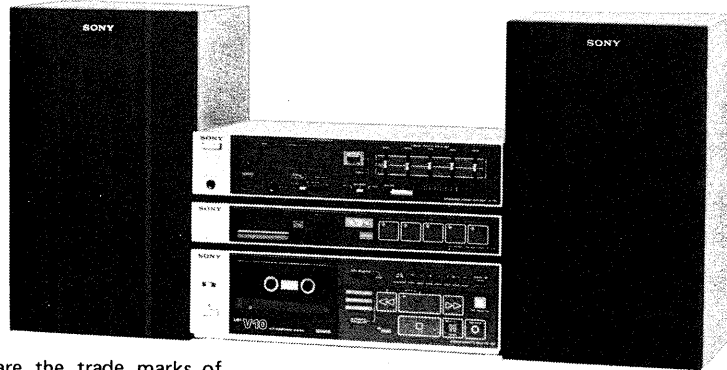


LBT-V10

SERVICE MANUAL

E Model



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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND 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.

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STEREO COMPONENT SYSTEM
SONY®

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SUPPLEMENT-1

SPECIFICATIONS

ST-V10S

System FM stereo, FM/AM superheterodyne tuner
Quartz-locked digital synthesizer system

FM tuner section

Tuning range 87.5—108 MHz
Antenna terminals 75 ohms unbalanced
300 ohms balanced
Intermediate frequency 10.7 MHz

	ST-V10S (at 75 kHz deviation)
Sensitivity	at 50 dB quieting 16.1 dBf, 3.5 μ V (mono) 38.3 dBf, 45 μ V (stereo)
Usable sensitivity	10.3 dBf, 1.8 μ V (IHF)
Signal-to-noise ratio	80 dB (mono) 75 dB (stereo)
Harmonic distortion at 1 kHz	0.2% (mono) 0.5% (stereo)
Separation at 1 kHz	40 dB
Frequency response	30 Hz — 15 kHz +0.5 dB -2.0 dB
Selectivity	at 400 kHz 65 dB
Image response ratio	50 dB
IF response ratio	90 dB

SW/MW tuner section

	SW 1	SW 2	MW
Tuning range	3.2 – 7.3 MHz	9.5 – 21.75 MHz	531 – 1,602 kHz (at 9 kHz step) 530 – 1,610 kHz (at 10 kHz step)
Antenna	Layout-free AM antenna, External antenna terminal		
Intermediate frequency	450 kHz		
Usable sensitivity	Layout-free AM antenna	300 μ V/m (5 MHz)	350 μ V/m (15 MHz)
	external antenna	20 μ V (5 MHz)	30 μ V (15 MHz)
Signal-to-noise ratio	54 dB (5 mV)		54 dB (50 mV/m)
Harmonic distortion	0.3% (5 mV, 400 Hz)		0.3% (50 mV/m, 400 Hz)
Selectivity	35 dB (10 kHz)		35 dB (9 kHz) 38 dB (10 kHz)

General

Dimensions Approx. 355 × 55 × 260 mm (w/h/d)
(14 × 2¹/₄ × 10¹/₄ inches)
incl. projecting parts and controls
Weight Approx. 1.8 kg (4 lb.) net

TC-V10

Recording system 4-track 2-channel stereo
Frequency response DOLBY NR OFF (DIN)
With TYPE IV cassette (Sony METALLIC cassette)
30 – 16,000 Hz ($\pm$ 3 dB)
With TYPE II cassette (Sony UCX cassette)
30 – 15,000 Hz ($\pm$ 3 dB)
With TYPE I cassette (Sony BHF cassette)
30 – 14,000 Hz ($\pm$ 3 dB)
Wow and flutter 0.065% WRMS (NAB)
 $\pm$ 0.2% (DIN)

General

Dimensions Approx. 355 × 105 × 245 mm (w/h/d)
(14 × 4¹/₄ × 9³/₄ inches)
incl. projecting parts and controls
Weight Approx. 2.9 kg (6 lb. 7 oz) net

TA-V10

Continuous RMS power output
30 + 30 watts
(6 ohms, at 1 kHz, 0.5% THD)
25 + 25 watts
(6 ohms, 40 Hz – 20 kHz, 0.5% THD)
Peak music power output 240 W (6 ohms)
Music power output 120 W (6 ohms)

Inputs

	Sensitivity	Impedance
PHONO (phono jacks)	2 mV	50 kilohms
CD/AUX (phono jacks)	150 mV	50 kilohms
MIC (phone jack)	2 mV	20 kilohms

Outputs Headphones Accepts headphone of 8 ohms or more
Speaker Accepts speakers of 6 to 16 ohms
Frequency response PHONO: RIAA curve $\pm$ 0.5 dB
CD/AUX: 15 Hz – 50 kHz $\pm$ $\frac{0}{3}$ dB
MIC: 100 Hz – 10 kHz $\pm$ $\frac{0}{6}$ dB

General

Dimensions Approx. 355 × 80 × 260 mm (w/h/d)
(14 × 3¹/₄ × 10¹/₄ inches)
incl. projecting parts and controls
Weight Approx. 4.6 kg (10 lb. 3 oz) net

SS-V10

Speaker system	2-way speaker system
Speaker units	Woofer : 16 cm (6½ in.) cone type Tweeter : 5 cm, (2 in.) cone type
Enclosure type	Bass reflex
Power handling capacity	Nominal 35 watts
Frequency range	70 Hz – 20 kHz
Sensitivity	90 dB/W/m (6 ohms)
Impedance	6 ohms
General	
Dimensions	Approx. 215 × 370 × 215 mm (w/h/d) (8½ × 14⅝ × 8½ inches)
Weight	Approx. 3.9 kg (8 lb. 10 oz) net per unit

General

Power requirements	Operates on 120, 220 or 240 V ac adjustable, 50/60 Hz
Power consumption	100 watts
AC outlet	1 switched, 100 watts max.

FEATURES

- Flat connecting cords, supplied, which enable you to connect each component quickly and securely.
- With the POWER switch on, pressing any function key automatically changes the program in use. There is no need to turn on the power of each component or to switch the function.
- On the front panels of the components, most of the controls and switches are "touch pad" switches.
- Synchronized play of the turntable and a cassette deck is possible. (The optional PS-LX30 turntable system is required.)

Amplifier section

- This section supplies power to other sections.
- Function display shows the program in use.
- MIC input jack for microphone mixing.
- CD/AUX input jacks for connecting a CD (compact disc) player, external tuner or cassette deck and PHONO input jacks for listening to records.
- Five frequency band equalizer to compose the source sound to your liking.

Tuner section

- High sensitivity and high selectivity.
- The PLL (phase locked loop) circuit allows precise tuning of FM and MW/SW stations.
- Each station PRESET key allows you to memorize one station for each band and to select these memorized stations with the touch of a key.
- The supplied LAYOUT-FREE AM antenna provides more satisfactory AM reception.

Cassette deck section

- The cassette deck can use the metal tapes, providing wider dynamic range and extended frequency response.
- Easy recording—Merely insert a cassette and press ● key.
- Automatic Music Sensor (AMS) allows easy playback of the selection being played and easy skipping to the next selection.
- The automatic recording control system sets the recording level automatically.
- The record muting function allows you to eliminate material you do not want to record, such as commercials, and to make a blank space between selections.
- The Dolby NR (Noise Reduction) system reduces tape hiss and assures high quality recording and playback.

CONNECTIONS

Turntable system is not supplied with the LBT-V10.

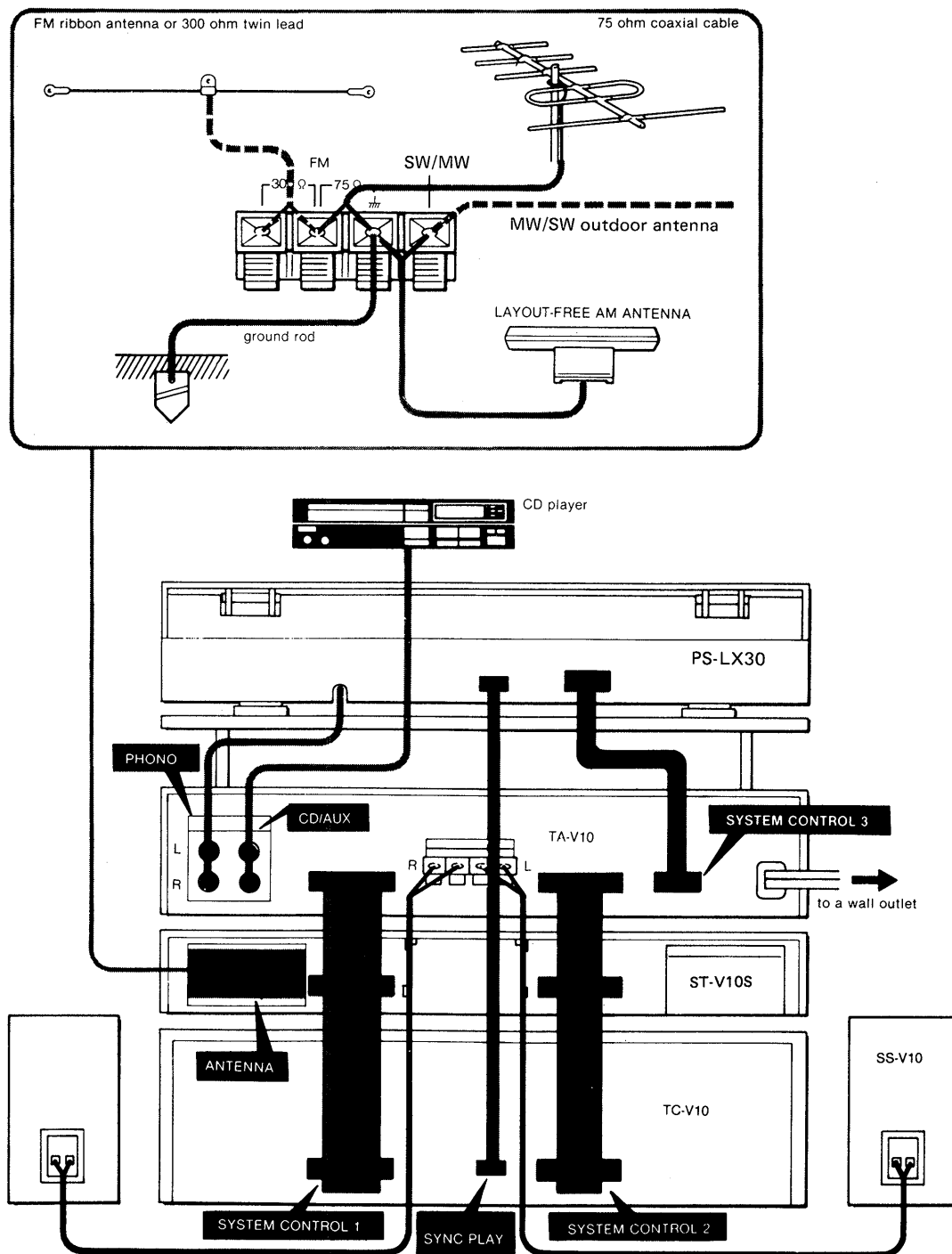
CONNECTION NOTES

- Turn the POWER switch off before connecting or disconnecting the connector to avoid damaging the speaker.
- Be sure to insert the female connector firmly until it clicks into the male connector. Loose connections may cause hum and noise.

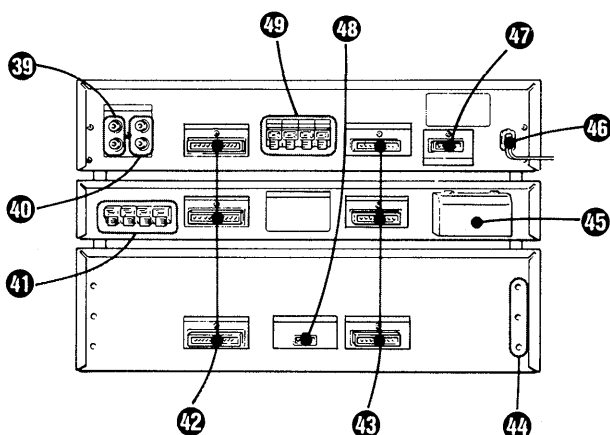
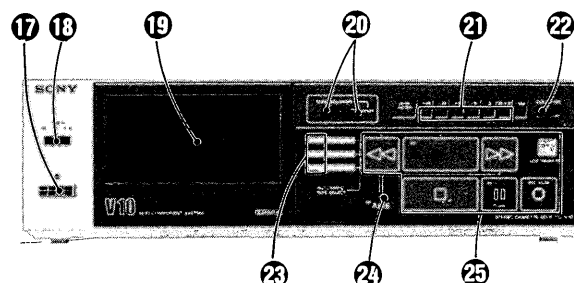
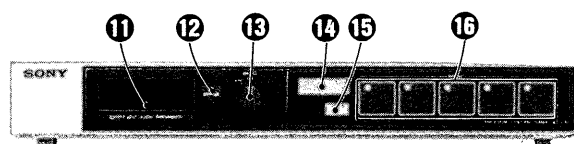
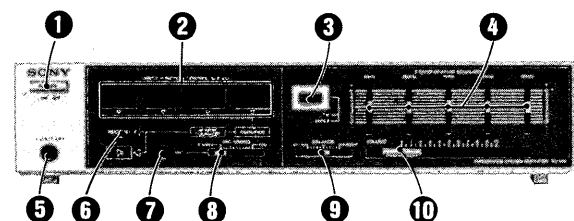
To connect the cable, depress the middle of the connector.
Never press the ends.

To disconnect the cable, pull the connector out. Never pull the cable itself.

- Keep the speaker cords, connecting cord and power cord away from the LAYOUT-FREE AM antenna and the antenna lead-in of the tuner to avoid possible noise pickup.
- Be sure to connect the red plug of the connecting cord to the right (R) jack and the remaining one to the left (L). The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.



FUNCTION OF CONTROLS



Amplifier TA-V10

1 POWER switch

Press to turn on the power of the amplifier, tuner, cassette deck and turntable system (PS-LX30). To turn them off, press it again.

2 Function display

The associated indicator illuminates to show the program in use when appropriate key is pressed. When the POWER switch is turned on, the TUNER indicator illuminates.

TAPE: When the ► key is pressed.

CD/AUX: When the CD/AUX button is pressed.

TUNER: When the BAND selector setting is changed or the TUNING or PRESET key is pressed.

PHONO: When the START/STOP key is pressed.

3 CD/AUX button

Press this button to listen to or record an auxiliary program (connected to CD/AUX inputs at the rear).

4 Graphic equalizer controls

Slide downwards or upwards to equalize the signal.

Equalization has effect on listening to and recording various program sources and on microphone mixing.

Normally set the controls at the center position.

5 HEADPHONES jack (stereo phone jack)

Accepts headphones with a stereo phone plug. The headphone volume can be adjusted with the VOLUME control.

6 RECORD indicator

During recording, this indicator lights up.

7 MIC (microphone) jack (phone jack)

Connect the microphone for microphone mixing.

8 MIC MIXING control

This is for adjusting the balance between the volume of the microphone and the program source. Slide the control towards MIC (right) for more microphone volume and less source volume. Slide the control towards SOURCE (left) for more source volume and less microphone volume.

When microphone mixing is not made, slide this control completely to SOURCE.

9 BALANCE control

This is for adjusting the balance of the left and right channel output level. Normally set the control to the center position.

10 VOLUME control

This is for adjusting the overall output level.

Tuner ST-V10S

11 Band/frequency-display

This identifies the received frequency. The TUNED indicator appears in the display when a signal is tuned in.

12 STEREO indicator

This lights when an FM stereo program of sufficient signal strength is tuned in.

13 BAND selector

Selects the desired band.

FM MW, SW1 or SW2

⑬ TUNING key

Press either side of the key to change the frequency.
Press the left side (–) to go to a lower frequency and the right side (+) to go to a higher. To change the frequency continuously, keep the key pressed.

⑭ MEMORY key

Press to operate memory circuit. The MEMORY indicator will appear in the band/frequency-display for a few seconds indicating that the memory circuit is standing by.

⑮ PRESET keys

To call up a memorized station, press the appropriate key. Associated key number will appear in the band/frequency-display.

Cassette deck TC-V10**⑰ ▲ (eject) button**

Press this button to open the cassette holder.

⑱ TIMER switch

You can set the unit to record or playback at a predetermined time by connecting an optional timer. Normally set it to OFF.

⑲ Cassette holder**⑳ TAPE COUNTER and RESET button**

The tape counter provides a numerical reference point while recording which can be used to index a recorded cassette. To reset to zero, press the RESET button.

㉑ LEVEL METER

This meter shows the input level during recording and recorded levels during playback for either the left or right channel, whichever is higher at that instant. The left-most LED will light when the POWER switch is turned on.

㉒ DOLBY NR switch

To record with the Dolby NR (Noise Reduction) process, depress this switch (▲ ON). To record without the Dolby NR process, press again and release this switch (▢ OFF).
When playing back, set this switch to the same position used in recording.

㉓ Tape type indicators

The type of the tape being used is automatically detected by the automatic tape selector system and the corresponding indicator lights.

㉔ AMS key and indicator

During playback, press this key and ◀◀ or ▶▶ key to locate the beginning of the selection being played or the following selections.

㉕ Function keys

- ◀◀ (rewind) key: Press this key to rewind the tape.
- ▶▶ (playback) key: Press this key to playback the tape.
- ▶▶▶ (fast-forward) key: Press this key to advance the tape rapidly.
- (record) key: Press this key to start recording. The RECORD indicator illuminates.
- (record muting) key: Press this key to eliminate unwanted material and to insert a blank space during recording.
- ⏏ (pause) key: To stop the tape for a moment during recording or playback, press this key. To restart, press it again.
- (stop) key: To stop the tape, press this key.

Rear panel**㉙ PHONO input jacks (phono jack)**

For connecting an optional turntable system.

㉚ CD/AUX input jacks (phono jack)

These accept the output of the CD player, TV tuner or the cassette deck only for playback.

㉛ Antenna and ground terminals**㉜ SYSTEM CONTROL 1 connectors**

These accept the supplied flat cord equipped with three 13-pin connectors.

㉝ SYSTEM CONTROL 2 connectors

These accept the supplied flat cord equipped with three 10-pin connectors (blue).

㉞ Player stand mounting holes

For mounting the optional SU-V1 player stand.

㉟ Battery compartment**Battery life**

About one year of operation can be expected when using Sony SUM-3 (NS) New Super batteries. Be sure to replace the batteries once a year to avoid damage from leaking batteries.

㊱ AC power cord**㊲ SYSTEM CONTROL 3 connectors**

These accept the supplied flat cord equipped with two 5-pin connectors.

㊳ Synchro remote control connectors

Connect the supplied remote control cord to synchronize the operation of the cassette deck with the turntable system. (Optional PS-LX30 turntable system is required).

㊴ Speaker terminals

Connect the SS-V10.

Voltage selector

Turn the selector so that the arrow on the selector points to the appropriate voltage.

AM CH (channel) SPACE selector

Set the selector according to the MW frequency allocation system of your country to tune in MW stations correctly.

AC outlet

This outlet can supply ac power to the optional PS-LX30 turntable system or other audio components whose power consumption is less than the 100 watts. This outlet is controlled by the POWER switch.

CONNECTIONS BETWEEN EACH SET

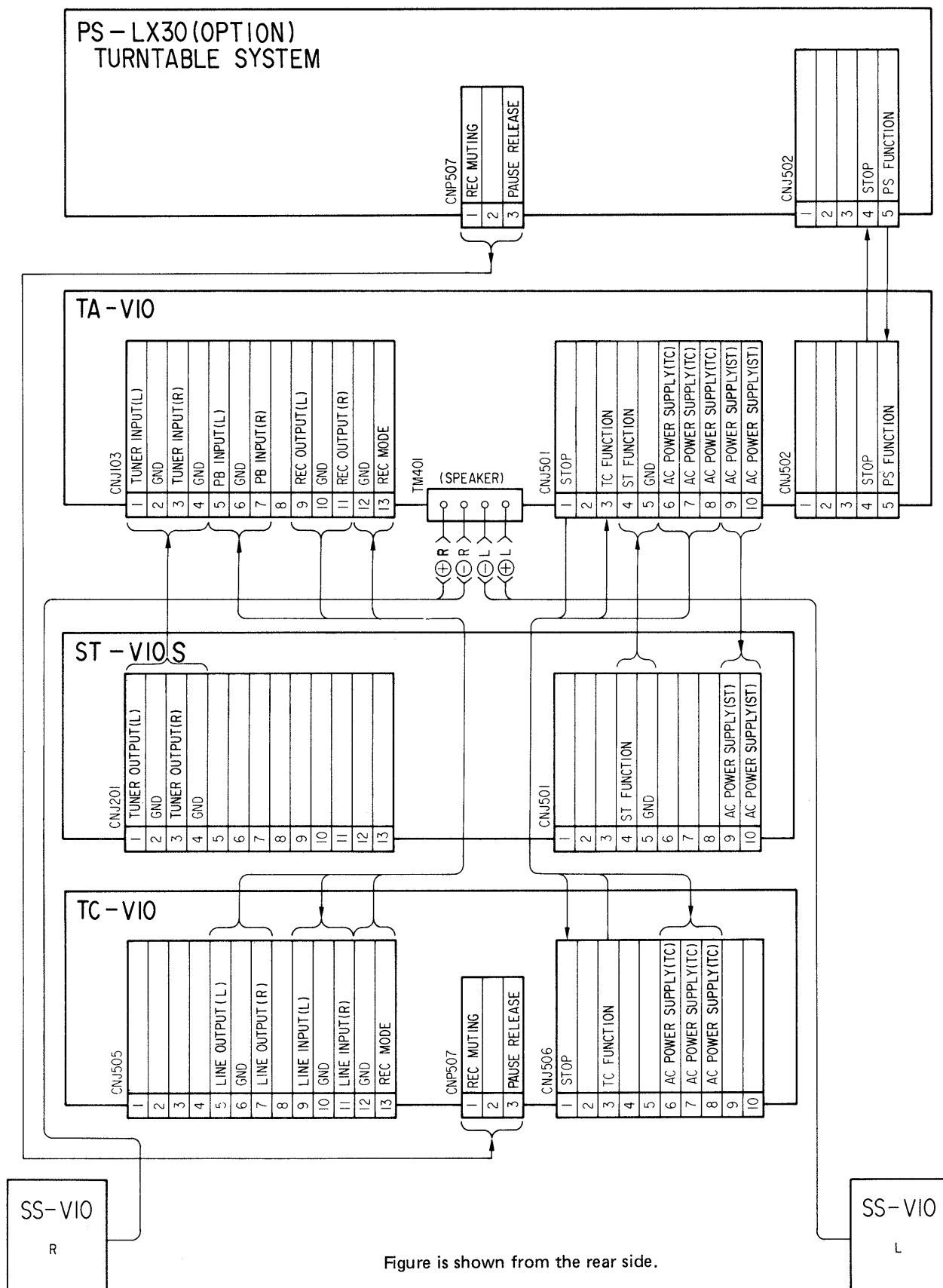
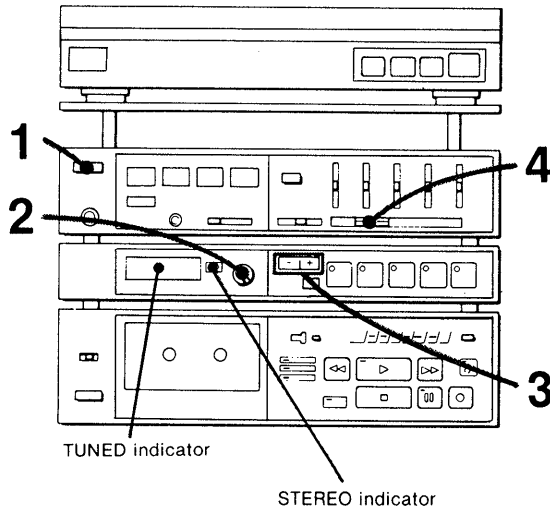


Figure is shown from the rear side.

OPERATION OF THE TUNER

Follow the numbered sequence.



- 1 Depress the POWER switch (ON). The TUNER indicator lights up.
- 2 Select the desired band with the BAND selector.
FM, MW, SW₁, SW₂
- 3 Tune in the desired station with the TUNING key, observing the STEREO indicator (in FM reception), the TUNED indicator and the band/frequency-display.
- 4 Adjust the volume with the VOLUME control.

- **STEREO indicator** illuminates when an FM stereo program of sufficient signal strength is received.
- **TUNED indicator** illuminates when a station is tuned in.

To receive the broadcasting program after you have enjoyed another program sources, change the BAND selector setting or press the TUNING or PRESET key.

Adjust the antenna as required

FM: Fully extend the supplied ribbon antenna and position it for best reception.

MW/SW: Position the supplied LAYOUT-FREE AM antenna for the best reception.

If it is difficult to hear the broadcast, connect an external antenna.

TO MEMORIZE STATION FREQUENCIES

Press the MEMORY key after you have tuned in the desired station to be memorized. While the MEMORY indicator is illuminated, press the desired PRESET key. The MEMORY indicator appears and the associated key number will appear in the band/frequency-display. The frequency is then memorized.

Repeat this procedure for each PRESET key.

For each PRESET key, you can memorize an FM, an SW₁, an SW₂, and MW stations in any desired sequence. A total of 20 stations can be memorized.

Arrange the order of stations for each PRESET key and note the band and the frequency of each in advance.

Notes

- The MEMORY indicator will go off automatically after a few seconds. When the indicator is out, the memory circuit does not operate to memorize the station. In this case press again the MEMORY key.

- The previous memory will be erased when a new frequency on the same band is committed to the memory of the same key. An erasure cannot be made without a new input.

TO CHECK A MEMORIZED FREQUENCY

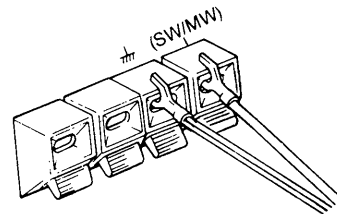
After the memory procedure is completed, confirm the memorized frequency. Select the band and press the TUNING key and change the frequency display indication. Press the PRESET key to be checked. The frequency which had been memorized should then be indicated in the band/frequency-display.

TO RECEIVE A MEMORIZED STATION

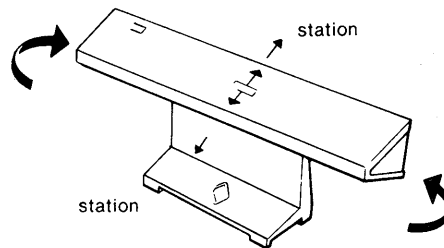
Select the band with the BAND selector and simply press the desired PRESET key.

Supplied LAYOUT-FREE AM external ferrite-bar antenna

Compared with a conventional built-in ferrite-bar antenna which cannot be moved freely to obtain optimum reception, the LAYOUT-FREE AM antenna can be placed virtually anywhere.



This antenna is designed to pickup signals from a particular direction. Move the LAYOUT-FREE AM antenna to find the best position for reception.



- While recording AM(MW, SW) programs, if a beating sound should be heard, move the LAYOUT-FREE AM antenna to the position where it is not heard.

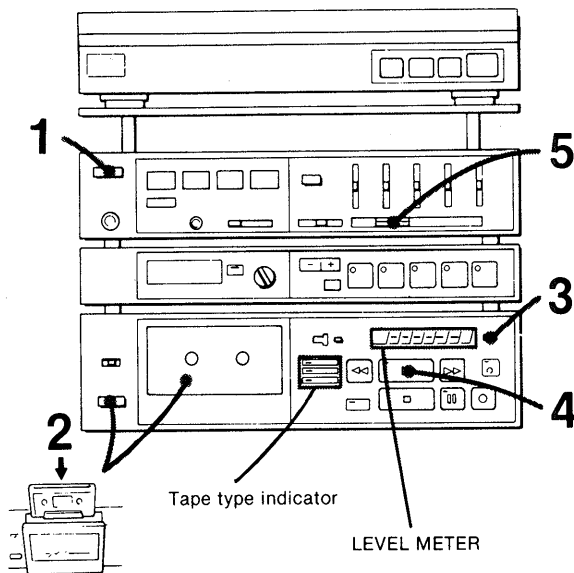
- Extend the lead-in of the LAYOUT-FREE AM antenna for SW reception.

TAPE PLAYBACK

Caution

Before turning the power on, make sure that the TIMER switch is set to OFF. If the power is on when this switch is set to the REC or PLAY position, recording or playback will start automatically in a few seconds.

Follow the numbered sequence.



- 1 Depress the POWER switch (⏻ ON).
The TUNER indicator lights up. The function keys do not activate until the flickering of the **II** key goes off.
- 2 Press the **▲** button and insert a recorded cassette with the desired side towards you and the tape surface down.
The appropriate tape type indicator lights up.
- 3 Depress the DOLBY NR switch when playing back a tape which has been recorded using the Dolby NR system (⏻ ON).
- 4 Press the **▶** key. The TAPE indicator illuminates and play will begin.
- 5 Adjust the volume with the VOLUME control.

The LEVEL METER shows the recorded level during playback.

After the tape is completely rewound, the cassette deck shuts off automatically.

To stop the playback, press the **■** key.

Notes on the blank spaces

● Since AMS works by searching out the blank spaces on a tape, it may not operate if there is noise in the space between selections, or if the space is less than 4 seconds long.

The record muting facility of this cassette deck can make a four second blank space that will assure AMS operation on any recorded tape.

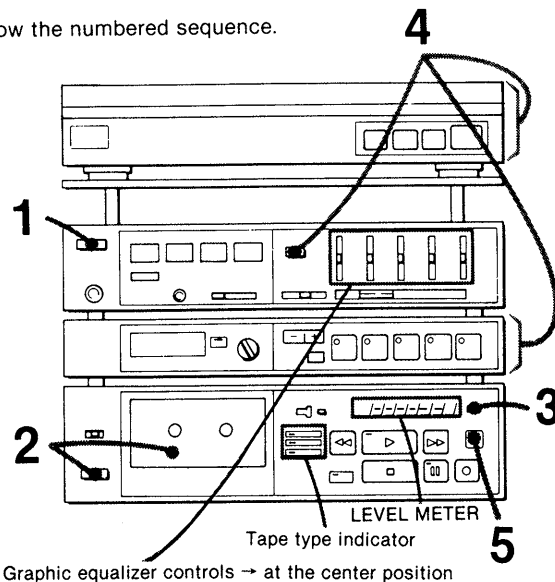
● If the record music includes a long pause, or if it continues for a time at sufficiently low volume, as may happen for instance with classical music, or if any selection is less than 20 seconds long, the AMS will treat it as a blank.

TAPE RECORDING

Caution

Before turning the power on, make sure that the TIMER switch is set to OFF. If the power is on when this switch is set to the REC or PLAY position, recording or playback will start automatically in a few seconds.

Follow the numbered sequence.



- 1 Depress the POWER switch (⏻ ON).
The TUNER indicator lights up. The function keys do not activate until the flickering of the **II** key goes off.
- 2 Press the **▲** button and insert a cassette with the tape surface down.
The appropriate tape indicator lights up.
- 3 Depress the DOLBY NR switch when recording using the Dolby NR system (⏻ ON).
- 4 Play the program source to be recorded. The appropriate function indicator lights up according to the program source in use.
To record a broadcast: Tune in the desired station.
To record from the phonograph: See "Synchronized play of the turntable and the cassette deck" on page 13.
To record the program source connected to the CD/AUX inputs: Play the program source and press the CD/AUX button.
- 5 Press the **●** key. The RECORD indicator illuminates and recording will begin.

To adjust the tone quality, use the graphic equalizer controls (See page 11).

The LEVEL METER shows the input level during recording.

After the tape is completely rewound, the cassette deck shuts off automatically.

To stop the recording, press the **■** key.

To stop the tape momentarily, press the **II** key.

AUTOMATIC RECORDING CONTROL SYSTEM

No recording level adjustment is necessary with the automatic recording control system. The recording level is automatically adjusted properly.

The settings of the VOLUME and BALANCE controls have no effect on recording, so you can listen to the program at any volume you want while recording.

MORE ACCURATE RECORDING STARTS

You can use the **||** (pause) key to start recording more accurately than is possible when recording is started by pressing the **●** key. After completing step 4, press the **||** key then press the **●** key. At the moment you wish to start recording, you need only press the **||** key again.

RECORD MUTING

By pressing the **○** (record muting) key during recording, four seconds interspacing is provided automatically, eliminating unwanted program material such as broadcasting commercials. While the record muting is operating, the incoming signal is not recorded on the tape but it continues to register on the meters and feed to the monitor so that you know exactly what is going on.

- 1 Press the **○** key when the segment you do not want to record begins. The indicator of the **||** key will blink, and the tape path will pause automatically after four seconds.
- 2 When you want to resume recording, press the **||** key.

To insert a blank over four seconds long

keep the **○** key pressed for as long as you want the blank segment on the tape to be. After four seconds, the indicator of the **||** key will blink more rapidly. When you release the **○** key, the cassette deck will be in the pause mode. When you want to resume recording, press the **||** key to release the pause mode.

ERASING

When the cassette deck functions in recording mode, the erase head automatically erases any previously recorded material.

To erase without recording :

- 1 Make sure that the safety tab of the cassette is in place, or that the tab slot is covered with plastic tape. Disconnect the microphone from the MIC jack.
- 2 Insert the cassette to be erased.
- 3 Press the **▶** key. The TAPE indicator illuminates.
- 4 Press the **◀◀** or **▶▶** key to rewind or to advance the tape for any desired point to be erased.
- 5 Press the **●** key. Erasing will begin.

USING THE GRAPHIC EQUALIZER CONTROLS

The level of a band will be increased by sliding a control upwards, and decreased by sliding it downwards.

To equalize the sound, first set all equalizer controls at their center position and lay the program. Slide the control of the frequency band to be equalized upwards or downwards until you perceive an improvement.

Frequency coverage of each equalizer control

63 Hz : Use this control to boost or cut the bass.

250 Hz : Use this control to adjust the middle frequency range.

1 kHz : Use this control to provide more presence of vocals.

4 kHz : Use this control to adjust the brightness of sound.

12 kHz : This control effects general treble. Slide downwards to reduce high frequency noise, such as tape hiss.

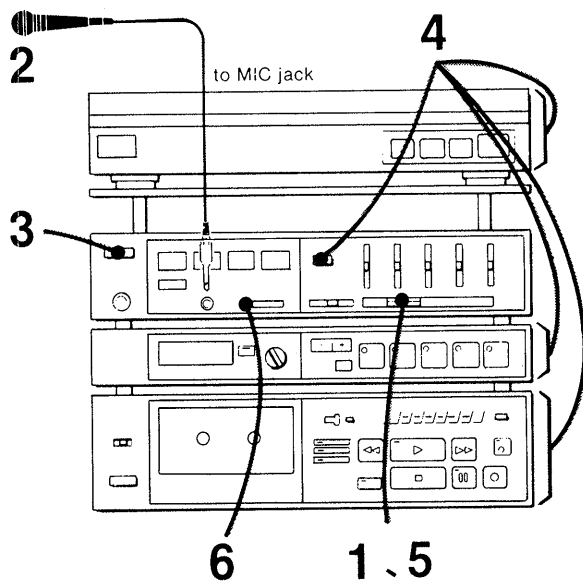
Notes

● The graphic equalizer controls have effect on recording, on listening to various program sources and on microphone mixing.

● Normally, keep each control at its center position.

MICROPHONE MIXING

Follow the numbered sequence.



- 1 Lower the volume with the VOLUME control.
- 2 Connect the microphone to the MIC jack.
- 3 Depress the POWER switch (ON).
- 4 Play the sound source to be mixed with the microphone sound.
- 5 Adjust the overall sound level with the VOLUME control.
- 6 Adjust the MIC MIXING control to get the good mixing balance.

You can also add the equalization value to the mixed sound.
See "using the graphic equalizer controls" on page 11.

TIPS FOR BETTER MIXING

Howling

If the microphone is placed too near speakers, a howling effect caused by acoustic feedback may occur. When this happens, change the direction of the microphone or decrease the volume until the howling stops.

Mixing balance between the microphone and the program source.

To get a good mixing balance, adjust the MIC MIXING control. Slide the control towards MIC (right) for more microphone volume and less source volume. Slide it towards SOURCE (left) for more source volume and less microphone volume.

RECORDING THE MIXED SOUND

You can record the sound from the microphone mixed with a program source.

To record the sound mixed with a record, a compact disc or an auxiliary program source connected to the CD/AUX inputs.

Insert a cassette into the cassette deck and press the **●** key.

To record the sound mixed with a taped program

Another cassette deck is required for playback. Connect this cassette deck to the CD/AUX inputs. Insert a cassette into the TC-V10 for recording, press the CD/AUX button and start playback of the recorded cassette. Then press the **●** key.

To record only the sound from the microphone

Turn off the equipment connected to the CD/AUX inputs (if connected). Insert a cassette into the cassette deck and press the CD/AUX button then press the **●** key.

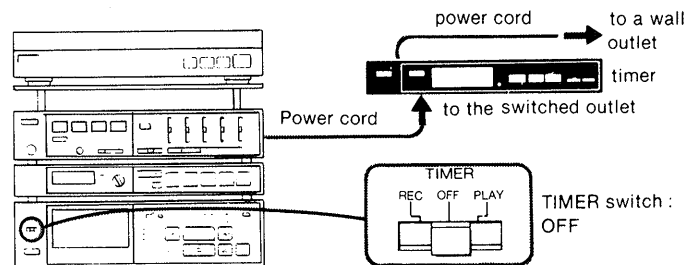
Note

When you have finished mixing, be sure to disconnect the microphone from the MIC jack and to slide the MIC MIXING control completely towards SOURCE.

USING THE TIMER

By connecting an optional timer to the LBT-V10, you can record a radio program or wake up to the taped program or the radio program at any desired time.

Connection



Timer activated recording

- 1 Set the timer so that power is supplied to LBT-V10.
 - 2 Turn on the LBT-V10 and tune in the station which will broadcast the program you want to record.
 - 3 Set the cassette deck's TIMER switch to OFF.
 - 4 Insert a cassette and select the Dolby NR system. Make sure that the tab is intact or that plastic tape covers the tab slot.
 - 5 Set the timer for the desired time. (At this point power to the connected equipment will be cut off.)
 - 6 Set the cassette deck's TIMER switch to REC.
- The cassette deck is now ready to start recording at the time set on the timer.

To wake up to a taped program

- 1 Set the cassette deck's TIMER switch to OFF.
 - 2 Turn on the LBT-V10 and set the appropriate switches for playback.
 - 3 Turn on the cassette deck and insert the recorded cassette.
 - 4 Set the timer for the desired time. (At this point power to the connected equipment will be cut off.)
 - 5 Set the cassette deck's TIMER switch to PLAY.
- The cassette deck is now ready to start playback at the time set on the timer.

To wake up to a radio program

- 1 Set the cassette deck's TIMER switch to OFF.
 - Turn on the LBT-V10 and tune in the station.
 - 3 Set the timer for the desired time. (At this point, power to the connected equipment will be cut off.)
- The tuner is now ready to receive a program at the time set on the timer.

Note

The cassette deck's TIMER switch will function properly only if the cassette deck is turned on after the switch is set to REC or PLAY. Do not change the setting of the TIMER switch during the few seconds stand-by period immediately after the power is turned on. If you want to change the setting of the switch, turn the power off first.

SYNCHRONIZED PLAY OF THE TURNTABLE AND THE CASSETTE DECK

The optional PS-LX30 turntable system is required.

Record recording starts only when the START/STOP or ARM LIFTER key is pressed. When the tonearm lowers onto the record, the cassette deck goes into the record mode and when the tonearm is lifted up, the deck goes into the auto record muting mode for four seconds, then into the record stand-by mode.

Before operation, check the synchro remote control cord connection.

- 1 Depress the POWER switch (⏻ ON).
The TUNER indicator illuminates.
- 2 Place a record on the platter.
- 3 Select the correct record size and speed with the SIZE SELECTOR and SPEED selector.
- 4 Press the **II** key and then **●** key. The cassette deck is set in record stand-by mode.
- 5 **To record from the beginning of a record**, press the START/STOP key. When the tonearm lowers onto the record, the record stand-by mode is released and recording begins.
To record from a certain point on the record, move the tonearm by hand over the desired point and press the START/STOP key. When the tonearm lowers onto the record, the record stand-by mode is released and recording begins.

To lift up the tonearm to move it to a different point on the record press the ARM LIFTER key. When the tonearm is lifted up, auto-record muting activates for four seconds, and the record stand-by mode is assumed.

To stop recording during record play, press the START/STOP key. When the tonearm is lifted up, auto-record muting activates for four seconds, and the record stand-by mode is assumed.

When record play ends, the tonearm returns automatically to the arm rest and the turntable stops rotating.

Caution If the START/STOP key is pressed during recording of other program sources, the record stand-by mode, not the record recording mode is assumed.

PARTS LISTACCESSORY & PACKING MATERIALS

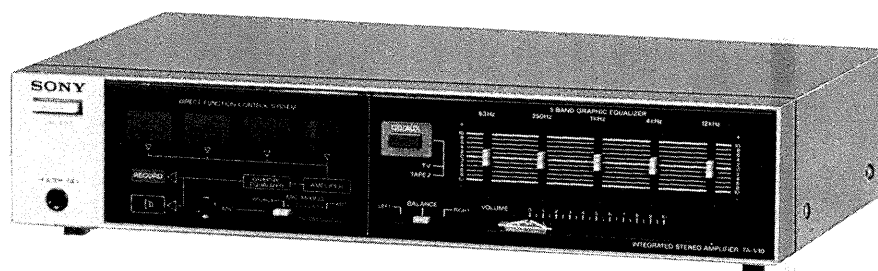
<u>Part No.</u>	<u>Description</u>
1-402-082-11	ANTENNA, FERRITE-ROD (LW,MW,SW)
1-501-224-00	ANTENNA, FEEDER
1-556-650-00	CORD, SPEAKER CONNECTION
1-557-307-11	CORD (WITH CONNECTOR)(5P:SYSCON 3)
1-557-308-21	CORD (WITH CONNECTOR)(13P:SYSCON 1)
1-557-357-21	CORD (WITH CONNECTOR)(10P:SYSCON 2)
•;1-560-938-00	PIN CONNECTOR 5P
3-312-970-00	(TC-V10)...SHEET, PROTECTION
3-701-630-00	BAG, POLYETHYLENE
3-701-806-00	ADAPTOR, 45, (E)
3-773-788-11	MANUAL, INSTRUCTION
3-795-835-11	(ST-V10S)...INSTRUCTION
4-855-809-00	(TA-V10)...SHEET, PROTECTION
4-875-574-00	(ST-V10S)...SHEET, PROTECTION
4-885-598-01	SCREWDRIVER, ADJUSTMENT
4-903-115-01	(SS-V10)...SHEET, PROTECTION
4-903-116-01	(SS-V10)...BAG, POLYETHYLENE
4-903-509-01	INDIVIDUAL CARTON
4-903-510-01	PARTITION (A)
4-903-516-01	CUSHION (RIGHT), UPPER
4-903-517-01	CUSHION (RIGHT), LOWER
4-903-519-01	CUSHION (LEFT), LOWER
4-903-522-01	CUSHION (LEFT), UPPER
4-903-529-01	PARTITION (B)
X-3701-105-0	ROD ASSY, CLEANING, HEAD

NOTE:

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

INTEGRATED STEREO AMPLIFIER

[TA-V10]



SECTION 1

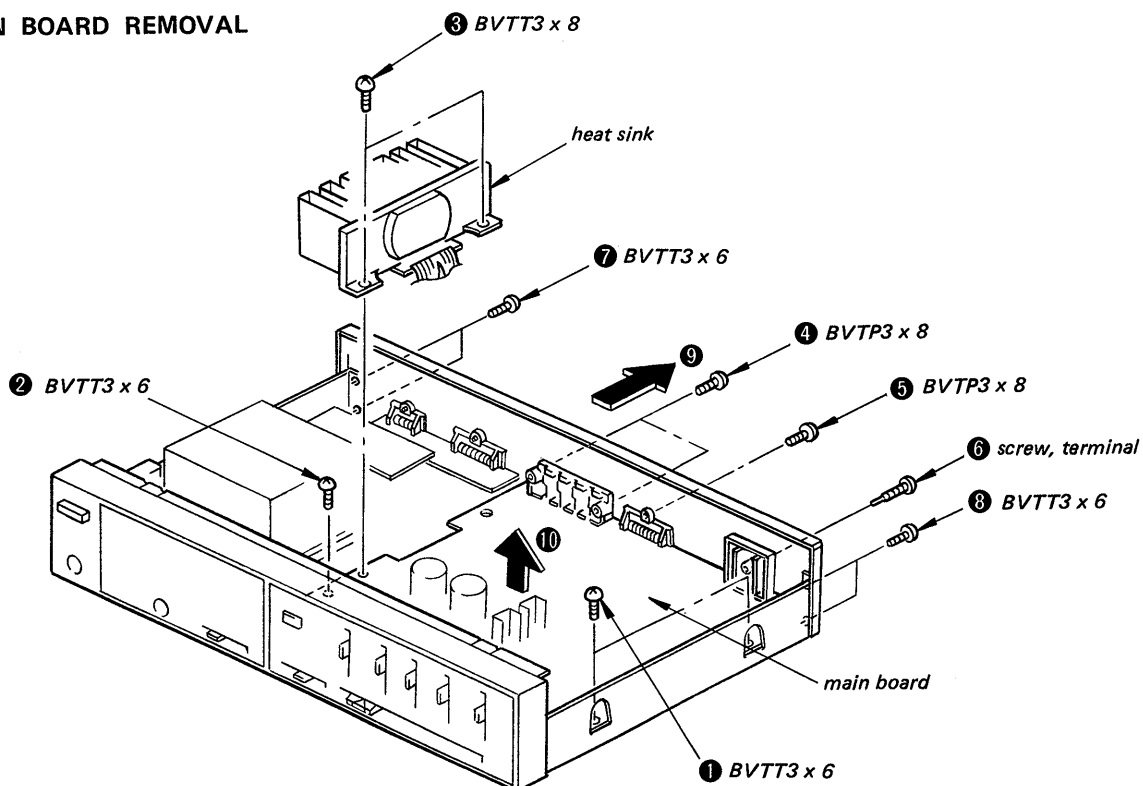
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

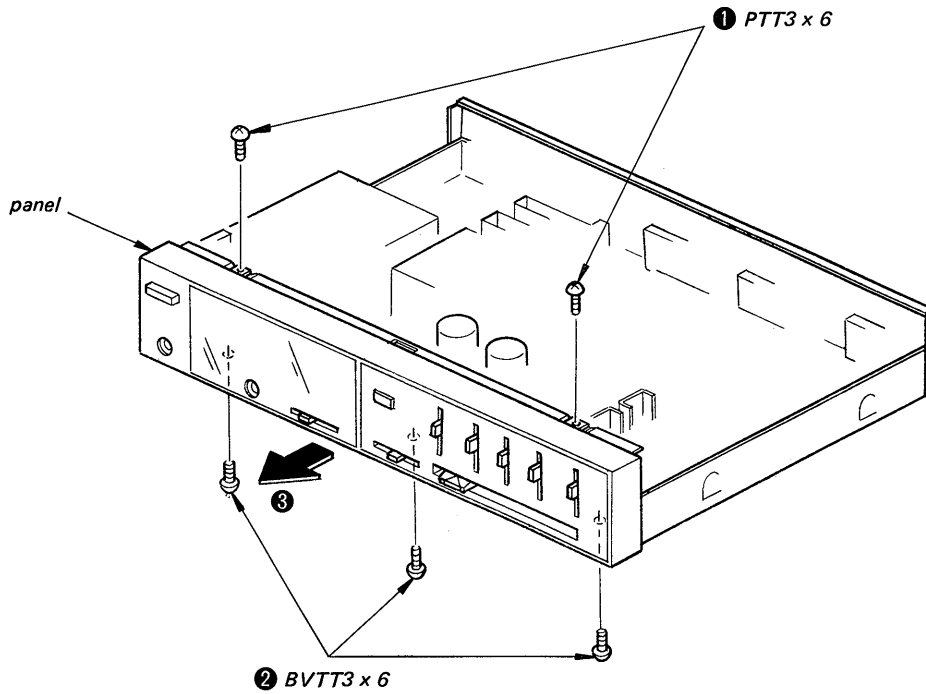
CASE REMOVAL

Remove case by taking out four screws.

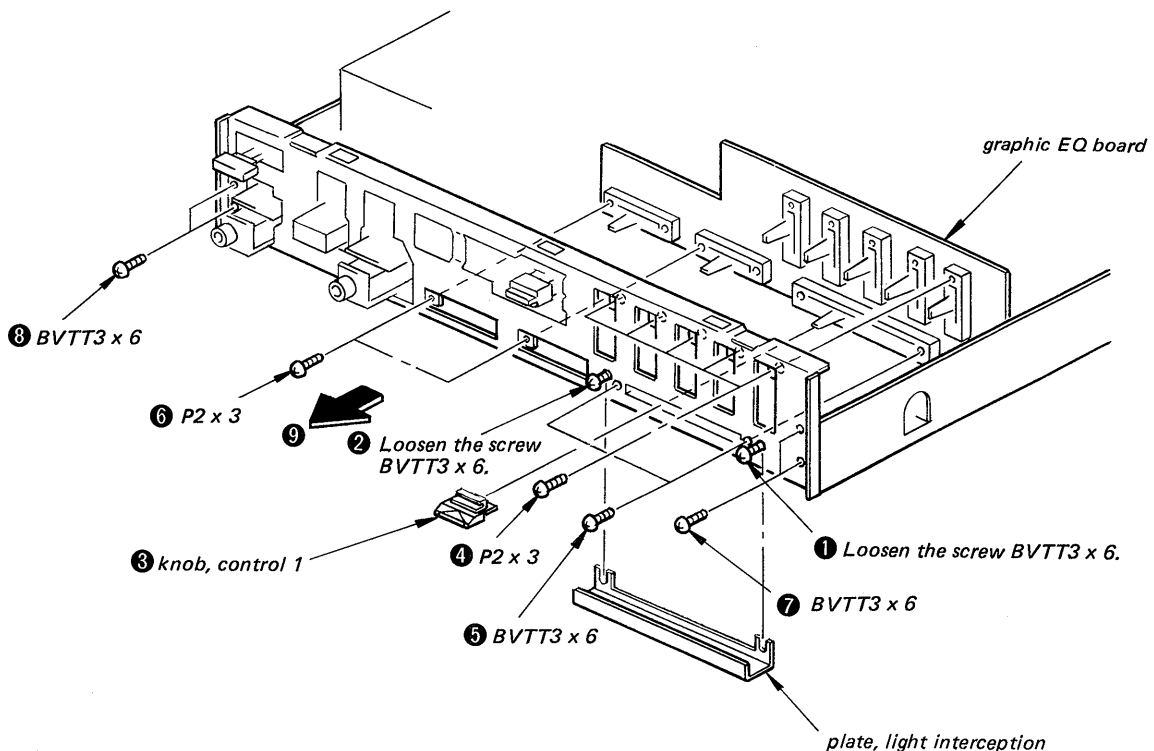
MAIN BOARD REMOVAL



PANEL REMOVAL

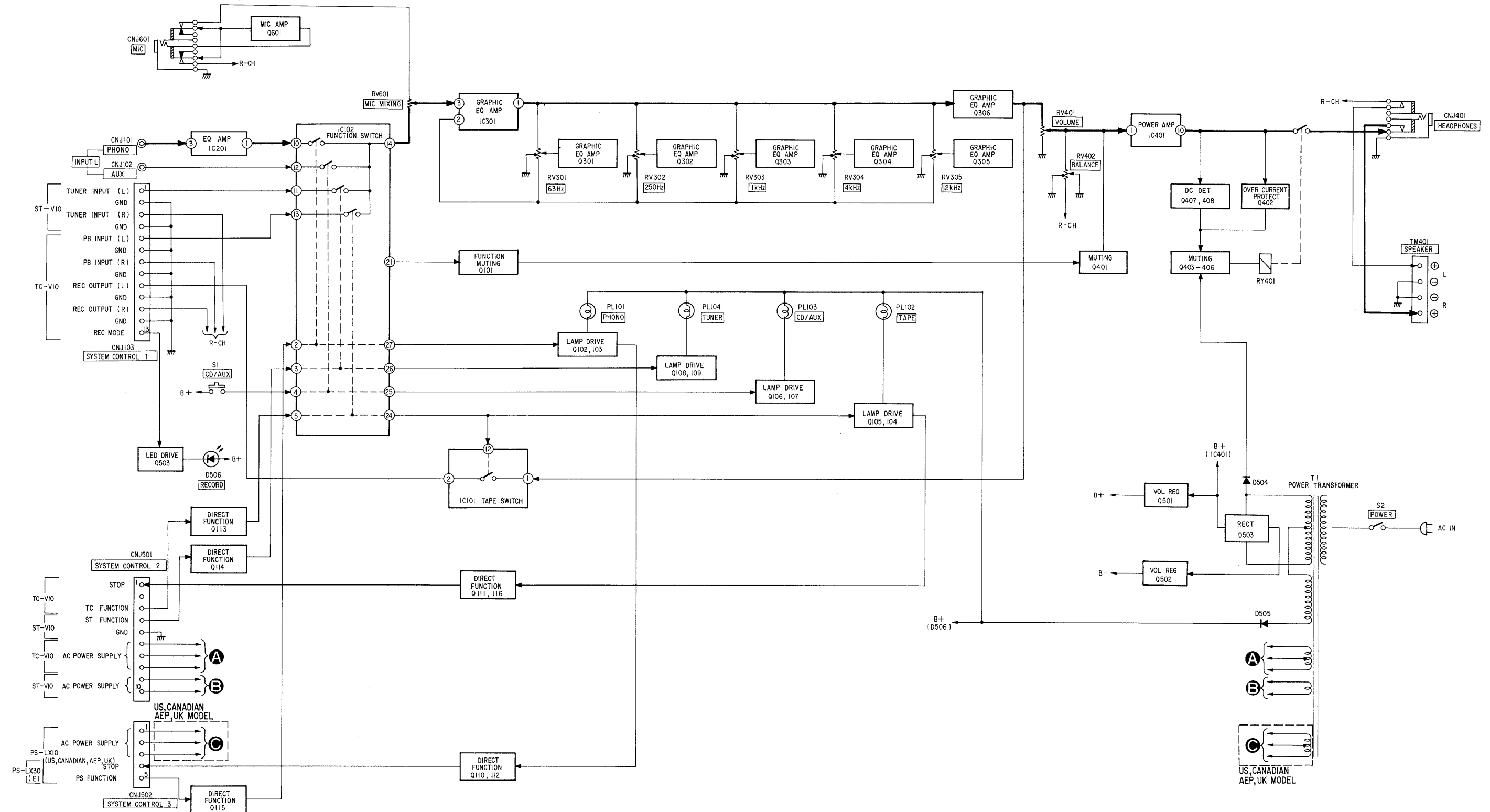


GRAPHIC EQ BOARD REMOVAL

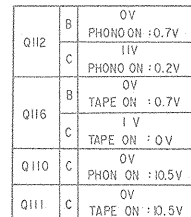


SECTION 2 DIAGRAMS

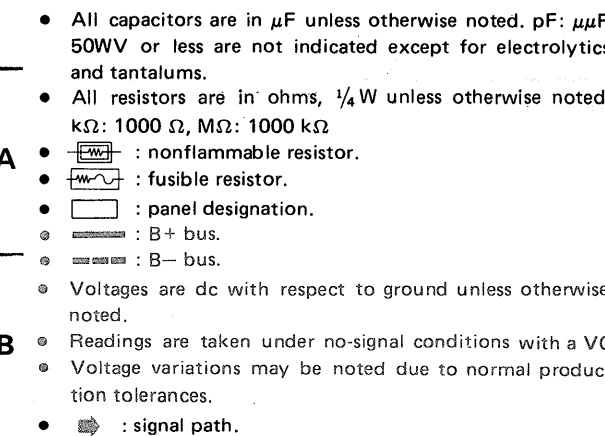
2-1. BLOCK DIAGRAM



- ○ — : parts extracted from the component side.
- : B + pattern
- : B $\rightarrow$ pattern
- : signal path
- : L-CH signal path
- : R-CH signal path

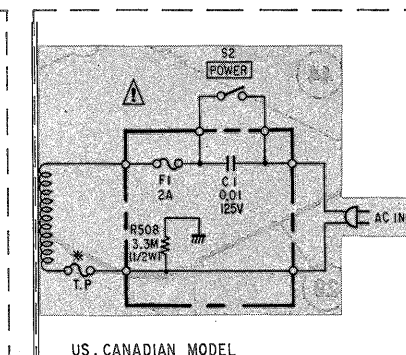
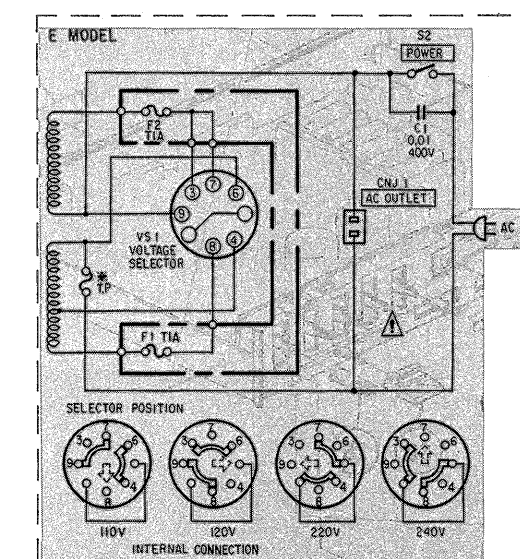


Note:



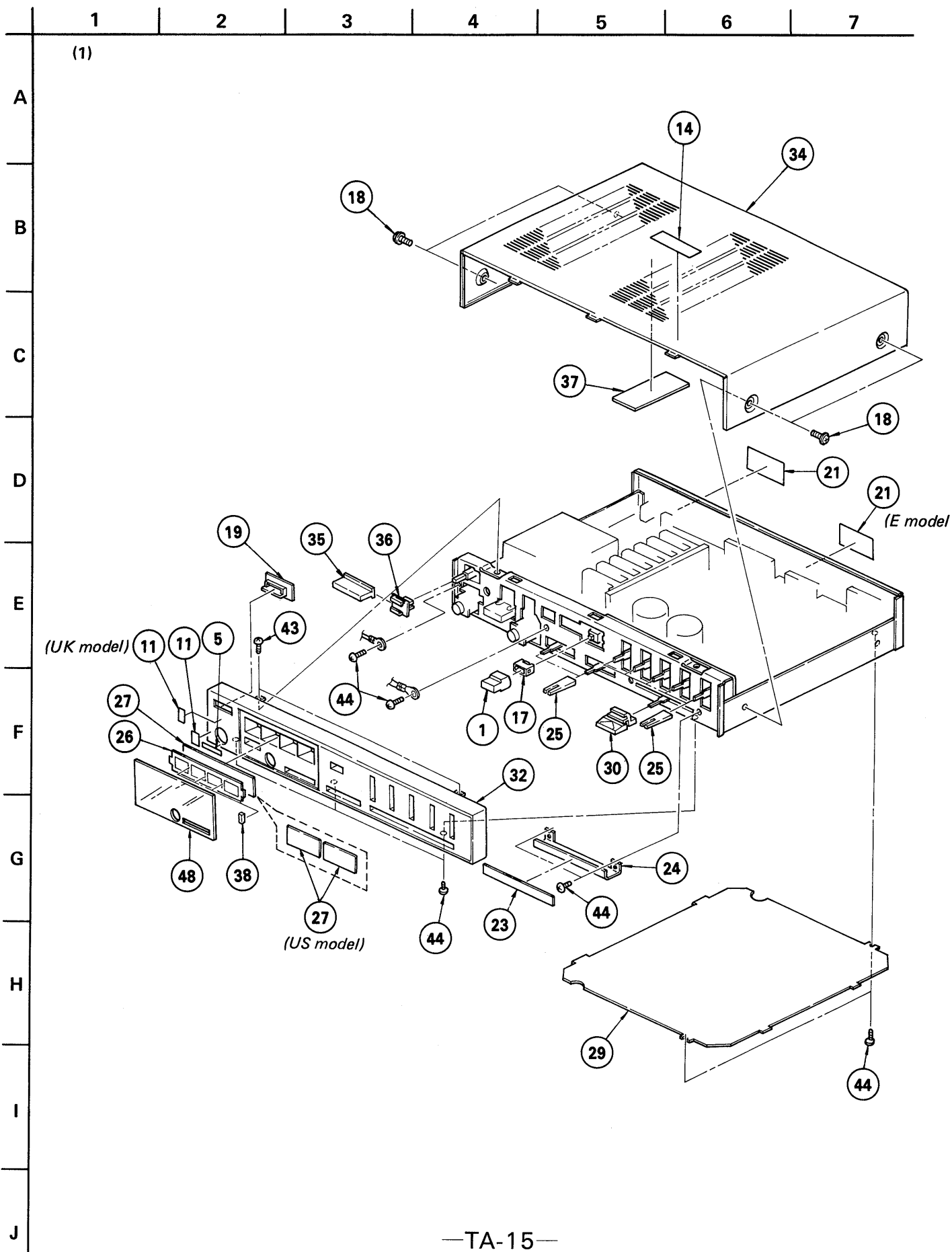
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

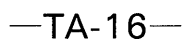
Note: Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



※ NOT REPLACEABLE: BUILT IN TRANSFORMER

SECTION 3
EXPLODED VIEWS AND PARTS LIST





GENERAL SECTION

No.	Part No.	Description
1	2-363-012-11	(SILVER)...KNOB (6X14), CORNER (CD/AUX)
1	2-363-012-31	(BLACK)...KNOB (6X14), CORNER (CD/AUX)
2	3-312-615-31	HEAT SINK
3	3-575-524-00	(AEP,UK)...COVER, POWER SWITCH
4	3-701-030-00	LABEL, SERIAL NUMBER
5	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)
6		
7	3-701-946-23	(US,Canadian)...LABEL, FUSE
8	3-703-044-26	(US,Canadian)...LABEL, CAUTION
9	3-703-244-00	(Canadian,AEP,UK)...BUSHING, CORD
9	3-703-571-00	(US,E).....BUSHING (S), CORD
10	3-703-473-00	SCREW, TERMINAL
11	3-703-710-11	STICKER, SONY SYMBOL (12)
12	4-812-134-00	RIVET NYLON, 3.5
13	4-875-455-01	(E)....COVER (DIA.20), CAPACITOR
14	4-861-045-00	LABEL, CAUTION
15	4-870-539-00	PLATE, GROUND
16	4-881-415-00	(US,Canadian,E)...HEAT SINK (A)
16	4-902-825-01	(AEP,UK).....HEAT SINK (LARGE)
17	4-881-725-00	RING (TACT), FLEXIBLE
18	4-886-821-11	(SILVER)...SCREW, M3 CASE
18	4-886-821-01	(BLACK)...SCREW, M3 CASE
19	4-886-976-00	ESCUTCHEON, POWER KNOB
20	4-888-047-12	(US,Canadian,AEP,UK)...PLATE, JACK
20	4-888-047-22	(E).....PLATE, JACK
21	4-902-807-01	(US).....LABEL, MODEL NUMBER
21	4-902-808-01	(Canadian)...LABEL, MODEL NUMBER
21	4-902-809-01	(AEP).....LABEL, MODEL NUMBER
21	4-902-810-01	(UK).....LABEL, MODEL NUMBER
21	4-902-811-01	(E).....LABEL, MODEL NUMBER
21	4-903-501-01	(G-AEP).....LABEL, MODEL NUMBER
22	4-902-812-01	HOLDER, FUSE PC BOARD
23	4-902-813-01	PLATE, BLIND, CONTROL
24	4-902-814-01	PLATE, LIGHT INTERCEPTION
25	4-902-815-01	(SILVER)...KNOB, (EQUALIZER, BALANCE, MIXING)
25	4-902-815-11	(BLACK)...KNOB, (EQUALIZER, BALANCE, MIXING)
26	4-902-816-01	PLATE (B), INDICATION
27	4-902-817-01	(Canadian,AEP,UK,E)...ILLUMINATOR
27	4-902-819-01	(US).....ILLUMINATOR
28	4-902-821-01	BRACKET, HEAT SINK
29	4-902-822-01	PLATE, BOTTOM
30	4-902-823-01	(SILVER)...KNOB, CONTROL (VOLUME)
30	4-902-823-11	(BLACK)...KNOB, CONTROL (VOLUME)
31	4-902-826-01	PANEL, SUB

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

GENERAL SECTION

No.	Part No.	Description
32	4-902-827-01	(SILVER)...PANEL
32	4-902-850-11	(BLACK)...PANEL
33	4-902-828-01	CHASSIS
34	4-902-829-01	(SILVER)...CASE
34	4-902-829-21	(BLACK)...CASE
35	4-902-830-01	(SILVER)...KNOB (POWER-S), T TYPE
35	4-902-830-14	(BLACK)...KNOB (POWER-S), T TYPE
36	4-902-831-01	JOINT (G), KNOB
37	9-911-842-99	(AEP,UK)...SHEET, HEAT INSULATING
38	4-902-847-01	PLATE, LIGHT INTERCEPTION
39	4-902-848-01	HOLDER (C), LED
40	7-621-255-15	SCREW +P 2X3
41	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
42	7-685-650-71	SCREW +BVTP 3X16 TYPE2 IT-3
43	7-685-751-09	SCREW +PTT 3X6 (S)
44	7-685-871-01	SCREW +BVTT 3X6 (S)
45	7-685-872-01	SCREW +BVTT 3X8 (S)
46	7-685-872-09	SCREW +BVTT 3X8 (S)
47	X-4886-405-1	(SILVER)...FOOT ASSY
47	X-4886-405-2	(BLACK)...FOOT ASSY
48	X-4902-802-1	(SILVER)...PLATE (A) ASSY, INDICATION
48	X-4902-802-3	(BLACK)...PLATE (A) ASSY, INDICATION

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	♣;1-508-810-00	14MM BASE POST
502	♣;1-508-811-00	BASE POST (14MM) 4P
503	♣;1-508-812-00	BASE POST (14MM) 5P
504	♣.1-526-565-00	(E3)...AC PLUG ADAPTOR
505	1-533-131-00	HOLDER, FUSE
506	♣;1-535-139-00	BASE POST 19MM (10MM PITCH) 2P
507	♣;1-535-140-00	BASE POST 19MM (10MM PITCH) 3P
508	♣.1-534-817-XX	(AEP).....CORD, POWER, EULO PLUG
508	♣.1-551-511-00	(Canadian)...CORD, POWER
508	♣.1-551-628-00	(US).....CORD, POWER
508	♣.1-551-472-00	(E).....CORD, POWER
508	♣.1-551-884-00	(UK).....CORD, POWER
509	♣;1-562-250-00	SOCKET, CONNECTOR 5P
510	♣;1-562-251-00	SOCKET, CONNECTOR 6P
511	♣;1-562-327-00	SOCKET, CONNECTOR 3P
512	♣;1-612-141-11	PC BOARD, MAIN
513	♣;1-612-142-11	PC BOARD, G-E
514	♣;1-612-143-11	PC BOARD, FUSE
515	♣;1-535-444-00	(AEP,UK)...TERMINAL
516	♣;1-612-144-11	PC BOARD, AUX SW
517	♣;1-612-145-11	PC BOARD, MIC JACK
518	♣;1-612-146-11	PC BOARD, LAMP
519	♣;1-612-147-11	PC BOARD, HP JACK
520	♣;1-612-148-11	PC BOARD, CONNECTOR
521	♣;1-612-149-11	PC BOARD, POWER IC
522	♣;A-4375-188-A	MOUNTED PCB, G-E
523	♣;A-4388-381-A	(G-AEP).....MOUNTED PCB, MAIN
523	♣;A-4388-382-A	(E).....MOUNTED PCB, MAIN
523	♣;A-4388-379-A	(US,Canadian)...MOUNTED PCB, MAIN
523	♣;A-4388-380-A	(AEP,UK).....MOUNTED PCB, MAIN
C1	♣.1-161-744-00	(AEP,UK,E).....CERAMIC 10000PF 400V
C1	♣.1-161-749-00	(US,Canadian)...CERAMIC 10000PF 125V
C102	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C103	1-123-380-00	ELECT 1MF 20% 50V
C104	1-123-380-00	ELECT 1MF 20% 50V
C105	1-123-380-00	ELECT 1MF 20% 50V
C106	1-123-382-00	ELECT 3.3MF 20% 50V
C107	1-161-494-00	CERAMIC 0.022MF 30% 25V
C108	1-161-494-00	CERAMIC 0.022MF 30% 25V
C111	1-161-494-00	CERAMIC 0.022MF 30% 25V
C113	1-161-494-00	CERAMIC 0.022MF 30% 25V
C115	1-161-494-00	CERAMIC 0.022MF 30% 25V
C116	1-123-356-00	(E).....ELECT 10MF 20% 50V
C117	1-161-494-00	CERAMIC 0.022MF 30% 25V
C152	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C153	1-123-380-00	ELECT 1MF 20% 50V
C154	1-123-380-00	ELECT 1MF 20% 50V

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA....: μA..., UPA....: μPA..., UPC....: μPC,
 UPD....: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C155	1-123-380-00	ELECT 1MF 20% 50V
C201	1-123-382-00	ELECT 3.3MF 20% 50V
C202	1-161-271-00	(US,Canadian,AEP,UK,E)...CERAMIC 100PF 5% 50V
C202	1-161-320-00	(G-AEP).....CERAMIC 560PF 10% 50V
C203	1-161-269-00	CERAMIC 68PF 5% 50V
C204	1-123-318-00	ELECT 33MF 20% 16V
C205	1-108-573-00	MYLAR 0.0056MF 5% 50V
C206	1-108-559-00	MYLAR 0.0015MF 5% 50V
C207	1-123-609-00	ELECT 0.33MF 20% 50V
C208	1-123-330-00	ELECT 22MF 20% 16V
C251	1-123-382-00	ELECT 3.3MF 20% 50V
C252	1-161-271-00	(US,Canadian,AEP,UK,E)...CERAMIC 100PF 5% 50V
C252	1-161-320-00	(G-AEP).....CERAMIC 560PF 10% 50V
C253	1-161-269-00	CERAMIC 68PF 5% 50V
C254	1-123-318-00	ELECT 33MF 20% 16V
C255	1-108-573-00	MYLAR 0.0056MF 5% 50V
C256	1-108-559-00	MYLAR 0.0015MF 5% 50V
C257	1-123-609-00	ELECT 0.33MF 20% 50V
C258	1-123-330-00	ELECT 22MF 20% 16V
C301	1-123-612-00	ELECT 2.2MF 20% 50V
C302	1-101-361-00	CERAMIC 150PF 5% 50V
C303	1-101-880-00	CERAMIC 47PF 5% 50V
C304	1-123-611-00	ELECT 1MF 20% 50V
C305	1-123-607-00	ELECT 0.1MF 20% 50V
C306	1-123-608-00	ELECT 0.22MF 20% 50V
C307	1-130-626-00	FILM 0.033MF 5% 50V
C308	1-130-630-00	FILM 0.068MF 5% 50V
C309	1-108-575-00	MYLAR 0.0068MF 5% 50V
C310	1-130-622-00	FILM 0.015MF 5% 50V
C311	1-108-561-00	MYLAR 0.0018MF 5% 50V
C312	1-108-572-00	MYLAR 0.0051MF 5% 50V
C313	1-102-116-00	CERAMIC 680PF 10% 50V
C314	1-123-612-00	ELECT 2.2MF 20% 50V
C315	1-123-611-00	ELECT 1MF 20% 50V
C351	1-123-612-00	ELECT 2.2MF 20% 50V
C352	1-101-361-00	CERAMIC 150PF 5% 50V
C353	1-101-880-00	CERAMIC 47PF 5% 50V
C354	1-123-611-00	ELECT 1MF 20% 50V
C355	1-123-607-00	ELECT 0.1MF 20% 50V
C356	1-123-608-00	ELECT 0.22MF 20% 50V
C357	1-130-626-00	FILM 0.033MF 5% 50V
C358	1-130-630-00	FILM 0.068MF 5% 50V
C359	1-108-575-00	MYLAR 0.0068MF 5% 50V

The components identified by shading and mark **♣** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **♣** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R201	1-247-171-00	CARBON	47K	5%	1/4W
R202	1-247-131-00	CARBON	1K	5%	1/4W
R203	1-246-539-00	CARBON	560K	5%	1/4W
R204	1-246-471-00	CARBON	820	5%	1/4W
R205	1-246-539-00	CARBON	560K	5%	1/4W
R206	1-247-171-00	CARBON	47K	5%	1/4W
R207	1-247-131-00	CARBON	1K	5%	1/4W
R208	1-247-179-00	CARBON	100K	5%	1/4W
R251	1-247-171-00	CARBON	47K	5%	1/4W
R252	1-247-131-00	CARBON	1K	5%	1/4W
R253	1-246-539-00	CARBON	560K	5%	1/4W
R254	1-246-471-00	CARBON	820	5%	1/4W
R255	1-246-539-00	CARBON	560K	5%	1/4W
R256	1-247-171-00	CARBON	47K	5%	1/4W
R257	1-247-131-00	CARBON	1K	5%	1/4W
R258	1-247-179-00	CARBON	100K	5%	1/4W
R301	1-247-879-00	CARBON	100K	5%	1/6W
R302	1-247-879-00	CARBON	100K	5%	1/6W
R303	1-247-831-00	CARBON	1K	5%	1/6W
R304	1-247-847-00	CARBON	4.7K	5%	1/6W
R305	1-247-847-00	CARBON	4.7K	5%	1/6W
R306	1-247-833-00	CARBON	1.2K	5%	1/6W
R307	1-247-871-00	CARBON	47K	5%	1/6W
R308	1-247-851-00	CARBON	6.8K	5%	1/6W
R309	1-247-821-00	CARBON	390	5%	1/6W
R310	1-247-833-00	CARBON	1.2K	5%	1/6W
R311	1-247-871-00	CARBON	47K	5%	1/6W
R312	1-247-851-00	CARBON	6.8K	5%	1/6W
R313	1-247-821-00	CARBON	390	5%	1/6W
R314	1-247-833-00	CARBON	1.2K	5%	1/6W
R315	1-247-871-00	CARBON	47K	5%	1/6W
R316	1-247-851-00	CARBON	6.8K	5%	1/6W
R317	1-247-821-00	CARBON	390	5%	1/6W
R318	1-247-833-00	CARBON	1.2K	5%	1/6W
R319	1-247-871-00	CARBON	47K	5%	1/6W
R320	1-247-851-00	CARBON	6.8K	5%	1/6W
R321	1-247-821-00	CARBON	390	5%	1/6W
R322	1-247-833-00	CARBON	1.2K	5%	1/6W
R323	1-247-871-00	CARBON	47K	5%	1/6W
R324	1-247-851-00	CARBON	6.8K	5%	1/6W
R325	1-247-821-00	CARBON	390	5%	1/6W
R326	1-247-831-00	CARBON	1K	5%	1/6W
R327	1-247-879-00	CARBON	100K	5%	1/6W
R328	1-247-843-00	CARBON	3.3K	5%	1/6W
R329	1-247-821-00	CARBON	390	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R330	1-247-895-00	CARBON	470K	5%	1/6W
R331	1-247-835-00	CARBON	1.5K	5%	1/6W
R332	1-247-835-00	CARBON	1.5K	5%	1/6W
R351	1-247-879-00	CARBON	100K	5%	1/6W
R352	1-247-879-00	CARBON	100K	5%	1/6W
R353	1-247-831-00	CARBON	1K	5%	1/6W
R354	1-247-847-00	CARBON	4.7K	5%	1/6W
R355	1-247-847-00	CARBON	4.7K	5%	1/6W
R356	1-247-833-00	CARBON	1.2K	5%	1/6W
R357	1-247-871-00	CARBON	47K	5%	1/6W
R358	1-247-851-00	CARBON	6.8K	5%	1/6W
R359	1-247-821-00	CARBON	390	5%	1/6W
R360	1-247-833-00	CARBON	1.2K	5%	1/6W
R361	1-247-871-00	CARBON	47K	5%	1/6W
R362	1-247-851-00	CARBON	6.8K	5%	1/6W
R363	1-247-821-00	CARBON	390	5%	1/6W
R364	1-247-833-00	CARBON	1.2K	5%	1/6W
R365	1-247-871-00	CARBON	47K	5%	1/6W
R366	1-247-851-00	CARBON	6.8K	5%	1/6W
R367	1-247-821-00	CARBON	390	5%	1/6W
R368	1-247-833-00	CARBON	1.2K	5%	1/6W
R369	1-247-871-00	CARBON	47K	5%	1/6W
R370	1-247-851-00	CARBON	6.8K	5%	1/6W
R371	1-247-821-00	CARBON	390	5%	1/6W
R372	1-247-833-00	CARBON	1.2K	5%	1/6W
R373	1-247-871-00	CARBON	47K	5%	1/6W
R374	1-247-851-00	CARBON	6.8K	5%	1/6W
R375	1-247-821-00	CARBON	390	5%	1/6W
R376	1-247-831-00	CARBON	1K	5%	1/6W
R377	1-247-879-00	CARBON	100K	5%	1/6W
R378	1-247-843-00	CARBON	3.3K	5%	1/6W
R379	1-247-821-00	CARBON	390	5%	1/6W
R380	1-247-895-00	CARBON	470K	5%	1/6W
R381	1-247-835-00	CARBON	1.5K	5%	1/6W
R382	1-247-835-00	CARBON	1.5K	5%	1/6W
R401	1-247-839-00	CARBON	2.2K	5%	1/6W
R402	1-247-131-00	CARBON	1K	5%	1/4W
R403	1-247-131-00	CARBON	1K	5%	1/4W
R404	1-247-173-00	CARBON	56K	5%	1/4W
R405	1-247-125-00	CARBON	560	5%	1/4W
R406	1-247-173-00	CARBON	56K	5%	1/4W
R407	1-244-881-00	CARBON	2.2K	5%	1/2W
R408	1-244-881-00	CARBON	2.2K	5%	1/2W
R409	△.1-247-107-00	CARBON	100	5%	1/4W F
R410	△.1-247-107-00	CARBON	100	5%	1/4W F

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA.... : μA..., UPA.... : μPA..., UPC.... : μPC,
UPD.... : μPD...

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R411	1-244-873-00	CARBON	1K	5%	1/2W	
R412	1-244-873-00	CARBON	1K	5%	1/2W	
R413	1-217-151-00	METAL PLATE	0.22	10%	2W	
R414	1-247-131-00	CARBON	1K	5%	1/4W	
R415	1-247-159-00	CARBON	15K	5%	1/4W	
R416	1-247-167-00	CARBON	33K	5%	1/4W	
R417	1-247-192-00	CARBON	10	5%	1/2W	F
R418	1-247-192-00	CARBON	10	5%	1/2W	F
R419	1-247-167-00	CARBON	33K	5%	1/4W	
R420	1-246-533-00	CARBON	330K	5%	1/4W	
R421	1-246-535-00	CARBON	390K	5%	1/4W	
R422	1-246-533-00	CARBON	330K	5%	1/4W	
R423	1-247-083-00	CARBON	10	5%	1/4W	
R424	1-246-535-00	CARBON	390K	5%	1/4W	
R425	1-247-192-00	(G-AEP)...CARBON	10	5%	1/2W	F
R426	1-247-228-00	CARBON	330	5%	1/2W	F
R427	1-247-224-00	(AEP,UK).....CARBON	220	5%	1/2W	F
R427	1-247-228-00	(US,Canadian,E)...CARBON	330	5%	1/2W	F
R428	1-247-173-00	CARBON	56K	5%	1/4W	
R429	1-247-167-00	CARBON	33K	5%	1/4W	
R430	1-247-173-00	CARBON	56K	5%	1/4W	
R451	1-247-839-00	CARBON	2.2K	5%	1/6W	
R452	1-247-131-00	CARBON	1K	5%	1/4W	
R453	1-247-131-00	CARBON	1K	5%	1/4W	
R454	1-247-173-00	CARBON	56K	5%	1/4W	
R455	1-247-125-00	CARBON	560	5%	1/4W	
R456	1-247-173-00	CARBON	56K	5%	1/4W	
R457	1-244-881-00	CARBON	2.2K	5%	1/2W	
R458	1-244-881-00	CARBON	2.2K	5%	1/2W	
R463	1-217-151-00	METAL PLATE	0.22	10%	2W	
R464	1-247-131-00	CARBON	1K	5%	1/4W	
R465	1-247-159-00	CARBON	15K	5%	1/4W	
R466	1-247-167-00	CARBON	33K	5%	1/4W	
R467	1-247-192-00	CARBON	10	5%	1/2W	F
R468	1-247-192-00	CARBON	10	5%	1/2W	F
R475	1-247-192-00	(G-AEP)....CARBON	10	5%	1/2W	F
R476	1-247-228-00	CARBON	330	5%	1/2W	F
R478	1-247-173-00	CARBON	56K	5%	1/4W	
R501	1-247-083-00	CARBON	10	5%	1/4W	F
R502	1-247-147-00	CARBON	4.7K	5%	1/4W	
R503	1-247-091-00	CARBON	22	5%	1/4W	F
R504	1-247-147-00	CARBON	4.7K	5%	1/4W	
R505	1-247-179-00	CARBON	100K	5%	1/4W	
R506	1-244-865-00	CARBON	470	5%	1/2W	
R507	1-247-071-00	(US,Canadian)...CARBON	1	5%	1/4W	F

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R508	1-202-725-00	(US,Canadian)...SOLID	3.3M	10%	1/2W	
R509	1-217-473-00	FUSIBLE	2.2	5%	1W	F
R510	1-217-473-00	FUSIBLE	2.2	5%	1W	F
R511	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R512	1-212-935-11	(US,Canadian,AEP,UK)...FUSIBLE	1.1	5%	1/2W	F
R513	1-212-935-11	(US,Canadian,AEP,UK)...FUSIBLE	1.1	5%	1/2W	F
R551	1-247-083-00	CARBON	10	5%	1/4W	F
R552	1-247-147-00	CARBON	4.7K	5%	1/4W	
R553	1-247-091-00	CARBON	22	5%	1/4W	F
R601	1-247-879-00	CARBON	100K	5%	1/6W	
R602	1-247-879-00	CARBON	100K	5%	1/6W	
R603	1-247-831-00	CARBON	1K	5%	1/6W	
R604	1-247-855-00	CARBON	10K	5%	1/6W	
R605	1-247-865-00	CARBON	27K	5%	1/6W	
R606	1-247-879-00	CARBON	100K	5%	1/6W	
R607	1-247-839-00	CARBON	2.2K	5%	1/6W	
RV301	1-230-388-11	RES, VAR, SLIDE	250K/250K(63Hz)			
RV302	1-230-388-11	RES, VAR, SLIDE	250K/250K(250Hz)			
RV303	1-230-388-11	RES, VAR, SLIDE	250K/250K(1KHz)			
RV304	1-230-388-11	RES, VAR, SLIDE	250K/250K(4KHz)			
RV305	1-230-388-11	RES, VAR, SLIDE	250K/250K(12KHz)			
RV401	1-228-839-00	RES, VAR, SLIDE	100K/100K(VOLUME)			
RV402	1-230-389-11	RES, VAR, SLIDE	250K(BALANCE)			
RV601	1-230-376-11	RES, VAR, SLIDE	100K/100K(MIC MIXING)			
RY401	1-515-503-00	RELAY				
S1	1-552-412-00	SWITCH, KEY BOARD				
S2	1-553-318-00	SWITCH, PUSH (1 KEY)(AC POWER)				
T1	1-447-784-11	(US,Canadian)...TRANSFORMER, POWER				
T1	1-447-785-11	(E).....TRANSFORMER, POWER				
T1	1-447-786-11	(AEP,UK).....TRANSFORMER, POWER				
TM401	1-536-705-00	TERMINAL BOARD (SP)				
VS1	1-526-576-51	(E)....SELECTOR, POWER VOLTAGE				

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA....: μA..., UPA....: μPA..., UPC....: μPC,
UPD....: μPD....

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C360	1-130-622-00	FILM	0.015MF	5%	50V
C361	1-108-561-00	MYLAR	0.0018MF	5%	50V
C362	1-108-572-00	MYLAR	0.0051MF	5%	50V
C363	1-102-116-00	CERAMIC	680PF	10%	50V
C364	1-123-612-00	ELECT	2.2MF	20%	50V
C365	1-123-611-00	ELECT	1MF	20%	50V
C401	1-123-380-00	ELECT	1MF	20%	50V
C402	1-123-381-00	ELECT	2.2MF	20%	50V
C403	1-161-319-00	CERAMIC	470PF	10%	50V
C404	1-123-294-00	ELECT	47MF	20%	6.3V
C405	1-123-512-00	ELECT	47MF	20%	50V
C406	1-123-513-00	ELECT	100MF	20%	50V
C407	1-123-356-00	ELECT	10MF	20%	50V
C408	1-108-244-00	MYLAR	0.033MF	10%	50V
C409	1-123-356-00	ELECT	10MF	20%	50V
C410	1-123-465-00	ELECT	220MF	20%	6.3V
C411	1-108-244-00	MYLAR	0.033MF	10%	50V
C412	1-108-239-00	(G-AEP)...MYLAR	0.01MF	10%	50V
C413	1-123-307-00	ELECT	100MF	20%	6.3V
C414	1-108-244-00	(AEP,UK).....MYLAR	0.033MF	10%	50V
C414	1-108-251-00	(US,Canadian,E)...MYLAR	0.1MF		50V
C415	1-108-246-00	MYLAR	0.047MF	10%	50V
C418	1-161-317-00	(G-AEP)...CERAMIC	330PF	10%	50V
C419	1-161-326-00	(G-AEP)...CERAMIC	0.0022MF	30%	50V
C451	1-123-380-00	ELECT	1MF	20%	50V
C452	1-123-381-00	ELECT	2.2MF	20%	50V
C453	1-161-319-00	CERAMIC	470PF	10%	50V
C454	1-123-294-00	ELECT	47MF	20%	6.3V
C455	1-123-512-00	ELECT	47MF	20%	50V
C458	1-108-244-00	MYLAR	0.033MF	10%	50V
C462	1-108-239-00	(G-AEP)...MYLAR	0.01MF	10%	50V
C468	1-161-317-00	(G-AEP)...CERAMIC	330PF	10%	50V
C501	1-123-738-00	(US,Canadian,AEP,UK)...ELECT	4700MF	20%	35V
C501	1-124-362-00	(E).....ELECT	4700MF	20%	42V
C502	1-123-333-00	ELECT	100MF	20%	16V
C503	1-123-330-00	ELECT	22MF	20%	16V
C504	1-123-332-00	ELECT	47MF	20%	16V
C505	1-161-326-00	(G-AEP)...CERAMIC	0.0022MF	30%	50V
C506	1-123-380-00	ELECT	1MF	20%	50V
C507	1-123-487-00	ELECT	470MF	20%	16V
C508	1-102-394-00	CERAMIC	0.01+0.01MF		250V
C551	1-123-738-00	(US,Canadian,AEP,UK)...ELECT	4700MF	20%	35V
C551	1-124-362-00	(E).....ELECT	4700MF	20%	42V

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- All resistors are in ohms.
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COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA...: μA..., UPA...: μPA..., UPC...: μPC,
 UPD...: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C552	1-123-333-00	ELECT	100MF	20%	16V
C553	1-123-330-00	ELECT	22MF	20%	16V
C554	1-123-332-00	ELECT	47MF	20%	16V
C555	1-161-326-00	(G-AEP)...CERAMIC	0.0022MF	30%	50V
C601	1-123-609-00	ELECT	0.33MF	20%	50V
C602	1-102-074-00	CERAMIC	0.001MF	10%	50V
C603	1-123-618-00	ELECT	22MF	20%	6.3V
C604	1-123-609-00	ELECT	0.33MF	20%	50V
C605	1-102-123-00	CERAMIC	0.0033MF	10%	50V
C606	1-108-244-00	MYLAR	0.033MF	10%	50V
CNJ1	1-526-609-00	(E)...CONNECTOR, AC OUTLET			
CNJ101	1-507-788-00	JACK, PIN 4P (PHONO-L)			
CNJ102	1-507-788-00	JACK, PIN 4P (AUX-L)			
CNJ103	1-562-068-00	SOCKET, CONNECTOR 13P(SYSTEM CONTROL 1)			
CNJ151	1-507-788-00	JACK, PIN 4P (PHONO-R)			
CNJ152	1-507-788-00	JACK, PIN 4P (AUX-R)			
CNJ401	1-507-931-11	JACK, LARGE TYPE (HEADPHONES)			
CNJ501	1-562-479-11	SOCKET, CONNECTOR 10P(SYSTEM CONTROL 2)			
CNJ502	1-562-067-00	SOCKET, CONNECTOR 5P (SYSTEM CONTROL 3)			
CNJ601	1-507-930-11	JACK, LARGE TYPE (MIC)			
D401	8-719-107-57	DIODE 1S953-7			
D402	8-719-107-57	DIODE 1S953-7			
D403	8-719-107-57	DIODE 1S953-7			
D451	8-719-107-57	DIODE 1S953-7			
D501	8-719-910-18	DIODE HZ11C2L			
D502	8-719-910-18	DIODE HZ11C2L			
D503	1-8-719-300-57	DIODE RB402			
D504	8-719-200-02	DIODE 10E-2			
D505	8-719-200-02	DIODE 10E-2			
D506	8-719-300-79	DIODE SEL1213C			
F1	1-532-078-00	(AEP,UK,E).....FUSE (1A TIME-LAG)			
F1	1-532-578-00	(US,Canadian)...FUSE, GLASS TUBE (2A)			
F2	1-532-078-00	(E)....FUSE (1A TIME-LAG)			
IC101	8-759-800-37	IC LC4066BH			
IC102	8-759-800-33	IC LC7815H			
IC201	8-759-601-02	IC M5218P			
IC301	8-759-601-02	IC M5218P			
IC401	8-749-941-41	(AEP,UK).....IC STK4141II			
IC401	8-749-941-51	(US,Canadian,E)...IC STK4151II			
L401	1-420-872-00	COIL, AIR CORE			
L451	1-420-872-00	COIL, AIR CORE			
PL101	1-518-527-51	LAMP, PILOT			
PL102	1-518-527-51	LAMP, PILOT			
PL103	1-518-527-51	LAMP, PILOT			
PL104	1-518-527-51	LAMP, PILOT			

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
APS501	1-532-675-00	(AEP,UK)...LINK, IC
Q101	8-729-117-54	TRANSISTOR 2SA1175
Q102	8-729-245-83	TRANSISTOR 2SC2458
Q103	8-729-245-83	TRANSISTOR 2SC2458
Q104	8-729-245-83	TRANSISTOR 2SC2458
Q105	8-729-245-83	TRANSISTOR 2SC2458
Q106	8-729-245-83	TRANSISTOR 2SC2458
Q107	8-729-245-83	TRANSISTOR 2SC2458
Q108	8-729-245-83	TRANSISTOR 2SC2458
Q109	8-729-245-83	TRANSISTOR 2SC2458
Q110	8-729-117-54	TRANSISTOR 2SA1175
Q111	8-729-117-54	TRANSISTOR 2SA1175
Q112	8-729-245-83	TRANSISTOR 2SC2458
Q113	8-729-117-54	TRANSISTOR 2SA1175
Q114	8-729-117-54	TRANSISTOR 2SA1175
Q115	8-729-117-54	TRANSISTOR 2SA1175
Q116	8-729-245-83	TRANSISTOR 2SC2458
Q301	8-729-245-83	TRANSISTOR 2SC2458
Q302	8-729-245-83	TRANSISTOR 2SC2458
Q303	8-729-245-83	TRANSISTOR 2SC2458
Q304	8-729-245-83	TRANSISTOR 2SC2458
Q305	8-729-245-83	TRANSISTOR 2SC2458
Q306	8-729-245-83	TRANSISTOR 2SC2458
Q351	8-729-245-83	TRANSISTOR 2SC2458
Q352	8-729-245-83	TRANSISTOR 2SC2458
Q353	8-729-245-83	TRANSISTOR 2SC2458
Q354	8-729-245-83	TRANSISTOR 2SC2458
Q355	8-729-245-83	TRANSISTOR 2SC2458
Q356	8-729-245-83	TRANSISTOR 2SC2458
Q401	8-729-201-04	TRANSISTOR 2SC2878
Q402	8-729-204-91	TRANSISTOR 2SA1049
Q403	8-729-245-83	TRANSISTOR 2SC2458
Q404	8-729-117-54	TRANSISTOR 2SA1175
Q405	8-729-245-83	TRANSISTOR 2SC2458
Q406	8-729-245-83	TRANSISTOR 2SC2458
Q407	8-729-117-54	TRANSISTOR 2SA1175
Q408	8-729-117-54	TRANSISTOR 2SA1175
Q451	8-729-201-04	TRANSISTOR 2SC2878
Q452	8-729-204-91	TRANSISTOR 2SA1049
Q501	8-729-180-93	TRANSISTOR 2SD809
Q502	8-729-173-13	TRANSISTOR 2SB731
Q503	8-729-245-83	TRANSISTOR 2SC2458
Q601	8-729-245-83	TRANSISTOR 2SC2458

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA....: μA..., UPA....: μPA..., UPC....: μPC,
 UPD....: μPD...

ELECTRICAL PARTS

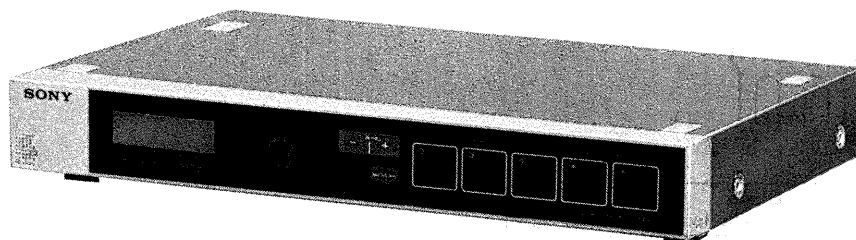
Ref.No.	Part No.	Description			
R102	1-246-465-00	(G-AEP)...CARBON	470	5%	1/4W
R103	1-246-545-00	CARBON	1M	5%	1/4W
R104	1-247-147-00	CARBON	4.7K	5%	1/4W
R105	1-246-545-00	CARBON	1M	5%	1/4W
R106	1-247-135-00	CARBON	1.5K	5%	1/4W
R107	1-247-135-00	CARBON	1.5K	5%	1/4W
R108	1-247-135-00	CARBON	1.5K	5%	1/4W
R109	1-246-539-00	CARBON	560K	5%	1/4W
R110	1-246-539-00	CARBON	560K	5%	1/4W
R111	1-246-539-00	CARBON	560K	5%	1/4W
R112	1-247-171-00	CARBON	47K	5%	1/4W
R113	1-246-505-00	CARBON	22K	5%	1/4W
R114	1-246-505-00	CARBON	22K	5%	1/4W
R115	1-247-179-00	CARBON	100K	5%	1/4W
R116	1-247-139-00	CARBON	2.2K	5%	1/4W
R117	1-246-479-00	CARBON	1.8K	5%	1/4W
R118	1-247-155-00	CARBON	10K	5%	1/4W
R119	1-246-495-00	CARBON	8.2K	5%	1/4W
R120	1-247-155-00	CARBON	10K	5%	1/4W
R121	1-246-495-00	CARBON	8.2K	5%	1/4W
R122	1-247-155-00	CARBON	10K	5%	1/4W
R123	1-246-495-00	CARBON	8.2K	5%	1/4W
R124	1-246-529-00	CARBON	220K	5%	1/4W
R125	1-247-155-00	CARBON	10K	5%	1/4W
R126	1-246-495-00	CARBON	8.2K	5%	1/4W
R127	1-246-495-00	CARBON	8.2K	5%	1/4W
R128	1-246-495-00	CARBON	8.2K	5%	1/4W
R129	1-246-495-00	CARBON	8.2K	5%	1/4W
R130	1-247-155-00	CARBON	10K	5%	1/4W
R131	1-247-155-00	CARBON	10K	5%	1/4W
R132	1-247-179-00	CARBON	100K	5%	1/4W
R133	1-247-155-00	CARBON	10K	5%	1/4W
R134	1-247-155-00	CARBON	10K	5%	1/4W
R135	1-247-155-00	CARBON	10K	5%	1/4W
R136	1-247-179-00	CARBON	100K	5%	1/4W
R138	1-247-155-00	CARBON	10K	5%	1/4W
R139	1-247-155-00	CARBON	10K	5%	1/4W
R140	1-247-155-00	CARBON	10K	5%	1/4W
R152	1-246-465-00	(G-AEP)...CARBON	470	5%	1/4W
R153	1-246-545-00	CARBON	1M	5%	1/4W
R154	1-247-147-00	CARBON	4.7K	5%	1/4W
R156	1-247-135-00	CARBON	1.5K	5%	1/4W
R157	1-247-135-00	CARBON	1.5K	5%	1/4W
R158	1-247-135-00	CARBON	1.5K	5%	1/4W
R159	1-246-539-00	CARBON	560K	5%	1/4W
R160	1-246-539-00	CARBON	560K	5%	1/4W
R161	1-246-539-00	CARBON	560K	5%	1/4W

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

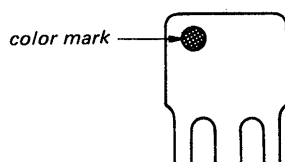
FM STEREO/FM-AM TUNER

[ST-V10S]



SERVICEING NOTE**• IF OFFSET ADJUSTMENT (FM IF)****Diode Installations Depending on the Ceramic Filters
(CF102, 103)**

This set employs three ceramic filters (CF102, 103) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by diodes (D405, 408) installation is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



Ceramic filter		Diode installation		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	D405	D408	
White	10.750	X	○	10.750
Red	10.700	X	X	10.700
Black	10.650	○	X	10.650

○: installed
X: not installed

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency should be used for CF102 and CF103.

SECTION 2 DISASSEMBLY

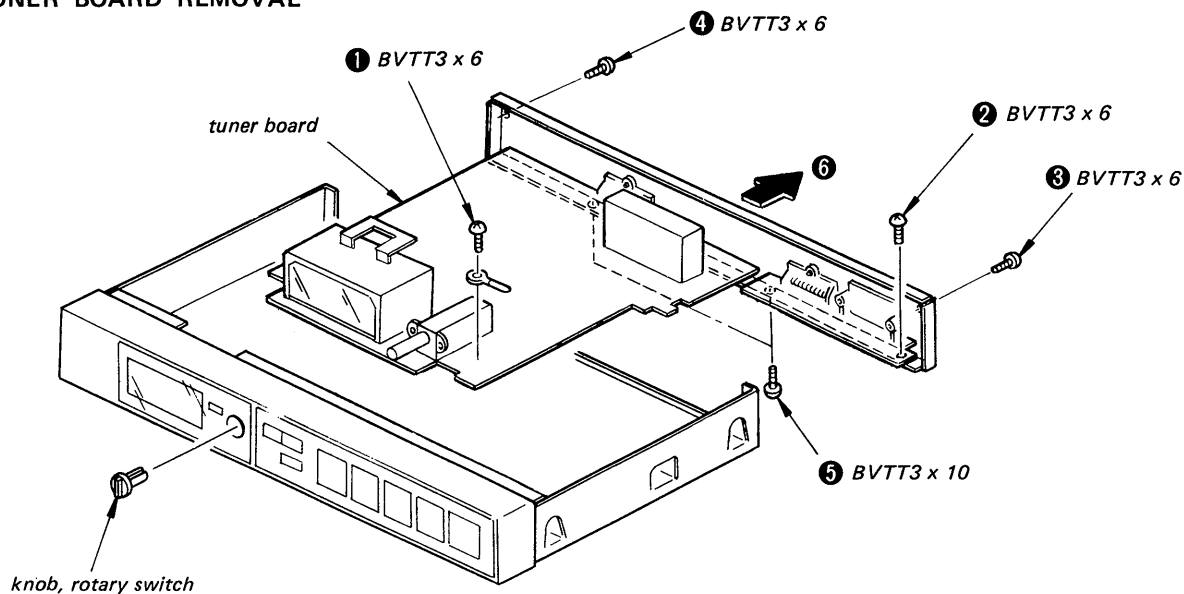
Note: Follow the disassembly procedure in the numerical order given.

CASE REMOVAL

Remove case by taking out four screws.

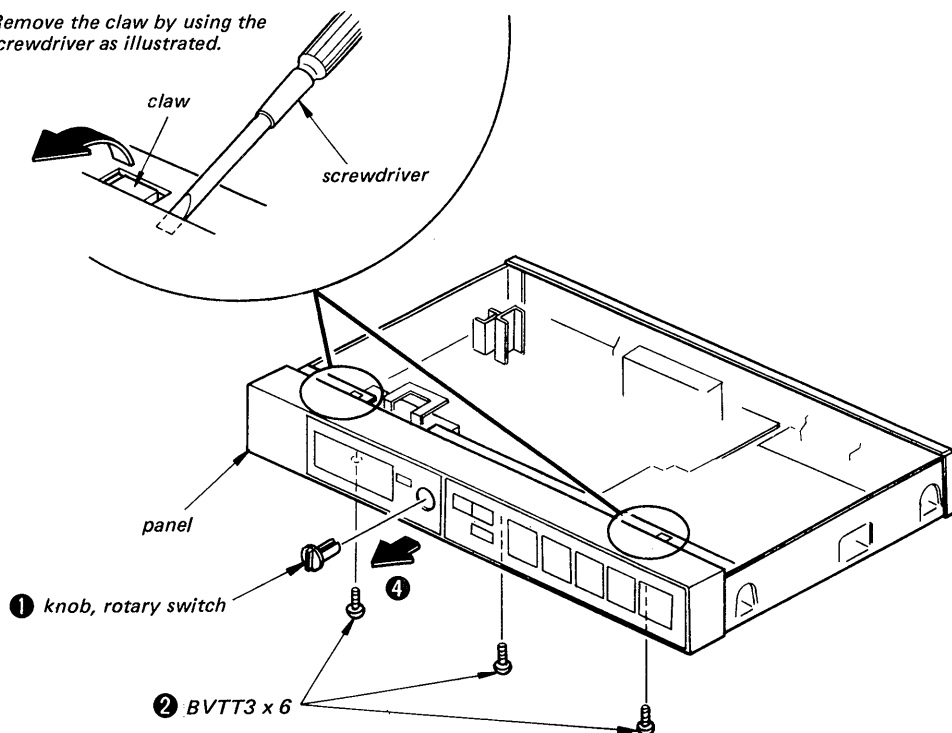


TUNER BOARD REMOVAL



PANEL REMOVAL

Remove the claw by using the screwdriver as illustrated.



SECTION 3 ADJUSTMENTS

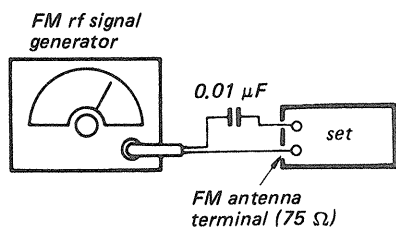
FM SECTION

FM Discriminator Alignment

Setting:

BAND SELECTOR switch FM

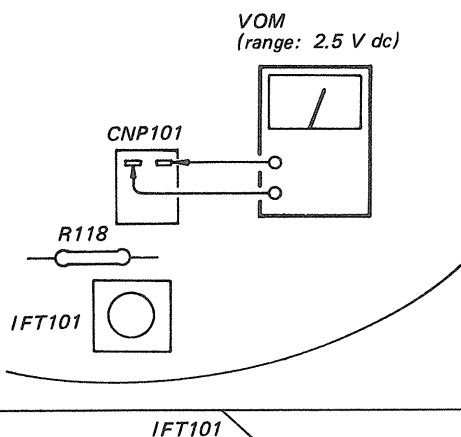
Procedure:



Carrier frequency: 98 MHz
Output level: 1 mV (60 dB)
Modulation: 1 kHz, 75 kHz deviation (100%)

1. Tune the set to 98 MHz.
2. Adjust IFT101 for 0 V reading on the VOM. NULL Adjustment

Note: When the ceramic filter is replaced, these adjustments should be made (See page ST-2).

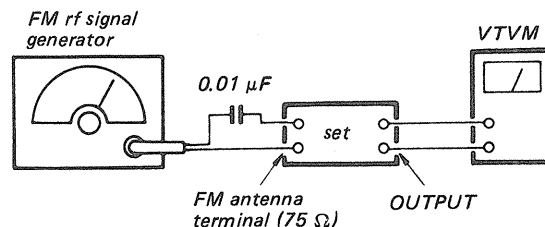


FM Muting Level Adjustment

Setting:

BAND SELECTOR switch FM

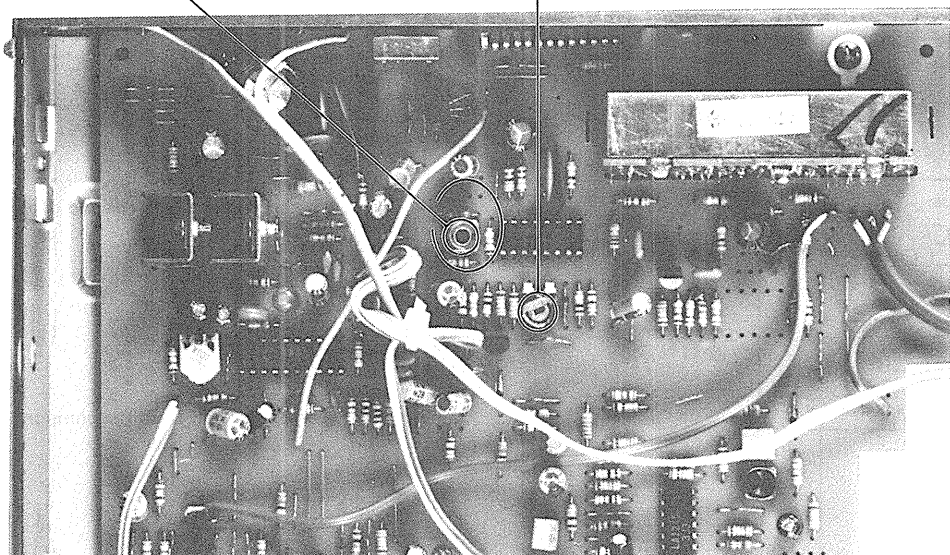
Procedure:



Carrier frequency: 98 MHz
Modulation: 1 kHz, 75 kHz deviation (100%)
Output level: 31.6 μV (30 dB)

1. Tune the set to 98 MHz.
2. Adjust RT101 for a point the VTVM reading just drops to 0 V.

RT101

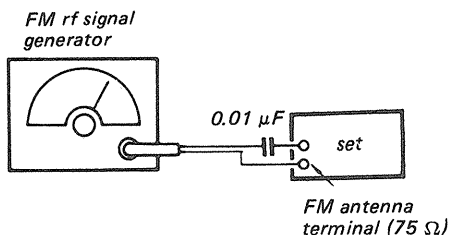


VCO Adjustment

Setting: BAND SELECTOR switch: FM

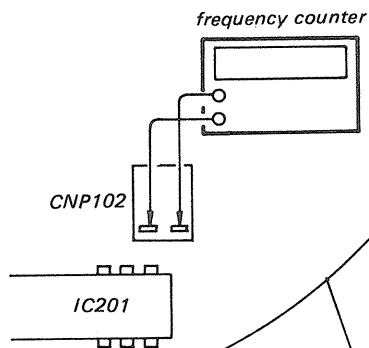
A) Regular Method

Procedure:



Carrier frequency: 98 MHz
Modulation: no modulation
Output level: 1 mV (60 dB)

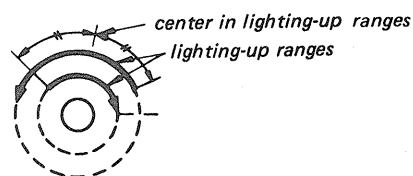
1. Tune the set to 98 MHz.
2. Adjust RT201 for 19 kHz $\pm$ 50 Hz on the counter.



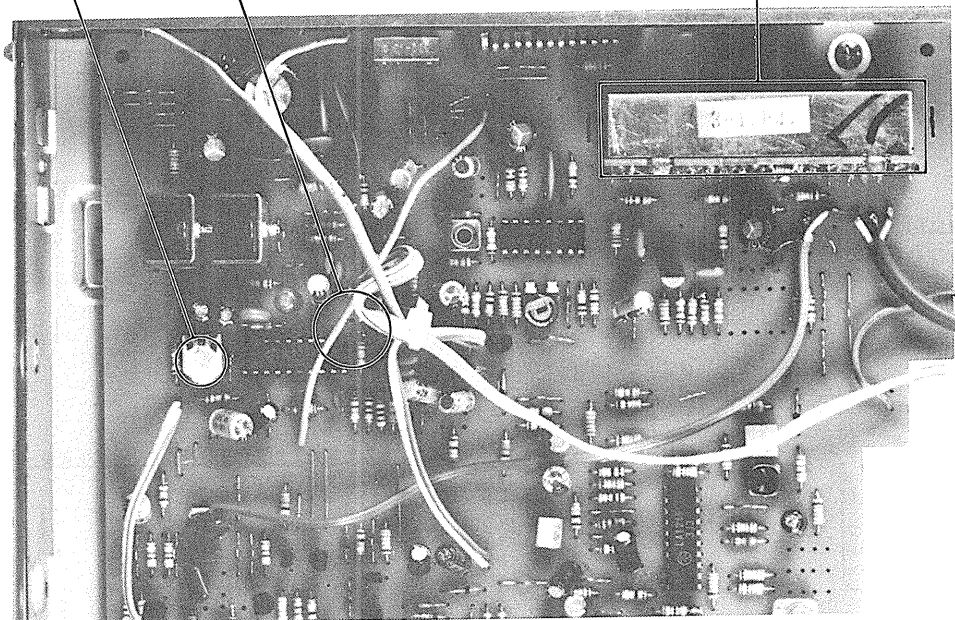
B) Simple Method

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RT201 clockwise or counterclockwise and memorize the lighting-up range of the stereo LED.
3. Secure RT201 at the center of the lighting-up range of both turns as shown below.

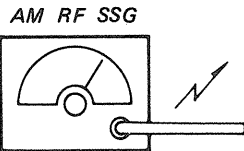


The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement.



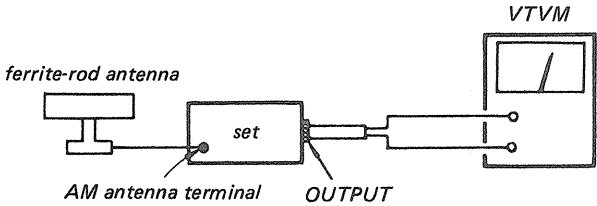
MW/SW SECTION

BAND SELECTOR switch: MW/SW₁/SW₂
AM CH. SPACE switch: 9 kHz

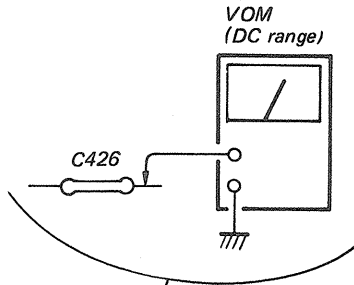


30% amplitude modulation by 400 Hz signal

Put the lead-wire antenna close to the ferrite-rod antenna.



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



AM CH. SPACE switch
10 kHz ↔ 9 kHz

MW FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM	frequency indication	adjustment part
1 ± 0.2 V	531 kHz	L302
9 ± 0.4 V	1,602 kHz	CT302

SW1 FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM	frequency indication	adjustment part
1 ± 0.2 V	3.2 MHz	L304
9 ± 0.4 V	7.3 MHz	CT304

SW2 FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM	frequency indication	adjustment part
1 ± 0.2 V	9.5 MHz	L306
9 ± 0.4 V	21.75 MHz	CT306

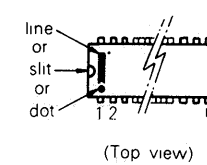
AM IF ALIGNMENT	
Adjust for a maximum reading on VTVM.	
IFT301	450 kHz

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT301	1,404 kHz
L301	603 kHz

SW1 TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT303	6.5 MHz
L303	3.5 MHz

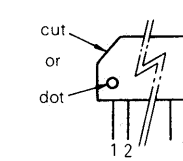
SW2 TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT305	20 MHz
L305	10 MHz

● Semiconductor Lead Layouts

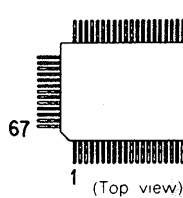
LA1231
LA3390
LA1245

(Top view)

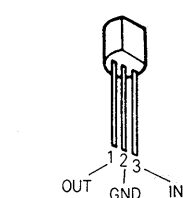
TD6109P-S



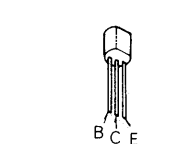
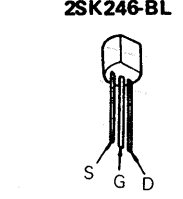
TC9300F007B



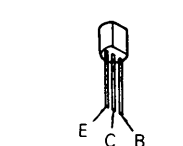
LA5640



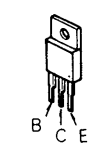
2SC710-13

2SK30A-GR3
2SK246-BL

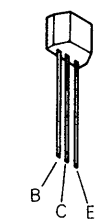
2SC3112-B



2SD880



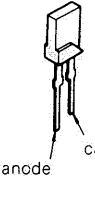
2SC2458



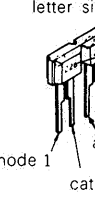
2SA1175



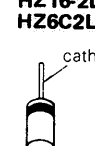
SEL1121R



KV1236Z

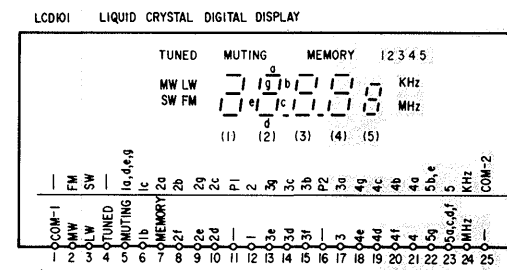
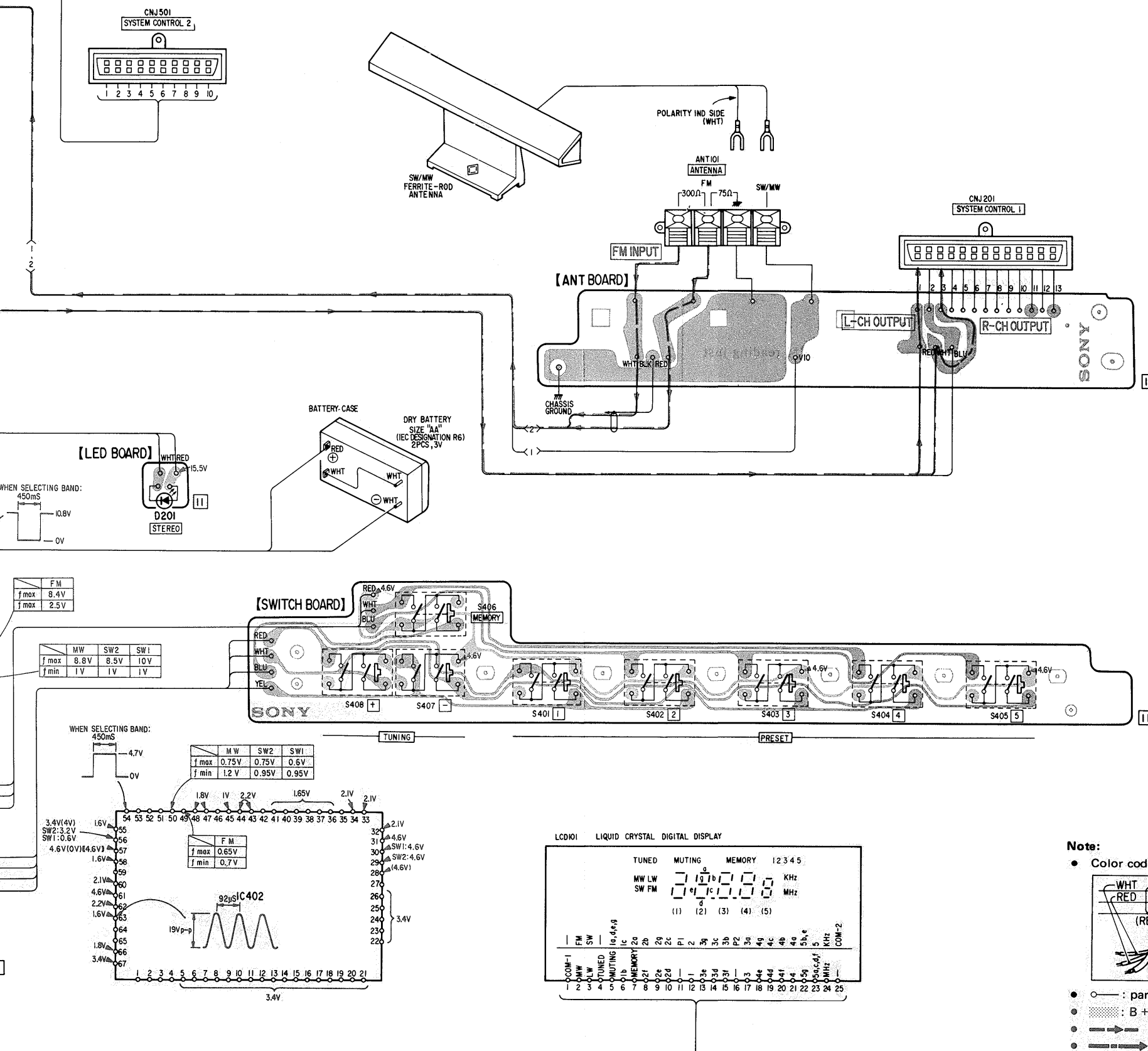
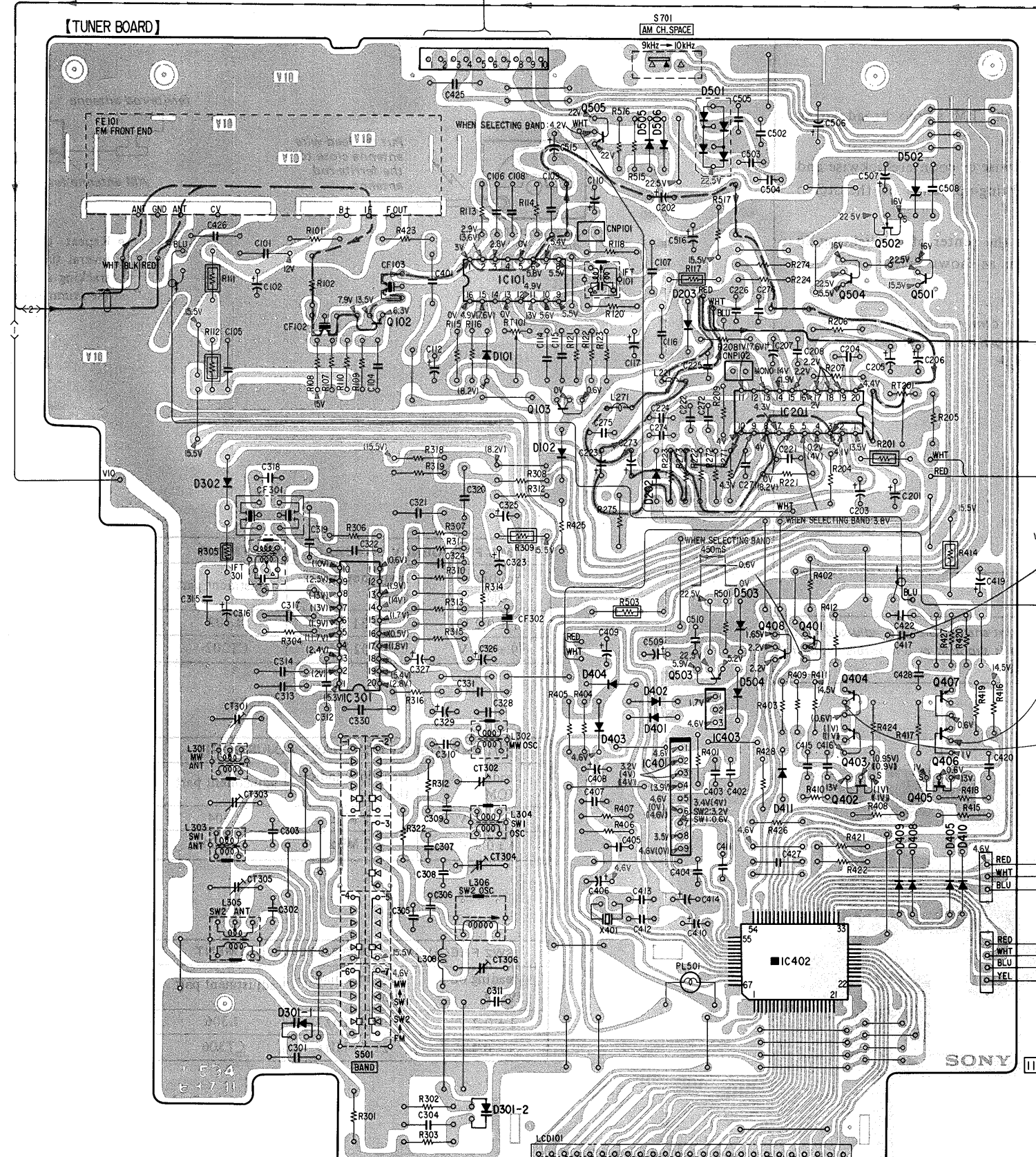
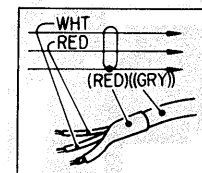


S1VB20

1SS202-1
HZ16-2L
HZ6C2L

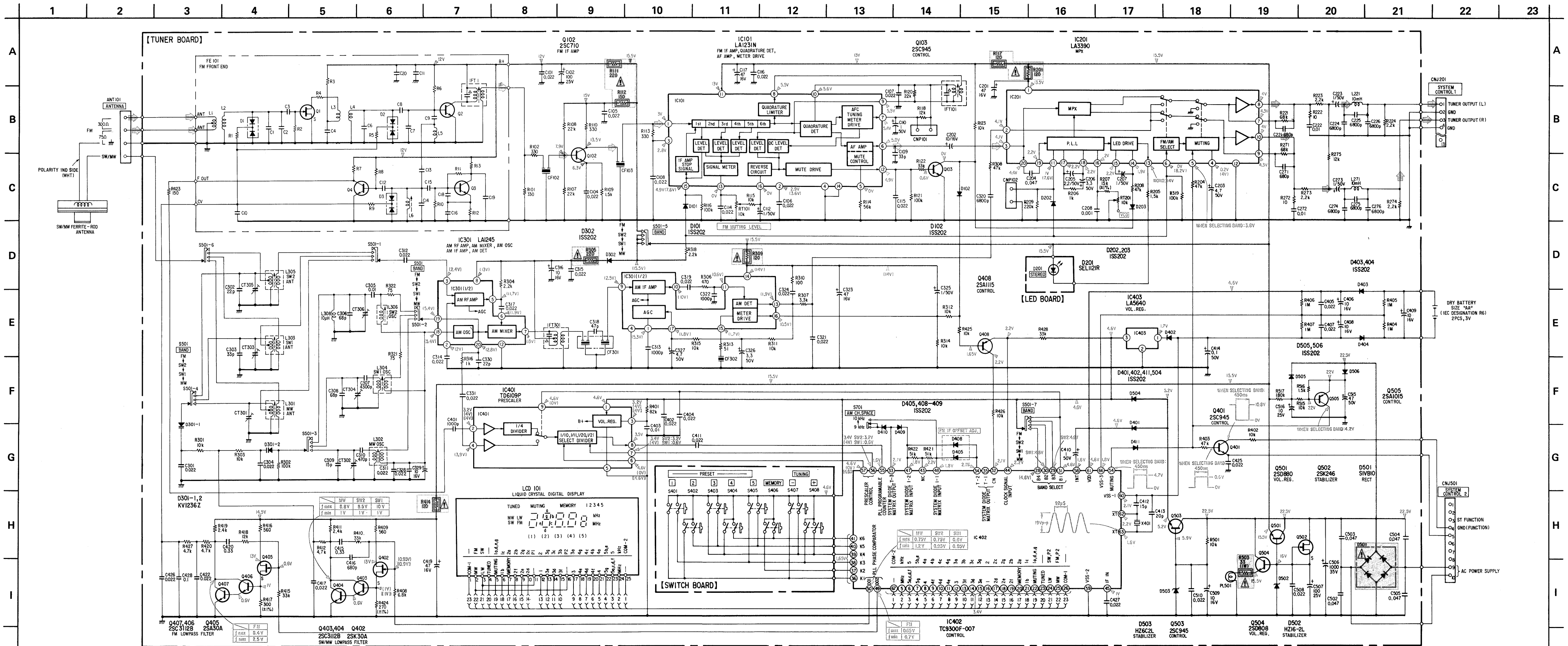
● See page ST-9 for semiconductor lead layouts.

Q, IC	D
505	501
505, 506	505, 506
502	502
502	502
IC101	504, 501
102	203
101	101
103	103
IC201	102
302	302
201	201
503	503
IC301	408, 401
503	404
404, 407	404
IC403	402
403, 406	401
IC401	411
402, 405	409
409	408
405	405
410	410
IC402	301-1
301-1	301-2
301-2	301-2
Q, IC	D

Note:
● Color code of sleeving over the end of the jacket.

- ○ : parts extracted from the component side.
- : B + pattern
- : signal path
- : L-CH signal path
- : R-CH signal path

4-2. SCHEMATIC DIAGRAM



Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega$: 1000 Ω , $\text{M}\Omega$: 1000 $\text{k}\Omega$

- : nonflammable resistor.
- : internal component.
- : panel designation.
- : signal path.

—ST-14—

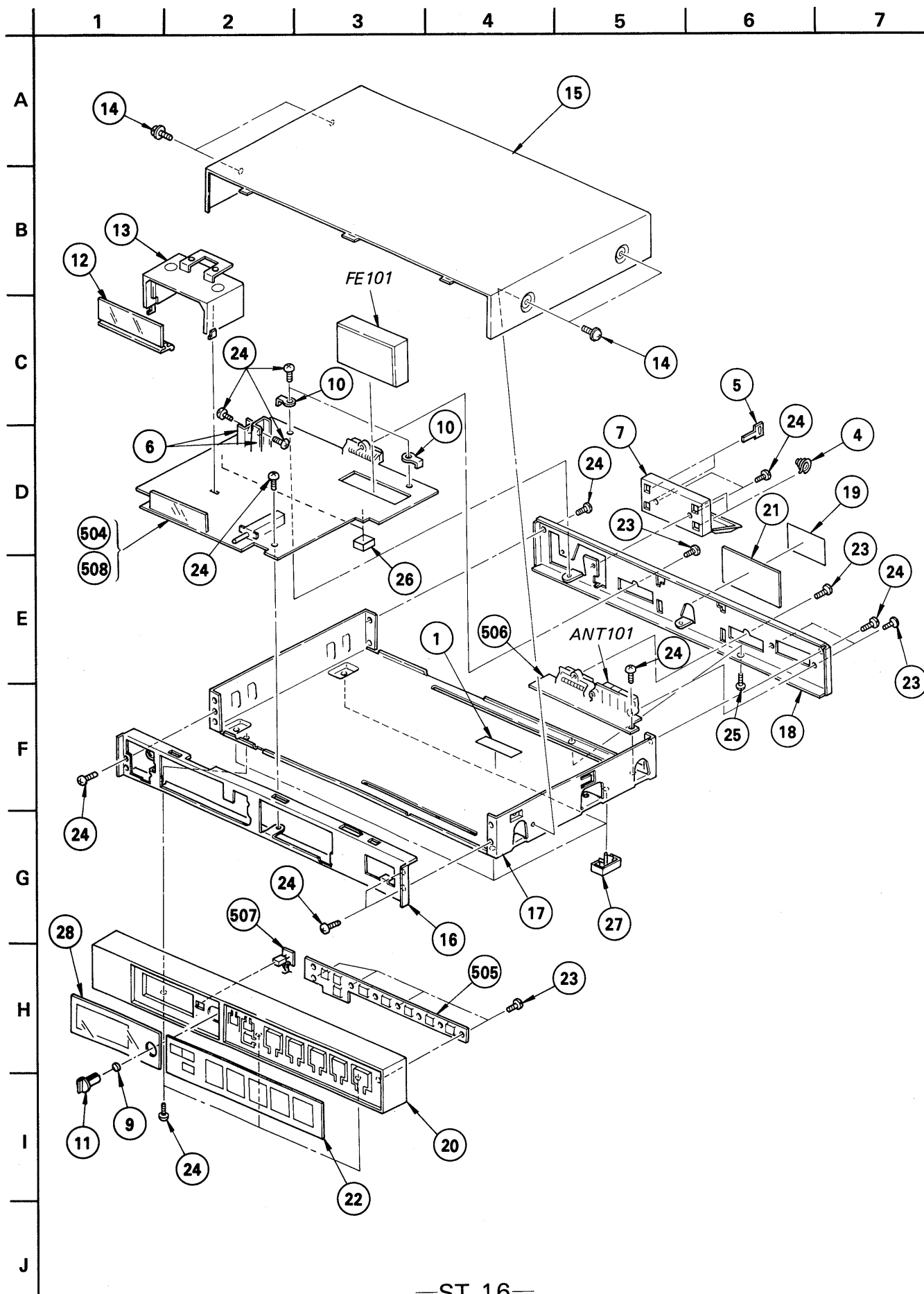
- : adjustment for repair.
- : B+ bus.
- Readings are taken under FM-signal conditions with a VOM.
- () : MW () : SW

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

—ST-15—

Note: Voltages are measured with a VOM (50k Ω /V).

SECTION 5
EXPLODED VIEW AND PARTS LIST



GENERAL SECTION

No.	Part No.	Description
1	3-701-030-00	LABEL, SERIAL NUMBER
2		
3		
4	3-883-424-00	SPRING
5	3-883-428-00	PLATE, TERMINAL (POSITIVE)
6	♣;4-875-327-01	HEAT SINK
7	4-875-530-00	CASE, BATTERY
8		
9	4-879-274-51	SPACER (t=2.5)
10	♣;4-881-629-00	PLATE (A), GROUND
11	4-884-847-21	KNOB (ST), ROTARY SWITCH
12	4-884-848-00	ILLUMINATOR (ST)
13	♣;4-884-856-00	HOUSE, LAMP
14	4-886-821-11	SCREW, M3 CASE
15	4-886-845-11	CASE
16	♣;4-888-213-11	PANEL, SUB
17	♣;4-888-214-21	CHASSIS
18	♣;4-888-235-32	PLATE, JACK
19	4-903-211-01	LABEL, MODEL NUMBER (E)
20	4-903-212-21	PANEL
21	4-903-213-01	PLATE, MASKING
22	4-903-216-22	SHEET, FUNCTION
23	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
24	7-685-871-01	SCREW +BVTT 3X6 (S)
25	7-685-873-01	SCREW +BVTT 3X10 (S)
26	9-911-841-XX	CUSHION
27	X-4886-405-1	FOOT ASSY
28	X-4903-203-1	PLATE ASSY, INDICATION

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	♣;1-560-060-00	PIN, CONNECTOR 2P
502	♣;1-562-249-00	SOCKET, CONNECTOR 4P
503	♣;1-562-327-00	SOCKET, CONNECTOR 3P
504	♣;1-612-117-11	PC BOARD, TUNER
505	♣;1-612-118-11	PC BOARD, SWITCH
506	♣;1-612-119-11	PC BOARD, ANT
507	♣;1-612-120-11	PC BOARD, LED
508	♣;A-4351-383-A	MOUNTED PCB, TUNER
ANT101	1-536-708-00	TERMINAL BOARD, PUSH 4P
C101	1-161-494-00	CERAMIC 0.022MF 30% 25V
C102	1-123-333-00	ELECT 100MF 20% 25V
C104	1-161-494-00	CERAMIC 0.022MF 30% 25V
C105	1-161-494-00	CERAMIC 0.022MF 30% 25V
C106	1-161-494-00	CERAMIC 0.022MF 30% 25V
C107	1-161-494-00	CERAMIC 0.022MF 30% 25V
C108	1-161-494-00	CERAMIC 0.022MF 30% 25V
C109	1-161-265-00	CERAMIC 33PF 5% 50V
C110	1-123-380-00	ELECT 1MF 20% 50V
C112	1-123-380-00	ELECT 1MF 20% 50V
C114	1-161-494-00	CERAMIC 0.022MF 30% 25V
C115	1-161-494-00	CERAMIC 0.022MF 30% 25V
C116	1-161-494-00	CERAMIC 0.022MF 30% 25V
C117	1-123-319-00	ELECT 47MF 20% 16V
C201	1-123-319-00	ELECT 47MF 20% 16V
C202	1-123-356-00	ELECT 10MF 20% 16V
C203	1-123-369-00	ELECT 4.7MF 20% 50V
C204	1-108-246-00	MYLAR 0.047MF 10% 50V
C205	1-123-381-00	ELECT 2.2MF 20% 50V
C206	1-123-382-00	ELECT 3.3MF 20% 50V
C207	1-123-380-00	ELECT 1MF 20% 50V
C208	1-104-077-00	POLYSTYRENE 0.001MF 5% 50V
C221	1-102-116-00	CERAMIC 680PF 10% 50V
C222	1-101-004-00	CERAMIC 0.01MF 50V
C223	1-123-380-00	ELECT 1MF 20% 50V
C224	1-108-575-00	MYLAR 0.0068MF 5% 50V
C225	1-108-575-00	MYLAR 0.0068MF 5% 50V
C226	1-108-575-00	MYLAR 0.0068MF 5% 50V
C271	1-102-116-00	CERAMIC 680PF 10% 50V
C272	1-101-004-00	CERAMIC 0.01MF 50V
C273	1-123-380-00	ELECT 1MF 20% 50V
C274	1-108-575-00	MYLAR 0.0068MF 5% 50V
C275	1-108-575-00	MYLAR 0.0068MF 5% 50V
C276	1-108-575-00	MYLAR 0.0068MF 5% 50V
C301	1-161-494-00	CERAMIC 0.022MF 30% 25V
C303	1-102-877-00	CERAMIC 33PF 5% 50V

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ♣ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

 UA....: μA...., UPA....: μPA...., UPC....: μPC,
 UPD....: μPD....

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C304	1-161-494-00	CERAMIC	0.022MF	30%	25V
C305	1-108-239-00	MYLAR	0.01MF	10%	50V
C306	1-102-760-00	CERAMIC	68PF	5%	50V
C307	1-104-092-11	POLYSTYRENE	0.0043MF	5%	50V
C308	1-102-760-00	CERAMIC	68PF	5%	50V
C309	1-102-880-00	CERAMIC	15PF	5%	50V
C310	1-104-069-00	POLYSTYRENE	470PF	5%	50V
C311	1-101-005-00	CERAMIC	0.022MF		50V
C312	1-161-494-00	CERAMIC	0.022MF	30%	25V
C313	1-161-323-00	CERAMIC	0.001MF	10%	50V
C314	1-161-494-00	CERAMIC	0.022MF	30%	25V
C315	1-161-494-00	CERAMIC	0.022MF	30%	25V
C316	1-123-356-00	ELECT	10MF	20%	16V
C317	1-161-494-00	CERAMIC	0.022MF	30%	25V
C318	1-161-267-00	CERAMIC	47PF	5%	50V
C319	1-161-494-00	CERAMIC	0.022MF	30%	25V
C320	1-161-329-00	CERAMIC	0.0068MF	30%	25V
C321	1-161-494-00	CERAMIC	0.022MF	30%	25V
C322	1-161-323-00	CERAMIC	0.001MF	10%	50V
C323	1-123-319-00	ELECT	47MF	20%	16V
C324	1-161-494-00	CERAMIC	0.022MF	30%	25V
C325	1-123-380-00	ELECT	1MF	20%	50V
C326	1-123-382-00	ELECT	3.3MF	20%	50V
C327	1-123-369-00	ELECT	4.7MF	20%	50V
C328	1-101-005-00	CERAMIC	0.022MF		50V
C329	1-123-356-00	ELECT	10MF	20%	16V
C330	1-161-263-00	CERAMIC	22PF	5%	50V
C331	1-161-494-00	CERAMIC	0.022MF	30%	25V
C340	1-101-999-00	CERAMIC	10PF	0.5PF	50V
C401	1-161-323-00	CERAMIC	0.001MF	10%	50V
C402	1-161-494-00	CERAMIC	0.022MF	30%	25V
C403	1-161-330-00	CERAMIC	0.01MF	30%	25V
C404	1-161-494-00	CERAMIC	0.022MF	30%	25V
C405	1-161-494-00	CERAMIC	0.022MF	30%	25V
C406	1-123-356-00	ELECT	10MF	20%	16V
C407	1-161-494-00	CERAMIC	0.022MF	30%	25V
C408	1-123-356-00	ELECT	10MF	20%	16V
C409	1-123-356-00	ELECT	10MF	20%	16V
C410	1-123-380-00	ELECT	1MF	20%	50V
C411	1-161-494-00	CERAMIC	0.022MF	30%	25V
C412	1-102-851-00	CERAMIC	15PF	5%	50V
C413	1-101-974-00	CERAMIC	20PF	5%	50V
C414	1-123-607-00	ELECT	0.1MF	20%	50V
C415	1-130-638-00	FILM	0.33MF	5%	50V
C416	1-102-116-00	CERAMIC	680PF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C417	1-101-005-00	CERAMIC	0.022MF		50V
C419	1-123-319-00	ELECT	47MF	20%	16V
C420	1-130-638-00	FILM	0.33MF	5%	50V
C422	1-101-005-00	CERAMIC	0.022MF		50V
C425	1-161-494-00	CERAMIC	0.022MF	30%	25V
C426	1-161-494-00	CERAMIC	0.022MF	30%	25V
C427	1-161-494-00	CERAMIC	0.022MF	30%	25V
C428	1-130-632-00	FILM	0.1MF	5%	50V
C502	1-108-246-00	MYLAR	0.047MF	10%	50V
C503	1-108-246-00	MYLAR	0.047MF	10%	50V
C504	1-108-246-00	MYLAR	0.047MF	10%	50V
C505	1-108-246-00	MYLAR	0.047MF	10%	50V
C506	1-123-349-00	ELECT	1000MF	20%	35V
C507	1-123-333-00	ELECT	100MF	20%	25V
C508	1-161-494-00	CERAMIC	0.022MF	30%	25V
C509	1-123-356-00	ELECT	10MF	20%	16V
C510	1-161-494-00	CERAMIC	0.022MF	30%	25V
C515	1-123-359-00	ELECT	47MF	20%	50V
C516	1-123-356-00	ELECT	10MF	20%	25V
CF102	1-527-968-00	FILTER, CERAMIC			
CF103	1-527-968-00	FILTER, CERAMIC			
CF301	1-527-937-00	FILTER, CERAMIC			
CF302	1-527-981-00	FILTER, CERAMIC			
CNJ201	1-562-068-00	SOCKET, CONNECTOR 13P			
CNJ501	1-562-479-11	SOCKET, CONNECTOR 10P			
CT301	1-141-171-00	CAP, TRIMMER 20P			
CT302	1-141-171-00	CAP, TRIMMER 20P			
CT303	1-141-181-11	CAP, TRIMMER			
CT304	1-141-181-11	CAP, TRIMMER			
CT305	1-141-181-11	CAP, TRIMMER			
CT306	1-141-181-11	CAP, TRIMMER			
D101	8-719-107-94	DIODE 1SS202-1			
D102	8-719-107-94	DIODE 1SS202-1			
D201	8-719-311-21	DIODE SEL1121R			
D202	8-719-107-94	DIODE 1SS202-1			
D203	8-719-107-94	DIODE 1SS202-1			
D301	8-719-902-79	DIODE KV1236Z			
D302	8-719-107-94	DIODE 1SS202-1			
D401	8-719-107-94	DIODE 1SS202-1			
D402	8-719-107-94	DIODE 1SS202-1			
D403	8-719-107-94	DIODE 1SS202-1			
D404	8-719-107-94	DIODE 1SS202-1			
D405	8-719-107-94	DIODE 1SS202-1			
D408	8-719-107-94	DIODE 1SS202-1			
D409	8-719-107-94	DIODE 1SS202-1			
D410	8-719-107-94	DIODE 1SS202-1			

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μH

SEMICONDUCTORS

In each case, U: μ, for example:
 UA...: μA..., UPA...: μPA..., UPC...: μPC,
 UPD...: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D411	8-719-107-94	DIODE 1SS202-1
D501	8-719-511-20	DIODE S1VB20
D502	8-719-901-62	DIODE HZ16-2L
D503	8-719-910-68	DIODE HZ6C2L
D504	8-719-107-94	DIODE 1SS202-1
D505	8-719-107-94	DIODE 1SS202-1
D506	8-719-107-94	DIODE 1SS202-1
FE101	A-4344-037-A	FRONT END
IC101	8-759-812-31	IC LA1231
IC201	8-759-833-90	IC LA3390
IC301	8-759-812-45	IC LA1245
IC401	8-759-202-10	IC TD6109P-S
IC402	8-759-202-09	IC TC9300F007B
IC403	8-759-800-63	IC LA5640
IFT101	1-404-419-00	COIL, DISCRIMINATOR
IFT301	1-404-535-11	COIL (WITH IFT)
L221	1-408-257-00	MICRO INDUCTOR 10MMH
L271	1-408-257-00	MICRO INDUCTOR 10MMH
L301	1-402-069-11	COIL (ANT)
L302	1-406-089-11	COIL (OSC)
L303	1-402-070-11	COIL (ANT)
L304	1-406-088-11	COIL (OSC)
L305	1-402-072-11	COIL (ANT)
L306	1-406-106-11	COIL (OSC)
L308	1-408-563-00	MICRO INDUCTOR 10UH
LCD1	1-806-643-00	DISPLAY PANEL, LIQUID CRYSTAL
PL501	1-518-557-11	LAMP, PILOT
Q102	8-729-671-13	TRANSISTOR 2SC710-13
Q103	8-729-245-83	TRANSISTOR 2SC2458
Q401	8-729-245-83	TRANSISTOR 2SC2458
Q402	8-729-203-05	TRANSISTOR 2SK30A-GR3
Q403	8-729-201-84	TRANSISTOR 2SC3112-B
Q404	8-729-201-84	TRANSISTOR 2SC3112-B
Q405	8-729-203-05	TRANSISTOR 2SK30A-GR3
Q406	8-729-201-84	TRANSISTOR 2SC3112-B
Q407	8-729-201-84	TRANSISTOR 2SC3112-B
Q408	8-729-117-54	TRANSISTOR 2SA1175
Q501	8-729-288-02	TRANSISTOR 2SD880
Q502	8-729-224-63	TRANSISTOR 2SK246-BL
Q503	8-729-245-83	TRANSISTOR 2SC2458
Q504	8-729-288-02	TRANSISTOR 2SD880
Q505	8-729-117-54	TRANSISTOR 2SA1175

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R101	1-247-119-00	CARBON	330	5%	1/4W
R102	1-247-119-00	CARBON	330	5%	1/4W
R107	1-246-505-00	CARBON	22K	5%	1/4W
R108	1-246-505-00	CARBON	22K	5%	1/4W
R109	1-247-135-00	CARBON	1.5K	5%	1/4W
R110	1-247-119-00	CARBON	330	5%	1/4W
R111	1-247-115-00	CARBON	220	5%	1/4W F
R112	1-247-111-00	CARBON	150	5%	1/4W F
R113	1-247-119-00	CARBON	330	5%	1/4W
R114	1-247-173-00	CARBON	56K	5%	1/4W
R115	1-247-155-00	CARBON	10K	5%	1/4W
R116	1-247-179-00	CARBON	100K	5%	1/4W
R117	1-247-109-00	CARBON	120	5%	1/4W F
R118	1-246-499-00	CARBON	12K	5%	1/4W
R120	1-246-505-00	CARBON	22K	5%	1/4W
R121	1-247-179-00	CARBON	100K	5%	1/4W
R122	1-247-167-00	CARBON	33K	5%	1/4W
R123	1-247-155-00	CARBON	10K	5%	1/4W
R201	1-247-109-00	CARBON	120	5%	1/4W F
R204	1-247-171-00	CARBON	47K	5%	1/4W
R205	1-247-135-00	CARBON	1.5K	5%	1/4W
R206	1-247-131-00	CARBON	1K	5%	1/4W
R207	1-214-757-00	METAL	15K	1%	1/4W
R208	1-247-171-00	CARBON	47K	5%	1/4W
R209	1-246-529-00	CARBON	220K	5%	1/4W
R221	1-247-175-00	CARBON	68K	5%	1/4W
R222	1-247-083-00	CARBON	10	5%	1/4W
R223	1-247-139-00	CARBON	2.2K	5%	1/4W
R224	1-247-139-00	CARBON	2.2K	5%	1/4W
R271	1-247-175-00	CARBON	68K	5%	1/4W
R272	1-247-083-00	CARBON	10	5%	1/4W
R273	1-247-139-00	CARBON	2.2K	5%	1/4W
R274	1-247-139-00	CARBON	2.2K	5%	1/4W
R275	1-246-499-00	CARBON	12K	5%	1/4W
R301	1-247-155-00	CARBON	10K	5%	1/4W
R302	1-247-179-00	CARBON	100K	5%	1/4W
R303	1-247-155-00	CARBON	10K	5%	1/4W
R304	1-247-139-00	CARBON	2.2K	5%	1/4W
R305	1-247-115-00	CARBON	220	5%	1/4W F
R306	1-247-123-00	CARBON	470	5%	1/4W
R307	1-246-485-00	CARBON	3.3K	5%	1/4W
R308	1-247-171-00	CARBON	47K	5%	1/4W
R309	1-247-109-00	CARBON	120	5%	1/4W F
R310	1-247-107-00	CARBON	100	5%	1/4W
R311	1-247-155-00	CARBON	10K	5%	1/4W

NOTE:

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD....

The components identified by shading and mark **Δ** are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R312	1-247-155-00	CARBON	10K	5%	1/4W	
R313	1-246-442-00	CARBON	51	5%	1/4W	
R314	1-247-155-00	CARBON	10K	5%	1/4W	
R315	1-247-155-00	CARBON	10K	5%	1/4W	
R316	1-247-131-00	CARBON	1K	5%	1/4W	
R318	1-247-139-00	CARBON	2.2K	5%	1/4W	
R319	1-247-179-00	CARBON	100K	5%	1/4W	
R321	1-246-446-00	CARBON	75	5%	1/4W	
R322	1-246-446-00	CARBON	75	5%	1/4W	
R401	1-246-519-00	CARBON	82K	5%	1/4W	
R402	1-247-155-00	CARBON	10K	5%	1/4W	
R403	1-247-171-00	CARBON	47K	5%	1/4W	
R404	1-246-545-00	CARBON	1M	5%	1/4W	
R405	1-246-545-00	CARBON	1M	5%	1/4W	
R406	1-246-545-00	CARBON	1M	5%	1/4W	
R407	1-246-545-00	CARBON	1M	5%	1/4W	
R408	1-247-151-00	CARBON	6.8K	5%	1/4W	
R409	1-247-125-00	CARBON	560	5%	1/4W	
R410	1-247-167-00	CARBON	33K	5%	1/4W	
R411	1-246-482-00	CARBON	2.4K	5%	1/4W	
R412	1-247-147-00	CARBON	4.7K	5%	1/4W	
R414	1-247-109-00	CARBON	120	5%	1/4W	F
R415	1-247-167-00	CARBON	33K	5%	1/4W	
R416	1-247-125-00	CARBON	560	5%	1/4W	
R417	1-214-716-00	METAL	300	1%	1/4W	
R418	1-246-499-00	CARBON	12K	5%	1/4W	
R419	1-246-482-00	CARBON	2.4K	5%	1/4W	
R420	1-247-147-00	CARBON	4.7K	5%	1/4W	
R421	1-246-514-00	CARBON	51K	5%	1/4W	
R422	1-246-514-00	CARBON	51K	5%	1/4W	
R423	1-247-111-00	CARBON	150	5%	1/4W	
R424	1-214-118-00	METAL	270	1%	1/4W	
R425	1-247-155-00	CARBON	10K	5%	1/4W	
R426	1-247-155-00	CARBON	10K	5%	1/4W	
R427	1-247-147-00	CARBON	4.7K	5%	1/4W	
R428	1-247-167-00	CARBON	33K	5%	1/4W	
R501	1-247-155-00	CARBON	10K	5%	1/4W	
R503	1-213-125-00	METAL OXIDE	33	5%	1W	F
R515	1-247-155-00	CARBON	10K	5%	1/4W	
R516	1-247-135-00	CARBON	1.5K	5%	1/4W	
R517	1-246-527-00	CARBON	180K	5%	1/4W	
RT101	1-226-236-00	RES, ADJ, CARBON 10K				
RT201	1-228-505-00	RES, ADJ, METAL GLAZE 10K				

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S401	1-552-174-00	SWITCH, PUSH (1)
S402	1-552-174-00	SWITCH, PUSH (2)
S403	1-552-174-00	SWITCH, PUSH (3)
S404	1-552-174-00	SWITCH, PUSH (4)
S405	1-552-174-00	SWITCH, PUSH (5)
S406	1-552-174-00	SWITCH, PUSH (MEMORY)
S407	1-552-174-00	SWITCH, PUSH (-)
S408	1-552-174-00	SWITCH, PUSH (+)
S501	1-554-267-00	SWITCH, ROTARY SLIDE (BAND)
S701	1-552-370-00	SWITCH, SLIDE (AM CH.SPACE)
X401	1-527-995-00	VIBRATOR, CRYSTAL

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- All resistors are in ohms.
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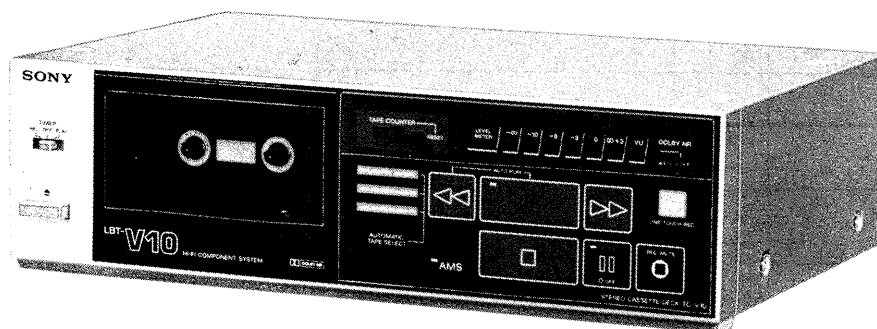
SEMICONDUCTORS

In each case, U : μ, for example:
 UA....: μA...., UPA....: μPA...., UPC....: μPC,
 UPD....: μPD....

The components identified by shading and mark **Δ** are critical for safety. Replace only with part number specified.

STEREO CASSETTE DECK

[TC-V10]



Tape Transport Mechanism Type	TCM-130V13
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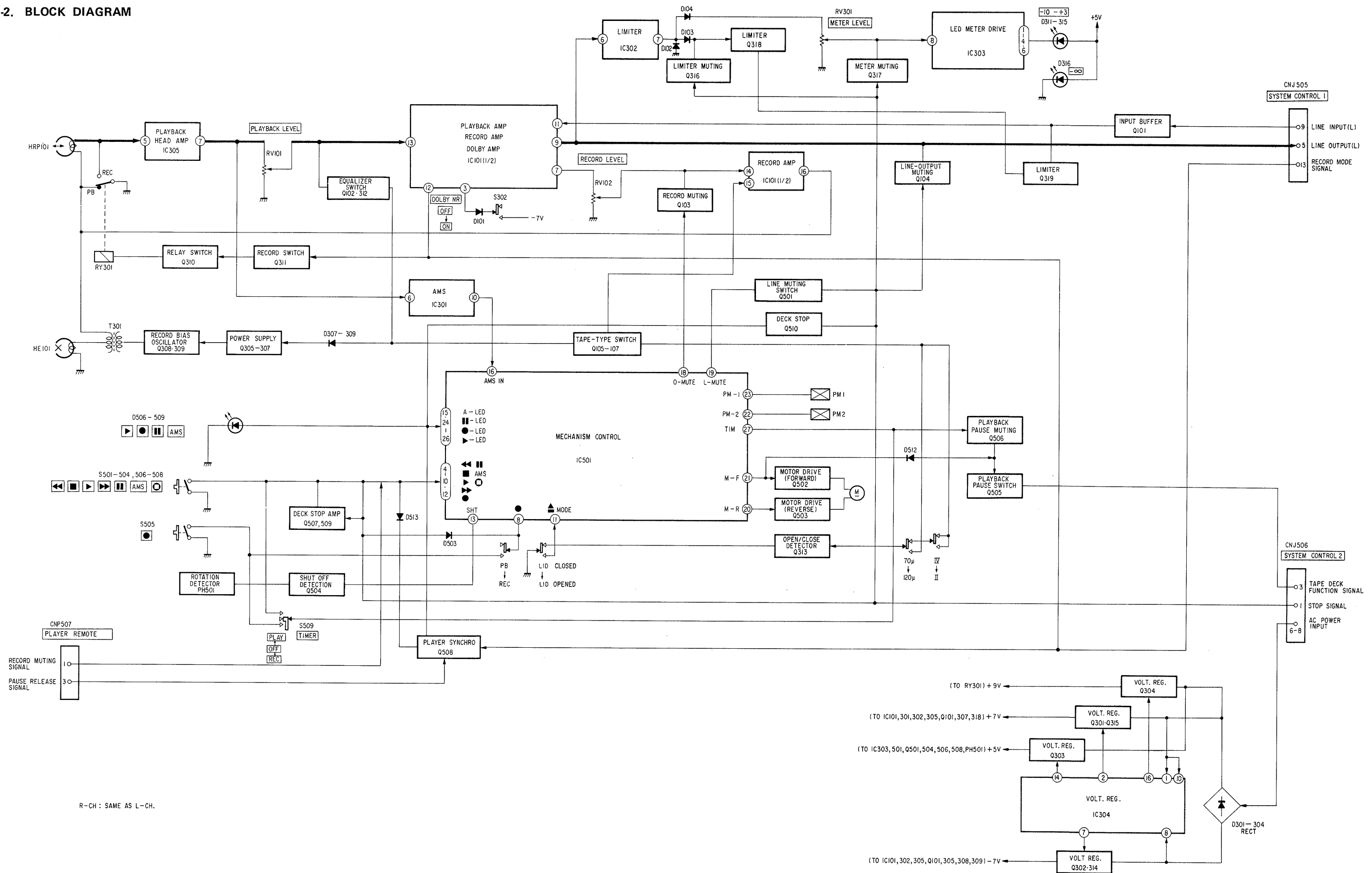
SECTION 1

OUTLINE

1-1. SERVICEING NOTE

This unit takes 10 V AC power source from the power amplifier unit TA-V10 together with the system-control signals using the connection cable, thus power-transformer less. When performing checks and repairs on the TC-V10, be sure to make a system setup. Otherwise, checkings and repairs may become in unsatisfactory.

1-2. BLOCK DIAGRAM



SECTION 2 DISASSEMBLY

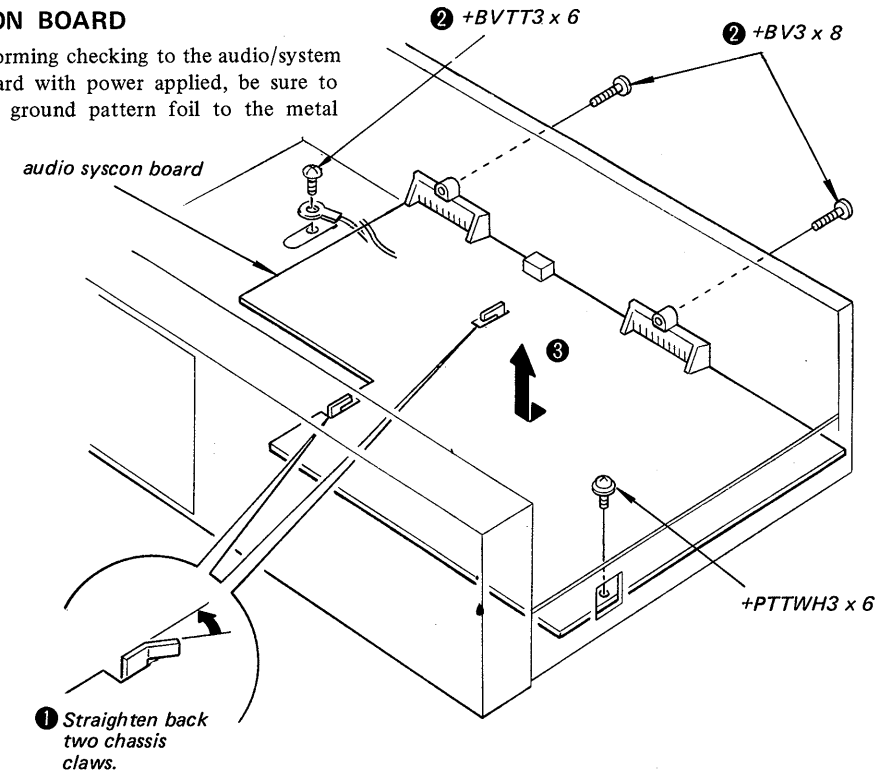
Note: Follow the disassembly procedure in the numerical order given.

CASE REMOVAL

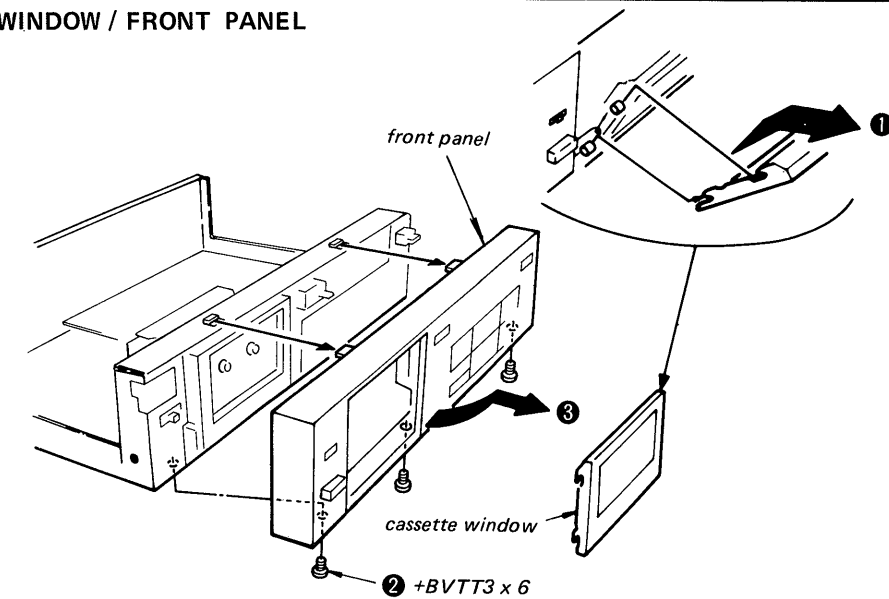
Remove case by taking out four securing case.

AUDIO-SYSCON BOARD

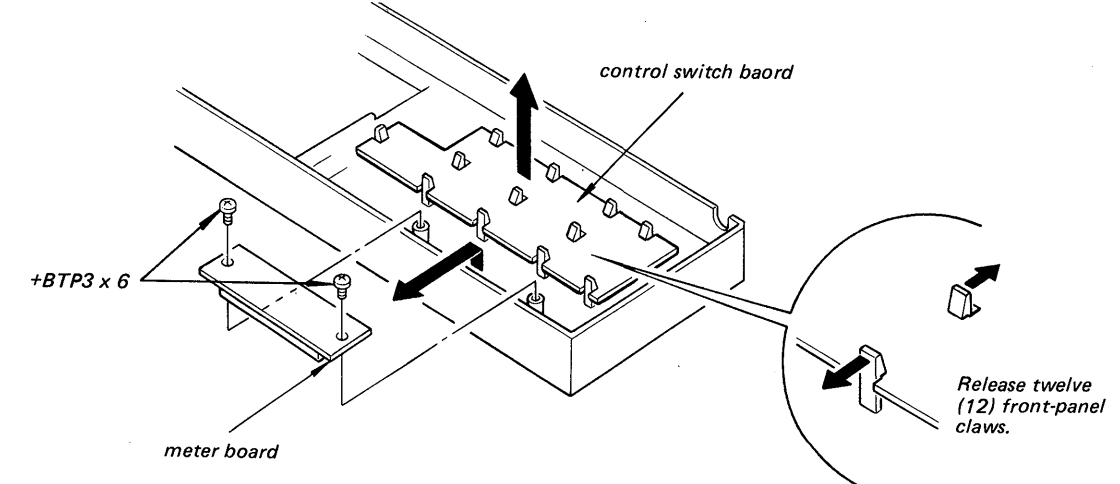
Note: When performing checking to the audio/system control board with power applied, be sure to connect its ground pattern foil to the metal chassis.



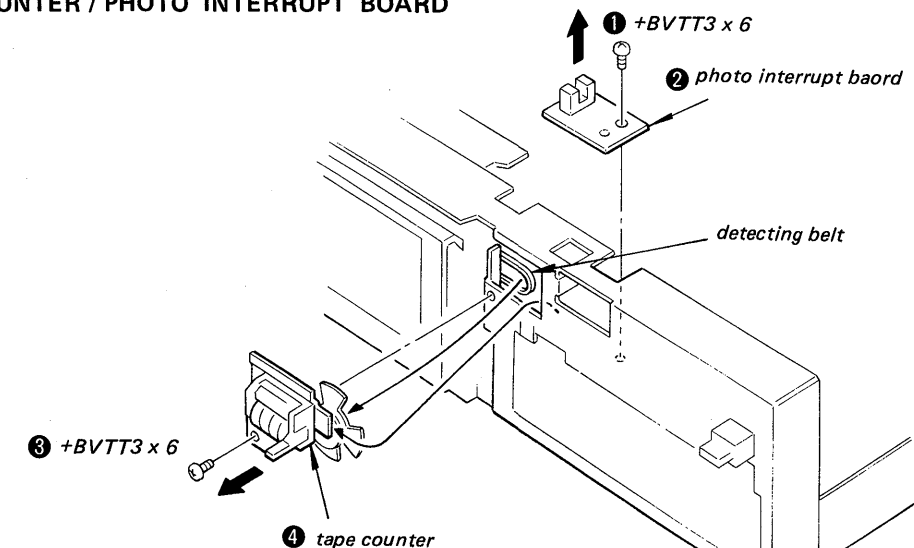
CASSETTE WINDOW / FRONT PANEL



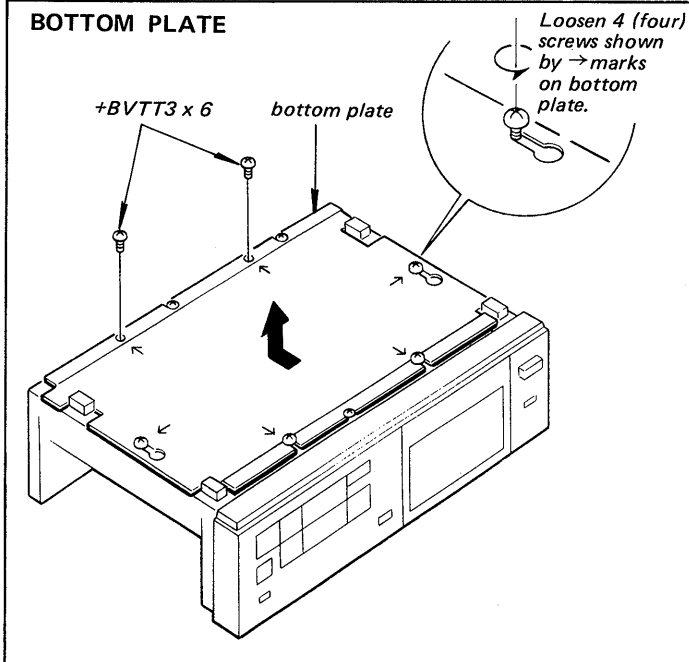
METER BOARD / CONTROL SWITCH BOARD



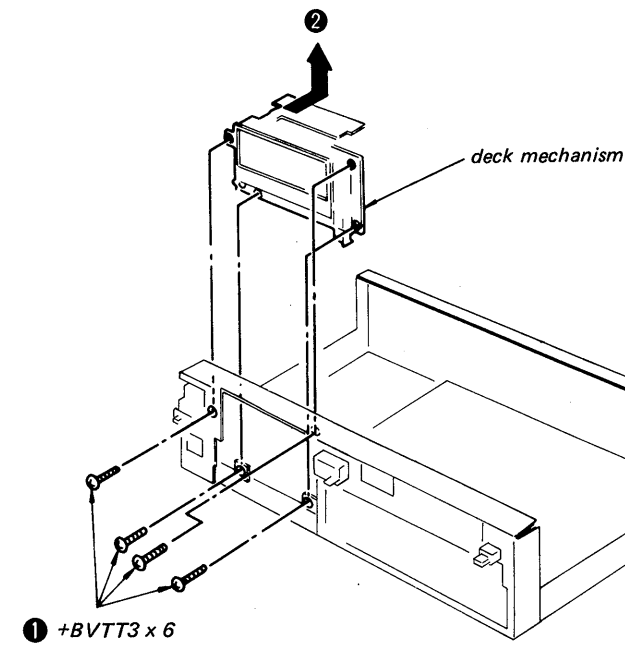
TAPE COUNTER / PHOTO INTERRUPT BOARD



BOTTOM PLATE

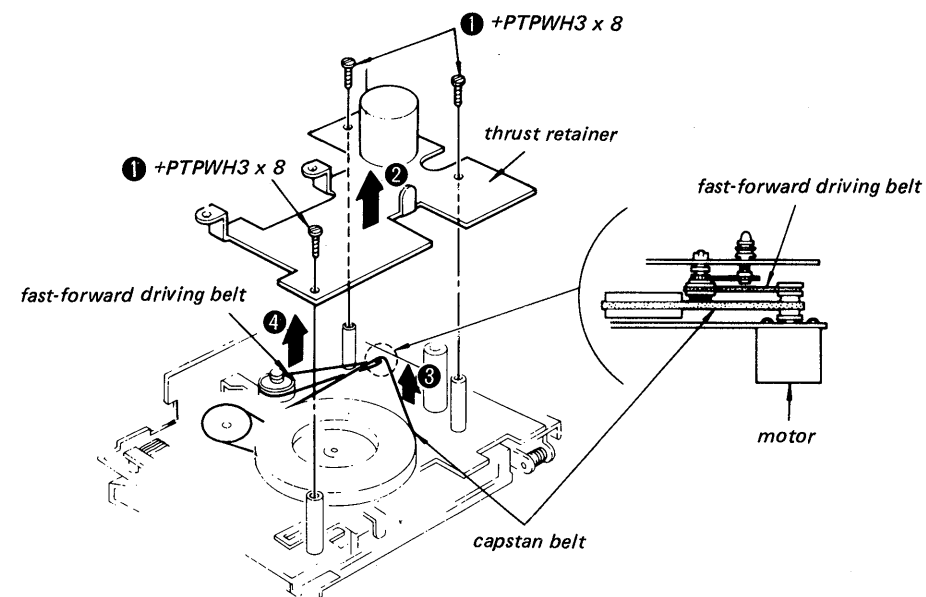


DECK MECHANISM ASS'Y



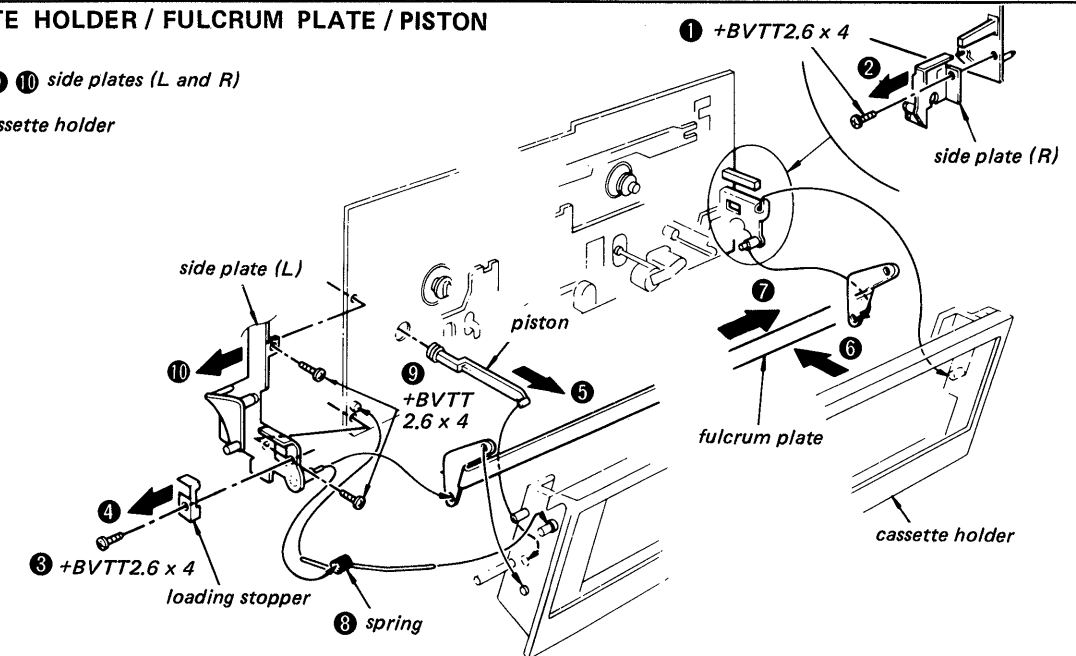
THRUST RETAINER / CAPSTAN BELT / FAST-FORWARD DRIVING BELT

1 2 thrust retainer

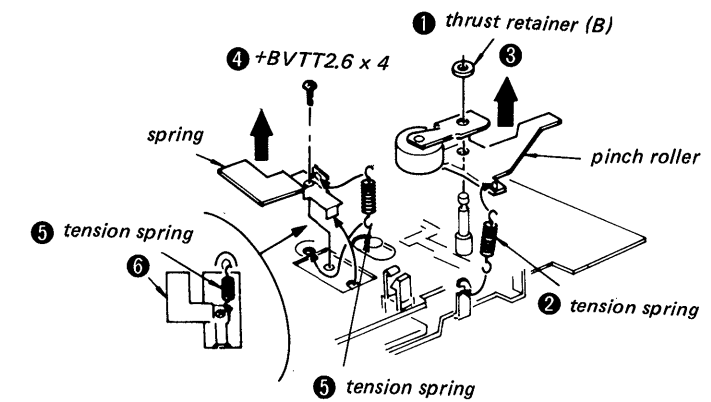


CASSETTE HOLDER / FULCRUM PLATE / PISTON

1-4 9 10 side plates (L and R)
6 7 cassette holder

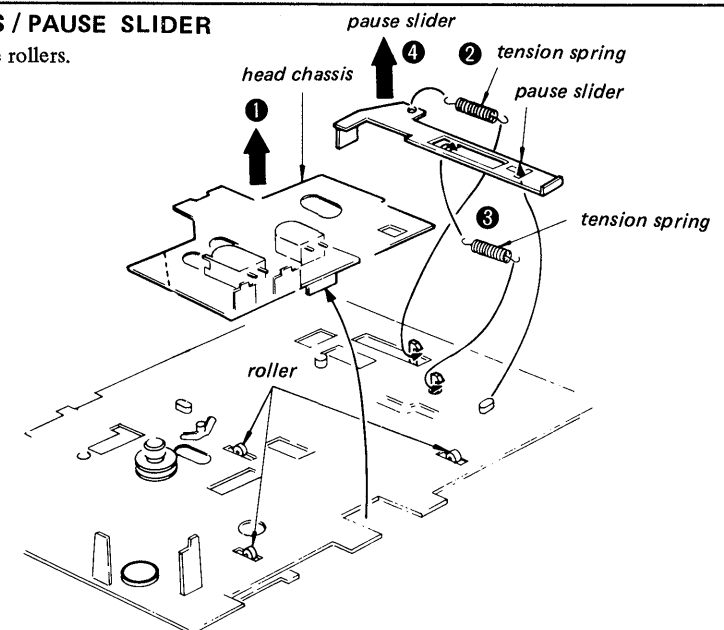


PINCH ROLLER / SPRINGS



HEAD CHASSIS / PAUSE SLIDER

Note: Do not loose rollers.



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

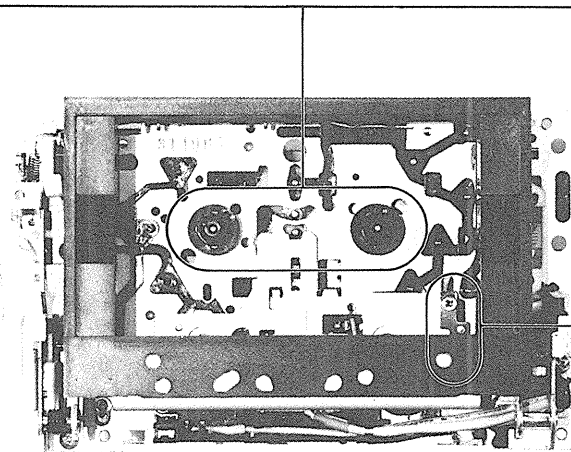
PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

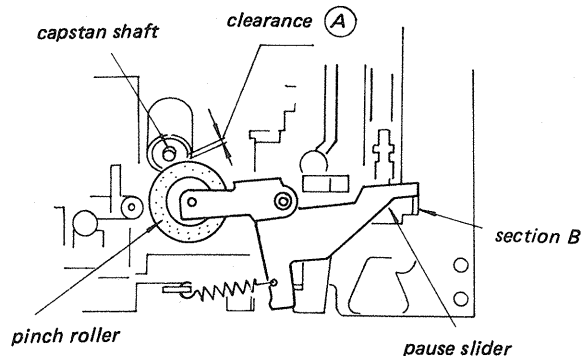
Torque	Torque meter	Meter reading
Forward torque	CQ102C	30–63 g·cm (0.42–0.88 oz·inch)
Back tension torque	CQ102C	2.5–6.5 g·cm (0.03–0.09 oz·inch)
Fast-forward/rewind torque	CQ201B	80–165 g·cm (1.1–2.29 oz·inch)



Clearance Between Pinch Roller And Capstan Shaft Adjustment

1. Mode: forward-pause

Adjust by bending section B of pause slider so that the clearance (A) between pinch roller and capstan shaft becomes 0.4 – 0.8 mm.



Head Moving Stroke Adjustment

– Playback and AMS Modes –

Procedure:

1. Put the unit in playback mode.
2. Adjust screw B so that the stroke becomes in 3.3 – 3.45 mm ($\frac{5}{32}$ ").
 - a) Loosen screw when short.
 - b) Tighten screw when long.
3. Check for a (overstroke) of more than 0.3 mm ($\frac{1}{31}$ ") when compared with a position of the head in normal playback mode.
4. Clearance between head chassis and adjustment plate should be 0 – 0.8 mm (0" – $\frac{1}{32}$ ") as shown in Fig. 1-b.
5. Put the unit in AMS mode.
6. Adjust screw A so that the stroke becomes in 1.9 mm – 2.1 mm ($\frac{3}{32}$ ").
 - a) Loosen screw B when long.
 - b) Tighten screw A when short.
7. Clearance between head chassis and adjustment plate should be 0 – 1 mm (0" – $\frac{1}{16}$ ") as shown in Fig. 1-a.
8. Lock the adjustment screws after the adjustment. Be sure to apply locking compound on only half (180°) of the screw head of screw B as shown in Fig. 2.

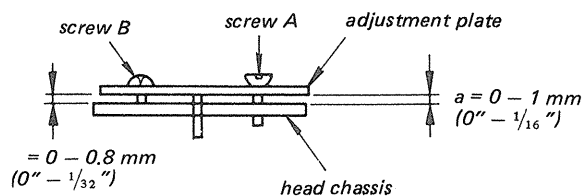


Fig. 1

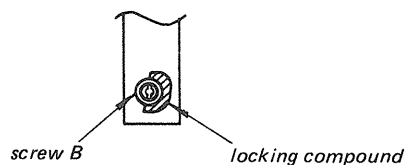
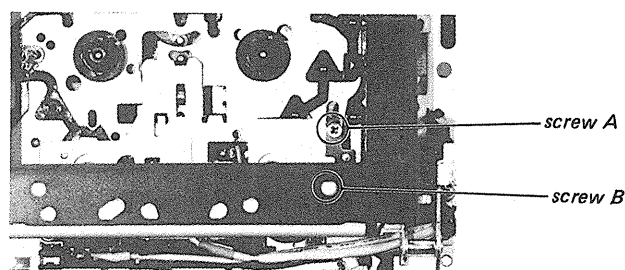


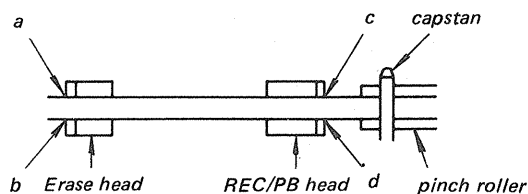
Fig. 2.



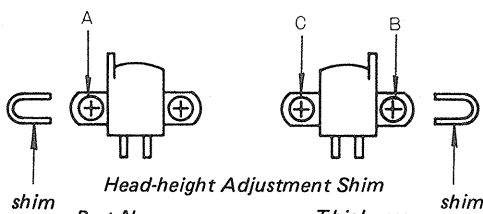
Tape Path Adjustment

Procedure:

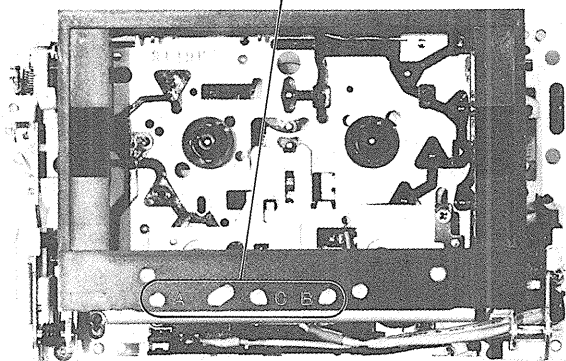
1. Mode: playback Mirror tape cassette CQ-009C
2. When curl exists at "a" of erase-head's tape guide.
 - a) Loosen screw A and put appropriate head-height adjustment shim(s) to eliminate curl.
 - b) Total shim height should be less than 0.3 mm ($\frac{1}{32}$ ").
3. When curl exists at "b" of erase-head's tape guide.
 - a) Loosen screw A and remove one or more shim(s) already installed at the head, or use only one 0.1 mm thick shim.
 - b) Total shim removing should be within the amount of 0.3 mm ($\frac{1}{32}$ ") thickness.
4. When curl exist at "c" of record/playback head. Perform the same procedure in step 2 above using screw B.
5. When curl exist at "d" of record/playback head. Perform the same procedure in step 3 above using screw B.
6. After the adjustment, lock the screws with locking compound.



Seen with a mirror tape cassette.



Part No.	Thickness
3-513-237-01	0.1 mm
3-513-237-11	0.2 mm

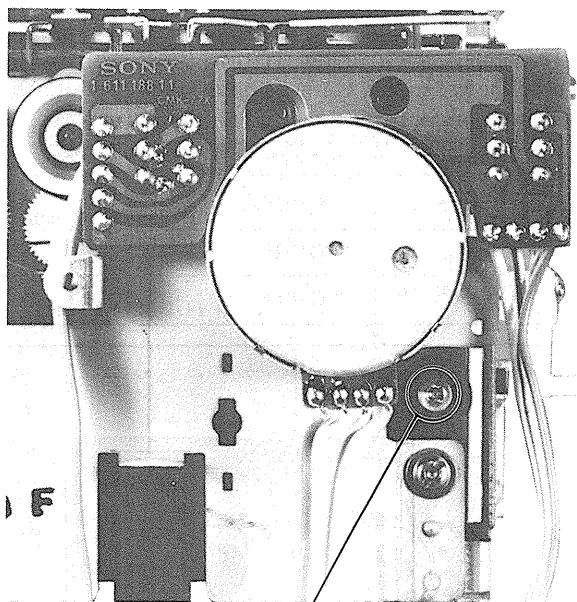


Soft Eject Speed Adjustment

Note: Place the unit on its side when performing this adjustment.

Procedure:

1. Put any tape cassette whose weight is equivalent to a "CHF 90" in the unit.
2. Be sure to install the cassette lid.
3. Adjust position of screw by repeating pressing ejection button and closing cassette lid so that the lid-opening time becomes in 0.4 to 1.0 second.
 - a) When fast: Tighten screw.
 - b) When slow: Loosen screw.



adjustment screw

3.2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.

The adjustments should be performed for both L-CH and R-CH.

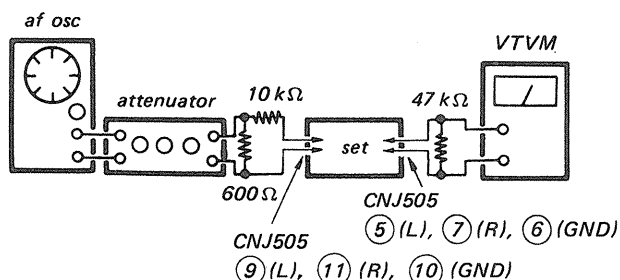
- Tape switches are automatically switched according to the tape used.

Tape	TAPE TYPE indicator
CS-15	TYPE I
CS-26	TYPE II
CS-40	TYPE IV

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch:	OFF
TIMER switch:	OFF

— Record Mode —

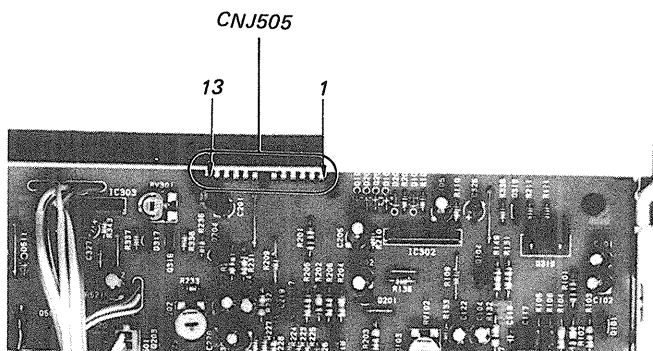


Standard Input Level

	CNJ505 9(L), 11(R)
source impedance	10 kΩ
input level	0.25 V (−10 dB)

Standard Output Level

	CNJ505 5(L), 7(R)
load impedance	47 kΩ
output level	0.44 V (−5 dB)



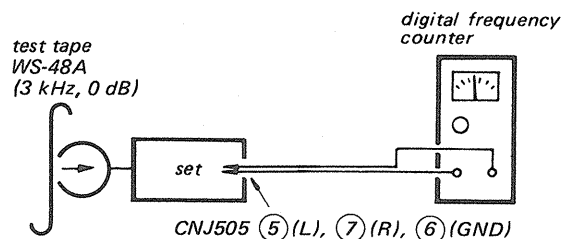
Tape Speed Adjustment

Setting:

DOLBY NR: OFF

Procedure:

1. Mode: playback



Play back the tape in forward mode, and adjust the adjustable resistor built in motor.

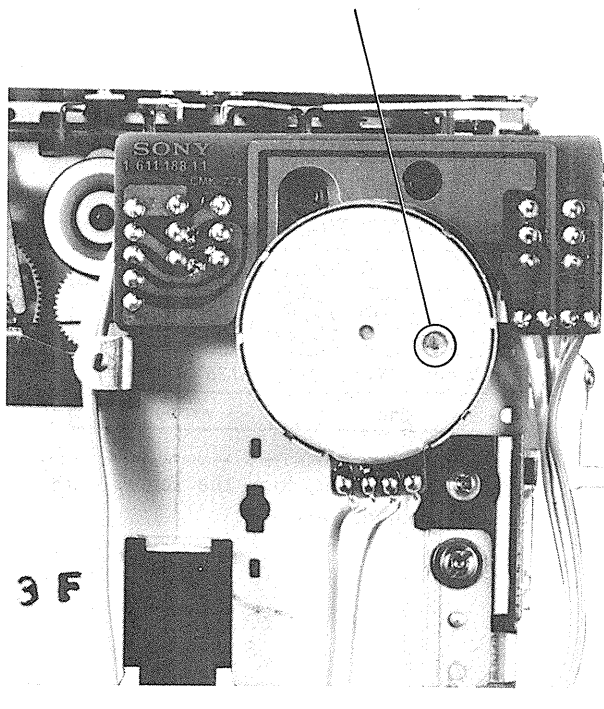
Specification:

Speed checker	Frequency counter
± 2.5%	2,925 – 3,075 Hz

Level difference between tape start and tape end: 1% (30 Hz)

Adjustment Location: Motor

*Built-in adjustable resistor
(Adjust the speed by using screwdriver.)
(When turning the screw clockwise,
speed is faster.)*

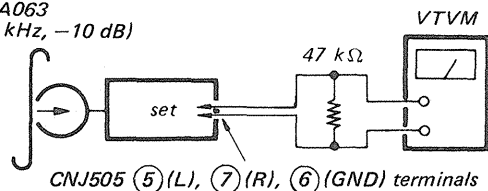


Record/playback Head Azimuth Adjustment

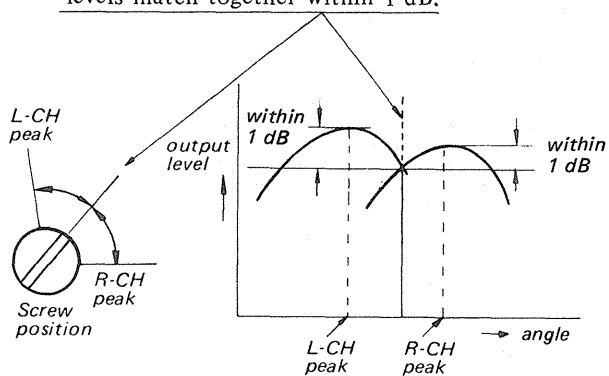
Procedure:

1. Mode: playback

test tape
P-4-A063
(6.3 kHz, -10 dB)

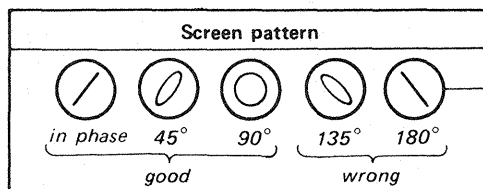
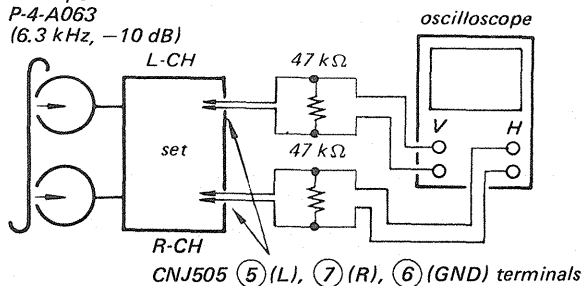


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



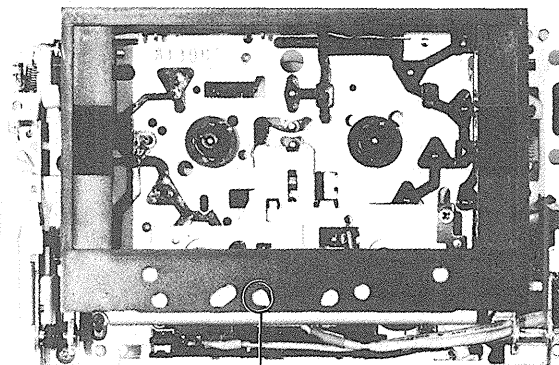
3. Mode: playback

test tape
P-4-A063
(6.3 kHz, -10 dB)



4. After the adjustment, lock the screws with locking compound.

Adjustment Location:



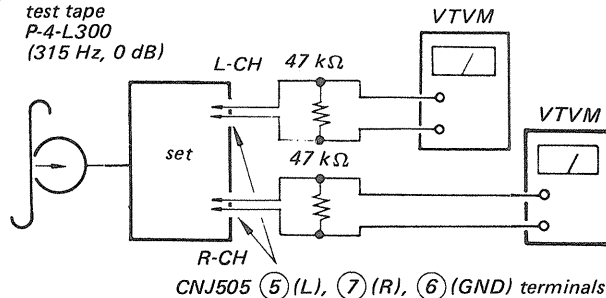
adjustment screw

Playback Level Adjustment

Procedure:

Mode: playback

test tape
P-4-L300
(315 Hz, 0 dB)



Adjust RV101 (L-CH) and RV201 (R-CH) so that the specification is met.

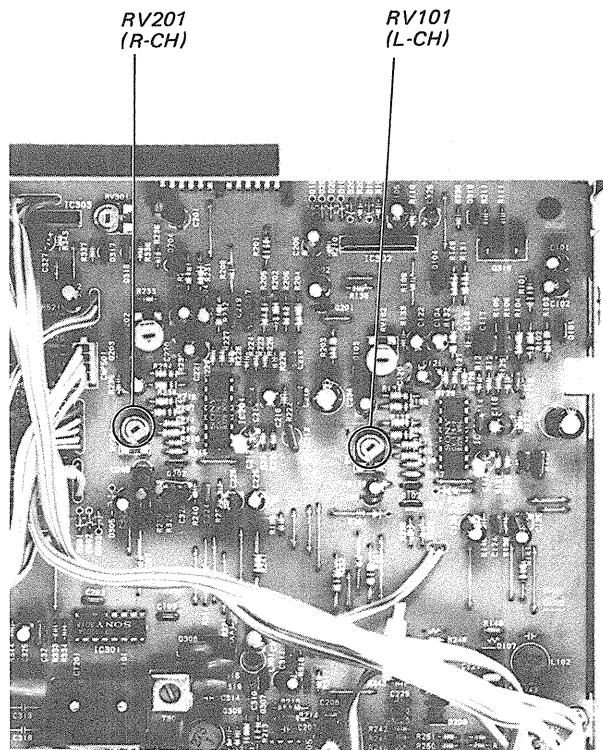
Specification:

LINE OUT level: 0.41 to 0.46 V
(-5.5 to -4.5 dB)

Level difference between channels:
less than 0.5 dB

Check that the CNJ505 ⑤ (L), ⑦ (R) terminal level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: audio syscon board



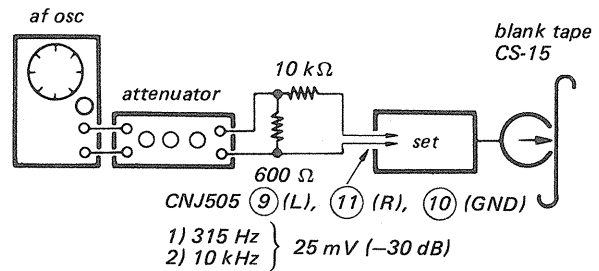
Record Bias Adjustment

Setting:

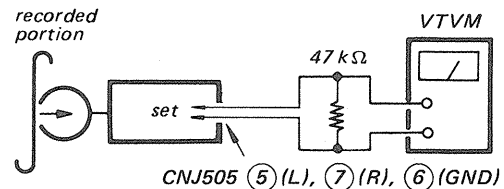
(See page TC-11.)

Procedure:

1. Mode: record

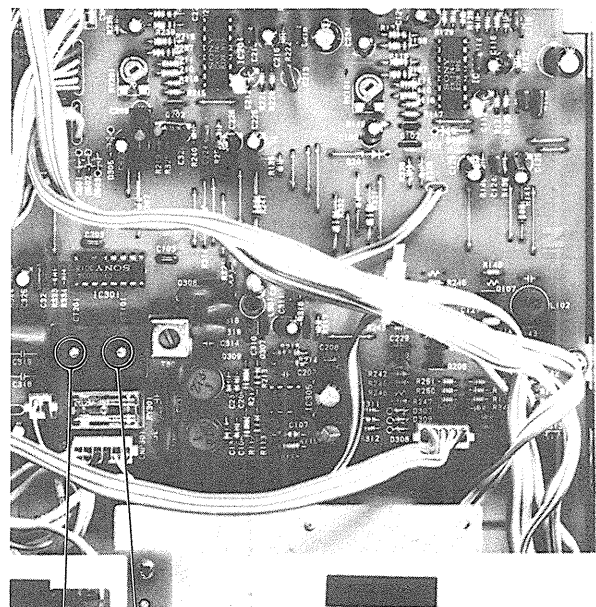


2. Mode: playback



Confirm that the 10 kHz playback output is 0 dB relative to the 315 Hz output. If necessary, adjust CT101 (L-CH), CT201 (R-CH) and repeat the steps given above.

Adjustment Location: audio syscon board



CT201 (R-CH)
CT101 (L-CH)

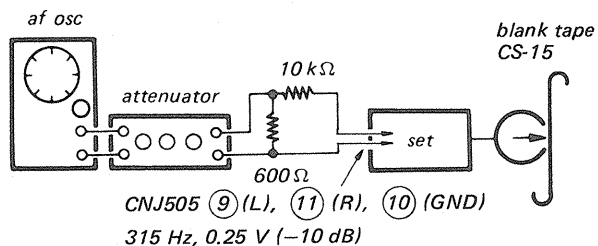
Record Level Adjustment

Setting:

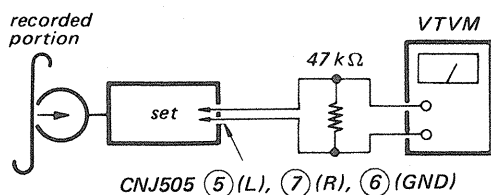
(See page TC-11.)

Procedure:

1. Mode: record



2. Mode: playback

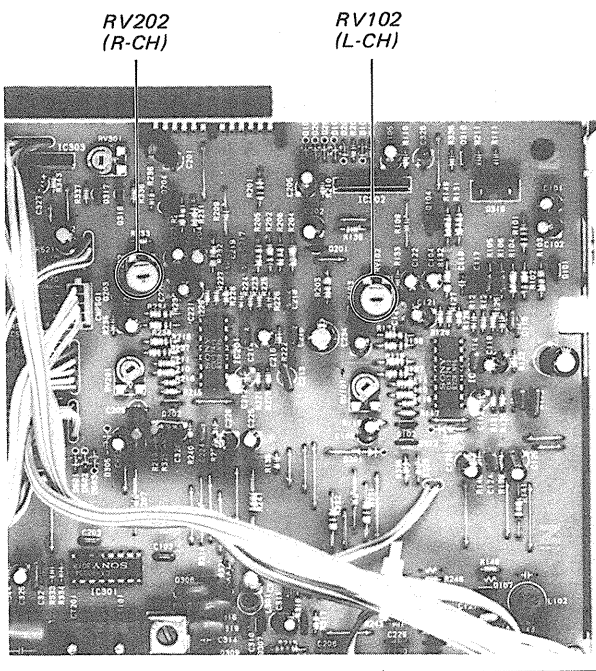


3. Play back the signal recorded in step 1.
Confirm that the signal level is within the specification below. If necessary, adjust RV102 (L-CH), RV202 (R-CH) and repeat the steps 1–3.

Specification:

LINE OUT level: 0.42 – 0.46 V
(–5.5 to –4.5 dB)

Adjustment Location: audio syscon board

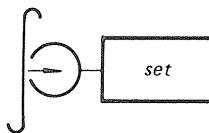


Level Meter Calibration

Procedure:

Mode: playback

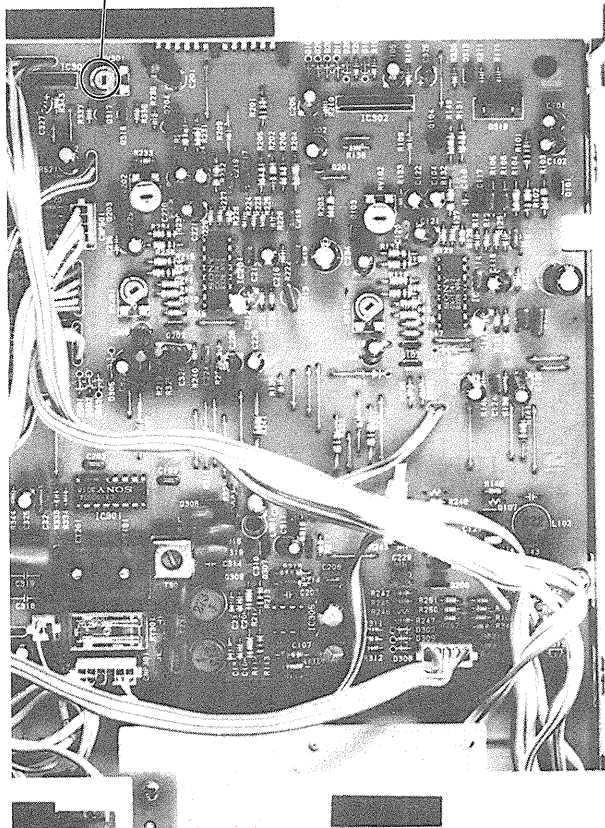
test tape
P-4-L300 (315 Hz, 0 dB)

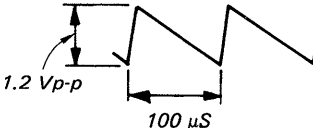
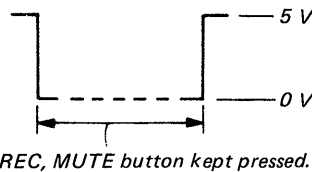
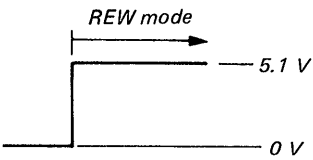
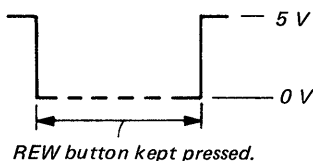
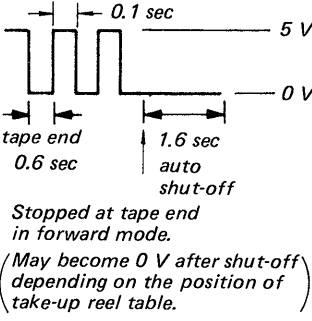
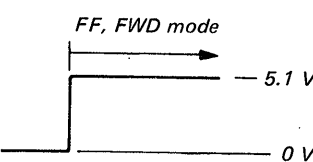
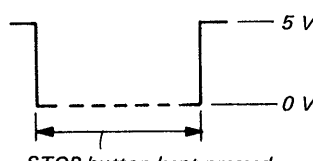
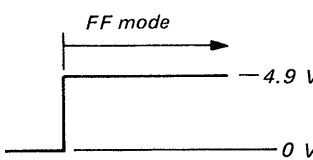
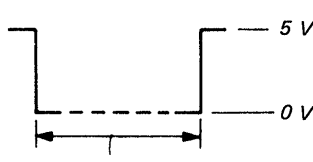
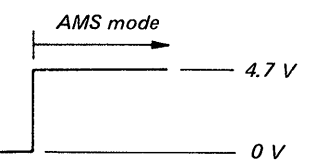
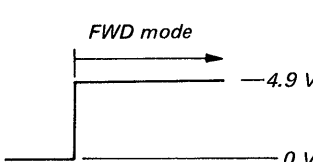
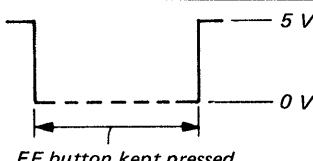
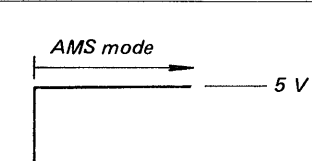
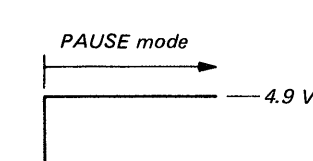
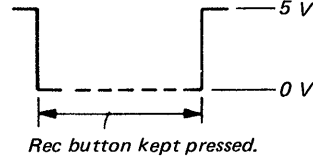
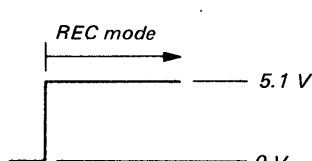
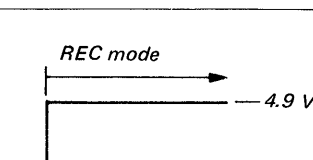
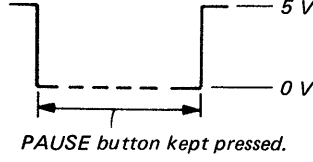
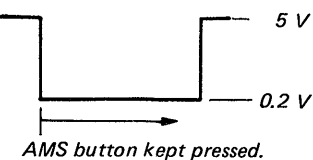
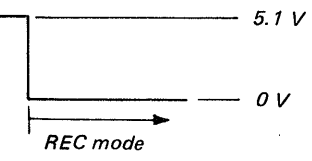
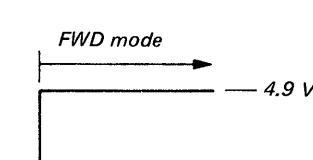
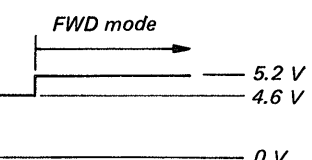
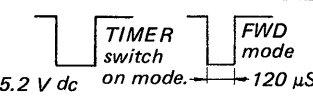


Adjust RV301 so that LEDs up to "0" scales of the meter go on.

Adjustment Location: audio syscon board

RV301

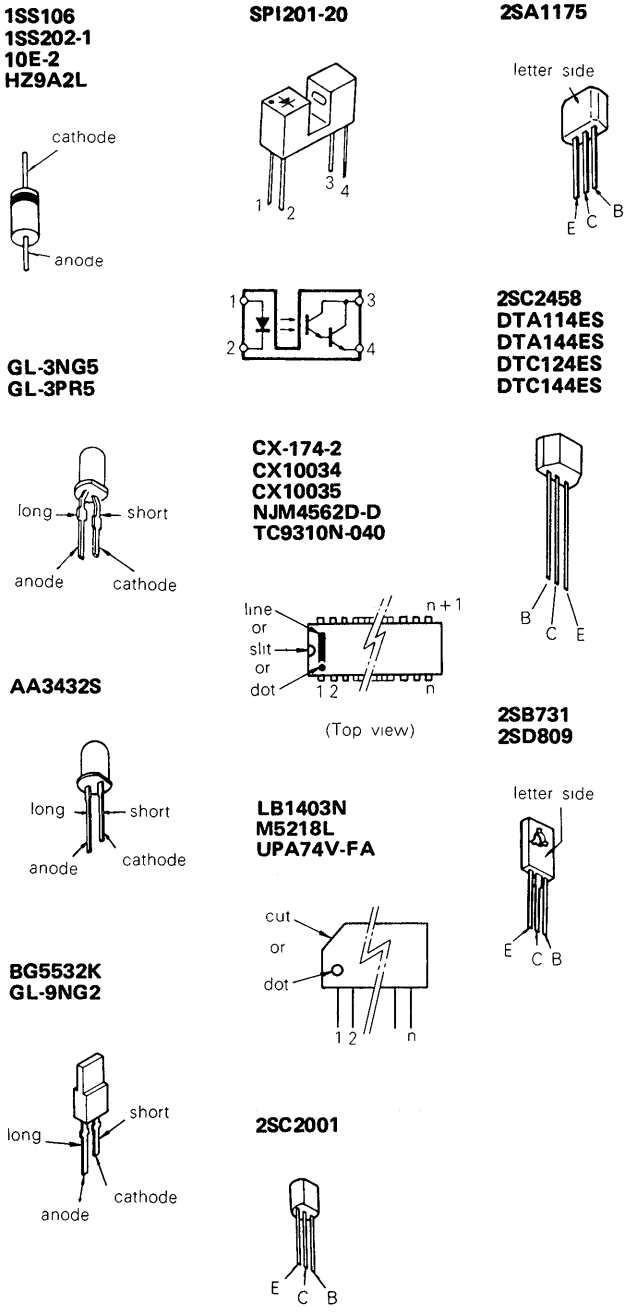


TERMINAL NAME, WAVEFORM AND OPERATING VOLTAGES OF IC501					
PIN NO.	Waveform or Voltages	PIN NO.	Waveform or Voltages	PIN NO.	Waveform or Voltages
① G	GND				
② OSC		⑫ O		⑳ M-R	
③ RES	5.6 V dc				
④ ◀		⑬ SHUT		㉑ M-F	
⑤ □		⑭ C	5.6 V dc	㉒ PM2	
⑥ ▶		⑮ AMS LED		㉓ PM1	
⑦ ▶▶		⑯ AMS		㉔ LED	
⑧ ●		⑰ BIAS		㉕ LED	
⑨ ■					
⑩ AMS		⑱ OM		㉖ LED	
⑪ ▲	Cassette lid Close: 5.2 V dc Open: 0 V dc	⑲ LM		㉗ TIM	
				㉘ Vcc	5.6 V dc

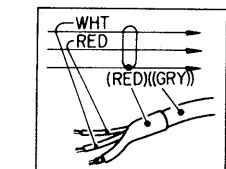
SECTION 4
DIAGRAMS

4-1. MOUNTING DIAGRAM

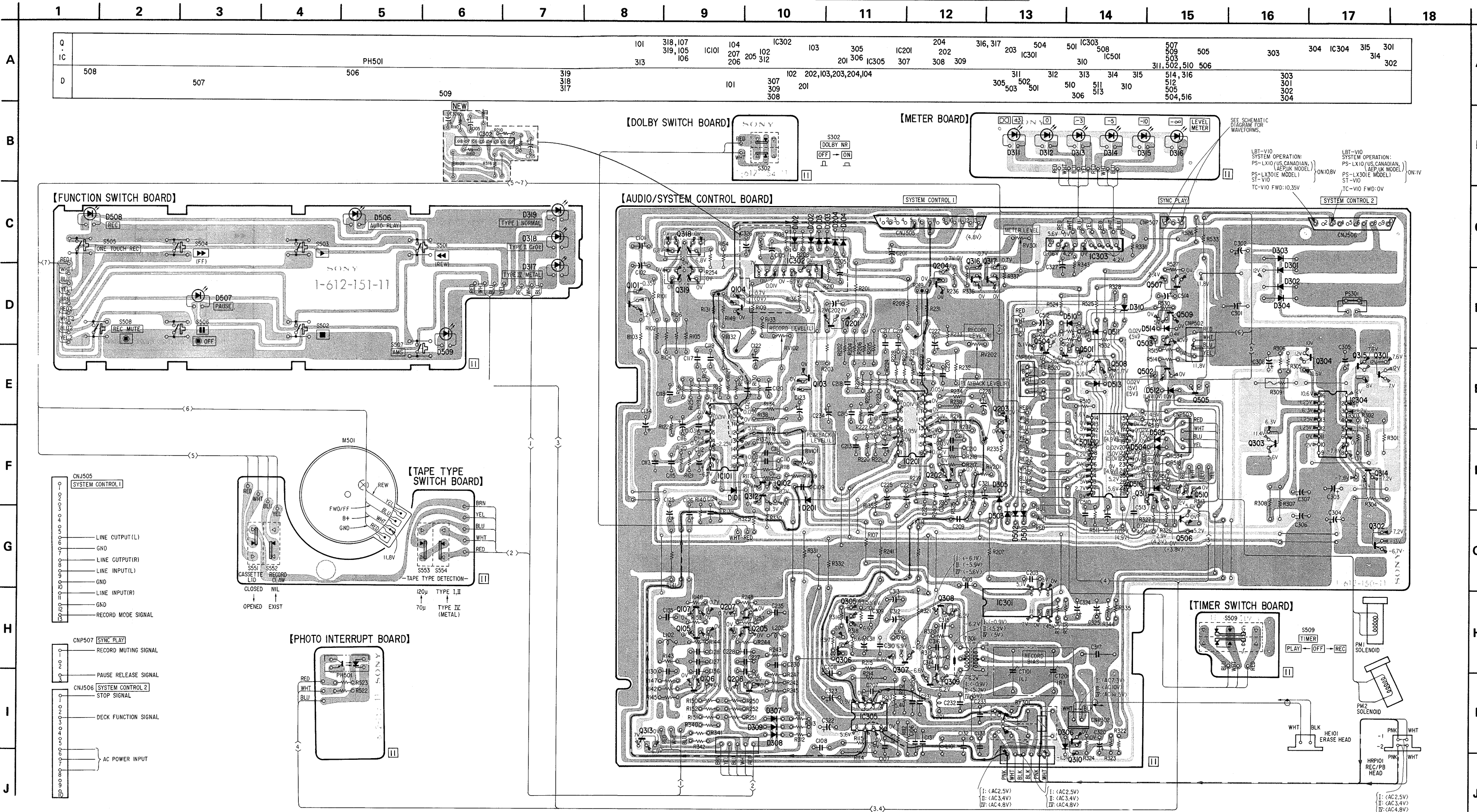
Semiconductor Lead Layouts



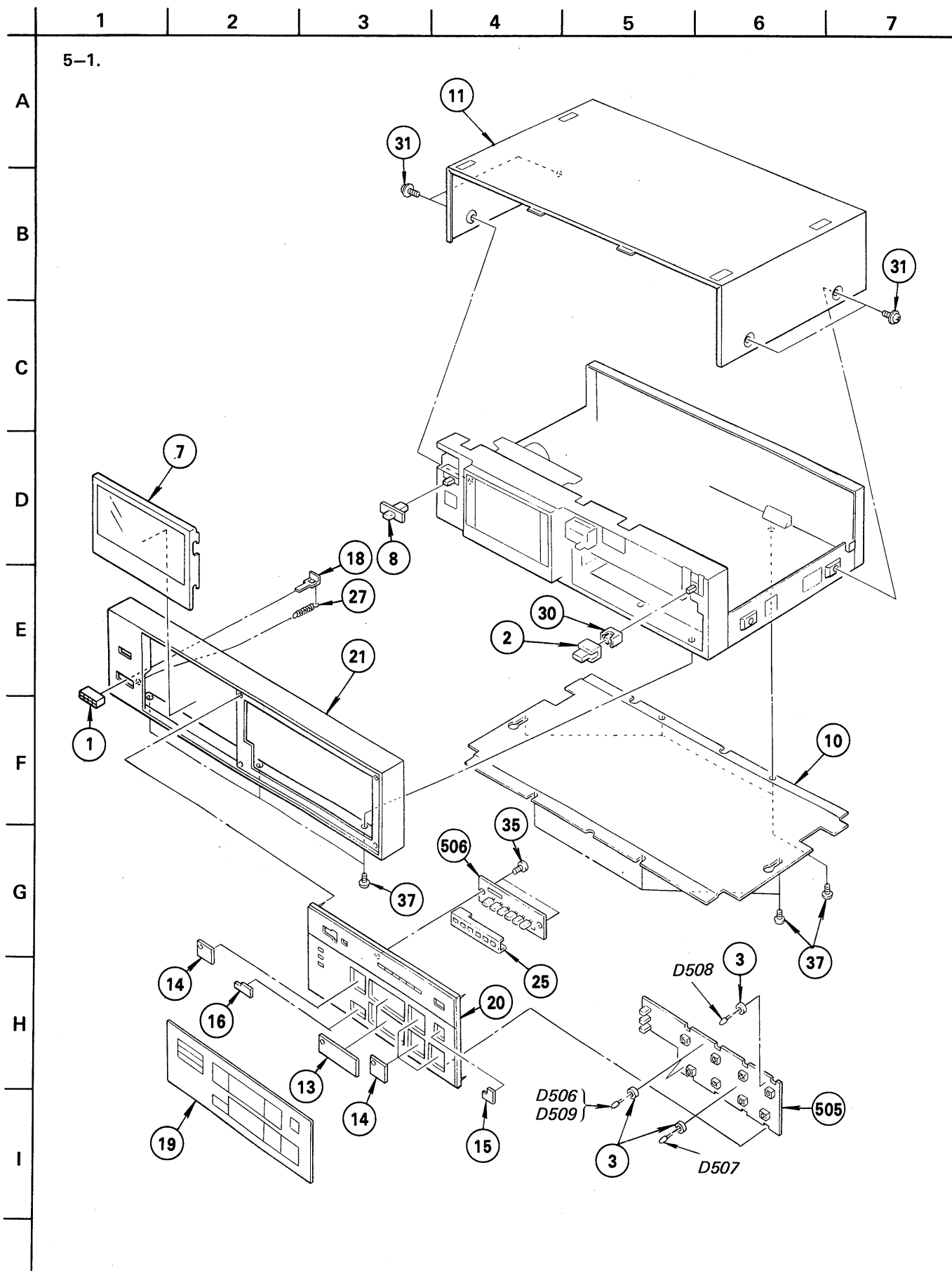
Note:
• Color code of sleeving over the end of the jacket.

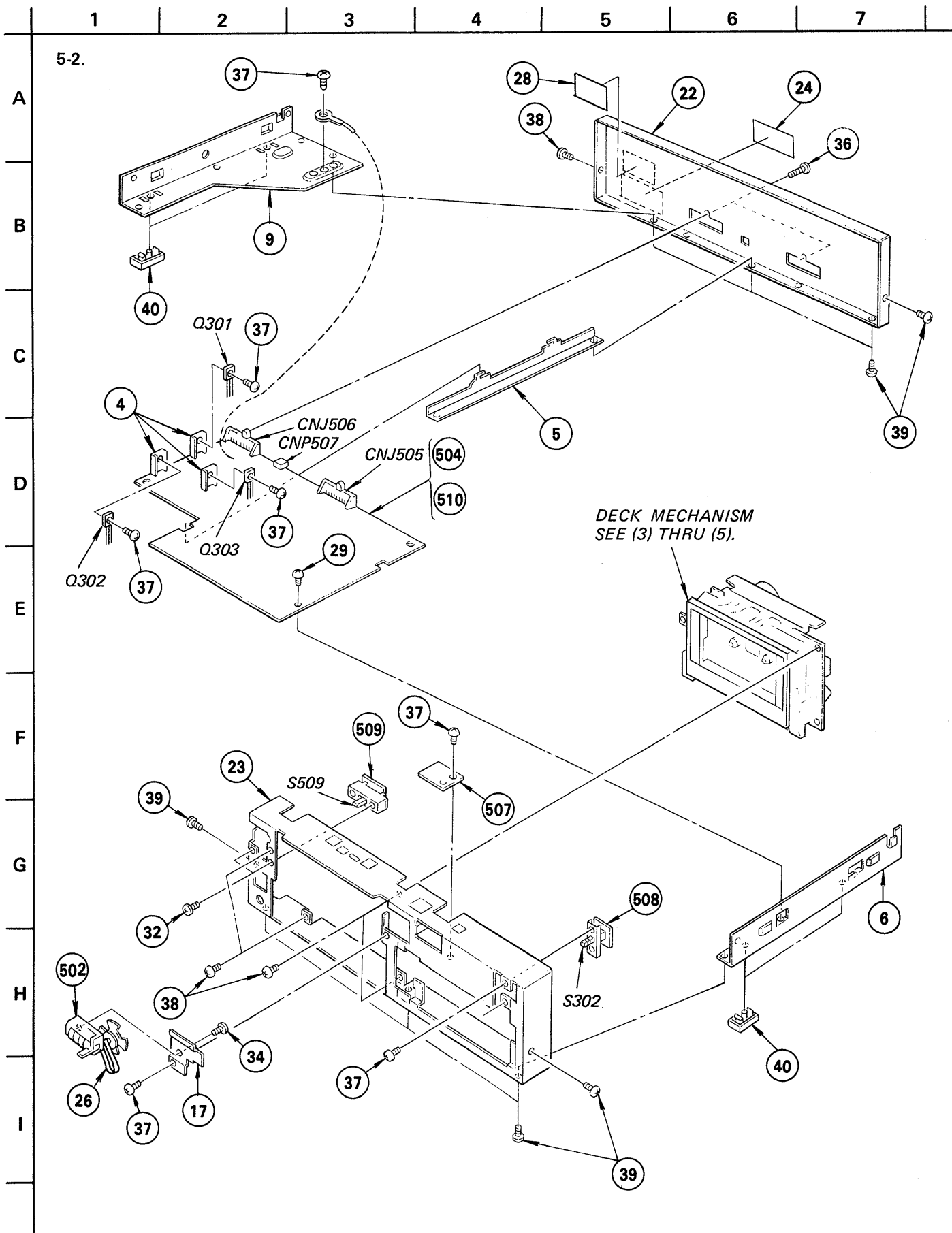


- — : parts extracted from the component side.
- — : B + pattern
- — : B - pattern
- — : signal path
- — : L-CH signal path
- — : R-CH signal path

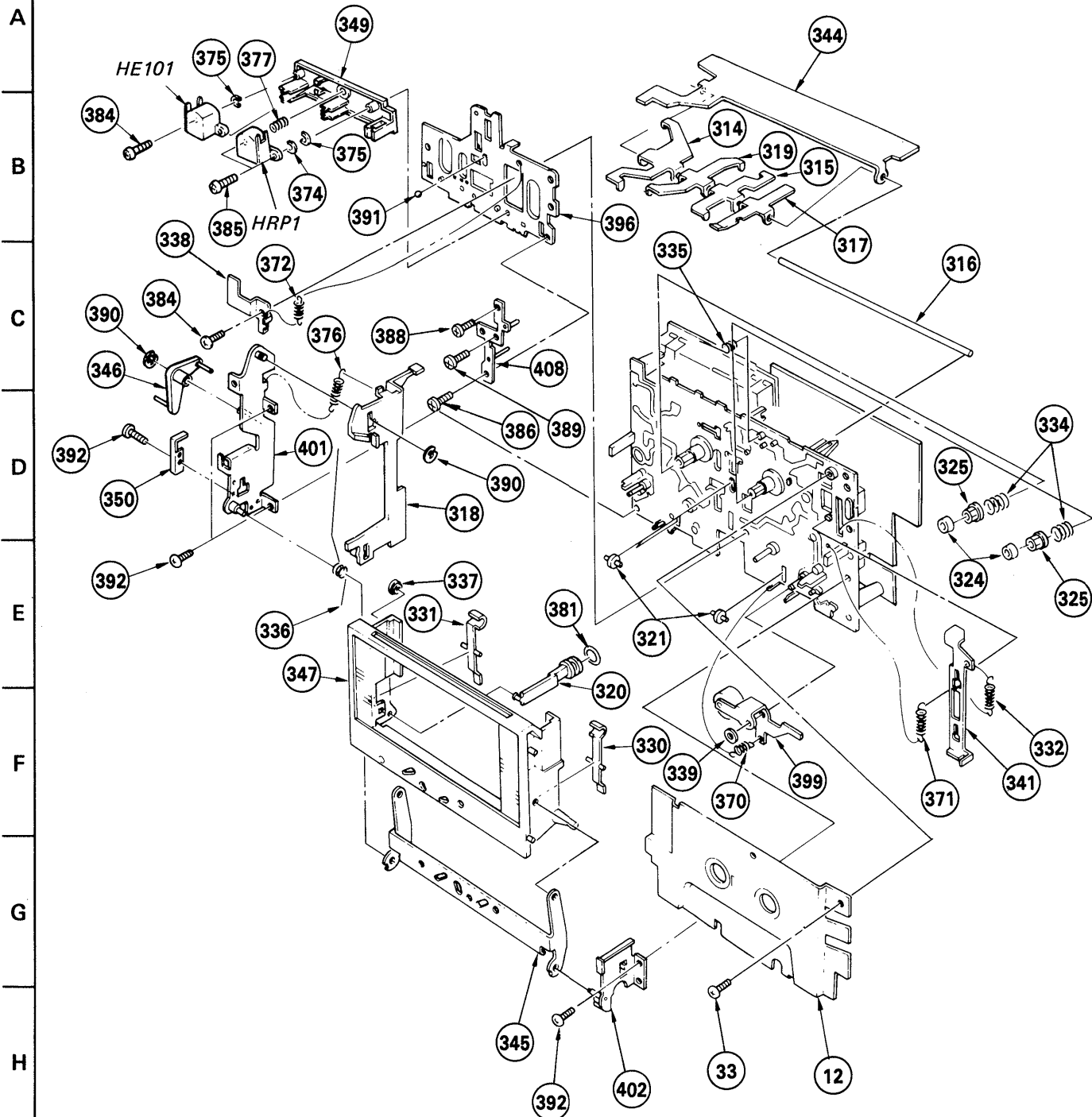


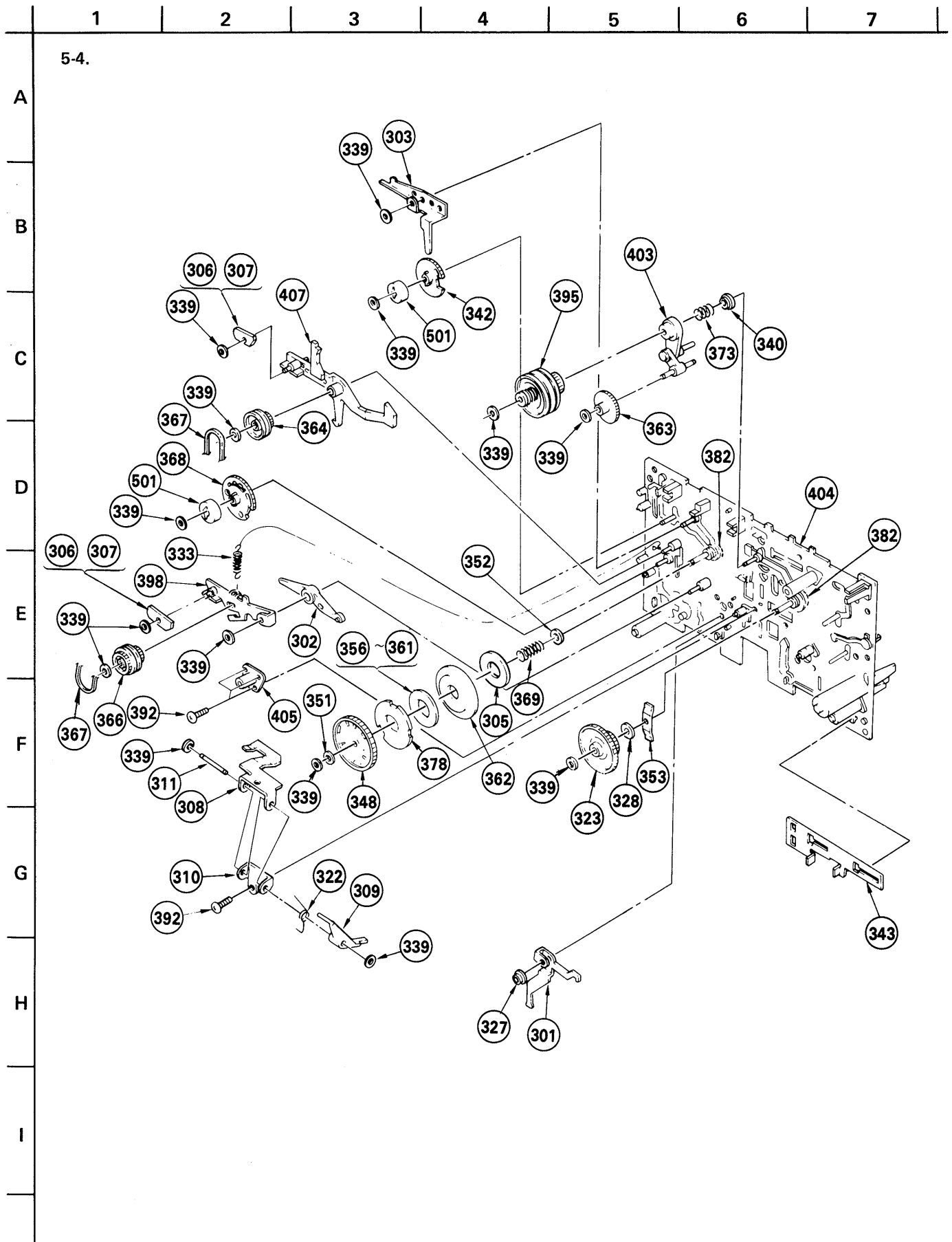
SECTION 5
EXPLODED VIEWS AND PARTS LIST





5-3.





5-5.

A

B

C

D

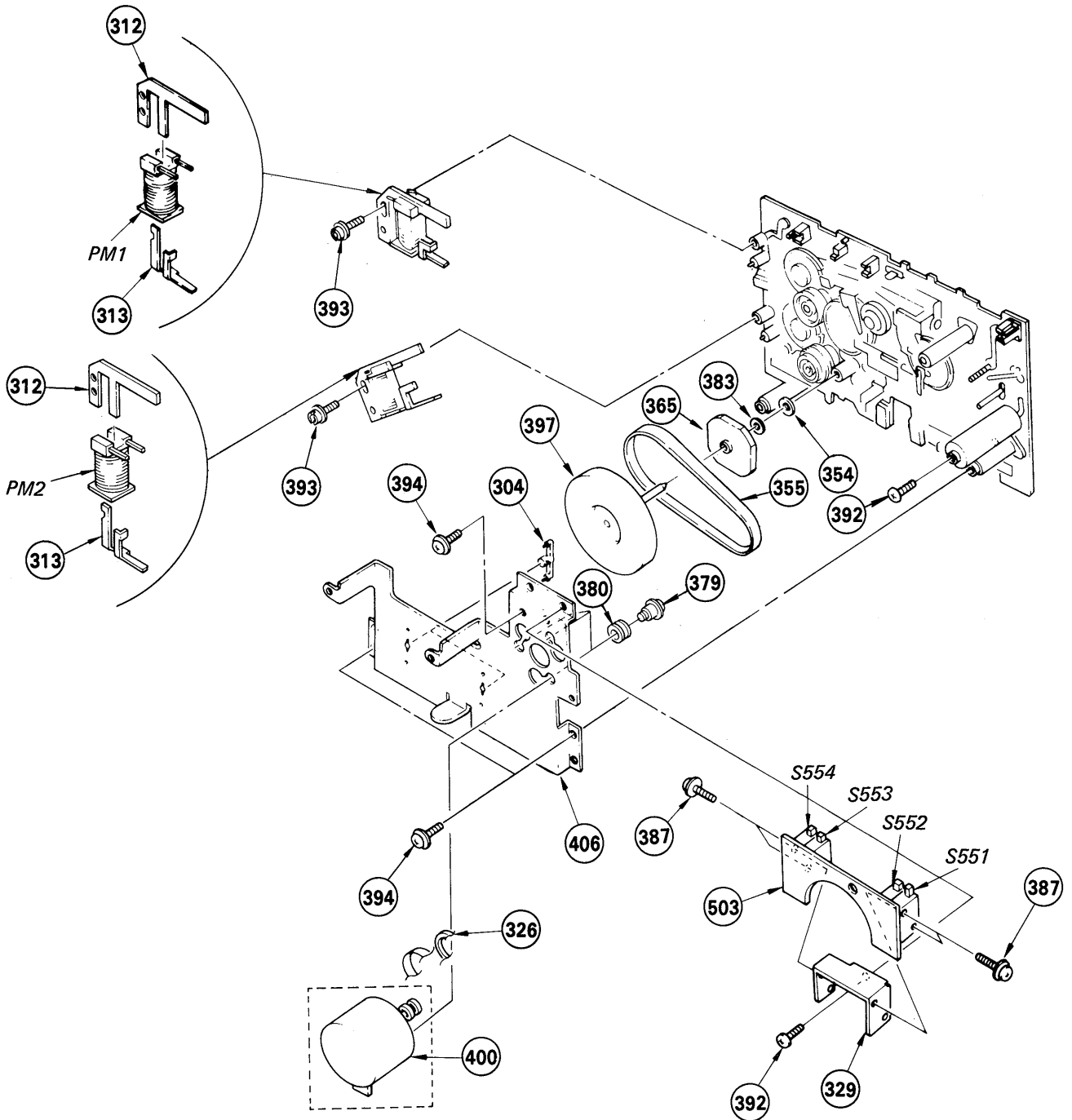
E

F

G

H

I



GENERAL SECTION

No.	Part No.	Description
1	3-304-419-01	(SILVER)...BUTTON, EJECT
1	3-304-419-21	(BLACK)...BUTTON, EJECT
2	3-304-926-11	(SILVER)...KNOB (A), PUSH
2	3-304-926-00	(BLACK)...KNOB (A), PUSH
3	3-307-390-00	BUSHING, LOADING SPRING
4	♣;3-312-615-31	HEAT SINK
5	♣;3-313-209-00	PLATE, RELAY
6	♣;3-313-210-00	PLATE, SIDE, RIGHT
7	3-313-215-21	(SILVER)...WINDOW, CASSETTE
7	3-313-215-51	(BLACK)...WINDOW, CASSETTE
8	3-313-216-11	(SILVER)...KNOB, SWITCH, TIMER
8	3-313-216-21	(BLACK)...KNOB, SWITCH, TIMER
9	♣;3-313-217-00	PLATE, SIDE, LEFT
10	♣;3-313-220-00	PLATE, BOTTOM
11	3-313-223-01	(SILVER)...CASE
11	3-313-223-31	(BLACK)...CASE
12	♣;3-313-234-00	PLATE, ORNAMENTAL, MD
13	♣;3-313-254-01	BUTTON (LARGE), CONTROL
14	♣;3-313-255-01	BUTTON (MIDDLE), CONTROL
15	♣;3-313-256-01	BUTTON (SMALL), CONTROL
16	;3-313-257-01	BUTTON, AMS
17	;3-313-258-01	BRACKET, COUNTER
18	;3-313-259-01	PLATE, SLIDE
19	3-313-260-01	(SILVER)...SHEET, SWITCH, CONTROL
19	3-313-260-31	(BLACK)...SHEET, SWITCH, CONTROL
20	3-313-261-02	(SILVER)...ESCUTCHEON
20	3-313-261-21	(BLACK)...ESCUTCHEON
21	3-313-262-01	(SILVER)...PANEL, FRONT
21	3-313-262-51	(BLACK)...PANEL, FRONT
22	♣;3-313-263-11	PLATE, JACK (E, AEP, UK)
22	♣;3-313-263-21	PLATE, JACK (US, CANADIAN)
23	♣;3-313-264-01	CHASSIS, AMPLIFIER
24	3-313-266-01	LABEL, MODEL NUMBER (E)
25	♣;3-313-269-01	HOLDER, LED
26	3-530-181-XX	BELT, DETECTING
27	3-540-244-00	SPRING, TENSION
28	3-701-030-00	LABEL, SERIAL NUMBER
29	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6
30	4-864-307-00	RING
31	4-886-821-11	(SILVER)...SCREW, M3 CASE
31	4-886-821-01	(BLACK)...SCREW, M3 CASE
32	7-621-773-93	SCREW +B 2.6X3
33	7-685-102-29	SCREW +P 2X4 TYPE2 SLIT
34	7-685-531-19	SCREW +BTP 2.6X4 TYPE2 N-S
35	7-685-545-19	SCREW +BTP 3X6 TYPE2 N-S
36	7-685-547-19	SCREW +BTP 3X10 TYPE2 N-S
37	7-685-871-01	SCREW +BVTT 3X6 (S)
38	7-685-871-09	SCREW +BVTT 3X6 (S)
39	7-685-872-01	SCREW +BVTT 3X8 (S)
40	X-4886-405-1	(SILVER)...FOOT ASSY
40	X-4886-405-2	(BLACK)...FOOT ASSY

NOTE:

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MECHANISM SECTION

No.	Part No.	Description
301	♣;3-307-301-00	LEVER (RELAY), FWD SELECT
302	3-307-307-00	LEVER, FWD
303	♣;3-307-308-00	LEVER, FF
304	3-307-309-00	RETAINER (A), THRUST
305	3-307-313-00	PLATE, YOKE
306	3-307-315-00	ARBOR, MOVABLE
307	3-307-315-01	ARBOR, MOVABLE
308	3-307-319-00	RETAINER, TAKE-UP GEAR
309	3-307-328-00	LEVER, TAKE-UP SELECTION
310	♣;3-307-329-00	PLATE, FULCRUM, SELECTION LEVER
311	3-307-330-00	PIN, FULCRUM PLATE
312	3-307-332-00	ARBOR, FIXED
313	3-307-333-00	ARBOR, TRIGGER
314	♣;3-307-337-00	LEVER, REC DETECTION
315	♣;3-307-338-00	LEVER, METAL DETECTION
316	♣;3-307-339-00	SHAFT, DETECTION LEVER
317	♣;3-307-344-00	LEVER, HALF RETAINER
318	3-307-345-00	SLIDER, EJECT
319	♣;3-307-346-00	LEVER, DETECTION
320	3-307-347-00	PISTON
321	3-307-348-00	ROLLER
322	3-307-355-00	SPRING
323	3-307-360-00	GEAR (S), REEL
324	3-307-362-00	CAP, REEL
325	3-307-363-00	CLAW (N), REEL
326	3-307-366-00	BELT, FAST FORWARD
327	3-307-367-00	BUSHING, SELECT LEVER
328	3-307-369-00	FELT, LIMITER
329	♣;3-307-370-00	BRACKET, SWITCH
330	3-307-371-00	SPRING (LEFT)
331	3-307-372-00	SPRING (RIGHT)
332	3-307-374-00	SPRING, TENSION
333	3-307-378-00	SPRING, TENSION
334	3-307-380-00	SPRING, COMPRESSION
335	3-307-382-00	SPRING
336	3-307-383-00	SPRING
337	3-440-113-01	WASHER, LOADING SPRING
338	3-307-391-00	SPRING
339	3-307-394-00	RETAINER (B), THRUST
340	3-307-395-00	RETAINER, SPRING
341	3-307-397-00	SLIDER, PAUSE
342	3-307-401-00	GEAR, FF CAM
343	♣;3-307-403-00	SLIDER, FWD
344	♣;3-307-404-00	RETAINER, DETECTION SWITCH
345	3-307-405-00	PLATE, FULCRUM, CASSETTE HOLDER

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA....: μA...., UPA....: μPA...., UPC....: μPC,
 UPD....: μPD....

MECHANISM SECTION

No.	Part No.	Description
346	3-307-406-00	LEVER, EJECT
347	3-307-407-31	HOLDER, CASSETTE
348	3-307-412-00	GEAR, TAKE-UP REEL
349	3-307-414-00	BRACKET, HEAD
350	3-307-416-00	STOPPER, LOADING
351	3-307-465-00	RETAINER, T SIDE
352	3-307-467-00	RETAINER, SPRING
353	3-307-475-00	PLATE, TENSION, BACK
354	3-307-482-00	WASHER, LUMILER
355	3-307-483-00	BELT (R), CAPSTAN
356	3-307-493-01	SPACER
357	3-307-493-11	SPACER
358	3-307-493-21	SPACER
359	3-307-493-31	SPACER
360	3-307-493-41	SPACER
361	3-307-493-51	SPACER
362	3-307-953-00	MAGNET, REEL TABLE
363	3-307-970-00	GEAR, FR
364	3-312-405-00	PULLEY, DRIVING
365	3-312-406-00	GEAR (T), PINION
366	3-312-408-00	GEAR (B), CONVERSION
367	3-312-409-00	BELT, FF DRIVING
368	3-312-412-00	GEAR (B), CAM, FWD
369	3-312-429-00	SPRING, COMPRESSION
370	3-312-432-00	SPRING, TENSION
371	3-312-448-00	SPRING, TENSION
372	3-312-451-00	SPRING, TENSION
373	3-312-452-00	SPRING, COMPRESSION
374	3-513-237-01	PLATE
375	3-513-237-11	PLATE
376	3-531-541-00	SPRING, TENSION
377	3-539-237-00	SPRING (3), COMPRESSION
378	3-561-827-00	PLATE (A), HYSTERESIS
379	3-570-027-00	SCREW, MOTOR
380	3-570-118-00	CUSHION, MOTOR
381	3-575-392-00	RING, PISTON
382	3-701-437-11	WASHER
383	3-701-438-11	WASHER, 2.5
384	3-701-465-00	SCREW, LOCK
385	3-701-466-00	SCREW, LOCK
386	3-701-467-00	SCREW, LOCK
387	7-621-760-05	+PSW, 2.6X16
388	7-621-770-20	SCREW +B 2X5
389	7-621-772-00	SCREW +B 2X3
390	7-624-105-04	STOP RING 2.3, TYPE -E

MECHANISM SECTION

No.	Part No.	Description
391	7-671-111-11	STEEL, BOUL 1.5MM
392	7-685-860-04	SCREW +BVTT 2.6X4 (S)
393	7-687-204-21	TOTSU PTPWH 2X6 NON-SLIT, TYPE2
394	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
395	A-2142-022-A	PULLEY ASSY, FR
396	X-3307-301-0	CHASSIS (N) ASSY, HEAD
397	X-3307-302-5	FLYWHEEL (N) ASSY
398	●;X-3307-305-0	LEVER ASSY, FWD LOCK
399	X-3307-307-0	PINCH ROLLER (N) ASSY
400	X-3307-308-0	MOTOR (N) ASSY
401	●;X-3307-309-0	PLATE (LEFT) ASSY, SIDE
402	●;X-3307-310-0	PLATE (RIGHT) ASSY, SIDE
403	X-3307-312-4	LEVER ASSY, FR
404	X-3307-330-1	CHASSIS (N) ASSY, MECHANICAL
405	X-3307-338-0	BEARING ASSY, CAPSTAN
406	X-3307-345-0	RETAINER, THRUST
407	X-3307-348-0	LEVER ASSY, FF LOCK
408	X-3307-920-0	PLATE ASSY, ADJUSTMENT

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- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD....

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
501	1-452-202-00	MAGNET				
502	1-548-563-41	COUNTER, TAPE				
503	♣;1-611-188-00	PC BOARD, TAPE SELECTION SWITCH				
504	♣;1-612-150-13	PC BOARD, AUDIO.SYSCON				
505	♣;1-612-151-11	PC BOARD, CONTROL SWITCH				
506	♣;1-612-152-12	PC BOARD, METER				
507	♣;1-612-153-11	PC BOARD, PHOTO INTERRUPT				
508	♣;1-612-154-11	PC BOARD, DOLBY SW				
509	♣;1-612-155-11	PC BOARD, TIMER SW				
510	♣;A-2056-217-A	PC BOARD ASSY, AUDIO				
C101	1-123-382-00	ELECT	3.3MF	20%	50V	
C102	1-123-382-00	ELECT	3.3MF	20%	50V	
C103	1-130-625-00	FILM	0.027MF	5%	50V	
C105	1-123-356-00	ELECT	10MF	20%	16V	
C106	1-162-108-00	CERAMIC	680PF	10%	50V	
C107	1-102-973-00	CERAMIC	100PF	5%	50V	
C108	1-130-624-00	FILM	0.022MF	5%	50V	
C109	1-124-184-00	ELECT	3.3MF	20%	50V	
C110	1-162-112-00	CERAMIC	0.0047MF	30%	25V	
C111	1-102-111-00	CERAMIC	270PF	10%	50V	
C112	1-127-457-00	ELECT(SOLID)	0.33MF	20%	25V	
C113	1-130-632-00	FILM	0.1MF	5%	50V	
C114	1-130-627-00	FILM	0.039MF	5%	50V	
C115	1-130-620-00	FILM	0.01MF	5%	50V	
C116	1-123-356-00	ELECT	10MF	20%	16V	
C117	1-130-629-00	FILM	0.056MF	5%	50V	
C118	1-130-629-00	FILM	0.056MF	5%	50V	
C119	1-130-625-00	FILM	0.027MF	5%	50V	
C120	1-108-573-00	MYLAR	0.0056MF	5%	50V	
C121	1-123-369-00	ELECT	4.7MF	20%	50V	
C122	1-123-382-00	ELECT	3.3MF	20%	50V	
C123	1-123-381-00	ELECT	2.2MF	20%	50V	
C124	1-130-626-00	FILM	0.033MF	5%	50V	
C125	1-123-382-00	ELECT	3.3MF	20%	50V	
C126	1-123-330-00	ELECT	22MF	20%	16V	
C127	1-108-575-00	MYLAR	0.0068MF	5%	50V	
C128	1-108-571-00	MYLAR	0.0047MF	5%	50V	
C130	1-108-573-00	MYLAR	0.0056MF	5%	50V	
C131	1-162-037-00	CERAMIC	100PF	5%	50V	
C132	1-107-167-00	MICA	75PF	5%	500V	
C133	1-107-165-00	MICA	56PF	5%	500V	
C134	1-123-307-00	ELECT	100MF	20%	10V	
C135	1-108-575-00	MYLAR	0.0068MF	5%	50V	
C136	1-108-571-00	MYLAR	0.0047MF	5%	50V	
C301	1-123-338-00	ELECT	2200MF	20%	25V	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
C302	1-123-335-00	ELECT	330MF	20%	25V	
C303	1-123-309-00	ELECT	330MF	20%	10V	
C304	1-123-307-00	ELECT	100MF	20%	10V	
C305	1-123-356-00	ELECT	10MF	20%	16V	
C306	1-123-307-00	ELECT	100MF	20%	10V	
C307	1-123-305-00	ELECT	33MF	20%	10V	
C308	1-123-356-00	ELECT	10MF	20%	16V	
C309	1-130-620-00	FILM	0.01MF	5%	50V	
C310	1-101-880-00	CERAMIC	47PF	5%	50V	
C311	1-123-379-00	ELECT	0.47MF	20%	50V	
C312	1-123-369-00	ELECT	4.7MF	20%	50V	
C313	1-123-369-00	ELECT	4.7MF	20%	50V	
C314	1-130-293-00	FILM	0.0068MF	5%	100V	
C315	1-130-293-00	FILM	0.0068MF	5%	100V	
C316	1-130-287-00	FILM	0.0039MF	5%	100V	
C317	1-129-708-00	FILM	0.0033MF	10%	630V	
C320	1-123-382-00	ELECT	3.3MF	20%	50V	
C321	1-123-356-00	ELECT	10MF	20%	16V	
C322	1-123-308-00	ELECT	220MF	20%	10V	
C323	1-123-308-00	ELECT	220MF	20%	10V	
C324	1-123-380-00	ELECT	1MF	20%	50V	
C325	1-123-380-00	ELECT	1MF	20%	50V	
C326	1-123-356-00	TANTALUM	3.3MF	20%	50V	
C327	1-123-369-00	ELECT	4.7MF	20%	50V	
C328	1-123-356-00	ELECT	10MF	20%	16V	
C510	1-108-571-00	MYLAR	0.0047MF	5%	50V	
C511	1-123-382-00	ELECT	3.3MF	20%	50V	
C512	1-123-380-00	ELECT	1MF	20%	50V	
C513	1-161-494-00	CERAMIC	0.022MF	30%	25V	
C514	1-123-380-00	ELECT	1MF	20%	50V	
♣CNP301	1-560-064-00	PIN, CONNECTOR	6P			
♣CNP302	1-560-060-00	PIN, CONNECTOR	2P			
♣CNP501	1-560-062-00	PIN, CONNECTOR	4P			
♣CNP502	1-560-062-00	PIN, CONNECTOR	4P			
♣CNP503	1-560-062-00	PIN, CONNECTOR	4P			
♣CNP504	1-560-063-00	PIN, CONNECTOR	5P			
CNP505	1-562-068-00	SOCKET, CONNECTOR	13P(SYSTEM CONTROL 1)			
CNP506	1-562-479-11	SOCKET, CONNECTOR	10P(SYSTEM CONTROL 2)			
CNP507	1-564-358-00	PIN, CONNECTOR	3P (PLAYER REMOTE TERMINAL)			
CT101	1-141-225-00	CAP, TUNING, TRIMMER				
CT201	1-141-225-00	CAP, TUNING, TRIMMER				
D101	8-719-107-94	DIODE 1SS202-1				
D102	8-719-107-94	DIODE 1SS202-1				
D103	8-719-107-94	DIODE 1SS202-1				

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COILS

MMH : mH, UH : μH

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In each case, U : μ, for example:
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 UPD.... : μPD....

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D104	8-719-911-06	DIODE 1SS106
D201	8-719-107-94	DIODE 1SS202-1
D202	8-719-107-94	DIODE 1SS202-1
D203	8-719-107-94	DIODE 1SS202-1
D204	8-719-911-06	DIODE 1SS106
D301	8-719-200-02	DIODE 10E-2
D302	8-719-200-02	DIODE 10E-2
D303	8-719-200-02	DIODE 10E-2
D304	8-719-200-02	DIODE 10E-2
D305	8-719-107-94	DIODE 1SS202-1
D306	8-719-107-94	DIODE 1SS202-1
D307	8-719-107-94	DIODE 1SS202-1
D308	8-719-107-94	DIODE 1SS202-1
D309	8-719-107-94	DIODE 1SS202-1
D310	8-719-910-92	DIODE HZ9A2L
D311	8-719-907-69	DIODE 8G5532K
D312	8-719-907-69	DIODE 8G5532K
D313	8-719-907-69	DIODE 8G5532K
D314	8-719-907-69	DIODE 8G5532K
D315	8-719-907-69	DIODE 8G5532K
D316	8-719-907-69	DIODE 8G5532K
D317	8-719-909-20	DIODE GL-9NG2
D318	8-719-909-20	DIODE GL-9NG2
D319	8-719-909-20	DIODE GL-9NG2
D501	8-719-107-94	DIODE 1SS202-1
D502	8-719-107-94	DIODE 1SS202-1
D503	8-719-107-94	DIODE 1SS202-1
D504	8-719-107-94	DIODE 1SS202-1
D505	8-719-107-94	DIODE 1SS202-1
D506	8-719-930-50	DIODE GL-3NG5
D507	8-719-934-34	DIODE AA3432S
D508	8-719-903-05	DIODE GL-3PR5
D509	8-719-930-50	DIODE GL-3NG5
D510	8-719-107-94	DIODE 1SS202-1
D511	8-719-107-94	DIODE 1SS202-1
D512	8-719-107-94	DIODE 1SS202-1
D513	8-719-107-94	DIODE 1SS202-1
D514	8-719-107-94	DIODE 1SS202-1
D516	8-719-107-94	DIODE 1SS202-1
HE101	8-825-724-00	HEAD, ERASE EF-201-36
HRP101	8-825-507-60	HEAD (PP227-3602D)
IC101	8-759-905-57	IC CX-174-2
IC201	8-759-905-57	IC CX-174-2
IC301	8-759-700-46	IC CX10034

ELECTRICAL PARTS

Ref.No.	Part No.	Description
IC302	8-759-600-02	IC M5218L
IC303	8-759-801-04	IC LB1403N
IC304	8-759-700-47	IC CX10035
IC305	8-759-705-62	IC NJM4562D-D
IC501	8-759-202-05	IC TC9310N-040
L101	1-408-262-00	MICRO INDUCTOR 27MMH
L102	1-408-256-00	MICRO INDUCTOR 8.2MMH
L201	1-408-262-00	MICRO INDUCTOR 27MMH
L202	1-408-256-00	MICRO INDUCTOR 8.2MMH
L301	1-407-177-XX	MICRO INDUCTOR 470UH
M501	1-541-201-00	MOTOR
PH1501	8-719-902-90	PHOTO INTERRUPTOR SPI201-20
PM1	1-454-316-00	SOLENOID, PLUNGER
PM2	1-454-316-00	SOLENOID, PLUNGER
PS301 1-532-605-00 LINK, IC		
Q101	8-729-245-83	TRANSISTOR 2SC2458
Q102	8-729-245-83	TRANSISTOR 2SC2458
Q103	8-729-245-83	TRANSISTOR 2SC2458
Q104	8-729-100-13	TRANSISTOR 2SC2001
Q105	8-729-245-83	TRANSISTOR 2SC2458
Q106	8-729-245-83	TRANSISTOR 2SC2458
Q107	8-729-245-83	TRANSISTOR 2SC2458
Q201	8-729-245-83	TRANSISTOR 2SC2458
Q202	8-729-245-83	TRANSISTOR 2SC2458
Q203	8-729-245-83	TRANSISTOR 2SC2458
Q204	8-729-100-13	TRANSISTOR 2SC2001
Q205	8-729-245-83	TRANSISTOR 2SC2458
Q206	8-729-245-83	TRANSISTOR 2SC2458
Q207	8-729-245-83	TRANSISTOR 2SC2458
Q301	8-729-180-93	TRANSISTOR 2SD809
Q302	8-729-173-13	TRANSISTOR 2SB731
Q303	8-729-180-93	TRANSISTOR 2SD809
Q304	8-729-245-83	TRANSISTOR 2SC2458
Q305	8-729-245-83	TRANSISTOR 2SC2458
Q306	8-729-117-54	TRANSISTOR 2SA1175
Q307	8-729-245-83	TRANSISTOR 2SC2458
Q308	8-729-245-83	TRANSISTOR 2SC2458
Q309	8-729-245-83	TRANSISTOR 2SC2458
Q310	8-729-245-83	TRANSISTOR 2SC2458
Q311	8-729-117-54	TRANSISTOR 2SA1175
Q312	8-729-900-89	TRANSISTOR DTC144ES
Q313	8-729-900-61	TRANSISTOR DTA114ES

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COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD....

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q314	8-729-117-54	TRANSISTOR 2SA1175
Q315	8-729-245-83	TRANSISTOR 2SC2458
Q316	8-729-245-83	TRANSISTOR 2SC2458
Q317	8-729-245-83	TRANSISTOR 2SC2458
Q318	8-759-101-13	IC UPA74V-FA
Q319	8-759-101-13	IC UPA74V-FA
Q501	8-729-117-54	TRANSISTOR 2SA1175
Q502	8-729-900-36	TRANSISTOR DTC124ES
Q503	8-729-900-36	TRANSISTOR DTC124ES
Q504	8-729-117-54	TRANSISTOR 2SA1175
Q505	8-729-900-89	TRANSISTOR DTC144ES
Q506	8-729-900-65	TRANSISTOR DTA144ES
Q507	8-729-900-89	TRANSISTOR DTC144ES
Q508	8-729-900-65	TRANSISTOR DTA144ES
Q509	8-729-900-89	TRANSISTOR DTC144ES
Q510	8-729-900-89	TRANSISTOR DTC144ES
R101	1-247-131-00	CARBON 1K 5% 1/4W
R102	1-247-179-00	CARBON 100K 5% 1/4W
R103	1-247-147-00	CARBON 4.7K 5% 1/4W
R104	1-246-511-00	CARBON 39K 5% 1/4W
R105	1-246-483-00	CARBON 2.7K 5% 1/4W
R106	1-246-455-00	CARBON 180 5% 1/4W
R107	1-247-131-00	CARBON 1K 5% 1/4W
R108	1-247-879-00	CARBON 100K 5% 1/6W
R109	1-247-879-00	CARBON 100K 5% 1/6W
R110	1-247-876-00	CARBON 75K 5% 1/6W
R112	1-246-529-00	CARBON 220K 5% 1/4W
R113	1-247-107-00	CARBON 100 5% 1/4W
R114	1-246-524-00	CARBON 130K 5% 1/4W
R115	1-247-149-00	CARBON 5.6K 5% 1/4W
R116	1-246-499-00	CARBON 12K 5% 1/4W
R117	1-247-887-00	CARBON 220K 5% 1/6W
R118	1-247-861-00	CARBON 18K 5% 1/6W
R119	1-247-831-00	CARBON 1K 5% 1/6W
R120	1-247-888-00	CARBON 240K 5% 1/6W
R121	1-247-888-00	CARBON 240K 5% 1/6W
R122	1-247-859-00	CARBON 15K 5% 1/6W
R123	1-247-850-00	CARBON 6.2K 5% 1/6W
R124	1-247-807-00	CARBON 100 5% 1/6W
R125	1-247-867-00	CARBON 33K 5% 1/6W
R126	1-247-813-00	CARBON 180 5% 1/6W
R127	1-247-875-00	CARBON 68K 5% 1/6W
R128	1-247-821-00	CARBON 390 5% 1/6W
R129	1-247-898-00	CARBON 620K 5% 1/6W
R130	1-247-835-00	CARBON 1.5K 5% 1/6W
R131	1-247-139-00	CARBON 2.2K 5% 1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R132	1-247-171-00	CARBON 47K 5% 1/4W
R133	1-247-855-00	CARBON 10K 5% 1/6W
R134	1-247-155-00	CARBON 10K 5% 1/4W
R135	1-247-831-00	CARBON 1K 5% 1/6W
R136	1-247-847-00	CARBON 4.7K 5% 1/6W
R137	1-247-131-00	CARBON 1K 5% 1/4W
R138	1-247-179-00	CARBON 100K 5% 1/4W
R139	1-247-881-00	CARBON 120K 5% 1/6W
R140	1-247-885-00	CARBON 180K 5% 1/6W
R141	1-246-499-00	CARBON 12K 5% 1/4W
R142	1-247-841-00	CARBON 2.7K 5% 1/6W
R143	1-247-811-00	CARBON 150 5% 1/6W
R144	1-247-861-00	CARBON 18K 5% 1/6W
R145	1-247-851-00	CARBON 6.8K 5% 1/6W
R147	1-247-831-00	CARBON 1K 5% 1/6W
R148	1-247-843-00	CARBON 3.3K 5% 1/6W
R149	1-246-505-00	CARBON 22K 5% 1/4W
R150	1-247-863-00	CARBON 22K 5% 1/6W
R151	1-247-863-00	CARBON 22K 5% 1/6W
R152	1-247-863-00	CARBON 22K 5% 1/6W
R153	1-247-833-00	CARBON 1.2K 5% 1/6W
R154	1-247-855-00	CARBON 10K 5% 1/6W
R160	1-247-831-00	CARBON 1K 5% 1/6W
R301	1-246-499-00	CARBON 12K 5% 1/4W
R302	1-246-482-00	CARBON 2.4K 5% 1/4W
R303	1-247-139-00	CARBON 2.2K 5% 1/4W
R304	1-246-500-00	CARBON 13K 5% 1/4W
R305	1-247-847-00	CARBON 4.7K 5% 1/6W
R306	1-247-826-00	CARBON 620 5% 1/6W
R307	1-246-484-00	CARBON 3K 5% 1/4W
R308	1-246-471-00	CARBON 820 5% 1/4W
R309	1-217-434-00	FUSIBLE 10 5% 1/2W F
R311	1-247-852-00	CARBON 7.5K 5% 1/6W
R312	1-247-844-00	CARBON 3.6K 5% 1/6W
R313	1-247-816-00	CARBON 240 5% 1/6W
R314	1-246-485-00	CARBON 3.3K 5% 1/4W
R315	1-247-855-00	CARBON 10K 5% 1/6W
R316	1-247-871-00	CARBON 47K 5% 1/6W
R317	1-247-871-00	CARBON 47K 5% 1/6W
R318	1-247-855-00	CARBON 10K 5% 1/6W
R319	1-247-857-00	CARBON 12K 5% 1/6W
R320	1-247-857-00	CARBON 12K 5% 1/6W
R321	1-217-529-00	CARBON 33 5% 1/4W
R322	1-247-855-00	CARBON 10K 5% 1/6W
R323	1-247-847-00	CARBON 4.7K 5% 1/6W
R324	1-247-855-00	CARBON 10K 5% 1/6W

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
 UA... : μA..., UPA... : μPA..., UPC... : μPC,
 UPD... : μPD...

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Ref.No.	Part No.	Description			
R325	1-247-879-00	CARBON	100K	5%	1/6W
R326	1-247-863-00	CARBON	22K	5%	1/6W
R327	1-247-855-00	CARBON	10K	5%	1/6W
R328	1-247-147-00	CARBON	4.7K	5%	1/4W
R329	1-247-883-00	CARBON	150K	5%	1/6W
R330	1-247-847-00	CARBON	4.7K	5%	1/6W
R331	1-247-123-00	CARBON	470	5%	1/4W
R332	1-247-123-00	CARBON	470	5%	1/4W
R333	1-247-809-00	CARBON	120	5%	1/6W
R334	1-247-839-00	CARBON	2.2K	5%	1/6W
R335	1-247-868-00	CARBON	36K	5%	1/6W
R336	1-247-863-00	CARBON	22K	5%	1/6W
R337	1-247-863-00	CARBON	22K	5%	1/6W
R339	1-247-813-00	CARBON	180	5%	1/6W
R340	1-247-816-00	CARBON	240	5%	1/6W
R341	1-247-816-00	CARBON	240	5%	1/6W
R342	1-247-816-00	CARBON	240	5%	1/6W
R343	1-247-863-00	CARBON	22K	5%	1/6W
R344	1-247-879-00	CARBON	100K	5%	1/6W
R510	1-247-855-00	CARBON	10K	5%	1/6W
R511	1-247-872-00	CARBON	51K	5%	1/6W
R512	1-247-879-00	CARBON	100K	5%	1/6W
R513	1-247-879-00	CARBON	100K	5%	1/6W
R514	1-247-839-00	CARBON	2.2K	5%	1/6W
R515	1-247-839-00	CARBON	2.2K	5%	1/6W
R516	1-247-813-00	CARBON	180	5%	1/6W
R517	1-247-826-00	CARBON	620	5%	1/6W
R518	1-247-813-00	CARBON	180	5%	1/6W
R519	1-247-813-00	CARBON	180	5%	1/6W
R520	1-247-863-00	CARBON	22K	5%	1/6W
R521	1-247-879-00	CARBON	100K	5%	1/6W
R522	1-247-855-00	CARBON	10K	5%	1/6W
R523	1-247-819-00	CARBON	330	5%	1/6W
R524	1-247-831-00	CARBON	1K	5%	1/6W
R525	1-247-847-00	CARBON	4.7K	5%	1/6W
R526	1-247-831-00	CARBON	1K	5%	1/6W
R527	1-247-855-00	CARBON	10K	5%	1/6W
R530	1-247-831-00	CARBON	1K	5%	1/6W
R531	1-247-871-00	CARBON	47K	5%	1/6W
R532	1-247-847-00	CARBON	4.7K	5%	1/6W
R533	1-247-855-00	CARBON	10K	5%	1/6W
R534	1-247-871-00	CARBON	47K	5%	1/6W

Ref.No.	Part No.	Description
RV101	1-226-236-00	RES, ADJ, CARBON 10K
RV102	1-226-238-00	RES, ADJ, CARBON 50K
RV201	1-226-236-00	RES, ADJ, CARBON 10K
RV202	1-226-238-00	RES, ADJ, CARBON 50K
RV301	1-226-239-00	RES, ADJ, CARBON 100K
RY301	1-515-473-00	RELAY
S302	1-554-763-11	SWITCH, PUSH (1 KEY)(DOLBY NR)
S501	1-553-856-00	SWITCH, KEY BOARD (REW)
S502	1-553-856-00	SWITCH, KEY BOARD (STOP)
S503	1-553-856-00	SWITCH, KEY BOARD (PLAY)
S504	1-553-856-00	SWITCH, KEY BOARD (FF)
S505	1-553-856-00	SWITCH, KEY BOARD (REC)
S506	1-553-856-00	SWITCH, KEY BOARD (PAUSE)
S507	1-553-856-00	SWITCH, KEY BOARD (AMS)
S508	1-553-856-00	SWITCH, KEY BOARD (REC MUTE)
S509	1-554-208-00	SWITCH, SLIDE (TIMER)
S551	1-554-205-00	SWITCH, PUSH
S552	1-554-205-00	SWITCH, PUSH
S553	1-554-205-00	SWITCH, PUSH
S554	1-554-205-00	SWITCH, PUSH
T301	1-433-267-00	TRANSFORMER, OSCILLATOR

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CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.

* F : nonflammable

COILS

* MMH : mH, UH : μH

SEMICONDUCTORS

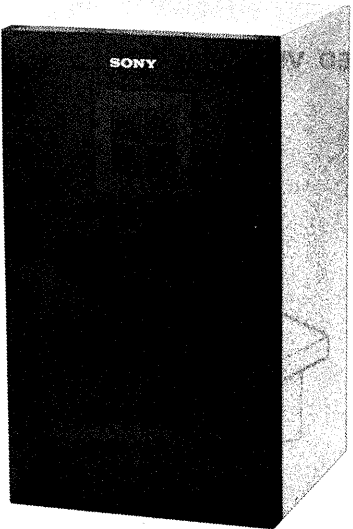
In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

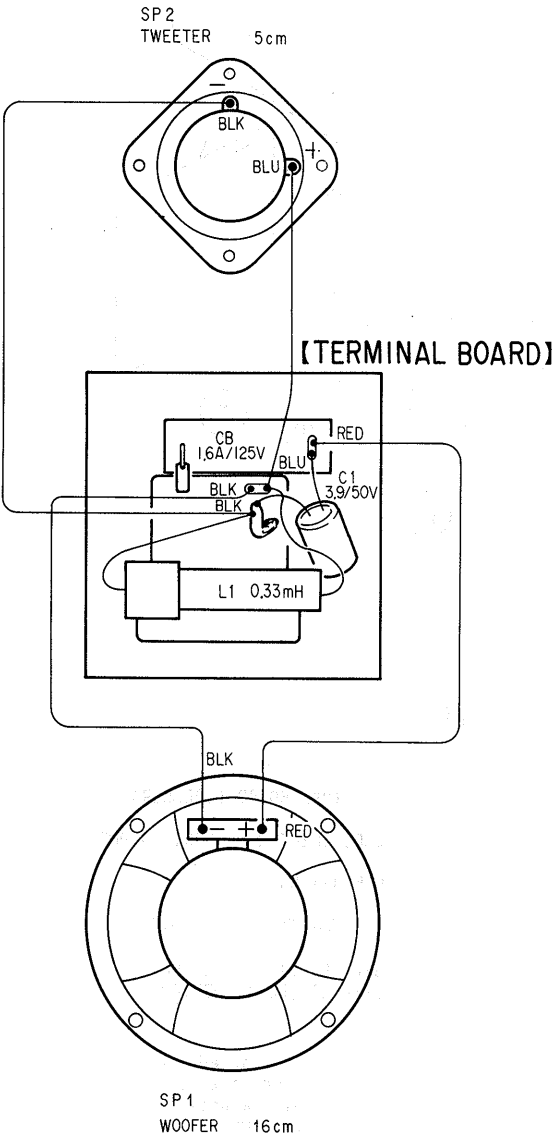
UPD....: μPD...

SPEAKER SYSTEM

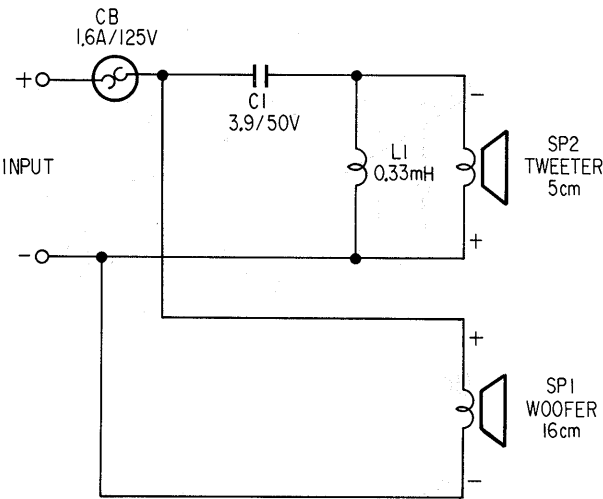
[SS-V10]



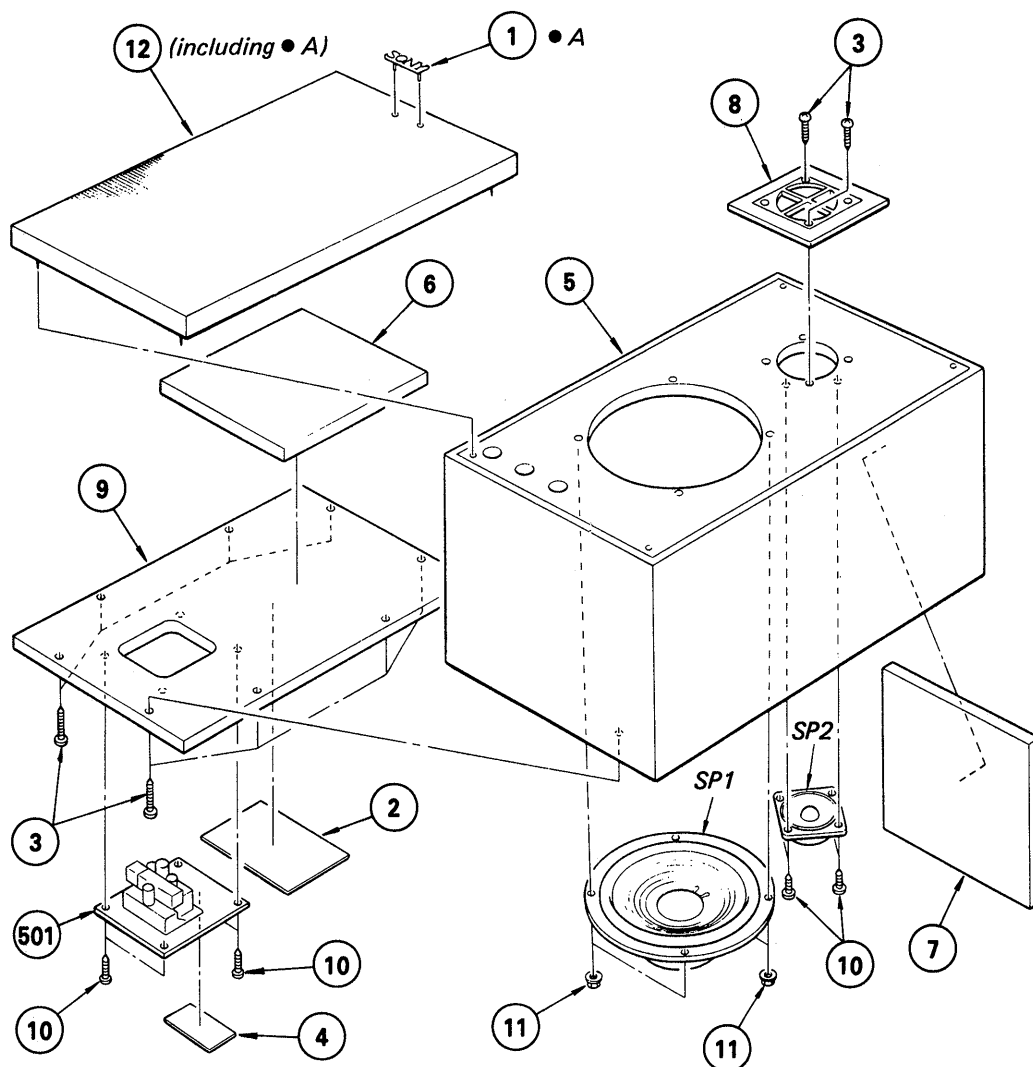
WIRING DIAGRAM



SCHEMATIC DIAGRAM



EXPLODED VIEW



PARTS LIST

GENERAL SECTION

No.	Part No.	Description
1	4-836-828-00	EMBLEM, SONY
2	4-875-621-00	LABEL, CAUTION
3	4-874-614-11	SCREW +BV4 3.5X14
4	4-903-104-01	LABEL, MODEL NUMBER
5	4-903-105-01	CABINET, SPEAKER
6	4-903-106-01	ABSORBENT, ACOUSTIC, REAR BOARD
7	4-903-108-01	ABSORBENT, ACOUSTIC, TOP BOARD
8	4-903-110-01	DIFFUSER, TWC
9	4-903-111-01	REAR, BOARD
10	7-621-849-40	SCREW, WOOD +R 3.1X25
11	7-684-023-04	N3 TYPE2
12	X-4903-101-1	FRAME ASSY, GRILLE

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-536-690-00	TERMINAL BOARD (SPEAKER)
C1	1-123-547-00	CAP, ELECT(NONPOLAR) 3.9MF 20% 50V
CB	1-532-661-00	CIRCUIT BREAKER
L1	1-459-174-00	NETWORK COIL (CHLS TYPE)
SP1	1-503-330-11	SPEAKER (16CM) WOOFER
SP2	1-503-329-11	SPEAKER (5CM) TWEETER

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SERVICE MANUAL SUPPLEMENT

US Model
Canadian Model
AEP Model
UK Model
E Model

CIRCUIT DESCRIPTION

Direct Function

This set uses LC7815 (IC102) as function switch IC.

The function signal is applied to IC102 from ST-V10, TC-V10, and PS-LX10 (or PS-LX30) connected with this set, and IC102 switches the input signal.

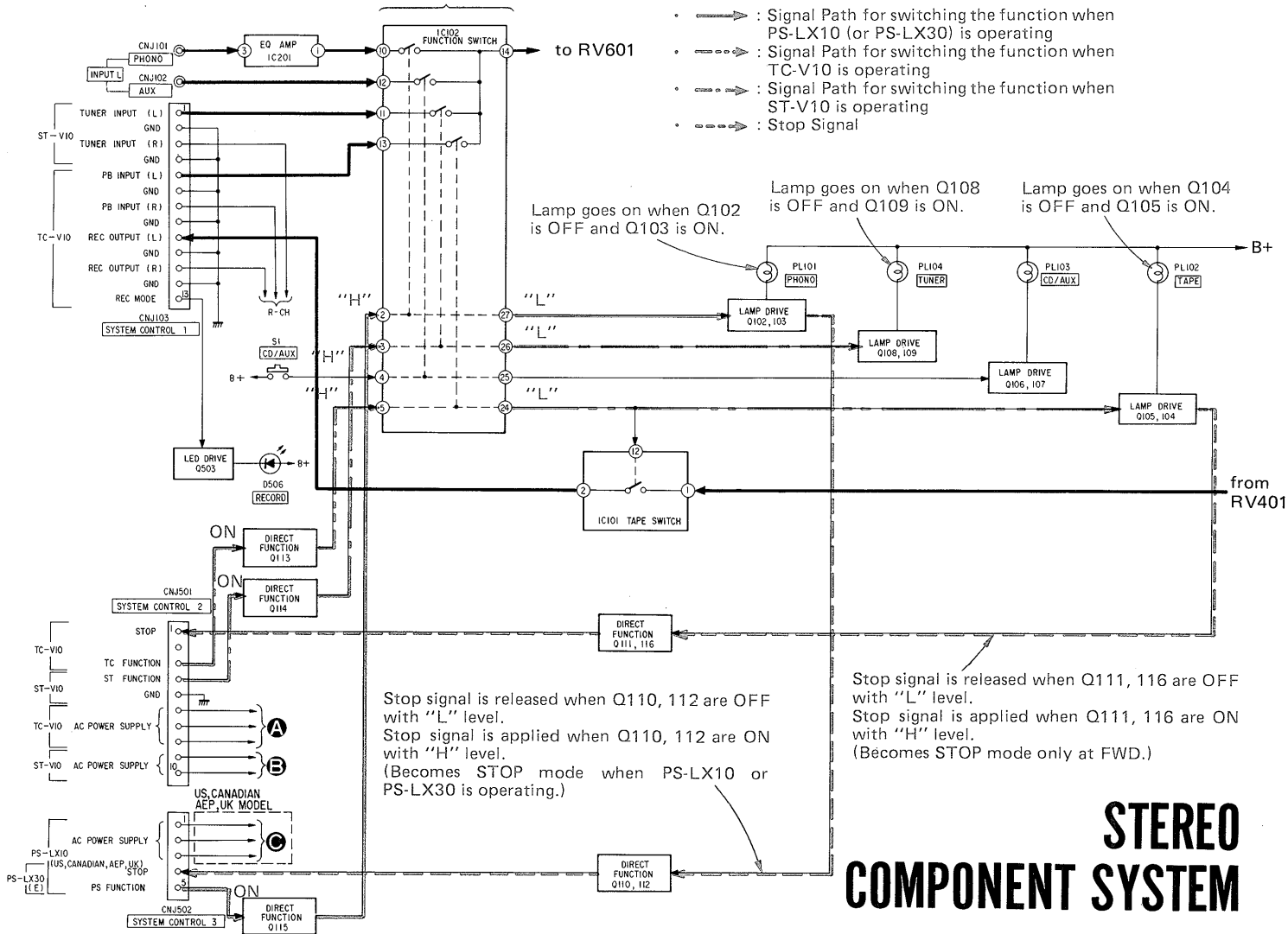
No.1

April, 1984

• Signal Path when each set is operating

Input signal of each set is switched.

- : Signal Path for switching the function when PS-LX10 (or PS-LX30) is operating
- - - - - : Signal Path for switching the function when TC-V10 is operating
- - - - - : Signal Path for switching the function when ST-V10 is operating
- : Stop Signal



STEREO
COMPONENT SYSTEM
SONY

