

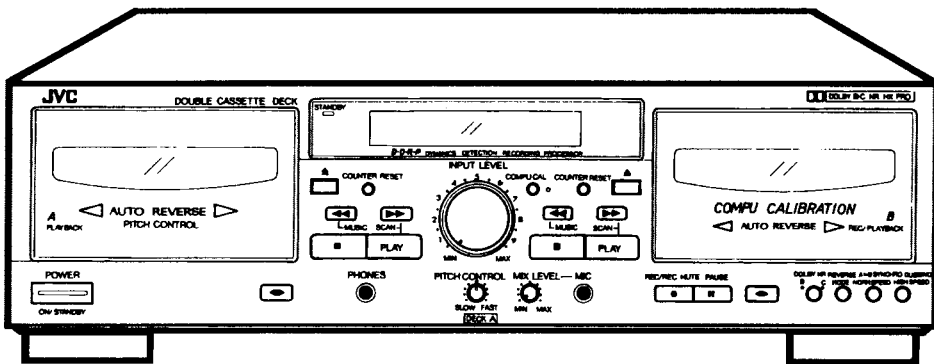
JVC

SERVICE MANUAL

DOUBLE CASSETTE DECK

TD-W317TN C/J

TD-W318BK A/B/E/EN/G/U/UT



COMPU LINK
 Component

Area Suffix	
A Australia
B U.K.
C Canada
E Continental europe
EN North Europe
G Germany
J U.S.A.
U Other Areas
UT Taiwan

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■ Safety Precautions

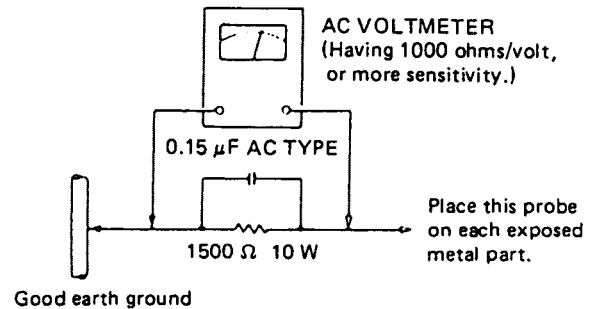
1. The design this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacture's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety — related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of service manual. Electrical components having such features are identified by shading and (\triangle) on the schematic diagram and by (\triangle) on the parts list in the service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps , tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
5. Leakage current check (Electrical shock hazard testing)

After re — assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. using a "Leakage current tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC(r.m.s.)

- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohms 10W resistor paralleled by a 0.15 μ F AC type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each




exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC(r.m.s.). This corresponds to 0.5mA AC(r.m.s.).

◆ Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

■ Features

1. Double auto-reverse mechanism for recording/playback in deck B and playback in deck A
2. COMPU CAL function which automatically sets the flat characteristics and brings out maximum tape performance.
3. Full logic mechanism
4. Dolby* HX PRO headroom extension
5. Dolby B & C noise reduction system
6. DDRP (Dynamics Detection Recording Processor) compatibility
 The DDRP function is possible only when used with a suitable JVC CD player.
7. 2-color FL peak level indicator
8. Digital tape counter respectively for deck A and deck B
9. Synchro start (normal-/high-speed) dubbing
10. Auto tape select mechanism (decks A and B)
11. Multi music scan mechanism for either direction
 "Under License of Staar S.A., Brussels, Belgium"
12. PITCH control
13. Microphone mixing is possible
14. COMPU LINK-3 compatible

- * Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
- * "Dolby", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

COMPU LINK Control System

COMPU LINK control system is the convenient system using COMPU LINK-3/SYNCHRO terminals on the rear panel. (See page 4 and 10.)

D·D·R·P DYNAMICS DETECTION RECORDING PROCESSOR

This product can be combined with a DDRP (DYNAMICS DETECTION RECORDING PROCESSOR) system (compact disc player + cassette deck, etc.) to enable setting the optimum recording level automatically. Refer to these instructions for details.

■ Specifications

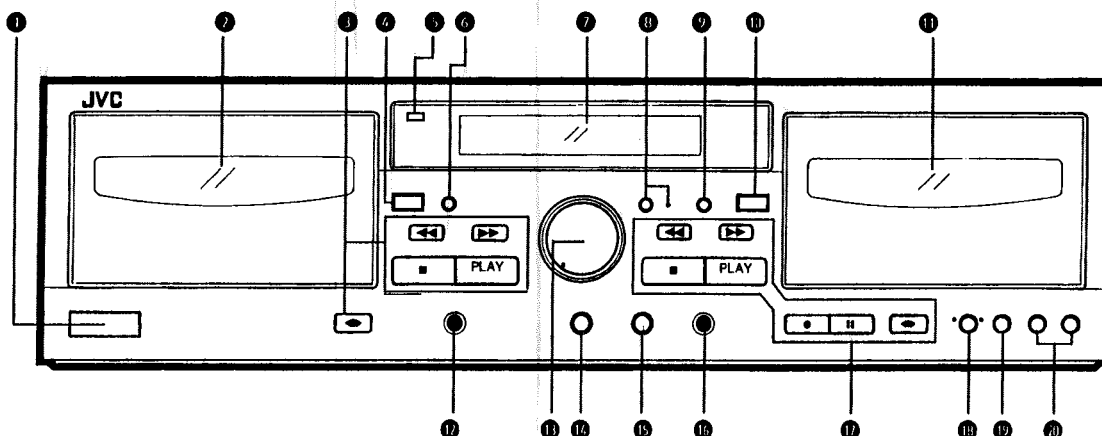
Type	: Double cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 4.8 cm/sec (1-7/8 inch/sec) (Normal) 9.5 cm/sec (3-3/4 inch/sec) (High)
Frequency response	: (-20 dB recording) Type IV tape ; 20 - 17,000 Hz 30 - 16,000 Hz (±3dB) Type II tape ; 20 - 16,000 Hz 30 - 15,000 Hz (±3dB) Type I tape ; 20 - 16,000 Hz 30 - 15,000 Hz (±3dB)
S/N ratio	: 58 dB (S = 315 Hz, k3 = 3%, N = A-weighted, Type IV tape) The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz ~ 10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with DOLBY B NR on.
Improvement of MOL	: 4 dB at 10 kHz with Dolby C NR on.
Wow and flutter	: 0.08% (WRMS), ±0.2% (DIN/IEC)
Channel separation	: 40 dB (1 kHz)
Crosstalk	: 60 dB (1 kHz)
Harmonic distortion	: k3; 0.8% (Type IV tape, 315 Hz, 0 VU)
Heads	: Deck A; METAPERM head for playback x 1 Deck B; METAPERM head for recording/playback, 2-gap ferrite head for erasure; combination head x 1

Motors	: Electric governed DC motor for capstan x 1 DC motor for reel x 1 DC motor for mechanism drive x 1 (For both decks A and B)
Fast forward/rewind time	: Approx. 110 sec. with C-60 cassette
Input terminals	
LINE IN (x1 circuit)	: Input sensitivity; 80 mV (0 VU) Input impedance; 50 kΩ
MIC x 1 (Monaural)	: Input sensitivity; 0.4m V (-68dBV) Matching impedance; 600 ~ 10 kΩ
Output terminals	
LINE OUT (x 1 circuit)	: Output level; 300 mV (0 VU) Output impedance; 5 kΩ
PHONES x 1	: Output level; 0.3 mW/8 Ω (0 VU) Matching impedance 8 Ω - 1 kΩ
Other terminals	: COMPU LINK-3/SYNCHRO x 2
Power requirement	: AC 240 V, 50 Hz (Australia) AC 230 V, 50 Hz (U.K.) AC 120 V, 60 Hz (U.S.A.)
Power consumption	: With power switch on 17 W With power switch standby 4.0 W
Dimensions (W x H x D)	: 435 x 134 x 331 mm (17-3/16" x 5-5/16" x 13-1/16")
Weight	: 4.9 kg (10.9 lbs.)
Accessories	: Pin plug cord 2 Remote cable 1

Design and specifications are subject to change without notice.

■ Instructions (Extraction)

NAMES OF PARTS AND THEIR FUNCTIONS



1 POWER switch (ON/STANDBY)

2 Cassette holder (deck A)

3 Cassette operation buttons (deck A)

◀◀ : Press to wind the tape quickly from right to left.

▶▶ : Press to wind the tape quickly from left to right.

PLAY : Press to play the tape.

■ (stop) : Press to stop the tape.

◀▶ (direction) : Press to change the direction of tape travel.

4 ▲ (eject) button (deck A)

5 Power STANDBY Indicator

Lights when in the power standby mode.

6 COUNTER RESET button (deck A)

Press this button to set the digital counter to "0000". Even if the POWER switch is set to STANDBY, the counter value at that time is stored in memory.

7 Indicators

① DDRP indicator

② Peak level indicator

These indicators light according to the level of the signal being recorded or the level of the signal recorded on the tape.

Note:

0 dB : IEC (DIN) STANDARD LEVEL (250 nWb/m)

0 VU : Signal level at 160 nWb/m

□□ : DOLBY NR STANDARD LEVEL

③ HX PRO indicator

④ Digital counter

The counter reading increases while the tape is running forward and decreases when it is running in reverse. In the Multi Music Scan mode when the ◀◀ (or ▶▶) button is pressed, the number of tunes which will be skipped is displayed.

⑤ Mechanism mode indicators (deck A)

▶▶ : This lights when rewinding the tape from left to right.

◀◀ : This lights when rewinding the tape from right to left.

PLAY : This lights when in the playback.

◀▶ : Indicates the direction of tape travel.

⑥ DUBBING >> : ">" lights when in the normal-speed dubbing mode.

">>" lights when in the high-speed dubbing mode.

⑦ CONT : Lights when the unit is in the continuous play mode.

⑧ Mechanism mode indicators (deck B)

PLAY : Lights when the unit is in the playback and record modes.

◀▶ : Indicates the direction of tape travel.

REC : Lights when the unit is in the record and record-pause modes; blinks during record muting.

|| : Pause Indicator

▶▶ : This lights when rewinding the tape from left to right.

◀◀ : This lights when rewinding the tape from right to left.

⑨ ↺ : Indicates reverse mode.

⑩ COMPU CAL button and indicator

Press this button to automatically set the recording characteristics with the COMPU CAL function. (See page 8.)

⑪ COUNTER RESET button (deck B)

⑫ ▲ (eject) button (deck B)

⑬ Cassette holder (deck B)

⑭ PHONES jack

Connects headphones (with an impedance of 8 Ω to 1 kΩ).

⑮ INPUT LEVEL control

⑯ PITCH control (deck A)

Varies the tape speed in deck A in the range of about ±10%. However, it cannot change the tape speed in the high-speed dubbing.

Turning it counterclockwise toward "SLOW" causes the tape speed to decrease while turning clockwise toward "FAST" causes it to increase. The center click position is for the standard speed. (See page 7.)

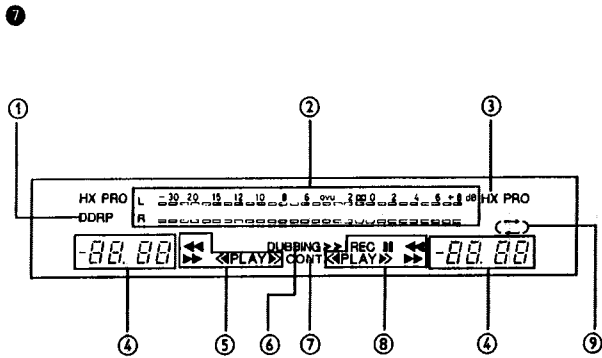
⑰ Mixing microphone level control

Adjusts the microphone input level.

⑱ MIX MIC jack

Connects a microphone (with an impedance of 600 Ω to 10 kΩ) to this jack.

Sounds from the microphone are monaural.



① Cassette operation buttons (deck B)

- ◀▶ : Press to wind the tape quickly from right to left.
- ▶▶ : Press to wind the tape quickly from left to right.
- (stop) : Press to stop the tape. Also press to stop both decks simultaneously during dubbing.
- PLAY : Press to start playback/recording.
- REC/REC MUTE : Press the PLAY button while pressing this button to start recording, and press to leave an appropriate non-recorded section. (See page 9.)
- ⏸ PAUSE : Press to stop the tape temporarily during recording and playback. Press the PLAY button to release the pause mode.
- ◀▶ (direction) : Press to change the direction of tape travel.

② DOLBY NR button and indicators

Set to B or C for recording using the Dolby NR system or for playing back a tape that was recorded using the Dolby NR system. Each time the button is pressed the NR mode changes and the indicator lights. (Dolby B NR -> Dolby C NR -> NR OFF -> Dolby B NR ...)

Set to OFF when the Dolby NR system is not used.

③ REVERSE MODE switch

Select the single side or full record/playback mode, or the continuous play mode. Each time the button is pressed the mode changes. (↔ -> ↔ -> ↔ -> ↔ ...) The current mode can be checked with the mechanism mode indicator.

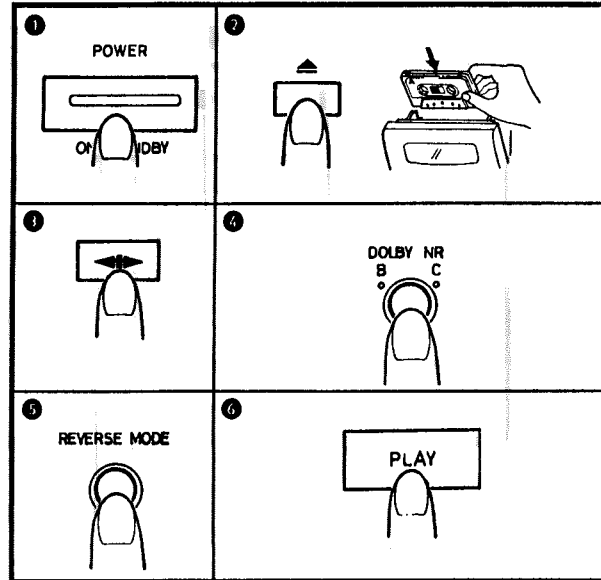
- ↔ : For single-side recording or playback.
- ↔ : To play or record both sides A and B.
- ↔ : To play sides A and B continuously.

④ A ▶ B SYNCHRO DUBBING buttons

Press to dub from deck A to deck B.

- NORM SPEED : Press to perform normal-speed dubbing.
- HIGH SPEED : Press to perform high-speed dubbing.

PLAYBACK



Playback of deck A

Operate in the order of the numbers in the illustration.

- ① Press the POWER switch to set to ON.
 - ② Load a prerecorded cassette with side A facing out.
 - ③ Select the side to be played back.
Side A... Forward direction (PLAY ▶)
Side B... Reverse direction (◀PLAY)
 - ④ Set the DOLBY NR switch to the same setting as when the tape was recorded.
 - ⑤ Select the REVERSE MODE.
 - ⑥ Press the PLAY button of deck A to start playback.
- When the deck contains a tape, the deck is turned on automatically and the tape is played back by only pressing the PLAY button.

Playback of deck B

Perform steps ② to ⑥ of the above procedure for deck B.

Microphone mixing during playback

By connecting a microphone, microphone mixing with playback sound from deck A or deck B is possible.

Continuous play

First set the REVERSE MODE switch to ↔.

Load cassette tapes in both decks and press the PLAY button of the deck to be played first for continuous play of both decks.

- At this time, the CONT indicator lights in the multimode display. When the tape in the deck which plays first reaches the end of side B (in the reverse direction), it automatically switches to the forward direction and enters the standby mode. At the same time, the other deck starts playback. These operations continue between decks A and B.
- While one deck is playing back, the cassette in the other one can be replaced. This is convenient for long-time playback of background music.

Note:

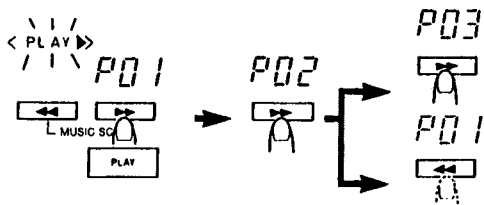
- Use tapes recorded using the same NR mode in decks A and B.

PITCH control (deck A)

It is possible to vary the tape speed in deck A in the range of about ±10% in the playback mode. The center click position is for the standard tape speed.

MULTI MUSIC SCAN

- The multi music scan mechanism of this unit allows you to quickly locate the beginning of a specific tune (up to 99 tunes before or after the current tune).
 - The multi music scan mechanism functions by detecting non-recorded sections between tunes (of more than 4-5 sec.).
 - The illustration shows the forward direction.
- Example of fast forward scan.



Procedure

1. Press the ►► button during playback.
2. When more than 2 tunes are to be skipped, after procedure 1 press the ►► (or ◀◀) button the number of times you want to skip tunes. The number of tunes to be skipped is displayed in the counter.

Relation between Multi Music Scan and REVERSE MODE.

⇐ : The multi music scan mechanism operates on one side of the tape only. If the number set is too high (more than there are tunes remaining on that side), the tape stops when the end of the tape is reached.

⇔ : It operates continuously through one cycle of the A and B sides of the tape. If the number set has not been reached, the tape stops at the end of the B side. When the head rotates to play side A from B or B from A, this rotation is counted as one non-recorded section. When a recorded tune continues from side A to B, this tune is recorded as two tunes. In such a case, press the ◀◀ (or ►►) button one extra time.

Notes:

In the following cases, the mechanism may not operate correctly. This is not a malfunction; use the mechanism according to the type of program.

- Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions during tunes.
- Tapes with short non-recorded sections.

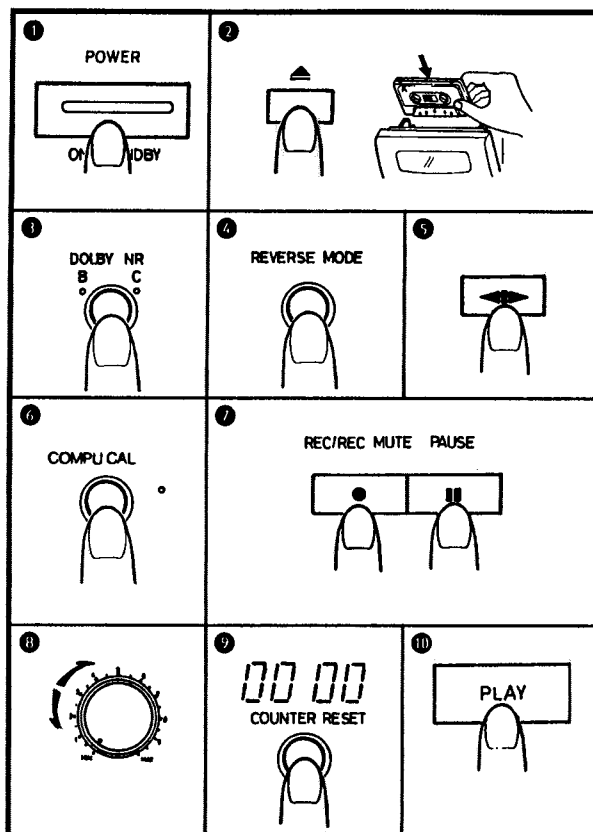
RECORDING

Deck B only

Operate in the order of the numbers in the illustration.

- Make sure the safety tab of the cassette has not been broken off.

It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.



- 1 Press the POWER switch to set to ON.
- 2 Load a cassette for recording.
- 3 Set the DOLBY NR switch as required.
- 4 Set the REVERSE MODE switch as desired.
- 5 Select the side to be recorded.
- 6 Press the COMPU CAL button, if required. (See page 8.)
- 7 Press the ■■ PAUSE button and ● REC/REC MUTE button (record-pause mode). REC and ■■ indicators light.
- 8 Adjust the recording level. (See page 9.)
- 9 Press to "0000".
- 10 Press the PLAY button to start recording.

Notes:

- When the safety tabs are removed from a cassette tape, the tape cannot be recorded even if you try. Make sure that both tabs are still in place when performing full recording.
- When the tape is played or recorded in the reverse direction (side B), only side B is played back or recorded and then the tape stops automatically.

DDRP (Dynamics Detection Recording Processor) recording

DDRP recording is performed with suitable JVC CD players and the recording level adjustment is performed automatically. Since recording level adjustment is performed automatically for different types of tape (normal, CrO₂ and metal), the adjustment of INPUT LEVEL control is not required. Read the instruction book of your CD player carefully.

COMPU CALIBRATION (COMPU CAL) FUNCTION

- This unit is equipped with a COMPU CAL function which can automatically set the flat frequency characteristics and optimal tape sensitivity for each tape in approximately 30 seconds. Calibration data is retained for each tape type (Type I, II or IV).
- Calibration data set with COMPU CAL is retained even if the power is turned off (or the power cord is unplugged), and the previous calibration data for the same type of tape as the new tape is recalled each time tapes are changed.
- Performing COMPU CAL operations again replaces existing data with the new data.

COMPU CAL operation

- Insert the tape to be recorded and press the COMPU CAL button. During the operation, "C" -> "CA" -> "CAL" is displayed in the tape counter. When the operation finishes, the tape returns to its starting position, and the COMPU CAL indicator lights. COMPU CALIBRATION is now finished.
- Pressing the ■ (stop) button part-way will interrupt the operations.
- To recalibrate the unit, press the COMPU CAL button and wait for the COMPU CAL indicator to go out. Then, press the COMPU CAL button again.

Note:

If the tape is near its end, it will automatically stop and an error will be generated during operation. Therefore, be sure to check the time remaining on the tape (more than 2 minutes in the play mode) before starting the operations.

COMPU CAL Errors

- When the COMPU CAL indicator flashes, this indicates a COMPU CAL error.
- Press the ■ (stop) button to stop the error indication.

Care should be taken for the following items as they are the cause of errors.

- 1) Dirty heads -Clean the heads.
- 2) Scratches on the tape surface -Replace with an undamaged tape.
- 3) When the tape ends part-way through the operations -Change the tape position.
- 4) In rare cases, tapes may have characteristics which fall outside the COMPU CAL setting range.

- When an error occurs or when COMPU CAL operations are interrupted, calibration data cannot be stored in the memory. If settings were previously performed, the previous setting values are retained.
- After confirming items 1) to 3) above and stopping the error indication if there are no problems, even tapes which experience errors can be recorded on using either ① the unit's preset values or ② previous setting values. (These are the values obtained by opening and closing the cassette holder one time.)

* Preset value: a standard value corresponding to each type of tape, which allows normal recording. (The preset value condition is in effect when the COMPU CAL indicator is unlit.)

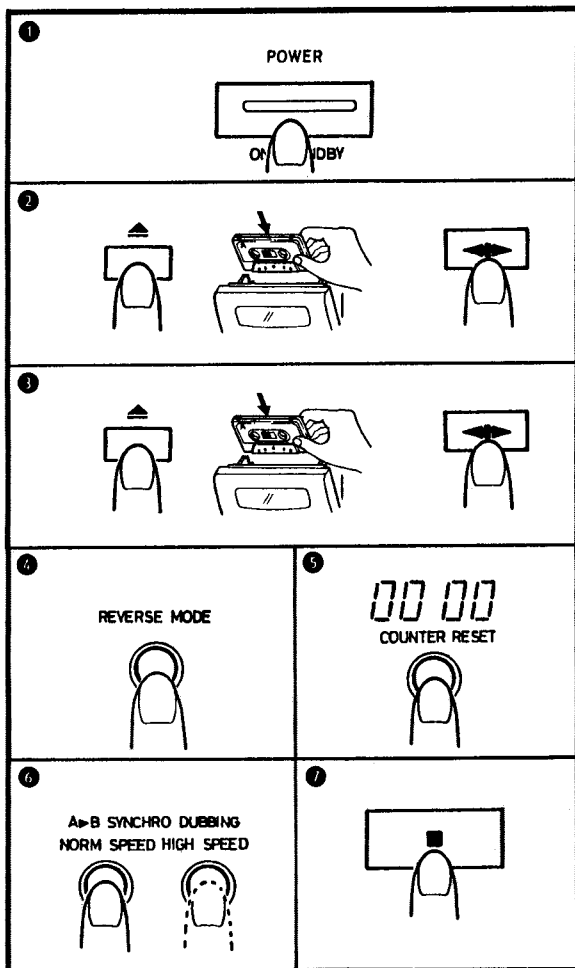
Notes:

1. Since COMPU CAL operations record a test tone on tapes, previously recorded contents will be erased.
2. Using new tapes and cleaning the heads beforehand are recommended for optimal COMPU CAL operations.
3. Some variance in characteristics exists even with the same type of tape made by the same manufacturer. Therefore, when precise settings are desired, performing COMPU CAL operations for each recording is recommended.
4. To delete contents set with COMPU CAL, simultaneously press the ●REC/REC MUTE and B deck COUNTER RESET buttons. This deletes the calibration data for the type of tape currently inserted in the unit. Calibration data for other tape types is not deleted.

DUBBING

• Synchro dubbing

Operate in the order of the numbers in the illustration.



- 1 Press the POWER switch to set to ON.
- 2 Insert a prerecorded tape with side A facing out into deck A, and press the ◀▶ (direction) button to select the travel direction.
- 3 Insert the blank tape with side A facing out into deck B, and press the ◀▶ (direction) button to select the side to be recorded.
- 4 Select the REVERSE MODE.
- 5 Press to "0000". (Deck B)
- 6 Press the SYNCHRO DUBBING (NORM or HIGH SPEED) button to start dubbing.
- 7 Press the ■ (stop) button of deck B to stop dubbing.

When deck B stops, the dubbing mode is automatically released.

• Synchro record muting

When deck A stops or enters any mode other than the playback mode during dubbing, deck B enters the record mute operation automatically and then enters the record-pause mode.

• Before pressing the SYNCHRO DUBBING button

Confirm that deck B is in the stop mode before starting dubbing.

Dubbing and DOLBY NR switch

During dubbing, the same NR mode selected for the playback cassette is applied to the recording cassette, regardless of the position of the NR switch.

Input level

Recording is performed at the same level as the playback tape during dubbing regardless of the position of the INPUT LEVEL control.

Microphone mixing during dubbing

By connecting a microphone, microphone mixing during dubbing is possible with the playback sounds from deck A. Be sure to perform dubbing at normal speed. When performing microphone mixing during dubbing, use cassettes recorded with NR OFF mode for the deck A.

Tape editing

1. Press the ● REC/REC MUTE button when finished dubbing a tune. Deck B automatically enters the record muting mode and leaves a non-recorded section of about 4-seconds then enters the record-paused mode.
2. Press the ■ (stop) button of deck A and search for the next tune you want by using the ▶▶, ◀◀ or PLAY button. Then stop the cassette just before the beginning of the tune.
3. Press the same SYNCHRO DUBBING button pressed before the pause again, and dubbing will start.

Notes at dubbing

1. Normal-speed dubbing is recommended to obtain good sound quality.
2. Television receivers placed close to the deck may cause interference on the recorded signal when the deck is used in the high-speed dubbing mode. If this happens, either turn off the television receiver or use the normal-speed dubbing mode.

CONNECTIONS

- Do not switch the power on until all the connections are completed.
- Insert the plugs firmly, or poor contact will result, causing noise.
- When the pin-plug cords are employed, always connect the white plug to the left channel terminal. This helps to avoid reversed connections.
- When using the Compu Link Control System version 3, do not connect the power cord to the SWITCHED AC OUTLET of an amplifier or receiver. Otherwise, the automatic power on/off (STANDBY) function cannot be carried out.

1. Connection to a stereo amplifier

Note:

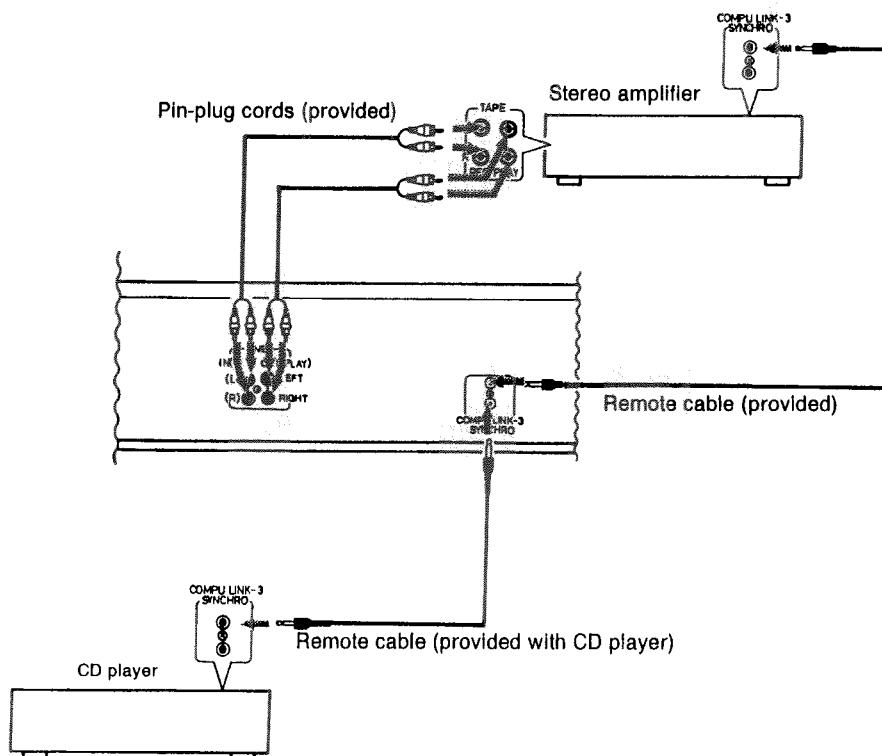
When installing the deck, be sure to install at a distance from your amplifier. If they are stacked, noise (hum) may occur.

2. Remote cable connection for COMPU LINK

- By connecting a remote cable, COMPU LINK functions (automatic power on/off (STANDBY), automatic source selection, synchronized recording and DDRP recording) can be performed. In this time the provided pin-plug cords must be also connected.
- When making synchronized recording with a CD player, connect the remote cable to the COMPU LINK-1/SYNCHRO or COMPU LINK-3/SYNCHRO jacks.

Notes:

1. When making synchronized recordings, only a single deck should be connected to the amplifier.
2. If a component is not a JVC COMPU LINK component, bypass it when making the remote cable connections.
3. This deck can be connected with an amplifier and a CD player which have the COMPU LINK-1/SYNCHRO jacks for COMPU LINK performance. (See page 10 for details.)



1 Location of Main Parts

■ Top view

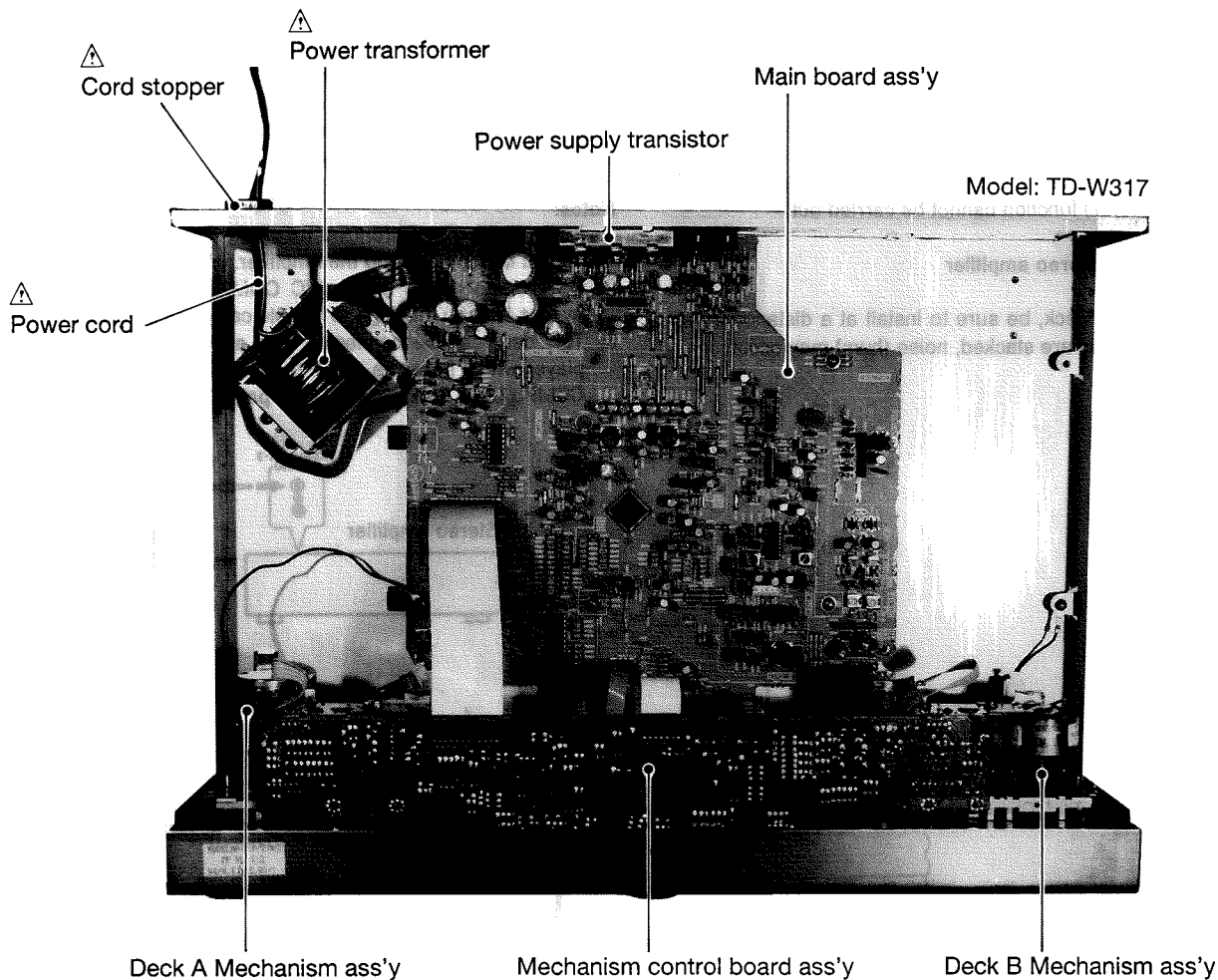


Fig. 1 - 1

■ Mechanism

◆ Top view

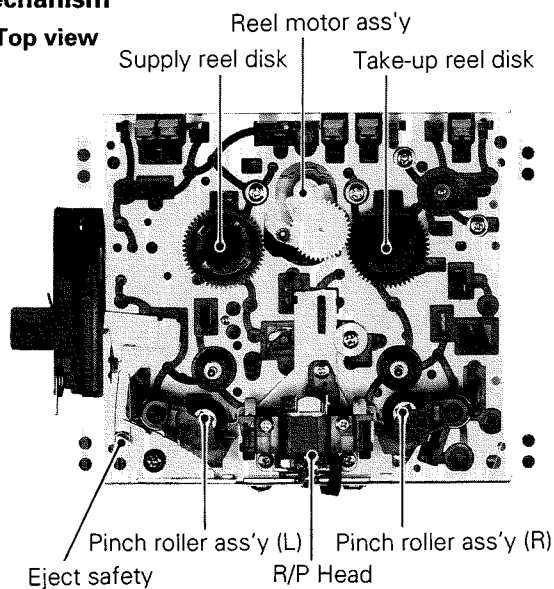


Fig. 1 - 2

◆ Bottom view

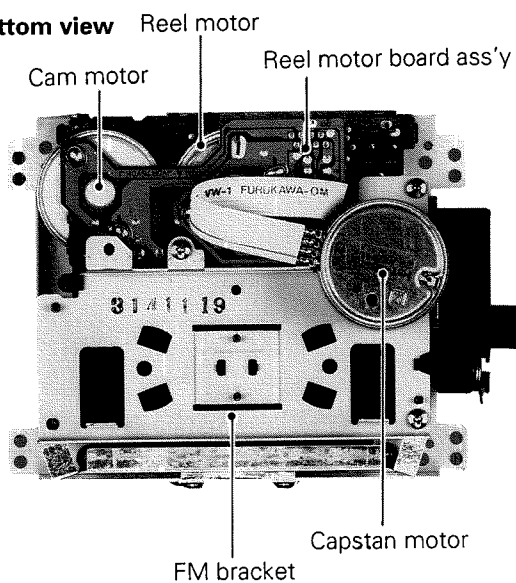


Fig. 1 - 3

2 Removal of main parts

■ Enclosure Section

◆ Top cover (Fig. 2 - 1)

1. Remove four screws ① retaining the top cover from both side.
2. Remove two screws ② retaining the top cover from the back side.
3. To remove the top cover ,slide in direction of allow and lift away (refer to Fig. 2 - 1).

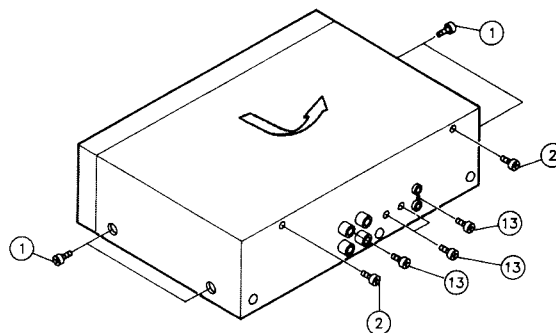


Fig. 2 - 1

◆ Front panel assembly (Fig. 2 - 2)

1. Remove the top cover as described in above.
2. Remove three screws ③ retaining the front panel ass'y from bottom side.
3. Release the front panel ass'y from two pawls in the front and bottom sides and draw it to the front side.
4. Disconnect all connectors between the mechanism ass'y, front panel ass'y and the main board ass'y.

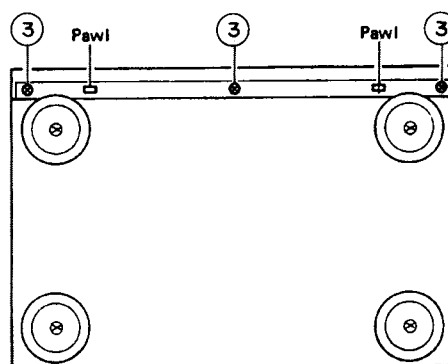
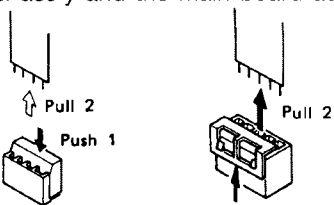


Fig. 2 - 2



Push up with a screwdriver, etc. 1

◆ Mechanism assembly

★ Although the mechanism assembly can be removed without detaching the front panel ass'y, it is recommended to detach the front panel ass'y to do the work with ease.

1. Remove two screws ④ or two screws ⑤ from the corners of the mechanism. (Fig. 2 - 5)
2. Open the door and remove the mechanism ass'y.
(At this time, door lock arm spring and door lock arm are removed together with.)
3. For moving the mechanism ass'y only, disconnect the following wirings.

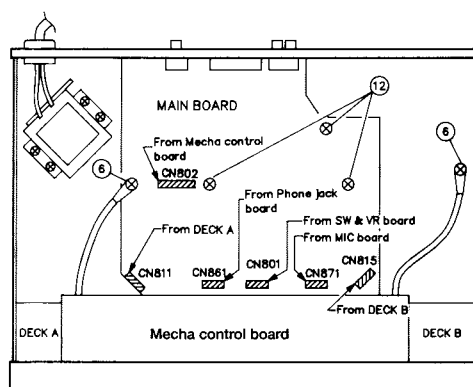


Fig. 2 - 3

a) Mechanism ass'y side (Fig. 2 - 4)

Top side connector of the cam switch board (CN2).

Connector of the motor board (CN1). (Board to Board connector)

b) Main board ass'y side (Fig. 2 - 3)

Disconnects CN802 from Mecha control board, CN801 from Switch & Volume board ass'y, CN871 from Mic board ass'y and CN861 from H. Phone jack board ass'y.

Disconnect wire coming from the head mount ass'y CN811 at deck A and CN815 at deck B.

Remove two screws ⑥ and remove the two GND wires from Mecha control board ass'y.

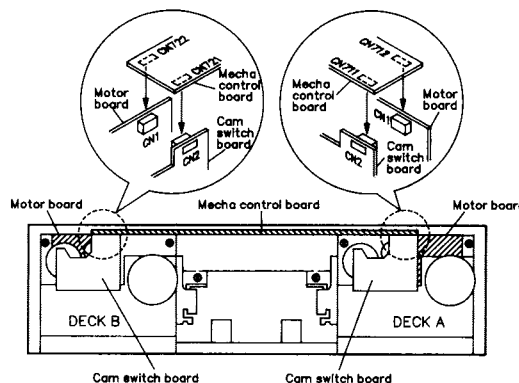


Fig. 2 - 4

◆ **Eject arm ass'y** (Fig. 2 - 5)

1. Remove two screws ⑦ retaining the eject arm ass'y and pull it out.

◆ **Mechanism holder and door ass'y** (Fig. 2 - 8)

1. Remove four screws ⑧ retaining the mechanism holder.
2. Remove the damper ass'y (for easy reassembling work).
Insert an originary (-) screwdriver or the like in to the gap between the damper and the front panel to disengage the pawl, and draw the damper ass'y outwards. (see Fig 2 - 6)
3. Remove the arm shaft of the cassette holder (door ass'y) from the mechanism holder. (The door spring is engaged with the door side by the longer side.)
(see Fig. 2 - 7)
4. Remove the eject spring from lock lever and mechanism ass'y. (see Fig. 2 - 7)

◆ **Switch & Volume board ass'y** (Fig. 2 - 8)

1. After removing the mechanism holder, proceed to the following steps.
2. Pull out the INPUT volume knob.
3. Remove five screws ⑨ retaining the Switch & Volume P.C. board.
4. Lift the board right upwards to remove it since it is connected to the mechanism control key board with connector pins (CN603/CN604).
5. Disconnect CN602 coming from Mecha control board ass'y (CN702).

◆ **Headphone jack board ass'y and Mic jack board ass'y** (Fig. 2 - 8)

1. After removing the Switch & Volume board ass'y, pull the H. Phone jack board ass'y and Mic jack board ass'y outwards while pushing it down toward the bottom side to remove it.

◆ **Key switch board ass'y** (Fig. 2 - 8)

1. Remove one screw ⑩ (DeckA or B) retaining the board ass'y.
2. Do the same for the other side.

◆ **Main board ass'y** (see Fig2 - 3, Fig 2 - 1)

1. Remove three screws ⑫ retaining the board.
2. Remove four screws ⑬ retaining the board to the rear panel.

◆ **Mechanism control board ass'y** (Fig. 2 - 8)

1. Remove two screws ⑪ retaining the board.

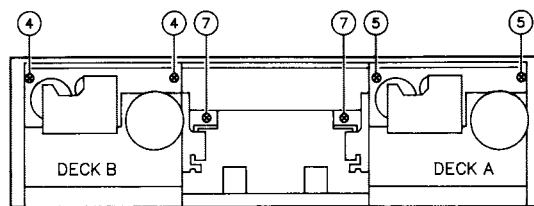


Fig. 2 - 5

How to remove damper

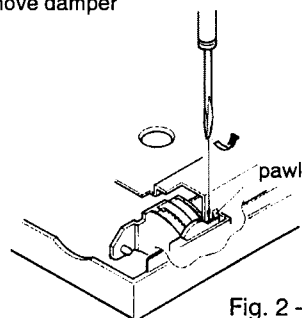


Fig. 2 - 6

How to engage the door and eject spring

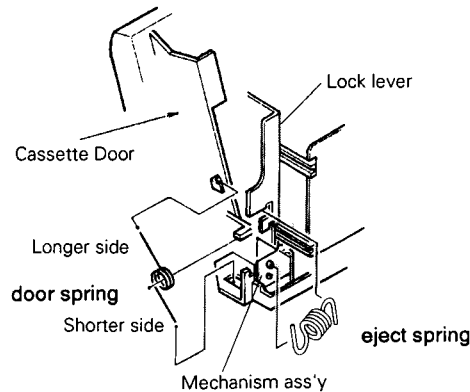


Fig. 2 - 7

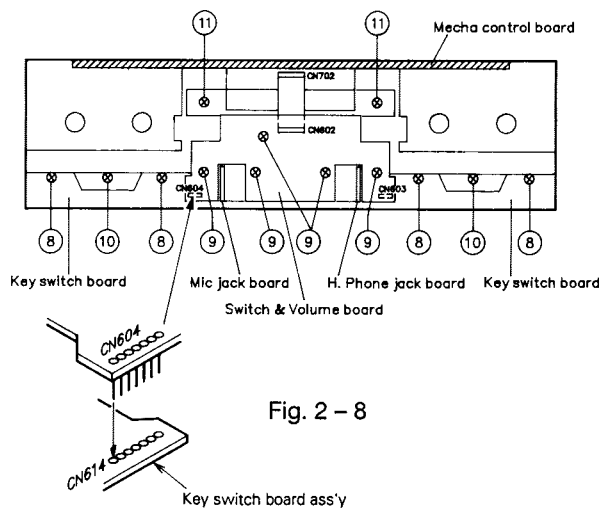


Fig. 2 - 8

● Reassembling procedure of the front panel ass'y

1. Attach the Key switch board ass'y to the panel with two screws.
2. Put the door ass'y and the mechanism holder together with on the front panel.
3. Attach the mechanism holder to the front panel ass'y with two screws.
4. Engage the door spring properly.
5. Install the damper. (Push the pawl side last to engage it.)
6. Attach the Mecha control board ass'y to the panel with two screws.
7. Install the eject arm ass'y.
8. Attach the Switch & Volume board ass'y to the panel with five screws.
9. Install the mechanism ass'y.
10. Hook the eject spring between lock lever and mechanism ass'y.

■ Cassette mechanism section

◆ Head mount assembly (Fig2-9, Fig2-10)

1. Remove three screws ① retaining the head mount ass'y.

◆ Pinch roller assembly (Fig. 2 - 9, Fig. 2 - 11)

1. Remove the pinch roller and pinch roller spring by disengaging the pawl hooking it.
2. For reengaging the pinch roller and pinch roller spring, refer to Fig. 2 - 11.

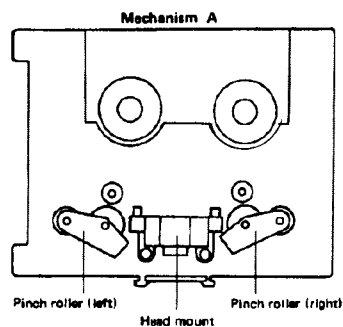


Fig. 2 - 9

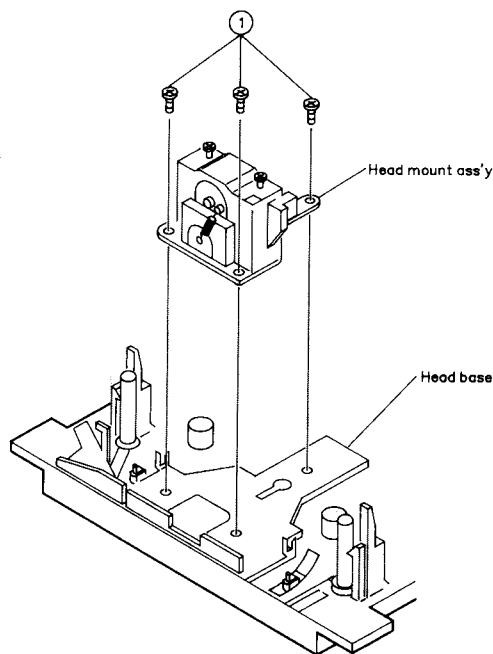


Fig. 2 - 10

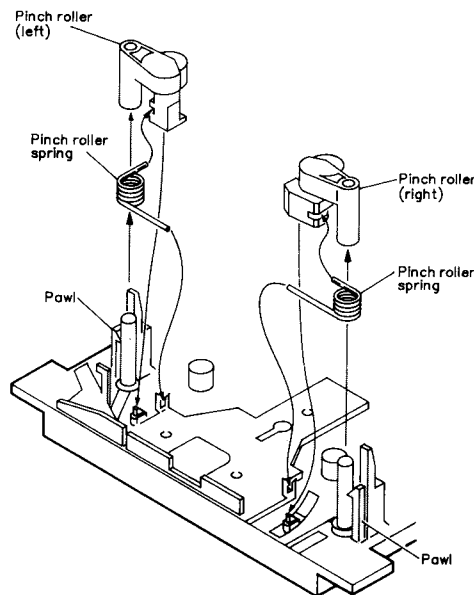


Fig. 2 - 11

◆ **FM bracket/Capstan motor assembly (Mechanism A and B)**

1. Remove soldering of connector FM on Reel motor board. (Fig. 2 - 12)
2. Remove three screws ② and disengage two pawls, and then the FM bracket and the capstan belt can be removed. (Fig. 2 - 12, 2 - 13)
3. Remove two screws ③ retaining the capstan motor from the FM bracket. (Fig. 2 - 12)
4. For reengaging the capstan belt, refer to Fig. 2 - 13.

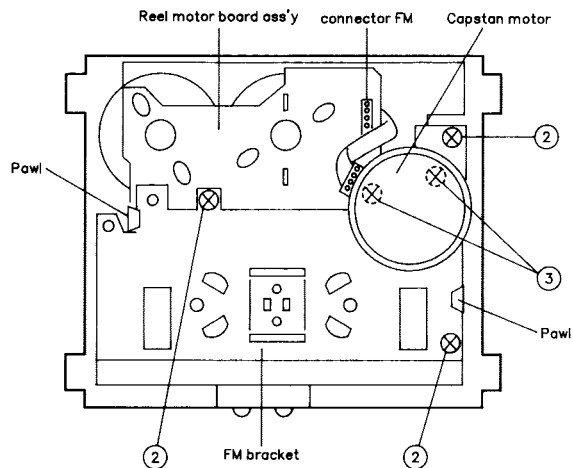


Fig. 2 - 12

◆ **Flywheel ass'y (Fig. 2 - 14)**

1. Remove two screws ④ and remove the shield plate.
2. Pull up the Flywheel (L) and (R) and remove them.

◆ **Reel motor board (Fig. 2 - 14)**

1. Remove four soldering of the Reel motor and Actuator motor and remove the Reel motor board.

◆ **Reel motor board (Fig. 2 - 15)**

1. Remove two screws ⑤ from rear of chassis and remove the Reel motor ass'y toward upward.

◆ **Actuator motor ass'y (Fig. 2 - 15)**

1. Remove two screws ⑥ from rear of chassis and remove the Actuator motor ass'y toward upward.

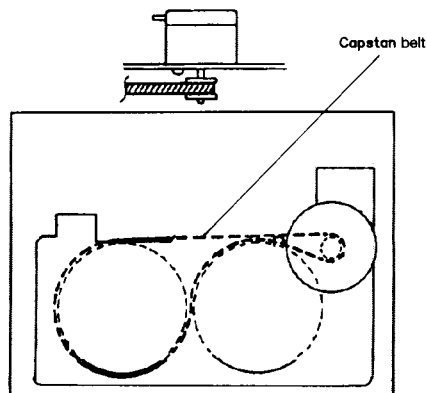


Fig. 2 - 13

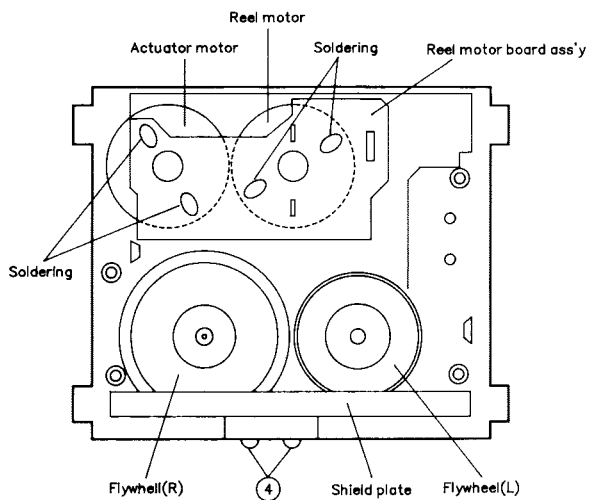


Fig. 2 - 14

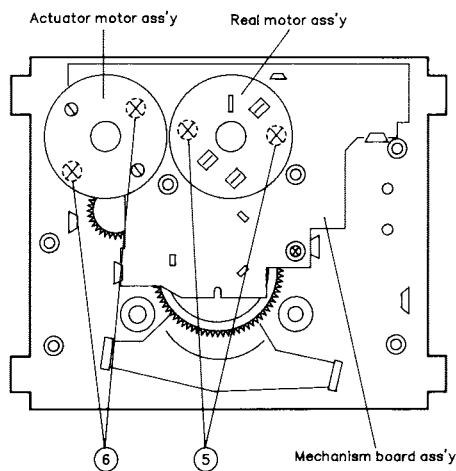


Fig. 2 - 15

◆ **Mechanism board ass'y** (Fig. 2 - 16)

1. Remove one screw ⑦ retaining the board.
2. Release the Mechanism board from five pawls.
3. For gearing between the Mechanism board and Control cam, see the magnified illustration in a circle.

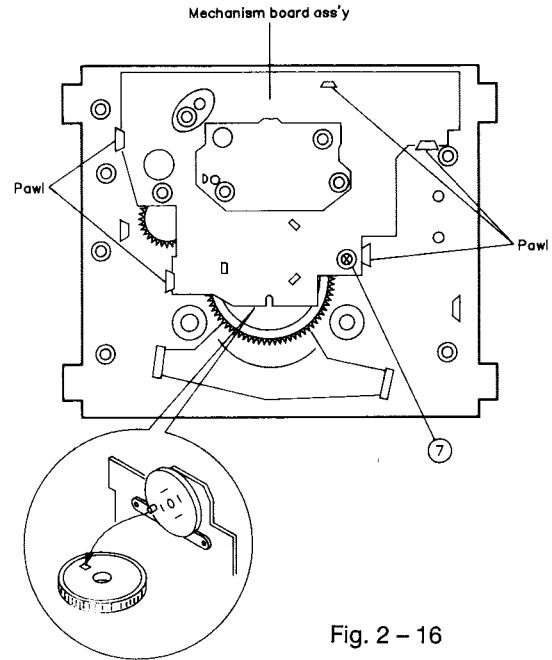


Fig. 2 - 16

◆ **Control cam** (Fig. 2 - 17, 2 - 18)

1. Release the control cam from two pawls. (Fig. 2 - 17)
2. For assembling the control cam, fits ① zone (groove) of control cam to ① position of Pinch lever and ② zone (groove) to ② position of Head base shaft. (Fig. 2 - 17, 2 - 18)

◆ **Actuator gear A and B (small)** (Fig. 2 - 17)

1. Release the actuator gear A (small) from one pawl and remove it toward upward.
2. Release the actuator gear B (small) from one pawl and remove it toward upward.

◆ **Actuator gear (large)** (Fig. 2 - 17)

1. After removing the Control cam, actuator gear A (small) and actuator gear B (small), remove the Actuator gear (large).

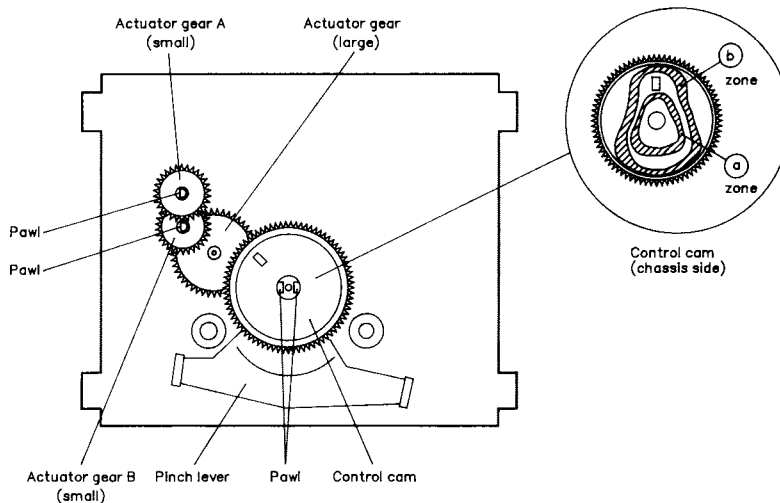


Fig. 2 - 17

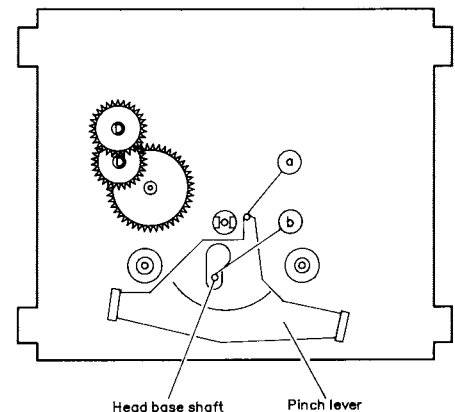


Fig. 2 - 18

3 Main Adjustment

◆ Measuring instruments required for adjustment

- (1) Low – frequency oscillator(oscillation frequency 50Hz – 20kHz, 0dB output with 600 Ω impedance)
- (2) Attenuator(600 Ω impedance)
- (3) Electronic voltmeter
- (4) Standard tapes
 VTT712 (tape speed, wow and flutter measurement)
 VTT727 (400Hz reference level)
 TMT735 (1 k, 12.5 k), VTT739 (63, 1 k, 10 k) (playback frequency)
 VTT703 or VTT703L (10 kHz), VTT704 (12.5 kHz) (azimuth)
 TMT6447, TM6448 (music scan)
- (5) Recording reference tapes
 AC-224 (Normal), AC-513 (TDK SA) (CrO₂)
 AC-712 (TDK MA) (Metal)
- (6) 600 Ω resistors(for attenuator matching)
- (7) Distortion meter(bandpass filter)
- (8) Torque gauge (cassette) for CTG-N, TW2111, TW2121, TS2231 and TW2241, mechanism adjustments

- (9) Wow & flutter gauge
- (10) Freequency counter gauge
- (11) M300 gauge
- (12) Band pass filter

◆ Power supply voltage

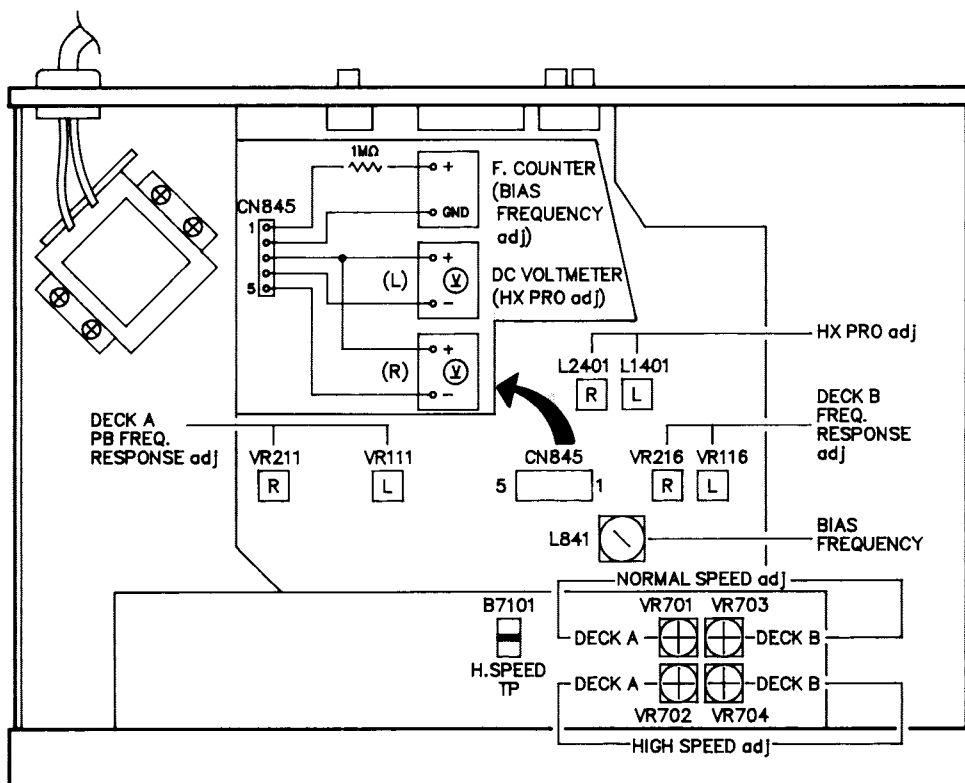
Set the line voltage selector switch to 240V/ 230V/ 220V/ 127V/ 120V/ 110V according to ⇄ your local voltage.

- AC240V, 50/60Hz :A/B version
- AC230V, 50/60Hz :E/EN/G version
- AC120V, 60Hz :C/J version
- AC230/127/110V, 50/60Hz:U/UT version

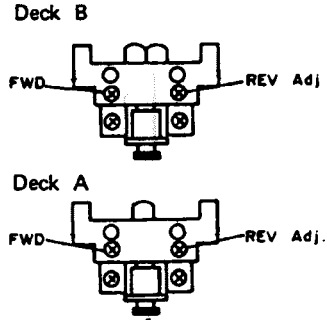
- (13) Standard position of the switch and volume knob

Switches and volume knobs	Setting position
INPUT LEVEL	: MAXIMUM
DOLBY NR	: OFF
REVERSE MODE	: ⇄
PITCH CONTROL	: CENTOR
MIC MIXING LEVEL	: MAXIMUM
COMPU CAL LED	: OFF

◆ Location of Adjustment



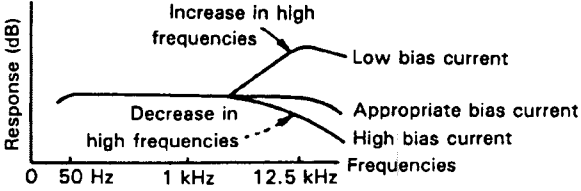
◆ Mechanism Adjustment

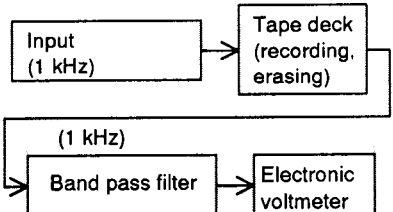
Item	Conditions	Adjustment and Confirmation	Standad value	Adjust point
Adjusting Head azimuth	Test tape :VTT704 (12.5kHz)	<ol style="list-style-type: none"> 1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VTT704 (12.5kHz) test tape. 3. Adjust the head angle with the screw (FWD and REV) until the reading of the electronic voltmeter becomes maximum for both channels (phase difference must be "0".) 4. Repeat the adjustment in FWD and REV modes as well as for the decks A and B. 	Maximum	Screws (FWD, REV) 
Adjusting motor speed	<ol style="list-style-type: none"> 1. For high speed adjustment, set the deck for play mode and shortcircuit between B7101 and GND. 2. Do not do anything while B7101 and GND are shortcircuited. 	<ol style="list-style-type: none"> 1. Connect a frequency counter to the LINEOUT terminals. 2. Perform normal speed adjustment first, and then do high speed adjustment 3. Play back the VTT712 test tape. 4. Adjust for deck A : Adjust VR701 for normal speed at 300Hz, and VR702 for high speed at 600Hz Adjust for deck B : Adjust VR703 for normal speed at 3000Hz, and VR704 for high speed at 6000Hz. 5. Difference in FWD and REV frequencies must be less than 48Hz. 	Normal speed: Deck A, B; 3000 ± 15Hz High speed : Deck A, B; 6000 ± 30Hz	Deck A : Normal; VR701 High ; VR702 Deck B ; Normal; VR703 High; VR704
Checking wow and flutter		Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.17% (WRMS).	0.17% (WRMS)	
Checking play back torque		Employ a torque testing cassette tape (TW2111[FWD] / TW2121[REV] for the checking, or remove the cassette cover and use a torque gauge.	27 – 70 gr-cm	
Checking fast forward – rewind torque		Measure the torque in the fast forward mode in the same manner as in the above. Test cassette : TW2231 (FWD), TW2241 (REV)	90 – 200gr – cm	

◆ Electrical Adjustment Procedure

Item	Check and Adjustment			
1 Cheking DOLBY circuit (Rec.mode) (BIAS-CUT)	Signal input: LINE IN Cal.level: 400Hz, - 8dBs Output terminal TP : NR IC831 (53) &(8) pin.	DOLBY B (Rec)	Input signal (Frequency, level)	Output raise value, deviation value
			1kHz, cal. - 40dB	+5.7 dB ± 2 dB
		DOLBY C (Rec)	5kHz, Cal. - 20dB	+3.5dB ± 1.5 dB
			1kHz, Cal.	0 dB ± ^{0.5} 1.0 dB
			1kHz, Cal. - 40	+16.2 dB ± ³ 2 dB
			5kHz, Cal. - 20	+2.9 dB ± 2.5 dB
1kHz, Cal.	0 dB ± 1 dB			

Item	Conditions	Adjustment and Confirmation	Standard	Adjusting
*2 Play back level check	Test tape VTT727 : 400Hz	Play back VTT727. Check that the level at LINE OUT is -4.5 dB ± 1dB. Difference between Lch and Rch must be less than 1 dB at LINE OUT.	LINE OUT -4.5 dB ± 1dB Phone Out -20.5 dB ± 2 dB	
*3 Playback frequency response adjustment	Test tape TMT735:1kHz/12.5kHz VTT739: 1kHz/63Hz	Play back TMT735 test tape, and adjust VR116, VR216 (deck [B]) and VR111, VR211 (deck [A]) so that deviation of 12.5 kHz to that of 1 kHz is 0.5 ± 0.5 dB (deck [A]) and 0 ± 0.5 dB (deck [B]). Then, play back VTT739 test tape to confirm that deviation of 63 Hz to 1kHz is +2 ± 3 dB.	with 12.5kHz as reference, 0.5 ± 0.5 dB (deck [A]) and 0 ± 0.5 dB (deck [B]) at 1 kHz 63 Hz (check): +2 ± 3 dB	Deck [B] L: VR116 R: VR216 Deck [A] L: VR111 R: VR211
*4 Bias frequency adjustment	Frequency counter TP: CN845 pin 1	Connect frequency counter to the CN845 and adjust L8401 so that the counter reads 95 kHz.	95 kHz ± 1 kHz	Deck [B] L8401
*5 Slave oscillation (HX PRO) adjustment	DC.Voltmeter TP: CN845	This step must be performed after the bias frequency adjustment. Load a metal tape and set the deck to the recording mode. Adjust L1401 and L2401 to minimize respective voltages of CN845 (PIN 3 - 4) at Lch and (PIN 3 -5) at Rch.	Minimum	Deck [B] L-ch : L1401 R-ch : L2401
6 Input sensitivity level check		1. Supply a 1kHz signal to the LINE IN terminals at -20dBs, confirm that LINE OUT level is -8dBs. 2. Confirm that difference level between left and right within 2dB.	LINE IN : -20dBs ± 2 dB	

Item	Conditions	Adjustment and Confirmation	Standard	Adjusting
*7 REC/PB frequency response check	LINE INRUT level : Ref. - 20dB (- 39dBs ± 2dB) MIC INPUT level : Ref. -20dB (-88dBs ± 3dB) NR SWITCH : OFF	This step must be performed after the slave oscillation adjustment. Record the 1 kHz and 12.5 kHz sig- nals at the level of - 20 dB (20 dB lower than the reference level). Playing back the recorded signals, check that the level of the 12.5 kHz signal is 0 ± 2 dB to the level of the 1 kHz signal. 	12.5 kHz level: 0 ± 2 dB higher than the 1kHz level.	
8 Recording/ playback sensitivity check		1. Supply a 400Hz signal to the LINE IN terminals record a 400Hz signal at reference level of -20dB. 2. Confirm that REC indicator should turn on when LINE OUT level is -28dBs during recording.	Normal, Chrome, Metal: -28dBs ±1 dB	
9 Maximum out put check		Supply 1 kHz signal to the LINE IN terminal in the Rec. monitoring mode, and read non-clipped signal level at the LINE IN terminal	LINE OUT: more than 5 dBs PHONES OUT: more than - 16dBs	
10 Checking record/ playback distortion		1)Record a 1 kHz, - 19 dBs signal to LINE IN terminals. 2)Play back the recorded part, Check the output with a distortion meter to see if the value conforms to the standard value.	Normal: Less than 2% CrO2/Metal: Less than 3% Metal tape:	
11 Checking signal to noise ratio recording playback		1)Record a 1 kHz, - 19 dBs signal, Stop the input bu disconnecting from the terminal to perform non-signal recording. 2)Play back the recorded part.Measure the - 8 dBs recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.	Normal, More than 40 dB Metal, chrome; More than 41 dB	

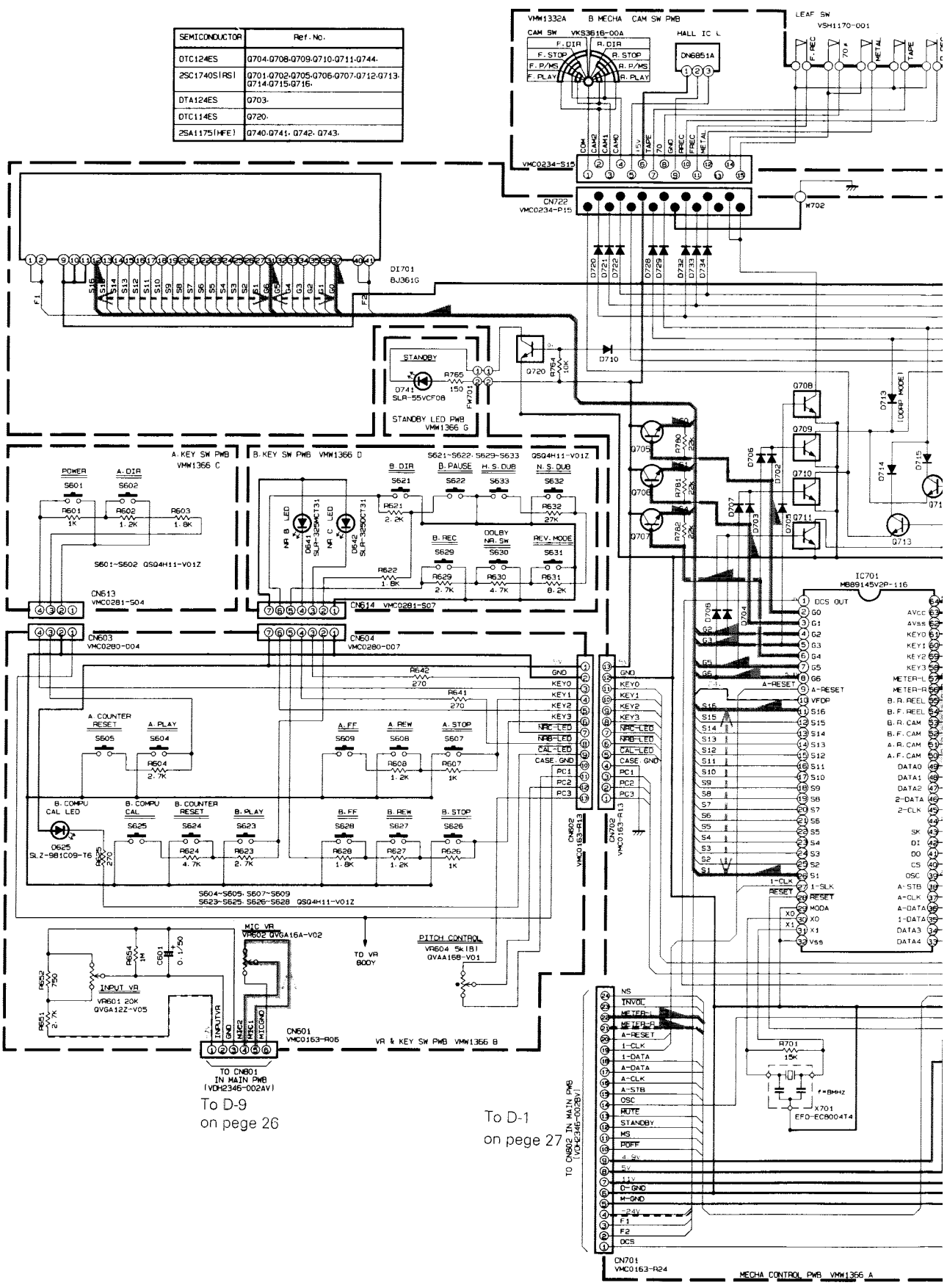
Item	Conditions	Adjustment and Confirmation	Standard	Adjusting
12 Checking erasing coefficient		1)Apply a 1 kHz, +20 dBs signal to the LINE IN terminals. 2)Perform recording with the signal enhanced by 20 dB 3)Erase a part of the recording. 4)Measure the output difference between the erased part and non- erased part to compare with an electronic voltmeter. For the measurement using a metal tape, connect a band pass filter between the deck and the electronic voltmeter. 	More than 55 dB	

6 Standard Schematic Diagrams

1 2 3 4 5

A
B
C
D
E
F
G

SEMICONDUCTOR	Ref. No.
DTC124ES	Q704-Q708-Q709-Q710-Q711-Q744
2SC1740S(RS)	Q701-Q702-Q705-Q706-Q707-Q712-Q713-Q714-Q715-Q716
DTA124ES	Q703
DTC114ES	Q720
2SA1175(HFE)	Q740-Q741-Q742-Q743



To D-9
on page 26

To D-1
on page 27

To CN602 IN MAIN PWB
100% (0.02A)

CN701
VMC0163-R24
MECHA CONTROL PWB VMH1366 A

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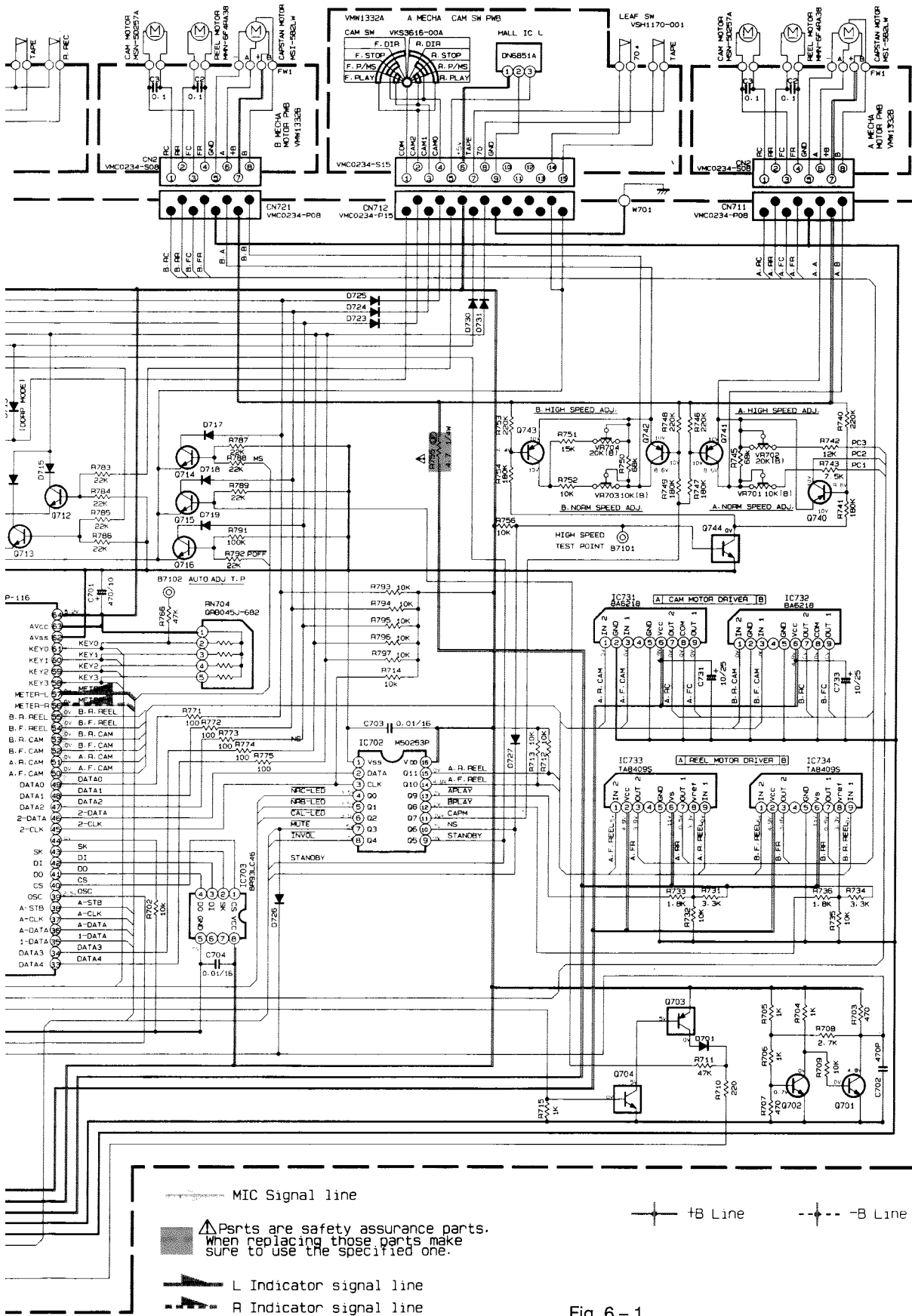
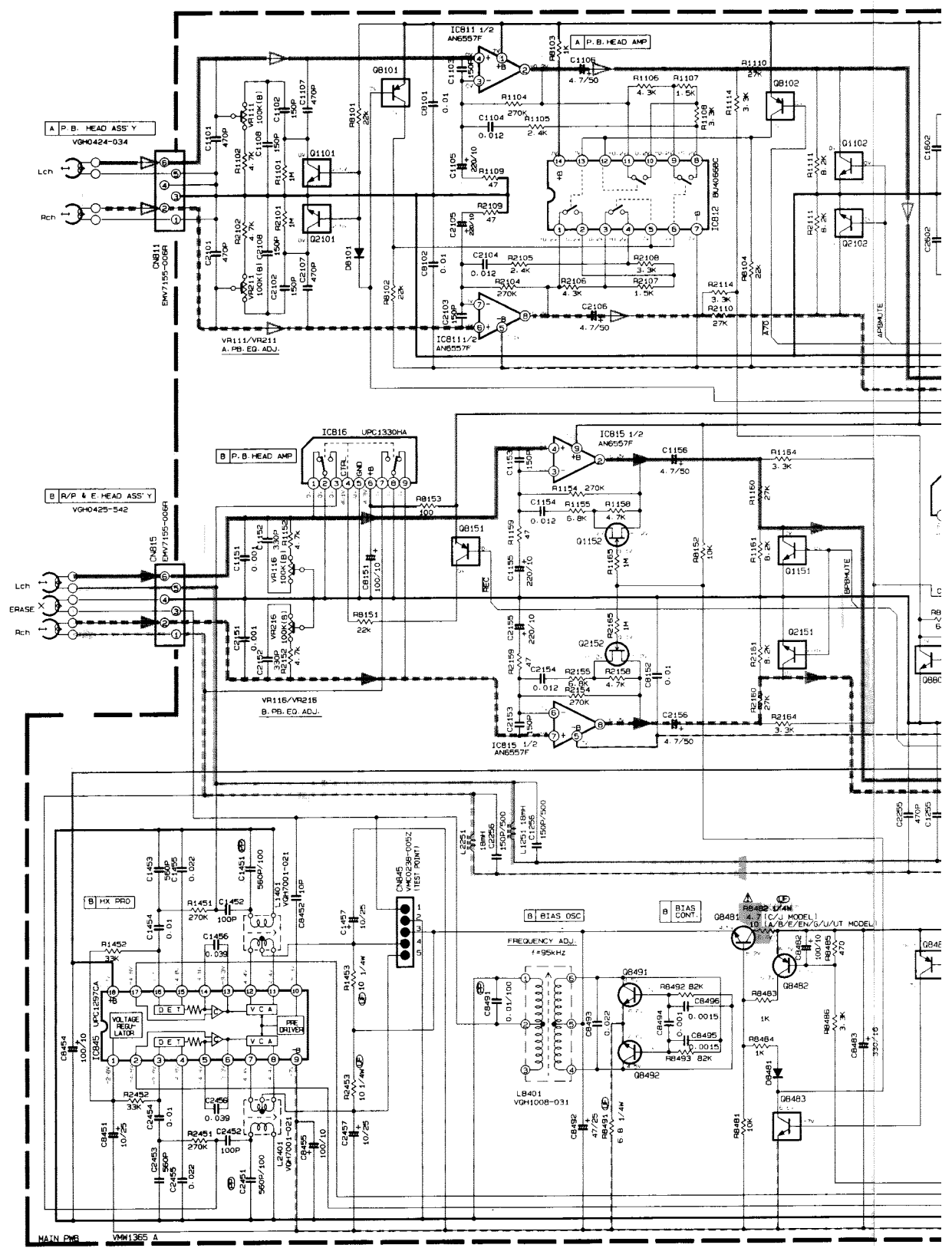


Fig. 6 - 1

1 2 3 4 5

A
 B
 C
 D
 E
 F
 G



- ▶ B:L Playback signal line
- ◀ B:R Playback signal line
- ▶ A:L Playback signal line
- ◀ A:R Playback signal line

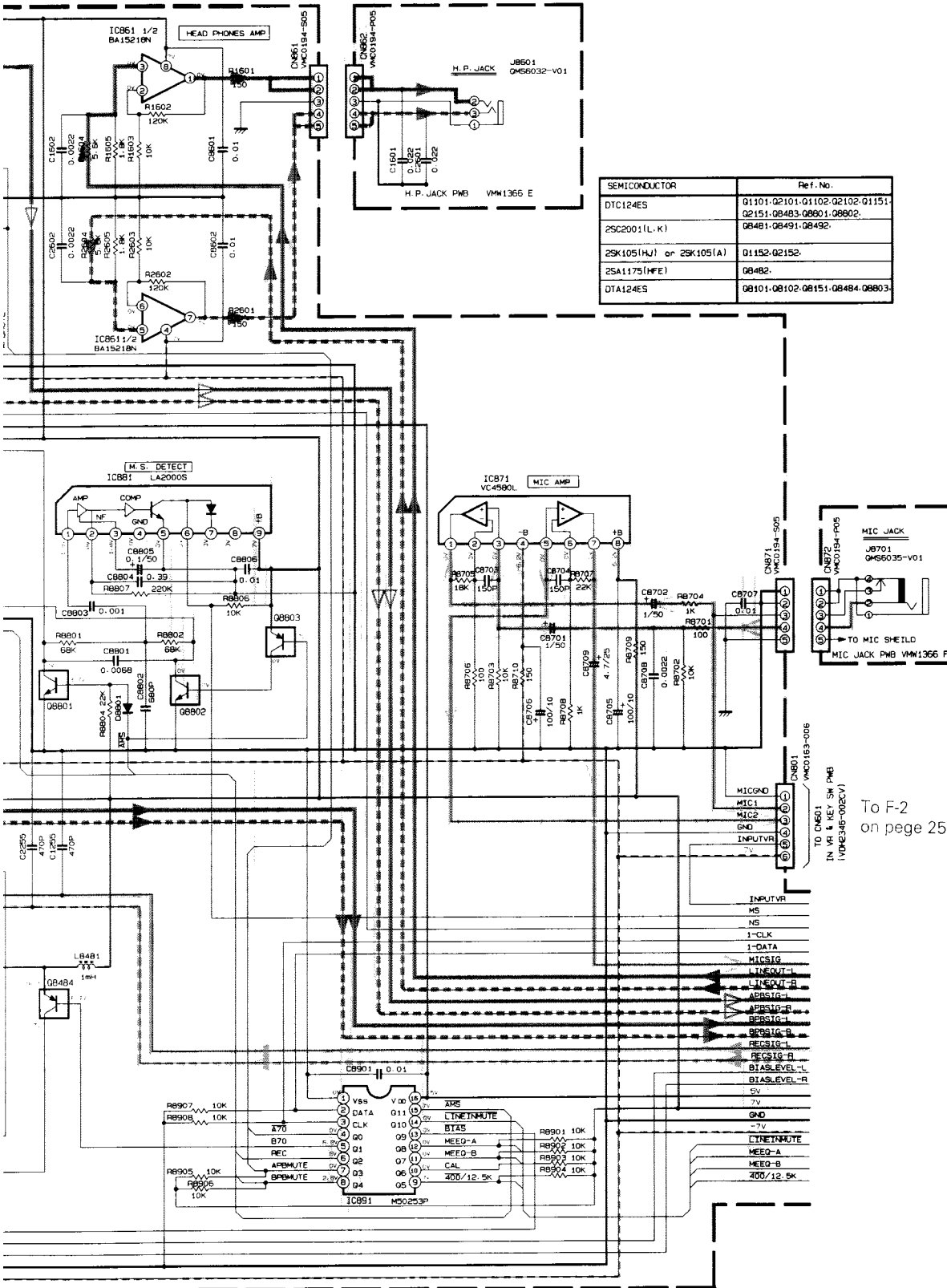
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SEMICONDUCTOR	Ref. No.
DTC124ES	01101-02101-01102-02102-01151-02151-08483-08801-08802
2SC2001(L, K)	08481-08491-08492
2SK105(H, J) or 2SK105(A)	01152-02152
2SA1175(H, F, E)	08482
DTA124ES	08101-08102-08151-08484-08803

To F-2
on page 25

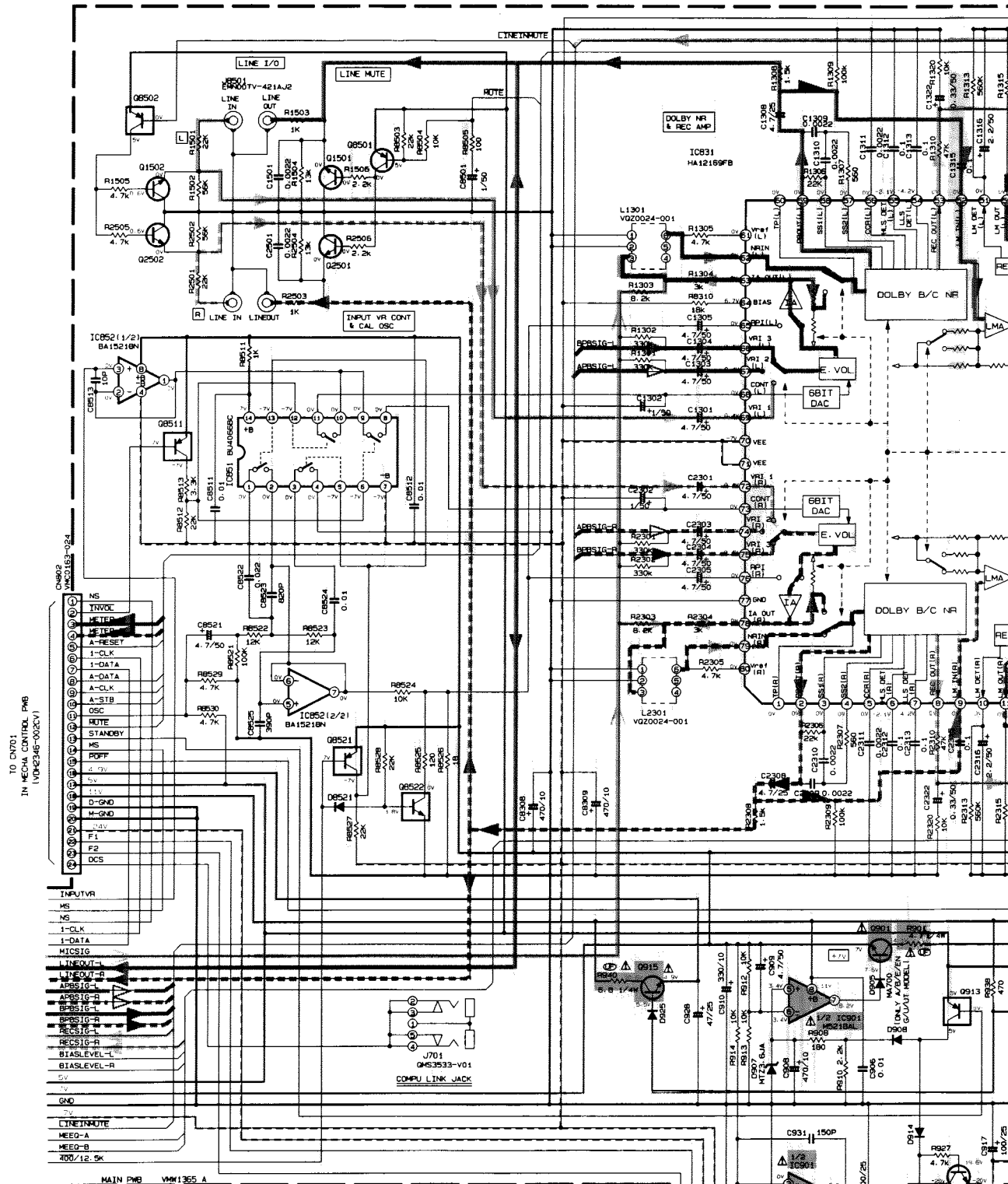
— L Recording signal line
— R Recording signal line
— MIC Signal line

— +B Line
- - - -B Line

△ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

Fig. 6 - 2

To F-4
on page 25



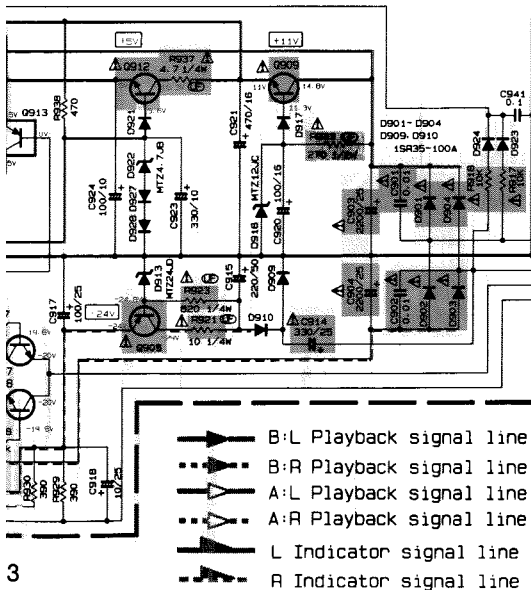
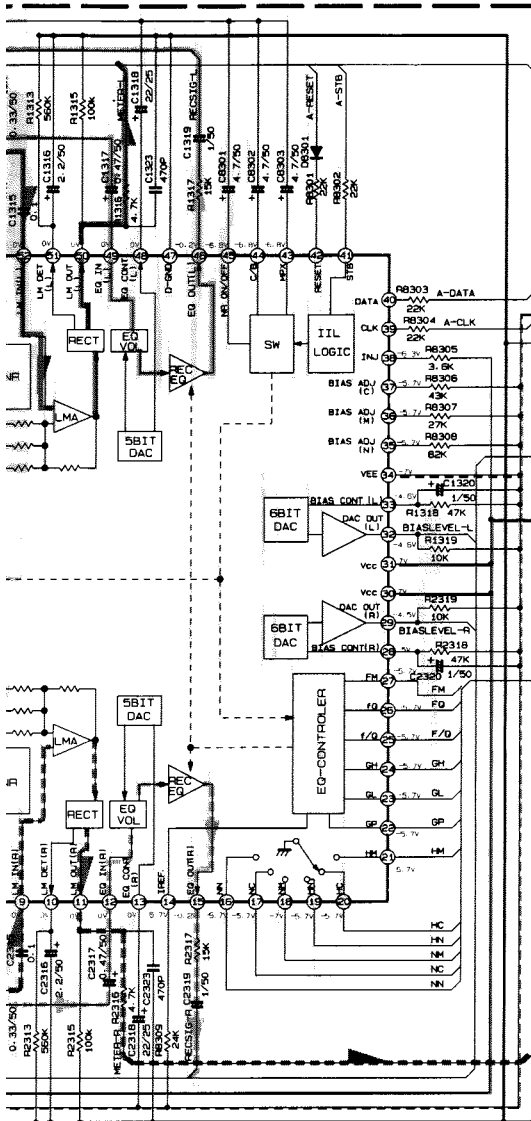
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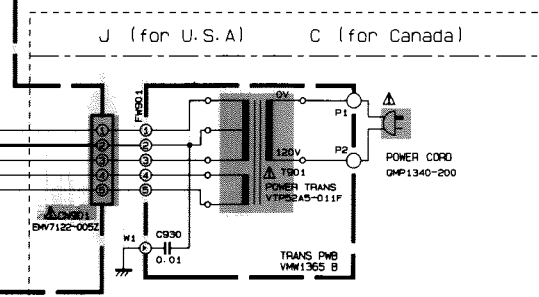
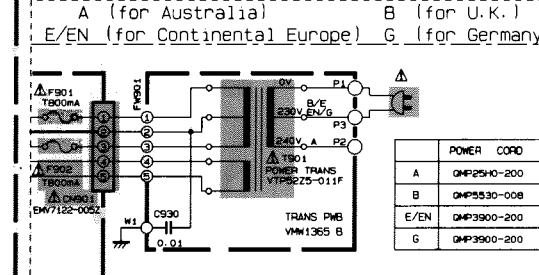
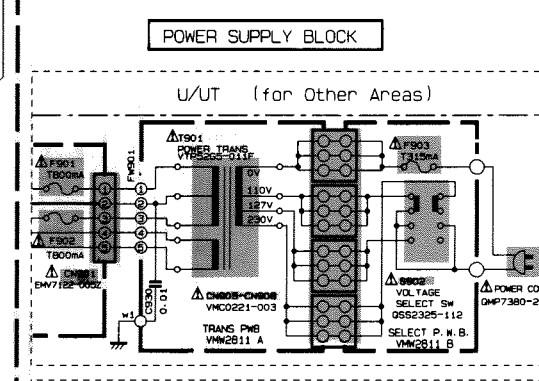
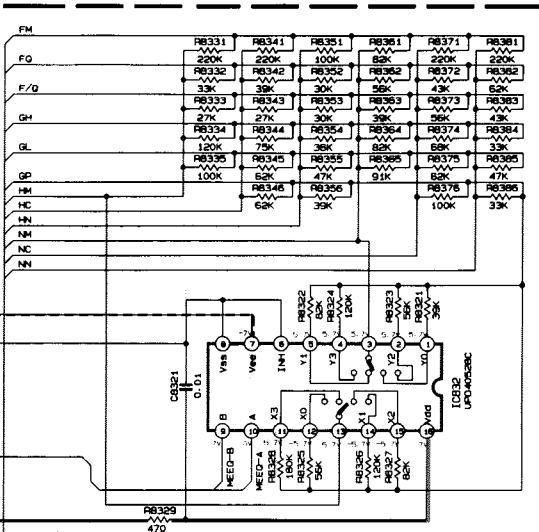
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10



- B:L Playback signal line
- B:R Playback signal line
- A:L Playback signal line
- A:R Playback signal line
- L Indicator signal line
- R Indicator signal line



- L Recording signal line
- R Recording signal line
- MIC Signal line
- +B Line
- B Line

A
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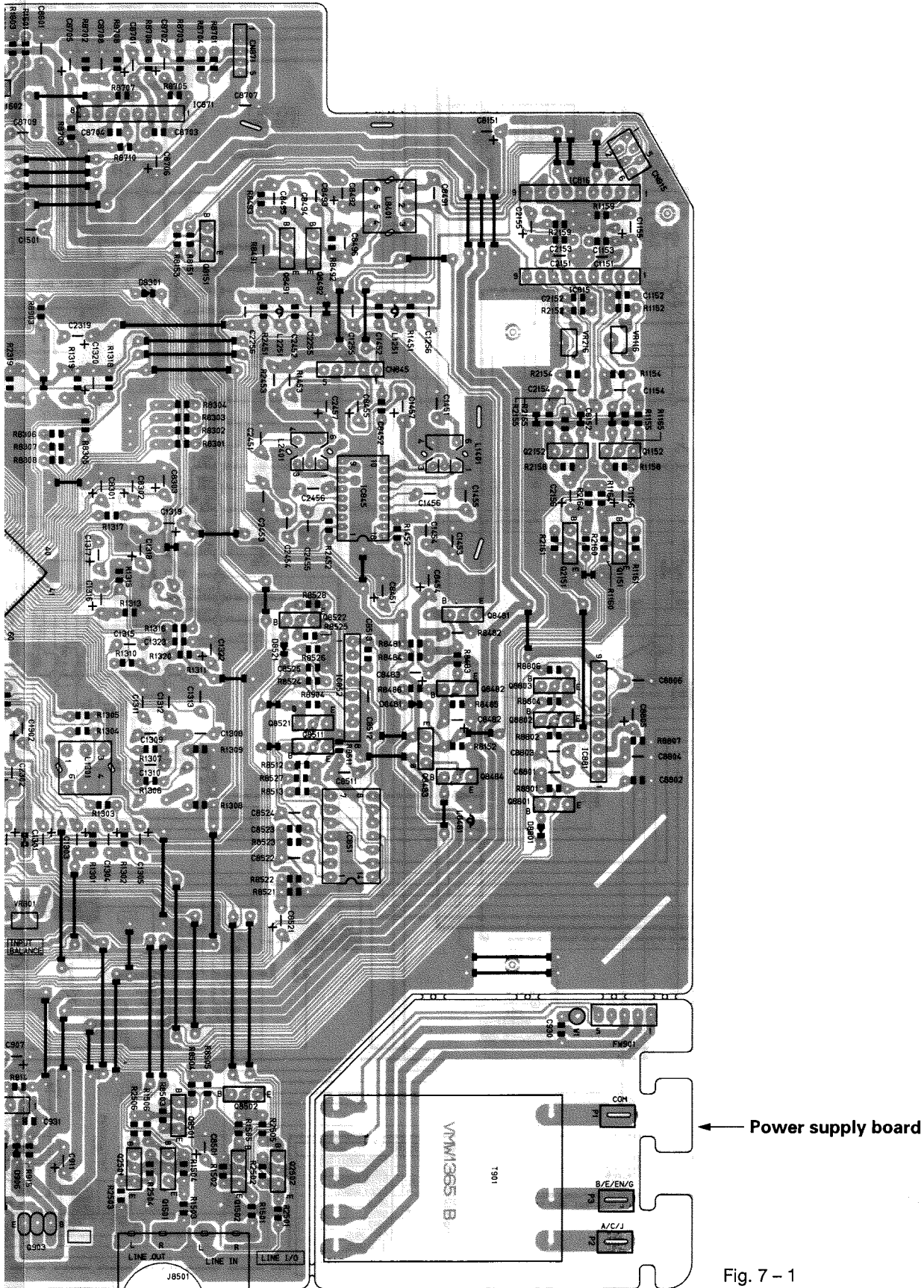


Fig. 7 - 1

⚠ Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

● Main Board Parts List

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 901	QCF11HP-103	C. CAPACITOR	.010MF +100: -0%	
C 902	QCF11HP-103	C. CAPACITOR	.010MF +100: -0%	
C 903	QETB1EM-228N	E. CAPACITOR	2200PF 20% 25V	
C 904	QETB1EM-228N	E. CAPACITOR	2200PF 20% 25V	
C 906	QCF11HP-103	C. CAPACITOR	.010MF +100: -0%	
C 907	QET41EM-107	E. CAPACITOR	100MF 20% 25V	
C 908	QET41AM-477	E. CAPACITOR	4.70MF 20% 10V	
C 909	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C 910	QETC1AM-337ZN	E. CAPACITOR	330MF 20% 10V	
C 911	QETC1AM-337ZN	E. CAPACITOR	330MF 20% 10V	
C 914	QETC1EM-337ZN	E. CAPACITOR	330MF 20% 25V	
C 915	QETC1HM-227ZN	E. CAPACITOR	220MF 20% 50V	
C 917	QET41EM-107	E. CAPACITOR	100MF 20% 25V	
C 918	QET41EM-106	E. CAPACITOR	10MF 20% 25V	
C 920	QET41CM-107	E. CAPACITOR	100MF 20% 16V	
C 921	QET41CM-477	E. CAPACITOR	4.70MF 20% 16V	
C 923	QETC1AM-337ZN	E. CAPACITOR	330MF 20% 10V	
C 924	QET41AM-107	E. CAPACITOR	100MF 20% 10V	
C 928	QET41EM-476	E. CAPACITOR	4.7MF 20% 25V	
C 930	QCVB1CM-103Y	C. CAPACITOR	.010MF 20% 16V	
C 931	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C 941	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
CN801	VMC0163-006	CONNECTOR		
CN802	VMC0163-024	CONNECTOR		
CN811	EMV7155-006R	CONNECTOR		
CN815	EMV7155-006R	CONNECTOR		
CN845	VMC0238-005Z	CONNECTOR		
CN861	VMC0194-S05	CONNECTOR		
CN862	VMC0194-P05	CONNECTOR		
CN871	VMC0194-S05	CONNECTOR		
CN872	VMC0194-P05	CONNECTOR		
CN901	EMV7122-005Z	SOCKET		
C1101	QCBBIHK-471Y	C. CAPACITOR	4.70PF 10% 50V	
C1102	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C1103	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C1104	QFN41HJ-123	M. CAPACITOR	.012MF 5% 50V	
C1105	QET41AM-227	E. CAPACITOR	220MF 20% 10V	
C1106	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C1107	QCBBIHK-471Y	C. CAPACITOR	4.70PF 10% 50V	
C1108	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C1151	QFN41HJ-102	M. CAPACITOR	1000PF 5% 50V	
C1152	QCBBIHK-331Y	C. CAPACITOR	330PF 10% 50V	
C1153	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C1154	QFN41HJ-123	M. CAPACITOR	.012MF 5% 50V	
C1155	QET41AM-227	E. CAPACITOR	220MF 20% 10V	
C1255	QCS11HJ-471	C. CAPACITOR	4.70PF 5% 50V	
C1256	QCS2HJ-151ZV	C. CAPACITOR	150PF 5% 500V	
C1301	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C1302	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C1303	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C1304	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C1305	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C1308	QEN41EM-475	NP. E. CAPACITOR	4.7MF 20% 25V	
C1309	QFN41HJ-222	M. CAPACITOR	2200PF 5% 50V	

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C1310	QFN41HJ-222	M. CAPACITOR	2200PF 5% 50V	
C1311	QFN41HJ-222	M. CAPACITOR	2200PF 5% 50V	
C1312	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
C1313	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
C1315	QFLC1HJ-104ZM	M. CAPACITOR	.10MF 5% 50V	
C1316	QETC1HM-225ZN	E. CAPACITOR	2.2MF 20% 50V	
C1317	QET41HM-474	E. CAPACITOR	.47MF 20% 50V	
C1318	QETC1EM-226ZN	E. CAPACITOR	22MF 20% 25V	
C1319	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C1320	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C1322	QETC1HM-334ZM	E. CAPACITOR	.33MF 20% 50V	
C1323	QCBBIHK-471Y	C. CAPACITOR	4.70PF 10% 50V	
C1451	QFP32AJ-561ZM	PP. CAPACITOR	560PF 5% 100V	
C1452	QCBBIHK-101Y	C. CAPACITOR	100PF 10% 50V	
C1453	QCS11HJ-561	C. CAPACITOR	560PF 5% 50V	
C1454	C1-PARTS838594	M. CAPACITOR	.010MF 5% 50V	
C1455	QFLC1HJ-223ZM	M. CAPACITOR	.022MF 5% 50V	
C1456	QFLC1HJ-393ZM	M. CAPACITOR	.039MF 5% 50V	
C1457	QET41EM-106	E. CAPACITOR	10MF 20% 25V	
C1501	QCY31HK-222Z	C. CAPACITOR	2200PF 10% 50V	
C1601	QCY11HP-223	C. CAPACITOR	.022MF +100: -0%	
C1602	QCY31HK-222Z	C. CAPACITOR	2200PF 10% 50V	
C2101	QCBBIHK-471Y	C. CAPACITOR	4.70PF 10% 50V	
C2102	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C2103	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C2104	QFN41HJ-123	M. CAPACITOR	.012MF 5% 50V	
C2105	QET41AM-227	E. CAPACITOR	220MF 20% 10V	
C2106	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C2107	QCBBIHK-471Y	C. CAPACITOR	4.70PF 10% 50V	
C2108	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C2151	QFN41HJ-102	M. CAPACITOR	1000PF 5% 50V	
C2152	QCBBIHK-331Y	C. CAPACITOR	330PF 10% 50V	
C2153	QCBBIHK-151Y	C. CAPACITOR	150PF 10% 50V	
C2154	QFN41HJ-123	M. CAPACITOR	.012MF 5% 50V	
C2155	QET41AM-227	E. CAPACITOR	220MF 20% 10V	
C2156	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C2255	QCS11HJ-471	C. CAPACITOR	4.70PF 5% 50V	
C2256	QCS2HJ-151ZV	C. CAPACITOR	150PF 5% 500V	
C2301	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C2302	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C2303	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C2304	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C2305	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C2308	QEN41EM-475	NP. E. CAPACITOR	4.7MF 20% 25V	
C2309	QFN41HJ-222	M. CAPACITOR	2200PF 5% 50V	
C2310	QFN41HJ-222	M. CAPACITOR	2200PF 5% 50V	
C2312	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
C2313	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
C2315	QFLC1HJ-104ZM	M. CAPACITOR	.10MF 5% 50V	
C2316	QETC1HM-225ZN	E. CAPACITOR	2.2MF 20% 50V	
C2317	QET41HM-474	E. CAPACITOR	.47MF 20% 50V	
C2318	QETC1EM-226ZN	E. CAPACITOR	22MF 20% 25V	
C2319	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C2320	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	

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make sure to use the specified one.

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C2322	QET1HK-3342M	E. CAPACITOR	.33MF 20% 50V	
C2323	QCB1HK-471Y	C. CAPACITOR	470PF 10% 50V	
C2451	QFP32AJ-5612M	PP. CAPACITOR	560PF 5% 100V	
C2452	QCB1HK-101Y	C. CAPACITOR	100PF 10% 50V	
C2453	QCS11HJ-561	C. CAPACITOR	560PF 5% 50V	
C2454	C1-PARTS838594	M. CAPACITOR	.010MF 5% 50V	
C2455	QFLC1HJ-2232M	M. CAPACITOR	.022MF 5% 50V	
C2456	QFLC1HJ-3932M	M. CAPACITOR	.039MF 5% 50V	
C2457	QET41EM-106	E. CAPACITOR	10MF 20% 25V	
C2501	QCY31HK-222Z	C. CAPACITOR	2200PF 10% 50V	
C2601	QCF11HP-223	C. CAPACITOR	.022MF +100:-0%	
C2602	QCY31HK-222Z	C. CAPACITOR	2200PF 10% 50V	
C8101	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8102	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8151	QET41AM-107	E. CAPACITOR	100MF 20% 10V	
C8152	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8301	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C8302	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C8303	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C8308	QET41AM-477	E. CAPACITOR	470MF 20% 10V	
C8309	QET41AM-477	E. CAPACITOR	470MF 20% 10V	
C8321	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8451	QET41EM-106	E. CAPACITOR	10PF 5% 50V	
C8452	QCS11HJ-100	C. CAPACITOR	100MF 20% 10V	
C8454	QET41AM-107	E. CAPACITOR	100MF 20% 10V	
C8455	QET41AM-107	E. CAPACITOR	100MF 20% 10V	
C8482	QET41AM-107	E. CAPACITOR	100MF 20% 10V	
C8483	QET1CM-3372M	E. CAPACITOR	330MF 20% 16V	
C8491	QFP32AJ-1032M	PP. CAPACITOR	.010MF 5% 100V	
C8492	QET41EM-476	E. CAPACITOR	47MF 20% 25V	
C8493	QFLC1HJ-2232M	M. CAPACITOR	.022MF 5% 50V	
C8494	QFN41HJ-102	M. CAPACITOR	1000PF 5% 50V	
C8495	QFN81HJ-152	M. CAPACITOR	1500PF 5% 50V	
C8496	QFN81HJ-152	M. CAPACITOR	1500PF 5% 50V	
C8501	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C8511	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8512	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8513	QCS11HJ-100	C. CAPACITOR	10PF 5% 50V	
C8521	QET41HM-475	E. CAPACITOR	4.7MF 20% 50V	
C8522	QFLC1HJ-2232M	M. CAPACITOR	.022MF 5% 50V	
C8523	QCB1HK-821Y	C. CAPACITOR	820PF 10% 50V	
C8524	C1-PARTS838594	M. CAPACITOR	.010MF 5% 50V	
C8525	QCB1HK-391Y	C. CAPACITOR	390PF 10% 50V	
C8601	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8602	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8701	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C8702	QET41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C8703	QCB1HK-151Y	C. CAPACITOR	150PF 10% 50V	
C8704	QCB1HK-151Y	C. CAPACITOR	150PF 10% 50V	
C8705	QET41AM-107	E. CAPACITOR	100MF 20% 10V	
C8706	QET41AM-107	E. CAPACITOR	100MF 20% 10V	
C8707	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8708	QFN41HJ-222	M. CAPACITOR	2200PF 5% 50V	
C8709	QFN41EM-475	NP. E. CAPACITOR	4.7MF 20% 25V	
C8801	C1-PARTS848694	M. CAPACITOR	6800PF 5% 50V	

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C8802	QCB1HK-681Y	C. CAPACITOR	680PF 10% 50V	
C8803	QFN41HJ-102	M. CAPACITOR	1000PF 5% 50V	
C8804	QFV71HJ-5942M	F. ILM CAPACITOR	.39MF 5% 50V	
C8805	QET1CM-1042N	E. CAPACITOR	.10MF 20% 50V	
C8806	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
C8901	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
A D 901	1SR35-100	SI DIODE		
A D 902	1SR35-100	SI DIODE		
A D 903	1SR35-100	SI DIODE		
A D 904	1SR35-100	SI DIODE		
D 905	MA700	ZENER DIODE		A, B, E, EN
D 905	MAT00-TA	ZENER DIODE		G, U, UT
D 906	1SS133	SI DIODE		
A D 907	MT73.6JA	ZENER DIODE		
D 908	1SS133	SI DIODE		
A D 909	1SR35-100	SI DIODE		
A D 910	1SR35-100	SI DIODE		
A D 913	MT224JD	ZENER DIODE		
D 914	1SS133	SI DIODE		
D 917	1SS133	SI DIODE		
A D 918	MT1213C	ZENER DIODE		
D 921	1SS133	SI DIODE		
A D 922	MT74.7JB	ZENER DIODE		
D 923	1SS133	SI DIODE		
D 924	1SS133	SI DIODE		
D 925	1SS133	SI DIODE		
D 928	1SS133	SI DIODE		
D8101	1SS133	SI DIODE		
D8301	1SS133	SI DIODE		
D8481	1SS133	SI DIODE		
D8521	1SS133	SI DIODE		
D8801	1SS133	SI DIODE		
A HS901	VMH4011-201	HEAT SINK		
IC811	AM6557F	IC		
IC812	BU4066B	IC		
IC815	AM6557F	IC		
IC816	UPC1330HA	IC		
IC831	HA12169FB	IC		
IC832	UPD4052BC	IC		
IC845	UPC1297CA	IC		
IC851	BU4066B	IC		
IC852	BA15218N	IC		
IC861	BA15218N	IC		
IC871	VC4580L	IC		
IC881	LA2000S	IC		
IC891	M50253P	IC		
IC901	M5218AL	IC		
J 701	QMS3533-V01	JACK		
J8501	EMN001V-421AJ2	PIN JACK		
J8701	GMS6032-V01	JACK		
L1251	GMS6035-V01	JACK		
L1301	VGP0001-183	INDUCTOR		
L1301	VGZ0024-001	FILTER		
L1401	VQH7001-021	OSC. COIL (BIAS)		

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REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 913	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 914	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 915	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 917	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 918	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 921	GRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	C,J
R 921	GRZ0077-100X	FUSI.RESISTOR	10 5% 1/4W	G,U,UT
R 921	GRZ0077-100X	FUSI.RESISTOR	10 5% 1/4W	A,B,E,EN
R 923	GRD14CJ-821SX	CARBON RESISTOR	820 5% 1/4W	G,U,UT
R 923	GRD161J-821	CARBON RESISTOR	820 5% 1/6W	C,J
R 923	GRD14CJ-821SX	CARBON RESISTOR	820 5% 1/4W	A,B,E,EN
R 927	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 928	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 929	GRD161J-391	CARBON RESISTOR	390 5% 1/6W	
R 930	GRD161J-391	CARBON RESISTOR	390 5% 1/6W	
R 933	GRD121J-271	UNF.C.RESISTOR	270 5% 1/2W	
R 937	GRD14CJ-4R7SX	CARBON RESISTOR	4.7 5% 1/4W	C,J
R 937	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	G,U,UT
R 937	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	A,B,E,EN
R 938	GRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R 940	GRH144J-6R8	FUSI.RESISTOR	6.8 5% 1/4W	G,U,UT
R 940	GRH144J-6R8	FUSI.RESISTOR	6.8 5% 1/4W	A,B,E,EN
R 940	GRD14CJ-6R8SX	CARBON RESISTOR	6.8 5% 1/4W	C,J
R 1101	GRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
R 1102	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 1104	GRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R 1105	GRD161J-242	CARBON RESISTOR	2.4K 5% 1/6W	
R 1106	GRD161J-432	CARBON RESISTOR	4.3K 5% 1/6W	
R 1107	GRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 1108	GRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 1109	GRD161J-470	CARBON RESISTOR	47 5% 1/6W	
R 1110	GRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 1111	GRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 1114	GRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 1152	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 1154	GRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R 1155	GRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R 1158	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 1159	GRD161J-470	CARBON RESISTOR	47 5% 1/6W	
R 1160	GRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 1161	GRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 1164	GRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 1165	GRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
R 1301	GRD161J-334	CARBON RESISTOR	330K 5% 1/6W	
R 1302	GRD161J-334	CARBON RESISTOR	330K 5% 1/6W	
R 1303	GRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 1305	GRD161J-302	CARBON RESISTOR	3.0K 5% 1/6W	
R 1305	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 1306	GRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 1307	GRD161J-561	CARBON RESISTOR	560 5% 1/6W	
R 1308	GRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 1309	GRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 1310	GRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 1313	GRD161J-564	CARBON RESISTOR	560K 5% 1/6W	
R 1315	GRD161J-104	CARBON RESISTOR	100K 5% 1/6W	

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
L2251	VQP0001-183	INDUCTOR		
L2301	VQZ0024-001	FILTER		
L2401	VQH7001-021	OSC COIL(BIAS)		
L8401	VGH1008-031	OSC COIL(BIAS)		
L8481	VQP0001-102S	INDUCTOR		
P 1	VMZ0034-001	TAB	FOR POWER CORD	
P 2	VMZ0034-001	TAB	FOR POWER CORD	
P 3	VMZ0034-001	TAB	FOR POWER CORD	
Q 901	2SD882(P,Q)	TRANSISTOR		
Q 903	2SB772(Q,P)	TRANSISTOR		
Q 905	2SB647(CD)	TRANSISTOR		
Q 907	2SD2144S(VW)	TRANSISTOR		
Q 908	2SD2144S(VW)	TRANSISTOR		
Q 909	2SD882(P,Q)	TRANSISTOR		
Q 912	2SD468(B,C)-T	TRANSISTOR		
Q 913	DTA124ES	TRANSISTOR		
Q 915	2SD468(B,C)-T	TRANSISTOR		
Q 1101	DTC124ES	TRANSISTOR		
Q 1102	DTC124ES	TRANSISTOR		
Q 1151	DTC124ES	TRANSISTOR		
Q 1152	2SK105(H,J)-T	TRANSISTOR(FET)		
Q 1501	2SC2001(L,K)	TRANSISTOR		
Q 1502	2SC1740S(R,S)	TRANSISTOR		
Q 2101	DTC124ES	TRANSISTOR		
Q 2102	DTC124ES	TRANSISTOR		
Q 2151	DTC124ES	TRANSISTOR		
Q 2152	2SK105(H,J)-T	TRANSISTOR(FET)		
Q 2501	2SC2001(L,K)	TRANSISTOR		
Q 2502	2SC1740S(R,S)	TRANSISTOR		
Q 8101	DTA124ES	TRANSISTOR		
Q 8102	DTA124ES	TRANSISTOR		
Q 8151	DTA124ES	TRANSISTOR		
Q 8481	2SC2001(L,K)	TRANSISTOR		
Q 8482	2SA1175	TRANSISTOR		
Q 8483	DTC124ES	TRANSISTOR		
Q 8484	DTA124ES	TRANSISTOR		
Q 8491	2SC2001(L,K)	TRANSISTOR		
Q 8492	2SC2001(L,K)	TRANSISTOR		
Q 8501	2SA1175	TRANSISTOR		
Q 8502	DTA124ES	TRANSISTOR		
Q 8511	DTA124ES	TRANSISTOR		
Q 8521	DTA124ES	TRANSISTOR		
Q 8522	DTC124ES	TRANSISTOR		
Q 8801	DTC124ES	TRANSISTOR		
Q 8802	DTC124ES	TRANSISTOR		
Q 8803	DTA124ES	TRANSISTOR		
R 901	GRZ0077-4R7X	FUSE RESISTOR	4.7 5% 1/4W	G,U,UT
R 901	GRD14CJ-4R7SX	UNF.C.RESISTOR	4.7 5% 1/4W	C,J
R 901	GRZ0077-4R7X	FUSE RESISTOR	4.7 5% 1/4W	A,B,E,EN
R 902	GRD14CJ-4R7SX	CARBON RESISTOR	4.7 5% 1/4W	C,J
R 902	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	G,U,UT
R 902	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	A,B,E,EN
R 908	GRD161J-181	CARBON RESISTOR	180 5% 1/6W	
R 910	GRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 912	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

BLOCK NO. 0111111111

BLOCK NO. 0111111111

⚠ Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. 00111111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R2320	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R2451	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R2452	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R2501	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
	R2501	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R2502	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R2503	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R2504	QRD161J-133Y	CARBON RESISTOR	13K 5% 1/6W	
	R2505	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2506	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R2601	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
	R2602	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
	R2603	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R2604	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R2605	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R8101	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8102	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8103	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R8104	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8151	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8152	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8153	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R8301	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8302	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8303	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8304	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8305	QRD161J-362	CARBON RESISTOR	3.6K 5% 1/6W	
	R8306	QRD161J-433	CARBON RESISTOR	43K 5% 1/6W	
	R8307	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R8308	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
	R8309	QRD161J-243	CARBON RESISTOR	24K 5% 1/6W	
	R8310	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R8321	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
	R8322	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
	R8323	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R8324	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
	R8325	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R8326	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
	R8327	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
	R8328	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
	R8329	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R8331	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R8332	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R8333	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R8334	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
	R8335	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R8341	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R8342	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
	R8343	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R8344	QRD161J-753	CARBON RESISTOR	75K 5% 1/6W	
	R8345	QRD161J-623	CARBON RESISTOR	62K 5% 1/6W	
	R8346	QRD161J-623	CARBON RESISTOR	62K 5% 1/6W	
	R8351	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R8352	QRD161J-303Y	CARBON RESISTOR	30K 5% 1/6W	
	R8353	QRD161J-303Y	CARBON RESISTOR	30K 5% 1/6W	

BLOCK NO. 00111111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R1316	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R1317	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R1318	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	
	R1319	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R1320	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R1451	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R1452	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R1501	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
	R1501	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R1502	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R1503	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R1504	QRD161J-133Y	CARBON RESISTOR	13K 5% 1/6W	
	R1505	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R1506	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R1601	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
	R1602	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
	R1603	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R1604	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R1605	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R2101	QRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
	R2102	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2104	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R2105	QRD161J-242	CARBON RESISTOR	2.4K 5% 1/6W	
	R2106	QRD161J-432	CARBON RESISTOR	4.3K 5% 1/6W	
	R2107	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R2108	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R2109	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R2110	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R2111	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R2114	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R2152	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2154	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R2155	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R2158	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2159	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R2160	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R2161	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R2164	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R2165	QRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
	R2301	QRD161J-334	CARBON RESISTOR	330K 5% 1/6W	
	R2302	QRD161J-334	CARBON RESISTOR	330K 5% 1/6W	
	R2303	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R2304	QRD161J-302	CARBON RESISTOR	3.0K 5% 1/6W	
	R2305	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2306	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R2307	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
	R2308	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R2309	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R2310	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R2313	QRD161J-564	CARBON RESISTOR	560K 5% 1/6W	
	R2315	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R2316	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2317	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R2318	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R2319	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

△Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. 01111111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R8709	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
	R8710	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
	R8801	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R8802	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R8804	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8806	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8807	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R8901	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8902	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8903	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8904	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8905	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8906	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8907	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8908	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	VR111	QVPA601-104A	V-RESISTOR		
	VR116	QVPA601-104A	V-RESISTOR		
	VR211	QVPA601-104A	V-RESISTOR		
	VR216	QVPA601-104A	V-RESISTOR		
	Z 702	VMA4633-001	SHIELD		
	Z 831	VVH7237-003	IC HOLDER		
	Z 901	VMZ0087-001Z	FUSE CLIP	FOR F901,F902	
	Z 902	VMZ0087-001Z	FUSE CLIP	FOR F901,F902	
	Z 903	VMZ0087-001Z	FUSE CLIP	FOR F901,F902	
	Z 904	VMZ0087-001Z	FUSE CLIP	FOR F901,F902	

BLOCK NO. 01111111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R8354	QRD161J-363	CARBON RESISTOR	36K 5% 1/6W	
	R8355	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R8356	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
	R8361	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
	R8362	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R8363	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
	R8364	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
	R8365	QRD161J-913	CARBON RESISTOR	91K 5% 1/6W	
	R8371	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R8372	QRD161J-433	CARBON RESISTOR	43K 5% 1/6W	
	R8373	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R8374	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R8375	QRD161J-623	CARBON RESISTOR	62K 5% 1/6W	
	R8376	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R8381	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R8382	QRD161J-623	CARBON RESISTOR	62K 5% 1/6W	
	R8383	QRD161J-433	CARBON RESISTOR	43K 5% 1/6W	
	R8384	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R8385	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R8386	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R8481	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8482	QRZ0077-100X	CARBON RESISTOR	4.7 5% 1/4W	
	R8482	QRD14CJ-4R7SX	UNF. C. RESISTOR	4.7 5% 1/4W	A, B, E, EN
	R8482	QRZ0077-100X	UNF. C. RESISTOR	4.7 5% 1/4W	C, J
	R8483	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	G, U, UT
	R8484	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R8485	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R8486	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R8491	QRD14CJ-6R8SX	CARBON RESISTOR	6.8 5% 1/4W	
	R8492	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
	R8493	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
	R8503	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8504	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8505	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R8511	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R8512	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8513	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R8521	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R8522	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
	R8523	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
	R8524	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8525	QRD161J-121	CARBON RESISTOR	120 5% 1/6W	
	R8526	QRD161J-180	CARBON RESISTOR	18 5% 1/6W	
	R8527	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8528	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8529	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R8530	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R8701	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R8702	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8703	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R8704	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R8705	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R8706	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R8707	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R8708	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	

■ Power Supply Board (U/UT only)

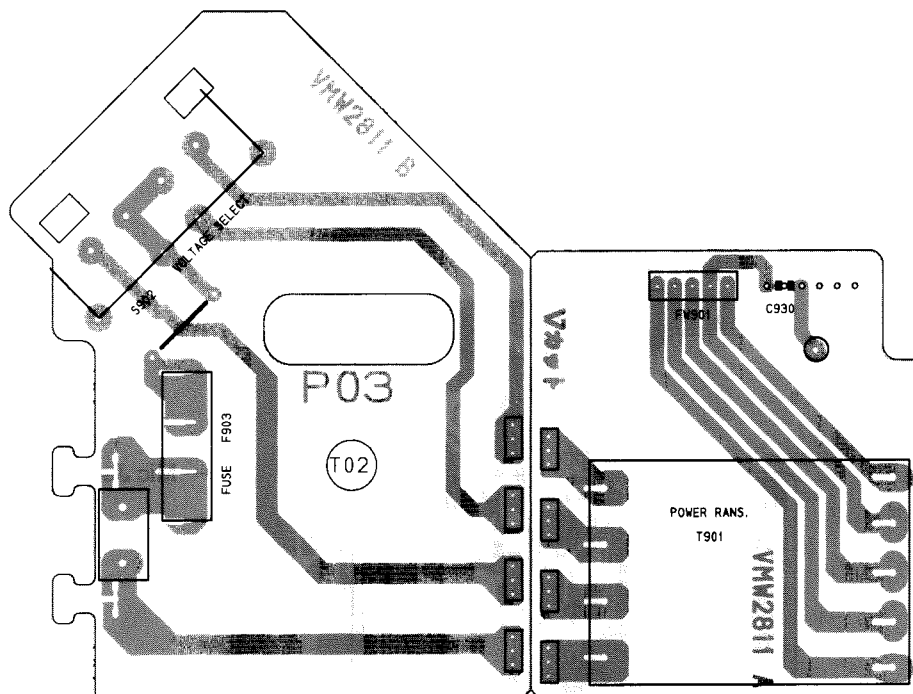


Fig. 7 - 2

● Power Supply Board Parts List

BLOCK NO. 0311111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 930	QCF11HP-103	C. CAPACITOR	.010MF +100:-0%	
△ CN905	VMC0221-003	CONNECTOR		
△ CN906	VMC0221-003	CONNECTOR		
△ CN907	VMC0221-003	CONNECTOR		
△ CN908	VMC0221-003	CONNECTOR		
△ S 902	QSS2325-112	SLIDE SWITCH		
△ Z 905	VMZ0043-001S	FUSE CLAMP	FOR F903	
△ Z 906	VMZ0043-001S	FUSE CLAMP	FOR F903	

y Switch Board

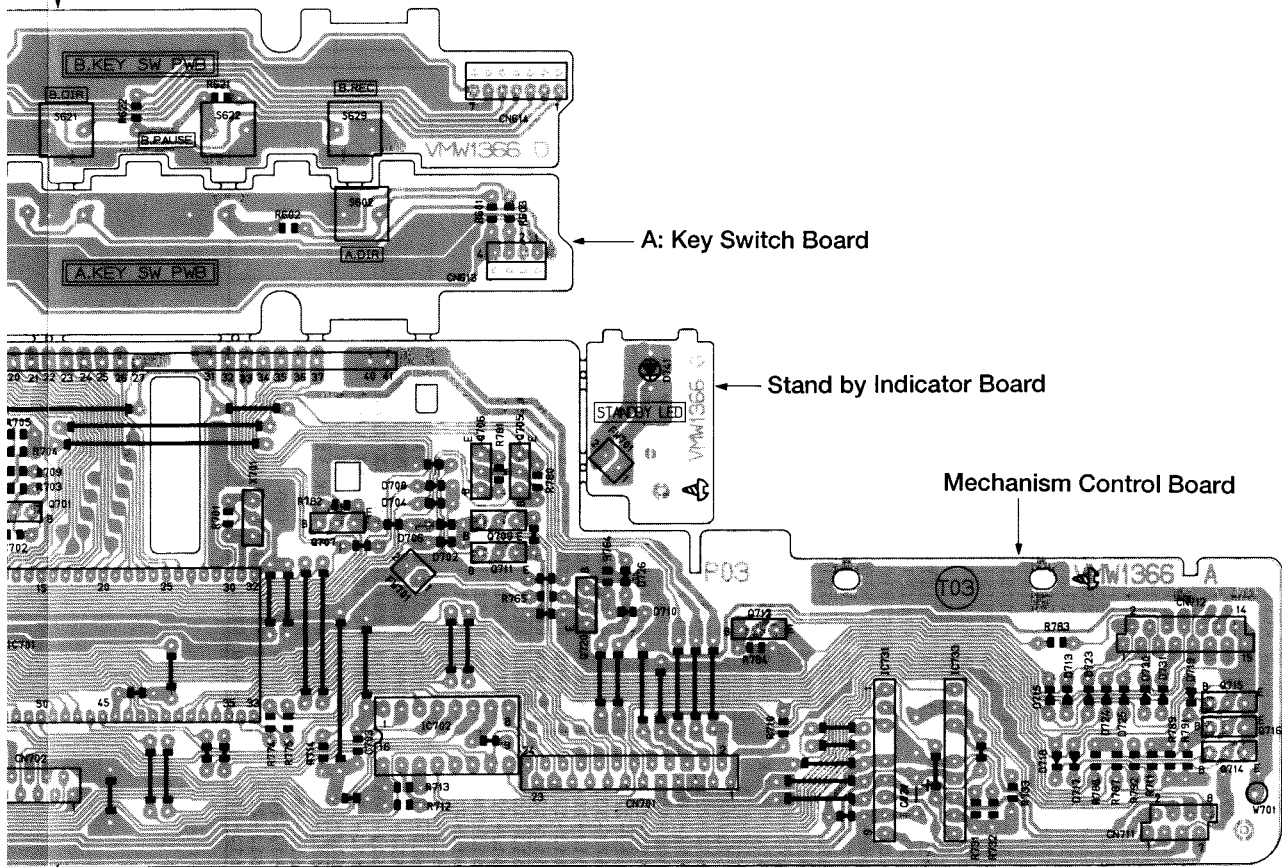


Fig. 7 - 3

⚠ Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. 02111111

● Sub Board Parts List

BLOCK NO. 02111111

A REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 601	QEK41HM-104	E-CAPACITOR	.10MF 20% 50V	
C 701	QET41AM-477	E-CAPACITOR	470MF 20% 10V	
C 702	QCB1HK-471Y	C-CAPACITOR	470PF 10% 50V	
C 703	QCVB1CM-103Y	C-CAPACITOR	.010MF 20% 16V	
C 704	QCVB1CM-103Y	C-CAPACITOR	.010MF 20% 16V	
C 731	QEK41EM-106	E-CAPACITOR	10MF 20% 25V	
C 733	QEK41EM-106	E-CAPACITOR	10MF 20% 25V	
CN601	VMC0163-R06	CONNECTOR		
CN602	VMC0163-R13	CONNECTOR		
CN603	VMC0280-004	CONNECTOR		
CN604	VMC0280-007	CONNECTOR		
CN613	VMC0281-S04	CONNECTOR		
CN614	VMC0281-S07	CONNECTOR		
CN701	VMC0163-R24	CONNECTOR		
CN702	VMC0163-R13	CONNECTOR		
CN711	VMC0234-P08	CONNECTOR		
CN712	VMC0234-P15	CONNECTOR		
CN721	VMC0234-P08	CONNECTOR		
CN722	VMC0234-P15	CONNECTOR		
D 625	SLZ-981C09-T6	LED		
D 641	SLR-325MCT31	LED		
D 642	SLR-325DCT31	LED		
D 701	1SS133	SI DIODE		
D 702	1SS133	SI DIODE		
D 703	1SS133	SI DIODE		
D 704	1SS133	SI DIODE		
D 705	1SS133	SI DIODE		
D 706	1SS133	SI DIODE		
D 707	1SS133	SI DIODE		
D 708	1SS133	SI DIODE		
D 710	1SS133	SI DIODE		
D 713	1SS133	SI DIODE		
D 714	1SS133	SI DIODE		
D 715	1SS133	SI DIODE		
D 717	1SS133	SI DIODE		
D 718	1SS133	SI DIODE		
D 719	1SS133	SI DIODE		
D 720	1SS133	SI DIODE		
D 721	1SS133	SI DIODE		
D 722	1SS133	SI DIODE		
D 723	1SS133	SI DIODE		
D 724	1SS133	SI DIODE		
D 725	1SS133	SI DIODE		
D 726	1SS133	SI DIODE		
D 727	1SS133	SI DIODE		
D 728	1SS133	SI DIODE		
D 729	1SS133	SI DIODE		
D 730	1SS133	SI DIODE		
D 731	1SS133	SI DIODE		
D 732	1SS133	SI DIODE		
D 733	1SS133	SI DIODE		
D 734	1SS133	SI DIODE		
D 741	SLR-55VCF08	LED		
DI701	BJ361G	FL TUBE		
IC701	MBB9145V2P-116	IC		

A REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
IC702	M50253P	IC		
IC703	BR93LC46	IC		
IC731	BA6218	IC		
IC732	BA6218	IC		
IC733	TAB409S	IC		
Q 701	25C1740S(R,S)	TRANSISTOR		
Q 702	25C1740S(R,S)	TRANSISTOR		
Q 703	D1A124ES	TRANSISTOR		
Q 704	D1C124ES	TRANSISTOR		
Q 705	25C1740S(R,S)	TRANSISTOR		
Q 706	25C1740S(R,S)	TRANSISTOR		
Q 707	25C1740S(R,S)	TRANSISTOR		
Q 708	D1C124ES	TRANSISTOR		
Q 709	D1C124ES	TRANSISTOR		
Q 710	D1C124ES	TRANSISTOR		
Q 711	D1C124ES	TRANSISTOR		
Q 712	25C1740S(R,S)	TRANSISTOR		
Q 713	25C1740S(R,S)	TRANSISTOR		
Q 714	25C1740S(R,S)	TRANSISTOR		
Q 715	25C1740S(R,S)	TRANSISTOR		
Q 716	25C1740S(R,S)	TRANSISTOR		
Q 720	D1C144ES	TRANSISTOR		
Q 740	25A117S	TRANSISTOR		
Q 741	25A117S	TRANSISTOR		
Q 742	25A117S	TRANSISTOR		
Q 743	25A117S	TRANSISTOR		
Q 744	D1C124ES	TRANSISTOR		
R 601	GRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 602	GRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 603	GRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R 604	GRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 607	GRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 608	GRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 621	GRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 622	GRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R 623	GRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 624	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 625	GRD161J-271	CARBON RESISTOR	270 5% 1/6W	
R 626	GRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 627	GRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 628	GRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R 629	GRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 630	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 631	GRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 632	GRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 641	GRD161J-271	CARBON RESISTOR	270 5% 1/6W	
R 642	GRD161J-271	CARBON RESISTOR	270 5% 1/6W	
R 651	GRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 652	GRD161J-751	CARBON RESISTOR	750 5% 1/6W	
R 654	GRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
R 701	GRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R 702	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 703	GRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R 704	GRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 794	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 795	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 796	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 797	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
RN704	QRB045J-682	R-NETWORK	6.8K 5% 1/4W	
S 601	QS04H11-V01	TACT SWITCH		
S 602	QS04H11-V01	TACT SWITCH		
S 604	QS04H11-V01	TACT SWITCH		
S 605	QS04H11-V01	TACT SWITCH		
S 607	QS04H11-V01	TACT SWITCH		
S 608	QS04H11-V01	TACT SWITCH		
S 609	QS04H11-V01	TACT SWITCH		
S 621	QS04H11-V01	TACT SWITCH		
S 622	QS04H11-V01	TACT SWITCH		
S 623	QS04H11-V01	TACT SWITCH		
S 624	QS04H11-V01	TACT SWITCH		
S 625	QS04H11-V01	TACT SWITCH		
S 626	QS04H11-V01	TACT SWITCH		
S 627	QS04H11-V01	TACT SWITCH		
S 628	QS04H11-V01	TACT SWITCH		
S 629	QS04H11-V01	TACT SWITCH		
S 630	QS04H11-V01	TACT SWITCH		
S 631	QS04H11-V01	TACT SWITCH		
S 632	QS04H11-V01	TACT SWITCH		
S 633	QS04H11-V01	TACT SWITCH		
T 755	QRD14CJ-4R7SX	UNF.C.RESISTOR	4.7 5% 1/4W	C,J
VR601	QVGA12Z-V05	V.RESISTOR		
VR602	QVGA16A-V02	V.RESISTOR		
VR604	QVAA16B-V01	V.RESISTOR		
VR701	QVPE612-103ZM	SEMI.V.RESISTOR		
VR702	QVPE612-203ZM	SEMI.V.RESISTOR		
VR703	QVPE612-103ZM	SEMI.V.RESISTOR		
VR704	QVPE612-203ZM	SEMI.V.RESISTOR		
X 701	EFD-EC800A4	CERAMIC RESONAT		
Z 701	VVH3844-001	FL HOLDER		

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 705	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 706	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 707	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R 708	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 709	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 710	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 711	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 712	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 713	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 714	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 715	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 731	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 732	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 733	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R 734	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 735	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 743	QRD161J-752	CARBON RESISTOR	7.5K 5% 1/6W	
R 745	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
R 746	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 747	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 748	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 749	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 750	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
R 751	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R 752	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 753	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 754	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 755	QRH144J-4R7	FUSI.RESISTOR	4.7 5% 1/4W	A,B,E,EN
R 756	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	G,U,UT
R 764	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 765	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
R 766	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 771	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 772	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 773	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 774	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 775	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 780	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 781	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 782	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 783	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 784	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 785	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 786	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 787	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 788	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 789	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 791	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 792	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 793	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

8 Exploded View of Enclosure Component Parts

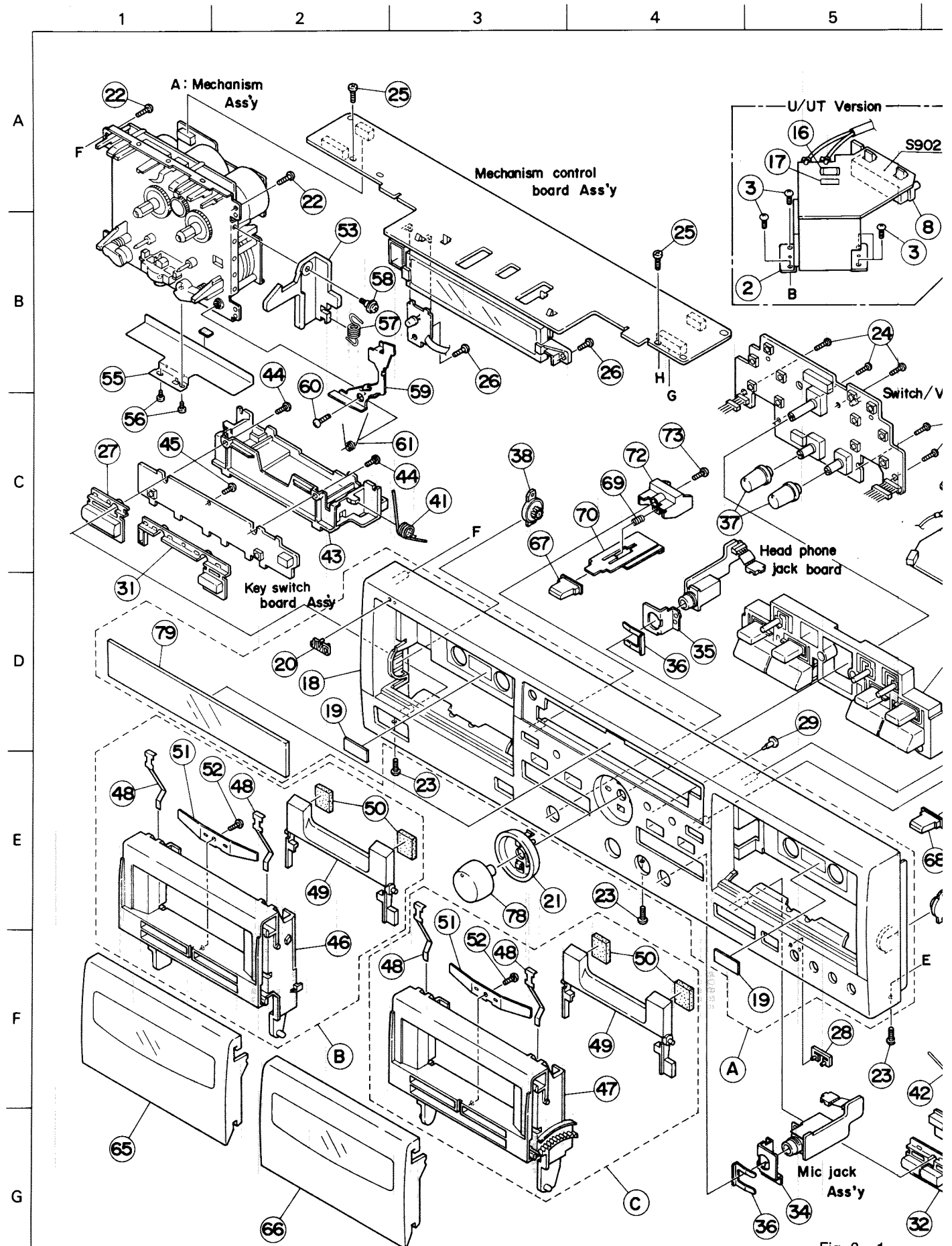


Fig. 8 - 1

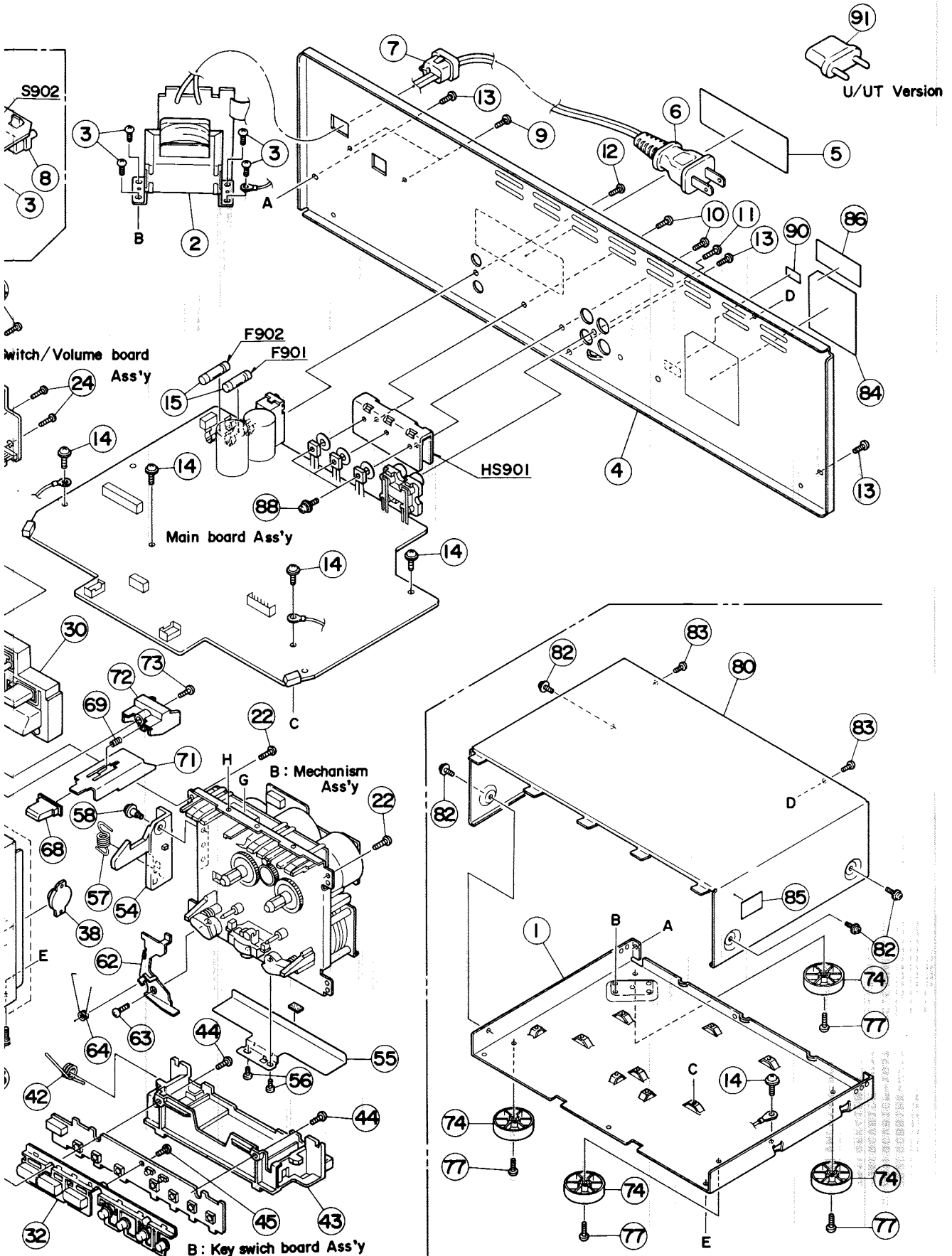
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● Enclosure Component Parts List

△Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. 1111

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	ZCTDW317J-FTN	FRONT PANEL ASSY	NO. 18-20,79	1		TN
		ZCTDW318K-FB	FRONT PANEL ASSY	NO. 18-20,79	1		BK
	B	ZCTDW317K-CH-A	CASSETTE HOLDER	NO. 46,48-52	1		
	C	ZCTDW317K-CH-B	CASSETTE HOLDER	NO. 47-52	1		
	1	VKL1333-009	CHASSIS BASE		1		
△	2	VTP5275-011F	POWER TRANS.		1	A,E,EN,G,B	
△		VTP52A5-011F	POWER TRANS.		1	C,J	
△		VTP52G5-011F	POWER TRANS.		1	U,UT	
	3	SBST3006Z	SCREW	FOR POWER TRANS	4		
	4	VJC2410-053	REAR PANEL		1	A,B,E,EN,G	BK
		VJC2410-054	REAR PANEL		1	U,UT	BK
		VJC2410-051	REAR PANEL		1	J,C	TN
	5	VND4999-001	FCC LABEL (3)		1	J	
△	6	QMP2560-244	POWER CORD		1	A	
△		QMP5530-008BS	POWER CORD		1	B	
△		QMP1340-200	POWER CORD		1	C,J	
△		QMP3900-200	POWER CORD		1	E,EN,G	
△		QMP7380-200	POWER CORD		1	U,UT	
	7	QHS3771-108	CORD STOPPER		1		
	8	VKS5011-001	VOLTAGE CONTACT		1	U,UT	
	9	SBSF3008M	SCREW	FOR V.SELECTOR	2	U,UT	
	10	SBSF3008M	SCREW	FOR HEAT SINK	2		
	11	SBSF3008M	SCREW	FOR PIN JACK	1		
	12	SBSF3008M	SCREW	FOR DCS JACK	1		
	13	SBST3006M	SCREW	FOR REAR+CHASSI	3		
	14	GBST3006Z	SCREW	FOR MAIN P.C.BO	5		
△	15	QMF51E2-R80SBS	FUSE	F901,F902	1	A,E,EN,G,U,J	
△		QMF51E2-R80SBS	FUSE	F901,F902	1	B	
△	16	QMF51A2-R315	FUSE	F903	1	U,UT	
	17	VND4003-074	FUSE LABEL		1	U,UT	
	18	VJG1320-007	FRONT PANEL		1	A,B,E,EN	BK
		VJG1320-007	FRONT PANEL		1	G,U,UT	BK
		VJG1320-006UL	FRONT PANEL		1	C,J	TN
	19	VJD4024-002	REFLECTION PLAT		2		
	20	VJD5429-001	JVC MARK		1		
	21	VYH7943-002	RING		1		BK
		VYH7943-001	RING		1		TN
	22	SBSF3010Z	SCREW	FOR MECHANISM	4		
	23	SBST3006M	SCREW	FOR FRONT PANEL	3		
	24	SBSF2610Z	SCREW	SWITCH/VOLUME B	5		
	25	SDST2604Z	SCREW	FOR FL.PWB+MECH	2		
	26	SBSF2610Z	SCREW	FOR FL.HOL+F.P.	2		
	27	VXP5288-002	PUSH BUTTON	POWER	1		BK
		VXP5288-001	PUSH BUTTON	POWER	1		TN
	28	VJK4436-001	LENS		1		
	29	VJK4437-001	LENS		1		
	30	VXP2098-004	MECHA BUTTON	A,B PLAY/STOP	1		BK
		VXP2098-003	MECHA BUTTON	A,B PLAY/STOP	1		TN
	31	VXP3688-004	MECHA BUTTON	A DIRECTION	1		BK
		VXP3688-003	MECHA BUTTON	A DIRECTION	1		TN
	32	VXP3689-002	MECHA BUTTON	B REC/PAUSE/DOL	1		BK
		VXP3689-001	MECHA BUTTON	B REC/PAUSE/DOL	1		TN
	34	VKL7265-003	JACK BRACKET	FOR H.P.JACK	1		
	35	VKL7264-003	MIC BRACKET	FPR P.H. JACK	1		
	36	VKL6752-001	SNAP PLATE		2		

BLOCK NO. M1MM | | | |

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	37	VXL4424-002	KNOB	BALANC/H.PHONE/	2		BK
		VXL4424-001	KNOB	P.CNT/MIX LEVEL	1		TN
	38	VYH7779-00B	DUMPER ASS'Y		2		
	41	VKW3006-236	TORSION SPRING	A-HOLDER	1		
	42	VKW3006-237	TORSION SPRING	B-HOLDER	1		
	43	VYH2300-001	MECHA HOLDER	FOR A B MECHA	2		
	44	SBSF2610Z	SCREW	FOR MECHANISM B	4		
	45	SBSF2610Z	SCREW	FOR A B PWB	2		
	46	VJT2317-007	CASSETTE HOLDER	FOR A-MECHA	1		
	47	VJT2317-008	CASSETTE HOLDER	FOR B-MECHA	1		
	48	VKY4180-001	CASSETTE SPRING		4		
	49	VJD3867-001	C.STABILIZER		2		
	50	VYTS491-001	PAD		4		
	51	VKY4635-002	SPRING PLATE		2		
	52	SBSF2608Z	SCREW	FOR S.PLATE	2		
	53	VYH7941-003	LOCK LEVER(L)	FOR A MECHA	1		
	54	VYH7941-004	LOCK LEVER(R)	FOR B MECHA	1		
	55	VMA4643-001	SHIELD	FOR MESA	2		
	56	SDST2603Z	SCREW	FOR MECHA+SHIEL	4		
	57	VKW5199-001	TORSHION SPRING	LOCK ARM	2		
	58	VKZ4749-001	SPECIAL SCREW	FOR LOCK L+MECH	2		
	59	VKL7293-001	EJECT SAFTY(R)	EGC	1		
	60	SBSF3010Z	SCREW	FOR E.SAFTY(R)	1		
	61	VKW5069-002	TORSION SPRING	FOR E.SAFTY(R)	1		
	62	VKL7663-001	EJECT SAFTY(L)	EGC	1		
	63	SBSF3010Z	SCREW	FOR E.SAFTY(L)	1		
	64	VKW5104-003	TORSION SPRING	FOR E.SAFTY(L)	1		
	65	VJT2349-006	CASSETTE LID	FOR A MECHA	1		BK
		VJT2349-005	CASSETTE LID	FOR A MECHA	1		TN
	66	VJT2349-004	CASSETTE LID	FOR B MECHA	1		BK
		VJT2349-002	CASSETTE LID	FOR B MECHA	1		TN
	67	VXP5289-003	PUSH BUTTON	EJECT	1		BK
		VXP5289-001	PUSH BUTTON	EJECT	1		TN
	68	VXP5289-004	PUSH BUTTON		1		BK
		VXP5289-002	PUSH BUTTON		1		TN
	69	VKW3001-077	C.SPRING		2		
	70	VKL7262-002	REMOTE ARM	FOR A-MECHA	1		
	71	VKL7263-002	REMOTE ARM	FOR B-MECHA	1		
	72	VYH7773-001	BUTTON HOLDER		2		
	73	SBSF2610Z	SCREW	FOR B.H.+F.P.	2		
	74	E406379-008SS	FOOT ASS'Y		4		BK
		VJF4039-00E	FOOT ASS'Y		4		TN
	77	SBST3008Z	SCREW	FOR FOOT	4		
	78	VXL3025-002	KNOB	INPUT VOLUME	1		BK
		VXL3025-001	KNOB	INPUT VOLUME	1		TN
	79	VJK3652-002	FINDER LENS		1		BK
		VJK3652-001	FINDER LENS		1		TN
	80	VJC1964-202SX	TOP COVER		1		BK
		VJC1964-201SX	TOP COVER		1		TN
	82	VKZ4614-001	SPECIAL SCREW		4		
	83	SBST3006M	SCREW	FOR TOP COVER	2		
	84	VYN2347-M003PA	NAME PLATE		1	A	
		VYN2347-M002PA	NAME PLATE		1	B	
		VYN2346-M104PA	NAME PLATE		1	C	

⚠ Parts are safety assurance parts.
 When replacing those parts,
 make sure to use the specified one.

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
		VYN2347-M005PA	NAME PLATE		1	E,EN	
		VYN2347-M008PA	NAME PLATE		1	G	
		VYN2346-M006PA	NAME PLATE		1	J	
		VYN2347-M007PA	NAME PLATE		1	U,UT	
	85	VYN2347-901	NAME PLATE		1	UT	
	86	VND4992-001	ORIGN LABEL		1	UT	
	88	DPSP3008Z	SCREW	FOR TRANSISTOR	3		
	90	E407097-001	HYATT L.LABEL		1	J	
	91	V04062-001	CONTI.PLUG		1	UT,U	
	HS901	VMH4011-201	HEAT SINK	Q901,Q903,Q909	1		
△	S 902	QSS2325-112	SLIDE SWITCH		1	U,UT	

9 Exploded View of Mechanism Component Parts

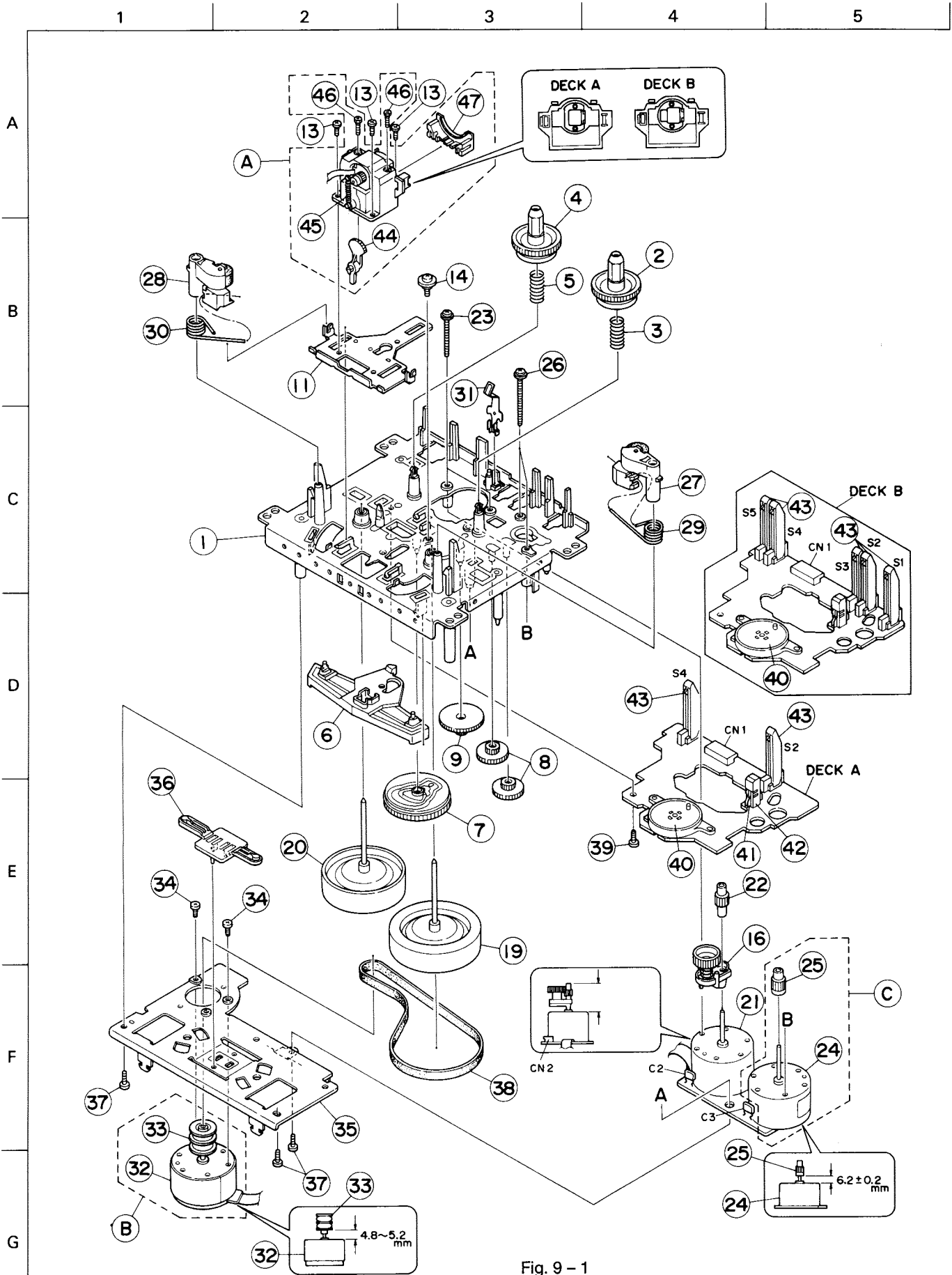


Fig. 9 - 1

● Mechanism Component Parts List

△Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. M2MM 1 1 1

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	VKS3629-00E	HEAD MOUNT ASSY	DECK B	1		
		VKS3626-00E	HEAD MOUNT ASSY	DECK A	1		
	B	MSI5B2LW-SA2	DC MOTOR ASS'Y	NO. 32-33	1		
	C	MSN5D257A-SA1	DC MOTOR ASS'Y	NO. 24-25	1		
	1	VKS1126-00B	CHASSIS B ASS'Y		1		
	2	VKS5428-00B	T-UP REEL ASSY		1		
	3	VKW5043-001	B.T. SPRING		1		
	4	VKS3617-002	REEL		1		
	5	VKW5043-001	B.T. SPRING		1		
	6	VKS3627-002	PINCH LEVER		1		
	7	VKS2224-002	CONTROL CAM		1		
	8	VKS5454-001	ACT GEAR(2)		2		
	9	VKS5455-001	ACT GEAR(3)		1		
	11	VKM3632-001	HEAD BASE	PRESS KIT S	1		
	13	SDST2004Z	SCREW		3		
	14	VKZ4708-001	SPECIAL SCREW		1		
	16	VKS5430-00CMM	FR ARM ASS'Y		1		
	19	VKF3195-00A	FLYWHEEL(R)ASS'		1		
	20	VKF3197-00A	FLYWHEEL(L)ASS'		1		
	21	MMN-6F4RA38	D.C.MOTOR	FOR REEL,MOTOR	1		
	22	VKS5432-001	REEL MOT. GEAR	GEAR KIT S	1		
	23	VKZ4705-001	SPECIAL SCREW		2		
	24	MSN-5D257A	D.C.MOTOR	FOR ACT,MOTOR K	1		
	25	VKS5433-001	ACT.MOTOR GEAR	GEAR KIT S	1		
	26	VKZ4705-002	SPECIAL SCREW		2		
	27	VKP4227-00B	PINCH R.(R) ASY		1		
	28	VKP4229-00B	PINCH R.(L) ASY		1		
	29	VKW5045-003	P.R. SP.(R)	FOR PINCH (R)	1		
	30	VKW5046-003	P.R. SP.(L)	FOR PINCH (L)	1		
	31	VKY4670-001	CASSETTE SPRING	PRESS KIT S	1		
	32	MSI-5B2LW	D.C.MOTOR	FOR CAP,MOTOR K	1		
	33	VKR4632-003MM	MOTOR PULLEY		1		
	34	SPSP2603Z	SCREW		2		
	35	VKM3636-002	FM. BRACKET	PRESS KIT S	1		
	36	VKS5327-005MM	THRUST PLATE		1		
	37	SDSF2608Z	SCREW		3		
	38	VKB3001-067	BELT		1		
	39	SDST2612Z	SCREW		1		
	40	VKS3616-00A	CAM SW UNIT	S6	1		
	41	DN6851-HI	HALL IC		1		
	42	VKS3630-001MM	IC HOLDER	IC1	1		
	43	MXS00220MVLO	CASSETTE SWITCH	S1,S2,S3,S4,S5	5		
		MXS00220MVLO	CASSETTE SWITCH	S2,S4,DECK A	2		
	44	VKS3614-001	TURN OVER GEAR		1		
	45	VKW5063-003	HEAD SPRING		1		
	46	VKZ4629-003	SPECIAL SCREW		2		
	47	VKS3654-001	HEAD MT. COVER		1		
	C	2	QFV41HJ-104ZM	TF.CAPACITOR	.10MF 5% 50V		
	C	3	QFV31HJ-104	TF.CAPACITOR	.10MF 5% 50V		
	CN	1	VMC0234-R15	CONNECTOR	CN1		
	CN	2	VMC0234-R08	CONNECTOR	CN2		

10 Packing Illustration and packing parts list

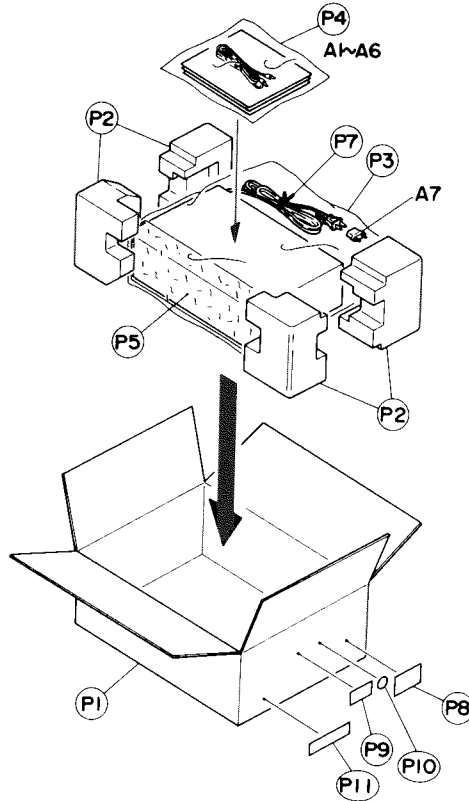


Fig. 10 - 1

● Packing Parts List

BLOCK NO.

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
P 1	VPC2347-M002	CARTON	TD-W318	1		
	VPC2346-M002	CARTON	TD-W317	1		
P 2	TDWR803-NZ	CUSHION ASS'Y		1		
P 3	E300196-031B	ENVELOPE	FOR DECK UNIT	1		
P 4	VPE3005-007	POLY BAG	FOR INSTRUCTION	1		
P 5	VPK3001-012	SHEET	FOR FRONT	1		
P 7	Q04141H	WIRE CLAMP	FOR POWER CORD	1		
P 8	-----	SIRIAL TICKET		1		
P 9	-----	EAN/UPC LABEL		1		
P 10	QZLA001-011	MARK		1	E, EN	
	QZLA001-012	GREEN POINT LAB		1	G	
P 11	VND4909-001	VOLTAGE LABEL		1	U, UT	

● Accessories

BLOCK NO.

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A 1	VMP0039-000	PIN CORD		1		
A 2	VNN2346-271	INSTRUCTIONS		1	G, EN	
	VNN2346-661	INSTTACIONS		1	C, E, EN, G, U, J	
	VNN2346-671	INSTRACIONS		1	A, B, J	
A 3	BT-20066A	WARRANTY CARD		1	B	
	BT-20025M	WARRANTY CARD		1	C	
	BT-20134	WARRANTY CARD		1	G	
	BT-51006-1	WARRANTY CARD		1	J	
	BT20060	WARRANTY CARD		1	B	
	BT-56001-1	WARRANTY CARD		1	A	
A 4	BT-20071B	SVC CENTER LIST		1	C	
	BT-56002-1	SERVIS CENTER L		1	A	
A 5	BT-20044G	SAFETY INST.		1	J	
	E43486-340A	SAFETY I. SHEET		1	B	
A 6	EWP805-001E	REMOTE WIRE		1		
A 7	V04062-001	CONTI.PLUG		1	U, UT	

JVC

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