SLV-815/UB/VP
RMT-V5E

SERVICE MANUAL

AEP Model
SLV-815
UK Model
SLV-815UB
Germany Model
SLV-815VP

Photo: SLV-815

- **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	5 pin DIN (1)
CONTROL S IN/OUT	Minijack (2)
Microphone input	Minijack
Headphone input	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 × 96.5 × 395 mm (w/h/d) (18 3/8 × 3 7/8 × 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.

MICROFILM

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 ⚠ OR DOTTED LINE WITH MARK ⚠ 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 Ⓐ of the cam motor, located at lower of the MD (between the front panel and the MD-49 board), to the arrow direction Ⓑ by finger.

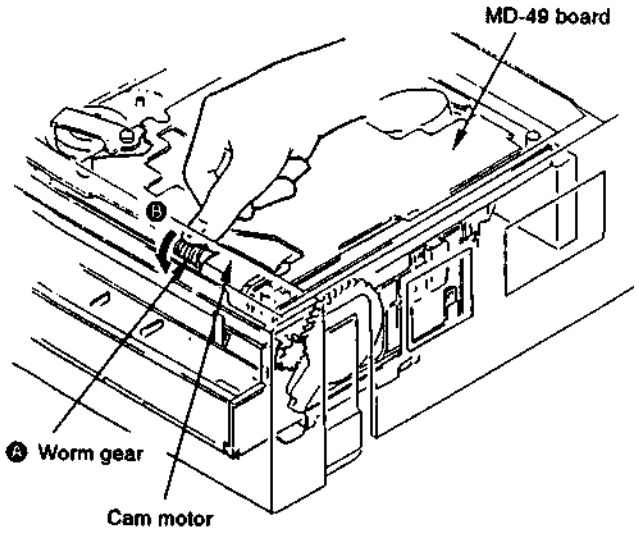


Fig. 1.

2. WINDING TAPE TO CASSETTE HALF

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

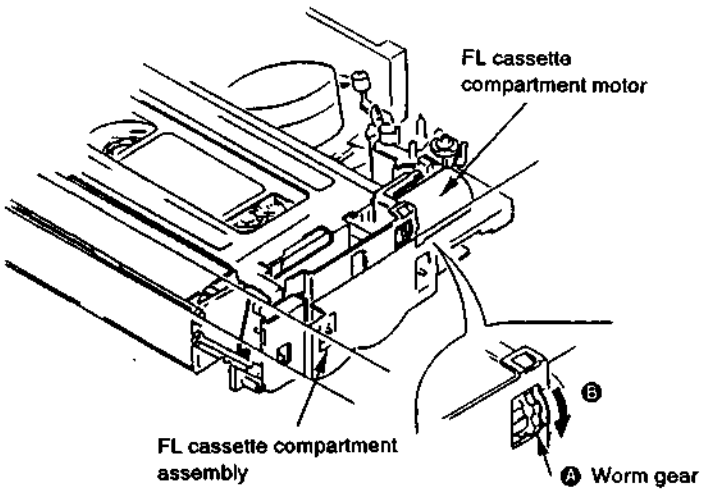


Fig. 2.

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

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

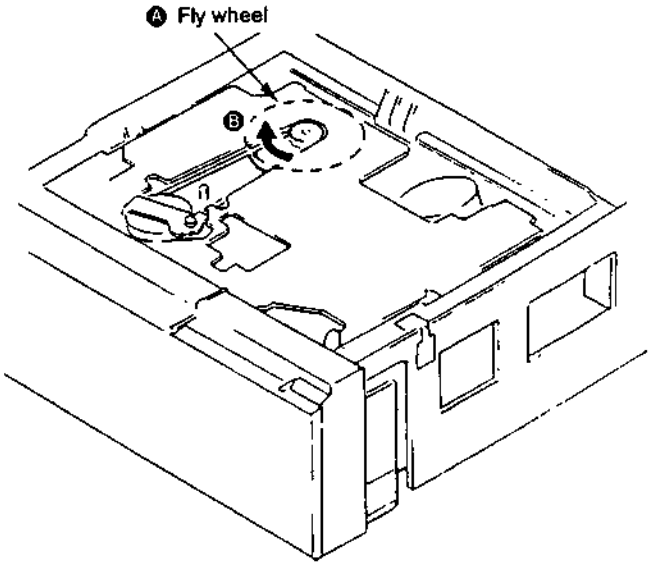


Fig. 3.

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 ❶ (P3×5) and take out the grounding shaft ❷. (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 ❸ (PSW3×8) and take out the rotary upper drum in the arrow direction Ⓐ. (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.

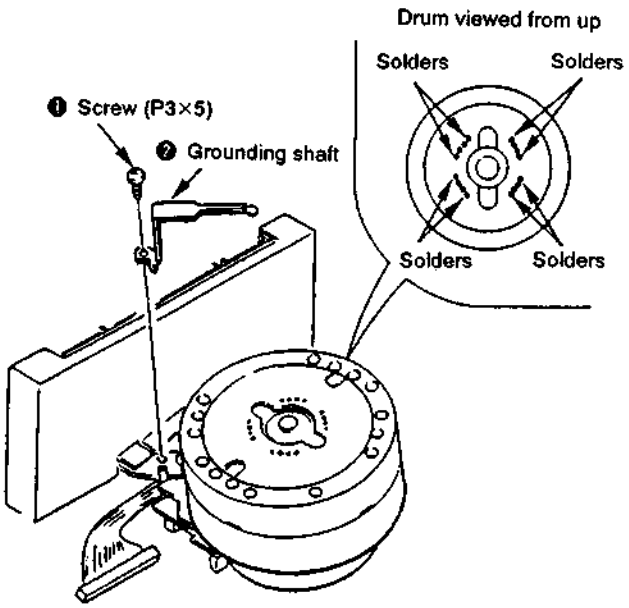


Fig. 4.

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 ❸ (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 ❷ using the screw ❶ (P3×5) so that the protrusion of grounding shaft end contacts the center of the drum shaft.
   Note: When attaching the grounding shaft ❷, be careful not to apply force to the spring section of it.

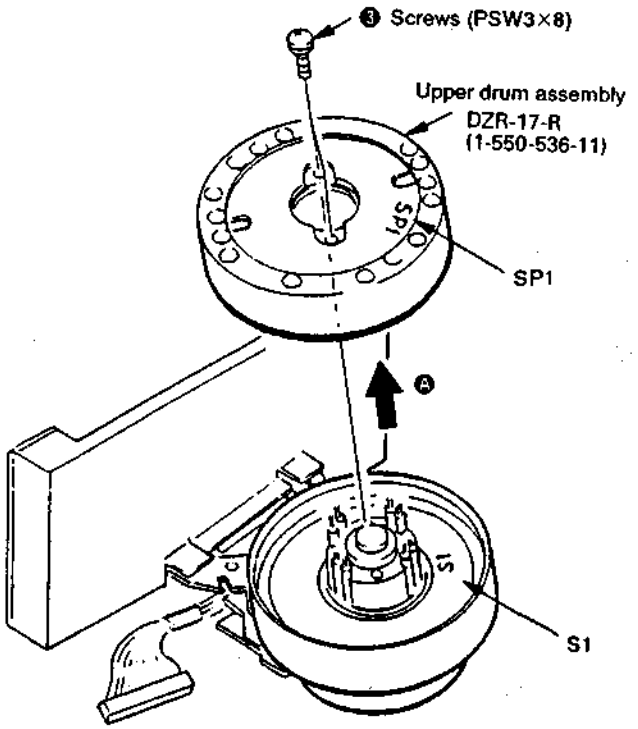


Fig. 5.

TABLE OF CONTENTS

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.

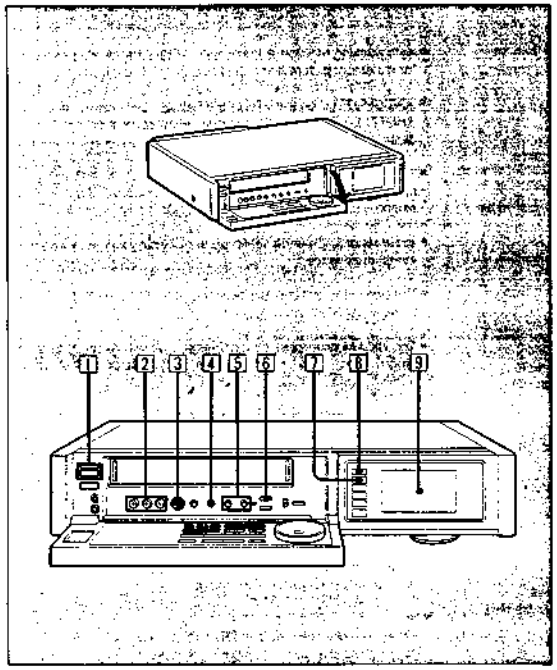
Convenient Functions

- 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.

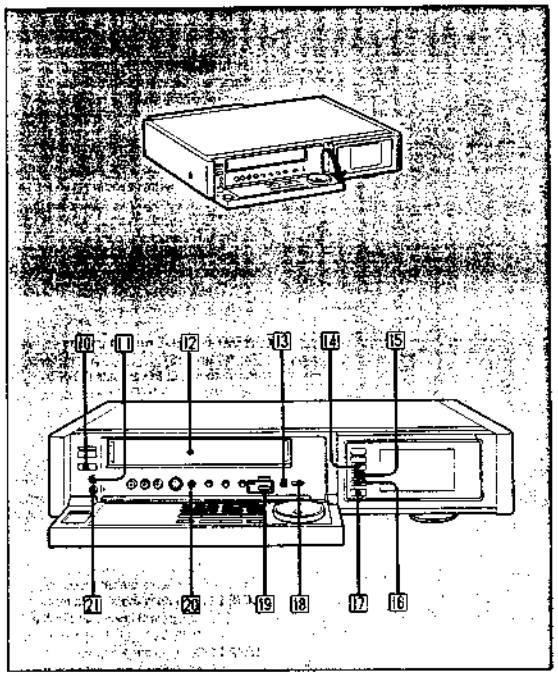
5 **REC LEVEL controls** (page 77)
Adjust the audio recording level. Normally set these controls at the center indented position.

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.

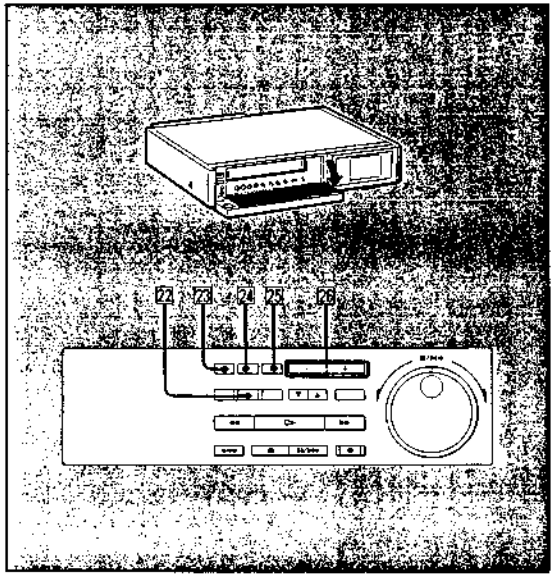
18 **VPS (Video Programme System) ON/OFF switch (SLV-815VP only)** (page 61)

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)**

Identifying the Operational Parts



Front

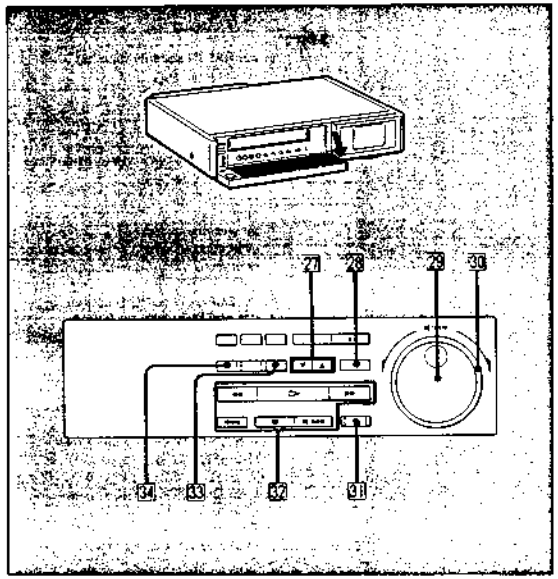
22 **TIMER REC ON/OFF button** (page 54)
Press to deactivate or reactivate the timer recording standby mode when using the VTR before timer recording.

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)

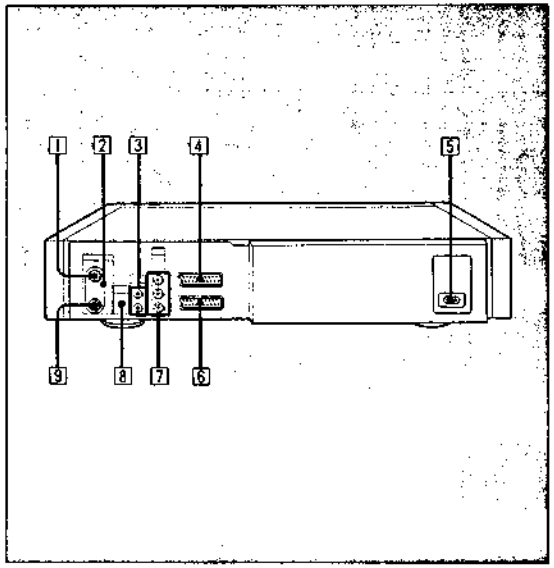
31 ● **REC (record) button** (page 40)

32 **Tape transport buttons** (pages 25 and 27)
◀◀ REW (rewind) button
▷ PLAY 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 (minijack)** (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.

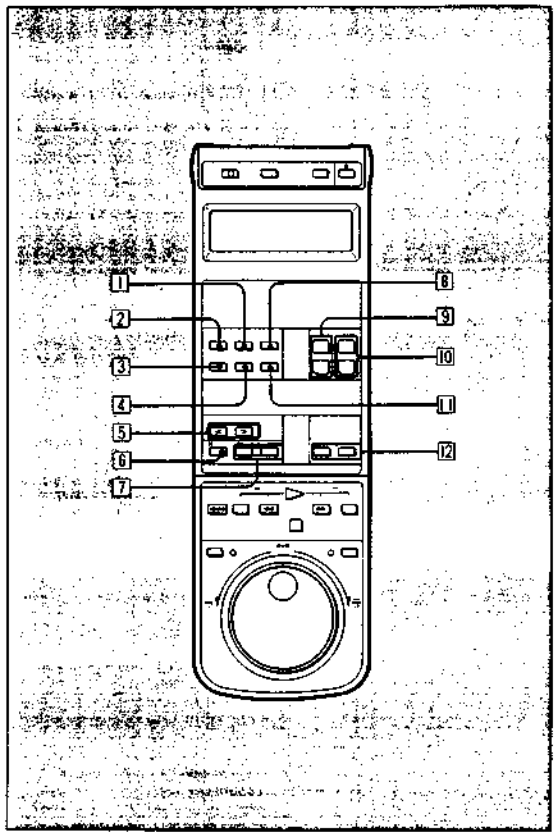
5 **AC IN socket**
Connect the supplied AC power cord.

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 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)

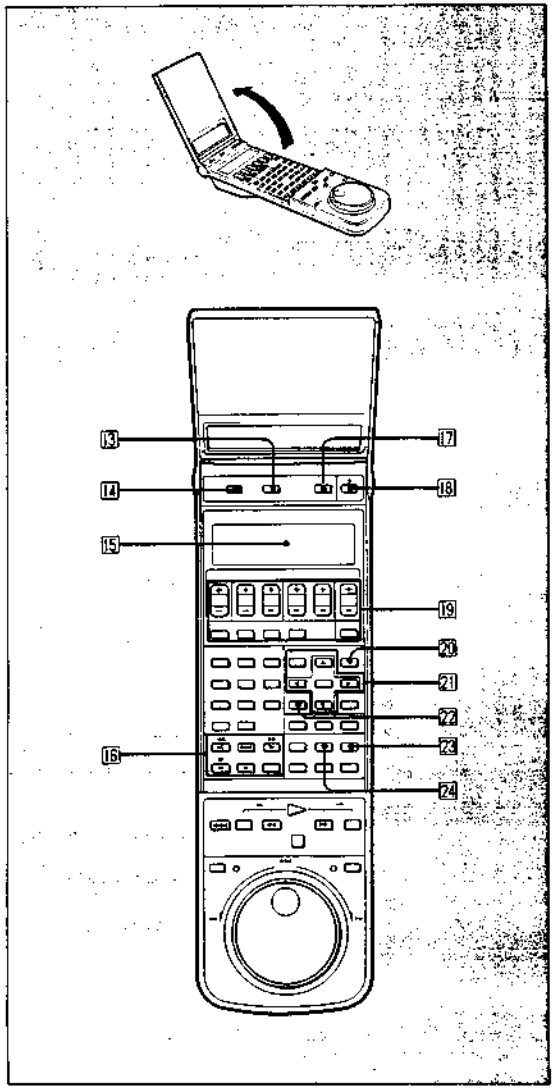
9 **VOL (TV volume) + / – buttons**
Press to control the volume of the TV. Effective only for Sony TVs with the mark.

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 / II▶ > (to select the direction for frame-by-frame picture or the direction for any playback mode)
▶I◀ (to obtain a still picture)
I▶ SLOW +/– (slow speed up/down)
× 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)

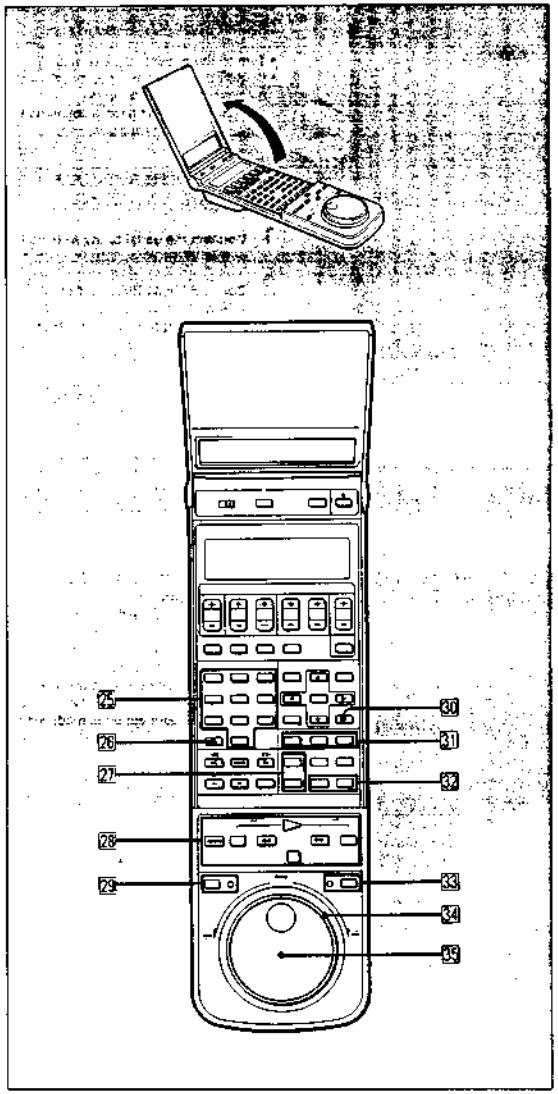
21 **Menu operation buttons**
Press MENU to display or erase the main MENU. Press EXE to store the selected parameters.
Press ▲/▼/◀/▶ to move the cursor.

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.

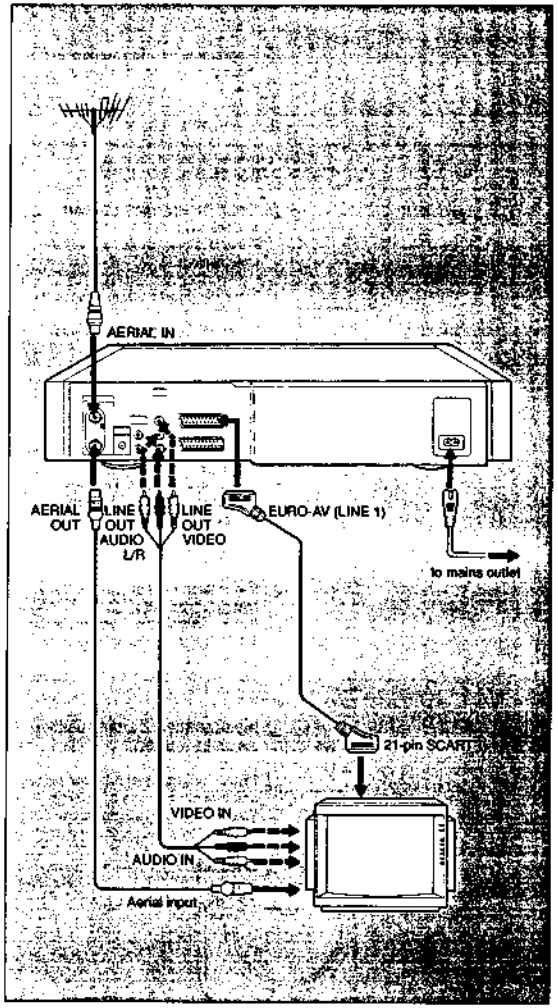
32 **INDEX MARK and ERASE buttons** (pages 65 and 68)

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.**

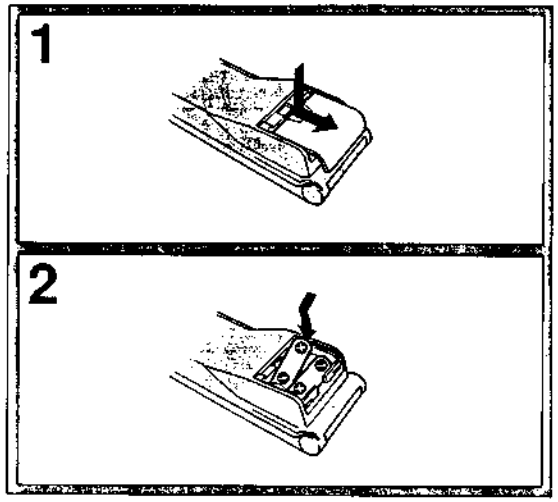
2 **Connect the AERIAL OUT of this VTR to the aerial input terminal of the TV using the supplied aerial cable.**

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**

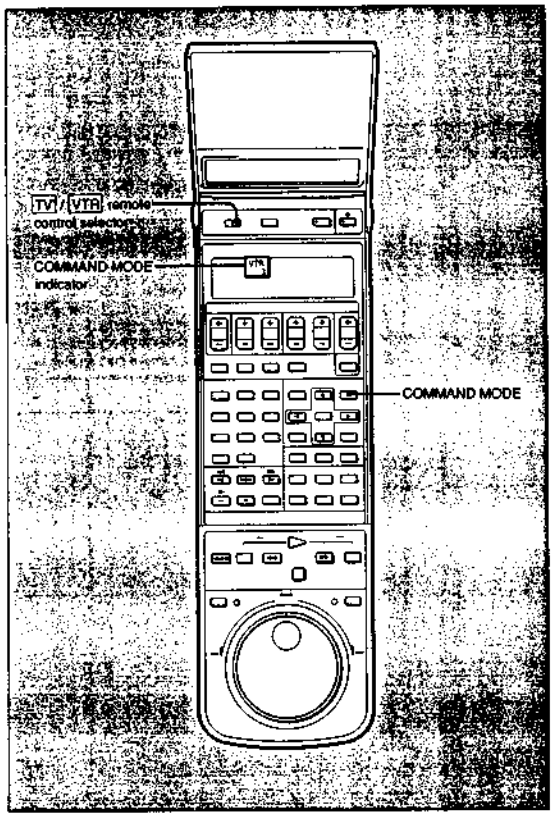
1 **Slide and remove the cover.**

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

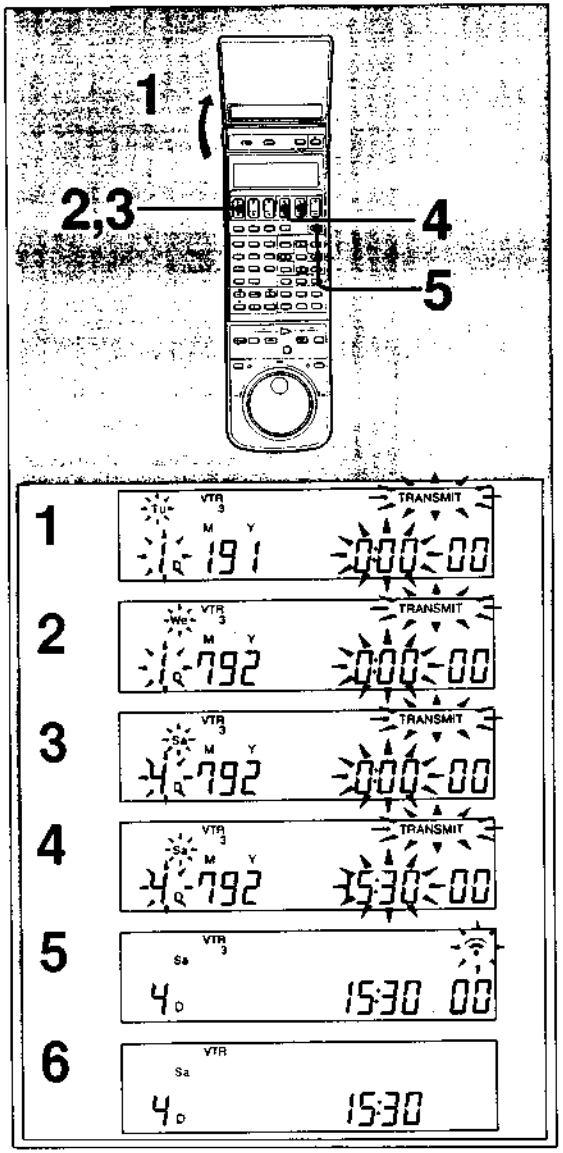
Set the COMMAND MODE 1/2/3 selector on the VTR to the same number displayed in the LCD. To change the setting on the Commander, press COMMAND MODE repeatedly. Then, set the TV / VTR remote control selector to VTR.

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.

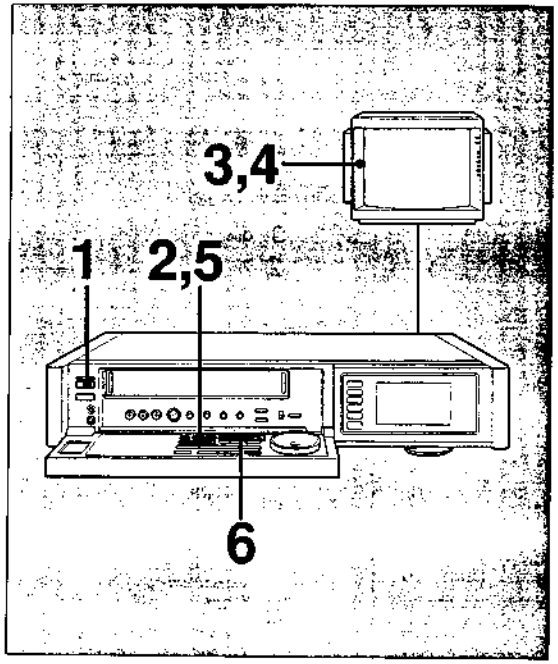
1. **Open the cover.**
2. **Keep pressing the D (date) button until 7 M 92 Y is displayed.**
   The date will be incremented slowly up to 30 days and then the month will be incremented.
3. **Press the + side or – side of the D (date) button until 4 D is displayed.**
   The day of the week appears automatically
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.

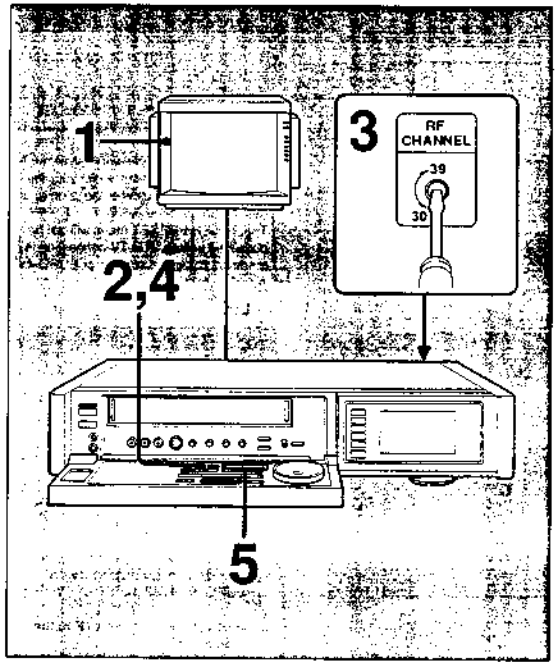
3 **Turn on the TV and select a programme position that is not used to receive a TV station.**

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.**

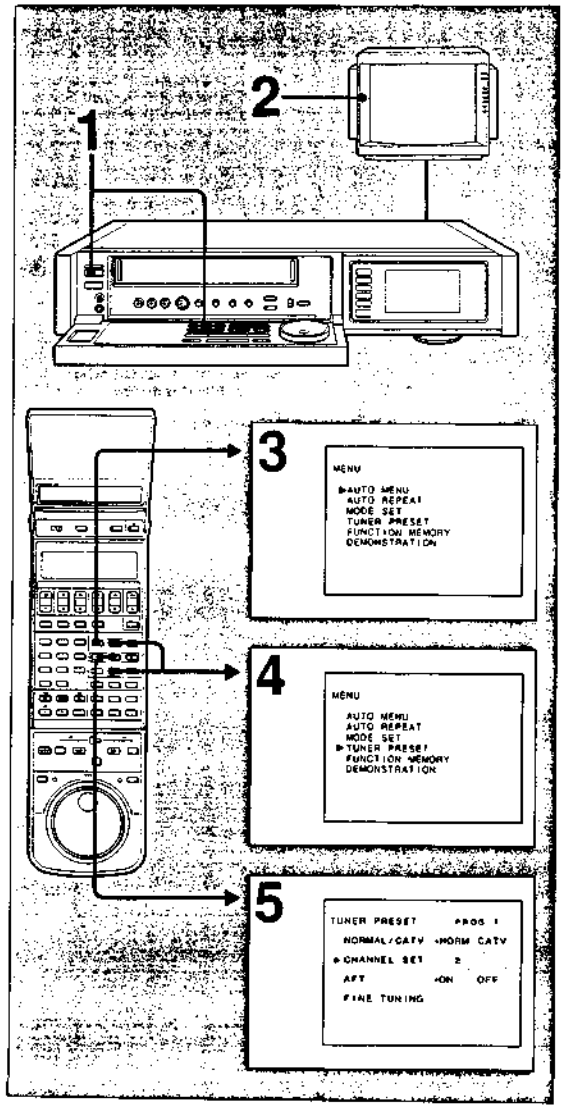
2 **Press INPUT SELECT to light LINE L2 in the display window.**
Do not connect any equipment to the LINE IN 2 VIDEO jack.

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 VTR and press INPUT SELECT to light the TUNER indicator and the programme position number in the display window.**

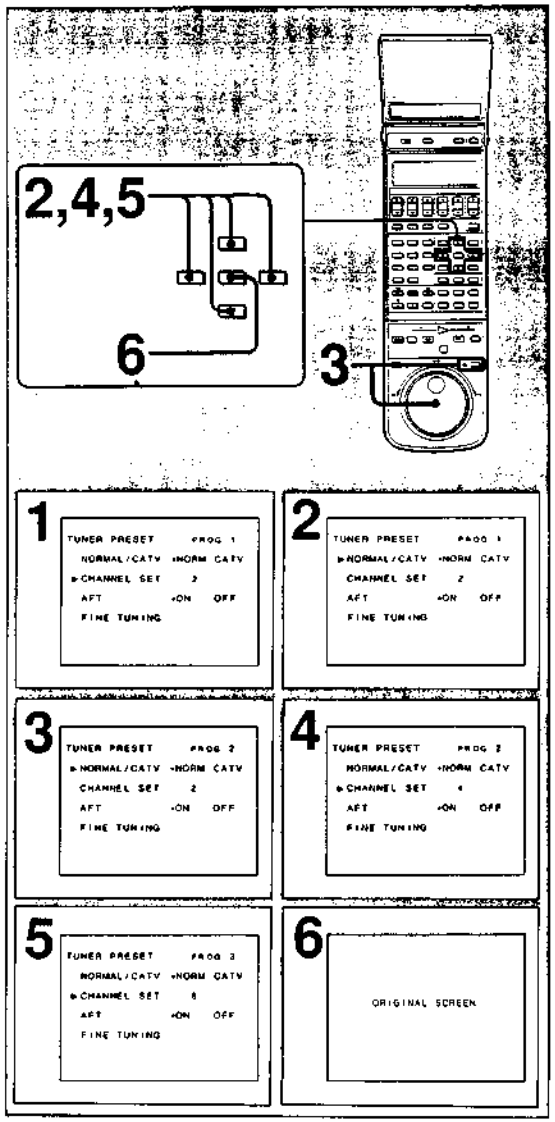
2 **Turn on the TV.**
Set to the programme position for the VTR if VTR-TV connection is made via the aerial sockets. Select VTR input if VTR-TV connection is made via EURO-AV (LINE 1).

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.**

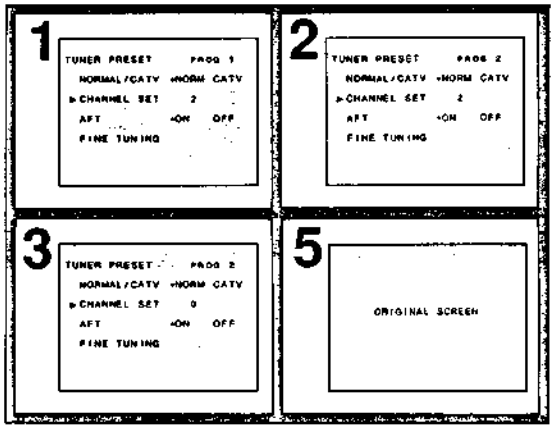
4 **Move cursor to CHANNEL SET with ▲ or ▼ and press ◀ or ▶.**
The channel number automatically increases with ▶ and decreases with ◀. The number stops changing when the first channel received in your area is detected.

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.**

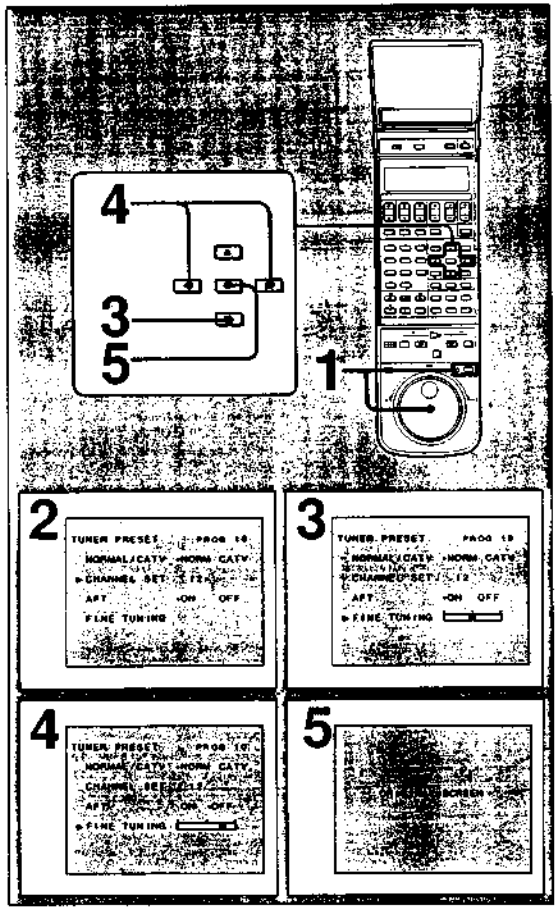
4 **Repeat steps 2 and 3 to erase other programme positions.**

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.**

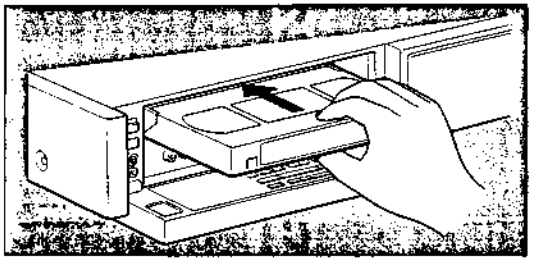
3 **Move cursor to FINE TUNING.**
The fine tuning meter appears.

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.**

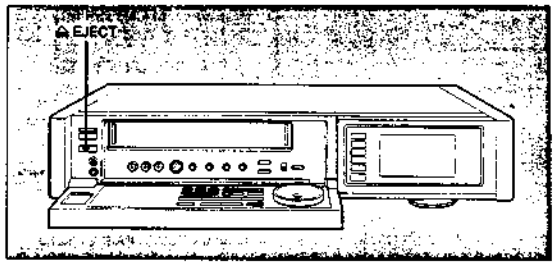
Note on the TUNER PRESET Menu
When the channel scanning function finds a station, it stops, and the blue background changes to the received TV picture. Usually, the TUNER PRESET menu will be superimposed over the TV picture clearly. However, if the synchronization of the received TV picture is disturbed (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



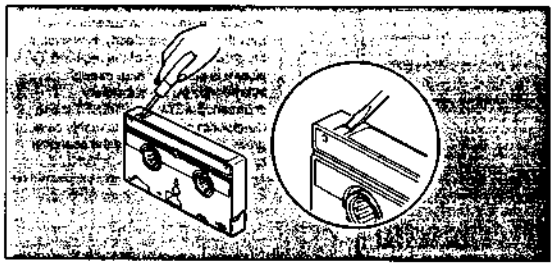
Cassette Insertion

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

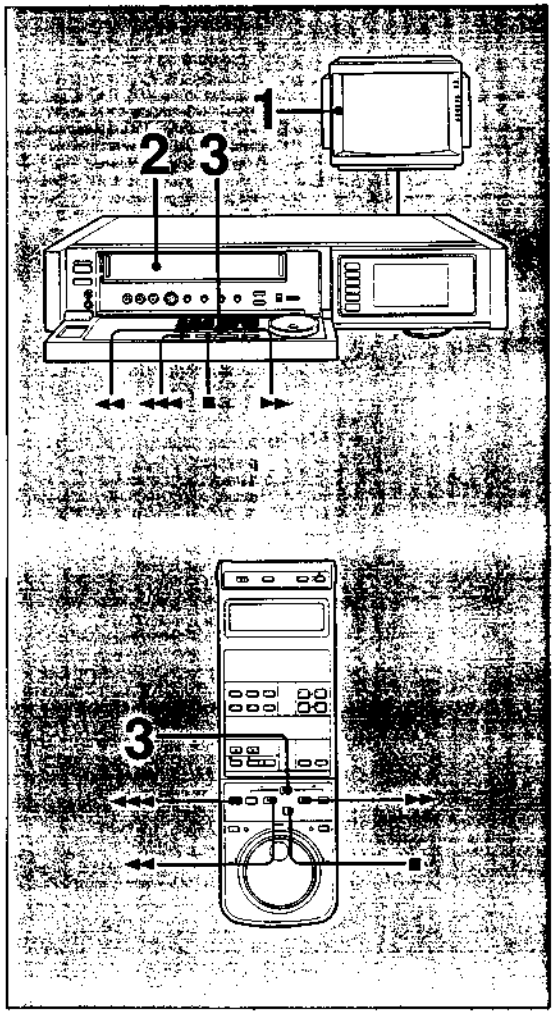
Press ⏏ EJECT on the VTR. When the VTR is turned off, pressing the ⏏ EJECT button will turn on the unit, eject the cassette, and turn off the VTR again.
Note that ⏏ EJECT will not function during recording.



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

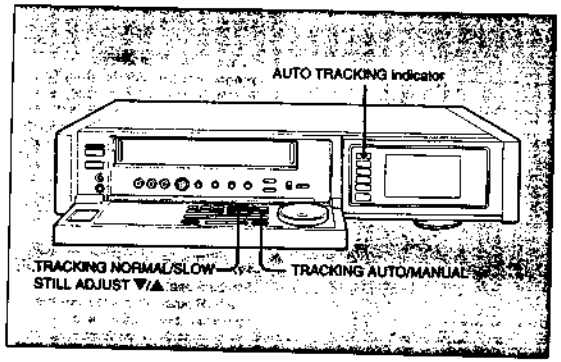
1 **Turn on the TV and select the programme position for the VTR.**
If VTR-TV connection is made via EURO-AV (LINE 1) or LINE OUT VIDEO/ AUDIO, select the input for the VTR.

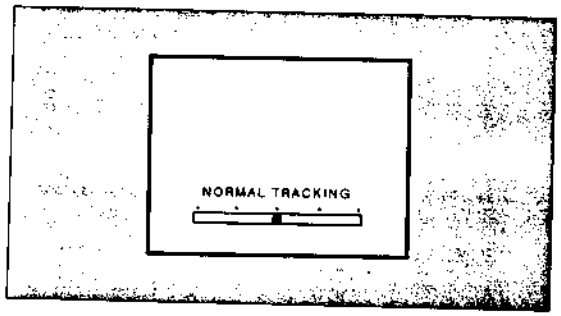
2 **Insert a cassette.**
The VTR will be turned on. If your cassette has its safety tab removed, playback starts automatically.

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.)

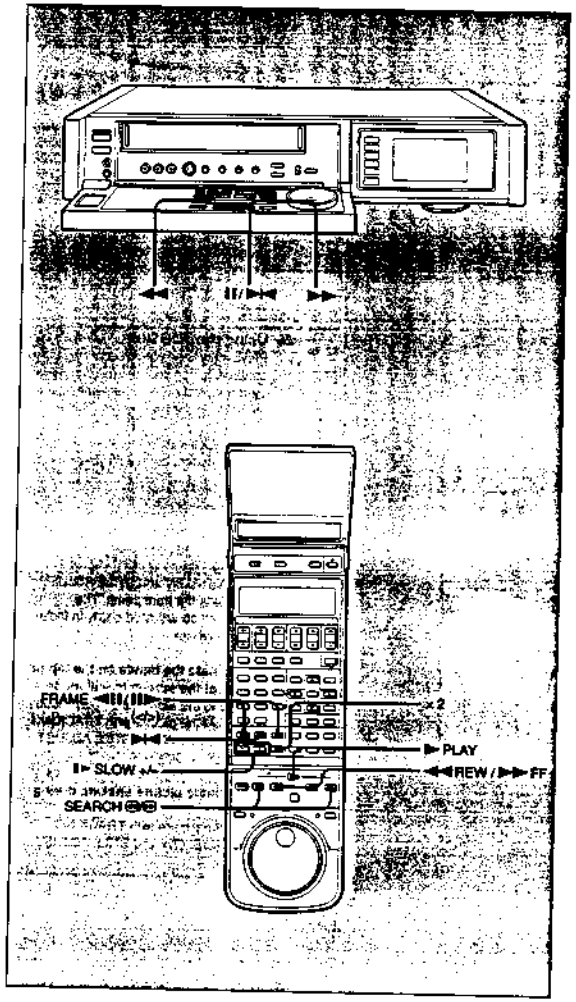
■ **Manual adjustment during normal playback**

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/ ▶▶I on the VTR, II or ▶▶I 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 ▮▶ 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.

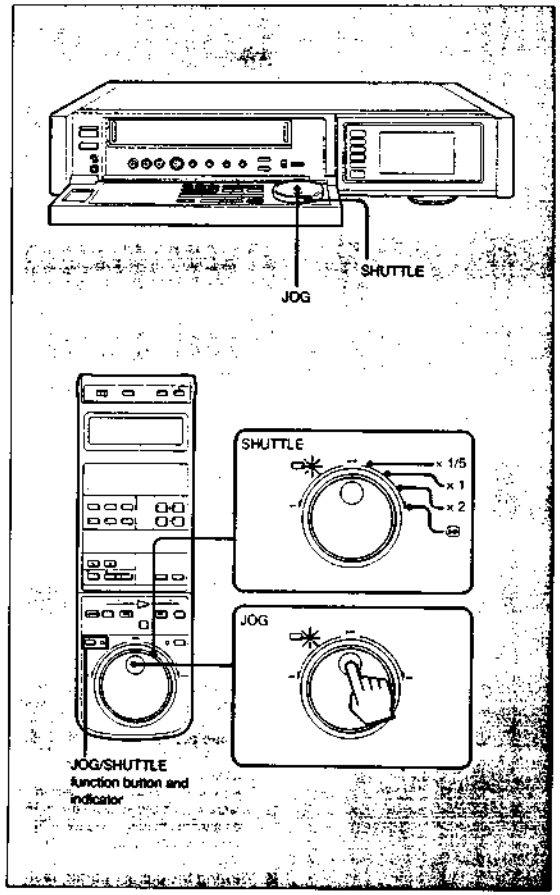
■ **Locked picture search**

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.

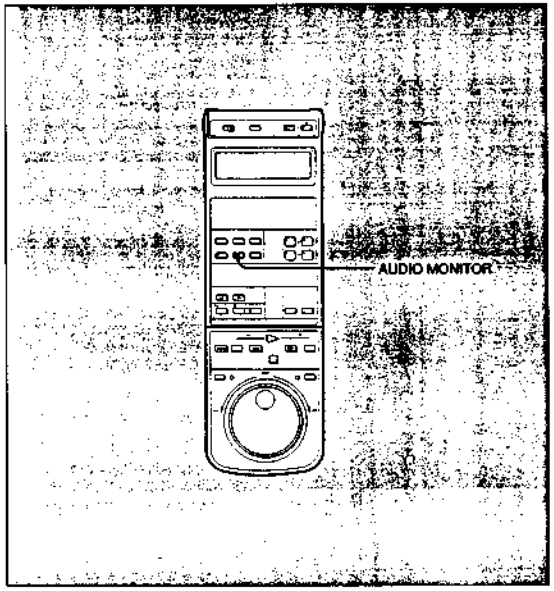
■ **Using the JOG dial**
Playback speed varies according to the speed at which you turn the dial (frame-by-frame, slow, × 1). The same speed is available in the reverse direction.

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 ▼/▲.

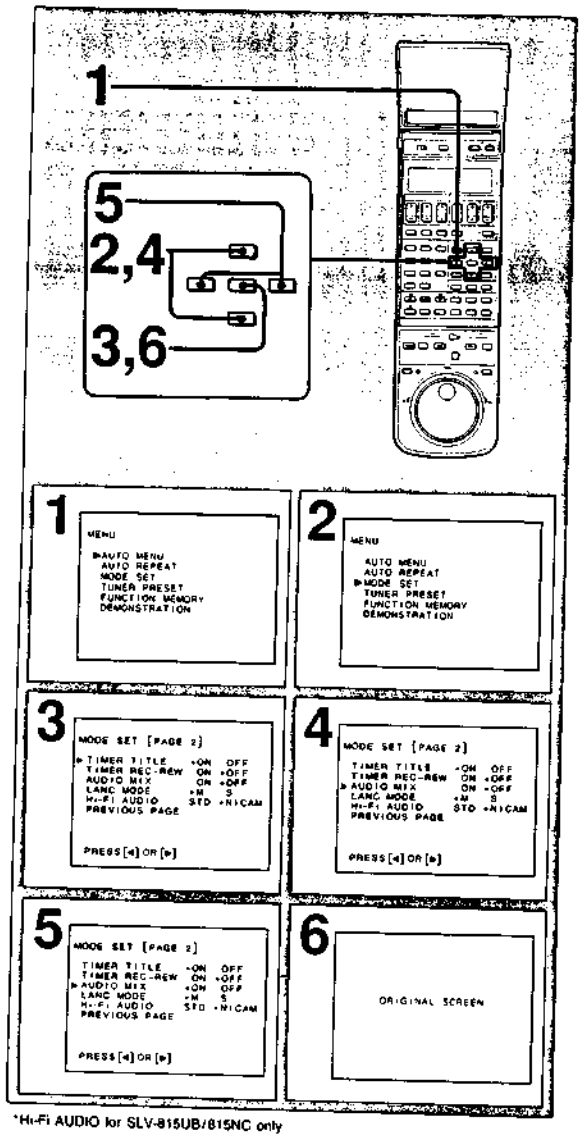


Listening to a Stereo or Bilingual Tape

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).



*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.

1 **Press MENU in the stop mode.**
The main MENU appears.

2 **Move cursor with ▲ or ▼ to MODE SET.**

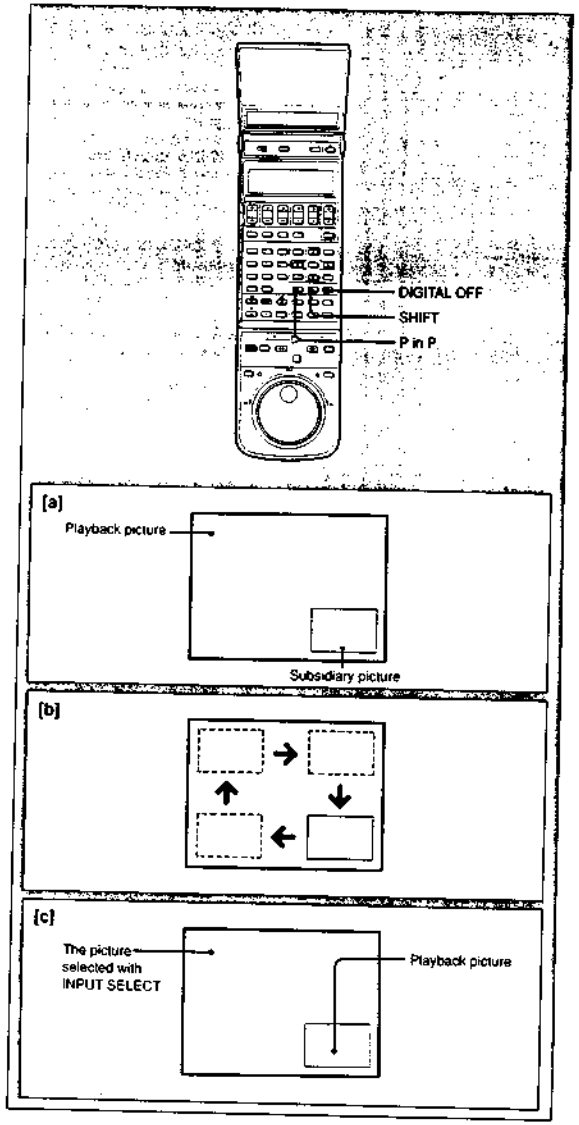
3 **Press EXE.**
If the MODE SET [PAGE 1] menu appears, move cursor with ▲ or ▼ to NEXT PAGE and press EXE
The MODE SET [PAGE 2] menu appears.

4 **Move cursor with ▲ or ▼ to AUDIO MIX.**

5 **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.

6 **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

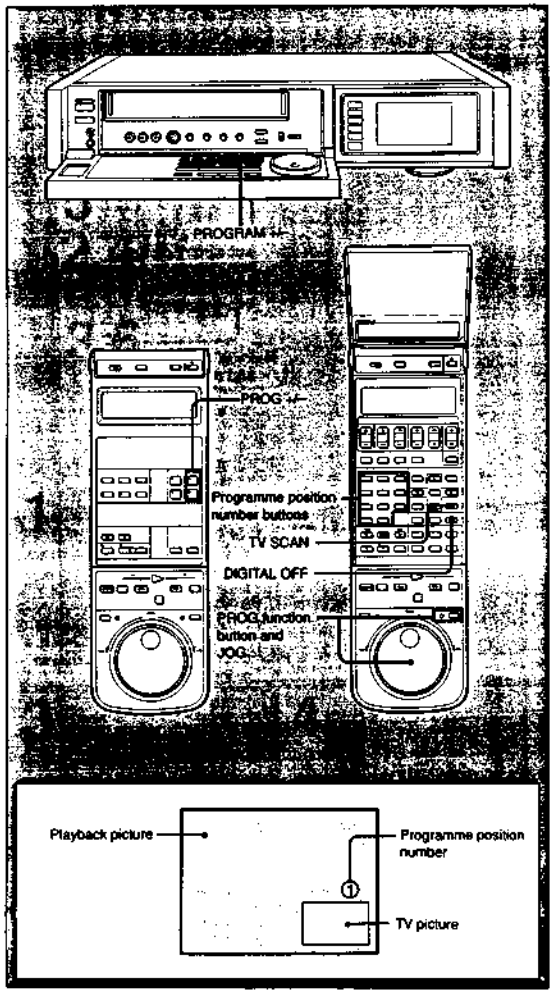
Press P in P during playback.
The subsidiary picture selected with INPUT SELECT will appear on the TV screen
See illustration (a).
- If TUNER mode is selected with INPUT SELECT, you can watch the TV picture on the subsidiary screen.

■ **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.



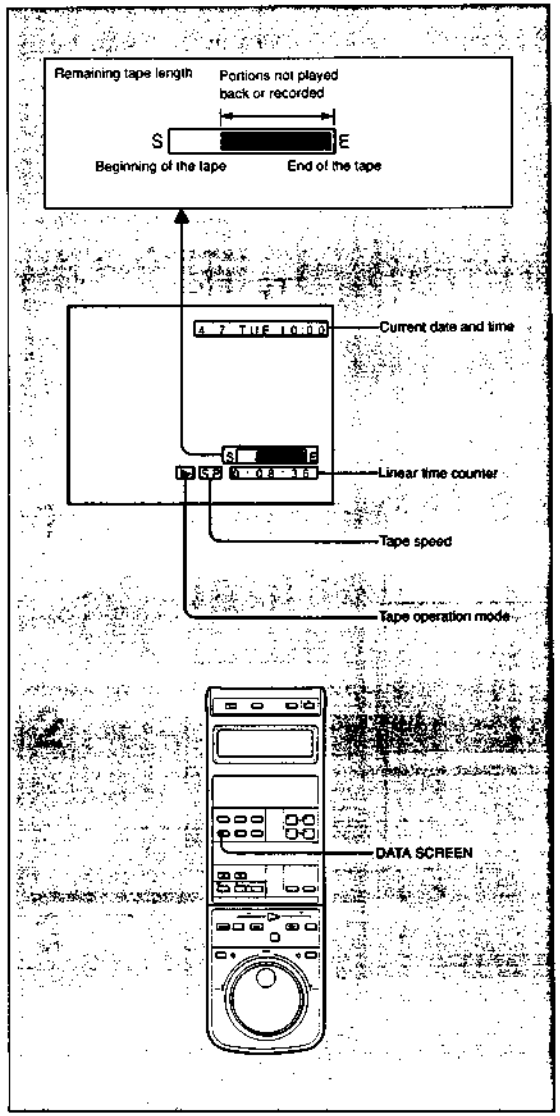
Watching TV Programmes in Succession — TV SCAN

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

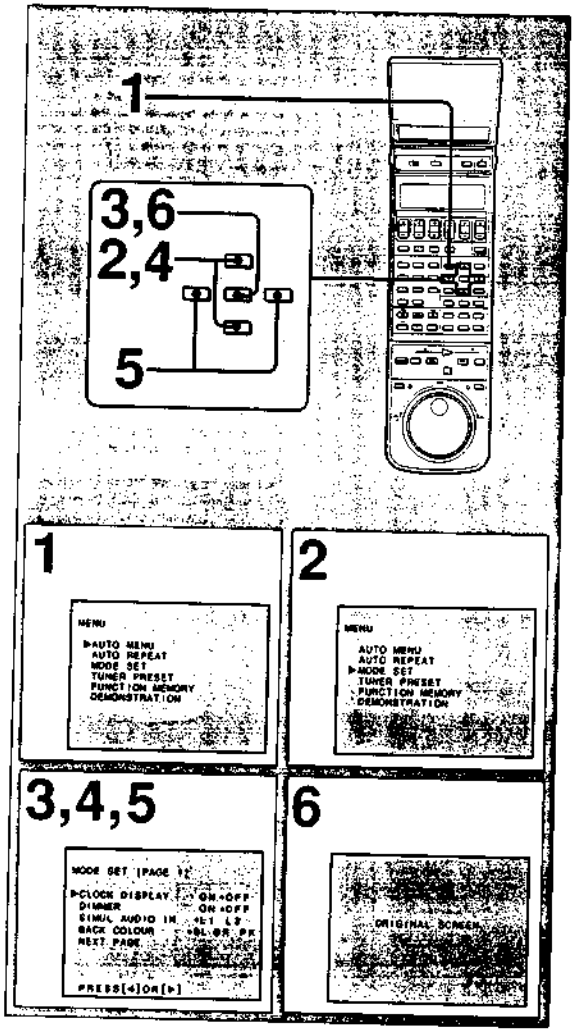
Data screen information illustrated on the left will automatically appear on the screen during playback or recording as a reference. Note, however, that the data screen will not be displayed in the following cases:

- 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.



To Erase the Current Date and Time from the Date Screen

1 **Press MENU**
The main MENU appears.

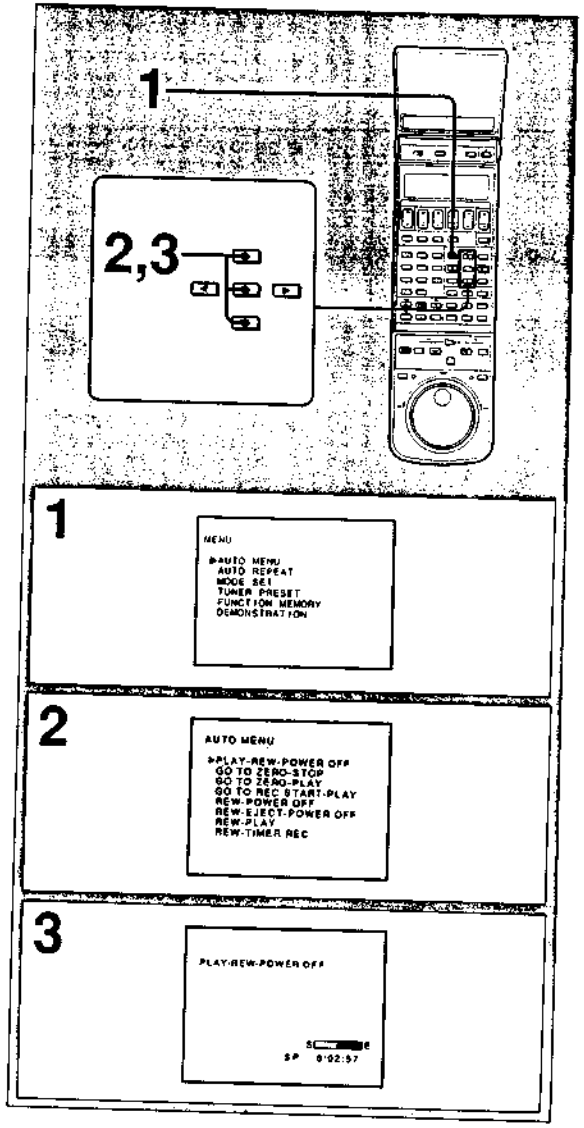
2 **Move cursor with ▲ or ▼ to MODE SET.**

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.

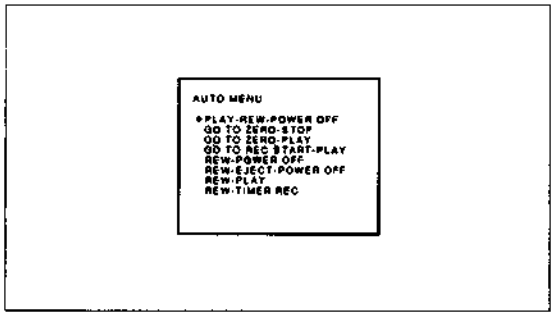
1 **Press MENU while the VTR is in the stop mode.**
The main MENU appears.

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.

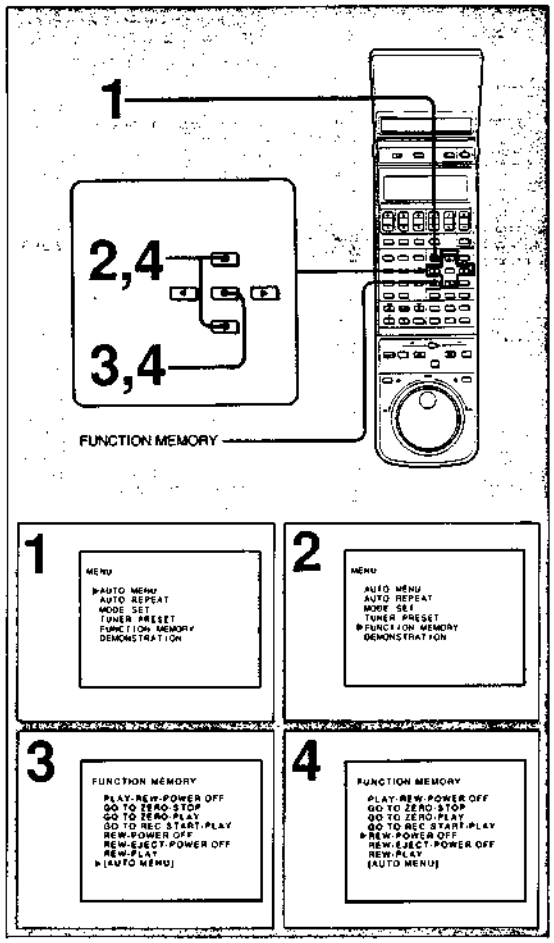
Note on AUTO MENU operation
AUTO MENU cannot be operated if there is no cassette installed or if the VTR is in modes other than stop mode. A short beep alerts you if the AUTO MENU is not operable.

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.



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.

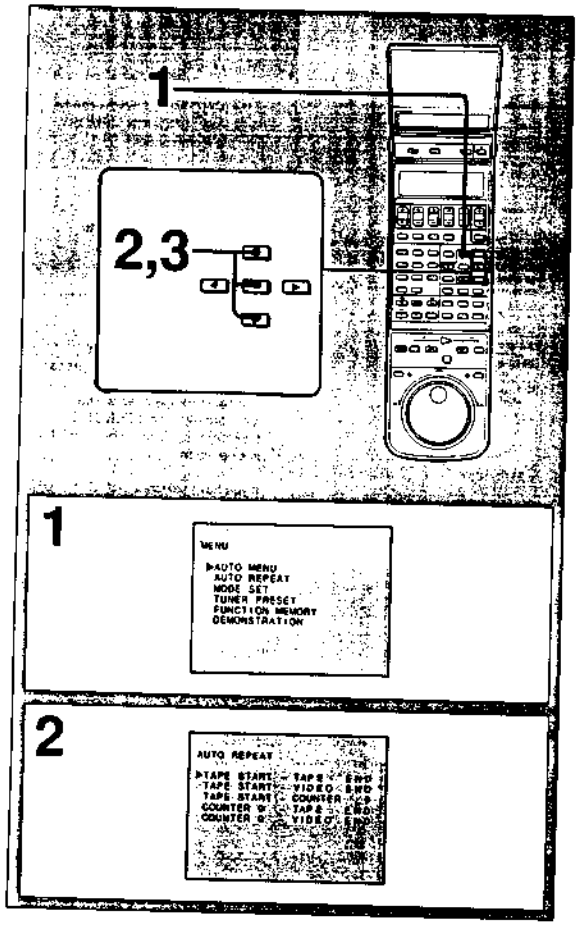
1 **Press MENU.**
The main MENU appears.

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.



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.

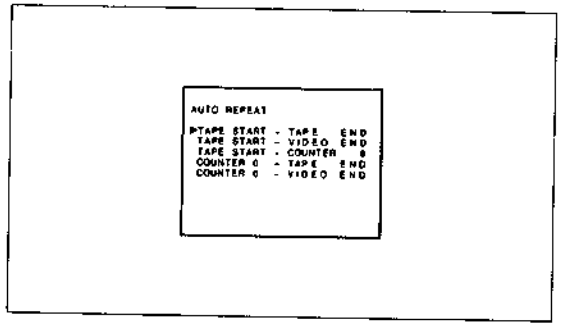
1 **Press MENU while the VTR is in the stop mode.**
The main MENU appears.

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.



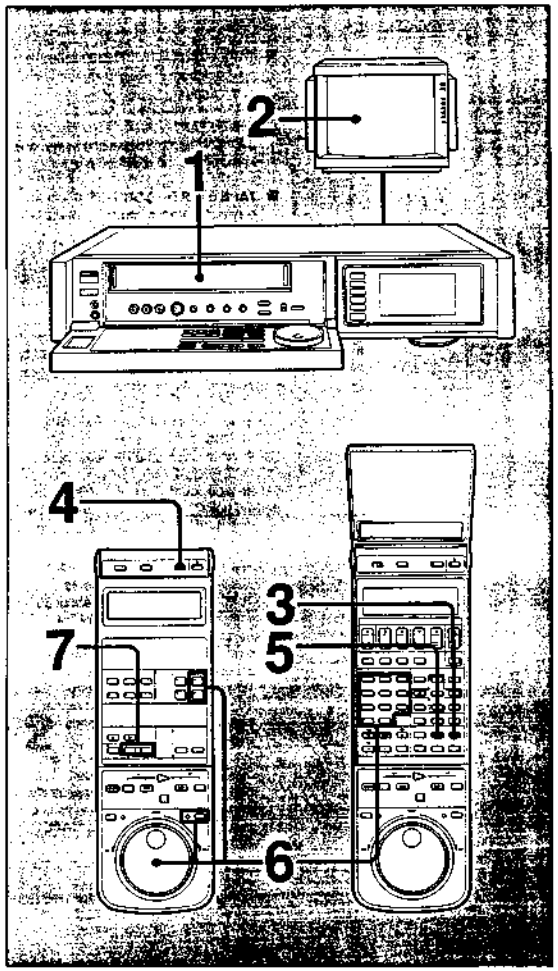
Auto Repeat Menu

- **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.**

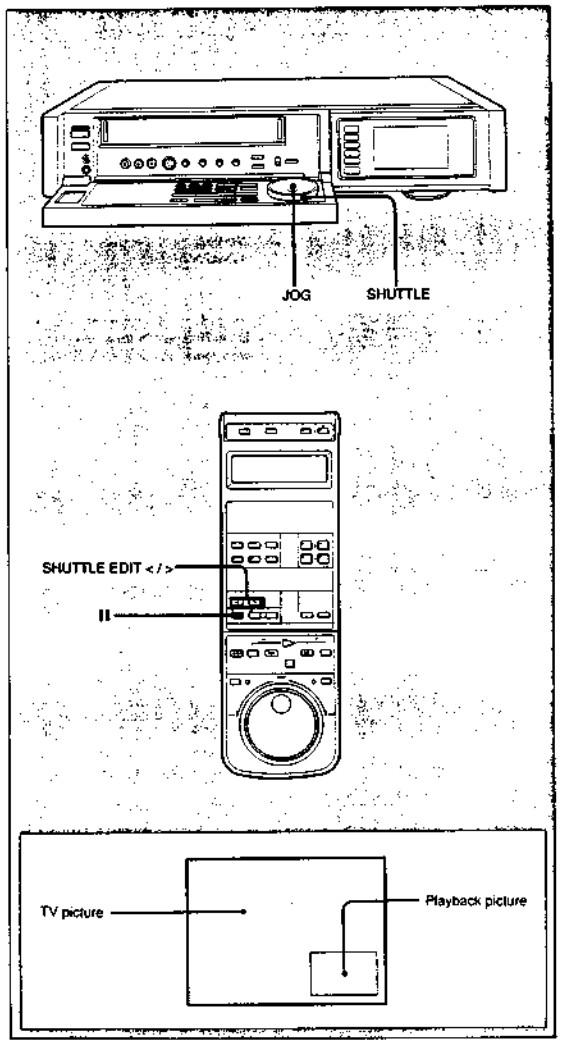
4 **Press TV/VTR so that the VTR indicator lights in the display window.**
(Only when connection is made via EURO-AV (LINE 1).)

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.**

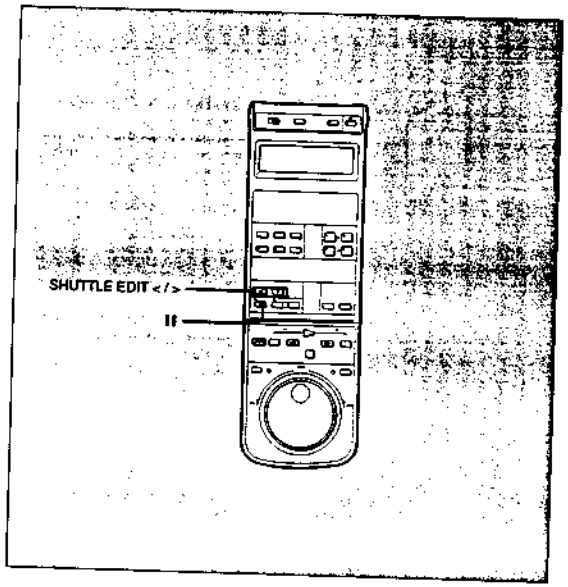
2 **Locate the point where you wish to continue recording using JOG/SHUTTLE on the VTR or SHUTTLE EDIT on the Commander.**
The unit will enter the P in P mode and the playback picture will be displayed on the subsidiary screen.
(For details on the operation, see below.)

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 turnig 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



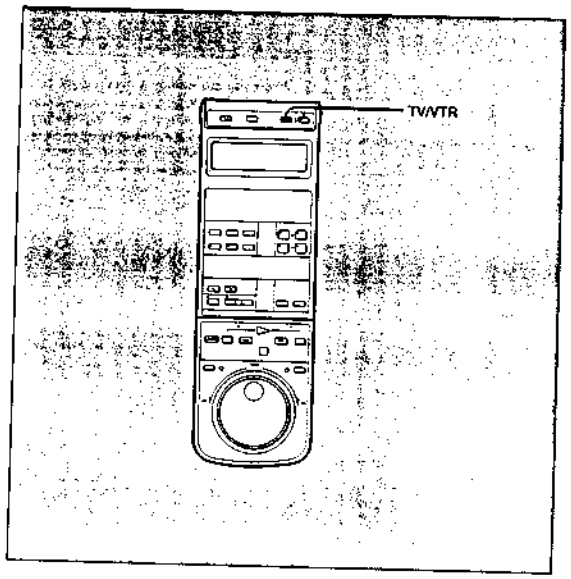
■ **How to use the SHUTTLE EDIT buttons on the Commander**

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 II 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.

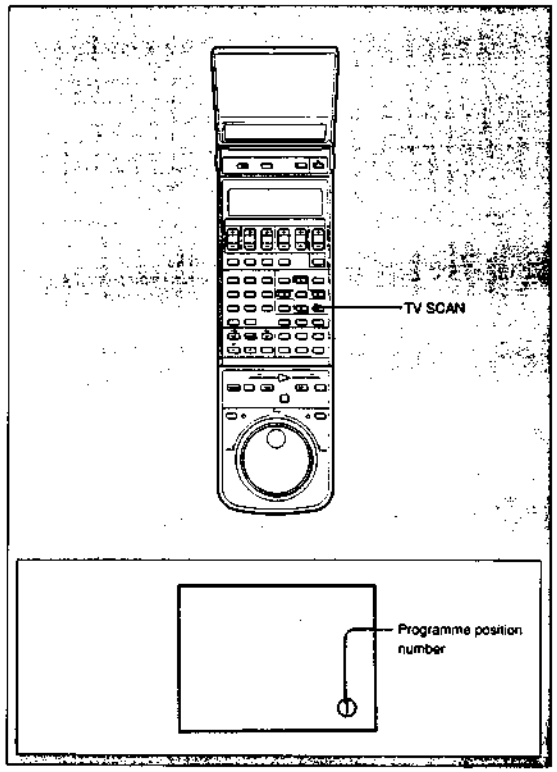
■ **If VTR-TV connection is made using the LINE OUT VIDEO/ AUDIO jacks**

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**

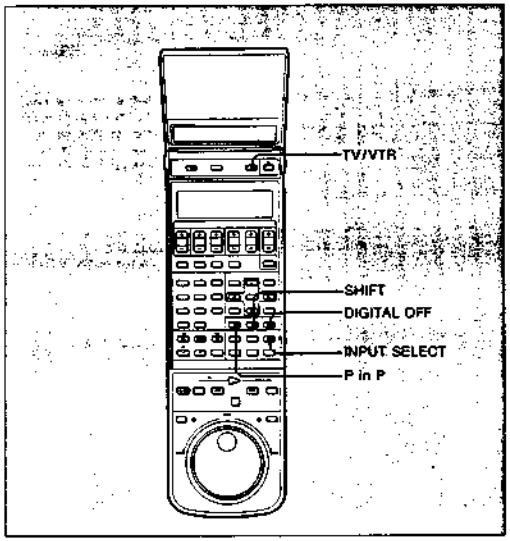
Change the programme position on the TV.

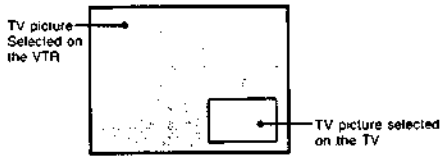
Recording TV Programmes



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.**

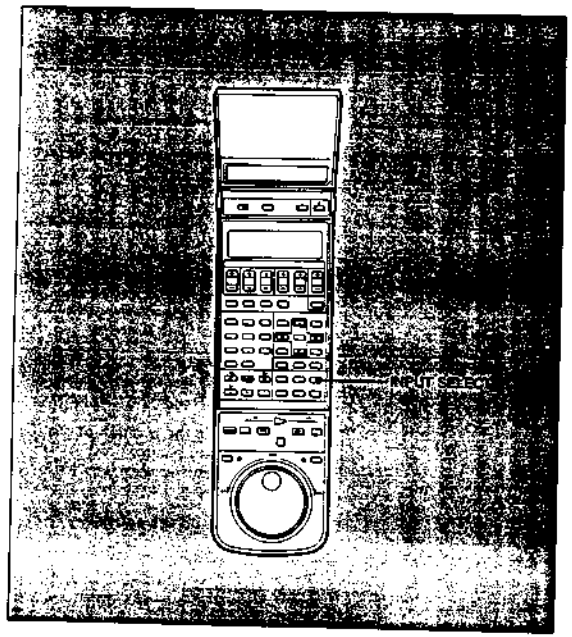
2 **Press TV/VTR to turn on the VTR indicator.**
The TV programme selected on the VTR appears on the screen.

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)

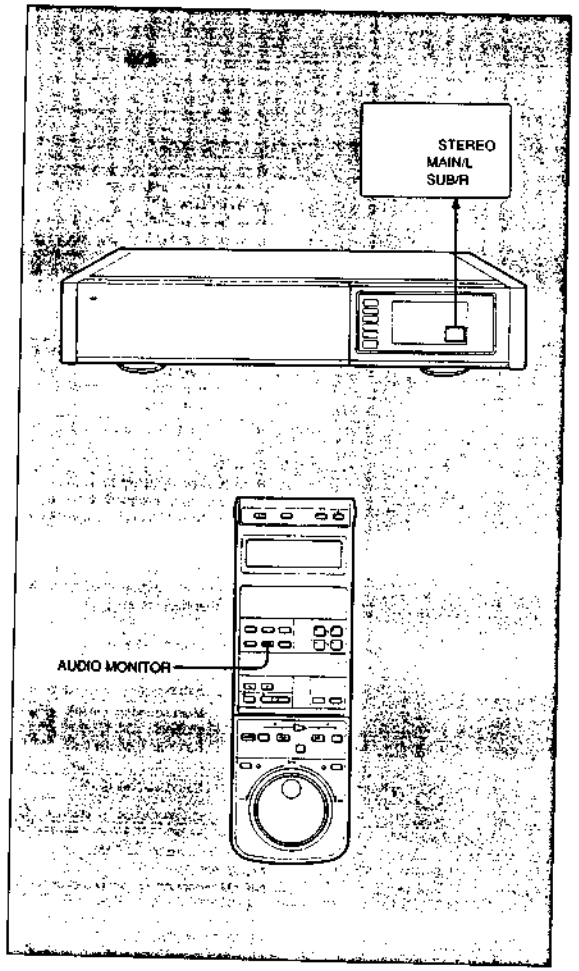
Main screen	TV programme selected on the TV
Subsidiary screen	TV programme selected on the VTR

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.

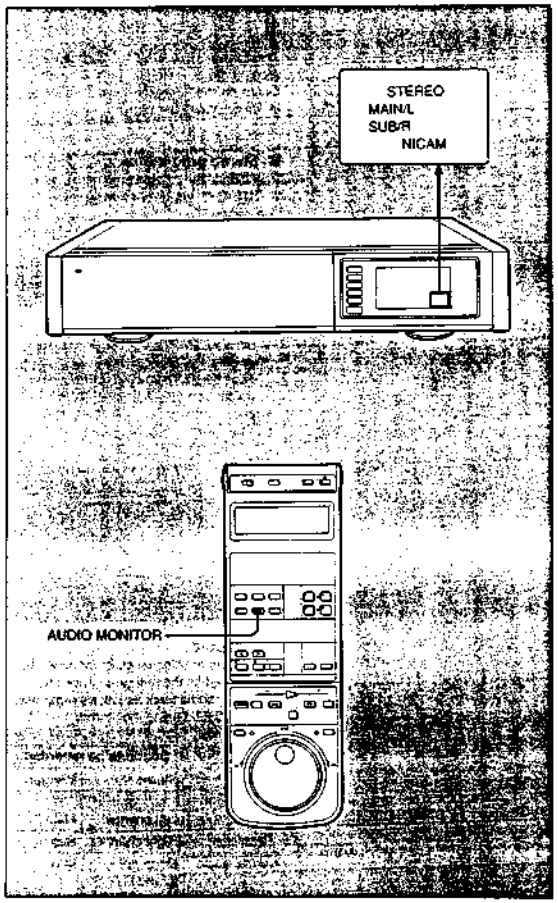
■ **Bilingual programme**
When a bilingual programme is received, MAIN/L appears in the display window.
Press the AUDIO MONITOR button repeatedly until the desired sound is heard. The sound is selected cyclically in the order as follows:

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

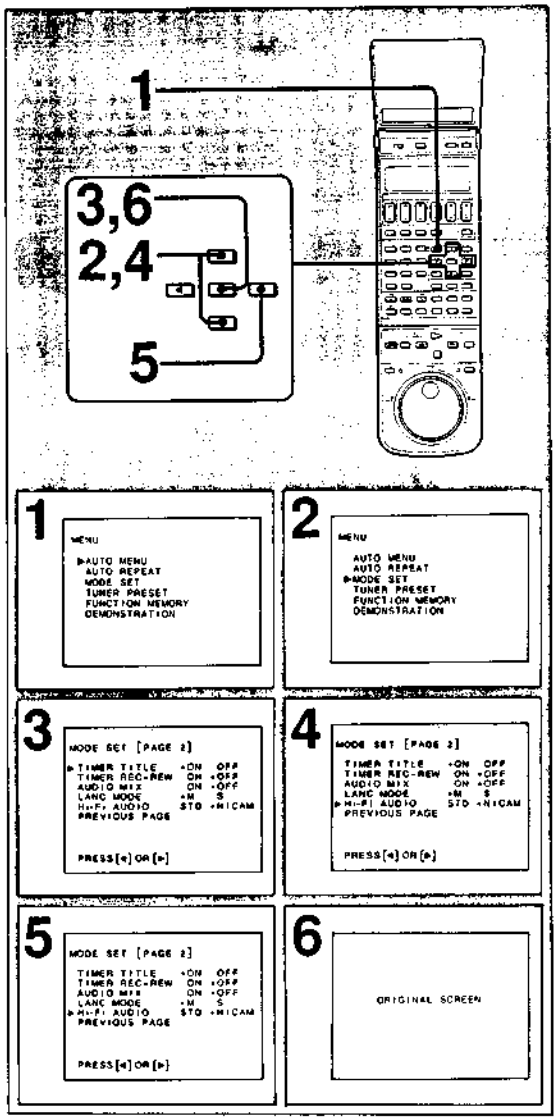
■ **Bilingual programme**

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.

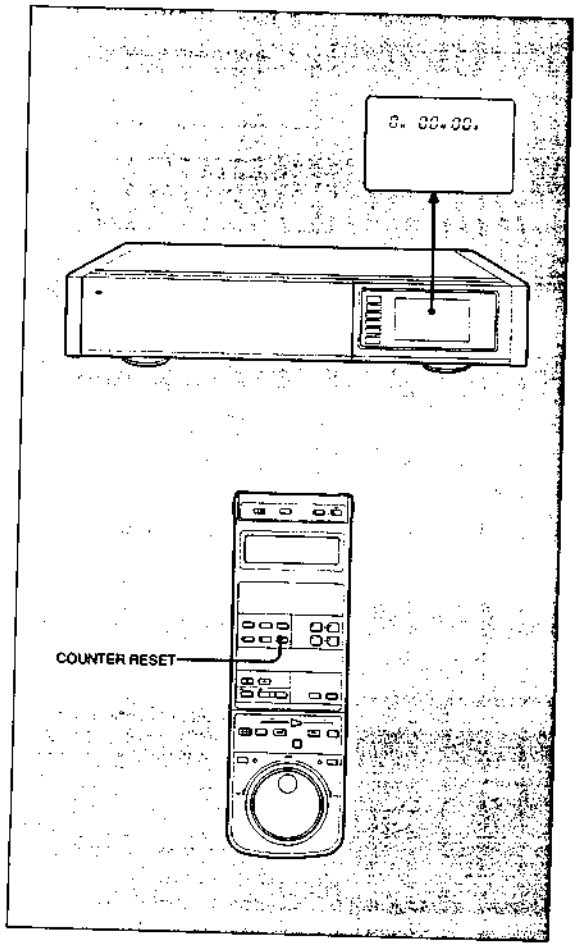
Track	Sound to be recorded	
	Stereo	Bilingual
Hi-fi video		
Left channel	Left channel	Main
Right channel	Right channel	Sub
Normal audio	Standard	Standard

• 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**

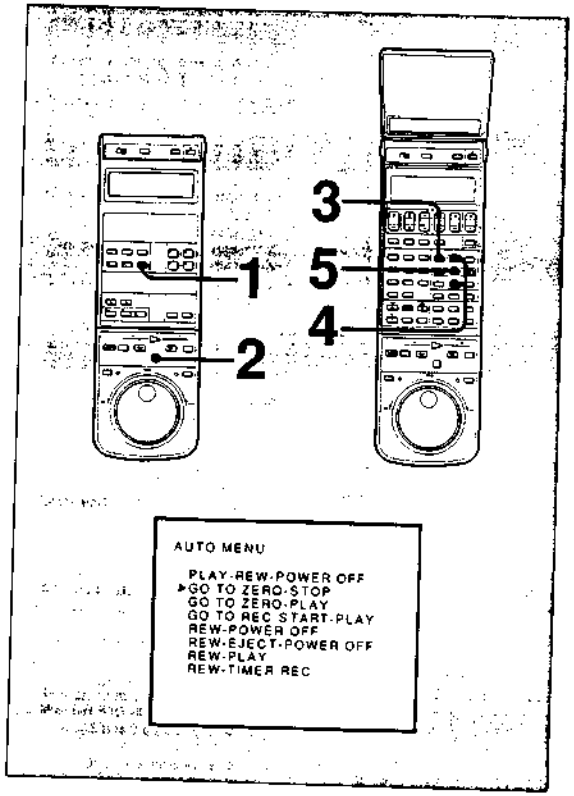
Follow the operations above and set Hi-Fi AUDIO to STD in step 5.
The standard sound will be recorded on the left and right channels of the hi-fi video track and the normal audio track.

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.

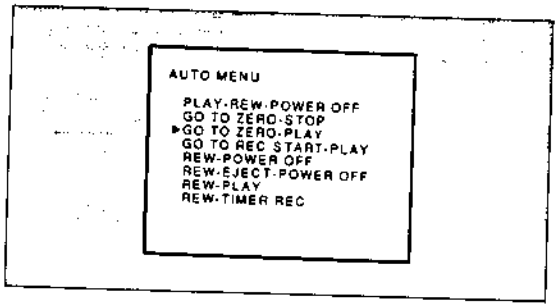
1 **Press COUNTER RESET at the desired scene during recording or playback.**

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

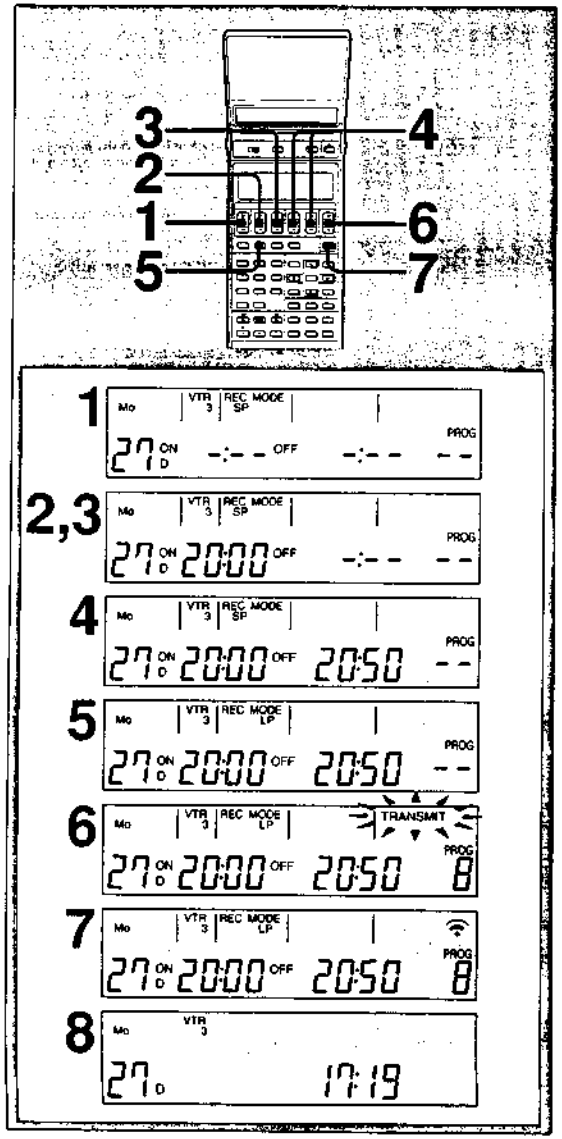
The VTR will even search and start playback from the counter zero position after recording or playback.

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.**

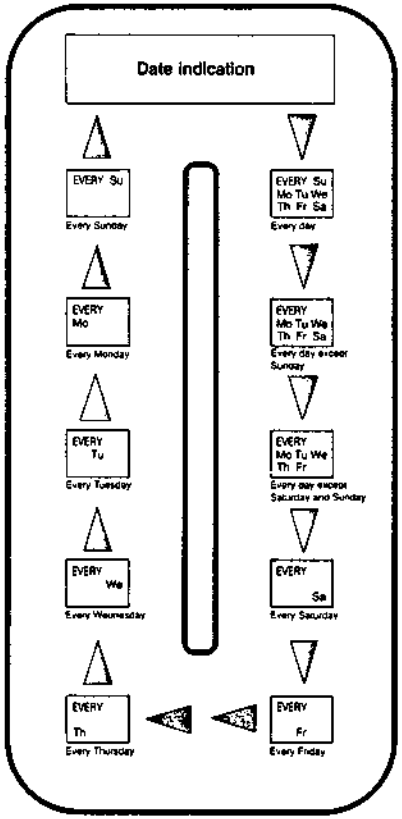
4 **Set the recording end hour and minute with TURN OFF H and M referring to step 2 and 3.**

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.

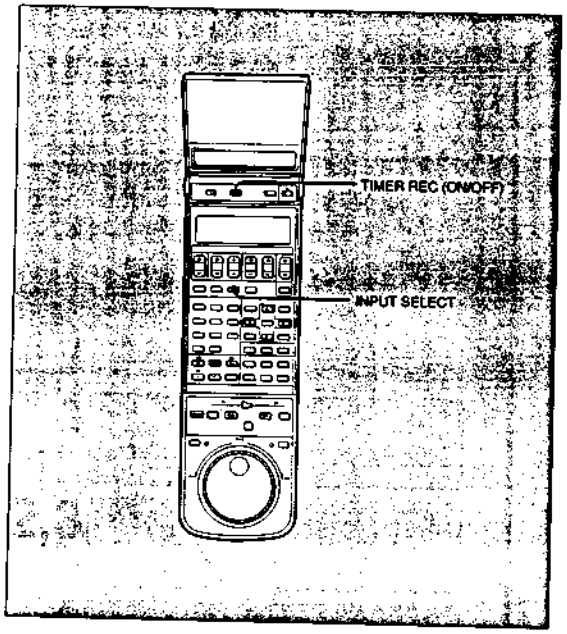
8 **Close the cover of the Commander so that the present time appears on the LCD.**
The VTR turns on, starts recording at the selected time, and turns off after recording ends.



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.



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

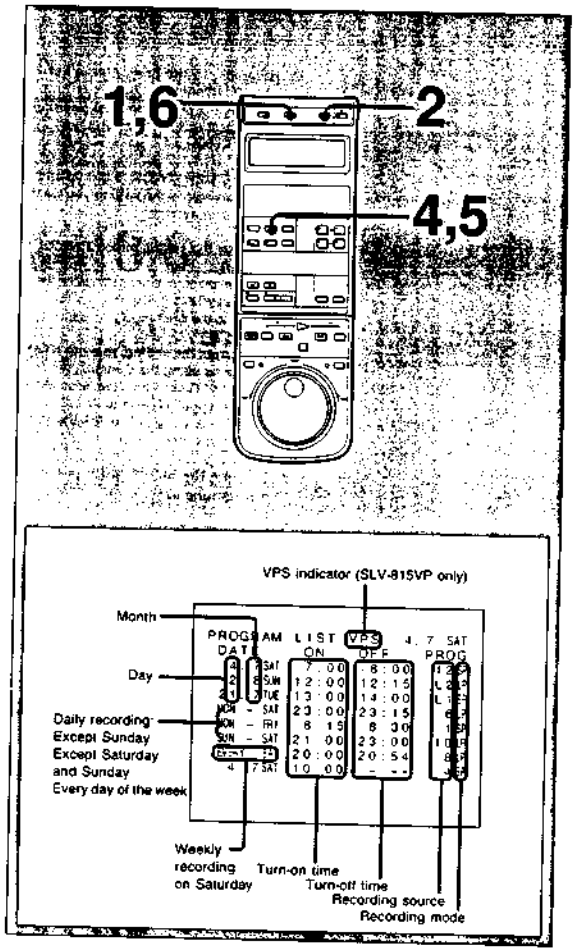
- No cassette is inserted.
- An illogical setting has been made.
- Timer setting can only be performed when the VTR is in turned off, stop, or timer recording mode.
- Eight timer settings have already been made.
- The tape is at its end.

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

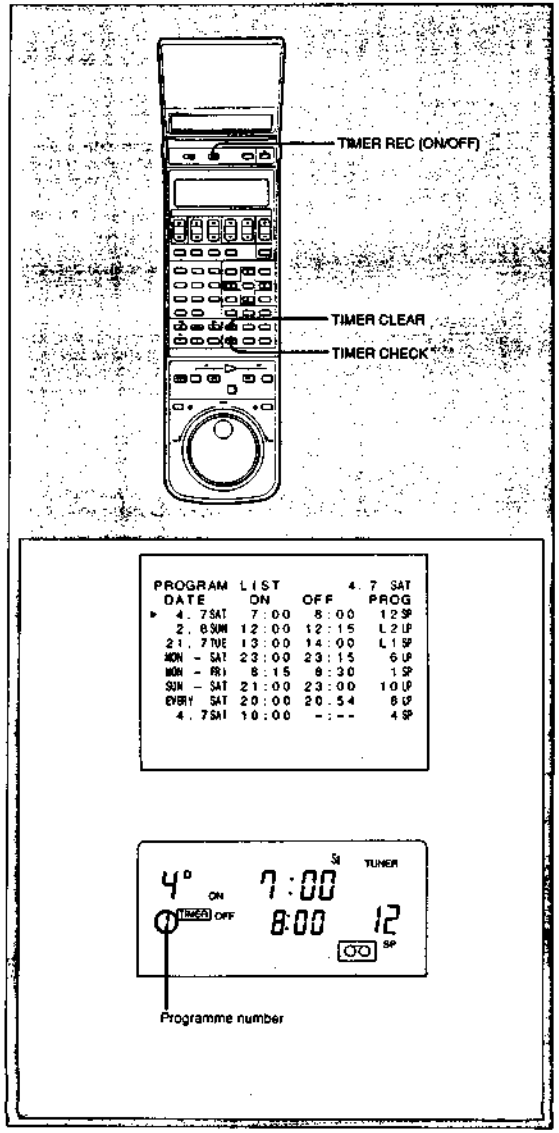
The timer settings can be checked while the VTR is in the timer recording standby mode by displaying the programme list on the TV screen.

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



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.

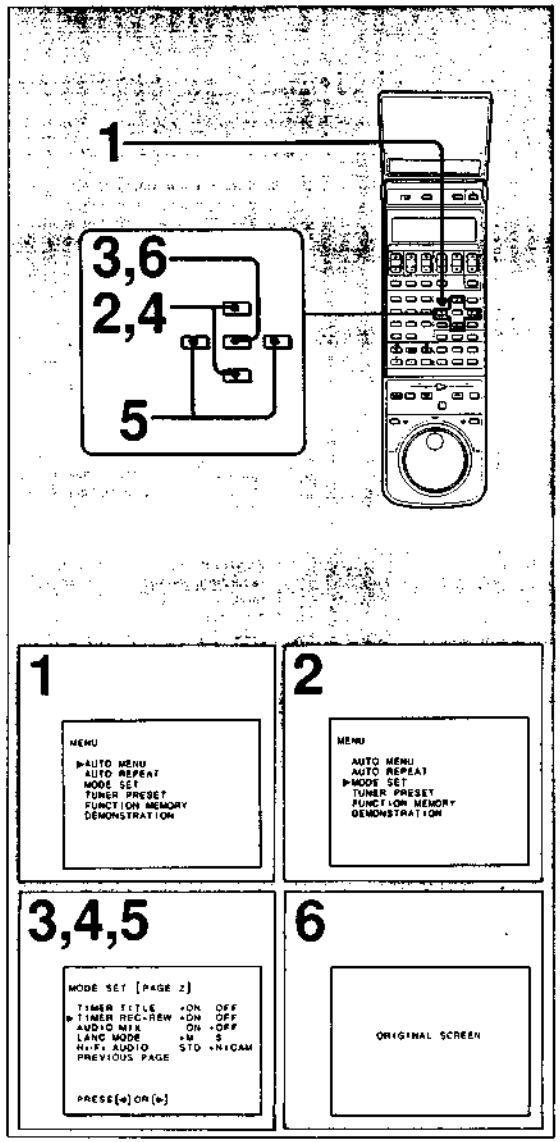
■ **Clearing the setting without the programme list**

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.**



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

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.**

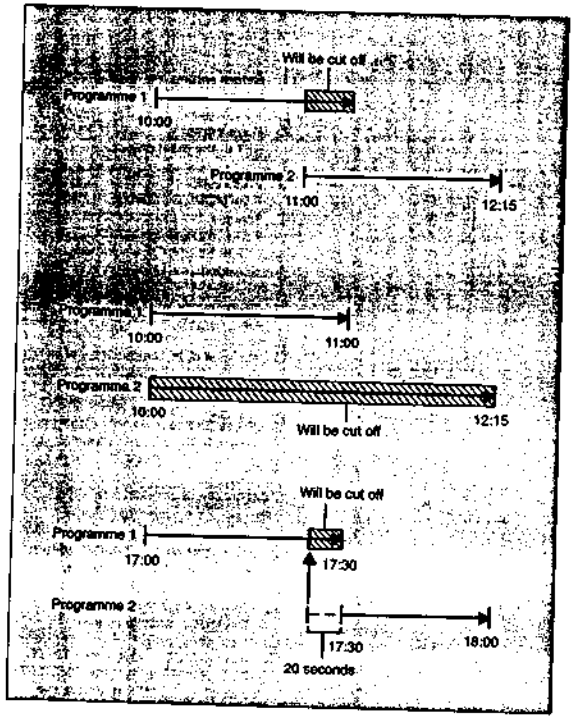
Using the VTR during Timer Recording Standby Mode

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 proceeding programme ends.

■ **If the turn-on time of two programmes are the same**

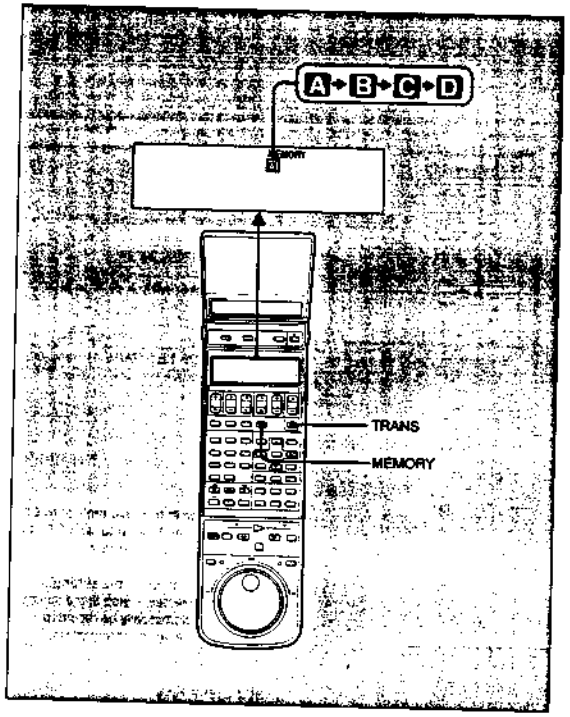
The VTR will record the programme with the smaller programme number or listed first on the programme list. The programme with the larger programme number or listed lower in the list will be erased.

■ **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.

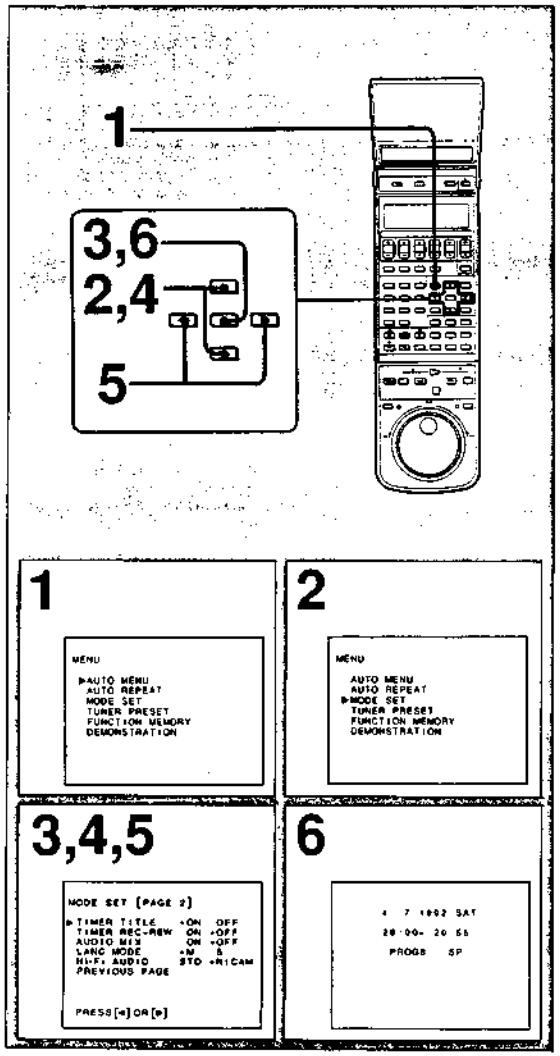
■ **Recalling and re-entering the items**

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-815UB/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.**

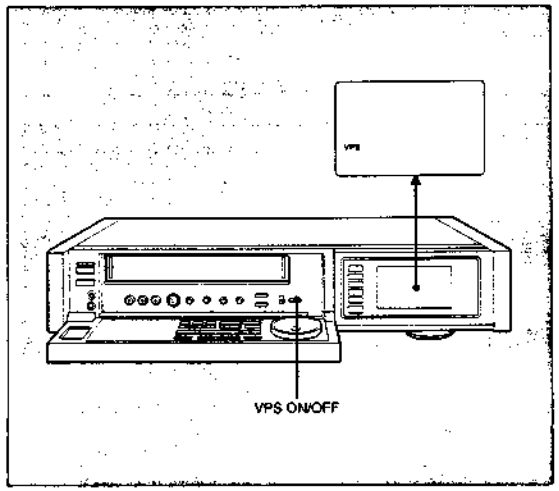
3 **Press EXE.**
If the MODE SET [PAGE 1] menu appears, move cursor with ▲ or ▼ to NEXT PAGE and press EXE. The MODE SET [PAGE 2] menu is displayed.

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

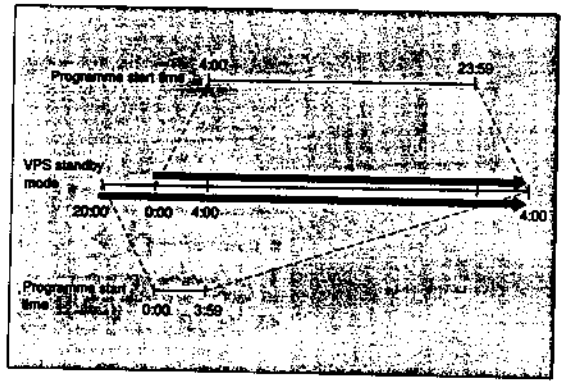
1 **Check whether VPS is transmitted with the programme to be recorded.**

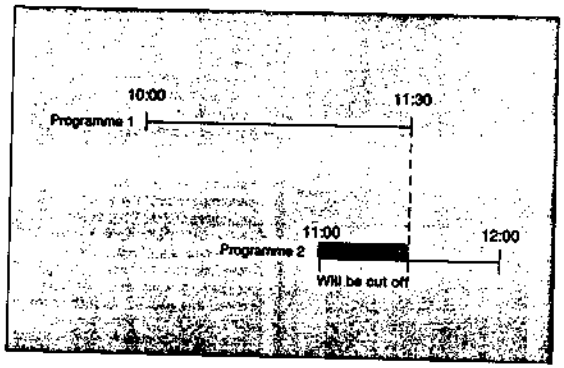
2 **Press VPS ON/OFF so that the VPS indicator lights in the display window.**

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.

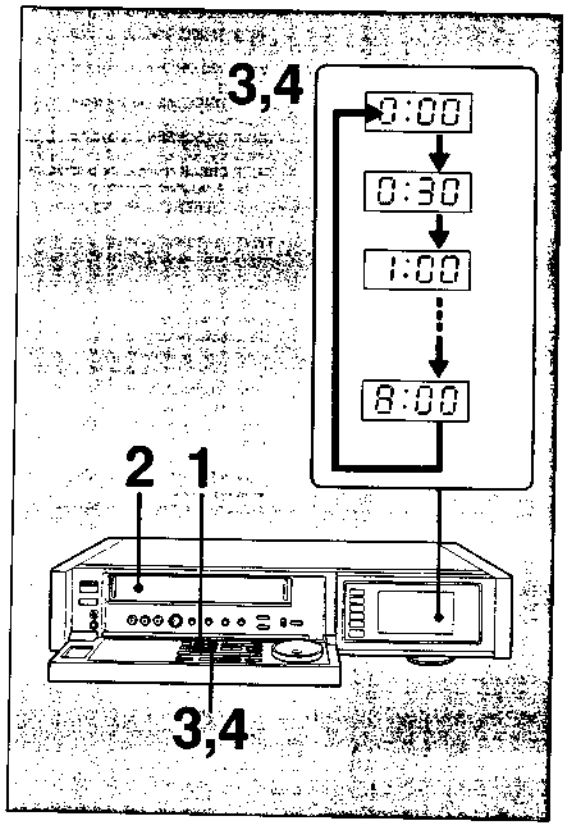
When the VPS timer recording is set for a programme which is expected to start between 4:00 and 23:59, the VTR will enter the standby mode at 0:00 that day and will keep on waiting for the VPS signal until 4:00 of the next day.

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.**

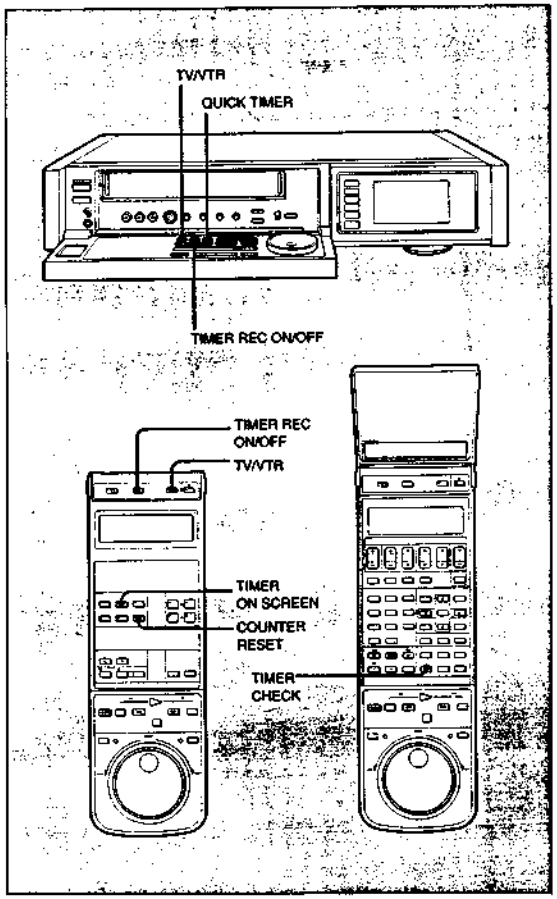
2 **Insert a cassette.**

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



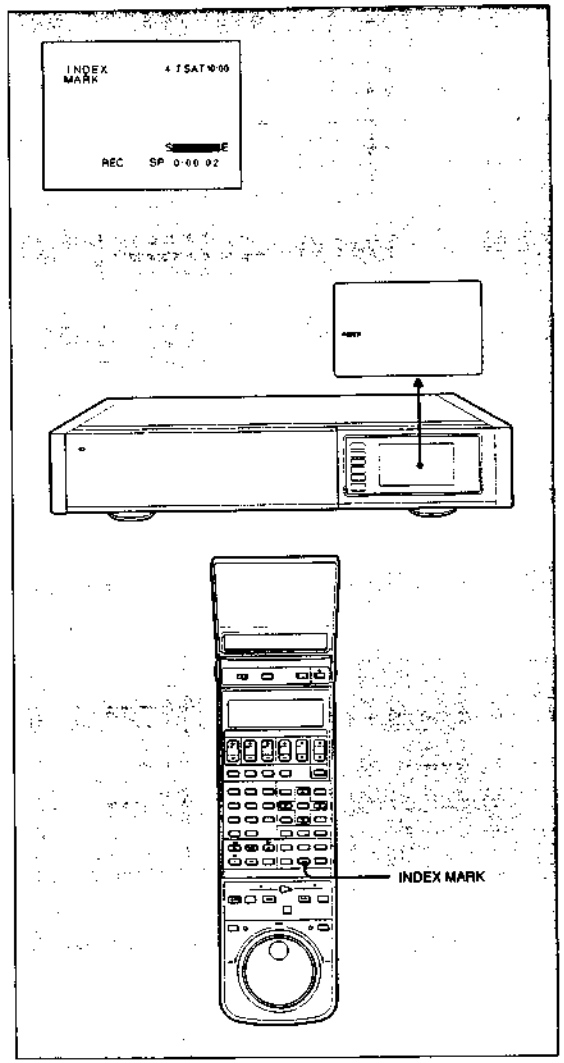
■ **Buttons operable during quick timer recording**

- **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.

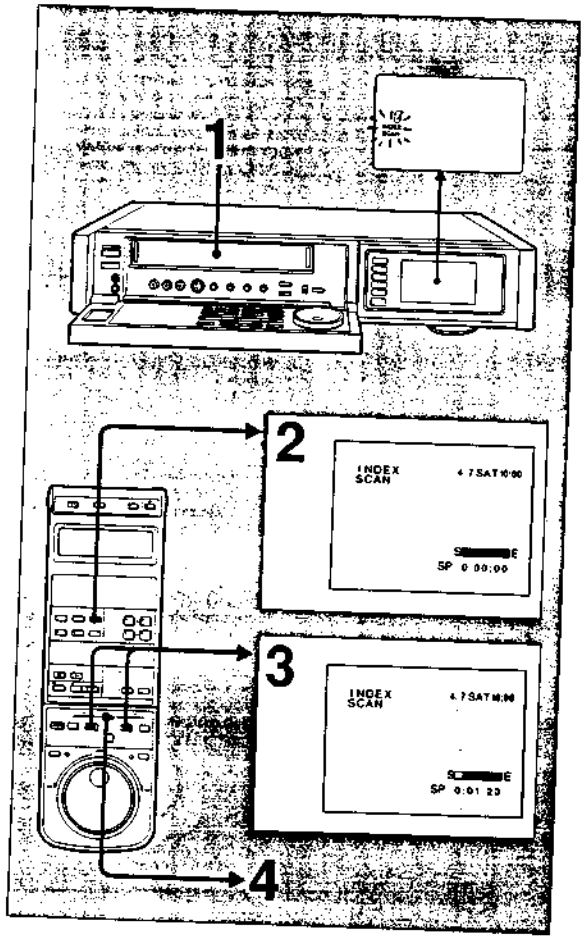
■ **Automatic index mark**
An index signal is automatically marked on the tape when the VTR starts recording.

■ **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



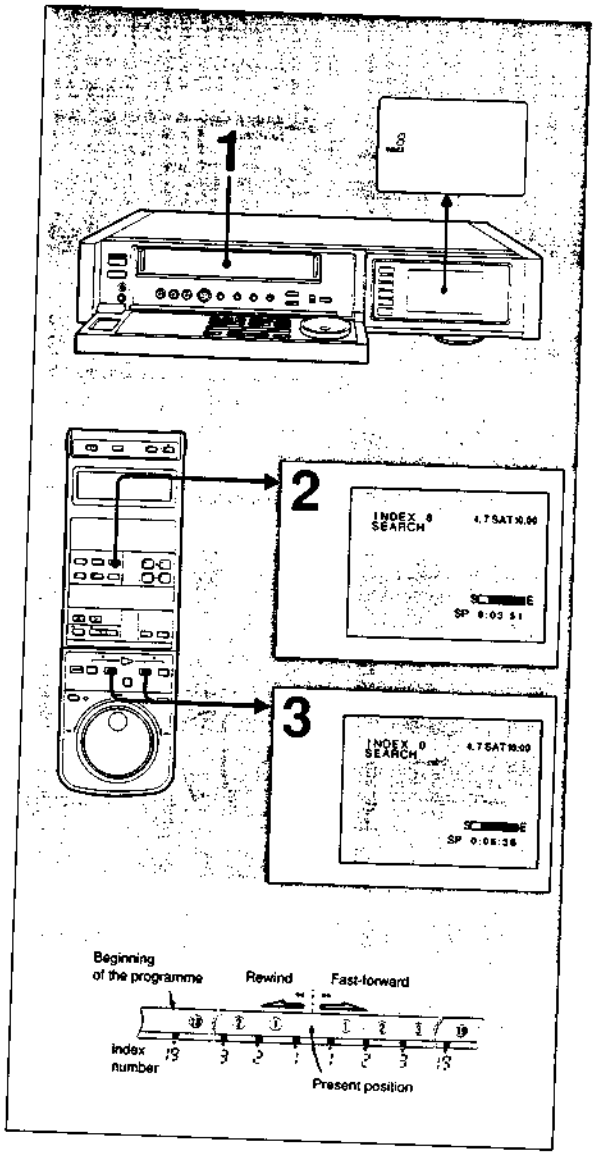
Playing Back from the Index Point — INDEX SCAN

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.

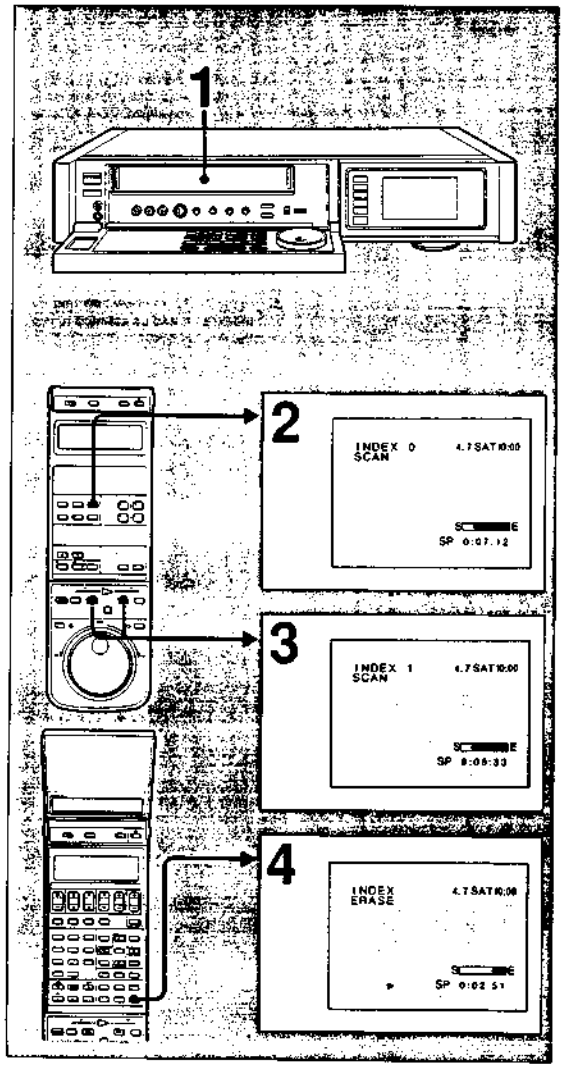
1 **Insert a cassette with index signals marked.**

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.

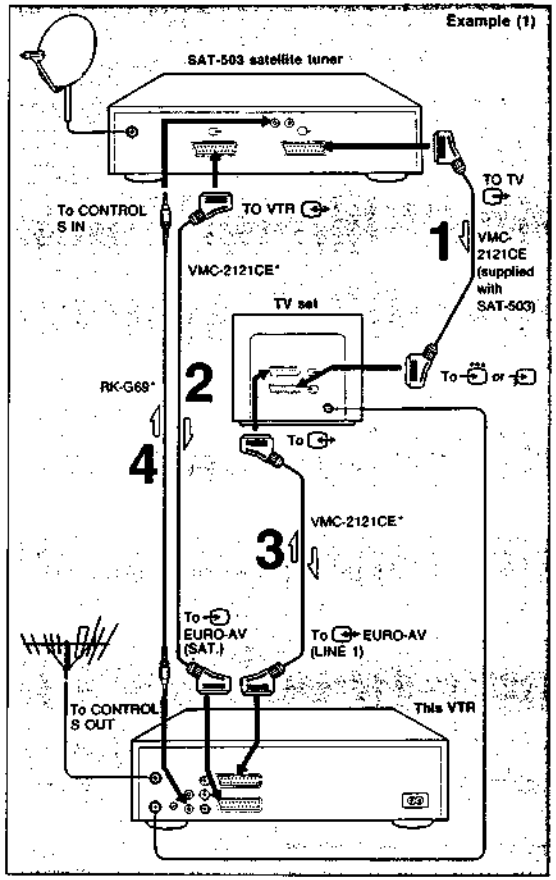
1 **Insert a cassette with index signals marked.**

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 ⊖ connector on the rear of the SAT-503 to the ⊖ or ⊖ connector on the rear of the TV set with the 21-pin connecting cable supplied using the SAT-503.**

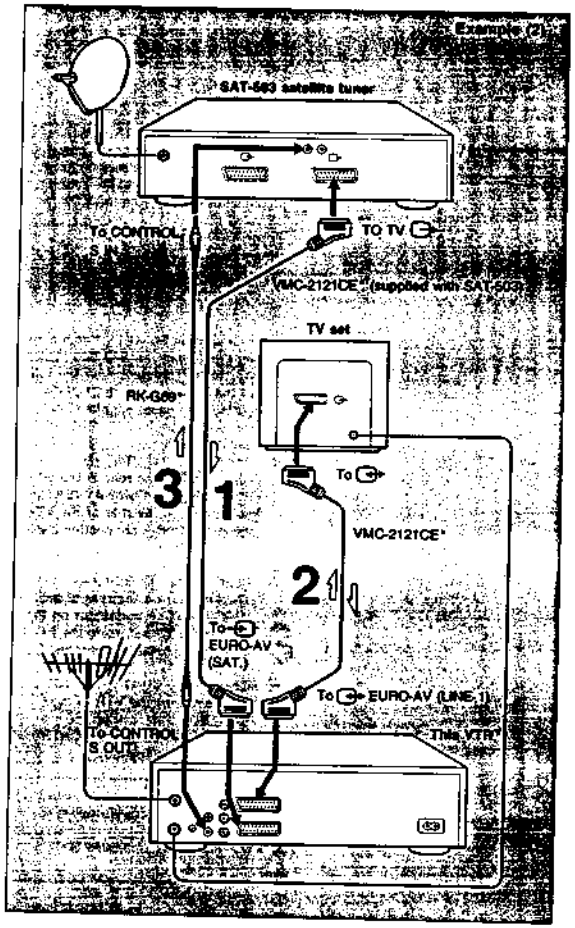
2 **Connect the TO VTR ⊖ connector on the rear of the SAT-503 to the ⊖ EURO-AV (SAT.) connector on the rear of the VTR using the 21-pin connecting cable (not supplied).**

3 **Connect the ⊖ EURO-AV (LINE 1) connector on the rear of the VTR to the ⊖ 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 ⇨ mark indicates the signal flow.

Recording Satellite Programmes



Connection with Sony SAT-503 Satellite Tuner ..... If Your TV Has One 21 Pin SCART Input (Example (2))

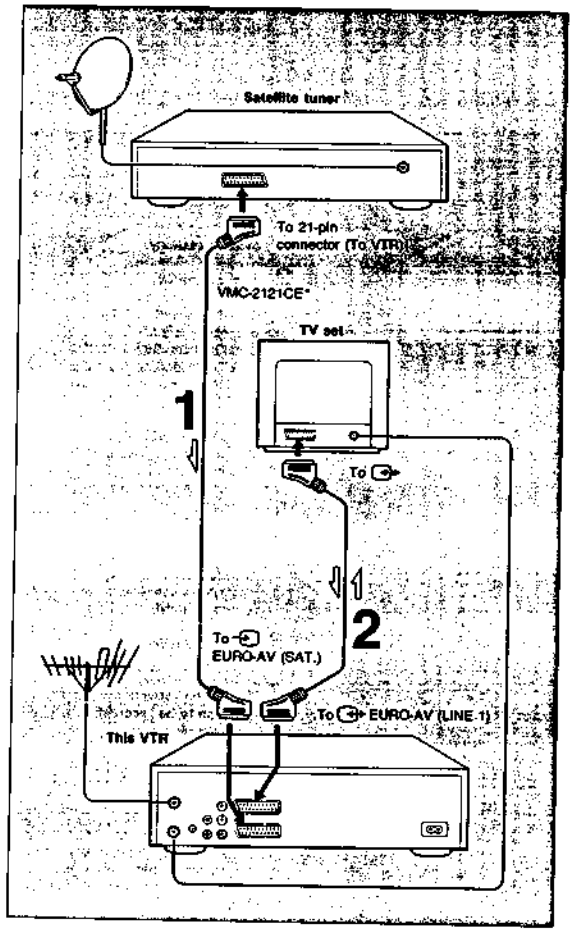
1 Connect the TO TV connector on the rear of the SAT-503 to the EURO-AV (SAT.) connector on the rear of the VTR using the 21-pin connecting cable supplied with the SAT-503.

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).

Notes
- 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.



Connection with a Satellite Tuner Other Than Sony's

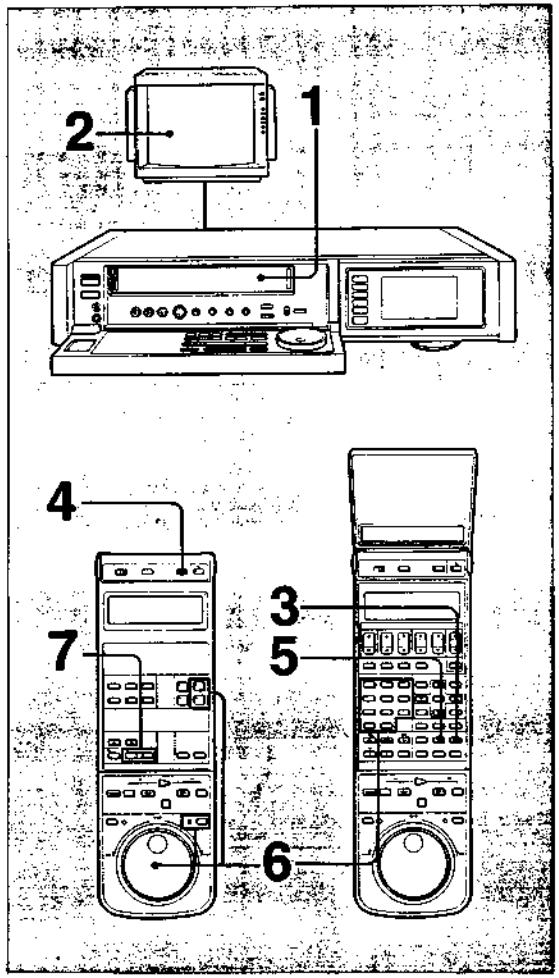
You cannot control the power on/off and channel selection of the satellite tuner directly from the VTR.

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).

Notes
- 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.

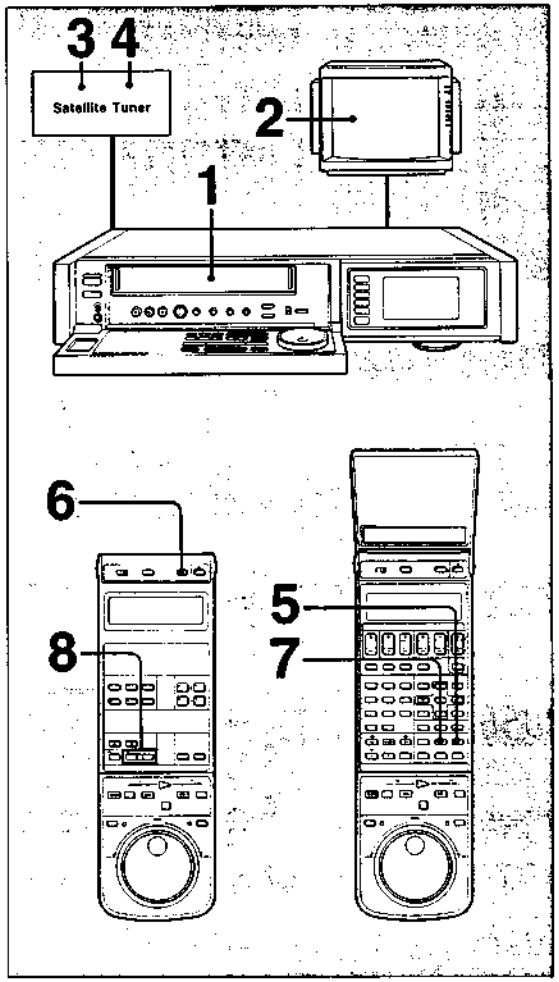
3 **Press INPUT SELECT so that the SAT indicator appears in the display window.**
The satellite tuner turns on automatically

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.**

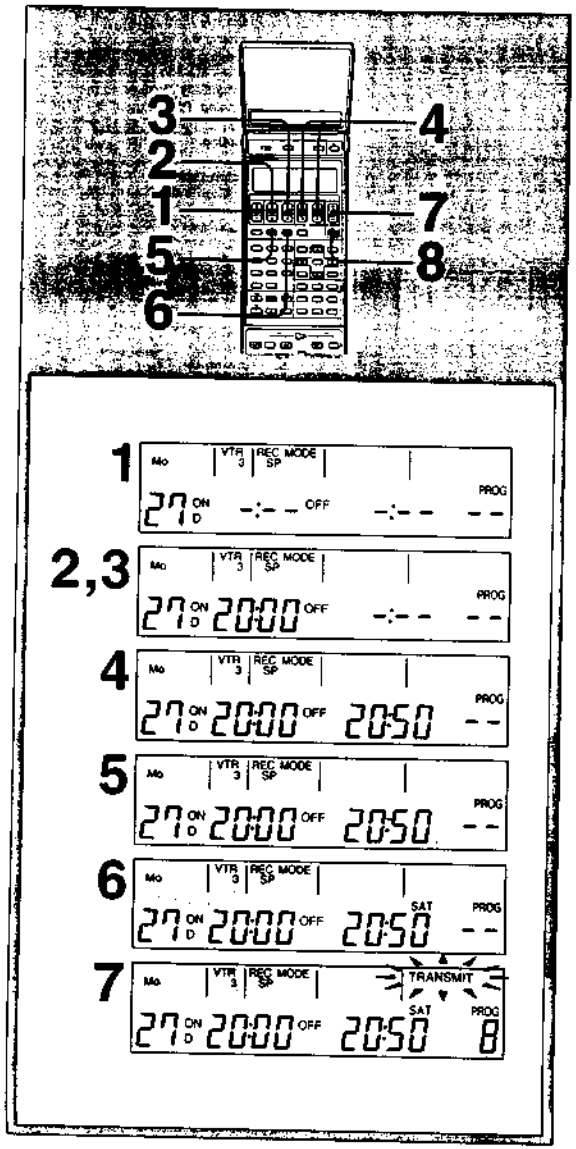
6 **Press TV/VTR so that the VTR indicator lights in the display window.**
(Only when connection is made via EURO-AV (LINE 1).)

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



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.**

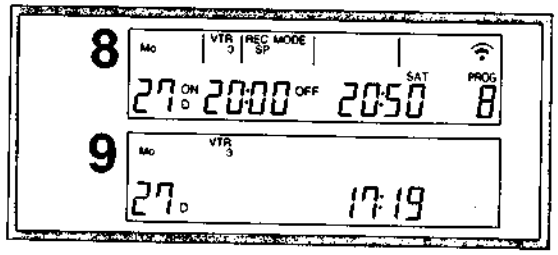
3 **Set the recording start minute with TURN ON M.**

4 **Set the recording end hour and minute with TURN OFF H and M referring to steps 2 and 3.**

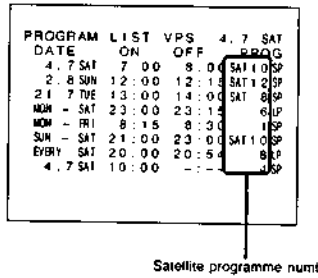
5 **Set the recording speed, SP or LP, with REC MODE.**

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.

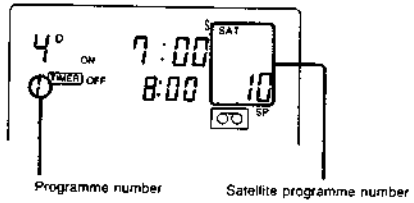


(a) PROGRAM LIST display



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.

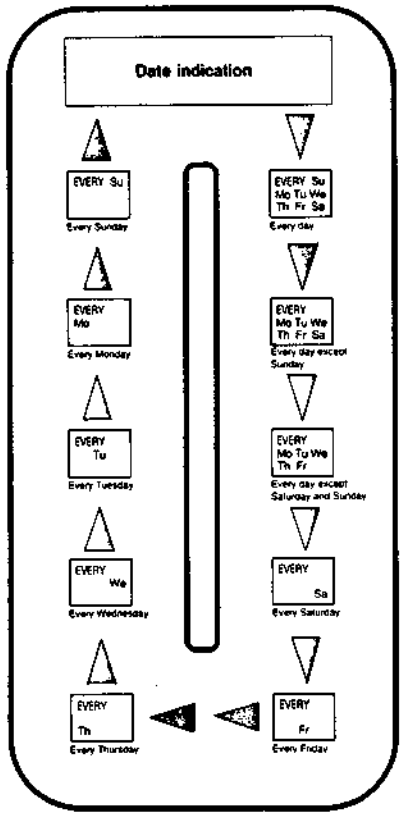
The preselected satellite programmes are displayed on the PROGRAM LIST screen (a) and in the display panel (b) when you want to check the preset timer programmes.

■ 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.

Timer Activated Recording with Sony SAT-503 Satellite Tuner

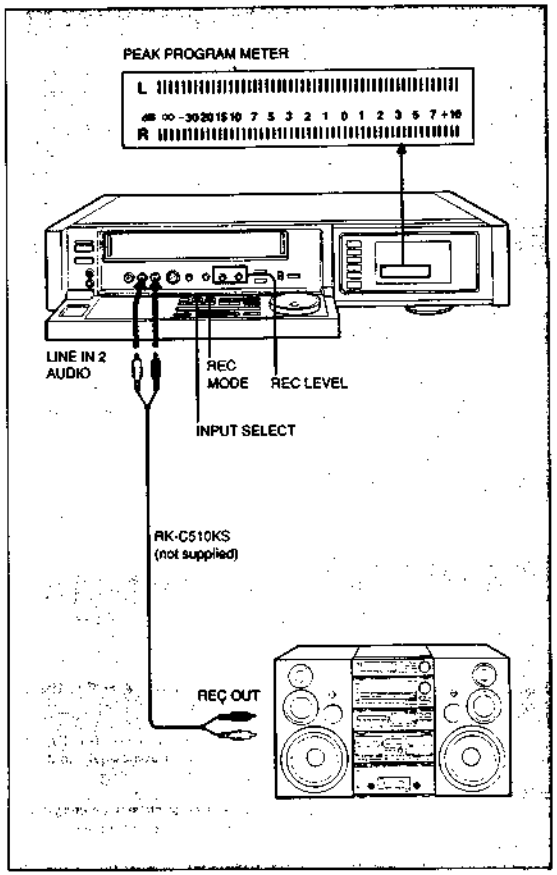


Daily/Weekly Recording

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

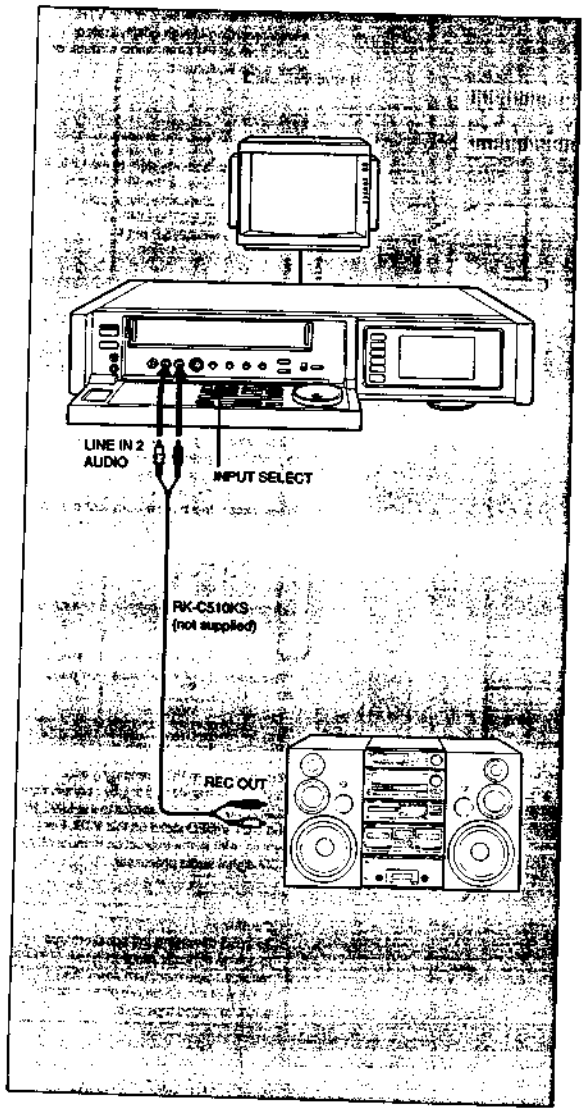
The recording procedure is the same as "Recording TV Programmes" on page 40.

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.**

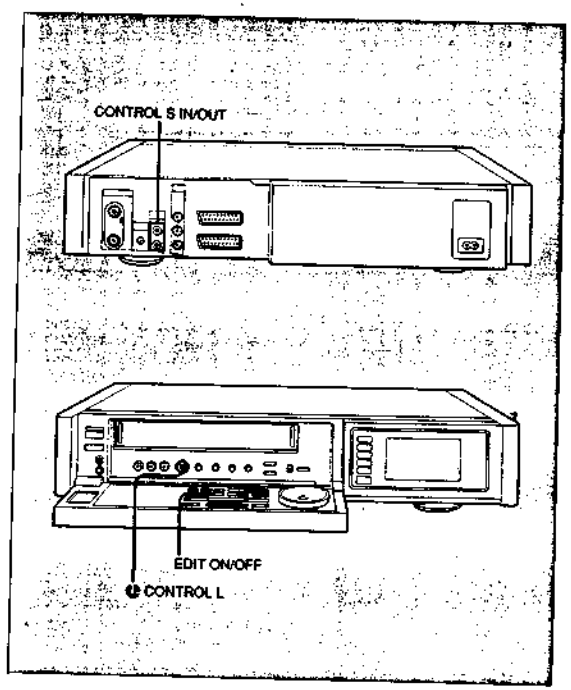
5 **Move the dot with ◀ or ▶ to L1 or L2 to which your audio equipment is connected.**

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.

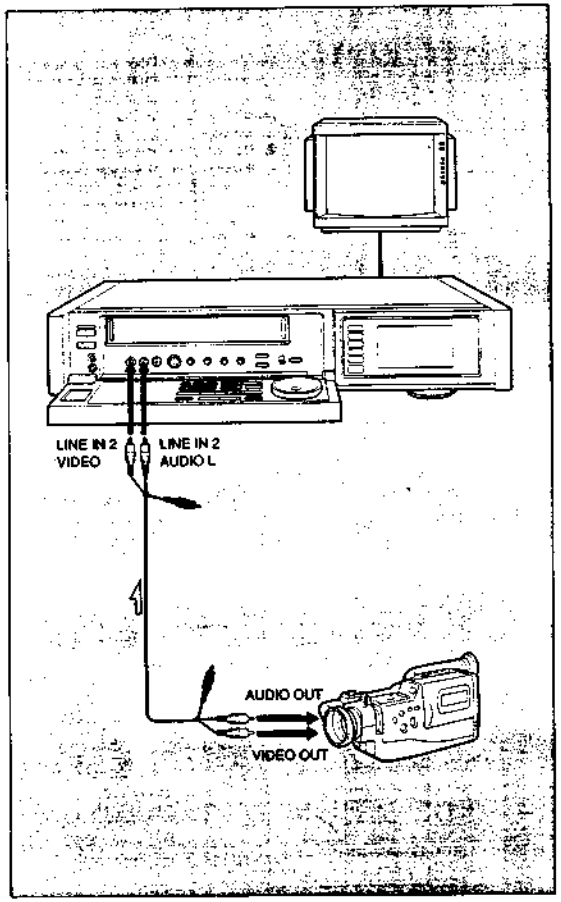
■ **Use of the Sony control terminals**

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

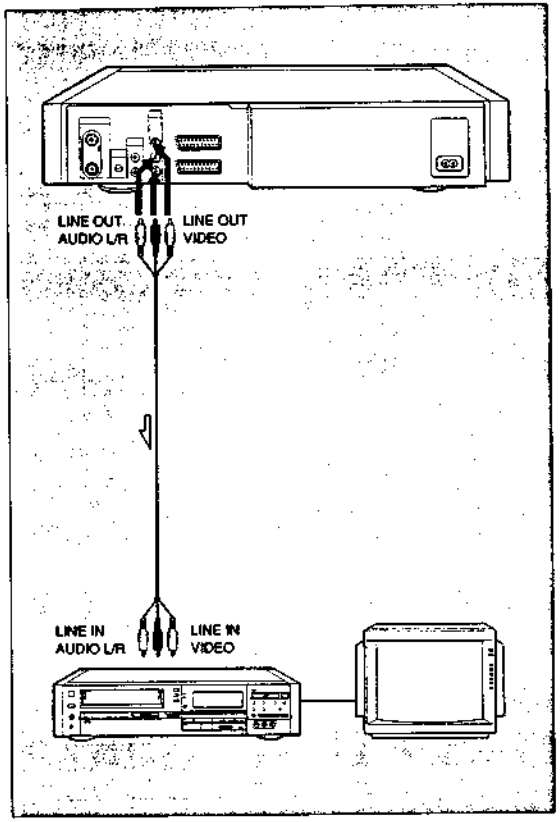
- Make connections using the supplied video/audio connecting cable as illustrated.
- If the other VTR is a monaural type as shown in the illustration, connect the white plug to LINE IN 2 AUDIO L and leave the red plugs unconnected. This enables the sound to be separated into the right and left channels. 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.

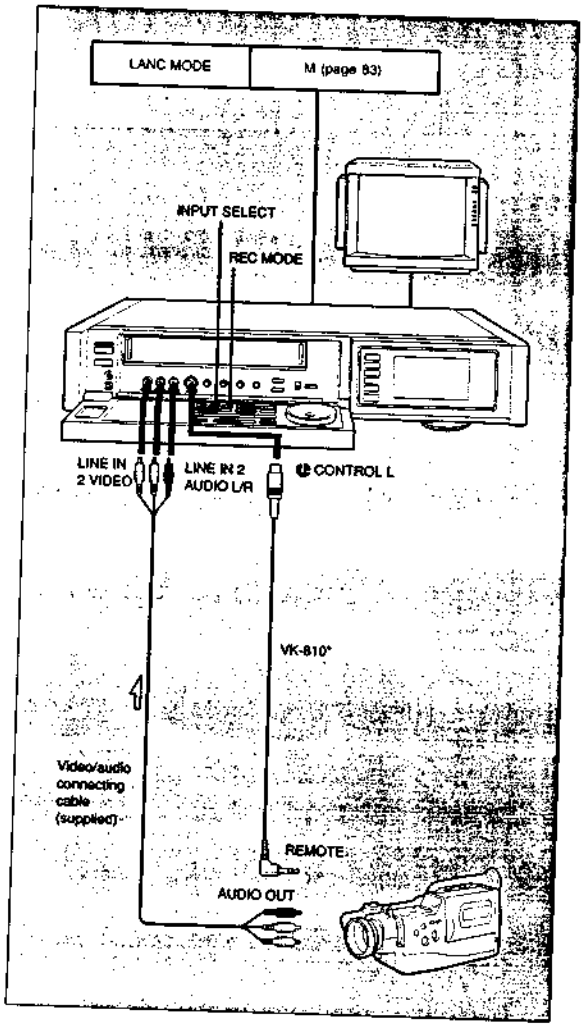
■ Operation

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

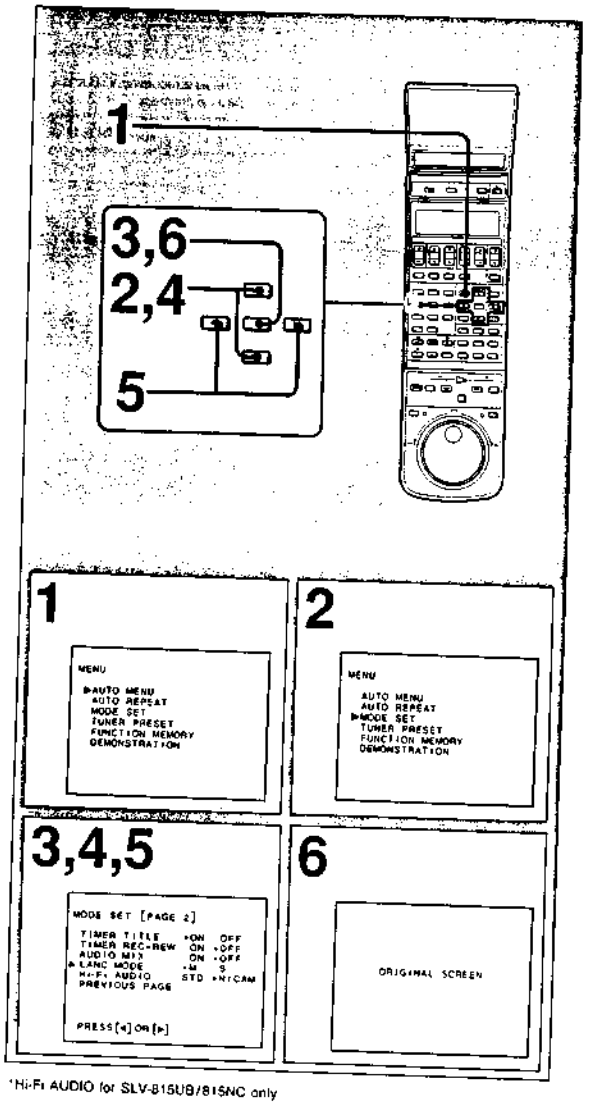


Connecting a VTR Equipped with a CONTROL L Connector

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



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

■ 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:

1 **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 LANC MODE.**

5 **Move the dot with ◀ to M when you control the other VTR through this VTR, and to S when you control this VTR through the other VTR.**

6 **Press EXE to store the setting and return to the original screen.**

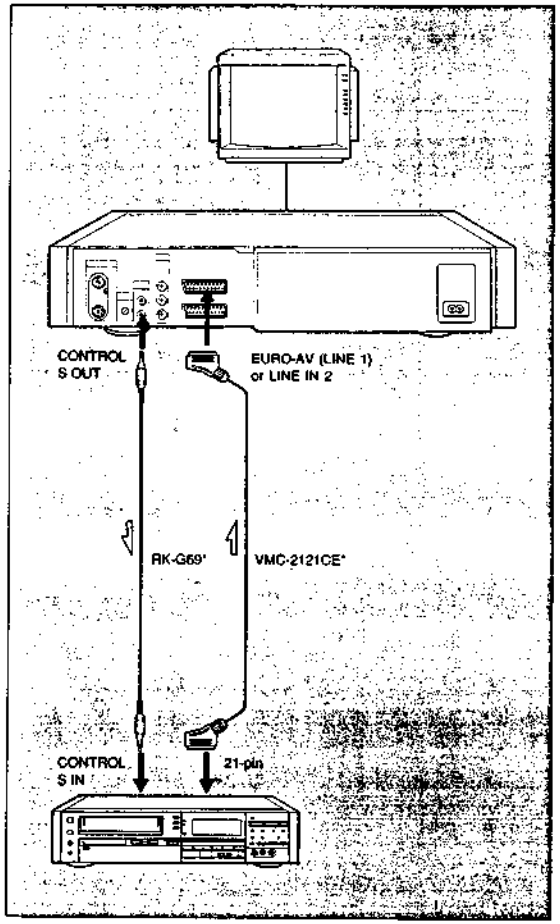
■ Operation

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 (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

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.

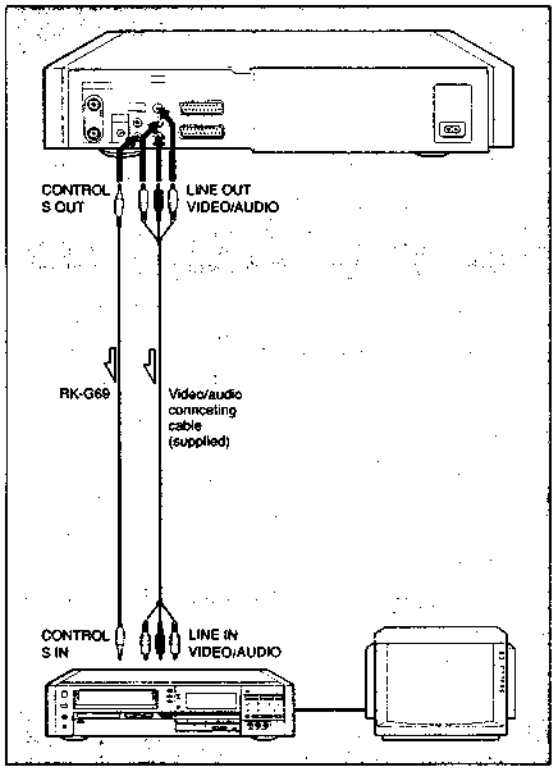
* When connecting the other VTR to LINE IN 2 on the front, use the supplied video /audio connecting cable. If the other VTR is monaural, connect to LINE IN 2 AUDIO L via the white plugs. This enables the sound to be separated into the right and left channels. Leave the red plugs unconnected.

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

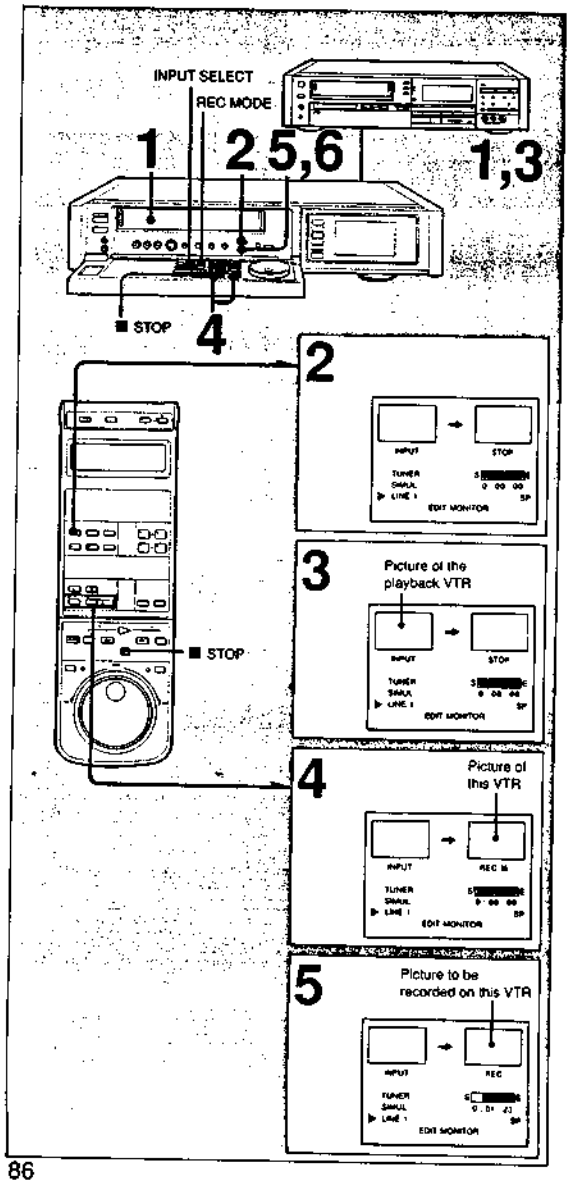
Using this VTR as a playback VTR and another VTR as a recording VTR.

* 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.

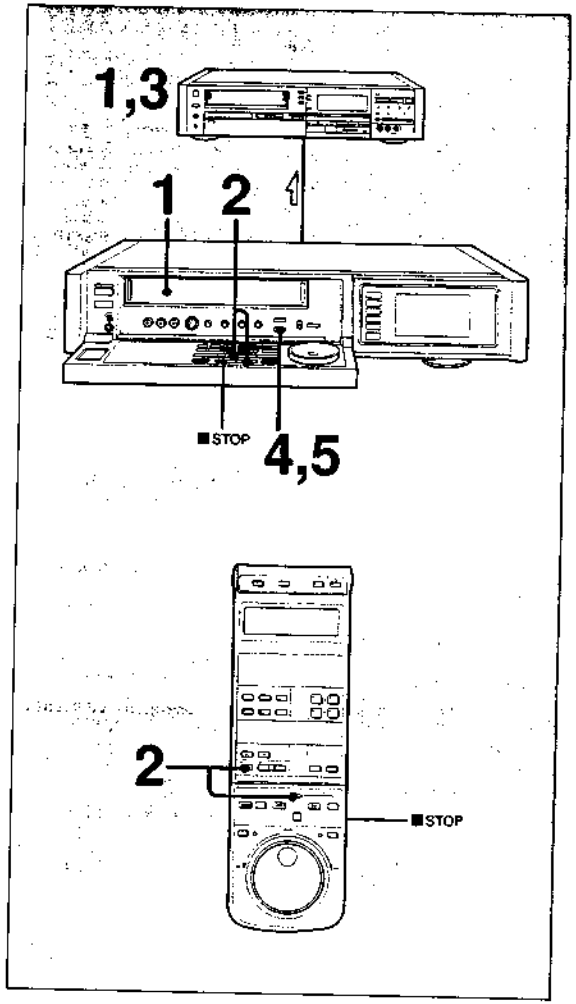
6 **To stop editing, press SYNCHRO EDIT.**

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.**

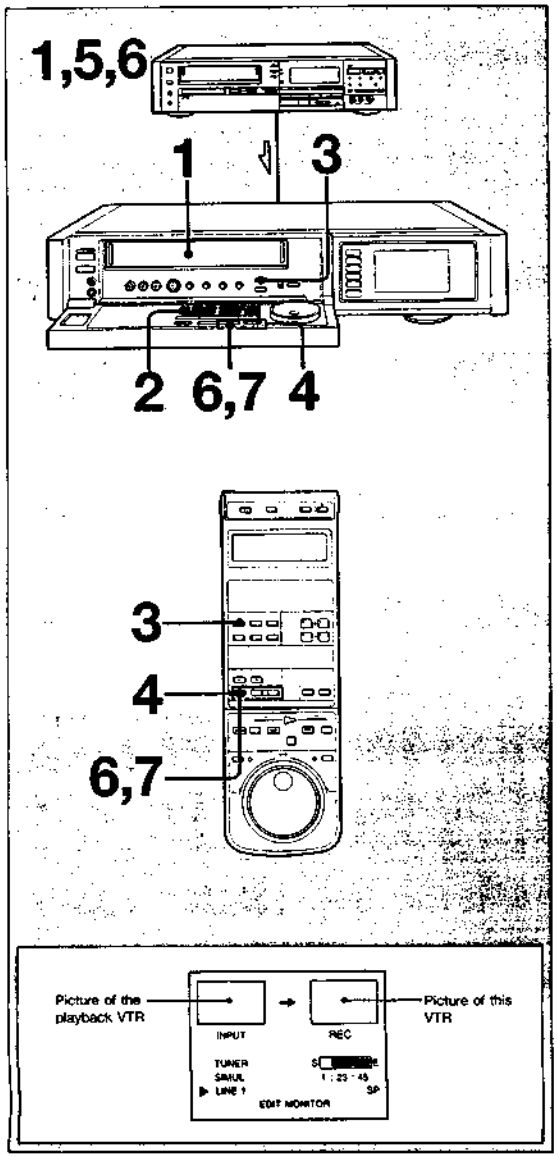
6 **To edit more scenes, repeat steps 2, 4 and 5.**

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.

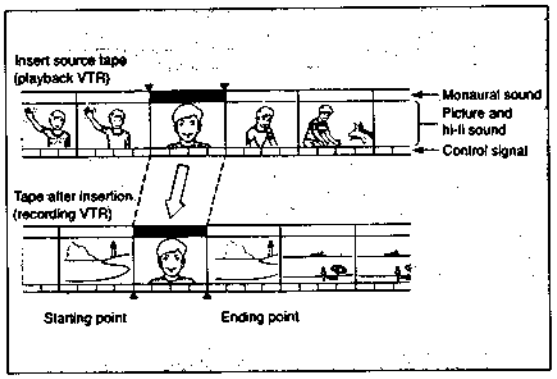
6 **Press II PAUSE of both VTRs simultaneously to start editing.**

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

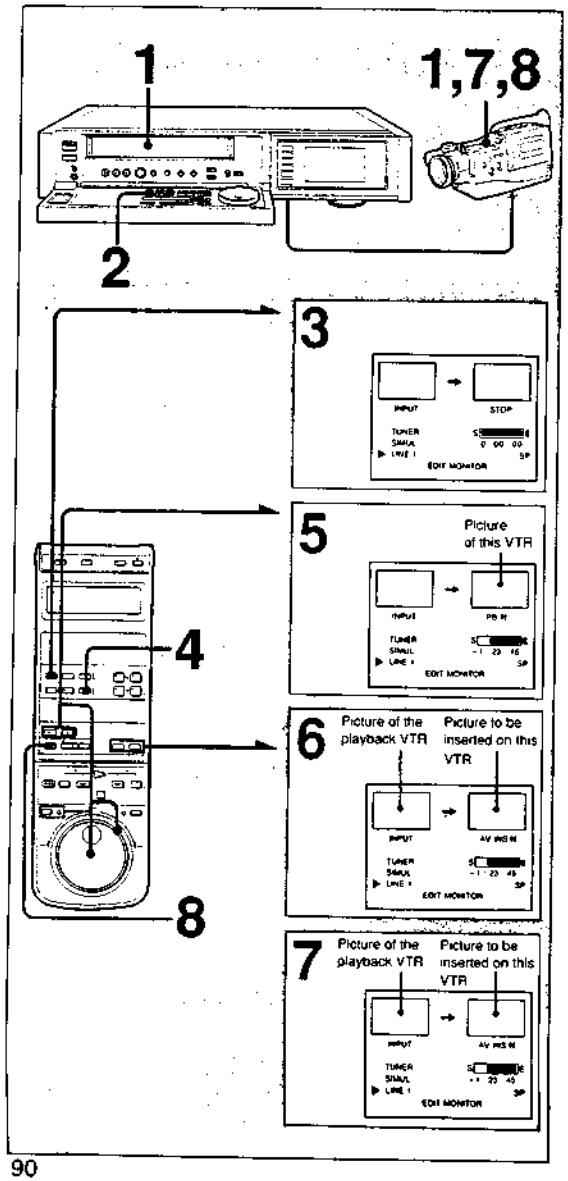


You can easily insert a new picture and/or sound onto a pre-recorded tape. This editing is useful to replace an unnecessary scene (sound) with another scene (sound).

■ 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



90

■ 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.)

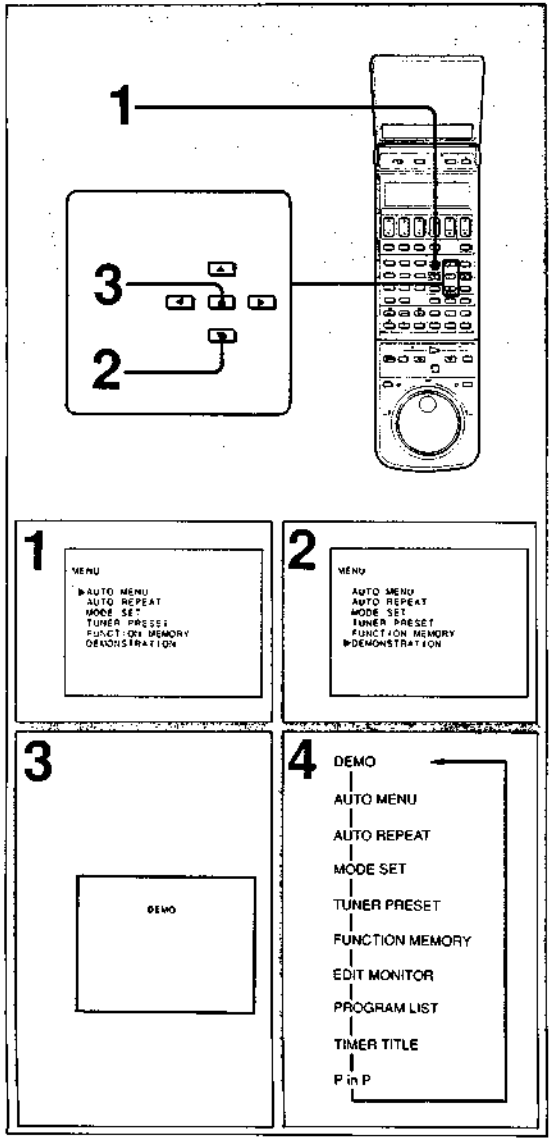
When the VIDEO and AUDIO INSERT buttons are pressed
The picture, sound on the hi-fi audio track and the sound on the normal audio track will be inserted.

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-236MS 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.

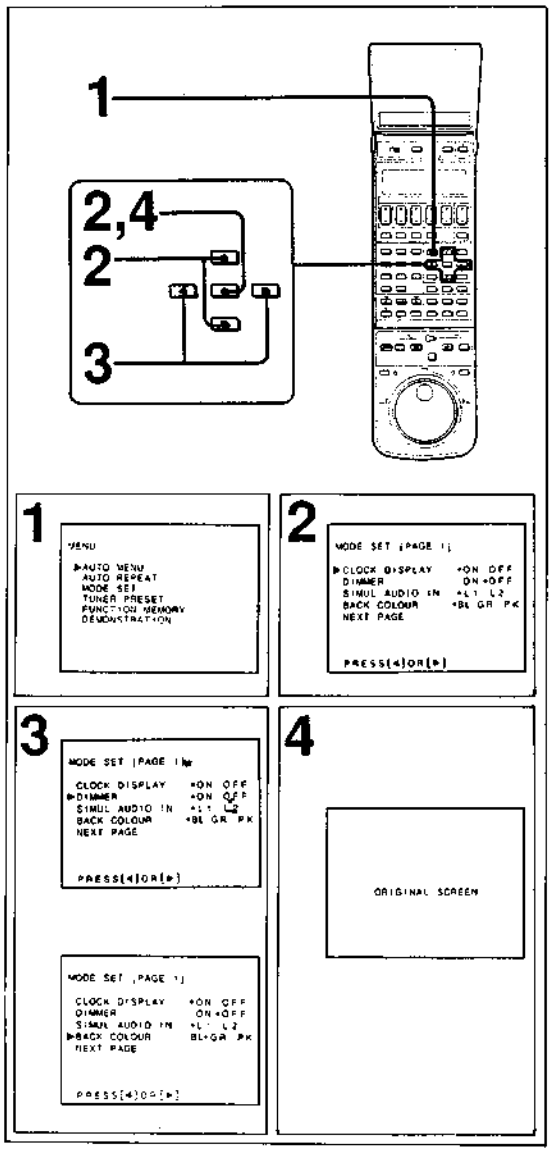
■ Operation

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.

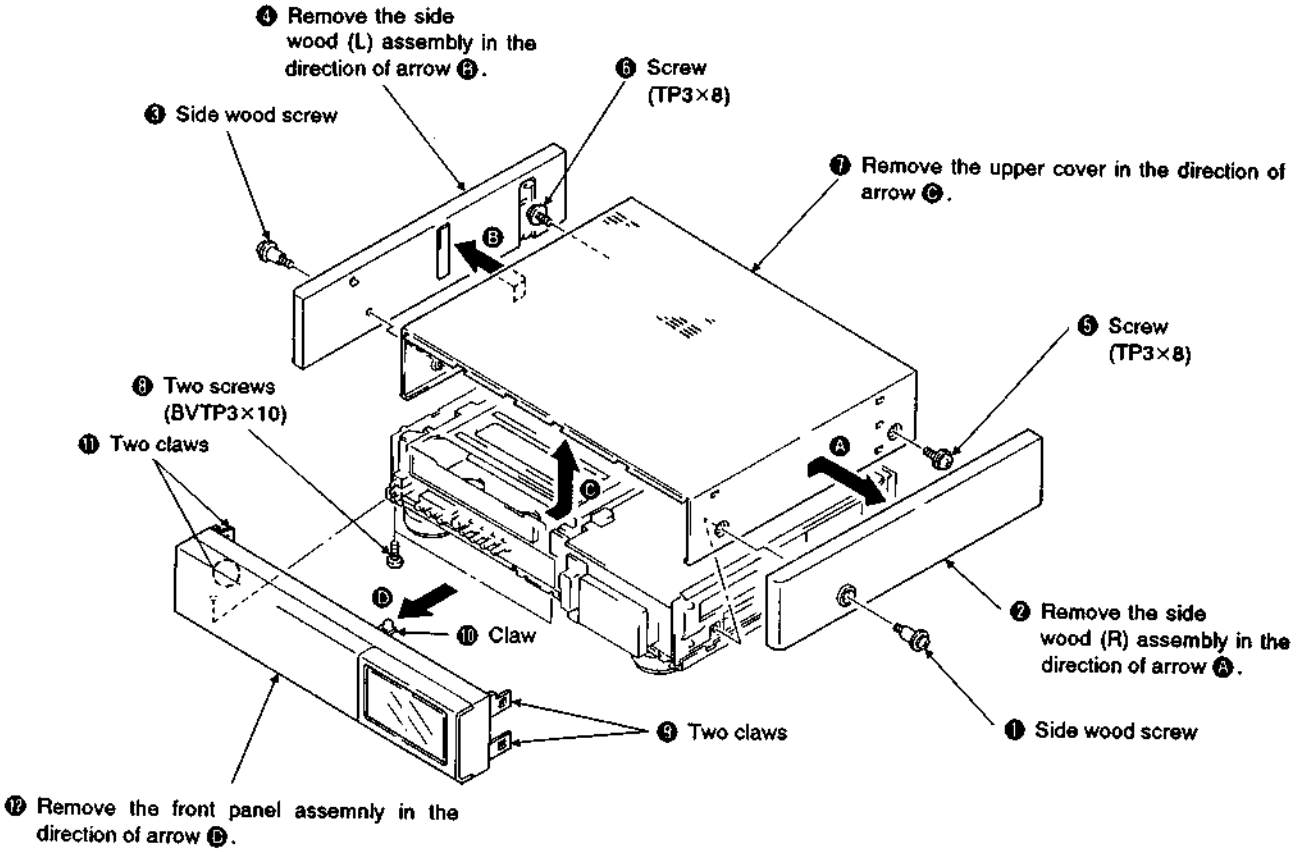
2 **Move cursor with ▲ or ▼ to MODE SET and press EXE.**
If the MODE SET (PAGE 2) menu appears, move cursor to PREVIOUS PAGE and press EXE.

3 **Move cursor to BACK COLOUR and select the desired colour with ◀ or ▶.**
BL....blue
GR....green
PK....pink

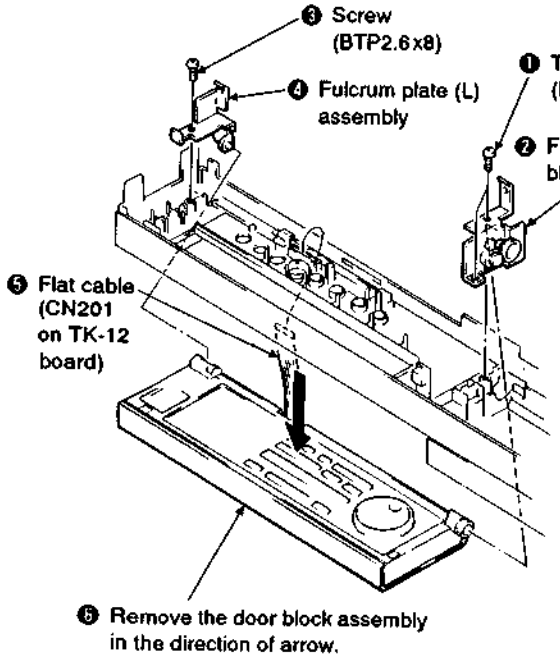
4 **Press EXE to store the setting and return to the original screen.**

SECTION 2
DISASSEMBLY

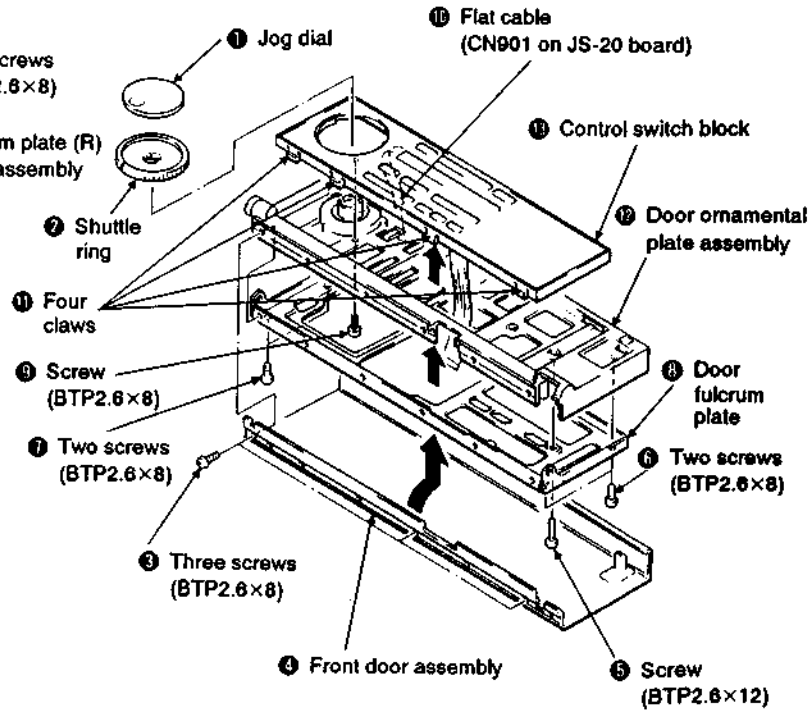
2-1. REMOVAL OF FRONT PANEL AND CABINET ASSEMBLIES



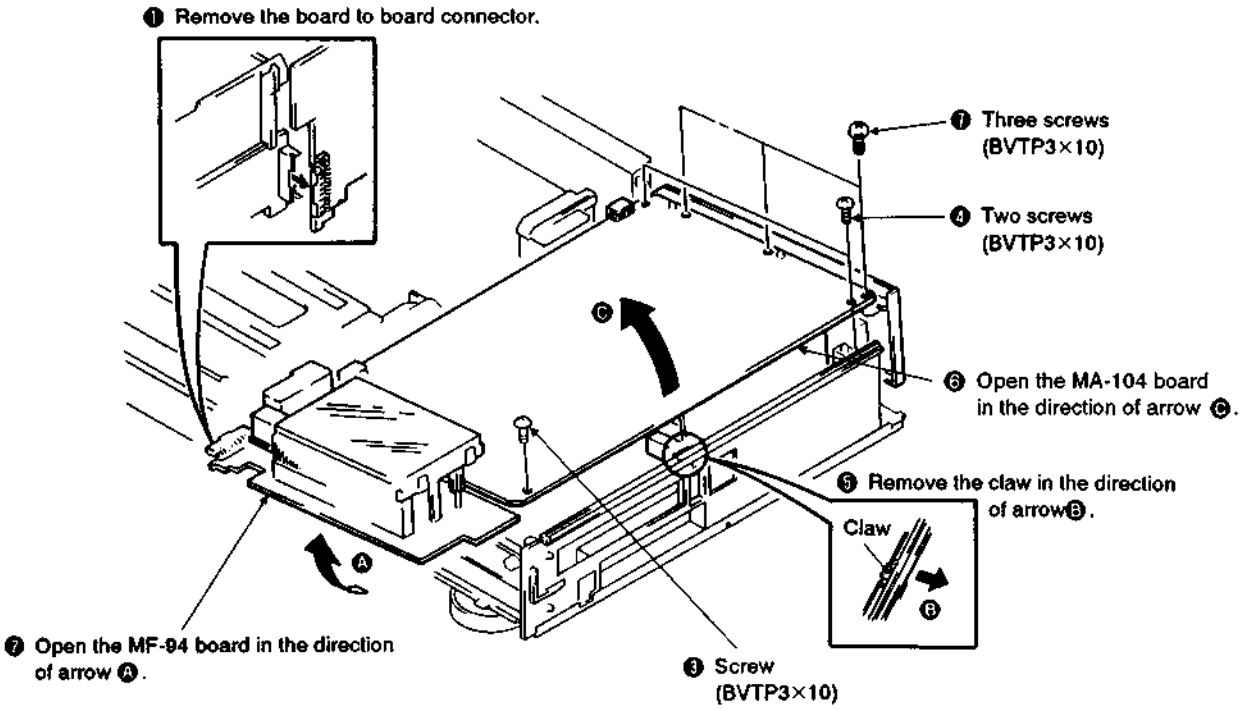
2-2. REMOVAL OF DOOR BLOCK ASSEMBLY



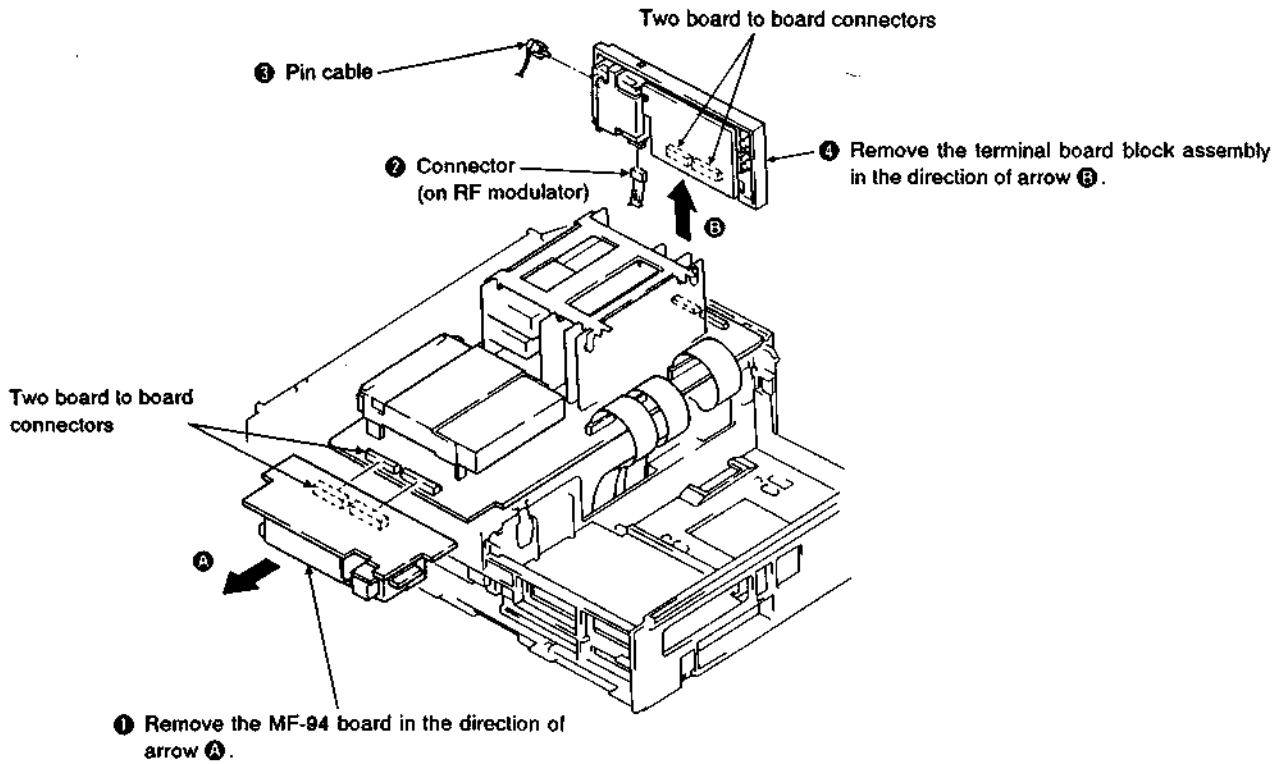
2-3. REMOVAL OF CONTROL SWITCH BLOCK



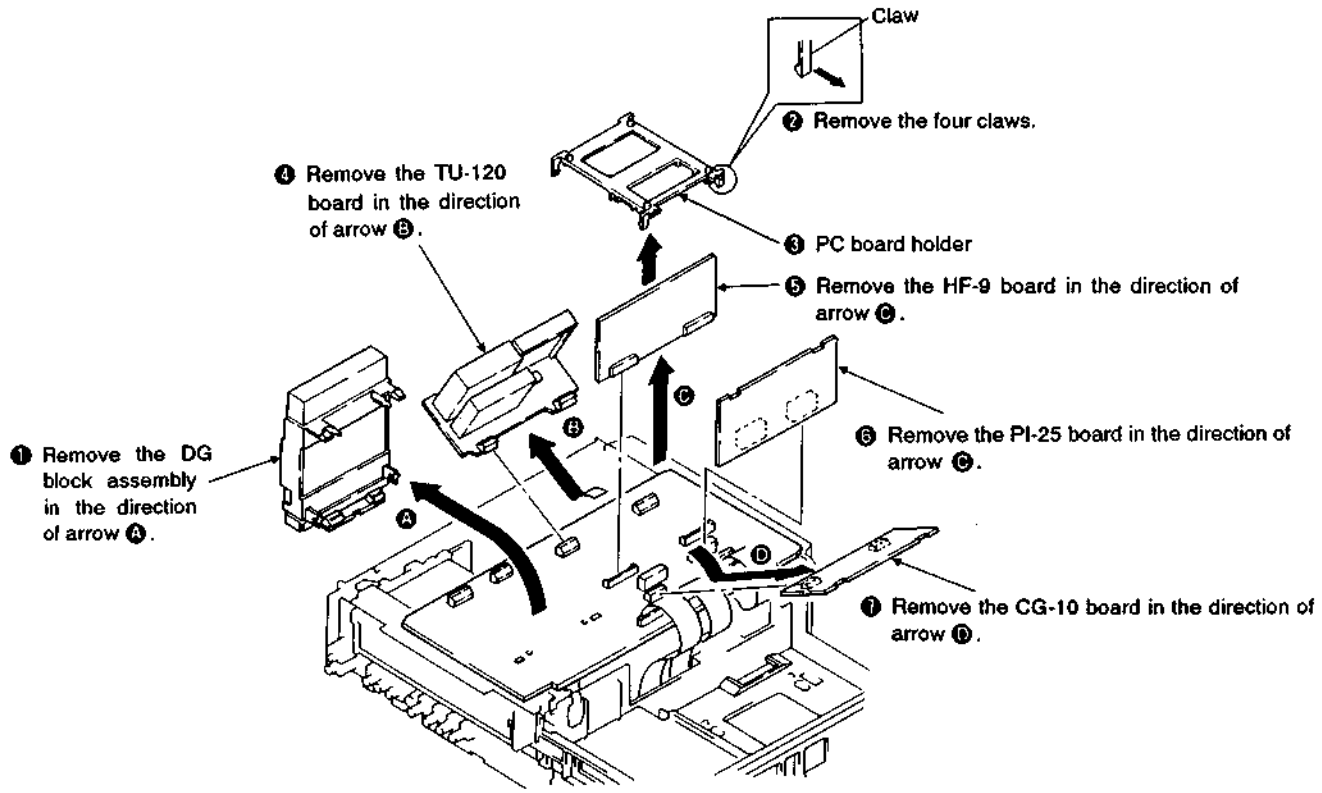
2-4. OPENING OF MA-104 BOARD



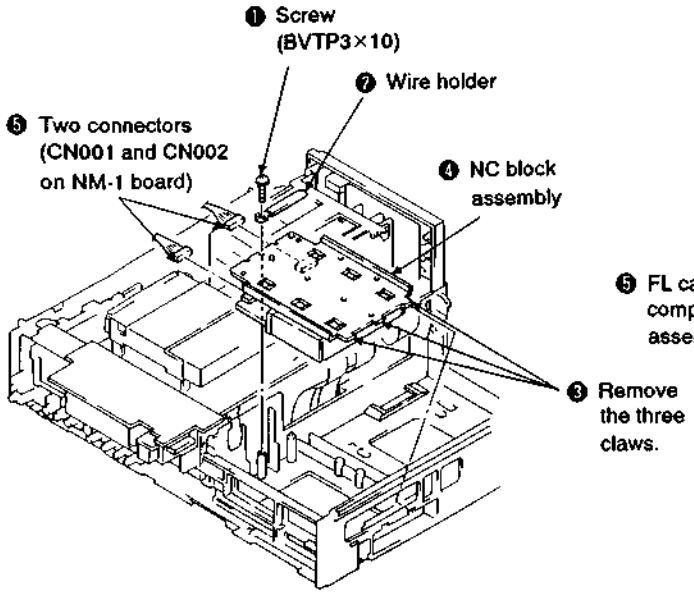
2-5. REMOVAL OF MF-94 BOARD AND TERMINAL BOARD BLOCK ASSEMBLY



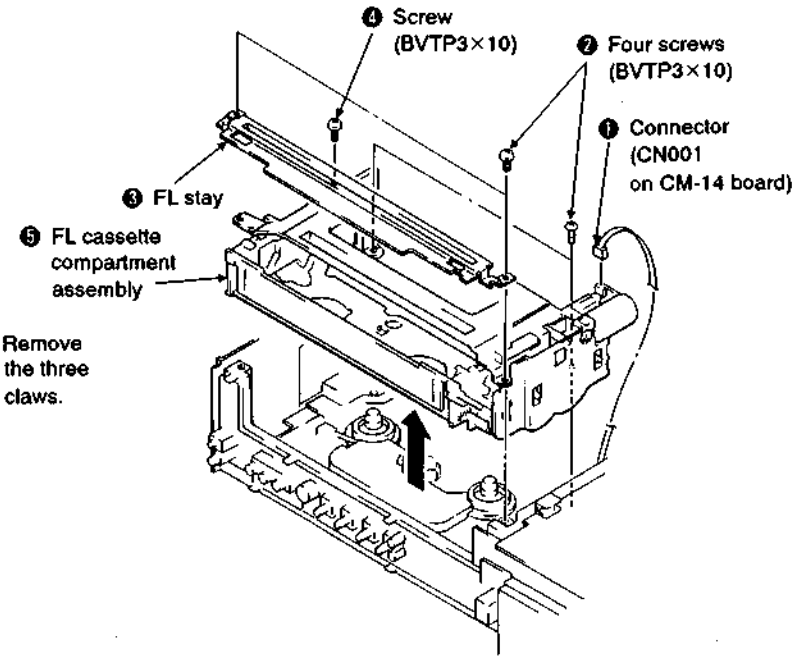
2-6. REMOVAL OF TU-120, HF-9, PI-25, CG-10 BOARDS AND DG BLOCK ASSEMBLY



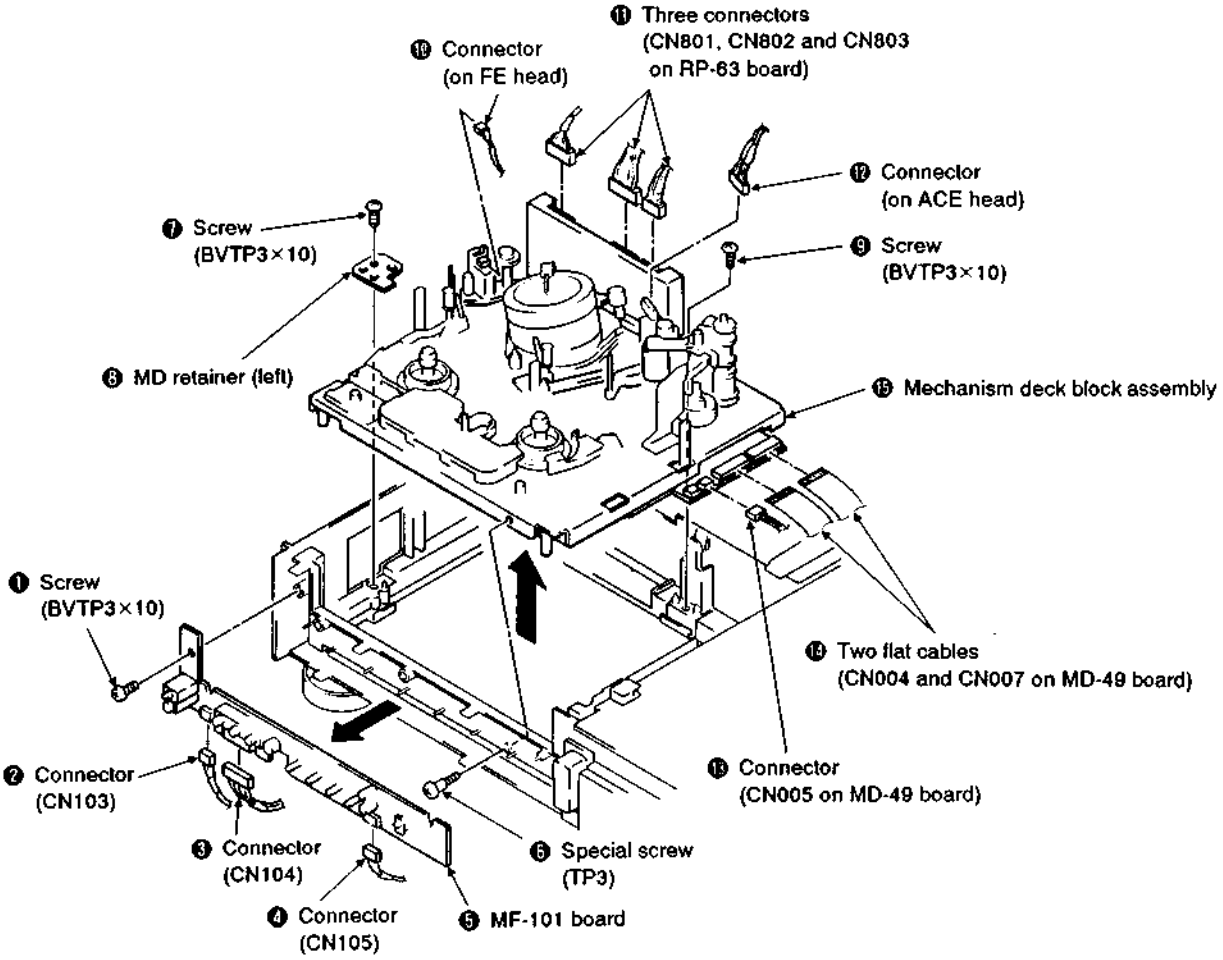
2-7. REMOVAL OF NC BLOCK ASSEMBLY (SLV-815UB ONLY)



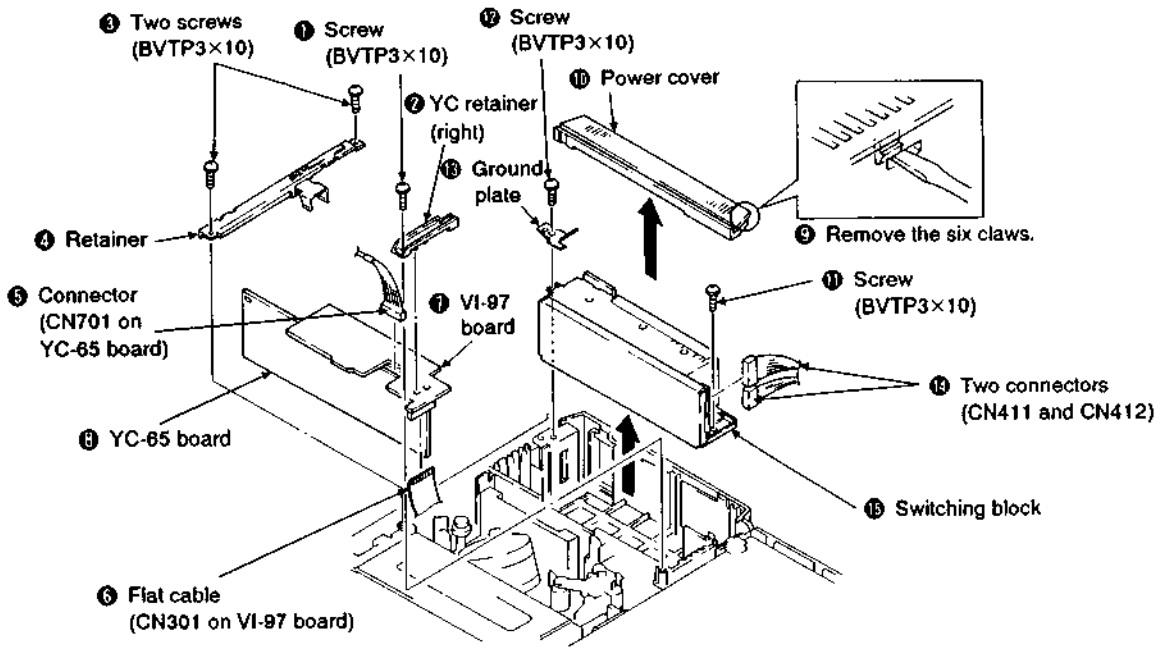
2-8. REMOVAL OF FL CASSETTE COMPARTMENT ASSEMBLY



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

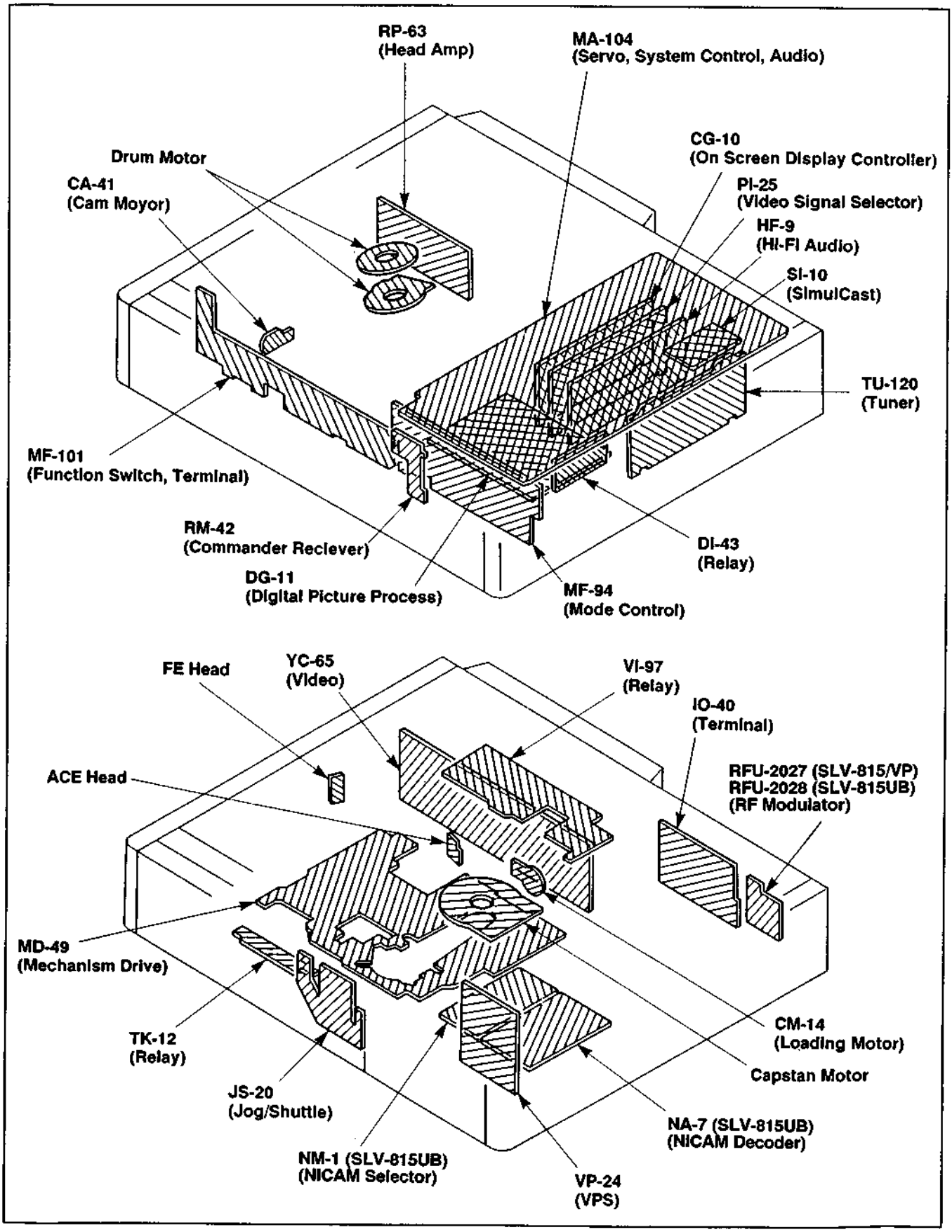


2-10. REMOVAL OF VI-97, YC-65 BOARDS AND SWITCHING BLOCK

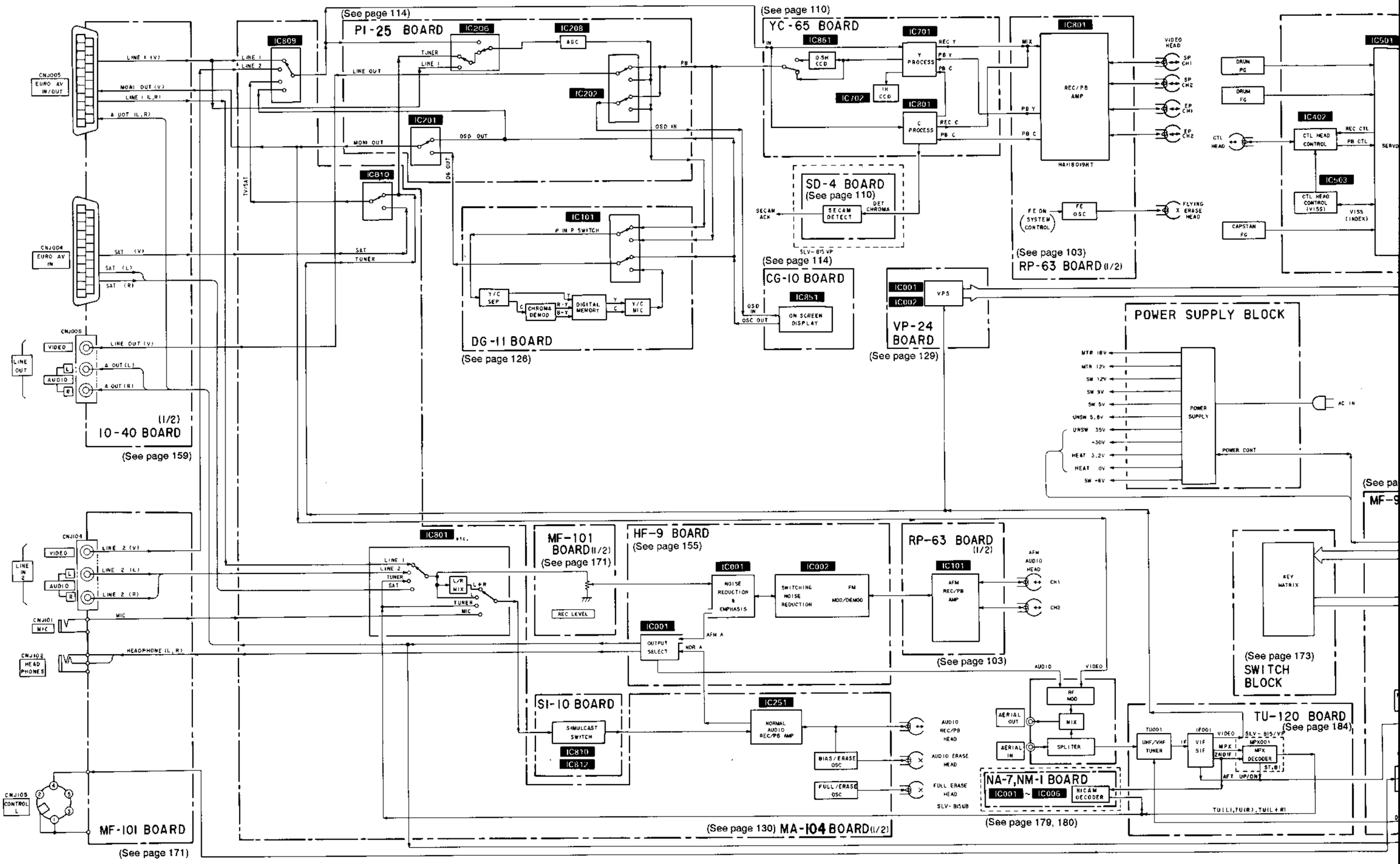


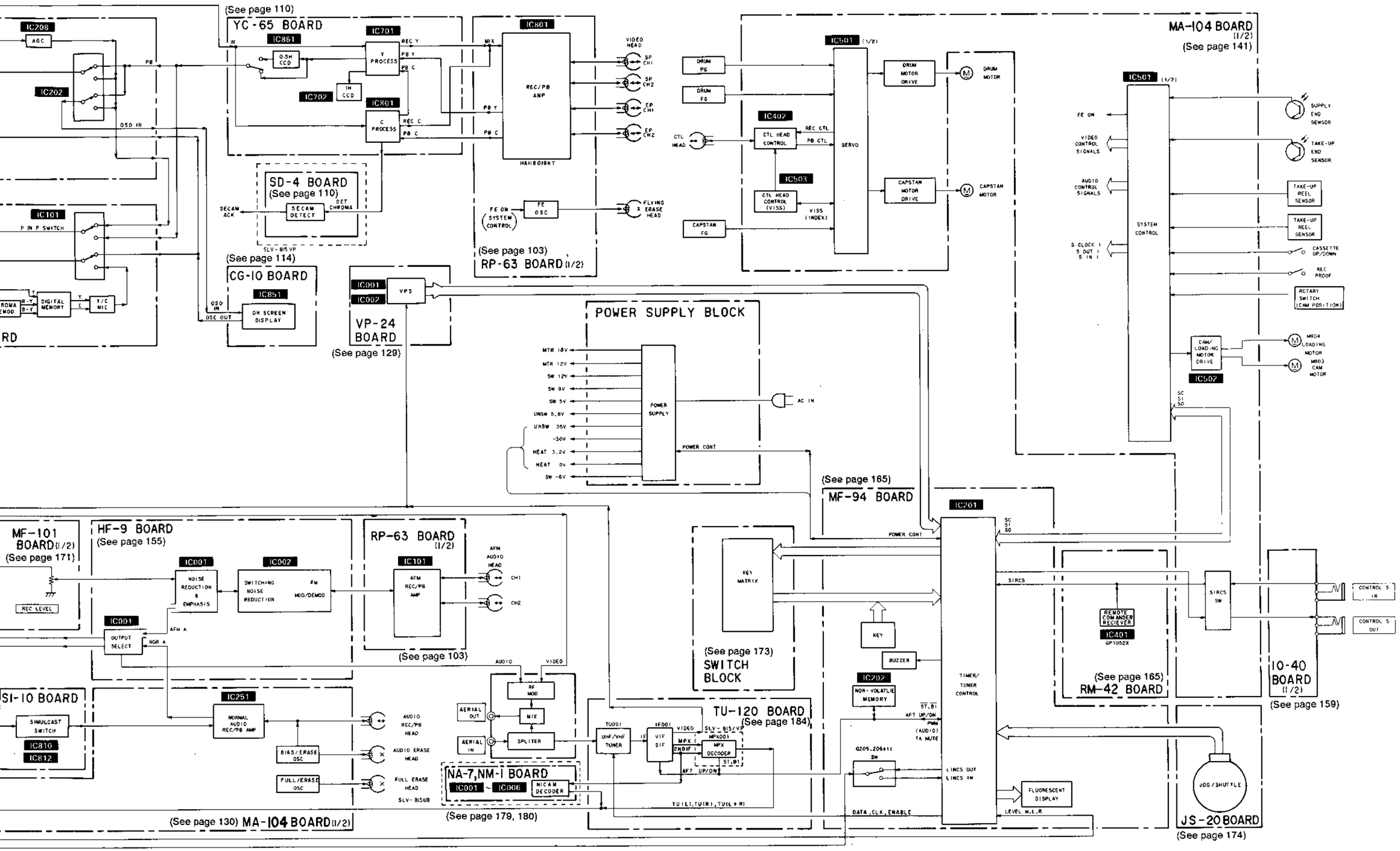
SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

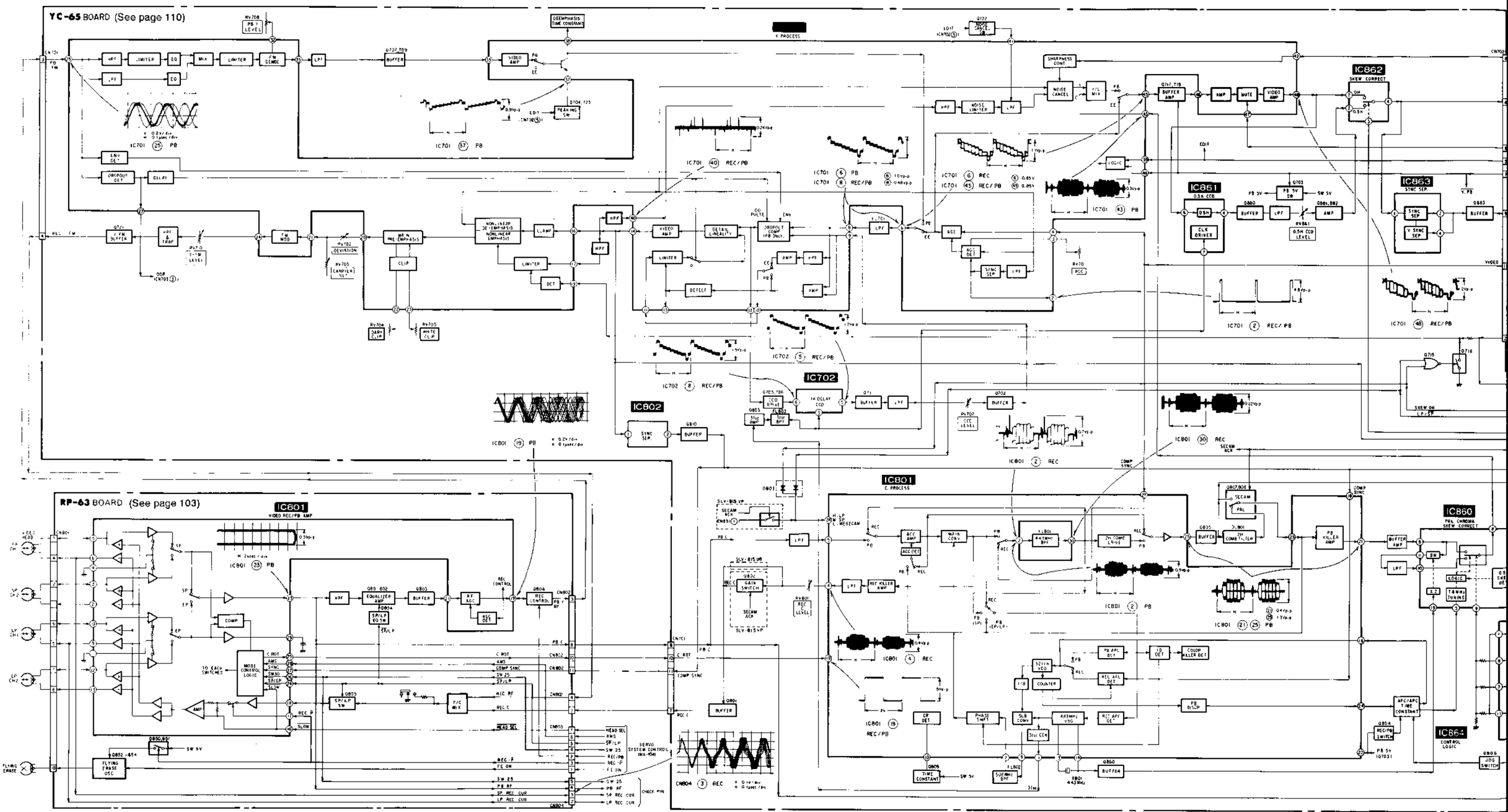


3-2. OVERALL BLOCK DIAGRAM

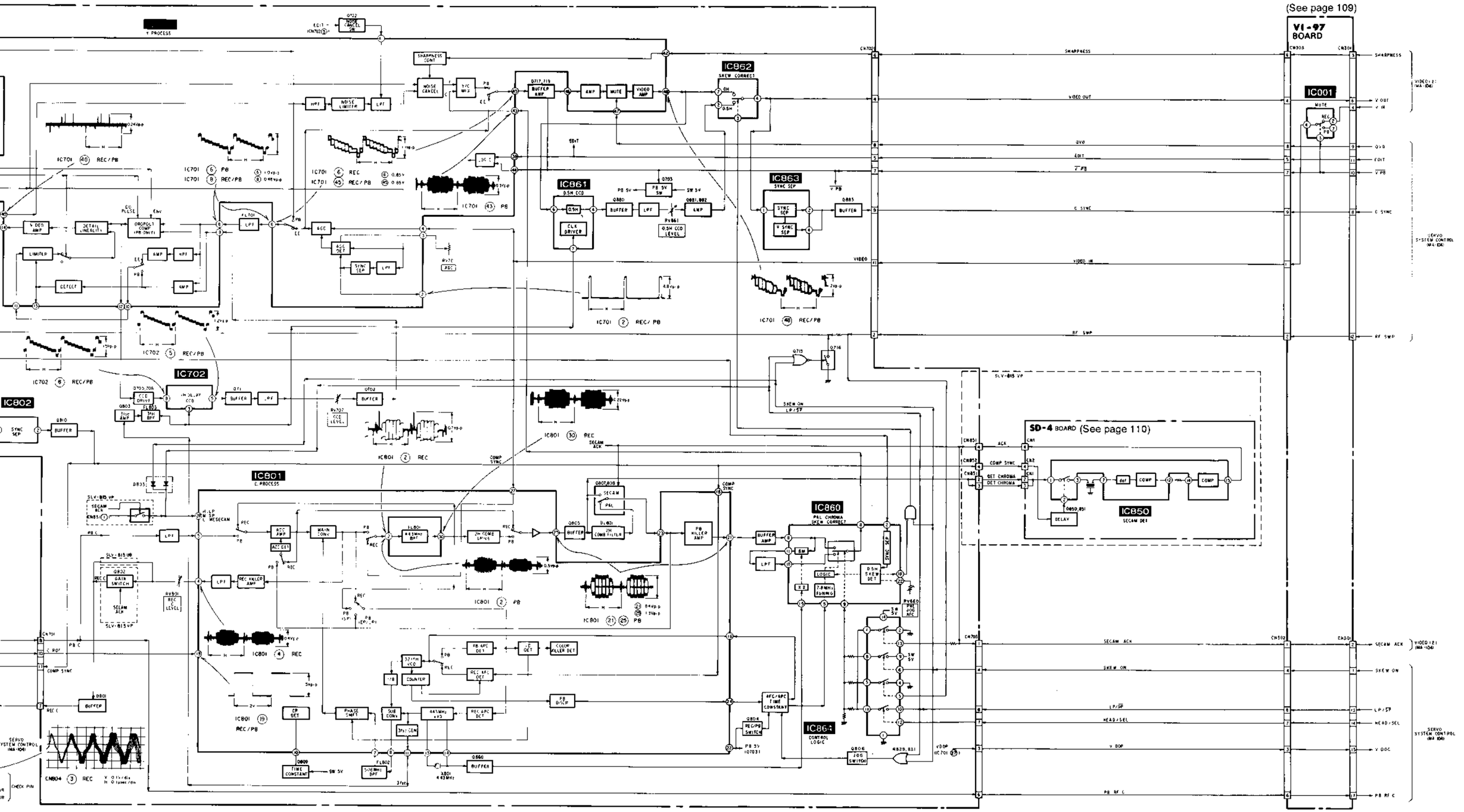



(See page 110)
YC-65 BOARD
IC861
0.5H CCD
IC701
Y PROCESS
IC702
1H CCD
IC801
C PROCESS
IC801
REC/PB AMP
HAMEOSINT
VIDEO HEAD
SP CH1
SP CH2
EP CH1
EP CH2
FLYING ERASE HEAD
FE OSC
FE ON SYSTEM CONTROL
SD-4 BOARD
(See page 110)
SECAM DETECT
SECAM ACK
DET CHROMA
SLV-815VP
IC208
AGC
IC202
OSD IN
IC101
P IN P SWITCH
DIGITAL MEMORY
Y/C MIX
(See page 114)
CG-10 BOARD
IC851
ON SCREEN DISPLAY
OSD IN
OSC OUT
IC001
IC002
VPS
VP-24 BOARD
(See page 129)
(See page 103)
RP-63 BOARD (1/2)
DRUM FG
CTL HEAD
CAPSTAN FG
IC501 (1/2)
DRUM MOTOR DRIVE
DRUM MOTOR
IC402
CTL HEAD CONTROL
REC CTL
PB CTL
SERVO
IC503
CTL HEAD CONTROL (VISS)
VISS (INDEX)
CAPSTAN MOTOR DRIVE
CAPSTAN MOTOR
MA-104 BOARD (1/2)
(See page 141)
IC501 (1/2)
FE ON
VIDEO CONTROL SIGNALS
AUDIO CONTROL SIGNALS
S CLOCK 1
S OUT 1
S IN 1
SYSTEM CONTROL
SUPPLY END SENSOR
TAKE-UP END SENSOR
TAKE-UP REEL SENSOR
TAKE-UP REEL SENSOR
CASSETTE UP/DOWN
REC PROOF
ROTARY SWITCH (CAM POSITION)
CAM/ LOADING MOTOR DRIVE
IC502
M904 LOADING MOTOR
M903 CAM MOTOR
SC
SI
SO
POWER SUPPLY BLOCK
MTR 18V
MTR 12V
SW 12V
SW 9V
SW 5V
UNSW 5.8V
UNSW 35V
-30V
HEAT 3.2V
HEAT 0V
SW -6V
POWER SUPPLY
AC IN
POWER CONT
(See page 165)
MF-94 BOARD
IC201
POWER CONT
SC
SI
SO
SIRCS
KEY MATRIX
KEY
BUZZER
IC202
NON-VOLATILE MEMORY
ST.B1
AFT UP/DN
PWM (AUDIO) TX MUTE
Q205,206etc SW
LINCS OUT
LINCS IN
TIMER/ TUNER CONTROL
FLUORESCENT DISPLAY
LEVEL M.L.R
DATA, CLK, ENABLE
REMOTE COMMANDER RECIEVER
IC401
GP1U52X
SIRCS SW
CONTROL S IN
CONTROL S OUT
(See page 165)
RM-42 BOARD
(See page 173)
SWITCH BLOCK
IO-40 BOARD (1/2)
(See page 159)
JOG/SHUTTLE
JS-20 BOARD
(See page 174)
MF-101 BOARD (1/2)
(See page 171)
REC LEVEL
HF-9 BOARD
(See page 155)
IC001
NOISE REDUCTION & EMPHASIS
IC002
SWITCHING NOISE REDUCTION
FM MOD/DEMOD
IC001
OUTPUT SELECT
AFM A
NOR A
RP-63 BOARD (1/2)
IC101
AFM REC/PB AMP
AFM AUDIO HEAD
CH1
CH2
(See page 103)
SI-10 BOARD
SIMULCAST SWITCH
IC810
IC812
IC251
NORMAL AUDIO REC/PB AMP
BIAS/ERASE OSC
FULL/ERASE OSC
AUDIO REC/PB HEAD
AUDIO ERASE HEAD
FULL ERASE HEAD
SLV-815UB
(See page 130) MA-104 BOARD (1/2)
AUDIO
VIDEO
RF MOD
MIX
SPLITTER
AERIAL OUT
AERIAL IN
NA-7,NM-1 BOARD
IC001 ~ IC006
NICAM DECODER
(See page 179, 180)
TU-120 BOARD
(See page 184)
TU001
UHF/VHF TUNER
IF
IF001
VIF SIF
VIDEO
MPX
RNDIF
SLV-815/VP
MPX001
MPX DECODER
ST.B1
AFT UP/DN
TU(L), TU(R), TU(L+R)

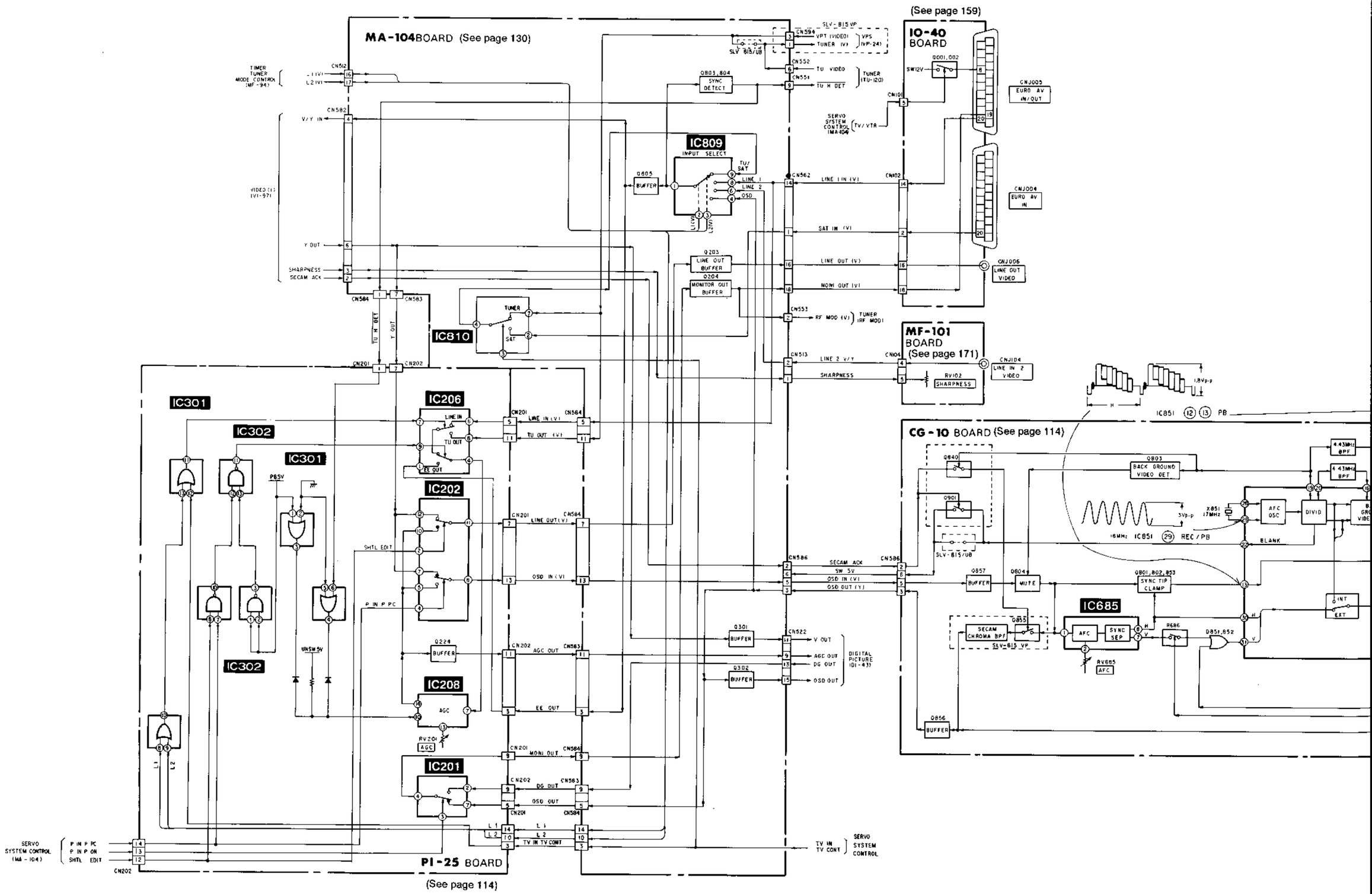
3-3. VIDEO (1) BLOCK DIAGRAM

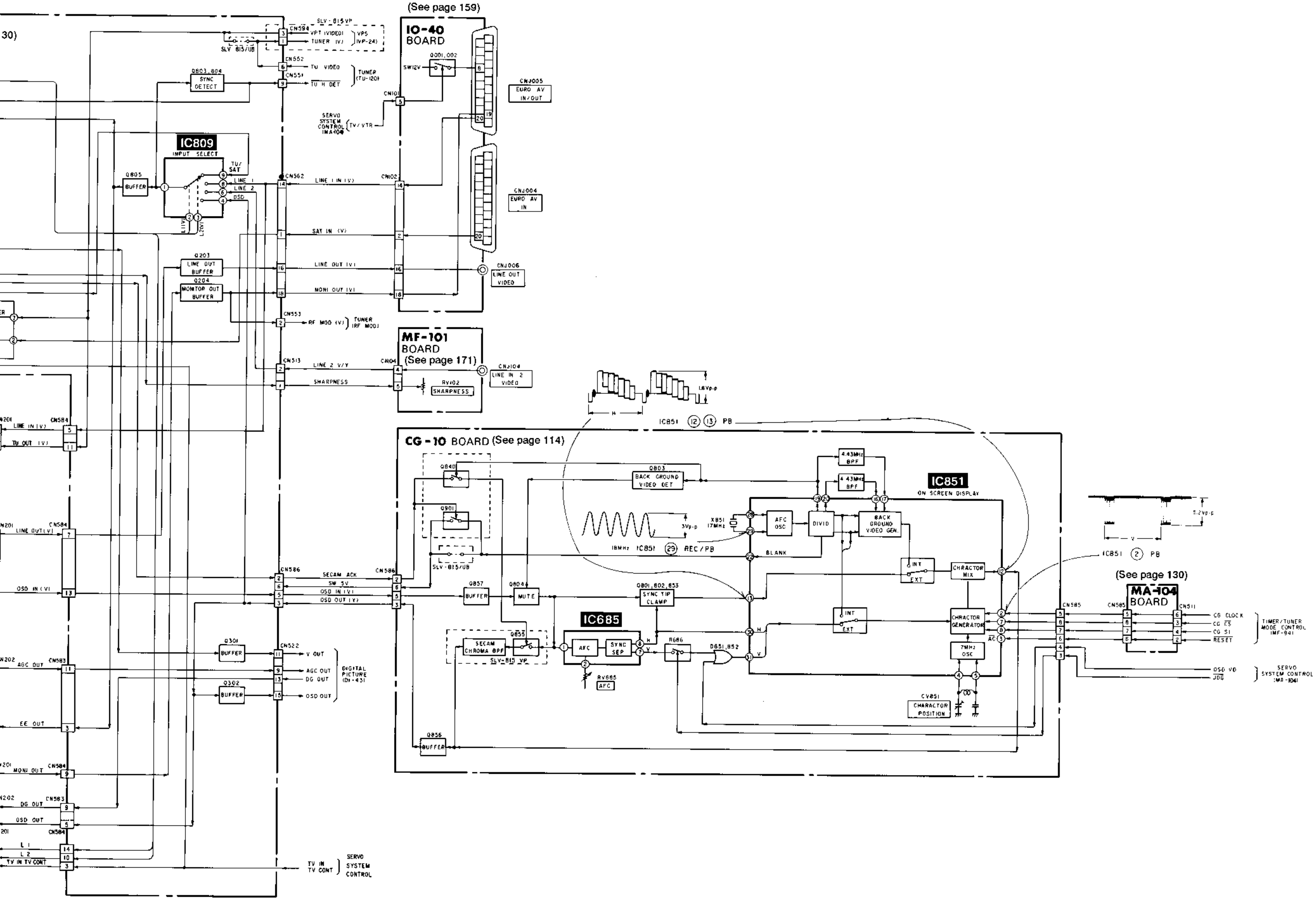


(See page 109)

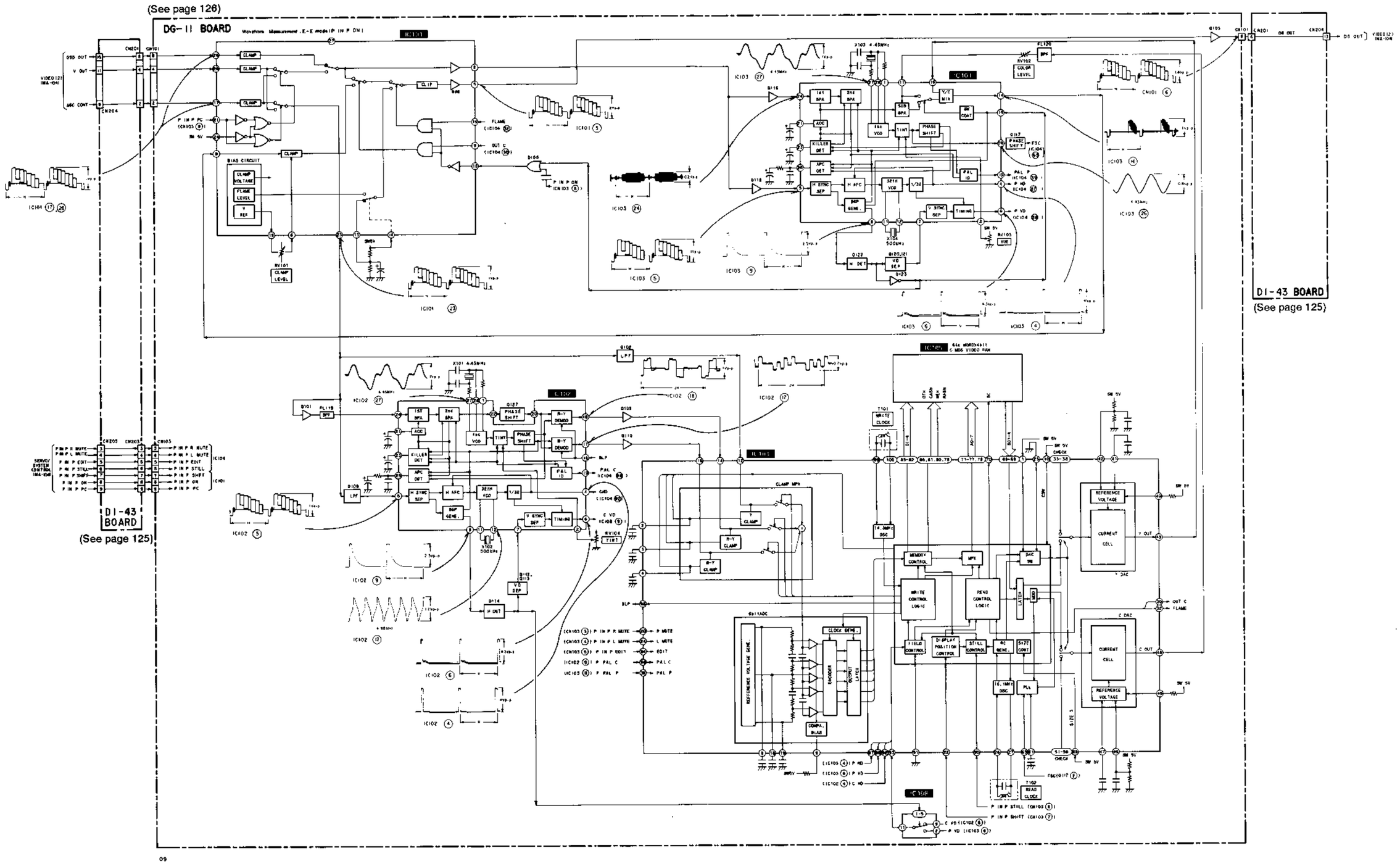

Y PROCESS
IC802
IC702
IC801
C PROCESS
IC861
IC862
SKEW CORRECT
IC863
SYNC SEP
IC860
PAL CHROMA SKEW CORRECT
IC864
CONTROL LOGIC
IC850
SECAM DET
IC001
MUTE
VI-97 BOARD
SD-4 BOARD (See page 110)
SHARPNESS
VIDEO OUT
Y/C
EDIT
Y PB
C SYNC
VIDEO IN
RF SWP
SECAM ACK
SKEW ON
LP/SP
HEAD/SEL
V DOP
PB RF C
COMP SYNC
DET CHROMA
SERVO SYSTEM CONTROL (MA-104)
VIDEO I/O (MA-104)

3-4. VIDEO (2) BLOCK DIAGRAM

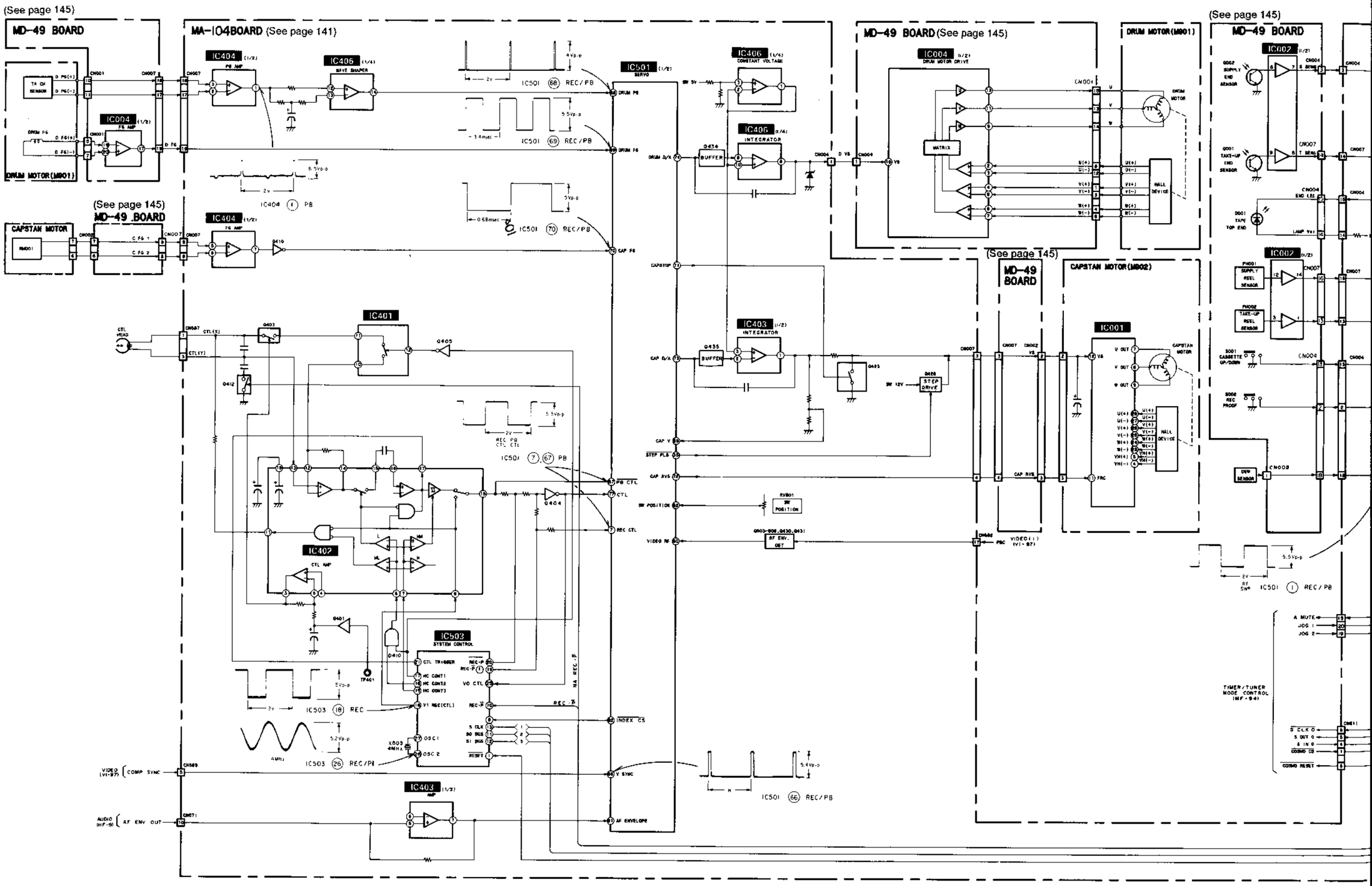


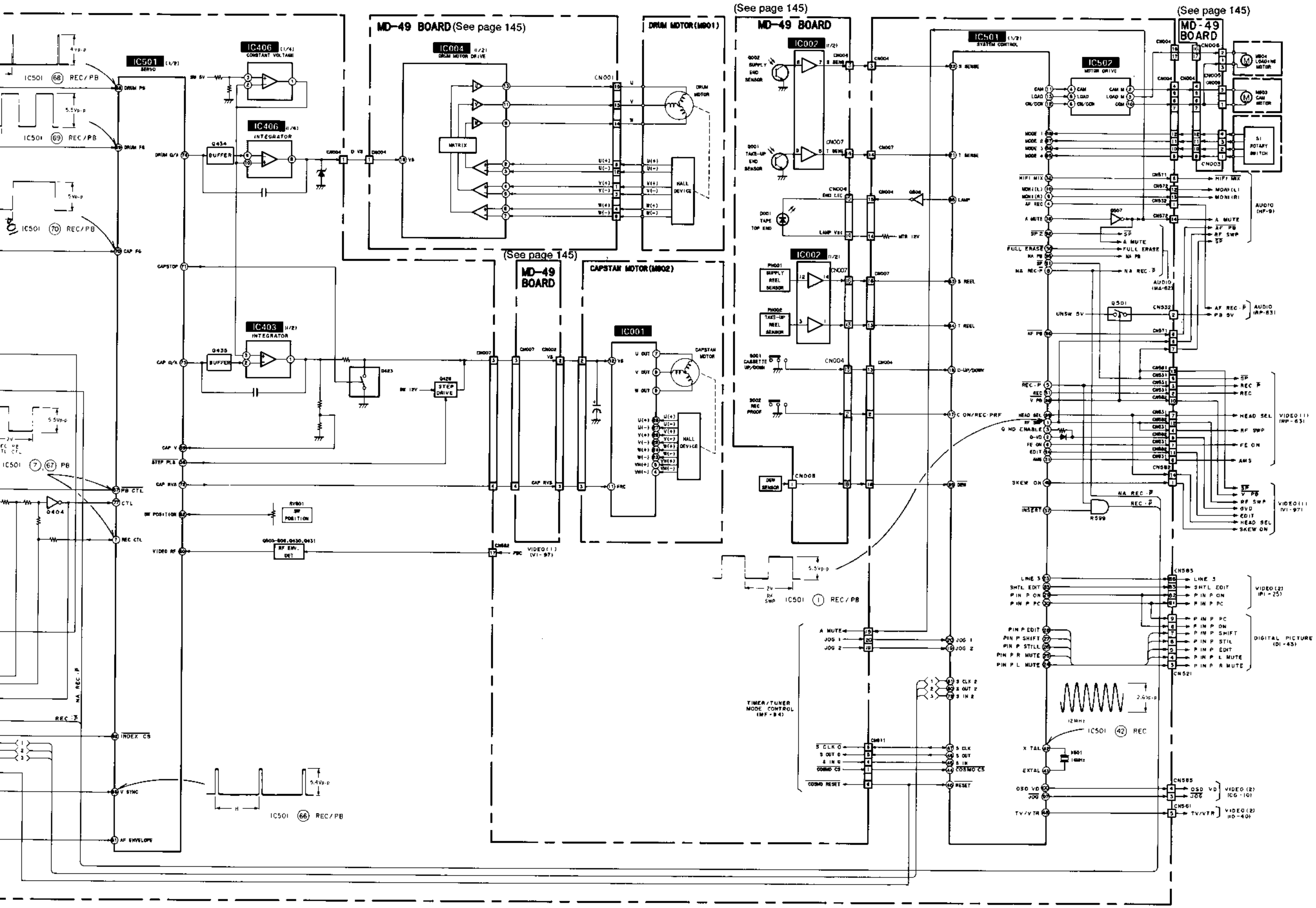

30)
(See page 159)
IO-40 BOARD
Q001,002
SW12V
CNJ005 EURO AV IN/OUT
CNJ004 EURO AV IN
CNJ006 LINE OUT VIDEO
CN101
CN102
SERVO SYSTEM CONTROL (MA-104) TV/VTR
SLV-815VP
CN594
VPT (VIDEO)
TUNER (V)
VPS (VP-24)
SLV-815/UB
CN552
TV VIDEO
CN551
TV H DET
TUNER (TU-120)
Q803,804 SYNC DETECT
IC809
INPUT SELECT
Q805 BUFFER
TV/SAT
LINE 1
LINE 2
OSD
L1(V)
L2(V)
CN562
LINE 1 IN (V)
SAT IN (V)
LINE OUT (V)
MONI OUT (V)
Q203 LINE OUT BUFFER
Q204 MONITOR OUT BUFFER
CN553
RF MOD (V)
TUNER (RF MOD)
MF-101 BOARD (See page 171)
CN513
CN104
LINE 2 V/Y
SHARPNESS
RV102 SHARPNESS
CNJ104 LINE IN 2 VIDEO
CN584
LINE IN (V)
TV OUT (V)
LINE OUT (V)
OSD IN (V)
CN583
AGC OUT
EE OUT
MONI OUT
DG OUT
OSD OUT
L 1
L 2
TV IN TV CONT
CN586
SECAM ACK
SW 5V
OSD IN (V)
OSD OUT (Y)
Q301 BUFFER
Q302 BUFFER
CN522
V OUT
AGC OUT
DG OUT
OSD OUT
DIGITAL PICTURE (DI-43)
TV IN
TV CONT
SERVO SYSTEM CONTROL
1.8Vp-p
H
IC851 (12) (13) PB
CG-10 BOARD (See page 114)
Q840
Q901
SLV-815/UB
Q857 BUFFER
Q804 MUTE
Q855
SECAM CHROMA BPF
SLV-815 VP
Q856 BUFFER
Q803 BACK GROUND VIDEO DET
4.43MHz BPF
IC851
ON SCREEN DISPLAY
X851 17MHz
3Vp-p
18MHz IC851 (29) REC/PB
AFC OSC
DIVID
BACK GROUND VIDEO GEN.
BLANK
INT
EXT
CHRACTOR MIX
CHRACTOR GENERATOR
7MHz OSC
CV851 CHARACTOR POSITION
Q801,802,853 SYNC TIP CLAMP
IC685
AFC
SYNC SEP
RV685 AFC
R686
D851,852
5.2Vp-p
V
IC851 (2) PB
(See page 130)
MA-104 BOARD
CN585
CN511
CG CLOCK
CG CS
CG SI
RESET
TIMER/TUNER MODE CONTROL (MF-94)
OSD VD
JOG
SERVO SYSTEM CONTROL (MA-104)

3-5. DIGITAL PICTURE BLOCK DIAGRAM



3-6. SERVO, SYSTEM CONTROL BLOCK DIAGRAM




IC501 (1/2) SERVO
IC406 (1/4) CONSTANT VOLTAGE
IC406 (1/4) INTEGRATOR
IC403 (1/2) INTEGRATOR
MD-49 BOARD (See page 145)
IC004 (1/2) DRUM MOTOR DRIVE
MATRIX
CN001
DRUM MOTOR (M001)
HALL DEVICE
(See page 145)
MD-49 BOARD
CAPSTAN MOTOR (M002)
IC001
IC002 (1/2)
IC501 (1/2) SYSTEM CONTROL
IC502 MOTOR DRIVE
M004 LOADING MOTOR
M003 CAM MOTOR
S1 ROTARY SWITCH
IC501 68 REC/PB
IC501 69 REC/PB
IC501 70 REC/PB
IC501 7, 67 PB
IC501 66 REC/PB
IC501 1 REC/PB
IC501 42 REC
DRUM PG
DRUM FG
CAP FG
CAPSTOP
CAP V
STEP PLS
CAP RVS
PB CTL
CTL
REC CTL
SW POSITION
VIDEO RF
INDEX CS
V SYNC
AF ENVELOPE
RF ENV. DET
SW POSITION
STEP DRIVE
BUFFER
S SENSE
T SENSE
LAMP
S REEL
T REEL
C-UP/DOWN
C ON/REC-PRF
DEW
DEW SENSOR
SUPPLY END SENSOR
TAKE-UP END SENSOR
TAPE TOP END
SUPPLY REEL SENSOR
TAKE-UP REEL SENSOR
CASSETTE UP/DOWN
REC PROOF
HIFI MIX
MONI (L)
MONI (R)
AF REC
A MUTE
SP
FULL ERASE
NA PB
NA REC-P
AUDIO (HF-9)
AUDIO (MA-62)
AUDIO (RP-63)
UNSW 5V
AF PB
REC-P
REC
V PB
HEAD SEL
RF SWP
FE ON
EDIT
AMS
SKEW ON
INSERT
VIDEO (1) (RP-63)
VIDEO (1) (VI-97)
LINE 3
SHTL EDIT
P IN P ON
P IN P PC
P IN P EDIT
P IN P SHIFT
P IN P STILL
P IN P R MUTE
P IN P L MUTE
VIDEO (2) (PI-25)
DIGITAL PICTURE (DI-43)
X TAL
EXTAL
OSD VD
JOG
TV/VTR
VIDEO (2) (CG-10)
VIDEO (2) (IO-40)
JOG 1
JOG 2
S CLK
S OUT
S IN
COSMO CS
COSMO RESET
TIMER/TUNER MODE CONTROL (MF-84)
12MHz
2.6Vp-p
5.5Vp-p
5.4Vp-p
4Vp-p
5Vp-p

3-7. SYSTEM CONTROL — VIDEO BLOCK INTERFACE

Signal	Mode I/O	Pin No.	STOP/ FF/REW	TAPE LOADING	TAPE UNLOADING	PB	PB• PAUSE	SLOW	×2	CUE	REVIEW	REC	REC• PAUSE	INSERT	INSERT• PAUSE
$\overline{V•PB}$	O	Pin ㊳ 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 ㊴ 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 VD/V 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 ㊾ of IC501 on MA-104 board	L	L	L	*6	*6	*6	*6	*6	*6	*6	L	*6	L
AMS	O	Pin ㊶ of IC501 on MA-104 board	L	L	L	L	L	L	L	*7	*7	L	L	L	L
$\overline{SP}$	O	Pin ㊵ of IC501 on MA-104 board	*8	*8	*8	*9	*9	*9	*9	*9	*9	*8	*8	*9	*9
$\overline{SP•2}$	O	Pin ㊷ of IC501 on MA-104 board	*8	*8	*8	*9	*9	*9	*9	*9	*9	*8	*8	*9	*9
LP•HEAD	O	Pin ㊸ of IC501 on MA-104 board	*9	*9	*9	*9	L	L	L	L	L	*9	*9	*9	*9
REC•$\overline{P}$	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 ㊱ of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	H	H	H	H
V SYNC	I	Pin ㊽ 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
$\overline{SP}$ (Pin ㊵)	L	H
$\overline{SP2}$ (Pin ㊷)	L	L
LP HEAD (Pin ㊸)	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 I/O	Pin No.	STOP	FF	REW	TAPE LOADING
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
$\overline{STEP\ PLS}$	O	Pin ㊺ of IC501 on MA-104 board	H	H	H	H
CAP V*3	I	Pin ㊾ of IC501 on MA-104 board				
SW POSITION*4	I	Pin ㊿ of IC501 on MA-104 board				
PB CTL	I	Pin ㊼ of IC501 on MA-104 board	H	*6	*6	
VD CTL	I	Pin ⑰ of IC501 on MA-104 board	H	*6	*6	
DRUM PG	I	Pin ㊽ of IC501 on MA-104 board	L	*7	*7	*5
DRUM FG	I	Pin ㊾ of IC501 on MA-104 board	L	*8	*8	*5
CAP FG	I	Pin ⑱ of IC501 on MA-104 board	H/L	*6	*6	*5
INDEX $\overline{CS}$	O	Pin ㊷ 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•$\overline{P}$	O	Pin ⑤ of IC501 on MA-104 board	L	L	L	L
$\overline{INSERT}$	O	Pin ㊲ 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 ⑱)	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 I/O	Mode Pin No.	STOP	FF	REW	TAPE LOADING	TAPE UNLOADING	PB	PB• PAUSE	SLOW	×2	CUE	REVIEW	REC	REC• PAUSE	INSERT	INSERT• PAUSE
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 ⑪ of IC501 on MA-104 board	H	L	L	L	L	L	H	H	L	L	L	L	H	L	H
$\overline{\text{STEP PLS}}$	O	Pin ⑮ 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 ⑯ of IC501 on MA-104 board															
SW POSITION *4	I	Pin ⑰ of IC501 on MA-104 board															
PB CTL	I	Pin ⑰ of IC501 on MA-104 board	H	*6	*6			*1	H/L	*2	*6	*6	*6	*1	H	*1	H
VD CTL	I	Pin ⑰ of IC501 on MA-104 board	H	*6	*6			*1	H/L	*2	*6	*6	*6	*1	H	*1	H
DRUM PG	I	Pin ⑱ 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 ⑲ 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 ⑳ 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 $\overline{\text{CS}}$	O	Pin ㉒ 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 ㉓ 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 ㉔ 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 ㉕ of IC501 on MA-104 board	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13	*13
REC•$\overline{\text{P}}$	O	Pin ⑤ of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	L	L	H	L	H	L
$\overline{\text{INSERT}}$	O	Pin ㉗ 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	I/O	Pin No.	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
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 ㊽ 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 ㊾ 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 ㊿ 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 ㊿ 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 ⑰ 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 ⑱ 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 ㊻ 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 ㊸ 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 ㊺ 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 ㊹ 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 ㊴ 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 ㉑ 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 ㉒ 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

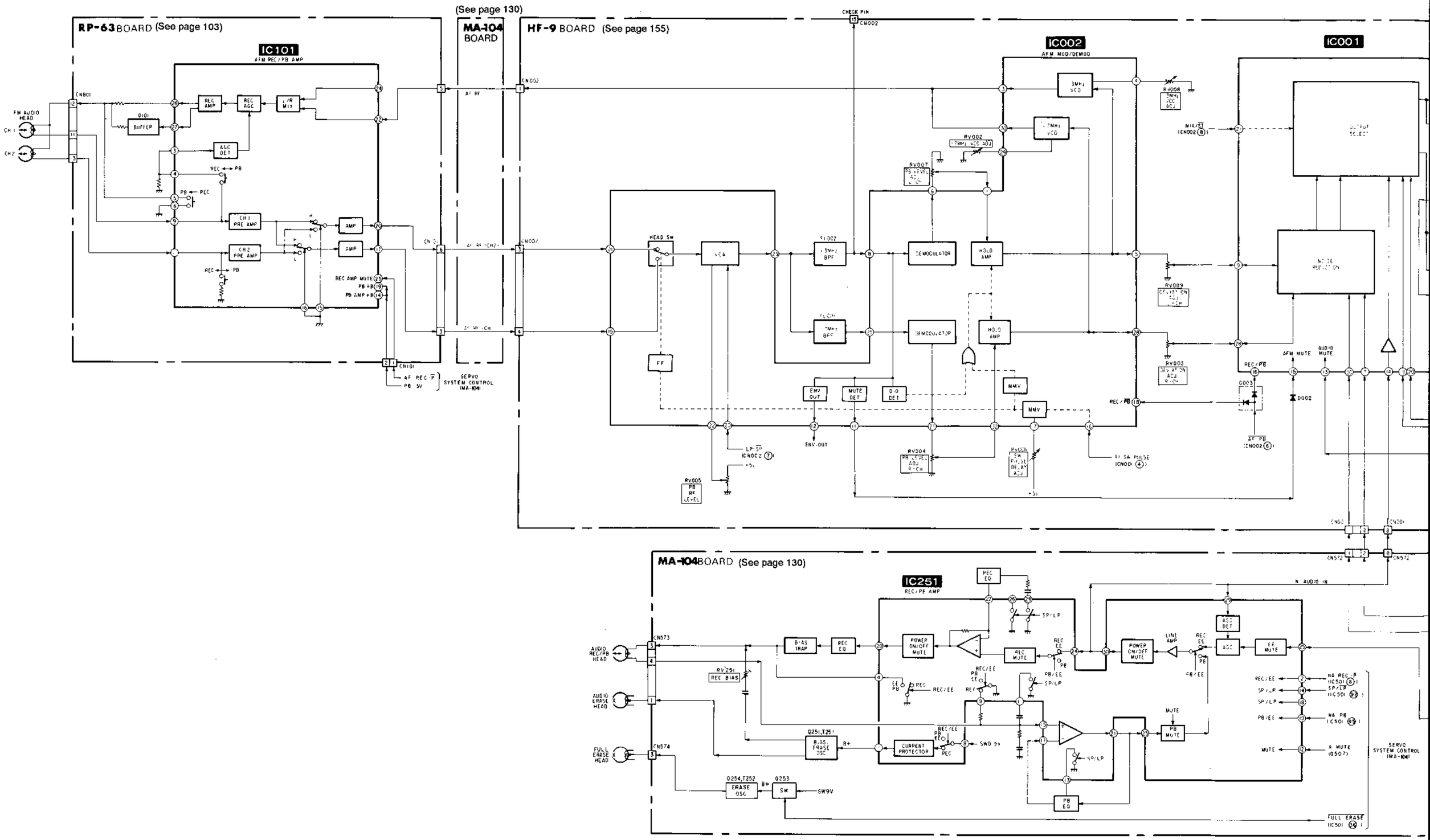
Signal	I/O	Pin No.	Input/output level
$\overline{\text{COSMO•RESET}}$	I	Pin ㊵ of IC501 on MA-104 board	"H": normally. "L": when power failure detected or power failure restored.
$\overline{\text{COSMO•CS}}$	I	Pin ㊹ of IC501 on MA-104 board	Chip select signal from timer micro computer. V cycle "L" pulse.
SI•BUS	I	Pin ㊺ of IC501 on MA-104 board	Serial communication data from timer micro computer. V cycle "L" pulse.
SO•BUS	O	Pin ㊻ of IC501 on MA-104 board	Serial communication data to timer micro computer. V cycle "L" pulse.
S CLK	I	Pin ㊼ of IC501 on MA-104 board	Serial communication clock with timer micro computer. V cycle "L" pulse.
S IN 2	I	Pin ㊾ of IC501 on MA-104 board	Serial communication data from INDEX IC. 8 msec cycle "L" pulse.
S OUT 2	O	Pin ㊿ of IC501 on MA-104 board	Serial communication data to INDEX IC. 8 msec cycle "L" pulse.
S CLK 2	O	Pin (51) of IC501 on MA-104 board	Serial communication clock to INDEX IC. 8 msec cycle "L" pulse.
INDEX $\overline{\text{CS}}$	O	Pin (52) of IC501 on MA-104 board	Chip select signal to INDEX IC. 8 msec cycle "L" pulse.

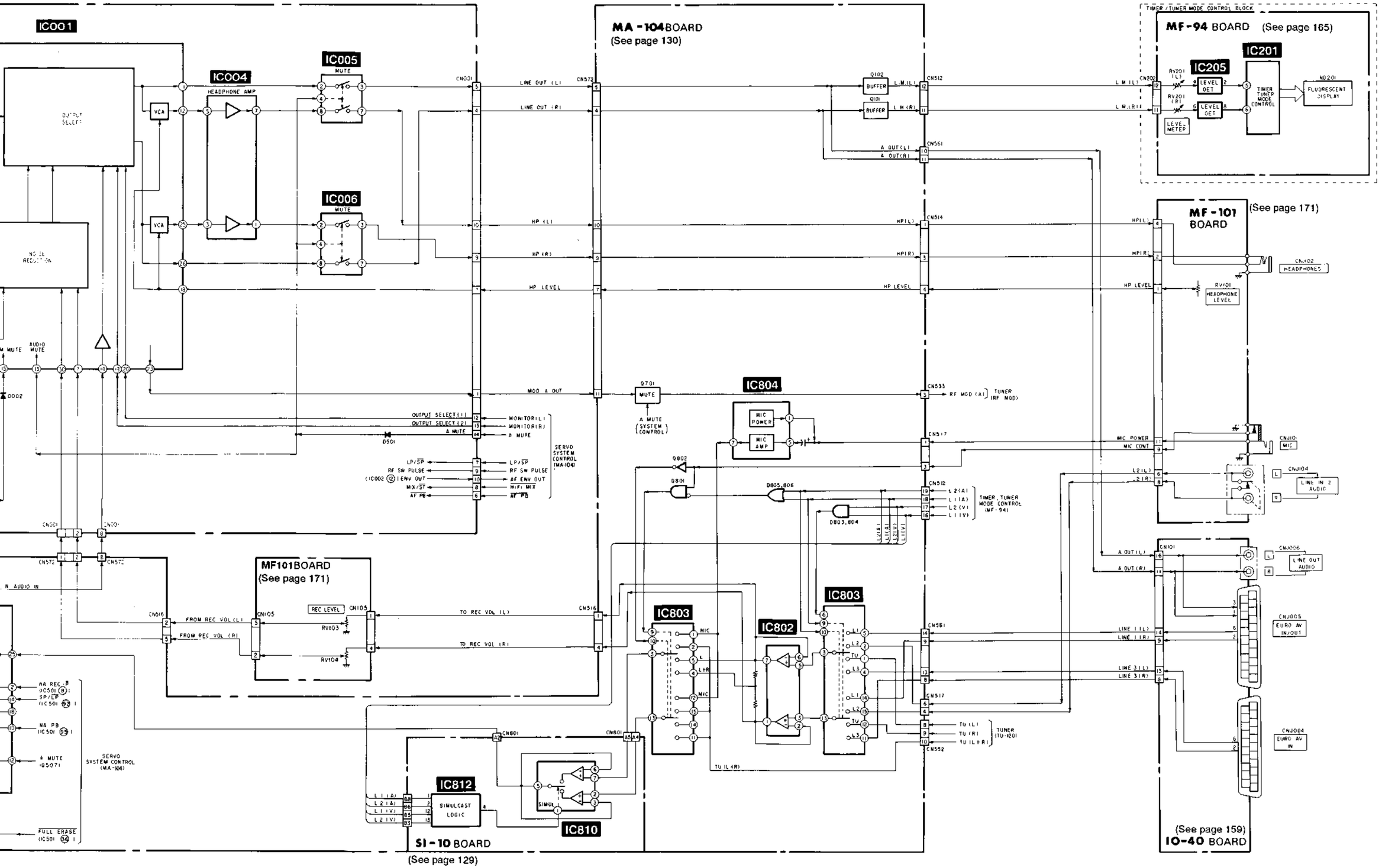
3-11. SYSTEM CONTROL — AUDIO BLOCK INTERFACE

Signal	I/O	Pin No.	STOP/ FF/REW	TAPE LOADING	TAPE UNLOADING	PB	PB• PAUSE	SLOW	×2	CUE	REVIEW	REC	REC• PAUSE	INSERT	INSERT• PAUSE
		Mode													
$\overline{\text{AF PB}}$	O	Pin (53) 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 (9) of IC501 on MA-104 board	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1
AF ENVELOP	I	Pin (61) of IC501 on MA-104 board													
NA•PB	O	Pin (58) 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 (56) of IC501 on MA-104 board	L	L	L	*4	H	H	H	H	H	H	H	H	H
SP•2	O	Pin (62) 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 (5) of IC501 on MA-104 board	L	L	L	L	L	L	L	L	L	H	L	H	L

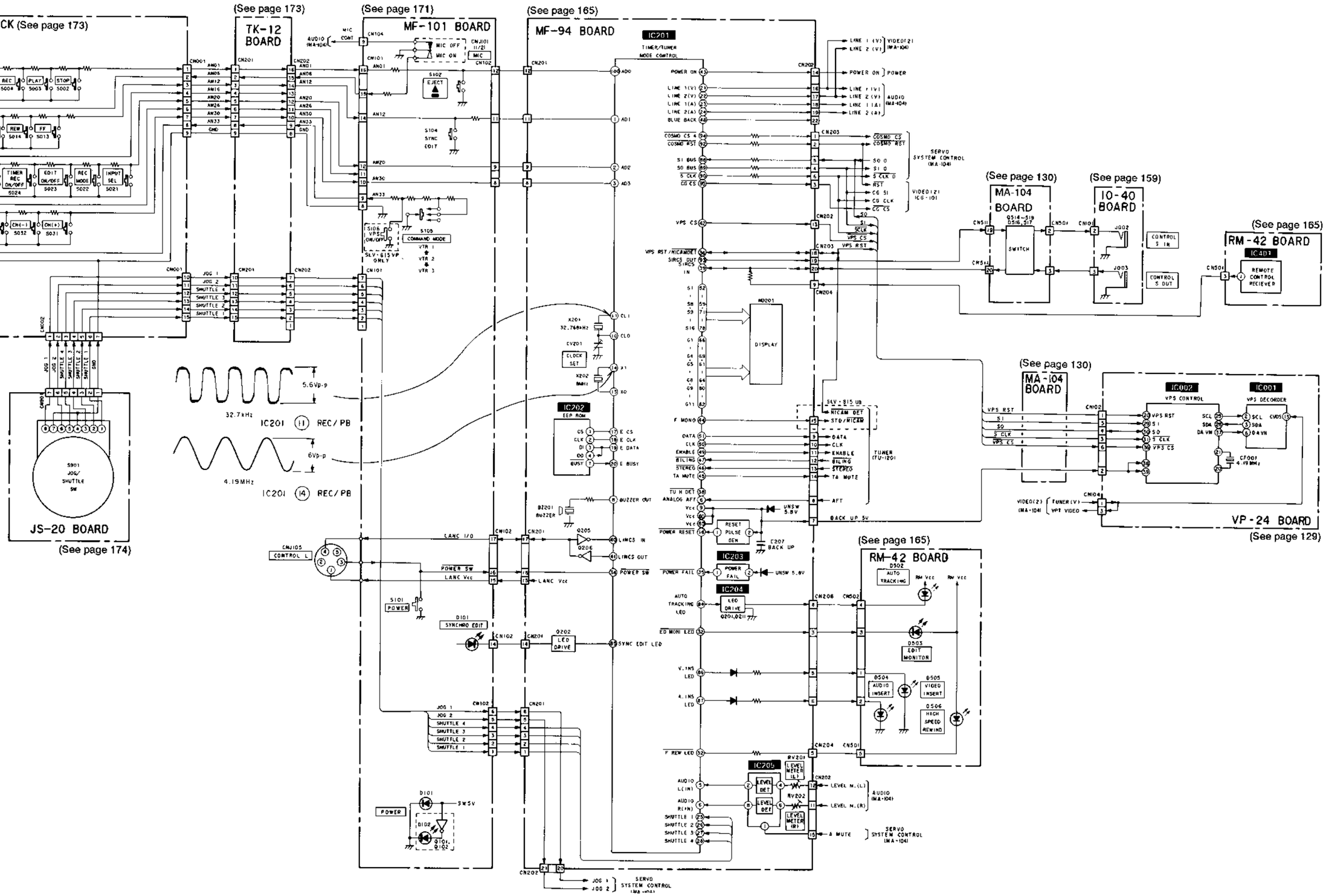
*1. According to audio monitor
*2. According to SP/LP selector. "L": SP mode, "H": LP mode.
*3. According to tape REC mode. "L": SP mode, "H": LP mode.
*4. "H": when CTL signal is not played back.

3-12. AUDIO BLOCK DIAGRAM

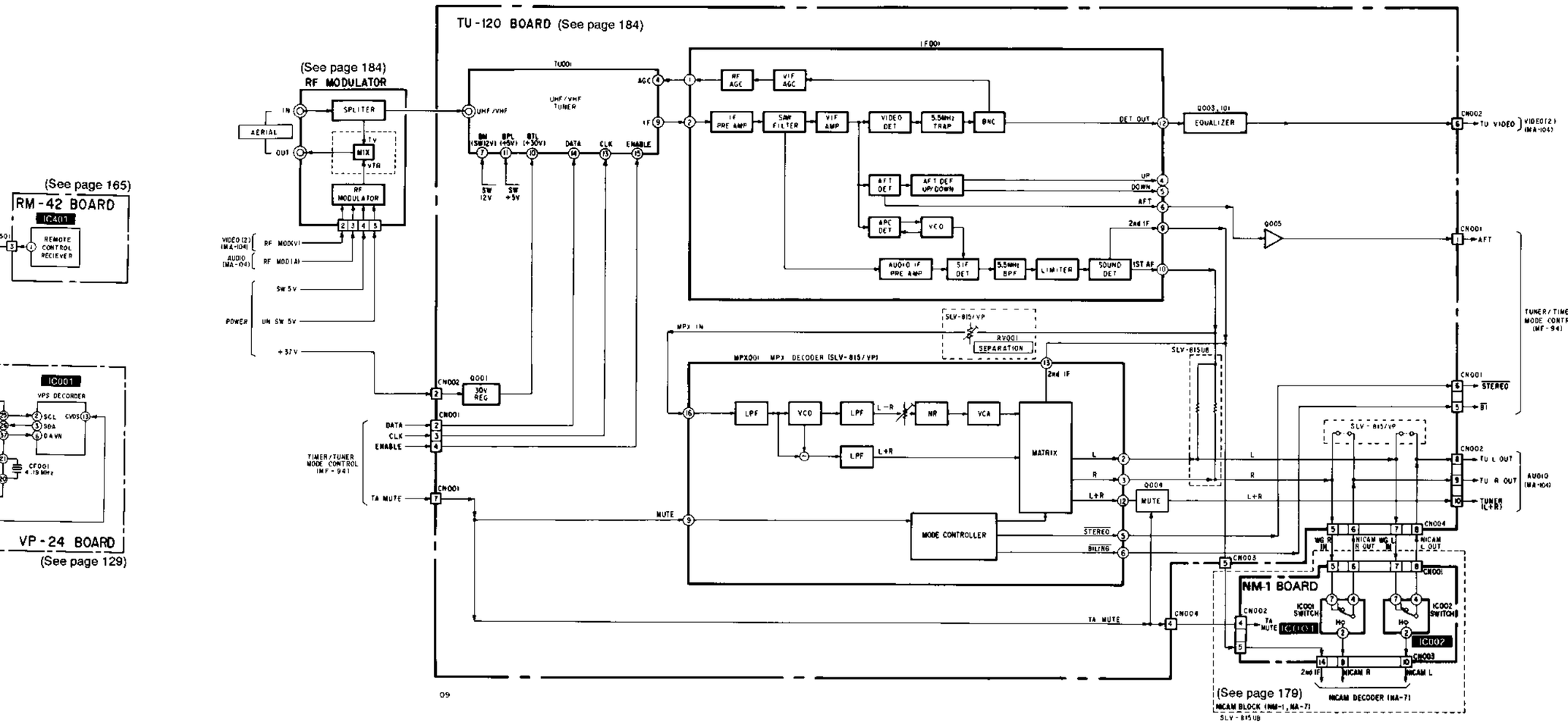



IC001
OUTPUT SELECT
NOISE REDUCTION
IC004
HEADPHONE AMP
VCA
IC005
MUTE
IC006
MUTE
CN003
LINE OUT (L)
LINE OUT (R)
HP (L)
HP (R)
HP LEVEL
MOD & OUT
OUTPUT SELECT(L)
OUTPUT SELECT(R)
MONITOR(L)
MONITOR(R)
A MUTE
D501
LP/SP
RF SW PULSE
IC002 (12) ENV OUT
MIX/ST
AF PB
SERVO SYSTEM CONTROL (MA-104)
MA-104 BOARD
(See page 130)
CN572
Q102
BUFFER
L.M(L)
Q101
BUFFER
L.M(R)
CN512
CN561
A OUT(L)
A OUT(R)
CN514
HP(L)
HP(R)
HP LEVEL
Q701
MUTE
A MUTE (SYSTEM CONTROL)
IC804
MIC POWER
MIC AMP
CN533
RF MOD (A)
TUNER (RF MOD)
CN517
Q802
D801
D805,806
D803,804
CN512
L2(A)
L1(A)
L2(V)
L1(V)
TIMER, TUNER MODE CONTROL (MF-94)
TIMER/TUNER MODE CONTROL BLOCK
MF-94 BOARD (See page 165)
IC201
IC205
CN202
RV201 (L)
RV201 (R)
LEVEL DET
LEVEL METER
TIMER TUNER MODE CONTROL
NO201
FLUORESCENT DISPLAY
MF-101 BOARD (See page 171)
CN514
HP(L)
HP(R)
HP LEVEL
CNJ02
HEADPHONES
RV101
HEADPHONE LEVEL
CNJ10
MIC
MIC POWER
MIC CONT
CNJ104
LINE IN 2 AUDIO
L2(L)
L2(R)
CN101
A OUT(L)
A OUT(R)
CNJ006
LINE OUT AUDIO
CNJ005
EURO AV IN/OUT
CNJ004
EURO AV IN
LINE 1(L)
LINE 1(R)
LINE 3(L)
LINE 3(R)
(See page 159)
10-40 BOARD
MF101 BOARD
(See page 171)
CN516
FROM REC VOL (L)
FROM REC VOL (R)
CN105
REC LEVEL
RV103
RV104
TO REC VOL (L)
TO REC VOL (R)
IC803
IC802
IC803
MIC
L
L+R
MIC
L1
L2
TU
L3
L1
L2
TU
L3
CN561
CN517
TU (L)
TU (R)
TU (L+R)
TUNER (TU-201)
TU (L+R)
CN801
IC812
SIMULCAST LOGIC
L1(A)
L2(A)
L1(V)
L2(V)
SIMUL
IC810
SI-10 BOARD
(See page 129)
SERVO SYSTEM CONTROL (MA-104)
FULL ERASE (IC501 58)

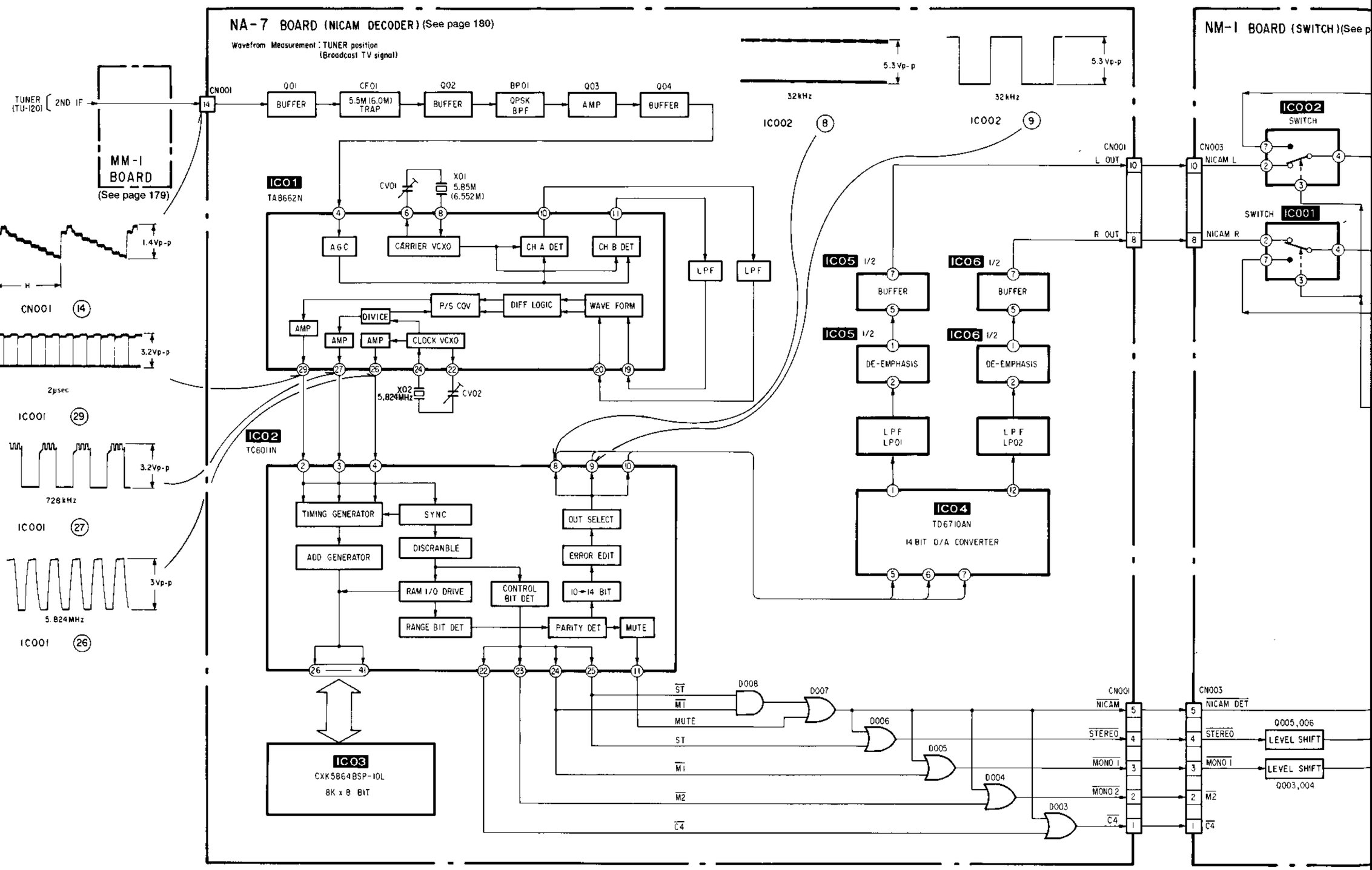
3-13. TIMER, TUNER, MODE CONTROL BLOCK DIAGRAM

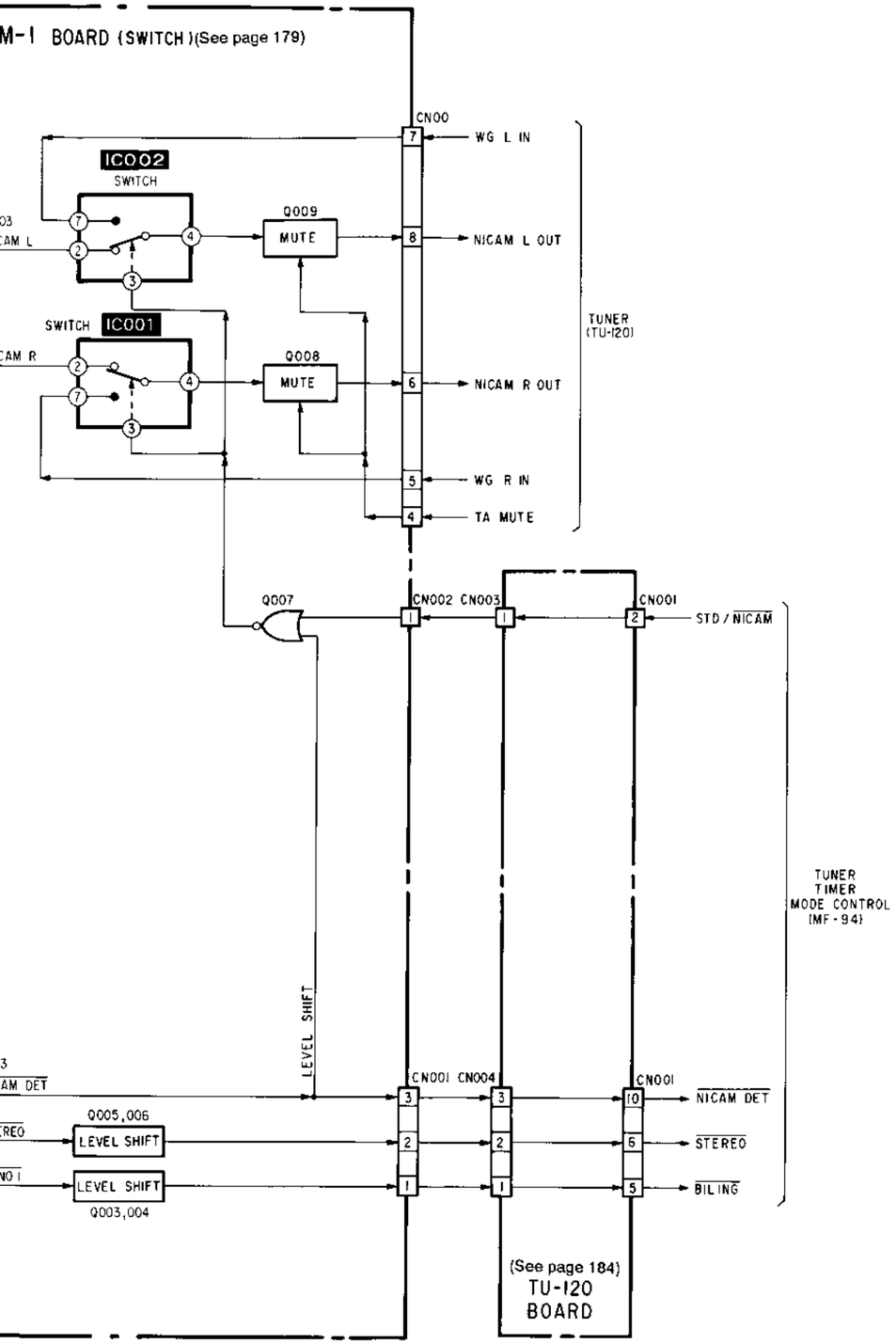


3-14. TUNER BLOCK DIAGRAM



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





3-16. NICAM (NEAR INSTANTANEOUS COMPAND SYSTEM) (SLV-815UB ONLY)

NICAM, or NICAM 728 which refers to its bit rate,stands for 14-to-10 bit Near Instantaneous Compand System which executes signal processing of PCM, employing the television's PCM sound multiplex broadcast system. By utilizing digital method for TV sound multiplex bradcasting, the following types of broadcasts are accomplished which heretofore were impossible to achieve with analog multiplex broadcasting.

1) High quality sound broadcast independent from FM sound (analog).
2) Data broadcast, while retaining the compatibility of receiving equipment. Tackles future diversification to facsimile broadcast, etc. (but not with SLV-815UB).

3-16-1. NICAM Standard

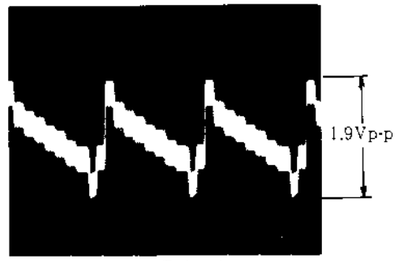
		SYSTEM-B/G Europe, etc.	SYSTEM-2 UK
Analog sound (Conventional mono 1ch TV sound)	Modulation method	FM	
	Sub-carrier frequency	5.5 MHz	6.0 MHz
	Signal level (image: FM)	20:1	10:1
Digital sound (NICAM)	Modulation method	DQPSK	
	Sub-carrier frequency	5.850 MHz	6.552 MHz
	Signal level (image: FM)	100:1	
	Bit rate	728K 6PS	
	Sampling frequency	32 kHz	
	Quantized bit count	14 bit	
	Compression/ expansion	10-to-14 bit ELONGATION COMPAND	
	Digital sound channels	2-CH	

3-16-2. NICAM Receiving System

The RF signal that is input from ANT is selected, amplified, & IF converted by the tuner; and it then enters VIF. At VIF, it is input into the image detection circuit for acquiring FM signal & QPSK signal as intercarrier; as well as into its parallel image detection circuit for reproducing image signal. To acquire QPSK signal of superior quality, quasi-parallel tone method is employed here. The QPSK signal that is output from VIF passes though QPSK DEMOD, PCM decoder, & D/A converter; then enters audio SW block, and is finally output as L, R signals.

3-16-3. Description of NA-7 Board (NICAM Decoder)

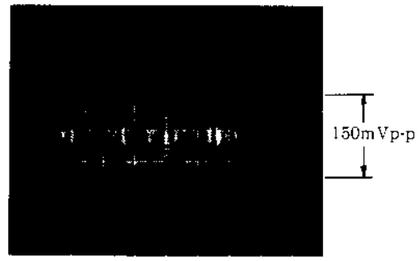
The 2nd IF signal that is output from Pin ⑨ of IF block passes through NM-1 board substrate, and enters Pin ⑭ of CN01 on NA-7 board (Fig. 1.).



2nd IF signal
(Pin ⑭ of CN01)

Fig. 1.

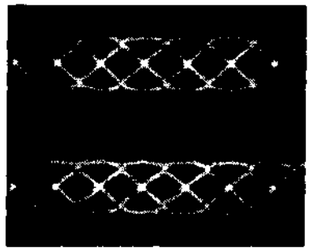
Here, the 2nd IF signal is superimposed with video signal & FM carrier 5.5 MHz [*6.0 MHz] signal, aside from QPSK signal. After passing through buffer Q01, the Pin ⑭ 2nd IF signal is FM trapped (CF01), and then passes through QPSK BPF (BP01) where its unwanted signal is eliminated. Next, it is undergoes level adjustment by AMP Q03 (about 13 dB), and is then iuput into QPSK demodulation IC IC01, Pin ④ (Fig. 2.).



QPSK signal
(Pin ④ of IC01)

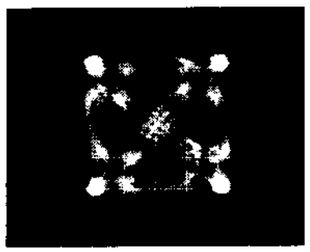
Fig. 2.

The input level at Pin ④ is 150 mVp-p for standerd 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 bank LPF, and is once again input into IC01.
The signal entering Pins ⑲, ⑳ (Fig. 3-1.) passes through wave shaper, difference logic, parallel to serial conversion; and is then output through Pin ㉙ as PCM data.



Eye pattern
(Pin ⑲ of IC01 up,
Pin ⑳ of IC01 down)

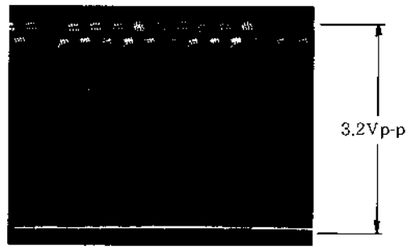
Fig. 3-1.



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

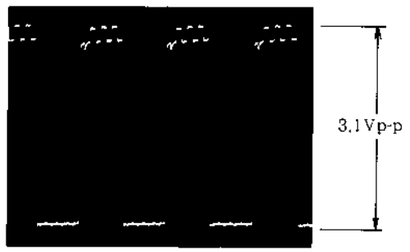
Fig. 3-2.

Similarly, PCM master clock 5.824 MHz is output through Pin㉘, and its 1/8th 728kHz bit clock through Pin ㉗.
The PCM data & clocks that are output through Pins ㉖ (Fig. 6.), ㉗ (Fig. 5.), ㉙ (Fig. 4.) of IC01 are input into the next PCM decoder IC02.



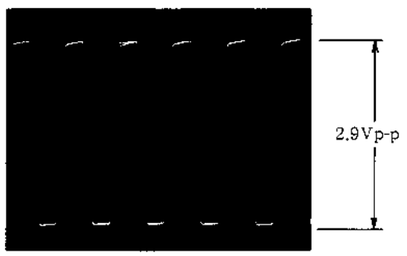
PCM data
(Pin ㉙ of IC01)

Fig. 4.



728 kHz bit clock
(Pin ㉗ of IC01)

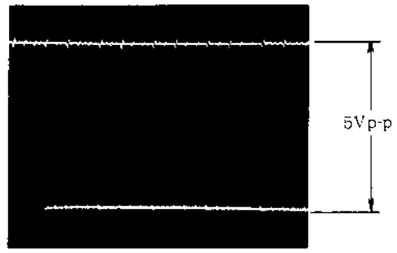
Fig. 5.



5.824 MHz master clock
(Pin ㉖ of IC01)

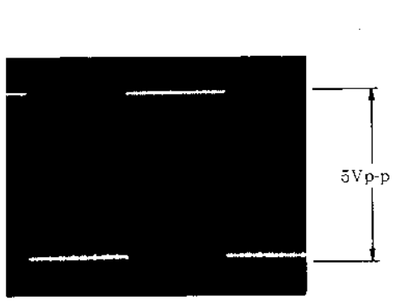
Fig. 6.

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.



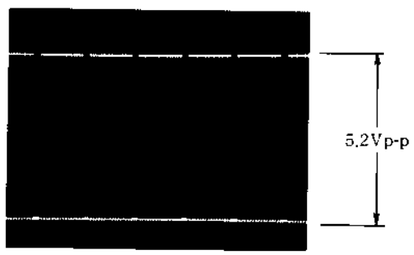
DA data
(Pin ⑩ of IC02)

Fig. 7.



Word clock
(Pin ⑨ of IC02)

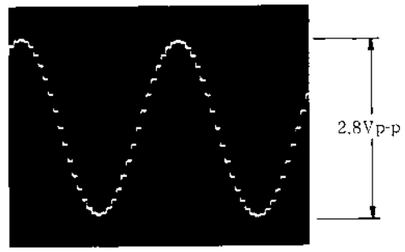
Fig. 8.



Sift clock
(Pin ⑧ of IC02)

Fig. 9.

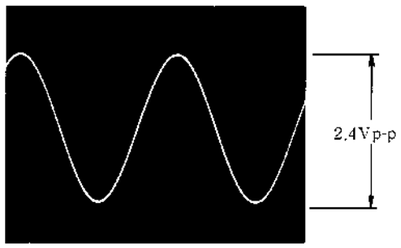
At IC04, the input DA data, after passing through integrator and sample-hold circuit, is convertedinto analog signal by a 14-bit 2ch D/A converter; and is then output through Pin ① Lch (Fig. 10.), Pin ⑫ Rch (Fig. 10.).



D/A audio out
(Pins ①, ⑫ 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 ⑧ R (Fig.11.) signal.

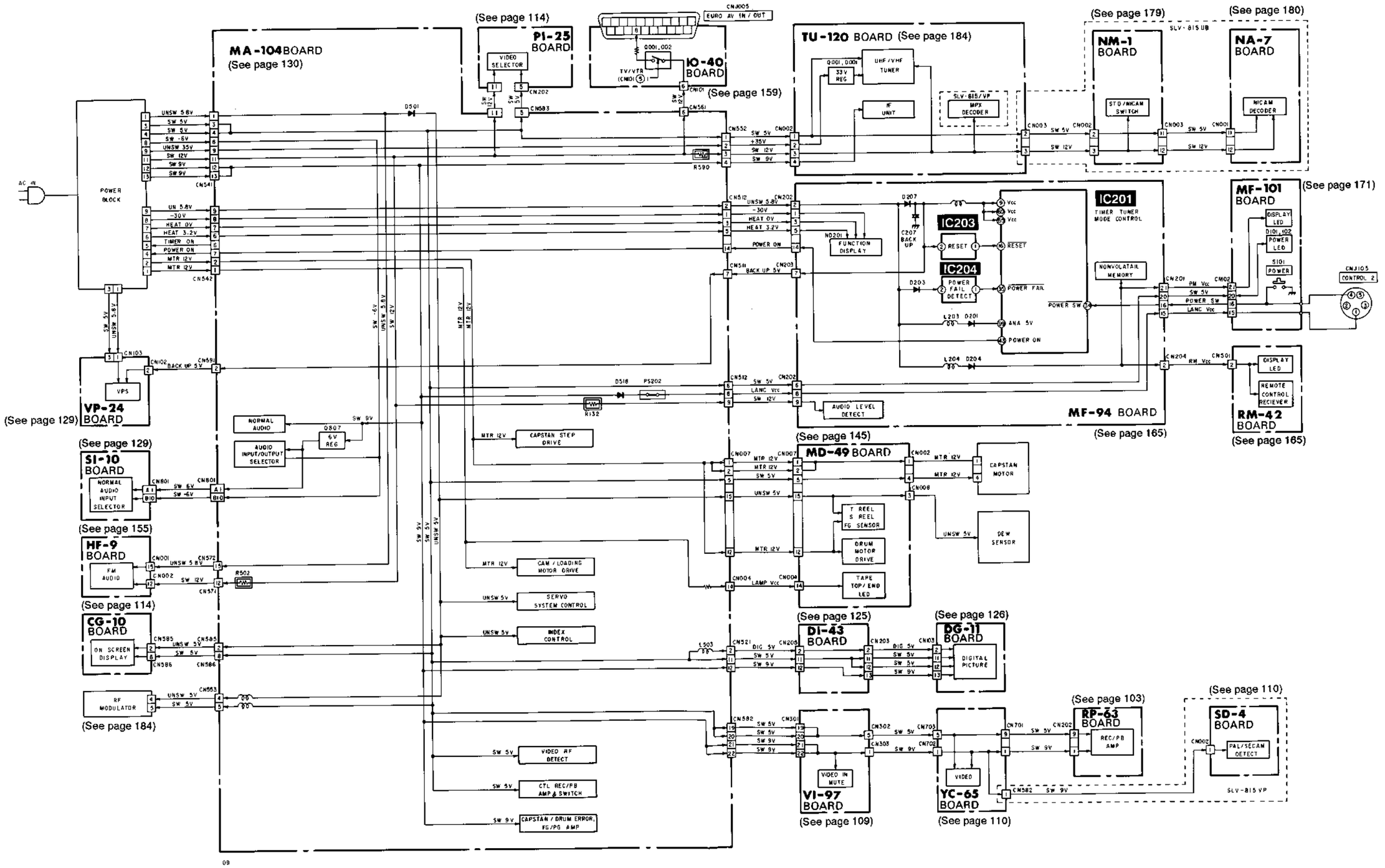


Audio out
(Pins ⑧, ⑩ of IC01)

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.

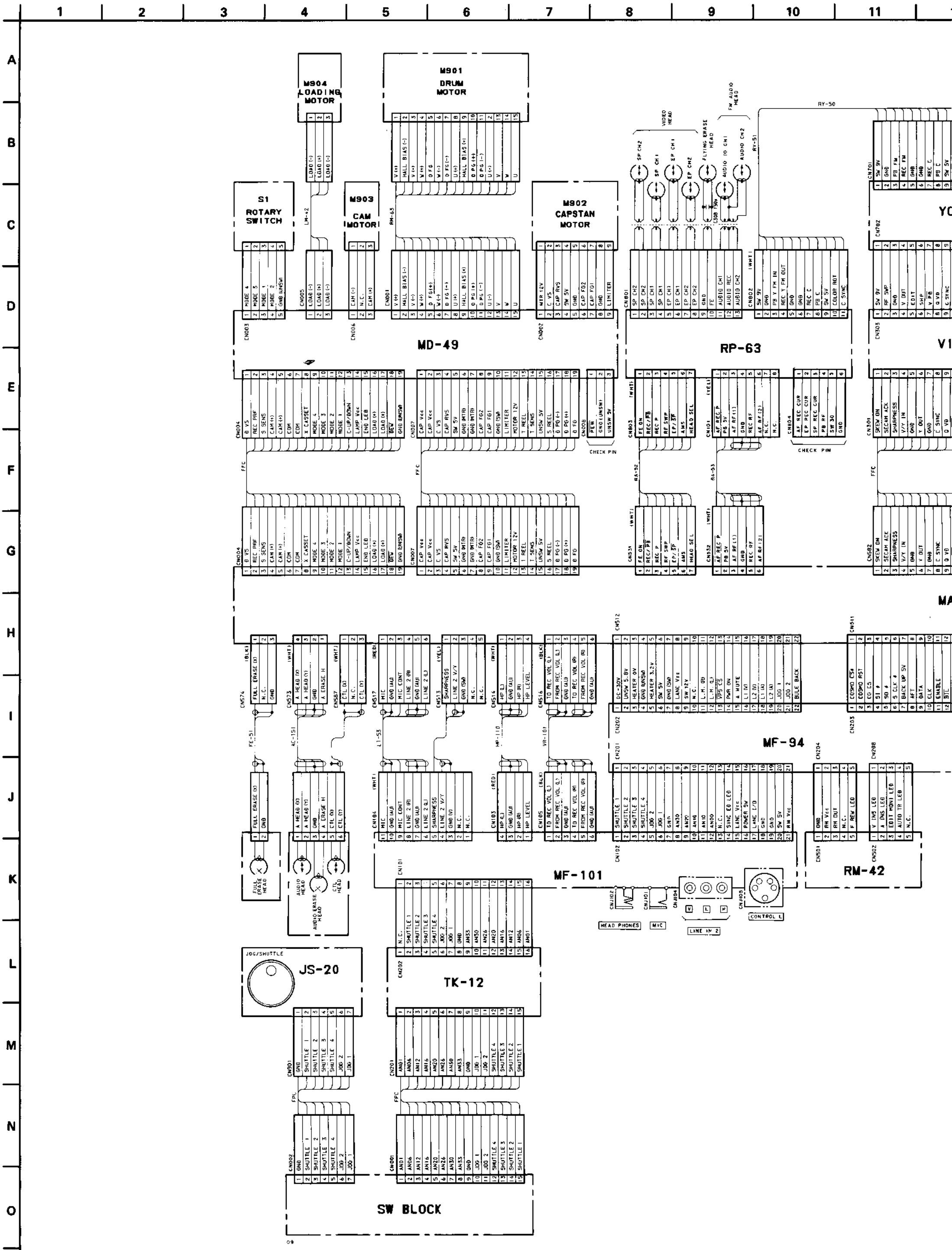
3-17. POWER BLOCK DIAGRAM

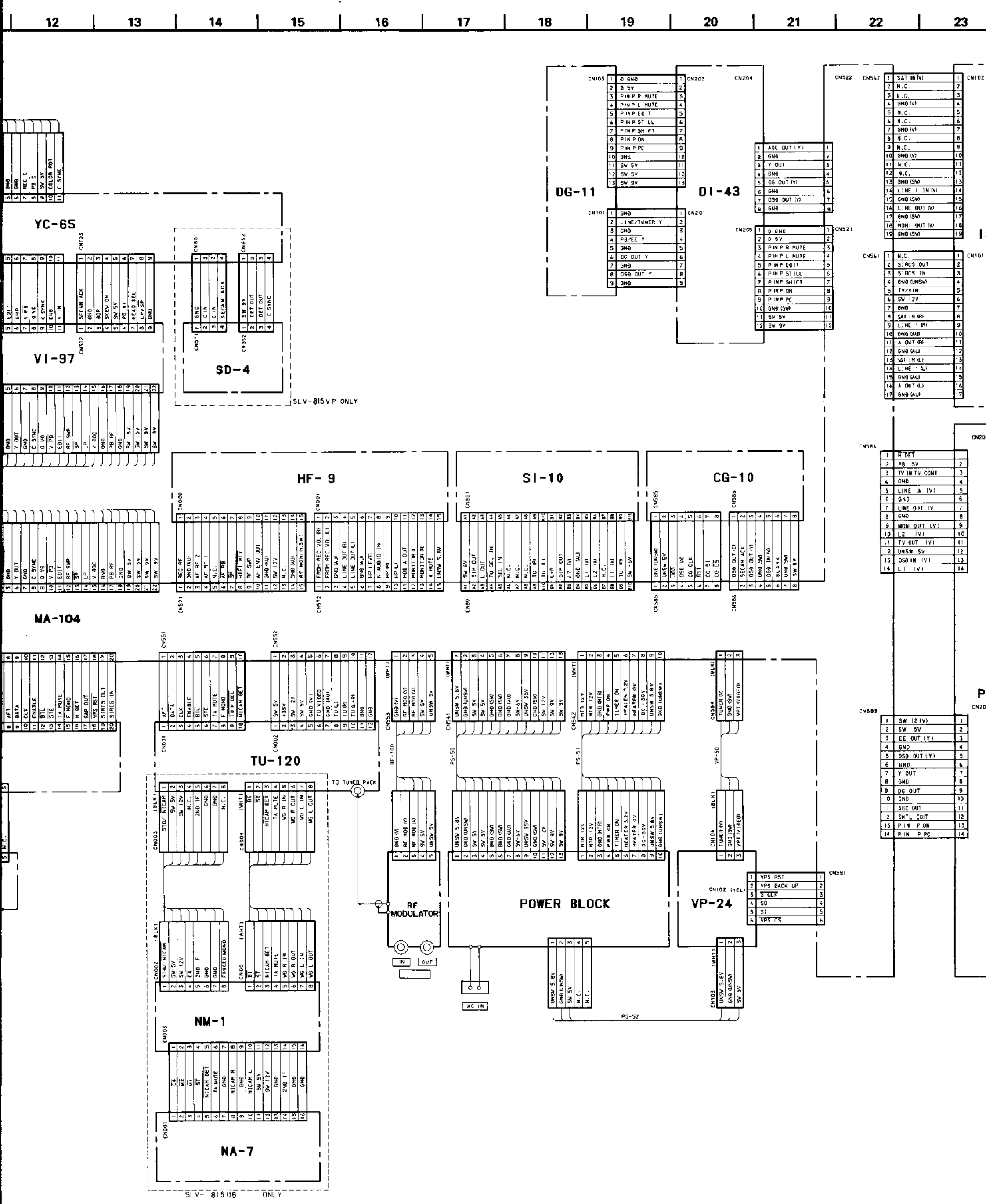


SECTION 4

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM




12
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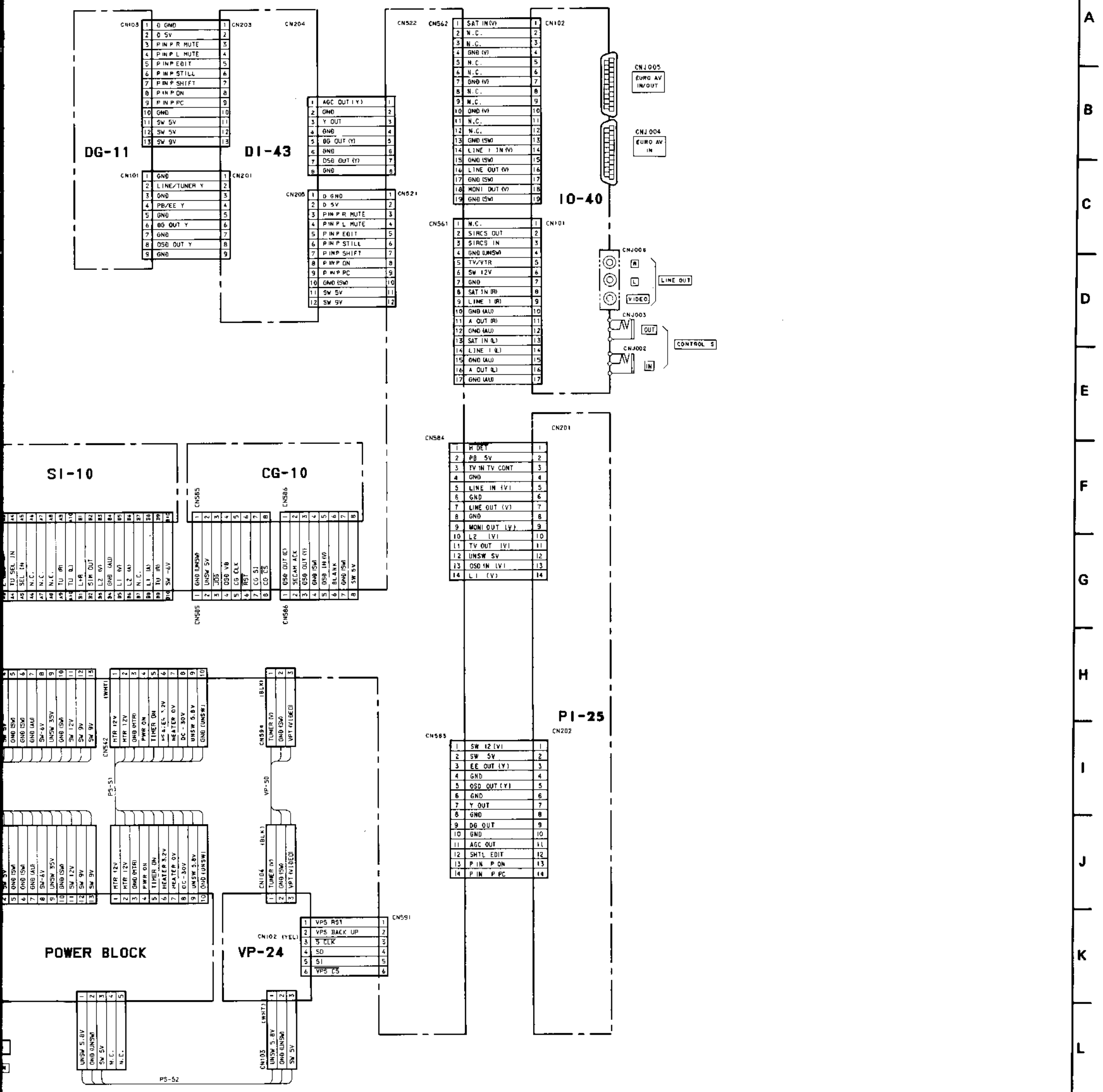
20
21
22
23
YC-65
VI-97
SD-4
SLV-815VP ONLY
HF- 9
SI-10
CG-10
MA-104
TU-120
TO TUNER PACK
RF MODULATOR
IN
OUT
AC IN
POWER BLOCK
VP-24
NM-1
NA-7
SLV- 815UB ONLY
DG-11
DI-43
RF-100
PS-50
PS-51
VP-50
PS-52
CN103
CN203
CN204
CN101
CN201
CN205
CN521
CN522
CN562
CN102
CN561
CN101
CN584
CN583
CN591
CN102 (YEL)
CN103 (WHT)
CN703
CN302
CN851
CN852
CN571
CN572
CN801
CN585
CN586
CN551
CN552
CN001
CN002
CN553
CN541
CN542
CN504
CN104
CN003
CN004
CN002 (BLK)
CN001 (WHT)
CN003 (BLK)
CN001
0 GND
0 5V
PINP R MUTE
PINP L MUTE
PINP EDIT
PINP STILL
PINP SHIFT
PINP ON
PINP PC
GND
5V 9V
AGC OUT (Y)
Y OUT
OSD OUT (Y)
N.C.
SIRCS OUT
SIRCS IN
GND (SW)
SAT IN (R)
LINE 1 (R)
GND (AU)
A OUT (R)
SAT IN (L)
LINE 1 (L)
A OUT (L)
LINE IN (V)
LINE OUT (V)
MONI OUT (V)
H DET
PB 5V
TV IN TV CONT
LINE IN (V)
LINE OUT (V)
L2 (V)
TV OUT (V)
UNSW 5V
OSD IN (V)
SW 12 (V)
SW 5V
EE OUT (Y)
OSD OUT (Y)
VPS RST
VPS BACK UP
S CLK
SO
SI
VPS CS
AFT
DATA
CLK
ENABLE
STE
TA MUTE
F MONO
H DET
SWP OUT
VPS RST
SIRCS OUT
SIRCS IN
SECAM ACK
GND
BDP
SKEW ON
SW 5V
PB RF
HEAD SEL
LP/SP
GND
EDIT
SHP
V PB
G VD
C SYNC
GND
V IN
NTCAM DET
+35V
SW 12V
GND (V)
TU VIDEO
GND (AU)
TU (L)
TU (R)
TU (L+R)
NICAM ACK
SW 9V
DET OUT
C SYNC
STD/ NICAM
2ND IF
WG R IN
WG R OUT
WG L IN
WG L OUT
FORCED MONO
NICAM L
NICAM R
C4
M2
M1
ST
RF MOD (V)
RF MOD (A)
UNSW 5.8V
GND (UNSW)
MTR 12V
GND (MTR)
PWR ON
TIMER ON
HEATER 3.2V
HEATER 0V
DC -30V
UNSW 35V
SW -6V
UNSW 5.8V
TUNER (V)
GND (SW)
VPT (VIDEO)
FROM REC VOL (R)
FROM REC VOL (L)
REC RF
AF RF 2
AF RF 1
AF PB
HIFI MIX
AF SWP
AF ENV OUT
AF MONI (1.3MT)
SIM OUT
L OUT
TU SEL IN
SEL IN
L1 (V)
L2 (V)
L1 (A)
L2 (A)
MOD A OUT
MONITOR (L)
MONITOR (R)
4 MUTE
N AUDIO IN
HP (R)
HP (L)
L+R
UNSW SV
JOG
CG CLK
RST
CG SI
CG CS
BLANK

FRAME FRAME


18
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A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
DG-11
DI-43
IO-40
SI-10
CG-10
PI-25
VP-24
POWER BLOCK
CN103
CN203
CN204
CN101
CN201
CN522
CN562
CN102
CN561
CN101
CNJ005
EURO AV IN/OUT
CNJ004
EURO AV IN
CNJ006
LINE OUT
CNJ003
CNJ002
CONTROL S
CN584
CN201
CN585
CN202
CN542
CN594
CN104
CN591
CN102 (YEL)
CN105
PS-S1
PS-S2
VP-S0

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

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:

- o——— : 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: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the 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: 1/10Wunless 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.

93

HEAD AMP HEAD AMP

RP-63 (HEAD AMP) PRINTED WIRING BOARD

— Ref. No. RP-63 BOARD: 6000 series —

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

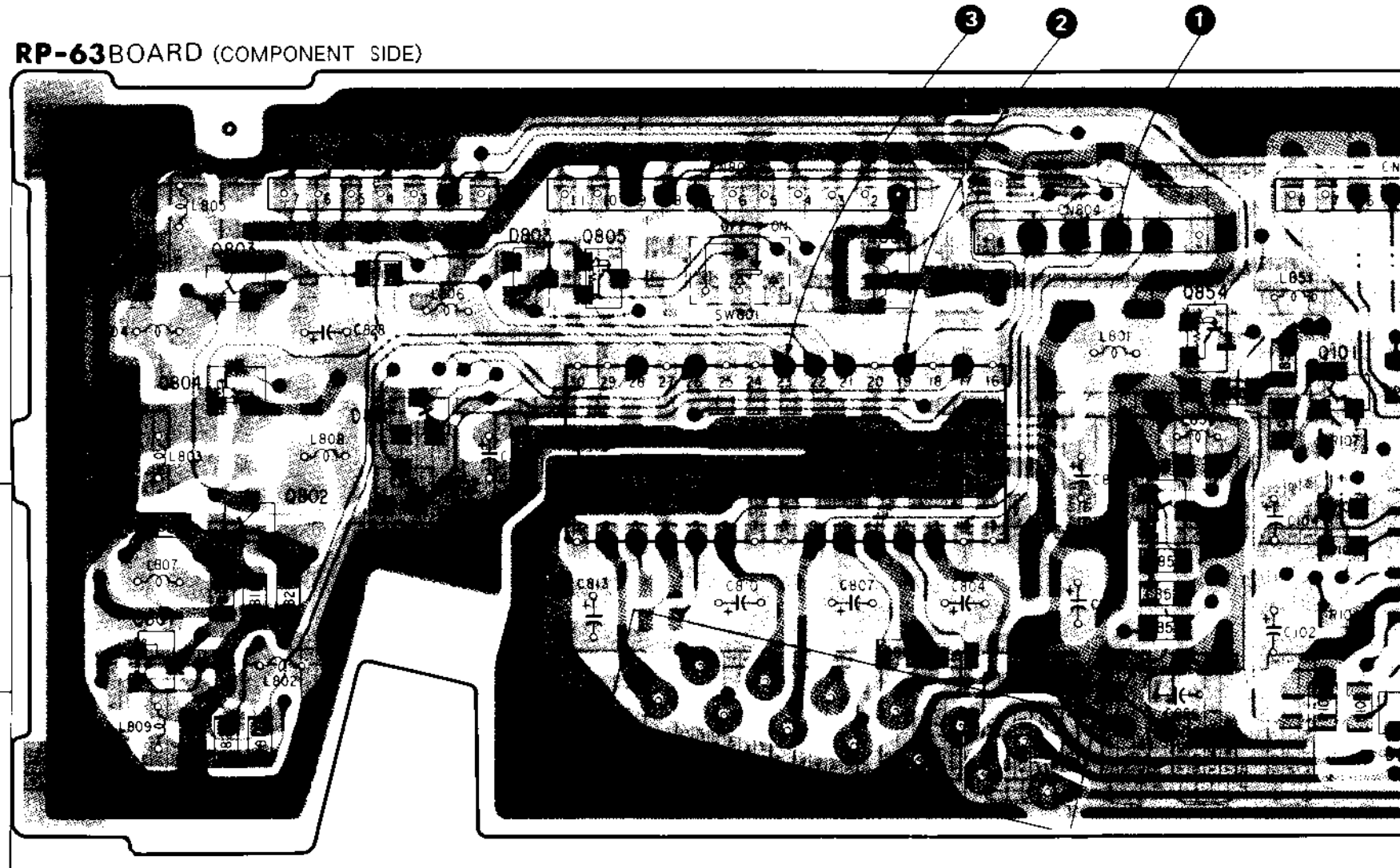
IC

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

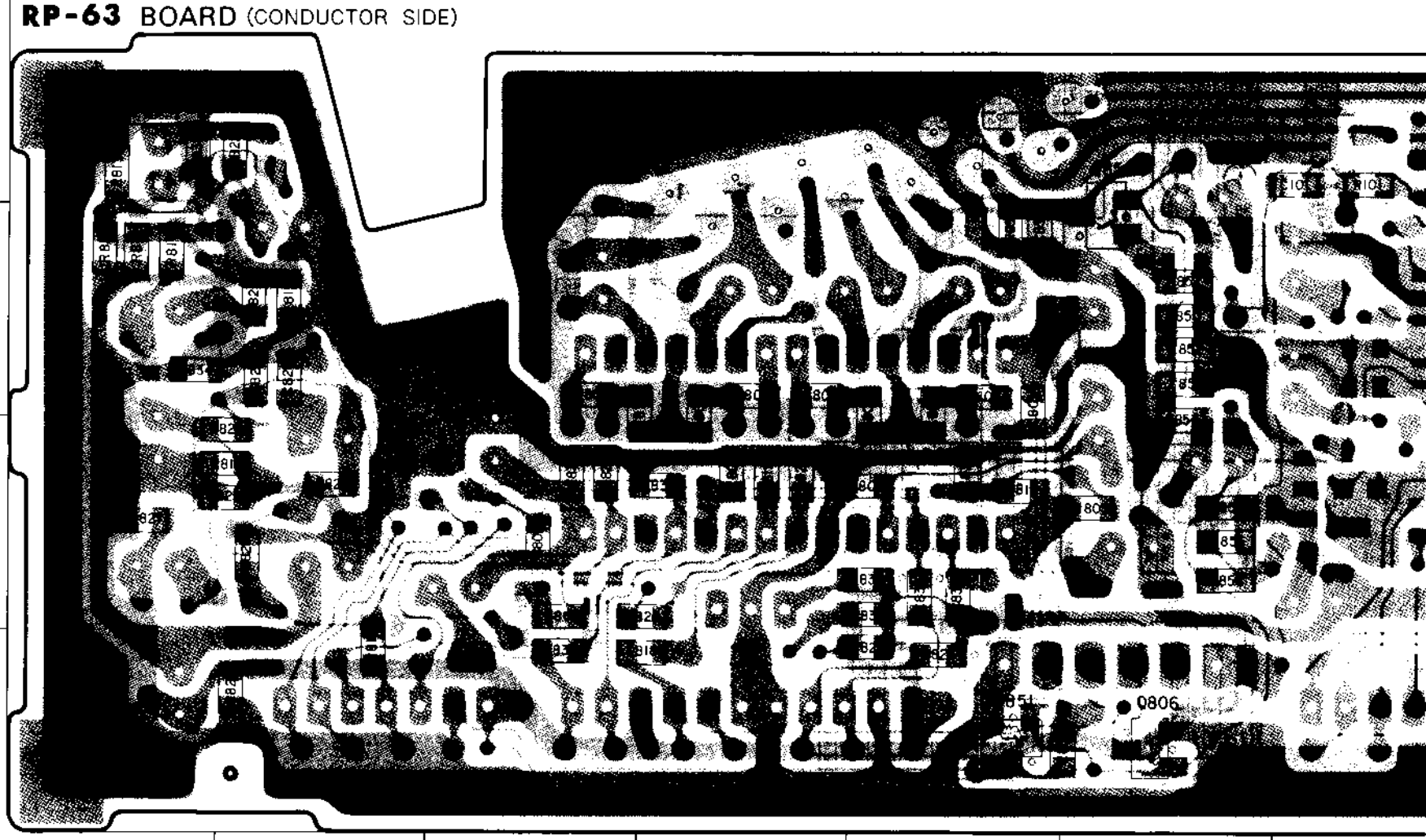
TRANSISTOR

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

RP-63BOARD (COMPONENT SIDE)



RP-63 BOARD (CONDUCTOR SIDE)



RP-63 BOARD

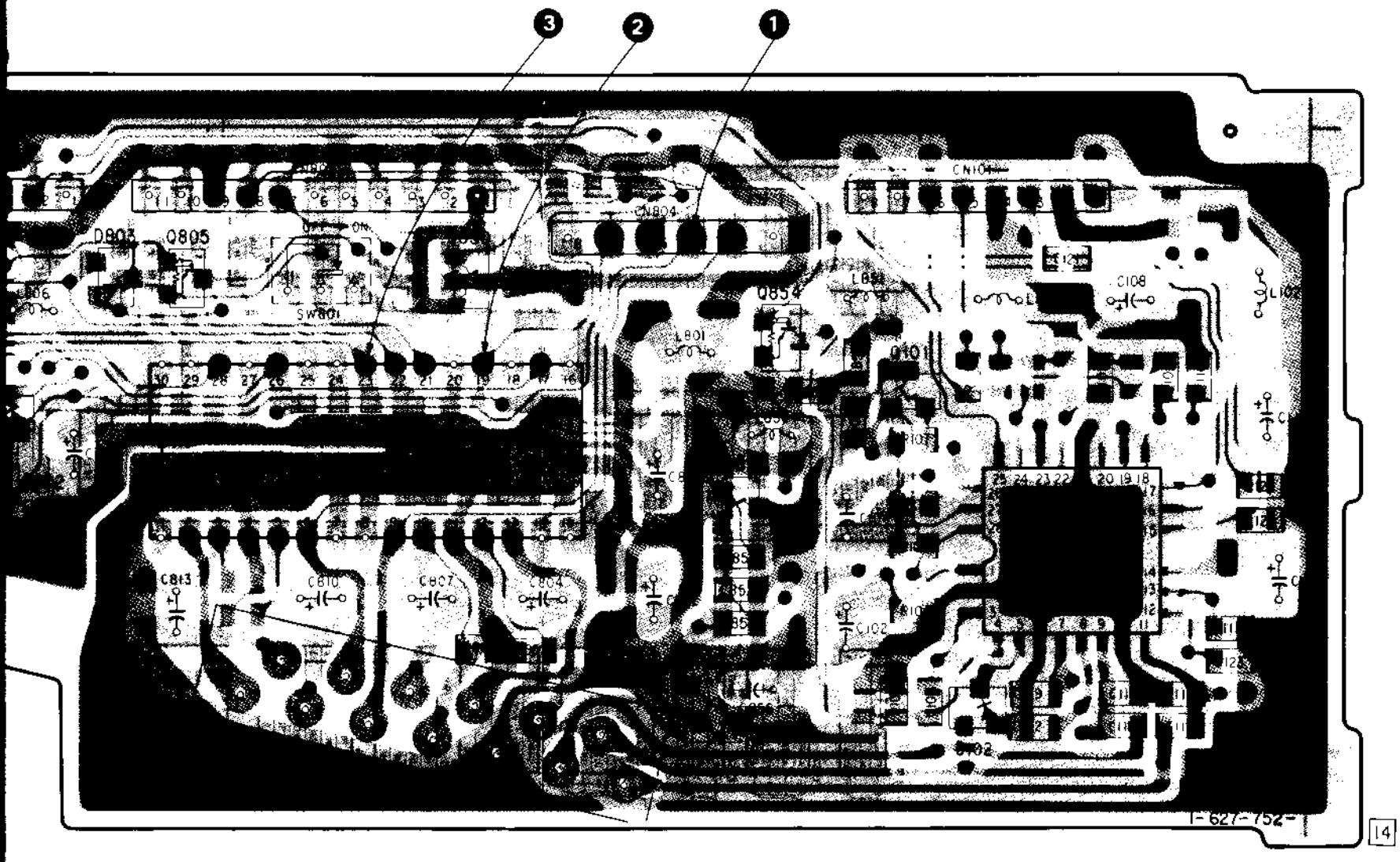
D102	D-7
D801	B-2
D802	B-2
D803	A-3
IC101	C-8
IC801	B-4
Q101	B-7
Q801	C-1
Q802	C-2
Q803	B-2
Q804	B-2
Q805	A-3
Q806	H-6
Q850	A-5
Q851	H-5
Q852	F-6
Q853	C-6
Q854	B-5

09

115MP
115MP
8019NT

TRANSISTOR

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)

3 4 5 6 7 8

HEAD AMP HEAD AMP

— Ref. No. RP-63 BOARD: 6000 series —

RP-63 BOARD

IC801
VIDEO REC/PB AMP

IC101
FM AUDIO REC/PB AMP

Q101
AUDIO REC AMP

Q801, Q802
EQUALIZER AMP

Q803
BUFFER

Q804
SP/EP SWITCH

Q805
SP/EP SWITCH

Q806
REC MUTING

Q850, Q851
REC 9V

Q852
FE AMP

Q853
FE OSC

Q854
OSC CONT

VIDEO HEAD
SP CH 2
SP CH 1
EP CH 1
EP CH 2
FLYING ERASE HEAD
FM AUDIO HEAD
AUDIO CH 1
AUDIO CH 2

CN801
SP CH2 1
SP CH2 2
SP CH1 3
SP CH1 4
EP CH1 5
EP CH1 6
EP CH2 7
EP CH2 8
GND 9
FE 10
AUDIO CH1 11
AUDIO REC 12
AUDIO CH2 13

CN101 (TYPE J)
1 AF REC P
2 +B SW
3 AF RF (-)
4 GND
5 REC RF
6 AF RF (+)
7 N.C
8 N.C

TO MA-104 BOARD CN532

(See page 143)

no mark : REC PB mode
( ) : REC mode
< > : PB mode

09

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

A B C D E F G H I J

BOARD

IC801
VIDEO
REC/PB AMP

IC801
HA11B019NT

MODE CONTROL LOGIC

COMP

TO SWITCH GND

Q805
SP/EP SWITCH

SW801
OFF ON

Q801, Q802
EQUALIZER AMP

Q804
SP/EP SWITCH

Q803
BUFFER

Q806
REC MUTING

Q850, Q851
REC 9V

Q852
FE AMP

Q853
FE OSC

Q854
OSC CONT

Q850
2SB1000A-K

Q101
AUDIO REC AMP

IC101
HA12115MP

CN802 (WHT)
1 SW 9V
2 GND
3 PB Y FM
4 REC Y FM
5 GND
6 GND
7 REC C
8 PB C
9 SW 5V
10 COLOR ROT
11 C SYNC

TO YC-65 BOARD CN701
(See page 111)

CN803 (WHT)
1 FE ON
2 REC/PB
3 REC P
4 RF SWP
5 EP/SP
6 AMS
7 HEAD SEL

TO MA-104 BOARD CN551
(See page 143)

CN804
1 AF REC CUR
2 EP REC CUR
3 SP REC CUR
4 PB RF
5 SW30
6 GND

CHECK PIN

CN101 (YEL)
1 AF REC P
2 PB 5V
3 AF RF(1)
4 GND
5 REC RF
6 AF RF(2)
7 N.C
8 N.C

TO MA-104 BOARD CN552
(See page 143)

no mark : REC/PB mode
( ) : REC mode
< > : PB mode

RP-63 BOARD

1 CN804 (3) REC V : 0.1V/div H : 0.1μsec/div

2 IC801 (19) PB V : 0.2V/div H : 0.1μsec/div

3 0.5Vp-p
H : 2μsec/div
IC801 (23) PB

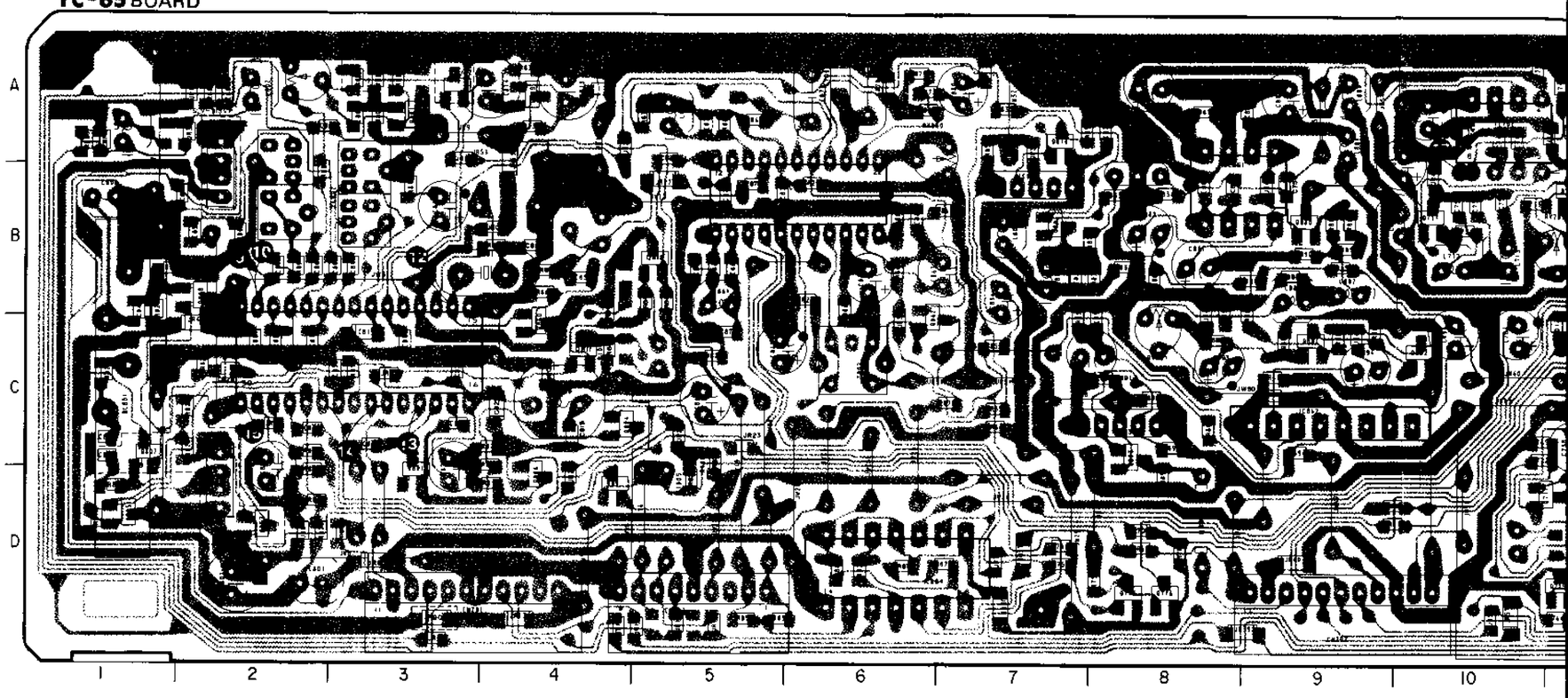
- **Signal path**

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

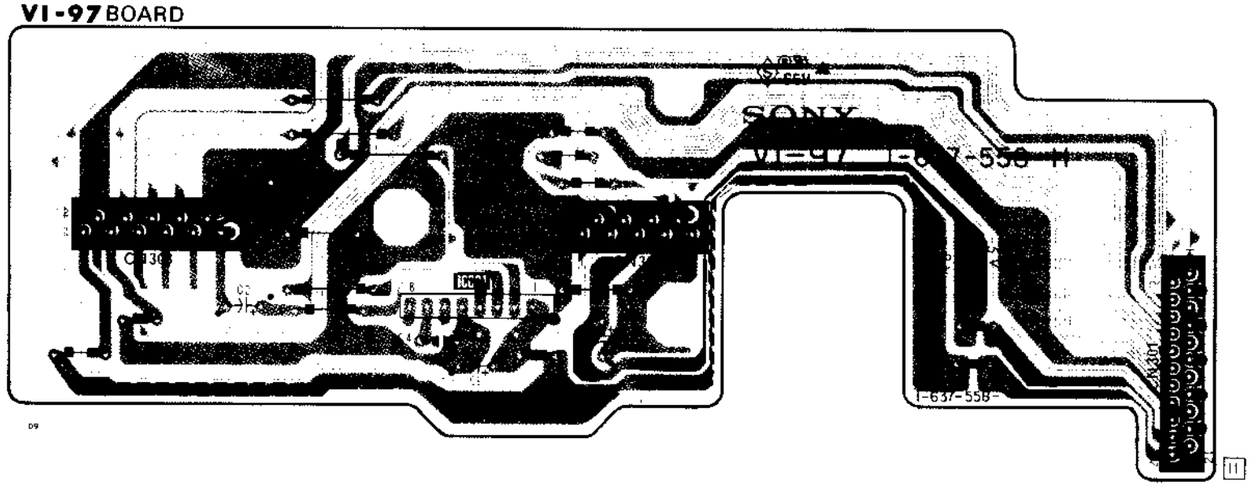
YC-65 (VIDEO), SD-4 (SECAM DETECTOR), VI-97 (RELAY) PRINTED WIRING BOARDS

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

YC-65 BOARD



VI-97 BOARD



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-4
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

DIODE

D705 8-719-104-34 DIODE 1S283S-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 DTC114EK
Q805 8-729-216-22 TRANSISTOR 2SA1162

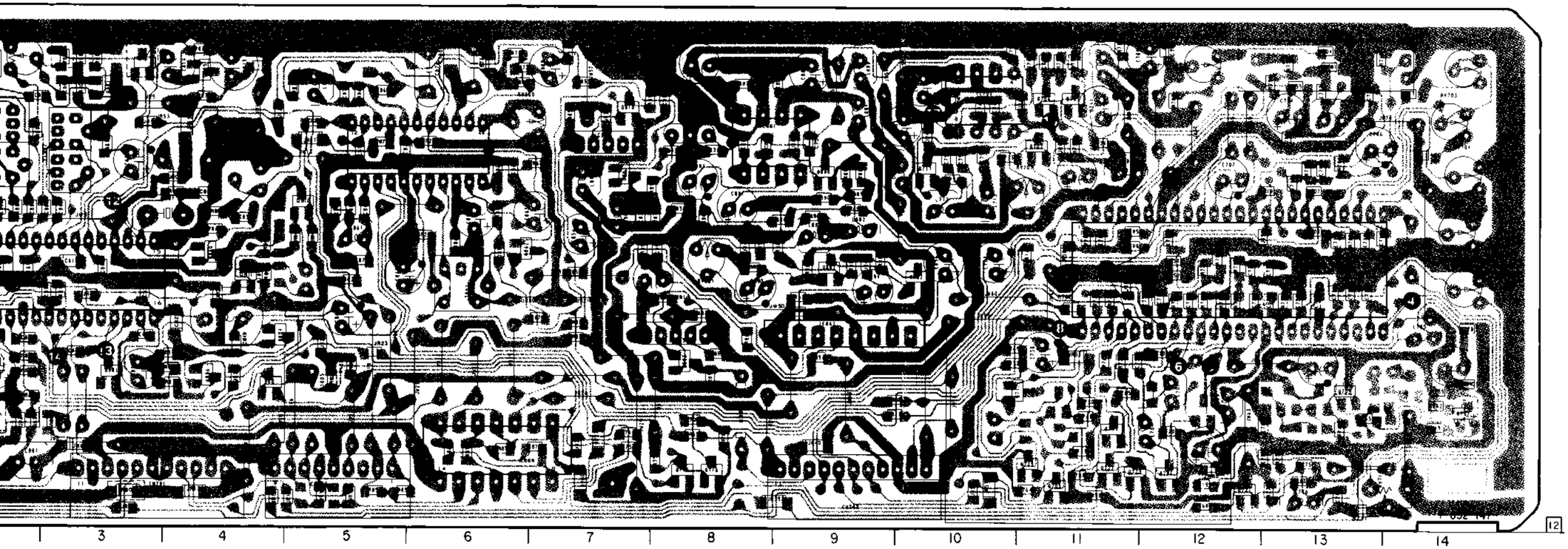
Q806 8-729-901-01 TRANSISTOR DTC144EK
Q807 8-729-100-66 TRANSISTOR 2SC1623 (SLV-815VP)
Q808 8-729-100-66 TRANSISTOR 2SC1623
Q809 8-729-100-66 TRANSISTOR 2SC1623
Q810 8-729-901-04 TRANSISTOR DTA114EK

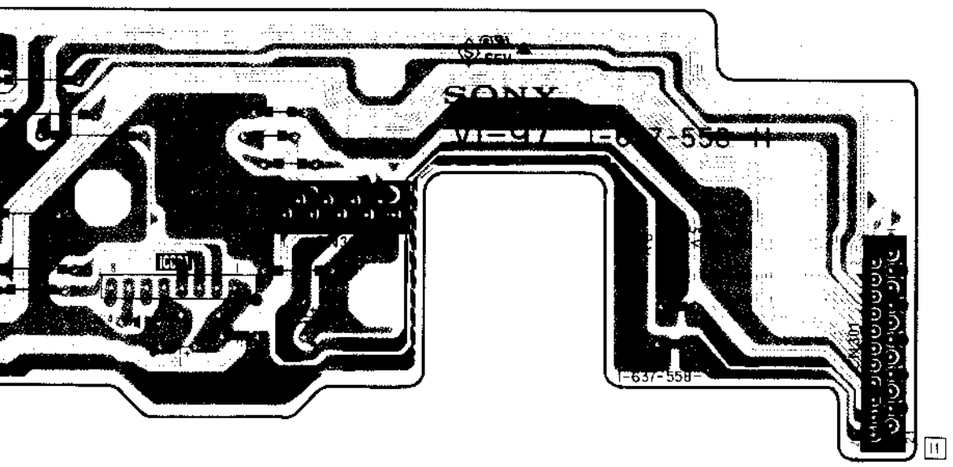
Q811 8-729-216-22 TRANSISTOR 2SA1162
Q812 8-729-100-66 TRANSISTOR 2SC1623
Q852 8-729-901-01 TRANSISTOR DTC144EK (SLV-815VP)
Q860 8-729-809-77 TRANSISTOR 2SC3142-J4
Q862 8-729-901-01 TRANSISTOR DTC144EK

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

IC

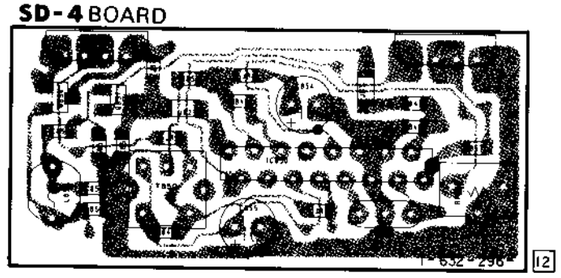
IC001 8-759-800-81 IC LA7016





7016

SD-4 BOARD



IC

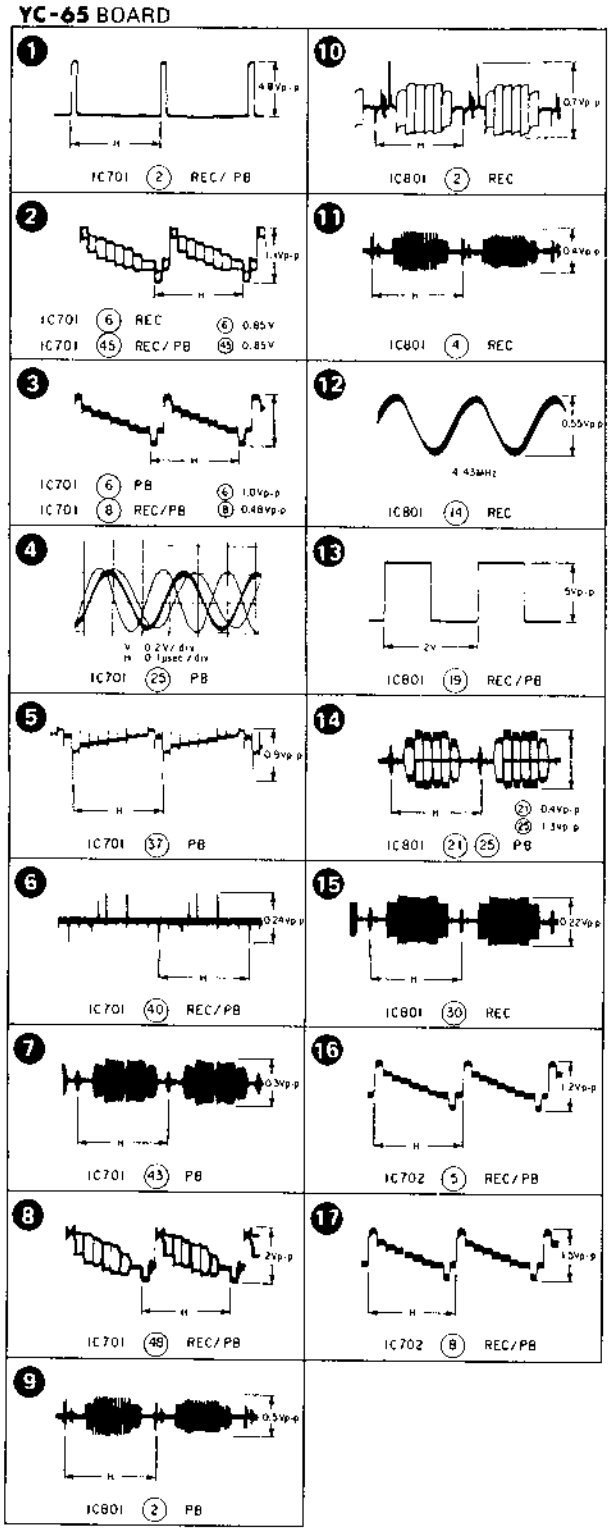
IC850 8-759-904-95 IC BA7007

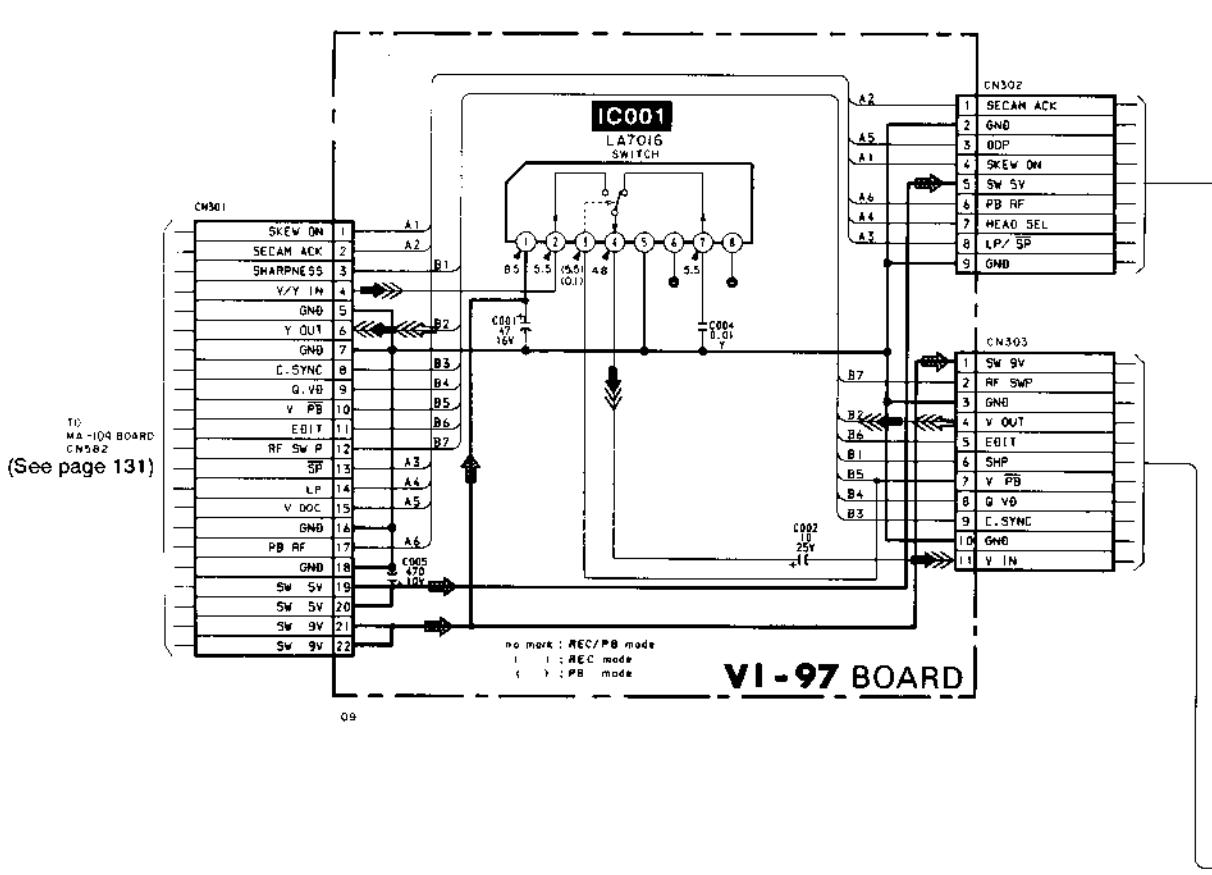
TRANSISTOR

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





SD-4 BOARD

no mark REC / PB mode

SLV-815VP

IC850 BA7007 SECAM DET

IC801 HA118016NT CHROMA PROCESS

IC861 MSM6989RS 0.5H CCD

IC862 CX20061 SWITCH

IC860 AN3592K 0.5H SKEW DET

IC864 MC14066BCP SWITCH

Q851 AMP

Q805 BUFFER

Q807 Q808 REC / PB SWITCH

Q811 BUFFER

Q812 AMP

Q717 AMP

Q880 BUFFER

Q881 Q882 AMP

Q862 SWITCH

Q804 Q806 REC / PB SWITCH

Q803 3fsc AMP

Q809 SWITCH

Q860 AMP

Q801 BUFFER

Q802 SECAM KILLER

Q810 SWITCH

CN852 1 SW 9V, 2 DET OUT, 3 DET OUT, 4 C SYNC

CN851 1 GND, 2 C IN, 3 C IN, 4 SECAM ACK

CN701 1 SW 9V, 2 GND, 3 PB FM, 4 REC FM, 5 GND, 6 GND, 7 REC C, 8 PB C, 9 SW 5V, 10 COLOR POT, 11 C SYNC

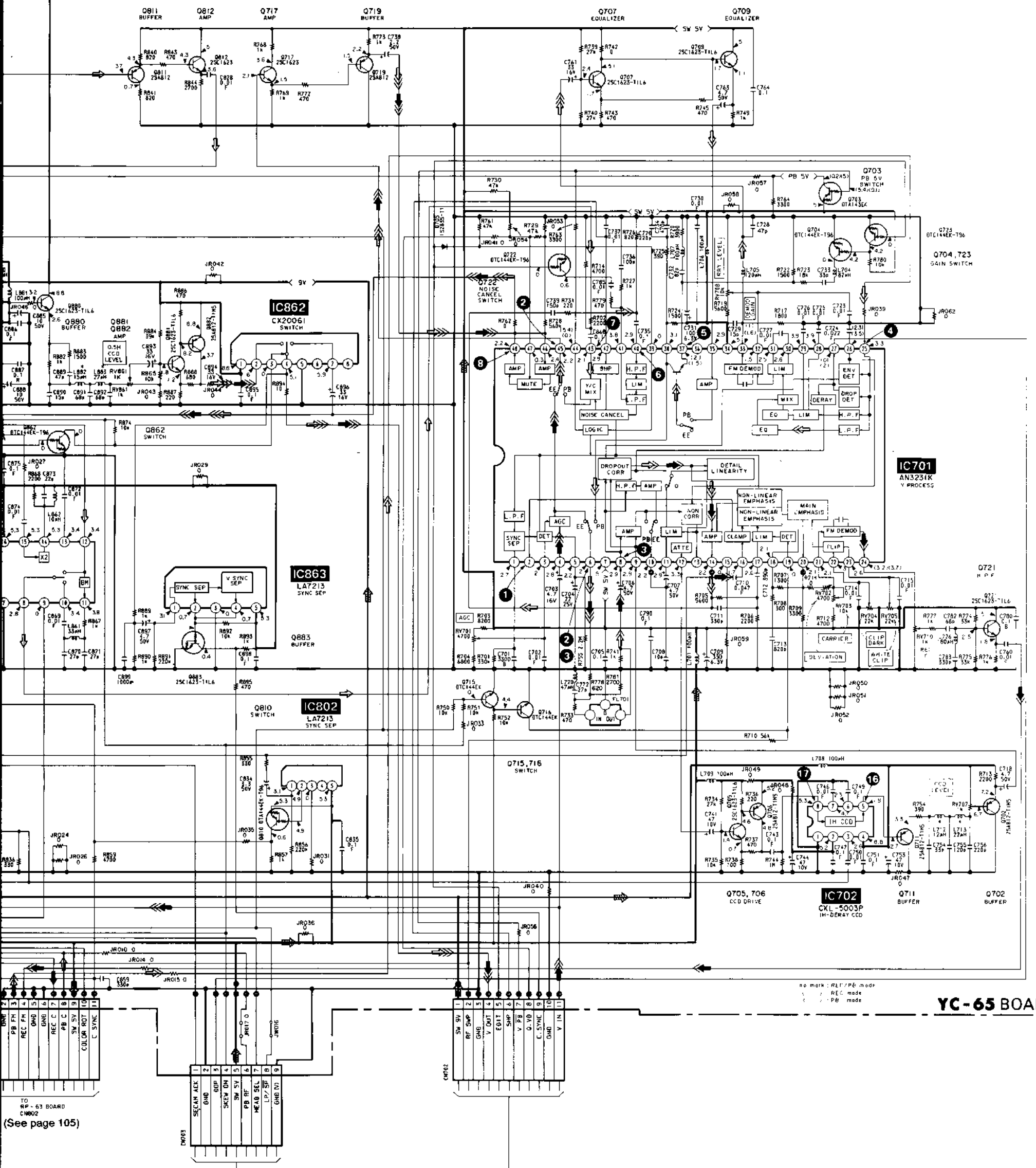
TO RP-63 BOARD CN802

CN703 1 SECAM ACK, 2 GND, 3 EOP, 4 SKEW ON, 5 SW 5V, 6 PB RF, 7 HEAD SEL, 8 LP/SP, 9 GND (V)

(See page 105)

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

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

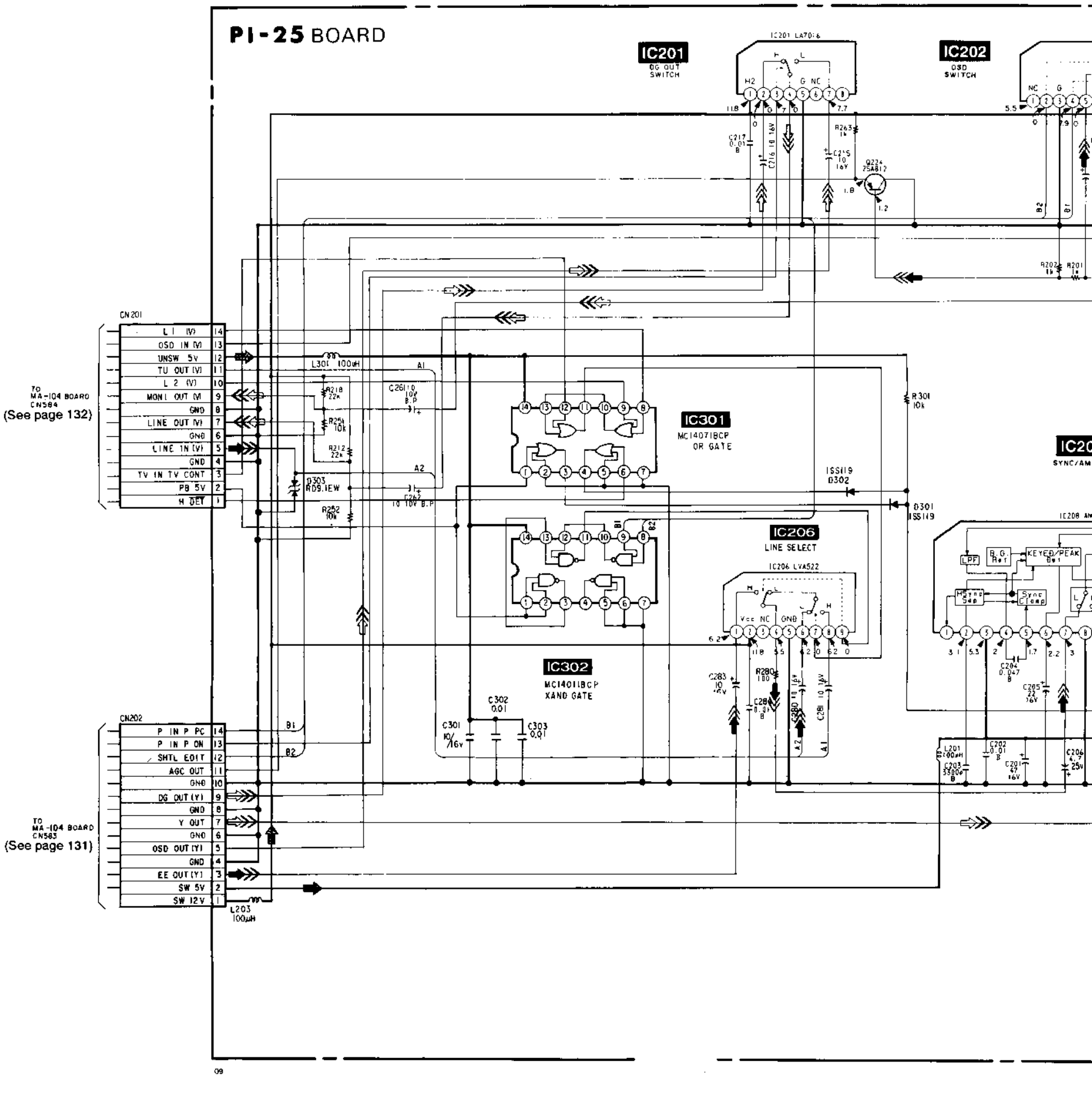


no mark : REC/PB mode
( ) : REC mode
[ ] : PB mode

- **Signal path**

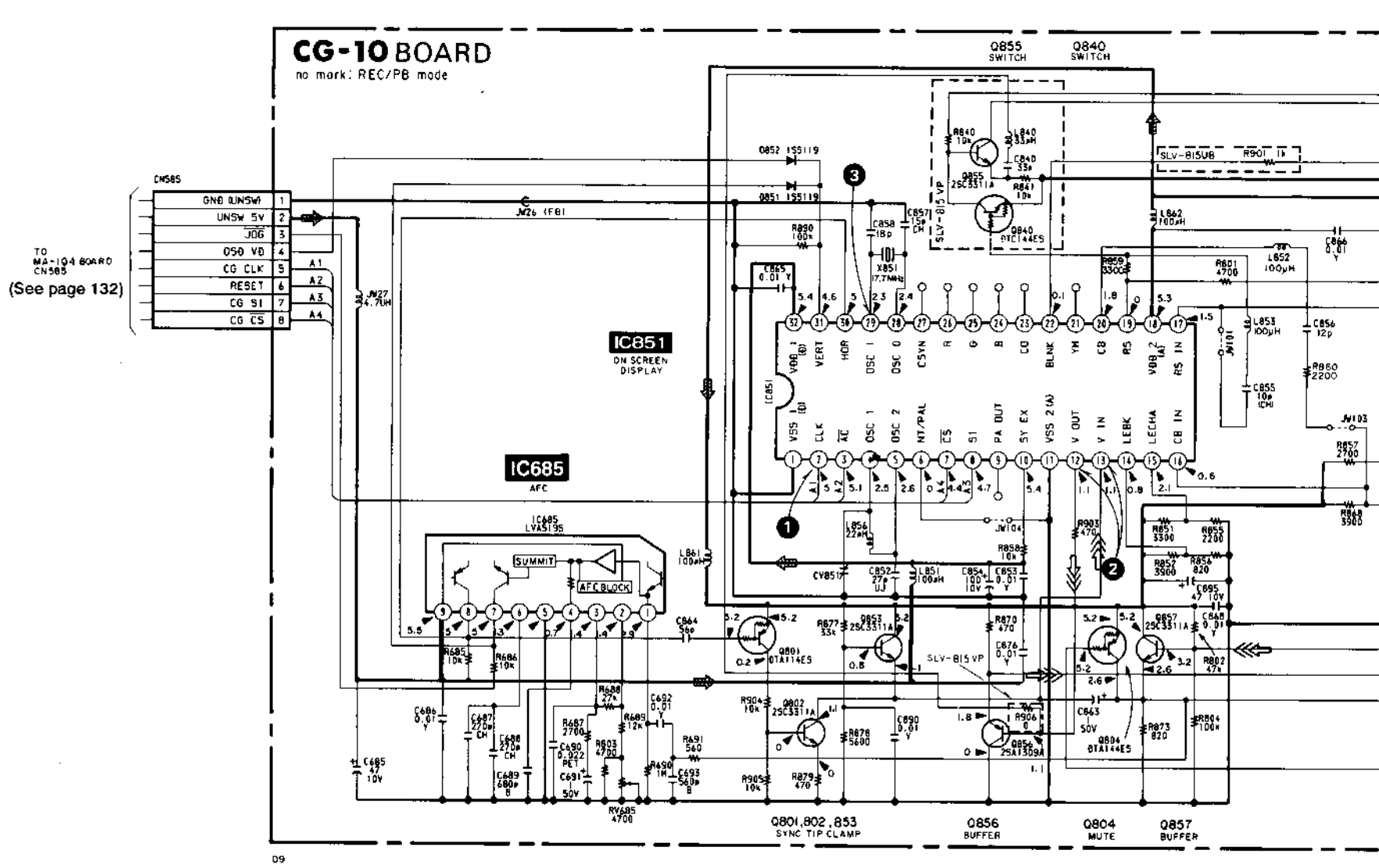
	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	
PB	⇨	⇨	⇨	

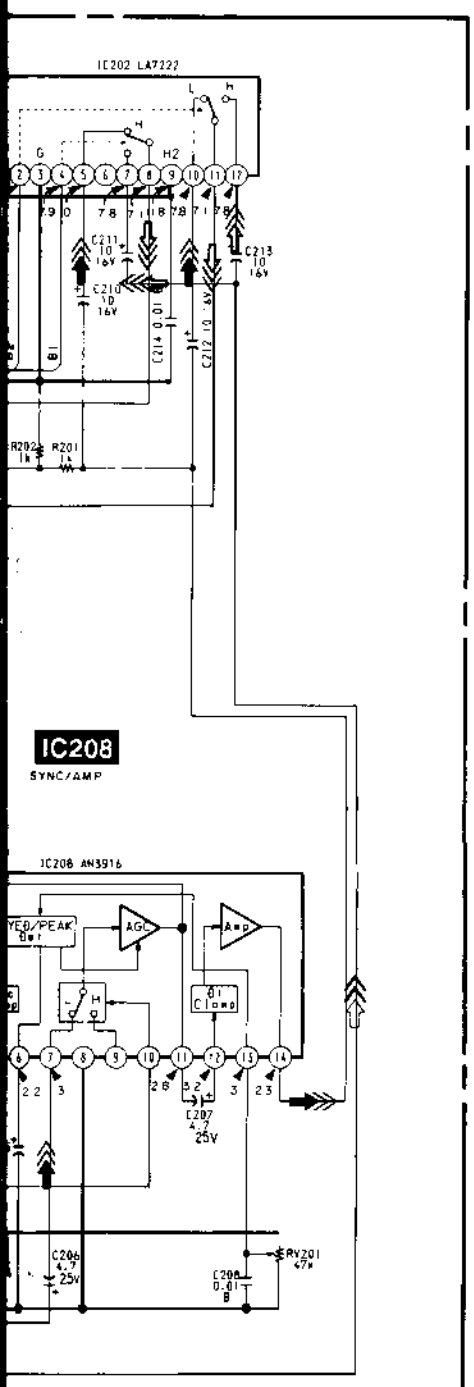
PI-25 BOARD

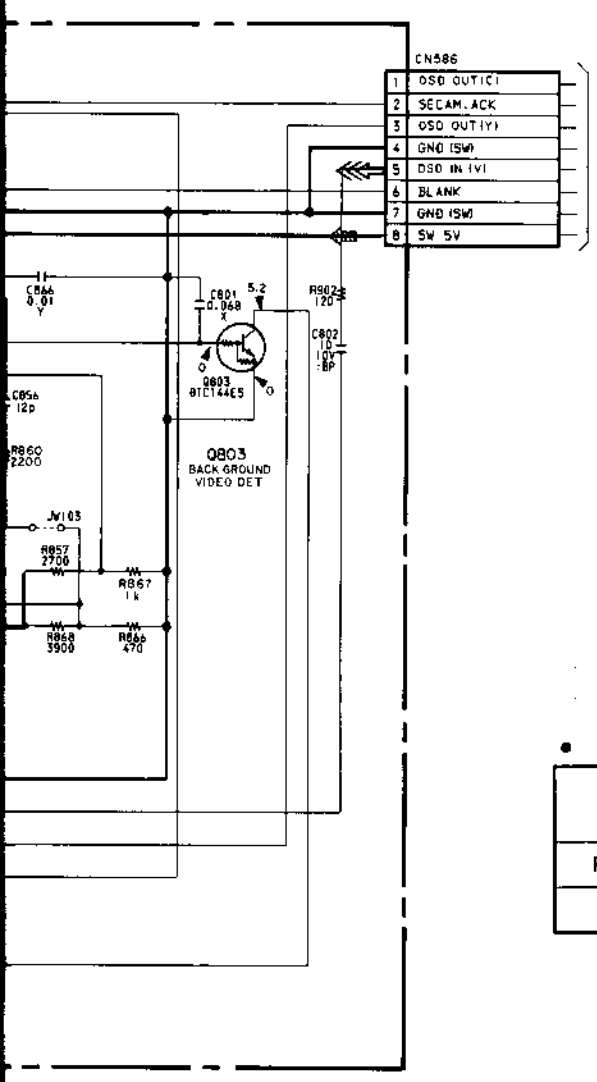


CG-10 BOARD

no mark: REC/PB mode



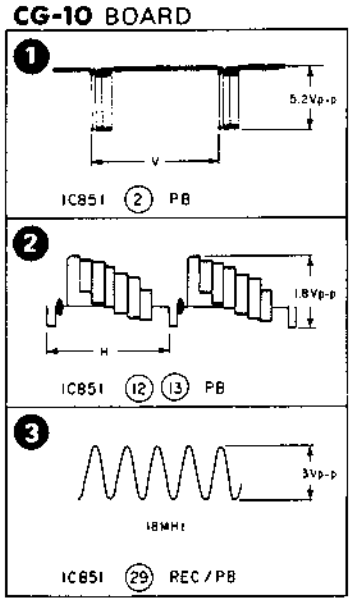




- **Signal path**

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

CG-10 BOARD



- **Signal path**

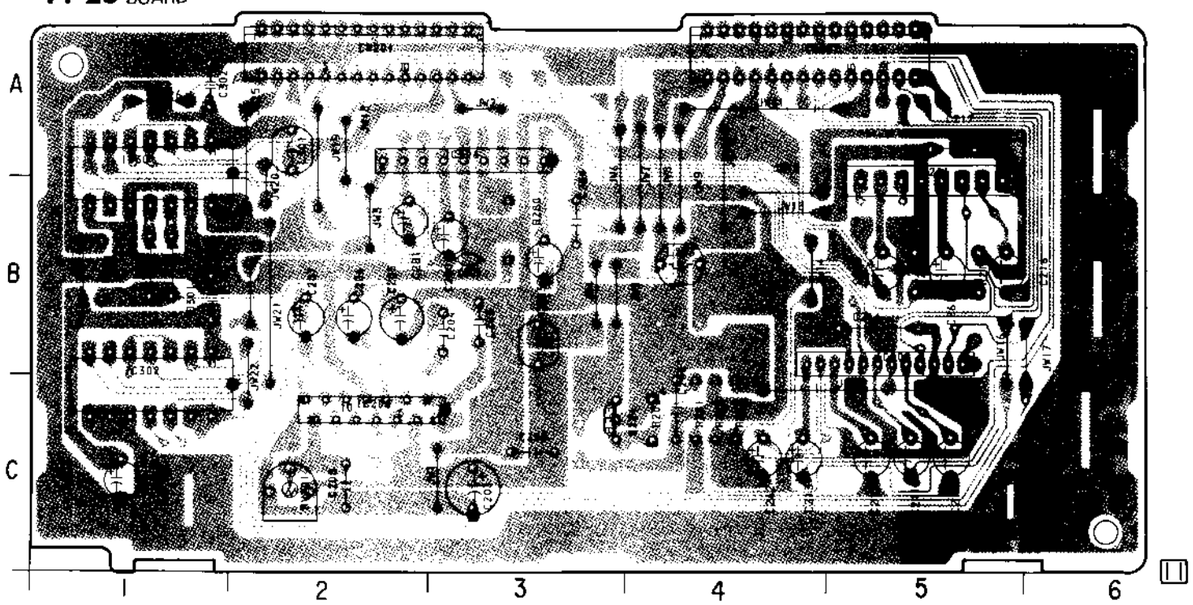
	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC			➡	
PB			⇨	

VIDEO VIDEO

PI-25 (VIDEO SIGNAL SELECTOR), CG-10 (ON SCREEN DISPLAY CONTROLLER) PRITED 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

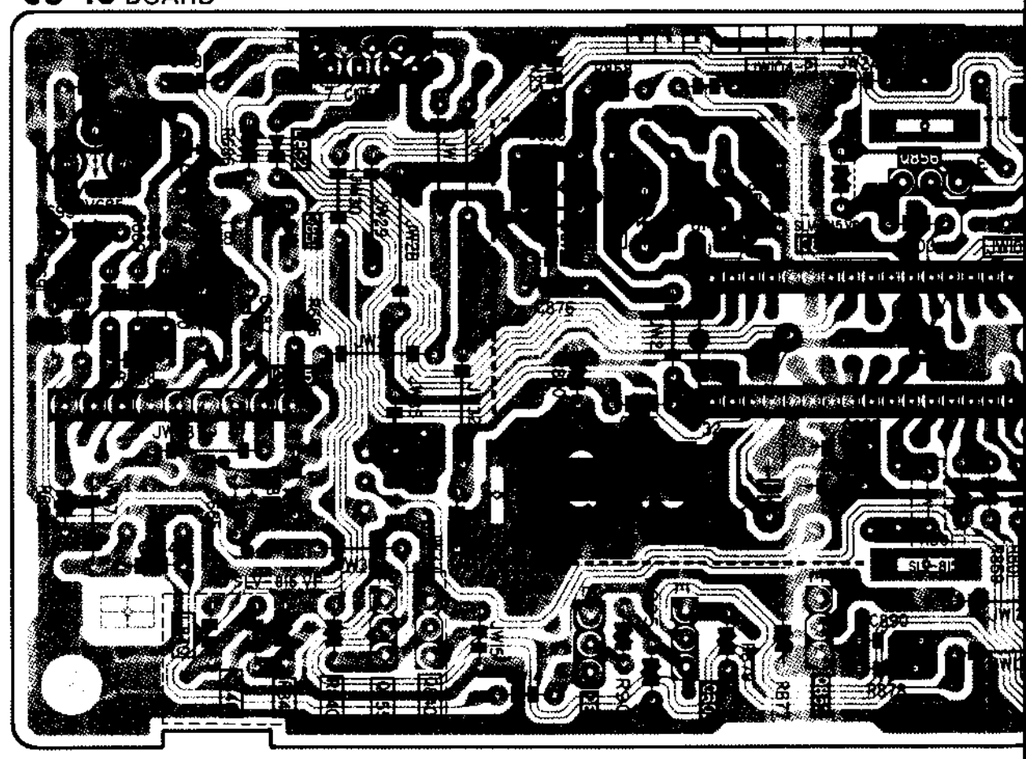
IC

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

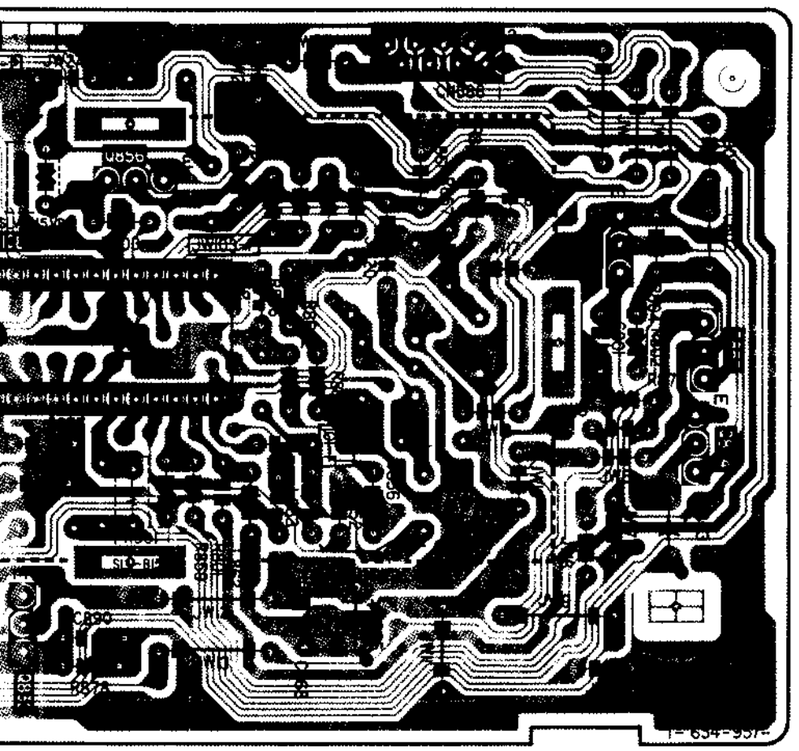
TRANSISTOR

Q224	8-729-216-22	TRANSISTOR 2SA1162

CG-10 BOARD



09



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

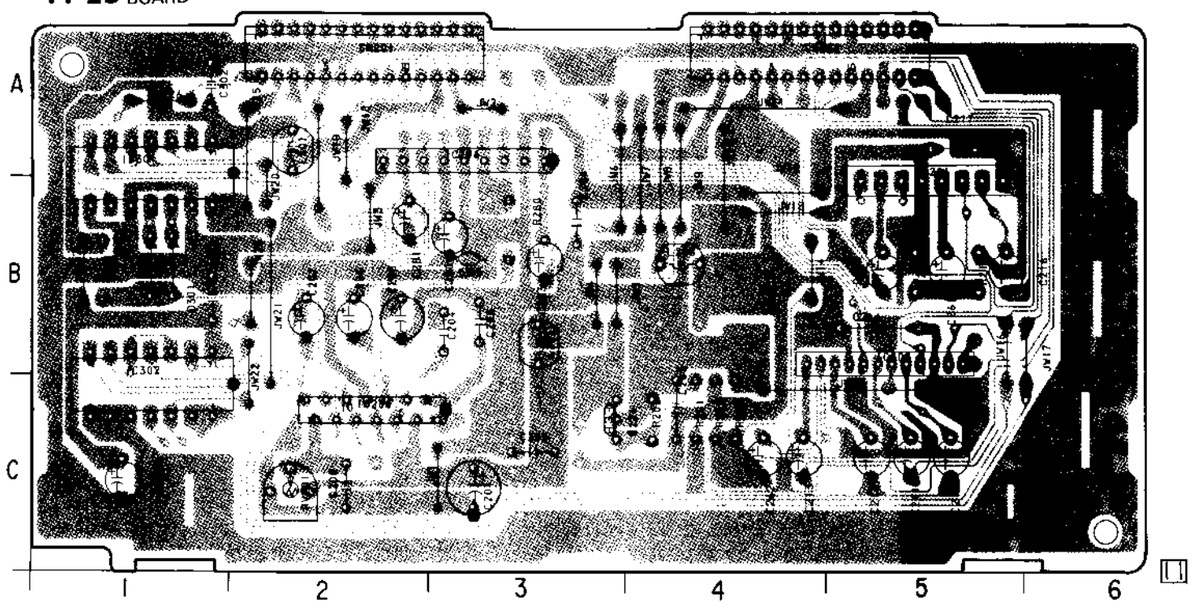
TRANSISTOR

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) PRITED 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

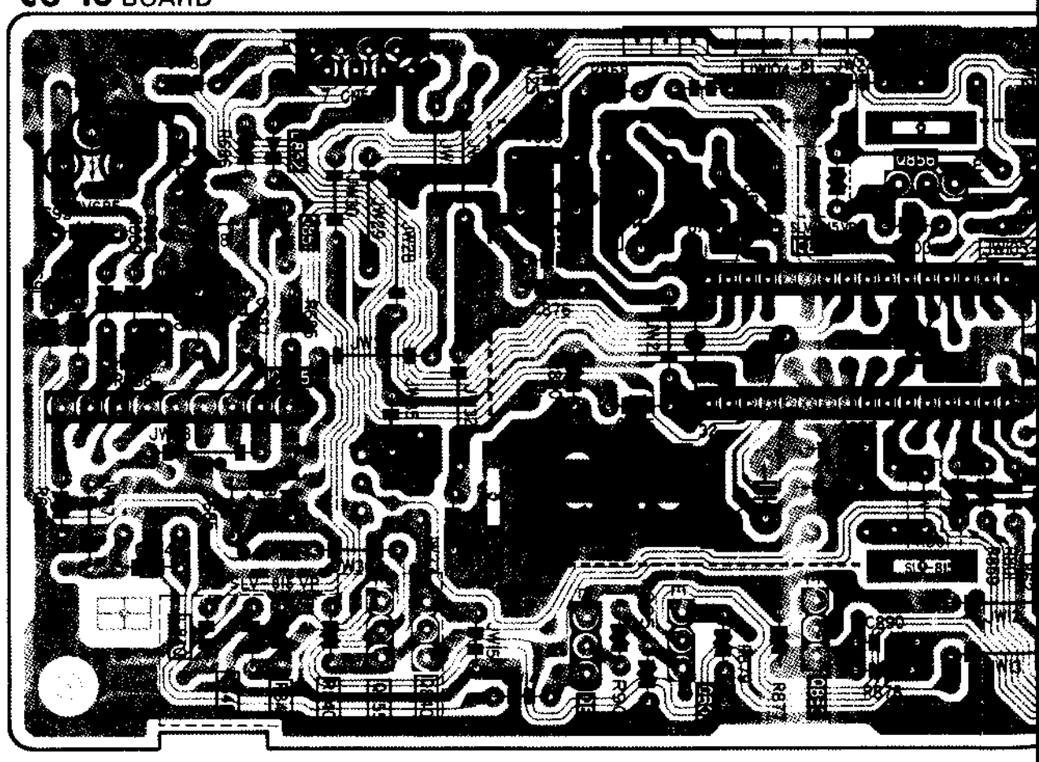
IC

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



09

DIODE

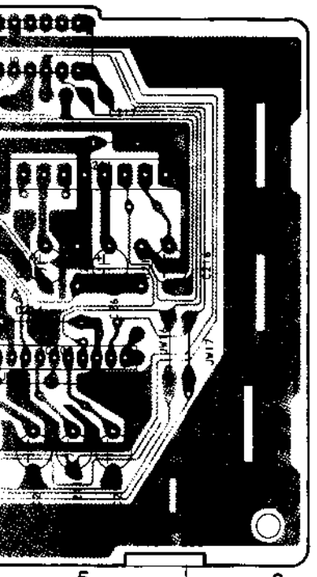
D301	8-719-911-19	DIODE 1SS119
D302	8-719-911-19	DIODE 1SS119

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

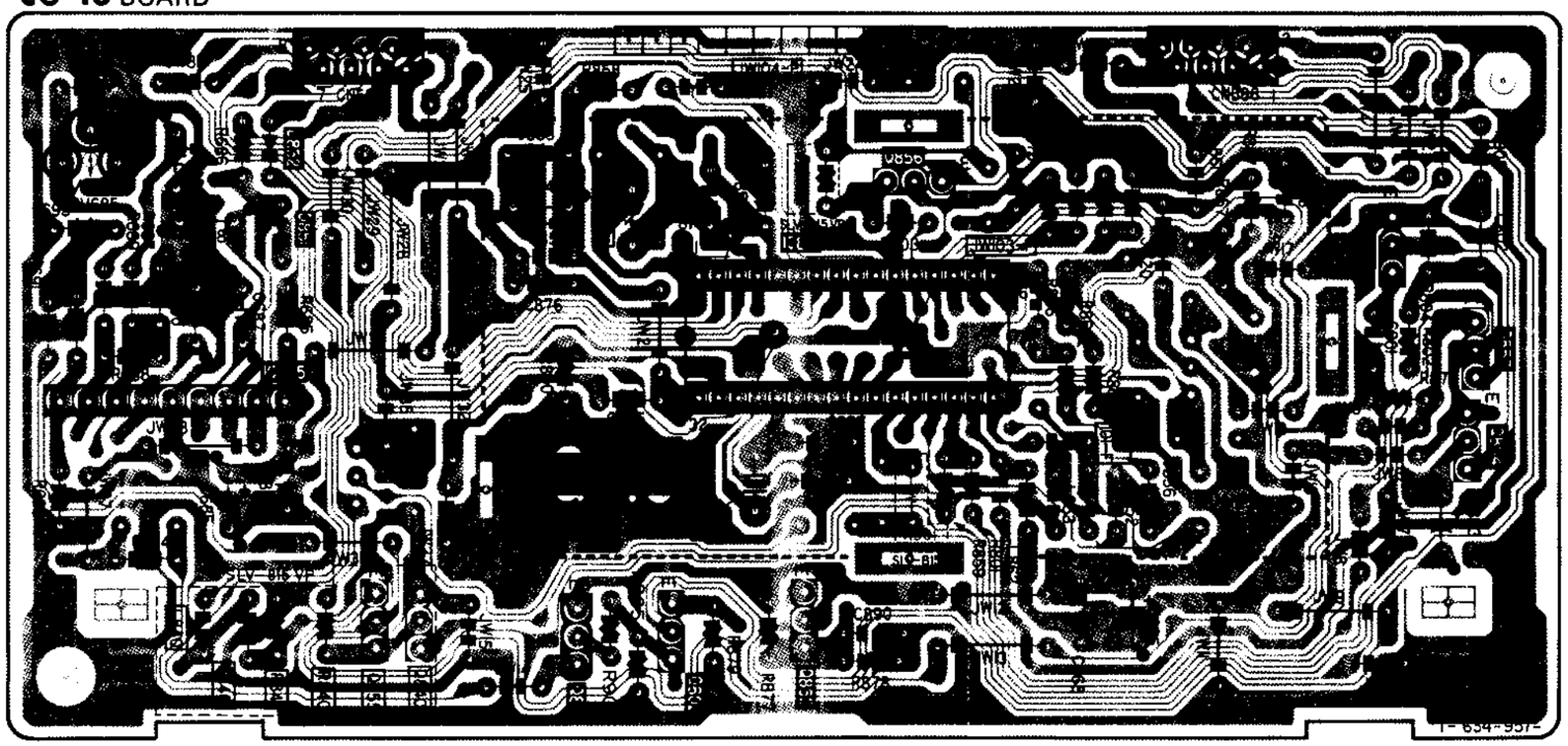
TRANSISTOR

Q224	8-729-216-22	TRANSISTOR 2SA1162



5 6

CG-10 BOARD



09

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 MS0554-182SP

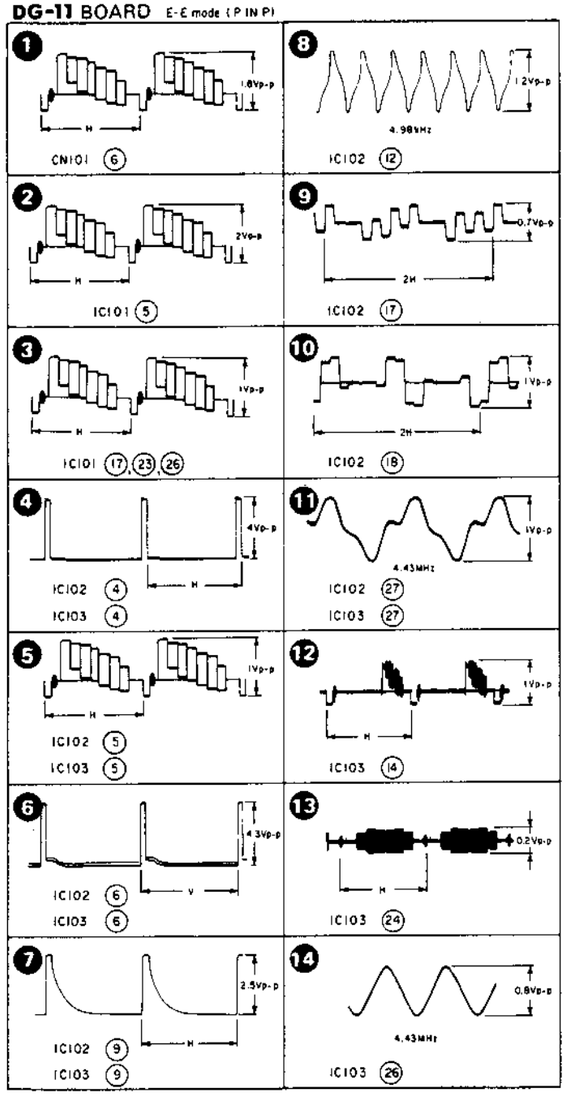
TRANSISTOR

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

DG-11 (DIGITAL PICTURE PROCESS), DI-43 (RELAY) PRINTED WIRING BOARDS

— Ref. No. DG-11 BOARD: 5000 series, DI-43 BOARD: 8000 series —

DG-11 BOARD E-E mode (P IN 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 HM53461ZP-12
IC108	8-759-008-74	IC MC14001BF

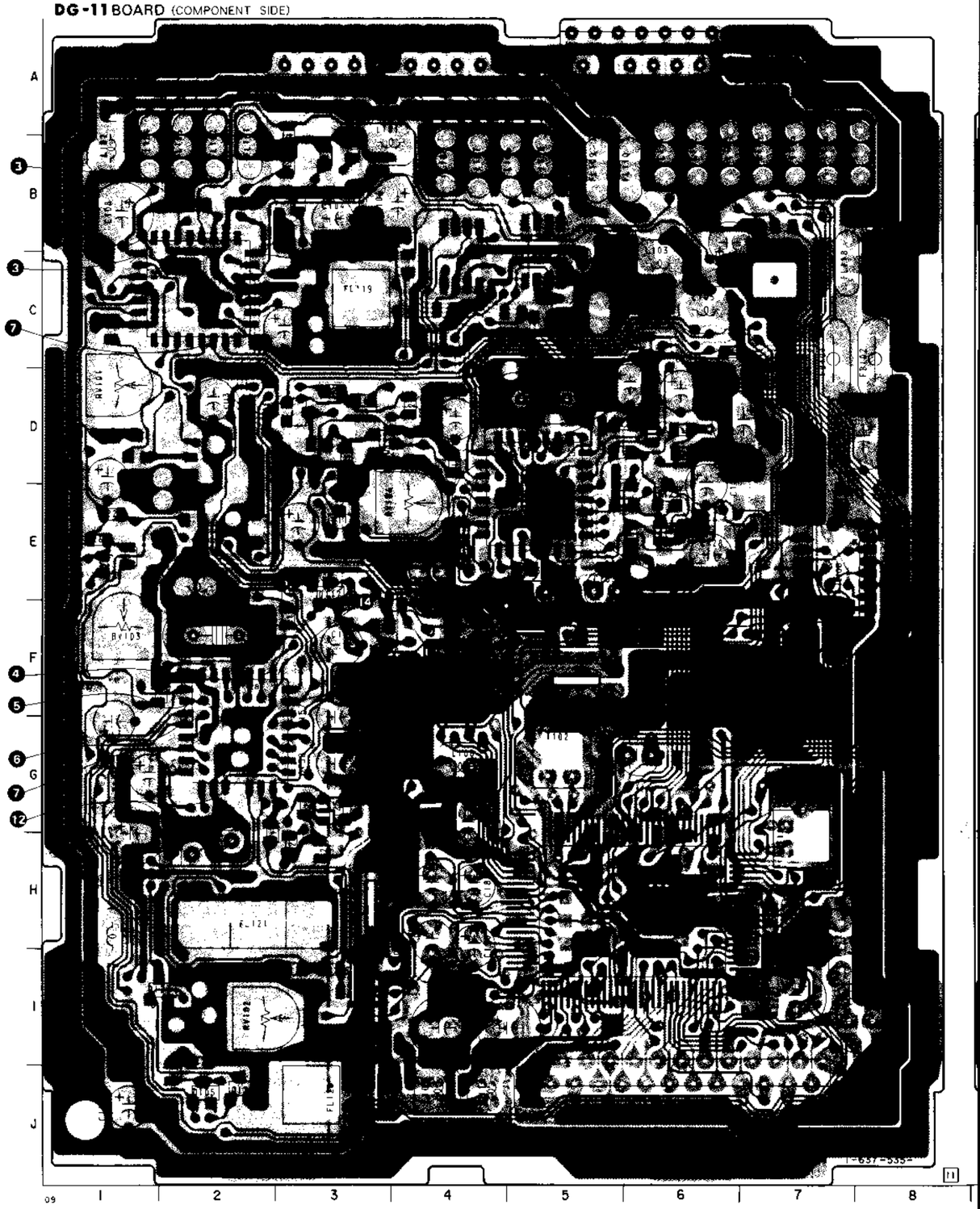
TRANSISTOR

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

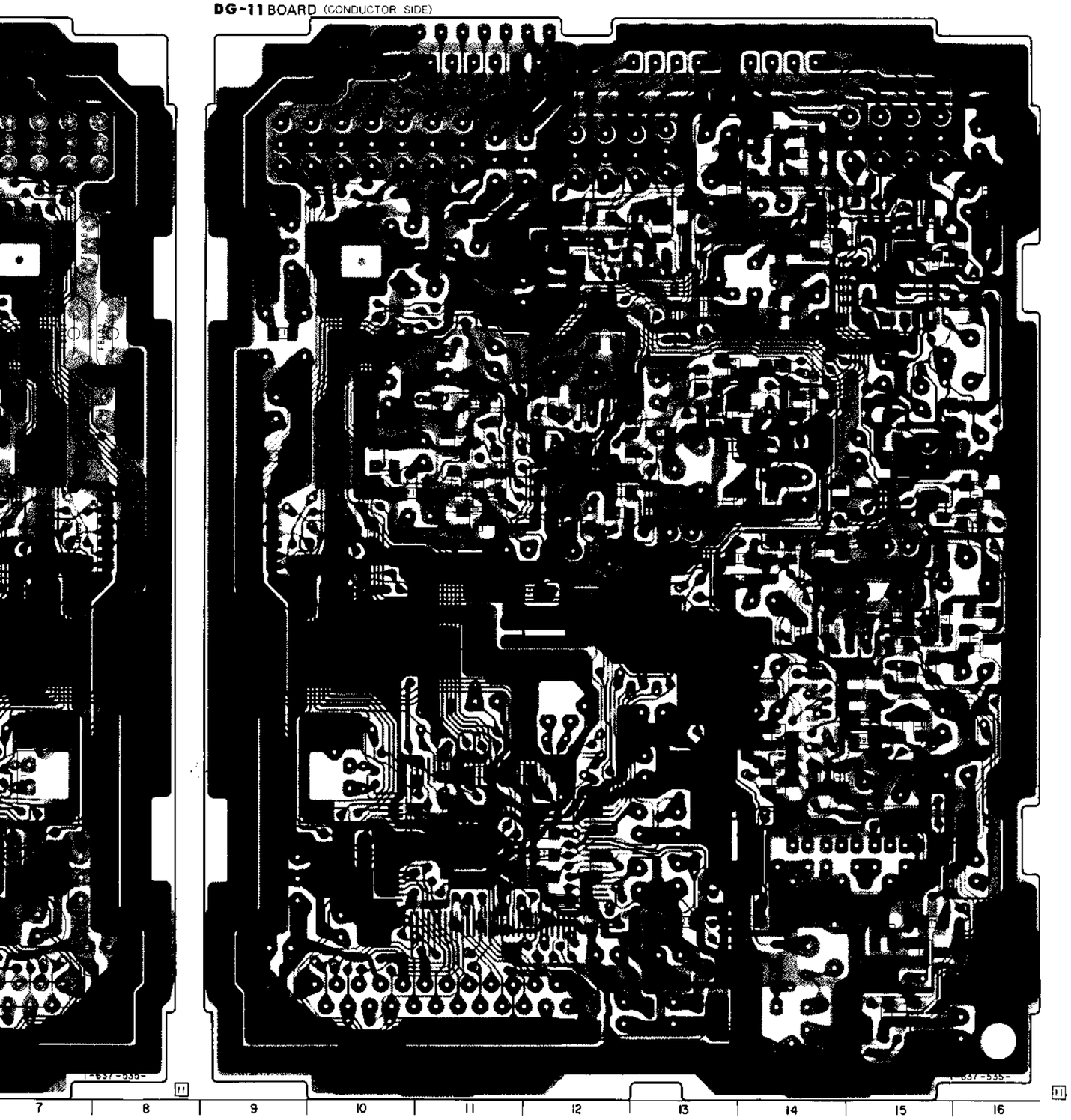
DG-11 BOARD

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	
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

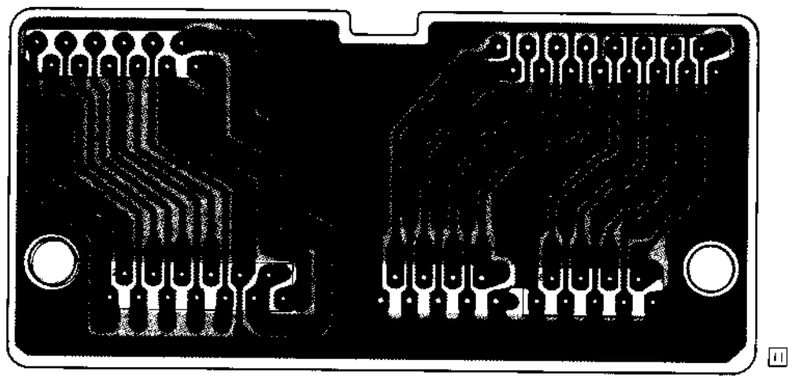
DG-11 BOARD (COMPONENT SIDE)



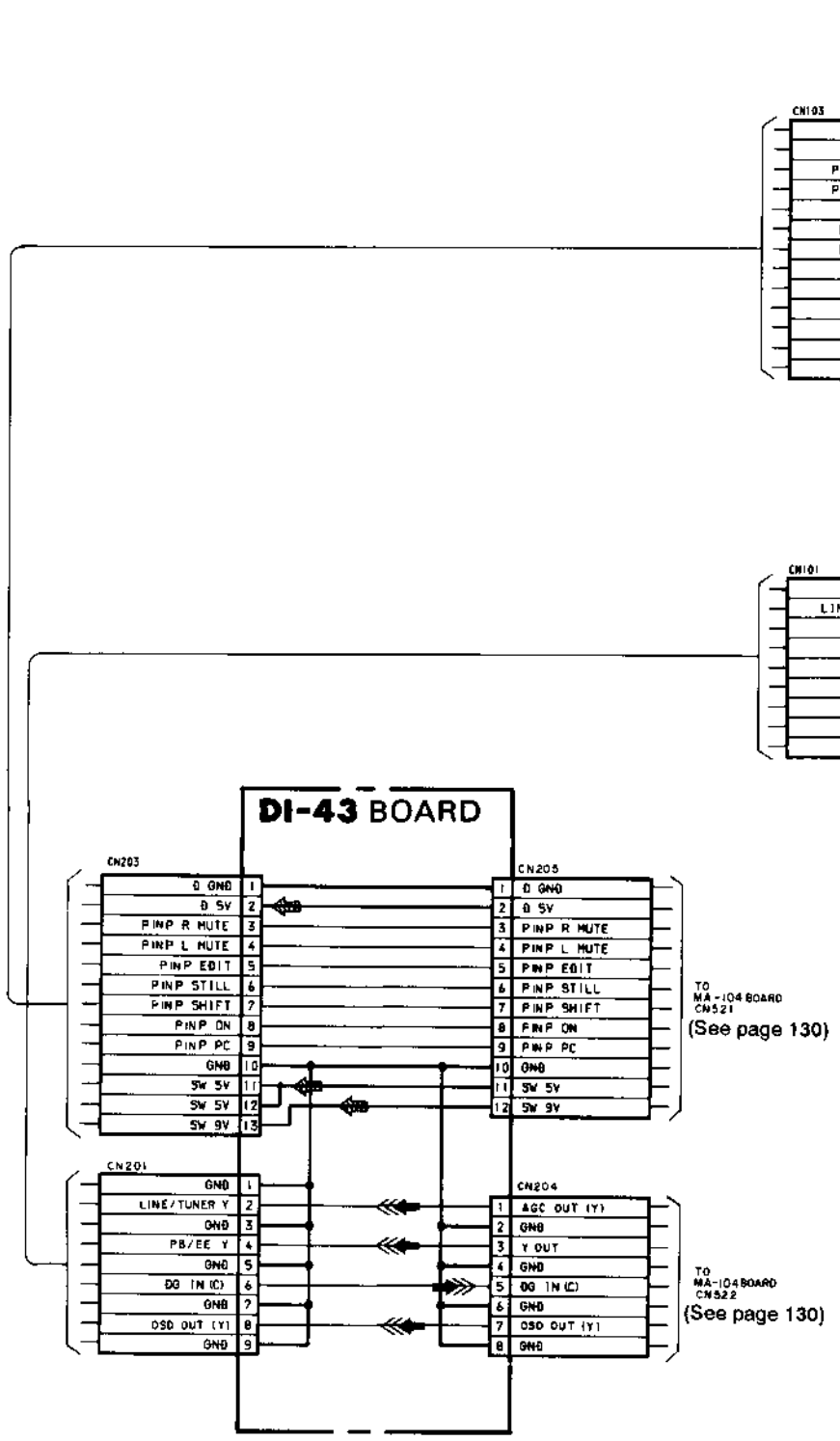
DG-11 BOARD (CONDUCTOR SIDE)

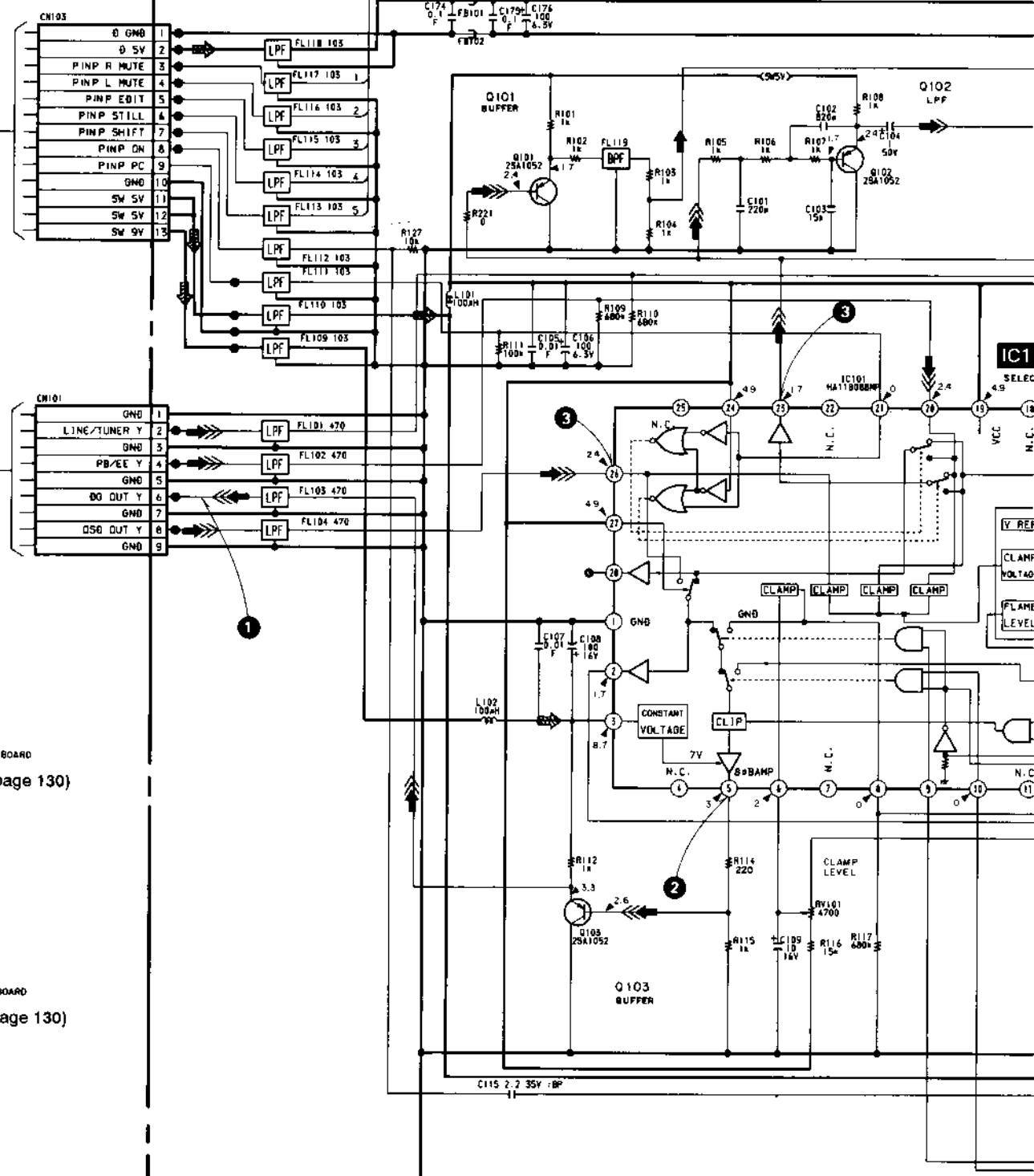


DI-43 BOARD



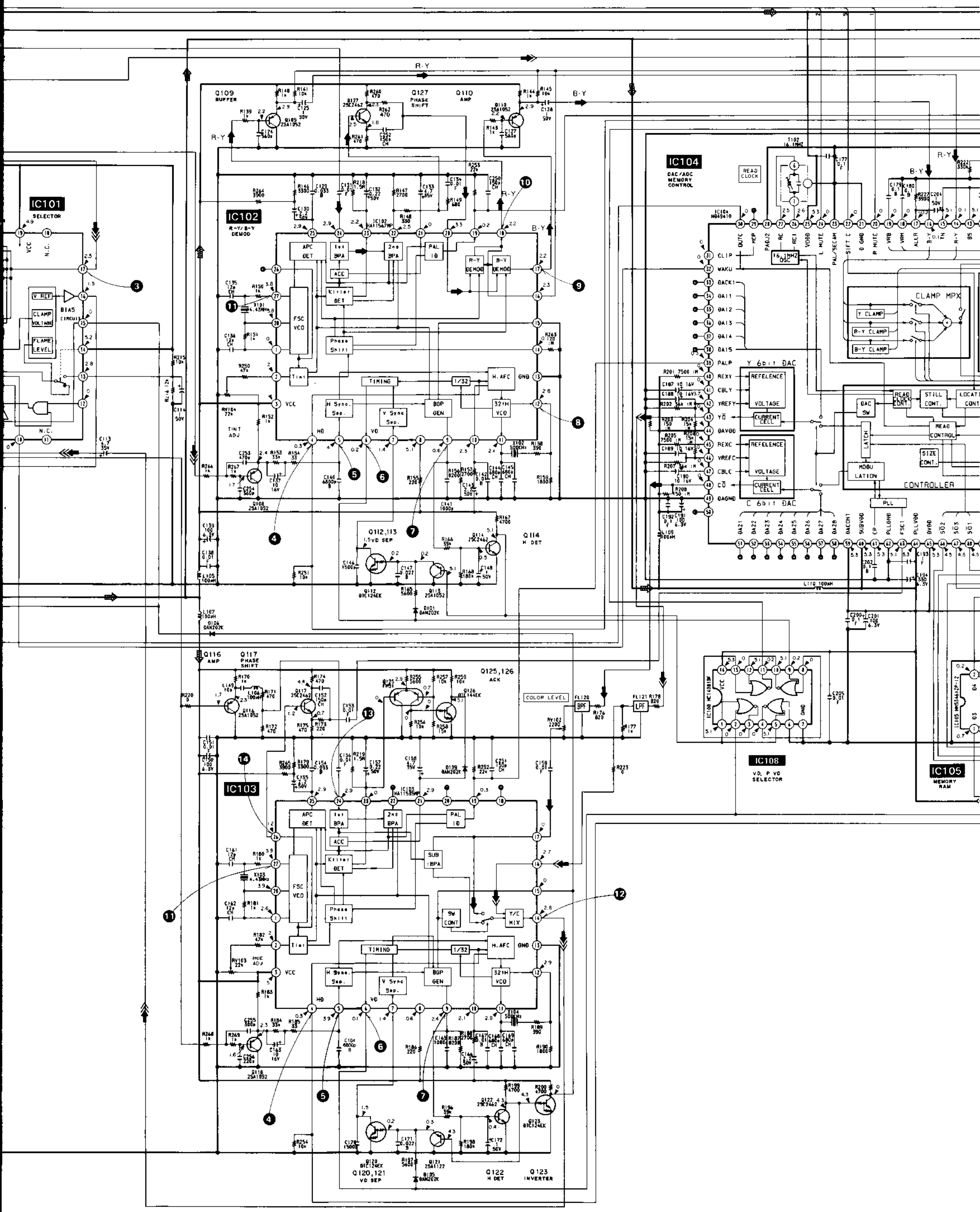
— Ref. No. DG-11 BOARD: 5000 series, DI-43 BOARD: 8000 series —

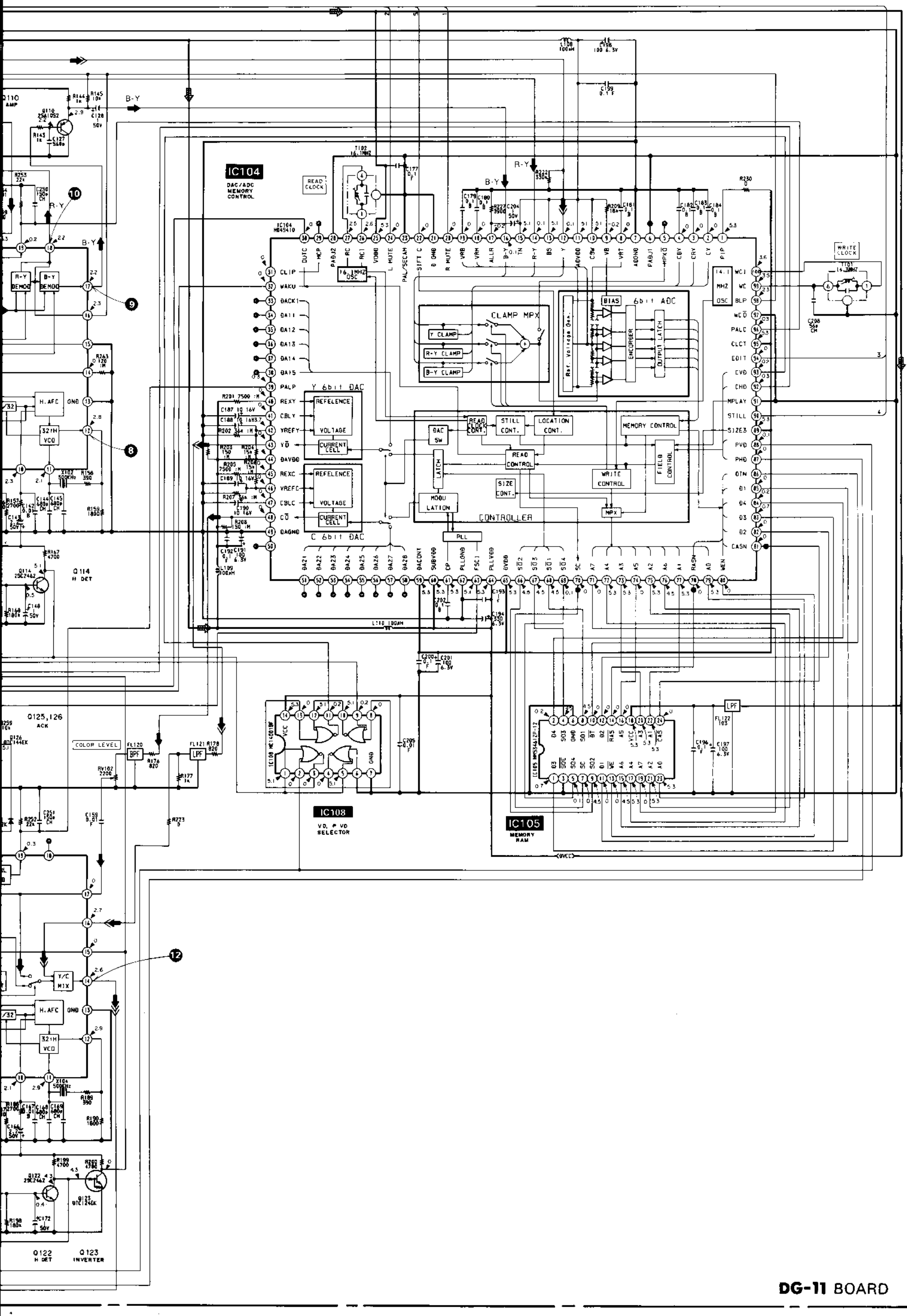




- **Signal path**

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

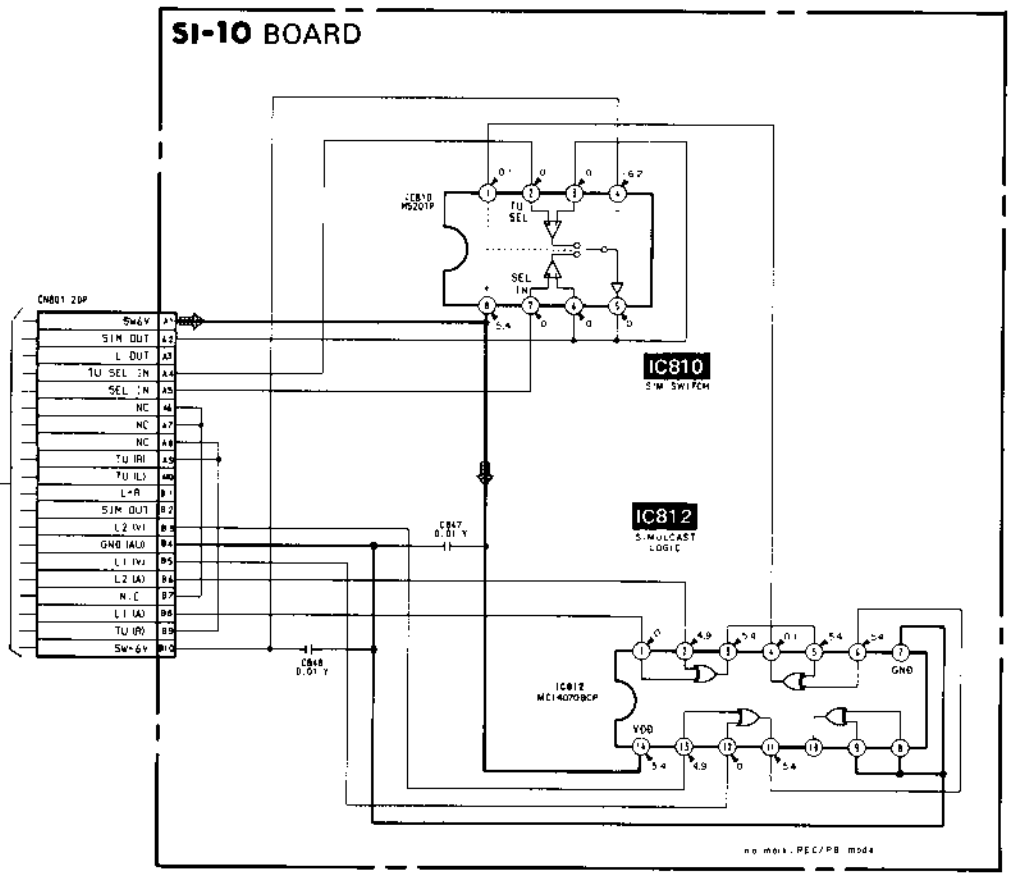

IC101
SELECTOR
V REF
CLAMP VOLTAGE
FLAME LEVEL
BIAS CIRCUIT
VCC
N.C.
IC102
R-Y/B-Y DEMOD
APC DET
1st BPA
2nd BPA
PAL ID
ACC
Killer DET
R-Y DEMOD
B-Y DEMOD
FSC VCO
Phase Shift
TINT
TIMING
1/32
H.AFC
GND
H Sync. Sep.
V Sync Sep.
BGP GEN
32fH VCO
TINT ADJ
HD
VD
Q109 BUFFER
Q127 PHASE SHIFT
Q110 AMP
Q108 2SA1052
Q112,113 1.5VD SEP
Q114 H DET
Q112 81C124EK
Q113 2SA1052
D101 DAN202K
D106 DAN202K
L105 100mH
L107 100mH
X102 500KHz
R-Y
B-Y
IC104
DAC/ADC MEMORY CONTROL
READ CLOCK
T102 16.1MHZ
16.1MHZ OSC
CLIP
WAKU
DACK1
DA11
DA12
DA13
DA14
DA15
PALP
REXY
CBLY
YREFY
YC
DAVDD
REXC
YREFC
CBLC
CC
DAGND
Y 6bit DAC
C 6bit DAC
REFELENCE VOLTAGE
CURRENT CELL
DA21
DA22
DA23
DA24
DA25
DA26
DA27
DA28
DACONT
SUBVDD
CP
PLLGND
FSC1
PLLVDD
DVDD
SD2
SD3
SD1
CLAMP MPX
Y CLAMP
R-Y CLAMP
B-Y CLAMP
DAC SW
READ CLOCK CONT.
STILL CONT.
LOCATION CONT
READ CONTROL
SIZE CONT.
LATCH
MODULATION
CONTROLLER
PLL
L109 100mH
Q116 AMP
Q117 PHASE SHIFT
Q125,126 ACK
Q116 2SA1052
COLOR LEVEL
FL120 BPF
FL121 LPF
R178 820
RV102 2200
IC103
IC108
VD, P VD SELECTOR
IC105
MEMORY RAM
Q120,121 VD SEP
Q122 H DET
Q123 INVERTER
Q120 81C124EK
Q121 2SA1122
D105 DAN202K
X103 4.43MHz
X104 500KHz


IC104
DAC/ADC MEMORY CONTROL
READ CLOCK
WRITE CLOCK
CLAMP MPX
Y CLAMP
R-Y CLAMP
B-Y CLAMP
BIAS
6bit ADC
ENCODER
OUTPUT LATCH
Y 6bit DAC
C 6bit DAC
REFELENCE VOLTAGE
CURRENT CELL
BAC SW
READ CLOCK CONT.
STILL CONT.
LOCATION CONT.
MEMORY CONTROL
READ CONTROL
WRITE CONTROL
FIELD CONTROL
SIZE CONT.
MODULATION
LATCH
CONTROLLER
PLL
16.1MHz OSC
14.1 MHz OSC
IC108
VD, P VD SELECTOR
IC105
MEMORY RAM
Q125,126
ACK
COLOR LEVEL
Q122
H DET
Q123
INVERTER
H. AFC
VCO
Y/C MIX
BPF
LPF

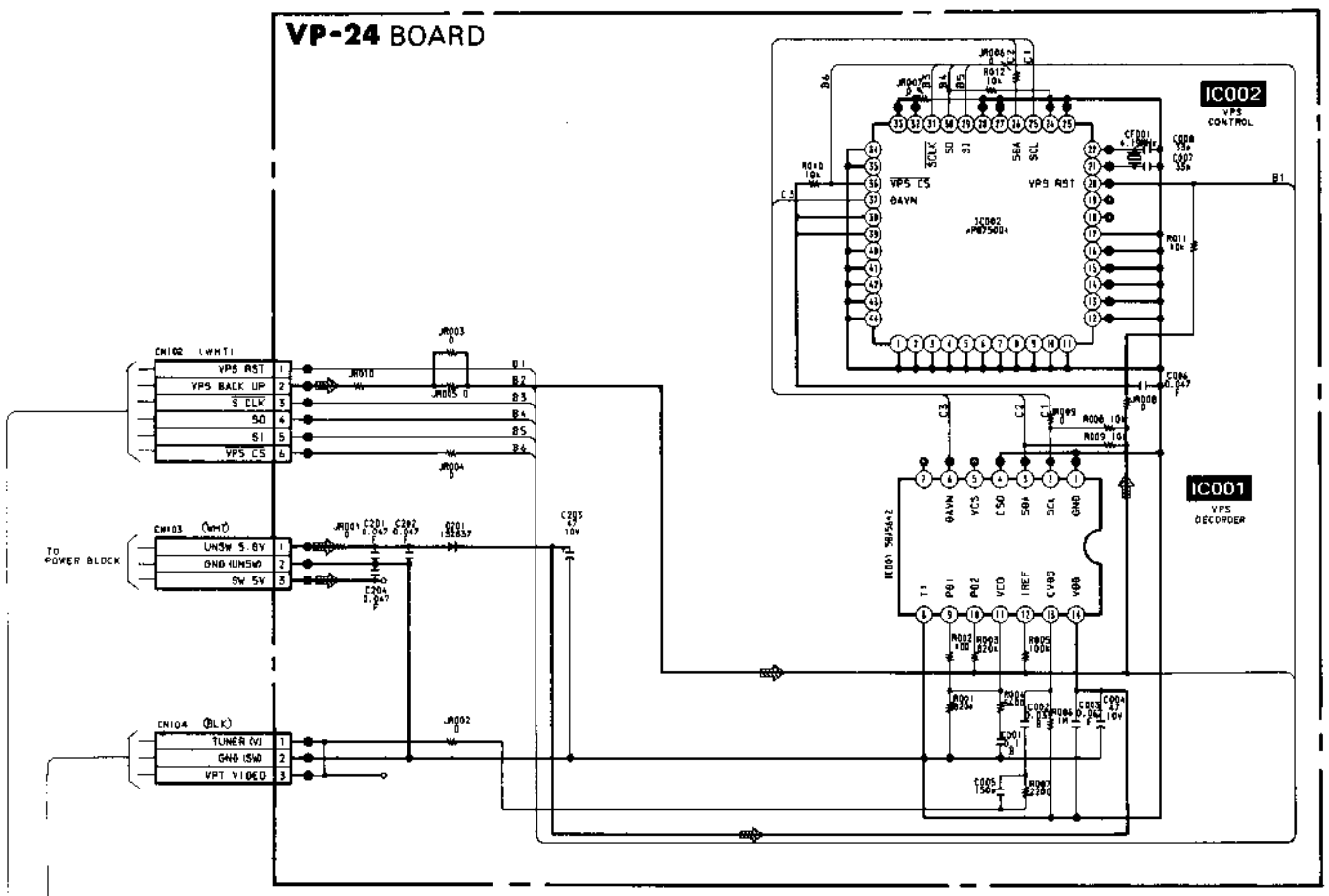
DG-11 BOARD

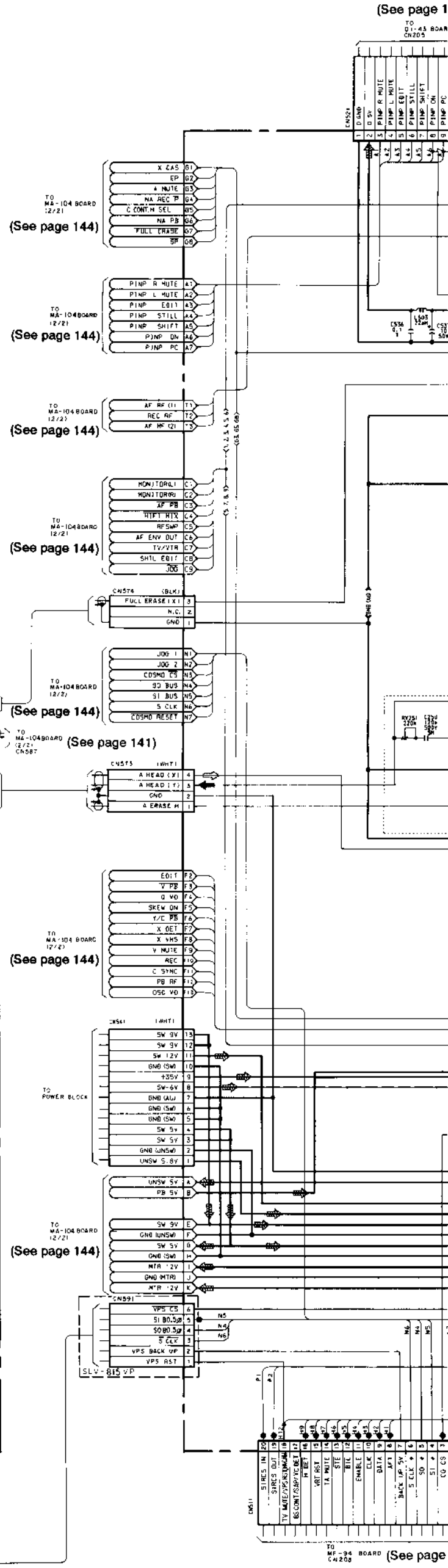
– Ref. No. SI-10 BOARD: 3000 series, MA-104 BOARD: 7000 series, VP-24 BOARD: 10000 series –

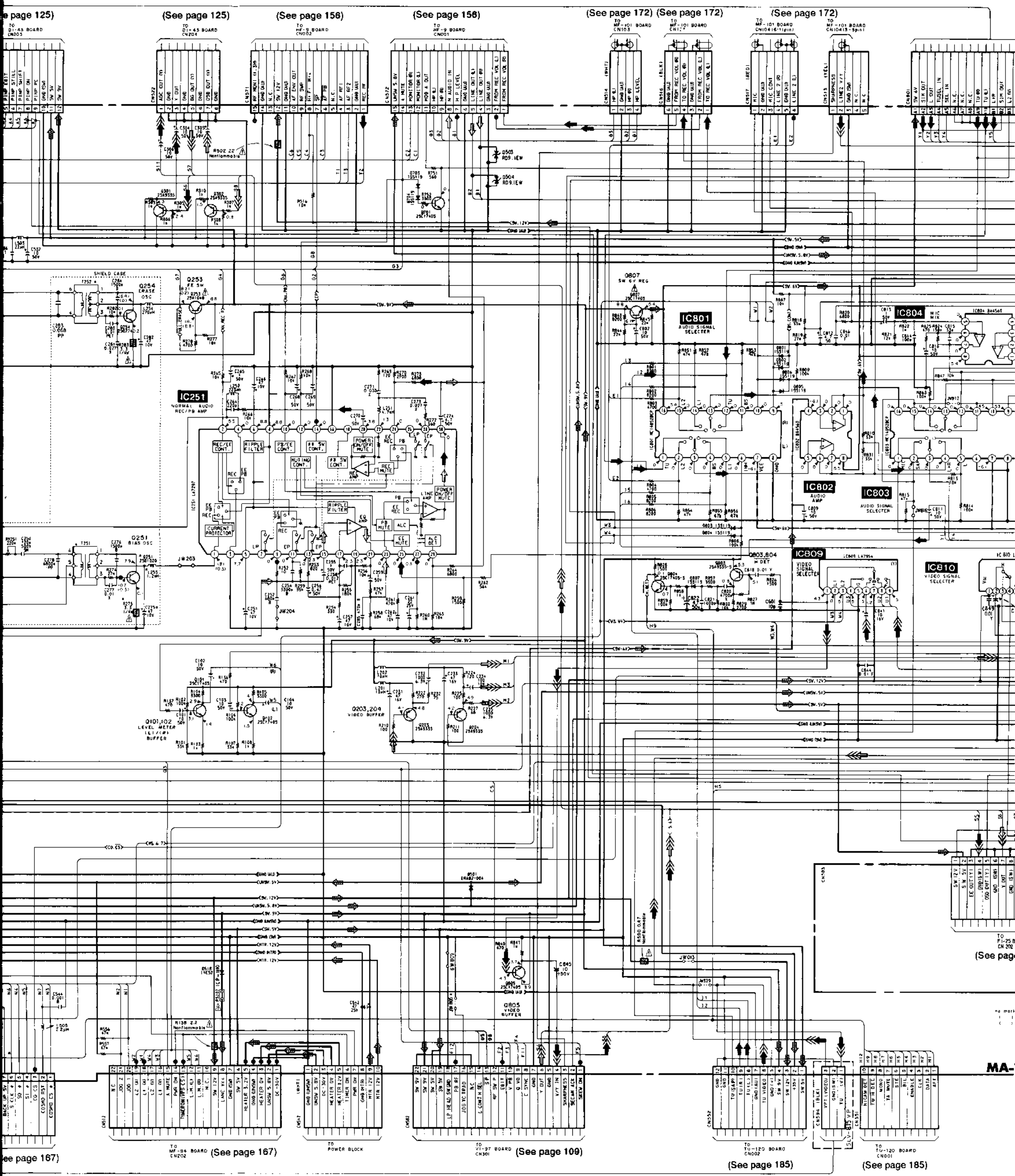
SI-10 BOARD

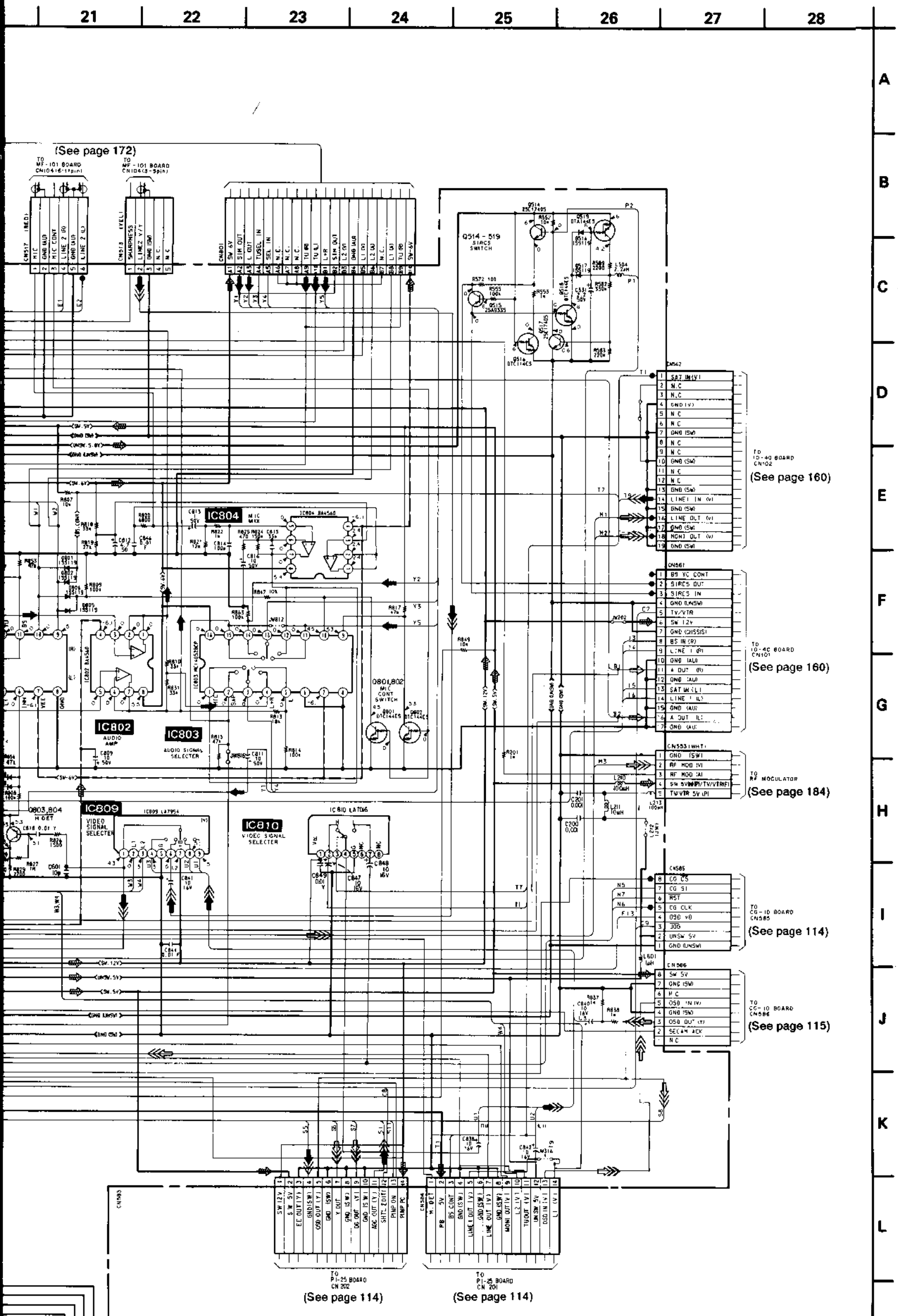


VP-24 BOARD






(See page 125)
(See page 125)
(See page 156)
(See page 158)
(See page 172)
(See page 172)
(See page 172)
IC251
NORMAL AUDIO REC/PB AMP
IC801
AUDIO SIGNAL SELECTOR
IC802
AUDIO AMP
IC803
AUDIO SIGNAL SELECTOR
IC804
MIC MIX
IC809
VIDEO SIGNAL SELECTOR
IC810
VIDEO SIGNAL SELECTOR
Q254 ERASE OSC
Q253 RF SW
Q251 BIAS OSC
Q101,102 LEVEL METER BUFFER
Q203,204 VIDEO BUFFER
Q805 VIDEO BUFFER
Q807 SW 6V REG
Q803,804 M DET
(See page 167)
(See page 167)
(See page 109)
(See page 185)
(See page 185)
SERVO, SYSTEM CONTROL

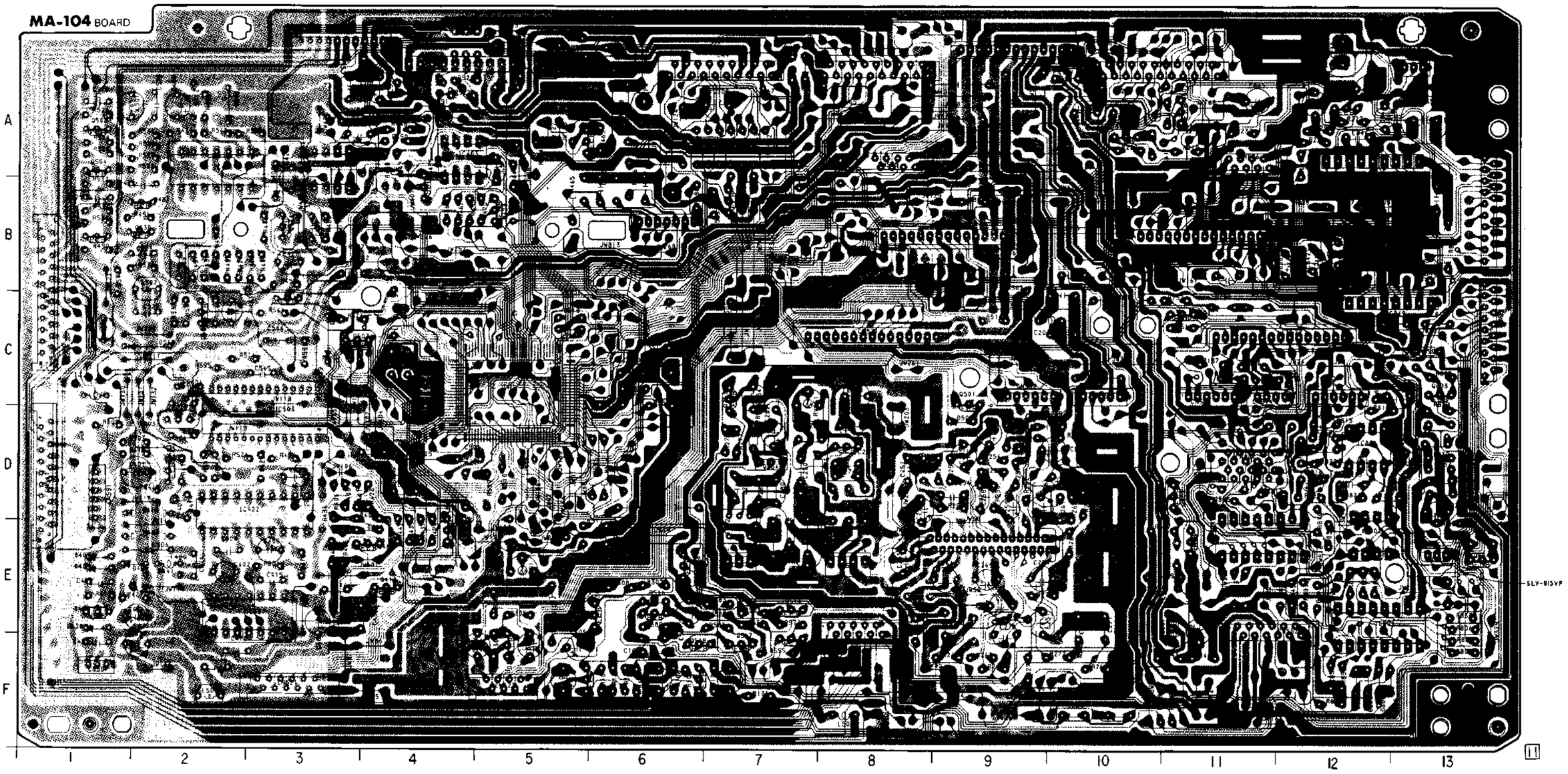


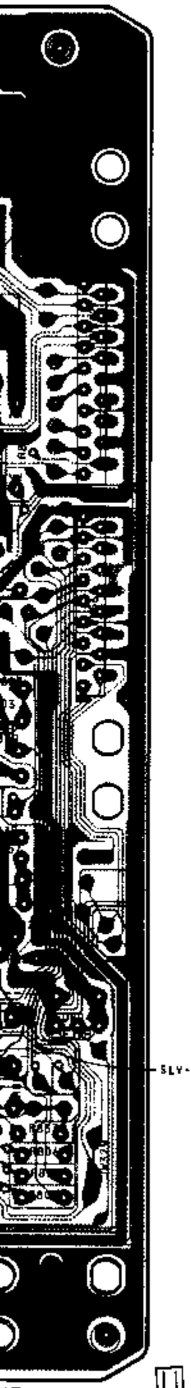
• **Signal path**

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

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

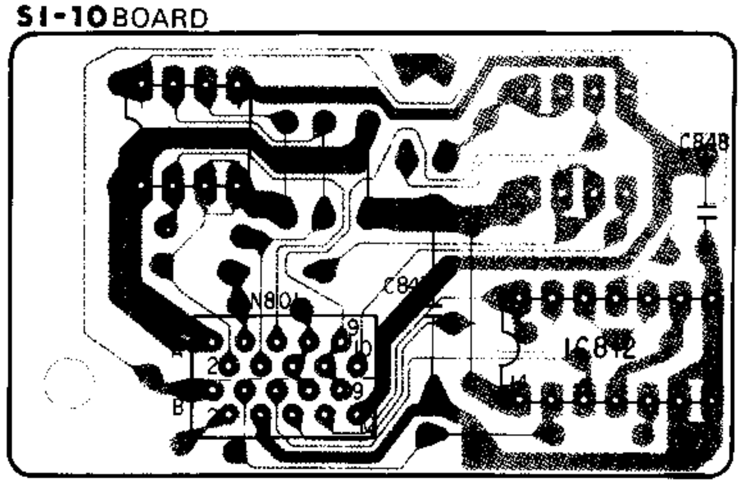
– Ref. No. SI-10 BOARD: 3000 series, MA-104 BOARD: 7000 series, VP-24 BOARD: 10000 series –





11

SI-10 BOARD

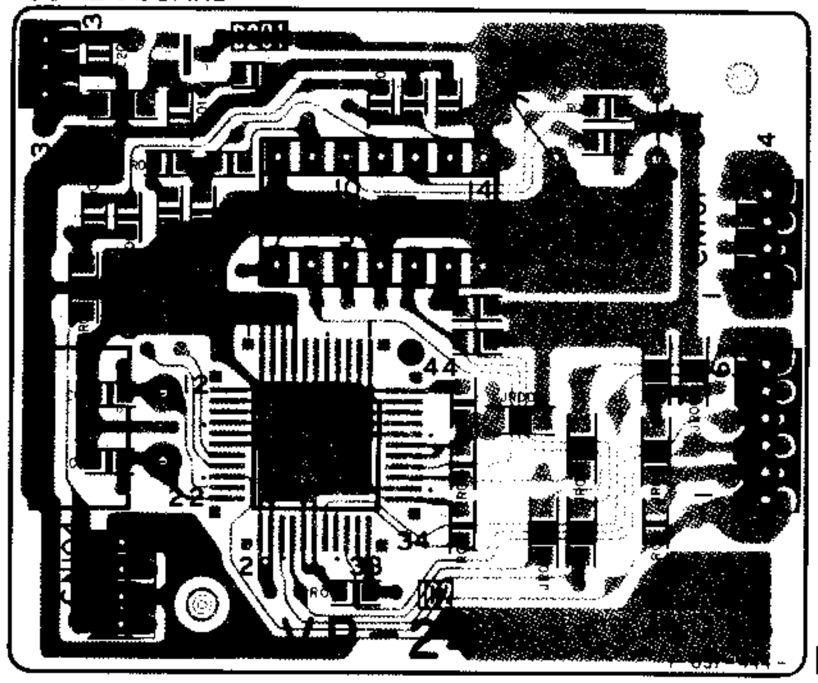


12

IC

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

VP-24 BOARD



11

DIODE

D201	8-719-400-18	DIODE 1S2837

IC

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

MA-104 BOARD

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

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

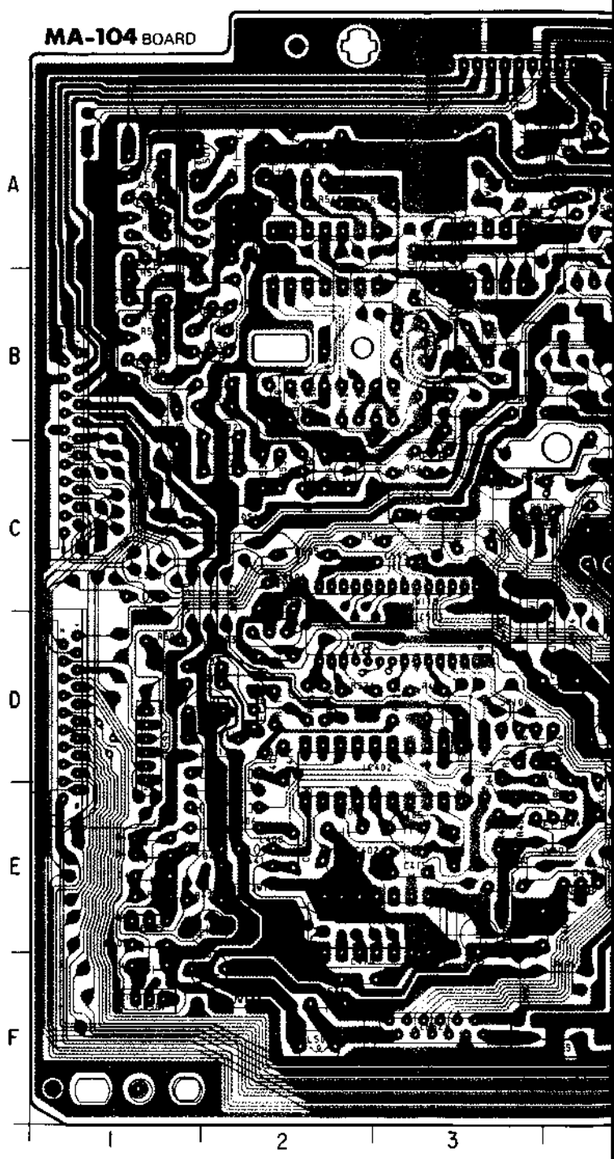
MA-104 (SERVO, SYSTEM CONTROL, AUDIO) PRINTED WIRING BOARD

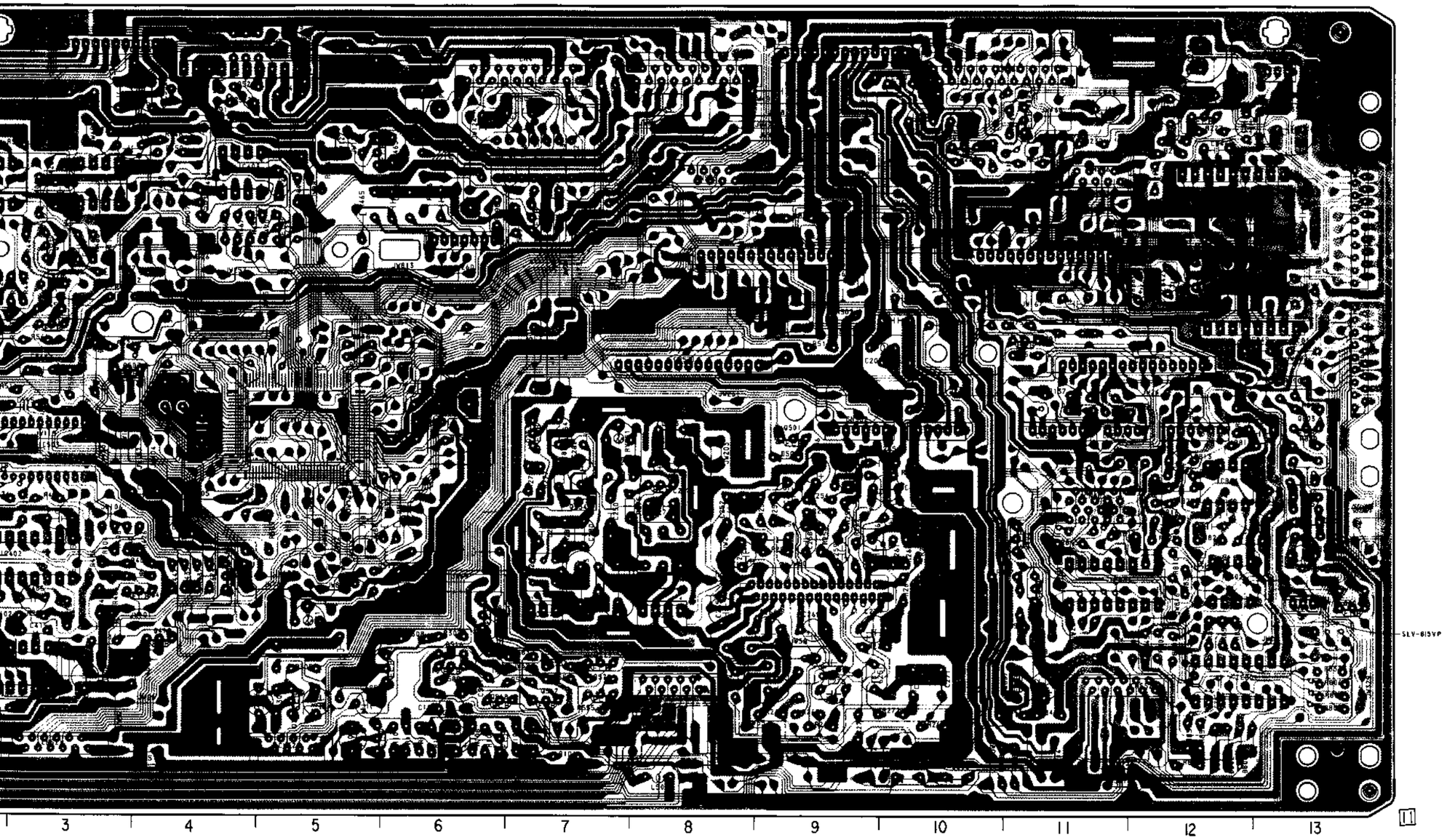
— Ref.No. MA-104 BOARD: 7000 sreies —

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-8	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		

MA-104 BOARD




SLV-815VP
3
4
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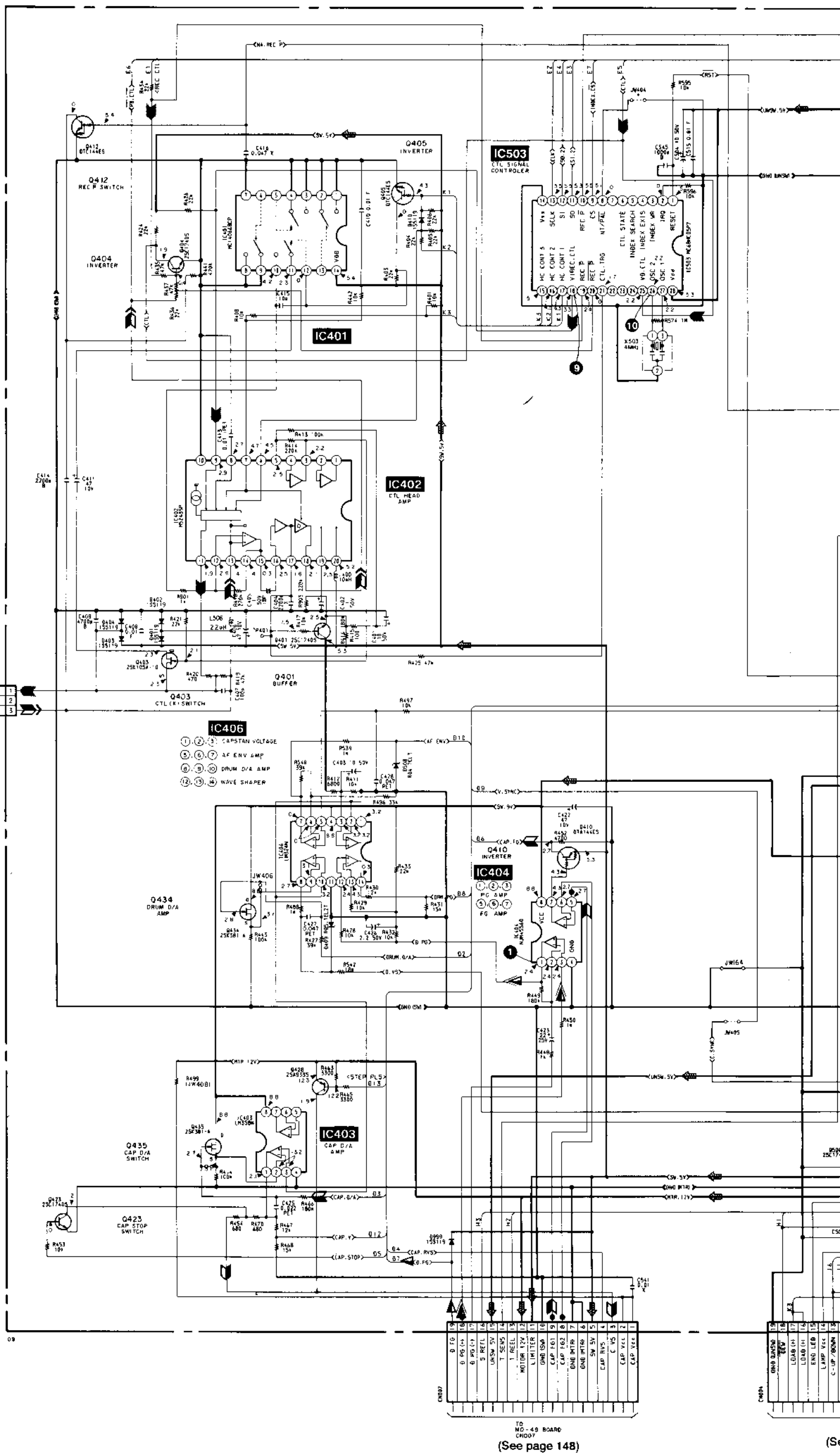
10
11
12
13

– Ref. No. MA-104 BOARD: 7000 series, –



IC501
SERVO
SYSTEM CONTROL

IC502
CAM/LOADING
MOTOR DRIVE

Q501
PB 5V
SWITCH

Q503-506,430,431
RF ENVELOPE
DETECTER

Q507
INVERTER

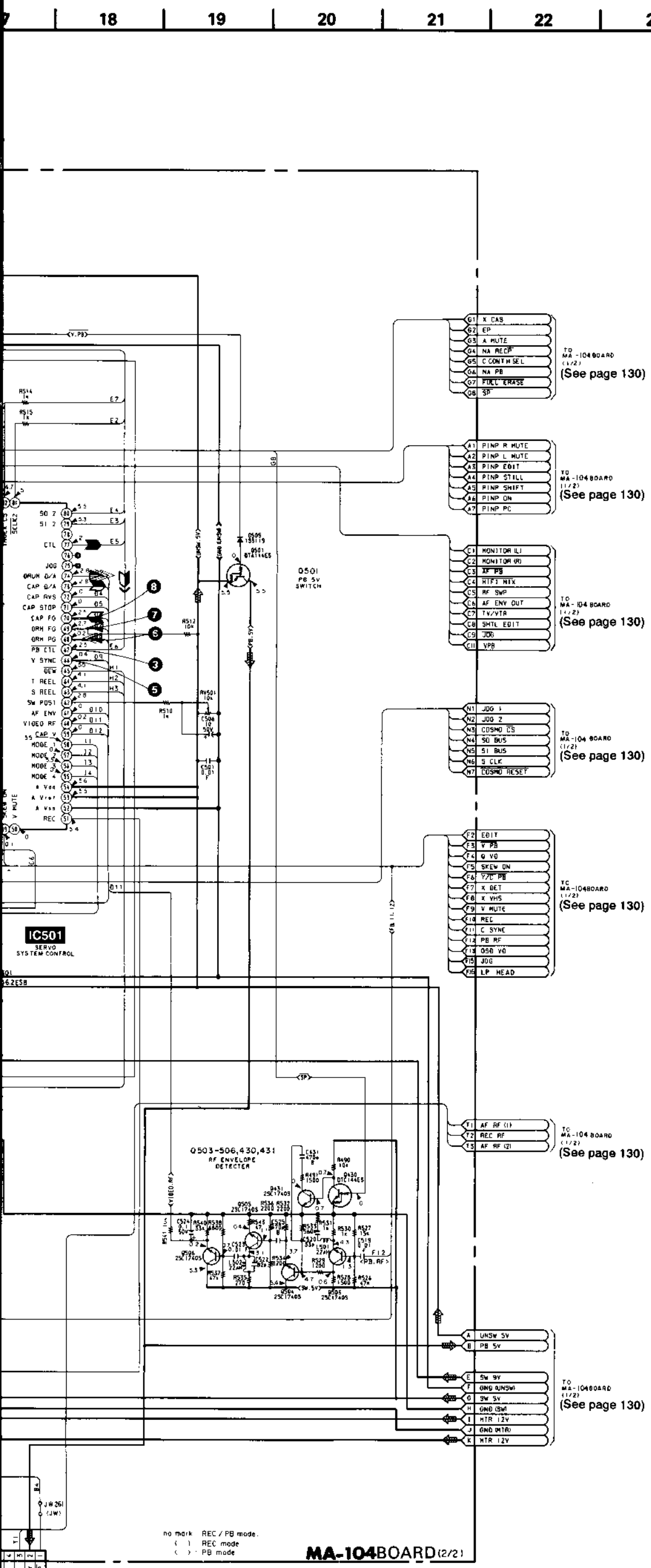
Q508
END LED
SWITCH

TO MA-104 BOARD (1/21) (See page 130)
TO MA-104 BOARD (1/21) (See page 130)
TO MA-104 BOARD (1/2) (See page 130)
TO MA-104 BOARD (1/2) (See page 130)
TO MA-104BOARD (1/2) (See page 130)
TO MA-104 BOARD (1/2) (See page 130)
TO MA-104BOARD (1/21) (See page 130)

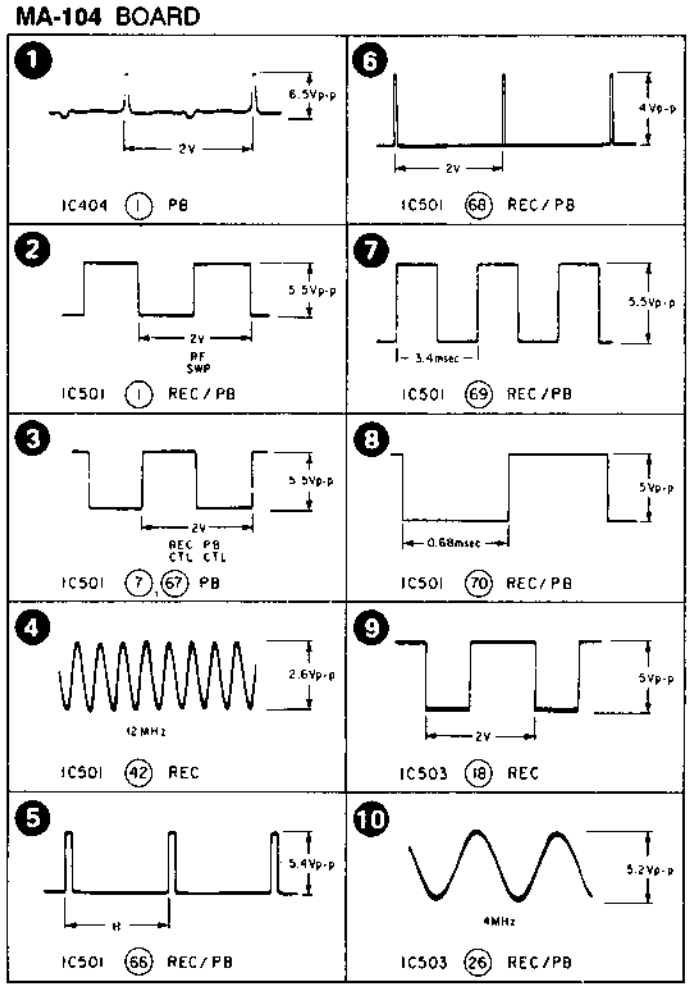
TO MD-49 BOARD CN004 (See page 148)
TO RF-63 BOARD CN803 (See page 105)
TO RF-63 BOARD CN101 (See page 104)

no mark : REC / PB mode.
[ ] : REC mode
( ) : PB mode

MA-104BOARD(2/2)



MA-104 BOARD



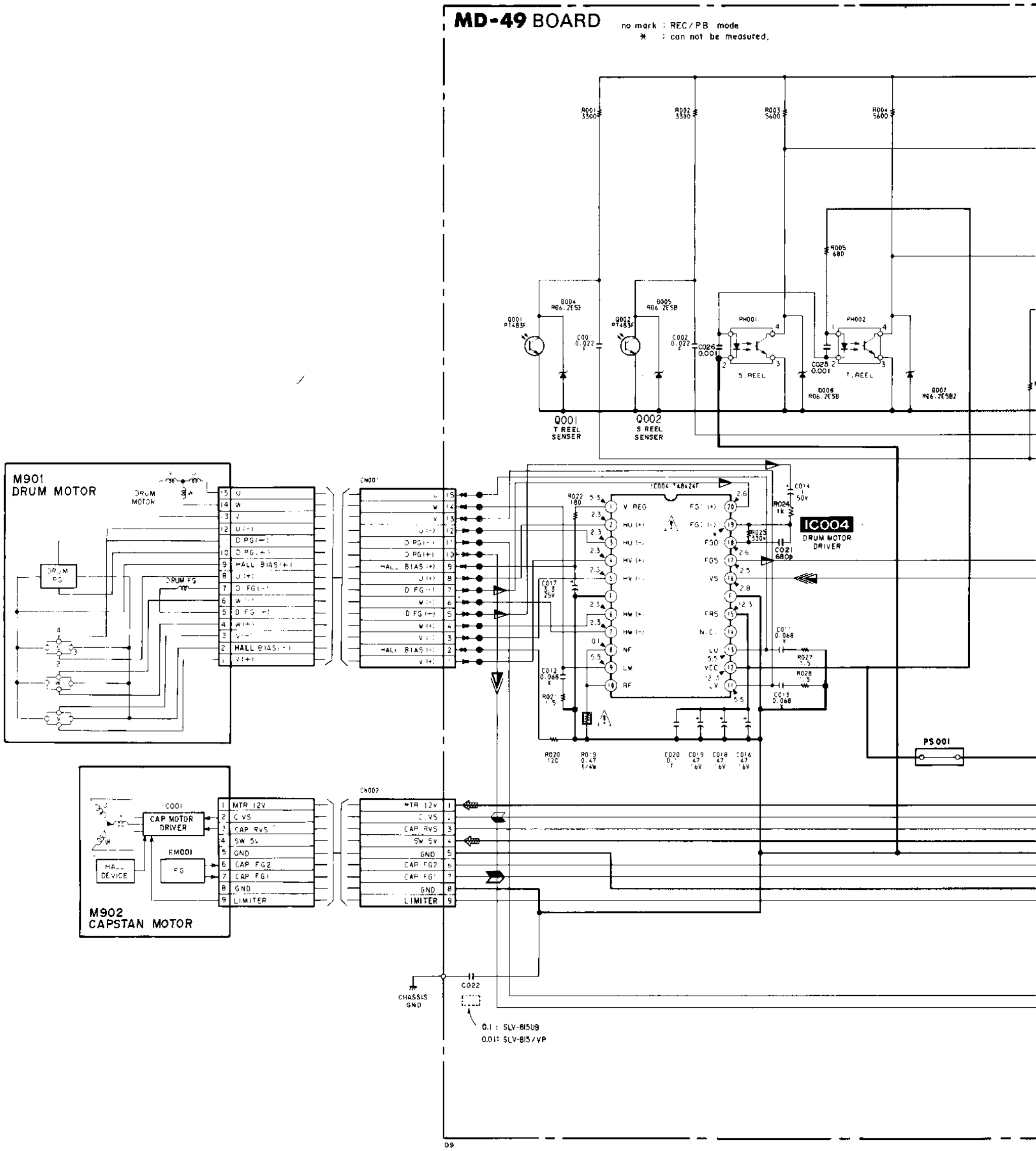
- **Signal path**

	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	▶		

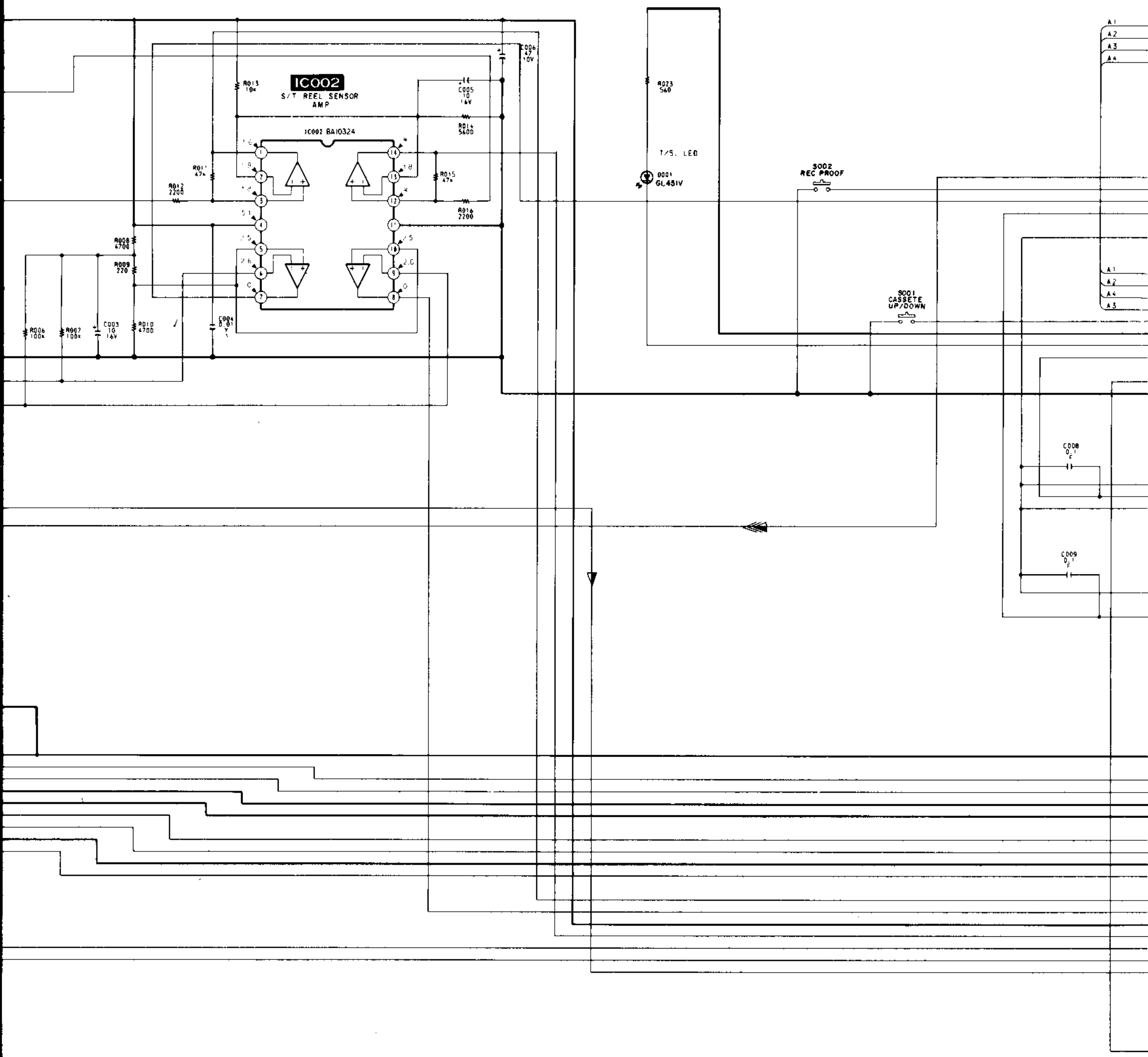
MD-49 (MECHANISM DRIVE) SCHEMATIC DIAGRAM — Ref. No. MD-49 BOARD: 9000 series —

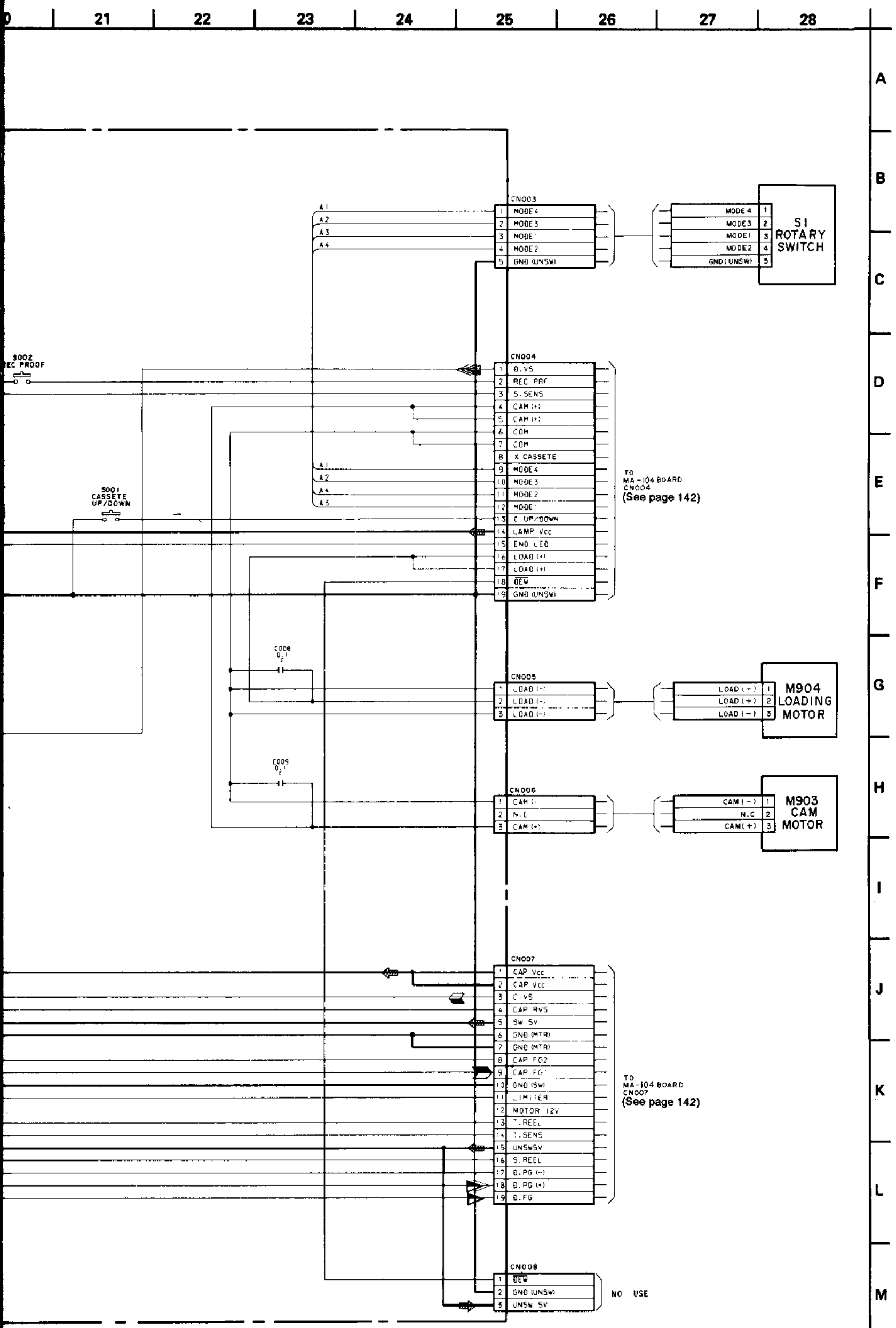
MD-49 BOARD

no mark : REC/PB mode
* : can not be measured.



MECHANISM DRIVE MECHANISM DRIVE


IC002
S/T REEL SENSOR AMP
IC002 BA10324
R013 10k
C006 47 10V
C005 10 16V
R014 5600
R011 47k
R012 2200
R015 47k
R016 2200
R008 4700
R009 220
R006 100k
R007 100k
C003 10 16V
R010 4700
C004 0.01
R023 560
T/S. LED
D001 GL451V
S002 REC PROOF
S001 CASSETE UP/DOWN
C008 0.1
C009 0.1
A1
A2
A3
A4



- **Signal path**

	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			

MD-49 (MECHANISM DRIVE) PRINTED WIRING BOARD

— Ref. No. MD-49 BOARD: 9000 series —

DIODE

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

IC

IC002	8-759-938-12	IC BA10324
IC004⚠	8-759-234-03	IC TA8424F

TRANSISTOR

Q001	8-729-921-53	PHOTO TRANSISTOR PT483F1
Q002	8-729-921-53	PHOTO TRANSISTOR PT483F1

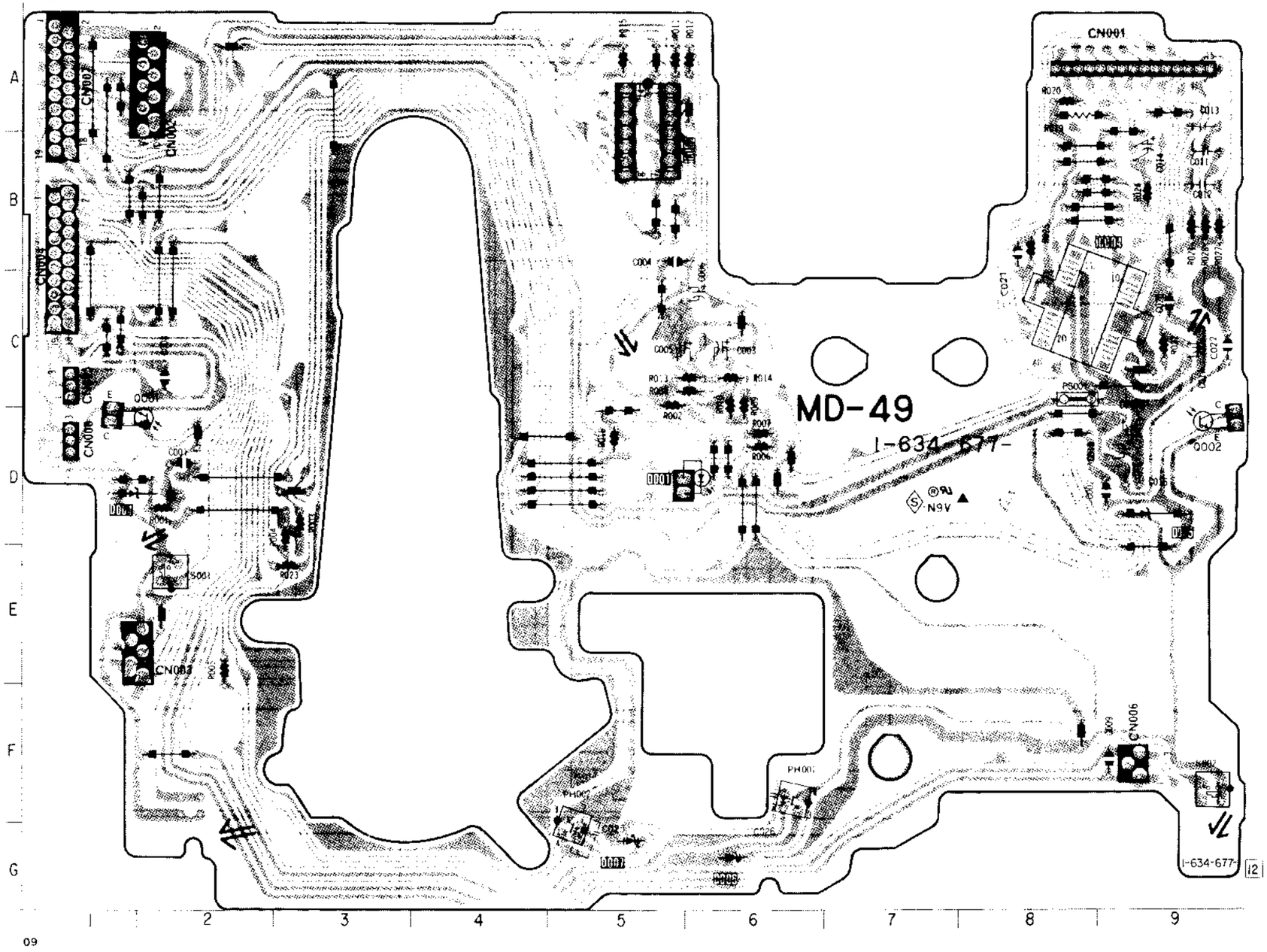
MD-49 BOARD

D001 D-5
D002 C-2
D003 C-2
D004 D-1
D005 D-9

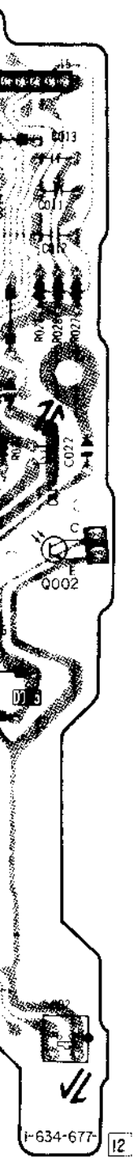
IC002 A-5
IC004 C-8

Q001 C-1
Q002 C-9

MD-49 BOARD



09

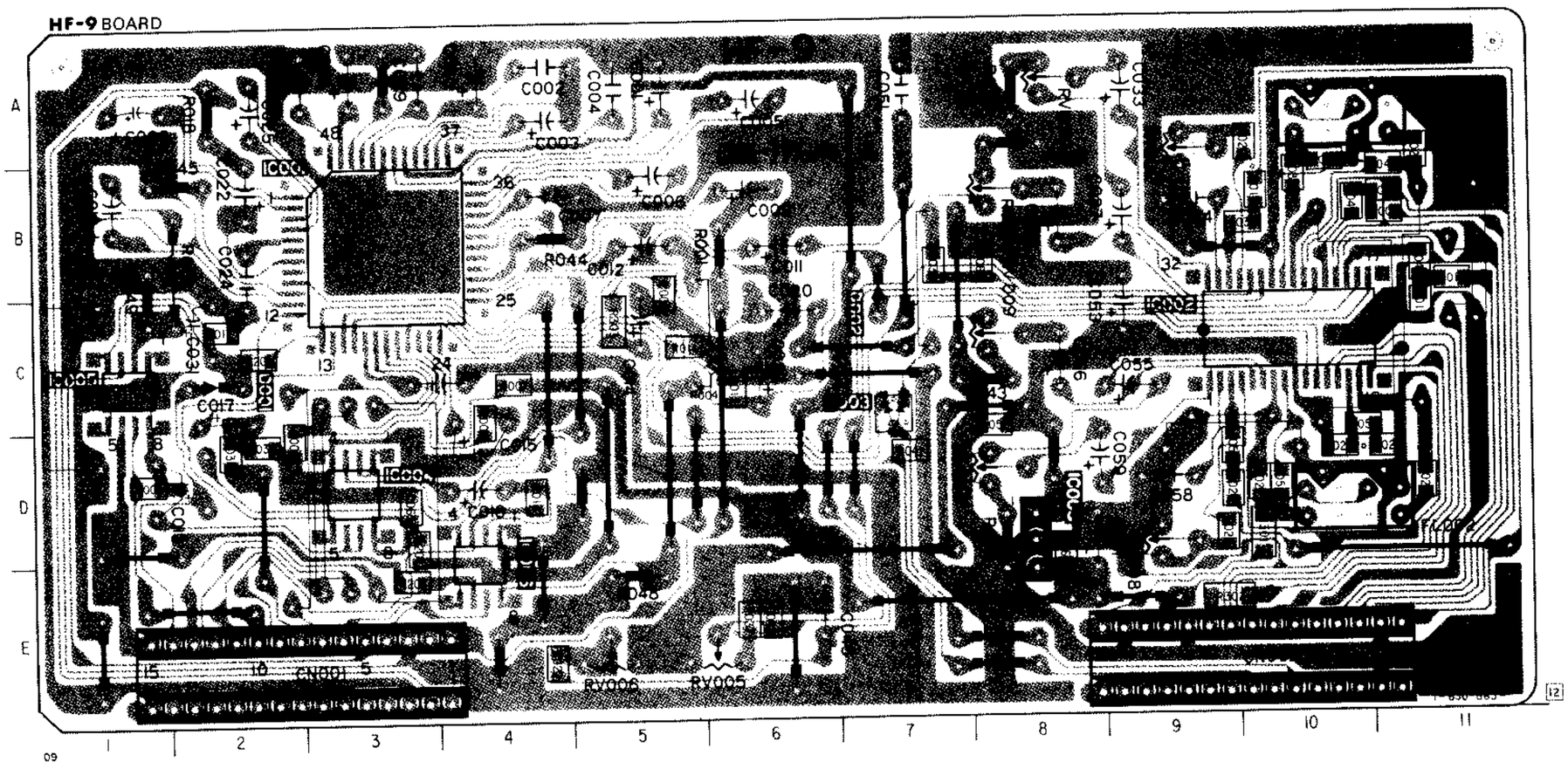


9

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

— Ref. No. HF-9 BOARD: 1000 series —

HF-9 BOARD



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

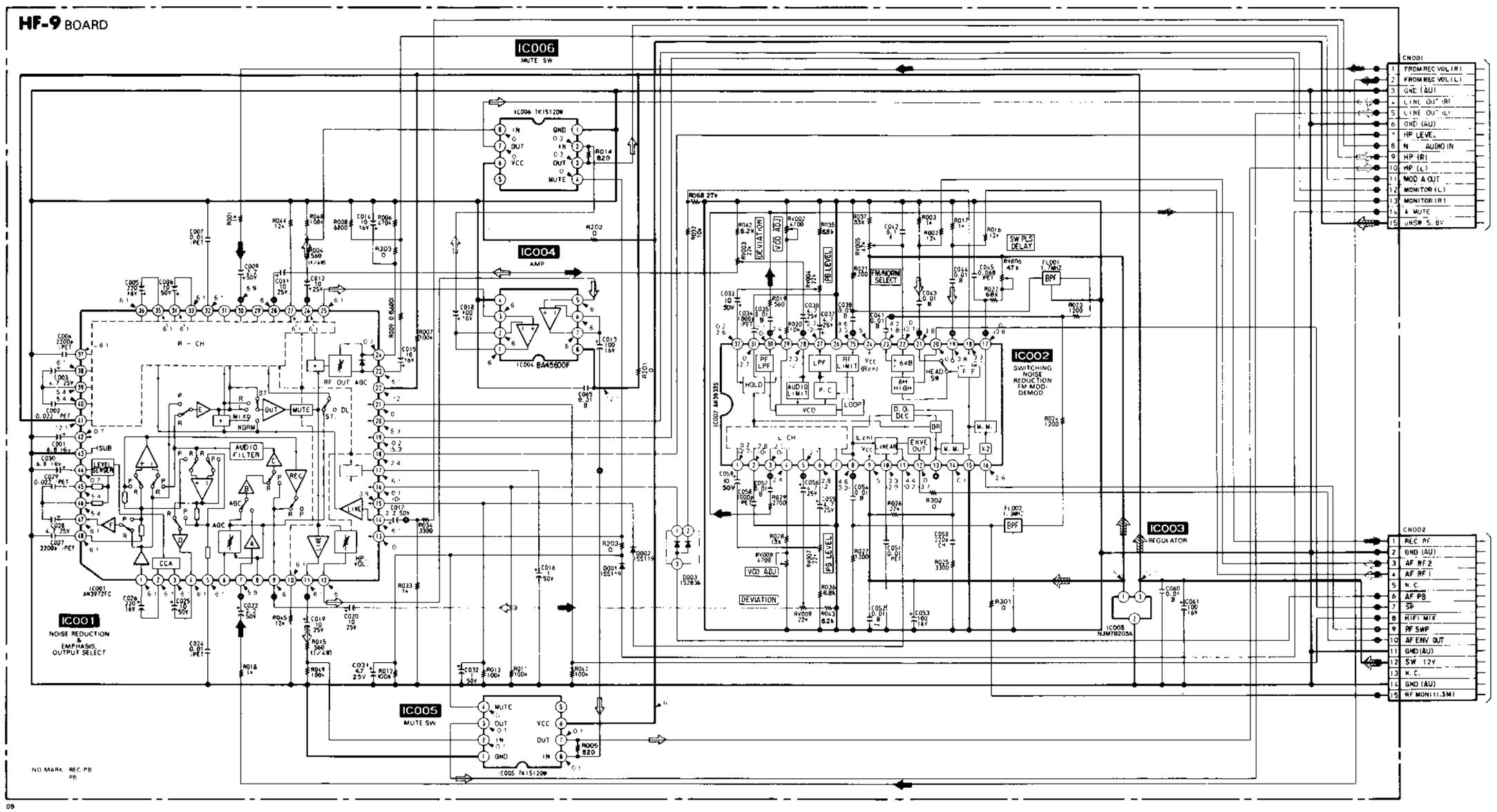
1

— Ref. No.

A
B
C
D
E
F
G
H
I
J

HF-9 (Hi-FI AUDIO) SCHEMATIC DIAGRAM

— Ref. No. HF-9 BOARD: 1000 series —



• **Signal path**

	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC				
PB				

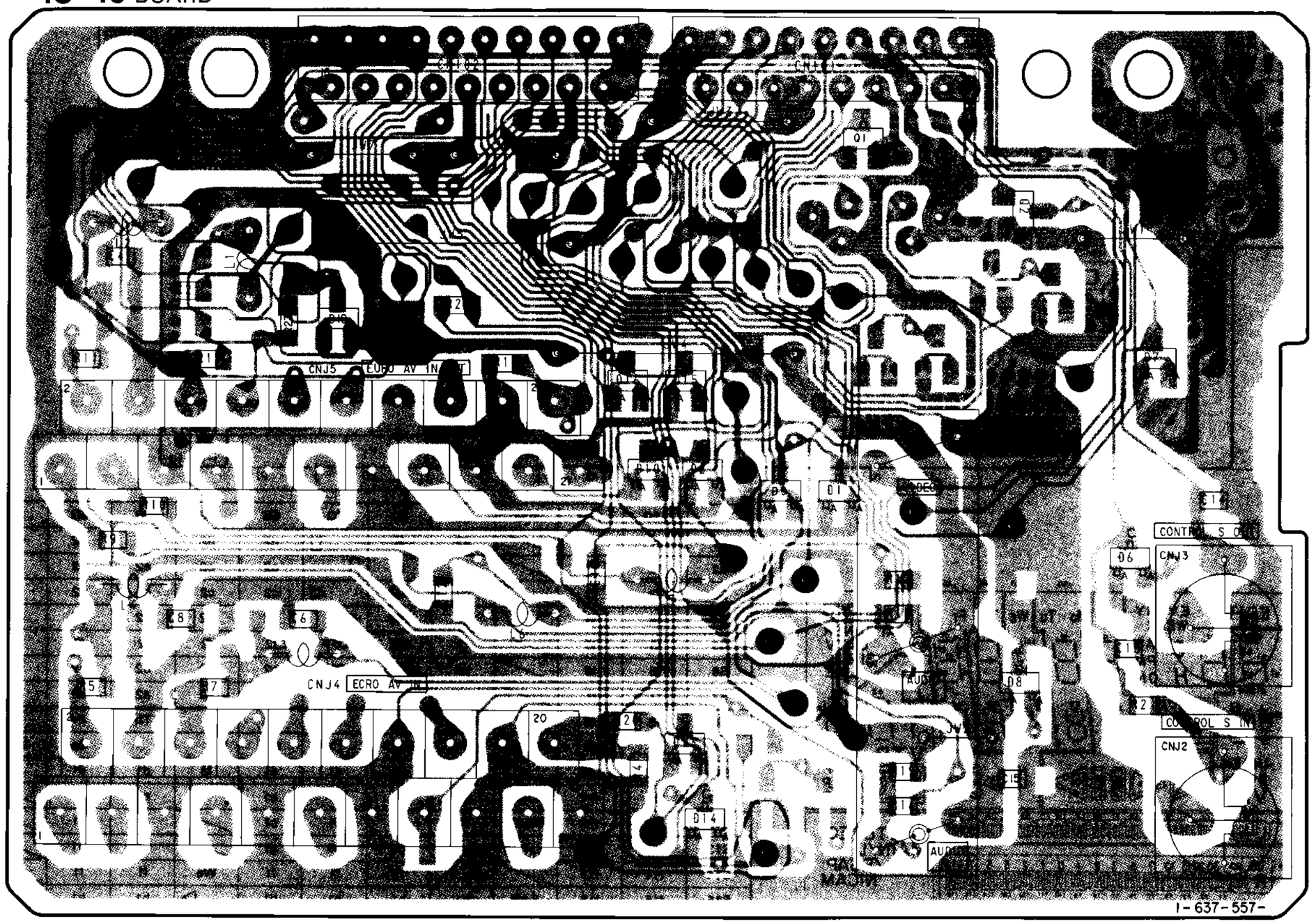
IO-40 BOARD

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

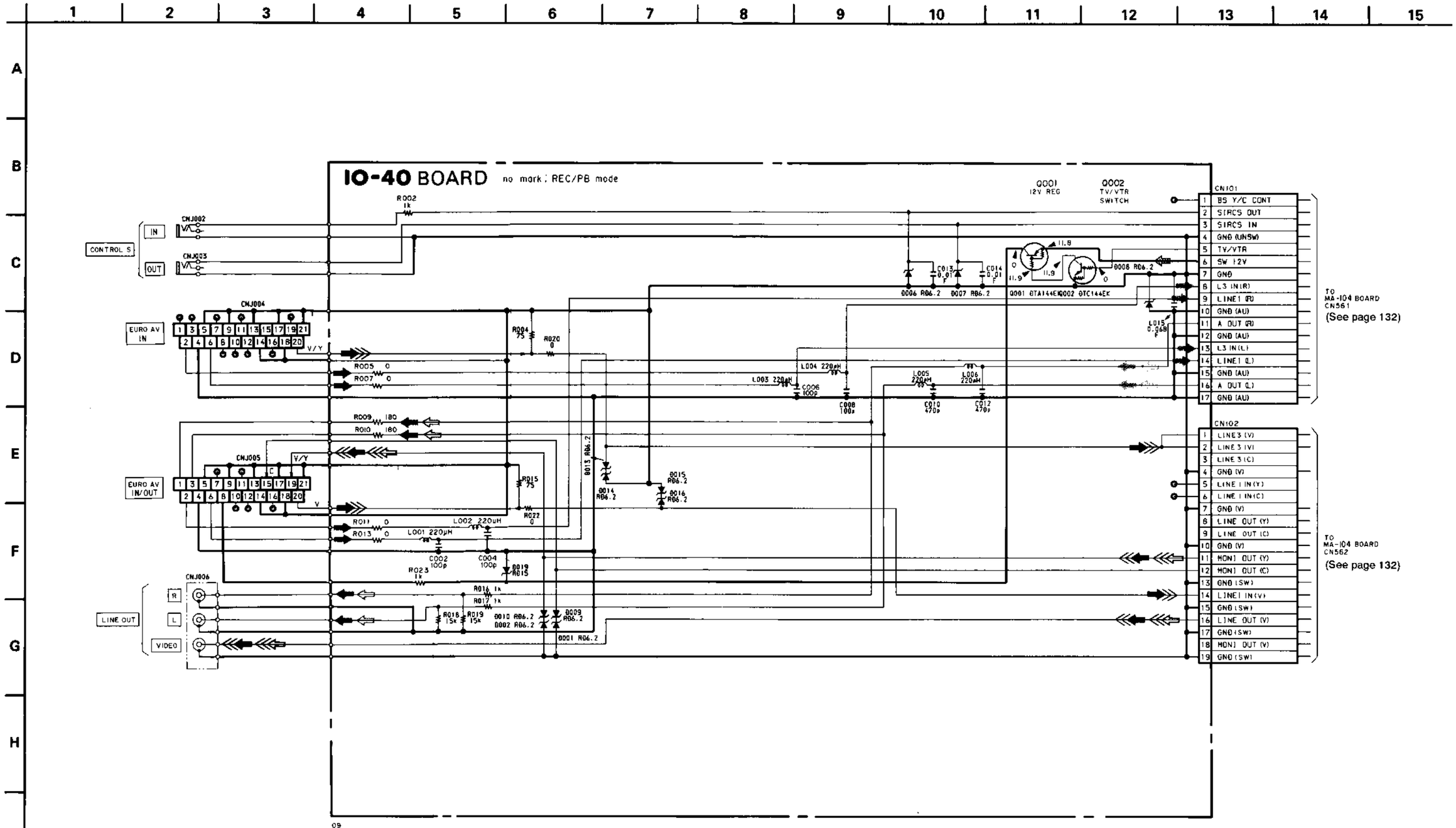
TRANSISTOR

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 —



- **Signal path**

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

MF-94 (MODE CONTROL), RM-42 (COMMANDER RECIEVER) PRINTED WIRING BOARDS

— Ref. No. MF-94, RM-42 BOARDS: 9000 series —

DIODE

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
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 1S2836
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

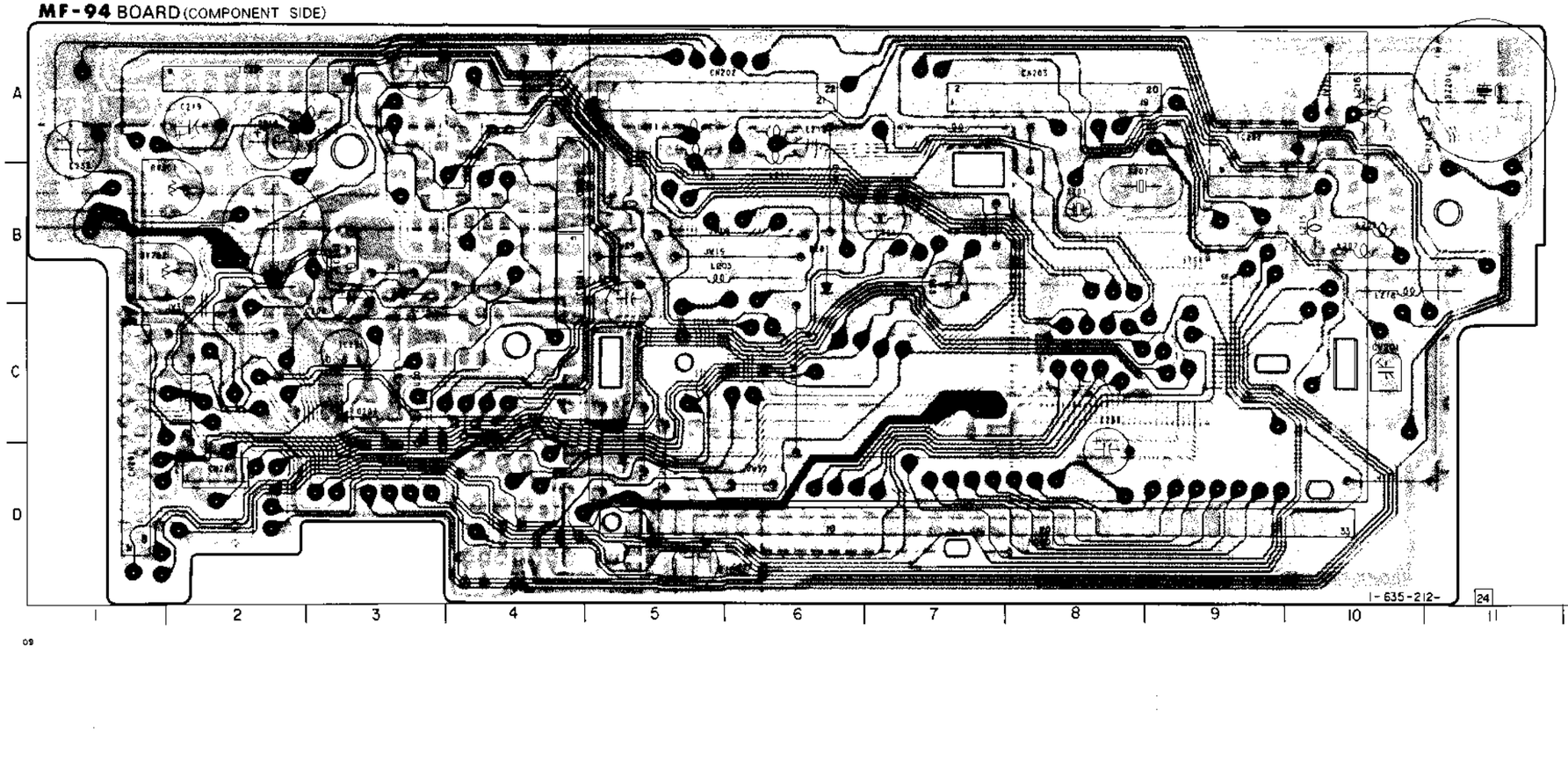
TRANSISTOR

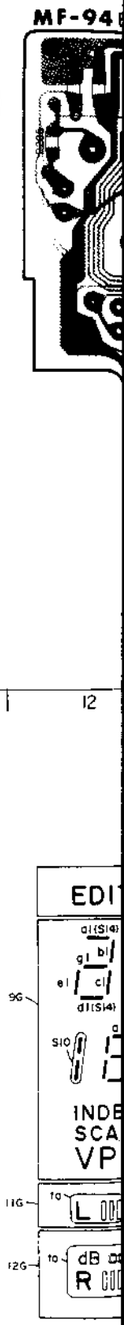
Q201	8-729-271-23	TRANSISTOR 2SC2712
Q202	8-729-271-23	TRANSISTOR 2SC2712
Q205	8-729-901-01	TRANSISTOR DTC144EI
Q206	8-729-901-01	TRANSISTOR DTC144EI

MF-94 BOARD

D201	B-6
D202	D-5
D203	C-3
D204	B-3
D206	C-18
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

MF-94 BOARD (COMPONENT SIDE)



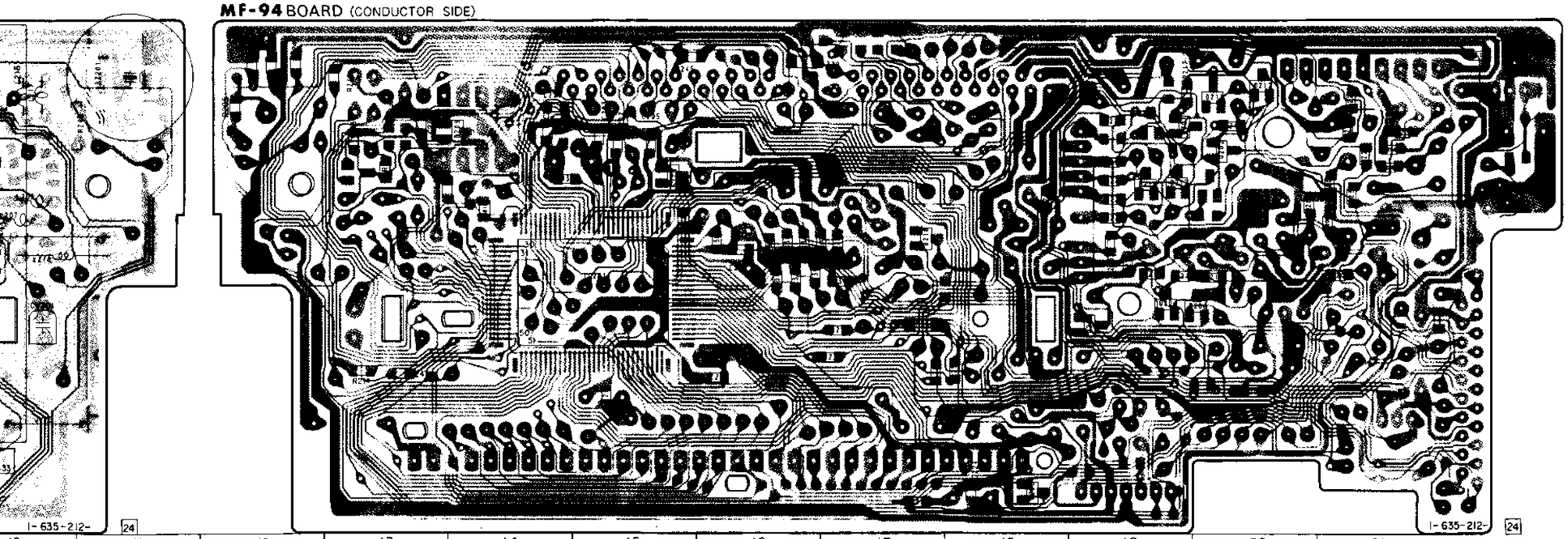


DIODE

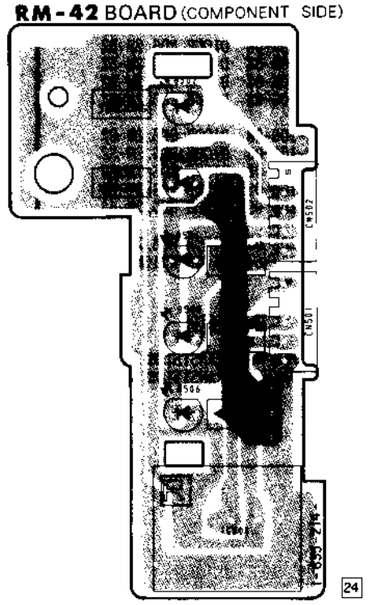
D502	8-719-955-04	DIODE SLR-54MC3 (AUTO TRAKING)
D503	8-719-302-07	DIODE SLR-54DC3 (EDIT MONITOR)
D504	8-719-921-01	DIODE SLR-54VC3 (AUDIO INSERT)
D505	8-719-921-01	DIODE SLR-54VC3 (VIDEO INSERT)
D506	8-719-955-04	DIODE SLR-54MC3 (◄◄◄)

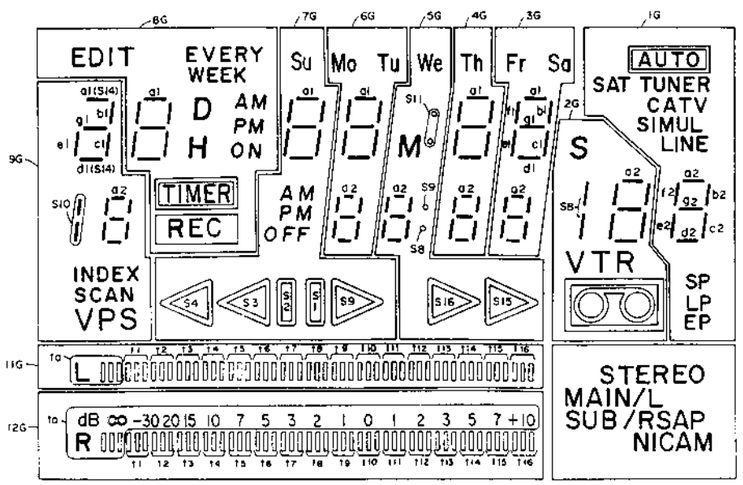
- For printed wiring boards.
- ⊗ : Through hole.

MF-94 BOARD (CONDUCTOR SIDE)



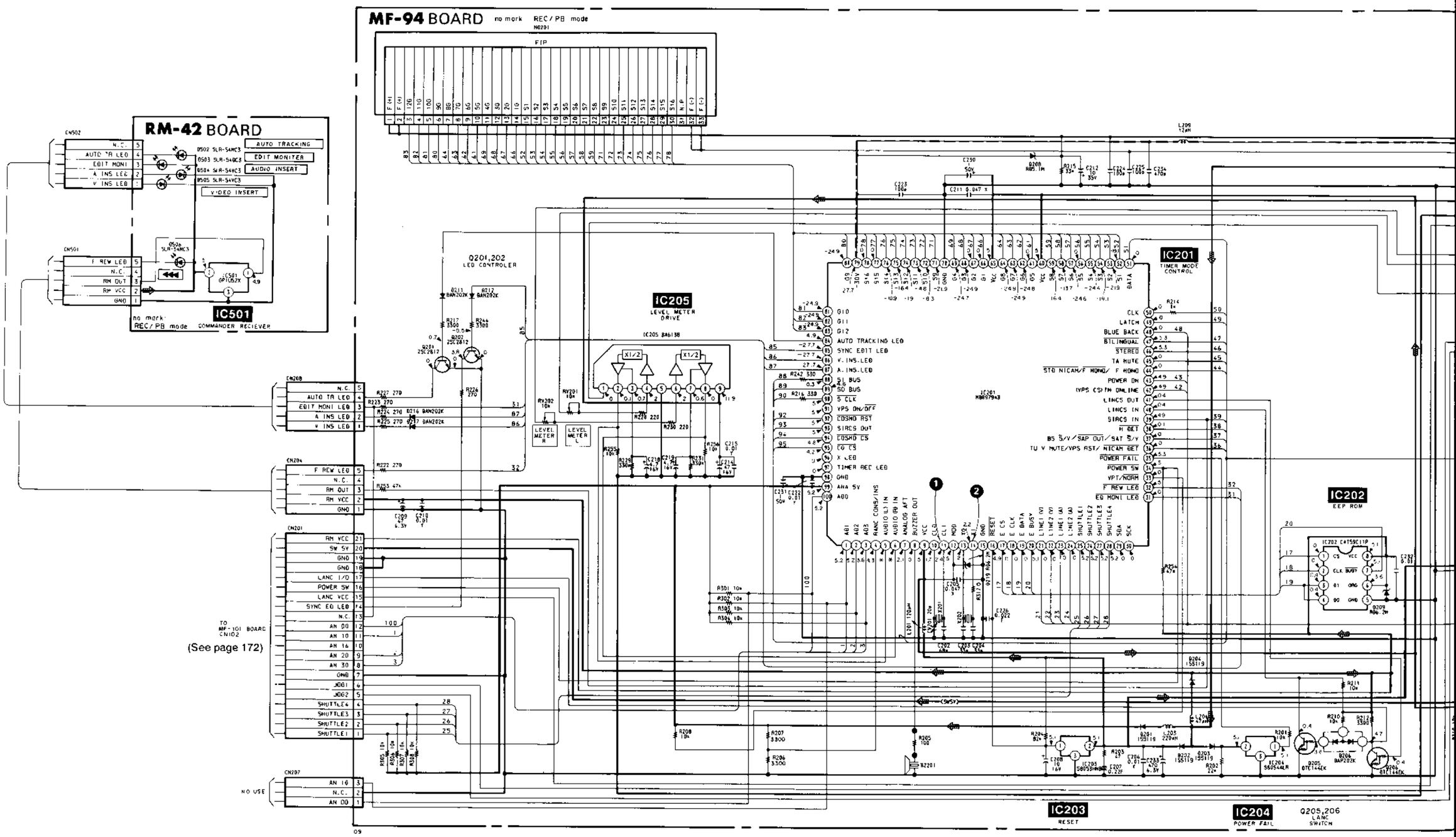
RM-42 BOARD (COMPONENT SIDE)

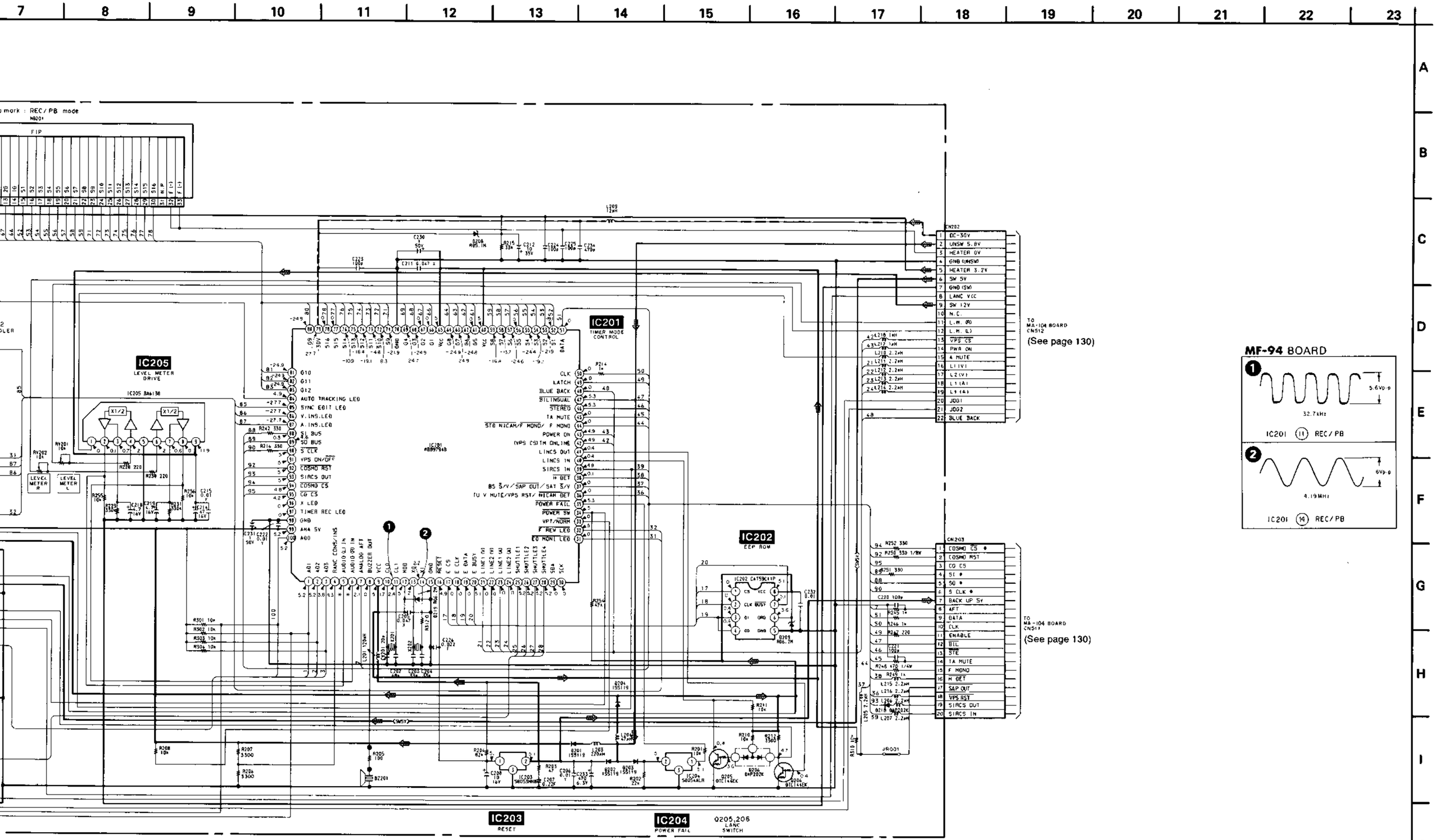




	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	t1	t1		d2	H	▯	d2	d2	d2	d2	d2	d2
S2	t2	t2		e2	D	▯	e2	e2	e2	e2	e2	e2
S3	t3	t3		c2	AM	◁	c2	c2	c2	c2	c2	c2
S4	t4	t4		g2	PM	◁	g2	g2	g2	g2	g2	g2
S5	t5	t5		f2	ON	OFF	f2	f2	f2	f2	f2	f2
S6	t6	t6		b2	REC	PM	b2	b2	b2	b2	b2	b2
S7	t7	t7		a2	TIMER	AM	a2	a2	a2	a2		a2
S8	t8	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

— Ref. No. MF-94, RM-42 BOARDS: 9000 series —

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22
23
A
B
C
D
E
F
G
H
I
J
mark : REC/PB mode
IC205
LEVEL METER DRIVE
IC201
TIMER MODE CONTROL
IC202
EEP ROM
IC203
RESET
IC204
POWER FAIL
0205,206
LANC SWITCH
CN202
CN203
TO MA-104 BOARD CN512
(See page 130)
TO MA-104 BOARD CN511
(See page 130)
MF-94 BOARD
5.6Vp-p
32.7kHz
IC201 (11) REC/PB
6Vp-p
4.19MHz
IC201 (14) REC/PB

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

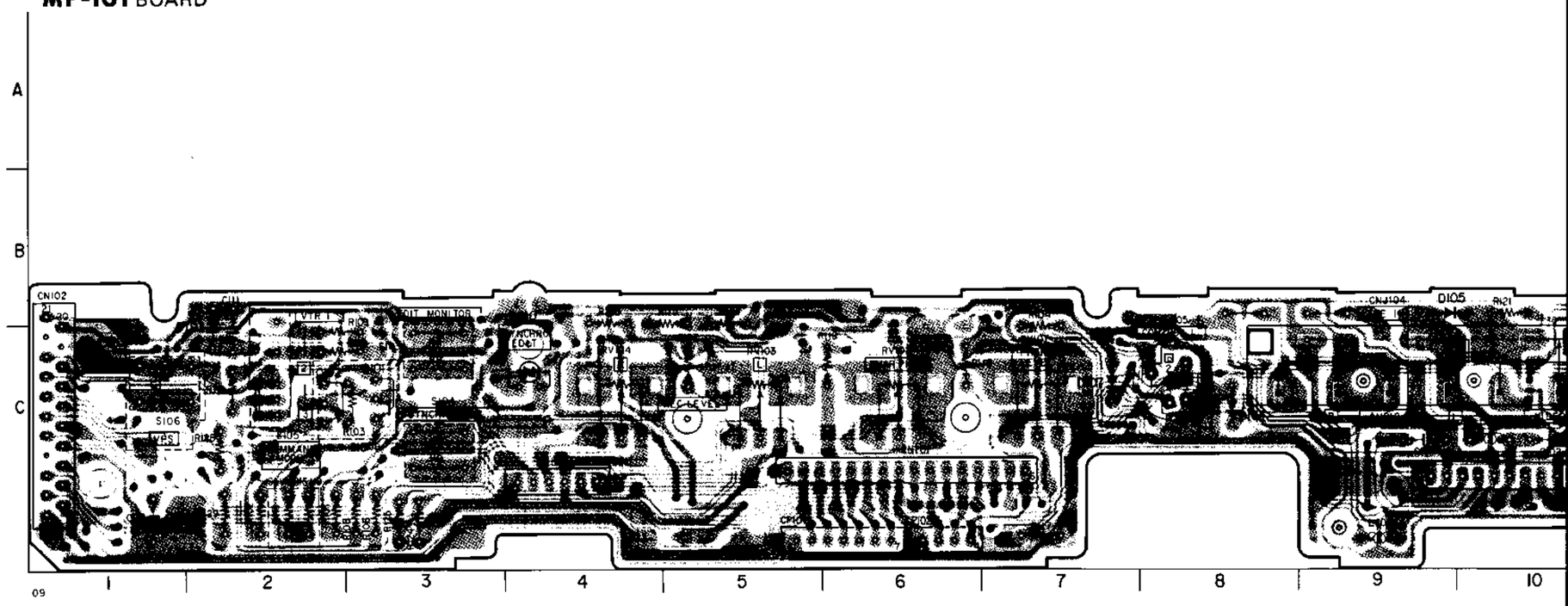
Q101 C-3
Q102 C-2

DIODE

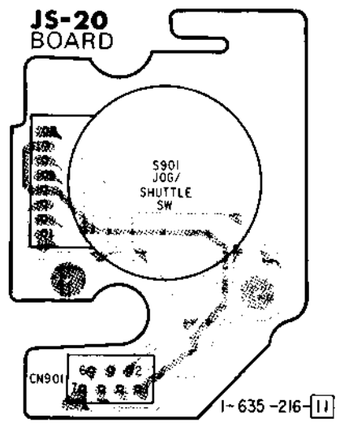
D101	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815VP)
D101	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)
D102	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815VP)
D102	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)
D103	8-719-110-36	DIODE RD13ES-B2
D104	8-719-109-93	DIODE RD6.2ES-B2
D105	8-719-911-19	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)

Q101	8	
Q102	8	

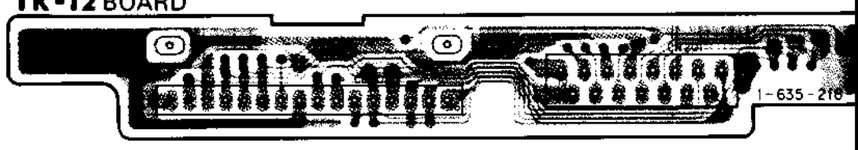
MF-101 BOARD



JS-20 BOARD



TK-12 BOARD

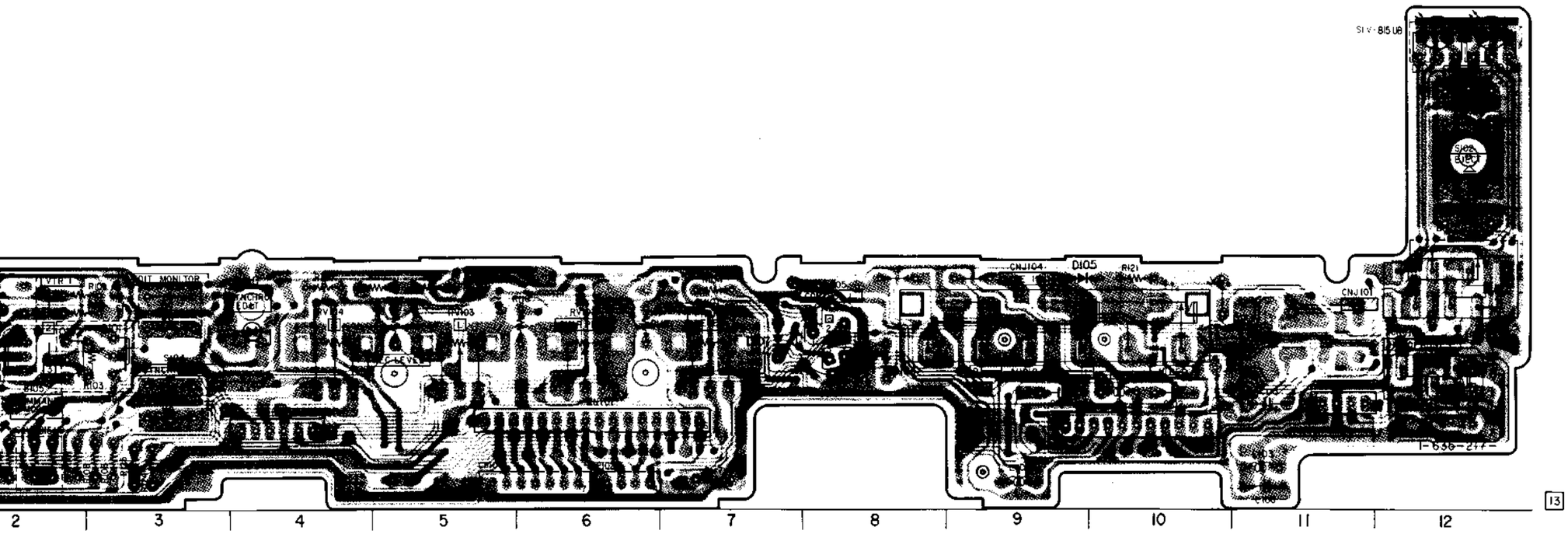


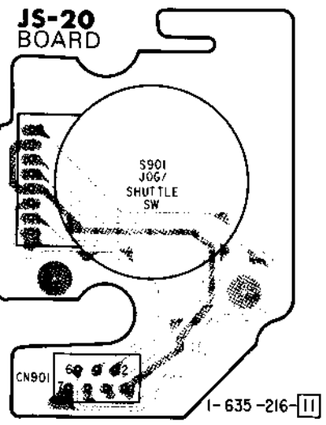
DIODE

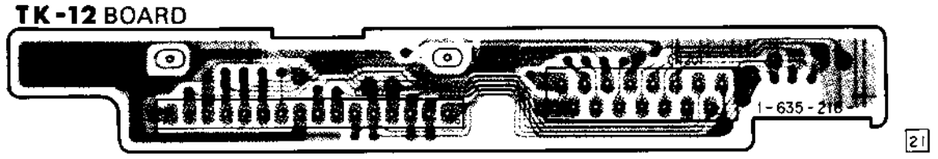
D101	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815VP)
D101	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)
D102	8-719-955-04	DIODE PY5504S-1 (POWER) (SLV-815VP)
D102	8-719-988-92	DIODE BRPG5041XK (POWER) (SLV-815UB)
D103	8-719-110-36	DIODE RD13ES-B2
D104	8-719-109-93	DIODE RD6.2ES-B2
D105	8-719-911-19	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)

TRANSISTOR

Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE (SLV-815UB)
Q102	8-729-900-89	TRANSISTOR DTC144ES (SLV-815UB)

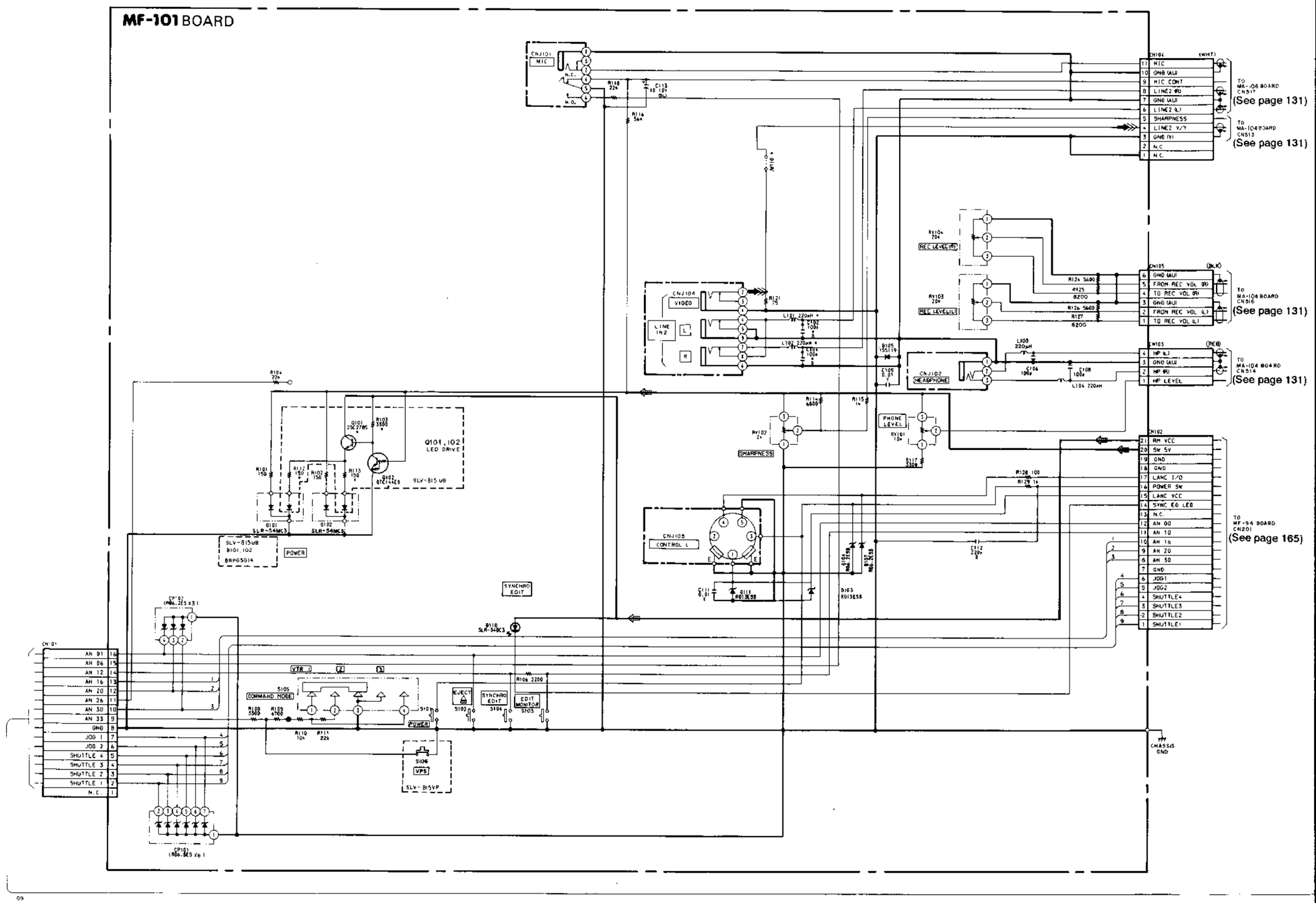


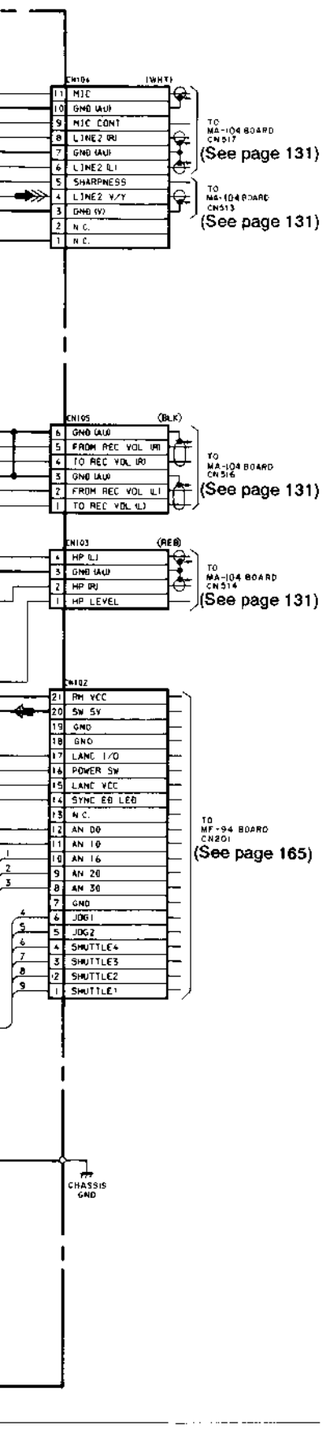


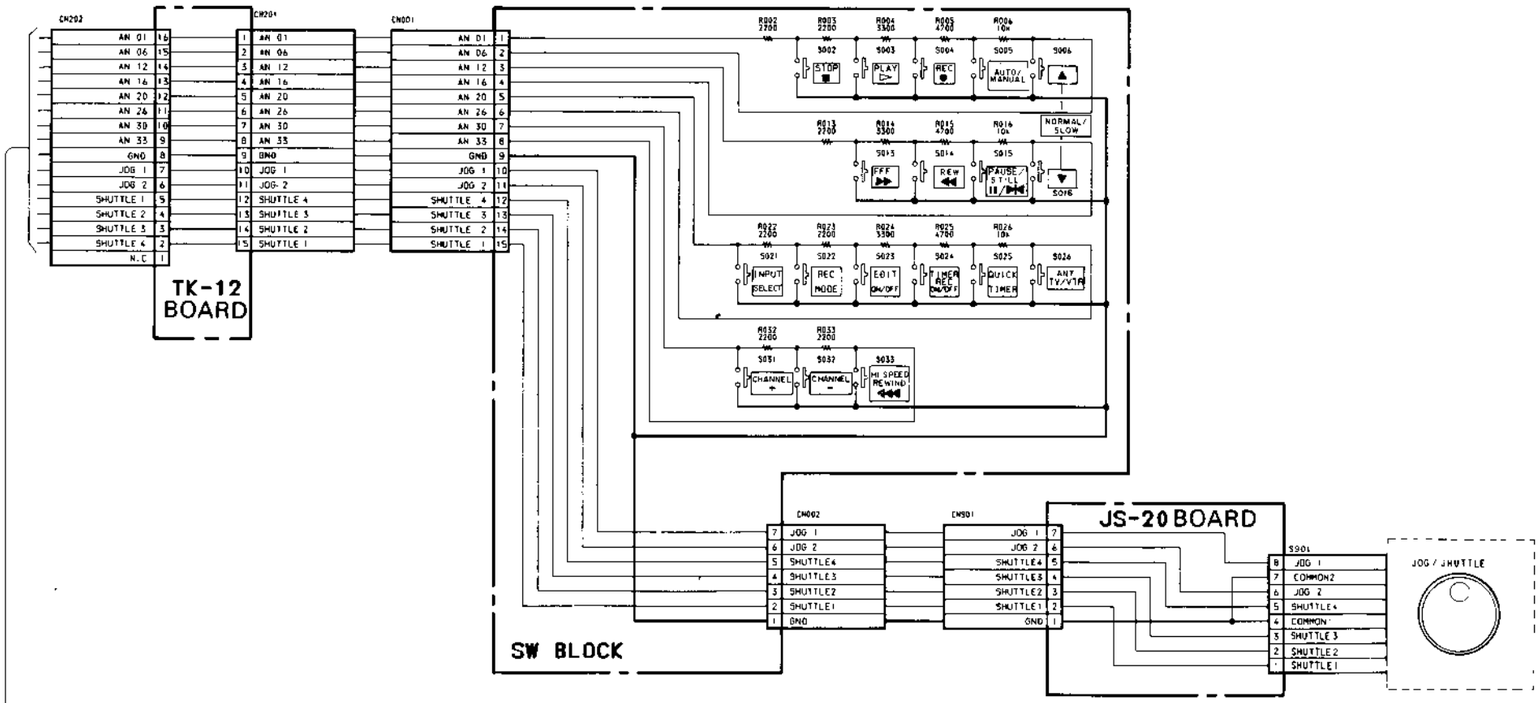


— Ref. No. TK-12 BOARD: 6000 series, JS-20 BOARD: 8000 series, MF-101 BOARD: 90000 series —

MF-101 BOARD







• **Signal path**

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

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

D001	8-719-801-52	DIODE 1SS190-TE85L
D002	8-719-801-52	DIODE 1SS190-TE85L
D003	8-719-400-18	DIODE 1S2837-T1
D004	8-719-400-18	DIODE 1S2837-T1
D005	8-719-400-18	DIODE 1S2837-T1
D006	8-719-400-18	DIODE 1S2837-T1
D007	8-719-400-18	DIODE 1S2837-T1
D008	8-719-104-34	DIODE 1S2835-T1

IC

IC001	8-759-231-09	IC TA8662N
IC002	8-759-231-28	IC TC6011N
IC003	8-752-331-22	IC CXK5864BSP-10L
IC004	8-759-231-29	IC TD6710AN
IC005	8-759-900-72	IC NE5532P
IC006	8-759-900-72	IC NE5532P

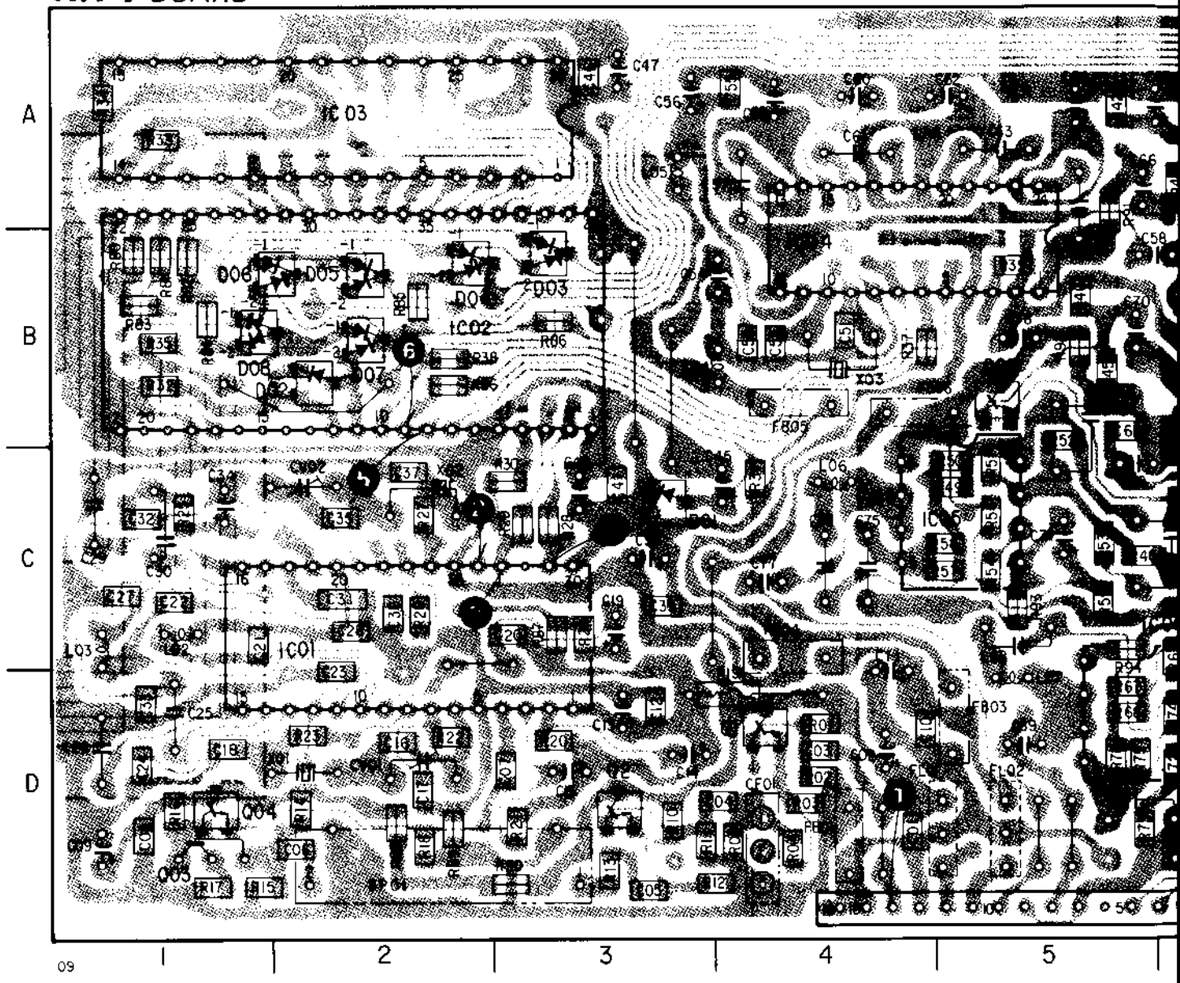
TRANSISTOR

Q001	8-729-100-66	TRANSISTOR 2SC1623-L6
Q002	8-729-100-66	TRANSISTOR 2SC1623-L6
Q003	8-729-104-80	TRANSISTOR 2SC3355
Q004	8-729-100-66	TRANSISTOR 2SC1623-L6
Q005	8-729-100-66	TRANSISTOR 2SC1623-L6
Q006	8-729-100-66	TRANSISTOR 2SC1623-L6

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

NA-7 BOARD



NICAM NICAM

B ONLY

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
29-100-66	TRANSISTOR	2SC1623-L6

SLV-815UB ONLY

DIODE

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

IC

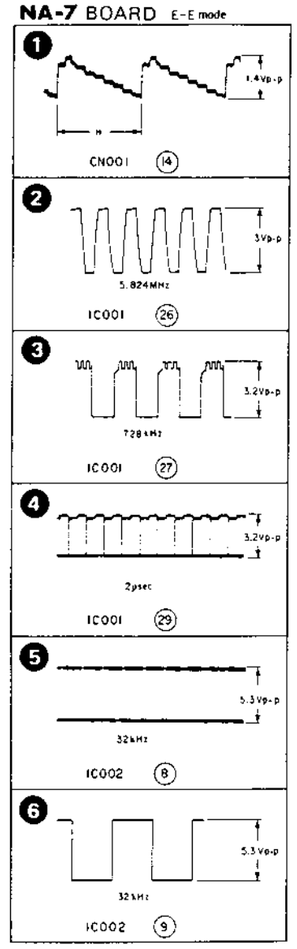
IC001	8-759-800-81	IC LA7016
IC002	8-759-800-81	IC LA7016

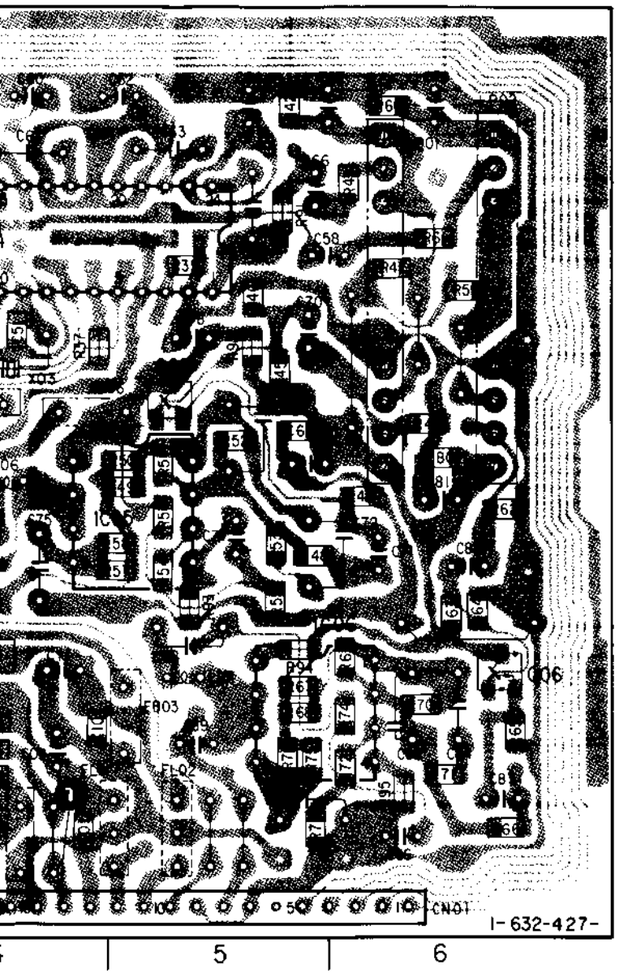
SLV-815UB ONLY

TRANSISTOR

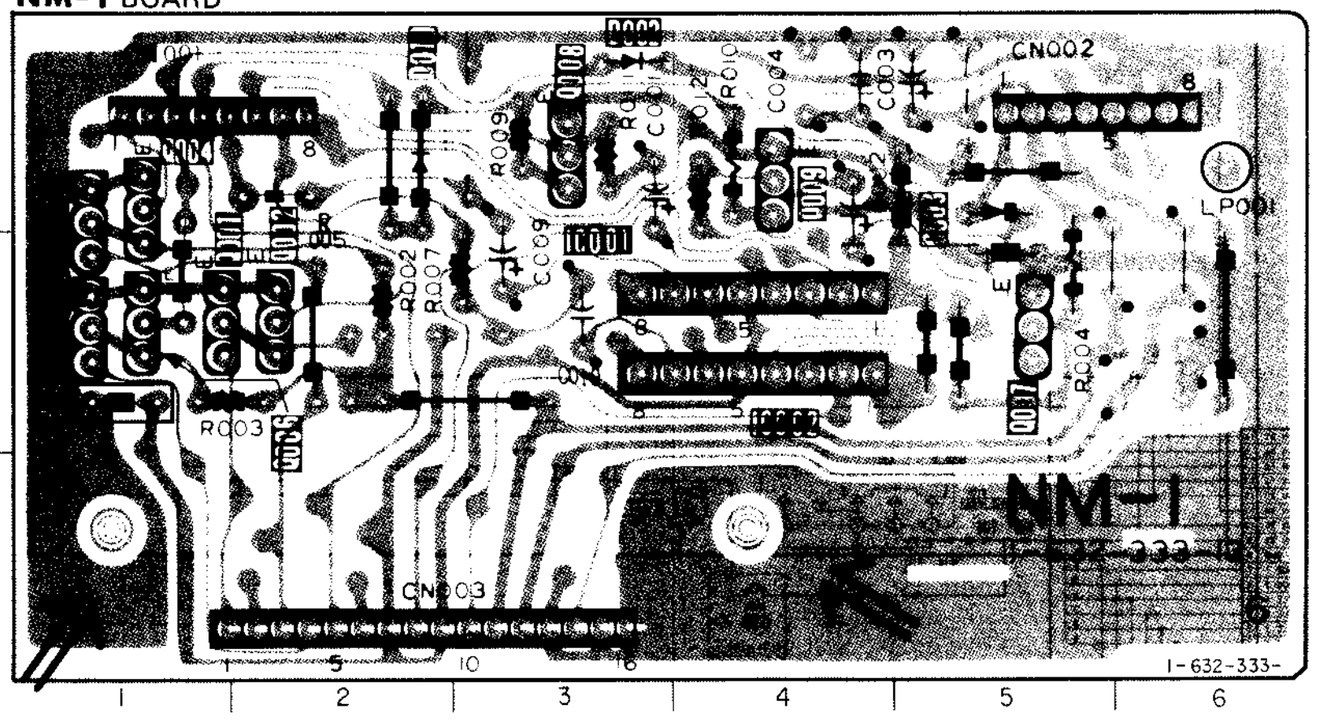
Q003	8-729-900-80	TRANSISTOR DTC114ES
Q004	8-729-900-80	TRANSISTOR DTC114ES
Q005	8-729-900-80	TRANSISTOR DTC114ES
Q006	8-729-900-80	TRANSISTOR DTC114ES
Q007	8-729-900-80	TRANSISTOR DTC114ES
Q008	8-729-303-37	TRANSISTOR 2SD655E
Q009	8-729-303-37	TRANSISTOR 2SD655E

NA-7 BOARD E-E mode





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

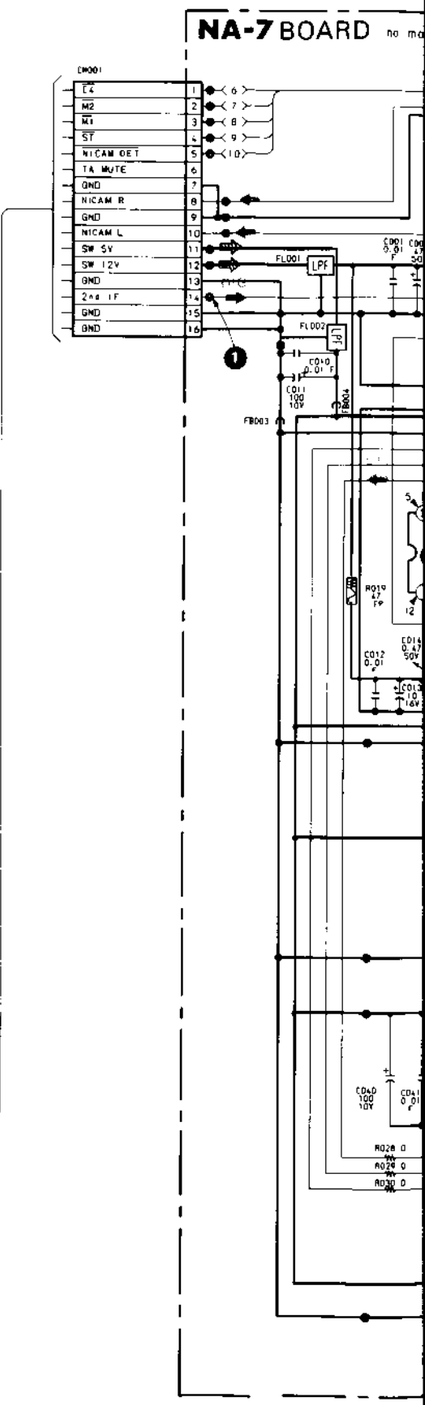
SLV-815UB ONLY

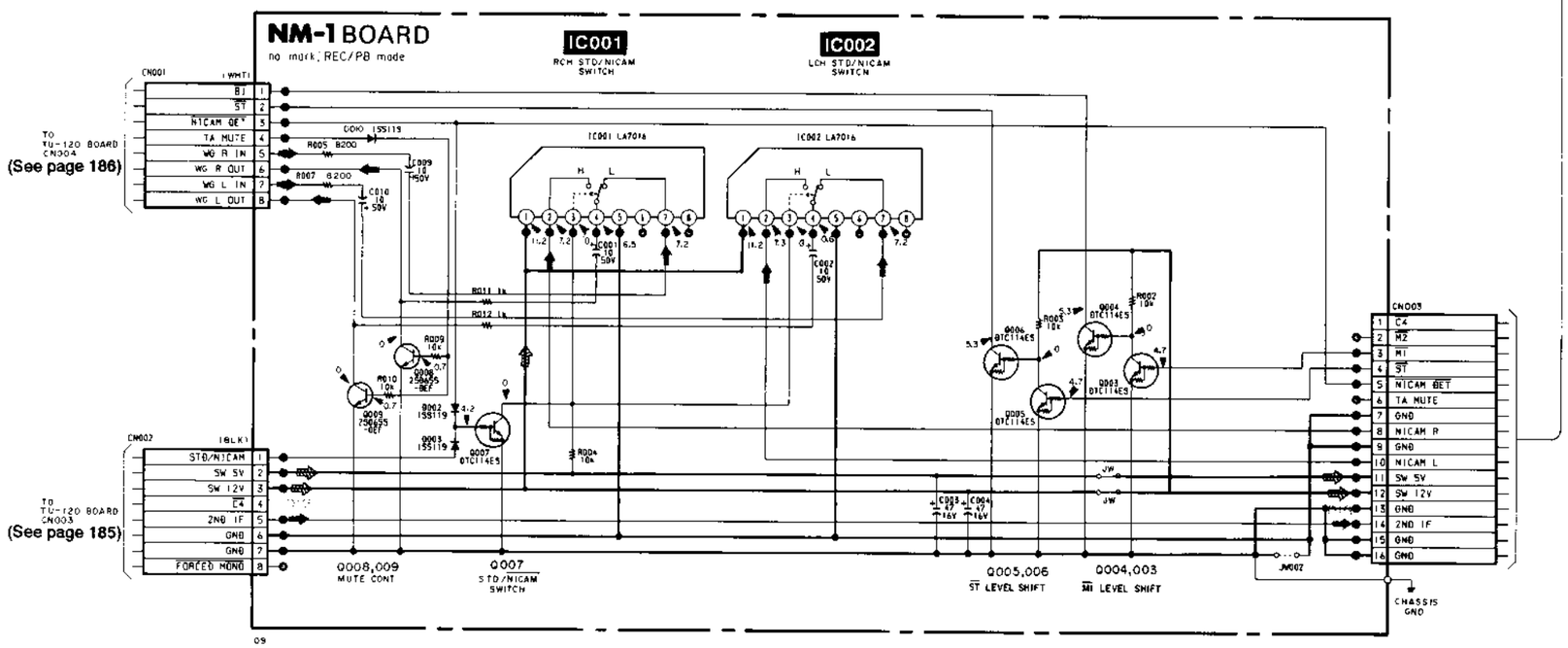
SLV-815UB ONLY

SLV-815UB ONLY

SLV-8

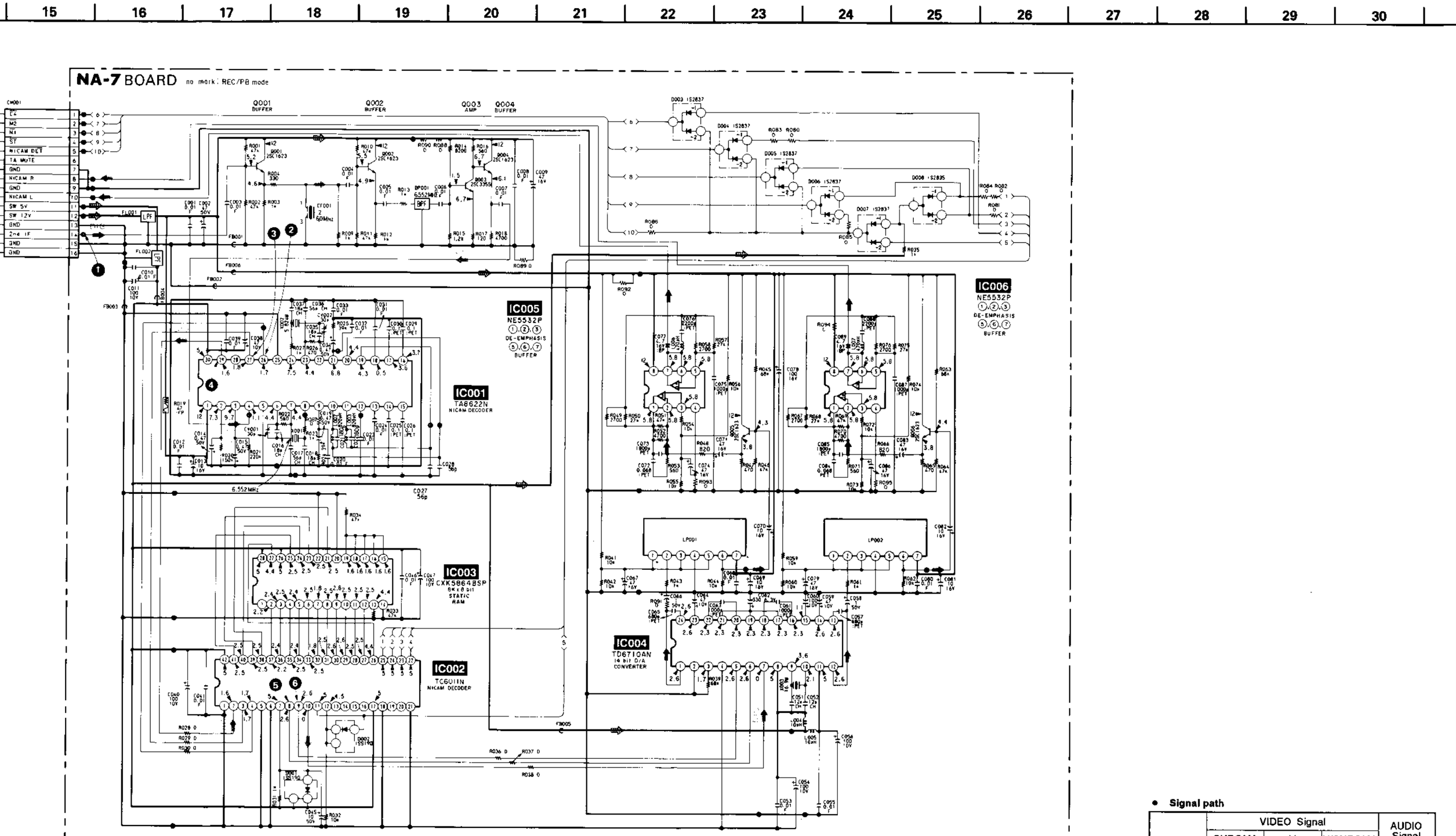
— Ref. No. NA-7 BOARD: 3000 series, NM-1 BOARD: 8000 series —





NA-7 BOARD

no mark : REC/PB mode



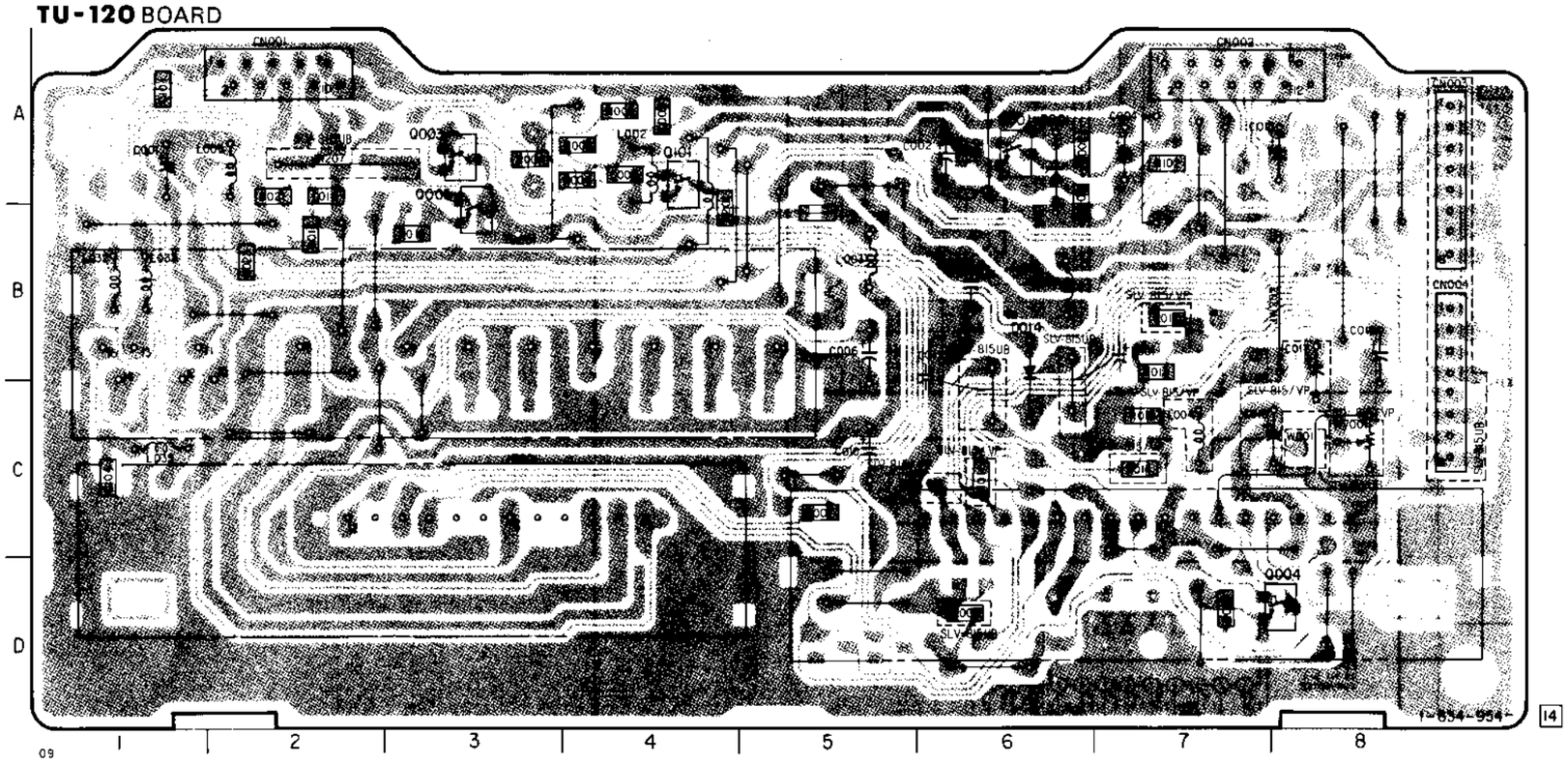
- **Signal path**

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

TU-120 (TUNER) PRINTED WIRING BOARD

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

TU-120 BOARD



DIODE

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

TRANSISTOR

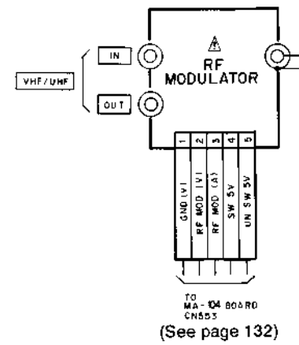
Q001	⚠8-729-901-78	TRANSISTOR	2SC2412K-R
Q003	8-729-901-78	TRANSISTOR	2SC2412K-R
Q004	8-729-900-98	TRANSISTOR	DTC143TK
Q005	8-729-901-78	TRANSISTOR	2SC2412K-R
Q101	8-729-901-78	TRANSISTOR	2SC2412K-R

TU-120 BOARD

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

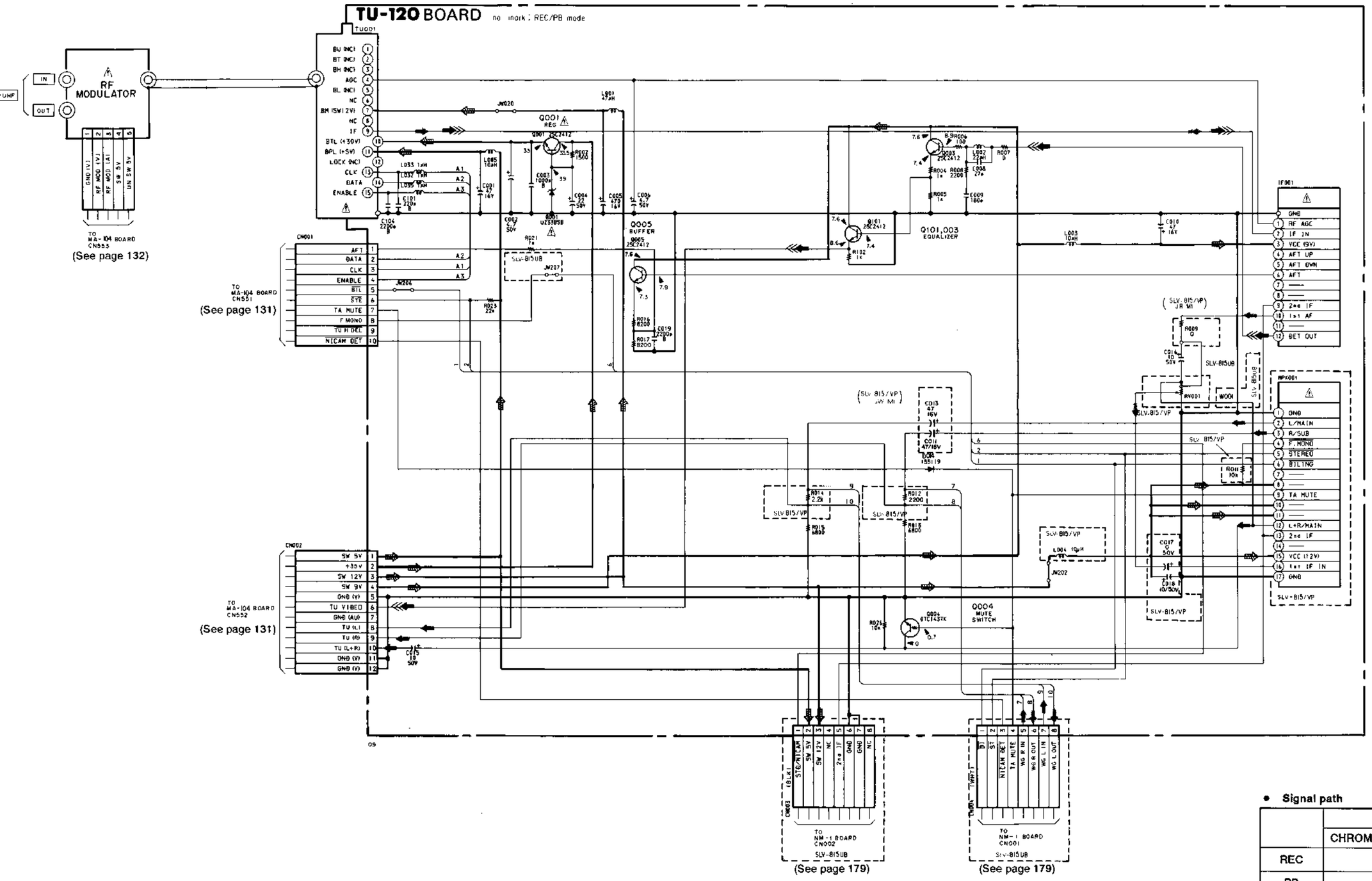
— Ref. No. TU-120 BOARD: 2000 series —



(See page 132)

(See pa

TU-120 BOARD no mark : REC/PB mode

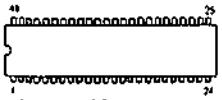


- **Signal path**

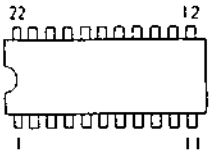
	VIDEO Signal			AUDIO Signal
	CHROMA	Y	Y/CHROMA	
REC			➡	⇛
PB				

4-3. SEMICONDUCTORS

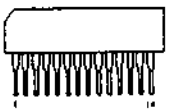
AN3231K



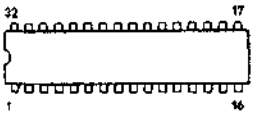
AN3592K



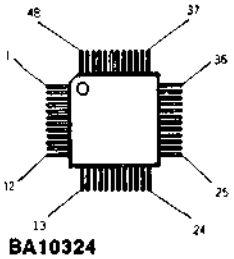
AN3916



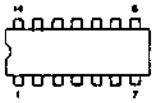
AN3932S
M50554



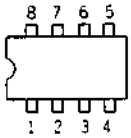
AN3972FC



BA10324
LM324N
MC14001BF
MC14011BCP
MC14066BCP
MC14070BCP
MC14071BCP
SDA5642



BA4560F
TK15120M
CXL5003P
LM358N
M5201P
MSM6989RS
NE5532P
RC4556D



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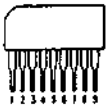
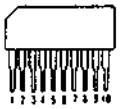
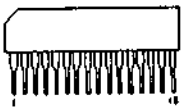
LA7954
LVA519A
LVA522S



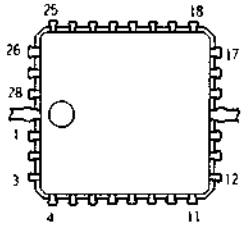
BA6238A



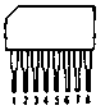
BA7007



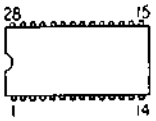
CAT35C202P
HA11535MP
HA11567MP
HA118088MP
HA12115MP



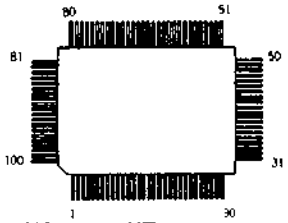
CX20061
LA7016



CXK5864BSP
MC68HC05P7



CXP80624
HD9410
MB89794B



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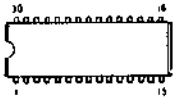
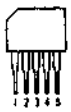
HA118019NT
TA8662NT



HM53461ZP

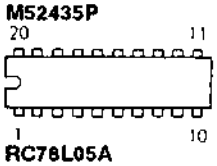
LA7213



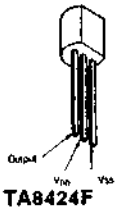
LA7222

LA7297

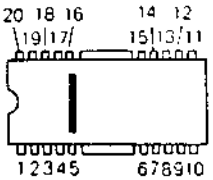
M52435P



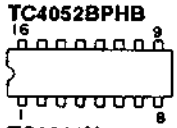
RC78L05A
S-8053ALR
S-8053HNB



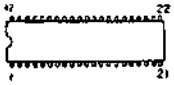
TA8424F



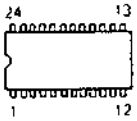
TC4052BPHB



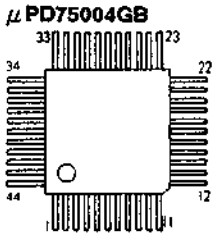
TC6011N



TD6710N



μPD75004GB



2SA1115
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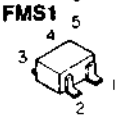
2SC2603
DTA114ES
DTA144ES
DTC114ES
DTA144ES

2SA1309
2SD1020TP
2SC3311

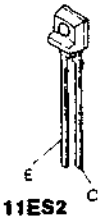
2SA933S

2SK381

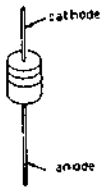
FMS1



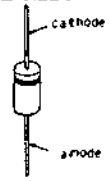
PT4831F1S



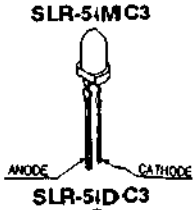
1ES2
1SS119
1SS133
ERA82
RD13ES
RD6.2ES
RD9.1EW
UZ-33BSB



RD4.7EL
RD5.1EL
UZ-6.2BSB

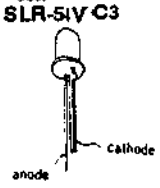


SLR-34DC3
SLR-54MC3



SLR-54DC3

SLR-54VC3

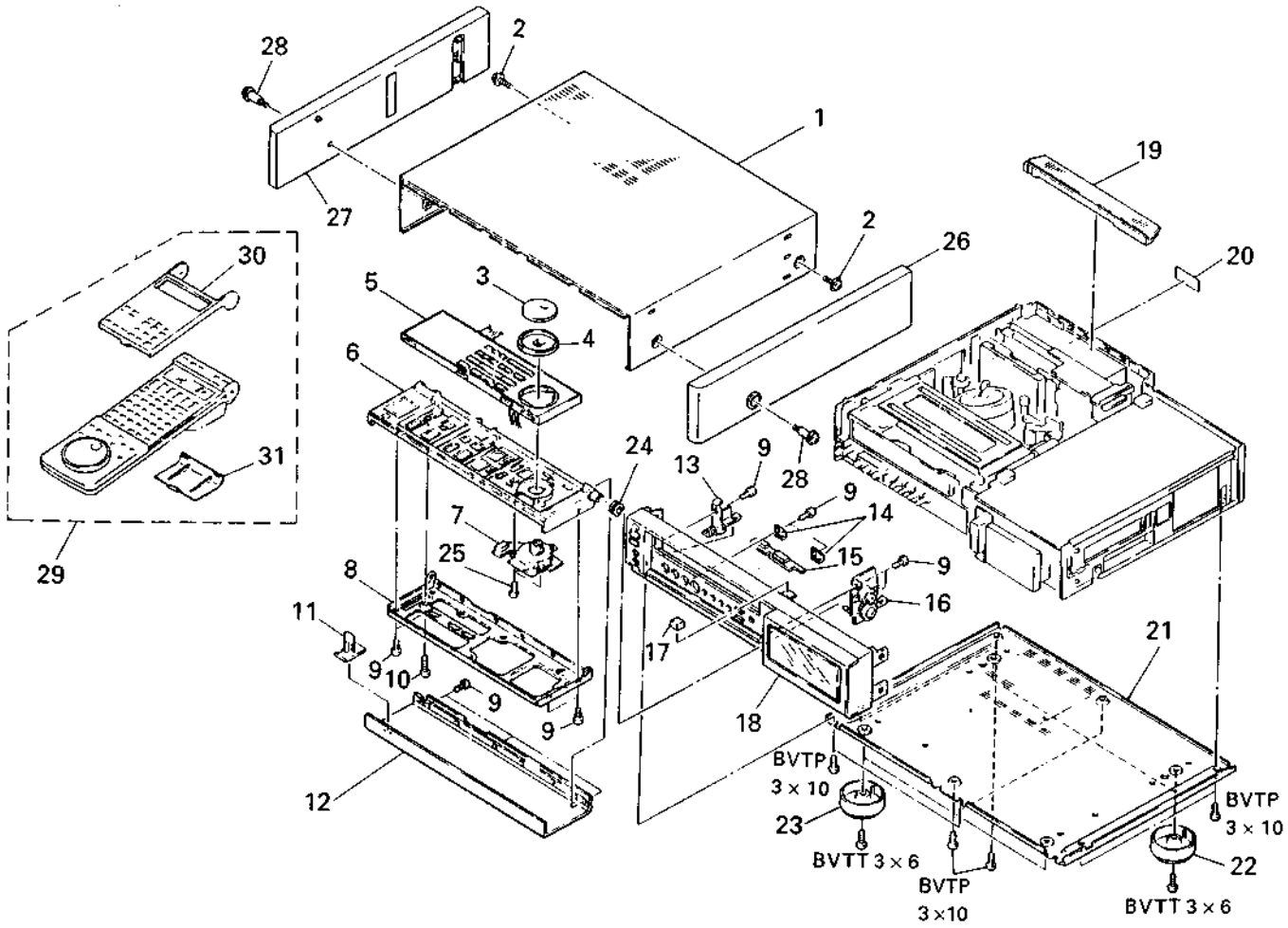


SECTION 5
EXPLODED VIEWS

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.

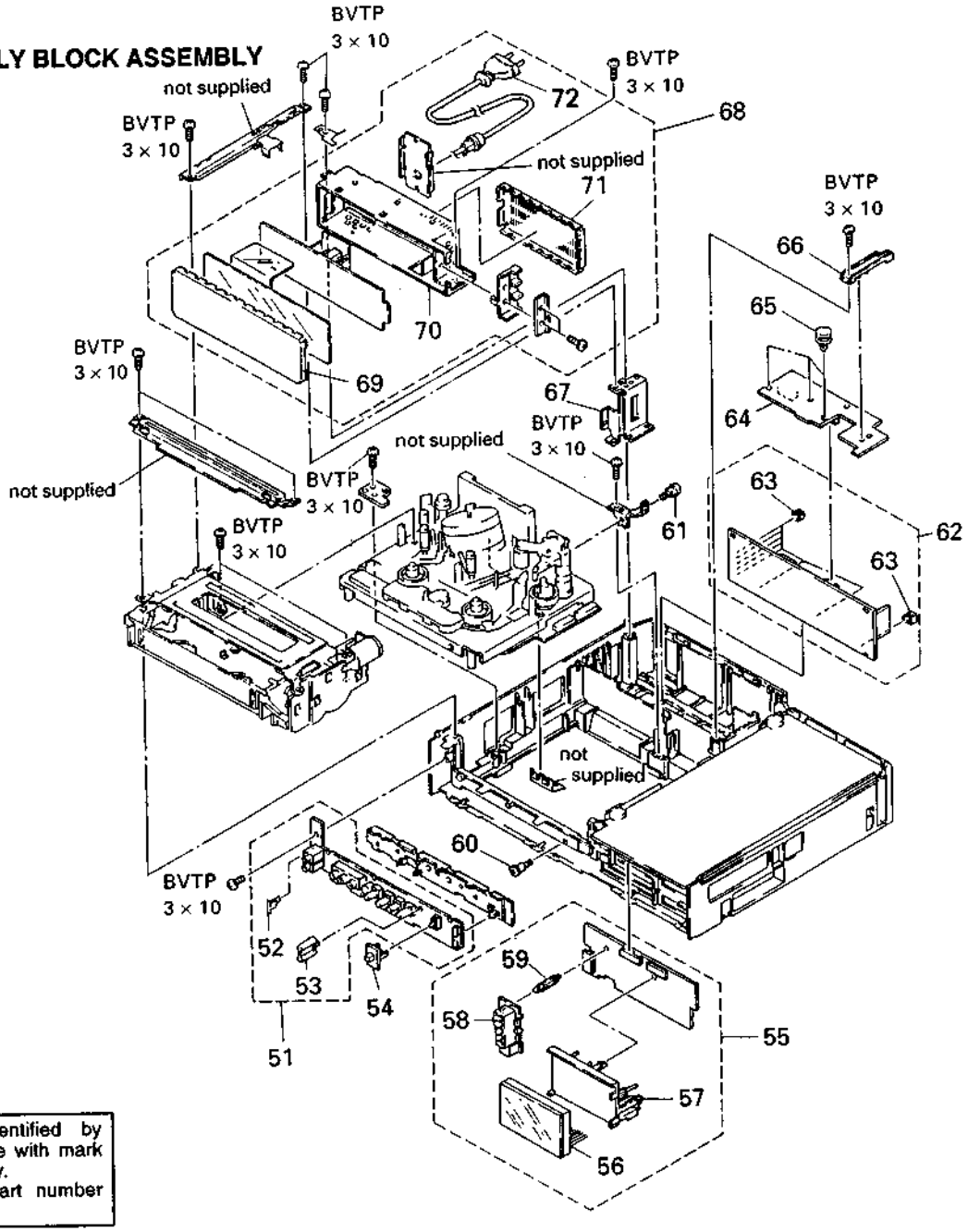
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. FRONT PANEL AND CABINET ASSEMBLIES



Ref. No.	Part No.	Description	Remark
1	3-743-670-51	COVER, UPPER	
2	3-710-901-21	SCREW (3X8), TAPPING	
3	3-744-018-01	DIAL, JOG	
4	3-744-019-11	RING, SHUTTLE	
5	1-466-346-31	SWITCH BLOCK, CONTROL	
6	X-3743-546-1	PLATE ASSY, ORNAMENTAL, DOOR	
7	‡1-635-216-11	JS-20 BOARD	
8	‡3-743-699-01	PLATE, FULCRUM, DOOR	
9	4-921-277-11	SCREW (B2.6X8), TAPPING, BIND	
10	4-921-277-21	SCREW (B2.6X12), TAPPING, BIND	
11	3-743-650-01	COVER, POWER LAMP	
12	X-3940-670-1	DOOR ASSY, FRONT (SLV-815)	
12	X-3940-650-1	DOOR ASSY, FRONT (SLV-815VP)	
12	X-3940-651-1	DOOR ASSY, FRONT (SLV-815UB)	
13	X-3743-536-1	PLATE (L) ASSY, FULCRUM	
14	‡3-743-640-01	RETAINER, PC BOARD	
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)	
18	X-3940-649-1	PANEL ASSY, FRONT (SLV-815VP)	
19	3-743-644-01	COVER, POWER	
20	‡3-942-796-01	LABEL, MODEL NUMBER (NO.2) (SLV-815)	
20	‡3-942-798-01	LABEL, MODEL NUMBER (NO.2) (SLV-815VP)	
20	‡3-942-799-01	LABEL, MODEL NUMBER (NO.2) (SLV-815UB)	
21	3-743-671-01	PLATE, BOTTOM	
22	3-749-328-01	FOOT	
23	3-940-667-11	FOOT	
24	‡3-744-012-02	RING, GEAR	
25	3-744-068-01	SCREW (2.6), TAPPING	
26	X-3940-177-1	WOOD (R) ASSY, SIDE	
27	X-3940-178-1	WOOD (L) ASSY, SIDE	
28	3-743-601-01	SCREW, SIDE WOOD	
29	1-465-832-11	REMOTE COMMANDER (RMT-V5E)	30, 31
30	3-749-148-11	COVER, TIMER	
31	3-744-080-00	COVER, BATTERY	

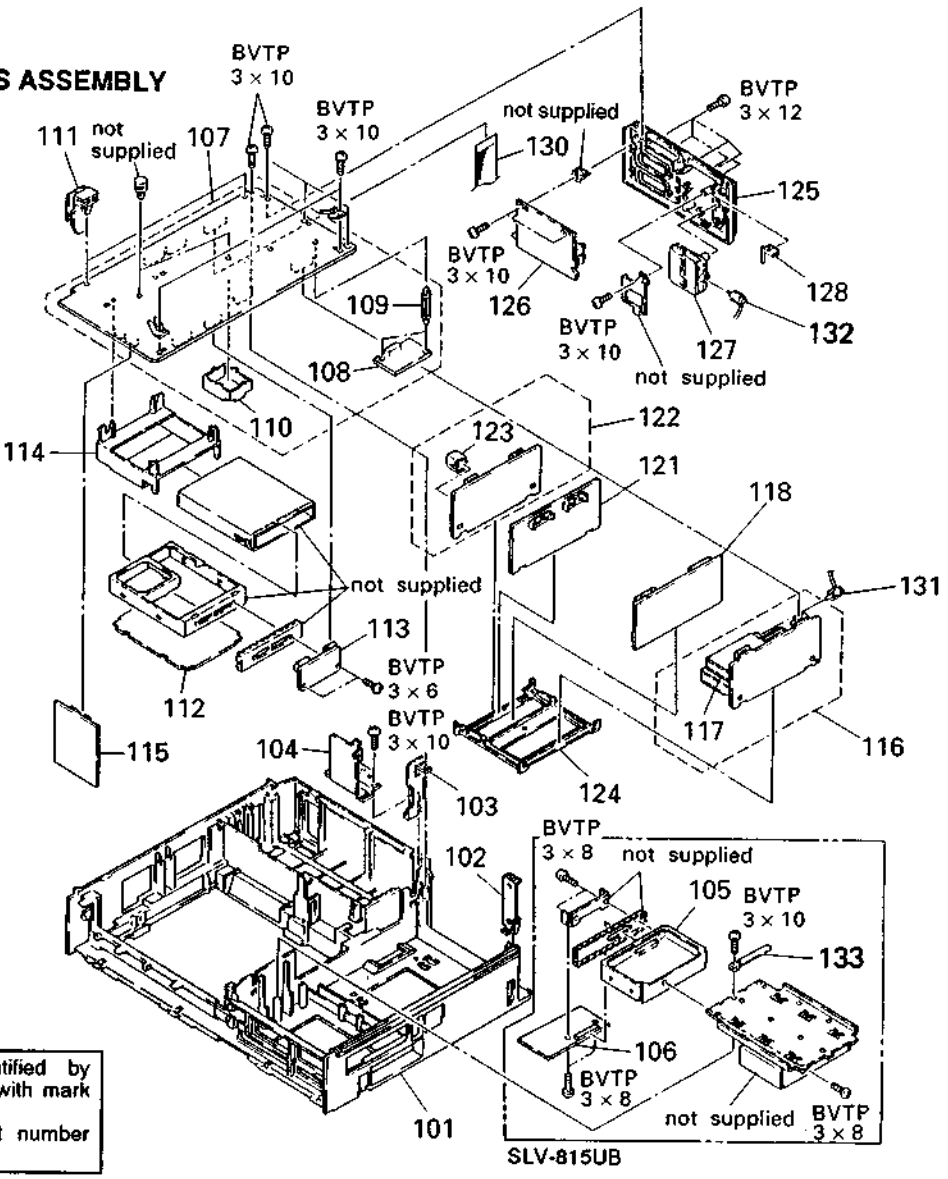
5-2. POWER SUPPLY BLOCK ASSEMBLY



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

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

5-3. MAIN BOARDS ASSEMBLY

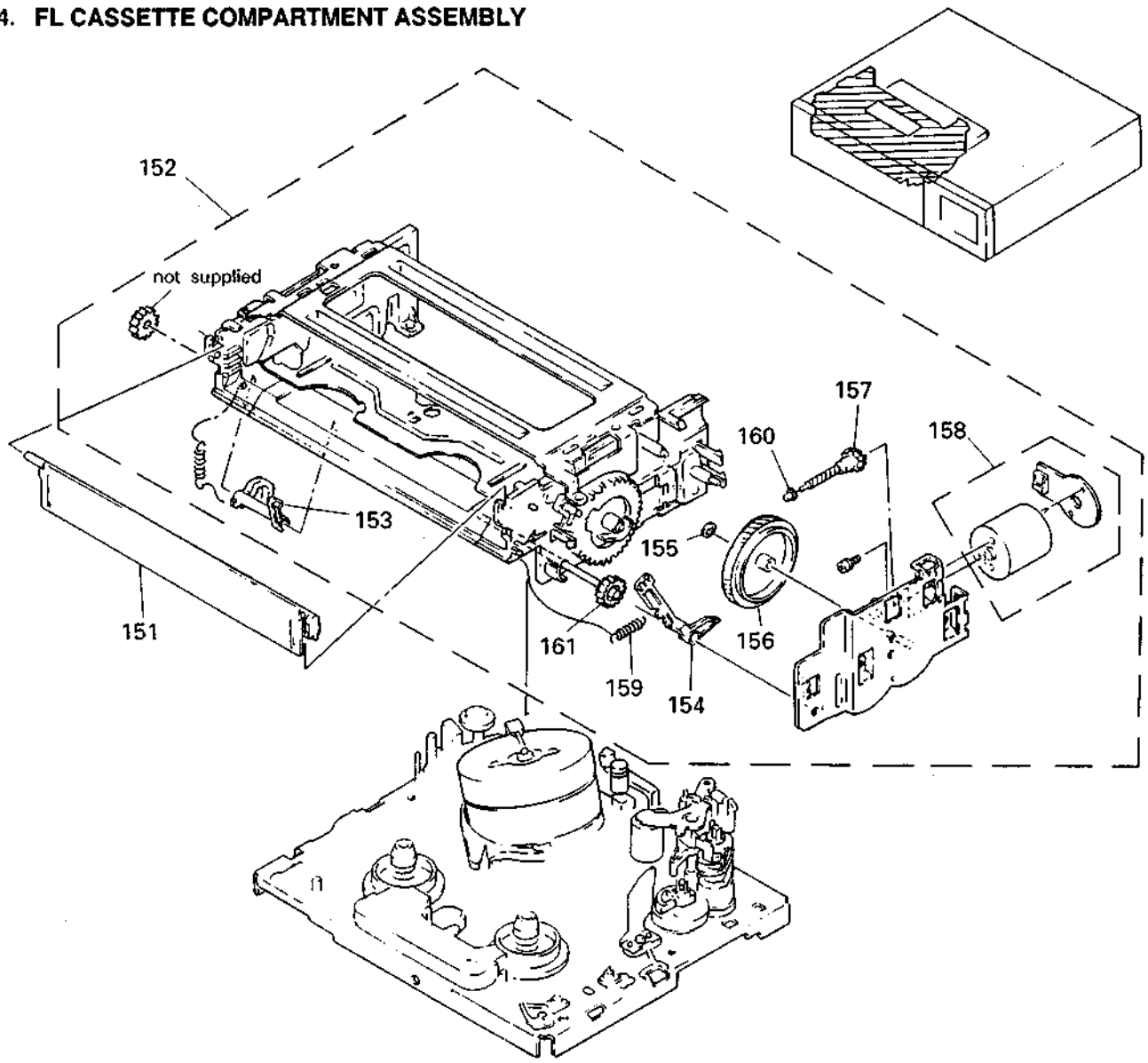


SLV-815UB

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

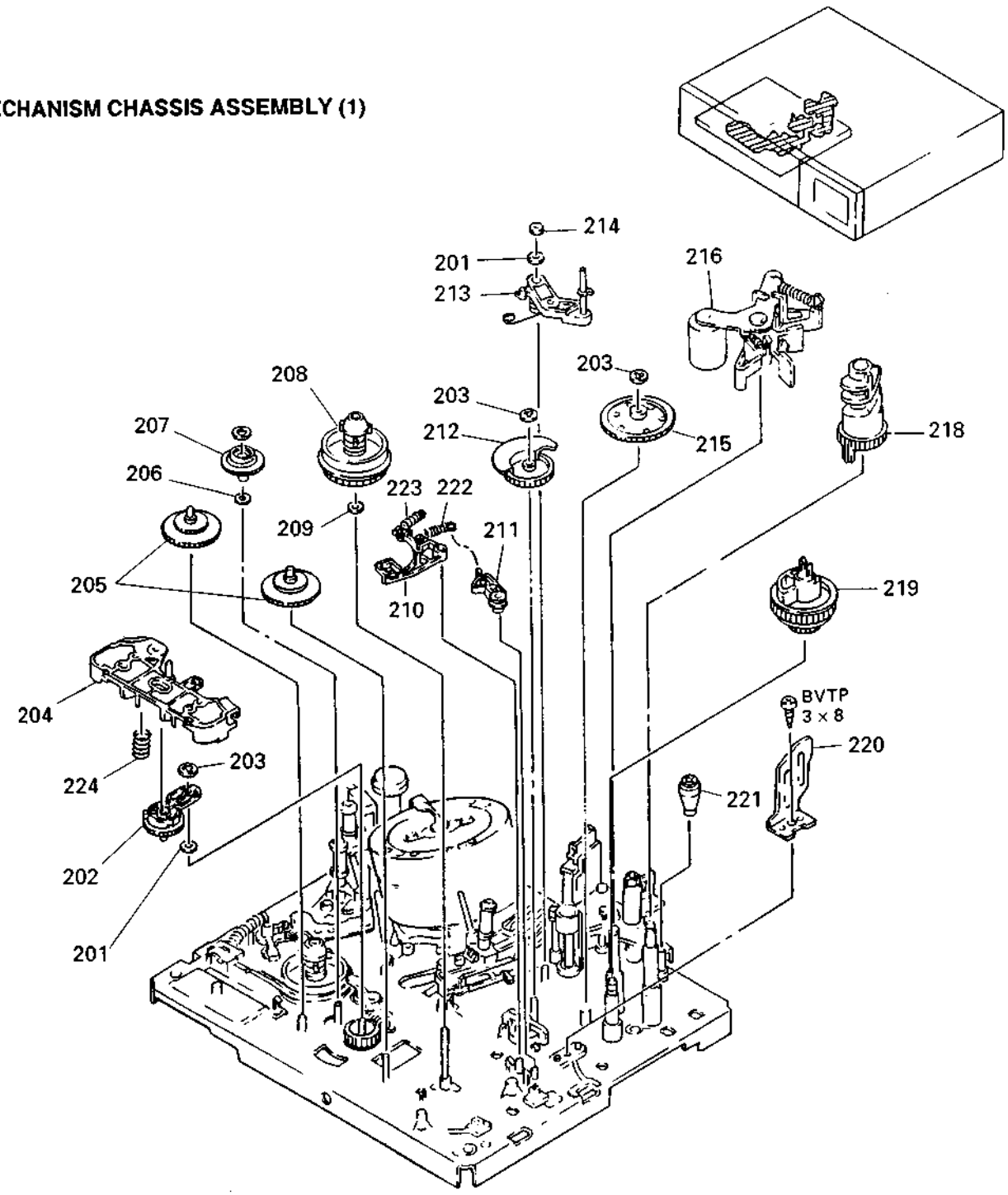
Ref. No.	Part No.	Description	Remark
101	*A-6771-254-A	FRAME BLOCK ASSY	
102	*3-743-676-01	PLATE (RIGHT), GROUND, MA	
103	*3-743-675-01	PLATE (LEFT), GROUND, MA	
104	*3-743-642-01	BRACKET (RIGHT), POWER	
105	*A-6721-376-A	NA-7BOARD, COMPLETE (SLV-815UB)	
106	*1-632-333-13	NM-1 BOARD (SLV-815UB)	
107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

5-4. FL CASSETTE COMPARTMENT ASSEMBLY



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

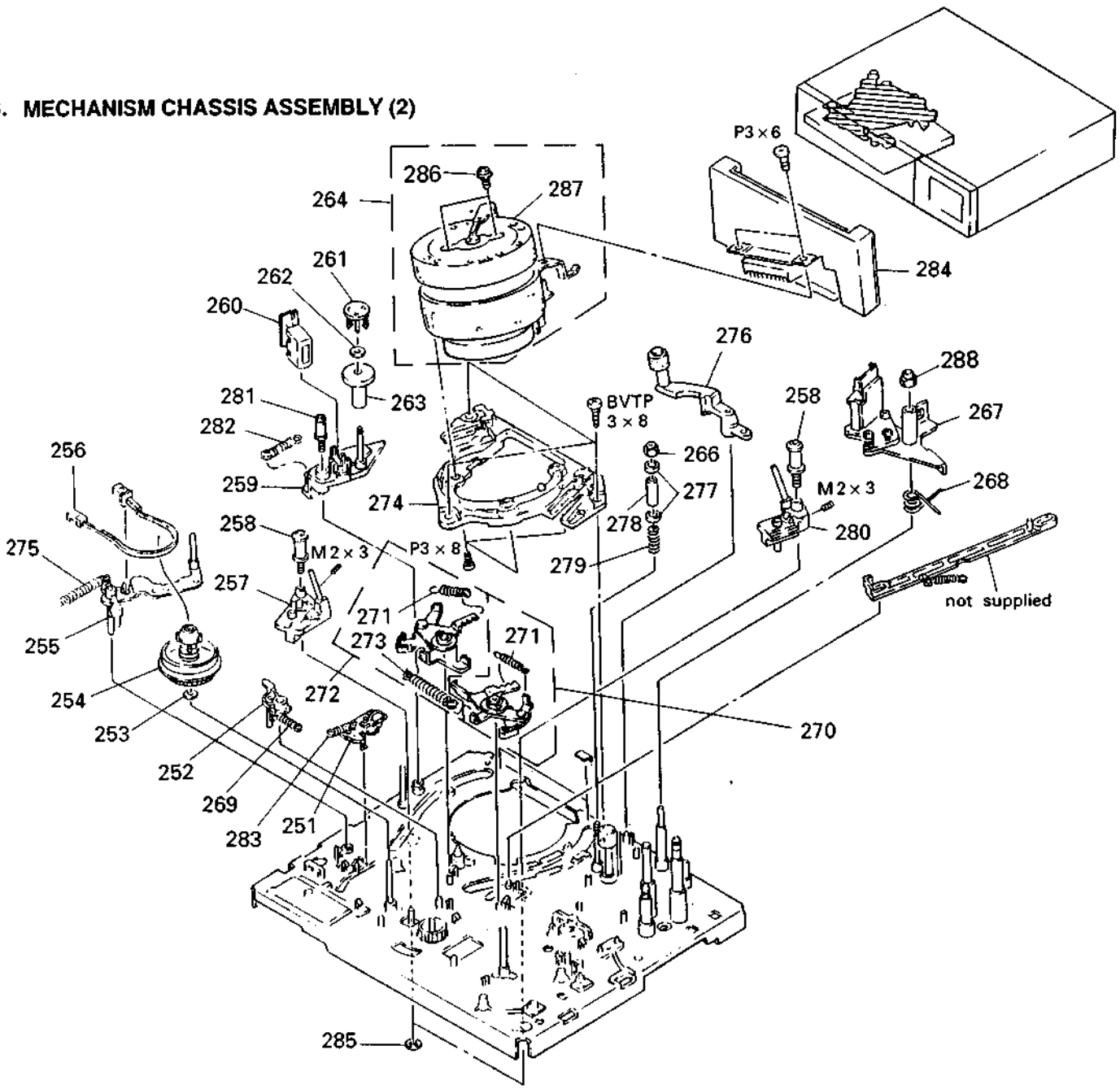
5-5. MECHANISM CHASSIS ASSEMBLY (1)



Ref. No.	Part No.	Description	Remark
201	3-701-438-11	WASHER, 2.5	
202	X-3727-776-1	ARM ASSY, PENDULUM	
203	3-669-595-00	WASHER (2), STOPPER	
204	3-736-172-02	RELEASE, LOCK, REEL	
205	X-3727-795-1	GEAR ASSY, RELAY	
206	3-736-074-01	RETAINER (SMALL), THRUST	
207	3-736-037-01	GEAR, REV	
208	X-3743-522-1	TABLE ASSY (S), REEL	
209	3-738-212-21	RETAINER, THRUST, REEL TABLE	
210	X-3733-335-1	BRAKE ASSY (AT), T SOFT	
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	

Ref. No.	Part No.	Description	Remark
215	3-736-116-01	GEAR, COMMUNICATION	
216	X-3727-770-1	PINCH ROLLER BLOCK ASSY	
218	3-736-136-01	CAM, ELEVATOR	
219	3-943-700-01	GEAR (LO), PRESS CAM	
220	A-6750-288-A	OPENNER BLOCK ASSY, LID	
221	3-738-250-01	SCREW, AC ADJUSTMENT	
222	3-736-025-01	SPRING (REV BRAKE), TENSION	
223	3-736-024-01	SPRING, TENSION	
224	3-736-020-11	SPRING, COMPRESSION	
226	3-736-069-01	RETAINER, SPRING	

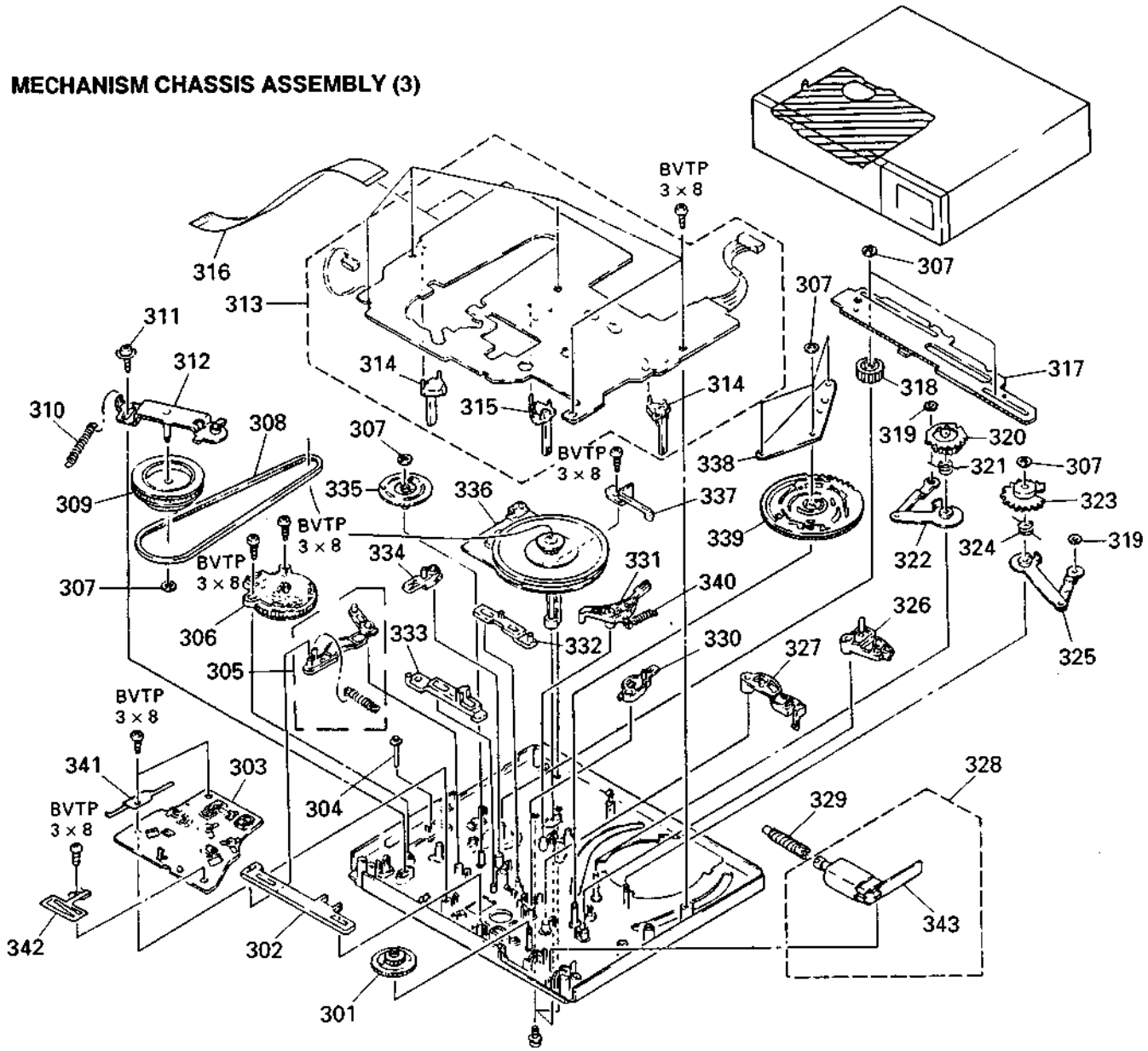
5-6. MECHANISM CHASSIS ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark
251	A-6759-483-A	TAKE-UP BLOCK ASSY (AT), S	
252	3-736-075-01	BRAKE, S SOFT	
253	3-738-212-21	RETAINER, THRUST, REEL TABLE	
254	X-3729-935-3	LABEL ASSY (2), S REEL	
255	3-736-151-11	ARM (POM), TENSION REGULATOR	
256	X-3727-797-1	BAND ASSY, TENSION REGULATOR	
257	X-3727-786-1	SHUTTLE (LEFT) ASSY	
258	X-3733-301-1	ROLLER ASSY, GUIDE	
259	X-3727-767-1	BASE ASSY, STABILIZER	
260	1-543-647-11	HEAD, FE	
261	3-736-082-01	RETAINER, TS THRUST	
262	3-741-925-01	RING, RETAINING	
263	X-3727-771-1	STABLILIZER ASSY, TAPE	
264	1-550-535-11	DRUM ASSY (DZH-17A-R)	286, 287
266	3-942-866-01	NUT (M3) (3X0.5), NYLON	
267	A-6761-129-C	HEAD BLOCK ASSY, ACE	
268	3-736-042-01	SPRING, TORSION	
269	3-736-047-01	SPRING (S SOFT), TENSION	
270	X-3729-926-1	BRAKE ASSY (2), T	271

Ref. No.	Part No.	Description	Remark
271	3-738-220-01	SPRING (MAIN BRAKE 2), TENSION	
272	X-3733-336-2	BRAKE ASSY (2) (AT), S	271
273	3-738-221-01	SPRING (MAIN BRAKE 1), TENSION	
274	X-3727-791-2	BASE ASSY, DRUM	
275	3-733-389-11	SPRING, TENSION	
276	A-6747-267-A	ARM BLOCK ASSY (S), C ROLLER	
277	3-944-033-01	FLANGE, 7 GUIDE	
278	3-736-730-01	SLEEVE, #7 GUIDE	
279	3-749-099-01	SPRING (#7 GUIDE), COMPRESSION	
280	X-3727-787-1	SHUTTLE (RIGHT) ASSY	
281	X-3727-788-1	ROLLER ASSY, GUIDE, #2	
282	3-736-745-01	SPRING	
283	3-738-284-01	SPRING, TENSION	
284	*A-6727-137-A	RP-63 BOARD, COMPLETE (SLV-815/VP)	
284	*A-6727-294-A	RP-63 BOARD, COMPLETE (SLV-815UB)	
285	3-736-073-01	SLIDER, POLYETHYLENE	
286	2-643-205-01	SCREW (PSW) 3X8	
287	1-550-536-11	DRUM ASSY, ROTARY UPPER (DZR-17-R)	
288	3-942-867-01	NUT, AC HEIGHT ADJUSTMENT	

5-7. MECHANISM CHASSIS ASSEMBLY (3)



Ref. No.	Part No.	Description	Remark
301	3-736-015-01	WHEEL (CAM), WORM	
302	3-736-158-01	PLATE, SLIDE, PENDULUM	
303	A-6739-084-A	CHASSIS BLOCK ASSY, SUB	
304	3-736-091-01	PIN, SWITCH	
305	X-3729-924-1	ARM, PENDULUM FUNCTION	
306	1-571-920-11	SWITCH, ROTARY	
307	3-669-595-00	WASHER (2), STOPPER	
308	3-736-013-01	BELT, TIMING	
309	X-3727-782-1	PULLEY ASSY	
310	3-736-089-01	SPRING, TENSION	
311	3-733-386-01	SCREW (3X8), WASHER	
312	X-3727-761-1	ARM ASSY, ADJUSTMENT	
313	*A-6754-218-A	MD-49 BOARRD, COMPLETE (SLV-815UB)	314, 315
313	*A-6754-228-A	MD-49 BOARRD, COMPLETE (SLV-815/VP)	314, 315
314	8-729-926-31	PHOTO TRANSISTOR PT483F1S (Q001, Q002)	
315	8-719-985-00	DIODE GL451VS1 (LED) (D001)	
316	1-575-745-11	WIRE, FLAT TYPE (19 CORE)	
317	3-736-177-01	PLATE, SLIDE, MODE	
318	3-733-394-01	GEAR, RVS RELAY	
319	3-736-073-01	SLIDER, POLYETHYLENE	
320	3-736-148-01	GEAR (RIGHT), THREADING	
321	3-736-092-01	SPRING (RIGHT), TORSION	
322	X-3727-777-1	ARM (RIGHT) ASSY, THREADING	

Ref. No.	Part No.	Description	Remark
323	3-736-147-01	GEAR (LEFT), THREADING	
324	3-736-040-01	SPRING (LEFT), TORSION	
325	X-3727-778-1	ARM (LEFT) ASSY, THREADING	
326	3-736-142-01	ARM, TENSION REGULATOR FUNCTION	
327	3-736-140-01	ARM, S TAKE-UP	
328	X-3733-302-1	MOTOR ASSY, CAM (M903)	343
329	3-733-395-01	GEAR (CAM), WORM	
330	3-733-397-03	ARM, BRAKE FUNCTION	
331	X-3733-338-1	BRAKE ASSY (AT), CAP	
332	3-733-398-01	PLATE, SLIDE, BRAKE	
333	3-736-103-01	PLATE, SLIDE, LIMITER	
334	3-736-016-01	ARM, LIMITER FUNCTION	
335	3-736-170-01	GEAR, RKB CAM	
336	8-835-394-01	MOTOR, DC U-26F (CAPSTAN) (M902)	
337	3-736-744-01	RETAINER, ROTOR	
338	3-733-396-01	HOLDER, CAM GEAR	
339	3-736-176-01	GEAR, CAM	
340	3-738-237-01	SPRING (CAP BRAKE), TENSION	
341	3-741-950-01	SPRING (AT), LEAF, SC GROUND	
342	*3-744-024-01	PLATE, GROUND, MD	
343	*1-633-460-11	CA-41 BOARD	

SECTION 6
ELECTRICAL PARTS LIST

HF-9

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.

- 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...: μA..., UPA...: μPA..., UPB...: μPB..., UPC...: μPC..., UPD...: μPD...
- CAPACITORS
  MF : μF, PF : μμF
- COILS
  MMH : mH, UH : μH

Ref. No.	Part No.	Description				Remark
	*A-6713-417-A	HF-9 BOARD, COMPLETE (SLV-815UB)				
		********** (Ref. No. 1000 series)				
	*A-6713-377-A	HF-9 BOARD, COMPLETE (SLV-815/VP)				
		********** (Ref. No. 1000 series)				
		CAPACITOR				
C001	1-124-239-00	ELECT	6.8MF	20%	16V	
C002	1-130-487-00	MYLAR	0.022MF	5%	50V	
C003	1-123-369-00	ELECT	4.7MF	20%	25V	
C004	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C005	1-123-321-00	ELECT	220MF	20%	16V	
C006	1-123-875-11	ELECT	10MF	20%	50V	
C007	1-130-483-00	MYLAR	0.01MF	5%	50V	
C009	1-123-381-00	ELECT	2.2MF	20%	50V	
C011	1-123-356-00	ELECT	10MF	20%	25V	
C012	1-123-356-00	ELECT	10MF	20%	25V	
C013	1-126-101-11	ELECT	100MF	20%	16V	
C014	1-126-157-11	ELECT	10MF	20%	16V	
C015	1-126-157-11	ELECT	10MF	20%	16V	
C016	1-124-791-11	ELECT	1MF	20%	50V	
C017	1-124-257-00	ELECT	2.2MF	20%	50V	
C018	1-126-101-11	ELECT	100MF	20%	16V	
C019	1-123-356-00	ELECT	10MF	20%	25V	
C020	1-123-356-00	ELECT	10MF	20%	25V	
C022	1-123-381-00	ELECT	2.2MF	20%	50V	
C024	1-130-483-00	MYLAR	0.01MF	5%	50V	
C025	1-123-875-11	ELECT	10MF	20%	50V	
C026	1-123-321-00	ELECT	220MF	20%	16V	
C027	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C028	1-123-369-00	ELECT	4.7MF	20%	25V	
C029	1-130-487-00	MYLAR	0.022MF	5%	50V	
C030	1-124-239-00	ELECT	6.8MF	20%	16V	
C031	1-126-163-11	ELECT	4.7MF	20%	25V	
C032	1-126-301-11	ELECT	1MF	20%	50V	
C033	1-123-380-00	ELECT	1MF	20%	50V	
C034	1-130-471-00	MYLAR	0.001MF	5%	50V	
C035	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C036	1-123-369-00	ELECT	4.7MF	20%	25V	
C037	1-123-369-00	ELECT	4.7MF	20%	25V	
C038	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C041	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C042	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C043	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C044	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C045	1-130-493-00	MYLAR	0.068MF	5%	50V	
C050	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C051	1-130-483-00	MYLAR	0.01MF	5%	50V	
C052	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C053	1-123-333-00	ELECT	100MF	20%	16V	
C054	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C055	1-123-369-00	ELECT	4.7MF	20%	25V	
C056	1-123-369-00	ELECT	4.7MF	20%	25V	
C057	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C058	1-130-471-00	MYLAR	0.001MF	5%	50V	
C059	1-123-380-00	ELECT	1MF	20%	50V	
C060	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C061	1-126-101-11	ELECT	100MF	20%	16V	
C065	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
		CONNECTOR				
CN001	*1-563-258-11	SOCKET, CONNECTOR 15P				
CN002	*1-563-258-11	SOCKET, CONNECTOR 15P				
		DIODE				
D001	8-719-911-19	DIODE 1SS119				
D002	8-719-911-19	DIODE 1SS119				
D003	8-719-104-34	DIODE 1S2835				
		FILTER				
FL001	1-236-569-11	BPF (1.7MHZ)				
FL002	1-236-570-11	BPF (1.3MHZ)				
		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				
		RESISTOR				
R001	1-249-417-11	METAL	1K	5%	1/4W	
R002	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R003	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R004	1-214-723-00	CARBON	560	5%	1/4W	
R005	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R006	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R007	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R008	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R009	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R011	1-216-097-00	METAL GLAZE	100K	5%	1/10W	

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

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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
C282	1-124-126-00	ELECT	47MF	20%	10V	
C283	1-137-075-11	FILM	0.068MF	5%	100V	
C284	1-164-087-11	CERAMIC	0.0015MF	10%	50V	
C285	1-162-290-31	CERAMIC	470PF	10%	50V	
C295	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C298	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C304	1-123-875-11	ELECT	10MF	20%	50V	
C305	1-123-875-11	ELECT	10MF	20%	50V	
C306	1-123-875-11	ELECT	10MF	20%	50V	
C401	1-123-875-11	ELECT	10MF	20%	50V	
C402	1-124-791-11	ELECT	1MF	20%	50V	
C403	1-123-875-11	ELECT	10MF	20%	50V	
C404	1-161-043-00	CERAMIC	0.0022MF	20%	16V	
C405	1-124-499-11	ELECT	1MF	20%	50V	
C406	1-124-126-00	ELECT	47MF	20%	10V	
C407	1-164-070-11	CERAMIC	100PF	5%	50V	
C408	1-164-096-11	CERAMIC	0.01MF		50V	
C409	1-164-093-11	CERAMIC	0.0047MF	10%	25V	
C410	1-164-096-11	CERAMIC	0.01MF		50V	
C411	1-124-126-00	ELECT	47MF	20%	10V	
C413	1-130-483-00	MYLAR	0.01MF	5%	50V	
C414	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C415	1-102-947-00	CERAMIC	10PF	0.5PF	50V	
C416	1-162-847-11	CERAMIC	0.047MF	20%	16V	
C422	1-124-126-00	ELECT	47MF	20%	10V	
C423	1-126-233-11	ELECT	22MF	20%	25V	
C425	1-130-487-00	MYLAR	0.022MF	5%	50V	
C426	1-124-925-11	ELECT	2.2MF	20%	50V	
C427	1-130-491-00	MYLAR	0.047MF	5%	50V	
C428	1-130-491-00	MYLAR	0.047MF	5%	50V	
C431	1-162-290-31	CERAMIC	470PF	10%	50V	
C501	1-164-096-11	CERAMIC	0.01MF		50V	
C504	1-123-875-11	ELECT	10MF	20%	50V	
C505	1-124-472-11	ELECT	470MF	20%	10V	
C506	1-123-875-11	ELECT	10MF	20%	50V	
C507	1-101-006-00	CERAMIC	0.047MF		50V	
C508	1-124-478-11	ELECT	100MF	20%	25V	
C509	1-102-953-00	CERAMIC	18PF	5%	50V	
C510	1-102-953-00	CERAMIC	18PF	5%	50V	
C515	1-164-096-11	CERAMIC	0.01MF		50V	
C519	1-164-096-11	CERAMIC	0.01MF		50V	
C520	1-162-211-31	CERAMIC	33PF	5%	50V	
C522	1-164-068-11	CERAMIC	82PF	5%	50V	
C523	1-164-096-11	CERAMIC	0.01MF		50V	
C524	1-124-463-00	ELECT	0.1MF	20%	50V	
C525	1-162-290-31	CERAMIC	470PF	10%	50V	
C531	1-124-925-11	ELECT	2.2MF	20%	50V	
C536	1-161-772-11	CERAMIC	0.1MF	20%	16V	
C537	1-123-875-11	ELECT	10MF	20%	50V	
C538	1-124-478-11	ELECT	100MF	20%	25V	
C539	1-102-978-00	CERAMIC	220PF	5%	50V	
C541	1-161-379-00	CERAMIC	0.01MF	30%	25V	

Ref. No.	Part No.	Description				Remark
C542	1-124-477-11	ELECT	47MF	20%	25V	
C543	1-162-849-11	CERAMIC	0.068MF	20%	16V	
C544	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C545	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C601	1-162-199-31	CERAMIC	10PF	5%	50V	
C802	1-123-875-11	ELECT	10MF	20%	50V	
C809	1-123-875-11	ELECT	10MF	20%	50V	
C811	1-123-875-11	ELECT	10MF	20%	50V	
C812	1-124-927-11	ELECT	4.7MF	20%	50V	
C813	1-124-903-11	ELECT	1MF	20%	50V	
C814	1-102-973-00	CERAMIC	100PF	10%	50V	
C815	1-162-211-31	CERAMIC	33PF	5%	50V	
C816	1-124-907-11	ELECT	10MF	20%	50V	
C818	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C820	1-162-835-11	CERAMIC	0.0047MF	10%	16V	
C821	1-164-085-11	CERAMIC	0.001MF	10%	50V	
C822	1-124-927-11	ELECT	4.7MF	20%	50V	
C838	1-126-157-11	ELECT	10MF	20%	16V	
C840	1-126-157-11	ELECT	10MF	20%	16V	
C841	1-126-157-11	ELECT	10MF	20%	16V	
C842	1-126-157-11	ELECT	10MF	20%	16V	
C844	1-164-096-11	CERAMIC	0.01MF		50V	
C845	1-124-907-11	ELECT	10MF	20%	50V	
C846	1-164-096-11	CERAMIC	0.01MF		50V	
C849	1-164-096-11	CERAMIC	0.01MF		50V	

CONNECTOR

CN004	1-563-596-11	CONNECTOR, FLEXIBLE 19P
CN007	1-563-596-11	CONNECTOR, FLEXIBLE 19P
CN511	1-568-093-11	CONNECTOR (PLUG) 20P
CN512	1-568-094-11	CONNECTOR (PLUG) 22P
CN513	*1-506-408-11	PIN, CONNECTOR 3P
CN514	1-506-469-11	PIN, CONNECTOR 4P
CN516	*1-568-783-11	PIN, CONNECTOR 6P
CN517	*1-568-783-31	PIN, CONNECTOR 6P
CN521	1-568-089-11	CONNECTOR (PLUG) 12P
CN522	1-568-087-11	CONNECTOR (PLUG) 8P
CN531	1-506-472-11	PIN, CONNECTOR 7P
CN532	*1-568-783-11	PIN, CONNECTOR 6P
CN541	1-506-478-11	PIN, CONNECTOR 13P
CN542	*1-568-787-11	PIN, CONNECTOR 10P
CN551	*1-568-088-11	CONNECTOR (PLUG) 10P
CN552	1-568-089-11	CONNECTOR (PLUG) 12P
CN553	1-506-470-11	PIN, CONNECTOR 5P
CN561	1-569-695-21	CONNECTOR, BOARD TO BOARD 17P
CN562	1-569-696-21	CONNECTOR, BOARD TO BOARD 19P
CN571	*1-506-744-11	PIN, CONNECTOR 15P
CN572	*1-506-744-11	PIN, CONNECTOR 15P
CN573	*1-560-892-00	PIN, CONNECTOR 4P
CN574	*1-560-891-00	PIN, CONNECTOR 3P
CN582	1-563-599-11	CONNECTOR, FLEXIBLE 22P
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

COIL

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	

IC LINK

PS202	⚠1-532-605-00	LINK, IC (ICP-N10)	

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	

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
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	

RESISTOR

R101	1-249-435-11	CARBON	33K	5%	1/4W	
R102	1-249-441-11	CARBON	100K	5%	1/4W	
R103	1-249-417-11	CARBON	1K	5%	1/4W	
R104	1-249-423-11	CARBON	3.3K	5%	1/4W	
R105	1-249-423-11	CARBON	3.3K	5%	1/4W	
R106	1-249-441-11	CARBON	100K	5%	1/4W	
R107	1-249-435-11	CARBON	33K	5%	1/4W	
R108	1-249-417-11	CARBON	1K	5%	1/4W	
R136	1-249-413-11	CARBON	470	5%	1/4W	
R137	1-249-413-11	CARBON	470	5%	1/4W	
R138	⚠1-249-385-11	CARBON	2.2	5%	1/4W	F
R201	1-249-417-11	CARBON	1K	5%	1/4W	
R210	1-249-405-11	CARBON	100	5%	1/4W	
R211	1-249-405-11	CARBON	100	5%	1/4W	
R222	1-249-410-11	CARBON	270	5%	1/4W	
R224	1-249-406-11	CARBON	120	5%	1/4W	
R225	1-249-405-11	CARBON	100	5%	1/4W	
R227	1-249-403-11	CARBON	68	5%	1/4W	
R232	1-247-804-11	CARBON	75	5%	1/4W	
R252	1-249-393-11	CARBON	10	5%	1/4W	
R253	1-249-416-11	CARBON	820	5%	1/4W	
R254	1-249-411-11	CARBON	330	5%	1/4W	
R255	1-247-885-00	CARBON	180K	5%	1/4W	
R256	1-249-429-11	CARBON	10K	5%	1/4W	
R257	1-249-437-11	CARBON	47K	5%	1/4W	
R258	1-249-439-11	CARBON	68K	5%	1/4W	
R259	1-249-419-11	CARBON	1.5K	5%	1/4W	
R260	1-247-903-00	CARBON	1M	5%	1/4W	
R261	1-247-895-00	CARBON	470K	5%	1/4W	
R262	1-249-438-11	CARBON	56K	5%	1/4W	
R263	1-249-432-11	CARBON	18K	5%	1/4W	
R264	1-249-427-11	CARBON	6.8K	5%	1/4W	
R265	1-249-429-11	CARBON	10K	5%	1/4W	
R266	1-249-429-11	CARBON	10K	5%	1/4W	
R267	1-249-429-11	CARBON	10K	5%	1/4W	
R268	1-249-429-11	CARBON	10K	5%	1/4W	
R269	1-249-406-11	CARBON	120	5%	1/4W	
R270	1-249-422-11	CARBON	2.7K	5%	1/4W	
R272	1-249-414-11	CARBON	560	5%	1/4W	
R273	1-249-427-11	CARBON	6.8K	5%	1/4W	
R274	1-249-434-11	CARBON	27K	5%	1/4W	
R275	⚠1-249-387-11	CARBON	3.3	5%	1/4W	F
R277	1-249-429-11	CARBON	10K	5%	1/4W	
R278	1-249-425-11	CARBON	4.7K	5%	1/4W	
R282	1-249-429-11	CARBON	10K	5%	1/4W	
R283	⚠1-249-387-11	CARBON	3.3	5%	1/4W	F
R299	1-249-436-11	CARBON	39K	5%	1/4W	
R305	1-249-417-11	CARBON	1K	5%	1/4W	
R306	1-249-417-11	CARBON	1K	5%	1/4W	
R307	1-249-417-11	CARBON	1K	5%	1/4W	
R308	1-249-417-11	CARBON	1K	5%	1/4W	
R309	1-249-417-11	CARBON	1K	5%	1/4W	
R310	1-249-417-11	CARBON	1K	5%	1/4W	
R401	1-249-429-11	CARBON	10K	5%	1/4W	
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-249-433-11	CARBON	22K	5%	1/4W	
R405	1-249-433-11	CARBON	22K	5%	1/4W	
R406	1-249-433-11	CARBON	22K	5%	1/4W	
R408	1-249-429-11	CARBON	10K	5%	1/4W	
R411	1-249-429-11	CARBON	10K	5%	1/4W	
R412	1-249-427-11	CARBON	6.8K	5%	1/4W	
R413	1-249-441-11	CARBON	100K	5%	1/4W	
R414	1-247-887-00	CARBON	220K	5%	1/4W	
R415	1-249-405-11	CARBON	100	5%	1/4W	
R416	1-247-885-00	CARBON	180K	5%	1/4W	
R417	1-249-429-11	CARBON	10K	5%	1/4W	
R418	1-247-889-00	CARBON	270K	5%	1/4W	
R419	1-249-437-11	CARBON	47K	5%	1/4W	
R420	1-249-413-11	CARBON	470	5%	1/4W	
R421	1-249-433-11	CARBON	22K	5%	1/4W	
R424	1-249-433-11	CARBON	22K	5%	1/4W	
R425	1-249-437-11	CARBON	47K	5%	1/4W	
R426	1-249-433-11	CARBON	22K	5%	1/4W	
R427	1-249-436-11	CARBON	39K	5%	1/4W	
R428	1-249-429-11	CARBON	10K	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	

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

MA-104

Ref. No.	Part No.	Description				Remark
R433	1-249-433-11	CARBON	22K	5%	1/4W	
R434	1-249-433-11	CARBON	22K	5%	1/4W	
R435	1-249-437-11	CARBON	47K	5%	1/4W	
R436	1-249-433-11	CARBON	22K	5%	1/4W	
R437	1-249-437-11	CARBON	47K	5%	1/4W	
R441	1-247-895-00	CARBON	470K	5%	1/4W	
R442	1-249-429-11	CARBON	10K	5%	1/4W	
R443	1-249-441-11	CARBON	100K	5%	1/4W	
R444	1-249-441-11	CARBON	100K	5%	1/4W	
R448	1-249-417-11	CARBON	1K	5%	1/4W	
R449	1-247-885-00	CARBON	180K	5%	1/4W	
R450	1-249-417-11	CARBON	1K	5%	1/4W	
R452	1-249-425-11	CARBON	4.7K	5%	1/4W	
R453	1-249-429-11	CARBON	10K	5%	1/4W	
R454	1-249-415-11	CARBON	680	5%	1/4W	
R463	1-249-423-11	CARBON	3.3K	5%	1/4W	
R465	1-249-423-11	CARBON	3.3K	5%	1/4W	
R466	1-247-885-00	CARBON	180K	5%	1/4W	
R467	1-249-430-11	CARBON	12K	5%	1/4W	
R468	1-249-431-11	CARBON	15K	5%	1/4W	
R470	1-249-415-11	CARBON	680	5%	1/4W	
R488	1-249-417-11	CARBON	1K	5%	1/4W	
R490	1-249-429-11	CARBON	10K	5%	1/4W	
R491	1-249-419-11	CARBON	1.5K	5%	1/4W	
R496	1-249-435-11	CARBON	33K	5%	1/4W	
R497	1-249-429-11	CARBON	10K	5%	1/4W	
R502	⚠1-249-385-11	CARBON	2.2	5%	1/4W	F
R506	1-249-429-11	CARBON	10K	5%	1/4W	
R509	1-249-417-11	CARBON	1K	5%	1/4W	
R510	1-249-417-11	CARBON	1K	5%	1/4W	
R511	1-249-417-11	CARBON	1K	5%	1/4W	
R512	1-249-429-11	CARBON	10K	5%	1/4W	
R513	1-247-705-11	CARBON	270	5%	1/4W	
R514	1-249-417-11	CARBON	1K	5%	1/4W	
R515	1-249-417-11	CARBON	1K	5%	1/4W	
R516	1-249-429-11	CARBON	10K	5%	1/4W	
R517	1-249-437-11	CARBON	47K	5%	1/4W	
R518	1-249-425-11	CARBON	4.7K	5%	1/4W	
R519	1-249-425-11	CARBON	4.7K	5%	1/4W	
R521	1-249-429-11	CARBON	10K	5%	1/4W	
R522	1-249-429-11	CARBON	10K	5%	1/4W	
R523	1-249-429-11	CARBON	10K	5%	1/4W	
R524	1-249-428-11	CARBON	8.2K	5%	1/4W	
R526	1-249-437-11	CARBON	47K	5%	1/4W	
R527	1-249-431-11	CARBON	15K	5%	1/4W	
R528	1-249-419-11	CARBON	1.5K	5%	1/4W	
R529	1-249-418-11	CARBON	1.2K	5%	1/4W	
R530	1-249-417-11	CARBON	1K	5%	1/4W	
R531	1-249-417-11	CARBON	1K	5%	1/4W	
R532	1-249-421-11	CARBON	2.2K	5%	1/4W	
R533	1-247-897-11	CARBON	560K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R534	1-249-428-11	CARBON	8.2K	5%	1/4W	
R535	1-249-410-11	CARBON	270	5%	1/4W	
R536	1-249-421-11	CARBON	2.2K	5%	1/4W	
R537	1-249-437-11	CARBON	47K	5%	1/4W	
R538	1-249-427-11	CARBON	6.8K	5%	1/4W	
R539	1-249-417-11	CARBON	1K	5%	1/4W	
R540	1-249-435-11	CARBON	33K	5%	1/4W	
R541	1-249-429-11	CARBON	10K	5%	1/4W	
R542	1-249-432-11	CARBON	18K	5%	1/4W	
R543	1-249-401-11	CARBON	47	5%	1/4W	
R548	1-249-436-11	CARBON	39K	5%	1/4W	
R552	1-249-429-11	CARBON	10K	5%	1/4W	
R553	1-249-417-11	CARBON	1K	5%	1/4W	
R555	1-249-441-11	CARBON	100K	5%	1/4W	
R556	1-249-437-11	CARBON	47K	5%	1/4W	
R557	1-249-437-11	CARBON	47K	5%	1/4W	
R558	1-249-437-11	CARBON	47K	5%	1/4W	
R561	1-249-437-11	CARBON	47K	5%	1/4W	
R562	1-249-437-11	CARBON	47K	5%	1/4W	
R563	1-249-437-11	CARBON	47K	5%	1/4W	
R564	1-249-437-11	CARBON	47K	5%	1/4W	
R565	1-249-437-11	CARBON	47K	5%	1/4W	
R566	1-249-437-11	CARBON	47K	5%	1/4W	
R567	1-249-437-11	CARBON	47K	5%	1/4W	
R572	1-249-405-11	CARBON	100	5%	1/4W	
R573	1-249-427-11	CARBON	6.8K	5%	1/4W	
R574	1-247-903-00	CARBON	1M	5%	1/4W	
R582	1-247-891-00	CARBON	330K	5%	1/4W	
R583	1-247-887-00	CARBON	220K	5%	1/4W	
R589	1-249-421-11	CARBON	2.2K	5%	1/4W	
R590	⚠1-249-377-11	CARBON	0.47	5%	1/4W	F
R591	1-249-422-11	CARBON	2.7K	5%	1/4W	
R595	1-249-429-11	CARBON	10K	5%	1/4W	
R596	1-249-429-11	CARBON	10K	5%	1/4W	
R598	1-249-413-11	CARBON	470	5%	1/4W	
R599	1-249-437-11	CARBON	47K	5%	1/4W	
R751	1-249-414-11	CARBON	560	5%	1/4W	
R752	1-249-423-11	CARBON	3.3K	5%	1/4W	
R801	1-249-428-11	CARBON	8.2K	5%	1/4W	
R802	1-249-428-11	CARBON	8.2K	5%	1/4W	
R803	1-249-425-11	CARBON	4.7K	5%	1/4W	
R804	1-249-425-11	CARBON	4.7K	5%	1/4W	
R805	1-249-428-11	CARBON	8.2K	5%	1/4W	
R806	1-249-428-11	CARBON	8.2K	5%	1/4W	
R807	1-249-429-11	CARBON	10K	5%	1/4W	
R808	1-249-441-11	CARBON	100K	5%	1/4W	
R809	1-249-441-11	CARBON	100K	5%	1/4W	
R810	1-249-435-11	CARBON	33K	5%	1/4W	
R813	1-249-432-11	CARBON	18K	5%	1/4W	
R814	1-249-441-11	CARBON	100K	5%	1/4W	
R815	1-249-437-11	CARBON	47K	5%	1/4W	

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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
		CRYSTAL				
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)				
		**********				
		CAPACITOR				
C847	1-162-306-11	CERAMIC	0.01MF	20%	16V	
C848	1-162-306-11	CERAMIC	0.01MF	20%	16V	
		IC				
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)				
		CAPACITOR				
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 (SVL-815UB)	47MF	20%	16V	
C013	1-124-477-11	ELECT (SVL-815UB)	47MF	20%	16V	

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 (SVL-815VP)	10MF	20%	50V	
C018	1-123-875-11	ELECT (SVL-815VP)	10MF	20%	50V	
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 1SS119				
		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 (SLV-815/VP)	10K	5%	1/10W	
R012	1-216-073-00	METAL GLAZE (SLV-815/VP)	2.2K	5%	1/10W	
R014	1-216-073-00	METAL GLAZE (SLV-815/VP)	2.2K	5%	1/10W	
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)				

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

Ref. No.	Part No.	Description				Remark
C081	1-126-157-11	ELECT	10MF	20%	16V	
C082	1-126-157-11	ELECT	10MF	20%	16V	
C083	1-124-477-11	ELECT	47MF	20%	16V	
C084	1-130-493-00	MYLAR	0.068MF	5%	50V	
C085	1-130-474-00	MYLAR	0.0018MF	5%	50V	
C086	1-124-477-11	ELECT	47MF	20%	16V	
C087	1-130-471-00	MYLAR	0.001MF	5%	50V	
C088	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C089	1-126-151-11	ELECT	4.7MF	20%	16V	
		FILTER				
CF001	1-409-333-00	TRAP, CERAMIC (6.0MHZ)				
		CONNECTOR				
CN001	1-580-554-11	CONNECTOR, BOARD TO BOARD 16P				
		VARIABLE CAPACITOR				
CV001	1-141-245-00	TRIMMER, CERAMIC 30PF				
CV002	1-141-245-00	TRIMMER, CERAMIC 30PF				
		DIODE				
D001	8-719-801-52	DIODE 1SS190-TE85L				
D002	8-719-801-52	DIODE 1SS190-TE85L				
D003	8-719-400-18	DIODE 1S2837-T1				
D004	8-719-400-18	DIODE 1S2837-T1				
D005	8-719-400-18	DIODE 1S2837-T1				
D006	8-719-400-18	DIODE 1S2837-T1				
D007	8-719-400-18	DIODE 1S2837-T1				
D008	8-719-104-34	DIODE 1S2835-T1				
		FERRITE BEAD INDUCTOR				
FB001	1-410-397-21	FERRITE BEAD INDUCTOR				
FB002	1-410-397-21	FERRITE BEAD INDUCTOR				
FB003	1-410-397-21	FERRITE BEAD INDUCTOR				
FB004	1-410-397-21	FERRITE BEAD INDUCTOR				
FB005	1-410-397-21	FERRITE BEAD INDUCTOR				
FB006	1-410-397-21	FERRITE BEAD INDUCTOR				
		FILTER				
FL001	1-236-071-11	ENCAPSULATED COMPONENT				
FL002	1-236-071-11	ENCAPSULATED COMPONENT				
		IC				
IC001	8-759-231-09	IC TA8662N				
IC002	8-759-231-28	IC TC6011N				
IC003	8-752-331-22	IC CXK5864BSP-10L				
IC004	8-759-231-29	IC TD6710AN				
IC005	8-759-900-72	IC NE5532P				
IC006	8-759-900-72	IC NE5532P				
		COIL				
L002	1-410-072-21	INDUCTOR	820UH			
L003	1-410-072-21	INDUCTOR	820UH			
L004	1-408-970-21	INDUCTOR	10UH			
L005	1-408-970-21	INDUCTOR	10UH			
L006	1-408-989-21	INDUCTOR	470UH			
L007	1-408-989-21	INDUCTOR	470UH			
		FILTER				
LP001	1-236-356-11	FILTER, LOW PASS				
LP002	1-236-356-11	FILTER, LOW PASS				
		TRANSISTOR				
Q001	8-729-100-66	TRANSISTOR 2SC1623-L6				
Q002	8-729-100-66	TRANSISTOR 2SC1623-L6				
Q003	8-729-104-80	TRANSISTOR 2SC3355				
Q004	8-729-100-66	TRANSISTOR 2SC1623-L6				
Q005	8-729-100-66	TRANSISTOR 2SC1623-L6				
Q006	8-729-100-66	TRANSISTOR 2SC1623-L6				
		RESISTOR				
R001	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R002	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R003	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R004	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R009	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R010	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R011	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R012	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R013	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R014	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R015	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R016	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R017	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R018	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R019	1-212-873-11	FUSIBLE	47	5%	1/4W	F
R020	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R021	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R022	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R023	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
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	
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

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*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 (SLV-815/UB)	4.7MF	20%	16V
C703	1-124-927-11	ELECT (SLV-815VP)	4.7MF	20%	50V
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
C711	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C712	1-163-131-00	CERAMIC CHIP 390PF	5%	50V	
C713	1-163-139-00	CERAMIC CHIP 820PF	5%	50V	
C714	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C715	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C718	1-124-927-11	ELECT 4.7MF	20%	50V	
C723	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C724	1-163-033-00	CERAMIC CHIP 0.022MF		50V	
C725	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C726	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C727	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C728	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	
C729	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C730	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C731	1-124-443-00	ELECT 100MF	20%	6.3V	
C732	1-163-115-00	CERAMIC CHIP 82PF	5%	50V	
C733	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	
C734	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	
C735	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C736	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C737	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C738	1-124-925-11	ELECT 2.2MF	20%	50V	
C739	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	
C741	1-124-126-00	ELECT 47MF	20%	10V	
C743	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C744	1-124-126-00	ELECT 47MF	20%	10V	
C746	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C747	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C749	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C750	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C751	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C753	1-124-126-00	ELECT 47MF	20%	10V	
C754	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	
C755	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	
C756	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C760	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C761	1-124-963-11	ELECT 33MF	20%	16V	
C763	1-124-927-11	ELECT 4.7MF	20%	50V	
C764	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C770	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C772	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	
C780	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C782	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	
C783	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C785	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C790	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C801	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C802	1-124-442-00	ELECT 330MF	20%	6.3V	
C803	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C804	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C805	1-163-033-00	CERAMIC CHIP 0.022MF		50V	

Ref. No.	Part No.	Description			Remark
C806	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C807	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C808	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C809	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C810	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C811	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	
C812	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C813	1-124-443-00	ELECT 100MF	20%	6.3V	
C814	1-124-443-00	ELECT 100MF	20%	6.3V	
C815	1-164-330-21	CERAMIC CHIP 0.22MF	10%	16V	
C816	1-124-927-11	ELECT 4.7MF	20%	50V	
C817	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C818	1-163-036-00	CERAMIC CHIP 0.068MF		50V	
C819	1-164-492-11	CERAMIC CHIP 0.15MF	10%	16V	
C820	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C823	1-124-927-11	ELECT 4.7MF	20%	50V	
C825	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V	
C826	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C827	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C828	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C829	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C830	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C831	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	
C832	1-124-791-11	ELECT 1MF	20%	50V	
C833	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C834	1-123-382-00	ELECT 3.3MF	20%	50V	
C835	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C836	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C837	1-163-099-00	CERAMIC CHIP 18PF	5%	50V	
C840	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C841	1-164-232-11	CERAMIC CHIP 0.01MF (SLV-815VP)		50V	
C842	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C858	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	
C859	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C861	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V	
C862	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	
C863	1-124-791-11	ELECT 1MF	20%	50V	
C864	1-124-126-00	ELECT 47MF	20%	10V	
C866	1-124-791-11	ELECT 1MF	20%	50V	
C867	1-123-875-11	ELECT 10MF	20%	50V	
C868	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C869	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C870	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	
C871	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	
C872	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C873	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C874	1-164-232-11	CERAMIC CHIP 0.01MF		50V	
C875	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C876	1-108-796-11	MYLAR 0.0022MF	5%	50V	
C877	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
C878	1-164-364-11	CERAMIC CHIP	0.0022MF	5% 50V	
C879	1-163-035-00	CERAMIC CHIP	0.047MF	50V	
C880	1-124-791-11	ELECT	1MF	20% 50V	
C881	1-123-875-11	ELECT	10MF	20% 50V	
C882	1-123-382-00	ELECT	3.3MF	20% 50V	
C883	1-164-232-11	CERAMIC CHIP	0.01MF	50V	
C884	1-164-232-11	CERAMIC CHIP	0.01MF	50V	
C885	1-123-875-11	ELECT	10MF	20% 50V	
C886	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C887	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C888	1-123-875-11	ELECT	10MF	20% 50V	
C889	1-163-109-00	CERAMIC CHIP	47PF	5% 50V	
C890	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	
C891	1-163-113-00	CERAMIC CHIP	68PF	5% 50V	
C892	1-163-113-00	CERAMIC CHIP	68PF	5% 50V	
C893	1-124-963-11	ELECT	33MF	20% 16V	
C894	1-124-963-11	ELECT	33MF	20% 16V	
C895	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C896	1-124-963-11	ELECT	33MF	20% 16V	
C897	1-124-927-11	ELECT	4.7MF	20% 50V	
C898	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C899	1-163-141-00	CERAMIC CHIP	0.001MF	5% 50V	

CONNECTOR

CN701	1-506-490-21	PIN, CONNECTOR 11P	
CN702	1-506-490-21	PIN, CONNECTOR 11P	
CN703	‡1-564-019-31	PIN, CONNECTOR 9P	

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	

DELAY LINE

DL801	1-415-602-11	DELAY LINE, GLASS	
FL701	1-236-312-11	FILTER, BAND PASS	
FL801	1-239-915-11	FILTER, BAND PASS	
FL802	1-236-311-11	FILTER, BAND PASS	
FL803	1-527-849-00	FILTER, CERAMIC	

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	

RESISTOR

JR001	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR003	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR004	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR005	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR006	1-216-295-00	METAL GLAZE	0	5%	1/10W	
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	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR011	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR012	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR013	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR014	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR015	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR017	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR019	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR020	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR021	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR022	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR023	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR024	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR026	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR027	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR028	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR029	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR030	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR031	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR033	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR034	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR035	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR036	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR037	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR039	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR040	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR041	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR042	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR043	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR044	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR045	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR046	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR047	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR048	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR049	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR050	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR051	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR052	1-216-295-00	METAL GLAZE	0	5%	1/10W	

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

YC-65

Ref. No.	Part No.	Description				Remark
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
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
R728	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R729	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R730	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R731	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R733	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R734	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R735	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R736	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R737	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R738	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R739	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R740	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R741	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R742	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R743	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R744	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R745	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R749	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R750	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R751	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R752	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R754	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R755	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R761	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R762	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R763	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R764	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R768	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R769	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R772	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R773	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R774	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R775	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R776	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R777	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R778	1-216-044-00	METAL GLAZE	620	5%	1/10W	
R779	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R780	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R781	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R801	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R802	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R803	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R804	1-216-049-00	METAL GLAZE	1K	5%	1/10W	(SLV-815VP)
R805	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R806	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R807	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R808	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R809	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R810	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R811	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R812	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	

Ref. No.	Part No.	Description				Remark
R813	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R814	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R816	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R817	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R818	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R819	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R820	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R822	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R823	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R824	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R825	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	(SLV-815VP)
R826	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	(SLV-815VP)
R827	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	(SLV-815VP)
R828	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R829	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R830	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R831	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R832	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R833	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R834	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R835	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R836	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R837	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R838	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R839	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R840	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R841	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R843	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R844	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R852	1-216-049-00	METAL GLAZE	1K	5%	1/10W	(SLV-815VP)
R853	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R855	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R856	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R857	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R858	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R859	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R860	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R862	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R863	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R864	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R865	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R866	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R867	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R868	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R869	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R870	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R872	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R873	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R874	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R875	1-216-073-00	METAL GLAZE	10K	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

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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.

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

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.

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
		CRYSTAL	
X851	1-577-289-11	VIBRATOR, CRYSTAL 17.7MHZ	

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*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)

CAPACITOR

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
C152	1-163-121-00	CERAMIC CHIP	150PF	5% 50V	
C153	1-164-232-11	CERAMIC CHIP	0.01MF	50V	
C154	1-163-989-11	CERAMIC CHIP	0.033MF	10% 25V	
C155	1-124-257-00	ELECT	2.2MF	20% 50V	
C156	1-164-232-11	CERAMIC CHIP	0.01MF	50V	
C157	1-124-464-11	ELECT	0.22MF	20% 50V	
C158	1-126-163-11	ELECT	4.7MF	20% 35V	
C159	1-164-232-11	CERAMIC CHIP	0.01MF	50V	
C161	1-163-095-00	CERAMIC CHIP	12PF	5% 50V	
C162	1-163-095-00	CERAMIC CHIP	12PF	5% 50V	
C163	1-126-157-11	ELECT	10MF	20% 16V	
C164	1-163-019-00	CERAMIC CHIP	0.0068MF	10% 50V	
C165	1-163-141-00	CERAMIC CHIP	0.001MF	5% 50V	
C166	1-124-257-00	ELECT	2.2MF	20% 50V	
C167	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C168	1-163-137-00	CERAMIC CHIP	680PF	5% 50V	
C169	1-163-137-00	CERAMIC CHIP	680PF	5% 50V	
C170	1-163-145-00	CERAMIC CHIP	0.0015MF	5% 50V	
C171	1-163-037-11	CERAMIC CHIP	0.022MF	10% 25V	
C172	1-126-301-11	ELECT	1MF	20% 50V	
C174	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C175	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C176	1-126-177-11	ELECT	100MF	20% 6.3V	
C177	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C179	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C180	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C181	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C182	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C183	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C184	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C187	1-126-157-11	ELECT	10MF	20% 16V	
C188	1-126-157-11	ELECT	10MF	20% 16V	
C189	1-126-157-11	ELECT	10MF	20% 16V	
C190	1-126-157-11	ELECT	10MF	20% 16V	
C191	1-126-177-11	ELECT	100MF	20% 6.3V	
C192	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C193	1-164-234-11	CERAMIC CHIP	1MF	10V	
C194	1-124-442-00	ELECT	330MF	20% 6.3V	
C196	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C197	1-126-177-11	ELECT	100MF	20% 6.3V	
C198	1-126-177-11	ELECT	100MF	20% 6.3V	
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	
C253	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C254	1-163-130-00	CERAMIC CHIP	360PF	5% 50V	
C255	1-163-128-00	CERAMIC CHIP	300PF	5% 50V	
C256	1-163-125-00	CERAMIC CHIP	220PF	5% 50V	
		CONNECTOR			
CN101	1-569-772-21	CONNECTOR, BOARD TO BOARD 9P			
CN103	1-568-152-21	CONNECTOR, BOARD TO BOARD 13P			
		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			
		FERRITE BEAD INDUCTOR			
FB101	1-410-397-21	FERRITE BEAD INDUCTOR			
FB102	1-410-397-21	FERRITE BEAD INDUCTOR			
		FILTER			
FL101	1-236-101-11	ENCAPSULATED COMPONENT			
FL102	1-236-101-11	ENCAPSULATED COMPONENT			
FL103	1-236-101-11	ENCAPSULATED COMPONENT			
FL104	1-236-101-11	ENCAPSULATED COMPONENT			
FL109	1-236-071-11	ENCAPSULATED COMPONENT			
FL110	1-236-071-11	ENCAPSULATED COMPONENT			
FL111	1-424-228-11	FILTER, NOISE			
FL112	1-424-228-11	FILTER, NOISE			
FL113	1-424-228-11	FILTER, NOISE			
FL114	1-424-228-11	FILTER, NOISE			
FL115	1-424-228-11	FILTER, NOISE			
FL116	1-424-228-11	FILTER, NOISE			
FL117	1-424-228-11	FILTER, NOISE			
FL118	1-236-071-11	ENCAPSULATED COMPONENT			
FL119	1-236-986-11	FILTER, BAND PASS			
FL120	1-236-986-11	FILTER, BAND PASS			
FL121	1-236-844-11	FILTER, LOW PASS			
FL122	1-236-071-11	ENCAPSULATED COMPONENT			
		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 HM53461ZP-12			
IC108	8-759-008-74	IC MC14001BF			

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

DG-11

Ref. No.	Part No.	Description				Remark
		COIL				
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			
		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				
		RESISTOR				
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.

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

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

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*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
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		

TRANSISTOR

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

RESISTOR

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.

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	

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	*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)	

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	*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	

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	*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	

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	*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
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.

Ref. No.	Part No.	Description	Remark
		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	
		RESISTOR	
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)	
		CAPACITOR	
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	
C026	1-102-074-00	CERAMIC MELF 0.001MF 10% 50V	
		CONNECTOR	
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	
		DIODE	
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	
		IC	
IC002	8-759-938-12	IC BA10324	
IC004	⚠8-759-234-03	IC TA8424F	
		PHOTO SENSOR	
PH001	8-759-144-33	PHOTO SENSOR PS6002	
PH002	8-759-144-33	PHOTO SENSOR PS6002	
		IC LINK	
PS001	1-535-685-91	IC LINK (ICP-N20-T104)	
		TRANSISTOR	
Q001	8-729-921-53	PHOTO TRANSISTOR PT483F1	
Q002	8-729-921-53	PHOTO TRANSISTOR PT483F1	
		RESISTOR	
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)	

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	*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
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)

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Ref. No.	Part No.	Description				Remark
R114	1-249-427-11	CARBON	6.8K	5%	1/4W	
R115	1-249-417-11	CARBON	1K	5%	1/4W	
R116	1-249-438-11	CARBON	56K	5%	1/4W	
R117	1-249-423-11	CARBON	3.3K	5%	1/4W	
R118	1-249-433-11	CARBON	22K	5%	1/4W	
R121	1-247-804-11	CARBON	75	5%	1/4W	
R124	1-249-426-11	CARBON	5.6K	5%	1/4W	
R125	1-249-428-11	CARBON	8.2K	5%	1/4W	
R126	1-249-426-11	CARBON	5.6K	5%	1/4W	
R127	1-249-428-11	CARBON	8.2K	5%	1/4W	
R128	1-249-405-11	CARBON	100	5%	1/4W	
R129	1-249-417-11	CARBON	1K	5%	1/4W	

VARIABLE RESISTOR

RV101	1-238-420-11	RES, VAR, CARBON 10K (PHONE LEVEL)
RV102	1-241-061-11	RES, VAR, CARBON 2K (SHARPNESS)
RV103	1-241-062-11	RES, VAR, CARBON 20K (REC LEVEL L)
RV104	1-241-062-11	RES, VAR, CARBON 20K (REC LEVEL R)

SWITCH

S101	1-571-977-11	SWITCH, TACTIL (POWER)
S102	1-571-977-11	SWITCH, TACTIL (EJECT)
S103	1-571-977-11	SWITCH, TACTIL (SYNCHRO EDIT)
S104	1-571-977-11	SWITCH, TACTIL (EDIT MONITOR)
S105	1-570-854-11	SWITCH, SLIDE (COMMANDE MODE)
S106	1-571-977-11	SWITCH, TACTIL (VPS ON/OFF) (SLV-815VP)

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*A-6755-192-A	MF-94 BOARD, COMPLETE (SLV-815)	
	**********	(Ref.No.9000 series)
*A-6755-193-A	MF-94 BOARD, COMPLETE (SLV-815VP)	
	**********	(Ref.No.9000 series)
*A-6755-194-A	MF-94 BOARD, COMPLETE (SLV-815UB)	
	**********	(Ref.No.9000 series)
*3-682-419-51	HOLDER, P.C.B	
*3-743-637-01	HOLDER, FL	

BUZZER

BZ201	1-529-080-11	BUZZER, PIEZOELECTRIC

CAPACITOR

C202	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C203	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C204	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C205	1-162-847-11	CERAMIC 0.047MF	10%	16V
C206	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C207	1-125-486-11	ELECT 0.22MF		5.5V
C208	1-126-157-11	ELECT 10MF	20%	16V
C209	1-126-154-11	ELECT 47MF	20%	6.3V
C210	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C211	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C212	1-126-096-11	ELECT 10MF	20%	35V
C214	1-124-589-11	ELECT 47MF	20%	16V
C215	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C218	1-126-163-11	ELECT 4.7MF	20%	16V
C219	1-126-163-11	ELECT 4.7MF	20%	16V
C220	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C221	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C222	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C223	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C224	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C225	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C226	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V
C230	1-126-160-11	ELECT 1MF	20%	50V
C231	1-126-160-11	ELECT 1MF	20%	50V
C232	1-164-232-11	CERAMIC CHIP 0.01MF		50V
C233	1-124-472-11	ELECT 470MF	20%	6.3V
C234	1-163-133-00	CERAMIC CHIP 470PF	5%	50V

CONNECTOR

CN201	1-569-814-11	CONNECTOR, BOARD TO BOARD 21P
CN202	1-568-080-11	CONNECTOR (RECEPTALE) 22P
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

VARIABLE CAPACITOR

CV201	1-141-291-11	CAP, TRIMMER 20PF

DIODE

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

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MF-94

Ref. No.	Part No.	Description	Remark
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 1S2836	
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	
		RESISTOR	
JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		COIL	
L201	1-408-422-00	INDUCTOR 120UH	
L203	1-410-336-11	INDUCTOR 220UH	
L204	1-410-517-11	INDUCTOR 47UH	
L205	1-410-501-11	INDUCTOR 2.2UH	
L206	1-410-501-11	INDUCTOR 2.2UH	
L207	1-410-501-11	INDUCTOR 2.2UH	
L209	1-410-361-21	INDUCTOR 12UH	
L210	1-410-501-11	INDUCTOR 2.2UH	
L211	1-410-501-11	INDUCTOR 2.2UH	
L212	1-410-501-11	INDUCTOR 2.2UH	
L213	1-410-501-11	INDUCTOR 2.2UH	
L214	1-410-501-11	INDUCTOR 2.2UH	
L215	1-410-501-11	INDUCTOR 2.2UH	
L216	1-410-501-11	INDUCTOR 2.2UH	
L217	1-410-316-11	INDUCTOR 1UH	
L218	1-410-316-11	INDUCTOR 1UH	
		INDICATOR	
ND201	1-519-633-11	INDICATION TUBE, FLUORESCENT	
		TRANSISTOR	
Q201	8-729-271-23	TRANSISTOR 2SC2712	
Q202	8-729-271-23	TRANSISTOR 2SC2712	
Q205	8-729-901-01	TRANSISTOR DTC144EK	
Q206	8-729-901-01	TRANSISTOR DTC144EK	

Ref. No.	Part No.	Description				Remark
		RESISTOR				
R201	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R202	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R203	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R204	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R205	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R206	1-216-068-00	METAL GLAZE	6.2K	5%	1/10W	
R207	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R208	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R210	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R211	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R212	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R213	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R214	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R215	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R216	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R217	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R222	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R223	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R224	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R225	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R226	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R227	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R228	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R229	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R230	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R231	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R242	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R244	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R245	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R246	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R247	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R248	1-249-413-11	CARBON	470	5%	1/4W	
R249	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R250	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R251	1-216-037-00	METAL GLAZE	330	5%	1/10W	
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.

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
		OSCILLATOR	
CF001	1-567-160-21	OSCILLATOR, CERAMIC 4.19MHZ	
		CONNECTOR	
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	
		DIODE	
D201	8-719-400-18	DIODE 1S2837	
		IC	
IC001	8-759-030-60	IC SDA5642	
IC002	8-759-147-30	IC uPD75004GB-V5X182	
		RESISTOR	
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	
		RESISTOR	
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
		MISCELLANEOUS	
		**********	
	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)	

****

		ACCESSORIES AND PACKING MATERIALS	
		**********	
	1-465-832-11	REMOTE COMMANDER (RMT-V5E)	
	1-551-513-00	CORD, CONNECTION (PAL)	
	1-551-513-00	CABLE, COAXAL 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.

Ref. No.	Part No.	Description	Remark

HARDWARE LIST
****

SET-SCREW

7-621-732-08	SET-SCR. HEX. 2X3 FLAT POINT	

SCREW

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 2×4 (S)	

Ref. No.	Part No.	Description	Remark

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.

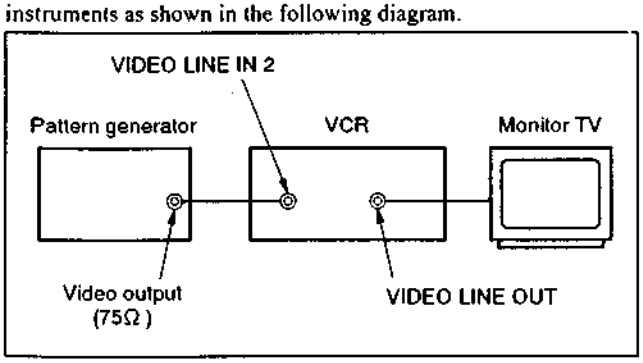


Fig. 7-1.

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.

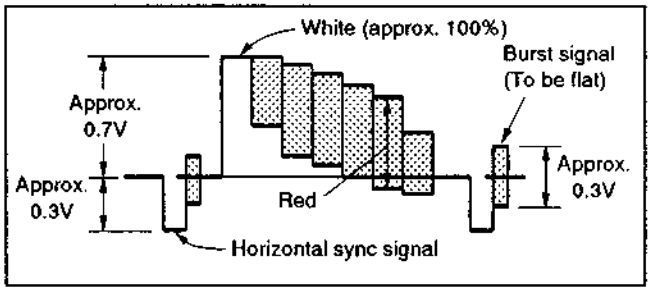


Fig. 7-2.

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 resisters as shown below and operate with the remote commander.

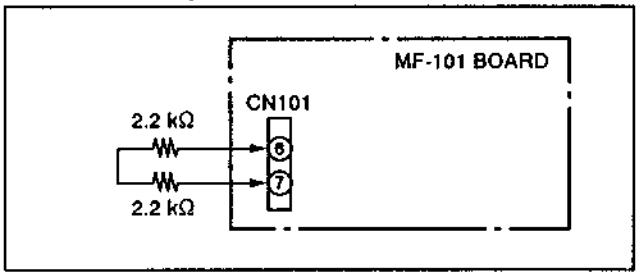
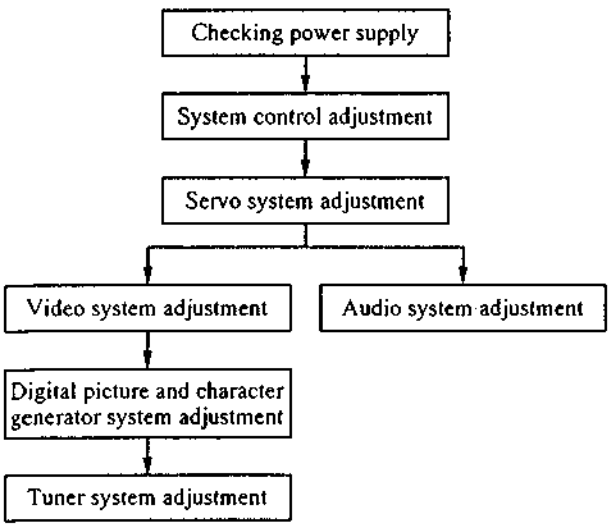


Fig. 7-3.

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 ofCN411
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 ± 0.2V

Checking method:

1) Confirm that each voltage meets its specified value.

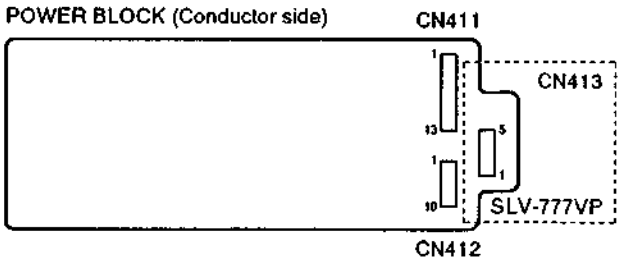


Fig. 7-4.

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.

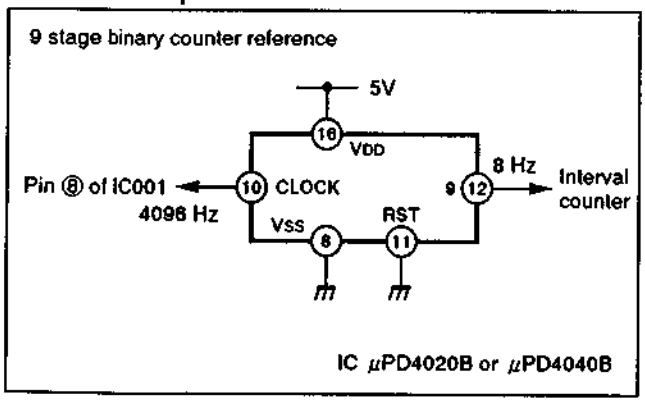


Fig. 7-5.

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 ⑱ of CN562 CH2: Pin ⑫ of CN582 (RF SWP)
Measuring Instrument	Oscilloscope
Adjusting Element	RV501
Specified Value	6.5 ± 0.5H (416 ± 32 μsec)

Adjusting method:

1) Once set to STOP mode, then to PB mode.
2) Check that the switching position is 6.5 ± 0.5H. (416 ± 32 μsec)
   If not meet the specified value, turn RV501 and repeat steps 1) to 2).

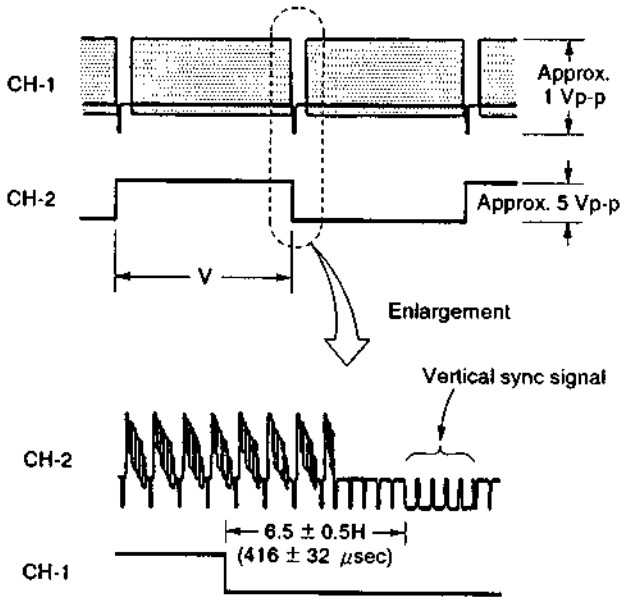


Fig. 7-6.

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 75Ω ± 1%.

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

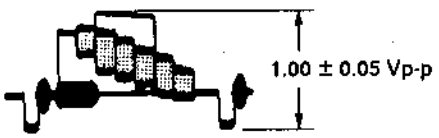


Fig. 7-7.

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.

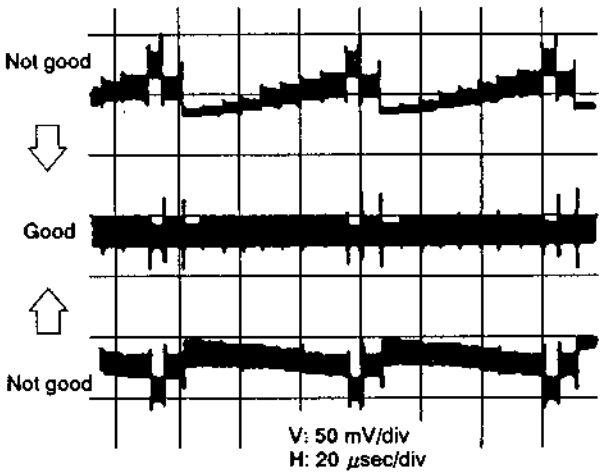


Fig. 7-8.

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 terminates at 75Ω .

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

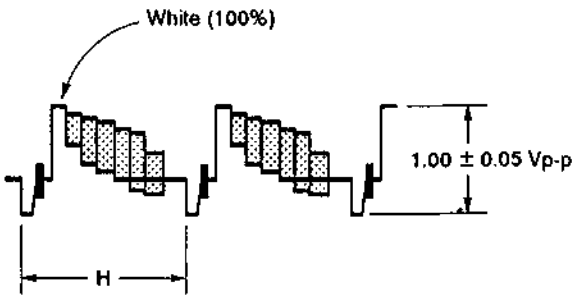


Fig. 7-9. SYNC AGC adjustment

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 ㉔ 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 made.
2) Connect the frequency counter to the Pin ㉔ 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.

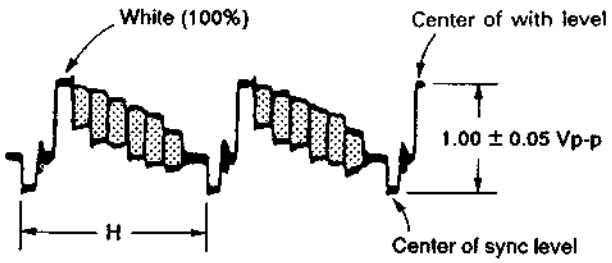


Fig. 7-10. Deviation adjustment

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 ⑳ of IC701
Measuring Instrument	Oscilloscope
Adjusting Element	White clip: RV705 Dark clip: RV704
Specified Value	White clip: 180 ± 10% Dark clip: 40 ± 10%

Adjusting method:

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

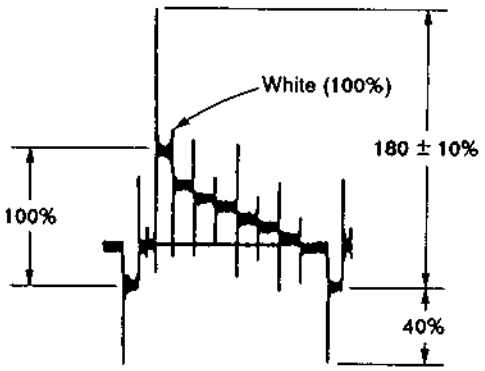


Fig. 7-11.

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.

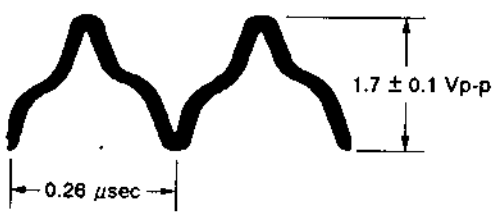


Fig. 7-12.

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 ± 10 mVp-p

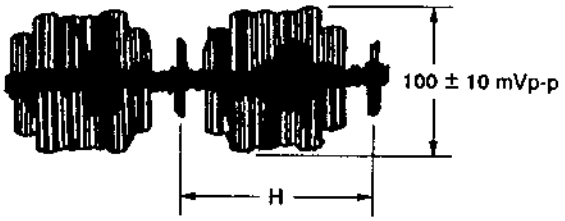


Fig. 7-13.

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

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑲ of IC860
Measuring Instrument	Digital voltmeter
Adjusting Element	RV860
Specified Value	2.65 ± 0.05 Vdc

Adjusting method:

1) Adjust RV860 so that the voltage at Pin ⑲ of IC860 become 2.65 ± 0.05 Vdc.
   At this time confirm that the cycle of delta wave at Pin ⑳ of IC860 is 32 μsec.

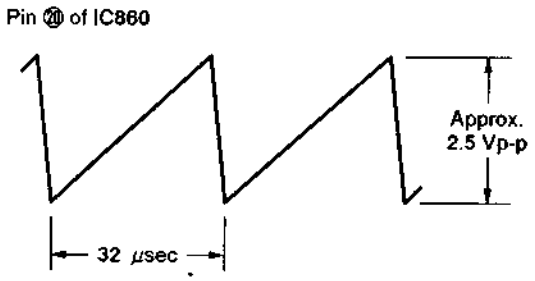


Fig. 7-14.

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.

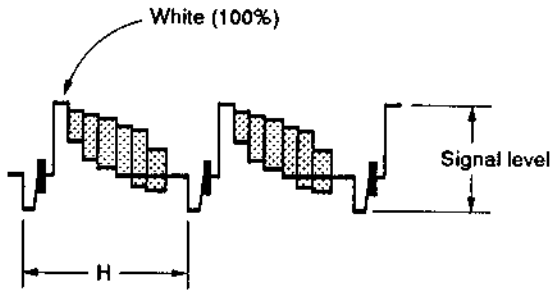


Fig. 7-15.

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 ± 0.1 Vp-p

Adjusting method:

1) Adjust RV850 so that the amplitude of 1/2 fH waveform becomes 4.5 ± 0.1 Vp-p.

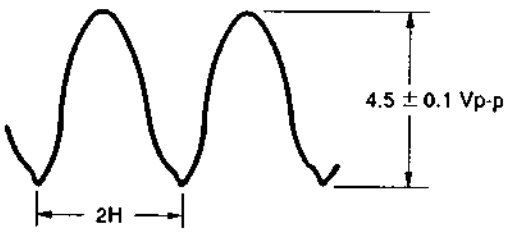


Fig. 7-16.

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.

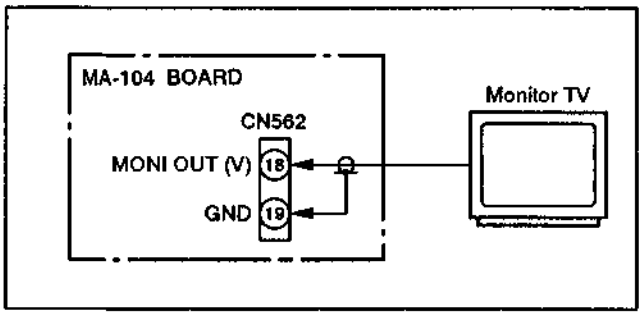


Fig. 7-17.

- 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:

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

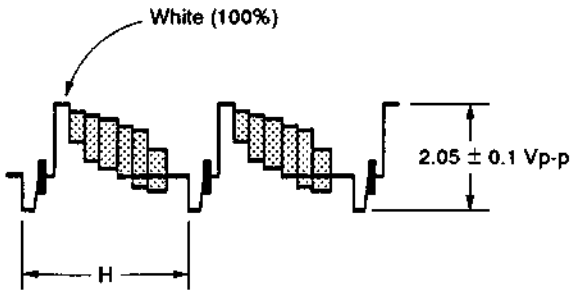


Fig. 7-18.

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:

1) Adjust T102 so that the child pictures are positioned symmetrically.
   Note: Adjust the character position following the steps in "Character Position Adjustment".

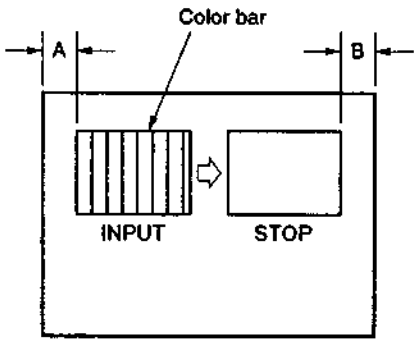


Fig. 7-19.

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:

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

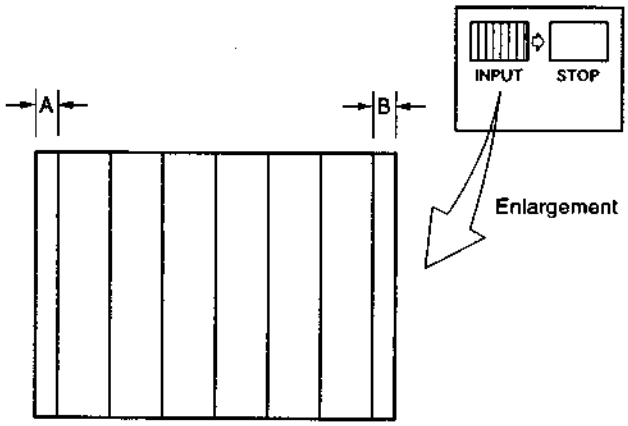


Fig. 7-20.

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

Mode	E-E (EDIT MONITOR)
Signal	Color bar
Measurement Point	Pin ⑰ 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.

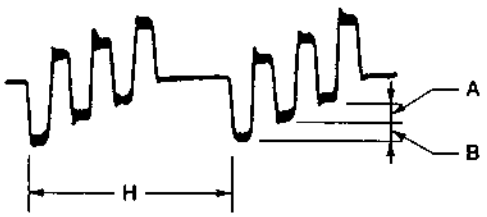


Fig. 7-21.

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.

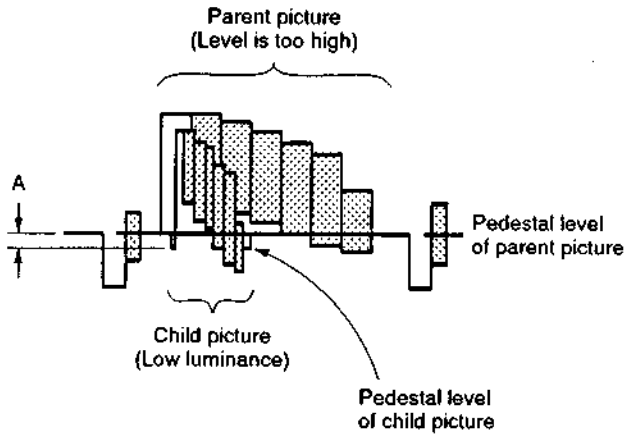


Fig. 7-22.

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

Mode	E-E (P in P)
Signal	Color bar
Measurement Point	Pin ⑱ 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 ㉘ of IC851
Measuring Instrument	Frequency counter
Specified Value	17.734476 MHz ± 100 Hz

Note: Attach 10 kΩ register to tip of the probe.

Checking method:

1) Confirm that the clock oscillation frequency is 17.734476 MHz ± 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 ± 50 Hz

Connection:

1) Connect Pins ① and ⑨ of IC685 with 1 kΩ resistance.

Adjusting method:

1) Adjust RV685 so that the oscillation frequency is 15625 ± 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.

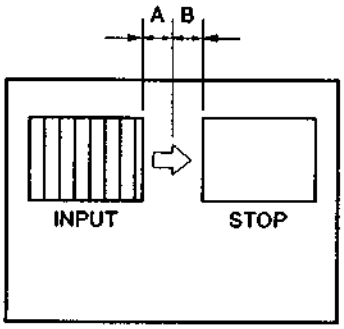


Fig. 7-23.

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]

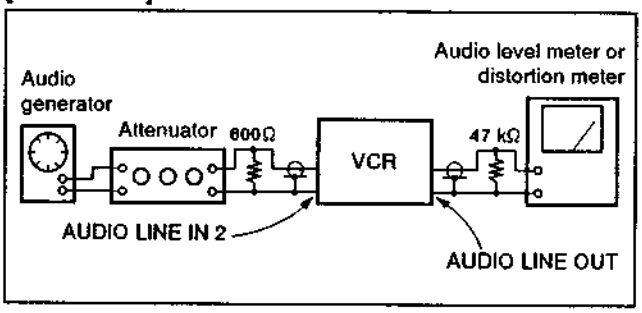


Fig. 7-24.

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 fo 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 fo 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 ± 2 kHz
1.7 MHz Adjustment	
Measurement point	Pin ⑳ of IC002
Adjusting element	RV002
Specified value	1.8 MHz ± 2 kHz

Note: Connect the frequency counter through a probe of high input impedance (more than 10 MΩ) 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 ⑮ 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.)

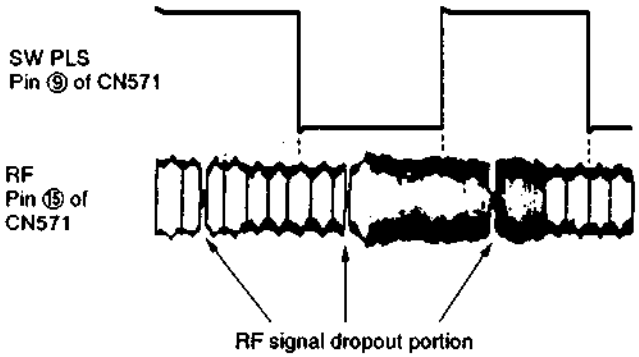


Fig. 7-25.

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 ± 2 kHz, 70 mVp-p to Pins ③ and ④ of CN571 from the signal generator.

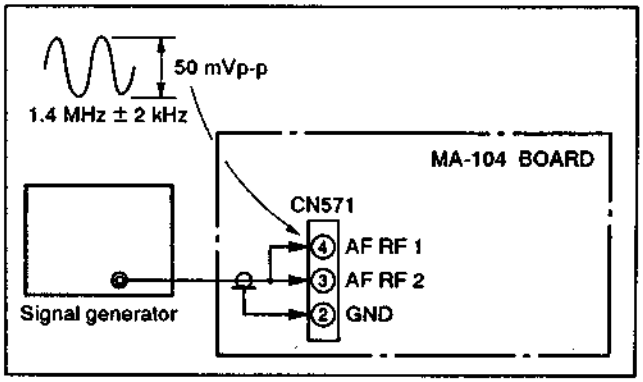


Fig. 7-26.

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 ± 0.1 dBs

Adjusting method:

1) Adjust a playback level to −7.5 ± 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.

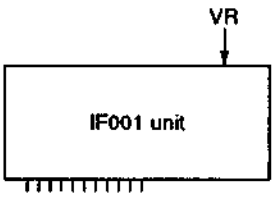


Fig. 7-27.

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 ⑳ 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.

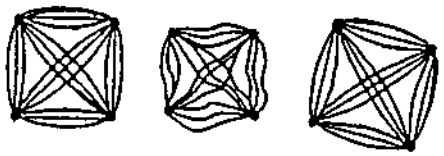


Fig. 7-28.

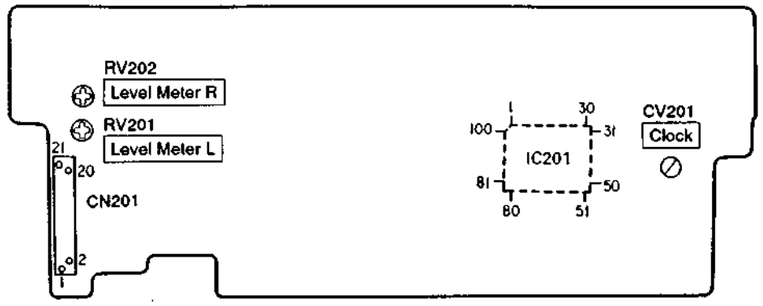
7-9-2. VCO Adjustment (NA-7 Board)

Mode	NICAM ch received
Signal	no-signal
Measurement Point	Pin ㉘ of IC001
Measuring Instrument	Frequency counter
Adjusting Element	CV02
Specified Value	5.824 MHz ± 30 Hz

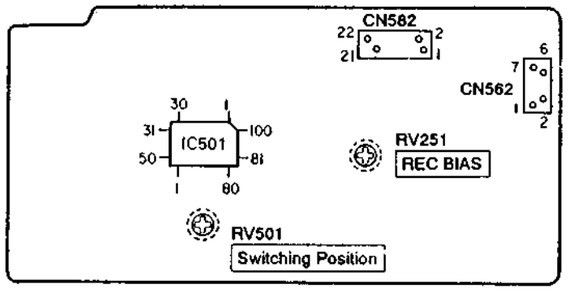
Note: Shorted Pins ⑫ and ⑳ of IC001.

7-10. ADJUSTMENT PARTS ARRANGEMENT DIAGRAM

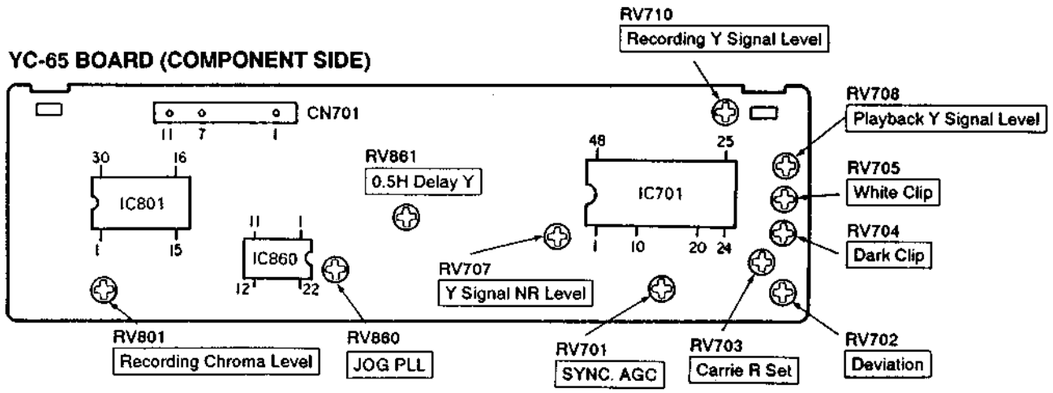
MF-94 BOARD (COMPONENT SIDE)



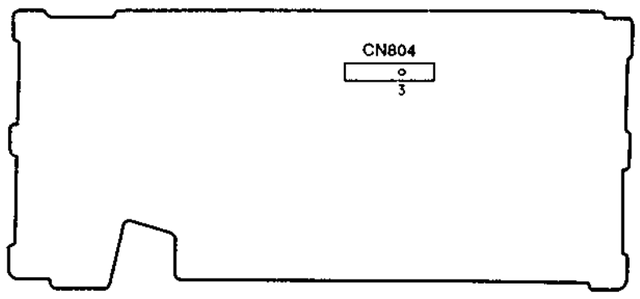
MA-104 BOARD (CONDUCTOR SIDE)



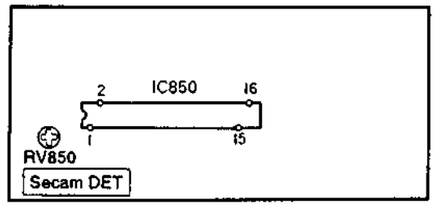
YC-65 BOARD (COMPONENT SIDE)



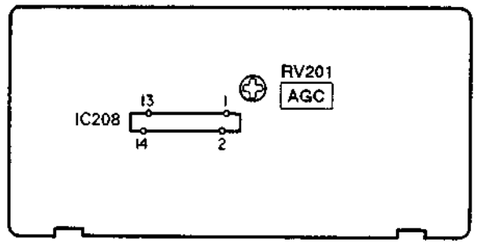
RP-63 BOARD (COMPONENT SIDE)



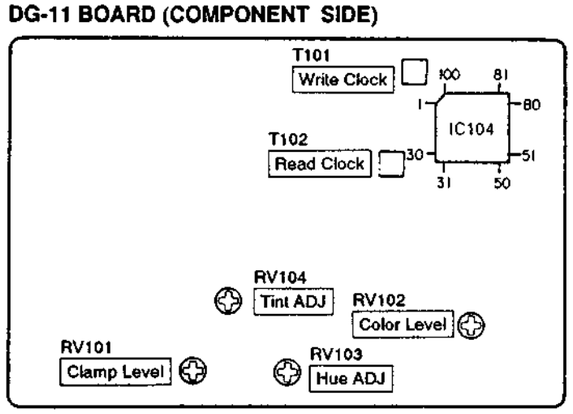
SD-4 BOARD (COMPONENT SIDE)



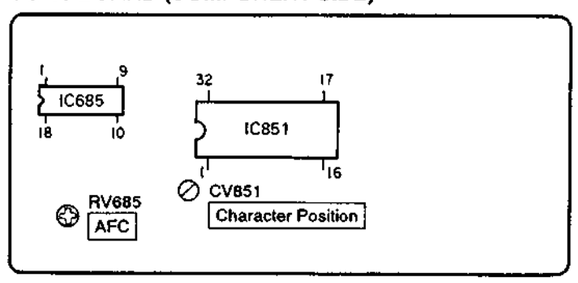
PI-25 BOARD (COMPONENT SIDE)



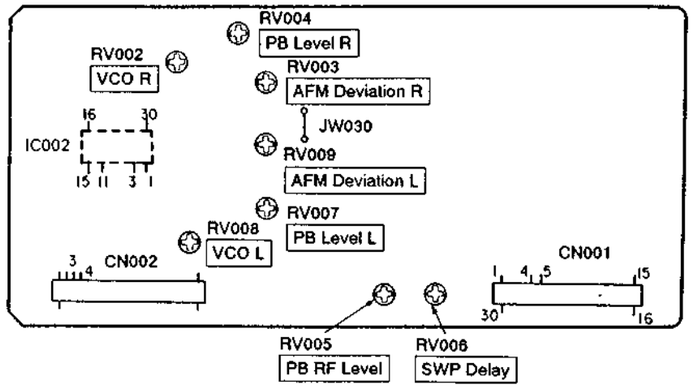
DG-11 BOARD (COMPONENT SIDE)



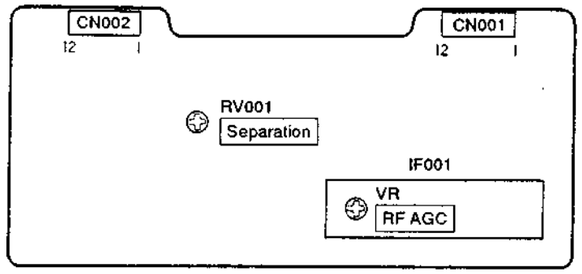
CG-10 BOARD (COMPONENT SIDE)



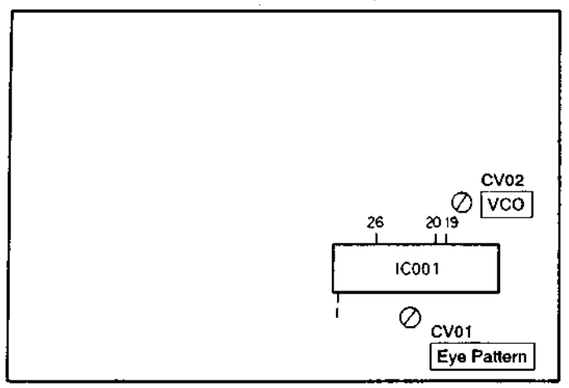
HF-9 BOARD (COMPONENT SIDE)



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

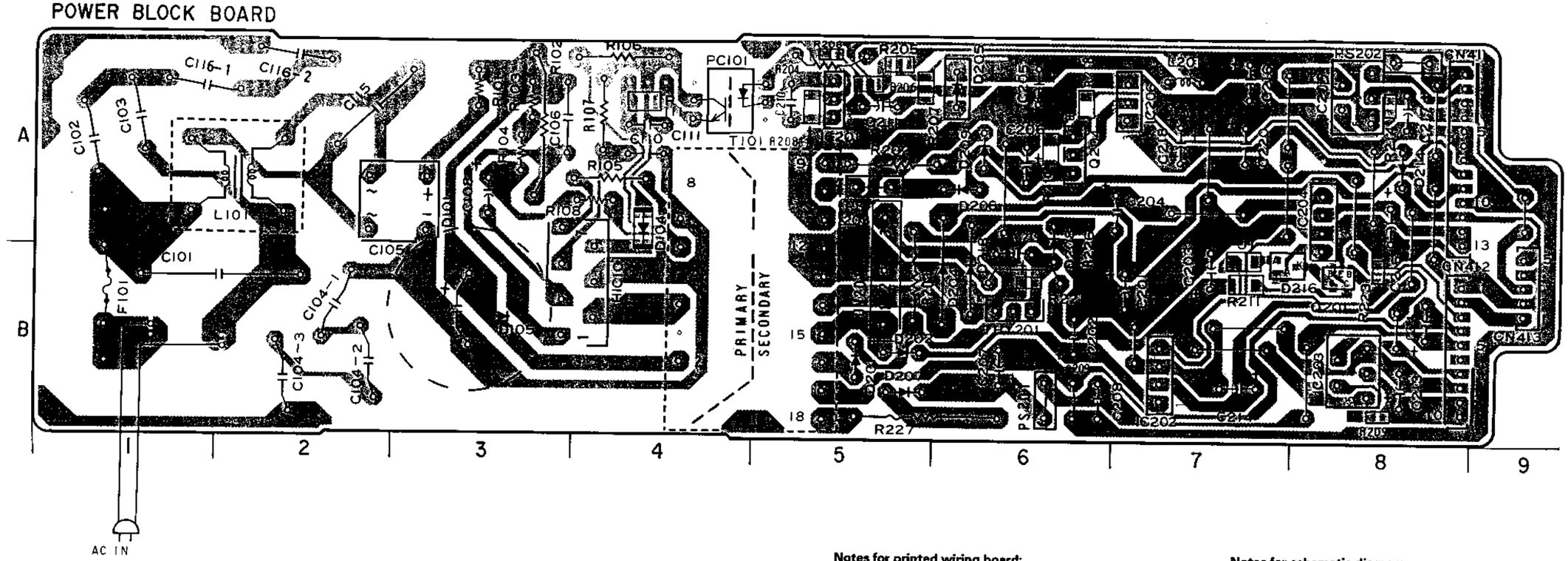
⬇

8-752-814-58 IC CPX80624-029Q

SECTION 1
DIAGRAMS

1-1. PRINTED WIRING BOARD

POWER BLOCK BOARD



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.
  kΩ: 1000Ω
- All capacitors are in μF unless otherwise noted. PF: μμF
  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 (DC10MΩ).
- 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 safetry.
Replace only with part number specified.

• 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	RD18ES82
D209	⚠ 8-719-510-26	DIODE	D1NL20
D214	8-719-110-30	DIODE	RD12ES81
D216	8-719-914-43	DIODE	DAN202K
D218	9-998-289-01	DIODE	RD43F82
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	S13120CS
IC205	8-749-920-43	IC	S13050CA
IC206	8-759-604-94	IC	M5F79M06L

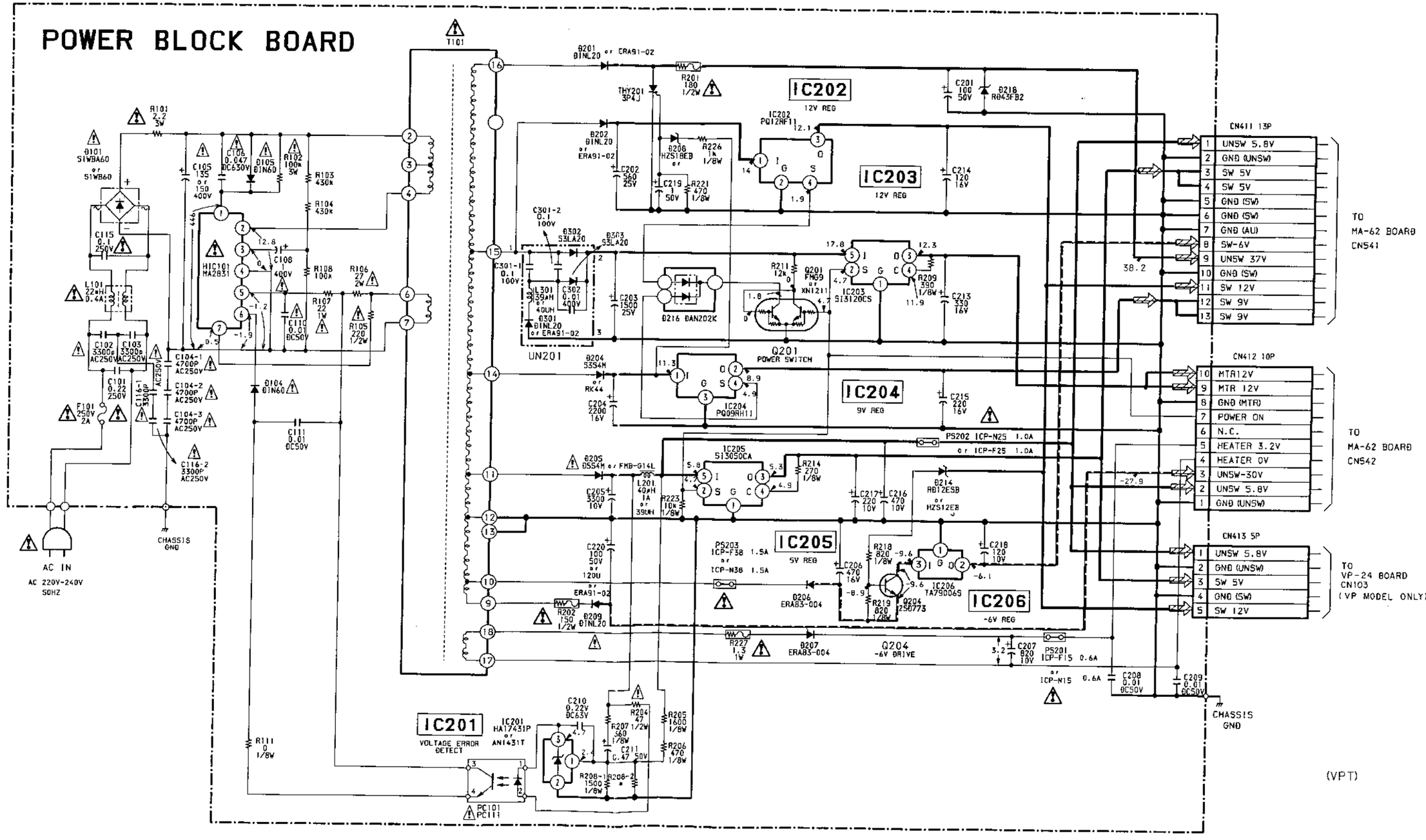
(TRANSISTOR)

Q201	8-729-920-28	TRANSISTOR FMG9
Q204	8-929-140-98	TRANSISTOR 2SD77-34

1-2. SCHEMATIC DIAGRAM

• See page 4 for note.

POWER BLOCK BOARD



POWER SUPPLY POWER SUPPLY

SECTION 2
ELECTRICAL PARTS LIST

POWER BLOCK

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.

- 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, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  MF : μF, PF :μμF
- COILS
  MMH : mH, uH : μH

Ref. No.		Part No.	Description			Remarks
		1-413-601-11	POWER BLOCK(SLV-777/AS/NC)			
		1-413-608-11	POWER BLOCK(SLV-777VP)			
		1-413-609-11	POWER BLOCK(SLV-777UB)			
			**********			
			(CAPACITOR)			
C105	⚠	9-901-004-01	ELECT	135uF	400V	
C115	⚠	1-136-548-11	FILM	0.1uF	AC250V	
C201		1-124-514-11	ELECT	100uF	50V	
C204		1-126-234-11	ELECT	2200uF	16V	
C205		1-124-781-11	ELECT	3300uF	10V	
C206		1-126-103-11	ELECT	470uF	16V	
C211		1-124-042-11	ELECT	0.47uF	50V	
C213		1-126-541-11	ELECT	330uF	16V	
C215		1-124-041-11	ELECT	220uF	16V	
C216		1-126-103-11	ELECT	470uF	10V	
C217		1-126-335-11	ELECT	220uF	10V	
C219		1-124-038-11	ELECT	1uF	50V	
C220		1-124-514-11	ELECT	100uF	50V	
			(CONNECTOR)			
CN411		1-506-478-11	CONNECTOR	13P		
CN412		1-506-475-11	CONNECTOR	10P		
CN413		1-506-470-11	CONNECTOR	5P		
			(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		

Ref. No.		Part No.	Description			Remarks
			(FUSE)			
F101		1-532-203-00	FUSE	250V	T2A	
			(HIC)			
HIC101	⚠	9-900-265-01	HIC	MA2831		
			(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		
			(COIL)			
L101	⚠	9-998-280-01	CHOCK COIL	ELF-18D290C		
L201		9-901-002-01	CHOCK COIL	40uH	1A	
			(COUPLER)			
PC101	⚠	8-719-939-00	COUPLER, PHOTO	PC111S		
			(PROTECTOR)			
PS201	⚠	1-532-679-00	PROTECTOR, IC	ICP-F15 0.5A		
PS202	⚠	1-532-637-00	PROTECTOR, IC	ICP-F25 1A		
PS203	⚠	1-532-675-00	PROTECTOR, IC	ICP-F38 1.5A		
			(TRANSISTOR)			
Q201		8-729-920-28	TRANSISTOR FMG9			
Q204		8-929-140-98	TRANSISTOR 2SD77-34			
			(RESISTOR)			
R102	⚠	1-215-929-11	METAL	100	3W	
R105	⚠	1-247-742-11	CARBON	180	1/2W	
R105	⚠	1-247-746-11	CARBON	390	1/2W	
R106	⚠	1-216-447-00	METAL	27	2W	
R107	⚠	1-215-859-00	METAL	22	1W	
R108		1-249-469-11	CARBON	100K	1/4W	
R201	⚠	1-212-988-00	FUSIBLE	180	1/2W	
R202	⚠	1-212-986-00	FUSIBLE	150	1/2W	

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	

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