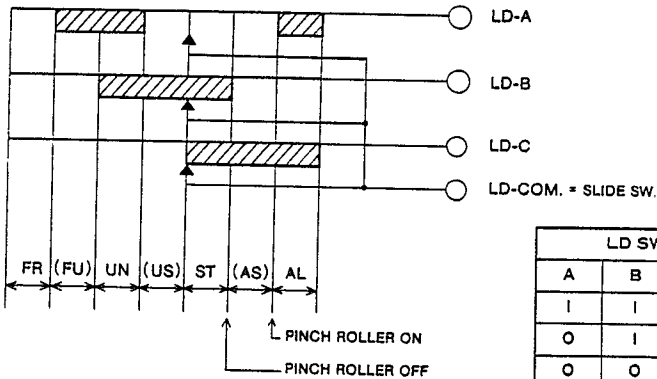
3- (A)

Check LD-A, B, C. (See Table 2.)

OK

\* When SYSTEM CONTROL IC has run away SYSTEM CONTROL IC will not accept any mode. At this time, must AC CORD disconnect to reset the SYSTEM CONTROL IC.

Position of loading switch



LD SW			Symbol	Position
A	B	C		
1	1	1	FR (FR LOADING)	FF. REW
0	1	1	(FU)	
0	0	1	UN (UN-LOADING)	STOP EJECT
1	0	1	(US)	
1	0	0	ST (SHORT STOP)	Loading motor is stopped temporarily at unloading.
1	1	0	(AS)	
0	1	0	AL (AFTER-LOADING)	PLAY RECPAUSE SHORT REW

0:MAKE 1:BREAK  
Break means intermediate position.

Table 2.

Check IC401 pin 10 "H" and pin 2 "L".

OK

Check CN-E connector.

OK

Check loading motor.

NG

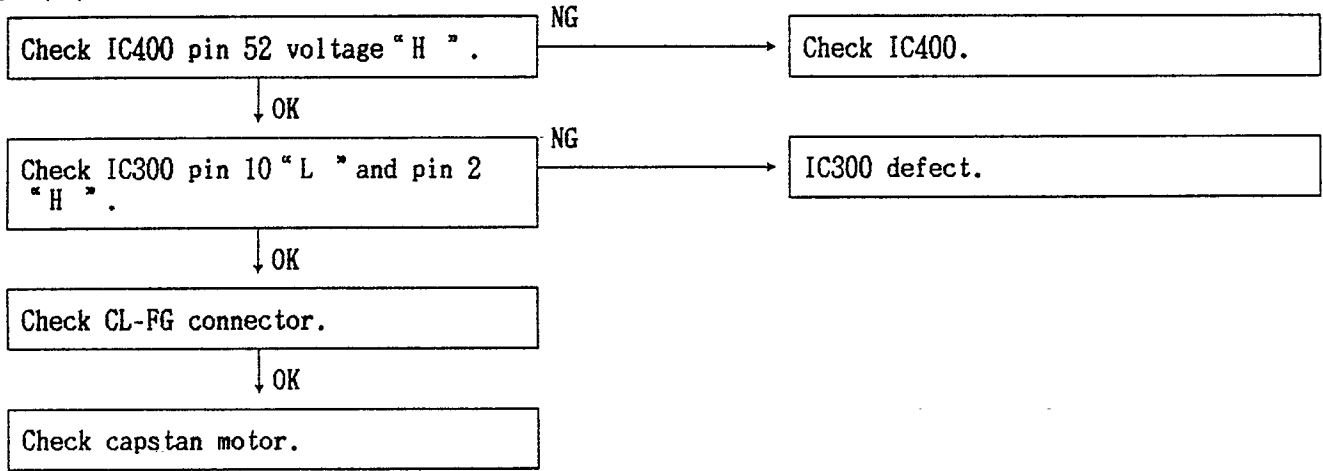
Check IC400 pins 55, 56 and 57 voltage.

NG

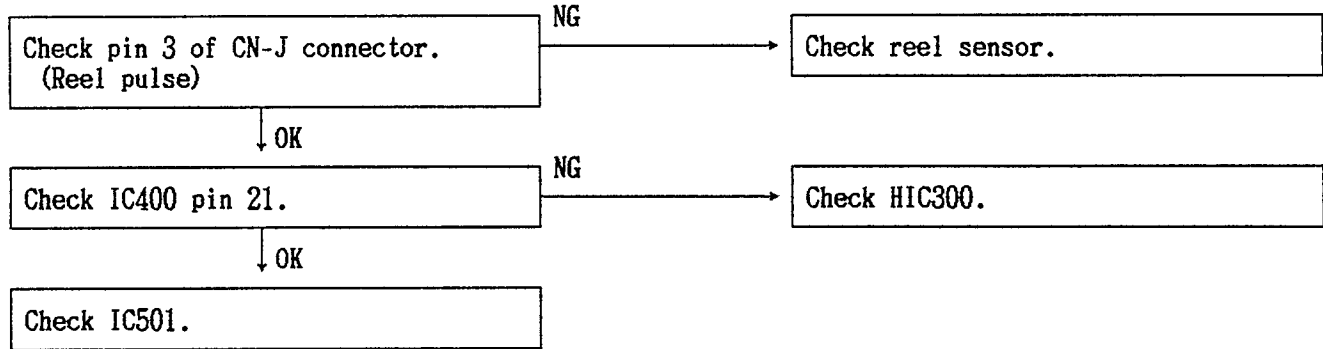
See Table 1.

Check IC400.

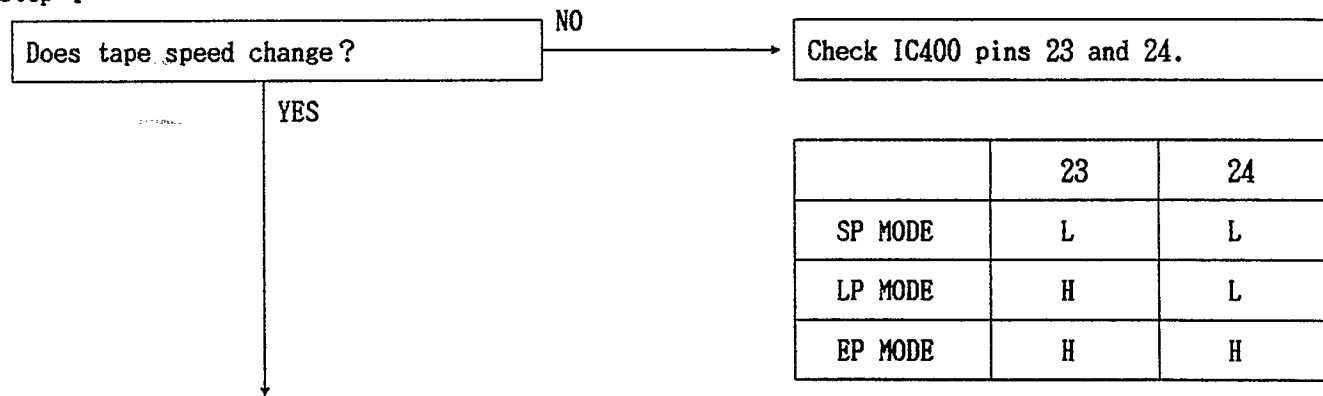
3- (B)



3- (C)



Step 4



	23	24
SP MODE	L	L
LP MODE	H	L
EP MODE	H	H



Step 5

Tape is automatically rewound at  
TAPE end.

YES

Step 5 OK, proceed to Step 6.

Check connection of CL-I pin 3  
"L".

NG

Check end sensor.

OK

Check IC400 pin 19 "H".

NG

Check Q401.

OK

Check Step 8.

Push PAUSE button during recording.

Step 6

Capstan motor is stopped?

NO

Check IC400 pin 48 "H".

NG

OK

Check IC400 pins 51 and 52 "H".

NG

OK

Check IC300 pins 2 and 10.

Check IC400 and IC500.

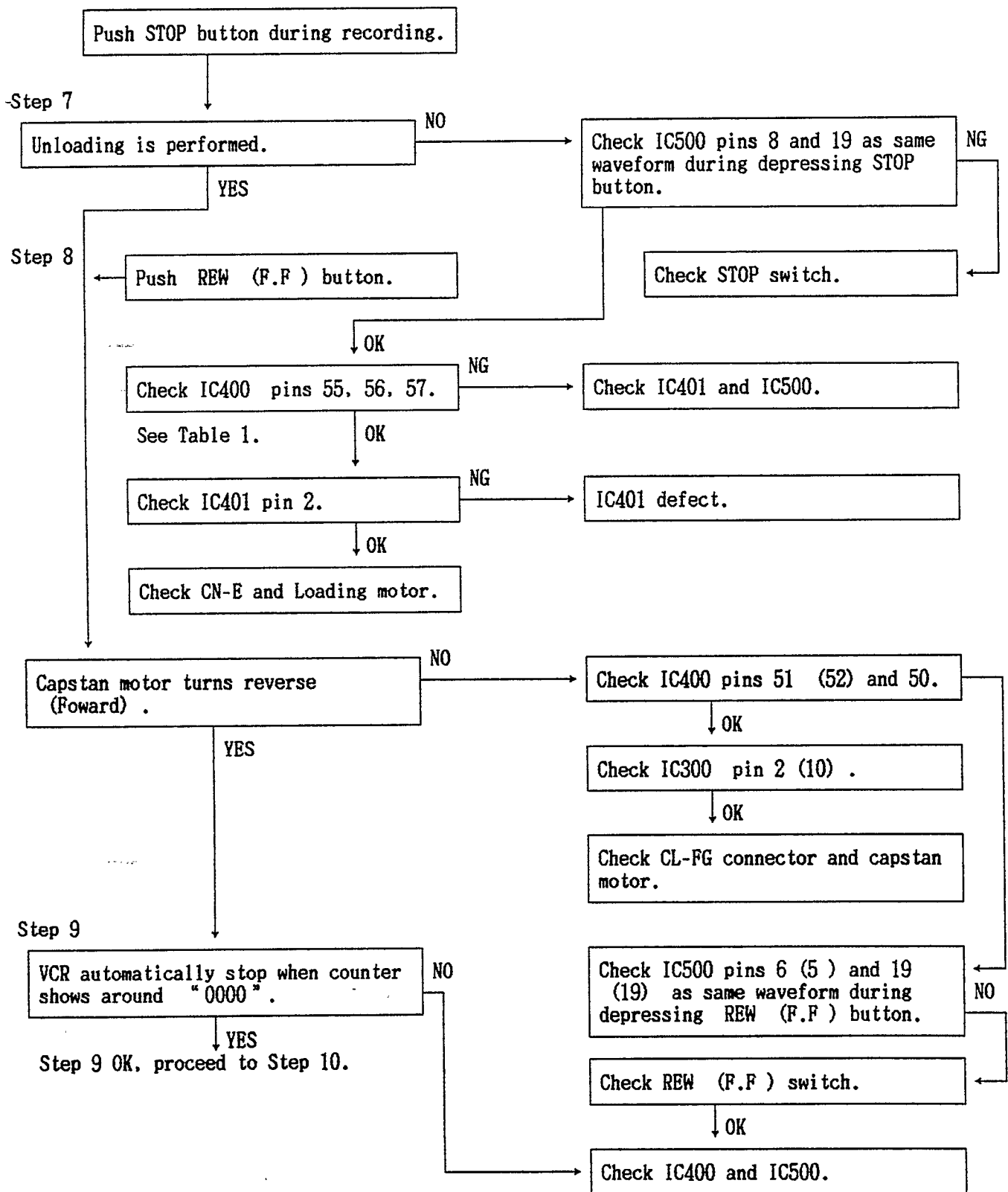
OK

Check IC500 pins 9 and 19 as same  
waveform during depressing PAUSE  
button.

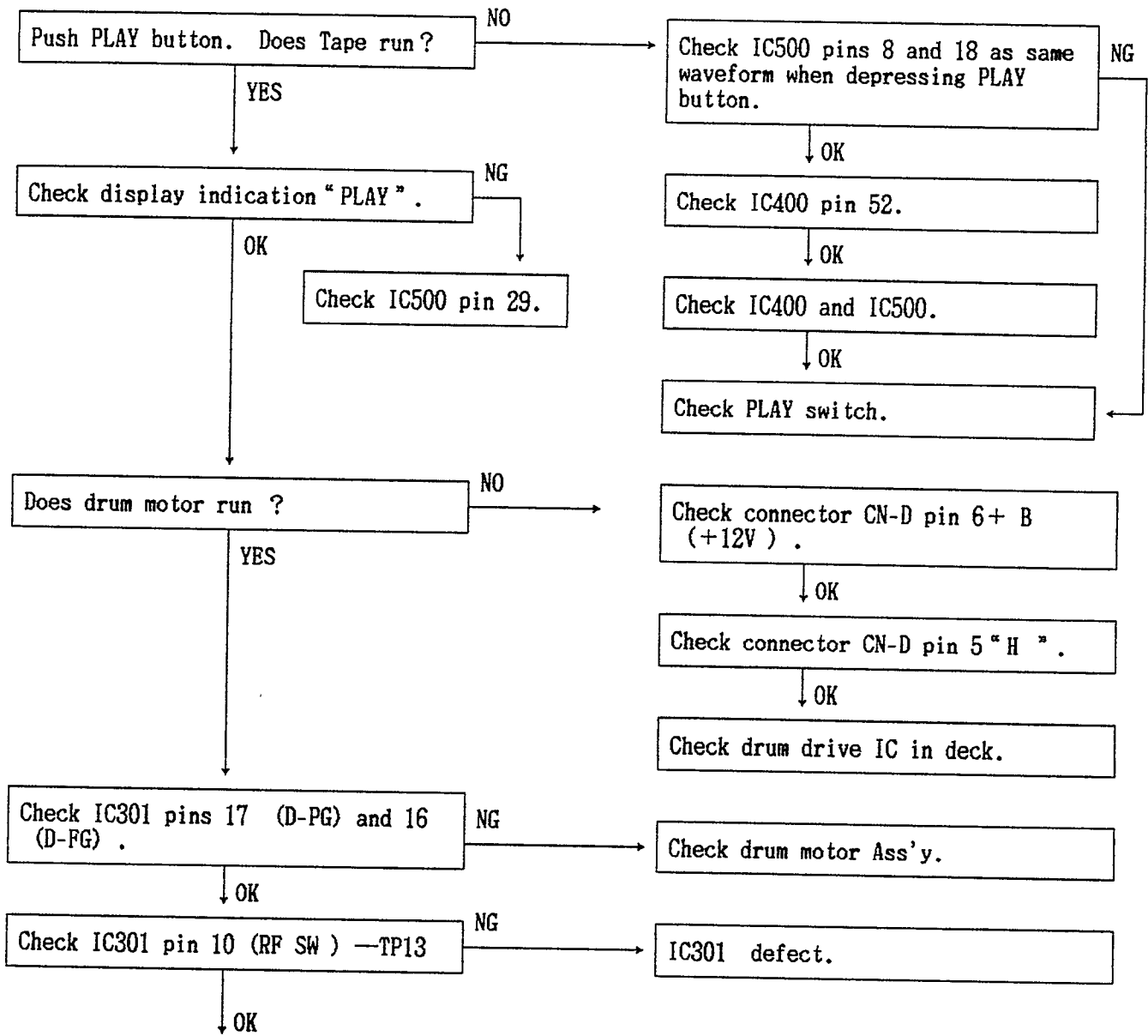
NG

Check PAUSE switch.

Step 6 OK, proceed to Step 7.

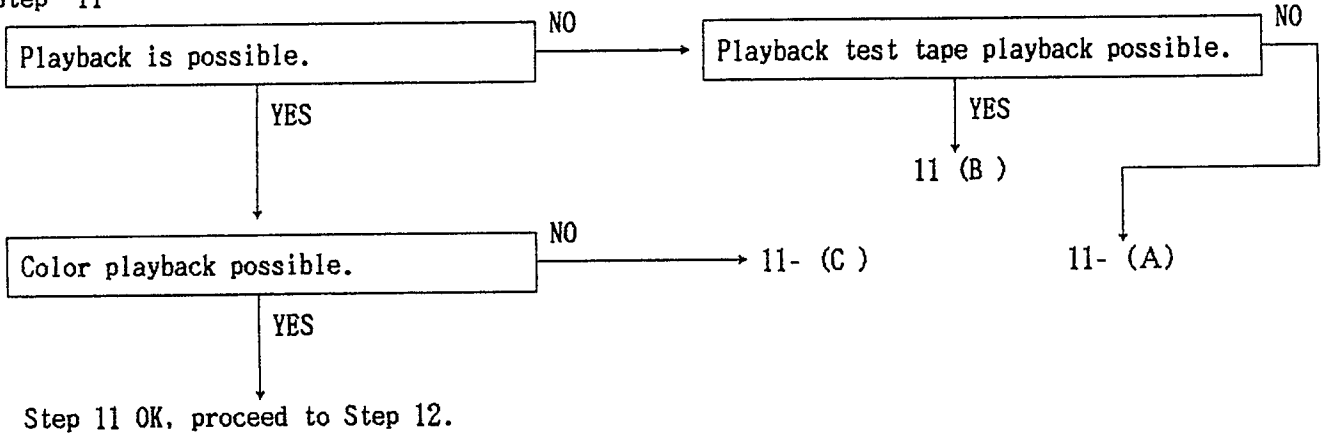


Step 10

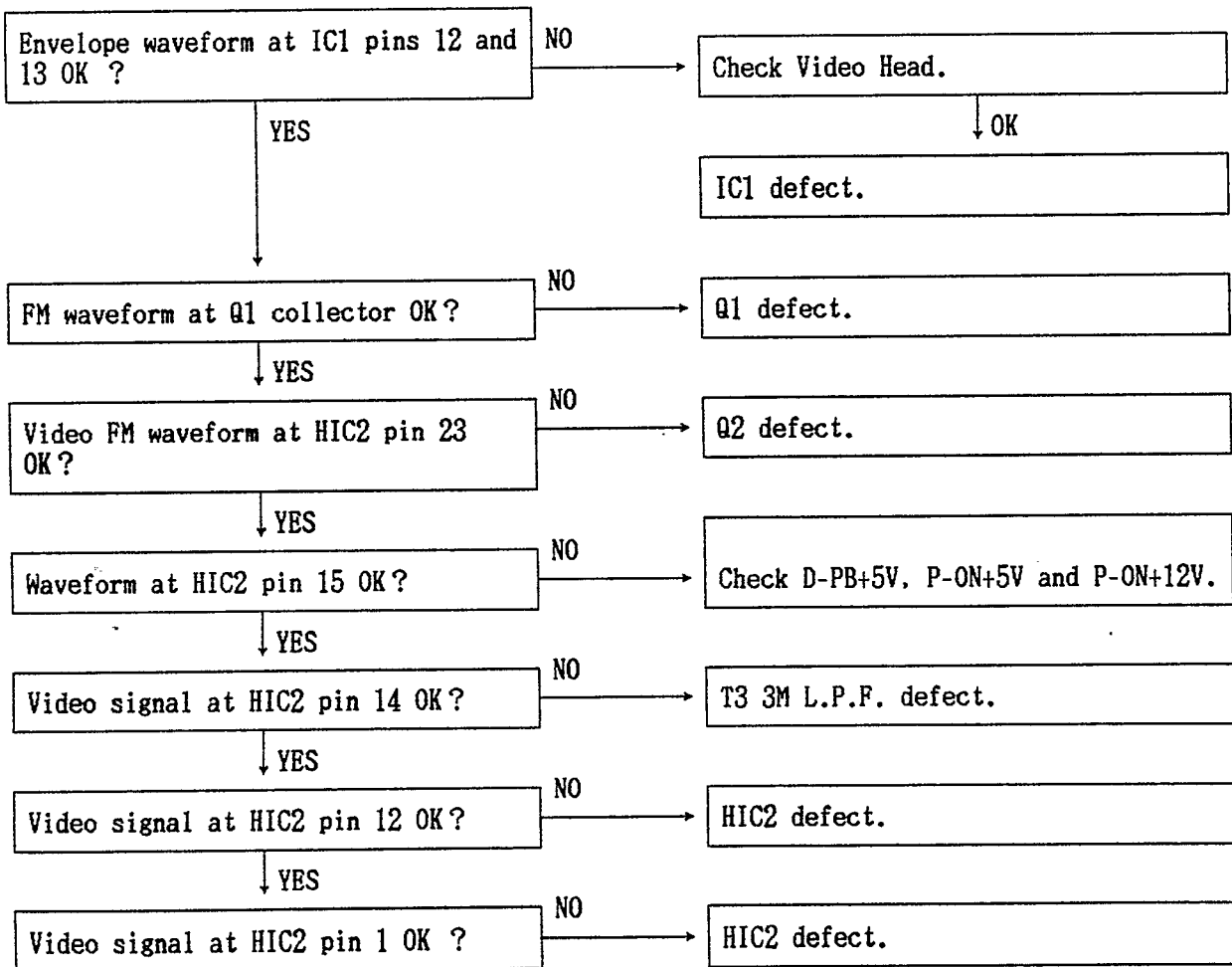


Step 10 OK. proceed to Step 11.

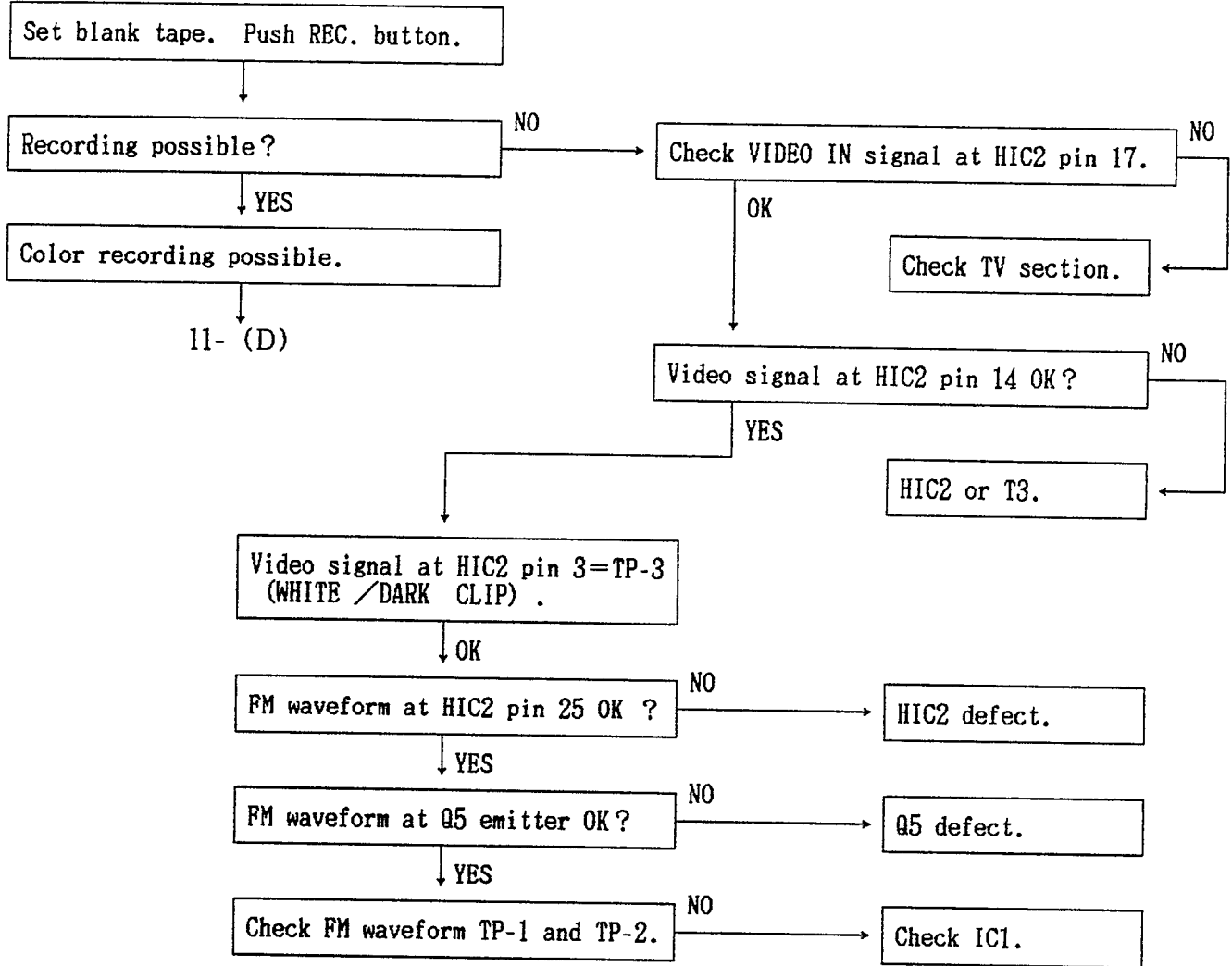
Step 11



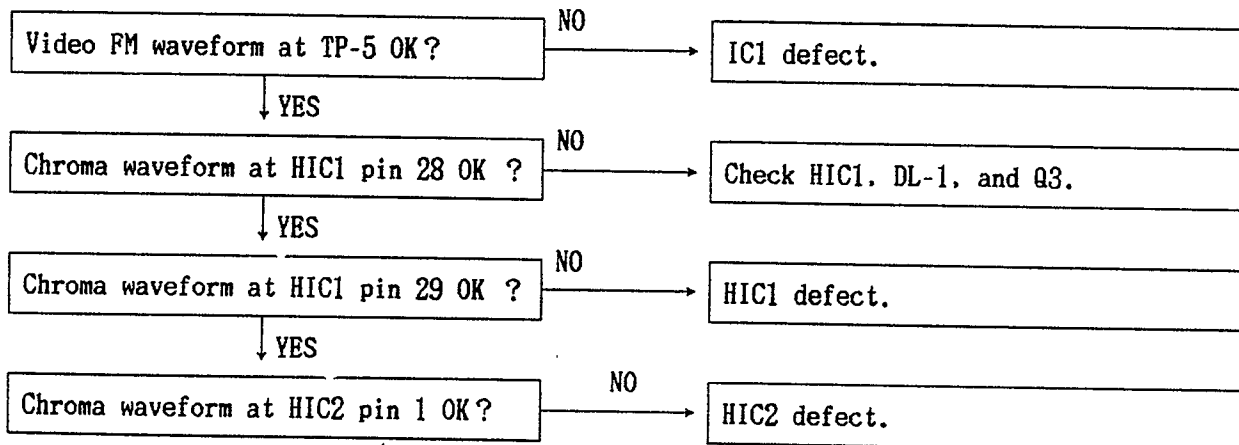
11- (A)



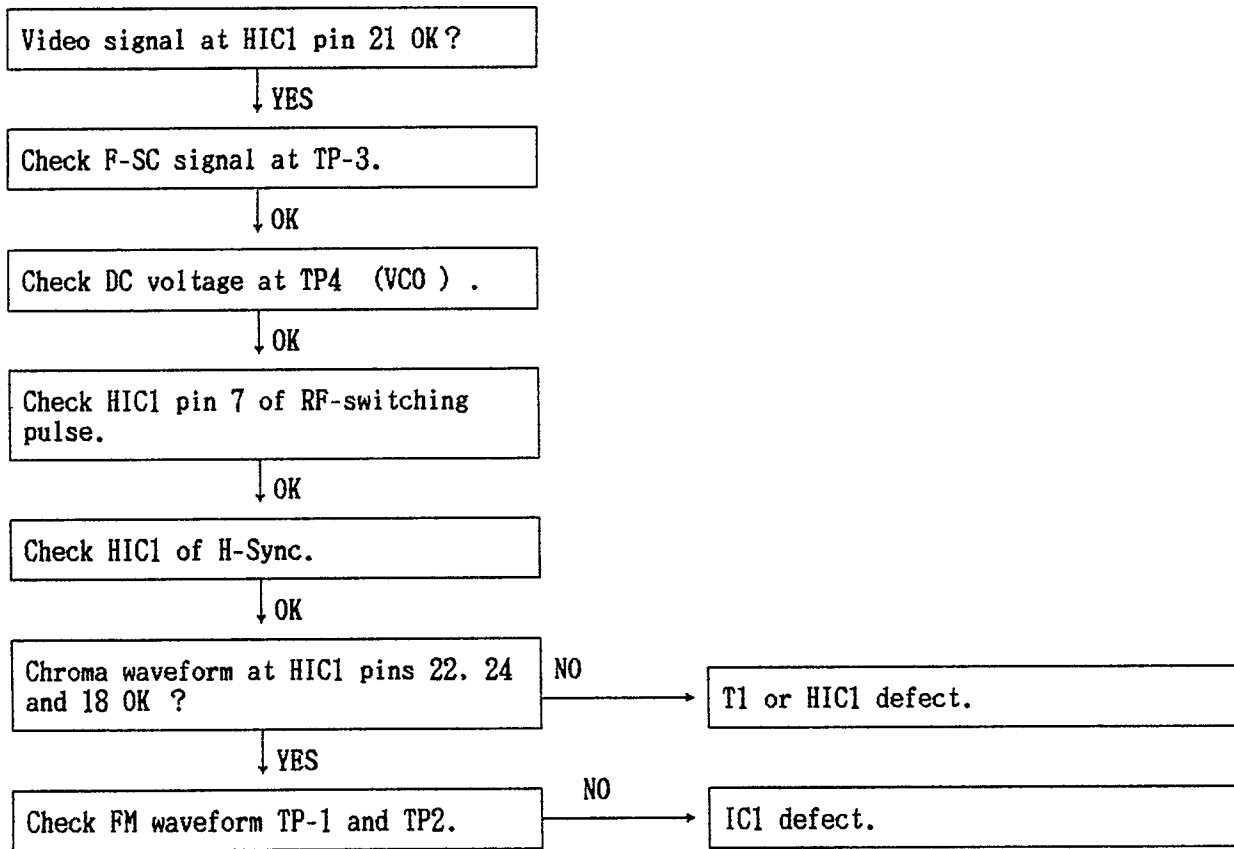
11- (B)



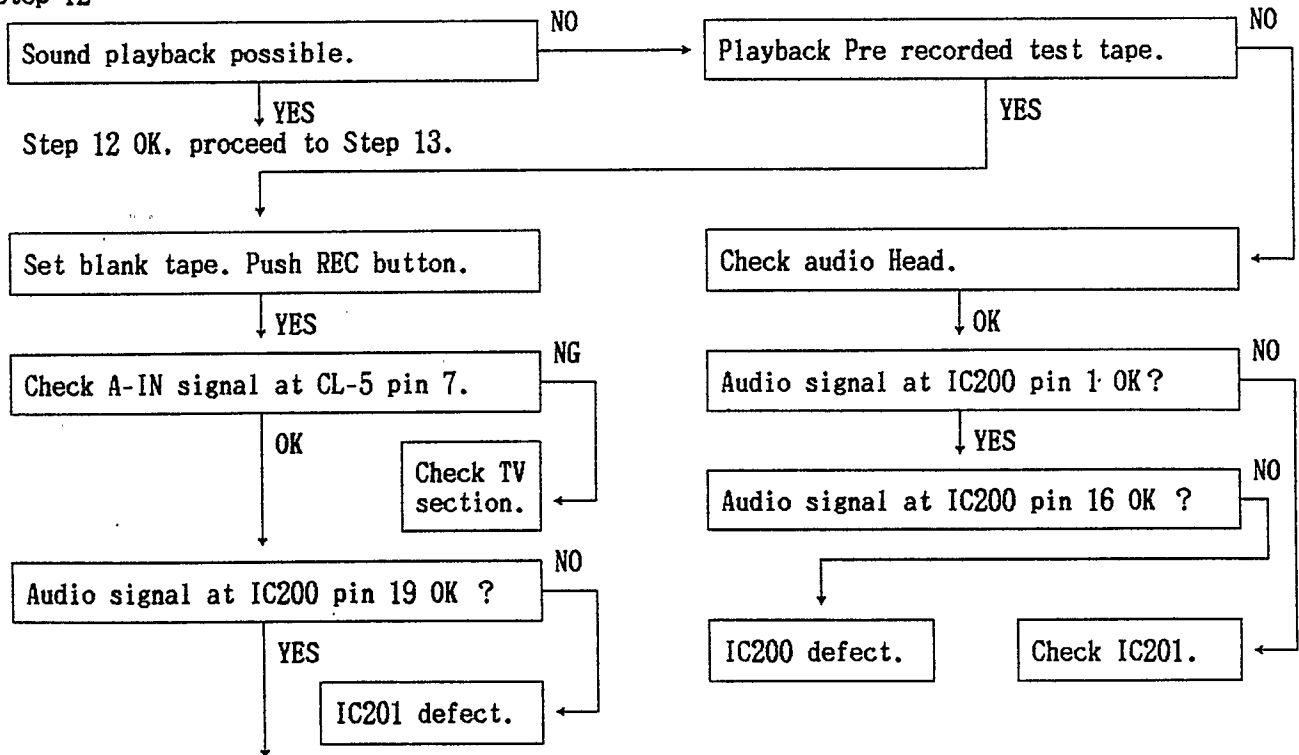
11- (C)

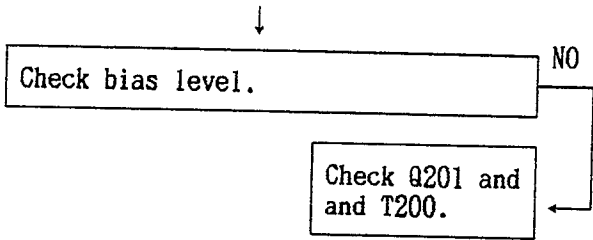


11- (D)

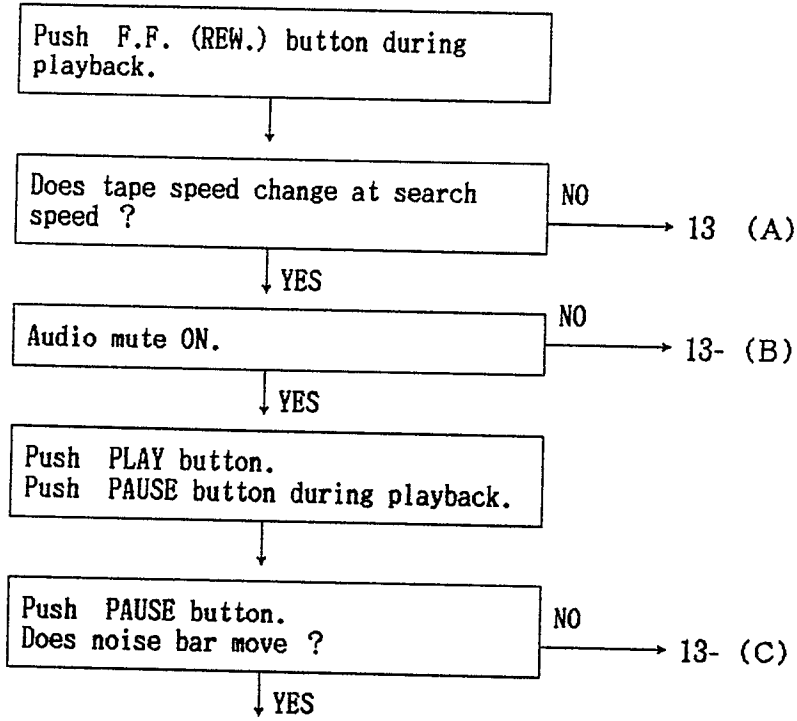


Step 12



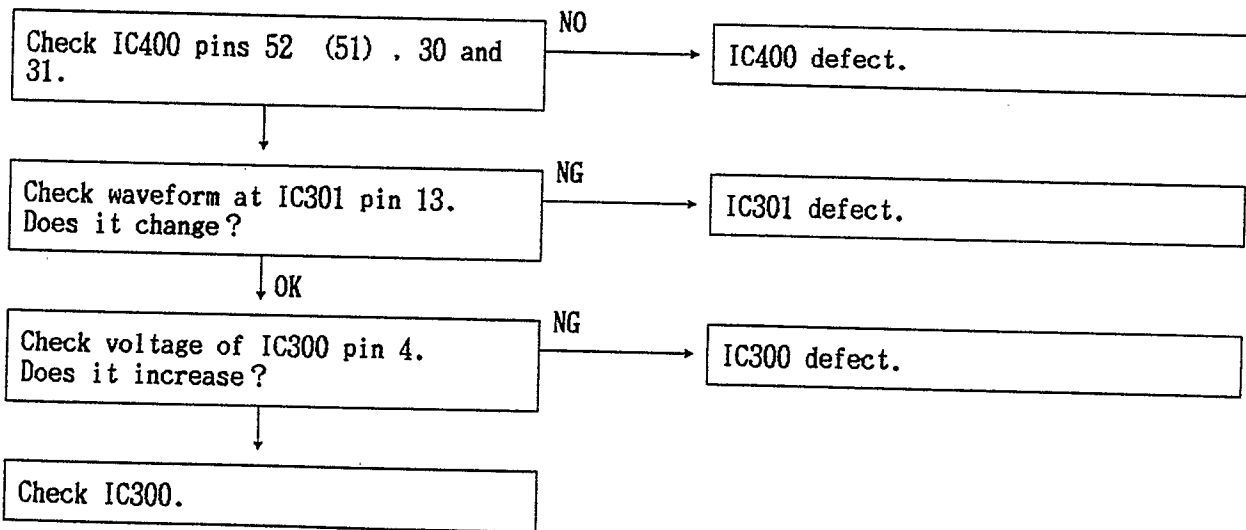


Step 13

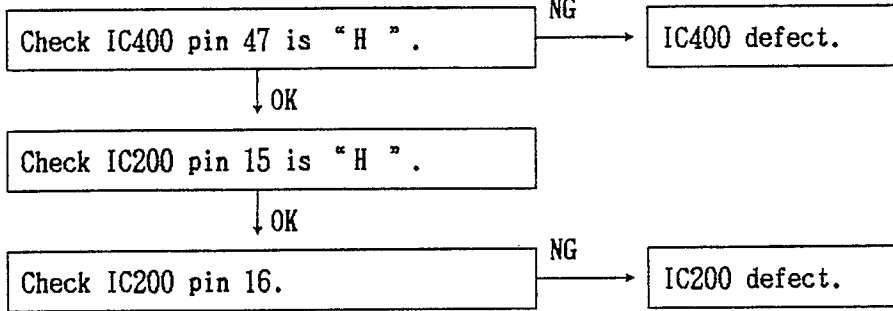


Step 13 OK, proceed to step 14.

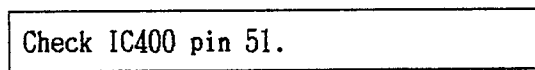
13- (A)



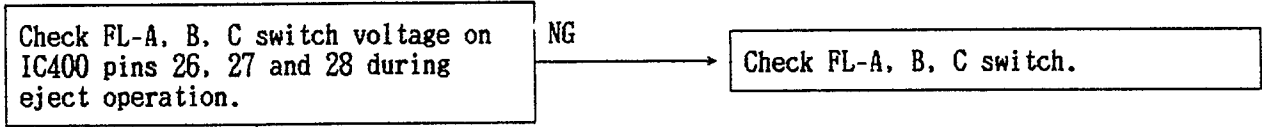
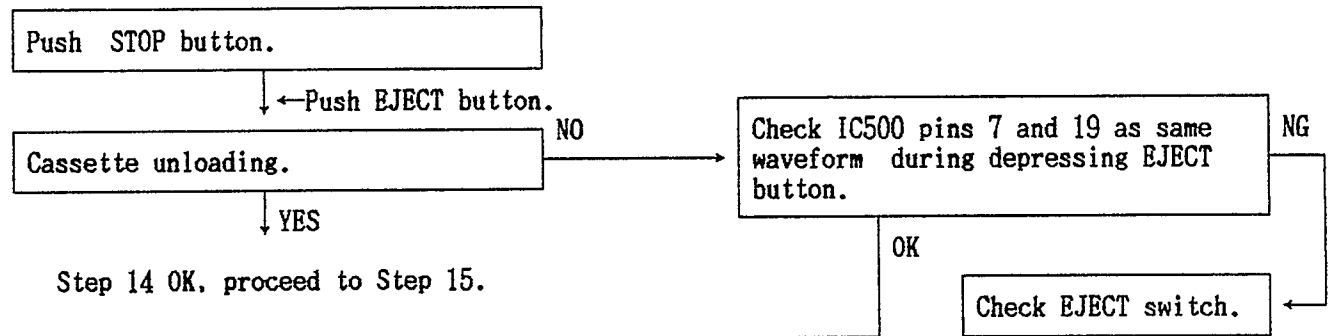
13- (B)



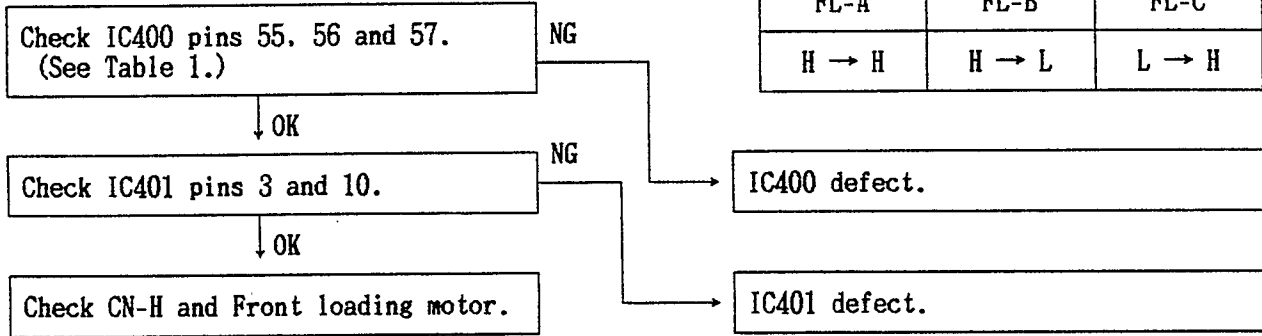
13- (C)



Step 14

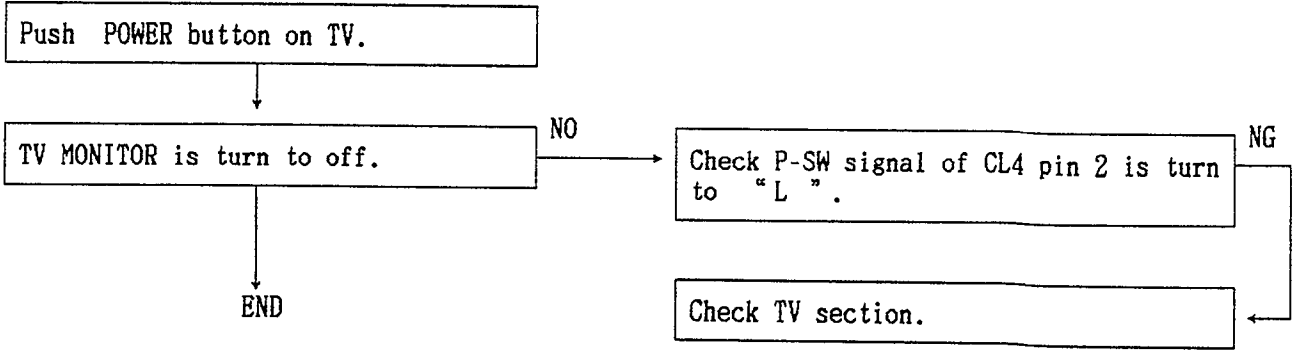


FL-A	FL-B	FL-C
H → H	H → L	L → H



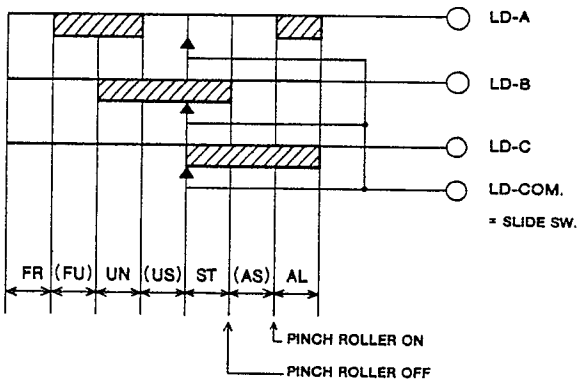


Step 15



\*When SYSTEM CONTROL IC has run away SYSTEM CONTROL IC will not accept any mode. At this time disconnect AC cord to reset the SYSTEM CONTROL IC.

Position of loading switch



LD SW			Symbol	Position
A	B	C		
1	1	1	FR (FR LOADING)	FF. REW
0	1	1	(FU)	
0	0	1	UN (UN-LOADING)	STOP EJECT
1	0	1	(US)	
1	0	0	ST (SHORT STOP)	Loading motor is stopped temporarily at unloading.
1	1	0	(AS)	
0	1	0	AL (AFTER-LOADING)	PLAY RECPAUSE SHORT REW

0:MAKE 1:BREAK  
Break means intermediate position.

Table 2.

## (TV SECTION) DISASSEMBLY INSTRUCTIONS

### 1 HOW TO REMOVE THE WHOLE VIDEO CASSETTE DECK MECHANISM— (Figure 1)

Remove 4 screws (A) on side.(2 screws on each side)

Drawing out the whole video cassette deck.  
Disconnect 4 connectors on back.

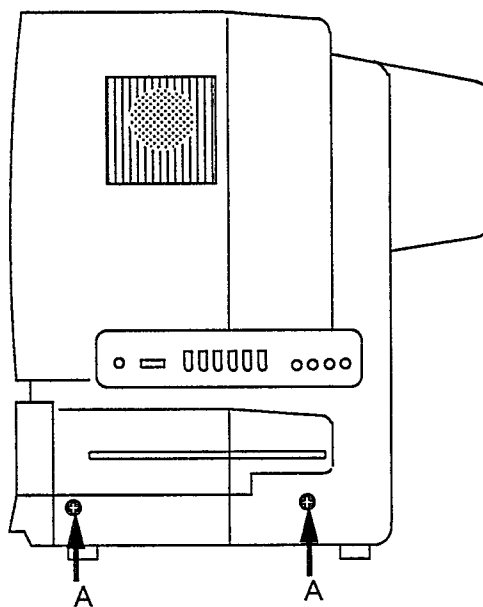


Figure 1

### 2 HOW TO REMOVE REAR BACK CABINET— (Figure 2)

Remove 7 screws (B).

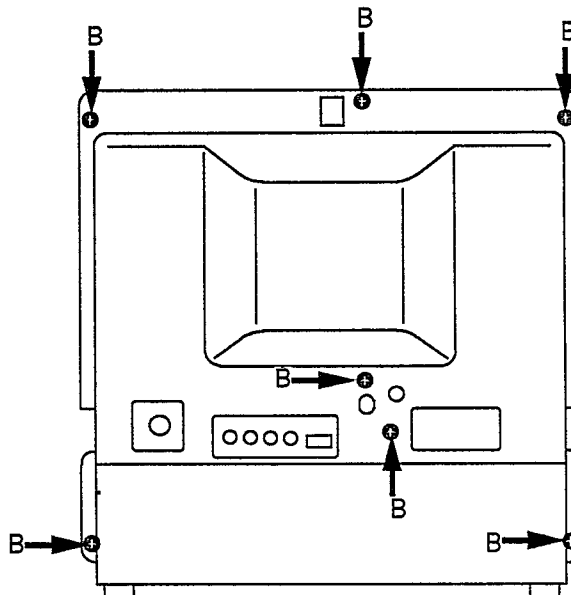


Figure 2

### 3 HOW TO REMOVE TV CHASSIS/MAIN PCB ASS'Y— (Figure 3)

Disconnect related 4 connectors (C), clamp (D), anode cap (E) and CRT PCB (F).

NOTE : Must discharge anode cap before disconnecting it.

Remove 2 screws (G) and draw out the TV chassis/main PCB ass'y.

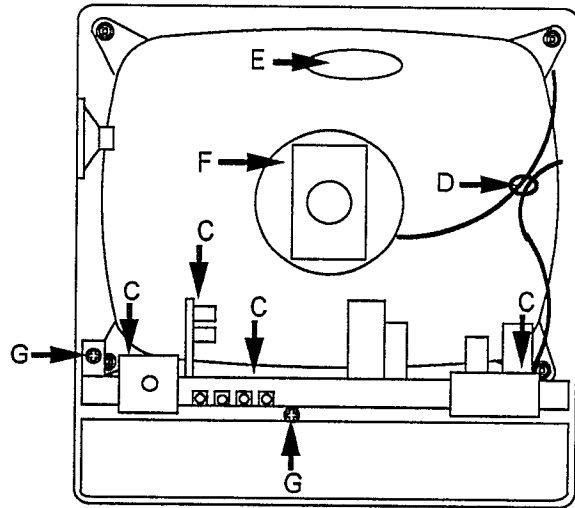


Figure 3

### 4 HOW TO REMOVE SPEAKER— (Figure 4)

Remove glue around the speaker flame and draw out.

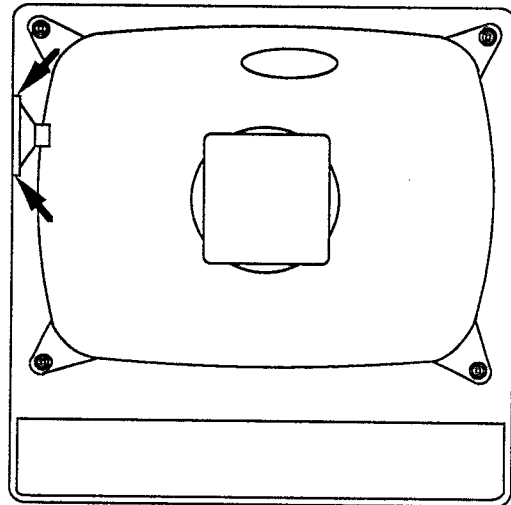


Figure 4

## 5 HOW TO REMOVE CATHODE RAY TUBE (CRT) – (Figure 5)

Remove 4 nuts (H).

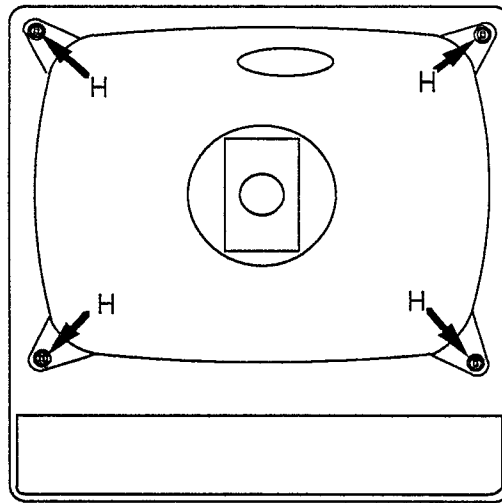
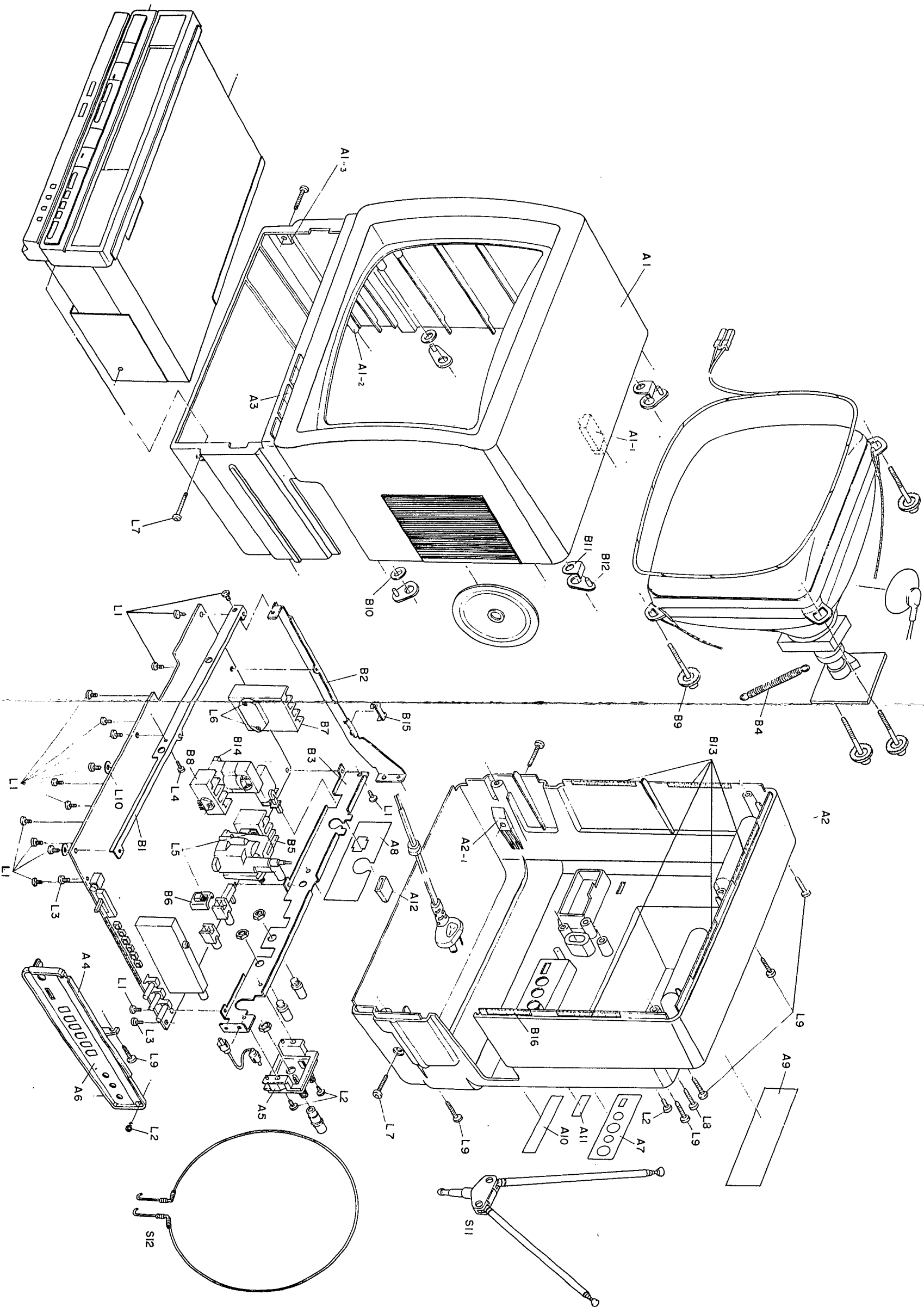


Figure 5

# EXPLODED VIEW (CABINET)





# ELECTRICAL ADJUSTMENT

## 1 FOCUS

1. Set the CONTRAST and BRIGHTNESS control to maximum.
2. Adjust the Focus control of FBT to sharp and clear on display.

## 2 CUT-OFF ADJUSTMENT

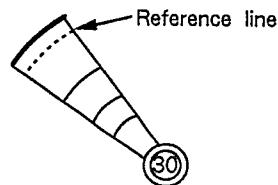
1. Turn the all Low Light controls to  $\frac{1}{2}$  position (VR1702, VR1703, VR1705).
2. Turn the B Drive (VR1701) and R Drive (VR1704) controls to center.
3. Set the SUB BRT control (VR1602) to center position.
4. Turn the SCREEN control (T1402) to fully counterclockwise.
5. Set the SERVICE switch (SW1601) to service position.(display picture become horizontal bar)
6. Slowly turn the SCREEN control to the point where horizontal bar just illuminates.
7. If horizontal bar is red, turn the B LOW-LIGHT control (VR1703) to get magenta.  
If horizontal bar is blue, turn the R LOW-LIGHT control (VR1702) to get magenta.
8. Turn the G LOW-LIGHT control to get white horizontal bar.(3 color to same brightness)
9. Reset the SERVICE switch (SW1601) to NORMAL position.

## 3 V-SIZE

1. Receive the monoscope pattern.
2. Adjust overscan with the VR1401 to 93% of display size.

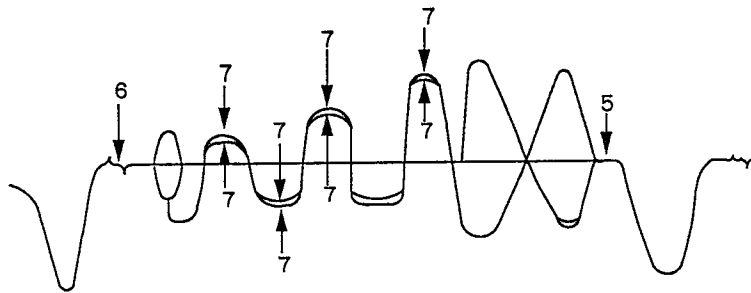
## 4 SUB-BRIGHTNESS

1. Receive the monoscope pattern.
2. Set the CONTRAST control to max and the BRIGHTNESS, COLOR control to fully counterclockwise.
3. Adjust VR1602 to the point where reference line just start illuminate.



## 5 COLOR DEMODURATOR DELAY LINE

1. Receive philips pattern (2ch. 80dB  $\mu$ ) with AFT off position, and set ATT to on position.
2. Turn the COLOR, CONTRAST control to max, BRIGHT control to min.
3. Connect TP12 (B-Y output) and TP11 (GND) to oscilloscope.
4. Connect anode side of D1404 to EXT TRIG terminal of oscilloscope.
5. Adjust the GAIN control (VR1601) to as following drawing.
6. Adjust the PHASE control (VR1603) to as following drawing.
7. Adjust the DELAY control (VR1604) to as following drawing.
8. Repeat above step 5~7 until to get best point of these three.



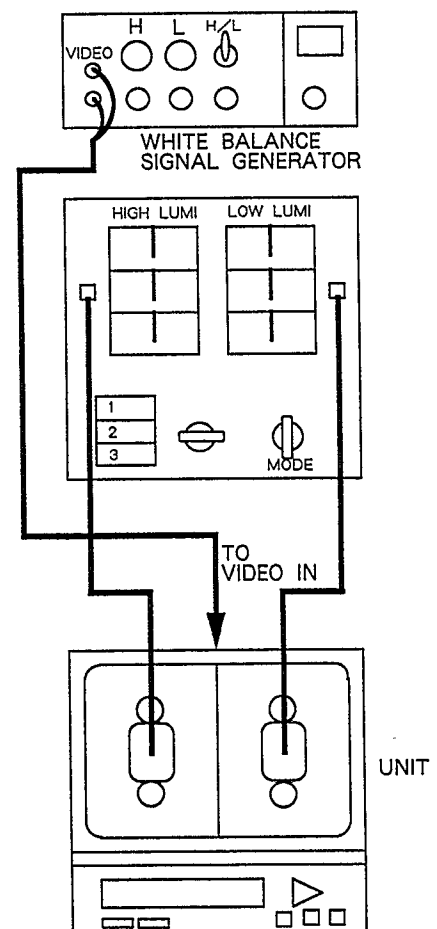
## 6 WHITE BALANCE

### Preparations :

1. Adjustment should be conducted in dark place (shielded sun light)
2. Under european magnetic shield (V : 0.44, H : 0.18)
3. All other adjustments should be done.
4. Module of white balance meter should be memorized as color temperature 6500° K, x=312, y=322.
5. Set MODE SELECT switch of white balancer to ZERO.
6. Lie down the light sensor of white balancer to shut out light.
7. Adjust ZERO ADJ control to center on meter.
8. Connect the white balance meter as following drawing.

### Adjustment :

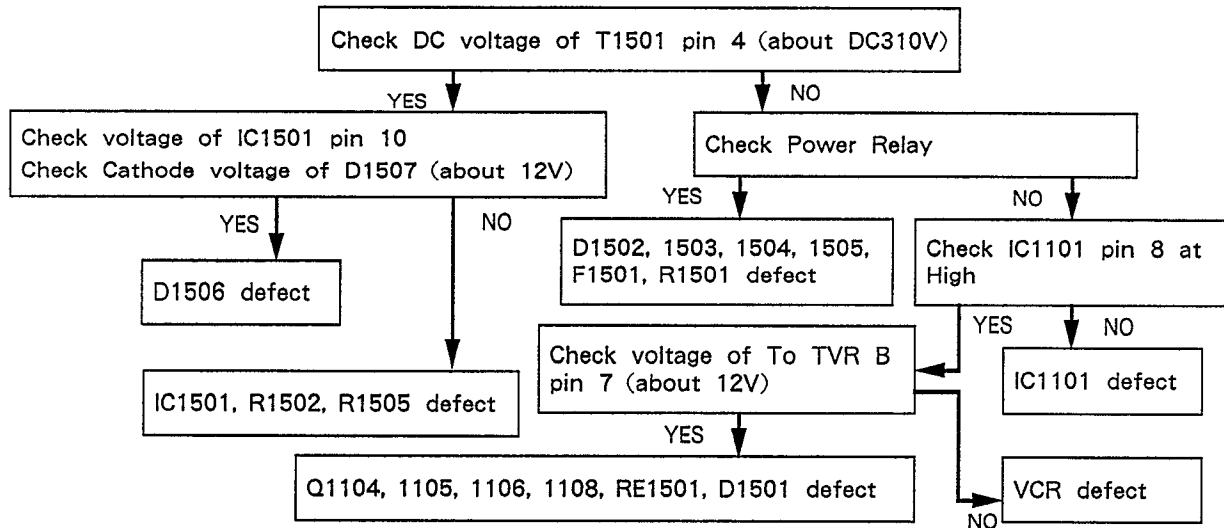
1. Set the PHOSPHOR SELECT switch of balancer to as memorized module position.
2. Set MODE SELECT switch of balancer to LOW SENS.
3. Set AUTO/MANUAL switch of signal generator to AUTO.
4. Set MODE SELECT switch of signal generator to H/L.
5. Adjust BRIGHT, CONTRAST control of unit, and HIGH, LOW control of signal generator to center of LOW LUMI and HIGH LUMI meters.
6. Adjust R DRIVE (VR1704) and B DRIVE (VR1701) to center of HIGH LUMI meter.
7. Adjust R CUT-OFF VR (VR1705) and B CUT-OFF VR (VR1702) to center of LOW LUMI meter.
8. Repeat step 6 and 7 until to get center indication on all meters.
9. Repeat step 6 and 7 until to get with-in 2% of meter indication even change MODE SELECT switch to HIGH SENS.



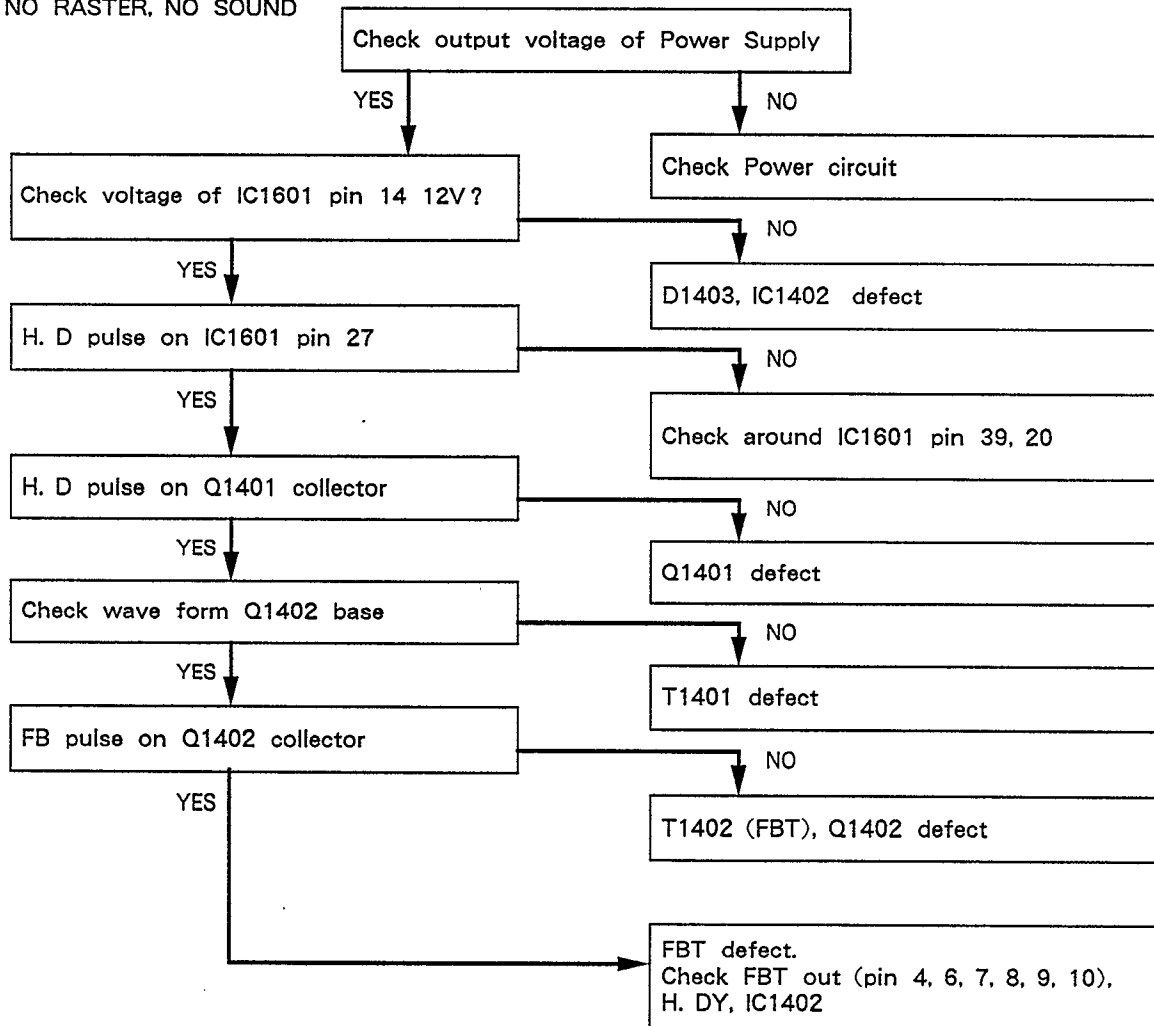


# TROUBLESHOOTING GUIDE

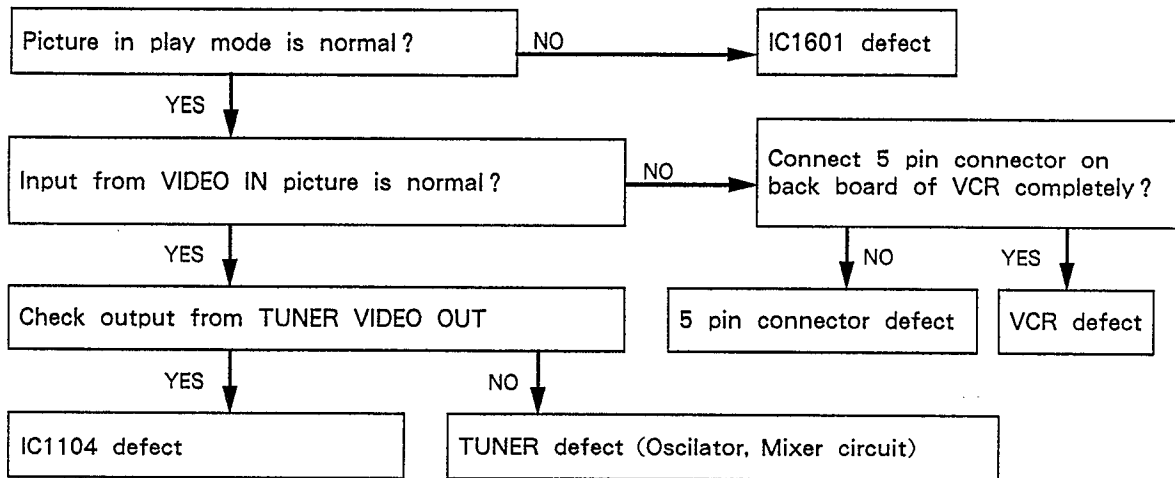
## (1) NO POWER OUTPUT



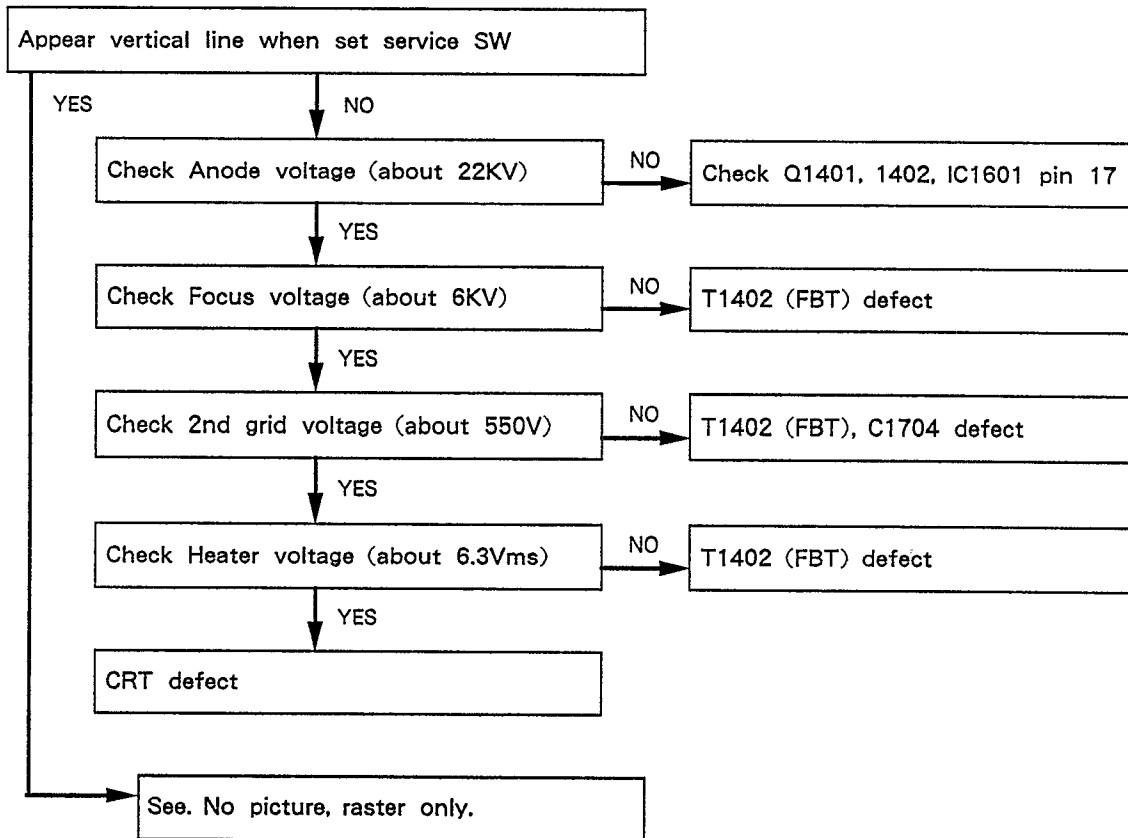
## (2) NO RASTER, NO SOUND



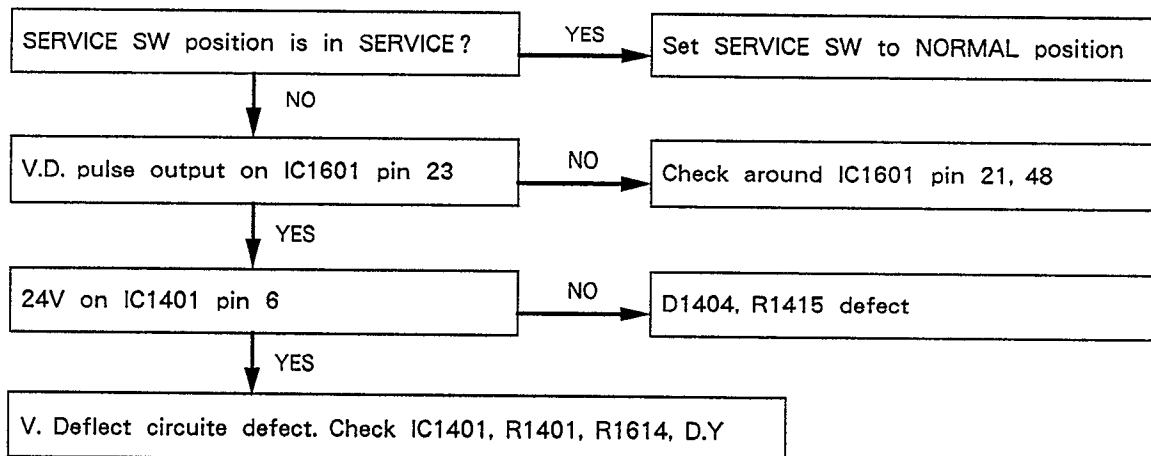
(3) NO PICTURE, RASTER ONLY



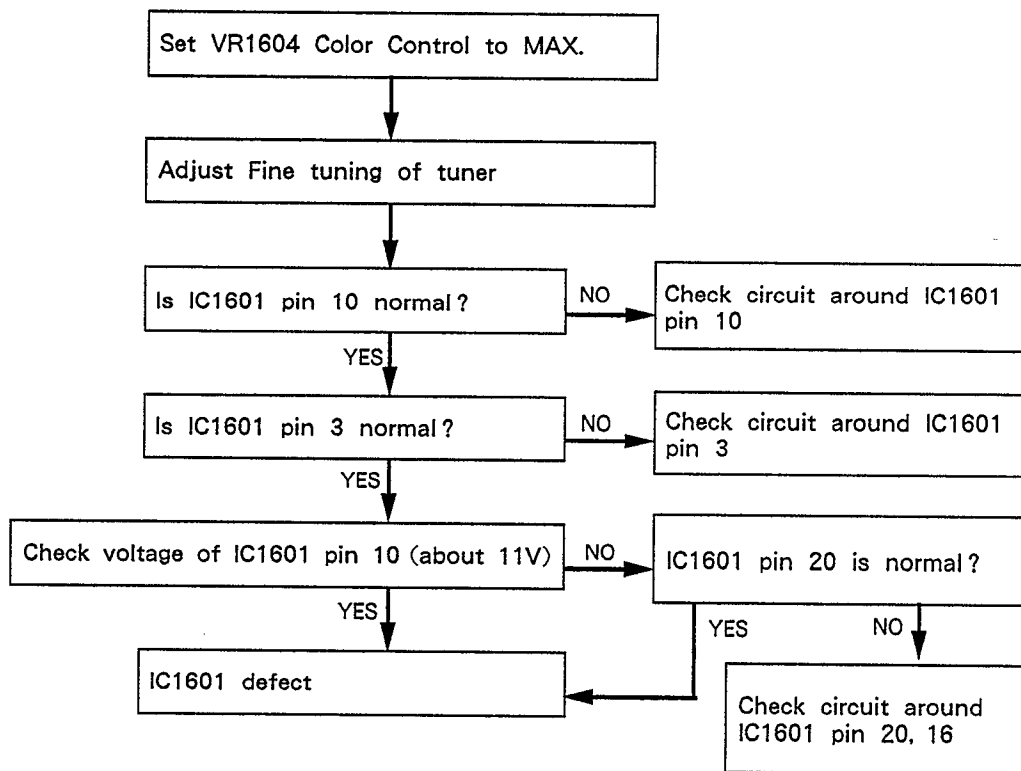
(4) NO RASTER WITH SOUND



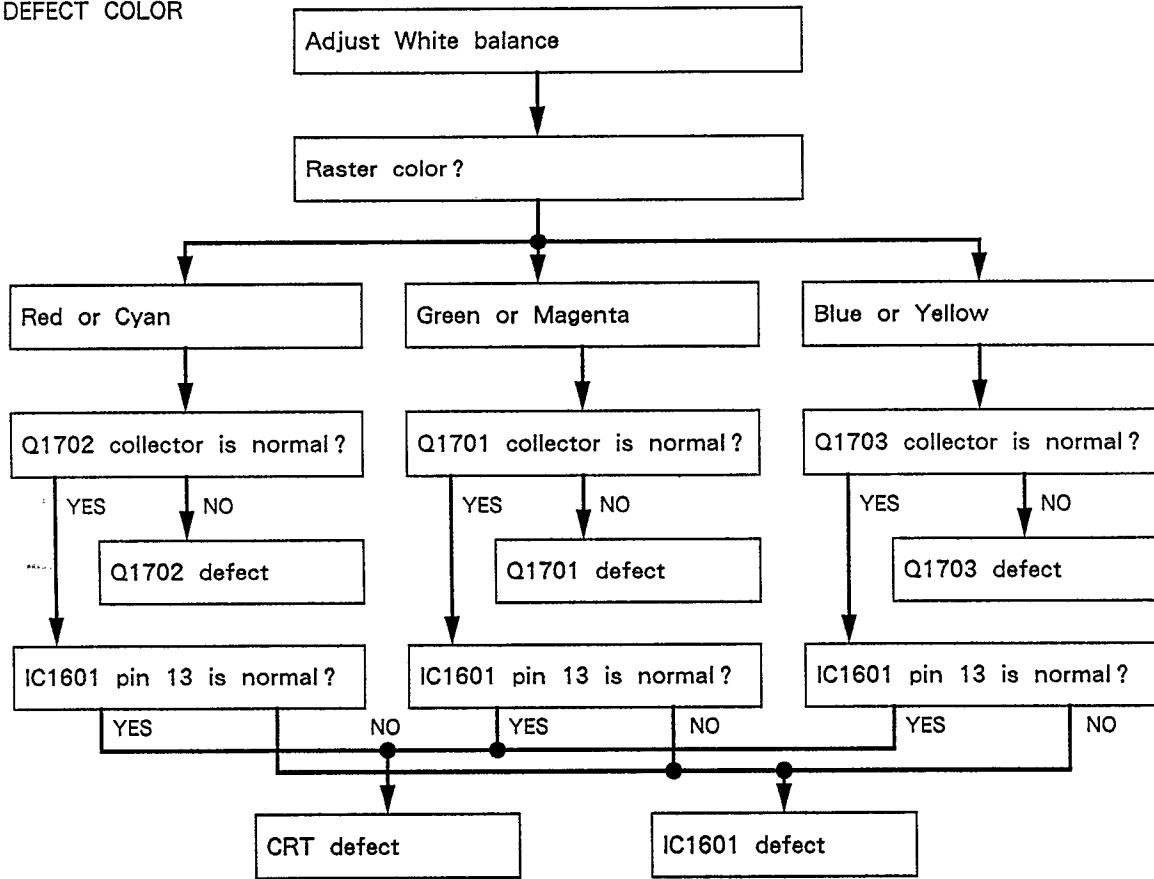
(5) NO V. DEFLECT (ONLY H. LINE)



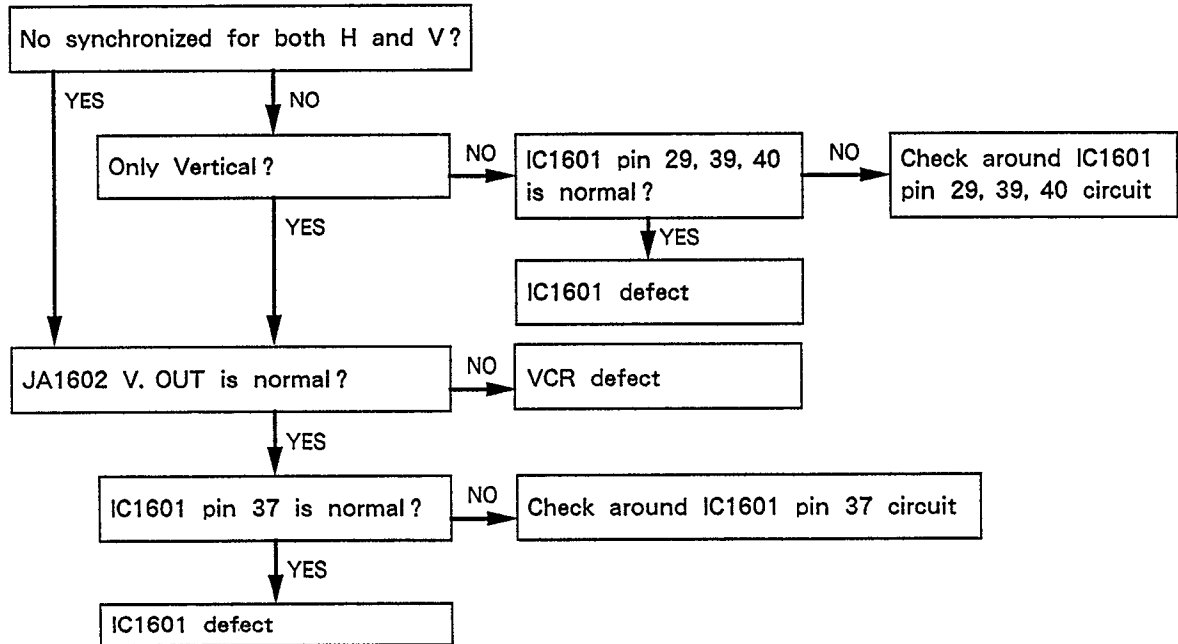
(6) NO COLOR



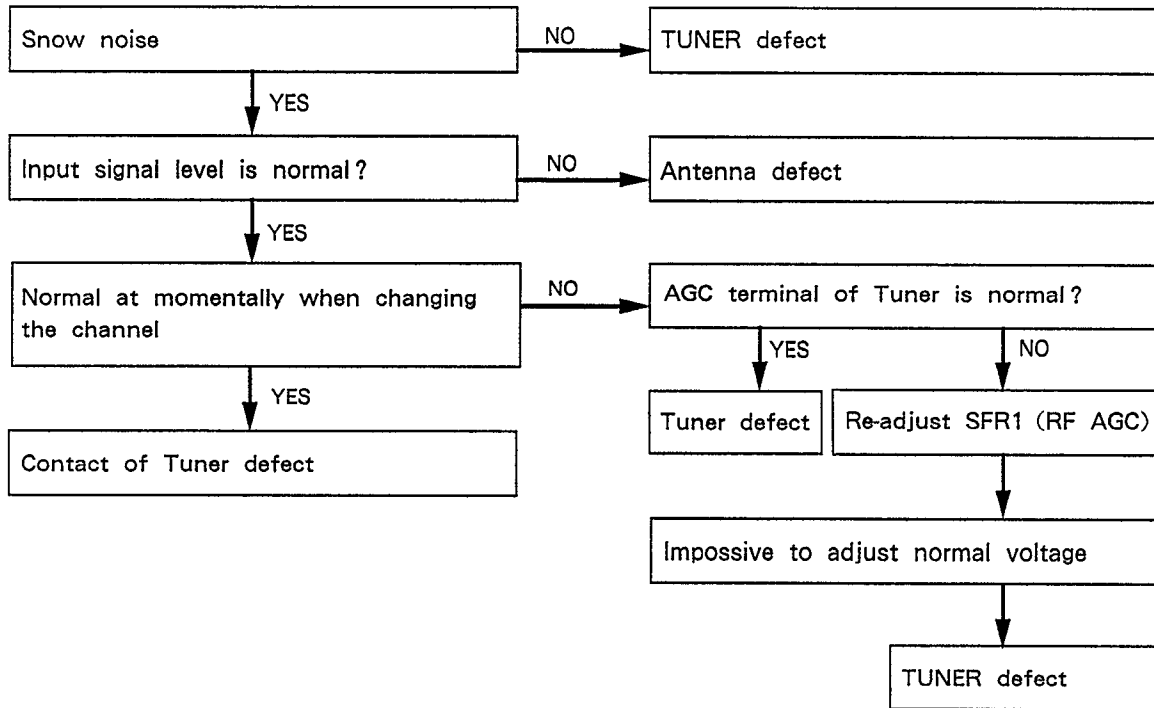
(7) DEFECT COLOR



(8) NO SYNCHRONIZED

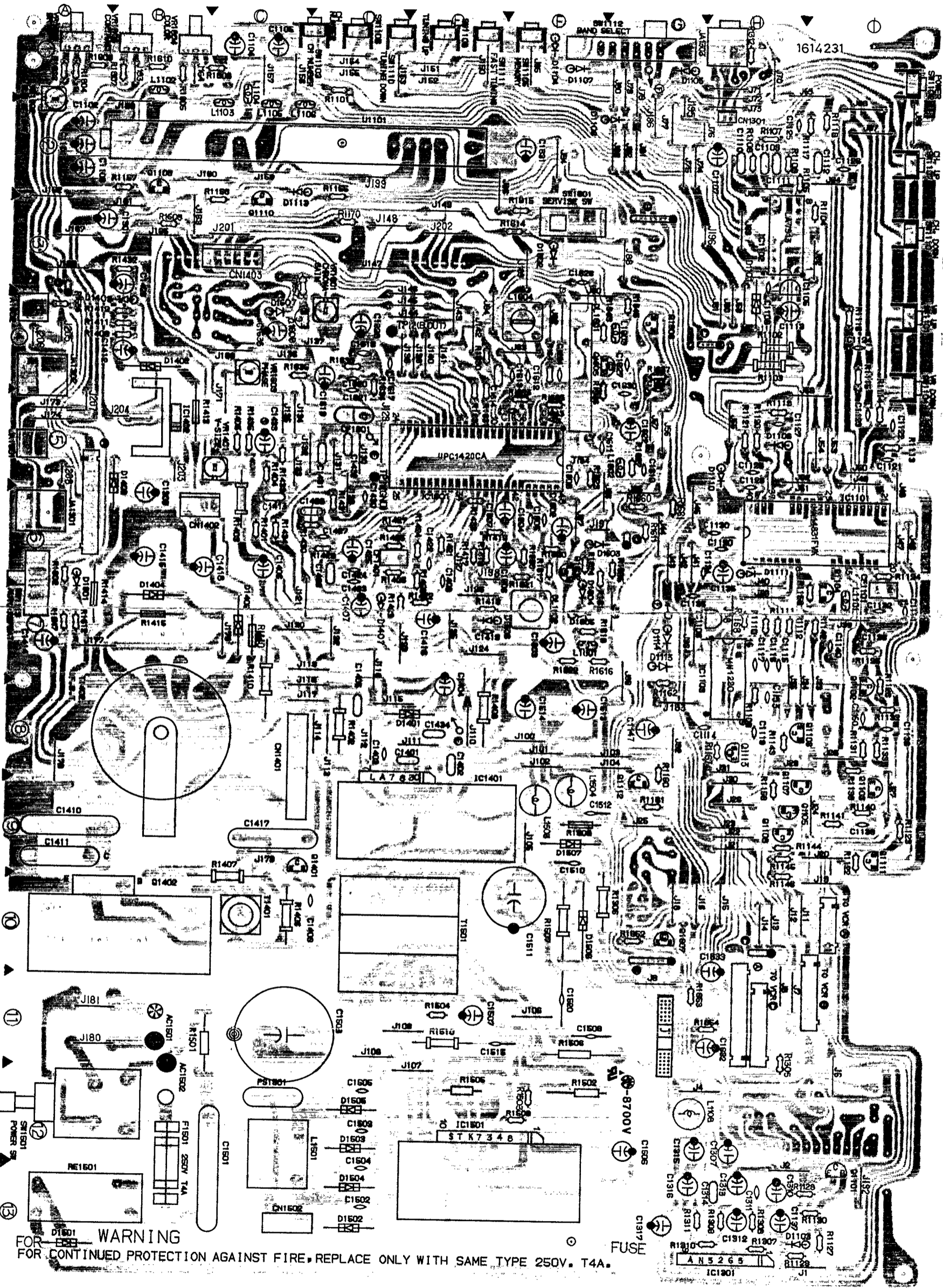


(9) DIMLY PICTURE



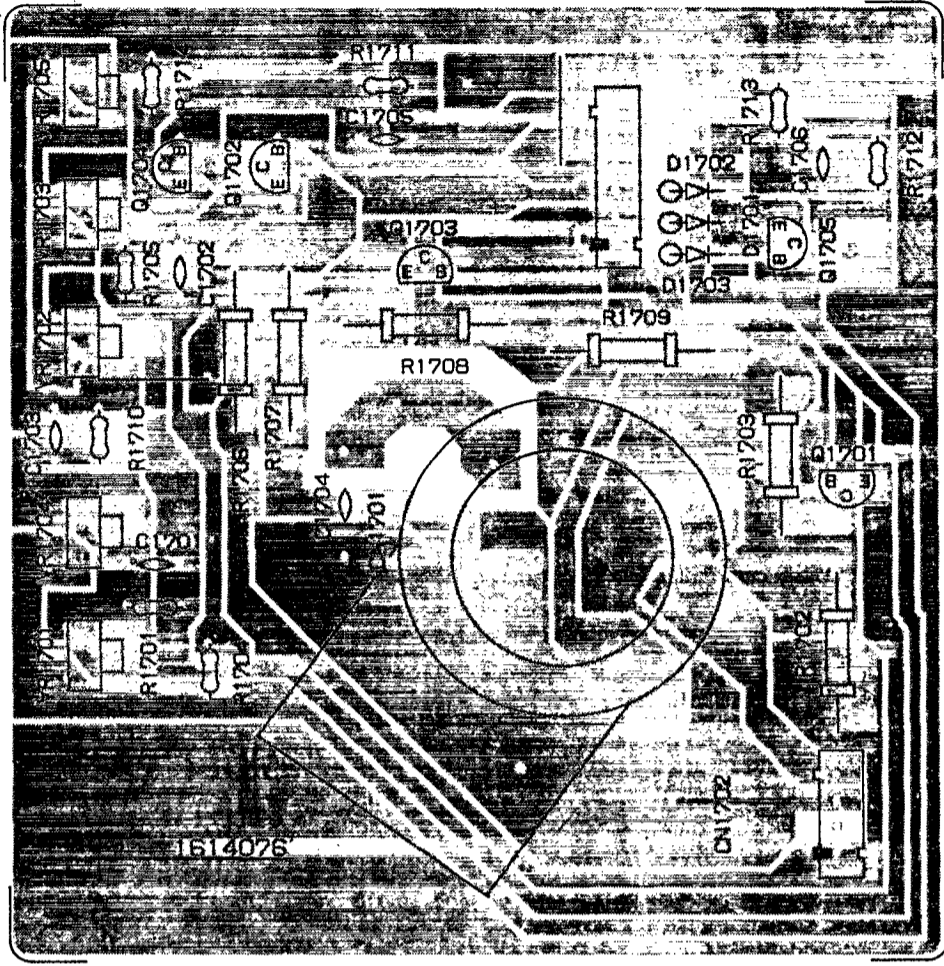


Main PCB (Top View)



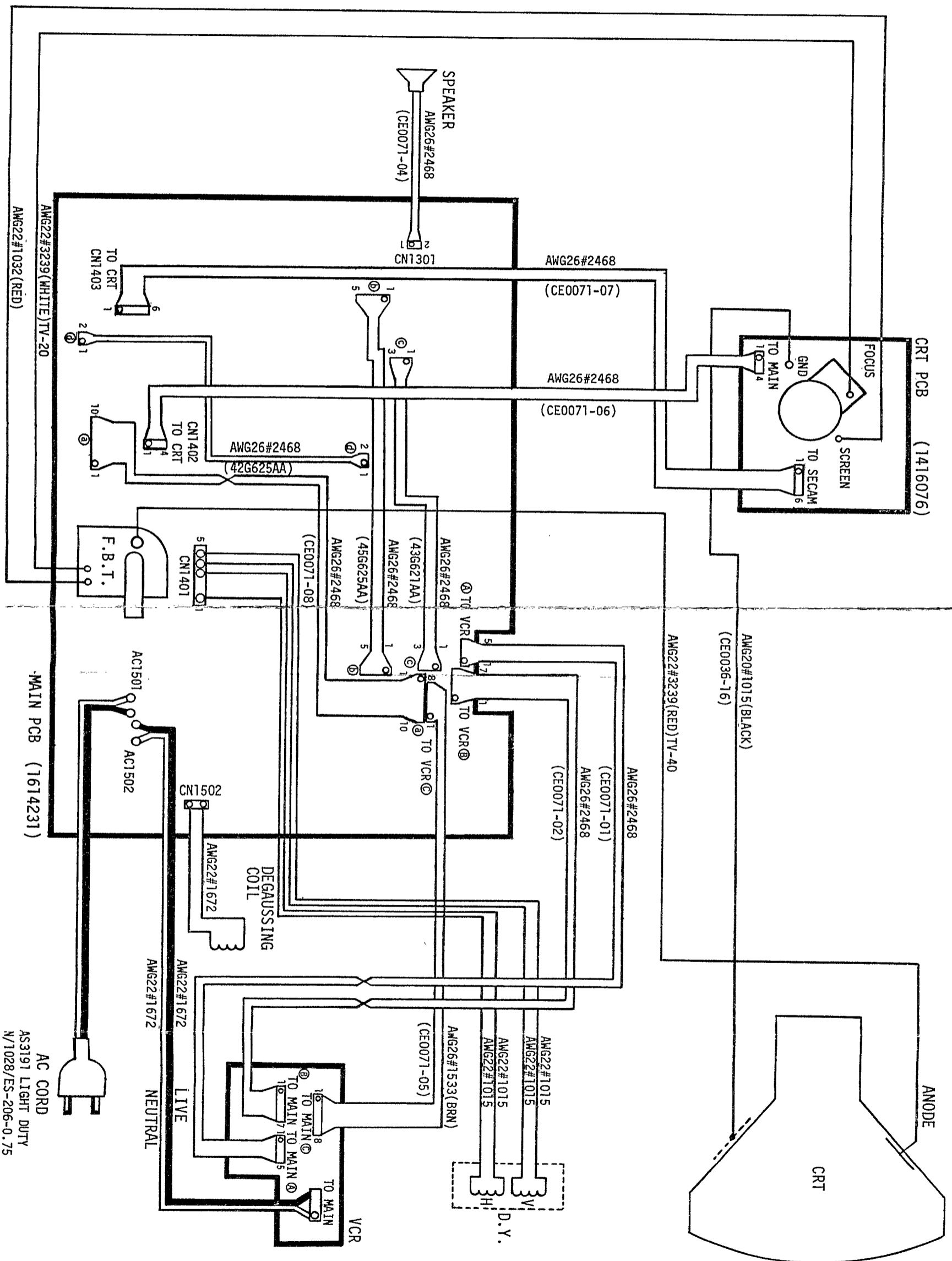
FOR CONTINUED PROTECTION AGAINST FIRE, REPLACE ONLY WITH SAME TYPE 250V. T4A.

CRT PCB (Top View)

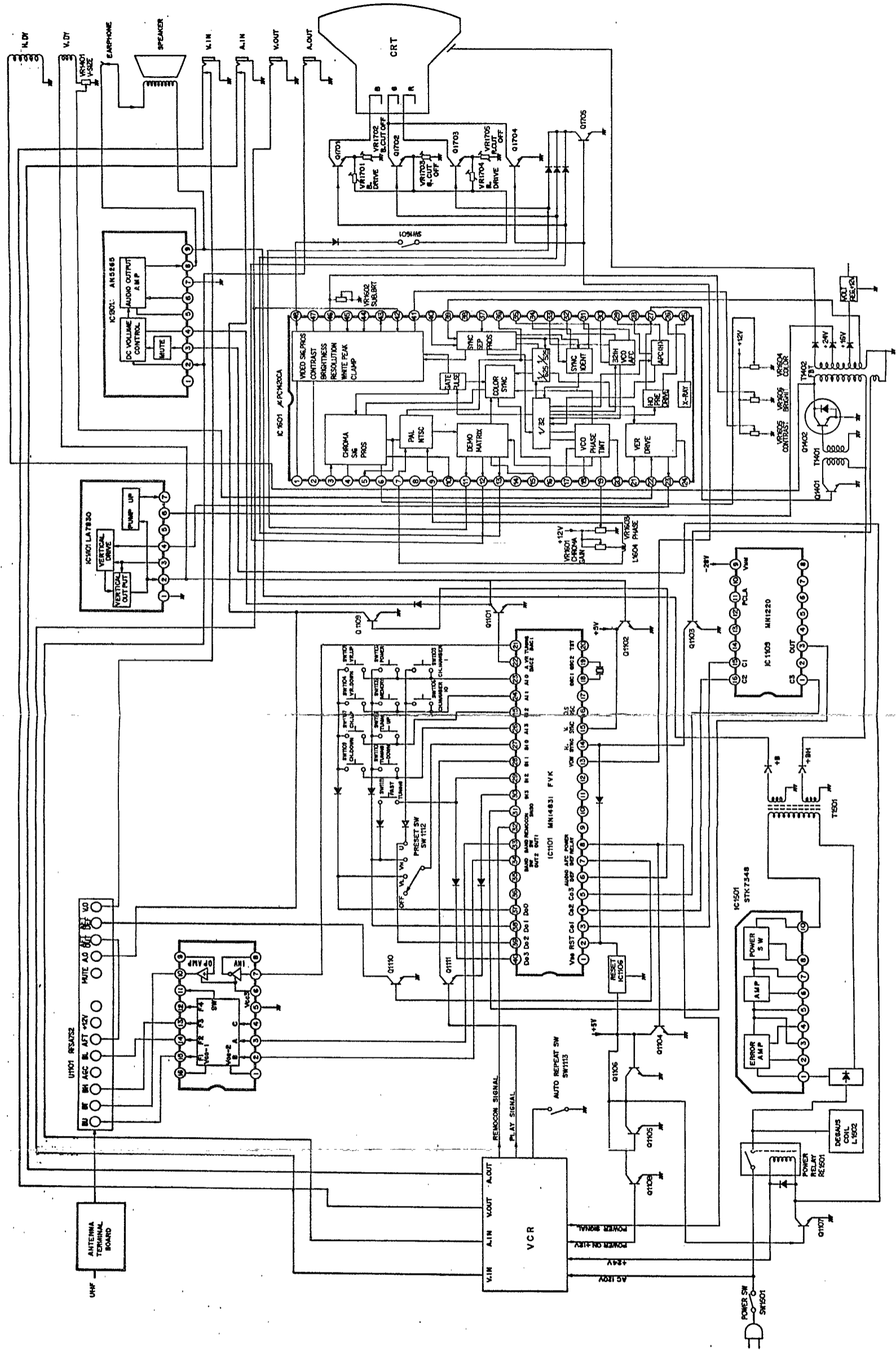




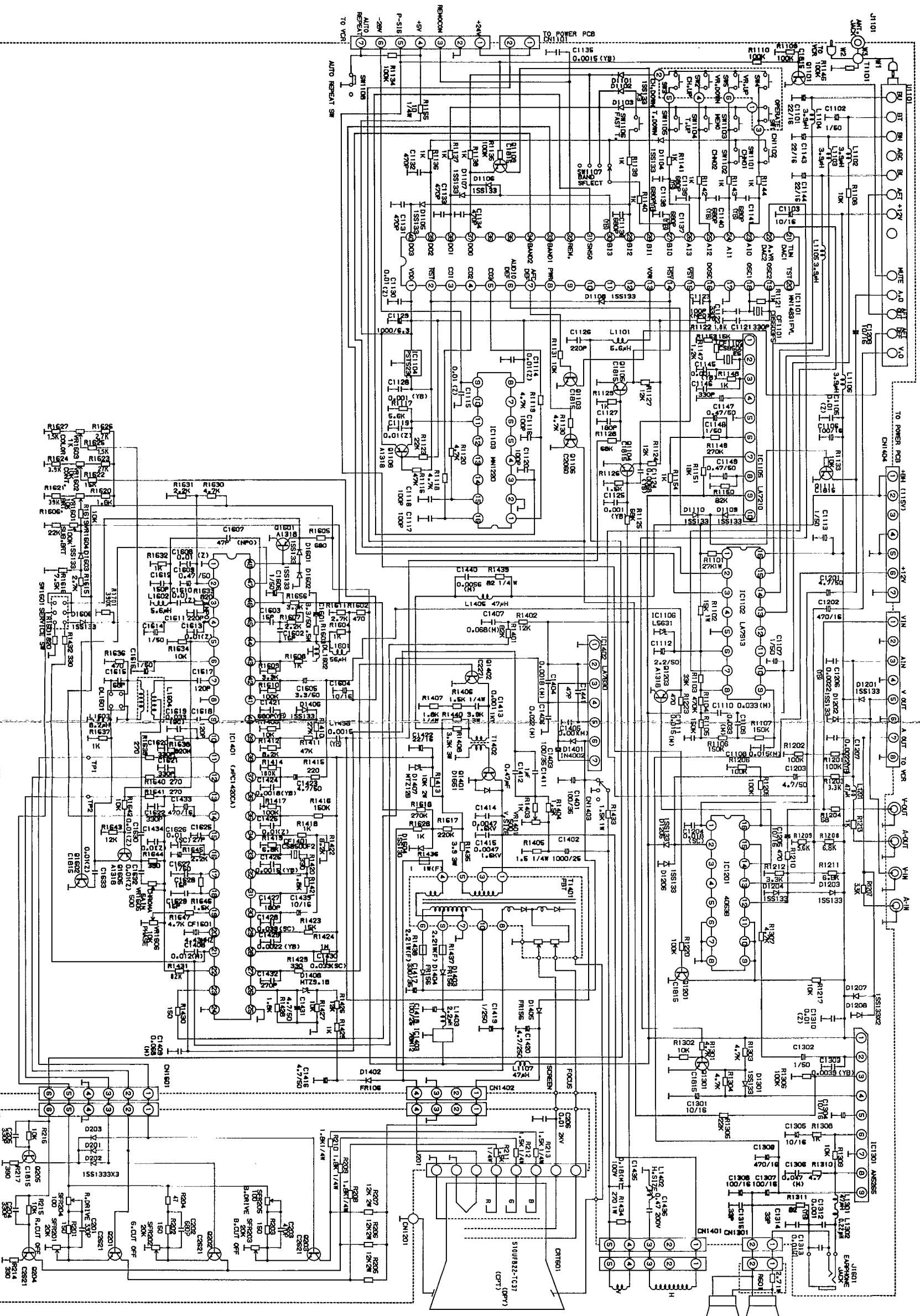
# WIRING DIAGRAM



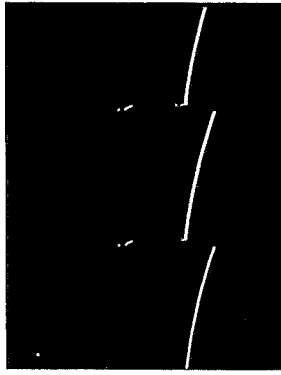
# BLOCK DIAGRAM



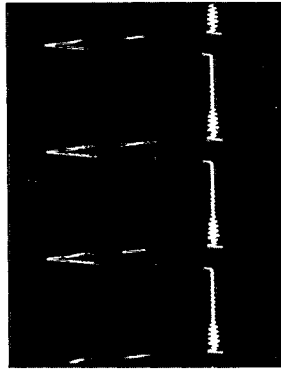
# SCHEMATIC DIAGRAM



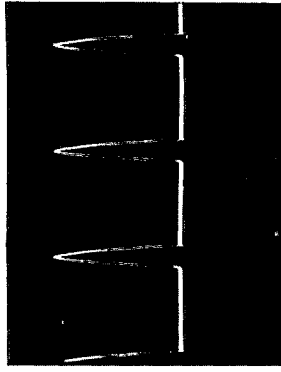
# WAVEFORMS



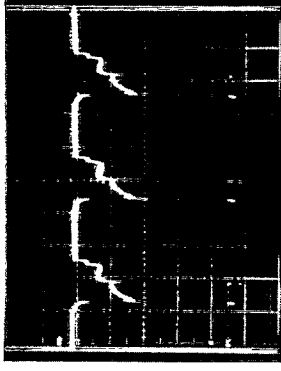
Point : A  
1Div=5ms 1Div=20V



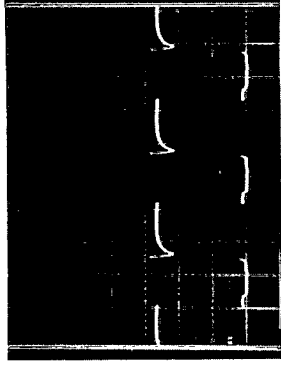
Point : B  
1Div=20us 1Div=5V



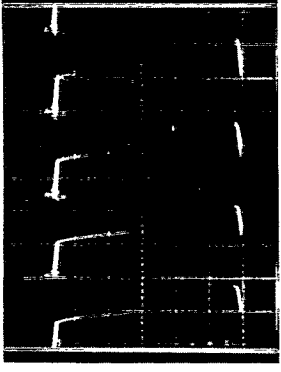
Point : C  
1Div=20us 1Div=250V



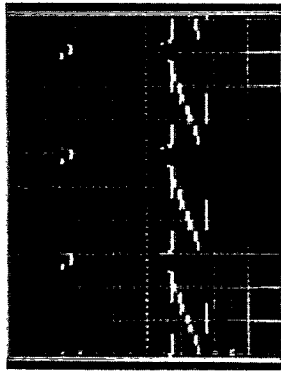
Point : D  
1Div=20us 1Div=2V



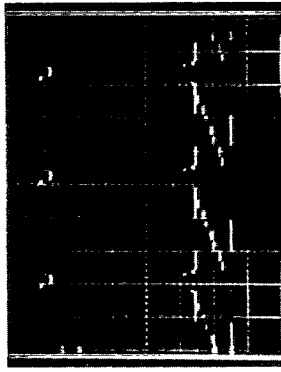
Point : E  
1Div=20us 1Div=50V



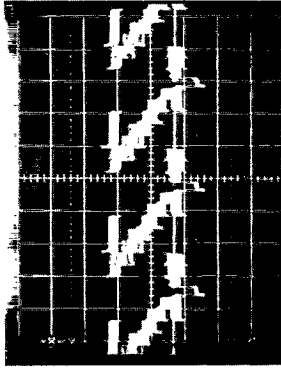
Point : F  
1Div=10us 1Div=100V



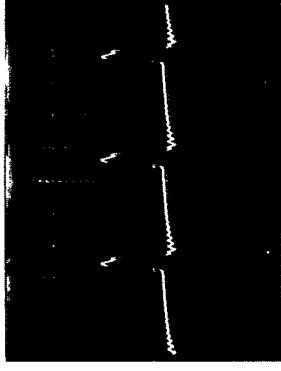
Point : G  
1Div=20us 1Div=1V



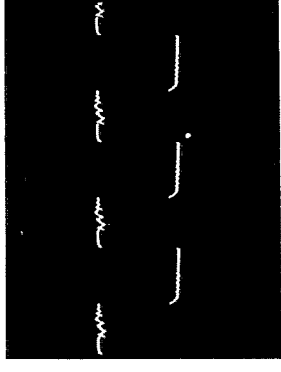
Point : H  
1Div=20us 1Div=1V



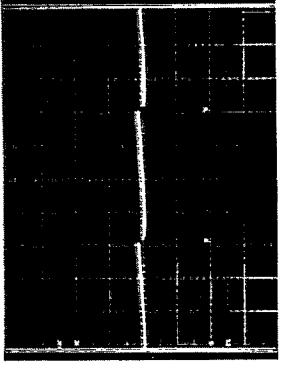
Point : I  
1Div=20us 1Div=0.5V



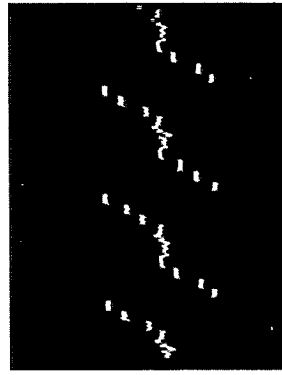
Point : K  
1Div=20us 1Div=5V



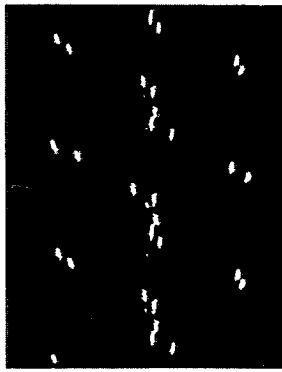
Point : L  
1Div=20us 1Div=0.5V



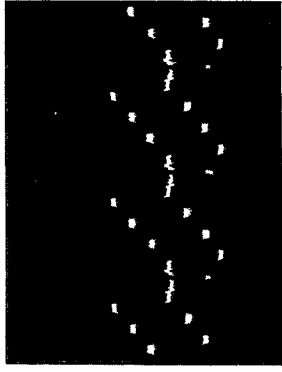
Point : N  
1Div=5ms 1Div=0.5V



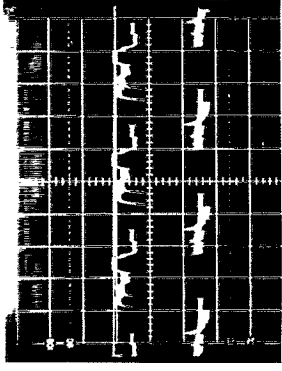
Point : O  
1Div=20us 1Div=0.2V



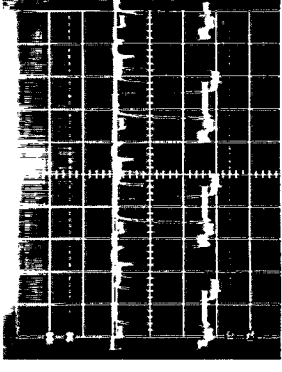
Point : P  
1Div=20us 1Div=0.5V



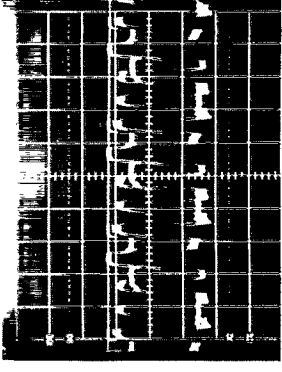
Point : Q  
1Div=20us 1Div=0.5V



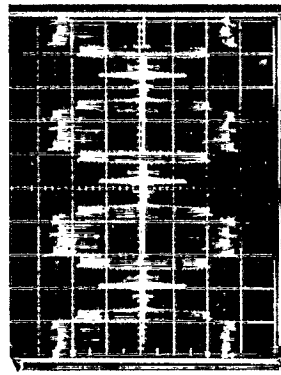
Point : R  
1Div=20us 1Div=50V



Point : S  
1Div=20us 1Div=50V

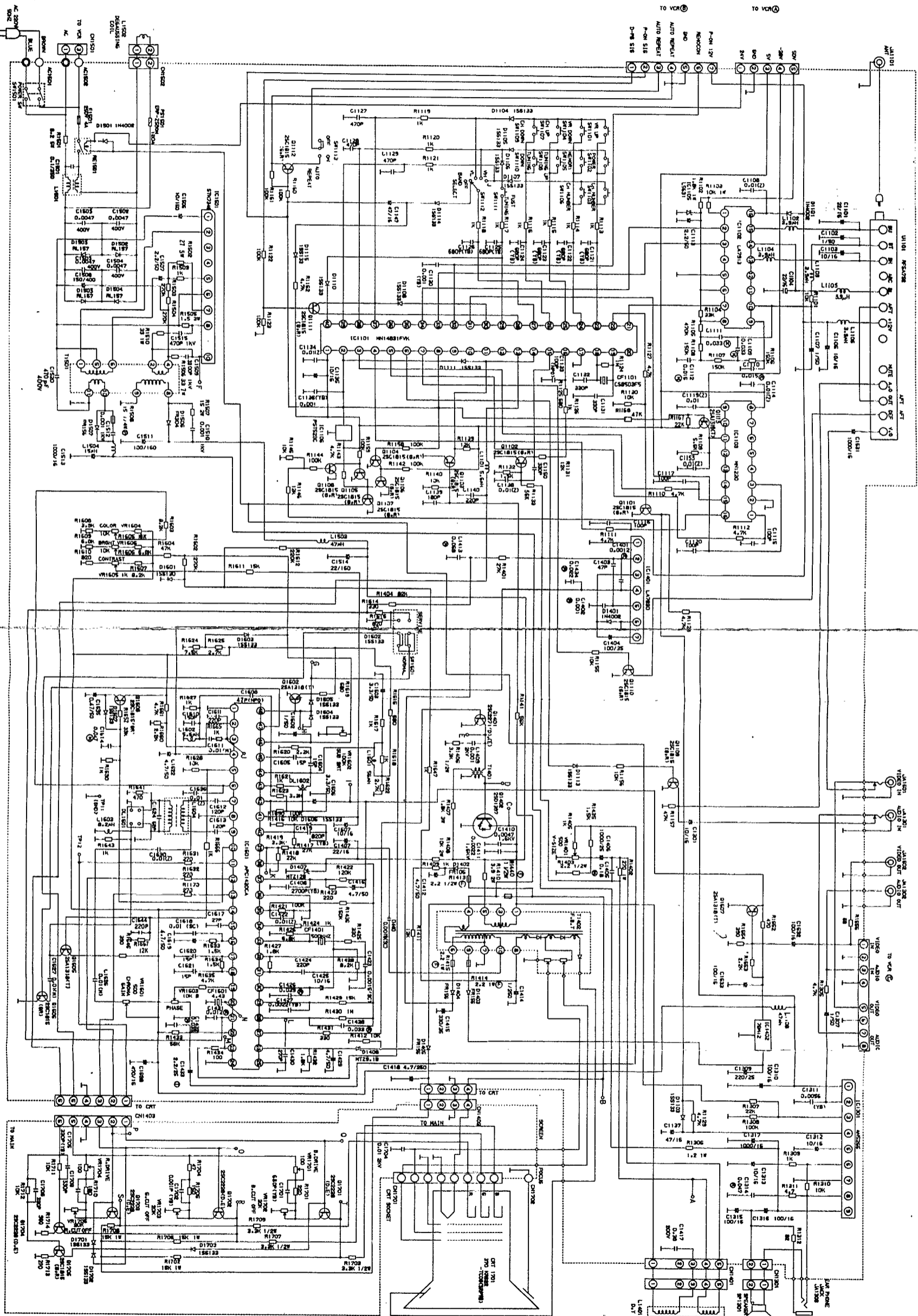


Point : T  
1Div=20us 1Div=50V

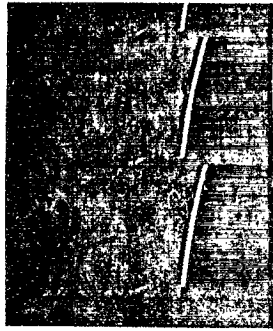


Point : U  
1Div=20us 1Div=0.1V

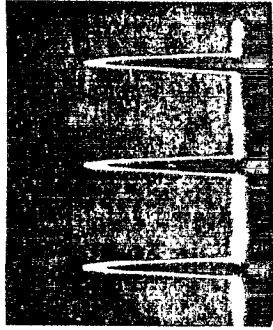
# SCHEMATIC DIAGRAM



# WAVE FORM



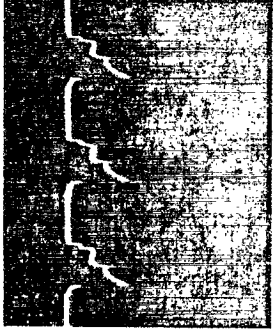
Point : A  
1Div=5ms 1Div=20V



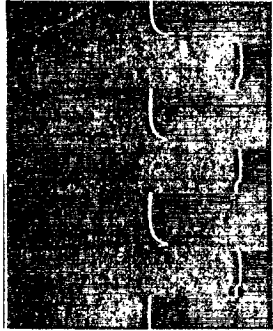
Point : B  
1Div=20us 1Div=5V



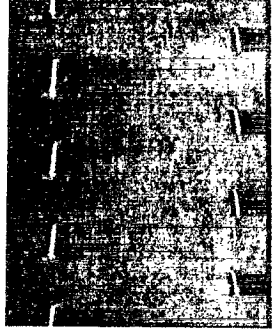
Point : C  
1Div=20us 1Div=250V



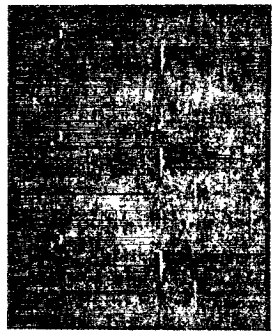
Point : D  
1Div=20us 1Div=2V



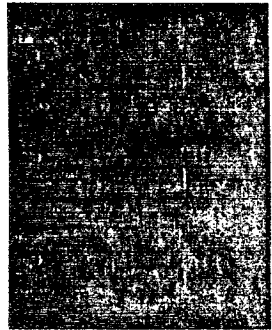
Point : E  
1Div=20us 1Div=50V



Point : F  
1Div=10us 1Div=100V



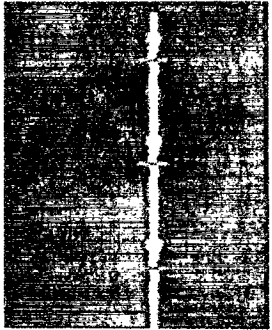
Point : G  
1Div=20us 1Div=1V



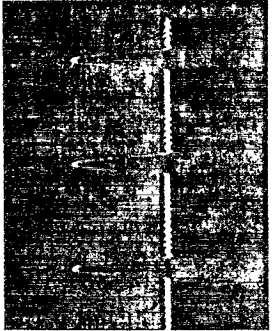
Point : H  
1Div=20us 1Div=1V



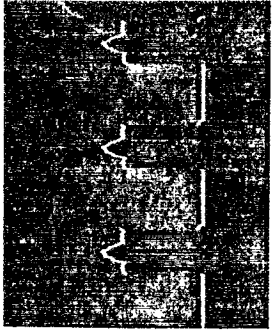
Point : I  
1Div=20us 1Div=0.5V



Point : J  
1Div=20us 1Div=50mV



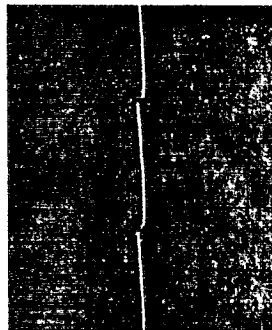
Point : K  
1Div=20us 1Div=5V



Point : L  
1Div=20us 1Div=0.5V



Point : M  
1Div=20us 1Div=10mV



Point : N  
1Div=5ms 1Div=0.5V



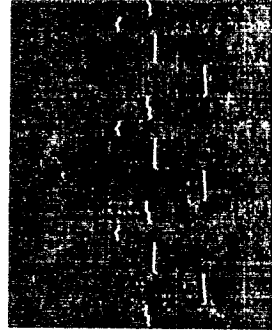
Point : O  
1Div=20us 1Div=0.2V



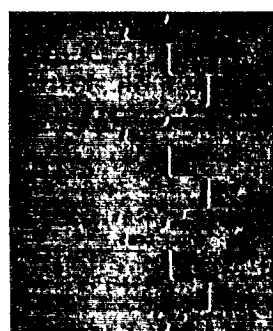
Point : P  
1Div=20us 1Div=0.5V



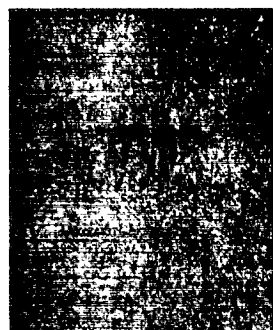
Point : Q  
1Div=20us 1Div=0.5V



Point : R  
1Div=20us 1Div=50V



Point : S  
1Div=20us 1Div=50V



Point : T  
1Div=20us 1Div=25V

## VOLTAGE CHARTS

Operation :    Input Signal    Split color bar signal  
                   Brightness    Maximum  
                   Contrast        Maximum  
                   Color            Maximum  
                   Volume          Minimum

TR NO	TR TYPE	E	C	B	REMARK
Q1101	2SC1815 (GR) 2SC3331 (T, U)	0	0	0.7	
Q1102	2SC1815 (GR) 2SC3331 (T, U)	0	4.6	0.4	
Q1103	2SC1815 (GR) 2SC3331 (T, U)	0	4.2	-0.2	
Q1104	2SC1815 (GR) 2SC3331 (T, U)	0	0	0.6	
Q1105	2SC1815 (GR) 2SC3331 (T, U)	0	0.8	0	
Q1106	2SC1815 (GR) 2SC3331 (T, U)	0	0.8	0	
Q1107	2SC1815 (GR) 2SC3331 (T, U)	0	0	0.8	
Q1108	2SC1815 (GR) 2SC3331 (T, U)	0	0	0.6	
Q1109	2SC1815 (GR) 2SC3331 (T, U)	0	0	0	
Q1110	2SC1815 (GR) 2SC3331 (T, U)	0	4.0	0	
Q1111	2SC1815 (GR) 2SC3331 (T, U)	4.2	5.0	0.1	
Q1112	2SC1815 (GR) 2SC3331 (T, U)	0	0	0.5	
Q1401	2SC2271 (D)	0	70.4	0.3	
Q1402	2SD1397	0	115.8	-0.1	
Q1602	2SA1318 (T)	6.5	0	6.1	
Q1605	2SA1318 (T)	9.0	0	8.2	

TR NO	TR TYPE	E	C	B	REMARK
Q1606	2SC1815 (GR) 2SC3331 (T, U)	0	0	0.1	
Q1607	2SA1318 (T)	2.4	0	1.8	
Q1608	2SC1815 (GR) 2SC3331 (T, U)	10.7	11.9	11.1	
Q1701	2SC2228 (D, E)	7.1	127.5	7.1	
Q1702	2SC2228 (D, E)	7.1	128.8	7.1	
Q1703	2SC2228 (D, E)	7.0	118.0	7.2	
Q1704	2SC2228 (D, E)	0	128.7	0	
Q1705	2SC1815 (GR) 2SC3331 (T, U)	0	9.0	0	
Q1113	2SA1318 (T)	0	4.8	0	



IC NO	IC1101	IC1102	IC1103	IC1105	IC1106	
PIN	MN14831FVK	LA7913	MN1220	L5631	PST523C	
1	5.0	1 2. 3	0	0	5.0	
2	5.0	0	0	3 2. 1	0	
3	5.0	0	1. 1		5.0	
4	0	NC	NC			
5	0	0	NC			
6	0	3 2. 1	NC			
7	0	4. 0	NC			
8	4. 8	6. 0	5. 0			
9	NC	5. 7	- 2 9. 0			
10	NC	6. 2	NC			
11	NC	NC	0			
12	NC	NC	NC			
13	0	0. 7	NC			
14	4. 2	0. 2	NC			
15	4. 6	1 1. 0	0			
16	2. 9	1 1. 1	0			
17	0					
18	2. 3					
19	2. 5					
20	NC					
21	4. 0					
22	4. 3					
23	5. 0					
24	5. 0					
25	5. 0					
26	5. 0					
27	5. 0					
28	5. 0					
29	2. 7					
30	4. 2					
31	1. 2					
32	2. 7					
33	0					
34	0					
35	NC					
36	NC					
37	4. 3					
38	4. 9					
39	4. 9					
40	2. 4					

IC NO	IC1301	IC1401	IC1402	IC1501	IC1601
PIN	AN5265	LA7830	μ PC78M12	STK7348	μ PC1420CA
1	11.8	0	15.2	40.0	0
2	5.3	13.4	0	0	4.8
3	0	23.3	11.9	NC	4.8
4	0.2	0.9		NC	9.0
5	5.2	0.7		-1.3	8.2
6	5.2	22.9		0	0.7
7	0	1.6		-0.4	4.2
8	5.3			0.2	0
9	11.7			343.0	4.2
10					11.2
11					5.9
12					5.9
13					2.4
14					11.9
15					5.0
16					6.2
17					8.7
18					8.7
19					5.7
20					5.2
21					0.3
22					3.4
23					0.9
24					0
25					0
26					0
27					0.5
28					6.8
29					6.0
30					4.6
31					4.6
32					4.6
33					8.7
34					0
35					7.2
36					0
37					7.5
38					11.0
39					0
40					0.9
41					3.6
42					2.3
43					9.1
44					9.3
45					5.5
46					7.7
47					0.1
48					6.1

# MECHANICAL PARTS LIST (DECK)

REF. NO.	DESCRIPTION	PART NO.
<b>CYLINDER</b>		
1	Cylinder Assembly (Consists of 2-13, 19, 20, 24)	8000-01-315
2	Upper Drum	8000-01-13
3	Cylinder Mount Assembly (Consists of 4-8, 24)	8000-01-302
4	Lower Drum Assembly	8000-01-303
5	Cylinder Mount	8000-01-22
6	Video Power Base Assembly	8000-01-304
7	Screw, Sems, 3X10	9109-00-00
8	Screw, Sems, 2.6X6	9098-00-00
24	Screw, Sems, 3X12	9110-00-00
9	Motor, TM-81A	6004-03-22
10	Screw, Camera, 2X4.5	9560-00-00
11	Screw, Sems, 2.6X6	9098-00-00
12	Upper Drum Base	8000-01-14
13	Screw, Sems, 3X8	9108-00-00
19	Screw, Sems, 2X5	9078-00-00
20	DM Bracket Semi Assembly	8000-01-501
14	Screw, Sems, 3X10	9109-00-00
15	Drum Earth, Bracket	8000-01-48
16	Drum Earth	8000-01-49
17	Screw, Sems, 3X10	9109-00-00
18	Screw, Cup, 2.6X3	9965-00-00
21	Support, Motor PCB	8000-01-37
22-23	Not Used	
25-30	Not Used	
<b>CHASSIS</b>		
31	Chassis Semi Assembly	8000-02-507
32-33	Not Used	
34	Open Angle Assembly	8000-02-301
35	Screw, C Tapping, 2.6X5	9192-00-00
36	BT Change Plate Semi Assembly	8000-02-502
37	BT Change Arm (B)	8000-13-32
38	Collar	8000-08-12
39	Screw, S Tapping, Camera, 2.6X35	9840-00-00
40	BT Actuator	8000-13-31
41	Collar	8000-08-12
42	Screw, C Tapping, 2.6X5	9192-00-00
43	RB Return Arm	8000-02-21
44	Collar	8000-08-12
45	Screw, C Tapping, 2.6X5	9192-00-00
46	Side Angle	8000-22-09
47	Screw, C Tapping, 3X5	9202-00-00
48-50	Not Used	
<b>LOADING BASE</b>		
51	Loading Base Semi Assembly	8000-03-501
52	Loading Block (L)	8000-03-31
53	Loading Block (R)	8000-03-09
54	Roller Post TT	8000-03-34
55	Loading Boss	8000-03-12
56	Screw, set, 2X3 Plane Head	9952-00-00
57	Screw, Camera, 2.6X4.5, Pan Head	9959-00-00
58	Washer, Plane, 2.6X7X0.8	9324-00-00
59	Pressing Plate, Roading	8000-03-13
60	Screw, Sems, 2X4	9077-00-00
61	Guide, Tape	8000-03-14
62	Flange (A), Tape Guide	8000-03-18
63	Flange (B), Tape Guide	8000-03-20
64	Spring, Tape Guide	8000-03-15
65	Nut, 3.0	9453-00-00
66	Cap, Guide	8000-03-19
67	Adjuster, Tracking	8000-03-16
68	Screw, Sems, 3X6	9107-00-00
69	Roller Post SIS	8000-03-33
70-76	Not Used	
77	Flange (C), Tape Guide	8000-03-28
78	Flange (D), Tape Guide	8000-03-29
79	Nut, Nylon, M3	9953-00-00
80	Not Used	
<b>LOADING DRIVE</b>		
81	Loading Plate (L) Assembly (Consists of 82-85)	8000-04-301
82	Loading Plate (L) Semi Assembly	8000-04-501
83	BT Return Roller	8000-04-25
84	E Ring, S1.5	9500-00-00
85	Loading Plate Spring	8000-04-23
86	Roading Plate (R) Assembly (Consists of 87-88)	8000-04-302
87	Roading Plate (R) Semi Assembly	8000-04-502
88	Spring, Roading Plate	8000-04-23
89	L Drive Gear Assembly (Consists of 90-92)	8000-04-303
90	L Drive Gear (A)	8000-04-13
91	L Drive Gear (B) Assembly	8000-04-304
92	L Drive Gear Spring	8000-04-16
93	Washer, Plane, 4X16X0.6	9956-00-00
94	Driver Gear	8000-04-20
95	Gearing Plate	8000-04-21
96	Gearing Gear	8000-04-22
97	Joint Gear (B)	8000-04-19
98	Joint Gear (A)	8000-04-18
99	Guide Gear	8000-04-09

REF. NO.	DESCRIPTION	PART NO.
100	Plane Washer 2.5X14X1	9955-00-00
101	E Ring S2.0	9502-00-00
102	Guide Roller	8000-04-10
103	Plane Washer 2.5X10X1	9954-00-00
104	Screw 2.6X4	9038-00-00
105	E Ring S3.2	9506-00-00
106	E Ring S2.3	9503-00-00
107	E Ring S2.5	9504-00-00
108-140	Not Used	
<b>CTH</b>		
141	Head Base Assembly (Consists of 142-150)	8000-06-310
142	AC Head HVMLA 1009	6204-15-02
143	Head Base Semi Assembly	8000-06-501
144	Screw Azimuth SP	8000-06-26
145	Not Used	
146	Azimuth Spring	8000-06-04
147	Screw 2.6X7	9041-00-00
148	Set Screw 3X5 (Get Sharp Type)	9950-00-00
149	Adjust Coller	8000-06-05
150	Nylon Nut M3	9953-00-00
151	Head Spring	8000-06-03
152	MD Base Bracket Assembly (Consists of 153-155)	8000-06-316
153	MD Base Bracket	8000-06-18
154	MD base Assembly	8000-06-315
155	Tams Screw 2X5	9078-00-00
156	Tams Screw 2.6X5	9097-00-00
157-170	Not Used	
<b>FEH</b>		
171	FE Plate Assembly (Consists of 172-175, 178)	8000-07-303
172	FE Plate Semi Assembly	8000-07-501
173	Impedance Roller	8000-07-05
174	Polys W Cut 1.6X3.8X0.3	9743-00-00
175	Polyslider W 2.1X5X0.3	9747-00-00
176	FE Head	6204-15-03
177	FE Plate Spring	8000-07-04
178	E Ring S3.0	9505-00-00
179	Screw, Camera 2X3	9550-00-00
180-190	Not Used	
<b>TENSION ARM</b>		
191	Tension Arm Assembly (Consists of 192-196)	8000-08-302
192	Band brake Assembly (Consists of 193-194)	8000-08-303
193	BT Felt Assembly	8000-08-301
194	P Tapping Screw 2X8	9675-00-00
195	Tension Arm Semi Assembly	8000-08-501
196	E Ring S1.5	9500-00-00
197	BT Adjust Plate	8000-08-13
198	Tension Arm Spring	8000-08-14
199	Tams Screw 2.6X5	9971-00-00
200	Not used	
201	BT Return Arm	8000-08-10
202	Collar	8000-08-12
203	Screw 2.6X4.5	9999-18-01
204	E Ring S2.0	9502-00-00
205	E Ring S2.0	9502-00-00
206	BT Return Lever	8000-08-11
207	R Ring S2.5	9504-00-00
208	Tension Guide	8000-08-17
209	Back Tension Support (B)	8000-08-16
210	C Tapping Screw 2.6X5	9192-00-00
211	C Tapping Screw 3X5	9202-00-00
212-220	Not Used	
<b>PINCH ROLLER</b>		
221	Pinch Roller Arm Assembly (Consists of 222-224)	8000-09-306
222	Screw 2.6X4	9038-00-00
223	Pinch Roller Arm Semi Assembly	8000-09-504
224	Pinch Roller A	8000-09-22
225	E Ring S2.3	9503-00-00
226	Toggle Arm Assembly (Consists of 227-229)	8000-09-305
227	Toggle Arm Semi Assembly	8000-09-505
228	Pinch Roller Arm Spring (B)	8000-09-05
229	Pinch Roller Arm Spring (A)	8000-09-04
230	Collar	8000-08-12
231	C Tapping Screw 2.6X5	9192-00-00
232	Pressure Plate Assembly (Consists of 233-237)	8000-09-303
233	Pressure Plate Semi Assembly	8000-09-503
234	Pressure Roller	8000-09-08
235	E Ring	9502-00-00
236	Collar	8000-08-12
237	C Tapping Screw 2.6X5	9192-00-00
238	Pressure Arm Actuator	8000-09-20
239	Tape Suport	8000-09-17
240	Tape Suport Shaft	8000-09-18
241	Tape Suport Spring	8000-09-19
242	Self Nut	8000-09-21
243-250	Not Used	

REF. NO.	DESCRIPTION	PART NO.
SUB CHASSIS		
251	Sub Chassis Assembly (Consists of 252-259)	8000-10-306
	252 Sub Chassis Semi Assembly	8000-10-507
	253 Change Plate Actuate Arm	8000-10-17
	254 E Ring S3.0	9505-00-00
	255 Change Plate Spring	8000-10-15
	256 Change Plate Actuate Arm Spring	8000-10-19
	257 SW Actuator (C) Semi Assembly	8000-10-506
	258 Collar	8000-08-12
	259 Tams Screw 2.6X5	9097-00-00
260-262	Not Used	
263	Tams Screw 2.6X5	9097-00-00
264	Tams Screw 2X6	9079-00-00
265	FH Screw (For Camera) 2.6X5	9564-00-00
266-280	Not Used	
REEL		
281	Supply Reel Assembly	8000-11-301
282	Take Up Reel Assembly	8000-11-310
283	Polys W Cut 2X5X0.5	9876-00-00
284	3.1X3X0.6	9969-00-00
285	RS Bracket (B) Assembly (Consists of 286-288)	8000-11-308
	286 Reel Sensor Base Assembly	8000-11-306
	287 RS Bracket (B)	8000-11-17
	288 Screw (For Camera) 2.6X2.5	9555-00-00
289	Tams Screw 2.6X5	9096-00-00
290	Screw 2.6X7	9041-00-00
291	Not Used	
292	RSP Base Assembly	8000-11-307
293	Tams Screw 2.6X5	9096-00-00
294	Not Used	
REEL DRIVE		
295	Middle Pulley Assembly	8000-12-308
296-300	Not Used	
301	Clutch Assembly	8000-12-304
302	Gear Holder Assembly (Consists of 303-305, 314-320)	8000-12-311
	303 Gear Holder Semi Assembly	8000-12-505
	304 R Drive Gear	8000-12-19
	305 E Ring S1.5	9500-00-00
	314 Return Gear (B) Assembly	8000-12-306
	315 Return Dram Assembly	8000-12-307
	316 E Ring S1.5	9500-00-00
	317 Return Arm	8000-12-18
	318 Return Arm Collar	8000-12-26
	319 Sems 2X4	9077-00-00
	320 Return Spring	8000-12-25
306	P Gear	8000-12-07
307	FF Gear	8000-12-08
308	Polys W Cut 1.6X3.8X0.3	9743-00-00
309	Wave Washer	8000-10-25
310	Tams Screw 2X5	9078-00-00
311	RF Clutch Assembly B	8000-12-309
312	Rumira W 3.6X6X0.1	9798-00-00
313	Polys W Cut 2.6X6X0.5	9884-00-00
BRAKE		
321	Exchange Plate (D) Semi Assembly	8000-13-503
322	S Brake True Form Assembly (Consists of 323-325)	8000-13-301
	323 S Brake True Form Semi Assembly	8000-13-501
	324 Brake Arm Spring	8000-13-09
	325 Brake Shoe (B)	8000-13-26
326	E Ring S2.3	9503-00-00
327	Brake True Form Spring	8000-13-10
328	T Brake True Form Assembly (Consists of 329-331)	8000-13-302
	329 T Brake True Form Semi Assembly	8000-13-502
	330 Brake Arm Spring	8000-13-09
	331 Brake Shoe (B)	8000-13-26
332	E Ring S2.3	9503-00-00
333	T Brake Actuate Arm	8000-13-34
334	Collar	8000-08-12
335	Tams Screw 2.6X5	9097-00-00
336	LB Arm Assembly (Consists of 337-338)	8000-13-304
	337 LB Arm (B)	8000-13-33
	338 Brake Shoe	8000-13-11
339	LB Arm Spring	8000-13-18
340	E Ring S2.3	9503-00-00
341	RB Actuate Arm	8000-13-21
342	LB Actuate Arm	8000-13-20
343	Neutral Spring (B)	8000-13-37
344	LB Actuate Arm Spring Collar	8000-13-29
345	LB Actuate Arm Spring	8000-13-28
346	W Tams Screw 2.6X11	9970-00-00
347	Bell Clank	8000-13-23
348	E Ring S2.5	9504-00-00
349	Main Plate	8000-13-02
350	Pull Plate A	8000-13-36
351	Collar	8000-08-12
352	Tams Screw 2.6X5	9097-00-00
353	S Soft Brake Assembly	8000-13-305
354	S Soft Brake Spring	8000-13-16

REF. NO.	DESCRIPTION	PART NO.
355	E Ring S2.3	9503-00-00
356	R Back Tension Arm Assembly	8000-13-306
357	RB Arm Spring	8000-13-17
358	RB Arm Sleeve	8000-13-24
359	E Ring S2.3	9503-00-00
360	Not Used	
PLANGER		
361	Plunger True Form Sub Assembly (Consists of 362-364)	8000-14-303
	362 Plunger True Form Assembly	8000-14-302
	363 Separate Spring Plate	8000-14-06
	364 Tams Screw 2X4	9077-00-00
365	Plunger	8000-14-04
366	Tams Screw 2.6X5	9097-00-00
367	P Holder	8000-10-23
368	Tams Screw 2.6X4	9096-00-00
369-370	Not Used	
FLYWHEEL		
371	Flywheel Capstan	8000-15-30
372	Flywheel Holder Assembly	8000-15-304
373	Main Belt	8000-15-26
374-375	Not Used	
376	Nylon Washer 3.6X10X0.5	9957-00-00
377	Capstan Metal	8000-15-24
378	Dish S Tapping Screw (For Camera) 2.6X6	9684-00-00
379	Not Used	
380	C Tapping Screw 3X5	9202-00-00
381	Nylon Washer 3.43X5X0.5	9860-00-00
382-391	Not Used	
MOTOR		
392	Capstan Motor Assembly	8000-16-305
393	Plane Belt	8000-16-07
394	Square Belt	8000-16-08
395	Tams Screw 3X4	9105-00-00
396	Relay Pulley (B) Assembly	8000-16-304
397	Polys W Cut 1.6X3.8X3.8	9743-00-00
398	Rumira W 2.1X5X0.5	9920-00-00
398-460	Not Used	
SENSOR		
461	Not Used	
462	Lamp Holder Assembly	8000-18-309
463-466	Not Used	
467	Dew Sensor EYH-S10K	6808-08-01
468	Tams Screw 3X4	9105-00-00
469-649	Not Used	
650	T Loading Motor Assembly (Consists of 651-671)	8000-21-302
	651 Motor Assembly	8000-21-303
	652 TL Motor Bracket (B)	8000-21-27
	653 Worm Gear Assembly	8000-21-304
	654 Mode Switch Assembly	8000-21-305
	655 Tams Screw 2.6X5	9097-00-00
	656 TL Worm Gear Shaft Receiver (A)	8000-21-32
	657 TL Worm Gear Shaft Receiver (B)	8000-21-33
	658 TL Pulley	8000-21-40
	659 TL Belt	8000-21-39
660-662	Not Used	
	663 SW Actuate Angle (B)	8000-21-28
	664 Actuate Angle Collar	8000-21-12
	665 Tams Screw 2X4	9077-00-00
	666 MSW Actuator Semi Assembly	8000-21-501
667	Not Used	
	668 Tams Screw 3X4	9105-00-00
	669 C Tapping Screw 2.6X5	9192-00-00
	670 Polyslider W 2.2X3.8X0.2	9939-00-00
	671 E Ring S1.2	9499-00-00
672-699	Not Used	
700	Front Loading Assembly (Consists of 700-819)	8000-22-323
	701 Motor Bracket Assembly (Consists of 702-717,819)	8000-22-302
	702 Motor Assembly	8000-22-303
	703 FL Motor Base Assembly	8000-22-304
	704 Motor Bracket Semi Assembly	8000-22-501
	705 Worm gear Assembly	8000-22-305
	706 Sensor Base (R) Assembly	8000-22-320
707-709	Not Used	
	710 SW Lever (A)	8000-22-28
	711 SW Lever (B)	8000-22-29
	712 Worm Gear Shaft Receive	8000-22-27
713	Not Used	
	714 Polys W Cut 1.6X3.8X0.3	9743-00-00
	715 Tams Screw 2X5	9078-00-00
	716 FL Belt (B)	8000-22-64
	717 Bracket (B)	8000-22-70
	819 Tams Screw (For Camera) 2.6X4.5	9999-18-01
718	Not Used	
719	Rec Switch Assembly	8000-22-324
720	Tams Screw 2X4	9077-00-00
721	Cassette Holder Assembly (Consists of 722-727)	8000-22-308
722	Cassette Holder	8000-22-03

REF. NO.	DESCRIPTION	PART NO.
	723 Slide Plate	8000-22-13
	724 C Lock PLate (R)	8000-22-12
	725 Collar	8000-08-12
	726 Lock Spring	8000-22-43
	727 Screw (For Camera) 2.6X3	9968-00-00
728-729	Not Used	
730	Front Angle Assembly (Consists of 731-733)	8000-22-309
	731 Front Angle	8000-22-06
	732 Tape Guide (R)	8000-19-25
	733 Tape Guide (L)	8000-19-26
734-744	Not Used	
745	Side Plate (R) Assembly (Consists of 746-756)	8000-22-310
	746 Side Plate (R) Semi Assembly	8000-22-502
	747 Cassette Press Plate	8000-19-11
748	Not Used	
	749 Screw (For Camera) 2.3X2	9833-00-00
	750 Open Lever	8000-22-25
	751 Open Lever Spring	8000-22-44
	752 Open Lever Callar	8000-22-42
	753 Screw (For SL Camera) 2X4	9967-00-00
	754 Lock Release Lever	8000-22-16
	755 Guide Roller	8000-22-23
	756 Polys W Cut 1.6X3.8X0.3	9743-00-00
757	Top Stay	8000-22-65
758-759	Not Used	
760	Side PLate (L) Assembly (Consists of 761-770)	8000-22-311
	761 Side (L) Semi Assembly	8000-22-503
	762 Cassette Press Plate	8000-19-11
763	Not Used	
	764 Screw (For Camera) 2.3X2	9833-00-00
	765 C Clock PLate (L)	8000-22-66
	766 C Lock Plate Spring (L)	8000-19-65
	767 Lock PLate Collar	8000-19-63
	768 Screw (For SL Camera) 2X2.5	9966-00-00
	769 Guide Roller	8000-22-23
	770 Polys W Cut 1.6X3.8X0.3	9743-00-00
771-774	Not Used	
775	Frame (R) Assembly (Consists of 776-787)	8000-22-312
	776 Frame (R) Semi Assembly	8000-22-504
	777 Worm Wheel Assembly	8000-22-313
	778 Worm Wheel	8000-22-20
	779 Friction Gear	8000-22-21
	780 Friction Spring	8000-22-48
	781 Lift Gear (R) Assembly	8000-22-314
	782 Lift Gear (R)	8000-22-15
	783 Lift Arm	8000-22-11
	784 LP Spring	8000-22-45
	785 Open Lever Guide	8000-22-26
	786 Guide Sleeve	8000-22-24
	787 E Ring S2.5	9504-00-00
788-789	Not Used	
790	Fram (L) Assembly (Consists of 791-804)	8000-22-315
	791 Fram (L) Semi Assembly	8000-22-505
	792 Sensor Base (L) Assembly	8000-22-321
793-795	Not Used	
	796 Lift Gear (L) Assembly (Consists of 797-799)	8000-22-318
	797 Lift Gear (L)	8000-22-14
	798 Lift Arm	8000-22-11
	799 LP Spring	8000-22-45
	800 Lift Lever	8000-22-22
	801 Lift Lever Spring	8000-22-47
	802 Guide Sleeve	8000-22-24
	803 E Ring S2.5	6504-00-00
	804 Tams Screw 2.6X6	9098-00-00
805-809	Not Used	
810	Rear Angle	8000-22-08
811	Upper Plate	8000-22-07
812	Synchronize Shaft	8000-22-46
813	Synchronize Gear (A)	8000-22-34
814	E Ring S2.5	9504-00-00
815	Tams Screw 2.6X4	9096-00-00
816	Screw (For Camera) 2.6X3	9556-00-00
817	Screw (For Camera) 2.3X2.5	9991-00-00
818	C Tapping Screw 3X5	9202-00-00
820-831	Not Used	

REF. NO.	DESCRIPTION	PART NO.

# MECHANICAL PARTS LIST (VCR CABINET)

Ref. No.	Description	Parts No.
A-IX	Front Ass'y (consists of following)	6A50502
A-1	Front Panel Ass'y (Non-repairable)	6A50502X
	Front	
	Button, Mode (EJECT, PLAY, STOP)	
	Button, FF/REW (REWIND, F. FWD)	
	Button, Memory (TIMER REC, CLOCK COUNTER, RESET, MEMORY, QUICK REC)	
	Button, REC / PAUSE (RECORD, PAUSE / STILL)	
	Button, Timer (PROG., SELECT, SET -/+)	
	Lens, LED (PLAY, MONITOR)	
A-2	Plate, Front	6E51241
A-3	Plate, Timer	6E51242
A-4	Plate, Brand	6E51243
A-5	Not used	
A-13	Badge	6H50157
A-6	Knob, Tracking	6D51030
A-7	Cabinet, Main	6C50245
A-8	Jack Board	6C50185
A-9	Case, Top Ass'y	6A50360
A-10	Spacer, Deck	6D51038
A-11	Door, Cassette	6D51296
A-12	Holder, Stopper	6S50336
BI-1	Deck Ass'y (See Deck List)	P306SRF
B2-1	Holder, Cassette Door	6L50062
B2-2	Holder, Deck	6S50208
B2-3	Shield, Head	6S50221
B2-4	Not used	
B2-5	Ground Plate	6S50212
L-1	Screw, P-Tight, Bind Head 3 x 10 (for Case, Top---2pcs.) (for Jack Board---3pcs.) (for Main PCB---1pc.) (for Holder, Transformer---2pc.) (for Front Ass'y---2pcs.)	GBMP310
L-2	Screw, P-Tight, Brazier Head, Flange 3 x 12 (for Deck Ass'y---5pcs.)	GCMP312
L-3	Screw, P-Tight, Bind Head 3 x 6 (for Holder, Deck---1pc.) (for Main PCB---2pcs.) (for Ground Plate---1pc.)	GBMS306
L-4	Screw, Sens, Pan Head M3 x 5 (for Holder, Cassette Door---1pc.)	CPM3305
L-5	Screw, Tapping, Bind Head 3 x 10 (for Transistors---3pcs.) (for Power Supply PCB---1pc.)	DBM1310
L-6	Screw, CE-Tight M4 x 8 (for Transformer---1pc.)	GZHC408
L-7	Screw, Tapping, Bind Head 3 x 8 (for IC---1pc.)	DBM1308

# ELECTRICAL PARTS LIST (VCR)

Ref. No.	Description	Parts No.
PCB Ass'y, Main		1614065X
Capacitors		
C1	Ceramic 100 pF / 50V ±5% SL	1270101
C2	Electrolytic 1 μF / 50V ±20%	126F105
C3	Semi-conductive 0.047 μF / 25V ±10%	12Y2473
C4	Ceramic 0.022 μF / 50V +80/-20%	12F3223
C5	Not used	
C6	Semi-conductive 0.047 μF / 25V ±10%	12Y2473
C7	Electrolytic 1 μF / 50V ±20%	526W105
C8-9	Ceramic 0.01 μF / 50V +80/-20%	12F3103
C10	Ceramic 15 pF / 50V ±5% SL	1270150
C11-13	Ceramic 0.01 μF / 50V +80/-20%	12F3103
C14	Ceramic 33 pF / 50V ±5% SL	1270330
C15	Ceramic 150 pF / 50V ±5% SL	1270151
C16	Ceramic 39 pF / 50V ±5% SL	1270390
C17	Ceramic 0.01 μF / 50V +80/-20%	12F3103
C18	Electrolytic 47 μF / 16V ±20%	126C476
C19	Not used	
C20	Ceramic 47 pF / 50V ±5% SL	1270470
C21	Electrolytic 1 μF / 50V ±20%	126F105
C22	Ceramic 0.01 μF / 50V +80/-20%	12F3103
C23	Electrolytic 47 μF / 16V ±20%	126C476
C24	Ceramic 22 pF / 50V ±5% SL	1270220
C25	Ceramic 270 pF / 50V ±5% SL	1270271
C26	Ceramic 22 pF / 50V ±5% SL	1270220
C27	Ceramic 68 pF / 50V ±5% SL	1270680
C28	Ceramic 22 pF / 50V ±5% SL	1270220
C29	Ceramic 150 pF / 50V ±5% SL	1270151
C30	Not used	
C31	Ceramic 82 pF / 50V ±5% SL	1270820
C32	Ceramic 0.01 μF / 50V +80/-20%	12F3103
C33	Ceramic 150 pF / 50V ±5% SL	1270151
C34	Ceramic 180 pF / 50V ±5% SL	1270181
C35	Polyester Film 0.082 μF / 50V ±5%	1254823
C36	Electrolytic 1 μF / 50V ±20%	126F105
C37	Not used	
C38	Ceramic 0.047 μF / 50V +80/-20%	12F3473
C39	Electrolytic 47 μF / 16V ±20%	126C476
C40	Not used	
C41	Ceramic 82 pF / 50V ±5% SL	1270820
C42	Ceramic 0.01 μF / 50V +80/-20%	12F3103
C43	Ceramic 2200 pF / 50V ±10% YB	12B3222
C44	Ceramic 150 pF / 50V ±5% SL	1270151
C45	Electrolytic 10 μF / 16V ±20%	126C106
C46	Ceramic 120 pF / 50V ±5% SL	1270121
C47	Electrolytic 220 μF / 6.3V ±20%	126A227
C48	Ceramic 56 pF / 50V ±5% SL	1270560
C49	Ceramic 10 pF / 50V ±5% SL	1270100
C50	Electrolytic 330 μF / 6.3V ±20%	126A337
C51	Electrolytic 10 μF / 16V ±20%	126C106
C52	Electrolytic 1000 μF / 6.3V ±20%	126A108
C53	Electrolytic 100 μF / 16V ±20%	126C107
C54	Ceramic 220 pF / 50V ±5% SL	1270221
C55	Ceramic 0.022 μF / 50V +80/-20%	12F3223
C56	Ceramic 180 pF / 50V ±5% SL	1270181
C57	Ceramic 0.022 μF / 50V +80/-20%	12F3223
C58-199	Not used	
C200	Polyester Film 0.047 μF / 100V ±5%	1255473
C201	Ceramic 220 pF / 50V ±5% SL	1270221
C202	Electrolytic 47 μF / 16V ±20%	126C476
C203-204	Semi-conductive 0.01 μF / 25V ±10%	12Y2103
C205	Electrolytic 100 μF / 16V ±20%	126C107
C206	Not used	
C207	Ceramic 820 pF / 50V ±10% YB	12B3821
C208	Electrolytic 22 μF / 16V ±20%	126C226
C209	Electrolytic 4.7 μF / 25V ±20%	526U475
C210	Not used	
C211	Electrolytic 33 μF / 16V ±20%	126C336
C212	Electrolytic 22 μF / 16V ±20%	126C226
C213	Electrolytic 1 μF / 50V ±20%	126F105
C214	Ceramic 560 pF / 50V ±10% YB	12B3561
C215	Electrolytic 22 μF / 16V ±20%	526T226
C216	Semi-conductive 0.01 μF / 25V ±10%	12Y2103
C217	Electrolytic 1 μF / 50V ±20%	126F105
C218	Semi-conductive 0.0033 μF / 25V ±10%	12Y2332
C219	Electrolytic 47 μF / 16V ±20%	126C476
C220	Electrolytic 1 μF / 50V ±20%	126F105
C221	Ceramic 1000 pF / 50V ±10% YB	12B3102
C222	Electrolytic 22 μF / 16V ±20%	126C226
C223-224	Not used	
C225	Semi-conductive 0.022 μF / 25V ±10%	12Y2223
C226	Electrolytic 1 μF / 50V ±20%	126F105
C227	Ceramic 1500 pF / 50V ±10% YB	12B3152
C228	Semi-conductive 0.1 μF / 16V +80/-20%	1220522
C229	Ceramic 1000 pF / 50V ±10% YB	12B3102
C230-231	Not used	
C232	Ceramic 100 pF / 50V ±5% SL	1270101
C233-299	Not used	
C300	Electrolytic 10 μF / 16V ±20% (N.P.)	126U106
C301	Semi-conductive 0.1 μF / 16V +80/-20%	1220522
C302-305	Semi-conductive 0.1 μF / 25V +80/-20%	1220461 or 1220520

Ref. No.	Description	Parts No.
C306	Electrolytic 100 μF / 25V ±20%	126D107
C307-309	Not used	
C310	Semi-conductive 0.01 μF / 25V ±10%	12Y2103
C311	Electrolytic 47 μF / 16V ±20%	126C476
C312	Electrolytic 1 μF / 50V ±20%	126F105
C313	Electrolytic 10 μF / 16V ±20%	126C106
C314-316	Semi-conductive 0.047 μF / 25V ±10%	12Y2473
C317	Electrolytic 10 μF / 16V ±20%	126C106
C318	Electrolytic 1 μF / 50V ±20%	126F105
C319	Electrolytic 2.2 μF / 50V ±20% (N.P.)	126X225
C320	Electrolytic 1 μF / 50V ±20%	126F105
C321	Electrolytic 10 μF / 16V ±20%	126C106
C322	Polyester Film 0.033 μF / 50V ±5%	1254333
C323-324	Semi-conductive 0.0047 μF / 25V ±10%	12Y2472
C325	Semi-conductive 0.1 μF / 16V +80/-20%	1220522
C326	Electrolytic 47 μF / 16V ±20%	126C476
C327	Polyester Film 0.15 μF / 50V ±5%	1254154
C328-329	Not used	
C330	Electrolytic 1000 μF / 16V ±20%	626C108
C331-399	Not used	
C400	Electrolytic 2.2 μF / 50V ±20%	526W225
C401-403	Electrolytic 10 μF / 16V ±20%	126C106
C404	Electrolytic 47 μF / 16V ±20%	126C476
C405	Electrolytic 100 μF / 16V ±20%	126C107
C406-407	Semi-conductive 0.1 μF / 25V +80/-20%	1220461 or 1220520
C408	Electrolytic 4.7 μF / 25V ±20% (N.P.)	126V475
Coils		
L1	Microinductor 39 μH	2162390
L2	Microinductor 220 μH	117N558
L3-4	Microinductor 100 μH	2162101
L5	Microinductor 33 μH	2162330
L6	Microinductor 47 μH	2162470
L7	Microinductor 220 μH	117N558
L8	Microinductor 18 μH	2162180
L9	Microinductor 100 μH	117N557
L10	Microinductor 1.8 μH	1170550
L11	Not used	
L12	Not used	
L13-14	Microinductor 330 μH	2162331
L15	Not used	
L16-17	Microinductor 15 μH	2162150
L18	Microinductor 39 μH	2162390
L19	Microinductor 220 μH	2162221
L20	Microinductor 18 μH	2162180
L21	Microinductor 22 μH	2162220
L22	Microinductor 100 μH	2162101
L23-199	Not used	
L200	Microinductor 100 μH	2162101
L201	Microinductor 12 mH	117M472 or 1170472
L202-299	Not used	
L300-301	Microinductor 200 μH	117B441
L302-399	Not used	
L400	Microinductor 100 μH	2162101
Diodes		
D3	1SS254 or US1040M or GMB01B	1SS254 or US1040M or GMB01B
D4-300	Not used	
D301-302	1SS254 or US1040M or GMB01B	1SS254 or US1040M or GMB01B
D305	Not used	
D306-307	1SS254 or US1040M or GMB01B	1SS254 or US1040M or GMB01B
D308-399	Not used	
D400-402	1SS254 or US1040M or GMB01B	1SS254 or US1040M or GMB01B
D403-404	Not used	
D405	MPC06B	MPC06B
Filters		
T1	BPF 4.43MHz	1810770 or 1810804
T2	Not used	
T3	LPF 3MHz	1810994 or 1810805
T4-199	Not used	
T200	Audio OSC Coil	113M686 or 1130686
DL-1	Comb Filter 2H	1812215
CF-1	Ceramic Filter 5.06MHz	1810497
CF-2	Ceramic Filter 4.5MHz	1810359

Ref. No	Description	Parts No
ICs		
IC1	AN3331K (Linear) Head Amp	14LN235
IC2	AN78N05 (Linear) 3terminal Voltage Regulator	AN78N05
IC3	AN78L05 or (Linear) 3terminal Voltage Regulator	AN78L05 or
	NJM78L05A	J78L05A
IC4-199	Not used	
IC200	BA7751ALS (Linear) Audio	14L0200
IC201	BA7755 (Linear) Audio Rec./Play Switch	14LF236
IC202-299	Not used	
IC300	BA6219B (Linear) Capstan Motor Drive	14LF232
IC301	FEVSE 14DN300 (MOS /Micro Processor )	14DN300
IC302-399	Not used	
IC400	FEVSY 14DN244 (MOS /Micro Controller) System Con	14DN244
IC401	BA6238A or (Linear) Loading Motor Drive	14LF168 or
	TA7288P	14LW198
IC402-403	AN78N05 (Linear) 3terminal Voltage Regulator	AN78N05
NIC1	Hybrid IC 1812421 Chrominance (Other) Video-C	1812421
NIC2	Hybrid IC 1812119 Luminance (Other) Video-Y	1812119
NIC2-299	Not used	
NIC300	Hybrid IC 1812120 Servo (Other)	1812120
Resistors		
R1	Carbon 4.7 ohm 1/5W ± 5%	1324479
R2	Carbon 560 ohm 1/5W ± 5%	1324561
R3	Carbon 1k ohm 1/5W ± 5%	1324102
R4	Carbon 470 ohm 1/5W ± 5%	1324471
R5	Carbon 1.5k ohm 1/5W ± 5%	1324152
R6	Carbon 10k ohm 1/5W ± 5%	1324103
R7	Carbon 330 ohm 1/5W ± 5%	1324331
R8	Carbon 820 ohm 1/5W ± 5%	1324821
R9	Carbon 1k ohm 1/5W ± 5%	1324102
R10	Carbon 3.9k ohm 1/5W ± 5%	1324392
R11	Carbon 8.2k ohm 1/5W ± 5%	1324822
R12	Carbon 1k ohm 1/5W ± 5%	1324102
R13	Carbon 1.5k ohm 1/5W ± 5%	1324152
R14	Carbon 820 ohm 1/5W ± 5%	1324821
R15	Carbon 1.8k ohm 1/5W ± 5%	1324182
R16	Carbon 270 ohm 1/5W ± 5%	1324271
R17-18	Carbon 1k ohm 1/5W ± 5%	1324102
R19	Carbon 2.2k ohm 1/5W ± 5%	1324222
R20	Fusible 6.8 ohm 1/4W ± 5%	1330850
R21-25	Not used	
R26	Carbon 1.2k ohm 1/5W ± 5%	1324122
R27	Not used	
R28	Carbon 5.6k ohm 1/5W ± 5%	1324562
R29	Carbon 1.8k ohm 1/5W ± 5%	1324182
R30	Carbon 270 ohm 1/5W ± 5%	1324271
R31-36	Not used	
R37	Carbon 1.5k ohm 1/5W ± 5%	1324152
R38-41	Not used	
R42	Carbon 1.2k ohm 1/5W ± 5%	1324122
R43	Carbon 180 ohm 1/5W ± 5%	1324181
R44	Carbon 1k ohm 1/5W ± 5%	1324102
R45	Carbon 3.3k ohm 1/5W ± 5%	1324332
R46	Carbon 1k ohm 1/5W ± 5%	1324102
R47	Oxide Film 330 ohm 1W ± 5%	1330419 or
R48	Carbon 82 ohm 1/5W ± 5%	1330363
R49	Carbon 220 ohm 1/5W ± 5%	1324820
R50-199	Not used	
R200	Fusible 22 ohm 1/4W ± 2%	5361220
R201	Carbon 6.8k ohm 1/5W ± 5%	1324682
R202	Carbon 47 ohm 1/5W ± 5%	1324470
R203	Carbon 4.7 ohm 1/5W ± 5%	1324479
R204	Carbon 5.6k ohm 1/5W ± 5%	1324562
R205	Carbon 100 ohm 1/5W ± 5%	1324101
R206	Carbon 68k ohm 1/5W ± 5%	1324683
R207	Not used	
R208	Carbon 39k ohm 1/5W ± 5%	1324393
R209	Carbon 5.6k ohm 1/5W ± 5%	1324562
R210-211	Carbon 10k ohm 1/5W ± 5%	1324103
R212	Not used	
R213	Carbon 220 ohm 1/5W ± 5%	1324221
R214	Carbon 330k ohm 1/5W ± 5%	1324334
R215	Carbon 12k ohm 1/5W ± 5%	1324123
R216	Not used	
R217	Carbon 22k ohm 1/5W ± 5%	1324223
R218	Carbon 8.2k ohm 1/5W ± 5%	1324822
R219	Carbon 1M ohm 1/5W ± 5%	1324105
R220	Carbon 68k ohm 1/5W ± 5%	1324683
R221	Carbon 27k ohm 1/5W ± 5%	1324273
R222	Carbon 18k ohm 1/5W ± 5%	1324183
R223	Not used	
R224	Carbon 820 ohm 1/5W ± 5%	1324821
R225	Not used	
R226	Carbon 270 ohm 1/5W ± 5%	1324271
R227	Carbon 2.2k ohm 1/5W ± 5%	1324222
R228	Carbon 100k ohm 1/5W ± 5%	1324104
R229	Carbon 22k ohm 1/5W ± 5%	1324223
R230-299	Not used	

Ref. No	Description	Parts No
R300	Carbon 1.5k ohm 1/5W ± 5%	1324152
R301	Carbon 6.8k ohm 1/5W ± 5%	1324682
R302	Carbon 91k ohm 1/5W ± 5%	1324913
R303	Not used	
R304	Carbon 4.7k ohm 1/5W ± 5%	1324472
R305	Oxide Film 3.3 ohm 2W ± 5%	1330460
R306-307	Carbon 2.7k ohm 1/5W ± 5%	1324272
R308-309	Carbon 39k ohm 1/5W ± 5%	1324393
R310	Carbon 2.2k ohm 1/5W ± 5%	1324222
R311	Carbon 4.7k ohm 1/5W ± 5%	1324472
R312-313	Carbon 10k ohm 1/5W ± 5%	1324103
R314	Carbon 3.3k ohm 1/5W ± 5%	1324332
R315	Carbon 1k ohm 1/5W ± 5%	1324102
R316	Carbon 100 ohm 1/5W ± 5%	1324101
R317	Carbon 150 ohm 1/5W ± 5%	1324151
R318	Carbon 1k ohm 1/5W ± 5%	1324102
R319	Carbon 4.7k ohm 1/5W ± 5%	1324472
R320-321	Carbon 10k ohm 1/5W ± 5%	1324103
R322	Carbon 33k ohm 1/5W ± 5%	1324333
R323	Carbon 10k ohm 1/5W ± 5%	1324103
R324-326	Carbon 22k ohm 1/5W ± 5%	1324223
R327	Oxide Film 1.5 ohm 1W ± 5%	1330391
R328-399	Not used	
R400	Carbon 4.7k ohm 1/5W ± 5%	1324472
R401	Carbon 82k ohm 1/5W ± 5%	1324823
R402	Carbon 1.2k ohm 1/5W ± 5%	1324122
R403	Carbon 150 ohm 1/5W ± 5%	1324151
R404	Carbon 47k ohm 1/5W ± 5%	1324473
R405-406	Not used	
R407-409	Carbon 2.7k ohm 1/5W ± 5%	1324272
R410	Carbon 6.8k ohm 1/5W ± 5%	1324682
R411-414	Not used	
R415-416	Carbon 10k ohm 1/5W ± 5%	1324103
R417	Carbon 47k ohm 1/5W ± 5%	1324473
R418-419	Not used	
R420	Carbon 82k ohm 1/5W ± 5%	1324823
R421-422	Carbon 10k ohm 1/5W ± 5%	1324103
R423	Carbon 22k ohm 1/5W ± 5%	1324223
R424	Carbon 5.6k ohm 1/5W ± 5%	1324562
R425-427	Carbon 10k ohm 1/5W ± 5%	1324103
R428	Carbon 82k ohm 1/5W ± 5%	1324823
R429-431	Carbon 6.8k ohm 1/5W ± 5%	1324682
R432	Carbon 47k ohm 1/5W ± 5%	1324473
R433	Oxide Film 3.3 ohm 1W ± 5%	1330395 or
R434	Not used	
R435	Carbon 100k ohm 1/5W ± 5%	1324104
R436	Carbon 1.8k ohm 1/5W ± 5%	1324182
R437	Carbon 100k ohm 1/5W ± 5%	1324104
R438-439	Carbon 1.8k ohm 1/5W ± 5%	1324182
R440	Carbon 100k ohm 1/5W ± 5%	1324104
R441	Carbon 1.2k ohm 1/5W ± 5%	1324122
R442	Carbon 100k ohm 1/5W ± 5%	1324104



Ref. No	Description	Parts No
Semi-Fixed Resistors		
VR1	Carbon 1k ohm (B) Rec. C Adjust	138J777
VR2	Carbon 1k ohm (B) Rec. Y Adjust	138J777
VR3-199	Not used	
VR200	Carbon 100k ohm (B) Audio Bias Adjust	138J785
VR201-299	Not used	
VR300	Carbon 200k ohm (B) CTL Adjust	138J786
VR301	Metal 200k ohm (B) Head SW Adjust	1380832
Transistors		
Q1	2SC2839EF or 2SC2058PQ	C2839EF or C2058PQ
Q2-3	2SC536SPEF or 2SC1740QR	C536SPEF or C1740QR
Q4	2SA608SPEF or 2SA933QR	A608SPEF or A933QR
Q5	2SC536SPEF or 2SC1740QR	C536SPEF or C1740QR
Q6-199	Not used	
Q200	2SD400F or 2SC2060Q	D400F or C2060Q
Q201-399	Not used	
Q400	2SC536SPEF or 2SC1740QR	C536SPEF or C1740QR
Q401	2SA608SPEF or 2SA933QR	A608SPEF or A933QR
Q402	2SC536SPEF or 2SC1740QR	C536SPEF or C1740QR
Q403	2SD400F or 2SC2060Q	D400F or C2060Q
Q404	2SA608SPEF or 2SA933QR	A608SPEF or A933QR
Q405	2SD1207ST or 2SD1384QR	D1207ST or D1384QR
Q406-408	2SB892ST or 2SB1010QR	B892ST or B1010QR
Digital Transistors		
QR1	DTA144WS	A144WS
QR2	2SA1346 or DTA124ES	A1346 or A124ES
QR3	2SC3400 or DTC124ES	C3400 or C124ES
QR4	DTA144WS	A144WS
QR5-299	Not used	
QR300	2SC3400 or DTC124ES	C3400 or C124ES
QR302-400	Not used	
QR401-403	2SC3400 or DTC124ES	C3400 or C124ES
QR404	2SA1346 or DTA124ES	A1346 or A124ES
Miscellaneous		
CN-A	Connector Base 6P (TOP)	1740768
CN-Bb	Connector Base 2P (TOP)	1740764
CN-CBa	Connector Base 7P (TOP)	1740769
CN-E	Connector Base 6P (TOP)	1740768
CN-D	Connector Base 7P (TOP)	1740769
CN-II	Connector Base 7P (TOP)	1740769
CN-J	Connector Base 5P (TOP)	1740767
CN-2	Connector Base 5P (TOP)	1770261
X1	Crystal 4.43MHz	1811259
X400	Ceramic Resonator 3.58MHz	1811211 or 1812206
	Shield Case, Cover	6S50351
	Shield Case, Frame	6S50352
	Shield Case, Base	6S50344
	IC Shield Case (for IC400)	6S50339
	Heat Sink	6S50335

Ref. No.	Description	Parts. No
PCB Ass'y, Timer		161-4066X
Capacitors		
C500	Ceramic 10 pF / 50V ± 0.5pF NPO	12CH100
C501-502	Not used	
C503	Ceramic 0.022 μF / 50V +80/ -20%	12F3223
C504	Electrolytic 47 μF / 6.3V ±20%	126A476
C505	Semi-conductive 0.01 μF / 25V ±10%	12Y2103
C506	Semi-conductive 0.047 μF / 50V +80/ -20%	1220870
C507	Ceramic 220 pF / 50V ±5%	1270221
C508	Electrolytic 47 μF / 6.3V ±20%	126A476
Diodes		
D500-504	1SS254 or US1040M or GMB01B	1SS254 or US1040M or GMB01B
D505-507	Not used	
D508	1SS254 or US1040M or GMB01B	1SS254 or US1040M or GMB01B
D509	1SS254 or US1040M or GMB01B	1SS254 or US1040M or GMB01B
D510-511	Not used	
D512-513	LED (Red)	1401263
D514	LED (Green)	1401264
D515	LED (Red)	1401263
	LED Bush (for D512)	6N50077
	LED Bush (for D513-515)	6N50091
	LED Holder	6N50154
ICs		
IC500	FEVTI 14DN329 (C-MOS /Micro Controller) Timer	14DN329 A
IC501	MN1280-Q (MOS /other ) Reset	14DN185
Resistors		
R500-501	Carbon 10k ohm 1/5W ± 5%	1324103
R502	Carbon 47k ohm 1/5W ± 5%	1324473
R503	Carbon 10k ohm 1/5W ± 5%	1324103
R504	Carbon 47k ohm 1/5W ± 5%	1324473
R505-508	Carbon 270 ohm 1/5W ± 5%	1324271
R509	Carbon 6.8k ohm 1/5W ± 5%	1324682
R510	Network 22k ohm × 8	1370066 or 137N066 or 137F066
Digital Transistors		
QR501	2SC3400 or DTC124ES	C3400 or C124ES
QR502-503	2SA1346 or DTA124ES	A1346 or A124ES
Switches		
SW501-515	Push SW	5622015 or 5622017 or 1622908
SW516	Not used	
SW517	Push SW	5622015 or 5622017 or 1622908
Miscellaneous		
FL500	FIP FIP Holder (L) FIP Holder (R)	1810916 6N50147 6N50148
X500	Crystal 4.19MHz	1811191
TC500	Trimer 20 pF	1280122 or 1280154
VR500	Potentiometer 250k ohm (B) (Tracking)	539N682
VR501	Potentiometer 20k ohm (B) (Picture)	539N724
RS500	Remote Sensor	1812012 or 1812075 or 1812065
	Film, Infrared Rays (for 1812012, 1812075)	6E50723
CN-2	Connector Base 5P (SIDE)	1770250
CN-3	Connector Base 6P (SIDE)	1770251
CN-7	Connector Base 4P (SIDE)	1770249

Ref. No	Description	Parts No
PCB Ass'y Power Supply		1614067X
Capacitors		
C600	Electrolytic 33 $\mu$ F / 63V $\pm$ 20%	126G336
C601	Electrolytic 47 $\mu$ F / 35V $\pm$ 20%	126E476
C602	Electrolytic 47 $\mu$ F / 63V $\pm$ 20%	126G476
C603	Ceramic 0.022 $\mu$ F / 50V +80/-20%	12F3223
C604	Electrolytic 2200 $\mu$ F / 35V $\pm$ 20%	626E228
C605	Ceramic 0.022 $\mu$ F / 50V +80/-20%	12F3223
C606	Electrolytic 2200 $\mu$ F / 25V $\pm$ 20%	626D228
C607-608	Electrolytic 47 $\mu$ F / 16V $\pm$ 20%	126C476
C609	Electrolytic 2200 $\mu$ F / 16V $\pm$ 20%	626C228
C610	Electrolytic 47 $\mu$ F / 25V $\pm$ 20%	126D476
Diodes		
D600-601	IN4003	IN4003
D602	Zener UZ27BII or MTZ30A	UZ27BII or MTZ30A
D603	KBLO2L or RS403L or S4VB20	KBLO2L or RS403L or S4VB20
D604	Not used	
D605	Zener MTZ6.2B	MTZ6.2B
D606	KBLO2L or RS403L	KBLO2L or RS403L
ICs		
IC600-601	7812A or 7812F	NJM7812FA or AN7812F
IC602	7818A or 7818F	NJM7818FA or AN7818F
Resistors		
R600	Oxide Film 1.2k ohm 1W $\pm$ 5%	534A122
R601-602	Carbon 100 ohm 1/5W $\pm$ 5%	1324101
R603	Carbon 22kohm 1/5W $\pm$ 5%	1324223
Miscellaneous		
T600	Power Transformer 240V	1150596
F600	Fuse T200mA	1790474
	Fuse Holder	1790424
CN-1	Connector Base 8P (TOP)	1770264
CN-8	Connector Base 5P (TOP)	1740767
	Holder, Transformer Sheet, Insulation	6S50348 6P50132

# MECHANICAL PARTS LIST (TV CABINET)

Ref. No.	Description	Parts No.
A1	FRONT CABINET	21CH115
A1-1	BACK CABINET MOUNTING BOSS (A)	21WH035
A1-2	BACK CABINET MOUNTING BOSS (B)	21WH036
A1-3	DECK MOUNTING BOSS (C)	21WH037
A2	REAR CABINET	21CH092
A2-1	DECK MOUNTING BOSS (D)	21WH038
A3	VOL./CH/POWER KNOB	21NH255
A4	CONTROL HOLDER	21CH094
A5	ANT. JACK BOARD	21AH006
A6	CONTROL PLATE	24MH060
A7	JACK PLATE	24MH061
A8	AC CORD PLATE	24MH059
A9	RATING PLATE	24LH122
A10	USER CAUTION LABEL	24LH008
A11	SERIAL NO. LABEL	24LH033
A12	MAIN POWER KNOB	21NH251
B1	FRONT PCB HOLDER	23SH016
B2	LEFT PCB HOLDER	23SH017
B3	REAR PCB HOLDER	23SH018
B4	TENSION SPRING	26WH003
B5	HEAT SINK (A)	22WH001
B6	HEAT SINK (B)	8500362
B7	HEAT SINK (C)	22WH002
B8	HEAT SINK (D)	22WH003
B9	CRT MOUNTING SCREW	8A00083
B10	CRT SPACER (A)	23WE079
B11	CRT SUPPORT	23WE094
B12	CRT RUBBER SPACER	21WH005
B13	CLOTH 0.5t×16×90	24WH019
B14	SWITCHING TRANSF. SPACER	21WH034
B15	PCB SUPPORT	21WH050
B16	CLOTH 0.5t×16×65	24WE420
L1	TAP TIGHT SCREW M3×6	GBMS306
L2	TAP TIGHT SCREW M3×6 (BLACK)	GBKS306
L3	TAP TIGHT SCREW M31×8	GLMP308
L4	TAP TIGHT SCREW M3×10	GLMP310
L5	TAP TIGHT SCREW M3×10	GBMS310
L6	TAP TIGHT SCREW M3×14	GBMS314
L7	TAP TIGHT SCREW M3×20 (BLACK)	GBKP320
L8	TAPPING SCREW M3.5×14 (BLACK)	DBK1T14
L9	TAPPING SCREW M4×16 (BLACK)	DBK1416
L10	WASHER	WPM3101
X1	ACCESSORY REMOTE CONTROL UNIT	1812338
X2	BATTERY	1812419
X3	Matching Pad with Mixer	1780131
X4	Antenna Adapter	1812233
X7	Wire Ass'y	CE0074-01
X8	Warranty Card C	32GH078
S11	OWNER'S MANUAL B	32GI048
S12	CERTIFICATE	32GI034
S1	CARTON	32PH063
S2	SET PAT (TOP)	32SH003
S3	SET PAT (BOTTOM)	32SH004
S4	SET BAG	32EH036
S5	OWNER'S MANUAL	32GH060
S6	POLYETHYLENE BAG (OWNER'S MANUAL)	Z325350
S7	POLYETHYLENE BAG (ACCESSORY)	Z310200
S8	POLYETHYLENE BAG (AC CORD)	Z509230
S11	VHF ANTENNA	27AH001
S12	UHF ANTENNA	27AH002
S13	SERIAL NO. LABEL	24LH033
S14	SIDE PAT	32FH056

# ELECTRICAL PARTS LIST (TV)

Ref. No.	Description	Parts No.
L1502	DEGAUSSING COIL	112M172
SP1301	SPEAKER	1502549
JA1101	IEC ANT JACK	1780111
AC1501	AC CORD	5750065
CRT1701	CRT	1812528
DL1601	GLASS DELAY	1812056
DL1602	DELAY LINE	113M652
U1101	TUNER VIF UNIT	1812201
SP1301	SPEAKER	1520549
F1501	FUSE 4A 250V	1790487
FH1501	FUSE HOLDER	1740246
FH1502	FUSE HOLDER	1740246
RE1501	POWER RELAY	1680090
PS1501	POSISTOR	179N617
CN1301	CONNECTOR BASE EH 2P	1730626
CN1401	CONNECTOR BASE 5P	1730812
CN1402	CONNECTOR BASE 4P	1730628
CN1403	CONNECTOR BASE 6P	1730630
CN1502	CONNECTOR BASE 2P	1780615
CN1801	CONNECTOR BASE EH 6P	1730645
CN1802	MB HEDER 6P	1770400
CN1803	MB HEDER 7P	1770399
SW1101-11	TACT SW	5622078
SW1112	SLIDE SW	1621727
SW1113	SLIDE SW	1621726
SW1501	POWER SW	1623350
SW1601	SLIDE SW	1621654
VR1401	SEMI FIXED RES 500 ohm	183N776
VR1601	SEMI FIXED RES 500 ohm	183N776
VR1602	SEMI FIXED RES 100Kohm	138N785
VR1603	SEMI FIXED RES 10Kohm	138N781
VR1604	ROTARY VR 10Kohm B	5390714
VR1605	ROTARY VR 1Kohm B	5390715
VR1606	ROTARY VR 10Kohm B	5390714
T1401	H. DRIVE TRANS	1150325
T1402	F. B. TRANS	1810951
T1501	SWITCHING POWER TRANS	115E475
JA1301	RCA JACK	1780042
JA1302	RCA JACK	1780101
JA1303	EARPHONE JACK	1630369
JA1601	BNC CONNECTOR	1780108
JA1602	BNC CONNECTOR	1780109
PCB	MAIN CRT	1614231 1614076

Ref. No.	Description	Parts No.
R1701	CARBON RES 220 ohm 1/4W J	1345221
R1702	METAL OXIDE RES 15Kohm 1W	534A153
R1703	METAL OXIDE RES 3.3Kohm 1/2W J	537A332
R1704	CARBON RES 47 ohm 1/4W J	1345470
R1705	CARBON RES 150 ohm 1/4W J	1345151
R1706	METAL OXIDE RES 15Kohm 1W	534A153
R1707	METAL OXIDE RES 3.3Kohm 1/2W J	537A332
R1708	METAL OXIDE RES 15Kohm 1W	534A153
R1709	METAL OXIDE RES 3.3Kohm 1/2W J	537A332
R1710	CARBON RES 100 ohm 1/4W J	1345101
R1711	CARBON RES 10Kohm 1/4W J	1345103
R1712	CARBON RES 10Kohm 1/4W J	1345103
R1713	CARBON RES 470 ohm 1/6W J	132A471
R1714	CARBON RES 470 ohm 1/6W J	132A471
R1715-50	Not used	
C1701	CERAMIC CAP 820pF YB	12B3821
C1702	CERAMIC CAP 820pF YB	12B3821
C1703	CERAMIC CAP 470pF	1271471
C1704	CERAMIC CAP 0.01uF 2KV	1220602
C1705	CERAMIC CAP 330pF	1271331
C1706	CERAMIC CAP 330pF	1271331
D1701	DIODE	1SS133
D1702	DIODE	1SS133
D1703	DIODE	1SS133
Q1701	TRANSISTOR 2SC2228 (D, E)	C2228
Q1702	TRANSISTOR 2SC2228 (D, E)	C2228
Q1703	TRANSISTOR 2SC2228 (D, E)	C2228
Q1704	TRANSISTOR 2SC2228 (D, E)	C2228
Q1705	TRANSISTOR 2SC3331 (T, U)	C3331
VR1701	SEMI FIXED RES 100 ohm	1380945
VR1702	SEMI FIXED RES 20Kohm	1380946
VR1703	SEMI FIXED RES 20Kohm	1380946
VR1704	SEMI FIXED RES 100 ohm	1380945
VR1705	SEMI FIXED RES 20Kohm	1380946
CN1701	CRT SOCKET	1780080
CN1702	CONNECTOR PIN 1P	1730688

Ref. No.	Description	Parts No.
L1101	MICRO INDUCTOR 5.6uH	2162569
L1102	MICRO INDUCTOR 3.9uH	2162399
L1103	MICRO INDUCTOR 3.9uH	2162399
L1104	MICRO INDUCTOR 3.9uH	2162399
L1105	MICRO INDUCTOR 3.9uH	2162399
L1106	MICRO INDUCTOR 3.9uH	2162399
L1108	POT TYPE COIL 47uH	1170511
L1501	LINE FILTER	1170510
L1503	POT TYPE COIL 47uH	1170511
L1504	POT TYPE COIL 15uH	117M535
L1601	MICRO INDUCTOR 56uH	2162560
L1602	MICRO INDUCTOR 5.6uH	2162569
L1603	MICRO INDUCTOR 8.2uH	2162829
L1604	CASING COIL	113M647
D1101	DIODE	IN4002
D1103-08	DIODE	1SS133
D1109	Not used	
D1110-11	DIODE	1SS133
D1113-15	DIODE	1SS133
D1401	DIODE	IN4002
D1402	DIODE	FR106
D1403	DIODE	FR156
D1404	DIODE	FR156
D1405	DIODE	FR156
D1407	DIODE	MT212B
D1408	DIODE	MT29, 1B
D1501	DIODE	IN4002
D1502	DIODE	RL157
D1503	DIODE	RL157
D1504	DIODE	RL157
D1505	DIODE	RL157
D1506	DIODE	FR304
D1507	DIODE	FR156
D1601	DIODE	1SS130
D1602	DIODE	1SS133
D1603	DIODE	1SS133
D1604	DIODE	1SS133
D1605	DIODE	1SS133
D1606	DIODE	1SS133
D1607	DIODE	1SS133
Q1101	TRANSISTOR 2SC3331 (T, U)	C3331
Q1102	TRANSISTOR 2SC3331 (T, U)	C3331
Q1103	TRANSISTOR 2SC3331 (T, U)	C3331
Q1104	TRANSISTOR 2SC3331 (T, U)	C3331
Q1105	TRANSISTOR 2SC3331 (T, U)	C3331
Q1106	TRANSISTOR 2SC3331 (T, U)	C3331
Q1107	TRANSISTOR 2SC3331 (T, U)	C3331
Q1108	TRANSISTOR 2SC3331 (T, U)	C3331
Q1109	TRANSISTOR 2SC3331 (T, U)	C3331
Q1110	TRANSISTOR 2SC3331 (T, U)	C3331
Q1111	TRANSISTOR 2SC3331 (T, U)	C3331
Q1112	TRANSISTOR 2SC3331 (T, U)	C3331
Q1113	TRANSISTOR 2SA1318 (T)	A1318
Q1401	TRANSISTOR 2SC2271 (D, E)	C2271
Q1402	TRANSISTOR 2SD1397	D1397
Q1602	TRANSISTOR 2SA1318 (T)	A1318
Q1605	TRANSISTOR 2SA1318 (T)	A1318
Q1606	TRANSISTOR 2SC3331 (T, U)	C3331
Q1607	TRANSISTOR 2SA1318 (T)	A1318
Q1608	TRANSISTOR 2SC3331 (T, U)	C3331
IC1101	IC	MN14831FVK
IC1102	IC	LA7913
IC1103	IC	MN1220
IC1105	IC	L5631
IC1106	IC	PST523C
IC1301	IC	AN5265
IC1401	IC	LA7830
IC1402	IC	uPC78M12
IC1501	IC	STK7348
IC1601	IC	uPC1420CA
CF1101	CERAMIC RESONATOR	1810899
CF1401	CERAMIC RESONATOR	1812039
CF1601	X' TAL	1811252

Ref. No.	Description	Parts No.
R1101	CARBON RES 10Kohm 1/6W J	132A103
R1102	METAL OXIDE RES 1.8Kohm 1W	534A182
R1103	METAL OXIDE RES 10Kohm 1W	534A103
R1104	CARBON RES 33Kohm 1/6W J	132A333
R1105	CARBON RES 470Kohm 1/4W J	1345474
R1106	CARBON RES 150Kohm 1/6W J	132A154
R1107	CARBON RES 150Kohm 1/6W J	132A154
R1108	CARBON RES 150Kohm 1/6W J	132A154
R1109	CARBON RES 5.6Kohm 1/6W J	132A562
R1110	CARBON RES 4.7Kohm 1/6W J	132A472
R1111	CARBON RES 4.7Kohm 1/6W J	132A472
R1112	CARBON RES 4.7Kohm 1/6W J	132A472
R1113	CARBON RES 1Kohm 1/6W J	132A102
R1114	CARBON RES 1Kohm 1/6W J	132A102
R1115	CARBON RES 1Kohm 1/6W J	132A102
R1116	CARBON RES 1Kohm 1/6W J	132A102
R1117	CARBON RES 1Kohm 1/6W J	132A102
R1118	CARBON RES 1Kohm 1/6W J	132A102
R1119	CARBON RES 1Kohm 1/6W J	132A102
R1120	CARBON RES 1Kohm 1/6W J	132A102
R1121	CARBON RES 1Kohm 1/6W J	132A102
R1122	CARBON RES 100Kohm 1/6W J	132A104
R1123	CARBON RES 100Kohm 1/6W J	132A104
R1124	CARBON RES 1Kohm 1/6W J	132A105
R1125	CARBON RES 680 ohm 1/6W J	132A681
R1126	CARBON RES 1Kohm 1/6W J	132A102
R1127	CARBON RES 4.7Kohm 1/6W J	132A472
R1128	CARBON RES 4.7Kohm 1/6W J	132A472
R1129	CARBON RES 4.7Kohm 1/6W J	132A472
R1130	CARBON RES 10Kohm 1/6W J	132A103
R1131	CARBON RES 12Kohm 1/6W J	132A123
R1132	CARBON RES 1.5Kohm 1/6W J	132A152
R1133	CARBON RES 56Kohm 1/6W J	132A563
R1134-38	Not used	
R1139	CARBON RES 12Kohm 1/6W J	132A123
R1140	CARBON RES 10Kohm 1/6W J	132A103
R1141	CARBON RES 56Kohm 1/6W J	132A563
R1142	CARBON RES 100Kohm 1/6W J	132A104
R1143	CARBON RES 4.7Kohm 1/6W J	132A472
R1144	CARBON RES 100Kohm 1/6W J	132A104
R1145	CARBON RES 10Kohm 1/6W J	132A103
R1146	CARBON RES 12Kohm 1/6W J	132A123
R1155	CARBON RES 10Kohm 1/6W J	132A103
R1156	CARBON RES 10Kohm 1/6W J	132A103
R1157	CARBON RES 47Kohm 1/6W J	132A473
R1158	CARBON RES 100Kohm 1/6W J	132A104
R1159	CARBON RES 100Kohm 1/6W J	132A104
R1160	CARBON RES 100Kohm 1/6W J	132A104
R1161	CARBON RES 100Kohm 1/6W J	132A104
R1162	CARBON RES 4.7Kohm 1/6W J	132A472
R1163-66	Not used	
R1167	CARBON RES 22Kohm 1/6W J	132A223
R1168	CARBON RES 47Kohm 1/6W J	132A473
R1169	Not used	
R1170	CARBON RES 270Kohm 1/6W J	132A271
R1301-04	Not used	
R1305	CARBON RES 4.7Kohm 1/6W J	132A472
R1306	METAL FILM RES 1.2 ohm 1W	534A129
R1307	CARBON RES 22Kohm 1/6W J	132A223
R1308	CARBON RES 100Kohm 1/6W J	132A104
R1309	CARBON RES 1Kohm 1/6W J	132A102
R1310	CARBON RES 10Kohm 1/6W J	132A103
R1311	CARBON RES 4.7 ohm 1/4W J	1345479
R1312	CARBON RES 82 ohm 1/4W J	1345820
R1313-50	Not used	
R1401	CARBON RES 27Kohm 1/6W J	132A273
R1402	METAL OXIDE RES 270 ohm 1W	534A271
R1403	METAL FILM RES 2.2 ohm 1/2W J	5347229
R1404	CARBON RES 82Kohm 1/6W J	132A823
R1405	CARBON RES 1Kohm 1/6W J	132A102
R1406	METAL FILM RES 3.3Kohm 1/2W J	5347332
R1407	OXIDE METAL FILM RES 1.8Kohm 3W	5330699
R1408	METAL OXIDE RES 10Kohm 2W	534B103
R1409	CARBON RES 1Kohm 1/6W J	132A102
R1410	METAL FILM RES 3.9 ohm 2W	534B399
R1411	CARBON RES 12Kohm 1/6W J	132A123
R1412	CARBON RES 10Kohm 1/6W J	132A103
R1413	FUSE RES 2.2 ohm 1/2W J	5367229
R1414	FUSE RES 2.2 ohm 1W J	5368229
R1415	FUSE RES 2.2 ohm 1W J	5368229
R1416	CARBON RES 10Kohm 1/6W J	132A103
R1417	CARBON RES 27Kohm 1/6W J	132A273
R1418	CARBON RES 18Kohm 1/6W J	132A183
R1419	CARBON RES 3.3Kohm 1/6W J	132A332
R1420	Not used	
R1421	CARBON RES 100Kohm 1/6W J	132A104
R1422	CARBON RES 120Kohm 1/6W J	132A124
R1423	CARBON RES 220 ohm 1/6W J	132A221
R1424	CARBON RES 1Kohm 1/6W J	132A102

U8371

Ref. No.	Description	Parts No.
R1425	CARBON RES 330 ohm 1/6W J	132A331
R1426	CARBON RES 6.8Kohm 1/6W J	132A682
R1427	CARBON RES 1.8Kohm 1/6W J	132A182
R1428	CARBON RES 8.2Kohm 1/6W J	132A822
R1429	CARBON RES 15Kohm 1/6W J	132A153
R1430	CARBON RES 1Mohm 1/6W J	132A105
R1431	CARBON RES 330 ohm 1/6W J	132A331
R1432	CARBON RES 1.8Kohm 1/6W J	132A182
R1433	CARBON RES 56Kohm 1/6W J	132A563
R1434	CARBON RES 100 ohm 1/4W J	1345101
R1435	CARBON RES 1.5Kohm 1/6W J	132A152
R1436	CARBON RES 150Kohm 1/6W J	132A154
R1437-39	Not used	
R1440	FUSE RES 10 ohm 1/2W J	1330868
R1501	CEMENT RES 8.2 ohm 5W	1330736
R1502	CEMENT RES 27 ohm 5W	1330863
R1503	CARBON RES 270Kohm 1/6W J	132A274
R1504	CARBON RES 270Kohm 1/6W J	132A274
R1505	CEMENT RES 1.5 ohm 3W	1330702
R1506	CEMENT RES 33 ohm 7W	1330869
R1507	METAL FILM RES 15 ohm 2W	5348150
R1508	FUSE RES 15 ohm 1/4W J	5366150
R1509	CARBON RES 1Kohm 1/6W J	132A102
R1510	METAL OXIDE RES 33 ohm 1W	534A330
R1511-50	Not used	
R1602	CARBON RES 270Kohm 1/6W J	132A274
R1603	CARBON RES 8.2Kohm 1/6W J	132A822
R1604	CARBON RES 47Kohm 1/6W J	132A473
R1605	CARBON RES 18Kohm 1/6W J	132A183
R1606	CARBON RES 6.8Kohm 1/6W J	132A682
R1607	CARBON RES 8.2Kohm 1/6W J	132A822
R1608	CARBON RES 3.9Kohm 1/6W J	132A392
R1609	CARBON RES 6.8Kohm 1/6W J	132A682
R1610	CARBON RES 820 ohm 1/6W J	132A821
R1611	CARBON RES 15Kohm 1/6W J	132A153
R1612	CARBON RES 220Kohm 1/4W J	1345224
R1614	CARBON RES 330 ohm 1/6W J	132A331
R1615	CARBON RES 820 ohm 1/6W J	132A821
R1616	CARBON RES 680 ohm 1/6W J	132A681
R1617	CARBON RES 1Kohm 1/6W J	132A102
R1618	CARBON RES 1Kohm 1/6W J	132A102
R1619	CARBON RES 680 ohm 1/6W J	132A681
R1620	CARBON RES 2.2Kohm 1/6W J	132A222
R1621	CARBON RES 1Kohm 1/6W J	132A102
R1622	CARBON RES 2.7Kohm 1/6W J	132A272
R1623	CARBON RES 3.9Kohm 1/6W J	132A392
R1624	CARBON RES 7.5Kohm 1/4W J	1345752
R1625	CARBON RES 2.7Kohm 1/6W J	132A272
R1626	CARBON RES 10Kohm 1/6W J	132A103
R1627	CARBON RES 1Kohm 1/6W J	132A102
R1628	CARBON RES 10Kohm 1/6W J	132A103
R1630	CARBON RES 1Mohm 1/6W J	132A105
R1631	CARBON RES 270 ohm 1/6W J	132A271
R1632	CARBON RES 270 ohm 1/6W J	132A271
R1633	CARBON RES 1.5Kohm 1/6W J	132A152
R1634	CARBON RES 1.5Kohm 1/6W J	132A152
R1635	CARBON RES 4.7Kohm 1/6W J	132A472
R1641	CARBON RES 470 ohm 1/6W J	132A471
R1643	CARBON RES 1Kohm 1/6W J	132A102
R1645	CARBON RES 390 ohm 1/6W J	132A391
R1646	Not used	
R1647	CARBON RES 1Kohm 1/6W J	132A102
R1648-49	Not used	
R1650	CARBON RES 100Kohm 1/6W J	132A104
R1651	Not used	
R1652	CARBON RES 470 ohm 1/6W J	132A471
R1653	CARBON RES 2.2Kohm 1/6W J	132A222
R1654	CARBON RES 390 ohm 1/6W J	132A391
R1655	Not used	
R1656	CARBON RES 68 ohm 1/4W J	1345680
R1657	CARBON RES 33Kohm 1/6W J	132A333
R1658-59	Not used	
R1660	CARBON RES 2.2Kohm 1/6W J	132A222
R1661	CARBON RES 4.7Kohm 1/6W J	132A472
R1662-64	Not used	
R1665	CARBON RES 1Kohm 1/6W J	132A102

Ref. No.	Description	Parts No.
C1101	ELECTROLYTIC CAP 22uF 16V	126C226
C1102	ELECTROLYTIC CAP 1uF 50V	126F105
C1103	ELECTROLYTIC CAP 10uF 16V	126C106
C1104	ELECTROLYTIC CAP 22uF 16V	126C226
C1105	ELECTROLYTIC CAP 10uF 16V	126C106
C1106	Not used	
C1107	ELECTROLYTIC CAP 1uF 50V	126F105
C1108	CERAMIC CAP 0.01uF Z	12G2103
C1109	MYLAR CAP 0.033uF 50V K	1250333
C1110	MYLAR CAP 0.015uF 50V K	1250153
C1111	MYLAR CAP 0.033uF 50V K	1250333
C1112	MYLAR CAP 0.015uF 50V K	1250153
C1113	ELECTROLYTIC CAP 2.2uF 50V	126F225
C1114	CERAMIC CAP 0.01uF Z	12G2103
C1115	CERAMIC CAP 100pF	1271101
C1116	CERAMIC CAP 100pF	1271101
C1117	CERAMIC CAP 100pF	1271101
C1119	CERAMIC CAP 0.01uF Z	12G2103
C1120	CERAMIC CAP 100pF	1271101
C1121	CERAMIC CAP 680pF YB	12B3681
C1122	CERAMIC CAP 680pF YB	12B3681
C1123	CERAMIC CAP 680pF YB	12B3681
C1124	CERAMIC CAP 680pF YB	12B3681
C1125	CERAMIC CAP 680pF YB	12B3681
C1126	CERAMIC CAP 680pF YB	12B3681
C1127	CERAMIC CAP 470pF	1271471
C1128	CERAMIC CAP 470pF	1271471
C1129	CERAMIC CAP 470pF	1271471
C1130	CERAMIC CAP 1000pF YB	12B3102
C1131	CERAMIC CAP 330pF	1271331
C1132	CERAMIC CAP 330pF	1271331
C1133	CERAMIC CAP 100pF NPO	12C1101
C1134	CERAMIC CAP 0.01uF Z	12G2103
C1135	ELECTROLYTIC CAP 10uF 16V	126C106
C1136	CERAMIC CAP 1000pF YB	12B3102
C1137	ELECTROLYTIC CAP 47uF 16V	126C476
C1138	CERAMIC CAP 0.01uF Z	12G2103
C1139	CERAMIC CAP 180pF	1271181
C1140	CERAMIC CAP 220pF	1271221
C1147	ELECTROLYTIC CAP 47uF 16V	126C476
C1148-49	Not used	
C1150	CERAMIC CAP 330pF	1271331
C1151-52	Not used	
C1153	CERAMIC CAP 0.01uF Z	12G3103
C1301	ELECTROLYTIC CAP 10uF 16V	126C106
C1302-06	Not used	
C1307	ELECTROLYTIC CAP 1uF 50V	126F105
C1308	Not used	
C1309	ELECTROLYTIC CAP 220uF 25V	126D227
C1310	ELECTROLYTIC CAP 100uF 16V	126C107
C1311	CERAMIC CAP 0.0056uF YB	12B3562
C1312	ELECTROLYTIC CAP 10uF 16V	126C106
C1313	ELECTROLYTIC CAP 10uF 16V	126C106
C1314	MYLAR CAP 0.047uF 50V K	126C106
C1315	ELECTROLYTIC CAP 100uF 16V	126C107
C1316	ELECTROLYTIC CAP 100uF 16V	126C107
C1317	ELECTROLYTIC CAP 1000uF 16V	626C108
C1318-50	Not used	
C1401	MYLAR CAP 0.0012uF 50V K	1250122
C1402	MYLAR CAP 0.001uF 50V K	1250102
C1403	CERAMIC CAP 47pF	1271470
C1404	ELECTROLYTIC CAP 100uF 35V	626E107
C1405	MYLAR CAP 0.18uF 50V K	1250184
C1406	ELECTROLYTIC CAP 1000uF 25V	626D108
C1407	ELECTROLYTIC CAP 22uF 16V	126C226
C1408	CERAMIC CAP 0.0027uF YB	12B3272
C1409	CERAMIC CAP 0.001uF 2KV	6220585
C1410	METALIZED P.P CAP 0.0047uF 1.6KV	1220496
C1411	METALIZED P.P CAP 0.0022uF 1.6KV	1220492
C1412	ELECTROLYTIC CAP 4.7uF 50V	126F475
C1413	MYLAR CAP 0.068uF 50V K	1250683
C1414	ELECTROLYTIC CAP 1uF 250V	6220690
C1415	ELECTROLYTIC CAP 330uF 35V	625E337
C1416	ELECTROLYTIC CAP 4.7uF 50V	126F475
C1417	METALIZED P.P CAP 0.39uF 200V	1220510
C1418	ELECTROLYTIC CAP 4.7uF 250V	6220691
C1419	CERAMIC CAP 820pF YB	12B3821
C1420-21	Not used	
C1422	CERAMIC CAP 0.01uF Z	12G2103
C1423	SEMICON CAP 0.0015uF 25V K	12Y2152
C1424	CERAMIC CAP 220pF	1271221
C1425	ELECTROLYTIC CAP 10uF 16V	126C106
C1426	MYLAR CAP 0.039uF 50V K	1250393
C1427	CERAMIC CAP 0.0022uF YB	12B3222
C1428	MYLAR CAP 0.033uF 50V K	1250333
C1429	ELECTROLYTIC CAP 4.7uF 50V	126F475
C1430	CERAMIC CAP 270pF	1271271
C1431	MYLAR CAP 0.012uF 50V K	1250123
C1432	MYLAR CAP 0.033uF 50V K	1250333
C1433	TANTAL CAP 2.2uF 25V	1210225
C1434	MYLAR CAP 0.022uF 50V K	1250223
C1435-39	Not used	
C1440	SEMICON CAP 0.0018uF 25V K	12Y2182

Ref. No.	Description	Parts No.
C1501	LINE ACROSS	1220756
C1502	CERAMIC CAP 0.0047uF 400V	6220353
C1503	CERAMIC CAP 0.0047uF 400V	6220353
C1504	CERAMIC CAP 0.0047uF 400V	6220353
C1505	CERAMIC CAP 0.0047uF 400V	6220353
C1506	ELECTROLYTIC CAP 10uF 160V	6220759
C1507	ELECTROLYTIC CAP 2.2uF 50V	126F225
C1508	ELECTROLYTIC CAP 150uF 400V	1220893
C1509	CERAMIC CAP 0.0033uF 1KV	6220577
C1510	CERAMIC CAP 0.001uF 1KV	6220574
C1511	ELECTROLYTIC CAP 100uF 160V	6220688
C1512	CERAMIC CAP 0.001uF 1KV	6220574
C1513	ELECTROLYTIC CAP 1000uF 16V	626C108
C1514	ELECTROLYTIC CAP 22uF 160V	6220758
C1515	CERAMIC CAP 470pF 1KV	6220487
C1516-19	Not used	
C1520	CERAMIC CAP 470pF 4KV	122Z009
C1602	ELECTROLYTIC CAP 1uF 50V	126F105
C1603	ELECTROLYTIC CAP 3.3uF 50V	126F335
C1604	CERAMIC CAP 15pF	1271150
C1605	CERAMIC CAP 15pF	1271150
C1606	ELECTROLYTIC CAP 3.3uF 50V	126F335
C1607	ELECTROLYTIC CAP 10uF 16V	126C106
C1608	CERAMIC CAP 47pF NPO	12C1470
C1610	CERAMIC CAP 150pF	1271151
C1611	CERAMIC CAP 0.01uF M	12D3103
C1612	CERAMIC CAP 120pF	1271121
C1613	CERAMIC CAP 120pF	1271121
C1614	NYLAR CAP 0.047uF 50V K	1250473
C1617	CERAMIC CAP 27pF	1271270
C1618	SEMICON CAP 0.01uF 25V K	12Y2103
C1619	ELECTROLYTIC CAP 47uF 50V	126F475
C1620	CERAMIC CAP 15pF	1271150
C1621	CERAMIC CAP 15pF	1271150
C1622	ELECTROLYTIC CAP 4.7uF 50V	126F475
C1624	CERAMIC CAP 68pF	1271680
C1626	CERAMIC CAP 0.01uF M	12D3103
C1627	CERAMIC CAP 0.01uF M	12D3103
C1628	ELECTROLYTIC CAP 470uF 16V	626C477
C1630	CERAMIC CAP 0.01uF Z	12G2103
C1631	ELECTROLYTIC CAP 1000uF 16V	626C108
C1632	ELECTROLYTIC CAP 100uF 16V	126C107
C1633	ELECTROLYTIC CAP 100uF 16V	126C107
C1635	ELECTROLYTIC CAP 0.47uF 50V	126F474
C1636	CERAMIC CAP 0.01uF Z	12G2103
C1637-42	Not used	
C1643	CERAMIC CAP 220pF	1271221

**TEAC AUSTRALIA PTY. LTD.**

**106 BAY STREET,  
PORT MELBOURNE  
VICTORIA. 3207**

**Printed in Japan  
B0074 (R6374)**



# SCHEMATIC DIAGRAM

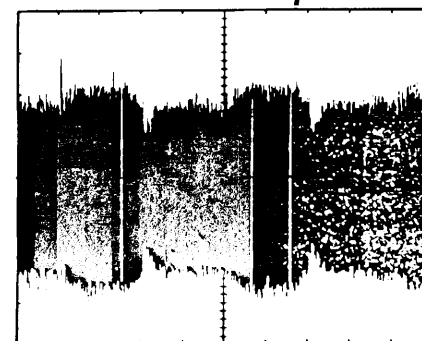
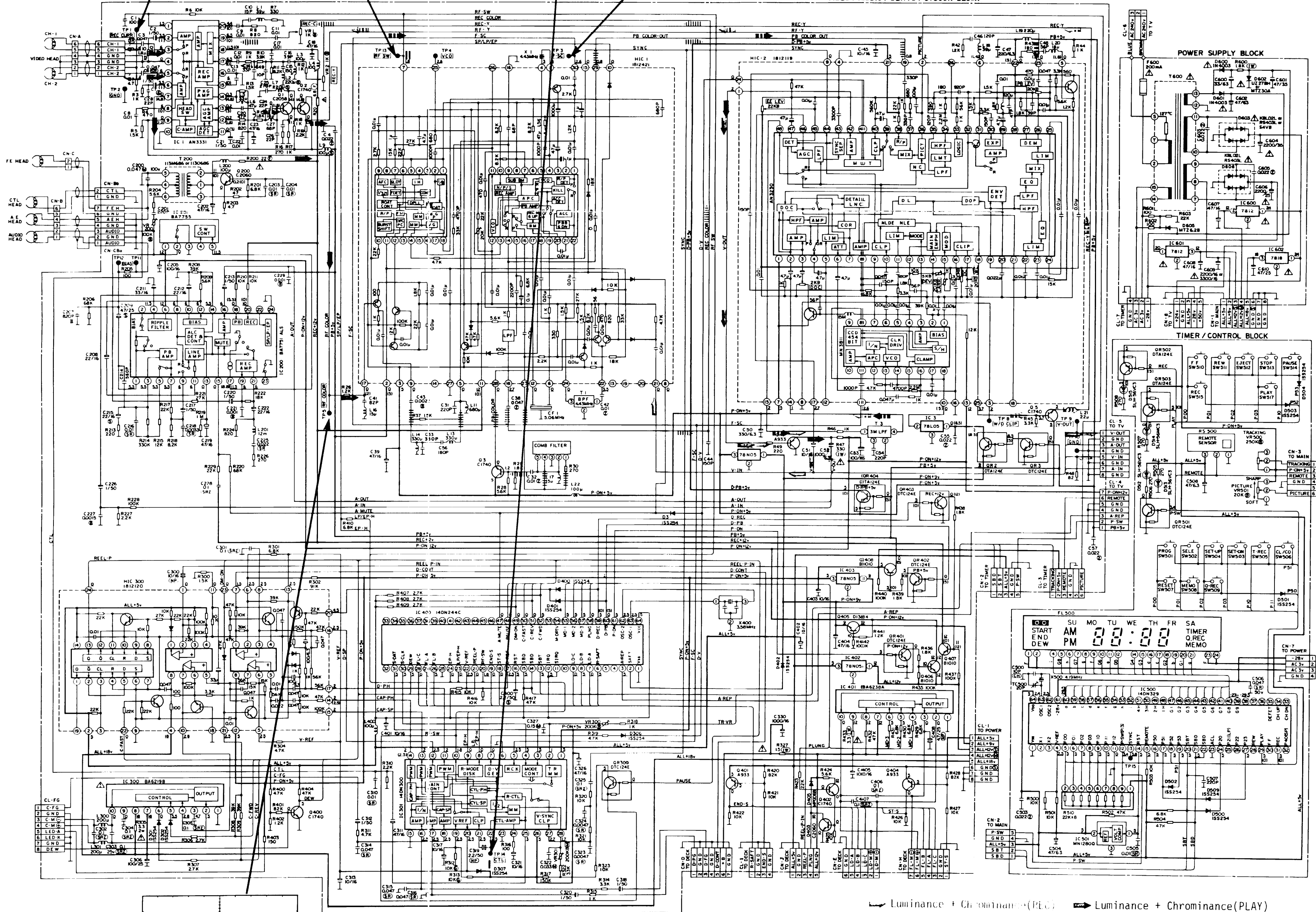
**WARNING:**  
REPLACEMENT PARTS WHICH HAVE SPECIAL SAFETY CHARACTERISTICS ARE IDENTIFIED BY  $\Delta$  SHOWING ON THIS SCHEMATIC DIAGRAM. REPLACE THESE CRITICAL COMPONENTS WITH RECOMMENDED REPLACEMENT PARTS. DON'T DEGRADE THE SAFETY OF THIS SET THROUGH IMPROPER SERVICING. SERVICE PERSONNEL SHOULD MAKE LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

1 Div: 2mS 1 Div: 150mV

1 Div: 5mS 1 Div: 2V

1 Div: 2uS 1 Div: 1V

VIDEO / AUDIO / SERVO / SYSCON BLOCK



1 Div: 10mS 1 Div: 150mV

**NOTES:**

1. ALL RESISTANCE VALUES ARE INDICATED IN OHM ( $K = 10^3$ ,  $M = 10^6$ ).
2. ALL CAPACITANCE VALUES ARE INDICATED IN  $\mu F$  ( $P = 10^{-8}$   $\mu F$ ).
3. VOLTAGES ARE MEASURED WITH SSVN ( $Z > 10K$  OHM) FRONT POINT INDICATED TO CHASSIS GROUND AT NO SIGNAL CONDITION UNLESS OTHERWISE NOTED. (SEE VOLTAGE CHART).
4. CAPACITOR TYPES A/E (PL) = POLYPROPYLENE, (SC) = SEMI-CONDUCTIVE, (M) = MYLAR, OTHERS ARE CERAMIC.

NOTE: All voltages are DC measured with a SSVN. The DC voltage measured at E-E mode.

- ( ) : at record mode.
- ( ) : at playback mode.
- ( ) : Fusing resistor.

- Luminance + Chrominance (REC)
- Luminance (REC)
- Chrominance (REC)
- Luminance + Chrominance (PLAY)
- Luminance (PLAY)
- Chrominance (PLAY)