

JVC

SERVICE MANUAL

STEREO CASSETTE DECK

TD-V1010 A/B/C/E/G/J/U

**Area suffix**

A	Australia
B	U.K.
C	Canada
E	Continental Europe
G	W. Germany
J	U.S.A.
U	Other Areas

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1 Safety Precautions

1. The design of 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 manufacturer's warranty and will further relieve the manufacturer 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 (\triangle) on the Schematic Diagram and 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 re-assembling.
5. Leakage current check (Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

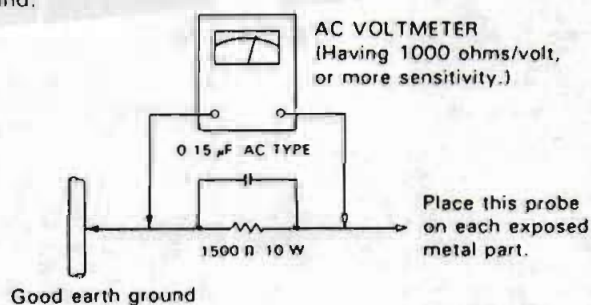
Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA 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 Ω 10 W 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 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

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

2 Safety Precautions about TD-V1010

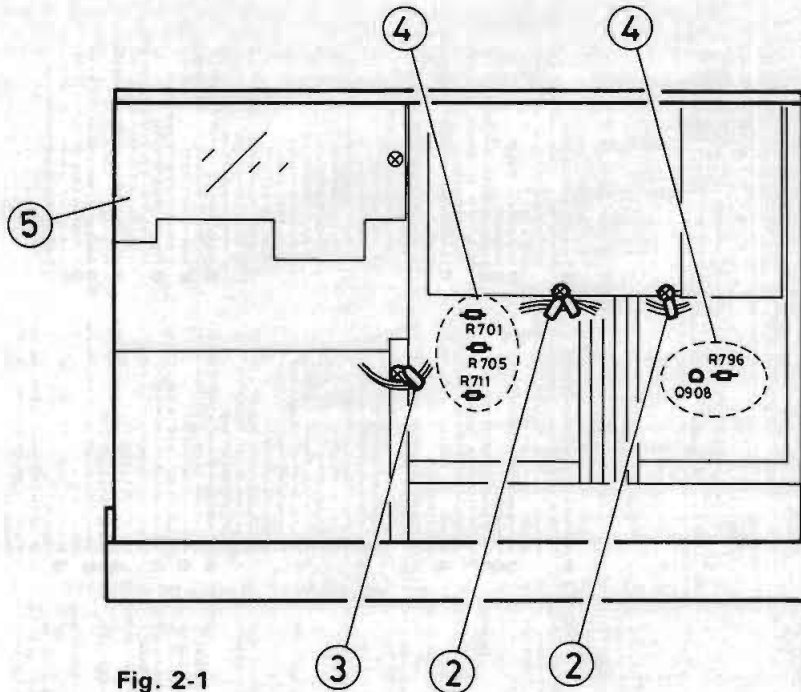


Fig. 2-1

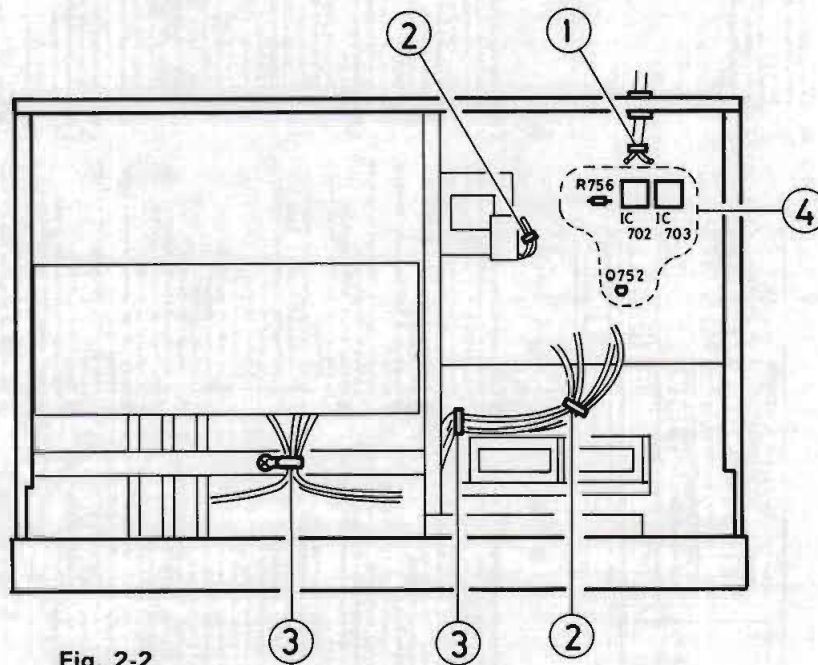


Fig. 2-2

- ① The power cord should be bound and securely fastened onto the substrate to avoid contacting other parts and shortcircuit in case of breaking of the wire.
- ② ③ All wires should be bound and arranged possibly away from the primary circuit, sharp edges of the chassis and heating parts (shown in in the diagram) not to touch them.
- ④ Parts to be attached onto the back of the P.C. board should be fastened down with bond or spacers.
- ⑤ The protector be fixed on screw.

3 Instruction Book (Extract)

NAMES OF PARTS AND THEIR FUNCTIONS

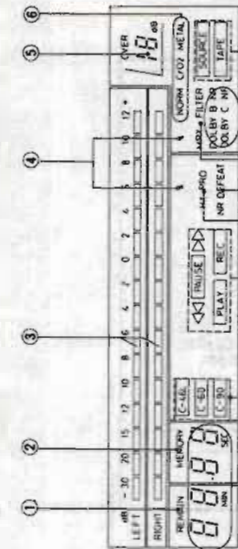
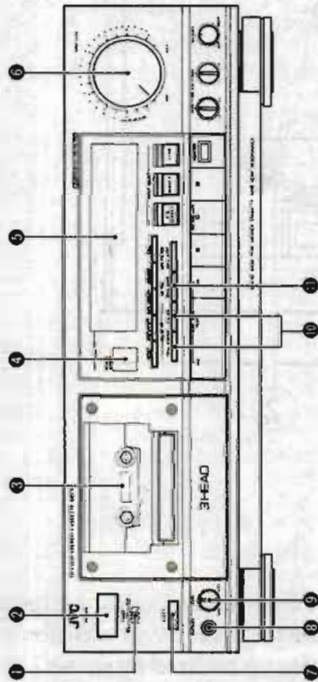
BEZEICHNUNG DER TEILE UND IHRE FUNKTIONEN

NOMENCLATURE DES PIÉCES ET LEURS FONCTIONS

NAMEN VAN ONDERDELEN EN HUN FUNKTIE

NOMBRE DE LAS PARTES Y SUS FUNCIONES

FUNKTIONSBESKRIVNING



- 1. **TIMER switch**
When recording timer is used, recording and playback can be performed at any desired time. (See page 48.)
- 2. **POWER switch**
Cassette holder
- 3. **REMOTE SENSOR**
Receives the infrared signals transmitted from the remote control unit.
- 4. **MULTI MODE DISPLAY**
REMAIN indicator
1. REMAIN indicator
2. Peak level meter
3. Recording guide indicator
4. Digital peak indicator
5. Tape length indicator
6. Mechanism mode indicator
7. NR DEFEAT indicator
8. HX PRO indicator
9. DOLBY NR mode indicator
10. Monitor indicator
11. INPUT LEVEL control
12. EJECT button
13. Connect headphones (with an impedance of 8 ohms to 1 kohm).
14. PHONES LEVEL control (See page 25.)
15. DOLBY NR switch
Used to record sources which contain many high frequency components.

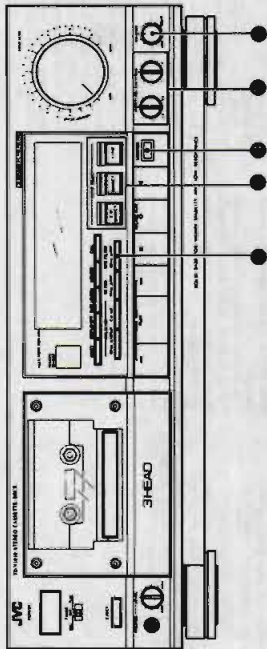
- 1. **Schaltuhrschalter (TIMER)**
Bei Aufnahme wird die Zeit, die für die Aufnahme und Wiedergabe vorgesehen ist, frei wählbar. (Siehe Seite 48.)
- 2. **Leistenschalter (POWER)**
Kassettenhalter
- 3. **Fernempfänger (REMOTE SENSOR)**
Empfängt die Infrarot-Signale vom Fernbedienungselement.
- 4. **Multifunktions-Anzeige (MULTI MODE DISPLAY)**
1. Restzeitanzeiger (REMAIN)
2. Spitzenniveauanzeiger (PEAK LEVEL)
3. Sperrfrequenzanzeiger (MEMORY)
4. Aufnahmefortschrittsanzeiger
5. Spitzenniveauanzeiger
6. Mechanismenmodusanzeiger
7. Digitaler Spitzenniveauanzeiger
8. NR DEFEAT-Anzeige
9. HX PRO-Anzeige
10. Monitor-Anzeige
11. Anzeige für Rechenwertrückkopplungsschaltung (NR DEFEAT)
12. DOLBY NR-Berücksichtigung
13. EJECT-Taste
14. Anschluss für Kopfhörer (mit einer Impedanz von 8 Ohm bis 1 Kohm)
15. Anzeige für die Automatische Lautstärkesteuerung
16. Auswurfknopf (EJECT)
17. Kopfhörerbuchse (PHONES)
Zum Öffnen der Kassettenhalter betätigen.
Kopfhörer mit einer Impedanz zwischen 8 Ohm und 1 Kohm können hier angeschlossen werden.
18. Kopfhörereinstellung (PHONES LEVEL)
(Siehe Seite 25.)
19. Schalter für Dolby Rauschunterdrückung (DOLBY NR)
20. DOLBY HX PRO-Schalter
Benutzt zur Aufnahme von Signalquellen, die einen hohen Anteil von hohen Frequenzen vorweisen, verwenden.

- 1. **Commutateur de minuterie (TIMER)**
Lorsqu'on utilise le minuterie, l'enregistrement et la lecture peuvent être effectués à n'importe quelle heure voulue. (Voir page 48.)
- 2. **Porte cassette**
Support cassette
- 3. **Senseur à distance (REMOTE SENSOR)**
Reçoit les signaux infrarouges transmis par le boîtier de télécommande.
- 4. **Affichage MULTI MODE DISPLAY**
1. Affichage de durée de bande restante (REMAIN)
2. Indicateur de niveau de crête (PEAK LEVEL)
3. Indicateur de fréquence de coupure (MEMORY)
4. Indicateur de guide d'enregistrement
5. Indicateur de crête numérique
6. Indicateur de bande
7. Compteur numérique
8. Indicateur de mode mécanisme
9. Indicateur HX PRO
10. Indicateur de mode DOLBY NR
11. Indicateur de monitoring
12. Indicateur de niveau d'entrée (INPUT LEVEL)
13. Bouton d'éjection (EJECT)
14. Régler le niveau d'enregistrement avec cette commande.
15. Touche d'éjection (EJECT)
Appuyer pour ouvrir le porte cassette.
16. Prise de casque d'écoute (PHONES)
Pour ouvrir le porte cassette, appuyez sur le bouton d'éjection.
17. Connecter des écouteurs (avec une impédance de 8 ohms à 1 kohm).
18. Commande de niveau de casque d'écoute (PHONES LEVEL) (Voir page 25.)
19. Commutateur de réduction de bruit Dolby (DOLBY NR)
20. Commutateur DOLBY HX PRO (voir page 48.)
Utilisé pour enregistrer des sources qui contiennent beaucoup de composantes haute fréquence.

- 1. **Timereschalter (TIMER)**
Bei Gebrauch von einer Sperrfrequenz wird Aufnahme und Wiedergabe zu jeder beliebigen Zeit durchgeführt. (Siehe Seite 50.)
- 2. **Leistenschalter (POWER)**
Kassettenhalter
- 3. **Abstrahlungsgeber (REMOTE SENSOR)**
Empfängt die Infrarot-Signale des Fernbedienungselementes.
- 4. **Multifunktionsdisplay (MULTI MODE DISPLAY)**
1. Restzeitanzeiger (REMAIN)
2. Spitzenniveauanzeiger (MEMORY)
3. Sperrfrequenzanzeiger
4. Digitaler Spitzenniveauanzeiger
5. Aufnahmefortschrittsanzeiger
6. Digitaler Bandzeiger
7. Mechanismenmodusanzeiger
8. Digitaler Spitzenniveauanzeiger
9. NR DEFEAT-Anzeige
10. HX PRO-Anzeige
11. DOLBY NR-Anzeige
12. Monitoranzeiger
13. Eingangspegelanzeiger (INPUT LEVEL)
14. Auswurfknopf (EJECT)
15. Anschluss für Kopfhörer (mit einer Impedanz von 8 Ohm bis 1 Kohm).
16. Lautstärkesteuerung (PHONES LEVEL) (siehe Seite 25.)
17. DOLBY NR-Schalter (siehe Seite 48.)
18. DOLBY HX PRO-Schalter (siehe Seite 48.)
Benutzt zur Aufnahme von Signalquellen mit vielen hohen Frequenzkomponenten.

- 1. **Interruptor del temporizador (TIMER)**
Cuando se utiliza un temporizador opcional, el grabado y la reproducción se pueden hacer a la hora deseada. (Vea la página 50.)
- 2. **Interruptor de alimentación (POWER)**
Cassettecarrier
- 3. **Sensor remoto (REMOTE SENSOR)**
Recibe las señales infrarrojas transmitidas por el elemento de mando a distancia.
- 4. **MODE DISPLAY**
1. Indicador de tiempo restante de cinta (REMAIN)
2. Indicador de nivel de cresta (PEAK LEVEL)
3. Frecuencia de bloqueo (MEMORY)
4. Indicador digital de cinta
5. Indicador de progreso de cinta
6. Indicador digital
7. Contador de duración de cinta
8. Indicador de modo de mecanismo
9. Indicador de modo DOLBY NR
10. Indicador de monitor
11. Indicador de nivel de entrada (INPUT LEVEL)
12. Botón de expulsión (EJECT)
13. Conexión para auriculares (PHONES)
Conecte los auriculares (con una impedancia de 8 ohmios a 1 kohmio).
14. Control de nivel de auriculares (PHONES LEVEL) (Vea la página 26.)
15. Interruptor Dolby HX PRO (Vea la página 48.)
16. Interruptor Dolby HX PRO (Vea la página 48.)
Se utiliza para grabar fuentes que contienen varios componentes de alta frecuencia.

- 1. **Timerstopplare (TIMER)**
Med en extra tillkommande timer, kan in- och utspeling göras vid önskad tid. (Se sid. 50.)
- 2. **Strömställare (POWER)**
Kassettkärl
- 3. **Fjärrsensor (REMOTE SENSOR)**
Mottar de infraröda ljudsignalerna från fjärrstyrningen.
- 4. **Funktionsindikator (MULTI MODE DISPLAY)**
1. Avenstämde bandtidindikering (REMAIN)
2. Måttindikator (MEMORY)
3. Toppspänningsare
4. Digitalt spänningsindikator
5. Bandförloppindikator
6. Bandtidindikering
7. Bandräknare
8. Bandlängdindikering
9. Bandlängdsindikering
10. DOLBY NR indikator
11. DOLBY NR indikator (MPX FILTER)
12. DOLBY NR indikator (MPX FILTER)
13. DOLBY NR indikator (MPX FILTER)
14. Monitorindikator
15. Inmatningsnivåkontroll (INPUT LEVEL)
16. Knapp för utspjällning
17. Anslutning för hörlurar (PHONES)
Tryck in för att koppla kassettkäret.
18. Hörlurskontroll (PHONES)
För anslutning av ett par hörlurar (med en impedans på 8 ohm till 1 kohm).
19. Hörlursnivåkontroll (PHONES LEVEL)
20. Onkoppelare Dolby HX PRO (Se sid. 48.)
21. Onkoppelare Dolby HX PRO (Se sid. 48.)
Används vid inspelning av källor som innehåller höga frekvenskomponenter.



- **MPX FILTER switch**
The MPX filter functions when the tape is recorded using the Dolby NR system. Normally, set this switch to OFF. When an MPX filter is used, set this switch to ON. When the Dolby NR circuit from malfunctioning (otherwise the sound quality could deteriorate).
- **INPUT SELECT switch and indicators**
Press this to set to the input you want to record. The corresponding indicator will light.
- **CD DIRECT:**
When recording directly from a CD player.
- **DIRECT:**
When recording directly from other equipment.
- **LINE:**
When recording from a stereo amplifier.
- **MONITOR button**
When recording, set to SOURCE to monitor the sound just before it is recorded. Set to TAPE to monitor the sound recorded on the tape.
- **Cassette presets (REC CAL)**
To adjust the recording bias and sensitivity according to the tape to be used, if adjustment is not performed, set to the center position.
- **BALANCE control**

- **MPX-Filter-Schalter (MPX FILTER)**
Die MPX-Filterfunktion ist für den Aufnahmehilfsbetrieb einer UKW-Stereoempfangsbatterie bei Dolby-Rauschunterdrückung vorgesehen. In der Regel ist dieser Schalter auf OFF zu stellen. Wenn ein MPX-Filter eingesetzt wird, muss der Schalter auf ON gestellt werden. Wenn die Dolby-NR-Schaltung ausfällt (sonst würde die Klangqualität abnehmen), muss der Schalter ebenfalls auf OFF gestellt werden.
- **Eingangswahl-Schalter und -anzeigen (INPUT SELECT)**
Drücken Sie diesen Schalter, um den gewünschten Aufnahmehilfsbetrieb zu wählen. Die entsprechenden Anzeigen leuchten.
- **CD DIRECT:**
Direktaufnahme von einem CD-Spieler.
- **DIRECT:**
Direktaufnahme von einem anderen Gerät.
- **LINE:**
Aufnahme von einem Stereo-Verstärker.
- **Tonüberwachungstaste (MONITOR)**
Bei Aufnahme wird bei Position SOURCE der Ton der Signalkette gehört. Bei Position TAPE wird das aufgenommene Signal (siehe Seite 41) wiedergegeben.
- **Kassetteneinstellungen (REC CAL)**
Für die Einstellung der Aufnahme-Vorgabe (Empfindlichkeit) und -Empfindlichkeit entsprechend der verwendeten Bandbreite. Bei Nichtverwendung auf die Mittelposition stellen.
- **Balanceschieber (BALANCE)**

- **Commutateur de filtre MPX (MPX FILTER)**
Le filtre MPX fonctionne quand le bande est enregistrée en utilisant le système de réduction de bruit Dolby. Normalement, placer ce commutateur sur OFF (l'ext.). Zet de schakelaar gewoonlijk op OFF (uit). Zet de schakelaar op ON (aan) bij opname met het MPX filter. Indien het MPX filter niet werkt, moet de schakelaar ook op ON (aan) worden gezet. Het Dolby NR-systeem kan uitvallopen (anderszins zou de geluidskwaliteit kan anderszins verslechteren).
- **SELECTEURS d'entrées et indicateurs (INPUT SELECT)**
Appuyez pour choisir l'entrée que vous voulez enregistrer. L'indicateur correspondant s'allumera.
- **CD DIRECT:**
Pour enregistrer directement à partir d'un disque compact.
- **DIRECT:**
Pour enregistrer directement à partir d'un autre appareil.
- **LINE:**
Pour enregistrer à partir d'un amplificateur stéréo.
- **Moniteur (MONITOR)**
Enregistrement, écouter sur SOURCE pour contrôler le son juste avant son enregistrement. Placez sur TAPE pour contrôler le son enregistré sur le bande. (Voir page 41).
- **Commandes d'équilibrage (REC CAL)**
Pour régler la polarisation d'enregistrement et l'empfindibilité en fonction de la bande à utiliser. Si le réglage n'est pas effectué, placer sur la position centrale.
- **Commande de balance (BALANCE)**

- **MPX filter-switcher (MPX FILTER)**
Het MPX filter funktioneeret wanneer de cassette opgenomen wordt met het Dolby ruisonderdrukkingssysteem. Zet deze schakelaar gewoonlijk op OFF (uit). Zet de schakelaar op ON (aan) bij opname met het MPX filter. Indien het MPX filter niet werkt, moet de schakelaar ook op ON (aan) worden gezet. Het Dolby ruisonderdrukkingssysteem kan uitvallen (de geluidskwaliteit kan anderszins verslechteren).
- **INPUT SELECT-schakelaar en -indicatoren**
Druk op deze knoppen om de op te nemen ingangbron in te stellen. De correspondentie indicator licht op.
- **CD DIRECT:**
Bij direct opnamen van een compact disc.
- **DIRECT:**
Bij direct opnamen van andere apparatuur.
- **LINE:**
Bij opnamen van een stereo versterker.
- **Monitorknop (MONITOR)**
Zet deze knop in het opnamen op SOURCE voor het opnamen van de geluidskwaliteit vóór het opnamen. Op TAPE knop om het op de cassette opgenomen geluid te bekijken. (Zie pag. 42.)
- **Ik-keuzeknop (REC CAL)**
Om de opnamevoorzpanning en gevoeligheid aan te passen aan de gebruikte cassette. Indien deze bijstelling niet wordt uitgevoerd, wordt de knop op de centrale middenstand.
- **Balanceschieber (BALANCE)**

- **Interruptor de filtro MPX (MPX FILTER)**
El filtro MPX funciona cuando la cinta está grabada con el sistema reductor de ruido Dolby. Normalmente, ajuste este interruptor en OFF. Cuando se graba una emisión estereo por FM con el sistema Dolby, ajuste el interruptor en ON. Cuando el sistema MPX no funciona correctamente, ajuste el interruptor en ON. Cuando el sistema MPX no funciona correctamente, ajuste el interruptor en ON.
- **Indicadores y selectores de entrada (INPUT SELECT)**
Presione estos para seleccionar la entrada que Ud. desea grabar. Se encenderá el indicador correspondiente.
- **CD DIRECT:**
Cuando se graba directamente de un disco compacto.
- **DIRECT:**
Cuando se graba directamente de otros equipos.
- **LINE:**
Cuando se graba del amplificador estereo.
- **Botón de monitoreo (MONITOR)**
Cuando realice una grabación, ajústelo en SOURCE para monitorear el sonido antes de grabar. Coloque el interruptor en TAPE para monitorear el sonido grabado en la cinta. (Vea la página 42.)
- **Control de calibración (REC CAL)**
Para ajustar la polarización de grabación y sensibilidad acorde con el tipo de cinta a usarse. Si no realiza el ajuste, el control quedará en la posición de equilibrio.
- **Control de equilibrio (BALANCE)**

- **MPX FILTER omkopplare**
MPX filter trädur i funktion när bandet spelas in med Dolby brusreduceringsystem. Normalt skall denna omkopplare vara i läget "OFF". Ställ den på "ON" vid inspelning av en FM stereosändning med Dolby brusreduceringssystem. Om MPX filter inte fungerar, ställ den i läget "ON".
- **Ingångsväxlare med indikatorer (INPUT SELECT)**
Trycks in för att välja vilken ingångsignal som skall spelas in och respektive indikator tändas.
- **CD DIRECT:**
Vid direktinspelning från en CD-spelare.
- **DIRECT:**
Vid direktinspelning från en annan komponent.
- **LINE:**
Vid inspelning från en stereoförstärkare.
- **Medbörningsknapp (MONITOR)**
Ställs i läge "SOURCE" för återgivning av ljudlådan och i "TAPE" för medbörning av det just inspelade ljudet. (Se sid. 42.)
- **Kassettinställningar (REC CAL)**
Ställ in kassettens inspelningsstyrka och känslighet efter det band som används. Ställ så i mittpåga när de inte används.
- **Balanskontroll (BALANCE)**

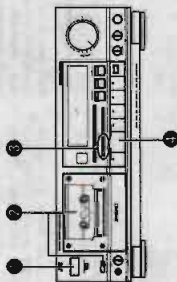
CASSETTE LOADING

1. Press the EJECT button to open the cassette holder. *(cassettenhouder)*
2. Load the cassette as shown. *(laad de cassette zoals getoond)*
3. Press the cassette holder to close it. Be sure to obtain the click sound to close the holder securely. *(druk op de cassettenhouder om deze dicht te krijgen. Zorg ervoor dat u het klikgeluid hoort, zodat de cassette stevig is vastgezet.)*

Note:
If the power is switched off while the tape is inserted, the tape will not be rewound. To avoid this, press the power on again before attempting to remove the cassette.

PLAYBACK

- Operate in the order of the numbers in the illustration —
 • Set the TIMER switch to OFF before switching the power on.

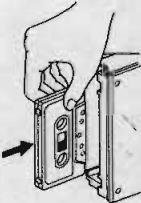


- 1 Press the POWER switch to set to on.
- 2 Load a prerecorded cassette.
- 3 Automatic slack tape removal operation) Press the DOLBY NR (noise reduction) button that was pressed when the tape was recorded.
- 4 Press the PLAY button to start playback.
- 5 To stop playing back midway Press the (stop) button.

Automatic slack tape removal operation: When a cassette is inserted, slack tape will be taken up automatically. This will also happen if the power is switched on with a tape loaded.

EINLEGEN EINER CASSETTE

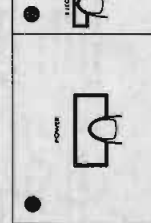
1. Zum Öffnen der Cassettenhähler die EJECT-Einrichtung drücken.
2. Die Kassette wie gezeigt einlegen.
3. Zum Schließen des Cassettenhählers an- drücken. Der Cassettenhähler ist nur dann fest geschlossen, wenn ein Einrastgeräusch wahrnehmbar ist.



Hinweis:
Wird der Gerät bei eingeschalteten Betrieb unterbrochen, wird die Kassette nicht automatisch zurückspulen. Um dies zu vermeiden, schalten Sie das Gerät vor dem Entfernen der Kassette ein.

WIEDERGABE

- In der Reihenfolge der nummerierten Abbildungen vorgehen —
 • Vor Geräteinrichtung den TIMER-Schalter auf OFF stellen.



- 1 MR dem POWER-Schalter einschalten.
- 2 Eine bereits Kassette einlegen.
- 3 Automatische Bandstraffung) Drücken der DOLBY NR (Rauschreduzierung) Taste, die beim Aufnehmen gedrückt wurde.
- 4 Zum Wiederspielen die PLAY-Taste betätigen.
- 5 Um das Wiederspielen vor Erreichen der Bandende zu stoppen (Stop-Taste betätigen).

Automatische Bandstraffung: Nach Einlegen einer Kassette wird Banddurchhang automatisch beseitigt. Dies geschieht gleichzeitig bei Einrichtung der Gerät, wenn bereits eine Kassette eingelegt ist.

MISE EN PLACE DE LA CASSETTE

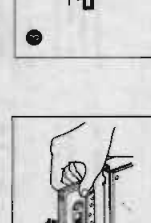
1. Appuyer sur la touche EJECT pour ouvrir la porte-cassette.
2. Appuyer sur la cassette comme indiqué.
3. Appuyer sur la porte-cassette pour la fermer. S'assurer que la porte fait entendre un clic audible quand vous fermez le compartiment.

Load the cassette with the tape-exposed edge down.
 Die Kassette mit der Bandöffnung nach unten einlegen.
 Charger la cassette, le côté où la bande est exposée dirigé vers le bas.
 Zet de cassette in met de bandopeningen naar beneden.
 Coloque el cassette con el trozo de cinta expuesto hacia abajo.
 Set 1 kassetten met dem offene gawein vand nedri.

Remarque:
Si l'alimentation est coupée alors que la bande est enroulée, il n'y a pas de retour automatique de la cassette. Si cela arrive, veuillez appuyer sur la touche EJECT avant de remettre l'alimentation.

LECTURE

- Suivre l'ordre des numéros dans l'illustration —
 • Placer le commutateur TIMER sur OFF avant de mettre l'alimentation.



- 1 Appuyer sur l'interrupteur POWER pour mettre l'alimentation.
- 2 Mettre en place une cassette préenregistrée. Appuyer sur la touche DOLBY NR (réduction de bruit) si elle a été utilisée au moment de l'enregistrement de la bande.
- 3 Appuyer sur la même commutateur de réduction de bruit DOLBY NR qui a été pressé lors de l'enregistrement de la bande.
- 4 Appuyer sur la touche PLAY pour commencer la lecture.
- 5 Pour arrêter la lecture au milieu Presser la touche (arrêt).

Recupération automatique du jeu dans la bande: Quand une cassette est mise en place, le jeu de bande est automatiquement récupéré. Ceci se produit également si l'alimentation est mise avec une bande en place.

INZETTEN VAN DE CASSETTE

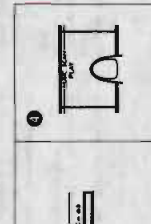
1. Druk de EJECT toets in, zodat de houder open gaat.
2. Zet een cassette in zoals aangegeven in de afbeelding.
3. Druk op de cassetthouder zodat deze dicht gaat. Als u een klik hoort, is de houder goed geloten.

Mogelijk kan de cassette niet uitgenomen worden wanneer de spanning uingeschakeld wordt. Om dit te voorkomen, schakel de spanning alvorens de cassette uit te nemen.

Note:
Si se apaga la unidad mientras la cinta se está moviendo es posible que no pueda extraer el cassette. Si esto sucede, presione el botón EJECT inmediatamente antes de intentar retirar el cassette.

WEERGAVE

- Ga volgens de getoonde volgorde in de afbeelding te werk —
 • Zet de TIMER schakelaar op OFF alvorens de spanning in te schakelen.



- 1 Druk op de POWER schakelaar om het toestel in te schakelen.
- 2 Leg een vooropgeleide cassette in.
- 3 Automatisch terugspelen (mechanisme) Druk op de DOLBY NR toets indien die gebruikt werd bij het opnemen van de cassette.
- 4 Druk op de PLAY toets om het weergaven te beginnen.
- 5 Om het weergaven tevens tijds te onderbreken (stop). Druk op de (stop) toets.

Automatisch terugspelen mechanisme: Bandruisen worden bij inleggen van een cassette automatisch terugspeld. Dit gebeurt ook wanneer de spanning uingeschakeld wordt terwijl een cassette ingelaged is.

COLOCACION DEL CASSETTE

1. Presione el botón EJECT para abrir el porta-cassette.
2. Coloque un cassette según indicia el dibujo.
3. Presione el botón EJECT para cerrar el porta-cassette. Asegúrese de que la portacassete está bien cerrada (clic).

Si se apaga la unidad mientras la cinta se está moviendo es posible que no pueda extraer el cassette. Si esto sucede, presione el botón EJECT inmediatamente antes de intentar retirar el cassette.

Note:
Si se apaga la unidad mientras la cinta se está moviendo es posible que no pueda extraer el cassette. Si esto sucede, presione el botón EJECT inmediatamente antes de intentar retirar el cassette.

REPRODUCCION

- Opere siguiendo el orden de los números de la ilustración —
 • Ajuste el interruptor TIMER en OFF antes de encender la unidad.



- 1 Presione el interruptor POWER para encender la unidad.
- 2 Coloque un cassette grabado.
- 3 Ajuste automáticamente la función de clic) Presione el botón DOLBY NR si se utilizó al grabar la cinta.
- 4 Presione el botón PLAY para comenzar la reproducción.
- 5 Para detener la reproducción durante la misma Presione el botón (parada).

Ajuste automático de función de clic: La cinta se ajustará automáticamente, si está floja, al colocar el cassette. Esto mismo sucederá si la unidad se enciende con el cassette colocado.

ISÄTTNING AV KASSETT

1. Tryck in EJECT tangenten för att öppna kassettdäcket.
2. Sätt i kassetten enligt figuren.
3. Tryck in EJECT tangenten för att stänga kassettdäcket så långt som möjligt. Se till att kassettdäcket stängs till med ett "klick".

Om strömmen frånkopplas medan bandet går kan det bli omöjligt att ta ut kassetten. Koppla istället strömmen igen.

Ann:
Om strömmen frånkopplas medan bandet går kan det bli omöjligt att ta ut kassetten. Koppla istället strömmen igen.

AVSPELNING

- Gör inställningarna i nummerordning i figuren —
 • Ställ TIMER omkopplaren i läge "OFF" innan strömmen tillkopplas.



- 1 Koppla till strömmen med POWER.
- 2 Sätt in en inlagd kassett. (Automatisk bandspänning)
- 3 Ställ DOLBY NR (Rauschreduzierung) i det läge som användes vid inspelningen.
- 4 Tryck in PLAY tangenten för att starta avspeling.
- 5 För att stoppa avspeling Tryck in (stopp) tangenten.

Automatisk bandspänning: Bandet spänns automatiskt när kassetten sätts in. Detta gäller även om strömmen tillkopplas med en kassett först.

Auto-monitor system

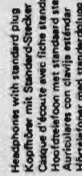
So that the advantages of the three-head system can be exploited more fully, this unit uses an auto-monitor system which lets the user listen to the played back sound automatically by simply pressing the PLAY button. This means that the MONITOR button doesn't have to be pressed each time a tape is played back.

- Monitoring with headphones
Adjust the volume using the PHONES LEVEL control.

Tonüberwachungssystem

Zur besseren Nutzung des Dreikopf-Systems arbeitet dieses Gerät mit einem Auto-Tonüberwachungssystem. Sobald die PLAY-Taste betätigt wird, wird automatisch auf Bandwiedergabe geschaltet. Dabei ist jeweils bei Wiedergabe die Benutzung der MONITOR-Taste nicht erforderlich.

- Tonüberwachung mit Kopfhörer
Die Lautstärke kann mit dem PHONES LEVEL-Regler eingestellt werden.



Systeme de monitoring automatique

Pour pleinement pouvoir exploiter les avantages du système à trois têtes, cet appareil utilise un système de monitoring automatique. Dès que l'on appuie sur la touche PLAY, le son est automatiquement renvoyé sur le haut-parleur. Ceci signifie que la touche MONITOR n'a pas à être pressée à chaque fois qu'une bande est lue.

- Monitoring avec le casque d'écoute
Régliez le niveau en utilisant le commande PHONES LEVEL.



Automatisch mesolijfersysteem

Omdat de voordelen van het driekoppenstelsel optimaal uitgebaat kunnen worden is dit toestel uitgeroerd met een automatisch mesolijfersysteem waarbij de geluiden automatisch op de PLAY toets te drukken. Dit betekent dat de MONITOR toets niet elke maal ingedrukt hoeft te worden wanneer een cassette weergegeven wordt.

- Mesolijfersysteem met de hoortelefoon
Stel het volume bij m.b.v. de PHONES LEVEL-regelaar.

Sistema de monitorio automático

De tal modo que se venjades del sistema de tres cabezas pueda ser totalmente aprovechado, este aparato utiliza un sistema de monitorio automático, el cual permite al usuario escuchar el sonido reproducido automáticamente mediante la simple presión del botón PLAY. Esto significa que el botón MONITOR no debe ser presionado cada vez que se reproduce una cinta.

- Monitorio con auriculares
Ajuste el volumen usando el control PHONES LEVEL.

Automatiskt medföljningssystem

För att fullt kunna utnyttja fördelen av systemet med tre huvud, har denna enhet utrustats med ett automatiskt medföljningssystem som gör att användaren automatiskt får höra ljudet som spelas tillbaka när PLAY-knappen trycks in. Detta betyder att MONITOR-knappen inte behöver dras varje gång ett band spelas.

- Medföljning med hörlurar
Ställ in ljudnivån med PHONES LEVEL-kontrollen.

Tape counter display

When the power is first switched on, "0000" is displayed in the digital counter. When the tape starts running, this functions as a normal four-digit tape counter.

- To reset the counter to "0000" press the RESET button. (The Zählerwerk wird durch Abdrücken des Geräts zurückgestellt.)

- When the tape remaining time is displayed ... Press the DISPLAY button twice to return to the tape counter display.

The display has three modes and can be switched from a tape counter display, to a remaining time display and to display, in this order.

- The indications in the display window will go off when the DISPLAY button is pressed. However, when the deck enters a mode other than the recording and playback modes (fast-forward, rewind, pause, stop), the indications will light again. The remaining time indications will stop in memory until the power is turned off or the cassette tape is ejected.
- Even when the indications go out when the DISPLAY button is pressed, the tape counter, remaining time, meter and digital peak indicator will continue to function. This can be confirmed after recording and playback.

Bandzeitanzeigeeinrichtung

Nach Geräteinbetriebnahme erscheint die Anzeige "0000" in der digitalen Anzeige. Nach Bandlaufstart erfolgt normale vierstellige Bandzeit-Verkreuzung.

- Zurückstellung auf "0000" Drücken Sie das Zählerwerk zurück.

- Anzeige der Bandzeit
Die DISPLAY-Taste zweimal betätigen, um auf die Zeitwertanzeige zurückzuschalten.

Drei Anzeigearten sind einander zur Verfügung stehen. Von der Bandzeitwertanzeige, über die verbleibende Zeitwertanzeige, bis zur Zeitwertanzeige.

- Die Anzeige im Displayfeld erlischt nach Betätigen der DISPLAY-Taste. Schaltet das Deck jedoch auf eine andere Betriebsart als Aufnahme oder Wiedergabe (Umspulen vorwärts/rückwärts, Pause, Stop), leuchtet die Anzeige wieder auf. Die verbleibende Zeitwertanzeige wird in den Speicher bis zum Ausschalten des Geräts gespeichert.
- Auch nach Anzeigeerlöschung mit der DISPLAY-Taste arbeiten Bandzeitwerk, Restzeitanzeigeeinrichtung, Pegel und Spitzenwertanzeige weiter. Dies kann durch Aufzeichnung und Wiedergabe bestätigt werden.

Bandzeitanzeigeeinrichtung

"0000" wordt weergegeven in de digitale teller wanneer de spanning ingeschakeld wordt. Tijdens het transponeren van de cassette fungeert deze als een bandteller met 4 cijfers.

- Om de bandteller op "0000" terug te stellen
Druk op de RESET toets. (De bandteller wordt teruggezet wanneer de spanning uit- en ingeschakeld wordt.)

- Wanneer de resterende tijd van de band weergegeven wordt ...
Druk tweemaal op de DISPLAY toets om de bandtellerdisplay weer te verscrijven.

De display heeft drie instellingen bestaande uit de bandtellerweergave, de resterende tijd weergave en de tijdweergave. De bandtellerweergave wordt in de geheugen opgeslagen tot de cassette uitgeworpen wordt.

- De aanduidingen in het displayvenster gaan uit wanneer op de DISPLAY toets gedrukt wordt. De aanduidingen worden echter weer zichtbaar als een andere functie (bv. vooruit- of achteruitspoelen, pauze, stop) dan de huidige functie wordt ingeschakeld. De aanduidingen worden in het geheugen vastgehouden totdat de spanning uitgeschakeld of de cassette uitgeworpen wordt.
- Zelfs wanneer de DISPLAY toets ingedrukt wordt, blijven de functies voor bandteller, resterende tijd weergave en tijdweergave doorgaan. Deze kunnen dan nog steeds worden na opnamen of weergaven.

Indicación del contador de cinta

Cuando se conecta primero la alimentación, se visualiza "0000" en el contador digital. Cuando la cinta comienza a moverse, éste funciona como un contador de cinta de cuatro dígitos normal.

- Presionar el botón RESET (el contador también se repone cuando se apaga y enciende nuevamente la unidad).

- Cuando se visualiza el tiempo restante de cinta ...
Presione el botón DISPLAY dos veces para retornar a la indicación del contador de cinta.

El display posee tres modos y puede cambiarse desde la indicación de contador de cinta, a indicación de tiempo restante a ninguna indicación, en este orden.

- Las indicaciones en el display desaparecerán cuando se presione el botón DISPLAY. Sin embargo, cuando se establece el magnetofono en un modo que no sea el de grabación o reproducción (avance, retroceso, pausa, parada), las indicaciones volverán a aparecer. Las indicaciones actuales se almacenan en memoria hasta que se desconecte la alimentación o se estraiga el cassette.
- Incluso cuando las indicaciones desaparecen, las funciones de contador de cinta, tiempo restante, medidor y cresta digital continuarán operando. Esto podrá confirmarse después de la grabación y reproducción.

Bandzeitwerk

När strömmen tillkopplas visas "0000" i räkneverket. Det fungerar som ett vanligt bandtellerverk med fyra siffror efter det bandet börjat gå.

- Tryck på RESET-knappen. (Räkneverket nollställs också när strömmen från och tillkopplas.)

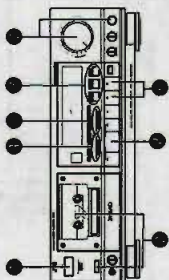
- När bandets återstående tid visas ...
Tryck in DISPLAY tangenten två gånger för att återställa räkneverket.

Tedansifonret har tre olika ardstadät: bandteller, återstående bandtid och ingen visning alls.

- Indikeringarna i tedansifonret försvinner när DISPLAY tangenten trycks in. Men då bandspelandet ställs in i något annat läge än inspelnings och avspelnings (framspolning, bakspolning, paus, stop), återkommer indikeringarna. Visad indikering lagras i spekerens minne tills strömmen från kopplas eller kassetten tas ut.
- Även med indikering bortkopplad med DISPLAY tangenten fortsätter funktionerna räkneverk, bandtids beredning, avspelningsmedel, medför och crestadigital. Detta kan bekräftas efter avslutad inspelning och avspelnning.

RECORDING

- Operate in the order of the numbers in the diagram for recording. (Automatic cassette for recording.)
- Set the TIMER switch to OFF before switching the power on.
- Make sure the safety tab of the cassette has not been broken off.

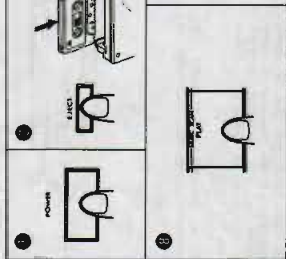


- Press the POWER switch to set to ON.
- Load cassette for recording. (Automatic cassette for recording.)
- Set the recording input.
- Set the DOLBY NR switch as required.
- When recording using the HX PRO circuit, set the HX PRO switch to ON (—).
- Set to SOURCE (record-pause mode). (See page 45.)
- Add to the recording level. (See page 31.)
- The BALANCE control only works with line input.
- Press the PLAY button to start recording and monitoring automatically.

It may be unlawful to record or playback copyrighted material without the consent of the copyright owner.

AUFNAHME

- In der Reihenfolge der numerierten Abbildungen vorgehen.
- Vor der Einschaltung des TIMER-Schalters auf OFF umschalten.
- Überprüfen, ob die Kassettensicherheitszunge herausgebrochen ist.

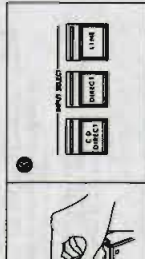


- Mit dem POWER-Schalter einschalten.
- Die zu benutzende Kassette einlegen. (Automatische Kassette.)
- Den DOLBY NR-Schalter als gewünscht einstellen.
- Wenn unter Verwendung der HX PRO-Schaltung aufgenommen werden soll, den HX PRO-Schalter auf ON (—) stellen.
- Auf SOURCE stellen (bei Aufnahmepause).
- Den Aufnahmepegel aussteuern. (Siehe Seite 31.) Der BALANCE-Regler arbeitet nur für den Line-Eingang.
- Zum Aufnahmezustand mit gleichzeitiger Tonüberwachung die PLAY-Taste betätigen.

AVERTISSEMENT:
Il peut être illégal d'enregistrer ou de reproduire des œuvres sous copyright sans le consentement du détenteur des droits d'auteur.

ENREGISTREMENT

- Suivre l'ordre des numéros dans l'illustration.
- Placer le commutateur TIMER sur OFF avant de passer à l'enregistrement.
- S'assurer que la languette de sécurité de la cassette n'a pas été rompue.



- Appuyer sur l'interrupteur POWER pour mettre l'alimentation.
- Mettre en place une cassette pour l'enregistrement. (Automatique.)
- Sélectionner l'entrée d'enregistrement.
- Régler le commutateur de réduction de bruit DOLBY NR comme voulu.
- Pour enregistrer en utilisant le circuit HX PRO, passer le commutateur HX PRO sur ON (—). (Voir page 45.)
- Réglér sur SOURCE (mode de pause d'enregistrement).
- Régler le niveau d'enregistrement. (Voir page 31.) La commande BALANCE fonctionne seulement avec l'entrée ligne.
- Appuyer sur la touche PLAY pour commencer l'enregistrement.

OPNEMEN

- Ga volgens de getoonde volgorde in de illustratie de knoppen bedienen.
- Zet de TIMER schakelaar op OFF alvorens de spanning in te schakelen.
- Ga na dat de veiligheidsnok van de cassette niet uitgebroken is.

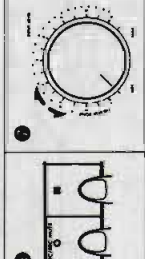


- Druk op de POWER schakelaar om het toestel in te schakelen.
- Zet een cassette in voor het opnemen. (Automatisch opnamemechanisme.)
- Selecteer de gewenste DOLBY NR schakelaar in.
- Zet de HX PRO schakelaar op (—) om op te nemen met het HX PRO circuit. (Zie blz. 45.)
- Op SOURCE (opnamepauze) zetten.
- Stel het opnameniveau in. (Zie blz. 32.) De BALANCE regelaar funktioneert enkel bij binnenkomende lijninput.
- Druk op de PLAY toets om het opnemen te beginnen.

WAARSCHUWING:
Het zonder toestemming van de auteur opnemen of afspelen van door auteursrechten beschermd materiaal kan onwettig zijn.

GRABACION

- Opere siguiendo el orden de los números de la ilustración.
- Poner el interruptor TIMER en OFF antes de encender la unidad.
- Asegúrese de que el cassette tenga la lengüeta de seguridad.



- Presione el interruptor POWER para encender la unidad.
- Coloque un cassette en el mecanismo automáticamente.
- Seleccione la entrada de grabación.
- Fije el interruptor DOLBY NR tal como se requiere.
- Cuando efectúe grabaciones con el circuito HX PRO, ponga el interruptor HX PRO en ON (—). (Vea la pág. 45.)
- Ajuste en SOURCE (modo de pausa de grabación).
- Ajuste el nivel de grabación. (Vea la pág. 32) El control BALANCE solamente funcionará con la entrada de línea. PLAY para iniciar la grabación monitoreo automáticamente.

ADVERTENCIA:
La grabación o reproducción de material protegido por la propiedad literaria puede ser ilegal sin el consentimiento del propietario de los derechos de autor.

INSPELNING

- Gör inställningarna i nummerseriering i figuren för inspelning.
- Sätt TIMER omkopplaren i läge "OFF" innan strömmen tillslås.
- Se till att säkerhetsflik på kassetten inte är bortbruten.



- Koppla till strömmen med POWER.
- Sätt i en kasset för inspelning. (Automatisk inspelning.)
- Välj inspelningsläge.
- Ställ DOLBY NR omkopplaren i önskat läge.
- Vid inspelning med HX PRO kretsen ställs HX PRO omkopplaren i läge "ON". (—).
- (Se sid. 46.)
- Ställ I LIGHT SOURCE (inspelningspausläge).
- Justera inspelningsnivån. (Se sid. 32.) BALANCE kontrollen fungerar endast med linjningången.
- Tryck in PLAY svingnen för att börja inspelning och automatisk övervakning.

WARNING:
Appareten får inte användas för att kopiera material belagda med upphovsrätt. Det är olagligt att reproducera band för skyddade med denna rätt.

Use of calibration adjustment function (adjustment of recording bias and level)

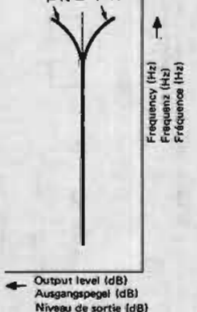
There are various types of cassette tapes, and their characteristics differ slightly even when they are of the same type. Generally, the bias current and equalization characteristics suitable for the type of tape being used can be obtained by the Auto Tape Select system. However, to get the best recording, it is necessary to adjust the recording bias so that distortion is minimized and the frequency characteristics are as flat as possible.

- Compensate the tape sensitivity within ±3 dB so that the recording and playback levels are the same.
- Adjust so that distortion is minimized and the frequency characteristics are as flat as possible.

How to adjust
Make a test recording and adjust the sound quality and sensitivity.

1. Play the source to be recorded with the amplifier set for tape monitoring.
 2. Press the **REC/REC MUTE** and **PLAY** buttons to start recording.
 3. Adjust the recording bias with the **REC CAL-BIAS** control.
 4. Press the **MONITOR** button to set it to the position where the same tone is obtained as that obtained with the **MONITOR** button in the SOURCE position with that obtained with the **MONITOR** button in the TAPE position.
 5. Adjust the recording level with the **REC CAL-LEVEL** control.
- Adjust so that the output volume is obtained with the same volume as that obtained with the **MONITOR** button in the SOURCE position with that obtained with the button in the TAPE position, by alternating the setting of the **MONITOR** button.
- With these adjustments, the optimum bias has been obtained and you have compensated for the tape's sensitivity. Now, after rewinding the tape, start recording.

When the bias is too low or too high, the frequency response is as shown in the following diagram.



Verwendung der Kalibrierungsfunktion (Einstellung von Aufnahmevorspannung und Pegel)

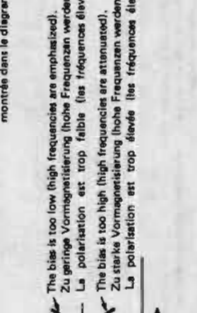
Für Musik-Cassetten werden verschiedene Bandtypen angeboten. Der für die jeweilige Bandart erforderliche Vormagnetisierungsstrom und Entzerrwert wird über das automatische Bandortersystem bereitgestellt. Doch um die bestmögliche Aufnahmequalität zu erreichen, ist es notwendig, die Bandcharakteristika so einzustellen, dass die Verzerrungen minimiert werden und ein bestmöglicher linearer Frequenzgang erzielt wird.

- Die Bandempfindlichkeit im Bereich von ±3 dB einstellen. So erreichen, daß Aufnahme- und Wiedergabepegel identisch sind.
- So einstellen, daß Verzerrungen minimiert werden und ein möglichst linearer Frequenzgang vorliegt.

Vorgehensweise bei der Einstellung
Ein Probeaufnahme durchführen und die Klangqualität und Empfindlichkeit einstellen.

1. Die für die Aufnahme vorgesehene Signalquelle abspielen. Der Verstärker muß hierbei auf Band-Signalempfindlichkeit eingestellt sein.
 2. Mit der **REC/REC MUTE** und **PLAY** Taste auf Aufnahme schalten.
 3. Die Aufnahme-Vormagnetisierung mit dem **REC CAL-BIAS**-Regler einstellen.
 4. Mit dem **MONITOR**-Taste auf TAPE einstellen, um die gleiche Lautstärke zu erhalten, die bei Umstellung der **MONITOR**-Taste zwischen Position **SOURCE** und **TAPE** in der gleichen Klangunterschiede wahrnehmbar unterbleiben.
 5. Den Aufnahmepegel mit dem **REC CAL-LEVEL**-Regler einstellen.
- Mit dem **MONITOR**-Taste zwischen **SOURCE** und **TAPE** umschalten, um beide Signale miteinander vergleichen zu können und für beide Positionen die gleiche Lautstärke zu erzielen.
- Nach diesen Einstellungen sind die Vormagnetisierung und die Bandempfindlichkeit kompensiert und die Aufnahmequalität optimiert. Nach Rückspulen des Bandes die Aufnahme starten.

Bei zu geringer oder zu starker Vormagnetisierung liegt der Frequenzgang wie folgt vor:



Utilisation de la fonction de réglage d'égalisation (réglage de la polarisation et du niveau d'enregistrement)

Il y a plusieurs types de bandes de cassettes, et leurs caractéristiques sont légèrement différentes même dans le même type. En général, le courant de polarisation et les caractéristiques de correction adaptés pour le type de bande à utiliser peuvent être obtenus par le système de sélection automatique des bandes. Cependant, pour obtenir la meilleure qualité de l'enregistrement, il est mieux de régler le courant de polarisation et les caractéristiques de fréquence afin de minimiser les distorsions et d'obtenir une réponse en fréquence aussi plate que possible.

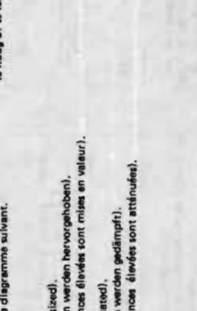


- Pour compenser la sensibilité de bande de ±3 dB. Régler pour que les niveaux d'enregistrement et de lecture soient les mêmes.
- Régler pour que la distorsion soit minimale et que les caractéristiques de fréquence soient les plus uniformes possibles.

Réglage
Faire un test d'enregistrement et régler la qualité du son et la sensibilité.

1. Lire la source à enregistrer avec l'amplificateur réglé pour le monitoring de bande.
 2. Appuyer sur les touches **REC/REC MUTE** et **PLAY** pour enregistrer la son de la source.
 3. Régler la polarisation d'enregistrement avec le commodeur **REC CAL-BIAS** pour la même intensité de lecture obtenue avec le **MONITOR** sur TAPE. Ajuster la commande d'égalisation pour obtenir la même tonalité la plus loin possible, en comparant la qualité du son obtenue avec la touche **MONITOR** quand la touche **SOURCE** avec celle obtenue quand la touche est dans la position TAPE.
 4. Régler le niveau d'enregistrement avec le commodeur **REC CAL-LEVEL**.
- Ajuster pour obtenir le même volume, en comparant le volume obtenu avec la touche **MONITOR** dans la position **SOURCE** avec celui obtenu quand la touche est dans la position **TAPE**, en alternant le réglage de la touche **MONITOR**.
- Avec ces réglages, la polarisation optimale a été obtenue et vous avez compensé la sensibilité de la bande. Alors, après réenroulement de la bande, commencez l'enregistrement.

Quand la polarisation est trop faible ou trop forte, la réponse en fréquence est comme montrée dans le diagramme suivant.



Gebrauch van de ijkingsrepefunctie (af-regelen van opnamevoorspanning en niveau)

Er zijn verschillende soorten cassettes en hun karakteristiek verschillen lichtjes, ook als ze van het zelfde type zijn. Over het algemeen kan de voorspanning en de equalisatie van de cassette voor het type van de band die gebruikt wordt automatisch worden ingesteld. Om echter de beste opnameresultaten te behalen, is het noodzakelijk de opnamevoorspanning en de equalisatie zo te regelen dat de distorsie minimaal is en de frequentie-eigenschappen zo vlak mogelijk zijn.

- Stel de bandvoorspanning binnen ±3 dB in. Voor de instelling zodanig uit dat de opnamevoorspanning en de afspanning hetzelfde zijn.
- Voor de instelling zodanig uit dat de vervorming minimaal is en de frequentie-eigenschappen zo vlak mogelijk zijn.

Uitvoeren van de instelling
Maak een testopname in regel de geluidskwaliteit en gevoeligheid af.

1. Speel de op te nemen bron af en stel de versterker in voor afspanning van de cassette.
 2. Druk tegelijkertijd op de **REC/REC MUTE** en **PLAY** toetsen om het opnamegeluid op te nemen.
 3. Regel de opnamevoorspanning e.m.b.v. de **REC CAL-BIAS** toets om de zelfde afspanning te krijgen als die wordt verkregen met de **MONITOR** toets op TAPE. Ajusteer de equalisatie zo nodig in dat zowel mogelijk dezelfde geluidskwaliteit wordt verkregen. Vergelijk dit met het originele geluid dat verkregen kan worden door de **MONITOR** toets in de positie van de TAPE in de **SOURCE** stand te zetten.
 4. Stel het opnameniveau bij m.b.v. de **REC CAL-LEVEL** regelaar.
- Zodanig afregelen dat hetzelfde volume verkregen wordt door het volume met de **MONITOR** toets in de positie van de TAPE met dat volume met de **MONITOR** toets in de positie van de TAPE met deze toets in de TAPE stand.
- Na uitvoeren van deze instellingen is de optimale voorspanning verkregen en is de equalisatie gecompenseerd voor de gevoeligheid van de cassette. Begin nu na de cassette te hebben teruggespoeld met opnemen.

De frequentie-eigenschappen zijn, afhankelijk van de opnamevoorspanning en de voorspanning in hoog of te laag ingesteld staat.

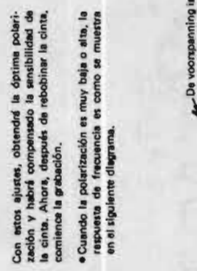
Uso de la función de ajuste de calibración (Ajuste de la polarización y nivel de grabación)

Existen varios tipos diferentes de cintas, y sus características varían ligeramente, incluso dentro del mismo tipo. Generalmente, las características de corriente y equalización de polarización apropiadas para el tipo de cinta utilizado pueden obtenerse mediante el sistema de selección automática de cintas. Sin embargo, para optimizar la respuesta de frecuencia y minimizar la distorsión se minimiza y las características de respuesta de frecuencia sean lo más uniforme posible.

- Compensar la sensibilidad de la cinta dentro ±3 dB. Ajuste a fin de que los niveles de grabación y reproducción sean los mismos.
- Ajuste a fin de que la distorsión se minimice y las características de frecuencia sean lo más uniformes posibles.

Cómo efectuar el ajuste
Realice una grabación de prueba y ajuste la calidad del sonido y sensibilidad.

1. Reproduzca la fuente que va a grabar con el amplificador ajustado para el monitoreo de la cinta.
 2. Presione los botones **REC/REC MUTE** y **PLAY** para grabar el sonido de la fuente.
 3. Regule la polarización de grabación con el control **REC CAL-BIAS** para ajustar el nivel de grabación con el mismo nivel que el obtenido con el botón **MONITOR** en la posición TAPE. Ajuste el control de calibración a fin de obtener en lo posible al mismo tono, comparando la calidad sonora obtenida con el botón **MONITOR** en la posición **SOURCE** con la obtenida con el botón **MONITOR** en la posición TAPE.
 4. Ajuste el nivel de grabación con el control **REC CAL-LEVEL**.
- Ajuste de tal modo que se obtenga el mismo volumen, comparando el volumen obtenido con el botón **MONITOR** en la posición **SOURCE** obtenido con el botón en la posición **TAPE**, alternando la posición del botón **MONITOR**.
- Con estos ajustes, obtendrá la óptima polarización y habrá compensado la sensibilidad de la cinta. Ahora, después de rebobinar la cinta, comience la grabación.
- Cuando la polarización es muy baja o alta, la respuesta de frecuencia es como se muestra en el siguiente diagrama.



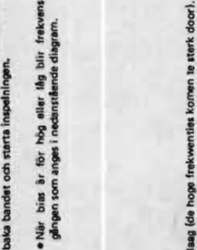
Kalibreringsfunktioner (inställning av inspänningsnivå och bias)

Det finns många kassettdrivor vars karakteristiska skiljer sig lite från varandra trots att de är av samma typ. Normalt kan korrekt förinställning av spänningen och equaliseringen (inställning av polariseringsströmmen och equaliseringskarakteristika) erhållas för respektive bandtyp genom den automatiska bandortersystemet. Men för att optimera det använda bandets frekvenssvaret är det bäst att ställa in förinställningen vid inspänningen så att distorsionen minimeras och frekvenssvaret blir så rak som möjligt.

- Bandspänningen kan regleras inom området ±3 dB. Gör inställningen så att ett inspännings- och avspänningsnivåer är lika.
- Ställ in så att distorsionen blir minimal och frekvenssvaret så rak som möjligt.

Tillvägagångssätt
Gör en provinspänning för att ställa in ljudets ton och känslighet.

1. Spela källan som skall spela in med förinställningen för inspänning och avspänning.
 2. Tryck in **REC/REC MUTE** och **PLAY** tangenterna för att spela in källan.
 3. Reglera inspänningsnivå med **REC CAL-BIAS** kontrollen.
 4. Tryck in **MONITOR** tangenten i läge TAPE. Ställ in kalibreringsnivån så att ljudets nivå är densamma som den som erhålls med **MONITOR** tangenten i läge SOURCE. Det går lätt att jämföra genom att trycka **MONITOR** tangenten mellan lägena **SOURCE** och **TAPE**.
 5. Reglera inspänningsnivån med **REC CAL-LEVEL** kontrollen.
- Ställ in den så att samma ljudnivå återges med samma volym när **MONITOR** tangenten i läge **SOURCE** och **TAPE** jämförs.
- Med dessa regleringar har optimal frekvensförspänning eller bias ställts in och även bandets distorsion har minimerats. Nu bör du tillbaka bandet och starta inspänningen.
- När bias är för hög eller för låg blir frekvenssvaret som anges i nedanstående diagram.



DIGITAL PEAK indicator and its use in recording level adjustment

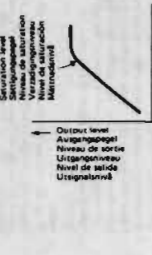
It is best to adjust so that the maximum sound level of the source to be recorded reaches the very limit of the saturation level* of the tape to be used.

- 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.

The saturation level differs with the type of tape. This unit automatically indicates the type of tape and the peak level for recordings. Set the recording level according to these indications.

- Saturation level means:

When the recording input is increased gradually, the output increases proportionally. However, once it reaches a certain level, the output cannot be increased any further. The level at which this occurs is called the "saturation level".



- How to adjust the recording level
1. Set to SOURCE (record/pause mode).
 2. LEVEL control.

The INPUT LEVEL control has a scale graduated in steps of about 1 dB which is used for level comparison reference when using the INPUT LEVEL control, referring to the digital peak indicator display.

- With normal tape (type I) / Chromatape (type II)
- Normalband (Type I) / Chromaband (Type II)
- Avec une bande normale (type I) / bande au chrome (type II)
- Met normale band (type I) / chromoband (type II)
- Con cinta normal (Type I) / cinta de cromo (Type II)
- Med normalband (typ I) / Chromband (typ II)

DIGITAL PEAK-Anzeige und ihre Verwendung bei der Aufnahmepegeljustierung

Die optimale Aussteuerung liegt vor, wenn der Tonpegel der Zuspil-Spindelquelle die Grenze des Band-Sättigungspegels* erreicht.

- Bei zu niedriger Aussteuerung tritt das Bandgeräusch in Erscheinung.
- Bei zu hoher Aussteuerung bei über den Sättigungspegel (Übsteuerung) zeigt die Aufnahme Tonunterbrechungen und Verzerrungen.

Der Sättigungspegel ist je nach Bandart unterschiedlich. Diese Einheit zeigt die Bandart und den Aufnahme-Sättigungspegel automatisch an. Die Aussteuerung entsprechend diesen Angaben vornehmen.

- Sättigungspegel:

Bei schrittweiser Erhöhung des Aufnahmepegels wird der Ausgang gleichfalls schrittweise angehoben. Ab einem bestimmten Pegel jedoch kann der Ausgang nicht mehr angehoben werden, obwohl der Eingangspegel weiter ansteigt. Der Pegel, ab dem dies der Fall ist, wird als Sättigungspegel bezeichnet.



- Aussteuerung des Aufnahmepegels
1. Auf SOURCE stellen (bei Aufnahmepegel).
 2. LEVEL-Regler einstellen.

How to adjust the recording level

1. Set to SOURCE (record/pause mode).
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Indicateur DIGITAL PEAK et sa fonction dans le réglage du niveau d'enregistrement

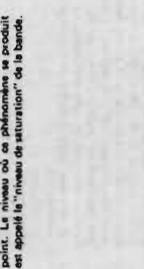
Il est mieux de régler pour que le niveau sonore maximal de la source à enregistrer atteigne la limite du niveau de saturation* de la bande d'enregistrement.

- Quand le niveau d'enregistrement est trop faible, le bruit de fond est excessivement audible.
- Si le niveau d'enregistrement est trop fort, dépassant le niveau de saturation, l'enregistrement contient des craquements et sera déformé.

Le niveau de saturation diffère avec le type de bande. Cet appareil indique automatiquement le type de la bande et le niveau créés pour l'enregistrement. Régler le niveau d'enregistrement en fonction de ces indications.

- Signification de la limite de saturation:

Quand l'intensité d'enregistrement augmente progressivement, le niveau de sortie augmente également. Cependant, une fois avoir atteint un certain niveau, la sortie ne peut plus augmenter davantage. Par conséquent, la sortie sera déformée si l'intensité est augmentée au-delà de ce point. Le niveau ou ce phénomène se produit est appelé le "niveau de saturation" de la bande.



- Réglage du niveau d'enregistrement
1. Régler sur SOURCE (mode de pause d'enregistrement).
 2. Régler le niveau d'enregistrement en utilisant la commande INPUT LEVEL.

How to adjust the recording level

1. Set to SOURCE (record/pause mode).
2. LEVEL control.

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De DIGITAL PEAK indicator en haar gebruik bij het bijstellen van het opnamenniveau

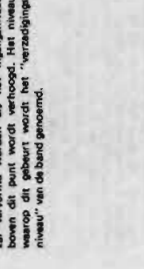
Het is het beste zodanig in te stellen dat het maximale geluidsniveau van de op te nemen bron de uitgangsniveau van de band gebruikte cassette bereikt.

- Bij opnamen met een te laag niveau zal de uitgangsniveau laag zijn.
- Wanneer het opnamenniveau te hoog is en de verzadigingsgrens overschrijdt, zal de opname kralend geluiden bevatten en vervormd zijn.

Het verzadigingsniveau verschilt per type cassette. Dit toont het automatisch de bandsoort aan en het pikniveau voor het opnamen. Stel het opnamenniveau in volgens deze aanduidingen.

- Verzadigingsniveau betekenis:

Bij stap voor stap verhogen van het opnamenniveau zal het uitgangsniveau proportioneel toenemen. Bij het bereiken van een bepaald niveau echter kan het uitgangsniveau niet meer worden verhoogd. Het niveau dat hierna wordt verhoogd, zal worden vervormd.



- Instellen van het opnamenniveau
1. Op SOURCE (opnamepauze/stop) zetten.
 2. LEVEL regelaar.

How to adjust the recording level

1. Set to SOURCE (record/pause mode).
2. LEVEL control.

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- Con cinta de metal (Type I) / cinta de metal (Type II)
- Med metalband (typ I) / Chromband (typ II)

Indicador DIGITAL PEAK y su utilización para el ajuste del nivel de grabación

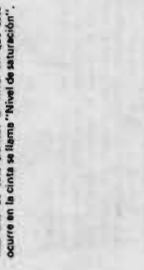
Es mejor ajustar de tal manera que el nivel de sonido máximo de la fuente a grabarse alcance el límite máximo del nivel de saturación* de la cinta a usar.

- Cuando el nivel de grabación sea demasiado bajo, el ruido inherente a la cinta será notable.
- Cuando el nivel de grabación sea demasiado alto, excediendo el nivel de saturación, la grabación contendrá sonido de crepitación y se distorsionará.

El nivel de saturación difiere según el tipo de cinta. Esta unidad automáticamente indica el tipo de cinta y el nivel de cresta para la grabación. Ajuste el nivel de grabación de acuerdo con estas indicaciones.

- El nivel de saturación significa:

Cuando la entrada de grabación aumenta proporcionalmente, la salida aumenta proporcionalmente. Sin embargo, una vez alcanzado cierto nivel, el nivel de salida no puede ser aumentado más allá de este punto. El nivel en que esto ocurre en la cinta se llama "nivel de saturación".



- Cómo ajustar el nivel de grabación
1. Ajuste SOURCE (modo de pausa de grabación).
 2. Ajuste el nivel de grabación utilizando el control INPUT LEVEL.

How to adjust the recording level

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Inställning av inspelningsnivån med DIGITAL PEAK indikator

Det är bäst att ställa in inspelningsnivån så att den närmast sig bandets mättröskel*.

- Vid för låg inspelningsnivå blir det alltid förkommande bandbruset tydligt.
- Vid för hög inspelningsnivå, som går över mättröskeln, kommer inspelningsnivån att innehålla störningar och distorsioner.

Mättröskeln är olika för olika bandtyper. Denna apparat anger automatiskt bandtyp och toppnivån för inspelning. Ställ in inspelningsnivån enligt dessa indikeringar.

- Mättröskelnivåns betydelse:

När inspelningsnivån ökas långsamt sker också en proportionerlig ökning av utspelningsnivån. Men när den har nått en viss nivå utspelnas inte längre ökat ljud. Detta innebär att utspelningsnivån blir försvagad om inspelningsnivån utövers denna punkt. Den nivå där detta hinder kallas bandets "mättröskel".



- Inställning av inspelningsnivån
1. Ajuste SOURCE (inspelningspaus).
 2. Ställ in inspelningsnivån med INPUT LEVEL kontrollen.

How to adjust the recording level

1. Set to SOURCE (record/pause mode).
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Digital Peak Indicator
When an unused blank tape is used for recording, the digital level indicator is locked with the peak level meter under the control of the master microcomputer. A maximum peak level memory function is provided so that the peak level can be checked after as well as during recording.

The digital peak level is indicated in 1 dB steps from +1 dB to +12 dB, and the maximum level is held for approximately 2 seconds.

Calling up the maximum level and resetting the memory

When the digital peak "CALL" button is pressed once, the peak level held in memory flickers in the display for approximately 5 seconds. If the CALL button is pressed again while the peak value is displayed, the previous constant maximum level will be held in memory as the peak level. In addition, the digital peak function holds the level of whichever of the left or right channels is the higher and displays it.

Notes:
When an unused blank tape is used for recording, the digital level indicator is locked with the peak level meter on both sides of the tape.

Direct input

So that signals can be input directly instead of from a stereo amplifier, connect a CD player and DAT player to the CD DIRECT and DIRECT terminals as shown in "CONNECTIONS" on Page 11. In this case the BALANCE control of this unit will be disabled because the signal path for an improved sound quality. To record with these sources, set the INPUT SELECT switch according to the input.

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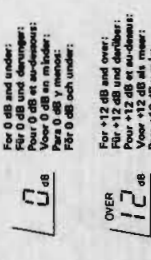
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Indicador de cresta digital
Cuando se utiliza una cinta en blanco para grabación, el nivel digital se indica en pasos de 1 dB desde +1 dB hasta +12 dB, y el nivel máximo se retiene por aproximadamente 2 segundos.



El nivel de cresta digital se indica en pasos de 1 dB desde +1 dB a +12 dB, y el nivel máximo se retiene por aproximadamente 2 segundos.

Recuperación del nivel máximo y reposición de la memoria

Cuando se presiona el botón CALL de cresta digital una vez, el nivel de cresta retenido en memoria, parpadea en el indicador por aproximadamente 5 segundos. Si se presiona nuevamente el botón CALL mientras se muestra el nivel de cresta, el nivel máximo retenido en memoria será retenido en memoria como nivel de cresta. Además, la función de cresta digital retiene el nivel de cualquiera de los canales izquierdo o derecho que sea el más alto y lo exhibe.

Nota:
Cuando se utiliza una cinta virgen para la grabación, el nivel digital se indica en pasos de 1 dB desde +1 dB hasta +12 dB, y el nivel máximo se retiene por aproximadamente 2 segundos.

Entrée directe

Para que las señales puedan ingresar directamente en lugar de provenir del amplificador estéreo, conecte un reproductor compacto y un reproductor DAT a los terminales CD DIRECT y DIRECT tal como se muestra en "CONEXIONES" en la pág. 12. En este caso, el control de este nivel de cresta se desactiva porque la trayectoria de la señal para mejorar la calidad del sonido. Para grabar con estas fuentes, ajuste el selector INPUT SELECT de acuerdo con la entrada.

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Cuando se utiliza una cinta virgen para la grabación, el nivel digital se indica en pasos de 1 dB desde +1 dB hasta +12 dB, y el nivel máximo se retiene por aproximadamente 2 segundos.

Direktföregång

Para que las señales puedan ingresar directamente en lugar de provenir del amplificador estéreo, conecte un reproductor compacto y un reproductor DAT a los terminales CD DIRECT y DIRECT tal como se muestra en "CONEXIONES" en la pág. 12. En este caso, el control de este nivel de cresta se desactiva porque la trayectoria de la señal para mejorar la calidad del sonido. Para grabar con estas fuentes, ajuste el selector INPUT SELECT de acuerdo con la entrada.

Digital toppeindikator
Når en ubrugt blank bånd bruges til optagelse, indikeres det digitale niveau i 1 dB trin fra +1 dB til +12 dB, og det maksimale niveau holdes i ca. 2 sekunder.



Toppeindikeren vises med stiftor i 1 dB trin mellem +1 dB og +12 dB samt den maksimale niveau som holdes i ca. 2 sekunder.

Återkalling av maksimumnivå og minnesetstillning

Trykk på CALL-tasten en gang for å sette opp en digital toppnivå. Når du trykker på CALL en gang til, blinker nivået i displayet i ca. 5 sekunder. Hvis du trykker på CALL mens nivået vises, vil det tidligere lagrede nivået i minnet og den maksimale nivået som er lagret i minnet, bli lagret som digital toppnivå. I tillegg vil den digitale toppnivåfunksjonen holde nivået av whichever of the left or right channels is the higher and displays it.

Ann:
Ved anvendning av ett nytt bånd for innspilling av lyd, indikeres det digitale nivået i 1 dB-trin fra +1 dB til +12 dB, og det maksimale nivået holdes i ca. 2 sekunder.

Direktföregång

Para que las señales puedan ingresar directamente en lugar de provenir del amplificador estéreo, conecte un reproductor compacto y un reproductor DAT a los terminales CD DIRECT y DIRECT tal como se muestra en "CONEXIONES" en la pág. 12. En este caso, el control de este nivel de cresta se desactiva porque la trayectoria de la señal para mejorar la calidad del sonido. Para grabar con estas fuentes, ajuste el selector INPUT SELECT de acuerdo con la entrada.

SPECIFICATIONS

(TD-V1010A/C/J)

Type : Stereo cassette deck
 Type system : 4.8 cm/sec (1 7/8 inch/sec)
 Type speed : 1-20 dB recording
 Frequency response : Metal tape : 10 - 22,000 Hz (±3 dB)
 15 - 20,000 Hz (±3 dB)
 Chromo band : 10 - 20,000 Hz
 15 - 18,000 Hz (±3 dB)
 Normal tape : 10 - 20,000 Hz
 15 - 18,000 Hz (±3 dB)
 S/N ratio : 3% N = A-weighted, K3 = 3%
 Metal tape : The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz.
 Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with Dolby B NR on.
 Improvement of S/N : 4 dB at 10 kHz with Dolby C NR on and 5 dB with Dolby B NR on.
 Wobble/flutter : 0.022 % (WFRMS)
 Channel separation : 40 dB (1 kHz)
 Crosstalk : 65 dB (1 kHz)
 Harmonic distortion : K3:0.5 % THD: 1.0 % (metal tape, 1 kHz)
 Heads : 2 Gap Ferrite (Amorphous) x 1, Record (Amorphous) x 1, Playback (Amorphous) x 1

CARACTERISTIQUES TECHNIQUES

(TD-V1010A/C/J)

Type : Platine d'enregistrement
 Système de pistes : 4 pistes, 2 canaux
 Vitesse de défillement : 4,8 cm/sec.
 Réponse en fréquence : (Enregistrement à -20 dB) Bande "metal" : 10 - 22.000 Hz (±3 dB) 15 - 20.000 Hz (±3 dB) Bande chrome : 10 - 20.000 Hz 15 - 18.000 Hz (±3 dB) Bande normale : 10 - 20.000 Hz 15 - 18.000 Hz (±3 dB)
 Rapport signal/bruit : 3 %, N = A-ponderé, K3 = 3 %
 Bande "metal" : Le rapport S/N est amélioré de 15 dB environ à 500 Hz et de max. 20 dB à 1 kHz.
 Dolby C NR on et amélioré de 5 dB à 1 kHz et de 10 dB à 5 kHz avec le Dolby B NR on.
 Amélioration du niveau de sortie max. : 4 dB à 10 kHz avec le Dolby C NR en circuit.
 Pleurage et scintillement : 0,022 % (WFRMS)
 Séparation des canaux : 40 dB (1 kHz)
 Diaphonie : 65 dB (1 kHz)
 Distorsion harmonique : K3:0,5 %, THD: 1,0 % (bande "metal", 1 kHz)
 Têtes : 2 Spalt-Ferrit (Amorphes) x 1, enregistrement (Amorphes) x 1, lecture (Amorphes) x 1

ESPECIFICACIONES

(TD-V1010A/C/J)

Tipo : Magneto-fono de cinta
 Sistema de pistas : 4 pistas, 2 canales
 Velocidad de la cinta : 4,8 cm/sec.
 Respuesta de frecuencias : (Grabación a -20 dB) Cinta metalizada : 10 - 22.000 Hz (±3 dB) 15 - 20.000 Hz (±3 dB) Cinta Cromo : 10 - 20.000 Hz 15 - 18.000 Hz (±3 dB) Cinta Normal : 10 - 20.000 Hz 15 - 18.000 Hz (±3 dB)
 Relación señal-ruido : 3 %, N = A-ponderado, K3 = 3 %
 Cinta metalizada : La relación S/N se ha mejorado en aprox. 15 dB a 500 Hz y de max. 20 dB a 1 kHz.
 Dolby C NR con y con Dolby B NR activado y en 5 dB a 1 kHz y en 10 dB a 5 kHz con el Dolby B NR activado.
 Mejora del nivel de salida máxima : 4 dB a 10 kHz con el Dolby C NR activado.
 Fluctuación y tremolación : 0,022 % (WFRMS)
 Separación de los canales : 40 dB (1 kHz)
 Distorsión armónica : K3:0,5 %, THD: 1,0 % (cinta metalizada, 1 kHz)
 Cabezales : Borrado (ferrite de 2 entrehierros) x 1, Grabación (amorfo) x 1, Reproducción (amorfo) x 1

TECHNISCHE DATEN

(TD-V1010G)

Type : Stereo-Cassette-Deck
 Soundsystem : 4-Spur, 2-Kanal
 Bandbreitenwidrigkeit : 4,8 cm/Sek.
 Frequenzgang : Metallband : 10 - 22.000 Hz (DIN 45 500) 15 - 20.000 Hz (±3 dB) Chromo-Band : 10 - 20.000 Hz (DIN 45 500) 15 - 18.000 Hz (±3 dB) Normalband : 10 - 20.000 Hz 15 - 18.000 Hz (±3 dB)
 Signal-Rauschabstand : 3 %, N = A-ponderiert, K3 = 3 %
 Der Signal-Rauschabstand ist um 15 dB bei 500 Hz und um max. 20 dB bei 1 kHz verbessert.
 10 kHz mit einschalteter DOLBY C NR verbessert und um 5 dB bei 1 kHz und um 10 dB bei 5 kHz mit DOLBY B NR.
 4 dB bei 10 kHz mit einschalteter DOLBY C NR.
 0,022 % (DIN 45 500)
 65 dB (250 Hz)
 K3:0,5 %, THD: 1,0 % (Metallband, 1 kHz)
 0 VU
 2-Spalt-Ferrit, Lesekopf x 1, Aufnahmekopf x 1, Anzeigebildschirm x 1, Wiedergabekopf x 1

CARACTERISTIQUES TECHNIQUES

(TD-V1010E)

Type : Platine d'enregistrement
 Système de pistes : 4 pistes, 2 canaux
 Vitesse de défillement : 4,8 cm/sec.
 Réponse en fréquence : (Enregistrement à -20 dB) Bande "metal" : 10 - 22.000 Hz (DIN 45 500) 15 - 20.000 Hz (±3 dB) Bande chrome : 10 - 20.000 Hz 15 - 18.000 Hz (±3 dB) Bande normale : 10 - 20.000 Hz (DIN 45 500) 15 - 18.000 Hz (±3 dB)
 Rapport signal/bruit : 3 %, N = A-ponderé, K3 = 3 %
 Bande "metal" : Le rapport S/N est amélioré de 15 dB environ à 500 Hz et de max. 20 dB à 1 kHz.
 avec le Dolby C NR en circuit et amélioré de 5 dB à 1 kHz et de 10 dB environ à 5 kHz avec le Dolby B NR en circuit.
 Amélioration du niveau de sortie max. : 4 dB à 10 kHz avec le Dolby C NR en circuit.
 Pleurage et scintillement : 0,022 % (DIN 45 500)
 Séparation des canaux : 40 dB (1 kHz)
 Diaphonie : K3:0,5 %, THD: 1,0 % (bande "metal", 1 kHz)
 0 VU
 Effacement (ferrite 2 entrehierros) x 1, enregistrement (amorfo) x 1, lecture (amorfo) x 1

SPECIFICATIEN

(TD-V1010E)

Type : Stereo cassette-Deck
 Soundsystem : 4-sporen, 2 kanalen
 Bandbreitenwidrigkeit : 4,8 cm/sec.
 Frekwentiergang : Metallband : 10 - 22.000 Hz (DIN 45 500) 15 - 20.000 Hz (±3 dB) Chromo-Band : 10 - 20.000 Hz (DIN 45 500) 15 - 18.000 Hz (±3 dB) Normalband : 10 - 20.000 Hz (DIN 45 500) 15 - 18.000 Hz (±3 dB)
 Signal/ruisverhouding : 3 %, N = A-ponderé, K3 = 3 %
 De signal/ruisverhouding wordt met ca. 15 dB bij 500 Hz verbeterd. Bij 1 kHz wordt de DOLBY C NR op "ON" wordt de signal/ruisverhouding met max. 20 dB verbeterd. De signal/ruisverhouding wordt met ca. 5 dB bij 10 kHz verbeterd.
 De signal/ruisverhouding wordt met ca. 5 dB bij 10 kHz met Dolby C NR op "ON" verbeterd (1 kHz) en met 10 dB bij 5 kHz met Dolby B NR op "ON".
 De signal/ruisverhouding wordt met ca. 5 dB bij 10 kHz met Dolby C NR op "ON" verbeterd (1 kHz) en met 10 dB bij 5 kHz met Dolby B NR op "ON".
 Maximaal uitgangsniveau : 0,022 % (DIN 45 500)
 Wobbel en flutten : 65 dB (1 kHz)
 Snelheidsfluctuaties : K3:0,5 %, THD: 1,0 % (metallband, 1 kHz)
 0 VU
 Wiskop (2-sporen ferrit) x 1, Openrekop (amorfo) x 1, Wiedergabekop (amorfo) x 1

Motors	Motors	Motors	Motors	Motors	Motors	Motors	Motors	Motors	Motors
<p>Fast forward/rewind : Pulse servo direct drive motor for capstan x 1 DC motor for reel x 1 DC motor for mechanism drive x 1 C-80 cassette</p> <p>Fast forward/rewind : Min. input level: 80 mV Input impedance: 50 kΩ</p> <p>DIRECT (x 1 circuit) Input impedance: 50 kΩ</p> <p>LINE IN (x 1 circuit) Output level: 300 mV Output impedance: 50 kΩ</p> <p>PHONES x 1 Output level: 300 mV Matching impedance: 0-1 mΩ/8 Ω</p> <p>Other terminals COMPU LINK-1/ SYNCHRO x 2</p> <p>Power requirement TD-V1010A AC 240/220/120 V, 50/60 Hz AC 120 V, 60 Hz 20 W</p> <p>TD-V1010C/J (W x H x D) 435 x 140 x 338 mm (17-3/16" x 5-9/16" x 13-1/4") 10.3 kg (22.8 lbs) Pin plug cord 2 Remote cable 1 Battery (RS/AA) 2</p> <p>Design and specifications are subject to change without notice.</p>	<p>Moteur à commande directe d'avancement par impulsions pour le capstan x 1, Moteur CC pour la bobine x 1 Moteur CC pour le mécanisme de système pour moteur CC x 1 Environ 95 secondes, avec une cassette C-80</p> <p>Temps d'avance rapide/Tempo de réembobinage Bornes d'entrée CD DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>LINE IN (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>Bornes de sortie LINE OUT (x 1 circuit) Niveau de sortie: 300 mV Impédance de sortie: 50 kΩ</p> <p>PHONES x 1 Niveau de sortie: 300 mV Impédance de sortie: 0-1 mΩ/8 Ω</p> <p>Autres prises Alimentation TD-V1010A 240/220/120 V CA, 50/60 Hz 120 V CA, 60 Hz 20 W 435 x 140 x 338 mm</p> <p>Alimentation TD-V1010C/J (L x H x P) 10,3 kg Câble de broches 2 Câble de télécommande 1 Pile (RS/AA) 2</p> <p>Présentation et caractéristiques modifiables sans préavis.</p>	<p>Motor impulsión directa para el eje de la bobina x 1, Motor de CC para el eje de carrete x 1 Motor de CC para el eje de sistema para motor CC x 1 C. 95 segundos con cassette C-80</p> <p>Tempo de avance rápido/rebobinado Terminales de entrada CD DIRECT (x 1 circuito) Nivel de entrada mín.: 80 mV Impedancia de entrada: 50 kΩ</p> <p>DIRECT (x 1 circuito) Nivel de entrada mín.: 80 mV Impedancia de entrada: 50 kΩ</p> <p>LINE IN (x 1 circuito) Nivel de entrada mín.: 80 mV Impedancia de entrada: 50 kΩ</p> <p>Terminales de salida LINE OUT (x 1 circuito) Nivel de salida: 300 mV Impedancia de salida: 50 kΩ</p> <p>PHONES x 1 Nivel de salida: 300 mV Impedancia de salida: 0-1 mΩ/8 Ω</p> <p>Otros terminales Alimentación TD-V1010A 240/220/120 V, 50/60 Hz 120 V CA, 60 Hz 20 W 435 x 140 x 338 mm</p> <p>Alimentación TD-V1010C/J (An x H x P) 10,3 kg Condiciones con clavijas 2 Cables de mando a distancia 1 Pila (RS/AA) 2</p> <p>El diseño y las especificaciones están sujetos a cambio sin aviso.</p>	<p>Moteur à commande directe d'avancement par impulsions pour le capstan x 1, Moteur CC pour la bobine x 1 Moteur CC pour le mécanisme de système pour moteur CC x 1 Environ 95 secondes, avec une cassette C-80</p> <p>Temps d'avance rapide/Tempo de réembobinage Bornes d'entrée CD DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>LINE IN (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>Bornes de sortie LINE OUT (x 1 circuit) Niveau de sortie: 300 mV Impédance de sortie: 50 kΩ</p> <p>PHONES x 1 Niveau de sortie: 300 mV Impédance de sortie: 0-1 mΩ/8 Ω</p> <p>Autres prises Alimentation TD-V1010A 240/220/120 V CA, 50/60 Hz 120 V CA, 60 Hz 20 W 435 x 140 x 338 mm</p> <p>Alimentation TD-V1010C/J (L x H x P) 10,3 kg Câble de broches 2 Câble de télécommande 1 Pile (RS/AA) 2</p> <p>Présentation et caractéristiques modifiables sans préavis.</p>	<p>Motors</p> <p>Impuls Servo-Direkt-antreibemotor für Capstan x 1 Gehäusomotor für Spule x 1 Gehäusomotor für Mechanismus für Motor CC x 1 C. 95 Sekunden mit C-80 Kassette</p> <p>Schwellenwertzeit/Rücklaufzeit CD DIRECT (x 1 Schaltkreis) Minimale Eingangspegel: 80 mV Eingangsimpedanz: 50 kΩ</p> <p>DIRECT (x 1 Schaltkreis) Minimale Eingangspegel: 80 mV Eingangsimpedanz: 50 kΩ</p> <p>LINE IN (x 1 Schaltkreis) Minimale Eingangspegel: 80 mV Eingangsimpedanz: 50 kΩ</p> <p>Ausgänge LINE OUT (x 1 Schaltkreis) Ausgangspegel: 300 mV Ausgangsimpedanz: 50 kΩ</p> <p>PHONES x 1 Ausgangspegel: 300 mV 0-1 mΩ/8 Ω</p> <p>Weitere Anschlüsse SYNCHRO x 1/ COMPU LINK-1/ SYNCHRO x 2</p> <p>Spannungsversorgung Netz: 240/220/120 V, 50/60 Hz 20 W</p> <p>Leitungsaußnahme (B x H x T) 435 x 140 x 338 mm</p> <p>Größe 10,3 kg</p> <p>Zubehör Steckkabel 2 Fernbedienkabel 1 Batterie (RS/AA) 2</p> <p>Technische Änderungen vorbehalten!</p>	<p>Moteurs</p> <p>Moteur à commande directe d'avancement par impulsions pour le capstan x 1, Moteur CC pour la bobine x 1 Moteur CC pour le mécanisme de système pour moteur CC x 1 Environ 95 secondes, avec une cassette C-80</p> <p>Temps d'avance rapide/rebobinado Bornes d'entrée CD DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>LINE IN (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>Bornes de sortie LINE OUT (x 1 circuit) Niveau de sortie: 300 mV Impédance de sortie: 50 kΩ</p> <p>PHONES x 1 Niveau de sortie: 300 mV Impédance de sortie: 0-1 mΩ/8 Ω</p> <p>Autres prises Alimentation TD-V1010A 240/220/120 V CA, 50/60 Hz 120 V CA, 60 Hz 20 W 435 x 140 x 338 mm</p> <p>Alimentation TD-V1010C/J (L x H x P) 10,3 kg Câble de broches 2 Câble de télécommande 1 Pile (RS/AA) 2</p> <p>Présentation et caractéristiques modifiables sans préavis.</p>	<p>Motors</p> <p>Moteur à commande directe d'avancement par impulsions pour le capstan x 1, Moteur CC pour la bobine x 1 Moteur CC pour le mécanisme de système pour moteur CC x 1 Environ 95 secondes, avec une cassette C-80</p> <p>Temps d'avance rapide/Tempo de réembobinage Bornes d'entrée CD DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>LINE IN (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>Bornes de sortie LINE OUT (x 1 circuit) Niveau de sortie: 300 mV Impédance de sortie: 50 kΩ</p> <p>PHONES x 1 Niveau de sortie: 300 mV Impédance de sortie: 0-1 mΩ/8 Ω</p> <p>Autres prises Alimentation TD-V1010A 240/220/120 V CA, 50/60 Hz 120 V CA, 60 Hz 20 W 435 x 140 x 338 mm</p> <p>Alimentation TD-V1010C/J (L x H x P) 10,3 kg Câble de broches 2 Câble de télécommande 1 Pile (RS/AA) 2</p> <p>Présentation et caractéristiques modifiables sans préavis.</p>	<p>Motors</p> <p>Moteur à commande directe d'avancement par impulsions pour le capstan x 1, Moteur CC pour la bobine x 1 Moteur CC pour le mécanisme de système pour moteur CC x 1 Environ 95 secondes, avec une cassette C-80</p> <p>Temps d'avance rapide/Tempo de réembobinage Bornes d'entrée CD DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>LINE IN (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>Bornes de sortie LINE OUT (x 1 circuit) Niveau de sortie: 300 mV Impédance de sortie: 50 kΩ</p> <p>PHONES x 1 Niveau de sortie: 300 mV Impédance de sortie: 0-1 mΩ/8 Ω</p> <p>Autres prises Alimentation TD-V1010A 240/220/120 V CA, 50/60 Hz 120 V CA, 60 Hz 20 W 435 x 140 x 338 mm</p> <p>Alimentation TD-V1010C/J (L x H x P) 10,3 kg Câble de broches 2 Câble de télécommande 1 Pile (RS/AA) 2</p> <p>Présentation et caractéristiques modifiables sans préavis.</p>	<p>Motors</p> <p>Moteur à commande directe d'avancement par impulsions pour le capstan x 1, Moteur CC pour la bobine x 1 Moteur CC pour le mécanisme de système pour moteur CC x 1 Environ 95 secondes, avec une cassette C-80</p> <p>Temps d'avance rapide/Tempo de réembobinage Bornes d'entrée CD DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>DIRECT (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>LINE IN (x 1 circuit) Niveau d'entrée min.: 80 mV Impédance d'entrée: 50 kΩ</p> <p>Bornes de sortie LINE OUT (x 1 circuit) Niveau de sortie: 300 mV Impédance de sortie: 50 kΩ</p> <p>PHONES x 1 Niveau de sortie: 300 mV Impédance de sortie: 0-1 mΩ/8 Ω</p> <p>Autres prises Alimentation TD-V1010A 240/220/120 V CA, 50/60 Hz 120 V CA, 60 Hz 20 W 435 x 140 x 338 mm</p> <p>Alimentation TD-V1010C/J (L x H x P) 10,3 kg Câble de broches 2 Câble de télécommande 1 Pile (RS/AA) 2</p> <p>Présentation et caractéristiques modifiables sans préavis.</p>	

4 Location of Main Parts

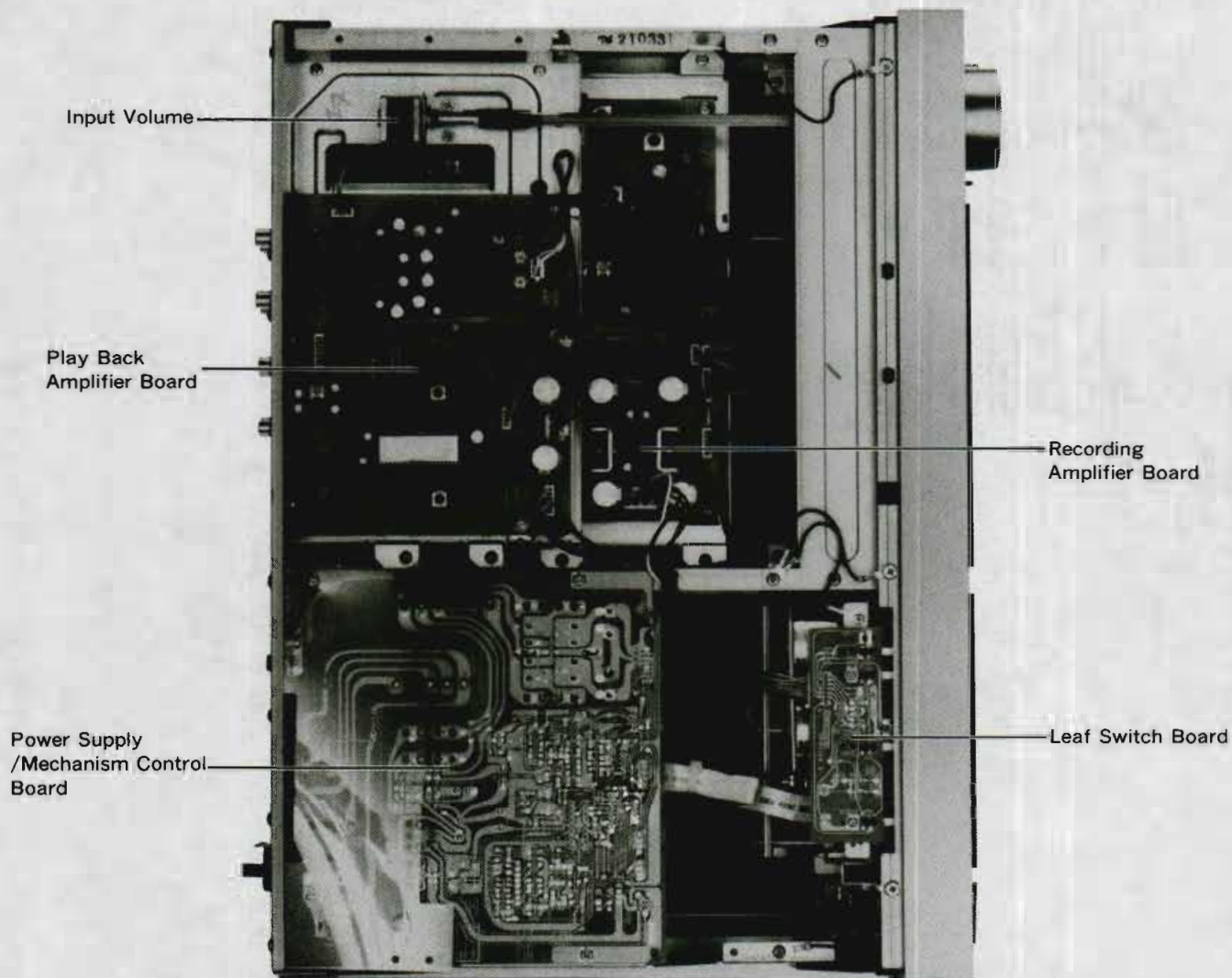


Fig. 4-1

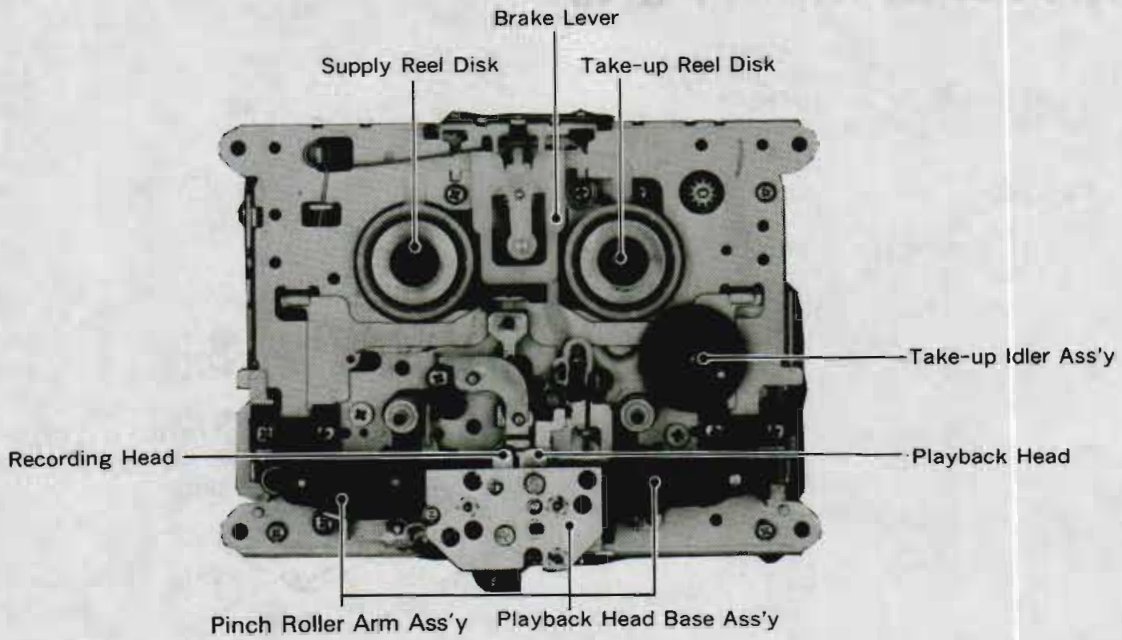


Fig. 4-2

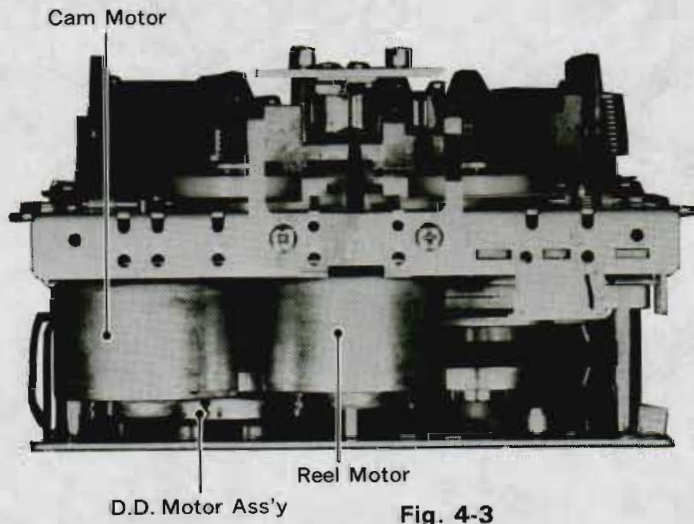


Fig. 4-3

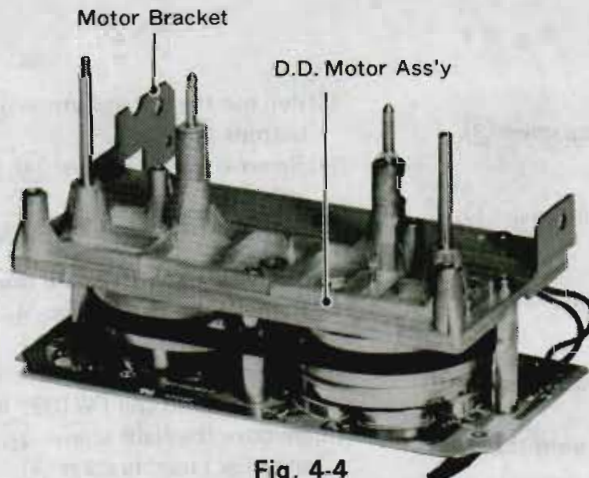


Fig. 4-4

5 Removal of Main Parts

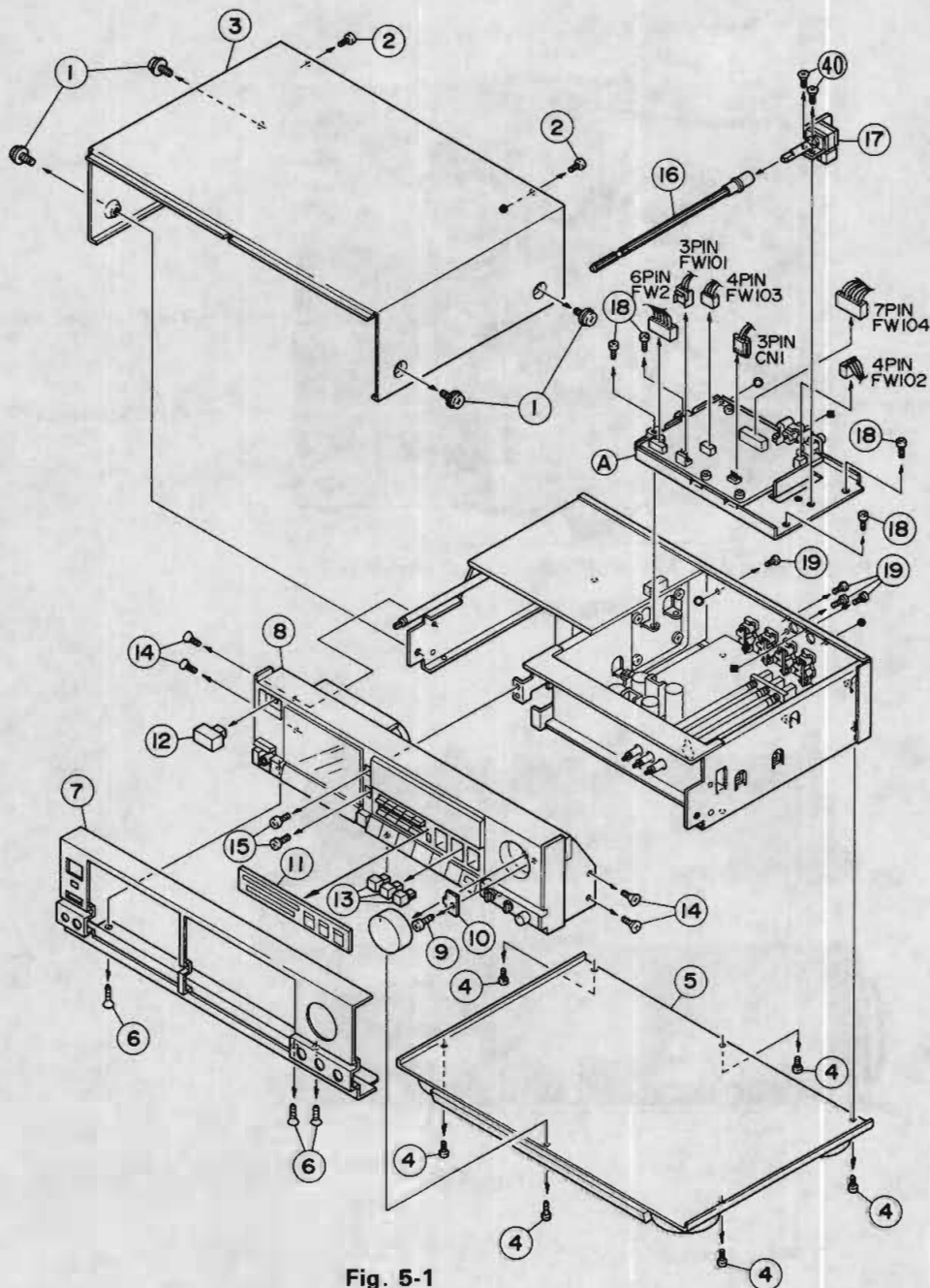


Fig. 5-1

1. Top cover

Remove the six screws ①, ② retaining the top cover ③.

2. Bottom cover

Remove the six screws ④ retaining the bottom cover ⑤.

3. Front plate

Remove the three screws ⑥ retaining the front plate ⑦.

4. Front panel ass'y ⑧ – Follow item 9.

- (1) Pull out the input volume knob and remove the screw ⑨ retaining the volume shaft stopper ⑩.
- (2) Remove the function/mode panel ⑪ from the front panel ass'y.

(3) Pull out the power button ⑫ and the three input select buttons ⑬.

(4) Remove the six screws ⑭, ⑮ retaining the front panel ass'y.

(5) Pull out the volume shaft ⑯ from the input volume ⑰.

5. Playback amplifier board bracket A

(1) Remove the two screws ⑳ retaining the input volume board ⑰.

(2) Pull out the six connectors (3-pin: CN1 and FW101; 4-pin: FW103 and FW102; 6-pin: FW2; 7-pin: FW104).

(3) Remove the eight screws ㉑, ㉒ retaining the playback amplifier board bracket A.

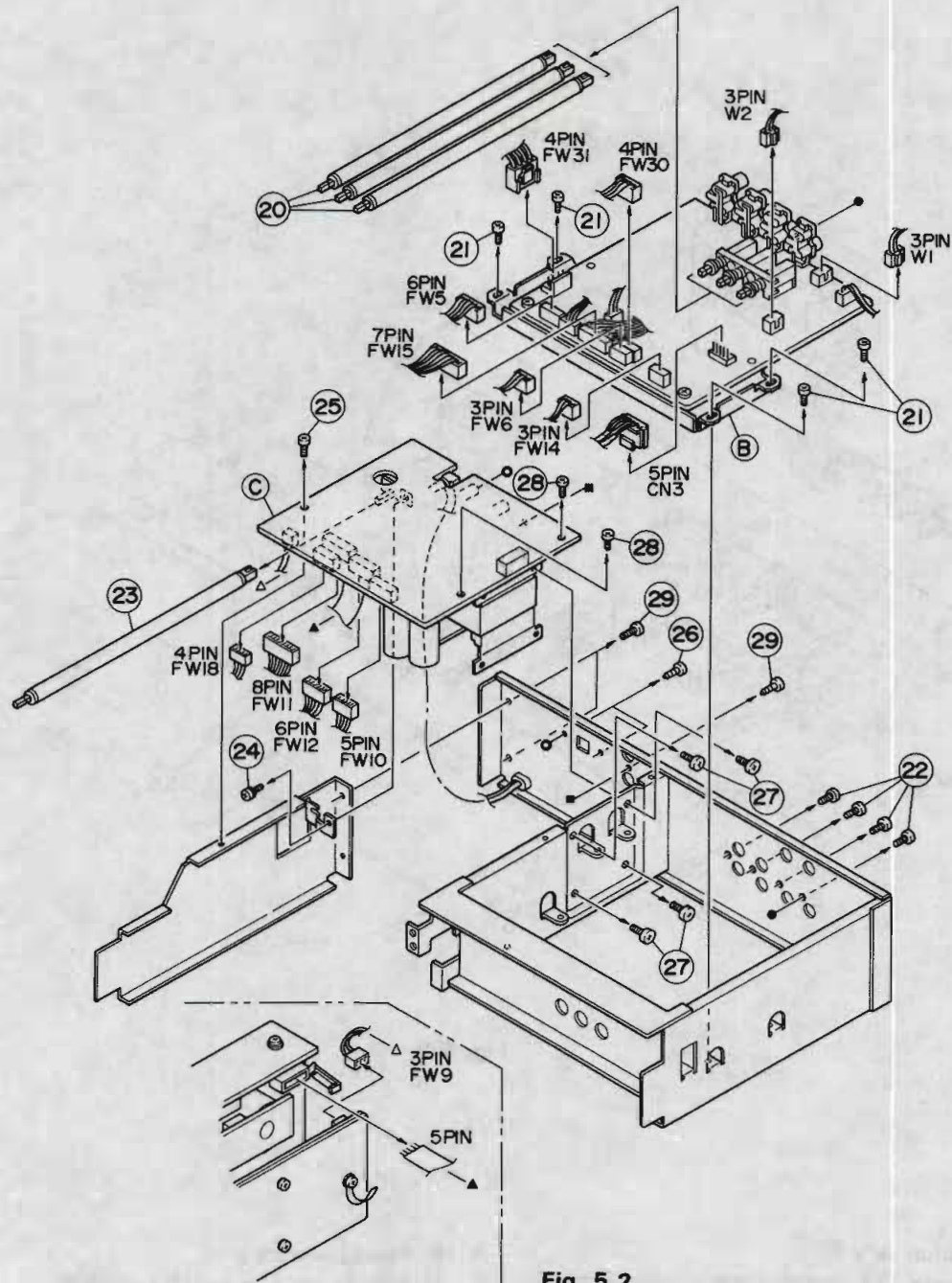


Fig. 5-2

6. Recording amplifier board bracket (B)

- (1) Pull out the three input select shafts (20).
- (2) Pull out the nine connectors (3-pin: FW6, FW14 and W1, W2; 4-pin: FW30 and FW31; 5-pin: CN3; 6-pin: FW5; 7-pin: FW15)
- (3) Remove the eight screws (21), (22) retaining the recording amplifier board bracket (B).

7. Power supply/Mechanism control board (C)

- (1) Pull out the power supply switch shaft (23).
- (2) Pull out the two connectors (5-pin and 3-pin: FW9).

- (3) Remove the screw (24) retaining the power switch.
- (4) Remove the three screws (25), (26) retaining the power supply board.
- (5) Remove the four screws (27) retaining the power transformer.
- (6) Remove the five screws (28), (29) retaining the power supply board.
- (7) Pull out the four connectors (4-pin: FW18; 5-pin: FW10; 6-pin: FW12; 8-pin: FW11).

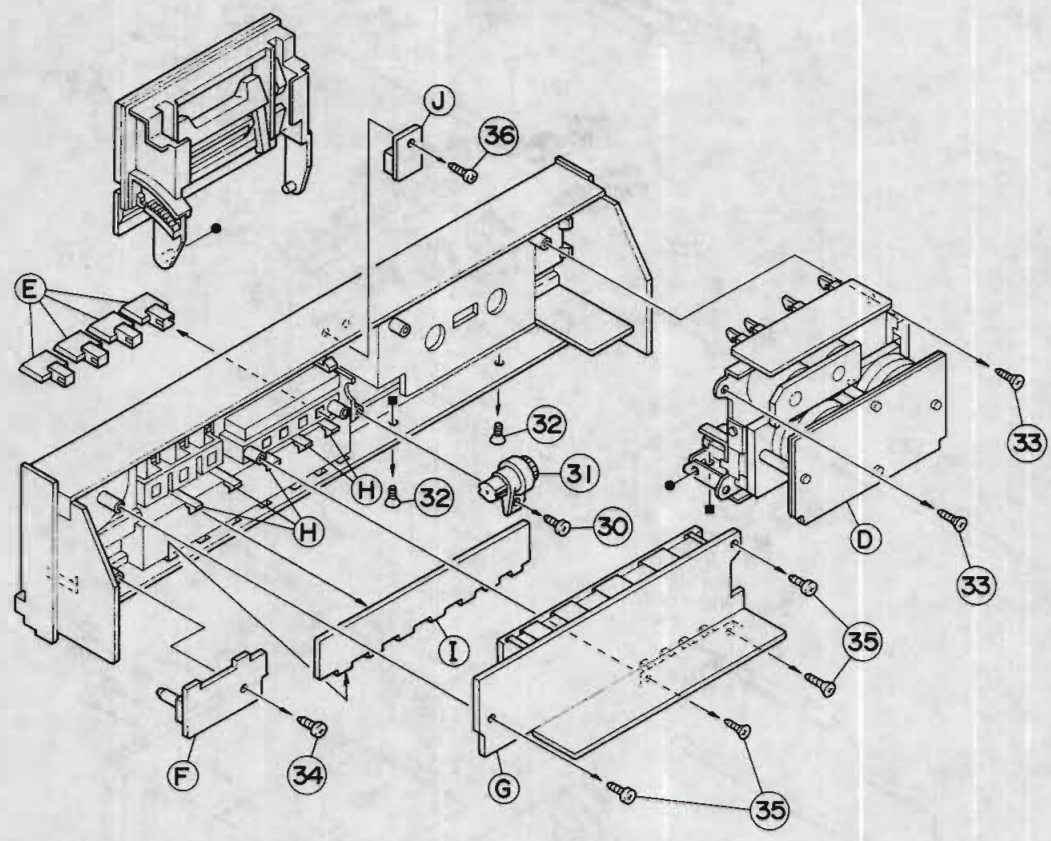


Fig. 5-3

8. Cassette mechanism ass'y (D)

- (1) Remove the screw (30) retaining the dumper (31) and take out the cassette door.
- (2) Remove the four screws (32), (33) retaining the cassette mechanism ass'y (D).

9. Front panel ass'y

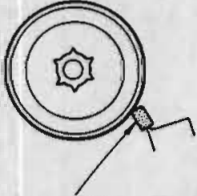
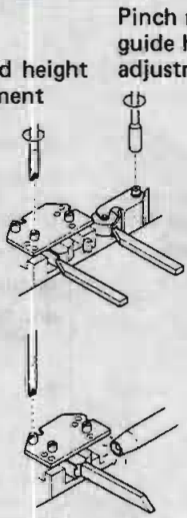
- (1) Pull out the four switch buttons (E).
- (2) Remove the screw (34) retaining the balance volume board (F).
- (3) Remove the four screws (35) retaining the display/Dolby NR board (G).
- (4) Remove the five joints (H) retaining the operation switch board (I).
- (5) Remove the screw (36) retaining the remocon board (J).

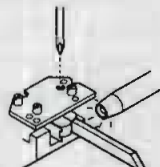
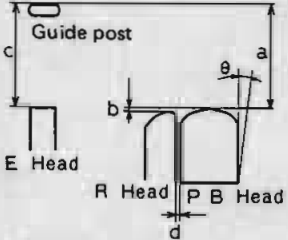
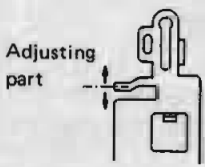
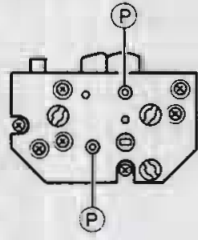
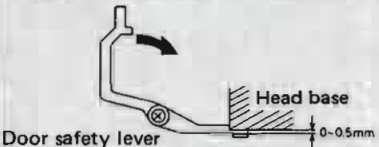
6 Main Adjustments

1. Measuring instruments required for adjustment

- | | |
|--|--|
| <ul style="list-style-type: none"> (1) Low-frequency oscillator (oscillation frequency 50 Hz ~ 20 kHz, 0 dB output with 600 Ω impedance) (2) Attenuator (600 Ω impedance) (3) Electronic voltmeter (4) Standard tapes
VTT712 (tape speed, wow & flutter measurements)
VTT724 (reference level)
TMT735, VTT739 (playback frequency)
TMT6447 (music scan)
TMT6448 (music scan)
TMT703 (10 kHz) | <ul style="list-style-type: none"> (5) Recording reference tapes
TS-9 (UD1), TS-10 (SA), TS-11 (MA) or equivalent
(Use the standard tapes specified by this department.) (6) 600 Ω resistors (for attenuator matching) (7) Distortion meter (bandpass filter) (8) Torque gauge (cassette) for CTG-N mechanism adjustments (9) Wow & flutter gauge (10) Frequency counter gauge (11) M300 gauge (12) Band pass filter |
|--|--|

■ Mechanical Adjustments (1)

Item	Adjustment and Checking Method	Standard Value	Checking Point
1 Flywheel, thrust check	Check up by the sense of touch.	0.2–0.5 mm	
2 Back tension rubber position check	Confirm that the back tension rubber contacts the supply wheel to stop its rotation in playback while the supply wheel is free from the back tension rubber in MS/Stop mode.		Supply disk  Back tension rubber
3 Pinch roller's contact timing check	The right pinch roller presses against the capstan shaft earlier than the left pinch roller.		
4 Pinch roller guide height adjustment	Use M300 gauge and adjust the screw A so that the 3.8 mm gauge can be just inserted.		
5 PB head height and tilt adjustment	<ol style="list-style-type: none"> 1) Use M300 gauge and adjust the screw B so that the 3.8 mm gauge can be just inserted into the tape guide of the PB head. 2) Adjust the screw C so that the PB head is not slanting and there is no gap between the head and the gauge. Be careful of inserting the gauge since it easily makes an opening resulting from imperfect contact. It is recommended to illuminate the gap from the opposite side and check up that no light can be seen through above and below the gauge. 3) Check up the height of the tape guide again. If the gauge contacts the head, repeat the above steps 1) and 2) for complete adjustment. 		Pinch roller guide height adjustment  PB head height adjustment PB head tilt adjustment
6 PB azimuth adjustment	Playing back the TMT702 tape (14 kHz segment), maximize the output level and adjust the phase by turning the screw D .		

	Item	Adjustment and Checking Method	Standard Value	Checking Point
7	Tape travel check	Use C-90 cassette tape with a pad to check that the tape runs around the head without curling in the beginning portion.		Use mirror tape, etc. by which tape travel can be checked.
8	REC head height, tilt, azimuth adjustment	<ol style="list-style-type: none"> 1) Record the 10 kHz signal, and, playing it back adjust the screw E for phase adjustment at the maximum output level. (Azimuth adjustment) 2) In the same manner as the step 1), adjust the phase with maximum output level by turning the screw (F). (Head height adjustment) 3) In the same manner as mentioned about the PB head, correct front-/rearward lean of the REC head with M300 gauge. (Use screw (G).) 4) Record the 10 kHz signal, and playing it back readjust the azimuth adjusting screw (E) to obtain maximum output level. At the same time adjust phases of R and L channels. 		 <p>REC head tilt adjustment</p>
9	Heads positioning	<p>With the M300 gauge, check that the PB head is positioned ahead of the REC head. Other specifications are as follows. (Every measure except θ is a space to the guide post (H). - unit: mm)</p>  <p>Adjust the head base by bending it in either direction so that "a" is 4.4-5.1 mm in MS mode.</p> <p>If "a" is out of the standard: Bend the indicated part in the direction of \uparrow arrow.</p> <p>If "a" is less than the standard: Bend the indicated part in the direction of \downarrow arrow.</p> <p>If the above adjustment is performed, make sure to confirm the item 10 of the following.</p> 	0.05-0.35 mm	 <p>Front-back adjustment of head position</p> <p>PB head must be positioned ahead of REC head by "b" (see the figure).</p> <p>To position the head front-/rearward, use the screw (P). (If P is turned, make sure to readjust the azimuth of PB and REC heads.)</p>
10	Door safety check	<p>In the condition that the door safety lever is moved in the direction of the arrow in the stop mode, regulate the space between the door safety lever and the head base as shown in the figure.</p> 		

NOTE:

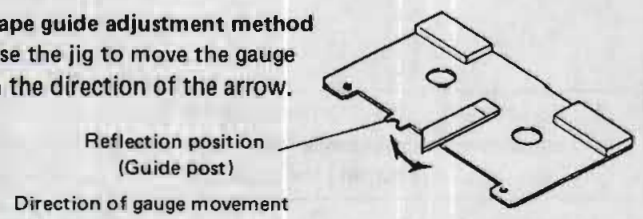
When the head was replaced, use the following check method after the height, direction and tilt (rough) of each head have been adjusted.

Tape travel adjustment

Use the M300 gauge. Be sure not to damage the head.

Tape guide adjustment method

Use the jig to move the gauge in the direction of the arrow.



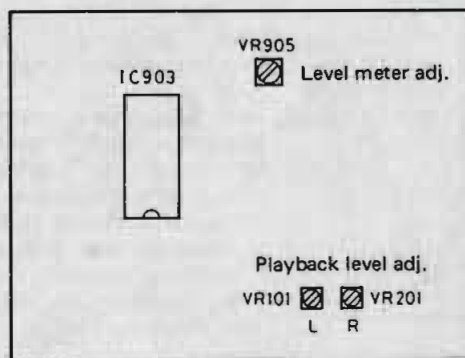
■ Mechanical Adjustments (2)

● Notice: 0 dBs = 0.775 V

Item	Adjustment and Checking Method	Adjusting Point	Standard Value	Remarks
Tape speed	1. Connect a frequency counter to the LINE OUT terminals. 2. Play back the VTT712 test tape. 3. Adjust volume in motor for normal speed at 3000 Hz.		Normal speed: 3005 b 10 Hz	
Checking wow and flutter	Connect a wow and flutter meter to the LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.038% (WRMS).		0.038% (JIS WRMS)	If the reading becomes moving value even if confirming to the standard, a reclaim may be raised. Repairs are necessary.
Checking playback torque	Employ a torque testing cassette tape for the checking, or remove the cassette cover and use a torque gauge.		35-75 gr-cm	If the standard torque is not obtained, replace the take-up disk assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		70-200 gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the idler circumference, the motor pulley, the take-up reel circumference, the flywheel circumference, etc. 2. Replace the belt and idler.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		70-200 gr-cm	If the standard torque is not obtained, clean the capstan belt, idler, motor pulley, flywheel circumference, rewinding idler circumference, left reel disk circumference, etc.

■ Location of Adjustments

Playback amplifier board



Recording amplifier board

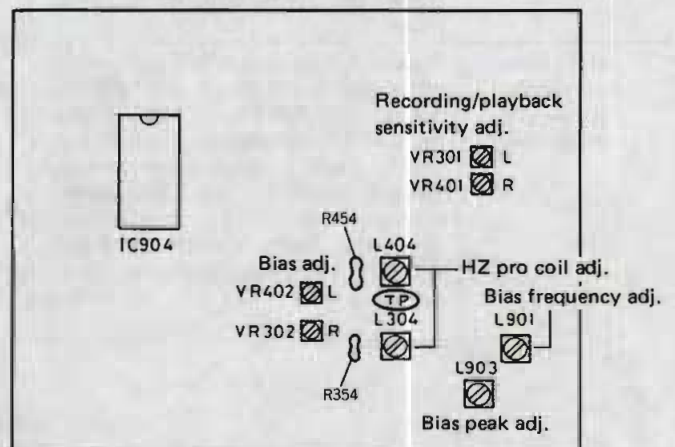


Fig. 6-1

■ Electrical Circuit Adjustment Procedures

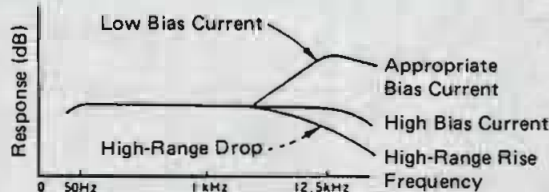
Make the following adjustments after the tape travel and head angle adjustments.

- In principle, the adjustments should be made in the order described.
- Adjustments required after head replacement are marked with an asterisk (*).

0 dB = 0.775 V

Item		Adjustment and Check Methods			
1	Dolby circuit recording check (record mode)	Record, Dolby B	INPUT: LINE IN (-8 dBs) Measurement point: IC905, pins ②1, ②2 Measurement point reference level: 400 Hz, -11 dBs (= Cal. level)	Frequency Level	Output Value and Deviation
				1 kHz Cal. -40 dB	+5.7 dB ± 2 dB
				5 kHz Cal. -20 dB	+3.5 dB ± 1.5 dB
		Record, Dolby C		1 kHz Cal.	0 dB ± 0.5 dB
				1 kHz Cal. -40 dB	+16.2 dB \pm $\frac{3}{2}$ dB
				5 kHz Cal. -20 dB	+2.9 dB ± 2.5 dB
		1 kHz Cal.	0 dB ± 1 dB		

Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
*2	Playback level adjustment 1) Play the VTT724 (1 kHz) test tape and adjust VR101 and VR201 so that the LINE OUT output is -8 dBs (the L-R channel output difference must be 0.5 dBm or less). 2) Headphone output check (headphone VR: max.): -15 dBm ± 3 dB L-R difference: 2 dB or less	VR101, VR201	-8 dBm ± 0.5 dB	The playback level changes when the head is replaced and must be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
*3	Playback equalizer adjustment Play the VTT739 (1 kHz, 10 kHz) test tape and confirm that deviation between 1 kHz and 10 kHz is less than 0~+1 dB while deviation between 1 kHz and 63 Hz is +2 ± 3 dB.		Deviation between 1 kHz & 10 kHz: 0~ +1 dB Deviation between 1 kHz & 63 Hz: +2 ± 3 dB	NR: OFF VTT739 can be used for TMT-735 tape. However, there is a little difference in their specifications as follows: TMT735 (1 kHz, 12.5 kHz) VTT739 (63 Hz, 1 kHz, 10 kHz)
*4	Bias frequency adjustment Connect the frequency counter to the lead through a 1.0 MΩ resistor, and adjust L901 so that output at the test point is 210 kHz ± 1 kHz. At the same time adjust L903 to maximize AC level.	L901 L903	130-170 mV approx. 210 kHz ± 1 kHz	Tape: METAL (Attach a probe to the measuring instrument lead terminal and plug in the connector plug.)
5	HX PRO coil adjustment In the METAL position recording mode, adjust L304 and L404 so that R354 and R454 voltages are minimum.	L304 L404	130-170 mV approx.	DC voltmeter Minimum voltage
*6	Recording/playback frequency adjustment Record 1 kHz at the Ref. -20 dB input, then record 50 Hz and 12.5 kHz and adjust VR302 and VR402 so that the difference between the 1.25 kHz and 12.5 kHz outputs is the standard value in relation to the 1 kHz output during playback. (Basically, adjust so that the 1 kHz and 12.5 kHz outputs are the standard value.)	VR302 VR402	NORMAL tape: 1 ± 0.5 dB CrO ₂ /METAL tape: 1 ± 2 dB	Ref. -20 dB value: -20 dB below the reference input value ± -28 dB Also adjust for normal tape and the left and right channels. • The bias value is set in accordance with the voltage shift for normal at chrome and metal. • When the bias current is not correctly adjusted, the recording characteristics will become as shown on the left.



	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
*7	Recording/playback sensitivity adjustment	1) Input to the LINE IN terminal so that the source monitor output is -8 dBs. 2) Adjust VR301 and VR401 so that the recording signal current is -8 dBs during recording and playback.	VR301 VR401	Normal: -8 dBs \pm 0.5 dB Chrome, Metal: -8 dBs \pm 1.5 dB	The right and left level difference must be 1 dB or less for both normal and metal. Make adjustment by using normal tape, and make sure that the level fluctuation for chrome and metal tapes is within 1.5 dB.
8	Level indicator adjustment and check	1) Apply a 1 kHz signal so that the line output level at the source monitor is -38 dB and adjust VR-905 so that -30 dB on the FL level indicator shall go out at the -40 dB level. 2) Check that the 0 dB indicator lights at the -8 dBs $^{+0}_{-1.0}$ dB signal level.	VR905	Lights at -30 dBs input Goes out at -40 dBs input	
9	Recording/playback distortion check	1) Record a 1 kHz signal so that the LINE OUT output is -8 dBs and the level indicator is $+0$ dB. 2) Use a distortion meter to check if the output is the standard value during playback.		Normal tape: 3.0% or less Chrome tape: 4% or less Metal tape: 3% or less	Check after adjusting the bias current and recording level.
10	Recording/playback S/N ratio check	1) Record 1 kHz, 0 dB input and then remove the input and record without a signal. 2) Play back this recording and measure the difference between the 0 dB recording and no-signal recording. The standard values must be satisfied.		Normal tape: more than 45 dB Chrome tape: more than 45 dB Metal tape: more than 45 dB	
11	Erase ratio check	1) Apply a 1 kHz signal from LINE IN and adjust the INPUT LEVEL knob so that the input level is -8 dBs. 2) Increase the signal level to 20 dB and record. 3) Rewind and erase the recorded section of the tape. 4) Measure the output ratio between the signal and no-signal sections of the tape with an electronic voltmeter.		More than 65 dB	Connect a B.P.F.(band pass filter) between the deck and the electronic voltmeter. <div style="text-align: center; margin-top: 10px;"> <pre> graph LR A["1 kHz 0 VU +20 dB input"] --> B["Deck record/erase"] B --> C["Band pass filter (B.P.F.)"] D["1 kHz"] --> C C --> E["Electronic voltmeter"] </pre> </div>

7 Block Diagrams

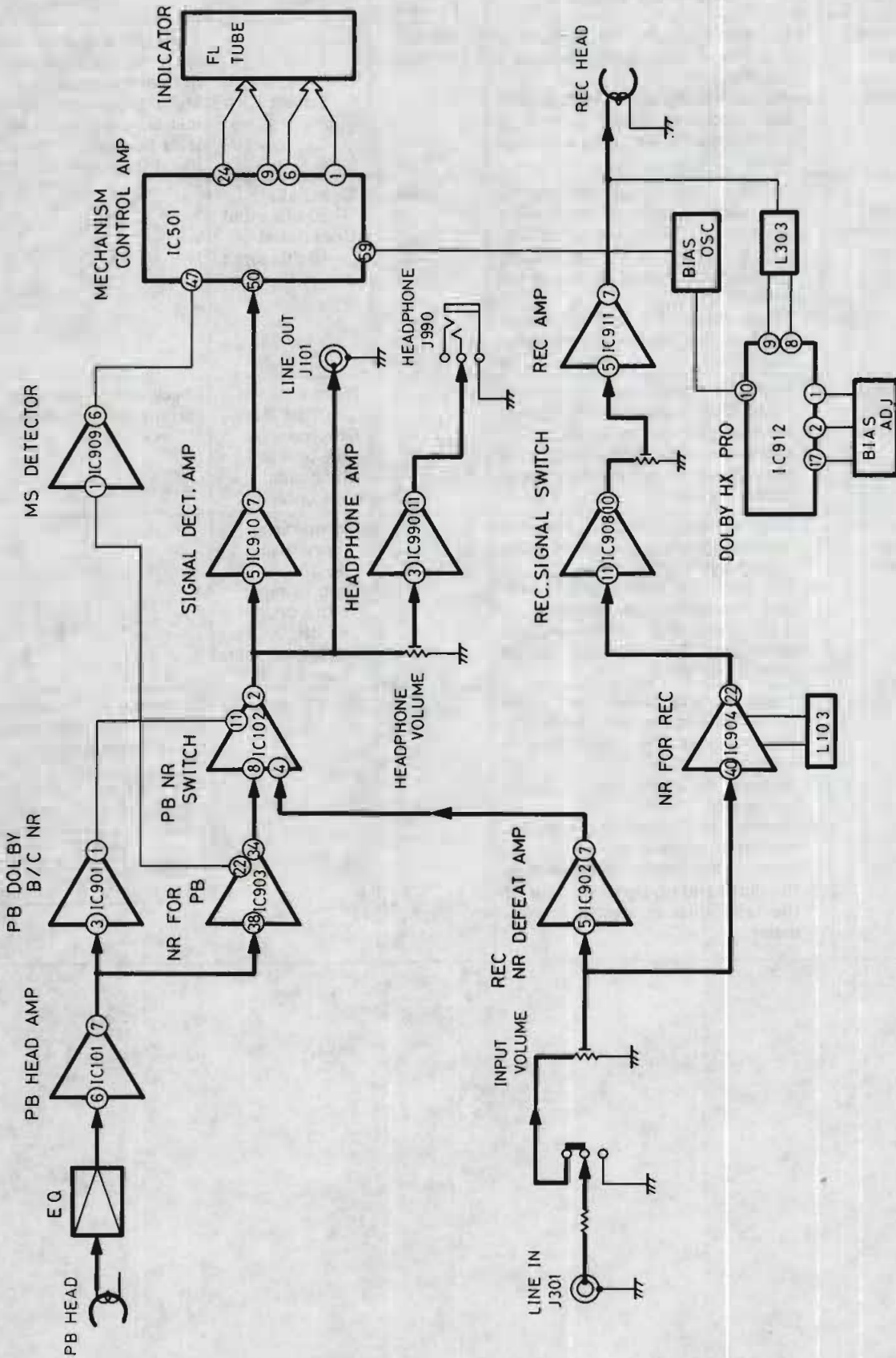
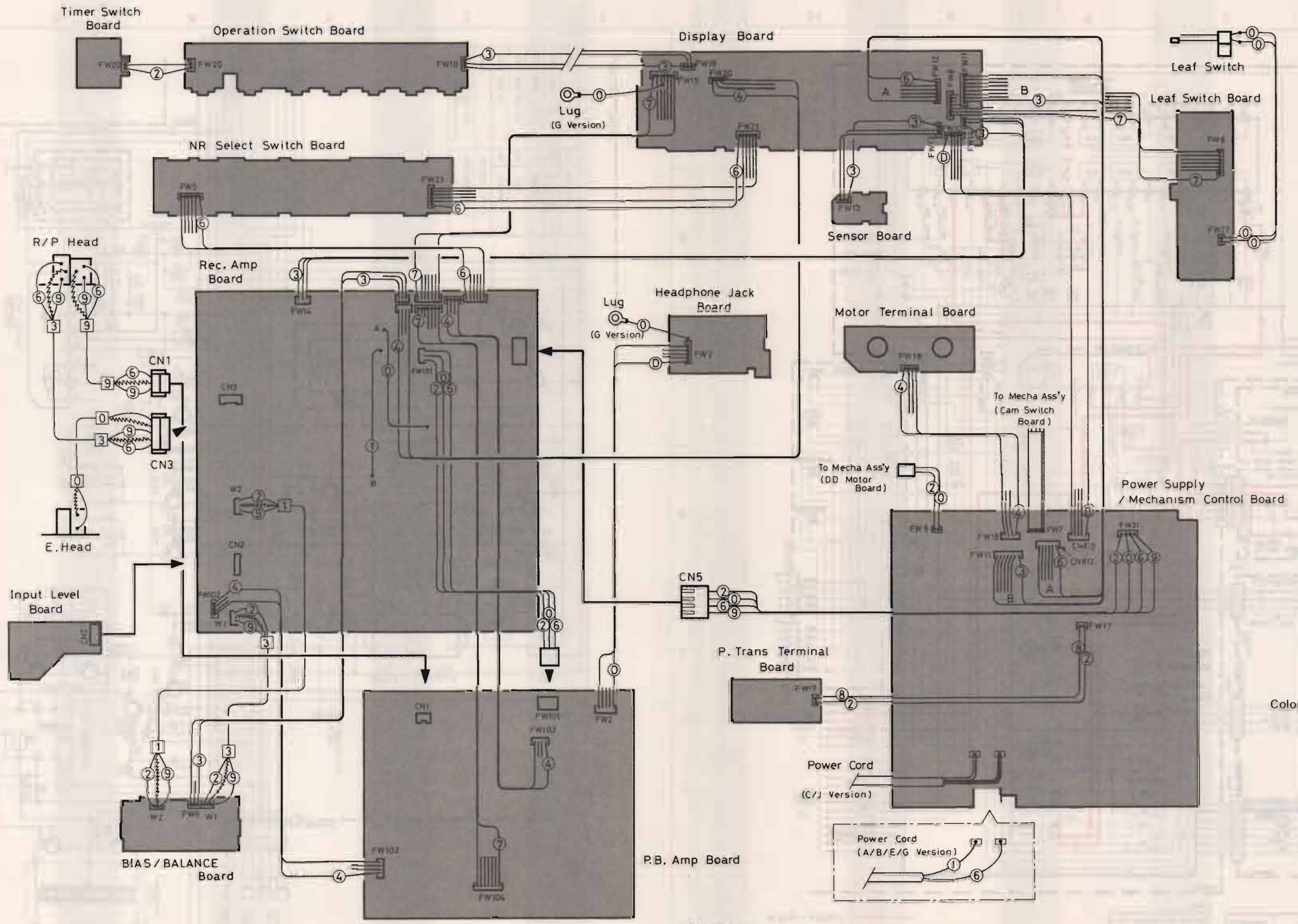


Fig. 7-1

8 Wiring Connections



- Color codes are shown below.
- 1 Brown
 - 2 Red
 - 3 Orange
 - 4 Yellow
 - 5 Green
 - 6 Blue
 - 7 Violet
 - 8 Grey
 - 9 White
 - 0 Black

Fig. 8-1

9 Standard Schematic Diagram and Location of P. C. Board

■ Playback/Recording Amplifier Circuit

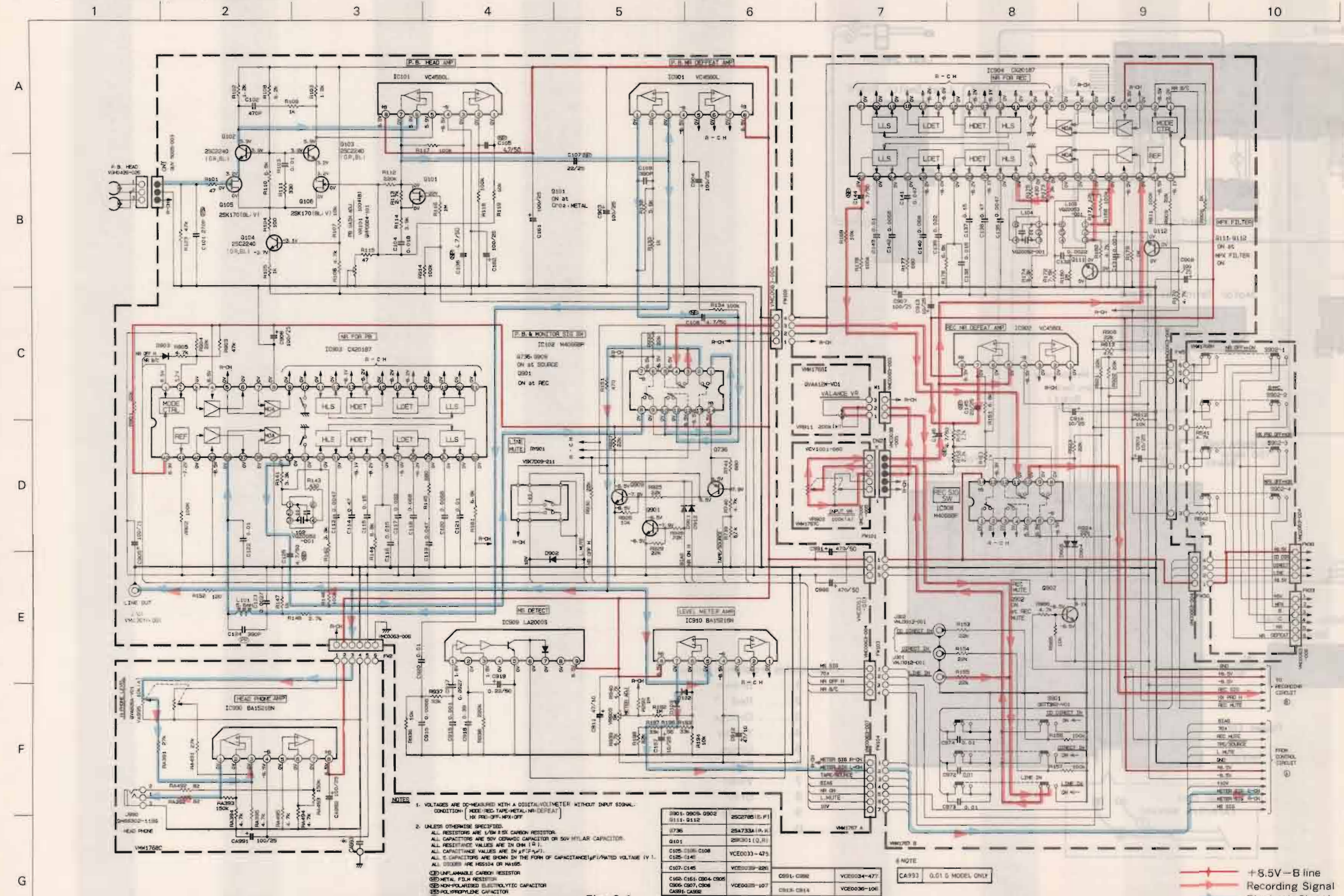


Fig. 9-1

- NOTE
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLTMETER WITHOUT INPUT SIGNAL. CONDITION: (REC) REC TAPE METAL (HI REPEAT) HI REC OFF (HI OFF)
 - UNLESS OTHERWISE SPECIFIED:
 - ALL RESISTORS ARE 1/8W 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 PICO-FARAD (pF).
 - ALL CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE/PERMITTED VOLTAGE (V).
 - ALL CIPHERS ARE KEYS OR DIP SW.
 - Ⓢ UNPOLARIZED CARBON RESISTOR
 - Ⓢ METAL FILM RESISTOR
 - Ⓢ NON-POLARIZED ELECTROLYTIC CAPACITOR
 - Ⓢ POLYSTYROL CAPACITOR

0901-0909-0902	25C2785 (E.F.F.)
0111-0112	25A733A (P.H.)
0736	25K301 (Q,R)
0101	25K170 (L,V)
C105-C108	VC0003-475
C125-C141	VC0003-475
C107-C145	VC0003-225
C160, C161, C904, C905	VC0003-107
C906, C907, C908	VC0003-106
C909, C910	VC0003-106
C911, C914	VC0003-106
C912, C913	VC0003-106
C915, C916	VC0003-106
C917, C918	VC0003-106
C919, C920	VC0003-106
C921, C922	VC0003-106
C923, C924	VC0003-106
C925, C926	VC0003-106
C927, C928	VC0003-106
C929, C930	VC0003-106
C931, C932	VC0003-106
C933, C934	VC0003-106
C935, C936	VC0003-106
C937, C938	VC0003-106
C939, C940	VC0003-106
C941, C942	VC0003-106
C943, C944	VC0003-106
C945, C946	VC0003-106
C947, C948	VC0003-106
C949, C950	VC0003-106
C951, C952	VC0003-106
C953, C954	VC0003-106
C955, C956	VC0003-106
C957, C958	VC0003-106
C959, C960	VC0003-106
C961, C962	VC0003-106
C963, C964	VC0003-106
C965, C966	VC0003-106
C967, C968	VC0003-106
C969, C970	VC0003-106
C971, C972	VC0003-106
C973, C974	VC0003-106
C975, C976	VC0003-106
C977, C978	VC0003-106
C979, C980	VC0003-106
C981, C982	VC0003-106
C983, C984	VC0003-106
C985, C986	VC0003-106
C987, C988	VC0003-106
C989, C990	VC0003-106
C991, C992	VC0003-106
C993, C994	VC0003-106
C995, C996	VC0003-106
C997, C998	VC0003-106
C999, C1000	VC0003-106

NOTE
CA933 0.01 Ω MODEL ONLY

+5.5V-B line
Recording Signal
Playback Signal

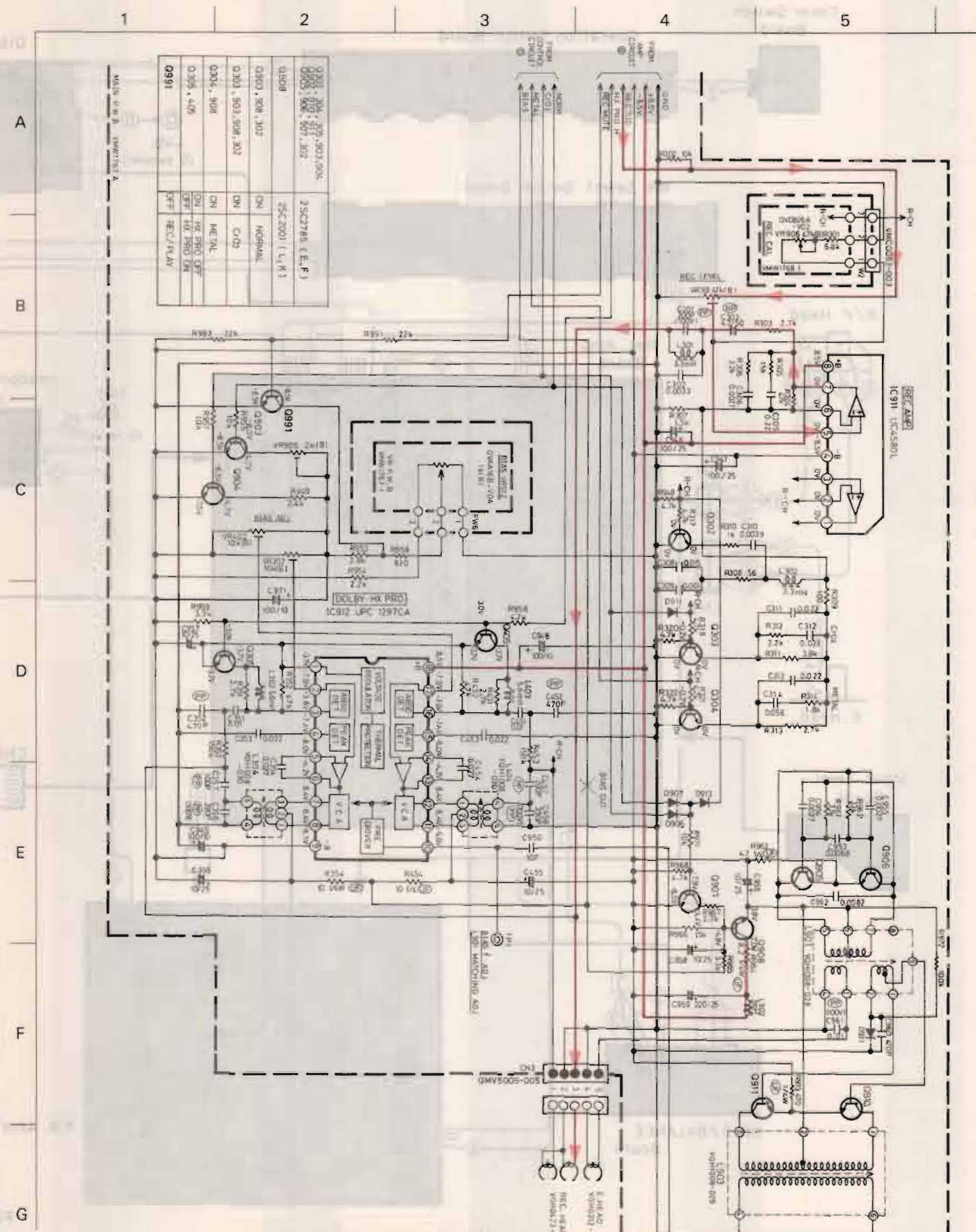
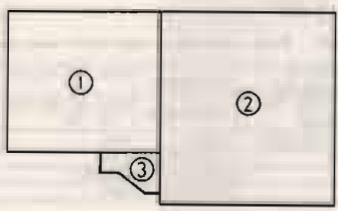
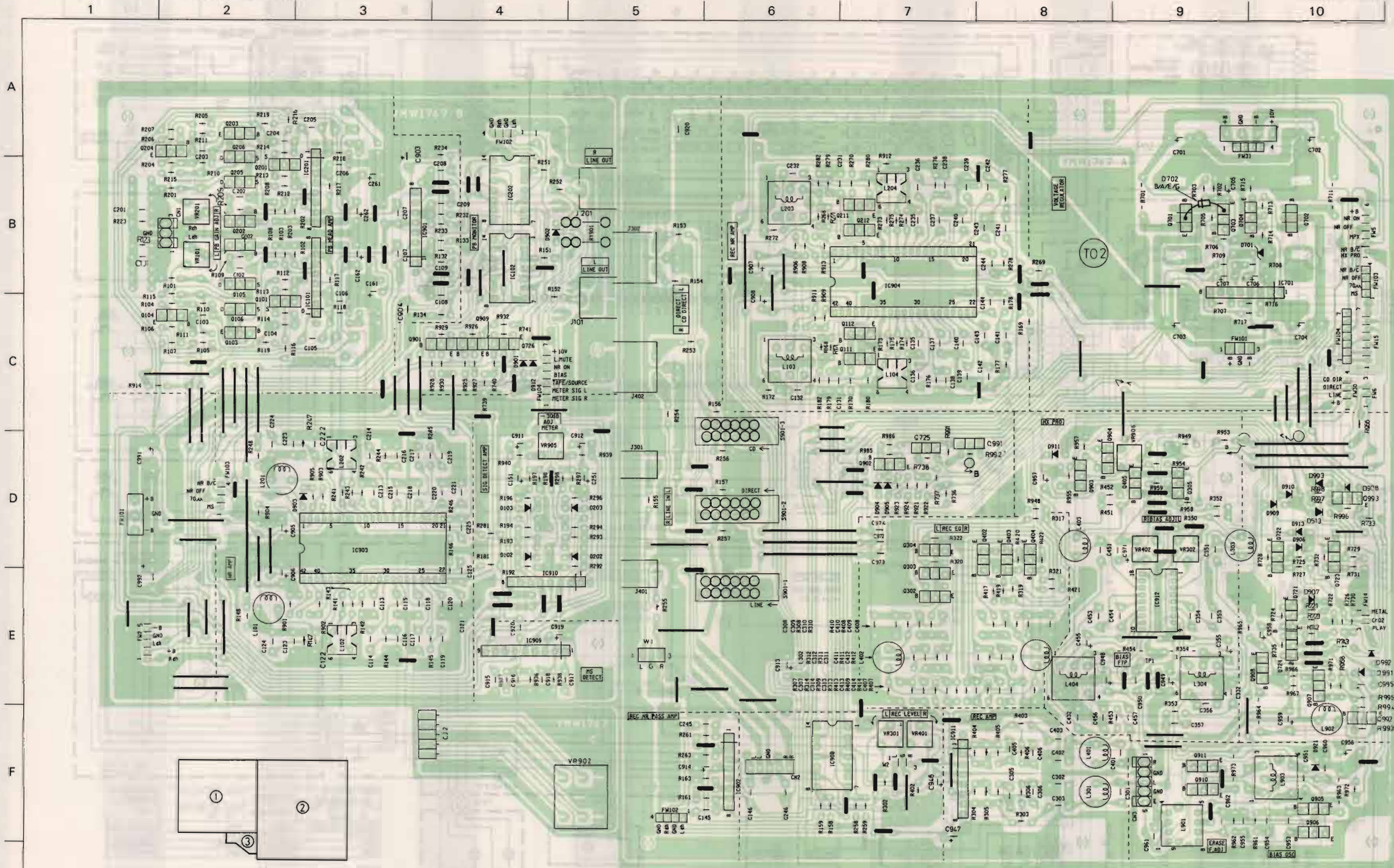


Fig. 9-2

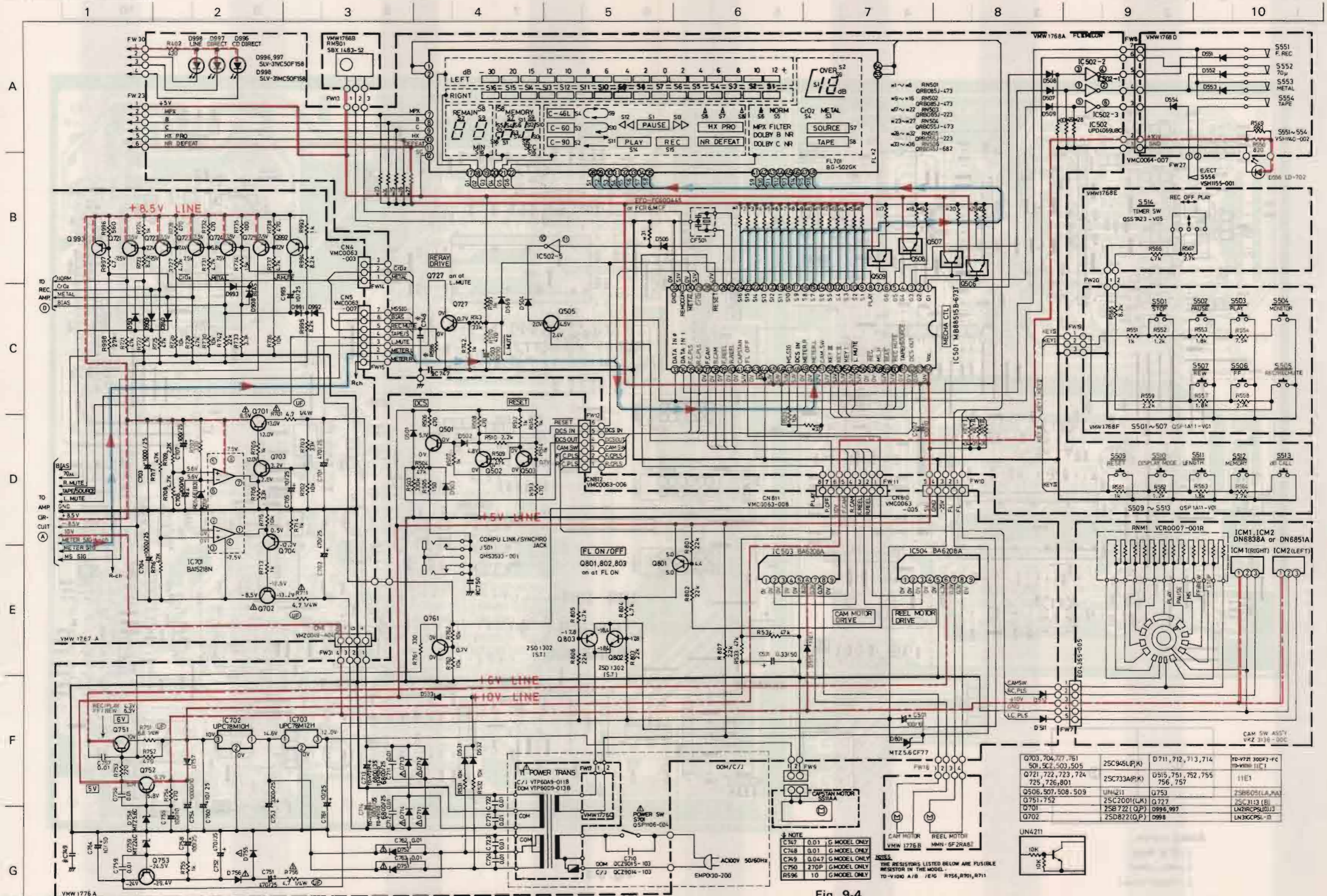
■ Playback/Recording Amplifier Board



Board name
 1. P. B. Amp
 2. Rec. Amp
 3. Input level

Fig. 9-3

The Other Circuit



Q703, 704, 777, 761	2SC945(L/P,K)	D711, 712, 713, 714	TD-V721 300P2-FC
501, 502, 503, 505			TD-V1010 IIC1
Q721, 722, 723, 724	2SC733A(P,K)	D515, 751, 752, 755	11E1
725, 726, 801		756, 757	
Q506, 507, 508, 509	UN4211	Q753	Z5B60S(LA,PA)
Q751, 752	2SC2001(L,K)	Q727	Z5C313(B)
Q701	Z5B722(L,Q,P)	D996, 997	LN21RCPS(J,J)
Q702	Z5D822(G,P)	D998	LN3KCP(SL-B)

NOTE
 C747 0.01 G MODEL ONLY
 C748 0.01 G MODEL ONLY
 C749 0.047 G MODEL ONLY
 C750 270P G MODEL ONLY
 R596 10 G MODEL ONLY

THE RESISTORS LISTED BELOW ARE FUSIBLE RESISTOR IN THE MODEL.
 TD-V1010 A/B /E/G /R56, R701, R711

■ The Other Boards

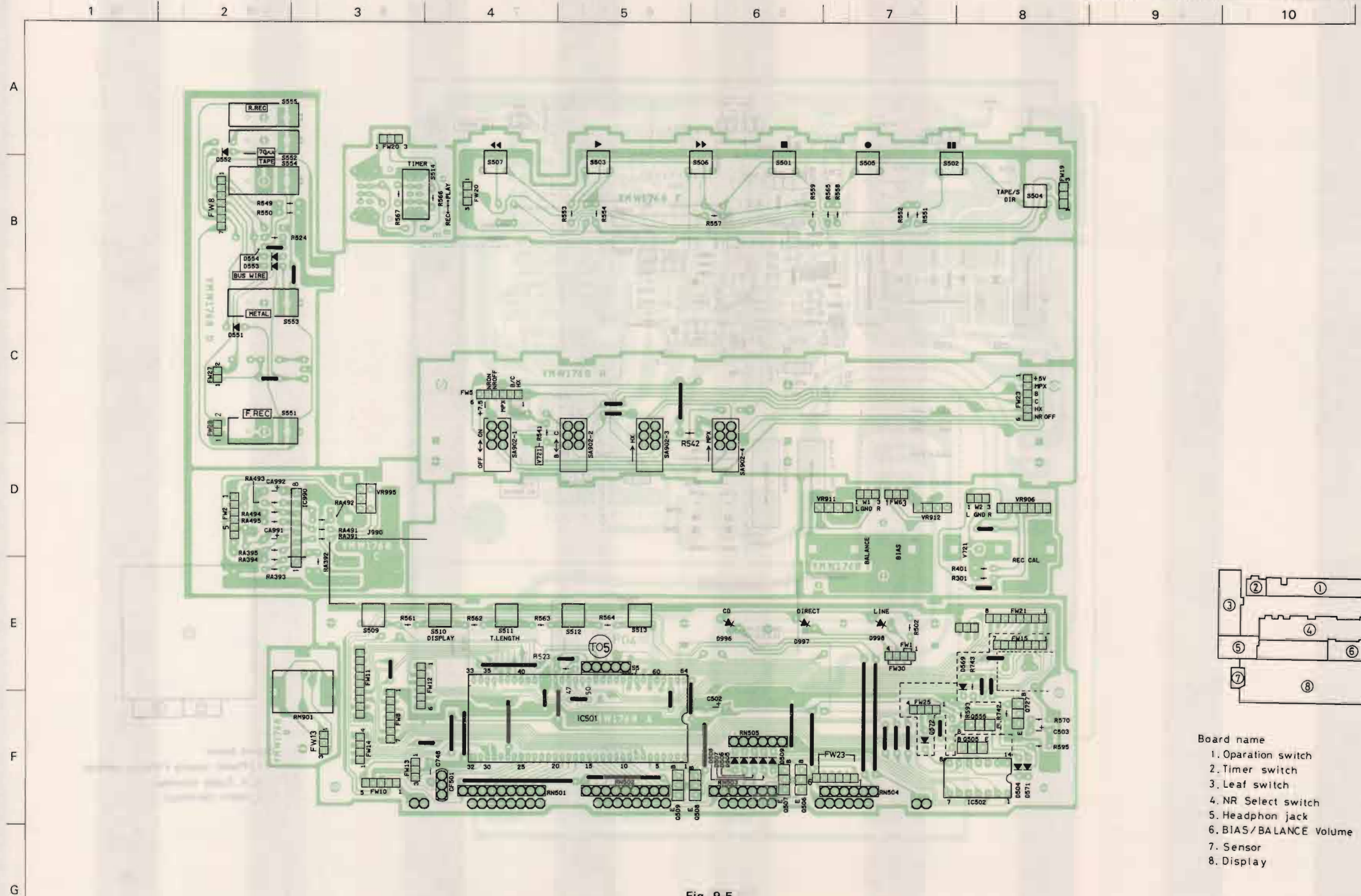


Fig. 9-5

- Board name
1. Operation switch
 2. Timer switch
 3. Leaf switch
 4. NR Select switch
 5. Headphon jack
 6. BIAS/BALANCE Volume
 7. Sensor
 8. Display

10 P. C. Board Parts List

Δ	REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
	C101	QFS41HJ-271	PS.CAPACITOR	270PF 5% 50V
	C102	QFP31HJ-471ZM	PP.CAPACITOR	470PF 5% 50V
	C103	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C104	QFV71HJ-183ZM	TF.CAPACITOR	.018MF 5% 50V
	C105	VCE0033-475	E CAP(TAPING)	
	C106	VCE0033-475	E CAP(TAPING)	
	C107	VCE0039-226	E.CAP(TAPING)	
	C108	VCE0033-475	E CAP(TAPING)	
	C109	QFP31HJ-391Z	P.P.CAPA.	390PF 5% 50V
	C113	QFN31HJ-472Z	M.CAPACITOR	4700PF 5% 50V
	C114	QFV71HJ-474ZM	3F.CAPACITOR	.47MF 5% 50V
	C115	QFV71HJ-154ZM	TF.CAPACITOR	.15MF 5% 50V
	C116	QFV71HJ-153ZM	TF.CAPACITOR	.015MF 5% 50V
	C117	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
	C118	QFV71HJ-683ZM	TF.CAPACITOR	.068MF 5% 50V
	C119	QFV71HJ-473ZM	TF.CAPACITOR	.047MF 5% 50V
	C120	QFN31HJ-682Z	M.CAPACITOR	6800PF 5% 50V
	C121	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C122	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C123	QFN31HJ-272Z	M.CAPACITOR	2700PF 5% 50V
	C124	QFP31HJ-391Z	P.P.CAPA.	390PF 5% 50V
	C125	VCE0033-475	E CAP(TAPING)	
	C131	QFN31HJ-102Z	M.CAPACITOR	1000PF 5% 50V
	C132	QFN31HJ-222Z	M CAPACITOR	2200PF 5% 50V
	C135	QFN31HJ-472Z	M.CAPACITOR	4700PF 5% 50V
	C136	QFV71HJ-474ZM	3F.CAPACITOR	.47MF 5% 50V
	C137	QFV71HJ-154ZM	TF.CAPACITOR	.15MF 5% 50V
	C138	QFV71HJ-153ZM	TF.CAPACITOR	.015MF 5% 50V
	C139	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
	C140	QFV71HJ-683ZM	TF.CAPACITOR	.068MF 5% 50V
	C141	QFV71HJ-473ZM	TF.CAPACITOR	.047MF 5% 50V
	C142	QFN31HJ-682Z	M.CAPACITOR	6800PF 5% 50V
	C143	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C144	VCE0033-475	E CAP(TAPING)	
	C145	VCE0039-226	E.CAP(TAPING)	
	C146	VCE0033-475	E CAP(TAPING)	
	C151	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
	C161	VCE0025-107	E CAP(TAPING)	
	C162	VCE0025-107	E CAP(TAPING)	
	C201	QFS41HJ-271	PS.CAPACITOR	270PF 5% 50V
	C202	QFP31HJ-471ZM	PP.CAPACITOR	470PF 5% 50V
	C203	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C204	QFV71HJ-183ZM	TF.CAPACITOR	.018MF 5% 50V
	C205	VCE0033-475	E CAP(TAPING)	
	C206	VCE0033-475	E CAP(TAPING)	
	C207	VCE0039-226	E.CAP(TAPING)	
	C208	VCE0033-475	E CAP(TAPING)	
	C209	QFP31HJ-391Z	P.P.CAPA.	390PF 5% 50V
	C213	QFN31HJ-472Z	M.CAPACITOR	4700PF 5% 50V
	C214	QFV71HJ-474ZM	3F.CAPACITOR	.47MF 5% 50V
	C215	QFV71HJ-154ZM	TF.CAPACITOR	.15MF 5% 50V
	C216	QFV71HJ-153ZM	TF.CAPACITOR	.015MF 5% 50V
	C217	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
	C218	QFV71HJ-683ZM	TF.CAPACITOR	.068MF 5% 50V
	C219	QFV71HJ-473ZM	TF.CAPACITOR	.047MF 5% 50V
	C220	QFN31HJ-682Z	M.CAPACITOR	6800PF 5% 50V
	C221	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C222	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C223	QFN31HJ-272Z	M.CAPACITOR	2700PF 5% 50V
	C224	QFP31HJ-391Z	P.P.CAPA.	390PF 5% 50V
	C225	VCE0033-475	E CAP(TAPING)	
	C231	QFN31HJ-102Z	M.CAPACITOR	1000PF 5% 50V
	C232	QFN31HJ-222Z	M CAPACITOR	2200PF 5% 50V
	C235	QFN31HJ-472Z	M.CAPACITOR	4700PF 5% 50V
	C236	QFV71HJ-474ZM	3F.CAPACITOR	.47MF 5% 50V
	C237	QFV71HJ-154ZM	TF.CAPACITOR	.15MF 5% 50V
	C238	QFV71HJ-153ZM	TF.CAPACITOR	.015MF 5% 50V
	C239	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
	C240	QFV71HJ-683ZM	TF.CAPACITOR	.068MF 5% 50V
	C241	QFV71HJ-473ZM	TF.CAPACITOR	.047MF 5% 50V
	C242	QFN31HJ-682Z	M.CAPACITOR	6800PF 5% 50V
	C243	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
	C244	VCE0033-475	E CAP(TAPING)	
	C245	VCE0039-226	E.CAP(TAPING)	
	C246	VCE0033-475	E CAP(TAPING)	

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
C251	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C261	VCE0025-107	E CAP(TAPING)	
C262	VCE0025-107	E CAP(TAPING)	
C301	QFP32AJ-151ZM	PP CAPACITOR	150PF 5% 100V
C302	QFN31HJ-332Z	M.CAPACITOR	3300PF 5% 50V
C303	VCE0033-475	E CAP(TAPING)	
C305	QFV71HJ-224ZM	TF CAPACITOR	.22MF 5% 50V
C306	QFN31HJ-272Z	M.CAPACITOR	2700PF 5% 50V
C308	QFV71HJ-153ZM	TF.CAPACITOR	.015MF 5% 50V
C309	QFN31HJ-102Z	M.CAPACITOR	1000PF 5% 50V
C310	QFN31HJ-392Z	M CAPACITOR	3900PF 5% 50V
C311	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
C312	QFV71HJ-333ZM	TF.CAPACITOR	.033MF 5% 50V
C313	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
C314	QFV71HJ-563ZM	TF.CAPACITOR	.056MF 5% 50V
C351	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
C352	QFP31HJ-471ZM	PP.CAPACITOR	470PF 5% 50V
C353	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
C354	QFV71HJ-273ZM	TF.CAPACITOR	.027MF 5% 50V
C355	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C356	QFP32AJ-391ZM	PP CAPACITOR	390PF 5% 100V
C357	QFP31HJ-101ZM	PP CAPACITOR	100PF 5% 50V
C401	QFP32AJ-151ZM	PP CAPACITOR	150PF 5% 100V
C402	QFN31HJ-332Z	M.CAPACITOR	3300PF 5% 50V
C403	VCE0033-475	E CAP(TAPING)	
C405	QFV71HJ-224ZM	TF CAPACITOR	.22MF 5% 50V
C406	QFN31HJ-272Z	M.CAPACITOR	2700PF 5% 50V
C408	QFV71HJ-153ZM	TF.CAPACITOR	.015MF 5% 50V
C409	QFN31HJ-102Z	M.CAPACITOR	1000PF 5% 50V
C410	QFN31HJ-392Z	M CAPACITOR	3900PF 5% 50V
C411	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
C412	QFV71HJ-333ZM	TF.CAPACITOR	.033MF 5% 50V
C413	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
C414	QFV71HJ-563ZM	TF.CAPACITOR	.056MF 5% 50V
C451	QFV41HJ-103	TF CAPACITOR	.010MF 5% 50V
C452	QFP31HJ-471ZM	PP.CAPACITOR	470PF 5% 50V
C453	QFV71HJ-223ZM	TF.CAPACITOR	.022MF 5% 50V
C454	QFV71HJ-273ZM	TF.CAPACITOR	.027MF 5% 50V
C455	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C456	QFP32AJ-391ZM	PP CAPACITOR	390PF 5% 100V
C457	QFP31HJ-101ZM	PP CAPACITOR	100PF 5% 50V
C701	QETB1HM-227N	E CAPACITOR	220MF 20% 50V
C702	QETB1HM-227N	E CAPACITOR	220MF 20% 50V
C703	QETB1HR-477N	E CAPACITOR	470MF +30:-10% 50V
C704	QETB1HR-477N	E CAPACITOR	470MF +30:-10% 50V
C705	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C706	QETC1AM-107ZM	E.CAPACITOR	100MF 20% 10V
C707	QETC1AM-107ZM	E.CAPACITOR	100MF 20% 10V
C903	VCE0025-107	E CAP(TAPING)	
C904	VCE0025-107	E CAP(TAPING)	
C905	VCE0025-107	E CAP(TAPING)	
C906	VCE0025-107	E CAP(TAPING)	
C907	VCE0025-107	E CAP(TAPING)	
C908	VCE0025-107	E CAP(TAPING)	
C909	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C911	QETC1AM-476ZM	E.CAPACITOR	47MF 20% 10V
C912	QETC1AM-476ZM	E.CAPACITOR	47MF 20% 10V
C913	VCE0036-106	E CAP(TAPING)	
C914	VCE0036-106	E CAP(TAPING)	
C915	QFN31HJ-102Z	M.CAPACITOR	1000PF 5% 50V
C916	QFN31HJ-682Z	M.CAPACITOR	6800PF 5% 50V
C917	QFN31HJ-272Z	M.CAPACITOR	2700PF 5% 50V
C918	QFV71HJ-394ZM	TF.CAPACITOR	.39MF 5% 50V
C919	QETB1HM-224N	E.CAPACITOR	.22MF 20% 50V
C920	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
C946	VCE0025-107	E CAP(TAPING)	
C947	VCE0025-107	E CAP(TAPING)	
C948	QETC1AM-107ZM	E.CAPACITOR	100MF 20% 10V
C949	QETC1AM-107ZM	E.CAPACITOR	100MF 20% 10V
C950	QCS31HJ-100Z	C.CAPACITOR	10PF 5% 50V
C951	QFPB2AJ-152	P.P.CAPACITOR	1500PF 5% 100V
C953	QFN31HJ-682Z	M.CAPACITOR	6800PF 5% 50V
C954	QFN31HJ-272Z	M.CAPACITOR	2700PF 5% 50V
C955	QFN31HJ-272Z	M.CAPACITOR	2700PF 5% 50V
C956	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
C957	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C958	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C959	QETB1EM-227N	E.CAPACITOR	220MF 20% 25V
C960	QFP31HJ-471ZM	PP.CAPACITOR	470PF 5% 50V
C961	QFP82AJ-103	P.P.CAPACITOR	.010MF 5% 100V
C962	QFN31HJ-822Z	M.CAPACITOR	8200PF 5% 50V
C971	QETC1AM-107ZM	E.CAPACITOR	100MF 20% 10V
C972	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C973	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C974	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C991	QETB1HR-477N	E CAPACITOR	470MF +30:-10% 50V
C992	QETB1HR-477N	E CAPACITOR	470MF +30:-10% 50V
C995	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
D102	HSS104TJ	SI DIODE	
D103	HSS104TJ	SI DIODE	
D202	HSS104TJ	SI DIODE	
D203	HSS104TJ	SI DIODE	
D513	HSS104TJ	SI DIODE	
D701	RD5.6E(B3)	ZENER DIODE	
D702	MA165	SI DIODE	
D901	HSS104TJ	SI DIODE	
D902	HSS104TJ	SI DIODE	
D903	HSS104TJ	SI DIODE	
D904	HSS104TJ	SI DIODE	
D905	HSS104TJ	SI DIODE	
D906	HSS104TJ	SI DIODE	
D907	HSS104TJ	SI DIODE	
D908	HSS104TJ	SI DIODE	
D909	HSS104TJ	SI DIODE	
D910	HSS104TJ	SI DIODE	
D911	HSS104TJ	SI DIODE	
D912	HSS104TJ	SI DIODE	
D913	HSS104TJ	SI DIODE	
D921	HSS104TJ	SI DIODE	
D991	HSS104TJ	SI DIODE	
D992	HSS104TJ	SI DIODE	
D993	HSS104TJ	SI DIODE	
IC101	VC4580L	IC	
IC102	M4066BP	IC	
IC201	VC4580L	IC	
IC202	M4066BP	IC	
IC701	BA15218N	IC	
IC901	VC4580L	IC	
IC902	VC4580L	IC	
IC903	CX20187	DOLBY IC	
IC904	CX20187	DOLBY IC	
IC908	M4066BP	IC	
IC909	LA2000S	I C	
IC910	BA15218N	IC	
IC911	VC4580L	IC	
IC912	UPC1297CA	I C	
J101	VMJ3011-001	PIN JACK	
J201	VMJ3011-001	PIN JACK	
J301	VMJ3012-001	PIN JACK	
J302	VMJ3013-001	PIN JACK	
J401	VMJ3012-001	PIN JACK	
J402	VMJ3013-001	PIN JACK	
L101	VQP0001-562S	INDUCTOR	
L102	VQZ0052-001	FILTER	
L103	VQZ0053-001	FILTER	
L104	VQZ0052-001	FILTER	
L201	VQP0001-562S	INDUCTOR	
L202	VQZ0052-001	FILTER	
L203	VQZ0053-001	FILTER	
L204	VQZ0052-001	FILTER	
L301	VQP0001-332S	INDUCTOR	
L302	VQP0001-332S	INDUCTOR	
L303	VQP0013-562	INDUCTOR	
L304	VQH1008-030	OSC COIL(BIAS)	
L401	VQP0001-332S	INDUCTOR	
L402	VQP0001-332S	INDUCTOR	
L403	VQP0013-562	INDUCTOR	
L404	VQH1008-030	OSC COIL(BIAS)	
L901	VQH1008-028	OSC COIL(BIAS)	
L902	VQP0001-102S	INDUCTOR	

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
L903	VQH1008-029	OSC COIL(BIAS)	
Q101	2SK301(Q,R)TA	FET I.M	
Q102	2SC2240(GR,BL)T	TRANSISTOR	
Q103	2SC2240(GR,BL)T	TRANSISTOR	
Q104	2SC2240(GR,BL)T	TRANSISTOR	
Q105	2SK170V(BL,V)	FET	
Q106	2SK170V(BL,V)	FET	
Q111	2SC2785(E,F)-T	TRANSISTOR	
Q112	2SC2785(E,F)-T	TRANSISTOR	
Q201	2SK301(Q,R)TA	FET I.M	
Q202	2SC2240(GR,BL)T	TRANSISTOR	
Q203	2SC2240(GR,BL)T	TRANSISTOR	
Q204	2SC2240(GR,BL)T	TRANSISTOR	
Q205	2SK170V(BL,V)	FET	
Q206	2SK170V(BL,V)	FET	
Q211	2SC2785(E,F)-T	TRANSISTOR	
Q212	2SC2785(E,F)-T	TRANSISTOR	
Q302	2SC2785(E,F)-T	TRANSISTOR	
Q303	2SC2785(E,F)-T	TRANSISTOR	
Q304	2SC2785(E,F)-T	TRANSISTOR	
Q305	2SC2785(E,F)-T	TRANSISTOR	
Q402	2SC2785(E,F)-T	TRANSISTOR	
Q403	2SC2785(E,F)-T	TRANSISTOR	
Q404	2SC2785(E,F)-T	TRANSISTOR	
Q405	2SC2785(E,F)-T	TRANSISTOR	
Q701	2SB772(Q,P)	TRANSISTOR	
Q702	2SD882(Q,P)	T.R (ツマクヒツ)	
Q703	2SC2785(E,F)-T	TRANSISTOR	
Q704	2SA733A(P,K)-T	TRANSISTOR	
Q721	2SA733A(P,K)-T	TRANSISTOR	
Q722	2SA733A(P,K)-T	TRANSISTOR	
Q723	2SA733A(P,K)-T	TRANSISTOR	
Q724	2SA952(L,K)-T	TRANSISTOR	
Q725	2SA733A(P,K)-T	TRANSISTOR	
Q726	2SA733A(P,K)-T	TRANSISTOR	
Q901	2SC2785(E,F)-T	TRANSISTOR	
Q902	2SC2785(E,F)-T	TRANSISTOR	
Q903	2SC2785(E,F)-T	TRANSISTOR	
Q904	2SC2785(E,F)-T	TRANSISTOR	
Q905	2SC2785(E,F)-T	TRANSISTOR	
Q906	2SC2785(E,F)-T	TRANSISTOR	
Q907	2SC2785(E,F)-T	TRANSISTOR	
Q908	2SC2001(L,K)-T	TRANSISTOR	
Q909	2SC2785(E,F)-T	TRANSISTOR	
Q910	2SC2785(E,F)-T	TRANSISTOR	
Q911	2SC2785(E,F)-T	TRANSISTOR	
Q912	2SC2785(E,F)-T	TRANSISTOR	
Q992	2SA733A(P,K)-T	TRANSISTOR	
Q993	2SA733A(P,K)-T	TRANSISTOR	
RY901	VSK7D09-211	RELAY	
R101	QRD161J-470Y	CARBON RESISTOR	47 5% 1/6W
R102	QRD161J-122Y	CARBON RESISTOR	1.2K 5% 1/6W
R103	QRD161J-122Y	CARBON RESISTOR	1.2K 5% 1/6W
R104	QRD161J-101Y	CARBON RESISTOR	100 5% 1/6W
R105	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R106	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R107	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R108	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R109	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R110	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
R111	QRD161J-331Y	CARBON RESISTOR	330 5% 1/6W
R112	QRD161J-224Y	CARBON RESISTOR	220K 5% 1/6W
R113	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R114	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
R115	QRD161J-470Y	CARBON RESISTOR	47 5% 1/6W
R116	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
R117	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R118	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R119	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R123	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R132	QRD161J-562Y	CARBON RESISTOR	5.6K 5% 1/6W
R133	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R134	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R141	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
R142	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W

△	REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
	R143	QRD161J-431Y	C RESISTOR	430 5% 1/6W
	R144	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
	R145	QRD161J-681Y	CARBON RESISTOR	680 5% 1/6W
	R146	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R147	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
	R148	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
	R151	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
	R152	QRD161J-121Y	CARBON RESISTOR	120 5% 1/6W
	R153	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
	R154	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
	R155	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
	R156	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R157	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R158	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
	R159	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
	R161	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
	R163	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
	R168	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R169	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
	R170	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
	R171	QRD161J-123Y	CARBON RESISTOR	12K 5% 1/6W
	R172	QRD161J-752Y	CARBON RESISTOR	7.5K 5% 1/6W
	R173	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
	R174	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
	R175	QRD161J-431Y	C RESISTOR	430 5% 1/6W
	R176	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
	R177	QRD161J-681Y	CARBON RESISTOR	680 5% 1/6W
	R178	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R179	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
	R180	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
	R181	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
	R182	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
	R192	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
	R193	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
	R194	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
	R196	QRD161J-560Y	CARBON RESISTOR	56 5% 1/6W
	R197	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
	R198	QRD161J-823Y	CARBON RESISTOR	82K 5% 1/6W
	R201	QRD161J-470Y	CARBON RESISTOR	47 5% 1/6W
	R202	QRD161J-122Y	CARBON RESISTOR	1.2K 5% 1/6W
	R203	QRD161J-122Y	CARBON RESISTOR	1.2K 5% 1/6W
	R204	QRD161J-101Y	CARBON RESISTOR	100 5% 1/6W
	R205	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
	R206	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
	R207	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
	R208	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
	R209	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
	R210	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
	R211	QRD161J-331Y	CARBON RESISTOR	330 5% 1/6W
	R212	QRD161J-224Y	CARBON RESISTOR	220K 5% 1/6W
	R213	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
	R214	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
	R215	QRD161J-470Y	CARBON RESISTOR	47 5% 1/6W
	R216	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
	R217	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R218	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R219	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
	R223	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
	R232	QRD161J-562Y	CARBON RESISTOR	5.6K 5% 1/6W
	R233	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
	R234	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R241	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
	R242	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
	R243	QRD161J-431Y	C RESISTOR	430 5% 1/6W
	R244	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
	R245	QRD161J-681Y	CARBON RESISTOR	680 5% 1/6W
	R246	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
	R247	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
	R248	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
	R251	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
	R252	QRD161J-121Y	CARBON RESISTOR	120 5% 1/6W
	R253	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
	R254	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
	R255	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
	R256	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
R257	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R258	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R259	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R261	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
R263	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R268	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R269	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R270	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R271	QRD161J-123Y	CARBON RESISTOR	12K 5% 1/6W
R272	QRD161J-752Y	CARBON RESISTOR	7.5K 5% 1/6W
R273	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
R274	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
R275	QRD161J-431Y	C RESISTOR	430 5% 1/6W
R276	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
R277	QRD161J-681Y	CARBON RESISTOR	680 5% 1/6W
R278	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R279	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
R280	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
R281	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
R282	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R292	QRD161J-105Y	CARBON RESISTOR	1.0M 5% 1/6W
R293	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
R294	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R296	QRD161J-560Y	CARBON RESISTOR	56 5% 1/6W
R297	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
R298	QRD161J-823Y	CARBON RESISTOR	82K 5% 1/6W
R302	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R303	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R304	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R305	QRD161J-153Y	CARBON RESISTOR	15K 5% 1/6W
R306	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R307	QRD161J-152Y	CARBON RESISTOR	1.5K 5% 1/6W
R308	QRD161J-560Y	CARBON RESISTOR	56 5% 1/6W
R309	QRD161J-101Y	CARBON RESISTOR	100 5% 1/6W
R310	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R311	QRD161J-392Y	CARBON RESISTOR	3.9K 5% 1/6W
R312	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R313	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R314	QRD161J-182Y	CARBON RESISTOR	1.8K 5% 1/6W
R317	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R319	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R320	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R321	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R322	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R351	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R352	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R353	QRD161J-154Y	CARBON RESISTOR	150K 5% 1/6W
R354	QRD149J-100S	CARBON RESISTOR	10 5% 1/4W
R402	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R403	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R404	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R405	QRD161J-153Y	CARBON RESISTOR	15K 5% 1/6W
R406	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R407	QRD161J-152Y	CARBON RESISTOR	1.5K 5% 1/6W
R408	QRD161J-560Y	CARBON RESISTOR	56 5% 1/6W
R409	QRD161J-101Y	CARBON RESISTOR	100 5% 1/6W
R410	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R411	QRD161J-392Y	CARBON RESISTOR	3.9K 5% 1/6W
R412	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R413	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R414	QRD161J-182Y	CARBON RESISTOR	1.8K 5% 1/6W
R417	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R419	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R420	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R421	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R422	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R451	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R452	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R453	QRD161J-154Y	CARBON RESISTOR	150K 5% 1/6W
R454	QRD149J-100S	CARBON RESISTOR	10 5% 1/4W
R701	QRZ0052-4R7	F. RESISTOR	4.7 1/0W
R702	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R703	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
R705	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R706	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
R707	QRD161J-331Y	CARBON RESISTOR	330 5% 1/6W
R708	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R709	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R711	QRZ0052-4R7	F.RESISTOR	4.7 1/0W
R713	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R714	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R715	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R716	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R717	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R721	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R722	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R723	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R724	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R725	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R726	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R727	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R728	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R729	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R730	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R731	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R732	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R733	QRD161J-182Y	CARBON RESISTOR	1.8K 5% 1/6W
R734	QRD161J-821Y	CARBON RESISTOR	820 5% 1/6W
R735	QRD161J-101Y	CARBON RESISTOR	100 5% 1/6W
R736	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R737	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R738	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R739	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R740	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R741	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R744	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R901	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R902	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R903	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R904	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R905	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R906	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R908	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R909	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R911	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R912	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R913	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R914	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R921	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R922	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R923	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R924	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R925	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R926	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R927	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R928	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R929	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R930	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R932	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R936	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R937	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
R938	QRD161J-224Y	CARBON RESISTOR	220K 5% 1/6W
R939	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R940	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R948	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R949	QRD161J-242Y	C RESISTOR	2.4K 5% 1/6W
R953	QRD161J-392Y	CARBON RESISTOR	3.9K 5% 1/6W
R954	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R955	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R956	QRD161J-821Y	CARBON RESISTOR	820 5% 1/6W
R957	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R958	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R959	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
R961	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
R962	QRD161J-333Y	CARBON RESISTOR	33K 5% 1/6W
R963	QRD149J-4R7S	CARBON RESISTOR	4.7 5% 1/4W
R964	QRD149J-8R2S	CARBON RESISTOR	8.2 5% 1/4W
R965	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
R966	QRD161J-153Y	CARBON RESISTOR	15K 5% 1/6W
R967	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
R968	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R971	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R972	QRD161J-104Y	CARBON RESISTOR	100K 5% 1/6W
R973	QRD149J-471S	CARBON RESISTOR	470 5% 1/4W
R985	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R986	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R991	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R992	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R993	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R994	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R995	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R996	QRD161J-561Y	CARBON RESISTOR	560 5% 1/6W
R997	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R998	QRD161J-273Y	CARBON RESISTOR	27K 5% 1/6W
S901	QSTT362-V01	PUSH SW	
TP1	VMZ0064-001	TEST POINT	
VR101	QVPC604-101	V.RESISTOR	
VR201	QVPC604-101	V.RESISTOR	
VR301	QVPA601-473	V.RESISTOR	
VR302	QVPA601-103	V.RESISTOR	
VR401	QVPA601-473	V.RESISTOR	
VR402	QVPA601-103	V.RESISTOR	
VR902	VCV1001-060	V.RESISTOR	
VR903	QVPA601-202	V.RESISTOR	
VR905	QVPA601-502	V.RESISTOR	

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
CA991	VCE0025-107	E CAP(TAPING)	
CA992	VCE0025-107	E CAP(TAPING)	
CA993	QCF31HP-103Z	C.CAPACITOR	.010MF +100:-0% 50V
CF501	FCR6.0MCF	CERA LOCK	
C502	QEK61CM-107ZN	E.CAPACITOR	100MF 20% 16V
C503	QEK61CM-106ZM	E CAPACITOR	10MF 20% 16V
D504	HSS104TJ	SI DIODE	
D506	HSS104TJ	SI DIODE	
D507	HSS104TJ	SI DIODE	
D508	HSS104TJ	SI DIODE	
D509	HSS104TJ	SI DIODE	
D551	HSS104TJ	SI DIODE	
D552	HSS104TJ	SI DIODE	
D553	HSS104TJ	SI DIODE	
D554	HSS104TJ	SI DIODE	
D569	HSS104TJ	SI DIODE	
D996	SLV-31VC50F158	L.E.D	
D997	SLV-31VC50F158	L.E.D	
D998	SLV-31MC50F158	LED (J,K)	
FL701	BG-502GK	FL TUBE	
IC501	MB885158-673T	IC	
IC502	UPD4069UBC	I C	
IC990	VC4580L	IC	
J990	QMS6302-119G	JACK	
Q505	2SC945L(P,K)-T	TRANSISTOR	
Q506	UN4211TA	TRANSISTOR	
Q507	UN4211TA	TRANSISTOR	
Q508	UN4211TA	TRANSISTOR	
Q509	UN4211TA	TRANSISTOR	
Q727	2SC3113(B)E4	TRANSISTOR	
RA391	QRD161J-273Y	CARBON RESISTOR	27K 5% 1/6W
RA392	QRD161J-820Y	CARBON RESISTOR	82 5% 1/6W
RA393	QRD161J-154Y	CARBON RESISTOR	150K 5% 1/6W
RA394	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
RA395	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
RA491	QRD161J-273Y	CARBON RESISTOR	27K 5% 1/6W
RA492	QRD161J-820Y	CARBON RESISTOR	82 5% 1/6W
RA493	QRD161J-154Y	CARBON RESISTOR	150K 5% 1/6W
RA494	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
RA495	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
RM901	SBX1483-52	RM RECIVER	
RN501	QRB085J-473	NETWORK RESIST	47K 5% 1/8W
RN502	QRB085J-473	NETWORK RESIST	47K 5% 1/8W
RN503	QRB065J-223	NETWORK RESIST	22K 5% 1/6W
RN504	QRB055J-473	NETWORK RESIST	47K 5% 1/5W
RN505	QRB055J-223	NETWORK RESIST	22K 5% 1/5W
RN506	QRB045J-682	NETWORKRESISTOR	6.8K 5% 1/4W
R301	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
R401	QRD161J-682Y	CARBON RESISTOR	6.8K 5% 1/6W
R502	QRD161J-431Y	C RESISTOR	430 5% 1/6W

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
R523	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R541	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R542	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R549	QRD161J-681Y	CARBON RESISTOR	680 5% 1/6W
R550	QRD161J-821Y	CARBON RESISTOR	820 5% 1/6W
R551	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R552	QRD161J-122Y	CARBON RESISTOR	1.2K 5% 1/6W
R553	QRD161J-182Y	CARBON RESISTOR	1.8K 5% 1/6W
R554	QRD161J-752Y	CARBON RESISTOR	7.5K 5% 1/6W
R557	QRD161J-182Y	CARBON RESISTOR	1.8K 5% 1/6W
R558	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R559	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R561	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R562	QRD161J-122Y	CARBON RESISTOR	1.2K 5% 1/6W
R563	QRD161J-182Y	CARBON RESISTOR	1.8K 5% 1/6W
R564	QRD161J-272Y	CARBON RESISTOR	2.7K 5% 1/6W
R565	QRD161J-822Y	CARBON RESISTOR	8.2K 5% 1/6W
R566	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R567	QRD161J-273Y	CARBON RESISTOR	27K 5% 1/6W
R570	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R595	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R596	QRD161J-100Y	CARBON RESISTOR	10 5% 1/6W
R742	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R743	QRD161J-332Y	CARBON RESISTOR	3.3K 5% 1/6W
SA902	QSTT461-V02	PUSH SW	
S501	QSP1A11-V01	TACT SWITCH	
S502	QSP1A11-V01	TACT SWITCH	
S503	QSP1A11-V01	TACT SWITCH	
S504	QSP1A11-V01	TACT SWITCH	
S505	QSP1A11-V01	TACT SWITCH	
S506	QSP1A11-V01	TACT SWITCH	
S507	QSP1A11-V01	TACT SWITCH	
S509	QSP1A11-V01	TACT SWITCH	
S510	QSP1A11-V01	TACT SWITCH	
S511	QSP1A11-V01	TACT SWITCH	
S512	QSP1A11-V01	TACT SWITCH	
S513	QSP1A11-V01	TACT SWITCH	
S514	QSS7A23-V05	SLIDE SWITCH	
VR906	QVDB26A-V02	V.RESISTOR	
VR911	QVAA12W-V01	V RESISTER	
VR912	QVAA16B-V04	V RESISTER	
VR995	QVAB26A-V01	V.RESISTOR	

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
C501	QETC1AM-1072M	E.CAPACITOR	100MF 20% 10V
C531	QETC1HM-2242N	E.CAPACITOR	.22MF 20% 50V
C710	QFZ9010-103	M.CAPACITOR	.010MF
C711	QCF31HP-103Z	C.CAPACITOR	.010MF +100:-0% 50V
C712	QCF31HP-103Z	C.CAPACITOR	.010MF +100:-0% 50V
C713	QETB1EM-688N	E CAPACITOR	6800MF 20% 25V
C714	QETB1EM-688N	E CAPACITOR	6800MF 20% 25V
C721	QCF31HP-103Z	C.CAPACITOR	.010MF +100:-0% 50V
C722	QCF31HP-103Z	C.CAPACITOR	.010MF +100:-0% 50V
C723	QCF31HP-103Z	C.CAPACITOR	.010MF +100:-0% 50V
C724	QCF31HP-103Z	C.CAPACITOR	.010MF +100:-0% 50V
C747	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C748	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C749	QCF31HP-473Z	C.CAPACITOR	.047MF +100:-0% 50V
C750	QCS31HJ-271Z	C.CAPACITOR	270PF 5% 50V
C751	QETB1EM-477N	E.CAPACITOR	470MF 20% 25V
C752	QETB1VM-477N	E.CAPACITOR	470MF 20% 35V
C753	QETB1EM-338N	E.CAPACITOR	3300MF 20% 25V
C754	QETB1AM-109N	E.CAPACITOR	10000MF 20% 10V
C755	QETC1AM-1072M	E.CAPACITOR	100MF 20% 10V
C756	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C757	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C758	QETC1EM-1072M	E CAPACITOR	100MF 20% 25V
C759	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V
C760	QETC1EM-1062M	E.CAPACITOR	10MF 20% 25V

REF. NO	PARTS NO.	PARTS NAME	DESCRIPTION
C761	QETC1EM-106ZM	E.CAPACITOR	10MF 20% 25V
C762	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
C763	QFV71HJ-103ZM	TF.CAPACITOR	.010MF 5% 50V
C764	QETC1HM-106ZM	E.CAPACITOR	10MF 20% 50V
D501	HSS104TJ	SI DIODE	
D502	HSS104TJ	SI DIODE	
D503	HSS104TJ	SI DIODE	
D511	HSS104TJ	SI DIODE	
D512	HSS104TJ	SI DIODE	
D515	11E1-TB2	SI.DIODE	
D531	HSS104TJ	SI DIODE	
D532	HSS104TJ	SI DIODE	
D533	HSS104TJ	SI DIODE	
D711	11E1-TB2	SI.DIODE	
D712	11E1-TB2	SI.DIODE	
D713	11E1-TB2	SI.DIODE	
D714	11E1-TB2	SI.DIODE	
D751	11E1-TB2	SI.DIODE	
D752	11E1-TB2	SI.DIODE	
D755	11E1-TB2	SI.DIODE	
D756	11E1-TB2	SI.DIODE	
D757	11E1-TB2	SI.DIODE	
D758	MTZ5.6CT-77	Z.DIODE	
D759	MTZ24CT-77	ZENER DIODE	
D801	MTZ5.6CT-77	Z.DIODE	
IC503	BA6208A	I C	
IC504	BA6208A	I C	
IC702	UPC78M10H	I C	
IC703	UPC78M12H	I.C.	
J501	QMS3533-001	JACK	
Q501	2SC945L(P,K)-T	TRANSISTOR	
Q502	2SC945L(P,K)-T	TRANSISTOR	
Q503	2SC945L(P,K)-T	TRANSISTOR	
Q751	2SC2001(L,K)-T	TRANSISTOR	
Q752	2SC2001(L,K)-T	TRANSISTOR	
Q753	2SB605(LA,KA)	TRANSISTOR	
Q761	2SC945L(P,K)-T	TRANSISTOR	
Q801	2SA733A(P,K)-T	TRANSISTOR	
Q802	2SD1302(S,T)TA	TR.I/M	
Q803	2SD1302(S,T)TA	TR.I/M	
R503	QRD161J-334Y	CARBON RESISTOR	330K 5% 1/6W
R504	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R505	QRD161J-151Y	CARBON RESISTOR	150 5% 1/6W
R506	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R507	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R508	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R509	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R510	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W
R512	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R513	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R514	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R515	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R531	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R532	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R533	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R534	QRD161J-473Y	CARBON RESISTOR	47K 5% 1/6W
R751	QRD149J-6R8S	CARBON RESISTOR	6.8 5% 1/4W
R752	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R753	QRD161J-221Y	CARBON RESISTOR	220 5% 1/6W
R754	QRD161J-471Y	CARBON RESISTOR	470 5% 1/6W
R755	QRD161J-102Y	CARBON RESISTOR	1.0K 5% 1/6W
R756	QRZ0052-4R7	F.RESISTOR	4.7 1/0W
R761	QRD161J-331Y	CARBON RESISTOR	330 5% 1/6W
R762	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R763	QRD161J-103Y	CARBON RESISTOR	10K 5% 1/6W
R801	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R802	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R803	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R804	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R805	QRD161J-472Y	CARBON RESISTOR	4.7K 5% 1/6W
R806	QRD161J-223Y	CARBON RESISTOR	22K 5% 1/6W
R807	QRD161J-222Y	CARBON RESISTOR	2.2K 5% 1/6W

11 Exploded View of Mechanism Component

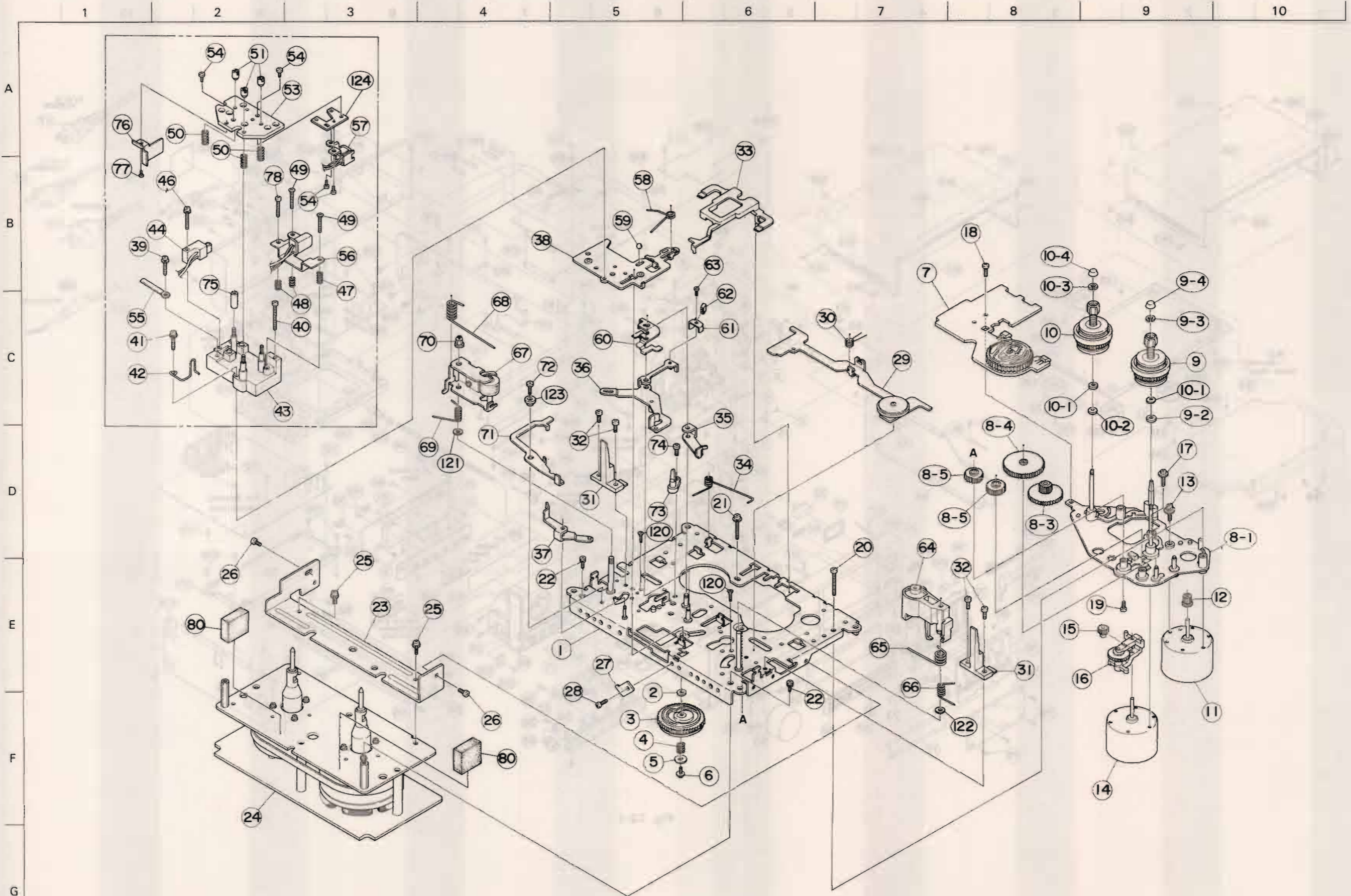


Fig. 11-1

13 Mechanism/Enclosure Component Parts List

■ Mechanism Component Parts List

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	VKL2449-00H	CHAS.BASE ASS'Y		1
	2	VKZ4003-010	FELT	REF.NO.1+REF.NO.3	1
	3	VKS2122-001	P.ROLLER CAM		1
	4	VKW4760-001	C.SPRING	REF.NO.3	1
	5	VKZ4284-002	WASHER	REF.NO.3,4	1
	6	VKZ4340-002	SCREW	REF.NO.5	1
	7	VKZ3136-00D	CAM SWITCH ASSY		1
	8-1	VKL2303-003	DISK BASE	J24	1
	8-3	VKR3001-001	GEAR(2)		1
	8-4	VKR3001-002	GEAR(2)		1
		VKR3001-002T	GEAR 2		1
		VKR3001-002T	GEAR 2		1
		VKR3001-002T	GEAR 2		1
		VKR3001-002T	GEAR 2		1
		VKR3001-002T	GEAR 2		1
		VKR3001-002T	GEAR 2		1
		VKR3001-002T	GEAR 2		1
	8-5	VKR3000-001	GEAR(1)		2
	9	VKR4565-00B	T-UP REEL ASY.		1
	9-2	VKZ4003-010	FELT	REF.NO.9	1
	9-3	VKR4170-001	RING		1
	9-4	VKS4131-001	REEL STOPPER		1
	10	VKR4566-00A	S.REEL ASS'Y		1
	10-1	VKZ4041-001	FELT		2
	10-2	Q03093-834	WASHER	REF.NO.10	1
	10-3	VKR4170-001	RING		1
	10-4	VKS4131-001	REEL STOPPER		1
△	11	MMN-6F2RA8Z	DC MOTOR	FOR CAM MOTOR	1
	12	VKR4326-001	MOTOR GEAR	REF.NO.11	1
	13	DPSP2608Z	SCREW	REF.NO.11	1
△	14	MMN-6F2RA8Z	DC MOTOR	FOR REEL	1
	15	VKR3000-003	GEAR(1)	REF.NO.14,16	1
	16	VKS4503-00D	F/R ARM ASS'Y	REF.NO.14	1
	17	SWSP2608Z	SCREW	REF.NO.14	1
	18	SDST2604Z	SCREW	REF.NO.7,8-1	1
	19	SDST2608Z	SCREW	REF.NO.8-1,8-5	1
	20	SPSP2615Z	SCREW	FOR CAM MOTOR	1
	21	LPSP2614Z	SCREW	FOR REEL MOTOR	1
	22	LPSP2606Z	SCREW	FOR REF.NO1+DD MOTOR	2
	23	VKL6562-001	MOTOR BRACKET		1
	24	SS11BA	D.D.MOTOR		1
	25	LPSP2606Z	SCREW	REF.NO.23	2
	26	SDST2605Z	SCREW	REF.NO.23/CHASSIS	2
	27	VKL5398-001	BRACKET	CHASSIS BASE	1
	28	SSST2604Z	SCREW	REF.NO.27	1
	29	VKL3411-00C	T-UP IDLER ASSY		1
	30	VKW3006-099	TORSION SPRING	REF.NO.29	1
	31	VKS4901-001	CASSETTE GUIDE	J24	2
	32	SDST2605Z	SCREW	REF.NO.31	4
	33	VKS3162-004	BRAKE BAR	J24	1
	34	VKW4380-001	TORSION SPRING	REF.NO.33/CHASSIS	1
	35	VKL5316-00G	H.BASE ARM ASY	REF.NO.36,60/CHASSIS	1
	36	VKL3879-00A	P.R.LEVER(1)		1
	37	VKL6190-00C	P.R.LEVER(2)		1
	38	VKM3192-001	HEAD BASE		1

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
39	LPSP2010N	SCREW	REF.NO.43	1
40	SPSP2016N	SCREW	REF.NO.43	1
41	LPSP2012Z	SCREW	REF.NO.42,43	1
42	VKZ4437-001	WIRE HOLDER	REF.NO.41,43	1
43	VKZ3137-00B	E/R H.BASE ASY.		1
44	VGH0212-121	ERASE HEAD		1
46	LPSP2012N	SCREW	ERASE HEAD	1
47	VKW3001-067	SPRING	REC.HEAD	1
48	VKW3001-099	SPRING	REC.HEAD	2
49	VKZ4463-00B	SPECIAL SCREW	REC.HEAD	2
50	VKW3001-223	SPRING	PB HEAD	3
51	VKH5137-001	ADJUST SCREW	REF.NO.53	3
53	VKL6192-003	P.B. HEAD BASE		1
54	VKZ4194-001	S.SCREW	REF.NO.53	4
55	VKZ4001-013	WIRE HOLDER	REF.NO.43	1
56	VGH0423-607	REC HEAD ASS'Y		1
57	VGH0424-629	P.B. HEAD ASS'Y		1
58	VKW4467-005	TORSION SPRING	REF.NO.38	1
59	T41615-004	STEEL BALL	REF.NO.38	1
60	VKY4559-001	SPRING PLATE	REF.NO.36	1
61	VKL6222-002	B.T.LEVER	REF.NO.36	1
62	VKZ4414-001	B.T.RUBBER	REF.NO.61	1
63	SPSK1716M	SCREW	REF.NO.61	1
64	VKP4169-00F	P.R.ARM ASY.(R)	RIGHT	1
65	VKW3006-057	TORSION SPRING	REF.NO.64	1
66	VKW3006-130	TORSION SPRING	REF.NO.64	1
67	VKP4129-00K	P.R.ARM ASY(L)	LEFT	1
68	VKW4735-003	TORSION SPRING	REF.NO.67	1
69	VKW3008-021	TORSION SPRING	REF.NO.67	1
70	VKS4513-001	ADJUST SCREW	REF.NO.67	1
71	VKL6193-003	EJECT SAFETY		1
72	SDST2605Z	SCREW		1
73	VKS4512-003	GUID POST		1
74	SDST2605Z	SCREW	REF.NO.73	1
75	QXTS400-010	SHURINK TUBE	REF.NO.43	1
76	VKL6581-001	SHIELD PLATE	REF.NO.53	1
77	SPSK2025M	MINI SCREW	REF.NO.76	1
78	VKZ4464-00B	SPECIAL SCREW	REC.HEAD	1
80	VYSH202-013	SPACER	DD MOTOR	2
120	SSSP2608Z	SCREW	CHASSIS BASE/DD	2
121	WNS3000N	WASHER	REF.NO.67	1
122	WNS3000N	WASHER	REF.NO.64,65,66	1
123	VKH4418-002	FLANGE COLLAR		1
124	VKL6422-001	HEAD BASE		1

■ Enclosure Component Parts List

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	ZCTDV1010J-FBK	FRONT PANEL ASS'Y	TD-V1010C/J	1
	ZCTDV1010K-FBK	FRONT PANEL ASS'Y	OTHER AREA	1
	ZCTDV1010K-CH	CASSETTE HOLDER ASS'Y		1
	ZCTDV1010K-CLBK	CASSETTE LID ASS'Y		1
△ 1	QSP1106-004	PUSH SWITCH	TD-V1010A/C/E/G/J	1
△	QSP1106-004BS	PUSH SWITCH	TD-V1010B	1
	VND4113-001	G.CAUTION CARD	TD-V1010J	1
2	VKZ4345-004	SPECIAL SCREW	MECHA+L.SW.PWB	2
3	VKL6200-00A	EJECT BKT ASS'Y		1
4	VSH1140-002	LEAF SWITCH		4
6	SDST2606Z	SCREW	MECHA+EJ.BKT	2
7	VKL3908-001	EJECT LEVER		1
8	VKW4688-002	TORSION SPRING		1
9	REE2500X	E RING		1
10	VKY4497-003	HOLDER SPRING		1
11	VKL6345-002	LEAF SW BRACKET		1
12	SDST2005Z	SCREW	L.SW.BKT+LEAF SW	1
13	VSH1155-001	LEAF SWITCH		1
14	SDST2604Z	SCREW	MECHA+H.SP	2
15	VKY4279-001	PACK SPRING		1
16	SDST2604Z	SCREW	MECHA+P.SP	2
17	VKL3883-001	MECHA.BRACKET		1
18	SSST3006Z	SCREW	MECHA BKT+F.PANEL	2
19	SDST2604Z	SCREW	MECHA+M.BKT	2
20	SSSF3010Z	SCREW	MECHA+F.PANEL	2
21	VJC1754-011	FRONT PLATE		1
22	PQ42376-001	JVC MARK		1
23	E73878-002	P.BUTTON ESCUTC		1
24	VJC1755-005	FRONT PANEL	TD-V1010A/B/C/E/G	1
	VJC1755-006	FRONT PANEL	TD-V1010J	1
25	LD-702YU	L.E.D		1
26	VJK3445-003	FINDER		1
27	VJD4025-001	FILTER	REMOCON UNIT	1
28	VJD4615-021	FILTER		1
30	VYH4638-001	BRACKET		3
31	SDSP3004Z	SCREW		6
32	E73877-002	PUSH BUTTON	POWER	1
33	VXP4349-00E	PUSH BUTTON ASS	EJECT	1
34	VKW3001-063	COMP.SPRING	PUSH BUTTON	1
35	E74179-002	KNOB	OUTPUT	1
36	SDSF2608Z	SCREW	M.BUTTON+F.PANEL	5
	SDSF2608Z	SCREW		1
37	VXP3274-004	MECHA BUTTON		1
38	VKL6628-001	BUTTON HOLDER		1
40	VKS5011-001	VOLTAGE CONTACT	FOR A/B/E/G V.SEL	1
41	SDSF3008CC	SCREW	FOR A/B/E/G R.P+V.C	2
43	WNS3000N	WASHER	EARTH SCREW	1
48	SSSF3010Z	SCREW	F.PLATE+M.BUTTON	1
49	SDSF3010Z	SCREW	VOL.PWB+F.PANEL	1
50	E74179-002	KNOB	REC CAL&BIAS	2
51	SDSF3010Z	SCREW	REMOCON PWB+F.PANEL	1
52	SDSF3010Z	SCREW	FL PWB+FRONT PANEL	2
53	VJD5174-001	LED LENS		1
56	VJD3780-00F	C.PANEL ASS'Y		1
57	VKY4550-003	EARTH CONTACT	M.BUTTON+C.PANEL	1
58	VKZ4150-001	SPECIAL NUT	H.P.JACK	1
59	VJD5181-004	SIDE PLATE(L)	F.PANEL LEFT	1
60	VJD5181-003	SIDE PLATE(R)	F.PANEL RIGHT	1
61	VYSH102-053	SPACER	FRONT PLATE	1
62	VJD5173-001	EJECT ESCUTCHED		1
63	VXP4812-002	PUSH BUTTON	MONITOR	1
64	VXP4575-002	PUSH BUTTON	RESET	5
65	E71268-003	PUSH KNOB	NR SELECT	4
66	SSSF3010Z	SCREW	F.PANEL+NR SW.	2
67	VXP4307-011	PUSH BUTTON	CD DIRECT	1

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
68	VXP4307-012	PUSH BUTTON	DIRECT	1
69	VXP4307-013	PUSH BUTTON	LINE	1
70	E302479-005	VOLUME KNOB	INPUT	1
71	VXL4166-005	KNOB	BALANCE	1
72	VJT2153-003	CASSETTE DOOR		1
73	VJD5081-007	HOLDER PLATE		1
74	VKY4382-007	CASSETTE SPRING	CASSETTE DOOR	1
75	VKY4382-008	CASSETTE SPRING	CASSETTE DOOR	1
76	VJT3265-002	CASSETTE LID		1
77	VJT3270-005	LID PLATE		1
78	VJT3266-001	CASSETTE FINDER		1
79	BYS3006M	S.BOLT	C.FINDER+C.LID	4
80	NTB3000	NUT	C.FINDER+C.LID	4
81	VYH4769-002	DAMP HOLDER		1
82	VYH5033-002	GEAR		1
84	SBSB2004Z	SCREW	GEAR	1
85	SDSF3008Z	SCREW	D.HOLDER+F.PANEL	1
86	VKS4989-002	REMOTE BAR	POWER	1
87	VKS4990-001	SWITCH CONTACT	POWER	1
88	VKL6207-001	STOPPER	SW. CONTACT	1
89	VKS4991-001	BUTTON CONTACT	POWER	1
90	VKL6207-001	STOPPER	B.CONTACT	1
91	VKS4989-002	REMOTE BAR	DIRECT&LINE	3
92	VKS4990-001	SWITCH CONTACT	DIRECT&LINE	3
93	VKL6207-001	STOPPER	SW.CONTACT	3
94	VKS4991-001	BUTTON CONTACT	DIRECT&LINE	3
95	VKL6207-001	STOPPER	BUTTON CONTACT	3
96	VKH5027-003	VOLUME SHAFT	INPUT	1
97	VKS4992-003	VOLUME CONTACT	INPUT	1
98	VKL3884-001	SIDE CHASSIS(L)		1
99	WNS3000N	WASHER	TD-V1010G	1
	WNS3000N	WASHER	TD-V1010G	1
100	SSST3006Z	SCREW	F.P.+S.CHAS(L)	2
101	LPSP3006Z	SCREW	P.SW+S.CHAS(L)	1
102	SDST3006CC	SCREW	PROTECTOR+S.CHAS.	1
	SDST3006CC	SCREW	S.CHAS(L)+M.PWB	1
103	VKL3891-003	SIDE CHASSIS(R)		1
105	SSST3006Z	SCREW	F.P.+S.CHAS(R)	2
106	SDST3006CC	SCREW	AMP CHAS(B)+S.CHAS	2
107	VKL3892-003	CENTER CHASSIS		1
△ 108	VTP60C9-011B	POWER TRANS	TD-V1010A/C/E/G/J	1
△ 109	VTP60C9-011BBS	POWER TRANS	TD-V1010B	1
	SDSB4010R	SCREW	C.CHAS+TRANS.	4
	SSST3008Z	SCREW	C.CHAS+F.PANEL	2
111	SDST3006CC	SCREW	C.CHAS+M.PWB	2
112	SDST3006CC	SCREW	A.CHAS.+REC AMP	3
113	VKL3932-001	SHIELD PLATE		1
114	SDST3006Z	SCREW	C.CHAS+S.PLATE	3
115	SDST3006Z	SCREW	S.CHAS+S.PLATE	3
116	VJC2301-011	REAR PANEL	TD-V1010C/J	1
	VJC2301-012	REAR PANEL	TD-V1010A/B/E/G	1
△ 117	QMP1900-200	POWER CORD	TD-V1010C/J	1
△	QMP2560-200	POWER CORD	TD-V1010A	1
△	QMP3900-200	POWER CORD	TD-V1010E/G	1
△	QMP9017-008BS	POWER CORD	TD-V1010B	1
△ 118	QHS3771-108	CORD STOPPER	TD-V1010A/C/E/G/J	1
△	QHS3771-108BS	CORD STOPPER	TD-V1010B	1
119	SDST3006CC	SCREW	S.CHAS(L)+R.PANEL	2
120	SDST3006CC	SCREW	S.CHAS(R)+R.PANEL	2
121	SDST3006CC	SCREW	C.CHAS+R.PANEL	2
122	SDSF3010CC	TAP SCREW	DCS+R.PANEL	1
123	SDSF3010CC	TAP SCREW	PIN JACK+R.PANEL	4
	SDSF3010CC	TAP SCREW	PIN JACK+R.PANEL	2
124	SDST3006CC	SCREW	AMP CHAS+P.B	5
125	VYH6841-001	STOPPER	VOLUME SHAFT	1
126	SDSF3008Z	SCREW	STOPPER+F.PANEL	1
127	SSSF3010Z	SCREW	F.PLATE+F.PANEL	3
128	VJC1547-007	BOTTOM COVER		1
129	SDSF3010Z	SCREW	BOTTOM+F.PANEL	1

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
130	SSSF3010Z	SCREW	F.PLATE+F.PANEL	2
131	VJF4013-00D	FOOT ASS'Y		4
132	GBST3008Z	TH.TAP.SCREW	FOOT+BOTTOM	4
133	VJD1130-005	SOLID BASE		1
134	GBST3016Z	SCREW	SOLID BASE+BOT.	9
135	SDST3006Z	SCREW	BOTTOM+R.PANEL	3
136	SDST3006Z	SCREW	BOTTOM+S.CHAS.	2
137	VJC1622-004	TOP COVER		1
138	VKM3190-001	AMP CHASSIS (A)	PLAY PWB	1
139	SDST3006CC	SCREW	T.COVER+R.PANEL	2
140	VKZ3001-004	SPECIAL SCREW	T.COVER+S.CHAS.	2
	VKZ3001-004	SPECIAL SCREW	T.COVER+S.CHAS.	2
141	VKL6556-001	SHIELD BRACKET	AMP CHASSIS(A)	1
142	VYN2249-002PA	NAME PLATE	TD-V1010A/B/G	1
	VYN2249-004PA	NAME PLATE	TD-V1010C	1
	VYN2249-004PK	NAME PLATE	TD-V1010C	1
	VYN2249-005PA	NAME PLATE	TD-V1010E	1
	VYN2249-006PA	NAME PLATE	TD-V1010J	1
143	SDST3006CC	SCREW	A.CHAS.(A)+S.CHAS	2
145	VYTS468-001	PROTECTOR	POWER PWB	1
146	VKZ4001-007	WIRE CLAMP		1
	VKZ4001-007	WIRE CLAMP		1
	VKZ4001-007	WIRE CLAMP	FW103,FW104	1
	VKZ4001-007	WIRE CLAMP	CAL,BAL	1
147	SDST3006Z	SCREW		1
	SDST3006Z	SCREW		1
	SDST3006Z	SCREW	WIRE HOLDER	1
148	VKSS179-001	REFLECTOR		1
149	SDSF3008Z	SCREW		1
150	SDST2606Z	SCREW	MECHA	1
151	VYSH105-034	SPACER	FL TUBE	2
152	VKZ4001-007	WIRE CLAMP	MECHA	1
154	SDST3006Z	SCREW	WIRE HOLDER	1
155	VYSR101-015	SPACER		2
157	VKY4535-001	EARTH PLATE	CASSETTE DOOR	1
158	VKY4533-001	CASSETTE SPRING	CASSETTE DOOR	1
159	VYSA1R2-008	SPACER	VOLUME SHAFT	1
	VYSA1R2-008	SPACER		1
161	SDST3006Z	SCREW		1
162	SDST3006Z	SCREW	CENTER CHASSIS	1
163	VYSA1R8-027	SPACER	TOP COVER	3
166	VYTR435-001	SPACER	TOP COVER	1
166	VYSH104-022	SPACER	FRONT PLATE	3
168	Q03093-819	WASHER	C.HOLDER	2
169	VYSA1R4-058	SPACER		1
170	VKZ4802-002	TORSION SPRING	C.LID&STABILIZER	1
171	VJT3271-002	CASSETTE STABIL		1
173	VJD5176-002	PAD		1
174	VJD5201-002	PAD		1
175	SDST3006CC	SCREW	AMP CHAS(A)+C.CHAS	2
176	SDST3006CC	SCREW	AMP CHAS(B)+C.CHAS	2
177	VKM3191-001	AMP CHASSIS(B)	REC PWB	1
178	SDST3006CC	SCREW	A.CHAS(A)+R.PANEL	2
179	SSST3008CC	SCREW	S.BKT+A.CHAS(A)	2
180	VKZ4001-010	WIRE CLAMP	CENTER CHASSIS	1
181	VWE350-08NTNT	LUG WIRE		3
	VWE350-08NTNT	LUG WIRE		1
182	VKZ4001-010	WIRE CLAMP	PB HEAD	1
	VKZ4001-010	WIRE CLAMP	HEAD	1
183	VKZ4001-111	WIRE HOLDER	REC HEAD	1
184	VKZ4001-111	WIRE HOLDER		1
185-1	QMF51A2-R63	FUSE	TD-V1010A/C/E/G/J	2
	QMF51E2-R63BS	FUSE	TD-V1010B	2
185-2	QMF51A2-1R0	FUSE	TD-V1010A/C/E/G/J	2
	QMF51E2-1R0BS	FUSE	TD-V1010B	2
186	OZL1002-003	WARNING LABEL	TD-V1010B	1

14 Packing Illustration and Packing Parts List

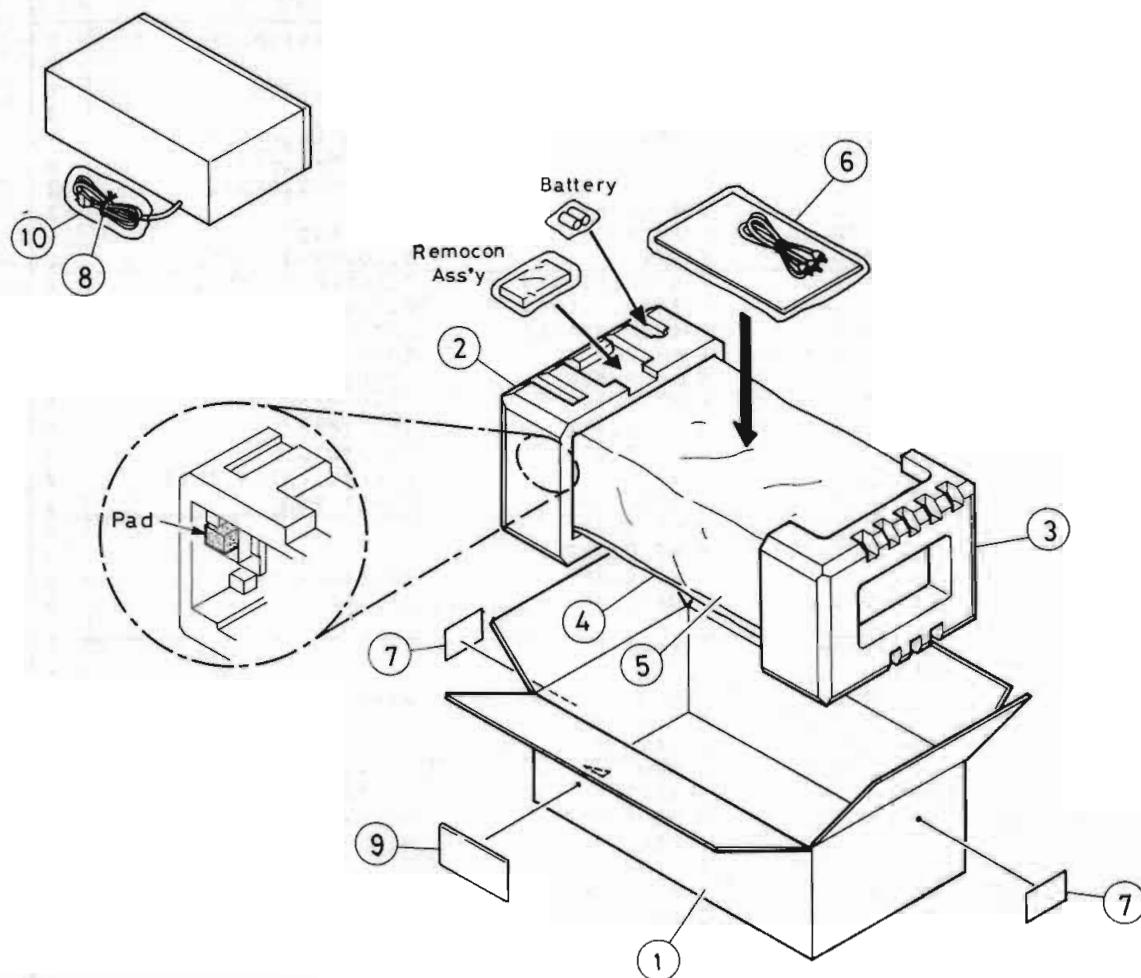


Fig. 14-1

● Packing Parts List

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
1	VPC2249-002	CARTON		1
2	VPH2315-001	CUSHION(L)		1
3	VPH2315-002	CUSHION(R)		1
4	E34033-015B	ENVELOPE	FOR UNIT	1
5	E73660-008	SHEET	FOR UNIT	1
6	VPE3005-007	POLY BAG	FOR INST BOOK	1
7	VND3044-001	S.TICKET (WT)	FOR A VERSION	1
	VND3044-002	SERIAL TICKET	FOR J VERSION	2
	VND3044-003	S.TICKET (BU)	FOR E VERSION	1
	VND3044-004	S.TICKET (GR)	FOR B VERSION	1
	VND3044-005	S.TICKET (RD)	FOR G VERSION	1
	VND3044-006	S.TICKET	FOR C VERSION	2
8	Q04141H	WIRE CLAMP	FOR POWER CORD	1
9	E66416-003	ENVELOPE	FOR J VERSION	1
10	QPGA010-03003	POLY.BAG	FOR POWER CORD	1
	VPH4116-003	PAD	FOR CUSHION(L)	1

15 Accessories

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
		BT20025K	WARRANTY CARD	C VERSION	1
		BT20029C	WARRANTY CARD	A VERSION	1
		BT20044F	SAFETY GUIDE	J VERSION	1
		BT20047D	WARRANTY CARD	J/ U VERSION	1
		BT20060	WARRANTY CARD	B VERSION	1
		BT20064A	WARRANTY CARD	G VERSION	1
		BT20066A	WARRANTY CARD	B/G VERSION	1
		BT20071A	SVC CENTRE LIST	C VERSION	1
		BT20098	WARRANTY CARD	A VERSION	1
		BT20108	WARRANTY CARD	J VERSION	1
		BT20108	WARRANTY CARD	U VERSION	1
		EWP805-001E	REMOTE WIRE		1
		E43486-340A	SAFTY INST SHEE	B VERSION	1
		TCP-3304	AUDIO TAPE PAMP		1
		VMP0039-00D	PIN CORD		1
		VNN2249-661	INST BOOK		1
		V04062-001	CONTI.PLUG	U VERSION	1
		Q7L1002-003	WARNING LABEL	B VERSION	1
		Q7L1007-001	BEAB LABEL	B VERSION	1
		TJL000420-01	CAUTION LABEL	B VERSION	1
		T44362-001	CSA LABEL	C VERSION	1
		VNC5004-001	MARK STICKER	B/E/G VERSION	1
		VNC5311-203	CAUTION CARD	U(ES) VERSION	1
		VNC5311-204	CAUTION CARD	U(PX) VERSION	1
		VND4113-001	G.CAUTION CARD	B VERSION	1
		VND4113-001	G.CAUTION CARD	J VERSION	1
		EUR64489	REMOCON ASS'Y	RM-RT1010U	1
		UM3HJ-2P	BATTERY		2

