GO.VIDEO®

DUAL DECK™ SYSTEM

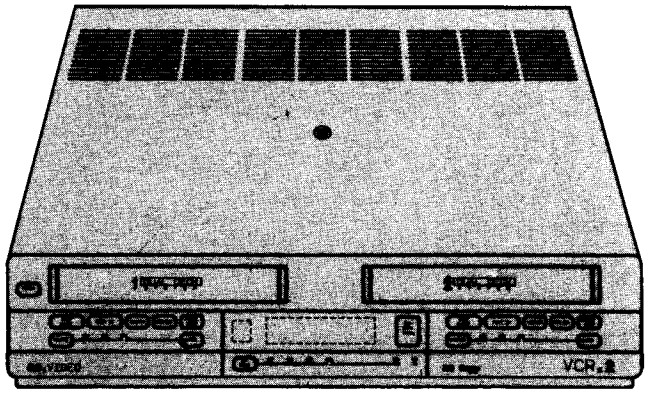
HQ Copy™

VHS

SERVICE MANUAL

MODEL : GV-2000/GV-2020

VIDEO CASSETTE RECORDER



SPECIFICATION

Recording System	: Rotary, azimuth two-head helical scanning system Luminance : FM azimuth recording Color signal : Converted subcarrier phase shift recording
Television System	: NTSC-type color signal EIA standard (525 lines, 60 fields)
Audio Track	: 2track
Tape Width	: 12.7mm (1/2inch)
Record Speed	: **SP :** 33.35mm/sec (1.31 inch/s) **LP :** 16.67mm/sec (0.66 inch/s) **EP :** 11.12mm/sec (0.43 inch/s)
Play/Record Time	: 480 minutes each deck with T-160 used in EP mode, (16 hours total)
FF/REWTime	: Less than 6 minutes with T-120
Heads	: Video : 2 rotary heads Audio/Control : 1 stationary head Erase : 1 full track erase 2 audio track
VIDEO	
Input	: Video In Connection (RCA) 1.0Vp-p, 75 ohms unbalanced.
Output	: Video Out Connection (RCA) 1.0Vp-p, 75 ohms unbalanced.
Horiz Res	: Color/Monochrome : more than 230 lines
S/N Ratio	: Better than 43 dB
AUDIO	
Input	: Audio In Connection (RCA) stereo -8dBm, 50K ohm unbalanced.
Output	: Audio Out Connection (RCA) stereo -6dBm, 50K ohm unbalanced.
S/N Ratio	: Better than 40dB (Dolby NR Off) Better than 45dB (Dolby NR On)
Frequency Response	: SP -6dB : 100Hz ~ 10KHz LP -6dB : 100Hz ~ 7KHz EP -6dB : 100Hz ~ 5KHz
TV Tuners	: VHF Input : CH2 ~ CH13 UHF Input : CH14 ~ CH69 Cable CH 4A to W +58 75 ohm unbalanced
RF Modulated	: Channel 3 or 4 66 dBu, 75 ohm unbalanced
Power Requirement	: 120V AC, 60Hz
Enviroment	: 41- 104 degrees Fahrenheit, 10-75 percent humidity
Size	: 11.8Kg. 514mm X 107mm X 420mm 26lbs. 20 1/4" X 4 1/4" X 16 1/2"

2. DISASSEMBLY

2-1. INSTRUMENT DISASSEMBLY

2-1-1. Top Cabinet Removal

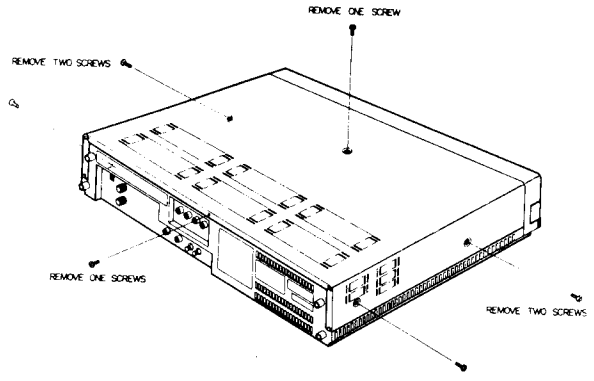


Fig. 1

1. Remove 6 screws located at the rear of the top cabinet.
2. Carefully lift the back of the top cabinet and slide it to the rear to remove.

2-1-2. Bottom Cover Removal

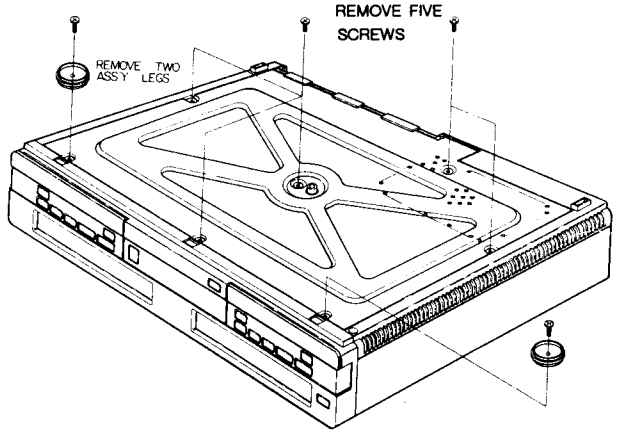


Fig. 2

1. Remove 7 screws holding the bottom cover.

2-1-3. Front Panel Removal

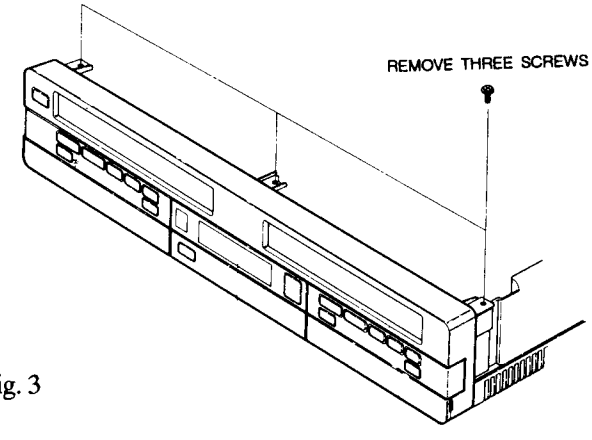


Fig. 3

1. Remove the top cabinet and the bottom cover. (See Figs. 1,2)
2. Remove 3 screws from the top of the front panel.
3. Release the tab from the top of the front panel.
4. Tilt the front panel forward to remove.

2-1-4. Function Circuit Board Removal

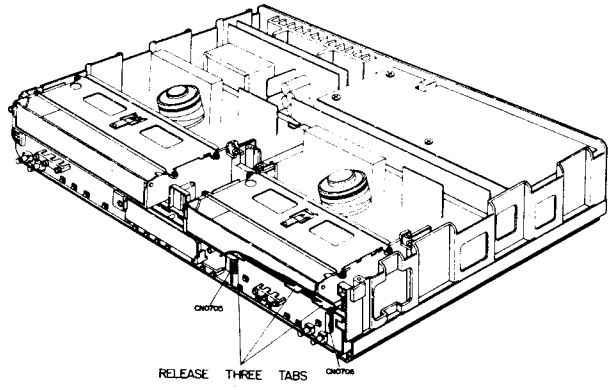


Fig. 4

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Release 3 tabs on the circuit board.
3. Disconnect 2 connectors (CN0705, CN0706) .
4. Taking care of the cable assemblies, pull the circuit board forward to release.

2-1-5. Timer Circuit Board Removal

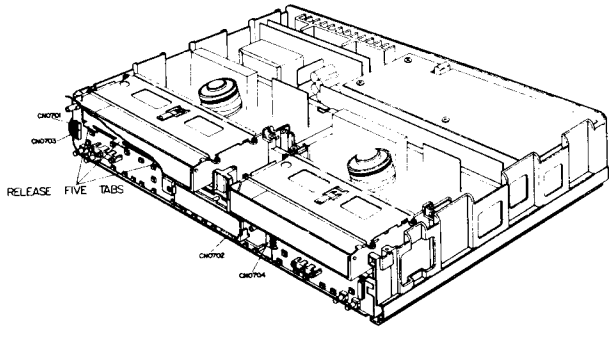


Fig. 5

1. Follow the procedures for removing the panels. (See Figs.1 to 4)
2. Release 5 tabs on the circuit board.
3. Disconnect 2 connectors (CN6010,CN6011) on the main A Board.
4. Carefully release the cable assemblies, pull the circuit board forward to release.

2-1-6. Main B Circuit Board Removal

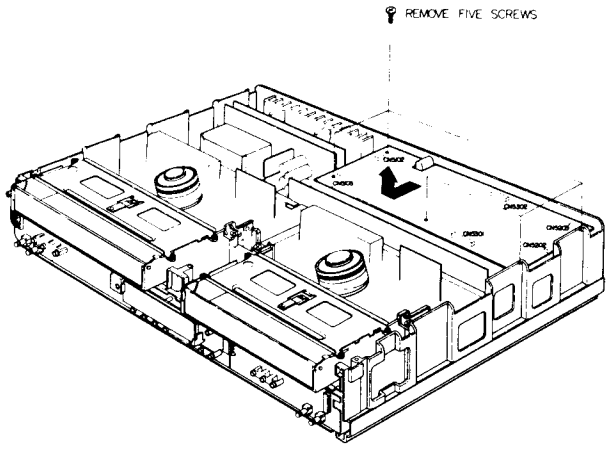


Fig. 6

1. Follow the procedures for removing the panels.
2. Remove the cover on the main B board in the direction of arrow.
3. Remove 5 screws on the main B board.
4. Carefully lift up the main B board in the direction of arrow.
5. Disconnect 7 connectors (CN5102,CN5103,CN5202, CN5203,CN5301,CN5302, CN5303) on the main B board.

2-1-7. Main A Circuit Board Removal

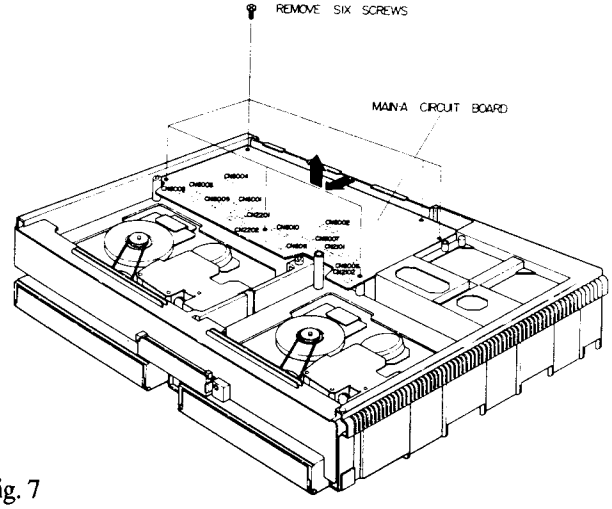


Fig. 7

1. Follow the procedures for removing the panels (See Figs. 1 to 3).
2. Unsolder 2 solders on the main A board.
3. Remove 6 screws on the main board.
4. Disconnect 16 connectors between the main circuit board and the other circuit boards.
5. Lift up the assembly in the direction of arrow.

2-1-8. Main C Circuit Board Removal

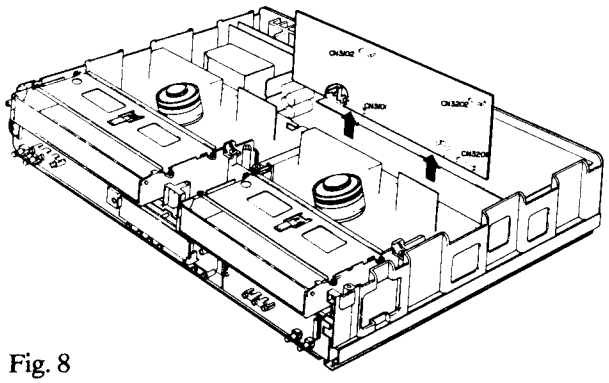


Fig. 8

1. Follow the procedures for removing the panels (See Figs.1 to 3) .
2. Unsolder 2 solders on the main A board.
3. Remove one(1) screw from the bracket on the pre-amp to remove bracket.
4. Disconnect 4 connectors from the unit. Two(2) connectors (CN3102,CN3202) from the pre-amp and two(2) connectors (CN3101,CN3201) from the main A board.

2-1-9. Pre-Amp Ass'y Removal

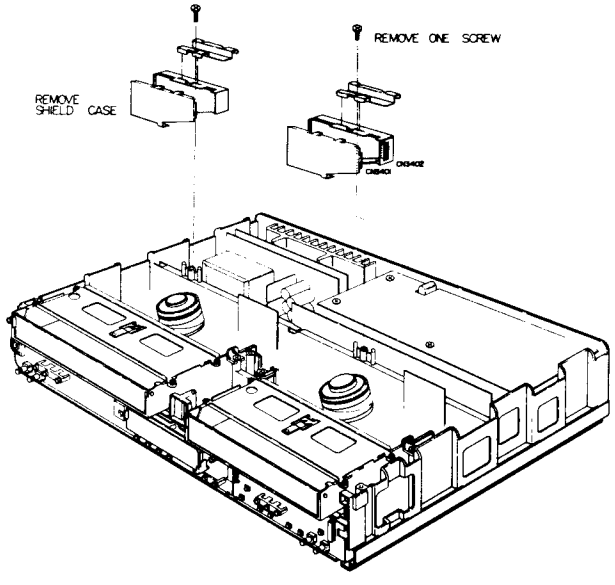


Fig. 9

1. Follow the procedure for removing the panels (See Figs. 1 to 3).
2. Remove 2 screws holding the pre-amp from the frame.
3. Disconnect 2 connectors (CN3401,CN3402) on the pre-amp board.
4. Pull out the pre-amp ass'y in the direction of arrow.

2-1-10. Regulator Ass'y Removal

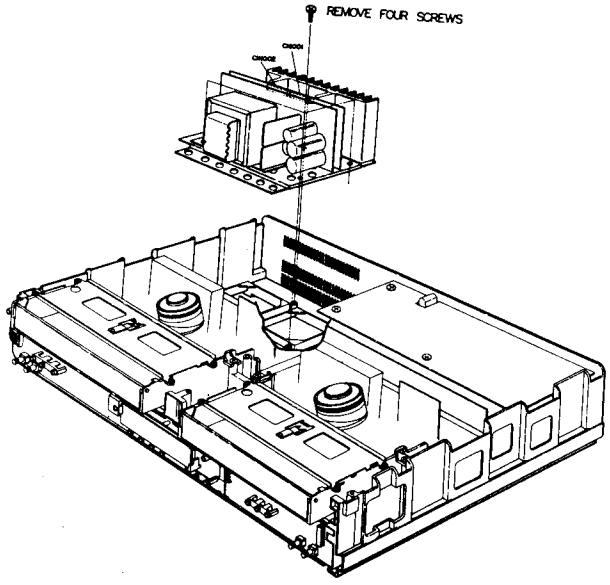


Fig. 10

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Remove 4 screws from the frame.
3. Disconnect 2 connectors (CN1001, CN1002) on the regulator circuit board.
4. Taking care of cable assemblies , lift up the regulator circuit board upward to remove.

2-2. MECHANICAL DISASSEMBLY

Tape Transport Mechanism Identification

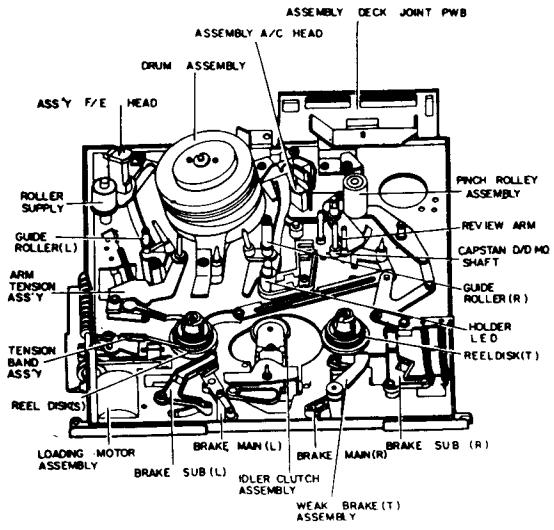


Fig.11 Tape Transport Mechanism Top View

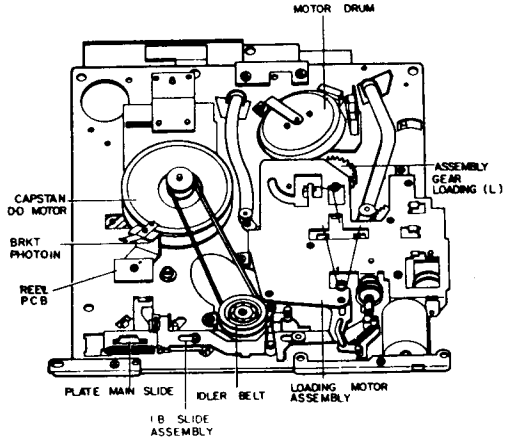


Fig. 12 Tape Transport Mechanism bottom View

2-2-1. Housing Assembly Removal

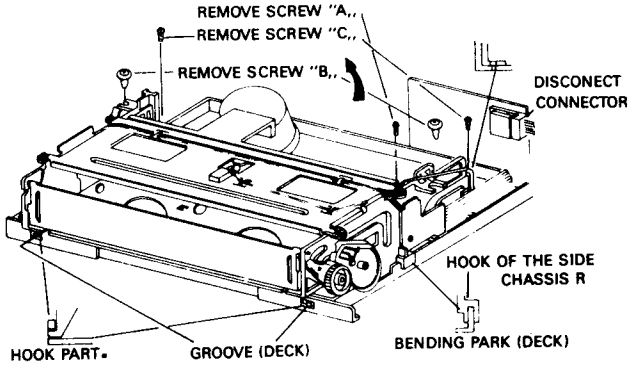


Fig. 13

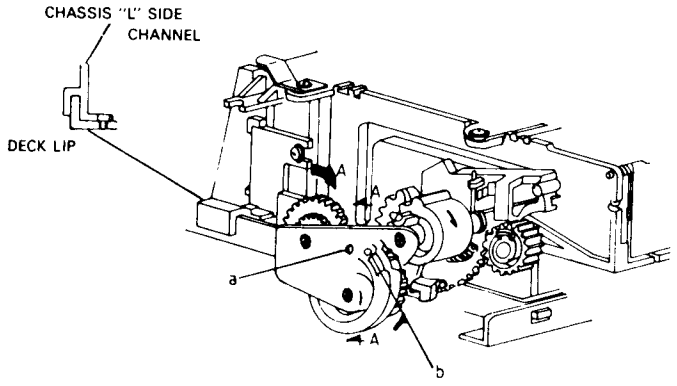


Fig. 14

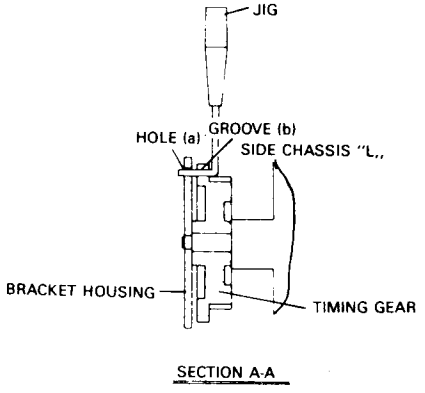


Fig.15

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Disconnect connector (CN204) from PCB-Deck Joint board.
3. Remove 2 screws (B).
4. Remove 3 screws (A & C).
5. Lift the rear of the housing assembly toward arrow mark.

Note : * When reinstalling housing assembly to the deck, first insert the hook part of the housing ass'y into the groove of the deck. Then fit the chassis "L" side channel (R) (L) to the deck lip.
* Before reinstalling screws, check assembling point of the timing gear and arm gear, rotating the worm gear in the direction of arrow A.
a) Assembling point is the point that the hole of the gear holder plate corresponds to the groove of the timing gear as in Fig 15.
b) If the ssembly point is not correct, mechanism will not operate smoothly.

2-2-2. Housing Assembly Identification

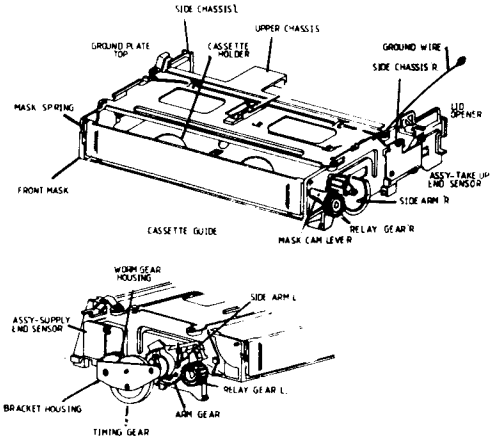


Fig. 16

2-2-3. Housing Assembly Disassembly

1. Front mask removal.

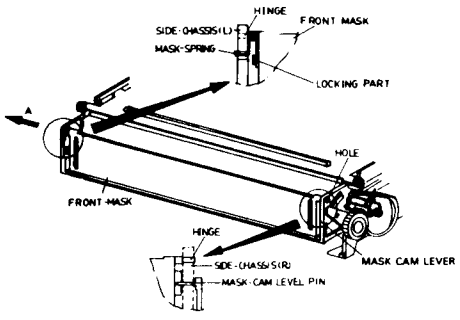


Fig. 17

* Pull front mask in the direction of arrow A, release front mask hinge part from the hole in the side-chassis (R) and hinge part in the hole in the side-chassis (L) release in the reverse direction.

2. REC S/W , Cassette S/W, PCB Start Sensor Removal.
Release REC S/W attached to the cassette guide.

Note :
* One end of the mask spring must be reinstalled in the lock part of the front mask and the other end must be reinstalled in the hook part of the side chassis(L).
* Upon reinstallation of the front mask slide lever pin of the mask cam in the side-chassis (R) must be reinstalled.

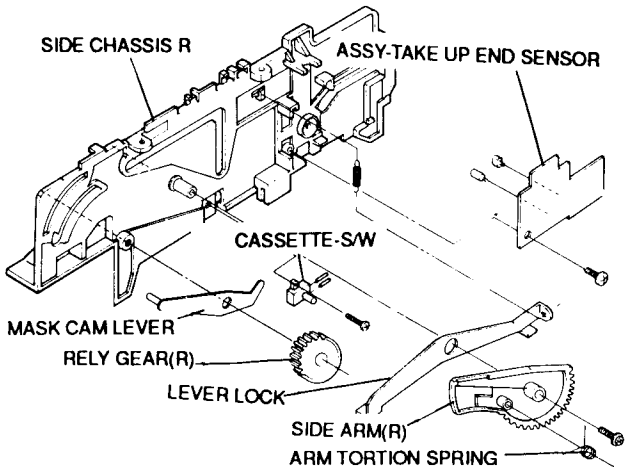


Fig. 18

1. Release tab of the cassette S/W and remove it . (Fig. 18).
2. Remove screw of the PCB start sensor.
3. Remove wires.
4. After removing the lid opener spring, remove the lid opener pulling the locking part in the direction of the arrow. (Fig. 20)

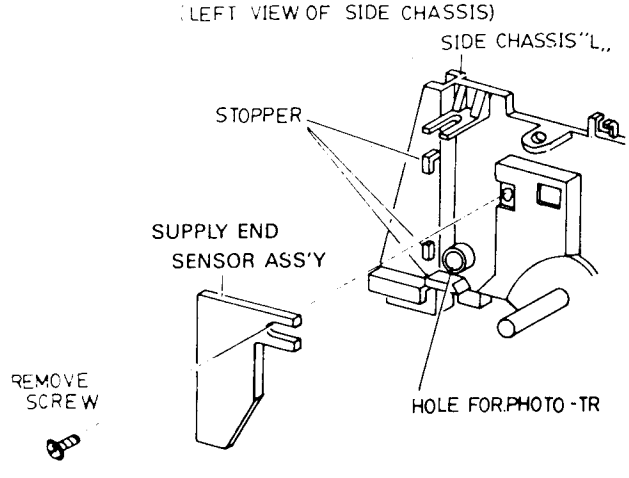


Fig. 19

3. Supply End Sensor Ass'y Removal.

* After removing screw at the side chassis (L), remove PCB end sensor.

Note : Be careful not to damage the TR and photo TR attached to the supply end sensor ass'y.

4. Lid Opener Removal

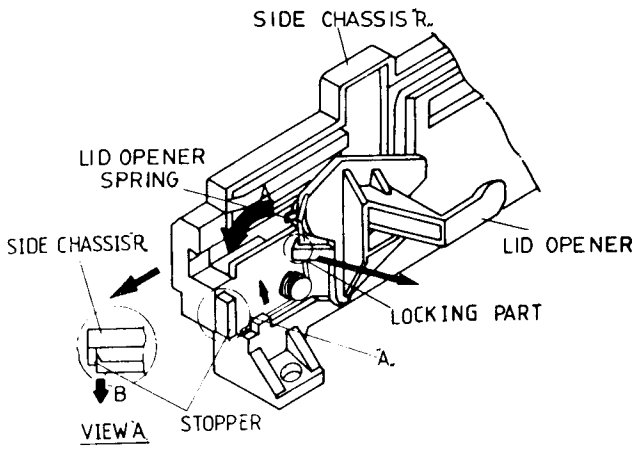


Fig. 20

* Remove the lid opener spring from locking part of the lid opener.
* Pull the lid opener in the direction A and release the locking part pulling it in the direction B (Refer to View A).

5. Timing Gear, Side Arm (L), Assembly /Worm Gear Housing Removal

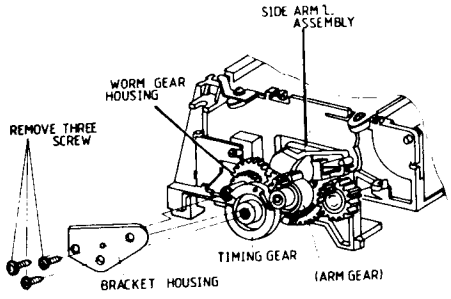


Fig. 21

1. Remove 3 screws holding each gear from the bracket housing . (Fig. 21)
   (Remove ground wire)
2. Remove the timing gear and the side arm (L) assembly and the worm gear housing.

Note : Upon reinstallation, check to see if the shaft (R) and (L) of the cassette holder is inserted at the home position of the side arm (R) and (L).

2. With Jig for Assembling

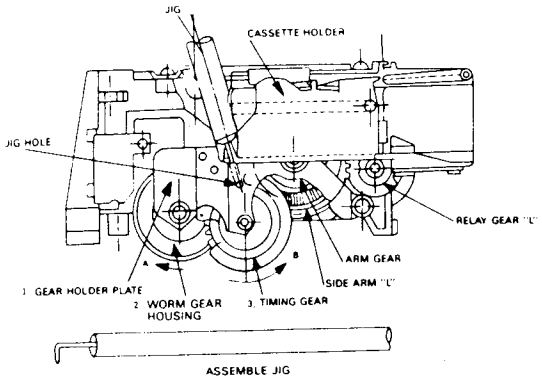


Fig. 27

As shown in Fig. 27, rotate the timing gear 3 and worm gear housing 2 in the direction of arrow A and B. Align the hole gear holder plate 1 and timing gear 3 and then insert the assembly jig in the hole to set-up the deck.

2-2-5. Mechanical Chassis Assembly Removal

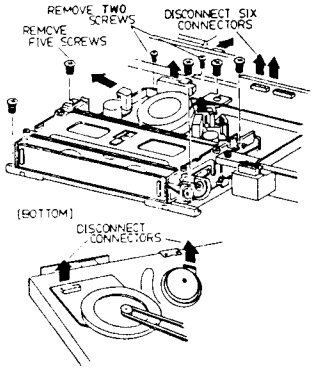


Fig. 28

1. Remove the panels (See Figs. 1 to 3)
2. Disconnect 6 connectors (4 on the top, 2 on the bottom).
3. Remove two (2) screws and pull the video head pre-amp ass'y upward to remove.
4. Remove 2 ground straps from bottom.
5. Remove 5 screws and pull the mechanism chassis assembly upward to remove.

2-2-6. Video Head (Upper Drum) Removal and Drum Motor Assembly Removal

Note : Take extreme care when removing the upper drum.
Do not touch the video head tips (located in the upper drum) during servicing.

Follow the procedures for removing
1. Remove the top cabinet (See Fig. 1).
2. Remove the bottom cover (See Fig. 2.)
3. Remove two (A) screws holding the upper drum cover, (Fig. 29).
4. Remove four wires soldered to PWB - Upper drum P-3.

Note : Upon reinstallation, connect four wires of the same color which are soldered PWB - Upper drum P-3.

5. Remove two (B) screws on the upper drum.
6. Lift up the upper drum in the direction of the arrow.
7. Remove video head pre amp ass'y & 2 (F) screws.
8. Remove two (C) screws holding the flywheel.
9. Disconnect connector from the drum motor.
10. Remove three screws (D) holding the drum motor.

When it is necessary to remove lower drum, remove three screws holding upper drum and perform the following adjustments.

Note : Upon reinstallation, alternately tighten the 2 screws holding upper drum and perform the following adjustments.
* Tracking Preset Adjustment.
* A/C Head Horizontal Position Adjustment (X-Point adj.)

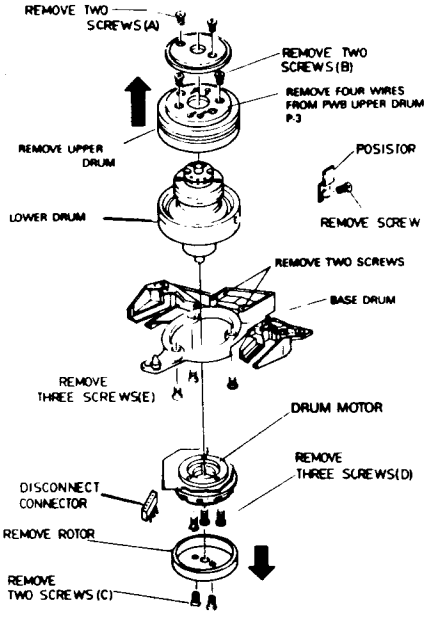


Fig. 29

2-2-7. Full Erase (F/E) Head/Supply Roller Removal

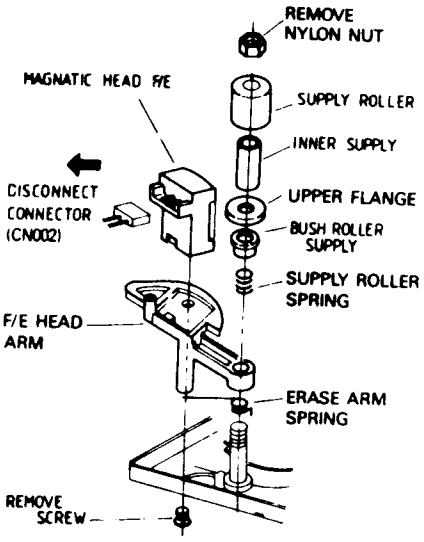


Fig. 30

1. Remove top cabinet (See Fig. 1)
2. Disconnect connector from the F/E Head.
3. Remove nut at the top of the supply roller and remove the supply roller, inner supply, upper flange, supply roller bushing.
4. Remove supply roller spring.
5. Pull the F/E head arm upward to remove.
6. Remove the screw holding the F/E head.
7. Pull the erase head arm spring from the hole upward and remove.
8. After replacing or reinstalling the F/E head, clean each tape contact surface of the F/E head and supply roller.

Note : Upon reinstallation, turn the nylon nut firmly (fix type).

2-2-8. Audio/ Control (A/C) Head Removal

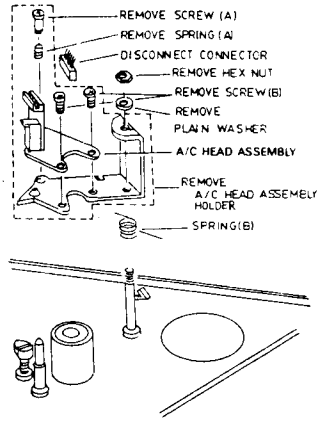


Fig. 31

1. Remove the top cabinet. (See Fig. 1)
2. Disconnect connector (CN0001) from the A/C head.
3. Remove hex nut holding the A/C Head Holder and remove the plain washer.
4. Pull the A/C head assembly upward to remove.
5. Remove screw (A) and spring (A).
6. Remove screw (B) and remove A/C head assembly.
7. After replacing or reinstalling the A/C head assembly holder, clean the tape contact surface of the head.

NOTE : Upon reinstallation, hook the spring between A/C head base and mechanism chassis.
After installing the A/C head assembly holder, perform the following adjustments.
1) A/C Head Height, Tilt and Azimuth Adjustments.
2) A/C Head Horizontal Position Adjustment (X-point).
3) Audio Playback Gain Adjustment.
4) Audio Record Level Adjustment.
5) Audio Bias Level Adjustment.

* Audio head height must be performed before A/C head horizontal position adjustment is performed.
* If audio head height is adjusted, the A/C head horizontal position must be readjusted.
* After completion of the A/C head position adjustment, the A/C head base must be positioned at approximately the center of the X-Point nut adjustment.

2-2-9. Loading Motor Assembly Removal

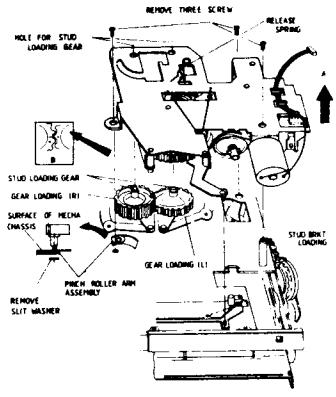


Fig. 32

1. Remove the top cabinet (See Fig. 1)
2. Remove the bottom cover . (See Fig. 2)
3. Remove the mechanism chassis assembly. (See Fig. 28).
4. Remove the housing assembly. (See Fig. 13)
5. Remove slit washer.
6. Remove 2 connectors.
7. Release spring (Loading pin side first).
8. Remove 3 screws and pull the loading motor assembly upward in the direction of arrow (A).

Note : Upon reinstallation , be sure the marks on the gear loading (L), (R) are positioned in line (See . B).

6. Side Arm (R) and (L) Reinstallation

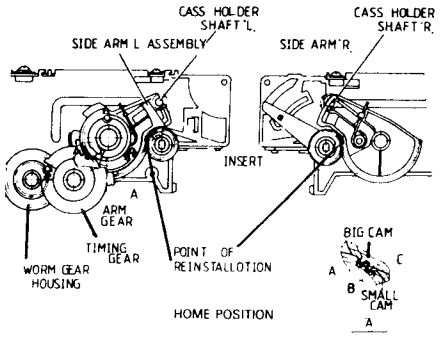


Fig. 22

7. Upper Chassis Removal.

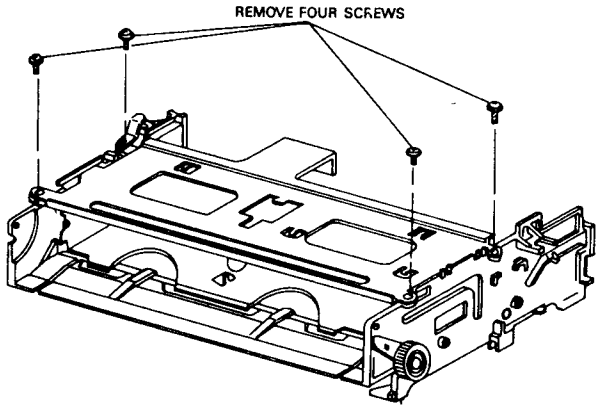


Fig. 23

After removing four screws, pull the upper chassis upward to remove (Fig. 23).
1. Release eject spring.
2. Remove arm gear.
3. Release tension arm spring L.

8. Side Arm (L) Assembly Removal

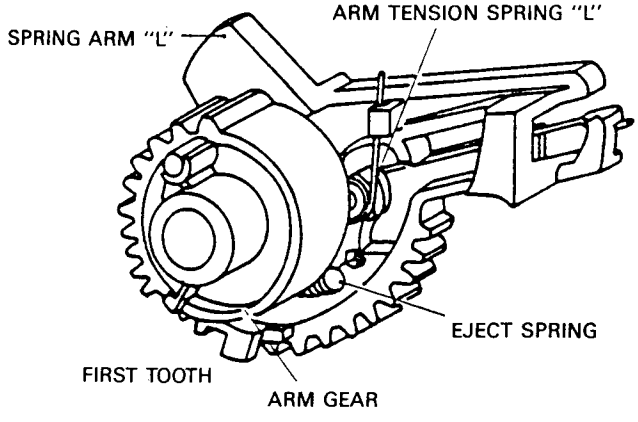


Fig. 14

2-2-4.How to Assembly Cassette Housing

1. Without Jig for Assembling

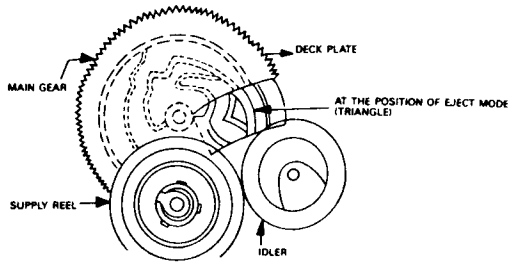


Fig. 25

1. Before assembling the cassette housing, eject loading gear completely.
2. Make sure the main gear of the loading motor is at the eject position as Fig. 25.
3. As shown in Fig. 16, rotate the worm gear housing of cassette housing in the direction of the arrow, until the rotation to stops.

Check the movement of the front loading mechanism, it should move freely from the eject to the cassette load position. If not the worm gear housing is in the wrong position.

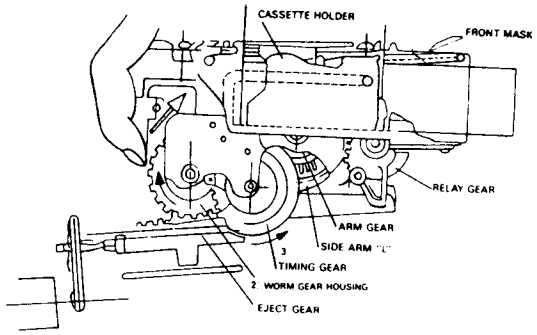


Fig. 26

If the cassette tape does come out in the eject assembling of gears 2 and 3 are not correct, reassemble cassette housing.

2-2-10. Tension Arm Assembly, Tension Band Assembly Removal

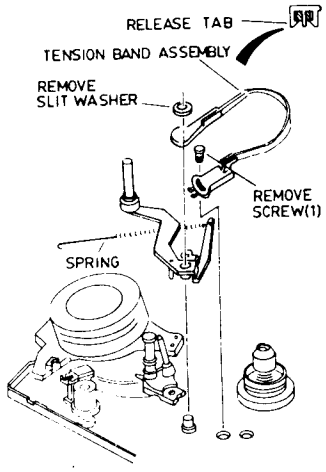


Fig.33

1. Remove screw holding the tension band assembly.
2. Release spring hooked on the chassis.
3. Remove the slit washers and pull the tension arm assembly upward.
4. Release tab holding the tension band assembly.

Note : Confirm back tension after reinstalling.

2-2-11. Sub Brake (L) (R) Assembly Removal

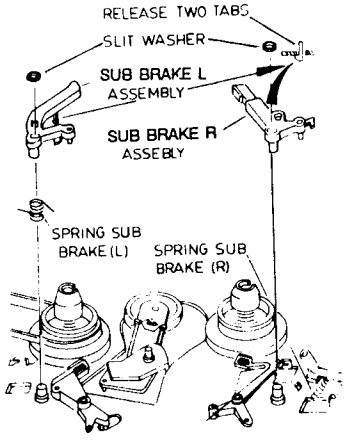


Fig. 34

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Remove the housing assembly.
3. Remove 2 slit washers and release sub brake spring.
4. Release tabs holding the sub brake (R) assembly and sub brake (L) assembly.

Note : Take care when removing spring.

2-2-12. Main Brake (L) (R) Assembly Removal

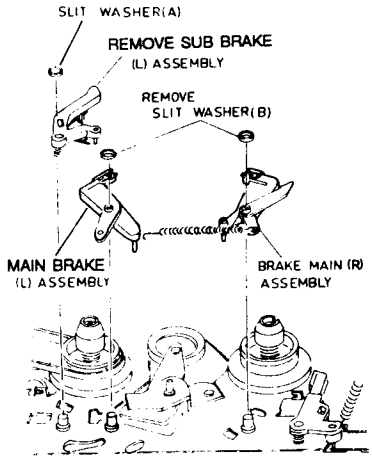


Fig. 35

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Remove the housing assembly.
3. Remove the sub brake (L) assembly.
4. Remove 2 slit washers.
5. Release spring hooks on the main brake assemblies.

2-2-13. D.D Capstan Motor Removal

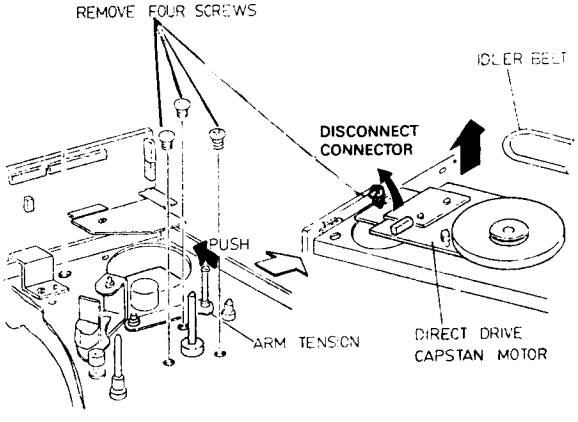


Fig. 36

1. Remove the top cabinet (See Fig. 1).
2. Remove the bottom panel (See Fig. 2).
3. Release idler belt and disconnect connector from D.D capstan motor.
4. Remove 4 screws.
5. Push the review arm assembly, remove 4 screws.

2-2-14. Assembly Loading Gear (L) (R) Removal

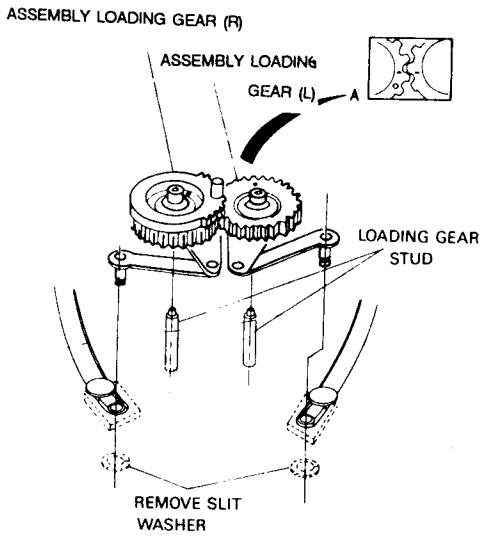


Fig. 37

1. Follow the procedures for removing the panels (See Figs. 1 to 3).
2. Remove mechanism chassis assembly.
3. Remove the housing assembly.
4. Remove the loading motor assembly.
5. Remove slit washer holding on the loading arm assembly.

Note : Place gears in the unloaded position upon reinstallation, be sure the marks on the loading gear (L) (R) are positioned in line (See. A).

2-2-15. Guide Roller Assembly Removal

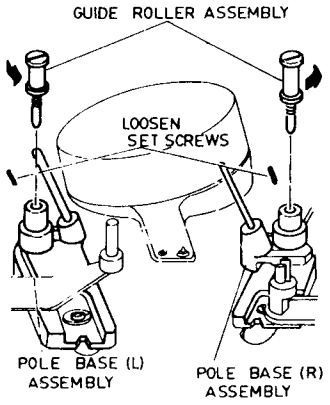


Fig. 38

1. Remove the top and the bottom cover (See Figs. 1,2).
2. Loosen each set screw at the pole base assembly.
3. Turn the guide roller assemblies counterclockwise.
4. After replacing or reinstalling the guide roller assemblies, clean each tape contact surface of the guide roller assemblies.

Note : Upon reinstallation, perform the guide roller assemblies adjustment.

2-2-16. Reel Disk (S) Assembly Removal

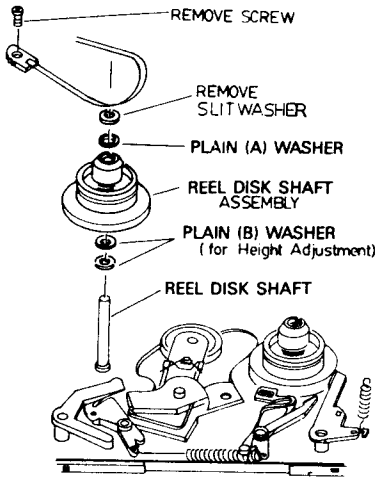


Fig. 39

1. Remove the top and bottom panels (See Figs. 1,2)
2. Remove the housing assembly.
3. Remove screw holding the tension band assembly.
5. Remove plain washer (A).

Note : Do not remove the plain washer (B) under the reel disk (S) assembly.

2-2-17. Reel Disk (T) Assembly Removal.

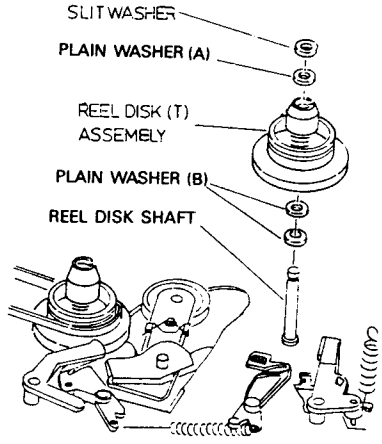


Fig. 40

1. Remove the top and bottom cover (See Figs. 1,2).
2. Remove the housing assembly.
3. Remove slit washer from the reel disk shaft.
4. Remove plain washer (A) and pull the reel disk (T) assembly upward.

Note : Do not remove the plain washer (B) under the reel disk (T) assembly.

2-2-18. Pinch Roller Assembly and Pinch Roller Arm Assembly Removal

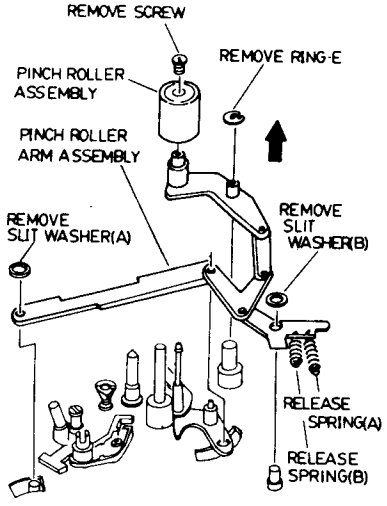


Fig. 41

1. Follow the procedures for removing the panels (See Figs. 1 to 2)
2. Remove housing assembly.
3. Remove screw holding the pinch roller assembly.
4. Remove ring-E.
5. Remove slit washer (A) and slit washer (B).
6. Release spring (A) and the spring (B).
7. Pull the pinch roller arm assembly upward (arrow mark direction) to remove.

2-2-19. Assembly Holder LED Removal

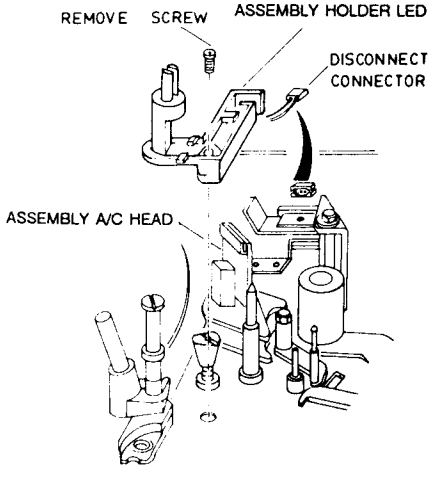


Fig. 42

1. Follow the procedures for removing the panels (See Fig. 1).
2. Remove the housing assembly.
3. Disconnect connector (CN210).
4. Remove screw and pull the assembly holder LED upward to remove, at the same time pushing the assembly A/C head in the direction of arrow.

2-2-20. Review Arm Assembly Removal

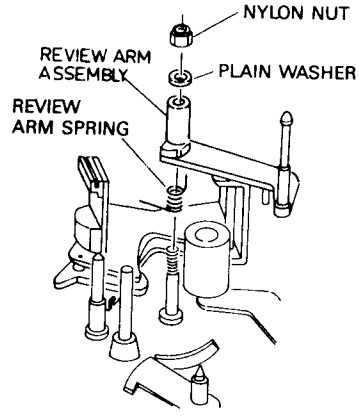


Fig. 43

1. Remove the top cabinet (See Fig. 1)
2. Remove nylon nut and plain washer.
3. Release review arm spring.
4. Pull the review arm assembly upward to remove.

> Note : After replacing or reinstalling the review arm assembly, clean the tape contact surface of the review arm assembly and perform the review arm assembly adjustment.

2-2-21. Drum Assembly Removal

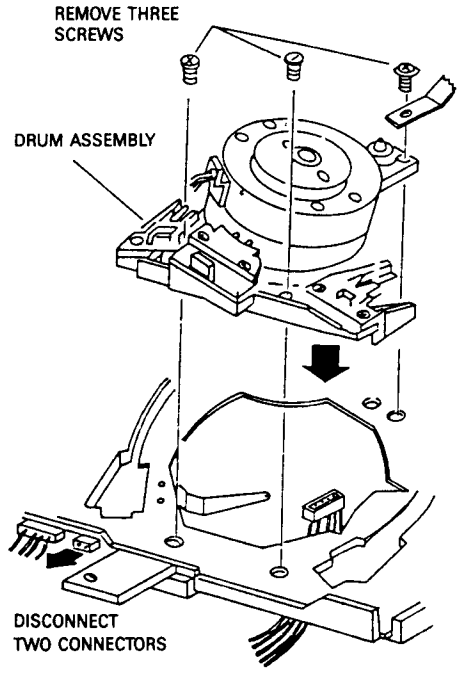


Fig. 44

1. Follow the procedures for removing the panels (See Figs. 1 to 2).
2. Remove video head pre amp assembly.
3. Disconnect 2 connectors.
4. Remove 3 screws.

2-2-22. Assembly Photo Interrupter Removal

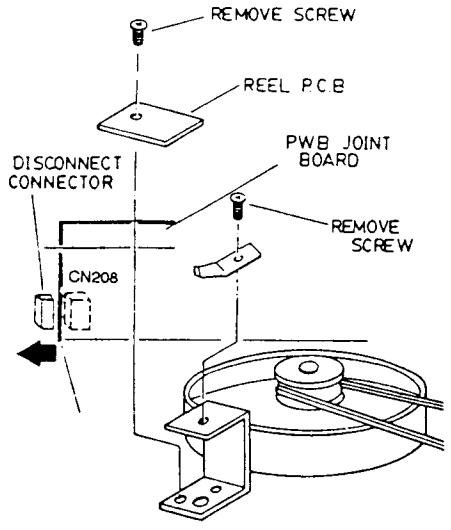


Fig. 45

1. Remove the top and bottom cover (See Figs. 1,2).
2. Disconnect connector (CN208).
3. Remove screw.

2-2-23. I.B Slide Assembly and Plate Main Slide Removal

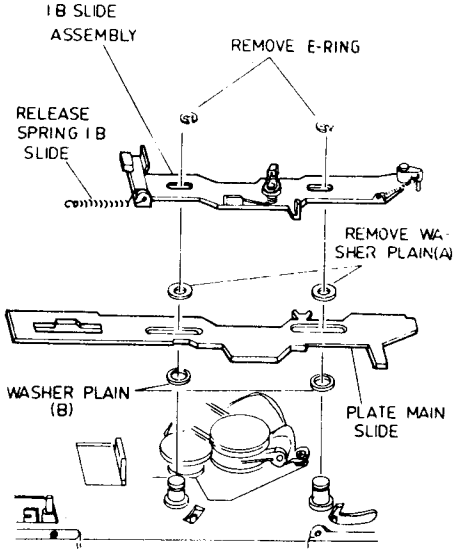


Fig. 46

1. Follow the procedures for removing the panels (See Figs. 1 to 3).
2. Remove mechanism chassis assembly.
3. Remove loading motor assembly.
4. Remove plain washer (A) and pull the plate main slide upward to remove.

Note : Do not remove the plain washer (B) under the plate main slide.
* I.B : Idler / Break

2-2-24. Idler Clutch Assembly Removal

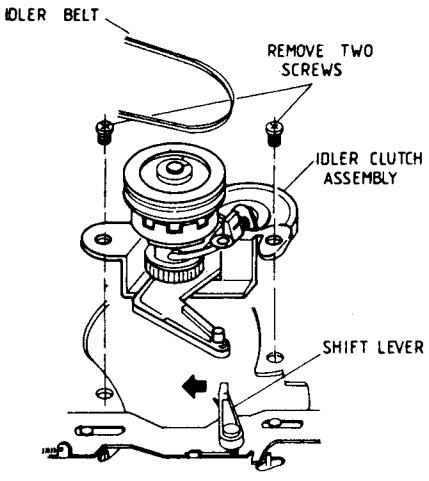


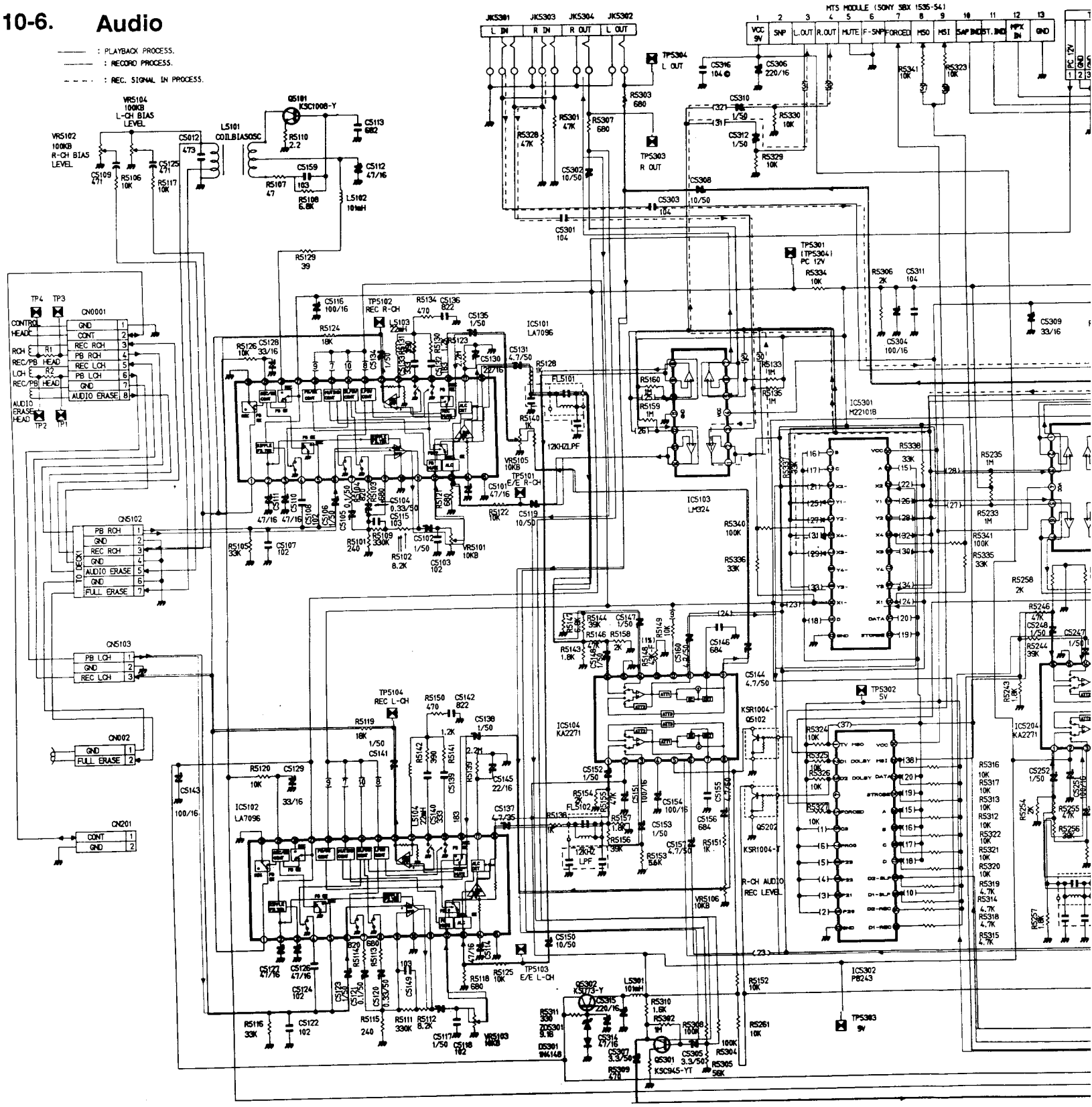
Fig. 47

1. Remove the bottom cover . (See Fig. 2)
2. Release Idler belt and remove 2 screws.
3. Pull the Idler clutch assembly upward to remove, at the same time push the shift lever about 5-10 mm.

AUDIO

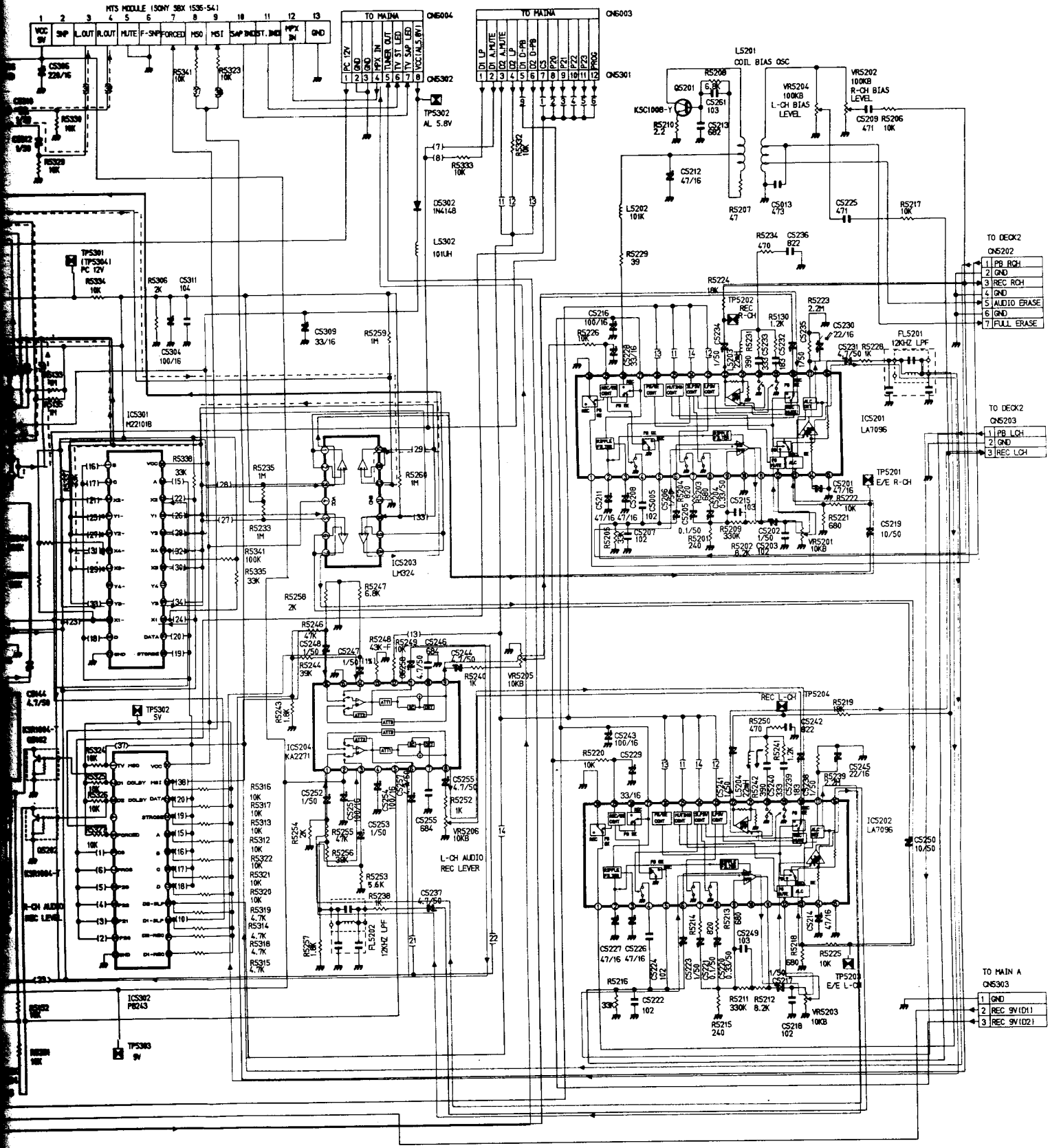
10-6. Audio

——— : PLAYBACK PROCESS.
——— : RECORD PROCESS.
- - - - : REC. SIGNAL IN PROCESS.



AUDIO

AUDIO



NOTE
Do not use the part number shown on this drawing for

SPECIAL NOTE
All integrated circuits and many other semiconductor

AUDIO

MODE / PIN NO	IC5101						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	0	0	0	0	0	0	0
PIN 2	10.8	10.8	10.8	10.8	10.8	10.8	10.8
PIN 3	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 4	0	0	0	0	0	0	0
PIN 5	0	0	0	0	0	0	0
PIN 6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 7	0	0	0	0	0	0	0
PIN 8	0	0	0	0	0	0	0
PIN 9	0	0	0	0	0	0	0
PIN 10	0	0	0	0	0	0	0
PIN 11	2.6	2.7	2.6	2.6	2.6	2.6	2.6
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0	0	0	0	0	0
PIN 14	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 15	0	0	0	0	0	0	0
PIN 16	5.5	5.5	5.5	5.5	5.5	5.5	5.5
PIN 17	0	0.4	0.4	0.1	0.4	0.1	0.4
PIN 18	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 19	0	0	0	0	0	0	0
PIN 20	0	0	0	0	0	0	0
PIN 21	1.1	1.1	4.7	1.0	4.6	1.0	4.9
PIN 22	5.2	5.2	5.2	5.1	5.2	5.2	5.2
PIN 23	0	0	0	0	0	0	0
PIN 24	0	0	0	0	0	0	0
PIN 25	0	0	0	4.7	4.7	0	4.7
PIN 26	0	0	4.9	0.1	4.9	0.1	4.9
PIN 27	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 28	0.2	11.3	0.3	0.2	0.3	0.3	0.3
PIN 29	0.3	8.0	0.3	0.3	0.3	0.3	0.3
PIN 30	0	0	0	0	0	0	0

NOTES : 1) TEST TAPE, D1=SP
2) REC SPEED, D1=SP

MODE / PIN NO	IC5102						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	0	0	0	0	0	0	0
PIN 2	10.8	10.8	10.8	10.8	10.8	10.8	10.8
PIN 3	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 4	0	0	0	0	0	0	0
PIN 5	0	0	0	0	0	0	0
PIN 6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 7	0	0	0	0	0	0	0
PIN 8	0	0	0	0	0	0	0
PIN 9	0	0	0	0	0	0	0
PIN 10	0	0	0	0	0	0	0
PIN 11	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0	0	0	0	0	0
PIN 14	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 15	0	0	0	0	0	0	0
PIN 16	5.5	5.5	5.5	5.5	5.5	5.5	5.5
PIN 17	0	0.5	0.4	0.1	0.4	0	0.4
PIN 18	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 19	0	0	0	0	0	0	0
PIN 20	0	0	0	0	0	0	0
PIN 21	1.1	1.1	4.7	1.0	4.6	1.0	4.9
PIN 22	5.2	5.2	5.2	5.2	5.2	5.2	5.2
PIN 23	0	0	0	0	0	0	0
PIN 24	0	0	0	0	0	0	0
PIN 25	0	0	0	4.7	4.7	0	4.7
PIN 26	0	0	4.9	0.1	4.9	0	4.9
PIN 27	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 28	-	-	-	-	-	-	-
PIN 29	0.3	3.0	0.3	0.3	0.3	0.3	0.3
PIN 30	0	0	0	0	0	0	0

NOTES : 1) TEST TAPE, D1=SP
2) REC SPEED, D1=SP

MODE / PIN NO		
	STOP	REC
PIN 1	0	0
PIN 2	10.8	10.8
PIN 3	12.1	12.1
PIN 4	0	0
PIN 5	0	0
PIN 6	0.6	0.6
PIN 7	0	0
PIN 8	0	0
PIN 9	0	0
PIN 10	0	0
PIN 11	2.6	2.7
PIN 12	0	0
PIN 13	0	0
PIN 14	0.6	0.6
PIN 15	0	0
PIN 16	5.5	5.5
PIN 17	0	0.4
PIN 18	2.4	2.4
PIN 19	0	0
PIN 20	0	0
PIN 21	1.1	1.1
PIN 22	5.2	5.2
PIN 23	0	0
PIN 24	0	0
PIN 25	0	0
PIN 26	0	0
PIN 27	12.1	12.1
PIN 28	0.2	11.3
PIN 29	0.3	8.0
PIN 30	0	0

NOTES : 1) TEST TAPE
2) REC SPEED

ODE / PIN NO	IC5103						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 3	1.9	1.9	1.9	1.9	1.9	1.9	1.9
PIN 4	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 6	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 7	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 8	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 10	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 11	-	-	-	-	-	-	-
PIN 12	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 13	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 14	2.0	2.0	2.0	2.0	2.0	2.0	2.0

MODE / PIN NO	IC5104						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	4.5	4.5	4.5	4.5	4.5	4.5	4.5
PIN 2	8.9	8.9	8.9	8.9	8.9	8.9	8.9
PIN 3	4.6	4.5	4.5	4.5	4.5	4.5	4.5
PIN 4	4.6	4.5	4.5	4.5	4.5	4.5	4.5
PIN 5	8.9	8.9	8.9	8.9	8.9	8.9	8.9
PIN 6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 7	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 8	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 9	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 10	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 11	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 12	0	0	4.9	0	4.9	0	4.9
PIN 13	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PIN 14	4.6	4.5	4.5	4.5	4.5	4.5	4.5
PIN 15	0	0	0	0	0	0	0
PIN 16	4.5	4.5	4.5	4.5	4.5	4.5	4.5

NOTES : 1) DOLBY OFF

MODE / PIN NO		
	STOP	REC
PIN 1	2.0	2.0
PIN 2	2.0	2.0
PIN 3	2.0	2.0
PIN 4	5.1	5.1
PIN 5	2.0	2.0
PIN 6	2.0	2.0
PIN 7	2.0	2.0
PIN 8	2.0	2.0
PIN 9	2.0	2.0
PIN 10	2.0	2.0
PIN 11	-	-
PIN 12	1.9	1.9
PIN 13	2.1	2.1
PIN 14	2.1	2.1

AUDIO

MODE / PIN NO	IC5201						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	0	0	0	0	0	0	0
PIN 2	10.8	10.8	10.8	10.8	10.8	10.8	10.8
PIN 3	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 4	0	0	0	0	0	0	0
PIN 5	0	0	0	0	0	0	0
PIN 6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 7	0	0	0	0	0	0	0
PIN 8	0	0	0	0	0	0	0
PIN 9	0	0	0	0	0	0	0
PIN 10	0	0	0	0	0	0	0
PIN 11	2.6	2.7	2.6	2.6	2.6	2.6	2.6
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0	0	0	0	0	0
PIN 14	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 15	0	0	0	0	0	0	0
PIN 16	5.5	5.5	5.5	5.5	5.5	5.5	5.5
PIN 17	0	0.4	0.4	0.1	0.4	0.1	0.4
PIN 18	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 19	0	0	0	0	0	0	0
PIN 20	0	0	0	0	0	0	0
PIN 21	1.1	1.1	4.7	1.0	4.6	1.0	4.9
PIN 22	5.2	5.2	5.2	5.1	5.2	5.2	5.2
PIN 23	0	0	0	0	0	0	0
PIN 24	0	0	0	0	0	0	0
PIN 25	0	0	0	4.7	4.7	0	4.7
PIN 26	0	0	4.9	0.1	4.9	0.1	4.9
PIN 27	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 28	0.2	11.3	0.3	0.2	0.3	0.3	0.3
PIN 29	0.3	8.0	0.3	0.3	0.3	0.3	0.3
PIN 30	0	0	0	0	0	0	0

NOTES : 1) TEST TAPE, D2=SP
2) REC SPEED, D2=SP

MODE / PIN NO	IC5202						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	0	0	0	0	0	0	0
PIN 2	10.8	10.8	10.8	10.8	10.8	10.8	10.8
PIN 3	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 4	0	0	0	0	0	0	0
PIN 5	0	0	0	0	0	0	0
PIN 6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 7	0	0	0	0	0	0	0
PIN 8	0	0	0	0	0	0	0
PIN 9	0	0	0	0	0	0	0
PIN 10	0	0	0	0	0	0	0
PIN 11	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0	0	0	0	0	0
PIN 14	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 15	0	0	0	0	0	0	0
PIN 16	5.5	5.5	5.5	5.5	5.5	5.5	5.5
PIN 17	0	0.5	0.4	0.1	0.4	0	0.4
PIN 18	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 19	0	0	0	0	0	0	0
PIN 20	0	0	0	0	0	0	0
PIN 21	1.1	1.1	4.7	1.0	4.6	1.0	4.9
PIN 22	5.2	5.2	5.2	5.2	5.2	5.2	5.2
PIN 23	0	0	0	0	0	0	0
PIN 24	0	0	0	0	0	0	0
PIN 25	0	0	0	4.7	4.7	0	4.7
PIN 26	0	0	4.9	0.1	4.9	0	4.9
PIN 27	12.1	12.1	12.1	12.1	12.1	12.1	12.1
PIN 28	-	-	-	-	-	-	-
PIN 29	0.3	8.0	0.3	0.3	0.3	0.3	0.3
PIN 30	0	0	0	0	0	0	0

NOTES : 1) TEST TAPE, D2=SP
2) REC SPEED, D2=SP

MODE / PIN NO	IC5301				
	STOP	REC	PLAY	R/F. FWD	R/F S
PIN 1	0	5.0	5.0	5.0	5.0
PIN 2	0	0	0	0	0
PIN 3	2.0	2.0	2.0	2.0	2.0
PIN 4	2.0	2.0	2.0	2.0	2.0
PIN 5	2.0	2.0	2.0	2.0	2.0
PIN 6	2.0	2.0	2.0	2.0	2.0
PIN 7	2.0	2.0	2.0	2.0	2.0
PIN 8	2.0	2.0	2.0	2.0	2.0
PIN 9	2.0	2.0	2.0	2.0	2.0
PIN 10	2.0	2.0	2.0	2.0	2.0
PIN 11	5.0	0	0	0	0
PIN 12	0	0	0	0	0
PIN 13	0	0	0	0	0
PIN 14	5.0	5.0	-	5.0	-
PIN 15	2.0	2.0	2.0	2.0	2.0
PIN 16	2.0	2.0	2.0	2.0	2.0
PIN 17	-	-	-	-	-
PIN 18	2.0	2.0	2.0	2.0	2.0
PIN 19	2.0	2.0	2.0	2.0	2.0
PIN 20	2.0	2.0	2.0	2.0	2.0
PIN 21	2.0	2.0	2.0	2.0	2.0
PIN 22	2.0	2.0	2.0	2.0	2.0
PIN 23	0	5.0	5.0	5.0	5.0
PIN 24	5.0	5.0	5.0	5.0	5.0

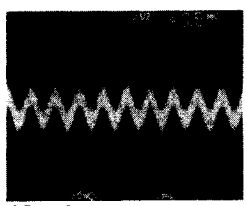
NOTES : 1) VIEW SRC=D1
2) REC SRC, D1=TUNER

MODE / TR NO	STOP			REC			PL	
	E	C	B	E	C	B	E	
Q5101	0	0.3	0.3	0	-1.0	8.9	0	
Q5102	0	8.9	0	0	8.9	0	0	
Q5201	0	0.3	0.3	0	-1.0	8.9	0	
Q5202	0	8.9	0	0	8.9	0	0	
Q5301	9.1	12.1	9.7	9.2	12.1	9.8	9.2	
Q5302	0.5	7.2	1.0	0.5	7.2	1.0	0.5	

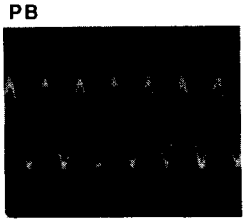
MODE / PIN NO	IC5203						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 3	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 4	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 6	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 7	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 8	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 10	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 11	-	-	-	-	-	-	-
PIN 12	1.9	1.9	1.9	1.9	1.9	1.9	1.9
PIN 13	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PIN 14	2.1	2.1	2.1	2.1	2.1	2.1	2.1

MODE / PIN NO	IC5204						
	STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	4.5	4.5	4.5	4.5	4.5	4.5	4.5
PIN 2	8.9	8.9	8.9	8.9	8.9	8.9	8.9
PIN 3	4.6	4.5	4.5	4.5	4.5	4.5	4.5
PIN 4	4.6	4.5	4.5	4.5	4.5	4.5	4.5
PIN 5	8.9	8.9	8.9	8.9	8.9	8.9	8.9
PIN 6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 7	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 8	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 9	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 10	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 11	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 12	0	0	4.9	0	4.9	0	4.9
PIN 13	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PIN 14	4.6	4.5	4.5	4.5	4.5	4.5	4.5
PIN 15	0	0	0	0	0	0	0
PIN 16	4.5	4.5	4.5	4.5	4.5	4.5	4.5

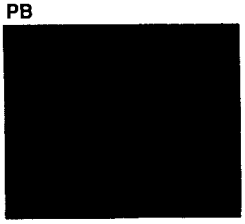
NOTES : 1) DOLBY OFF



IC5101-11
20mV/1msec/cm
PB



IC5103-5
5mV/100usec/cm
PB



IC5104-6
5mV/100usec/cm
PB

MODE / PIN NO	IC5301 STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 2	0	0	0	0	0	0	0
PIN 3	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 4	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 6	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 7	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 8	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 10	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 11	5.0	0	0	0	0	0	0
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0	0	0	0	0	0
PIN 14	5.0	5.0	–	5.0	–	5.0	–
PIN 15	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 16	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 17	–	–	–	–	–	–	–
PIN 18	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 19	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 20	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 21	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 22	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PIN 23	0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 24	5.0	5.0	5.0	5.0	5.0	5.0	5.0

MODE / PIN NO	IC5302 STOP	REC	PLAY	R/F. FWD	R/F S.	REC P.	PLAY P.
PIN 1	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 2	0	0	0	0	0	0	0
PIN 3	0	0	0	0	0	0	0
PIN 4	–	–	–	–	–	–	–
PIN 5	0	0	0	0	0	0	0
PIN 6	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 7	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PIN 8	4.1	3.8	3.8	3.8	3.8	3.8	3.8
PIN 9	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 10	3.3	3.7	3.2	3.6	3.2	3.6	3.2
PIN 11	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PIN 12	0	0	0	0	0	0	0
PIN 13	–	–	–	–	–	–	–
PIN 14	–	–	–	–	–	–	–
PIN 15	0.1	0	0	0	0	0	0
PIN 16	0	0	0	0	0	0	0
PIN 17	5.0	0	0	0	0	0	0
PIN 18	0	0	0	0	0	0	0
PIN 19	0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 20	0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 21	0	0	0	0	0	0	0
PIN 22	5.0	5.0	–	5.0	–	5.0	–
PIN 23	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 24	5.0	5.0	5.0	5.0	5.0	5.0	5.0

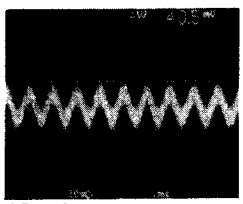
NOTES : 1) VIEW SRC=D1

2) REC SRC. D1=TUNER

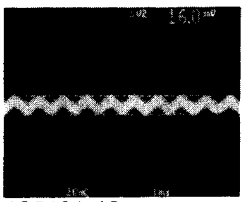
FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / TR NO	STOP E	C	B	REC E	C	B	PLAY E	C	B	REW E	C	B	F.FWD E	C	B	REV S. E	C	B	FWD S. E	C	B
Q5101	0	0.3	0.3	0	-1.0	8.9	0	0.4	0.4	0	0.4	0.4	0	0.4	0.4	0	0.4	0.4	0	0.4	0.4
Q5102	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0
Q5201	0	0.3	0.3	0	-1.0	8.9	0	0.4	0.4	0	0.4	0.4	0	0.4	0.4	0	0.4	0.4	0	2.8	0
Q5202	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0	0	8.9	0
Q5301	9.1	12.1	9.7	9.2	12.1	9.8	9.2	12.1	9.8	9.2	12.1	9.8	9.2	12.2	9.8	9.2	12.1	9.7	9.2	12.1	9.7
Q5302	0.5	7.2	1.0	0.5	7.2	1.0	0.5	7.2	1.1	0.5	7.2	1.0	0.5	7.2	1.0	0.5	7.2	1.0	0.5	7.2	1.0

NOTES :
1) NO OSD
2) NO RF-IN
3) TEST TAPE. D1=SP
4) REC SPEED. D1=SP
5) AUDIO SRC=STEREO
6) DOLBY NR. D1=OFF
7) REC SRC. D1=TUNER
8) VIEW SRC=D1



IC5101-11
20mV/1msec/cm
PB

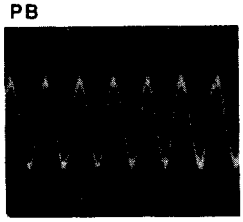


IC5101-12
20mV/1msec/cm
PB

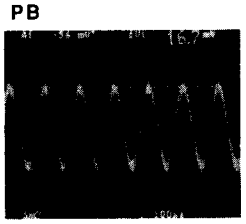
IC5101-16
5mV/1msec/cm
PB

IC5101-16
500mV/500usec/cm
REC

IC5101-22
50mV/500usec/cm
REC

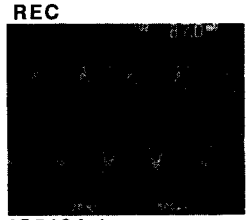


IC5103-5
5mV/100usec/cm
PB

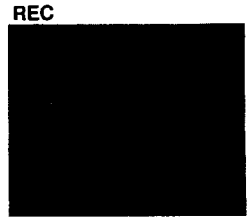


IC5103-6
5mV/100usec/cm
PB

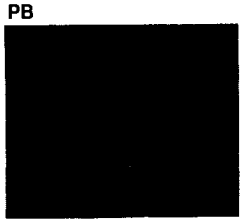
IC5103-7
5mV/100usec/cm
PB



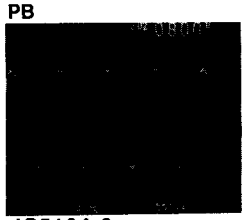
IC5104-1
20mV/500usec/cm
REC



IC5104-3
2mV/500usec/cm
PB

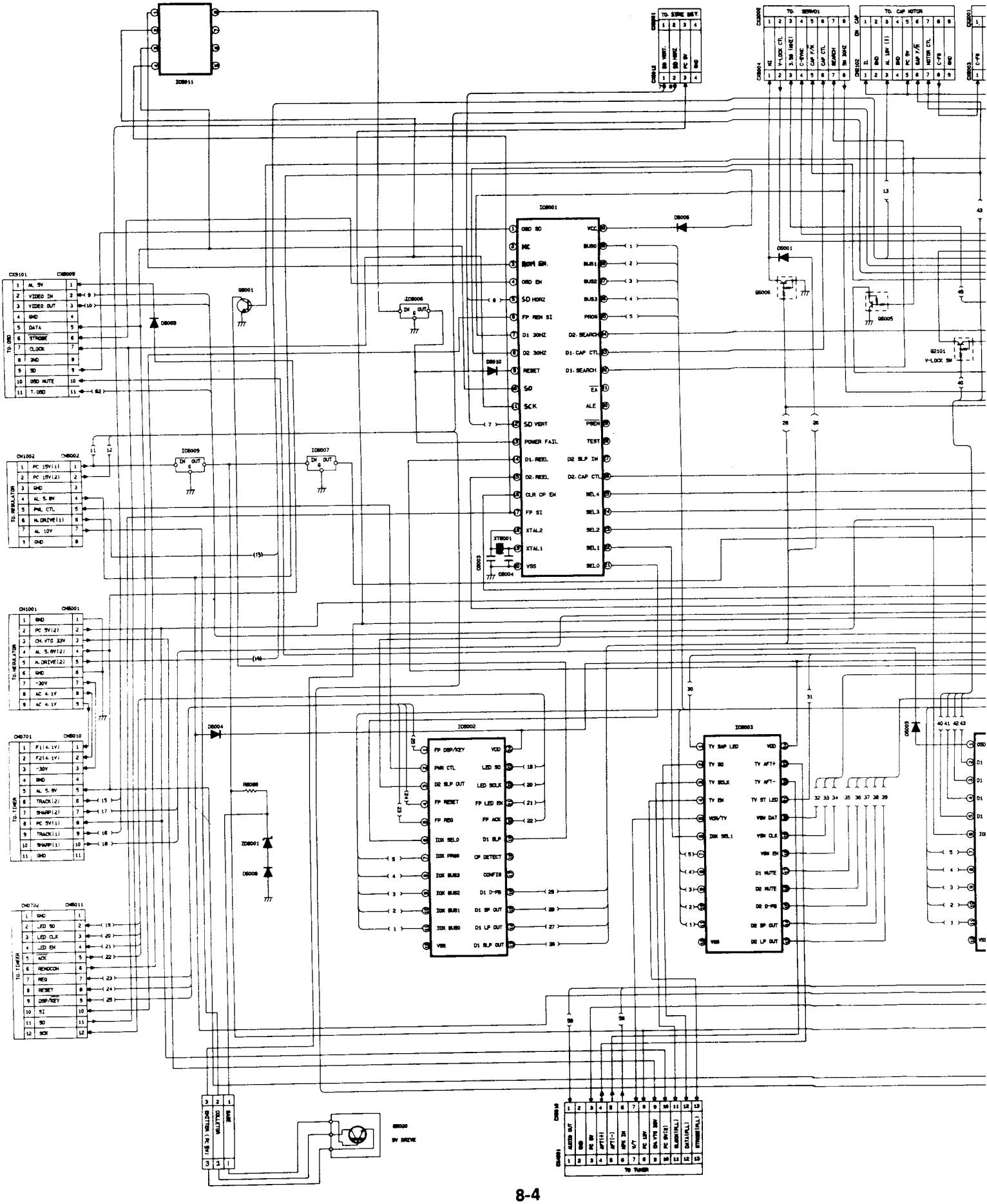


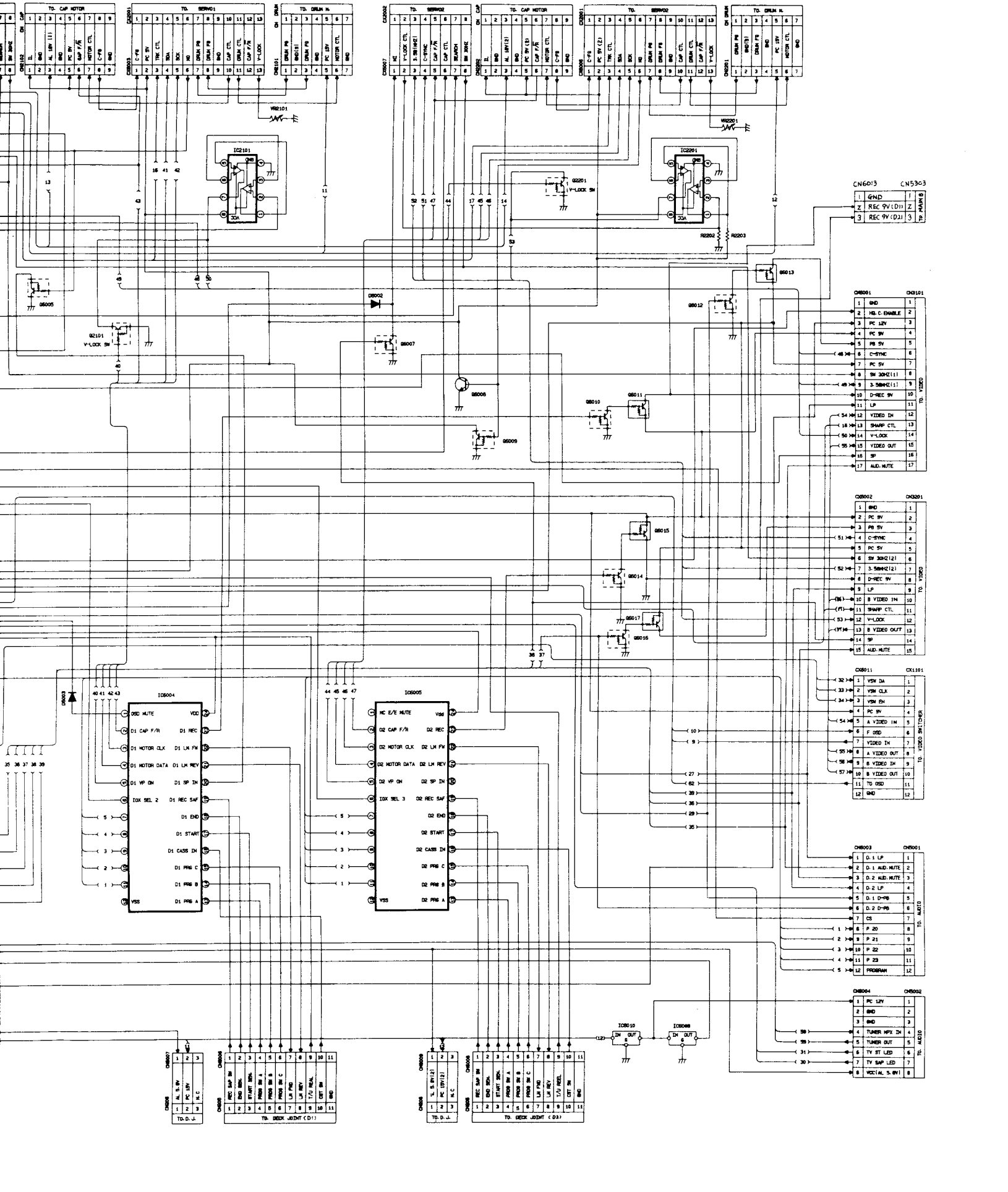
IC5104-6
5mV/100usec/cm
PB



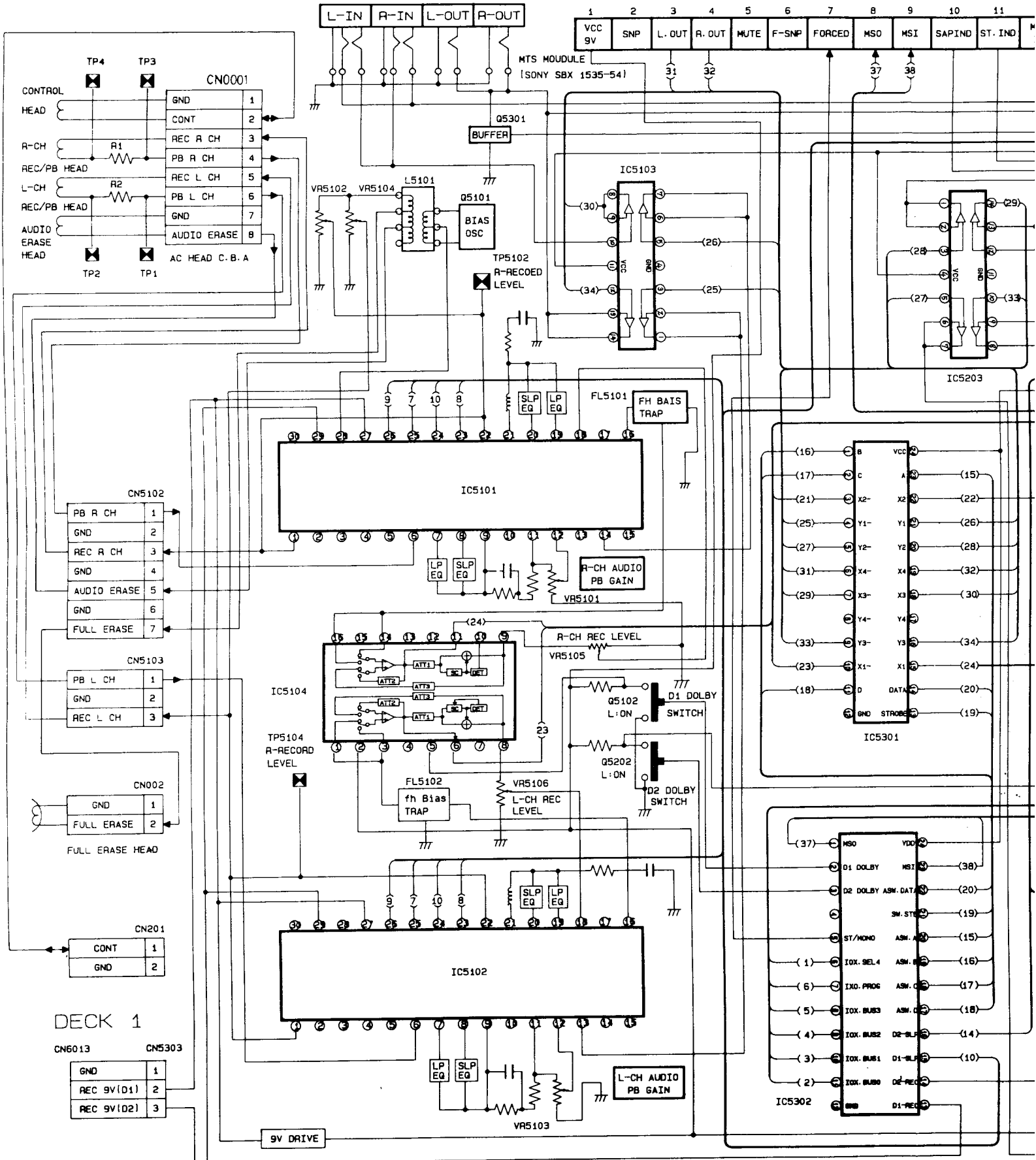
IC5104-8
200mV/500usec/cm
REC

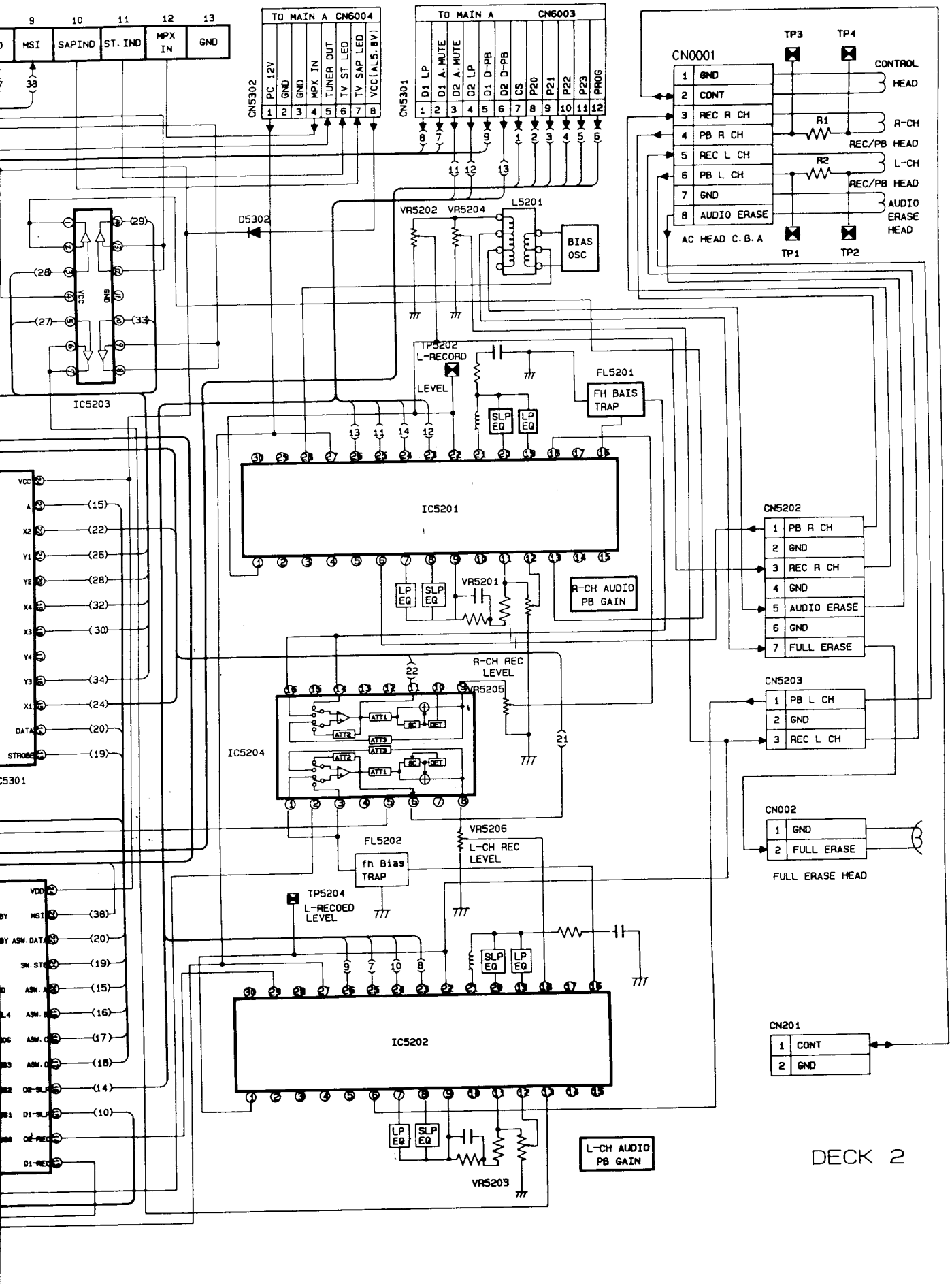
8-3. Main A

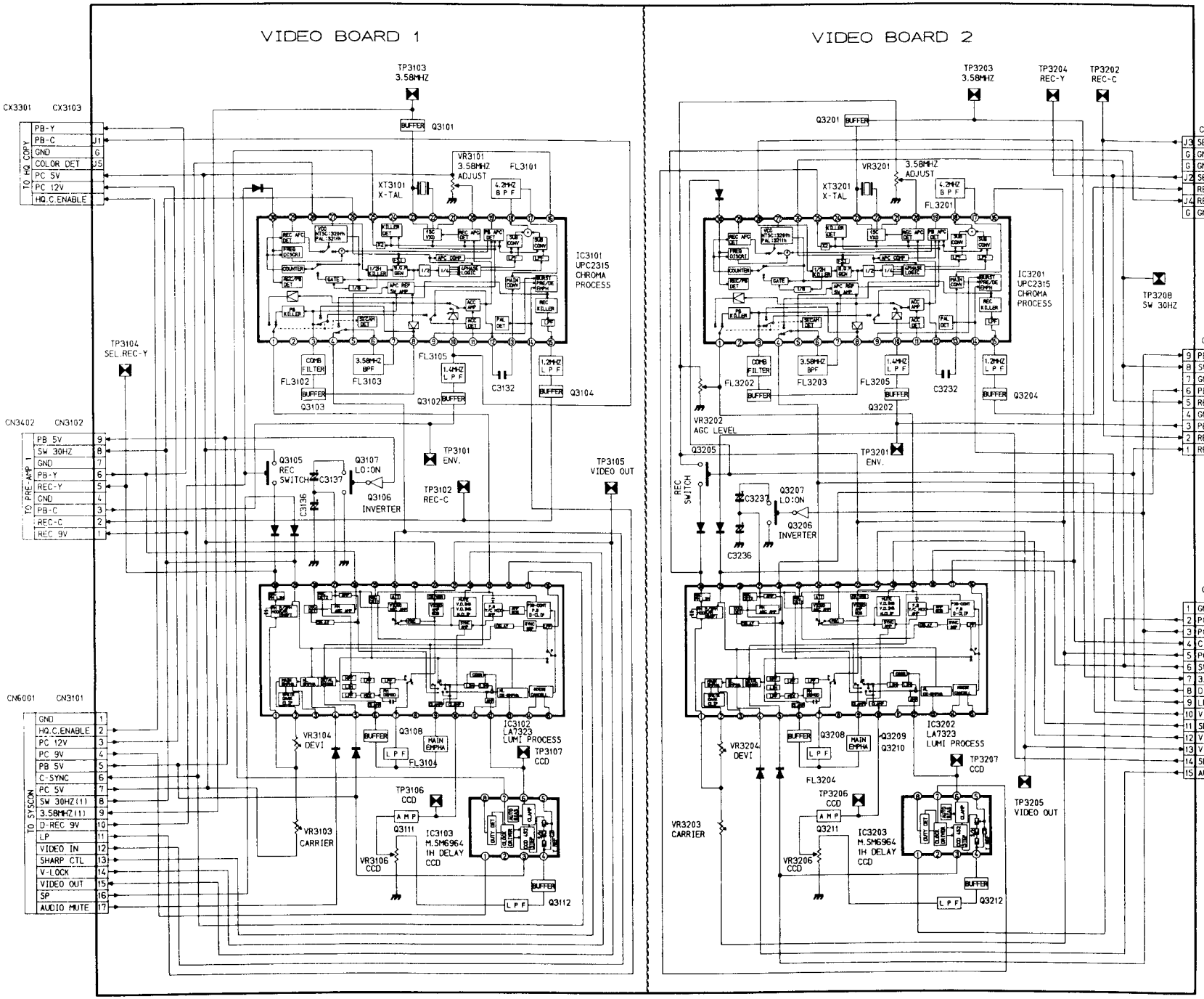


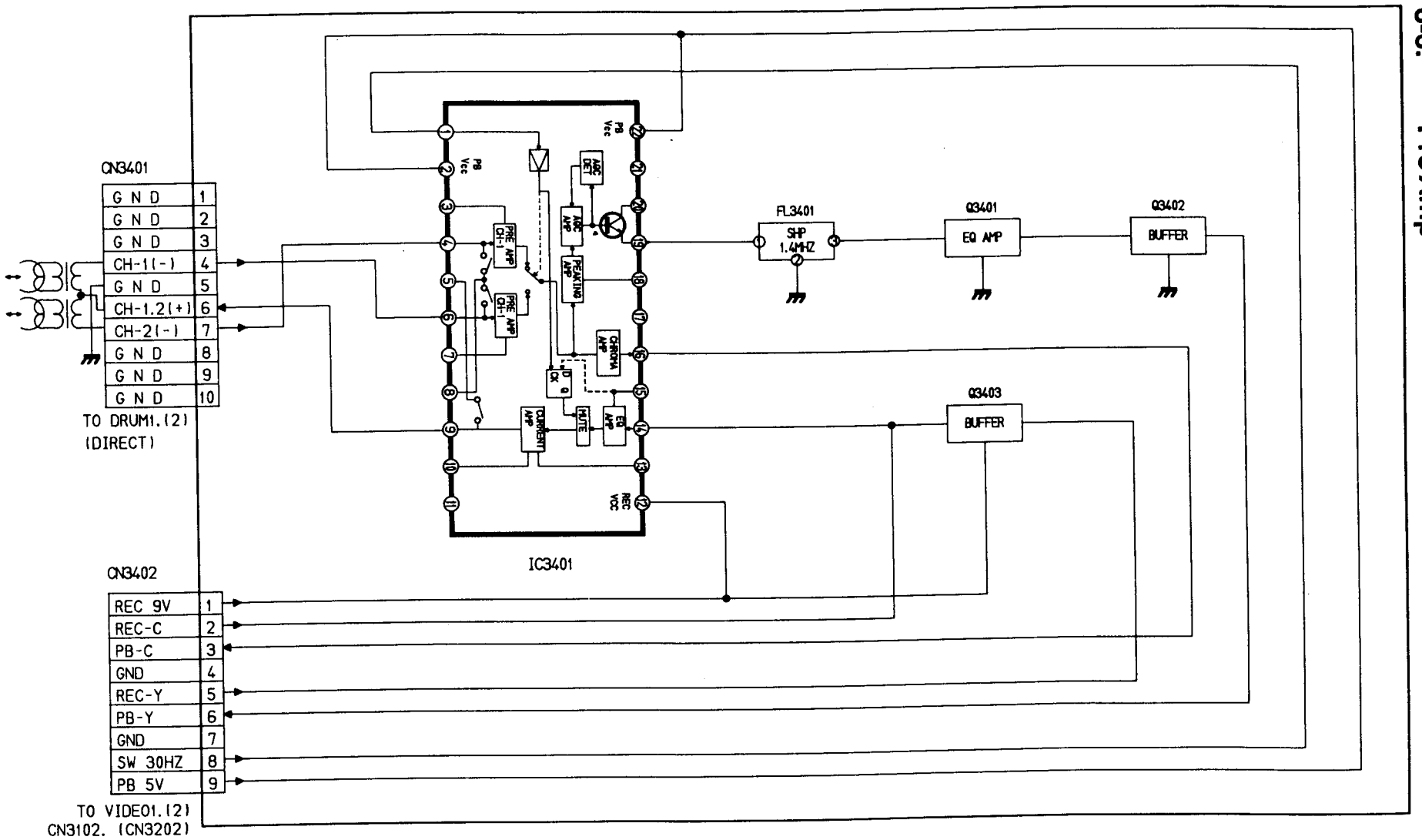

TO. CAP MOTOR
TO. SERVO1
TO. DRUM M.
TO. SERVO2
CN6013
CN5303
GND
REC 9V(D1)
REC 9V(D2)
TO MAIN B
VR2101
VR2201
IC2101
IC2201
Q2101
V-LOCK SW
Q2201
V-LOCK SW
R2202
R2203
Q6005
Q6002
Q6007
Q6006
Q6009
Q6010
Q6011
Q6012
Q6013
Q6014
Q6015
Q6016
Q6017
D6003
IC6004
IC6005
OSD MUTE
D1 CAP F/R
D1 MOTOR CLK
D1 MOTOR DATA
D1 VP ON
IOX SEL 2
D1 REC
D1 LM FW
D1 LM REV
D1 SP IN
D1 REC SAF
D1 END
D1 START
D1 CASS IN
D1 PRG C
D1 PRG B
D1 PRG A
VSS
VDD
MC E/E MUTE
D2 CAP F/R
D2 MOTOR CLK
D2 MOTOR DATA
D2 VP ON
IOX SEL 3
D2 REC
D2 LM FW
D2 LM REV
D2 SP IN
D2 REC SAF
D2 END
D2 START
D2 CASS IN
D2 PRG C
D2 PRG B
D2 PRG A
VSS
CN6001
CN3101
TO. VIDEO
GND
HSL C-ENABLE
PC 12V
PC 9V
PB 9V
C-SYNC
PC 5V
SW 30HZ(1)
3.58HZ(1)
D-REC 9V
LP
VIDEO IN
SHARP CTL
V-LOCK
VIDEO OUT
SP
AUD.MUTE
CN6002
CN3201
TO. VIDEO
GND
PC 9V
PB 9V
C-SYNC
PC 5V
PC 5V
SW 30HZ(2)
3.58HZ(2)
D-REC 9V
LP
B VIDEO IN
SHARP CTL
V-LOCK
B VIDEO OUT
SP
AUD.MUTE
CN6011
CX1101
TO. VIDEO SWITCHER
VSW DA
VSW CLK
VSW EN
PC 9V
A VIDEO IN
F OSD
VIDEO IN
A VIDEO OUT
B VIDEO IN
B VIDEO OUT
TO OSD
GND
CN6003
CN5001
TO. AUDIO
D. 1 LP
D. 1 AUD.MUTE
D. 2 AUD.MUTE
D. 2 LP
D. 1 D-PB
D. 2 D-PB
CS
P 20
P 21
P 22
P 23
PROGRAM
CN6004
CN5002
TO. AUDIO
PC 12V
GND
GND
TUNER MPX IN
TUNER OUT
TV ST LED
TV SAP LED
VCC(AL 5.8V)
IC6010
IC6048
IN
OUT
CN6007
CN6008
CN6009
CN6008
TO. D. J.
TO. DECK JOINT (D1)
TO. D. J.
TO. DECK JOINT (D2)

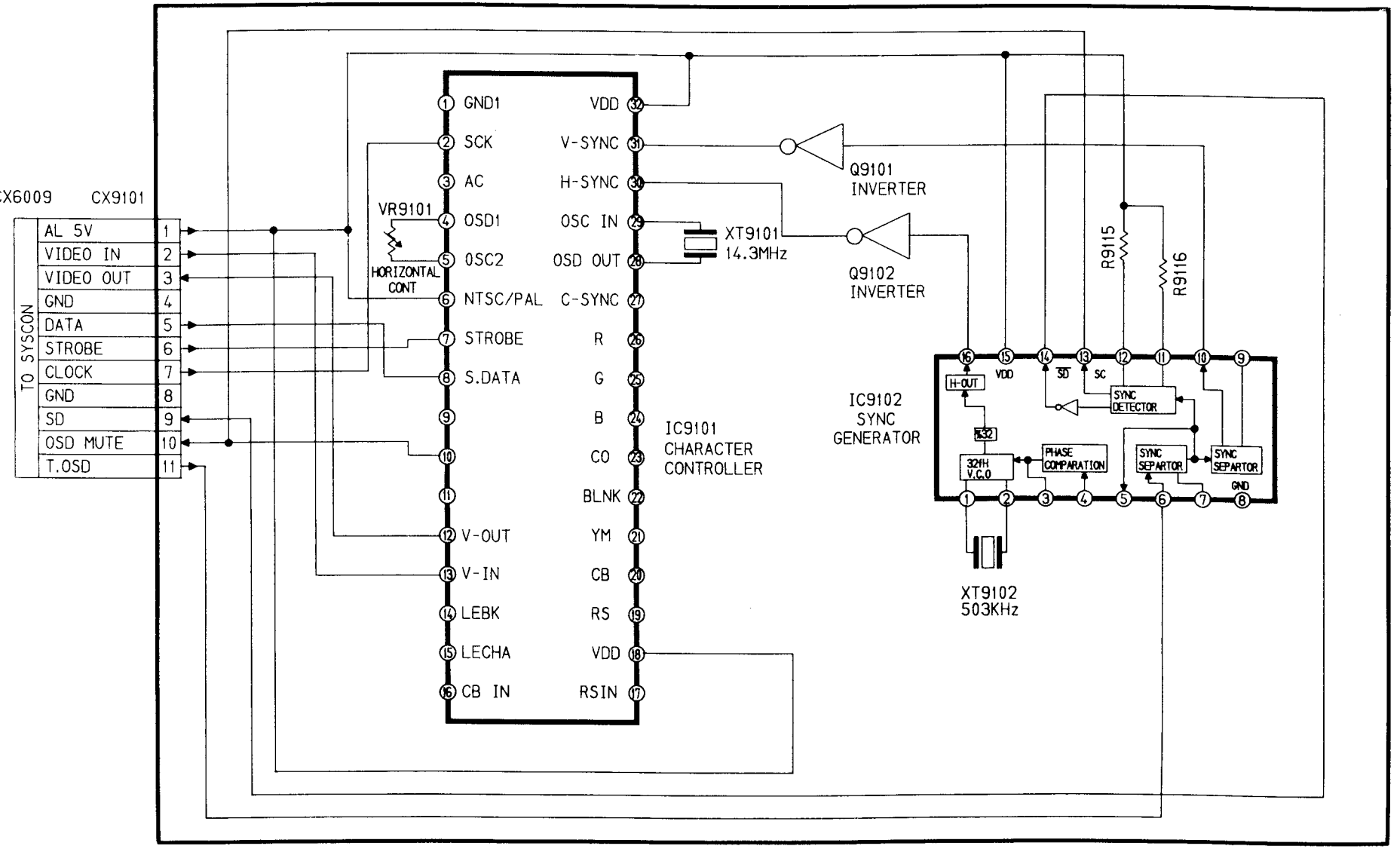
8-4. Main B


L-IN
R-IN
L-OUT
R-OUT
MTS MOUDULE
(SONY SBX 1535-54)
VCC 9V
SNP
L. OUT
R. OUT
MUTE
F-SNP
FORCED
MSO
MSI
SAPIND
ST. IND
CN0001
CONTROL HEAD
R-CH REC/PB HEAD
L-CH REC/PB HEAD
AUDIO ERASE HEAD
GND
CONT
REC R CH
PB R CH
REC L CH
PB L CH
AUDIO ERASE
AC HEAD C.B.A
TP4
TP3
TP2
TP1
R1
R2
Q5301
BUFFER
VR5102
VR5104
L5101
Q5101
BIAS OSC
TP5102
R-RECOED LEVEL
IC5103
IC5203
FL5101
FH BAIS TRAP
IC5101
SLP EQ
LP EQ
R-CH AUDIO PB GAIN
VR5101
CN5102
CN5103
CN002
FULL ERASE HEAD
IC5104
R-CH REC LEVEL
VR5105
Q5102
L:ON
D1 DOLBY SWITCH
Q5202
L:ON
D2 DOLBY SWITCH
TP5104
R-RECORD LEVEL
FL5102
fh Bias TRAP
VR5106
L-CH REC LEVEL
IC5301
IC5302
IC5102
CN201
CONT
GND
DECK 1
CN6013
CN5303
REC 9V(D1)
REC 9V(D2)
L-CH AUDIO PB GAIN
VR5103
9V DRIVE

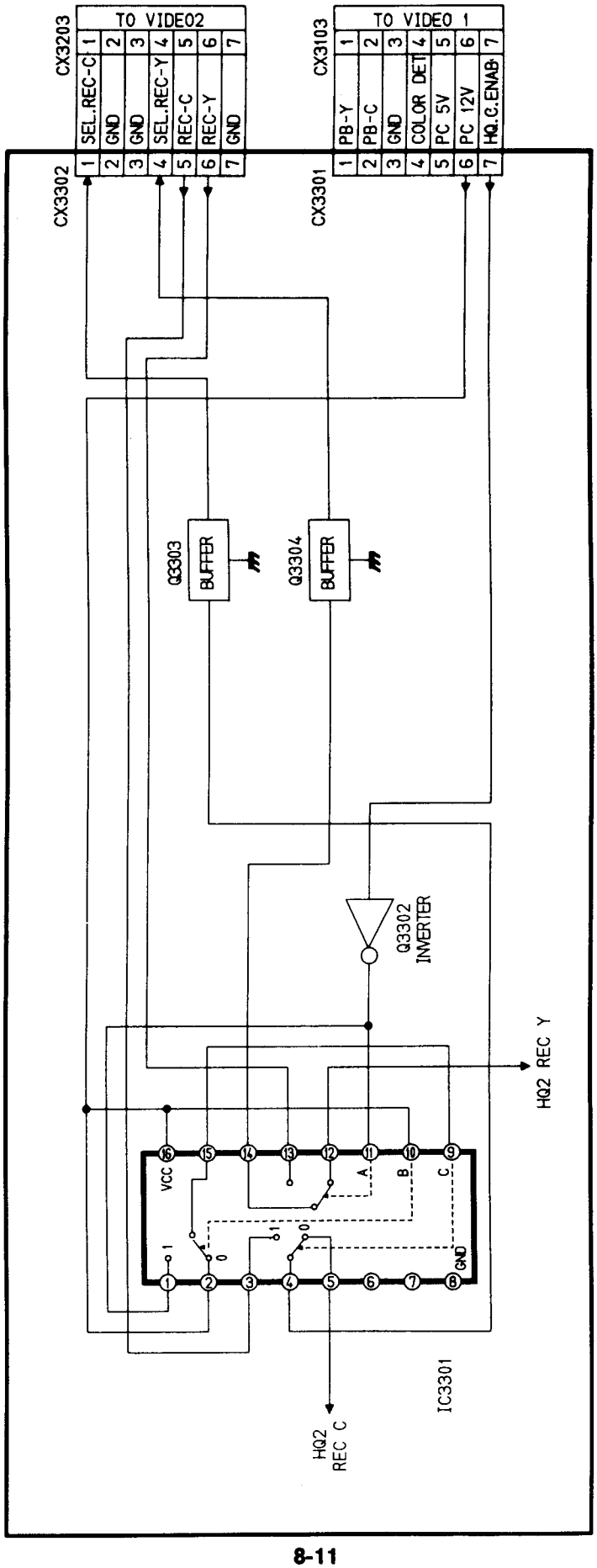

9 10 11 12 13
MSI
SAPIND
ST. IND
MPX IN
GND
TO MAIN A CN6004
CN5302
PC 12V
GND
GND
MPX IN
TUNER OUT
TV ST LED
TV SAP LED
VCC(ALS.8V)
TO MAIN A CN6003
CN5301
D1 LP
D1 A.MUTE
D2 A.MUTE
D2 LP
D1 D-PB
D2 D-PB
CS
P20
P21
P22
P23
PROG
CN0001
CONTROL HEAD
REC R CH
PB R CH
REC L CH
PB L CH
GND
AUDIO ERASE
AC HEAD C.B.A
R1
R-CH REC/PB HEAD
R2
L-CH REC/PB HEAD
AUDIO ERASE HEAD
TP1
TP2
TP3
TP4
D5302
VR5202
VR5204
L5201
BIAS OSC
IC5203
TP5202
L-RECORD LEVEL
FL5201
FH BAIS TRAP
SLP EQ
LP EQ
IC5201
VR5201
R-CH AUDIO PB GAIN
CN5202
PB R CH
GND
REC R CH
GND
AUDIO ERASE
GND
FULL ERASE
R-CH REC LEVEL
VR5205
IC5204
CN5203
PB L CH
GND
REC L CH
CN002
GND
FULL ERASE
FULL ERASE HEAD
VR5206
L-CH REC LEVEL
FL5202
fh Bias TRAP
TP5204
L-RECOED LEVEL
IC5202
CN201
CONT
GND
L-CH AUDIO PB GAIN
VR5203
DECK 2


VIDEO BOARD 1
VIDEO BOARD 2
CX3301 CX3103
TO HQ COPY
PB-Y
PB-C
GND
COLOR DET
PC 5V
PC 12V
HQ.C.ENABLE
TP3103 3.58MHZ
BUFFER Q3101
VR3101 3.58MHZ ADJUST
FL3101
XT3101 X-TAL
4.2MHZ B P F
IC3101 UPC2315 CHROMA PROCESS
TP3104 SEL.REC-Y
COMB FILTER
FL3102
3.58MHZ BPF
FL3103
1.4MHZ L P F
FL3105
1.2MHZ L P F
C3132
Q3103
Q3102
Q3104
CN3402 CN3102
TO PRE-AMP 1
PB 5V
SW 30HZ
GND
PB-Y
REC-Y
GND
PB-C
REC-C
REC 9V
Q3105 REC SWITCH
C3137
Q3107 LO:ON
Q3106 INVERTER
C3136
TP3101 ENV.
TP3102 REC-C
TP3105 VIDEO OUT
CN6001 CN3101
TO SYSCON
GND
HQ.C.ENABLE
PC 12V
PC 9V
PB 5V
C-SYNC
PC 5V
SW 30HZ(1)
3.58MHZ(1)
D-REC 9V
LP
VIDEO IN
SHARP CTL
V-LOCK
VIDEO OUT
SP
AUDIO MUTE
VR3104 DEVI
Q3108
BUFFER
MAIN EMPHA
L P F
FL3104
IC3102 LA7323 LUMI PROCESS
TP3107 CCD
TP3106 CCD
A M P
Q3111
VR3103 CARRIER
VR3106 CCD
IC3103 M.SM6964 1H DELAY CCD
Q3112
TP3203 3.58MHZ
TP3204 REC-Y
TP3202 REC-C
Q3201
VR3201 3.58MHZ ADJUST
XT3201 X-TAL
FL3201
IC3201 UPC2315 CHROMA PROCESS
CX3203 CX3302
SEL.REC-C
GND
GND
SEL.REC-Y
REC-C
REC-Y
GND
TO HQ COPY
TP3208 SW 30HZ
CN3202 CN3402
TO PRE-AMP 2
PB 5V
SW 30HZ
GND
PB-FM
REC-Y
GND
PB-C
REC-C
REC 9V
VR3202 AGC LEVEL
Q3205
TP3201 ENV.
REC SWITCH
C3237
Q3207 LO:ON
Q3206 INVERTER
C3236
CN3201 CX6002
TO SYSCON
GND
PC 9V
PC 5V
C-SYNC
PC 5V
SW 30HZ(2)
3.58MHZ(2)
D-REC 9V
LP
VIDEO IN
SHARP CTL
V-LOCK
VIDEO OUT
SP
AUD.MUTE
VR3204 DEVI
Q3208
Q3209
Q3210
IC3202 LA7323 LUMI PROCESS
TP3207 CCD
FL3204
TP3206 CCD
Q3211
VR3203 CARRIER
VR3206 CCD
IC3203 M.SM6964 1H DELAY CCD
Q3212
TP3205 VIDEO OUT

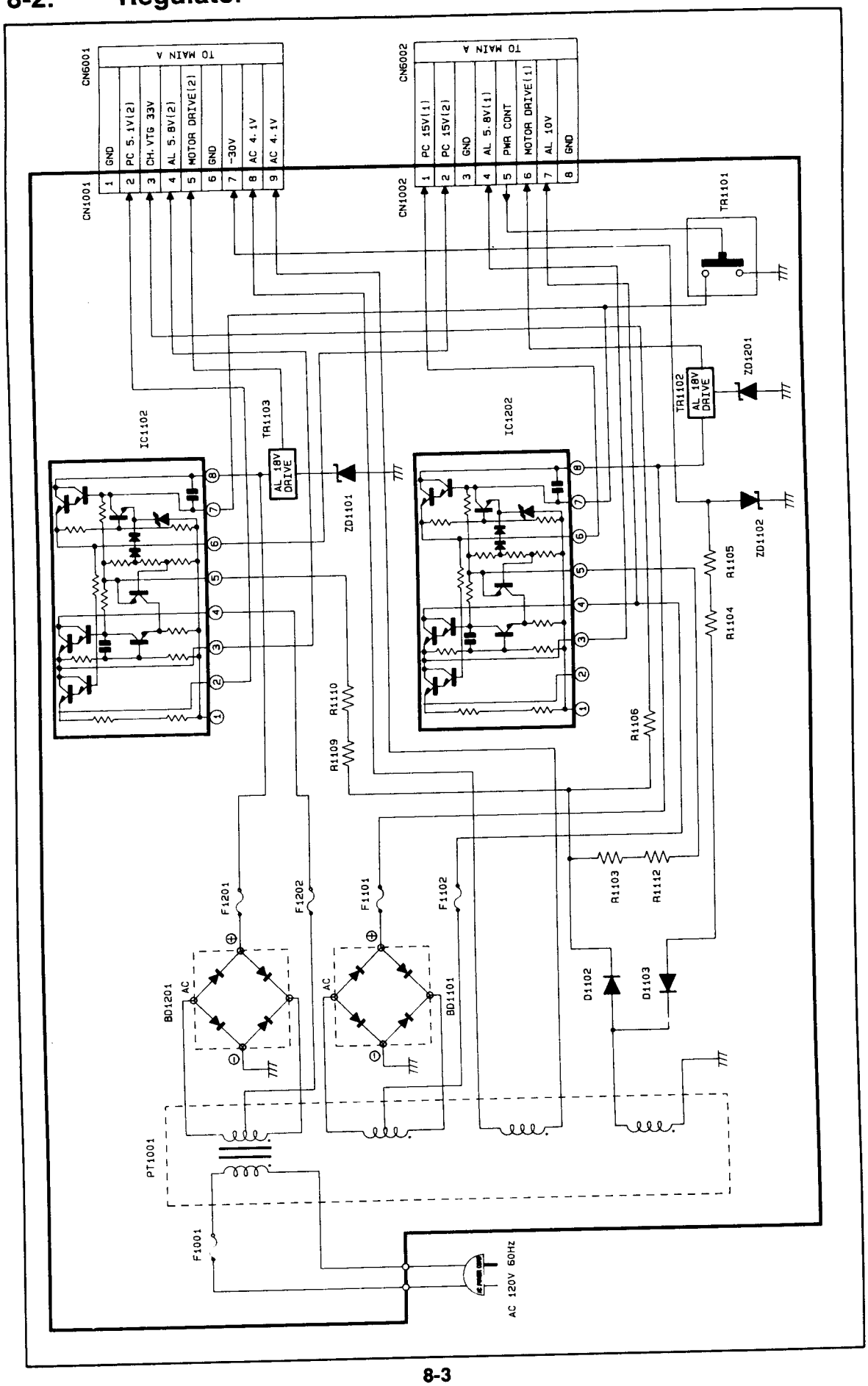

CN3401
G N D 1
G N D 2
G N D 3
CH-1(-) 4
G N D 5
CH-1.2(+) 6
CH-2(-) 7
G N D 8
G N D 9
G N D 10
TO DRUM1.(2)
(DIRECT)
IC3401
FL3401
SHP
1.4MHZ
Q3401
EQ AMP
Q3402
BUFFER
Q3403
BUFFER
CN3402
REC 9V 1
REC-C 2
PB-C 3
GND 4
REC-Y 5
PB-Y 6
GND 7
SW 30HZ 8
PB 5V 9
TO VIDEO1.(2)
CN3102. (CN3202)

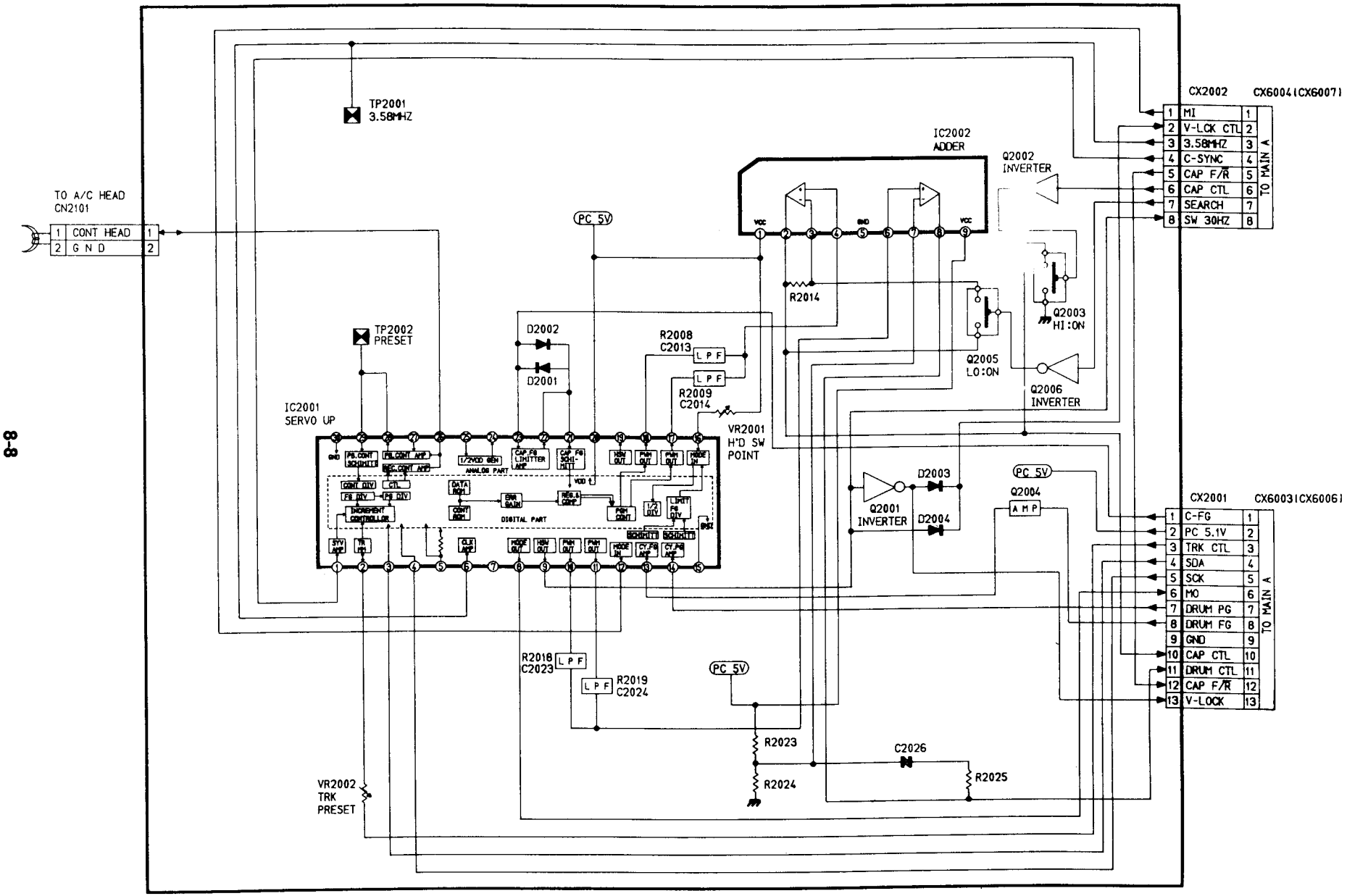

CX6009
CX9101
TO SYSCON
AL 5V 1
VIDEO IN 2
VIDEO OUT 3
GND 4
DATA 5
STROBE 6
CLOCK 7
GND 8
SD 9
OSD MUTE 10
T.OSD 11
VR9101
HORIZONTAL CONT
GND1 1
SCK 2
AC 3
OSD1 4
OSC2 5
NTSC/PAL 6
STROBE 7
S.DATA 8
V-OUT 12
V-IN 13
LEBK 14
LECHA 15
CB IN 16
VDD 32
V-SYNC 31
H-SYNC 30
OSC IN 29
OSD OUT 28
C-SYNC 27
R 26
G 25
B 24
CO 23
BLNK 22
YM 21
CB 20
RS 19
VDD 18
RSIN 17
IC9101
CHARACTER
CONTROLLER
XT9101
14.3MHz
Q9101
INVERTER
Q9102
INVERTER
R9115
R9116
IC9102
SYNC
GENERATOR
H-OUT
VDD
SD
SC
SYNC DETECTOR
32
32fH V.C.O
PHASE COMPARATION
SYNC SEPARTOR
SYNC SEPARTOR
GND
XT9102
503KHz

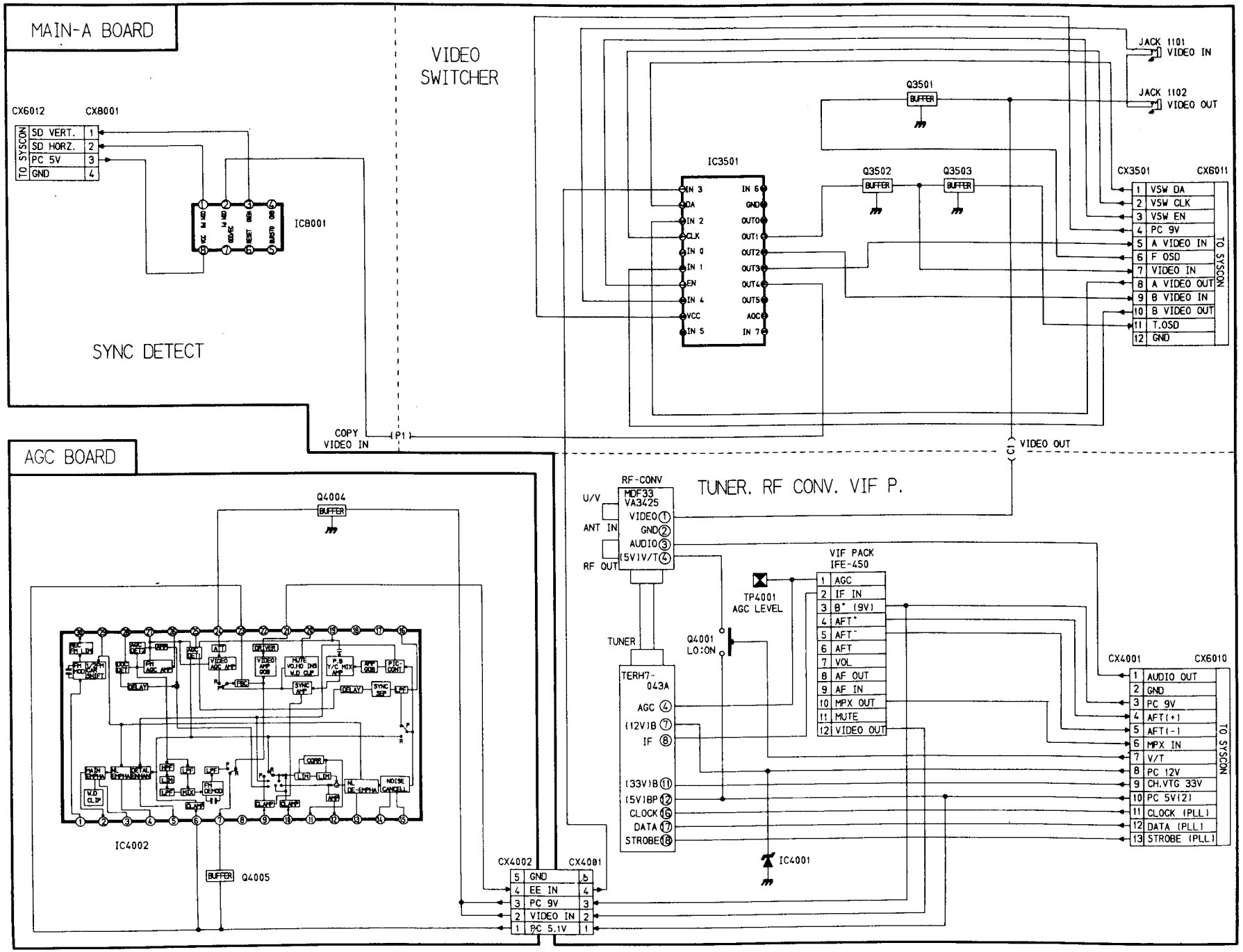
8-10. HQ Copy


CX3203
TO VIDEO2
1 SEL.REC-C
2 GND
3 GND
4 SEL.REC-Y
5 REC-C
6 REC-Y
7 GND
CX3302
CX3103
TO VIDEO 1
1 PB-Y
2 PB-C
3 GND
4 COLOR DET
5 PC 5V
6 PC 12V
7 HQ.C.ENAB
CX3301
Q3303
BUFFER
Q3304
BUFFER
Q3302
INVERTER
HQ2 REC Y
VCC
A
B
C
GND
IC3301
HQ2
REC C

8-2. Regulator




TP2001
3.58MHZ
TO A/C HEAD
CN2101
1 CONT HEAD 1
2 G N D 2
PC 5V
IC2002
ADDER
Q2002
INVERTER
R2014
Q2003
HI:ON
Q2005
LO:ON
Q2006
INVERTER
TP2002
PRESET
D2002
D2001
R2008
C2013
L P F
R2009
C2014
VR2001
H'D SW
POINT
IC2001
SERVO UP
Q2001
INVERTER
D2003
D2004
Q2004
A M P
R2018
C2023
R2019
C2024
R2023
R2024
C2026
R2025
VR2002
TRK
PRESET
CX2002 CX6004(CX6007)
1 MI 1
2 V-LCK CTL 2
3 3.58MHZ 3
4 C-SYNC 4
5 CAP F/R 5
6 CAP CTL 6
7 SEARCH 7
8 SW 30HZ 8
TO MAIN A
CX2001 CX6003(CX6006)
1 C-FG 1
2 PC 5.1V 2
3 TRK CTL 3
4 SDA 4
5 SCK 5
6 MO 6
7 DRUM PG 7
8 DRUM FG 8
9 GND 9
10 CAP CTL 10
11 DRUM CTL 11
12 CAP F/R 12
13 V-LOCK 13
TO MAIN A

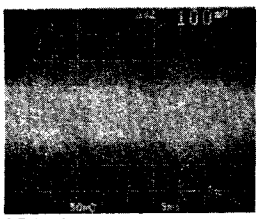

MAIN-A BOARD
VIDEO SWITCHER
CX6012
CX8001
TO SYSCON
SD VERT. 1
SD HORZ. 2
PC 5V 3
GND 4
IC8001
SYNC DETECT
IC3501
IN 3
DA
IN 2
CLK
IN 0
IN 1
EN
IN 4
VCC
IN 5
IN 6
GND
OUT0
OUT1
OUT2
OUT3
OUT4
OUT5
AOC
IN 7
Q3501
Q3502
Q3503
BUFFER
JACK 1101
VIDEO IN
JACK 1102
VIDEO OUT
CX3501
CX6011
1 VSW DA
2 VSW CLK
3 VSW EN
4 PC 9V
5 A VIDEO IN
6 F OSD
7 VIDEO IN
8 A VIDEO OUT
9 B VIDEO IN
10 B VIDEO OUT
11 T.OSD
12 GND
TO SYSCON
COPY VIDEO IN
(P1)
(C1)
VIDEO OUT
AGC BOARD
Q4004
BUFFER
IC4002
Q4005
CX4002
CX4001
5 GND
4 EE IN
3 PC 9V
2 VIDEO IN
1 PC 5.1V
TUNER. RF CONV. VIF P.
RF-CONV
MDF33
VA3425
U/V
ANT IN
RF OUT
VIDEO (1)
GND (2)
AUDIO (3)
(5V)V/T (4)
TUNER
TERH7-043A
AGC (4)
(12V)B (7)
IF (8)
(33V)B (11)
(5V)BP (12)
CLOCK (16)
DATA (17)
STROBE (18)
TP4001
AGC LEVEL
Q4001
LO:ON
IC4001
VIF PACK
IFE-450
1 AGC
2 IF IN
3 B+ (9V)
4 AFT+
5 AFT-
6 AFT
7 VOL
8 AF OUT
9 AF IN
10 MPX OUT
11 MUTE
12 VIDEO OUT
CX4001
CX6010
1 AUDIO OUT
2 GND
3 PC 9V
4 AFT(+)
5 AFT(-)
6 MPX IN
7 V/T
8 PC 12V
9 CH.VTG 33V
10 PC 5V(2)
11 CLOCK (PLL)
12 DATA (PLL)
13 STROBE (PLL)
TO SYSCON

OPY

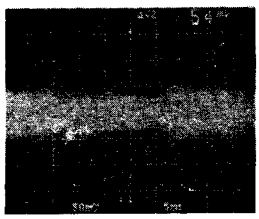
HQ COPY

MODE / PIN NO	IC3301		
	STOP	HQ1	HQ2
PIN 1	12.1	12.1	0.1
PIN 2	12.1	12.1	12.1
PIN 3	5.9	5.9	0
PIN 4	5.9	5.9	5.9
PIN 5	0	0	5.9
PIN 6	-	-	-
PIN 7	-	-	-
PIN 8	-	-	-
PIN 9	12.1	12.1	0.1
PIN 10	12.1	12.1	12.1
PIN 11	12.1	12.1	0.1
PIN 12	0	0	5.9
PIN 13	5.9	5.9	0.4
PIN 14	5.9	5.9	5.9
PIN 15	12.1	12.1	0.1
PIN 16	12.1	12.1	12.1

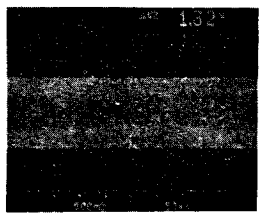
MODE / TR NO	STOP			HQ1			HQ2		
	E	C	B	E	C	B	E	C	B
Q3302	0	12.1	0	0	12.1	0	0	0.1	4.1
Q3303	5.2	12.1	5.9	5.2	12.1	5.9	5.2	12.1	5.9
Q3304	5.3	12.1	5.9	5.3	12.1	5.9	5.3	12.1	5.9



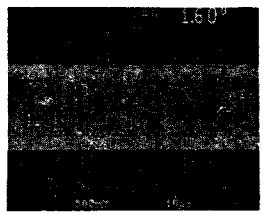
IC3301-3
50mV/5msec/cm
PB



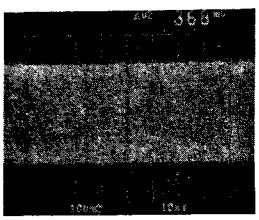
IC3301-5
50mV/5msec/cm
PB



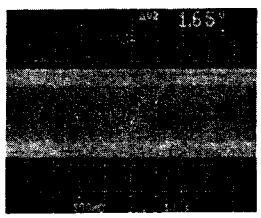
IC3301-12
500mV/50usec/cm
PB



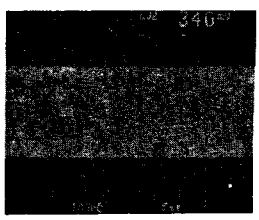
IC3301-13
500mV/10usec/cm
PB



IC3302-13
100mV/10usec/cm
PB

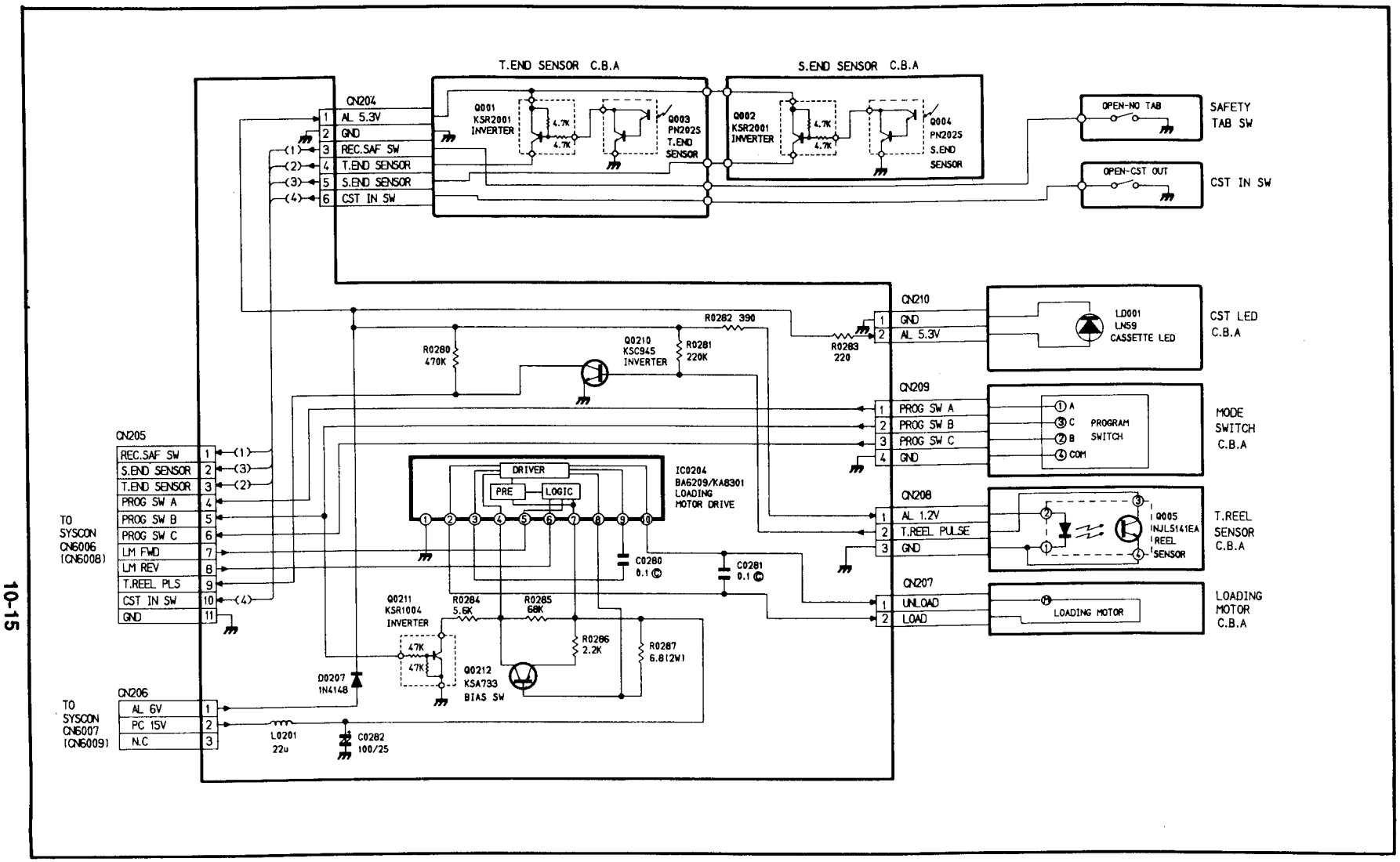


IC3303-8
500mV/10usec/cm
PB



IC3303-14
100mV/5usec/cm
PB

10-11. Deck Joint



SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

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

MODE / TR NO	E
Q0210	0
Q0211	0
Q0212	15.2

MODE / PIN NO	STOP
PIN 1	0
PIN 2	0.5
PIN 3	0.5
PIN 4	1.0
PIN 5	3.4
PIN 6	3.4
PIN 7	15.2
PIN 8	15.2
PIN 9	0.9
PIN 10	0.5

DECK JOINT

4. ELECTRICAL ADJUSTMENTS

4-1. PREPARATION

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

4-1-1. Required test equipment

1. Color television or monitor
2. Oscilloscope: wide-band, dual-trace, triggered delayed sweep.
3. Frequency counter.
4. Audio oscillator.
5. Audio voltmeter.
6. Digital voltmeter.
7. Signal generator : RF/IF sweep/marker.
8. Signal generator : NTSC color bar. 100% White.
9. Recording tape.
10. Alignment tapes : SR2-1, SR1-1,DROP OUT TAPE.

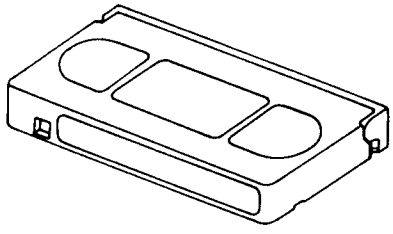


Fig. 1 Tape

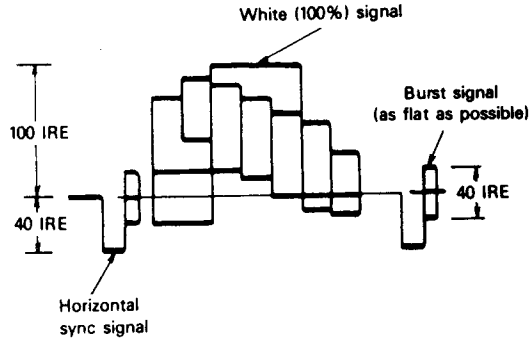


Fig. 2 Color bar signal of alignment tape

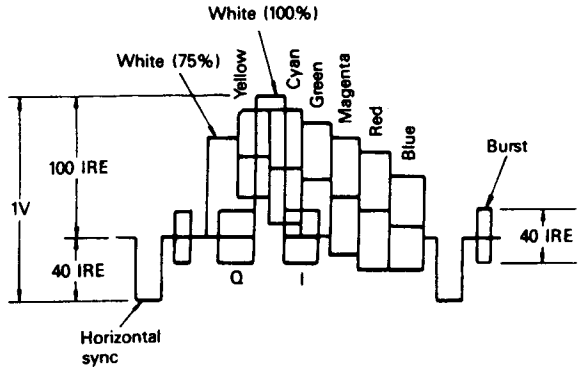


Fig. 3 Color bar signal waveform

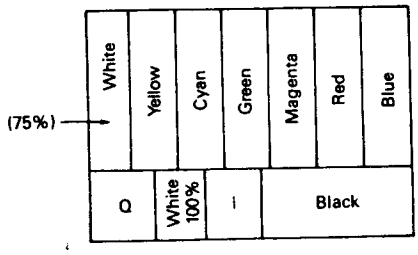


Fig. 4 Color bar pattern

4-1-2. Alignment tape contents

	Video signal	Audio signal	Applications
SR2-1 (SP)	Color bars	1 KHz	* Video signal playback circuit checks and adjustments. * Audio signal playback circuit checks and adjustments
SR1-1 (SP)	Monoscopes	7KHz	* Interchangeability checks and adjustments * SERVO circuit checks and adjustments * Audio head Azimuth adjustments

4-1-3. Check and adjustment steps

The check and adjustment steps are provided in the form of charts. For clarity, the nomenclature used in the charts is outlined below.

No.	Checks and adjustments are numbered in the recommended sequence to be performed.
Item	Name assigned to the particular check and adjustment steps.
Check Point	Location to which measuring instrument (oscilloscope unless otherwise noted) is to be connected.
Adjustment Parts	Variable component (resistor capacitor, etc.) to be adjusted in this step.
Signal	Input signal required to perform adjustment.
Mode	Equipment operating mode at time of check of adjustment.
100% White	100% White signal as video input.
Color bar	Color bar signal as video input .
1KHz	Supply an 1KHz sinewave as audio input signal.
STOP	Power on and machine in stop mode.
PB	Playback mode.
SR2-1	Playback SR2-1 alignment tape.
SR1-1	Playback SR1-1 alignment tape.
STILL	Playback then pause.
Description and Waveform	This column provides an explanation of the step, notes, adjustment values and waveform diagrams.
M.A	Main A PCB (SYSCON, SERVO, TUNER)
M.B	Main B PCB (AUDIO)
M.C	Main C PCB (VIDEO)
P.A	PRE-AMP PCB

4-2. CIRCUIT BOARD LOCATION AND IDENTIFICATION

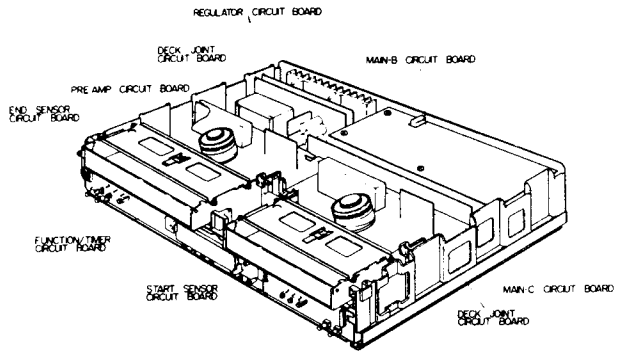


Fig. 5 Top View

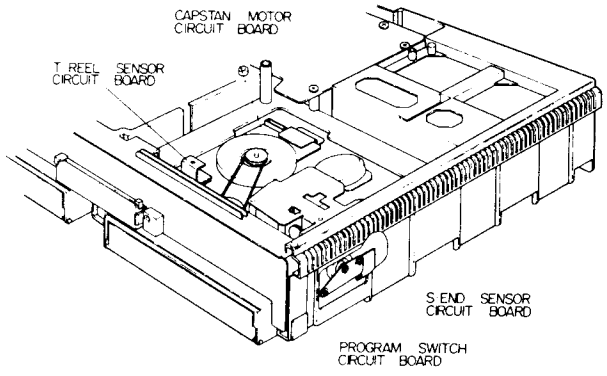


Fig. 6 Bottom View

4-3. SERVO ADJUSTMENT

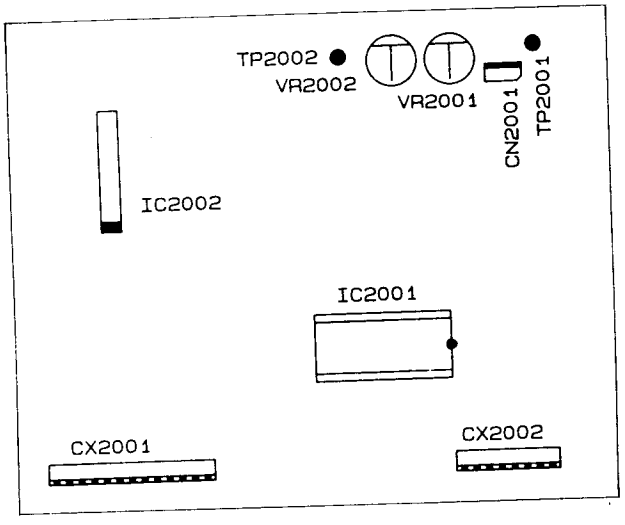


Fig. 7

4-3-1. Switching Point Adjustment

Equipment : Oscilloscope
Test Point : TP3108 (SW 30Hz) TP3208 Main C
TP9101 (Video Output Signal) Main A
Adjustment : VR2001 (CH1,CH2) : Servo A

1) Load alignment tape (SR1-1) to the deck 1 and playback the signal.
2) Connect channel-1 scope probe(1V/div.) to TP3108(for servo A), TP3208 (for servo B) and channel-2 scope probe(Vert. 1V/div. Horiz. 50us/div.) to TP9101.
3) Set the scope to (+) slope and adjust the VR2001 so that the rising edge of the SW30Hz pulse is placed 6.5H + /- 0.5H (horizontal) lines before the start of vertical sync pulse of the video signal.
4) Set the scope to (-) slope and verify that the head switching point is 6.5H + /-0.5H before the start of the vertical sync pulse of the video signal.
5) Repeat the above steps for adjusting DECK 2.

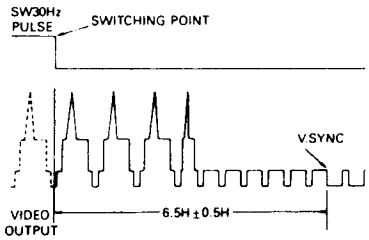


Fig.8

4-3-2. Tracking Preset Adjustment

Equipment : Oscilloscope
Test Point : TP3108 (SW30Hz), TP2002(Servo A)
DECK 1
TP3208, TP2002 (servo B) DECK 2
Adjustment : VR2002

This adjustment optimizes tracking during playback of a tape recorded on this instrument, so that it occurs at the detented position of the tracking control.

1) Load alignment tape (SR1-1) to the deck 1 and playback the lion pattern signal .
2) Connect channel-1 scope probe (Vert. 2V/div. : : Horiz. 0.5ms/div) to TP3108 and channel-2 scope probe(0.5/div.) to TP2002 on servo A.
3) Set the tracking control (VR0703) on the front panel to the detented position and adjust the tracking preset control (VR2002 on servo A to align the pulse width T = 0.5ms + /- 0.5ms).
4) Set the tracking control (VR0702) to the detented position and insert alignment tape (SR1-1) to the deck 2.

5) Repeat steps 2 and 3 connecting channel 1 scope probe to TP3208 and channel 2 scope probe to TP2002 on servo B.

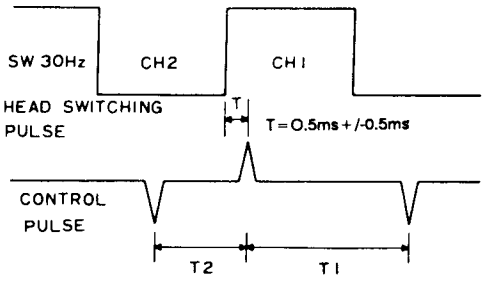


Fig. 9

4-3-3. X-Point Adjustment

Equipment : Oscilloscope
Test Point : TP3108 (SW 30HZ), TP3101 (Deck 1)
TP3208 , TP3201 (Deck 2)
Adjustment : Nut Adjustment.

1) Load alignment tape to the deck 1 and playback the color bar signal .
2) Connect channel-1 scope probe (Vert. 2V/div . : Horiz. 5ms/div.) to TP3108 and channel-2 scope probe (Vert. 0.1V/div. : Horiz. 5ms/div.) to TP3101.
3) Compare ENV Amplitude full counter-clockwise (CCW) state of the tracking control (VR0703) with that at maximum state.
4) When the level of two signal is different, adjust NUT on the base of A/C head so that two level are the same.
5) Repeat steps 1 thru 4 for adjusting DECK 2. Connect channel 1 scope probe to TP3208, channel 2 probe to TP3201, and adjust tracking control VR0702.

4-3-4. Vertical Lock Adjustment

Equipment : TV Monitor
Adjustment : VR2101 (EP mode) Rear Panel
VR2201 (Deck 2)

This adjustment is to avoid vertically unstable picture in pause or search mode.

1) Apply an NTSC color bar signal to the video input jack on the rear panel.
2) Load a blank tape to the deck 1 after self-recording make it playback and then still mode. Adjust VR2101 so that the center of picture is most stable.
3) Repeat steps 1 and 2 for DECK 2 using VR2201.

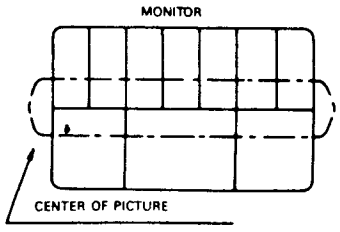


Fig. 10

4-4. OSD ADJUSTMENT

4-4-1. Horizontal Calibration Adjustment.

Equipment : Monitor
Adjustment : VR9101 (Horizontal Calibration Control)
OSD

1) Connect the Video Output Jack on the rear panel to a monitor.
2) Push the menu button on the remote hand unit so that the program menu displays on the monitor.
3) Adjust the Horiziontal calibration control (VR9101) so that the program menu displays in appropriate position on the monitor.

4-5.AUDIO ADJUSTMENT

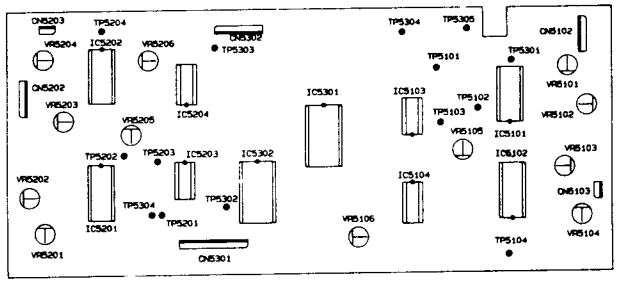


Fig.11

4-5-1. Audio Record Level Adjustment

Equipment : AC Voltmeter, Audio Signal Generator
Test Point : TP1,TP2,TP3,TP4 (A/C Head C.B.A)
Adjustment:VR5105 (R-CH),VR5106 (L-CH) Deck 1
VR5205 (R-CH), VR5206 (L-CH) Deck 2

This adjustment optimizes the record level of the audio signal.

1) Set the DOLBY NR to off position and place the record source of Deck 1 and Deck 2 in the AV position.
2) Apply an 1KHz sinewave with an amplitude of 308mVrms to the left channel audio input jack and connect an AC voltmeter between TP 1 and TP 2 located on the A/C head C.B.A of Deck 1 or Deck 2. TP1 must be connected to the ground lead of the AC voltmeter.
3) Adjust the audio bias to minimum using VR5104 (DECK 2 : VR5204).
4) Make an SP recording from a blank tape and adjust the record level control VR5106 for 260uV.
5) Repeat steps 1 thru 4 for DECK 1 (and DECK 2) right channel. Apply the 1KHz sinewave signal to the right channel audio input jack and connect the AC voltmeter to TP3 and TP4 on the A/C head. Adjust the audio bias control VR5102 (VR5202 : DECK 2) and audio record level control VR5105 (VR5205 : DECK 2) respectively.

4-5-2. Audio Bias Level Adjustment

Equipment : AC Voltmeter
Test Point : TP1,TP2,TP3, TP4, (A/C head C.B.A)
Adjustment : VR5102 (R-CH),VR5104 (L-CH) Deck 1
VR5202 (R-CH), VR5204 (L-CH) Deck 2

This adjustment optimizes the audio record bias level. When the audio record bias is too low, high frequencies are increased resulting in distortion.
When the level is too high, high frequencies are attenuated.

1) Insert blank tape to the deck 1 and place in the SP record mode with no signal.
2) Check that the audio record level measures is 260uV as discussed in section 4-5-1.
3) Connect AC voltmeter to TP1 and TP2.
4) Adjust the left channel bias level control (VR5104) for 3.2mVrms.
5) Connect an AC voltmeter between TP3 and TP4.
6) Adjust the right channel bias control (VR5104) for 3.2mVrms.
7) Repeat steps 1 thru 6 for DECK 2 using bias level controls VR5204 and VR5202 for left and right channels respectively.

4-5-3. Audio Playback Level Adjustment

Equipment : AC Voltmeter
Test Point : TP5304,TP5305
Adjustment : VR5101 (R-CH), VR5103 (L-CH), : (R/L Audio Playback Level) on Main B

This adjustment sets the output level of the audio signal to the specified level.

1) Set the Dolby NR to the OFF position using Menu key on the remote controller.
2) Connect AC voltmeter to the left channel audio output jack (TP5304).
3) Playback the 7KHz alignment tape (SR1-1).
4) Adjust the left channel playback level control (VR5103) for 360mVrms +/- 30mVrms.
5) Connect AC voltmeter to the right channel audio output jack (TP5305).
6) Adjust the right channel playback level control VR5101 for 360mVrms +/-30mVrms.
7) Repeat steps 1 thru 6 for DECK 2 using VR5201 and VR5203 for left and right channels respectively.

4-6. LUMA/CHROMA ADJUSTMENT

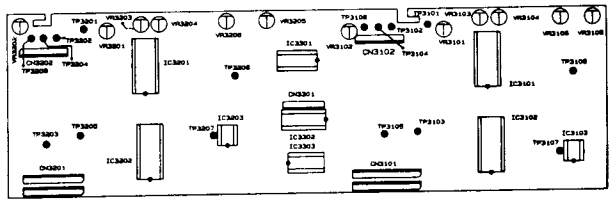


Fig.12

4-6-1. E-E Level Adjustment

Equipment : Oscilloscope, Color Bar Signal Generator
Test Point : TP9101 (Video Output Level) Main A
Adjustment : VR3102 (AGC Level Control) Deck 1 Main C

VR3202 : Deck 2

1) Apply 1Vp-p color bar signal to the video input jack on the rear panel.
2) Push the source buttons of Deck 1 and Deck 2 on the front panel to receive AV signal.
3) Connect channel-1 scope probe (1V/div.) to TP9101.
4) Push the VIEW button on the front panel to receive Deck 1 signal.
5) Adjust the AGC level control (VR3102) for 2Vp-p +/-0.1Vp-p from sync tip to white peak level. (Deck 1)
6) Push the view button on the front panel so that the VIEW mode is on the Deck 2.
7) Adjust the AGC level control (VR3202) for 2Vp-p +/- 0.1Vp-p from sync tip to white peak level.

4-6-2. PB Luminance Level Adjustment

Equipment : Oscilloscope
Test Point : TP 9101 (Video Output Level) Main
Adjustment : VR3105 (PB Luma Level Control) Deck 1
Main C
VR3205 : Deck 2

This adjustment sets the output level of the video signal to the specified level.

1) Load alignment tape (SR2-1) to the Deck 1 and playback the color bar signal.
2) Connect channel-1 scope probe (1V/div.) to TP9101.
3) Adjust the PB luminance level control (VR3105) for 2V p-p +/- 0.1 Vp-p.
4) In the same way , adjust Deck 2 using VR3205.

4-6-3. CCD IN (CLAMP) Adjustment

Equipment : TV Monitor
Adjustment : VR3106 (DOC Control) Main C, Deck 1
VR3206, Deck 2

This adjustment is for the drop-out compensation.

1) Load drop-out adjustment tape to the Deck 1 and make it playback.
2) Adjust the DOC control (VR3106) to eliminate the white or black line on the monitor.
3) Load drop-out adjustment tape to the Deck 2, and adjust the DOC control (VR3206).

4-6-4. Sub Carrier Frequency (3.58MHz) Adjustment

Equipment : Frequency Counter
Test Point : TP2001 (SERVO A) Deck 1
TP 2001 (SERVO B) Deck 2
Adjustment : VR3101(Sub Carrier Frequency) Deck 1
VR3201, Deck 2 Main C
This adjustment sets the 3.58 MHz Vxo oscilloscope frequency accurately. When this adjustment is incomplete, 1 H delay of the video signal is disabled and the S/N ratio deteriorates.

1)Load alignment tape (SR2-1) in the Deck 1 and play it back.
2) Connect frequency counter to TP2001 of servo A.
3) Adjust the sub carrier frequency control (VR3101) so that the frequency is 3.579545 MHz +/- 30HZ.
4) Load alignment tape (SR2-1) in the Deck 2 and play it back.
5) Connect frequency counter to TP2001 on servo B. Adjust the sub carrier frequency control (VR3201).

4-6-5. FM Carrier and Deviation Adjustment

Equipment : Oscilloscope, Frequency Counter,
Signal Generator
Test Point : TP3104 (REC-Y) Main C
Adjustment : VR3103 (Carrier)
VR3104 (Deviation)

1) Turn the VCR power on.
2) Select AV-In.
3) Do not connect the video input jack.
4) Iasert a blank tape and make an SP recording.
5) Connect the frequency counter to TP3104.
6) Adjust the FM carrier control (VR3103) so that the FM frequency is 3.43MHz +/- 20KHz.
7) Apply the 100% white field signal to the video input jack.
8) Adjust the deviation control (VR3104) so that the frequency is 4.14MHz +/- 20KHz.
9) Repeat above steps for adjusting DECK 2.

4-7. TUNER ADJUSTMENT

4-7-1. RF AGC Adjustment

Equipment : Pattern Generator, TV Monitor, TV CH
Signal Generator
Oscilloscope or DC Voltmeter
Test Point : TP4001
Adjustment : VR4001 (RF AGC Control) Main

This adjustment determines the point where the AGC is activated.

1) Apply the color bar signal to the VHF IN Terminal on the rear panel. Using the Attenuator, adjust the input signal level for 80dBu measured at the VHF IN Terminal and tune the channel at 10.
2) Adjust the RF AGC Control (VR4001) so that the voltage is 4.8 V +/- 0.1.
3) Check the condition of screen if there is snow noise.

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
C3506	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3507	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J	
C3508	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3509	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3510	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3511	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J	
C3512	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3513	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3514	A1104-0480	C-ELEC;CE 04 F 16V T 471-M STX/KME -40	
C3515	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3516	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3517	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
IC3501	62119-106-090	IC;TEA6414	
JK3501	63334-700-630	JACK-PIN;SJP.Y	
JK3502	63334-700-630	JACK-PIN;SJP.Y	
Q3501	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3502	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3503	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
R3501	61048-177-221	R-CARBON;RD 1/8 T 221-J	
R3502	61048-177-221	R-CARBON;RD 1/8 T 221-J	
R3505	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3506	61048-177-100	R-CARBON;RD 1/8 T 100-J	
R3507	61048-177-750	R-CARBON;RD 1/8 T 750-J	
R3508	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R3509	61048-177-221	R-CARBON;RD 1/8 T 221-J	
R3510	61048-177-221	R-CARBON;RD 1/8 T 221-J	
R3511	61048-177-750	R-CARBON;RD 1/8 T 750-J	
R3512	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R3513	61048-177-101	R-CARBON;RD 1/8 T 101-J	
R3514	61048-177-911	R-CARBON;RD 1/8 T 911-J	
R3515	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3516	61048-177-911	R-CARBON;RD 1/8 T 911-J	
R3517	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3518	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3519	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R3520	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R3521	61048-177-221	R-CARBON;RD 1/8 T 221-J	
R3522	61048-177-391	R-CARBON;RD 1/8 T 391-J	

TUNER PARTS

	64519-903-201	TUNER F/S;TERH7-043A	
	63054-401-662	CABLE-COAXIAL ASSY;UL 1365 AWG 30 BLK	
	64519-901-022	VIF PACK;IFE450A	
C4002	61617-404-220	C-ELEC;CEAP 16V 22M RSS(5X7)	
C4003	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C4004	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C4005	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C4006	61507-121-570	C-POLYESTER;CQ921M TAPG 50V 683-K	
C4007	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C4008	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C4009	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C4010	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C4011	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C4011	61407-101-420	C-CERAMIC.TEMP;CC45 SL TAPG 50V 180-J	
C4012	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C4012	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
IC4001	62119-501-561	IC-L;KA33V TAPG	
IC4002	62119-103-662	IC;LA7323	
Q4001	62137-701-020	TRANSISTOR;KSR 2001 TAPG	
Q4002	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q4004	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q4005	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
R4001	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R4002	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R4003	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R4004	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R4007	61048-177-752	R-CARBON;RM 1/8 T 752-J	
R4008	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R4009	61048-177-181	R-CARBON;RD 1/8 T 181-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R4010	61048-177-181	R-CARBON;RD 1/8 T 181-J	
R4011	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R4012	61048-177-272	R-CARBON;RD 1/8 T 272-J	
R4013	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R4014	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R4015	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R4016	61048-177-561	R-CARBON;RD 1/8 T 561-J	
R4017	61048-177-152	R-CARBON;RD 1/8 T 152-J	
R4018	61048-177-474	R-CARBON;RD 1/8 T 474-J	
R4019	61048-177-153	R-CARBON;RD 1/8 T 153-J	
R4020	61048-177-181	R-CARBON;RD 1/8 T 181-J	
R4021	61048-177-221	R-CARBON;RD 1/8 T 221-J	
U4001	66614-614-710	BRACKET HOLD PWB;SPTE T0.5	

SYSTEM CONTROL PARTS

C6001	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C6002	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z	
C6003	61407-105-300	C-CERAMIC.TEMP;CC45 CH TAPG 50V 68-J	
C6005	61639-502-222	C-ELEC;CEAP 6.3V 2200M SG(13X20)	
C6006	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6007	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6008	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C6011	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6012	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6013	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6014	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6015	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6016	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6017	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6018	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6019	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6020	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6021	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6022	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6023	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6025	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6026	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6027	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6028	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6029	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6030	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6031	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6032	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6033	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6034	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C6035	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6036	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6037	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6038	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6039	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6040	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6041	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6042	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6043	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6047	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6048	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6049	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6050	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6051	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6052	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C6053	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C6054	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6055	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K	
C6056	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K	
C6057	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K	
C6058	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K	
C6059	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K	
C6060	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6061	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
C6062	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6064	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6066	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)	
C6067	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6068	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6069	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C6070	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6071	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C6072	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C6073	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C6074	61407-105-260	C-CERAMIC.TEMP;CC45 CH TAPG 50V 47-J	
C6075	61407-105-260	C-CERAMIC.TEMP;CC45 CH TAPG 50V 47-J	
C6076	61407-105-260	C-CERAMIC.TEMP;CC45 CH TAPG 50V 47-J	
C6077	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6078	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6079	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6080	61407-101-490	C-CERAMIC.TEMP;CC45 SL TAPG 50V 390-J	
C6081	61407-101-490	C-CERAMIC.TEMP;CC45 SL TAPG 50V 390-J	
C6082	61507-121-581	C-POLYESTER;CQ921M TAPG 50V 823-J	
C6083	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6084	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6085	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K	
CJ6001	63054-305-170	FLAT CABLE;2878 #26 P20.05P 170	
CN6001	63053-409-140	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
CN6002	63053-408-128	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
CN6003	63053-112-124	LEAD CONNECTOR ASSY;1429 #26 5295-5264	
CN6004	63053-108-115	LEAD CONNECTOR ASSY;1429 #26 5295-5264	
CN6006	63053-607-030	LEAD CONNECTOR ASSY;1429/1007#26 BLK	
CN6007	63053-403-120	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
CN6008	63053-607-030	LEAD CONNECTOR ASSY;1429/1007#26 BLK	
CN6009	63053-403-120	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
CN6010	63349-062-400	CONNECTOR-WAFER;5267-11A	
CN6011	63349-062-410	CONNECTOR-WAFER;5267-12A	
CN6012	63053-916-324	LEAD CONNECTOR ASSY;1007 #26 5395-5051	
CN6013	63053-403-126	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
D6001	62169-406-482	DIODE;1N4148 SAMSUNG	
D6002	62169-406-482	DIODE;1N4148 SAMSUNG	
D6003	62169-406-482	DIODE;1N4148 SAMSUNG	
D6004	B4104-0046	DIODE-RECT;1N4002GP 200V 1A	
D6005	B4104-0046	DIODE-RECT;1N4002GP 200V 1A	
D6006	B4104-0046	DIODE-RECT;1N4002GP 200V 1A	
D6007	B4104-0046	DIODE-RECT;1N4002GP 200V 1A	
D6008	62169-406-482	DIODE;1N4148 SAMSUNG	
D6009	B4104-0046	DIODE-RECT;1N4002GP 200V 1A	
D6010	62169-406-482	DIODE;1N4148 SAMSUNG	
D6011	62169-406-482	DIODE;1N4148 SAMSUNG	
D6012	62169-406-482	DIODE;1N4148 SAMSUNG	
IC6001	B4002-0048	IC;87C51FC DIP	
IC6002	62119-102-911	IC;8243(VCR-2)	
IC6003	62119-102-911	IC;8243(VCR-2)	
IC6004	62119-102-911	IC;8243(VCR-2)	
IC6005	62119-102-911	IC;8243(VCR-2)	
IC6006	62119-101-776	IC;PST523D	
IC6007	62109-201-281	IC;KA7809	
IC6008	62109-201-281	IC;KA7809	
IC6009	62119-107-002	IC;LM340T-12(NATIONAL SEMI)	
IC6010	62119-107-002	IC;LM340T-12(NATIONAL SEMI)	
IC6011	B4000-0003	IC;93C56 EEPROM SIP	
L6001	62427-812-109	COIL-PEAKING;EL0606RA 1uH-K	
L6002	62427-812-109	COIL-PEAKING;EL0606RA 1uH-K	
L6003	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L6004	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L6005	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L6006	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L6007	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
Q6001	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q6004	62137-302-441	TRANSISTOR;KSC 2328-Y TAPG	
Q6005	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q6006	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q6007	62137-701-012	TRANSISTOR;KSR 1003 TAPG	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
Q6008	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q6009	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q6010	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q6011	62137-701-020	TRANSISTOR;KSR 2001 TAPG	
Q6012	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q6013	62137-701-020	TRANSISTOR;KSR 2001 TAPG	
Q6014	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q6015	62137-701-020	TRANSISTOR;KSR 2001 TAPG	
Q6016	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q6017	62137-701-020	TRANSISTOR;KSR 2001 TAPG	
Q6020	62139-301-308	TRANSISTOR;2SD 1944/2SD1273	
Q6021	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
R6001	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6002	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6003	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6004	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6005	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6006	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6007	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6008	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6009	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6010	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6011	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6012	61048-177-272	R-CARBON;RD 1/8 T 272-J	
R6013	61048-177-332	R-CARBON;RD 1/8 T 332-J	
R6014	61048-177-332	R-CARBON;RD 1/8 T 332-J	
R6015	61048-177-332	R-CARBON;RD 1/8 T 332-J	
R6016	61048-177-332	R-CARBON;RD 1/8 T 332-J	
R6017	61048-177-332	R-CARBON;RD 1/8 T 332-J	
R6018	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6019	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6020	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6021	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6022	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6023	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6024	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R6026	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6027	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6028	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R6029	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6030	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6031	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6032	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6033	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6034	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6035	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6036	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6037	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6038	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6039	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6040	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6041	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6042	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6043	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6044	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6045	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6046	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6047	61048-177-152	R-CARBON;RD 1/8 T 152-J	
R6048	61048-177-152	R-CARBON;RD 1/8 T 152-J	
R6049	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6050	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6051	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6052	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6053	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6054	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6055	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6056	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6057	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6058	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6059	61048-177-472	R-CARBON;RD 1/8 T 472-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R6060	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6061	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6062	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6063	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6064	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6065	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6066	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6067	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6068	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6069	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6070	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6071	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6072	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6073	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6074	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R6075	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6076	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6077	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6078	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6079	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6080	61048-177-220	R-CARBON;RD 1/8 T 220-J	
R6081	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6082	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6083	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6084	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6086	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6087	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6088	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6089	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6090	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6091	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R6092	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R6093	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R6094	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R6095	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R6096	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6097	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6098	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R6099	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6100	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R6101	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6102	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R6103	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R6106	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6108	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6109	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6110	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R6111	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R6112	61048-177-472	R-CARBON;RD 1/8 T 472-J	
VC6001	61829-201-060	C-TRIMMER;ECR HA 040 E11	
XT6001	64539-012-525	CRYSTAL;12.000MHZ	
ZD6001	62169-403-821	DIODE-ZENER;MTZ 5.1B	

207	69013-605-116	ASSY DECK JOINT;G-B/S/L	

C0280	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C0281	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C0282	61637-505-101	C-ELEC;CEAP 25V 100M SG(6.3X11)	
CN204	63349-062-550	CONNECTOR-WAFER;5268-06A	
CN205	63349-062-600	CONNECTOR-WAFER;5268-11A	
CN206	63349-062-520	CONNECTOR-WAFER;5268-03A	
CN206	63349-601-071	CONNECTOR WAFER;5234-08A	
CN207	63349-062-310	CONNECTOR-WAFER;5267-02A	
CN208	63349-062-520	CONNECTOR-WAFER;5268-03A	
CN209	63349-062-530	CONNECTOR-WAFER;5268-04A	
CN210	63349-062-510	CONNECTOR WAFER;5268-02A	
D0207	62169-406-482	DIODE;1N4148 SAMSUNG	
L0201	62429-813-220	COIL-PEAKING;EL0607SK1-220K	
Q0210	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q0211	62137-701-013	TRANSISTOR;KSR 1004 TAPG	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
Q0212	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q6020	62139-301-308	TRANSISTOR;2SD 1944/2SD1273	
R0260	61048-177-474	R-CARBON;RD 1/8 T 474-J	
R0261	61048-177-224	R-CARBON;RD 1/8 T 224-J	
R0262	61048-177-391	R-CARBON;RD 1/8 T 391-J	
R0263	61048-177-221	R-CARBON;RD 1/8 T 221-J	
R0264	61048-177-562	R-CARBON;RD 1/8 T 562-J	
R0265	61048-177-683	R-CARBON;RD 1/8 T 683-J	
R0266	61048-177-222	R-CARBON;RD 1/8 T 222-J	
R0267	61049-527-689	R-METAL OXIDE;RS 2 P 6R8-J	
R2005	61048-177-124	R-CARBON;RD 1/8 T 124-J	
R2008	61048-177-753	R-CARBON;RD 1/8 T 753-J	
R2009	61048-177-304	R-CARBON;RD 1/8 T 304-J	
R2010	61048-177-334	R-CARBON;RD 1/8 T 334-J	

6-2.ELECTRICAL REPLACEMENT PARTS LIST

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
	69099-614-100	REMOCON ASSY;GO-VIDEO VCR-2	
	67644-601-010	DOOR BATTERY;ABS 94HB	
C1	61637-804-470	C-ELEC;CEAP 16V 47M SE(6.3X5)	
C2	61419-109-140	C-CERAMIC.HK;CK45F 50V 103-Z	
C3	61409-101-360	C-CERAMIC.TEMP;CC45 SL 50V 100-J	
C4	61409-101-360	C-CERAMIC.TEMP;CC45 SL 50V 100-J	
D1	62169-406-482	DIODE;1N4148 SAMSUNG	
D2	62169-406-482	DIODE;1N4148 SAMSUNG	
IC1	62119-703-638	IC;SAA3004P	
IR1	62309-112-036	LED-IR;CL2	
Q1	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG	
R1	61048-177-470	R-CARBON;RD 1/8 T 470-J	
R2	61048-177-100	R-CARBON;RD 1/8 T 100-J	
XT1	64539-102-311	CERAMIC RESONATOR;CSB455EBL/KBR455	
145	69098-600-942	REGULATOR ASSY;GO-VIDEO VCR-2	
BD1101	62169-403-562	DIODE-STACK;RBV402/D3SBA20	
BD1201	62169-403-562	DIODE-STACK;RBV402/D3SBA20	
C1001	61469-502-010	C-CERAMIC DISK;CS17-E2GA 472 MYAS	
C1002	61469-502-010	C-CERAMIC DISK;CS17-E2GA 472 MYAS	
C1101	61609-412-103	C-ELECTROLYTIC;CE04W 35V 100M(SS)	
C1103	61639-506-332	C-ELEC;CEAP 35V 3300M SG(18X36.5)	
C1104	61419-109-210	C-CERAMIC.HK;CK45F 50V 104-Z	
C1105	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C1106	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C1107	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)	
C1108	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)	
C1109	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C1110	61639-904-332	C-ELEC;LC-1325-3300-16-M	
C1111	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)	
C1112	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)	
C1113	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)	
C1201	61609-412-103	C-ELECTROLYTIC;CE04W 35V 100M(SS)	
C1203	61639-904-332	C-ELEC;LC-1325-3300-16-M	
C1204	61419-109-210	C-CERAMIC.HK;CK45F 50V 104-Z	
C1205	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)	
C1206	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C1207	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)	
C1208	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)	
C1209	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C1210	61639-506-332	C-ELEC;CEAP 35V 3300M SG(18X36.5)	
C1211	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)	
CN1001	63349-062-580	CONNECTOR-WAFER;5268-09A	
CN1002	63349-062-570	CONNECTOR-WAFER;5268-08A	
D1101	62169-406-482	DIODE;1N4148 SAMSUNG	
D1102	62169-403-561	DIODE;1N4003(MOLD)	
D1103	62169-403-561	DIODE;1N4003(MOLD)	
D1201	62169-406-482	DIODE;1N4148 SAMSUNG	
F1001	64709-084-791	FUSE;T1.6A 250V 51S 5X20mm SJ U/C	
F1101	64709-084-823	FUSE;T2.5A 250V 51S 5X20MM SJ U/C	
F1102	64709-084-791	FUSE;T1.6A 250V 51S 5X20mm SJ U/C	
F1201	64709-084-823	FUSE;T2.5A 250V 51S 5X20MM SJ U/C	
F1202	64709-084-791	FUSE;T1.6A 250V 51S 5X20mm SJ U/C	
GN1001	63054-211-130	WIRE-GND;1007 #18 170 BLK YO	
GN1002	63054-211-040	WIRE-GND ASSY;1007-06 #18 270 BLK YO	
IC1102	62119-101-431	IC;STK5333S	
IC1202	62119-101-431	IC;STK5333S	
PT1001	62869-190-315	POWER TRANS;74X42 120V 60HZ EX(VCR-2)	
R1001	61028-327-185	R-COMPOSITION;RC 1/2P 185-J	
R1101	61048-257-102	R-CARBON;RD 1/4R 102-J	
R1102	61048-277-561	R-CARBON;RD 1/4 T 561-J	
R1103	61048-327-681	R-METAL FILM;RM 1/2 P 681-J	
R1104	61048-324-122	R-METAL FILM;RM 1/2 T 122-J	
R1105	61048-324-122	R-METAL FILM;RM 1/2 T 122-J	
C4003	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
R1106	61048-427-222	R-METAL FILM;RM 1 P 222-J	
R1109	61048-327-681	R-METAL FILM;RM 1/2 P 681-J	
R1110	61048-327-681	R-METAL FILM;RM 1/2 P 681-J	
R1112	61048-327-681	R-METAL FILM;RM 1/2 P 681-J	
R1201	61048-257-102	R-CARBON;RD 1/4R 102-J	
R1202	61048-277-561	R-CARBON;RD 1/4 T 561-J	
TR1101	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
TR1102	62149-401-274	TRANSISTOR;KSD1273P	
TR1103	62149-401-274	TRANSISTOR;KSD1273P	
ZD1101	62169-423-030	DIODE-ZENER;MTZ-18C	
ZD1102	62169-403-829	DIODE-ZENER;MTZ 30D	
ZD1201	62169-423-030	DIODE-ZENER;MTZ-18C	
	69914-601-203	ASSY-AGC;VCR-2	
	63054-401-662	CABLE-COAXIAL ASSY;UL 1365 AWG 30 BLK	
	64519-901-022	VIF PACK;IFE450A	
	64519-903-201	TUNER F/S;TERH7-043A	
C4002	61617-404-220	C-ELEC;CEAP 16V 22M RSS(5X7)	
C4003	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C4004	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C4005	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C4006	61507-121-570	C-POLYESTER;CQ921M TAPG 50V 683-K	
C4007	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C4008	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C4009	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C4010	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C4011	61407-101-420	C-CERAMIC.TEMP;CC45 SL TAPG 50V 180-J	
C4011	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C4012	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
C4012	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
IC4001	62119-501-561	IC-L;KA33V TAPG	
IC4002	62119-103-662	IC;LA7323	
Q4001	62137-701-020	TRANSISTOR;KSR 2001 TAPG	
Q4002	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q4004	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q4005	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
R4001	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R4002	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R4003	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R4004	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R4007	61048-177-752	R-CARBON;RM 1/8 T 752-J	
R4008	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R4009	61048-177-181	R-CARBON;RD 1/8 T 181-J	
R4010	61048-177-181	R-CARBON;RD 1/8 T 181-J	
R4011	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R4012	61048-177-272	R-CARBON;RD 1/8 T 272-J	
R4013	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R4014	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R4015	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R4016	61048-177-561	R-CARBON;RD 1/8 T 561-J	
R4017	61048-177-152	R-CARBON;RD 1/8 T 152-J	
R4018	61048-177-474	R-CARBON;RD 1/8 T 474-J	
R4019	61048-177-153	R-CARBON;RD 1/8 T 153-J	
R4020	61048-177-181	R-CARBON;RD 1/8 T 181-J	
R4021	61048-177-221	R-CARBON;RD 1/8 T 221-J	
U4001	66614-614-710	BRACKET HOLD PWB;SPTE T0.5	S.N.A
	69871-601-362	ASSY F/TIMER;GO-VIDEO VCR-2	
C0701	61627-408-339	C-ELEC;CEAP 50V 3.3M RSS(4X7)	
C0702	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C0703	61637-804-470	C-ELEC;CEAP 16V 47M SE(6.3X5)	
C0704	61637-604-221	C-ELEC;CEAP 16V 220M SV(8X9)	
C0705	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C0706	61409-105-660	C-CERAMIC.TEMP;CC45 CH 50V 100-J	
C0707	61409-105-660	C-CERAMIC.TEMP;CC45 CH 50V 100-J	
C0708	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C0709	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C0710	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
CN0701	63053-111-152	LEAD CONNECTOR ASSY;1429 #26 5295-5264	
CN0702	63053-112-140	LEAD CONNECTOR ASSY;1429 #26 5295-5264	
CN0703	63053-212-155	LEAD CONNECTOR ASSY;1429 #26 5295-5100	
CN0704	63054-608-030	FLAT-CABLE;2760 #26 210C-8P-30m/m	
CN0705	63348-232-080	CONNECTOR-WAFER;52147-0810	
CN0706	63349-603-120	CONNECTOR-WAFER;53015-1210	
D0701	62169-406-482	DIODE;1N4148 SAMSUNG	
D0702	62169-406-482	DIODE;1N4148 SAMSUNG	
D0703	62169-406-482	DIODE;1N4148 SAMSUNG	
D0704	62169-406-482	DIODE;1N4148 SAMSUNG	
D0705	62169-406-482	DIODE;1N4148 SAMSUNG	
D0706	62169-406-482	DIODE;1N4148 SAMSUNG	
D0707	62169-406-482	DIODE;1N4148 SAMSUNG	
D0708	62169-406-482	DIODE;1N4148 SAMSUNG	
D0709	62169-406-482	DIODE;1N4148 SAMSUNG	
D0712	62169-406-482	DIODE;1N4148 SAMSUNG	
DT0701	62319-013-068	DIGITRON;13BT-95ZK(GE)	
IC0701	62109-104-997	IC;UPD7537AC-026	
IC0702	62119-102-870	IC;M5481	
LD0701	62309-110-340	LED;GL-3HD7/GL3HD8	
LD0709	62309-110-340	LED;GL-3HD7/GL3HD8	
LD702	62309-112-140	LED;KLG 123E(GREEN)	
LD703	62309-112-140	LED;KLG 123E(GREEN)	
LD704	62309-112-140	LED;KLG 123E(GREEN)	
LD705	62309-112-140	LED;KLG 123E(GREEN)	
LD706	62309-112-140	LED;KLG 123E(GREEN)	
LD707	62309-112-140	LED;KLG 123E(GREEN)	
LD708	62309-112-140	LED;KLG 123E(GREEN)	
LD710	62309-112-140	LED;KLG 123E(GREEN)	
LD711	62309-112-140	LED;KLG 123E(GREEN)	
LD712	62309-112-140	LED;KLG 123E(GREEN)	
LD713	62309-112-140	LED;KLG 123E(GREEN)	
LD714	62309-112-140	LED;KLG 123E(GREEN)	
R0701	61048-177-101	R-CARBON;RD 1/8 T 101-J	
R0702	61048-177-101	R-CARBON;RD 1/8 T 101-J	
R0703	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R0704	61048-177-683	R-CARBON;RD 1/8 T 683-J	
R0705	61048-177-562	R-CARBON;RD 1/8 T 562-J	
R0706	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R0707	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R0708	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R0709	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R0710	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R0711	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R0713	61048-177-101	R-CARBON;RD 1/8 T 101-J	
R0714	61048-277-470	R-CARBON;RD 1/4 T 470-J	
RM0701	A1294-0007	MODULE-REMOCON;ORC-02H 40KHZ 940	
SW0701	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0702	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0703	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0704	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0705	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0706	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0707	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0708	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0709	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0710	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0711	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0712	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0713	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0714	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0715	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0716	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0717	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0718	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0719	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0720	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0721	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0722	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0723	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0724	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0725	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0726	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW0727	63599-016-070	SW-TACT;EVQ-QS2 05K	
VR0701	61203-107-110	VR ROUND;RK09K1130/RH0102SQ 20KB	
VR0702	61203-107-120	VR ROUND;RK09K1130/RH0102SQ 500KB	
VR0703	61203-107-120	VR ROUND;RK09K1130/RH0102SQ 500KB	
VR0704	61203-107-110	VR ROUND;RK09K1130/RH0102SQ 20KB	
XT0701	64539-102-045	CERAMIC-RESONATOR;CSB 600P	
ZD0701	62169-423-092	DIODE-ZENER;MTZ 6.8B/UZ 6.8BH	
ZD0702	62169-403-824	DIODE-ZENER;MTZ 9.1B	

69802-801-207 ASSY-SERVO;VCR-2

C2001	61507-121-530	C-POLYESTER;CQ921M TAPG 50V 333-K	
C2002	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C2003	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C2004	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V	
C2005	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C2006	61637-206-019	C-ELEC;CEAP 50V 0.1M SA(5X11)	
C2007	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C2008	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C2009	61407-101-510	C-CERAMIC.TEMP;CC45 SL TAPG 50V 470-J	
C2010	61617-408-010	C-ELEC;CEAP 50V 1M RSS(4X7)	
C2011	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C2012	61637-204-220	C-ELEC;CEAP 16V 22M SA	
C2013	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C2014	61507-121-420	C-POLYESTER;CQ921M TAPG 50V 392-K	
C2015	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C2016	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C2017	61627-208-478	C-ELEC;CEAP 50V 0.47M NP(6X11)	
C2018	61507-121-570	C-POLYESTER;CQ921M TAPG 50V 683-K	
C2019	61507-121-600	C-POLYESTER;CQ921M TAPG 50V 563-K	
C2020	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C2021	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C2022	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C2023	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C2024	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C2025	61507-121-420	C-POLYESTER;CQ921M TAPG 50V 392-K	
C2026	61627-204-479	C-ELEC;CEAP 16V 4.7M NP(4X7)	
C2027	61507-121-470	C-POLYESTER;CQ921M TAPG 50V 103-K	
C2028	61507-121-390	C-POLYESTER;CQ921M TAPG 50V 222-K	
C2029	61617-404-100	C-ELEC;CEAP 16V 10M RSS(4X7)	
C2030	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C2031	61617-408-229	C-ELEC;CEAP 50V 2.2M RSS(4X7)	
C2032	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
CN2001	63349-062-310	CONNECTOR-WAFER;5267-02A	
CX2001	63349-120-010	PIN-CONNECTOR(G7);MAIN TO SUB 7PIN	
CX2002	63349-120-010	PIN-CONNECTOR(G7);MAIN TO SUB 7PIN	
D2001	62169-406-482	DIODE;1N4148 SAMSUNG	
D2002	62169-406-482	DIODE;1N4148 SAMSUNG	
D2003	62169-406-482	DIODE;1N4148 SAMSUNG	
D2004	62169-406-482	DIODE;1N4148 SAMSUNG	
IC2001	62109-321-081	IC;UPD6163ACA-703	
IC2002	62119-501-572	IC-LINEAR;KA358S	
Q2001	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q2002	62137-701-023	TRANSISTOR;KSR 2004 TAPG	
Q2003	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q2004	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q2005	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q2006	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q2007	62137-701-023	TRANSISTOR;KSR 2004 TAPG	
R2001	61048-177-152	R-CARBON;RD 1/8 T 152-J	
R2002	61048-177-222	R-CARBON;RD 1/8 T 222-J	
R2003	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R2004	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R2006	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R2007	61048-177-682	R-CARBON;RD 1/8 T 682-J	
R2011	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R2012	61048-177-333	R-CARBON;RD 1/8 T 333-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R2013	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R2014	61048-177-224	R-CARBON;RD 1/8 T 224-J	
R2015	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R2016	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R2017	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R2018	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R2019	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R2020	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R2021	61048-177-123	R-CARBON;RD 1/8 T 123-J	
R2022	61048-177-154	R-CARBON;RD 1/8 T 154-J	
R2023	61048-177-204	R-CARBON;RD 1/8 T 204K	
R2024	61048-177-204	R-CARBON;RD 1/8 T 204K	
R2025	61048-177-823	R-CARBON;RD 1/8 T 823-J	
R2026	61048-177-332	R-CARBON;RD 1/8 T 332-J	
R2027	61048-177-273	R-CARBON;RD 1/8 T 273-J	
R2028	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R2029	61048-177-153	R-CARBON;RD 1/8 T 153-J	
R2030	61048-177-224	R-CARBON;RD 1/8 T 224-J	
R2031	61048-177-152	R-CARBON;RD 1/8 T 152-J	
R2032	61048-177-150	R-CARBON;RD 1/8 T 150-J	
R2033	61048-177-104	R-CARBON;RD 1/8 T 104-J	
VR2001	61243-110-105	VR-SEMI;VG067TH1 100KB	
VR2002	61243-110-505	VR-SEMI;VG067TH1 500KB	
VR2001	61243-110-105	VR-SEMI;VG067TH1 100KB	
VR2002	61243-110-505	VR-SEMI;VG067TH1 500KB	

69855-601-208 ASSY-OSD;NTSC GV-2000

C9101	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C9102	61407-105-300	C-CERAMIC.TEMP;CC45 CH TAPG 50V 68-J	
C9103	61407-105-280	C-CERAMIC.TEMP;CC45 CH TAPG 50V 56-J	
C9104	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C9105	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C9106	61417-109-140	C-CERAMIC.HK;CK45F TAPG 50V 103-Z	
C9107	61637-503-221	C-ELEC;CEAP 10V 220M SG(6.3X11)	
C9108	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C9109	61407-105-270	C-CERAMIC.TEMP;CC45 CH TAPG 50V 27-J	
C9110	61407-105-180	C-CERAMIC.TEMP;CC45 CH TAPG 50V 22-J	
C9111	61417-109-050	C-CERAMIC HK;CK45B TAPG 50V 222-K	
C9112	61417-104-170	C-CERAMIC.HK;CK45B TAPG 50V 820-K	
C9113	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C9114	61507-121-570	C-POLYESTER;CQ921M TAPG 50V 683-K	
C9115	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C9116	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z	
C9117	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C9118	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C9119	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C9120	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C9121	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C9122	61417-109-050	C-CERAMIC HK;CK45B TAPG 50V 222-K	
D9101	62169-406-482	DIODE;1N4148 SAMSUNG	
D9102	62169-406-482	DIODE;1N4148 SAMSUNG	
IC9102	62119-103-665	IC;NJM2229S	
L9101	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L9102	62427-812-270	COIL-PEAKING;EL0606RA 27uH-J	
L9103	62427-812-270	COIL-PEAKING;EL0606RA 27uH-J	
L9104	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
Q9101	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q9102	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
R9101	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R9102	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R9104	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R9105	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R9106	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R9107	61079-919-821	R-CHIP;RH 20X12 CS 821-J	
R9108	61079-919-681	R-CHIP;RH 20X12 CS 681-J	
R9109	61079-919-681	R-CHIP;RH 20X12 CS 681-J	
R9110	61079-919-272	R-CHIP;RH 20X12 CS 272-J	
R9111	61079-919-682	R-CHIP;RH 20X12 CS 682-J	
R9112	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R9113	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R9114	61079-919-564	R-CHIP;RH 20X12 CS 564-J	
R9115	61079-919-333	R-CHIP;RH 20X12 CS 333-J	
R9116	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R9117	61079-919-391	R-CHIP;RH 20X12 CS 391-J	
R9118	61079-919-681	R-CHIP;RH 20X12 CS 681-J	
R9119	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R9120	61079-919-122	R-CHIP;RH 20X12 CS 122-J	
R9121	61079-919-104	R-CHIP;RH 20X12 CS 104-J	
XT9101	64539-012-082	CRYSTAL;HC-UP/U(14.31818MHZ)TAPG	
XT9102	64539-102-336	CERAMIC RESONATOR;CSB503F19	

204 69897-601-204 ASSY PRE AMP;GO-VIDEO VCR-2

C3401	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3402	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C3403	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3404	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3405	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J	
C3406	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J	
C3407	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3408	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3409	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3410	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C3411	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C3412	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3413	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3414	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3417	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3418	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3419	61407-101-480	C-CERAMIC.TEMP;CC45 SL TAPG 50V 330-J	
C3420	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3421	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3422	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3423	61407-105-250	C-CERAMIC.TEMP;CC45 CH TAPG 50V 39-J	
C3424	61407-105-120	C-CERAMIC.TEMP;CC45 CH TAPG 50V 120-J	
C3425	61407-101-730	C-CERAMIC.TEMP;CC45 SL TAPG 50V 150-K	
C3426	61407-105-180	C-CERAMIC.TEMP;CC45 CH TAPG 50V 22-J	
C3427	61407-103-680	C-CERAMIC.TEMP;CC45 PH TAPG 50V 68-J	
C3428	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3429	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
CN3401	63379-600-078	PC BOARD CONNECTOR;3024-10 AHPB	
CN3402	63349-062-580	CONNECTOR-WAFER;5268-09A	
FL3401	64529-431-090	FILTER-LC DIP TYPE;HP1.4 MHZ	
IC3401	62109-301-680	IC;UPC2313CA	
L3401	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L3402	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L3406	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J	
L3407	62427-812-181	COIL-PEAKING;EL0606RA 180uH-J	
L3408	62427-812-100	COIL-PEAKING;EL0606RA 10uH-J	
L3409	62427-812-271	COIL-PEAKING;EL0606RA 270uH-J	
L3410	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3411	62427-812-330	COIL-PEAKING;EL0606RA 33uH-J	
L3412	62427-812-390	COIL-PEAKING;EL0606RA 39uH-J	
Q3401	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3402	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3403	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
R3401	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3402	61048-177-222	R-CARBON;RD 1/8 T 222-J	
R3403	61048-177-100	R-CARBON;RD 1/8 T 100-J	
R3404	61048-177-100	R-CARBON;RD 1/8 T 100-J	
R3405	61048-177-222	R-CARBON;RD 1/8 T 222-J	
R3406	61048-177-151	R-CARBON;RD 1/8 T 151-J	
R3407	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3408	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3409	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R3410	61048-177-272	R-CARBON;RD 1/8 T 272-J	
R3411	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3412	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3413	61048-177-561	R-CARBON;RD 1/8 T 561-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R3414	61048-177-271	R-CARBON;RD 1/8 T 271-J	
R3415	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3417	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3418	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R3419	61048-177-561	R-CARBON;RD 1/8 T 561-J	
R3420	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R3421	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R3422	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R3423	61048-177-621	R-CARBON;RD 1/8 T 621-J	
R3425	61048-177-152	R-CARBON;RD 1/8 T 152-J	
R3426	61048-177-102	R-CARBON;RD 1/8 T 102-J	
111	69802-601-221	ASSY MAIN B;GO-VIDEO VCR-2	
C5012	61507-339-010	C-POLYESTER;MDX 100V TAPG 473-K	
C5013	61507-339-010	C-POLYESTER;MDX 100V TAPG 473-K	
C5101	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5102	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5103	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5104	61637-804-338	C-ELEC;CEAP 16V 0.33M SE(4X5)	
C5105	61637-208-019	C-ELEC;CEAP 50V 0.1M SA(5X11)	
C5106	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5107	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5108	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5109	61407-101-510	C-CERAMIC.TEMP;CC45 SL TAPG 50V 470-J	
C5110	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5111	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5112	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5113	61507-121-451	C-POLYESTER;CQ921M TAPG 50V 682-J	
C5114	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5115	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C5116	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5117	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5118	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5119	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C5120	61637-804-338	C-ELEC;CEAP 16V 0.33M SE(4X5)	
C5121	61637-208-019	C-ELEC;CEAP 50V 0.1M SA(5X11)	
C5122	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5123	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5124	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5125	61407-101-510	C-CERAMIC.TEMP;CC45 SL TAPG 50V 470-J	
C5126	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5127	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5128	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)	
C5129	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)	
C5130	61637-204-220	C-ELEC;CEAP 16V 22M SA	
C5131	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5132	61507-121-491	C-POLYESTER;CQ921M TAPG 50V 183-J	
C5133	61507-121-530	C-POLYESTER;CQ921M TAPG 50V 333-K	
C5134	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5135	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5136	61507-121-460	C-POLYESTER;CQ921M TAPG 50V 822-K	
C5137	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5138	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5139	61507-121-491	C-POLYESTER;CQ921M TAPG 50V 183-J	
C5140	61507-121-530	C-POLYESTER;CQ921M TAPG 50V 333-K	
C5141	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5142	61507-121-460	C-POLYESTER;CQ921M TAPG 50V 822-K	
C5143	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5144	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5145	61637-204-220	C-ELEC;CEAP 16V 22M SA	
C5146	61629-201-543	TF CAPACITOR;ECQ-VIH684JZ(V3)	
C5147	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5148	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5149	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C5150	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C5151	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5152	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5153	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5154	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
C5155	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5156	61629-201-543	TF CAPACITOR;ECQ-VIH684JZ(V3)	
C5157	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5159	61507-121-470	C-POLYESTER;CQ921M TAPG 50V 103-K	
C5160	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5201	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5202	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5203	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5204	61637-804-338	C-ELEC;CEAP 16V 0.33M SE(4X5)	
C5205	61637-208-019	C-ELEC;CEAP 50V 0.1M SA(5X11)	
C5206	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5207	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5208	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5209	61407-101-510	C-CERAMIC.TEMP;CC45 SL TAPG 50V 470-J	
C5210	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5211	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5212	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5213	61507-121-451	C-POLYESTER;CQ921M TAPG 50V 682-J	
C5214	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5215	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C5216	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5217	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5218	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5219	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C5220	61637-804-338	C-ELEC;CEAP 16V 0.33M SE(4X5)	
C5221	61637-208-019	C-ELEC;CEAP 50V 0.1M SA(5X11)	
C5222	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5223	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5224	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C5225	61407-101-510	C-CERAMIC.TEMP;CC45 SL TAPG 50V 470-J	
C5226	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5227	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5228	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)	
C5229	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)	
C5230	61637-204-220	C-ELEC;CEAP 16V 22M SA	
C5231	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5232	61507-121-491	C-POLYESTER;CQ921M TAPG 50V 183-J	
C5233	61507-121-530	C-POLYESTER;CQ921M TAPG 50V 333-K	
C5234	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5235	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5236	61507-121-460	C-POLYESTER;CQ921M TAPG 50V 822-K	
C5237	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5238	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5239	61507-121-491	C-POLYESTER;CQ921M TAPG 50V 183-J	
C5240	61507-121-530	C-POLYESTER;CQ921M TAPG 50V 333-K	
C5241	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5242	61507-121-460	C-POLYESTER;CQ921M TAPG 50V 822-K	
C5243	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5244	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5245	61637-204-220	C-ELEC;CEAP 16V 22M SA	
C5246	61629-201-543	TF CAPACITOR;ECQ-VIH684JZ(V3)	
C5247	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5248	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5249	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C5250	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C5251	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5252	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5253	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5254	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5255	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5256	61629-201-543	TF CAPACITOR;ECQ-VIH684JZ(V3)	
C5257	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5258	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C5261	61507-121-470	C-POLYESTER;CQ921M TAPG 50V 103-K	
C5301	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C5302	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C5303	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C5304	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C5305	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)	
C5306	61637-504-221	C-ELEC;CEAP 16V 220M SG(6X11.5)	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
C5307	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)	
C5308	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C5309	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)	
C5310	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5311	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C5312	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C5313	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)	
C5314	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C5315	61637-504-221	C-ELEC;CEAP 16V 220M SG(8X11.5)	
C5316	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
CN5102	63349-062-360	CONNECTOR-WAFER;5267-07A STICK	
CN5103	63349-062-320	CONNECTOR-WAFER;5267-03A STICK	
CN5202	63349-062-360	CONNECTOR-WAFER;5267-07A STICK	
CN5203	63349-062-320	CONNECTOR-WAFER;5267-03A STICK	
CN5301	63349-062-410	CONNECTOR-WAFER;5267-12A	
CN5302	63349-062-370	CONNECTOR-WAFER;5267-08A	
D5301	62169-406-482	DIODE;1N4148 SAMSUNG	
D5302	62169-406-482	DIODE;1N4148 SAMSUNG	
FL5101	64529-402-151	FILTER-LC;253AGGS 12KHZ LPF	
FL5102	64529-402-151	FILTER-LC;253AGGS 12KHZ LPF	
FL5201	64529-402-151	FILTER-LC;253AGGS 12KHZ LPF	
FL5202	64529-402-151	FILTER-LC;253AGGS 12KHZ LPF	
IC5101	62119-103-645	IC;LA7096	
IC5102	62119-103-645	IC;LA7096	
IC5103	62119-108-012	IC;LM324	
IC5104	62109-101-212	IC;KA2271	
IC5201	62119-103-645	IC;LA7096	
IC5202	62119-103-645	IC;LA7096	
IC5203	62119-108-012	IC;LM324	
IC5204	62109-101-212	IC;KA2271	
IC5301	62119-106-011	IC;M22101E	
IC5302	62119-102-911	IC;8243(VCR-2)	
JK5301	63334-700-640	JACK-PIN;SJP.W	
JK5302	63334-700-640	JACK-PIN;SJP.W	
JK5303	63334-700-620	JACK-PIN;SJP.R	
JK5304	63334-700-620	JACK-PIN;SJP.R	
L5101	62429-014-103	COIL-BIAS OSC;KS12-18-2510	
L5102	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L5103	62429-010-280	COIL-PEAKING;BOAM-22mH	
L5104	62429-010-280	COIL-PEAKING;BOAM-22mH	
L5201	62429-014-103	COIL-BIAS OSC;KS12-18-2510	
L5202	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L5203	62429-010-280	COIL-PEAKING;BOAM-22mH	
L5204	62429-010-280	COIL-PEAKING;BOAM-22mH	
L5301	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L5302	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
Q5101	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG	
Q5102	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q5201	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG	
Q5202	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q5301	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q5302	62149-401-834	TRANSISTOR;KSD 73-Y (N.M)	
R5101	61048-177-241	R-CARBON;RD 1/8 T 241-J	
R5102	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R5103	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R5104	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R5105	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5106	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5107	61048-177-470	R-CARBON;RD 1/8 T 470-J	
R5108	61048-177-682	R-CARBON;RD 1/8 T 682-J	
R5109	61048-177-334	R-CARBON;RD 1/8 T 334-J	
R5110	61048-177-229	R-CARBON;RD 1/8 T 2R2-J	
R5111	61048-177-334	R-CARBON;RD 1/8 T 334-J	
R5112	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R5113	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R5114	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R5115	61048-177-241	R-CARBON;RD 1/8 T 241-J	
R5116	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5117	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5118	61048-177-512	R-CARBON;RD 1/8 T 512-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R5119	61048-177-183	R-CARBON;RD 1/8 T 183-J	
R5120	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5121	61048-177-512	R-CARBON;RD 1/8 T 512-J	
R5122	61048-177-683	R-CARBON;RD 1/8 T 683-J	
R5123	61048-177-225	R-CARBON;RD 1/8 T 225-J	
R5124	61048-177-183	R-CARBON;RD 1/8 T 183-J	
R5125	61048-177-683	R-CARBON;RD 1/8 T 683-J	
R5126	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5128	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R5129	61048-177-390	R-CARBON;RD 1/8 T 390-J	
R5130	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R5131	61048-177-391	R-CARBON;RD 1/8 T 391-J	
R5133	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5134	61048-177-471	R-CARBON;RD 1/8 T 471-J	
R5135	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5138	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R5139	61048-177-225	R-CARBON;RD 1/8 T 225-J	
R5140	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5141	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R5142	61048-177-391	R-CARBON;RD 1/8 T 391-J	
R5143	61048-177-182	R-CARBON;RD 1/8 T 182-J	
R5144	61048-177-393	R-CARBON;RD 1/8 T 393-J	
R5146	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R5147	61048-177-562	R-CARBON;RD 1/8 T 562-J	
R5148	61048-175-433	R-CARBON;RD 1/8 RT 433-F	
R5149	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5150	61048-177-471	R-CARBON;RD 1/8 T 471-J	
R5151	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5152	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5153	61048-177-562	R-CARBON;RD 1/8 T 562-J	
R5154	61048-177-202	R-CARBON;RD 1/8 T 202-J	
R5155	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R5156	61048-177-393	R-CARBON;RD 1/8 T 393-J	
R5157	61048-177-182	R-CARBON;RD 1/8 T 182-J	
R5158	61048-177-202	R-CARBON;RD 1/8 T 202-J	
R5159	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5160	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5162	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5163	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5201	61048-177-241	R-CARBON;RD 1/8 T 241-J	
R5202	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R5203	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R5204	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R5205	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5206	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5207	61048-177-470	R-CARBON;RD 1/8 T 470-J	
R5208	61048-177-682	R-CARBON;RD 1/8 T 682-J	
R5209	61048-177-334	R-CARBON;RD 1/8 T 334-J	
R5210	61048-177-229	R-CARBON;RD 1/8 T 2R2-J	
R5211	61048-177-334	R-CARBON;RD 1/8 T 334-J	
R5212	61048-177-822	R-CARBON;RD 1/8 T 822-J	
R5213	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R5214	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R5215	61048-177-241	R-CARBON;RD 1/8 T 241-J	
R5216	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5217	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5218	61048-177-512	R-CARBON;RD 1/8 T 512-J	
R5219	61048-177-183	R-CARBON;RD 1/8 T 183-J	
R5220	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5221	61048-177-512	R-CARBON;RD 1/8 T 512-J	
R5222	61048-177-683	R-CARBON;RD 1/8 T 683-J	
R5223	61048-177-225	R-CARBON;RD 1/8 T 225-J	
R5224	61048-177-183	R-CARBON;RD 1/8 T 183-J	
R5225	61048-177-683	R-CARBON;RD 1/8 T 683-J	
R5226	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5228	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R5229	61048-177-390	R-CARBON;RD 1/8 T 390-J	
R5230	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R5231	61048-177-391	R-CARBON;RD 1/8 T 391-J	
R5233	61048-177-105	R-CARBON;RD 1/8 T 105-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R5234	61048-177-471	R-CARBON;RD 1/8 T 471-J	
R5235	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5238	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R5239	61048-177-225	R-CARBON;RD 1/8 T 225-J	
R5240	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5241	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R5242	61048-177-391	R-CARBON;RD 1/8 T 391-J	
R5243	61048-177-182	R-CARBON;RD 1/8 T 182-J	
R5244	61048-177-393	R-CARBON;RD 1/8 T 393-J	
R5246	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R5247	61048-177-562	R-CARBON;RD 1/8 T 562-J	
R5248	61048-175-433	R-CARBON;RD 1/8RT 433-F	
R5249	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5250	61048-177-471	R-CARBON;RD 1/8 T 471-J	
R5252	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5253	61048-177-562	R-CARBON;RD 1/8 T 562-J	
R5254	61048-177-202	R-CARBON;RD 1/8 T 202-J	
R5255	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R5256	61048-177-393	R-CARBON;RD 1/8 T 393-J	
R5257	61048-177-182	R-CARBON;RD 1/8 T 182-J	
R5258	61048-177-202	R-CARBON;RD 1/8 T 202-J	
R5259	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5260	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5261	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5262	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5263	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5301	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R5302	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R5303	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R5304	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R5305	61048-177-563	R-CARBON;RD 1/8 T 563-J	
R5306	61048-177-202	R-CARBON;RD 1/8 T 202-J	
R5307	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R5308	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R5309	61048-177-471	R-CARBON;RD 1/8 T 471-J	
R5310	61048-177-162	R-CARBON;RD 1/8 T 162-J	
R5311	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R5312	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5313	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5314	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5316	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5317	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5318	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5319	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R5320	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5321	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5322	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5323	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5324	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5325	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5326	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5327	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5328	61048-177-473	R-CARBON;RD 1/8 T 473-J	
R5329	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5330	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5331	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5332	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5333	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5334	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R5335	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5336	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5337	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5338	61048-177-333	R-CARBON;RD 1/8 T 333-J	
R5340	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R5341	61048-177-104	R-CARBON;RD 1/8 T 104-J	
VR5101	61246-105-103	VR-SEMI;RH0615C 10K	
VR5102	61246-105-104	VR-SEMI;RH0615C 100K	
VR5103	61246-105-103	VR-SEMI;RH0615C 10K	
VR5104	61246-105-104	VR-SEMI;RH0615C 100K	
VR5201	61246-105-103	VR-SEMI;RH0615C 10K	
VR5202	61246-105-104	VR-SEMI;RH0615C 100K	
VR5203	61246-105-103	VR-SEMI;RH0615C 10K	
VR5204	61246-105-104	VR-SEMI;RH0615C 100K	
ZD5301	62169-403-824	DIODE-ZENER;MTZ 9.1B	
112	69802-601-224	ASSY MAIN C;VCR2	
C3101	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)	
C3102	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)	
C3103	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V	
C3104	61407-105-350	C-CERAMIC TEMP;CC45 CH TAPG 50V 30-J	
C3105	61407-101-240	C-CERAMIC.TEMP;CC45 SL TAPG 50V 33-J	
C3106	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3108	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J	
C3109	61407-105-180	C-CERAMIC.TEMP;CC45 CH TAPG 50V 22-J	
C3110	61407-105-260	C-CERAMIC.TEMP;CC45 CH TAPG 50V 47-J	
C3111	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z	
C3112	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C3113	61637-208-159	C-ELEC;CEAP 50V 1.5M SA(5X11)	
C3114	61417-109-050	C-CERAMIC HK;CK45B TAPG 50V 222-K	
C3115	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3116	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3117	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3118	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3119	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3120	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3121	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3122	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3123	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3124	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3125	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3126	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3127	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3131	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3132	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3133	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3134	61407-101-730	C-CERAMIC.TEMP;CC45 SL TAPG 50V 150-K	
C3135	61407-101-730	C-CERAMIC.TEMP;CC45 SL TAPG 50V 150-K	
C3136	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3137	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3138	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3139	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C3140	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3141	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C3142	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3143	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C3144	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3145	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3146	61507-121-570	C-POLYESTER;CQ921M TAPG 50V 683-K	
C3147	61407-105-660	C-CERAMIC.TEMP;CC45 CH TAPG 50V 5-D	
C3148	61407-101-121	C-CERAMIC.TEMP;CC45 SL TAPG 50V 10-D	
C3149	61407-101-470	C-CERAMIC.TEMP;CC45 SL TAPG 50V 300-J	
C3150	61407-101-240	C-CERAMIC.TEMP;CC45 SL TAPG 50V 33-J	
C3151	61407-101-240	C-CERAMIC.TEMP;CC45 SL TAPG 50V 33-J	
C3152	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3153	61407-105-300	C-CERAMIC.TEMP;CC45 CH TAPG 50V 68-J	
C3155	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3156	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3157	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J	
C3158	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J	
C3159	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3160	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J	
C3161	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3162	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3163	61407-101-121	C-CERAMIC.TEMP;CC45 SL TAPG 50V 10-D	
C3164	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3165	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3166	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C3167	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3168	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
C3169	61407-105-180	C-CERAMIC.TEMP;CC45 CH TAPG 50V 22-J	
C3170	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3171	61407-101-230	C-CERAMIC.TEMP;CC45 SL TAPG 50V 27-J	
C3172	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3173	61407-101-230	C-CERAMIC.TEMP;CC45 SL TAPG 50V 27-J	
C3201	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)	
C3202	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)	
C3203	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V	
C3204	61407-105-350	C-CERAMIC TEMP;CC45 CH TAPG 50V 30-J	
C3205	61407-101-240	C-CERAMIC.TEMP;CC45 SL TAPG 50V 33-J	
C3206	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3208	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J	
C3209	61407-105-180	C-CERAMIC.TEMP;CC45 CH TAPG 50V 22-J	
C3210	61407-105-260	C-CERAMIC.TEMP;CC45 CH TAPG 50V 47-J	
C3211	61454-240-227	M-CHIP CAP;RL UX 050B 0.022-Z	
C3212	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C3213	61637-208-159	C-ELEC;CEAP 50V 1.5M SA(5X11)	
C3214	61417-109-050	C-CERAMIC HK;CK45B TAPG 50V 222-K	
C3215	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3216	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3217	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3218	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3219	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3220	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3221	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3222	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3223	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3224	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3225	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3226	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3227	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3231	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3232	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3234	61407-101-730	C-CERAMIC.TEMP;CC45 SL TAPG 50V 150-K	
C3235	61407-101-730	C-CERAMIC.TEMP;CC45 SL TAPG 50V 150-K	
C3236	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3237	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3238	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3239	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C3240	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3241	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C3242	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3243	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C3244	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3245	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3246	61507-121-570	C-POLYESTER;CQ921M TAPG 50V 683-K	
C3247	61407-105-660	C-CERAMIC.TEMP;CC45 CH TAPG 50V 5-D	
C3248	61407-101-121	C-CERAMIC.TEMP;CC45 SL TAPG 50V 10-D	
C3249	61407-101-470	C-CERAMIC.TEMP;CC45 SL TAPG 50V 300-J	
C3250	61407-101-240	C-CERAMIC.TEMP;CC45 SL TAPG 50V 33-J	
C3251	61407-101-240	C-CERAMIC.TEMP;CC45 SL TAPG 50V 33-J	
C3252	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3253	61407-105-300	C-CERAMIC.TEMP;CC45 CH TAPG 50V 68-J	
C3255	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3256	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3257	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J	
C3258	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J	
C3259	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3260	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J	
C3261	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3262	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3263	61407-101-121	C-CERAMIC.TEMP;CC45 SL TAPG 50V 10-D	
C3264	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3265	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3266	61637-208-479	C-ELEC;CEAP 50V 4.7M SA(5X11)	
C3267	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3268	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3269	61407-105-180	C-CERAMIC.TEMP;CC45 CH TAPG 50V 22-J	
C3270	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3271	61407-101-230	C-CERAMIC.TEMP;CC45 SL TAPG 50V 27-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
C3272	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3273	61407-101-230	C-CERAMIC.TEMP;CC45 SL TAPG 50V 27-J	
C3274	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3301	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3302	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3303	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3304	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3305	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3306	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C3307	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3308	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3309	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3310	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3311	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C3312	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3313	61407-105-280	C-CERAMIC.TEMP;CC45 CH TAPG 50V 56-J	
C3314	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)	
C3315	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3316	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3317	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3318	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3319	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3320	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3321	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N	
C3322	61407-101-380	C-CERAMIC.TEMP;CC45 SL TAPG 50V 120-J	
C3323	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3324	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C3325	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
CN3101	63349-067-170	CONNECTOR-HOUSING;5513-17APB	
CN3102	63053-409-124	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
CN3201	63349-067-150	CONNECTOR-HOUSING;5513-15APB	
CN3202	63053-409-118	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
D3101	62169-406-482	DIODE;1N4148 SAMSUNG	
D3102	62169-406-482	DIODE;1N4148 SAMSUNG	
D3103	62169-406-482	DIODE;1N4148 SAMSUNG	
D3104	62169-406-482	DIODE;1N4148 SAMSUNG	
D3105	62169-406-482	DIODE;1N4148 SAMSUNG	
D3201	62169-406-482	DIODE;1N4148 SAMSUNG	
D3202	62169-406-482	DIODE;1N4148 SAMSUNG	
D3203	62169-406-482	DIODE;1N4148 SAMSUNG	
D3204	62169-406-482	DIODE;1N4148 SAMSUNG	
D3205	62169-406-482	DIODE;1N4148 SAMSUNG	
DL3302	64569-006-030	DELAY LINE;MS-31N-5K	
FL3101	64529-416-430	FILTER-LC DIP TYPE;B0134(4.21MHZBPF)	
FL3102	64569-006-052	COMB FILTER;MS-19NC-72A	
FL3103	64529-416-420	FILTER-LC DIP TYPE;B0139(3.58MHZBPF)	
FL3104	64529-418-082	FILTER-LC;SEL 4201D-K	
FL3105	64529-431-084	FILTER-LC DIP TYPE;L0132	
FL3201	64529-416-430	FILTER-LC DIP TYPE;B0134(4.21MHZBPF)	
FL3202	64569-006-052	COMB FILTER;MS-19NC-72A	
FL3203	64529-416-420	FILTER-LC DIP TYPE;B0139(3.58MHZBPF)	
FL3204	64529-418-082	FILTER-LC;SEL 4201D-K	
FL3205	64529-431-084	FILTER-LC DIP TYPE;L0132	
IC3101	62109-301-700	IC;UPC2315CA	
IC3102	62119-103-662	IC;LA7323	
IC3103	62109-501-010	IC;MSM6964-3RS	
IC3201	62109-301-700	IC;UPC2315CA	
IC3202	62119-103-662	IC;LA7323	
IC3203	62109-501-010	IC;MSM6964-3RS	
IC3301	62119-106-010	IC;CD4053BC	
IC3302	62119-102-750	IC;AN6326N	
IC3303	62119-102-651	IC;AN304P	
L3101	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J	
L3102	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J	
L3103	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L3107	62427-812-151	COIL-PEAKING;EL0606RA 150uH-J	
L3108	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3110	62427-812-680	COIL-PEAKING;EL0606RA 68uH-J	
L3111	62427-812-680	COIL-PEAKING;EL0606RA 68uH-J	
L3112	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
L3201	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J	
L3202	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J	
L3203	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L3207	62427-812-151	COIL-PEAKING;EL0606RA 150uH-J	
L3208	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3210	62427-812-680	COIL-PEAKING;EL0606RA 68uH-J	
L3211	62427-812-680	COIL-PEAKING;EL0606RA 68uH-J	
L3212	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L3301	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J	
L3302	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J	
L3303	62427-812-151	COIL-PEAKING;EL0606RA 150uH-J	
Q3101	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3102	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3103	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3104	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3105	62137-701-023	TRANSISTOR;KSR 2004 TAPG	
Q3106	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q3107	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3108	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3109	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3110	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3111	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3112	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3201	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3202	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3203	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3204	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3205	62137-701-023	TRANSISTOR;KSR 2004 TAPG	
Q3206	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q3207	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3208	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3209	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3210	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3211	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3212	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3213	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3301	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3302	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q3303	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3304	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3305	62137-301-900	TRANSISTOR;KSC 838-Y TAPG	
Q3306	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
R3101	61048-177-752	R-CARBON;RM 1/8 T 752-J	
R3102	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3103	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3104	61079-919-392	R-CHIP;RH 20X12 CS 392-J	
R3105	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3106	61079-919-471	R-CHIP;RH 20X12 CS 471-J	
R3107	61079-919-273	R-CHIP;RH 20X12 CS 273-J	
R3108	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3109	61079-919-221	R-CHIP;RH 20X12 CS 221-J	
R3110	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3111	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3112	61048-177-684	R-CARBON;RD 1/8 T 684-J	
R3113	61079-919-472	R-CHIP;RH 20X12 CS 472-J	
R3114	61079-919-431	R-CHIP;RH 20X12 CS 431-J	
R3115	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3116	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3117	61079-919-392	R-CHIP;RH 20X12 CS 392-J	
R3118	61079-919-101	R-CHIP;RH 20X12 CS 101-J	
R3119	61079-919-153	R-CHIP;RH 20X12 CS 153-J	
R3120	61079-919-223	R-CHIP;RH 20X12 CS 223-J	
R3121	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3122	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3123	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3124	61079-919-183	R-CHIP;RH 20X12 CS 183-J	
R3125	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3126	61079-919-153	R-CHIP;RH 20X12 CS 153-J	
R3127	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3128	61079-919-102	R-CHIP;RH 20X12 CS 102-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R3129	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R3130	61079-919-471	R-CHIP;RH 20X12 CS 471-J	
R3131	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3132	61079-919-101	R-CHIP;RH 20X12 CS 101-J	
R3133	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3134	61079-919-303	R-CHIP;RH 20X12 CS 303-J	
R3135	61079-919-123	R-CHIP;RH 20X12 CS 123-J	
R3136	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3137	61079-919-153	R-CHIP;RH 20X12 CS 153-J	
R3138	61079-919-474	R-CHIP;RH 20X12 CS 474-J	
R3139	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3141	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R3142	61079-919-333	R-CHIP;RH 20X12 CS 333-J	
R3143	61079-919-332	R-CHIP;RH 20X12 CS 332-J	
R3144	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3145	61079-919-272	R-CHIP;RH 20X12 CS 272-J	
R3146	61048-177-561	R-CARBON;RD 1/8 T 561-J	
R3147	61079-919-272	R-CHIP;RH 20X12 CS 272-J	
R3148	61079-919-332	R-CHIP;RH 20X12 CS 332-J	
R3149	61079-919-105	R-CHIP;RH 20X12 CS 105-J	
R3150	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3151	61079-919-122	R-CHIP;RH 20X12 CS 122-J	
R3152	61079-919-332	R-CHIP;RH 20X12 CS 332-J	
R3153	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3154	61079-919-105	R-CHIP;RH 20X12 CS 105-J	
R3155	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3156	61079-919-392	R-CHIP;RH 20X12 CS 392-J	
R3157	61079-919-471	R-CHIP;RH 20X12 CS 471-J	
R3158	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3159	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R3160	61079-919-822	R-CHIP;RH 20X12 CS 822-J	
R3161	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3162	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3163	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3164	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3165	61048-177-752	R-CARBON;RM 1/8 T 752-J	
R3168	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R3169	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3201	61048-177-752	R-CARBON;RM 1/8 T 752-J	
R3202	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3203	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3204	61079-919-392	R-CHIP;RH 20X12 CS 392-J	
R3205	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3206	61079-919-471	R-CHIP;RH 20X12 CS 471-J	
R3207	61079-919-273	R-CHIP;RH 20X12 CS 273-J	
R3208	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3209	61079-919-221	R-CHIP;RH 20X12 CS 221-J	
R3210	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3211	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3212	61048-177-684	R-CARBON;RD 1/8 T 684-J	
R3213	61079-919-472	R-CHIP;RH 20X12 CS 472-J	
R3214	61079-919-431	R-CHIP;RH 20X12 CS 431-J	
R3215	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3216	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3217	61079-919-392	R-CHIP;RH 20X12 CS 392-J	
R3218	61079-919-101	R-CHIP;RH 20X12 CS 101-J	
R3219	61079-919-153	R-CHIP;RH 20X12 CS 153-J	
R3220	61079-919-223	R-CHIP;RH 20X12 CS 223-J	
R3221	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3222	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3223	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3224	61079-919-183	R-CHIP;RH 20X12 CS 183-J	
R3225	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3226	61079-919-153	R-CHIP;RH 20X12 CS 153-J	
R3227	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3228	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3229	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R3230	61079-919-471	R-CHIP;RH 20X12 CS 471-J	
R3231	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3232	61079-919-101	R-CHIP;RH 20X12 CS 101-J	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
R3233	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3234	61079-919-303	R-CHIP;RH 20X12 CS 303-J	
R3235	61079-919-123	R-CHIP;RH 20X12 CS 123-J	
R3236	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3237	61079-919-153	R-CHIP;RH 20X12 CS 153-J	
R3238	61079-919-474	R-CHIP;RH 20X12 CS 474-J	
R3239	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3241	61048-177-331	R-CARBON;RD 1/8 T 331-J	
R3242	61079-919-333	R-CHIP;RH 20X12 CS 333-J	
R3243	61048-177-332	R-CARBON;RD 1/8 T 332-J	
R3244	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3245	61079-919-272	R-CHIP;RH 20X12 CS 272-J	
R3246	61048-177-561	R-CARBON;RD 1/8 T 561-J	
R3247	61079-919-272	R-CHIP;RH 20X12 CS 272-J	
R3248	61079-919-332	R-CHIP;RH 20X12 CS 332-J	
R3249	61079-919-105	R-CHIP;RH 20X12 CS 105-J	
R3250	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3251	61079-919-122	R-CHIP;RH 20X12 CS 122-J	
R3252	61079-919-332	R-CHIP;RH 20X12 CS 332-J	
R3253	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3254	61079-919-105	R-CHIP;RH 20X12 CS 105-J	
R3255	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3256	61079-919-392	R-CHIP;RH 20X12 CS 392-J	
R3257	61079-919-471	R-CHIP;RH 20X12 CS 471-J	
R3258	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3259	61048-177-105	R-CARBON;RD 1/8 T 105-J	
R3260	61079-919-822	R-CHIP;RH 20X12 CS 822-J	
R3261	61079-919-222	R-CHIP;RH 20X12 CS 222-J	
R3262	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3263	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3264	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3265	61048-177-752	R-CARBON;RM 1/8 T 752-J	
R3266	61048-177-511	R-CARBON;RD 1/8 T 511-J	
R3267	61079-919-752	R-CHIP;RH 20X12 CS 752-J	
R3268	61048-177-472	R-CARBON;RD 1/8 T 472-J	
R3269	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3301	61048-177-153	R-CARBON;RD 1/8 T 153-J	
R3302	61048-177-821	R-CARBON;RD 1/8 T 821-J	
R3303	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3304	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3305	61048-277-100	R-CARBON;RD 1/4 T 100-J	
R3306	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3307	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3308	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3309	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3310	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3311	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R3312	61079-919-102	R-CHIP;RH 20X12 CS 102-J	
R3313	61048-177-101	R-CARBON;RD 1/8 T 101-J	
R3314	61079-919-331	R-CHIP;RH 20X12 CS 331-J	
R3315	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3316	61048-177-102	R-CARBON;RD 1/8 T 102-J	
R3317	61079-919-561	R-CHIP;RH 20X12 CS 561-J	
R3318	61079-919-561	R-CHIP;RH 20X12 CS 561-J	
R3319	61079-919-561	R-CHIP;RH 20X12 CS 561-J	
R3320	61079-919-273	R-CHIP;RH 20X12 CS 273-J	
R3321	61048-177-561	R-CARBON;RD 1/8 T 561-J	
R3322	61048-177-100	R-CARBON;RD 1/8 T 100-J	
R3323	61079-919-473	R-CHIP;RH 20X12 CS 473-J	
R3324	61079-919-511	R-CHIP;RH 20X12 CS 511-J	
R3325	61048-177-182	R-CARBON;RD 1/8 T 182-J	
R3326	61048-177-681	R-CARBON;RD 1/8 T 681-J	
R3326	61079-919-122	R-CHIP;RH 20X12 CS 122-J	
R3327	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3328	61079-919-103	R-CHIP;RH 20X12 CS 103-J	
R3329	61079-919-822	R-CHIP;RH 20X12 CS 822-J	
VR3101	61247-102-102	VR-SEMI;EVN-DCA A03 B13 TAPG 1KB	
VR3102	B1054-0197	VR-SEMI;EVN-DCAA03-B13 4.7KB CARBON	
VR3103	61249-403-104	VR-SEMI;H0622A 10K	
VR3104	61249-403-104	VR-SEMI;H0622A 10K	
VR3105	61247-102-102	VR-SEMI;EVN-DCA A03 B13 TAPG 1KB	
VR3106	61247-102-102	VR-SEMI;EVN-DCA A03 B13 TAPG 1KB	
VR3201	61247-102-102	VR-SEMI;EVN-DCA A03 B13 TAPG 1KB	
VR3202	B1054-0197	VR-SEMI;EVN-DCAA03-B13 4.7KB CARBON	
VR3203	61249-403-104	VR-SEMI;H0622A 10K	
VR3204	61249-403-104	VR-SEMI;H0622A 10K	
VR3205	61247-102-102	VR-SEMI;EVN-DCA A03 B13 TAPG 1KB	
VR3206	61247-102-102	VR-SEMI;EVN-DCA A03 B13 TAPG 1KB	
XT3101	64539-012-011	CRYSTAL;3.579545 HC/49V	
XT3201	64539-012-011	CRYSTAL;3.579545 HC/49V	

110	69157-301-222	ASSY MAIN A;GO-VIDEO GV-2020	

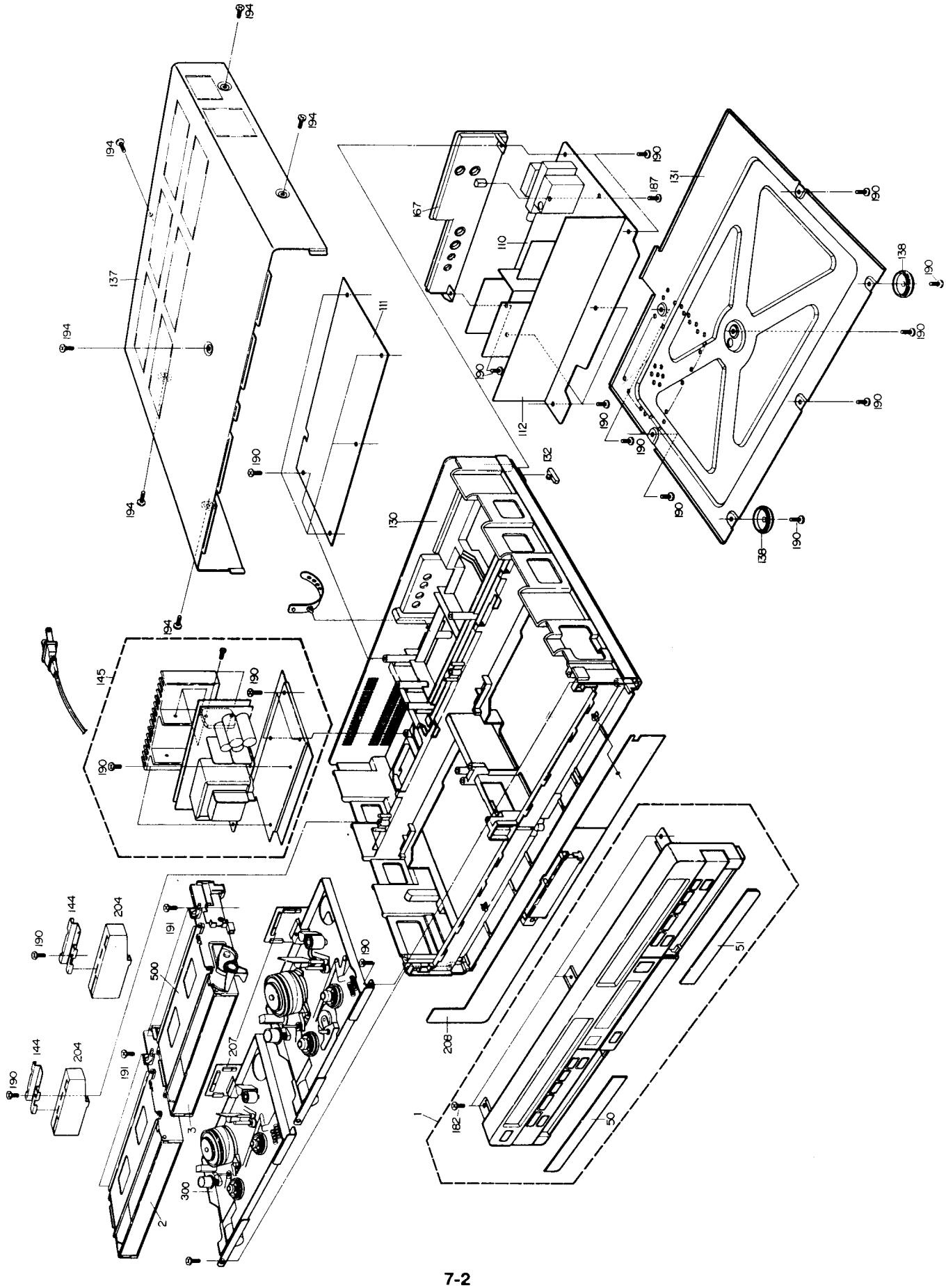
SERVO PARTS

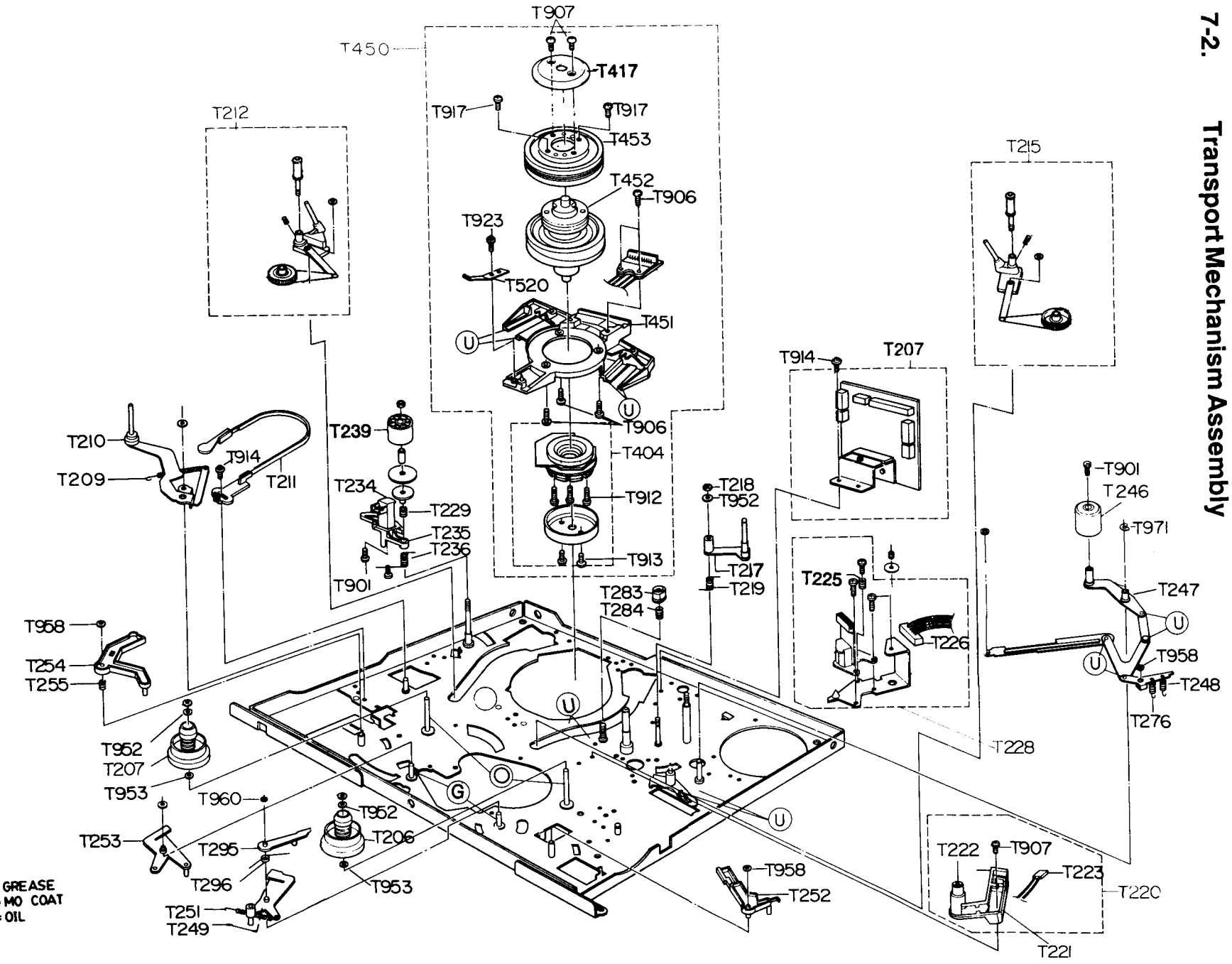
C2101	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C2102	61637-505-101	C-ELEC;CEAP 25V 100M SG(6.3X11)	
C2103	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C2104	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C2105	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C2107	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C2108	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)	
C2109	61507-121-480	C-POLYESTER;CQ921M TAPG 50V 153-K	
C2201	B1102-0125	C-FILM;CQ982P 50V T 104J-40/85 ECQV1H104	
C2202	61637-505-101	C-ELEC;CEAP 25V 100M SG(6.3X11)	
C2203	61507-121-340	C-POLYESTER;CQ921M TAPG 50V 102-K	
C2204	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C2205	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C2207	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C2209	61507-121-480	C-POLYESTER;CQ921M TAPG 50V 153-K	
CN2101	63053-917-499	LEAD CONNECTOR ASSY;1533 #28 5395-5231	
CN2102	63053-409-107	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
CN2201	63053-917-498	LEAD CONNECTOR ASSY;1533 #28 5395-5231	
CN2202	63053-409-112	LEAD CONNECTOR ASSY;1429 #26 5395-5264	
D2101	62169-406-482	DIODE;1N4148 SAMSUNG	
D2201	62169-406-482	DIODE;1N4148 SAMSUNG	
IC2101	62119-401-872	IC;KA393	
IC2201	62119-401-872	IC;KA393	
L2101	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L2102	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L2201	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L2202	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
Q2101	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q2201	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
R2101	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R2102	61048-177-474	R-CARBON;RD 1/8 T 474-J	
R2103	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R2104	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R2105	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R2106	61048-177-393	R-CARBON;RD 1/8 T 393-J	
R2107	61048-177-223	R-CARBON;RD 1/8 T 223-J	
R2108	61048-177-334	R-CARBON;RD 1/8 T 334-J	
R2201	61048-177-103	R-CARBON;RD 1/8 T 103-J	
R2202	61048-177-474	R-CARBON;RD 1/8 T 474-J	
R2203	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R2204	61048-177-122	R-CARBON;RD 1/8 T 122-J	
R2205	61048-177-104	R-CARBON;RD 1/8 T 104-J	
R2206	61048-177-393	R-CARBON;RD 1/8 T 393-J	
R2207	61048-177-223	R-CARBON;RD 1/8 T 223-J	
R2208	61048-177-334	R-CARBON;RD 1/8 T 334-J	
VR2101	61203-107-115	VR-ROUND;RK09K1110 500KB	
VR2201	61203-107-115	VR-ROUND;RK09K1110 500KB	

VIDEO PARTS

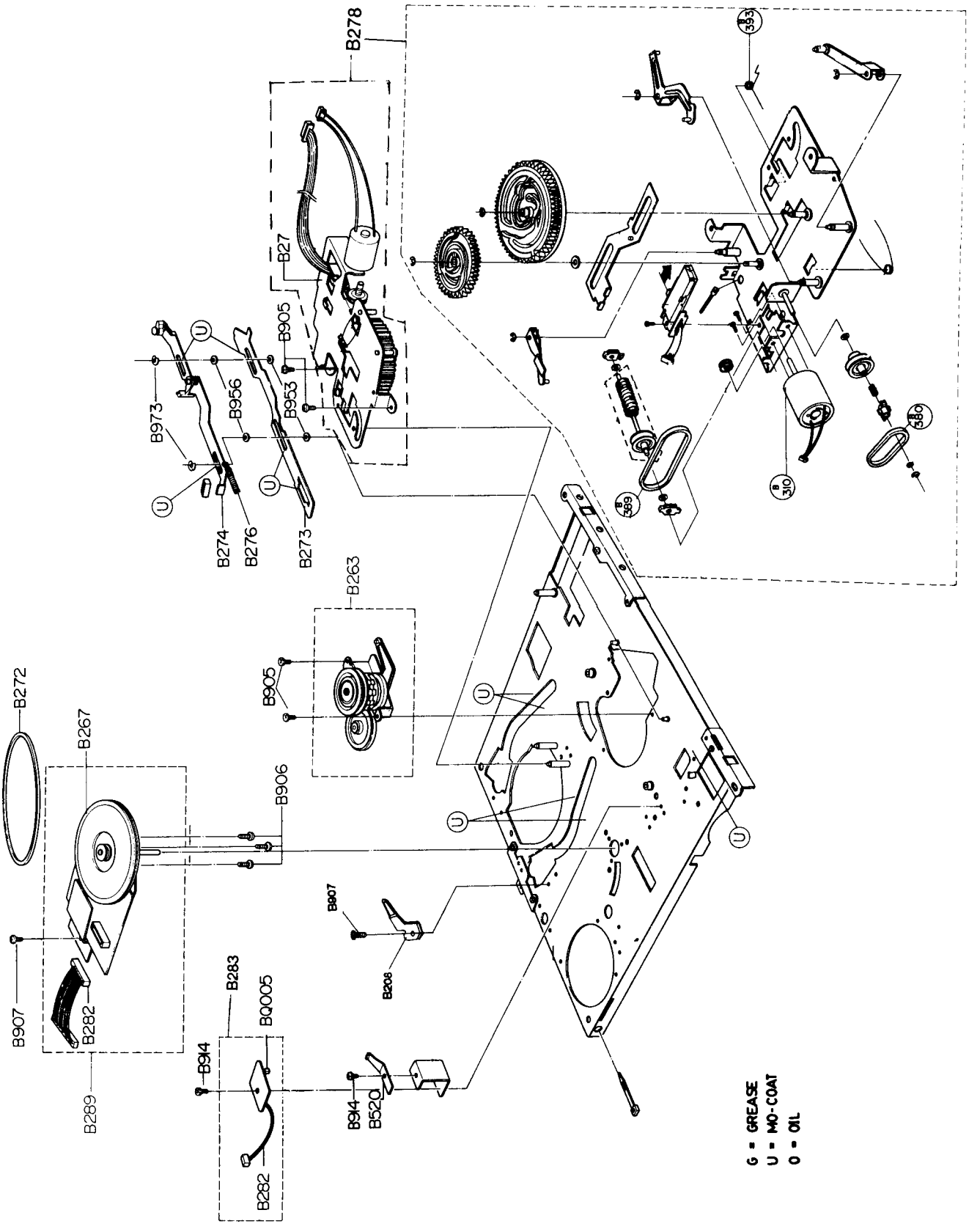
C3501	61617-408-228	C-ELEC;CEAP 50V 0.22M RSS(4X7)	
C3502	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3504	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3505	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	

7-1. Instrument Assembly

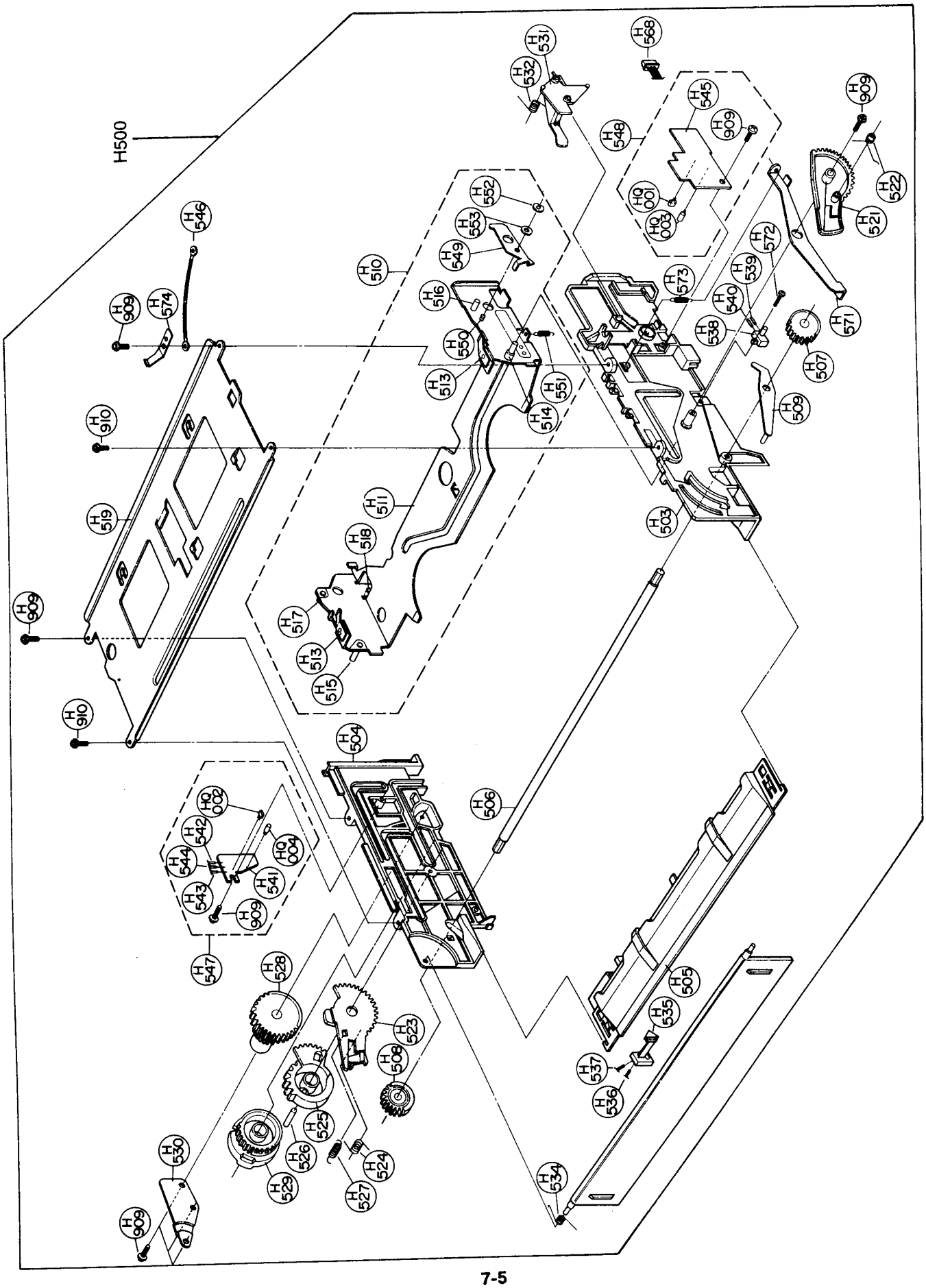



T907
T450
T417
T917
T917
T453
T212
T452
T906
T923
T520
T451
T906
T404
T912
T913
T239
T210
T914
T209
T211
T234
T229
T235
T236
T901
T218
T952
T217
T219
T283
T284
T914
T207
T215
T901
T246
T971
T247
T958
T248
T276
T225
T226
T228
T958
T254
T255
T952
T207
T953
T960
T952
T206
T253
T295
T296
T953
T251
T249
T958
T252
T222
T907
T223
T220
T221
G = GREASE
U = MO COAT
O = OIL

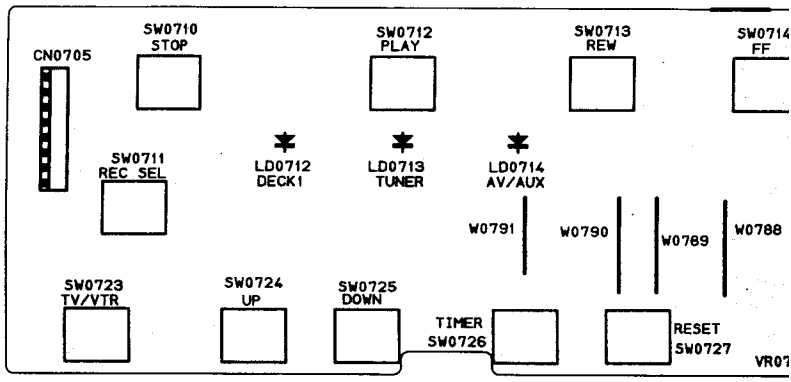
7-3. Bottom Side Mechanism Assembly



7-4. Housing Assembly



9-10. Function/Timer



CN0703

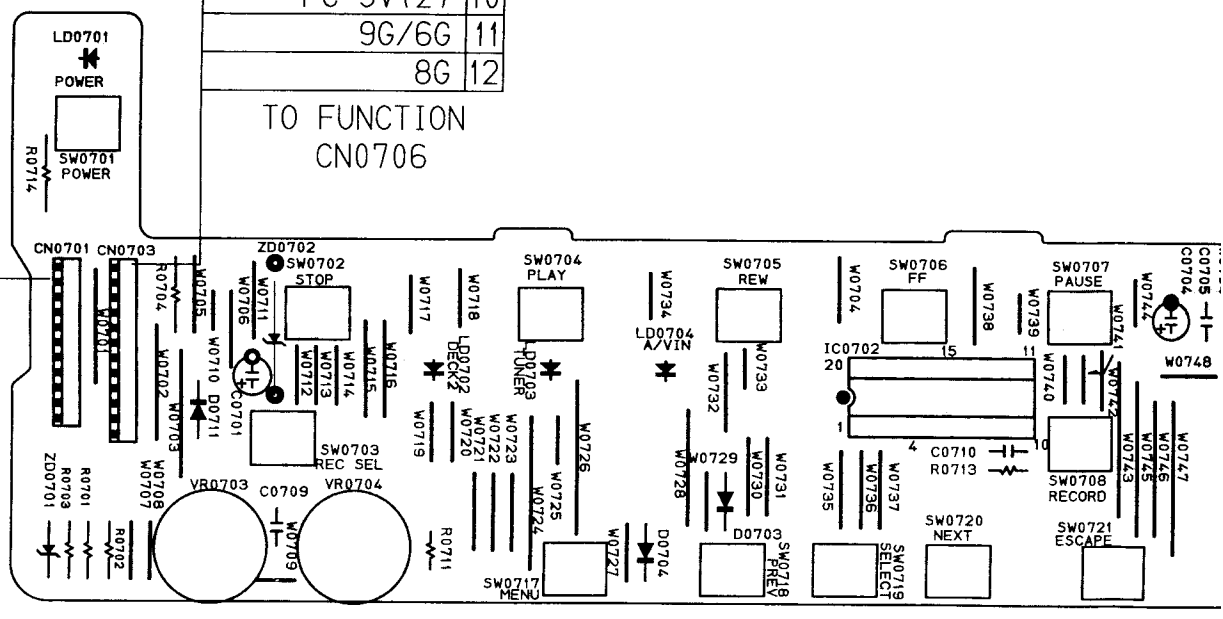
5G	1
11G	2
10G	3
12G	4
7G	5
LED DRIVE	6
LED DRIVE	7
TRACK(2)	8
SHARP(2)	9
PC 5V(2)	10
9G/6G	11
8G	12

TO FUNCTION
CN0706

CN0701

F1(4.1V)	1
F2(4.1V)	2
-30V	3
GND	4
AL 5.8V	5
TRACK(2)	6
SHARP(2)	7
PC 5V(2)	8
TRACK(1)	9
SHARP(1)	10
GND	11

TO MAIN A
CN6010



TOP SIDE

CN0706

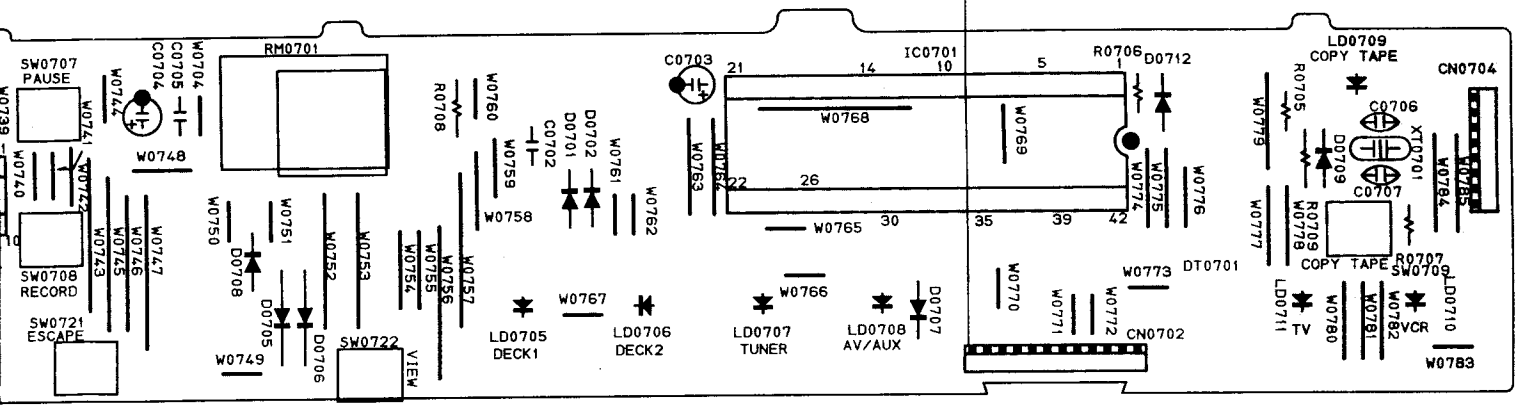
5G	1
11G	2
10G	3
12G	4
7G	5
LED DRIVE	6
LED DRIVE	7
TRACK(2)	8
SHARP(2)	9
PC 5V(2)	10
9G/6G	11
8G	12

TO TIMER
CN0703

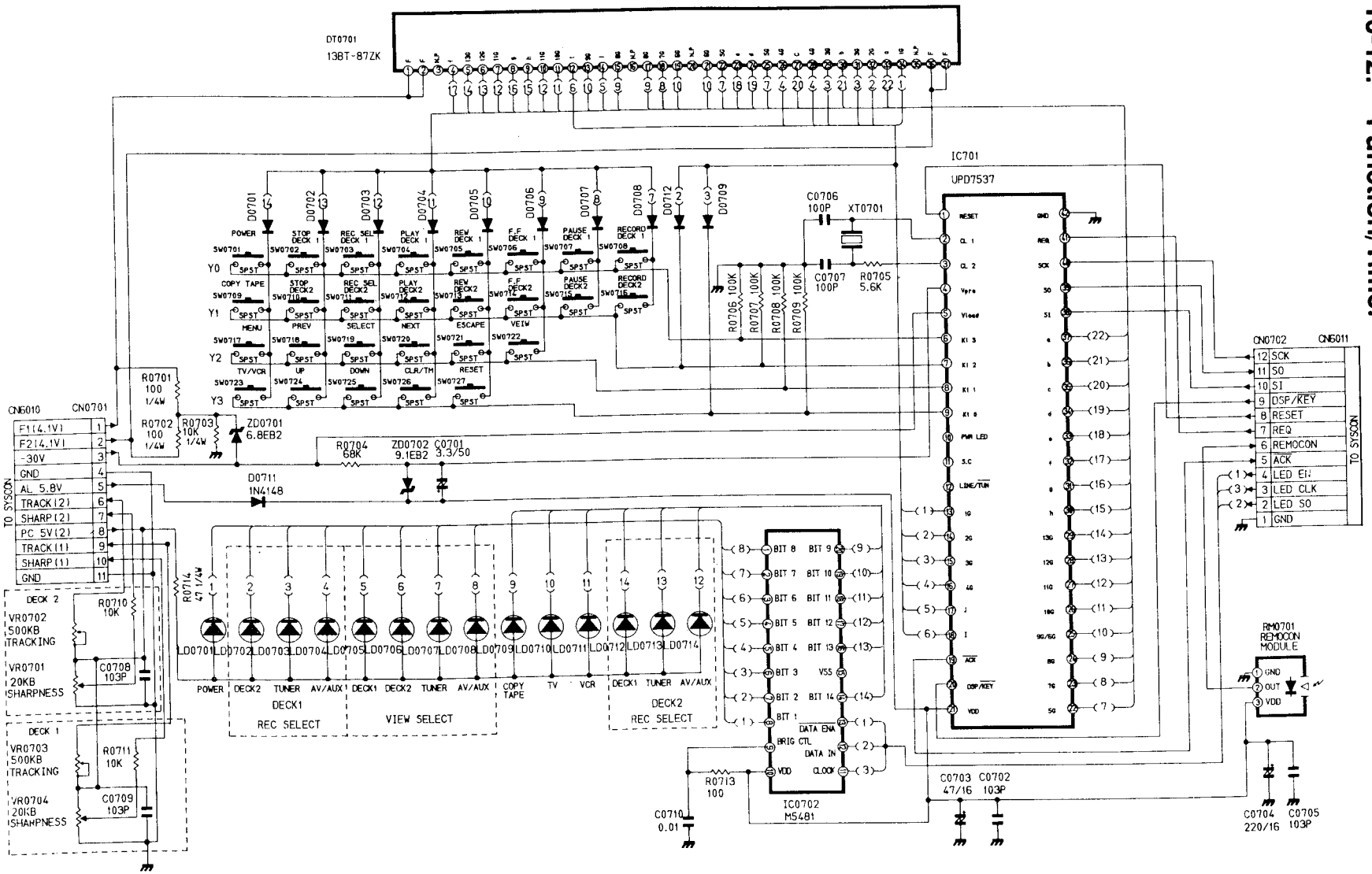
CN0702

GND	1
LED SO	2
LED CLK	3
LED EN	4
$\overline{\text{ACK}}$	5
REMOCON	6
REQ	7
RESET	8
$\overline{\text{DSP/KEY}}$	9
SI	10
SO	11
SCK	12

TO MAIN A
CN6011



10-12. Function/Timer



SPECIAL NOTE

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

NOTE

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

FUNCTION/TIM

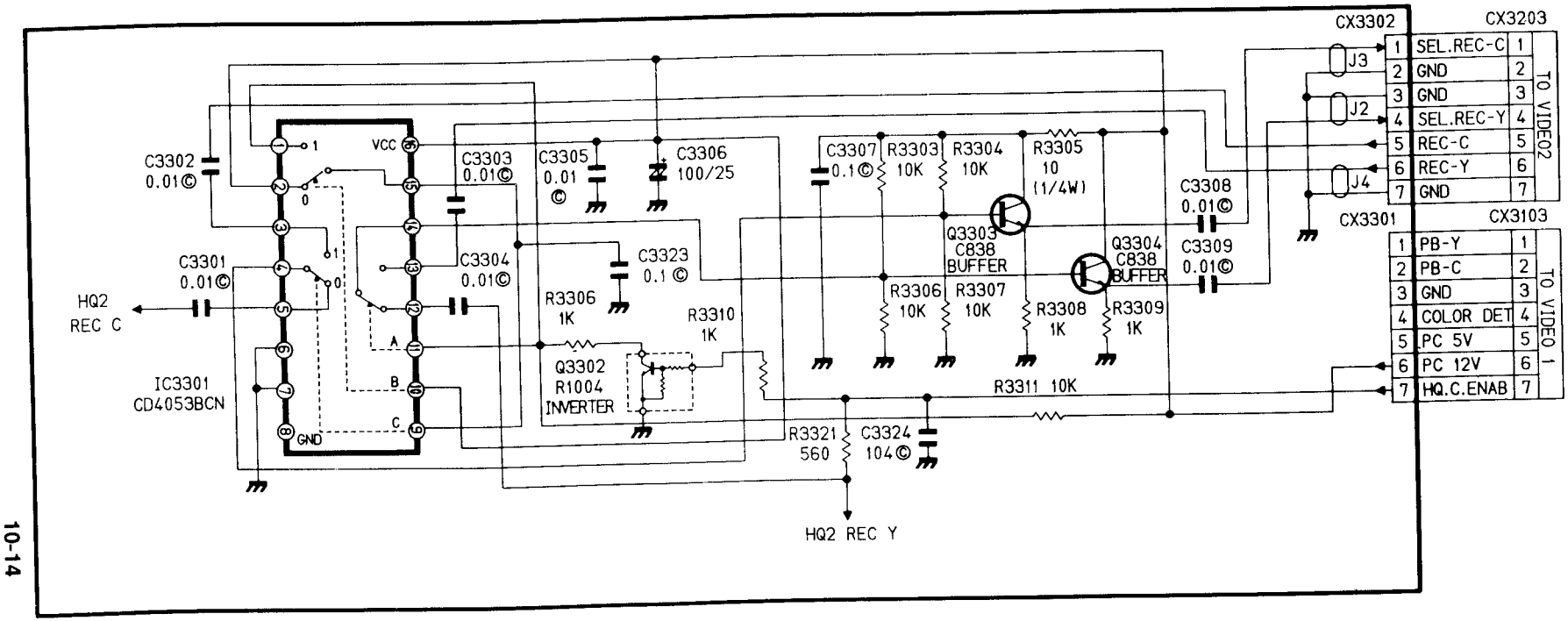
MODE	IC701						
PIN NO	STOP	REC	PLAY	REW	FFWD	REV S	FWD S
PIN 1	0	0	0	0	0	0	0
PIN 2	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 3	2.6	2.6	2.6	2.6	2.6	2.6	2.6
PIN 4	-3.6	-3.7	-3.7	-3.7	-3.6	-3.6	-3.7
PIN 5	-30.5	-30.3	-30.3	-30.5	-30.6	-30.5	-30.5
PIN 6	0	0	0	0	0	0	0
PIN 7	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 8	0	0	0	0	0	0	0
PIN 9	0.3	0.3	0.3	0.3	0.3	0.3	0.3
PIN 10	-	-	-	-	-	-	-
PIN 11	-	-	-	-	-	-	-
PIN 12	-	-	-	-	-	-	-
PIN 13	-27.5	-27.4	-27.4	-27.5	-27.6	-27.5	-27.5
PIN 14	-27.5	-27.4	-27.4	-27.5	-27.6	-27.5	-27.5
PIN 15	-27.5	-27.4	-27.4	-27.5	-27.6	-27.5	-27.5
PIN 16	-27.5	-27.4	-27.4	-27.5	-27.6	-27.5	-27.5
PIN 17	-28.8	-28.7	-28.7	-28.8	-28.9	-28.9	-28.8
PIN 18	-25.5	-25.5	-25.4	-25.5	-25.6	-25.5	-25.5
PIN 19	3.9	4.1	4.1	4.1	4.2	4.1	4.1
PIN 20	0.7	0.6	0.5	0.6	0.6	0.6	0.5
PIN 21	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 22	-27.4	-27.4	-27.3	-27.4	-27.6	-27.5	-27.4
PIN 23	-27.4	-27.3	-27.3	-27.4	-27.5	-27.5	-27.4
PIN 24	-27.4	-27.4	-27.3	-27.4	-27.6	-27.5	-27.4
PIN 25	-27.5	-27.4	-27.4	-27.5	-27.6	-27.5	-27.5
PIN 26	-27.5	-27.4	-27.4	-27.4	-27.6	-27.5	-27.5
PIN 27	-27.5	-27.4	-27.3	-27.4	-27.5	-27.5	-27.4
PIN 28	-27.4	-27.4	-27.2	-27.4	-27.5	-27.5	-27.4
PIN 29	-27.5	-27.4	-27.2	-27.4	-27.5	-27.5	-27.4
PIN 30	-27	-26.9	-26.8	-23.9	-30.1		-30
PIN 31	-6.4	-6.4	-3.2	-6.2	-6.2	-	-
PIN 32	-15.1	-15.1	-11.9	-14.8	-17.8	-	-
PIN 33	-18.1	-15.2	-14.8	-15	-18	-	-
PIN 34	-18.1	-18.1	-20.6	-17.9	-24	-	-24
PIN 35	-17.9	-23.9	-20.5	-20.8	-23.9	-	-24
PIN 36	-18.2	-21.1	-14.7	-17.9	-24	-	-24
PIN 37	-12.4	-15.3	-17.6	-18	-18.1	-	
PIN 38	4.8	4.8	4.8	4.8	4.8	4.8	4.8
PIN 39	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 40	4.9	4.9	4.9	4.9	4.9	4.9	4.9
PIN 41	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PIN 42	0	0	0	0	0	0	0

NOTES :
1) NO OSD
2) NO DATE AND TIME
3) NO RF
4) REC SPEED, D1 & D2 = SP
5) TEST TAPE, D1 & D2 = SP
6) TUNER CHANNEL = D2
7) VIEW SOURCE = TUNER
8) TV/VCR MODE = VCR

MODE	IC702						
PIN NO	STOP	REC	PLAY	REW	FFWD	REV S	FWD S
PIN 1	1	1	1	1	1	1	1
PIN 2	1	1	1	1	1	1	1
PIN 3	1	1	1	1	1	1	1
PIN 4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 5	1	1	1	1	1	1	1
PIN 6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 7	1	1	1	1	1	1	1
PIN 8	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PIN 9	5	5	5	5	5	5	5
PIN 10	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 11	0	0	0	0	0	0	0
PIN 12	0	0	0	0	0	0	0
PIN 13	3.7	3.7	3.7	3.7	3.7	3.7	3.7
PIN 14	1	1	1	1	1	1	1
PIN 15	0	0	0	0	0	0	0
PIN 16	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 17	1	1	1	1	1	1	1
PIN 18	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 19	1	1	1	1	1	1	1
PIN 20	1.3	1.3	1.3	1.3	1.3	1.3	1.3

NOTES :
1) VIEW SOURCE = D1
2) REC SOURCE, D1 & D2 = TUNER
3) TV/VCR MODE = VCR
4) TEST TAPE = D1

10-10. HQ Copy



SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

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

DECK JOINT

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC0204						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	0	0	0	0	0	0
PIN 2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
PIN 4	1.0	14.9	14.9	14.9	15.0	14.9	14.9
PIN 5	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 6	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 7	15.2	15.0	15.1	15.0	15.1	15.0	15.0
PIN 8	15.2	15.0	15.0	15.0	15.1	15.0	15.0
PIN 9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
PIN 10	0.5	0.5	0.5	0.5	0.5	0.5	0.5

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / TR NO	STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q0210	0	0	0.5	0	-	-	0	-	-	0	2.5	0.3	0	2.5	0.3	0	-	-	0	-	-
Q0211	0	0	4.7	0	14.9	0	0	14.9	0	0	15.0	0	0	15.0	0	0	0	4.7	0	14.9	0
Q0212	15.2	1.0	15.2	15.0	14.9	15.0	15.1	14.9	15.0	15.1	15.0	15.1	15.1	15.0	15.1	15.0	1.0	15.0	15.0	14.9	15.0

the electrostatically sensitive (ES) devices section of this service manual.

NOTE
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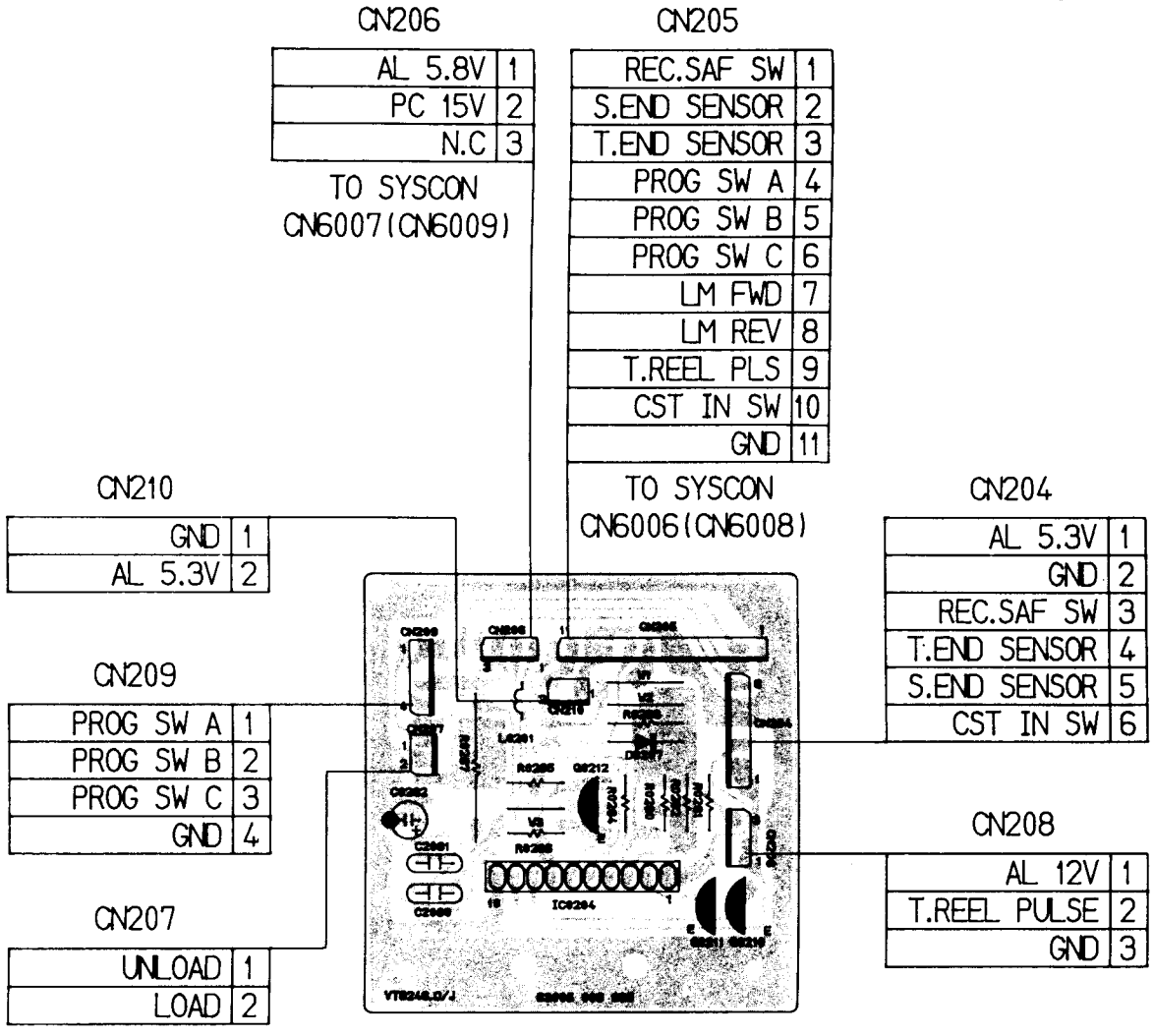
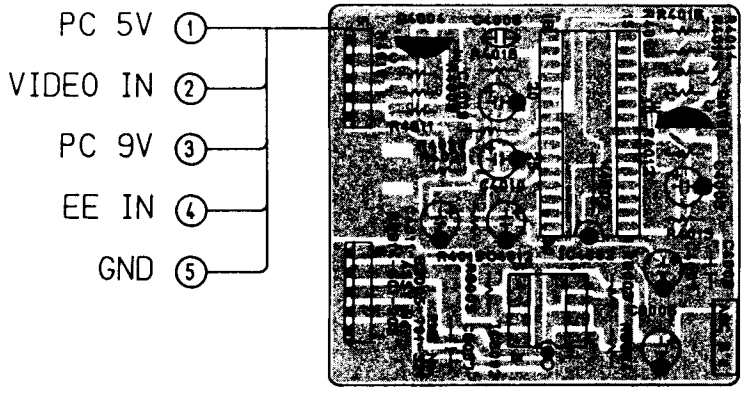
9-8. Deck Joint

TOP SIDE



9-9. AGC

TOP SIDE



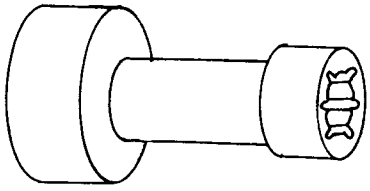
3. MECHANICAL ADJUSTMENT

3-1. MECHANICAL ADJUSTMENT TOOLS

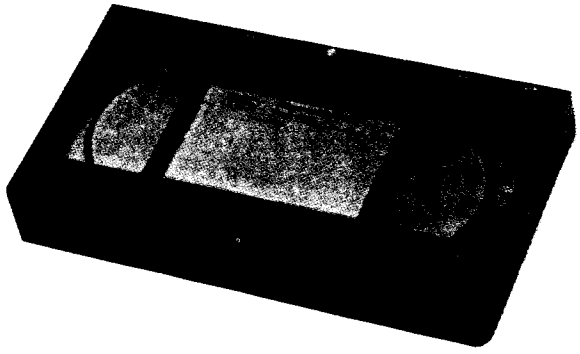
NO	JIG ITEM	CODE NO.	SPECIFICATION	DESCRIPTION	SKETCH NO.
1	TORQUE HEAD GAUGE	68140-100-100	COMMON ; LONG	; Use for torque adjustment of Take up / Supply Reel.	A
2	ALIGNMENT TAPE	68140-100-201 68140-100-202 68140-100-203 68140-100-204 68140-100-213	NTSC ; SR 1-1 NTSC ; SR 2-1 NTSC ; SVJ -1 NTSC ; SHR 2 -1 NTSC ; SMRSB	; LION PATTERN ; 7KHz ; COLOR BAR ; 1KHz ; PROGRAM (MONO) ; COLOR BAR (Hi-Fi) ; L-1KHz, R-400Hz ; DROP OUT	B
3	BACK TENSION CASSETTE TAPE	68140-100-105 (S.N.A)	COMMON	; Use for back tension adjustment of Supply reel.	C
4	MASTER PLANE AND REEL DISK HEIGHT JIG	68140-107-102 (S.N.A)	G7/8	; Use for height Adjustment of Reel Disk and Deck plate.	D
5	SERVICE JIG KIT	68140-100-301	UPPER DRUM REPLACING JIG	Use for upper drum replacement.	E(A)
			DRIVER HANDLE	Use for connection with each driver.	E(B)
			CAP. ADJ. DRIVER	; Use for CAP nut Adjustment and X-position Adjustment with A/C Head movement.	E(C)
			(+) (-) DRIVER	; Use for screw Adjustment and Audio Azimuth Adjustment.	E(D-G)
			N3 BOX DRIVER	; Use for A/C Head or Roller supply review arm replacement and Tape transport Adjustment.	E(H)
			HEX WRENCH (0.9mm) HEX WRENCH (1.5mm) HEX WRENCH (2.0mm)	; Use for Guide Roller set screw fastening. ; Use for AudioAzimuth Adjustment (Differ from item) ; Use for Drum bush and driver replacement.	E(I)
			CERAMIC DRIVER	; Use for Electrical Adjustment.	E(J)
			HOUSING ASSEMBLING JIG	; Use for Housing Assembly. (Refer to service manual for further information)	E(K)
			TRANSPORT MECHANISM ADJUSTING DRIVER	; Use for height adjustment of Guide Roller for Envelope linearity adjustment.	E(L)

S.N.A:Service Not Available

A : TORQUE HEAD GAUGE

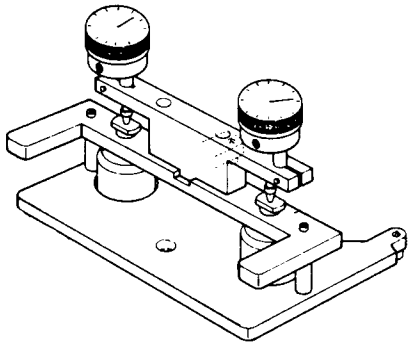


B : ALIGNMENT TAPE

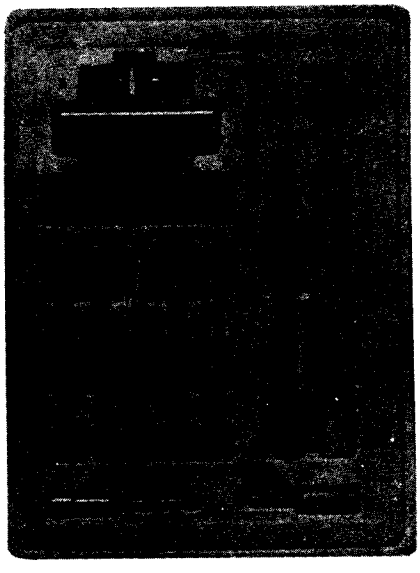


C : BACK TENSION CASSETTE TAPE

D : MASTER PLANE AND REEL DISK HEIGHT JIG



E : SERVICE JIG KIT



(A) UPPER DRUM REPLACING JIG

(B) DRIVER HANDLE

(C) CAP.ADJ.DRIVER

(D-G) (+) (-) DRIVER

(H) N3 BOX DRIVER

(I) HEX WRENCH (0.9mm)
HEX WRENCH (1.5mm)
HEX WRENCH (2.0mm)

(J) CERAMIC DRIVER

(K) HOUSING ASSEMBLING JIG

(L) TRANSPORT MECHANISM ADJUSTING DRIVER

3-2. Reel Disk Heights

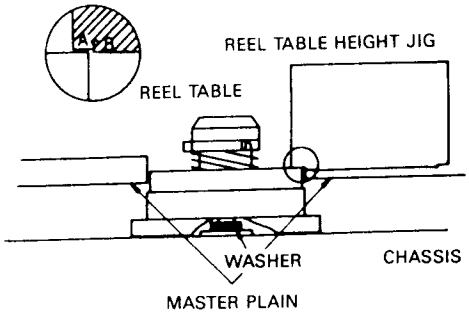


Fig. 1

The height of the supply and take-up turntables should be the same, +/- 0.2mm. Turntable heights are adjusted by changing plain washer stack located under each turntable.

Check turntable heights by installing the Master Plain. Set the Reel Disk Height Jig in place and check the height of the supply and take up turntables. (See Fig. 1).

The size of washer is 0.5mm (3.2mm ID). This washer should be used to achieve equal reference heights for both turntables.

Note : For proper height point "A" should slide over the reel disk and point "B" should not . (Fig. 1)

3-3. Back Tension Adjustment

When the back tension is properly adjusted, the service test tape recorded will play back with minimum skew error-picture displacement in line following head switching. The tension is set as follows :

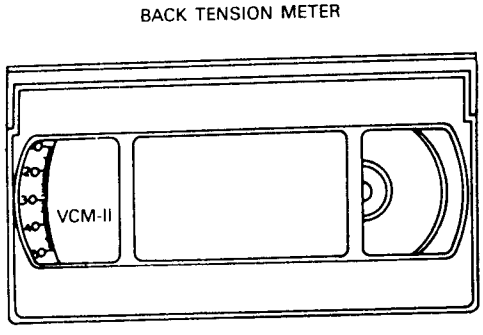


Fig. 2 Back Tension Meter

1. Load the VCR with the back tension adjustment tape.
2. Place the VCR in the " play " mode.
3. Read the scale on the reel disk (S).
4. This reading should be between 39.5 and 44.5.
5. After loosening the screw, move the tension spring holder in direction "b" , If the tension adjustment tape reads 45 or higher, move in direction "a" when it is 39 or lower, and adjust the back tension for a nomal reading of 42 on the scale.
6. Recheck the arm tension position when the back tension is changed . (6 or more).

Note : The VCR must be in a horizontal position for this adjustment.

3-4. Arm Tension Position Adjustment

1. After removing the housing assembly, momentarily short the tenth PIN of deck joint P.C Board's connector CN205 to ground.
2. Place the instrument in the "play" mode.
3. After loading is complete, loosen the screw holding the tension holder A and adjust so that the clearance between lower edge of tension pole ass'y and chassis is 1.5mm +/- 0.5mm.
4. Tighten screw to secure adjustment.

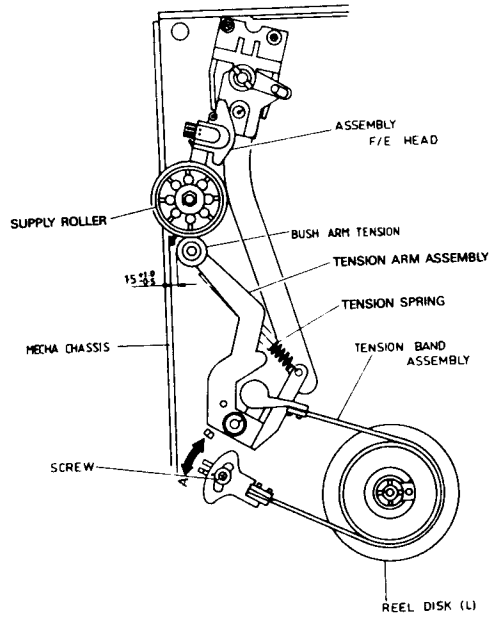


Fig. 3 Arm Tension/Back Tension

3-5. Brake Torque Confirmation

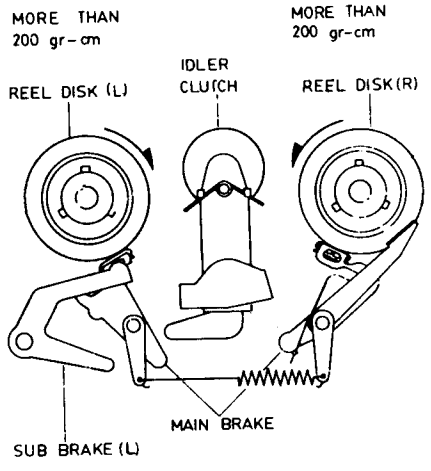


Fig. 4 Main Brake Torque

1. Remove top cover and place VCR in the "stop" mode.
2. Clean the brake surfaces on turntables using a cloth and solvent, before measuring torque.
3. Attach the torque gauge head to the torque gauge.
4. Place torque gauge on the reel disk (S) turntable.
5. Turn torque gauge clockwise until the brake begins slipping. Maintain "slipping " rotation and read torque-torque reading should be more than 200grams-cm.
6. Repeat for the take up side turning the torque gauge counterclockwise-reading should be more than 200grams-cm.

Note : Brake torque problems can cause tape stretch, broken tape or loose tape wind in cassette.
These symptoms can usually be corrected by properly cleaning. If not replace brakes.

3-6. Play, Fast Forward, Rewind Torque Confirmation

1. Place the cassette holder in the loading state without inserting a cassette tape.
2. Attach the torque gauge head to the torque gauge.
3. Place torque gauge on the reel disk (T), operate VCR in the "SP Record " mode - torque should be measured 150 + /- 30 grams-cm.
4. Press Fast Forward button-torque reading should be 600 grams-cm minimum.
5. Place torque gauge on the reel disk (S) and operate instrument in the "rewind" mode-torque reading should be 600 grams-cm minimum.

3-7. Rough Tape Travel Check

Using a blank tape, place the VCR in "play " mode and note the following.

1. The tape should be in full contact with all tape guide posts.
2. The tape should be crease-free with no slack.
3. The supply roller should be moving freely.
4. The tape should be perpendicular to the longitudinal axis of the heads when crossing the erase head and the A/C head.
5. The tape should be centered top to bottom on the head when crossing the erase head.
6. The tape should follow the lower-edge guide surface on the lower drum.

3-8. Creasing or Slack Tape

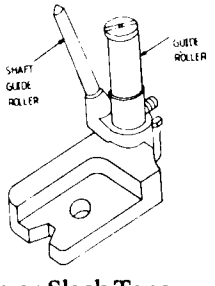


Fig. 5 Creasing or Slack Tape

Load the VCR with a blank tape and place in "play" mode.
With the tape running, inspect the tape path for creasing or frilling along top or bottom edge of tape. If the tape is creasing or frilling, check the tape as it goes "on" and comes "off" the lower drum.
The tape should follow the lower edge guide surface in the drum. If the tape is high on the guide surface, adjust guide rollers to correct this condition (use guide roller adjusting driver).
It will now be necessary to perform guide rollers adjustments and confirm interchangeability.

3-9. Mechanical Interchangeability

The tape-guide adjustments position the tape so that the prerecorded tracks on the test tape align perfectly with the scan of the video head assembly. The mechanical interchangeability adjustment procedures will insure that a tape recorded on the VHS recorder will play back properly on another machine.

Usually little or on mechanical adjustment is required after routine (head replacement) servicing. Before making any adjustments, perform the following interchangeability confirmation procedure to determine if adjustment is required. If the video heads are replaced, it will also neceassary to confirm the PG shifter adjustment.
If major mechanical servicing was performed (tape guide replacement, etc.) perform "Rough Tape Travel Adjustment" before using test tape.

3-10. Interchangeability Confirmation

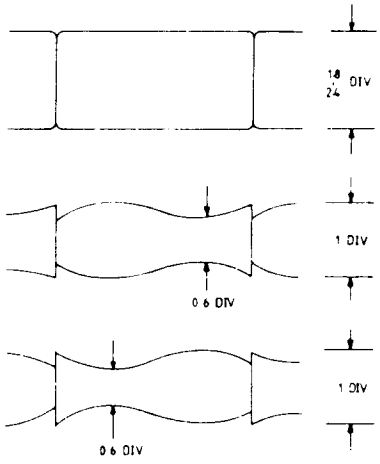


Fig. 6 Interchangeability Confirmation

This confirmation should be performed after any servicing operation that could adversely affect the tape path : i.e. Lower drum motor replacement, tape guide replacement, audio/control head replacement, etc.
If unit passes this confirmation, no tape guide adjustment is required.

Preliminary : This adjustment should be performed after the Tracking Pr adjustment is completed.

1. Connect ch... l scope probe (Vert. 2V/div : Horiz. 5ms/div., to TP3108 (MAIN C PCB Deck1),TP3201(Deck 2).
2. Connect channel-2 scope probe (10mV/div) to TP3101 (MAIN A PCB :PB FM level).
3. Play monoscope signal on test tape (Alignment Tape SR 1-1).
4. Adjust tracking control (VR0703) for maximum FM envelope amplitude (TP3101 signal) at center of envelope.
5. Adjust scope vertical gain control so that maximum envelope amplitude is 1.8-2.4 graticule divisions.
6. Turn tracking control (VR0703) to the left so that maximum envelope amplitude is 1 graticule divisions (Fig.6).
7. Confirm that the minimum envelope amplitude is 0.6 graticule divisions or more (Fig. 6.)
8. Turn tracking control (VR0703) to the right so that maximum envelope amplitude is 1 graticule divisions (Fig. 6.)
9. Confirm that the minimum envelope amplitude is 0.6 graticule divisions or more (Fig. 6).
10. If readings are correct, no guide roller adjustments are necessary.
11. Set tracking control to detent (fixed) position. Adjust control track/Audio head assembly position (X-value)to obtain maximum FM envelope (TP3101 signal) at the detent position.
12. Repeat steps 1 thru 11 for DECK2 (using VR0702 and TP3201)

Note : If the lower drum motor assembly has been replaced, perform the following electrical adjustments.
* PG Shifter adjustment.
* Record Chroma and Luminance Level adjustment.

3-11. Control Pulse Adjustment

1. Connect scope probe to TP2002.
2. Place unit in SP play mode.
3. Adjust HEX NUT (A) for maximum amplitude.

3-12. Audio/Control Head (Height / Tilt /Azimuth)

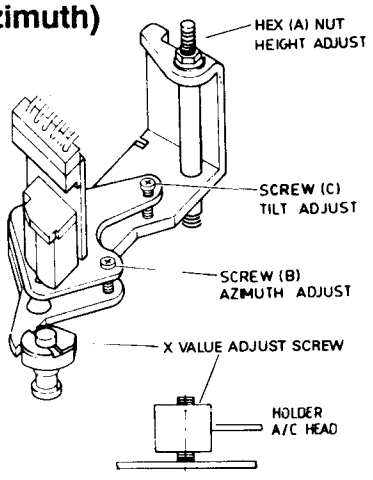


Fig. 7 Audio/Control Head Assembly

1. Connect channel 1,2 scope probes (0.5/div. : 1ms/div.) to TP530..., TP5304 (use audio jacks) located on the main-B circuit board.
2. Play back the 1-KHz (color bars) audio signal on test tape (Alignment Tape SR-2-1).
3. Alternately adjust height screw (B) and tilt adjust screw (C) for maximum output.
4. Play back the 7-KHz audio on test tape. (Alignment Tape SR1-1).
5. Adjust azimuth screw (B) for maximum output.
6. Repeat steps 3 and 5 for maximum 7KHz and 1KHz output.
7. Lock the HEX NUT (A) with paint.

3-13. Guide Rollers Adjustment

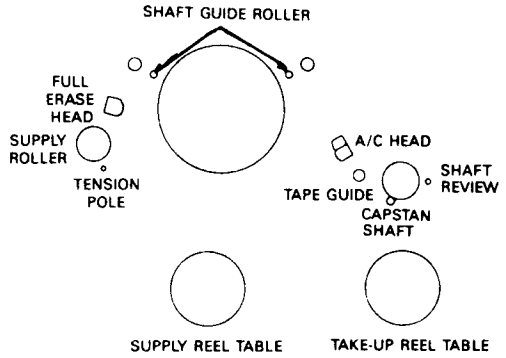


Fig. 8 Tape Guides

1. Connect channel-1 scope probe (2V/div.: 5ms/div.) to TP0201.
   Trigger the scope on channel-1.
2. Connect channel-2 scope probe (10mV/div.) to TP9101 (MAIN PCB : PB FM LEVEL).
3. Set tracking control to detent (fixed) position and playback test tape monoscope signal. (Alignment tape SR1-1). Slightly loosen screw on pole base guide rollers.
4. Adjust guide roller down using guide roller adjusting driver (CW)until top edge of tape slightly bows at the top tape guide.
5. Monitor the head FM envelope at TP9101.
6. Turn (CCW) side roller (right guide) to obtain maximum amplitude at right side of Head envelope.
7. Turn (CCW) guide roller (lift guide) to obtain maximum amplitude at left side of Head envelope.
8. Adjust tracking control (VR0701) for best envelope.
9. Touch up guide rollers for maximum amplitude flat envelope. Tighten set screw at pole base of guide rollers.
10. Adjust control head position (if necessary) to move the best envelope condition to the tracking control detent position.

Note : In the event that correct head envelope is not obtainable, check Audio/Control (A/C)head adjustment.

3-14. Audio/Control head (A/C Head Horizontal Position)

This adjustment establishes proper tape tracking when the tracking control (VR0701) is in its detent position.

Note : This adjustments should only be made after the tracking preset adjustment is completed. (See Electrical Adjustments).

1. Connect scope probe (10V/div,: 5mss/div.) to TP9101 (MAIN PCB : PB FM LEVEL). Trigger using TP0201.
2. Set tracking control (VR0701) to the detent (fixed) position.
3. Playback monoscope signal on test tape. (Alignment tape SR 1-1).
4. Carefully move the A/C head base plate in either direction for maximum head envelope output by adjusting the X-value screw. (Fig. 7).

3-15. Operating The VCR without inserting a Cassette Tape

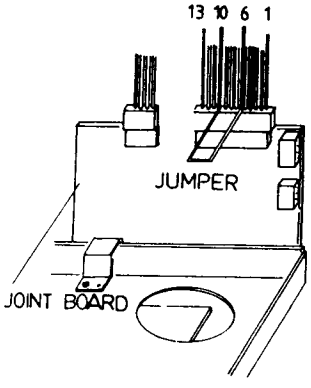


Fig. 9

1. Remove the top cover.
2. Remove the housing assembly .
3. Plug power cord of the VCR into AC outlet.
4. Turn "on" the power switch of the VCR.
5. Connect jumper to short circuit shortly between ground and pin 6 of connector.
6. The above procedure enables the VCR to be operated without loading a cassette tape.

Note : Operate the play or record button in order to place the VCR in the record mode or in the play mode.

3-16. Use of Lock-tite after Mechanical Adjustment

1. Apply Lock-tite (or equivalent) to nut and/or screw threads after adjustments are made to any of the four (4) places shown in Fig. 10.

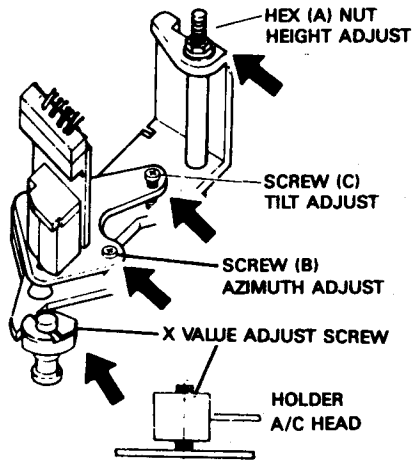
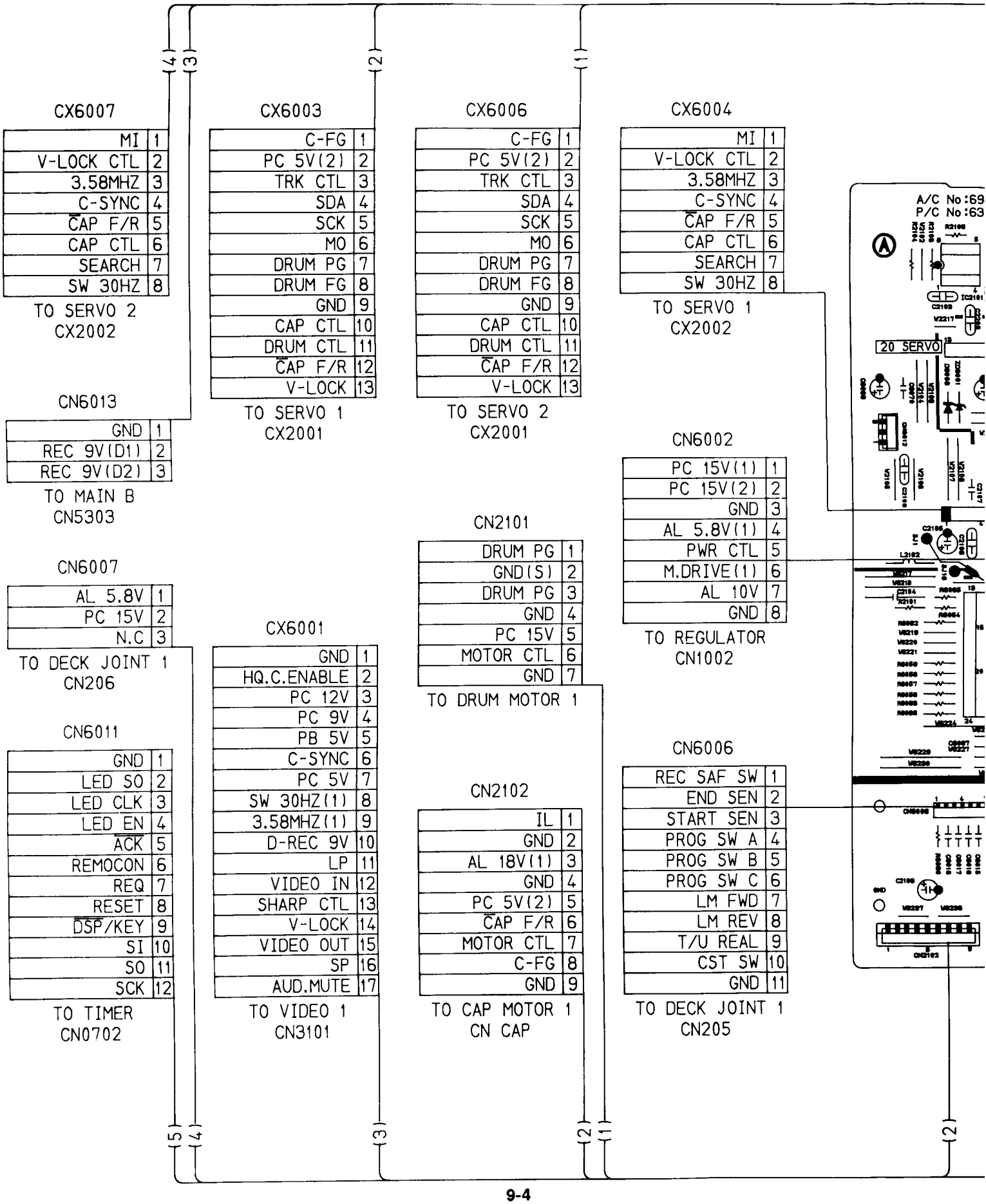
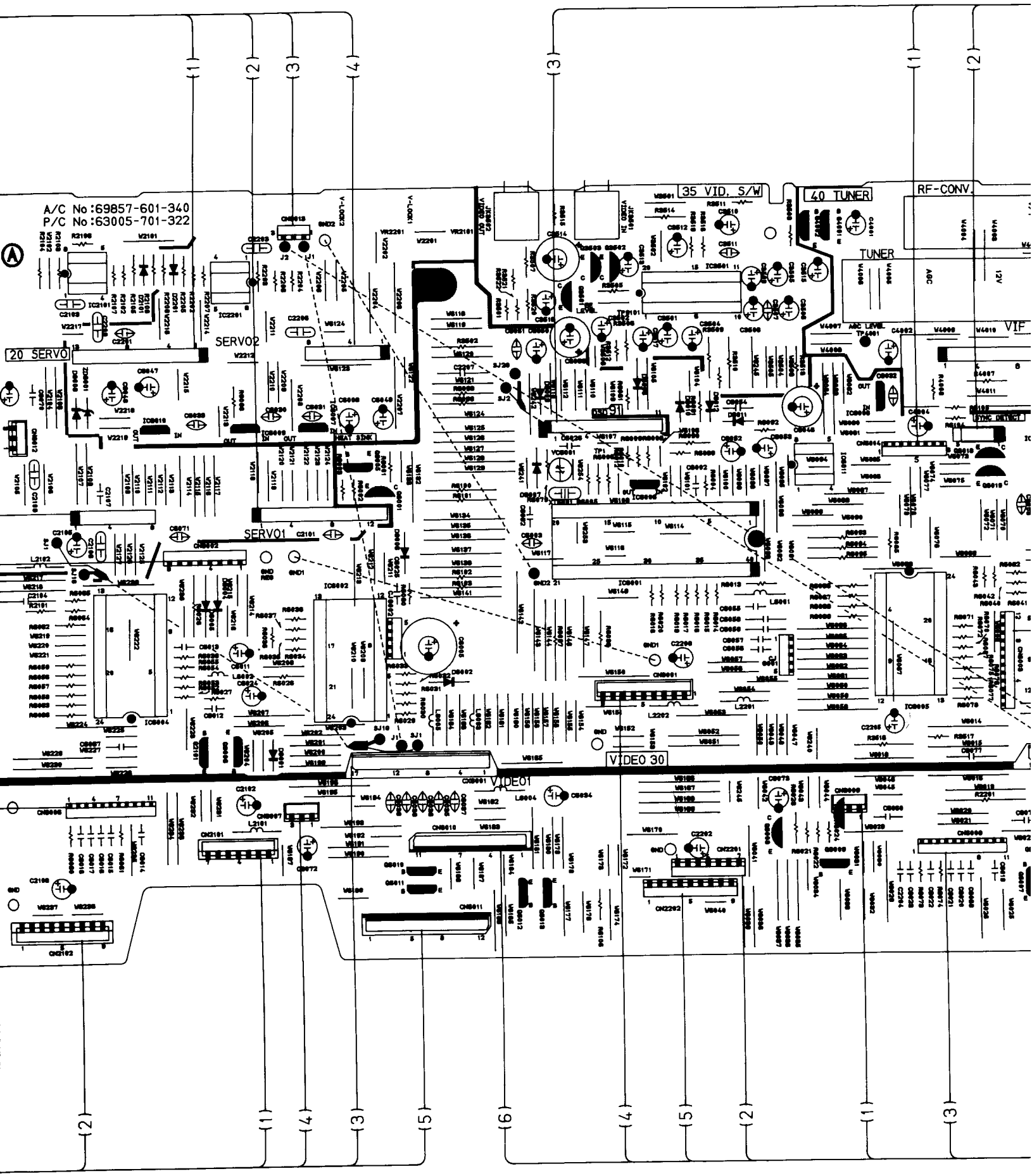


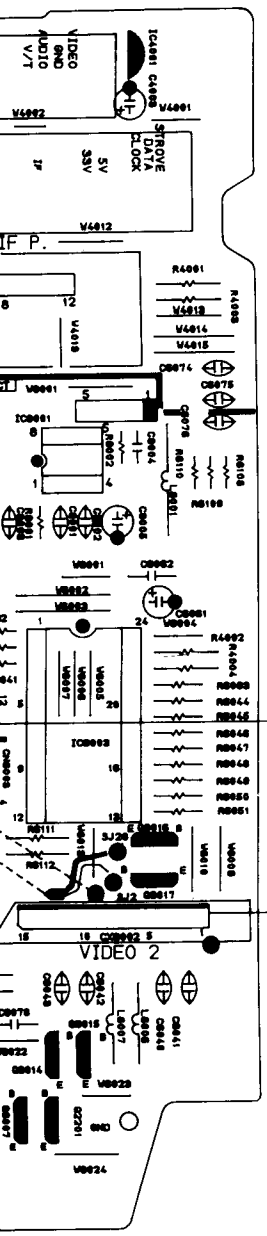
Fig. 10

9-3. Main A


CX6007
MI 1
V-LOCK CTL 2
3.58MHZ 3
C-SYNC 4
CAP F/R 5
CAP CTL 6
SEARCH 7
SW 30HZ 8
TO SERVO 2 CX2002
CX6003
C-FG 1
PC 5V(2) 2
TRK CTL 3
SDA 4
SCK 5
MO 6
DRUM PG 7
DRUM FG 8
GND 9
CAP CTL 10
DRUM CTL 11
CAP F/R 12
V-LOCK 13
TO SERVO 1 CX2001
CX6006
C-FG 1
PC 5V(2) 2
TRK CTL 3
SDA 4
SCK 5
MO 6
DRUM PG 7
DRUM FG 8
GND 9
CAP CTL 10
DRUM CTL 11
CAP F/R 12
V-LOCK 13
TO SERVO 2 CX2001
CX6004
MI 1
V-LOCK CTL 2
3.58MHZ 3
C-SYNC 4
CAP F/R 5
CAP CTL 6
SEARCH 7
SW 30HZ 8
TO SERVO 1 CX2002
CN6013
GND 1
REC 9V(D1) 2
REC 9V(D2) 3
TO MAIN B CN5303
CN6002
PC 15V(1) 1
PC 15V(2) 2
GND 3
AL 5.8V(1) 4
PWR CTL 5
M.DRIVE(1) 6
AL 10V 7
GND 8
TO REGULATOR CN1002
CN6007
AL 5.8V 1
PC 15V 2
N.C 3
TO DECK JOINT 1 CN206
CN2101
DRUM PG 1
GND(S) 2
DRUM PG 3
GND 4
PC 15V 5
MOTOR CTL 6
GND 7
TO DRUM MOTOR 1
CX6001
GND 1
HQ.C.ENABLE 2
PC 12V 3
PC 9V 4
PB 5V 5
C-SYNC 6
PC 5V 7
SW 30HZ(1) 8
3.58MHZ(1) 9
D-REC 9V 10
LP 11
VIDEO IN 12
SHARP CTL 13
V-LOCK 14
VIDEO OUT 15
SP 16
AUD.MUTE 17
TO VIDEO 1 CN3101
CN6011
GND 1
LED SO 2
LED CLK 3
LED EN 4
ACK 5
REMOCON 6
REQ 7
RESET 8
DSP/KEY 9
SI 10
SO 11
SCK 12
TO TIMER CN0702
CN2102
IL 1
GND 2
AL 18V(1) 3
GND 4
PC 5V(2) 5
CAP F/R 6
MOTOR CTL 7
C-FG 8
GND 9
TO CAP MOTOR 1 CN CAP
CN6006
REC SAF SW 1
END SEN 2
START SEN 3
PROG SW A 4
PROG SW B 5
PROG SW C 6
LM FWD 7
LM REV 8
T/U REAL 9
CST SW 10
GND 11
TO DECK JOINT 1 CN205
A/C No:69
P/C No:63
20 SERVO


A/C No:69857-601-340
P/C No:63005-701-322
20 SERVO
SERVO2
SERVO1
35 VID. S/W
40 TUNER
TUNER
RF-CONV.
VIF
VIDEO 30
VIDEO1
HEAT SINK
SYNC DETECT

TOP SIDE



CN6003

D.1 LP	1
D.1 AUD.MUTE	2
D.2 AUD.MUTE	3
D.2 LP	4
D.1 D-PB	5
D.2 D-PB	6
CS	7
P20	8
P21	9
P22	10
P23	11
PROGRAM	12

TO MAIN B
CN5301

CN6004

PC 12V	1
GND	2
GND	3
TUNER MPX IN	4
TUNER OUT	5
TV ST LED	6
TV SAP LED	7
VCC(AL 5.8V)	8

TO MAIN B
CN5302

PC 5V	1
VIDEO IN	2
PC 9V	3
EE IN	4
GND	5

TO AGC

CX6009

AL 5V	1
VIDEO IN	2
VIDEO OUT	3
GND	4
DATA	5
$\overline{\text{STROBE}}$	6
CLOCK	7
GND	8
SD	9
OSD MUTE	10
T.OSD	11

TO OSD
CX9101

CX6002

GND	1
PC 9V	2
PC 5V	3
C-SYNC	4
PB 5V	5
SW 30HZ(2)	6
3.58MHZ(2)	7
D-REC 9V	8
LP	9
B VIDEO IN	10
SHARP CTL	11
V-LOCK	12
B VIDEO OUT	13
SP	14
AUD.MUTE	15

TO VIDEO 2
CN3201

CN2201

DRUM PG	1
GND(S)	2
DRUM PG	3
GND	4
PC 15V	5
MOTOR CTL	6
GND	7

TO DRUM MOTOR 2

CN6001

GND	1
PC 5V(2)	2
CH.VTG 33V	3
AL 5.8V(2)	4
M.DRIVE(2)	5
GND	6
-30V	7
AC 4.1V	8
AC 4.1V	9

TO REGULATOR
CN1001

CN6008

REC SAF SW	1
END SEN	2
START SEN	3
PROG SW A	4
PROG SW B	5
PROG SW C	6
LM FWD	7
LM REV	8
T/U REAL	9
CST SW	10
GND	11

TO DECK JOINT 2
CN205

CN2202

IL	1
GND	2
AL 18V(1)	3
GND	4
PC 5V(2)	5
$\overline{\text{CAP F/R}}$	6
MOTOR CTL	7
C-FG	8
GND	9

TO CAP MOTOR 2
CN CAP

CN6010

F1(4.1V)	1
F2(4.1V)	2
-30V	3
GND	4
AL 5.8V	5
TRACK(2)	6
SHARP(2)	7
PC 5V(2)	8
TRACK(1)	9
SHARP(1)	10
GND	11

TO TIMER
CN0701

CN6009

AL 5.8V	1
PC 15V	2
N.C	3

TO DECK JOINT 2
CN206

9-4. Main B

CN5203

PB L CH	1
GND	2
REC L CH	3

TO DECK 2
CN0001

CN5302

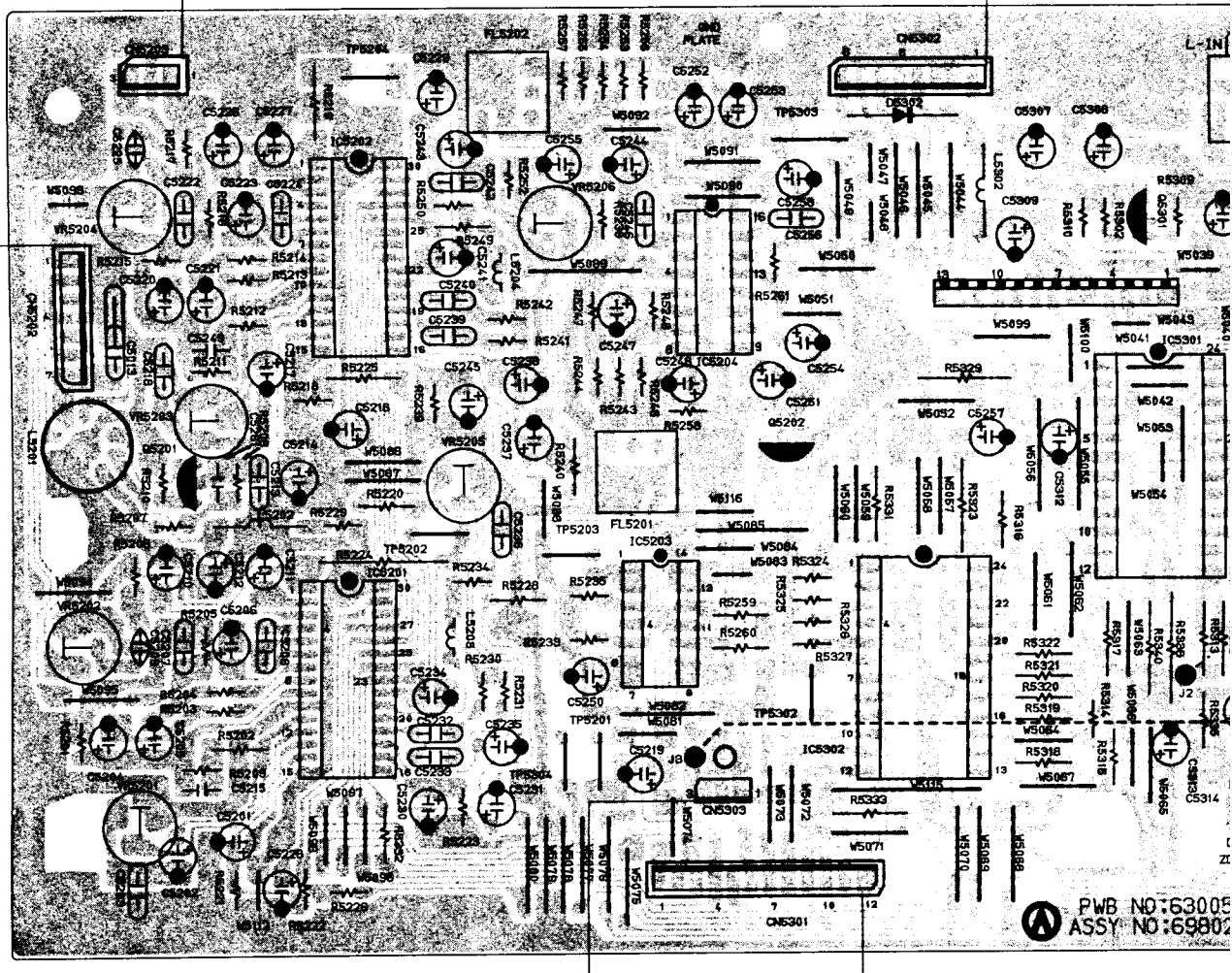
PC 12V	1
GND	2
GND	3
MPX IN	4
TUNER OUT	5
TV ST LED	6
TV SAP LED	7
VCC(AL 5.8V)	8
PC 12V	9

TO MAIN A
CN6004

CN5202

PB R CH	1
GND(S)	2
REC R CH	3
GND	4
AUDIO ERASE	5
GND	6
FULL ERASE	7

TO DECK 2
CN0001
CN002



CN5303

GND	1
REC 9V(D1)	2
REC 9V(D2)	3

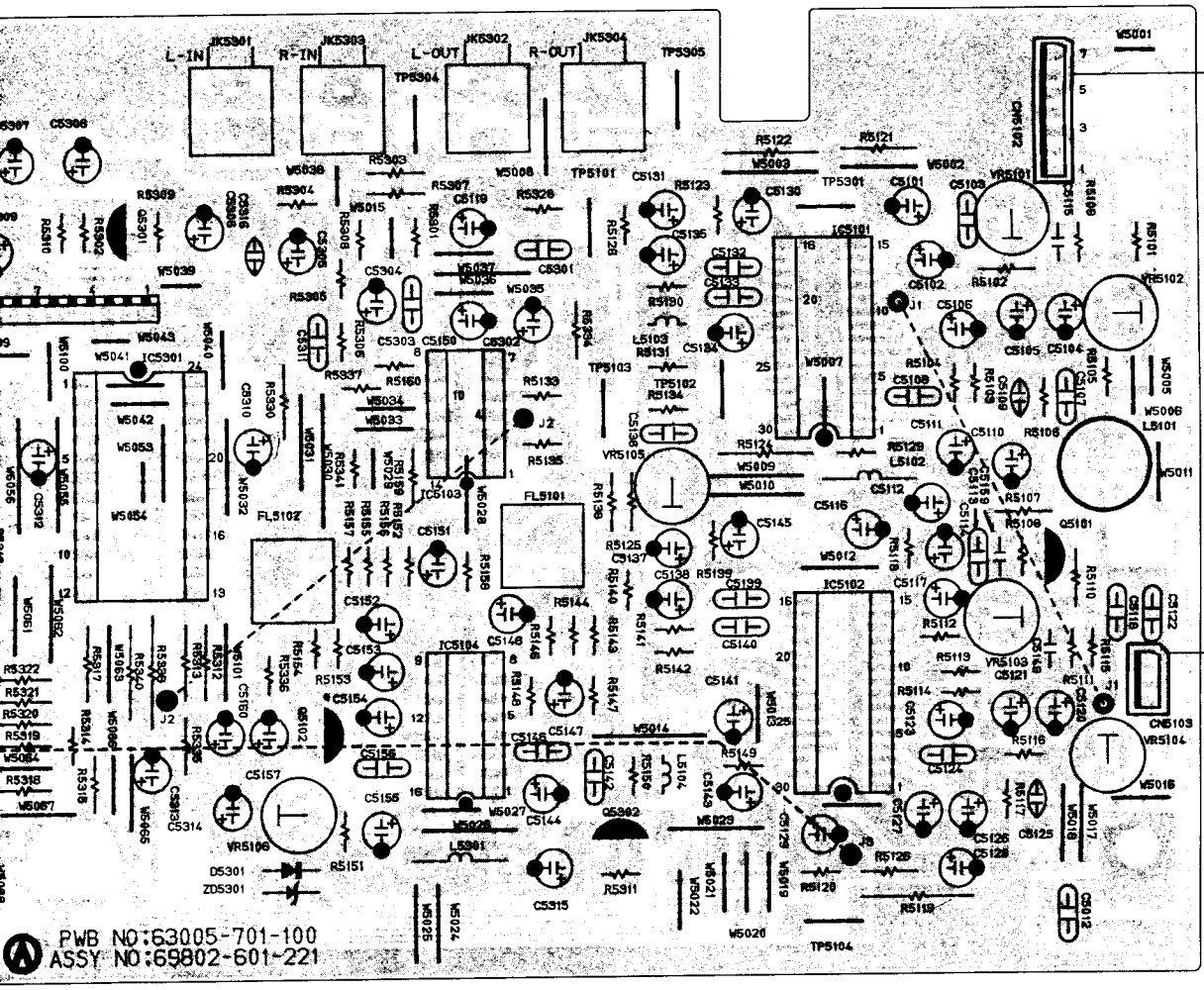
TO MAIN A
CN6013

CN5301

D1 LP	1
D1 A.MUTE	2
D2 A.MUTE	3
D2 LP	4
D1 D-PB	5
D2 D-PB	6
CS	7
P20	8
P21	9
P22	10
P23	11
PROGRAM	12

TO MAIN A
CN6003

TOP SIDE



CN5102

PB R CH	1
GND(S)	2
REC R CH	3
GND	4
AUDIO ERASE	5
GND	6
FULL ERASE	7

TO DECK 1
CN0001
CN002

CN5103

PB L CH	1
GND	2
REC L CH	3

TO DECK 1
CN0001

CN3202

REC 9V	1
REC-C	2
PB-C	3
GND	4
REC-Y	5
PB-Y	6
GND	7
SW 30HZ	8
PB 5V	9

TO PRE-AMP
CN3402

CN3201

GND	1
PC 9V	2
PB 5V	3
C-SYNC	4
PC 5V	5
SW 30HZ(2)	6
3.58MHZ(2)	7
D-REC 9V	8
LP	9
B VIDEO IN	10
SHARP CTL	11
V-LOCK	12
B VIDEO OUT	13
SP	14
AUD.MUTE	15

TO MAIN A
CX6002

CN3102

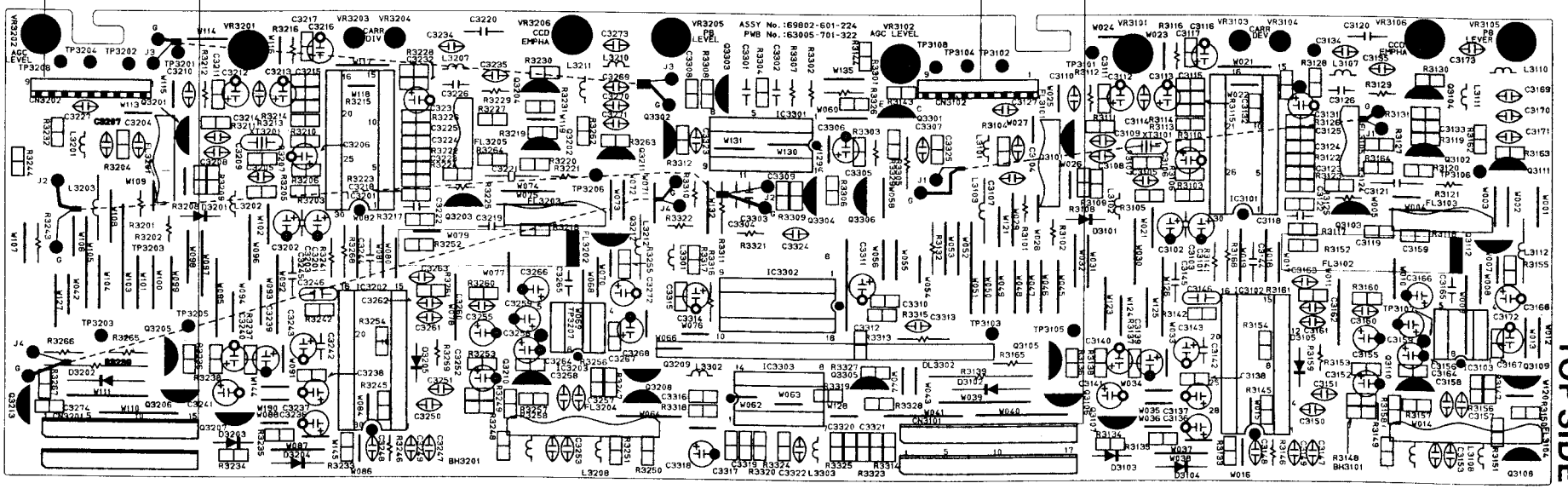
REC 9V	1
REC-C	2
PB-C	3
GND	4
REC-Y	5
PB-Y	6
GND	7
SW 30HZ	8
PB 5V	9

TO PRE-AMP
CN3402

CN3101

GND	1
HQ.C.ENABLE	2
PC 12V	3
PC 9V	4
PB 5V	5
C-SYNC	6
PC 5V	7
SW 30HZ(1)	8
3.58MHZ(1)	9
D-REC 9V	10
LP	11
VIDEO IN	12
SHARP CTL	13
V-LOCK	14
VIDEO OUT	15
SP	16
AUD.MUTE	17

TO MAIN A
CX6001



TOP SIDE

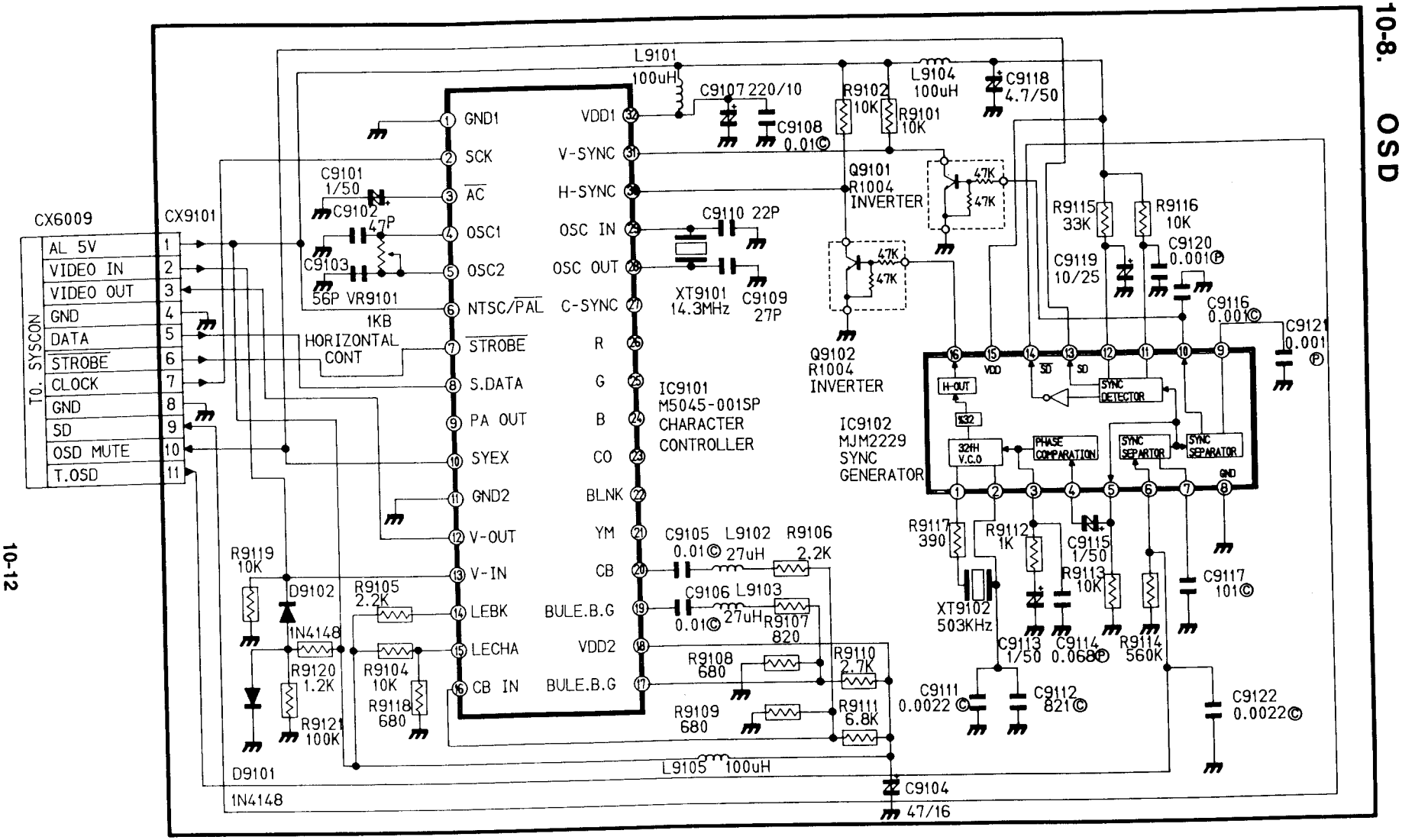
6-1. MECHANICAL REPLACEMENT PARTS LIST

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
		INSTRUMENT ASSEMBLY	
1	69000-101-288	ASSY PANEL FRONT;GV-2010	
1	69000-101-342	ASSY PANEL FRONT;GV-2020	
110	69157-301-222	ASSY MAIN A;GO-VIDEO VCR-2	S.N.A
111	69802-601-221	ASSY MAIN B;GO-VIDEO VCR-2	S.N.A
112	69802-601-224	ASSY MAIN C;VCR2	S.N.A
130	66020-602-410	FRAME;HIPS 94-V0	
131	66612-605-010	BOTTOM COVER;SPG T0.5(820COIL)	
132	66074-616-130	LEG;TPE BLACK(7705)	
137	66001-600-310	TOP CABINET;PVC STEEL T0.85X417X687	
138	69103-603-826	ASSY LEG;ABS 94HB	
144	66614-625-810	BRKT PREAMP;SPG T0.8	S.N.A
145	69098-600-942	REGULATOR ASSY;GO-VIDEO VCR-2	
167	66462-605-710	CONNECTOR-BOARD;HIPS 94-V0	S.N.A
187	67154-101-440	SCREW-TAP.PWH;2-3X10 FE FZY	
190	67158-240-121	SCREW BH;2-4*12 FE FZY	
191	67158-240-180	SCREW TAP PWH;2-4*16 FE FZY	
194	67158-240-163	SCREW-TAP BH;2-4X16 FE FZB	
2	67642-602-302	FRONT MASK LEFT;ACRYL DECK1 (VCR2)	
204	69897-601-204	ASSY PRE AMP;GO-VIDEO VCR-2	
207	69013-605-116	ASSY DECK JOINT;G-8/S/L	
208	69871-601-362	ASSY F/TIMER;GO-VIDEO VCR-2	
3	67642-602-303	FRONT MASK RIGHT;ACRYL DECK2 (VCR2)	
300	D8-NL2D	FULL DECK ASSY;69018-150-178	
50	67643-607-640	DOOR FRONT LEFT;ABS 94HB GV-2010	
500	69000-470-920	HOUSING ASSY;RUBY SVC PARTS	
51	67643-607-710	DOOR-FRONT RIGHT;ABS 94HB(VCR2)	
51	67643-607-741	DOOR-FRONT RIGHT;ABS 94HB(GV2020)	
		FULL DECK ASS'Y	
		TRANSFORT MECHANISM ASSEMBLY	
T206	65234-600-420	REEL DISK(R) ASSY;POM+SUS	
T207	65234-600-520	REEL DISK(S) ASSY;POM+SUS	
T209	66674-617-810	SPRING TENSION;D7-NR2A	
T210	65254-608-420	ARM TENSION ASSY;SECC+SUS304	
T211	65274-601-310	TENSION BAND ASSY;D7-NR2A	
T212	69000-280-232	ASSY POLE BASE LOADING ARM(L)	
T213	66613-609-421	POLE BASE(L) ASSY	
T215	69000-280-231	ASSY POLE BASE LOADING ARM(R)	
T216	66613-609-321	POLE BASE(R) ASSY	
T217	65254-610-840	REVIEW ARM ASSY G-8 TSB	
T218	67224-602-011	NUT NYLON;M3 X 4.5 NYLON 66 + SWR	
T219	66674-611-810	SPRING REVIEW ARM;SUS304-WPB	
T220	69000-280-100	ASSY HOLDET LED;G-8 RUBY(R)	
T221	66604-628-010	HOLDER LED;ABS(BLK)	
T222	62309-112-020	LED-IR;LN59	
T223	63053-607-110	LEAD CONNECTOR ASSY;1429/1007 #26 BLU	
T225	66674-611-520	SPRING TORSION A/C;SUS304WPB	S.N.A
T228	69000-280-230	ASSY A/C HEAD;G-8 L/S(D/B)	
T229	66674-614-710	SPRING ROLLER SUPPEY;D7-NR2A	
T234	64079-503-062	HEAD MAGNETIC F/E;VTR-1X2ERS11-072	
T235	65253-602-210	ARM F/E HEAD;D7-NR2A	
T236	66674-614-510	SPRING ARM ERASE;D7-NR2A	
T237	65224-602-410	BUSH ROLLER SUPPLY;D7-NR2A	
T239	65224-703-220	ROLLER SUPPLY;POM	
T246	65264-601-120	PINCH ROLLER ASSY;TCR-65	
T247	65253-609-140	PINCH ROLLER ARM ASSY;SECC+SUM+SWP	
T248	66674-611-720	SPRING PINCH ARM;SUS 304-WPB	
T249	65254-612-910	BRAKE MAIN(R) ASSY;D7-NR2A	S.N.A
T251	66674-611-910	SPRING MAIN BRAKE;SUS304-WPB	
T252	65254-608-720	BRAKE SUB(R) ASSY;DURANEX+SUS 420J2	
T253	65254-613-010	BRAKE MAIN(L) ASSY;D7-NR2A	
T254	65253-604-010	SUB BRAKE L ASSY	
T255	66674-629-010	S/P SUB BRAKE(L);SWP-B(BLK)	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
T276	66674-613-110	SPRING I.B SLIDE;SUS304-WPB	
T283	67224-602-210	CAM ADJUST;ALLOY 5	
T284	66674-624-610	SPRING ADJUST;SUS304-WPB	
T295	66464-601-100	BRAKE WEAK(T);M90-44(WHT)	
T296	66674-625-000	SPRING BRAKE WEAK(T);SUS 304 WPB	
T404	64769-052-067	MOTOR DRUM ASS'Y;G8-NR2C	
T417	66154-600-320	COVER UPPER DRUM;A1050P T0.5	
T450	69018-123-033	DRUM ASS'Y G8-NR2C	
T451	69000-370-171	ASS'Y BASE DRUM;G8-NR2C/RUBY	
T452	69000-370-149	LOWER DRUM ASS'Y;G8-NL2A	
T453	69000-370-148	UPPER DRUM ASS'Y;G8-NL2A	
T901	67004-101-110	SCREW-PH;+M2X4 FE FZY	
T907	67004-100-710	SCREW-PH;+M3X4 FE FZY	
T914	67094-700-710	SCREW-PWH;+M3X6 FE FZY	
T917	67094-700-620	SCREW-BH;+M3X7.5 BSW3 WP NI	
T952	67304-103-410	WASHER-PLAIN;3.2X6X0.5 POLYSLIDER	
T953	67304-103-430	WASHER-PLAIN;3.2X6X0.13 POLY SLIDE	
T958	67334-600-410	WASHER SLIT;PI3.2XPI6XT0.5	
T960	67334-600-320	WASHER SLIT;PI2.5XPI9XT0.5 POLYSLIDE	
T971	67358-103-006	RING-E;PI3 STSC304-CSP	
		BOTTOM SIDE MECHANISM	
B208	66604-630-310	ASS'Y HEAD BRUSH;SECC+PBSP+CARBON	
B263	66052-600-310	IDLER CLUTCH ASSY;D7-NR2A	
B267	64769-052-094	MOTOR-D/D CAPSTAN;DVX-75K5RB	
B272	65274-600-720	IDLER BELT;CR-65	
B273	65253-601-210	PLATE MAIN SLIDE;SECC-E 20/20(G-8A)	
B274	65253-602-140	I.B SLIDE ASSY;G-8 LOCAL	
B277	65292-600-340	LOADING UNIT ASSY;G-8A	
B278	69000-280-161	ASSY-LOADING MOTOR;D8-NR7A	S.N.A
B282	63053-625-011	LEAD CONNECTOR ASSY;1429 #26 RED 490AY	
B283	69000-116-007	ASSY PHOTO INTERRUPTER(R);69000-280-16	
B289	69000-280-165	ASSY-D.D CAPSTAN MOTOR;D8-NR7A	S.N.A
B310	64769-052-140	MOTOR-LOADING;RF-370CA-15370	
B380	65274-601-220	BELT RELEASE;5CM-60	
B389	65274-601-120	BELT LOADING;5CM-60	
B393	66674-615-910	SPRING LOADING;SUS 304	
B520	66674-608-140	GROUND PLATE TOP;SUS430 0.15T	
B905	67008-130-171	SCREW-PH;+M3X3 FE FZY	
B906	67008-130-061	SCREW-PH;+M3X6 FE FZY	
B907	67004-101-410	SCREW-PH;+M3X6 FE FZY WL	
B914	67009-130-051	SCREW-PH;+M3X5 FE FZY WL	
B953	67304-103-430	WASHER-PLAIN;3.2X6X0.13 POLY SLIDE	
B956	67304-103-410	WASHER-PLAIN;3.2X6X0.5 POLY SLIDE	
B973	67358-102-506	RING-E;PI2.5 STSC304-CSP	
BQ005	62309-110-243	PHOTO-INTERRUPTER;NJL5141EA	
H500	66122-700-583	HOUSING ASSY;G8R-AA(RUBY)P	
H503	66022-600-330	SIDE CHASSIS R;ABS G20	
H504	66022-601-210	SIDE CHASSIS(L)ABS G20	
H505	66463-601-210	CASSETTE-GUIDE;ABS(BLK)	
H506	65104-612-010	RELAY SHAFT;SUM-2	
H507	65204-603-010	RELAY GEAR(R);DURACON(M90-44)	
H508	65204-603-120	RELAY GEAR(L);DURACON (M90-44)	
H509	65254-609-510	MASK CAM LEVER;DURACON(M90-44)	
H510	69000-470-110	ASSY-CASSETTE HOLDER;F/L SYSTEM(G-7)	
H511	66132-600-110	CASSETTE-HOLDER;SECC-E20/20 T1.2	S.N.A
H512	66054-604-310	KEY-CASSETTE;DURACON+SUS304 T0.15	S.N.A
H513	66674-612-610	CASSETTE HOLDER SPR;SUS 304 T0.15	S.N.A
H514	65104-612-110	HOLDER SHAFT(R);SUM-2(H)	S.N.A
H515	65104-612-210	HOLDER SHAFT(L);SUM-2(H)	S.N.A
H516	65104-612-310	GUIDE PIN(R);SUM-2(H)	S.N.A
H517	65104-612-410	GUIDE PIN(L);SUM-2(H)	S.N.A
H518	65104-612-510	VERTICAL GUIDE PIN;SUM-2(H)	S.N.A
H521	65202-600-230	SIDE ARM R;DURACON(M90-44)	
H522	66674-616-410	ARM TORSION SPRING(R);SWP-B PI1.0	
H523	65202-600-320	SIDE ARM(L);DURACON(M90-44)	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK
H524	66674-616-310	ARM TORSION SPRING(L);SWP-B PI1.0	
H525	65203-600-730	ARM GEAR;ESLON PBT(ES-830S)	
H524	66674-616-310	ARM TORSION SPRING(L);SWP-B PI1.0	
H525	65203-600-730	ARM GEAR;ESLON PBT(ES-830S)	
H526	66664-605-510	ARM GEAR PIN;SUS 420J2-B	
H527	66674-616-610	EJECT SPRING;SWP-B	
H528	65203-602-210	WORM GEAR HOUSING;DURACON(M90-44)	
H529	65203-600-910	TIMING GEAR;DURACON(M90-44)	
H531	66463-601-310	LID OPENER;DURACON(M90-44)	
H532	66674-616-510	LID OPENER SPRING;SWP-B PI0.5	
H535	63569-700-210	REC SAFTY-S/W;MSW-1456 NBKU	
H536	63054-220-400	LEAD WIRE;1429 #26 GRAY 365	S.N.A
H537	63054-220-410	LEAD WIRE;1429 #26 BLUE 183	S.N.A
H538	63569-700-340	SW-CASSETTE;PS-74	
H539	63054-220-425	LEAD WIRE;1429 #26 BROWN 80	S.N.A
H540	63054-220-435	LEAD WIRE;1429 #26 BLACK 80	S.N.A
H541	63005-006-455	PWB-SENSOR(E);94V0 1.6T*20*25(G-8)	S.N.A
H542	63054-220-440	LEAD WIRE;1429 #26 BLUE 268	S.N.A
H543	63054-220-450	LEAD WIRE;1429 #26 RED 280	S.N.A
H544	63054-220-460	LEAD WIRE;1429 #26 ORANGE 285	S.N.A
H545	63005-005-032	PWB-SENSOR(S);94V0 1.6TX45X32(G-7)	S.N.A
H546	63054-212-410	WIRE GND ASSY;17/0.26(1007) BLACK	S.N.A
H547	69000-470-410	ASSY-SUPPLY END SENSOR;F/L SYSTEM	
H548	69000-470-310	ASSY-TAKE UP END SENSOR;F/L SYSTEM	
H549	65254-619-610	BRACKET;SECC E20/20 T1.2	
H550	65104-625-110	SHAFT BRACKET;SUS 304 WPB	S.N.A
H551	66674-629-310	SPRING BRACKET;STSC 304-CSP 02.5	
H552	67358-102-506	RING-E;PI2.5 STSC304-CSP	
H553	67334-600-410	WASHER SLIT;PI3.2XPI6XT0.5	
H571	65253-602-340	LEVER LOCK;SECC E20/20 T0.8	
H572	67108-600-120	SCREW TAP-PH;PTS-2 PI1.4X5 FE FZY	
H573	66674-613-220	S/P LEVER LOCK;SUS 430 WPB PI0.3	
H574	66674-608-140	GROUND PLATE TOP;SUS430 0.15T	
H909	67154-101-420	SCREW-TAP PWH;2S-3X8 FE FZY	S.N.A
H910	67108-600-010	SCREW TAP PH;2S-M3X4.5 FE FZY	S.N.A
HQ001	62139-701-020	TRANSISTOR;KSR 2001	
HQ002	62139-701-020	TRANSISTOR;KSR 2001	
HQ003	62139-401-055	TRANSISTOR.PHOTO;PN202S(R)	
HQ004	62139-401-055	TRANSISTOR.PHOTO;PN202S(R)	

L/C.NO	PART-NO	DESCRIPTION;SPECIFICATION	REMARK



SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

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

OSD

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC9101						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	0	0	0	0	0	0
PIN 2	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 3	4.9	4.9	4.9	4.9	4.9	4.9	4.9
PIN 4	2.4	2.4	2.4	2.5	2.5	2.4	2.4
PIN 5	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 6	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 7	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 8	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 9	-	-	-	-	-	-	-
PIN 10	4.3	4.3	4.3	1.5	1.5	4.3	4.3
PIN 11	0	0	0	0	0	0	0
PIN 12	1.1	1.1	0.6	0.7	0.8	1.0	1.0
PIN 13	1.1	1.1	0.8	2.0	2.0	1.0	1.0
PIN 14	1.7	1.6	1.7	1.7	1.7	1.7	1.7
PIN 15	0.8	0.8	0.9	0.9	0.9	0.9	0.9
PIN 16	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 17	0.9	0.9	0.9	0.9	0.9	0.9	0.9
PIN 18	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 19	0	0	0	0	0	0	0
PIN 20	0	0	0	0	0	0	0
PIN 21	-	-	-	-	-	-	-
PIN 22	-	-	-	-	-	-	-
PIN 23	-	-	-	-	-	-	-
PIN 24	-	-	-	-	-	-	-
PIN 25	-	-	-	-	-	-	-
PIN 26	-	-	-	-	-	-	-
PIN 27	-	-	-	-	-	-	-
PIN 28	2.3	2.3	2.3	2.4	2.4	2.3	2.3
PIN 29	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PIN 30	4.4	4.4	4.4	4.4	4.4	4.4	4.4
PIN 31	4.9	4.9	4.9	4.9	4.9	4.9	4.9
PIN 32	5.0	5.0	5.0	5.0	5.0	5.0	5.0

NOTES : 1) BLUE SCREEN (NO)
2) NO OSD

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

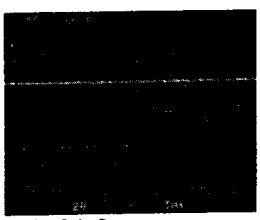
MODE / PIN NO	IC9102						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	2.6	2.6	2.6	2.7	2.7	2.7	2.7
PIN 2	2.1	2.1	2.2	2.2	2.2	2.2	2.2
PIN 3	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 4	0	0	0	0	0	0	0
PIN 5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 6	3.2	3.2	3.1	3.3	3.3	3.1	3.1
PIN 7	2.8	2.5	3.0	2.6	2.6	2.5	2.5
PIN 8	0	0	0	0	0	0	0
PIN 9	0.3	0.3	0.3	0.3	0.3	0.2	0.2
PIN 10	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 11	0.6	0.6	0.6	0.6	0.6	0.5	0.5
PIN 12	2.0	1.9	1.9	2.0	2.0	2.0	2.0
PIN 13	4.3	4.3	4.4	4.4	4.4	4.4	4.4
PIN 14	0	0	0	0	0	0	0
PIN 15	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 16	0.4	0.4	0.4	0.4	0.4	0.4	0.4

NOTES : 1) BLUE SCREEN (NO)
2) NO OSD

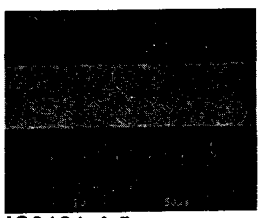
FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / TR NO	STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q9101	0	5.0	0.1	0	4.9	0.1	0	4.9	0	0	5.0	0.1	0	5.0	0	0	4.8	0.2	0	4.9	0
Q9102	0	4.4	0.4	0	4.4	0.4	0	4.4	0.4	0	4.4	0.4	0	4.4	0.4	0	4.4	0.4	0	4.4	0.4

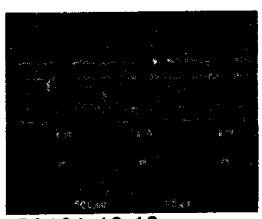
NOTES : 1) BLUE SCREEN (NO)
2) NO OSD



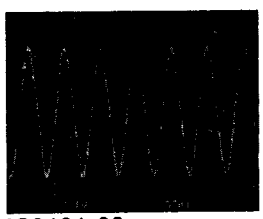
IC9101-2
2V/5msec/cm
EE



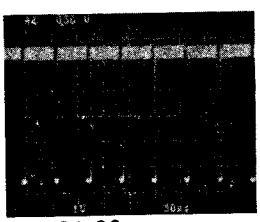
IC9101-4.5
1V/50usec/cm
EE



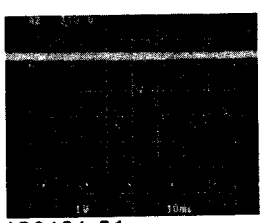
IC9101-12.13
500mV/20usec/cm
EE



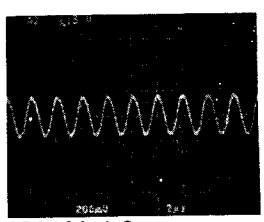
IC9101-28
1V/50msec/cm
EE



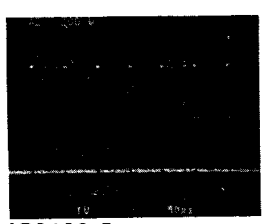
IC9101-30
1V/50usec/cm
EE



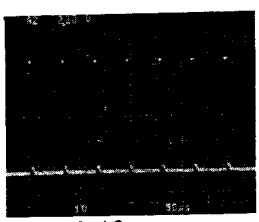
IC9101-31
1V/10msec/cm
EE



IC9102-1.2
200mV/2usec/cm
EE



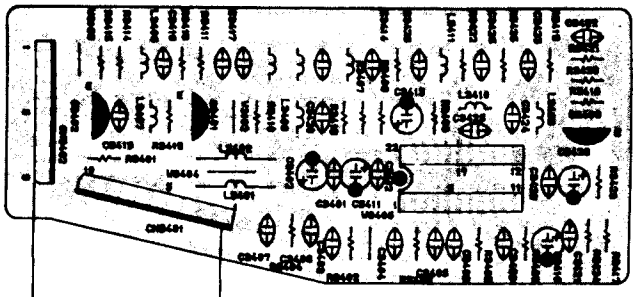
IC9102-5
1V/50usec/cm
EE



IC9102-16
1V/50usec/cm
EE

9-6. Pre-Amp

TOP SIDE



CN3402

REC 9V	1
REC-C	2
PB-C	3
GND	4
REC-Y	5
PB-Y	6
GND	7
SW 30HZ	8
PB 5V	9

TO MAIN C
CN3202
(CN3102)

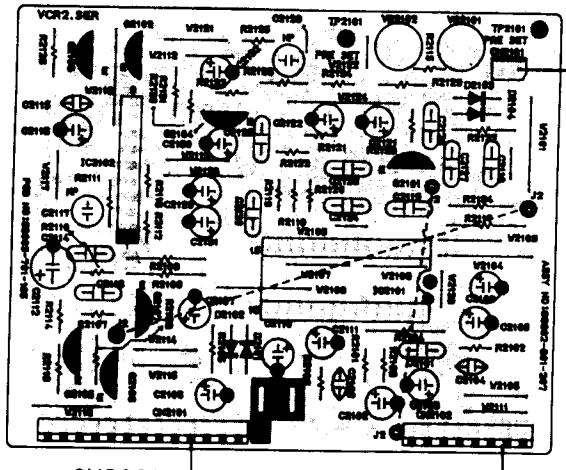
CN3401

GND	1
GND	2
GND	3
CH-1(-)	4
GND	5
CH-1,2(+)	6
CH-2(-)	7
GND	8
GND	9
GND	10

TO DECK

9-7. Servo

TOP SIDE



CN2001

CTL HEAD	1
GND(S)	2

TO DECK

CX2001

C-FG	1
PC 5V	2
TRK CTL	3
SDA	4
SCK	5
MO	6
DRUM.PG	7
DRUM.FG	8
GND	9
CAP CTL	10
DRUM CTL	11
CAP F/R	12
V-LOCK	13

TO MAIN A
CX6003(CX6006)

CX2002

MI	1
V-LOCK CTL	2
3.58MHZ	3
C-SYNC	4
CAP F/R	5
CAP CTL	6
SEARCH	7
SW 30HZ	8

TO MAIN A
CX6004(CX6007)

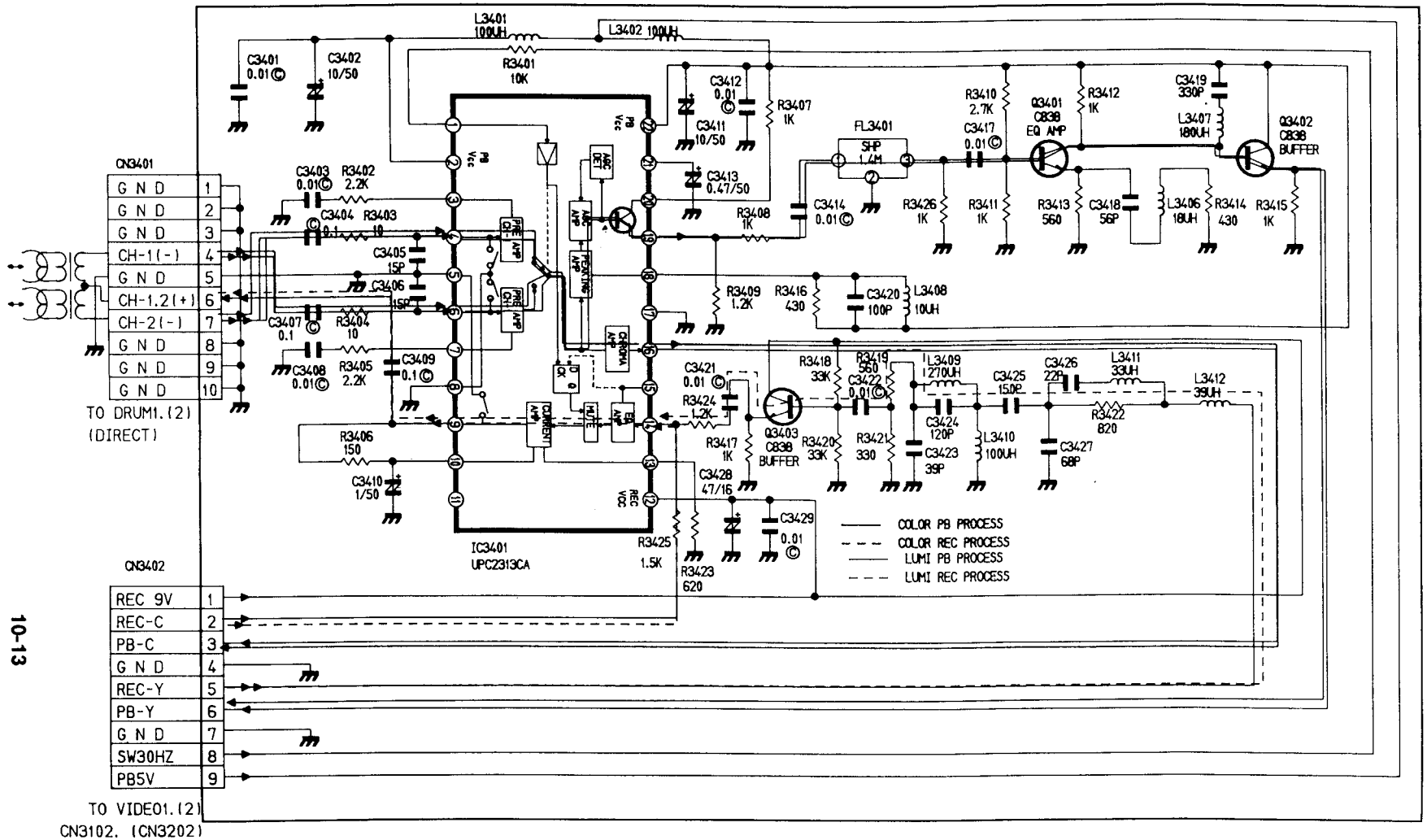
FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC3401						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0	2.6	2.6	-	-	2.7	2.7
PIN 2	0	0	4.8	0	0	5.1	5.1
PIN 3	0	0	2.0	0	0	2.0	2.0
PIN 4	0	0.1	0.6	0	0	0.6	0.6
PIN 5	0	0	0	0	0	0	0
PIN 6	0	0.1	0.6	0	0	0.6	0.6
PIN 7	0	0	2.0	0	0	2.0	2.0
PIN 8	0	0	0	0	0	0	0
PIN 9	0.2	4.8	0	0	0	0	0
PIN 10	0.3	4.8	0	0	0	0	0
PIN 11	-	-	-	-	-	-	-
PIN 12	0.4	8.9	0.4	0.4	0.4	0.4	0.4
PIN 13	0	1.9	0	0	0	0	0
PIN 14	0	1.9	0	0	0	0	0
PIN 15	-	-	-	-	-	-	-
PIN 16	0	0	2.6	0	0	2.6	2.6
PIN 17	0	0	0	0	0	0	0
PIN 18	0	0	4.8	0	0	5.1	5.1
PIN 19	0	0	1.9	0	0	1.9	1.9
PIN 20	0	0	3.2	0	0	3.2	3.2
PIN 21	0.1	0	0.8	0.1	0	0.8	0.8
PIN 22	0	0	4.8	0	0	5.1	5.1

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE	STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
TR NO	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q3401	0	0	0	0	0	0	0.7	3.5	1.3	0	0	0	0	0	0	0.7	3.5	1.3	0.7	3.5	1.3
Q3402	0	0	0	0	0	0	2.9	4.8	3.5	0	0	0	0	0	0	2.9	4.8	3.5	2.9	4.8	3.5
Q3403	0	0.4	0.2	3.4	8.9	4.1	0	0.4	0.2	0	0.4	0.2	0	0.4	0.2	0	0.4	0.2	0	0.4	0.2

10-9. Pre Amp



SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

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

MODE	PB	REC
TR NO		
Q3401		
Q3402		
Q3403		

MODE	PB	REC
PIN NO		
PIN 1		
PIN 2		
PIN 3		
PIN 4		
PIN 5		
PIN 6		
PIN 7		
PIN 8		
PIN 9		
PIN 10		
PIN 11		
PIN 12		
PIN 13		
PIN 14		
PIN 15		
PIN 16		
PIN 17		
PIN 18		
PIN 19		
PIN 20		
PIN 21		
PIN 22		

PRE AMP

9-1. Power

TOP SIDE

CN1001

GND	1
PC 5.1V(2)	2
CH.VTG 33V	3
AL 5.8V(2)	4
M.DRIVE(2)	5
GND	6
-30V	7
AC 4.1V	8
AC 4.1V	9

TO MAIN A CN6001

CN1002

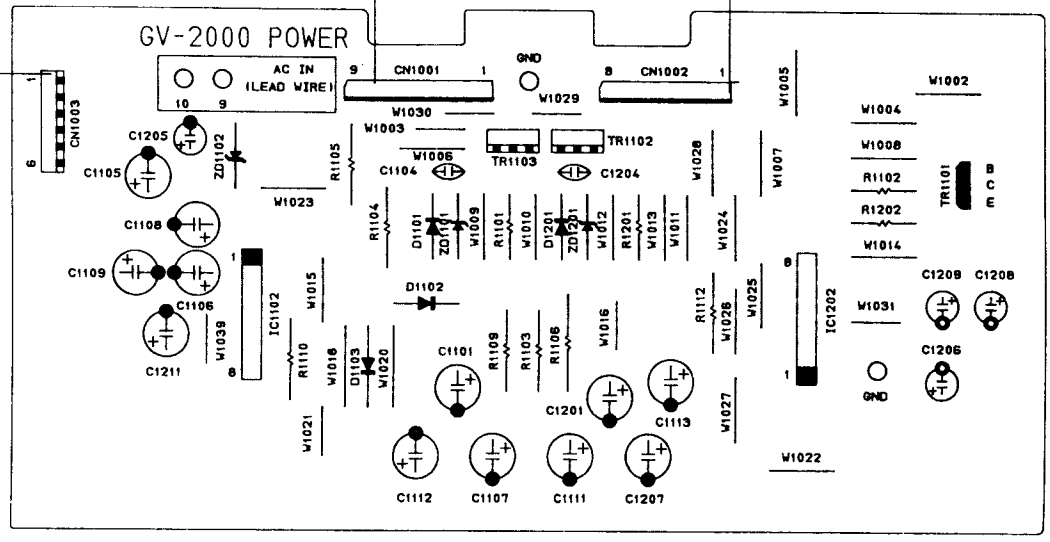
PC 15V(1)	1
PC 15V(2)	2
GND	3
AL 5.8V(1)	4
PWR CONTROL	5
M.DRIVE(1)	6
AL 10V	7
GND	8

TO MAIN A CN6002

CN1003

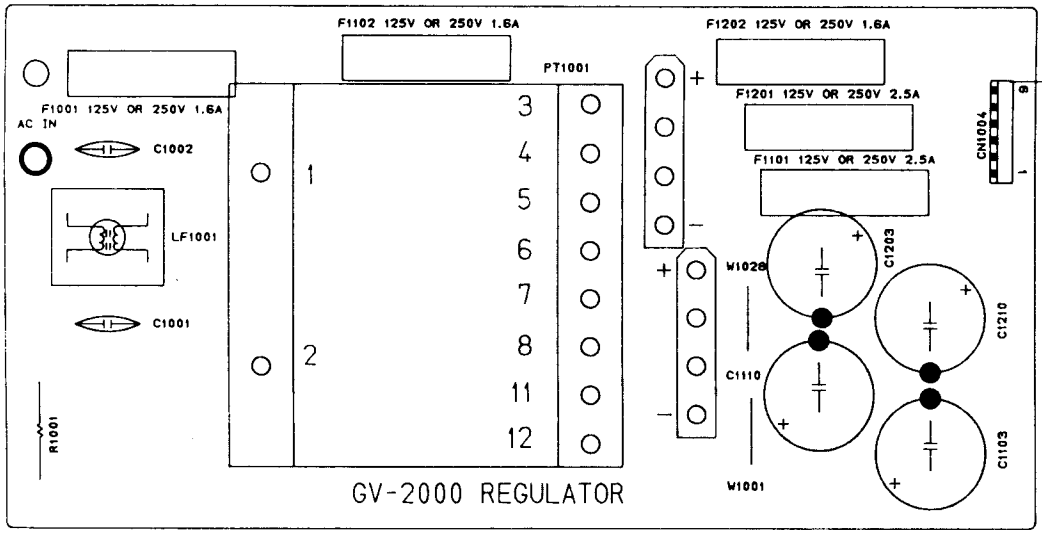
GND	1
DC 10V(2)	2
DC 22V(2)	3
DC 22V(1)	4
DC 10V(1)	5
AC 50V	6

TO REGULATOR CN1004



9-2. Regulator

TOP SIDE

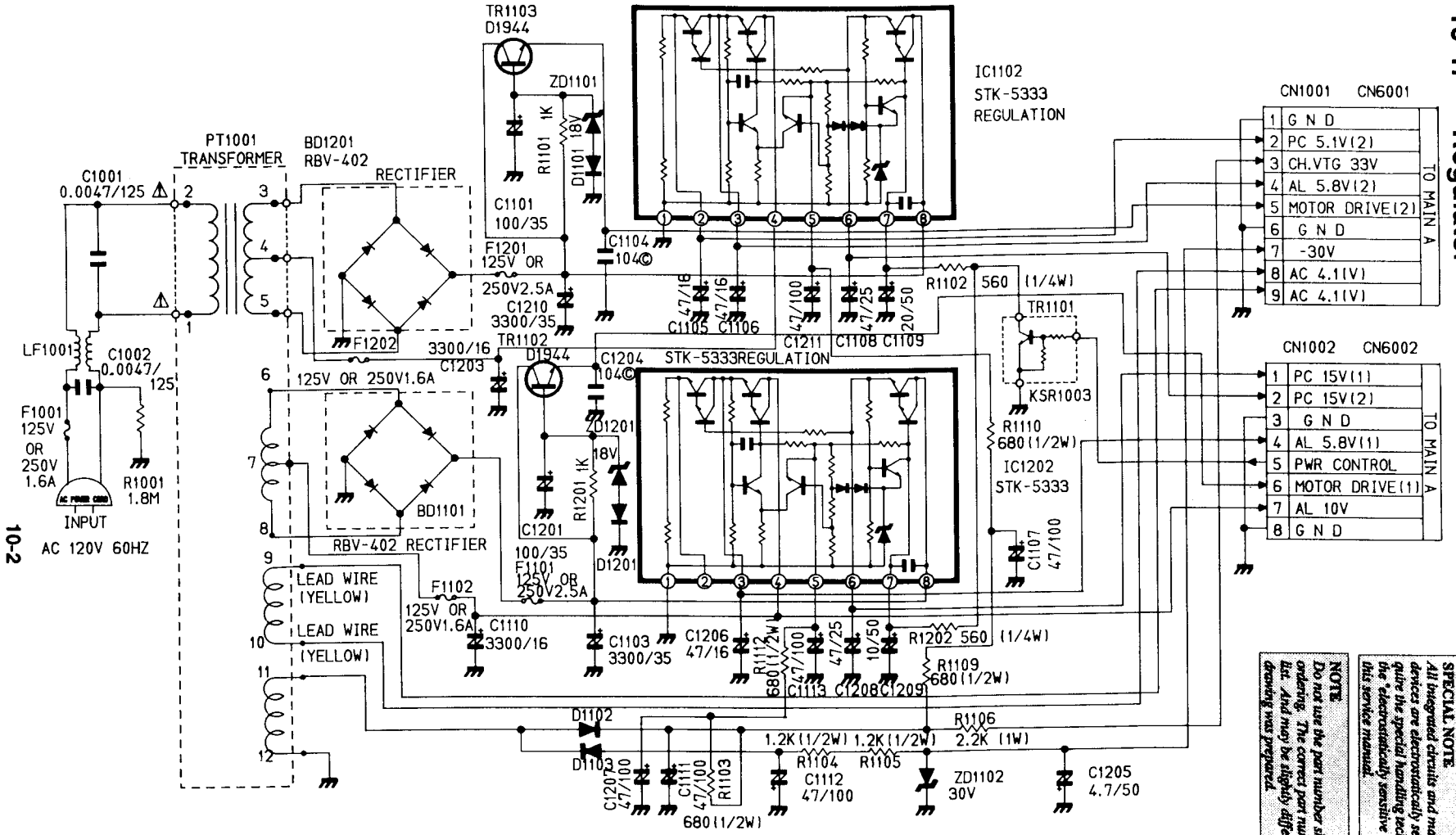


CN1004

AC 50V	1
DC 10V(1)	2
DC 22V(1)	3
DC 22V(2)	4
DC 10V(2)	5
GND	6

TO REGULATOR CN1003

10-1. Regulator



IMPORTANT SAFETY NOTICES
Components identified with the mark ⚠ have the special charateristics for safety when replacing any of these components. Use only the same type.

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

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

MODE / TR NO	E	C	B

MODE / PIN NO	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8

REGULATOR

OR

REGULATOR

MODE / PIN NO	IC1102							
	STOP	REC	PLAY	F.FWD	R/F.FWD	R/F S.	REC P.	PLAY P.
PIN 1	0	0	0	0	0	0	0	0
PIN 2	5.2	5.4	5.3	5.2	5.3	5.3	5.2	5.3
PIN 3	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
PIN 4	10.4	9.6	10.2	10.2	10.2	10.2	10.8	10.5
PIN 5	33.0	31.4	33.0	33.0	33.0	33.0	33.0	33.0
PIN 6	15.2	15.7	15.2	15.2	15.2	15.2	15.1	15.2
PIN 7	17.3	17.2	17.3	17.3	17.3	17.3	17.3	17.3
PIN 8	21.7	21.0	21.0	21.3	21.3	20.7	21.0	21.7

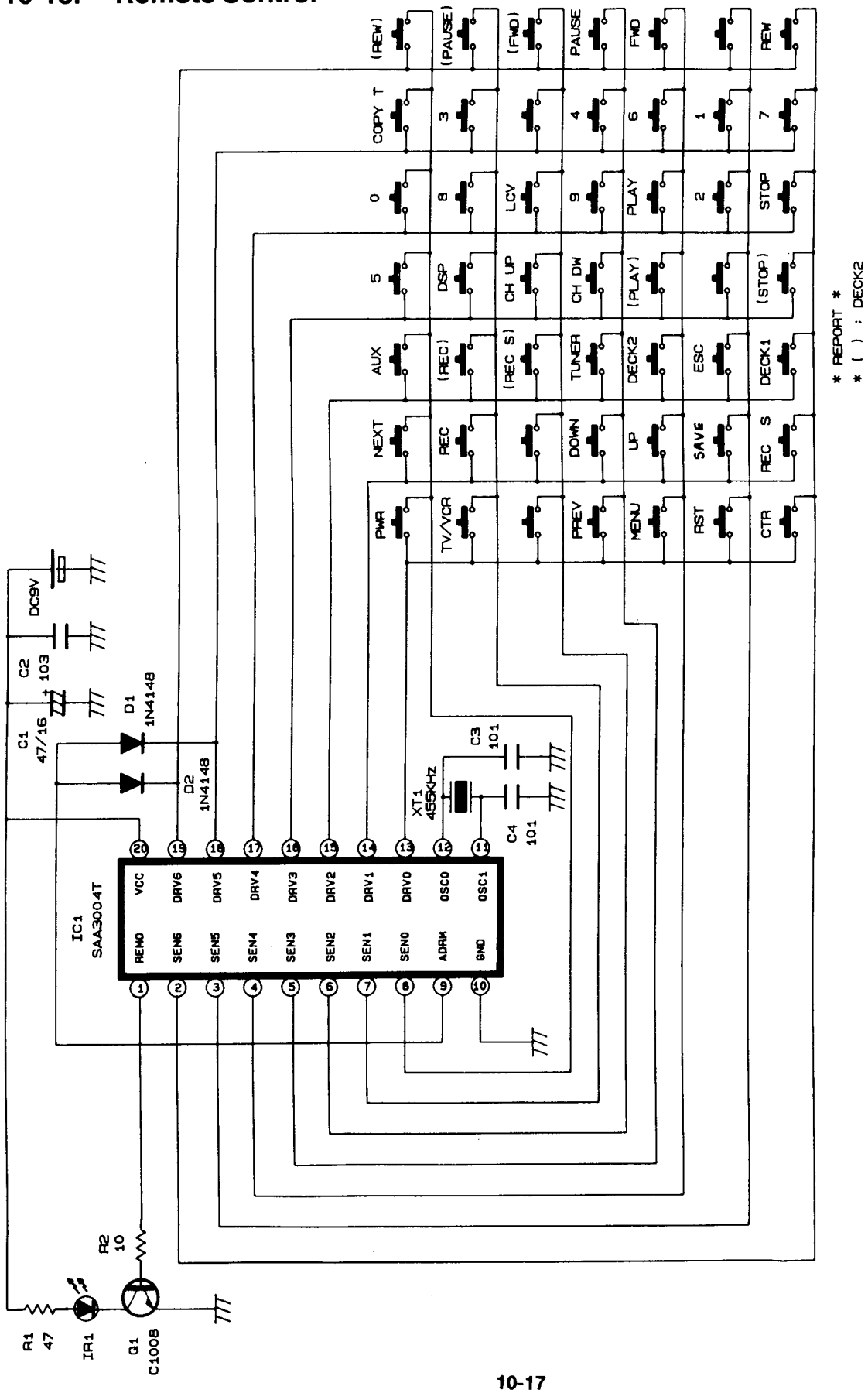
MODE / PIN NO	IC1202							
	STOP	REC	PLAY	F.FWD	R/F.FWD	R/F S.	REC P.	PLAY P.
PIN 1	0	0	0	0	0	0	0	0
PIN 2	–	–	–	–	–	–	–	–
PIN 3	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
PIN 4	10.5	9.8	10.1	10.4	10.4	9.9	10.7	10.5
PIN 5	33.0	31.0	33.0	33.0	33.0	33.0	33.0	33.0
PIN 6	15.2	15.4	15.2	15.2	15.2	15.2	15.1	15.2
PIN 7	17.3	17.3	17.5	17.3	17.3	17.3	17.3	17.3
PIN 8	22.0	22.0	22.0	22.0	22.0	21.0	22.0	22.0

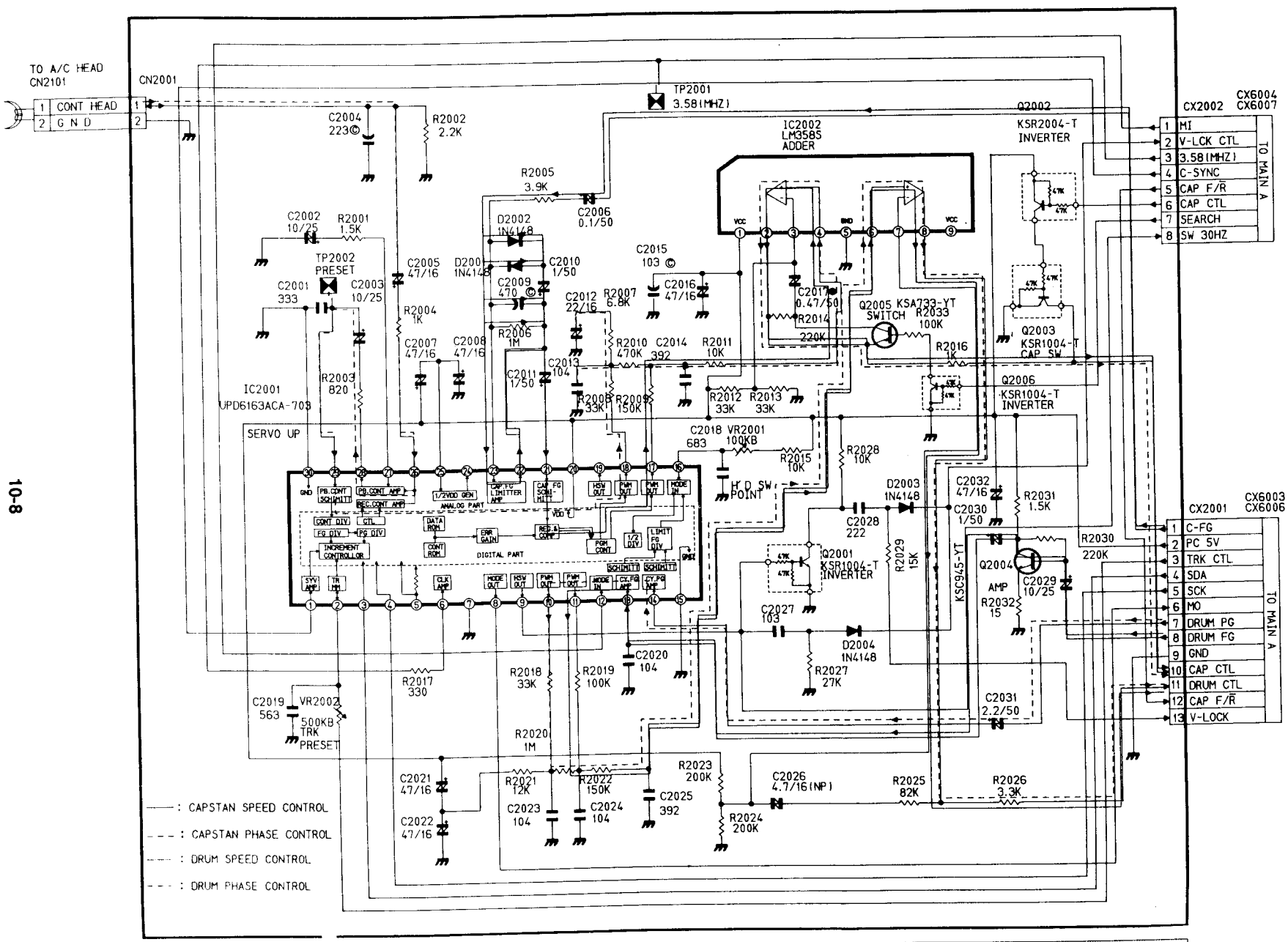
MODE / TR NO	TR1103							
	STOP	REC	PLAY	F.FWD	R/F.FWD	R/F S.	REC P.	PLAY P.
E	17.7	17.4	17.5	17.6	17.6	17.5	17.8	17.6
C	21.8	21.0	21.0	21.1	21.1	20.7	22.0	21.0
B	18.2	18.0	18.1	18.1	18.1	18.1	18.3	18.2

MODE / TR NO	TR1102							
	STOP	REC	PLAY	F.FWD	R/F.FWD	R/F S.	REC P.	PLAY P.
E	18.1	17.8	18.0	18.0	18.0	18.4	18.2	18.1
C	22.3	20.0	21.2	21.4	21.4	21.4	22.4	22.0
B	18.6	18.2	18.5	18.5	18.5	18.5	18.7	18.6

REMOTE CONTROL

10-13. Remote Control





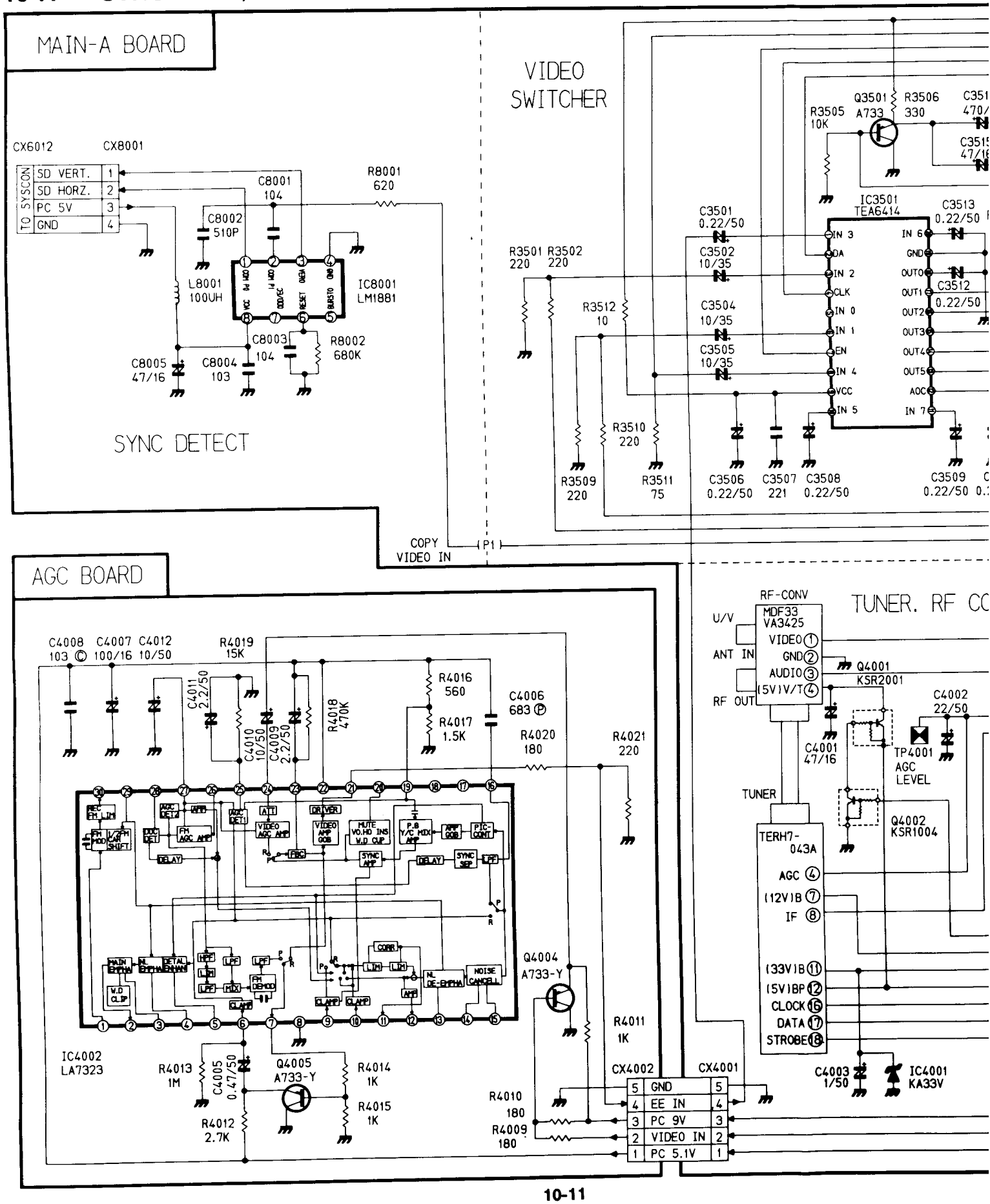
NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

SERVO

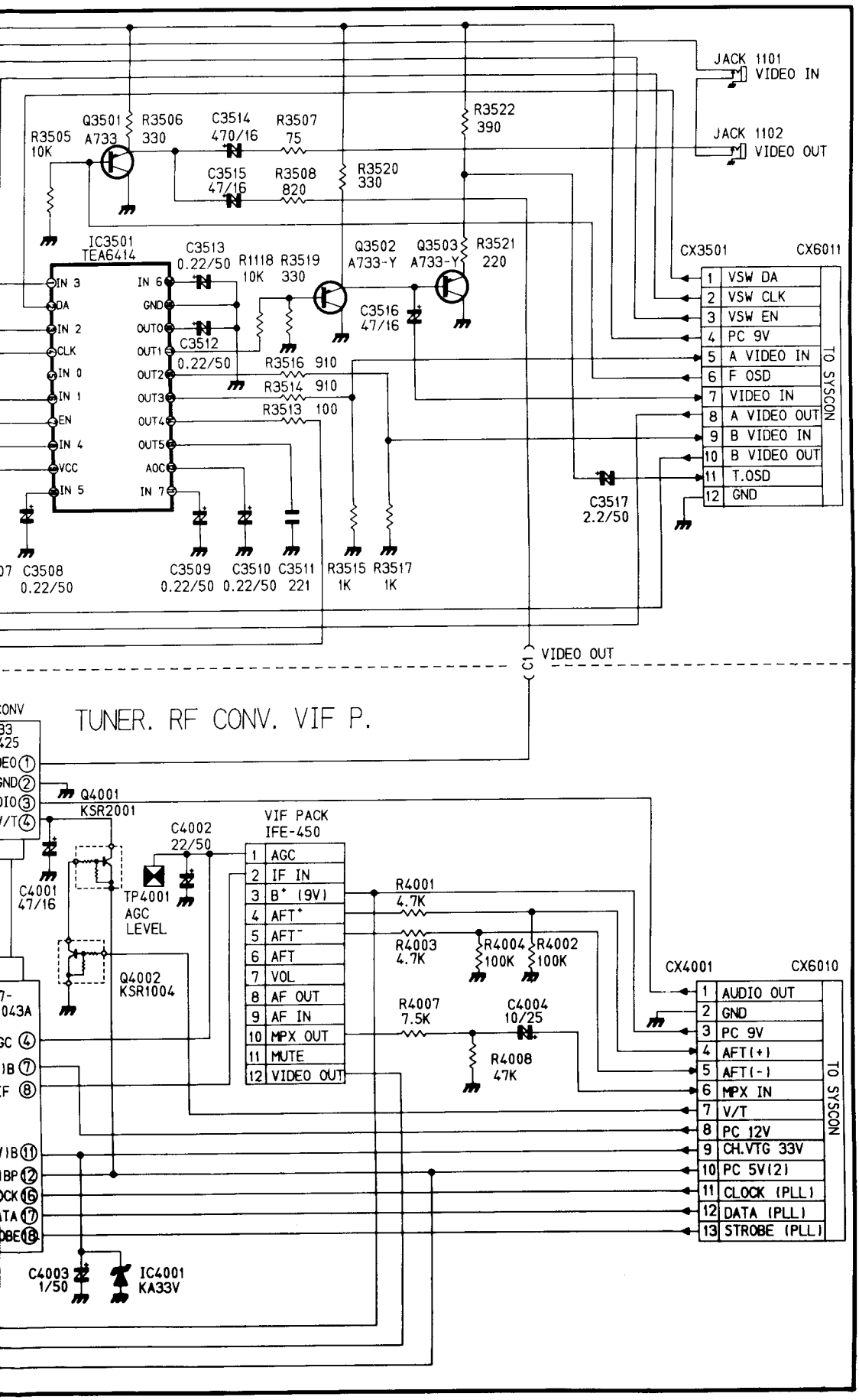
SYNC DETECT/AGC
VIDEO SWITCHER/TUNER

10-7. SYNC Detect/Video Switcher/AGC/Tuner



NC DETECT/AGC
EO SWITCHER/TUNER

SYNC DETECT/AGC
VIDEO SWITCHER/TUNER



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

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

MODE / PIN NO	STOP	REC
PIN 1	3.4	3.5
PIN 2	0	0
PIN 3	3.5	3.5
PIN 4	5.1	5.1
PIN 5	-	-
PIN 6	3.5	3.5
PIN 7	5.1	5.1
PIN 8	3.2	3.2
PIN 9	8.7	8.7
PIN 10	3.2	3.2
PIN 11	3.1	3.1
PIN 12	3.6	3.6
PIN 13	3.1	3.1
PIN 14	3.6	3.6
PIN 15	3.5	3.5
PIN 16	3.5	3.5
PIN 17	3.4	3.7
PIN 18	2.8	2.8
PIN 19	0	0
PIN 20	3.2	3.2

NOTES : 1) NO BLUE S
2) NO OSD
3) TEST TAP
4) REC SRC.

MODE / PIN NO	STOP	REC
PIN 1	4.6	4.6
PIN 2	2.4	2.4
PIN 3	4.9	4.9
PIN 4	0	0
PIN 5	-	-
PIN 6	1.3	1.3
PIN 7	-	-
PIN 8	4.9	4.9

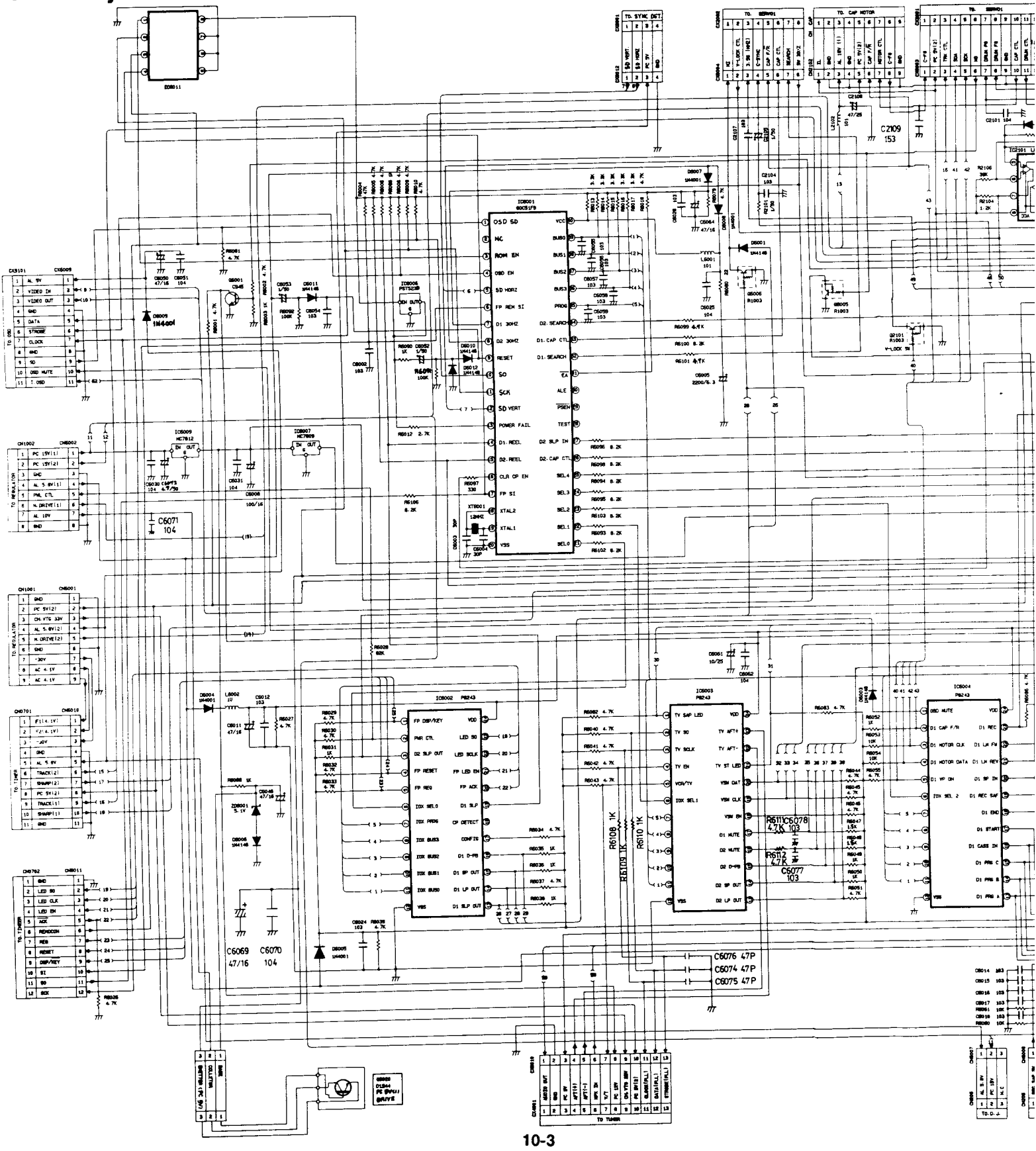
NOTES : 1) TEST TAP
2) REC SRC.
3) SUPPLY R

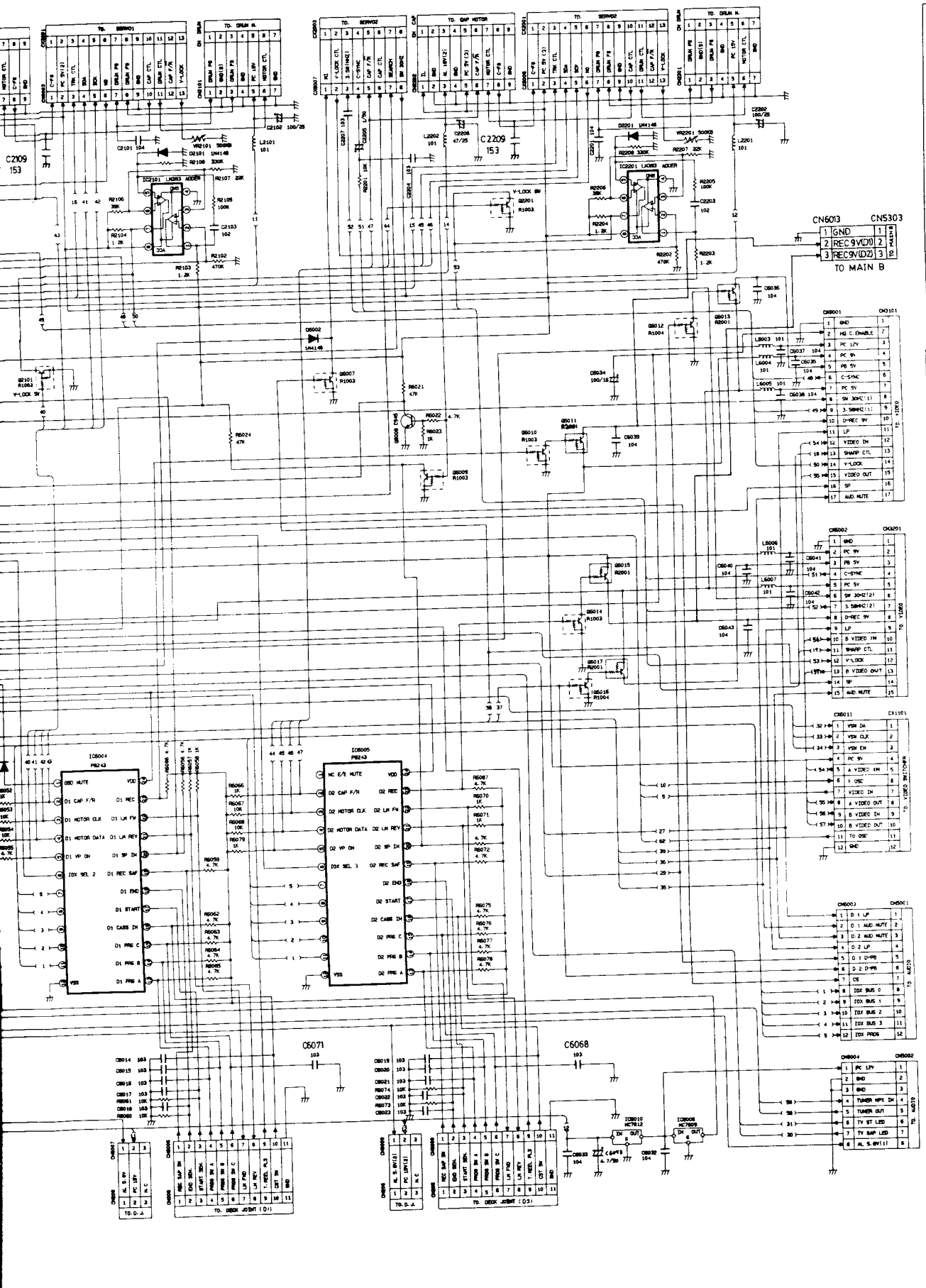
MODE / TR NO	STOP		
	E	C	B
Q1101	1.5	0	0.8
Q1102	4.1	0	3.5
Q1103	4.9	0	4.0
Q4001	5.0	5.0	0
Q4002	0	0	4.6
Q4004	7.6	0	7.0
Q4005	2.0	0	1.4

NOTES : 1) TV/TCR B
2) SUPPLY F

SYSTEM CONTROL

10-2. System Control





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

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (E.S) devices" section of this service manual.

SYSTEM CONTROL

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC6001						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	4.3	4.3	0	4.3	4.3	0	0
PIN 2	-	-	-	-	-	-	-
PIN 3	-	-	-	-	-	-	-
PIN 4	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 5	2.0	2.0	4.6	2.0	2.0	4.7	4.7
PIN 6	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 7	-	2.5	2.5	-	-	2.5	2.5
PIN 8	-	2.5	2.5	-	-	2.5	2.5
PIN 9	0	0	0	0	0	0	0
PIN 10	4.8	4.8	4.8	4.8	4.8	4.8	4.8
PIN 11	4.9	4.9	4.9	4.9	4.9	4.9	4.9
PIN 12	4.5	4.5	4.5	4.5	4.5	4.5	4.5
PIN 13	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 14	-	2.8	2.8	2.8	2.8	2.8	2.8
PIN 15	-	2.8	2.8	2.8	2.8	2.8	2.8
PIN 16	0	0	0	0	0	0	0
PIN 17	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 18	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PIN 19	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 20	0	0	0	0	0	0	0
PIN 21	3.0	3.7	3.7	3.7	3.7	3.7	3.7
PIN 22	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 23	4.9	4.2	4.2	4.2	4.2	4.2	4.2
PIN 24	4.9	4.2	4.2	4.2	4.2	4.2	4.2
PIN 25	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 26	0	5.1	5.1	5.1	5.1	5.1	5.1
PIN 27	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 28	-	-	-	-	-	-	-
PIN 29	-	-	-	-	-	-	-
PIN 30	-	-	-	-	-	-	-
PIN 31	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 32	5.1	5.1	5.1	5.1	5.1	0.1	0.1
PIN 33	0	5.1	5.1	5.1	5.1	5.1	5.1
PIN 34	5.1	5.1	5.1	5.1	5.1	0.1	0.1
PIN 35	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PIN 36	4.4	3.7	3.7	3.7	3.7	3.7	3.7
PIN 37	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 38	3.1	4.1	3.4	3.4	3.4	3.4	3.4
PIN 39	2.5	3.2	3.4	3.4	3.4	3.4	3.4
PIN 40	5.1	5.1	5.1	5.1	5.1	5.1	5.1

NOTES :
1) NO AV-IN
2) NO OSD
3) NO RF-IN
4) REC SPEED, D1 & D2=SP
5) TEST TAPE, D1 & D2=SP

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC6002						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 2	0	0	0	0	0	0	0
PIN 3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 4	0	0	0	0	0	0	0
PIN 5	2.3	3.1	3.5	3.5	3.5	3.5	3.5
PIN 6	2.9	3.5	3.8	3.8	3.8	3.8	3.8
PIN 7	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PIN 8	4.4	3.9	3.9	3.9	3.9	3.9	3.9
PIN 9	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 10	3.0	3.7	3.2	3.2	3.2	3.2	3.2
PIN 11	2.5	3.2	3.2	3.2	3.2	3.2	3.2
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0.1	0.1	0.1	0.1	0.1	0.1
PIN 14	0	0	0	0	0	0	0
PIN 15	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 16	0	0.1	4.9	0.1	0.1	4.6	4.9
PIN 17	-	-	-	-	-	-	-
PIN 18	-	-	-	-	-	-	-
PIN 19	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 20	3.9	4.2	4.2	4.2	4.2	4.2	4.2
PIN 21	3.7	3.8	3.8	3.8	3.8	3.8	3.8
PIN 22	0	0	0	0	0	0	0
PIN 23	0	0	0	0	0	0	0
PIN 24	5.1	5.0	5.0	5.0	5.0	5.0	5.0

NOTES :
1) REC SPEED, D1=SP
2) TEST TAPE, D1=SP
3) NO OSD

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC6003						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 2	0	0	0	0	0	0	0
PIN 3	0	0	0	0	0	0	0
PIN 4	0	0	0	0	0	0	0
PIN 5	4.6	4.6	4.6	4.9	4.6	4.6	4.6
PIN 6	4.9	4.9	4.9	4.9	4.9	4.9	4.9
PIN 7	3.0	3.0	3.0	3.0	3.0	3.6	3.0
PIN 8	4.4	3.6	3.6	3.6	3.6	3.6	3.6
PIN 9	3.0	3.2	3.2	3.2	3.2	3.2	3.2
PIN 10	3.0	4.1	3.2	3.2	3.2	3.2	3.2
PIN 11	2.4	3.2	3.2	3.2	3.2	3.2	3.2
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0	0	0	0	0	0
PIN 14	4.6	4.5	4.5	4.5	4.5	4.5	4.5
PIN 15	0	0	4.3	0	0	4.3	4.3
PIN 16	0	0	0	0	0	4.6	4.6
PIN 17	0	0	0	0	0	4.6	4.6
PIN 18	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 19	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 20	0	0	0	0	0	0	0
PIN 21	2.6	2.6	2.6	2.6	2.6	2.6	2.6
PIN 22	0	0	0	0	0	0	0
PIN 23	0	0	0	0	0	0	0
PIN 24	5.0	5.0	5.0	5.0	5.0	5.0	5.0

NOTES :
1) REC SPEED, D1 & D2=SP
2) TEST TAPE, D1 & D2=SP
3) TV/VCR IN TV MODE
4) SUPPLY RF-IN
5) NO OSD

MODE / PIN NO		
	STOP	REC
PIN 1	-	-
PIN 2	4.7	4.7
PIN 3	5.0	5.0
PIN 4	5.0	5.0
PIN 5	4.9	4.9
PIN 6	4.8	4.0
PIN 7	2.9	2.9
PIN 8	4.5	3.9
PIN 9	3.4	3.4
PIN 10	3.1	3.9
PIN 11	2.5	3.1
PIN 12	0	0
PIN 13	0	5.1
PIN 14	4.7	0
PIN 15	0	5.1
PIN 16	5.1	5.1
PIN 17	0	0
PIN 18	0	0
PIN 19	0	5.1
PIN 20	5.1	5.1
PIN 21	3.4	3.4
PIN 22	3.4	3.4
PIN 23	0	4.3
PIN 24	5.1	5.1

NOTES :
1) REC SPEED
2) TEST TAPE
3) REC SAFE
4) NO OSD
5) VIEW SOUR

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC6004						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	-	-	-	-	-	-	-
PIN 2	4.7	4.7	4.7	0.1	4.7	0.1	4.7
PIN 3	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 4	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 5	4.9	4.9	4.9	4.9	4.9	0.1	0.1
PIN 6	4.8	4.0	3.9	4.0	4.0	4.0	4.0
PIN 7	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PIN 8	4.5	3.9	3.9	3.9	3.9	3.9	3.9
PIN 9	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 10	3.1	3.9	3.4	3.4	3.4	3.4	3.4
PIN 11	2.5	3.1	3.1	3.1	3.1	3.1	3.1
PIN 12	0	0	0	0	0	0	0
PIN 13	0	5.1	5.1	5.1	5.1	0	5.1
PIN 14	4.7	0	0	0	0	4.6	0
PIN 15	0	5.1	5.1	0	0	5.1	5.1
PIN 16	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 17	0	0	0	0	0	0	0
PIN 18	0	0	0	0	0	0	0
PIN 19	0	5.1	0	0	0	0	0
PIN 20	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 21	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 22	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 23	0	4.3	0	0	0	0	0
PIN 24	5.1	5.1	5.1	5.1	5.1	5.1	5.1

NOTES :
1) REC SPEED, D1=SP
2) TEST TAPE, D1=SP
3) REC SAFETY TAB=REMOVED
4) NO OSD
5) VIEW SOURCE=D1

MODE / TR NO	STOP			
	E	C	B	
Q2101	0	0	4.3	
Q2201	0	0	5.0	
Q6001	0	5.0	0	
Q6005	0	5.0	0	
Q6006	0	0	4.6	
Q6007	0	0	4.6	
Q6008	0	5.2	0	
Q6009	0	5.2	0	
Q6010	0	9.0	0	
Q6011	9.0	0.4	9.0	9.
Q6012	0	5.2	0	
Q6013	5.2	0	5.2	
Q6014	0	9.0	0	
Q6015	9.0	0.4	9.0	9.
Q6016	0	5.0	0	
Q6017	5.0	0	5.0	5.

NOTES :
1) REC SPEED,
2) TEST TAPE,

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC6005						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	-	-	-	-	-	-	-
PIN 2	4.7	4.7	4.7	0.1	4.7	0.1	4.7
PIN 3	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 4	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PIN 5	4.9	4.9	4.9	4.9	4.9	0.1	0.1
PIN 6	4.8	4.0	3.9	4.0	4.0	4.0	4.0
PIN 7	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PIN 8	4.5	3.9	3.9	3.9	3.9	3.9	3.9
PIN 9	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 10	3.1	3.9	3.4	3.4	3.4	3.4	3.4
PIN 11	2.5	3.1	3.1	3.1	3.1	3.1	3.1
PIN 12	0	0	0	0	0	0	0
PIN 13	0	5.1	5.1	5.1	5.1	0	5.1
PIN 14	4.7	0	0	0	0	4.6	0
PIN 15	0	5.1	5.1	0	0	5.1	5.1
PIN 16	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 17	0	0	0	0	0	0	0
PIN 18	0	0	0	0	0	0	0
PIN 19	0	5.1	0	0	0	0	0
PIN 20	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 21	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 22	3.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 23	0	4.3	0	0	0	0	0
PIN 24	5.1	5.1	5.1	5.1	5.1	5.1	5.1

OTES :
1) REC SPEED, D2=SP
2) TEST TAPE, D2=SP
3) REC SAFETY TAB=REMOVED
4) NO OSD
5) VIEW SOURCE=D2

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC2201						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 2	0	0.1	0.1	0	0	0.2	0.2
PIN 3	1.9	1.8	1.8	1.8	1.8	1.8	1.8
PIN 4	0	0	0	0	0	0	0
PIN 5	0	0	0.1	0	0	0.1	0.1
PIN 6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
PIN 7	0	0	0	0	0	0.2	0.2
PIN 8	5.1	5.1	5.1	5.1	5.1	5.1	5.1

NOTES : 1) D2 ONLY

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC2101						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 2	0	0.1	0.1	0	0	0.2	0.2
PIN 3	1.9	1.8	1.8	1.8	1.8	1.8	1.8
PIN 4	0	0	0	0	0	0	0
PIN 5	0	0	0.1	0	0	0.1	0.1
PIN 6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
PIN 7	0	0	0	0	0	0.2	0.2
PIN 8	5.1	5.1	5.1	5.1	5.1	5.1	5.1

NOTES : 1) D1 ONLY

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / TR NO	STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q2101	0	0	4.3	0	0	4.3	0	0	4.3	0	0	4.3	0	0	4.3	0	0.2	0.1	0	0.2	0.1
Q2201	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0.2	0.1	0	0.2	0.1
Q6001	0	5.0	0	0	5.0	0	0	5.1	0	0	5.0	0	0	5.0	0	0	5.1	0	0	5.1	0
Q6005	0	5.0	0	0	5.0	0	0	5.1	0	0	5.0	0	0	5.0	0	0	5.1	0	0	5.1	0
Q6006	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	6.0	0	4.6	0	0	4.6
Q6007	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6
Q6008	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0
Q6009	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0	0	5.2	0
Q6010	0	9.0	0	0	0	4.3	0	9.0	0	0	9.0	0	0	9.0	0	0	9.0	0	0	9.0	0
Q6011	9.0	0.4	9.0	9.0	9.0	0	9.0	0.4	9.0	9.0	0.4	9.0	9.0	0.4	9.0	9.0	0.4	9.0	9.0	0.4	9.0
Q6012	0	5.2	0	0	5.2	0	0	0	4.9	0	5.2	0	0	5.2	0	0	0	5.0	0	0	5.0
Q6013	5.2	0	5.2	0	0	5.2	5.2	5.2	0	5.2	0	5.2	5.2	0	5.2	5.2	5.2	0	5.2	5.2	0
Q6014	0	9.0	0	0	0	4.4	0	9.0	0	0	9.0	0	0	9.0	0	0	9.0	0	0	9.0	0
Q6015	9.0	0.4	9.0	9.0	9.0	0	9.0	0.4	9.0	9.0	0.4	9.0	9.0	0.4	9.0	9.0	0.4	9.0	9.0	0.4	9.0
Q6016	0	5.0	0	0	5.0	0	0	0	4.4	0	5.0	0	0	5.0	0	0	0	4.4	0	0	4.4
Q6017	5.0	0	5.0	5.0	0	5.0	5.0	5.0	0	5.0	0	5.0	5.0	0	5.0	5.0	5.0	0	5.0	5.0	0

OTES :
1) REC SPEED, D1 & D2=SP
2) TEST TAPE, D1 & D2=SP

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC1101						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	3.4	3.5	3.5	3.5	3.5	3.5	3.5
PIN 2	0	0	0	0	0	0	0
PIN 3	3.5	3.5	3.5	3.5	3.5	3.5	3.5
PIN 4	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 5	-	-	-	-	-	-	-
PIN 6	3.5	3.5	3.5	3.5	3.5	3.6	3.6
PIN 7	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 8	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 9	8.7	8.7	8.7	8.7	8.7	8.7	8.7
PIN 10	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 11	3.1	3.1	3.1	3.1	3.1	3.1	3.1
PIN 12	3.6	3.6	3.6	3.6	3.6	3.6	3.6
PIN 13	3.1	3.1	3.1	3.1	3.1	3.1	3.1
PIN 14	3.6	3.6	3.6	3.6	3.6	3.7	3.7
PIN 15	3.5	3.5	3.5	3.5	3.5	2.7	2.7
PIN 16	3.5	3.5	3.5	3.5	3.5	2.7	2.7
PIN 17	3.4	3.7	3.7	3.7	3.7	3.6	3.6
PIN 18	2.8	2.8	2.8	2.8	2.8	2.8	2.8
PIN 19	0	0	0	0	0	0	0
PIN 20	3.2	3.2	3.2	3.2	3.2	3.2	3.2

NOTES : 1) NO BLUE SCREEN (SUPPLY RF-IN)
2) NO OSD
3) TEST TAPE, D1 & D2=SP
4) REC SRC, D1 & D2=TUNER

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC4002						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	-	-	-	-	-	-	-
PIN 2	-	-	-	-	-	-	-
PIN 3	-	-	-	-	-	-	-
PIN 4	-	-	-	-	-	-	-
PIN 5	-	-	-	-	-	-	-
PIN 6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
PIN 7	2.6	3.0	3.2	2.9	2.9	2.7	2.8
PIN 8	0	0	0	0	0	0	0
PIN 9	-	-	-	-	-	-	-
PIN 10	-	-	-	-	-	-	-
PIN 11	-	-	-	-	-	-	-
PIN 12	-	-	-	-	-	-	-
PIN 13	-	-	-	-	-	-	-
PIN 14	-	-	-	-	-	-	-
PIN 15	-	-	-	-	-	-	-
PIN 16	3.6	3.6	3.6	3.6	3.6	3.6	3.6
PIN 17	-	-	-	-	-	-	-
PIN 18	-	-	-	-	-	-	-
PIN 19	4.2	4.2	4.2	4.2	4.2	4.2	4.2
PIN 20	-	-	-	-	-	-	-
PIN 21	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 22	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 23	3.6	3.6	3.6	3.6	3.6	3.6	3.6
PIN 24	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 25	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PIN 26	-	-	-	-	-	-	-
PIN 27	1.4	1.4	1.4	1.4	1.4	1.4	1.4
PIN 28	-	-	-	-	-	-	-
PIN 29	-	-	-	-	-	-	-
PIN 30	-	-	-	-	-	-	-

NOTES : 1) SUPPLY RF-IN

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC8001						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 2	2.4	2.4	2.4	2.5	2.5	2.5	2.5
PIN 3	4.9	4.9	4.9	4.9	4.9	4.9	4.9
PIN 4	0	0	0	0	0	0	0
PIN 5	-	-	-	-	-	-	-
PIN 6	1.3	1.3	1.3	1.3	1.3	1.3	1.3
PIN 7	-	-	-	-	-	-	-
PIN 8	4.9	4.9	4.9	4.9	4.9	4.9	4.9

NOTES : 1) TEST TAPE, D1=SP
2) REC SRC, D1=TUNER
3) SUPPLY RF-IN

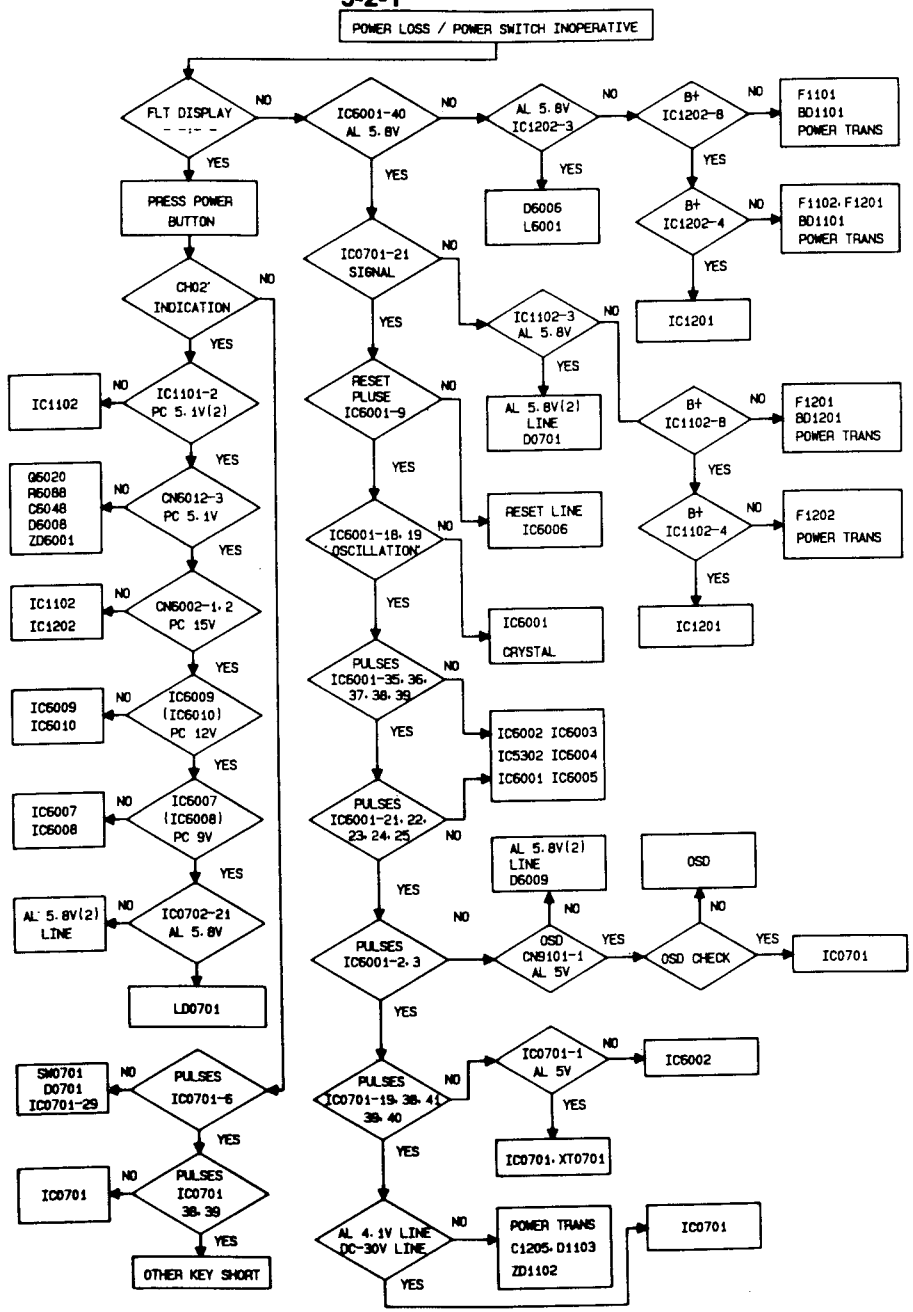
FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / TR NO	STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q1101	1.5	0	0.8	1.5	0	2.9	1.5	0	0.8	1.5	0	0.8	1.5	0	0.8	1.5	0	0.8	1.5	0	0.8
Q1102	4.1	0	3.5	4.0	0	3.3	3.3	0	2.6	3.6	0	2.9	3.6	0	2.9	4.3	0	2.6	4.3	0	2.6
Q1103	4.9	0	4.0	4.6	0	4.9	4.0	0	3.3	4.2	0	3.6	4.2	0	3.6	5.0	0	4.3	5.0	0	4.3
Q4001	5.0	5.0	0	5.0	4.9	0	5.0	4.9	0	5.0	4.9	0	5.0	4.9	0	5.0	4.9	0	5.0	4.9	0
Q4002	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6	0	0	4.6
Q4004	7.6	0	7.0	7.6	0	7.0	7.6	0	7.0	7.6	0	7.0	7.6	0	7.0	7.6	0	7.0	7.6	0	7.0
Q4005	2.0	0	1.4	1.2	0	1.4	1.1	1.1	1.4	1.1	1.1	1.3	1.1	1.1	1.3	1.1	0	1.3	1.1	0	1.3

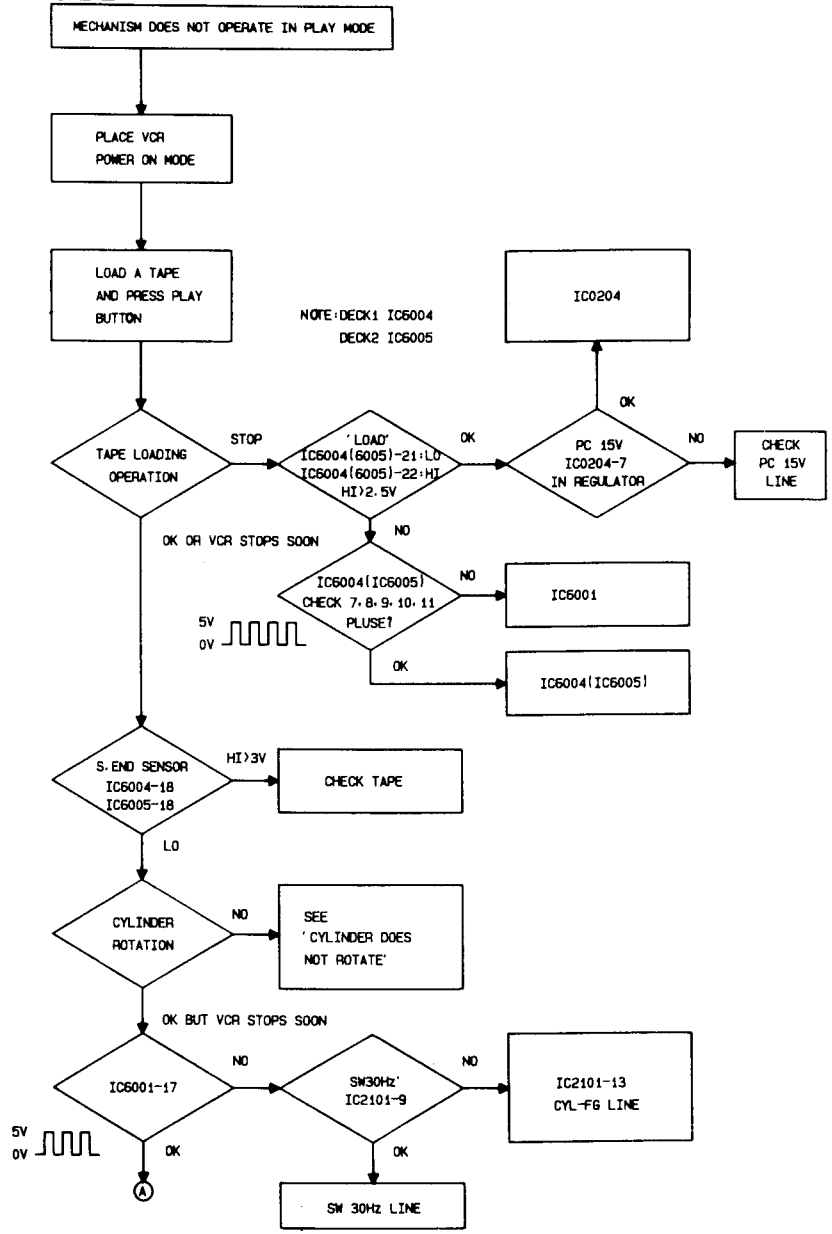
NOTES : 1) TV/TCR BUTTON=VCR
2) SUPPLY RF-IN

5-2. TROUBLESHOOTING

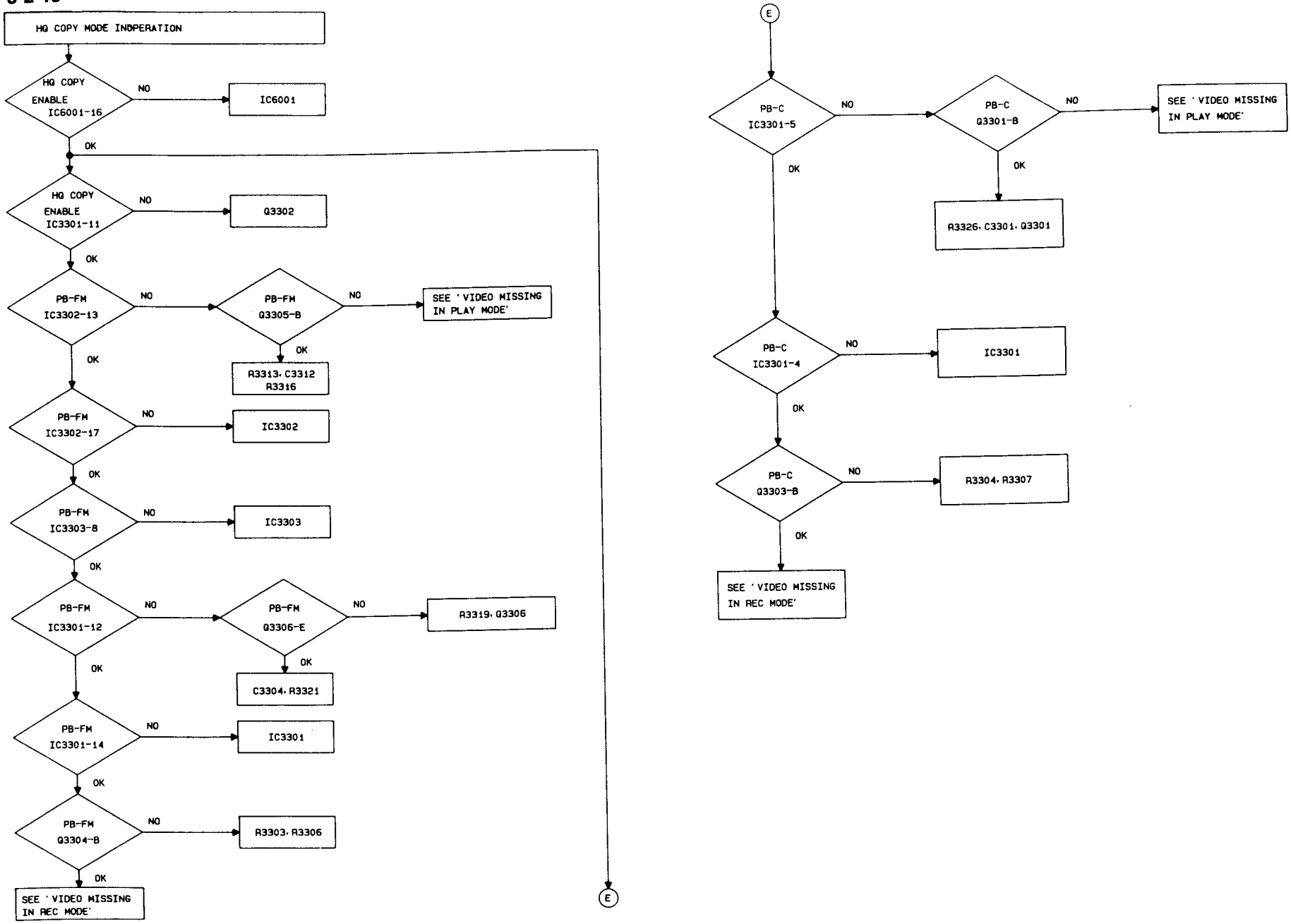
5-2-1



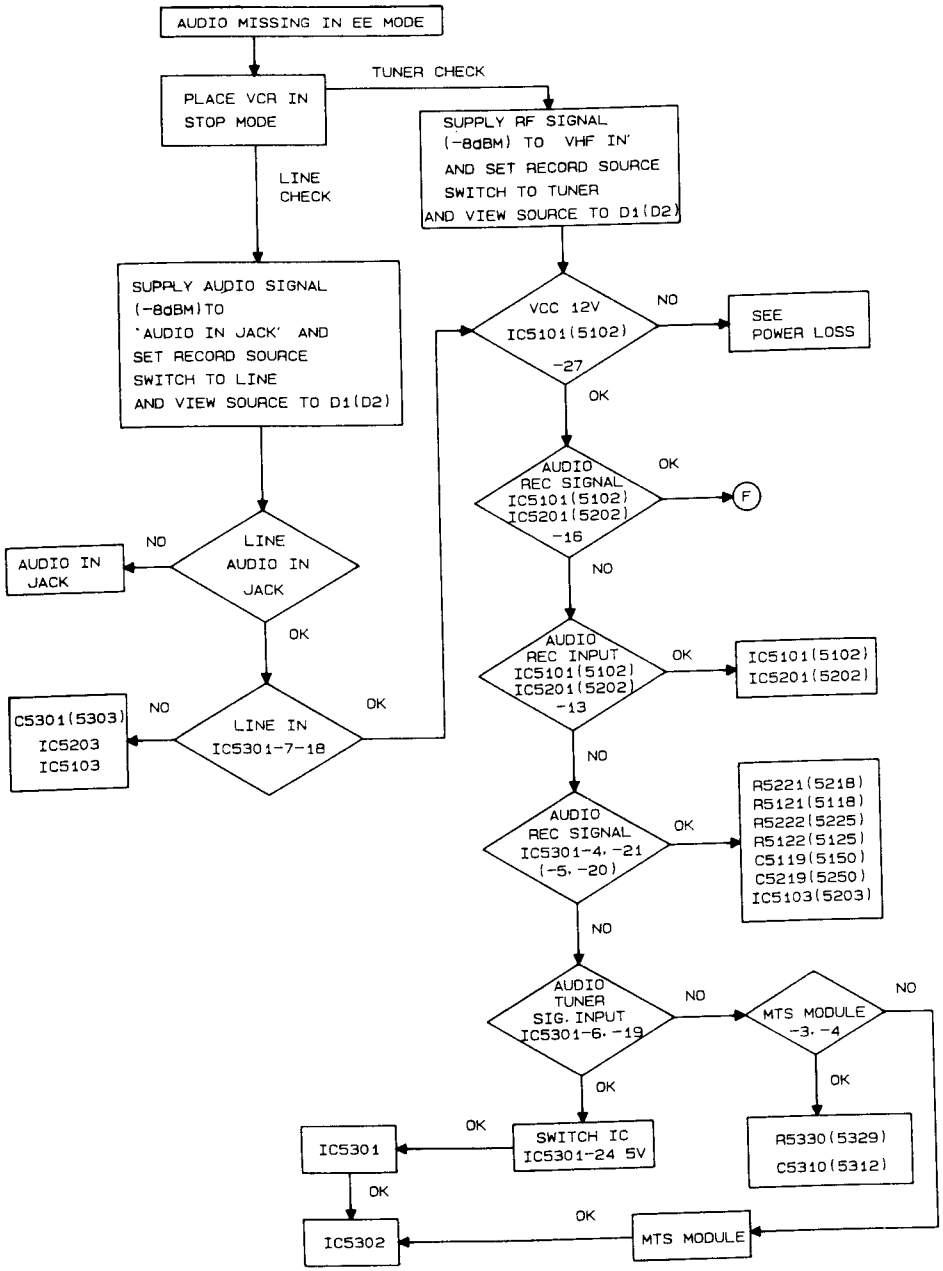
5-2-2



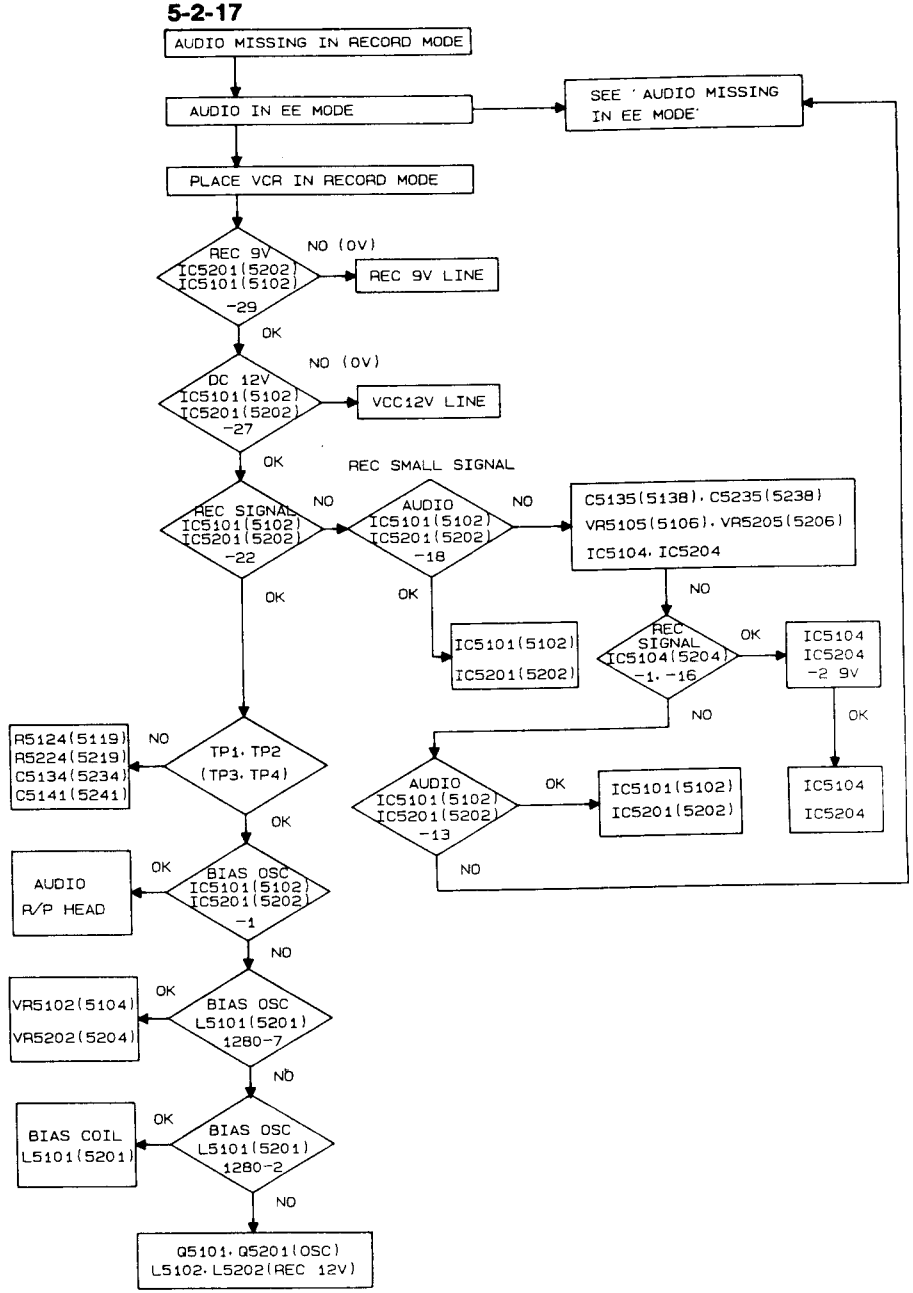
5-2-15

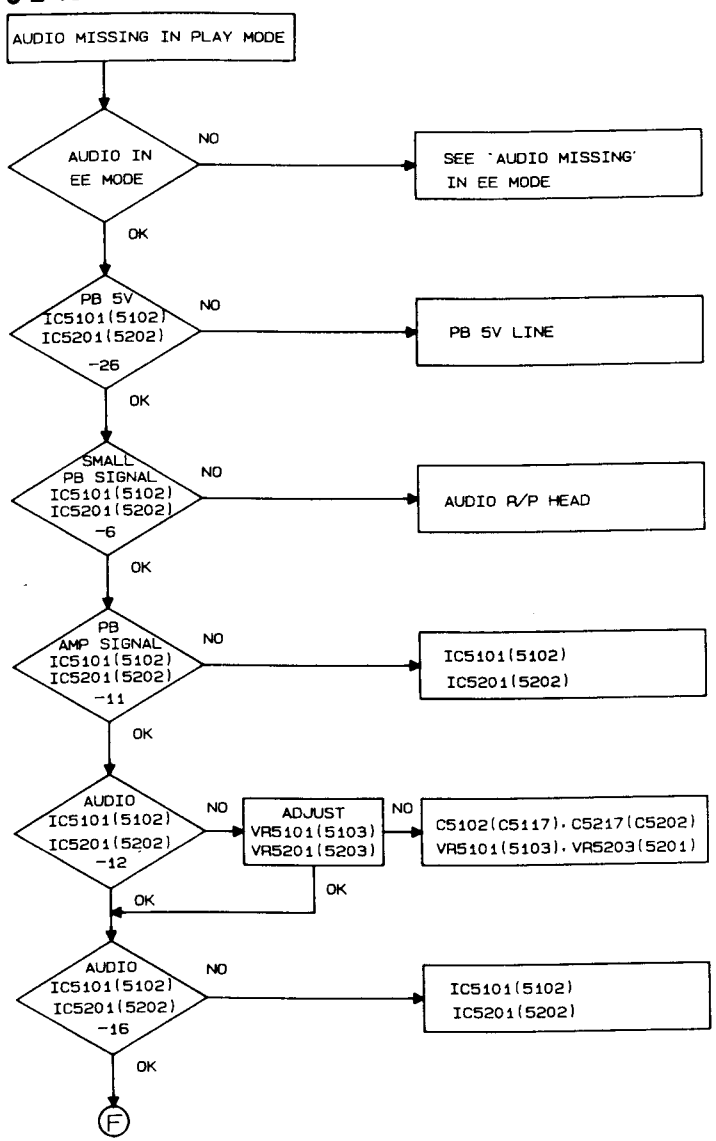

HQ COPY MODE INOPERATION
HQ COPY ENABLE IC6001-16
NO
IC6001
OK
HQ COPY ENABLE IC3301-11
NO
Q3302
OK
PB-FM IC3302-13
NO
PB-FM Q3305-B
NO
SEE 'VIDEO MISSING IN PLAY MODE'
OK
R3313, C3312 R3316
OK
PB-FM IC3302-17
NO
IC3302
OK
PB-FM IC3303-8
NO
IC3303
OK
PB-FM IC3301-12
NO
PB-FM Q3306-E
NO
R3319, Q3306
OK
C3304, R3321
OK
PB-FM IC3301-14
NO
IC3301
OK
PB-FM Q3304-B
NO
R3303, R3306
OK
SEE 'VIDEO MISSING IN REC MODE'
E
E
PB-C IC3301-5
NO
PB-C Q3301-B
NO
SEE 'VIDEO MISSING IN PLAY MODE'
OK
OK
R3326, C3301, Q3301
PB-C IC3301-4
NO
IC3301
OK
PB-C Q3303-B
NO
R3304, R3307
OK
SEE 'VIDEO MISSING IN REC MODE'

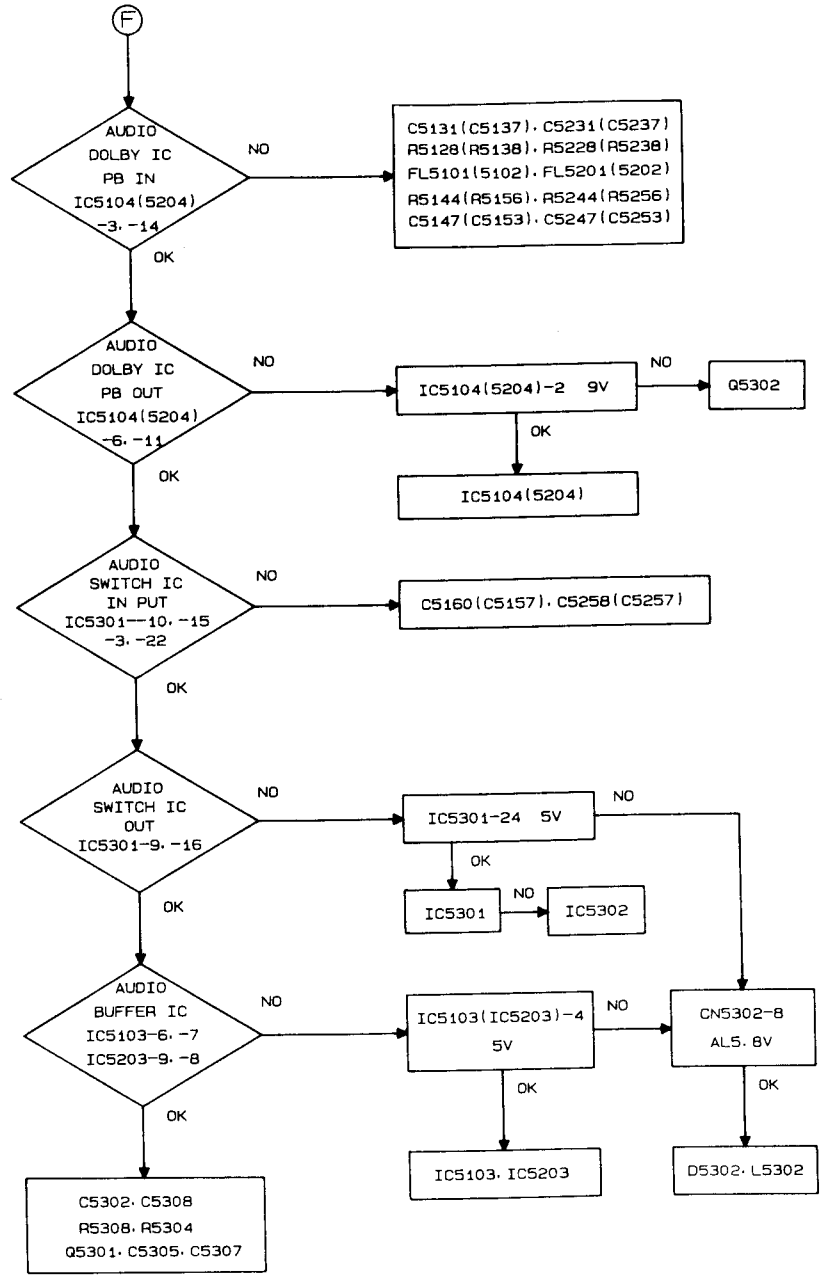
5-2-16


AUDIO MISSING IN EE MODE
PLACE VCR IN STOP MODE
TUNER CHECK
LINE CHECK
SUPPLY RF SIGNAL (-8dBM) TO VHF IN' AND SET RECORD SOURCE SWITCH TO TUNER AND VIEW SOURCE TO D1(D2)
SUPPLY AUDIO SIGNAL (-8dBM) TO 'AUDIO IN JACK' AND SET RECORD SOURCE SWITCH TO LINE AND VIEW SOURCE TO D1(D2)
VCC 12V IC5101(5102) -27
NO
SEE POWER LOSS
OK
AUDIO REC SIGNAL IC5101(5102) IC5201(5202) -16
OK
F
NO
LINE AUDIO IN JACK
NO
AUDIO IN JACK
OK
AUDIO REC INPUT IC5101(5102) IC5201(5202) -13
OK
IC5101(5102) IC5201(5202)
NO
C5301(5303) IC5203 IC5103
NO
LINE IN IC5301-7-18
OK
AUDIO REC SIGNAL IC5301-4, -21 (-5, -20)
OK
R5221(5218) R5121(5118) R5222(5225) R5122(5125) C5119(5150) C5219(5250) IC5103(5203)
NO
AUDIO TUNER SIG. INPUT IC5301-6, -19
NO
MTS MODULE -3, -4
NO
OK
OK
SWITCH IC IC5301-24 5V
OK
R5330(5329) C5310(5312)
IC5301
OK
IC5302
OK
MTS MODULE

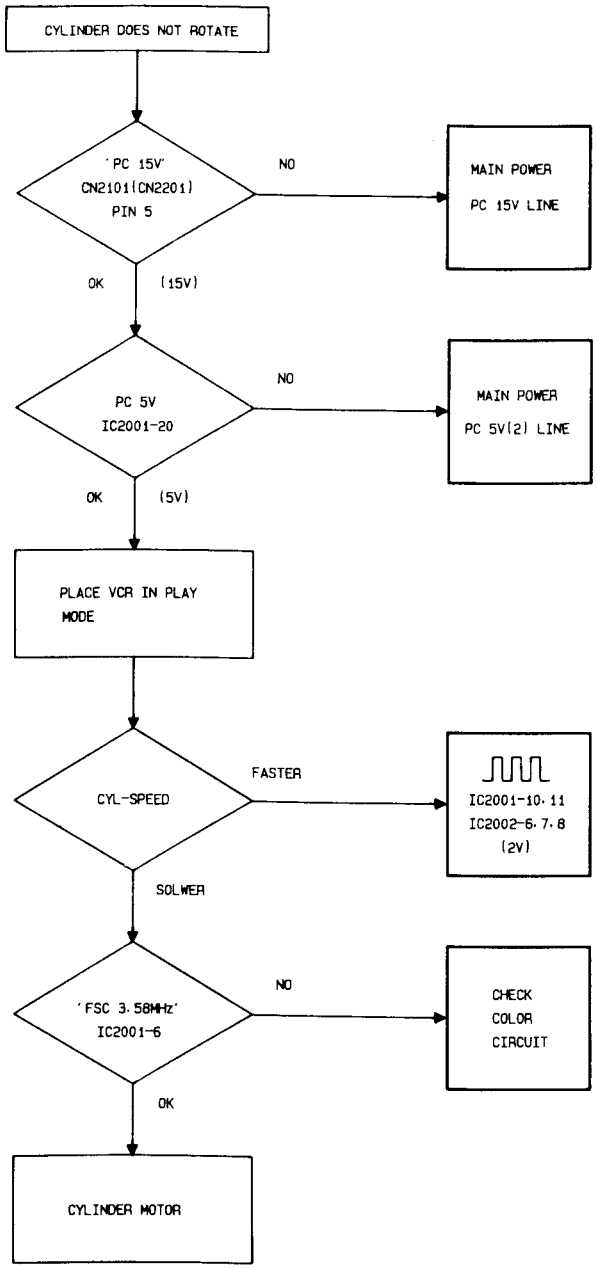
5-2-17


AUDIO MISSING IN RECORD MODE
AUDIO IN EE MODE
SEE 'AUDIO MISSING IN EE MODE'
PLACE VCR IN RECORD MODE
REC 9V IC5201(5202) IC5101(5102) -29
NO (0V)
REC 9V LINE
OK
DC 12V IC5101(5102) IC5201(5202) -27
NO (0V)
VCC12V LINE
OK
REC SMALL SIGNAL
REC SIGNAL IC5101(5102) IC5201(5202) -22
NO
AUDIO IC5101(5102) IC5201(5202) -18
NO
C5135(5138), C5235(5238) VR5105(5106), VR5205(5206) IC5104, IC5204
OK
OK
IC5101(5102) IC5201(5202)
NO
REC SIGNAL IC5104(5204) -1, -16
OK
IC5104 IC5204 -2 9V
OK
NO
AUDIO IC5101(5102) IC5201(5202) -13
OK
IC5101(5102) IC5201(5202)
IC5104 IC5204
NO
R5124(5119) R5224(5219) C5134(5234) C5141(5241)
NO
TP1, TP2 (TP3, TP4)
OK
AUDIO R/P HEAD
OK
BIAS OSC IC5101(5102) IC5201(5202) -1
NO
VR5102(5104) VR5202(5204)
OK
BIAS OSC L5101(5201) 1280-7
NO
BIAS COIL L5101(5201)
OK
BIAS OSC L5101(5201) 1280-2
NO
Q5101, Q5201(OSC) L5102, L5202(REC 12V)

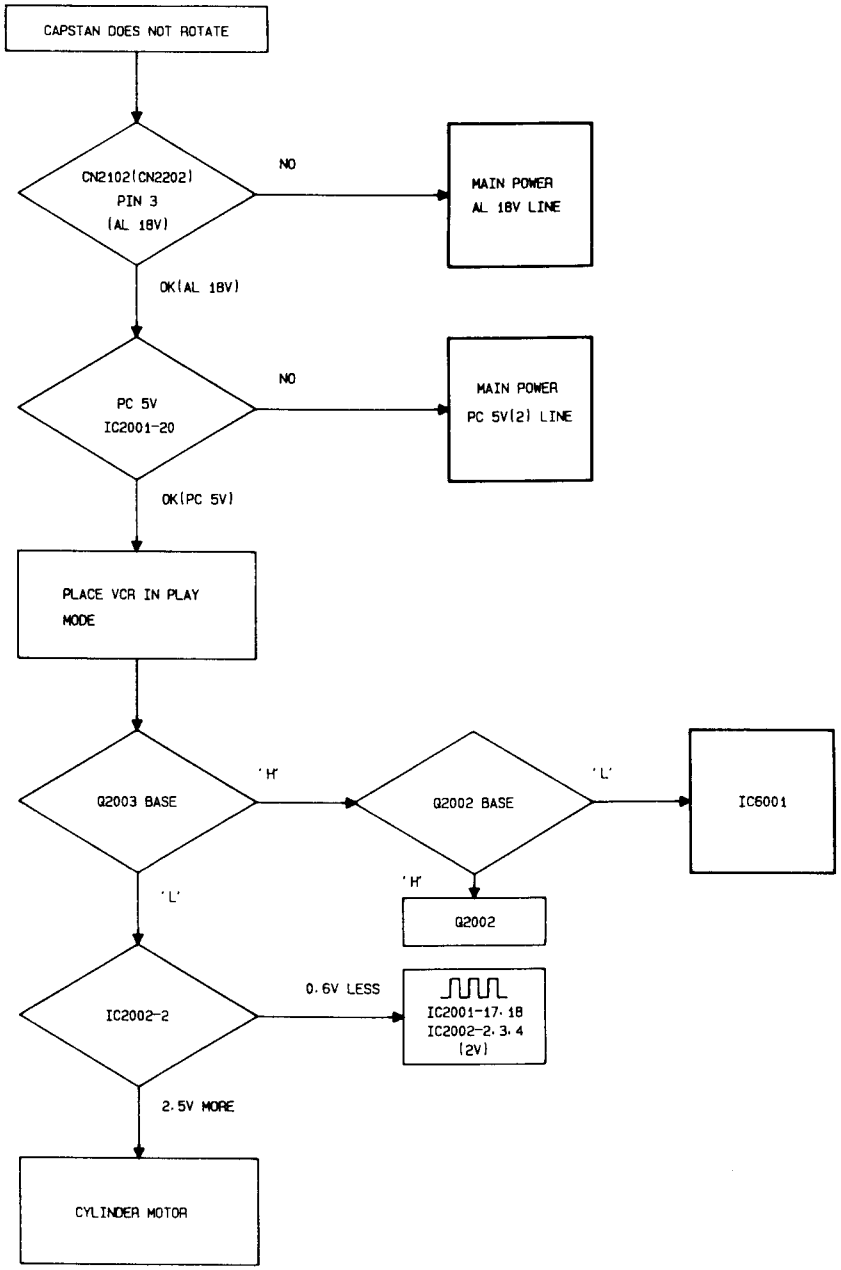

AUDIO MISSING IN PLAY MODE
AUDIO IN EE MODE
NO
SEE 'AUDIO MISSING' IN EE MODE
OK
PB 5V IC5101(5102) IC5201(5202) -26
NO
PB 5V LINE
OK
SMALL PB SIGNAL IC5101(5102) IC5201(5202) -6
NO
AUDIO R/P HEAD
OK
PB AMP SIGNAL IC5101(5102) IC5201(5202) -11
NO
IC5101(5102) IC5201(5202)
OK
AUDIO IC5101(5102) IC5201(5202) -12
NO
ADJUST VR5101(5103) VR5201(5203)
NO
C5102(C5117), C5217(C5202) VR5101(5103), VR5203(5201)
OK
OK
AUDIO IC5101(5102) IC5201(5202) -16
NO
IC5101(5102) IC5201(5202)
OK
F


F
AUDIO DOLBY IC PB IN IC5104(5204) -3, -14
NO
C5131(C5137), C5231(C5237) R5128(R5138), R5228(R5238) FL5101(5102), FL5201(5202) R5144(R5156), R5244(R5256) C5147(C5153), C5247(C5253)
OK
AUDIO DOLBY IC PB OUT IC5104(5204) -6, -11
NO
IC5104(5204)-2 9V
NO
Q5302
OK
IC5104(5204)
OK
AUDIO SWITCH IC IN PUT IC5301--10, -15 -3, -22
NO
C5160(C5157), C5258(C5257)
OK
AUDIO SWITCH IC OUT IC5301-9, -16
NO
IC5301-24 5V
NO
OK
IC5301
NO
IC5302
OK
AUDIO BUFFER IC IC5103-6, -7 IC5203-9, -8
NO
IC5103(IC5203)-4 5V
NO
CN5302-8 AL5.8V
OK
OK
IC5103, IC5203
OK
C5302, C5308 R5308, R5304 Q5301, C5305, C5307
D5302, L5302

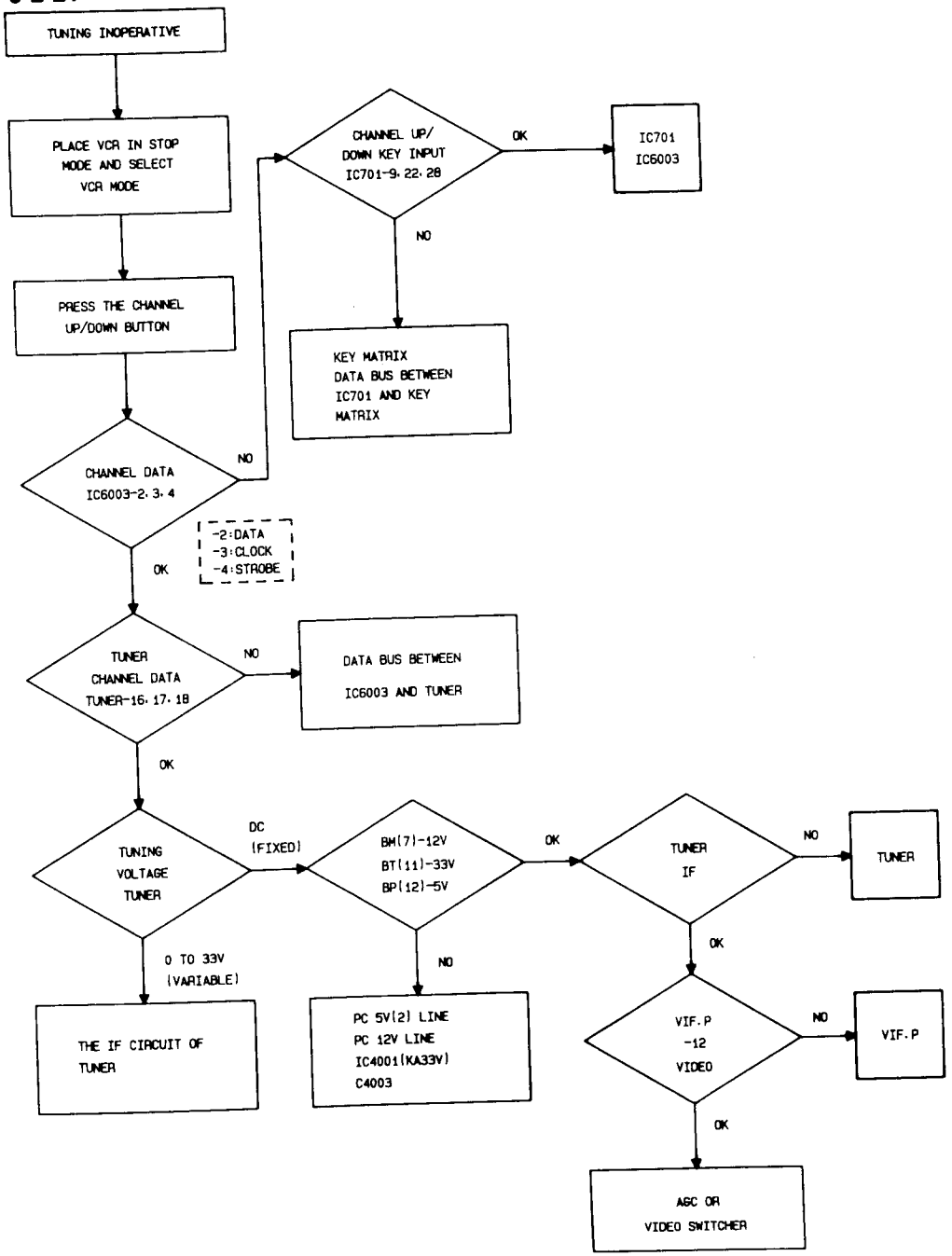
5-2-19


CYLINDER DOES NOT ROTATE
'PC 15V'
CN2101(CN2201)
PIN 5
NO
MAIN POWER
PC 15V LINE
OK
(15V)
PC 5V
IC2001-20
NO
MAIN POWER
PC 5V(2) LINE
OK
(5V)
PLACE VCR IN PLAY
MODE
CYL-SPEED
FASTER
IC2001-10, 11
IC2002-6, 7, 8
(2V)
SOLWER
'FSC 3.58MHz'
IC2001-6
NO
CHECK
COLOR
CIRCUIT
OK
CYLINDER MOTOR

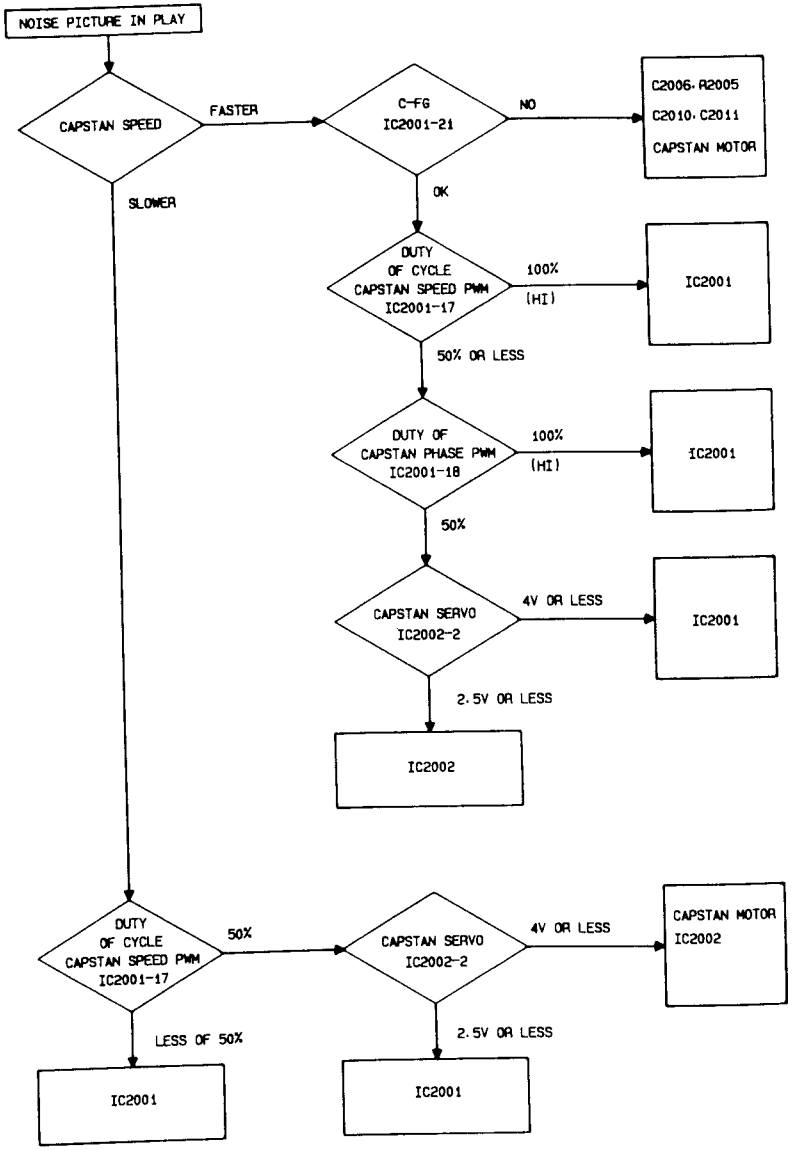
5-2-20

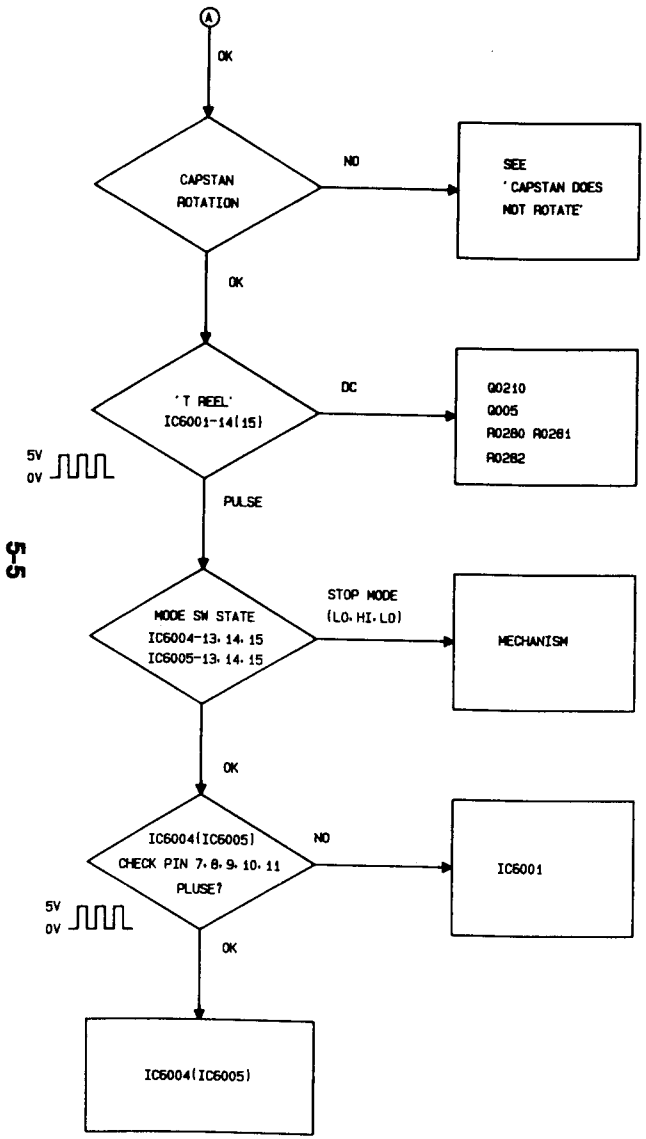

CAPSTAN DOES NOT ROTATE
CN2102(CN2202)
PIN 3
(AL 18V)
NO
MAIN POWER
AL 18V LINE
OK(AL 18V)
PC 5V
IC2001-20
NO
MAIN POWER
PC 5V(2) LINE
OK(PC 5V)
PLACE VCR IN PLAY
MODE
Q2003 BASE
'H'
Q2002 BASE
'L'
IC6001
'L'
'H'
Q2002
IC2002-2
0.6V LESS
IC2001-17, 18
IC2002-2, 3, 4
(2V)
2.5V MORE
CYLINDER MOTOR

5-2-21

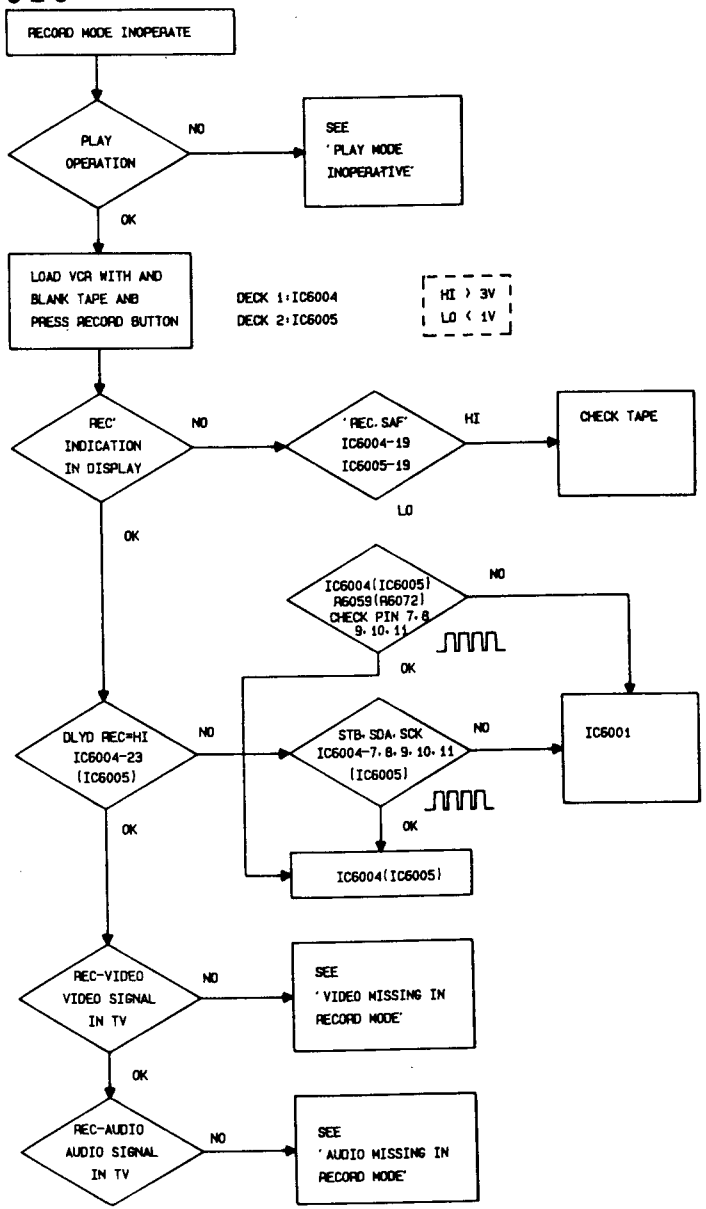

TUNING INOPERATIVE
PLACE VCR IN STOP MODE AND SELECT VCR MODE
PRESS THE CHANNEL UP/DOWN BUTTON
CHANNEL DATA IC6003-2, 3, 4
NO
OK
-2:DATA
-3:CLOCK
-4:STROBE
TUNER CHANNEL DATA TUNER-16, 17, 18
NO
DATA BUS BETWEEN IC6003 AND TUNER
OK
TUNING VOLTAGE TUNER
DC (FIXED)
0 TO 33V (VARIABLE)
THE IF CIRCUIT OF TUNER
BM(7)-12V
BT(11)-33V
BP(12)-5V
OK
NO
PC 5V(2) LINE
PC 12V LINE
IC4001(KA33V)
C4003
TUNER IF
NO
TUNER
OK
VIF.P -12 VIDEO
NO
VIF.P
OK
AGC OR VIDEO SWITCHER
CHANNEL UP/ DOWN KEY INPUT IC701-9, 22, 28
OK
IC701 IC6003
NO
KEY MATRIX DATA BUS BETWEEN IC701 AND KEY MATRIX

5-2-22

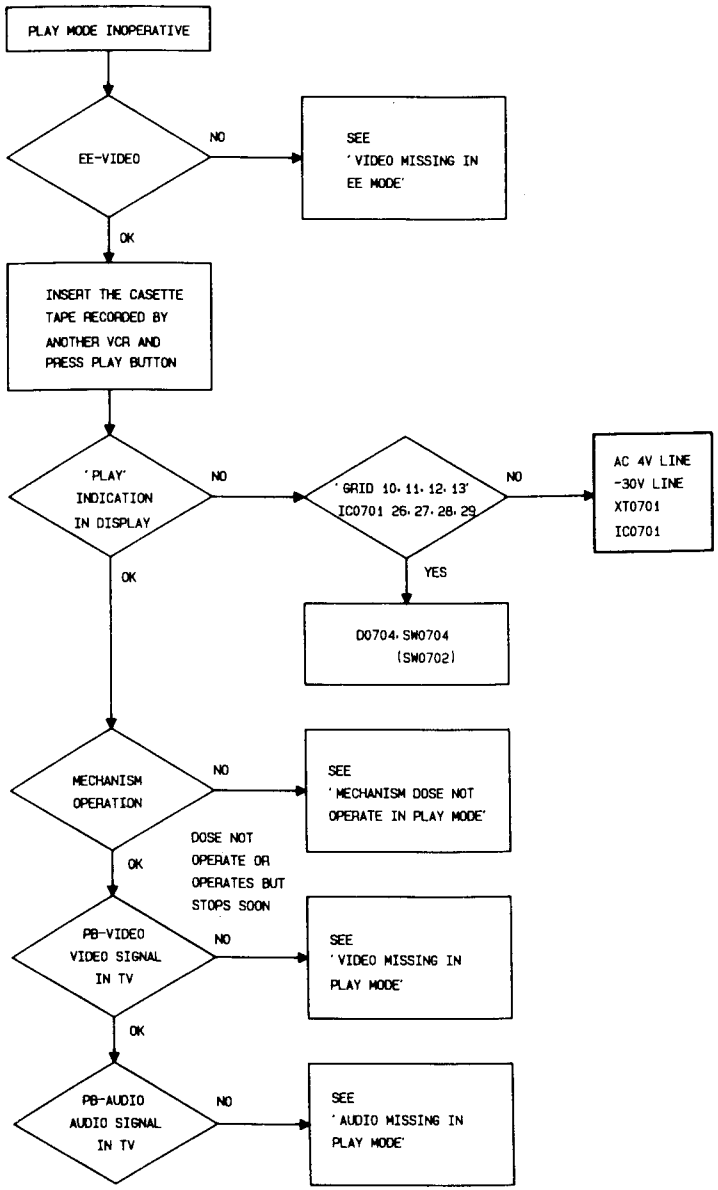

NOISE PICTURE IN PLAY
CAPSTAN SPEED
FASTER
C-FG IC2001-21
NO
C2006, R2005
C2010, C2011
CAPSTAN MOTOR
OK
SLOWER
DUTY OF CYCLE CAPSTAN SPEED PWM IC2001-17
100% (HI)
IC2001
50% OR LESS
DUTY OF CAPSTAN PHASE PWM IC2001-18
100% (HI)
IC2001
50%
CAPSTAN SERVO IC2002-2
4V OR LESS
IC2001
2.5V OR LESS
IC2002
DUTY OF CYCLE CAPSTAN SPEED PWM IC2001-17
50%
CAPSTAN SERVO IC2002-2
4V OR LESS
CAPSTAN MOTOR IC2002
LESS OF 50%
IC2001
2.5V OR LESS
IC2001


A
OK
CAPSTAN ROTATION
NO
SEE 'CAPSTAN DOES NOT ROTATE'
OK
'T REEL' IC6001-14(15)
DC
Q0210
Q005
R0280 R0281
R0282
5V
0V
PULSE
MODE SW STATE IC6004-13, 14, 15 IC6005-13, 14, 15
STOP MODE (LO, HI, LO)
MECHANISM
OK
IC6004(IC6005) CHECK PIN 7, 8, 9, 10, 11 PLUSE?
NO
IC6001
5V
0V
OK
IC6004(IC6005)

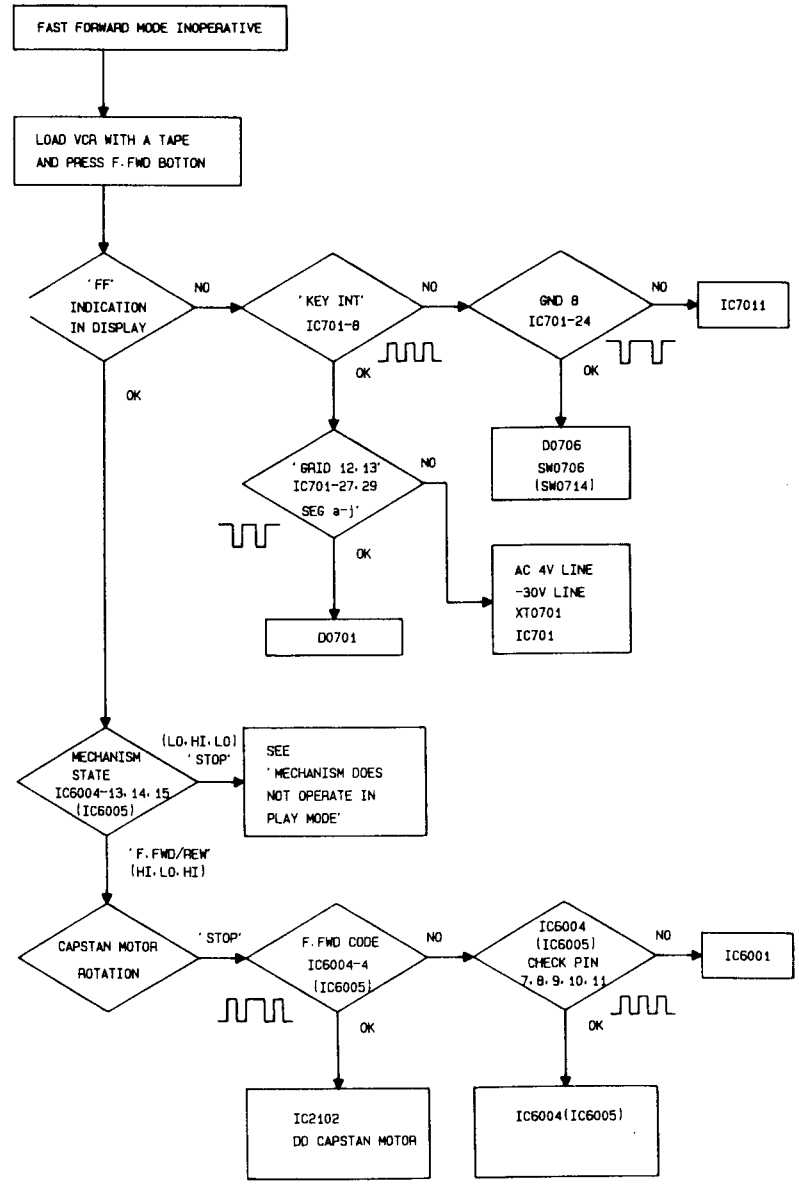
5-2-3


RECORD MODE INOPERATE
PLAY OPERATION
NO
SEE 'PLAY MODE INOPERATIVE'
OK
LOAD VCR WITH AND BLANK TAPE ANB PRESS RECORD BUTTON
DECK 1:IC6004
DECK 2:IC6005
HI > 3V
LO < 1V
'REC' INDICATION IN DISPLAY
NO
'REC.SAF' IC6004-19 IC6005-19
HI
CHECK TAPE
LO
OK
IC6004(IC6005) R6059(R6072) CHECK PIN 7, 8, 9, 10, 11
NO
OK
DLYD REC=HI IC6004-23 (IC6005)
NO
STB, SDA, SCK IC6004-7, 8, 9, 10, 11 (IC6005)
NO
IC6001
OK
OK
IC6004(IC6005)
REC-VIDEO VIDEO SIGNAL IN TV
NO
SEE 'VIDEO MISSING IN RECORD MODE'
OK
REC-AUDIO AUDIO SIGNAL IN TV
NO
SEE 'AUDIO MISSING IN RECORD MODE'

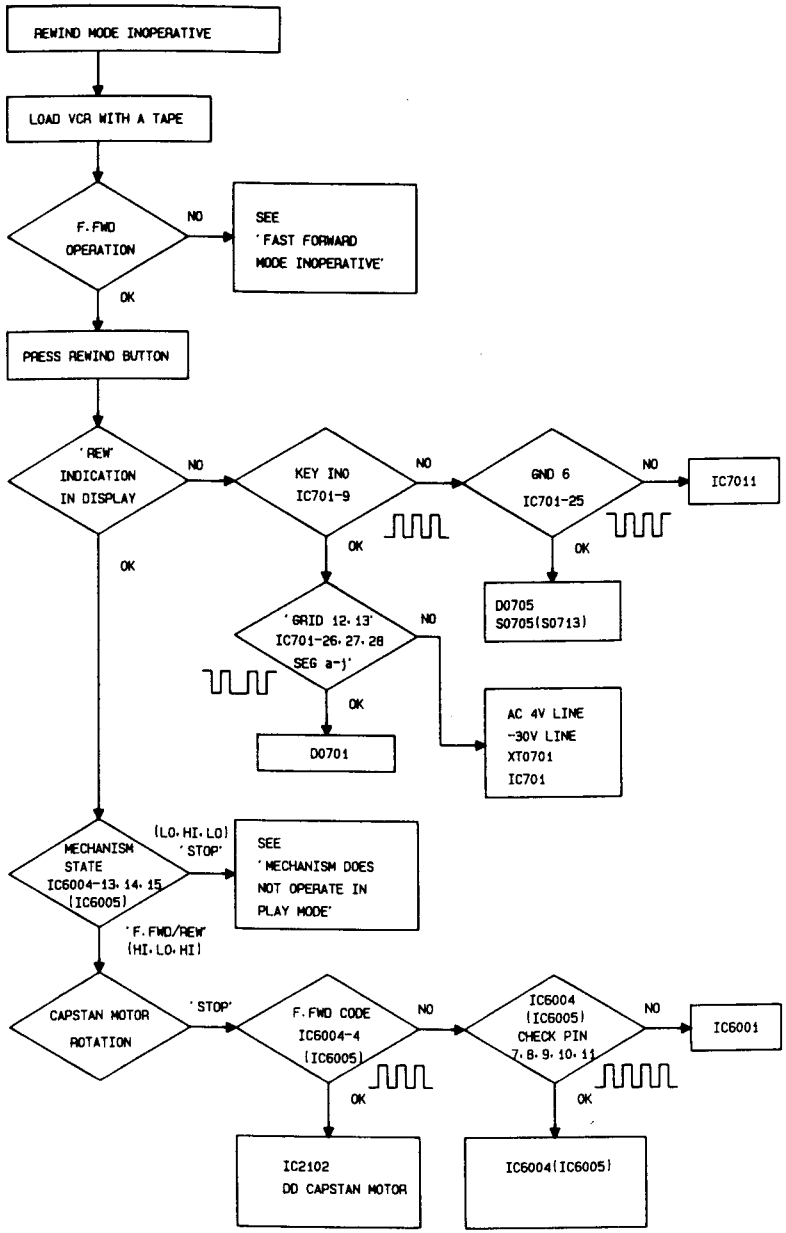
5-2-4


PLAY MODE INOPERATIVE
EE-VIDEO
NO
SEE 'VIDEO MISSING IN EE MODE'
OK
INSERT THE CASETTE TAPE RECORDED BY ANOTHER VCR AND PRESS PLAY BUTTON
'PLAY' INDICATION IN DISPLAY
NO
'GRID 10, 11, 12, 13' IC0701 26, 27, 28, 29
NO
AC 4V LINE -30V LINE XT0701 IC0701
YES
D0704, SW0704 (SW0702)
OK
MECHANISM OPERATION
NO
SEE 'MECHANISM DOSE NOT OPERATE IN PLAY MODE'
DOSE NOT OPERATE OR OPERATES BUT STOPS SOON
OK
PB-VIDEO VIDEO SIGNAL IN TV
NO
SEE 'VIDEO MISSING IN PLAY MODE'
OK
PB-AUDIO AUDIO SIGNAL IN TV
NO
SEE 'AUDIO MISSING IN PLAY MODE'

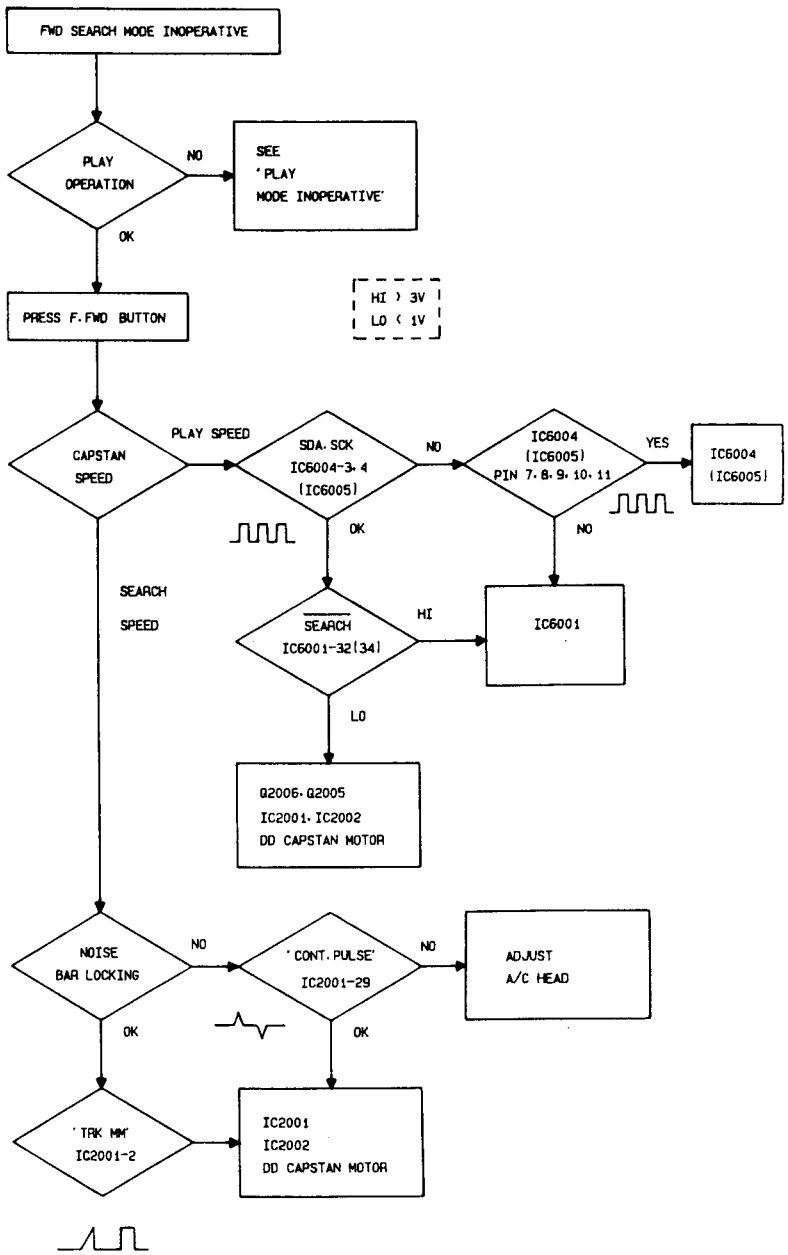
5-2-5


FAST FORWARD MODE INOPERATIVE
LOAD VCR WITH A TAPE AND PRESS F.FWD BOTTON
'FF' INDICATION IN DISPLAY
NO
'KEY INT' IC701-8
NO
GND 8 IC701-24
NO
IC7011
OK
OK
OK
'GRID 12, 13' IC701-27, 29 SEG a-j'
NO
D0706 SW0706 (SW0714)
OK
AC 4V LINE -30V LINE XT0701 IC701
D0701
MECHANISM STATE IC6004-13, 14, 15 (IC6005)
(LO, HI, LO) 'STOP'
SEE 'MECHANISM DOES NOT OPERATE IN PLAY MODE'
'F.FWD/REW' (HI, LO, HI)
CAPSTAN MOTOR ROTATION
'STOP'
F.FWD CODE IC6004-4 (IC6005)
NO
IC6004 (IC6005) CHECK PIN 7, 8, 9, 10, 11
NO
IC6001
OK
OK
IC2102 DD CAPSTAN MOTOR
IC6004(IC6005)

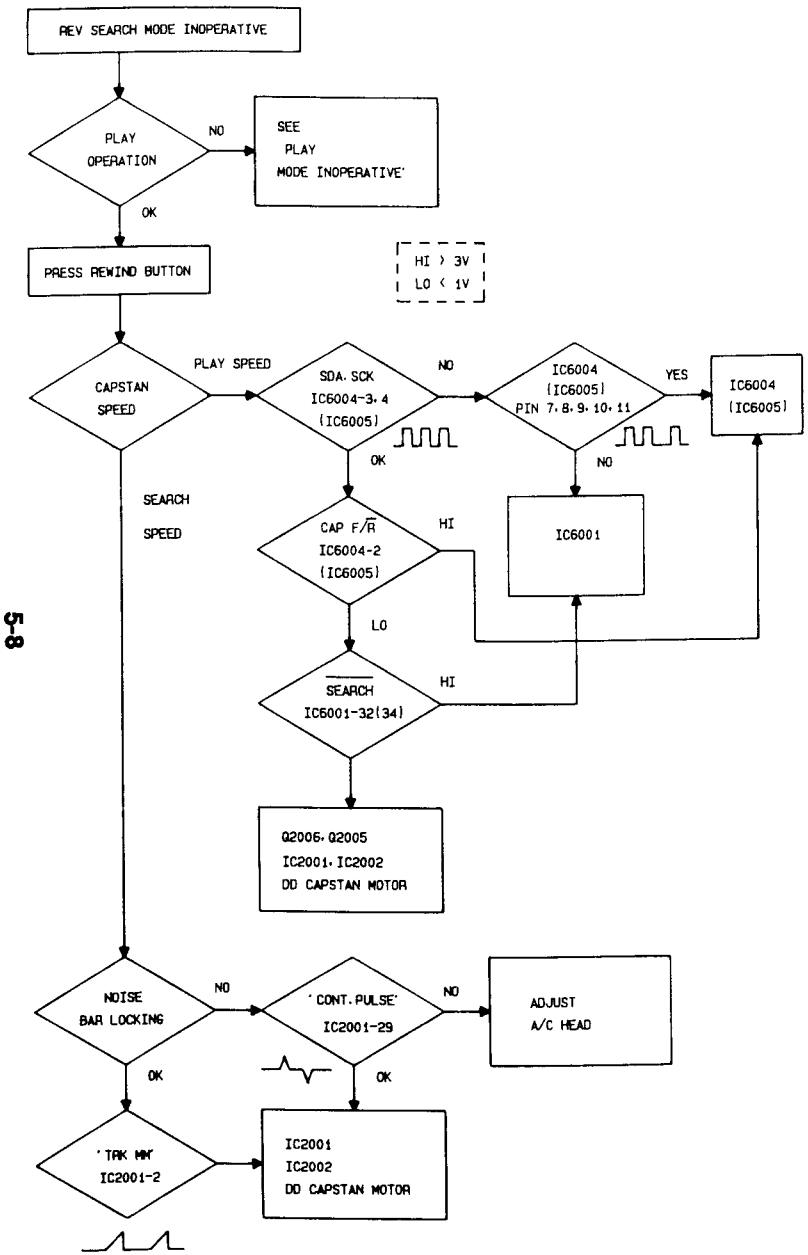
5-2-6


REWIND MODE INOPERATIVE
LOAD VCR WITH A TAPE
F.FWD OPERATION
NO
SEE 'FAST FORWARD MODE INOPERATIVE'
OK
PRESS REWIND BUTTON
'REW' INDICATION IN DISPLAY
NO
KEY IN0 IC701-9
NO
GND 6 IC701-25
NO
IC7011
OK
OK
OK
'GRID 12.13' IC701-26.27.28 SEG a-j'
NO
D0705 S0705(S0713)
OK
D0701
AC 4V LINE -30V LINE XT0701 IC701
MECHANISM STATE IC6004-13.14.15 (IC6005)
(LO.HI.LO) 'STOP'
SEE 'MECHANISM DOES NOT OPERATE IN PLAY MODE'
'F.FWD/REW' (HI.LO.HI)
CAPSTAN MOTOR ROTATION
'STOP'
F.FWD CODE IC6004-4 (IC6005)
NO
IC6004 (IC6005) CHECK PIN 7.8.9.10.11
NO
IC6001
OK
OK
IC2102 DD CAPSTAN MOTOR
IC6004(IC6005)

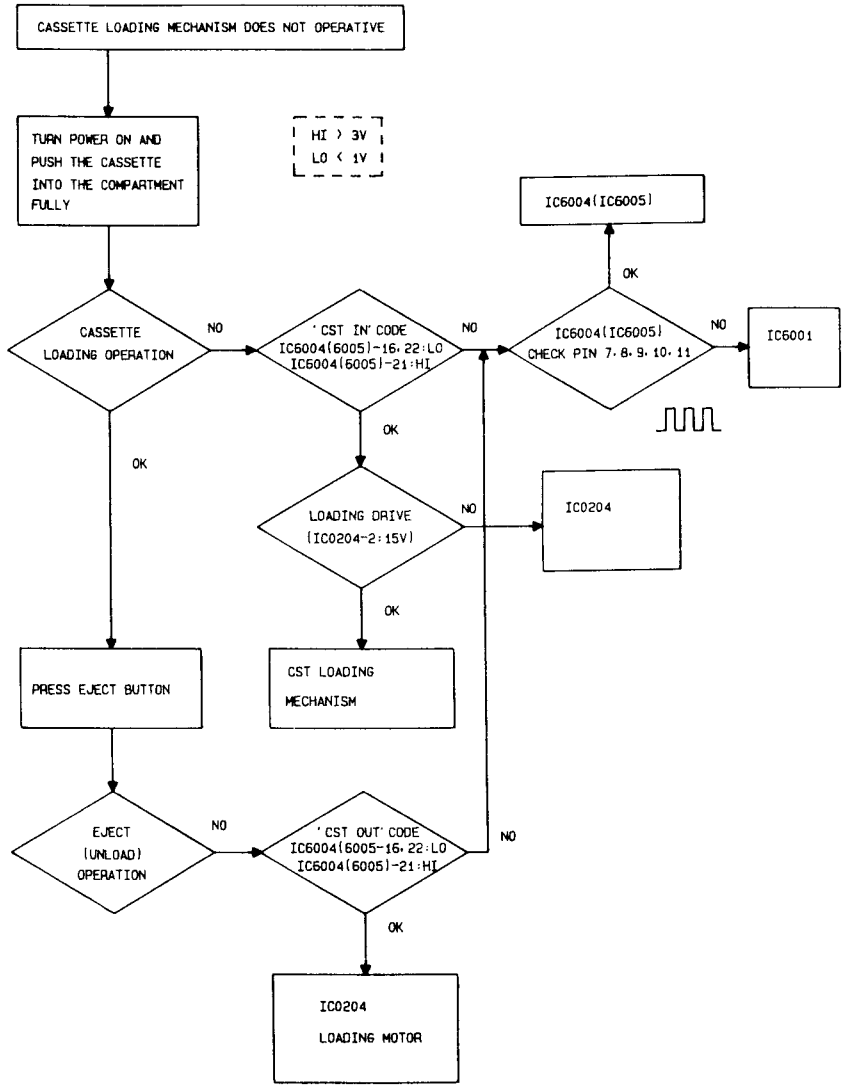
5-2-7


FWD SEARCH MODE INOPERATIVE
PLAY OPERATION
NO
SEE 'PLAY MODE INOPERATIVE'
OK
HI) 3V
LO (1V
PRESS F.FWD BUTTON
CAPSTAN SPEED
PLAY SPEED
SDA.SCK IC6004-3.4 (IC6005)
NO
IC6004 (IC6005) PIN 7.8.9.10.11
YES
IC6004 (IC6005)
OK
NO
SEARCH SPEED
SEARCH IC6001-32(34)
HI
IC6001
LO
Q2006.Q2005 IC2001.IC2002 DD CAPSTAN MOTOR
NOISE BAR LOCKING
NO
'CONT.PULSE' IC2001-29
NO
ADJUST A/C HEAD
OK
OK
'TRK MM' IC2001-2
IC2001 IC2002 DD CAPSTAN MOTOR

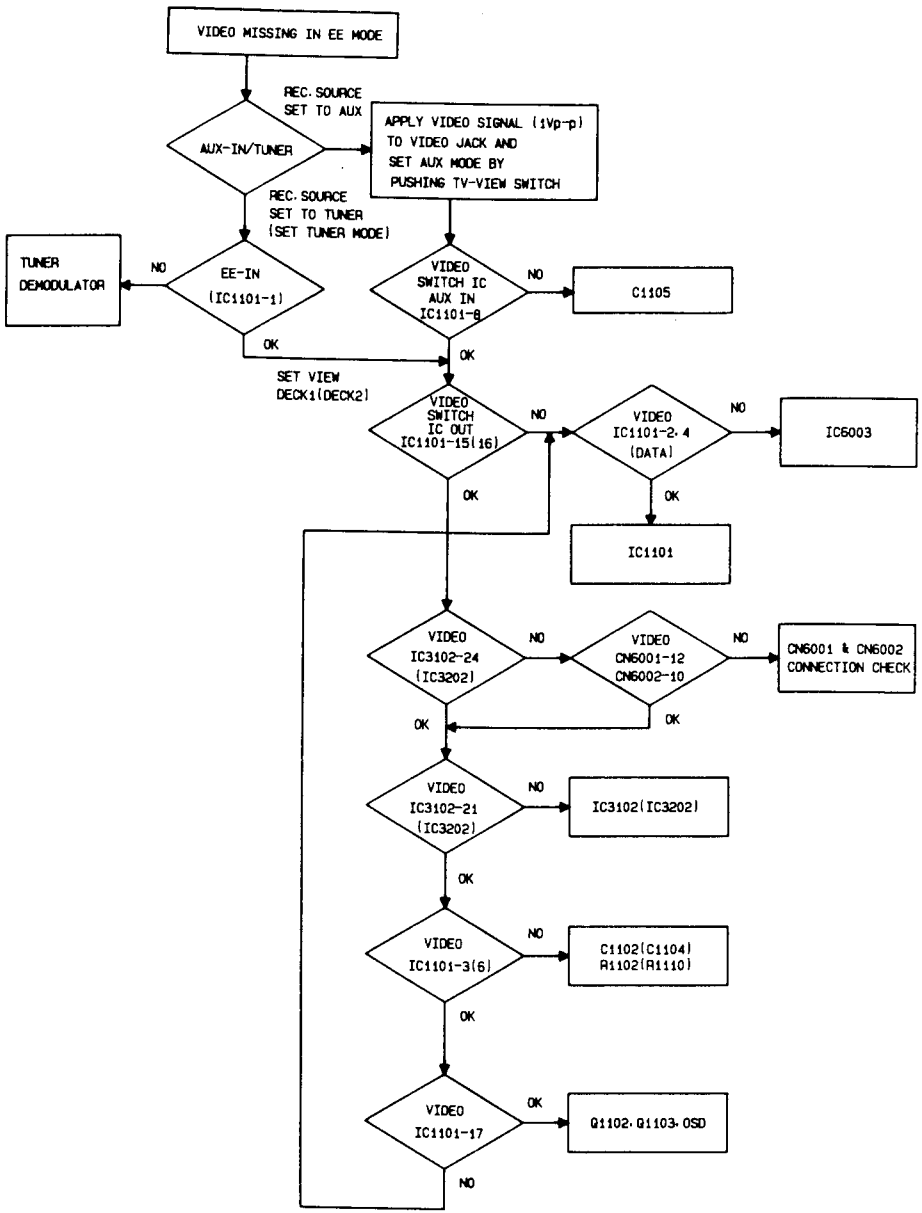
5-2-8


REV SEARCH MODE INOPERATIVE
PLAY OPERATION
NO
SEE PLAY MODE INOPERATIVE'
OK
PRESS REWIND BUTTON
HI › 3V
LO ‹ 1V
CAPSTAN SPEED
PLAY SPEED
SDA. SCK IC6004-3. 4 (IC6005)
NO
IC6004 (IC6005) PIN 7. 8. 9. 10. 11
YES
IC6004 (IC6005)
OK
NO
SEARCH SPEED
CAP F/R IC6004-2 (IC6005)
HI
IC6001
LO
SEARCH IC6001-32(34)
HI
Q2006. Q2005 IC2001. IC2002 DD CAPSTAN MOTOR
NOISE BAR LOCKING
NO
'CONT. PULSE' IC2001-29
NO
ADJUST A/C HEAD
OK
OK
'TRK MN' IC2001-2
IC2001 IC2002 DD CAPSTAN MOTOR

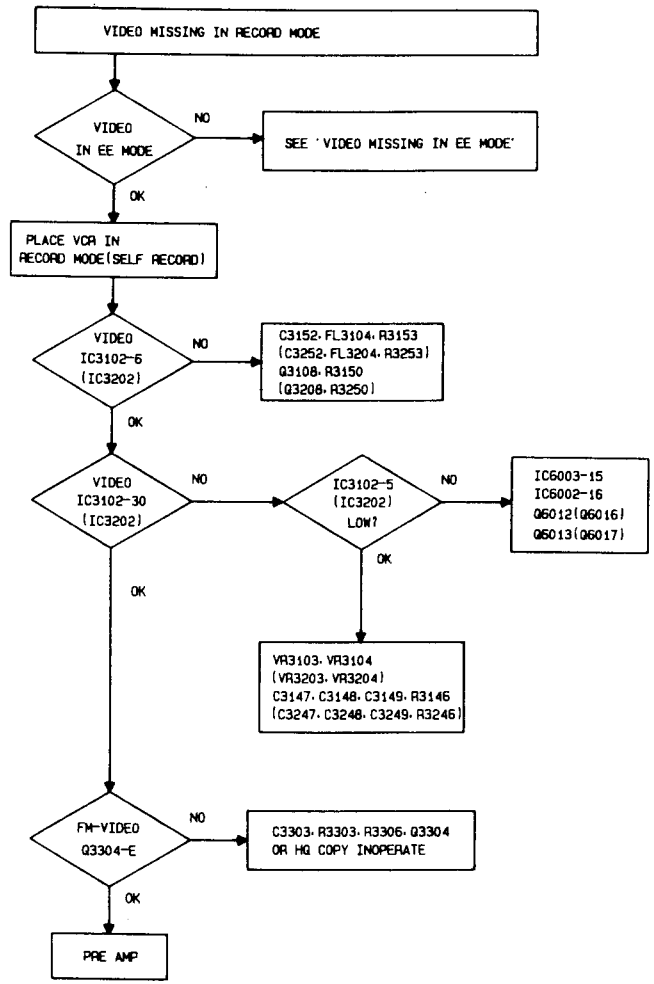
5-2-9

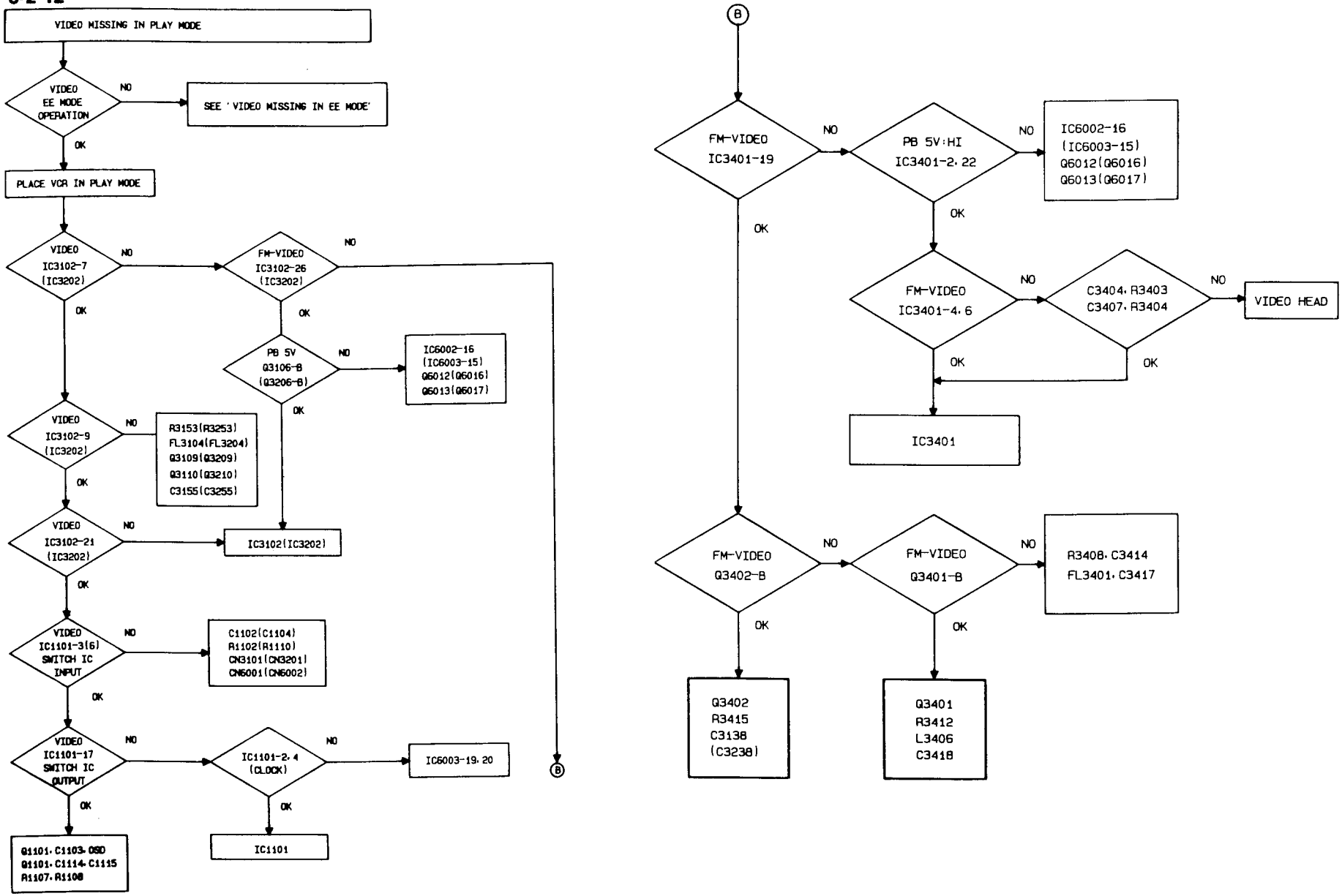

CASSETTE LOADING MECHANISM DOES NOT OPERATIVE
TURN POWER ON AND PUSH THE CASSETTE INTO THE COMPARTMENT FULLY
HI › 3V
LO ‹ 1V
IC6004(IC6005)
OK
CASSETTE LOADING OPERATION
NO
'CST IN' CODE IC6004(6005)-16. 22:LO IC6004(6005)-21:HI
NO
IC6004(IC6005) CHECK PIN 7. 8. 9. 10. 11
NO
IC6001
OK
OK
LOADING DRIVE (IC0204-2:15V)
NO
IC0204
OK
OK
PRESS EJECT BUTTON
CST LOADING MECHANISM
EJECT (UNLOAD) OPERATION
NO
'CST OUT' CODE IC6004(6005-16. 22:LO IC6004(6005)-21:HI
NO
OK
IC0204 LOADING MOTOR

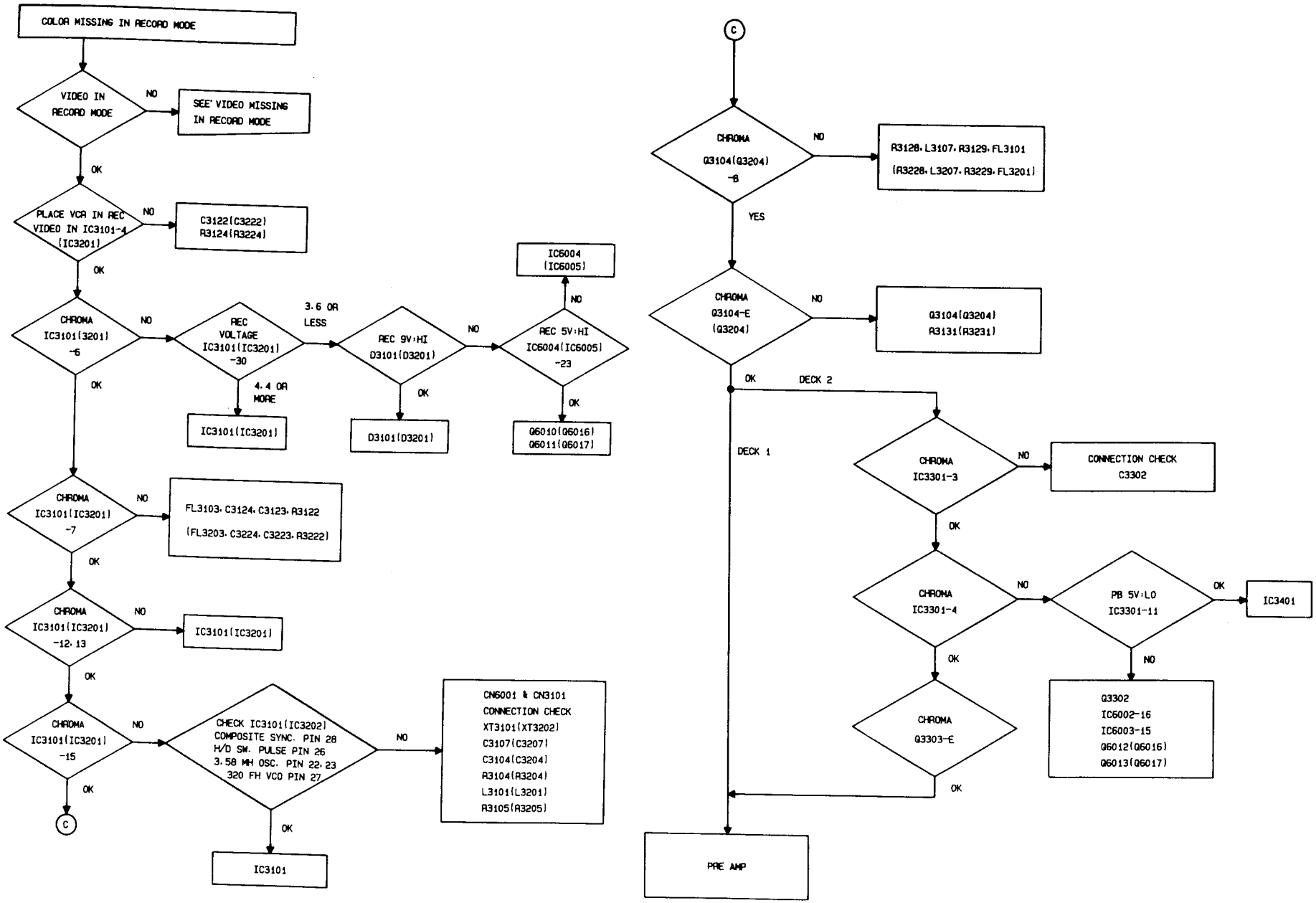
5-2-10


VIDEO MISSING IN EE MODE
REC. SOURCE SET TO AUX
AUX-IN/TUNER
APPLY VIDEO SIGNAL (1Vp-p) TO VIDEO JACK AND SET AUX MODE BY PUSHING TV-VIEW SWITCH
REC. SOURCE SET TO TUNER (SET TUNER MODE)
TUNER DEMODULATOR
NO
EE-IN (IC1101-1)
VIDEO SWITCH IC AUX IN IC1101-8
NO
C1105
OK
OK
SET VIEW DECK1(DECK2)
VIDEO SWITCH IC OUT IC1101-15(16)
NO
VIDEO IC1101-2, 4 (DATA)
NO
IC6003
OK
OK
IC1101
VIDEO IC3102-24 (IC3202)
NO
VIDEO CN6001-12 CN6002-10
NO
CN6001 & CN6002 CONNECTION CHECK
OK
OK
VIDEO IC3102-21 (IC3202)
NO
IC3102(IC3202)
OK
VIDEO IC1101-3(6)
NO
C1102(C1104) R1102(R1110)
OK
VIDEO IC1101-17
OK
Q1102, Q1103, OSD
NO

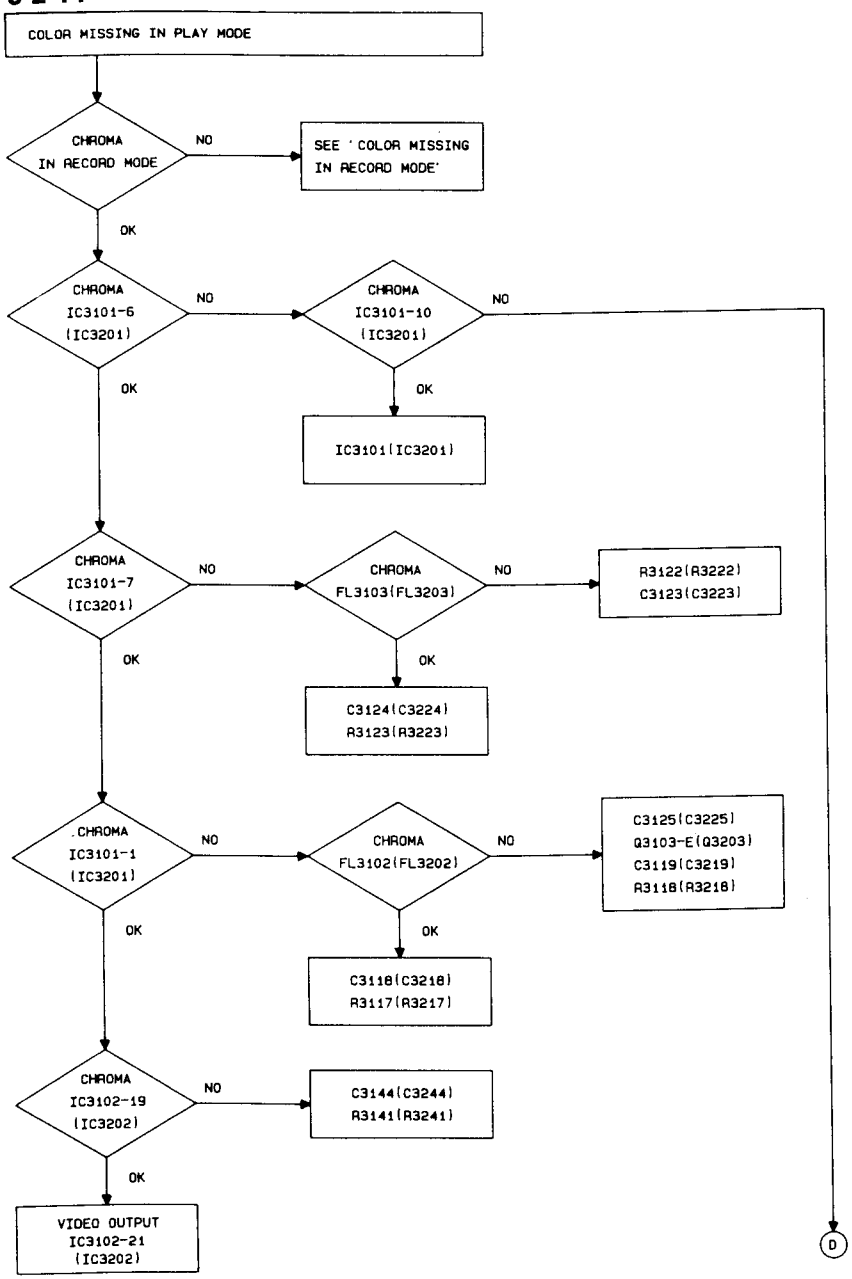
5-2-11

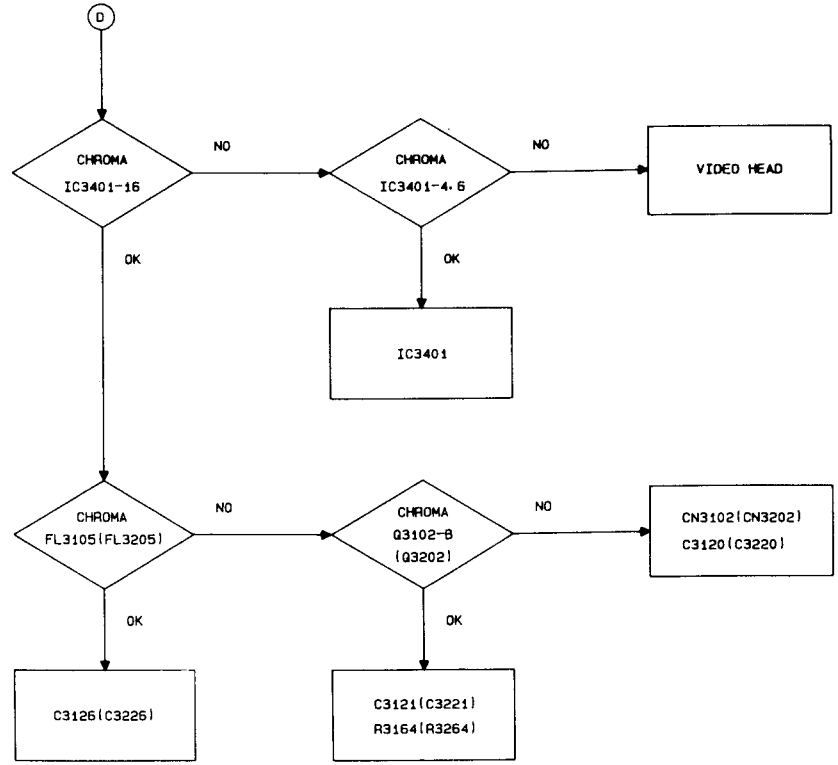

VIDEO MISSING IN RECORD MODE
VIDEO IN EE MODE
NO
SEE 'VIDEO MISSING IN EE MODE'
OK
PLACE VCR IN RECORD MODE(SELF RECORD)
VIDEO IC3102-6 (IC3202)
NO
C3152, FL3104, R3153 (C3252, FL3204, R3253) Q3108, R3150 (Q3208, R3250)
OK
VIDEO IC3102-30 (IC3202)
NO
IC3102-5 (IC3202) LOW?
NO
IC6003-15 IC6002-16 Q6012(Q6016) Q6013(Q6017)
OK
OK
VR3103, VR3104 (VR3203, VR3204) C3147, C3148, C3149, R3146 (C3247, C3248, C3249, R3246)
FM-VIDEO Q3304-E
NO
C3303, R3303, R3306, Q3304 OR HQ COPY INOPERATE
OK
PRE AMP


VIDEO MISSING IN PLAY MODE
VIDEO EE MODE OPERATION
NO
SEE 'VIDEO MISSING IN EE MODE'
OK
PLACE VCR IN PLAY MODE
VIDEO IC3102-7 (IC3202)
NO
FM-VIDEO IC3102-26 (IC3202)
NO
OK
OK
PB 5V Q3106-B (Q3206-B)
NO
IC6002-16 (IC6003-15) Q6012(Q6016) Q6013(Q6017)
OK
VIDEO IC3102-9 (IC3202)
NO
R3153(R3253) FL3104(FL3204) Q3109(Q3209) Q3110(Q3210) C3155(C3255)
OK
VIDEO IC3102-21 (IC3202)
NO
IC3102(IC3202)
OK
VIDEO IC1101-3(6) SWITCH IC INPUT
NO
C1102(C1104) R1102(R1110) CN3101(CN3201) CN6001(CN6002)
OK
VIDEO IC1101-17 SWITCH IC OUTPUT
NO
IC1101-2, 4 (CLOCK)
NO
IC6003-19, 20
OK
OK
Q1101, C1103, OSD Q1101, C1114, C1115 R1107, R1108
IC1101
B
B
FM-VIDEO IC3401-19
NO
PB 5V:HI IC3401-2, 22
NO
IC6002-16 (IC6003-15) Q6012(Q6016) Q6013(Q6017)
OK
OK
FM-VIDEO IC3401-4, 6
NO
C3404, R3403 C3407, R3404
NO
VIDEO HEAD
OK
OK
IC3401
FM-VIDEO Q3402-B
NO
FM-VIDEO Q3401-B
NO
R3408, C3414 FL3401, C3417
OK
OK
Q3402 R3415 C3138 (C3238)
Q3401 R3412 L3406 C3418


COLOR MISSING IN RECORD MODE
VIDEO IN RECORD MODE
NO
SEE' VIDEO MISSING IN RECORD MODE
OK
PLACE VCR IN REC VIDEO IN IC3101-4 (IC3201)
NO
C3122(C3222) R3124(R3224)
OK
CHROMA IC3101(3201) -6
NO
REC VOLTAGE IC3101(IC3201) -30
3.6 OR LESS
REC 9V:HI D3101(D3201)
NO
REC 5V:HI IC6004(IC6005) -23
NO
IC6004 (IC6005)
4.4 OR MORE
IC3101(IC3201)
OK
D3101(D3201)
OK
Q6010(Q6016) Q6011(Q6017)
OK
CHROMA IC3101(IC3201) -7
NO
FL3103, C3124, C3123, R3122 (FL3203, C3224, C3223, R3222)
OK
CHROMA IC3101(IC3201) -12, 13
NO
IC3101(IC3201)
OK
CHROMA IC3101(IC3201) -15
NO
CHECK IC3101(IC3202) COMPOSITE SYNC. PIN 28 H/D SW. PULSE PIN 26 3.58 MH OSC. PIN 22, 23 320 FH VCO PIN 27
NO
CN6001 & CN3101 CONNECTION CHECK XT3101(XT3202) C3107(C3207) C3104(C3204) R3104(R3204) L3101(L3201) R3105(R3205)
OK
IC3101
C
C
CHROMA Q3104(Q3204) -B
NO
R3128, L3107, R3129, FL3101 (R3228, L3207, R3229, FL3201)
YES
CHROMA Q3104-E (Q3204)
NO
Q3104(Q3204) R3131(R3231)
OK
DECK 2
DECK 1
CHROMA IC3301-3
NO
CONNECTION CHECK C3302
OK
CHROMA IC3301-4
NO
PB 5V:LO IC3301-11
OK
IC3401
NO
Q3302 IC6002-16 IC6003-15 Q6012(Q6016) Q6013(Q6017)
OK
CHROMA Q3303-E
OK
PRE AMP

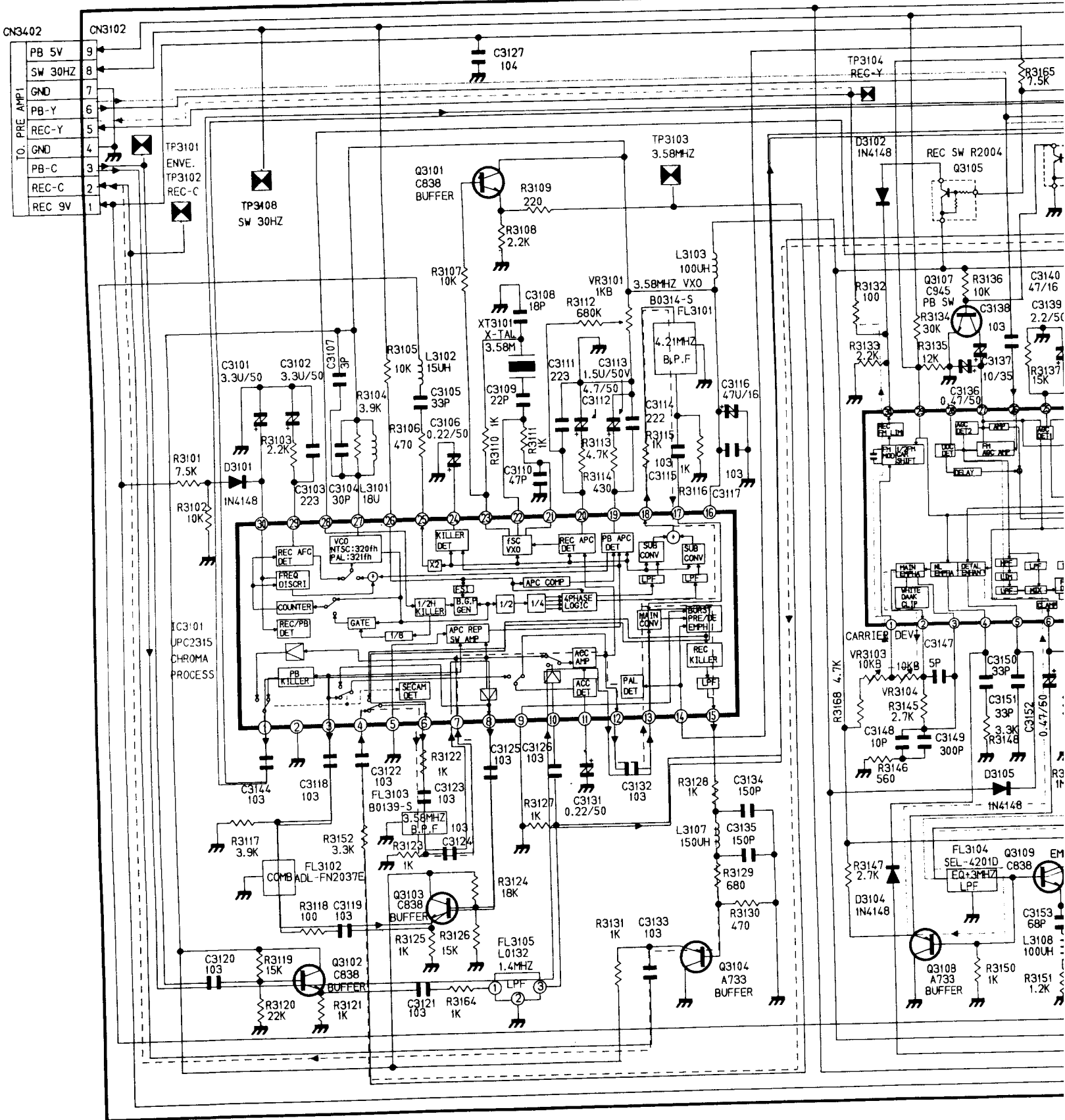
5-2-14


COLOR MISSING IN PLAY MODE
CHROMA IN RECORD MODE
NO
SEE 'COLOR MISSING IN RECORD MODE'
OK
CHROMA IC3101-6 (IC3201)
NO
CHROMA IC3101-10 (IC3201)
NO
OK
OK
IC3101(IC3201)
CHROMA IC3101-7 (IC3201)
NO
CHROMA FL3103(FL3203)
NO
R3122(R3222) C3123(C3223)
OK
OK
C3124(C3224) R3123(R3223)
CHROMA IC3101-1 (IC3201)
NO
CHROMA FL3102(FL3202)
NO
C3125(C3225) Q3103-E(Q3203) C3119(C3219) R3118(R3218)
OK
OK
C3118(C3218) R3117(R3217)
CHROMA IC3102-19 (IC3202)
NO
C3144(C3244) R3141(R3241)
OK
VIDEO OUTPUT IC3102-21 (IC3202)
D

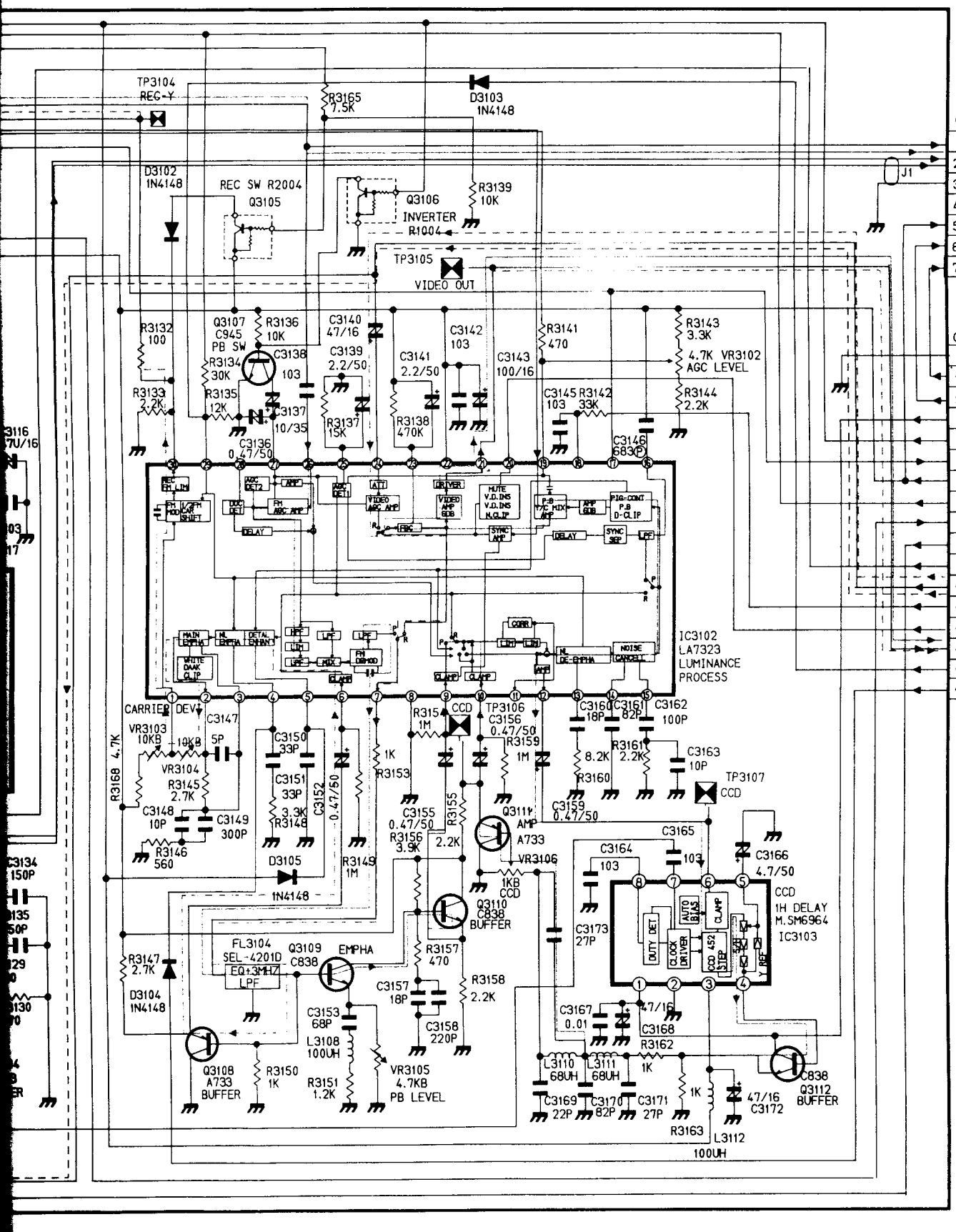

D
CHROMA IC3401-16
NO
CHROMA IC3401-4.6
NO
VIDEO HEAD
OK
OK
IC3401
CHROMA FL3105(FL3205)
NO
CHROMA Q3102-B (Q3202)
NO
CN3102(CN3202) C3120(C3220)
OK
OK
C3126(C3226)
C3121(C3221) R3164(R3264)

VIDEO 1

10-3. Video 1



VIDEO 1

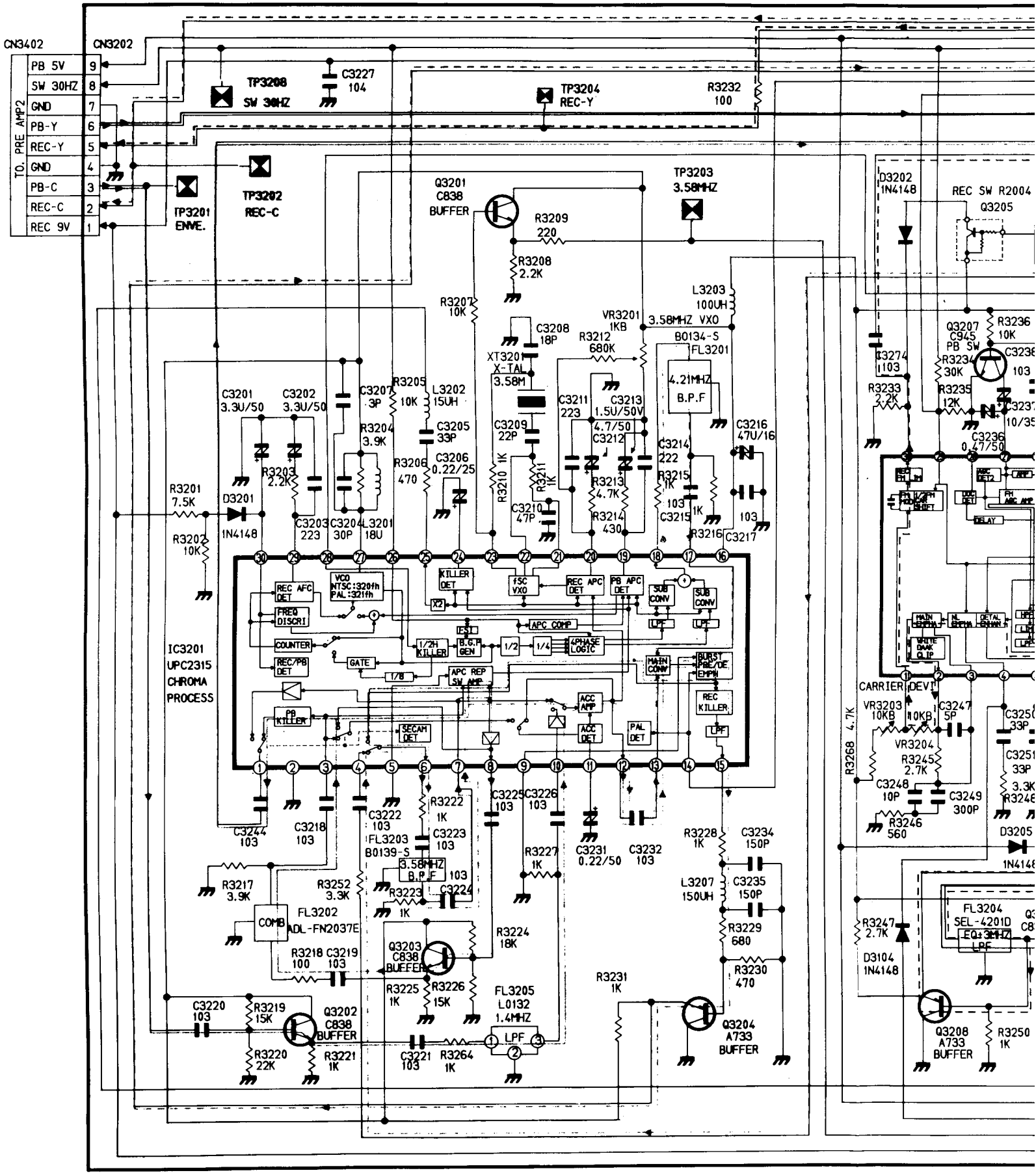


NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts

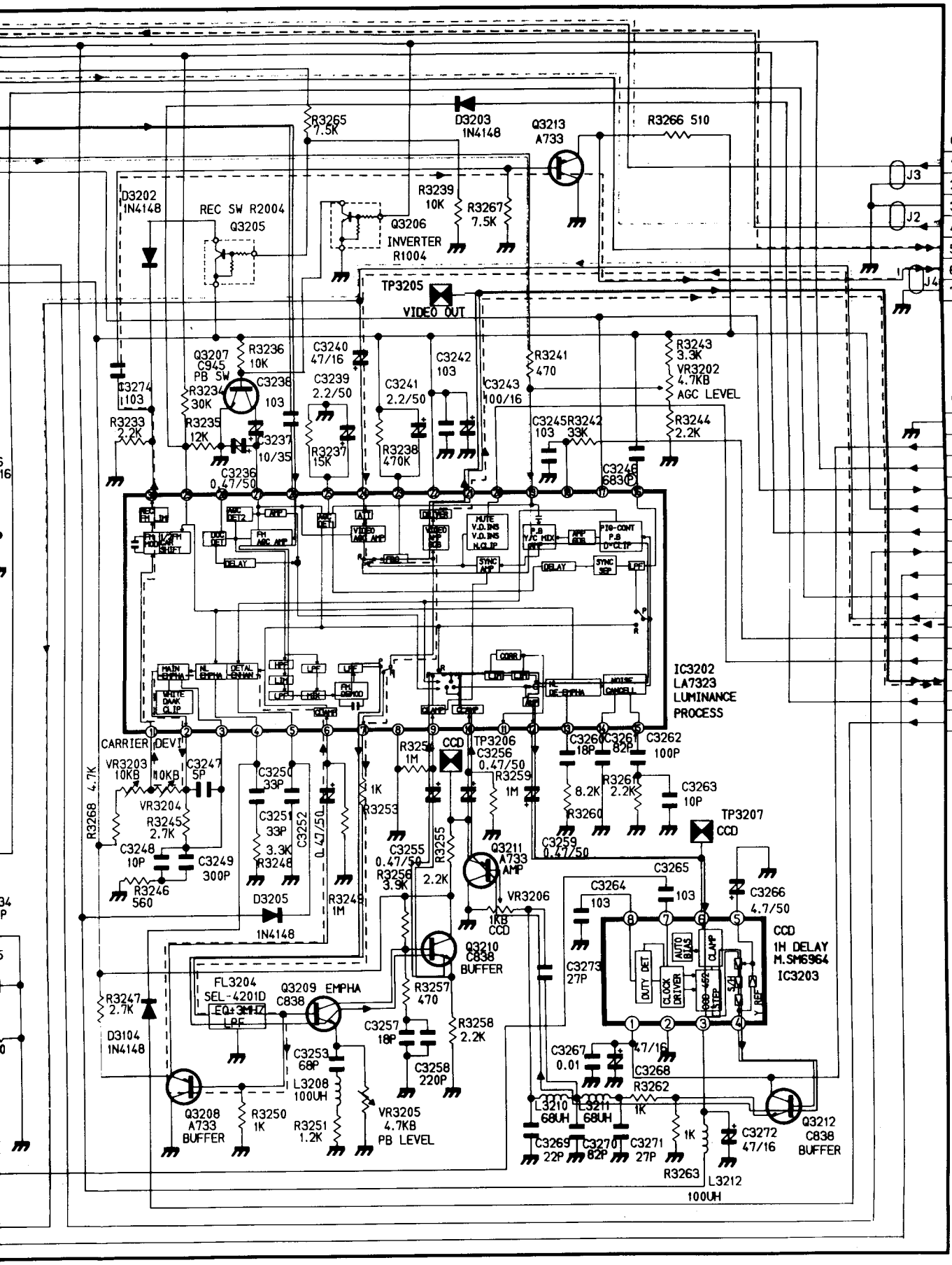
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore re-

VIDEO 2

10-4. Video 2



VIDEO 2



SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

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

VIDEO 1

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC3101						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	2.8	4.1	2.8	2.8	2.8	2.8	2.7
PIN 2	0	0	0	0	0	0	0
PIN 3	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PIN 4	2.6	2.6	2.8	2.9	2.9	2.8	2.8
PIN 5	0	0	0	0	0	0	0
PIN 6	2.8	2.9	2.9	2.9	2.9	2.9	2.9
PIN 7	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PIN 8	2.6	4.1	2.6	2.6	2.9	2.6	2.6
PIN 9	0	0	0	0	0	0	0
PIN 10	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PIN 11	-	-	-	-	-	-	-
PIN 12	3.1	3.3	3.2	3.0	3.0	3.2	3.2
PIN 13	3.7	3.7	3.7	3.7	3.7	3.7	3.7
PIN 14	0	0	0	0	0	0	0
PIN 15	3.2	2.3	3.1	3.2	3.1	3.6	3.5
PIN 16	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 17	2.7	2.7	2.7	2.7	2.7	2.7	2.7
PIN 18	3.0	3.0	3.0	3.0	3.0	3.1	3.0
PIN 19	2.4	3.5	2.4	2.4	2.4	3.2	2.7
PIN 20	2.8	2.6	2.8	2.8	2.8	2.9	2.8
PIN 21	2.8	2.8	2.8	2.8	2.8	2.8	2.8
PIN 22	2.8	2.8	2.8	2.8	2.8	2.8	2.8
PIN 23	3.4	2.4	3.4	3.4	3.4	3.4	3.4
PIN 24	3.3	2.2	2.0	3.3	3.3	2.0	2.0
PIN 25	3.7	3.7	3.7	3.7	3.7	3.7	3.7
PIN 26	5.1	2.6	2.6	2.6	2.6	2.5	2.6
PIN 27	4.6	4.6	4.6	4.6	4.6	4.6	4.6
PIN 28	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PIN 29	2.7	2.8	2.7	2.8	2.8	2.7	2.7
PIN 30	2.5	4.2	2.5	2.8	2.8	2.5	2.7

NOTES : 1) TEST TAPE, D1=SP

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / PIN NO	IC3102						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	2.3	2.3	3.5	2.3	2.3	3.5	3.5
PIN 2	2.4	2.6	2.7	2.6	2.6	2.7	2.7
PIN 3	2.6	2.6	2.3	2.6	2.6	2.3	2.3
PIN 4	3.1	3.4	2.7	2.9	2.9	5.1	5.1
PIN 5	2.5	2.8	4.4	2.8	2.8	4.4	4.4
PIN 6	3.5	3.5	1.1	3.5	3.5	1.5	1.5
PIN 7	2.7	2.7	2.6	2.7	2.7	2.5	2.5
PIN 8	0	0	0	0	0	0	0
PIN 9	0.9	0.9	3.4	0.9	0.9	3.5	3.7
PIN 10	3.1	3.3	3.4	3.3	3.2	3.6	3.6
PIN 11	-	-	-	-	-	-	-
PIN 12	3.0	3.0	3.0	3.0	3.0	3.1	3.1
PIN 13	4.5	4.5	3.2	4.5	4.5	3.5	3.5
PIN 14	4.4	4.4	3.3	4.4	4.4	3.4	3.5
PIN 15	4.4	4.4	4.1	4.5	4.4	4.1	4.4
PIN 16	3.5	3.5	3.5	3.5	3.5	3.5	3.5
PIN 17	0.3	0.3	0.3	1.5	1.5	0.2	0.2
PIN 18	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 19	4.2	4.2	4.2	4.2	4.2	4.2	4.2
PIN 20	0	0	0	0	0	0	0
PIN 21	2.4	2.4	2.4	1.8	1.8	2.6	3.0
PIN 22	5.0	5.0	5.0	5.0	5.0	4.9	4.9
PIN 23	3.8	3.8	3.1	3.8	3.8	3.0	3.0
PIN 24	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 25	2.9	2.6	3.7	2.8	2.8	3.7	3.7
PIN 26	3.5	2.5	3.6	2.5	3.5	3.6	3.6
PIN 27	1.5	1.5	1.5	1.5	1.5	0.9	0.9
PIN 28	-	-	-	-	-	-	-
PIN 29	4.1	4.1	4.0	4.0	4.0	4.0	4.0
PIN 30	4.3	3.6	4.3	4.3	4.3	4.3	4.3

NOTES : 1) TEST TAPE, D1=SP

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

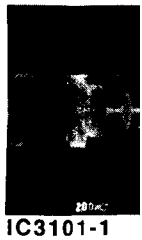
MODE / PIN NO	IC3103						
	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
PIN 1	8.9	8.9	8.9	8.9	8.9	8.9	8.9
PIN 2	0	0	0	0	0	0	0
PIN 3	0	0	4.9	0	0	4.9	4.9
PIN 4	6.2	6.2	3.3	6.2	6.2	3.3	3.3
PIN 5	1.6	1.6	3.3	3.0	3.5	3.4	3.4
PIN 6	5.8	5.7	2.3	1.8	1.6	2.4	2.5
PIN 7	1.6	1.6	1.6	1.6	1.6	1.6	1.6
PIN 8	3.1	3.1	5.2	3.1	3.1	5.2	5.2

NOTES : 1) TEST TAPE, D1=SP

FWD S : FORWARD SEARCH
REV S : REVERSE SEARCH

MODE / TR NO	STOP			REC			PLAY			REW			F.FWD			REV S.			FWD S.		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
Q3101	2.7	4.6	3.3	3.0	5.1	3.4	2.6	4.6	3.3	3.1	4.6	3.4	3.1	4.6	3.3	3.0	5.1	3.7	3.6	4.6	3.3
Q3102	2.0	4.6	2.7	2.0	4.6	2.7	2.9	2.6	2.6	2.0	5.0	2.0	0	5.0	2.7	1.4	3.7	2.6	2.0	4.6	2.0
Q3103	1.4	4.6	2.0	1.4	4.6	2.0	1.4	4.6	2.0	1.4	4.6	2.0	0	4.6	0	0	4.6	0.1	1.4	4.6	2.0
Q3104	1.4	0	1.7	1.5	0	0.8	1.4	0	1.7	1.4	0	0.7	1.8	0	1.1	1.8	0	1.1	1.8	0	1.1
Q3105	5.0	5.0	0.2	5.0	0.1	5.1	5.0	4.9	0.7	5.0	4.9	0.7	5.0	4.9	0.7	5.0	4.9	0.7	5.0	4.9	0.7
Q3106	0	0.7	0	0	0.7	0	0	0	4.9	0	0.7	0	0	0.7	0	0	0	4.9	0	0	4.9
Q3107	0	0	0.7	0	0	0.7	0	0.2	0	0	0	0.7	0	0	0.7	0	0.8	0	0	0.8	0
Q3108	2.0	0	1.4	2.0	0	1.3	1.8	0	1.2	2.0	0	1.4	2.0	0	1.3	1.8	0	1.1	1.8	0	1.1
Q3109	0.7	3.0	1.3	0.7	3.0	1.3	0.5	3.4	1.2	0.7	3.0	1.3	0.7	3.0	1.3	0.5	3.5	1.2	0.5	3.4	1.2
Q3110	2.4	5.0	3.0	2.4	5.0	3.0	2.7	4.9	3.4	2.4	5.0	3.0	2.4	5.0	3.0	2.8	4.9	3.5	2.9	4.9	3.5
Q3111	2.4	0	1.7	2.4	0	1.9	1.5	0	0.9	2.4	0	1.9	0	0	1.8	1.6	0	1.9	1.6	0	0.9
Q3112	5.5	8.9	6.2	5.5	8.9	6.2	2.6	8.9	3.3	5.5	8.9	6.2	5.1	8.9	6.0	2.6	8.9	3.3	2.6	8.9	3.3

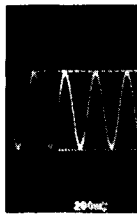
NOTES : 1) TEST TAPE, D1=SP



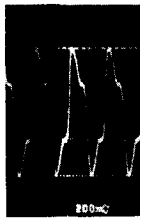
IC3101-1
200mV/10us
PB

IC3101-6
200mV/5ms
PB

IC3101-10
20mV/5mse
PB

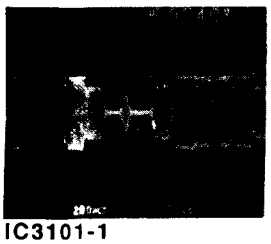


IC3101-17
200mV/200
PB/REC



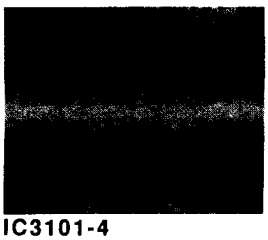
IC3101-23
200mV/200
PB/REC

IC3101-27
200mV/200
REC



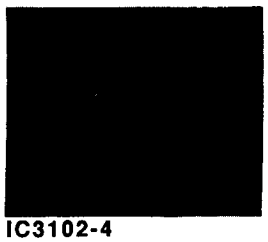
IC3101-1
200mV/10usec/cm
PB

IC3101-3
10mV/10usec/cm
PB

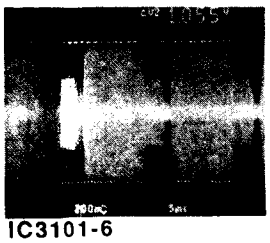


IC3101-4
20mV/5msec/cm
PB

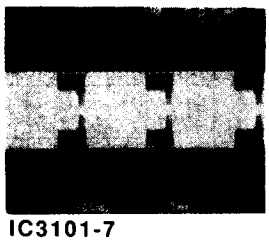
IC3101-3.4
200mV/20usec/cm
REC



IC3102-4
200mV/20usec/cm
REC

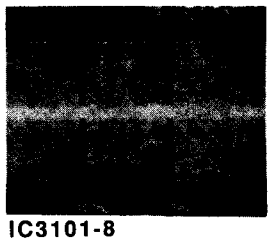


IC3101-6
200mV/5msec/cm
PB

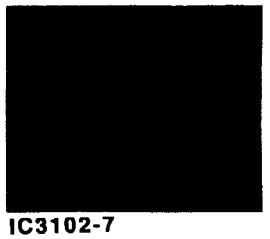


IC3101-7
100mV/5msec/cm
PB

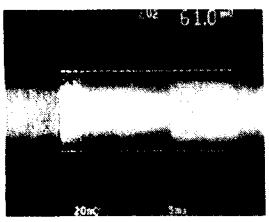
IC3101-7
50mV/10usec/cm
REC



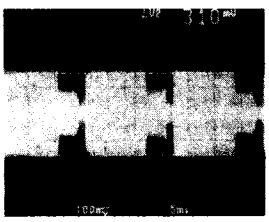
IC3101-8
100mV/5msec/cm
PB



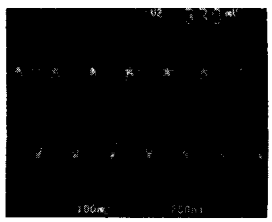
IC3102-7
200mV/20usec/cm
REC



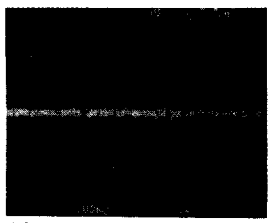
IC3101-10
20mV/5msec/cm
PB



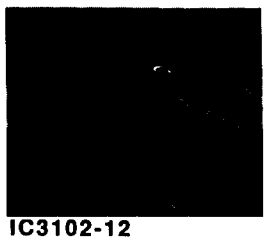
IC3101-12.13
100mV/5msec/cm
PB



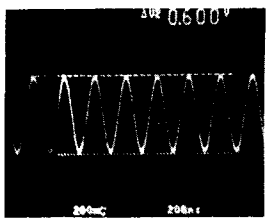
IC3101-12.13
100mV/200msec/cm
REC



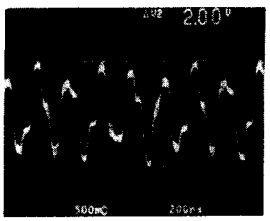
IC3101-15
100mV/20usec/cm
REC



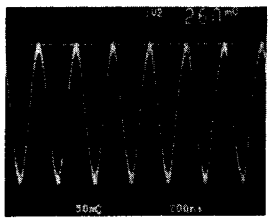
IC3102-12
200mV/20usec/cm
PB



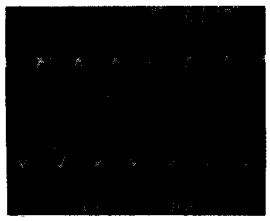
IC3101-17
200mV/200msec/cm
PB/REC



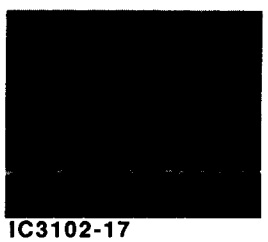
IC3101-18
500mV/200msec/cm
PB/REC



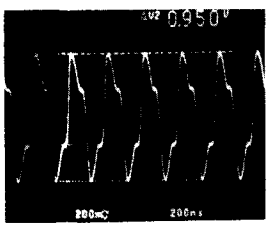
IC3101-21
50mV/200msec/cm
PB/REC



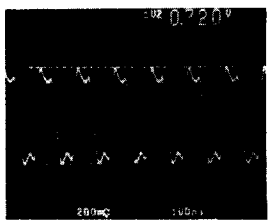
IC3101-22
100mV/200msec/cm
PB/REC



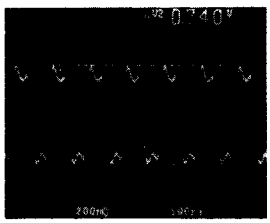
IC3102-17
1V/50usec/cm
REC



IC3101-23
200mV/200msec/cm
PB/REC



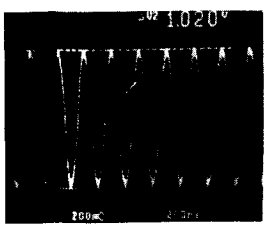
IC3101-25
200mV/100msec/cm
PB



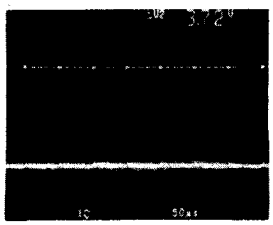
IC3101-25
200mV/100msec/cm
REC

IC3101-27
200mV/100msec/cm
PB

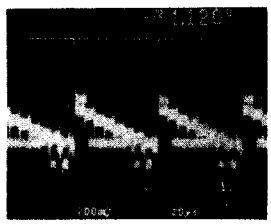
IC3102-26
200mV/5msec/cm
PB



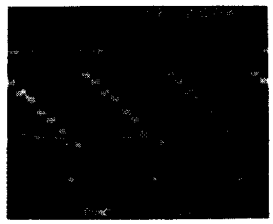
IC3101-27
200mV/200msec/cm
REC



IC3101-28
1V/50usec/cm
PB/REC



IC3102-2
200mV/20usec/cm
REC

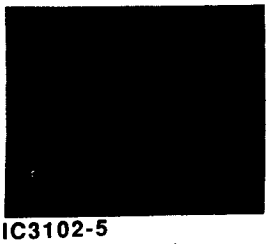


IC3102-3
100mV/20usec/cm
REC

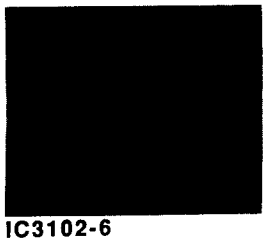
IC3103-6
100mV/20usec/cm
PB

VIDEO 1

2-4
V/20usec/cm

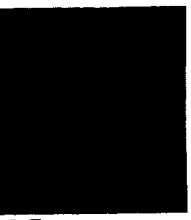


IC3102-5
100mV/20usec/cm
REC



IC3102-6
100mV/20usec/cm
PB

IC3102-6
100mV/20usec/cm
REC



02-7
V/20usec/cm

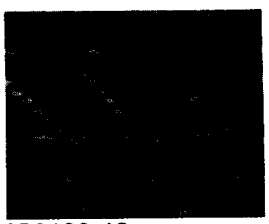
IC3102-9
200mV/20usec/cm
PB

IC3102-9
500mV/20usec/cm
REC

IC3102-10
200mV/20usec/cm
PB

02-12
V/20usec/cm

IC3102-12
100mV/20usec/cm
REC



IC3102-13
200mV/20usec/cm
PB

IC3102-14
200mV/20usec/cm
PB

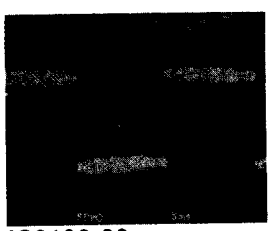
02-17
0usec/cm

IC3102-21
500mV/20usec/cm
PB

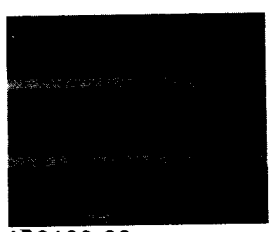
IC3102-21
500mV/20usec/cm
REC

IC3102-24
200mV/20usec/cm
REC

02-26
V/5msec/cm



IC3102-29
50mV/5msec/cm
PB



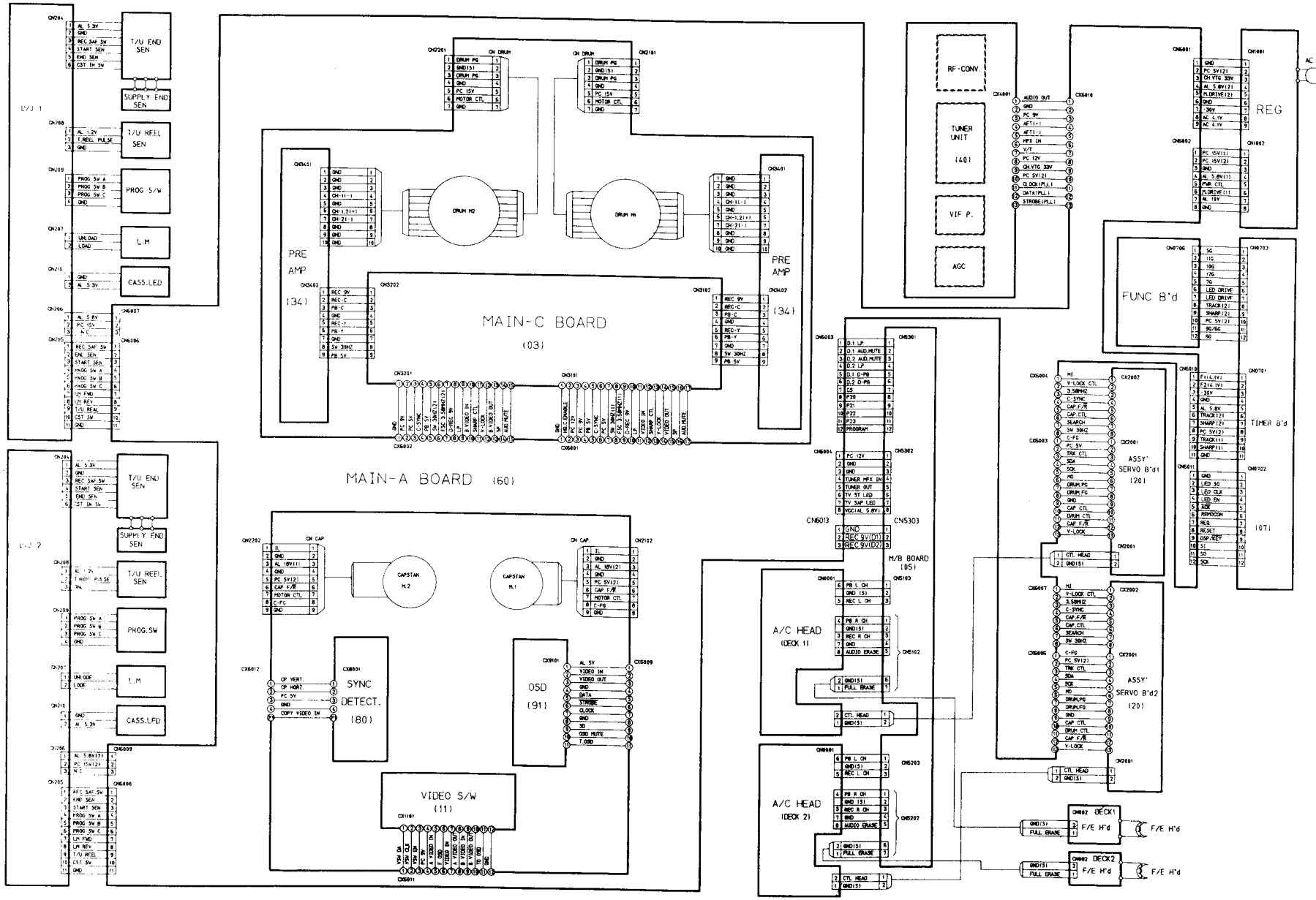
IC3102-30
500mV/20usec/cm
REC

IC3103-4
500mV/20usec/cm
PB

03-6
V/20usec/cm

IC3103-6
100mV/20usec/cm
REC

IC3103-7
200mV/100msec/cm
REC


T/U END SEN
SUPPLY END SEN
T/U REEL SEN
PROG S/W
L.M
CASS.LED
MAIN-C BOARD
(03)
MAIN-A BOARD (60)
PRE AMP
(34)
DRUM M2
DRUM M1
CAPSTAN M2
CAPSTAN M1
SYNC DETECT.
(80)
OSD
(91)
VIDEO S/W
(11)
RF-CONV.
TUNER UNIT
(40)
VIF P.
AGC
M/B BOARD
(05)
A/C HEAD
(DECK 1)
A/C HEAD
(DECK 2)
REG
FUNC B'd
TIMER B'd
(07)
ASSY' SERVO B'd1
(20)
ASSY' SERVO B'd2
(20)
F/E H'd
AC 120V/60HZ