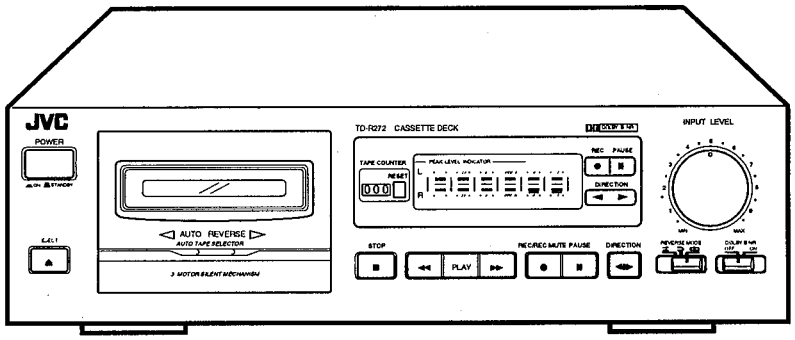
JVC

SERVICE MANUAL

CASSETTE DECK

TD-R272BK B/C/E/EN/G/J/U/UB/US



COMPU LINK Component

Area Suffix

B	U.K.
C	Canada
E	Continental Europe
EN	Northern Europe
G	Germany
J	U.S.A.
U	Other Area
UB	Hong Kong
US	Singapore

Contents

No. 4361
July 1996

■ Safety Precautios

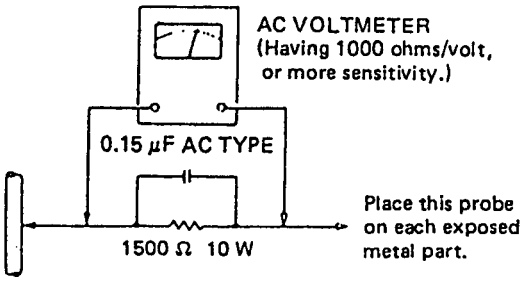
1. The design this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original 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(⚠)on the schematic diagram and by (⚠) 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, particulary any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exposeed 0.5mA AC(r.m.s.)

   • Alternate check method

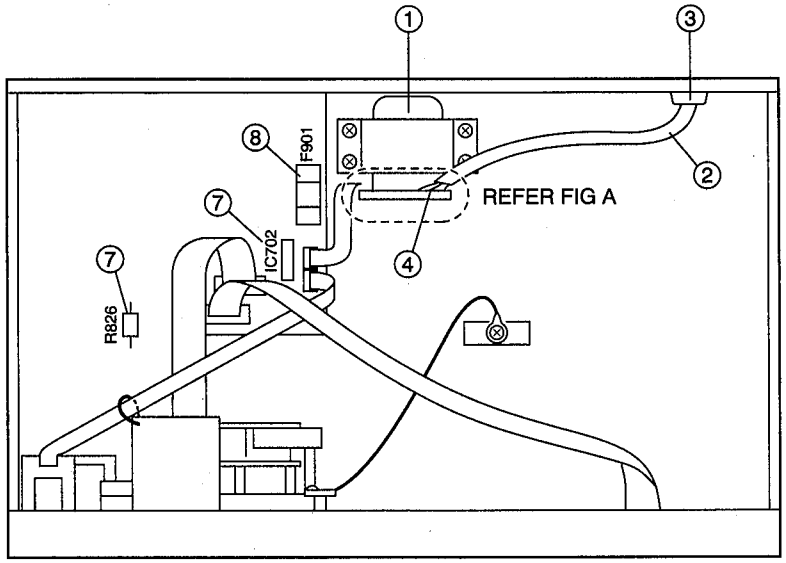
   Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohms 10W resistor paralleled by a 0.15 μ F AC type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage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

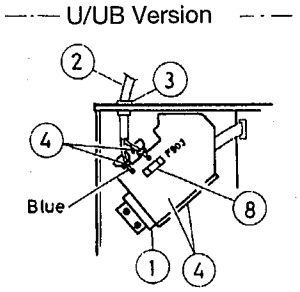


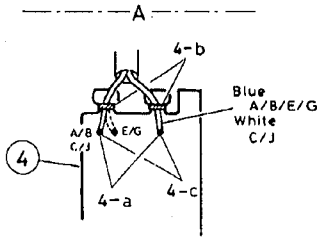
◆ Warning (UK only)

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 maintaintained.**
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.**

◆ Important Management Points Regading Safety
(Items Demanding Special Safety Precautions)







1.Securely fix the power transformer while confirming its marking specified in the following.

Suffix	Marking	Description
J	KEI-54-001S1	UL approved No.
C	KEI-54-001S1	
A/B/E/EN/G	VTP54Z2-011C	
U/UT	VTP54G2-031C	

2.Power cord : Make sure of the following markings and inspect exterior scratch anddamage.

	Power cord	Attachment plug
J	SPT-1	KP-10W or SD-008P
C	SPT-1	KP-10W or SD-008P
E/EN/G	◁ VDE ▷	KP-419C or HKE-1
B/UB	BASEC BS6500	KP-610 SE-5 ⛉ 3A
U/UT	◁ VDE ▷	KP-8H

3. Install the cord bushing by the specified tool whileconfirming the marking. Bushing : NIFCO 2271

4. Wiring terminal

a)When installing the power cord,wind it around the terminal by the end before soldering.

b)Arrange the wires while binding them nearby the terminal.

c)The end of respective power cords is solderedin the air and the space from others must be3.2 mm or more in the distance.

7. Since the following parts are hear generation ones, they must no contact with electolytic capacitors, wires, etc.

● Parts in parentheses ( ) are inflammables.Make sure of their lift – up condition for the purpose.

● Parts in box are out of JVC's control.

R813 R826 Q821 R821 R863 R937 D901 to D905 R915 Q912 IC702 T821 Q824 Q822 Q909

Other parts

C903 C904 2200uF/25V C/J virsion (VENT TYPE)

8. All fuses must securely be connected. In A/B/E/EN/G/U/UB/US version, F901 must be specified by the rating of 800 mA shown on the surface as well as by the marking of Ⓢ or in U/UB version, F902 must be specified by the rating of 200 mA shown on the surface well as by the marking Ⓢ or ⛉ .

⚠ Caution

Pay careful attention to burrs left on the chassis as they were borne by press and machine work.
When servicing, carefully handle the chassis not to get injured by burrs on it.

JVC

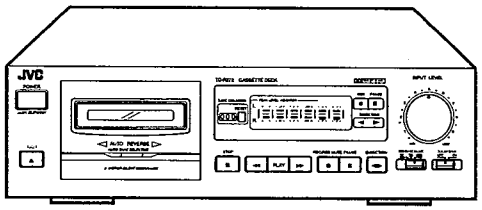
TD-R272BKB/J CASSETTE DECK

CASSETTE DECK

TD-R272BK B/J

JVC
VICTOR COMPANY OF JAPAN, LIMITED

COMPU LINK
Component



INSTRUCTIONS

For Customer Use:
Enter below the Model No. and Serial No. which are located on the rear of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

Printed in China
VNN2355-671C

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION "TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

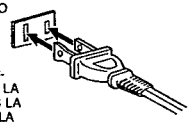
INFORMATION (FOR U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

(For CANADA)
CAUTION:
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

(Pour le CANADA)
ATTENTION:
POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSOU AU FOND.



IMPORTANT (In the United Kingdom)
Mains Supply (AC 230 V ~, 50 Hz only)

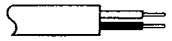
DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted and to replace the fuse cover.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:



Blue to N
(Neutral) or Black
Brown to L
(Live) or Red

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT-CONSULT A COMPETENT ELECTRICIAN.

WARNING (In the United Kingdom)
Pre-recorded tapes, records or discs should not be re-recorded without the consent of the owners of copyright in the sound recording and in any copyright musical or literary work embodied in that recording as this constitutes an infringement of copyright.

Please study this instruction manual carefully before starting to operate the unit, in order to use the unit correctly. We take no responsibility for any problems resulting from misuse of this unit by operating this equipment other than instructed in this manual.

Thank you for purchasing JVC product. Read this instruction book carefully before operating to be sure of getting optimum performance and longer service life from the unit.

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FEATURES

1. **Full logic control mechanism**
2. **Auto reverse mechanism**
3. **Auto tape select mechanism**
4. **COMPU LINK-1/SYNCHRO terminal**
5. **Tape counter**
6. **DDRP (Dynamics Detection Recording Processor)**
   With the DDRP function, the recording level is adjusted automatically so that recording is performed in optimum condition.
7. **Metal tape compatibility**
8. **2-color 6-LED peak level indicator**
9. **Dolby* B noise reduction system**
10. **INPUT LEVEL control**

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

* "DOLBY" and the double-D symbol ◫ are trademarks of Dolby Laboratories Licensing Corporation.

COMPU LINK
Control System

COMPU LINK control system is the convenient system using COMPU LINK-1/SYNCHRO terminals on the rear panel. (See page 5 and 9.)

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.

AUTO REVERSE OPERATION

The auto reverse operation of this unit turns the tape transport over to the reverse of forward direction automatically when the tape reaches its end during recording or playback.

- Because of cassette shell construction, a tape recorded in the forward direction should be played back in the same direction to obtain stable sound reproduction.
- During recording, auto reverse can be activated only from the forward to the reverse direction. For good sound quality and to avoid accidental erasure of previously recorded material, always start recording with the side A of the tape facing out.

CAUTIONS

1. **Prevention of Electric Shocks, Fire Hazards and Damage**

1) Even when the POWER switch is set to STANDBY, a very small current will flow. To save power and for safety when not using the unit for an extended period of time, disconnect the power cord from the household AC outlet.
2) Do not handle the power cord with wet hands.
3) When unplugging from the wall outlet, always grasp and pull the plug, not the power cord.
4) Consult your nearest dealer when damage, disconnection, or contact failure is found with the cord.
5) Do not bend the cord sharply, or pull or twist it.
6) Do not modify the power cord in any manner.
7) Do not remove screws to disassemble the unit and do not touch anything inside the unit.
8) AC power cord **(For U.S.A. version only)**
   The AC power cord of this unit has certain one-way direction connections to prevent electric shock. Refer to the illustration for correct connection. (Fig. 1)

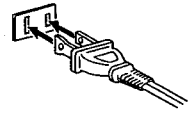

Fig. 1

9) Do not insert any metallic objects into the unit.
10) Unplug the power cord when there is a possibility of lightning.
11) If water gets inside the unit, unplug the power cord from the outlet and consult your dealer.
12) Do not block the ventilation holes of the unit so that heat can escape. Do not install the unit in a badly ventilated place.
13) Be sure to unplug the power cord from the outlet when going out or when the unit is not in use for an extended period of time.

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TD-R272BK

2. Installation

1) Avoid placing the unit on or adjacent to an amplifier, to prevent hum from being produced by some types of amplifiers. Move the unit to a place not affected by the amplifier. Keep the unit as far as possible from a TV set.
2) Avoid installing the unit in a location subject to ambient temperatures exceeding 40°C (104°F) (e.g. direct sunlight, near heaters, etc.) or less than 0°C (32°F), excessive humidity, dust or vibrations.
3) If this set is moved suddenly from a cold place (0°C) to a warm place, it may not function properly because of moisture generated inside the unit. The unit will function properly 30 minutes after being moved.

3. Cleaning the cabinet

Never use benzine or thinner for cabinet cleaning as they may damage the surface finish.

4. Cassette tape

1) Loose tape may become tangled in the tape transport mechanism. Remove slack by winding the tape with a pencil. (Fig. 2)

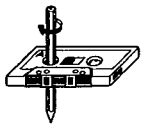


Fig. 2

Turn the pencil to tighten the tape.

2) The use of C-120 (120 minutes turn around) or thinner tape is not recommended, since characteristic deterioration may occur.
3) To prevent recordings from being erased accidentally, remove the tab(s) with a screwdriver. Reseal the slots with adhesive tape to erase and re-record after the tabs have been broken off.

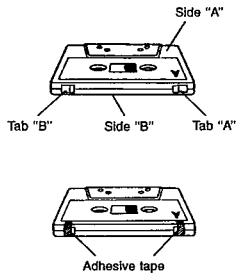


Fig. 3

4) Do not store cassette tapes where there is a magnetic field (e.g. near a TV, etc.) or in a place subject to high temperatures or humidity.

5. Automatic tape select mechanism

This deck has an Automatic Tape Select mechanism which distinguishes between different types of tape from holes in the cassette. After the type of tape has been detected, bias and equalization are set to be suitable for the tape.

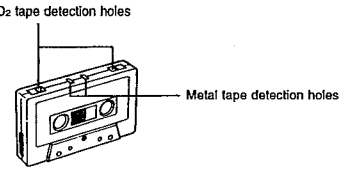
- Cassettes with detection holes:

Metal tape (EQ: 70μs) ..... Type IV
CrO_2 (chrome) tape (EQ: 70μs) ..... Type II

- Cassettes without detection holes:

Normal tape (EQ: 120μs) ..... Type I

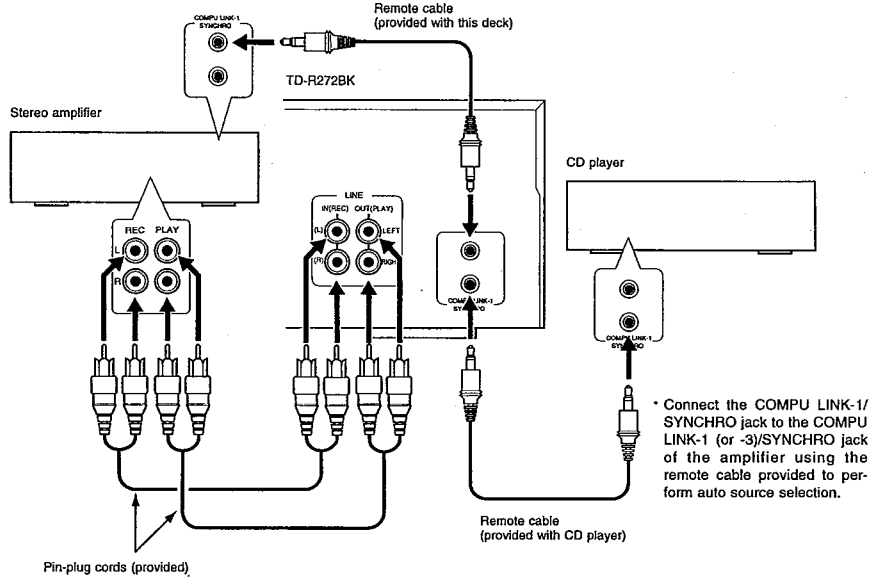
Some earlier types of metal and CrO_2 (chrome) tapes may not be provided with the detection holes. Avoid using such tapes, since correct equalization characteristics cannot be obtained. Also do not use ferrochrome tapes whose characteristics do not match this unit.



6. Others

1) When the POWER switch is turned ON or off (STANDBY) with the deck set to the playback or recording mode, noise may be generated. Before turning the POWER switch ON or off (STANDBY), confirm that the ■ STOP button has been pressed.
2) Many operations of this unit are performed under the control of a microcomputer. Use the unit only after carefully studying the descriptions and cautions in each item. If operations are done incorrectly, the unit may stop functioning correctly. If this happens, turn off the power, and then turn it on again after waiting about 10 seconds, so that the unit can function correctly.

CONNECTIONS



- Connect the COMPU LINK-1/ SYNCHRO jack to the COMPU LINK-1 (or -3)/SYNCHRO jack of the amplifier using the remote cable provided to perform auto source selection.

1. Connection to a stereo amplifier

- 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.

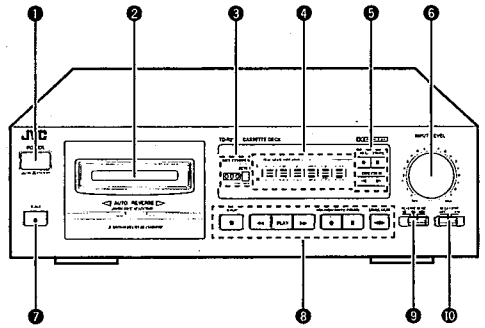
2. Remote cable connection for COMPU LINK

- By connecting a remote cable, COMPU LINK functions (auto source select, synchro 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 (or -3)/ SYNCHRO jacks. (See page 9 for details.)

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.

NAMES OF PARTS AND THEIR FUNCTIONS

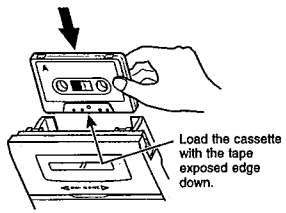


❶ **POWER switch (ON/STANDBY)**
❷ **Cassette holder**
❸ **TAPE COUNTER and RESET button**
❹ **PEAK LEVEL INDICATOR**
These indicate the recording level during recording and output level during playback.
The LED indication varies with the signal strength during recording and playback.
Note:
0 dB : IEC (DIN) STANDARD LEVEL (250 nWb/m)
0 VU : Signal level at 160 nWb/m
❺ **Mechanism mode indicators**
● (REC) : Lights when the unit is in the record and record-pause modes; blinks during record muting.
❚❚ (PAUSE) : Lights in the pause mode.
◄, ► (DIRECTION) : Indicates the direction of tape travel. The direction indicator flashes while the tape is moving in the record or play mode.
❻ **INPUT LEVEL control**
Adjust the recording level with this control
❼ **▲ EJECT button**
❽ **Cassette operation buttons**
■ /STOP : Press to stop the tape.
◄◄ : Press to wind the tape quickly from right to left.
PLAY : Press to start playback/recording.
►► : Press to wind the tape quickly from left to right.
● 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 8.)
❚❚ 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.
❾ **REVERSE MODE switch**
Select the single side or both sides record/playback mode, or the continuous play mode.
• ⇄ : For single-side recording or playback.
• ⇉ : To play or record both sides A and B.
• ⇆ : To play sides A and B continuously.
❿ **DOLBY B NR switch**

CASSETTE LOADING

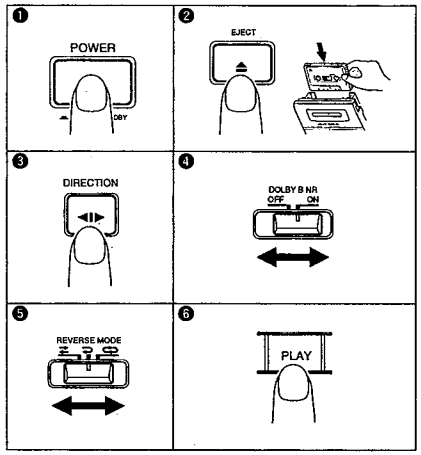
1. Press the EJECT button to open the cassette holder.
2. Load a cassette as shown.
3. Press the cassette holder to close it.
Be sure to obtain the click sound to close the holder securely.

Note:
* If the power is switched off (STANDBY) while the tape is moving, you might not be able to remove the cassette. If this happens, switch the power on again before attempting to remove the cassette.



PLAYBACK

Operate in the order of the numbers in the illustration.

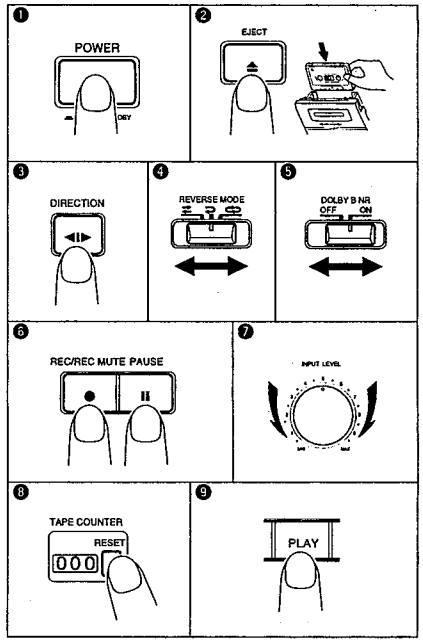


❶ Press the POWER switch to set to ON (⏏).
❷ Load a prerecorded cassette with side A facing out.
❸ Select the side to be played back.
Side A... Forward direction (PLAY ►)
Side B... Reverse direction (◄ PLAY)
❹ Set the DOLBY B NR switch to the same setting as when the tape was recorded.
❺ Select the REVERSE MODE.
❻ Press the PLAY button to start playback.
• To stop playback midway.... Press ■ /STOP button.

RECORDING

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

Operate in the order of the numbers in the illustration.



❶ Press the POWER switch to set to ON (⏏).
❷ Load a cassette for recording with side A facing out.
❸ Select the side to be recorded.
Side A... Forward direction
Side B... Reverse direction
❹ Select the REVERSE MODE.
❺ Set the DOLBY B NR switch as required.
❻ Press the ❚❚ PAUSE button and ● REC/REC MUTE button at the same time (record-pause mode).
The ● (REC) and ❚❚ (PAUSE) indicators light.
❼ Adjust the recording level. (See page 8.)
❽ Press to "000".
❾ 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 recorded in the reverse direction (side B), only side B is recorded and then the tape stops automatically.

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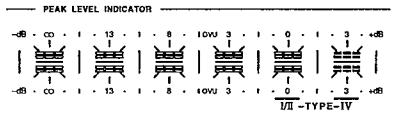
It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

Erasing
When recording on a prerecorded tape, the previous recording is automatically erased and only the new program is recorded on the tape.

To erase a tape without making a new recording...
In step ❺ "RECORDING", set the DOLBY B NR switch to OFF and, in step ❼, set the INPUT LEVEL control to MIN.

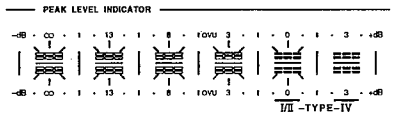
RECORDING LEVEL ADJUSTMENT
Adjust the recording level while observing the PEAK LEVEL INDICATOR indication.

For example:
With TYPE IV tape



Because of metal tape's higher saturation level, it is OK that "+3" lights occasionally.

With TYPE I or TYPE II tape



It is OK that "+0" lights occasionally.

- When the recording level is too low, the hiss noise inherent in the tape will be conspicuous.
- When the recording level is too high, exceeding the saturation level, the recording will contain cracking noise and will be distorted.

It is best to adjust so that the maximum sound level of the source to be recorded reaches the very limit of the saturation level of the tape to be used. The best level varies depending on the type of music and type of tape so it is better to make test recordings, using FM music, records, etc.

DOLBY B NR switch
- The tapes recorded using NR must be played back through the corresponding circuit.

Note:
Proper sound quality will not be obtained if different NR switch settings are used during recording and playback.

AUTOMATIC RECORD MUTING

This facility is used to eliminate undesired sections and leave an appropriate non-recorded section.

A. To leave non-recorded sections of about 4–5 seconds automatically
1. When the undesired section comes during recording, press the ● REC/REC MUTE button and release it.
2. The REC indicator flashes and a non-recorded section is made during record muting operation. About 4–5 seconds later, the tape automatically stops, and the unit enters the record-pause mode.
3. Press the PLAY button to start recording again.

B. To leave non-recorded sections of more than 4–5 seconds
1. Keep the ● REC/REC MUTE button pressed continuously as long as you want to make a non-recorded section. By releasing the finger from the button after the above operation, the unit enters the record-pause mode.
2. Press the PLAY button to start recording again.

C. To leave non-recorded section of less than 4-seconds
When the undesired section comes during recording....
After the ● REC/REC MUTE button is pressed, press the PLAY button before the unit enters the pause mode to start recording again, or press the ▮▮ PAUSE button to enter the record-pause mode.

- The peak level indicator lights even during record muting according to the input level which can be heard from the speakers or headphones so that recording can be resumed at the exact point on the tape.

COMPU LINK CONTROL SYSTEM

COMPU LINK Control System

The Compu Link Control System controls relative operations between components automatically and facilitates various operations.
This is a system originated and developed by JVC for facilitating various system operations.
There are two versions of this system; version 1 and 3. (For version 1 components, "COMPU LINK-1/SYNCHRO" is marked on the rear panel. For version 3 components, "COMPU LINK-3/SYNCHRO" is marked on the rear panel. This unit belongs to version 1.)
This cassette deck can be connected to version 3 components, but in this case only the functions listed below will be available.

Automatic Source Selection
When the provided remote cables are used for connecting this unit to other components which have COMPU LINK-1 (or -3)/SYNCHRO terminals, the switch-over of all system components is possible with simple one-touch of the source selector button of JVC's amplifier or receiver.
By doing this, the corresponding component will start playing automatically.
The source select button of the remote control unit or the activation button of the desired component can be also used for this purpose. When the components have been switched over, the previous component will stop playing within five seconds.

Synchronized Recording
Synchronized recording refers to the process in which the deck starts recording in synchronism with the CD player. Perform the synchronized recording as follows:
1. Set the cassette deck to the record-pause mode in accordance with the recording procedures on page 7.
2. If you want the programmed recording, program the desired tunes in any order you wish to hear.
3. Press the PLAY/PAUSE button of the CD player. By so doing, the cassette deck is placed in the record mode and synchronized with the CD player for recording. Synchronized recording thus can be made possible.

DDRP (Dynamics Detection Recording Processor) recording
The DDRP function makes possible fully automatic recording when used with a suitable JVC CD player. When the DDRP button of a suitable JVC CD player is pressed, the recording level is first adjusted automatically, then recording starts; it is not necessary to start recording by the normal procedure.

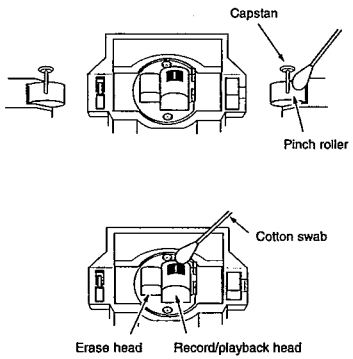
Notes:
- Synchronized recording or DDRP recording stops automatically when the CD player stops playing.
- Synchronized recording does not start except when the record-pause mode is set by simultaneously pressing the ● REC/REC MUTE and ▮▮ PAUSE buttons in the stop mode.
- To cancel synchronized recording or DDRP recording, press the STOP button of the CD player or cassette deck.
- The source is locked to the CD position during synchronized recording or DDRP recording to avoid accidental stops or switch-over to another component. To switch over the components, cancel synchronized recording or DDRP recording first.

MAINTENANCE

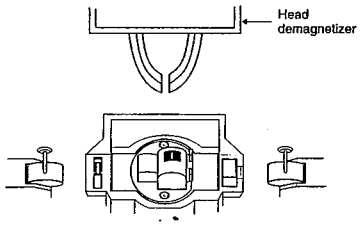
The importance of cleaning
When the tape is moving, magnetic powder and dust naturally accumulate on the heads, capstan and pinch roller.
When they become too dirty:
- tone quality deteriorates.
- the output sound level drops.
- the previous sound is not erased satisfactorily.
- recordings are not satisfactory.

Because of this, clean the heads, etc. every 10 hours of use so that optimum recordings will be made.

Cleaning the heads, pinch roller and capstan
Wipe the heads, the capstan, etc. with a cotton swab with its tip dipped in alcohol.
For effective cleaning, use a cleaning kit available from your audio store. After cleaning, be sure that the cleaning fluid has completely dried before loading a cassette.



Demagnetizing the heads
Magnetic objects brought close to the head or using the deck for a long period of time, results in magnetization of the head, thus noise occurs. When the noise is excessive, high frequencies on the recorded tape may be erased.
Demagnetize the heads and other metal parts that come into contact with the tape every 20–30 hours of use with a head demagnetizer (available from your audio store).



TROUBLESHOOTING

What appears to be trouble is not always real trouble. Make sure first....

1. **Cassette cannot be loaded.**
   - Is the cassette positioned correctly?
2. **When PLAY button is pressed, tape does not move.**
   - Is the tape too loosely wound?
3. **Tape runs, but no sound is heard.**
   - Are all connections properly and securely made?
   - Is the MONITOR switch of the stereo amplifier set to the TAPE position?
   - Is the VOLUME control of the stereo amplifier set to MIN?
4. **Sound quality is poor.**
   - Is the DOLBY B NR switch set to the right position?
   - Is the head section dirty?
   - Is the record/playback head magnetized?
   - Is the tape worn out?
5. **Recording cannot be performed.**
   - Are the safety tabs of cassette tape broken?
   - Are all connections properly and securely made?
   - Is the head section dirty?
6. **Previous recording is not completely erased.**
   - Is the erase head dirty?
7. **Since tape speed is irregular, wow and flutter occur.**
   - Is the pinch roller or capstan dirty?
   - Is the tape rewound too tight?

SPECIFICATIONS

Type	: Cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 4.8 cm/sec (1-7/8 inch/sec)
Frequency response	: (–20 dB recording) TYPE IV tape; 20 – 17,000 Hz 30 – 16,000 Hz (±3 dB) TYPE II tape; 20 – 16,000 Hz 30 – 15,000 Hz (±3 dB) TYPE I tape; 20 – 16,000 Hz 30 – 15,000 Hz (±3 dB)
S/N ratio	: 58 dB (S = 315 Hz, k3 = 3%, N = A-weighted, Type IV tape) The S/N is improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with DOLBY B NR on.
Wow and flutter	: 0.08% (WRMS), ±0.2% (DIN/IEC)
Channel separation	: 40dB (1 kHz)
Crosstalk	: 60dB (1 kHz)
Harmonic distortion	: k3; 0.8% (Type IV tape, 315 Hz 0 VU)
Heads	: METAPERM head for recording/playback, 2-gap ferrite head for erasure; combination head x 1
Motors	: Electronic governed DC motor for capstan x 1 DC motor for reel x 1 DC motor for mechanism drive x 1
Fast forward/Rewind time	: Approx. 110 sec. with C-60 cassette
Input terminals LINE IN (x 1 circuit)	: Input sensitivity; 80 mV (0 VU) Input impedance; 50 kΩ
Output terminals LINE OUT (x 1 circuit)	: Output level; 300 mV (0 VU) Output impedance; 5 kΩ
Power requirement	: B version: AC 230 V, 50 Hz J version: AC 120 V, 60 Hz
Power consumption	: With POWER switch ON; 12 W With POWER switch STANDBY; 1.8 W
Dimensions (W x H x D)	: 435 x 140 x 297 mm (17-3/16 x 5-9/16 x 11-3/4")
Weight	: 3.9 kg (8.6 lbs.)
Accessories	: Pin plug cord ..... 2 Remote cable 1

Design and specifications are subject to change without notice.

Area suffix	
B.....U.K.	J.....U.S.A.

(No. 4361) 9

1 Location of Main Parts

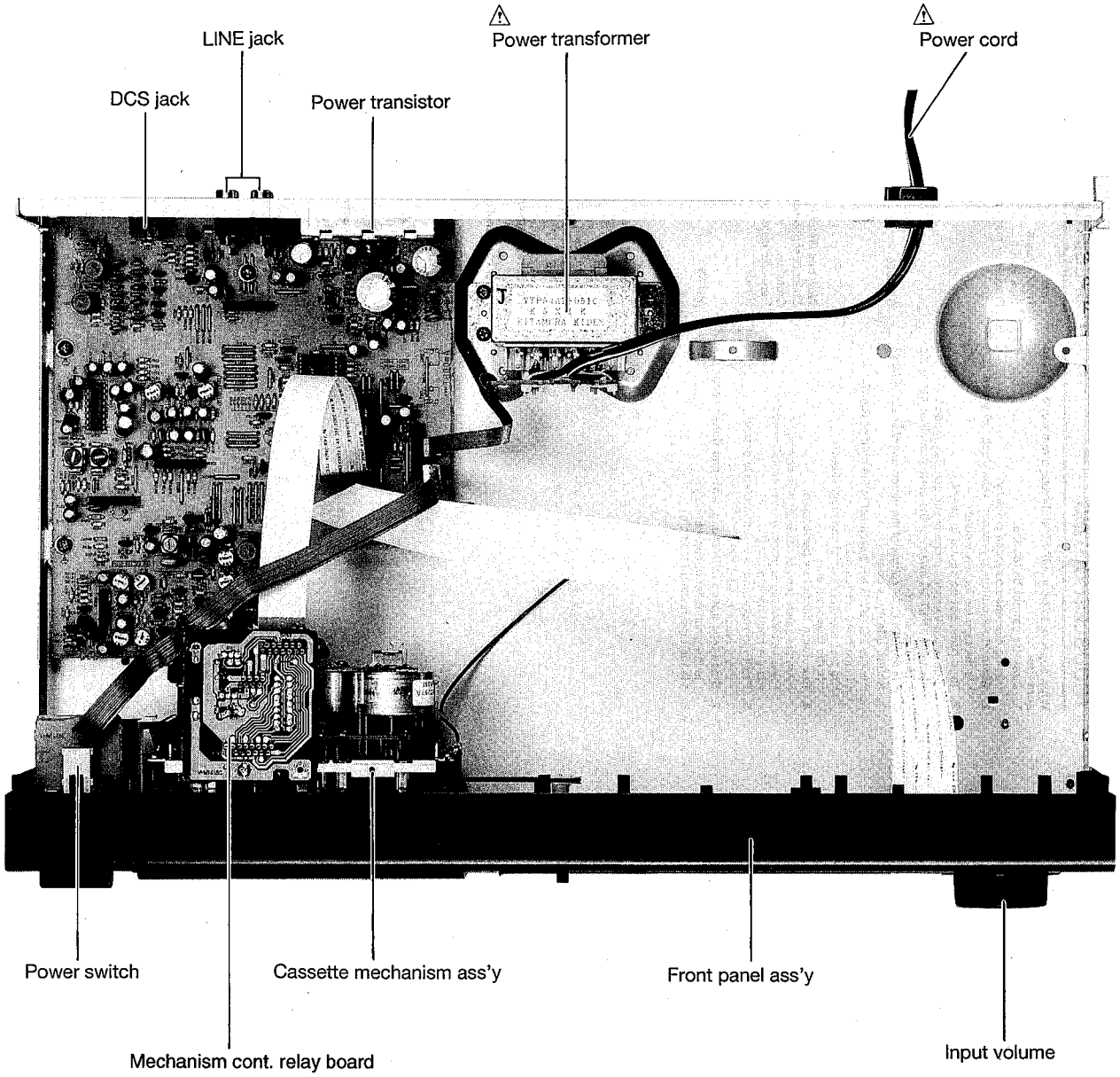


Fig. 1 – 1

2 Removal of Main Parts

■ Enclosure Section (See Fig. 2 – 1)

◆ Top cover

1. Remove four screws ① retaining the top cover from the both sides.
2. Remove two screws ② retaining the top cover from the back.

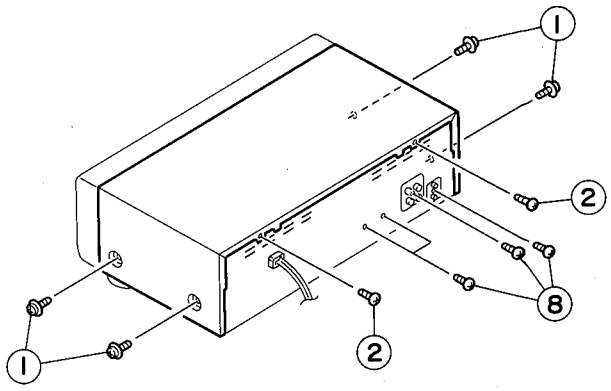


Fig. 2 – 1

◆ Front panel assembly (See Fig. 2 – 2 to 2 – 3)

1. Remove the top cover.
2. Remove one screw ③ retaining the earth wire from the chassis.
3. Disconnect connector CN753 of the mechanism board assembly.
4. Disconnect connectors CN901, CN902, CN821 and CN701 of the main board assembly.
5. Disconnect connector CN801 of the main board assembly.
6. Remove three screws ④ retaining the front panel assembly from the bottom.
7. Pull out the front panel assembly.

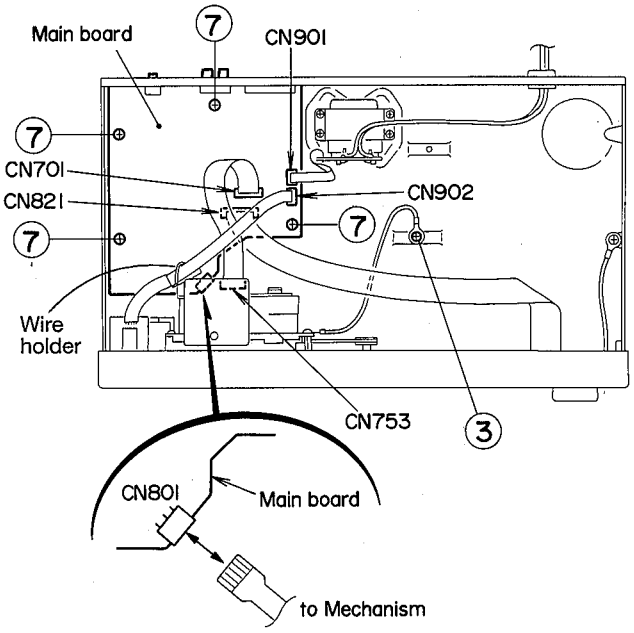


Fig. 2 – 2

◆ Mechanism assembly (See Fig. 2 – 4)

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

1. Disconnect all connectors between the mechanism assembly or the front panel assembly and the main board assembly.
2. Remove two screws ⑤ retaining the mechanism assembly from the top side.
3. Remove two screws ⑥ retaining the mechanism assembly from the bottom side.
4. Disengage the counter belt from the counter pulley, and temporarily engage the belt with the FM bracket hook of the mechanism assembly.
5. Disconnect the power switch wire from the wire holder of the Mechanism board. (See Fig. 2 – 2)
6. After unlocking the mechanism assembly by pressing the EJECT button or raising the EJECT arm upwards, remove the mechanism assembly.

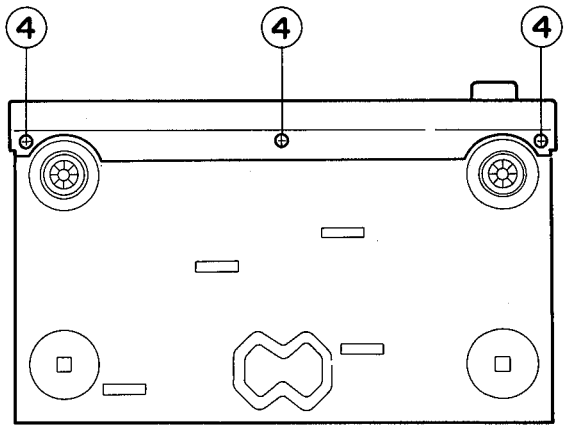


Fig. 2 – 3

◆ **Main board assembly** (See Fig. 2 – 1 to 2 – 2)

1. Remove the top cover.
2. Disconnect all connectors between the mechanism assembly or the front panel assembly and main board assembly, or remove the front panel assembly.
   Remove the front panel assembly.
3. Remove four screws ⑦ retaining the main board assembly.
4. Remove four screws ⑧ retaining the jacks and heat sink the rear side.

◆ **Volume/indicator board assembly** (See Fig. 2 – 4)

1. Pull out the input knob.
2. Remove ten screws ⑨ retaining the volume/indicator board assembly.
3. Pull up the volume/indicator board assembly, remove the REV, DOLBY switch knobs.

◆ **Tape counter assembly** (See Fig. 2 – 4)

1. Remove two screws ⑩ retaining the tape counter assembly.

◆ **Power switch assembly** (See Fig. 2 – 4)

1. Remove two screws ⑪ retaining the power switch assembly.

◆ **Eject button assembly** (See Fig. 2 – 4)

1. Remove one screw ⑫ retaining the EJECT button assembly.

◆ **Gear damper** (See Fig. 2 – 5)

1. While inserting the tip of an ordinary (–) screwdriver between the gear damper and the cassette holder to unhook the pawl of the gear damper, draw out the gear damper upwards.

◆ **Cassette door** (See Fig. 2 – 6)

1. Remove the door spring.
2. Press the door arm shaft inwards for disengaging from the cassette door, and then draw out the cassette door in the direction of the door spring side.

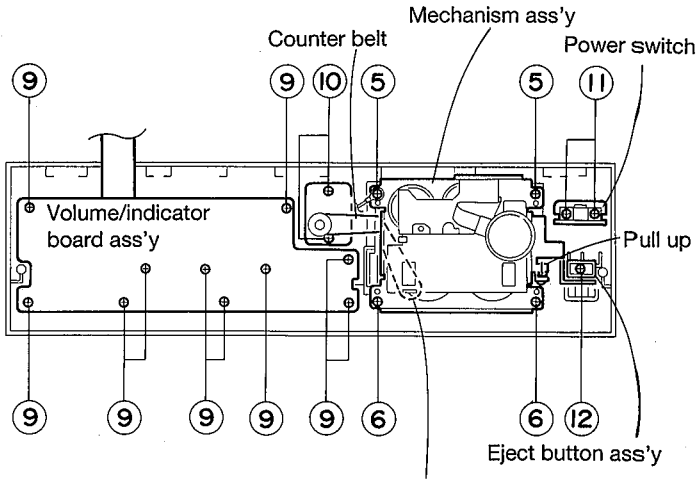


Fig. 2 – 4

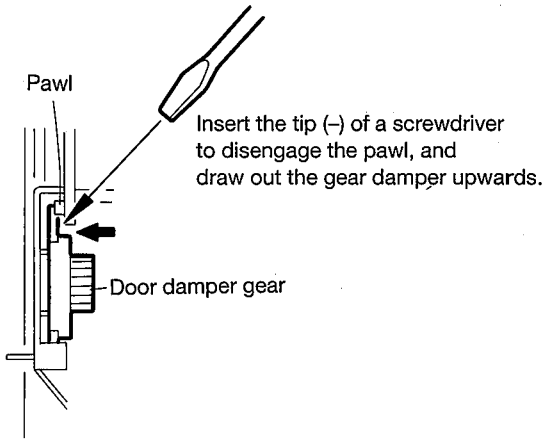


Fig. 2 – 5

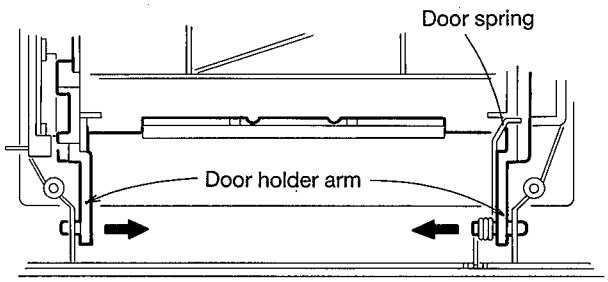


Fig. 2 – 6

■ Mechanism Section

◆ Head mount assembly (Fig. 2 – 7, 2 – 8)

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

◆ Pinch roller assembly (Fig. 2 – 7, 2 – 9)

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 –9.

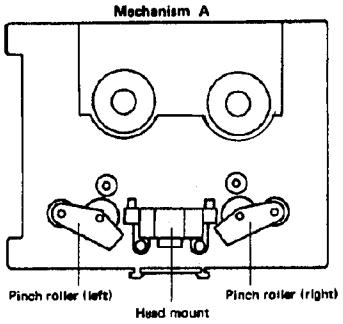


Fig. 2 – 7

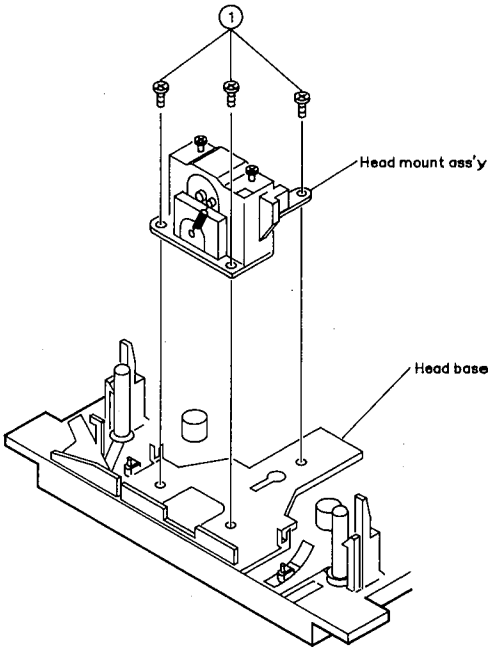


Fig. 2 – 8

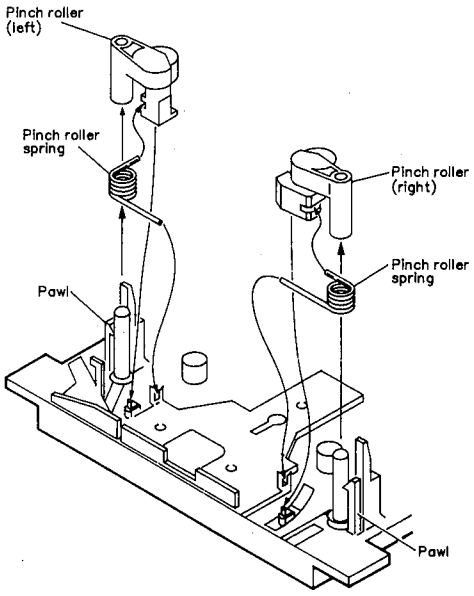


Fig. 2 – 9

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

1. Remove soldering of connector FM on Reel motor board. (Fig. 2 – 10)
2. Remove three screws ② and disengage two pawls, and then the FM bracket and the capstan belt can be removed. (Fig. 2 – 10, 2 – 11)
3. Remove two screws ③ retaining the capstan motor from the FM bracket. (Fig. 2 – 10)
4. For reengaging the capstan belt, refer to Fig. 2 – 11.

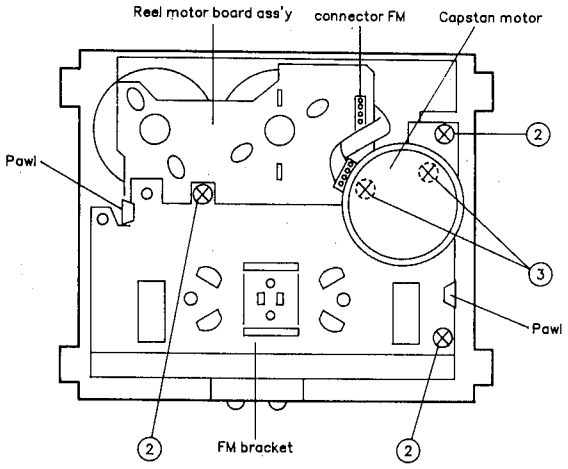


Fig. 2 – 10

◆Flywheel ass'y (Fig. 2 – 12)

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 – 12)

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

◆Reel motor board (Fig. 2 – 13)

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

◆Actuator motor ass'y (Fig. 2 – 13)

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

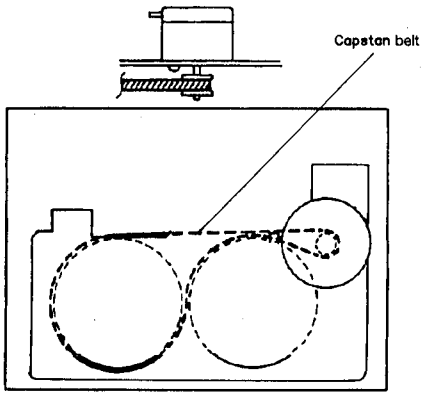


Fig. 2 – 11

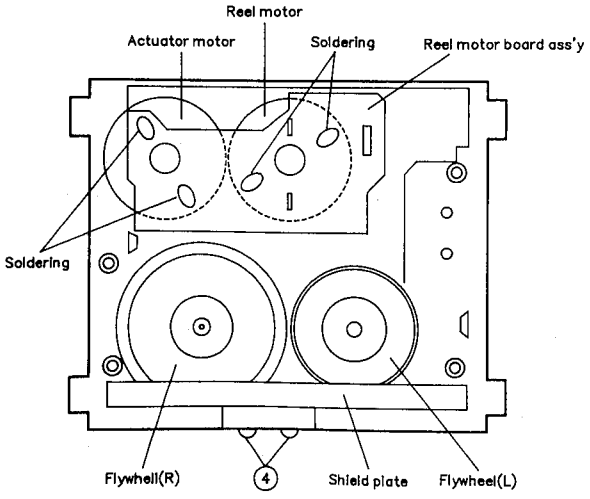


Fig. 2 – 12

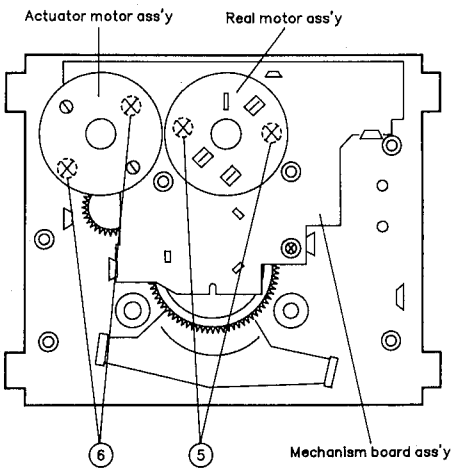


Fig. 2 – 13

◆Mechanism board ass'y (Fig. 2 – 14)

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.

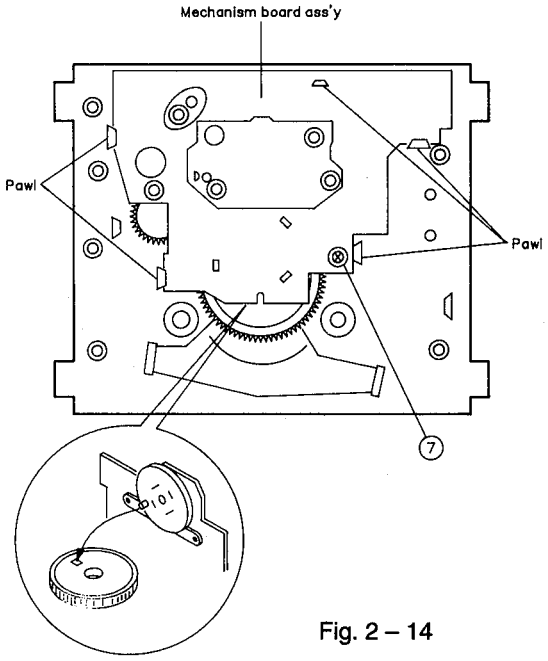


Fig. 2 – 14

◆Control cam (Fig. 2 – 15, 2 – 16)

1. Release the control cam from two pawls. (Fig. 2 – 15)
2. For assembling the control cam, fits ⓐ zone (groove) of control cam to ⓐ position of Pinch lever and ⓑ zone (groove) to ⓑ position of Head base shaft. (Fig. 2 – 15, 2 – 16)

◆Actuator gear A and B (small) (Fig. 2 – 15)

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 – 15)

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

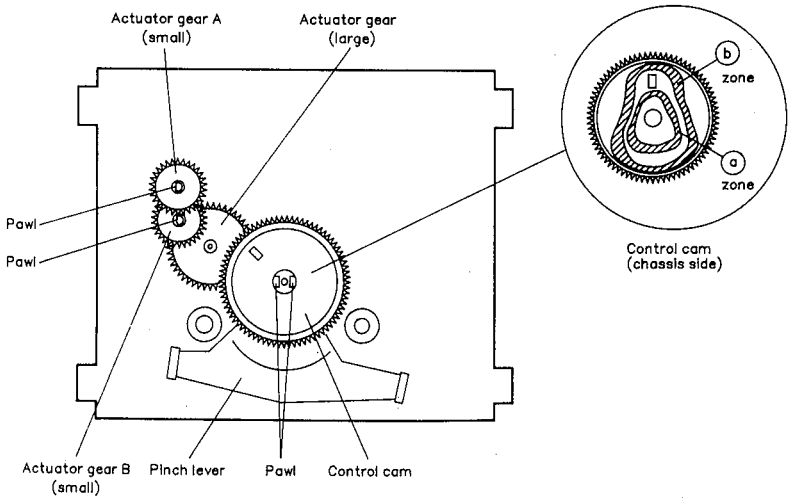


Fig. 2 – 15

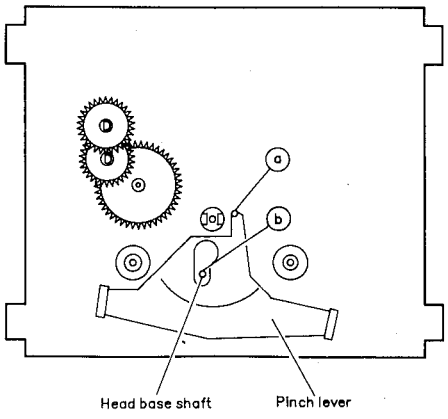


Fig. 2 – 16

3. Main Adjustments

◆ **Measuring instruments required for adjustment**

(1) Low frequency oscillator (oscillation frequency 50 Hz to 20 kHz, 0 dB output with 600 Ω impedance)

(2) Attenutor(600 Ω impedance)

(3) Electronic voltmeter

(4) Standard tapes

VT 712 (tape speed, wow and flutter measurement)

VT 727 (400Hz reference level)

TMT735 (1 k, 12.5 k), VT739 (63, 1 k, 10 k) (playback frequency)

VT705 (12.5 kHz) (azimuth)

TMT6447, TM6448 (music scan)

(5) Recording reference tapes

AC225 Type I (Normal)

AC514 Type II (CrO_2)

AC713 Type III (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:

AC230 V, 50 Hz : B/E/EN/G version

AC120V, 60Hz :C/J version

AC230/127/110 V, 50/60 Hz: U/UB version

(13) Standard position of the switch and volume knob

Switches and volume knobs Setting position

INPUT LEVEL : MAXIMUM

DOLBY NR : OFF

REVERSE MODE : ⇄

(14) Measuring references

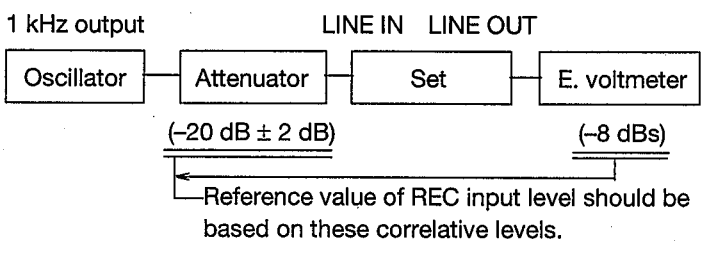
1) Output level of a low frequency oscillator must be 0 dBs after passing through a 0 dB attenuator (in connection with 600 Ω impedance).

2) The reference value of recording input level is the LINE IN level of a signal whose LINE OUT level is –8 dBs.

3) 0 dBs = 0.775 V

Item	Test c ondition	Check and adjustment procedure	Standard value	Adjusting part
Adjusting tape speed	Test tape: VT712 (3 kHz)	1. Connect an electronic frequency meter to the LINE OUT terminals. 2. Play back the end portion of the VT712 test tape. 3. Adjust the normal tape speed to be 3000 Hz with VR761. 4. Check that difference in tape speed between FWD and REV is within 45 Hz.	3000 ± 15 Hz Check 3000 ± 45 Hz for FWD and REV.	VR761
Checking wow and flutter	Test tape: VT712 (3 kHz)	1. Connect a wow and flutter meter to the LINE OUT terminals. 2. Play back the VT712 test tape. 3. Check to see if the wow and flutter meter reads less than 0.17 % (WRMS), or not.	Less than 0.17 %	
Checking play-back torque	Torque gauge: TW2111A (FWD) TW2121A (REV)	After setting a torque gauge on the set, press the PLAY button and confirm that the torque gauge reads a value between 0.26 and 0.69 N-cm (27 to 70 g-cm).	0.26 to 0.69 N-cm (27 to 70 g-cm)	

Item	Test c ondition	Check and adjustment procedure	Standard value	Adjusting part
Checking FF or REW torque	Torque gauge: TW2231 (FF/REW)	After setting a torque gauge on the set, press the FF or REW button and confirm that the torque gauge reads a value from 0.88 to 1.96 N-cm (90 to 200 g-cm).	0.88 to 1.96 N-cm (90 to 200 g-cm)	
Checking FF and REW time	Test tape: C-60	Confirm that the tape travel from the beginning to the end is complete within 120 seconds in both FF and REW modes.	Within 120 sec	
Adjusting head azimuth	Test tape: VT705 (12.5 kHz) Measing point: LINE OUT terminals	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VT705 test tape. 3. While maintaining minimum phase difference between channels, maximize the output level with the adjusting screw. At that time, the output level must not decrease more than 1 dB as compared with the maximum output level.		
Adjusting playback level	Test tape: VT727 (400 Hz) Measuring point: LINE OUT terminals	1. Connect an electronic voltmeter and oscilloscope to the LINE OUT terminals. 2. While playing back the VT727 test tape, adjust VR102 (L) and VR202 (R) to obtain –5 dBs ± 0.5 dB as the output level on both channels.	–5 dBs ± 0.5 dB	L: VR102 R: VR202
Adjusting playback frequency response	Test tape: VT739 (63 Hz, 1 kHz) TMT735 (12.5 kHz, 1 kHz) Measuring point: LINE OUT terminals NR switch: OFF Tape travel: FWD	1. Play the 12.5 kHz signal of the TMT735 alignment tape to check to see if the azimuth is normal or not. 2. Connect an electronic voltmeter and oscilloscope to the LINE OUT terminals. 3. While playing the TMT735 test tape (12.5 kHz, 1 kHz), adjust VR101 (L) and VR201 (R) so that level difference of 12.5 kHz signal from 1 kHz signal is 0 ± 0.5 dB on both channels. 4. In the condition of the above step 2), play back the VT739 test tape (63 Hz, 1 kHz) to confirm that the level difference of the 63 Hz signal from 1 kHz signal is within 0 ± 3 dB on both channels.	63 Hz/1 kHz: 0 ± 3 dB 12.5 kHz/1 kHz: 0 ± 2 dB	L: VR101 R: VR201
Checking playback noise	Blank cassette tape (Normal tape) IEC-A curve filter NR switch: ON and OFF	1. Connect an electronic voltmeter to the LINE OUT terminals through an IEC-A curve filter. 2. While playing a blank cassette tape (normal tape), measure noise level as the NR switch is on and off to check to see if it satisfies the following requirements. When NR switch is off, noise level is 1 mV or lower. When NR switch is on with a blank metal tape being loaded, noise level is 0.4 mV or lower.	NR switch OFF (Normal tape): 1 mV or lower NR switch ON (Metal tape): 0.4 mV or lower When A-curve filter is unavailable: NR switch OFF (Normal tape): 2 mV NR switch ON (Metal tape): 1.3 mV	

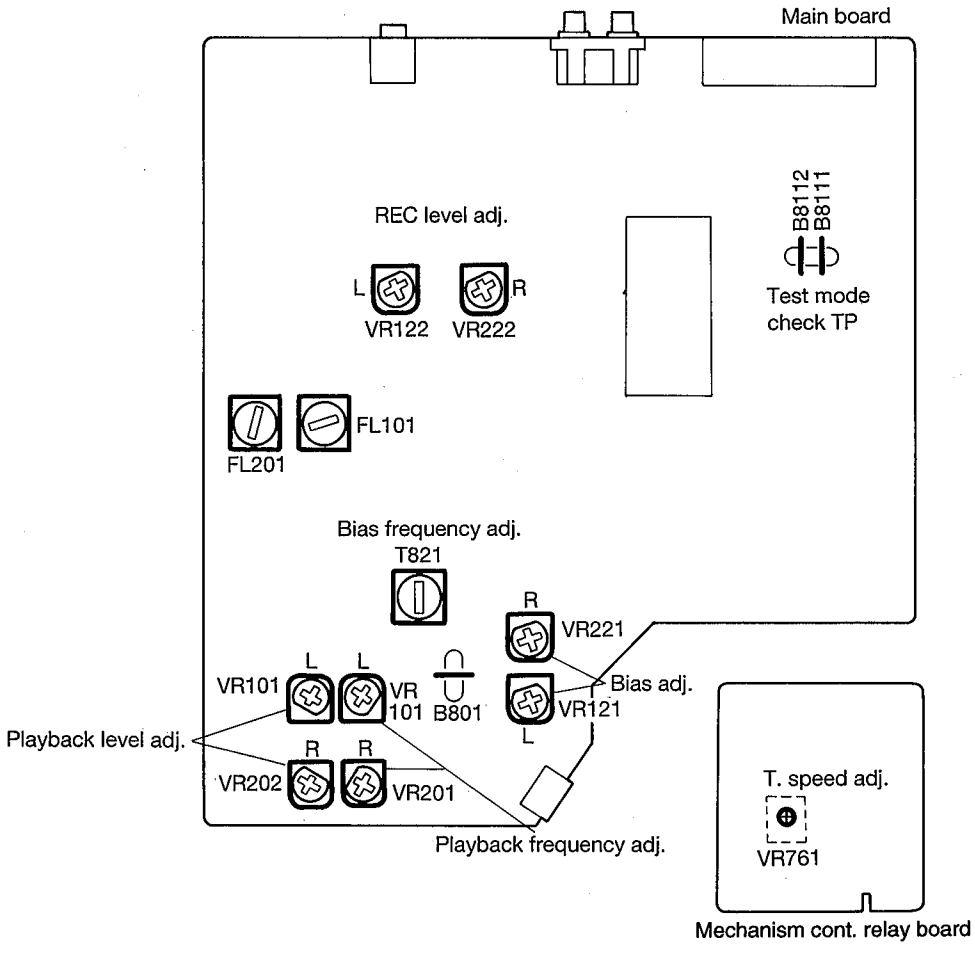
Item	Test c ondition	Check and adjustment procedure	Standard value	Adjusting part
Adjusting recording frequency	Tape: Metal tape Operation mode: Recording Measuring point: B801	1. Load the set with a metal cassette tape and start recording. 2. Adjust T821 so that the frequency meter reads 95 kHz ± 1 kHz.	95 kHz ± 1 kHz	T821
Checking erasing current (Values appearing here are just for reference.)	Operation mode: Recording Measring point: Both ends of 1 Ω resistor connected to the erase head terminal in series.	Connect a 1 Ω resistor to the erase head terminal in series, and measure voltage at both ends of the resistor to check to see if measured voltage meets the following requirements. • When the tape selector is set for METAL tape, the voltage is 173 mV (173 mA in current). • When the tape selector is set for CrO_2 (chromium dioxide) tape, the voltage is 115 mV (115 mA). • When the tape selector is set for NORMAL tape, the voltage is 76 mV (76 mA).	Reference values Metal tape mode: 173 mA (173 mV) CrO_2 tape mode: 115 mA (115 mV) Normal tape mode: 76 mA (76 mV)	
Checking recording bias current (Values appearing here are just for reference.)	Measuring point: Both ends of 100 Ω resistor connected to the R/P head terminal	1. Connect a 100 Ω resistor to the R/P head in series and measure voltage at both ends of the resistor. 2. Adjust VR121 (L) and VR221 (R) so that bias current between the measuring points meets the following requirements on both channels. • In recording with metal tape, the bias current is 1300 µA (1.3 mV) or higher. • In recording with CrO2 tape, the bias current is 830 µA (0.8 mV). • In recording with normal tape, the bias current is 565 µA (0.56 mV). (This adjustment must be repeated more precisely in the following step of recording frequency response adjustment.)	Reference values Metal tape: Approx. 1300 µA ± 20 % CrO_2 tape: Approx. 830 µA ± 20 % Normal tape: Approx. 565 µA ± 20 %	L: VR121 R: VR221
Checking input sensitivity	Input: 1 kHz, –20 dBs ± 2 dB signal to LINE IN terminals Measuring point: LINE OUT terminals	1. Turn the INPUT volume of the set to the maximum position. 2. Connect an electronic voltmeter to the LINE OUT of the set. 3. Supply 1 kHz signal output from an oscillator to the LINE IN of the set through an attenuator. 4. Adjust LINE IN level with the attenuator so that the electronic voltmeter reads –8 dBs. Moreover, confirm that the input level to the set is within –20 dBs ± 2 dB at that time. 	–20 dBs ± 2 dB	

Item	Test c ondition	Check and adjustment procedure	Standard value	Adjusting part
Adjusting recording and playback frequency response	LINE IN Input level: 20 dB lower than reference level NR switch: OFF Tape travel: FWD Note: When the check points B8111 and B8112 are short-circuited for a test mode, the set automatically rewinds the tape to the beginning point of recording and play it back as recording/playback is stopped.	1. Connect an electronic voltmeter and oscilloscope to the LINE OUT terminals. 2. Supply 1 kHz, 12.5 kHz and 63 Hz signals whose levels are 20 dB lower than the reference level (attenuated level, -40 dB ± 2 dB) to the LINE IN terminals and record them. 3. While playing back the 1 kHz, 12.5 kHz signals respectively, adjust VR121 (L) and VR221 (R) so that level difference between the 12.5 kHz signal and the 1 kHz signal is 0 dB ± 0.5 dB. 4. Play back the 63 Hz signal to check to see if it meets the standard value or not.	12.5 kHz/1 kHz 0 dB ± 0.5 dB 63 Hz/1 kHz 0 dB ± 3 dB	L: VR121 R: VR221
	In the same condition as mentioned above except NR switch setting. NR switch: ON	4. Set the NR switch to ON. While selecting the NORMAL, CrO2 and METAL tape modes respectively, check level difference between the two signals in the same manner as mentioned above. 63 Hz to 1 kHz = 0 ± 3 dB 12.5 kHz to 1 kHz = 0 ± 4 dB	63 Hz to 1 kHz = 0 ± 3 dB 12.5 kHz to 1 kHz = 0 ± 4 dB	
Adjusting recording and playback sensitivity	NR switch: OFF TAPE: NORMAL Tape travel: FWD Signal input: LINE IN Input frequency: 400 Hz Input level: 20 dB lower than reference level (–40 dB ± 2 dB)	1. Supply 400 Hz signal whose level is 20 dB lower than the reference level (attenuated level, -40 dB ± 2 dB) to the LINE IN terminals. 2. While recording the recorded signal and playing it back, adjust VR122 (L) and VR222 (R) so that difference between the recording/playback level and the reference level is -28 dBs ± 0.5 dB on both channels.	–28 dBs ± 0.5 dB	L: VR122 R: VR222
Checking recording/playback distortion	NR switch: OFF Signal input: LINE IN Input frequency: 1 kHz Input level: Reference level Tape travel: FWD	1. Connect a distortion meter to the LINE OUT terminals. 2. Supply the 1 kHz reference signal to the LINE IN terminals and record it in the respective tape modes. While playing back the recorded signal, check to see if the distortion meter reads the following values for the respective tape modes. NORMAL tape: 2 % or less CrO2, METAL tape: 3 % or less	Normal tape: 2 % or less CrO_2, Metal tape: 3 % or less	

Item	Test c ondition	Check and adjustment procedure	Standard value	Adjusting part
Checking recording/playback S/N ratio	NR switch: OFF Signal input: LINE IN Input frequency: 1 kHz Input level: Reference level Tape travel: FWD	1. Connect an electronic voltmeter and oscilloscope to the LINE OUT terminals. 2. Record the 1 kHz reference signal input through the LINE IN terminals in the respective tape modes, and continue recording without input signal. 3. While playing back the recordings with input signal and without input signal, check to see if level difference between the two recorded portions (with and without input signal) meets the standard value mentioned on the right.	Normal tape: More than 42 dB CrO_2, Metal tape: More than 43 dB	
Checking erasing ratio	NR switch: OFF Signal input: LINE IN Input frequency: 400 Hz Input level: 20 dB higher than the reference level (0 ± 2 dB)	1. Connect an electronic voltmeter and oscilloscope to the LINE OUT terminals through a band-pass filter. 2. Supply the 400 Hz signal whose level is 20 dB higher than the reference level (0 ± 2 dB) to the LINE IN terminals and record it in the respective tape modes. 3. Erase the recording partially. Play back the recorded part and the erased part to check to see if level difference between the two parts is more than 55 dB in the respective tape modes. 400 Hz, Ref. level + 20 dB signal input → Recording and erasing 400 Hz Band pass filter (B.P.F.) → Electronic voltmeter	Normal, CrO_2, Metal tape: More than 55 dB	
Checking NR effect	Tool: CCIR/ARM filter Tape: CrO_2	1. Connect an electronic voltmeter to the LINE OUT terminals through the CCIR/ARM filter. 2. Set the INPUT volume to the maximum position. 3. Set the NR switch to ON position and perform recording without input signal (nothing is connected to the LINE OUT). Set the NR switch to OFF position and perform recording in the same manner. 4. While playing back the recorded part with the NR switch set properly to the recording condition, check to see if level difference between the two setting conditions of the NR switch is more than 8.5 dB. Note: When playing back the recorded part, make sure to set the NR switch properly to the recording condition.	More than 8.5 dB	

Item	Test c ondition	Check and adjustment procedure	Standard value	Adjusting part
Checking channel separation	NR switch: OFF Tape: Normal Input frequency: 1 kHz	1. Connect an electronic voltmeter and oscilloscope to the LINE OUT terminals. 2. While supplying the 1 kHz reference signal to either channel of LINE IN terminals and supplying no signal to the other channel, perform recording. 3. While playing back the recorded part, check to see if level difference between the two channels (one with input signal and the other without input signal) is more than 30 dB.	More than 30 dB	
Checking peak indicator calibration	Operation mode: Recording Input frequency: 1 kHz Input terminal: LINE IN (Level indicator must reads 0 dB in this condition.) LINE OUT: –4 dBs	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Supply the 1 kHz reference signal to the LINE IN terminals. 3. While raising the input signal level gradually, check the signal level at the LINE OUT so that each peak indicator is turned on with the output level specified on the right.		

■ Adjusting Location



4. Wiring Connections

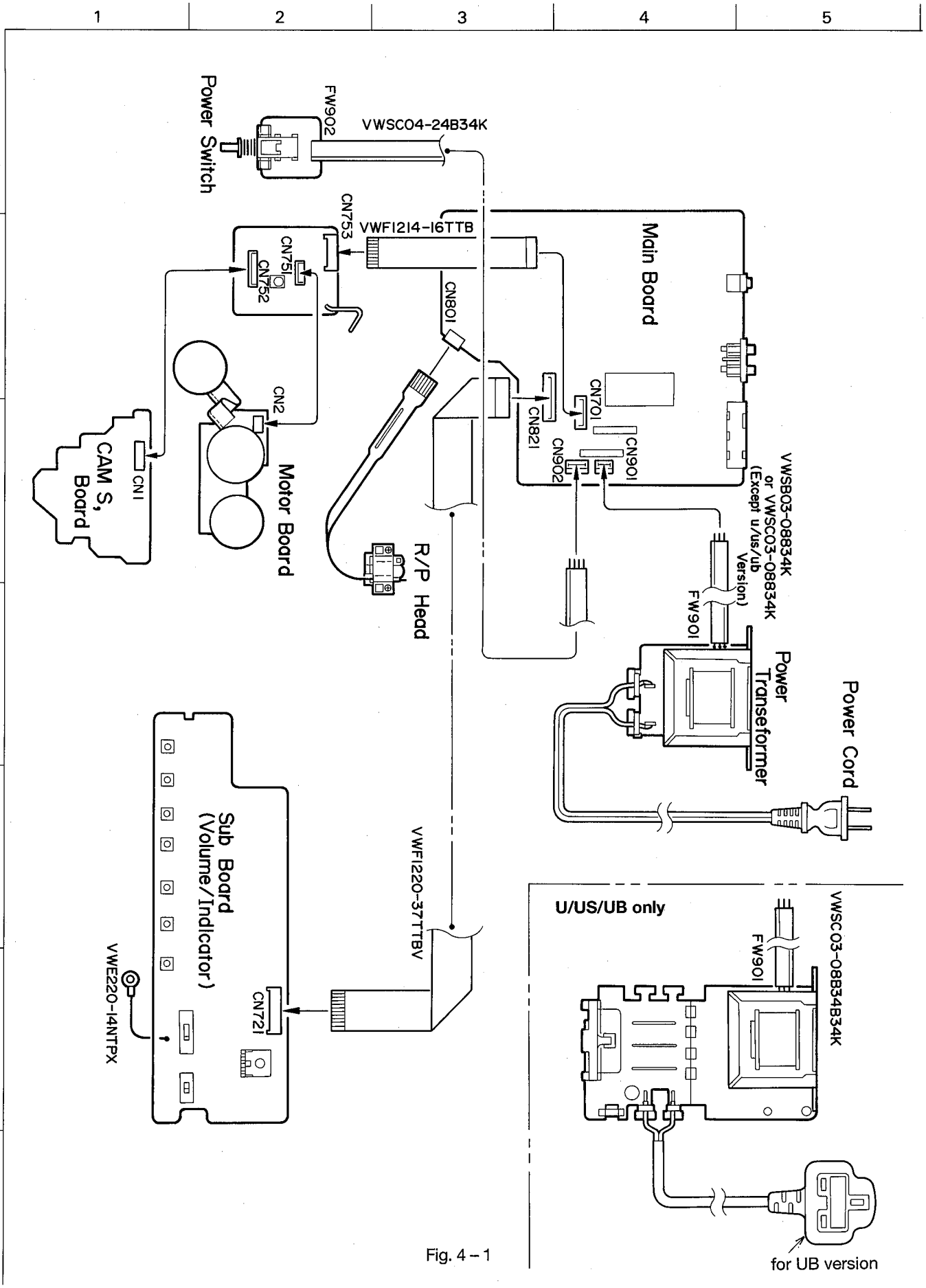


Fig. 4 – 1

5. Block Diagram

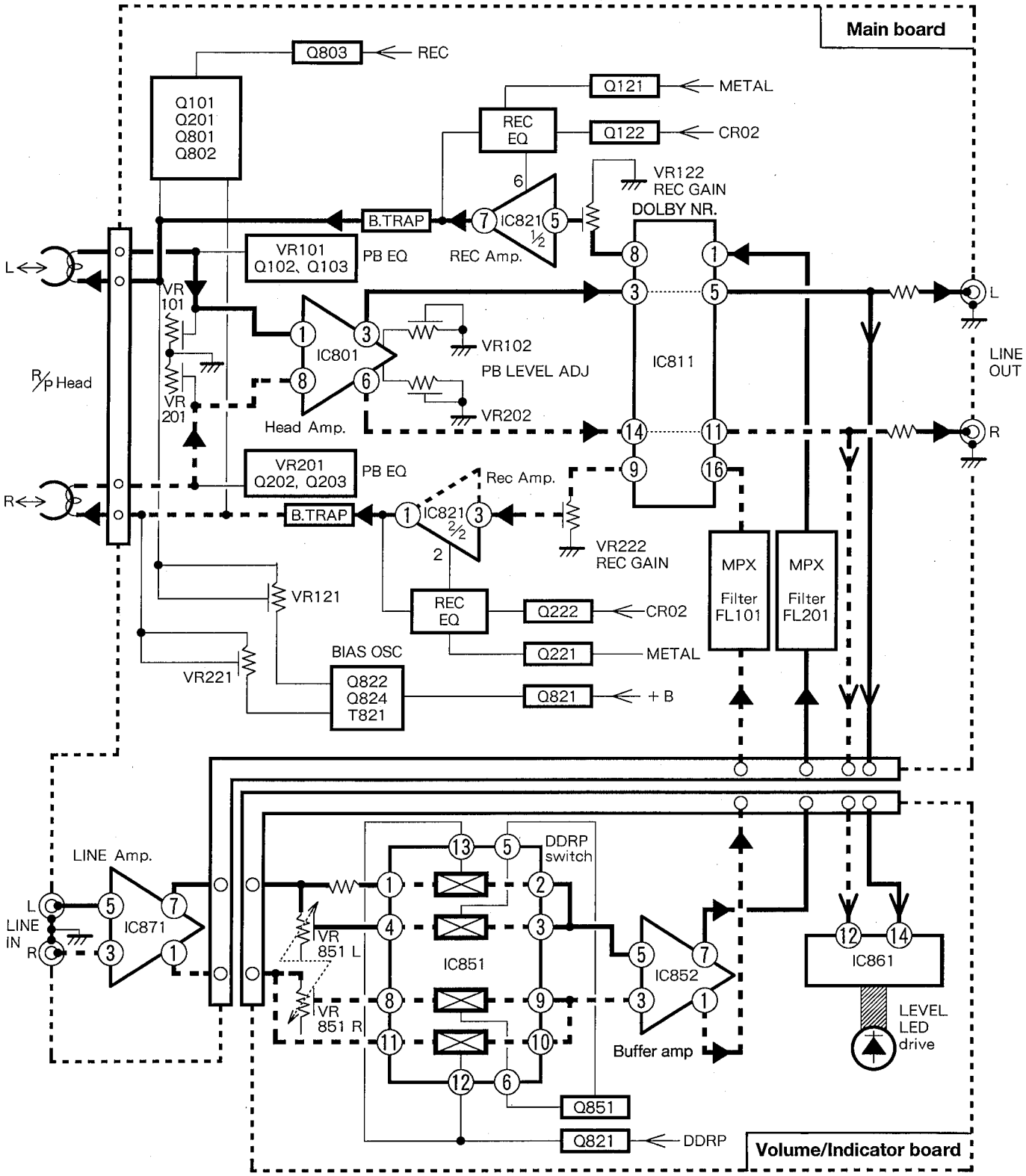
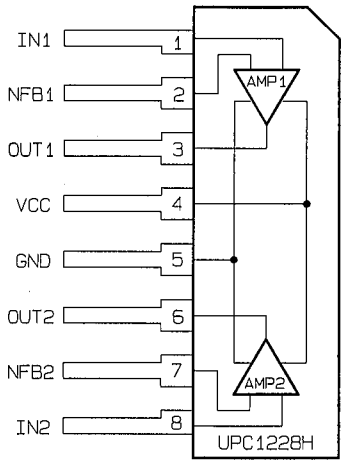


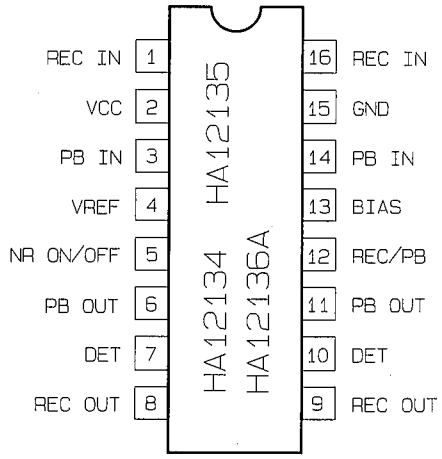
Fig. 5 – 1

■ Integrated Circuit

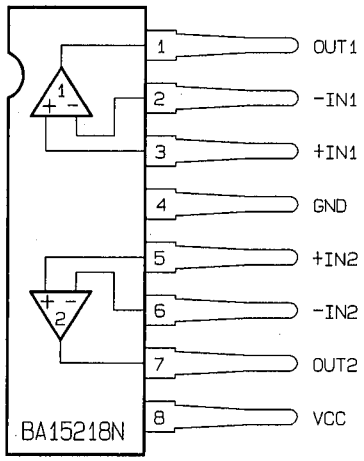
◆ IC801 (UPC1228HA) Head amp.



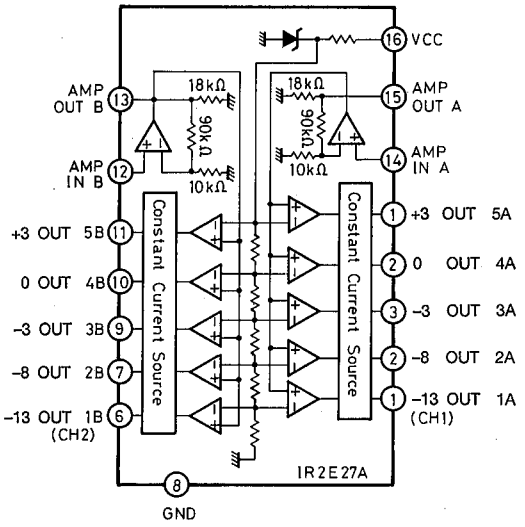
◆ IC811 (HA12136A) N.R. amp.



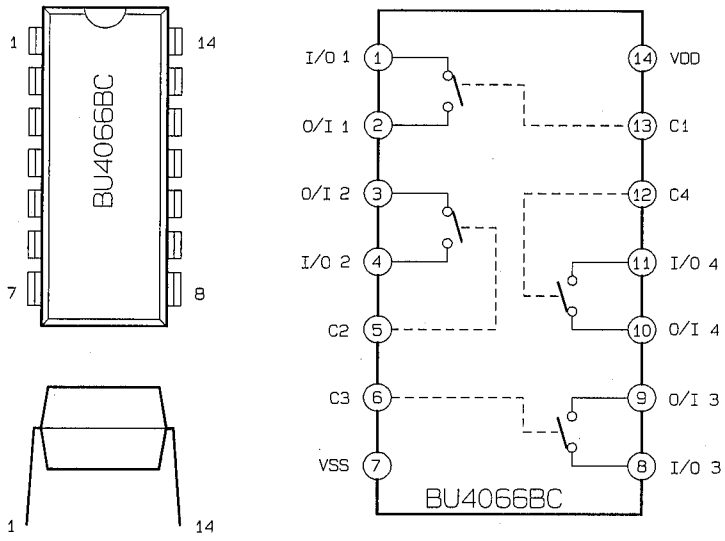
◆ IC812/IC852/IC821/IC871 (BA15218N)



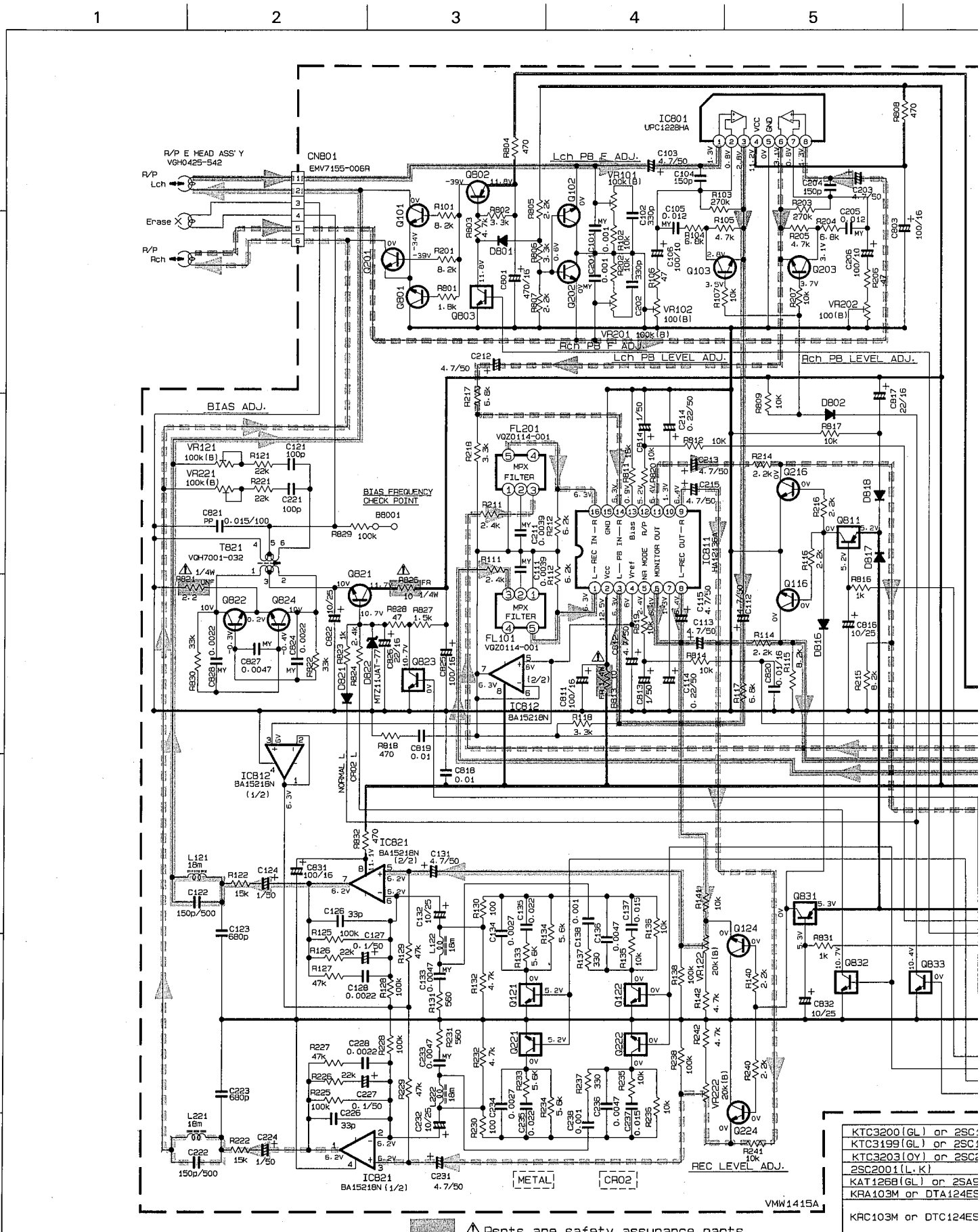
◆ IC861 (IR2E27A) Indicator driver



◆ IC851 (BU4066BC) DDRP switch



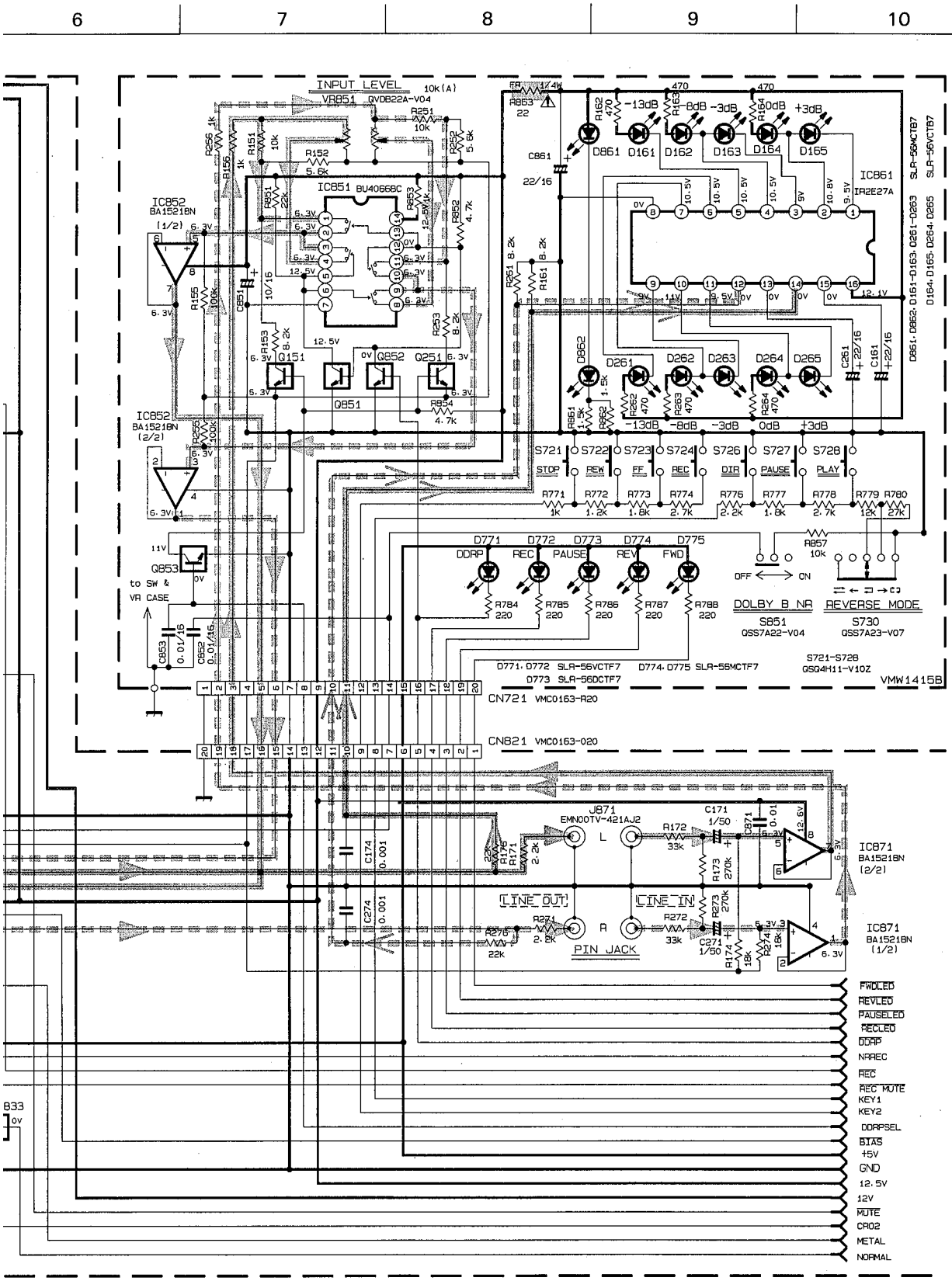
6. Standard Schematic Diagram ■ U/US Version



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

Fig. 6 – 1

Note : VDH2355007AW



or 2SC1845(E,U)	Q101, Q201, Q801
or 2SC1740S(R,S)	Q103, Q203
or 2SC2001(L,K)	Q102, Q202, Q116, Q216, Q124, Q224, Q821
)	Q822, Q824
or 2SA992(F,E,U)	Q802
DTA124ES	Q811, Q831
DTC124ES	Q121, Q122, Q151, Q221, Q222 Q251, Q803, Q823, Q832, Q833 Q851, Q852, Q853

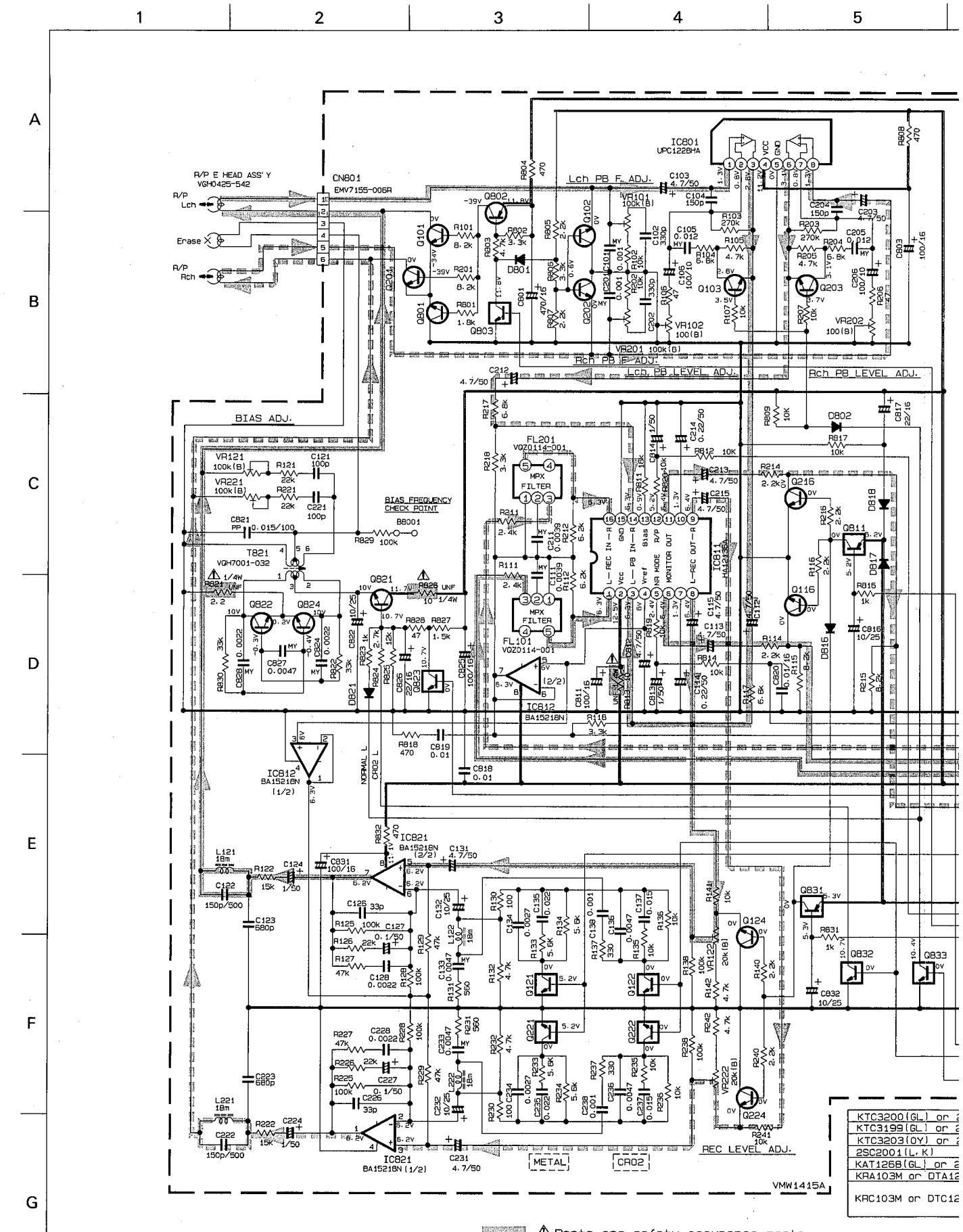
L
R
LINE IN Recording signal

L
R
Playback signal

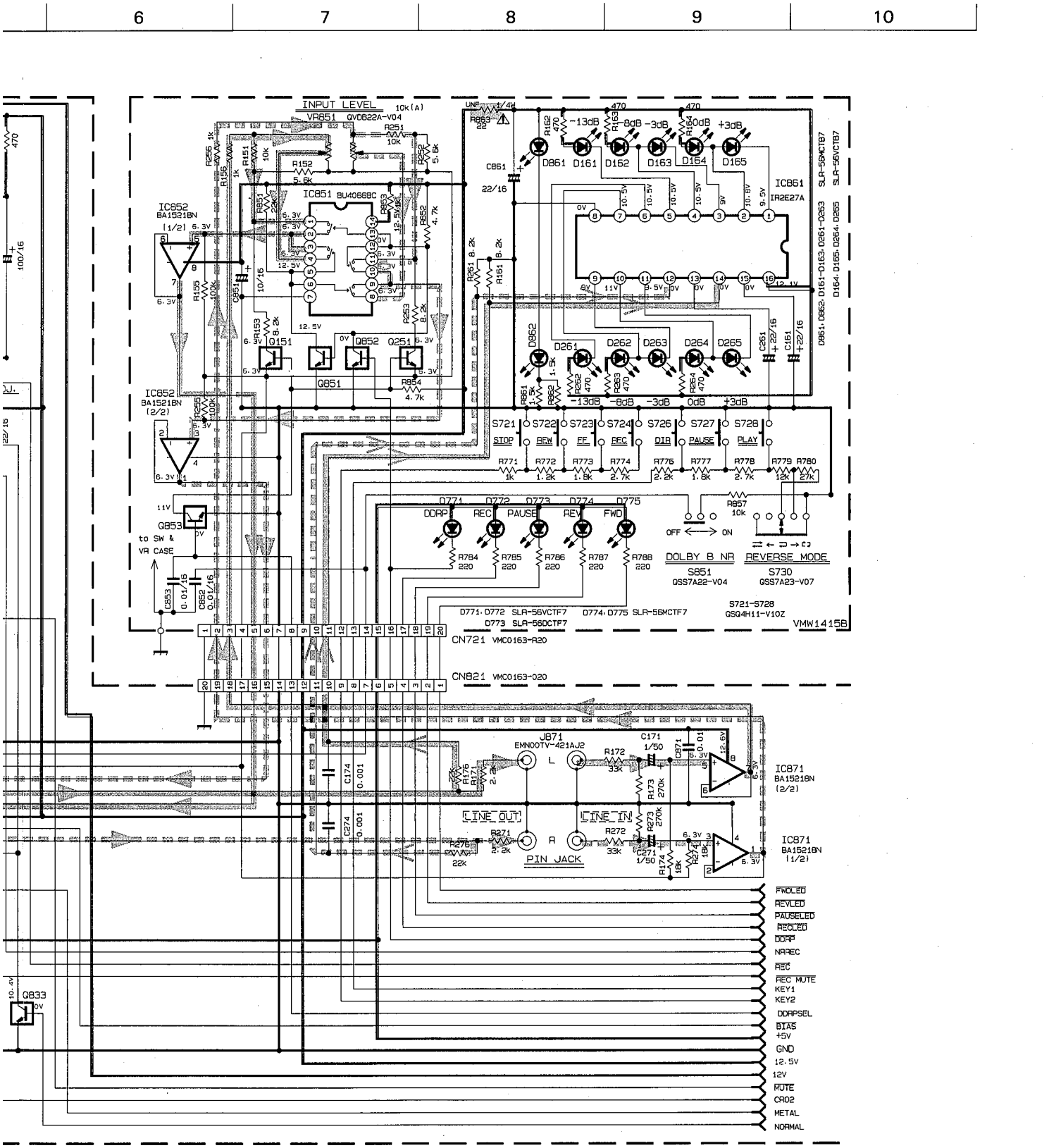
+B Line

L
R
Level mater signal

■ B/C/E/G/J Version



Note : VDH2355002AW



(GL) or 2SC1845(E,U)	Q101, Q201, Q801
(GL) or 2SC1740S(A,S)	Q103, Q203
(OY) or 2SC2001(L,K)	Q102, Q202, Q116, Q216, Q124, Q224, Q821
(L,K)	Q822, Q824
(GL) or 2SA992(F,E,U)	Q802
or DTA124ES	Q811, Q831
or DTC124ES	Q121, Q122, Q151, Q221, Q222 Q251, Q803, Q823, Q832, Q833 Q851, Q852, Q853

L / R Playback signal

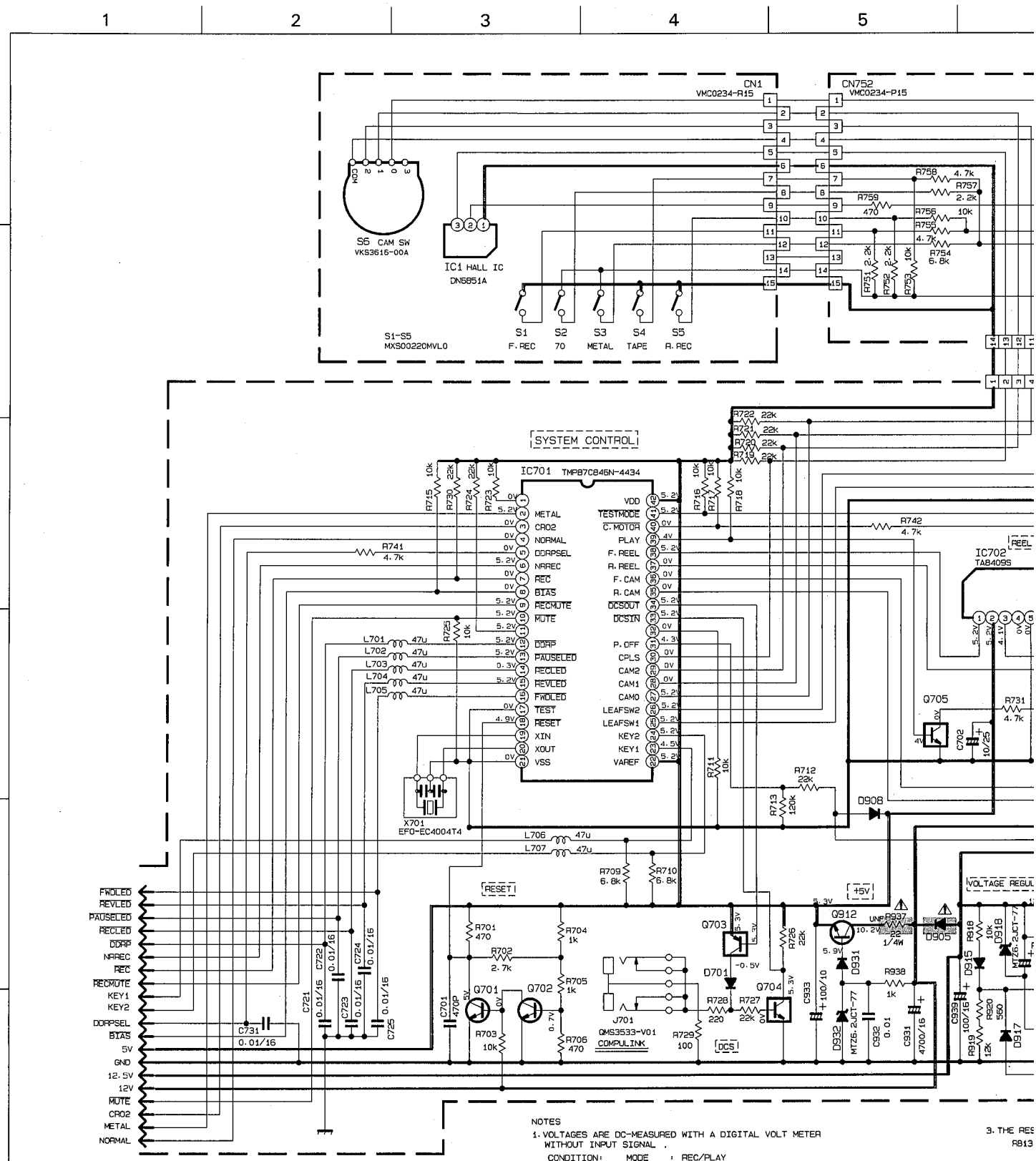
L / R Level mater signal

+B Line

L / R LINE IN Recording signal

Fig. 6 – 2

■ ALL Version

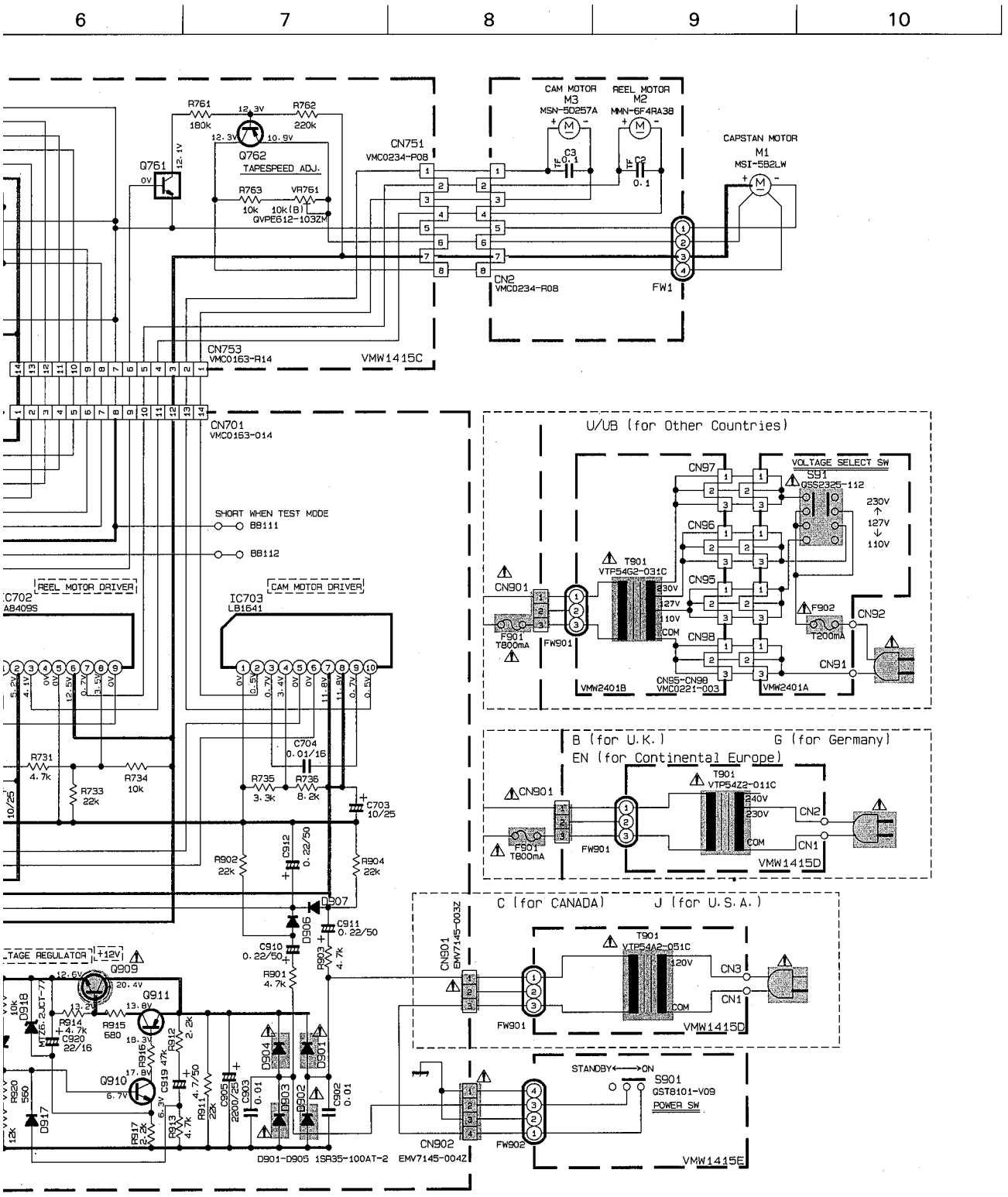


NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL .
   CONDITION: MODE : REC/PLAY
   NR SW : OFF
   TAPE : METAL
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL INDUCTANCE VALUES ARE IN HENRY(H).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS254 OR 1SS133 OR HSS104 OR MA165.
   -PP- MYLAR CAPACITOR
   -MY- POLYPROPYLENE CAPACITOR
   -UNF- UNFLAMMABLE RESISTOR
3. THE RES

Fig. 6 – 3

Note : VDH2355002CW



3. THE RESISTORS LISTED BELOWARE FUSIBLE RESISTOR IN THE MODEL TD-R272BKB/EN/G/U/UB
R813, R826, R863, R937

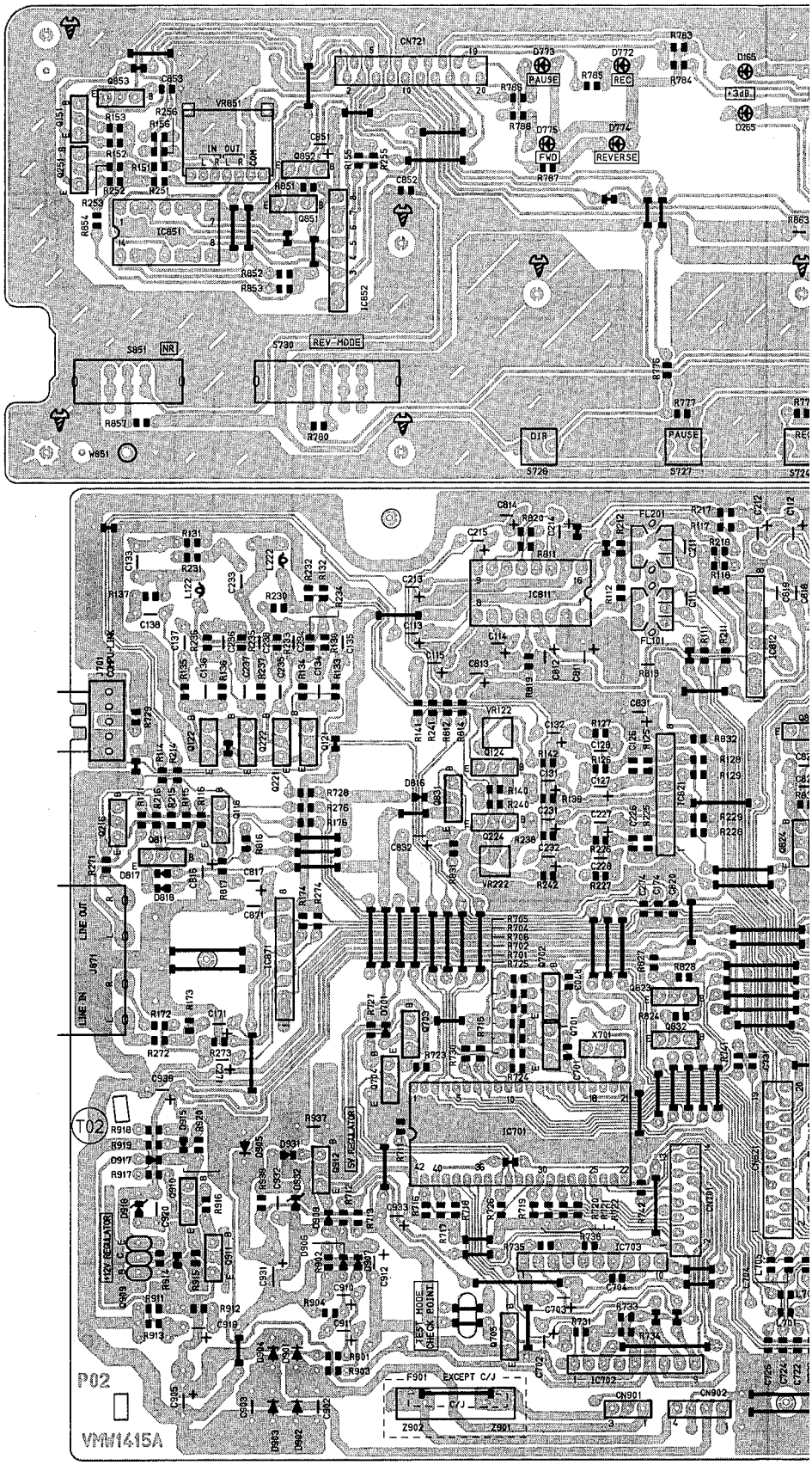
+B Line

KTC3199(GL) or 2SC1740(R,S)	Q701, Q702, Q910
KTA1267(YG) or 2SA933S(R,S)	Q762, Q911
KTC3203(OY) or 2SC2001(L,K)	Q912
KRA103M or DTA124ES	Q703
KRC103M or DTC124ES	Q704, Q705, Q761
2SD882(Q,P)	Q909

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

7. Location of P.C. Board Parts and Parts List

◆ Sub board (Key switch/volume board)



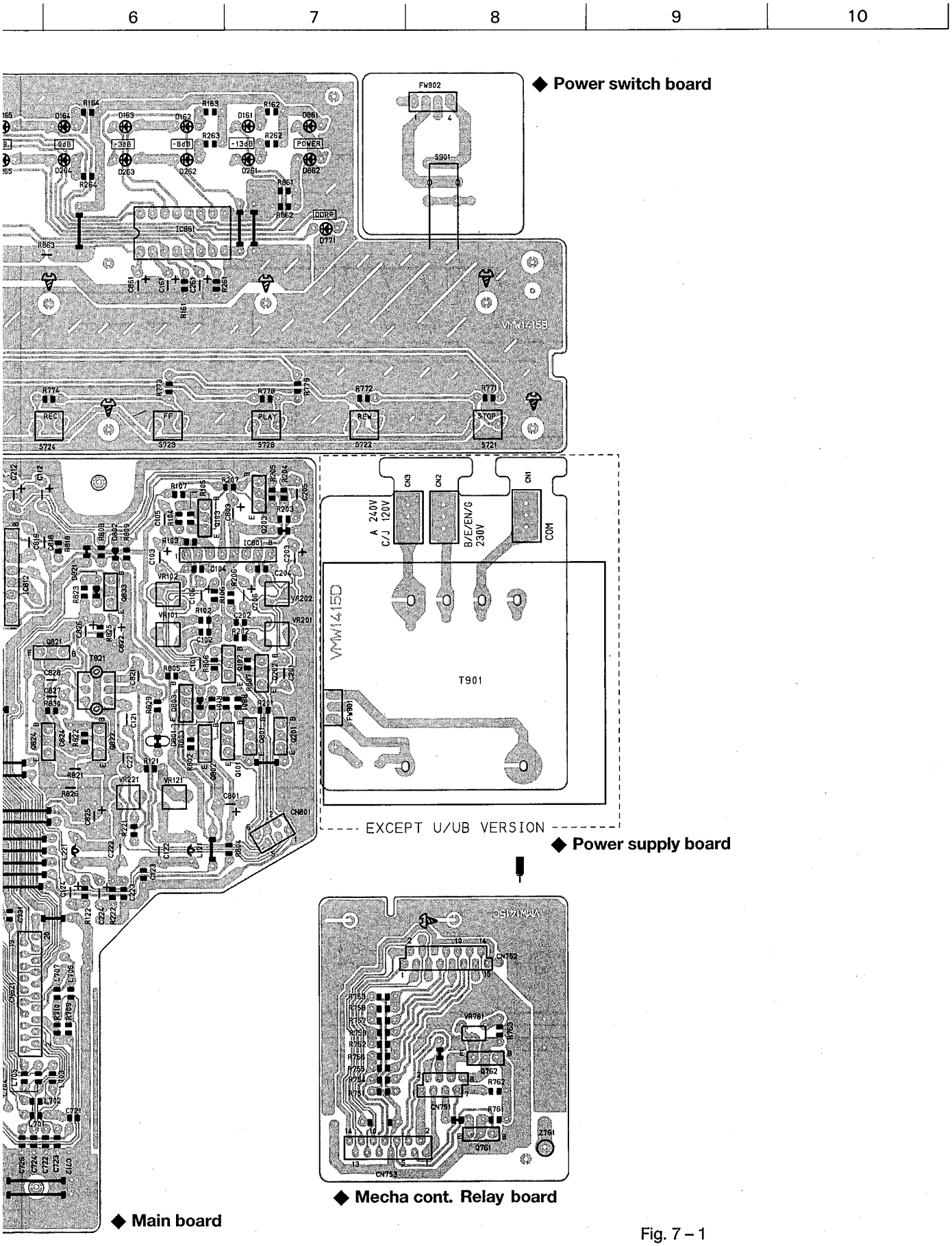

6
7
8
9
10
◆ Power switch board
FW902
S901
VMM1458
REC
FF
PLAY
REV
STOP
S724
S725
S726
S722
S721
CN3
CN2
CN1
A 240V
C/J 120V
B/E/EN/G
230V
COM
VMM1415D
T901
FW901
EXCEPT U/UB VERSION
◆ Power supply board
VMM1456
CN752
CN751
CN753
◆ Mecha cont. Relay board
◆ Main board

Fig. 7 – 1

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 101	QFN41HJ-102	M.CAPACITOR	1000PF 5% 50V	
	C 102	QCBB1HK-331Y	C.CAPACITOR	330PF 10% 50V	
	C 103	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 104	QCBB1HK-151Y	C.CAPACITOR	150PF 10% 50V	
	C 105	QFN41HJ-123	M.CAPACITOR	.012MF 5% 50V	
	C 106	QET41AM-107	E CAPACITOR	100MF 20% 10V	
	C 111	QFN31HJ-392Z	M.CAPACITOR	3900PF 5% 50V	
	C 112	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 113	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 114	QETC1HM-224ZM	E CAPACITOR	.22MF 20% 50V	
	C 115	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 121	QCS11HJ-101	C.CAPACITOR	100PF 5% 50V	
	C 122	QCS32HJ-151ZV	C.CAPACITOR	150PF 5% 500V	
	C 123	QCBB1HK-681Y	C.CAPACITOR	680PF 10% 50V	
	C 124	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 126	QCS11HJ-330	C.CAPACITOR	33PF 5% 50V	
	C 127	QETC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 128	QCY31HK-222Z	C.CAPACITOR	2200PF 10% 50V	
	C 131	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 132	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 133	QFN41HJ-472	M CAPACITOR	4700PF 5% 50V	
	C 134	QCY31HK-272Z	C.CAPACITOR	2700PF 10% 50V	
	C 135	QCC11EM-223V	C.CAPACITOR	.022MF 20% 25V	
	C 136	QCY31HK-472Z	C.CAPACITOR	4700PF 10% 50V	
	C 137	QCC31EM-153ZV	C.CAPACITOR	.015MF 20% 25V	
	C 138	QCY41HK-102	C.CAPACITOR	1000PF 10% 50V	
	C 161	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C 171	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 174	QCBB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
	C 201	QFN41HJ-102	M.CAPACITOR	1000PF 5% 50V	
	C 202	QCBB1HK-331Y	C.CAPACITOR	330PF 10% 50V	
	C 203	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 204	QCBB1HK-151Y	C.CAPACITOR	150PF 10% 50V	
	C 205	QFN41HJ-123	M.CAPACITOR	.012MF 5% 50V	
	C 206	QET41AM-107	E CAPACITOR	100MF 20% 10V	
	C 211	QFN31HJ-392Z	M.CAPACITOR	3900PF 5% 50V	
	C 212	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 213	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 214	QETC1HM-224ZM	E CAPACITOR	.22MF 20% 50V	
	C 215	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 221	QCS11HJ-101	C.CAPACITOR	100PF 5% 50V	
	C 222	QCS32HJ-151ZV	C.CAPACITOR	150PF 5% 500V	
	C 223	QCBB1HK-681Y	C.CAPACITOR	680PF 10% 50V	
	C 224	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 226	QCS11HJ-330	C.CAPACITOR	33PF 5% 50V	
	C 227	QETC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 228	QCY31HK-222Z	C.CAPACITOR	2200PF 10% 50V	
	C 231	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 232	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 233	QFN41HJ-472	M CAPACITOR	4700PF 5% 50V	
	C 234	QCY31HK-272Z	C.CAPACITOR	2700PF 10% 50V	
	C 235	QCC11EM-223V	C.CAPACITOR	.022MF 20% 25V	
	C 236	QCY31HK-472Z	C.CAPACITOR	4700PF 10% 50V	
	C 237	QCC31EM-153ZV	C.CAPACITOR	.015MF 20% 25V	
	C 238	QCY41HK-102	C.CAPACITOR	1000PF 10% 50V	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 261	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C 271	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 274	QCBB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
	C 701	QCBB1HK-471Y	C.CAPACITOR	470PF 10% 50V	
	C 702	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 703	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 704	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 721	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 722	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 723	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 724	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 725	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 731	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 801	QET41CM-477	E CAPACITOR	470MF 20% 16V	
	C 803	QET41CM-107	E CAPACITOR	100MF 20% 16V	
	C 811	QET41CM-107	E CAPACITOR	100MF 20% 16V	
	C 812	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 813	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 814	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 816	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 817	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C 818	QCF11HP-103	C.CAPACITOR	.010MF +100:-0%	
	C 819	QCF11HP-103	C.CAPACITOR	.010MF +100:-0%	
	C 820	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 821	QFG32AJ-153ZN	PP CAPACITOR	.015MF 5% 100V	
	C 822	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 824	QFN41HJ-222	M.CAPACITOR	2200PF 5% 50V	
	C 825	QET41CM-107	E CAPACITOR	100MF 20% 16V	
	C 826	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C 827	QFN41HJ-472	M CAPACITOR	4700PF 5% 50V	
	C 828	QFN41HJ-222	M.CAPACITOR	2200PF 5% 50V	
	C 831	QET41CM-107	E CAPACITOR	100MF 20% 16V	
	C 832	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 851	QEK41CM-106	E.CAPACITOR	10MF 20% 16V	
	C 852	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 853	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
	C 861	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C 871	QCF11HP-103	C.CAPACITOR	.010MF +100:-0%	
	C 902	QCF11HP-103	C.CAPACITOR	.010MF +100:-0%	
	C 903	QCF11HP-103	C.CAPACITOR	.010MF +100:-0%	
⚠	C 905	QETM1EM-228	E CAPACITOR	2200MF 20% 25V	
	C 910	QETC1HM-224ZM	E CAPACITOR	.22MF 20% 50V	
	C 911	QETC1HM-224ZM	E CAPACITOR	.22MF 20% 50V	
	C 912	QETC1HM-224ZM	E CAPACITOR	.22MF 20% 50V	
	C 919	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 920	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C 931	QETB1CM-478E	E.CAPACITOR	4700MF 20% 16V	
	C 932	QCF11HP-103	C.CAPACITOR	.010MF +100:-0%	
	C 933	QET41AM-107	E CAPACITOR	100MF 20% 10V	
	C 939	QET41CM-107	E CAPACITOR	100MF 20% 16V	
	CN 1	EMZ4001-001	TAB	FOR P.CORD	
	CN 2	EMZ4001-001	TAB	FOR P.CORD	B/E/EN/G
	CN 2	EMZ4001-001	TAB	FOR P.CORD	U/UB/US
	CN 3	EMZ4001-001	TAB	FOR P.CORD	C/J
	CN701	VMC0163-014	CONNECTOR		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
⚠	CN721	VMC0163-R20	CONNECTOR		
	CN751	VMC0234-P08	CONNECTOR		
	CN752	VMC0234-P15	CONNECTOR		
	CN753	VMC0163-R14	CONNECTOR		
	CN801	EMV7155-006R	CONNECTOR		
⚠	CN821	VMC0163-020	CONNECTOR		
	CN901	EMV7145-003Z	SOCKET		
	CN902	EMV7145-004Z	SOCKET	FOR P.SWITCH	
	D 161	SLR-56MCTB7	LED	-13DB	
	D 162	SLR-56MCTB7	LED	- 8DB	
	D 163	SLR-56MCTB7	LED	- 3DB	
	D 164	SLR-56VCTB7	LED	0DB	
	D 165	SLR-56VCTB7	LED	+ 3DB	
	D 261	SLR-56MCTB7	LED	-13DB	
	D 262	SLR-56MCTB7	LED	- 8DB	
	D 263	SLR-56MCTB7	LED	- 3DB	
	D 264	SLR-56VCTB7	LED	0DB	
	D 265	SLR-56VCTB7	LED	+ 3DB	
	D 701	1SS133	SI DIODE		
	D 771	SLR-56VCTF7	LED	DDRP	
	D 772	SLR-56VCTF7	LED	REC	
	D 773	SLR-56DCTF7	LED	PAUSE	
	D 774	SLR-56MCTF7	LED	REV	
	D 775	SLR-56MCTF7	LED	FWD	
	D 801	1SS133	SI DIODE		
	D 802	1SS133	SI DIODE		
	D 816	1SS133	SI DIODE		
	D 817	1SS133	SI DIODE		
	D 818	1SS133	SI DIODE		
	D 821	1SS133	SI DIODE		
	D 822	MTZ11JA	Z.DIODE		
	D 861	SLR-56MCTB7	LED	POWER	
	D 862	SLR-56MCTB7	LED	POWER	
⚠	D 901	1SR35-100	SI DIODE		
⚠	D 902	1SR35-100	SI DIODE		
⚠	D 903	1SR35-100	SI DIODE		
⚠	D 904	1SR35-100	SI DIODE		
⚠	D 905	1SR35-100	SI DIODE		
	D 906	1SS133	SI DIODE		
	D 907	1SS133	SI DIODE		
	D 908	1SS133	SI DIODE		
	D 915	1SS133	SI DIODE		
	D 917	1SS133	SI DIODE		
	D 918	MTZ6.2JC	ZENER DIODE		
	D 931	1SS133	SI DIODE		
	D 932	MTZ6.2JC	ZENER DIODE		
	FL101	VQZ0114-001	FILTER		
	FL201	VQZ0114-001	FILTER		
	IC701	TMP87C846N-4434	IC		
	IC702	TA8409S	IC		
	IC703	LB1641	IC		
	IC801	UPC1228HA	IC		
	IC811	HA12136A	IC		
	IC812	BA15218N	IC		
	IC821	BA15218N	IC		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	IC851	BU4066BC	IC		
	IC852	BA15218N	IC		
	IC861	IR2E27A	IC		
	IC871	BA15218N	IC		
	J 701	QMS3533-V01	JACK		
	J 871	EMN00TV-421AJ2	PIN JACK		
	L 121	VQP0001-183	INDUCTOR		
	L 122	VQP0001-183	INDUCTOR		
	L 221	VQP0001-183	INDUCTOR		
	L 222	VQP0001-183	INDUCTOR		
	L 701	VQP0018-470	INDUCTOR		
	L 702	VQP0018-470	INDUCTOR		
	L 703	VQP0018-470	INDUCTOR		
	L 704	VQP0018-470	INDUCTOR		
	L 705	VQP0018-470	INDUCTOR		
	L 706	VQP0018-470	INDUCTOR		
	L 707	VQP0018-470	INDUCTOR		
	Q 101	KTC3200(GL)-T	TRANSISTOR		
	Q 102	KTC3203(OY)-T	TRANSISTOR		
	Q 103	KTC3199(GL)-T	TRANSISTOR		
	Q 116	KTC3203(OY)-T	TRANSISTOR		
	Q 121	KRC103M-T	TRANSISTOR		
	Q 122	KRC103M-T	TRANSISTOR		
	Q 124	KTC3203(OY)-T	TRANSISTOR		
	Q 151	KRC103M-T	TRANSISTOR		
	Q 201	KTC3200(GL)-T	TRANSISTOR		
	Q 202	KTC3203(OY)-T	TRANSISTOR		
	Q 203	KTC3199(GL)-T	TRANSISTOR		
	Q 216	KTC3203(OY)-T	TRANSISTOR		
	Q 221	KRC103M-T	TRANSISTOR		
	Q 222	KRC103M-T	TRANSISTOR		
	Q 224	KTC3203(OY)-T	TRANSISTOR		
	Q 251	KRC103M-T	TRANSISTOR		
	Q 701	KTC3199(GL)-T	TRANSISTOR		
	Q 702	KTC3199(GL)-T	TRANSISTOR		
	Q 703	KRA103M-T	TRANSISTOR		
	Q 704	KRC103M-T	TRANSISTOR		
	Q 705	KRC103M-T	TRANSISTOR		
	Q 761	KRC103M-T	TRANSISTOR		
	Q 762	KTA1267(YG)-T	TRANSISTOR		
	Q 801	KTC3200(GL)-T	TRANSISTOR		
	Q 802	KTA1268(GL)-T	TRANSISTOR		
	Q 803	KRC103M-T	TRANSISTOR		
	Q 811	KRA103M-T	TRANSISTOR		
	Q 821	KTC3203(OY)-T	TRANSISTOR		
	Q 822	2SC2001(L,K)	TRANSISTOR		
	Q 823	KRC103M-T	TRANSISTOR		
	Q 824	2SC2001(L,K)	TRANSISTOR		
	Q 831	KRA103M-T	TRANSISTOR		
	Q 832	KRC103M-T	TRANSISTOR		
	Q 833	KRC103M-T	TRANSISTOR		
	Q 851	KRC103M-T	TRANSISTOR		
	Q 852	KRC103M-T	TRANSISTOR		
	Q 853	KRC103M-T	TRANSISTOR		
⚠	Q 909	2SD882(P,Q)	TRANSISTOR		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q 910	KTC3199(GL)-T	TRANSISTOR		
	Q 911	KTA1267(YG)-T	TRANSISTOR		
	Q 912	KTC3203(OY)-T	TRANSISTOR		
	R 101	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 102	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 103	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R 104	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 105	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 106	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R 107	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 111	QRD161J-242	CARBON RESISTOR	2.4K 5% 1/6W	
	R 112	QRD161J-622	CARBON RESISTOR	6.2K 5% 1/6W	
	R 114	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 115	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 116	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 117	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 118	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 121	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 122	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R 125	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 126	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 127	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 128	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 129	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 130	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 131	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
	R 132	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 133	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R 134	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R 135	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 136	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 137	QRD161J-331	CARBON RESISTOE	330 5% 1/6W	
	R 138	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 140	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 141	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 142	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 151	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 152	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R 153	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 155	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 156	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 161	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 162	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 163	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 164	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 171	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 172	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 173	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R 174	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 176	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 201	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 202	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 203	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R 204	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 205	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 206	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R 207	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 211	QRD161J-242	CARBON RESISTOR	2.4K 5% 1/6W	
	R 212	QRD161J-622	CARBON RESISTOR	6.2K 5% 1/6W	
	R 214	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 215	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 216	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 217	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 218	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 221	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 222	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R 225	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 226	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 227	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 228	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 229	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 230	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 231	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
	R 232	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 233	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R 234	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R 235	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 236	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 237	QRD161J-331	CARBON RESISTOE	330 5% 1/6W	
	R 238	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 240	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 241	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 242	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 251	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 252	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R 253	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 255	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 256	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 261	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 262	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 263	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 264	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 271	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 272	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 273	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
	R 274	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 276	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 701	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 702	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 703	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 704	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 705	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 706	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 709	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 710	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 711	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 712	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 713	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
	R 715	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 716	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 717	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 718	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 719	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 720	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 721	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 722	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 723	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 724	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 725	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 726	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 727	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 728	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 729	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 730	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 731	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 733	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 734	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 735	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 736	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 741	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 742	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 751	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 752	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 753	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 754	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 755	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 756	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 757	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 758	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 759	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 761	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
	R 762	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 763	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 771	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 772	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
	R 773	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 774	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 776	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 777	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 778	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 779	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
	R 780	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R 784	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 785	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 786	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 787	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 788	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 801	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 802	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 803	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 804	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 805	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 806	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 807	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 808	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 809	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 811	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 812	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
⚠	R 813	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	C,J
⚠	R 813	QRZ0077-100X	FUSI.RESISTOR	10 5% 1/4W	B,E,EN,G
⚠	R 813	QRZ0077-100X	FUSI.RESISTOR	10 5% 1/4W	U,UB,US
	R 814	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 816	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 817	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 818	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 819	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 820	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
⚠	R 821	QRD14CJ-2R2SX	CARBON RESISTOR	2.2 5% 1/4W	
	R 822	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 823	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 824	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 825	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
⚠	R 826	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	C,J
⚠	R 826	QRZ0077-100X	FUSI.RESISTOR	10 5% 1/4W	B,E,EN,G
⚠	R 826	QRZ0077-100X	FUSI.RESISTOR	10 5% 1/4W	U,UB,US
	R 827	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 828	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R 829	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 830	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 831	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 832	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 851	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 852	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 853	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 854	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 857	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 861	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 862	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
⚠	R 863	QRD14CJ-220S	CARBON RESISTOR	22 5% 1/4W	C,J
⚠	R 863	QRZ0077-220X	FUSI.RESISTOR	22 5% 1/4W	U,UB,US
⚠	R 863	QRZ0077-220X	FUSI.RESISTOR	22 5% 1/4W	B,E,EN,G
	R 901	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 902	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 903	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 904	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 911	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 912	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 913	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 914	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 915	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
	R 916	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 917	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 918	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 919	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
	R 920	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
⚠	R 937	QRD14CJ-220S	CARBON RESISTOR	22 5% 1/4W	C,J
⚠	R 937	QRZ0077-220X	FUSI.RESISTOR	22 5% 1/4W	U,UB,US
⚠	R 937	QRZ0077-220X	FUSI.RESISTOR	22 5% 1/4W	B,E,EN,G
	R 938	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	S 721	QSQ4H11-V10Z	TACT SWITCH		

■ Mechanism board

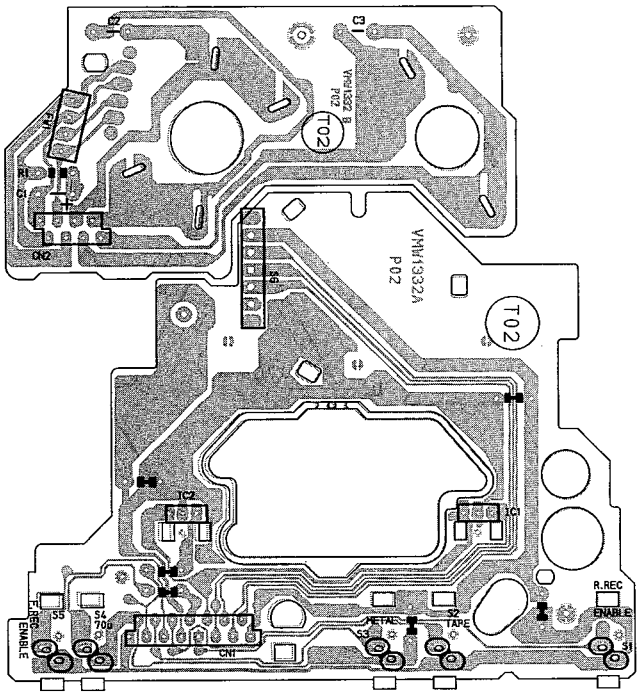


Fig. 7 – 2

● Mechanism board parts list

BLOCK NO. 03

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 2	QFV31HJ-104AZM	T.F.CAPACITOR	.10MF 5% 50V	
	C 3	QFV31HJ-104AZM	T.F.CAPACITOR	.10MF 5% 50V	
	CN 1	VMC0234-R15	CONNECTOR		
	CN 2	VMC0234-R08	CONNECTOR		
	H 1	VKS3630-001MM	IC HOLDERTOR		
	H IC	DN6851-HI	HALL IC		
	S 1	MXS00220MVL0	CASSETTE SWITCH		
	S 2	MXS00220MVL0	CASSETTE SWITCH		
	S 3	MXS00220MVL0	CASSETTE SWITCH		
	S 4	MXS00220MVL0	CASSETTE SWITCH		
	S 5	MXS00220MVL0	CASSETTE SWITCH		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	S 722	QSQ4H11-V10Z	TACT SWITCH		
	S 723	QSQ4H11-V10Z	TACT SWITCH		
	S 724	QSQ4H11-V10Z	TACT SWITCH		
	S 726	QSQ4H11-V10Z	TACT SWITCH		
	S 727	QSQ4H11-V10Z	TACT SWITCH		
	S 728	QSQ4H11-V10Z	TACT SWITCH		
	S 730	QSS7A23-V07	SLIDE SWITCH	REV MODE	
	S 851	QSS7A22-V04	SLIDE SWITCH	NR	
	S 901	QST8101-V09	PUSH SWITCH	POWER SWITCH	
	T 821	VQH7001-032	OSC COIL(BIAS)		
	VR101	QVPA601-104M	V RESISTOR		
	VR102	QVPA601-101	V RESISTOR		
	VR121	QVPA601-104M	V RESISTOR		
	VR122	QVPA601-203M	V RESISTOR		
	VR201	QVPA601-104M	V RESISTOR		
	VR202	QVPA601-101	V RESISTOR		
	VR221	QVPA601-104M	V RESISTOR		
	VR222	QVPA601-203M	V RESISTOR		
	VR761	QVPE612-103ZM	SEMI.V.RESISTOR		
	VR851	QVDB22A-V04	V RESISTOR	QVDB22A-V01ﾍﾝ	
	X 701	EFO-EC4004T4	CERA LOCK		
	Z 761	VMZ0015-005	POST PIN		
	Z 901	VMZ0125-001Z	FUSE CLIP	FOR F901	U,UB
	Z 901	VMZ0125-001Z	FUSE CLIP	FOR F901	B,E,EN,G
	Z 902	VMZ0125-001Z	FUSE CLIP	FOR F902	U,UB
⚠	F 901	QMF51E2-R80SBS	FUSE	800MA	B,E,EN,G,U,UB

C B A

■ Voltage select switch board (U/US/UB only)

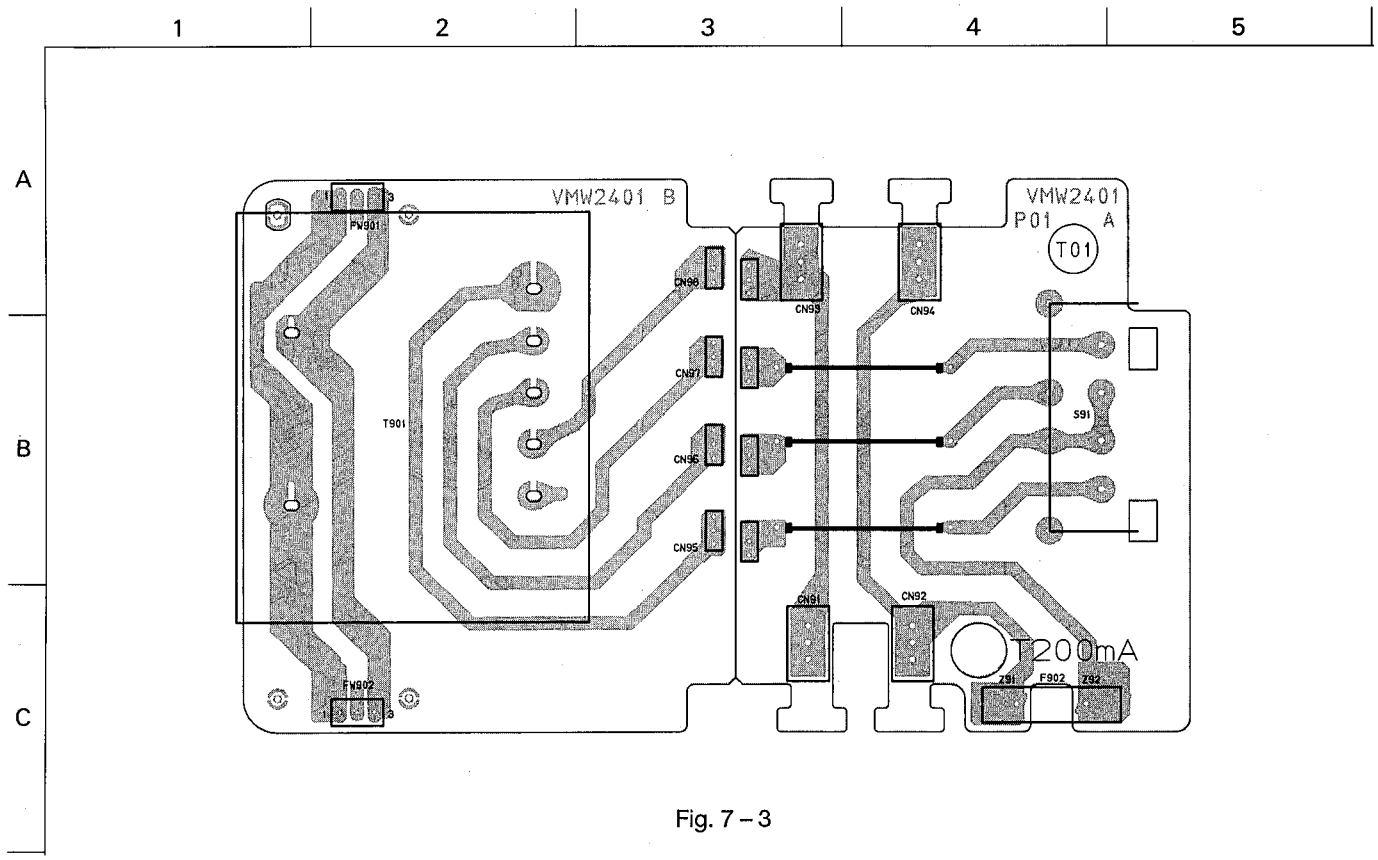


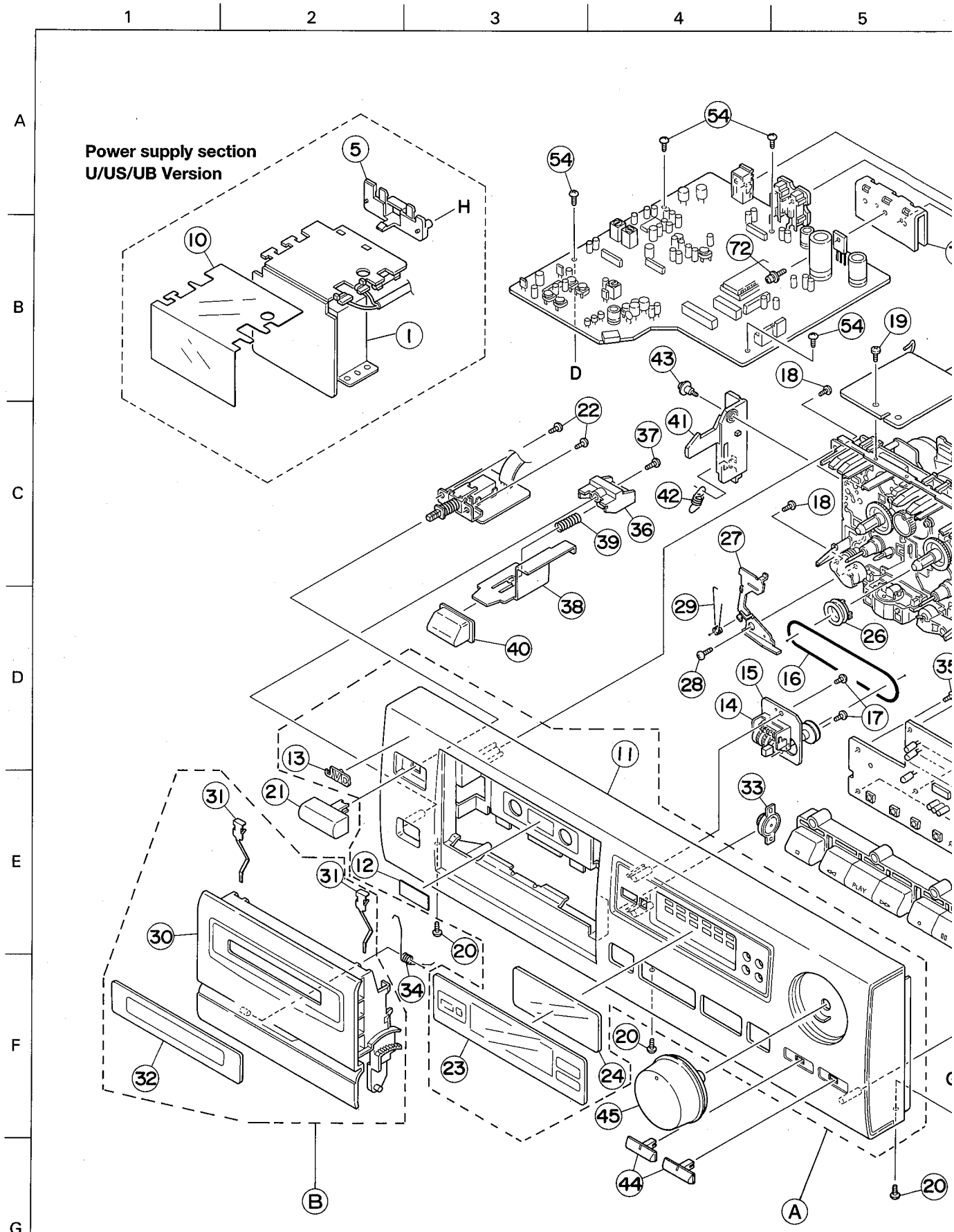
Fig. 7 – 3

● Voltage select switch board parts list (U/US/UB only)

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN 91	EMZ4001-001	TAB		
	CN 92	EMZ4001-001	TAB		
	CN 95	VMC0221-003	CONNECTOR		
	CN 96	VMC0221-003	CONNECTOR		
	CN 97	VMC0221-003	CONNECTOR		
	CN 98	VMC0221-003	CONNECTOR	200MA	
	F 902	QMF51E2-R20SBS	FUSE		
	S 91	QSS2325-112	SLIDE SWITCH		

8. Exploded View of Enclosure Assembly



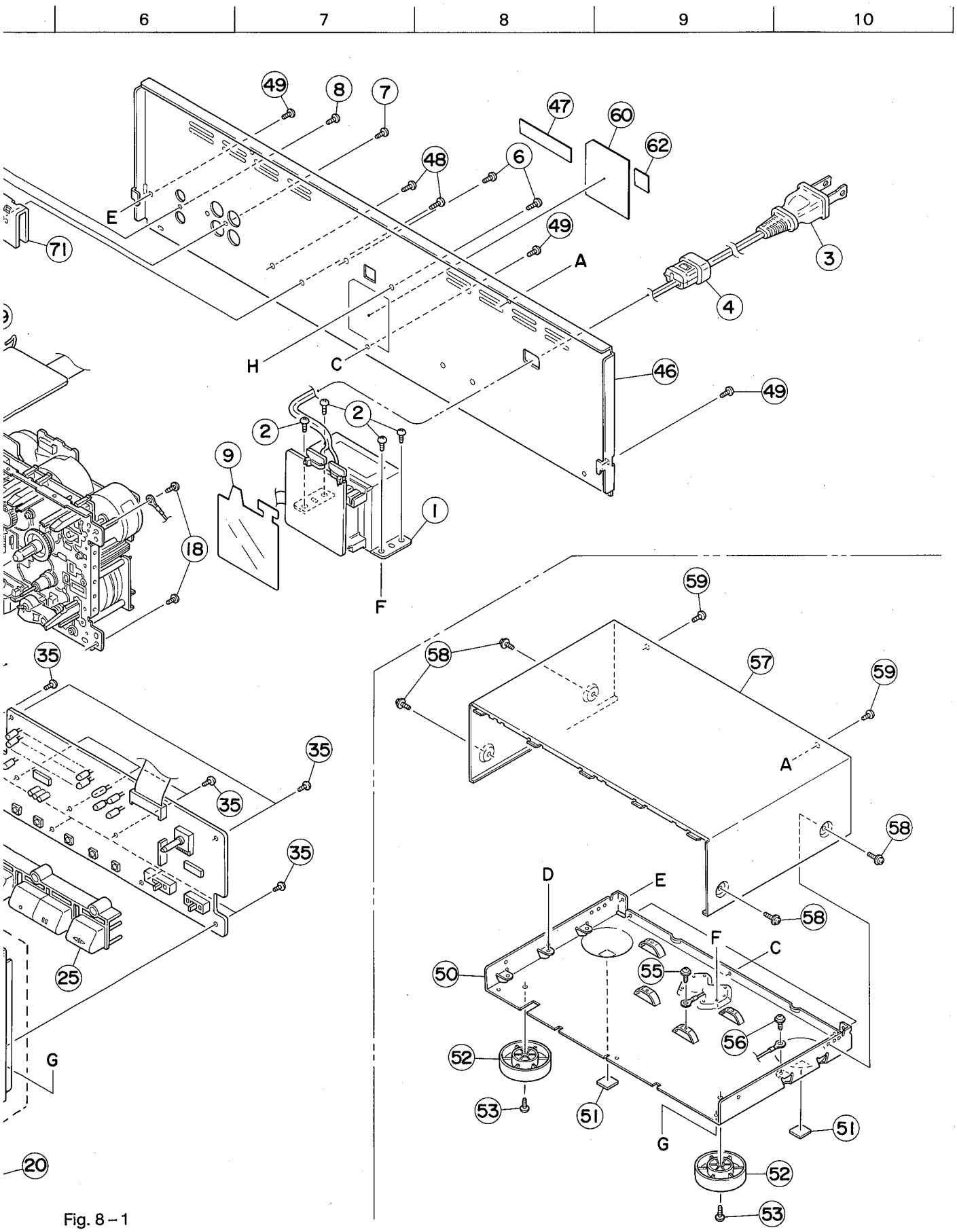

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Fig. 8 – 1

● Enclosure assembly parts list

BLOCK NO. M1MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	ZCTDR272K-FB	FRONT PANEL ASS	NO.11-13,23-24	1		
	B	ZCTDR272K-CH	CASSETTE HOLDER	NO.30-32	1		
⚠	1	VTP54A2-051C	POWER TRANS		1	C,J	
⚠		VTP54G2-031C	POWER TRANS		1	U,UB	
⚠		VTP54Z2-011C	POWER TRANS		1	B,E,EN,G	
	2	SBST3006Z	SCREW	FOR POWER TRANS	4		
⚠	3	QMP1340-200	POWER CORD		1	C,J	
⚠		QMP3900-200	POWER CORD		1	E,EN	
⚠		QMP5530-008BS	POWER CORD		1	B,UB	
⚠		QMP7380-200	POWER CORD		1	U	
⚠	4	QHS3771-108	CORD STOPPER		1		
	5	VKS5011-001	VOLTAGE HOLDER		1	U,UB	
	6	SBSF3008M	SCREW	VOLTAGE HOLDER	2	U,UB	
	7	SBSF3008M	SCREW	PIN JACK	1		
	8	SBSF3008M	SCREW	FOR DCS JACK	1		
	9	VMA4693-001	SHIELD (A)	FOR POWER TRANS	1		
	10	VMA4694-001	SHIELD (B)	FOR POWER TRANS	1	U,UB	
	11	VJG1411-003	FRONT PANEL		1	U,UB	
		VJG1411-003	FRONT PANEL		1	B,E,EN,G	
		VJG1411-004UL	FRONT PANEL		1	C,J	
	12	VJD4024-002	REFLECTION PLAT		1		
	13	E72968-001	JVC MARK		1		
	14	VKC5193-001T	TAPE COUNTER		1		
	15	VKL7834-001	COUNTER BKT		1		
	16	VKB3000-169	BELT		1		
	17	SBSF2610Z	SCREW	FOR C.BKT+F.P	2		
	18	SBSF3010Z	SCREW	FOR MECHA+F.P.	4		
	19	SDST2604Z	SCREW	FOR MECHA JOINT	1		
	20	SBST3006M	SCREW	FOR F.P.+CHASSI	3		
	21	VXP5327-002	POWER KNOB		1		
	22	SBSF3010Z	SCREW	FOR POWER SW.	2		
	23	VJK3691-001	LENS (A)	OUT SIDE	1		
	24	VJK3692-001	LENS (B)	IN SIDE	1		
	25	VXP3795-001	MECHA BUTTON		1		
	26	VKR3197-001	COUNTER PULLEY		1		
	27	VKL7663-001	EJECT SAFTY(L)		1		
	28	SBSF3010Z	SCREW	FOR E.SAFETY(L)	1		
	29	VKW5104-003	TORSION SPRING	FOR E.SAFETY(L)	1		
	30	VJT2372-001	CASSETTE HOLDER		1		
	31	VKY4180-001	CASSETTE SPRING		2		
	32	VJK4475-001	CASS LENS		1		
	33	VYH7779-00B	DUMPER ASS'Y		1		
	34	VKW5227-001	DOOR SPRING		1		
	35	SBSF2610Z	SCREW	FOR PWB+F.P	10		
	36	VYH7773-001	EJECT HOLDER		1		
	37	SBSF2610Z	SCREW	FOR EJT.H.+F.P	1		
	38	VKL7833-001	EJECT BRACKET		1		
	39	VKW3001-077	C.SPRING		1		
	40	VXP5333-001	EJECT BUTTON		1		
	41	VYH7941-202	LOCK LEVER (R)		1		
	42	VKW5199-001	TENSION SPRING		1		
	43	VKZ4749-001	SPECIAL SCREW		1		
	44	VXS4409-002	SLIDE KNOB		2		
	45	VXL3022-002	INPUT KNOB	INPUT VOLUME	1		
	46	VJC2558-007	REAR PANEL		1	C,J	

BLOCK NO. M1MM[ ][ ][ ]

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
		VJC2558-008	REAR PANEL		1	U,UB,US	
		VJC2558-007	REAR PANEL		1	B,E,EN,G	
	47	VND4999-001	FCC LABEL (3)		1	C,J	
	48	SBSF3008M	SCREW	FOR HEAT SINK	2		
	49	SBST3006M	SCREW	FOR REAR+CHASSI	3		
	50	VKL1434-002	CHASSIS BASE		1		
	51	VJF4053-001	FELT SPACER		2		
	52	E406379-008SS	FOOT ASS'Y		2		
	53	SBST3008Z	SCREW	FOOT+CHASSIS	2		
	54	GBST3006Z	SCREW	FOR MAIN PWB	4		
	55	GBST3006Z	SCREW	FOR LUG WIRE	1		
	56	GBST3006Z	SCREW	FOR SW PB - LUG	1		
	57	VKL1435-002S	TOP COVER		1		
	58	VKZ4614-001	SPECIAL SCREW	FOR TOP COVER	4		
	59	SBST3006M	SCREW	FOR TOP COVER	2		
	60	VYN2355-C005PA	NAME PLATE		1	E,EN,G	
		VYN2355-C006PA	NAME PLATE		1	C,J	
		VYN2355-C007PA	NAME PLATE		1	U,UB	
		VYN2355-C014PA	NAME PLATE		1	US	
		VYN2355-002PA	NAME PLATE		1	B	
	62	E407097-001	HYATT L.LABEL	HYATT LICENSE	1		

9. Exploded View of Mechanism Assembly

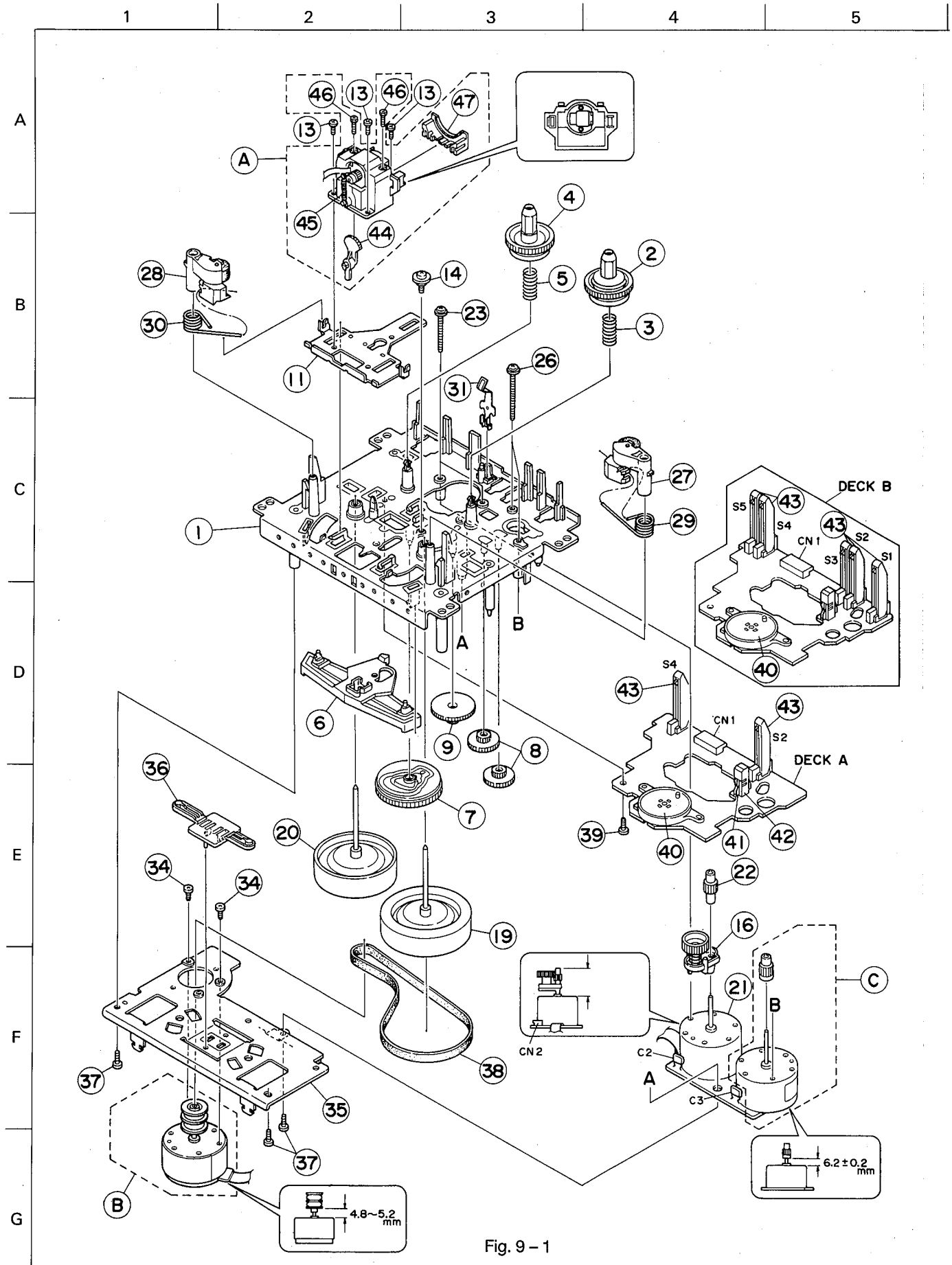

Fig. 9 – 1

● Mechanism assembly parts list

BLOCK NO. M2MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	VKS3629-00E	HEAD BLOCK		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	SDSR2004Z	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	SCREW		2		
	26	VKZ4705-002	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		
	34	SPSP2603Z	SCREW		2		
	35	VKM3636-002	FM. BRACKET	PRESS KIT S	1		
	36	VKS5327-005MM	THRUST PLATE		1		
	37	SBSF2608Z	SCREW		3		
	38	VKB3001-068	BELT		1		
	39	SDST2612Z	SCREW		1		
	40	VKS3616-00A	CAM SW UNIT		1		
	41	DN6851-HI	HALL IC		1		
	42	VKS3630-001MM	IC HOLDER		1		
	43	MXS00220MVLO	CASSETTE SWITCH	S1,S2,S3,S4,S5	5		
	44	VKS3614-001	TURN OVER GEAR		1		
	45	VKW5126-001	HEAD SPRING		1		
	46	VKZ4730-001	SPECIAL SCREW		2		
	47	VKS3654-001	HEAD MT. COVER		1		
	C 2	QFV41HJ-104ZM	TF CAPACITOR	.10MF 5% 50V	1		
	C 3	QFV41HJ-104ZM		.10MF 5% 50V	1		
	CN 1	VMC0234-R15	CONNECTOR	CN1	1		
	CN 2	VMC0234-R08	CONNECTOR	CN2	1		

10. Illustration of Packing and Parts List

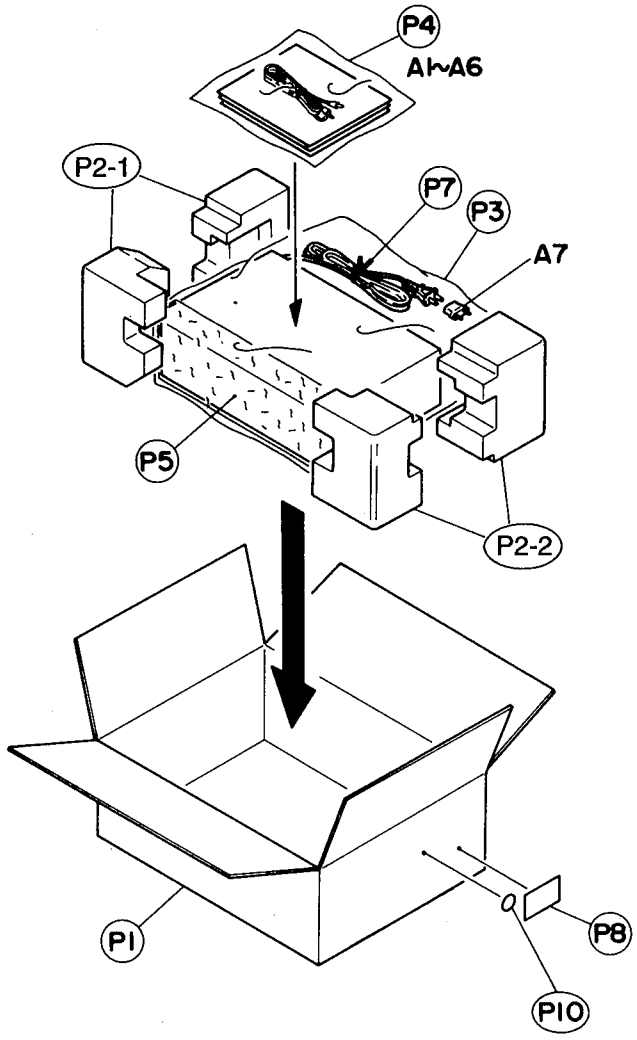

Fig. 10 – 1

● Packing parts list

BLOCK NO. M3MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	VPC2355-C002	CARTON		1		
	P 2-1	VPH2479-001	CUSHION(L)		1		
	P 2-2	VPH2479-002	CUSHION(R)		1		
	P 3	E300196-031B	ENVELOPE	SET	1		
	P 4	VPE3005-007	POLY BAG	INSTRUCTIONSE	1		
	P 5	VPK3001-012	SHEET	SET	1		
	P 7	Q04141H	WIRE CLAMP	FOR POWER CORD	1		
	P 8	----------	SIRIAL TICKET	(GREEN)	1	B	
		----------	SIRIAL TICKET	(RED)	1	G	
		----------	SIRIAL TICKET	(YELLOW)	2	C	
		----------	SIRIAL TICKET	(WHIT)	1	U,UB	
		----------	SIRIAL TICKET	(ORANGE)	2	J	
		----------	SIRIAL TICKET	(BLUE)	1	E,EN	
	P10	QZLA001-011	MARK		1	E,EN,G	

● Accessories

BLOCK NO. M3MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	VMP0088-001J	PIN CORD		1		
	A 2	VNN2355-661C	INSTRUCTIONSE		1	U,UB	
		VNN2355-271C	INSTRUCTIONSE		1	EN	
		VNN2355-671C	INSTRUCTIONSE		1	B,J	
		VNN2355-661C	INSTRUCTIONSE		1	C,E,EN,G	
	A 3	BT-54003-1	WARRANTY CARD		1	B	
		BT-20047F	WARRANTY CARD		1	J	
		BT-20134	WARRANTY CARD		1	G	
		BT-52002-1	WARRANTY CARD		1	C	
		VNN2355-121C	INSTRUCTIONSE		1	U,UB	
	A 4	E43486-340A	SAFETY I.SHEET		1	B	
		BT-20044G	SAFETY I.SHEET		1	C,J	
	A 5	BT-20066A	SERVICE NETWORK		1	B	
		BT-20071B	SERVICE NETWORK		1	C	
		BT-20137	SERVICE NETWORK		1	J	
	A 6	EWP805-012	REMOTE WIRE		1		
	A 7	V04062-001	CONTI.PLUG		1	U,UB	

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