

FH-B166/MHC-600

SERVICE MANUAL

AEP Model

- FH-B166 and MHC-600 are composed of following models. As for the service manual, it is issued for each component models, then, please refer to it.

COMPONENT MODEL NAME FOR FH-B166 and MHC-600

System	FH-B166
Component	
Tuner, deck, CD, amplifier	HCD-H160
Speaker System	SS-H155

System	MHC-600
Component	
Tuner, deck, CD, amplifier	HCD-H600
Speaker System	SS-H700

SPECIFICATIONS



Power requirements	220 - 230 V, 50/60 Hz
Power consumption	90 watts
Dimensions	Approx. 615 x 285 x 260 mm (w/h/d) (24 ¹ / ₄ x 11 ¹ / ₄ x 10 ¹ / ₄ inches) incl. projecting parts and controls
Weight	Approx. 12.6 kg (27 lb 12 oz)
Supplied accessories	Remote commander (1) Sony SUM-3 (NS) batteries (2) AM loop antenna (1) FM lead antenna (1) (MHC-600 only)

Design and specifications subject to change without notice.

PARTS LIST


NOTE:

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

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

Ref. No. Part No. Description

ACCESSORIES & PACKING MATERIALS *****

	1-501-369-11	ANTENNA (MHC-600)
	1-501-374-11	ANTENNA, LOOP
	1-575-131-11	CORD, POWER
	1-575-495-11	CORD, SPEAKER (MHC-600)
	3-755-091-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (FH-B166; AEP/MHC-600)
	3-755-091-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN)
*	4-936-852-01	CUSHION (LOWER)
*	4-936-853-01	CUSHION (UPPER)
*	4-952-040-01	INDIVIDUAL CARTON (FH-B166)
*	4-952-041-01	INDIVIDUAL CARTON (MHC-600)



9-957-116-11

Sony Corporation
Audio Group

COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY[®]

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HCD-H160/H600

SERVICE MANUAL

HCD-H160 and HCD-H600 are the tuner, deck, CD and amplifier section in FH-B166 and MHC-600 respectively.



AEP Model

HCD-H160

HCD-H600

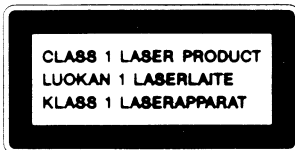
UK Model

HCD-H600



PHOTO : HCD-H600

For the United Kingdom and European countries



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CD Section	Model Name Using Similar Mechanism	HCD-H66/H1200
	Optical Pickup Block Type	BU-5BD3
Cassette Deck Section	Model Name Using Similar Mechanism	HCD-H66/H1200
	Tape Transport Mechanism Type	DECK A: TCM-170RA1
		DECK B: TCM-170RB7

SPECIFICATIONS

Tuner Section


System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 – 108 MHz
Antenna	Telescopic antenna (HCD-H160) FM lead antenna (MHC-H600)
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	For AEP, UK, Germany model MW: 531 – 1.602 kHz LW: 153 – 279 kHz For Italian model MW: 522 – 1.611 kHz LW: 144 – 288 kHz
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

Amplifier Section

Continuous RMS power output	20 + 20 watts (6 ohms at 1 kHz, DIN)
Inputs	MIX MIC (minijack): sensitivity 1 mV, impedance 600 ohms PHONO (phono jacks): sensitivity 5 mV, impedance 47 kilohms
Outputs	HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more. SPEAKER: accepts speakers of 6 to 16 ohms.

— continued on next page —



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COMPACT DISC DECK RECEIVER
SONY®

Compact Disc Player Section

System	Compact disc digital audio system
Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$) Emission duration: continuous
Laser output	Max. 44.6 μW * * This output is the value measured at distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

Cassette Deck Section

Recording system	4-track 2-channel stereo (DOLBY NR OFF)
Frequency response	40 – 13,000 Hz ($\pm 3 \text{ dB}$), using TYPE I cassette (Sony HF-S) 40 – 14,000 Hz ($\pm 3 \text{ dB}$), using TYPE II cassette
Wow and flutter	0.1% WRMS $\pm 0.3\%$ (DIN)

General

Power requirements	AEP model: 220 – 230 V, 50/60 Hz U K model: 240 V, 50 Hz Germany, Italian model: 240V AC, 50Hz
Power consumption	Except for model: 90 watts U K model: 160 watts
Dimensions	Approx. 615 x 285 x 260 mm (w/h/d) (24 $\frac{1}{4}$ x 11 $\frac{1}{4}$ x 10 $\frac{1}{4}$ inches) incl. projecting parts and controls
Weight	Approx. 12.6 kg (27 lb 12 oz)
Supplied accessories	Remote commander (RM-S100) (1) Sony SUM-3 (NS) batteries (2) AM loop antenna (1) FM lead antenna (1) (HCD-H600 only)

Design and specifications subject to change without notice.



Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

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SAFETY-RELATED COMPONENT WARNING!!

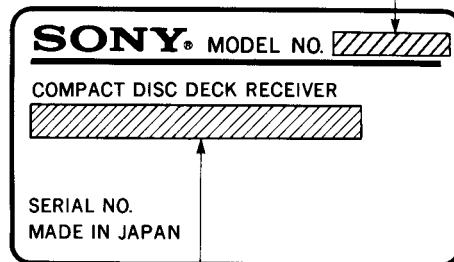
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 SERVICING NOTES

MODEL IDENTIFICATION

— Specification Labels —

AEP, Germany Italian model: HCD-H160
AEP, UK model: HCD-H600



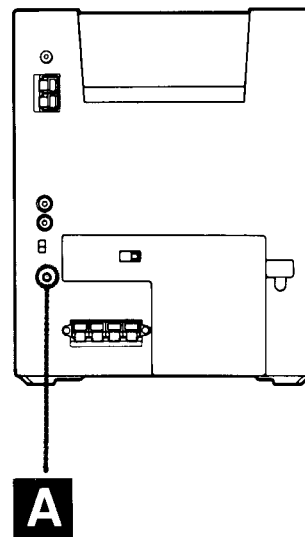
AEP model: AC: 220-230V~50/60Hz
UK model: AC: 240V~50Hz
G, IT model: AC: 220-230V~50Hz

On operation **A**

- When you connect the AC power cord for the first time or after several days of disconnection, press the system reset button located at the rear of the unit.
- If the system do not operate due to power noise, press the system reset button at the rear. The system will resume operation.

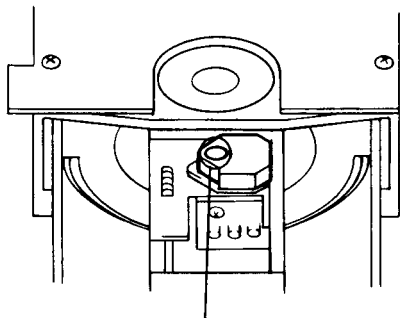
At this time, the system returns to the factory-set mode. Please set the clock, timer, or store stations again.

If you have any question or problem concerning your stereo system, please consult your nearest Sony dealer.



LASER DIODE AND FOCUS SERCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



- ① Confirm that laser beam is spread.
- ② Up and down motion of the objective lens. (3 times)

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

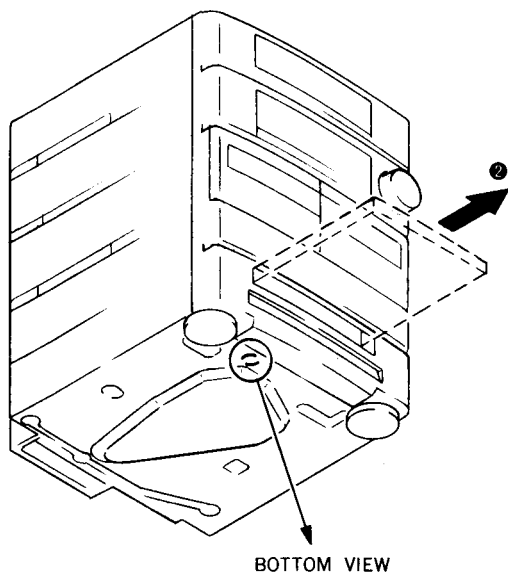
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

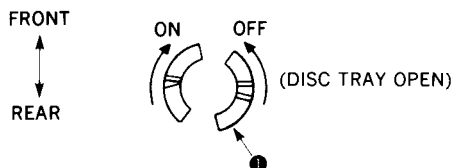
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



- (1) Insert to ① for tapering driver, etc., and turn in the direction of arrow OFF. (Disc tray open)
- (2) Tray as come out little of front panel, pull out in the direction of arrow ② by hand.



PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties

- Material: GaAlAs
 - Wavelength: 780 nm
 - Emission Duration: continuous
 - Laser Output Power: less than 44.6 μW *
- * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat, anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-diode data

- Materiale: GaAlAs
 - Bølgelængde: 780 nm
 - Udstråling: Kontinuerlig
 - Laseroutput: Max. 0,4 mW*
- * Målt i 1,6 mm afstand fra overfladen af objektiv-linsen på den optiske pick-up enhed.

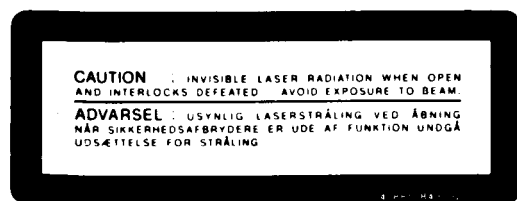
- Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning



VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkyvätöntä) silmille vaarallista lasersäteilyä.

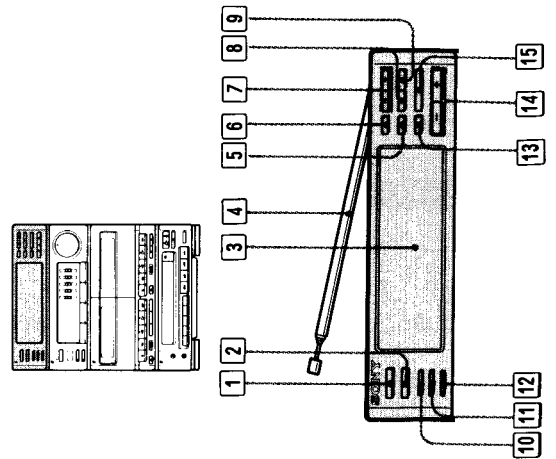
SECTION 2
GENERAL

Parts
Identification

Tuner Section **A**

- 1 TIMER CONTROL button
- 2 SLEEP timer button
- 3 Display window
- 4 Telescopic antenna (FH-B166 only)
- 5 AUTO tuning button
- 6 BAND selector
- 7 TUNING +/- buttons
- 8 MEMORY button
- 9 ENTER button
- 10 TIMER SET button
- 11 CLOCK DISPLAY button
- 12 CLOCK SET button
- 13 NEXT button
- 14 PRESET/TIMER +/- (preset station scan/time set) buttons
- 15 SHIFT (memory page select) button

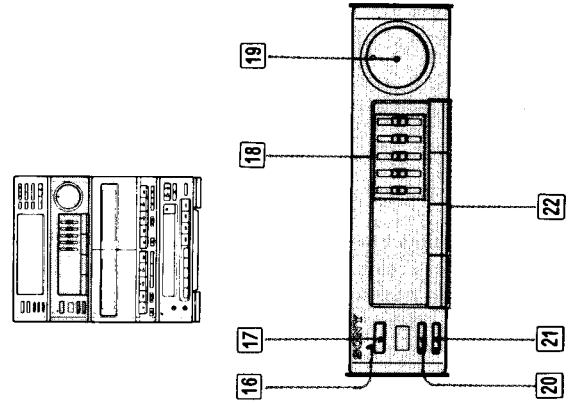
A



Amplifier Section **B**

- 16 STANDBY indicator
It is lit as long as the AC power cord is connected to a wall outlet.
- 17 POWER switch
- 18 5-band stereo graphic equalizer
- 19 VOLUME control
- 20 DBFB (Dynamic Bass Feedback) button
- 20 S-SUR (simulated surround) effect button
- 21 Function selectors

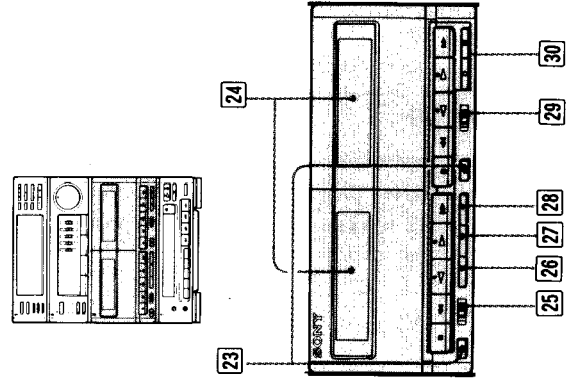
B



Cassette Deck Section **C**

- 23 EJECT button
 - 24 Cassette holders
 - 25 DIRECTION MODE selector
 - 26 AMS/BLK SKIP (Automatic Music Sensor/blank skip) button
 - 27 TAPE DUBBING HIGH SPEED button
 - 28 CD SYNCHRO (CD synchronized recording) button
 - 29 DOLBY NR (Dolby Noise Reduction) switch
 - 30 Tape operation buttons
- ◀▶ / ▶▶ : Fast winding
 ▶ : Forward play
 ◀ : Reverse play
 ■ : Stop
 REC (recording)
 PAUSE

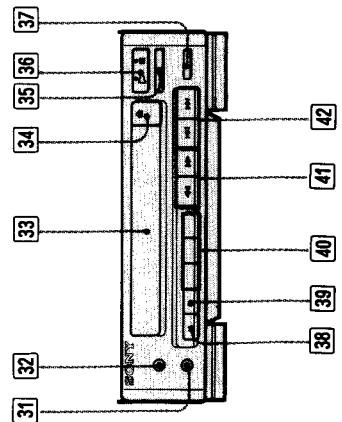
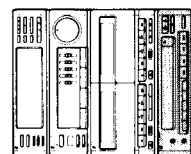
C



This section is extracted from instruction manual.

CD Player Section D

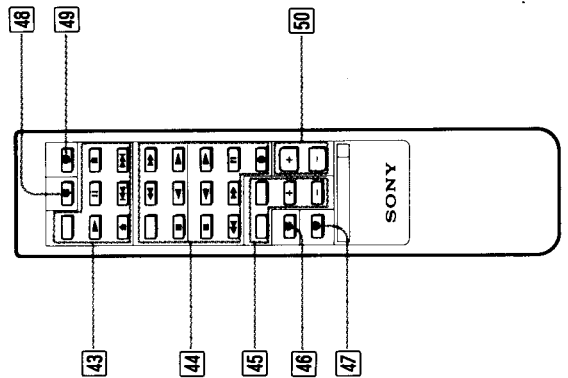
- 31 HEADPHONES jack (stereo minijack)
- 32 MIX MIC (mixing microphone) jack (minijack)
- 33 Disc compartment
- 34 ▲ OPEN/CLOSE button
- 35 ■ (stop) button
- 36 ▷||| (play/pause) button and indicator
- 37 EDIT button
- 38 TIME display selector
- 39 REPEAT button
- 40 PLAY MODE selectors
- CONTINUE play button
- SHUFFLE play button
- PROGRAM play button
- 41 ◀◀ / ▶▶ (manual search) buttons
- 42 ◀◀ / ▶▶ / ▷||| (Automatic Music Sensor) buttons



D

Remote Commander E

- 43 CD player operation buttons
- 44 Cassette deck operation buttons
- 45 Tuner operation buttons
- 46 PHONO select button
- 47 VIDEO/AUX select button
- 48 SLEEP timer button
- 49 POWER switch
- 50 VOL (volume) +/- control buttons



E

Audio Adjustment

Volume Adjustment

Turn VOLUME **A** clockwise to increase the sound level, or counterclockwise to decrease it.

Sound Quality Adjustment

To reinforce bass

Press DBFB **B**.
The lower the sound level is, the more the bass is emphasized.

To adjust sound quality to your preference

Adjust the graphic equalizer controls **C**

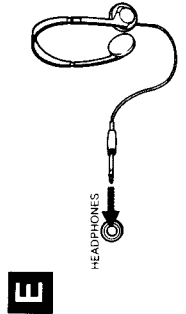
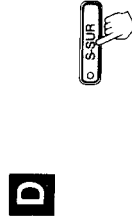
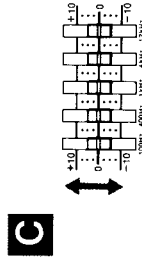
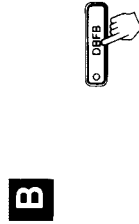
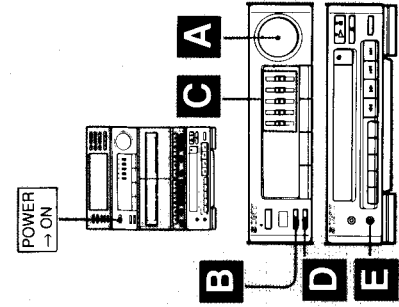
- 100 Hz: Boost or cut heavy bass.
- 400 Hz: Adjust the power, spaciousness and warmth of the sound.
- 1 kHz: Increase the presence of vocals.
- 4 kHz: Enhance the brightness of sound, or reduce stridency.
- 12 kHz: Highlight the fine details of instrumental sound.

To activate surround effect for stereo sound

Press S-SUR (simulated surround) **D** during a stereo sound reproduction. This creates the atmosphere of a movie theater or concert hall.
This function is not effective for a monaural sound.

For personal listening
Connect headphones to HEADPHONES **E**

No sound comes from the speakers.



Clock Setting

Setting the Clock

Example: Set to 9:25 in the morning.
When the AC power cord is connected, the display shows 0:00.

- 1 Press CLOCK SET.
- 2 Set the hour with PRESET/TIMER +/- buttons
- 3 Press NEXT.
- 4 Set the minute with PRESET/TIMER +/- buttons.
- 5 Press NEXT.
The clock starts operating.

Information on the time

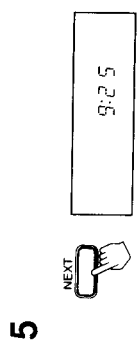
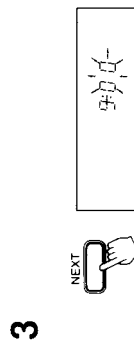
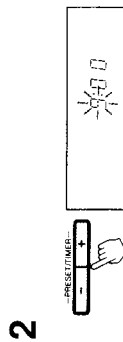
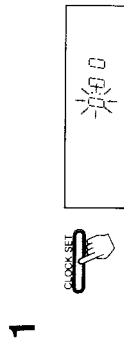
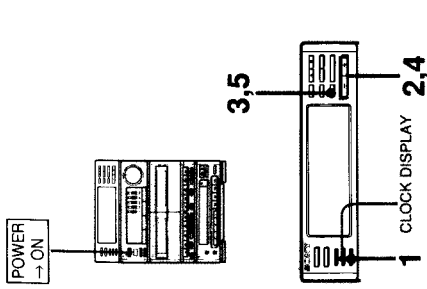
This model shows the time in 24-hour cycle.

When a power interruption occurs

The power is backed up for approximately one day. If the power is recovered within one day, there is no need to reset the clock and timer. If it is longer than one day, both the clock and timer settings are erased, and "0:00" will flash on the display.

To check the present time while using the system

Press CLOCK DISPLAY.
The time display disappears after a few seconds.

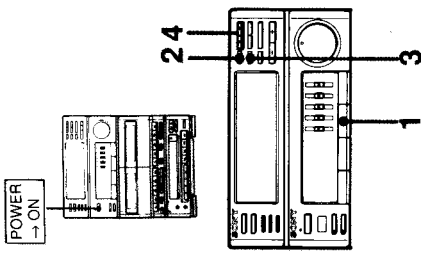


Radio

The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

Tuning in Automatically

- 1 Press **TUNER**.
- 2 Press **BAND** repeatedly until the desired band appears. As you press **BAND**, the band changes as follows:
FM → MW → LW
- 3 Press **AUTO**. Make sure that **AUTO** appears in the display.
- 4 Select the station with **TUNING +** or **-**.



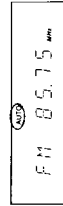
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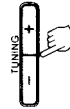
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3



4

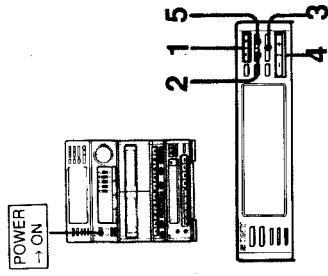


Radio

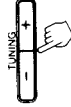
A total of 30 stations can be stored in any desired sequence, so that you can tune in the stored station directly by entering the memory page and number.

Storing Stations

- 1 Tune in the desired station.
- 2 Press **MEMORY**. **MEMORY** appears for several seconds.
- 3 While **MEMORY** is on, press **SHIFT** to select the memory page (A, B or C). The memory pages (A, B or C) can be classified according to the music category, station band, etc.
- 4 While **MEMORY** is on, press **PRESET/TIMER +** or **-** to select the number (1 to 10).
- 5 Press **ENTER**. **MEMORY** disappears, and the station is stored.
- 6 Repeat 1 to 5 for each station to be stored.



1



2



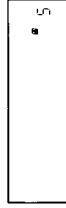
3



4



5



If you cannot store a station successfully
Press **MEMORY** again so that **MEMORY** appears, and then proceed with the steps 3 to 5 above.
Be sure to operate while **MEMORY** is on (approx. 4 seconds)

When you have selected the wrong page and number
Press **MEMORY** and then proceed with the above steps.

Radio

To Tune in a Preset Station

- 1 Press **SHIFT** to select the memory page.
- 2 Press **PRESET/TIMER +** or **-** to select the desired number.

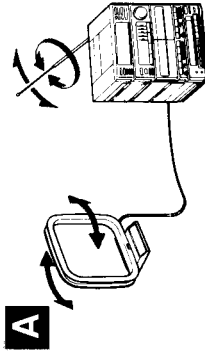
Indicator on the display

TUNED: Appears when a station of sufficient signal strength is tuned in.

STEREO: Appears when an FM stereo program of sufficient signal strength is received.

Antenna adjustment **A**

For FM reception, adjust the length and direction of the telescopic antenna (FH-R166 only).
For MW and LW reception, find the best location of the AM loop antenna.



Can a previously stored station be erased?

No. Erasing only is not possible, but storing a new station erases the previous one.

Important

The stored stations remain for approximately 1 week even if no power is supplied (e.g. the power cord is disconnected, etc.). If they are erased, store the stations again.

Disc Playing

Playing the Entire Disc

- 1 Press **CD**.
- 2 Press **OPEN/CLOSE** to open the tray.
- 3 Place the disc with the printed side up.
- 4 Press **PAUSE**.
The tray closes and play starts.
The display shows **A** the track number, **B** elapsed playing time of the track and **C** track numbers.

Caution on adjusting volume
Do not turn up the volume while listening to the portion with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level portion is played.

To stop play
Press **STOP**.

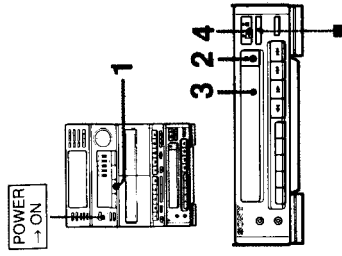
To stop for a moment during play
Press **PAUSE**. **II** appears in the display. To resume play, press it again.

To stop play and open the tray
Press **OPEN/CLOSE**.

To play an 8 cm (3+inch) CD

Place it on the inner circle of the tray. If the disc is provided with an adaptor, first remove it. Do not put a normal CD (12 cm/5-inch) on top of an 8 cm (3-inch) CD.

When the TUNER function is selected
The CD player section does not operate. This prevents interference to radio reception.



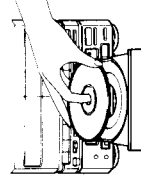
1



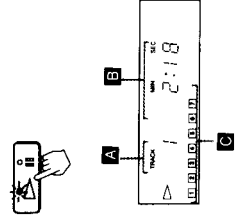
2



3



4



Disc Playing

Locating a Particular Selection — Automatic Music Sensor (AMS)

The AMS locates the beginning of a selection. This function works during play or pause.

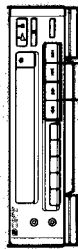
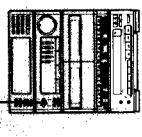
To locate the beginning of a current or preceding selection **A-1**

Press **[AMS]** as many times as required. Keep **[AMS]** pressed to skip selection.

To locate the beginning of a succeeding selection **A-2**

Press **[AMS]** as many times as required. Keep **[AMS]** pressed to skip selection.

POWER
→ ON



A-1

A-1



A-2



B-1



B-2



Locating a Particular Point in a Selection

You can locate any particular point in the disc during play.

To search while monitoring the sound

To move forward at high speed **B-1**
Keep **[FWD]** pressed during play and release at the desired point.

To move backward at high speed **B-2**
Keep **[REV]** pressed during play and release at the desired point.

To search quickly

- 1 Press **[FWD]** to set the unit in pause mode.
- 2 Keep **[FWD]** or **[REV]** pressed. The search speed increases, but there is no sound. Find the desired point by observing the display. Press **[FWD]** again at the desired point.

Disc Playing

Information display

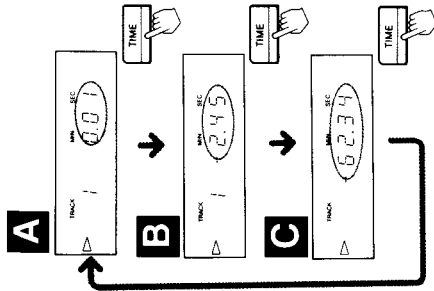
To change the time display, press **TIME** during play. As you press **TIME**, the display changes to give you the following information.

- A** Elapsed playing time
- B** Remaining time in a selection. If the current selection number is over 20, "....." is displayed.
- C** Remaining time of the disc

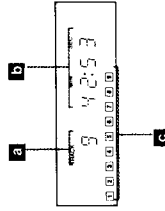
When the tray was closed by pressing

▲ OPEN/CLOSE D
The followings appear for approx. 5 seconds.

- a** Last track number
 - b** Total play time of the disc
 - c** Track numbers
- For the discs containing 17 selections or more, up to 16 appear and the rest does not appear.



D



E



a



b

Notes on handling discs **E**

- To keep the disc clean, handle the disc by its edge. Do not touch the surface. **a**
- Do not stick paper or tape on the disc. **b**
- Do not expose the disc to direct sunlight or heat sources such as hot air duct, nor leave it in a car parked in direct sunlight as there can be a considerable rise in the temperature.
- After playing, store the disc in its case.

Disc Playing

Playing in a Random Order — Shuffle Play

Shuffle play function plays all the selections in a random order.

- 1 Press **OPEN/CLOSE** to open the tray.
- 2 Place the disc.
- 3 Press **OPEN/CLOSE** to close the tray.
- 4 Press **SHUFFLE**. **SHUFFLE** appears.
- 5 Press **END**.

To stop playing
Press **■**.

To cancel shuffle play

Press **CONTINUE**. **SHUFFLE** disappears, and play continues in normal play mode.

Playing Repeatedly — Repeat Play

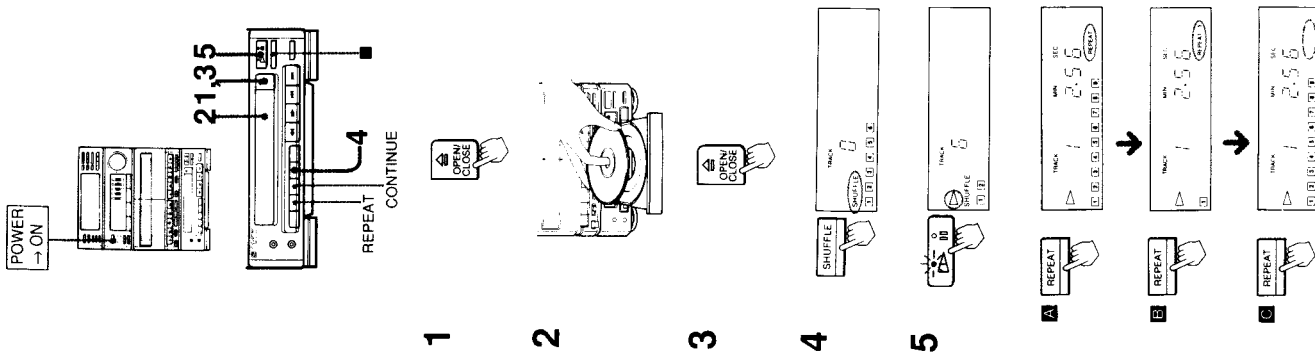
To repeat all selections **A**
Press **REPEAT** once during play so that **REPEAT** appears.

To repeat a single selection **B**

Press **REPEAT** twice while playing the desired selection so that **REPEAT 1** appears.

To cancel repeat play **C**

Press **REPEAT** so that neither **REPEAT** nor **REPEAT 1** is on.



Disc Playing

Playing in a Desired Order — Program Play

You can make a program for up to 20 selections in the order you want them to be played.

- 1 Insert the disc.
- 2 Press **PROGRAM**. **PGM** appears in the display.
- 3 Press **▲** or **▼** to display the desired selection.
- 4 Press **PROGRAM**.
- 5 Repeat steps 3 and 4 for the desired selections.
 - A** Last programmed selection
 - B** Total playing time of selections
 - C** Programmed selection numbers
- 6 Press **END**.

To stop playing

Press **■**.
To restart the same program play, press **▶||**.

To resume normal play

Press **CONTINUE**.
The program is erased and the play continues in the normal play mode.

If "....." is displayed

- You have programmed a selection number over 20.
- The total time has exceeded 100 minutes.

Disc Playing

To check your program

- 1 Press **[PAUSE]** to enter the pause mode. Press **[EJECT]**.
- 2 As you press **[EJECT]**, the track numbers appear in the order in which they are programmed. When you finished checking, press **[STOP]** once. (Be sure that you press **[STOP]** only once. If you press it twice, the program will be erased.)

To add a selection to the end of the program

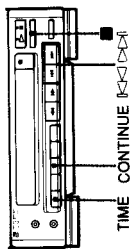
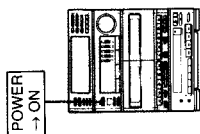
Follow the same procedures as "Playing in a Desired Order", while the unit is in the stop mode. You cannot add selections during play.

To erase the entire program

Press **[STOP]** once during stop; twice during play. The program is also erased when you press **[EJECT]** to open the tray or turn off the system.

To check the remaining time

Press **[TIME]** once to see the remaining time of the selection being played; twice to see the total remaining time of the programmed selections; once more to return to the initial display.



Tape Playback

Playback Operation

- 1 Press **[TAPE]**. **TAPE** appears in the display.
- 2 Insert the tape.
- 3 Press **[REVERSE]** (for reverse side playback) or **[PLAY]** (for front side playback).

How to select the DIRECTION MODE position

To playback one side: Select **[DIRECTION MODE]**. To playback both sides: Select **[DOLBY NR]**. The **DIRECTION MODE** setting is effective for both decks.

To stop playback

Press **[STOP]**.

Playing Back Automatically after Fast Winding – Auto Play

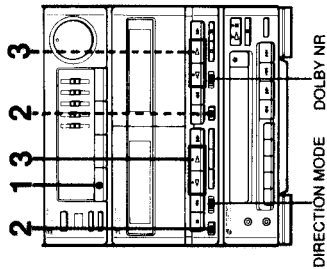
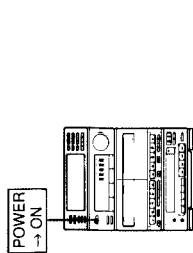
This function starts playback automatically from the beginning of the side after fast winding.

To start playback from the beginning of the front side:

press **[REVERSE]** while keeping **[REVERSE]** pressed

To start playback from the beginning of the reverse side:

press **[PLAY]** while keeping **[REVERSE]** pressed



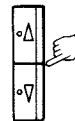
1



2



3



When listening to the cassette recorded with Dolby noise reduction system*
Set the **DOLBY NR** switch to **ON**.

What is the Dolby NR system?

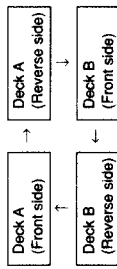
Dolby NR (noise reduction) system reduces tape hiss noise in low-level high-frequency signals. The system boosts these signals in recording and lowers them in playback.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double D symbol **DD** are trademarks of Dolby Laboratories Licensing Corporation.

Tape Playback

Playing Both Decks in Succession – Relay Play

Relay play always follows the sequence below regardless of where playback starts. When playback of the reverse side of the tape in deck B is completed, the following sequence continues 4 more times.



- 1 Insert recorded cassettes in both decks.
- 2 Set DIRECTION MODE to RELAY.
- 3 Press **▷** or **◁** on deck A or deck B.

To stop relay play

Press **■** of the deck playing.

Notes on Cassettes

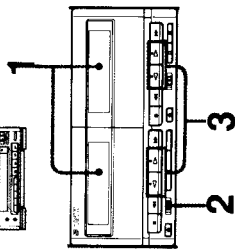
To protect recording **A**

Break out the tab on the left shoulder of the cassette side of which recording is to be protected.

To re-record the cassette **B**

Cover each slot with plastic tape.

When using a TYPE II (C-02) cassette, be careful not to cover the detector slots which are necessary for automatic tape type detection. **C**



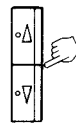
1



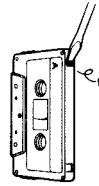
2



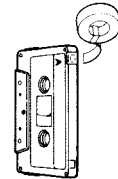
3



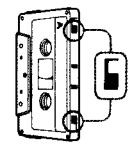
A



B



C



Tape Playback

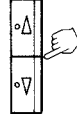
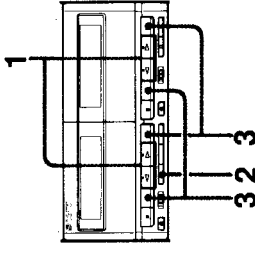
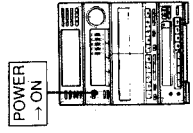
Locating the Beginning of a Selection during Playback – Automatic Music Sensor (AMS)

The AMS locates the beginning of a selection by detecting the blank spaces between selections. To assure correct operation of the AMS, there must be a blank of 4 seconds or longer between selections.

- 1 Press **▶** or **◁** to start playback.
- 2 Press AMS/BLK SKIP to illuminate its indicator.
- 3 Press **▶** or **◁** referring to the following table.

Direction indicator	Side of the cassette being played	Desired selection
	Front side	▶▶
	Reverse side	◁◁

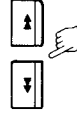
1



2



3



A



Skipping a Blank

The deck automatically goes into the fast winding mode when it detects a blank of about 10 seconds or more. Playback resumes when a new selection begins.

Press AMS/BLK SKIP to illuminate its indicator. **A**





To cancel the blank skip function

Press AMS/BLK SKIP again so that the indicator goes off.

Recording (Deck B)


Recording Operation

Use only TYPE I (normal) or TYPE II (C-60) tapes for recording.



- 1 Insert the tape.
- 2 Select program source with the function selectors and play it. The display shows the selected program source.
- 3 Set DIRECTION MODE. To record one side, set to . To record both sides, set to .
- 4 Set DOLBY NR. To use the Dolby NR system, set to ON. Otherwise, set to OFF.
- 5 While keeping REC pressed, press  (for front side recording) or  (for reverse side recording). Recording starts.

To stop recording
Press .

Notes

- Even if you set DIRECTION MODE to , recording stops at the end of the reverse side. To record both sides, be sure to start with the front side.
- Graphic equalizer controls are not effective for recording.
- The recording level is fixed and cannot be adjusted manually.

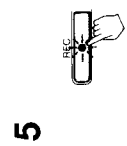
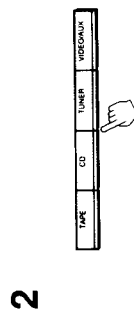
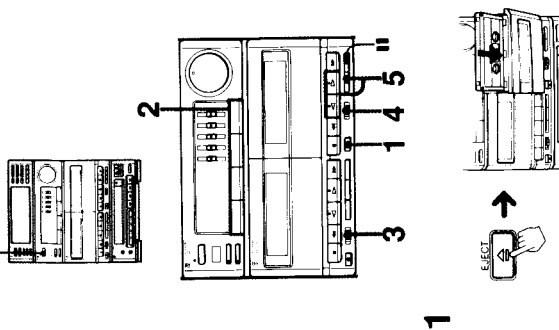
How to start recording precisely

- 1 Press PAUSE after step 4 in "Recording Operation" above.
- 2 While keeping REC pressed, press  or .
- 3 Press PAUSE again at the desired point.

If whistling noise is heard during recording MW and LW recording



Slide the ISS (Interference Suppress Switch) at the rear to the position depending on which best reduces the noise.

POWER → ON




CD Recording (Deck B)

CD Recording Operation

- 1 Insert a blank tape in deck B.
- 2 Set DIRECTION MODE. To record one side, set to . To record both sides, set to .
- 3 Set DOLBY NR. To use the Dolby NR system, set to ON. Otherwise, set to OFF.
- 4 Press CD of the function selector.
- 5 Place the disc with the printed side up, and close the tray.
- 6 Press CD SYNCHRO. CD SYNC appears in the display. The CD player and cassette deck are set in pause mode.

Note

The front side is automatically selected to be recorded in. To record in the reverse side, press .

- 7 Press PAUSE of the cassette deck.

The CD play and recording start simultaneously.

Note

When the tab on the cassette has been removed, the CD SYNCHRO button does not operate.

Is it possible to listen to program sources other than CD during CD recording?

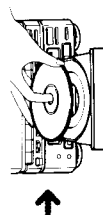
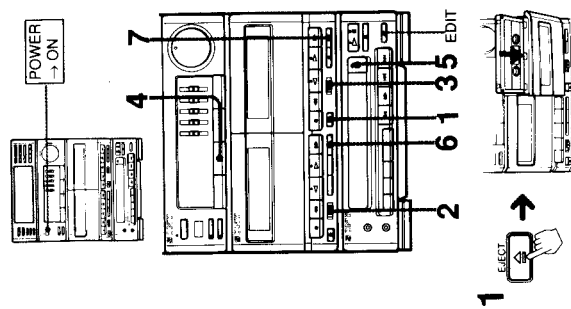
No. If you press another function selector, the CD play stops and the program of the pressed button will be recorded.

Blanks between selections during CD recording

A 3-second blank is automatically inserted between selections.

Is it possible to adjust the sound quality for CD recording?

No. The graphic equalizer does not work.



CD Recording (Deck B)

If the tape ends in the middle of a selection **A**

The tape is rewound to the beginning of the selection. Then the selection is re-recorded so that it fades out naturally at the end of the tape.

If the recording is to be continued to the reverse side, the selection that faded out on the front side is recorded from its beginning on the reverse side.

To record only desired selections

Before pressing CD SYNCHRO, program the desired selections. (See page 36.) To program for both sides continuously, insert a pause section between the selections for side A and those for side B.

- 1 Program the selections for side A.
- 2 Press **II** for CD operation on the remote commander.
The total play time will be reset to 0.
- 3 Program the selections for side B.
- 4 Press CD SYNCHRO.
- 5 Press PAUSE on the cassette deck.
Recording starts.

When the CD play of side A ends, the CD player enters pause mode. When the tape comes to the beginning of side B, the CD play of side B starts and the recording starts automatically.

Important

- Total playing time of the program of each side must be within the length of each side of the tape.
- Up to 20th selection in the disc can be programmed. 21st selection cannot be programmed.

CD Recording (Deck B)

Editing the CD for Recording

The CD player automatically edits the selections on a CD according to the tape length.

- 1 Perform 1 to 5 of the CD recording operation, on page 48.
- 2 Press **EDIT**.
Make sure that **EDIT** and **---** appear in the display.

- 3 Designate the tape length of one side using **▶**, **◀**, **↔**, or **⏪** and **⏩**.
As you press **▶** or **↔**, the minute display changes as follows:

23 ↔ 27 ↔ 30 ↔ 37 ↔ 45 ↔ --

As you press **⏪** or **⏩**, the seconds increase or decrease by 10. After 50, the seconds show 00 and the minutes increase by 1.

- 4 Press **EDIT**.

The selections to be recorded are determined automatically. For details, see page 54.
Then the display shows **A** the last selection to be recorded, **B** total playing time, and **C** selections to be recorded.

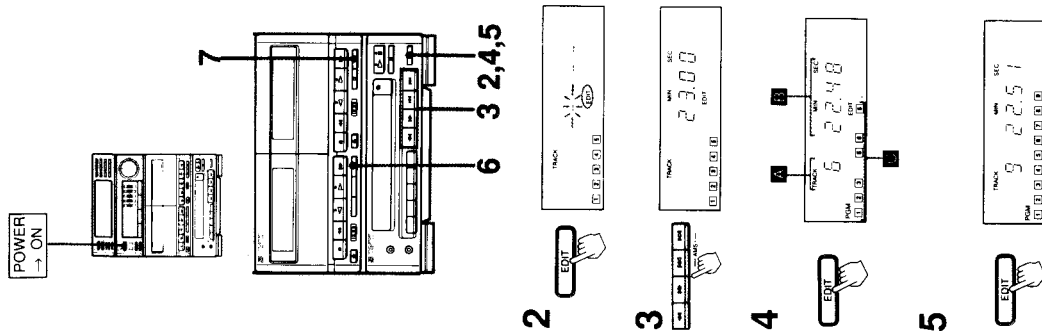
- 5 For recording both sides, press **EDIT** again.

- 6 Press **CD SYNCHRO**.

- 7 Press **PAUSE** of the cassette deck.
The recording starts.

Note

- Up to 20th selection in the disc can be recorded. 21st selection cannot be recorded.
- Designate the total playing time shorter than the tape length in step 3.



CD Recording (Deck B)

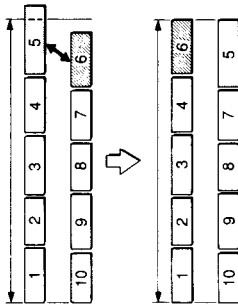
To record desired selections on the front side

Before pressing EDIT, program the desired selection. (See page 36.)

How the CD player determines the selections **A**

The CD player selects the selections from the first one in the CD, summing up each playing time. When the total playing time exceeds the specified tape length, the last selection is eliminated. Then, the CD player looks for a selection whose length is within the remaining tape and substitutes it for the eliminated one.

A



Tape Dubbing (from deck A to B)

Dubbing the Whole Tape

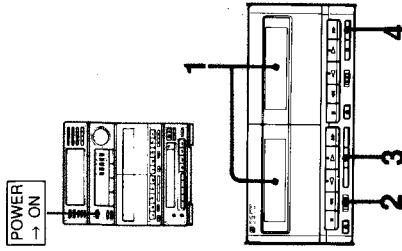
- 1 Insert the recorded tape in deck A and the blank tape in deck B.
- 2 Set DIRECTION MODE.
To dub on one side: \equiv
To dub on both sides of the tapes with the same length: \odot
To dub on both sides of the tapes with the different length: RELAY
- 3 Press HIGH SPEED.
- 4 Press PAUSE.
High speed dubbing starts.

To stop dubbing

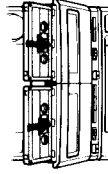
Press \blacksquare on either deck A or B. The tapes in both decks stop.

Note on DIRECTION MODE setting

Position	Operation
\equiv	Dubbing stops at the end of the tape.
\odot	When the tape in one deck comes to its end, it reverses immediately regardless of the tape position of the other deck.
RELAY	When the tape in one deck reaches its end, it stops until the other tape also comes to its end, and then both tapes reverse together.



1



2



3



4

When dubbing starts from the reverse side in the RELAY mode
At the end of the reverse side, dubbing stops automatically.

Note

During high speed dubbing, only \blacksquare is operative.

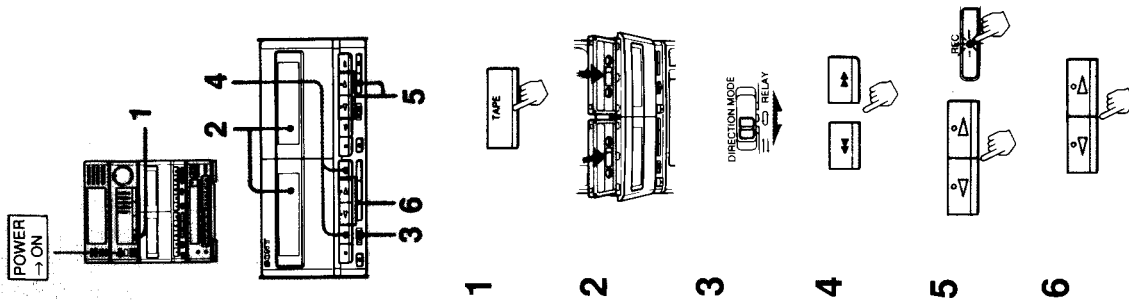
Tape Dubbing (from deck A to B)

Editing the Tape

- 1 Press TAPE of the function selector.
- 2 Insert the recorded tape in deck A and the blank tape in deck B.
- 3 Set DIRECTION MODE to \rightleftarrows or $\leftarrow\rightarrow$.
- 4 Locate the beginning of the portion to be dubbed on deck A, using \blacktriangleleft or \blacktriangleright and then stop the tape.
- 5 While keeping REC pressed, press \blacktriangleleft or \blacktriangleright of deck B.
- 6 Press \blacktriangleleft or \blacktriangleright of deck A. Normal speed dubbing starts.

To stop dubbing

Press \blacksquare on both decks.



Timer-activated Operation

The power can be turned on and off automatically so that you can record a radio program while you are out, or wake up to music, etc.

The preset timer-on and -off time remain until you reset them or the power cord is disconnected.

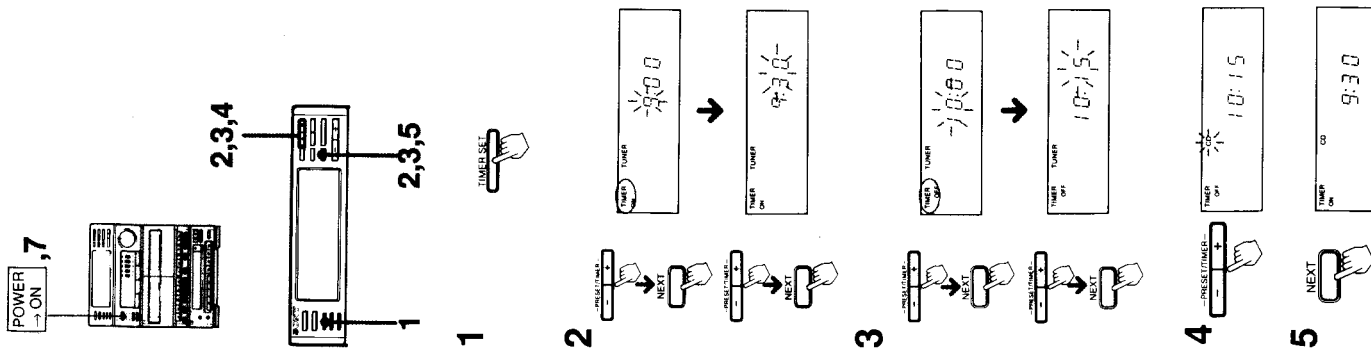
Before setting the timer

- Make sure the clock is set correctly. (See page 18.)
- If you want to record a radio program, be sure to insert a cassette tape long enough.

Timer Setting

The illustrations show an example that the system turns on at 9:30 and off at 10:15.

- 1 Press **TIMER SET**.
TIMER ON appears and a figure indicating hour blinks.
- 2 Set the hour and minute of the timer-on time with **PRESET/TIMER +** or **-** and **NEXT**.
TIMER OFF appears and a figure indicating hour blinks.
- 3 Set the hour and minute of the timer-off time with **PRESET/TIMER +** or **-**, and **NEXT**.
The program source blinks.
- 4 Select the program source with **PRESET/TIMER +** or **-**.
As you press **+** or **-**, the source changes:
TUNER \leftrightarrow TUNER REC \leftrightarrow TAPE \leftrightarrow CD
5 Press **NEXT**.
- 6 Prepare for the source, selecting a stored station, inserting the disc or tape.
- 7 Press **POWER** to turn off the system.
Make sure that **TIMER** is on.
At the timer-on time, the system turns on automatically.



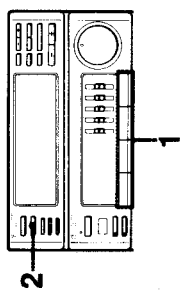
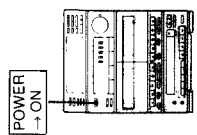
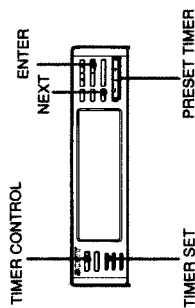
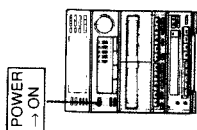
Timer-activated Operation

To change the time and program

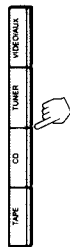
- 1 Press **TIMER SET**.
The timer-on hour blinks.
- 2 Press **NEXT** until the item to be changed blinks.
- 3 Press **PRESET/TIMER +** or **-** until the desired time or source appears.
- 4 Press **NEXT** until **TIMER ON** time appears.
The display, then, shows **TIMER OFF** time, and returns to the previous display.

When you do not want to operate the timer program

Press **TIMER CONTROL** to turn off **TIMER**.
To reactivate the timer, press **TIMER CONTROL** to display **TIMER**.



1



2

Sleep Timer Operation

By setting the sleep timer, the system power can be turned off after the preset duration.

Sleep Timer Setting

- 1 Play the desired program source.
- 2 Press **SLEEP** to select the desired duration in minute.
As you press **SLEEP**, the indication changes as follows:
90 → 80 → ... 10 → ...

To turn off the system before the time of the sleep timer comes

Press **POWER**.

To check the remaining time of the sleep timer

Press **SLEEP** once, and the remaining time appears.
The display returns to the previous indication in several seconds.

When the power is already on at the preset time

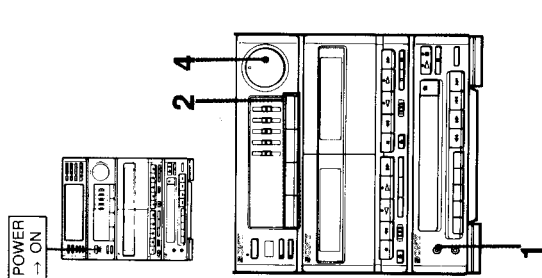
The function mode will be automatically changed to the preset one, even if you are playing a program of another function. However, when you have preset the **TUNER REC** mode, recording will not start even though the station is tuned in. Be sure to turn the power off before the preset time for tuner recording.

Important

On the recording side of a tape during timer recording

Playback or recording always starts from the front side (the side facing you). To record on the other side, be sure to turn over the tape; otherwise, recording on the front side will be erased.

A



Microphone Mixing

Mixing Operation A

- 1 Connect the microphone to MIX MIC jack.
- 2 Select program source with the function buttons and play it.
- 3 Sing or speak into the microphone.
- 4 Adjust the total volume.

When the mixing is over

Be sure to disconnect the microphone.

Recording the Sound Mixed with a Source

- 1 Mix the sound as described above.
- 2 Insert a tape in deck B.
- 3 Set deck B to the record mode.

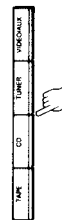
Recording from a Microphone Only

- 1 Press CD.
- 2 Press **■** of the CD player.
- 3 Insert a tape in deck B.
- 4 While keeping REC pressed, press **▷** or **◁** on deck B. Recording starts.
- 5 Speak or sing into the microphone.

1



2



3



4



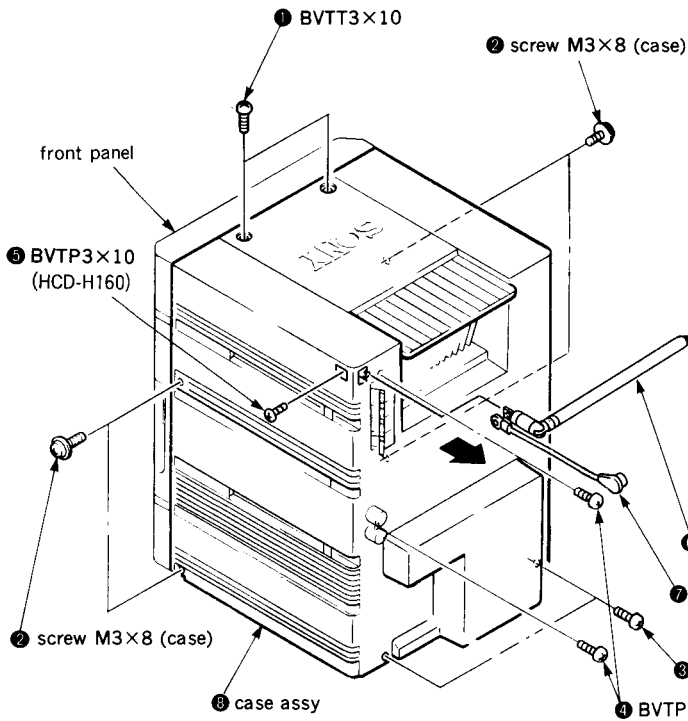
To stop howling (acoustic feedback)

Placing the microphone too close to the speakers may cause howling. Move the microphone away from the speakers or change the direction it faces.

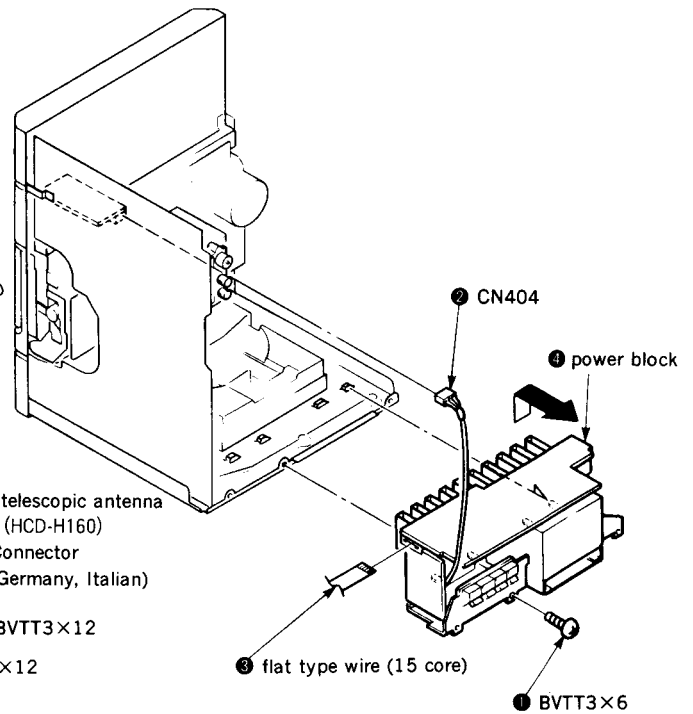
SECTION 3 DISASSEMBLY

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

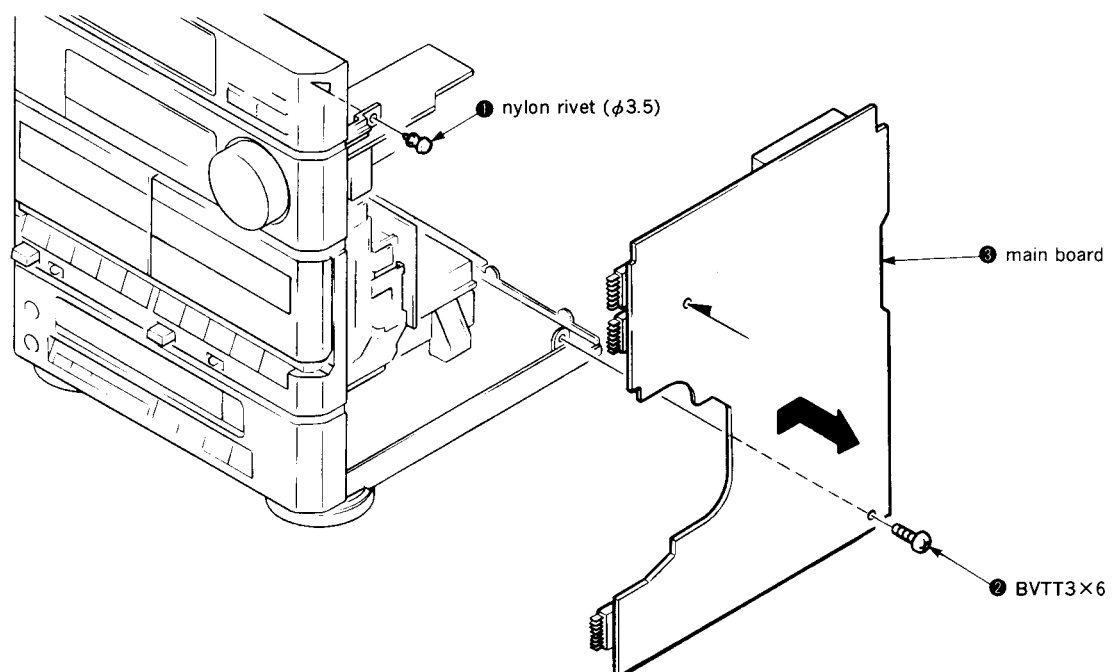
3-1. CASE



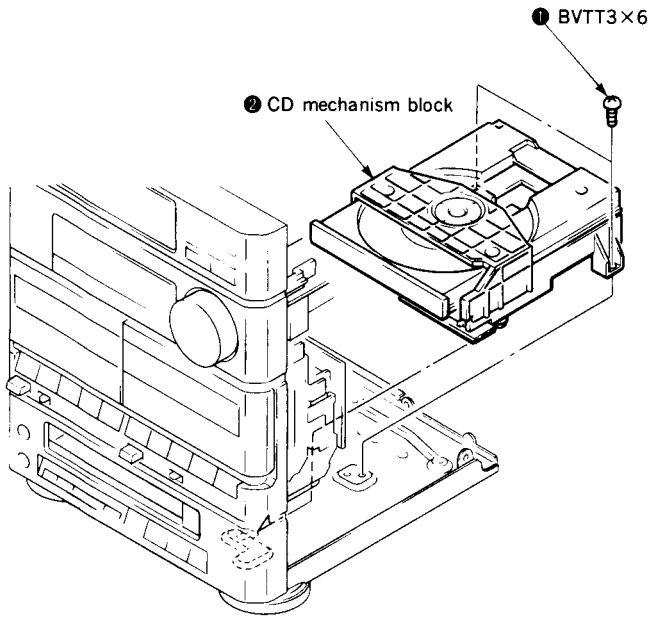
3-2. POWER BLOCK



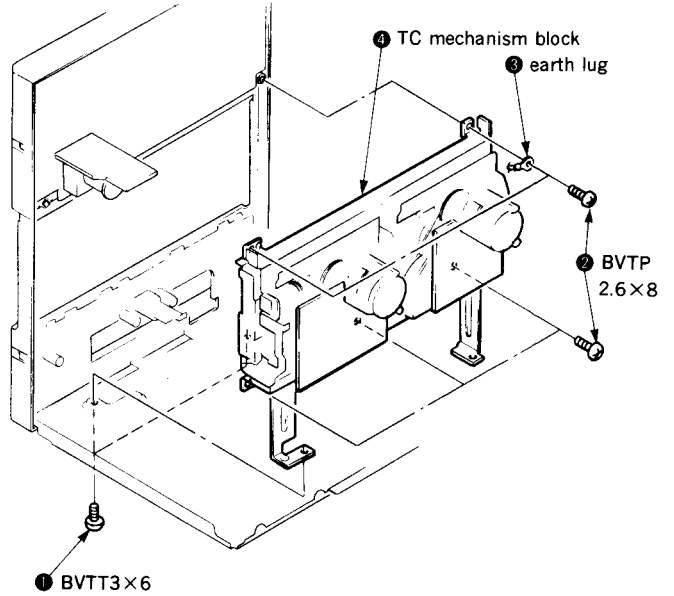
3-3. MAIN BOARD



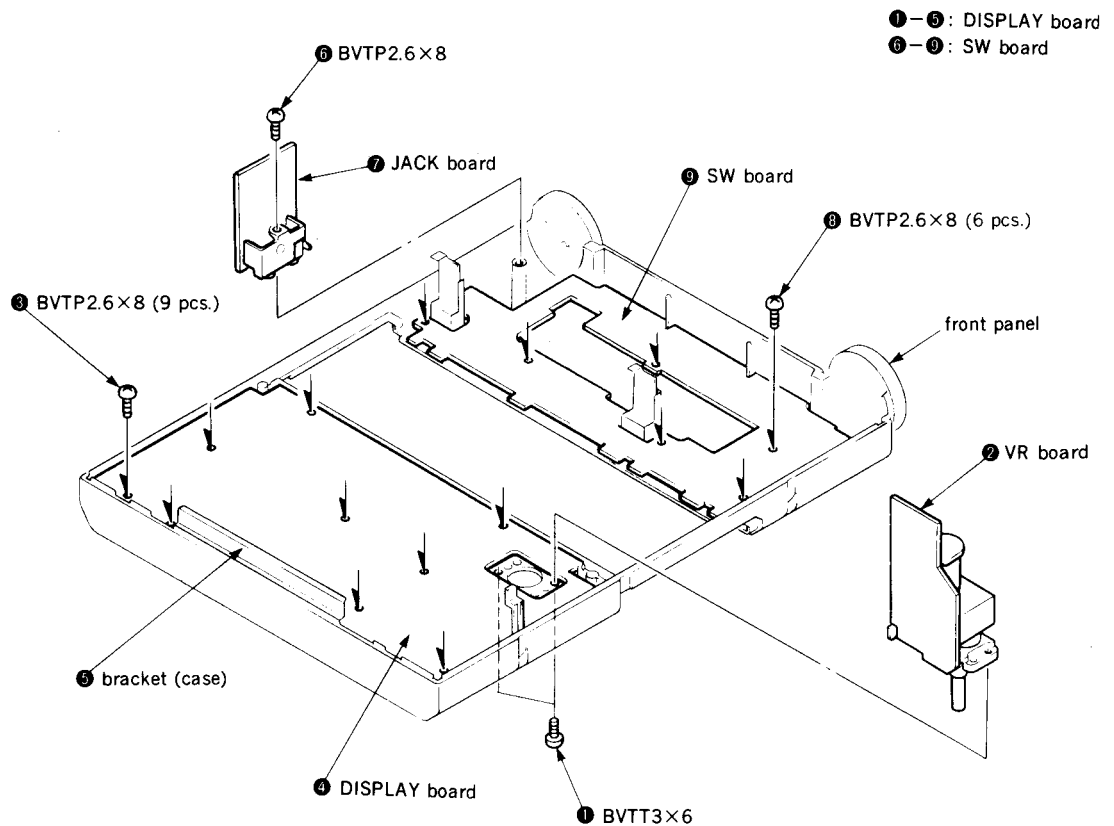
3-4. CD MECHANISM BLOCK



3-5. TC MECHANISM BLOCK

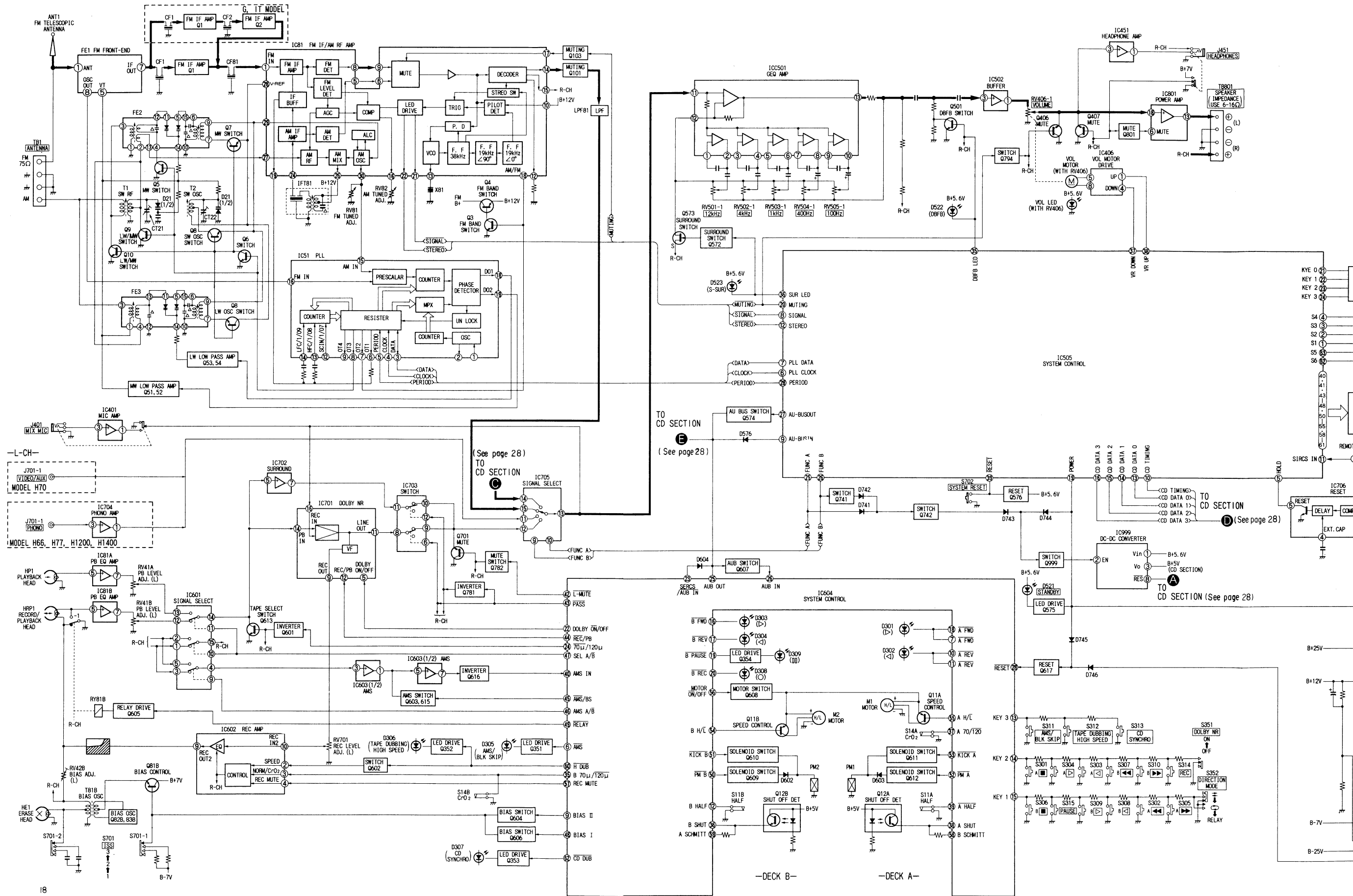


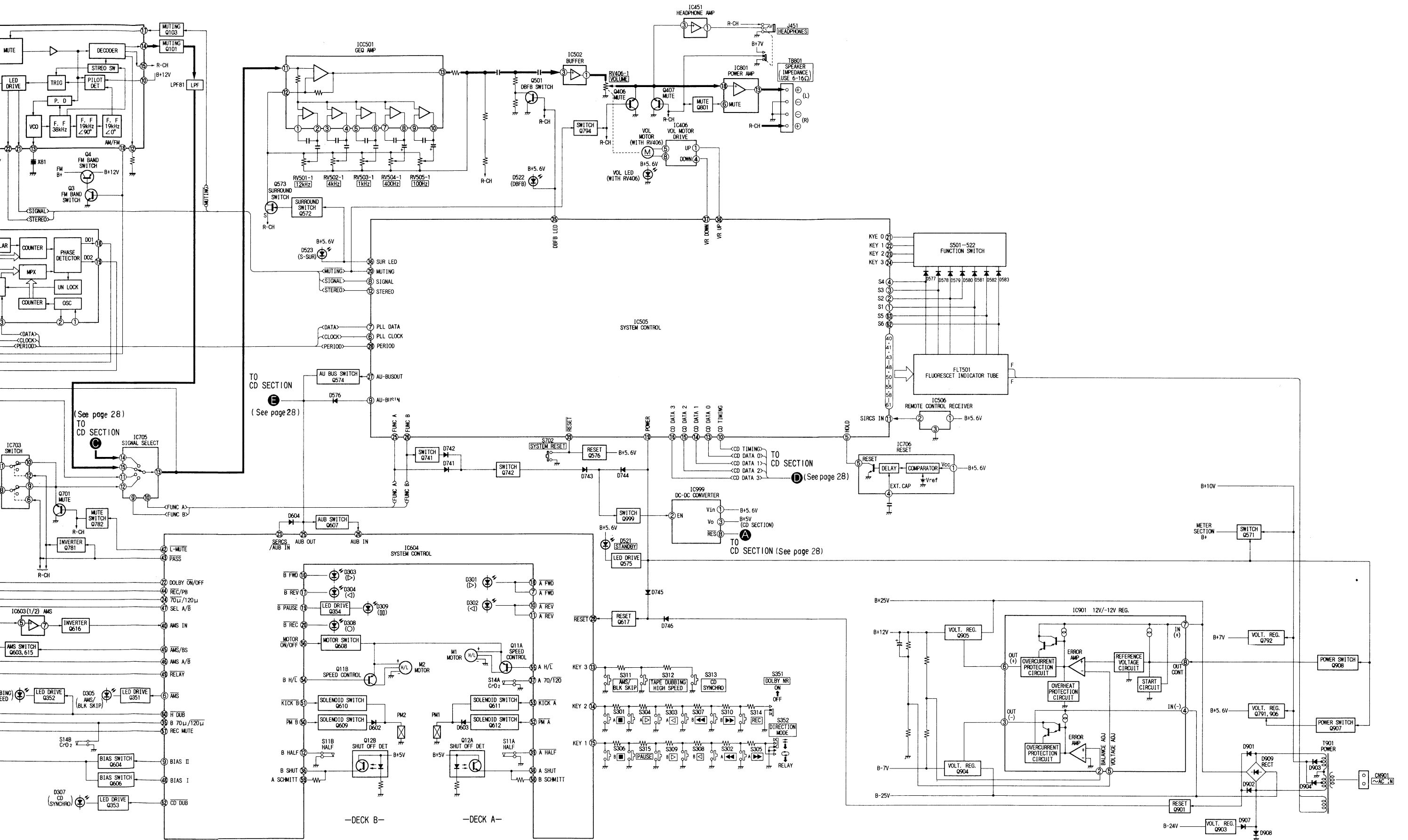
3-6. DISPLAY/SW/JACK/VR BOARD



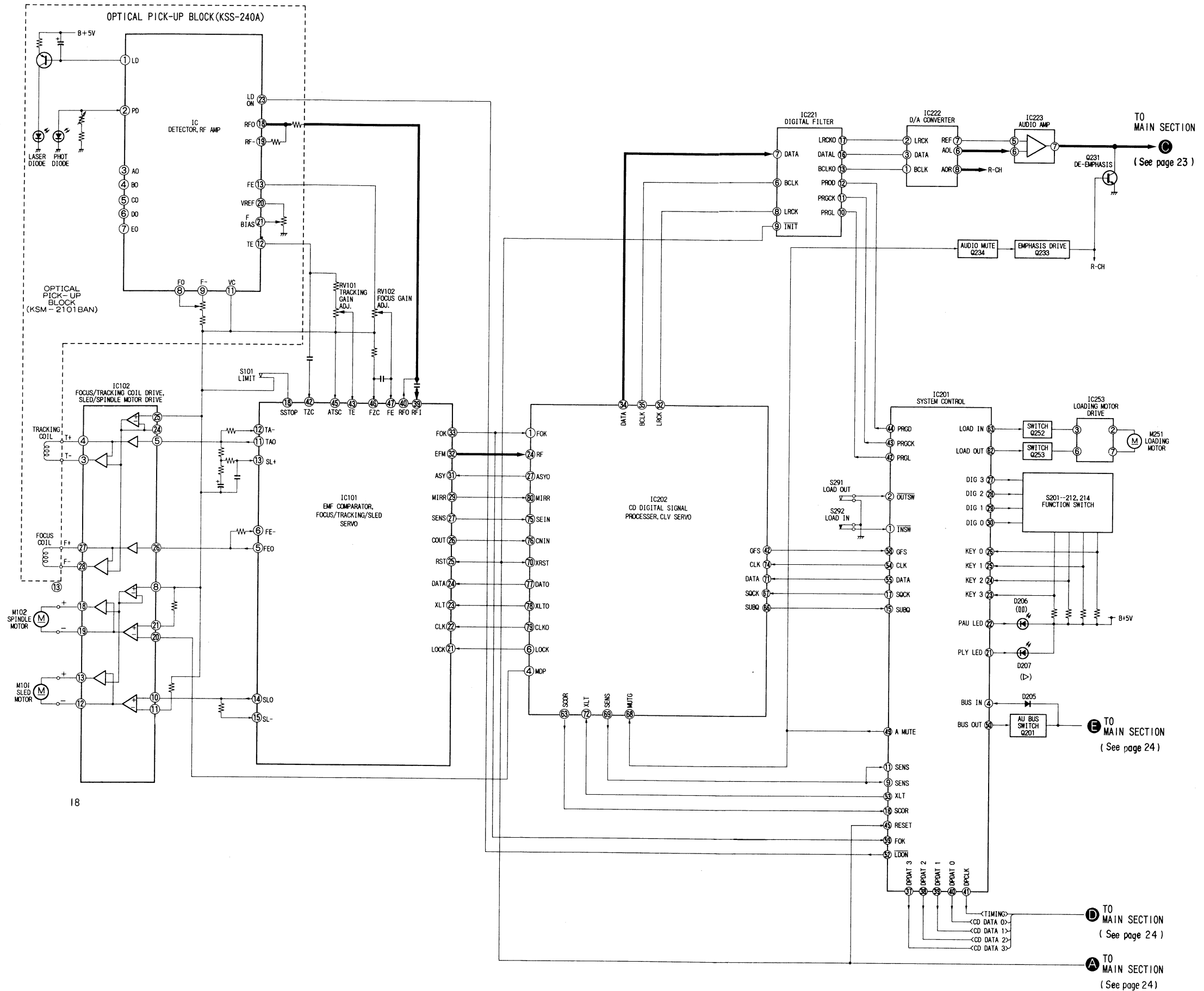
SECTION 4 BLOCK DIAGRAM

4-1. MAIN BLOCK





4-2. CD BLOCK



SECTION 5 MECHANICAL ADJUSTMENTS

PRECAUTION

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

record/playback head	pinch roller
erase head	rubber belt
capstan	idler
- Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
- Do not use a magnetized screwdriver for the adjustment.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustment should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

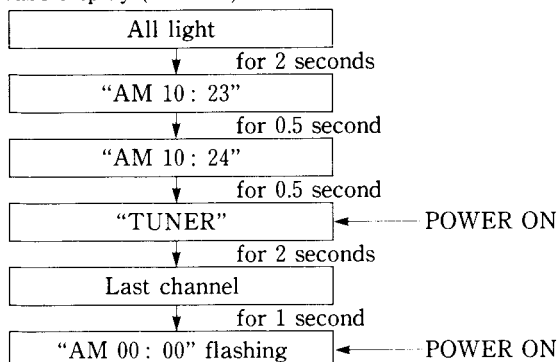
Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 60g·cm (0.42 to 0.83oz·inch)
Forward back tension	CQ-102C	1 to 5g·cm (0.014 to 0.069oz·inch)
Reverse	CQ-102RB	30 to 60g·cm (0.42 to 0.83oz·inch)
Reverse back tension	CQ-102RB	1 to 5g·cm (0.014 to 0.069oz·inch)
Forward, Reverse	CQ-201B	100 to 170g·cm (1.39 to 2.36oz·inch)

• Timer Test Mode

When BAND, SHIFT and PRESET/TIMER+ buttons are pressed at the same time the following time test operation is performed. After the operation, it becomes in the system reset mode. Take care that the frequency preset to the tuner is initialized.

- POWER OFF
- Timer set Clock AM10 : 23
 Timer ON AM10 : 24
 Timer OFF AM10 : 31
 Function TUNER

- FL tube display (FLT501)



- Finish

SECTION 6 ELECTRICAL ADJUSTMENTS

DECK SECTION

- The adjustment should be performed in the publication.
(Be sure to make playback adjustment at first.)
- The adjustment and measurement should be performed for both L-CH and R-CH.
 - Switch position
DOLBY NR switch : OFF

• Test Tape

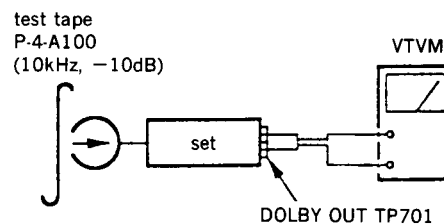
Tape	Contents	Use
P-4-A100	10kHz, -10dB	Head Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48A	3kHz, 0dB	Tape Speed Adjustment
CS-122	—	Recording bias and Recording level Adjustment

Record/Playback Head Azimuth Adjustment

DECK A DECK B

Procedure :

- Forward Playback Mode

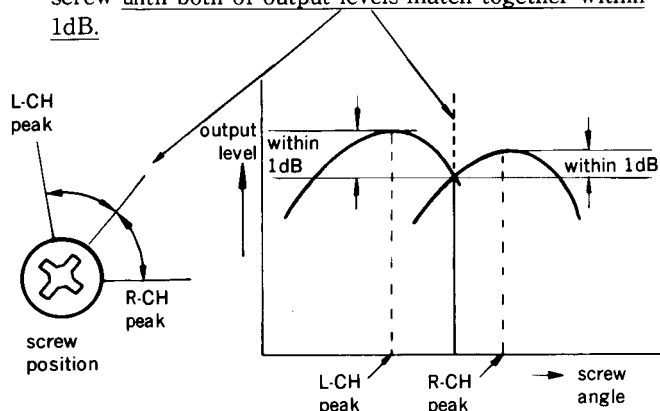


• Preset Frequency in Restting

When pressing the system reset button (S702) of the rear side of the unit, the following frequency is preset to the tuner part. When the system reset is performed in repairing, be sure to return to the frequency set by the user.

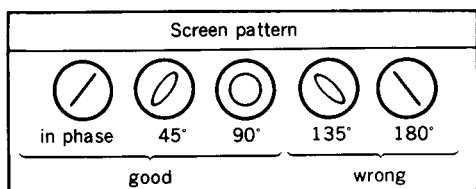
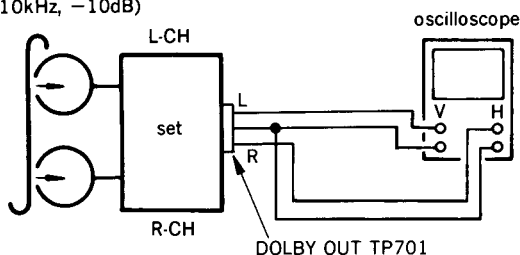
FM	no mark : AEP, Germany, UK model () : Italian model		
		MW	LW
A1	87.5MHz	A6 531(522)kHz	B1 153(144)kHz
A2	88.0MHz	A7 603(522)kHz	B2 162kHz
A3	98.0MHz	A8 999(522)kHz	B3 216kHz
A4	106.0MHz	A9 1040(522)kHz	B4 270kHz
A5	108.0MHz	A0 1602(1611)kHz	B5 279(288)kHz

- 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 1dB.



3. Playback Mode

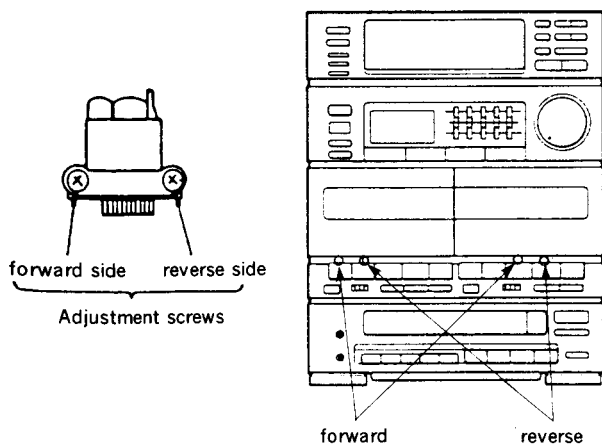
test tape
P-4-A100
(10kHz, -10dB)



- Change the reverse playback mode and repeat the steps 1 to 3.
- After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location :

—record/playback head (deck A and B)



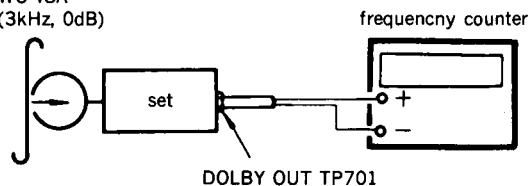
Tape Speed Adjustment DECK A DECK B

Procedure :

- Perform high speed adjustment before normal speed adjustment.

Mode : playback

test tape
WS-48A
(3kHz, 0dB)



Speed	Test pin (TP601)	Deck	Adjustment	Frequency counter
*High	short	A	M1 (H)	5,960 to 6,040Hz
		B	M2 (H)	
Normal	open	A	M1 (L)	2,980 to 3,020Hz
		B	M2 (L)	

* Continue to press HIGH SPEED DUBBING switch (S312) in playback mode: High speed playback.

Frequency difference between the beginning and the end of the tape should be within $\pm 1.5\%$.

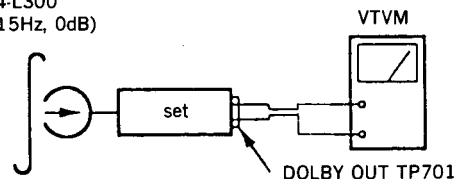
Adjustment Location : motors (M1 (deck A), M2 (deck B))

Playback Level Adjustment DECK A DECK B

Procedure :

Mode : playback

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



Deck A is RV41A (L-CH) and RV61A (R-CH), deck B is RV41B (L-CH) and RV61B (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level :

LINE OUT level : $-6 \pm 0.5\text{dB}$ (0.37 to 0.41V)

Level Difference between Channels : within 1dB

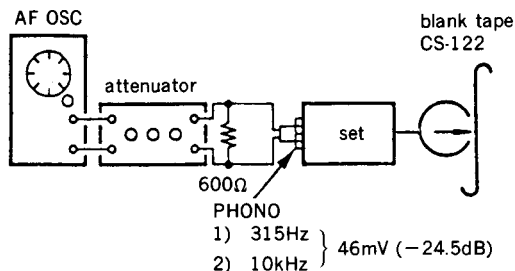
Confirm the DOLBY OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD-A and MD-B boards

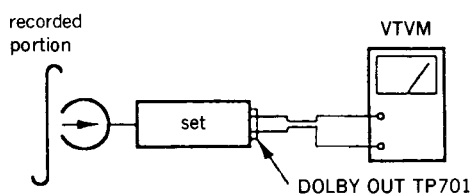
Record Bias Adjustment **DECK B**

Procedure :

1. record mode



2. playback mode



Confirm playback the signal recorded in step 1 become adjustment level as follows.

If these levels do not adjustment level, adjustment the RV42B (deck A) and RV62B (deck B) to repeat step 1 and 2.

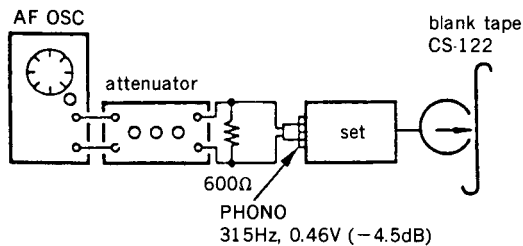
Adjustment level: Playback output of 315Hz to playback output of 10kHz : -0.5dB to 0.5dB

Adjustment Location : MD-B board

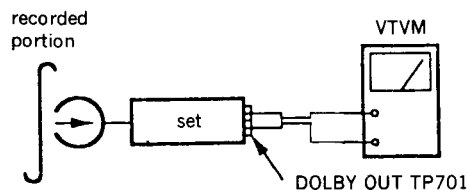
Record Level Adjustment **DECK B**

Procedure :

1. record mode



2. playback mode



Confirm playback the signal recorded in step become adjustment level as follows.

If these levels do not adjustment level, adjustment the RV701 (deck A) and RV751 (deck B) to repeat step 1 and 2.

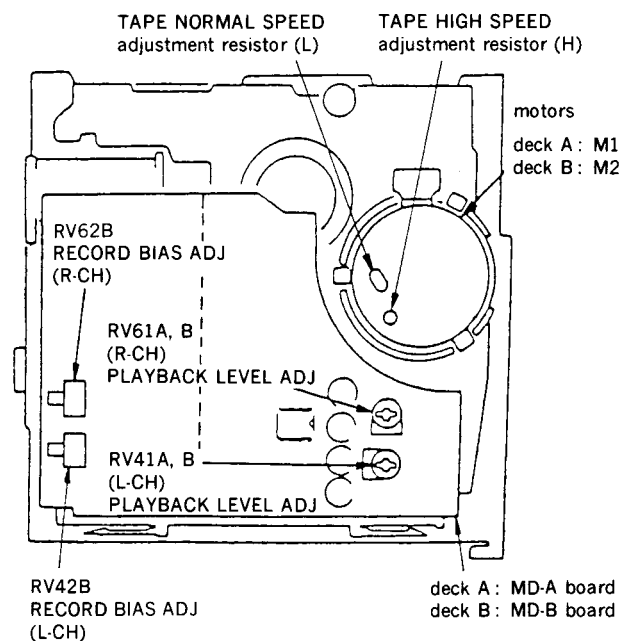
Adjustment Level :

LINE OUT level : $-6 \pm 0.5\text{dB}$ (0.37 to 0.41V)

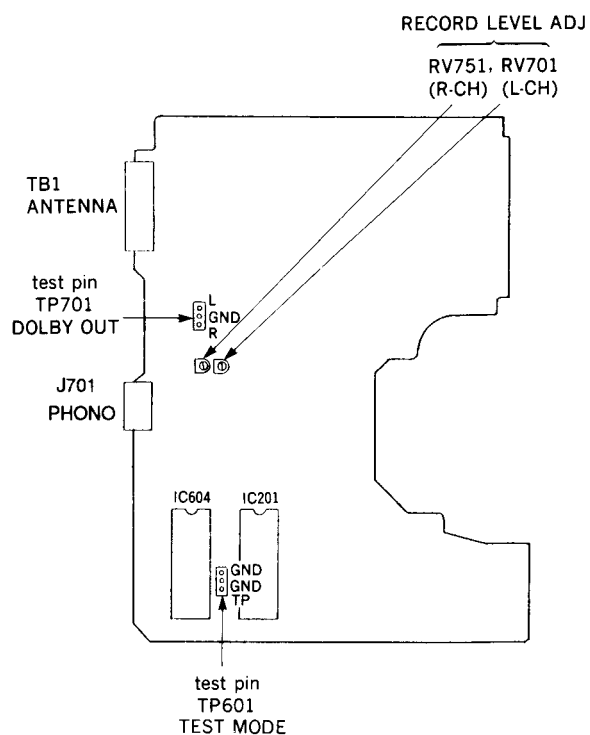
Adjustment Location : main board

Adjustment Location :

mechanism deck—rear side—



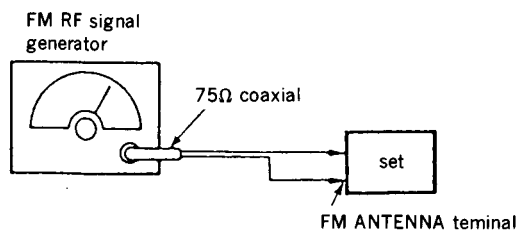
main board —component side—



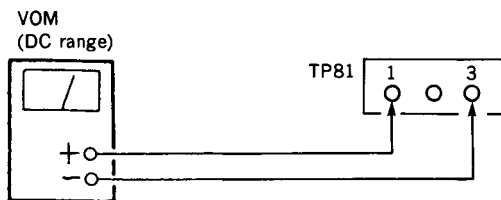
TUNER SECTION

FM SECTION ADJUSTMENTS

Setting :



Carrier frequency : 98MHz
 Modulation : 1kHz, 40kHz deviation
 Output level : as low as possible



FM Discriminator Alignment (NULL Check)

Band : FM

Procedure :

1. Supply a 1mV (60dB μ) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust IFT82 for 0V reading on the VOM.

Note : FM tuned indication lighting level adjustment should be made after FM discriminator alignment.

FM Tuned Indication Lighting Level Adjustment

Band : FM

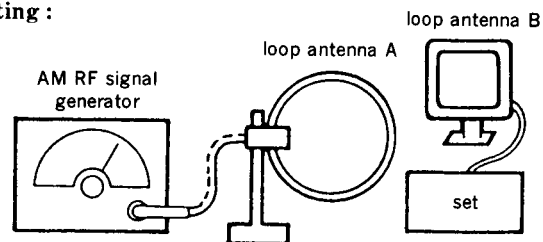
Procedure :

1. Supply a 32 μ V (30dB μ) 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV81 so that the **TUNED** light up.

Adjustment Location : main board

AM SECTION ADJUSTMENTS

Setting :



30% amplitude modulation by 400Hz signal
 Output level : as low as possible

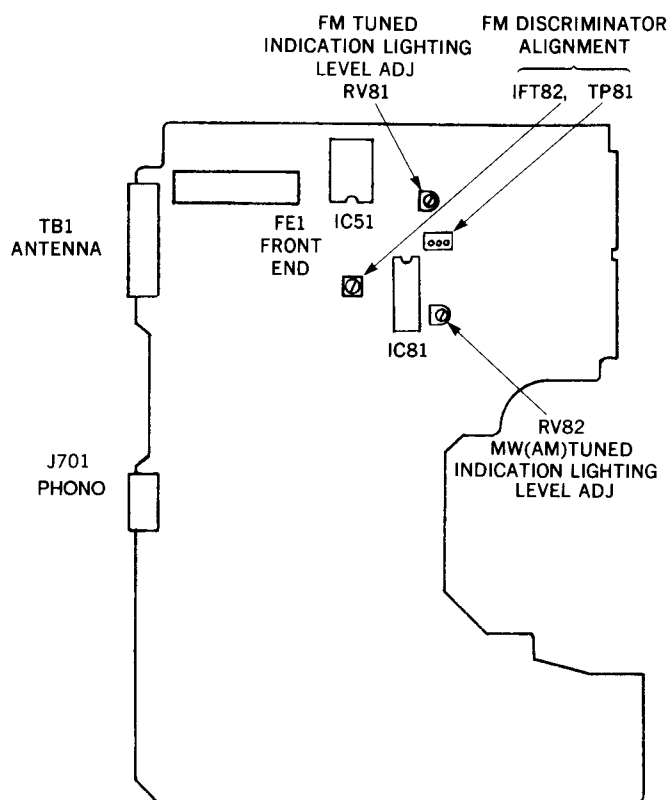
MW Tuned Indication Lighting Level Adjustment

Band : MW

Procedure :

1. Set loop antenna A so that the loop antenna, B input level becomes 0.45mV (53dB μ)
2. Tune the set to 1,404kHz.
3. Adjust the RV82 so that the **TUNED** light up.

Adjustment Location : main board —component side—

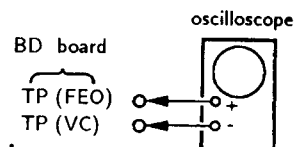


CD SECTION

Note :

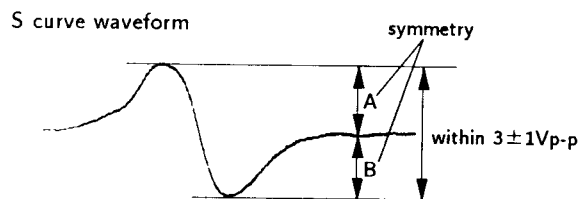
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within $3 \pm 1V_{p-p}$.

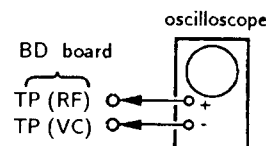


5. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

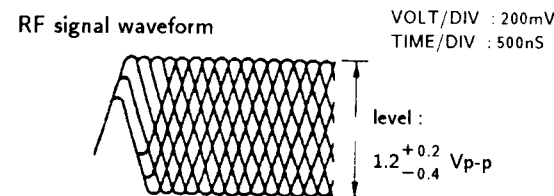


Procedure :

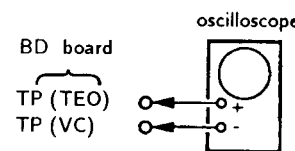
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

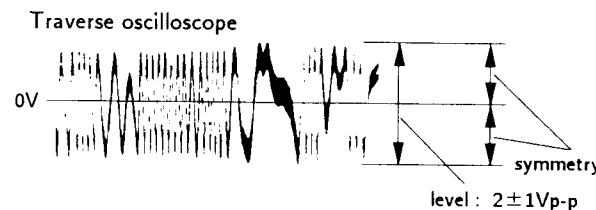


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

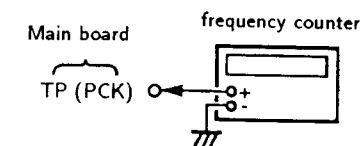


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

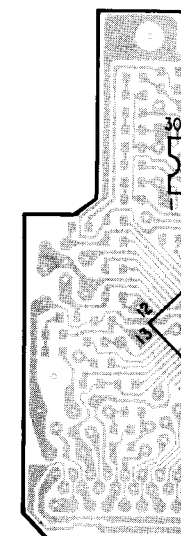
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.

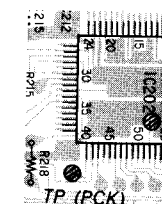
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location [BD board]

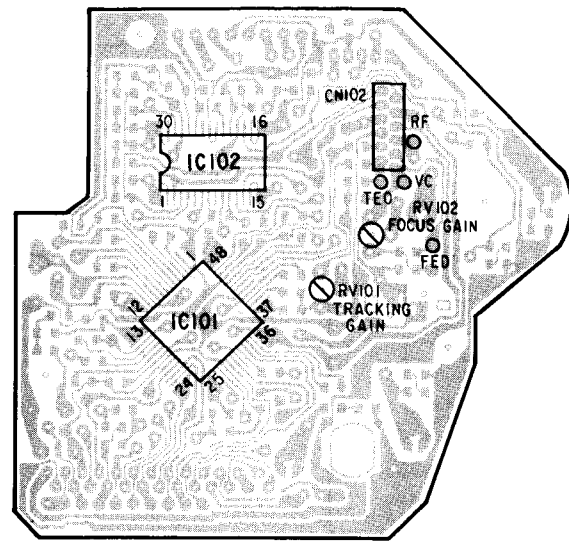


[Main board]

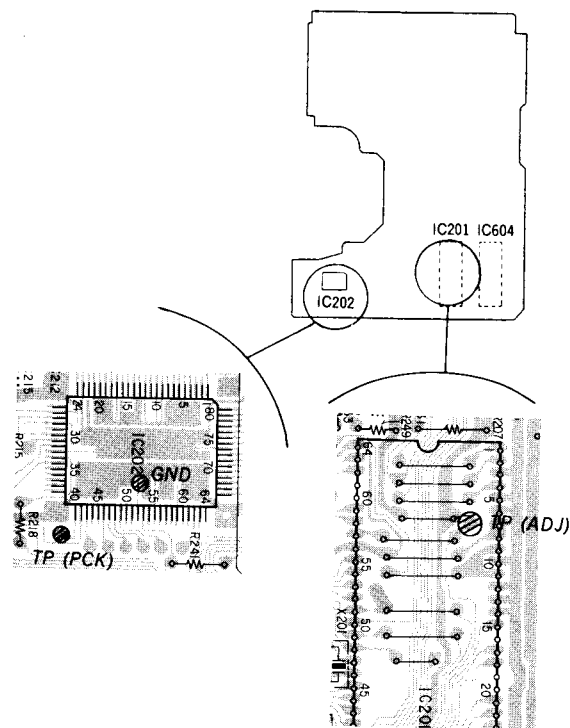


SECTION 7 DIAGRAMS

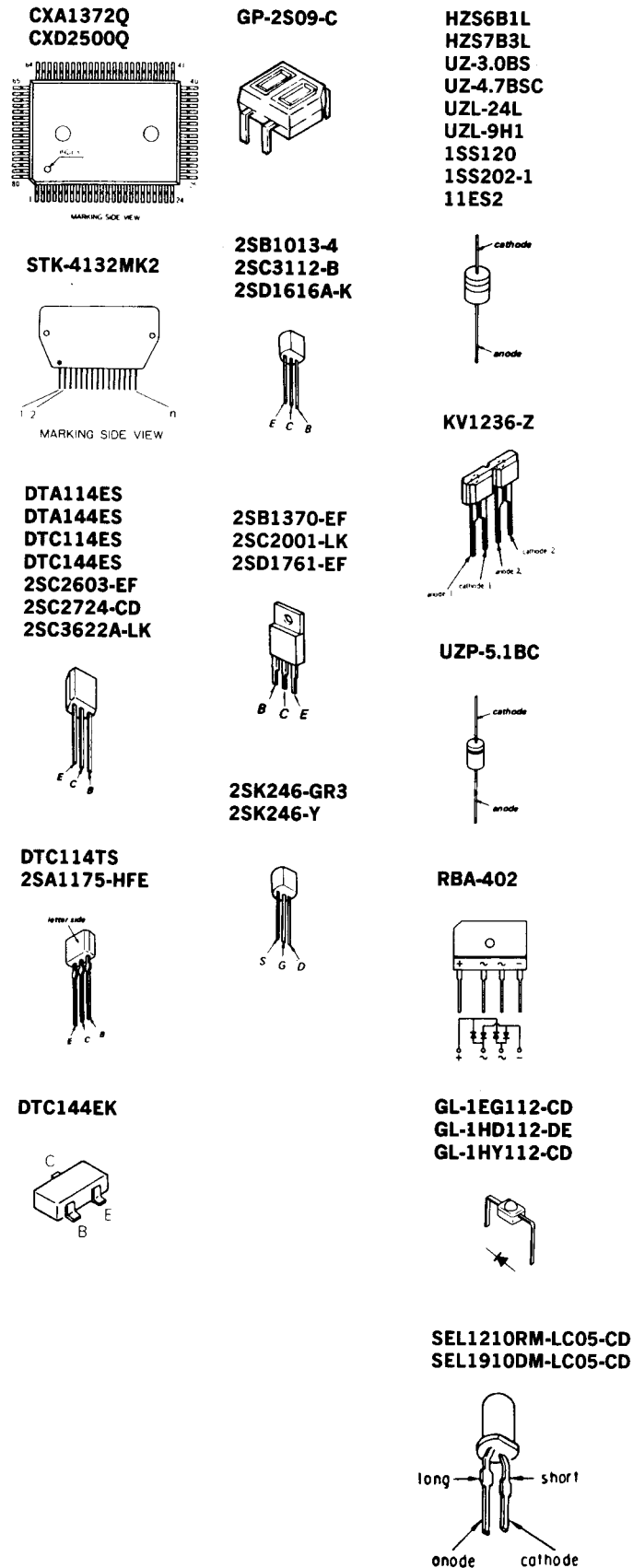
Adjustment Locations:
[BD board]



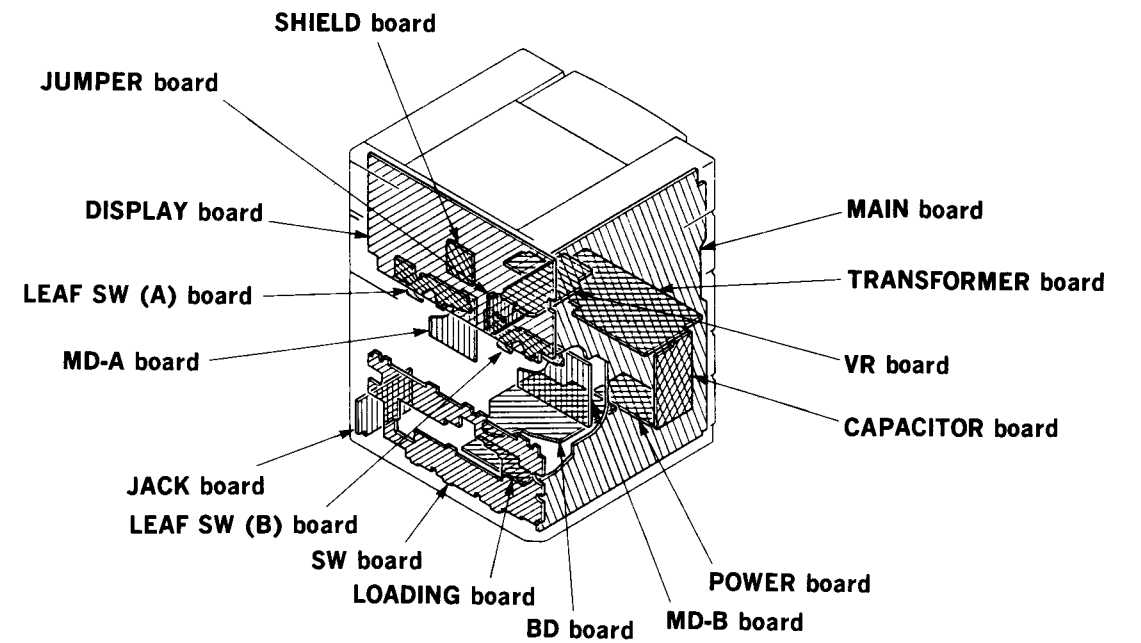
[Main board]



7-1. SEMICONDUCTOR LEAD LAYOUTS



7-2. CIRCUIT BOARDS LOCATION



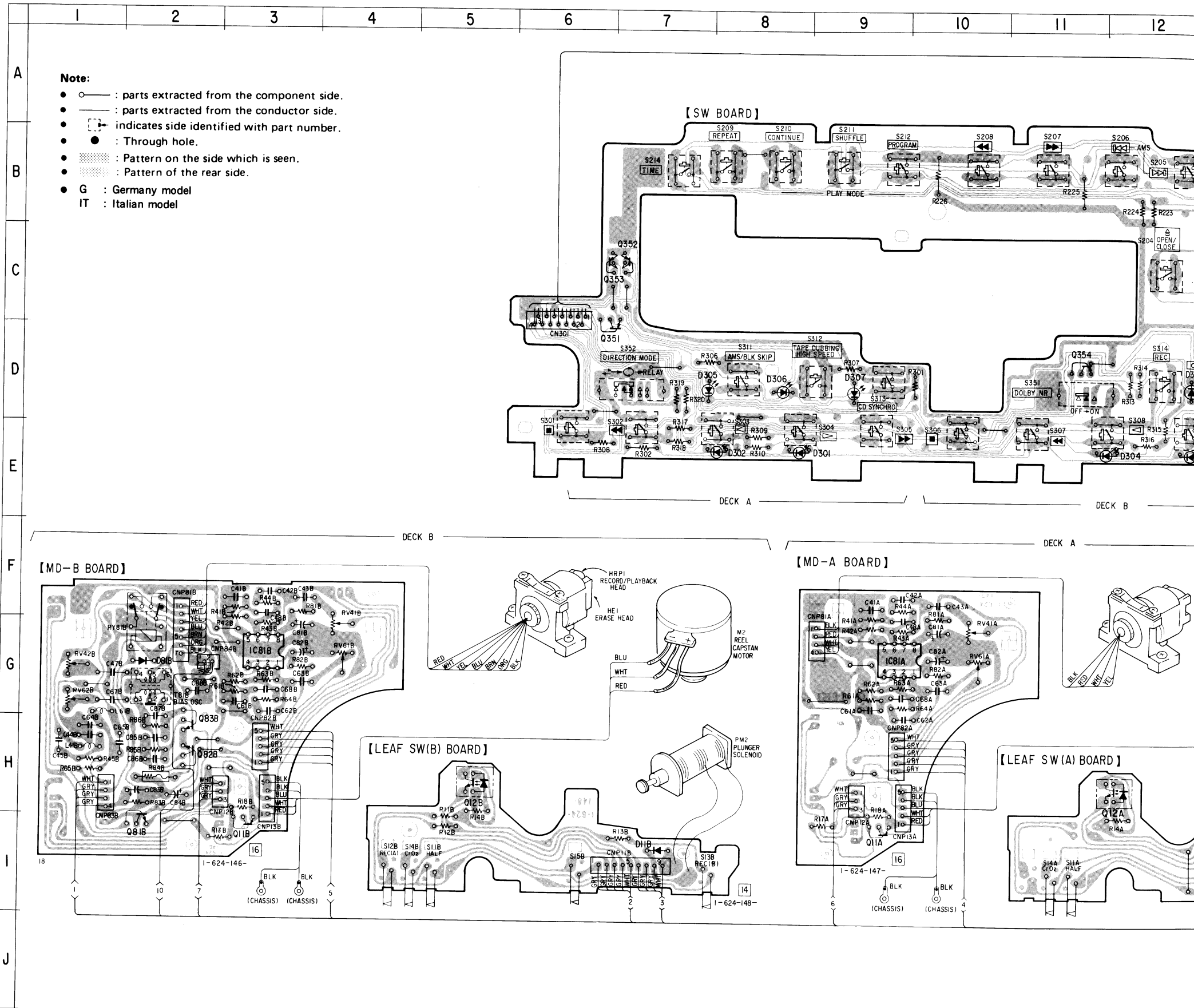
7-3. PRINTED WIRING BOARDS—Tuner/Deck/CD Section—

- Refer to page 35 for Semiconductor Lead Layouts.
- Refer to page 36 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D11A	I-13	IC602	C-21	Q353	C-6
D11B	I-7	IC603	E-21	Q354	D-11
D81B	G-2	IC604	C-25	Q601	E-22
D201	E-24	IC701	C-20	Q602	B-22
D205	D-23	IC702	D-20	Q603	E-22
D206	C-13	IC703	E-20	Q604	B-23
D207	C-13	IC704	B-20	Q605	C-23
D301	E-8	IC705	F-20	Q606	B-23
D302	E-8	IC706	I-18	Q607	B-25
D303	E-12	IC999	H-24	Q608	D-22
D304	E-12			Q609	D-22
D305	D-7	Q1	D-17	Q610	D-22
D306	D-8	Q2	D-17	Q611	D-22
D307	D-9	Q3	D-18	Q612	D-23
D308	D-12	Q4	D-18	Q613	E-21
D309	D-13	Q5	B-17	Q614	E-21
D601	E-22	Q6	E-18	Q615	F-22
D602	C-22	Q7	D-18	Q616	E-22
D603	D-23	Q8	D-18	Q617	C-25
D604	B-25	Q9	B-17	Q701	E-20
D605	D-23	Q10	B-18	Q741	G-20
D606	C-23	Q11A	I-9	Q742	G-20
D701	B-21	Q11B	I-3	Q751	E-20
D702	B-21	Q12A	H-12	Q781	E-20
D703	H-19	Q12B	H-5	Q782	E-20
D741	F-20	Q51	D-16	Q791	H-19
D742	G-20	Q52	C-16	Q792	G-19
D743	G-19	Q53	D-15	Q794	H-18
D744	G-20	Q54	C-15	Q999	G-23
D745	F-22	Q81B	I-2		
D746	E-22	Q82B	H-2		
		Q83B	H-2		
IC51	E-16	Q101	H-16		
IC81	F-18	Q101(BD)	F-35		
IC81A	G-9	Q102	H-16		
IC81B	G-3	Q103	G-18		
IC101(BD)	E-28	Q201	E-23		
IC102(BD)	D-28	Q231	F-25		
IC201	D-25	Q232	E-25		
IC202	H-25	Q233	F-24		
IC221	G-25	Q234	E-25		
IC222	F-26	Q252	E-24		
IC223	F-25	Q253	E-24		
IC253	E-23	Q351	D-6		
IC601	D-21	Q352	C-7		

BD: Used on BD board.

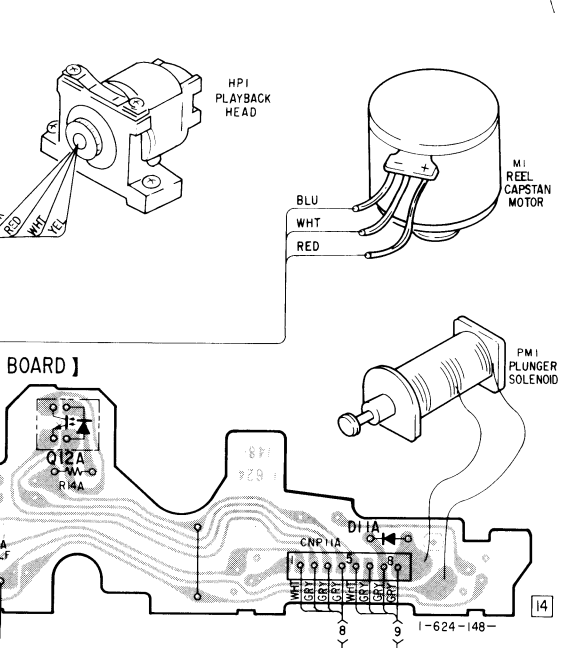
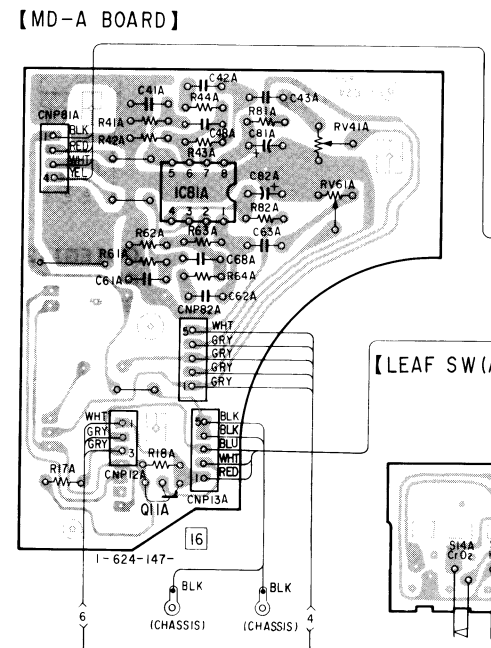
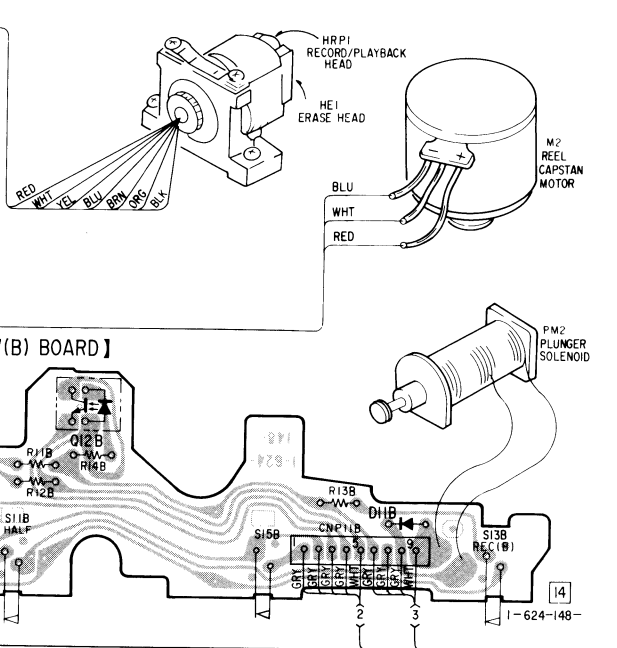
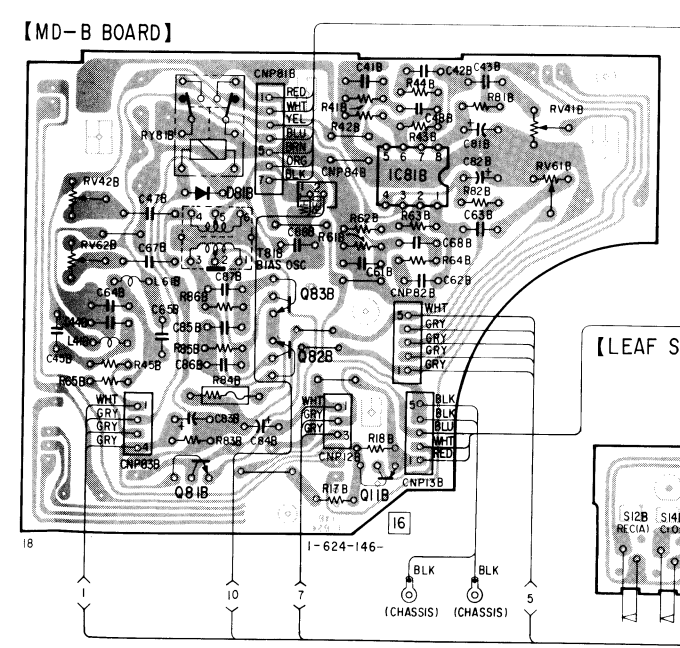
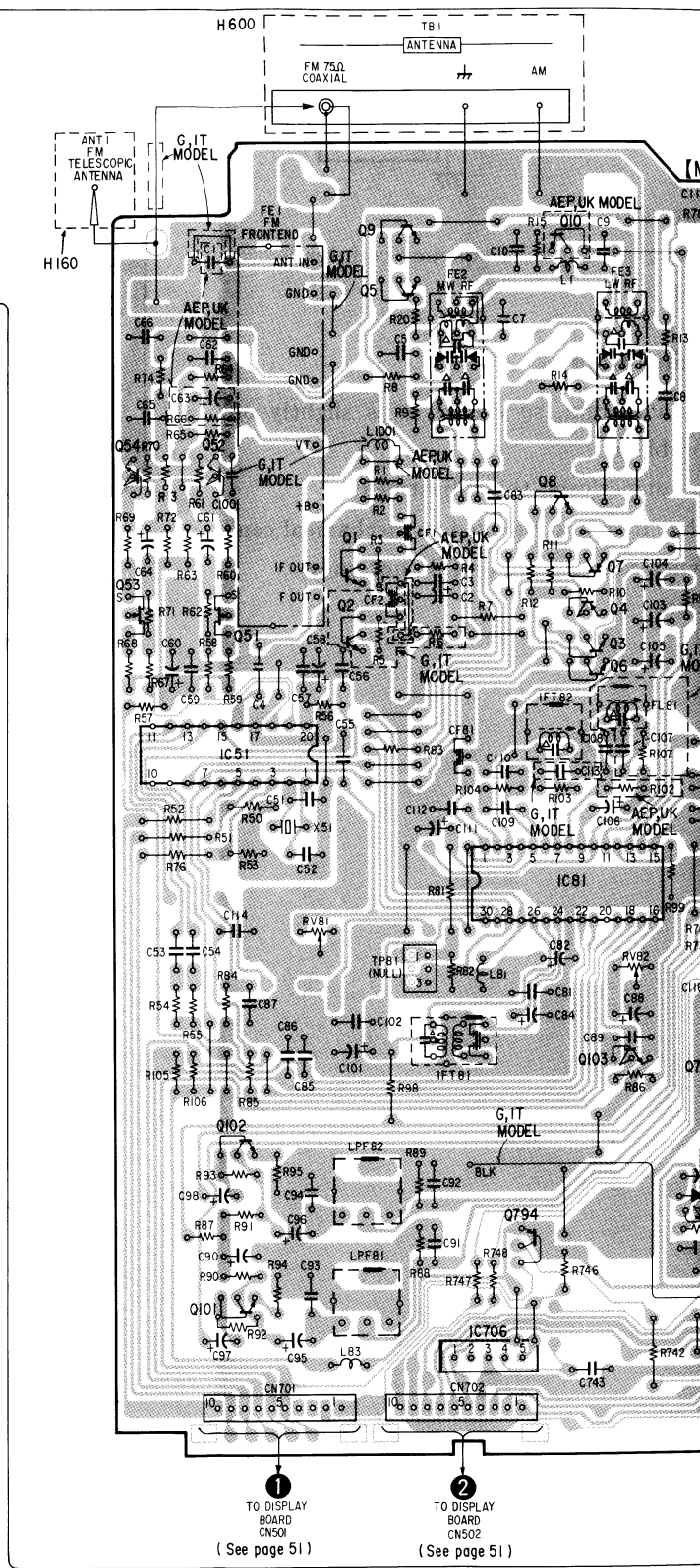
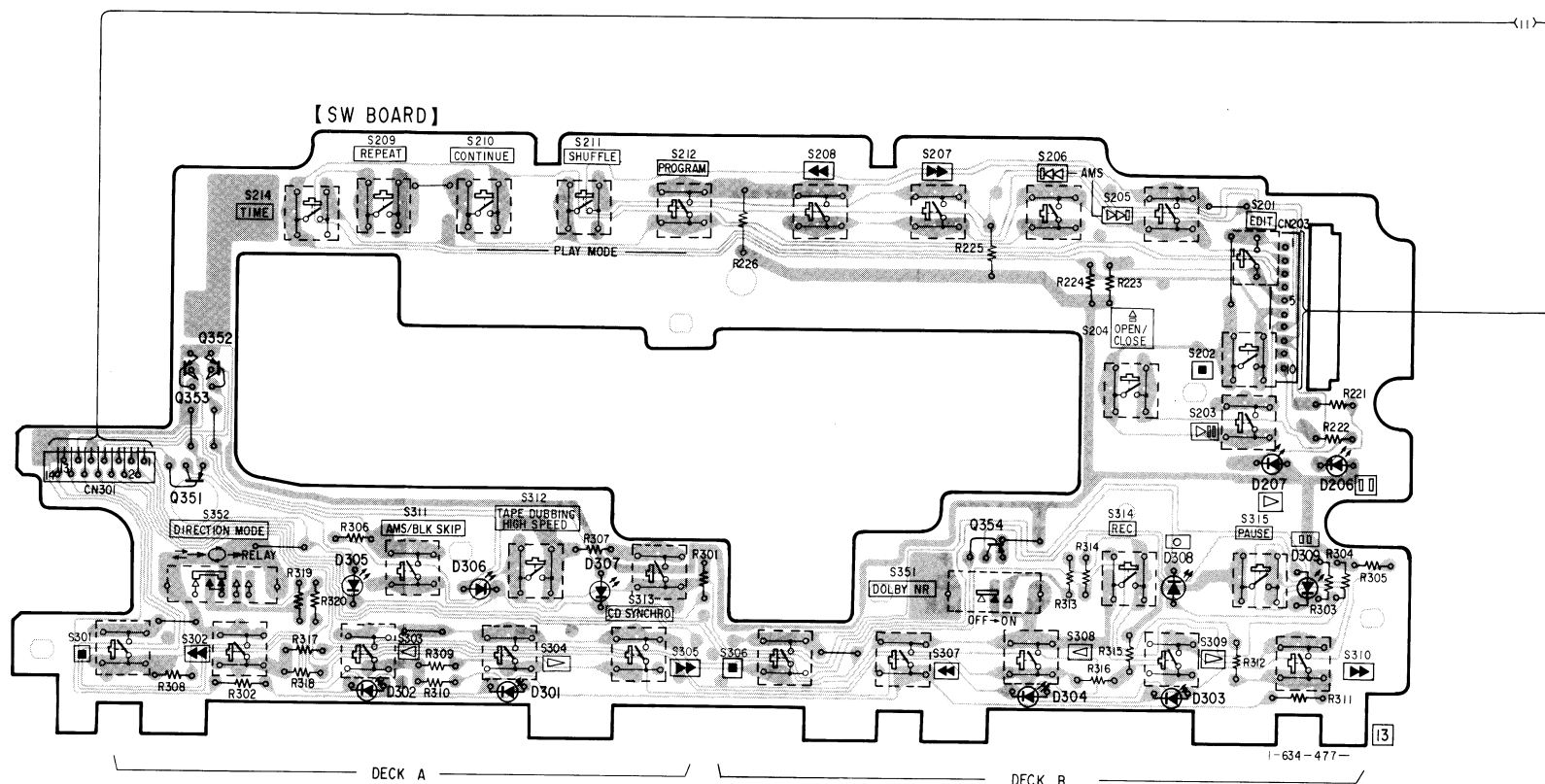


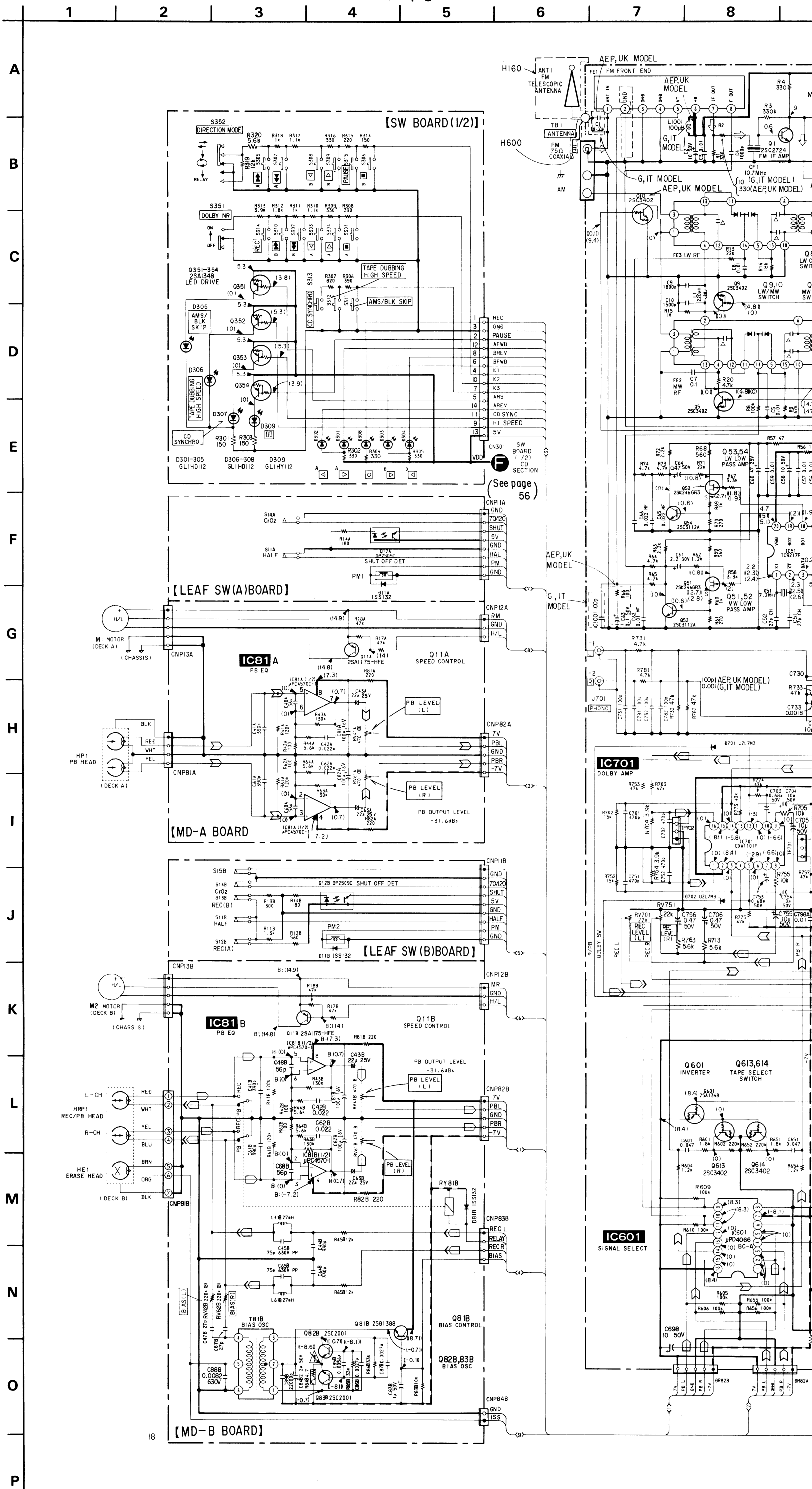
3. PRINTED WIRING BOARDS—Tuner/Deck/CD Section—

- Refer to page 35 for Semiconductor Lead Layouts.
- Refer to page 36 for Circuit Boards Location.

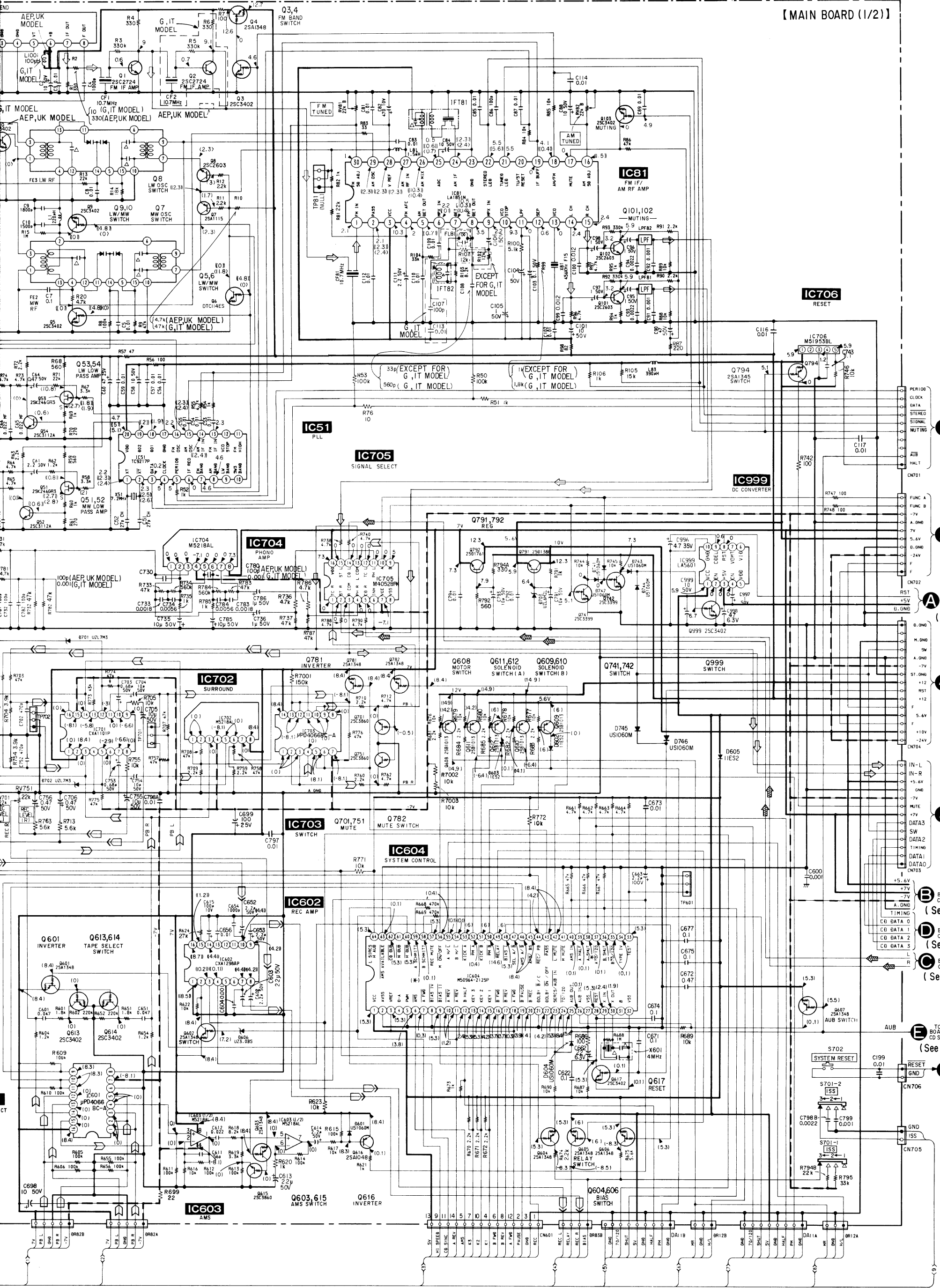
Note:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : indicates side identified with part number.
- : Through hole.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.
- G : Germany model
- IT : Italian model

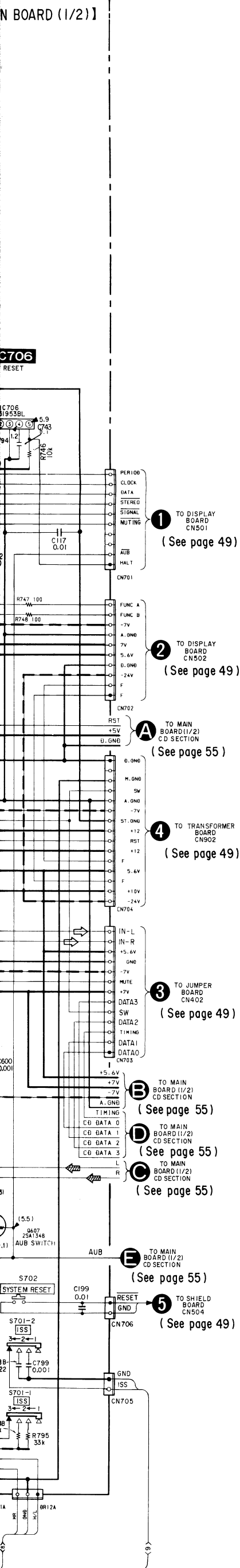




[MAIN BOARD (1/2)]



- 1 TO DISPLAY BOARD CN501 (See page 49)
- 2 TO DISPLAY BOARD CN502 (See page 49)
- A TO MAIN BOARD (1/2) CD SECTION (See page 55)
- 3 TO JUMPER BOARD CN402 (See page 49)
- B TO MAIN BOARD (1/2) CD SECTION (See page 55)
- D TO MAIN BOARD (1/2) CD SECTION (See page 55)
- C TO MAIN BOARD (1/2) CD SECTION (See page 55)
- E TO MAIN BOARD (1/2) CD SECTION (See page 55)
- 5 TO SHIELD BOARD CN504 (See page 49)



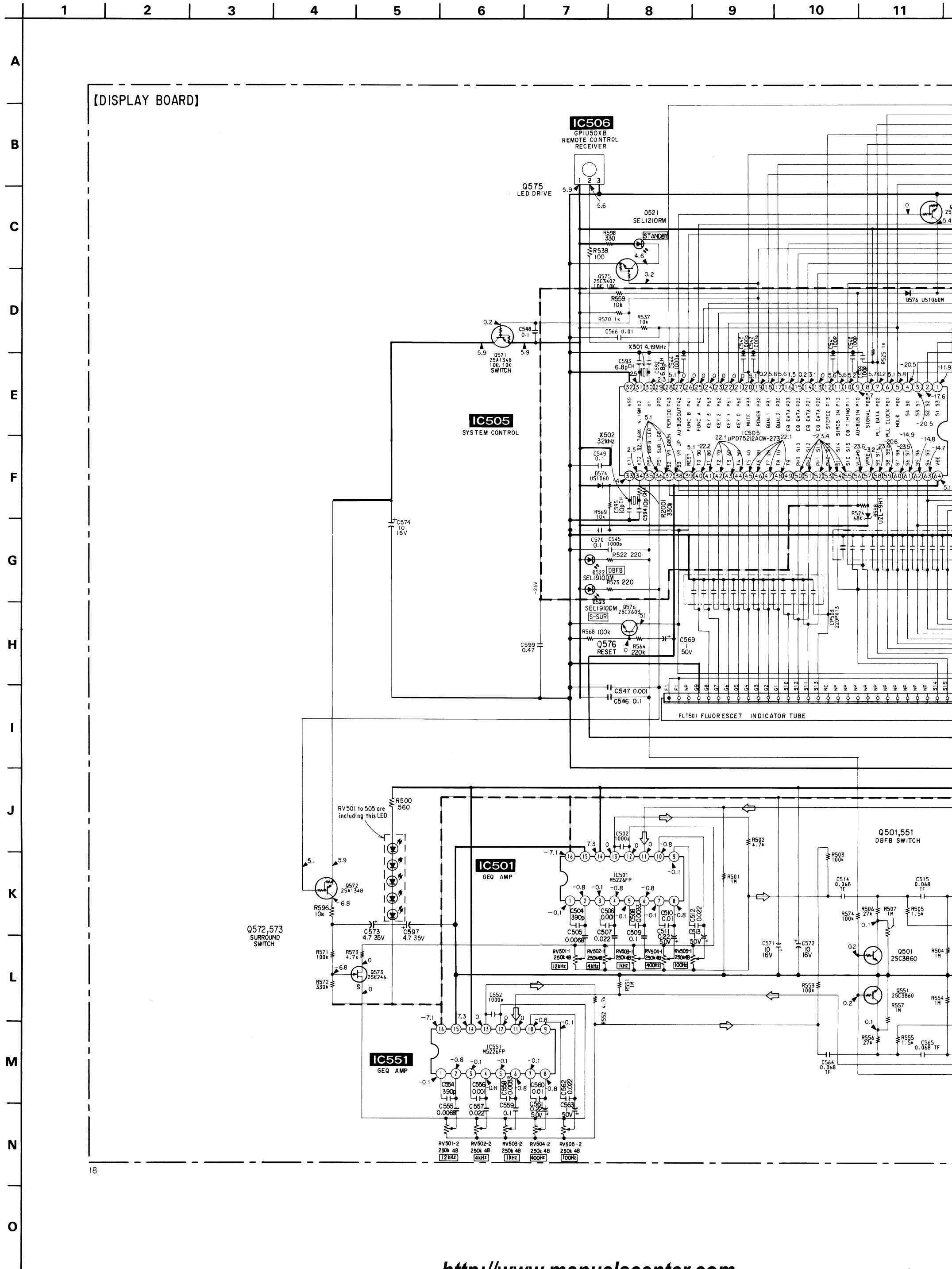
Note:

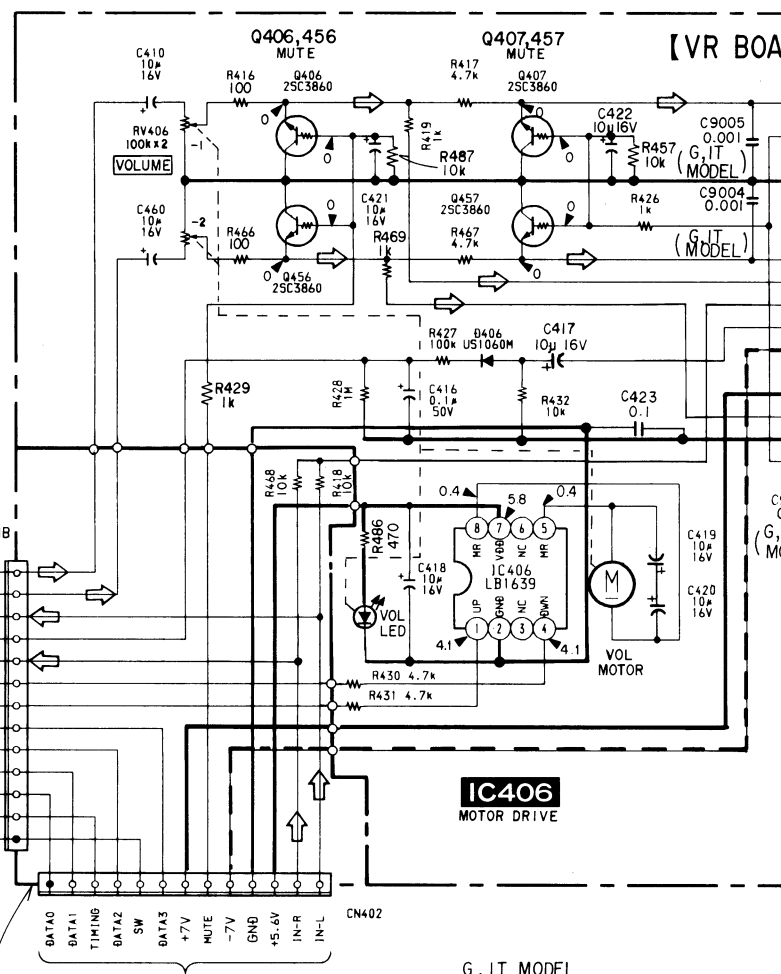
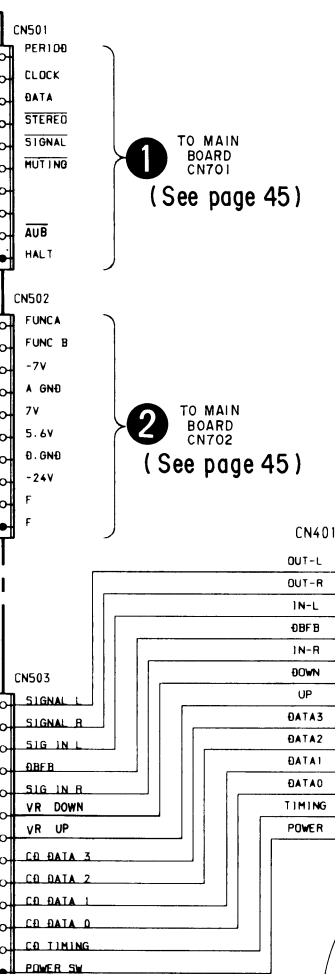
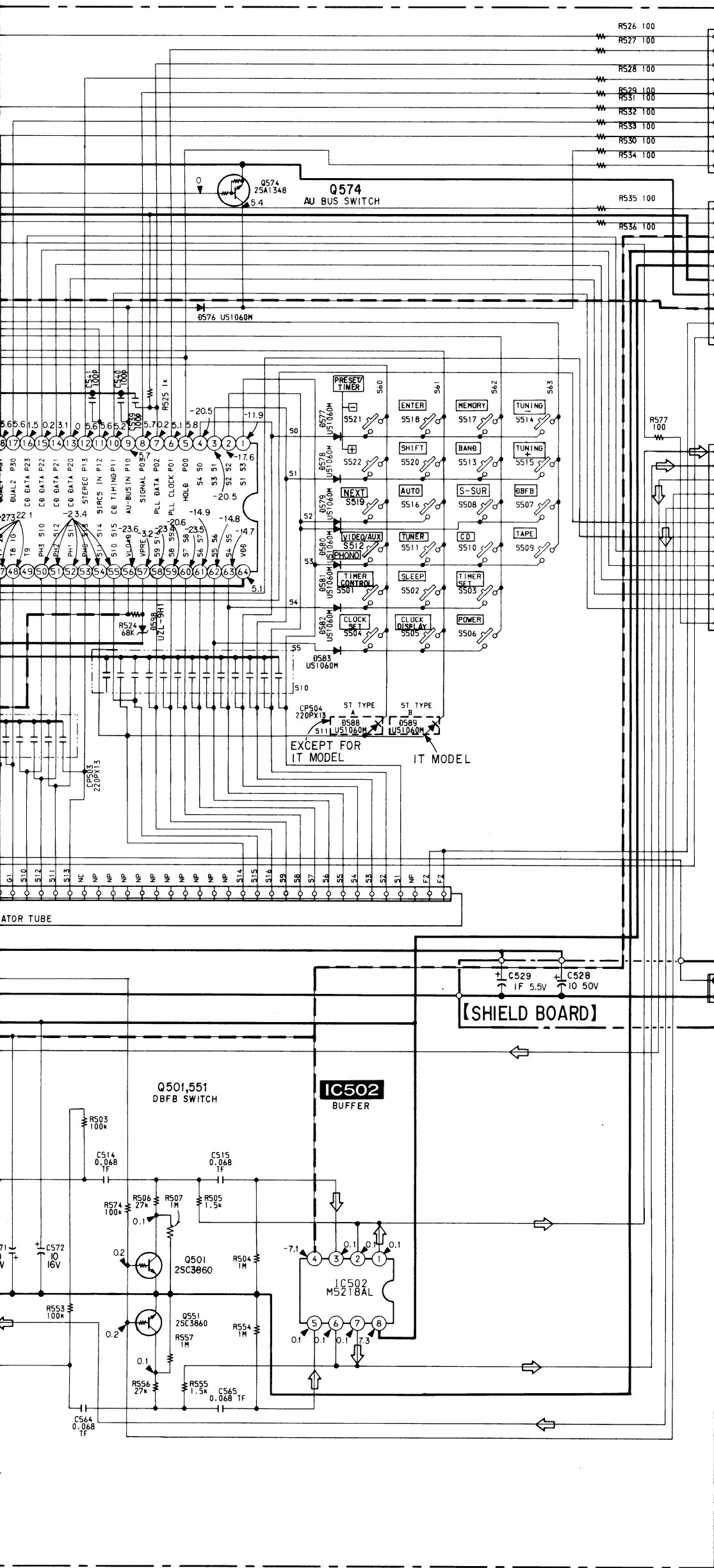
- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- : fusible resistor.

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

- : B+ Line
- : B- Line
- : adjustment for repair.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
no mark: FM
(): Playback
((): MW
< >: LW
- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
: FM
: PB (DECK A)
: CD
: PB (DECK B)
: REC
- G: Germany model
IT: Italian model

7-5. SCHEMATIC DIAGRAM—Power/Amplifier/Display Section— • Refer to page 57 for IC Block Diagrams.



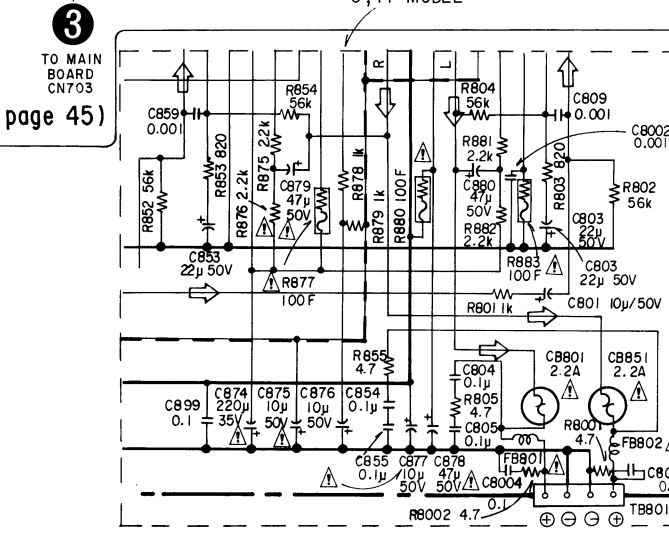


1 TO MAIN BOARD CN701 (See page 45)

2 TO MAIN BOARD CN702 (See page 45)

[JUMPER BOARD]

3 TO MAIN BOARD CN703 (See page 45)

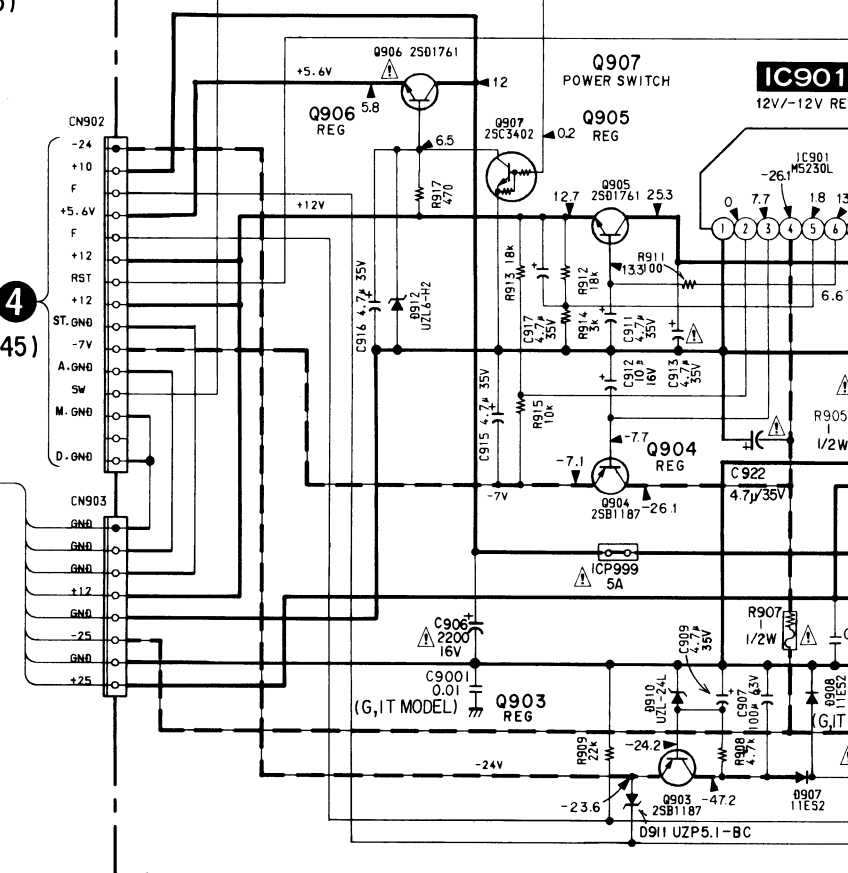


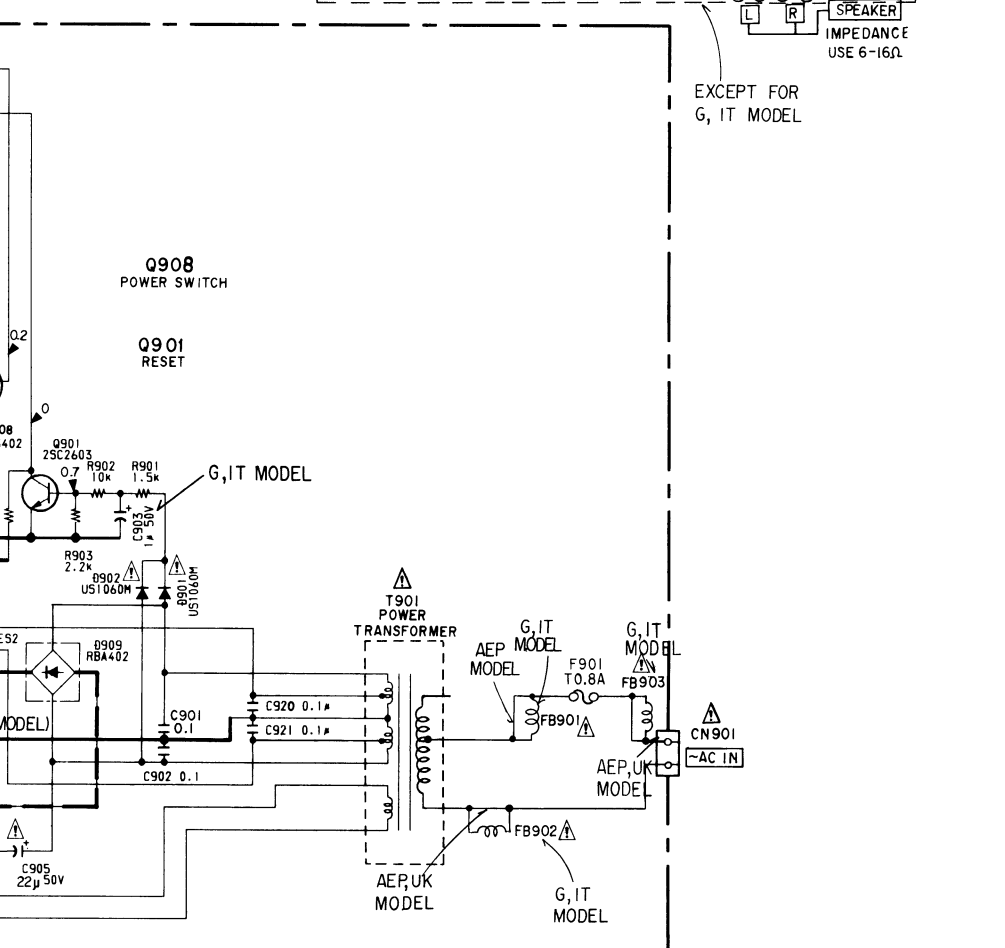
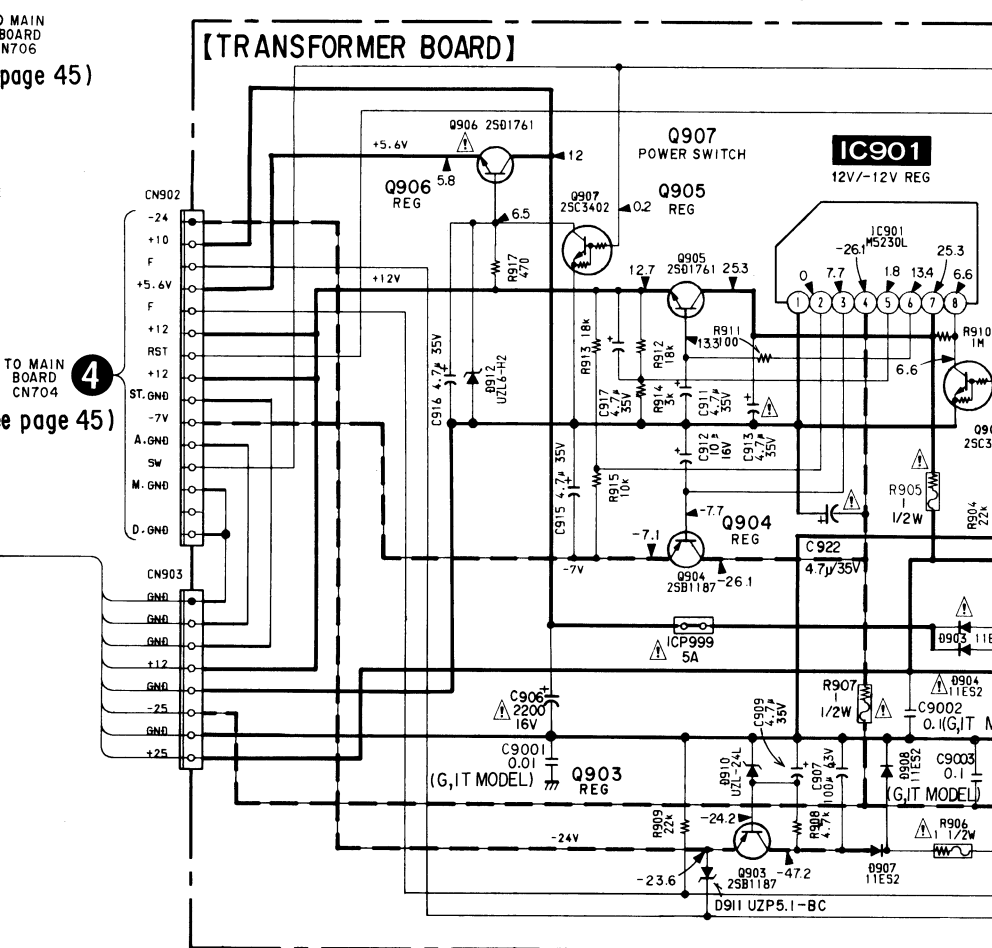
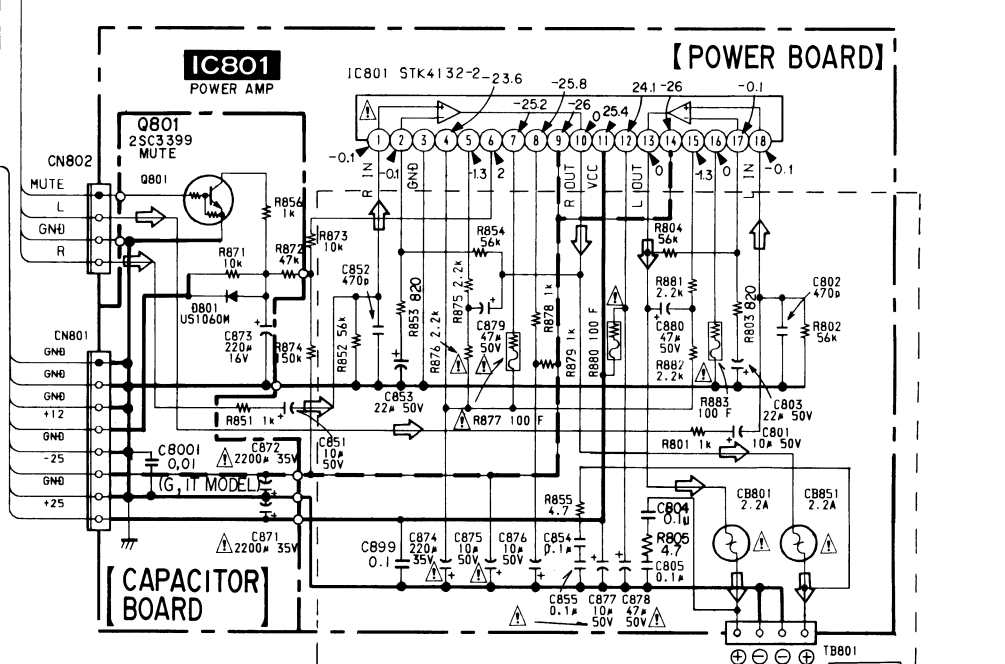
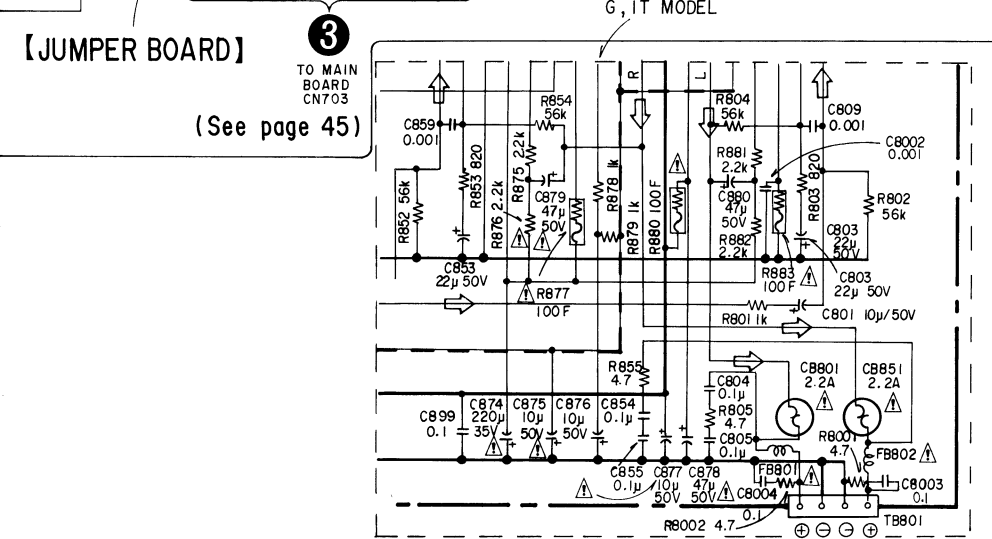
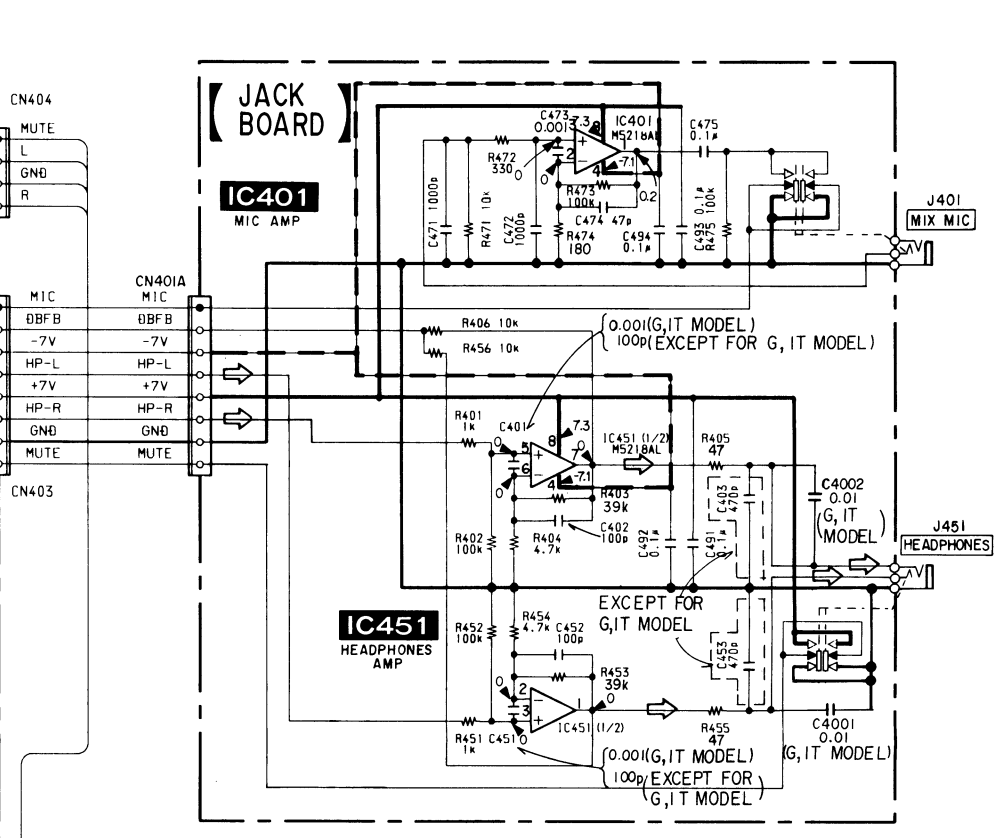
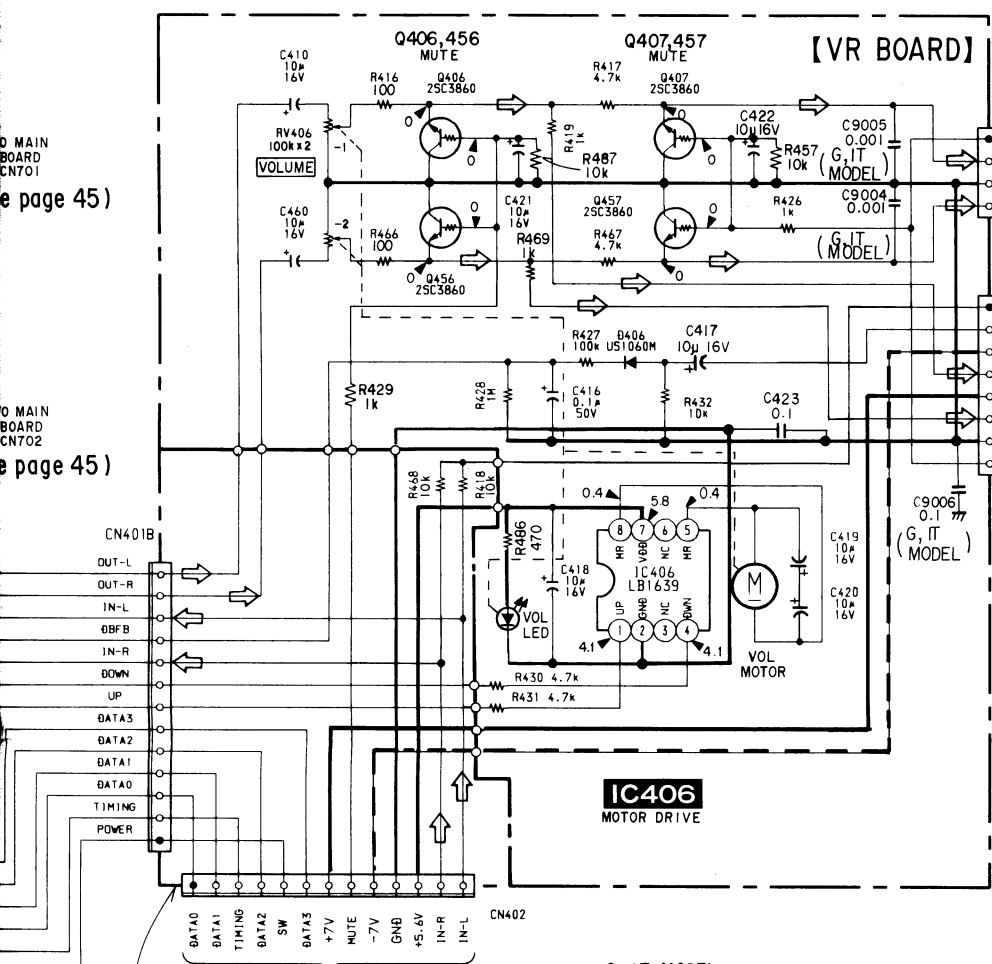
[SHIELD BOARD]

5 TO MAIN BOARD CN706 (See page 45)

[TRANSFORMER BOARD]

4 TO MAIN BOARD CN704 (See page 45)





TO MAIN BOARD CN701 (See page 45)

TO MAIN BOARD CN702 (See page 45)

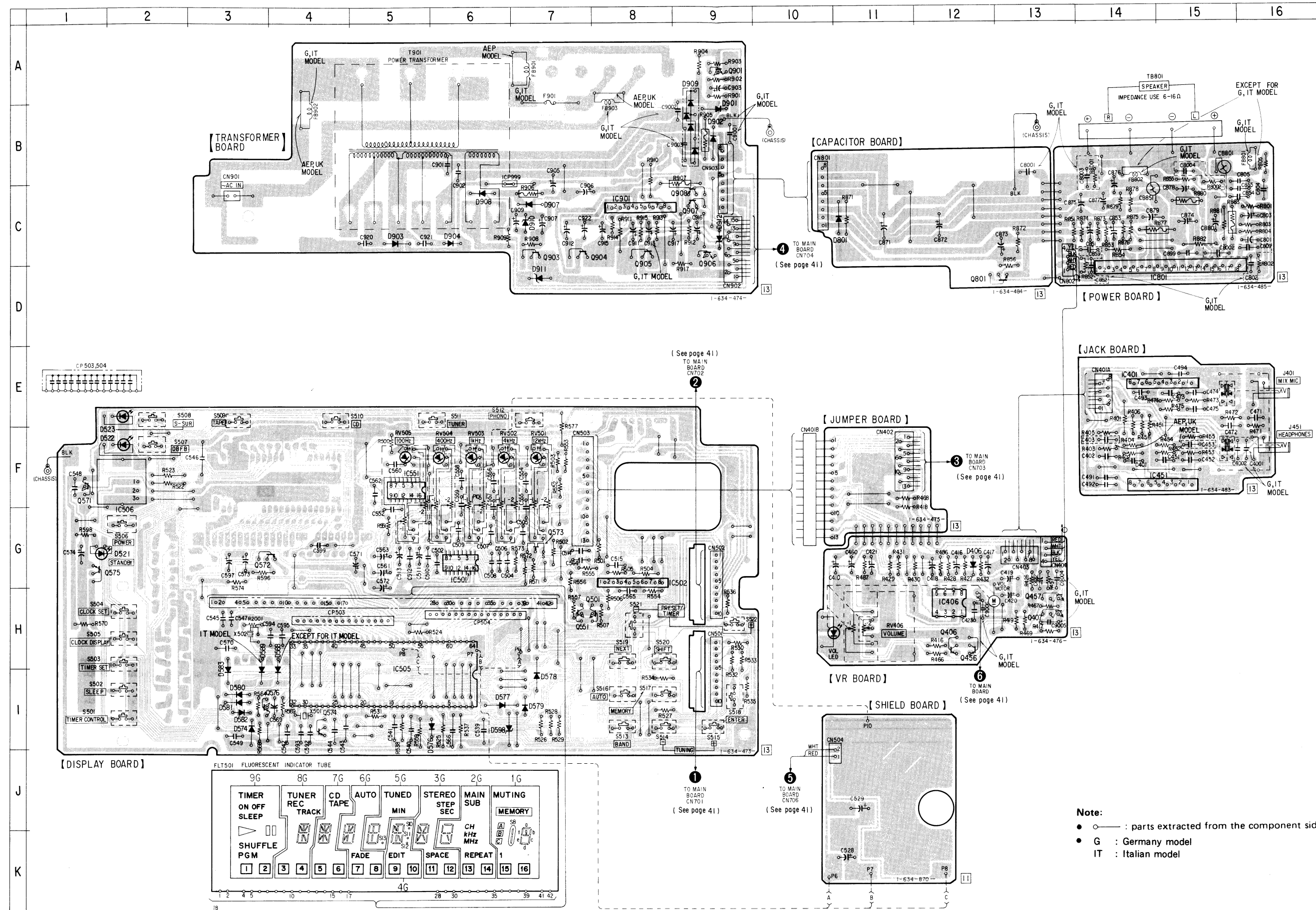
3 TO MAIN BOARD CN703 (See page 45)

TO MAIN BOARD CN704 (See page 45)

4 TO MAIN BOARD CN704 (See page 45)

7-6. PRINTED WIRING BOARDS—Power/Amplifier/Display Section—

- Refer to page 35 for Semiconductor Lead Layouts.
- Refer to page 36 for Circuit Boards Location.



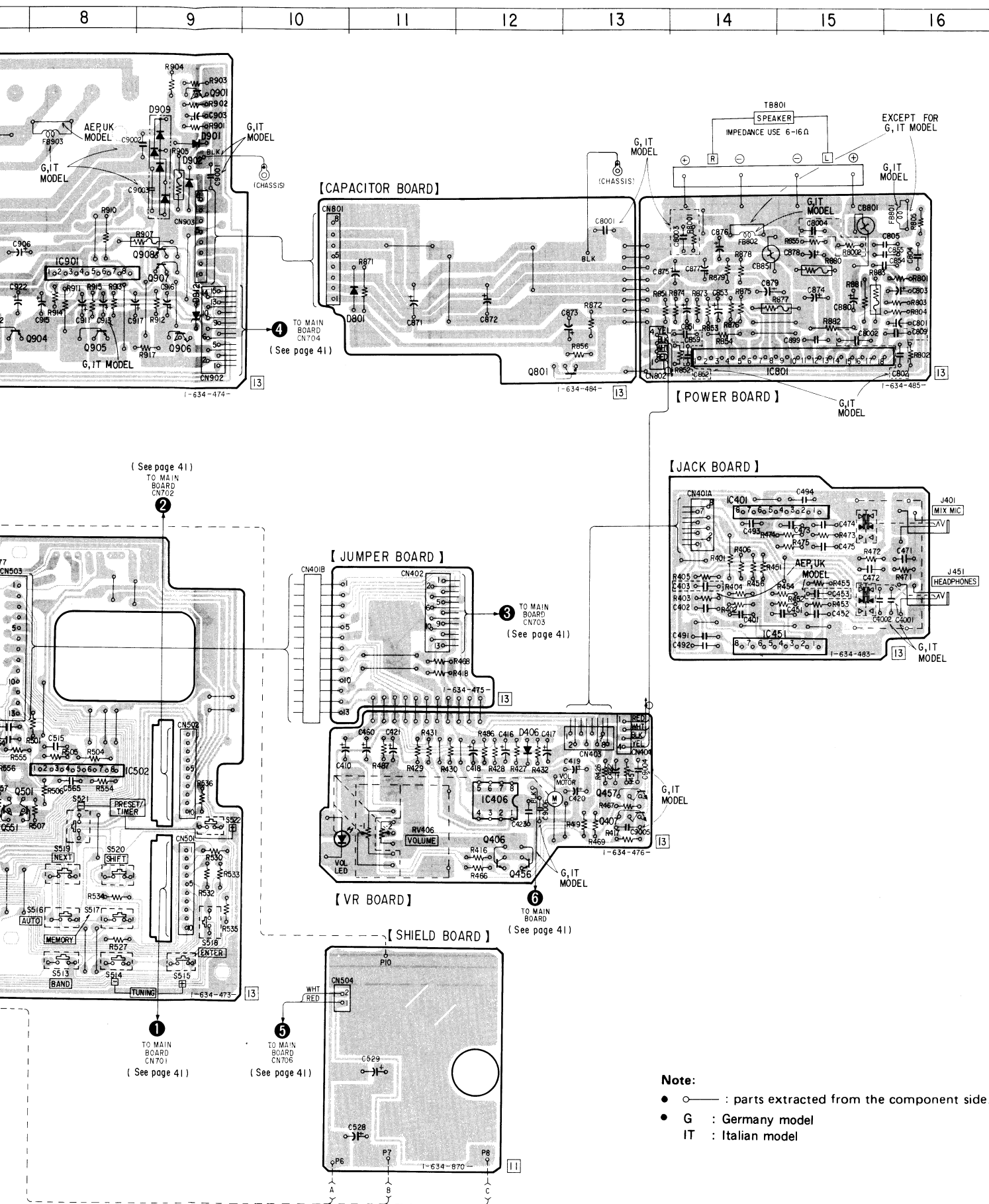
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D406	G-12	IC451	F-
D521	G-1	IC501	G-
D522	F-2	IC502	G-
D523	E-2	IC505	H-
D574	I-3	IC506	F-
D576	I-6	IC551	F-
D577	I-6	IC801	D-
D578	I-7	IC901	C-
D579	I-7		
D580	I-3	Q406	H-
D581	I-3	Q407	H-
D582	I-3	Q456	H-
D583	H-3	Q457	H-
D588	H-4	Q501	H-
D589	H-3	Q551	H-
D598	I-6	Q571	F-
D801	C-11	Q572	G-
D901	B-9	Q573	G-
D902	B-9	Q574	I-
D903	C-5	Q575	G-
D904	C-6	Q576	I-
D907	C-7	Q801	D-
D908	C-6	Q901	A-
D909	A-9	Q903	C-
D910	C-7	Q904	C-
D911	D-7	Q905	C-
D912	C-9	Q906	C-
		Q907	C-
		Q908	C-
IC401	E-14		
IC406	H-12		

Note:

- ○ : parts extracted from the component side.
- G : Germany model
- IT : Italian model

Semiconductor Lead Layouts.
Circuit Boards Location.

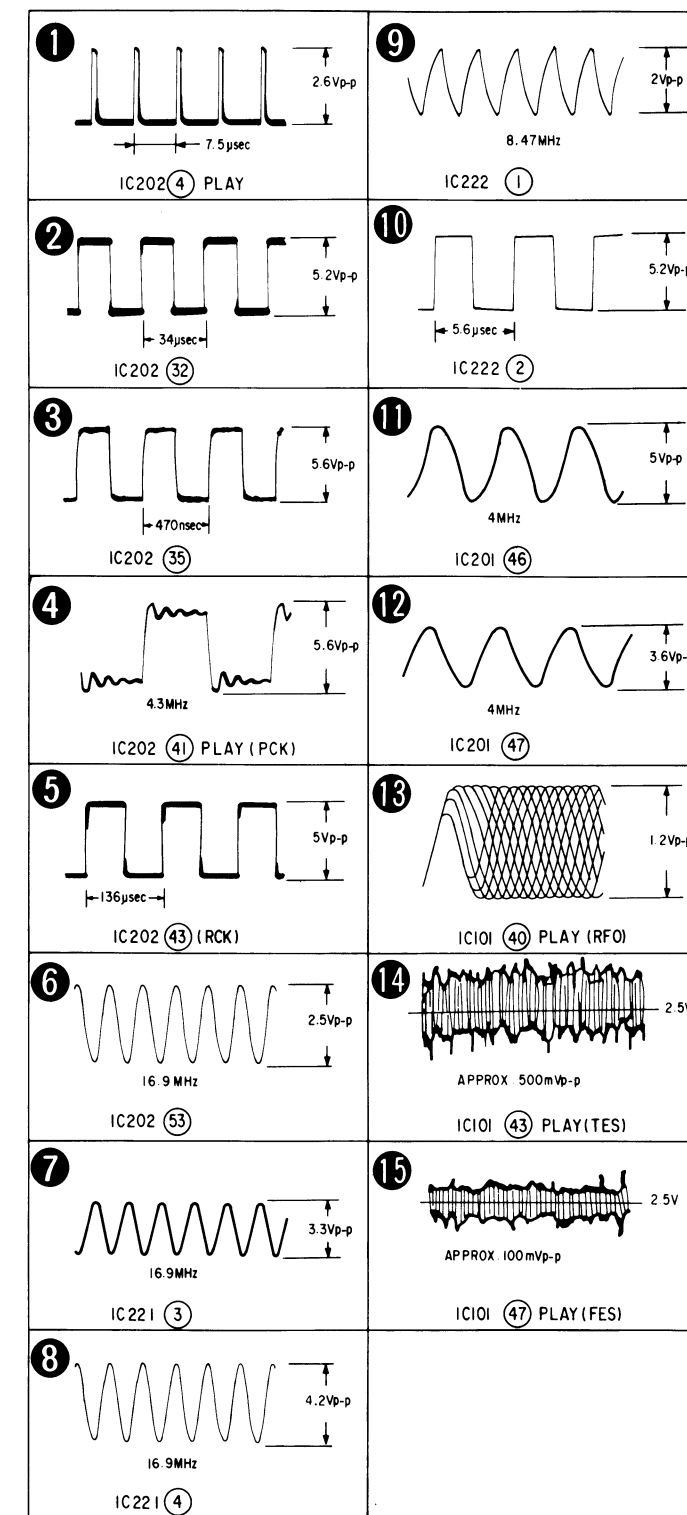


Note:
 • ○ : parts extracted from the component side.
 • G : Germany model
 IT : Italian model

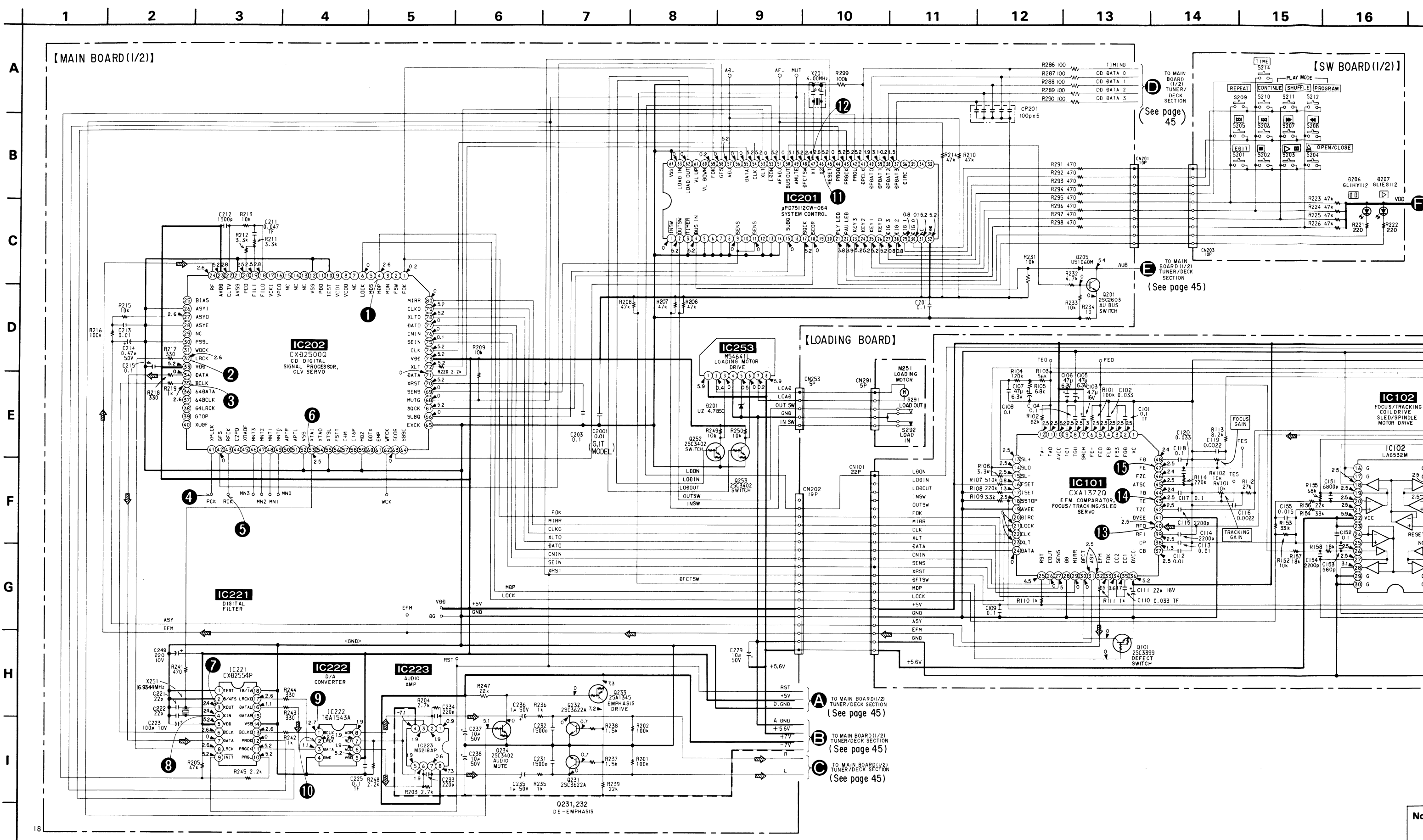
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D406	G-12	IC451	F-14
D521	G-1	IC501	G-6
D522	F-2	IC502	G-8
D523	E-2	IC505	H-5
D574	I-3	IC506	F-2
D576	I-6	IC551	F-5
D577	I-6	IC801	D-15
D578	I-7	IC901	C-8
D579	I-7		
D580	I-3	Q406	H-12
D581	I-3	Q407	H-13
D582	I-3	Q456	H-12
D583	H-3	Q457	H-13
D588	H-4	Q501	H-8
D589	H-3	Q551	H-7
D598	I-6	Q571	F-1
D801	C-11	Q572	G-3
D901	B-9	Q573	G-7
D902	B-9	Q574	I-4
D903	C-5	Q575	G-1
D904	C-6	Q576	I-3
D907	C-7	Q801	D-13
D908	C-6	Q901	A-9
D909	A-9	Q903	C-7
D910	C-7	Q904	C-7
D911	D-7	Q905	C-8
D912	C-9	Q906	C-9
		Q907	C-9
IC401	E-14	Q908	C-9
IC406	H-12		

• Waveforms



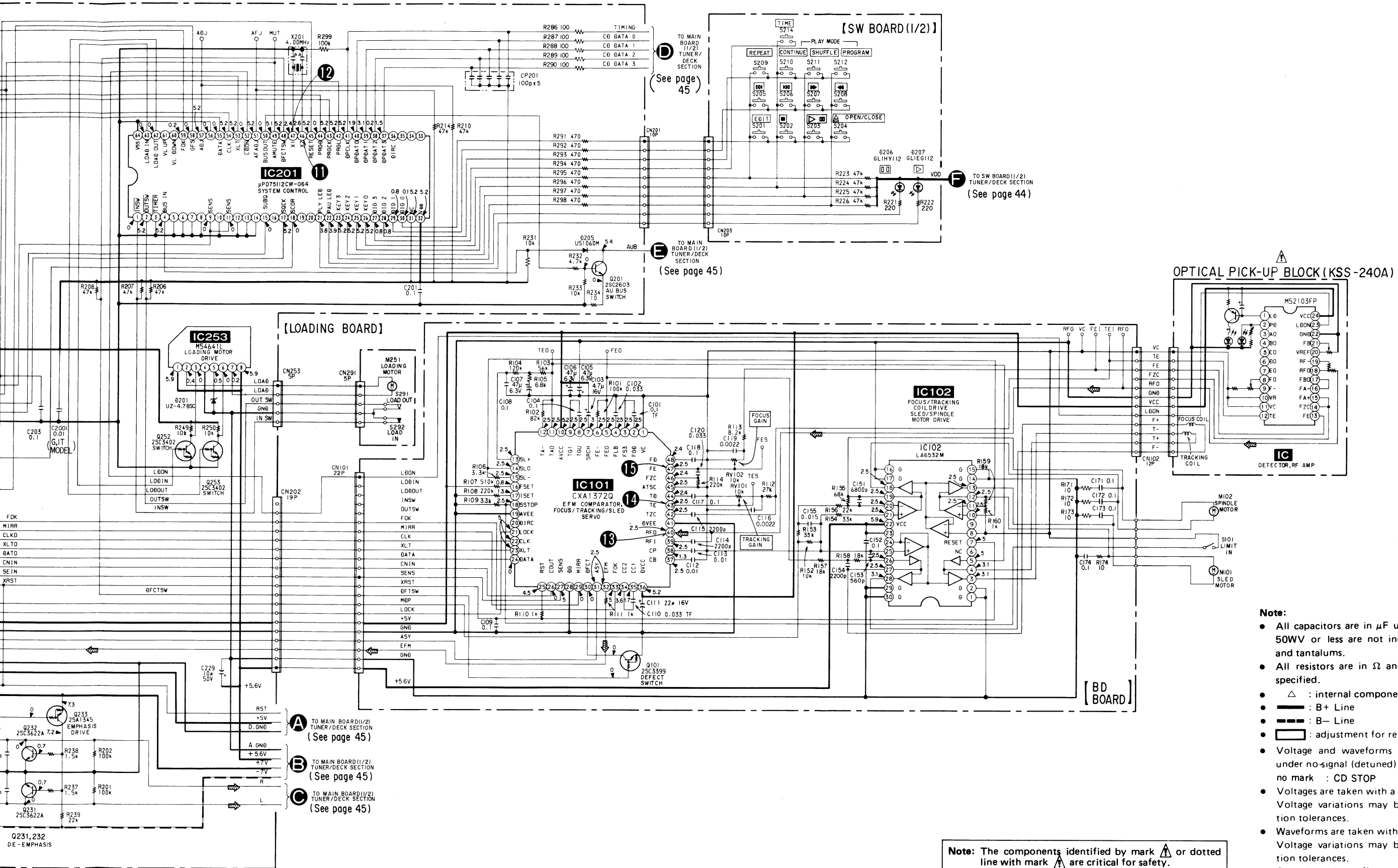
7-7. SCHEMATIC DIAGRAM—CD Section— Refer to page 53 for Waveforms.



A
B
C
D
E
F
G
H
I
J

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

- A TO MAIN BOARD(1/2) TUNER/DECK SECTION (See page 45)
- B TO MAIN BOARD(1/2) TUNER/DECK SECTION (See page 45)
- C TO MAIN BOARD(1/2) TUNER/DECK SECTION (See page 45)

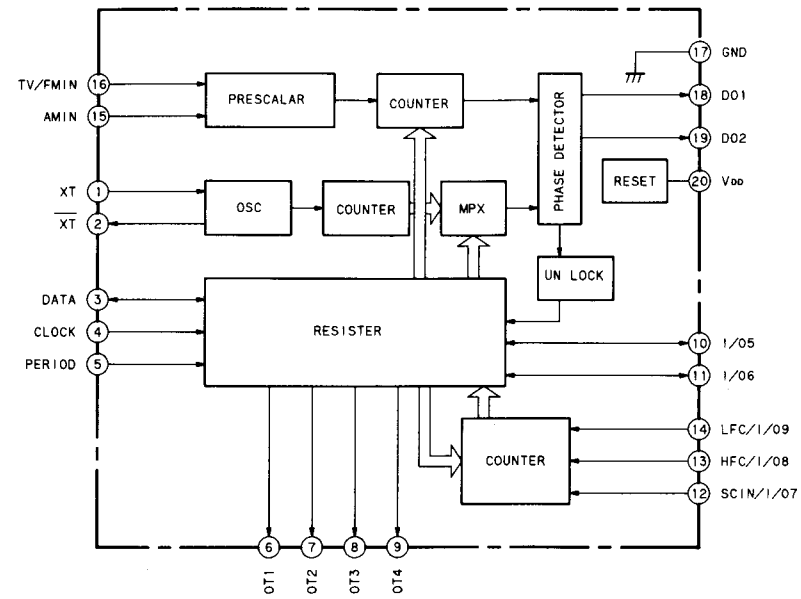


- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - \triangle : internal component.
 - --- : B+ Line
 - --- : B- Line
 - --- : adjustment for repair.
 - Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : CD STOP
 - Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circled numbers refer to waveforms.
 - Signal path.
 - --- : CD

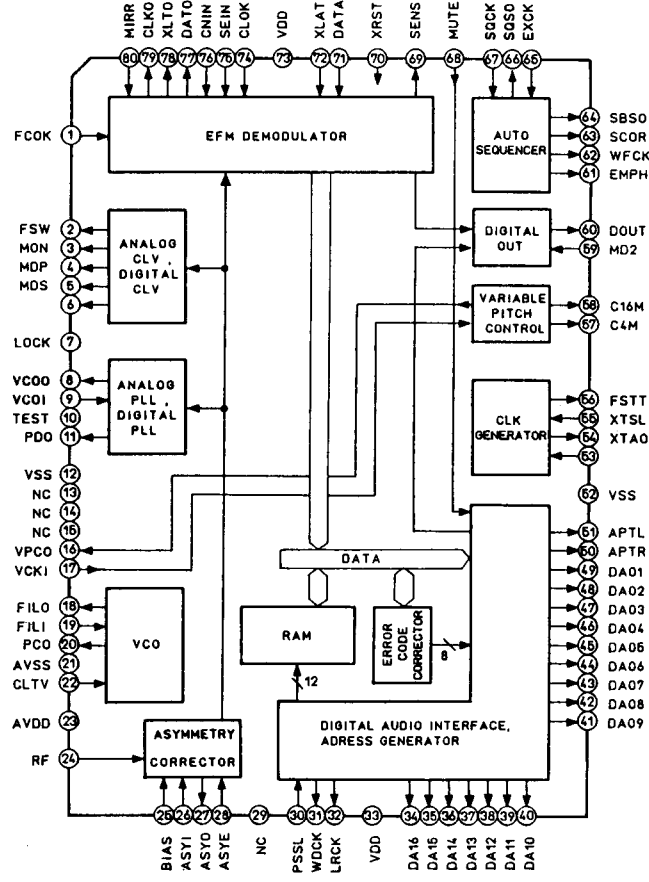
Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

• IC Block Diagrams

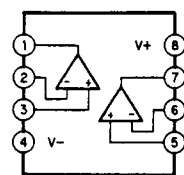
• IC51 TC9217P



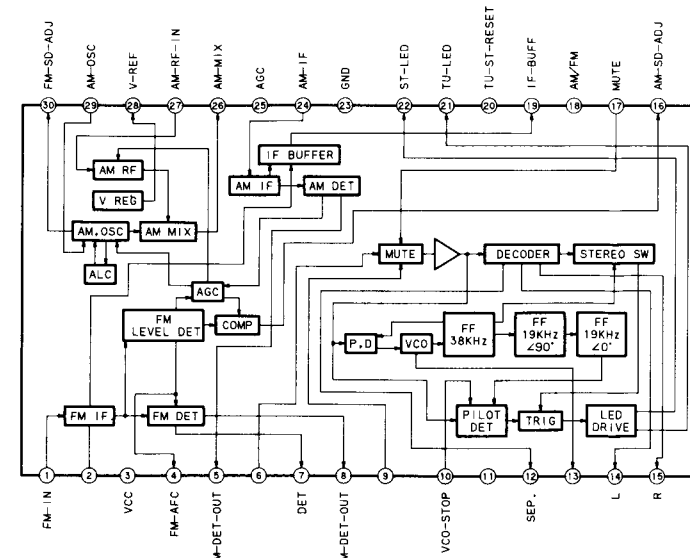
• IC202 CXD2500Q



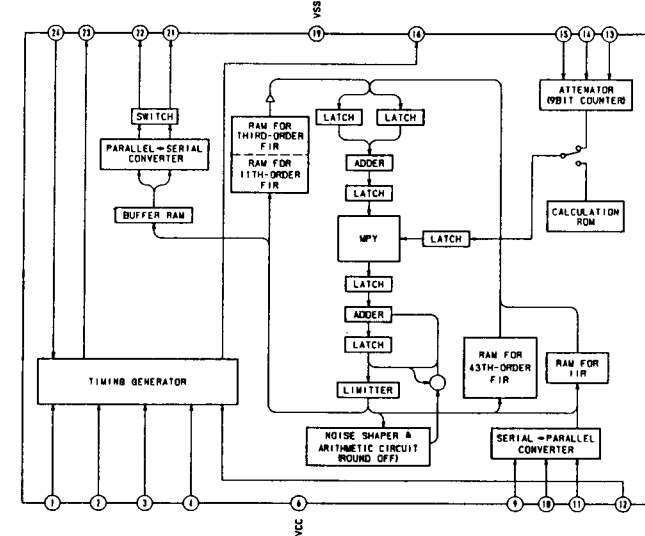
• IC223 M5218AP



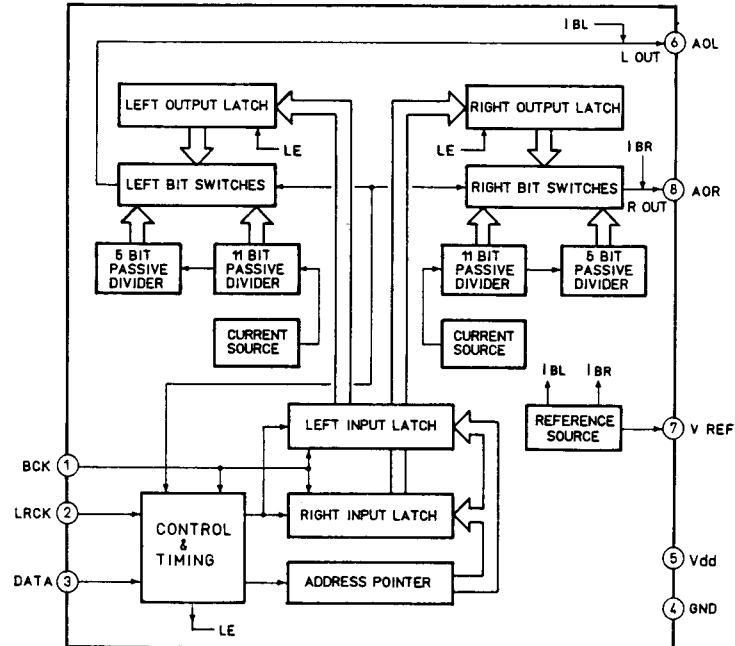
• IC81 LA1851N



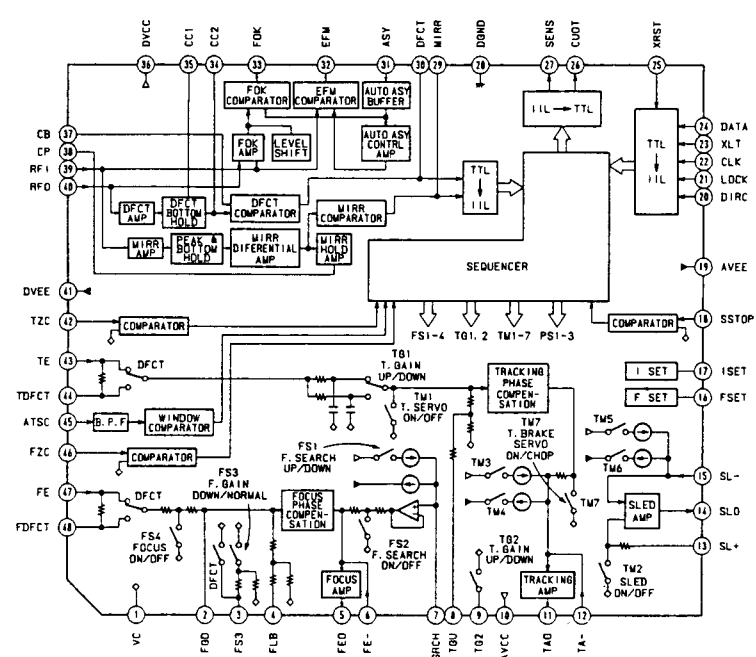
• IC221 CXD2554P



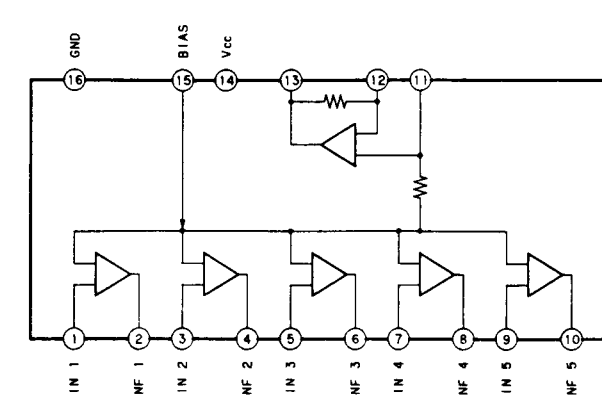
• IC222 TDA1543A



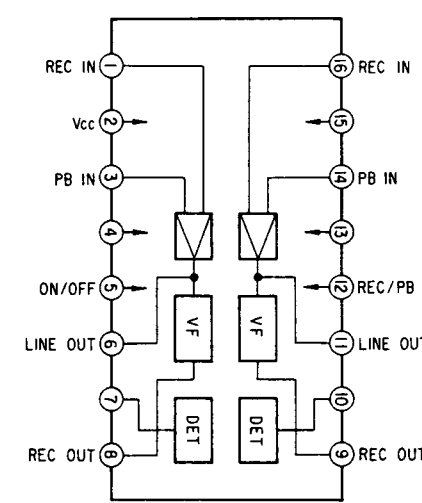
• IC101 CXA1372Q



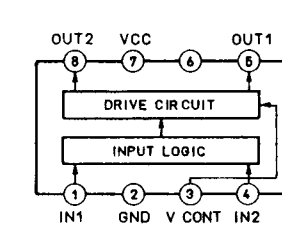
• IC501, IC551 M5226FP



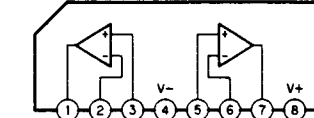
• IC701 CXA1101P



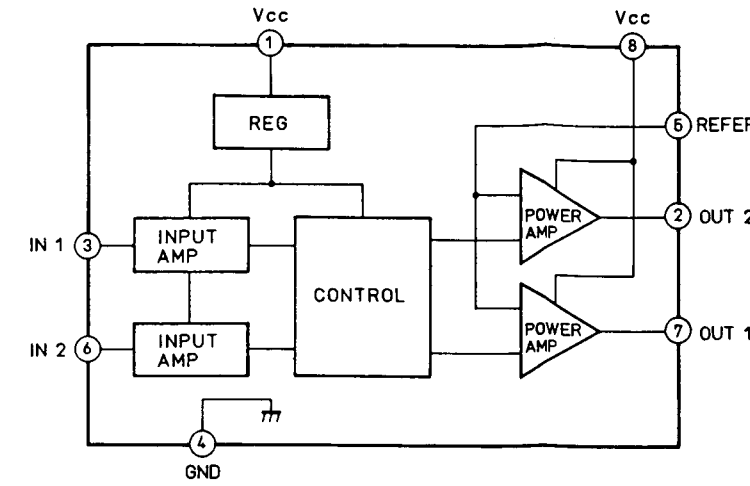
• IC406 LB1639



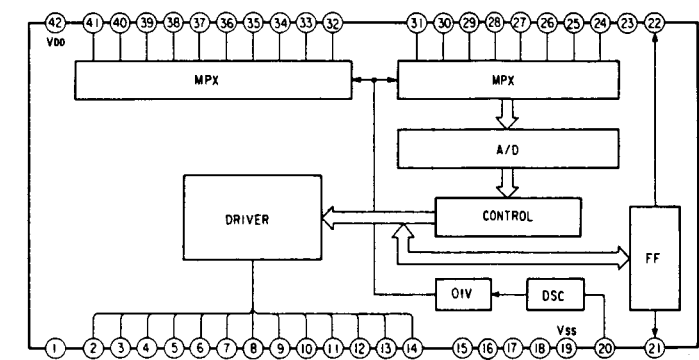
• IC401, 451, 502, 503, 603, 702, 704 M5218AL



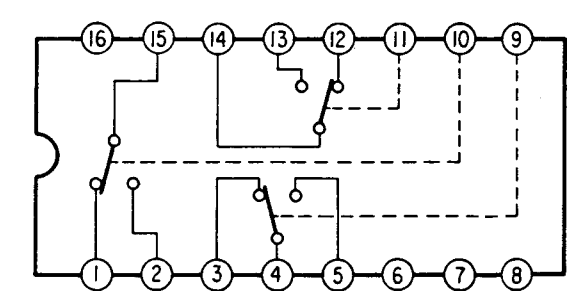
• IC253 M54641L



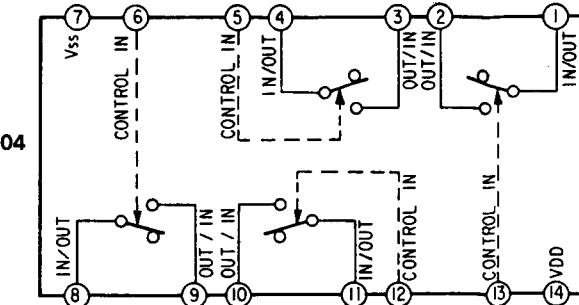
• IC504 LC7566

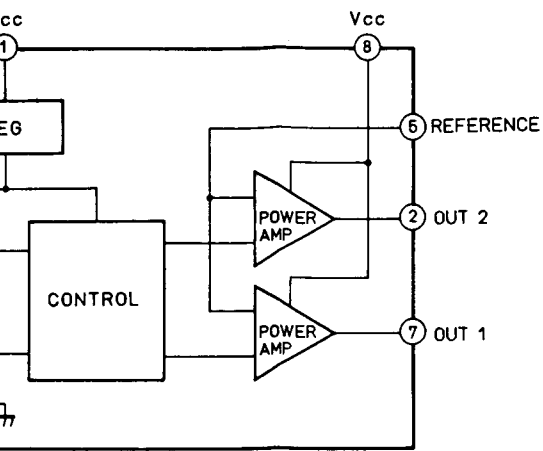


• IC601 μPD4053BC-A

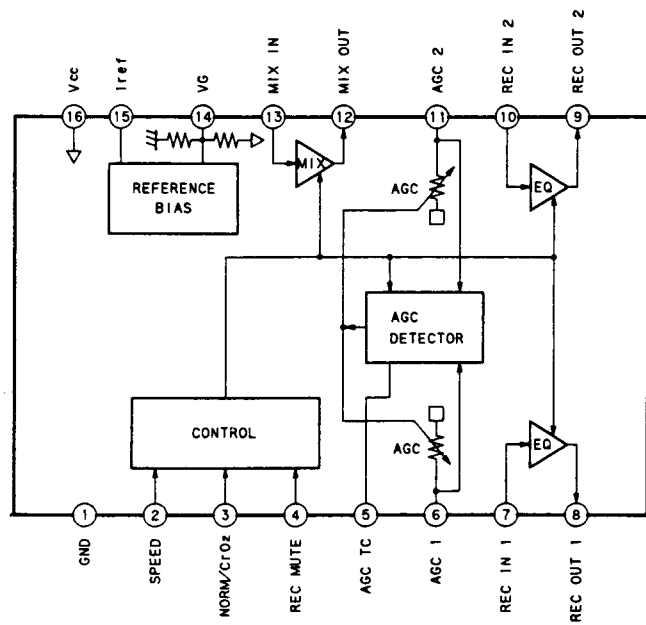


• IC703 μPD4066BC-A

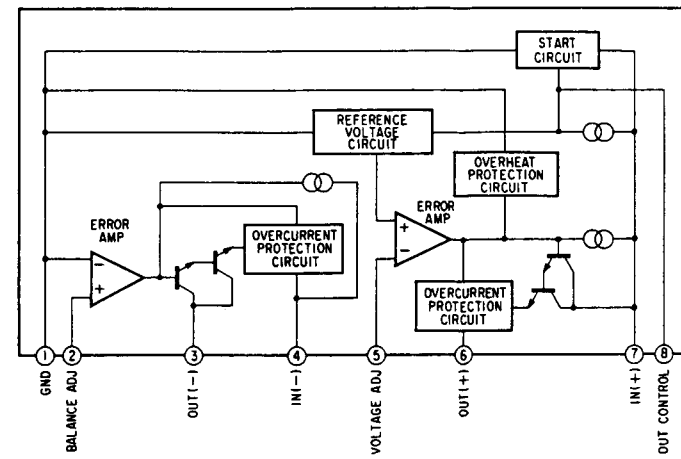




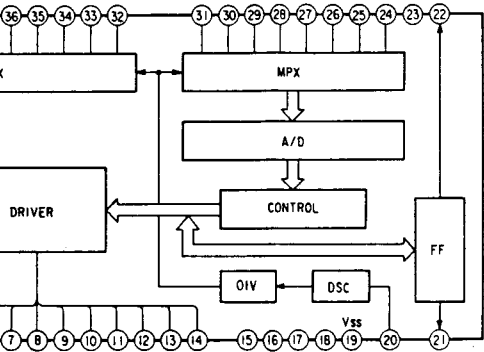
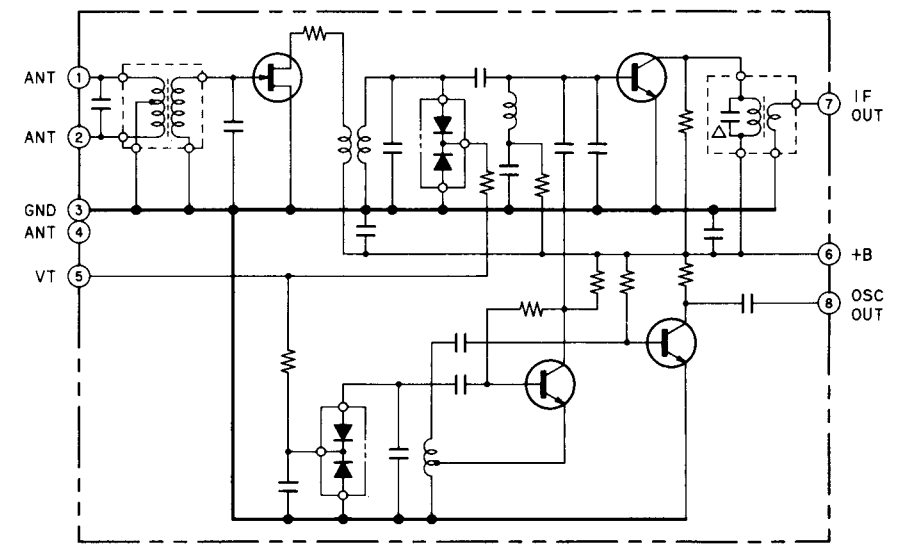
• IC602 CXA1298AP



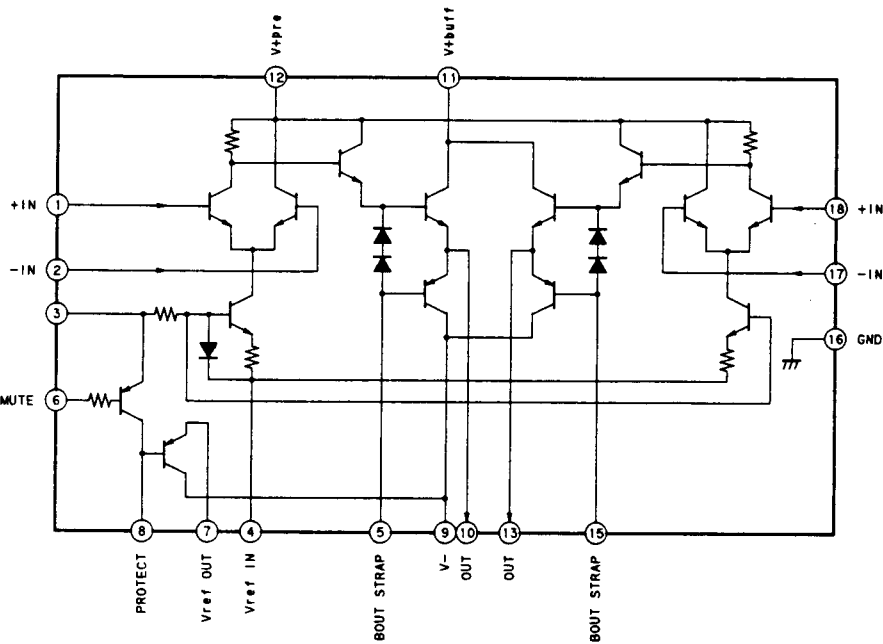
• IC901 M5230L-A



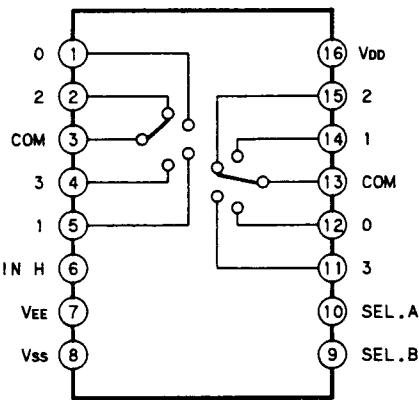
• FE1 FM Front End (AEP, UK)



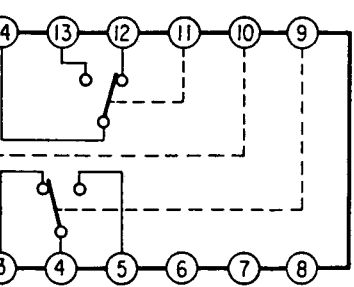
• IC801 STK-4132MK2



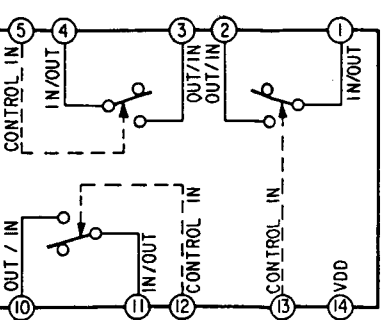
• IC705 M4052BPK



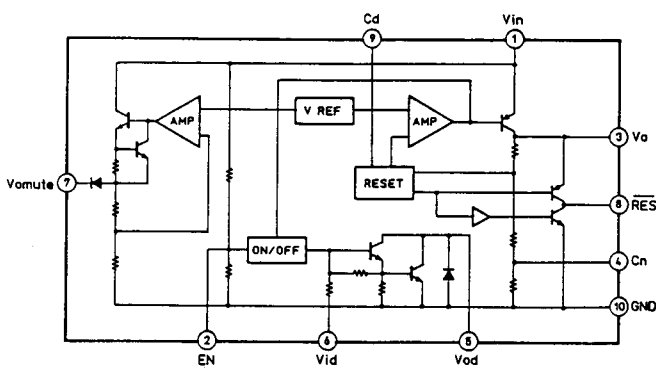
• 3BC-A



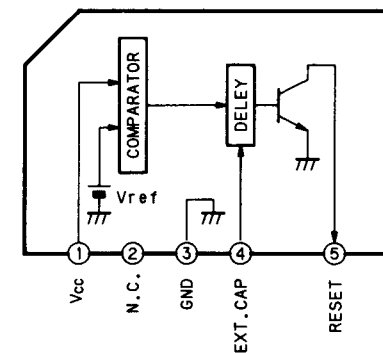
• 6BC-A



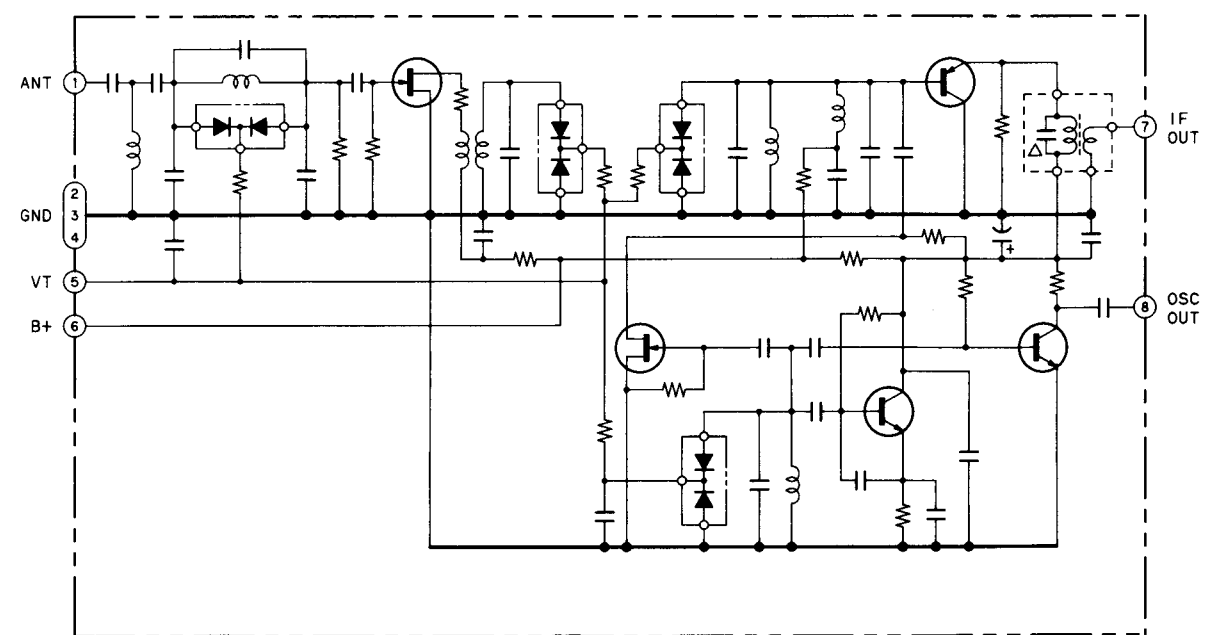
• IC999 LA5601



• IC706 M51953BL



• FE1 FM Front End (Germany, Italian)



7-8. PIN FUNCTIONS

• IC604 Deck Controller (M50964-212SP)

Pin No.	Pin Name	I/O	Symbol	Description																																																
1	V _{CC}		V _{CC}	POWER 5±0.5V																																																
2	AV _{SS}		AV _{SS}	Analog system GND																																																
3	VREF	I	VREF	Analog system reference voltage input																																																
4	D•A	O	D•A	D/A conversion output (Not used : open)																																																
5	PWM	O	PWM	PWM output (Not used : GND)																																																
6	P63	O	$\overline{\text{AMS}}$	AMS LED indication output																																																
7	P62	O	$\overline{\text{A FWD}}$	Deck A FWD LED output																																																
8	P61	O	$\overline{\text{BIAS IV}}$	TYPE IV bias oscillation output																																																
9	P60	O	$\overline{\text{BIAS II}}$	TYPE II bias oscillation output																																																
10	P47	O	$\overline{\text{A REV}}$	Deck A RVS LED output																																																
11	P46	O	$\overline{\text{A REV}}$	Deck A RVS LED output																																																
12	AN5	I	B HALF	Beck B record prevention claw A, B detection input (Analogue) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Voltage (V)</th> <th>1V</th> <th>1.9V</th> <th>2.8V</th> <th>3.9V</th> <th>5V</th> </tr> </thead> <tbody> <tr> <td>Half</td> <td>ON</td> <td>ON</td> <td>ON</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>Claw A</td> <td>OFF</td> <td>ON</td> <td>OFF</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>Claw B</td> <td>ON</td> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> </tr> </tbody> </table>	Voltage (V)	1V	1.9V	2.8V	3.9V	5V	Half	ON	ON	ON	ON	OFF	Claw A	OFF	ON	OFF	ON	OFF	Claw B	ON	ON	OFF	OFF	OFF																								
Voltage (V)	1V	1.9V	2.8V	3.9V	5V																																															
Half	ON	ON	ON	ON	OFF																																															
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Claw B	ON	ON	OFF	OFF	OFF																																															
13	AN4	I	KEY3	KEY input <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Voltage (V)</th> <th>0</th> <th>0.3</th> <th>0.7</th> <th>1.2</th> <th>1.7</th> <th>2.3</th> <th>2.8</th> <th>3.4</th> <th>4.0</th> <th>4.5</th> <th>5.0</th> </tr> </thead> <tbody> <tr> <td>KEY 1</td> <td>B ■</td> <td>B ■■</td> <td>B ►</td> <td>B ◀</td> <td>B ●</td> <td>A ◀◀</td> <td>A ►►</td> <td></td> <td>Ⓚ B</td> <td>Ⓚ C</td> <td>OFF</td> </tr> <tr> <td>KEY 2</td> <td>A ■</td> <td>A ■■</td> <td>A ►</td> <td>A ◀</td> <td></td> <td>B ◀◀</td> <td>B ►►</td> <td>B ●</td> <td>Ⓚ</td> <td>RELAY</td> <td>OFF</td> </tr> <tr> <td>KEY 3</td> <td>AMS</td> <td></td> <td>H DUB</td> <td>N DUB</td> <td>CD SYNC</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Voltage (V)	0	0.3	0.7	1.2	1.7	2.3	2.8	3.4	4.0	4.5	5.0	KEY 1	B ■	B ■■	B ►	B ◀	B ●	A ◀◀	A ►►		Ⓚ B	Ⓚ C	OFF	KEY 2	A ■	A ■■	A ►	A ◀		B ◀◀	B ►►	B ●	Ⓚ	RELAY	OFF	KEY 3	AMS		H DUB	N DUB	CD SYNC						
Voltage (V)	0	0.3	0.7	1.2	1.7	2.3	2.8	3.4	4.0	4.5	5.0																																									
KEY 1	B ■	B ■■	B ►	B ◀	B ●	A ◀◀	A ►►		Ⓚ B	Ⓚ C	OFF																																									
KEY 2	A ■	A ■■	A ►	A ◀		B ◀◀	B ►►	B ●	Ⓚ	RELAY	OFF																																									
KEY 3	AMS		H DUB	N DUB	CD SYNC																																															
14	AN3	I	KEY2																																																	
15	AN2	I	KEY1																																																	
16	P41	O	$\overline{\text{B FWD}}$	Deck B FWD LED output																																																
17	P40	O	$\overline{\text{B REV}}$	Deck B RVS LED output																																																
18	P37	O	$\overline{\text{A FWD}}$	Deck A FWD LED output																																																
19	P36	O	$\overline{\text{B PAUSE}}$	Deck B PAUSE LED output																																																
20	P35	O	$\overline{\text{B REC}}$	Deck B REC LED output																																																
21	P34	O	DOLBY $\overline{\text{B/C}}$	Dolby $\overline{\text{B/C}}$ output																																																
22	P33	O	DOLBY $\overline{\text{ON/OFF}}$	Dolby $\overline{\text{ON/OFF}}$ output																																																
23	P32	I	SIRCS	SIRCS input or AUDIO BUS reverse input																																																
24	P31	O	$\overline{70/120}$	Playback EQ output for playing deck																																																
25	P30	O	AUB OUT	AUDIO BUS output																																																
26	INT1	I	AUB IN	AUDIO BUS normal input																																																
27	CNVSS		CNVSS	GND																																																
28	$\overline{\text{RESET}}$	I	$\overline{\text{RESET}}$	Microcomputer reset input																																																
29	XIN	I	XIN	Clock input (4MHz)																																																
30	X _o	O	X _o	Clock output (4MHz)																																																
31	Φ	O	Φ	Not used (open)																																																

Pin No.	Pin Name	I/O	Symbol	Description
32	V _{SS}		V _{SS}	GND
33	P57	I	$\overline{\text{TEST}}$	Electrical adjustment test mode setting
34	P56	I	TYPE IV	TYPE IV switch input
35	P55	I	B70/120	Deck B TYPE II switch input
36	P54	I	B SHUT	Deck B Reel table signal input
37	P53	I	A70/120	Deck A TYPE II switch input
38	P52	I	A SHUT	Deck B Reel table signal input
39	P51	I	$\overline{\text{A HALF}}$	Deck A Half switch input
40	P50	I	AMS IN	AMS signal input
41	P17	O	$\overline{\text{M MUTE}}$	Meter mute output
42	P16	O	$\overline{\text{L MUTE}}$	Line mute output
43	P15	O	$\overline{\text{PASS}}$	PASS AMP change output
44	P14	O	$\overline{\text{REC/PB}}$	Dolby IC REC/PB select output
45	P13	O	$\overline{\text{AMS/BS}}$	AMS AMP characteristics change output
46	P12	O	AMS A/ $\overline{\text{B}}$	AMS AMP input Deck A/B select output
47	P11	O	SEL A/ $\overline{\text{B}}$	Dolby IC PB input Deck A/B select output
48	P10	O	$\overline{\text{BIAS I}}$	TYPE I bias oscillation output
49	P07	O	$\overline{\text{RELAY}}$	REC/PB change relay output
50	P06	O	$\overline{\text{PMB}}$	Deck B plunger hold output
51	P05	O	$\overline{\text{KICK B}}$	Deck B plunger kick output
52	P04	O	$\overline{\text{PMA}}$	A Deck A plunger hold output
53	P03	O	$\overline{\text{KICK A}}$	Deck A plunger kick output
54	P02	O	B H/ $\overline{\text{L}}$	Deck B capstan motor speed select
55	P01	O	A H/ $\overline{\text{L}}$	Deck A capstan motor speed select
56	P00	O	M $\overline{\text{ON/OFF}}$	Capstan motor $\overline{\text{ON/OFF}}$
57	P27	O	REC MUTE	REC MUTE output
58	P26	O	B SCHMITT	Deck B reel table schmitt output
59	P25	O	A SCHMITT	Deck A reel table schmitt output
60	P24	O	H DUB	High Speed Dubbing LED output
61	P23	O	N DUB	Normal Speed Dubbing LED output
62	P22	O	$\overline{\text{CD DUB}}$	Auto CD Synchro LED output
63	P21	I	$\overline{\text{AMS AVIRABLE}}$	Deck A PAUSE LED output
64	P20	O	$\overline{\text{SIRCS/AUB}}$	SIRCS/AUDIO BUS mode select

[TEST MODE]

When making pin ③ low (connect TP1 to ground with jumper wire), following function operates.

1. Source monitor
Release the line mute while recording.

2. High speed playback
On recording, while pressing HIGH SPEED (DUBBING) button, high speed playback operates.
3. Record memory stop
Using DIRECTION MODE switch ⇄, returns to the recording start point and stops or plays.

● IC505 Display Control (μ PD75212ACW-273)

Pin No.	Pin Name	I/O	ACTIVE	Description	Hold
1	S3	O	H	Segment, keyscan output terminals	Low
2	S2				
3	S1				
4	S0				
5	INT4	I	L	HOLD input	input
6	SCK	O	—	CLOCK (TC9217P T-BUS)	
7	SO	I/O	—	DATA (TC9217P T-BUS)	
8	PO3	I	L	SIGNAL input	
9	INT0	I	L	AUDIO-BUS input	input
10	INT1	I	Down	CD display data, timng	
11	P12	I	L	Remote input	
12	P13	I	L	STEREO input	
13	P20	I	—	CD display data	input
14	P21				
15	P22				
16	P23				
17	P30	I	L	DUAL 2 input	input
18	P31	I	L	DUAL 1 input	
19	P32	O	L	POWER port	
20	P33	O	L	MUTING	Low
21	P60	I	H	Keyscan input	input
22	P61				
23	P62				
24	P63				
25	P40	O	—	FUNCTION A output	Low
26	P41	O	—	FUNCTION B output	
27	P42	O	H	AUDIO-BUS output	
28	P43	O	L	PERIOD (TC9217P T-BUS)	
29	PP0	—	—	Not used (open)	—
30	X1	—	—	Main system clock 4.19MHz	—
31	X2				
32	V _{ss}	—	—	GND terminal (0V)	—
33	XT1	—	—	Sub system clock 32.768kHz	—
34	XT2				
35	P50	O	L	DBFB	Low
36	P51	O	L	SURROUND	
37	P52	O	L	Volume DOWN	
38	P53	O	L	Volume UP	
39	RESET	I	L	System reset input terminal	—
40	T0	O	H	Digit output	Low
41	T1				

Pin No.	Pin Name	I/O	ACTIVE	Description	Hold
42	T2	O	H	Digit output	Low
43	T3				
44	T4				
45	T5				
46	T6				
47	T7				
48	T8				
49	T9	O	—	Not used (open)	Low
50	S15	O	H	Segment output	Low
51	S14				
52	S13				
53	S12				
54	S11	O	H	Segment output, specification distinction diode output	Low
55	S10				
56	V _{LOAD}	—	—	Pull-down resistor connect terminal of FIP driver	—
57	V _{PRE}	—	—	Power supply terminal of FIP driver output buffer	—
58	S9	O	H	Segment output	Low
59	S8				
60	S7				
61	S6				
62	S5	O	H	Segment, keyscan output terminal	Low
63	S4				
64	V _{DD}	—	—	Power supply terminal (5V)	—

[KEY, DIODE MATRIX]

	Key						Diode	
	S5	S4	S3	S2	S1	S0	S10	S11
P60	CLOCK	TIMER CONTROL	VIDEO	DUAL	STATION UP	STATION DOWN	TIMER FUNCTION	A
P61	DISPLAY	SLEEP	TUNER	AUTO/MANUAL	SHIFT	ENTER	VIDEO/PHONO	B
P62	POWER	TIMER SET	CD	SURROUND	BAND	MERORY	IF+50kHz	C
P63	—	—	TAPE	DBFB	TUNING UP	TUNING DOWN	IF-50kHz	—

- 1) Pressing the key twice is not allowed. (First pressing is preceded)
- 2) The remote control precedes the input with the key.
- 3) Input the diode in resetting and in releasing HOLD.

● IC201 CD Controller (μ PD75112CW-064)

Pin No.	Pin Name	I/O	Description
1	IN \overline SW	I	Disk tray clamp-end input
2	OUT \overline SW	I	Disk tray open-end input
3	(TIMER)	I	Timer start input
4	BSIN	I	Audio bus input
5	Not Used	I	GND
6	Not Used	I	GND
7	Not Used	I	GND
8	Not Used	I	GND
9	SENS	I	SENS input, and the state input of every kind from CXD2500Q and CXA1372Q
10	Not Used	I	GND
11	SENS	I	SENS input, and the state input of every kind from CXD2500Q and CXA1372Q
12	Not Used	I	GND
13	Not Used	I	GND
14	Not Used	I	GND
15	SUBQ	I	Q data serial input from CXD2500Q
16	Not Used	O	OPEN
17	SQCLK	O	Sub-code Q data read-in clock output for CXD2500Q
18	SCOR	I	Sub-code synchro S0 and S1 detect input
19	Not Used	O	OPEN
20	Not Used	O	OPEN
21	PLAYL	O	Play LED ON/OFF output
22	PAUSL	O	Pause LED ON/OFF output
23	KEY3	I	Key data input
24	KEY2	I	Key data input
25	KEY1	I	Key data input
26	KEY0	I	Key data input
27	DG3	O	Key-scan digit output
28	DG2	O	Key-scan digit output
29	DG1	O	Key-scan digit output
30	DG0	O	Key-scan digit output
31	Not Used	I	+5V
32	VDD	I	+5V
33	Not Used	O	OPEN
34	Not Used	O	OPEN
35	Not Used	O	OPEN
36	Not Used	O	On time 1 track jump, tracking drive is inversed output for CXA1372Q
37	DPDAT3	O	Display data output for tuner amp micon
38	DPDAT2	O	Display data output for tuner amp micon
39	DPDAT1	O	Display data output for tuner amp micon
40	DPDAT0	O	Display data output for tuner amp micon
41	DPCLK	O	Display data transmission clock output for tuner amp micon
42	PRGL	O	Serial data latch pulse output for digital filter CXD2551P
43	PRGCK	O	Serial clock output for digital filter CXD2551P
44	PRGD	O	Serial clock output for digital filter CXD2551P

Pin No.	Pin Name	I/O	Description
45	RESET	I	System reset input terminal (LOW ACTIVE)
46	X2	I	System clock input 4.19MHz
47	X1	I	System clock input 4.19MHz
48	DFCTSW	O	From focus in till spindle kick is ON except then is OFF.
49	AMUTE	O	Muting ON/OFF output
50	BSOUT	O	Audio bus output
51	AFADJ	I	Test mode input, and on time POWER "L" is test move ment of every kind
52	LDON	O	Laser diode ON/OFF output
53	XLT	O	Serial data latch pulse output for CXD2500Q
54	CLK	O	Serial data output for CXD2500Q
55	DATA	O	Serial data output for CXD2500Q
56	Not Used	I	GND
57	ADJ	I	Test mode input, "L" is GFS no check.
58	GFS	I	GFS OK/NO Good input
59	FOK	I	Focus OK NO Good input
60	Not Used	O	OPEN
61	Not Used	O	OPEN
62	LODOUT	O	Disc tray loading-out output
63	LODIN	O	Disc tray loading-in output
64	VSS	I	GND

SECTION 8 EXPLODED VIEWS

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.

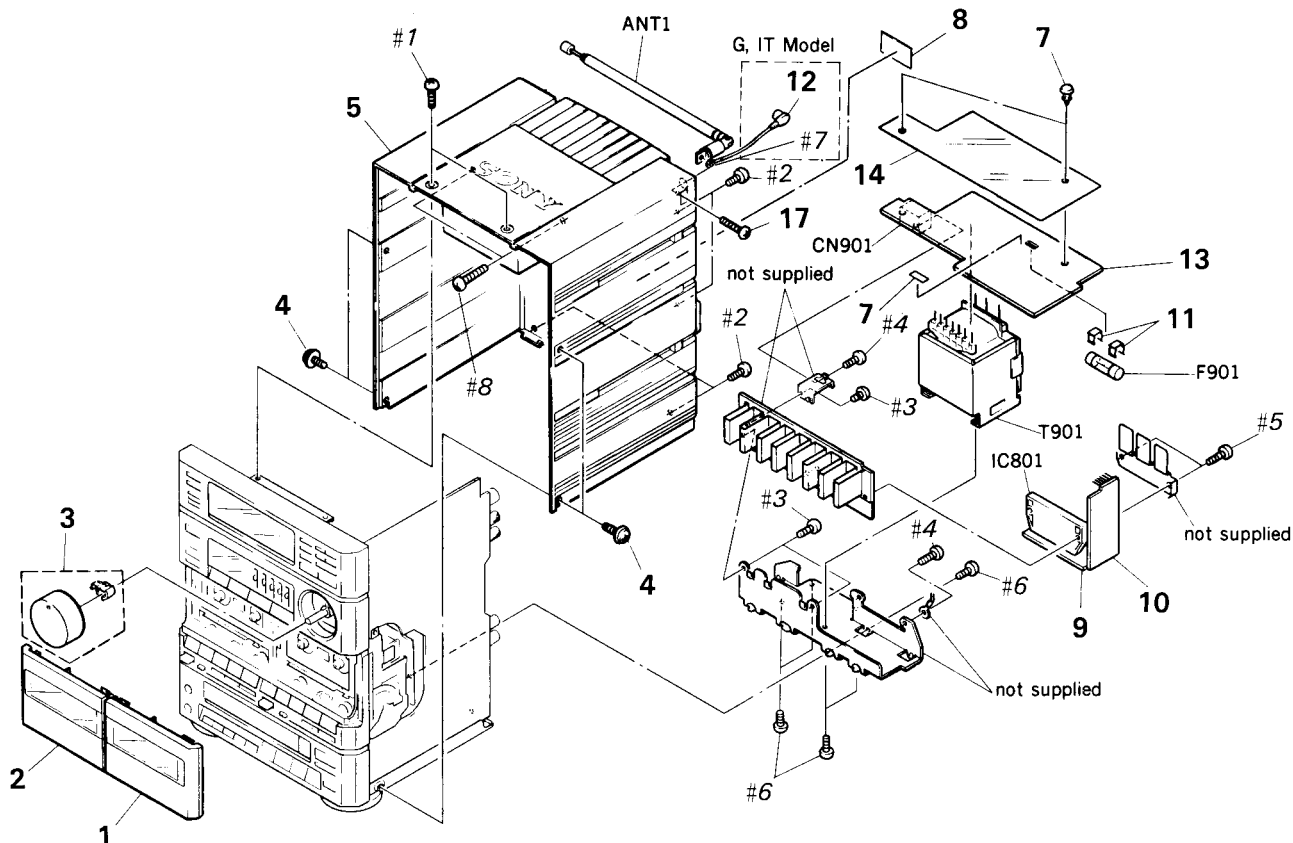
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE)...(RED)

↑Parts Color ↑Cabinet's Color
- G : Germany model
IT : Italian model

- Hardware(# mark) list is given in the last of this parts list.

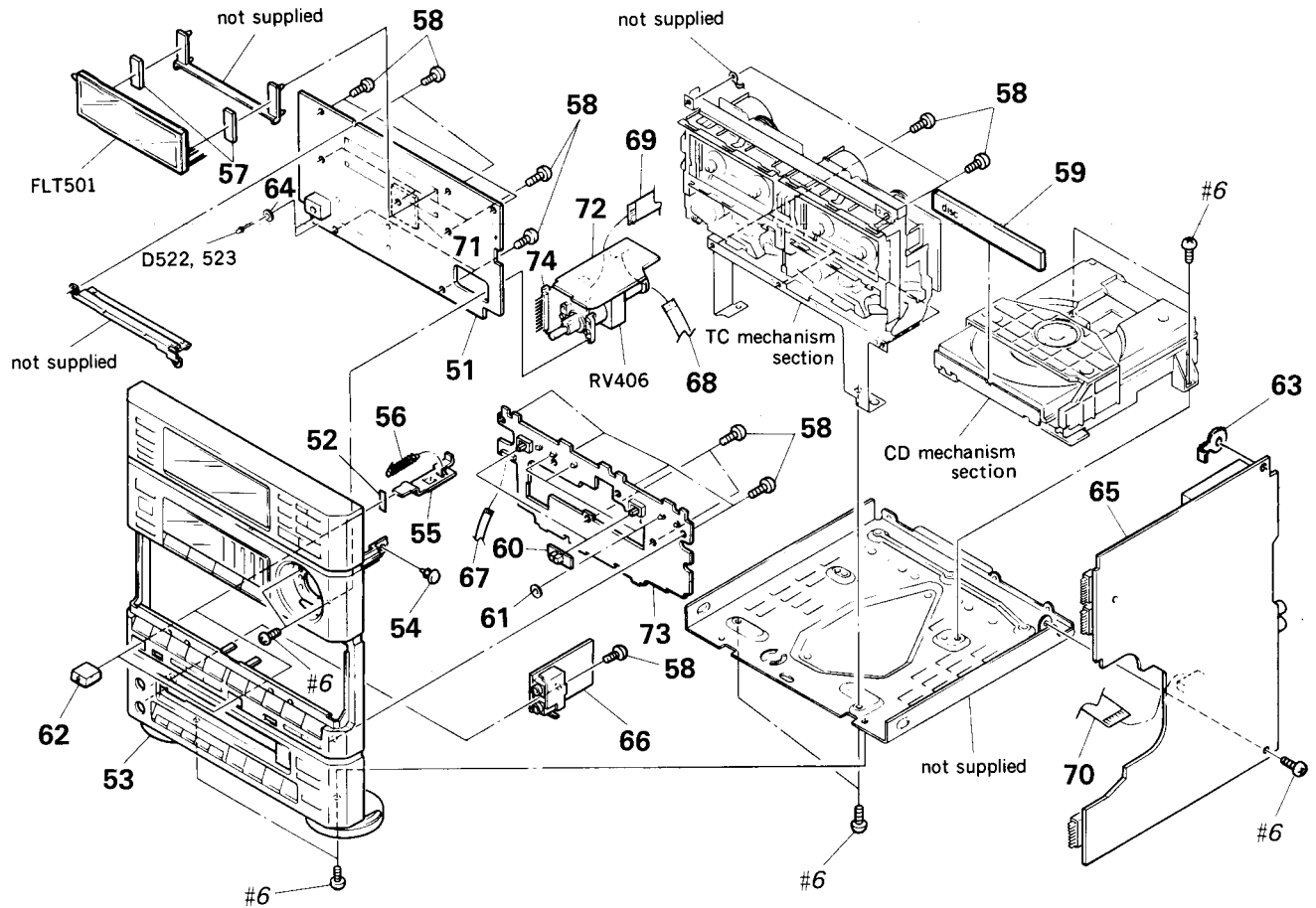
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

8-1. CASE, POWER SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4941-495-1	LID (B) ASSY, CASSETTE		* 10	1-634-484-13	CAPACITOR BOARD	
2	X-4941-496-1	LID (A) ASSY, CASSETTE		* 11	1-533-213-31	HOLDER, FUSE	
3	X-4936-803-1	KNOB (VOLUME) ASSY		* 12	1-562-908-11	CONNECTOR, FEMALE (NO SHIELD) (G, IT)	
4	3-704-366-01	SCREW (CASE) (M3X8)		* 13	1-634-474-11	TRANSUFORMER BOARD	
5	4-936-804-11	CASE (H600)		* 14	4-936-816-01	COVER (INSULATING)	
5	X-4936-802-1	CASE ASSY (H160)		ANT1	1-501-321-51	ANTENNA, TELESCOPIC (H160)	
6	4-812-134-31	RIVET NYLON, 3. 5		F901	1-532-215-00	FUSE, TIME-LAG (0. 8A)	
7	3-701-947-10	LABEL (T800MA), FUSE		T901	1-450-937-11	TRANSFORMER, POWER	
* 8	4-941-548-01	LABEL, CLASS 1		IC801	8-749-920-13	IC STK-4132-2	
* 9	1-634-483-13	POWER BOARD		CN901	1-526-931-11	INLET, AC	

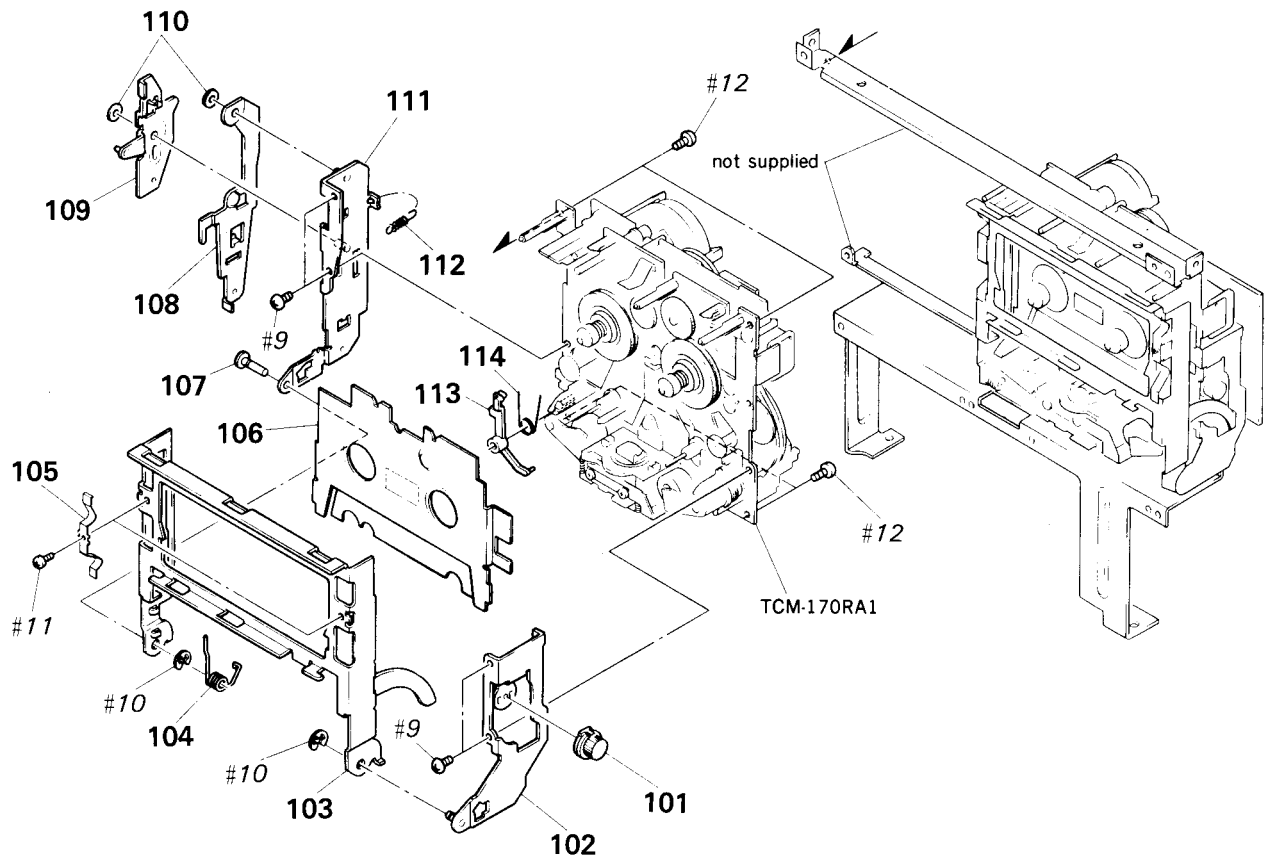
8-2. FRONT PANEL, MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
* 51	A-4341-540-A	DISPLAY BOARD, COMPLETE (AEP, UK)	
* 51	A-4341-541-A	DISPLAY BOARD, COMPLETE (G)	
* 51	A-4341-543-A	DISPLAY BOARD, COMPLETE (IT)	
52	3-831-441-11	CUSHION, CABINET (UPPER)	
53	X-4942-637-1	PANEL ASSY, FRONT (H160)	
53	X-4942-638-1	PANEL ASSY, FRONT (H600)	
54	4-812-134-31	RIVET NYLON, 3.5	
* 55	4-936-807-01	SLIDER (EJECT) (B) (DECK B)	
* 55	4-936-808-01	SLIDER (EJECT) (A) (DECK A)	
56	3-489-099-11	SPRING, TENSION	
* 57	4-932-810-11	CUSHION (FL)	
58	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
59	4-936-833-11	PANEL, LOADING	
60	3-349-054-01	KNOB (SLIDE)	
61	3-831-441-XX	CUSHION, BLIND	
62	3-349-055-01	BUTTON (EJECT)	
* 63	4-925-530-01	PLATE, GROUND	

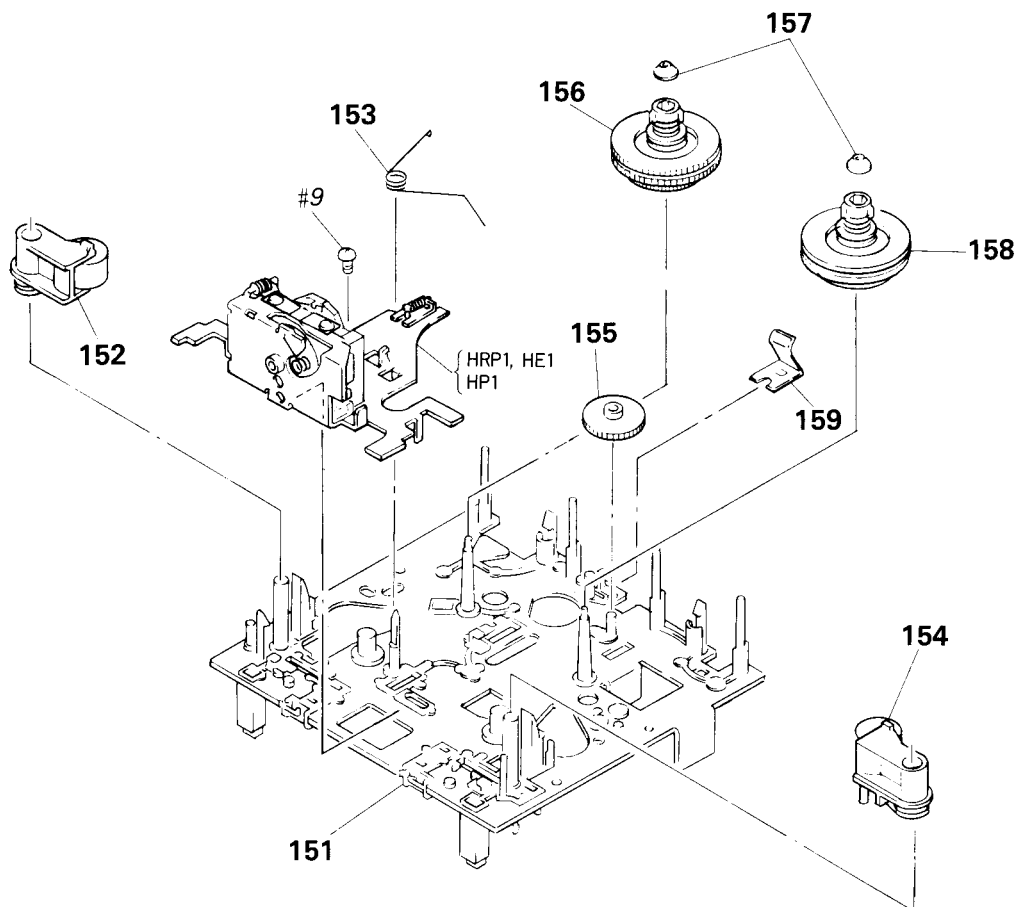
Ref. No.	Part No.	Description	Remark
64	3-350-679-11	WASHER, FIBER	
* 65	A-4345-098-A	MAIN BOARD, COMPLETE (AEP, UK)	
* 65	A-4345-099-A	MAIN BOARD, COMPLETE (G, IT)	
* 66	1-634-485-13	JACK BOARD	
67	1-575-675-11	WIRE, FLAT TYPE (14 CORE)	
68	1-575-674-11	WIRE, FLAT TYPE (8 CORE)	
69	1-575-672-11	WIRE, FLAT TYPE (13 CORE)	
70	1-575-673-11	WIRE, FLAT TYPE (15 CORE)	
* 71	1-634-870-11	SHIELD BOARD	
* 72	1-634-476-11	VR BOARD	
* 73	1-634-477-11	SW BOARD	
* 74	1-634-475-11	JUMPER BOARD	
D522	8-719-313-39	DIODE SEL1910DM-LC0-CD	
D523	8-719-313-39	DIODE SEL1910DM-LC0-CD	
FLT501	1-519-577-11	INDICATOR TUBE, FLUORESCENT	
RV406	1-238-865-11	RES. VAR, CARBON (MOTOR) 100KX2 (VOLUME) (INCUDING VOL LED)	

8-3. MD CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	X-3340-185-1	GEAR (DAMPER) ASSY		* 108	3-340-142-01	LEVER (EJECT)	
* 102	X-3332-494-1	BRACKET (R) ASSY		* 109	X-3332-465-1	LEVER (LOCK) ASSY	
* 103	3-340-150-01	HOLDER, CASSETTE		110	3-558-708-21	WASHER, STOPPER	
104	3-346-364-01	SPRING (LOADING), TORSION		* 111	X-3332-466-1	BRACKET (LEFT) ASSY	
105	3-354-908-01	SPRING (CASSETTE RETAINER)		112	3-343-474-01	SPRING, TENSION	
* 106	3-340-123-01	RETAINER, CASSETTE		113	3-343-476-01	LEVER (EJECT SAFETY LEVER)	
* 107	3-346-334-01	SHAFT (HOLDER FITTING LEFT)		114	3-343-477-01	SPRING, TORSION (EJECT SAFETY)	

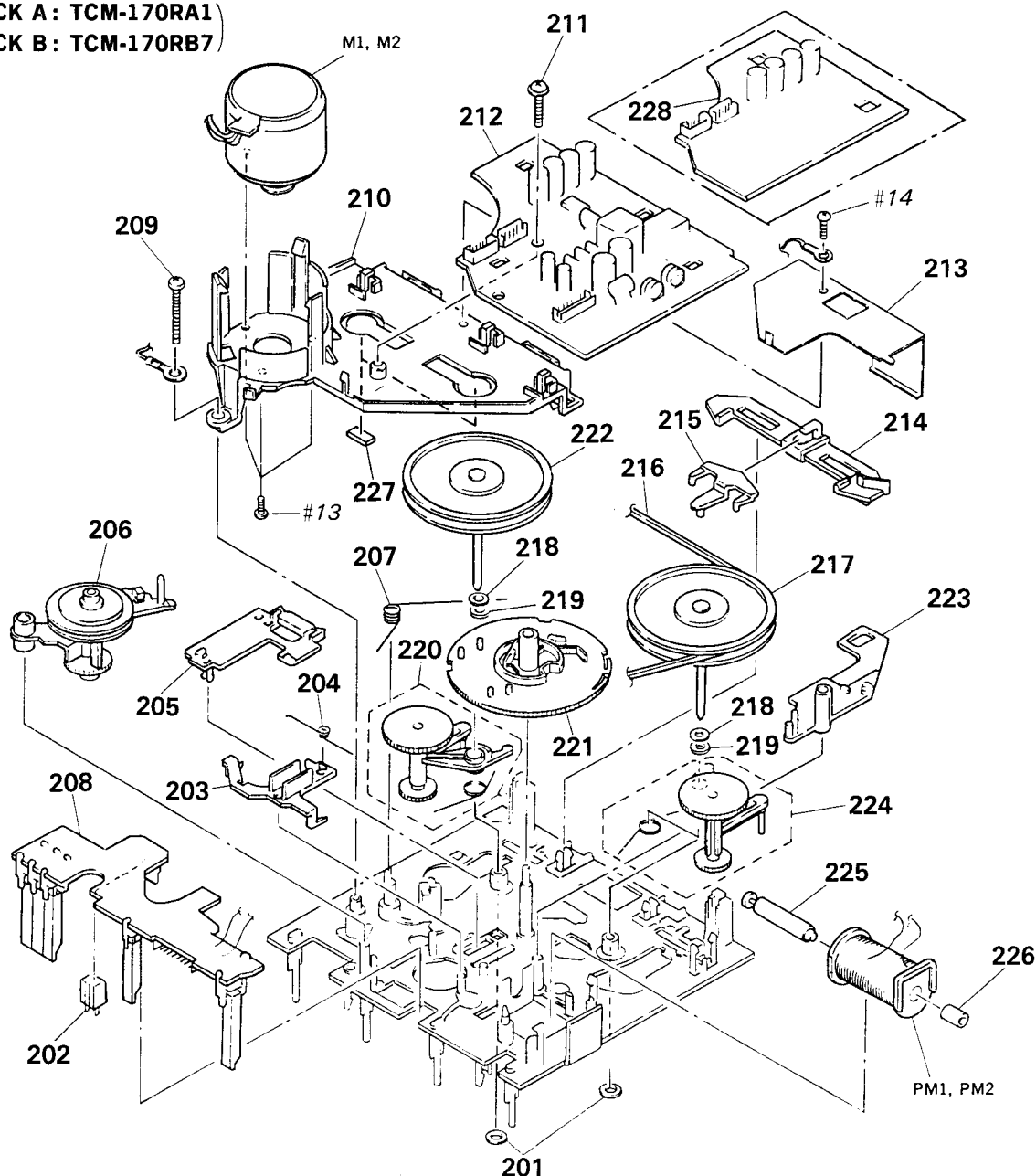
8-4. MECHANISM DECK SECTION (1)
(DECK A: TCM-170RA1)
(DECK B: TCM-170RB7)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-3343-439-1	CHASSIS ASSY, MECHANICAL		159	3-343-420-01	SPRING, LEAF	
152	X-3343-456-1	LEVER (PINCH R) ASSY		HE1	A-2003-504-A	CHASSIS ASSY, HEAD (REC/PB/ERASE) (DECK B)	
153	3-343-401-01	SPRING, TORSION		HP1	A-2003-503-A	HEAD BOARD, COMPLETE (PB) (DECK A)	
154	X-3343-455-1	LEVER (PINCH F) ASSY		HRP1	A-2003-504-A	CHASSIS ASSY, HEAD (REC/PB/ERASE) (DECK B)	
155	3-343-411-01	GEAR (FF GEAR)					
156	X-3343-415-1	TABEL (REV) ASSY, REEL					
157	3-343-439-01	CAP (REEL TABLE)					
158	X-3343-401-1	TABEL ASSY, REEL					

8-5. MECHANISM DECK SECTION (2)

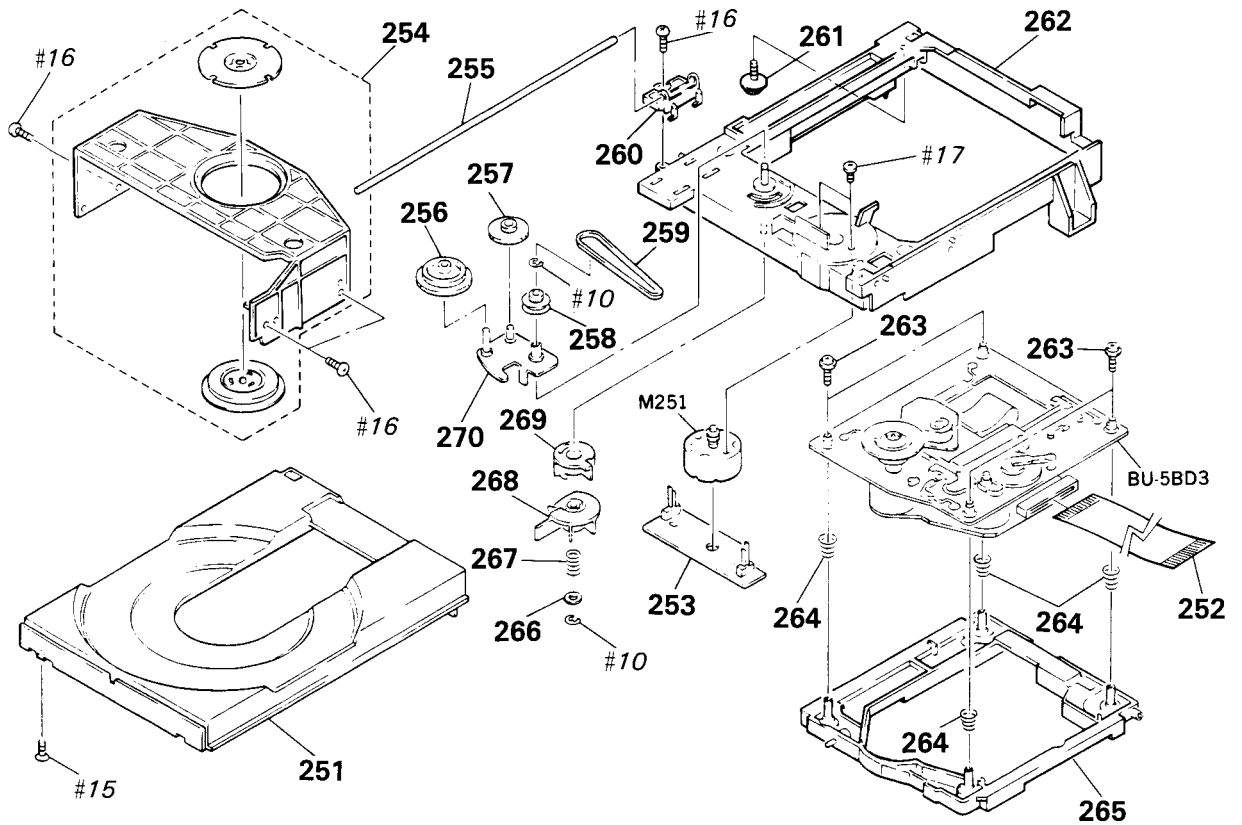
(DECK A : TCM-170RA1)
(DECK B : TCM-170RB7)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-343-473-01	WASHER, NYLON		217	X-3343-411-6	FLYWHEEL COMPLETE ASSY	
202	3-343-419-01	HOLDER (S SENSER A)		218	4-605-835-11	WASHER (2.6), POLYSLIDER	
203	3-343-453-01	SLIDER (BRAKE PLATE)		219	3-307-482-00	WASHER, LUMILER	
204	3-343-482-01	SPRING, TORSION		220	X-3343-454-1	LEVER (TU-R) ASSY	
205	3-343-461-01	SLIDER		221	3-343-470-01	GEAR (CAM GEAR)	
206	X-3343-414-1	LAVER (FR ARM) ASSY		222	X-3343-416-7	FLYWHEEL (REV) COMPLETE ASSY	
207	3-343-430-01	SPRING, TORSION		223	3-343-493-01	LEVER (PM LEVER)	
* 208	1-624-148-11	LEAF SW (A) BOARD (DECK A)		224	X-3343-453-1	LEVER (TU-F) ASSY	
* 208	1-624-148-11	LEAF SW (B) BOARD (DECK B)		225	3-343-425-01	ARBOR (MOVABLE IRON ARBOR), IRON	
209	3-355-801-01	SCREW (BTP 2X18)		226	3-343-424-01	ARBOR (FIXED IRON ARBOR), IRON	
210	X-3343-407-1	BASE (THRUST RETAINER) ASSY		227	9-911-863-XX	SPACER (THRUST RETAINER)	
211	3-343-404-01	SCREW (PTPWH 2X12)		* 228	1-624-147-11	MD-A BOARD (DECK A)	
* 212	1-624-146-11	MD-B BOARD (DECK B)		M1	X-3343-447-1	MOTOR ASSY (DECK A)	
213	3-343-480-01	PLATE, SHIELD		M2	X-3343-447-1	MOTOR ASSY (DECK B)	
214	3-343-457-01	SLIDER (REVERSE SLIDER)		PM1	1-454-456-11	SOLENOID, PLUNGER (DECK A)	
215	3-343-462-01	LEVER		PM2	1-454-456-11	SOLENOID, PLUNGER (DECK B)	
216	3-313-816-00	BELT (CAPSTAN BELT SQUARE)					

HCD-H160/H600

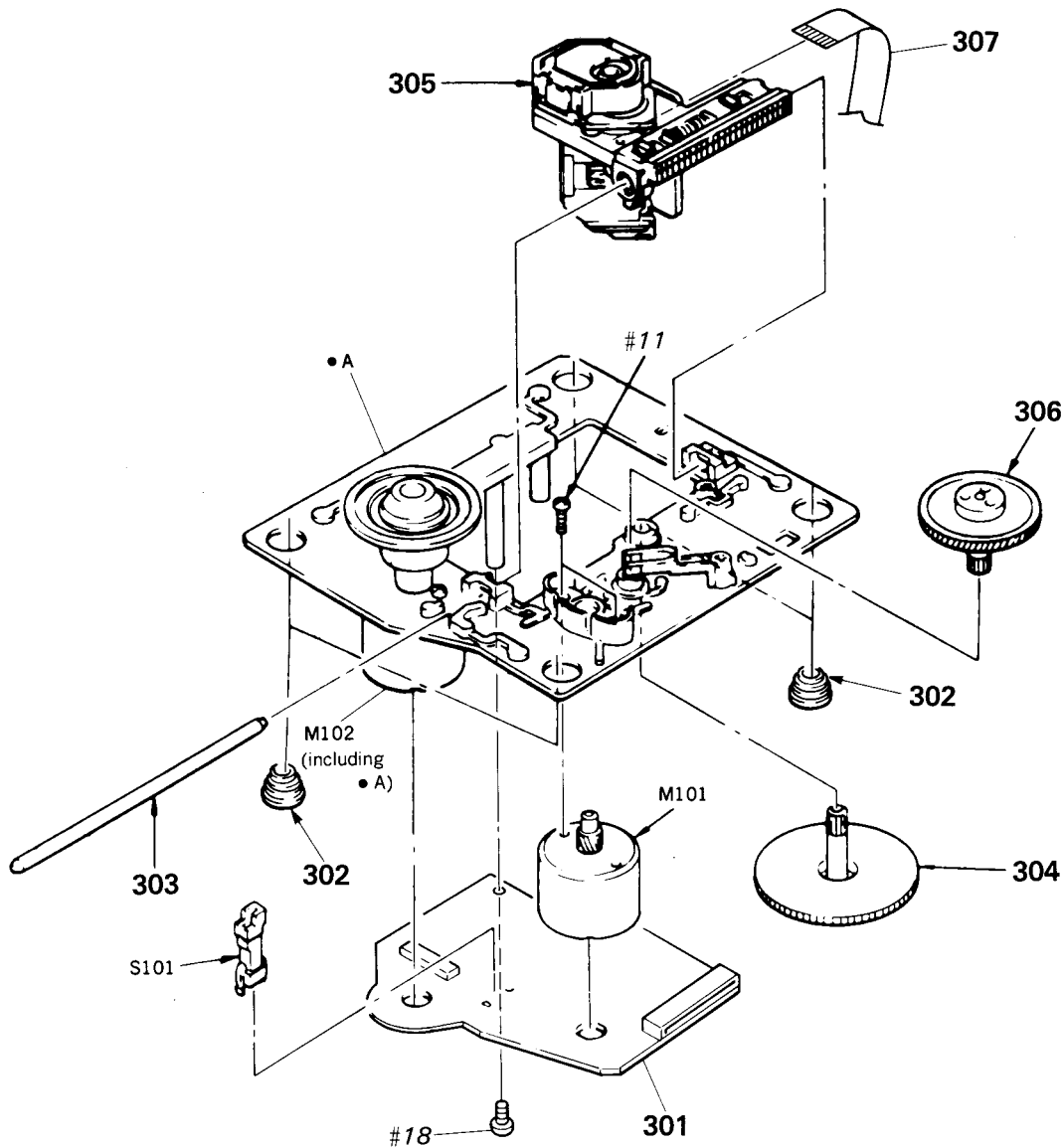
8-6. CD SECTION (1) (CDM13A-5BD3)






Ref. No.	Part No.	Description	Remark
251	4-929-732-01	TABLE, DISK	
252	1-535-832-12	JUMPER, FILM (WITH TERMINAL)	
* 253	1-634-461-11	LOADING BOARD	
254	A-4604-219-A	HOLDER (MG) ASSY	
255	4-929-764-01	SHAFT (TABLE GUIDE)	
256	4-927-620-01	GEAR (P)	
257	4-927-628-01	GEAR (C)	
258	4-929-724-01	PULLEY (B)	
259	4-927-649-01	BELT	
260	4-929-723-01	GUIDE (T)	
* 261	4-917-583-21	BRACKET, YOKE	

Ref. No.	Part No.	Description	Remark
262	X-4929-709-2	CHASSIS ASSY (MD)	
263	4-933-134-01	SCREW (+PTPWH M2.6X6)	
264	4-917-541-01	SPRING (B)	
265	4-929-747-01	HOLDER (BU)	
266	4-927-654-01	WASHER (LIMITER)	
267	3-659-338-00	SPRING, COMPRESSION	
268	4-929-729-01	CAM (B)	
269	4-929-727-01	CAM (A)	
270	X-4929-703-1	ARM ASSY, SWING	
M251	A-4608-362-A	MOTOR (L) ASSY (LOADING)	

8-7. CD SECTION (2)
(BU-5BD3)



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 301	A-4617-371-A	BD BOARD, COMPLETE		306	4-917-567-01	GEAR (M)	
302	4-933-126-01	INSULATOR (A)		307	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
303	4-917-565-01	SHAFT, SLED		M101	X-4917-504-1	MOTOR ASSY (SLED)	
304	4-917-564-01	GEAR (P), FLATNESS		M102	X-4917-523-3	MOTOR ASSY (SPINDLE)	
 305	8-848-144-11	PICKUP, OPTICAL KSS-240A		S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

SECTION 9
ELECTRICAL PARTS LIST

BD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- CAPACITORS
uF: μ F

- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA...,
uPB...: μ PB..., uPC...: μ PC...,
uPD...: μ PD....

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

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

- G : Germany model
- IT : Italian model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4617-371-A	BD BOARD, COMPLETE *****				< CONNECTOR >	
		< CAPACITOR >					
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V			< IC >	
C102	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V				
C103	1-126-163-11	ELECT 4.7uF	20% 50V				
C104	1-163-038-00	CERAMIC CHIP 0.1uF	25V	IC101	8-752-037-31	IC CXA1372Q	
C105	1-126-154-11	ELECT 47uF	20% 6.3V	IC102	8-759-821-94	IC LA6532M	
						< JUMPER RESISTOR >	
C106	1-126-154-11	ELECT 47uF	20% 6.3V	J101	1-216-295-00	METAL CHIP 0 5% 1/10W	
C107	1-126-154-11	ELECT 47uF	20% 6.3V	J102	1-216-295-00	METAL CHIP 0 5% 1/10W	
C108	1-163-038-00	CERAMIC CHIP 0.1uF	25V			< TRANSISTOR >	
C109	1-163-038-00	CERAMIC CHIP 0.1uF	25V				
C110	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V	Q101	8-729-901-01	TRANSISTOR DTC144EK	
						< RESISTOR >	
C111	1-131-367-00	TANTALUM 22uF	10% 20V	R101	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C112	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R102	1-216-095-00	METAL CHIP 82K 5% 1/10W	
C113	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R103	1-216-091-00	METAL CHIP 56K 5% 1/10W	
C114	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	R104	1-216-099-00	METAL CHIP 120K 5% 1/10W	
C115	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	R105	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
				R106	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
C116	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	R107	1-216-114-00	METAL GLAZE 510K 5% 1/10W	
C117	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R108	1-216-105-00	METAL CHIP 220K 5% 1/10W	
C118	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R109	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
C119	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	R110	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C120	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V				
				R111	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C151	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V	R112	1-216-083-00	METAL CHIP 27K 5% 1/10W	
C152	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R113	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
C153	1-163-006-11	CERAMIC CHIP 560PF	10% 50V	R114	1-216-105-00	METAL CHIP 220K 5% 1/10W	
C154	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V	R152	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C155	1-163-023-00	CERAMIC CHIP 0.015uF	5% 50V				
				R153	1-216-085-00	METAL CHIP 33K 5% 1/10W	
C171	1-163-038-00	CERAMIC CHIP 0.1uF	25V				
C172	1-163-038-00	CERAMIC CHIP 0.1uF	25V				
C173	1-163-038-00	CERAMIC CHIP 0.1uF	25V				
C174	1-163-038-00	CERAMIC CHIP 0.1uF	25V				

BD CAPACTOR DISPLAY

Ref. No.	Part No.	Description	Remark		
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W
< VARIABLE RESISTOR >					
RV101	1-238-016-11	RES. ADJ. CARBON 10K			
RV102	1-238-016-11	RES. ADJ. CARBON 10K			
< SWITCH >					
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)			

*	1-634-484-13	CAPACTOR BOARD			

< CAPACITOR >					
△ C871	1-124-618-11	ELECT	2200uF	20%	35V
△ C872	1-124-618-11	ELECT	2200uF	20%	35V
C873	1-124-120-11	ELECT	220uF	20%	25V
C8001	1-161-379-00	CERAMIC	0.01uF	20%	25V (G, IT)
< CONNECTOR >					
* CN801	1-508-694-00	CONNECTOR PIN 8P			
* CN802	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
< DIODE >					
D801	8-719-912-20	DIODE 1SS120			
< TRANSISTOR >					
Q801	8-729-900-89	TRANSISTOR DTC144ES			
< RESISTOR >					
R856	1-249-417-11	CARBON	1K	5%	1/4W
R871	1-249-429-11	CARBON	10K	5%	1/4W
R872	1-249-437-11	CARBON	47K	5%	1/4W

*	A-4341-540-A	DISPLAY BOARD, COMPLETE (AEP, UK)			
*	A-4341-541-A	DISPLAY BOARD, COMPLETE (G)			
*	A-4341-543-A	DISPLAY BOARD, COMPLETE (IT)			

Ref. No.	Part No.	Description	Remark		
*	1-533-213-31	HOLDER, FUSE			
*	4-932-810-11	CUSHION (FL)			
< CAPACTOR >					
C502	1-162-294-31	CERAMIC	0.001uF	10%	50V
C504	1-162-289-31	CERAMIC	390PF	10%	50V
C505	1-161-329-00	CERAMIC	0.0068uF	30%	16V
C506	1-162-294-31	CERAMIC	0.001uF	10%	50V
C507	1-161-494-00	CERAMIC	0.022uF		25V
C508	1-161-327-00	CERAMIC	0.0033uF	30%	16V
C509	1-164-159-11	CERAMIC	0.1uF		50V
C510	1-162-306-11	CERAMIC	0.01uF	20%	16V
C511	1-124-464-11	ELECT	0.22uF	20%	50V
C512	1-161-494-00	CERAMIC	0.022uF		25V
C513	1-126-160-11	ELECT	1uF	20%	50V
C514	1-136-163-00	FILM	0.068uF	5%	50V
C515	1-136-163-00	FILM	0.068uF	5%	50V
C539	1-162-282-31	CERAMIC	100PF	10%	50V
C540	1-162-282-31	CERAMIC	100PF	10%	50V
C541	1-162-282-31	CERAMIC	100PF	10%	50V
C542	1-162-294-31	CERAMIC	0.001uF	10%	50V
C543	1-162-294-31	CERAMIC	0.001uF	10%	50V
C544	1-162-294-31	CERAMIC	0.001uF	10%	50V
C545	1-162-294-31	CERAMIC	0.001uF	10%	50V
C546	1-164-159-11	CERAMIC	0.1uF		50V
C547	1-162-294-31	CERAMIC	0.001uF	10%	50V
C548	1-164-159-11	CERAMIC	0.1uF		50V
C549	1-164-159-11	CERAMIC	0.1uF		50V
C552	1-162-294-31	CERAMIC	0.001uF	10%	50V
C554	1-162-289-31	CERAMIC	390PF	10%	50V
C555	1-161-329-00	CERAMIC	0.0068uF	30%	16V
C556	1-162-294-31	CERAMIC	0.001uF	10%	50V
C557	1-161-494-00	CERAMIC	0.022uF		25V
C558	1-161-327-00	CERAMIC	0.0033uF	30%	16V
C559	1-164-159-11	CERAMIC	0.1uF		50V
C560	1-162-306-11	CERAMIC	0.01uF	20%	16V
C561	1-124-464-11	ELECT	0.22uF	20%	50V
C562	1-161-494-00	CERAMIC	0.022uF		25V
C563	1-126-160-11	ELECT	1uF	20%	50V
C564	1-136-163-00	FILM	0.068uF	5%	50V
C565	1-136-163-00	FILM	0.068uF	5%	50V
C566	1-162-306-11	CERAMIC	0.01uF	20%	16V
C569	1-126-160-11	ELECT	1uF	20%	50V
C570	1-164-159-11	CERAMIC	0.1uF		50V
C571	1-126-157-11	ELECT	10uF	20%	16V
C572	1-126-157-11	ELECT	10uF	20%	16V
C573	1-126-163-11	ELECT	4.7uF	20%	50V
C574	1-126-157-11	ELECT	10uF	20%	16V
C592	1-162-197-31	CERAMIC	6.8PF	10%	50V

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

DISPLAY

Ref. No.	Part No.	Description	Remark
C593	1-162-197-31	CERAMIC 6.8PF 10%	50V
C594	1-102-947-00	CERAMIC 10PF 5%	50V
C595	1-102-947-00	CERAMIC 10PF 5%	50V
C597	1-126-163-11	ELECT 4.7uF 20%	50V
C599	1-136-173-00	FILM 0.47uF 5%	50V
C9001	1-161-379-00	CERAMIC 0.01uF 20%	25V (G. IT)
C9002	1-164-159-11	CERAMIC 0.1uF	50V (G. IT)
C9003	1-164-159-11	CERAMIC 0.1uF	50V (G. IT)
C9004	1-162-294-31	CERAMIC 0.001uF 10%	50V (G. IT)
C9005	1-162-294-31	CERAMIC 0.001uF 10%	50V (G. IT)
C9006	1-164-159-11	CERAMIC 0.1uF	50V (G. IT)
< CONNECTOR >			
* CN501	1-569-156-11	SOCKET, CONNECTOR 10P	
* CN502	1-569-156-11	SOCKET, CONNECTOR 10P	
* CN503	1-509-931-11	SOCKET, CONNECTOR	
< COMPOSITION CIRCUIT BLOCK >			
* CP503	1-233-216-11	COMPOSITION CIRCUIT BLOCK	
* CP504	1-233-216-11	COMPOSITION CIRCUIT BLOCK	
< DIODE >			
D521	8-719-313-38	LED SEL1210RM-LC05-CD (STAND)	
D522	8-719-313-39	LED SEL1910DM-LC05-CD (DBFB)	
D523	8-719-313-39	LED SEL1910DM-LC05-CD (S-SUR)	
D574	8-719-912-20	DIODE 1SS120	
D576	8-719-912-20	DIODE 1SS120	
D577	8-719-912-20	DIODE 1SS120	
D578	8-719-912-20	DIODE 1SS120	
D579	8-719-912-20	DIODE 1SS120	
D580	8-719-912-20	DIODE 1SS120	
D581	8-719-912-20	DIODE 1SS120	
D582	8-719-912-20	DIODE 1SS120	
D583	8-719-912-20	DIODE 1SS120	
D588	8-719-912-20	DIODE 1SS120 (EXCEPT IT)	
D598	8-719-001-21	DIODE UZL-9H1	
< FLUORESCENT INDICATOR >			
FLT501	1-519-577-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC501	8-759-630-99	IC M5226FP	
IC502	8-759-634-50	IC M5218AL	
IC505	8-759-153-84	IC uPD75212ACW-273	
IC506	8-749-922-36	IC GP1U50XB	
IC551	8-759-630-99	IC M5226FP	

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q501	8-729-904-39	TRANSISTOR DTC114TS	
Q551	8-729-904-39	TRANSISTOR DTC114TS	
Q571	8-729-900-61	TRANSISTOR DTA114ES	
Q572	8-729-900-61	TRANSISTOR DTA114ES	
Q573	8-729-224-61	TRANSISTOR 2SK246-Y	
Q574	8-729-900-80	TRANSISTOR DTC114ES	
Q575	8-729-900-80	TRANSISTOR DTC114ES	
Q576	8-729-620-05	TRANSISTOR 2SC2603-EF	
< RESISTOR >			
R500	1-249-414-11	CARBON 560 5%	1/4W
R501	1-247-903-00	CARBON 1M 5%	1/4W
R502	1-249-425-11	CARBON 4.7K 5%	1/4W
R503	1-249-441-11	CARBON 100K 5%	1/4W
R504	1-247-903-00	CARBON 1M 5%	1/4W
R505	1-249-419-11	CARBON 1.5K 5%	1/4W
R506	1-249-434-11	CARBON 27K 5%	1/4W
R507	1-247-903-00	CARBON 1M 5%	1/4W
R522	1-249-409-11	CARBON 220 5%	1/4W
R523	1-249-409-11	CARBON 220 5%	1/4W
R524	1-249-439-11	CARBON 68K 5%	1/4W
R525	1-249-417-11	CARBON 1K 5%	1/4W
R526	1-249-405-11	CARBON 100 5%	1/4W
R527	1-249-405-11	CARBON 100 5%	1/4W
R528	1-249-405-11	CARBON 100 5%	1/4W
R529	1-249-405-11	CARBON 100 5%	1/4W
R530	1-249-405-11	CARBON 100 5%	1/4W
R531	1-249-405-11	CARBON 100 5%	1/4W
R532	1-249-405-11	CARBON 100 5%	1/4W
R533	1-249-405-11	CARBON 100 5%	1/4W
R534	1-249-405-11	CARBON 100 5%	1/4W
R535	1-249-405-11	CARBON 100 5%	1/4W
R536	1-249-405-11	CARBON 100 5%	1/4W
R537	1-249-429-11	CARBON 10K 5%	1/4W
R538	1-249-405-11	CARBON 100 5%	1/4W
R551	1-247-903-00	CARBON 1M 5%	1/4W
R552	1-249-425-11	CARBON 4.7K 5%	1/4W
R553	1-249-441-11	CARBON 100K 5%	1/4W
R554	1-247-903-00	CARBON 1M 5%	1/4W
R555	1-249-419-11	CARBON 1.5K 5%	1/4W
R556	1-249-434-11	CARBON 27K 5%	1/4W
R557	1-247-903-00	CARBON 1M 5%	1/4W
R559	1-249-429-11	CARBON 10K 5%	1/4W
R564	1-247-887-00	CARBON 220K 5%	1/4W
R568	1-249-441-11	CARBON 100K 5%	1/4W
R569	1-249-429-11	CARBON 10K 5%	1/4W
R570	1-249-417-11	CARBON 1K 5%	1/4W

DISPLAY **JACK**

Ref. No.	Part No.	Description	Remark		
R571	1-249-441-11	CARBON	100K	5%	1/4W
R572	1-247-891-00	CARBON	330K	5%	1/4W
R573	1-249-425-11	CARBON	4.7K	5%	1/4W
R574	1-249-441-11	CARBON	100K	5%	1/4W
R577	1-249-405-11	CARBON	100	5%	1/4W
R596	1-249-429-11	CARBON	10K	5%	1/4W
R598	1-249-411-11	CARBON	330	5%	1/4W
R2001	1-247-891-00	CARBON	330K	5%	1/4W
< VARIABLE RESISTOR >					
RV501	1-238-457-11	RES. VAR. CARBON	250K/250K		(12kHz)
RV502	1-238-457-11	RES. VAR. CARBON	250K/250K		(4kHz)
RV503	1-238-457-11	RES. VAR. CARBON	250K/250K		(1kHz)
RV504	1-238-457-11	RES. VAR. CARBON	250K/250K		(400Hz)
RV505	1-238-457-11	RES. VAR. CARBON	250K/250K		(100Hz)
< SWITCH >					
S501	1-572-184-11	SWITCH, KEYBOARD	(TIMER CONTROL)		
S502	1-572-184-11	SWITCH, KEYBOARD	(SLEEP)		
S503	1-572-184-11	SWITCH, KEYBOARD	(TIMER SET)		
S504	1-572-184-11	SWITCH, KEYBOARD	(CLOCK SET)		
S505	1-572-184-11	SWITCH, KEYBOARD	(CLOCK DISPLAY)		
S506	1-572-184-11	SWITCH, KEYBOARD	(POWER)		
S507	1-572-184-11	SWITCH, KEYBOARD	(DBFB)		
S508	1-572-184-11	SWITCH, KEYBOARD	(S-SUR)		
S509	1-572-184-11	SWITCH, KEYBOARD	(TAPE)		
S510	1-572-184-11	SWITCH, KEYBOARD	(CD)		
S511	1-572-184-11	SWITCH, KEYBOARD	(TUNER)		
S512	1-572-184-11	SWITCH, KEYBOARD	(PHONO)		
S513	1-572-184-11	SWITCH, KEYBOARD	(BAND)		
S514	1-572-184-11	SWITCH, KEYBOARD	(TUNING -)		
S515	1-572-184-11	SWITCH, KEYBOARD	(TUNING +)		
S516	1-572-184-11	SWITCH, KEYBOARD	(AUTO)		
S517	1-572-184-11	SWITCH, KEYBOARD	(MEMORY)		
S518	1-572-184-11	SWITCH, KEYBOARD	(ENTER)		
S519	1-572-184-11	SWITCH, KEYBOARD	(NEXT)		
S520	1-572-184-11	SWITCH, KEYBOARD	(SHIFT)		
S521	1-572-184-11	SWITCH, KEYBOARD	(PRESET/TIMER -)		
S522	1-572-184-11	SWITCH, KEYBOARD	(PRESET/TIMER +)		
< VIBRATOR >					
X501	1-567-821-21	VIBRATOR, CRYSTAL	(4.19MHz)		
X502	1-527-997-21	VIBRATOR, CRYSTAL	(32kHz)		

*	1-634-485-13	JACK BOARD	*****		

Ref. No.	Part No.	Description	Remark		
< CAPACITOR >					
C401	1-162-282-31	CERAMIC	100PF	10%	50V (AEP, UK)
C401	1-162-294-31	CERAMIC	0.001uF	10%	50V (G, IT)
C402	1-162-282-31	CERAMIC	100PF	10%	50V
C403	1-162-290-31	CERAMIC	470PF	10%	50V (AEP, UK)
C451	1-162-282-31	CERAMIC	100PF	10%	50V (AEP, UK)
C451	1-162-294-31	CERAMIC	0.001uF	10%	50V (G, IT)
C452	1-162-282-31	CERAMIC	100PF	10%	50V
C453	1-162-290-31	CERAMIC	470PF	10%	50V (AEP, UK)
C471	1-162-294-31	CERAMIC	0.001uF	10%	50V
C472	1-162-294-31	CERAMIC	0.001uF	10%	50V
C473	1-162-294-31	CERAMIC	0.001uF	10%	50V
C474	1-162-215-31	CERAMIC	47PF	5%	50V
C475	1-164-159-11	CERAMIC	0.1uF		50V
C491	1-164-159-11	CERAMIC	0.1uF		50V
C492	1-164-159-11	CERAMIC	0.1uF		50V
C493	1-164-159-11	CERAMIC	0.1uF		50V
C494	1-164-159-11	CERAMIC	0.1uF		50V
C4001	1-162-306-11	CERAMIC	0.01uF	20%	16V (G, IT)
C4002	1-162-306-11	CERAMIC	0.01uF	20%	16V (G, IT)
< CONNECTOR >					
* CN401	1-568-851-11	SOCKET, CONNECTOR	8P		
< IC >					
IC401	8-759-634-50	IC	M5218AL		
IC451	8-759-634-50	IC	M5218AL		
< JACK >					
J401	1-562-837-21	JACK (MIX MIC)			
J451	1-562-837-21	JACK (HEADPHONES)			
< RESISTOR >					
R401	1-249-417-11	CARBON	1K	5%	1/4W
R402	1-249-441-11	CARBON	100K	5%	1/4W
R403	1-249-436-11	CARBON	39K	5%	1/4W
R404	1-249-425-11	CARBON	4.7K	5%	1/4W
R405	1-249-401-11	CARBON	47	5%	1/4W
R406	1-249-429-11	CARBON	10K	5%	1/4W
R451	1-249-417-11	CARBON	1K	5%	1/4W
R452	1-249-441-11	CARBON	100K	5%	1/4W
R453	1-249-436-11	CARBON	39K	5%	1/4W
R454	1-249-425-11	CARBON	4.7K	5%	1/4W
R455	1-249-401-11	CARBON	47	5%	1/4W
R456	1-249-429-11	CARBON	10K	5%	1/4W
R471	1-249-429-11	CARBON	10K	5%	1/4W
R472	1-249-411-11	CARBON	330	5%	1/4W
R473	1-249-441-11	CARBON	100K	5%	1/4W

JACK

JUMPER

LEAF SW (A)

LEAF SW (B)

LOADING

MAIN

Ref. No.	Part No.	Description	Remark
R474	1-249-408-11	CARBON 180 5% 1/4W	
R475	1-249-441-11	CARBON 100K 5% 1/4W	

*	1-634-475-11	JUMPER BOARD	

		< CONNECTOR >	
* CN401	1-569-418-11	PIN, CONNECTOR 13P	
* CN402	1-568-856-11	SOCKET, CONNECTOR 13P	
		< RESISTOR >	
R418	1-249-429-11	CARBON 10K 5% 1/4W	
R468	1-249-429-11	CARBON 10K 5% 1/4W	

*	1-624-148-11	LEAF SW (A) BOARD	

	3-343-419-01	HOLDER (S SENSER A)	
		< CONNECTOR >	
CNP11A	1-564-501-11	PIN, CONNECTOR 8P	
		< DIODE >	
D11A	8-719-107-94	DIODE 1SS202-1	
		< PHOTO SENSOR >	
Q12A	8-719-939-23	PHOTO SENSOR GP-2S09-C	
		< RESISTOR >	
R14A	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S11A	1-571-281-21	SWITCH, LEAF (HALF)	
S14A	1-571-281-21	SWITCH, LEAF (CrO2)	

*	1-624-148-11	LEAF SW (B) BOARD	

	3-343-419-01	HOLDER (S SENSER A)	
		< CONNECTOR >	
CNP11B	1-506-615-11	PIN, CONNECTOR 9P	
		< DIODE >	
D11B	8-719-107-94	DIODE 1SS202-1	

Ref. No.	Part No.	Description	Remark
		< PHOTO SENSOR >	
Q12B	8-719-939-23	PHOTO SENSOR GP-2S09-C	
		< RESISTOR >	
R11B	1-247-834-11	CARBON 1.3K 5% 1/4W	
R12B	1-249-414-11	CARBON 560 5% 1/4W	
R13B	1-247-818-11	CARBON 300 5% 1/4W	
R14B	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S11B	1-571-281-21	SWITCH, LEAF (HALF)	
S12B	1-571-281-21	SWITCH, LEAF (REC (A))	
S13B	1-571-281-21	SWITCH, LEAF (REC (B))	
S14B	1-571-281-21	SWITCH, LEAF (CrO2)	
S15B	1-571-281-21	SWITCH, LEAF	

*	1-634-461-11	LOADING BOARD	

		< CONNECTOR >	
* CN291	1-564-498-11	PIN, CONNECTOR 5P	
		< SWITCH >	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

*	A-4345-098-A	MAIN BOARD, COMPLETE (AEP, UK)	
*	A-4345-099-A	MAIN BOARD, COMPLETE (G, IT)	

*	4-925-530-01	PLATE, GROUND	
		< CAPACITOR >	
C1	1-162-195-31	CERAMIC 4.7PF 10% 50V (AEP, UK)	
C2	1-124-907-11	ELECT 10uF 20% 50V	
C3	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C4	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C5	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C7	1-164-159-11	CERAMIC 0.1uF 50V	
C8	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C9	1-102-120-00	CERAMIC 0.0018uF 10% 50V	
C10	1-161-374-11	CERAMIC 0.0015uF 20% 50V	
C51	1-164-056-11	CERAMIC 27PF 5% 50V	
C52	1-164-056-11	CERAMIC 27PF 5% 50V	
C53	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C54	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C55	1-161-379-00	CERAMIC 0.01uF 20% 25V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C56	1-161-379-00	CERAMIC	0.01uF	20%	25V	C199	1-161-379-00	CERAMIC	0.01uF	20%	25V
C57	1-161-379-00	CERAMIC	0.01uF	20%	25V	C201	1-164-159-11	CERAMIC	0.1uF		50V
C58	1-124-907-11	ELECT	10uF	20%	50V	C203	1-164-159-11	CERAMIC	0.1uF		50V
C59	1-161-379-00	CERAMIC	0.01uF	20%	25V	C211	1-136-161-00	FILM	0.047uF	5%	50V
C60	1-124-477-11	ELECT	47uF	20%	25V	C212	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C61	1-124-925-11	ELECT	2.2uF	20%	100V	C213	1-161-379-00	CERAMIC	0.01uF	20%	25V
C62	1-136-153-00	FILM	0.01uF	5%	50V	C214	1-124-902-00	ELECT	0.47uF	20%	50V
C63	1-124-463-00	ELECT	0.1uF	20%	50V (AEP, UK)	C215	1-164-159-11	CERAMIC	0.1uF		50V
C64	1-124-902-00	ELECT	0.47uF	20%	50V	C221	1-162-207-31	CERAMIC	22PF	5%	50V
C65	1-136-157-00	FILM	0.022uF	5%	50V	C222	1-162-207-31	CERAMIC	22PF	5%	50V
C66	1-136-157-00	FILM	0.022uF	5%	50V	C223	1-124-443-00	ELECT	100uF	20%	10V
C81	1-161-379-00	CERAMIC	0.01uF	20%	25V	C225	1-136-165-00	FILM	0.1uF	5%	50V
C82	1-124-472-11	ELECT	470uF	20%	10V	C229	1-124-907-11	ELECT	10uF	20%	50V
C83	1-161-379-00	CERAMIC	0.01uF	20%	25V	C231	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C84	1-124-907-11	ELECT	10uF	20%	50V	C232	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C85	1-161-379-00	CERAMIC	0.01uF	20%	25V	C233	1-162-286-31	CERAMIC	220PF	10%	50V
C86	1-162-282-31	CERAMIC	100PF	10%	50V	C234	1-162-286-31	CERAMIC	220PF	10%	50V
C87	1-161-379-00	CERAMIC	0.01uF	20%	25V	C235	1-124-903-11	ELECT	1uF	20%	50V
C88	1-124-907-11	ELECT	10uF	20%	50V	C236	1-124-903-11	ELECT	1uF	20%	50V
C89	1-161-379-00	CERAMIC	0.01uF	20%	25V	C237	1-124-907-11	ELECT	10uF	20%	50V
C90	1-124-477-11	ELECT	47uF	20%	25V	C238	1-124-907-11	ELECT	10uF	20%	50V
C91	1-162-294-31	CERAMIC	0.001uF	10%	50V	C249	1-126-176-11	ELECT	220uF	20%	10V
C92	1-162-294-31	CERAMIC	0.001uF	10%	50V	C600	1-162-294-31	CERAMIC	0.001uF	10%	50V
C93	1-161-375-00	CERAMIC	0.0022uF	20%	50V	C601	1-136-161-00	FILM	0.047uF	5%	50V
C94	1-161-375-00	CERAMIC	0.0022uF	20%	50V	C602	1-124-925-11	ELECT	2.2uF	20%	100V
C95	1-124-903-11	ELECT	1uF	20%	50V	C603	1-124-925-11	ELECT	2.2uF	20%	100V
C96	1-124-903-11	ELECT	1uF	20%	50V	C604	1-162-294-31	CERAMIC	0.001uF	10%	50V
C97	1-124-903-11	ELECT	1uF	20%	50V	C611	1-162-217-31	CERAMIC	56PF	5%	50V
C98	1-124-903-11	ELECT	1uF	20%	50V	C612	1-136-157-00	FILM	0.022uF	5%	50V
C99	1-136-154-00	FILM	0.012uF	5%	50V	C613	1-124-925-11	ELECT	2.2uF	20%	100V
C100	1-136-154-00	FILM	0.012uF	5%	50V	C614	1-124-925-11	ELECT	2.2uF	20%	100V
C101	1-124-907-11	ELECT	10uF	20%	50V	C615	1-124-443-00	ELECT	100uF	20%	10V
C102	1-161-379-00	CERAMIC	0.01uF	20%	25V	C622	1-164-159-11	CERAMIC	0.1uF		50V
C103	1-124-463-00	ELECT	0.1uF	20%	50V	C651	1-136-161-00	FILM	0.047uF	5%	50V
C104	1-124-903-11	ELECT	1uF	20%	50V	C652	1-124-925-11	ELECT	2.2uF	20%	100V
C105	1-124-903-11	ELECT	1uF	20%	50V	C653	1-124-925-11	ELECT	2.2uF	20%	100V
C106	1-124-903-11	ELECT	1uF	20%	50V	C654	1-162-294-31	CERAMIC	0.001uF	10%	50V
C107	1-162-282-31	CERAMIC	100PF	10%	50V (G, IT)	C656	1-161-379-00	CERAMIC	0.01uF	20%	25V
C108	1-162-211-31	CERAMIC	33PF	5%	50V (AEP, UK)	C662	1-126-153-11	ELECT	22uF	20%	6.3V
C108	1-162-291-31	CERAMIC	560PF	10%	50V (G, IT)	C663	1-124-925-11	ELECT	2.2uF	20%	100V
C109	1-161-379-00	CERAMIC	0.01uF	20%	25V	C671	1-164-159-11	CERAMIC	0.1uF		50V
C110	1-161-379-00	CERAMIC	0.01uF	20%	25V	C672	1-136-173-00	FILM	0.47uF	5%	50V
C111	1-124-925-11	ELECT	2.2uF	20%	100V	C673	1-161-379-00	CERAMIC	0.01uF	20%	25V
C112	1-161-379-00	CERAMIC	0.01uF	20%	25V	C674	1-164-159-11	CERAMIC	0.1uF		50V
C113	1-161-379-00	CERAMIC	0.01uF	20%	25V (G, IT)	C675	1-164-159-11	CERAMIC	0.1uF		50V
C114	1-161-379-00	CERAMIC	0.01uF	20%	25V	C677	1-164-159-11	CERAMIC	0.1uF		50V
C116	1-161-379-00	CERAMIC	0.01uF	20%	25V	C698	1-124-907-11	ELECT	10uF	20%	50V
C117	1-161-379-00	CERAMIC	0.01uF	20%	25V	C699	1-124-478-11	ELECT	100uF	20%	25V

HCD-H160/H600



MAIN

Ref. No.	Part No.	Description	Remark
C701	1-162-290-31	CERAMIC 470PF 10% 50V	
C702	1-162-290-31	CERAMIC 470PF 10% 50V	
C703	1-124-254-00	ELECT 0.68uF 20% 50V	
C704	1-124-907-11	ELECT 10uF 20% 50V	
C705	1-124-907-11	ELECT 10uF 20% 50V	
C706	1-124-902-00	ELECT 0.47uF 20% 50V	
C730	1-162-282-31	CERAMIC 100PF 10% 50V (AEP, UK)	
C730	1-162-294-31	CERAMIC 0.001uF 10% 50V (G, IT)	
C731	1-162-282-31	CERAMIC 100PF 10% 50V	
C732	1-162-282-31	CERAMIC 100PF 10% 50V	
C733	1-130-474-00	MYLAR 0.0018uF 5% 50V	
C734	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C735	1-124-907-11	ELECT 10uF 20% 50V	
C736	1-124-903-11	ELECT 1uF 20% 50V	
C743	1-164-159-11	CERAMIC 0.1uF 50V	
C751	1-162-290-31	CERAMIC 470PF 10% 50V	
C752	1-162-290-31	CERAMIC 470PF 10% 50V	
C753	1-124-254-00	ELECT 0.68uF 20% 50V	
C754	1-124-907-11	ELECT 10uF 20% 50V	
C755	1-124-907-11	ELECT 10uF 20% 50V	
C756	1-124-902-00	ELECT 0.47uF 20% 50V	
C780	1-162-282-31	CERAMIC 100PF 10% 50V (AEP, UK)	
C780	1-162-294-31	CERAMIC 0.001uF 10% 50V (G, IT)	
C781	1-162-282-31	CERAMIC 100PF 10% 50V	
C782	1-162-282-31	CERAMIC 100PF 10% 50V	
C783	1-130-474-00	MYLAR 0.0018uF 5% 50V	
C784	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C785	1-124-907-11	ELECT 10uF 20% 50V	
C786	1-124-903-11	ELECT 1uF 20% 50V	
C791	1-124-907-11	ELECT 10uF 20% 50V	
C792	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C793	1-124-907-11	ELECT 10uF 20% 50V	
C794	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C797	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C799	1-130-471-00	MYLAR 0.001uF 5% 50V	
C996	1-126-163-11	ELECT 4.7uF 20% 50V	
C997	1-124-903-11	ELECT 1uF 20% 50V	
C998	1-126-154-11	ELECT 47uF 20% 6.3V	
C999	1-124-907-11	ELECT 10uF 20% 50V	
C1001	1-162-282-31	CERAMIC 100PF 10% 50V (G, IT)	
C2001	1-161-379-00	CERAMIC 0.01uF 20% 25V (G, IT)	
C798A	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C798B	1-130-475-00	MYLAR 0.0022uF 5% 50V	

< FILTER >

CF1	1-567-389-11	FILTER, CERAMIC
CF2	1-567-389-11	FILTER, CERAMIC (10.7MHz) (G, IT)
CF81	1-567-389-11	FILTER, CERAMIC

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
* CN201	1-569-155-11	PLUG, CONNECTOR 10P	
CN202	1-568-802-11	SOCKET, CONNECTOR 19P	
* CN253	1-564-339-71	PIN, CONNECTOR 5P	
* CN601	1-569-511-11	SOCKET, CONNECTOR 14P	
* CN701	1-569-155-11	PLUG, CONNECTOR 10P	
* CN702	1-569-155-11	PLUG, CONNECTOR 10P	
* CN703	1-568-832-11	SOCKET, CONNECTOR 13P	
* CN704	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN705	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN706	1-564-336-00	PIN, CONNECTOR 2P	
< COMPOSITION CIRCUIT BLOCK >			
* CP201	1-233-224-11	COMPOSITION CIRCUIT BLOCK (100P×5)	
< DIODE >			
D201	8-719-010-34	DIODE UZ-4.7BSC	
D205	8-719-912-20	DIODE 1SS120	
D589	8-719-912-20	DIODE 1SS120 (IT)	
D601	8-719-912-20	DIODE 1SS120	
D602	8-719-200-82	DIODE 11ES2	
D603	8-719-200-82	DIODE 11ES2	
D604	8-719-912-20	DIODE 1SS120	
D605	8-719-200-82	DIODE 11ES2	
D606	8-719-010-15	DIODE UZ-3.0BS	
D701	8-719-933-48	DIODE HZS7B3L	
D702	8-719-933-48	DIODE HZS7B3L	
D703	8-719-933-36	DIODE HZS6B1L	
D741	8-719-912-20	DIODE 1SS120	
D742	8-719-912-20	DIODE 1SS120	
D743	8-719-912-20	DIODE 1SS120	
D744	8-719-912-20	DIODE 1SS120	
D745	8-719-912-20	DIODE 1SS120	
D746	8-719-912-20	DIODE 1SS120	
< CONNECTOR >			
* DA11A	1-564-342-11	PIN, CONNECTOR 8P	
* DA11B	1-506-503-61	PIN, CONNECTOR 9P	
* DR12A	1-564-337-00	PIN, CONNECTOR 3P	
* DR12B	1-564-337-61	PIN, CONNECTOR 3P	
* DR82A	1-564-339-00	PIN, CONNECTOR 5P	
* DR82B	1-564-339-61	PIN, CONNECTOR 5P	
* DR83B	1-564-338-61	PIN, CONNECTOR 4P	
< COIL >			
△ FB801	1-410-858-11	INDUCTOR 0UH (G, IT)	
△ FB802	1-410-858-11	INDUCTOR 0UH (G, IT)	

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< FRONTEND >							
FE1	1-465-673-11	FRONTEND (2 BAND) (AEP, UK)		Q3	8-729-900-80	TRANSISTOR DTC114ES	
FE1	1-465-007-11	FRONT END (FM) (4 GANG) (G, IT)		Q4	8-729-900-61	TRANSISTOR DTA114ES	
FE2	1-236-462-11	ENCAPSULATED COMPONENT		Q5	8-729-900-80	TRANSISTOR DTC114ES	
FE3	1-236-463-11	ENCAPSULATED COMPONENT		Q6	8-729-900-80	TRANSISTOR DTC114ES	
FL81	1-236-465-11	ENCAPSULATED COMPONENT (G, IT)		Q7	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< IC >				Q8	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC51	8-759-239-29	IC TC9217P		Q9	8-729-900-80	TRANSISTOR DTC114ES	
IC81	8-759-821-45	IC LA1851N		Q10	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK)	
IC201	8-759-150-19	IC uPD75112CW-064		Q51	8-729-202-67	TRANSISTOR 2SK246-GR3	
IC202	8-752-335-15	IC CXD2500Q		Q52	8-729-201-84	TRANSISTOR 2SC3112-B	
IC221	8-752-337-09	IC CXD2554P		Q53	8-729-202-67	TRANSISTOR 2SK246-GR3	
IC222	8-759-990-13	IC TDA1543A		Q54	8-729-201-84	TRANSISTOR 2SC3112-B	
IC223	8-759-634-51	IC M5218AP		Q101	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC253	8-759-633-65	IC M54641L		Q102	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC601	8-759-152-31	IC uPD4053BC-A		Q103	8-729-900-80	TRANSISTOR DTC114ES	
IC602	8-752-038-00	IC CXA1298AP		Q201	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC603	8-759-634-50	IC M5218AL		Q231	8-729-141-26	TRANSISTOR 2SC3622A-LK	
IC604	8-759-632-54	IC M50964-212SP		Q232	8-729-141-26	TRANSISTOR 2SC3622A-LK	
IC701	8-752-034-26	IC CXA1101P		Q233	8-729-900-65	TRANSISTOR DTA144ES	
IC702	8-759-634-50	IC M5218AL		Q234	8-729-900-80	TRANSISTOR DTC114ES	
IC703	8-759-152-32	IC uPD4066BC-A		Q252	8-729-900-80	TRANSISTOR DTC114ES	
IC704	8-759-634-50	IC M5218AL		Q253	8-729-900-80	TRANSISTOR DTC114ES	
IC705	8-759-630-42	IC M4052BPK		Q601	8-729-900-61	TRANSISTOR DTA114ES	
IC706	8-759-605-16	IC M51953BL		Q602	8-729-900-61	TRANSISTOR DTA114ES	
IC999	8-759-821-93	IC LA5601		Q603	8-729-900-61	TRANSISTOR DTA114ES	
< IFT >				Q604	8-729-900-61	TRANSISTOR DTA114ES	
IFT81	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)		Q605	8-729-900-61	TRANSISTOR DTA114ES	
IFT82	1-404-807-11	TRANSFORMER, DISCRIMINATOR		Q606	8-729-900-61	TRANSISTOR DTA114ES	
< JACK >				Q607	8-729-900-61	TRANSISTOR DTA114ES	
J701	1-569-181-11	JACK, PIN 2P (PHONO)		Q608	8-729-801-84	TRANSISTOR 2SB1013-4	
< COIL >				Q609	8-729-801-84	TRANSISTOR 2SB1013-4	
L1	1-408-425-00	INDUCTOR 220uH		Q610	8-729-801-84	TRANSISTOR 2SB1013-4	
L81	1-408-399-00	INDUCTOR 1.5uH		Q611	8-729-801-84	TRANSISTOR 2SB1013-4	
L83	1-410-489-11	INDUCTOR 390uH		Q612	8-729-801-84	TRANSISTOR 2SB1013-4	
L1001	1-410-521-11	INDUCTOR 100uH (G, IT)		Q613	8-729-900-80	TRANSISTOR DTC114ES	
< FILTER >				Q614	8-729-900-80	TRANSISTOR DTC114ES	
LPF81	1-235-164-00	FILTER, LOW PASS		Q615	8-729-904-39	TRANSISTOR DTC114TS	
LPF82	1-235-164-00	FILTER, LOW PASS		Q616	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< TRANSISTOR >				Q617	8-729-900-80	TRANSISTOR DTC114ES	
Q1	8-729-620-19	TRANSISTOR 2SC2724-CD		Q701	8-729-904-39	TRANSISTOR DTC114TS	
Q2	8-729-620-19	TRANSISTOR 2SC2724-CD (G, IT)		Q741	8-729-900-89	TRANSISTOR DTC144ES	
				Q742	8-729-900-89	TRANSISTOR DTC144ES	
				Q751	8-729-904-39	TRANSISTOR DTC114TS	
				Q781	8-729-900-61	TRANSISTOR DTA114ES	
				Q782	8-729-900-61	TRANSISTOR DTA114ES	
				Q791	8-729-111-29	TRANSISTOR 2SD1616A-K	
				Q792	8-729-920-98	TRANSISTOR 2SD1761-EF	
				Q794	8-729-900-61	TRANSISTOR DTA114ES	

HCD-H160/H600

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q999	8-729-900-80	TRANSISTOR	DTC114ES	R82	1-249-417-11	CARBON	1K 5% 1/4W
		< RESISTOR >		R83	1-249-399-11	CARBON	33 5% 1/4W
R1	1-249-411-11	CARBON	330 5% 1/4W	R84	1-249-429-11	CARBON	10K 5% 1/4W
R2	1-249-411-11	CARBON	330 5% 1/4W (AEP, UK)	R85	1-249-429-11	CARBON	10K 5% 1/4W
R2	1-249-393-11	CARBON	10 5% 1/4W (G, IT)	R86	1-249-437-11	CARBON	47K 5% 1/4W
R3	1-247-891-00	CARBON	330K 5% 1/4W	R87	1-249-409-11	CARBON	220 5% 1/4W
R4	1-249-411-11	CARBON	330 5% 1/4W	R88	1-249-429-11	CARBON	10K 5% 1/4W
R5	1-247-891-00	CARBON	330K 5% 1/4W (G, IT)	R89	1-249-429-11	CARBON	10K 5% 1/4W
R6	1-249-411-11	CARBON	330 5% 1/4W (G, IT)	R90	1-249-421-11	CARBON	2. 2K 5% 1/4W
R7	1-249-405-11	CARBON	100 5% 1/4W	R91	1-249-421-11	CARBON	2. 2K 5% 1/4W
R8	1-249-441-11	CARBON	100K 5% 1/4W	R92	1-247-891-00	CARBON	330K 5% 1/4W
R9	1-249-437-11	CARBON	47K 5% 1/4W	R93	1-247-891-00	CARBON	330K 5% 1/4W
R10	1-249-437-11	CARBON	47K 5% 1/4W (G, IT)	R94	1-249-417-11	CARBON	1K 5% 1/4W
R10	1-249-425-11	CARBON	4. 7K 5% 1/4W (AEP, UK)	R95	1-249-417-11	CARBON	1K 5% 1/4W
R11	1-249-421-11	CARBON	2. 2K 5% 1/4W	R96	1-249-425-11	CARBON	4. 7K 5% 1/4W
R12	1-249-421-11	CARBON	2. 2K 5% 1/4W	R97	1-249-425-11	CARBON	4. 7K 5% 1/4W
R13	1-249-433-11	CARBON	22K 5% 1/4W	R98	1-249-404-00	CARBON	82 5% 1/4W
R14	1-249-432-11	CARBON	18K 5% 1/4W	R99	1-249-417-11	CARBON	1K 5% 1/4W (AEP, UK)
R15	1-247-903-00	CARBON	1M 5% 1/4W	R99	1-249-420-11	CARBON	1. 8K 5% 1/4W (G, IT)
R20	1-249-425-11	CARBON	4. 7K 5% 1/4W	R100	1-247-848-11	CARBON	5. 1K 5% 1/4W
R50	1-249-441-11	CARBON	100K 5% 1/4W	R102	1-249-430-11	CARBON	12K 5% 1/4W (AEP, UK)
R51	1-249-417-11	CARBON	1K 5% 1/4W	R103	1-249-428-11	CARBON	8. 2K 5% 1/4W
R52	1-249-417-11	CARBON	1K 5% 1/4W	R104	1-249-435-11	CARBON	33K 5% 1/4W
R53	1-249-441-11	CARBON	100K 5% 1/4W	R105	1-249-431-11	CARBON	15K 5% 1/4W
R54	1-249-417-11	CARBON	1K 5% 1/4W	R106	1-249-417-11	CARBON	1K 5% 1/4W
R55	1-249-425-11	CARBON	4. 7K 5% 1/4W	R107	1-249-430-11	CARBON	12K 5% 1/4W (G, IT)
R56	1-249-405-11	CARBON	100 5% 1/4W	R201	1-249-441-11	CARBON	100K 5% 1/4W
R57	1-249-401-11	CARBON	47 5% 1/4W	R202	1-249-441-11	CARBON	100K 5% 1/4W
R58	1-249-423-11	CARBON	3. 3K 5% 1/4W	R203	1-249-422-11	CARBON	2. 7K 5% 1/4W
R59	1-249-414-11	CARBON	560 5% 1/4W	R204	1-249-422-11	CARBON	2. 7K 5% 1/4W
R60	1-249-417-11	CARBON	1K 5% 1/4W	R205	1-249-437-11	CARBON	47K 5% 1/4W
R61	1-249-410-11	CARBON	270 5% 1/4W	R206	1-249-437-11	CARBON	47K 5% 1/4W
R62	1-249-418-11	CARBON	1. 2K 5% 1/4W	R207	1-249-437-11	CARBON	47K 5% 1/4W
R63	1-249-421-11	CARBON	2. 2K 5% 1/4W	R208	1-249-437-11	CARBON	47K 5% 1/4W
R64	1-249-425-11	CARBON	4. 7K 5% 1/4W	R209	1-249-429-11	CARBON	10K 5% 1/4W
R65	1-249-425-11	CARBON	4. 7K 5% 1/4W	R210	1-249-437-11	CARBON	47K 5% 1/4W
R66	1-249-405-11	CARBON	100 5% 1/4W (AEP, UK)	R211	1-249-423-11	CARBON	3. 3K 5% 1/4W
R67	1-249-423-11	CARBON	3. 3K 5% 1/4W	R212	1-249-423-11	CARBON	3. 3K 5% 1/4W
R68	1-249-414-11	CARBON	560 5% 1/4W	R213	1-249-429-11	CARBON	10K 5% 1/4W
R69	1-249-417-11	CARBON	1K 5% 1/4W	R214	1-249-437-11	CARBON	47K 5% 1/4W
R70	1-249-410-11	CARBON	270 5% 1/4W	R215	1-249-429-11	CARBON	10K 5% 1/4W
R71	1-249-433-11	CARBON	22K 5% 1/4W	R216	1-249-441-11	CARBON	100K 5% 1/4W
R72	1-249-421-11	CARBON	2. 2K 5% 1/4W	R217	1-249-411-11	CARBON	330 5% 1/4W
R73	1-249-425-11	CARBON	4. 7K 5% 1/4W	R218	1-249-411-11	CARBON	330 5% 1/4W
R74	1-249-425-11	CARBON	4. 7K 5% 1/4W	R219	1-249-417-11	CARBON	1K 5% 1/4W
R76	1-249-393-11	CARBON	10 5% 1/4W	R220	1-249-421-11	CARBON	2. 2K 5% 1/4W
R81	1-249-433-11	CARBON	22K 5% 1/4W	R231	1-249-429-11	CARBON	10K 5% 1/4W
				R232	1-249-425-11	CARBON	4. 7K 5% 1/4W
				R233	1-249-429-11	CARBON	10K 5% 1/4W

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R234	1-249-393-11	CARBON	10	5%	1/4W	R623	1-249-429-11	CARBON	10K	5%	1/4W
R235	1-249-417-11	CARBON	1K	5%	1/4W	R624	1-249-434-11	CARBON	27K	5%	1/4W
R236	1-249-417-11	CARBON	1K	5%	1/4W	R651	1-249-420-11	CARBON	1.8K	5%	1/4W
R237	1-249-419-11	CARBON	1.5K	5%	1/4W	R652	1-247-887-00	CARBON	220K	5%	1/4W
R238	1-249-419-11	CARBON	1.5K	5%	1/4W	R654	1-249-418-11	CARBON	1.2K	5%	1/4W
R239	1-249-433-11	CARBON	22K	5%	1/4W	R655	1-249-441-11	CARBON	100K	5%	1/4W
R241	1-249-413-11	CARBON	470	5%	1/4W	R656	1-249-441-11	CARBON	100K	5%	1/4W
R242	1-249-417-11	CARBON	1K	5%	1/4W	R661	1-249-425-11	CARBON	4.7K	5%	1/4W
R243	1-249-411-11	CARBON	330	5%	1/4W	R662	1-249-425-11	CARBON	4.7K	5%	1/4W
R244	1-249-411-11	CARBON	330	5%	1/4W	R663	1-249-425-11	CARBON	4.7K	5%	1/4W
R245	1-249-421-11	CARBON	2.2K	5%	1/4W	R664	1-249-425-11	CARBON	4.7K	5%	1/4W
R247	1-249-433-11	CARBON	22K	5%	1/4W	R665	1-249-437-11	CARBON	47K	5%	1/4W
R248	1-249-421-11	CARBON	2.2K	5%	1/4W	R666	1-249-437-11	CARBON	47K	5%	1/4W
R249	1-249-429-11	CARBON	10K	5%	1/4W	R667	1-249-437-11	CARBON	47K	5%	1/4W
R250	1-249-429-11	CARBON	10K	5%	1/4W	R668	1-247-895-00	CARBON	470K	5%	1/4W
R286	1-249-405-11	CARBON	100	5%	1/4W	R669	1-247-895-00	CARBON	470K	5%	1/4W
R287	1-249-405-11	CARBON	100	5%	1/4W	R670	1-249-421-11	CARBON	2.2K	5%	1/4W
R288	1-249-405-11	CARBON	100	5%	1/4W	R671	1-249-421-11	CARBON	2.2K	5%	1/4W
R289	1-249-405-11	CARBON	100	5%	1/4W	R672	1-249-421-11	CARBON	2.2K	5%	1/4W
R290	1-249-405-11	CARBON	100	5%	1/4W	R673	1-249-417-11	CARBON	1K	5%	1/4W
R291	1-249-413-11	CARBON	470	5%	1/4W	R674	1-249-421-11	CARBON	2.2K	5%	1/4W
R292	1-249-413-11	CARBON	470	5%	1/4W	R675	1-249-426-11	CARBON	5.6K	5%	1/4W
R293	1-249-413-11	CARBON	470	5%	1/4W	R676	1-249-429-11	CARBON	10K	5%	1/4W
R294	1-249-413-11	CARBON	470	5%	1/4W	R677	1-249-429-11	CARBON	10K	5%	1/4W
R295	1-249-413-11	CARBON	470	5%	1/4W	R678	1-249-429-11	CARBON	10K	5%	1/4W
R296	1-249-413-11	CARBON	470	5%	1/4W	R679	1-249-429-11	CARBON	10K	5%	1/4W
R297	1-249-413-11	CARBON	470	5%	1/4W	R680	1-249-429-11	CARBON	10K	5%	1/4W
R298	1-249-413-11	CARBON	470	5%	1/4W	R681	1-249-421-11	CARBON	2.2K	5%	1/4W
R299	1-249-441-11	CARBON	100K	5%	1/4W	R682	1-249-421-11	CARBON	2.2K	5%	1/4W
R601	1-249-420-11	CARBON	1.8K	5%	1/4W	R683	1-249-421-11	CARBON	2.2K	5%	1/4W
R602	1-247-887-00	CARBON	220K	5%	1/4W	R684	1-249-421-11	CARBON	2.2K	5%	1/4W
R604	1-249-418-11	CARBON	1.2K	5%	1/4W	R685	1-249-421-11	CARBON	2.2K	5%	1/4W
R605	1-249-441-11	CARBON	100K	5%	1/4W	R686	1-249-405-11	CARBON	100	5%	1/4W
R606	1-249-441-11	CARBON	100K	5%	1/4W	R687	1-249-429-11	CARBON	10K	5%	1/4W
R609	1-249-441-11	CARBON	100K	5%	1/4W	R688	1-247-903-00	CARBON	1M	5%	1/4W
R610	1-249-441-11	CARBON	100K	5%	1/4W	R689	1-249-429-11	CARBON	10K	5%	1/4W
R611	1-249-441-11	CARBON	100K	5%	1/4W	R690	1-249-429-11	CARBON	10K	5%	1/4W
R612	1-249-441-11	CARBON	100K	5%	1/4W	R699	1-249-397-11	CARBON	22	5%	1/4W
R613	1-249-441-11	CARBON	100K	5%	1/4W	R702	1-249-431-11	CARBON	15K	5%	1/4W
R614	1-249-441-11	CARBON	100K	5%	1/4W	R703	1-249-437-11	CARBON	47K	5%	1/4W
R615	1-249-441-11	CARBON	100K	5%	1/4W	R704	1-249-424-11	CARBON	3.9K	5%	1/4W
R616	1-249-429-11	CARBON	10K	5%	1/4W	R705	1-249-429-11	CARBON	10K	5%	1/4W
R617	1-249-429-11	CARBON	10K	5%	1/4W	R707	1-249-437-11	CARBON	47K	5%	1/4W
R618	1-249-428-11	CARBON	8.2K	5%	1/4W	R708	1-249-437-11	CARBON	47K	5%	1/4W
R619	1-249-423-11	CARBON	3.3K	5%	1/4W	R709	1-249-421-11	CARBON	2.2K	5%	1/4W
R620	1-249-417-11	CARBON	1K	5%	1/4W	R710	1-249-421-11	CARBON	2.2K	5%	1/4W
R621	1-249-417-11	CARBON	1K	5%	1/4W	R712	1-249-425-11	CARBON	4.7K	5%	1/4W
R622	1-249-429-11	CARBON	10K	5%	1/4W	R713	1-249-426-11	CARBON	5.6K	5%	1/4W

HCD-H160/H600

MAIN MD-A

Ref. No.	Part No.	Description	Remark
R731	1-249-417-11	CARBON	1K 5% 1/4W
R732	1-249-437-11	CARBON	47K 5% 1/4W
R733	1-249-437-11	CARBON	47K 5% 1/4W
R734	1-247-897-11	CARBON	560K 5% 1/4W
R735	1-249-417-11	CARBON	1K 5% 1/4W
R736	1-249-425-11	CARBON	4.7K 5% 1/4W
R737	1-249-437-11	CARBON	47K 5% 1/4W
R738	1-249-425-11	CARBON	4.7K 5% 1/4W
R740	1-249-425-11	CARBON	4.7K 5% 1/4W
R742	1-249-405-11	CARBON	100 5% 1/4W
R744	1-249-429-11	CARBON	10K 5% 1/4W
R745	1-249-429-11	CARBON	10K 5% 1/4W
R746	1-249-429-11	CARBON	10K 5% 1/4W
R747	1-249-405-11	CARBON	100 5% 1/4W
R748	1-249-405-11	CARBON	100 5% 1/4W
R752	1-249-431-11	CARBON	15K 5% 1/4W
R753	1-249-437-11	CARBON	47K 5% 1/4W
R754	1-249-424-11	CARBON	3.9K 5% 1/4W
R755	1-249-429-11	CARBON	10K 5% 1/4W
R757	1-249-437-11	CARBON	47K 5% 1/4W
R758	1-249-437-11	CARBON	47K 5% 1/4W
R759	1-249-421-11	CARBON	2.2K 5% 1/4W
R760	1-249-421-11	CARBON	2.2K 5% 1/4W
R762	1-249-425-11	CARBON	4.7K 5% 1/4W
R763	1-249-426-11	CARBON	5.6K 5% 1/4W
R771	1-249-429-11	CARBON	10K 5% 1/4W
R772	1-249-429-11	CARBON	10K 5% 1/4W
R773	1-247-870-11	CARBON	43K 5% 1/4W
R774	1-249-437-11	CARBON	47K 5% 1/4W
R775	1-249-437-11	CARBON	47K 5% 1/4W
R776	1-249-437-11	CARBON	47K 5% 1/4W
R781	1-249-417-11	CARBON	1K 5% 1/4W
R782	1-249-437-11	CARBON	47K 5% 1/4W
R783	1-249-437-11	CARBON	47K 5% 1/4W
R784	1-247-897-11	CARBON	560K 5% 1/4W
R785	1-249-417-11	CARBON	1K 5% 1/4W
R786	1-249-425-11	CARBON	4.7K 5% 1/4W
R787	1-249-437-11	CARBON	47K 5% 1/4W
R788	1-249-425-11	CARBON	4.7K 5% 1/4W
R790	1-249-425-11	CARBON	4.7K 5% 1/4W
R791	1-249-417-11	CARBON	1K 5% 1/4W
R792	1-249-414-11	CARBON	560 5% 1/4W
R795	1-249-435-11	CARBON	33K 5% 1/4W
R7001	1-247-883-00	CARBON	150K 5% 1/4W
R7002	1-249-429-11	CARBON	10K 5% 1/4W
R7003	1-249-429-11	CARBON	10K 5% 1/4W
R794A	1-249-411-11	CARBON	330 5% 1/4W
R794B	1-249-433-11	CARBON	22K 5% 1/4W
R8001	1-249-389-11	CARBON	4.7 5% 1/4W (G, IT)

Ref. No.	Part No.	Description	Remark
R8002	1-249-389-11	CARBON	4.7 5% 1/4W (G, IT)
< VARIABLE RESISTOR >			
RV81	1-238-601-11	RES. ADJ. CARBON 22K	
RV82	1-238-601-11	RES. ADJ. CARBON 22K	
RV701	1-238-601-11	RES. ADJ. CARBON 22K	
RV751	1-238-601-11	RES. ADJ. CARBON 22K	
< SWITCH >			
S701	1-572-185-11	SWITCH. SLIDE (ISS)	
S702	1-554-088-00	SWITCH. KEY BOARD (SYSTEM RESET)	
< TERMINAL >			
* TB1	1-537-138-31	TERMINAL BOARD (ANTENNA)	
< TEST PIN >			
* TP81	1-568-449-11	HOUSING. CONNECTOR (PC BOARD) 3P	
* TP601	1-568-449-11	HOUSING. CONNECTOR (PC BOARD) 3P	
* TP701	1-568-449-11	HOUSING. CONNECTOR (PC BOARD) 3P	
* TP702	1-568-449-11	HOUSING. CONNECTOR (PC BOARD) 3P	
< VIBRATOR >			
X51	1-577-126-11	VIBRATOR. CRYSTAL (7.2MHz)	
X81	1-577-075-11	OSCILLATOR. CERAMIC (456kHz)	
X201	1-577-358-21	VIBRATOR. CERAMIC (4MHz)	
X251	1-567-908-11	VIBRATOR. CRYSTAL (16.9344MHz)	
X601	1-577-358-21	VIBRATOR. CERAMIC (4MHz)	

* 1-624-147-11	MD-A BOARD	*****	
< CAPACITOR >			
C41A	1-162-289-31	CERAMIC	390PF 10% 50V
C42A	1-136-157-00	FILM	0.022uF 5% 50V
C43A	1-124-282-00	ELECT	22uF 20% 16V
C48A	1-162-217-31	CERAMIC	56PF 5% 50V
C61A	1-162-289-31	CERAMIC	390PF 10% 50V
C62A	1-136-157-00	FILM	0.022uF 5% 50V
C63A	1-124-282-00	ELECT	22uF 20% 16V
C68A	1-162-217-31	CERAMIC	56PF 5% 50V
C81A	1-126-101-11	ELECT	100uF 20% 16V
C82A	1-126-101-11	ELECT	100uF 20% 16V
< CONNECTOR >			
* CNP12A	1-564-337-00	PIN. CONNECTOR 3P	
* CNP13A	1-564-707-11	PIN. CONNECTOR (SMALL TYPE) 5P	
* CNP81A	1-564-706-11	PIN. CONNECTOR (SMALL TYPE) 4P	
* CNP82A	1-564-339-00	PIN. CONNECTOR 5P	

MD-A



MD-B

Ref. No.	Part No.	Description	Remark		
		< IC >			
IC81A	8-759-111-44	IC uPC4570C-1			
		< TRANSISTOR >			
Q11A	8-729-119-76	TRANSISTOR 2SA1175-HFE			
		< RESISTOR >			
R17A	1-249-437-11	CARBON	47K	5%	1/4W
R18A	1-249-437-11	CARBON	47K	5%	1/4W
R41A	1-247-881-00	CARBON	120K	5%	1/4W
R42A	1-249-405-11	CARBON	100	5%	1/4W
R43A	1-247-882-11	CARBON	130K	5%	1/4W
R44A	1-249-426-11	CARBON	5.6K	5%	1/4W
R61A	1-247-881-00	CARBON	120K	5%	1/4W
R62A	1-249-405-11	CARBON	100	5%	1/4W
R63A	1-247-882-11	CARBON	130K	5%	1/4W
R64A	1-249-426-11	CARBON	5.6K	5%	1/4W
R81A	1-249-409-11	CARBON	220	5%	1/4W
R82A	1-249-409-11	CARBON	220	5%	1/4W
		< VARIABLE RESISTOR >			
RV41A	1-228-989-00	RES. ADJ. METAL 470			
RV61A	1-228-989-00	RES. ADJ. METAL 470			

*	1-624-146-11	MD-B BOARD			

		< CAPACITOR >			
C41B	1-162-289-31	CERAMIC	390PF	10%	50V
C42B	1-136-157-00	FILM	0.022uF	5%	50V
C43B	1-124-282-00	ELECT	22uF	20%	16V
C44B	1-162-288-31	CERAMIC	330PF	10%	50V
C45B	1-136-273-91	FILM	75PF	5%	630V
C47B	1-162-209-31	CERAMIC	27PF	5%	50V
C48B	1-162-217-31	CERAMIC	56PF	5%	50V
C61B	1-162-289-31	CERAMIC	390PF	10%	50V
C62B	1-136-157-00	FILM	0.022uF	5%	50V
C63B	1-124-282-00	ELECT	22uF	20%	16V
C64B	1-162-288-31	CERAMIC	330PF	10%	50V
C65B	1-136-273-91	FILM	75PF	5%	630V
C67B	1-162-209-31	CERAMIC	27PF	5%	50V
C68B	1-162-217-31	CERAMIC	56PF	5%	50V
C81B	1-126-101-11	ELECT	100uF	20%	16V
C82B	1-126-101-11	ELECT	100uF	20%	16V
C83B	1-124-903-11	ELECT	1uF	20%	50V
C84B	1-124-925-11	ELECT	2.2uF	20%	100V
C85B	1-130-480-00	MYLAR	0.0056uF	5%	50V

Ref. No.	Part No.	Description	Remark		
C86B	1-130-476-00	MYLAR	0.0027uF	5%	50V
C87B	1-130-476-00	MYLAR	0.0027uF	5%	50V
C88B	1-136-562-11	FILM	0.0082uF	5%	630V
C89B	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
* CNP12B 1-564-337-61 PIN, CONNECTOR 3P					
* CNP13B 1-564-707-11 PIN, CONNECTOR (SMALL TYPE) 5P					
* CNP81B 1-564-709-11 PIN, CONNECTOR (SMALL TYPE) 7P					
* CNP82B 1-564-339-61 PIN, CONNECTOR 5P					
* CNP83B 1-564-338-61 PIN, CONNECTOR 4P					
* CNP84B 1-564-704-11 PIN, CONNECTOR (SMALL TYPE) 2P					
		< DIODE >			
D81B	8-719-107-94	DIODE 1SS202-1			
		< IC >			
IC81B	8-759-111-44	IC uPC4570C-1			
		< COIL >			
L41B	1-410-780-11	INDUCTOR			27mH
L61B	1-410-780-11	INDUCTOR			27mH
		< TRANSISTOR >			
Q11B	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q81B	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q82B	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q83B	8-729-142-46	TRANSISTOR 2SC2001-LK			
		< RESISTOR >			
R17B	1-249-437-11	CARBON	47K	5%	1/4W
R18B	1-249-437-11	CARBON	47K	5%	1/4W
R41B	1-247-881-00	CARBON	120K	5%	1/4W
R42B	1-249-405-11	CARBON	100	5%	1/4W
R43B	1-247-882-11	CARBON	130K	5%	1/4W
R44B	1-249-426-11	CARBON	5.6K	5%	1/4W
R45B	1-249-430-11	CARBON	12K	5%	1/4W
R61B	1-247-881-00	CARBON	120K	5%	1/4W
R62B	1-249-405-11	CARBON	100	5%	1/4W
R63B	1-247-882-11	CARBON	130K	5%	1/4W
R64B	1-249-426-11	CARBON	5.6K	5%	1/4W
R65B	1-249-430-11	CARBON	12K	5%	1/4W
R81B	1-249-409-11	CARBON	220	5%	1/4W
R82B	1-249-409-11	CARBON	220	5%	1/4W
R83B	1-249-429-11	CARBON	10K	5%	1/4W
△R84B	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R85B	1-249-435-11	CARBON	33K	5%	1/4W

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

HCD-H160/H600

MD-B POWER SHIELD SW

Ref. No.	Part No.	Description	Remark
R86B	1-249-435-11	CARBON 33K 5% 1/4W	
< VARIABLE RESISTOR >			
RV41B	1-228-989-00	RES. ADJ. METAL 470	
RV42B	1-230-725-11	RES. ADJ. CARBON 220K	
RV61B	1-228-989-00	RES. ADJ. METAL 470	
RV62B	1-230-725-11	RES. ADJ. CARBON 220K	
< RELAY >			
RY81B	1-515-519-00	RELAY	
RY81B	1-515-614-11	RELAY	
< TRANSFORMER >			
T81B	1-433-337-11	TRANSFORMER, BIAS OSCILLATION	

*	1-634-483-13	POWER BOARD	

< CAPACITOR >			
C801	1-124-907-11	ELECT 10uF 20% 50V	
C802	1-162-290-31	CERAMIC 470PF 10% 50V (AEP, UK)	
C803	1-126-233-11	ELECT 22uF 20% 50V	
C804	1-164-159-11	CERAMIC 0.1uF 50V	
C805	1-164-159-11	CERAMIC 0.1uF 50V	
C809	1-162-294-31	CERAMIC 0.001uF 10% 50V (G, IT)	
C851	1-124-907-11	ELECT 10uF 20% 50V	
C852	1-162-290-31	CERAMIC 470PF 10% 50V (AEP, UK)	
C853	1-126-233-11	ELECT 22uF 20% 50V	
C854	1-164-159-11	CERAMIC 0.1uF 50V	
C855	1-164-159-11	CERAMIC 0.1uF 50V	
C859	1-162-294-31	CERAMIC 0.001uF 10% 50V (G, IT)	
△C874	1-124-484-11	ELECT 220uF 20% 35V	
△C875	1-124-907-11	ELECT 10uF 20% 50V	
C876	1-124-907-11	ELECT 10uF 20% 50V	
△C877	1-124-907-11	ELECT 10uF 20% 50V	
△C878	1-124-910-11	ELECT 47uF 20% 50V	
△C879	1-124-910-11	ELECT 47uF 20% 50V	
C880	1-124-910-11	ELECT 47uF 20% 50V	
C899	1-164-159-11	CERAMIC 0.1uF 50V	
C8002	1-162-294-31	CERAMIC 0.001uF 10% 50V (G, IT)	
C8003	1-164-159-11	CERAMIC 0.1uF 50V (G, IT)	
C8004	1-164-159-11	CERAMIC 0.1uF 50V (G, IT)	
< CIRCUIT BREAKER >			
△CB801	1-532-564-00	BREAKER, CIRCUIT (2.2A)	
△CB851	1-532-564-00	BREAKER, CIRCUIT (2.2A)	

Ref. No.	Part No.	Description	Remark
< IC >			
△IC801	8-749-920-13	IC STK-4132MK2	
< RESISTOR >			
R801	1-249-417-11	CARBON 1K 5% 1/4W	
R802	1-249-438-11	CARBON 56K 5% 1/4W	
R803	1-249-416-11	CARBON 820 5% 1/4W	
R804	1-249-438-11	CARBON 56K 5% 1/4W	
R805	1-249-389-11	CARBON 4.7 5% 1/4W	
R851	1-249-417-11	CARBON 1K 5% 1/4W	
R852	1-249-438-11	CARBON 56K 5% 1/4W	
R853	1-249-416-11	CARBON 820 5% 1/4W	
R854	1-249-438-11	CARBON 56K 5% 1/4W	
R855	1-249-389-11	CARBON 4.7 5% 1/4W	
R873	1-249-429-11	CARBON 10K 5% 1/4W	
R874	1-247-883-00	CARBON 150K 5% 1/4W	
R875	1-249-421-11	CARBON 2.2K 5% 1/4W	
R876	1-249-421-11	CARBON 2.2K 5% 1/4W	
△R877	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R878	1-249-417-11	CARBON 1K 5% 1/4W	
R879	1-249-417-11	CARBON 1K 5% 1/4W	
△R880	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R881	1-249-421-11	CARBON 2.2K 5% 1/4W	
R882	1-249-421-11	CARBON 2.2K 5% 1/4W	
△R883	1-212-881-11	FUSIBLE 100 5% 1/4W F	
< TERMINAL >			
TB801	1-537-238-11	TERMINAL BOARD (SPEAKER)	

*	1-634-870-11	SHIELD BOARD	

< CAPACITOR >			
C528	1-124-907-11	ELECT 10uF 20% 50V	
C529	1-125-447-11	DOUBLE LAYERS 1F 5.5V	
< CONNECTOR >			
* CN504	1-564-336-00	PIN, CONNECTOR 2P	

*	1-634-477-11	SW BOARD	

< CONNECTOR >			
* CN203	1-569-156-11	SOCKET, CONNECTOR 10P	
CN301	1-569-225-11	SOCKET, CONNECTOR 14P	

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

SW TRANSFORMER

Ref. No.	Part No.	Description	Remark
< DIODE >			
D206	8-719-984-16	LED GL-1HY112-CD (STOP)	
D207	8-719-984-17	LED GL-1EG112-CD (PLAY)	
D301	8-719-984-17	LED GL-1EG112-CD (A FWD)	
D302	8-719-984-17	LED GL-1EG112-CD (A RVS)	
D303	8-719-984-17	LED GL-1EG112-CD (B FWD)	
D304	8-719-984-17	LED GL-1EG112-CD (B RVS)	
D305	8-719-984-17	LED GL-1EG112-CD (AMS/BLK)	
D306	8-719-984-15	LED GL-1HD112-DE (TAPE/HIGH)	
D307	8-719-984-15	LED GL-1HD112-DE (CD)	
D308	8-719-984-15	LED GL-1HD112-DE (REC)	
D309	8-719-984-16	LED GL-1HY112-CD (STOP)	
< TRANSISTOR >			
Q351	8-729-900-61	TRANSISTOR DTA114ES	
Q352	8-729-900-61	TRANSISTOR DTA114ES	
Q353	8-729-900-61	TRANSISTOR DTA114ES	
Q354	8-729-900-61	TRANSISTOR DTA114ES	
< RESISTOR >			
R221	1-249-409-11	CARBON 220 5% 1/4W	
R222	1-249-409-11	CARBON 220 5% 1/4W	
R223	1-249-437-11	CARBON 47K 5% 1/4W	
R224	1-249-437-11	CARBON 47K 5% 1/4W	
R225	1-249-437-11	CARBON 47K 5% 1/4W	
R226	1-249-437-11	CARBON 47K 5% 1/4W	
R301	1-249-407-11	CARBON 150 5% 1/4W	
R302	1-249-411-11	CARBON 330 5% 1/4W	
R303	1-249-407-11	CARBON 150 5% 1/4W	
R304	1-249-411-11	CARBON 330 5% 1/4W	
R305	1-249-411-11	CARBON 330 5% 1/4W	
R306	1-249-412-11	CARBON 390 5% 1/4W	
R307	1-249-416-11	CARBON 820 5% 1/4W	
R308	1-249-412-11	CARBON 390 5% 1/4W	
R309	1-249-411-11	CARBON 330 5% 1/4W	
R310	1-247-832-11	CARBON 1.1K 5% 1/4W	
R311	1-249-417-11	CARBON 1K 5% 1/4W	
R312	1-249-420-11	CARBON 1.8K 5% 1/4W	
R313	1-249-424-11	CARBON 3.9K 5% 1/4W	
R314	1-249-407-11	CARBON 150 5% 1/4W	
R315	1-249-409-11	CARBON 220 5% 1/4W	
R316	1-249-411-11	CARBON 330 5% 1/4W	
R317	1-247-832-11	CARBON 1.1K 5% 1/4W	
R318	1-249-417-11	CARBON 1K 5% 1/4W	
R319	1-249-430-11	CARBON 12K 5% 1/4W	
R320	1-249-426-11	CARBON 5.6K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S201	1-572-184-11	SWITCH, KEYBOARD (EDIT)	
S202	1-572-184-11	SWITCH, KEYBOARD (STOP)	
S203	1-572-184-11	SWITCH, KEYBOARD (PAUSE)	
S204	1-572-184-11	SWITCH, KEYBOARD (OPEN/CLOSE)	
S205	1-572-184-11	SWITCH, KEYBOARD (SEARCH FF)	
S206	1-572-184-11	SWITCH, KEYBOARD (SEARCH RWD)	
S207	1-572-184-11	SWITCH, KEYBOARD (FF)	
S208	1-572-184-11	SWITCH, KEYBOARD (REW)	
S209	1-572-184-11	SWITCH, KEYBOARD (REPEAT)	
S210	1-572-184-11	SWITCH, KEYBOARD (CONTINUE)	
S211	1-572-184-11	SWITCH, KEYBOARD (SHUFFLE)	
S212	1-572-184-11	SWITCH, KEYBOARD (PROGRAM)	
S214	1-572-184-11	SWITCH, KEYBOARD (TIME)	
S301	1-572-184-11	SWITCH, KEYBOARD (STOP) (DECK A)	
S302	1-572-184-11	SWITCH, KEYBOARD (REW) (DECK A)	
S303	1-572-184-11	SWITCH, KEYBOARD (RVS) (DECK A)	
S304	1-572-184-11	SWITCH, KEYBOARD (FWD) (DECK A)	
S305	1-572-184-11	SWITCH, KEYBOARD (FF) (DECK A)	
S306	1-572-184-11	SWITCH, KEYBOARD (STOP) (DECK B)	
S307	1-572-184-11	SWITCH, KEYBOARD (REW) (DECK B)	
S308	1-572-184-11	SWITCH, KEYBOARD (RVS) (DECK B)	
S309	1-572-184-11	SWITCH, KEYBOARD (FWD) (DECK B)	
S310	1-572-184-11	SWITCH, KEYBOARD (FF) (DECK B)	
S311	1-572-184-11	SWITCH, KEYBOARD (AMS/BLK SKIP)	
S312	1-572-184-11	SWITCH, KEYBOARD (TAPE DUBBING HIGH SPEED)	
S313	1-572-184-11	SWITCH, KEYBOARD (CD SYNCHRO)	
S314	1-572-184-11	SWITCH, KEYBOARD (REC)	
S315	1-572-184-11	SWITCH, KEYBOARD (PAUSE)	
S351	1-570-849-11	SWITCH, SLIDE (DOLBY NR)	
S352	1-570-837-11	SWITCH, SLIDE (DIRECTION MODE)	

*	1-634-474-11	TRANSFORMER BOARD	

< CAPACITOR >			
C901	1-164-159-11	CERAMIC 0.1uF 50V	
C902	1-164-159-11	CERAMIC 0.1uF 50V	
C903	1-126-160-11	ELECT 1uF 20% 50V (G, IT)	
△ C905	1-126-233-11	ELECT 22uF 20% 50V	
△ C906	1-124-556-11	ELECT 2200uF 20% 16V	
C907	1-124-572-11	ELECT 100uF 20% 63V	
C909	1-126-163-11	ELECT 4.7uF 20% 50V	
C911	1-126-163-11	ELECT 4.7uF 20% 50V	
C912	1-126-157-11	ELECT 10uF 20% 16V	
△ C913	1-126-163-11	ELECT 4.7uF 20% 50V	
C915	1-126-163-11	ELECT 4.7uF 20% 50V	

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

HCD-H160/H600

TRANSFORMER

VR

Ref. No.	Part No.	Description	Remark
C916	1-126-163-11	ELECT 4.7uF 20%	50V
C917	1-126-163-11	ELECT 4.7uF 20%	50V
C920	1-164-159-11	CERAMIC 0.1uF	50V
C921	1-164-159-11	CERAMIC 0.1uF	50V
△C922	1-126-163-11	ELECT 4.7uF 20%	50V

< CONNECTOR >

△CN901	1-526-931-11	INLET, AC (AC IN)	
* CN902	1-568-858-11	SOCKET, CONNECTOR 15P	
* CN903	1-565-484-11	CONNECTOR, BOARD TO BOARD 8P	

< DIODE >

△D901	8-719-912-20	DIODE 1SS120	
△D902	8-719-912-20	DIODE 1SS120	
△D903	8-719-200-82	DIODE 11ES2	
△D904	8-719-200-82	DIODE 11ES2	
D907	8-719-200-82	DIODE 11ES2	
D908	8-719-200-82	DIODE 11ES2	
D909	8-719-312-09	DIODE RBA-402	
D910	8-719-002-33	DIODE UZL-24L	
D911	8-719-014-64	DIODE UZP-5.1BC	
D912	8-719-933-36	DIODE HZS6B1L	

< COIL >

△FB901	1-410-858-11	INDUCTOR 0UH (G, IT)	
△FB902	1-410-858-11	INDUCTOR 0UH (G, IT)	
△FB903	1-410-858-11	INDUCTOR 0UH (G, IT)	

< IC >

IC901	8-759-602-66	IC M5230L-A	
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< IC LINK >

△ICP999	1-532-846-11	LINK, IC (5A)	
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< TRANSISTOR >

Q901	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q903	8-729-924-90	TRANSISTOR 2SB1370-EF	
Q904	8-729-924-90	TRANSISTOR 2SB1370-EF	
Q905	8-729-920-98	TRANSISTOR 2SD1761-EF	
Q906	8-729-920-98	TRANSISTOR 2SD1761-EF	

Q907	8-729-900-80	TRANSISTOR DTC114ES	
Q908	8-729-900-80	TRANSISTOR DTC114ES	

< RESISTOR >

R901	1-249-419-11	CARBON 1.5K 5%	1/4W
R902	1-249-429-11	CARBON 10K 5%	1/4W
R903	1-249-421-11	CARBON 2.2K 5%	1/4W
R904	1-249-433-11	CARBON 22K 5%	1/4W

Ref. No.	Part No.	Description	Remark
△R905	1-212-934-00	FUSIBLE 1 5%	1/2W F
△R906	1-212-934-00	FUSIBLE 1 5%	1/2W F
△R907	1-212-934-00	FUSIBLE 1 5%	1/2W F
R908	1-249-425-11	CARBON 4.7K 5%	1/4W
R909	1-249-433-11	CARBON 22K 5%	1/4W
R910	1-247-903-00	CARBON 1M 5%	1/4W
R911	1-249-405-11	CARBON 100 5%	1/4W
R912	1-249-432-11	CARBON 18K 5%	1/4W
R913	1-249-432-11	CARBON 18K 5%	1/4W
R914	1-247-842-11	CARBON 3K 5%	1/4W
R915	1-249-429-11	CARBON 10K 5%	1/4W
R917	1-249-413-11	CARBON 470 5%	1/4W

*	1-634-476-11	VR BOARD (VOLUME) (INCLUDING VOL LED)	
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< CAPACITOR >

C410	1-126-157-11	ELECT 10uF 20%	16V
C416	1-124-463-00	ELECT 0.1uF 20%	50V
C417	1-126-157-T1	ELECT 10uF 20%	16V
C418	1-126-157-11	ELECT 10uF 20%	16V
C419	1-126-157-11	ELECT 10uF 20%	16V
C420	1-126-157-11	ELECT 10uF 20%	16V
C421	1-126-157-11	ELECT 10uF 20%	16V
C422	1-126-157-11	ELECT 10uF 20%	16V
C423	1-164-159-11	CERAMIC 0.1uF	50V
C460	1-126-157-11	ELECT 10uF 20%	16V

< CONNECTOR >

* CN403	1-568-827-11	SOCKET, CONNECTOR 8P	
* CN404	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	

< DIODE >

D406	8-719-912-20	DIODE 1SS120	
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< IC >

IC406	8-759-820-62	IC LB1639	
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< TRANSISTOR >

Q406	8-729-904-39	TRANSISTOR DTC114TS	
Q407	8-729-904-39	TRANSISTOR DTC114TS	
Q456	8-729-904-39	TRANSISTOR DTC114TS	
Q457	8-729-904-39	TRANSISTOR DTC114TS	

< RESISTOR >

R416	1-249-405-11	CARBON 100 5%	1/4W
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The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
R417	1-249-425-11	CARBON 4.7K 5%	1/4W
R419	1-249-417-11	CARBON 1K 5%	1/4W
R426	1-249-417-11	CARBON 1K 5%	1/4W
R427	1-249-441-11	CARBON 100K 5%	1/4W
R428	1-247-903-00	CARBON 1M 5%	1/4W
R429	1-249-417-11	CARBON 1K 5%	1/4W
R430	1-249-425-11	CARBON 4.7K 5%	1/4W
R431	1-249-425-11	CARBON 4.7K 5%	1/4W
R432	1-249-429-11	CARBON 10K 5%	1/4W
R457	1-249-429-11	CARBON 10K 5%	1/4W
R466	1-249-405-11	CARBON 100 5%	1/4W
R467	1-249-425-11	CARBON 4.7K 5%	1/4W
R469	1-249-417-11	CARBON 1K 5%	1/4W
R486	1-249-413-11	CARBON 470 5%	1/4W
R487	1-249-429-11	CARBON 10K 5%	1/4W

< VARIABLE RESISTOR >

RV406 1-238-865-11 RES. VAR. CARBON (MOTOR) 100KX2

MISCELLANEOUS

* 12	1-562-908-11	CONNECTOR, FEMALE (NO SHIELD) (G, IT)
67	1-575-675-11	WIRE, FLAT TYPE (14 CORE)
68	1-575-674-11	WIRE, FLAT TYPE (8 CORE)
69	1-575-672-11	WIRE, FLAT TYPE (13 CORE)
70	1-575-673-11	WIRE, FLAT TYPE (15 CORE)
252	1-535-832-12	JUMPER, FILM (WITH TERMINAL)
△ 305	8-848-144-11	PISKUP, OPTICAL KSS-240A
307	1-575-001-11	WIRE, FLAT TYPE (12 CORE)
ANT1	1-501-321-51	ANTENNA, TELESCOPIC (H160)
D522	8-719-313-39	DIODE SEL1910DM-LCO-CD
D523	8-719-313-39	DIODE SEL1910DM-LCO-CD
F901	1-532-215-00	FUSE, TIME-LAG (0.8A)
HE1	A-2003-504-A	CHASSIS ASSY, HEAD (REC/PB/ERASE) (DECK B)
HP1	A-2003-503-A	HEAD BOARD, COMPLETE (PB) (DECK A)
HRP1	A-2003-504-A	CHASSIS ASSY, HEAD (REC/PB/ERASE) (DECK B)
IC801	8-749-920-13	IC STK-4132-2
M1	X-3343-447-1	MOTOR ASSY (DECK A)
M2	X-3343-447-1	MOTOR ASSY (DECK B)
M101	X-4917-504-1	MOTOR ASSY (SLED)
M102	X-4917-523-3	MOTOR ASSY (SPINDLE)
M251	A-4608-362-A	MOTOR (L) ASSY (LOADING)
PM1	1-454-456-11	SOLENOID, PLUNGER (DECK A)
PM2	1-454-456-11	SOLENOID, PLUNGER (DECK B)
△ T901	1-450-937-11	TRANSFORMER, POWER

Ref. No.	Part No.	Description	Remark

ACCESSORIES & PACKING MATERIALS			

	1-465-342-11	REMOTE COMMANDER (RM-S100)	
	1-501-369-11	ANTENNA (UK)	
	1-501-374-11	ANTENNA, LOOP (UK)	
	1-558-032-11	CORD, POWER (UK)	
	2-181-754-01	COVER, BATTERY	
	3-755-091-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (UK)	
*	4-936-852-01	CUSHION (LOWER)	
*	4-936-853-01	CUSHION (UPPER)	
*	4-936-899-01	CUSHION	
*	4-952-042-01	INDIVIDUAL CARTON (UK)	

HARDWARE LIST

#1	7-682-549-09	SCREW +BVTT 3X10 (S)
#2	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S
#3	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3
#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#5	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#6	7-682-547-04	SCREW +BVTT 3X6 (S)
#7	7-623-508-01	LUG, 3 (G, IT)
#8	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S (H160)
#9	7-621-773-86	SCREW +BVTT 2.6X4 (S)
#10	7-624-105-04	RETAINING, RING E-2.3
#11	7-621-255-15	SCREW +PTT 2X3 (S)
#12	7-621-770-67	SCREW +PTT 2.6X6 (S)
#13	7-627-556-28	SCREW +P 2.6X3.5
#14	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
#15	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT
#16	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3
#17	7-621-775-10	SCREW +B 2.6X4
#18	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S

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