

SLV-815/UB/VP

RMT-V5E

SERVICE MANUAL



Photo: SLV-815

AEP Model
SLV-815

UK Model
SLV-815UB

Germany Model
SLV-815VP

• Refer to the **SERVICE MANUAL** of VHS MECHANICAL ADJUSTMENT II for MECHANICAL ADJUSTMENTS.
(9-972-816-11)

VHS Hi-Fi

SPECIFICATIONS

Channel coverage
SLV-815/815VP
VHF channels E2 — E12
(A to H only for Italy)
CATV channels S01 — S03
CATV channels S1 — S20
HYPER S21 — S41
UHF channels E21 — E69
SLV-815UB
UHF channels B21 — B68

Inputs and Outputs

Video inputs
LINE IN 2: phono jack
EURO-AV (LINE 1):
21-pin (pin 20)
EURO-AV (SAT.):
21-pin (pin 20)

Audio inputs
LINE IN 2: phono jack
EURO-AV (LINE 1):
21-pin (pins 2 and 6)
EURO-AV (SAT.):
21-pin (pins 2 and 6)

Video output
LINE OUT: phono jack
EURO-AV (LINE 1):
21-pin (pin 19)

Audio output
LINE OUT: phono jack
EURO-AV (LINE 1):
21-pin (pins 1 and 3)

CONTROL L
CONTROL S IN/OUT
Microphone input
Headphone input

5 pin DIN (1)
Minijack (2)
Minijack
Stereo minijack

General

Power requirements 240 V AC, 50 Hz (SLV-815UB)
220 V AC, 50 Hz
(SLV-815/815VP)

Power consumption 38 W

Operating temperature 5°C to 40°C (41°F to 104°F)

Storage temperature -20°C to 60°C (-4°F to 140°F)

Dimensions Approx. 466 x 96.5 x 395 mm
(w/h/d)
(18 3/8 x 3 7/8 x 15 5/8 inches)
including projecting parts and controls.

Weight SLV-815/SLV-815VP
7.9 kg (17 lb 7 oz)
SLV-815UB
8.1 kg (17 lb 14 oz)

Accessories Supplied

Wireless Remote Commander with two R6 batteries (1)
75-ohm coaxial cable (1)
Video/audio connecting cable (1)
Screwdriver for RF channel adjustment (1)
AC power cord (1)

Design and specifications are subject to change without notice.

Remote commander is available as a unit, but as individual parts the battery case lid of commander and timer cover are only available.



VHS VIDEO CASSETTE RECORDER
SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splasher and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer, and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SERVICE NOTE

1. RETURNING PINCH ROLLER, GUIDE ROLLER AND ELEVATOR CAM TO STOP CONDITION

- 1) Remove the bottom panel.
- 2) Turn the worm gear **A** of the cam motor, located at lower of the MD (between the front panel and the MD-49 board), to the arrow direction **B** by finger.

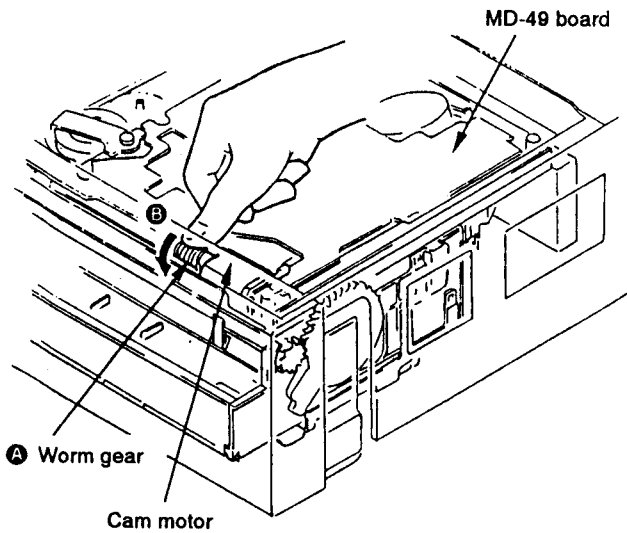


Fig. 1.

2. WINDING TAPE TO CASSETTE HALF

Turn the fly wheel **A** of the capstan motor to the arrow direction **B** by finger, then the cassette tape will be wound to the cassette half.

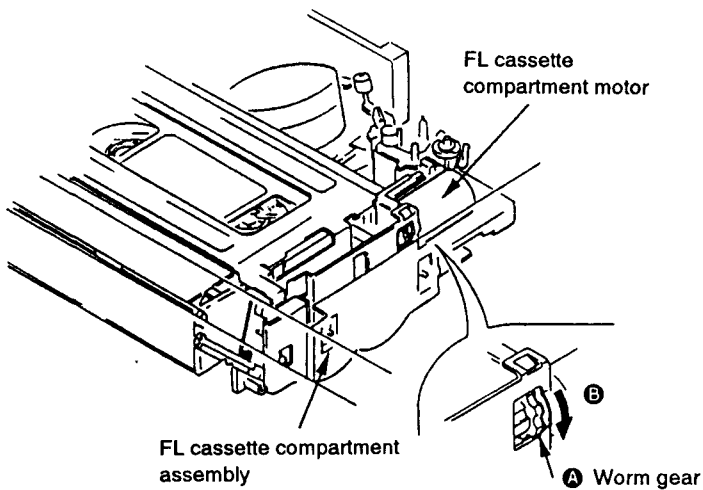


Fig. 2.

3. TAKING OUT CASSETTE WHEN UNIT IS DEFECTIVE WITH CASSETTE IN

- 1) Remove the upper case.
- 2) Turn the worm gear **A** of the FL cassette compartment motor to the arrow direction **B** by finger.

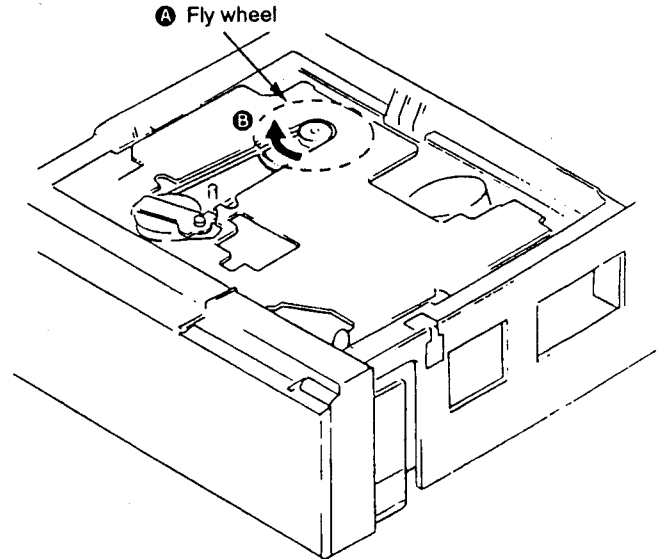


Fig. 3.

Note: When performing 1. to 3., be careful not to clog and damage the cassette tape.

4. UPPER DRUM REPLACEMENT

4-1. Removal of Upper Drum

- 1) Remove the screw ① (P3×5) and take out the grounding shaft ②. (See Fig. 4.)
- 2) Completely remove the rotary upper drum board and desolder the soldering indicated by the arrows (16 points).
- 3) Remove two screws ③ (PSW3×8) and take out the rotary upper drum in the arrow direction A. (See Fig. 5.)
If it is difficult, remove by shaking the rotary upper drum gradually.

Note: If the drum can not be removed, check whether the solders have been removed or not again.

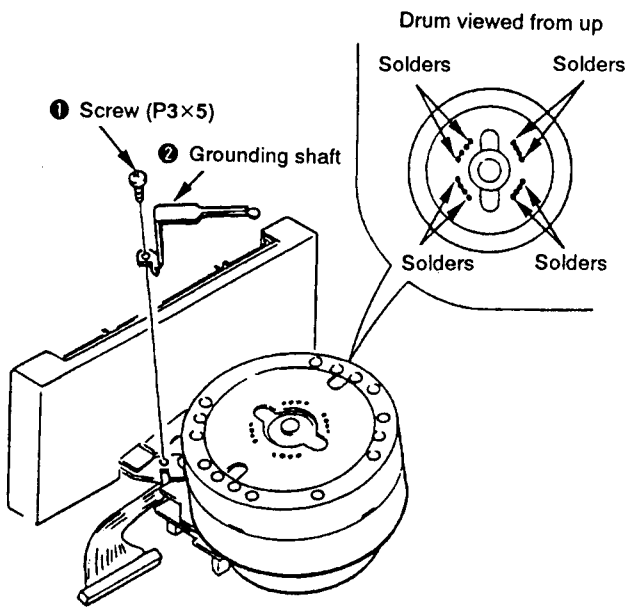


Fig. 4.

4-2. Mounting Upper Drum

- 1) When inserting the rotary drum into the lower drum, be careful not to blur the contacting surface with fingerprint or the like.
- 2) Mount the rotary upper drum board by aligning SP1 with S1 of rotary transformer board (lower drum) so that the screw holes of both upper and lower drums match. (See Fig. 5.)
- 3) If it is difficult, mount the upper drum by shaking it gradually.

Note: Be careful not to damage the head. Make sure that the upper drum is tightly inserted.

- 4) Tighten two screws ③ (PSW3×8). (See Fig. 5.)

Note: Temporary tighten two screws. After making sure that upper drum is tightly inserted, tighten the screws.

- 5) Solder 16 points on the board of the rotary upper drum.
- 6) Fix the grounding shaft ② using the screw ① (P3×5) so that the protrusion of grounding shaft end contacts the center of the drum shaft.

Note: When attaching the grounding shaft ②, be careful not to apply force to the spring section of it.

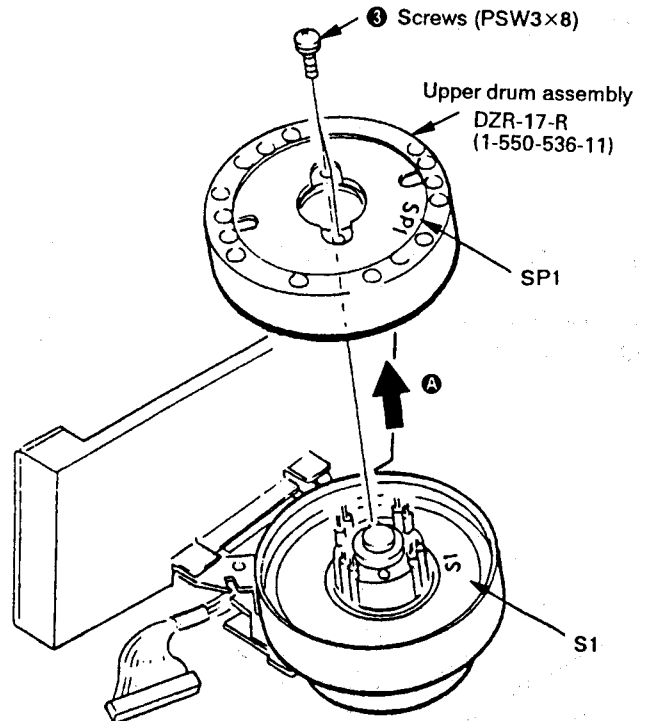


Fig. 5.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1. GENERAL			3. DIAGRAMS		
Main Features		7	3-1. Circuit Boards Location		56
Identifying the Operational Parts		8	3-2. Overall Block Diagram		57
Connections		12	3-3. Video (1) Block Diagram		60
Remote Control Operation		13	3-4. Video (2) Block Diagram		63
Date and Clock Setting		13	3-5. Digital Picture Block Diagram		67
Adjusting the TV		14	3-6. Servo, System Control Block Diagram		69
Presetting the Active Channels		15	3-7. System Control — Video Block Interface		72
Handling Video Cassette		17	3-8. System Control — Servo Peripheral Circuit Interface		73
Playback		17	3-9. System Control — Mechanism Block Interface		75
Recording TV Programmes		25	3-10. System Control		
Recording Stereo/Bilingual Programmes		27	— System Control Peripheral Circuit Interface		77
Use of the Tape Counter		29	3-11. System Control — Audio Block Interface		77
Timer Activated Recording		30	3-12. Audio Block Diagram		79
Quick Timer Recording		35	3-13. Timer, Tuner, Mode Control Block Diagram		83
Index Function		38	3-14. Tuner Block Diagram		85
Audio Recording		43	3-15. NICAM Block Diagram		87
Tape Editing		45	3-16. NICAM (Near Instantaneous Compand System)		
Synchronized Editing — Editing with a VTR Equipped			(SLV-815/UB Onry)		90
with a Sony Control Terminal		46	3-16-1. NICAM Standard		90
Synchronized Editing — Connection		47	3-16-2. NICAM Receiving System		90
Synchronized Editing — Operation		48	3-16-3. Description of NA-7 Board (NICAM Decoder)		90
Manual Editing — Editing with a VTR not Equipped			3-17. Power Block Diagram		93
with a Sony Control Terminal		49			
Insert Editing		50	4. PRINTED WIRING BOARDS AND		
The Menu System		51	SCHEMATIC DIAGRAMS		
2. DISASSEMBLY			4-1. Frame Schematic Diagram		95
2-1. Removal of Front Panel and Cabinet Assembly		52	4-2. Printed Wiring Boards and Schematic Diagrams		99
2-2. Removal of Door Block Assembly		52	• RP-83 Board		101
2-3. Removal of Control Switch Block		52	• YC-65, SD-4, VI-97 Boards		106
2-4. Opening of MA-104 Board		53	• PI-25, CG-10 Boards		114
2-5. Removal of MF-94 Board and			• DG-11, DI-43 Boards		122
Terminal Board Block Assembly		53	• MA-104 (Servo, System Control, Audio),		
2-6. Removal of TU-120, HF-9, PI-20, CG-10 Boards and			SI-10, VP-24 Boards		129
DG Block Assembly		54	• MA-104 (Servo, System Control) Board		137
2-7. Removal of NC Block Assembly			• MD-49 Board		145
(SLV-815/UB Onry)		54	• HF-9 Board		153
2-8. Removal of FL Cassette Compartment Assembly		54	• IO-40 Board		157
2-9. Removal of MF-101 Board and			• MF-94, RM-42 Boards		161
Mechanism Deck Block Assembly		55	• MF-101, TK-12, JS-20, Switch Block Boards		168
2-10. Removal of VI-97, YC-65 Boards and			• NA-7, NM-1 Boards		176
Switching Block		55	• TU-120 Board		183
			4-3. Semiconductors		187

<u>Section</u>	<u>Title</u>	<u>Page</u>
5.	EXPLODED VIEWS	
5-1.	Front Panel and Cabinet Assemblies	188
5-2.	Power Supply Block Assembly.....	189
5-3.	Main Boards Assembly	190
5-4.	FL Cassette Compartment Assembly	191
5-5.	Mechanism Chassis Assembly (1)	192
5-6.	Mechanism Chassis Assembly (2)	193
5-7.	Mechanism Chassis Assembly (3)	194
6.	ELECTRICAL PARTS LIST	195
	HARDWARE LIST	225
7.	ELECTRICAL ADJUSTMENTS	
7-1.	Pre-adjustment Preparations.....	226
7-1-1.	Instruments to be Used.....	226
7-1-2.	Connection	226
7-1-3.	Setup for Adjustment.....	226
7-1-4.	Alignment Tape (MH-2)	226
7-1-5.	Specified I/O Level and Impedance	227
7-1-6.	Operating Method When the Front Panel Removed	227
7-1-7.	Adjusting Sequence.....	227
7-2.	Power Supply Check (Power Block)	227
7-3.	System Control Adjustment.....	228
7-3-1.	Clock Adjustment (MF-94 Board)	228
7-4.	Servo System Adjustment.....	228
7-4-1.	Switching Position Adjustment (MA-62 Board)	228
7-5.	Video System Adjustments	229
7-5-1.	Playback Y Signal Level Adjustment (YC-65 Board)	229
7-5-2.	Y Signal NR Level Adjustment (YC-65 Board)	229
7-5-3.	Sync AGC Adjustment (YC-65 Board).....	229
7-5-4.	Sync Tip Carrier Set and Deviation Adjustment (YC-65 Board)	230
7-5-5.	White Clip, Dark Clip Adjustment (YC-65 Board)	230
7-5-6.	Recording Y Signal Level Adjustment (YC-65 Board)	230
7-5-7.	Recording Chroma Level Adjustment (YC-65 Board)	231
7-5-8.	PAL JOG AFC Adjustment (YC-65 Board)	231
7-5-9.	0.5H CCD Level Adjustment (YC-65 Board)	231
7-5-10.	SECAM Discrimination Adjustment (YC-65 Board)	231

<u>Section</u>	<u>Title</u>	<u>Page</u>
7-6.	Digital Picture and Character Generator System Adjustments	232
7-6-1.	AGC Adjustment (PI-25 Board)	232
7-6-2.	Read Clock Adjustment (DG-11 Board)	232
7-6-3.	Write Clock Adjustment (DG-11 Board)	232
7-6-4.	TINT Adjustment (DG-11 Board).....	233
7-6-5.	Clamp Level Adjustment (DG-11 Board).....	233
7-6-6.	Hue and Color Level Adjustment (DG-11 Board)	233
7-6-7.	Character Generator Clock Check (CG-10 Board).....	233
7-6-8.	AFC Adjustment (CG-10 Board)	233
7-6-9.	Character Position Adjustment (CG-10 Board).....	234
7-7.	Audio System Adjustments	234
7-7-1.	Hi-Fi Audio System Adjustment	234
7-7-2.	Normal Audio System Adjustment	236
7-8.	Tuner System Adjustments	238
7-8-1.	RF AGC Adjustment (IF001 Unit/TU-120 Board)	238
7-8-2.	Receive Separation Adjustment (TU-120 Board) (SLV-815/VP)	238
7-9.	NAICAM System Adjustments (SLV-815UB).....	238
7-9-1.	Eye Pattern Adjustment (NA-7 Board).....	238
7-9-2.	VCO Adjustment (NA-7 Board).....	238
7-10.	Adjustment Parts Arrangement Diagram	240

This section is extracted from SLV-815/UB/VP instruction manual.

SECTION 1 GENERAL

Main Features

For Editing

- Edit monitor function allows easier editing by displaying both the edit source picture and the picture to be edited on the TV screen.
- Flying erase head allows smooth transition between two recordings.
- Synchronized editing either from or onto this VTR is possible.
- Two kinds of remote control terminals, CONTROL L and CONTROL S IN jacks, allow this VTR to be remotely controlled by other equipment involved in tape editing.
- Video/audio input jacks on the front panel offer easy connection to other VTRs.

On-screen Displays

- Information on the tape counter, tape speed, remaining tape length and present date and time, can be displayed on the TV screen.
- Auto menu can be displayed to set the VTR to the desired automatic tape operation.
- Auto repeat function allows playing back the desired portion of the tape repeatedly.
- P in P (picture in picture) function allows watching a small TV picture in the playback picture and vice versa.
- TV in TV function permits the viewing of a small picture selected on the connected TV while watching a TV programme selected on the VTR.
- Information on the pre-selected timer recording programmes can be called up on the screen with a press of the button.

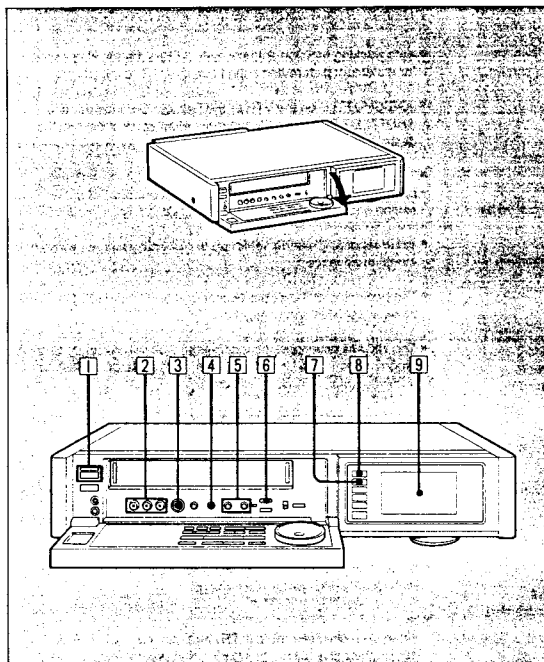
Convenient Functions

- Auto tracking function automatically adjusts the tracking condition for maximum picture and sound quality.
- JOG/SHUTTLE on the VTR or the Remote Commander and SHUTTLE EDIT on the Commander allow quick access to the desired scene.
- The wireless Commander with liquid crystal display (LCD) provides access to almost all of the VTR controls and makes timer setting easy.
- Timer recording can be set for up to eight programmes within one month in advance.
- The beginning of the desired scene can be located easily with the index scan/index search function.
- The NICAM broadcast (stereo/bilingual CONTROL S IN terminal programmes in the United Kingdom and Nordic countries) can be received. (SLV-815UB/815NC only)
- Any Sony satellite tuner equipped with CONTROL S IN terminal can be remotely controlled on the VTR regarding the power on/off and the programme selection. Moreover, timer recording of satellite programmes is possible on the VTR.

High-quality Picture

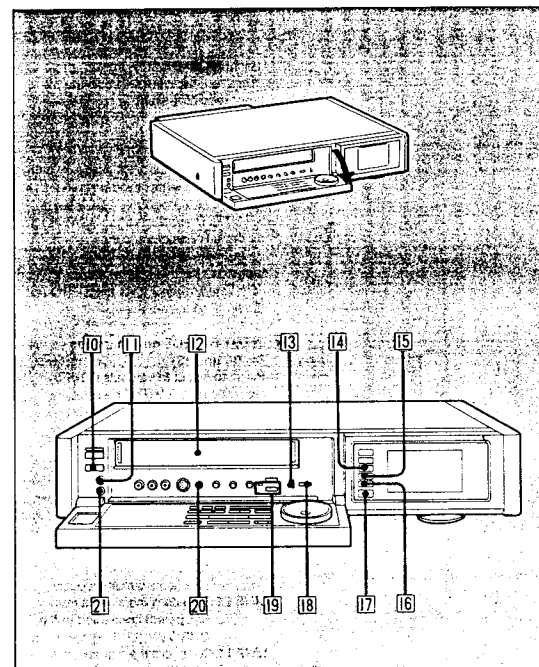
- Sharp, finely detailed pictures are possible through the use of High Quality (HQ) picture technology.
- **HQ**
Video Cassette Recorders (VTR) with this marking incorporate **VHS** high-quality picture technology and are compatible with any video cassette recorders bearing the **VHS** mark.

Identifying the Operational Parts



Front

- 1 ON/STANDBY switch and indicator
- 2 LINE IN 2 VIDEO/AUDIO jacks
- 3 CONTROL L connector (5-pin DIN type) (page 82)
Connect to the CONTROL L connector of other Sony product for systematic operations such as synchronized editing.
- 4 SHARPNESS (SOFT/SHARP) control
Use to adjust the sharpness of the picture.
- 5 REC LEVEL controls (page 77)
Adjust the audio recording level.
Normally set these controls at the center indented position.
- 6 EDIT MONITOR button (pages 86, 88 and 90)
Press to display the picture selected with the INPUT SELECT button and that being recorded on this VTR simultaneously.
- 7 EDIT MONITOR indicator
- 8 AUTO TRACKING indicator (page 26)
- 9 Display window

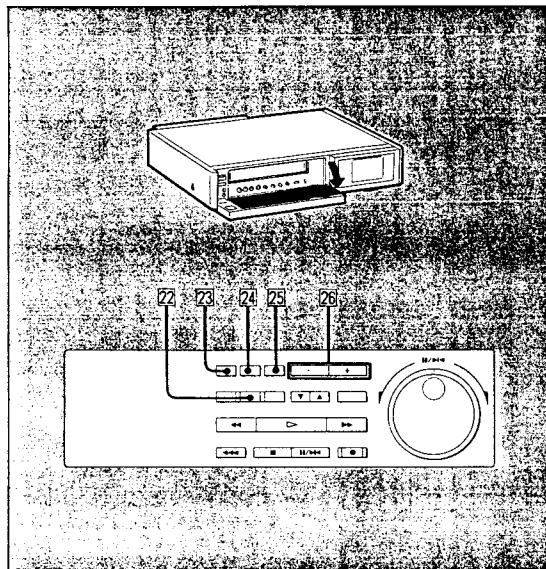


Front

- 10 EJECT button
Press to eject the cassette. This button does not function during recording.
- 11 MIC jack (mini type)
Connect a microphone.
- 12 Cassette compartment (page 24)
- 13 COMMAND MODE selector (page 16)
Set to the same position as the COMMAND MODE button on the Commander.
- 14 AUDIO INSERT indicator
- 15 VIDEO INSERT indicator
- 16 ◀◀ (high speed rewind) Indicator
- 17 Remote sensor
Point the Commander here.
- 18 VPS (Video Programme System) ON/OFF switch (SLV-815VP only) (page 61)
- 19 SYNCHRO EDIT button and indicator (pages 86 and 87)
Press to perform synchronized editing.
- 20 PHONE LEVEL (headphone level) control
- 21 PHONES (headphones) jack (stereo mini type)

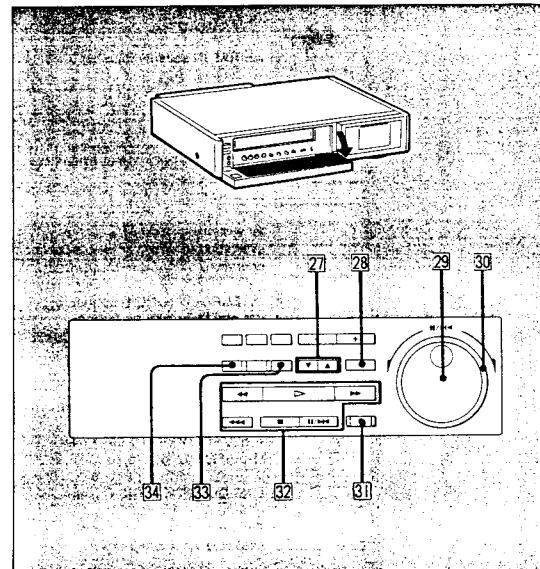
Getting Started

Identifying the Operational Parts



Front

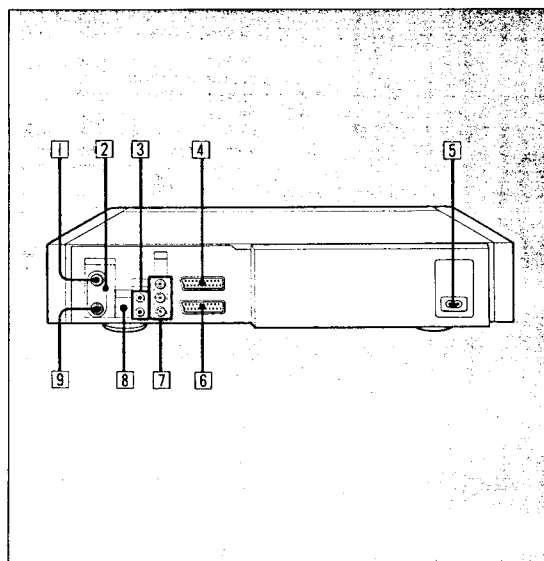
- 22 TIMER REC ON/OFF button** (page 54)
Press to deactivate or reactivate the timer recording standby mode when using the VTR before timer recording.
- 23 TV/VTR button** (page 43)
Press and light the VTR indicator in the display window to view the playback of the VTR or a programme selected on the VTR. Press this button again to turn off the VTR indicator to view a programme selected on the TV. This button is effective only when the VTR is connected to the TV via the EURO-AV (LINE 1) connector.
- 24 INPUT SELECT button** (pages 40, 72, 74, 86 and 88)
Press to select the signals to be recorded by the VTR. The selected mode will be indicated in the display window as follows:
TUNER: To record TV programmes.
SAT: To record the signals from equipment connected to the EURO-AV (SAT.) connector.
SIMUL: To record TV programmes and audio signals from equipment connected to the EURO-AV (LINE 1) connector or the LINE IN 2 jacks simultaneously.
LINE L1: To record the signals from equipment connected to the EURO-AV (LINE 1) connector.
LINE L2: To record the signals from equipment connected to the LINE IN 2 jacks.
- 25 REC MODE SP/LP button** (page 40)
Press to select the recording tape speed, SP or LP.
- 26 PROGRAM +/- buttons**
Press to select the programme positions.



Front

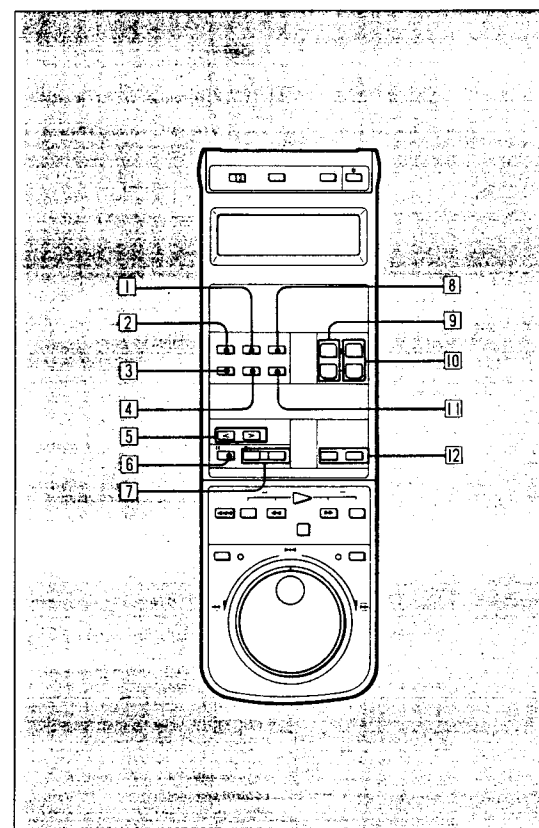
- 27 TRACKING NORMAL/SLOW and STILL ADJUST buttons** (pages 26 and 28)
Press either of the buttons to clear streaks that may appear on the screen when playing back tapes in normal or slow speed or to reduce picture shaking in still mode.
- 28 TRACKING AUTO/MANUAL button** (page 26)
Press to reactivate the automatic tracking function after manual tracking adjustment.
- 29 JOG dial** (pages 28 and 41)
- 30 SHUTTLE ring** (FORWARD/REVERSE) (pages 28 and 41)
- 31 ● REC (record) button** (page 40)
- 32 Tape transport buttons** (pages 25 and 27)
 ◀◀ REW (rewind) button
 ▶▶ FF (fast-forward) button
 ■ STOP button
 ||/▶ PAUSE/STILL button
 ◀◀ HIGH SPEED REWIND button
- 33 QUICK TIMER button** (page 63)
Press to activate the quick timer recording function.
- 34 EDIT ON/OFF button** (page 79)
Normally keep this button at OFF (i.e. the EDIT indicator is off in the display window). When using this VTR for editing, press this button to light the EDIT indicator.

Identifying the Operational Parts



Rear

- 1 **AERIAL IN socket** (page 14)
- 2 **DX/LOCAL switch**
Normally set to DX. If the TV signal is very strong, set it to LOCAL.
- 3 **CONTROL S IN/OUT jacks (mini-jack)** (pages 84 and 85)
Connect to the CONTROL S output/input jack of other Sony product for systematic operations such as synchronized editing or remote control operation.
- 4 **EURO-AV (LINE 1) connector (21-pin)** (page 14)
The on-screen display is available via this connector.
- 5 **AC IN socket**
Connect the supplied AC power cord.
- 6 **EURO-AV (SAT.) connector (21-pin)** (pages 69, 70 and 71)
- 7 **LINE OUT VIDEO/AUDIO jacks (phono type)** (pages 14 and 81)
The on-screen display is not available via these jacks.
- 8 **RF CHANNEL screw (30 to 39)** (page 19)
- 9 **AERIAL OUT socket** (page 14)

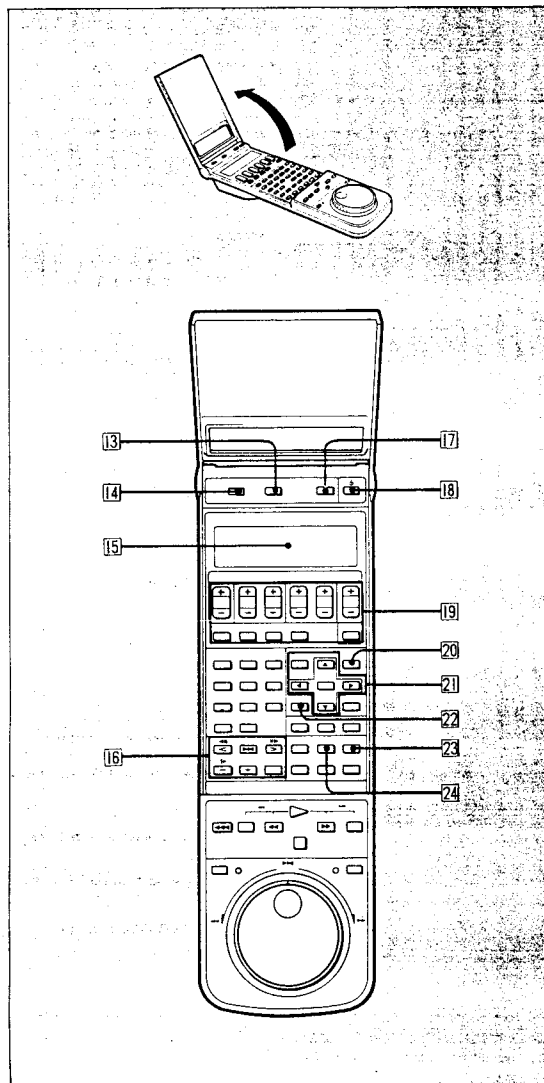


Remote Commander RMT-V5E

- The buttons on the Commander with the same name or mark as those on the VTR have the same function.
- The buttons with a yellow dot inscribed at the beginning of the button's name can be used to remotely control Sony TVs with the **TV** mark when the **TV/VTR** remote control selector is set to **TV**.
- Keep the upper cover closed except where noted.

- 1 **TIMER ON SCREEN button** (page 55)
Press to display the timer settings on the TV screen.
- 2 **EDIT MONITOR button** (pages 86, 88 and 90)
- 3 **DATA SCREEN button** (page 33)
- 4 **AUDIO MONITOR button** (pages 29, 47 and 48)
- 5 **SHUTTLE EDIT buttons** (page 41)
- 6 **II PAUSE button**
- 7 **● REC (recording) buttons** (page 40)
Press two buttons simultaneously.
- 8 **INDEX button** (pages 66, 67 and 68)
- 9 **VOL (TV volume) +/- buttons**
Press to control the volume of the TV. Effective only for Sony TVs with the **TV** mark.
- 10 **PROG (programme) +/- buttons**
- 11 **COUNTER RESET button** (page 50)
- 12 **AUDIO/VIDEO INSERT buttons** (page 90)

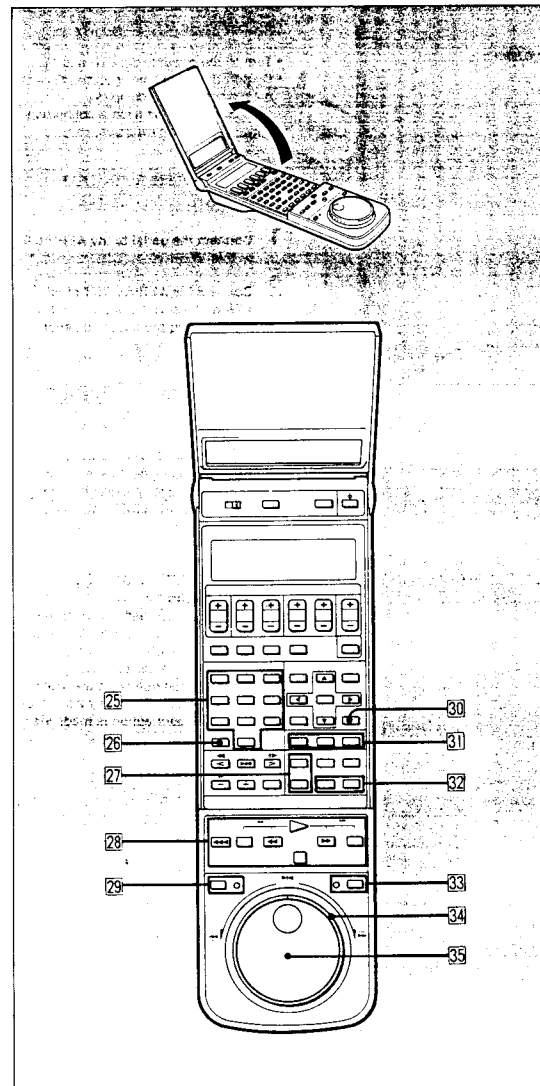
Identifying the Operational Parts



Remote Commander RMT-V5E

- 13 **TIMER REC (ON/OFF) button** (page 54)
- 14 **TV / VTR remote control selector** (page 16)
Set to **VTR** to control this VTR and set to **TV** to control the TV.
- 15 **Liquid-crystal display**
- 16 **Various speed playback buttons** (page 27)
< **II** / **III** > (to select the direction for frame-by-frame picture or the direction for any playback mode)
II (to obtain a still picture)
SLOW +/- (slow speed up/down) x 2 (double speed playback)
- 17 **TV/VTR button** (page 43)
- 18 **(on/standby) button**
- 19 **Timer recording/clock set buttons** (pages 17 and 52)
- 20 **COMMAND MODE button** (page 16)
- 21 **Menu operation buttons**
Press **MENU** to display or erase the main **MENU**. Press **EXE** to store the selected parameters.
Press **▲** / **▼** / **◀** / **▶** to move the cursor.
- 22 **FUNCTION MEMORY button** (page 37)
- 23 **INPUT SELECT button** (pages 40, 72, 86 and 88)
- 24 **REC MODE select button** (page 40)

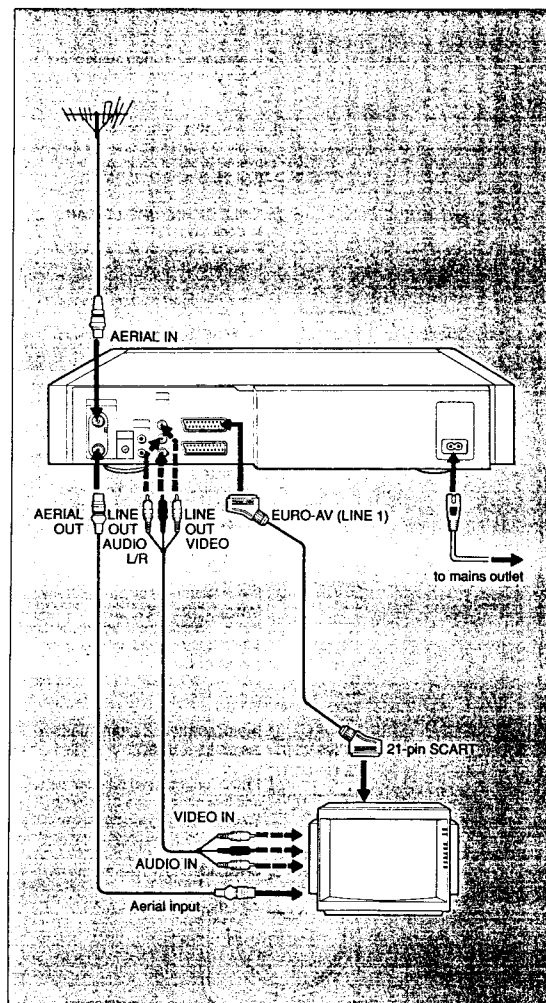
Note on the TV / VTR remote control selector
When you set the **TV / VTR** remote control selector on the Remote Commander to **TV**, the TV/VTR button cannot operate some Sony TV's.



Remote Commander RMT-V5E

- 25 **Programme position number buttons**
Press to select the programme position directly.
- 26 **- / - - (10's digit) button**
Press to select a programme number over 9. To select 23, press - / - -, then 2 and 3.
- 27 **TIMER CHECK/TIMER CLEAR buttons** (page 56)
Press to check, correct, or clear the timer settings.
- 28 **Tape transport buttons** (pages 25 and 27)
SEARCH (reverse/forward)
REW (rewind)
PLAY
FF (fast-forward)
STOP
HIGH SPEED REW
- 29 **JOG/SHUTTLE function button and indicator** (page 28)
Press to light the indicator to use JOG/SHUTTLE for various playback modes.
- 30 **TV SCAN button** (pages 32 and 44)
- 31 **P in P (picture in picture) buttons** (pages 31 and 45)
P in P to display the subsidiary picture.
SHIFT to change the position of the subsidiary picture.
DIGITAL OFF to turn off the subsidiary picture.
- 32 **INDEX MARK and ERASE buttons** (pages 65 and 68)
- 33 **PROG (programme) function button and indicator** (pages 21, 40 and 72)
Press to light the indicator to use JOG for selection of the programme position.
- 34 **SHUTTLE ring** (pages 28 and 41)
- 35 **JOG dial** (pages 21, 28, 40 and 72)

Connections



Before You Begin

- Turn off the power to the VTR and TV.
- Do not connect the mains lead until all of the connections are complete.
- Connect firmly since a loose connection may cause picture distortion.

Using the AERIAL IN/OUT Sockets

- 1 Connect the aerial to the AERIAL IN of this VTR.
- 2 Connect the AERIAL OUT of this VTR to the aerial input terminal of the TV using the supplied aerial cable.

Additional Connections for Higher Picture Quality

- **Using the EURO-AV connector**
If your TV is equipped with a 21-pin SCART connector, connect it to the VTR's EURO-AV (LINE 1) connector using the optional VMC-2121CE cable to view a higher quality picture.
- **Using the LINE OUT VIDEO/AUDIO jacks**
If your TV is equipped with video/audio input jacks, connect it to the VTR's LINE OUT VIDEO/AUDIO jacks using the supplied video/audio connecting cable to view a higher quality picture. **Note that the on-screen display will not be available if connection is made via these jacks.**

Remote Control Operation

Preparing the Commander

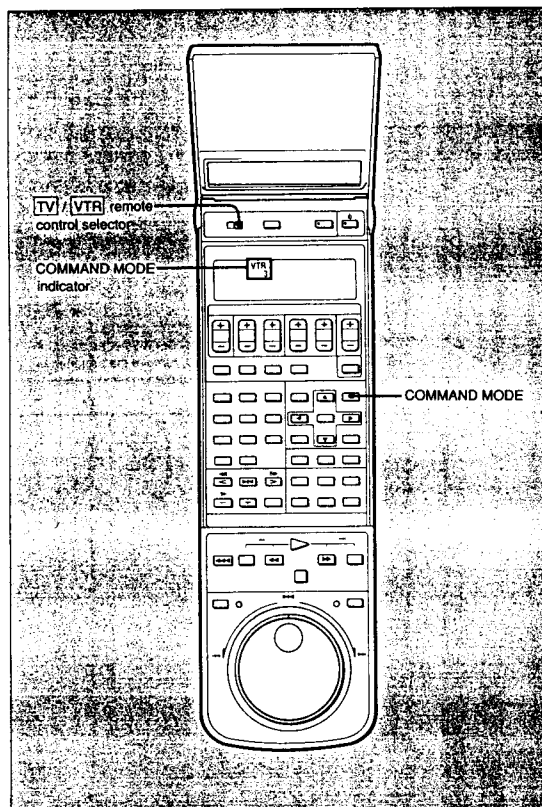
■ Battery insertion

- 1 Slide and remove the cover.
- 2 Insert two R6 (size AA) batteries with polarity positioned correctly.
- 3 Close the cover. The clock on the Commander will read - D - - -. Set the date and clock referring to the "Date and Clock Setting" (page 17).

Note on batteries

With normal operation, batteries will last for about three months. However, if the Commander will not be used for a long period, remove the batteries to avoid possible damage from battery leakage.

Remote Control Operation



Command Mode Setting

Set the COMMAND MODE 1/2/3 selector on the VTR to the same number displayed in the LCD. To change the setting on the Commander, press COMMAND MODE repeatedly. Then, set the TV/VTR remote control selector to VTR.

Remotely Controlling Other Sony Equipment

■ Controlling another VTR equipped with a command mode selector

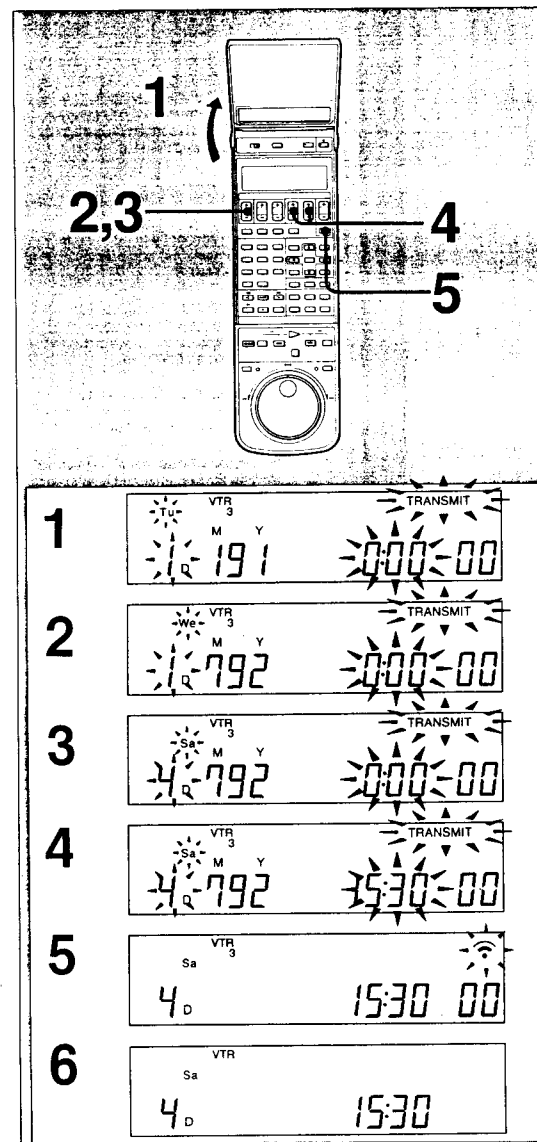
Set different command mode for this VTR (VTR 3, for instance) and the other VTR (VTR 1). Select VTR 1 on the Commander to control the other VTR and VTR 3 to control this VTR.

■ Controlling equipment without a command mode selector

Change the setting on the Commander as follows to control each type of VTR.

VTR 1: Sony Betamax infrared remote control VTRs
VTR 2: Sony 8 mm format VTRs
VTR 3: This VTR

Date and Clock Setting



Before You Begin

The time and date between the years 1991 and 2006 can be set with the Commander.

Operation

Example: To set to 15:30, Saturday, 4th July, 1992.

- 1 Open the cover.
- 2 Keep pressing the D (date) button until 7 M 92 Y is displayed. The date will be incremented slowly up to 30 days and then the month will be incremented.
- 3 Press the + side or - side of the D (date) button until 4 D is displayed. The day of the week appears automatically.
- 4 Press the H (hour) and M (minute) buttons under TURN OFF to set the current time.
- 5 Point the Commander at the VTR and press TRANS (transmit). A beep sound confirms that the date and clock setting is registered in the VTR as well.
- 6 Check the display window on the VTR and close the cover.

To correct the preset date and time Open the cover, press CLOCK SET and repeat steps 2 to 6.

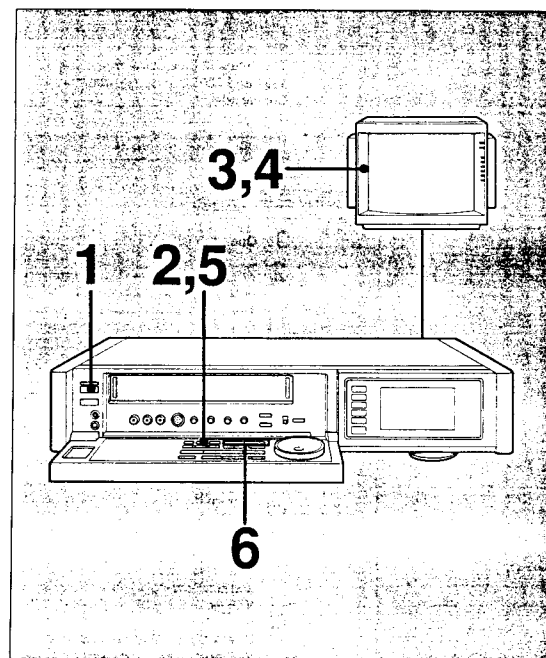
When 0:00 is blinking on the VTR

Any time power is interrupted for more than three hours, you will see 0:00 blinking when power is restored. You will have to re-set the date and clock again.

When a short beep sounds repeatedly

The VTR is in the timer recording or quick timer recording mode or standby mode for timer recording and the setting cannot be transmitted.

Adjusting the TV



Before You Begin

If you have connected your VTR and TV using only the aerial sockets, one of the television programme positions must be adjusted to receive the VTR's playback signal. If TV-VTR connection is made by other means, skip this step.

Operation

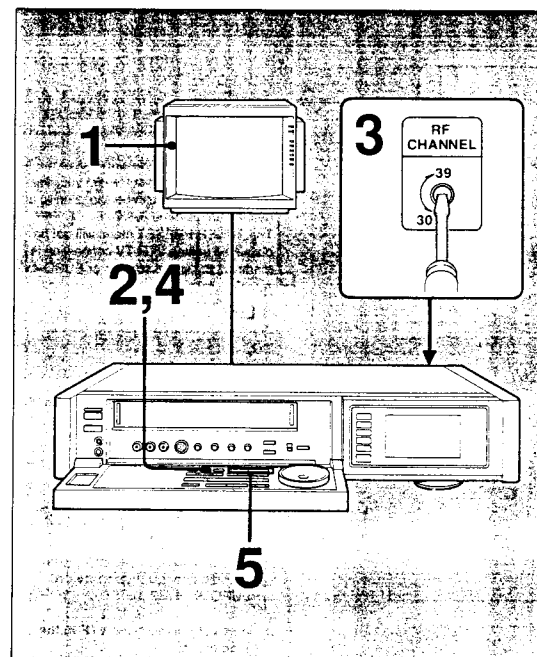
- 1 Make connections referring to "Connections" and press ON/STANDBY.
- 2 Press INPUT SELECT to light LINE L2 in the display window. Do not connect any equipment to the LINE IN 2 VIDEO jack.
- 3 Turn on the TV and select a programme position that is not used to receive a TV station.
- 4 Tune the TV so that a blue screen with tape counter and tape speed indication is clearly displayed on the TV screen.
- 5 Press INPUT SELECT to light TUNER in the display window.
- 6 Press PROGRAM +/- on the VTR and check that the screen changes to a different programme.

Now your TV is tuned to receive the VTR's playback picture. Whenever playing back a tape, select the programme position you chose in step 3.

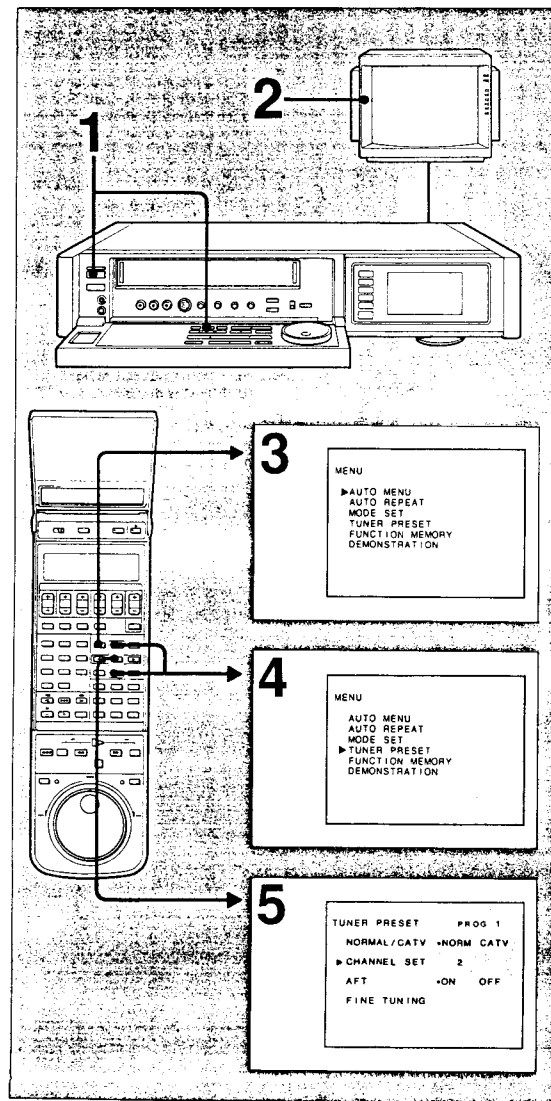
If you are not sure how to tune your TV, refer to the TV's instruction manual or consult your dealer.

When the Playback Picture is not Free of Disturbance

- 1 Select a programme position on the TV between UHF channels 30 and 39, so that the TV shows no picture and a steady rustling sound or no sound is heard.
- 2 Press INPUT SELECT to light LINE L2 in the display window. Do not connect any equipment to the LINE IN 2 VIDEO jack.
- 3 Turn the RF CHANNEL screw with the supplied screwdriver so that a blue screen with tape counter and tape speed indication is clearly displayed on the TV screen.
- 4 Press INPUT SELECT to light TUNER in the display window.
- 5 Press PROGRAM +/- on the VTR and check that the screen changes to a different programme.



Presetting the Active Channels



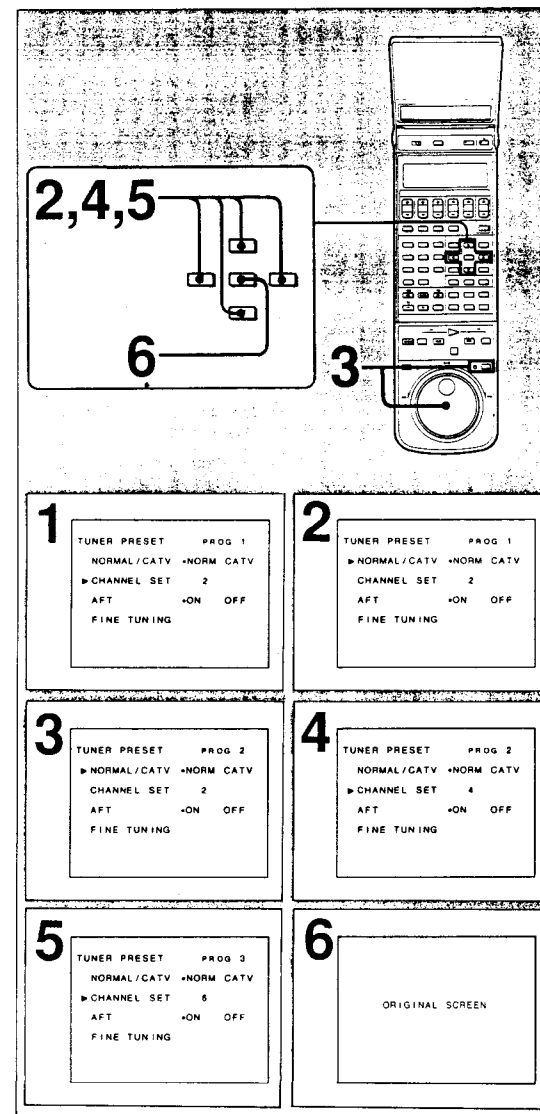
Before You Begin

- SLV-815/815VP/815NC are capable of receiving VHF channels E2 — E12, UHF channels E21 — E69, and cable TV channels S1 — S41 and S01 — S03. SLV-815UB is capable of receiving UHF channels B21 — B68.
- The receivable channels are governed by the TV broadcasting system in your area.
- Up to 60 channels can be allocated to any desired programme position.
- The TUNER PRESET menu will not be displayed unless VTR-TV connection is made via the aerial sockets or EURO-AV (LINE 1).

To Call Up the TUNER PRESET Menu

- 1 Turn on the TV and press INPUT SELECT to light the TUNER indicator and the programme position number in the display window.
- 2 Turn on the TV. Set to the programme position for the VTR if VTR-TV connection is made via the aerial sockets. Select VTR input if VTR-TV connection is made via EURO-AV (LINE 1).
- 3 Press MENU with the VTR in the stop mode. The main MENU appears.
- 4 Move cursor with ▲ or ▼ to TUNER PRESET.
- 5 Press EXE. The TUNER PRESET menu appears.

Note for the users of SLV-815UB
The TUNER PRESET menu of the SLV-815UB does not have the NORMAL/CATV selection as illustrated.



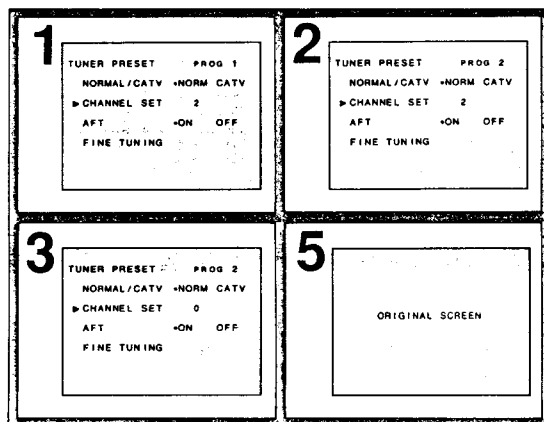
Tuning a Desired Channel

- 1 Call up the TUNER PRESET menu.
- 2 Move cursor with ▲ to NORMAL/CATV and select NORM with ◀. (For SLV-815UB, skip this step.) To tune in CATV channels first, select CATV with ▶.
- 3 Select the desired programme position in any of the following ways:
 - Press the PROG function button to light the indicator and turn JOG on the Commander. Turn it clockwise for higher numbered programme positions; counterclockwise for lower numbered programme positions.
 - Press PROG +/- on the Commander or PROGRAM +/- on the VTR.
- 4 Move cursor to CHANNEL SET with ▲ or ▼ and press ◀ or ▶. The channel number automatically increases with ▶ and decreases with ◀. The number stops changing when the first channel received in your area is detected.
- 5 To allocate a channel to the next programme position, repeat steps 2 to 4.
- 6 Press EXE to store the allocated channels and return to the original screen.

Channel scanning on your VTR

- When ▶ is pressed in steps 4 and 5, the channels are scanned in the following order. When ◀ is pressed, the scanning order is reversed.
VHF (E2—E12) → UHF (E21—E69) → CATV (S1—S20) → HYPER BAND (S21—S41) → CATV (S01 — S03)
- The SLV-815UB only scans UHF channels B21 to B68.
- In Italy, channels 13 to 20 correspond to channels A to H.

Presetting the Active Channels



Erasing Unwanted Programme Positions

The VTR can be preset so that only the desired programme positions will appear when you press PROG +/- on the Commander or PROGRAM +/- on the VTR.

- 1 Call up the TUNER PRESET menu.
- 2 Press PROG +/- on the Commander or PROGRAM +/- on the VTR to call up the unused programme position. You can also call it up using JOG on the Commander. Press the PROG function button to light the indicator and turn JOG.
- 3 Press programme position number button 0 twice or keep pressing ◀ or ▶ until 0 is displayed.
- 4 Repeat steps 2 and 3 to erase other programme positions.
- 5 Press EXE.

- To enter the erased programme positions again
Follow the operations in "Tuning a Desired Channel."

To Allocate the Channels Directly

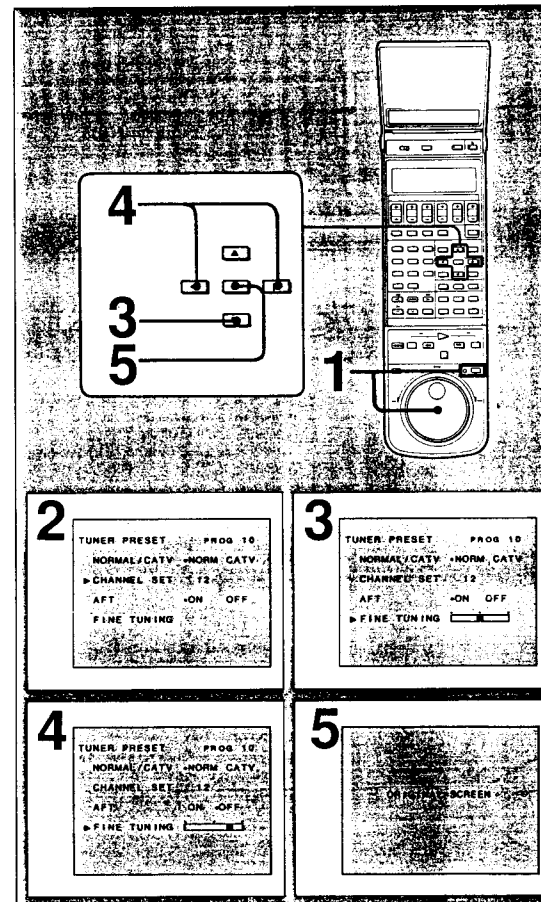
After step 3 in "Tuning a Desired Channel," move cursor to CHANNEL SET. Enter the desired programme numbers using the programme position number buttons. To enter one's digits, press 0 and then the desired number. To enter two digit numbers, press the ten's digit number and the one's digit number.

Manually Fine-tuning a Weak Station

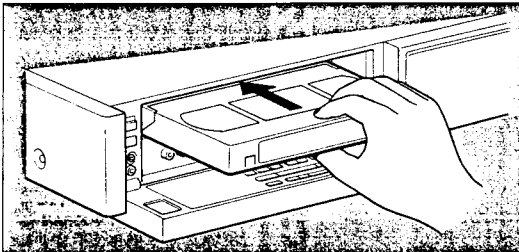
Normally the AFT (Automatic Fine Tuning) function fine-tunes the picture with the AFT in TUNER PRESET menu set to ON. However, when the programme received on the VTR is distorted due to signal interference, fine tuning may solve the problem.

- 1 Select the distorted programme position by pressing PROG +/- on the Commander or PROGRAM +/- on the VTR, or using JOG on the Commander.
- 2 Call up the TUNER PRESET menu.
- 3 Move cursor to FINE TUNING. The fine tuning meter appears.
- 4 Press ◀ or ▶ to obtain the best picture. If you cannot obtain a better picture, move cursor to AFT and move dot to ON.
- 5 Press EXE to store that position and return to the original screen.

Note on the TUNER PRESET Menu
When the channel scanning function finds a station, it stops, and the blue background changes to the received TV picture. Usually, the TUNER PRESET menu will be superimposed over the TV picture clearly. However, if the synchronization of the received TV picture is disturbed (e.g. through interference from a subsidiary channel), the TUNER PRESET menu disappears or is not clear. In this case, press ◀ or ▶ to continue the scanning operation.

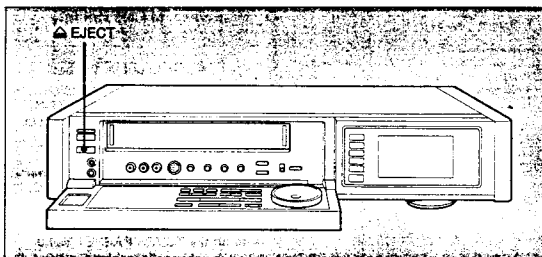


Handling Video Cassettes



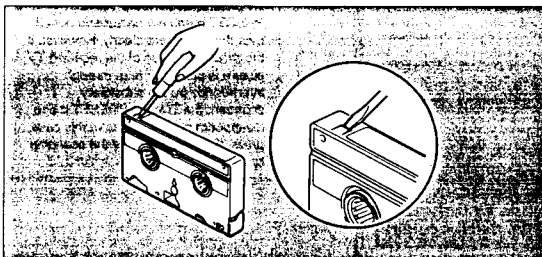
Cassette Insertion

Insert the cassette by slowly pressing its center with the arrow indication facing upwards. When a cassette is inserted, the power will be turned on automatically. If the inserted cassette has its safety tab removed, playback starts automatically.



Cassette Ejection

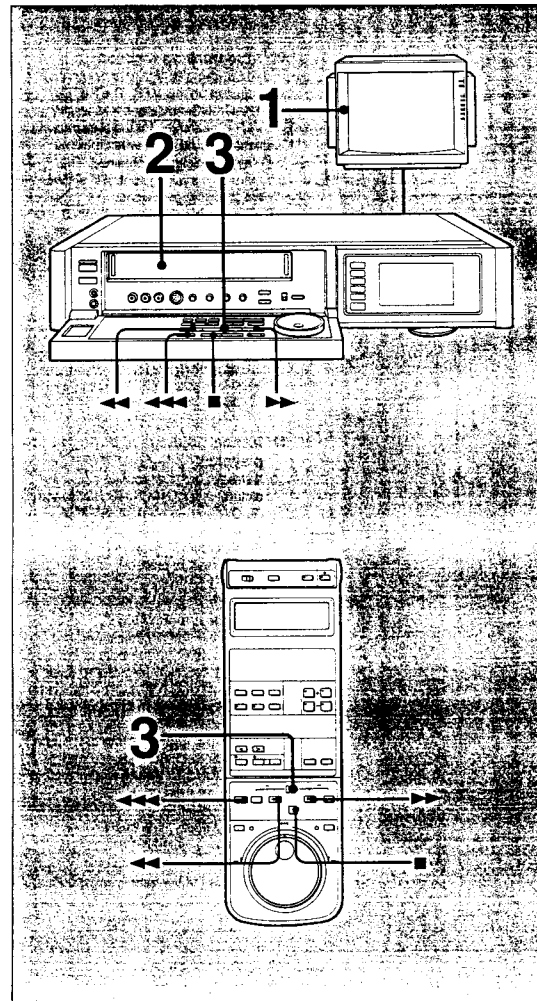
Press EJECT on the VTR. When the VTR is turned off, pressing the EJECT button will turn on the unit, eject the cassette, and turn off the VTR again. Note that EJECT will not function during recording.



Erase Protection

When recording is made on a pre-recorded tape, the previous recording will be erased. To avoid this, remove the safety tab with a screwdriver or a similar tool. The cassette will then be ejected when recording is attempted. To record again on a cassette that has no tab, simply cover the safety tab hole with a piece of plastic tape.

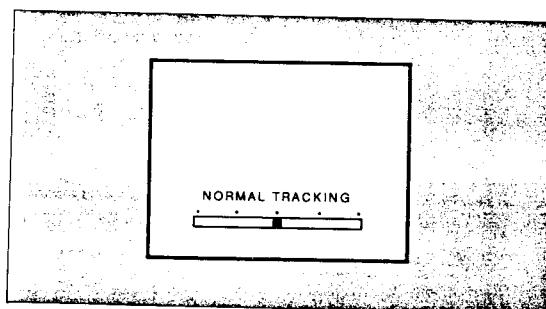
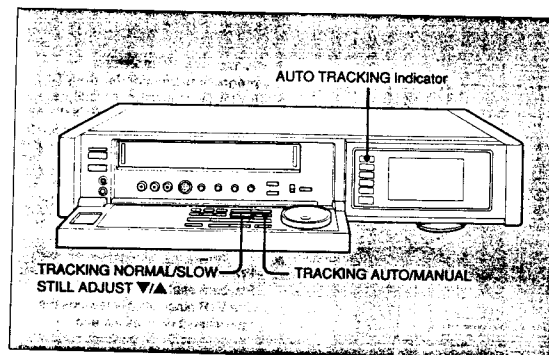
Playback



Playing a Tape

- 1 Turn on the TV and select the programme position for the VTR. If VTR-TV connection is made via EURO-AV (LINE 1) or LINE OUT VIDEO/ AUDIO, select the input for the VTR.
- 2 Insert a cassette. The VTR will be turned on. If your cassette has its safety tab removed, playback starts automatically.
- 3 Press . Playback starts. The VTR automatically rewinds the tape when it reaches the end.
 - To stop playback, press .
 - To rewind the tape, press .
 - To rewind the tape at a higher speed, press .
 - To advance the tape rapidly, press .

Playback



Picture Adjustments

Auto tracking function

The tracking condition is automatically adjusted on this VTR. The AUTO TRACKING indicator blinks while the VTR is searching for the best tracking condition and lights when maximum playback picture is obtained. The automatic tracking control is activated in the following conditions:

- when the cassette is inserted and played back.
- when the recording tape speed on the playback tape is switched between SP and LP.
- when the picture is distorted by scratches, etc. on the tape.
- when the AUTO TRACKING indicator is turned on by pressing TRACKING AUTO/MANUAL after the picture is adjusted manually. (See below.)

Manual adjustment during normal playback

If streaks or snow appear, adjust the picture using TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲.

Press either ▼ or ▲ to obtain the best possible picture.

Notes on auto tracking

- When the manual adjustment proves unsatisfactory, press both of the TRACKING NORMAL SLOW and STILL ADJUST ▼/▲. The tracking condition will return to the center position.
- When the sound on the hi-fi audio track is not clear, adjust it with TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲. While adjusting, the sound on the normal audio track may be heard.
- Tracking adjustment may not be possible when the recording condition of the tape is very poor.

Various Playback Modes Using the Buttons on the Commander and the VTR

Playback pause/still

Press II/II on the VTR, II or II during playback. Press ► to resume normal playback.

Frame-by-frame playback

Press ◀II or II▶ in playback still mode. II▶ will advance and ◀II will reverse the picture one frame. Press ► to resume normal playback.

Variable speed playback

Press I▶ SLOW ◀ for slow playback between 1/5 to 1/30 times normal speed. Press + or - to change the playback speed. Press × 2 for double speed playback. The speed setting can be made from any playback mode. Press ► to resume normal playback.

Reverse playback

During normal, slow or × 2 playback, press ◀II (<) to reverse the picture. Press II▶ (>) or ► to resume forward playback.

Picture search

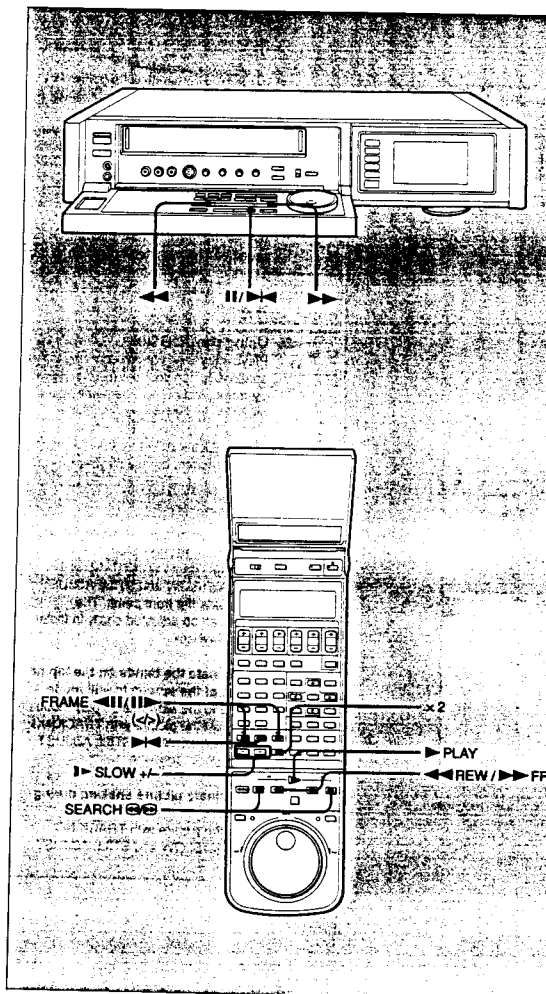
Press ◀◀ or ▶▶ during playback. The picture will be scanned in reverse with ◀◀ and forward with ▶▶ as long as they are pressed. Release the button to return to the previous playback mode.

Locked picture search

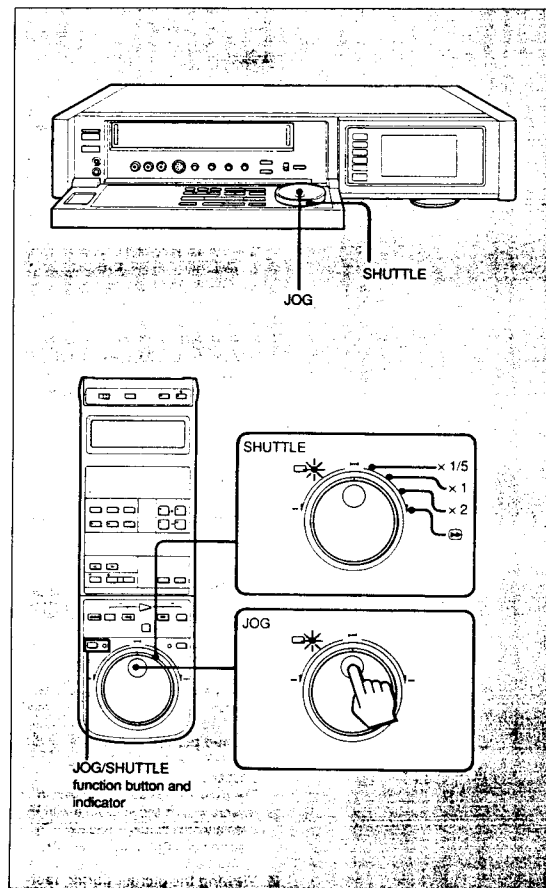
Press ◀ or ▶ SEARCH during playback. The picture will keep on scanning in reverse with ◀ and in forward with ▶ even after the button is released. To resume normal playback, press ►.

Viewing the picture during fast-forward or rewind

Press ▶▶ during fast-forward, or ◀◀ during rewind mode. The picture can be seen while the button is pressed. Release the button to return to the previous mode.



Playback



Various Playback Modes Using JOG/SHUTTLE

Various playback modes can be selected with JOG/SHUTTLE on the Commander or the VTR from any playback mode. If you use the Remote Commander, press the JOG/SHUTTLE function button to light the indicator. (The VTR enters the still picture mode.)

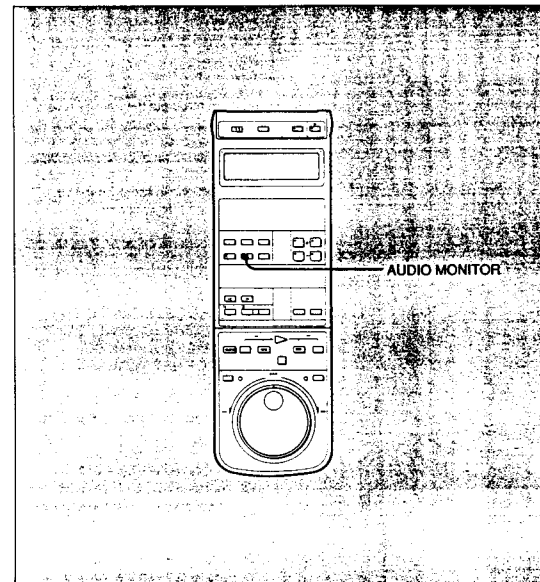
- **Using the SHUTTLE ring**
Turn the ring and hold it. Playback speed can be selected according to the turning angle as illustrated. The same speed is available in the reverse direction.
- **Using the JOG dial**
Playback speed varies according to the speed at which you turn the dial (frame-by-frame, slow, x 1). The same speed is available in the reverse direction.

Releasing JOG/SHUTTLE makes a still picture. To resume normal playback, press ►.

To eliminate streaks or noise bands during slow motion play
Adjust the picture with TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲ inside the front panel. The picture can be adjusted easily in faster speed playback.

To eliminate the bands on the top or bottom of the screen in still mode
Change to the slow motion play mode and adjust the picture with TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲.

To eliminate picture shaking during still mode
Adjust the picture with TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲.



Listening to a Stereo or Bilingual Tape

Press AUDIO MONITOR to select the sound to be heard.

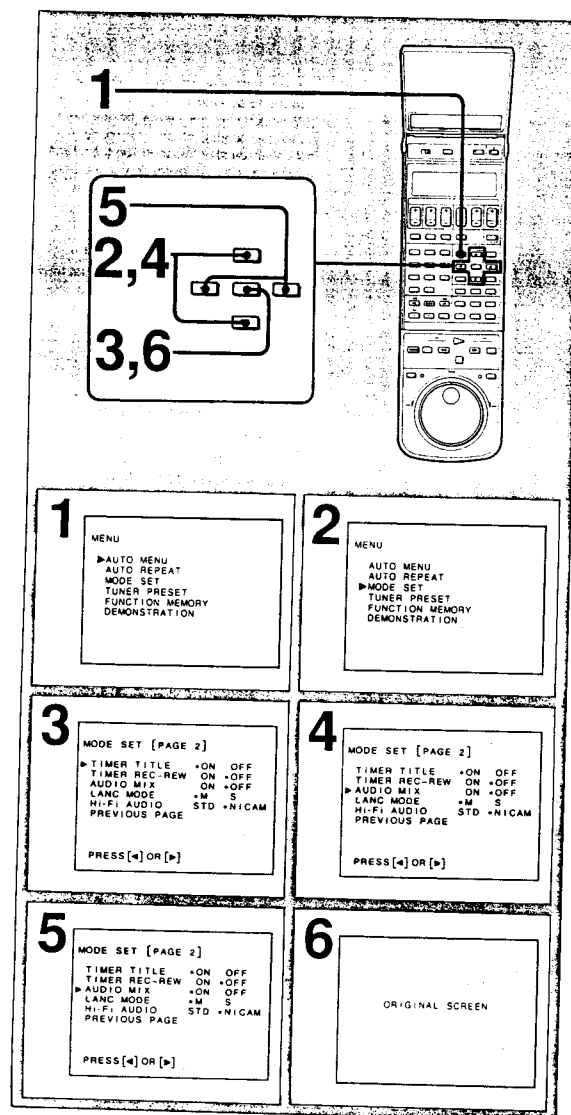
With each pression, stereo (left and right channel sounds), left-channel sound, right-channel sound or the sound on the normal audio track is selected cyclically in order. The selected sound is indicated in the display window of the VTR.

Display	Sound to be heard	
	Stereo tape	Bilingual tape
STEREO	Stereo	Left and right channels
MAIN/L	Left channel	Left channel
SUB/R	Right channel	Right channel
None	Monaural (on normal audio track)	Sound on normal audio track

Notes on the AUDIO MONITOR button

- AUDIO MONITOR will not function with a monaural tape.
- AUDIO MONITOR does not operate when AUDIO MIX ON is selected in the MODE SET menu (see page 30).

Playback



*Hi-Fi AUDIO for SLV-815UB/815NC only

To listen to the sounds on the hi-fi video track and normal audio track mixed

It is possible to output the sounds recorded on the hi-fi video track and the normal audio track simultaneously. This function is useful when you listen to an audio-inserted tape.

- Press MENU in the stop mode. The main MENU appears.
- Move cursor with ▲ or ▼ to MODE SET.
- Press EXE. If the MODE SET [PAGE 1] menu appears, move cursor with ▲ or ▼ to NEXT PAGE and press EXE. The MODE SET [PAGE 2] menu appears.
- Move cursor with ▲ or ▼ to AUDIO MIX.
- Select ON or OFF by ◀ or ▶.
ON: to make AUDIO MONITOR inoperative so that the sounds of the hi-fi video and normal audio tracks are always output.
OFF: to make AUDIO MONITOR operative so that you can select the sound to be heard.
- Press EXE to store the setting and return to the original screen.

Note
Reset the AUDIO MIX setting to OFF after listening to the particular tape.

Inserting a Small Picture into the Playback Picture — P in P

Press P in P during playback. The subsidiary picture selected with INPUT SELECT will appear on the TV screen. See illustration [a].

- If TUNER mode is selected with INPUT SELECT, you can watch the TV picture on the subsidiary screen.

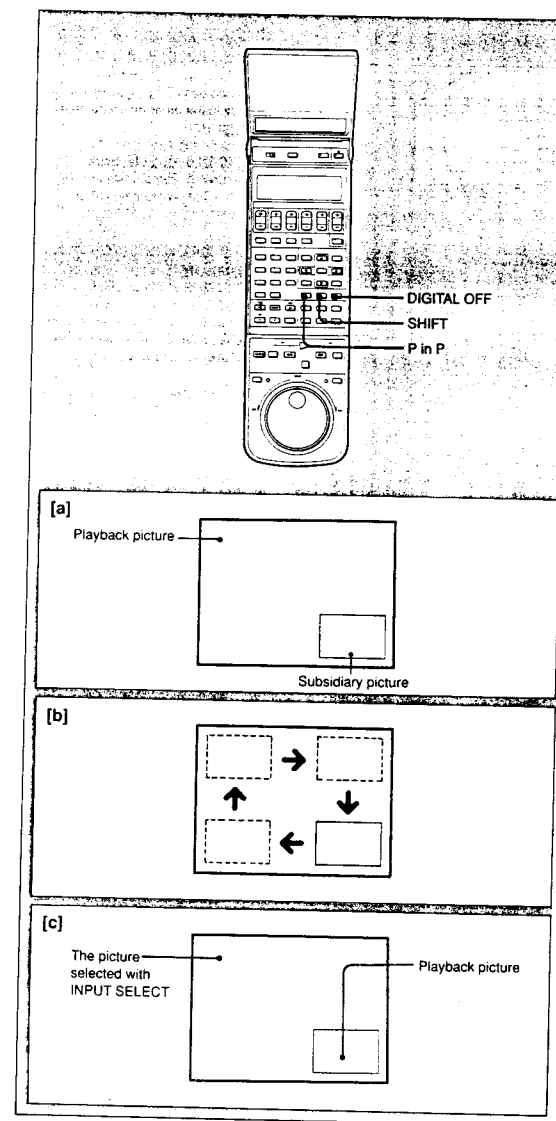
■ **Changing the position of the subsidiary picture**
Press SHIFT repeatedly until the desired position is reached. See illustration [b].

■ **Inverting the subsidiary picture and the main picture**
Press P in P again. See illustration [c].

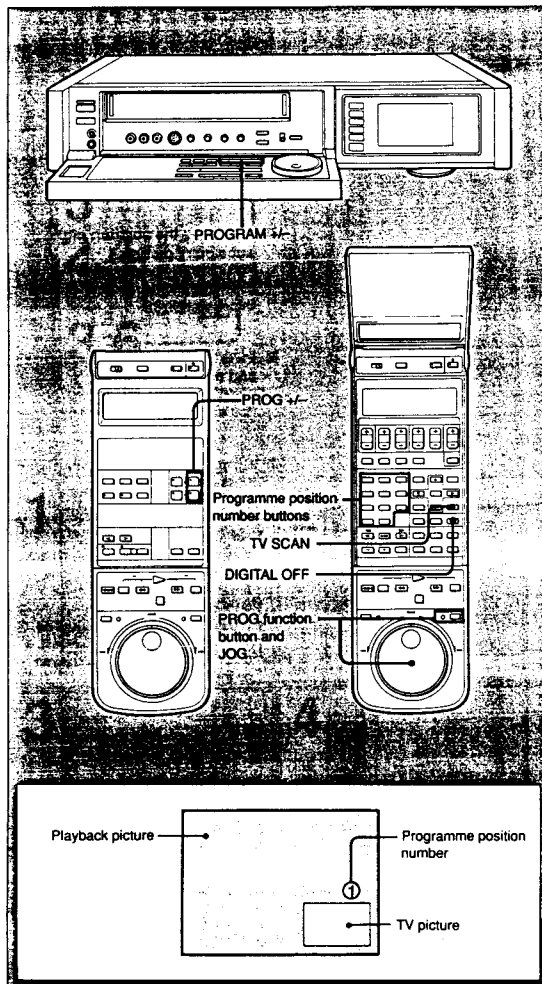
■ **Turning off the subsidiary picture**
Press DIGITAL OFF.

Note

- If no recorded portion is played back at a speed except the normal one, the subsidiary picture will not be displayed.
- If TUNER mode is selected and no TV programme is being broadcast, a disturbed picture may be displayed on the subsidiary screen.



Playback



Watching TV Programmes in Succession — TV SCAN

You can watch each TV programme for a few seconds in the order of programme position numbers.

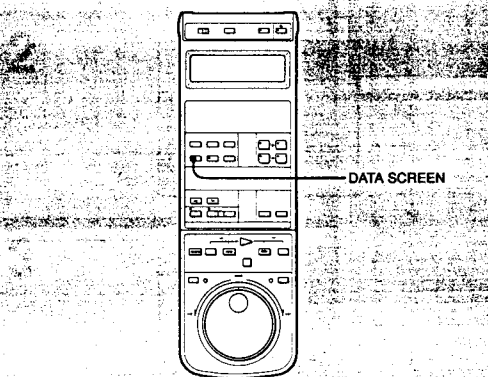
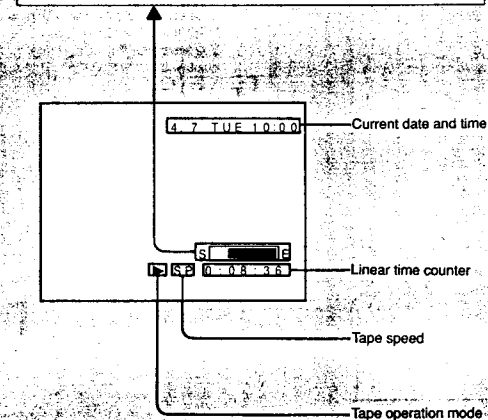
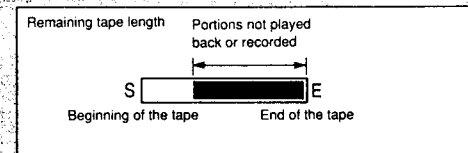
Press TV SCAN during playback.
After all the preset programmes are displayed, the first programme will appear again.

■ Viewing the desired programme continuously

Press the programme position number buttons, PROG +/- or press the PROG function button to light the indicator and turn JOG on the Commander or press PROGRAM +/- on the VTR.

■ Turning off the subsidiary picture

Press DIGITAL OFF.



Data Screen

Data screen information illustrated on the left will automatically appear on the screen during playback or recording as a reference. Note, however, that the data screen will not be displayed in the following cases:

- When the VTR-TV connection is made via the LINE OUT VIDEO jack.
- When the VTR is in slow motion or playback pause mode.

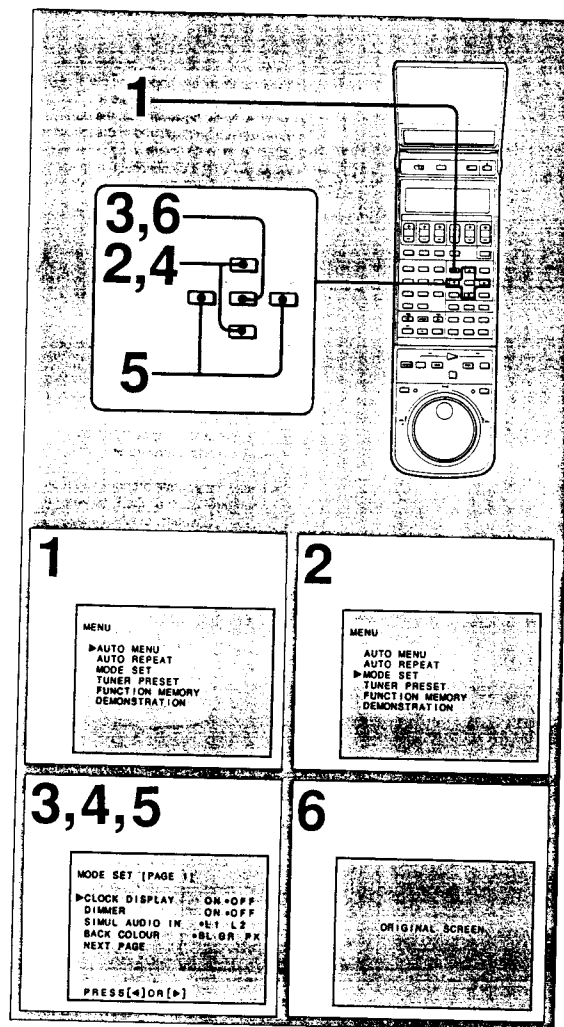
■ To erase or display the data screen

Press DATA SCREEN.

Notes on the remaining tape length indicator

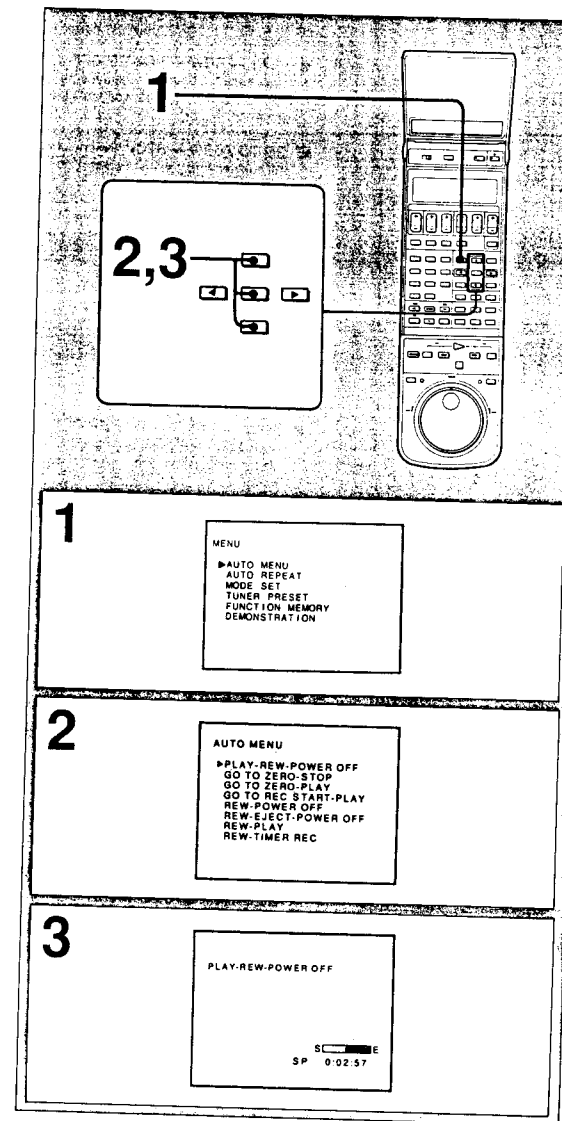
- The remaining tape length indicator only shows the approximate amount of tape left.
- The indication may shift vertically during the fast-forward or rewind mode.
- It may not operate properly when a short tape, such as the E-30 and VHS-C cassettes, or when a non-standardized tape is inserted.

Playback



To Erase the Current Date and Time from the Data Screen

- 1 Press MENU. The main MENU appears.
- 2 Move cursor with ▲ or ▼ to MODE SET.
- 3 Press EXE. If the MODE SET [PAGE 2] menu appears, move cursor with ▼ or ▲ to PREVIOUS PAGE and press EXE. The MODE SET [PAGE 1] menu is displayed.
- 4 Move cursor with ▲ or ▼ to CLOCK DISPLAY.
- 5 Press ◀ or ▶ to move the dot to OFF to erase the current date and time and to ON to display them.
- 6 Press EXE to store the setting and return to the original screen.



Assigning a Desired Operation Mode — AUTO MENU

Guided by the AUTO MENU, you can make the VTR enter the desired operational sequence automatically.

- 1 Press MENU while the VTR is in the stop mode. The main MENU appears.
- 2 Move cursor with ▲ or ▼ to AUTO MENU and press EXE. The AUTO MENU appears.
- 3 Move cursor with ▲ or ▼ to the desired operational sequence and press EXE. The selected operation will begin. The selected operating mode will be superimposed on the TV screen for a few seconds. The AUTO indicator will light in the display window during AUTO MENU operation.

Note on AUTO MENU operation
AUTO MENU cannot be operated if there is no cassette installed or if the VTR is in modes other than stop mode. A short beep alerts you if the AUTO MENU is not operable.

Note on "GO TO REC START — PLAY"
The recording start point data will be erased from the memory after the following operations and "GO TO REC START — PLAY" will not be operable.

- When COUNTER RESET is pressed.
- When cassette is ejected and re-inserted.
- When HIGH SPEED REWIND is pressed.

Playback

AUTO MENU

▶PLAY-REW-POWER OFF
GO TO ZERO-STOP
GO TO ZERO-PLAY
GO TO REC START-PLAY
REW-POWER OFF
REW-EJECT-POWER OFF
REW-PLAY
REW-TIMER REC

Auto Menu Modes

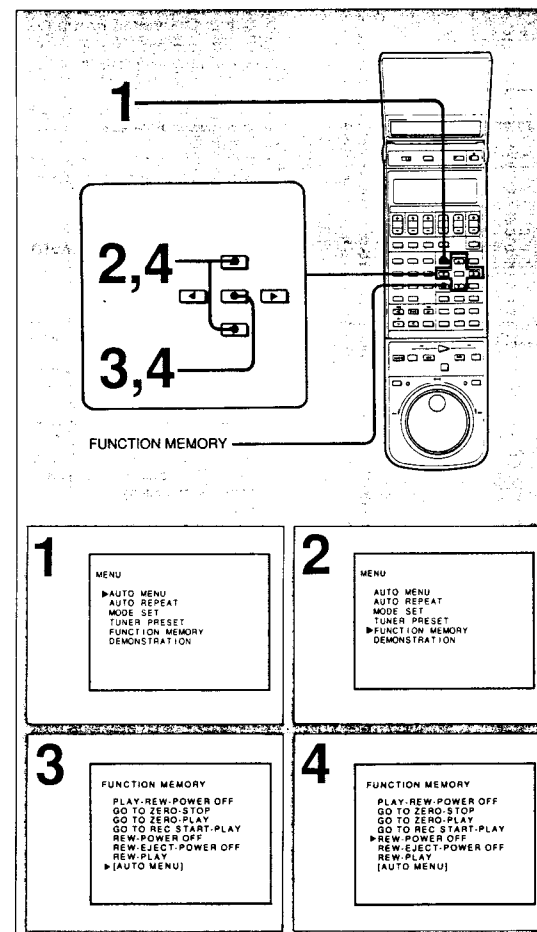
- **PLAY — REW — POWER OFF** plays back the tape, rewinds the tape when the end is reached, and turns the power off.
- **GO TO ZERO — STOP** searches for the counter zero point and stops. See page 50.
- **GO TO ZERO — PLAY** searches for the counter zero point and starts playback. See page 50.
- **GO TO REC START — PLAY** searches for the recording start point and starts playback.
- **REW — POWER OFF** rewinds the tape to the beginning and turns the power off.
- **REW — EJECT — POWER OFF** rewinds the tape to the beginning, ejects the cassette, and turns off the power.
- **REW — PLAY** rewinds the tape to the beginning and starts playback.
- **REW — TIMER REC** rewinds the tape to the beginning and enters the timer recording standby mode for timer recording when a timer recording is preset. A cassette with its safety tab removed will be ejected. When the VTR is in the timer recording standby mode, 1) press **TIMER REC ON/OFF** to cancel the standby mode, 2) turn on the power of the VTR, 3) call up the **AUTO MENU** referring to page 35.

Assigning an Auto Menu Mode to the FUNCTION MEMORY Button

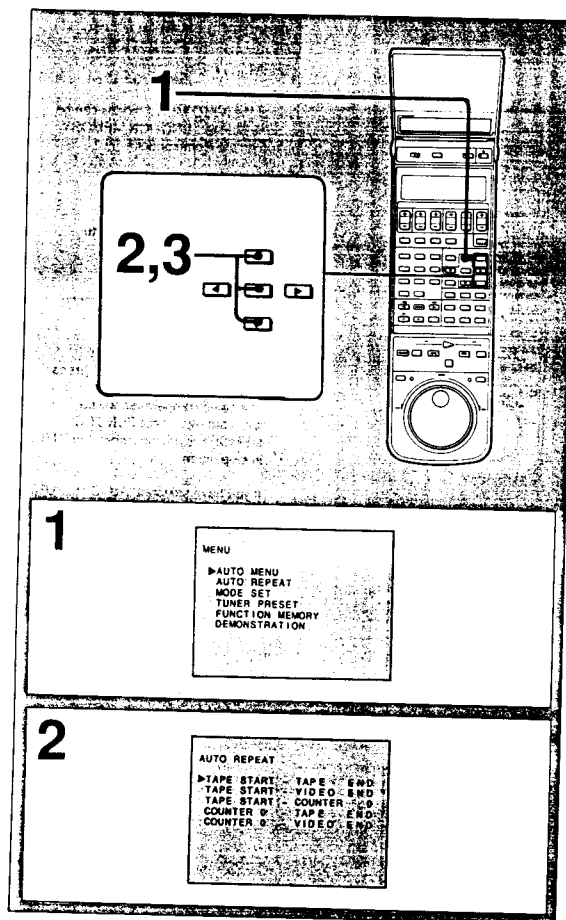
One of the **AUTO MENU** modes can be assigned to the **FUNCTION MEMORY** button on the Commander.

- 1 Press **MENU**. The main **MENU** appears.
- 2 Move cursor with **▲** or **▼** to **FUNCTION MEMORY**.
- 3 Press **EXE**. The **FUNCTION MEMORY** menu appears.
- 4 Move cursor to the desired operational sequence and press **EXE**. The selected operation will be activated every time **FUNCTION MEMORY** is pressed when the VTR is in stop mode.

If you have selected "AUTO MENU" in step 4, the **AUTO MENU** will be displayed immediately after **FUNCTION MEMORY** is pressed, providing a short cut to the **AUTO MENU**.



Playback



Assigning a Desired Portion of the Tape Played Back Repeatedly—AUTO REPEAT

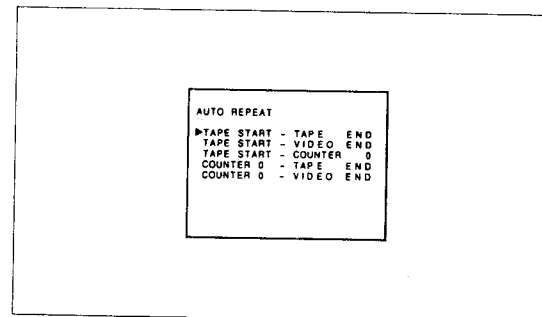
You can make the VTR to repeat playback of a certain portion of the tape automatically.

- 1** Press MENU while the VTR is in the stop mode.
The main MENU appears.
- 2** Move cursor with ▲ or ▼ to AUTO REPEAT and press EXE.
The AUTO REPEAT menu appears.
- 3** Move cursor with ▲ or ▼ to the desired item you want to play back repeatedly and press EXE.
The VTR will rewind or advance the tape rapidly to the start point of the selected repeat portion and start playback. Playback of that portion will repeat five times and then the VTR will rewind the tape to the start point. The [AUTO] indicator will light in the display window during repeat playback.

- To stop playback
Press ■ STOP on the VTR or the Commander.

Notes on AUTO REPEAT operation

- If you press any tape operation button during repeat playback, AUTO REPEAT will be released.
 - AUTO REPEAT cannot be operated if there is no cassette installed or if the VTR is in modes other than stop mode.
- A short beep alerts you if the AUTO REPEAT is not operable.



Auto Repeat Menu

- TAPE START—TAPE END repeats playback from the beginning to the end of the tape.
- TAPE START—VIDEO END repeats playback from the beginning of the tape to the end of the recorded portion.
- TAPE START—COUNTER 0 repeats playback from the beginning of the tape to the counter zero point.
- COUNTER 0—TAPE END repeats playback from the counter zero point to the end of the tape.
- COUNTER 0—VIDEO END repeats playback from the counter zero point to the end of the recorded portion of the tape.

When you select the menu including "COUNTER 0"

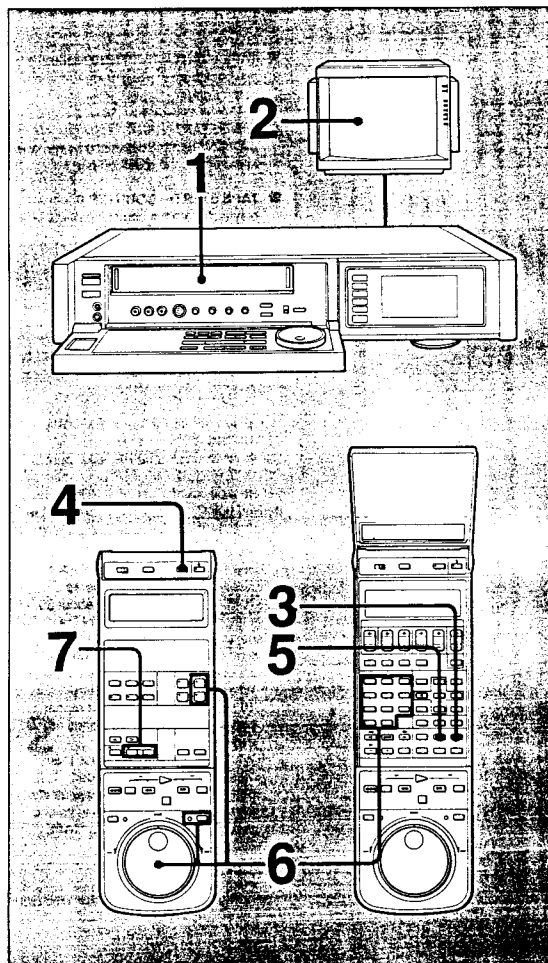
Before activating AUTO REPEAT, press COUNTER RESET on the Commander to set the tape counter to 0H00M00S at the desired point.

Note on "VIDEO END"

The VTR normally detects a blank of about 10 seconds on the tape as "VIDEO END". However, for about 30 seconds from the beginning of the tape, the VTR does not do this. Accordingly, AUTO REPEAT will not work correctly in the following cases.

- When there is a blank of more than 10 seconds in the assigned repeat portion (more than 40 seconds at the beginning).
- When there is a blank of less than 10 seconds after the recorded portion to be played back repeatedly.
- When the tape is recorded to its end. (Assign the menu including "TAPE END".)

Recording TV Programmes



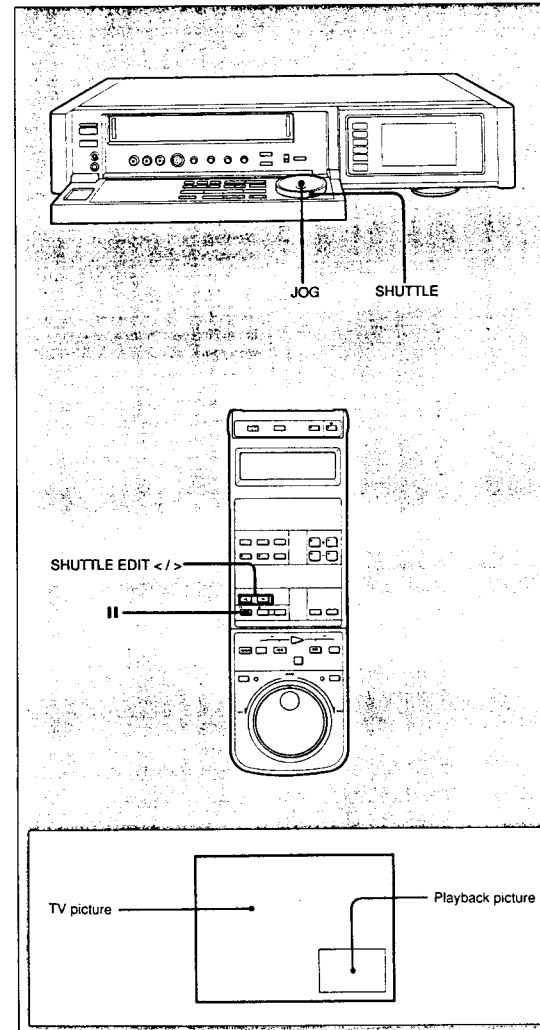
Before You Begin

- Check that all of the preparations are complete.
- The buttons on the VTR with the same name or mark can be used in the operation below as well.
- Data screen displays will not be recorded on the tape.

Operation

- 1 Insert a cassette.
- 2 Turn on the TV.
Set to the programme position for the VTR playback if VTR-TV connection is made only via the aerial sockets. Select VTR input if VTR-TV connection is via the EURO-AV (LINE 1) connector or LINE OUT VIDEO/AUDIO jacks.
- 3 Press INPUT SELECT so that the TUNER indicator appears in the display window.
- 4 Press TV/VTR so that the VTR indicator lights in the display window.
(Only when connection is made via EURO-AV (LINE 1).)
- 5 Select the recording speed, SP or LP.
- 6 Select the programme position to be recorded in any of the following ways:
 - Press PROG +/-.
 - Press the programme position number buttons. To select 23, press +/-, then 2 and 3. To select 9, press 9.
 - Press the PROG function button to light the indicator and turn JOG on the Commander. Turn it clockwise for higher numbered programme positions, counterclockwise for lower numbered programme positions.
- 7 Press the right button while pressing ● REC.
Recording will begin. When the tape reaches the end, it will be automatically rewound to the beginning. Pressing the ● REC button on the VTR also activates the recording.

To stop recording, press ■.



To Stop Recording Momentarily at an Unwanted Scene

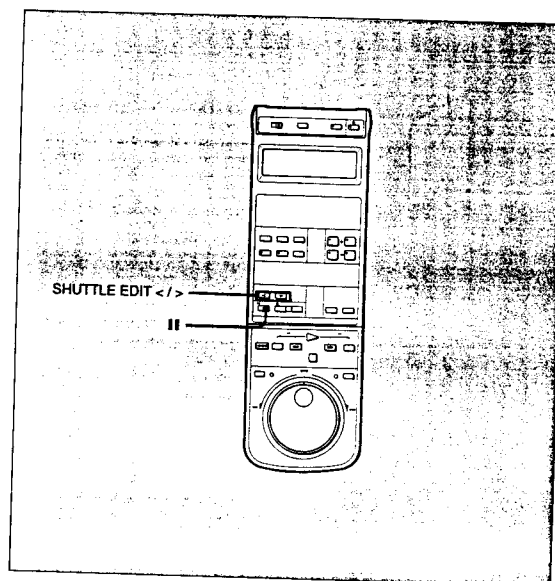
- 1 Press II when an unwanted scene appears.
Recording is stopped and the VTR enters the recording pause mode.
- 2 Press II again to resume recording at the desired scene.

To Cut Out an Unwanted Scene by Recording Over it

- 1 Press II during recording to enter the recording pause mode.
- 2 Locate the point where you wish to continue recording using JOG/SHUTTLE on the VTR or SHUTTLE EDIT on the Commander.
The unit will enter the P in P mode and the playback picture will be displayed on the subsidiary screen.
(For details on the operation, see below.)
- 3 At the desired point, release JOG, SHUTTLE or SHUTTLE EDIT.
- 4 Press II to resume recording.

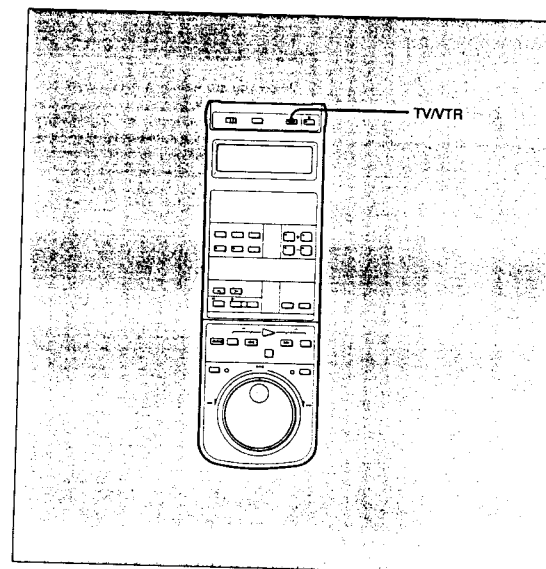
- How to use the JOG dial and the SHUTTLE ring on the VTR
Turn the dial and the ring during playback or in the recording pause mode.
Using JOG, playback speed and the direction can be selected according to the turning speed and direction. Using SHUTTLE, playback speed and the direction can be selected according to the turning angle and direction. Release the dial or ring to enter the playback pause mode or resume the recording pause mode.
 - If the dial or ring is turned in the recording pause mode, the VTR enters the P in P mode and the playback picture appears on the subsidiary screen.

Recording TV Programmes



- **How to use the SHUTTLE EDIT buttons on the Commander**
Use the buttons in the playback pause mode or in the recording pause mode. Keep < pressed to obtain 1/5 playback picture in reverse, and keep > pressed to obtain 1/5 playback picture. Release the button to resume the playback pause or recording pause mode.
 - If the button is pressed in the recording pause mode, the VTR enters the P in P mode and the playback picture appears on the subsidiary screen.

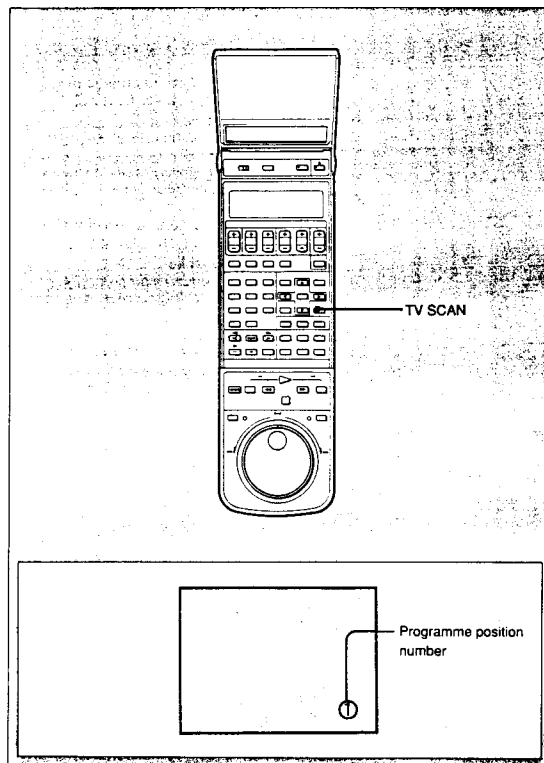
- To record over from playback mode**
- 1) Locate the point from where you wish re-record using JOG/SHUTTLE on the VTR or the Commander or SHUTTLE EDIT and release it.
 - 2) Press ● REC and its right button to enter the recording pause mode.
 - 3) Press || to start recording.



Watching a TV Broadcast While Recording Another

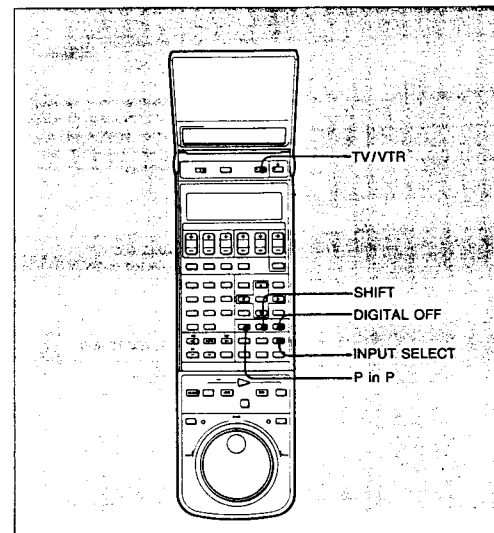
- **If VTR-TV connection is made using the EURO-AV (LINE 1) connector**
Press TV/VTR to turn off the VTR indicator.
The programme selected on the TV appears on the screen.
- **If VTR-TV connection is made using the LINE OUT VIDEO/AUDIO jacks**
Select the tuner input on the TV and change the programme position on the TV.
- **If VTR-TV connection is made using only the aerial sockets**
Change the programme position on the TV.

Recording TV Programmes



Watching TV Programmes in Succession — TV SCAN

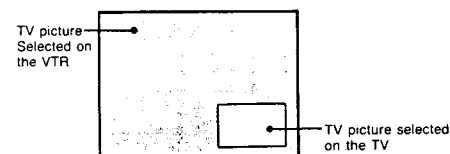
When you are watching a TV programme, press TV SCAN. Each preset programme will be displayed for a few seconds in the order of programme position numbers. When all the programmes are displayed, the normal display will resume.



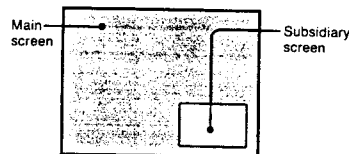
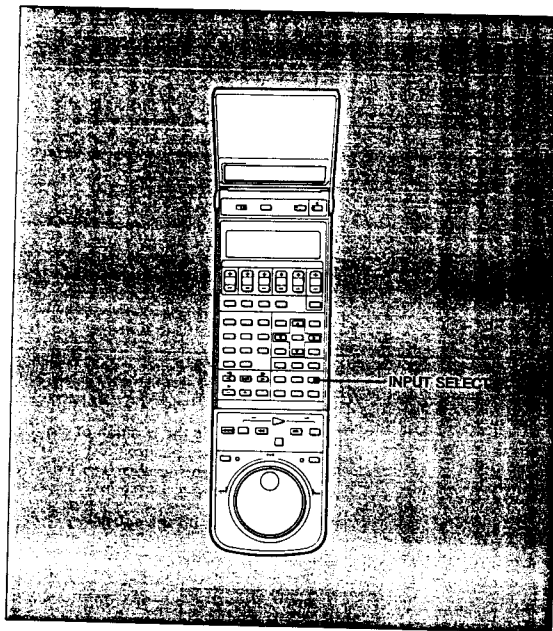
Watching a TV Broadcast While Watching Another — TV in TV

You can watch two TV programmes, simultaneously on the screen: One programme selected on the VTR, and the other selected on the TV connected to EURO-AV.

- 1 Select TUNER mode with INPUT SELECT.
 - 2 Press TV/VTR to turn on the VTR indicator. The TV programme selected on the VTR appears on the screen.
 - 3 Press P in P. The programme selected on the TV appears on the subsidiary screen.
- Changing the position of the subsidiary picture
Press SHIFT repeatedly until the desired position is reached.
 - Turning off the subsidiary picture
Press DIGITAL OFF.



Recording TV Programmes



How to Select the Main Screen and the Subsidiary Screen

If the input mode is changed with INPUT SELECT, the picture on the main screen and the subsidiary screen change as follows. The audible sound is determined according to the input mode selected with INPUT SELECT.

INPUT SELECT: TUNER

Main screen	The programme selected on the VTR
Subsidiary screen	TV programme selected on the TV

INPUT SELECT: SAT. (EURO-AV)

Main screen	Picture of the satellite tuner connected to SAT. (EURO-AV)
Subsidiary screen	TV programme selected on the VTR

INPUT SELECT: SIMUL

Main screen	TV programme selected on the VTR
Subsidiary screen	TV programme selected on the TV

INPUT SELECT: LINE L1 (EURO-AV)

Main screen	TV programme selected on the TV
Subsidiary screen	TV programme selected on the VTR

INPUT SELECT: LINE L2

Main screen	Picture of the equipment connected to LINE IN 2 VIDEO
Subsidiary screen	TV programme selected on the VTR

Note

You cannot change the programme position of the VTR if it appears on the subsidiary screen.

Recording Stereo/Bilingual Programmes

SLV-815/815VP/815NC

The SLV-815/815VP/815NC receives and records stereo/bilingual programmes based on the "Zweiton" system adopted in former West Germany.

■ Stereo programme

When a stereo programme is received, STEREO appears in the display window.

The AUDIO MONITOR button does not function for the stereo programmes of the Zweiton system.

■ Bilingual programme

When a bilingual programme is received, MAIN/L appears in the display window.

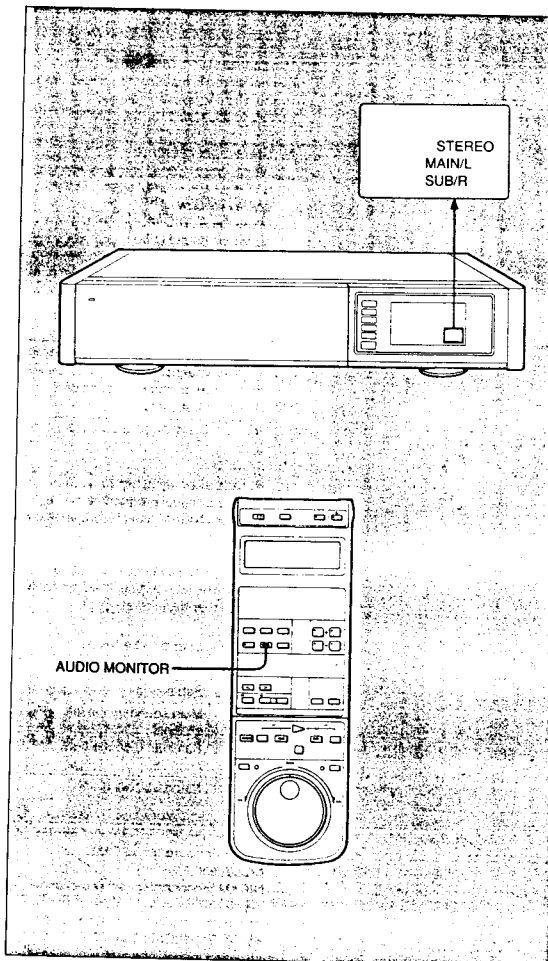
Press the AUDIO MONITOR button repeatedly until the desired sound is heard. The sound is selected cyclically in the order as follows:

Display	Sound to be heard
MAIN/L	Main sound
SUB/R	Sub sound
MAIN/L	Main sound on the left channel
SUB/R	Sub sound on the right channel

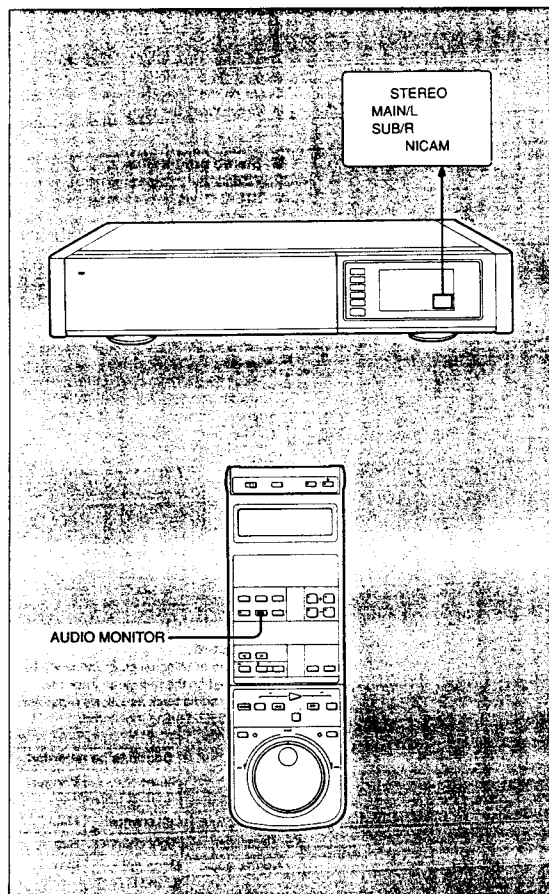
■ To record

A stereo or bilingual programme will be recorded on the hi-fi video track and normal audio track as follows regardless of the sound being monitored.

Track	Sound to be recorded	
	Stereo	Bilingual
Hi-fi video		
Left channel	Left channel	Main
Right channel	Right channel	Sub
Normal audio	Monaural (L and R channels mixed)	Main



Recording Stereo/Bilingual Programmes



SLV-815UB/815NC

The SLV-815UB/815NC receives and records stereo/bilingual programmes based on the 'NICAM' system adopted in the United Kingdom and Nordic countries.

■ Stereo programme

When a stereo programme is received, STEREO and NICAM appear in the display window. Press the AUDIO MONITOR button to select the sound to be heard. Each time AUDIO MONITOR is pressed, the stereo (NICAM L and R channels) or the standard sound is selected alternately.

Display	Sound to be heard
STEREO	Left channel sound on the left channel Right channel sound on the right channel
None	Standard sound

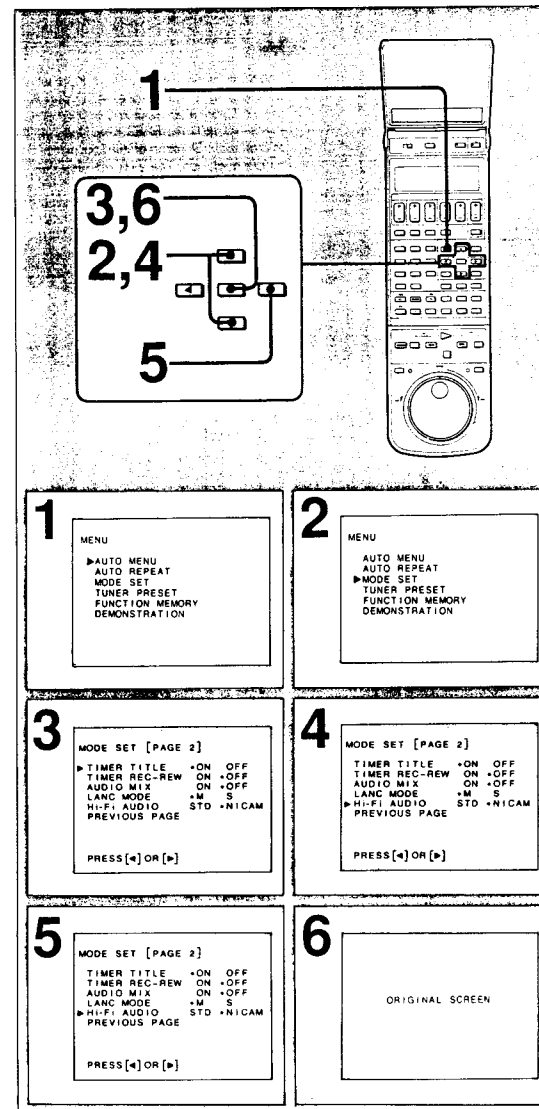
■ Bilingual programme

When a bilingual programme is received, NICAM and MAIN/L appear in the display window. Press the AUDIO MONITOR button repeatedly until the desired sound is heard. The sound is selected cyclically in the order as follows:

Display	Sound to be heard
MAIN/L	Main sound
SUB/R	Sub sound
MAIN/L SUB/R	Main sound on the left channel Sub sound on the right channel
None	Standard sound

Understanding the NICAM broadcast

NICAM broadcasting has two-channel digital sounds called NICAM L and R channels in addition to the standard sound. The NICAM L and R are assigned to the stereo left and right channels or the main and sub sounds of a bilingual programme. The standard sound of most NICAM broadcasts is the mixed sound of the left and right channels for a stereo programme, and the main sound for a bilingual programme.



■ To record NICAM broadcasts

- 1 Before recording a NICAM broadcast, press MENU. The main MENU appears.
- 2 Move cursor with ▲ or ▼ to MODE SET.
- 3 Press EXE. If the MODE SET [PAGE 1] menu appears, move cursor with ▲ or ▼ to NEXT PAGE and press EXE. The MODE SET [PAGE 2] menu appears.
- 4 Move cursor with ▲ or ▼ to Hi-Fi AUDIO.
- 5 Press ► to move the dot to NICAM.
- 6 Press EXE to store the setting.

With NICAM setting, NICAM broadcasts will be recorded as in the following table.

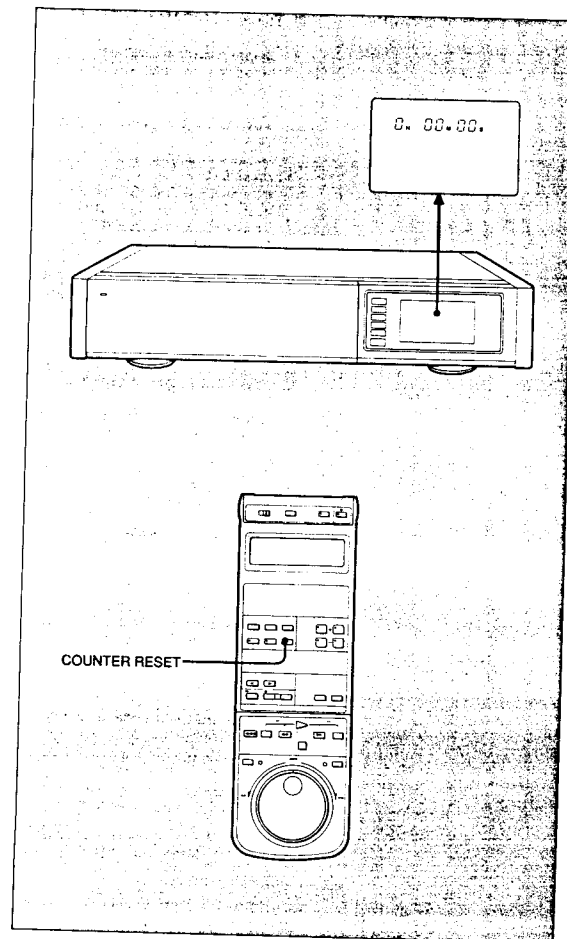
Track	Sound to be recorded	
	Stereo	Bilingual
Hi-fi video		
Left channel	Left channel	Main
Right channel	Right channel	Sub
Normal audio	Standard	Standard

- When there is no NICAM broadcast, the standard sound will be recorded on both the hi-fi video track and the normal audio track.

■ To record the standard sound only

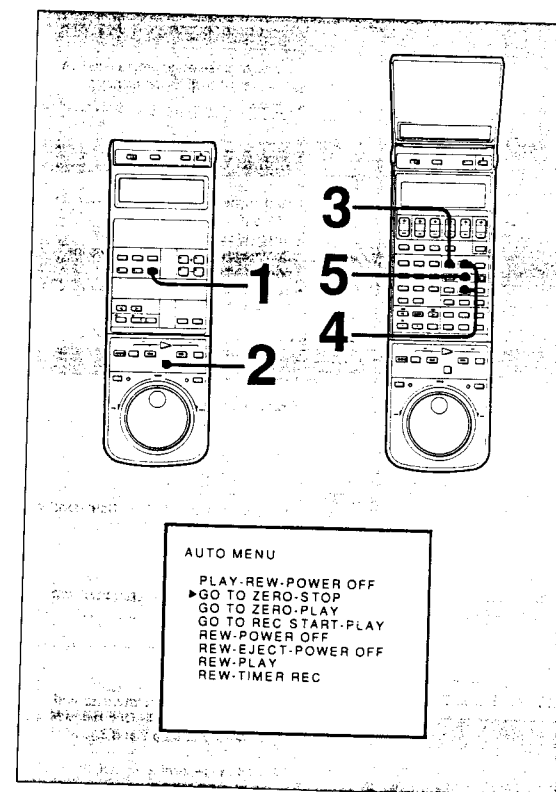
Follow the operations above and set Hi-Fi AUDIO to STD in step 5. The standard sound will be recorded on the left and right channels of the hi-fi video track and the normal audio track.

Use of the Tape Counter



Understanding Counter Zero Position

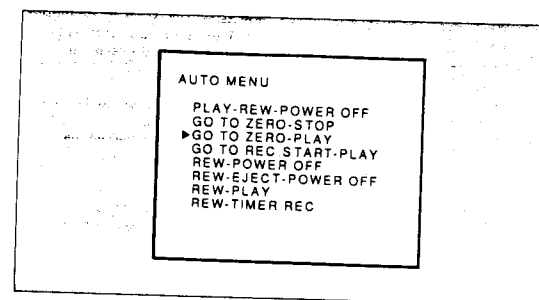
The tape counter on this VTR can be used as a reference when you wish to locate a certain scene after recording or playback. Press COUNTER RESET to set the counter to "0H00M00S" (counter zero position) before operation. The VTR will keep counting the length of tape being played back or recorded. Note, however, that the tape counter will not count the portions of tape with no signals recorded. This VTR automatically resets the counter to zero whenever a cassette is inserted. Two additional features using COUNTER RESET are available on this VTR: Tape Return and Tape Return Play.



Tape Return

The VTR can search for the counter zero position and stop. This function is useful for locating a particular scene after recording or playback.

- 1 Press COUNTER RESET at the desired scene during recording or playback.
- 2 Press ■ to stop after recording or playback.
- 3 Press MENU and select AUTO MENU.
See "Assigning a Desired Operation Mode" for operation.
- 4 Move cursor to "GO TO ZERO-STOP."
- 5 Press EXE.

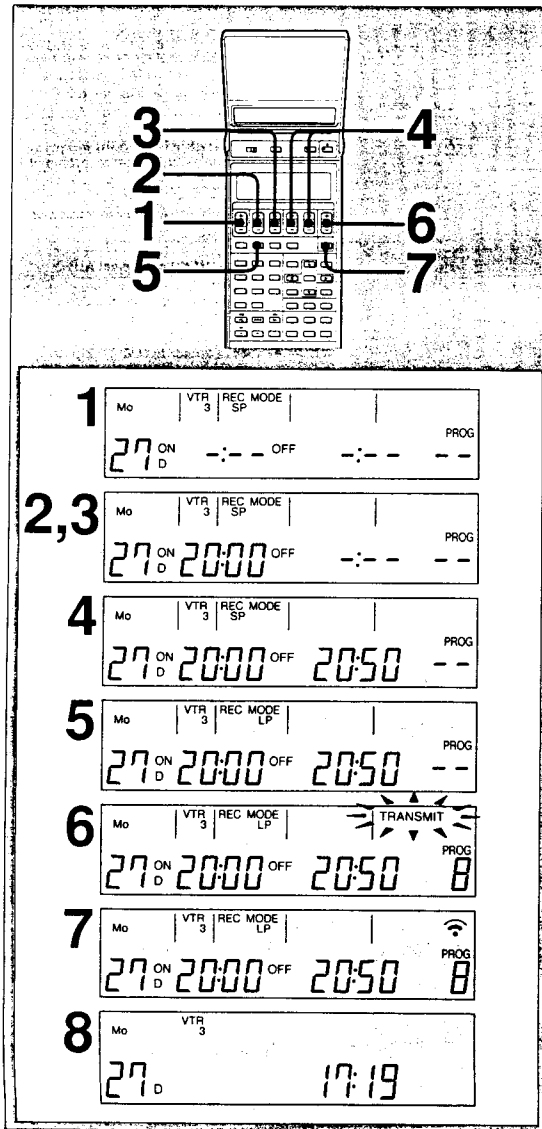


Tape Return Play

The VTR will even search and start playback from the counter zero position after recording or playback.

- 1 Repeat steps 1 to 3 in the Tape Return operation.
- 2 Move cursor to "GO TO ZERO-PLAY".
- 3 Press EXE.

Timer Activated Recording



Timer Recording on this VTR

Up to eight preselected programmes can be set on this VTR, up to one month in advance.

Before You Begin

- Turn on the TV and adjust it to view the VTR output.
- Check to see that the clock on the Commander and the VTR shows the present time.
- To operate the SLV-815VP, read "VPS Function" first. (See page 61.)

Operation

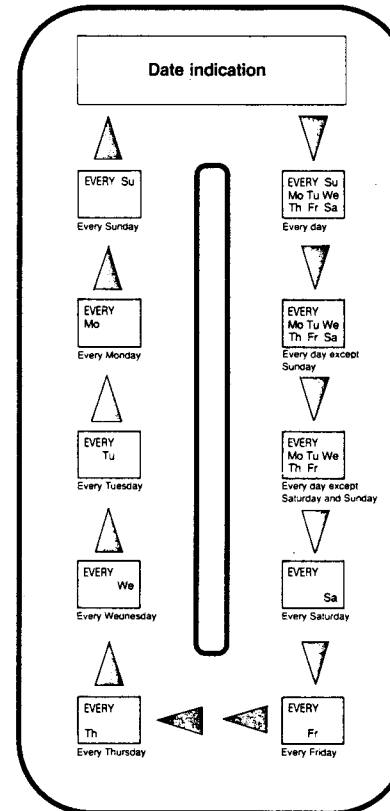
Example: To record a programme broadcast from 20:00 to 20:50 on Monday, July 27, 1992 on programme position 8 in LP mode.

- 1 Open the cover of the Commander and press D until 27 appears. The day of the week, Mo (Monday), is automatically set.
- 2 Set the recording start hour with TURN ON H.
- 3 Set the recording start minute with TURN ON M.
- 4 Set the recording end hour and minute with TURN OFF H and M referring to step 2 and 3.
- 5 Set the recording speed, SP or LP, with REC MODE.
- 6 Set the programme position with PROG. The TRANSMIT indicator blinks to indicate that all of the items are entered.
- 7 Point the Commander to the VTR and press TRANS. With a beep sound, the settings appear in the display window of the VTR for a few seconds and the VTR enters the timer recording standby mode. The PROGRAM LIST appears on the screen for a few seconds if the VTR is turned on.
- 8 Close the cover of the Commander so that the present time appears on the LCD. The VTR turns on, starts recording at the selected time, and turns off after recording ends.

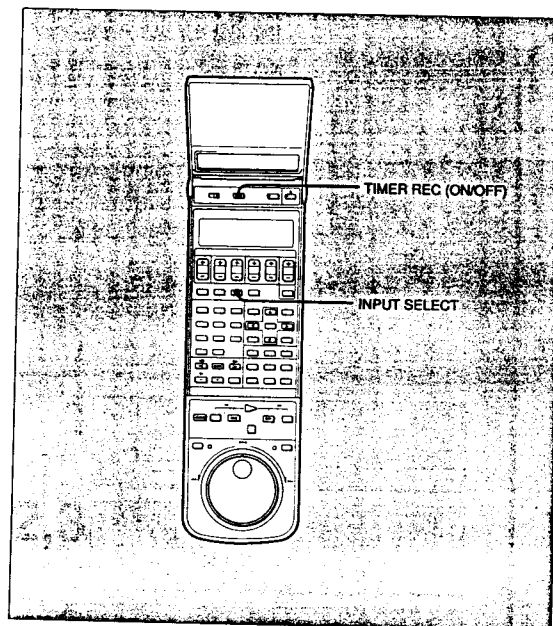
Daily/Weekly Recording

This VTR can be preset to record the same programme each day of the week (daily recording) or the same programme on a specific day of every week.

Press D - (minus) on the Commander to change the LCD in the order shown in the illustration instead of step 1 in the "Operation." When the desired recording mode is set and transmitted to the VTR, the corresponding indicator lights in the display window.



Timer Activated Recording



To Set Other Programmes

Repeat steps 1 to 7 in "Operation" before step 8.

To Stop Timer Recording

Press TIMER REC ON/OFF.

To Record from Equipment Connected to EURO-AV (LINE 1), EURO-AV (SAT.), or LINE IN 2 VIDEO/AUDIO

Press INPUT SELECT anytime in step 1 to 6 to change the indication from PROG -- to LINE L1 (for the EURO-AV (LINE 1) connector), LINE L2 (for the LINE IN 2 VIDEO/AUDIO jacks) or SAT (for the EURO-AV (SAT.) connector).

To Record TV Programme and Audio Signals from Equipment Connected to EURO-AV (LINE 1) or LINE IN 2 AUDIO Simultaneously

Set the desired programme position and press INPUT SELECT to indicate SIMUL in step 6. For simulcast recording, see page 78.

If a short beep sounds repeatedly when TRANS is pressed

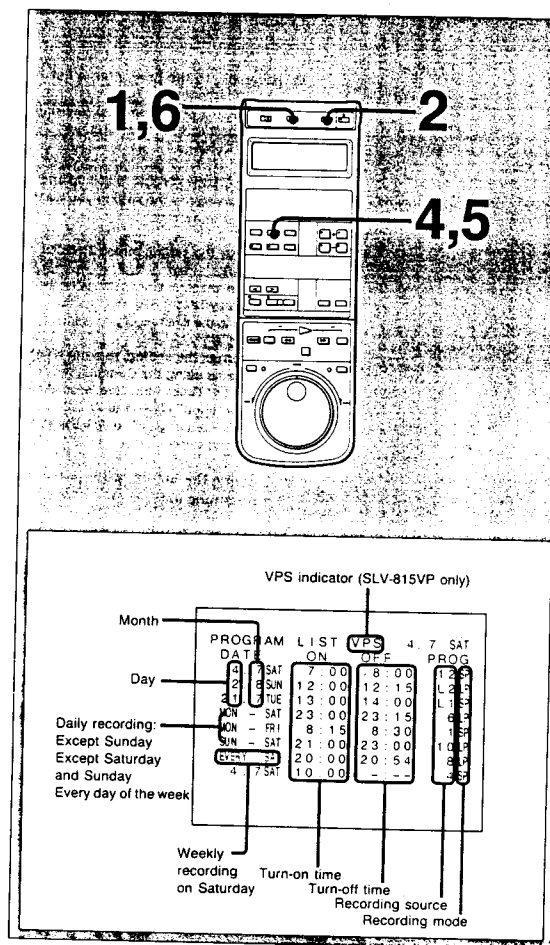
- No cassette is inserted.
- An illogical setting has been made.
- Timer setting can only be performed when the VTR is in turned off, stop, or timer recording mode.
- Eight timer settings have already been made.
- The tape is at its end.

If the tape is ejected after pressing TRANS

The safety tab of the inserted cassette is removed.

Understanding "one month"

This VTR sets the timer to record programmes which are to be broadcast between today and one day before the same date of the next month.



Checking the Timer Settings

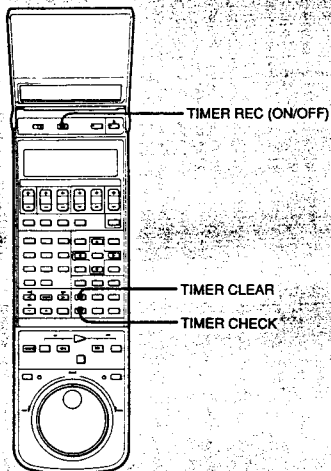
The timer settings can be checked while the VTR is in the timer recording standby mode by displaying the programme list on the TV screen.

- 1 Press TIMER REC ON/OFF to turn off the TIMER REC indicator in the display window of the VTR.
- 2 Turn on the VTR and press TV/VTR to light the VTR indicator in the display window. (Only when connection is made via EURO-AV (LINE 1).)
- 3 Turn on the TV. Set to the programme position for VTR if VTR-TV connection is made via the aerial sockets. Select VTR input on the TV if VTR-TV connection is made via EURO-AV (LINE 1).
- 4 Press TIMER ON SCREEN. The programme list appears.
- 5 Press TIMER ON SCREEN again to return to the original screen.
- 6 Press TIMER REC ON/OFF to return to the timer recording standby mode.

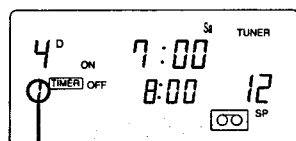
Checking the settings without releasing timer recording standby mode

Press TIMER CHECK. Each press changes the programme in the display window one after another.

Timer Activated Recording



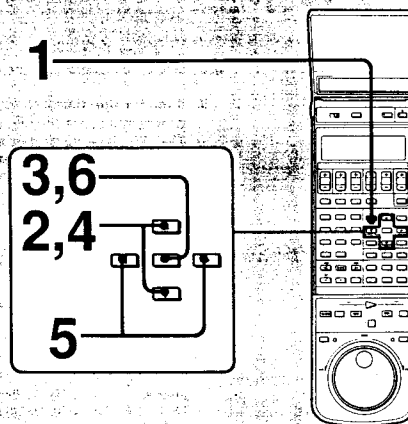
PROGRAM	LIST	DATE	ON	OFF	PROG
4	7 SAT	7:00	8:00	12 SP	
2	8 SUN	12:00	12:15	L2 LP	
21	7 TUE	13:00	14:00	L1 SP	
MON	- SAT	23:00	23:15	6 LP	
MON	- FRI	8:15	8:30	1 SP	
SUN	- SAT	21:00	23:00	10 LP	
EVERY	SAT	20:00	20:54	8 LP	
4	7 SAT	10:00	-:-	4 SP	



Clearing/Correcting the Timer Setting

- Referring to the programme list
- 1 Display the programme list referring to steps 1 to 4 in "Checking the Timer Settings."
- 2 Press TIMER CHECK to call up and move cursor to the setting you want to clear or correct.
- 3 To clear the setting, press TIMER CLEAR. If there are other timer settings on the list, press TIMER REC ON/OFF to return to the timer recording standby mode. To correct the setting, re-enter all of the items using the Commander. Refer to "Timer Activated Recording — Operation" steps 1 to 7. The VTR automatically enters the timer recording standby mode.

- Clearing the setting without the programme list
- 1 Press TIMER REC ON/OFF.
- 2 Press TIMER CHECK repeatedly until the desired programme appears in the display window.
- 3 Press TIMER CLEAR.
- 4 Press TIMER REC ON/OFF to return to the timer recording standby mode if there are other programmes set for timer recording.

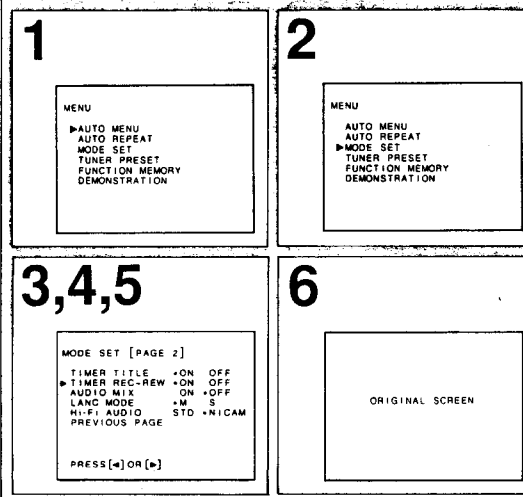


To Automatically Rewind the Tape After Timer Recording

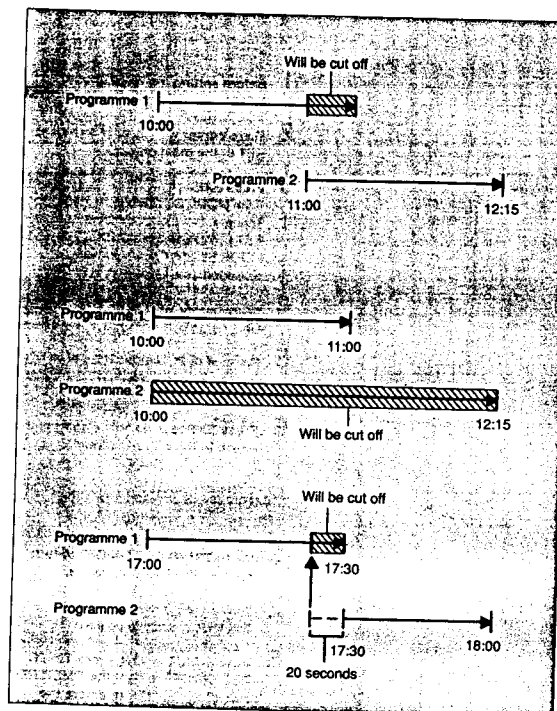
- 1 Before setting the timer, press MENU.
- 2 Move cursor with ▲ or ▼ to MODE SET in the main menu.
- 3 Press EXE. If the MODE SET [PAGE 1] menu appears, move cursor with ▲ or ▼ to NEXT PAGE and press EXE. The MODE SET [PAGE 2] menu is displayed.
- 4 Move cursor with ▲ or ▼ to TIMER REC — REW.
- 5 Press ◀ or ▶ to move the dot to ON. To cancel this setting, move the dot to OFF.
- 6 Press EXE to store this setting and return to the original screen.

Using the VTR during Timer Recording Standby Mode

- 1 Press TIMER REC ON/OFF to turn off the TIMER REC indicator.
- 2 Turn on the power of the VTR. The VTR is ready to be used.
- 3 After using the VTR, press TIMER REC ON/OFF to light the TIMER REC indicator. The VTR re-enters the timer recording standby mode.



Timer Activated Recording



When the Timer Settings Overlap

- **If the setting of two programmes overlap**
The recording of the following programme will begin automatically before the preceding programme ends.
- **If the turn-on time of two programmes are the same**
The VTR will record the programme with the smaller programme number or listed first on the programme list. The programme with the larger programme number or listed lower in the list will be erased.
- **If the recording end time of programme 1 and the recording start time of programme 2 are the same**
The last 20 seconds of programme 1 will not be recorded because the VTR will enter the recording pause mode for programme 2 and records the timer title for programme 2 before programme 1 ends.

Power interruption during timer recording standby/timer recording mode

- If the power interruption lasts less than three hours, the VTR will enter the recording standby mode or resume timer recording when the power is recovered.
- If the power interruption exceeds three hours during the recording standby mode, the timer settings will be cleared. Reset the clock and re-enter the items for timer recording again. If the power interruption occurred during timer recording, the recording will stop and the VTR will be turned off.

To Store the Frequently Used Timer Settings in the Commander

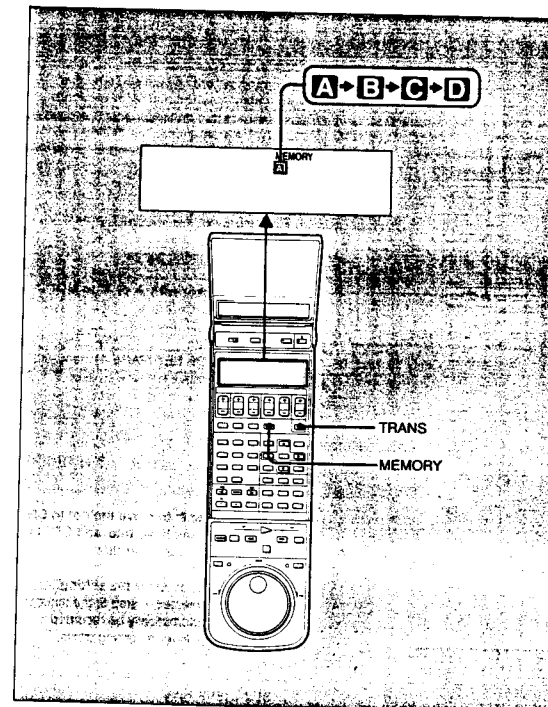
The items selected for one timer recording programme will be erased from the LCD when the Commander cover is closed, and cleared from the programme list as well when recording is over. However, the turn-on/turn-off time and the programme position of up to four programmes can be stored in the Commander to be recalled later. This enables you to quickly access the most frequently used items, especially your favorite weekly programme, since the recording date will automatically be shifted to the next week after the recording is over.

■ Storing the parameters

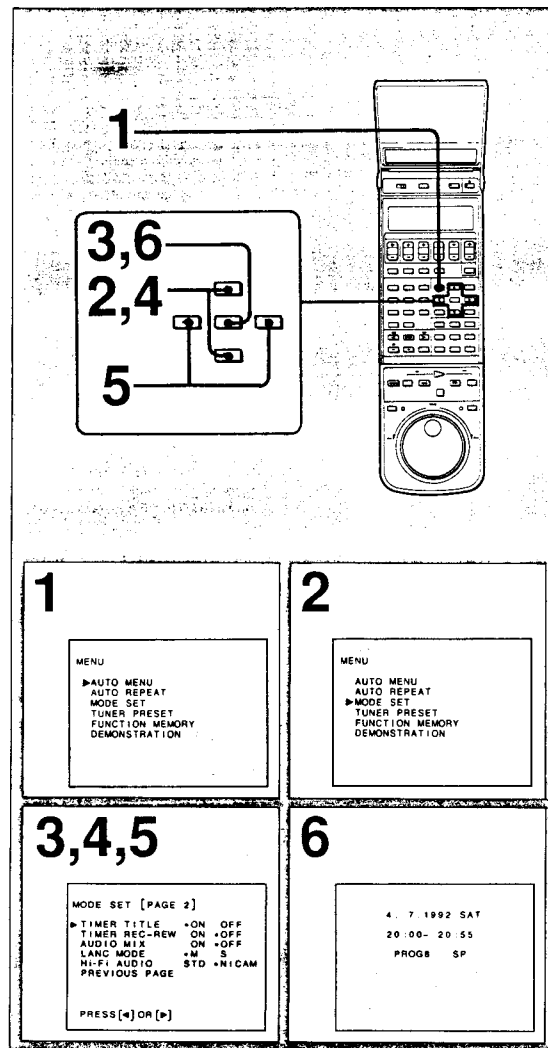
- 1 Press **MEMORY** to indicate **MEMORY A**.
- 2 Set all of the items for timer recording referring to "Timer Activated Recording — Operation."
- 3 Press **MEMORY** to change the indication to **B, C, or D**, and repeat step 2 for other programmes. The items set will be kept in the memory even when the Commander cover is closed.

■ Recalling and re-entering the items

- 1 Press **MEMORY** to call up the desired memory indication (**A, B, C, or D**).
- 2 Make whatever changes necessary.
- 3 Press **TRANS**. The VTR enters the timer recording standby mode.



Timer Activated Recording



*Hi-Fi AUDIO for SLV-815SUB/815NC only

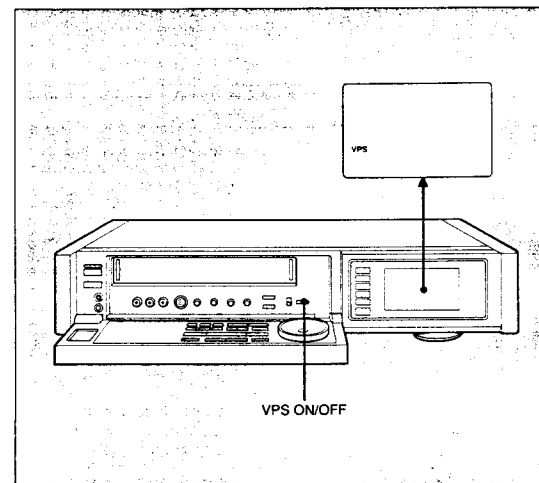
Recording a Timer Title

A timer title screen consisting of the date of recording, recording start/end time, the programme position and recording mode can be recorded on the tape for 3 seconds before the programme. The timer title is convenient for locating a desired programme when several programmes are recorded on a single tape.

- 1 Before setting the timer, press MENU.**
The main menu appears.
- 2 Move cursor with ▲ or ▼ to MODE SET.**
- 3 Press EXE.**
If the MODE SET [PAGE 1] menu appears, move cursor with ▲ or ▼ to NEXT PAGE and press EXE. The MODE SET [PAGE 2] menu is displayed.
- 4 Move cursor with ▲ or ▼ to TIMER TITLE.**
- 5 Press ◀ or ▶ to move the dot to ON to record the timer title, and OFF to record without timer title.**
- 6 Press EXE to store the setting.**
If ON is selected in step 5, the timer title will automatically be recorded before the timer recording starts.

SLV-815VP only

The timer title cannot be recorded if the VPS indication is lit in the VTR's display window, regardless of the setting in the MODE SET [PAGE 2] menu.



VPS (Video Programme System) Function (SLV-815VP only)

The German broadcasting system transmits VPS signals with the TV programmes which assure that your timer recording will be performed without missing any portion of it regardless of any earliness, time delay, extension, or broadcast interruption which might occur during that programme.

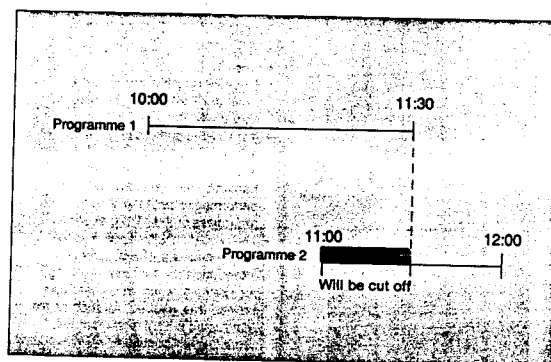
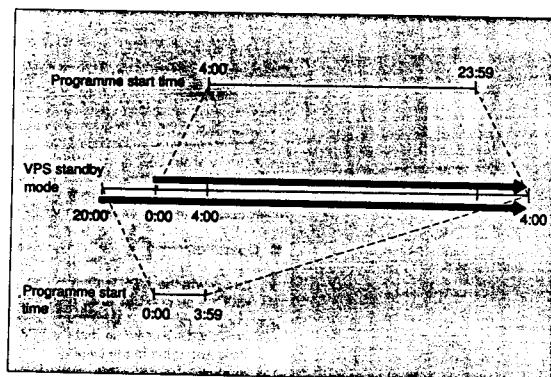
■ Operation

- 1 Check whether VPS is transmitted with the programme to be recorded.**
- 2 Press VPS ON/OFF so that the VPS indicator lights in the display window.**
- 3 Set the timer referring to "Timer Activated Recording — Operation."**

Notes

- The VPS button is effective only when the TIMER REC indicator is turned off.
- If the VPS signal was not received on the VTR because it was too weak or because the station failed to transmit, timer recording will be performed without the VPS function regardless of the VPS indication.
- The recording will stop when the VTR receives a VPS programme interruption code during recording, for example, when an urgent news bulletin was inserted. As soon as the interrupted programme resumes, recording will continue.
- The timer title will not be recorded, regardless of the setting in the MODE SET [PAGE 2] menu, when the VPS function is activated.
- The VPS timer recording only functions for normal TV programmes. It does not function for satellite programmes.

Timer Activated Recording



■ VPS standby mode

The VTR will be ready for VPS recording far before the turn-on time and remain in standby mode until the VPS signal is received, in order to prepare for any change in the actual broadcast time.

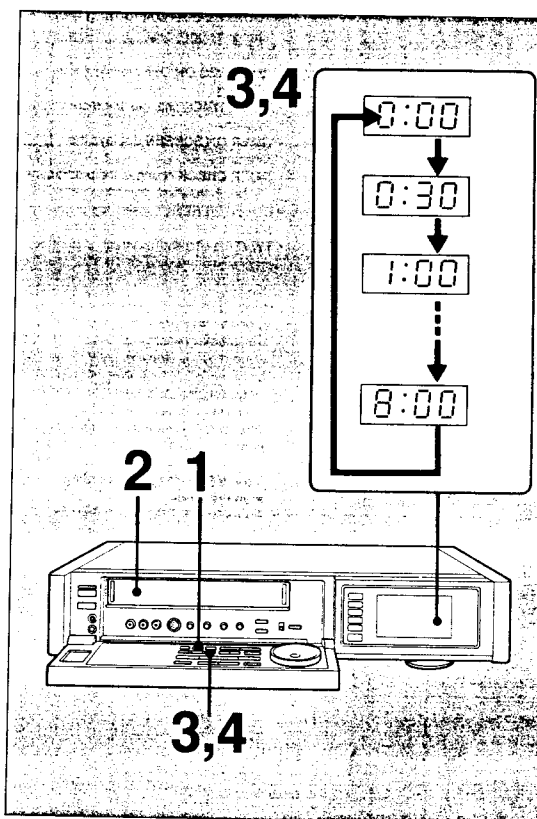
When the VPS timer recording is set for a programme which is expected to start between 4:00 and 23:59, the VTR will enter the standby mode at 0:00 that day and will keep on waiting for the VPS signal until 4:00 of the next day.

When the VPS timer recording is set for a programme which is expected to start between 0:00 and 3:59, the VTR will enter the standby mode at 20:00 the day before the recording day and will keep on waiting for the VPS signal until 4:00 on the next day.

■ If the actual recording time overlaps with the next timer recording programme

There may be cases when the actual broadcast time of two timer recording programmes overlap owing to the shift made by the VPS signal. In this case, the programme that was broadcast first always has priority. The recording of the second programme will begin only after the first programme is over.

Quick Timer Recording



What Is Quick Timer Recording?

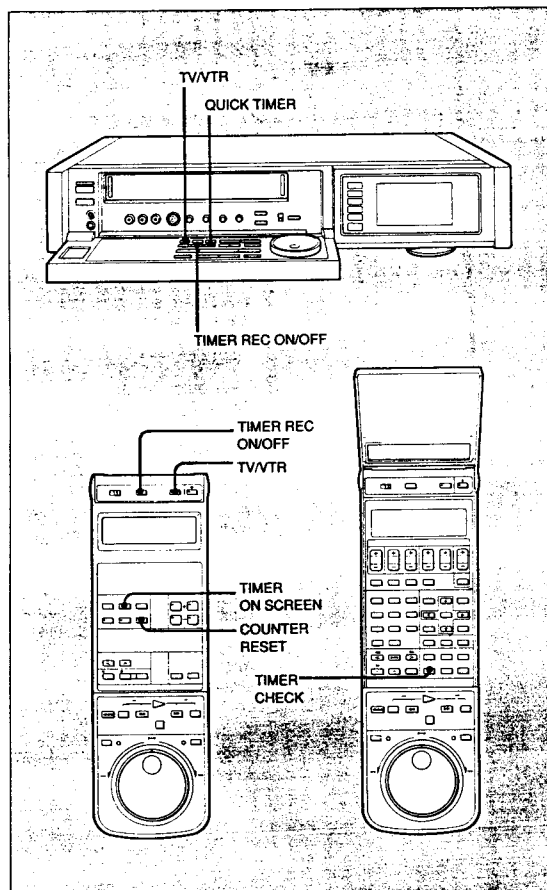
The quick timer recording function provides a short cut to enter the timer recording mode or to use the timer to turn off the VTR after recording is over. The timer can be set to operate within 8 hours in units of 30 minutes.

Operation

If you are recording, skip steps 1 to 3.

- 1 Press INPUT SELECT so that TUNER indicator is turned on.
- 2 Insert a cassette.
- 3 Press QUICK TIMER. The TIMER indicator lights in the display window. While 0:00 and programme position number is blinking in the display window, select the desired programme number with PROGRAM +/-
A cassette with its safety tab removed will be ejected.
- 4 Press QUICK TIMER again to start recording. Press QUICK TIMER again to set the recording duration within 30 seconds from step 3, otherwise the power will be turned off. Each press of QUICK TIMER changes the indication in the display window in units of 30 minutes.
- 5 The recording duration will decrease minute by minute until 0:00 when the VTR is automatically turned off.

Quick Timer Recording



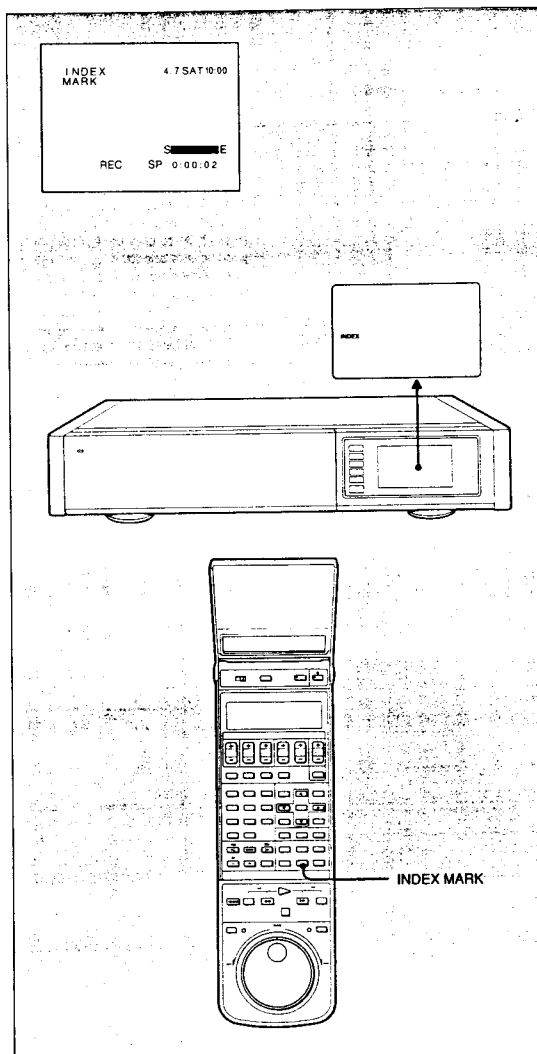
■ Buttons operable during quick timer recording

- **TIMER REC ON/OFF** stops quick timer recording.
- **QUICK TIMER** changes the recording duration.
- **TIMER ON SCREEN** displays the programme list.
- **TIMER CHECK** changes the programme number in the display window.
- **COUNTER RESET** resets the counter to zero.
- **TV/VTR** switches the screen to another programme received on the TV.

If power interruption occurs during quick timer recording
Recording will stop and the VTR will be turned off. If the power interruption lasted for less than three hours and if the power recovered within the quick timer duration, recording will resume from that instant.

If the VTR is in timer recording standby mode
Press **TIMER REC ON/OFF** to turn off the indicator, then follow steps 4 and 5.

Index Function



Marking Index Signals

The desired position on a tape can be located easily by detecting the index signals. There are two ways in which to mark index signals: automatic and manual. When the index signal is being marked, **INDEX** flashes in the display window and the **INDEX MARK** display will appear on the screen.

■ Automatic index mark

An index signal is automatically marked on the tape when the VTR starts recording.

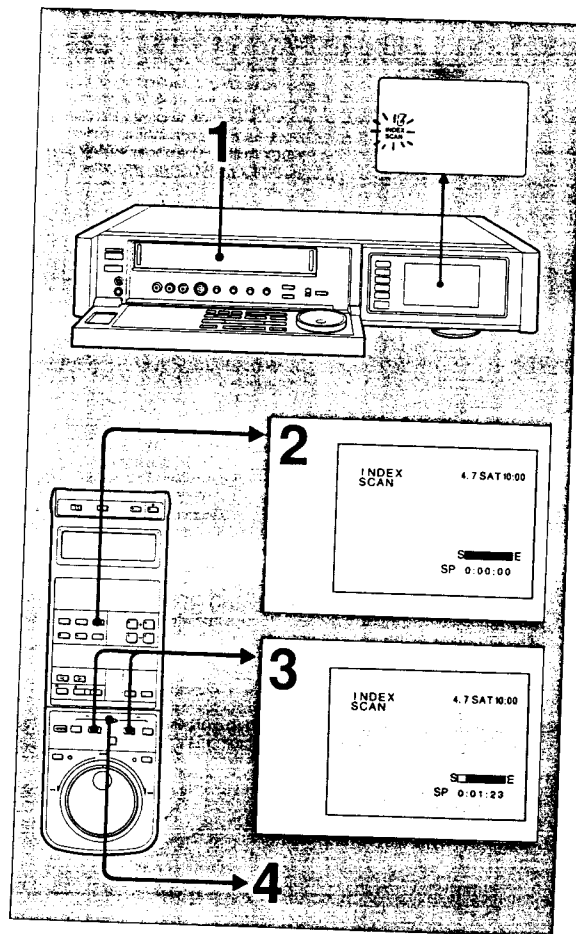
■ Manual index mark

Index signals can be marked at desired scenes during recording or normal playback. Press **INDEX MARK** to mark an index.

Notes

- Leave an interval of more than 2 minutes between two index points so that the VTR can detect each **INDEX** signal accurately.
- The recorded sound will not be heard while marking an index signal. But the audio signal will not be erased.
- Index signals cannot be marked
 - on a tape whose safety tab is removed
 - on an unrecorded portion of the tape.
 - immediately before a point on the tape where the tape speed (LP or SP) changes.

Index Function



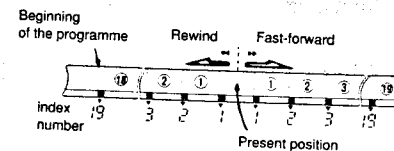
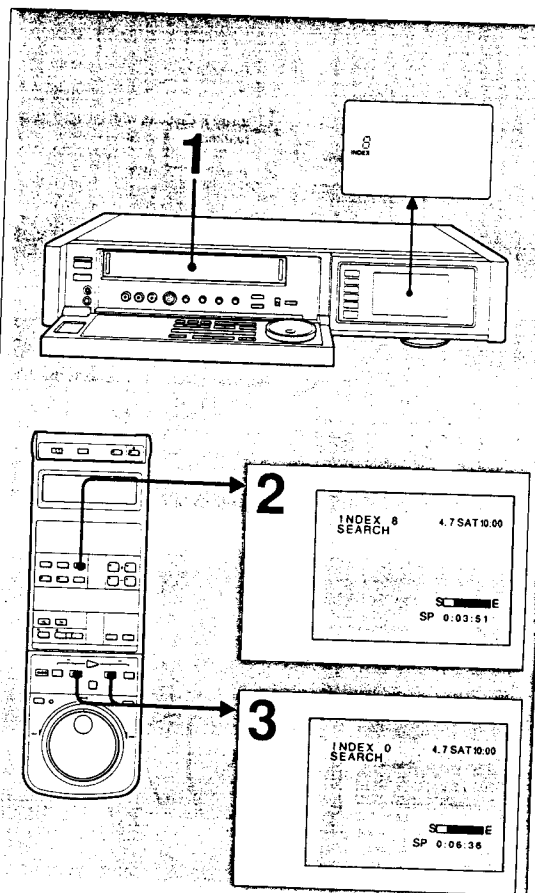
Playing Back from the Index Point — INDEX SCAN

- 1 Insert a cassette with index signals marked.
- 2 Press INDEX once.
INDEX or SCAN indicator blinks alternately in the display window.
- 3 Press ◀ to play back from the previous programme.
Press ▶ to play back from the programme ahead.
The VTR will advance to the next or previous index signal. Then the VTR will play the tape for approximately 10 seconds, and then move to the next index in the selected direction. The index number changes one by one.
- 4 Press ▶ when the desired index signal is detected.

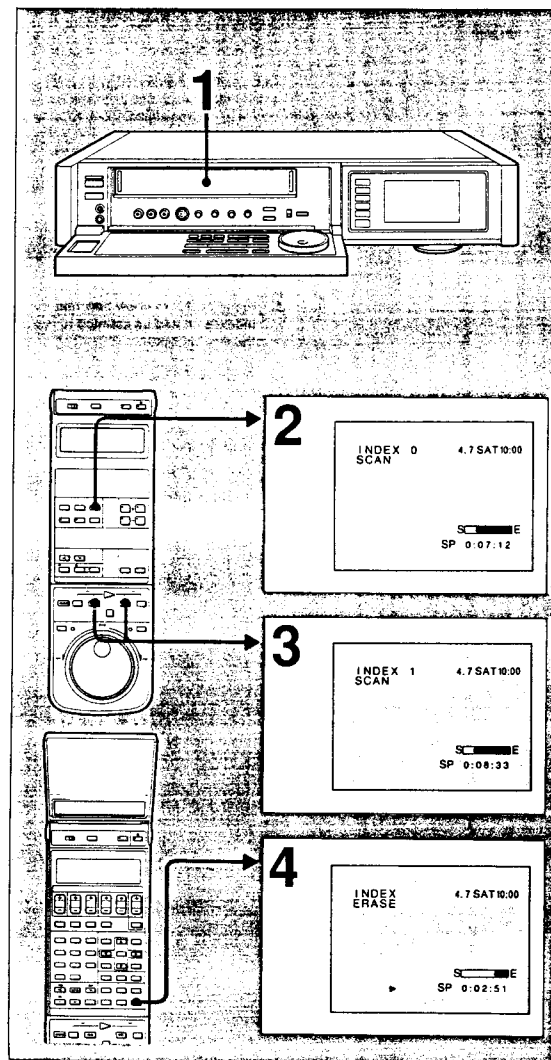
Locating an Index — INDEX SEARCH

Direct search of the desired index point can be performed by entering the number of how many indexes ahead or behind it is from the current tape position. The VTR counts down how many more indexes should be searched for and displays the sequence in the display window. Up to 19 indexes from the preset position can be searched.

- 1 Insert a cassette with index signals marked.
- 2 Press INDEX to show how many indexes should be counted to reach the desired scene.
- 3 Press ◀ if the index is behind or ▶ if the index is ahead of the current tape position.
The VTR starts searching and the index number will be counted down to zero.
- 4 Playback from the desired point starts.



Index Function

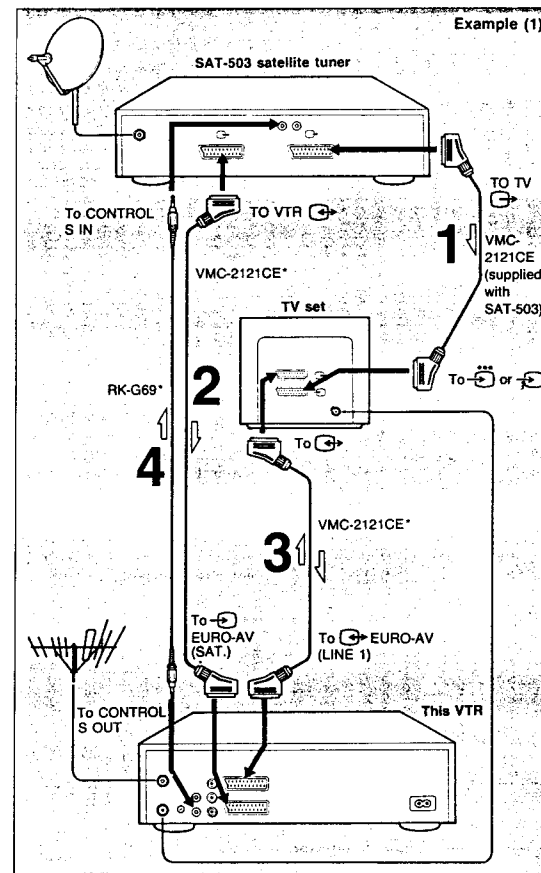


Erasing an Index

The index marked on the tape can be erased.

- 1 Insert a cassette with index signals marked.
- 2 Press INDEX once.
- 3 Press ◀ or ▶ to search for the index signal.
When the VTR detects an index signal, the VTR will play the tape for approximately 10 seconds from the index. If that is the index you want to erase, go to step 4. If that is not the index you want to erase, wait until the desired index is searched.
- 4 Press INDEX ERASE while the VTR is in step 3.
That index signal will be erased. While the index signal is being erased, the recorded sound will not be heard, but it will not be erased. After erasing, the VTR starts searching for an index signal again.

Recording Satellite Programmes



This section describes two connection examples (1) and (2) of the VTR and Sony satellite tuner SAT-503, one connection example of a satellite tuner other than Sony's, and how to record a satellite programme on the VTR.

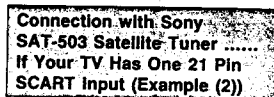
Sony SAT-503 has CONTROL S-terminals and you can control the power on/off and channel selection of the satellite tuner, and the timer recording of the satellite programmes directly from the VTR.

Connection with Sony SAT-503 Satellite Tuner If Your TV Has Two 21 Pin SCART Inputs (Example (1))

- 1 Connect the TO TV (SCART) connector on the rear of the SAT-503 to the (SCART) connector on the rear of the TV set with the 21-pin connecting cable supplied using the SAT-503.
- 2 Connect the TO VTR (SCART) connector on the rear of the SAT-503 to the (SCART) connector on the rear of the VTR using the 21-pin connecting cable (not supplied).
- 3 Connect the (SCART) EURO-AV (LINE 1) connector on the rear of the VTR to the (SCART) connector on the rear of the TV set using the 21-pin connecting cable (not supplied).
- 4 Connect the CONTROL S OUT jack on the rear of the VTR to the CONTROL S IN jack on the rear of the SAT-503 using the CONTROL S cable (not supplied).

Notes

- The cables with an * (asterisk) are not supplied.
- The (SCART) mark indicates the signal flow.



- Note**
This connection permits the viewing of the SAT-503 on-screen display. If you connect to the TO VTR  connector, you cannot view the on-screen display.

- 2** Connect the  EURO-AV (LINE 1) connector on the rear of the VTR to the connector on the rear of the TV set with the 21-pin connecting cable (not supplied).
- 3** Connect the CONTROL S OUT jack on the rear of the VTR to the CONTROL S IN jack on the rear of the SAT-503 with the CONTROL S cable (not supplied).

- The cables with an * (asterisk) are not supplied.
- The mark indicates the signal flow.
- The on-screen display of the satellite tuner shown on the TV screen is recorded on the VTR.
- To view a satellite programme, be sure to turn on the VTR and press INPUT SELECT to set the input mode to SAT.
- During timer recording standby, press TIMER REC ON/OFF to disengage the VTR from the timer recording standby mode. Then turn on the VTR and press INPUT SELECT to set the input mode to SAT. After using the VTR, press TIMER REC ON/OFF to light the TIMER REC indicator and enter the timer recording standby mode.

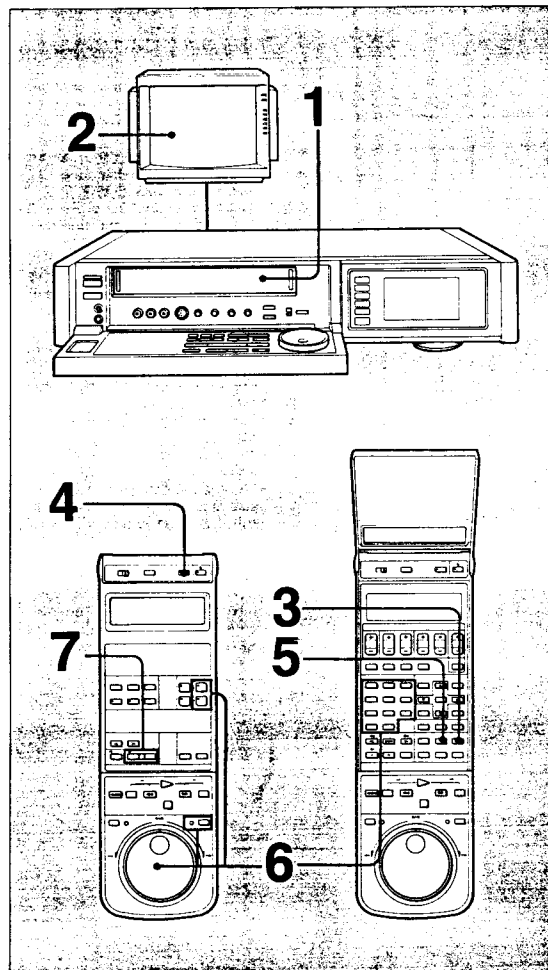


You cannot control the power on/off and channel selection of the satellite tuner directly from the VTR.

- 1** Connect the 21-pin connector on the rear of the satellite tuner to the  **EURO-AV (SAT.)** connector on the rear of the VTR using the 21-pin connecting cable (not supplied).
- 2** Connect the  **EURO-AV (LINE 1)** on the rear of the VTR to the 21-pin  connector on the rear of the TV set using the 21-pin connecting cable (not supplied).

- The cables with an * (asterisk) are not supplied.
- The mark indicates the signal flow.
- To view a satellite programme, be sure to turn on the VTR and press INPUT SELECT to set the input mode to SAT.
- During timer recording standby, press TIMER REC ON/OFF to disengage the VTR from the timer recording standby mode. Then turn on the VTR and press INPUT SELECT to set the input mode to SAT. After using the VTR, press TIMER REC ON/OFF to light the TIMER REC indicator and enter the timer recording standby mode.

Recording Satellite Programmes

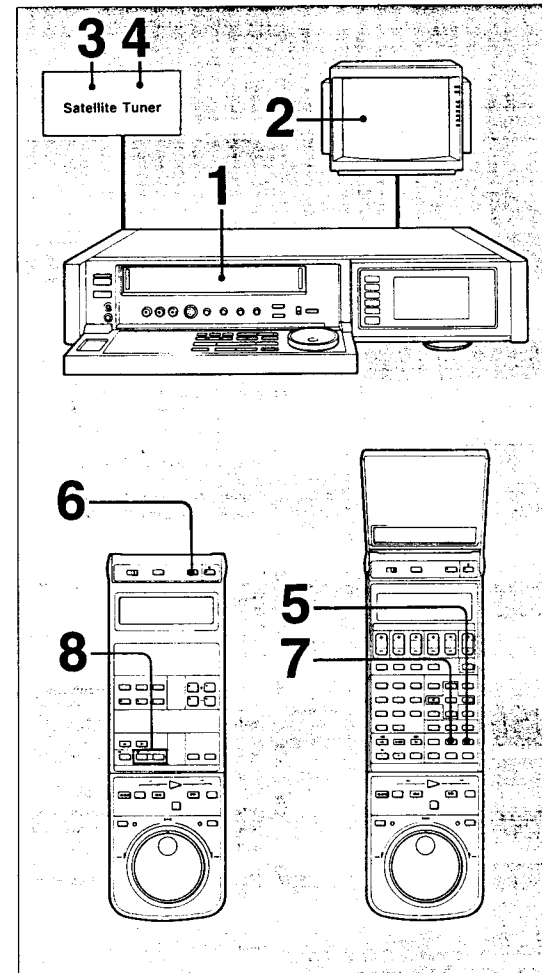


Before You Begin

- Check that all of the preparations are complete.
- The buttons on the VTR with the same name or mark can be used in the operation below as well.

Operation with Sony SAT-503 Satellite Tuner

- 1 Insert a cassette.
- 2 Turn on the TV.
Set to the programme position for the VTR playback if VTR-TV connection is made only via the aerial sockets. Select VTR input if VTR-TV connection is via the EURO-AV (LINE 1) connector or LINE OUT VIDEO/AUDIO jacks.
- 3 Press INPUT SELECT so that the SAT indicator appears in the display window.
The satellite tuner turns on automatically.
- 4 Press TV/VTR so that the VTR indicator lights in the display window.
(Only when connection is made via EURO-AV (LINE 1).)
- 5 Select the recording speed, SP or LP.
- 6 Select the satellite programme position to be recorded in any of the following ways:
 - Press PROG +/-.
 - Press the programme position number buttons. To select 23, press -/---, then 2 and 3. To select 9, press 9.
 - Press the PROG function button to light the indicator and turn JOG on the Commander. Turn it clockwise for higher numbered programme positions; counterclockwise for lower numbered programme positions.
You can select up to 60 satellite tuner programme positions.



- 7 Press the right button while pressing ● REC.
Recording will begin. When the tape reaches the end, it will be automatically rewound to the beginning. Pressing the ● REC button on the VTR also activates the recording.

To stop recording, press ■.
The satellite tuner turns off automatically.

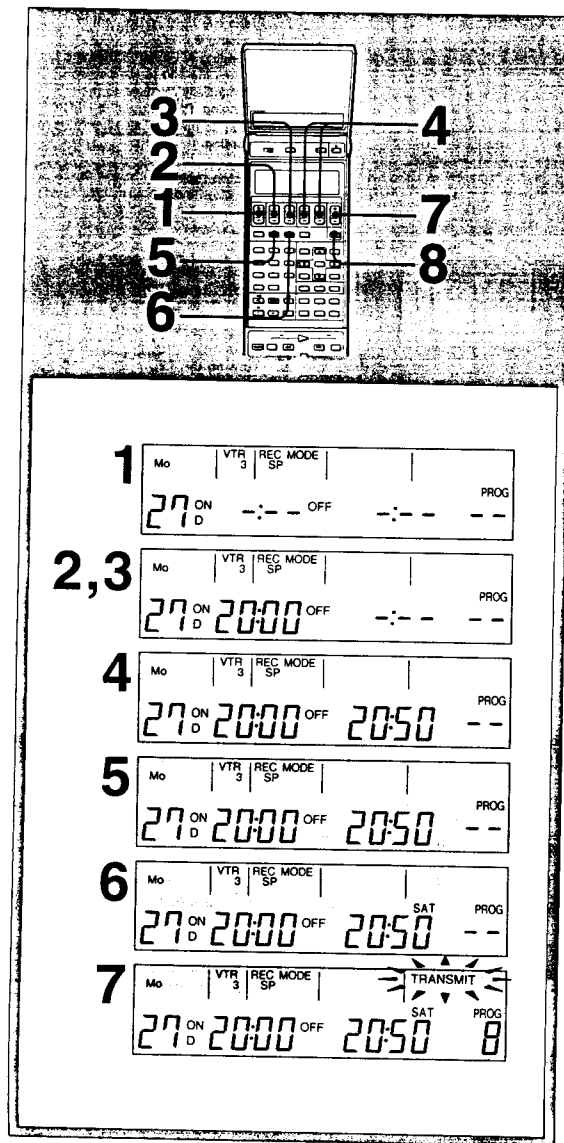
Operation with a Satellite Tuner Other Than Sony's

- 1 Insert a cassette.
- 2 Turn on the TV.
Set to the programme position for the VTR playback if VTR-TV connection is made only via the aerial sockets. Select VTR input if VTR-TV connection is via the EURO-AV (LINE 1) connector or LINE OUT VIDEO/AUDIO jacks.
- 3 Turn on the satellite tuner.
- 4 Select the programme position to be recorded on the satellite tuner.
- 5 Press INPUT SELECT so that the SAT indicator appears in the display window.
- 6 Press TV/VTR so that the VTR indicator lights in the display window.
(Only when connection is made via EURO-AV (LINE 1).)
- 7 Select the recording speed, SP or LP.
- 8 Press the right button while pressing ● REC.
Recording will begin. When the tape reaches the end, it will be automatically rewound to the beginning. Pressing the ● REC button on the VTR also activates the recording.

To stop recording, press ■.
To turn off the satellite tuner, use the power button of the satellite tuner.

Timer Activated Recording with Sony SAT-503 Satellite Tuner

-42-



74

Timer Recording on this VTR

Up to eight preselected satellite programmes can be set on this VTR, up to one month in advance.

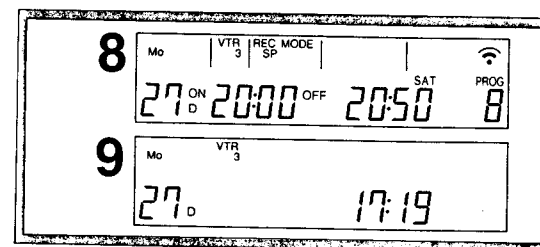
Before You Begin

- For connections, refer to pages 69 and 70.
- Turn on the TV and adjust it to view the VTR output.
- Check to see that the clock on the Commander and the VTR shows the present time.

Operation

Example: To record a satellite programme broadcast from 20:00 to 20:50 on Monday, July 27, 1992 on programme position 8 in SP mode.

- 1 Open the cover of the Commander and press D until 27 appears. The day of the week, Mo (Monday), is automatically set.
- 2 Set the recording start hour with TURN ON H.
- 3 Set the recording start minute with TURN ON M.
- 4 Set the recording end hour and minute with TURN OFF H and M referring to steps 2 and 3.
- 5 Set the recording speed, SP or LP, with REC MODE.
- 6 Press INPUT SELECT so that the SAT indicator appears in the LCD panel of the Commander.
- 7 Set the programme position with PROG. The TRANSMIT indicator blinks to indicate that all of the items are entered.

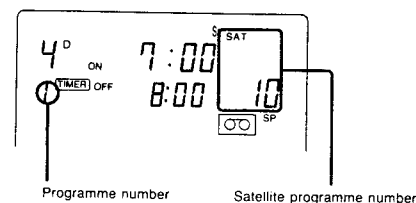


(a) PROGRAM LIST display

PROGRAM	LIST	VPS	4. 7 SAT
DATE	ON	OFF	PROG
4. 7 SAT	7:00	8:00	SAT 10 SP
2. 8 SUN	12:00	12:15	SAT 12 SP
21. 7 TUE	13:00	14:00	SAT 8 SP
MON - SAT	23:00	23:15	6LP
MON - FRI	8:15	8:30	1SP
SUN - SAT	21:00	23:00	SAT 10 SP
EVERY SAT	20:00	20:50	8LP
4. 7 SAT	10:00	-:-	4SP

Satellite programme number

(b) Display panel



Programme number

Satellite programme number

- 8 Point the Commander to the VTR and press TRANS.

With a beep sound, the settings appear in the display window of the VTR for a few seconds and the VTR enters the timer recording standby mode. The PROGRAM LIST appears on the screen for a few seconds if the VTR is turned on.

- 9 Close the cover of the Commander so that the present time appears in the LCD panel.

The VTR turns on, starts recording at the selected time, and turns off after recording ends.

The preselected satellite programmes are displayed on the PROGRAM LIST screen (a) and in the display panel (b) when you want to check the preset timer programmes.

■ Timer recording for a satellite tuner other than Sony's

For connection with a satellite tuner other than Sony's, see page 71.

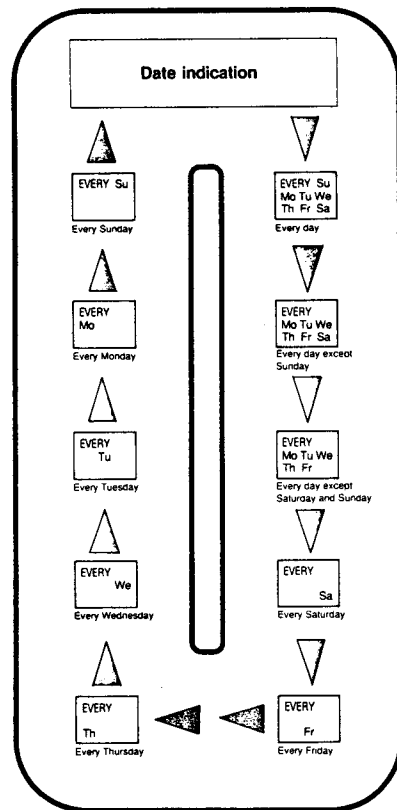
- To turn on the satellite tuner at the preset start time and turn off at the preset recording end time, you need a commercially available audio timer. Since the programme positions of the satellite tuner cannot be controlled on the VTR, the programme position to be recorded must be preset on the satellite tuner.
- Even though the programme position numbers are changed during programming timer recordings on the LCD panel, you cannot change the programme numbers of the satellite tuner simultaneously.

■ Note on VPS timer recording

The VPS timer recording only functions for normal TV programmes. It does not function for satellite programmes.

75

Timer Activated Recording with Sony SAT-503 Satellite Tuner

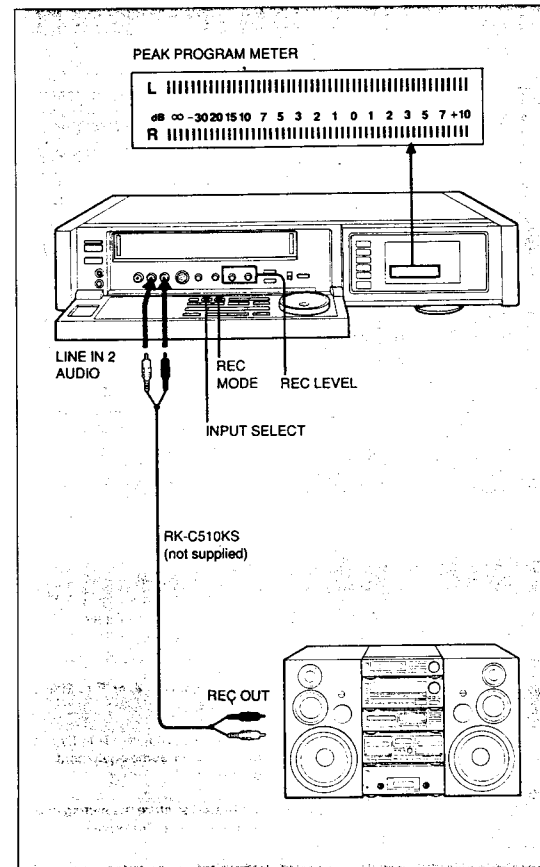


Daily/Weekly Recording

This VTR can be preset to record the same programme each day of the week (daily recording) or the same programme on a specific day of every week.

Press D — (minus) on the Commander to change the LCD in the order shown in the illustration instead of step 1 in the "Operation." When the desired recording mode is set and transmitted to the VTR, the corresponding indicator lights in the display window.

Audio Recording



The hi-fi recording system of this VTR allows recording of high quality stereo sound from an FM tuner, audio system, or other audio equipment.

Before You Begin

- Connect your audio system to the LINE IN 2 AUDIO jacks using the RK-C510KS audio connecting cable (not supplied).
- Set INPUT SELECT to LINE L2.
- Select REC MODE, SP or LP.

Adjusting the Audio Recording Level

Play the recording source. While observing the PEAK PROGRAM METER, adjust the REC LEVEL controls referring to the following guide.

When recording from a conventional record: The right-most element (+10) should light up sometimes.

When recording from a compact disc or PCM processor: The right-most element (+10) should light up only at the highest signal level.

Recording

The recording procedure is the same as "Recording TV Programmes" on page 40.

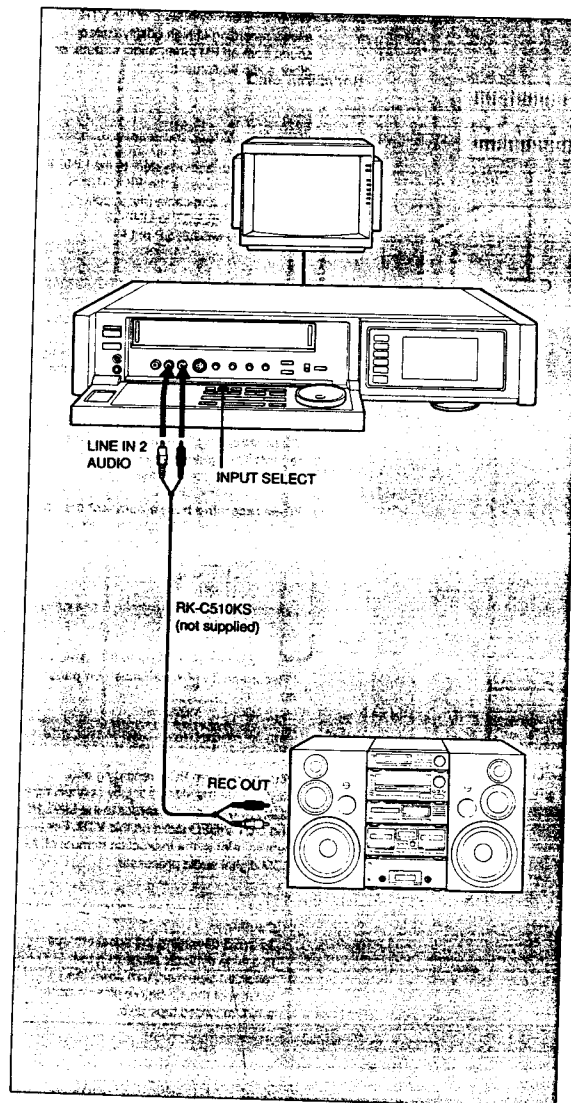
PCM Recording and Playback

You can perform PCM recording and playback on the video track by connecting a PCM digital audio processor to the LINE IN and OUT VIDEO jacks on this VTR. For details, refer to the instruction manual of the PCM digital audio processor.

Caution

To avoid damaging the speakers due to a wide dynamic range of a hi-fi recorded tape/disc, turn down the volume of the TV before playing back a hi-fi recorded tape/disc.

Audio Recording



Simulcast Recording

You can record TV programme and the sound from other equipment such as an FM tuner, simultaneously. The audio signals from the TV receiver are recorded on the normal audio track and those from the connected equipment on the video track.

Before you begin

- Connect your audio equipment to the EURO-AV (LINE 1) connector or the LINE IN 2 AUDIO jacks.
- The EURO-AV (SAT.) connector cannot be used for a simulcast recording.
- Press INPUT SELECT on this VTR to indicate SIMUL in the display window.
- Other settings are the same as "Audio recording" on the previous page.

To set SIMUL AUDIO IN

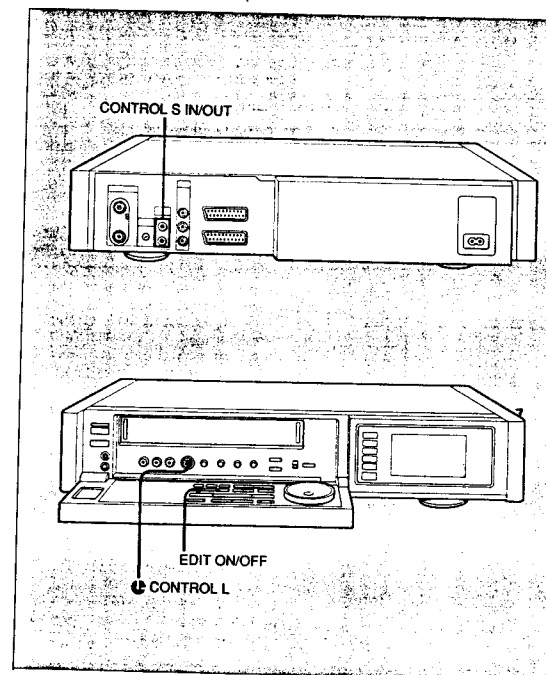
Select the audio input to which your audio equipment is connected.

- 1 Press MENU.
The main MENU appears.
- 2 Move cursor with ▲ or ▼ to MODE SET.
- 3 Press EXE.
If the MODE SET [PAGE 2] menu appears, move cursor with ▲ or ▼ to PREVIOUS PAGE and press EXE. The MODE SET [PAGE 1] menu appears.
- 4 Move cursor with ▲ or ▼ to SIMUL AUDIO IN.
- 5 Move the dot with ◀ or ▶ to L1 or L2 to which your audio equipment is connected.
- 6 Press EXE to store the setting and return to the original screen.

Operation

The recording procedure is the same as "Recording TV programmes" on page 40.

Tape Editing



Before You Begin

You can create your own video programme by editing with other VTRs. Take a look at the following examples to expand your pleasure in video operation.

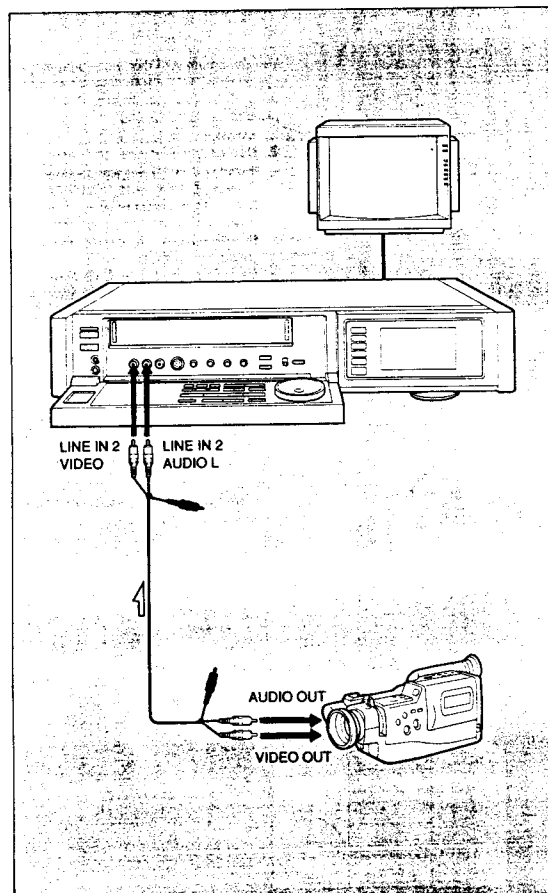
Use of the Sony control terminals

If your second VTR is equipped with Sony control terminals, CONTROL L or CONTROL S output or input, synchronized editing can be performed. Synchronized editing enables remote control of this VTR's playback/recording start and pause by the other VTR. See pages 82 through 87.

Use of the EDIT mode

The EDIT mode activated by the EDIT ON/OFF button on the VTR enables recording and playback of higher quality pictures during editing. If the other VTR is equipped with this function, turn it on. However, note that even when using the EDIT mode during editing, the quality of the edited tape will have a certain extent of degradation in picture and sound. Avoid using the edited tape for multiple generations of editing.

Tape Editing



Editing from another VTR

Using this VTR as a recording VTR and an 8 mm video camera recorder as a playback VTR.

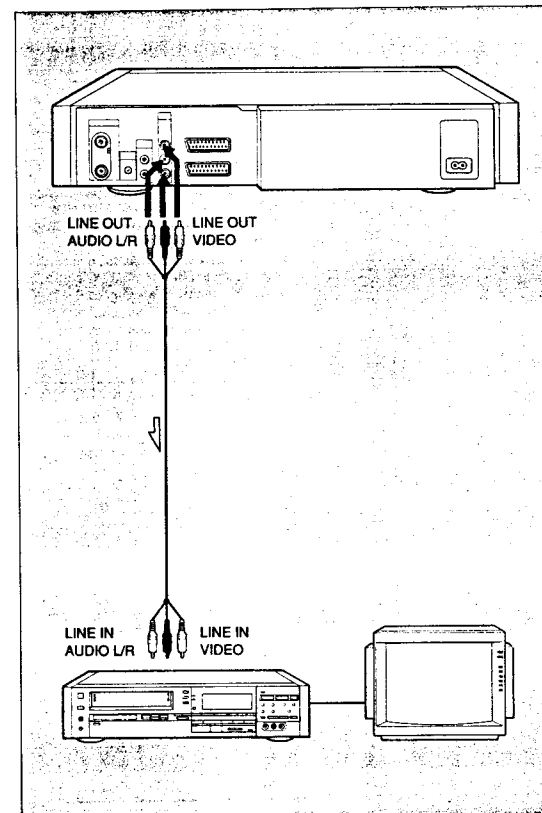
■ Before you begin

- Make connections using the supplied video/audio connecting cable as illustrated.
- If the other VTR is a monaural type as shown in the illustration, connect the white plug to LINE IN 2 AUDIO L and leave the red plugs unconnected. This enables the sound to be separated into the right and left channels. If the other VTR is a stereo type, make connections with both the red and white plugs.
- Press INPUT SELECT on this VTR to indicate LINE L1, LINE L2 or SAT. to match the jack to which you have connected the other VTR.
- Activate the EDIT mode on both VTRs.
- Select the recording tape speed, SP or LP.

■ Operation

- 1 Insert a source tape into the playback VTR. Insert a tape for recording into this VTR.
- 2 Play back on the playback VTR and record with this VTR.

Note
The  mark indicates the signal flow.



Editing onto Another VTR

Using this VTR as a playback VTR and another VTR as a recording VTR.

■ Before You Begin

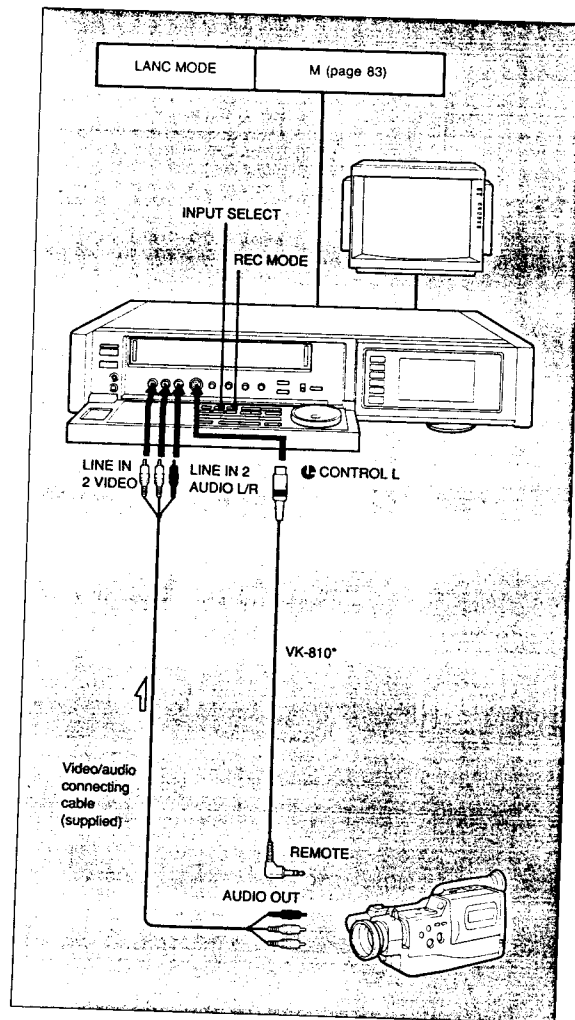
- Make connections using the supplied video/audio connecting cable as illustrated. If the other VTR is a monaural type, make connections with the VMC-910MS/920MS video/audio connecting cable (not supplied).
- Press AUDIO MONITOR on the Commander to select the sound to be recorded.
- Press DATA SCREEN on the Commander to erase the data screen.
- Activate the EDIT mode on both VTRs.
- Select the line input on the other VTR.

■ Operation

- 1 Insert a source tape into this VTR. Insert a tape for recording into the recording VTR.
- 2 Play back on this VTR and record with the recording VTR.

Note
Do not connect the same VTR to both the LINE IN and LINE OUT jacks of this VTR. This may cause hum noise.

Synchronized Editing — Editing with a VTR Equipped with a Sony Control Terminal



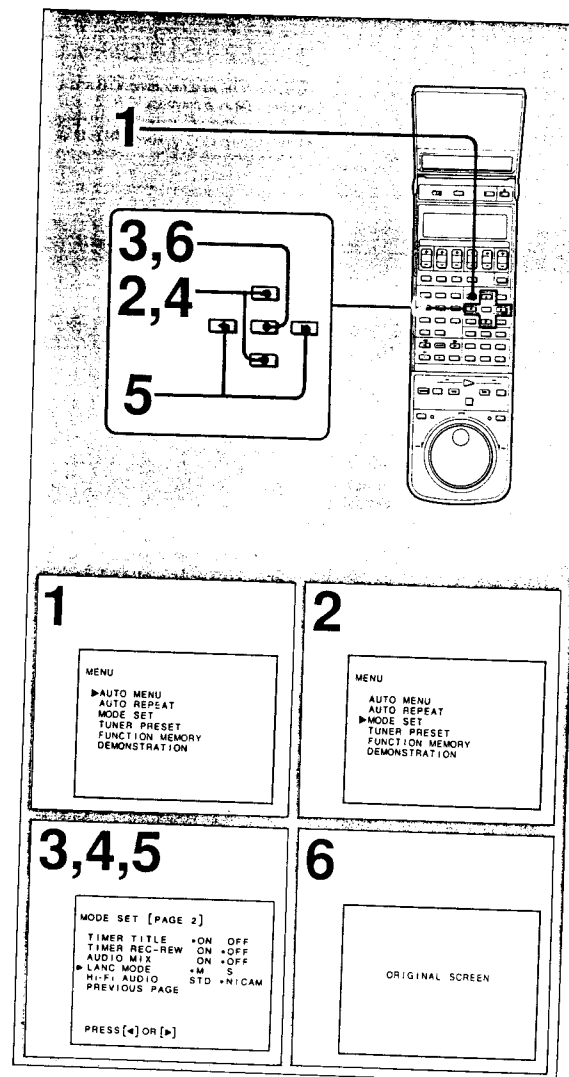
Connecting a VTR Equipped with a CONTROL L Connector

Using this VTR as a recording VTR and another VTR as a playback VTR.

- When the REMOTE connector of the other VTR is a stereo mini-mini plug, use the VK-810 connecting cable (not supplied).
- If it is a 5-pin DIN connector, use the VK-800 connecting cable (not supplied) instead of VK-810.
- If the other VTR is monaural, connect the white plug to LINE IN 2 AUDIO L and leave the red plugs unconnected. This enables the sound to be separated into the right and left channels. Connect nothing to LINE IN 2 AUDIO R.

Notes

- The cable with an* (asterisk) is not supplied.
- The mark indicates the signal flow.



To set LANC MODE

When the other VTR is connected via the CONTROL L connector, you may select the LANC MODE which determines if this VTR controls the other VTR via the CONTROL L connector or it is controlled by the other VTR. This is LANC MODE.

To perform synchronized editing using the SYNCHRO EDIT button on this VTR, select LANC MODE M as follows:

- Press MENU.
The main MENU appears.
- Move cursor with ∇ or $\blacktriangle$ to MODE SET.
- Press EXE.
If the MODE SET [PAGE 1] menu appears, move cursor with $\blacktriangle$ or ∇ to NEXT PAGE and press EXE. The MODE SET [PAGE 2] menu appears.
- Move cursor with ∇ or $\blacktriangle$ to LANC MODE.
- Move the dot with $\blacktriangleleft$ to M when you control the other VTR through this VTR, and to S when you control this VTR through the other VTR.
- Press EXE to store the setting and return to the original screen.

Operation

See "Synchronized Editing from Another VTR" on page 86.

Using a Sony editing controller RM-E300

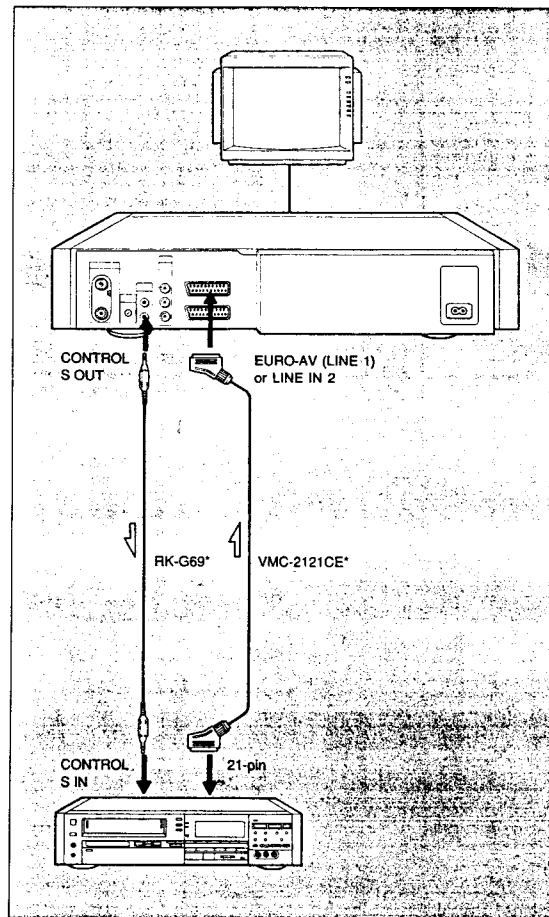
You can perform automatic assemble editing of up to 8 programmes. Select the LANC MODE S in the MODE SET [PAGE 2] menu.

About the L (LANC)

LANC stands for Local Application Control Bus System. The LANC connector is used for controlling the tape transport of video equipment and peripherals connected to it. This connector has the same function as the connectors indicated as CONTROL L or REMOTE.

*Hi-Fi AUDIO for SLV-815UB/815NC only

Synchronized Editing — Connection



Connecting a VTR Equipped with a CONTROL S Input Jack

Using this VTR as a recording VTR and another VTR as a playback VTR.

- When connecting the other VTR to LINE IN 2 on the front, use the supplied video/audio connecting cable. If the other VTR is monaural, connect to LINE IN 2 AUDIO L via the white plugs. This enables the sound to be separated into the right and left channels. Leave the red plugs unconnected.

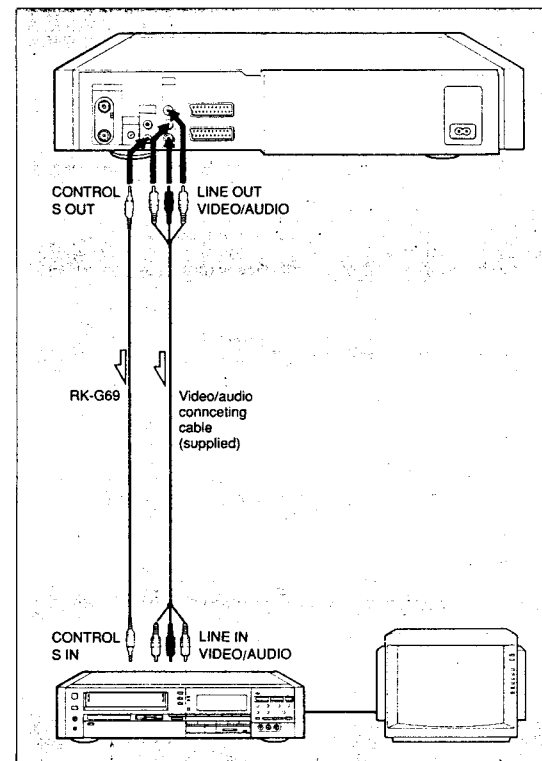
Notes

- The cables with an * (asterisk) are not supplied.
- The  mark indicates the signal flow.

■ Operation

See "Synchronized Editing from Another VTR" on page 86.

When a new scene is inserted onto the recorded tape
See "Insert Editing" on page 89.
The edited picture will be distorted at the editing end point.



Connecting a VTR Equipped with a CONTROL S Input Jack

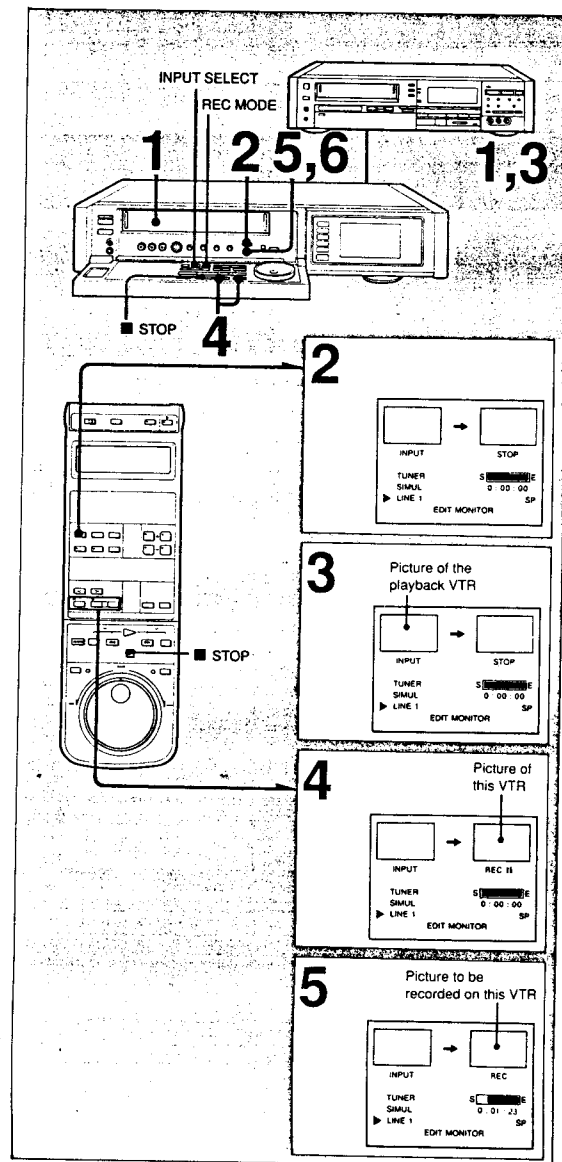
Using this VTR as a playback VTR and another VTR as a recording VTR.

- If the other VTR is monaural, connect the VTR using the VMC-910MS/920MS video/audio connecting cable (not supplied).
- You can also connect the other VTR to EURO-AV (LINE 1) using the VMC-2121CE cable (not supplied).

■ Operation

See "Synchronized Editing onto Another VTR" on page 87.

Synchronized Editing — Operation



Synchronized Editing From Another VTR

Using this VTR as a recording VTR and another VTR as a playback VTR.

Before You Begin

- Press INPUT SELECT to indicate LINE L1, LINE L2 or SAT, to match the jacks to which you have connected the other VTR.
- Press REC MODE to select the recording tape speed, SP or LP.

Operation

- 1 Insert a source tape into the playback VTR. Insert a tape for recording into this VTR.
- 2 Press EDIT MONITOR.
- 3 On the playback VTR, locate the point where you wish to start editing and set the VTR to the playback pause mode. If the VTR is equipped with the EDIT switch, set it to ON.
- 4 On this VTR, locate the recording starting point and set the VTR to the recording pause mode.
- 5 Press SYNCHRO EDIT. Playback and recording will start on each VTR. The EDIT mode will be activated automatically.
- 6 To stop editing, press SYNCHRO EDIT.
- 7 To edit more scenes, repeat steps 3, 5 and 6.

After editing, press ■ STOP on both VTRs.

Notes

- For considering of the rise time of the player, the recording will start approximately 1 second after the playback pause mode is released.
- When this VTR is used as the recording VTR and the SYNCHRO EDIT indicator lights, if the variable speed picture, such as the slow speed or double speed picture is played back on the playback VTR, the variable speed picture will be recorded.

Synchronized Editing onto Another VTR

Using this VTR as a playback VTR and another VTR as a recording VTR.

Operation

- 1 Insert a source tape into this VTR. Insert a tape for recording into the recording VTR.
- 2 On this VTR, locate the point where you wish to start editing and set the VTR to the playback pause mode.
- 3 On the recording VTR, locate the recording starting point and set the VTR to the recording pause mode.
- 4 Press SYNCHRO EDIT. After a tape is rewound a little, playback will start on this VTR. The recording will start at the assigned recording starting point. The EDIT mode will be activated automatically.
- 5 To stop editing, press SYNCHRO EDIT.
- 6 To edit more scenes, repeat steps 2, 4 and 5.

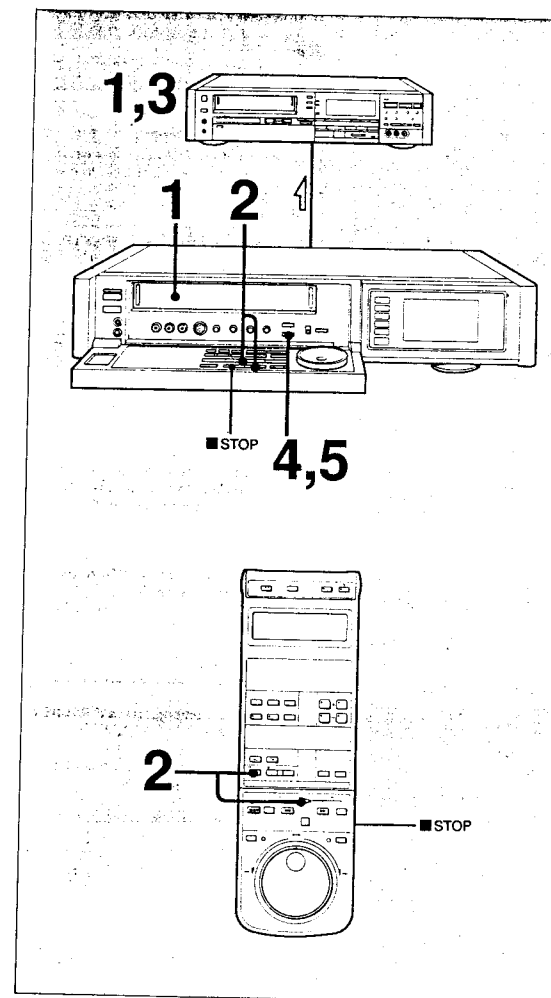
After editing, press ■ STOP on both VTRs.

When using the synchronized editing function of another Sony VTR

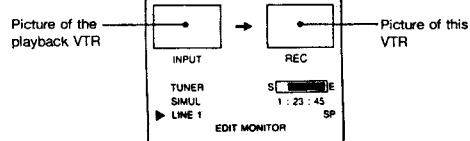
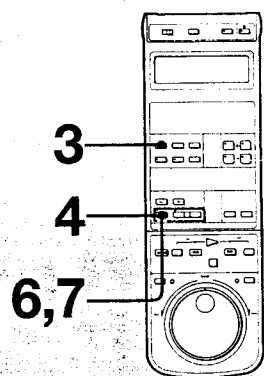
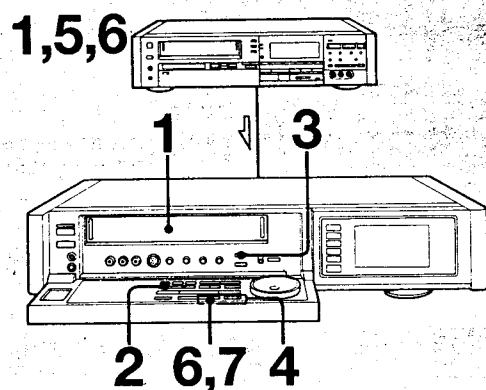
When the VTRs are connected via the CONTROL S jacks, set COMMAND MODE of this VTR to VTR 1 or VTR 2. With VTR 3 setting, this VTR may not be operated.

Note

Do not operate the buttons on the VTRs or Commander during editing. Doing so may cause a malfunction.



Manual Editing—Editing with a VTR not Equipped with a Sony Control Terminal



Using this VTR as a recording VTR and another VTR as a playback VTR.

For connections, see page 82 or 84. The CONTROL L or CONTROL S connection is not necessary.

■ Before You Begin

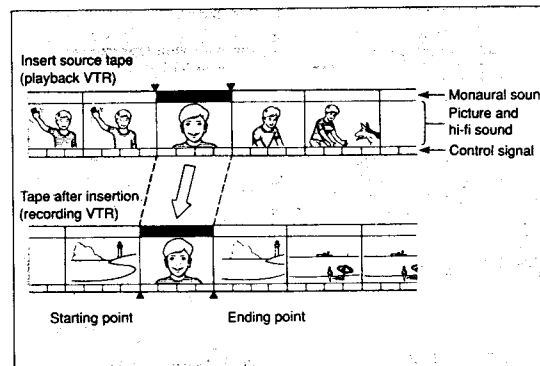
- Press INPUT SELECT to indicate LINE L1, LINE L2 or SAT, to match the jacks to which you have connected the other VTR.
- Press REC MODE to select the recording tape speed, SP or LP.

■ Operation

- 1 Insert a source tape into the playback VTR. Insert a tape for recording into this VTR.
- 2 Press EDIT to light the EDIT indicator in the display window.
- 3 Press EDIT MONITOR.
- 4 On this VTR, locate the recording starting point and set the VTR to the recording pause mode.
- 5 On the playback VTR, locate the point where you wish to start editing and set the VTR to the playback pause mode. If the VTR is equipped with EDIT switch, set it to ON.
- 6 Press II PAUSE of both VTRs simultaneously to start editing.
- 7 To stop editing, press II PAUSE of this VTR.
- 8 To edit more scenes, repeat steps 5 to 7.

After editing, press ■ STOP on both VTRs.

Insert Editing

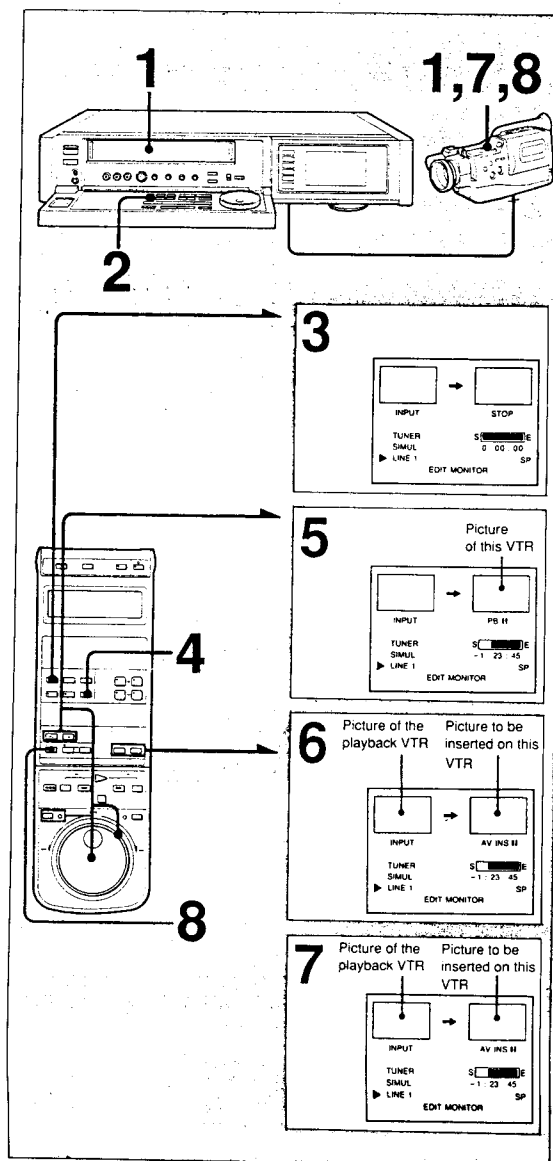


You can easily insert a new picture and/or sound onto a pre-recorded tape. This editing is useful to replace an unnecessary scene (sound) with another scene (sound).

■ Before You Begin

- For connection, see page 82 or 84. (The CONTROL L or CONTROL S connection is not needed.)
- Select the insert source from the equipment connected to EURO-AV (LINE 1), LINE IN 2 and EURO-AV (SAT.)

Insert Editing



■ Operation

- 1 Insert a source tape into the playback VTR. Insert a tape for recording into this VTR.
- 2 Press EDIT ON/OFF.
If the playback VTR is equipped with the EDIT switch, set it to ON.
- 3 Press EDIT MONITOR.
- 4 On this VTR, locate the ending point and press COUNTER RESET.
The counter will show "0H00M00S" and the ending point will be memorized.
- 5 On this VTR, locate the starting point and set the VTR to the playback pause mode.
JOG/SHUTTLE or SHUTTLE EDIT are useful for this operation.
- 6 Press AUDIO/VIDEO INSERT.
For audio insert, press AUDIO.
For video insert, press VIDEO.
For audio and video insert, press AUDIO and then VIDEO or vice versa.
The indicator corresponding to the button pressed will light.
- 7 On the playback VTR, locate the starting point where you want to start the insertion and set the VTR to the playback pause mode.
- 8 Press II PAUSE of both VTRs to start the insertion.
At the ending point (0H00M00S), the insertion will stop automatically.

■ To stop the insertion temporarily
Press II PAUSE.

■ To stop on-going insertion
Press ■ STOP.

■ To turn off the EDIT MONITOR display
Press EDIT MONITOR.

When the VIDEO INSERT button is pressed

The picture and the sound on the hi-fi audio track will be inserted. (The sound on the normal audio track will be retained.)

When the AUDIO INSERT button is pressed

The sound on the normal audio track will be inserted. (The picture and the sound on the hi-fi audio track will be retained.)

When the VIDEO and AUDIO INSERT buttons are pressed

The picture, sound on the hi-fi audio track and the sound on the normal audio track will be inserted.

Notes

- The insertion cannot be made onto the unrecorded portion of a tape.
- After the insertion, the pre-recorded picture and/or sound will be erased.

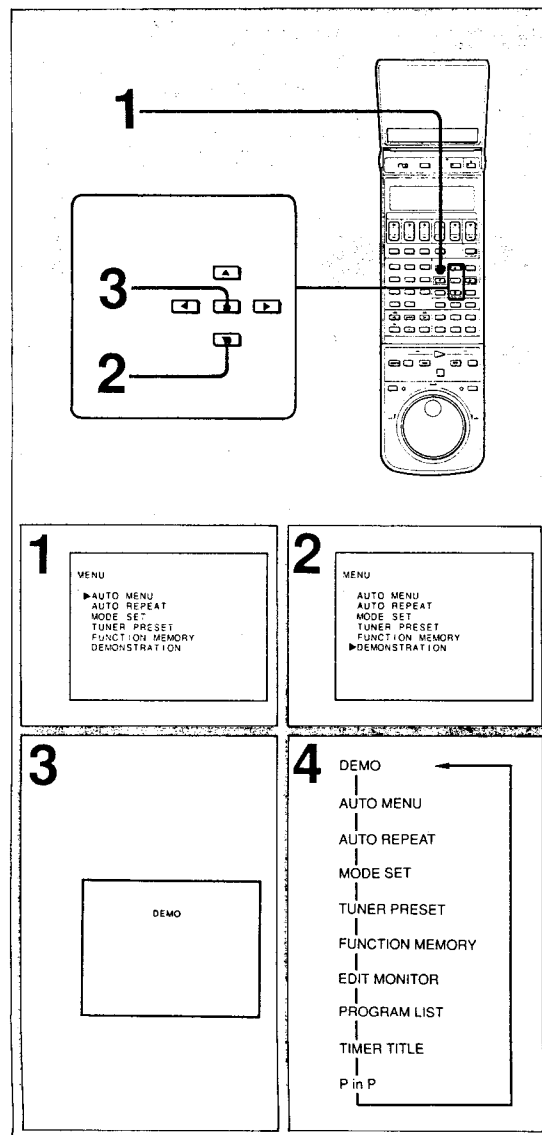
■ When the sound from the microphone is inserted

When the microphone is connected to the MIC jack, the sound from the microphone is automatically selected and it is recorded on the normal audio track. When VIDEO INSERT is pressed, the sound from the microphone cannot be recorded.

Note

The MIC jack of this VTR is adaptable with the use of a monaural mini plug. If you connect a microphone with a stereo mini plug, use a plug adaptor such as the PC-216MS or the PC-236HMS.

The Menu System

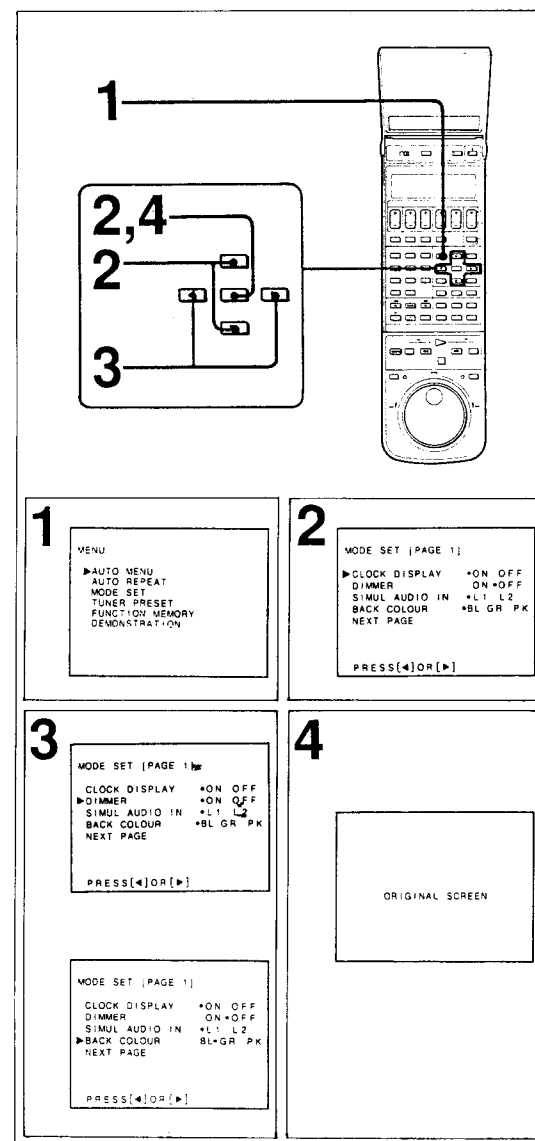


Demonstration Menu

As you have noticed, many of the operations on this VTR are guided by the menu system. All of the menus are explained in sections where and when needed. However, to get an overview of the menu system, check the DEMONSTRATION menu which will give you a quick review of the MENU system.

■ Operation

- 1 Press MENU.
The main MENU appears.
- 2 Move cursor with ▲ or ▼ to DEMONSTRATION.
- 3 Press EXE.
- 4 The screen will change automatically as shown in the illustration.
The DEMONSTRATION menu can be stopped at the desired screen by pressing EXE. Press EXE again to resume the DEMONSTRATION menu sequence. Press any button except for EXE to get out of the DEMONSTRATION mode.



To Dim Out the Display Window

The indications in the display window can be dimmed out when the VTR is in the standby mode.

- 1 Press MENU.
The main MENU appears.
- 2 Move cursor with ▲ or ▼ to MODE SET and press EXE.
If the MODE SET (PAGE 2) menu appears, move cursor with ▲ or ▼ to PREVIOUS PAGE and press EXE.
- 3 Move cursor to DIMMER and select ON with ◀ to dim the indication.
- 4 Press EXE to store the setting and return to the original screen.

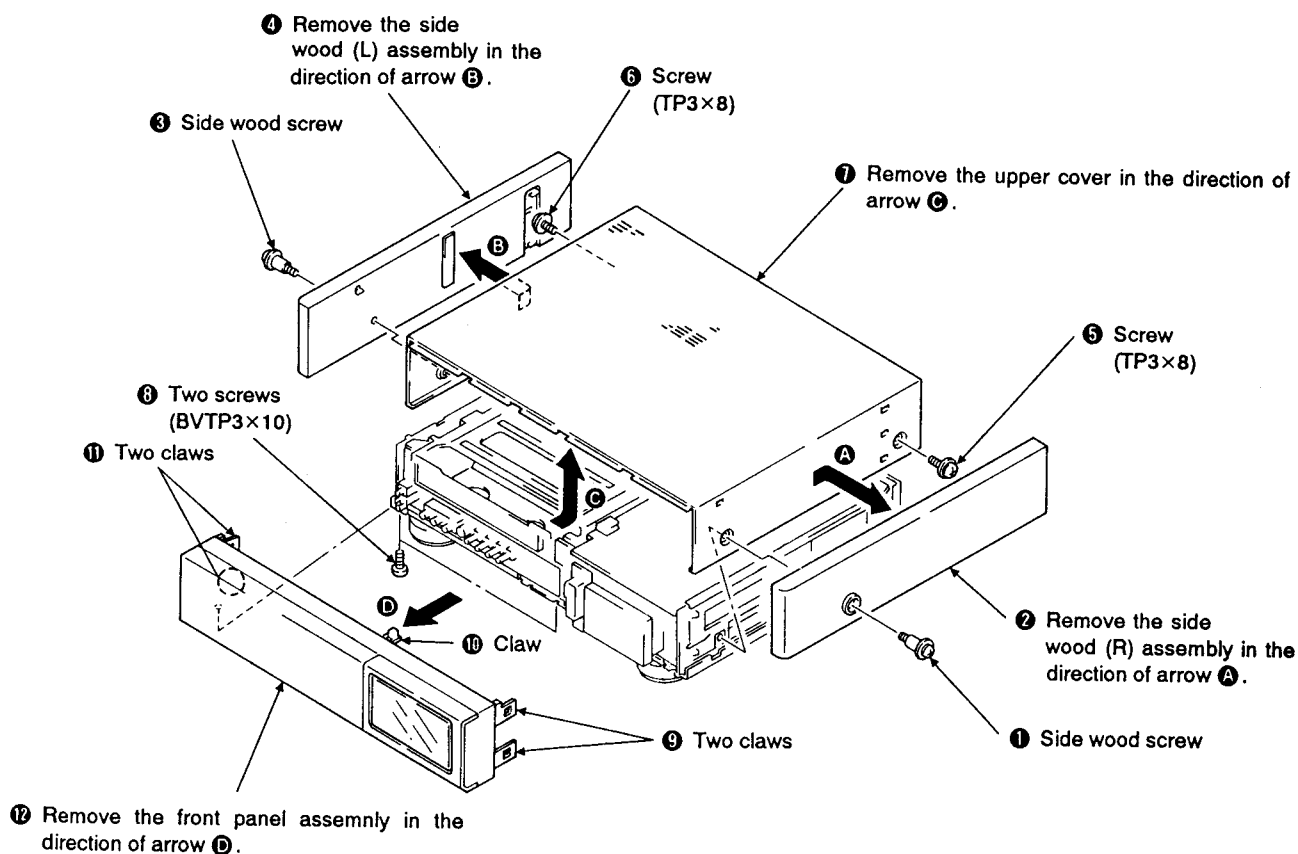
To Select the Background Colour on the Screen

You can change the background colour on the screen when no picture is displayed or the MENU display is shown on the screen.

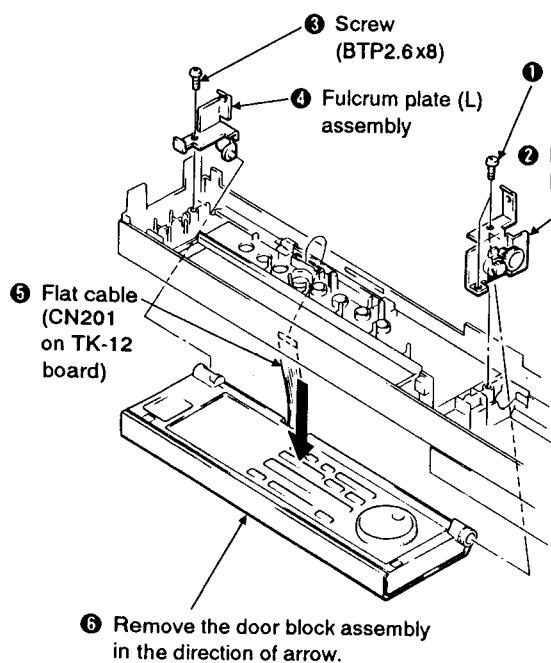
- 1 Press MENU.
The main MENU appears.
- 2 Move cursor with ▲ or ▼ to MODE SET and press EXE.
If the MODE SET (PAGE 2) menu appears, move cursor to PREVIOUS PAGE and press EXE.
- 3 Move cursor to BACK COLOUR and select the desired colour with ◀ or ▶.
BL....blue
GR....green
PK....pink
- 4 Press EXE to store the setting and return to the original screen.

SECTION 2 DISASSEMBLY

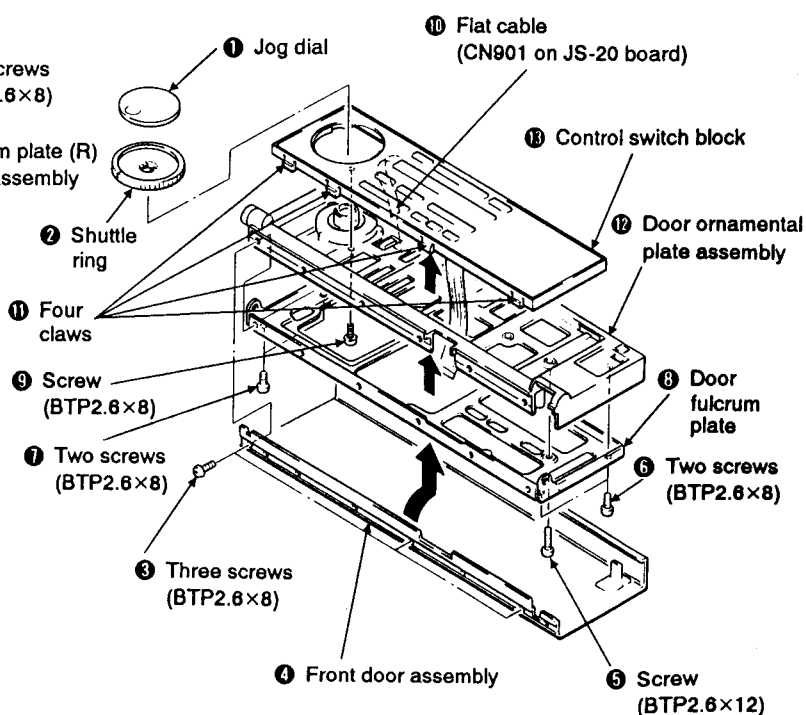
2-1. REMOVAL OF FRONT PANEL AND CABINET ASSEMBLIES



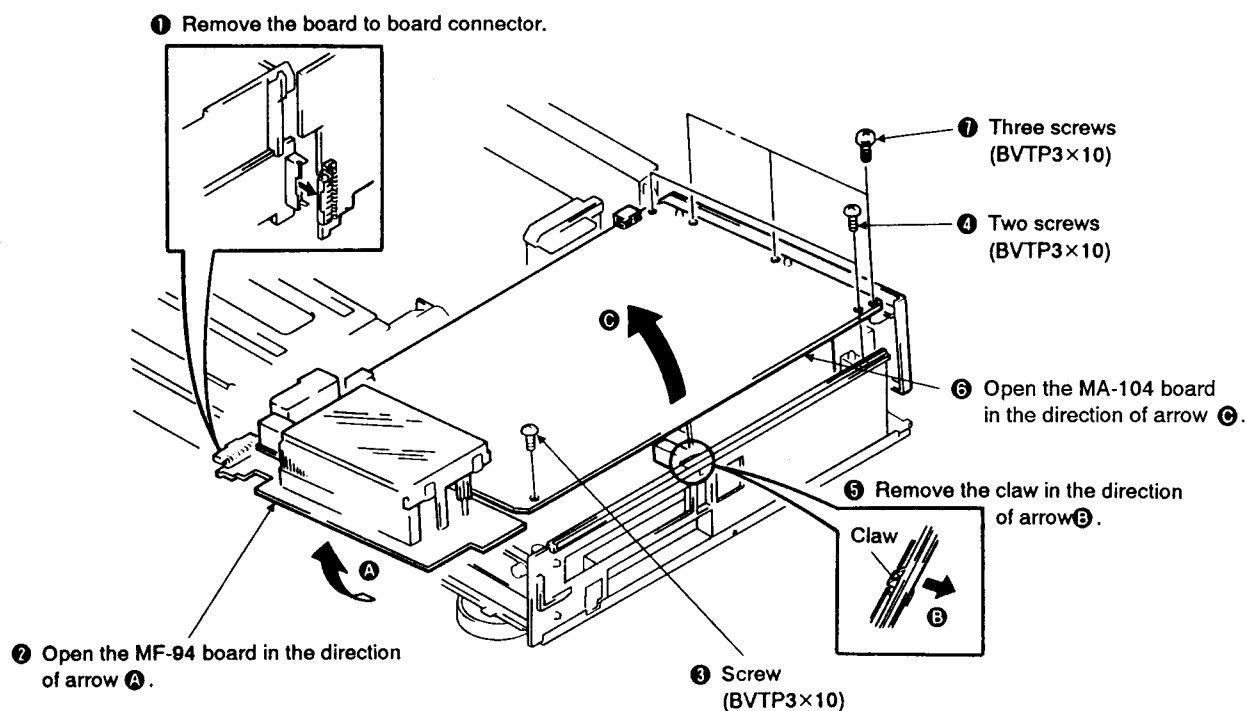
2-2. REMOVAL OF DOOR BLOCK ASSEMBLY



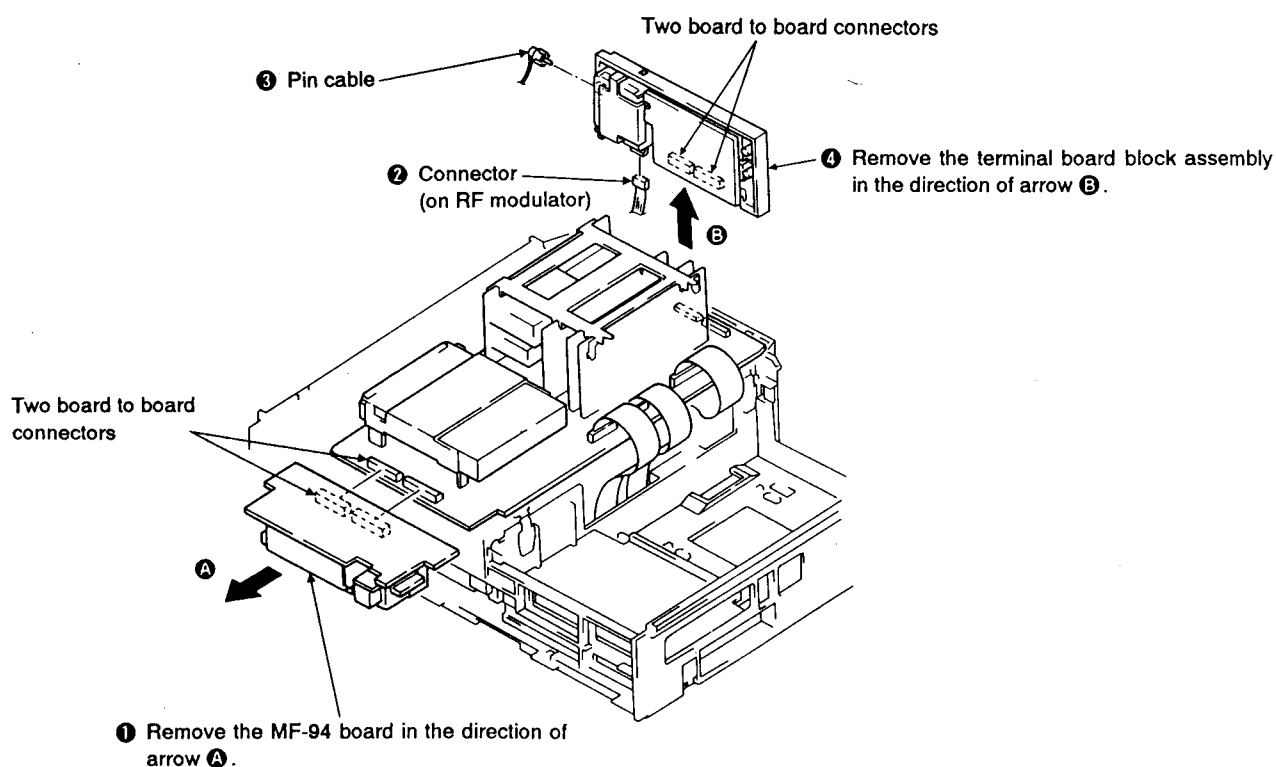
2-3. REMOVAL OF CONTROL SWITCH BLOCK



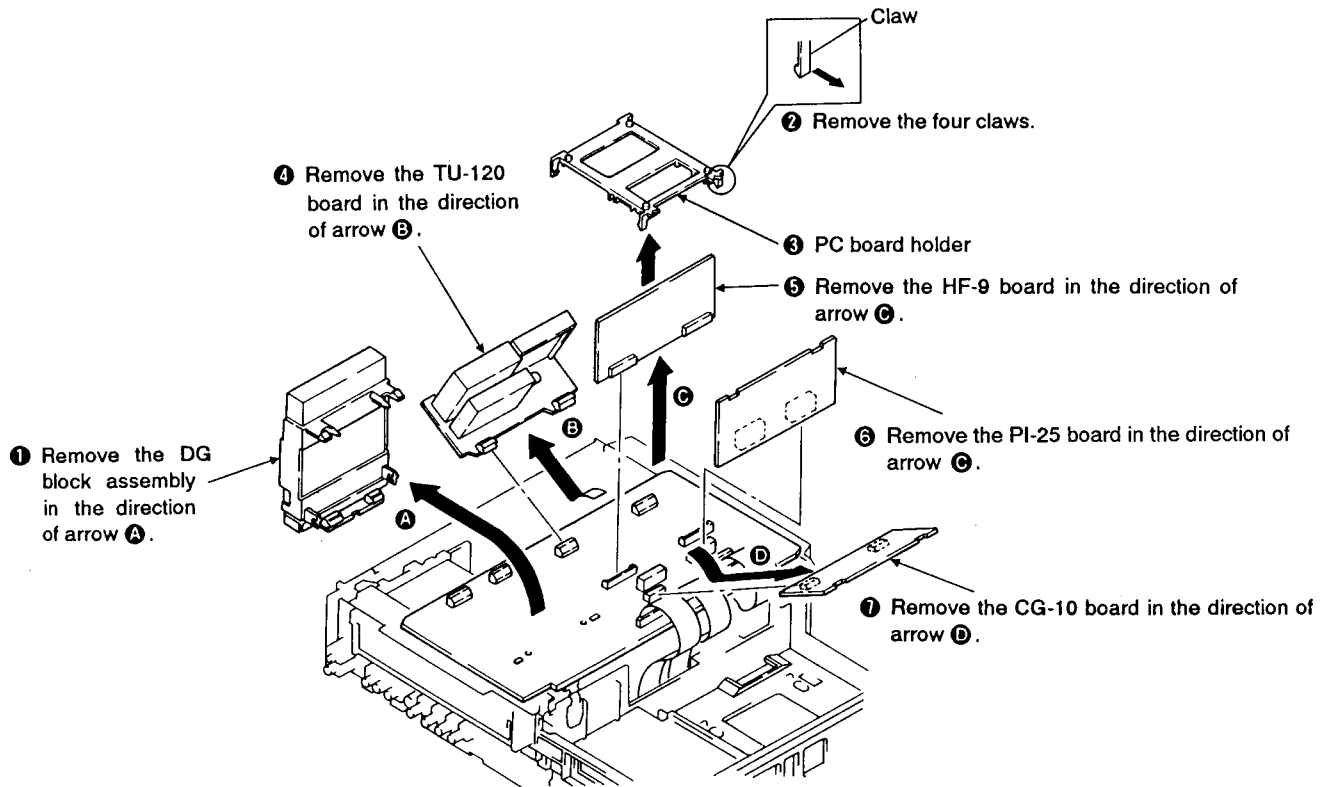
2-4. OPENING OF MA-104 BOARD



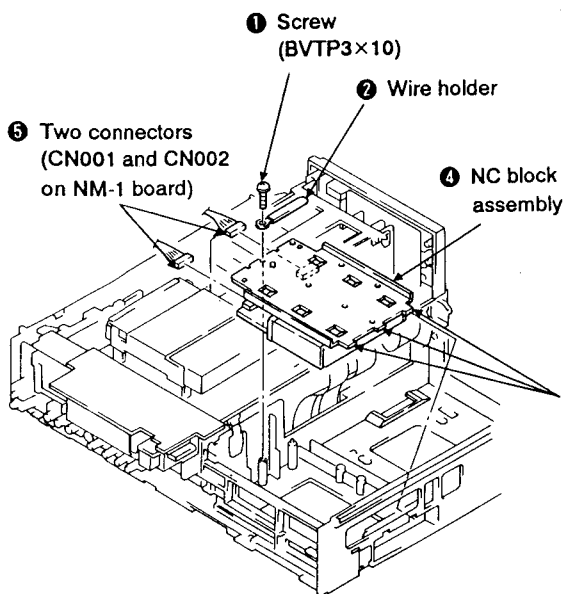
2-5. REMOVAL OF MF-94 BOARD AND TERMINAL BOARD BLOCK ASSEMBLY



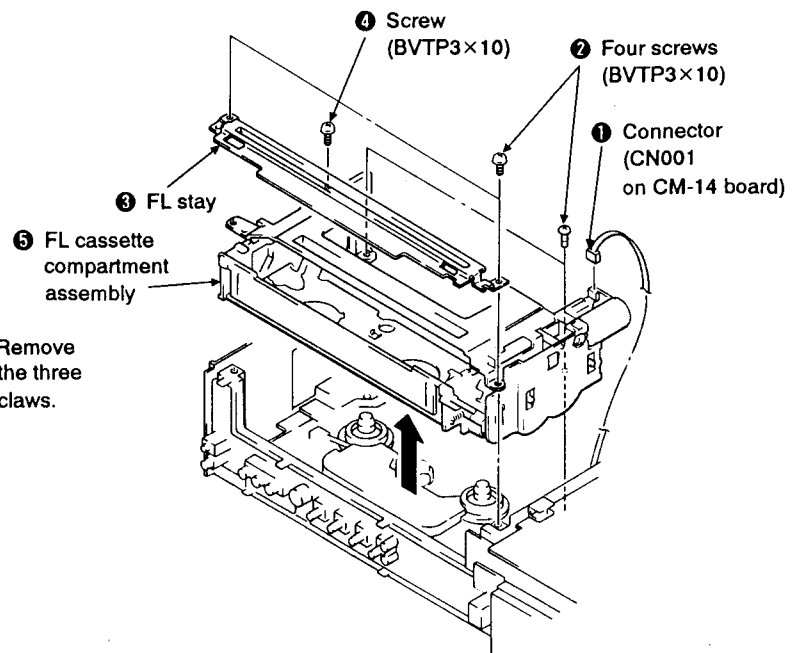
2-6. REMOVAL OF TU-120, HF-9, PI-25, CG-10 BOARDS AND DG BLOCK ASSEMBLY



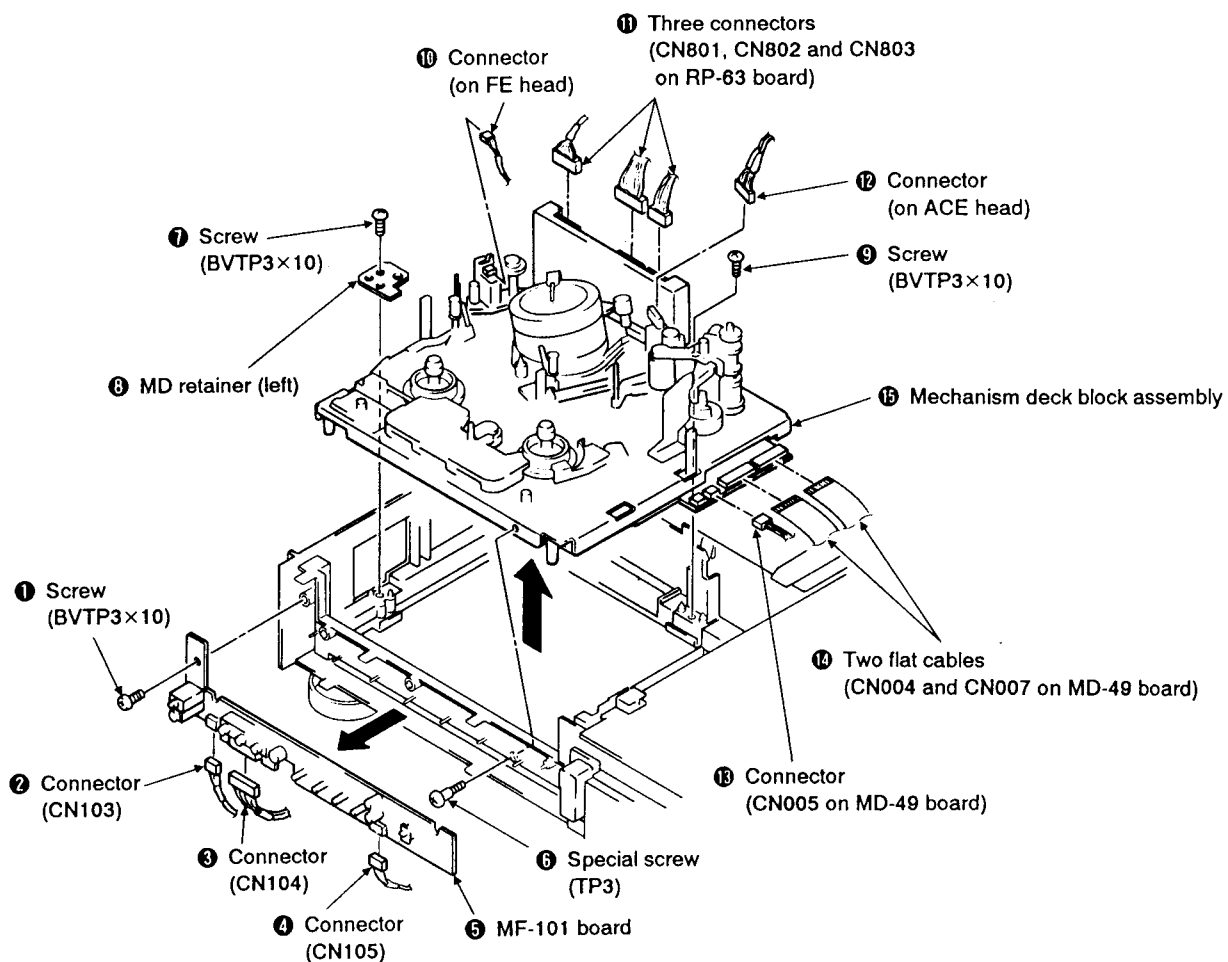
2-7. REMOVAL OF NC BLOCK ASSEMBLY (SLV-815UB ONLY)



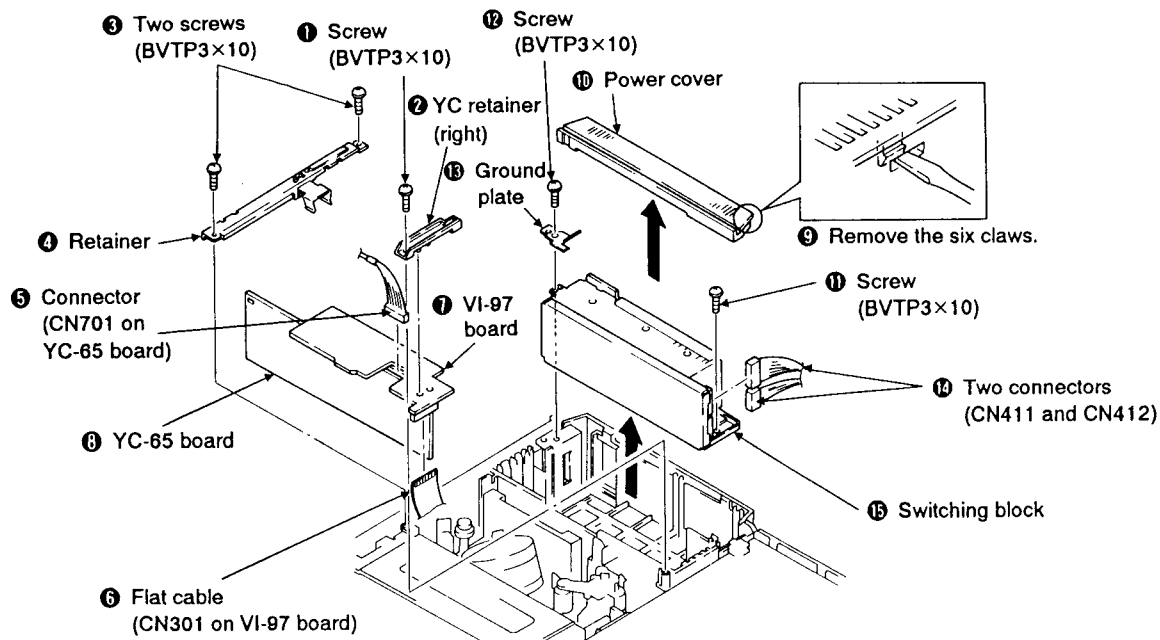
2-8. REMOVAL OF FL CASSETTE COMPARTMENT ASSEMBLY



2-9. REMOVAL OF MF-101 BOARD AND MECHANISM DECK BLOCK ASSEMBLY

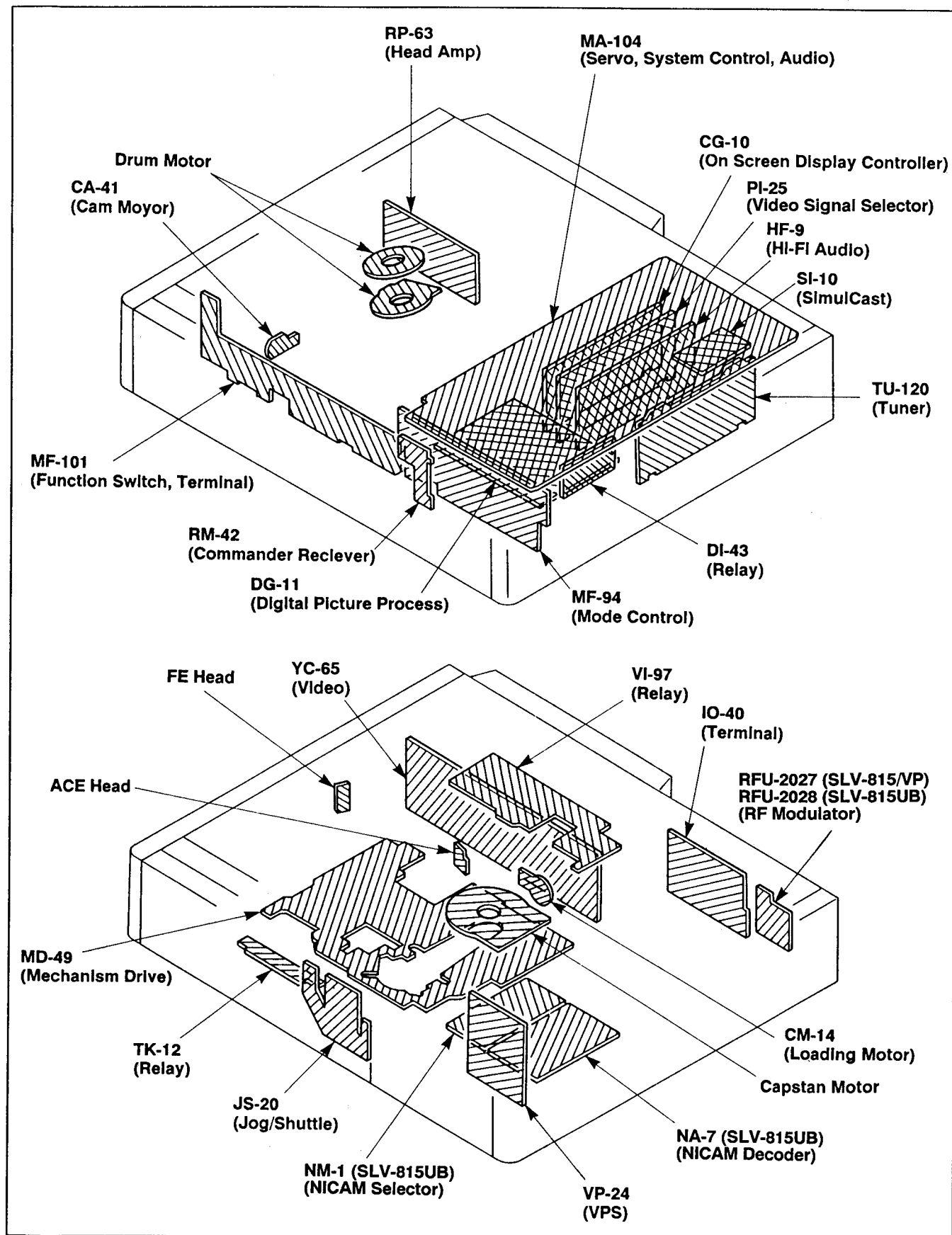


2-10. REMOVAL OF VI-97, YC-65 BOARDS AND SWITCHING BLOCK

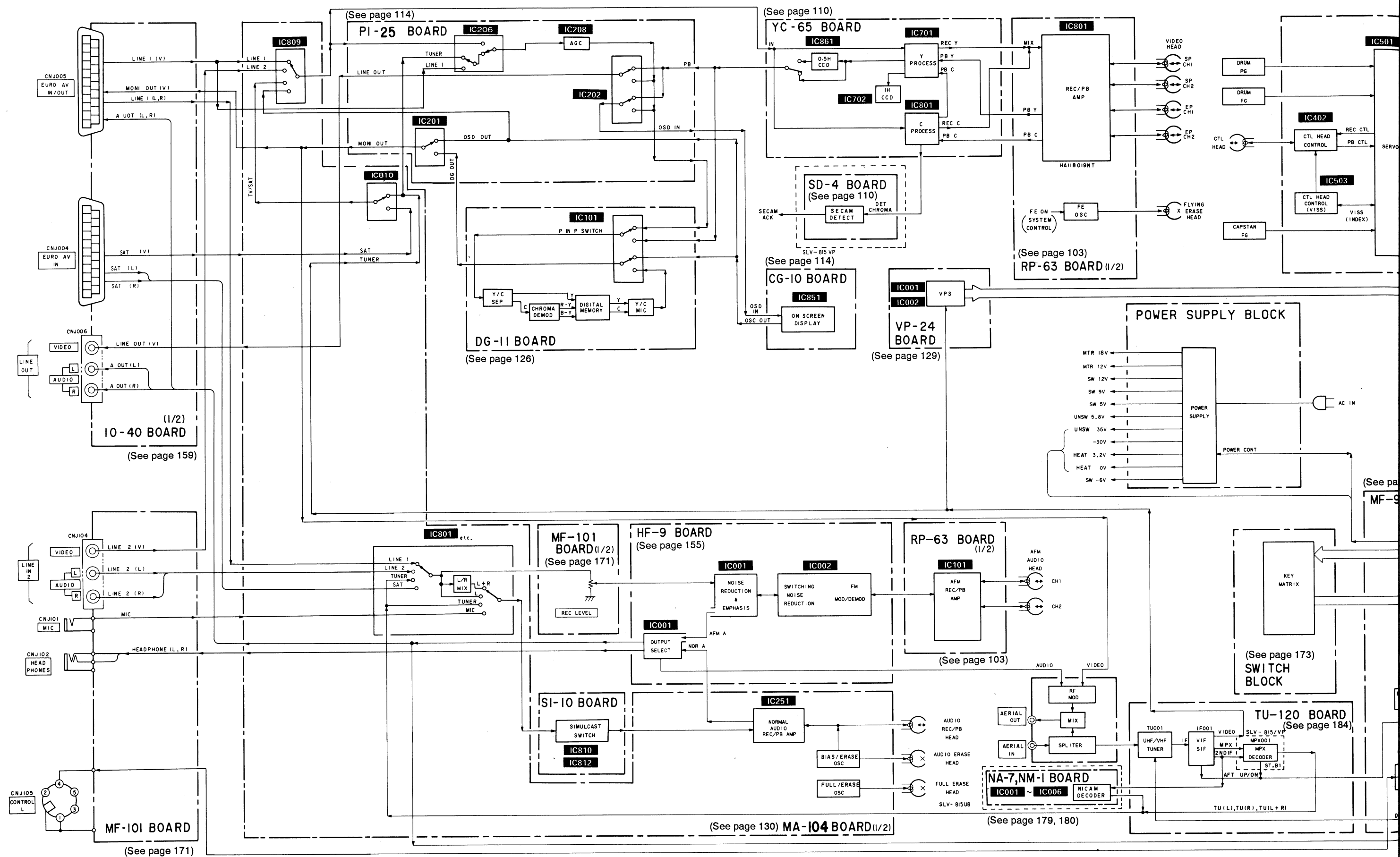


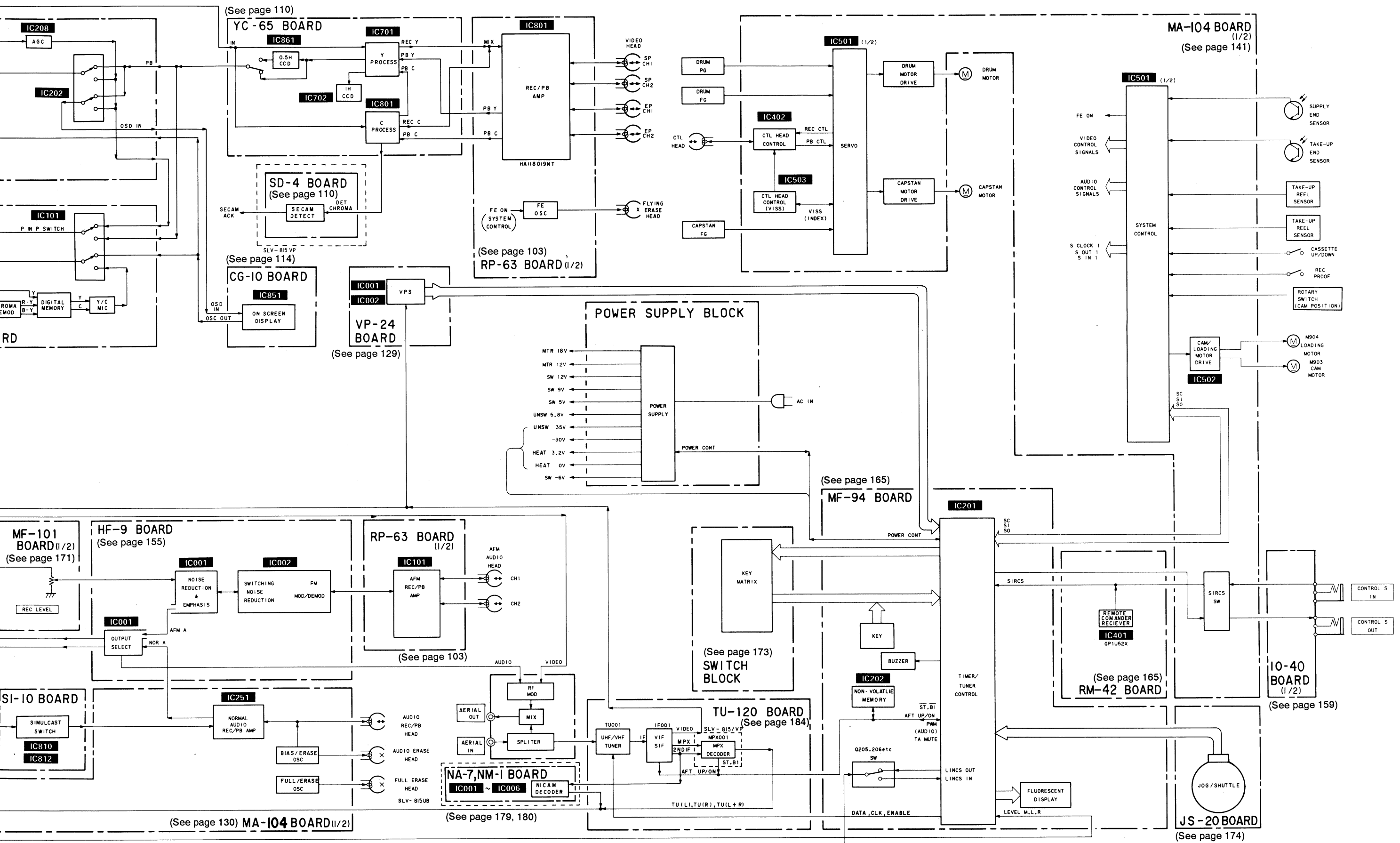
SECTION 3 DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

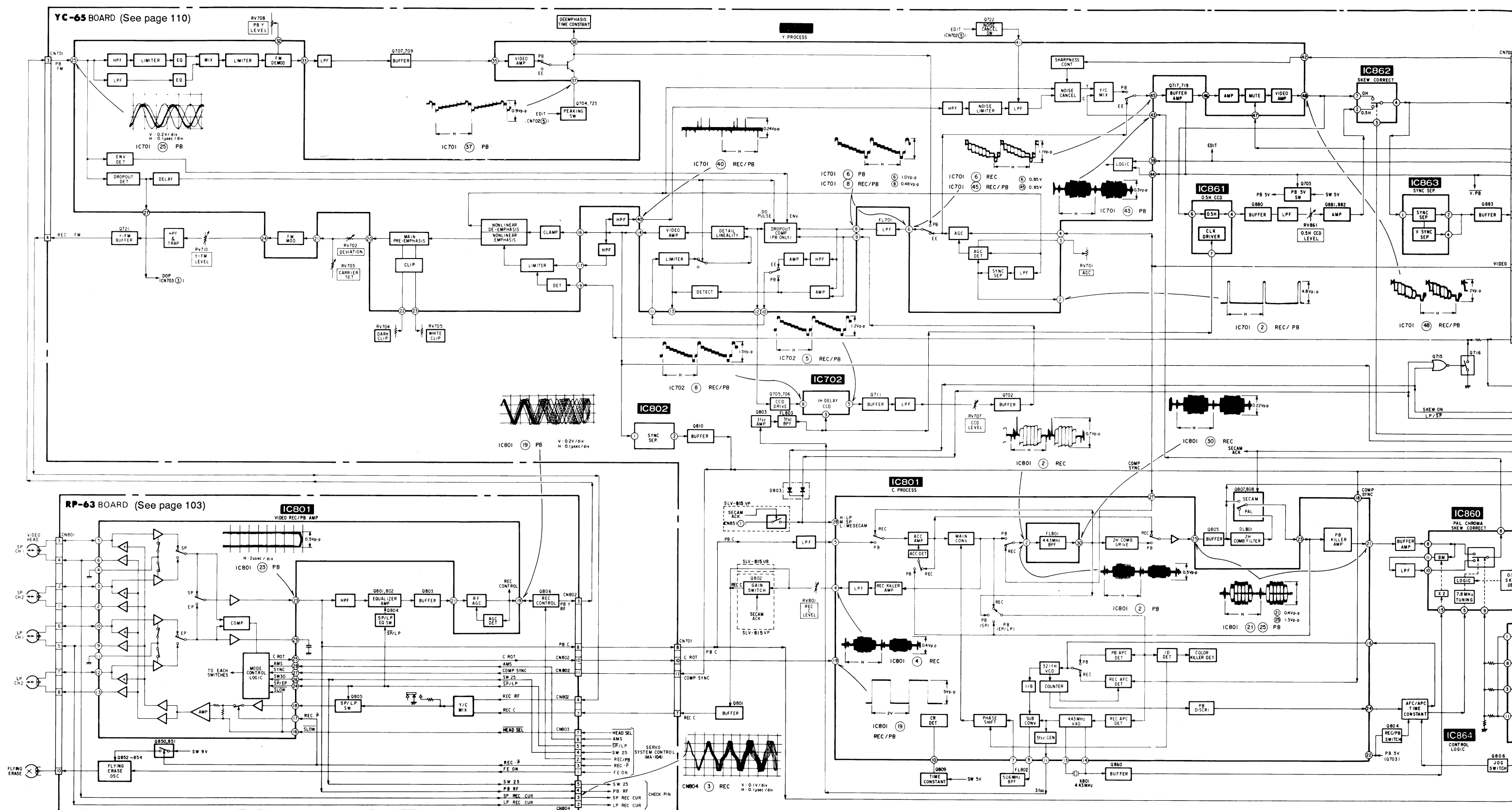


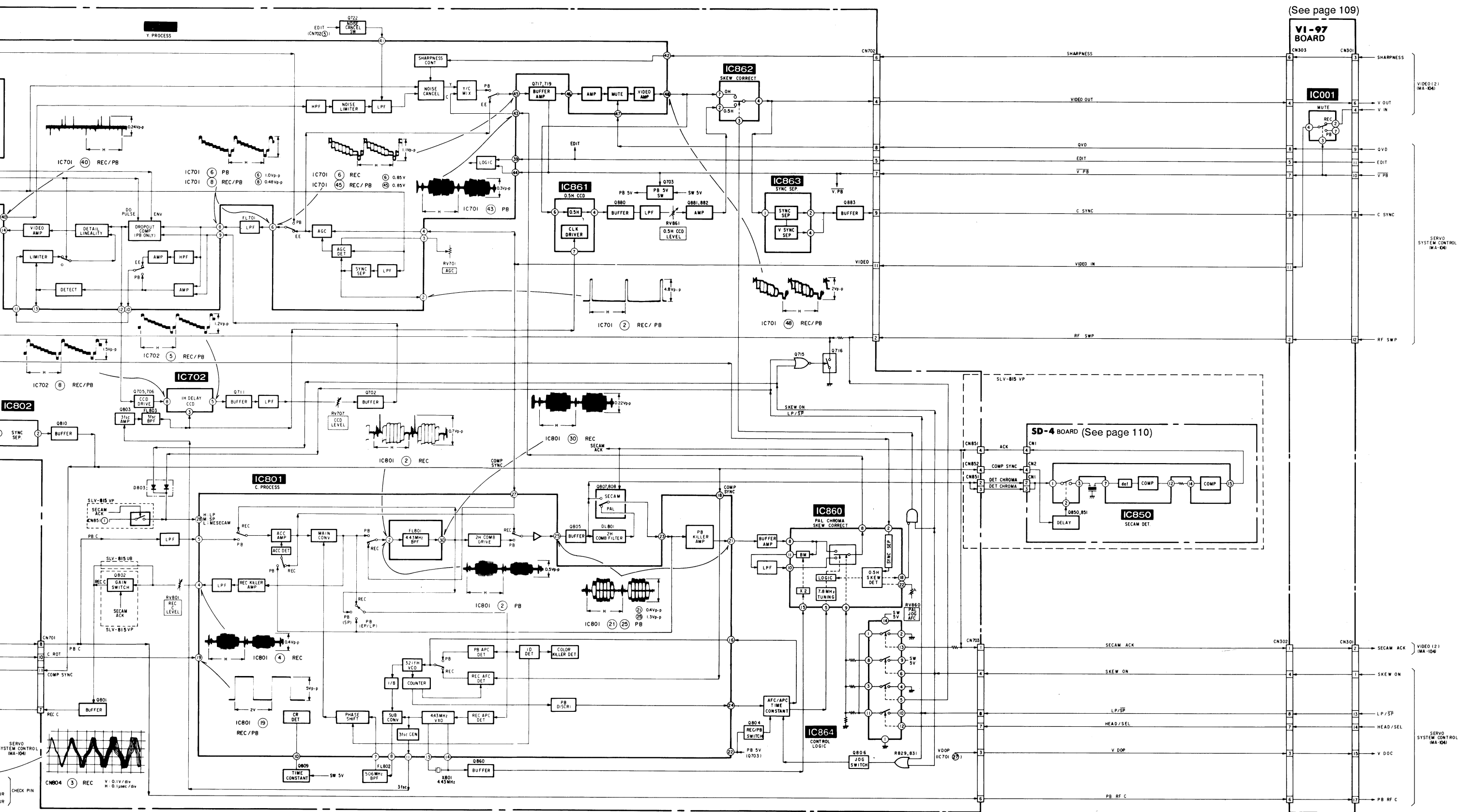
3-2. OVERALL BLOCK DIAGRAM



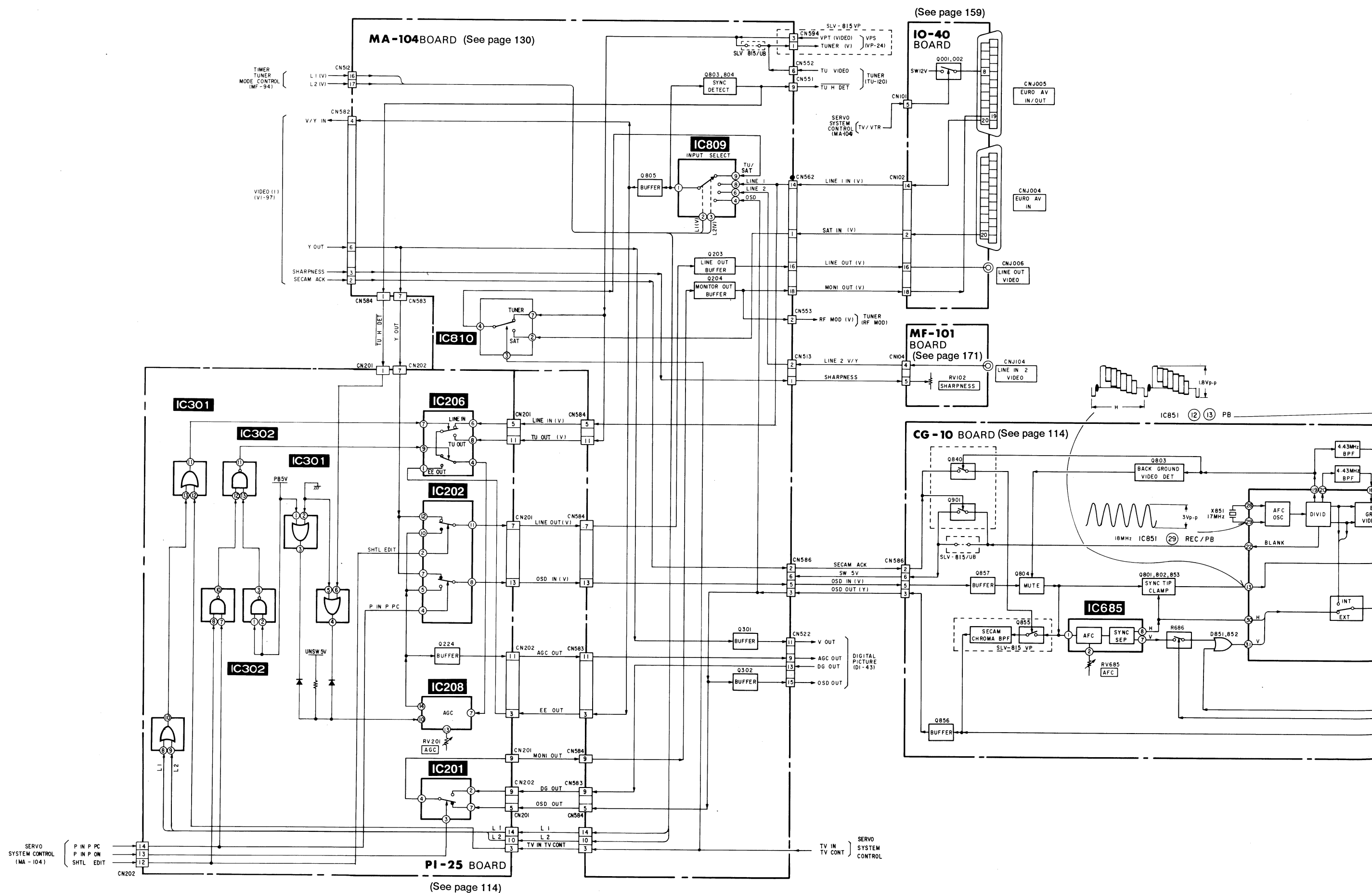


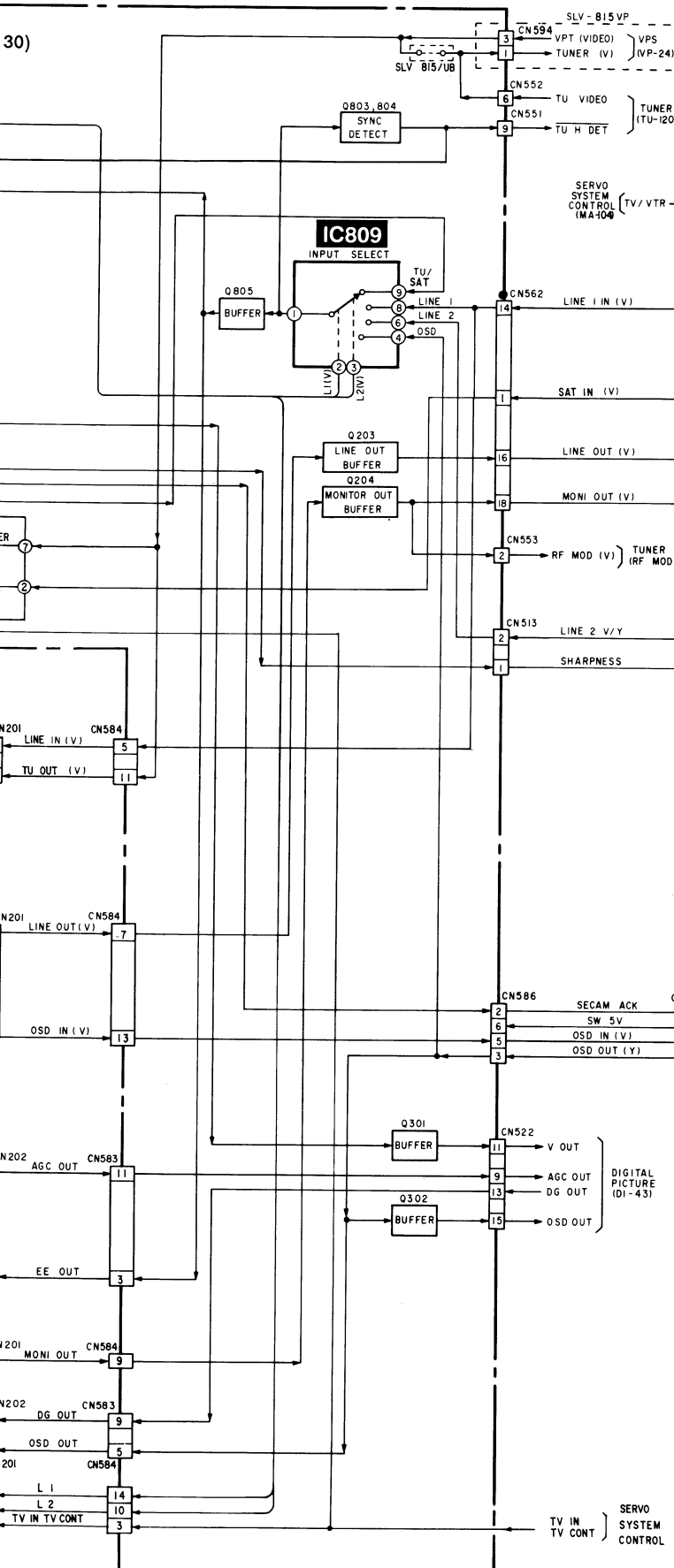
3-3. VIDEO (1) BLOCK DIAGRAM





3-4. VIDEO (2) BLOCK DIAGRAM

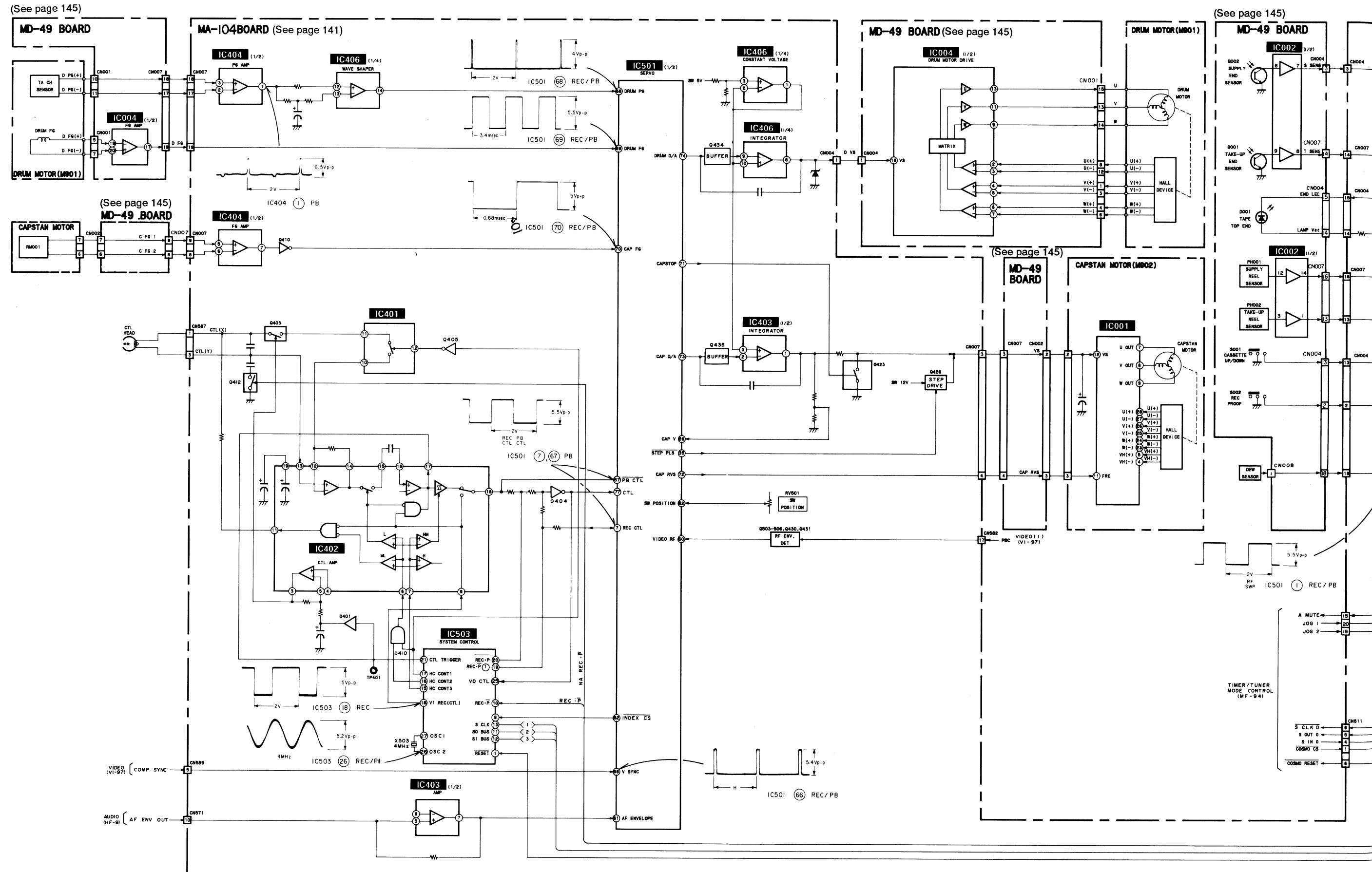


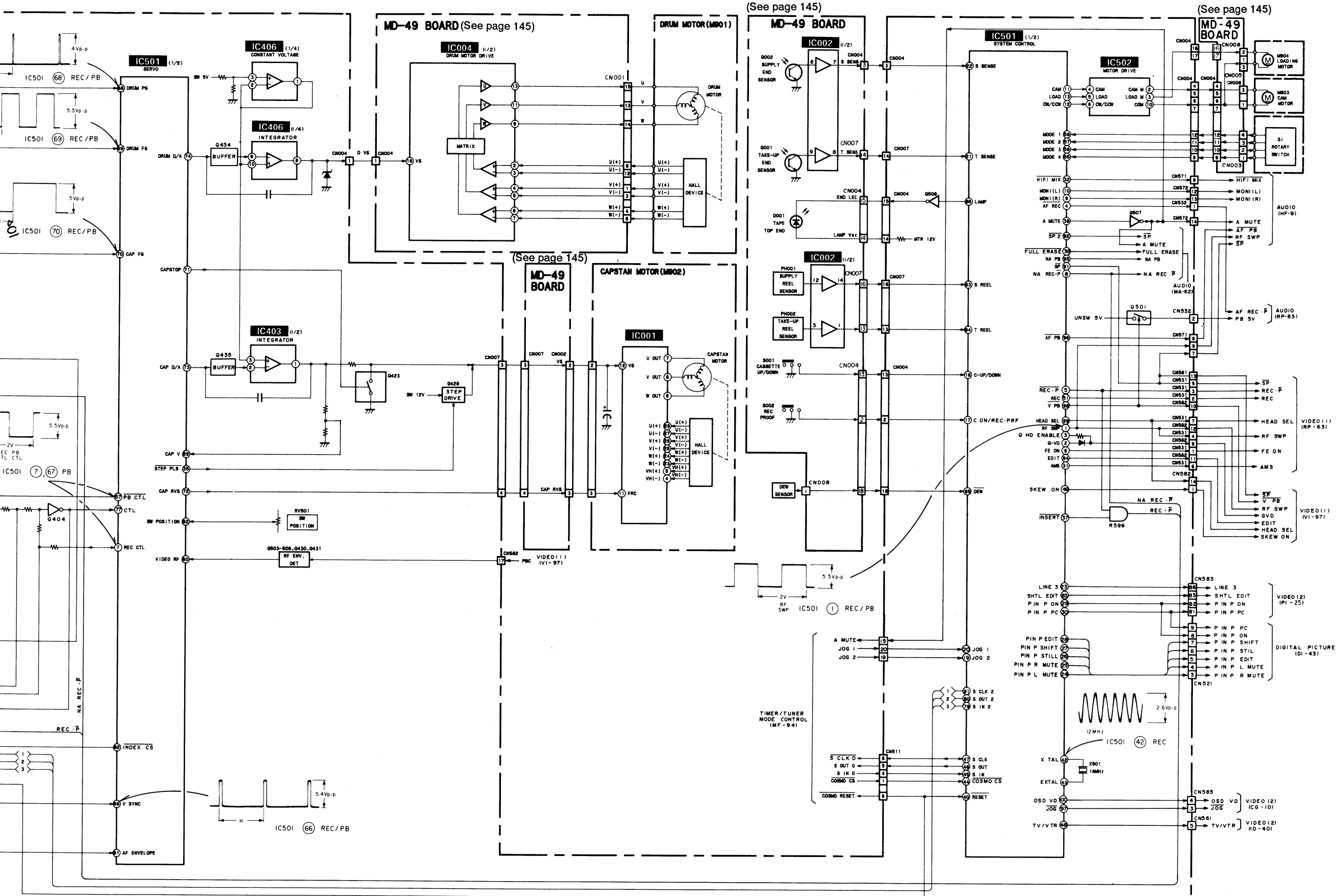


66



3-6. SERVO, SYSTEM CONTROL BLOCK DIAGRAM





3-7. SYSTEM CONTROL — VIDEO BLOCK INTERFACE

Signal	Mode		STOP/ FF/REW	TAPE LOADING	TAPE UNLOADING	PB	PB- PAUSE	SLOW	×2	CUE	REVIEW	REC	REC- PAUSE	INSERT	INSERT- PAUSE
	I/O	Pin No.													
V-PB	O	Pin ⑤ of IC501 on MA-104 board	H	H	H	L	L	L	L	L	L	H	H	H*12	H*12
HEAD SEL	O	Pin ⑤ of IC501 on MA-104 board	L	L	L	L	H	*1	H	L	L	H	L	H*12	L
RF SW P (SW25)	O	Pin ① of IC501 on MA-104 board	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2
Q VDN MUTE	O	Pin ② of IC501 on MA-82 board	L	L	L	*3	*4	*4	*4	*4	*4	L	L	L	L*11
FE ON	O	Pin ⑥ of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	*5	L	H*12	L
EDIT	O	Pin ④ of IC501 on MA-104 board	L	L	L	*6	*6	*6	*6	*6	*6	*6	L	*6	L
AMS	O	Pin ⑪ of IC501 on MA-104 board	L	L	L	L	L	L	L	*7	*7	L	L	L	L
SP	O	Pin ⑩ of IC501 on MA-104 board	*8	*8	*8	*9	*9	*9	*9	*9	*9	*8	*8	*9	*9
SP-2	O	Pin ⑫ of IC501 on MA-104 board	*8	*8	*8	*9	*9	*9	*9	*9	*9	*8	*8	*9	*9
LP-HEAD	O	Pin ③ of IC501 on MA-104 board	*9	*9	*9	*9	L	L	L	L	L	*9	*9	*9	*9
REC-P	O	Pin ⑤ of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	H	L	H	L
REC	O	Pin ⑥ of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	H	H	H	H
V SYNC	I	Pin ⑧ of IC501 on MA-104 board	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10

- *1. "H": when tape stopped. "L": when tape running (for approx. 40 msec).
- *2. Sync with drum revolution. 25 Hz 50% DUTY pulse.
- *3. "L": normally. "H": when CTL signal is not played back.
- *4. V cycle "H" pulse.
- *5. "H": when REC start (SP: for approx. 10 sec, LP: for approx. 20 sec)
- *6. "L": normally. "H": EDIT mode.
- *7. HI-Z (2.5V) in SP mode. "L": LP mode.
- *8. According to SP/LP selector. "L": SP mode, "H": LP mode.

*9. According to tape REC mode.

Signal	Mode	
	SP	LP
SP (Pin ⑩)	L	H
SP2 (Pin ⑫)	L	L
LP HEAD (Pin ③)	L	H

- *10. Composite sync signal (positive polarity).
- *11. V cycle "H" pulse: when A INS.PAUSE mode.
- *12. "L": when A INS or A INS.PAUSE mode.

3-8. SYSTEM CONTROL — SERVO PERIPHERAL CIRCUIT INTERFACE

Signal	Mode		STOP	FF	REW	TAPE LOADING
	I/O	Pin No.				
REC CTL *1	O	Pin ⑦ of IC501 on MA-104 board	*1	*1	*1	*1
CAP STOP	O	Pin ⑪ of IC501 on MA-104 board	H	L	L	L
STEP PLS	O	Pin ⑤ of IC501 on MA-104 board	H	H	H	H
CAP V *3	I	Pin ⑨ of IC501 on MA-104 board				
SW POSITION *4	I	Pin ⑫ of IC501 on MA-104 board				
PB CTL	I	Pin ⑦ of IC501 on MA-104 board	H	*6	*6	
VD CTL	I	Pin ⑦ of IC501 on MA-104 board	H	*6	*6	
DRUM PG	I	Pin ⑧ of IC501 on MA-104 board	L	*7	*7	*5
DRUM FG	I	Pin ⑨ of IC501 on MA-104 board	L	*8	*8	*5
CAP FG	I	Pin ⑩ of IC501 on MA-104 board	H/L	*6	*6	*5
INDEX CS	O	Pin ⑫ of IC501 on MA-104 board	*10	*10	*10	*10
CAP RVS	O	Pin ⑫ of IC501 on MA-104 board	H/L	L	H	L
CAP DA *14	O	Pin ⑬ of IC501 on MA-104 board	*11	*11	*11	*11
DRUM DA *14	O	Pin ⑭ of IC501 on MA-104 board	*13	*13	*13	*13
REC-P	O	Pin ⑤ of IC501 on MA-104 board	L	L	L	L
INSERT	O	Pin ⑦ of IC501 on MA-104 board	H	H	H	H

- *1. 25 Hz pulse
- *2. Tape running pulse
- *3. Input terminal for capstan constant voltage driving. Used fro cassette loading/unloading, etc.
- *4. Input terminal for switching position adjustment.
- *5. Non periodical pulse
- *6. Cycle pulse proportional to tape speed.
- *7. 25 Hz "H" pulse
- *8. 300 Hz pulse
- *9. Tape running pulse
- *10. 8 msec cycle pulse
- *11. Approx. 2 msec cycle "H" or "L" pulse.
- *12. Approx. 1.5 msec cycle "H" or "L" pulse.
- *13. Approx. 3 msec cycle "H" or "L" pulse.
- *14. Tri-state output of "H", "L" and "HI-Z (2.5V)".

×2	CUE	REVIEW	REC	REC· PAUSE	INSERT	INSERT· PAUSE
L	L	L	H	H	H*12	H*12
H	L	L	H	L	H*12	L
*2	*2	*2	*2	*2	*2	*2
*4	*4	*4	L	L	L	L*11
L	L	L	*5	L	H*12	L
*6	*6	*6	*6	L	*6	L
L	*7	*7	L	L	L	L
*9	*9	*9	*8	*8	*9	*9
*9	*9	*9	*8	*8	*9	*9
L	L	L	*9	*9	*9	*9
L	L	L	H	L	H	L
L	L	L	H	H	H	H
*10	*10	*10	*10	*10	*10	*10

pe REC mode.

ode	SP	LP
)	L	H
)	L	L
n ⑤)	L	H

signal (positive polarity).
se: when A INS.PAUSE mode.
S or A INS.PAUSE mode.

3-8. SYSTEM CONTROL — SERVO PERIPHERAL CIRCUIT INTERFACE

Signal	Mode		STOP	FF	REW	TAPE LOADING	TAPE UNLOADING	PB	PB· PAUSE	SLOW	×2	CUE	REVIEW	REC	REC· PAUSE	INSERT	INSERT· PAUSE
	I/O	Pin No.															
REC CTL *1	O	Pin ⑦ of IC501 on MA-104 board	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1
CAP STOP	O	Pin ⑦ of IC501 on MA-104 board	H	L	L	L	L	L	H	H	L	L	L	L	H	L	H
STEP PLS	O	Pin ⑤ of IC501 on MA-104 board	H	H	H	H	H	H	H	*2	H	H	H	H	H	H	H
CAP V *3	I	Pin ⑤ of IC501 on MA-104 board															
SW POSITION *4	I	Pin ⑥ of IC501 on MA-104 board															
PB CTL	I	Pin ⑦ of IC501 on MA-104 board	H	*6	*6			*1	H/L	*2	*6	*6	*6	*1	H	*1	H
VD CTL	I	Pin ⑦ of IC501 on MA-104 board	H	*6	*6			*1	H/L	*2	*6	*6	*6	*1	H	*1	H
DRUM PG	I	Pin ⑥ of IC501 on MA-104 board	L	*7	*7	*5	*5	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7
DRUM FG	I	Pin ⑤ of IC501 on MA-104 board	L	*8	*8	*5	*5	*8	*8	*8	*8	*8	*8	*8	*8	*8	*8
CAP FG	I	Pin ⑦ of IC501 on MA-104 board	H/L	*6	*6	*5	*5	*6	H/L	*9	*6	*6	*6	*6	H/L	*6	H/L
INDEX CS	O	Pin ② of IC501 on MA-104 board	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10
CAP RVS	O	Pin ⑦ of IC501 on MA-104 board	H/L	L	H	L	H	L	L	*2	L	L	H	L	L	L	L
CAP DA *14	O	Pin ③ of IC501 on MA-104 board	*11	*11	*11	*11	*11	*12	*11	*11	*12	*12	*12	*12	*11	*12	*11
DRUM DA *14	O	Pin ④ of IC501 on MA-104 board	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13
REC·P	O	Pin ⑤ of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	L	L	H	L	H	L
INSERT	O	Pin ⑦ of IC501 on MA-104 board	H	H	H	H	H	H	H	H	H	H	H	H	H	L	H

- *1. 25 Hz pulse
- *2. Tape running pulse
- *3. Input terminal for capstan constant voltage driving. Used fro cassette loading/unloading, etc.
- *4. Input terminal for switching position adjustment.
- *5. Non periodical pulse
- *6. Cycle pulse proportional to tape speed.
- *7. 25 Hz "H" pulse
- *8. 300 Hz pulse
- *9. Tape running pulse
- *10. 8 msec cycle pulse
- *11. Approx. 2 msec cycle "H" or "L" pulse.
- *12. Approx. 1.5 msec cycle "H" or "L" pulse.
- *13. Approx. 3 msec cycle "H" or "L" pulse.
- *14. Tri-state output of "H", "L" and "HI-Z (2.5V)".

3-9. SYSTEM CONTROL — MECHANISM BLOCK INTERFACE

Signal	Mode		HI-SPEED REW	EJECTED	CASSETTE LOADING	CASSETTE UNLOADING	TAPE LOADING	TAPE UNLOADING	STOP	FF	REW	PB	PB- PAUSE	SLOW	×2	CUE	REVIEW	REC	REC PAUSE
	I/O	Pin No.																	
CAM * 1	O	Pin ⑪ of IC501 on MA-104 board	L	L	L	L	H	H	L	L	L	L	L	L	L	L	L	L	L
LOAD	O	Pin ⑬ of IC501 on MA-104 board	L	L	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L
CW/CCW	O	Pin ⑫ of IC501 on MA-104 board			H	L	H	L											
MODE 1	I	Pin ⑤ of IC501 on MA-104 board	H	L	L	L	H	H	L	H	H	H	L	L	H	H	H	H	L
MODE 2	I	Pin ⑤ of IC501 on MA-104 board	L	H	H	H	H	H	L	L	L	L	H	H	L	L	L	L	H
MODE 3	I	Pin ⑤ of IC501 on MA-104 board	H	H	H	H	L	L	L	L	L	H	H	H	H	H	L	H	H
MODE 4	I	Pin ⑤ of IC501 on MA-104 board	H	H	H	H	H	H	L	H	H	L	L	L	L	L	L	L	L
REC PRF	I	Pin ⑪ of IC501 on MA-104 board	*2	L	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2
C-UP/DOWN	I	Pin ⑩ of IC501 on MA-104 board	L	H	H→L	L→H	L	L	L	L	L	L	L	L	L	L	L	L	L
T REEL	I	Pin ④ of IC501 on MA-104 board	*3	H/L	H/L	H/L	H/L	H/L	H/L	*3	*3	*3	H/L	*3	*3	*3	*3	*3	H/L
S REEL	I	Pin ④ of IC501 on MA-104 board	*3	H/L	H/L	H/L	*3	*3	H/L	*3	*3	*3	H/L	*3	*3	*3	*3	*3	H/L
LAMP	O	Pin ⑤ of IC501 on MA-104 board	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4
DEW	I	Pin ⑤ of IC501 on MA-104 board	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5
CAP V	I	Pin ⑤ of IC501 on MA-104 board	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6
CAP STOP	O	Pin ⑪ of IC501 on MA-104 board	L	H	H	H	L	L	H	L	L	L	H	H	L	L	L	L	H
CAP RVS	O	Pin ⑫ of IC501 on MA-104 board	H	H			L	H	H/L	L	H	L	L	L/*9	L	L	H	L	L
CAP DA *8	O	Pin ⑬ of IC501 on MA-104 board																	
T SENS	I	Pin ② of IC501 on MA-104 board	*7	*4	*4	*4	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7
S SENS	I	Pin ② of IC501 on MA-104 board	*7	*4	*4	*4	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	7	*7	*7

- *1. "H": when mechanical mode shifted.
- *2. "L": when erasure protection tab is removed, "H": when not removed.
- *3. Cycle pulse proportional to reel rotation speed.
- *4. Approx. 2 msec cycle "H" pulse.
- *5. "H": normally.
- *6. Input terminal for capstan constant voltage driving. Used for FF/REW, cassette loading/unloading, etc.
- *7. "L": normally. 2 msec cycle "H" pulse: when tape top or end is detected.
- *8. Tri-state output of "H", "L" and "HI-Z (2.5V)".
- *9. Tape running pulse

3-10. SYSTEM CONTROL — SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE

Signal	I/O	Pin No.	Input/output level
$\overline{\text{COSMO}}\cdot\text{RESET}$	I	Pin ⑩ of IC501 on MA-104 board	"H": normally. "L": when power failure detected or power failure restored.
$\overline{\text{COSMO}}\cdot\text{CS}$	I	Pin ④ of IC501 on MA-104 board	Chip select signal from timer micro computer. V cycle "L" pulse.
SI•BUS	I	Pin ⑤ of IC501 on MA-104 board	Serial communication data from timer micro computer. V cycle "L" pulse.
SO•BUS	O	Pin ⑥ of IC501 on MA-104 board	Serial communication data to timer micro computer. V cycle "L" pulse.
S CLK	I	Pin ⑦ of IC501 on MA-104 board	Serial communication clock with timer micro computer. V cycle "L" pulse.
S IN 2	I	Pin ⑨ of IC501 on MA-104 board	Serial communication data from INDEX IC. 8 msec cycle "L" pulse.
S OUT 2	O	Pin ⑩ of IC501 on MA-104 board	Serial communication data to INDEX IC. 8 msec cycle "L" pulse.
S CLK 2	O	Pin ⑪ of IC501 on MA-104 board	Serial communication clock to INDEX IC. 8 msec cycle "L" pulse.
INDEX $\overline{\text{CS}}$	O	Pin ⑫ of IC501 on MA-104 board	Chip select signal to INDEX IC. 8 msec cycle "L" pulse.

3-11. SYSTEM CONTROL — AUDIO BLOCK INTERFACE

Signal	Mode		STOP/ FF/REW	TAPE LOADING	TAPE UNLOADING	PB	PB• PAUSE	SLOW	×2	CUE	REVIEW	REC	REC• PAUSE	INSERT	INSERT• PAUSE
	I/O	Pin No.													
$\overline{\text{AF}}\text{PB}$	O	Pin ⑨ of IC501 on MA-104 board	H	H	H	L	L	L	L	L	L	H	H	*1	H
MONI (L)	O	Pin ⑩ of IC501 on MA-104 board	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1
MONI (R)	O	Pin ⑪ of IC501 on MA-104 board	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1
AF ENVELOP	I	Pin ⑫ of IC501 on MA-104 board													
NA•PB	O	Pin ⑬ of IC501 on MA-104 board	L	L	L	H	H	H	H	H	H	L	L	*1	L
$\overline{\text{A MUTE}}$	O	Pin ⑭ of IC501 on MA-104 board	L	L	L	*4	H	H	H	H	H	H	H	H	H
SP•2	O	Pin ⑮ of IC501 on MA-104 board	*2	*2	*2	*3	*3	*3	*3	*3	*3	*2	*2	*3	*3
REC• $\overline{\text{P}}$	O	Pin ⑯ of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	H	L	H	L

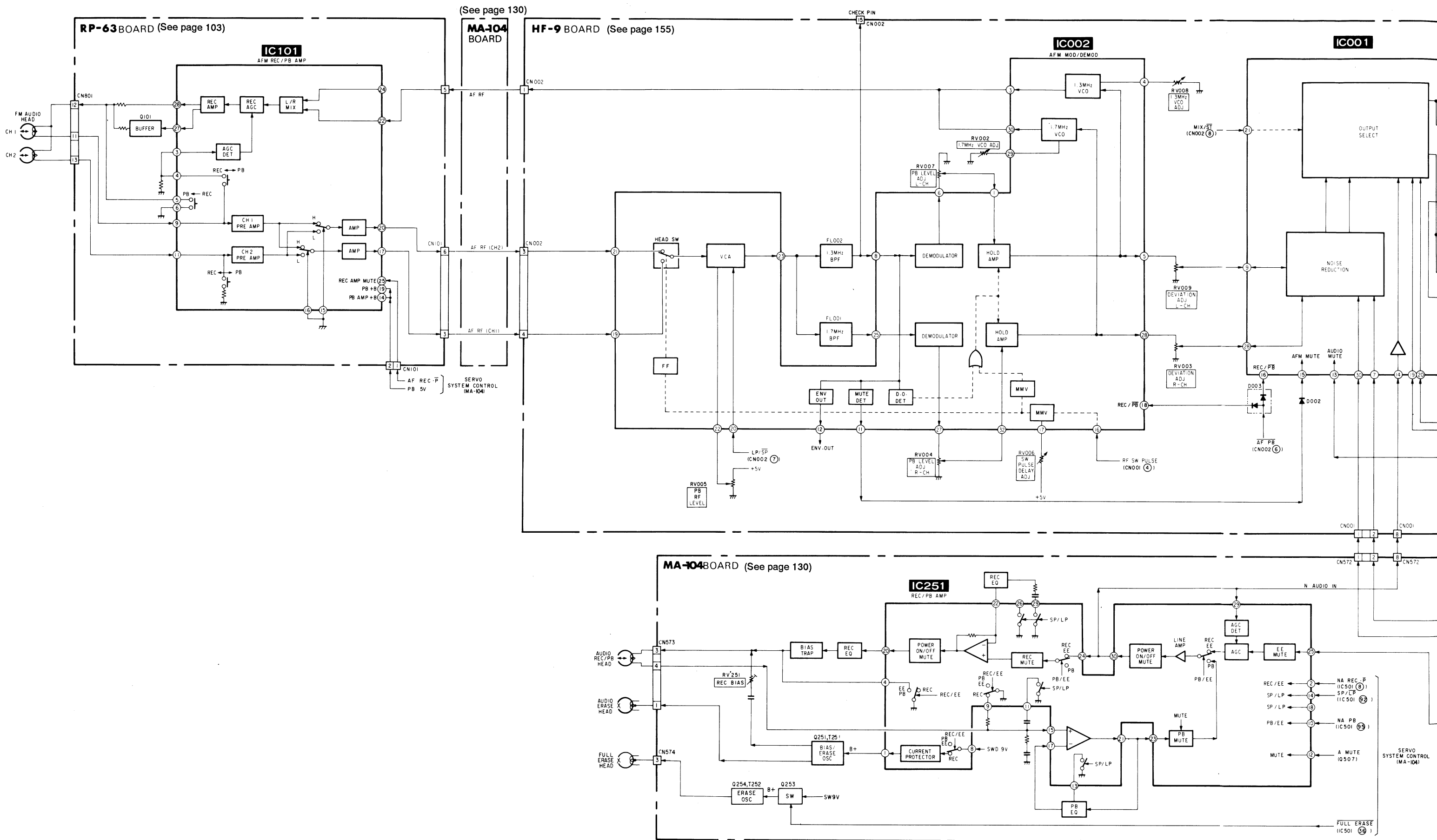
*1. According to audio monitor

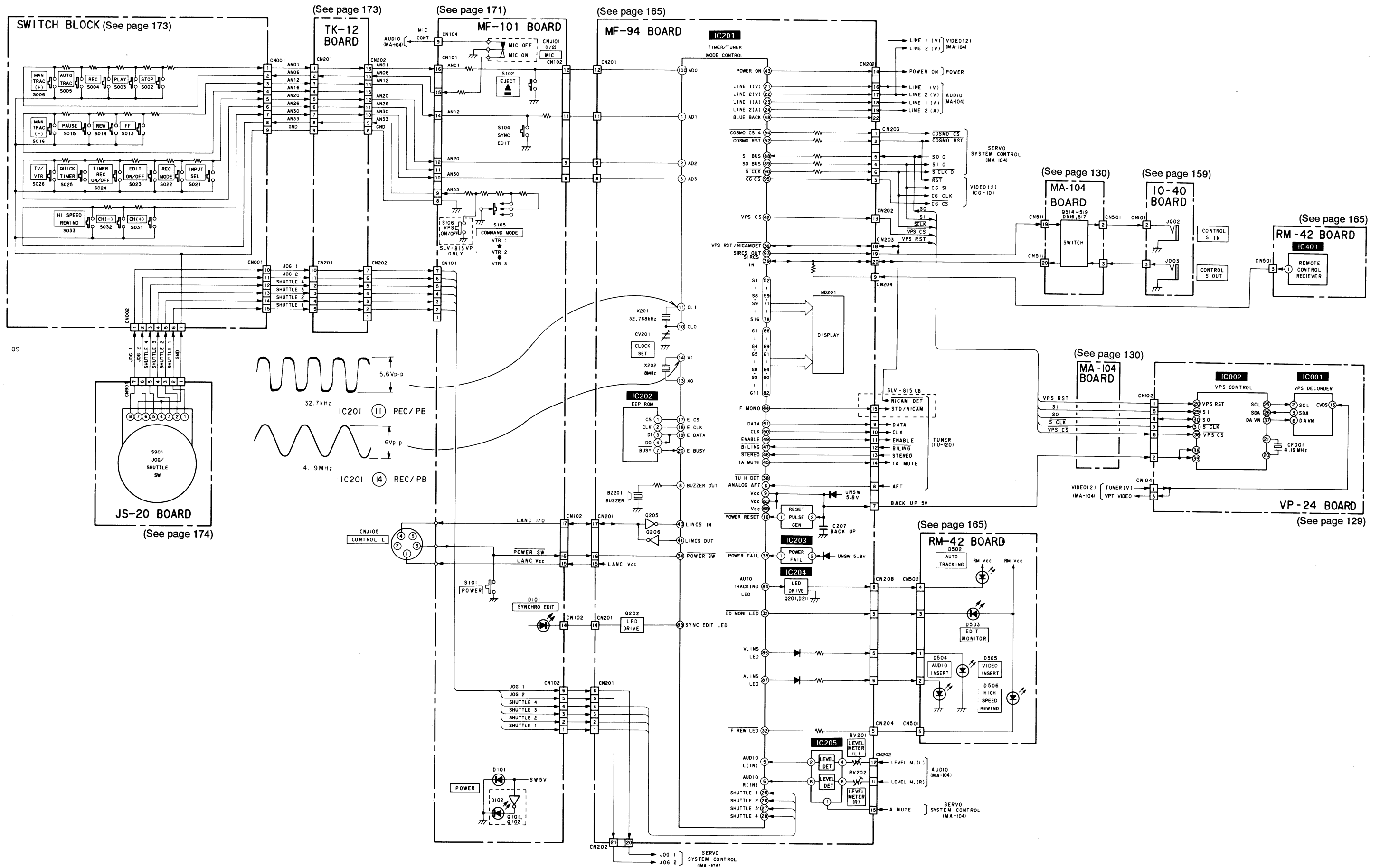
*2. According to SP/LP selector. "L": SP mode, "H": LP mode.

*3. According to tape REC mode. "L": SP mode, "H": LP mode.

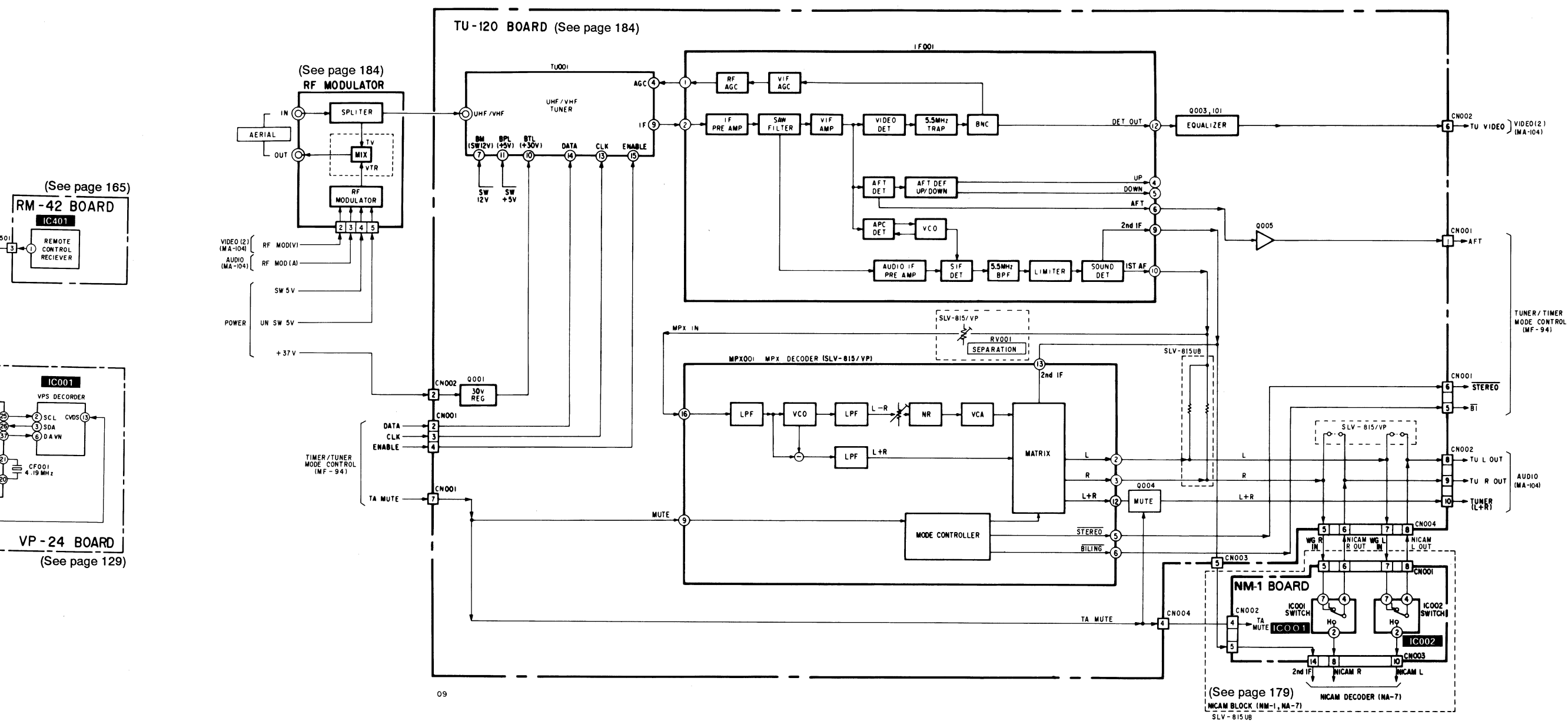
*4. "H": when CTL signal is not played back.

3-12. AUDIO BLOCK DIAGRAM

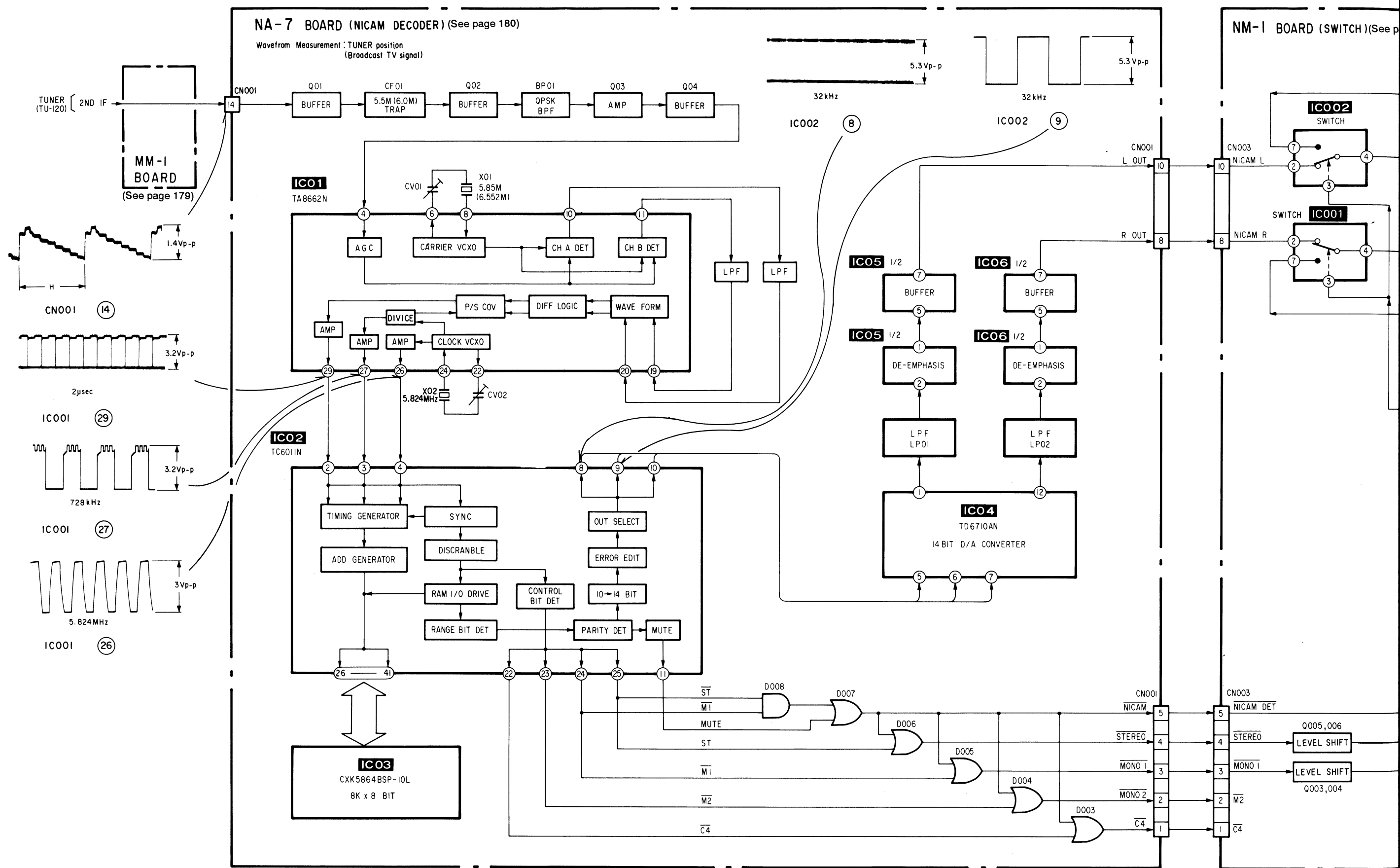


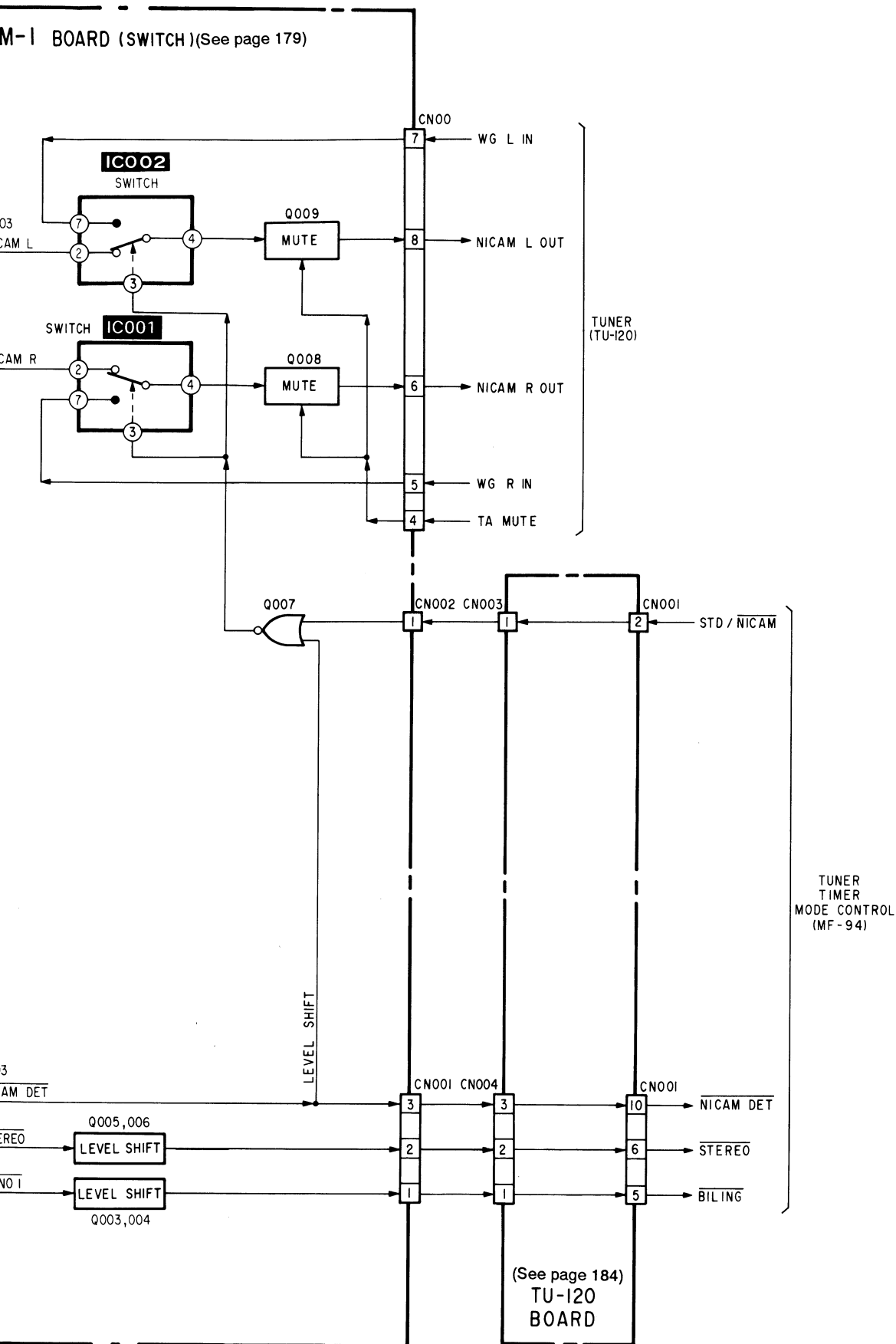


3-14. TUNER BLOCK DIAGRAM



3-15. NICAM BLOCK DIAGRAM (SLV-815UB ONLY)

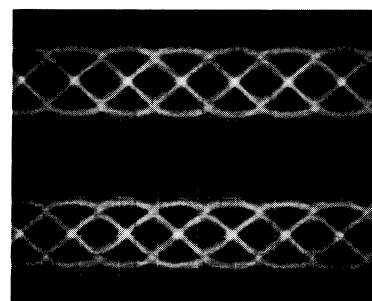




The input level at Pin ④ is 150 mVp-p for standard signal (P/S2=20 dB).

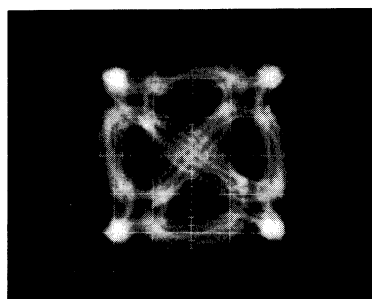
After passing through AGC, the signal that is input from Pin ④ is subject to phase synchronization detection by two VCXO, that is by a signal which is phase synchronized with 2nd IF carrier 5.58 MHz [± 6.552 MHz] and a signal whose phase is 180° different from it; next it is output as eye pattern through Pins ⑩, ⑪ from where it then passes through the prescribed base band LPF, and is once again input into IC01.

The signal entering Pins ⑩, ⑪ (Fig. 3-1.) passes through wave shaper, difference logic, parallel to serial conversion; and is then output through Pin ⑫ as PCM data.



Eye pattern
(Pin ⑩ of IC01 up,
Pin ⑪ of IC01 down)

Fig. 3-1.

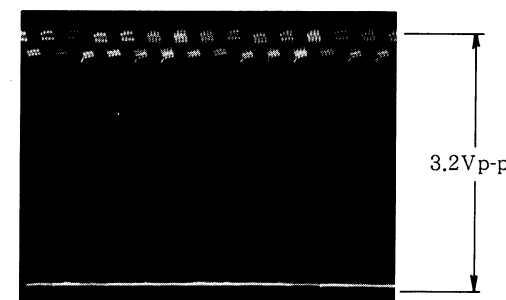


Eye pattern
(X-Y wave of Fig. 3-1.)

Fig. 3-2.

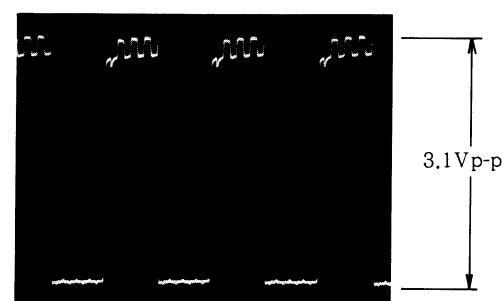
Similarly, PCM master clock 5.824 MHz is output through Pin ⑫, and its 1/8th 728kHz bit clock through Pin ⑬.

The PCM data & clocks that are output through Pins ⑫ (Fig. 6.), ⑬ (Fig. 5.), ⑭ (Fig. 4.) of IC01 are input into the next PCM decoder IC02.



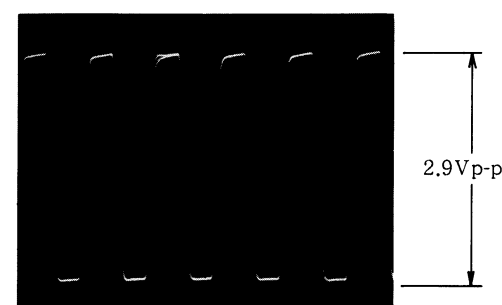
PCM data
(Pin ⑫ of IC01)

Fig. 4.



728 kHz bit clock
(Pin ⑬ of IC01)

Fig. 5.

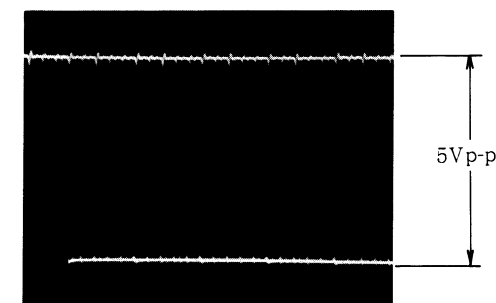


5.824 MHz master clock
(Pin ⑫ of IC01)

Fig. 6.

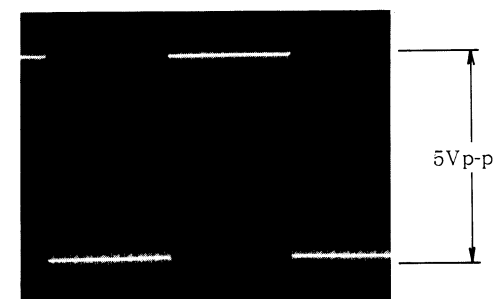
The PCM decoder executes various signal processing, like, descramble, deinterleave, range bit detection, 10-to-14 bit elongation, error compensation, muting, and so on.

As a result of the various signal processing executed by IC02, identification signal as well as the shift clock (Fig. 9.), work clock (Fig. 8.), DA data (Fig. 7.), etc. that is needed by D/A converter are output.



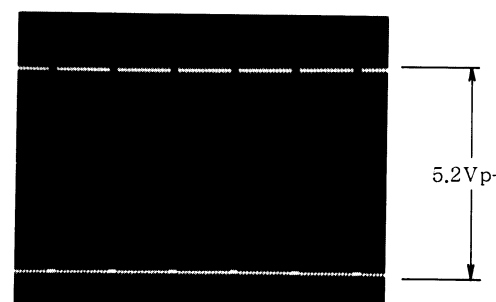
DA data
(Pin ⑩ of IC02)

Fig. 7.



Word clock
(Pin ⑨ of IC02)

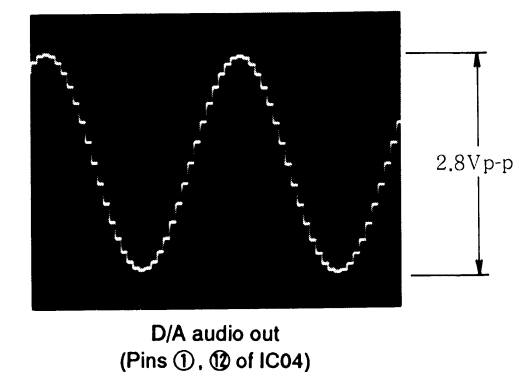
Fig. 8.



Shift clock
(Pin ⑧ of IC02)

Fig. 9.

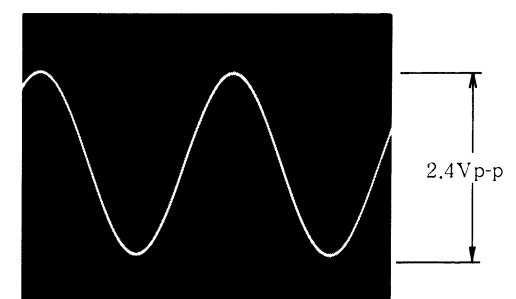
At IC04, the input DA data, after passing through integrator and sample-hold circuit, is converted into analog signal by a 14-bit 2ch D/A converter; and is then output through Pin ① Lch (Fig. 10.), Pin ② Rch (Fig. 10.).



D/A audio out
(Pins ①, ② of IC04)

Fig. 10.

After passing through L.P.F., the L, R signal passes through buffer and de-emphasis circuit that is composed of IC05, IC06; and is then output as CN01 Pin ⑩ L (Fig. 11.), Pin ⑨ R (Fig. 11.) signal.



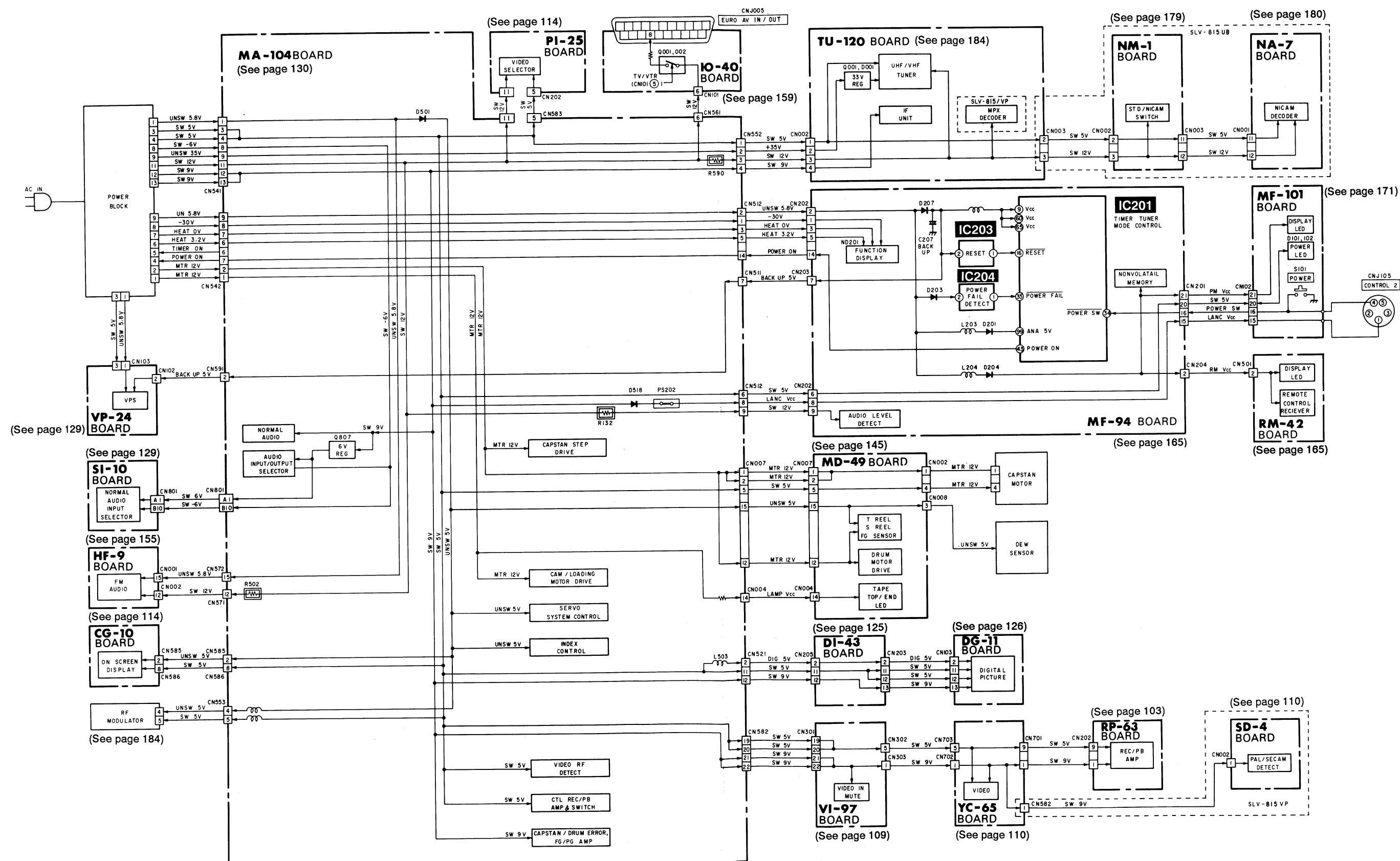
Audio out
(Pins ⑨, ⑩ of IC01)

Fig. 11.

Identification signal is prepared with a combination of ST, M, MUTE signal; and it is then input into IC201 on MF-94 board.

* Frequency shown in [] is UK board value.

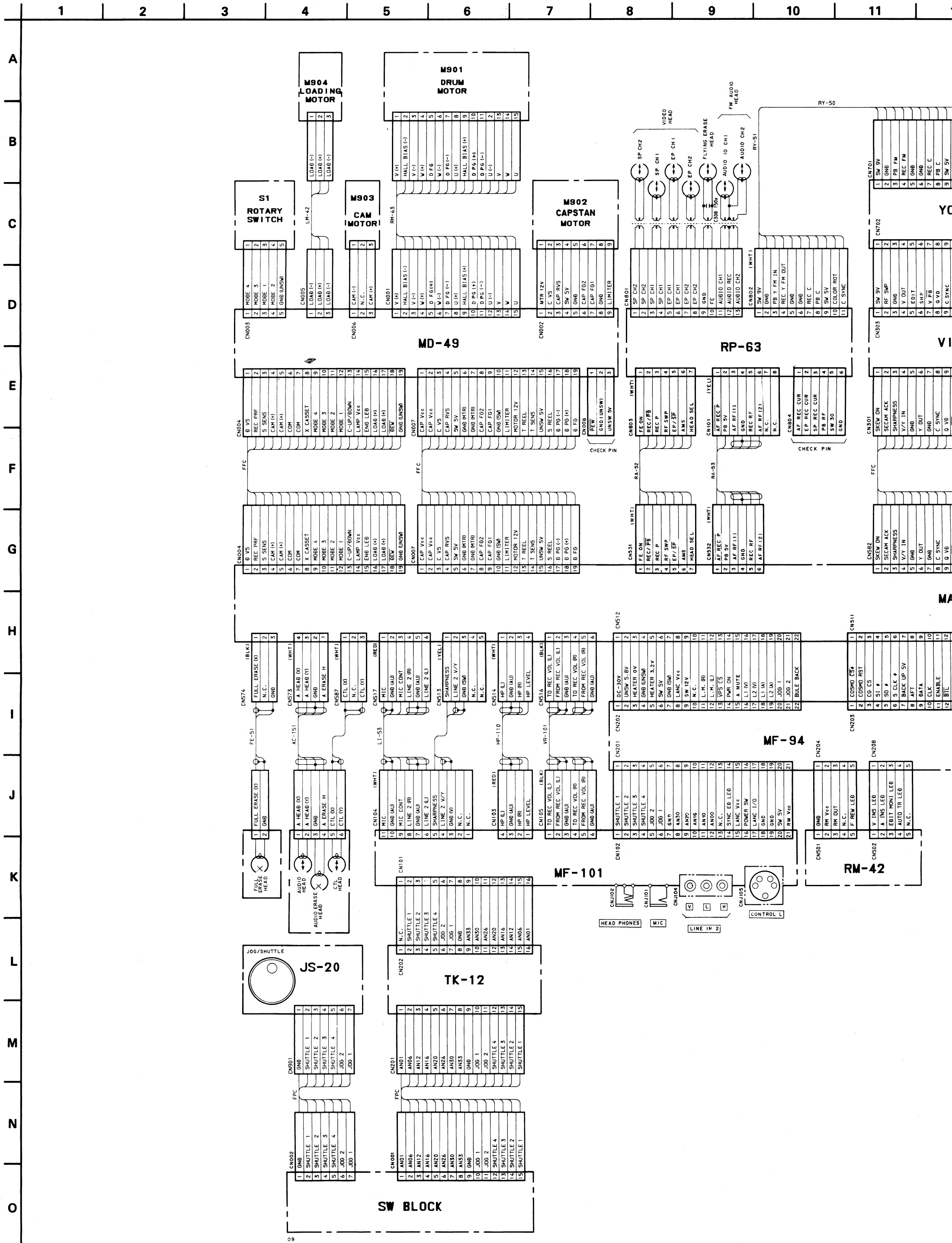
3-17. POWER BLOCK DIAGRAM



SECTION 4

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM





THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For printed wiring boards:

- — : indicated a lead wire mounted on the component side.
- : indicated a lead wire mounted on the conductor side.
- : Through hole.
- : Parts mounted on the conductor side.
- ▨ : Pattern from the side which enables seeing.
- ▩ : Pattern of the rear side.
- : Circled numbers refer to waveforms.

Caution:
Pattern face side: Parts on the pattern face side seen from the (Conductor Side) pattern face are indicated.
Parts face side: Parts on the parts face side seen from the (Component Side) parts face are indicated.

For schematic diagram:

- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W unless otherwise noted.
Chip resistors: 1/10W unless otherwise noted.
kΩ: 1000Ω, MΩ: 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF: μμF.
50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⎓ : nonflammable resistor.
- ⎓ : fusible resistor.
- : panel designation.
- △ : internal component.
- : adjustment for repair.
- : B + Line.
- : B - Line.
- ⇒ : IN/OUT direction of B line (+, -).
- Circled numbers refer to waveforms.
- Voltages are dc between ground and measurement points.
- Readings are taken with a color-bar signal input.
- Readings are taken with a digital multimeter (DC10MΩ).
- Voltage are taken with a VOM (Input impedance 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

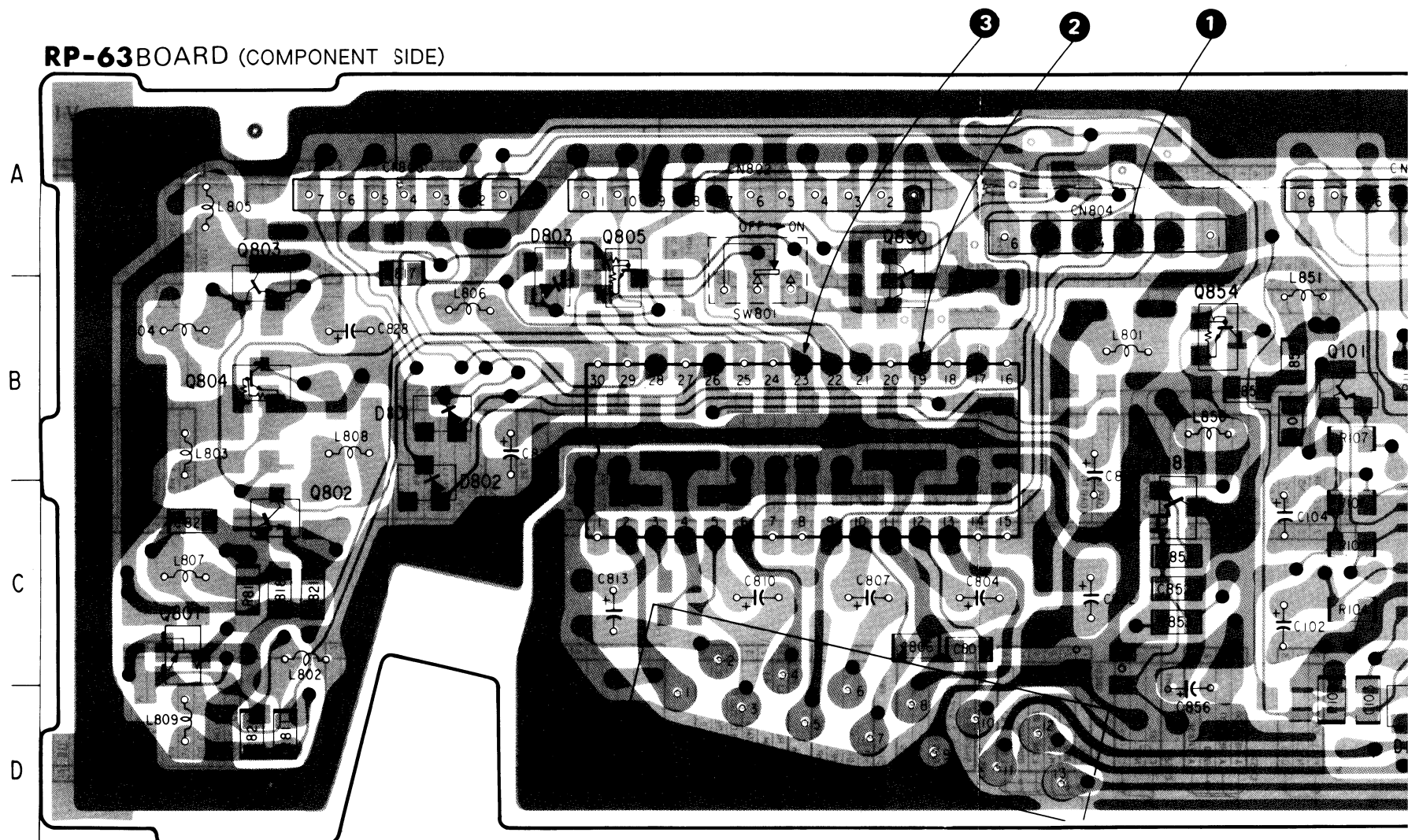
99

RP-63 (HEAD AMP) PRINTED WIRING BOARD

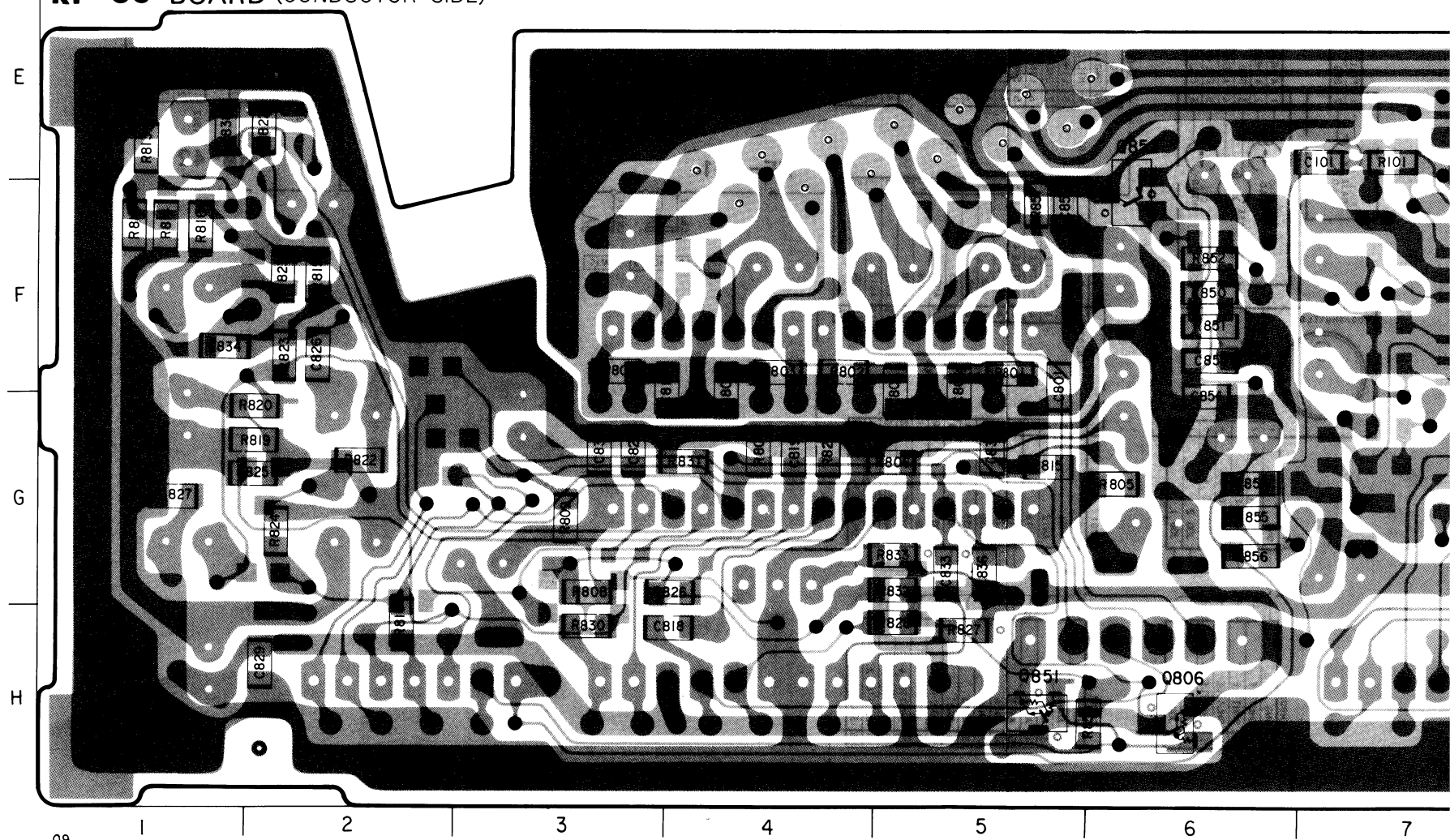
— Ref. No. RP-63 BOARD: 6000 series —

DIODE		IC		TRANSISTOR	
D102	8-719-400-18	DIODE	MA152WK	Q101	8-729-216-22
D801	8-719-400-18	DIODE	MA152WK	Q801	8-729-216-22
D802	8-719-400-18	DIODE	MA152WK	Q802	8-729-901-78
D803	8-719-400-18	DIODE	MA152WK	Q803	8-729-901-78
				Q804	8-729-901-01
				Q805	8-729-901-01
				Q806	8-729-901-01
				Q850	8-729-301-98
				Q851	8-729-901-01
				Q852	8-729-216-22
				Q853	8-729-216-22
				Q854	8-729-901-01

RP-63 BOARD (COMPONENT SIDE)



RP-63 BOARD (CONDUCTOR SIDE)



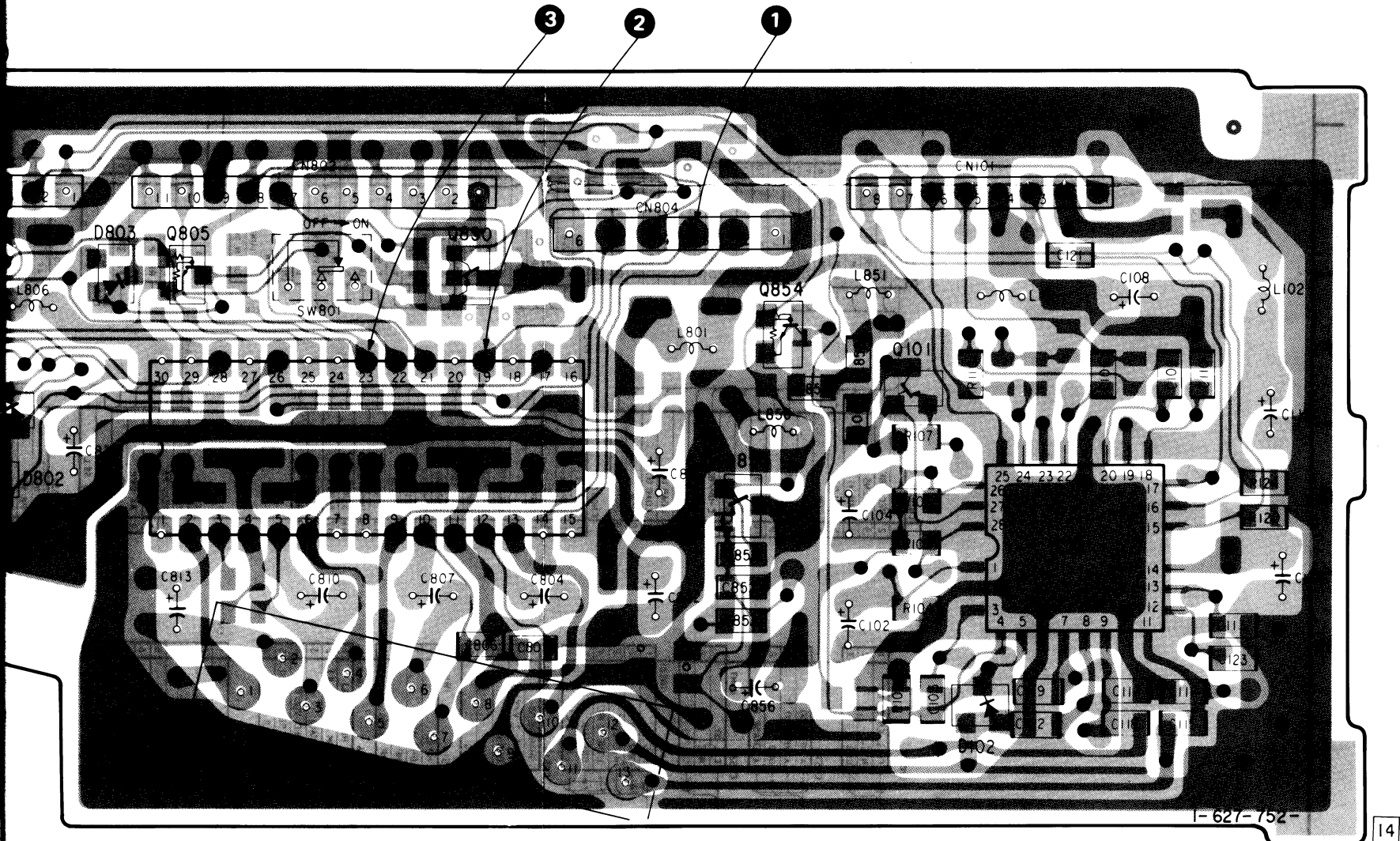
RP-63 BOARD

D102	D-7
D801	B-2
D802	B-2
D803	A-3
IC101	C-8
IC801	B-4
Q101	B-7
Q801	C-1
Q802	C-2
Q803	B-2
Q804	B-2
Q805	A-3
Q806	H-6
Q850	A-5
Q851	H-5
Q852	F-6
Q853	C-6
Q854	B-5

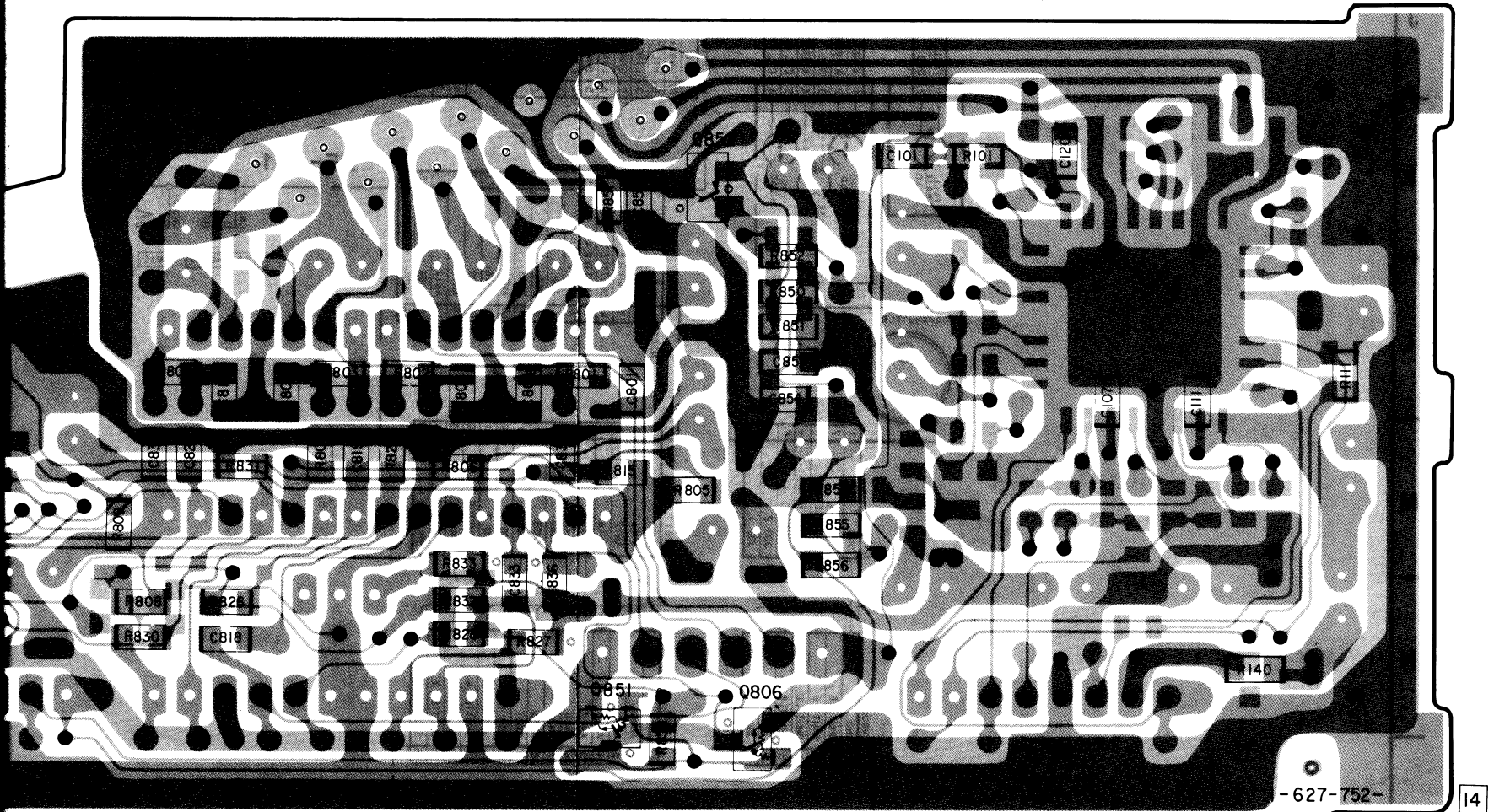
TRANSISTOR

115MP
115MP
8019NT

Q101	8-729-216-22	TRANSISTOR 2SA1162
Q801	8-729-216-22	TRANSISTOR 2SA1162
Q802	8-729-901-78	TRANSISTOR 2SC2412K-R
Q803	8-729-901-78	TRANSISTOR 2SC2412K-R
Q804	8-729-901-01	TRANSISTOR DTC144EK
Q805	8-729-901-01	TRANSISTOR DTC144EK
Q806	8-729-901-01	TRANSISTOR DTC144EK
Q850	8-729-301-98	TRANSISTOR 2SB1000A-L
Q851	8-729-901-01	TRANSISTOR DTC144EK
Q852	8-729-216-22	TRANSISTOR 2SA1162
Q853	8-729-216-22	TRANSISTOR 2SA1162
Q854	8-729-901-01	TRANSISTOR DTC144EK

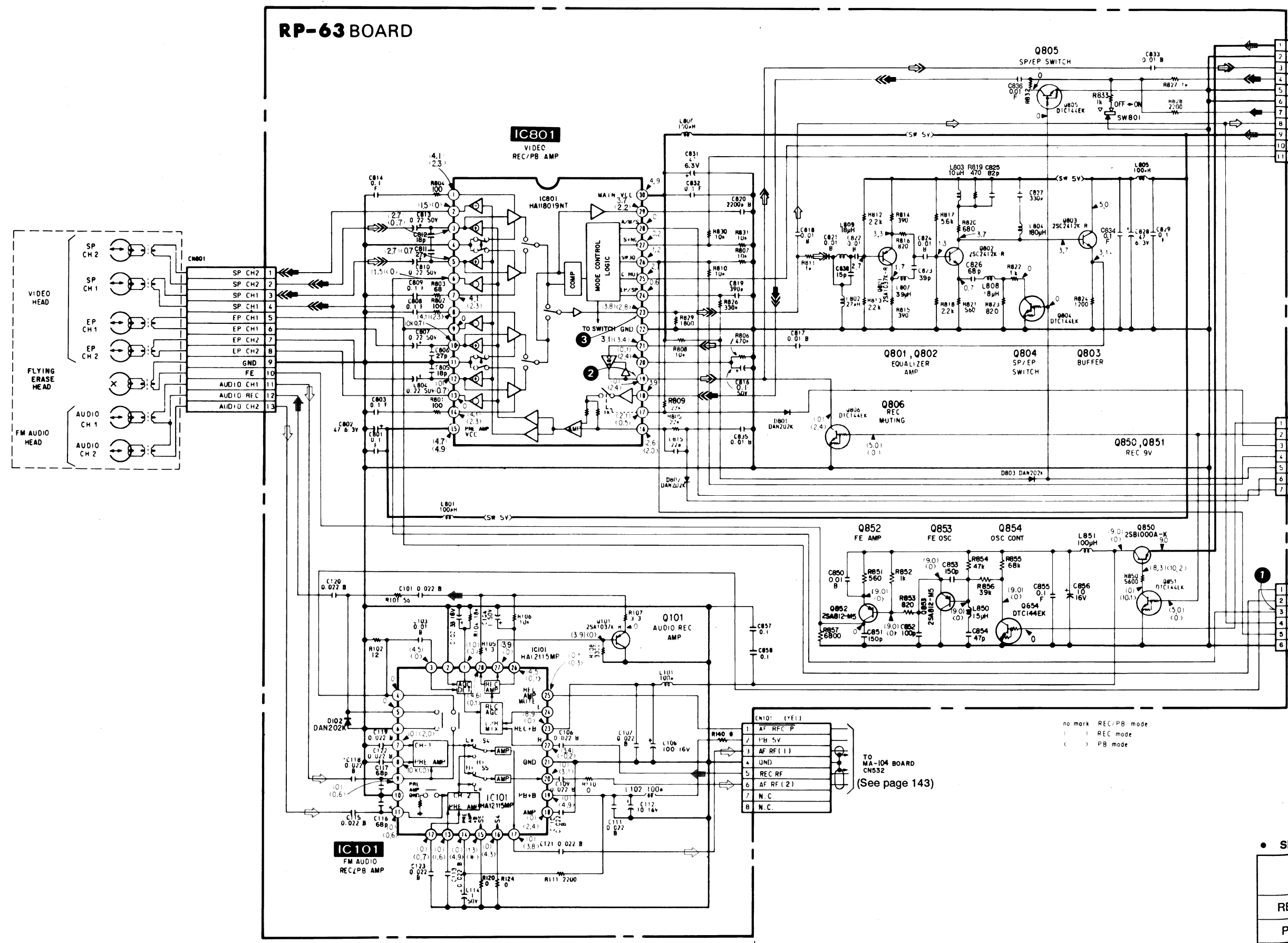


DE)



RP-63 (HEAD AMP) SCHEMATIC DIAGRAM

— Ref. No. RP-63 BOARD: 6000 series —



A

B

C

D

E

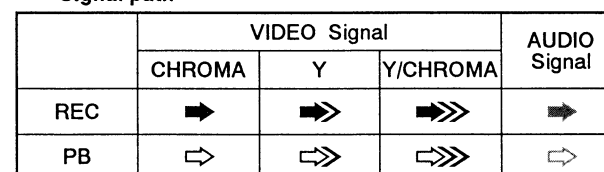
F

LG

1

1.

1.



DIODE

D705	8-719-104-34	DIODE 1S2835-T1
D801	8-719-400-18	DIODE DAN202K-T-146
D803	8-719-400-18	DIODE DAN202K-T-146

IC

IC701	8-759-420-07	IC AN3231K
IC702	8-752-321-89	IC CXL5003P
IC801	8-759-320-78	IC HA118016NT
IC802	8-759-822-05	IC LA7213
IC860	8-759-420-53	IC AN3592K

IC861	8-759-991-54	IC MSM6989RS
IC862	8-752-006-12	IC CX20061
IC863	8-759-822-05	IC LA7213
IC864	8-759-000-49	IC MC14066BCP

TRANSISTOR

Q702	8-729-216-22	TRANSISTOR 2SA1162
Q703	8-729-901-47	TRANSISTOR DTA143EK
Q704	8-729-901-01	TRANSISTOR DTC144EK
Q705	8-729-100-66	TRANSISTOR 2SC1623
Q706	8-729-216-22	TRANSISTOR 2SA1162

Q707	8-729-100-66	TRANSISTOR 2SC1623
Q709	8-729-100-66	TRANSISTOR 2SC1623
Q711	8-729-216-22	TRANSISTOR 2SA1162
Q715	8-729-901-01	TRANSISTOR DTC144EK

Q716	8-729-901-01	TRANSISTOR DTC144EK
------	--------------	---------------------

Q717	8-729-100-66	TRANSISTOR 2SC1623
Q719	8-729-216-22	TRANSISTOR 2SA1162
Q721	8-729-100-66	TRANSISTOR 2SC1623
Q722	8-729-901-01	TRANSISTOR DTC144EK
Q723	8-729-901-01	TRANSISTOR DTC144EK

Q801	8-729-100-66	TRANSISTOR 2SC1623
Q802	8-729-901-01	TRANSISTOR DTC144EK (SLV-815VP)
Q803	8-729-100-66	TRANSISTOR 2SC1623
Q804	8-729-900-53	TRANSISTOR DTC144EK
Q805	8-729-216-22	TRANSISTOR 2SA1162

Q806	8-729-901-01	TRANSISTOR DTC144EK
Q807	8-729-100-66	TRANSISTOR 2SC1623 (SLV-815VP)
Q808	8-729-100-66	TRANSISTOR 2SC1623
Q809	8-729-100-66	TRANSISTOR 2SC1623
Q810	8-729-901-04	TRANSISTOR DTA144EK

Q811	8-729-216-22	TRANSISTOR 2SA1162
Q812	8-729-100-66	TRANSISTOR 2SC1623
Q852	8-729-901-01	TRANSISTOR DTC144EK (SLV-815VP)
Q860	8-729-809-77	TRANSISTOR 2SC3142-J4
Q862	8-729-901-01	TRANSISTOR DTC144EK

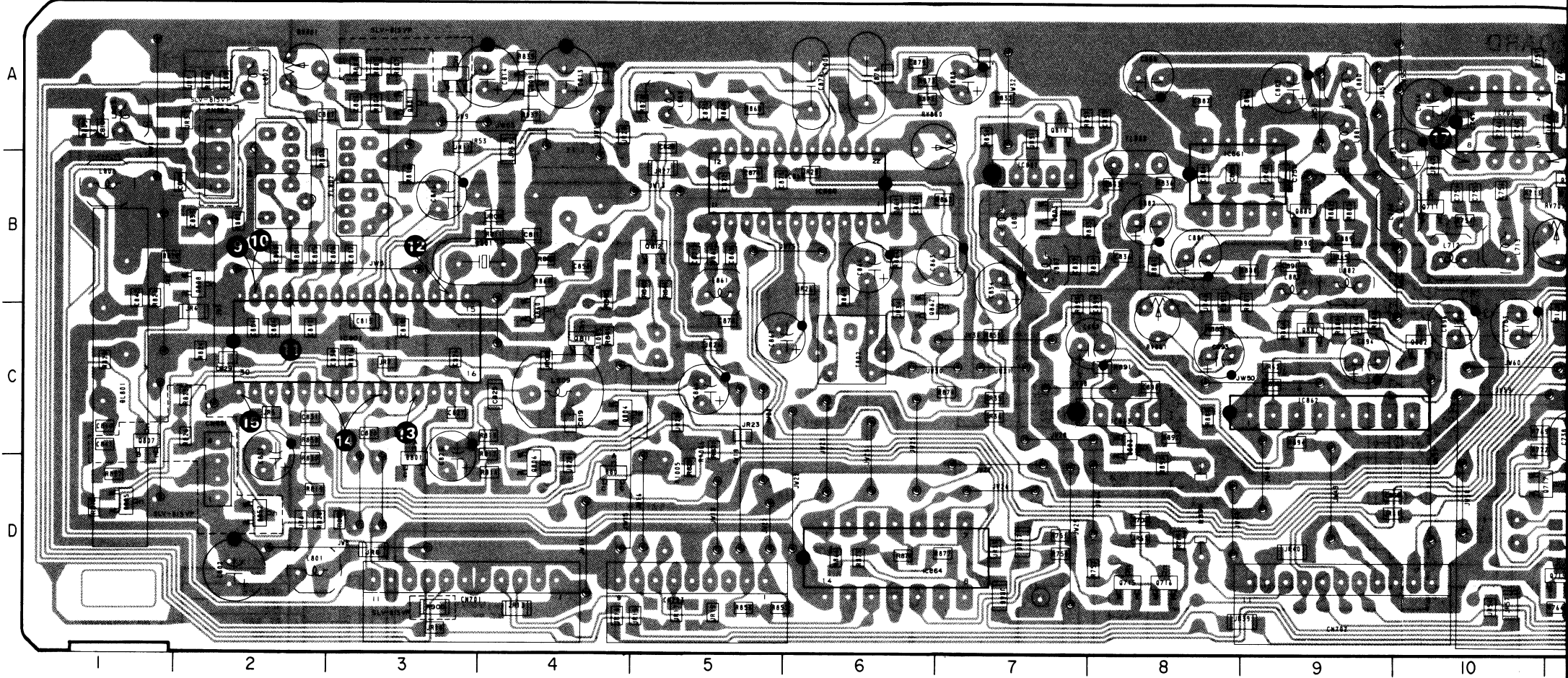
Q880	8-729-100-66	TRANSISTOR 2SC1623
Q881	8-729-100-66	TRANSISTOR 2SC1623
Q882	8-729-216-22	TRANSISTOR 2SA1162
Q883	8-729-100-66	TRANSISTOR 2SC1623

YC-65 BOARD	
D705	D-11
D801	D-3
D803	D-4

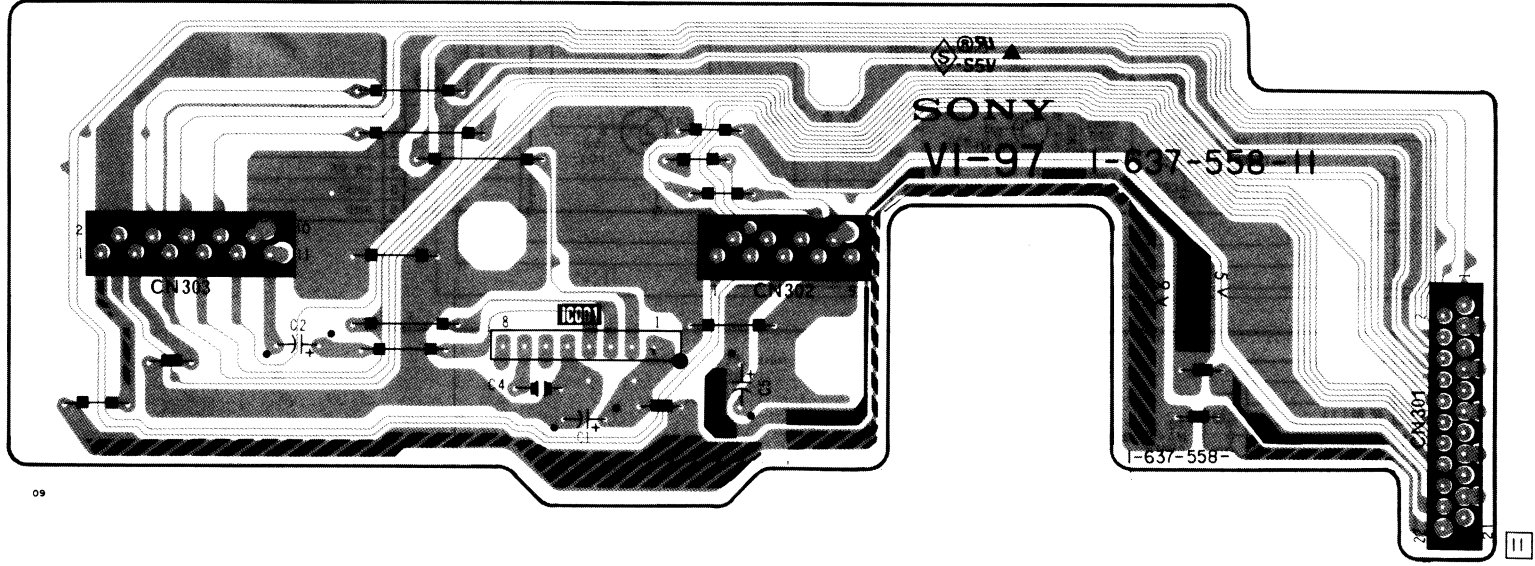
IC701	C-13
IC702	A-10
IC801	C-3
IC802	B-7
IC860	B-6
IC861	A-8
IC862	C-9
IC863	C-8
IC864	D-6

Q702	B-11
Q703	D-11
Q704	D-12
Q705	A-11
Q706	A-11
Q707	D-14
Q709	D-13
Q711	B-10
Q715	D-8
Q716	D-8
Q717	D-11
Q719	D-11
Q721	D-12
Q722	D-11
Q723	D-12
Q801	A-3
Q802	A-3
Q803	B-2
Q804	C-4
Q805	D-1
Q806	D-4
Q807	C-1
Q808	B-2
Q809	A-2
Q810	A-7
Q811	C-4
Q812	B-5
Q852	D-2
Q860	B-4
Q862	B-6
Q880	B-9
Q881	C-9
Q882	C-10
Q883	C-8

YC-65 BOARD

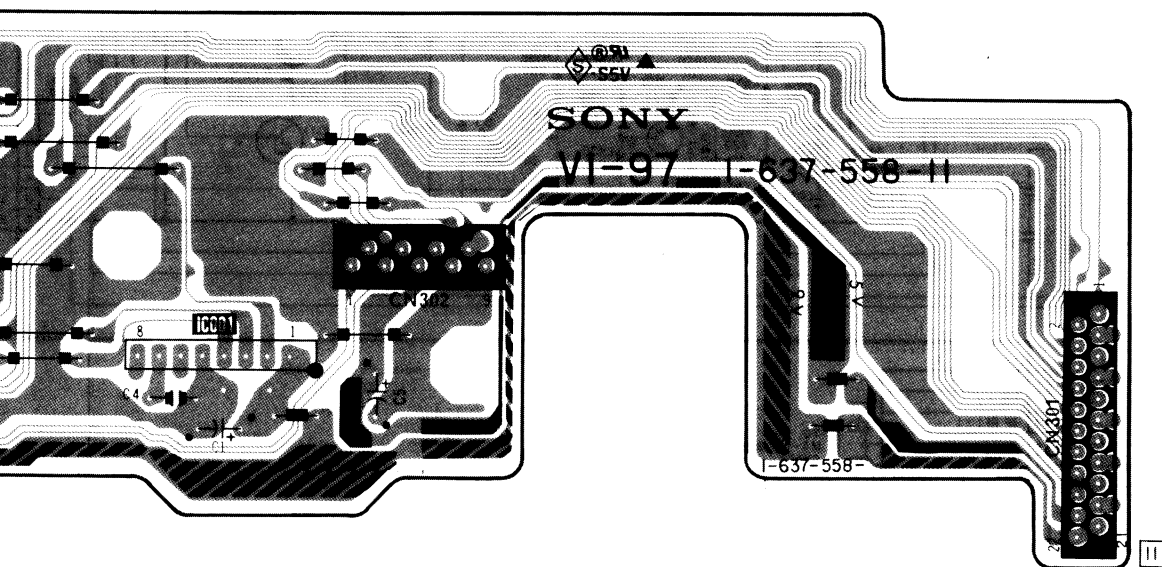
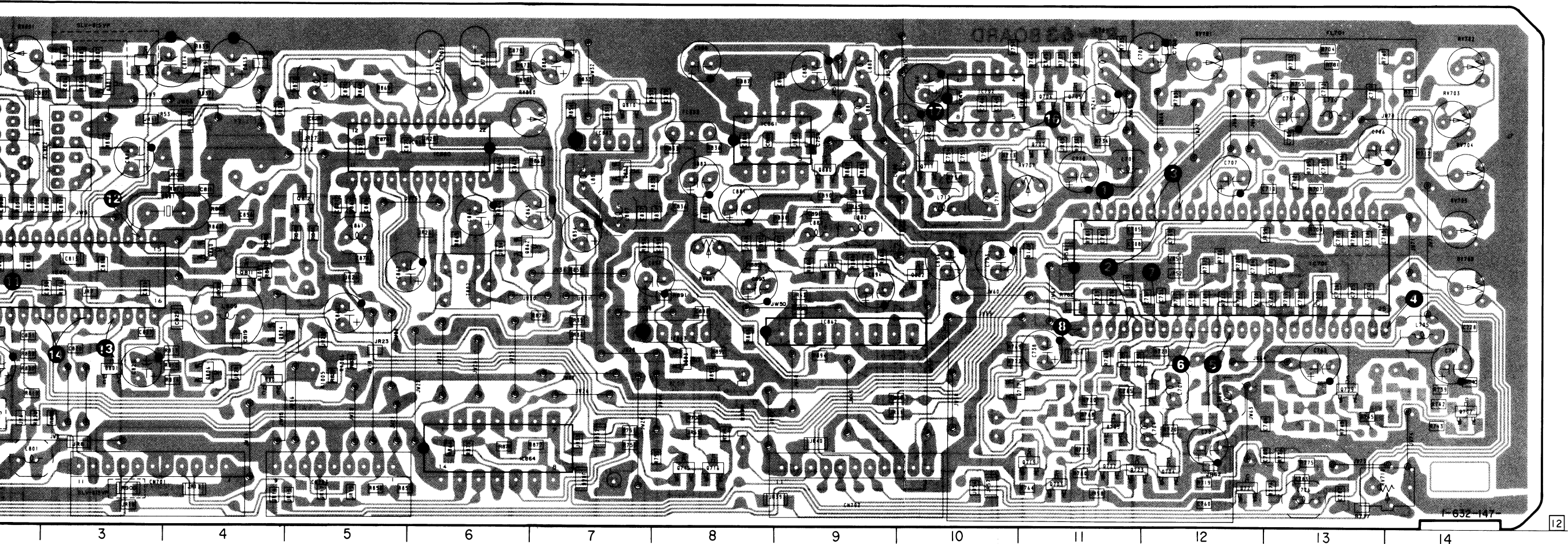


VI-97 BOARD

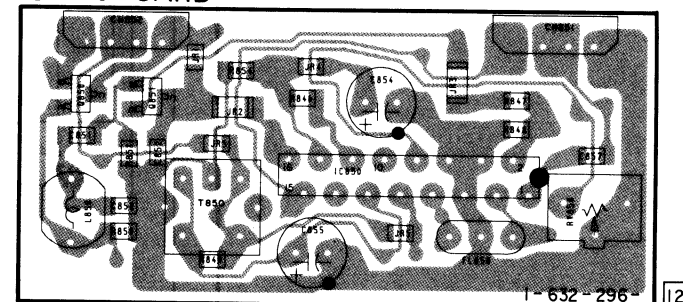


IC

IC001	8-759-800-81	IC LA7016
-------	--------------	-----------



SD-4 BOARD



IC

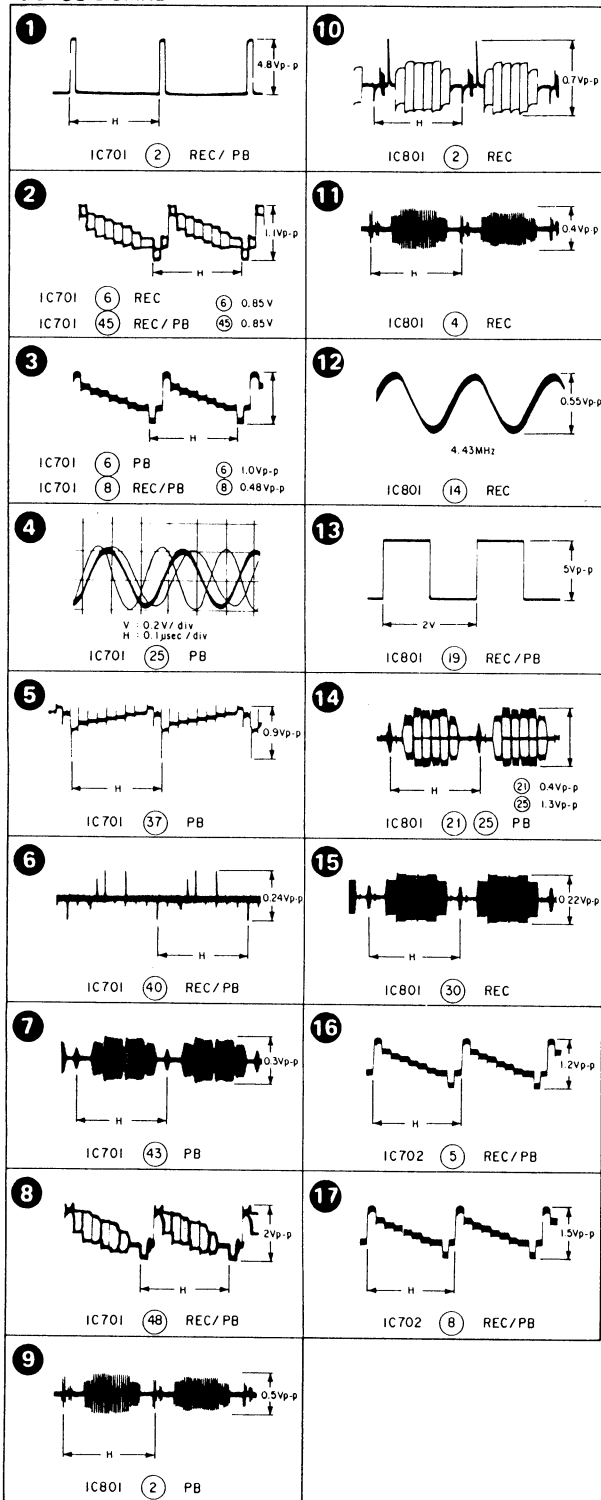
IC850 8-759-904-95 IC BA7007

TRANSISTOR

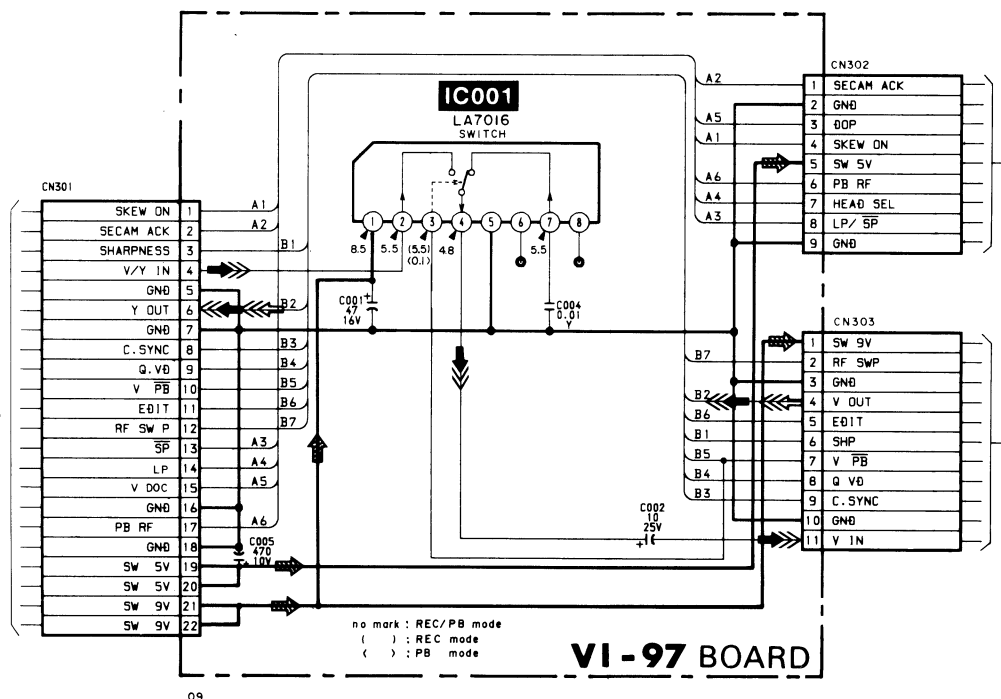
Q850 8-729-901-81 TRANSISTOR 2SC2412K
Q851 8-729-901-81 TRANSISTOR 2SC2412K

— Ref. No. YC-65 BOARD: 4000 series, VI-97 BOARD: 6000 series, SD-4 BOARD: 9000 series —

YC-65 BOARD

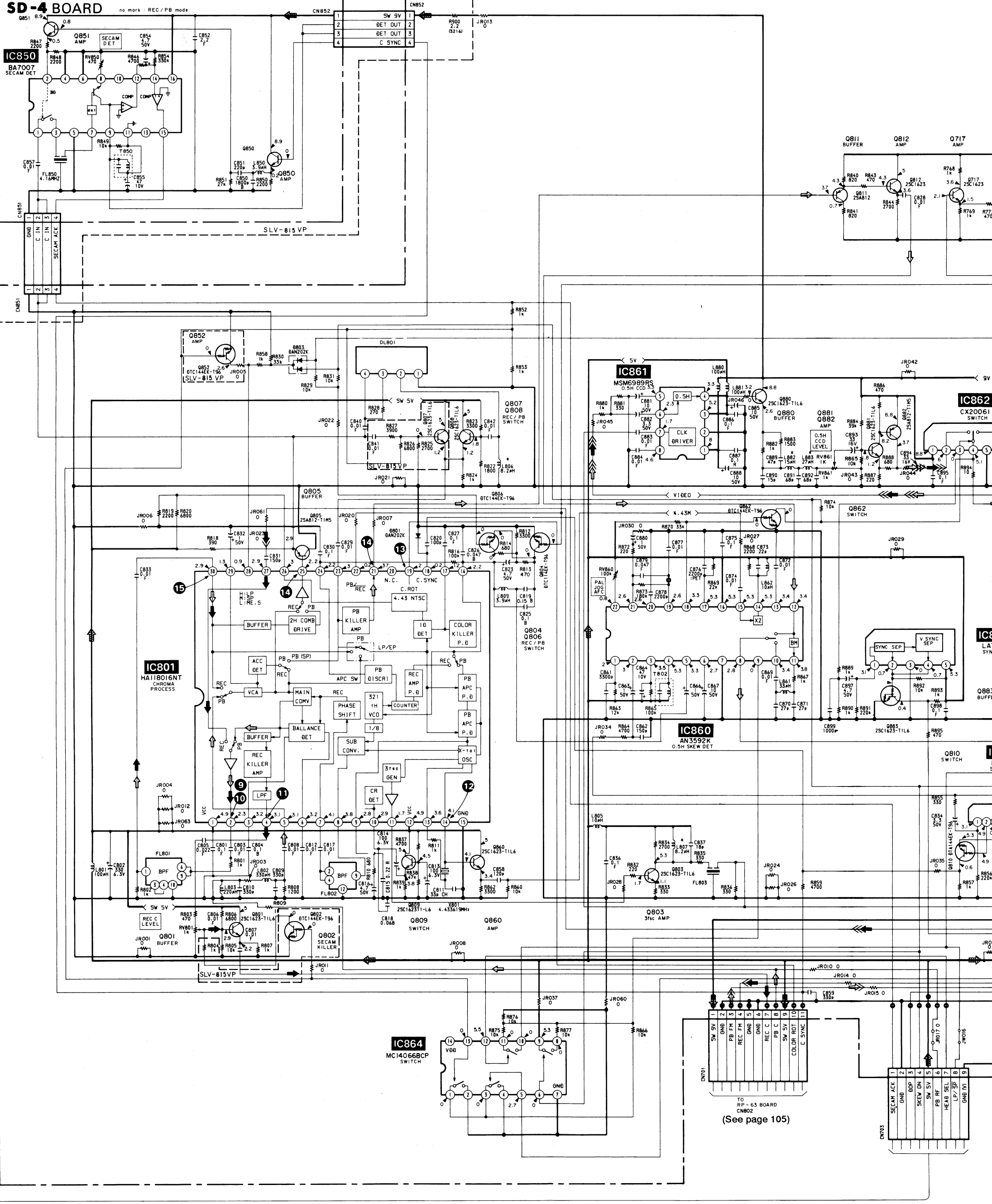


TO
MA-104 BOARD
CN582
(See page 131)

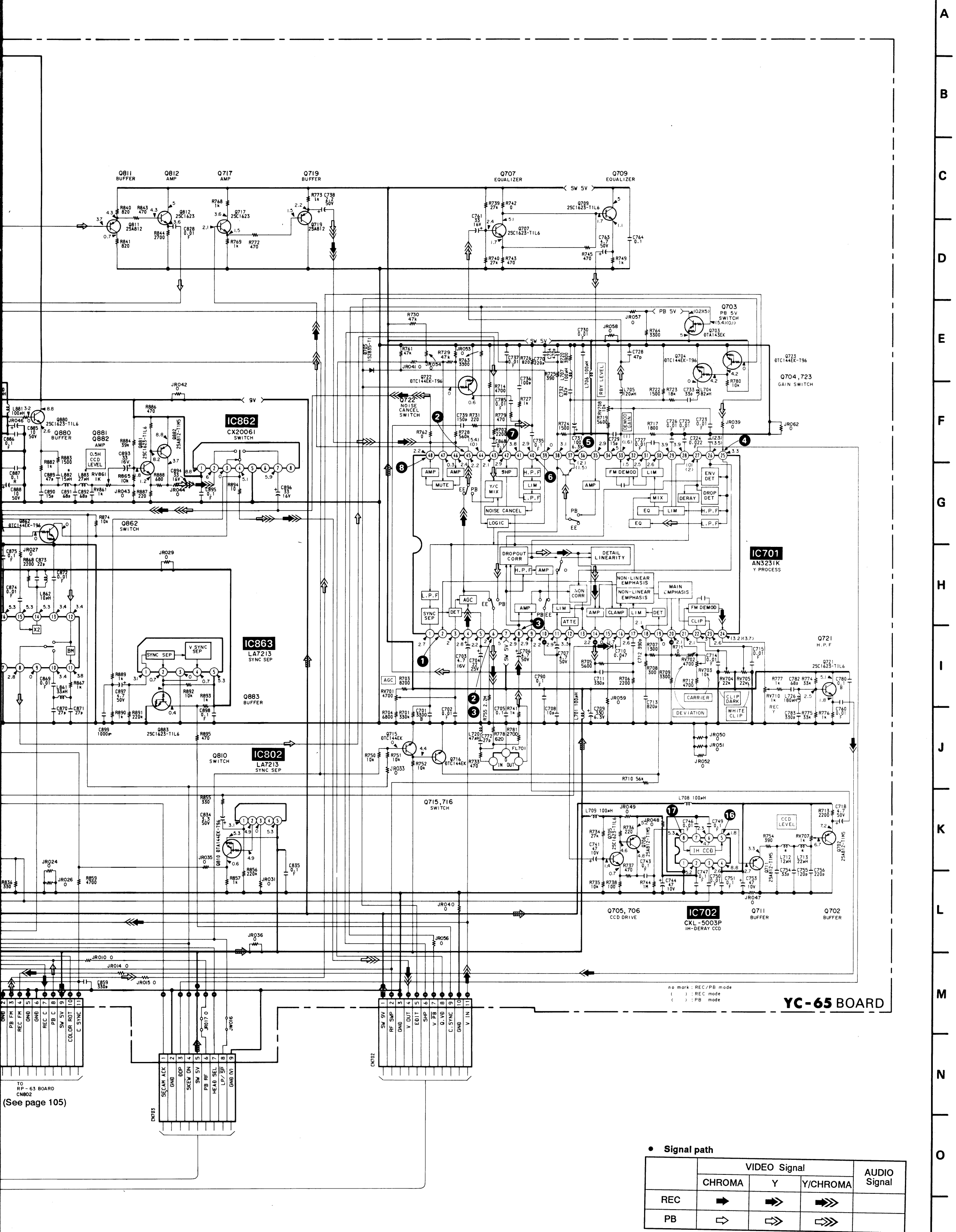


SD-4 BOARD

no mark : REC / PB mode

IC850
BA7007
SECAM DET

16 17 18 19 20 21 22 23 24 25 26 27



1 2 3 4 5 6 7 8 9 10 11 12

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

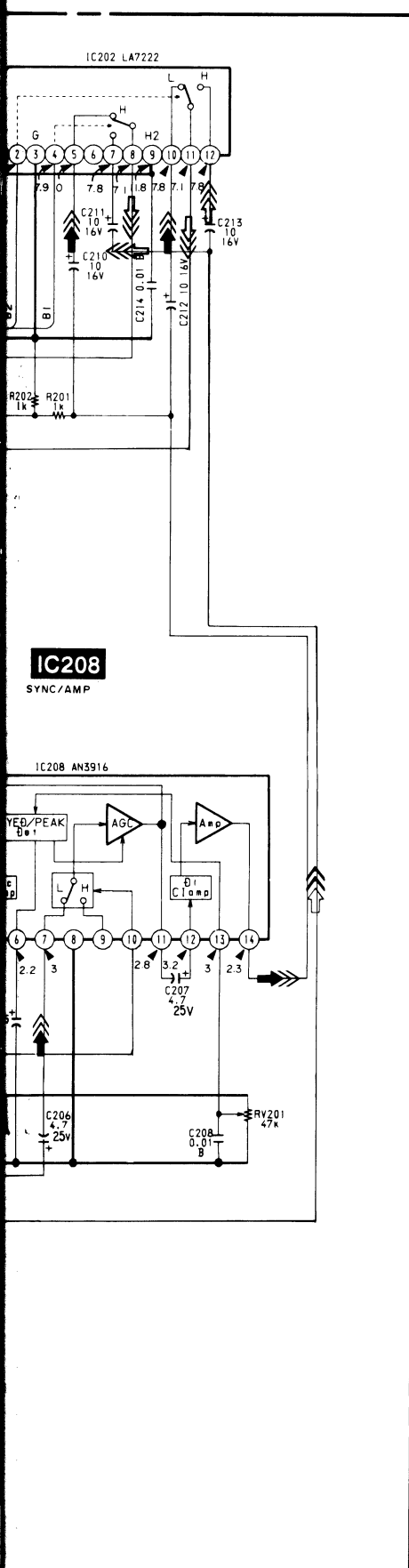
PI-25 BOARD

TO
MA-104 BOARD
CN584
(See page 132)

TO
MA-104 BOARD
CN583
(See page 131)

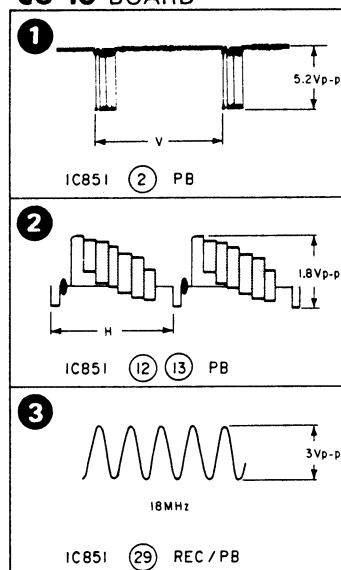
CG-10 BOARD no mark: REC/PB mode

TO
MA-104 BOARD
CN585
(See page 132)



- **Signal path**

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC				
PB			⇨⇨⇨	

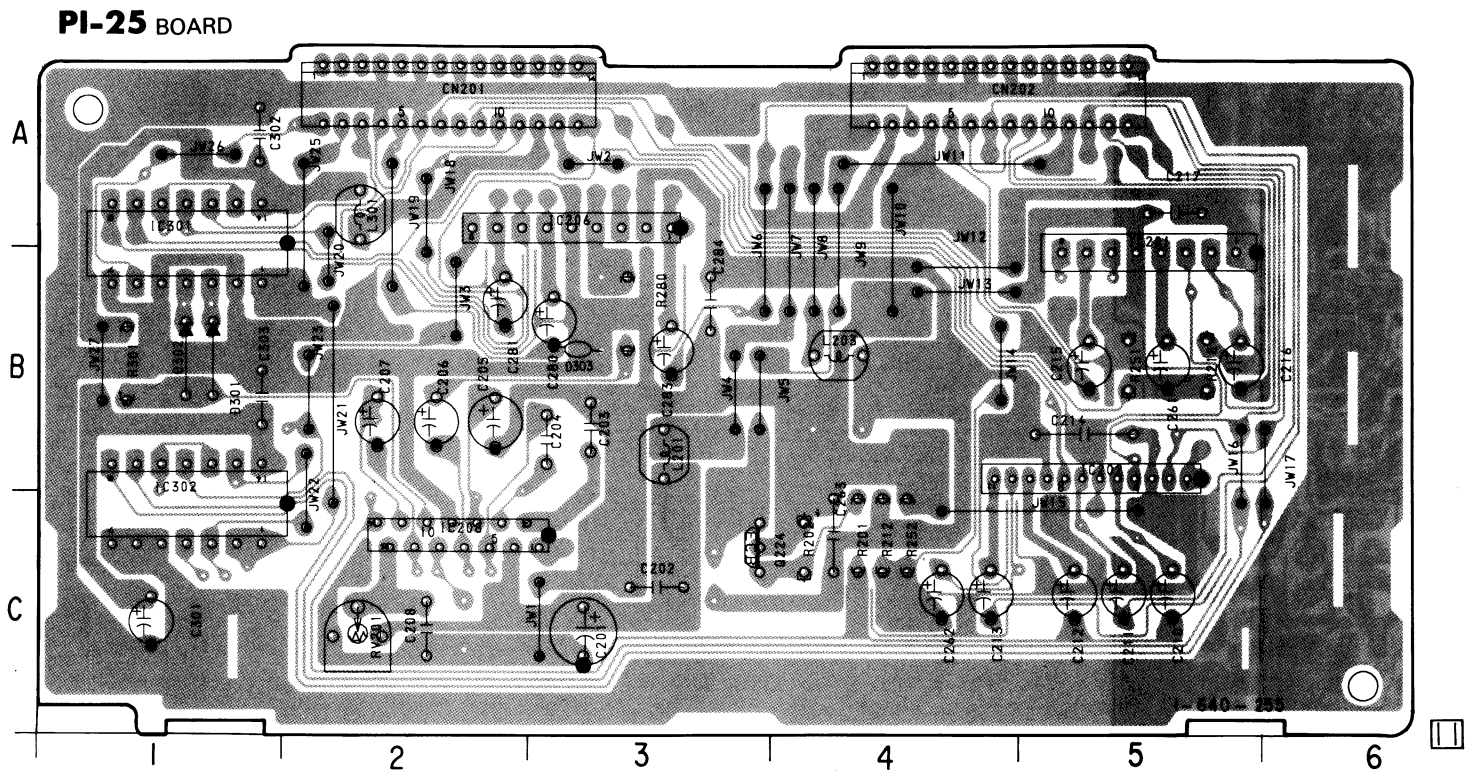
CG-10 BOARD

- **Signal path**

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC			▶▶▶▶	
PB			◀▶▶▶	

PI-25 (VIDEO SIGNAL SELECTOR), CG-10 (ON SCREEN DISPLAY CONTROLLER) PRINTED WIRING BOARDS

— Ref. No. PI-25 BOARD: 4000 series, CG-10 BOARD: 5000 series —

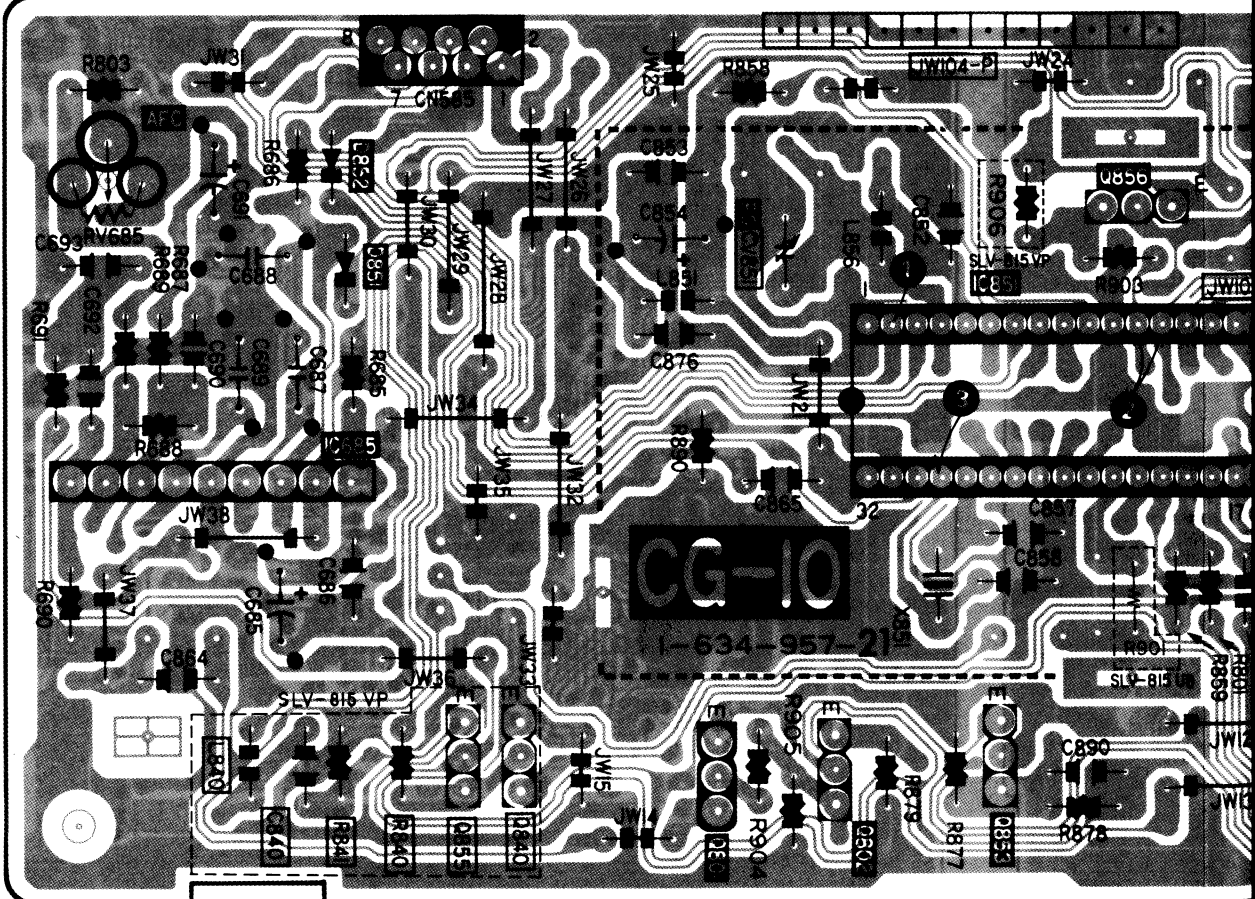


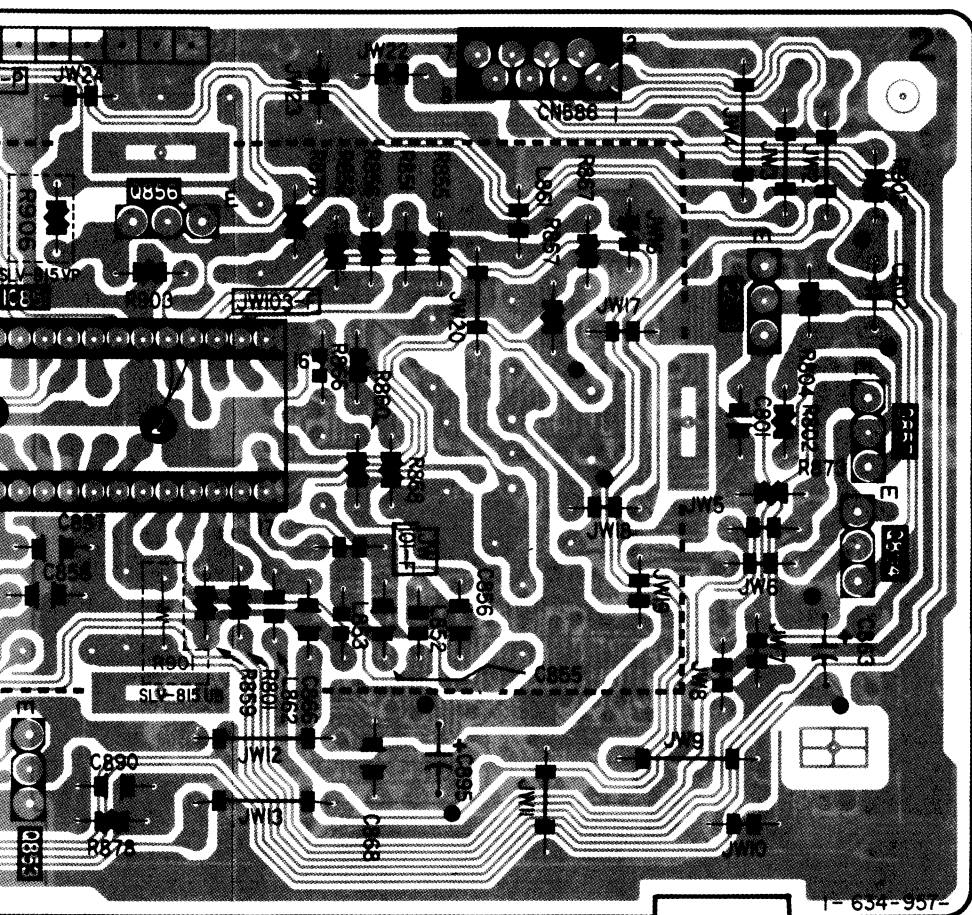
PI-25 BOARD

D301	B-1
D302	B-1
IC201	B-5
IC202	B-5
IC206	A-3
IC208	C-2
IC301	A-1
IC302	C-1
Q224	C-3

DIODE		
D301	8-719-911-19	DIODE 1SS119
D302	8-719-911-19	DIODE 1SS119
IC		
IC201	8-759-800-81	IC LA7016
IC202	8-759-822-60	IC LA7222
IC206	8-759-501-20	IC LVA522S
IC208	8-759-420-62	IC AN3916
IC301	8-759-240-71	IC MC14071BCP
IC302	8-759-040-11	IC MC14011BCP
TRANSISTOR		
Q224	8-729-216-22	TRANSISTOR 2SA1162

CG-10 BOARD





21

DIODE

D851 8-719-911-19 DIODE 1SS119
D852 8-719-911-19 DIODE 1SS119

IC

IC685 8-759-996-03 IC LVA519S
IC851 8-759-634-22 IC M50554-182SP

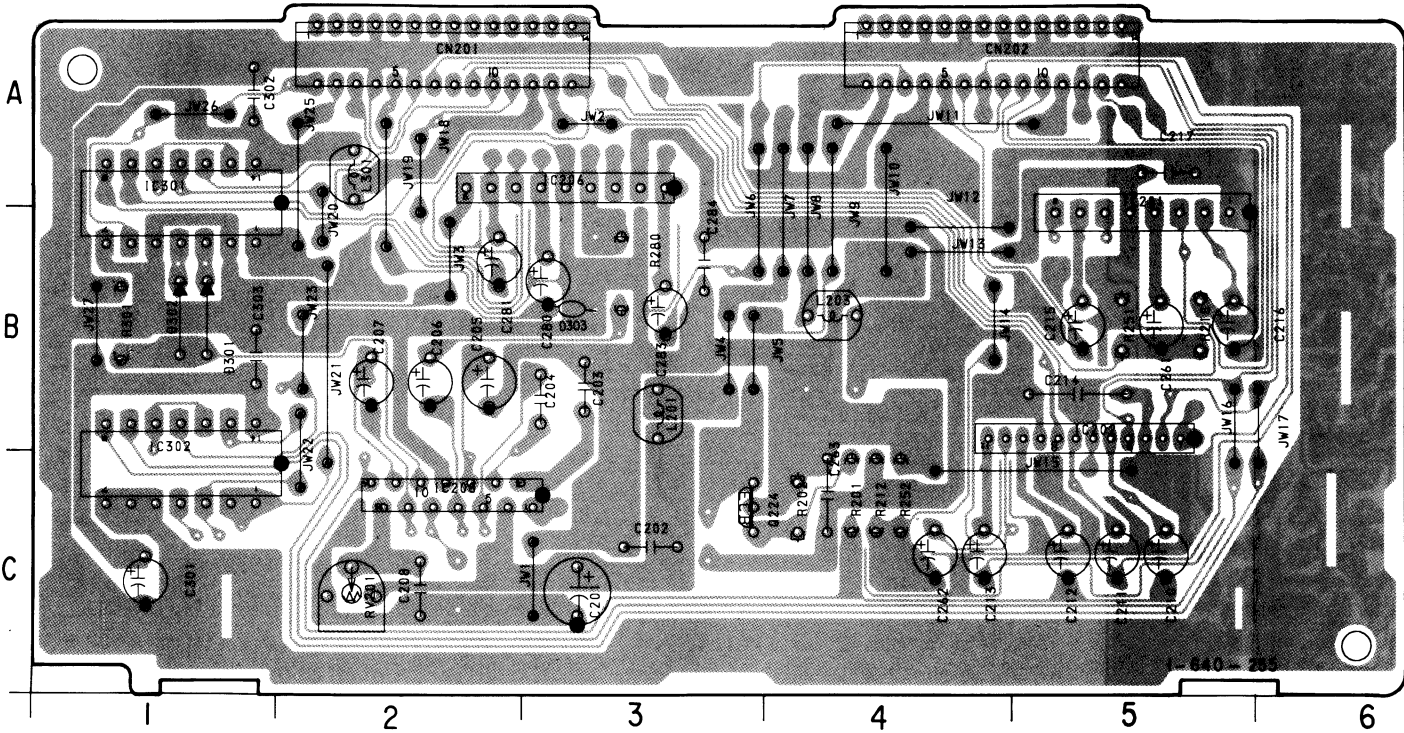
TRANSISTOR

Q801 8-729-900-61 TRANSISTOR DTA114ES
Q802 8-729-423-37 TRANSISTOR 2SC3311A-QRS
Q803 8-729-900-89 TRANSISTOR DTC144ES

PI-25 (VIDEO SIGNAL SELECTOR), CG-10 (ON SCREEN DISPLAY CONTROLLER) PRINTED WIRING BOARDS

— Ref. No. PI-25 BOARD: 4000 series, CG-10 BOARD: 5000 series —

PI-25 BOARD



PI-25 BOARD

D301	B-1
D302	B-1
IC201	B-5
IC202	B-5
IC206	A-3
IC208	C-2
IC301	A-1
IC302	C-1
Q224	C-3

DIODE

D301	8-719-911-19	DIODE 1SS119
D302	8-719-911-19	DIODE 1SS119

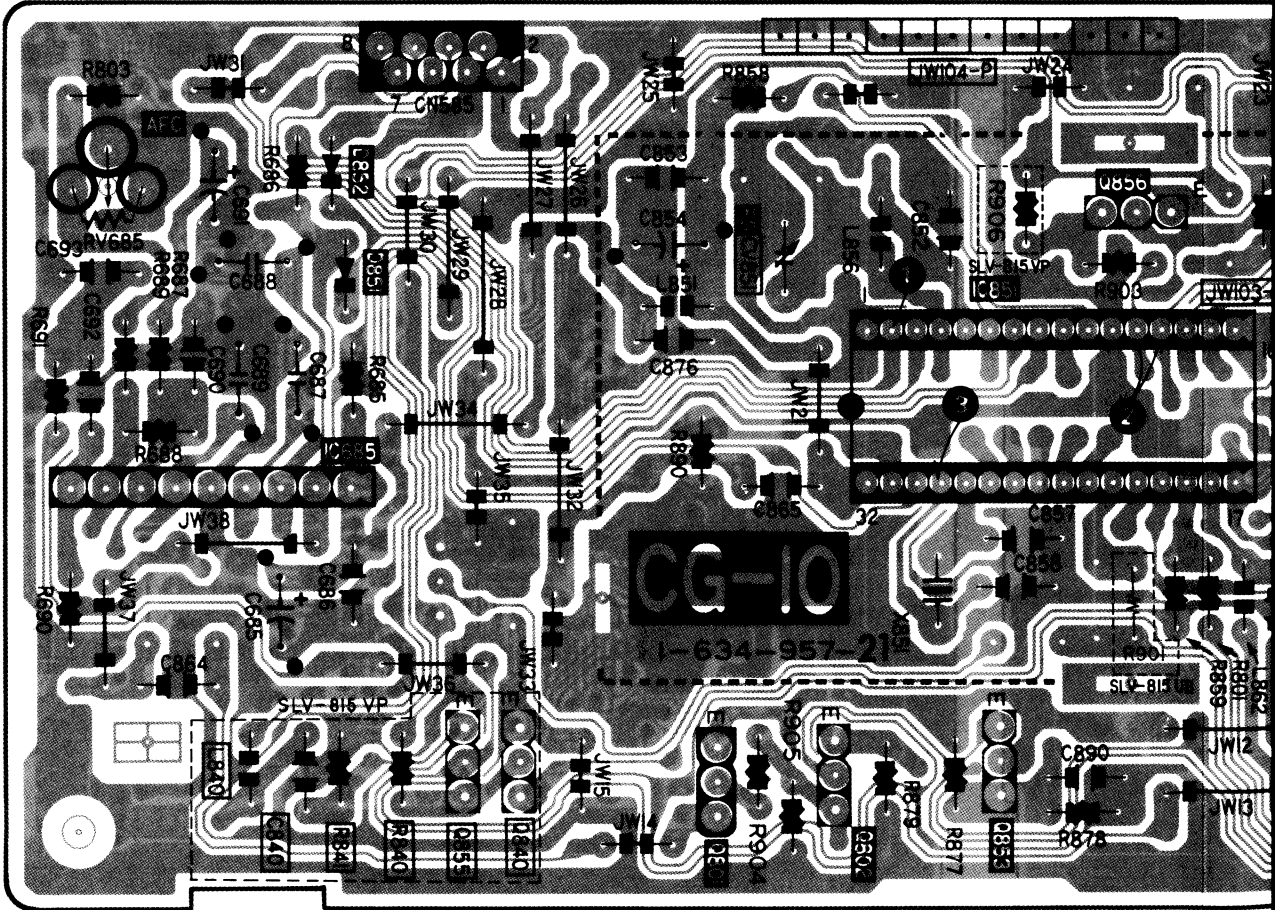
IC

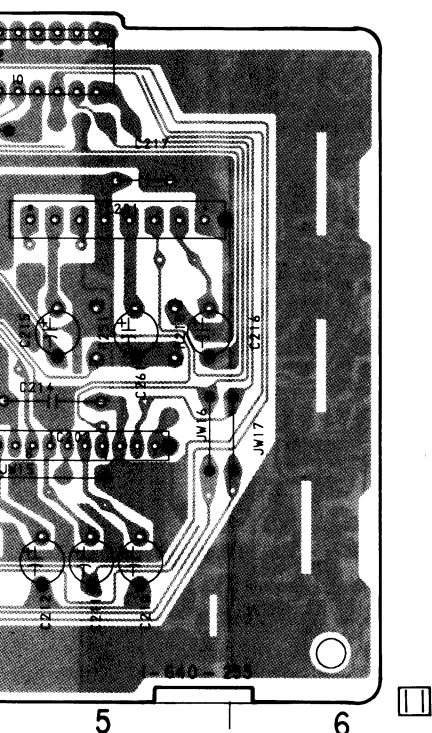
IC201	8-759-800-81	IC LA7016
IC202	8-759-822-60	IC LA7222
IC206	8-759-501-20	IC LVA522S
IC208	8-759-420-62	IC AN3916
IC301	8-759-240-71	IC MC14071BCP
IC302	8-759-040-11	IC MC14011BCP

TRANSISTOR

Q224	8-729-216-22	TRANSISTOR 2SA1162
------	--------------	--------------------

CG-10 BOARD





DIODE

D301 8-719-911-19 DIODE 1SS119
D302 8-719-911-19 DIODE 1SS119

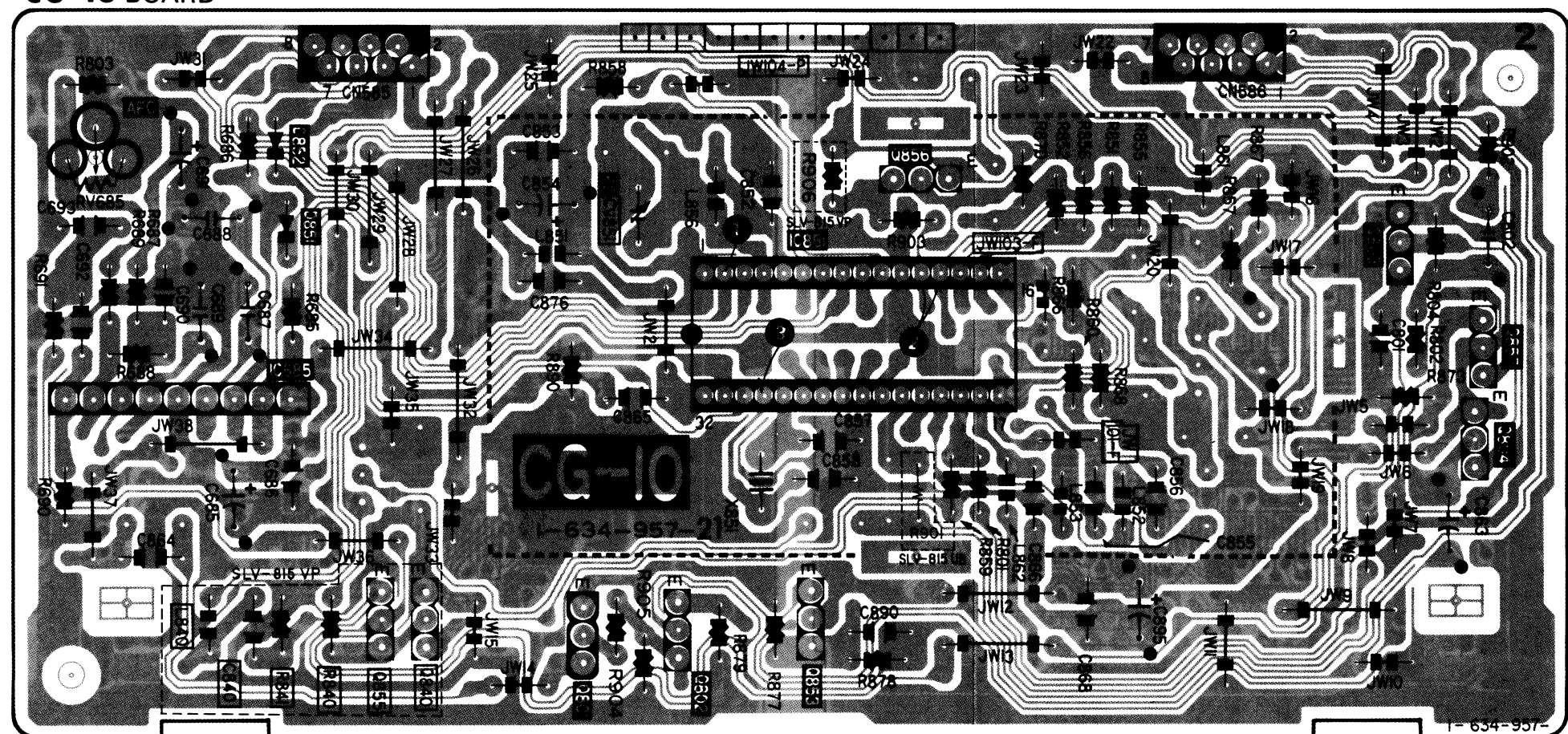
IC

IC201 8-759-800-81 IC LA7016
IC202 8-759-822-60 IC LA7222
IC206 8-759-501-20 IC LVA522S
IC208 8-759-420-62 IC AN3916
IC301 8-759-240-71 IC MC14071BCP
IC302 8-759-040-11 IC MC14011BCP

TRANSISTOR

Q224 8-729-216-22 TRANSISTOR 2SA1162

CG-10 BOARD



DIODE

D851 8-719-911-19 DIODE 1SS119
D852 8-719-911-19 DIODE 1SS119

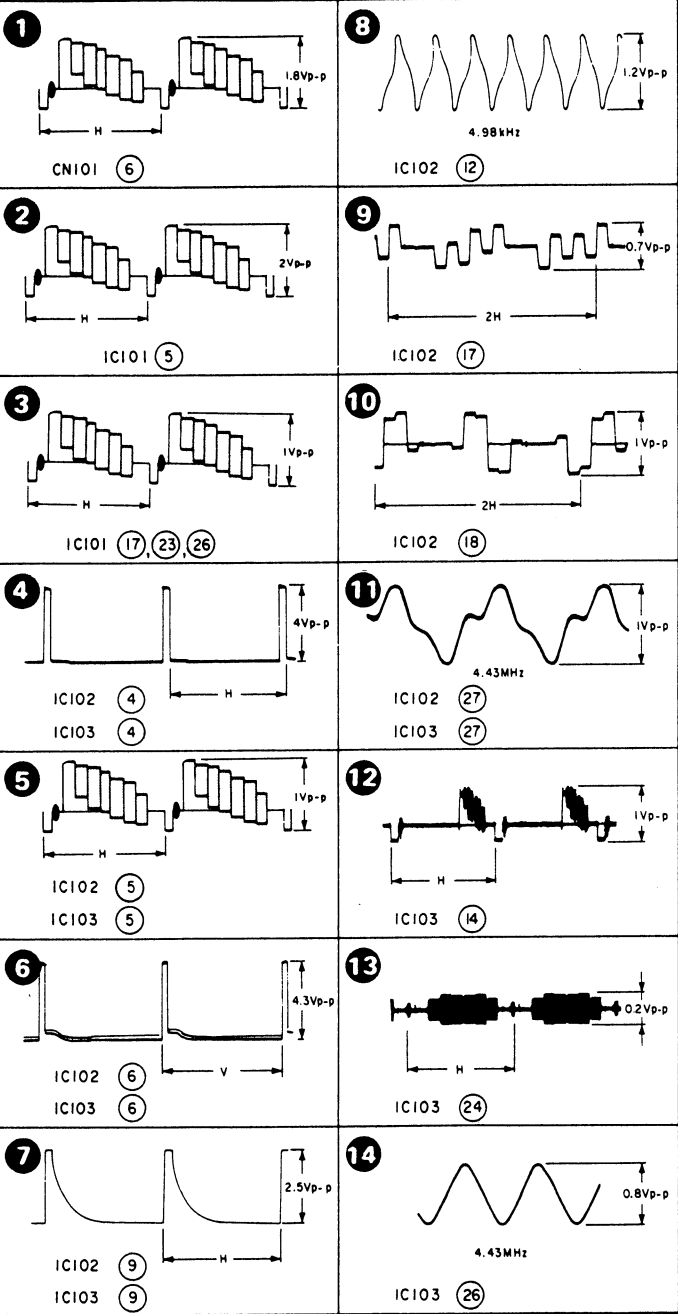
IC

IC685 8-759-996-03 IC LVA519S
IC851 8-759-634-22 IC M50554-182SP

TRANSISTOR

Q801 8-729-900-61 TRANSISTOR DTA114ES
Q802 8-729-423-37 TRANSISTOR 2SC3311A-QRS
Q803 8-729-900-89 TRANSISTOR DTC144ES

DG-11 BOARD E-E mode (P I N P)



DIODE

D101	8-719-400-18	DIODE MA152WK
D105	8-719-400-18	DIODE MA152WK
D106	8-719-400-18	DIODE MA152WK
D109	8-719-400-18	DIODE MA152WK

IC

IC101	8-759-322-29	IC HA118088MPER
IC102	8-759-323-11	IC HA11567MP
IC103	8-759-322-34	IC HA11535MP
IC104	8-759-322-68	IC HD49410
IC105	1-759-322-32	IC HM534612P-12
IC108	8-759-008-74	IC MC14001BF

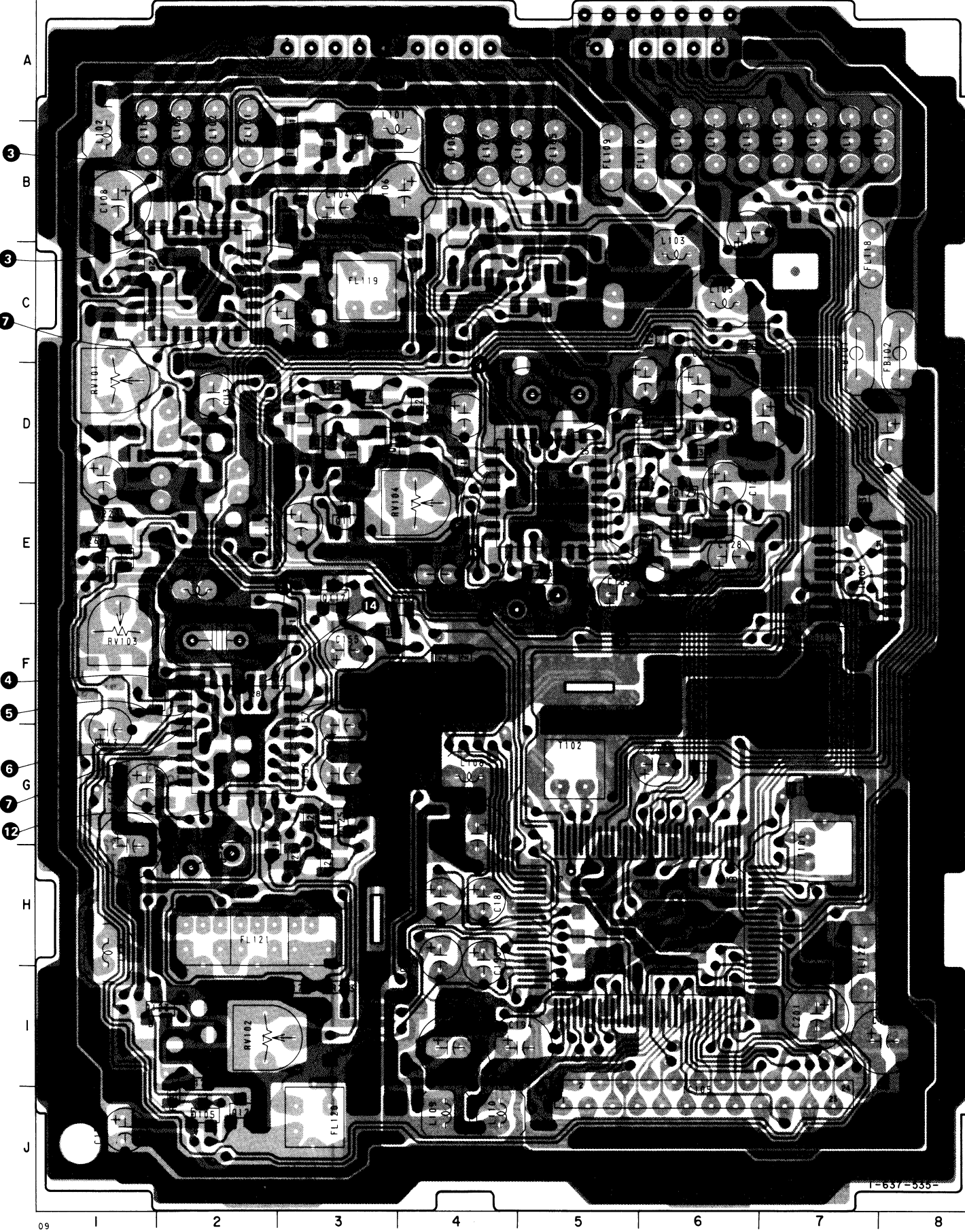
TRANSISTOR

Q101	8-729-305-25	TRANSISTOR 2SA1052-C
Q102	8-729-305-25	TRANSISTOR 2SA1052-C
Q103	8-729-305-25	TRANSISTOR 2SA1052-C
Q108	8-729-305-25	TRANSISTOR 2SA1052-C
Q109	8-729-305-25	TRANSISTOR 2SA1052-C
Q110	8-729-305-25	TRANSISTOR 2SA1052-C
Q112	8-729-901-00	TRANSISTOR DTC124EK
Q113	8-729-305-25	TRANSISTOR 2SA1052-C
Q114	8-729-271-22	TRANSISTOR 2SC2712-G
Q116	8-729-305-25	TRANSISTOR 2SA1052-C
Q117	8-729-271-22	TRANSISTOR 2SC2712-G
Q118	8-729-305-25	TRANSISTOR 2SA1052-C
Q120	8-729-901-00	TRANSISTOR DTC124EK
Q121	8-729-305-25	TRANSISTOR 2SA1052-C
Q122	8-729-271-22	TRANSISTOR 2SC2712-G
Q123	8-729-901-00	TRANSISTOR DTC124EK
Q125	8-729-903-82	TRANSISTOR FMW2
Q126	8-729-901-01	TRANSISTOR DTC144EK
Q127	8-729-271-22	TRANSISTOR 2SC2712-G

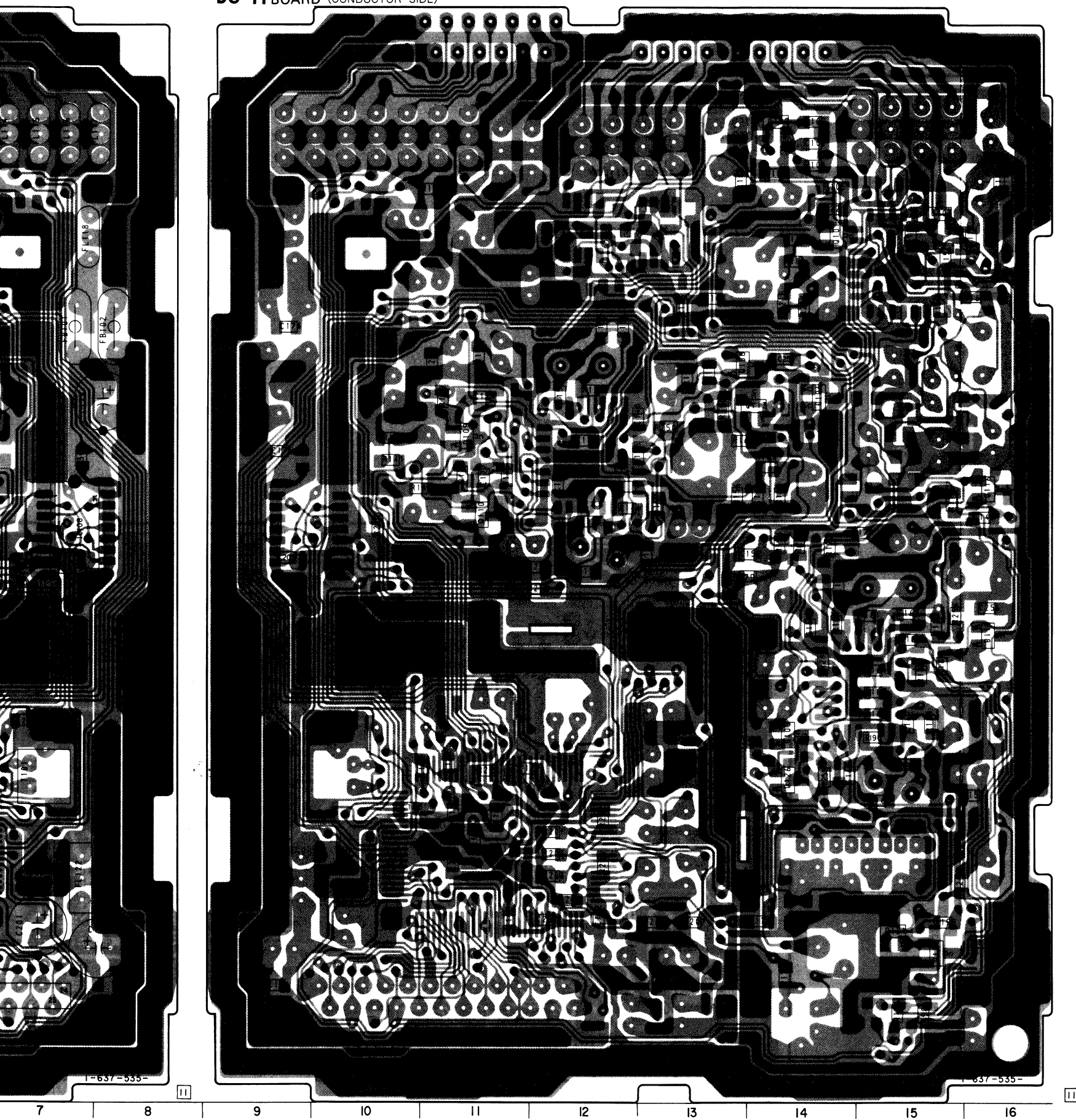
DG-11 BOARD

D101	D-3
D105	J-2
D106	D-14
D109	G-14
IC101	C-2
IC102	E-5
IC103	G-2
IC104	H-5
IC105	E-1
IC108	E-7
Q101	C-14
Q102	A-14
Q103	A-15
Q108	D-14
Q109	D-11
Q110	E-11
Q112	D-3
Q113	D-14
Q114	E-3
Q116	E-16
Q117	E-3
Q118	F-16
Q120	I-15
Q121	I-15
Q122	J-2
Q123	I-2
Q125	G-3
Q126	H-14
Q127	E-6

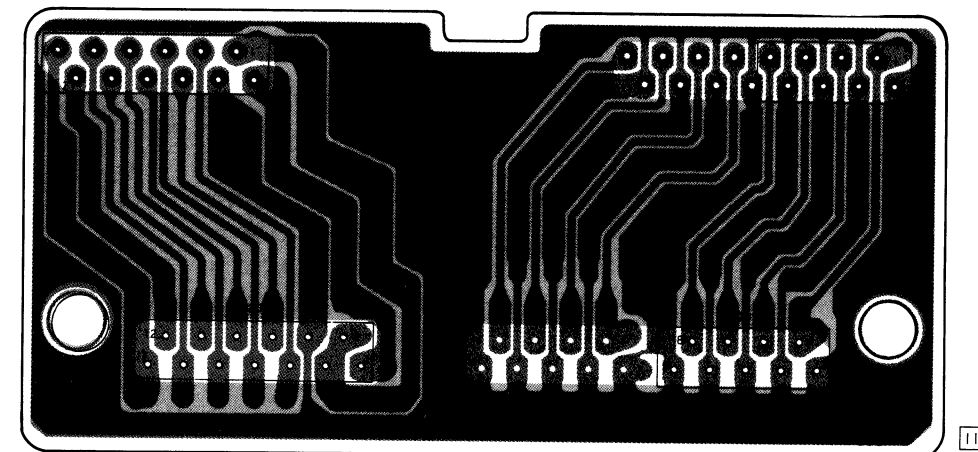
DG-11 BOARD (COMPONENT SIDE)



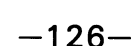
DG-11 BOARD (CONDUCTOR SIDE)



D1-43 BOARD

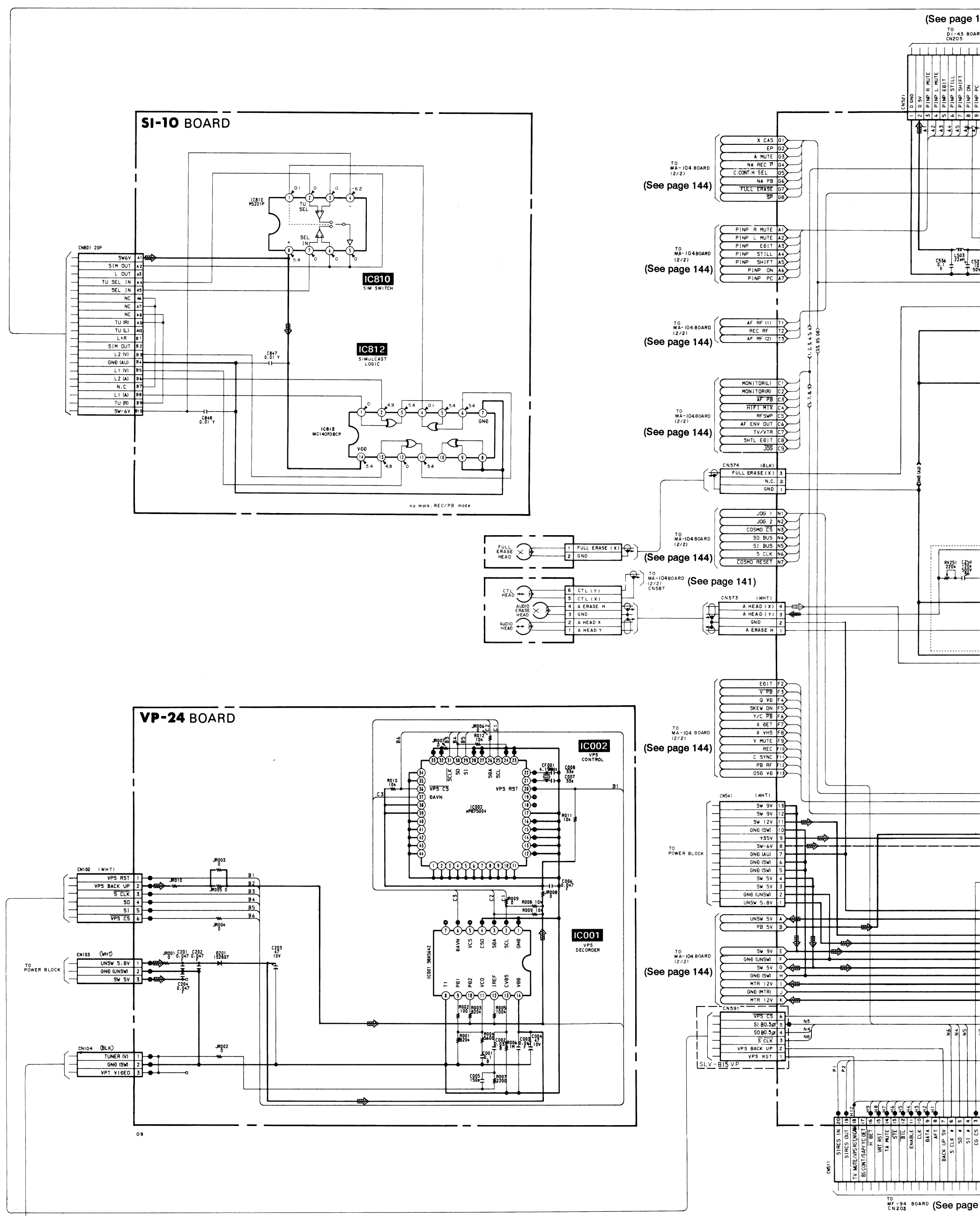


A
B
C
D
E
F
G
H
I
J
K
L
M
N
O





— Ref. No. SI-10 BOARD: 3000 series, MA-104 BOARD: 7000 series, VP-24 BOARD: 10000 series —



(See page 125)

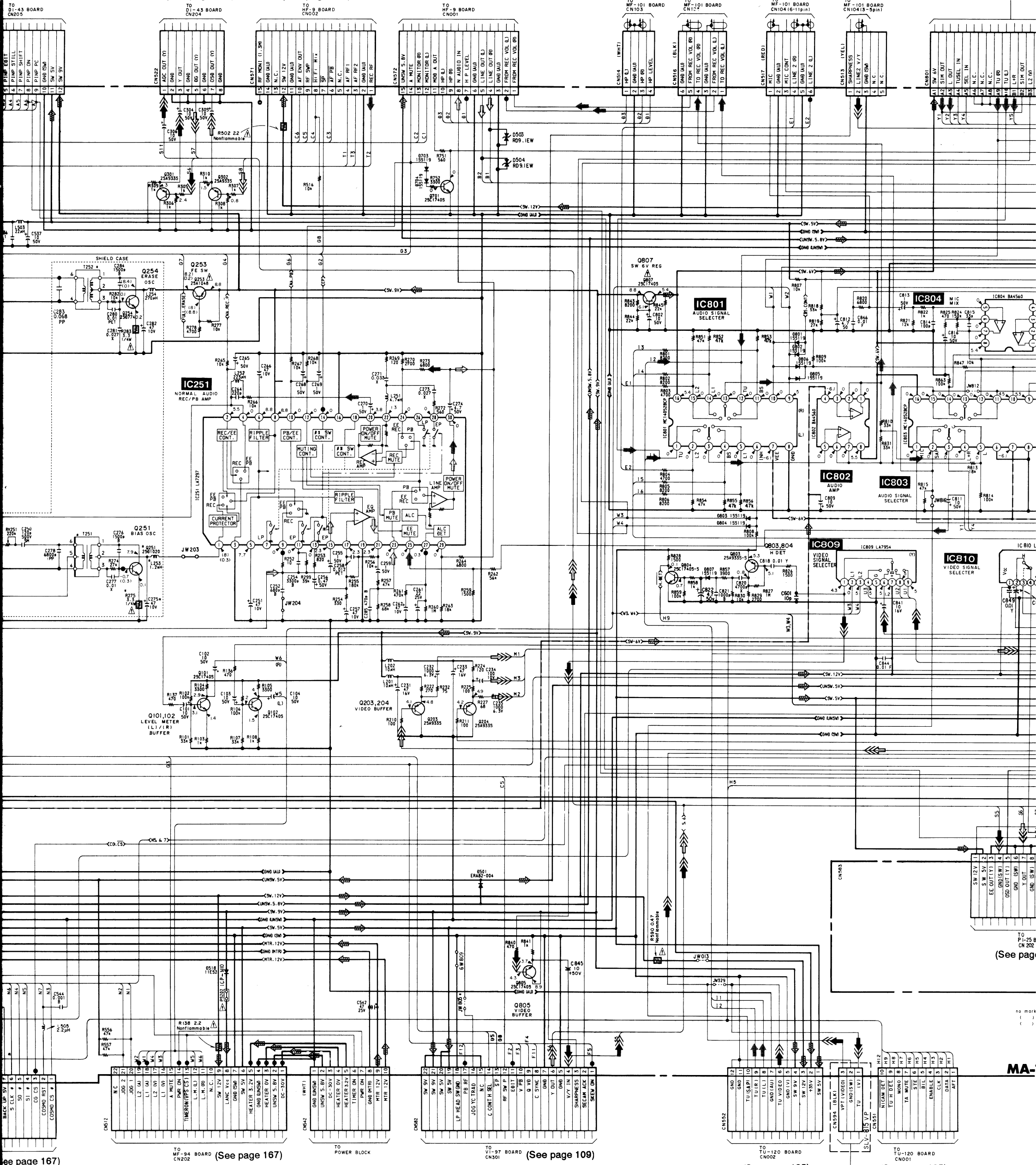
(See page 125)

(See page 156)

(See page 156)

(See page 172) (See page 172)

(See page 172)



(See page 167)

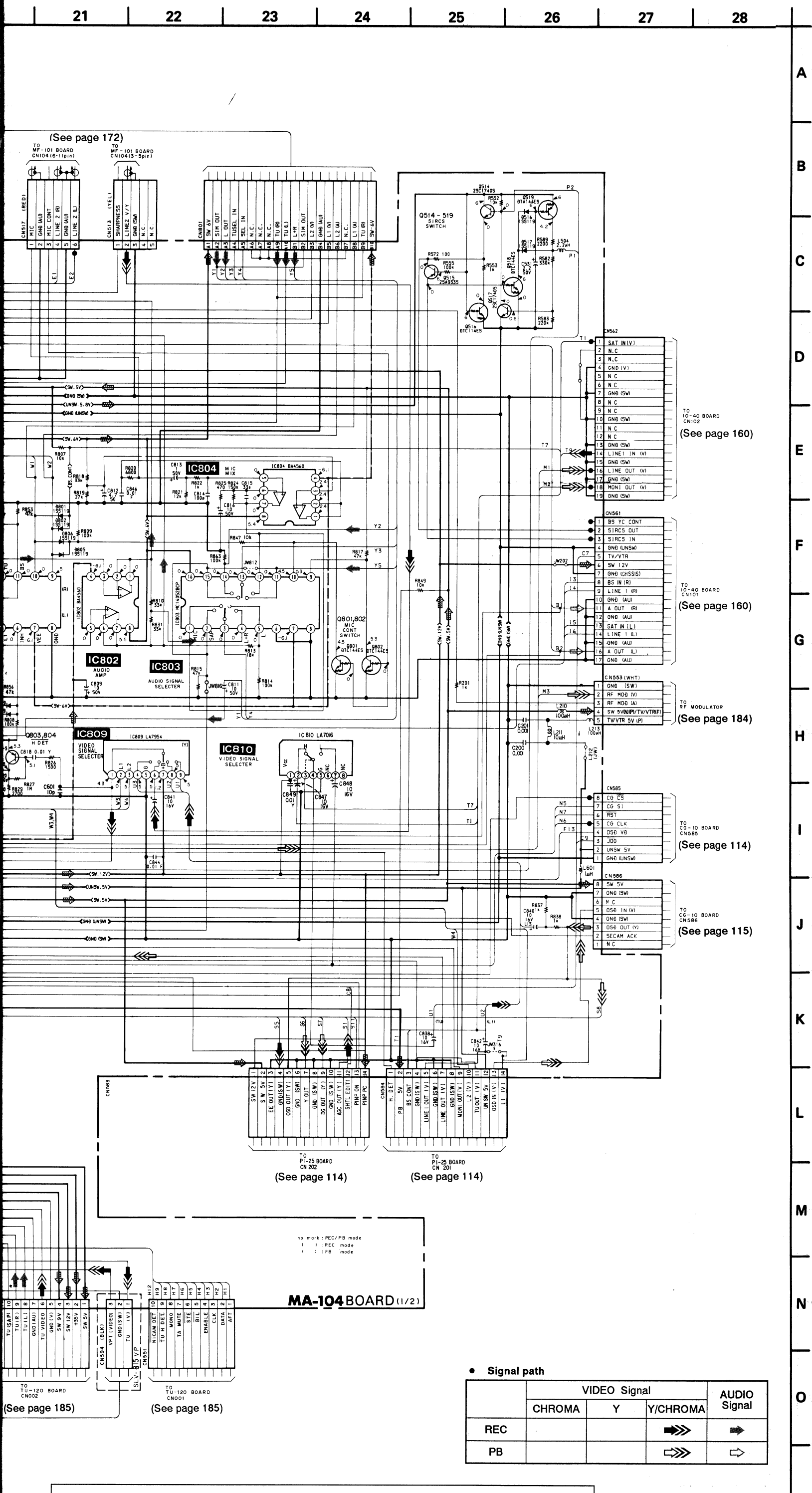
TO MF-94 BOARD
CN202 (See page 167)

TO POWER BLOCK

TO VI-97 BOARD
CN301 (See page 109)

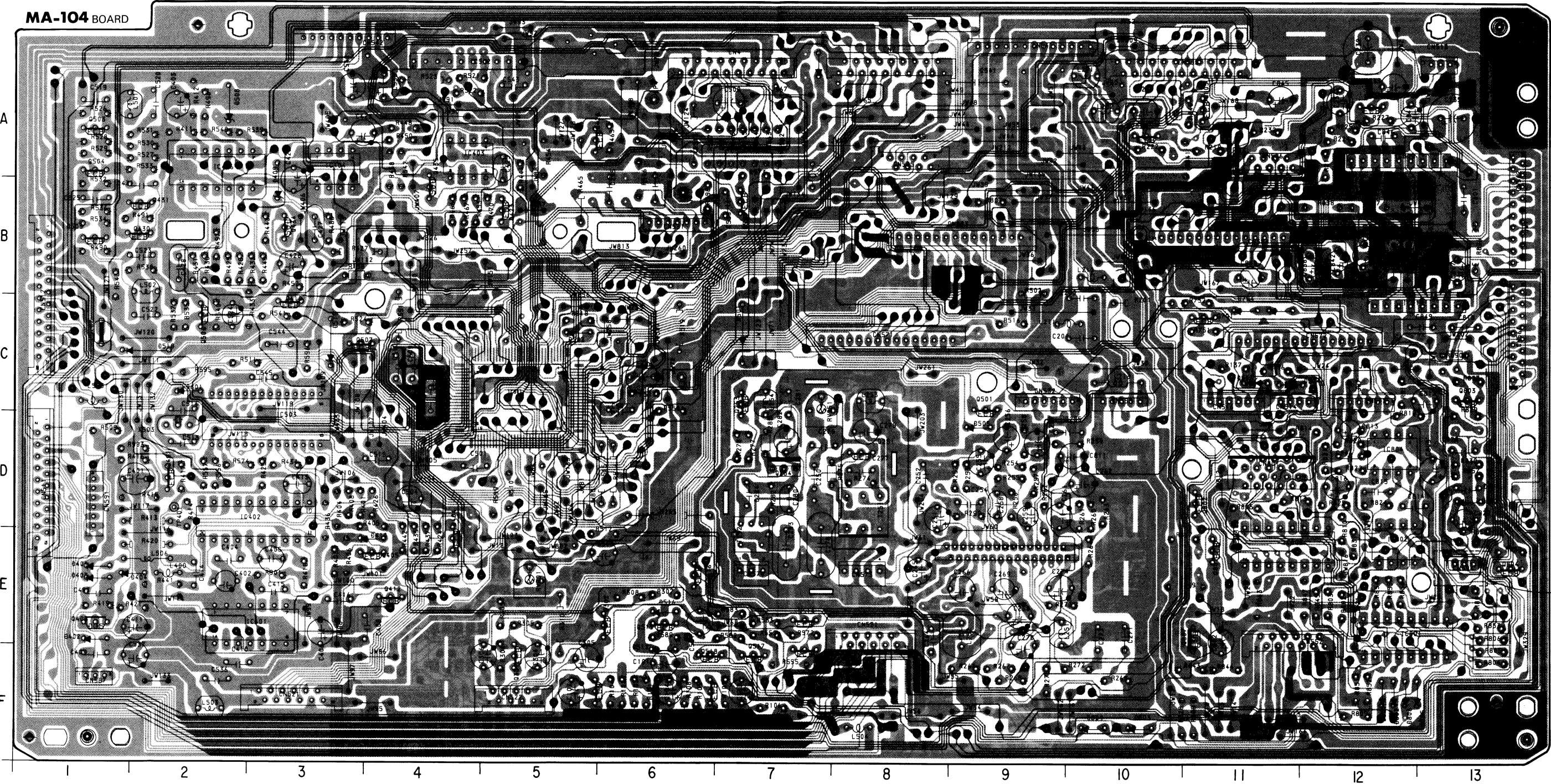
(See page 185)

(See page 185)

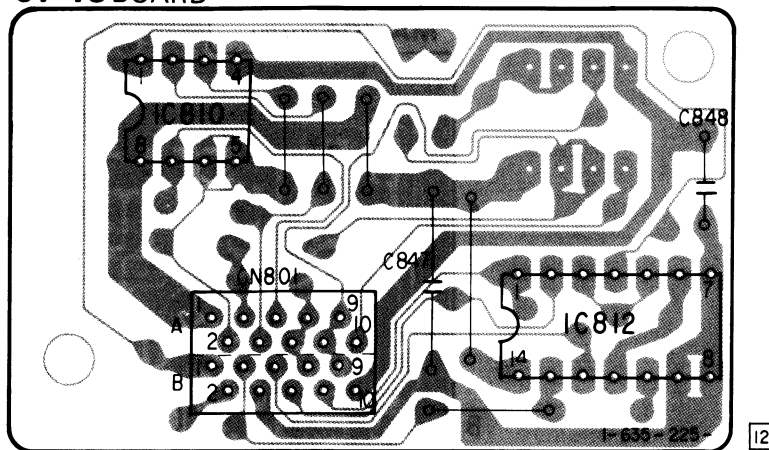


MA-104 (SERVO, SYSTEM CONTROL, AUDIO), SI-10 (SIMULCAST), VP-24 (VPS) PRINTED WIRING BOARDS

— Ref. No. SI-10 BOARD: 3000 series, MA-104 BOARD: 7000 series, VP-24 BOARD: 10000 series —



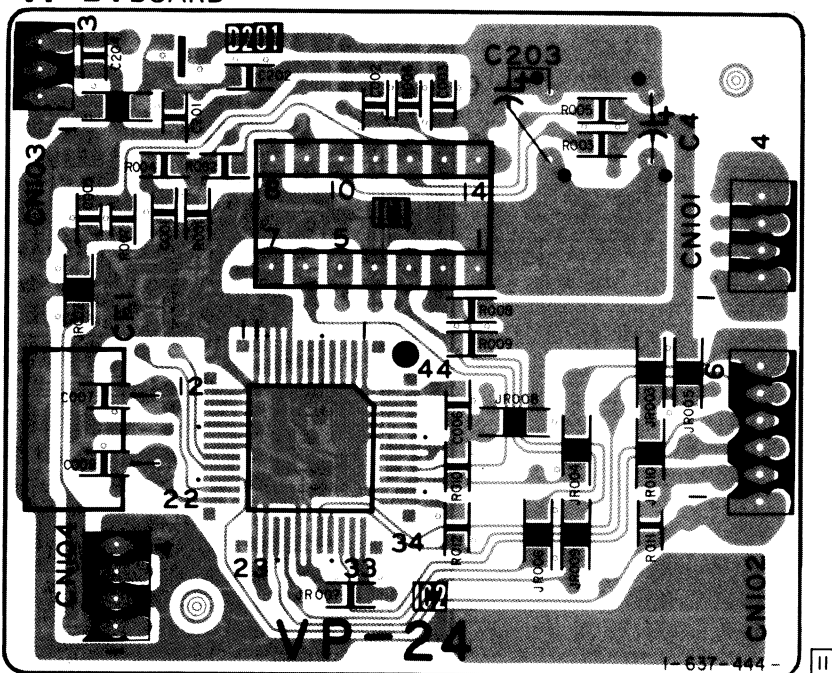
SI-10 BOARD



IC

IC810 8-759-602-49 IC M5201P
IC812 8-759-040-70 IC MC14070BCP

VP-24 BOARD



DIODE

D201 8-719-400-18 DIODE 1S2837

IC

IC001 8-759-030-60 IC SDA5642
IC002 8-759-147-30 IC uPD75004GB-V5X182

DIODE

D401 8-719-911-19 DIODE 1SS119
D402 8-719-911-19 DIODE 1SS119
D403 8-719-911-19 DIODE 1SS119
D404 8-719-911-19 DIODE 1SS119
D409 8-719-101-50 DIODE RD5.1E-L2

D410 8-719-911-19 DIODE 1SS119
D501 8-719-913-44 DIODE ERA82-004
D502 8-719-911-19 DIODE 1SS119
D503 8-719-108-12 DIODE RD9.1EW-T2
D504 8-719-108-12 DIODE RD9.1EW-T2

D505 8-719-911-19 DIODE 1SS119
D508 8-719-101-47 DIODE RD4.7E-L2
D516 8-719-911-19 DIODE 1SS119
D517 8-719-911-19 DIODE 1SS119
D518 8-719-200-82 DIODE 11ES2

D519 8-719-109-93 DIODE RD6.2ES-B2
D601 8-719-109-93 DIODE RD6.2ES-B2
D703 8-719-911-19 DIODE 1SS119
D704 8-719-911-19 DIODE 1SS119
D801 8-719-911-19 DIODE 1SS119

D802 8-719-911-19 DIODE 1SS119
D803 8-719-911-19 DIODE 1SS119
D804 8-719-911-19 DIODE 1SS119
D805 8-719-911-19 DIODE 1SS119
D806 8-719-911-19 DIODE 1SS119

D807 8-719-911-19 DIODE 1SS119
D999 8-719-911-19 DIODE 1SS119TG

IC

IC251 8-759-805-20 IC LA7297
IC401 8-759-000-49 IC MC14066BCP
IC402 8-759-632-58 IC M52435P
IC403 8-759-008-70 IC LM358N
IC404 8-759-981-85 IC RC4556D

IC406 8-759-008-71 IC LM324N
IC501 8-752-815-90 IC CXP80624 009Q
IC502 8-759-983-45 IC BA6238A
IC503 8-759-035-36 IC MC68HC05P7
IC801 8-759-152-34 IC TC4052BPHB

IC802 8-759-923-90 IC BA4560
IC803 8-759-208-08 IC TC4052BPHB
IC804 8-759-923-90 IC BA4560
IC809 8-759-822-71 IC LA7954
IC810 8-759-800-81 IC LA7016

TRANSISTOR

Q101 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q102 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q203 8-729-920-68 TRANSISTOR 2SA933S-QR
Q204 8-729-920-68 TRANSISTOR 2SA933S-QR
Q251 8-729-102-14 TRANSISTOR 2SD1021

Q253 8-729-119-76 TRANSISTOR 2SA1175-HFE
Q254 8-729-140-96 TRANSISTOR 2SD774-34
Q301 8-729-920-68 TRANSISTOR 2SA933S-QR
Q302 8-729-920-68 TRANSISTOR 2SA933S-QR
Q401 8-729-920-70 TRANSISTOR 2SC1740S-QR

Q403 8-729-115-10 TRANSISTOR 2SK105A-10
Q404 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q405 8-729-900-89 TRANSISTOR DTC144ES
Q410 8-729-900-65 TRANSISTOR DTA144ES
Q412 8-729-900-89 TRANSISTOR DTC144ES

Q423 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q428 8-729-920-68 TRANSISTOR 2SA933S-QR
Q430 8-729-900-89 TRANSISTOR DTC144ES
Q431 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q434 8-729-601-47 TRANSISTOR 2SK381-B

Q435 8-729-601-47 TRANSISTOR 2SK381-B
Q501 8-729-900-61 TRANSISTOR DTA114ES

Q503 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q504 8-729-920-70 TRANSISTOR 2SC1740S-QR

Q505 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q506 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q507 8-729-900-61 TRANSISTOR DTA114ES
Q508 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q514 8-729-920-70 TRANSISTOR 2SC1740S-QR

Q515 8-729-920-68 TRANSISTOR 2SA933S-QR
Q516 8-729-900-80 TRANSISTOR DTC114ES
Q517 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q518 8-729-900-89 TRANSISTOR DTC144ES
Q519 8-729-900-65 TRANSISTOR DTA144ES

Q701 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q801 8-729-900-89 TRANSISTOR DTC144ES
Q802 8-729-900-89 TRANSISTOR DTC144ES
Q803 8-729-920-68 TRANSISTOR 2SA933S-QR
Q804 8-729-119-78 TRANSISTOR 2SC1740-ST

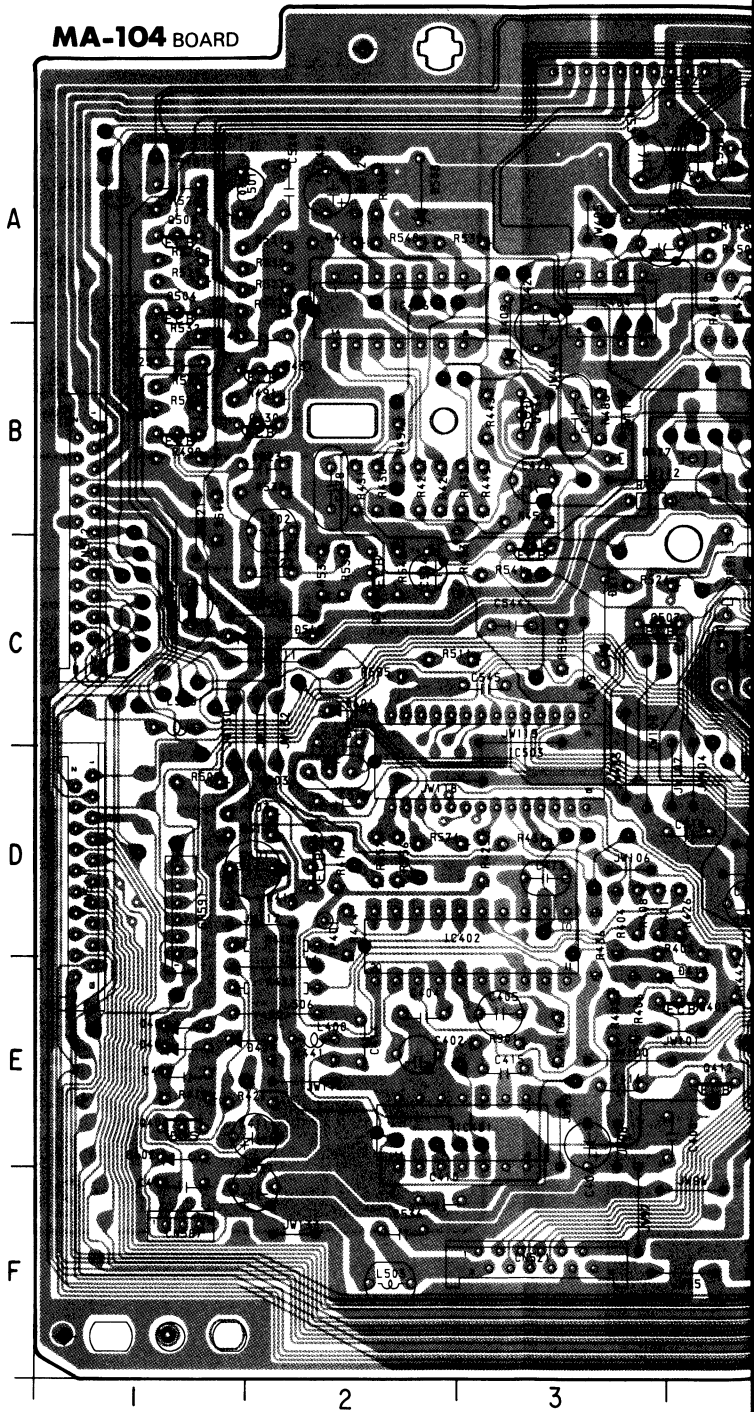
Q805 8-729-920-70 TRANSISTOR 2SC1740S-QR
Q807 8-729-920-70 TRANSISTOR 2SC1740S-QR

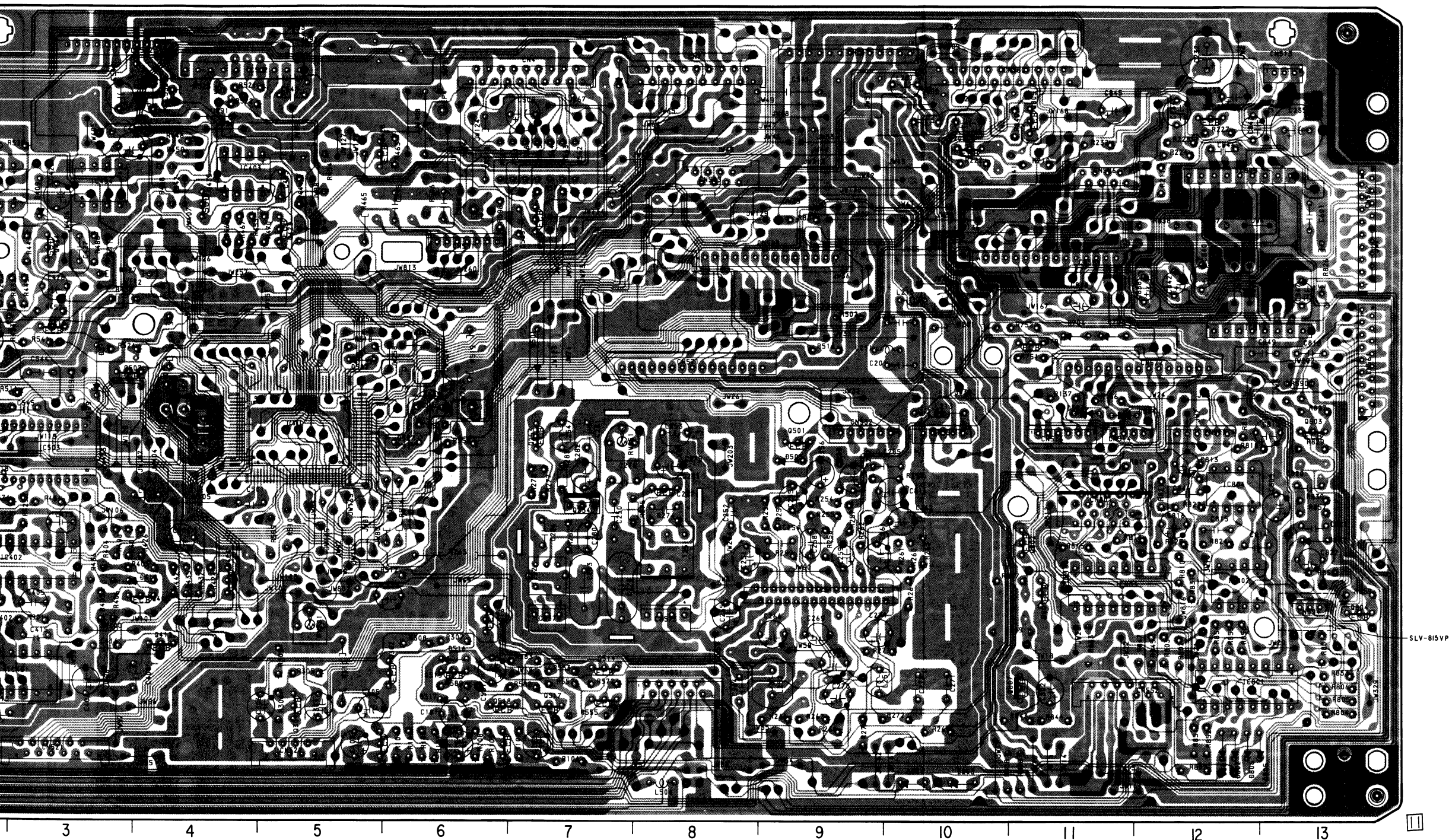
MA-104 (SERVO, SYSTEM CONTROL, AUDIO) PRINTED WIRING BOARD

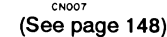
— Ref.No. MA-104 BOARD: 7000 sreies —

MA-104 BOARD

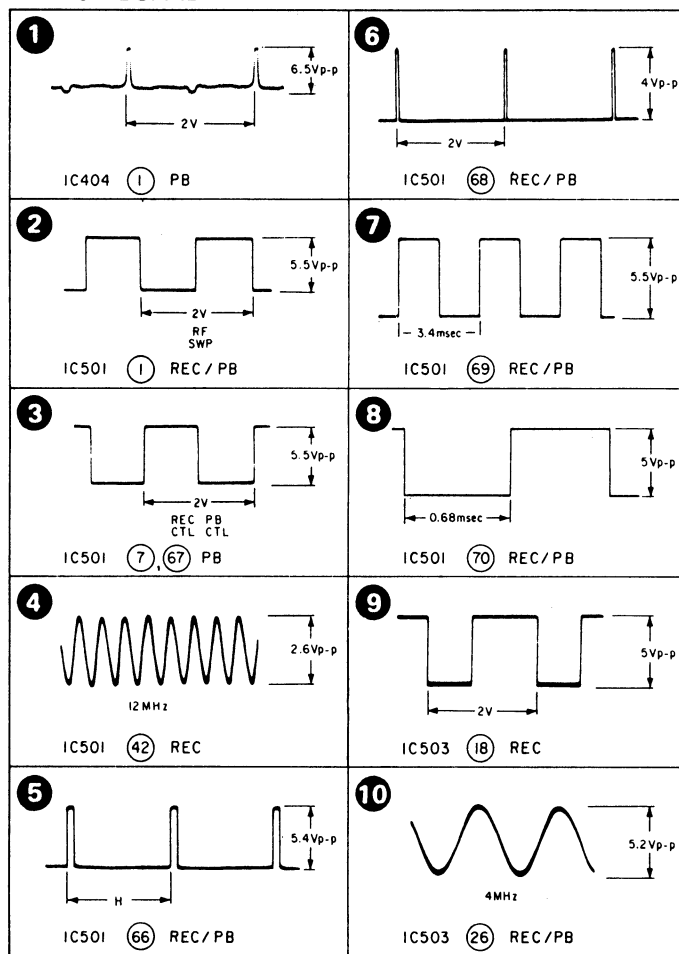
D401	E-1	Q101	F-6
D402	E-1	Q102	F-6
D403	E-1	Q203	A-10
D404	E-2	Q204	A-12
D409	A-3	Q251	D-8
D410	E-4	Q253	C-7
D501	C-7	Q254	D-7
D502	C-5	Q301	F-5
D503	C-11	Q302	E-6
D504	C-11	Q401	D-2
D505	D-9	Q403	E-1
D508	A-2	Q404	E-4
D516	E-6	Q405	E-4
D517	F-6	Q410	C-3
D518	C-2	Q412	E-4
D519	C-3	Q423	B-5
D601	C-2	Q428	A-5
D703	C-11	Q430	B-2
D704	C-11	Q431	B-2
D801	F-12	Q434	B-3
D802	F-12	Q435	B-4
D803	F-10	Q501	C-9
D804	F-10	Q503	A-1
D805	F-12	Q504	A-1
D806	F-12	Q505	B-1
D807	E-11	Q506	C-2
D999	A-7	Q507	C-3
		Q508	B-7
IC251	E-9	Q514	E-7
IC401	E-3	Q515	F-7
IC402	D-3	Q516	E-6
IC403	A-4	Q517	F-7
IC404	A-3	Q518	F-6
IC406	A-2	Q519	E-6
IC501	C-5	Q701	C-11
IC502	A-4	Q801	E-11
IC503	D-3	Q802	D-11
IC801	E-12	Q803	C-13
IC802	E-12	Q804	E-13
IC803	E-11	Q805	A-11
IC804	D-12	Q807	D-13
IC809	A-12		
IC810	C-12		



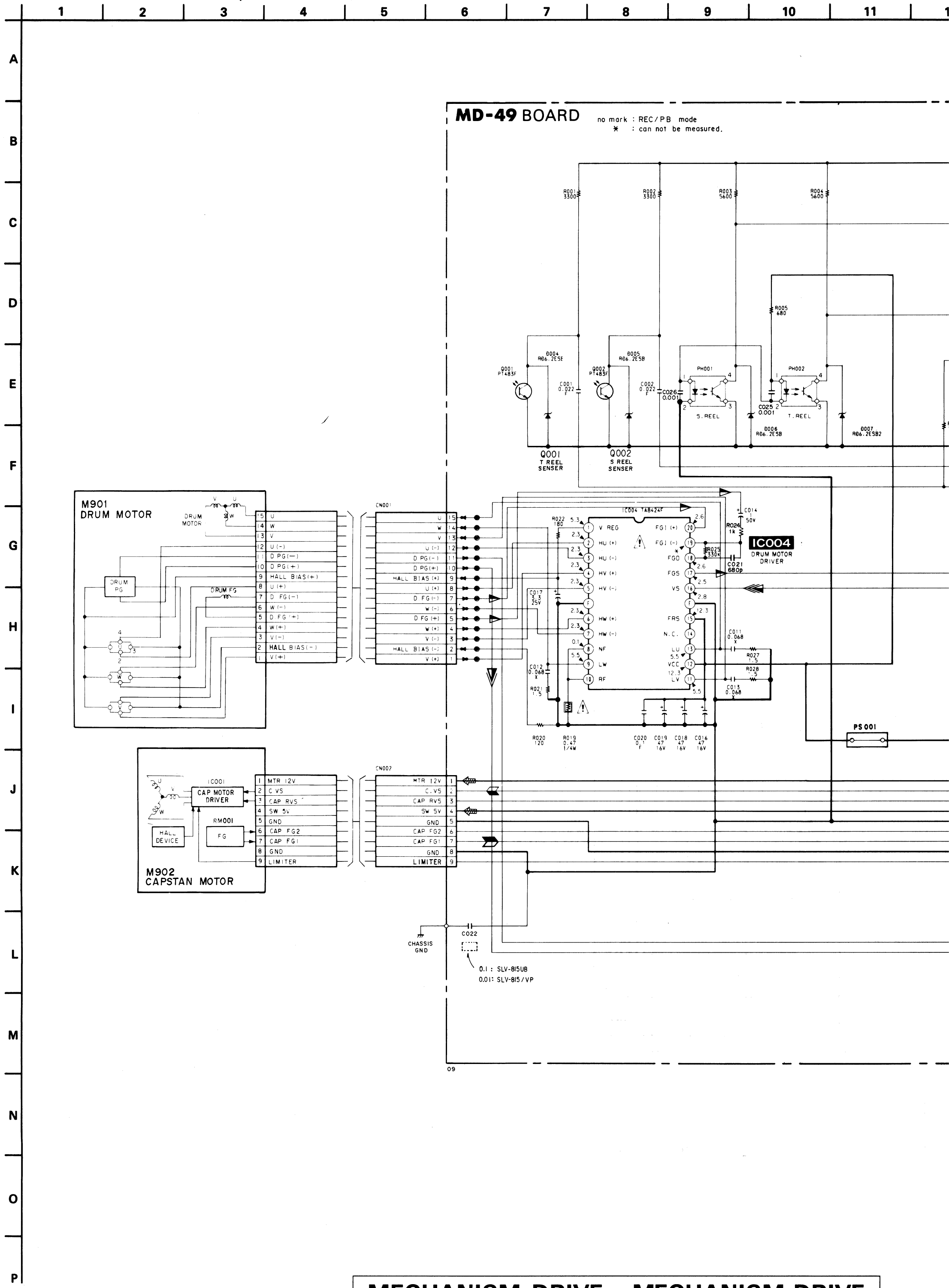


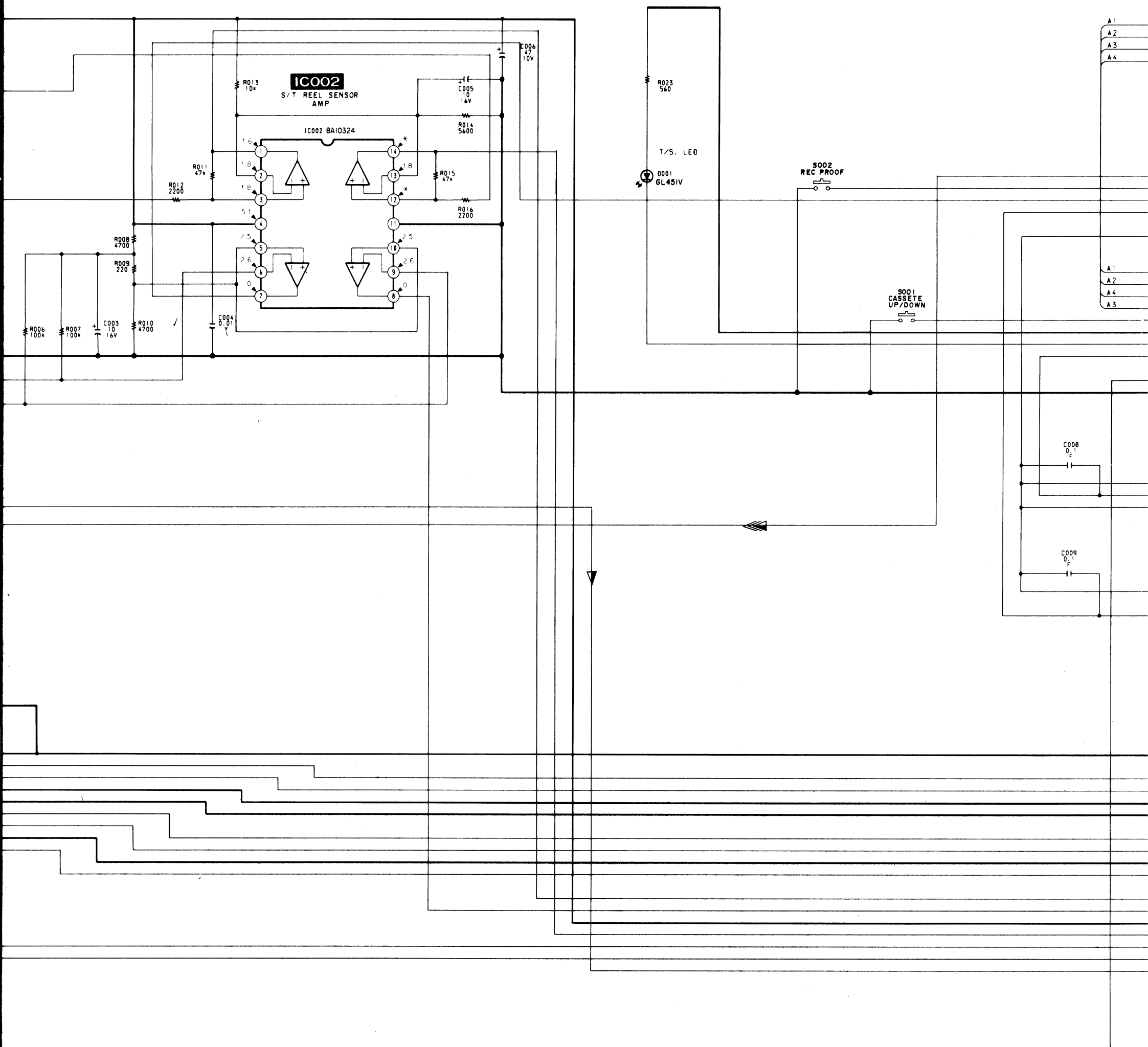


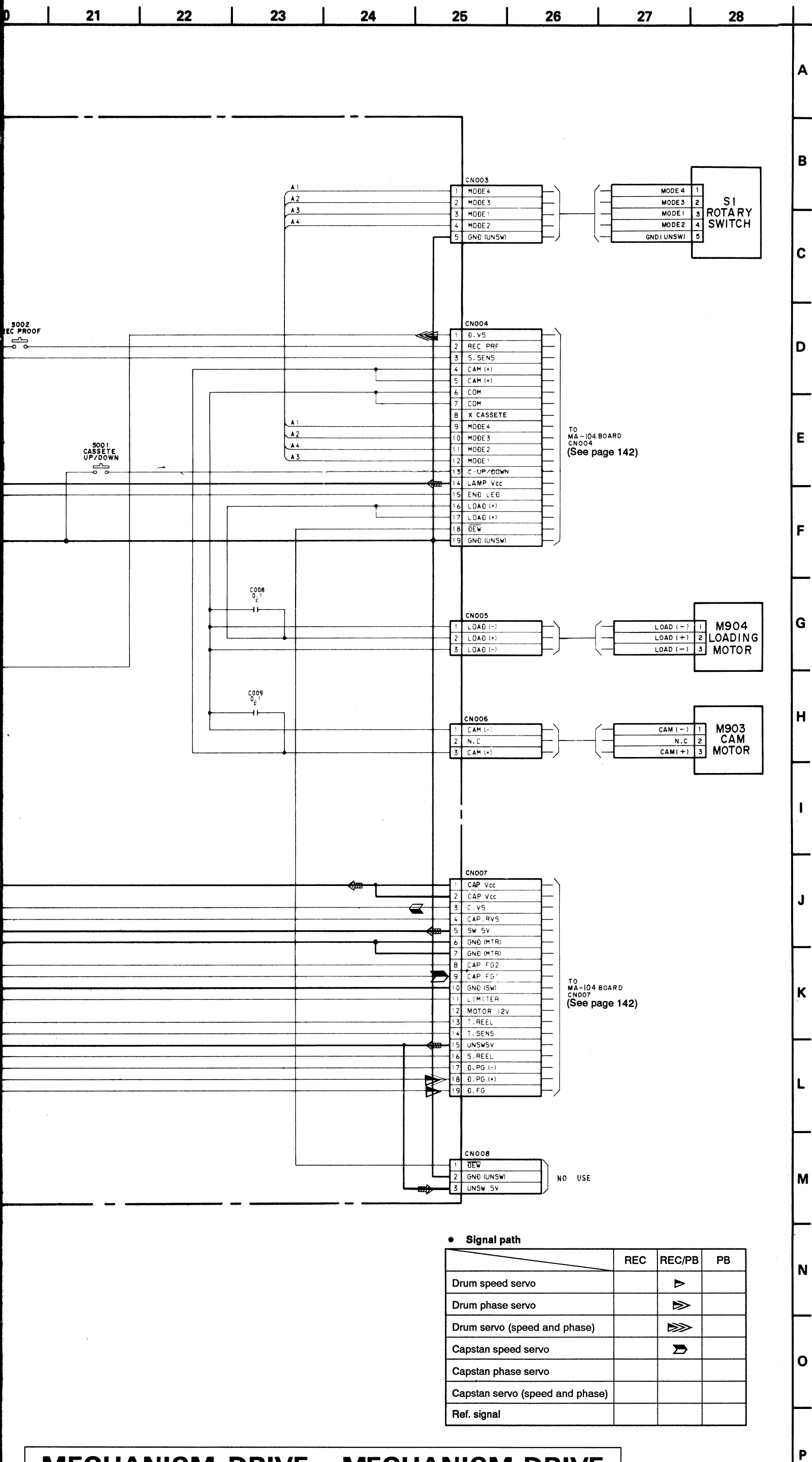




	REC	REC/PB	PB
Drum speed servo		▶	
Drum phase servo		▶▶	
Drum servo (speed and phase)		▶▶▶	
Capstan speed servo		▶	
Capstan phase servo		▶▶	
Capstan servo (speed and phase)		▶▶▶	
Ref. signal	▶		

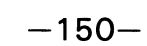


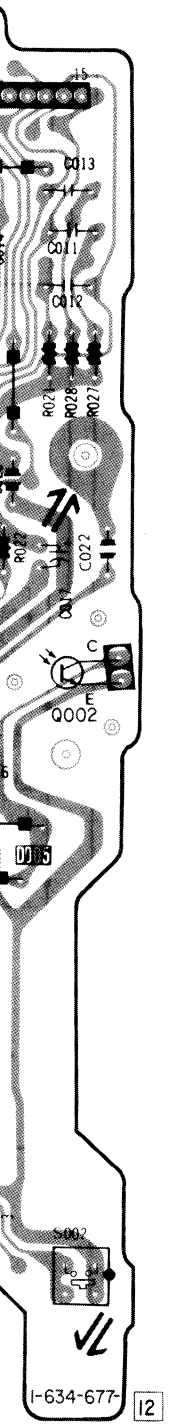




— Ref. No. MD-49 BOARD: 9000 series —

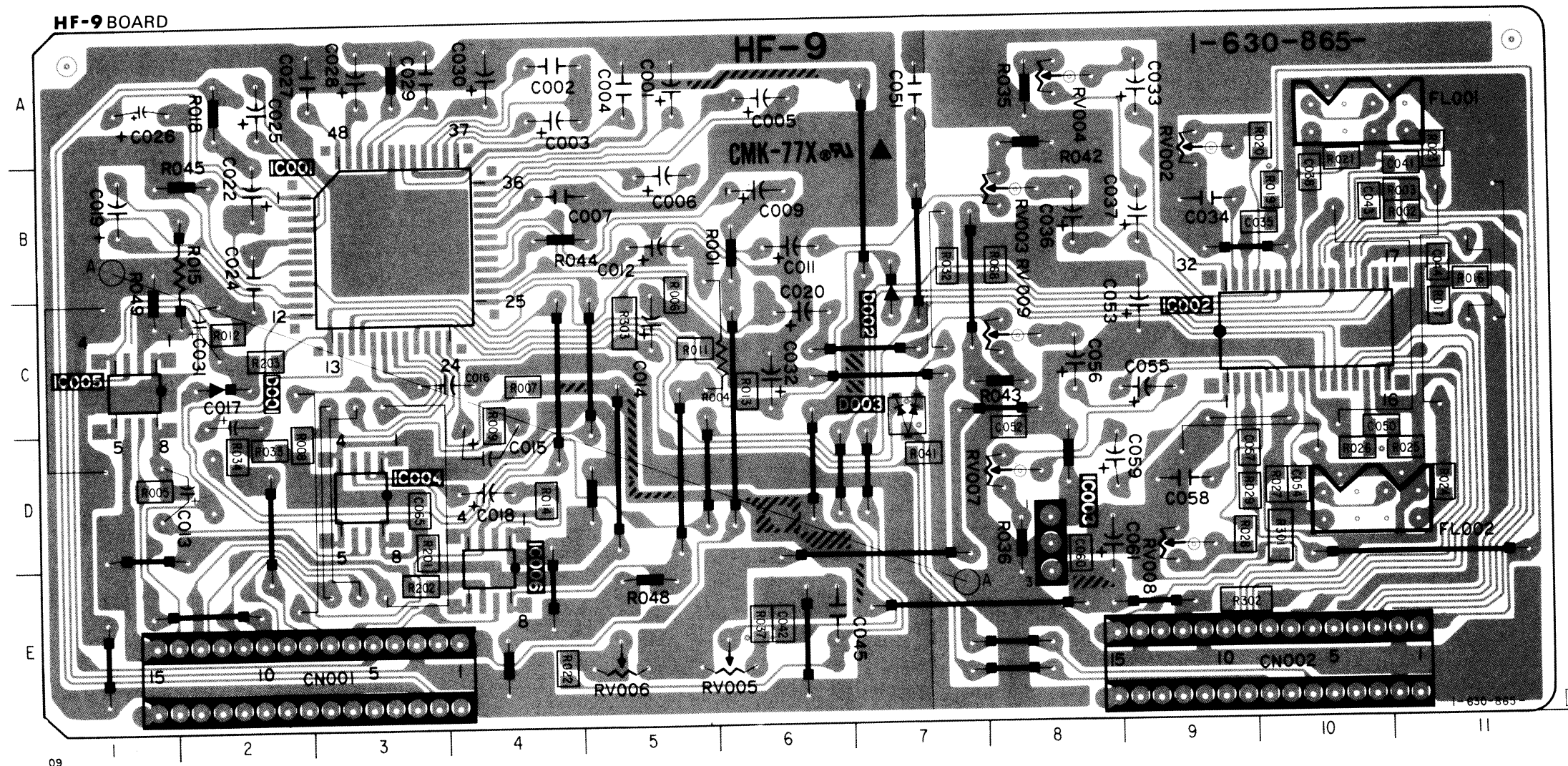
MD-49 BOARD	
D001	D-5
D002	C-2
D003	C-2
D004	D-1
D005	D-9
IC002	A-5
IC004	C-8
Q001	C-1
Q002	C-9





HF-9 (Hi-Fi AUDIO) PRINTED WIRING BOARD

— Ref. No. HF-9 BOARD: 1000 series —



HF-9 BOARD

D001 C-2
D002 C-7
D003 C-7

IC001 B-3
IC002 C-10
IC003 D-8
IC004 D-3
IC005 C-1
IC006 D-4

DIODE

D001 8-719-911-19 DIODE 1SS119
D002 8-719-911-19 DIODE 1SS119
D003 8-719-104-34 DIODE 1S2835

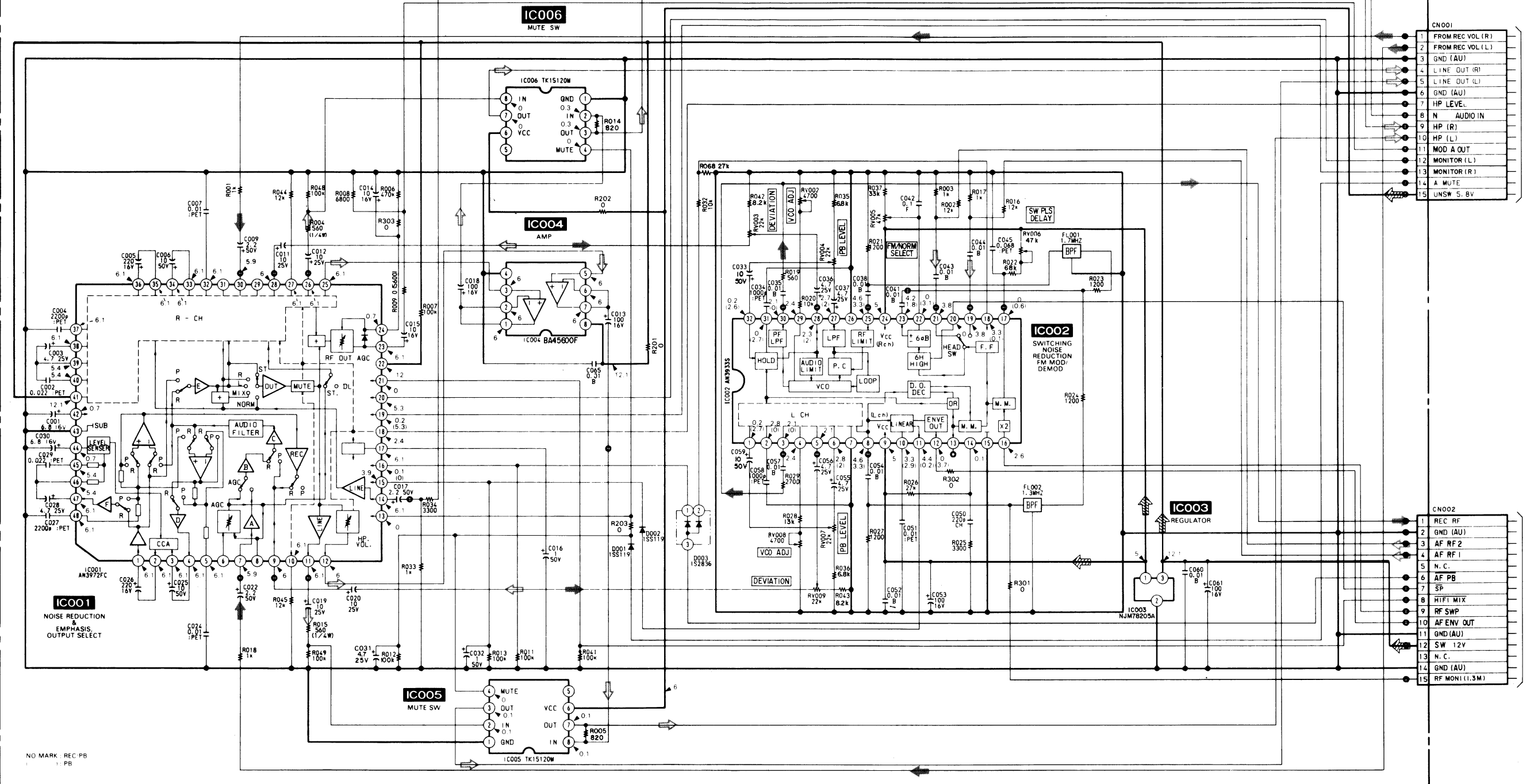
IC

IC001 8-759-420-18 IC AN3972FC
IC002 8-759-420-15 IC AN3932S
IC003 8-759-982-21 IC RC78L05A
IC004 8-759-924-46 IC BA4560F
IC005 8-759-946-44 IC TK15120M
IC006 8-759-946-44 IC TK15120M

HF-9 (HI-FI AUDIO) SCHEMATIC DIAGRAM

— Ref. No. HF-9 BOARD: 1000 series —

HF-9 BOARD



TO MA-104 BOARD
CN572
(See page 131)

TO MA-104 BOARD
CN571
(See page 130)

• Signal path

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC				→
PB				→

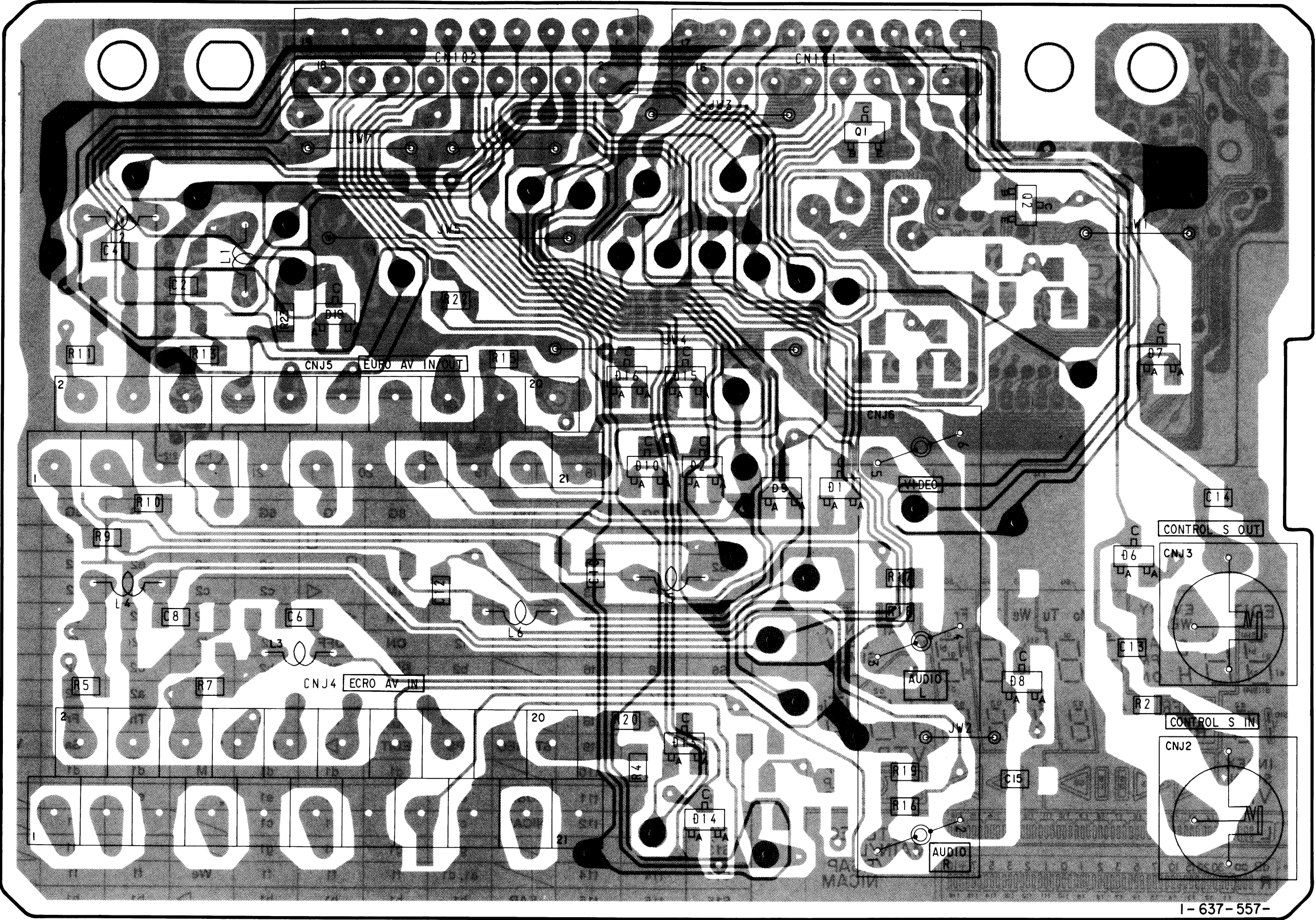
IO-40 BOARD

DIODE

D001	8-719-106-08	DIODE RD6. 2M-B2
D002	8-719-106-08	DIODE RD6. 2M-B2
D006	8-719-106-08	DIODE RD6. 2M-B2
D007	8-719-106-08	DIODE RD6. 2M-B2
D008	8-719-106-08	DIODE RD6. 2M-B2
D009	8-719-106-08	DIODE RD6. 2M-B2
D010	8-719-106-08	DIODE RD6. 2M-B2
D013	8-719-106-08	DIODE RD6. 2M-B2
D014	8-719-106-08	DIODE RD6. 2M-B2
D015	8-719-106-08	DIODE RD6. 2M-B2
D016	8-719-106-08	DIODE RD6. 2M-B2
D019	8-719-157-61	DIODE RD15M-T1B

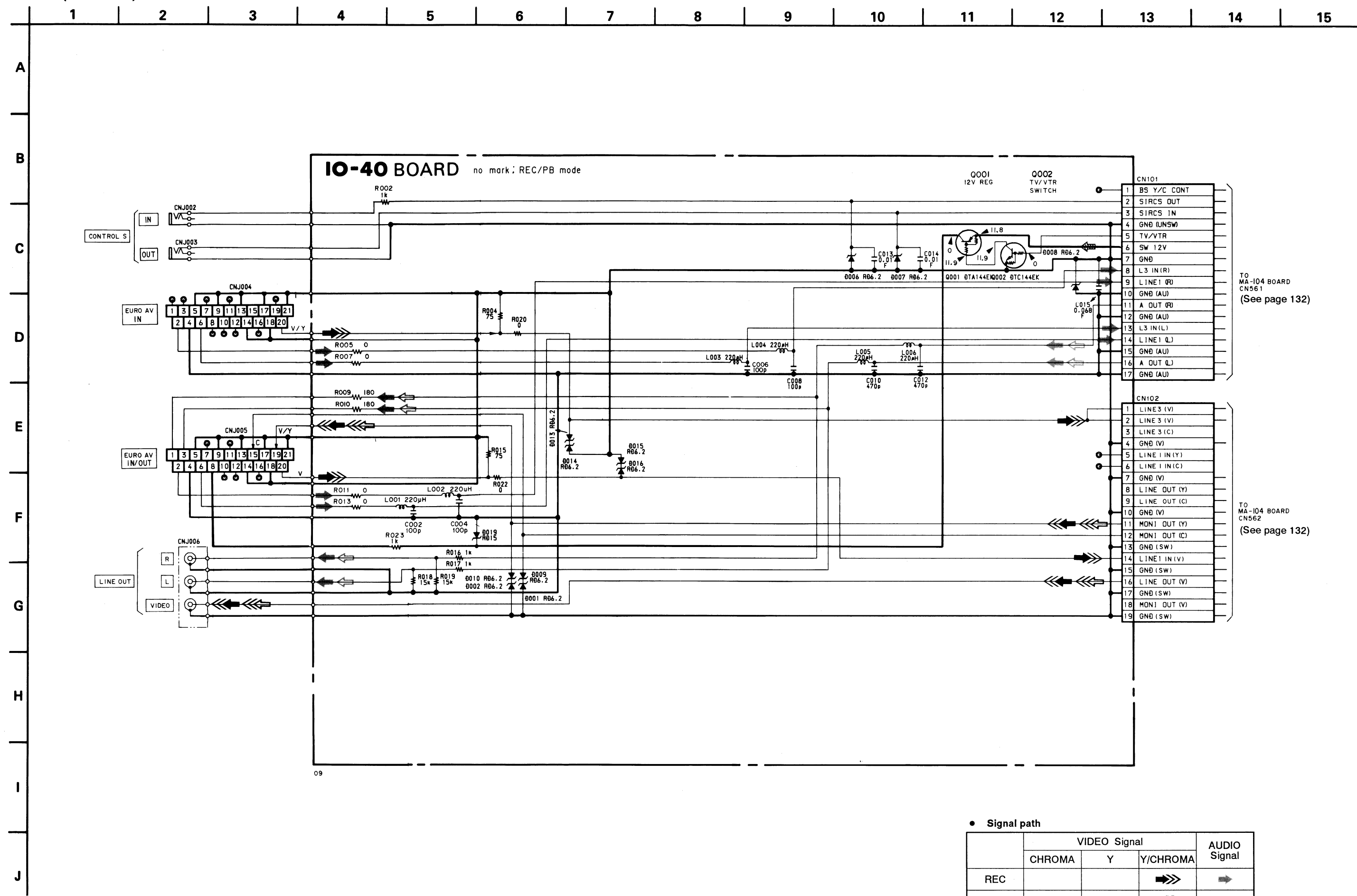
TRANSISTOR

Q001	8-729-901-06	TRANSISTOR DTA144EK
Q002	8-729-901-01	TRANSISTOR DTC144EK



09

IO-40 (TERMINAL) SCHEMATIC DIAGRAM — Ref. No. IO-40 BOARD: 7000 series —



TO MA-104 BOARD
CN561
(See page 132)

TO MA-104 BOARD
CN562
(See page 132)

• Signal path

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC			➡➡➡	➡
PB			➡➡➡	➡

DIODE

D201	8-719-911-19	DIODE ISS119
D202	8-719-911-19	DIODE ISS119
D203	8-719-911-19	DIODE ISS119
D204	8-719-911-19	DIODE ISS119
D206	8-719-104-34	DIODE IS2836
D208	8-719-105-82	DIODE RD5. 1M-B2
D209	8-719-106-08	DIODE RD6. 2M-B2
D211	8-719-400-18	DIODE MA152WK
D212	8-719-400-18	DIODE MA152WK
D216	8-719-400-18	DIODE MA152WK
D217	8-719-400-18	DIODE MA152WK
D218	8-719-104-34	DIODE IS2836
D219	8-719-106-08	DIODE RD6. 2M-B2

IC

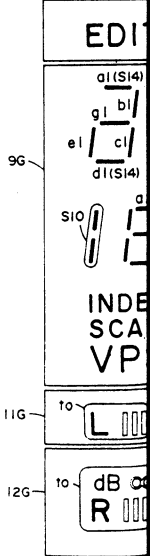
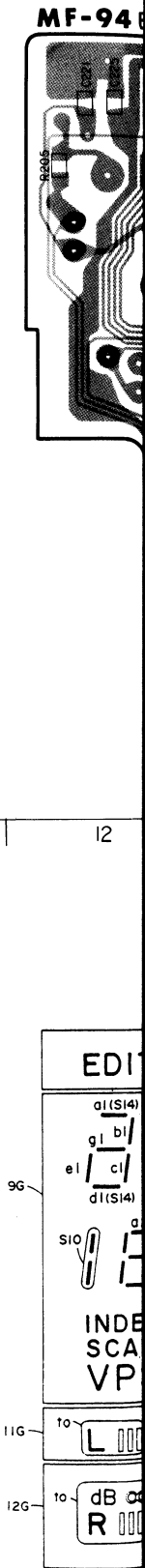
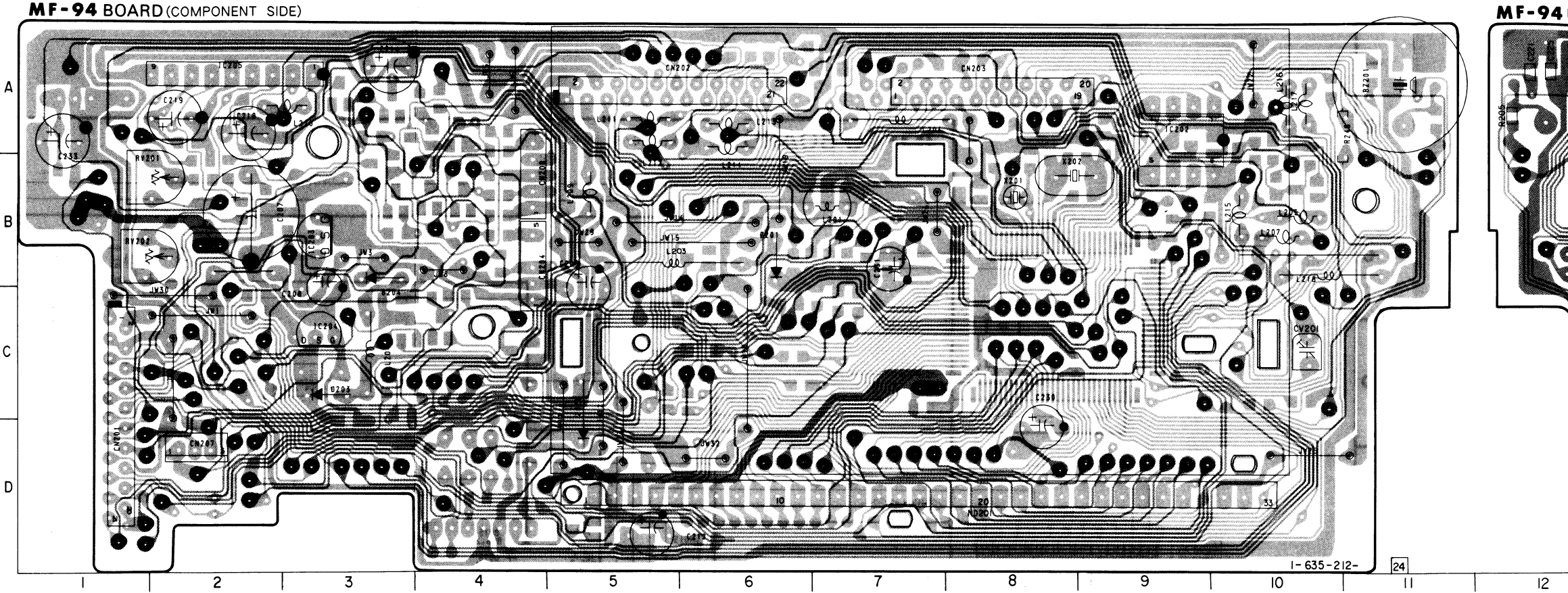
IC201	8-759-504-10	IC MB89794B-PAL
IC202	8-759-748-54	IC CAT35C202P
IC203	8-759-502-50	IC S-8053HNB
IC204	8-759-947-53	IC S-8054ALR
IC205	8-759-961-38	IC BA6138

TRANSISTOR

Q201	8-729-271-23	TRANSISTOR 2SC2712
Q202	8-729-271-23	TRANSISTOR 2SC2712
Q205	8-729-901-01	TRANSISTOR DTC144EJ
Q206	8-729-901-01	TRANSISTOR DTC144EJ

MF-94 BOARD

D201	B-6
D202	D-5
D203	C-3
D204	B-3
D206	C-19
D208	D-18
D209	A-14
D211	A-20
D212	A-20
D216	B-19
D217	B-19
D218	B-17
D219	B-15
IC201	C-15
IC202	A-9
IC203	B-3
IC204	C-3
IC205	A-2
Q201	A-19
Q202	B-20
Q205	C-19
Q206	C-10



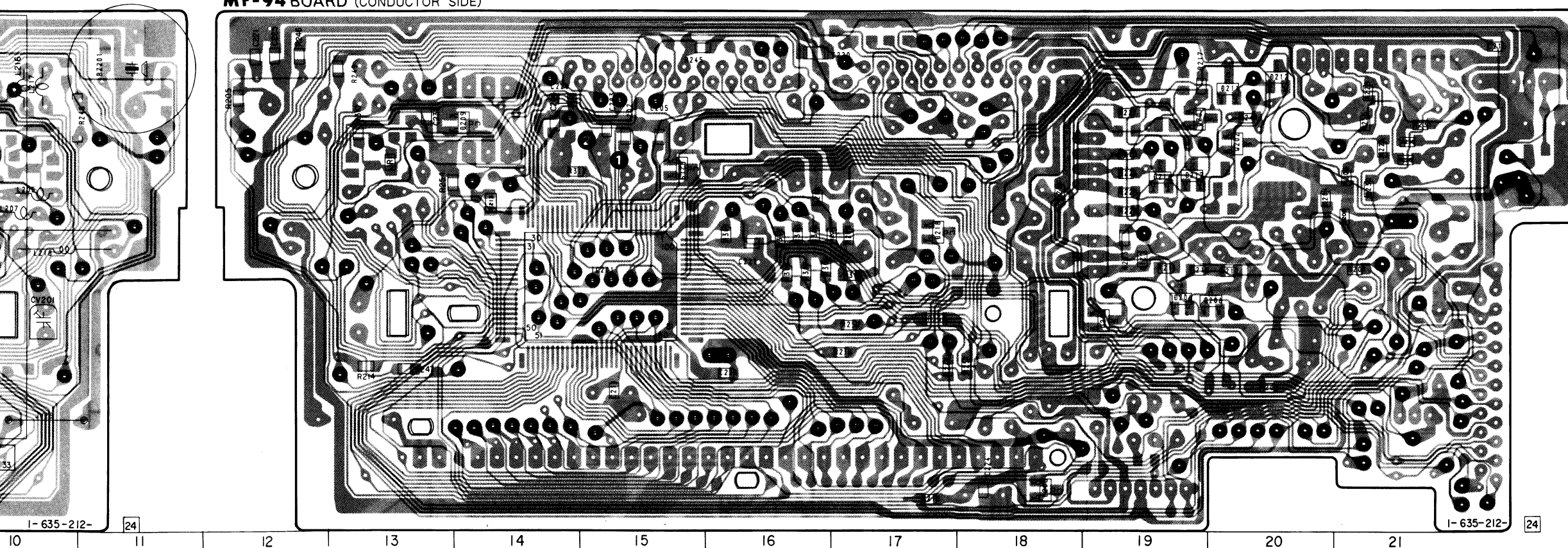
DIODE

D502 8-719-955-04 DIODE SLR-54MC3 (AUTO TRACKING)
D503 8-719-302-07 DIODE SLR-54DC3 (EDIT MONITOR)
D504 8-719-921-01 DIODE SLR-54VC3 (AUDIO INSERT)
D505 8-719-921-01 DIODE SLR-54VC3 (VIDEO INSERT)
D506 8-719-955-04 DIODE SLR-54MC3 (◀▶▶)

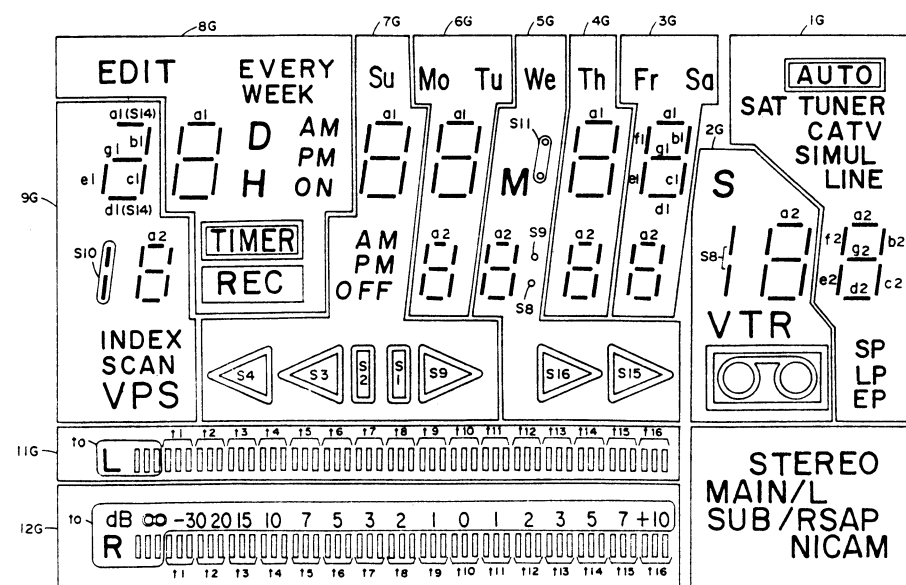
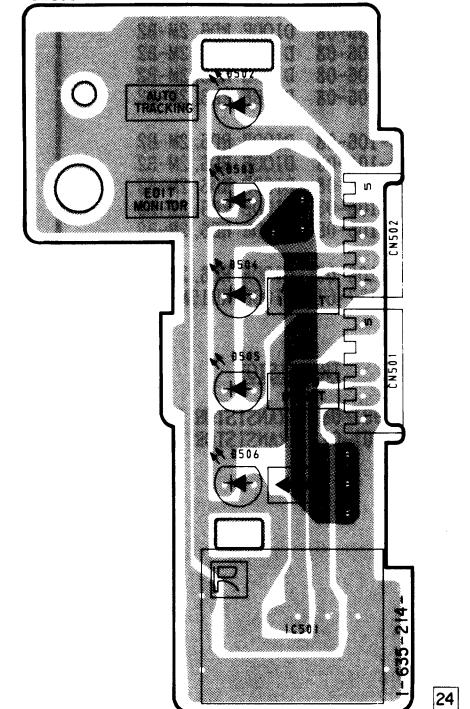
• For printed wiring boards.

• ⊗ : Through hole.

MF-94 BOARD (CONDUCTOR SIDE)



RM-42 BOARD (COMPONENT SIDE)



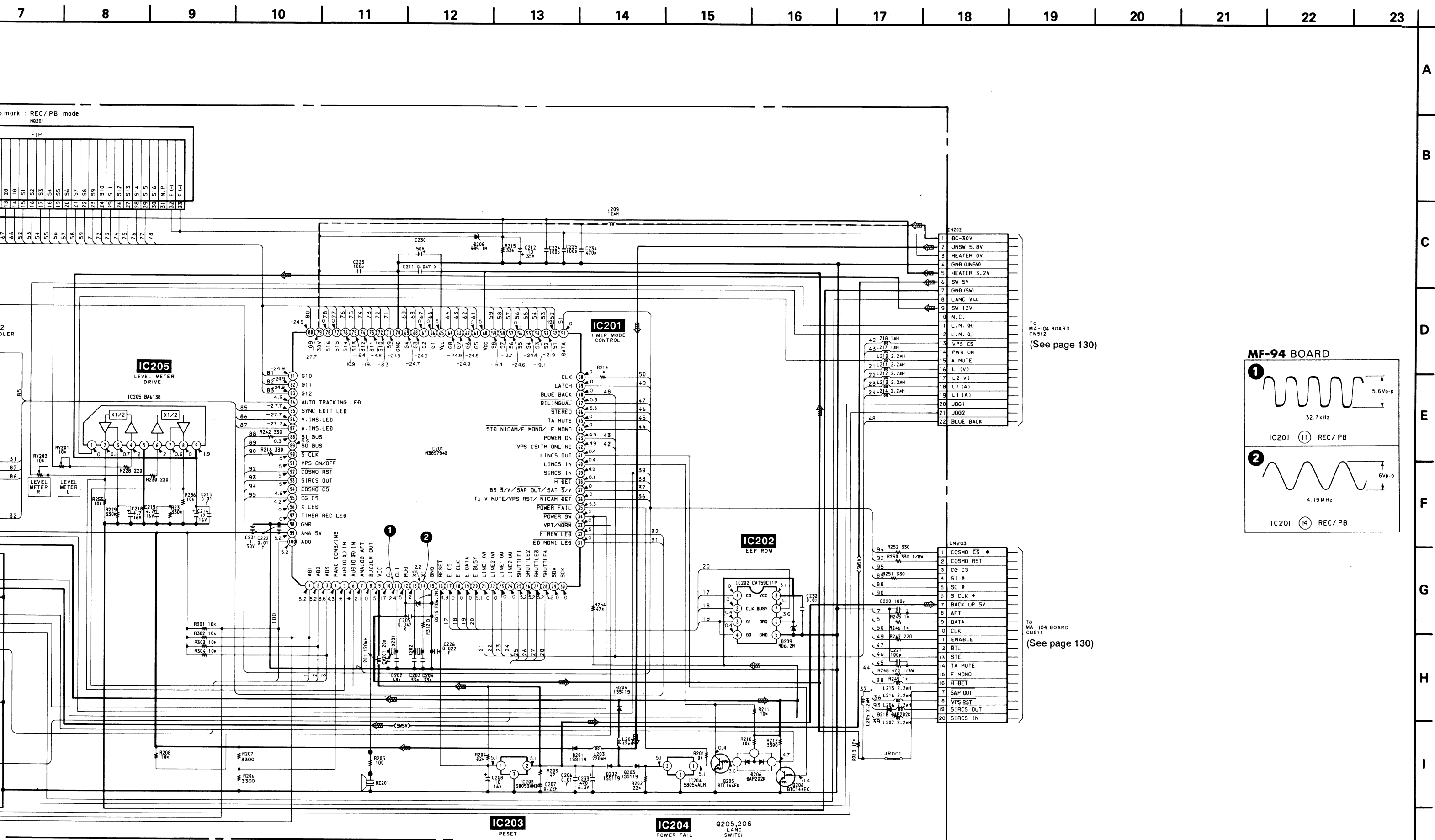
	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	t1	t1		d2	H		d2	d2	d2	d2	d2	d2
S2	t2	t2		e2	D		e2	e2	e2	e2	e2	e2
S3	t3	t3		c2	AM		c2	c2	c2	c2	c2	c2
S4	t4	t4		g2	PM		g2	g2	g2	g2	g2	g2
S5	t5	t5		f2	ON	OFF	f2	f2	f2	f2	f2	f2
S6	t6	t6		b2	REC	PM	b2	b2	b2	b2	b2	b2
S7	t7	t7		a2	TIMER	AM	a2	a2	a2	a2		a2
S8	t8	t8		SCAN	EVERY WEEK	Su	Tu	.	Th	Fr	/	SP
S9	t9	t9	STEREO	VPS	EDIT	▶	Mo	.		Sa	VTR	LP
S10	t10	t10		/	d1	d1	d1	M	d1	d1	S	LINE
S11	t11	t11	SUB/R	e1	e1	e1	e1	:	e1	e1		SIMUL
S12	t12	t12	NICAM	c1	c1	c1	c1		c1	c1		CATV
S13	t13	t13		g1	g1	g1	g1		g1	g1		TUNER
S14	t14	t14		a1, d1	f1	f1	f1	We	f1	f1		AUTO
S15	t15	t15	SAP	b1	b1	b1	b1	▶	b1	b1		SAT
S16	t16	t16	MAIN/L	INDEX	a1	a1	a1	▶	a1	a1	◻	EP

(See page 172)



IC204
POWER FAIL

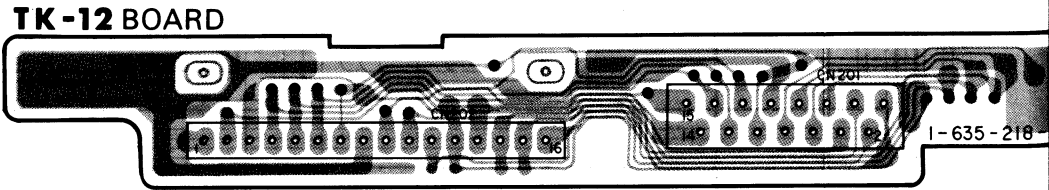
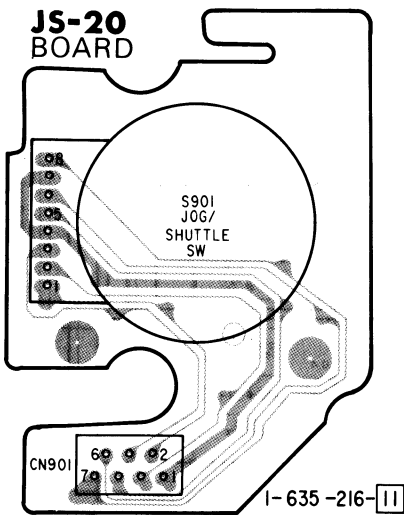
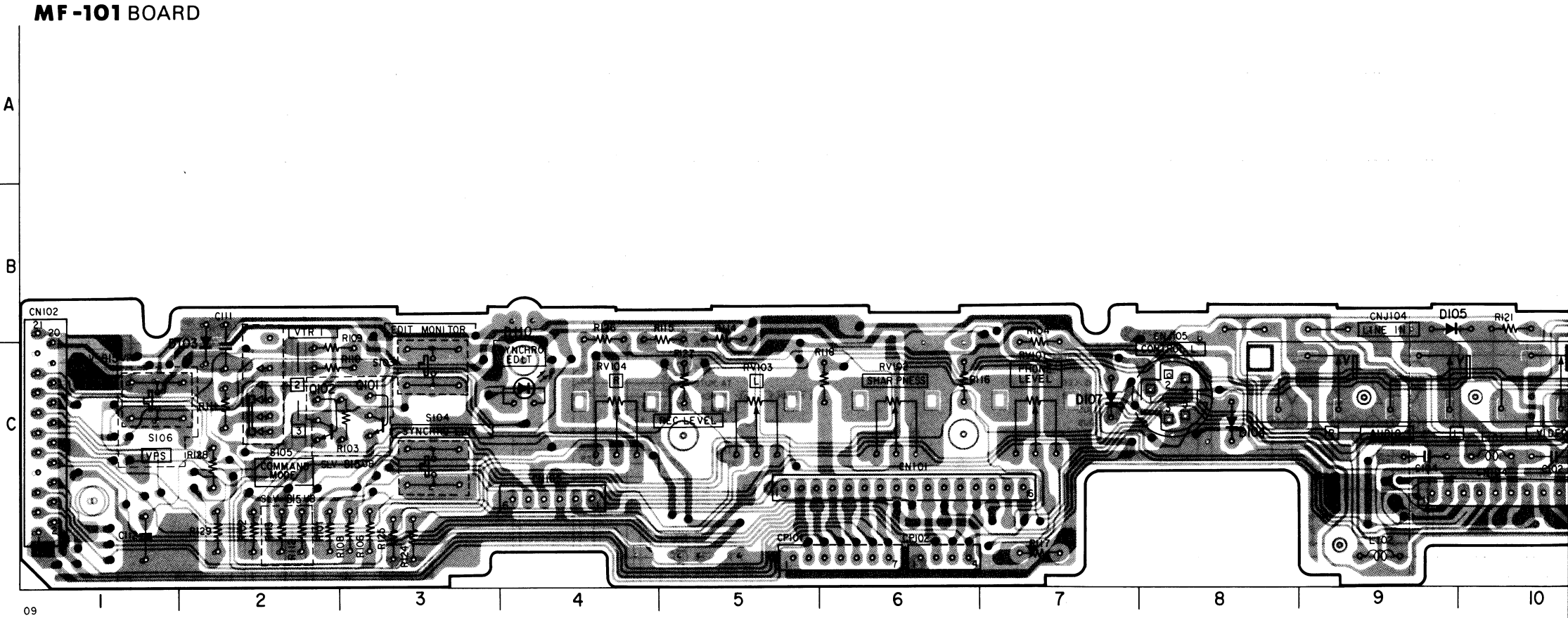
Q205,206
LANC
SWITCH



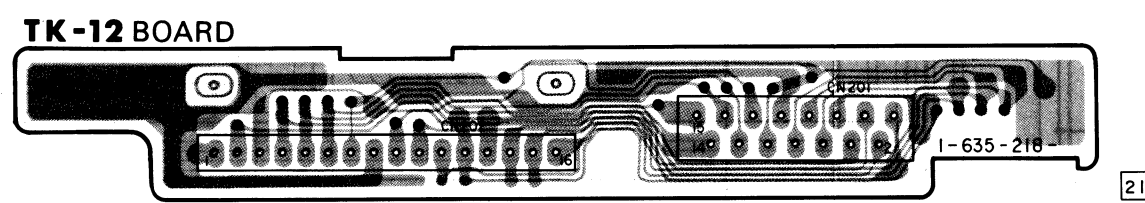
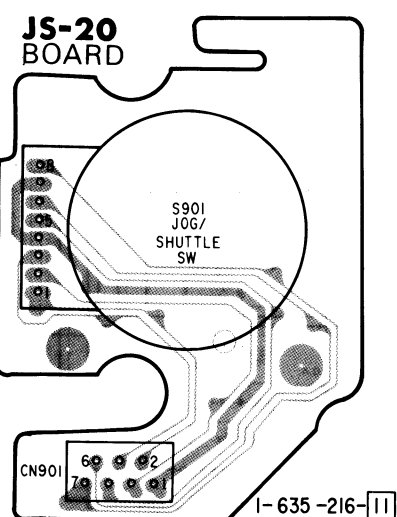
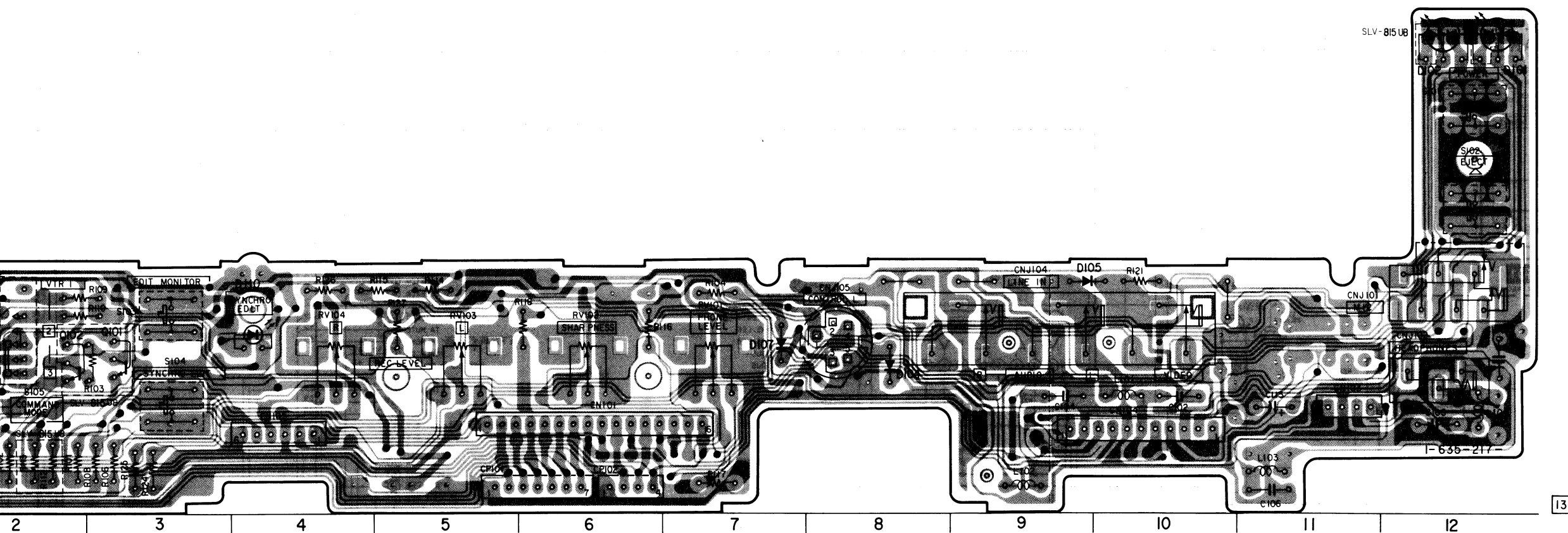
MF-101 (FUNCTION SWITCH, TERMINAL), TK-12 (RELAY), JS-20 (JOG/SHUTTLE), SWITCH BLOCK PRINTED WIRING BOARDS
— Ref. No. TK-12 BOARD: 6000 series, JS-20 BOARD: 8000 series, MF-101 BOARD: 90000 series —

- MF-101 BOARD
- D101 A-12
 - D102 A-12
 - D103 B-2
 - D104 C-8
 - D105 B-10
 - D107 C-7
 - D110 C-4
 - Q101 C-3
 - Q102 C-2

DIODE			
D101	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815VP)	Q101 8
D101	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)	Q102 8
D102	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815VP)	
D102	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)	
D103	8-719-110-36	DIODE RD13ES-B2	
D104	8-719-109-93	DIODE RD6. 2ES-B2	
D105	8-719-911-19	DIODE ISS119	
D106	8-719-911-19	DIODE ISS119	
D107	8-719-109-93	DIODE RD6. 2ES-B2	
D110	8-719-946-30	DIODE SLR-34DC3 (SYNCHRO EDIT)	



DIODE				TRANSISTOR			
D101	8-719-955-04	DIODE PY5504S-1 (POWER)	(SLV-815VP)	Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	(SLV-815UB)
D101	8-719-988-92	DIODE BRPG5041XK (POWER)	(SLV-815UB)	Q102	8-729-900-89	TRANSISTOR DTC144ES	(SLV-815UB)
D102	8-719-955-04	DIODE PY5504S-1 (POWER)	(SLV-815VP)				
D102	8-719-988-92	DIODE BRPG5041XK (POWER)	(SLV-815UB)				
D103	8-719-110-36	DIODE RD13ES-B2					
D104	8-719-109-93	DIODE RD6.2ES-B2					
D105	8-719-911-19	DIODE 1SS119					
D106	8-719-911-19	DIODE 1SS119					
D107	8-719-109-93	DIODE RD6.2ES-B2					
D110	8-719-946-30	DIODE SLR-34DC3 (SYNCHRO EDIT)					

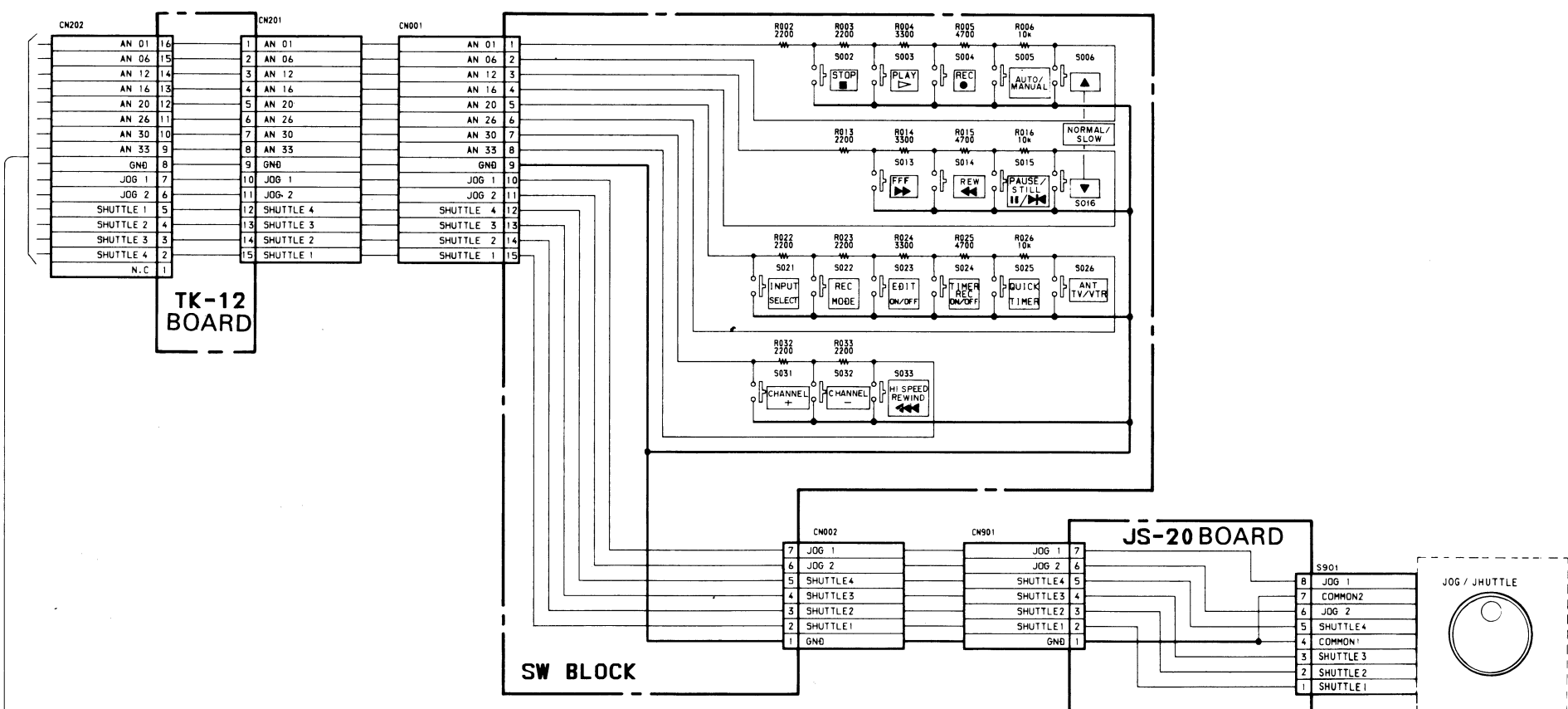
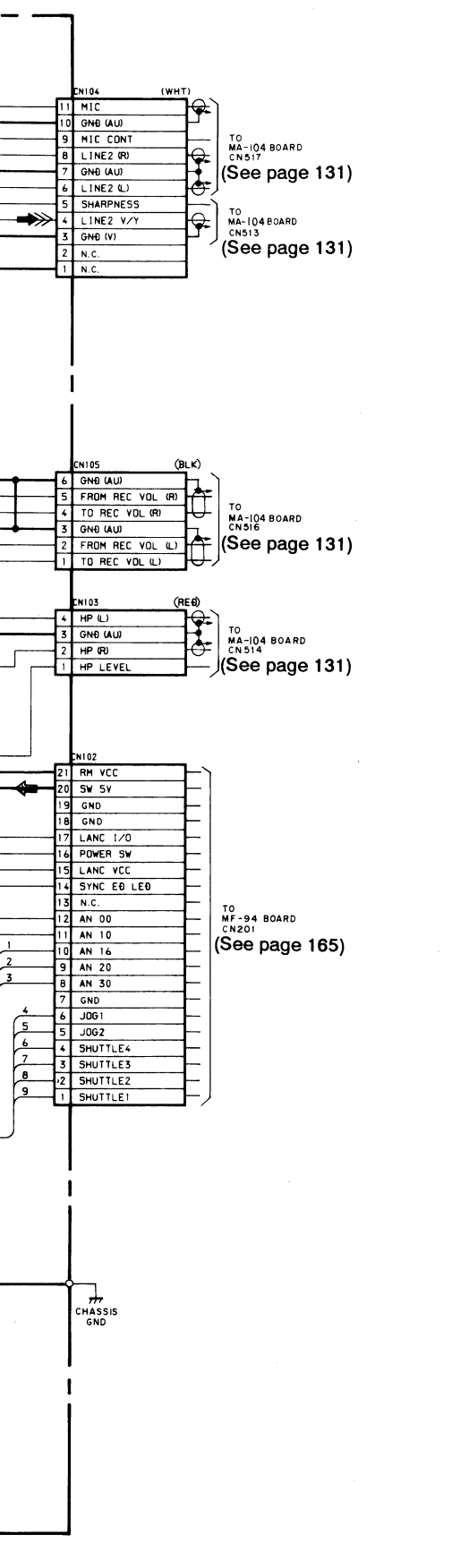


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

A
B
C
D
E
F
G
H



15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



• Signal path

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC			➡➡➡	➡➡➡
PB				

A
B
C
D
E
F
G
H
I
J

SLV-815UB ONLY

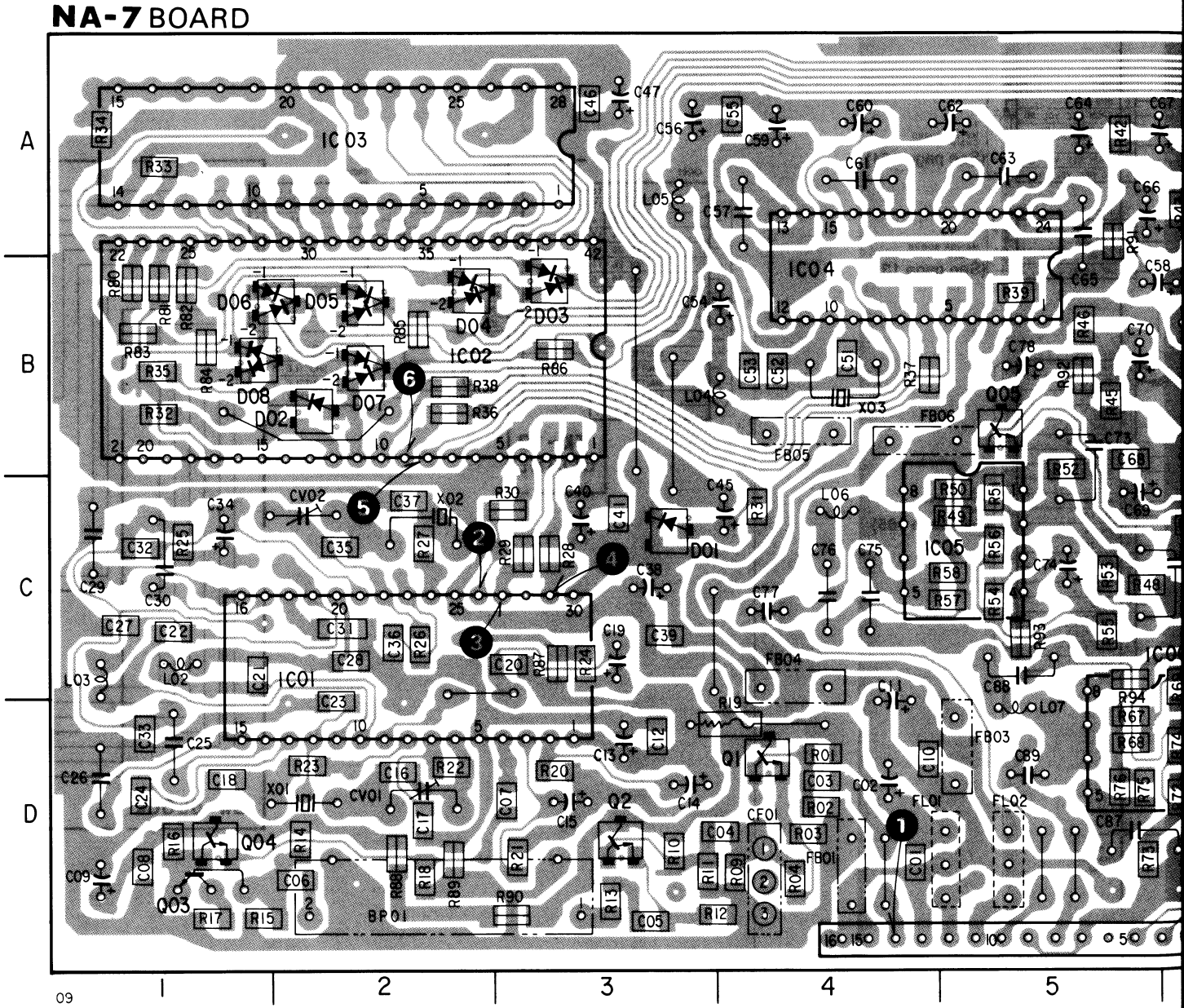
NA-7 (NICAM DECODER), NM-1 (NICAM SELECTOR) PRINTED WIRING BOARDS
— Ref. No. NA-7 BOARD: 3000 series, NM-1 BOARD: 8000 series —

SLV-815UB ONLY

DIODE			IC			TRANSISTOR		
D001	8-719-801-52	DIODE 1SS190-TE85L	IC001	8-759-231-09	IC TA8662N	Q001	8-729-100-66	TRANSISTOR 2SC1623-L6
D002	8-719-801-52	DIODE 1SS190-TE85L	IC002	8-759-231-28	IC TC6011N	Q002	8-729-100-66	TRANSISTOR 2SC1623-L6
D003	8-719-400-18	DIODE 1S2837-T1	IC003	8-752-331-22	IC CXK5864BSP-10L	Q003	8-729-104-80	TRANSISTOR 2SC3355
D004	8-719-400-18	DIODE 1S2837-T1	IC004	8-759-231-29	IC TD6710AN	Q004	8-729-100-66	TRANSISTOR 2SC1623-L6
D005	8-719-400-18	DIODE 1S2837-T1	IC005	8-759-900-72	IC NE5532P	Q005	8-729-100-66	TRANSISTOR 2SC1623-L6
D006	8-719-400-18	DIODE 1S2837-T1	IC006	8-759-900-72	IC NE5532P	Q006	8-729-100-66	TRANSISTOR 2SC1623-L6
D007	8-719-400-18	DIODE 1S2837-T1						
D008	8-719-104-34	DIODE 1S2835-T1						

NA-7 BOARD

D001	C-3
D002	D-2
D003	B-3
D004	B-2
D005	B-2
D006	B-2
D007	B-2
D008	B-1
IC001	C-2
IC002	B-1
IC003	A-1
IC004	A-4
IC005	C-5
IC006	D-5
Q001	D-4
Q002	D-3
Q003	D-1
Q004	D-1
Q005	B-5
Q006	D-6



TRANSISTOR

29-100-66 TRANSISTOR 2SC1623-L6
29-100-66 TRANSISTOR 2SC1623-L6
29-104-80 TRANSISTOR 2SC3355
29-100-66 TRANSISTOR 2SC1623-L6
29-100-66 TRANSISTOR 2SC1623-L6

DIODE

D002 8-719-911-19 DIODE 1SS119
D003 8-719-911-19 DIODE 1SS119
D010 8-719-911-19 DIODE 1SS119

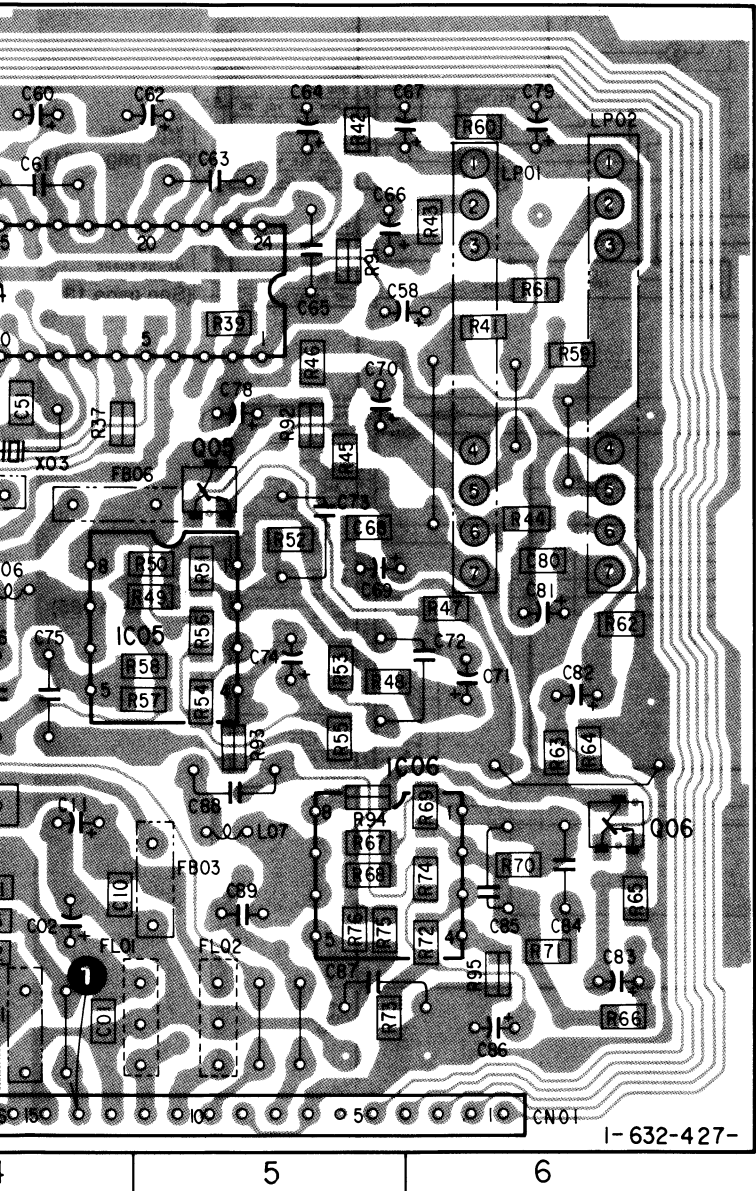
IC

IC001 8-759-800-81 IC LA7016
IC002 8-759-800-81 IC LA7016

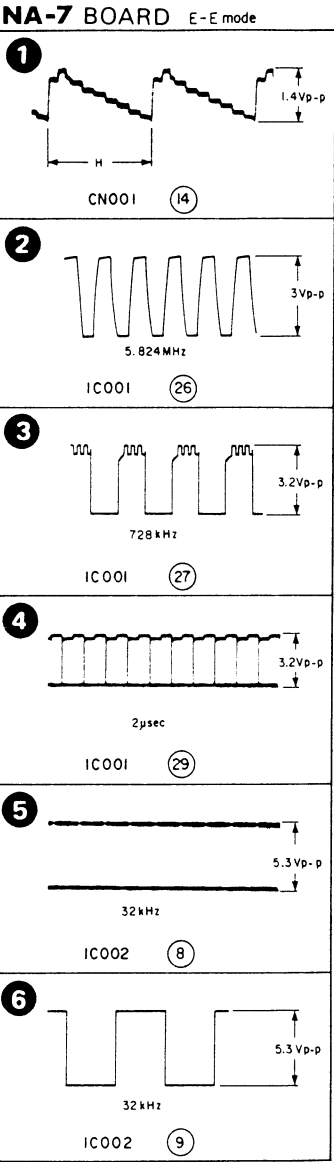
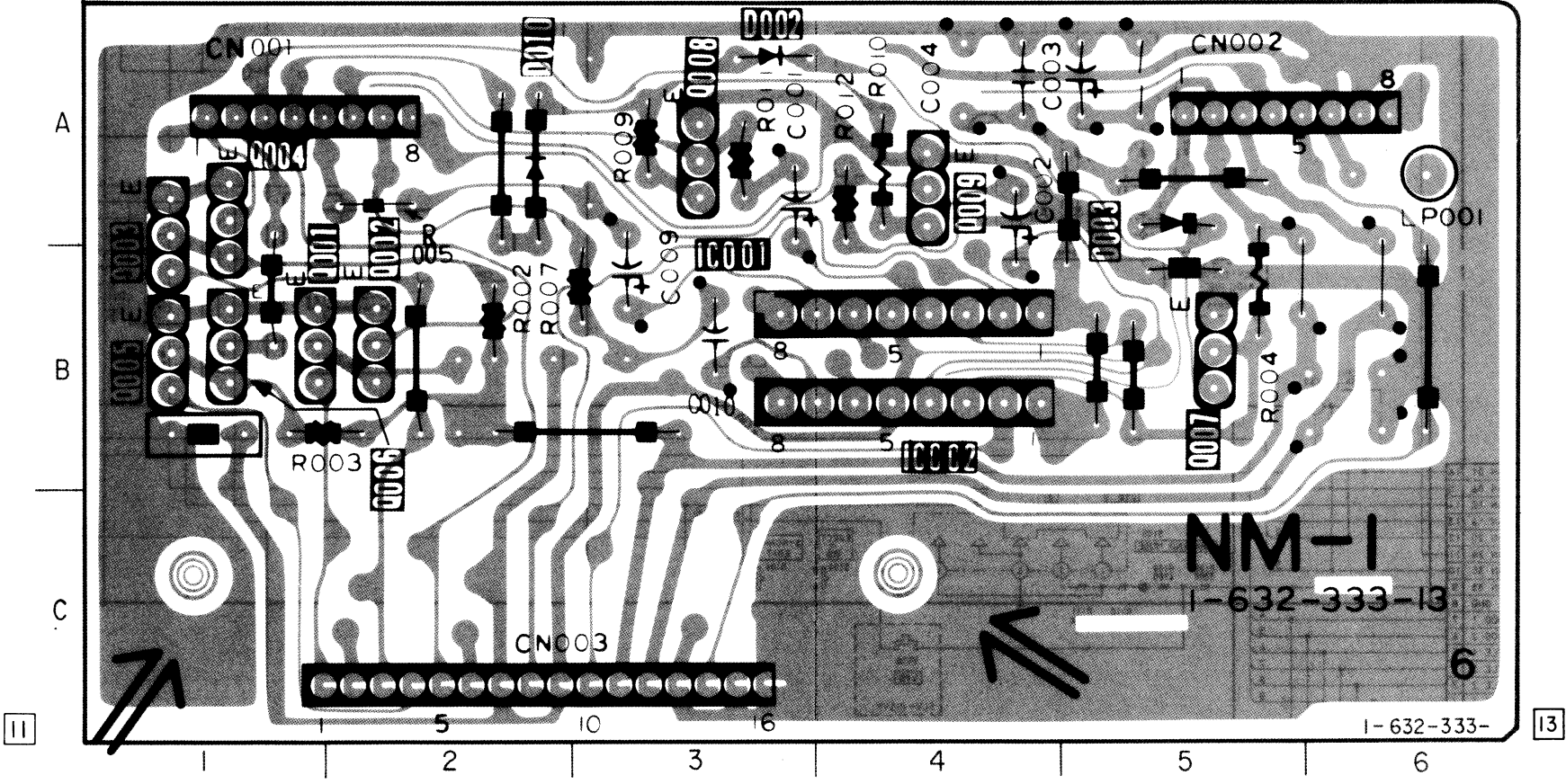
TRANSISTOR

Q003 8-729-900-80 TRANSISTOR DTC114ES
Q004 8-729-900-80 TRANSISTOR DTC114ES
Q005 8-729-900-80 TRANSISTOR DTC114ES
Q006 8-729-900-80 TRANSISTOR DTC114ES
Q007 8-729-900-80 TRANSISTOR DTC114ES

Q008 8-729-303-37 TRANSISTOR 2SD655E
Q009 8-729-303-37 TRANSISTOR 2SD655E



NM-1 BOARD



NM-1 BOARD

D002 A-3
D003 A-5
D010 A-2

IC001 B-4
IC002 B-4

Q001 B-2
Q002 B-2
Q003 A-1
Q004 A-1
Q005 B-1
Q006 B-1
Q007 B-5
Q008 A-3
Q009 A-4

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

— Ref. No. NA-7 BOARD: 3000 series, NM-1 BOARD: 8000 series —

A

B

C

D

E

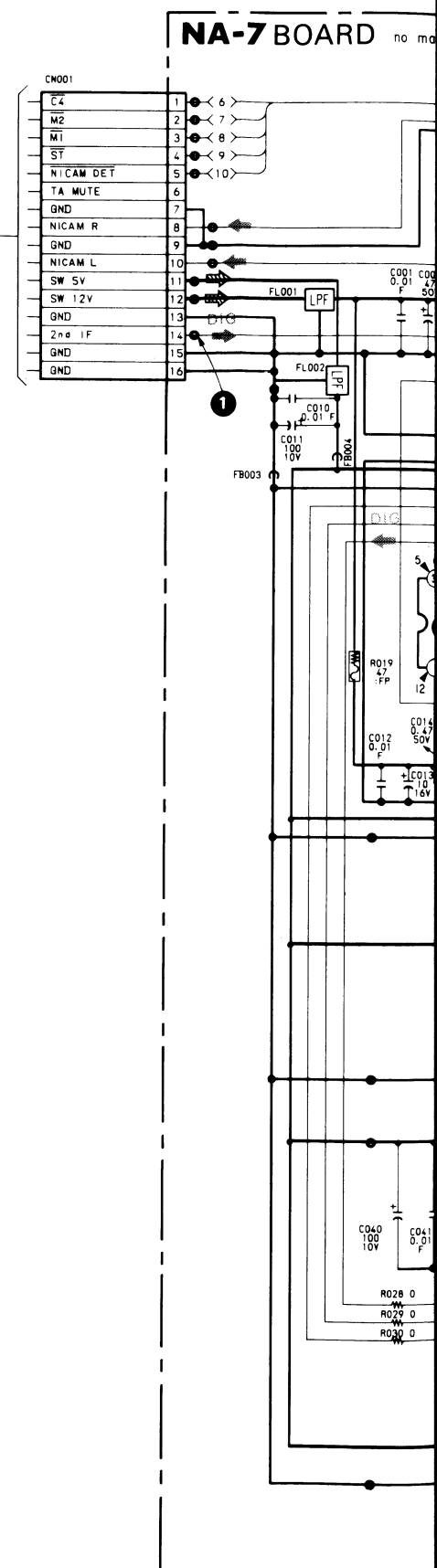
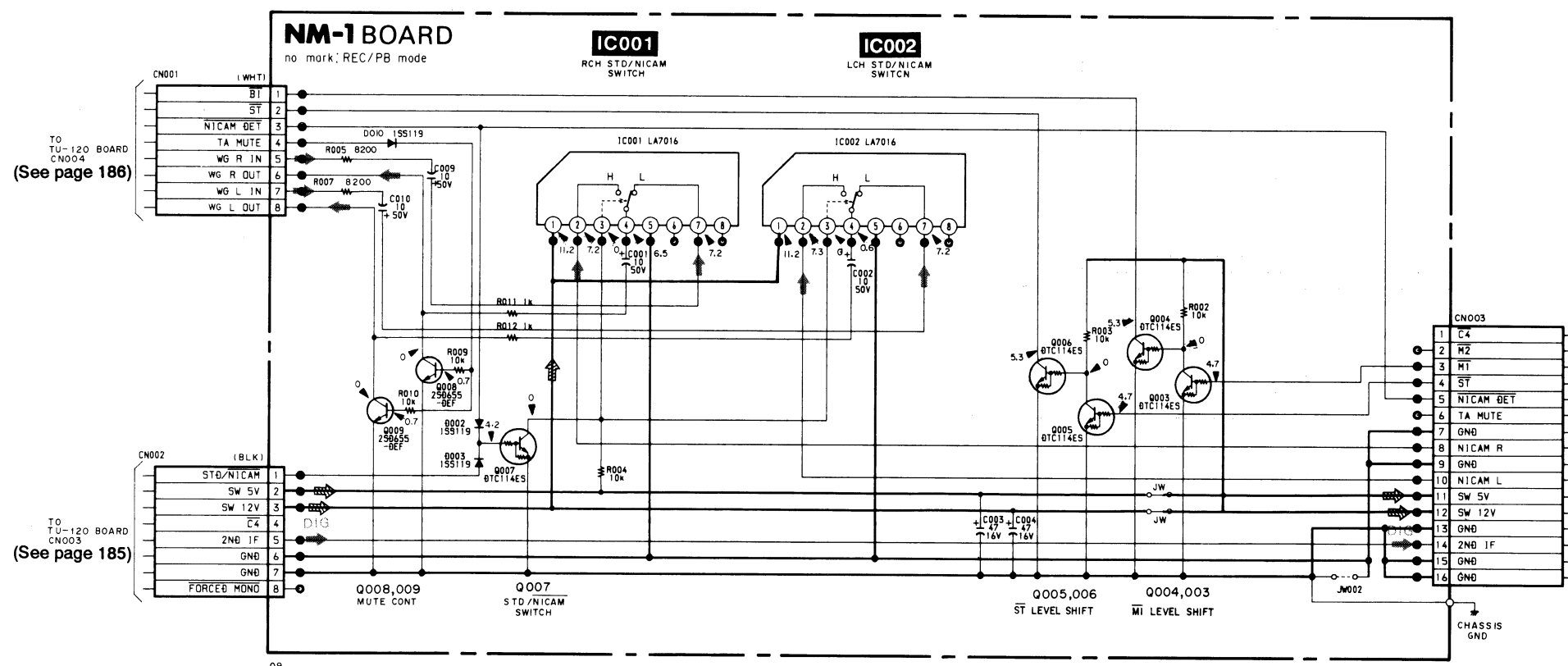
F

G

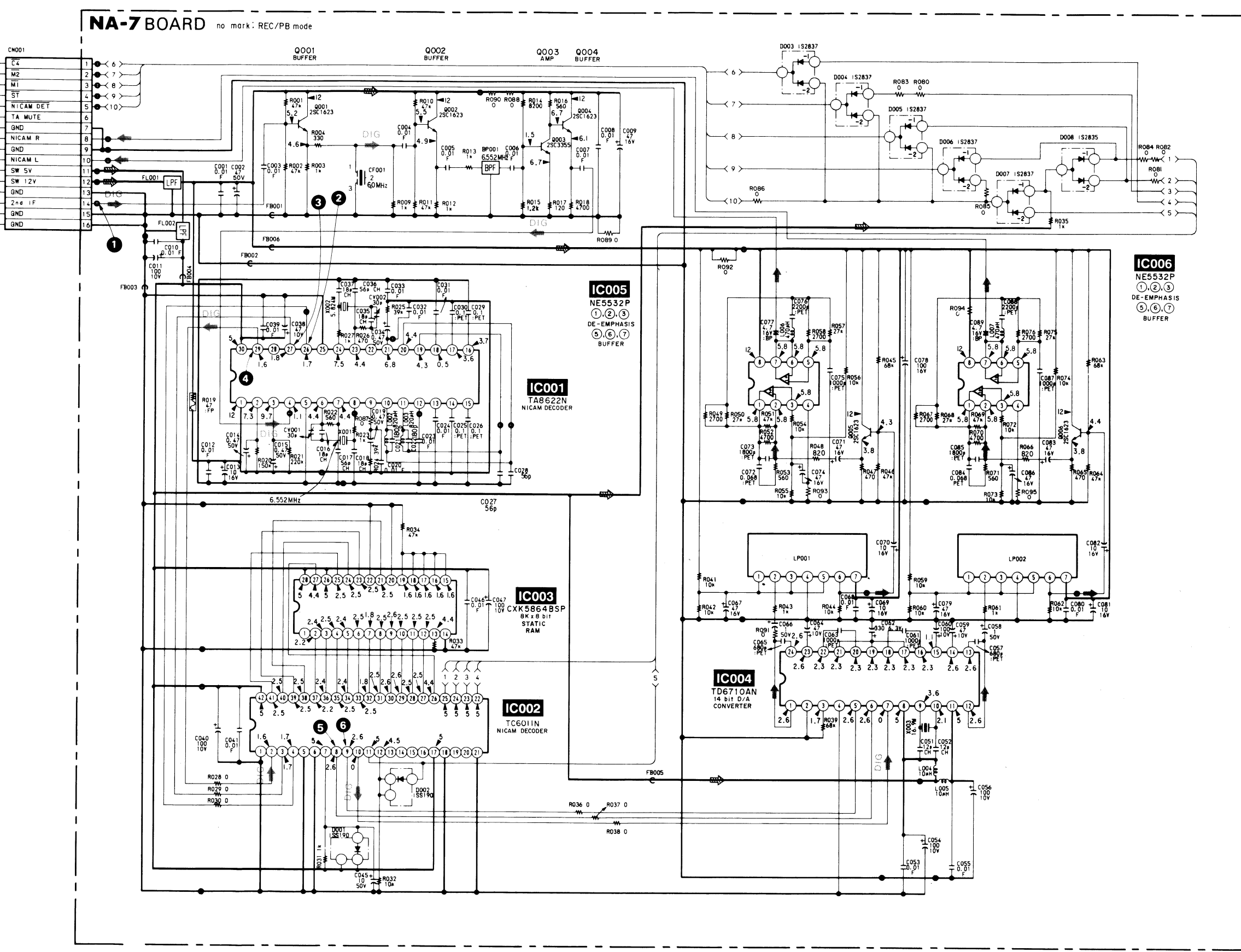
H

I

J



15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



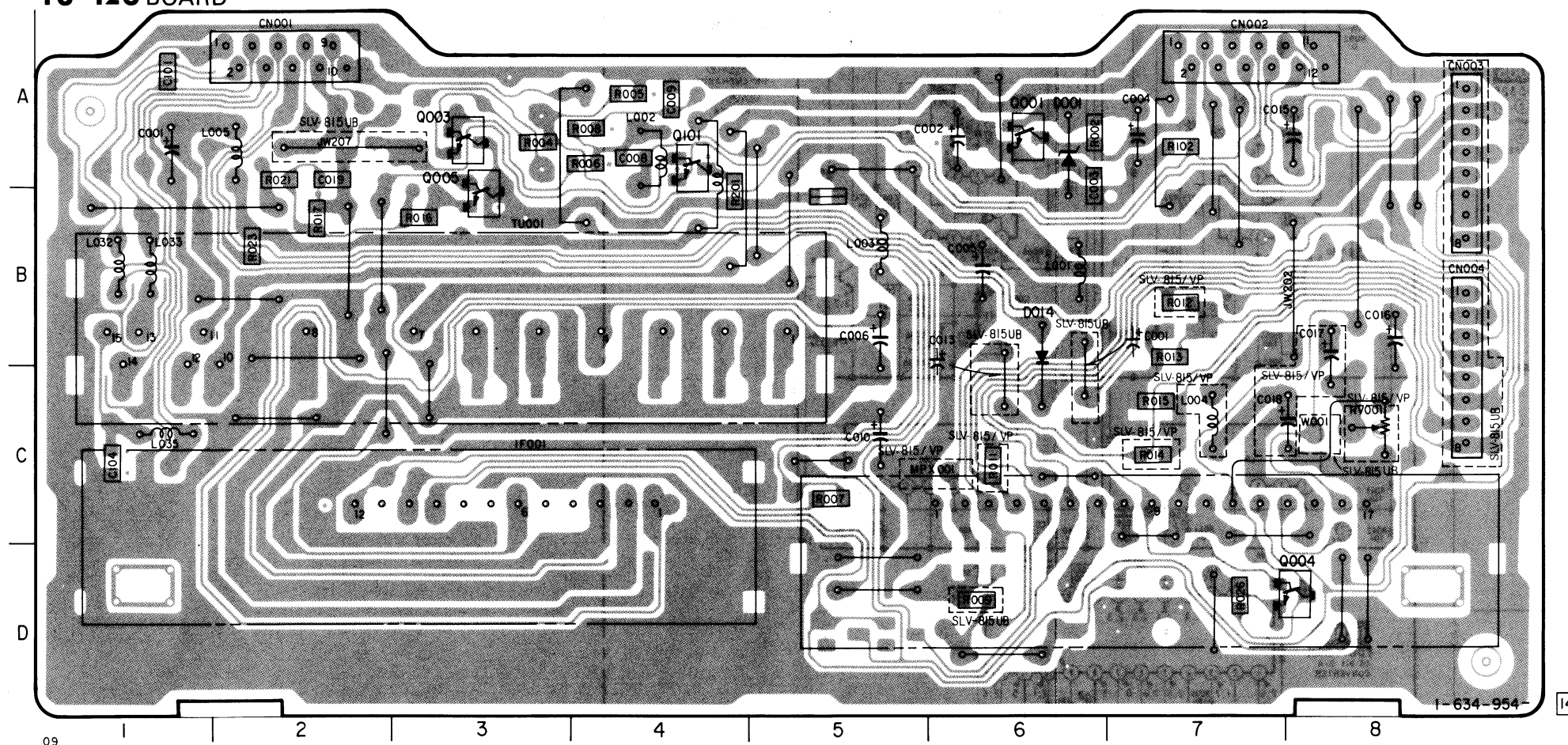
DIODE

D001	△8-719-110-78	DIODE RD33ES-B2
D014	8-719-911-19	DIODE 1SS119

TRANSISTOR

Q001	8-729-901-78	TRANSISTOR	2SC2412K-R
Q003	8-729-901-78	TRANSISTOR	2SC2412K-R
Q004	8-729-900-98	TRANSISTOR	DTC143TK
Q005	8-729-901-78	TRANSISTOR	2SC2412K-R
Q101	8-729-901-78	TRANSISTOR	2SC2412K-R

TU-120 BOARD



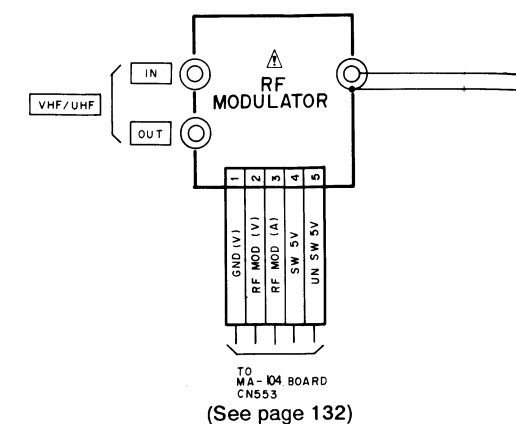
TU-120 BOARD

D001 A-6
D014 B-6

Q001	A-6
Q003	A-3
Q004	D-8
Q005	A-3
Q101	A-4

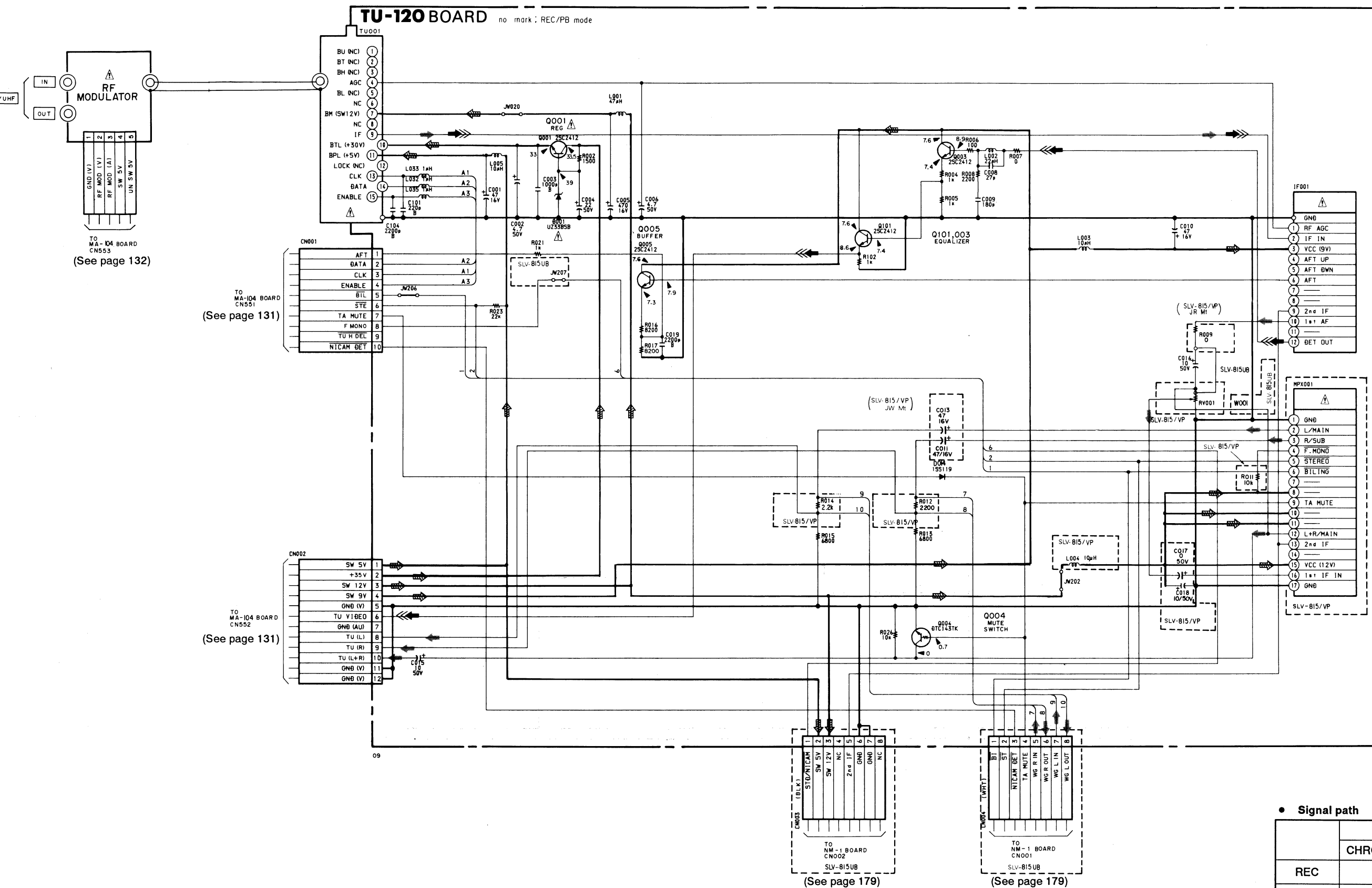
TU-120 (TUNER) SCHEMATIC DIAGRAM

— Ref. No. TU-120 BOARD: 2000 series —



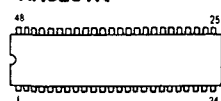
(See page 1)

(See page 10)

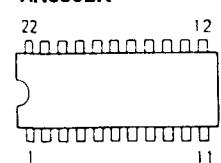


4-3. SEMICONDUCTORS

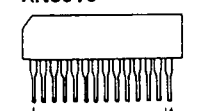
AN3231K



AN3592K

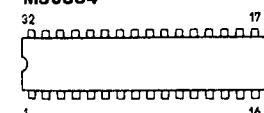


AN3916

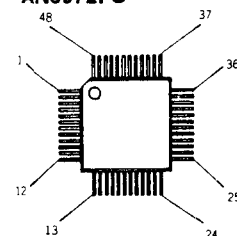


AN3932S

M50554



AN3972FC



BA10324

LM324N

MC14001BF

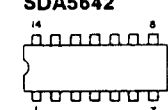
MC14011BCP

MC14066BCP

MC14070BCP

MC14071BCP

SDA5642



BA4560F

TK15120M

CXL5003P

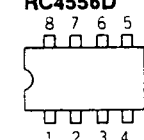
LM358N

M5201P

MSM6989RS

NE5532P

RC4556D

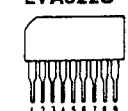


BA6138

LA7954

LVA519A

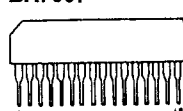
LVA522S



BA6238A



BA7007



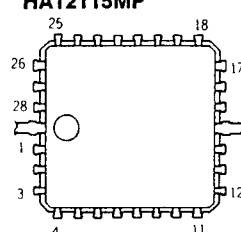
CAT35C202P

HA11535MP

HA11567MP

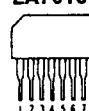
HA118088MP

HA12115MP



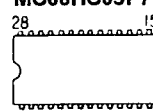
CX20061

LA7016



CXK5864BSP

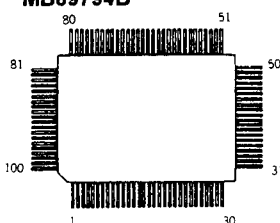
MC68HC05P7



CXP80624

HD9410

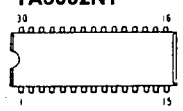
MB89794B



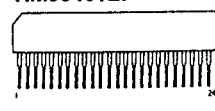
HA118016NT

HA118019NT

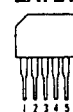
TA8662NT



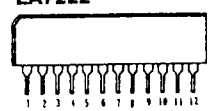
HM53461ZP



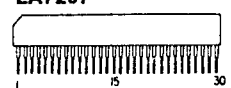
LA7213



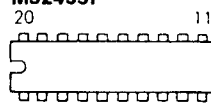
LA7222



LA7297



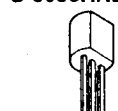
M52435P



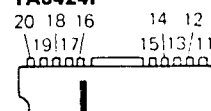
RC78L05A

S-8053ALR

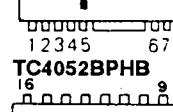
S-8053HNB



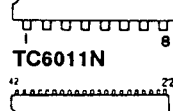
TA8424F



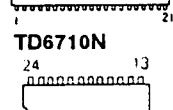
TC4052BPHB



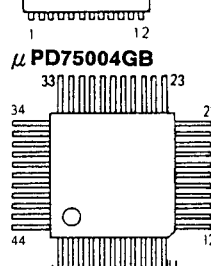
TC6011N



TD6710N



μ PD75004GB



2SA1115

2SC1740

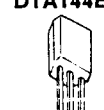
2SC2603

DTA114ES

DTA144ES

DTC114ES

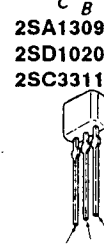
DTA144ES



2SA1309

2SD1020TP

2SC3311



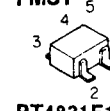
2SA933S



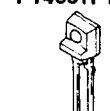
2SK381



FMS1



PT4831F1S



11ES2

1SS119

1SS133

ERA82

RD13ES

RD6.2ES

RD9.1EW

UZ-33BSB



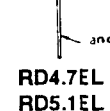
cathode

anode

RD4.7EL

RD5.1EL

UZ-6.2BSB

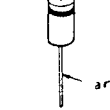


cathode

anode

SLR-34DC3

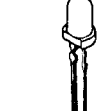
SLR-54MC3



ANODE

CATHODE

SLR-54DC3



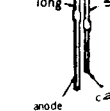
long

short

anode

cathode

SLR-54V C3



anode

cathode

SECTION 5 EXPLODED VIEWS

NOTE:

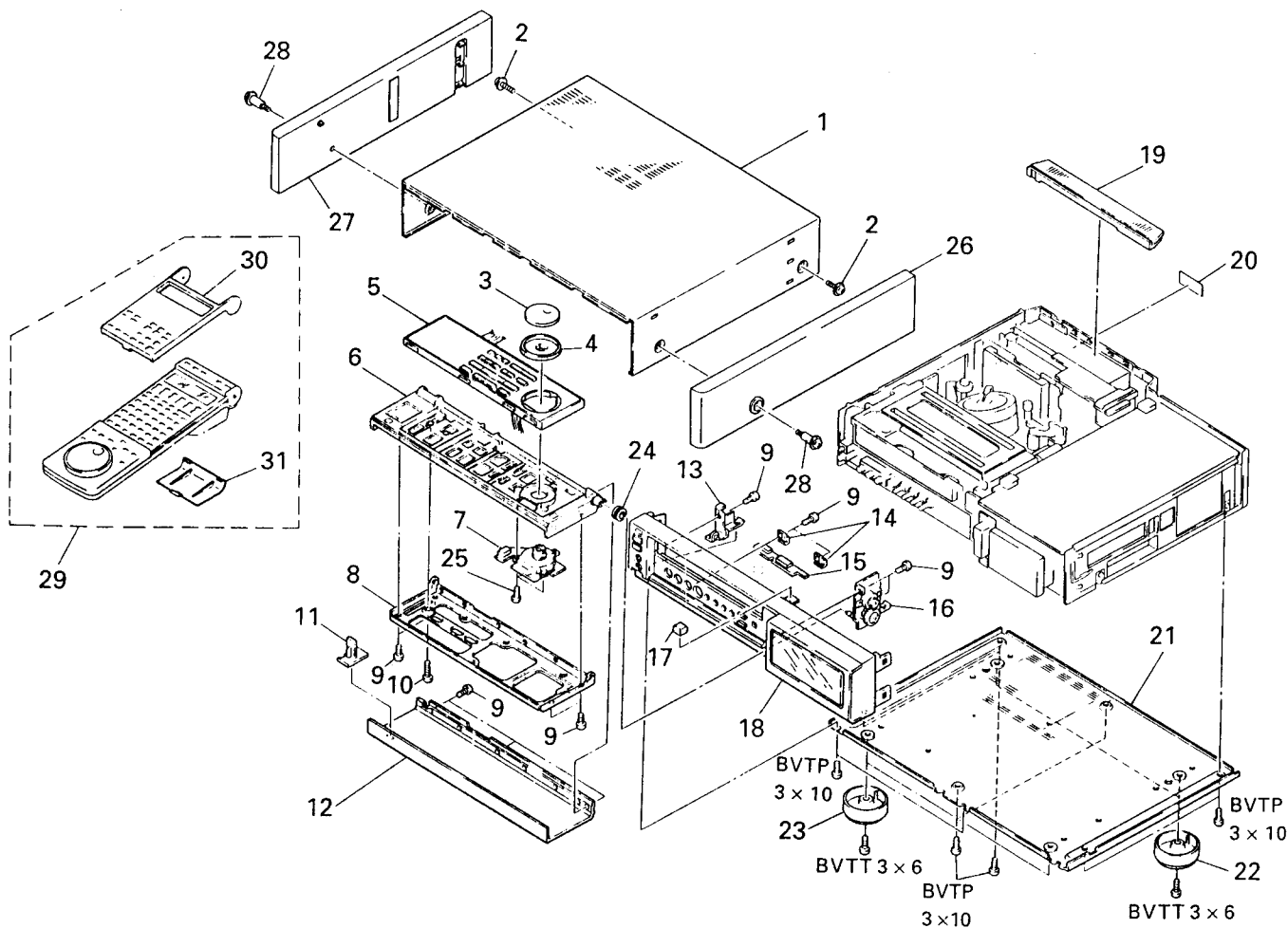
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

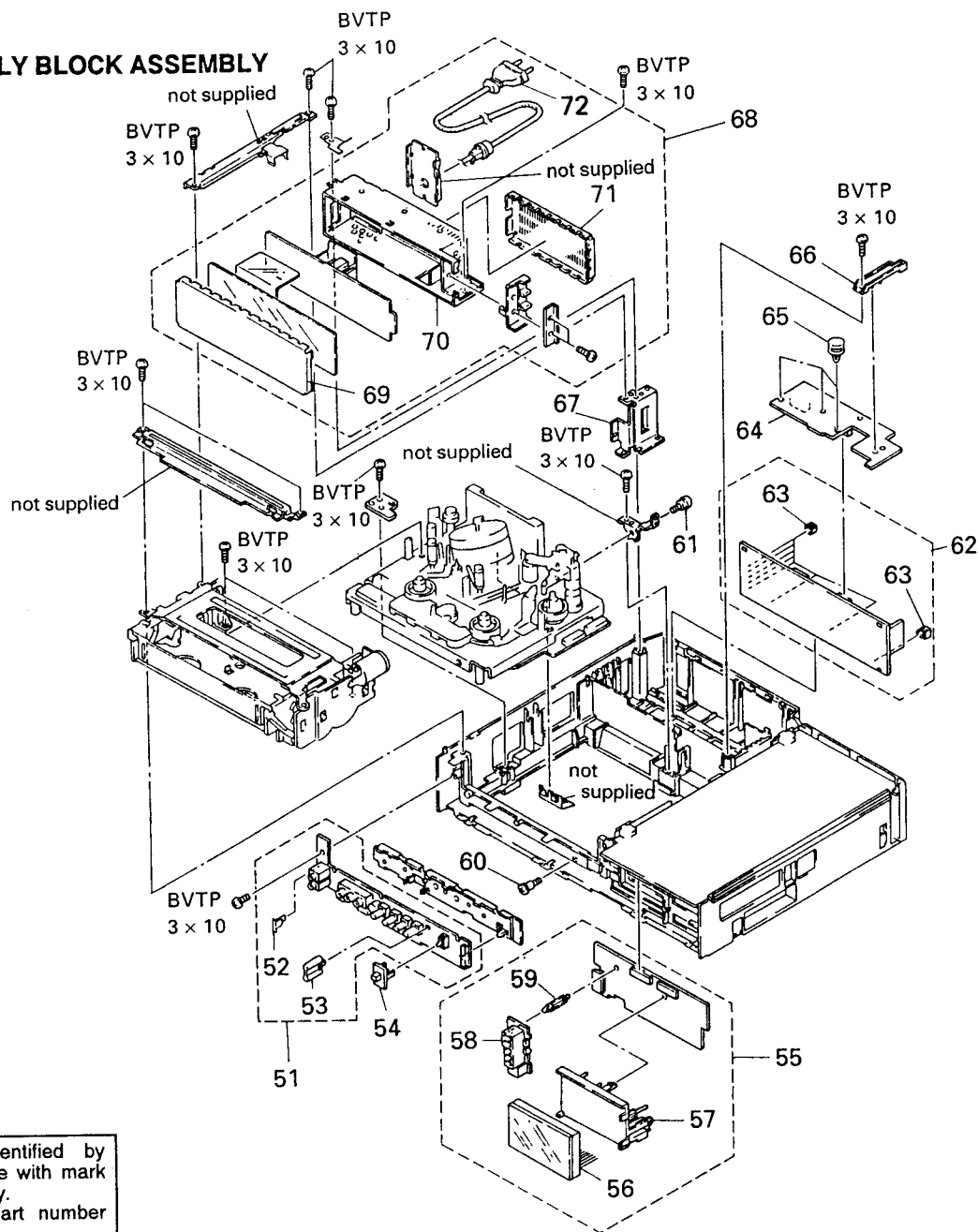
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

5-1. FRONT PANEL AND CABINET ASSEMBLIES



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-743-670-51	COVER, UPPER		18	X-3940-649-1	PANEL ASSY, FRONT (SLV-815VP)	
2	3-710-901-21	SCREW (3X8), TAPPING		19	3-743-644-01	COVER, POWER	
3	3-744-018-01	DIAL, JOG		20	*3-942-796-01	LABEL, MODEL NUMBER (NO. 2) (SLV-815)	
4	3-744-019-11	RING, SHUTTLE		20	*3-942-798-01	LABEL, MODEL NUMBER (NO. 2) (SLV-815VP)	
5	1-466-346-31	SWITCH BLOCK, CONTROL		20	*3-942-799-01	LABEL, MODEL NUMBER (NO. 2) (SLV-815UB)	
6	X-3743-546-1	PLATE ASSY, ORNAMENTAL, DOOR		21	3-743-671-01	PLATE, BOTTOM	
7	*1-635-216-11	JS-20 BOARD		22	3-749-328-01	FOOT	
8	*3-743-699-01	PLATE, FULCRUM, DOOR		23	3-940-667-11	FOOT	
9	4-921-277-11	SCREW (B2.6X8), TAPPING, BIND		24	*3-744-012-02	RING, GEAR	
10	4-921-277-21	SCREW (B2.6X12), TAPPING, BIND		25	3-744-068-01	SCREW (2.6), TAPPING	
11	3-743-650-01	COVER, POWER LAMP		26	X-3940-177-1	WOOD (R) ASSY, SIDE	
12	X-3940-670-1	DOOR ASSY, FRONT (SLV-815)		27	X-3940-178-1	WOOD (L) ASSY, SIDE	
12	X-3940-650-1	DOOR ASSY, FRONT (SLV-815VP)		28	3-743-601-01	SCREW, SIDE WOOD	
12	X-3940-651-1	DOOR ASSY, FRONT (SLV-815UB)		29	1-465-832-11	REMOTE COMMANDER (RMT-VSE)	30, 31
13	X-3743-536-1	PLATE (L) ASSY, FULCRUM		30	3-749-148-11	COVER, TIMER	
14	*3-743-640-01	RETAINER, PC BOARD		31	3-744-080-00	COVER, BATTERY	
15	*1-635-218-21	TK-12 BOARD					
16	A-6759-487-B	PLATE (R) BLOCK ASSY, FULCRUM					
17	9-911-841-XX	CUSHION (B)					
18	X-3940-648-1	PANEL ASSY, FRONT (SLV-815/UB)					

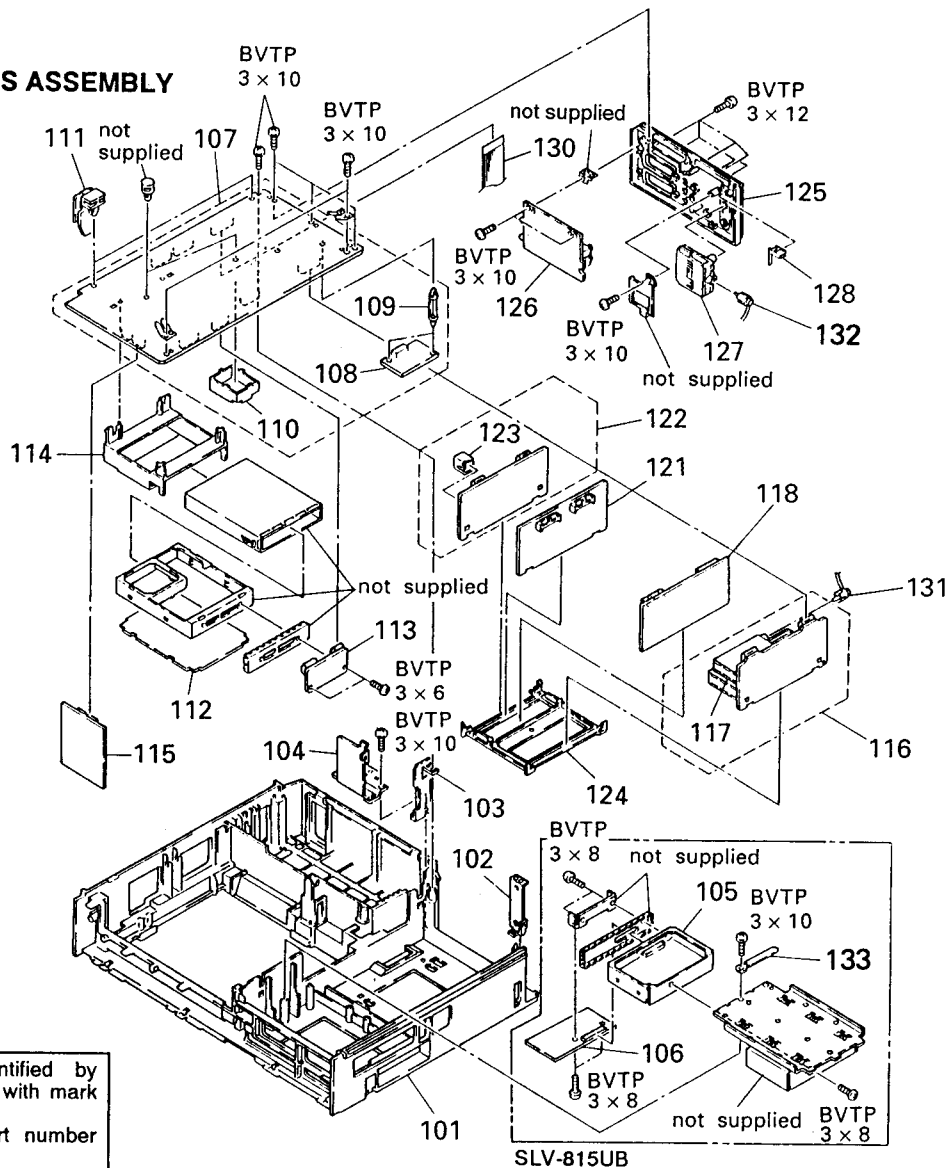
5-2. POWER SUPPLY BLOCK ASSEMBLY



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

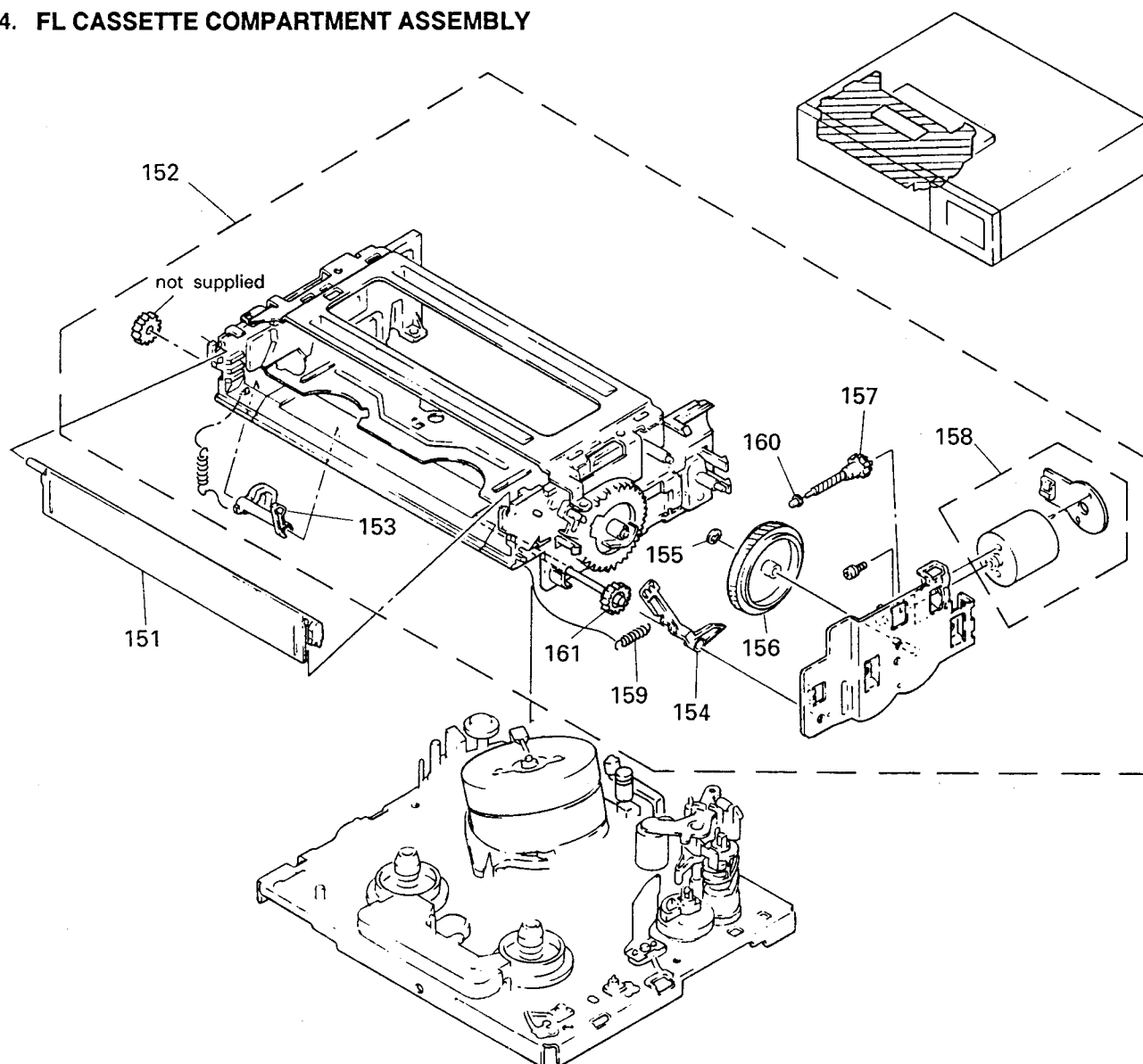
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	*A-6756-034-A	MF-101 BOARD, COMPLETE (SLV-815)	52, 53	61	3-736-055-01	SCREW (3X8), TAPPING	
51	*A-6756-043-A	MF-101 BOARD, COMPLETE (SLV-815VP)	52, 53	62	*A-6727-277-A	YC-65 BOARD, COMPLETE (SLV-815)	63
51	*A-6756-051-A	MF-101 BOARD, COMPLETE (SLV-815UB)	52, 53	62	*A-6727-281-A	YC-65 BOARD, COMPLETE (SLV-815VP)	63
				62	*A-6727-290-A	YC-65 BOARD, COMPLETE (SLV-815UB)	63
52	*3-749-306-01	PLATE, GROUND, MF		63	3-729-971-01	COVER, VOLUME	
53	*3-744-056-01	COVER, LED		64	*1-637-558-11	VI-97 BOARD	
54	3-743-636-01	KNOB, SLIDE		65	3-682-057-21	SPACER (SMALL)	
55	*A-6755-192-A	MF-94 BOARD, COMPLETE (SLV-815)	56-59	66	*3-743-641-01	RETAINER (RIGHT), YC	
55	*A-6755-193-A	MF-94 BOARD, COMPLETE (SLV-815VP)	56-59	67	*3-743-643-01	BRACKET (LEFT), POWER	
55	*A-6755-194-A	MF-94 BOARD, COMPLETE (SLV-815UB)	56-59	68	Δ 1-413-659-11	SWITCHING BLOCK	69-72
56	1-519-633-11	INDICATION TUBE, FLUORESCENT (ND201)		69	*3-743-645-01	LID, UPPER	
57	*3-743-637-01	HOLDER, FL		70	*3-743-649-11	CASE, MAIN	
58	*1-635-214-31	RM-42 BOARD		71	*3-743-646-11	PLATE, BOTTOM	
59	*3-682-419-51	HOLDER, P. C. B		72	Δ 1-575-131-11	CORD, POWER	
60	3-741-948-01	SCREW (3), SPECIAL (+) TAPPING					

5-3. MAIN BOARDS ASSEMBLY



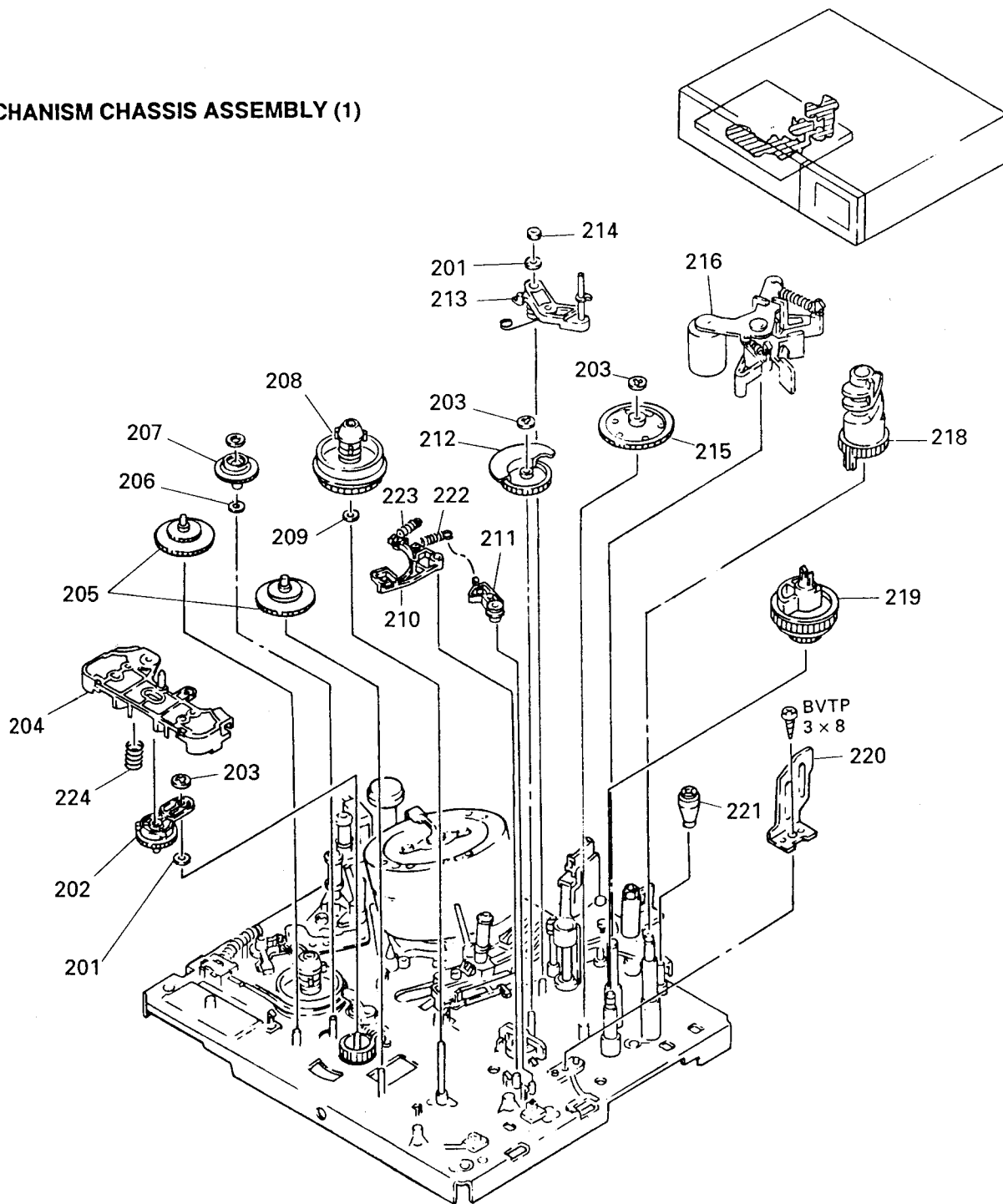
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	*A-6771-254-A	FRAME BLOCK ASSY		117	Δ 1-465-262-11	TUNER, ET (TU001) (SLV-815UB)	
102	*3-743-676-01	PLATE (RIGHT), GROUND, MA		118	*A-6713-377-A	HF-BOARD, COMPLETE (SLV-815/VP)	119, 120
103	*3-743-675-01	PLATE (LEFT), GROUND, MA		118	*A-6713-417-A	HF-BOARD, COMPLETE (SLV-815UB)	119, 120
104	*3-743-642-01	BRACKET (RIGHT), POWER		121	*A-6727-334-A	PI-25 BOARD, COMPLETE (SLV-815/VP)	
105	*A-6721-376-A	NA-7BOARD, COMPLETE (SLV-815UB)		121	*A-6727-335-A	PI-25 BOARD, COMPLETE (SLV-815UB)	
106	*1-632-333-13	NM-1 BOARD (SLV-815UB)		122	*A-6727-279-A	CG-10 BOARD, COMPLETE (SLV-815)	123
107	*A-6717-613-A	MA-104 BOARD, COMPLETE (SLV-815)	108-110	122	*A-6727-282-A	CG-10 BOARD, COMPLETE (SLV-815VP)	123
107	*A-6717-614-A	MA-104 BOARD, COMPLETE (SLV-815VP)	108-110	122	*A-6727-292-A	CG-10 BOARD, COMPLETE (SLV-815UB)	123
107	*A-6717-615-A	MA-104 BOARD, COMPLETE (SLV-815UB)	108-110	123	*3-738-015-01	COVER, (DIA. 6) CARBON VR	
108	*1-635-225-11	SI-10 BOARD		124	*3-743-673-01	HOLDER, PC BOARD	
109	*3-682-419-41	HOLDER, P. C. B		125	3-940-827-11	TERMINAL BOARD (PAL)	
110	*3-743-679-01	CASE, SHIELD, AU		126	*A-6754-198-A	IO-40 BOARD, COMPLETE (SLV-815/VP)	
111	*3-743-678-01	HINGE, PC BOARD		126	*A-6754-215-A	IO-40 BOARD, COMPLETE (SLV-815UB)	
112	*A-6727-280-A	DG-11 BOARD, COMPLETE (SLV-815/VP)		127	Δ 1-466-347-31	MODULATOR, RF (RFU-2028) (SLV-815UB)	
112	*A-6727-293-A	DG-11 BOARD, COMPLETE (SLV-815UB)		127	Δ 1-466-328-31	MODULATOR, RF (RFU-2027) (SLV-815/VP)	
113	*1-637-536-11	DI-43 BOARD		128	*3-743-677-01	PLATE, GROUND, RF	
114	*3-749-334-01	HOLDER, DG		130	1-575-746-11	WIRE, FLAT TYPE (22 CORE)	
115	*1-637-444-11	VP-24 BOARD		131	1-558-924-41	CABLE, PIN	
116	*A-6721-369-A	TU-120 BOARD, COMPLETE (SLV-815)	117	132	1-555-110-00	CABLE, PIN	
116	*A-6721-372-A	TU-120 BOARD, COMPLETE (SLV-815VP)	117	133	*3-701-822-00	HOLDER, WIRE	
116	*A-6721-375-A	TU-120 BOARD, COMPLETE (SLV-815UB)	117				
117	Δ 1-465-260-11	TUNER, ET (TU001) (SLV-815/VP)					

5-4. FL CASSETTE COMPARTMENT ASSEMBLY



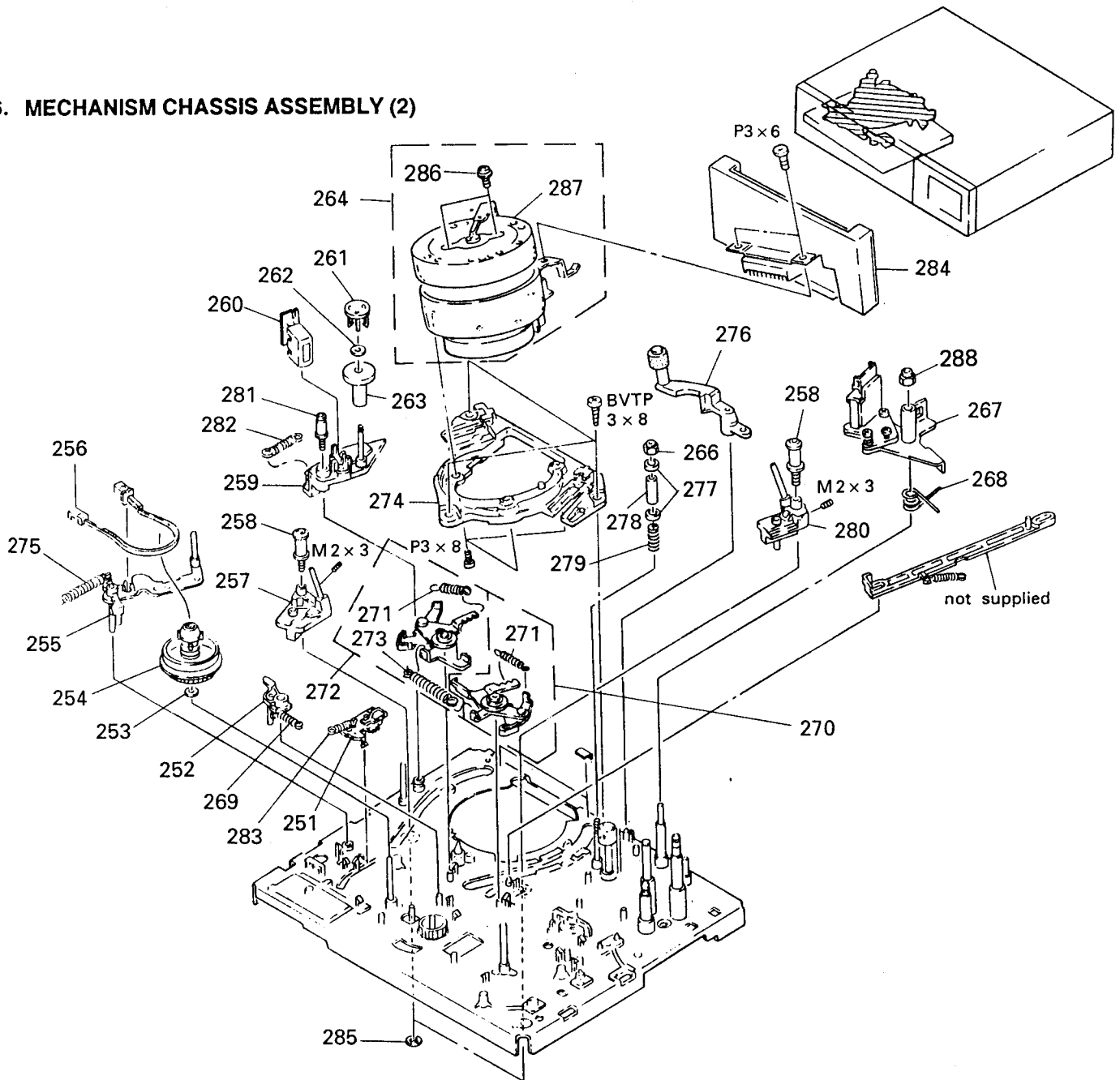
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-3940-341-1	DOOR ASSY, FL		157	3-736-100-01	GEAR (FL), WORM	
152	A-6751-426-A	FL BLOCK ASSY (F3)		158	X-3727-784-1	MOTOR ASSY (LOADING) (M904)	
153	3-736-163-01	LEVER, ERASING PROTECTION	153-161	159	3-738-285-01	SPRING, TENSION	
154	3-736-167-01	ARM, DOOR SWITCHING		160	3-716-144-02	RETAINER, WORM	
155	3-696-510-01	WASHER (3), STOPPER		161	X-3727-775-2	GEAR (RIGHT) ASSY, MIDWAY	
156	3-736-164-01	WHEEL (FL), WORM					

5-5. MECHANISM CHASSIS ASSEMBLY (1)



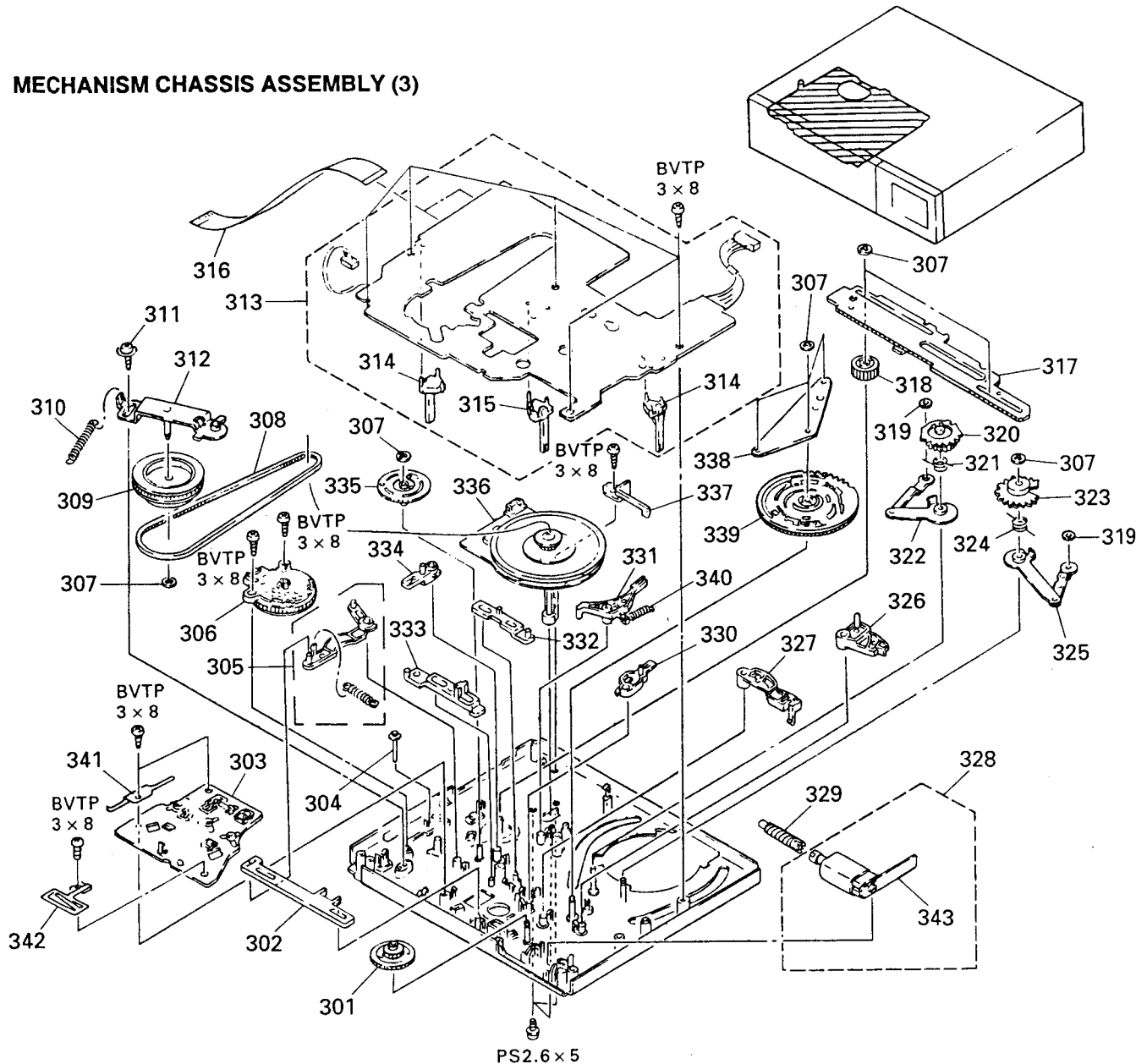
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-701-438-11	WASHER, 2.5		215	3-736-116-01	GEAR, COMMUNICATION	
202	X-3727-776-1	ARM ASSY, PENDULUM		216	X-3727-770-1	PINCH ROLLER BLOCK ASSY	
203	3-669-595-00	WASHER (2), STOPPER		218	3-736-136-01	CAM, ELEVATOR	
204	3-736-172-02	RELEASE, LOCK, REEL		219	3-943-700-01	GEAR (LO), PRESS CAM	
205	X-3727-795-1	GEAR ASSY, RELAY		220	A-6750-288-A	OPENER BLOCK ASSY, LID	
206	3-736-074-01	RETAINER (SMALL), THRUST		221	3-738-250-01	SCREW, AC ADJUSTMENT	
207	3-736-037-01	GEAR, REW		222	3-736-025-01	SPRING (REV BRAKE), TENSION	
208	X-3743-522-1	TABLE ASSY (S), REEL		223	3-736-024-01	SPRING, TENSION	
209	3-738-212-21	RETAINER, THRUST, REEL TABLE		224	3-736-020-11	SPRING, COMPRESSION	
210	X-3733-335-1	BRAKE ASSY (AT), T SOFT		226	3-736-069-01	RETAINER, SPRING	
211	3-736-105-01	ARM, REV BRAKE					
212	3-736-143-01	GEAR, RVS CAM					
213	X-3729-911-1	ARM ASSY, RVS					
214	3-736-740-01	NUT (M2X0.25), NYLON					

5-6. MECHANISM CHASSIS ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	A-6759-483-A	TAKE-UP BLOCK ASSY (AT), S		271	3-738-220-01	SPRING (MAIN BRAKE 2), TENSION	
252	3-736-075-01	BRAKE, S SOFT		272	X-3733-336-2	BRAKE ASSY (2) (AT), S	271
253	3-738-212-21	RETAINER, THRUST, REEL TABLE		273	3-738-221-01	SPRING (MAIN BRAKE 1), TENSION	
254	X-3729-935-3	LABEL ASSY (2), S REEL		274	X-3727-791-2	BASE ASSY, DRUM	
255	3-736-151-11	ARM (POM), TENSION REGULATOR		275	3-733-389-11	SPRING, TENSION	
256	X-3727-797-1	BAND ASSY, TENSION REGULATOR		276	A-6747-267-A	ARM BLOCK ASSY (S), C ROLLER	
257	X-3727-786-1	SHUTTLE (LEFT) ASSY		277	3-944-033-01	FLANGE, 7 GUIDE	
258	X-3733-301-1	ROLLER ASSY, GUIDE		278	3-736-730-01	SLEEVE, #7 GUIDE	
259	X-3727-767-1	BASE ASSY, STABILIZER		279	3-749-099-01	SPRING (#7 GUIDE), COMPRESSION	
260	1-543-647-11	HEAD, FE		280	X-3727-787-1	SHUTTLE (RIGHT) ASSY	
261	3-736-082-01	RETAINER, TS THRUST		281	X-3727-788-1	ROLLER ASSY, GUIDE, #2	
262	3-741-925-01	RING, RETAINING		282	3-736-745-01	SPRING	
263	X-3727-771-1	STABILIZER ASSY, TAPE		283	3-738-284-01	SPRING, TENSION	
264	1-550-535-11	DRUM ASSY (DZH-17A-R)	286, 287	284	*A-6727-137-A	RP-63 BOARD, COMPLETE (SLV-815/VP)	
266	3-942-866-01	NUT (M3) (3X0.5), NYLON		284	*A-6727-294-A	RP-63 BOARD, COMPLETE (SLV-815UB)	
267	A-6761-129-C	HEAD BLOCK ASSY, ACE		285	3-736-073-01	SLIDER, POLYETHYLENE	
268	3-736-042-01	SPRING, TORSION		286	2-643-205-01	SCREW (PSW) 3X8	
269	3-736-047-01	SPRING (S SOFT), TENSION		287	1-550-536-11	DRUM ASSY, ROTARY UPPER (DZR-17-R)	
270	X-3729-926-1	BRAKE ASSY (2), T	271	288	3-942-867-01	NUT, AC HEIGHT ADJUSTMENT	

5-7. MECHANISM CHASSIS ASSEMBLY (3)



PS2.6 x 5

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	3-736-015-01	WHEEL (CAM), WORM		323	3-736-147-01	GEAR (LEFT), THREADING	
302	3-736-158-01	PLATE, SLIDE, PENDULUM		324	3-736-040-01	SPRING (LEFT), TORSION	
303	A-6739-084-A	CHASSIS BLOCK ASSY, SUB		325	X-3727-778-1	ARM (LEFT) ASSY, THREADING	
304	3-736-091-01	PIN, SWITCH		326	3-736-142-01	ARM, TENSION REGULATOR FUNCTION	
305	X-3729-924-1	ARM, PENDULUM FUNCTION		327	3-736-140-01	ARM, S TAKE-UP	
306	1-571-920-11	SWITCH, ROTARY		328	X-3733-302-1	MOTOR ASSY, CAM (M903)	343
307	3-669-595-00	WASHER (2), STOPPER		329	3-733-395-01	GEAR (CAM), WORM	
308	3-736-013-01	BELT, TIMING		330	3-733-397-03	ARM, BRAKE FUNCTION	
309	X-3727-782-1	PULLEY ASSY		331	X-3733-338-1	BRAKE ASSY (AT), CAP	
310	3-736-089-01	SPRING, TENSION		332	3-733-398-01	PLATE, SLIDE, BRAKE	
311	3-733-386-01	SCREW (3X8), WASHER		333	3-736-103-01	PLATE, SLIDE, LIMITER	
312	X-3727-761-1	ARM ASSY, ADJUSTMENT		334	3-736-016-01	ARM, LIMITER FUNCTION	
313	*A-6754-218-A	MD-49 BOARD, COMPLETE (SLV-815UB) 314, 315		335	3-736-170-01	GEAR, RKB CAM	
313	*A-6754-228-A	MD-49 BOARD, COMPLETE (SLV-815/VP) 314, 315		336	8-835-394-01	MOTOR, DC U-26F (CAPSTAN) (M902)	
314	8-729-926-31	PHOTO TRANSISTOR PT483F1S (Q001, Q002)		337	3-736-744-01	RETAINER, ROTOR	
315	8-719-985-00	DIODE GL451VS1 (LED) (D001)		338	3-733-396-01	HOLDER, CAM GEAR	
316	1-575-745-11	WIRE, FLAT TYPE (19 CORE)		339	3-736-176-01	GEAR, CAM	
317	3-736-177-01	PLATE, SLIDE, MODE		340	3-738-237-01	SPRING (CAP BRAKE), TENSION	
318	3-733-394-01	GEAR, RVS RELAY		341	3-741-950-01	SPRING (AT), LEAF, SC GROUND	
319	3-736-073-01	SLIDER, POLYETHYLENE		342	*3-744-024-01	PLATE, GROUND, MD	
320	3-736-148-01	GEAR (RIGHT), THREADING		343	*1-633-460-11	CA-41 BOARD	
321	3-736-092-01	SPRING (RIGHT), TORSION					
322	X-3727-777-1	ARM (RIGHT) ASSY, THREADING					

SECTION 6

ELECTRICAL PARTS LIST

HF-9

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- **RESISTORS**
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- **SEMICONDUCTORS**
In each case, U: μ , for example:
UA...: μ A..., UPA...: μ PA..., UPB...: μ PB...,
UPC...: μ PC..., UPD...: μ PD...
- **CAPACITORS**
MF: μ F, PF: μ F
- **COILS**
MMH: mH, UH: μ H

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*A-6713-417-A	HF-9 BOARD, COMPLETE (SLV-815UB)			C051	1-130-483-00	MYLAR	0.01MF
	***** (Ref. No. 1000 series)			C052	1-164-232-11	CERAMIC CHIP	0.01MF
*A-6713-377-A	HF-9 BOARD, COMPLETE (SLV-815/VP)			C053	1-123-333-00	ELECT	100MF
	***** (Ref. No. 1000 series)			C054	1-164-232-11	CERAMIC CHIP	0.01MF
				C055	1-123-369-00	ELECT	4.7MF
CAPACITOR				C056	1-123-369-00	ELECT	4.7MF
C001	1-124-239-00	ELECT	6.8MF	C057	1-164-232-11	CERAMIC CHIP	0.01MF
C002	1-130-487-00	MYLAR	0.022MF	C058	1-130-471-00	MYLAR	0.001MF
C003	1-123-369-00	ELECT	4.7MF	C059	1-123-380-00	ELECT	1MF
C004	1-130-475-00	MYLAR	0.0022MF	C060	1-164-232-11	CERAMIC CHIP	0.01MF
C005	1-123-321-00	ELECT	220MF	C061	1-126-101-11	ELECT	100MF
C006	1-123-875-11	ELECT	10MF	C065	1-163-038-00	CERAMIC CHIP	0.1MF
C007	1-130-483-00	MYLAR	0.01MF	CONNECTOR			
C009	1-123-381-00	ELECT	2.2MF	CN001	*1-563-258-11	SOCKET, CONNECTOR 15P	
C011	1-123-356-00	ELECT	10MF	CN002	*1-563-258-11	SOCKET, CONNECTOR 15P	
C012	1-123-356-00	ELECT	10MF	DIODE			
C013	1-126-101-11	ELECT	100MF	D001	8-719-911-19	DIODE 1SS119	
C014	1-126-157-11	ELECT	10MF	D002	8-719-911-19	DIODE 1SS119	
C015	1-126-157-11	ELECT	10MF	D003	8-719-104-34	DIODE 1S2835	
C016	1-124-791-11	ELECT	1MF	FILTER			
C017	1-124-257-00	ELECT	2.2MF	FL001	1-236-569-11	BPF (1.7MHZ)	
C018	1-126-101-11	ELECT	100MF	FL002	1-236-570-11	BPF (1.3MHZ)	
C019	1-123-356-00	ELECT	10MF	IC			
C020	1-123-356-00	ELECT	10MF	IC001	8-759-420-18	IC AN3972FC	
C022	1-123-381-00	ELECT	2.2MF	IC002	8-759-420-15	IC AN3932S	
C024	1-130-483-00	MYLAR	0.01MF	IC003	8-759-982-21	IC RC78L05A	
C025	1-123-875-11	ELECT	10MF	IC004	8-759-924-46	IC BA4560F	
C026	1-123-321-00	ELECT	220MF	IC005	8-759-946-44	IC TK15120M	
C027	1-130-475-00	MYLAR	0.0022MF	IC006	8-759-946-44	IC TK15120M	
C028	1-123-369-00	ELECT	4.7MF	RESISTOR			
C029	1-130-487-00	MYLAR	0.022MF	R001	1-249-417-11	METAL	1K
C030	1-124-239-00	ELECT	6.8MF	R002	1-216-075-00	METAL GLAZE	12K
C031	1-126-163-11	ELECT	4.7MF	R003	1-216-049-00	METAL GLAZE	1K
C032	1-126-301-11	ELECT	1MF	R004	1-214-723-00	CARBON	560
C033	1-123-380-00	ELECT	1MF	R005	1-216-047-00	METAL GLAZE	820
C034	1-130-471-00	MYLAR	0.001MF	R006	1-216-113-00	METAL GLAZE	470K
C035	1-164-232-11	CERAMIC CHIP	0.01MF	R007	1-216-097-00	METAL GLAZE	100K
C036	1-123-369-00	ELECT	4.7MF	R008	1-216-069-00	METAL GLAZE	6.8K
C037	1-123-369-00	ELECT	4.7MF	R009	1-216-295-00	METAL GLAZE	0
C038	1-164-232-11	CERAMIC CHIP	0.01MF	R011	1-216-097-00	METAL GLAZE	100K
C041	1-164-232-11	CERAMIC CHIP	0.01MF				
C042	1-163-038-00	CERAMIC CHIP	0.1MF				
C043	1-164-232-11	CERAMIC CHIP	0.01MF				
C044	1-164-232-11	CERAMIC CHIP	0.01MF				
C045	1-130-493-00	MYLAR	0.068MF				
C050	1-163-125-00	CERAMIC CHIP	220PF				

HF-9 MA-104

Ref. No.	Part No.	Description	Remark
R012	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R013	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R014	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R015	1-214-723-00	CARBON 560 5% 1/4W	
R016	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R017	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R018	1-249-417-11	METAL 1K 5% 1/4W	
R019	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R020	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R021	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R022	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R023	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R024	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R025	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R026	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R027	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R028	1-216-076-00	METAL GLAZE 13K 5% 1/10W	
R029	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R032	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R033	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R034	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R035	1-249-427-11	CARBON 6.8K 5% 1/4W	
R036	1-249-427-11	CARBON 6.8K 5% 1/4W	
R037	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R041	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R042	1-249-428-11	CARBON 8.2K 5% 1/4W	
R043	1-249-428-11	CARBON 8.2K 5% 1/4W	
R044	1-249-430-11	CARBON 12K 5% 1/4W	
R045	1-249-430-11	CARBON 12K 5% 1/4W	
R048	1-249-441-11	CARBON 100K 5% 1/4W	
R049	1-249-441-11	CARBON 100K 5% 1/4W	
R068	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R201	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R202	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R203	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R301	1-216-296-00	METAL GLAZE 0 5% 1/8W	
R302	1-216-296-00	METAL GLAZE 0 5% 1/8W	
R303	1-216-296-00	METAL GLAZE 0 5% 1/8W	
VARIABLE RESISTOR			
RV002	1-230-522-11	RES, ADJ, METAL GLAZE 4.7K	
RV003	1-238-167-11	RES, ADJ, CARBON 22K	
RV004	1-238-167-11	RES, ADJ, CARBON 22K	
RV005	1-230-498-11	RES, ADJ, CARBON 47K	
RV006	1-230-498-11	RES, ADJ, CARBON 47K	
RV007	1-238-167-11	RES, ADJ, CARBON 22K	
RV008	1-230-522-11	RES, ADJ, METAL GLAZE 4.7K	
RV009	1-238-167-11	RES, ADJ, CARBON 22K	

Ref. No.	Part No.	Description	Remark
*A-6717-613-A	MA-104 BOARD, COMPLETE (SLV-815)	***** (Ref. No. 7000 series)	
*A-6717-614-A	MA-104 BOARD, COMPLETE (SLV-815VP)	***** (Ref. No. 7000 series)	
*A-6717-615-A	MA-104 BOARD, COMPLETE (SLV-815UB)	***** (Ref. No. 7000 series)	
*9-911-839-99	RETAINER (B), MICROPHONE		
*3-682-419-41	HOLDER, P. C. B		
*3-743-679-01	CASE, SHIELD, AU		
CAPACITOR			
C101	1-123-875-11	ELECT 10MF 20% 50V	
C102	1-123-875-11	ELECT 10MF 20% 50V	
C103	1-123-875-11	ELECT 10MF 20% 50V	
C104	1-123-875-11	ELECT 10MF 20% 50V	
C200	1-162-294-31	CERAMIC 0.001MF 10% 50V	
C231	1-124-477-11	ELECT 47MF 20% 16V	
C232	1-124-471-00	ELECT 1000MF 20% 6.3V	
C233	1-124-477-11	ELECT 47MF 20% 16V	
C234	1-124-443-00	ELECT 100MF 20% 10V	
C235	1-124-471-00	ELECT 1000MF 20% 6.3V	
C250	1-109-675-11	MICA 120PF 5% 500V	
C251	1-124-126-00	ELECT 47MF 20% 10V	
C252	1-164-083-11	CERAMIC 680PF 10% 50V	
C254	1-102-123-00	CERAMIC 0.0033MF 10% 50V	
C255	1-124-791-11	ELECT 1MF 20% 50V	
C256	1-124-902-00	ELECT 0.47MF 20% 50V	
C257	1-124-126-00	ELECT 47MF 20% 10V	
C258	1-130-484-00	MYLAR 0.012MF 5% 50V	
C259	1-126-160-11	ELECT 1MF 20% 50V	
C261	1-126-233-11	ELECT 22MF 20% 25V	
C262	1-124-126-00	ELECT 47MF 20% 10V	
C264	1-102-978-00	CERAMIC 220PF 5% 50V	
C265	1-124-791-11	ELECT 1MF 20% 50V	
C266	1-124-126-00	ELECT 47MF 20% 10V	
C268	1-124-791-11	ELECT 1MF 20% 50V	
C269	1-126-160-11	ELECT 1MF 20% 50V	
C270	1-124-791-11	ELECT 1MF 20% 50V	
C271	1-161-019-91	CERAMIC 0.033MF 10% 25V	
C273	1-161-056-00	CERAMIC 0.027MF 10% 25V	
C274	1-126-163-11	ELECT 4.7MF 20% 50V	
C275	1-124-126-00	ELECT 47MF 20% 10V	
C276	1-164-087-11	CERAMIC 0.0015MF 10% 50V	
C277	1-161-051-00	CERAMIC 0.01MF 10% 25V	
C278	1-136-561-11	FILM 0.0068MF 10% 400V	
C280	1-130-483-00	MYLAR 0.01MF 5% 50V	
C281	1-161-056-00	CERAMIC 0.027MF 10% 25V	

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C282	1-124-126-00	ELECT	47MF 20% 10V	C542	1-124-477-11	ELECT	47MF 20% 25V
C283	1-137-075-11	FILM	0.068MF 5% 100V	C543	1-162-849-11	CERAMIC	0.068MF 20% 16V
C284	1-164-087-11	CERAMIC	0.0015MF 10% 50V	C544	1-102-074-00	CERAMIC	0.001MF 10% 50V
C285	1-162-290-31	CERAMIC	470PF 10% 50V	C545	1-102-074-00	CERAMIC	0.001MF 10% 50V
C295	1-161-379-00	CERAMIC	0.01MF 30% 16V	C601	1-162-199-31	CERAMIC	10PF 5% 50V
C298	1-161-379-00	CERAMIC	0.01MF 30% 16V	C802	1-123-875-11	ELECT	10MF 20% 50V
C304	1-123-875-11	ELECT	10MF 20% 50V	C809	1-123-875-11	ELECT	10MF 20% 50V
C305	1-123-875-11	ELECT	10MF 20% 50V	C811	1-123-875-11	ELECT	10MF 20% 50V
C306	1-123-875-11	ELECT	10MF 20% 50V	C812	1-124-927-11	ELECT	4.7MF 20% 50V
C401	1-123-875-11	ELECT	10MF 20% 50V	C813	1-124-903-11	ELECT	1MF 20% 50V
C402	1-124-791-11	ELECT	1MF 20% 50V	C814	1-102-973-00	CERAMIC	100PF 10% 50V
C403	1-123-875-11	ELECT	10MF 20% 50V	C815	1-162-211-31	CERAMIC	33PF 5% 50V
C404	1-161-043-00	CERAMIC	0.0022MF 20% 16V	C816	1-124-907-11	ELECT	10MF 20% 50V
C405	1-124-499-11	ELECT	1MF 20% 50V	C818	1-161-379-00	CERAMIC	0.01MF 30% 16V
C406	1-124-126-00	ELECT	47MF 20% 10V	C820	1-162-835-11	CERAMIC	0.0047MF 10% 16V
C407	1-164-070-11	CERAMIC	100PF 5% 50V	C821	1-164-085-11	CERAMIC	0.001MF 10% 50V
C408	1-164-096-11	CERAMIC	0.01MF 50V	C822	1-124-927-11	ELECT	4.7MF 20% 50V
C409	1-164-093-11	CERAMIC	0.0047MF 10% 25V	C838	1-126-157-11	ELECT	10MF 20% 16V
C410	1-164-096-11	CERAMIC	0.01MF 50V	C840	1-126-157-11	ELECT	10MF 20% 16V
C411	1-124-126-00	ELECT	47MF 20% 10V	C841	1-126-157-11	ELECT	10MF 20% 16V
C413	1-130-483-00	MYLAR	0.01MF 5% 50V	C842	1-126-157-11	ELECT	10MF 20% 16V
C414	1-102-121-00	CERAMIC	0.0022MF 10% 50V	C844	1-164-096-11	CERAMIC	0.01MF 50V
C415	1-102-947-00	CERAMIC	10PF 0.5PF 50V	C845	1-124-907-11	ELECT	10MF 20% 50V
C416	1-162-847-11	CERAMIC	0.047MF 20% 16V	C846	1-164-096-11	CERAMIC	0.01MF 50V
C422	1-124-126-00	ELECT	47MF 20% 10V	C849	1-164-096-11	CERAMIC	0.01MF 50V
C423	1-126-233-11	ELECT	22MF 20% 25V	<u>CONNECTOR</u>			
C425	1-130-487-00	MYLAR	0.022MF 5% 50V				
C426	1-124-925-11	ELECT	2.2MF 20% 50V	CN004	1-563-596-11	CONNECTOR, FLEXIBLE 19P	
C427	1-130-491-00	MYLAR	0.047MF 5% 50V	CN007	1-563-596-11	CONNECTOR, FLEXIBLE 19P	
C428	1-130-491-00	MYLAR	0.047MF 5% 50V	CN511	1-568-093-11	CONNECTOR (PLUG) 20P	
C431	1-162-290-31	CERAMIC	470PF 10% 50V	CN512	1-568-094-11	CONNECTOR (PLUG) 22P	
C501	1-164-096-11	CERAMIC	0.01MF 50V	CN513	*1-506-408-11	PIN, CONNECTOR 3P	
C504	1-123-875-11	ELECT	10MF 20% 50V	CN514	1-506-469-11	PIN, CONNECTOR 4P	
C505	1-124-472-11	ELECT	470MF 20% 10V	CN516	*1-568-783-11	PIN, CONNECTOR 6P	
C506	1-123-875-11	ELECT	10MF 20% 50V	CN517	*1-568-783-31	PIN, CONNECTOR 6P	
C507	1-101-006-00	CERAMIC	0.047MF 50V	CN521	1-568-089-11	CONNECTOR (PLUG) 12P	
C508	1-124-478-11	ELECT	100MF 20% 25V	CN522	1-568-087-11	CONNECTOR (PLUG) 8P	
C509	1-102-953-00	CERAMIC	18PF 5% 50V	CN531	1-506-472-11	PIN, CONNECTOR 7P	
C510	1-102-953-00	CERAMIC	18PF 5% 50V	CN532	*1-568-783-11	PIN, CONNECTOR 6P	
C515	1-164-096-11	CERAMIC	0.01MF 50V	CN541	1-506-478-11	PIN, CONNECTOR 13P	
C519	1-164-096-11	CERAMIC	0.01MF 50V	CN542	*1-568-787-11	PIN, CONNECTOR 10P	
C520	1-162-211-31	CERAMIC	33PF 5% 50V	CN551	*1-568-088-11	CONNECTOR (PLUG) 10P	
C522	1-164-068-11	CERAMIC	82PF 5% 50V	CN552	1-568-089-11	CONNECTOR (PLUG) 12P	
C523	1-164-096-11	CERAMIC	0.01MF 50V	CN553	1-506-470-11	PIN, CONNECTOR 5P	
C524	1-124-463-00	ELECT	0.1MF 20% 50V	CN561	1-569-695-21	CONNECTOR, BOARD TO BOARD 17P	
C525	1-162-290-31	CERAMIC	470PF 10% 50V	CN562	1-569-696-21	CONNECTOR, BOARD TO BOARD 19P	
C531	1-124-925-11	ELECT	2.2MF 20% 50V	CN571	*1-506-744-11	PIN, CONNECTOR 15P	
C536	1-161-772-11	CERAMIC	0.1MF 20% 16V	CN572	*1-506-744-11	PIN, CONNECTOR 15P	
C537	1-123-875-11	ELECT	10MF 20% 50V	CN573	*1-560-892-00	PIN, CONNECTOR 4P	
C538	1-124-478-11	ELECT	100MF 20% 25V	CN574	*1-560-891-00	PIN, CONNECTOR 3P	
C539	1-102-978-00	CERAMIC	220PF 5% 50V	CN582	1-563-599-11	CONNECTOR, FLEXIBLE 22P	
C541	1-161-379-00	CERAMIC	0.01MF 30% 25V	CN583	1-506-982-11	PIN, CONNECTOR 14P	
				CN584	1-506-982-11	PIN, CONNECTOR 14P	

When indicating parts by reference number, please include the board name.

MA-104

Ref. No.	Part No.	Description	Remark
CN585	1-568-087-11	CONNECTOR (PLUG) 8P	
CN586	1-568-087-11	CONNECTOR (PLUG) 8P	
CN587	1-506-468-11	PIN, CONNECTOR 3P	
CN591	1-566-119-11	CONNECTOR, BOARD TO BOARD 6P	
CN594	1-566-824-11	PIN, CONNECTOR (PC BOARD) 3P (SLV-815VP)	
CN801	1-569-761-11	CONNECTOR, BOARD TO BOARD 20P	

DIODE

D401	8-719-911-19	DIODE 1SS119	
D402	8-719-911-19	DIODE 1SS119	
D403	8-719-911-19	DIODE 1SS119	
D404	8-719-911-19	DIODE 1SS119	
D409	8-719-101-50	DIODE RD5. 1E-L2	
D410	8-719-911-19	DIODE 1SS119	
D501	8-719-913-44	DIODE ERA82-004	
D502	8-719-911-19	DIODE 1SS119	
D503	8-719-108-12	DIODE RD9. 1EW-T2	
D504	8-719-108-12	DIODE RD9. 1EW-T2	
D505	8-719-911-19	DIODE 1SS119	
D508	8-719-101-47	DIODE RD4. 7E-L2	
D516	8-719-911-19	DIODE 1SS119	
D517	8-719-911-19	DIODE 1SS119	
D518	8-719-200-82	DIODE 11ES2	
D519	8-719-109-93	DIODE RD6. 2ES-B2	
D601	8-719-109-93	DIODE RD6. 2ES-B2	
D703	8-719-911-19	DIODE 1SS119	
D704	8-719-911-19	DIODE 1SS119	
D801	8-719-911-19	DIODE 1SS119	
D802	8-719-911-19	DIODE 1SS119	
D803	8-719-911-19	DIODE 1SS119	
D804	8-719-911-19	DIODE 1SS119	
D805	8-719-911-19	DIODE 1SS119	
D806	8-719-911-19	DIODE 1SS119	
D807	8-719-911-19	DIODE 1SS119	
D999	8-719-911-19	DIODE 1SS119TG	

IC

IC251	8-759-805-20	IC LA7297	
IC401	8-759-000-49	IC MC14066BCP	
IC402	8-759-632-58	IC M52435P	
IC403	8-759-008-70	IC LM358N	
IC404	8-759-981-85	IC RC4556D	
IC406	8-759-008-71	IC LM324N	
IC501	8-752-815-90	IC CXP80624 009Q	
IC502	8-759-983-45	IC BA6238A	
IC503	8-759-035-36	IC MC68HC05P7	
IC801	8-759-152-34	IC TC4052BPHB	
IC802	8-759-923-90	IC BA4560	
IC803	8-759-208-08	IC TC4052BPHB	
IC804	8-759-923-90	IC BA4560	
IC809	8-759-822-71	IC LA7954	
IC810	8-759-800-81	IC LA7016	

Ref. No.	Part No.	Description	Remark
<u>COIL</u>			
L201	1-408-409-00	INDUCTOR 10UH	
L202	1-408-409-00	INDUCTOR 10UH	
L210	1-410-521-11	INDUCTOR 100UH	
L211	1-410-509-11	INDUCTOR 10UH	
L213	1-410-521-11	INDUCTOR 100UH	
L251	1-410-067-21	INDUCTOR 4.7MMH	
L252	1-412-092-11	INDUCTOR, SMALL TYPE	
L253	1-410-687-11	INDUCTOR 1.2MMH	
L254	1-408-426-00	INDUCTOR 270UH	
L256	8-719-911-19	DIODE 1SS119	
L400	1-410-509-11	INDUCTOR 10UH	
L501	1-408-413-00	INDUCTOR 22UH	
L502	1-408-413-00	INDUCTOR 22UH	
L503	1-408-413-00	INDUCTOR 22UH	
L504	1-410-501-11	INDUCTOR 2.2UH	
L505	1-410-501-11	INDUCTOR 2.2UH	
L506	1-410-501-11	INDUCTOR 2.2UH	
L601	1-410-316-11	INDUCTOR 1UH	
<u>IC LINK</u>			
PS202	1-532-605-00	LINK, IC (ICP-N10)	
<u>TRANSISTOR</u>			
Q101	8-729-920-70	TRANSISTOR 2SC1740S-QR	
Q102	8-729-920-70	TRANSISTOR 2SC1740S-QR	
Q203	8-729-920-68	TRANSISTOR 2SA933S-QR	
Q204	8-729-920-68	TRANSISTOR 2SA933S-QR	
Q251	8-729-102-14	TRANSISTOR 2SD1021	
Q253	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q254	8-729-140-96	TRANSISTOR 2SD774-34	
Q301	8-729-920-68	TRANSISTOR 2SA933S-QR	
Q302	8-729-920-68	TRANSISTOR 2SA933S-QR	
Q401	8-729-920-70	TRANSISTOR 2SC1740S-QR	
Q403	8-729-115-10	TRANSISTOR 2SK105A-10	
Q404	8-729-920-70	TRANSISTOR 2SC1740S-QR	
Q405	8-729-900-89	TRANSISTOR DTC144ES	
Q410	8-729-900-65	TRANSISTOR DTA144ES	
Q412	8-729-900-89	TRANSISTOR DTC144ES	
Q423	8-729-920-70	TRANSISTOR 2SC1740S-QR	
Q428	8-729-920-68	TRANSISTOR 2SA933S-QR	
Q430	8-729-900-89	TRANSISTOR DTC144ES	
Q431	8-729-920-70	TRANSISTOR 2SC1740S-QR	
Q434	8-729-601-47	TRANSISTOR 2SK381-B	
Q435	8-729-601-47	TRANSISTOR 2SK381-B	
Q501	8-729-900-61	TRANSISTOR DTA114ES	

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q503	8-729-920-70	TRANSISTOR 2SC1740S-QR		R261	1-247-895-00	CARBON 470K 5% 1/4W	
Q504	8-729-920-70	TRANSISTOR 2SC1740S-QR		R262	1-249-438-11	CARBON 56K 5% 1/4W	
Q505	8-729-920-70	TRANSISTOR 2SC1740S-QR		R263	1-249-432-11	CARBON 18K 5% 1/4W	
Q506	8-729-920-70	TRANSISTOR 2SC1740S-QR		R264	1-249-427-11	CARBON 6.8K 5% 1/4W	
Q507	8-729-900-61	TRANSISTOR DTA114ES		R265	1-249-429-11	CARBON 10K 5% 1/4W	
Q508	8-729-920-70	TRANSISTOR 2SC1740S-QR		R266	1-249-429-11	CARBON 10K 5% 1/4W	
Q514	8-729-920-70	TRANSISTOR 2SC1740S-QR		R267	1-249-429-11	CARBON 10K 5% 1/4W	
Q515	8-729-920-68	TRANSISTOR 2SA933S-QR		R268	1-249-429-11	CARBON 10K 5% 1/4W	
Q516	8-729-900-80	TRANSISTOR DTC114ES		R269	1-249-406-11	CARBON 120 5% 1/4W	
Q517	8-729-920-70	TRANSISTOR 2SC1740S-QR		R270	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q518	8-729-900-89	TRANSISTOR DTC114ES		R272	1-249-414-11	CARBON 560 5% 1/4W	
Q519	8-729-900-65	TRANSISTOR DTA114ES		R273	1-249-427-11	CARBON 6.8K 5% 1/4W	
Q701	8-729-920-70	TRANSISTOR 2SC1740S-QR		R274	1-249-434-11	CARBON 27K 5% 1/4W	
Q801	8-729-900-89	TRANSISTOR DTC114ES		R275	△1-249-387-11	CARBON 3.3 5% 1/4W	F
Q802	8-729-900-89	TRANSISTOR DTC114ES		R277	1-249-429-11	CARBON 10K 5% 1/4W	
Q803	8-729-920-68	TRANSISTOR 2SA933S-QR		R278	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q804	8-729-119-78	TRANSISTOR 2SC1740-ST		R282	1-249-429-11	CARBON 10K 5% 1/4W	
Q805	8-729-920-70	TRANSISTOR 2SC1740S-QR		R283	△1-249-387-11	CARBON 3.3 5% 1/4W	F
Q807	△8-729-920-70	TRANSISTOR 2SC1740S-QR		R299	1-249-436-11	CARBON 39K 5% 1/4W	
RESISTOR				R305	1-249-417-11	CARBON 1K 5% 1/4W	
R101	1-249-435-11	CARBON 33K 5% 1/4W		R306	1-249-417-11	CARBON 1K 5% 1/4W	
R102	1-249-441-11	CARBON 100K 5% 1/4W		R307	1-249-417-11	CARBON 1K 5% 1/4W	
R103	1-249-417-11	CARBON 1K 5% 1/4W		R308	1-249-417-11	CARBON 1K 5% 1/4W	
R104	1-249-423-11	CARBON 3.3K 5% 1/4W		R309	1-249-417-11	CARBON 1K 5% 1/4W	
R105	1-249-423-11	CARBON 3.3K 5% 1/4W		R310	1-249-417-11	CARBON 1K 5% 1/4W	
R106	1-249-441-11	CARBON 100K 5% 1/4W		R401	1-249-429-11	CARBON 10K 5% 1/4W	
R107	1-249-435-11	CARBON 33K 5% 1/4W		R403	1-249-433-11	CARBON 22K 5% 1/4W	
R108	1-249-417-11	CARBON 1K 5% 1/4W		R404	1-249-433-11	CARBON 22K 5% 1/4W	
R136	1-249-413-11	CARBON 470 5% 1/4W		R405	1-249-433-11	CARBON 22K 5% 1/4W	
R137	1-249-413-11	CARBON 470 5% 1/4W		R406	1-249-433-11	CARBON 22K 5% 1/4W	
R138	△1-249-385-11	CARBON 2.2 5% 1/4W	F	R408	1-249-429-11	CARBON 10K 5% 1/4W	
R201	1-249-417-11	CARBON 1K 5% 1/4W		R411	1-249-429-11	CARBON 10K 5% 1/4W	
R210	1-249-405-11	CARBON 100 5% 1/4W		R412	1-249-427-11	CARBON 6.8K 5% 1/4W	
R211	1-249-405-11	CARBON 100 5% 1/4W		R413	1-249-441-11	CARBON 100K 5% 1/4W	
R222	1-249-410-11	CARBON 270 5% 1/4W		R414	1-247-887-00	CARBON 220K 5% 1/4W	
R224	1-249-406-11	CARBON 120 5% 1/4W		R415	1-249-405-11	CARBON 100 5% 1/4W	
R225	1-249-405-11	CARBON 100 5% 1/4W		R416	1-247-885-00	CARBON 180K 5% 1/4W	
R227	1-249-403-11	CARBON 68 5% 1/4W		R417	1-249-429-11	CARBON 10K 5% 1/4W	
R232	1-247-804-11	CARBON 75 5% 1/4W		R418	1-247-889-00	CARBON 270K 5% 1/4W	
R252	1-249-393-11	CARBON 10 5% 1/4W		R419	1-249-437-11	CARBON 47K 5% 1/4W	
R253	1-249-416-11	CARBON 820 5% 1/4W		R420	1-249-413-11	CARBON 470 5% 1/4W	
R254	1-249-411-11	CARBON 330 5% 1/4W		R421	1-249-433-11	CARBON 22K 5% 1/4W	
R255	1-247-885-00	CARBON 180K 5% 1/4W		R424	1-249-433-11	CARBON 22K 5% 1/4W	
R256	1-249-429-11	CARBON 10K 5% 1/4W		R425	1-249-437-11	CARBON 47K 5% 1/4W	
R257	1-249-437-11	CARBON 47K 5% 1/4W		R426	1-249-433-11	CARBON 22K 5% 1/4W	
R258	1-249-439-11	CARBON 68K 5% 1/4W		R427	1-249-436-11	CARBON 39K 5% 1/4W	
R259	1-249-419-11	CARBON 1.5K 5% 1/4W		R428	1-249-429-11	CARBON 10K 5% 1/4W	
R260	1-247-903-00	CARBON 1M 5% 1/4W		R429	1-249-429-11	CARBON 10K 5% 1/4W	
				R430	1-249-430-11	CARBON 12K 5% 1/4W	
				R431	1-249-431-11	CARBON 15K 5% 1/4W	
				R432	1-249-429-11	CARBON 10K 5% 1/4W	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MA-104

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R433	1-249-433-11	CARBON	22K 5% 1/4W	R534	1-249-428-11	CARBON	8. 2K 5% 1/4W
R434	1-249-433-11	CARBON	22K 5% 1/4W	R535	1-249-410-11	CARBON	270 5% 1/4W
R435	1-249-437-11	CARBON	47K 5% 1/4W	R536	1-249-421-11	CARBON	2. 2K 5% 1/4W
R436	1-249-433-11	CARBON	22K 5% 1/4W	R537	1-249-437-11	CARBON	47K 5% 1/4W
R437	1-249-437-11	CARBON	47K 5% 1/4W	R538	1-249-427-11	CARBON	6. 8K 5% 1/4W
R441	1-247-895-00	CARBON	470K 5% 1/4W	R539	1-249-417-11	CARBON	1K 5% 1/4W
R442	1-249-429-11	CARBON	10K 5% 1/4W	R540	1-249-435-11	CARBON	33K 5% 1/4W
R443	1-249-441-11	CARBON	100K 5% 1/4W	R541	1-249-429-11	CARBON	10K 5% 1/4W
R444	1-249-441-11	CARBON	100K 5% 1/4W	R542	1-249-432-11	CARBON	18K 5% 1/4W
R448	1-249-417-11	CARBON	1K 5% 1/4W	R543	1-249-401-11	CARBON	47 5% 1/4W
R449	1-247-885-00	CARBON	180K 5% 1/4W	R548	1-249-436-11	CARBON	39K 5% 1/4W
R450	1-249-417-11	CARBON	1K 5% 1/4W	R552	1-249-429-11	CARBON	10K 5% 1/4W
R452	1-249-425-11	CARBON	4. 7K 5% 1/4W	R553	1-249-417-11	CARBON	1K 5% 1/4W
R453	1-249-429-11	CARBON	10K 5% 1/4W	R555	1-249-441-11	CARBON	100K 5% 1/4W
R454	1-249-415-11	CARBON	680 5% 1/4W	R556	1-249-437-11	CARBON	47K 5% 1/4W
R463	1-249-423-11	CARBON	3. 3K 5% 1/4W	R557	1-249-437-11	CARBON	47K 5% 1/4W
R465	1-249-423-11	CARBON	3. 3K 5% 1/4W	R558	1-249-437-11	CARBON	47K 5% 1/4W
R466	1-247-885-00	CARBON	180K 5% 1/4W	R561	1-249-437-11	CARBON	47K 5% 1/4W
R467	1-249-430-11	CARBON	12K 5% 1/4W	R562	1-249-437-11	CARBON	47K 5% 1/4W
R468	1-249-431-11	CARBON	15K 5% 1/4W	R563	1-249-437-11	CARBON	47K 5% 1/4W
R470	1-249-415-11	CARBON	680 5% 1/4W	R564	1-249-437-11	CARBON	47K 5% 1/4W
R488	1-249-417-11	CARBON	1K 5% 1/4W	R565	1-249-437-11	CARBON	47K 5% 1/4W
R490	1-249-429-11	CARBON	10K 5% 1/4W	R566	1-249-437-11	CARBON	47K 5% 1/4W
R491	1-249-419-11	CARBON	1. 5K 5% 1/4W	R567	1-249-437-11	CARBON	47K 5% 1/4W
R496	1-249-435-11	CARBON	33K 5% 1/4W	R572	1-249-405-11	CARBON	100 5% 1/4W
R497	1-249-429-11	CARBON	10K 5% 1/4W	R573	1-249-427-11	CARBON	6. 8K 5% 1/4W
R502	△1-249-385-11	CARBON	2. 2 5% 1/4W F	R574	1-247-903-00	CARBON	1M 5% 1/4W
R506	1-249-429-11	CARBON	10K 5% 1/4W	R582	1-247-891-00	CARBON	330K 5% 1/4W
R509	1-249-417-11	CARBON	1K 5% 1/4W	R583	1-247-887-00	CARBON	220K 5% 1/4W
R510	1-249-417-11	CARBON	1K 5% 1/4W	R589	1-249-421-11	CARBON	2. 2K 5% 1/4W
R511	1-249-417-11	CARBON	1K 5% 1/4W	R590	△1-249-377-11	CARBON	0. 47 5% 1/4W F
R512	1-249-429-11	CARBON	10K 5% 1/4W	R591	1-249-422-11	CARBON	2. 7K 5% 1/4W
R513	1-247-705-11	CARBON	270 5% 1/4W	R595	1-249-429-11	CARBON	10K 5% 1/4W
R514	1-249-417-11	CARBON	1K 5% 1/4W	R596	1-249-429-11	CARBON	10K 5% 1/4W
R515	1-249-417-11	CARBON	1K 5% 1/4W	R598	1-249-413-11	CARBON	470 5% 1/4W
R516	1-249-429-11	CARBON	10K 5% 1/4W	R599	1-249-437-11	CARBON	47K 5% 1/4W
R517	1-249-437-11	CARBON	47K 5% 1/4W	R751	1-249-414-11	CARBON	560 5% 1/4W
R518	1-249-425-11	CARBON	4. 7K 5% 1/4W	R752	1-249-423-11	CARBON	3. 3K 5% 1/4W
R519	1-249-425-11	CARBON	4. 7K 5% 1/4W	R801	1-249-428-11	CARBON	8. 2K 5% 1/4W
R521	1-249-429-11	CARBON	10K 5% 1/4W	R802	1-249-428-11	CARBON	8. 2K 5% 1/4W
R522	1-249-429-11	CARBON	10K 5% 1/4W	R803	1-249-425-11	CARBON	4. 7K 5% 1/4W
R523	1-249-429-11	CARBON	10K 5% 1/4W	R804	1-249-425-11	CARBON	4. 7K 5% 1/4W
R524	1-249-428-11	CARBON	8. 2K 5% 1/4W	R805	1-249-428-11	CARBON	8. 2K 5% 1/4W
R526	1-249-437-11	CARBON	47K 5% 1/4W	R806	1-249-428-11	CARBON	8. 2K 5% 1/4W
R527	1-249-431-11	CARBON	15K 5% 1/4W	R807	1-249-429-11	CARBON	10K 5% 1/4W
R528	1-249-419-11	CARBON	1. 5K 5% 1/4W	R808	1-249-441-11	CARBON	100K 5% 1/4W
R529	1-249-418-11	CARBON	1. 2K 5% 1/4W	R809	1-249-441-11	CARBON	100K 5% 1/4W
R530	1-249-417-11	CARBON	1K 5% 1/4W	R810	1-249-435-11	CARBON	33K 5% 1/4W
R531	1-249-417-11	CARBON	1K 5% 1/4W	R813	1-249-432-11	CARBON	18K 5% 1/4W
R532	1-249-421-11	CARBON	2. 2K 5% 1/4W	R814	1-249-441-11	CARBON	100K 5% 1/4W
R533	1-247-897-11	CARBON	560K 5% 1/4W	R815	1-249-437-11	CARBON	47K 5% 1/4W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MA-104**SI-10****TU-120**

Ref. No.	Part No.	Description	Remark
R816	1-249-436-11	CARBON 39K 5% 1/4W	
R817	1-249-437-11	CARBON 47K 5% 1/4W	
R818	1-249-435-11	CARBON 33K 5% 1/4W	
R819	1-249-434-11	CARBON 27K 5% 1/4W	
R820	1-249-427-11	CARBON 6.8K 5% 1/4W	
R821	1-249-430-11	CARBON 12K 5% 1/4W	
R822	1-249-417-11	CARBON 1K 5% 1/4W	
R824	1-247-883-00	CARBON 150K 5% 1/4W	
R825	1-249-413-11	CARBON 470 5% 1/4W	
R826	1-249-419-11	CARBON 1.5K 5% 1/4W	
R827	1-247-903-00	CARBON 1M 5% 1/4W	
R828	1-249-419-11	CARBON 1.5K 5% 1/4W	
R829	1-249-422-11	CARBON 2.7K 5% 1/4W	
R830	1-249-429-11	CARBON 10K 5% 1/4W	
R831	1-249-435-11	CARBON 33K 5% 1/4W	
R837	1-249-417-11	CARBON 1K 5% 1/4W	
R838	1-249-417-11	CARBON 1K 5% 1/4W	
R840	1-249-413-11	CARBON 470 5% 1/4W	
R841	1-249-417-11	CARBON 1K 5% 1/4W	
R843	1-249-428-11	CARBON 8.2K 5% 1/4W	
R844	1-249-433-11	CARBON 22K 5% 1/4W	
R845	1-249-433-11	CARBON 22K 5% 1/4W	
R847	1-249-429-11	CARBON 10K 5% 1/4W	
R849	1-249-429-11	CARBON 10K 5% 1/4W	
R851	1-249-437-11	CARBON 47K 5% 1/4W	
R852	1-249-437-11	CARBON 47K 5% 1/4W	
R853	1-249-437-11	CARBON 47K 5% 1/4W	
R854	1-249-437-11	CARBON 47K 5% 1/4W	
R855	1-249-437-11	CARBON 47K 5% 1/4W	
R856	1-249-437-11	CARBON 47K 5% 1/4W	
R857	1-249-424-11	CARBON 3.9K 5% 1/4W	
R858	1-249-417-11	CARBON 1K 5% 1/4W	
R859	1-249-441-11	CARBON 100K 5% 1/4W	
R863	1-249-441-11	CARBON 100K 5% 1/4W	
R901	1-249-417-11	CARBON 1K 5% 1/4W	
R903	1-247-887-00	CARBON 220K 5% 1/4W	
R904	1-249-429-11	CARBON 10K 5% 1/4W	

VARIABLE RESISTOR

RV251	1-238-021-11	RES, ADJ, CARBON 220K
RV501	1-238-016-11	RES, ADJ, CARBON 10K

TRANSFORMER

T251	1-433-352-11	TRANSFORMER, BIAS OSCILLATION
T252	1-406-349-11	TRANSFORMER, OSCILLATION

Ref. No.	Part No.	Description	Remark
<u>CRYSTAL</u>			
X501	1-578-774-11	VIBRATOR, CRYSTAL	
X503	1-577-358-21	VIBRATOR, CERAMIC	

*1-635-225-12 SI-10 BOARD (Ref. No. 3000 series)			

<u>CAPACITOR</u>			
C847	1-162-306-11	CERAMIC 0.01MF 20% 16V	
C848	1-162-306-11	CERAMIC 0.01MF 20% 16V	
<u>IC</u>			
IC810	8-759-602-49	IC M5201P	
IC812	8-759-040-70	IC MC14070BCP	

*A-6721-369-A TU-120 BOARD, COMPLETE (SLV-815)			
***** (Ref. No. 2000 series)			
*A-6721-375-A TU-120 BOARD, COMPLETE (SLV-815UB)			
***** (Ref. No. 2000 series)			
*A-6721-372-A TU-120 BOARD, COMPLETE (SLV-815VP)			
***** (Ref. No. 2000 series)			
<u>CAPACITOR</u>			
C001	1-124-477-11	ELECT 47MF 20% 16V	
C002	1-126-163-11	ELECT 4.7MF 20% 50V	
C003	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C004	1-126-233-11	ELECT 22MF 20% 50V	
C005	1-126-103-11	ELECT 470MF 20% 16V	
C006	1-124-927-11	ELECT 4.7MF 20% 50V	
C008	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C009	1-163-123-00	CERAMIC CHIP 180PF 5% 50V	
C010	1-124-477-11	ELECT 47MF 20% 16V	
C011	1-124-477-11	ELECT 47MF 20% 16V	
(SVL-815UB)			
C013	1-124-477-11	ELECT 47MF 20% 16V	
(SVL-815UB)			

When indicating parts by reference number, please include the board name.

TU-120

Ref. No.	Part No.	Description	Remark
C015	1-123-875-11	ELECT 10MF 20% 50V	
C016	1-123-875-11	ELECT 10MF 20% 50V	
C017	1-123-875-11	ELECT 10MF 20% 50V	
		(SVL-815VP)	
C018	1-123-875-11	ELECT 10MF 20% 50V	
		(SVL-815VP)	
C019	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C101	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C104	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	

CONNECTOR

CN001	1-568-074-11	CONNECTOR (RECEPTALE) 10P
CN002	1-568-075-11	CONNECTOR (RECEPTALE) 12P
CN003	1-506-487-11	PIN, CONNECTOR 8P (SLV-815UB)
CN004	1-506-487-11	PIN, CONNECTOR 8P (SLV-815UB)

DIODE

D001	△8-719-110-78	DIODE RD33ES-B2
D014	8-719-911-19	DIODE ISS119

IF BLOCK

IF001	△1-466-166-11	IF BLOCK (IFX-395C) (SLV-815UB)
IF001	△1-466-167-11	IF BLOCK (IFX-389C) (SLV-815)
IF001	△1-466-145-11	IF BLOCK (IFX-389) (SLV-815VP)

RESISTOR

JR007	1-216-295-00	METAL GLAZE 0 5% 1/10W
JR009	1-216-295-00	METAL GLAZE 0 5% 1/10W (SLV-815/VP)
JR024	1-216-295-00	METAL GLAZE 0 5% 1/10W (SLV-815UB)
JR025	1-216-295-00	METAL GLAZE 0 5% 1/10W (SLV-815UB)
JR101	1-216-295-00	METAL GLAZE 0 5% 1/10W
JR201	1-216-295-00	METAL GLAZE 0 5% 1/10W

COIL

L001	1-408-417-00	INDUCTOR 47UH
L002	1-408-413-00	INDUCTOR 22UH
L003	1-408-409-00	INDUCTOR 10UH
L004	1-408-971-11	INDUCTOR 12UH (SLV-815/VP)
L005	1-408-409-00	INDUCTOR 10UH
L032	1-410-316-11	INDUCTOR 1UH
L033	1-410-316-11	INDUCTOR 1UH
L035	1-410-316-11	INDUCTOR 1UH

Ref. No.	Part No.	Description	Remark
----------	----------	-------------	--------

DECODER BLOCK

MPX001	△1-466-144-11	DECODER BLOCK (MPL-389) (SLV-815/VP)
--------	---------------	--------------------------------------

TRANSISTOR

Q001	△8-729-901-78	TRANSISTOR 2SC2412K-R
Q003	8-729-901-78	TRANSISTOR 2SC2412K-R
Q004	8-729-900-98	TRANSISTOR DTC143TK
Q005	8-729-901-78	TRANSISTOR 2SC2412K-R
Q101	8-729-901-78	TRANSISTOR 2SC2412K-R

RESISTOR

R002	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R004	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R005	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R006	1-216-025-00	METAL GLAZE 100 5% 1/10W
R008	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R009	1-216-073-00	METAL GLAZE 10K 5% 1/10W (SLV-815UB)
R011	1-216-073-00	METAL GLAZE 10K 5% 1/10W (SLV-815/VP)
R012	1-216-073-00	METAL GLAZE 2.2K 5% 1/10W (SLV-815/VP)
R014	1-216-073-00	METAL GLAZE 2.2K 5% 1/10W (SLV-815/VP)
R013	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R015	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R016	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W
R017	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W
R021	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R023	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R026	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R102	1-216-049-00	METAL GLAZE 1K 5% 1/10W

VARIABLE RESISTOR

RV001	1-241-080-11	RES, ADJ, CARBON 10K (SLV-815/VP)
-------	--------------	-----------------------------------

TUNER

TU001	△1-465-262-11	TUNER, ET (BTP-2U601) (SLV-815UB)
TU001	△1-465-260-11	TUNER, ET (BTP2C401) (SLV-815/VP)

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*A-1296-772-A	NA-7 BOARD, COMPLETE (SLV-815UB)			C030	1-130-495-00	MYLAR 0.1MF	5% 50V
	***** (Ref. No. 3000 series)			C031	1-163-059-00	CERAMIC CHIP 0.01MF	50V
<u>FILTER</u>				C032	1-164-232-11	CERAMIC CHIP 0.01MF	50V
BP001	1-236-238-11	FILTER, BAND PASS		C033	1-164-232-11	CERAMIC CHIP 0.01MF	50V
<u>CAPACITOR</u>				C034	1-124-465-00	ELECT 0.47MF	20% 50V
C001	1-164-232-11	CERAMIC CHIP 0.01MF	20% 50V	C035	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C002	1-124-477-11	ELECT 47MF	20% 16V	C036	1-163-245-11	CERAMIC CHIP 56PF	5% 50V
C003	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C037	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C004	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C038	1-124-126-00	ELECT 47MF	20% 10V
C005	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C039	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C006	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C040	1-124-443-00	ELECT 100MF	20% 10V
C007	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C041	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C008	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C045	1-123-875-11	ELECT 10MF	20% 50V
C009	1-124-477-11	ELECT 47MF	20% 16V	C046	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C010	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C047	1-124-443-00	ELECT 100MF	20% 10V
C011	1-124-443-00	ELECT 100MF	20% 10V	C051	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C012	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C052	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C013	1-126-157-11	ELECT 10MF	20% 16V	C053	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C014	1-124-465-00	ELECT 0.47MF	20% 50V	C054	1-124-443-00	ELECT 100MF	20% 10V
C015	1-124-465-00	ELECT 0.47MF	20% 50V	C055	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C016	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C056	1-124-443-00	ELECT 100MF	20% 10V
C017	1-163-245-11	CERAMIC CHIP 56PF	5% 50V	C057	1-130-469-00	MYLAR 680PF	5% 50V
C018	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C058	1-126-301-11	ELECT 1MF	20% 50V
C019	1-124-465-00	ELECT 0.47MF	20% 50V	C059	1-124-126-00	ELECT 47MF	20% 10V
C020	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C060	1-124-443-00	ELECT 100MF	20% 10V
C021	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C061	1-130-471-00	MYLAR 0.001MF	5% 50V
C022	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C062	1-124-442-00	ELECT 330MF	20% 6.3V
C023	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C063	1-130-471-00	MYLAR 0.001MF	5% 50V
C024	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C064	1-124-126-00	ELECT 47MF	20% 10V
C025	1-130-495-00	MYLAR 0.1MF	5% 50V	C065	1-130-469-00	MYLAR 680PF	5% 50V
C026	1-130-495-00	MYLAR 0.1MF	5% 50V	C066	1-126-301-11	ELECT 1MF	20% 50V
C027	1-163-245-11	CERAMIC CHIP 56PF	5% 50V	C067	1-124-477-11	ELECT 47MF	20% 16V
C028	1-163-245-11	CERAMIC CHIP 56PF	5% 50V	C068	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C029	1-130-495-00	MYLAR 0.1MF	5% 50V	C069	1-126-157-11	ELECT 10MF	20% 16V
				C070	1-126-157-11	ELECT 10MF	20% 16V
				C071	1-124-477-11	ELECT 47MF	20% 16V
				C072	1-130-493-00	MYLAR 0.068MF	5% 50V
				C073	1-130-474-00	MYLAR 0.0018MF	5% 50V
				C074	1-124-477-11	ELECT 47MF	20% 16V
				C075	1-130-471-00	MYLAR 0.001MF	5% 50V
				C076	1-130-475-00	MYLAR 0.0022MF	5% 50V
				C077	1-126-151-11	ELECT 4.7MF	20% 16V
				C078	1-126-101-11	ELECT 100MF	20% 16V
				C079	1-124-477-11	ELECT 47MF	20% 16V
				C080	1-164-232-11	CERAMIC CHIP 0.01MF	50V

When indicating parts by reference number, please include the board name.

NA-7

[illegible]

When indicating parts by reference number, please include the board name.

NA-7

YC-65

Ref. No.	Part No.	Description			
R024	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R025	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R026	1-216-041-00	METAL GLAZE	470	5%	1/10W
R027	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R028	1-216-295-00	METAL GLAZE	0	5%	1/10W
R029	1-216-295-00	METAL GLAZE	0	5%	1/10W
R030	1-216-295-00	METAL GLAZE	0	5%	1/10W
R031	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R032	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R033	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R034	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R035	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R036	1-216-295-00	METAL GLAZE	0	5%	1/10W
R037	1-216-295-00	METAL GLAZE	0	5%	1/10W
R038	1-216-295-00	METAL GLAZE	0	5%	1/10W
R039	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R041	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R042	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R043	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R044	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R045	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R046	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R047	1-216-041-00	METAL GLAZE	470	5%	1/10W
R048	1-216-047-00	METAL GLAZE	820	5%	1/10W
R049	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R050	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R051	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R052	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R053	1-216-043-00	METAL GLAZE	560	5%	1/10W
R054	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R055	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R056	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R057	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R058	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R059	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R060	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R061	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R062	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R063	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R064	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R065	1-216-041-00	METAL GLAZE	470	5%	1/10W
R066	1-216-047-00	METAL GLAZE	820	5%	1/10W
R067	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R068	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R069	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R070	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R071	1-216-043-00	METAL GLAZE	560	5%	1/10W

Remark

Ref. No.	Part No.	Description	Remark		
R072	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R073	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R074	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R075	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R076	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R080	1-216-295-00	METAL GLAZE	0	5%	1/10W
R081	1-216-295-00	METAL GLAZE	0	5%	1/10W
R082	1-216-295-00	METAL GLAZE	0	5%	1/10W
R083	1-216-295-00	METAL GLAZE	0	5%	1/10W
R084	1-216-296-00	METAL GLAZE	0	5%	1/8W
R085	1-216-296-00	METAL GLAZE	0	5%	1/8W
R086	1-216-295-00	METAL GLAZE	0	5%	1/10W
R087	1-216-295-00	METAL GLAZE	0	5%	1/10W
R088	1-216-295-00	METAL GLAZE	0	5%	1/10W
R089	1-216-295-00	METAL GLAZE	0	5%	1/10W
R090	1-216-296-00	METAL GLAZE	0	5%	1/8W
R091	1-216-295-00	METAL GLAZE	0	5%	1/10W
R092	1-216-295-00	METAL GLAZE	0	5%	1/10W
R093	1-216-295-00	METAL GLAZE	0	5%	1/10W
R094	1-216-295-00	METAL GLAZE	0	5%	1/10W
R095	1-216-295-00	METAL GLAZE	0	5%	1/10W
CRYSTAL					
X001	1-577-251-11	VIBRATOR, CRYSTAL 6.552MHZ			
X002	1-577-252-11	VIBRATOR, CRYSTAL 5.824MHZ			
X003	1-577-253-11	VIBRATOR, CERAMIC 16.9MHZ			

*A-6727-277-A	YC-65 BOARD, COMPLETE (SLV-815) ***** (Ref. No. 4000 series)				
*A-6727-281-A	YC-65 BOARD, COMPLETE (SLV-815VP) ***** (Ref. No. 4000 series)				
*A-6727-290-A	YC-65 BOARD, COMPLETE (SLV-815UB) ***** (Ref. No. 4000 series)				
3-729-971-01	COVER, VOLUME				
CAPACITOR					
C701	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C702	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C703	1-124-927-11	ELECT	4.7MF	20%	16V
		(SLV-815/UB)			
C703	1-124-927-11	ELECT	4.7MF	20%	50V
		(SLV-815VP)			
C704	1-126-233-11	ELECT	22MF	20%	25V
C705	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C706	1-124-927-11	ELECT	4.7MF	20%	50V
C707	1-124-927-11	ELECT	4.7MF	20%	50V
C708	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C709	1-124-442-00	ELECT	330MF	20%	6.3V
C710	1-163-035-00	CERAMIC CHIP	0.047MF		50V

When indicating parts by
reference number, please include
the board name.

YC-65

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C711	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C806	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C712	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C807	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C713	1-163-139-00	CERAMIC CHIP 820PF	5% 50V	C808	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C714	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C809	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C715	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C810	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C718	1-124-927-11	ELECT 4.7MF	20% 50V	C811	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C723	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C812	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C724	1-163-033-00	CERAMIC CHIP 0.022MF	50V	C813	1-124-443-00	ELECT 100MF	20% 6.3V
C725	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C814	1-124-443-00	ELECT 100MF	20% 6.3V
C726	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C815	1-164-330-21	CERAMIC CHIP 0.22MF	10% 16V
C727	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C816	1-124-927-11	ELECT 4.7MF	20% 50V
C728	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C817	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C729	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C818	1-163-036-00	CERAMIC CHIP 0.068MF	50V
C730	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C819	1-164-492-11	CERAMIC CHIP 0.15MF	10% 16V
C731	1-124-443-00	ELECT 100MF	20% 6.3V	C820	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C732	1-163-115-00	CERAMIC CHIP 82PF	5% 50V	C823	1-124-927-11	ELECT 4.7MF	20% 50V
C733	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C825	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C734	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C826	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C735	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C827	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C736	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C828	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C737	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C829	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C738	1-124-925-11	ELECT 2.2MF	20% 50V	C830	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C739	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C831	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C741	1-124-126-00	ELECT 47MF	20% 10V	C832	1-124-791-11	ELECT 1MF	20% 50V
C743	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C833	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C744	1-124-126-00	ELECT 47MF	20% 10V	C834	1-123-382-00	ELECT 3.3MF	20% 50V
C746	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C835	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C747	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C836	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C749	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C837	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C750	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C840	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C751	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C841	1-164-232-11	CERAMIC CHIP 0.01MF (SLV-815VP)	50V
C753	1-124-126-00	ELECT 47MF	20% 10V	C842	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C754	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C858	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C755	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C859	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C756	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C861	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C760	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C862	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C761	1-124-963-11	ELECT 33MF	20% 16V	C863	1-124-791-11	ELECT 1MF	20% 50V
C763	1-124-927-11	ELECT 4.7MF	20% 50V	C864	1-124-126-00	ELECT 47MF	20% 10V
C764	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C866	1-124-791-11	ELECT 1MF	20% 50V
C770	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C867	1-123-875-11	ELECT 10MF	20% 50V
C772	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C868	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C780	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C869	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C782	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C870	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C783	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C871	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C785	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C872	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C790	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C873	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C801	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C874	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C802	1-124-442-00	ELECT 330MF	20% 6.3V	C875	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C803	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C876	1-108-796-11	MYLAR 0.0022MF	5% 50V
C804	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C877	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C805	1-163-033-00	CERAMIC CHIP 0.022MF	50V				

When indicating parts by reference number, please include the board name.

When indicating parts by reference number, please include the board name.

YC-65

Ref. No.	Part No.	Description				
JR053	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR054	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR055	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR056	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR057	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR058	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR059	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR060	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR061	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR062	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR063	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR064	1-216-295-00	METAL GLAZE	0	5%	1/10W	

COIL

L701	1-408-982-11	INDUCTOR	100UH		
L704	1-408-981-21	INDUCTOR	82UH		
L705	1-408-983-21	INDUCTOR	120UH		
L706	1-408-982-11	INDUCTOR	100UH		
L707	1-408-982-11	INDUCTOR	100UH		
L708	1-408-982-11	INDUCTOR	100UH		
L709	1-408-982-11	INDUCTOR	100UH		
L712	1-408-971-21	INDUCTOR	12UH		
L713	1-408-974-21	INDUCTOR	22UH		
L720	1-408-978-21	INDUCTOR	47UH		
L721	1-408-971-21	INDUCTOR	12UH		
L726	1-408-985-21	INDUCTOR	180UH		
L801	1-408-982-11	INDUCTOR	100UH		
L802	1-408-987-21	INDUCTOR	330UH		
L803	1-408-948-00	INDUCTOR	220UH		
L805	1-408-970-21	INDUCTOR	10UH		
L806	1-408-969-21	INDUCTOR	8. 2UH		
L807	1-408-969-21	INDUCTOR	8. 2UH		
L809	1-407-499-00	INDUCTOR	3. 9MMH		
L861	1-408-976-21	INDUCTOR	33UH		
L862	1-408-970-21	INDUCTOR	10UH		
L880	1-408-982-11	INDUCTOR	100UH		
L881	1-408-982-11	INDUCTOR	100UH		
L882	1-408-972-21	INDUCTOR	15UH		
L883	1-408-975-21	INDUCTOR	27UH		

TRANSISTOR

Q702	8-729-216-22	TRANSISTOR	2SA1162		
Q703	8-729-901-47	TRANSISTOR	DTA143EK		
Q704	8-729-901-01	TRANSISTOR	DTC144EK		
Q705	8-729-100-66	TRANSISTOR	2SC1623		
Q706	8-729-216-22	TRANSISTOR	2SA1162		
Q707	8-729-100-66	TRANSISTOR	2SC1623		
Q709	8-729-100-66	TRANSISTOR	2SC1623		
Q711	8-729-216-22	TRANSISTOR	2SA1162		
Q715	8-729-901-01	TRANSISTOR	DTC144EK		

Ref. No.	Part No.	Description	Remark
Q716	8-729-901-01	TRANSISTOR DTC144EK	
Q717	8-729-100-66	TRANSISTOR 2SC1623	
Q719	8-729-216-22	TRANSISTOR 2SA1162	
Q721	8-729-100-66	TRANSISTOR 2SC1623	
Q722	8-729-901-01	TRANSISTOR DTC144EK	
Q723	8-729-901-01	TRANSISTOR DTC144EK	
Q801	8-729-100-66	TRANSISTOR 2SC1623	
Q802	8-729-901-01	TRANSISTOR DTC144EK (SLV-815VP)	
Q803	8-729-100-66	TRANSISTOR 2SC1623	
Q804	8-729-900-53	TRANSISTOR DTC114EK	
Q805	8-729-216-22	TRANSISTOR 2SA1162	
Q806	8-729-901-01	TRANSISTOR DTC144EK	
Q807	8-729-100-66	TRANSISTOR 2SC1623 (SLV-815VP)	
Q808	8-729-100-66	TRANSISTOR 2SC1623	
Q809	8-729-100-66	TRANSISTOR 2SC1623	
Q810	8-729-901-04	TRANSISTOR DTA114EK	
Q811	8-729-216-22	TRANSISTOR 2SA1162	
Q812	8-729-100-66	TRANSISTOR 2SC1623	
Q852	8-729-901-01	TRANSISTOR DTC144EK (SLV-815VP)	
Q860	8-729-809-77	TRANSISTOR 2SC3142-J4	
Q862	8-729-901-01	TRANSISTOR DTC144EK	
Q880	8-729-100-66	TRANSISTOR 2SC1623	
Q881	8-729-100-66	TRANSISTOR 2SC1623	
Q882	8-729-216-22	TRANSISTOR 2SA1162	
Q883	8-729-100-66	TRANSISTOR 2SC1623	
RESISTOR			
R701	1-216-109-00	METAL GLAZE 330K 5%	1/10W
R702	1-216-057-00	METAL GLAZE 2. 2K 5%	1/10W
R703	1-216-071-00	METAL GLAZE 8. 2K 5%	1/10W
R704	1-216-069-00	METAL GLAZE 6. 8K 5%	1/10W
R705	1-216-067-00	METAL GLAZE 5. 6K 5%	1/10W
R706	1-216-057-00	METAL GLAZE 2. 2K 5%	1/10W
R707	1-216-052-00	METAL GLAZE 1. 3K 5%	1/10W
R708	1-216-036-00	METAL GLAZE 300 5%	1/10W
R709	1-216-061-00	METAL GLAZE 3. 3K 5%	1/10W
R710	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R711	1-216-295-00	METAL GLAZE 0 5%	1/10W
R712	1-216-065-00	METAL GLAZE 4. 7K 5%	1/10W
R713	1-216-057-00	METAL GLAZE 2. 2K 5%	1/10W
R714	1-216-065-00	METAL GLAZE 4. 7K 5%	1/10W
R717	1-216-055-00	METAL GLAZE 1. 8K 5%	1/10W
R719	1-216-067-00	METAL GLAZE 5. 6K 5%	1/10W
R720	1-216-063-00	METAL GLAZE 3. 9K 5%	1/10W
R722	1-216-053-00	METAL GLAZE 1. 5K 5%	1/10W
R723	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R724	1-216-053-00	METAL GLAZE 1. 5K 5%	1/10W
R725	1-216-039-00	METAL GLAZE 390 5%	1/10W
R726	1-216-047-00	METAL GLAZE 820 5%	1/10W
R727	1-216-049-00	METAL GLAZE 1K 5%	1/10W

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R728	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R813	1-216-041-00	METAL GLAZE	470 5% 1/10W
R729	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R814	1-216-045-00	METAL GLAZE	680 5% 1/10W
R730	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R816	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R731	1-216-033-00	METAL GLAZE	220 5% 1/10W	R817	1-216-295-00	METAL GLAZE	0 5% 1/10W
R733	1-216-041-00	METAL GLAZE	470 5% 1/10W	R818	1-216-039-00	METAL GLAZE	390 5% 1/10W
R734	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R819	1-216-057-00	METAL GLAZE	2. 2K 5% 1/10W
R735	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R820	1-216-069-00	METAL GLAZE	6. 8K 5% 1/10W
R736	1-216-033-00	METAL GLAZE	220 5% 1/10W	R822	1-216-055-00	METAL GLAZE	1. 8K 5% 1/10W
R737	1-216-041-00	METAL GLAZE	470 5% 1/10W	R823	1-216-061-00	METAL GLAZE	3. 3K 5% 1/10W
R738	1-216-025-00	METAL GLAZE	100 5% 1/10W	R824	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R739	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R825	1-216-059-00	METAL GLAZE	2. 7K 5% 1/10W (SLV-815VP)
R740	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R826	1-216-069-00	METAL GLAZE	6. 8K 5% 1/10W (SLV-815VP)
R741	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R827	1-216-063-00	METAL GLAZE	3. 9K 5% 1/10W (SLV-815VP)
R742	1-216-295-00	METAL GLAZE	0 5% 1/10W	R828	1-216-035-00	METAL GLAZE	270 5% 1/10W
R743	1-216-041-00	METAL GLAZE	470 5% 1/10W	R829	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R744	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R830	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R745	1-216-041-00	METAL GLAZE	470 5% 1/10W	R831	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R749	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R832	1-216-033-00	METAL GLAZE	220 5% 1/10W
R750	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R833	1-216-037-00	METAL GLAZE	330 5% 1/10W
R751	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R834	1-216-059-00	METAL GLAZE	2. 7K 5% 1/10W
R752	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R835	1-216-037-00	METAL GLAZE	330 5% 1/10W
R754	1-216-039-00	METAL GLAZE	390 5% 1/10W	R836	1-216-037-00	METAL GLAZE	330 5% 1/10W
R755	1-216-129-00	METAL GLAZE	2. 2M 5% 1/10W	R837	1-216-065-00	METAL GLAZE	4. 7K 5% 1/10W
R761	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R838	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R762	1-216-295-00	METAL GLAZE	0 5% 1/10W	R839	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R763	1-216-061-00	METAL GLAZE	3. 3K 5% 1/10W	R840	1-216-047-00	METAL GLAZE	820 5% 1/10W
R764	1-216-061-00	METAL GLAZE	3. 3K 5% 1/10W	R841	1-216-047-00	METAL GLAZE	820 5% 1/10W
R768	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R843	1-216-041-00	METAL GLAZE	470 5% 1/10W
R769	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R844	1-216-059-00	METAL GLAZE	2. 7K 5% 1/10W
R772	1-216-041-00	METAL GLAZE	470 5% 1/10W	R852	1-216-049-00	METAL GLAZE	1K 5% 1/10W (SLV-815VP)
R773	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R853	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R774	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R855	1-216-037-00	METAL GLAZE	330 5% 1/10W
R775	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R856	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R776	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R857	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R777	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R858	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R778	1-216-044-00	METAL GLAZE	620 5% 1/10W	R859	1-216-065-00	METAL GLAZE	4. 7K 5% 1/10W
R779	1-216-041-00	METAL GLAZE	470 5% 1/10W	R860	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R780	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R862	1-216-061-00	METAL GLAZE	3. 3K 5% 1/10W
R781	1-216-059-00	METAL GLAZE	2. 7K 5% 1/10W	R863	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R801	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R864	1-216-065-00	METAL GLAZE	4. 7K 5% 1/10W
R802	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R865	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R803	1-216-041-00	METAL GLAZE	470 5% 1/10W	R866	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R804	1-216-049-00	METAL GLAZE	1K 5% 1/10W (SLV-815VP)	R867	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R805	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R868	1-216-057-00	METAL GLAZE	2. 2K 5% 1/10W
R806	1-216-069-00	METAL GLAZE	6. 8K 5% 1/10W	R869	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R807	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R870	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R808	1-216-051-00	METAL GLAZE	1. 2K 5% 1/10W	R872	1-216-033-00	METAL GLAZE	220 5% 1/10W
R809	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R873	1-216-103-00	METAL GLAZE	180K 5% 1/10W
R810	1-216-045-00	METAL GLAZE	680 5% 1/10W	R874	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R811	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R875	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R812	1-216-061-00	METAL GLAZE	3. 3K 5% 1/10W				

When indicating parts by reference number, please include the board name.

YC-65**PI-25**

Ref. No.	Part No.	Description	Remark
R876	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R877	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R880	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R881	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R882	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R883	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R884	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
R885	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R886	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R887	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R888	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R889	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R890	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R891	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R892	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R893	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R894	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R895	1-249-413-11	CARBON 470 5% 1/4W	
R900	1-216-143-00	METAL GLAZE 2.2 5% 1/10W (SLV-815VP)	

VARIABLE RESISTOR

RV701	1-237-723-11	RES, ADJ, CARBON 4.7K
RV702	1-237-723-11	RES, ADJ, CARBON 4.7K
RV703	1-230-523-11	RES, ADJ, CARBON 10K
RV704	1-238-167-11	RES, ADJ, CARBON 22K
RV705	1-238-167-11	RES, ADJ, CARBON 22K
RV707	1-238-166-11	RES, ADJ, CARBON 1K
RV708	1-230-523-11	RES, ADJ, CARBON 10K
RV710	1-230-494-11	RES, ADJ, CARBON 1K
RV801	1-238-166-11	RES, ADJ, CARBON 1K
RV860	1-230-527-11	RES, ADJ, CARBON 100K
RV861	1-238-166-11	RES, ADJ, CARBON 1K

TRANSFORMER

T802	1-409-467-11	COIL (TRAP 7.8K)
------	--------------	------------------

CRYSTAL

X801	1-577-651-11	VIBRATOR, CRYSTAL 4.43619MHZ
------	--------------	------------------------------

Ref. No.	Part No.	Description	Remark
*A-6727-334-A		PI-25 BOARD, COMPLETE (SLV-815/VP) ***** (Ref. No. 4000 series)	
*A-6727-335-A		PI-25 BOARD, COMPLETE (SLV-815UB) ***** (Ref. No. 4000 series)	

CAPACITOR

C201	1-124-589-11	ELECT 47MF 20% 16V
C202	1-162-306-11	CERAMIC 0.01MF 10% 50V
C203	1-102-123-00	CERAMIC 0.0033MF 10% 50V
C204	1-161-021-11	CERAMIC 0.047MF 10% 25V
C205	1-124-234-00	ELECT 22MF 20% 16V
C206	1-126-163-11	ELECT 4.7MF 20% 16V
C207	1-126-163-11	ELECT 4.7MF 20% 16V
C208	1-162-306-11	CERAMIC 0.01MF 10% 50V
C210	1-126-157-11	ELECT 10MF 20% 16V
C211	1-126-157-11	ELECT 10MF 20% 16V
C212	1-126-157-11	ELECT 10MF 20% 16V
C213	1-126-157-11	ELECT 10MF 20% 16V
C214	1-162-306-11	CERAMIC 0.01MF 10% 50V
C215	1-126-157-11	ELECT 10MF 20% 16V
C216	1-126-157-11	ELECT 10MF 20% 16V
C217	1-162-306-11	CERAMIC 0.01MF 10% 50V
C261	1-124-287-00	ELECT 10MF 20% 10V
C262	1-124-287-00	ELECT 10MF 20% 10V
C301	1-126-157-11	ELECT 10MF 20% 16V
C302	1-162-306-11	CERAMIC 0.01MF 20% 16V
C303	1-162-306-11	CERAMIC 0.01MF 20% 16V

CONNECTOR

CN201	1-563-465-11	SOCKET, CONNECTOR 14P
CN202	1-563-465-11	SOCKET, CONNECTOR 14P

DIODE

D301	8-719-911-19	DIODE 1SS119
D302	8-719-911-19	DIODE 1SS119

IC

IC201	8-759-800-81	IC LA7016
IC202	8-759-822-60	IC LA7222
IC206	8-759-501-20	IC LVA522S
IC208	8-759-420-62	IC AN3916
IC301	8-759-240-71	IC MC14071BCP
IC302	8-759-040-11	IC MC14011BCP

COIL

L201	1-408-421-00	INDUCTOR 100UH
L203	1-408-421-00	INDUCTOR 100UH
L301	1-408-421-00	INDUCTOR 100UH

When indicating parts by reference number, please include the board name.

PI-25

CG-10

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
<u>TRANSISTOR</u>				C858	1-162-205-31	CERAMIC 18PF 5% 50V	
Q224	8-729-216-22	TRANSISTOR 2SA1162		C863	1-124-791-11	ELECT 1MF 20% 50V	
<u>RESISTOR</u>				C864	1-162-217-31	CERAMIC 56PF 5% 50V	
R201	1-249-417-11	CARBON 1K 5% 1/10W		C865	1-162-306-11	CERAMIC 0.01MF 20% 16V	
R202	1-249-417-11	CARBON 1K 5% 1/10W		C866	1-162-306-11	CERAMIC 0.01MF 20% 16V	
R212	1-249-433-11	CARBON 22K 5% 1/10W		C868	1-162-306-11	CERAMIC 0.01MF 20% 16V	
R218	1-249-433-11	CARBON 22K 5% 1/10W		C876	1-162-306-11	CERAMIC 0.01MF 20% 16V	
R251	1-249-429-11	CARBON 10K 5% 1/10W		C890	1-162-306-11	CERAMIC 0.01MF 20% 16V	
R252	1-249-429-11	CARBON 10K 5% 1/10W		C895	1-124-126-00	ELECT 47MF 20% 10V	
R263	1-249-417-11	CARBON 1K 5% 1/10W		<u>CONNECTOR</u>			
R301	1-249-429-11	CARBON 10K 5% 1/4W		CN585	1-568-073-11	CONNECTOR (RECEPTALE) 8P	
<u>VARIABLE RESISTOR</u>				CN586	1-568-073-11	CONNECTOR (RECEPTALE) 8P	
RV201	1-241-083-11	RES, ADJ, CARBON 47K		<u>VARIABLE CAPACITOR</u>			
*****				CV851	1-141-245-00	CAP, TRIMMER	
*A-6727-279-A	CG-10 BOARD, COMPLETE (SLV-815) ***** (Ref. No. 5000 series)			<u>DIODE</u>			
*A-6727-282-A	CG-10 BOARD, COMPLETE (SLV-815VP) ***** (Ref. No. 5000 series)			D851	8-719-911-19	DIODE 1SS119	
*A-6727-292-A	CG-10 BOARD, COMPLETE (SLV-815UB) ***** (Ref. No. 5000 series)			D852	8-719-911-19	DIODE 1SS119	
*3-738-015-01	COVER, (DIA. 6) CARBON VR			<u>IC</u>			
<u>CAPACITOR</u>				IC685	8-759-996-03	IC LVA519S	
C685	1-124-126-00	ELECT 47MF 20% 10V		IC851	8-759-634-22	IC M50554-182SP	
C686	1-162-306-11	CERAMIC 0.01MF 20% 16V		<u>JUMPER</u>			
C687	1-102-980-00	CERAMIC 270PF 5% 50V		JW026	1-410-397-21	FERRITE BEAD INDUCTOR	
C688	1-102-980-00	CERAMIC 270PF 5% 50V		JW027	1-410-324-11	INDUCTOR 4.7UH	
C689	1-164-083-11	CERAMIC 680PF 10% 50V		<u>COIL</u>			
C690	1-130-487-00	MYLAR 0.022MF 5% 50V		L840	1-408-421-00	INDUCTOR 33UH (SLV-815VP)	
C691	1-124-791-11	ELECT 1MF 20% 50V		L851	1-410-521-11	INDUCTOR 100UH	
C692	1-162-306-11	CERAMIC 0.01MF 20% 16V		L852	1-410-521-11	INDUCTOR 100UH	
C693	1-162-291-31	CERAMIC 560PF 10% 50V		L853	1-410-521-11	INDUCTOR 100UH	
C801	1-161-061-11	CERAMIC 0.068MF 10% 25V		L856	1-410-423-11	INDUCTOR 22UH	
C802	1-124-287-00	ELECT 10MF 20% 10V		L861	1-410-521-11	INDUCTOR 100UH	
C840	1-162-211-11	CERAMIC 33MF 5% 50V		L862	1-410-521-11	INDUCTOR 100UH	
C852	1-162-209-31	CERAMIC 27PF 5% 50V		<u>TRANSISTOR</u>			
C853	1-162-306-11	CERAMIC 0.01MF 20% 16V		Q801	8-729-900-61	TRANSISTOR DTA114ES	
C854	1-124-584-00	ELECT 100MF 20% 10V		Q802	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C855	1-162-199-31	CERAMIC 10PF 5% 50V		Q803	8-729-900-89	TRANSISTOR DTC144ES	
C856	1-162-201-31	CERAMIC 12PF 5% 50V					
C857	1-162-203-31	CERAMIC 15PF 5% 50V					

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CG-10**DG-11**

Ref. No.	Part No.	Description	Remark
Q804	8-729-900-65	TRANSISTOR DTA144ES	
Q840	8-729-900-61	TRANSISTOR DTA114ES (SLV-815VP)	
Q853	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q855	8-729-423-37	TRANSISTOR 2SA3311A-QRS (SLV-815VP)	
Q856	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q857	8-729-423-37	TRANSISTOR 2SC3311A-QRS	

RESISTOR

R685	1-249-429-11	CARBON	10K	5%	1/4W	
R686	1-249-429-11	CARBON	10K	5%	1/4W	
R687	1-249-422-11	CARBON	2.7K	5%	1/4W	
R688	1-249-434-11	CARBON	27K	5%	1/4W	
R689	1-249-430-11	CARBON	12K	5%	1/4W	
R690	1-247-903-00	CARBON	1M	5%	1/4W	
R691	1-249-414-11	CARBON	560	5%	1/4W	
R801	1-249-425-11	CARBON	4.7K	5%	1/4W	
R802	1-249-437-11	CARBON	47K	5%	1/4W	
R803	1-249-425-11	CARBON	4.7K	5%	1/4W	
R804	1-249-441-11	CARBON	100K	5%	1/4W	
R840	1-249-429-11	CARBON	10K	5%	1/4W	(SLV-815VP)
R841	1-249-429-11	CARBON	10K	5%	1/4W	(SLV-815VP)
R851	1-249-423-11	CARBON	3.3K	5%	1/4W	
R852	1-249-424-11	CARBON	3.9K	5%	1/4W	
R855	1-249-421-11	CARBON	2.2K	5%	1/4W	
R856	1-249-416-11	CARBON	820	5%	1/4W	
R857	1-249-422-11	CARBON	2.7K	5%	1/4W	
R858	1-249-429-11	CARBON	10K	5%	1/4W	
R859	1-249-423-11	CARBON	3.3K	5%	1/4W	
R860	1-249-421-11	CARBON	2.2K	5%	1/4W	
R866	1-249-413-11	CARBON	470	5%	1/4W	
R867	1-249-417-11	CARBON	1K	5%	1/4W	
R868	1-249-424-11	CARBON	3.9K	5%	1/4W	
R870	1-249-413-11	CARBON	470	5%	1/4W	
R873	1-249-416-11	CARBON	820	5%	1/4W	
R877	1-249-435-11	CARBON	33K	5%	1/4W	
R878	1-249-426-11	CARBON	5.6K	5%	1/4W	
R879	1-249-413-11	CARBON	470	5%	1/4W	
R890	1-249-441-11	CARBON	100K	5%	1/4W	
R902	1-249-406-11	CARBON	120	5%	1/4W	
R903	1-249-413-11	CARBON	470	5%	1/4W	
R904	1-249-429-11	CARBON	10K	5%	1/4W	
R905	1-249-429-11	CARBON	10K	5%	1/4W	

VARIABLE RESISTOR

RV685 1-238-015-11 RES. ADJ. CARBON 4.7K

Ref. No.	Part No.	Description	Remark
<u>CRYSTAL</u>			
X851	1-577-289-11	VIBRATOR, CRYSTAL 17.7MHZ	

*A-6727-280-A	DG-11 BOARD, COMPLETE (SLV-815/VP)		
	***** (Ref. No. 5000 series)		
*A-6727-293-A	DG-11 BOARD, COMPLETE (SLV-815UB)		
	***** (Ref. No. 5000 series)		
<u>CAPACITOR</u>			
C101	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C102	1-163-139-00	CERAMIC CHIP 820PF	5% 50V
C103	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C104	1-126-301-11	ELECT 1MF	20% 50V
C105	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C106	1-126-177-11	ELECT 100MF	20% 6.3V
C107	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C108	1-126-101-11	ELECT 100MF	20% 16V
C109	1-126-157-11	ELECT 10MF	20% 16V
C113	1-126-163-11	ELECT 4.7MF	20% 35V
C114	1-126-301-11	ELECT 1MF	20% 50V
C115	1-126-099-11	ELECT 2.2MF	20% 35V
C124	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C125	1-126-301-11	ELECT 1MF	20% 50V
C127	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C128	1-126-301-11	ELECT 1MF	20% 50V
C129	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C130	1-124-257-00	ELECT 2.2MF	20% 50V
C131	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C132	1-124-464-11	ELECT 0.22MF	20% 50V
C133	1-126-163-11	ELECT 4.7MF	20% 35V
C134	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C135	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C136	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C137	1-126-157-11	ELECT 10MF	20% 16V
C138	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C139	1-126-177-11	ELECT 100MF	20% 6.3V
C140	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C141	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C142	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C143	1-124-257-00	ELECT 2.2MF	20% 50V
C144	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C145	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C146	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C147	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C148	1-126-301-11	ELECT 1MF	20% 50V
C149	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C150	1-126-177-11	ELECT 100MF	20% 6.3V
C151	1-164-232-11	CERAMIC CHIP 0.01MF	50V

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C152	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C253	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C153	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C254	1-163-130-00	CERAMIC CHIP 360PF	5% 50V
C154	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C255	1-163-128-00	CERAMIC CHIP 300PF	5% 50V
C155	1-124-257-00	ELECT 2.2MF	20% 50V	C256	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C156	1-164-232-11	CERAMIC CHIP 0.01MF	50V	<u>CONNECTOR</u>			
C157	1-124-464-11	ELECT 0.22MF	20% 50V	CN101	1-569-772-21	CONNECTOR, BOARD TO BOARD 9P	
C158	1-126-163-11	ELECT 4.7MF	20% 35V	CN103	1-568-152-21	CONNECTOR, BOARD TO BOARD 13P	
C159	1-164-232-11	CERAMIC CHIP 0.01MF	50V	<u>DIODE</u>			
C161	1-163-095-00	CERAMIC CHIP 12PF	5% 50V	D101	8-719-400-18	DIODE MA152WK	
C162	1-163-095-00	CERAMIC CHIP 12PF	5% 50V	D105	8-719-400-18	DIODE MA152WK	
C163	1-126-157-11	ELECT 10MF	20% 16V	D106	8-719-400-18	DIODE MA152WK	
C164	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V	D109	8-719-400-18	DIODE MA152WK	
C165	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	<u>FERRITE BEAD INDUCTOR</u>			
C166	1-124-257-00	ELECT 2.2MF	20% 50V	FB101	1-410-397-21	FERRITE BEAD INDUCTOR	
C167	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	FB102	1-410-397-21	FERRITE BEAD INDUCTOR	
C168	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	<u>FILTER</u>			
C169	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	FL101	1-236-101-11	ENCAPSULATED COMPONENT	
C170	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V	FL102	1-236-101-11	ENCAPSULATED COMPONENT	
C171	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	FL103	1-236-101-11	ENCAPSULATED COMPONENT	
C172	1-126-301-11	ELECT 1MF	20% 50V	FL104	1-236-101-11	ENCAPSULATED COMPONENT	
C174	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FL109	1-236-071-11	ENCAPSULATED COMPONENT	
C175	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FL110	1-236-071-11	ENCAPSULATED COMPONENT	
C176	1-126-177-11	ELECT 100MF	20% 6.3V	FL111	1-424-228-11	FILTER, NOISE	
C177	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FL112	1-424-228-11	FILTER, NOISE	
C179	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FL113	1-424-228-11	FILTER, NOISE	
C180	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FL114	1-424-228-11	FILTER, NOISE	
C181	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FL115	1-424-228-11	FILTER, NOISE	
C182	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FL116	1-424-228-11	FILTER, NOISE	
C183	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FL117	1-424-228-11	FILTER, NOISE	
C184	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FL118	1-236-071-11	ENCAPSULATED COMPONENT	
C187	1-126-157-11	ELECT 10MF	20% 16V	FL119	1-236-986-11	FILTER, BAND PASS	
C188	1-126-157-11	ELECT 10MF	20% 16V	FL120	1-236-986-11	FILTER, BAND PASS	
C189	1-126-157-11	ELECT 10MF	20% 16V	FL121	1-236-844-11	FILTER, LOW PASS	
C190	1-126-157-11	ELECT 10MF	20% 16V	FL122	1-236-071-11	ENCAPSULATED COMPONENT	
C191	1-126-177-11	ELECT 100MF	20% 6.3V	<u>IC</u>			
C192	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC101	8-759-322-29	IC HA118088MPER	
C193	1-164-234-11	CERAMIC CHIP 1MF	10V	IC102	8-759-323-11	IC HA11567MP	
C194	1-124-442-00	ELECT 330MF	20% 6.3V	IC103	8-759-322-34	IC HA11535MP	
C196	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC104	8-759-322-68	IC HD49410	
C197	1-126-177-11	ELECT 100MF	20% 6.3V	IC105	1-759-322-32	IC HM53461ZP-12	
C198	1-126-177-11	ELECT 100MF	20% 6.3V	IC108	8-759-008-74	IC MC14001BF	
C199	1-163-038-00	CERAMIC CHIP 0.1MF	25V				
C200	1-163-038-00	CERAMIC CHIP 0.1MF	25V				
C201	1-126-177-11	ELECT 100MF	20% 6.3V				
C202	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C204	1-126-301-11	ELECT 1MF	20% 50V				
C205	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C208	1-163-245-11	CERAMIC CHIP 56PF	5% 50V				
C250	1-163-121-00	CERAMIC CHIP 150PF	5% 50V				
C251	1-163-121-00	CERAMIC CHIP 150PF	5% 50V				
C252	1-163-121-00	CERAMIC CHIP 150PF	5% 50V				

When indicating parts by reference number, please include the board name.

DG-11

Ref. No.	Part No.	Description	Remark
<u>COIL</u>			
L101	1-407-169-XX	INDUCTOR 100UH	
L102	1-407-169-XX	INDUCTOR 100UH	
L105	1-407-169-XX	INDUCTOR 100UH	
L106	1-407-169-XX	INDUCTOR 100UH	
L107	1-407-169-XX	INDUCTOR 100UH	
L108	1-407-169-XX	INDUCTOR 100UH	
L109	1-407-169-XX	INDUCTOR 100UH	
L110	1-407-169-XX	INDUCTOR 100UH	
<u>TRANSISTOR</u>			
Q101	8-729-305-25	TRANSISTOR 2SA1052-C	
Q102	8-729-305-25	TRANSISTOR 2SA1052-C	
Q103	8-729-305-25	TRANSISTOR 2SA1052-C	
Q108	8-729-305-25	TRANSISTOR 2SA1052-C	
Q109	8-729-305-25	TRANSISTOR 2SA1052-C	
Q110	8-729-305-25	TRANSISTOR 2SA1052-C	
Q112	8-729-901-00	TRANSISTOR DTC124EK	
Q113	8-729-305-25	TRANSISTOR 2SA1052-C	
Q114	8-729-271-22	TRANSISTOR 2SC2712-G	
Q116	8-729-305-25	TRANSISTOR 2SA1052-C	
Q117	8-729-271-22	TRANSISTOR 2SC2712-G	
Q118	8-729-305-25	TRANSISTOR 2SA1052-C	
Q120	8-729-901-00	TRANSISTOR DTC124EK	
Q121	8-729-305-25	TRANSISTOR 2SA1052-C	
Q122	8-729-271-22	TRANSISTOR 2SC2712-G	
Q123	8-729-901-00	TRANSISTOR DTC124EK	
Q125	8-729-903-82	TRANSISTOR FMW2	
Q126	8-729-901-01	TRANSISTOR DTC144EK	
Q127	8-729-271-22	TRANSISTOR 2SC2712-G	
<u>RESISTOR</u>			
R101	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R102	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R103	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R104	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R105	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R106	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R107	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R108	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R109	1-216-117-00	METAL GLAZE 680K 5% 1/10W	
R110	1-216-117-00	METAL GLAZE 680K 5% 1/10W	
R111	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R112	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R114	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R115	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R116	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R117	1-216-117-00	METAL GLAZE 680K 5% 1/10W	
R127	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R139	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R140	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R141	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R143	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R144	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R145	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R146	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R147	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R148	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R149	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R150	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R151	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R152	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R153	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R154	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R155	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R156	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R157	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R158	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R159	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R165	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R166	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
R167	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R168	1-216-103-00	METAL GLAZE 180K 5% 1/10W	
R170	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R171	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R172	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R173	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R174	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R175	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R176	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R177	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R178	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R179	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R180	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R181	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R182	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R183	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R184	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R185	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R186	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R187	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R188	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R189	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R190	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R196	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
R197	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R198	1-216-103-00	METAL GLAZE 180K 5% 1/10W	
R199	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R200	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R201	1-216-672-11	METAL CHIP 7.5K 0.50% 1/10W	

When indicating parts by reference number, please include the board name.

DG-11
RP-63

Ref. No.	Part No.	Description	Remark
R202	1-216-688-11	METAL CHIP 36K 0.50% 1/10W	
R203	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R204	1-216-679-11	METAL CHIP 15K 0.50% 1/10W	
R205	1-216-672-11	METAL CHIP 7.5K 0.50% 1/10W	
R206	1-216-679-11	METAL CHIP 15K 0.50% 1/10W	
R207	1-216-688-11	METAL CHIP 36K 0.50% 1/10W	
R208	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R209	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R215	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R216	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R218	1-216-125-00	METAL GLAZE 1.5M 5% 1/10W	
R219	1-216-125-00	METAL GLAZE 1.5M 5% 1/10W	
R220	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R221	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R222	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R223	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R227	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R230	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R250	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R251	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R252	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R253	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R254	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R255	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R256	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R257	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R258	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R259	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R260	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R261	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R262	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R263	1-216-629-11	METAL CHIP 120 0.50% 1/10W	
R264	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R265	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R266	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R267	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R268	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R269	1-216-049-00	METAL GLAZE 1K 5% 1/10W	

VARIABLE RESISTOR

RV101	1-241-079-11	RES. ADJ. CARBON 4.7K
RV102	1-241-077-11	RES. ADJ. CARBON 2.2K
RV103	1-241-081-11	RES. ADJ. CARBON 22K
RV104	1-241-081-11	RES. ADJ. CARBON 22K

TRANSFORMER

T101	1-411-120-11	COIL, PEAKING 14.3MHZ
T102	1-411-119-11	COIL, PEAKING 16.1MHZ

Remark

Ref. No.	Part No.	Description	Remark
CRYSTAL			
X101	1-579-222-11	OSCILLATOR, CRYSTAL 4.43MHZ	
X102	1-577-611-11	OSCILLATOR, CERAMIC 500KHZ	
X103	1-579-222-11	OSCILLATOR, CRYSTAL 4.43MHZ	
X104	1-577-611-11	OSCILLATOR, CERAMIC 500KHZ	

*A-6727-137-A	RP-63 BOARD, COMPLETE (SLV-815/VP)	***** (Ref.No. 6000 series)	
*A-6727-294-A	RP-63 BOARD, COMPLETE (SLV-815UB)	***** (Ref.No. 6000 series)	
CAPACITOR			
C101	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C102	1-124-242-00	ELECT 33MF 20% 16V	
C103	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C104	1-126-301-11	ELECT 1MF 20% 50V	
C106	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C107	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C108	1-124-455-00	ELECT 100MF 20% 16V	
C109	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C110	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C111	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C112	1-126-157-11	ELECT 10MF 20% 16V	
C113	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C114	1-126-301-11	ELECT 1MF 20% 50V	
C115	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C116	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
C117	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
C118	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C119	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C120	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C121	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C122	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C123	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C801	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C802	1-126-154-11	ELECT 47MF 20% 6.3V	
C803	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C804	1-124-464-11	ELECT 0.22MF 20% 50V	
C805	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C806	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C807	1-124-464-11	ELECT 0.22MF 20% 50V	
C808	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C809	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C810	1-124-464-11	ELECT 0.22MF 20% 50V	
C811	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C812	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C813	1-124-464-11	ELECT 0.22MF 20% 50V	
C814	1-163-038-00	CERAMIC CHIP 0.1MF 25V	

When indicating parts by reference number, please include the board name.

RP-63

Ref. No.	Part No.	Description	Remark
C815	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C816	1-124-463-00	ELECT 0.1MF	20% 50V
C817	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C818	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C819	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C820	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C821	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C822	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C823	1-163-107-00	CERAMIC CHIP 39PF	5% 50V
C824	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C825	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C826	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C827	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C828	1-126-154-11	ELECT 47MF	20% 6.3V
C829	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C831	1-126-154-11	ELECT 47MF	20% 6.3V
C832	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C833	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C834	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C835	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C836	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C838	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C850	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C851	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C852	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C853	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C854	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C855	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C856	1-126-157-11	ELECT 10MF	20% 16V
C857	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C858	1-163-038-00	CERAMIC CHIP 0.1MF	25V

CONNECTOR

CN101	1-506-487-11	PIN, CONNECTOR 8P
CN801	1-565-759-11	CONNECTOR, BOARD TO BOARD 13P
CN802	1-506-490-21	PIN, CONNECTOR 11P
CN803	1-506-486-11	PIN, CONNECTOR 7P
CN804	*1-564-031-00	PIN, CONNECTOR 6P

DIODE

D102	8-719-400-18	DIODE MA152WK
D801	8-719-400-18	DIODE MA152WK
D802	8-719-400-18	DIODE MA152WK
D803	8-719-400-18	DIODE MA152WK

IC

IC101	8-759-320-55	IC HA12115MP
IC101	8-759-320-55	IC HA12115MP
IC801	8-759-320-52	IC HA118019NT

Ref. No.	Part No.	Description	Remark
<u>COIL</u>			
L101	1-408-982-11	INDUCTOR 100UH	
L102	1-408-982-11	INDUCTOR 100UH	
L801	1-408-982-11	INDUCTOR 100UH	
L802	1-408-975-21	INDUCTOR 27UH	
L803	1-408-970-21	INDUCTOR 10UH	
L804	1-408-985-21	INDUCTOR 180UH	
L805	1-408-982-11	INDUCTOR 100UH	
L806	1-408-982-11	INDUCTOR 100UH	
L807	1-408-977-21	INDUCTOR 39UH	
L808	1-408-973-21	INDUCTOR 18UH	
L809	1-408-973-21	INDUCTOR 18UH	
L850	1-408-972-21	INDUCTOR 15UH	
L851	1-408-982-11	INDUCTOR 100UH	
<u>TRANSISTOR</u>			
Q101	8-729-216-22	TRANSISTOR 2SA1162	
Q801	8-729-216-22	TRANSISTOR 2SA1162	
Q802	8-729-901-78	TRANSISTOR 2SC2412K-R	
Q803	8-729-901-78	TRANSISTOR 2SC2412K-R	
Q804	8-729-901-01	TRANSISTOR DTC144EK	
Q805	8-729-901-01	TRANSISTOR DTC144EK	
Q806	8-729-901-01	TRANSISTOR DTC144EK	
Q850	8-729-301-98	TRANSISTOR 2SB1000A-L	
Q851	8-729-901-01	TRANSISTOR DTC144EK	
Q852	8-729-216-22	TRANSISTOR 2SA1162	
Q853	8-729-216-22	TRANSISTOR 2SA1162	
Q854	8-729-901-01	TRANSISTOR DTC144EK	
<u>RESISTOR</u>			
R101	1-216-019-00	METAL GLAZE 56 5% 1/10W	
R102	1-216-003-11	METAL GLAZE 12 5% 1/10W	
R104	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R105	1-216-304-11	METAL GLAZE 3.3 5% 1/10W	
R106	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R107	1-216-304-11	METAL GLAZE 3.3 5% 1/10W	
R108	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R110	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R111	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R120	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R124	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R140	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R141	1-216-011-00	METAL GLAZE 27 5% 1/10W	
R801	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R802	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R803	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R804	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R805	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R806	1-216-113-00	METAL GLAZE 470K 5% 1/10W	

When indicating parts by reference number, please include the board name.

RP-63

JS-20

TK-12

VI-97

IO-40

Ref. No.	Part No.	Description	Remark
R807	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R808	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R809	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R810	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R811	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R812	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R813	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R814	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R815	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R816	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R817	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R818	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R819	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R820	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R821	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R822	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R823	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R824	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R826	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R827	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R828	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R829	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R830	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R831	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R832	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R833	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R850	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R851	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R852	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R853	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R854	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R855	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R856	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
R857	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	

SWITCH

SW801 1-570-857-11 SWITCH, SLIDE

*1-635-216-11 JS-20 BOARD (Ref.No. 8000 series)

CONNECTOR

CN901 *1-563-610-11 CONNECTOR, FLEXIBLE 7P

Ref. No.	Part No.	Description	Remark
----------	----------	-------------	--------

SWITCH

S901 1-572-384-11 SWITCH, ROTARY (JOG/SHUTTLE)

*1-635-218-21 TK-12 BOARD (Ref.No. 6000 series)

CONNECTOR

CN201 1-563-618-11 CONNECTOR, FLEXIBLE 15P

CN202 1-569-672-11 CONNECTOR, BOARD TO BOARD 16P

*1-637-558-11 VI-97 BOARD (Ref.No. 6000 series)

CAPACITOR

C001	1-124-589-11	ELECT	47MF	20%	16V
C002	1-126-096-11	ELECT	10MF	20%	25V
C004	1-161-379-00	CERAMIC	0.01MF	30%	16V
C005	1-124-472-11	ELECT	470MF	20%	10V

CONNECTOR

CN301 1-563-599-11 CONNECTOR, FLEXIBLE 22P

CN302 1-569-335-11 CONNECTOR, BOARD TO BOARD 9P

CN303 1-569-735-11 CONNECTOR, BOARD TO BOARD 11P

IC

IC001 8-759-800-81 IC LA7016

*A-6754-215-A IO-40 BOARD, COMPLETE (SLV-815UB)
***** (Ref.No. 7000 series)

*A-6754-198-A IO-40 BOARD, COMPLETE (SLV-815/VP)
***** (Ref.No. 7000 series)

CAPACITOR

C002	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C004	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C006	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C008	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C010	1-163-133-00	CERAMIC CHIP	470PF	5%	50V

When indicating parts by
reference number, please include
the board name.

IO-40**DI-43****NM-1**

Ref. No.	Part No.	Description	Remark
C012	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C013	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C014	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C015	1-163-833-00	CERAMIC CHIP 0.068MF	25V

CONNECTOR

CN101	1-569-773-11	CONNECTOR, BOARD TO BOARD 17P
CN102	1-569-774-11	CONNECTOR, BOARD TO BOARD 19P

JACK

CNJ002	1-507-792-31	JACK (CONTROL S IN)
CNJ003	1-507-792-31	JACK (CONTROL S OUT)
CNJ004	1-561-534-41	SOCKET 21P (EURO AV IN)
CNJ005	1-561-534-41	SOCKET 21P (EURO AV IN/OUT)
CNJ006	1-565-727-11	JACK, PIN 3P (LINE OUT)

DIODE

D001	8-719-106-08	DIODE RD6. 2M-B2
D002	8-719-106-08	DIODE RD6. 2M-B2
D006	8-719-106-08	DIODE RD6. 2M-B2
D007	8-719-106-08	DIODE RD6. 2M-B2
D008	8-719-106-08	DIODE RD6. 2M-B2

D009	8-719-106-08	DIODE RD6. 2M-B2
D010	8-719-106-08	DIODE RD6. 2M-B2
D013	8-719-106-08	DIODE RD6. 2M-B2
D014	8-719-106-08	DIODE RD6. 2M-B2
D015	8-719-106-08	DIODE RD6. 2M-B2

D016	8-719-106-08	DIODE RD6. 2M-B2
D019	8-719-157-61	DIODE RD15M-T1B

COIL

L001	1-410-336-11	INDUCTOR 220UH
L002	1-410-336-11	INDUCTOR 220UH
L003	1-410-336-11	INDUCTOR 220UH
L004	1-410-336-11	INDUCTOR 220UH
L005	1-410-336-11	INDUCTOR 220UH

L006	1-410-336-11	INDUCTOR 220UH
------	--------------	----------------

TRANSISTOR

Q001	8-729-901-06	TRANSISTOR DTA144EK
Q002	8-729-901-01	TRANSISTOR DTC144EK

RESISTOR

R002	1-216-049-00	METAL GLAZE 1K	5%	1/10W
R004	1-216-022-00	METAL GLAZE 75	5%	1/10W
R005	1-216-295-00	METAL GLAZE 0	5%	1/10W

Ref. No.	Part No.	Description	Remark
R007	1-216-295-00	METAL GLAZE 0	5% 1/10W
R009	1-216-031-00	METAL GLAZE 180	5% 1/10W
R010	1-216-031-00	METAL GLAZE 180	5% 1/10W
R011	1-216-295-00	METAL GLAZE 0	5% 1/10W
R013	1-216-295-00	METAL GLAZE 0	5% 1/10W
R015	1-216-022-00	METAL GLAZE 75	5% 1/10W
R016	1-216-049-00	METAL GLAZE 1K	5% 1/10W
R017	1-216-049-00	METAL GLAZE 1K	5% 1/10W
R018	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R019	1-216-077-00	METAL GLAZE 15K	5% 1/10W
R020	1-216-295-00	METAL GLAZE 0	5% 1/10W
R022	1-216-295-00	METAL GLAZE 0	5% 1/10W
R023	1-216-049-00	METAL GLAZE 1K	5% 1/10W

*1-637-536-11 DI-43 BOARD (Ref.No. 8000 series)

CONNECTOR

CN201	1-569-678-21	CONNECTOR, BOARD TO BOARD 9P
CN203	1-568-104-21	CONNECTOR, BOARD TO BOARD 13P
CN204	1-568-073-11	CONNECTOR (RECEPTALE) 8P
CN205	1-568-075-11	CONNECTOR (RECEPTALE) 12P

*1-632-333-11 NM-1 BOARD (SLV-815UB)
***** (Ref.No. 8000 series)

CAPACITOR

C001	1-123-875-11	ELECT 10MF	20%	50V
C002	1-123-875-11	ELECT 10MF	20%	50V
C003	1-124-589-11	ELECT 47MF	20%	16V
C004	1-124-589-11	ELECT 47MF	20%	16V
C009	1-123-875-11	ELECT 10MF	20%	50V
C010	1-123-875-11	ELECT 10MF	20%	50V

CONNECTOR

CN001	1-506-487-11	PIN, CONNECTOR 8P
CN002	1-506-487-11	PIN, CONNECTOR 8P
CN003	1-580-555-11	CONNECTOR, BOARD TO BOARD 16P

DIODE

D002	8-719-911-19	DIODE 1SS119
D003	8-719-911-19	DIODE 1SS119
D010	8-719-911-19	DIODE 1SS119

When indicating parts by reference number, please include the board name.

NM-1
MD-49

Ref. No.	Part No.	Description	Remark
<u>IC</u>			
IC001	8-759-800-81	IC LA7016	
IC002	8-759-800-81	IC LA7016	
<u>TRANSISTOR</u>			
Q003	8-729-900-80	TRANSISTOR DTC114ES	
Q004	8-729-900-80	TRANSISTOR DTC114ES	
Q005	8-729-900-80	TRANSISTOR DTC114ES	
Q006	8-729-900-80	TRANSISTOR DTC114ES	
Q007	8-729-900-80	TRANSISTOR DTC114ES	
Q008	8-729-303-37	TRANSISTOR 2SD655E	
Q009	8-729-303-37	TRANSISTOR 2SD655E	
<u>RESISTOR</u>			
R002	1-249-429-11	METAL 10K 5% 1/4W	
R003	1-249-429-11	METAL 10K 5% 1/4W	
R004	1-249-429-11	METAL 10K 5% 1/4W	
R005	1-249-428-11	METAL 8.2K 5% 1/4W	
R007	1-249-428-11	METAL 8.2K 5% 1/4W	
R009	1-249-429-11	METAL 10K 5% 1/4W	
R010	1-249-429-11	METAL 10K 5% 1/4W	
R011	1-249-417-11	METAL 1K 5% 1/4W	
R012	1-249-417-11	METAL 1K 5% 1/4W	

*A-6754-218-A	MD-49 BOARD, COMPLETE (SLV-815UB) ***** (Ref. No. 9000 series)		
*A-6754-228-A	MD-49 BOARD, COMPLETE (SLV-815/VP) ***** (Ref. No. 9000 series)		
<u>CAPACITOR</u>			
C001	1-161-494-00	CERAMIC 0.022MF	25V
C002	1-161-494-00	CERAMIC 0.022MF	25V
C003	1-126-157-11	ELECT 10MF	20% 16V
C004	1-161-379-00	CERAMIC 0.01MF	30% 16V
C005	1-126-157-11	ELECT 10MF	20% 16V
C006	1-124-589-11	ELECT 47MF	20% 16V
C008	1-164-159-11	CERAMIC 0.1MF	50V
C009	1-164-159-11	CERAMIC 0.1MF	50V
C011	1-162-849-11	CERAMIC 0.068MF	10% 50V
C012	1-162-849-11	CERAMIC 0.068MF	10% 50V
C013	1-162-849-11	CERAMIC 0.068MF	10% 50V
C014	1-124-160-11	ELECT 1MF	20% 50V
C016	1-124-589-11	ELECT 47MF	20% 16V
C017	1-126-162-11	ELECT 3.3MF	20% 25V
C018	1-124-589-11	ELECT 47MF	20% 16V
C019	1-124-589-11	ELECT 47MF	20% 16V
C020	1-164-159-11	CERAMIC 0.1MF	50V
C021	1-162-292-31	CERAMIC 680PF	10% 50V
C022	1-164-159-11	CERAMIC 0.1MF	50V
C025	1-102-074-00	CERAMIC MELF 0.001MF	10% 50V

Ref. No.	Part No.	Description	Remark
C026	1-102-074-00	CERAMIC MELF 0.001MF 10% 50V	
<u>CONNECTOR</u>			
CN001	1-506-494-11	PIN, CONNECTOR 15P	
CN002	1-569-335-11	CONNECTOR, BOARD TO BOARD 9P	
CN003	1-569-334-11	CONNECTOR, BOARD TO BOARD 5P	
CN004	1-563-622-21	CONNECTOR, FLEXIBLE 19P	
CN005	*1-506-482-11	PIN, CONNECTOR 3P	
CN006	1-569-333-11	CONNECTOR, BOARD TO BOARD 3P	
CN007	1-563-622-21	CONNECTOR, FLEXIBLE 19P	
<u>DIODE</u>			
D001	8-719-974-65	DIODE GL451V (LED)	
D004	8-719-109-93	DIODE RD6.2ESB2	
D005	8-719-109-93	DIODE RD6.2ESB2	
D006	8-719-109-93	DIODE RD6.2ESB2	
D007	8-719-109-93	DIODE RD6.2ESB2	
<u>IC</u>			
IC002	8-759-938-12	IC BA10324	
IC004	△8-759-234-03	IC TA8424F	
<u>PHOTO SENSOR</u>			
PH001	8-759-144-33	PHOTO SENSOR PS6002	
PH002	8-759-144-33	PHOTO SENSOR PS6002	
<u>IC LINK</u>			
PS001	1-535-685-91	IC LINK (ICP-N20-T104)	
<u>TRANSISTOR</u>			
Q001	8-729-921-53	PHOTO TRANSISTOR PT483F1	
Q002	8-729-921-53	PHOTO TRANSISTOR PT483F1	
<u>RESISTOR</u>			
R001	1-249-423-11	CARBON 3.3K 5% 1/4W	
R002	1-249-423-11	CARBON 3.3K 5% 1/4W	
R003	1-249-426-11	CARBON 5.6K 5% 1/4W	
R004	1-249-426-11	CARBON 5.6K 5% 1/4W	
R005	1-249-415-11	CARBON 680 5% 1/4W	
R006	1-249-441-11	CARBON 100K 5% 1/4W	
R007	1-249-441-11	CARBON 100K 5% 1/4W	
R008	1-249-425-11	CARBON 4.7K 5% 1/4W	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MD-49

MF-101

Ref. No.	Part No.	Description	Remark
R009	1-249-409-11	CARBON 220 5% 1/4W	
R010	1-249-425-11	CARBON 4.7K 5% 1/4W	
R011	1-249-437-11	CARBON 47K 5% 1/4W	
R012	1-249-421-11	CARBON 2.2K 5% 1/4W	
R013	1-249-429-11	CARBON 10K 5% 1/4W	
R014	1-249-426-11	CARBON 5.6K 5% 1/4W	
R015	1-249-437-11	CARBON 47K 5% 1/4W	
R016	1-249-421-11	CARBON 2.2K 5% 1/4W	
R019	△1-249-377-11	CARBON 0.47 5% 1/4W	F
R020	1-249-406-11	CARBON 120 5% 1/4W	
R021	1-249-383-11	CARBON 1.5 5% 1/4W	
R022	1-249-408-11	CARBON 180 5% 1/4W	
R023	1-249-414-11	CARBON 560 5% 1/4W	
R024	1-249-417-11	CARBON 1K 5% 1/4W	
R025	1-247-891-00	CARBON 330K 5% 1/4W	
R027	1-249-383-11	CARBON 1.5 5% 1/4W	
R028	1-249-383-11	CARBON 1.5 5% 1/4W	

SWITCH

S001	1-570-953-11	SWITCH, PUSH (1 KEY)
S002	1-570-953-11	SWITCH, PUSH (1 KEY)

*A-6756-051-A MF-101 BOARD, COMPLETE (SLV-815UB)
***** (Ref. No. 9000 series)

*A-6756-043-A MF-101 BOARD, COMPLETE (SLV-815VB)
***** (Ref. No. 9000 series)

*A-6756-034-A MF-101 BOARD, COMPLETE (SLV-815)
***** (Ref. No. 9000 series)

*3-744-056-01 COVER, LED
*3-749-306-01 PLATE, GROUND, MF

CAPACITOR

C102	1-162-282-31	CERAMIC 100PF 10% 50V
C104	1-162-282-31	CERAMIC 100PF 10% 50V
C106	1-162-282-31	CERAMIC 100PF 10% 50V
C108	1-162-282-31	CERAMIC 100PF 10% 50V
C109	1-161-379-00	CERAMIC 0.01MF 30% 16V
C111	1-161-379-00	CERAMIC 0.01MF 30% 16V
C112	1-162-286-31	CERAMIC 220PF 10% 50V
C113	1-126-157-11	ELECT 10MF 20% 10V

CONNECTOR

CN101	1-569-669-11	CONNECTOR, BOARD TO BOARD 16P
CN102	1-569-815-11	CONNECTOR, BOARD TO BOARD 21P

Ref. No.	Part No.	Description	Remark
CN103	1-506-483-21	PIN, CONNECTOR 4P	
CN104	1-506-490-21	PIN, CONNECTOR 11P	
CN105	1-506-485-11	PIN, CONNECTOR 6P	
JACK			
CNJ101	1-562-808-11	JACK (MIC)	
CNJ102	1-565-669-21	JACK, SMALL TYPE (HEADPHONES)	
CNJ104	1-565-735-21	JACK, PIN 3P (LINE IN 2)	
CNJ105	1-568-611-11	SOCKET, DIN (SMALL TYPE) 5P (CONTROL L)	
COMPOSITION CIRCUIT BLOCK			
CP101	1-233-220-11	COMPOSITION CIRCUIT BLOCK	
CP102	1-232-656-11	COMPOSITION CIRCUIT BLOCK	
DIODE			
D101	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815/VP)	
D101	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)	
D102	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815/VP)	
D102	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)	
D103	8-719-110-36	DIODE RD13ES-B2	
D104	8-719-109-93	DIODE RD6.2ES-B2	
D105	8-719-911-19	DIODE 1SS119	
D106	8-719-911-19	DIODE 1SS119 (SLV-815/VP)	
D107	8-719-109-93	DIODE RD6.2ES-B2	
D110	8-719-946-30	DIODE SLR-34DC3 (SYNCHRO EDIT)	
COIL			
L101	1-410-336-11	INDUCTOR 220UH	
L102	1-410-336-11	INDUCTOR 220UH	
L103	1-410-336-11	INDUCTOR 220UH	
L104	1-410-336-11	INDUCTOR 220UH	
TRANSISTOR			
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE (SLV-815UB)	
Q102	8-729-900-89	TRANSISTOR DTC144ES (SLV-815UB)	
RESISTOR			
R101	1-249-407-11	CARBON 150 5% 1/4W	
R102	1-249-407-11	CARBON 150 5% 1/4W	
R103	1-241-423-11	CARBON 3.3K 5% 1/4W (SLV-815UB)	
R104	1-249-433-11	CARBON 22K 5% 1/4W	
R106	1-249-421-11	CARBON 2.2K 5% 1/4W	
R108	1-249-423-11	CARBON 3.3K 5% 1/4W	
R109	1-249-425-11	CARBON 4.7K 5% 1/4W	
R110	1-249-429-11	CARBON 10K 5% 1/4W	
R111	1-249-433-11	CARBON 22K 5% 1/4W	
R112	1-249-407-11	CARBON 150 5% 1/4W (SLV-815UB)	
R113	1-249-407-11	CARBON 150 5% 1/4W (SLV-815UB)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MF-101

MF-94

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R114	1-249-427-11	CARBON	6.8K 5% 1/4W	C203	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
R115	1-249-417-11	CARBON	1K 5% 1/4W	C204	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
R116	1-249-438-11	CARBON	56K 5% 1/4W	C205	1-162-847-11	CERAMIC 0.047MF	10% 16V
R117	1-249-423-11	CARBON	3.3K 5% 1/4W	C206	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R118	1-249-433-11	CARBON	22K 5% 1/4W				
R121	1-247-804-11	CARBON	75 5% 1/4W	C207	1-125-486-11	ELECT 0.22MF	5.5V
R124	1-249-426-11	CARBON	5.6K 5% 1/4W	C208	1-126-157-11	ELECT 10MF	20% 16V
R125	1-249-428-11	CARBON	8.2K 5% 1/4W	C209	1-126-154-11	ELECT 47MF	20% 6.3V
R126	1-249-426-11	CARBON	5.6K 5% 1/4W	C210	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R127	1-249-428-11	CARBON	8.2K 5% 1/4W	C211	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
R128	1-249-405-11	CARBON	100 5% 1/4W	C212	1-126-096-11	ELECT 10MF	20% 35V
R129	1-249-417-11	CARBON	1K 5% 1/4W	C214	1-124-589-11	ELECT 47MF	20% 16V
<u>VARIABLE RESISTOR</u>				C215	1-164-232-11	CERAMIC CHIP 0.01MF	50V
RV101	1-238-420-11	RES, VAR, CARBON 10K (PHONE LEVEL)		C218	1-126-163-11	ELECT 4.7MF	20% 16V
RV102	1-241-061-11	RES, VAR, CARBON 2K (SHARPNESS)		C219	1-126-163-11	ELECT 4.7MF	20% 16V
RV103	1-241-062-11	RES, VAR, CARBON 20K (REC LEVEL L)					
RV104	1-241-062-11	RES, VAR, CARBON 20K (REC LEVEL R)		C220	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
<u>SWITCH</u>				C221	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
S101	1-571-977-11	SWITCH, TACTIL (POWER)		C222	1-164-232-11	CERAMIC CHIP 0.01MF	50V
S102	1-571-977-11	SWITCH, TACTIL (EJECT)		C223	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
S103	1-571-977-11	SWITCH, TACTIL (SYNCHRO EDIT)		C224	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
S104	1-571-977-11	SWITCH, TACTIL (EDIT MONITOR)					
S105	1-570-854-11	SWITCH, SLIDE (COMMANDE MODE)		C225	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
S106	1-571-977-11	SWITCH, TACTIL (VPS ON/OFF) (SLV-815VP)		C226	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
*****				C230	1-126-160-11	ELECT 1MF	20% 50V
*A-6755-192-A	MF-94 BOARD, COMPLETE (SLV-815)	***** (Ref. No. 9000 series)		C231	1-126-160-11	ELECT 1MF	20% 50V
*A-6755-193-A	MF-94 BOARD, COMPLETE (SLV-815VP)	***** (Ref. No. 9000 series)		C232	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*A-6755-194-A	MF-94 BOARD, COMPLETE (SLV-815UB)	***** (Ref. No. 9000 series)					
*3-682-419-51	HOLDER, P. C. B			C233	1-124-472-11	ELECT 470MF	20% 6.3V
*3-743-637-01	HOLDER, FL			C234	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
<u>BUZZER</u>				<u>CONNECTOR</u>			
BZ201	1-529-080-11	BUZZER, PIEZOELECTRIC		CN201	1-569-814-11	CONNECTOR, BOARD TO BOARD 21P	
<u>CAPACITOR</u>				CN202	1-568-080-11	CONNECTOR (RECEPTALE) 22P	
C202	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	CN203	1-568-079-11	CONNECTOR (RECEPTALE) 20P	
				CN204	*1-569-666-11	PIN, CONNECTOR (PC BOARD) 5P	
				CN205	1-569-667-11	CONNECTOR, BOARD TO BOARD 8P	
				CN207	1-506-468-11	PIN, CONNECTOR 3P	
				CN208	*1-569-666-11	PIN, CONNECTOR (PC BOARD) 5P	
				<u>VARIABLE CAPACITOR</u>			
				CV201	1-141-291-11	CAP, TRIMMER 20PF	
				<u>DIODE</u>			
				D201	8-719-911-19	DIODE 1SS119	
				D202	8-719-911-19	DIODE 1SS119	
				D203	8-719-911-19	DIODE 1SS119	
				D204	△8-719-911-19	DIODE 1SS119	
				D206	8-719-104-34	DIODE 1S2836	
				D208	△8-719-105-82	DIODE RD5. 1M-B2	
				D209	8-719-106-08	DIODE RD6. 2M-B2	
				D211	8-719-400-18	DIODE MA152WK	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MF-94

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D212	8-719-400-18	DIODE MA152WK		<u>RESISTOR</u>			
D216	8-719-400-18	DIODE MA152WK		R201	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
D217	8-719-400-18	DIODE MA152WK		R202	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
D218	8-719-104-34	DIODE 1S2836		R203	1-216-017-00	METAL GLAZE 47 5% 1/10W	
D219	8-719-106-08	DIODE RD6. 2M-B2		R204	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
<u>IC</u>				R205	1-216-025-00	METAL GLAZE 100 5% 1/10W	
IC201	8-759-504-10	IC MB89794B-PAL		R206	1-216-068-00	METAL GLAZE 6. 2K 5% 1/10W	
IC202	8-759-748-54	IC CAT35C202P		R207	1-216-061-00	METAL GLAZE 3. 3K 5% 1/10W	
IC203	8-759-502-50	IC S-8053HNB		R208	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
IC204	8-759-947-53	IC S-8054ALR		R210	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
IC205	8-759-961-38	IC BA6138		R211	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
<u>RESISTOR</u>				R212	1-216-061-00	METAL GLAZE 3. 3K 5% 1/10W	
JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W		R213	1-216-001-00	METAL GLAZE 10 5% 1/10W	
<u>COIL</u>				R214	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
L201	1-408-422-00	INDUCTOR 120UH		R215	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
L203	1-410-336-11	INDUCTOR 220UH		R216	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L204	1-410-517-11	INDUCTOR 47UH		R217	1-216-061-00	METAL GLAZE 3. 3K 5% 1/10W	
L205	1-410-501-11	INDUCTOR 2. 2UH		R222	1-216-035-00	METAL GLAZE 270 5% 1/10W	
L206	1-410-501-11	INDUCTOR 2. 2UH		R223	1-216-035-00	METAL GLAZE 270 5% 1/10W	
L207	1-410-501-11	INDUCTOR 2. 2UH		R224	1-216-035-00	METAL GLAZE 270 5% 1/10W	
L209	1-410-361-21	INDUCTOR 12UH		R225	1-216-035-00	METAL GLAZE 270 5% 1/10W	
L210	1-410-501-11	INDUCTOR 2. 2UH		R226	1-216-035-00	METAL GLAZE 270 5% 1/10W	
L211	1-410-501-11	INDUCTOR 2. 2UH		R227	1-216-035-00	METAL GLAZE 270 5% 1/10W	
L212	1-410-501-11	INDUCTOR 2. 2UH		R228	1-216-033-00	METAL GLAZE 220 5% 1/10W	
L213	1-410-501-11	INDUCTOR 2. 2UH		R229	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
L214	1-410-501-11	INDUCTOR 2. 2UH		R230	1-216-033-00	METAL GLAZE 220 5% 1/10W	
L215	1-410-501-11	INDUCTOR 2. 2UH		R231	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
L216	1-410-501-11	INDUCTOR 2. 2UH		R242	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L217	1-410-316-11	INDUCTOR 1UH		R244	1-216-061-00	METAL GLAZE 3. 3K 5% 1/10W	
L218	1-410-316-11	INDUCTOR 1UH		R245	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
<u>INDICATOR</u>				R246	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
ND201	1-519-633-11	INDICATION TUBE, FLUORESCENT		R247	1-216-033-00	METAL GLAZE 220 5% 1/10W	
<u>TRANSISTOR</u>				R248	1-249-413-11	CARBON 470 5% 1/4W	
Q201	8-729-271-23	TRANSISTOR 2SC2712		R249	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q202	8-729-271-23	TRANSISTOR 2SC2712		R250	1-216-186-00	METAL GLAZE 330 5% 1/8W	
Q205	8-729-901-01	TRANSISTOR DTC144EK		R251	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q206	8-729-901-01	TRANSISTOR DTC144EK		R252	1-216-037-00	METAL GLAZE 330 5% 1/10W	
				R253	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
				R254	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
				R255	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R256	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

When indicating parts by reference number, please include the board name.

MF-94

RM-42

SD-4

VP-24

Ref. No.	Part No.	Description	Remark
R301	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R302	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R303	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R304	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R305	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R306	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R307	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R308	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R310	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R312	1-216-295-00	METAL GLAZE 0 5% 1/10W	

VARIABLE RESISTOR

RV201	1-238-016-11	RES, ADJ, CARBON 10K	
RV202	1-238-016-11	RES, ADJ, CARBON 10K	

CRYSTAL

X201	1-567-098-00	VIBRATOR, CRYSTAL	
X202	1-579-223-11	OSCILLATOR, CERAMIC	

*1-635-214-31 RM-42 BOARD (Ref.No.9000 series)

CONNECTOR

CN501	*1-565-042-11	HOUSING, CONNECTOR(PC BOARD)5P	
CN502	*1-565-042-11	HOUSING, CONNECTOR(PC BOARD)5P	

DIODE

D502	8-719-955-04	DIODE SLR-54MC3 (AUTO TRAKING)	
D503	8-719-302-07	DIODE SLR-54DC3 (EDIT MONITOR)	
D504	8-719-921-01	DIODE SLR-54VC3 (AUDIO INSERT)	
D505	8-719-921-01	DIODE SLR-54VC3 (VIDEO INSERT)	
D506	8-719-955-04	DIODE SLR-54MC3 (◀▶)	

IC

IC501	1-466-131-21	IC GPIU52X	
-------	--------------	------------	--

*1-632-296-12 SD-4 BOARD (SLV-815VP)
***** (Ref.No.9000 series)

CAPACITOR

C850	1-130-474-11	MYLAR 0.0018MF	5%	50V
C851	1-163-125-11	CERAMIC CHIP 220PF	5%	50V
C852	1-164-505-11	CERAMIC CHIP 2.2MF		25V
C854	1-124-906-11	ELECT 4.7MF	20%	50V
C855	1-124-892-11	ELECT 47MF	20%	10V
C857	1-163-031-11	CERAMIC CHIP 0.01MF		50V

Ref. No.	Part No.	Description	Remark
----------	----------	-------------	--------

CONNECTOR

CN851	1-564-782-11	PIN, CONNECTOR 4P	
CN852	1-564-782-11	PIN, CONNECTOR 4P	

FILTER

FL850	1-527-943-11	FILTER, CERAMIC 4.16MHZ	
-------	--------------	-------------------------	--

IC

IC850	8-759-904-95	IC BA7007	
-------	--------------	-----------	--

COIL

L850	1-410-450-11	INDUCTOR 3.9MMH	
------	--------------	-----------------	--

TRANSISTOR

Q850	8-729-901-81	TRANSISTOR 2SC2412K	
Q851	8-729-901-81	TRANSISTOR 2SC2412K	

RESISTOR

R846	1-216-065-11	METAL GLAZE 4.7K 5%	1/10W
R847	1-216-057-11	METAL GLAZE 2.2K 5%	1/10W
R848	1-216-057-11	METAL GLAZE 2.2K 5%	1/10W
R849	1-216-073-11	METAL GLAZE 10K 5%	1/10W
R850	1-216-057-11	METAL GLAZE 2.2K 5%	1/10W
R851	1-216-083-11	METAL GLAZE 27K 5%	1/10W
R854	1-216-109-11	METAL GLAZE 330K 5%	1/10W

*1-637-444-11 VP-24 BOARD
***** (Ref.No.10000 series)

CAPACITOR

C001	1-164-044-11	CERAMIC CHIP 0.1MF	20%	50V
C002	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C003	1-163-035-00	CERAMIC CHIP 0.047MF	20%	50V
C004	1-124-589-11	ELECT 47MF	20%	16V
C005	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C006	1-163-035-00	CERAMIC CHIP 0.047MF	20%	50V
C007	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C008	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C201	1-163-035-00	CERAMIC CHIP 0.047MF	20%	50V
C202	1-163-035-00	CERAMIC CHIP 0.047MF	20%	50V
C203	1-124-589-11	ELECT 47MF	20%	16V
C204	1-163-035-00	CERAMIC CHIP 0.047MF	20%	50V

When indicating parts by
reference number, please include
the board name.

VP-24

Ref. No.	Part No.	Description	Remark
<u>OSCILLATOR</u>			
CF001	1-567-160-21	OSCILLATOR, CERAMIC 4.19MHZ	
<u>CONNECTOR</u>			
CN102	1-563-528-11	CONNECTOR, BOARD TO BOARD 6P	
CN103	1-566-824-11	PIN, CONNECTOR (PC BOARD) 3P	
CN104	1-506-483-21	PIN, CONNECTOR 4P	
<u>DIODE</u>			
D201	8-719-400-18	DIODE 1S2837	
<u>IC</u>			
IC001	8-759-030-60	IC SDA5642	
IC002	8-759-147-30	IC uPD75004GB-V5X182	
<u>RESISTOR</u>			
JR001	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR002	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR003	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR004	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR005	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR006	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR007	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR008	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR009	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR010	1-216-296-00	METAL GLAZE 0 5% 1/8W	
<u>RESISTOR</u>			
R001	1-216-119-00	METAL GLAZE 820K 5% 1/10W	
R002	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R003	1-216-119-00	METAL GLAZE 820K 5% 1/10W	
R004	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R005	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R006	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R007	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R008	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R009	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R010	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R011	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R012	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
<u>MISCELLANEOUS</u>			

A-6761-129-A		HEAD BLOCK ASSY, ACE	
		(AUDIO, AUDIO ERASE, CTL HEAD)	
△1-413-601-11		SWITCHING BLOCK (POWER BLOCK)	
		(SLV-815)	
△1-413-608-11		SWITCHING BLOCK (POWER BLOCK) (SLV-815VP)	
△1-413-609-11		SWITCHING BLOCK (POWER BLOCK) (SLV-815UB)	
△1-466-328-31		MODULATOR, RF (RFU-2027) (RF MODULATOR)	
		(SLV-815/VP)	
△1-466-347-31		MODULATOR, RF (RFU-2028) (RF MODULATOR)	
		(SLV-815UB)	
1-466-346-31		SWITCH BLOCK, CONTROL (SW BLOCK)	
1-506-482-11		PIN, CONNECTOR 3P (FOR LOADING MOTOR)	
1-506-482-11		PIN, CONNECTOR 3P (FOR CAM MOTOR)	
1-506-483-21		PIN, CONNECTOR 4P	
		(FOR AUDIO, AUDIO ERASE HEAD)	
1-543-647-11		HEAD, FE (FULL ERASE HEAD)	
1-558-924-41		CABLE, PIN (RF MODULATOR TO TUNER)	
1-571-920-11		SWITCH, ROTARY	
1-575-745-11		WIRE, FLAT TYPE (19 CORE)	
		(MA BOARD TO MD BOARD)	
1-575-746-11		WIRE, FLAT TYPE (22 CORE)	
		(MA BOARD TO VI BOARD)	
*1-633-460-11		PC BOARD, CA-41 (ON CAM MOTOR)	
M901	1-550-535-11	DRUM ASSY (DZH-17A) (DRUM MOTOR)	
M902	8-835-394-01	MOTOR, DC U-26F (CAPSTAN MOTOR)	
M903	X-3733-302-1	MOTOR ASSY (CAM MOTOR)	
M904	X-3727-784-1	MOTOR ASSY (LOADING MOTOR)	

<u>ACCESSORIES AND PACKING MATERIALS</u>			

1-465-832-11		REMOTE COMMANDER (RMT-V5E)	
1-551-513-00		CORD, CONNECTION (PAL)	
1-551-513-00		CABLE, COAXIAL ASSY	
1-575-334-11		CORD, CONNECTION	
3-695-308-01		DRIVER, VOLUME	
*3-738-213-01		CASE, ACCESSORY	
*3-743-682-01		CUSHION (UPPER)	
*3-743-683-01		CUSHION (LOWER)	
*3-744-029-61		INDIVIDUAL CARTON	
3-753-334-11		MANUAL, INSTRUCTION (SLV-815UB) (ENGLISH)	
3-753-334-41		MANUAL, INSTRUCTION (SLV-815)	
		(ITALIAN, PORTGUESE)	
3-753-334-51		MANUAL, INSTRUCTION (SLV-815VP)	
		(FRENCH, GERMAN, ITALIAN, DUTCH)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
HARDWARE LIST							

<u>SET-SCREW</u>							
7-621-732-08		SET-SCR, HEX. 2X3 FLAT POINT					
<u>SCREW</u>							
7-621-849-10		SCREW, WOOD +R 3.1X13					
7-627-552-08		SCREW, PRECISION +P 1.7X2.5					
7-628-254-00		SCREW +PS 2.6X5					
7-682-548-04		SCREW +P 3X8					
7-682-645-01		SCREW +PS 3X4					
7-685-646-79		SCREW +BVTP 3X8 TYPE2 IT-3					
7-685-647-79		SCREW +BVTP 3X10 TYPE2 IT-3					
7-685-648-79		SCREW +BVTP 3X12 TYPE2 IT-3					
7-682-547-04		SCREW +BVTT 3X6 (S)					
7-621-255-25		SCREW +PTT 2X4 (S)					

When indicating parts by reference number, please include the board name.

SECTION 7
ELECTRICAL ADJUSTMENTS

During the adjustment, see the Parts Arrangement Diagram relevant to the adjustment on page 240.

7-1. PRE-ADJUSTMENT PREPARATIONS

Necessary items and indications for total adjustment of electric circuit of this machine will be described in this chapter.

7-1-1. Instruments to be Used

- 1) Color TV
- 2) Oscilloscope 1 or 2 phenomena, band more than 15 MHz, delay mode, as provided.
- 3) Frequency counter (min, 8 digits)
- 4) PAL pattern generator
- 5) SECAM pattern generator (SLV-815VP only)
- 6) Digital voltmeter
- 7) Audio level meter
- 8) Audio generator
- 9) Attenuator
- 10) Distortion factor meter
- 11) Voice multiple signal generator
- 12) Alignment tape
Part code: H7099052H (MH-2)
- 13) HiFi alignment tape

7-1-2. Connection

Unless otherwise specified, connect and adjust the measuring instruments as shown in the following diagram.

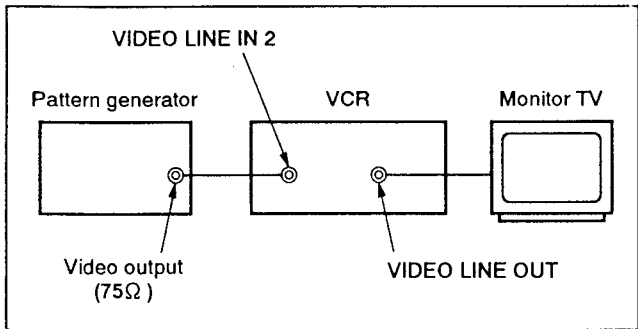


Fig. 7-1.

7-1-3. Setup for Adjustment

In this adjustment, PAL pattern generator is connected with LINE 1 input signal terminal. When check to tuner, connected AERIAL terminal. Check that the amplitudes of video signal SYNC signal, of picture portions, and of burst signals are flat at approximately 0.3, 0.7 and 0.3V, respectively, and that the level ratio of the burst signal and "red" signal are 0.30:0.66. Fig. 7-2. shows video signals (color bars) used in adjusting the video section.

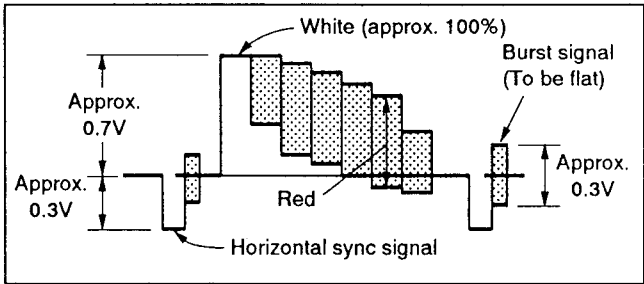


Fig. 7-2.

7-1-4. Alignment Tape (MH-2)

	Time	Video signal	Audio signal
1	10 min	Stair-step	6 kHz
2	5 min	—	3 kHz
3	10 min	Color bar	1 kHz
4	3 min	RF sweep	—

Table 7-1.

7-1-5. Specified I/O Level and Impedance

Input/output terminal

Video inputs	LINE IN: phono jacks
	EURO-AV: 21-pin (Pin ⑳) 1 Vp-p, 75Ω , unbalanced, sync negative
Audio inputs	LINE IN: phono jacks
	47 kΩ , -7.5 dBs (0 dBs=0.775 Vrms) EURO-AV: 21-pin (Pin ② and ⑥) More than 10 kΩ , -4 dBs
Video outputs	LINE OUT: phono jack
	EURO-AV: 21-pin (Pin ⑲) 1 Vp-p, 75Ω , unbalanced sync negative
Audio outputs	LINE OUT: phono jack
	-7.5 dBs at load
	impedance 47 kΩ
	Output impedance: less than 10 kΩ
	EURO-AV: 21-pin (Pins ① and ③)
	Output impedance: less than 1 kΩ
	-4 dBs with 10 kΩ load

7-1-6. Operating Method When the Front Panel Removed

When adjust with the front panel (SW BLOCK, JOG/SHUTTLE, JS-20 board and TK-12 board) removed, connect the resistors as shown below and operate with the remote commander.

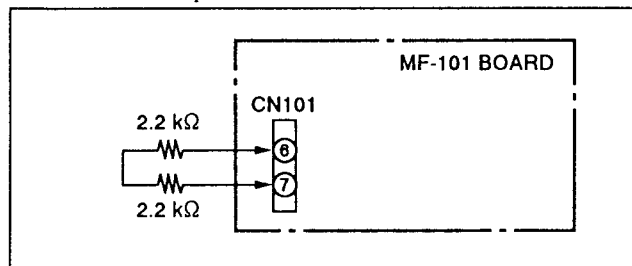
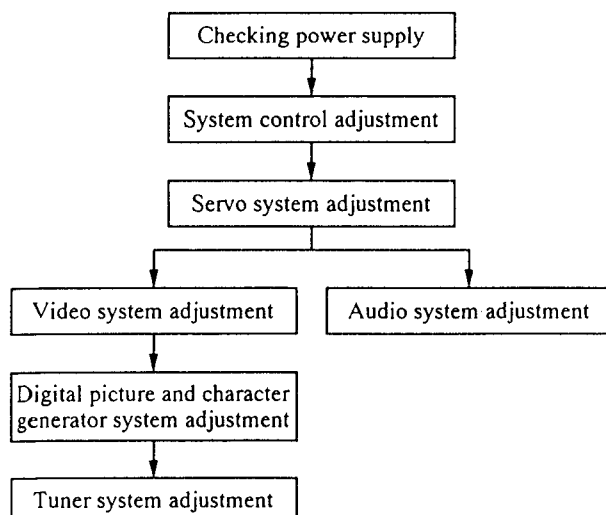


Fig. 7-3.

7-1-7. Adjusting Sequence

Make the electrical adjustment in the following sequence.



7-2. POWER SUPPLY CHECK (POWER BLOCK)

Mode	E-E
Measuring instrument	Digital voltmeter
UNSW 5.8V check	
Measurement point	Pin ① of CN411
Specified value	5.8 ± 0.25 Vdc
UNSW -30V check	
Measurement point	Pin ③ of CN412
Specified value	-30.0 ± 2.5 Vdc
UNSW 37V check	
Measurement point	Pin ⑨ of CN411
Specified value	37.0 ± 3.0 Vdc
SW 5V check	
Measurement point	Pin ③ of CN411
Specified value	$5.00^{+0.15}_{-0.10}$ Vdc
SW 9V check	
Measurement point	Pin ⑬ of CN411
Specified value	9.0 ± 0.3 Vdc
SW 12V check	
Measurement point	Pin ⑪ of CN411
Specified value	12.0 ± 0.3 Vdc
MTR 12V check	
Measurement point	Pin ⑩ of CN412
Specified value	12.0 ± 0.3 Vdc
HEATER 3.2V check	
Measurement point	+: Pin ⑤ of CN412 -: Pin ④ of CN412
Specified value	3.2 ± 0.2 V

Checking method:

- 1) Confirm that each voltage meets its specified value.

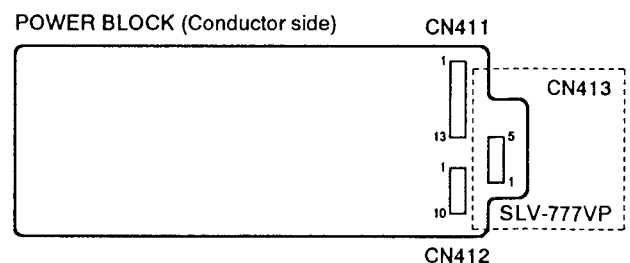


Fig. 7-4.

7-3. SYSTEM CONTROL ADJUSTMENT

7-3-1. Clock Adjustment (MF-94 Board)

Measurement Point	Pin ⑧ of IC201
Measuring Instrument	Interval counter
Adjusting Element	CV201
Specified Value	0.1249995 ± 0.0000005 sec

Connection:

- 1) Connect the connecting point of R109 and R110 on the MF-101 board to ground.

Adjusting method:

- 1) Pass a 9-state binary counter through Pin ⑧ of IC201 to divide the 4096 Hz frequency nine times and transform to 8 Hz. Measure the cycle.
- 2) Adjust CV201 so that an 8 Hz cycle equals 0.1249995 ± 0.0000005 sec.

Note: Do not adjust CV201 except when replacing microcomputers.

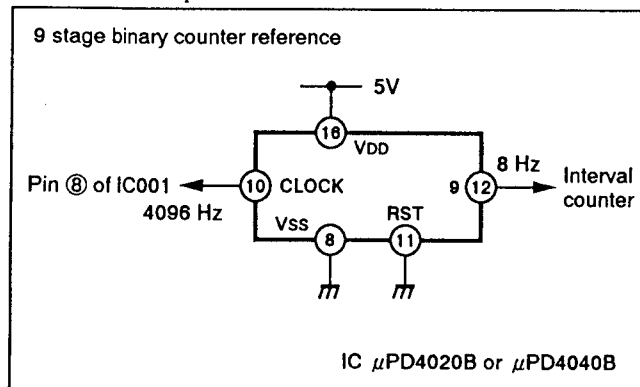


Fig. 7-5.

7-4. SERVO SYSTEM ADJUSTMENT

7-4-1. Switching Position Adjustment (MA-104 Board)

Mode	PB
Signal	Alignment tape: SP stair-step section
Measurement Point	CH1: Pin ⑩ of CN562 CH2: Pin ⑫ of CN582 (RF SWP)
Measuring Instrument	Oscilloscope
Adjusting Element	RV501
Specified Value	$6.5 \pm 0.5H$ ($416 \pm 32 \mu\text{sec}$)

Adjusting method:

- 1) Once set to STOP mode, then to PB mode.
- 2) Check that the switching position is $6.5 \pm 0.5H$. ($416 \pm 32 \mu\text{sec}$)
If not meet the specified value, turn RV501 and repeat steps 1) to 2).

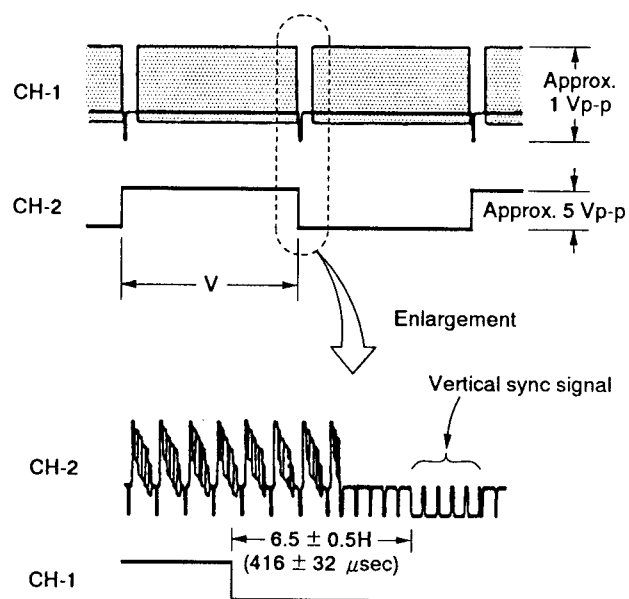


Fig. 7-6.

7-5. VIDEO SYSTEM ADJUSTMENTS

Adjust the video system in the following sequence as a rule. The color video signal supplied from the pattern generator is used as a video input signal for video system adjustment in the recording mode.

Make sure that sync and color burst signals meet requirements specified at setup of adjustment shown in Fig. 7-2.

[Adjusting sequence]

- 7-5-1. Playback Y Signal Level Adjustment
- 7-5-2. Y Signal NR Level Adjustment
- 7-5-3. Sync AGC Adjustment
- 7-5-4. Sync Tip Carrier Set and Deviation Adjustment
- 7-5-5. White Clip, Dark Clip Adjustment
- 7-5-6. Recording Y Signal Level Adjustment
- 7-5-7. Recording Chroma Level Adjustment
- 7-5-8. PAL JOG AFC Adjustment
- 7-5-9. 0.5H CCD Level Adjustment
- 7-5-10. SECAM Discrimination Adjustment

7-5-1. Playback Y Signal Level Adjustment (YC-65 Board)

Mode	PB
Signal	Alignment tape: SP color bar section
Measurement Point	VIDEO LINE OUT terminal
Measuring Instrument	Oscilloscope
Adjusting Element	RV708
Specified Value	1.00 ± 0.05 Vp-p

- Note:** 1) Make this adjustment with the EDIT ON/OFF button set to off.
2) VIDEO LINE OUT terminal must be terminated at $75\Omega \pm 1\%$.

Adjusting method:

- 1) With RV708, adjust the VIDEO signal level to 1.00 ± 0.05 Vp-p.

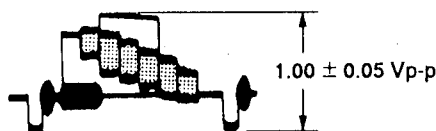


Fig. 7-7.

7-5-2. Y Signal NR Level Adjustment (YC-65 Board)

Mode	PB
Signal	Alignment tape: SP color bar section
Measurement Point	Pin ⑩ of IC701
Measuring Instrument	Oscilloscope
Adjusting Element	RV707
Specified Value	Less than 30 mVp-p

Adjusting method:

- 1) Adjust to eliminate level differences for each H step with RV707.

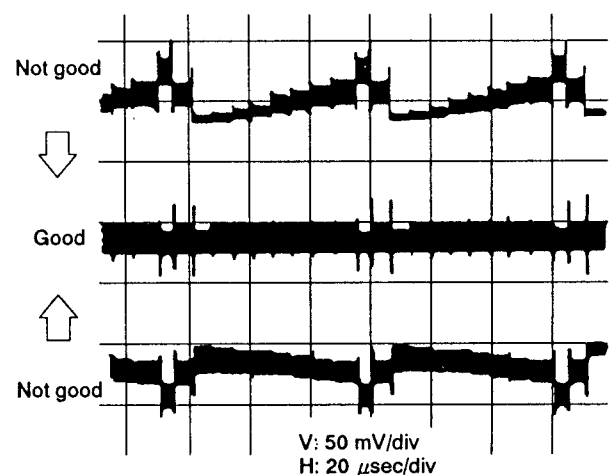


Fig. 7-8.

7-5-3. Sync AGC Adjustment (YC-65 Board)

Mode	E-E
Signal	Color bar
Measurement Point	VIDEO LINE OUT terminal
Measuring Instrument	Oscilloscope
Adjusting Element	RV701
Specified Value	1.00 ± 0.05 Vp-p

Note: VIDEO LINE OUT terminal must be terminated at 75Ω .

Adjusting method:

- 1) With RV701, adjust the VIDEO signal level to 1.00 ± 0.05 Vp-p.

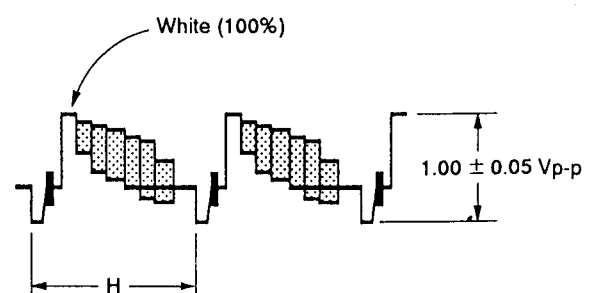


Fig. 7-9. SYNC AGC adjustment

7-5-4. Sync Tip Carrier Set and Deviation Adjustment (YC-65 Board)

Before starting the adjustment, be sure to check that recording Y signal level adjustment has been completed.

Sync tip carrier set	
Mode	E-E
Signal	No signal (Note 2)
Measurement Point	Pin ④ of IC701
Measuring Instrument	Frequency counter
Adjusting Element	RV703
Specified Value	3.80 ± 0.05 MHz
Deviation adjustment	
Mode	REC and PB
Signal	Color bar
Measurement Point	VIDEO LINE OUT terminal
Measuring Instrument	Oscilloscope
Adjusting Element	RV702
Specified Value	1.00 ± 0.05 Vp-p

Note 1) VIDEO LINE OUT terminal must be terminated at 75Ω .

2) To make no signal input, insert a shorting plug into VIDEO LINE IN 2 terminal.

Adjusting method:

- 1) Make a no signal state and select the E-E mode.
- 2) Connect the frequency counter to the Pin ④ of IC701 and adjust to 3.80 ± 0.05 MHz with RV703.
- 3) Input the color bar signal to make recording.
- 4) Playback the recorded tape portion and check that the playback Y signal level is 1.00 ± 0.05 Vp-p.

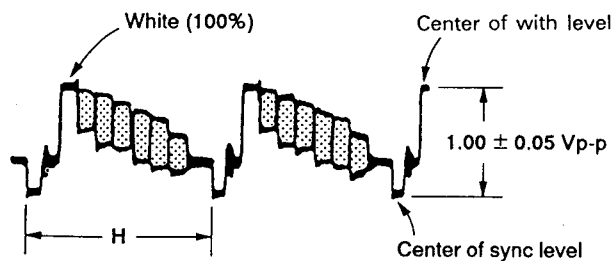


Fig. 7-10. Deviation adjustment

- 5) When the specified value is not met, input the color bar signal to select the E-E mode. Adjust RV702 to correct a playback Y signal level error, and then, repeat the steps 1) through 4) above.

7-5-5. White Clip and Dark Clip Adjustments (YC-65 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ④ of IC701
Measuring Instrument	Oscilloscope
Adjusting Element	White clip: RV705 Dark clip: RV704
Specified Value	White clip: $180 \pm 10\%$ Dark clip: $40 \pm 10\%$

Adjusting method:

- 1) With RV705, adjust the white clip level to $180 \pm 10\%$ of the white level (100%).
- 2) With RV704, adjust the dark clip level to $40 \pm 10\%$ of the white level (100%).

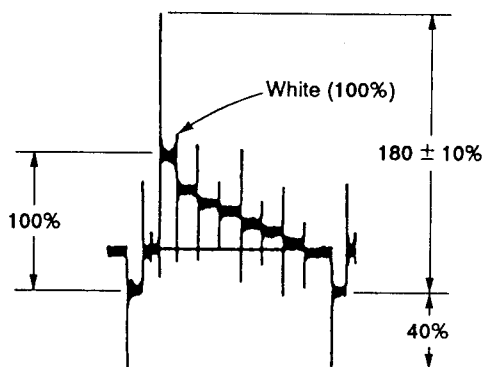


Fig. 7-11.

7-5-6. Recording Y Signal Level Adjustment (YC-65 Board/RP-63 Board)

Mode	RE
Signal	No signal
Measurement Point	Pin ③ of CN804 (RP-63 board)
Measuring Instrument	Oscilloscope
Adjusting Element	RV710 (YC-65 board)
Specified Value	1.7 ± 0.1 Vp-p

Adjusting method:

- 1) With RV710, adjust the Y REC RF signal level to 1.7 ± 0.1 Vp-p.

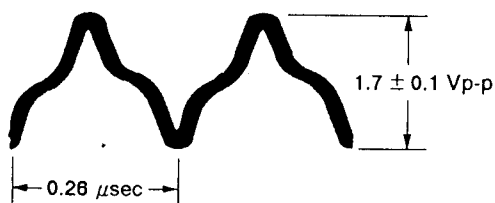


Fig. 7-12.

7-5-7. Recording Chroma Level Adjustment (YC-65 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑦ of CN701
Measuring Instrument	Oscilloscope
Adjusting Element	RV801
Specified Value	$100 \pm 10 \text{ mVp-p}$

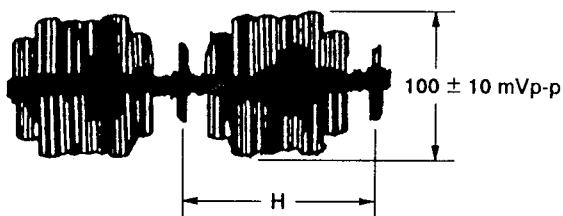


Fig. 7-13.

7-5-8. PAL JOG AFC Adjustment (YC-65 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑩ of IC860
Measuring Instrument	Digital voltmeter
Adjusting Element	RV860
Specified Value	$2.65 \pm 0.05 \text{ Vdc}$

Adjusting method:

- 1) Adjust RV860 so that the voltage at Pin ⑩ of IC860 become $2.65 \pm 0.05 \text{ Vdc}$.
At this time confirm that the cycle of delta wave at Pin ⑪ of IC860 is $32 \mu\text{sec}$.

Pin ⑪ of IC860

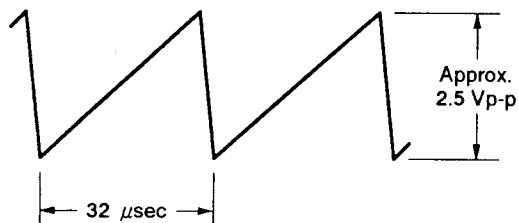


Fig. 7-14.

7-5-9. 0.5H CCD Level Adjustment (YC-65 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ② of IC802
Measuring Instrument	Oscilloscope
Adjusting Element	RV861
Specified Value	Same signal level with Pin ⑦ of IC802.

Adjusting method:

- 1) Measure the signal level at Pin ⑦ of IC802.
(Approx. 2 Vp-p)
- 2) Adjust RV861 so that the signal levels at Pins ② and ⑦ of IC802 become same.

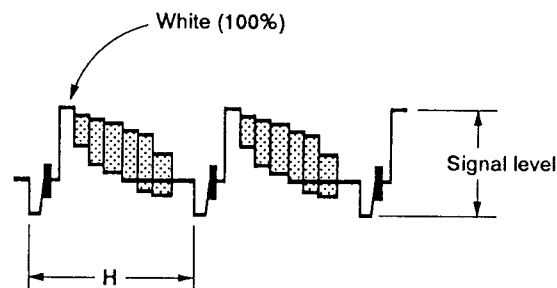


Fig. 7-15.

7-5-10. SECAM Discrimination Adjustment (SD-4 Board) (SLV-815VP Only)

Mode	E-E
Signal	SECAM Color bar
Measurement Point	Pin ⑨ of IC850
Measuring Instrument	Oscilloscope
Adjusting Element	RV850
Specified Value	$4.5 \pm 0.1 \text{ Vp-p}$

Adjusting method:

- 1) Adjust RV850 so that the amplitude of $1/2 \text{ fH}$ waveform becomes $4.5 \pm 0.1 \text{ Vp-p}$.

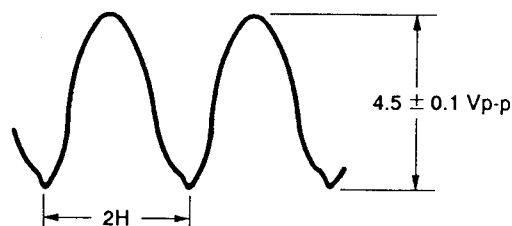


Fig. 7-16.

7-6. DIGITAL PICTURE AND CHARACTER GENERATOR SYSTEM ADJUSTMENTS

- Connect the monitor TV to EURO-AV connector (Pin ①⑨ of CNJ005 on IO-40 board) or Pin ①⑧ of CN562 on MA-104 board, then perform the adjustment.

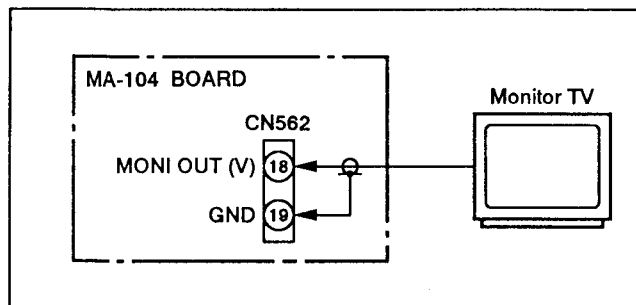


Fig. 7-17.

- When adjusting the PI-25 board, remove the HF-9 board as necessity.

7-6-1. AGC Adjustment (PI-25 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ①④ of IC208
Measuring Instrument	Oscilloscope
Adjusting Element	RV201
Specified Value	2.05 ± 0.1 Vp-p

Adjusting method:

- Adjust with RV201 so that it becomes 2.05 ± 0.1 Vp-p.

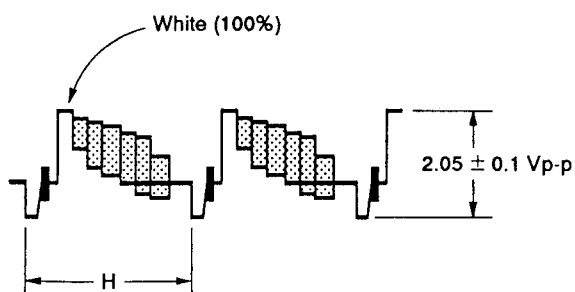


Fig. 7-18.

7-6-2. Read Clock Adjustment (DG-11 Board)

Mode	E-E (EDIT MONITOR)
Signal	Color bar
Measurement Point	EURO AV IN/OUT connector
Measuring Instrument	Monitor TV
Adjusting Element	T102
Specified Value	A=B

Adjusting method:

- Adjust T102 so that the child pictures are positioned symmetrically.

Note: Adjust the character position following the steps in "Character Position Adjustment".

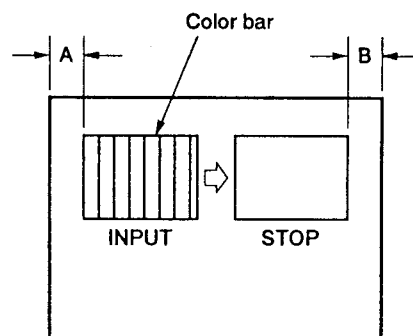


Fig. 7-19.

7-6-3. Write Clock Adjustment (DG-11 Board)

Mode	E-E
Signal	Color bar
Measurement Point	EURO AV IN/OUT connector
Measuring Instrument	Monitor TV
Adjusting Element	T101
Specified Value	A=B

Adjusting method:

- Adjust T101 so that the image center of the child picture in INPUT side matches with the child picture frame center.

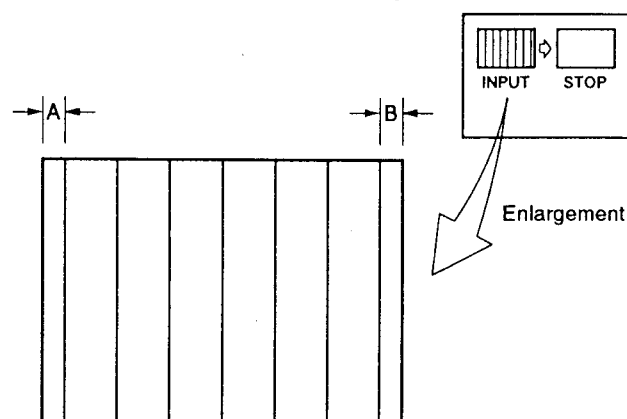


Fig. 7-20.

7-6-4. TINT Adjustment (DG-11 Board)

Mode	E-E (EDIT MONITOR)
Signal	Color bar
Measurement Point	Pin ⑩ of IC102
Measuring Instrument	Oscilloscope
Adjusting Element	RV104
Specified Value	A=B

Adjusting method:

- 1) Adjust RV104 so that the level A and level B become same.

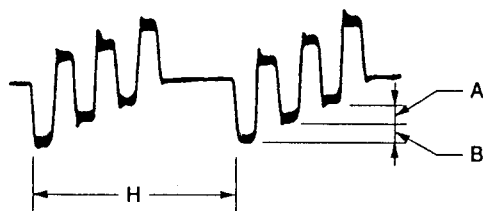


Fig. 7-21.

7-6-5. Clamp Level Adjustment (DG-11 Board)

Mode	PB (P in P)
Signal	Color bar
Measurement Point	Pin ⑥ of CN101
Measuring Instrument	Oscilloscope
Adjusting Element	RV101
Specified Value	A=0V

Adjusting method:

- 1) Adjust RV101 so that the pedestal levels of parent picture match with the levels of child picture.

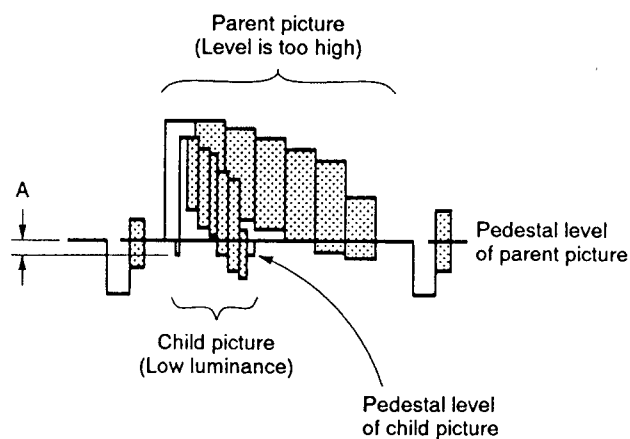


Fig. 7-22.

7-6-6. Hue and Color Level Adjustment (DG-11 Board)

Mode	E-E (P in P)
Signal	Color bar
Measurement Point	Pin ⑩ of CN562 (MA-62 board)
Measuring Instrument	Vectorscope
Adjusting Element	Hue: RV103 Color Level: RV102
Specified Value	The chroma luminance points in parent and child pictures should be overlapped.

Adjusting method:

- 1) Turn RV102 and RV103 alternately and match the chroma luminance point (higher luminance) of parent picture with the chroma luminance point (lower luminance) of child picture.

7-6-7. Character Generator Clock Check (CG-10 Board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ② of IC851
Measuring Instrument	Frequency counter
Specified Value	17.734476 MHz $\pm$ 100 Hz

Note: Attach 10 k Ω resistor to tip of the probe.

Checking method:

- 1) Confirm that the clock oscillation frequency is 17.734476 MHz $\pm$ 100 Hz.

7-6-8. AFC Adjustment (CG-10 Board)

Mode	E-E
Signal	No signal
Measurement Point	Pin ⑧ of IC685
Measuring Instrument	Oscilloscope
Adjusting Element	RV685
Specified Value	15625 $\pm$ 50 Hz

Connection:

- 1) Connect Pins ① and ⑨ of IC685 with 1 k Ω resistance.

Adjusting method:

- 1) Adjust RV685 so that the oscillation frequency is 15625 $\pm$ 50 Hz.

7-6-9. Character Position Adjustment (CG-10 Board)

Mode	E-E (EDIT MONITOR)
Signal	Color bar
Measurement Point	EURO AV IN/OUT connector
Measuring Instrument	Monitor TV
Adjusting Element	CV851
Specified Value	A=B

Note: Perform this adjustment after "Write Clock Adjustment".

Adjusting method:

- 1) Adjust CV851 so that the arrow mark is positioned at the center between the child pictures.

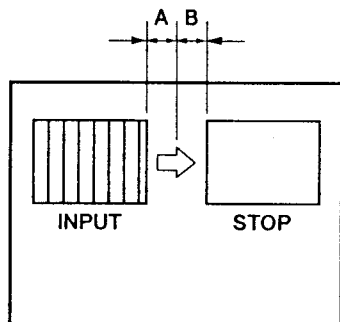


Fig. 7-23.

7-7. AUDIO SYSTEM ADJUSTMENTS

- Adjust the audio system in the LP mode, unless otherwise specified.
Use the alignment tape.
- Adjust both Lch and Rch.

[Connection]

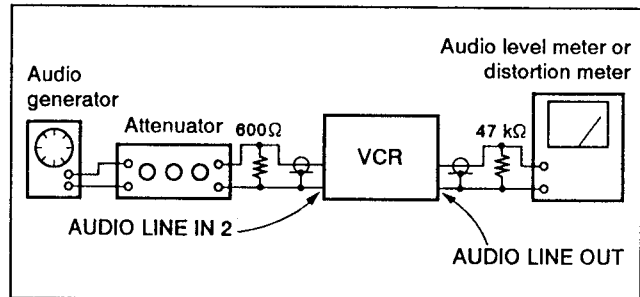


Fig. 7-24.

7-7-1. HI-FI Audio System Adjustment

- Set switches and knobs to the following positions to make adjustment unless otherwise specified.
INPUT SELECT switch.....LINE 2
REC LEVEL knob.....Set to -21 dBs.
(Pins ① and ② of CN572 on MA-104 board)
- When perform the adjustment after removing the PI-20 board, connect Pin (A13) of CN583 and Pin (B10) of CN584 on the MA-104 board with jumper wire.
- When the tuner block is obstructive for adjustment, remove it.

[Adjusting sequence]

1. VCO f_0 adjustment
2. Switching pulse portion adjustment
3. Playback RF level adjustment
4. Playback level adjustment
5. AFM deviation adjustment
6. Level meter adjustment

1. VCO f_0 adjustment (HF-9 board)

Mode	Recording
Signal	No signal
Measuring instrument	Frequency counter
1.3 MHz Adjustment	
Measurement point	Pin ③ of IC002
Adjusting element	RV008
Specified value	1.4 MHz $\pm$ 2 kHz
1.7 MHz Adjustment	
Measurement point	Pin ④ of IC002
Adjusting element	RV002
Specified value	1.8 MHz $\pm$ 2 kHz

Note: Connect the frequency counter through a probe of high input impedance (more than 10 M Ω) and low capacity (10 pF or less).

Checking method:

- 1) Connect the frequency counter to each measurement point.
- 2) Confirm that each frequency meet its specified value.

2. Switching pulse portion adjustment (HF-9 board)

Mode	PB
Signal	Alignment tape (HiFi 400 Hz)
Measurement Point	CH1: Pin ⑨ of CN571 (MA-104 board) CH2: Pin ⑩ of CN571 (MA-104 board)
Measuring Instrument	Oscilloscope
Adjusting Element	RV006
Specified Value	Fig. 7-25.

Adjusting method:

- 1) Adjust RV006 for no dropout.
(Turn and adjust RV006 to the mid-rotation of no dropout range.)

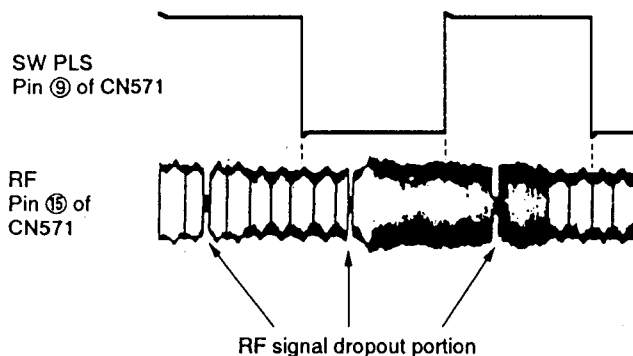


Fig. 7-25.

3. Playback RF level adjustment (HF-9 board)

Mode	PB
Signal	Alignment tape (MH-2): Stair-step section
Measurement Point	Pin ⑪ of IC002
Measuring Instrument	Oscilloscope (DC range)
Adjusting Element	RV005
Specified Value	50 mVp-p

Connection:

- 1) Remove CN532 on MA-104 board, and input sine waveform of 1.4 MHz $\pm$ 2 kHz, 70 mVp-p to Pins ③ and ④ of CN571 from the signal generator.

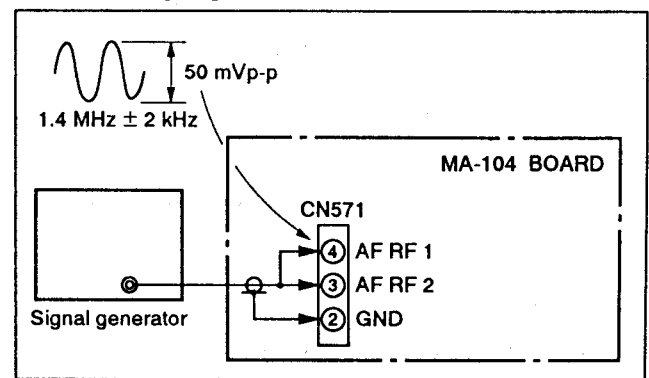


Fig. 7-26.

- 2) Connect the headset to the headphone terminal, and monitor the playback sound.

Adjusting method:

- 1) Turn RV005 fully counterclockwise (○) seeing from the soldering side of MA-104 board.
- 2) Confirm that the level at Pin ⑪ of IC002 is "L" (0V) and there is no playback sound.
- 3) Turn RV005 slowly clockwise (○) until the level at Pin ⑪ of IC002 becomes "H" (3.3V or more). Then, confirm that the audio signal of 6 kHz is played back.

4. Playback level adjustment (HF-9 board)

Mode	PB
Signal	Alignment tape (HiFi 400 Hz)
Measurement Point	Lch: AUDIO LINE OUT L Rch: AUDIO LINE OUT R
Measuring Instrument	Audio level meter
Adjusting Element	Lch: RV007 Rch: RV004
Specified Value	-7.5 $\pm$ 0.1 dBs

Adjusting method:

- 1) Adjust a playback level to -7.5 $\pm$ 0.1 dBs for both L and R channels with RV007 and RV004, respectively.

5. AFM deviation adjustment (HF-9 board)

Mode	Recording and Playback
Signal	400 Hz, -7.5 dB: AUDIO LINE IN 2 L, R
Measurement Point	Lch: AUDIO LINE OUT L Rch: AUDIO LINE OUT R
Measuring Instrument	Audio level meter
Adjusting Element	Lch: RV009 Rch: RV003
Specified Value	-7.5 ± 0.5 dBs

Adjusting method:

- 1) Confirm the 400 Hz signal level at Pins ② (Lch) and ① (Rch) of CN572 on the MA-62 board is -21 ± 0.1 dBs.
- 2) Record the signals.
- 3) Play back the recorded portion.
- 4) Confirm that the AUDIO LINE OUT level meets the specification.
If not, turn RV009 (Lch) or RV003 (Rch), and repeat steps 2) to 4).

6. Level meter adjustment (MF-94 board)

Mode	E-E
Signal	1 KHz, -7.5 dBs: AUDIO LINE IN 2 L, R
Measurement Point	REC level meter
Measuring Instrument	
Adjusting Element	Lch: RV201 Rch: RV202
Specified Value	0 dB

Adjusting method:

- 1) Adjust the REC level controls (L/R) so that the signal level at AUDIO LINE OUT is -6.5 ± 0.1 dBs.
- 2) Adjust RV201 (Lch) and RV202 (Rch) so that the REC level meters (L/R) indicate 0 dB, respectively.

7-7-2. Normal Audio System Adjustment

- Make adjustment in the SP mode, unless otherwise specified. Use a normal VHS cassette for an adjustment tape.
- Make adjustment with the switches set to the following positions.
INPUT SELECT.....LINE 2
- Set the AUDIO MONITOR mode to NORMAL on the menu screen.

[Adjusting sequence]

1. ACE head adjustment.....See Mechanism Block Adjustment
2. E-E output level check
3. Recording bias adjustment
4. Overall level characteristic and distortion factor check
5. Overall S/N check

1. ACE head adjustment

See "Mechanism Block Adjustment".

2. E-E output level check

Mode	E-E
Signal	L, R : 400 Hz, -7.5 dBs
Measurement Point	AUDIO LINE OUT L or R
Adjusting Element	Audio level meter
Specified Value	-7.5 ± 2 dBs

Confirming method:

- 1) Simultaneously input a signal of 400 Hz, -7.5 dBs to both L and R channels of Audio Line Input.
- 2) Confirm that the audio output level is -7.5 ± 2 dBs.

3. Recording bias adjustment (MA-104 board)

Mode	REC and PB
Signal	400 Hz, -30 dBs 7 kHz, -30 dBs
Measurement Point	AUDIO LINE OUT L or R
Measuring Instrument	Audio level meter
Adjusting Element	RV251
Specified Value	0 ± 1 dB

Adjusting method:

- 1) Supply a signal of 400 Hz, -30 dBs to Audio Line Input.
- 2) Connect the audio level meter to the Audio Line Output.
- 3) Adjust the attenuator so that the audio level meter will indicate -30 dBs.
- 4) Make recording in the SP mode.
- 5) Set an audio line input signal to 7 kHz and make recording.
- 6) Playback a recorded portion, and measure output levels at 400 Hz and 7 kHz.
- 7) Confirm that the 7 kHz playback output levels within a range of the 400 Hz playback output level 0 ± 1 dB. When beyond this range, adjust RV251 and repeat the steps 1) through 7) above.

4. Overall level characteristic and distortion factor check

Mode	REC and PB
Signal	400 Hz, -7.5 dBs
Measurement Point	AUDIO LINE OUT L or R
Measuring Instrument	Audio level meter and distortion factor gauge
Specified Value	Playback level: -7.5 ± 2 dBs Distortion factor: 4% or less

Confirming method:

- 1) Supply an audio signal of 400 Hz, -7.5dBs simultaneously to both L and R channels of Audio Line Input.
- 2) Make recording.
- 3) Playback a recorded portion.
- 4) Confirm that a playback level is -7.5 ± 2 dBs.
- 5) Confirm that a distortion factor is within 4%.

5. Overall S/N check

Mode	REC and PB
Signal	400 Hz, -7.5 dBs, and no signal
Measurement Point	AUDIO LINE OUT L
Measuring Instrument	Audio level meter
Specified Value	38 dB or more

Confirming method:

- 1) Supply a signal of 400 Hz simultaneously to both L and R channels of Audio Line Input.
Adjust the attenuator so that the L channel audio line output level will be -7.5 dBs.
- 2) Make recording.
- 3) With the REC mode held, make the no signal state. (Short an input for both L and R)
- 4) Playback a recorded portion, and confirm that there is a level difference of 38 dB or more between 400 Hz portion and no signal portion (immediately after a 400 Hz signal).

7-8. TUNER SYSTEM ADJUSTMENTS

7-8-1. RF AGC Adjustment (IF001 Unit/TU-120 Board)

Signal	Broadcast TV signal
Adjusting Element	VR of IF001 unit (Fig. 7-27.)

Adjusting method:

- 1) Adjust the monitor TV to a maximum contrast.
- 2) Turn the VR to make snow noise visible.
- 3) Turn the VR in an opposite direction and set it to the point where the snow noise disappears.
- 4) Receive each channel and confirm that there are no beat picture corruption snow noise due to cross modulation.

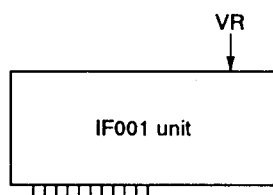


Fig. 7-27.

7-8-2. Receive Separation Adjustment (TU-120 Board) (SLV-815/VP)

Signal	Stereo Lch: 400 Hz, 100% modulation Rch: No modulation
Connection Point	AUDIO LINE OUT R
Measuring Instrument	Oscilloscope
Adjusting Element	RV001

Setting of switches:

- RV103 (MF-101 board).....Center click
- RV104 (MF-104 board).....Center click

Adjusting method:

- 1) Set the sound multiplex signal generator in the Stereo mode, and set only Lch to 400 Hz, 100% modulation.
- 2) Connect the oscilloscope to the Rch of Audio Line Output.
- 3) Adjust RV001 to minimize Rch output.
When this is done, do not fully turn RV001.
(The "STEREO" indication must be illuminated).

7-9. NAICAM SYSTEM ADJUSTMENTS (SLV-815UB)

7-9-1. Eye Pattern Adjustment (NA-7 Board)

Mode	NAICAM ch received
Signal	Color bar
Measurement Point	CH1: Pin ①⑨ of IC001 CH2: Pin ②⑩ of IC001
Measuring Instrument	Oscilloscope (X-Y mode)
Adjusting Element	CV01

Adjusting method:

- 1) Confirm that waveform as OK in Fig observed clearly and with out tilt.

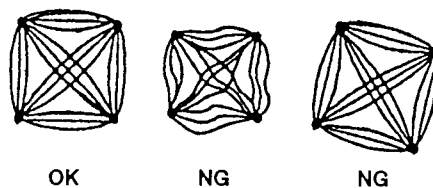


Fig. 7-28.

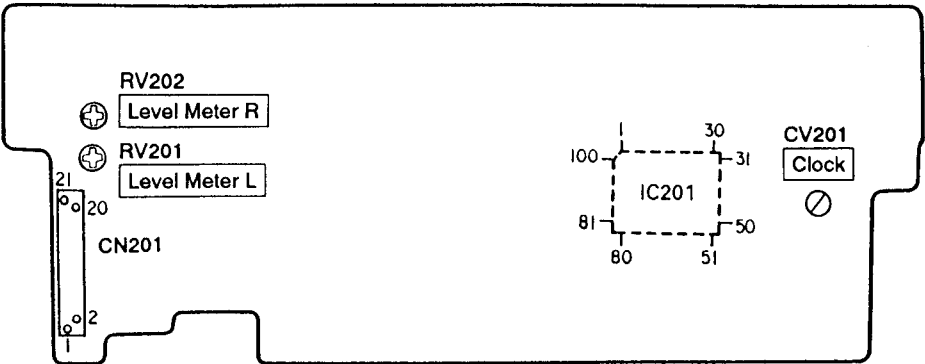
7-9-2. VCO Adjustment (NA-7 Board)

Mode	NICAM ch received
Signal	no-signal
Measurement Point	Pin ②⑤ of IC001
Measuring Instrument	Frequency counter
Adjusting Element	CV02
Specified Value	5.824 MHz $\pm$ 30 Hz

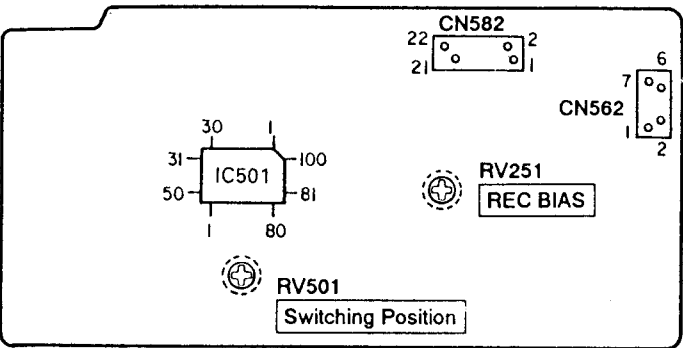
Note: Shorted Pins ①② and ②① of IC001.

7-10. ADJUSTMENT PARTS ARRANGEMENT DIAGRAM

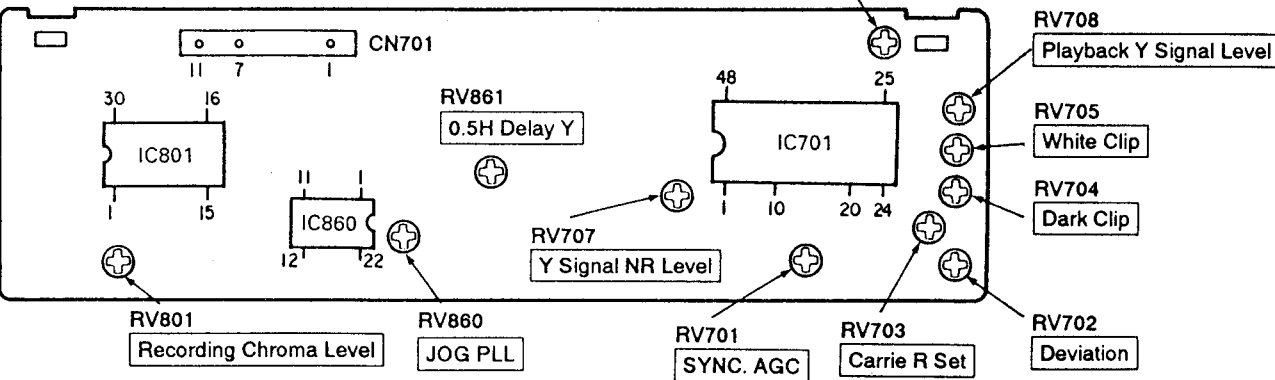
MF-94 BOARD (COMPONENT SIDE)



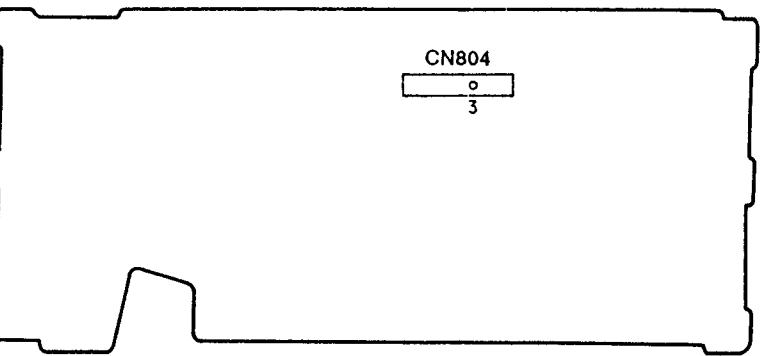
MA-104 BOARD (CONDUCTOR SIDE)



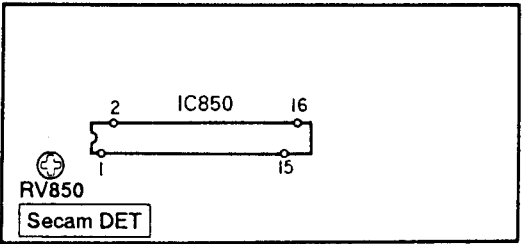
YC-65 BOARD (COMPONENT SIDE)



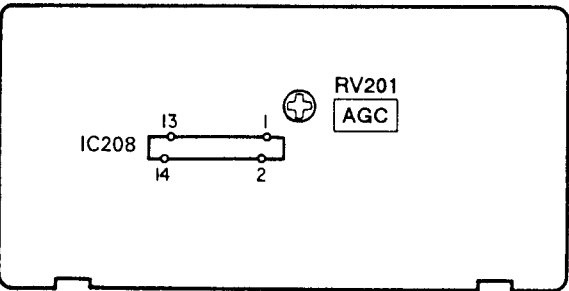
RP-63 BOARD (COMPONENT SIDE)



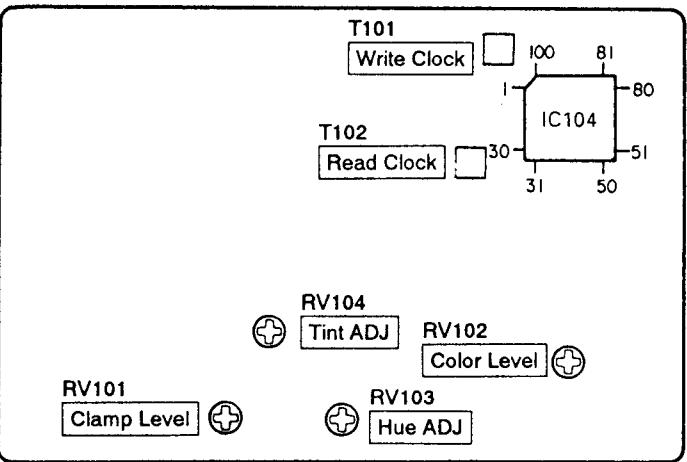
SD-4 BOARD (COMPONENT SIDE)



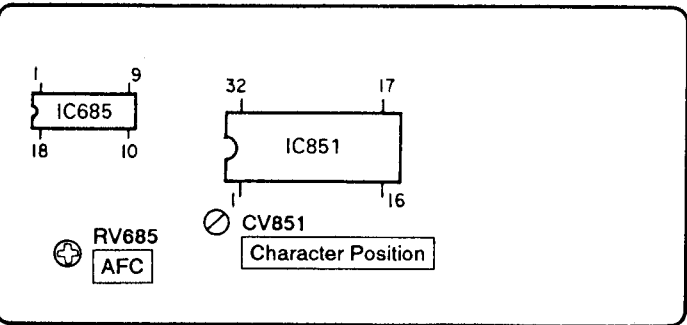
PI-25 BOARD (COMPONENT SIDE)



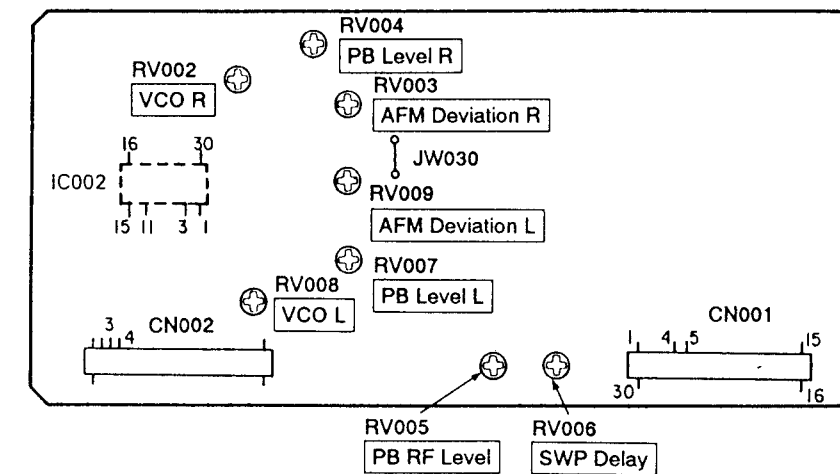
DG-11 BOARD (COMPONENT SIDE)



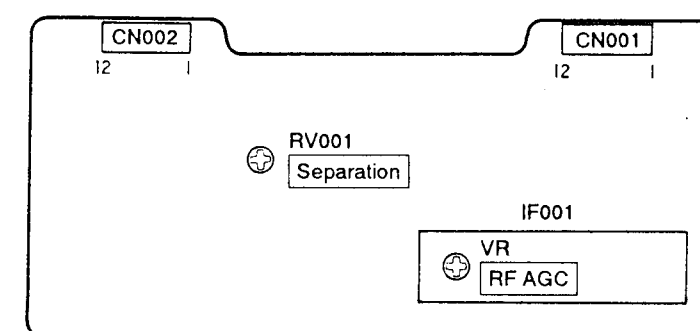
CG-10 BOARD (COMPONENT SIDE)



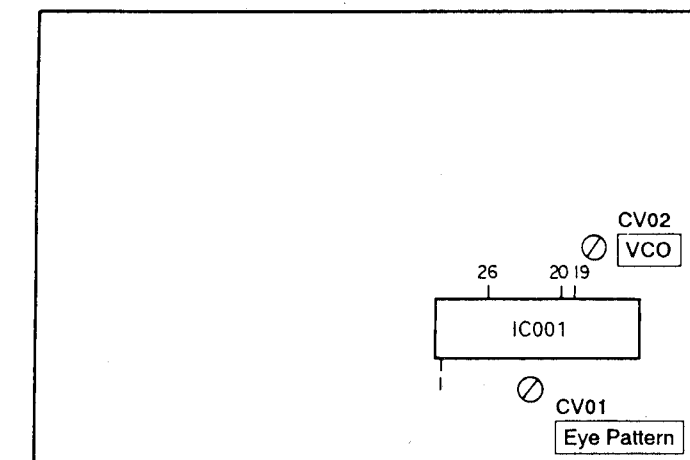
HF-9 BOARD (COMPONENT SIDE)



TU-120 BOARD (COMPONENT SIDE)



NA-7 BOARD (COMPONENT SIDE)



SLV-777/AS/NC/UB/VP

815

RMT-V5B

SONY[®] SERVICE MANUAL

AEP, E Model
SLV-777

Australian Model
SLV-777AS

AEP, New Zealand Model
SLV-777NC

UK Model
SLV-777UB

ME, Germany Model
SLV-777VP

SUPPLEMENT-1

File this supplement with the service manual.

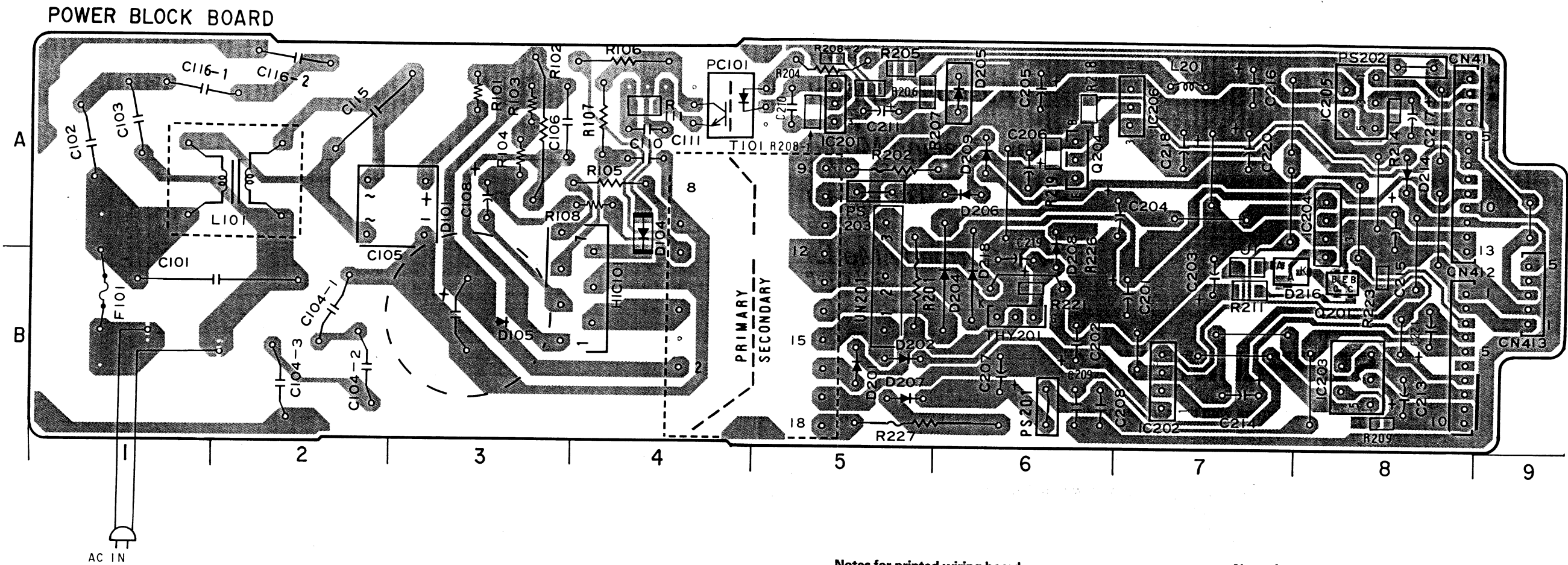
1. We send you in addition the schematic diagram, printed wiring diagram and electrical parts list for the power supply unit.
2. Please correct parts code of IC501 on page 192 as follows:

IC501 8-752-815-90 IC CPX80624-009Q



8-752-814-58 IC CPX80624-029Q

1-1. PRINTED WIRING BOARD



• SEMICONDUCTOR LOCATION

Pef. No.	Location	Pef. No.	Location	Pef. No.	Location
CN411	A - 8	D205	A - 6	IC201	A - 5
CN412	B - 8	D206	A - 6	IC202	B - 7
CN413	B - 9	D207	B - 5	IC203	B - 8
		D208	A - 6	IC204	A - 8
D101	A - 3	D209	A - 6		
D104	A - 4			IC205	A - 8
D105	B - 3	D214	A - 8	IC206	A - 7
D201	A - 5	D216	B - 7		
		D218	B - 6	Q201	B - 8
D202	B - 5			Q204	A - 6
D204	B - 6	HIC101	B - 4		

< DIODE >

D101	⚠	8-719-510-06	DIODE	S1WB60
D104	⚠	9-901-003-01	DIODE	D1F60
D105	⚠	9-901-003-01	DIODE	D1F60
D201		8-719-510-26	DIODE	D1NL20
D204		8-719-500-15	DIODE	S3S4M
D205	⚠	8-719-500-70	DIODE	D5S4M
D206		8-719-980-78	DIODE	ERA83-006
D207		8-719-980-78	DIODE	ERA83-006
D208		8-719-110-49	DIODE	RD18ESB2
D209	⚠	8-719-510-26	DIODE	D1NL20
D214		8-719-110-30	DIODE	RD12ESB1
D216		8-719-914-43	DIODE	DAN202K
D218		9-998-289-01	DIODE	RD43FB2
D222		8-719-510-26	DIODE	D1NL20

< IC >

IC201	8-759-420-19 IC	AN1431T
IC202	9-998-291-01 IC	PQ12RF11
IC203	1-808-796-11 IC	SI3120CS
IC205	8-749-920-43 IC	SI3050CA
IC206	8-759-604-94 IC	M5F79M06L

〈 TRANSISTOR 〉

Q201 8-729-920-28 TRANSISTOR FMG9
Q204 8-929-140-98 TRANSISTOR 2SD77-34

Notes for printed wiring board:

- : indicated a lead wire mounted on the component side.
-  : indicated a lead wire mounted on the conductor side.
-  : Pattern from the side which enables seeing.

Notes for schematic diagram:

- **Caution when replacing chip parts.**
New parts must be attached after removal of chip.
- **Be careful not to heat the minuts side of tantalum capacitor, because it is damaged by the heat.**
- **All resistors are in ohms, 1/4W (Chip resistors: 1/10W) unless otherwise noted.**
k Ω : 1000 Ω
- **All capacitors are in μ F unless otherwise noted. PF: μ μ F**
50V or less are not indicated except for electrolytics and tantalums.
-  : fusible resistor.
-  : adjustment for repair.
-  : B + Line.
-  : B - Line.
-  : IN/OUT direction of (+, -) B LINE.
- **Voltages are DC between measurement points and ground unless otherwise noted.**
- **Readings are taken with a color-bar signal input.**
- **Readings are taken with a digital multimeter (DC10M Ω).**
- **Voltage variations may be noted due to normal production tolerances.**

When indicating parts by reference number, please include the board name.

Note:
The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

- See page 4 for note.



SECTION 2

ELECTRICAL PARTS LIST

POWER BLOCK

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, μ : μ , for example :
 $\mu A...$: $\mu A...$, $\mu PA...$: $\mu PA...$,
 $\mu PB...$: $\mu PB...$, $\mu PC...$: $\mu PC...$,
 $\mu PD...$: $\mu PD...$
- CAPACITORS
MF : μF , PF : μF
- COILS
MMH : mH, μH : μH

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	1-413-601-11	POWER BLOCK(SLV-777/AS/NC)				(FUSE)	
	1-413-608-11	POWER BLOCK(SLV-777VP)		F101	1-532-203-00	FUSE 250V	T2A
	1-413-609-11	POWER BLOCK(SLV-777UB)				(HIC)	
	*****			HIC101	Δ 9-900-265-01	HIC	MA2831
		(CAPACITOR)				(IC)	
C105	Δ 9-901-004-01	ELECT 135 μF	400V	IC201	8-759-420-19	IC	AN1431T
C115	Δ 1-136-548-11	FILM 0.1 μF	AC250V	IC202	9-998-291-01	IC	PQ12RF11
C201	1-124-514-11	ELECT 100 μF	50V	IC203	1-808-796-11	IC	S13120CS
C204	1-126-234-11	ELECT 2200 μF	16V	IC205	8-749-920-43	IC	S13050CA
C205	1-124-781-11	ELECT 3300 μF	10V	IC206	8-759-604-94	IC	M5F79M06L
C206	1-126-103-11	ELECT 470 μF	16V			(COIL)	
C211	1-124-042-11	ELECT 0.47 μF	50V	L101	Δ 9-998-280-01	CHOCK COIL	ELF-18D290C
C213	1-126-541-11	ELECT 330 μF	16V	L201	9-901-002-01	CHOCK COIL	40 μH 1A
C215	1-124-041-11	ELECT 220 μF	16V			(COUPLER)	
C216	1-126-103-11	ELECT 470 μF	10V	PC101	Δ 8-719-939-00	COUPLER, PHOTO	PC111S
C217	1-126-335-11	ELECT 220 μF	10V			(PROTECTOR)	
C219	1-124-038-11	ELECT 1 μF	50V	PS201	Δ 1-532-679-00	PROTECTOR, IC	ICP-F15 0.5A
C220	1-124-514-11	ELECT 100 μF	50V	PS202	Δ 1-532-637-00	PROTECTOR, IC	ICP-F25 1A
		(CONNECTOR)		PS203	Δ 1-532-675-00	PROTECTOR, IC	ICP-F38 1.5A
CN411	1-506-478-11	CONNECTOR 13P				(TRANSISTOR)	
CN412	1-506-475-11	CONNECTOR 10P		Q201	8-729-920-28	TRANSISTOR FMG9	
CN413	1-506-470-11	CONNECTOR 5P		Q204	8-929-140-98	TRANSISTOR 2SD77-34	
		(DIODE)				(RESISTOR)	
D101	Δ 8-719-510-06	DIODE S1WB60		R102	Δ 1-215-929-11	METAL 100	3W
D104	Δ 9-901-003-01	DIODE D1F60		R105	Δ 1-247-742-11	CARBON 180	1/2W
D105	Δ 9-901-003-01	DIODE D1F60		R105	Δ 1-247-746-11	CARBON 390	1/2W
D201	8-719-510-26	DIODE D1NL20		R106	Δ 1-216-447-00	METAL 27	2W
D204	8-719-500-15	DIODE S3S4M		R107	Δ 1-215-859-00	METAL 22	1W
D205	Δ 8-719-500-70	DIODE D5S4M		R108	1-249-469-11	CARBON 100K	1/4W
D206	8-719-980-78	DIODE ERA83-006		R201	Δ 1-212-988-00	FUSIBLE 180	1/2W
D207	8-719-980-78	DIODE ERA83-006		R202	Δ 1-212-986-00	FUSIBLE 150	1/2W
D208	8-719-110-49	DIODE RD18ESB2					
D209	Δ 8-719-510-26	DIODE D1NL20					
D214	8-719-110-30	DIODE RD12ESB1					
D216	8-719-914-43	DIODE DAN202K					
D218	9-998-289-01	DIODE RD43FB2					
D222	8-719-510-26	DIODE D1NL20					

Ref. No.	Part No.	Description	Remarks
R204	△ 1-247-735-11	CARBON 47	1/2W
R208	1-216-202-00	CARBON(CHIP) 1.5K	1/8W
R211	1-216-224-00	CARBON(CHIP) 12K	1/4W
R218	1-216-196-00	CARBON(CHIP) 820	1/8W
R219	1-216-196-00	CARBON(CHIP) 820	1/8W
R227	△ 1-213-039-11	FUSIBLE 1.3	1W
< TRANCE >			
T101	△ 9-901-001-01	TRANSFORMER	
< THYRISTOR >			
THY201	8-719-123-76	THYRISTOR	3P4J