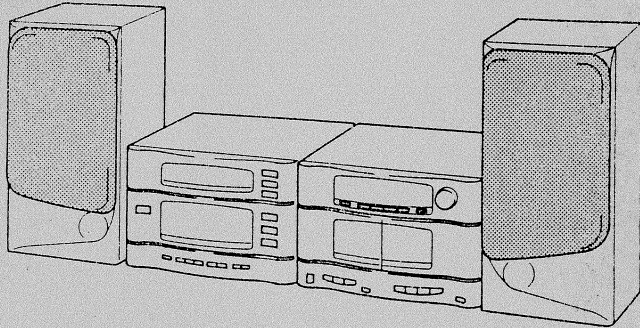


# HITACHI

## SERVICE MANUAL



YS

No. 0013EF

AX12  
AXC12  
AX15  
AXC15  
[UC,E,EBS,EZ,W,WUN, WAU]

AX12	AX15
HAD-12	HAD-15
HTC-15	HTC-15
HS-AX12	HS-AX15
AXC12	AXC15
HAD-12	HAD-15
HTC-C15	HTC-C15
HS-AX12	HS-AX15

### CAUTION

#### DANGER

Invisible laser radiation when open and interlocks failed or defeated. AVOID DIRECT EXPOSURE TO BEAM.

### GEFAHR

Unsichtbare Laser-Strahlung wenn Interlock (Blockierung) funktionsuntüchtig oder abgeschaltet. UNMITTELBAREN KONTAKT MIT DEM STRAHL UNBEDIGT VERMEIDEN.

### DANGER

Faire très attention aux radiations émises par le faisceau laser invisible au défaillance du verrouillage. NE JAMAIS S'EXPOSER DIRECTEMENT AU FAISCEAU.

### VARNING

När apparaten öppnats och skyddsanordningen felar eller satts ur funktion förekommer osynlig laserstrålning. UNDVIK DIREKTE BESTRÅLING.

### ADVARSEL

Når apparatet åbnes og beskyttelsesanordningen ikke virker eller sættes un af funktion, forekommer der usynlig laserstråling. UNDGÅ DIREKTE BESTRÅLING.

### ADVARSEL

Når denne delen er åpen som følge av at låsen er utkoplet eller ikke fungerer, eksisterer det usynlig laserstråling. UNNGÅ Å BLI UTSATT FOR DIREKTE BESTRÅLING!

### VARIQITS

Laite lähettää näkymätöntä lasersäteilyä, kun se avataan ja kun sisäiset turvalukot eivät toimi. VARO JOUTUMASTA ALTTIIKSI SÄTEILYLLE.

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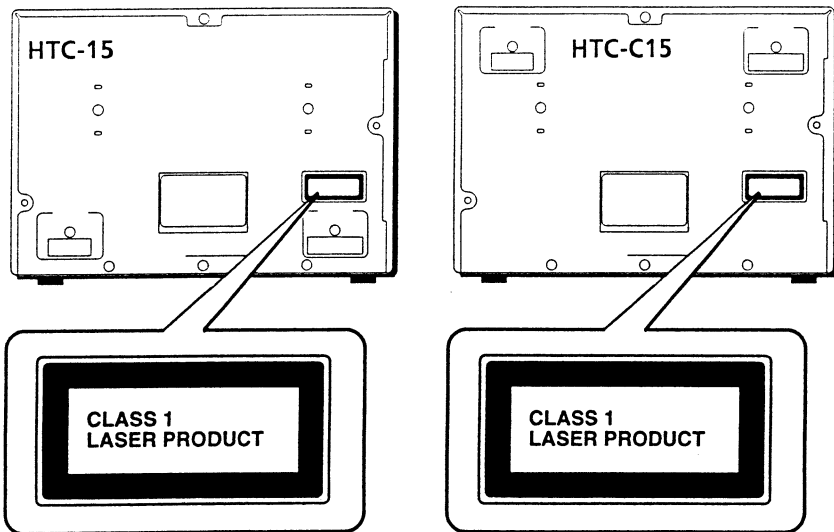
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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

## COMPACT DISC STEREO SYSTEM

September 1993 Consumer Electronics Division

- The caution labels on laser usage • Notices de précautions d'emploi du laser



Inside of the set is a laser component emitting a laser radiation over the limit for laser class 1.

In dem Gerät befindet sich eine Laser-Komponente, die eine Laserstrahlung über dem Grenzwert für Laserklasse 1 ausstrahlt.

A l'intérieur de l'appareil se trouve un composant à rayonnement laser soumis aux normes de limitation laser de classe 1.

All'interno dell'unità è presente un componente al laser che emette radiazioni al di sopra del limite per i laser di classe 1.

Binnen in dit apparaat bevindt zich een laseronderdeel dat laserstralen boven de limiet voor laser klasse 1 uitzendt.

Dentro del aparato hay un elemento de láser que emite radiación láser por encima del límite para la clase 1.

Inuti apparaten finns en laserkomponent som avger laserstrålning över gränsen för laser klass 1.

Indeni apparatet findes en laserkomponent, der giver en laserbestråling, der ligger over grænsen for laser klasse 1.

Dentro do aparelho há um componente laser que emite radiação laser superior ao limite para a classe Laser 1.

#### ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion.  
Se ikke ind i strålen-heller ikke med optiske instrumenter.

#### ADVARSEL

Usynlig laserstråling når deksel åbnes og sikkerhedsåls brytes.  
Stir ikke inn i strålen eller se direkte med optiske instrumenter.

#### VARO!

Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle laser-säteilylle.  
Älä tuijota säteeseen äläkä katso sitä optisen laitteen läpi.

#### VARNING

Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad.  
Stirra ej in i strålen och betrakta ej strålen genom optiskt instrument.

## SAFETY PRECAUTION

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with  $\Delta$  in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

## SPECIFICATIONS

### HAD-12/HAD-15

#### • TUNER SECTION

Circuit system: FM/AM 2 bands [for UC]  
FM/MW/LW 3 bands [for E,EBS,EZ]  
FM/SW/MW 3 bands  
[for W,WUN,WAU]

Tuning range: UC

FM: 87.9 to 107.9MHz (200KHz step)  
AM: 530 to 1,710KHz (10KHz step)  
E,E(BS),E(Z)  
FM: 87.5 to 108.0MHz (50KHz step)  
MW: 522 to 1,611KHz (9KHz step)  
LW: 153 to 281KHz (1KHz step)  
W,W(UN),W(AU)

MW Spacing: 9KHz

FM 87.5 to 108MHz (50KHz step)  
MW 522 to 1,611KHz (9KHz step)  
SW 3.8 to 12.5 MHz (5KHz step)  
MW Spacing: 10KHz  
FM 87.9 to 107.9MHz (200KHz step)  
AM 530 to 1,710KHz (10KHz step)

IEC Sensitivity: FM: 1.5 $\mu$ V/75ohms (S/N30dB) [for UC]

FM: 1.5 $\mu$ V/75ohms (S/N26dB)

[except UC]

AM: 600 $\mu$ V/m  
(S/N20dB,loop antenna) [for UC]

MW: 1,400 $\mu$ V/m  
(S/N26dB,loop antenna)  
[for E,EBS,EZS]

MW: 600 $\mu$ V/m  
(S/N20dB,loop antenna)  
[for W,WUN,WAU]

LW: 2,500 $\mu$ V/m  
(S/N26dB,loop antenna)

[for E,EBS,EZS]

SW: 400 $\mu$ V (S/N20dB)  
[for W,WUN,WAU]

Station presets: FM 12,AM 12 [for UC]

FM 12,MW 12,LW 12

[for E,EBS,EZS]

FM 12,MW 12,SW 12

[for W,WUN,WAU]

#### • TAPE DECK SECTION

Track system: 4 tracks,2 channels

Recording system: AC bias

Erasing system: AC erase

Tape: Tape 1: Playback  
Tape 2: Recording/Playback  
Normal/CrO<sub>2</sub>/Metal  
(playback only)  
Tape speed: 4.75cm/s  
Frequency response: CrO<sub>2</sub>: 40 to 16,000Hz  
S/N ratio: 63dB (dolby-on, IHF-A,  
3%THD)

#### • AMPLIFIER SECTION

Input sensitivity/impedance: AUX: 270mV/47Kohms

Output impedance: External speaker terminals

Suitable impedance:

6 to 16 ohms

Headphones

Suitable impedance:

8 to 100 ohms

Audio output: HAD-12: 20W + 20W

(6 ohms,T.H.D. 0.9%)

HAD-15: 35W + 35W

(6 ohms,T.H.D. 0.9%)

#### • Timer Section

System: Digital quartz clock

Display format: 12-hour cycle

[for UC,W,WUN,WAU]

24-hour cycle

[except UC,W,WUN,WAU]

Timer accuracy: Within 60 second at monthly rate

#### • General Specification

		UC	E,EZ	EBS	W,WUN,WAU
HAD-12	Power supply	AC 120V 60Hz	AC 230V	AC 240V 50Hz	AC110-120,200-220 230-240V,50/60Hz
	Power consumption	65W	55W	55W	55W
HAD-15	Power supply	AC 120V 60Hz	AC 230V	AC 240V 50Hz	AC110-120,200-220 230-240V,50/60Hz
	Power consumption	70W	65W	65W	65W

Dimensions: HAD-12:  
225 x 170 x 324mm

HAD-15:

225 x 170 x 350mm

Weight: HAD-12: 5.2kg

HAD-15: 6.0kg



## HTC-15/HTC-C15

**CD cangerr:** Magazine (6) + 1 [for HTC-C15]  
**Frequency response:** 10 to 20,000KHz  
**Number of channels:** 2  
**Disc:** HTC-15: 12/8cm  
 HTC-C15: 12cm  
 (8cm : tray only)  
**Pickup:** Semiconductor laser  
**Memory:** HTC-15 : 20  
 HTC-C15 : 16  
**Dimensions:** HTC-15:  
 225 W x 170 H x 309 D mm  
 HTC-C15:  
 225 W x 170 H x 309 D mm  
**Weight:** HTC-15: 2.6kg  
 HTC-C15: 3.9kg

## HS-AX12

**System:** 2-way speaker system, bass reflex  
**Speakers:** 14cm x 1, 5cm x 1  
**Impedance:** 6 ohms  
**Maximu input power:** 35W (musical peak signal)  
**Dimensions:** 170 W x 340 H x 204 D mm  
**Weight:** 5.8kg (pair)

## HS-AX15

**System:** 3-way speaker system, bass reflex  
**Speakers:** 14cm x 1, 5cm x 1, 2cm x 1  
**Impedance:** 6 ohms  
**Maximu input power:** 50W (musical peak signal)  
**Dimensions:** 170 W x 340 H x 204 D mm  
**Weight:** 6.0kg (pair)

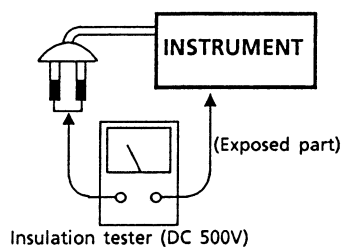
## ACCESSORIES

**AM loop antenna:** 1  
**FM dipole antenna:** 1 [for UC, WAU]  
**System connector cable (7P):** 1  
**System connector cable (13P):** 1  
**Speaker wire:** 2 (HS-AX15)  
**Remote control unit:** AX-12,AX-15:  
 RB-AX15 (36key)  
 AX-C12,AX-C15:  
 RB-AXC15(38key)

Check that exposed parts are acceptably insulated from the supply circuit before returning the instrument repaired to the customer.

### • Checking method

Power (Operate) switch is set to ON.  
 Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the CD OUT terminal of rear plate and check that the resistance value is 500 kohms or more.



## PRÉCAUTIONS DE SÉCURITÉ

Les précautions suivantes doivent être observées chaque fois qu'une réparation doit être faite.

1. Etant donné que de nombreux composants de l'appareil possèdent des caractéristiques relatives à la sécurité, utiliser uniquement des pièces de rechange d'origine Hitachi pour effectuer un remplacement. Ceci se rapporte notamment aux pièces critiques du bloc d'alimentation qui ne doivent en aucun cas être remplacées par celles d'autres fabricants. Les pièces critiques sont accompagnés du symbole  $\triangle$  dans le plan de circuit et sur le plan de base.
2. Avant de retourner l'appareil répare au client le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

## CARACTÉRISTIQUES TECHNIQUES

### HAD-12/HAD-15

#### SECTION SYNTONISEUR

**système de**  
**Circuit:** FM/AM 2 bands [pour UC]  
 FM/MW/LW 9 bands [pour E,EBS,EZ]  
 FM/SW/MW 3 bands [pour W,WUN,WAU]  
**Gemme d'accord:** UC  
 FM: 87.9 to 107.9MHz (Régle sur 200KHz)  
 AM: 530 to 1,710KHz (Régle sur 10KHz)  
 E,EBS,EZ  
 FM: 87.5 to 108.0MHz (Régle sur 50KHz)  
 MW: 522 to 1,611KHz (Régle sur 9KHz)  
 GO: 153 to 281KHz (Régle sur 1KHz)  
 W,WUN,WAU  
 MW Spacing : 9KHz  
 FM 87.5 to 108MHz (Régle sur 50KHz)  
 MW 522 to 1,611KHz (Régle sur 9KHz)  
 OC 3.8 to 12.5 MHz (Régle sur 5KHz)  
 MW Spacing : 10KHz  
 FM 87.9 to 107.9MHz (Régle sur 200KHz)  
 AM 530 to 1,710KHz (Régle sur 10KHz)

**Sensibilité IEC:** FM: 1.5 $\mu$ V/75ohms (S/N30dB) [pour UC]  
 FM: 1.5 $\mu$ V/75ohms (S/N26dB) [sauf UC]  
 AM: 600 $\mu$ V/m (S/N20dB,antenne en cadre) [pour UC]  
 MW: 1,400 $\mu$ V/m (S/N26dB,antenne en cadre) [pour E,EBS,EZ]  
 MW: 600 $\mu$ V/m (S/N20dB,antenne en cadre) [pour W,WUN,WAU]

GO: 2,500 $\mu$ V/m (S/N26dB,antenne en cadre) [pour E,EBS,EZ]  
 OC: 400 $\mu$ V (S/N20dB) [for W,WUN,WAU]  
**Station presets:** FM 12,AM 12 [for UC]  
 FM 12,MW 12,LW 12 [pour E,EBS,EZ]  
 FM 12,MW 12,SW 12 [pour W,WUN,WAU]

#### SECTION PLATINE MAGNÉTOPHONE

**système de pistes:** 4 pistes, 2 canaux stéréo  
**système d'enregistrement:** Polarisation à courant alternatif  
**Système d'effacement:** Effacement à courant alternatif  
**Bande:** Tape 1: Pour la lecture  
 Tape 2: Pour l'enregistrement/ la lecture  
 Normal/CrO<sub>2</sub>/Métal (Uniquement lecture)

**Vitesse de défilement de bands magnétique:** 4.75cm/s  
**Réponse en fréquence:** CrO<sub>2</sub>: 40 to 16,000Hz  
**Rapport signal-sur-bruit:** 63dB (dolby en service,IHF-A, 3 % d.h.t.)

#### SECTION AMPLIFICATEUR

**Snsibilité d'entrée/impédance:** AUX: 270mV/47Kohms  
**Impédance de sortie:** Bornes de haut-parleur extérieur impédance appropriée: 6 à 16 ohms impédance appropriée de casque d'écoute: 8 à 100 ohms  
**Sortie audio:** HAD-12: 20W + 20W (6 ohms,T.H.D. 0.9%)  
 HAD-15: 35W + 35W (6 ohms,T.H.D. 0.9%)

**SECTION MINUTERIE**

Alimentation: Horloge à quartz numérique  
 Format d'affichage: 12-hour cycle  
 [pour UC,W,WUN,WAU]  
 24-hour cycle  
 [sauf UC,W,WUN,WAU]

Précision de la minuterie: Within 60 second at monthly rate

**CARACTÉRISTIQUES GÉNÉRALES**

		UC	E,EZ	EBS	W,WUN,WAU
HAD-12	Alimentation	Secteur alternatif 120V 60Hz	Secteur alternatif 230V	Secteur alternatif 240V 50Hz	Secteur alternatif 110-120,200-220 230-240V,50/60Hz
	Puissance consommée	65W	55W	55W	55W
HAD-15	Alimentation	Secteur alternatif 120V 60Hz	Secteur alternatif 230V	Secteur alternatif 240V 50Hz	Secteur alternatif 110-120,200-220 230-240V,50/60Hz
	Puissance consommée	70W	65W	65W	65W

Encombrement: HAD-12: 225 x 170 x 324mm  
 HAD-15: 225 x 170 x 350mm  
 Poids: HAD-12: 5.2kg  
 HAD-15: 6.0kg

**HTC-15/HTC-C15**

Capacité CD: Magasin (6) + 1 [for HTC-C15]  
 Réponse en fréquence: 10 to 20,000KHz  
 Nombre de canaux: 2  
 Disque: HTC-15: 12/8cm  
 HTC-C15: 12cm  
 (8 cm: uniquement piste)  
 Analyseur: Laser à semiconducteur  
 Longueur d'onde: 785 nm  
 Sortie laser: Moins de 175µW (IEC pub. 825)  
 Moins de 48,5µW (FDA CFR21)  
 Mémoire: HTC-15: 20  
 HTC-C15: 16

Encombrement: HTC-15: 225 L x 170 H x 309 P mm  
 HTC-C15: 225 L x 170 H x 309 P mm  
 Poids: HTC-15: 2.6kg  
 HTC-C15: 3.9kg

**HS-AX12**

Système: Système de haut-parleur à 2boies, bass-reflex  
 Haut-parleurs: 14cm x 1, 5cm x 1  
 Impédance: 6 ohms  
 Puissance d'entrée maximum: 35W (signal de crête musical)  
 Poids: 170 L x 340 H x 204 P mm  
 Poids: 5.8kg (pair)

**HS-AX15**

Système: Système de haut-parleur à 3boies, bass-reflex  
 Haut-parleurs: 14cm x 1, 5cm x 1, 2cm x 1  
 Impédance: 6 ohms  
 maximum: 50W (musical peak signal)  
 Encombrement: 170 L x 340 H x 204 P mm  
 Poids: 6.0kg (pair)

**ACCESSOIRES**

Antenne en cadre AM: 1  
 Antenne dipôle: 1 [pour UC, WAU]  
 Câble de raccordement de système(7 broches): 1  
 Câble de raccordement de système (13 broches): 1  
 Fil de haut-parleur: 2 (HS-AX15)  
 Boîtier de télécommande: AX-12,AX-15:  
 RB-AX15(36touches)  
 AX-C12,AX-C15:  
 RB-AXC15(38touches)

**SERVICE POINTS**

**HAD-12/15**

- Removal of the top cover (Fig. 1)  
 (1) Remove 7 screws ①.
- Removal of the front panel (Figs. 2 and 3)  
 (1) After removing the top cover, remove 2 screws ② and 3 screws ③.  
 (2) Remove VR knobs, nuts and washers.  
 (3) Remove 9 connectors on the AUDIO P.W.B., 1 connector on the flexible P.W.B. and 2 connector on the MAIN P.W.B.  
 (4) Press the Eject button to open the cassette door.  
 Release the hooks(2 hooks at both left and right) from the claws and pull out the front panel towards the front.

- Removal of the AUDIO P.W.B. (Figs. 2 and 4)  
 (1) Remove VR knobs and washers. (Fig. 2)  
 (2) After removing the top cover, remove screws ④ (8 screws for E, E(BS) and E(Z), 7 screws for UC, W, W(UN) and W(AU)) and 4 screws ⑤.  
 (3) Disconnect 8 connectors on the AUDIO P.W.B. and 2 connectors on the flexible P.W.B.  
 (4) Remove 3 screws ⑥.[Except E(Z)]  
 Remove 4 screws ⑦.[For E]

- Removal of the MAIN P.W.B. (Fig. 5)  
 (1) After removing the AUDIO P.W.B., disconnect 2 connectors on the MAIN P.W.B. and release 8 soldered section.  
 (2) Remove 5 screws ⑧ on the MAIN P.W.B.

- Removal of the spectrum analyzer P.W.B. (Fig. 6)  
 (1) After removing the front panel.

- Removal of the cassette Mechanism chassis (Fig. 6 and Fig. 7)  
 (1) After removing the front panel.  
 (2) Remove 8 screws ⑨, ⑩, and then remove the cassette mechanism chassis from the front panel. (Use the shorter 3 x 8 BT screws. If the 3 x 10 screws are used, a hole is made in the front panel, causing a faulty appearance.)  
 (3) Cautions when installing the deck mechanism (Fig. 7)
  - Set so that the eject lever is placed on the eject cam.
  - Check that the eject lever is pushed up by the eject cam when the eject button is pressed.

[ Caution ]  
 When installing the cassette deck, make sure that the eject cam is located under the eject lever.  
 If the cassette deck is installed with the eject button pressed, the eject arm and eject lever are caught each other and the deck does not operate. Lift the front panel slightly and install the cassette deck without pressing the eject button. (Fig. 7)

- Removal of the cassette door (Fig. 8)  
 (1) Remove the top cover, front panel and eject spring.  
 (2) Insert a small screwdriver through the hole at the side of the front panel and release the pivot on one side, then release the other pivot and remove the cassette door.
- Removal of the DECK O.P. P.W.B. (Fig. 9)  
 (1) Remove the front panel and the deck mechanism.  
 (2) Remove 2 screws ⑪ and remove the deck mechanism holder and DECK O.P. P.W.B.  
 (3) Be sure that the eject cam is in the correct position when installing the deck mechanism holder.

- Installing the cassette door (Fig. 10)  
 (1) Insert the pivots of the cassette door into the pivot holes in the front panel.  
 (2) Install the eject spring.

**HTC-15**

- Removal of the top panel (Fig. 11)  
 (1) Remove 5 screws ①.
- Removal of the front panel (Fig. 12)  
 (1) After removing the top cover, remove the flexible P.W.B., 1 connector ③ (W only), 2 screws ② and 2 screws ④.  
 (2) Release the claws (2 claws at both left and right) and pull out the front panel towards the front.
- Removal of the CD mechanism (Figs. 12 and 13)  
 (1) After removing the top cover, disconnect 1 connector ⑤ and 3 connectors ⑥. (Fig. 12)  
 (2) Remove 4 screws ④. (Fig. 12)  
 (3) Lift up the CD mechanism and release the Boss at the front of the CD-mechanism from the CD-mechanism holder, then pull it out towards the back. (Fig. 13)



4. Removal of the CD-P.W.B. (Fig. 12)
  - (1) After removing the top cover, disconnect 3 connector ㉑ and 1 connector ㉒.
  - (2) Remove 3 screws ㉓ and 2 screws ㉔.
5. Removal of the DISPLAY P.W.B. (Fig. 14)
  - (1) After removing the front panel, remove 7 screws ㉕.
6. Removal of the MICROPHONE P.W.B. (Fig. 14)
  - (1) After removing the front panel, remove 1 screw ㉖.

### HTC-C15

1. Removal of the top cover (Fig. 15)
  - (1) Remove 5 screws ①.
2. Removal of the front panel (Fig. 16)
  - (1) After removing the top cover, remove the flexible P.W.B.
  - (2) Remove 1 connector ② (W only), 2 screws ③ and 3 screws ④.
  - (3) Release the claws (2 claws at both left and right) and pull out the front panel towards the front.
3. Removal of the CDC P.W.B. (Fig. 16)
  - (1) After removing the top cover, remove the flexible P.W.B., 3 cables and 2 connector ⑤.
  - (2) Remove 2 screws ⑥ and 4 screws ⑦.
4. Removal of the CD mechanism (Figs. 16 and 17)
  - (1) After removing the top cover and front panel.
  - (2) Remove 3 cables and 2 connector ⑧ (Fig. 15) and 2 screws ⑨, and 2 washers.
  - (3) Release the CD mechanism push it inside to release the hook, then pull it out while lifting it.
5. Removal of the DISPLAY P.W.B. (Fig. 18)
  - (1) Remove the front panel.
  - (2) Remove 4 screws ⑩ and 2 screws ⑪.
6. Removal of the switch P.W.B. (Fig. 18)
  - (1) Remove the front panel.
  - (2) Remove 2 screws ⑫ and 1 screw ⑬.
7. Removal of the MIC P.W.B. (Fig. 18, W only)
  - (1) Remove 1 screw ⑭.
8. Disengage CD Changer Mechanism (Fig. 19 and 20)
  - (1) Release 2 screws ⑮, and remove ⑯.  
 Push lift cam to the position as shown in Fig. 19, then raise the rail base up.

- (2) Pull P rail base out, and remove P1 tray from the set. Use a "-" screwdriver to lift the hook (Part A), then pull out the P rail base from the set.
- (3) Remove rail base as followed; (Fig. 21,22, 23 and 24)
  1. Press Arm ① with left little finger and Arm ② with left thumb, then hold the rail base with back of left hand. Release Arm ③-1 located on rail base from the P base with right hand, then remove Arm ③-2 beside the P base from the rail base.
  2. Use left little finger to press Arm ①, and back of left hand to hold rail base. Release Arm ④-1 located on rail base from the P base with right hand, then remove Arm ④-2 beside the P base from the rail base.
  3. Use back of right hand to hold the rail base. Release Arm ⑤-1 locate on rail base from the P base with left hand, then remove Arm ⑤-2 beside the P base from the rail base.

Place rail base on P base on the order of 3→2→1.
- (4) T/T Base (Fig. 25)
 

Remove 3 screws ⑯, then disengage T/T base from the p base.
- (5) Installation of Gear (Fig. 26, 27 and 28)
  1. Pull p slide rail to the front, then fit P railbase on the top of P base and P slide rail.
  2. When P rail base is inserted into P base, and the hook of P rail base in Part A matches with P slide rail, P gear B shall be at the position as shown in the figure of Part B.
  3. Fit up P gear B with point B aiming at the direction of P gear A1 and assemble the wheel shafts of P gear A1 and P gear B. Then conjugate P gear B and P gear A1.
- (6) CD Changer Mechanism packing status when transporting (Fig. 29)
 

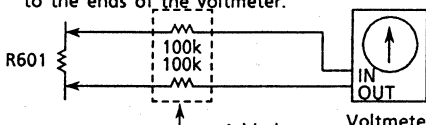
For assembly or transportation of the set, the rail base and lift cam should be positioned as Fig. 16.
- (7) Replacing the belt (Fig. 19 and 20)
  1. Remove two screws ⑰. Push the tray stopper and hold it, then remove section ⑱.
  2. Push the lift cam in the direction of the arrow, lift the rail base and set FE gear D to the upper position.
  3. Turn FE gear C and pull out the P rail base.
  4. Remove PE gear B and replace the belt. Be careful of the gear position when reinstalling PF gear B.

9. Checking the objective lens (Fig. 30)
 

Handle so that dirt or dust does not adhere to the objective lens in the lens actuator. When the unit has been used for a long time, dust or dirt may adhere to the objective lens. Clean the lens surface using a cotton swab.
10. Check the laser
 

Normally, the laser is driven by a current of 40 to 80mA. If the laser drive current value is 120mA or more when measuring the circuit, it may be defective.  
 (Current is measured with a voltage of 0.9 to 1.8V between both ends of 22 ohm R602.)

**[ Caution ]**  
 When the voltage is to be measured between both ends of R601, since there is a danger that the laser could be broken by surge generated by the voltmeter, measure the voltage via the 100k ohm resistors added to the ends of the voltmeter.



If a battery tester is used, it can be measured directly.

11. Cautions when servicing.
  - (1) Semiconductor laser
 

The semiconductor laser is very sensitive to electrostatic breakdown and surge current. Do not touch the terminals of the semiconductor laser and flexible P.W.B. with your fingers or tools.  
 Relationship between current and light intensity is shown in Fig. 30. When the threshold current is exceeded, intensity changes steeply.
  - (2) Handling of the unit mechanism section (Fig. 31)
 

When handling the pickup mechanism section or the unit mechanism section, use the grounding ring as shown in Fig. 31. (The grounding ring can be made from a normal lead wire.)

## POINTS DE DEPANNAGE

### HAD-12/15

- Retirer le couvercle supérieur (Fig. 1)
  - Retirer les 7 vis de fixation ①.
- Retirer la plaque de façade (Figs. 2 et 3)
  - Après avoir retiré le couvercle supérieur, retirer les 2 vis de fixation ② et les 3 vis de fixation ③.
  - Retirer les boutons de réglage de VR, les écrous de fixation et les rondelles.
  - Retirer les 9 connecteurs de la carte de circuits imprimés audio, 1 connecteur de la carte de circuits imprimés en film souple et 2 connecteurs de la carte de circuits imprimés principale.
  - Appuyer sur la touche d'éjection pour obtenir l'ouverture de la trappe à cassette.

Libérer les crochets (2 crochets placés à gauche et à droite) des griffes et dégager la plaque de façade en agissant vers l'avant.
- Séparation de la carte de circuits imprimés audio (Fig. 2 et 4)
  - Retirer les boutons de réglage de VR et les rondelles. (Fig. 2)
  - Après avoir retiré le couvercle supérieur, retirer les 2 vis de fixation ④ (les 8 vis de fixation pour E, E (BS) et E (Z)), les 7 vis de fixation pour UC, W, W (UN) et W (AU) et les 4 vis de fixation ⑤.
  - Débrancher les 8 connecteurs de la carte de circuits imprimés audio et les 2 connecteurs de la carte de circuits imprimés en film souple.
  - Retirer les 3 vis de fixation ⑥. (Sauf E (Z))  
Retirer les 4 vis de fixation ⑥. (De E)
- Séparation de la carte de circuits imprimés principale (Fig. 5)
  - Après avoir retiré la carte de circuits imprimés audio, débrancher les 2 connecteurs de la carte de circuits imprimés principale et libérer les 8 parties soudées.
  - Retirer les 5 vis de fixation ⑦ de la carte de circuits imprimés principale.
- Séparation de récepteur panoramique (Fig. 6)
  - Après avoir retiré la plaque de façade.
- Séparation du mécanisme de commande de cassette (Fig. 6 et 7)
  - Après avoir retiré la plaque de façade.
  - Retirer les 8 vis de fixation ⑧, ⑨, puis retirer le châssis du mécanisme de platine à cassettes de la plaque de façade. (Utiliser les vis de fixation 3 x 8 les plus courtes. Si les vis de fixation de 3 x 10 sont utilisées, un trou est percé dans la plaque de façade, ce qui aura pour effet d'affecter son aspect extérieur.)

- Précautions à prendre lors du remontage du mécanisme de platine (Fig. 7)
  - Disposer de telle sorte que le levier d'éjection soit placé sur la came d'éjection.
  - Vérifier que le levier interne est repoussé par la came d'éjection lorsque la touche d'éjection est pressée.

#### [ Attention ]

Au moment de reposer la platine à cassettes, vérifier que la came d'éjection est bien placée sous le levier d'éjection.

Si la platine à cassettes est installée alors que la touche d'éjection est pressée, le bras d'éjection et le levier d'éjection se coincent, ce qui empêchera la platine à cassettes de fonctionner normalement. Soulever légèrement la plaque de façade et installer la platine à cassettes sans appuyer sur la touche d'éjection. (Fig. 7)

- Séparation du volet de trappe à cassette (Fig. 8)
  - Retirer le couvercle supérieur, la plaque de façade et le ressort d'éjection.
  - Introduire un petit tournevis dans le trou qui se trouve sur le côté de la plaque de façade pour libérer le pivot d'un côté puis libérer le pivot de l'autre côté et retirer la trappe à cassette.
- Séparation de la carte de circuits imprimés de latine O.P. (Fig. 9)
  - Retirer la plaque de façade et le mécanisme de platine.
  - Retirer les 2 vis de fixation ⑩ et retirer le support de mécanisme de platine et la carte de circuits imprimés O.P.
  - Vérifier que la came d'éjection se trouve dans la position exacte au moment de remonter le support de mécanisme de platine.
- Remontage de la trappe à cassette (Fig. 10)
  - Engager les pivots de la trappe à cassette dans les trous de pivot de la plaque de façade.
  - Remonter le ressort d'éjection.

### HTC-15

- Retirer la plaque supérieure (Fig. 11)
  - Retirer les 5 vis de fixation ①.
- Retirer la plaque de façade (Fig. 12)
  - Après avoir retiré le couvercle supérieur, retirer la carte de circuits imprimés en film souple, 1 connecteur ② (W seulement), les 2 vis de fixation ② et les 2 vis de fixation ③.
  - Libérer les crochets (2 crochets placés à gauche et à droite) des griffes et dégager la plaque de façade en agissant vers l'avant.

- Séparation du mécanisme de platine CD (Figs. 12 et 13)
  - Après avoir retiré le couvercle supérieur, débrancher le connecteur ④ et les 3 connecteurs ⑤. (Fig. 12)
  - Retirer les 4 vis de fixation ④. (Fig. 12)
  - Soulever le mécanisme de platine CD et libérer le bossage de l'avant du mécanisme de platine CD du support de mécanisme de platine CD puis dégager vers l'arrière. (Fig. 13)
- Séparation de la carte de circuits imprimés CD (Fig. 12)
  - Après avoir retiré le couvercle supérieur, débrancher les connecteurs ⑥ et 1 connecteur ⑦.
  - Retirer les 3 vis de fixation ⑤ et les 2 vis de fixation ⑥.
- Séparation de la carte de circuits imprimés d'affichage (Fig. 14)
  - Après avoir retiré la plaque de façade, retirer les 7 vis de fixation ⑦.
- Séparation de la carte de circuits imprimés de mic (Fig. 14)
  - Après avoir retiré la plaque de façade, retirer la vis de fixation ⑧.

### HTC-C15

- Retirer la plaque supérieure (Fig. 15)
  - Retirer les 5 vis de fixation ①.
- Retirer la plaque de façade (Fig. 16)
  - Après avoir retiré le couvercle supérieur, retirer la carte de circuits imprimés en film souple.
  - Retirer 1 connecteur ③ (W seulement), les 2 vis de fixation ② et les 2 vis de fixation ③.
  - Libérer les crochets (2 crochets placés à gauche et à droite) des griffes et dégager la plaque de façade en agissant vers l'avant.
- Séparation de la carte de circuits imprimés CDC (Fig. 16)
  - Après avoir retiré le couvercle supérieur, retirer la carte de circuits imprimés en film souple, les 3 câbles et les deux connecteurs ④.
  - Retirer les 2 vis de fixation ④ et les 4 vis de fixation ⑤.
- Séparation du mécanisme de platine CD (Fig. 16 et 17)
  - Retirer le couvercle supérieur et la plaque de façade.
  - Retirer les 3 câbles et les 2 connecteurs ⑥ (Fig. 15) et les 2 vis de fixation ⑥

- Libérer le mécanisme de platine CD des griffes et le repousser vers l'intérieur de façon à libérer le crochet puis le dégager vers l'extérieur tout en le soulevant.
- Séparation de la carte de circuits imprimés DISPLAY (Fig. 18)
  - Retirer la plaque de façade.
  - Retirer les 4 vis de fixation ⑦ et les 2 vis de fixation ⑧.
- Séparation de la carte de circuits imprimés des commutateurs (Fig. 18)
  - Retirer la plaque de façade.
  - Retirer les 2 vis de fixation ⑨ et une vis de fixation ⑩.
- Séparation de la carte de circuits imprimés de microphone (Fig. 18, W uniquement)
  - Retirer la vis de fixation ⑩.
- Dégager le mécanisme de changeur CD (Fig. 19 et 20)
  - Libérer les 2 vis de fixation ⑪ et retirer ⑫. Repousser la came de levage de façon à la placer dans la position représentée sur l'illustration 18 puis soulever la base du rail.
  - Tirer la base du rail vers l'extérieur puis retirer le plateau P1 et le séparer de l'appareil. Se servir d'un tournevis ordinaire pour soulever le crochet (partie A) et soulever la base du rail P pour la séparer de l'appareil.
  - Retirer la base du rail en procédant de la façon suivante; (Fig. 21,22,23 et 24)
    - Appuyer sur le bras ① d'un doigt de la main gauche et sur le bras ② du pouce de la main gauche et immobiliser la base du rail avec le dos de la main. Libérer le bras ③-1 qui est installé sur la base du rail à partir de la base P en procédant de la main droite puis retirer le bras ③-2 placé à côté de la base P en procédant à partir de la base du rail.
    - Utiliser le petit doigt de la main gauche pour appuyer sur le bras ④ et le dos de la main gauche pour immobiliser la base du rail. Libérer le bras ⑤-1 qui est installé sur la base du rail à partir de la base P en procédant de la main droite puis retirer le bras ⑤-2 placé à côté de la base P en procédant à partir de la base du rail.
    - Utiliser le dos de la main droite pour immobiliser la base du rail. Libérer le bras ⑥-1 qui est installé sur la base du rail à partir de la base P en procédant de la main gauche puis retirer le bras ⑥-2 placé à côté de la base P en procédant à partir de la base du rail.

Placer la base du rail sur la base P en respectant l'ordre 3→2→1.

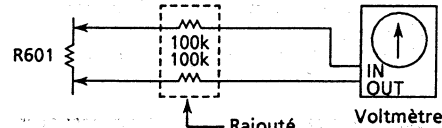


- (4) Base T/T (Fig. 25)  
Retirer les trois vis de fixation ② puis dégager la base T/T de la base p.
- (5) Remontage de roue dentée d'engrenage (Fig. 26, 27 et 28)
- Tirer sur le rail coulissant en procédant de l'avant puis installer la base du rail sur la partie supérieure de la base P et sur le rail coulissant P.
  - Lorsque la base du rail P est engagée dans la base P et que le crochet de la base du rail P se trouve dans la partie A et correspond avec le rail coulissant P, la roue dentée d'engrenage P et B doit se trouver dans la position représentée sur la figure de la partie B.
  - Installer la roue dentée d'engrenage P et B avec la section B dirigée vers la roue dentée d'engrenage P A1 et assembler les axes de roue de la roue dentée d'engrenage P A1 et de la roue dentée d'engrenage P B. Ensuite, faire correspondre la roue dentée d'engrenage P B et la roue dentée d'engrenage P A1.
- (6) Conditions d'emballage du mécanisme  
Lorsque l'ensemble doit être assemblé ou transporté, la base du rail et la came de levée doivent se trouver dans la position représentée sur la figure 29.
- (7) Remplacement de la courroie d'entraînement (Fig. 19 et 20)
- Retirer les deux vis de fixation ①. Repousser la butée de plateau et l'immobiliser dans cette position puis retirer la section ③.
  - Repousser la came de levage en agissant dans la direction indiquée par la flèche, soulever la base du rail et placer la roue dentée d'engrenage FE D en position haute.
  - Faire tourner la roue dentée d'engrenage PE B et remplacer la courroie d'entraînement. Faire attention à la position de la roue dentée d'engrenage au moment de reposer la roue dentée d'engrenage FE B.
9. Vérification de l'optique de lecture (Fig. 30)  
Manipuler de telle sorte que ni poussière ni saleté ne colle à la surface de l'optique de lecture dans le dispositif de commande d'optique. Quand l'appareil a fonctionné pendant une durée prolongée, il se peut que de la poussière ou des saletés adhèrent à la surface de l'optique de lecture, ce qui implique de nettoyer la surface de l'optique de lecture avec un coton-tige.

10. Vérification du laser  
En principe, le laser est excité par une intensité de l'ordre de 40 à 80 mA. Si la valeur d'intensité d'excitation du laser est égale ou supérieure à 120 mA quand le circuit est mesuré, il est possible qu'il y ait anomalie.  
(Le courant est mesuré avec une tension comprise entre 0,9 et 1,8 V entre les deux extrémités de R062 22 ohms.)

[ Attention ]

Lorsque la tension doit être mesurée entre les deux extrémités de R601 et étant donné qu'il y a un risque d'endommagement du laser s'il est soumis à un courant transitoire anormal produit par le voltmètre, la tension doit être mesurée en passant par l'intermédiaire de résistances de 100k-ohms rajoutées aux deux extrémités du voltmètre.



Quand un contrôleur de batterie est utilisé, il est possible de mesurer directement la tension.

11. Mesures de précautions à prendre lors du dépannage

- (1) Laser à semi-conducteurs  
Le laser à semi-conducteurs est un composant particulièrement sensible au rupture électrostatique et les surintensités. Ne jamais toucher les bornes du laser à semi-conducteurs ni la carte de circuits imprimés en film souple directement avec les doigts ou avec des outils. Le rapport qui existe entre l'intensité et l'intensité lumineuse est représenté sur la figure 30. Lorsque le courant de seuil est dépassé l'intensité change brutalement.
- (2) Manipulation de la section de mécanisme de platine (Fig. 31)  
Utiliser un anneau de mise à la terre lors des manipulations de la section de mécanisme de platine de lecture ou la section mécanisme de lecture comme indiqué sur la figure 31.  
(L'anneau de mise à la terre peut être réalisé avec du fil de connexion ordinaire.)

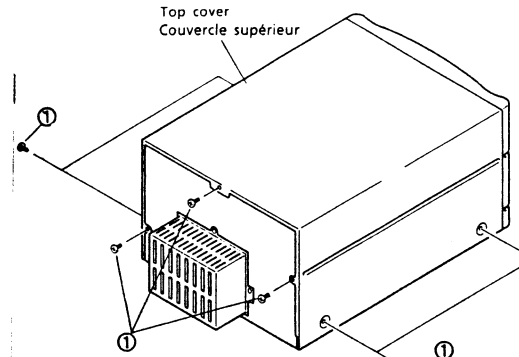


Fig. 1

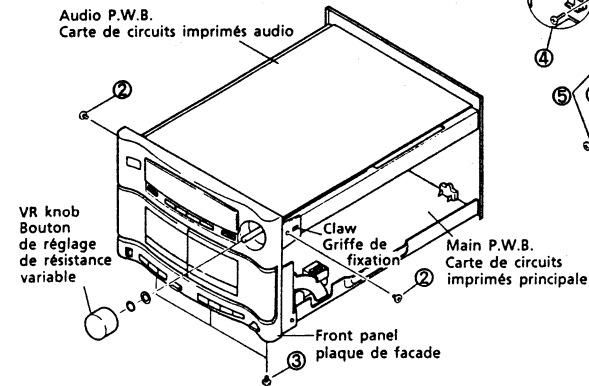


Fig. 2

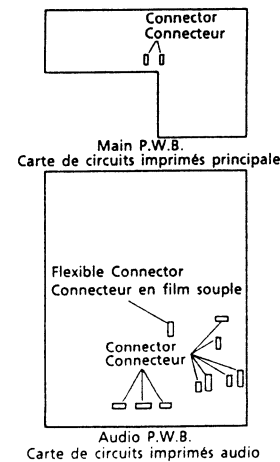


Fig. 3

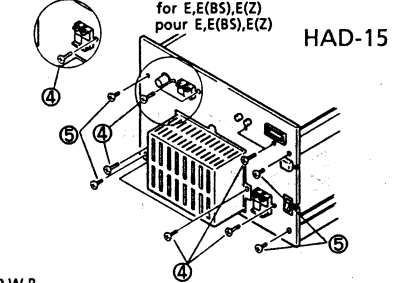
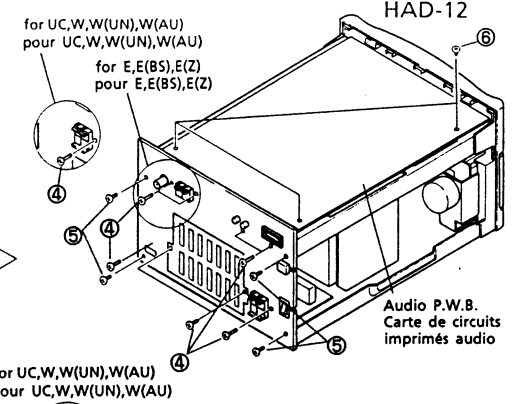


Fig. 4

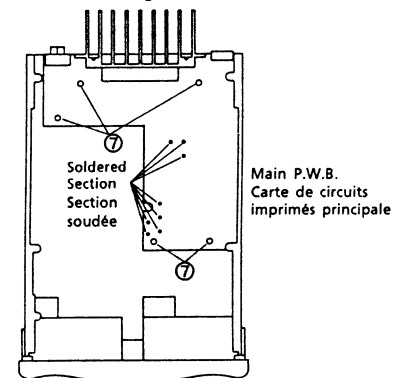


Fig. 5

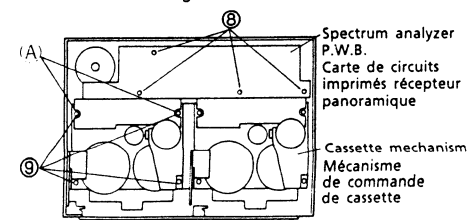


Fig. 6

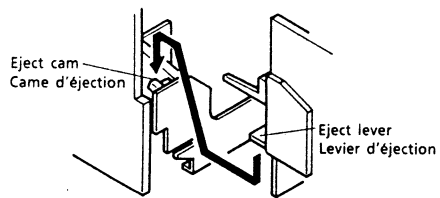


Fig. 7

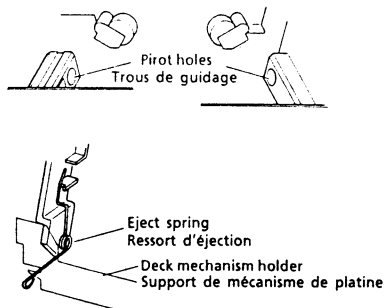


Fig. 10

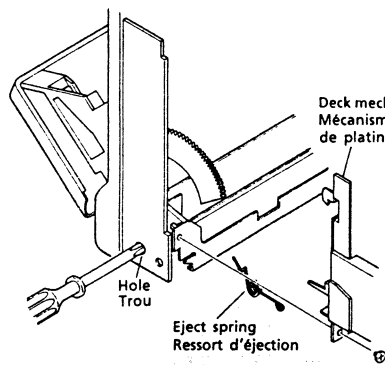


Fig. 8

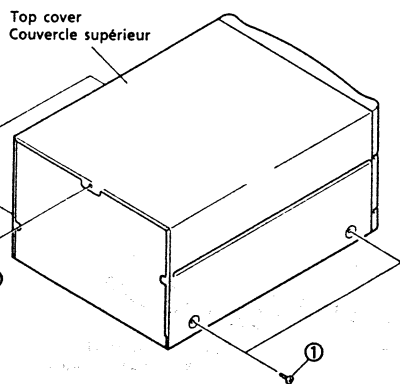


Fig. 11

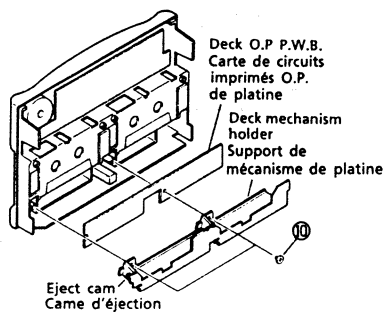


Fig. 9

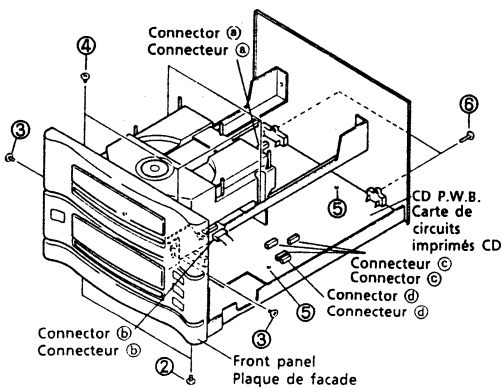


Fig. 12

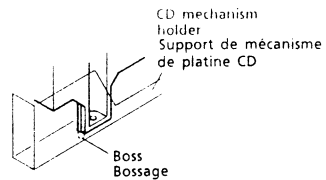


Fig. 13

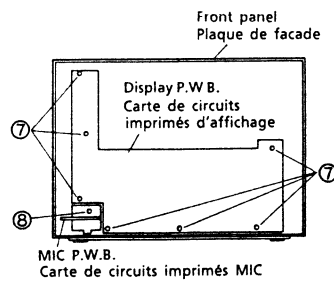


Fig. 14

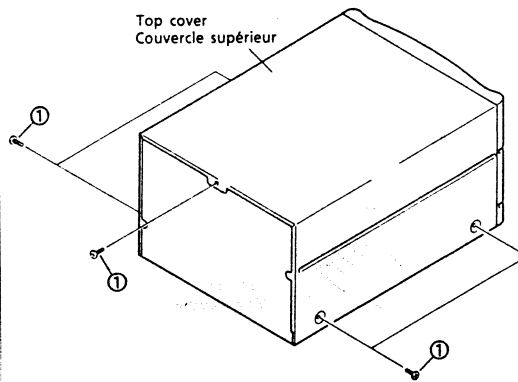


Fig. 15

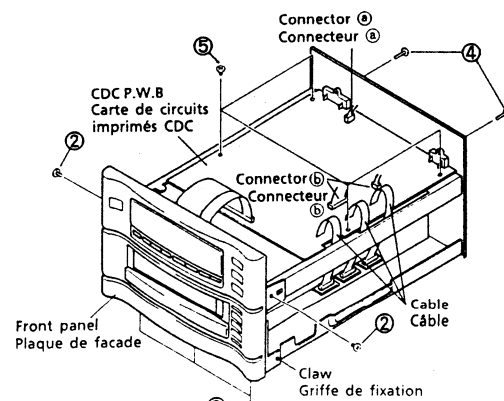


Fig. 16

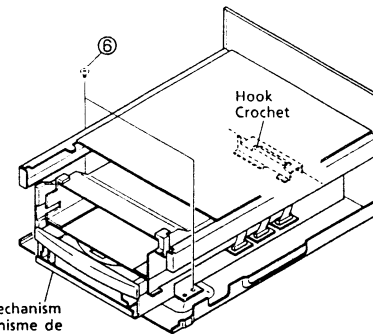


Fig. 17

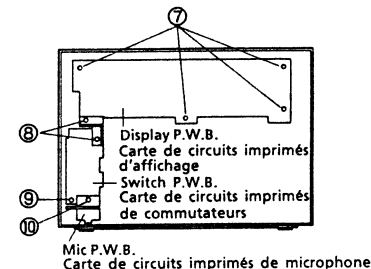


Fig. 18

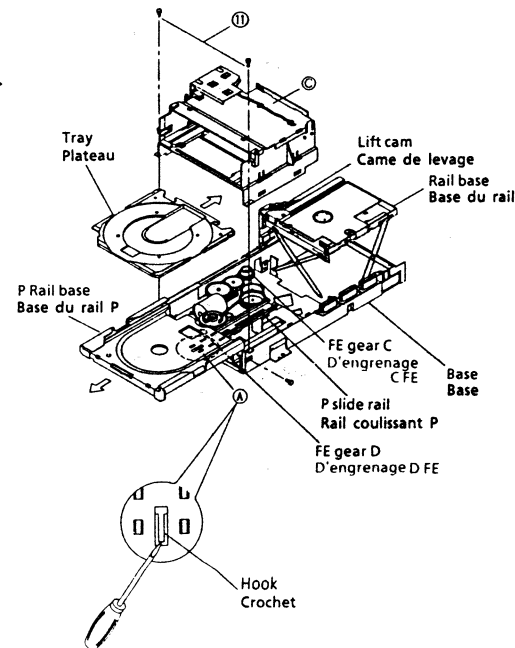


Fig. 19



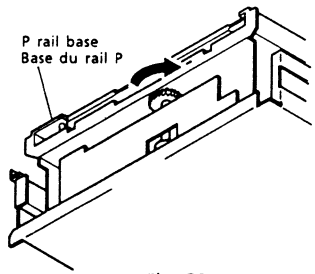


Fig. 20

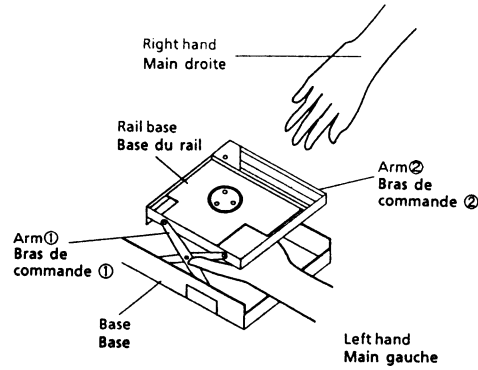


Fig. 23

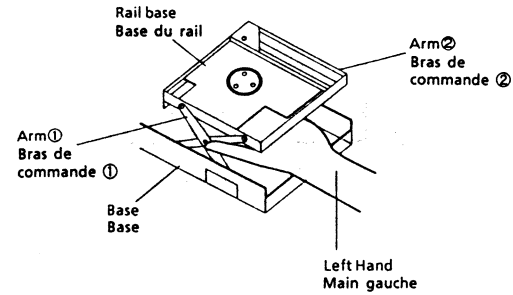


Fig. 21

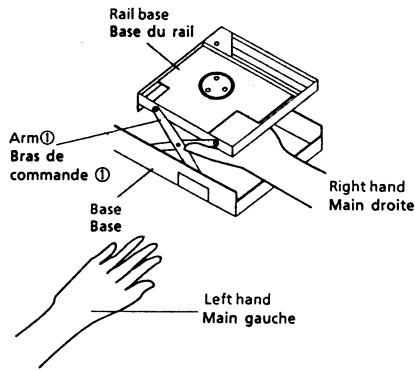


Fig. 24

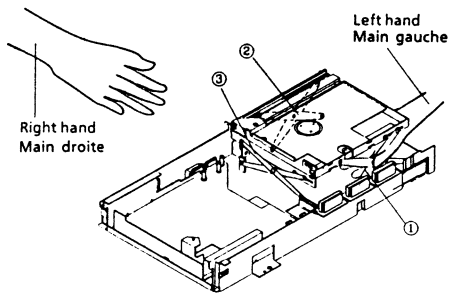


Fig. 22

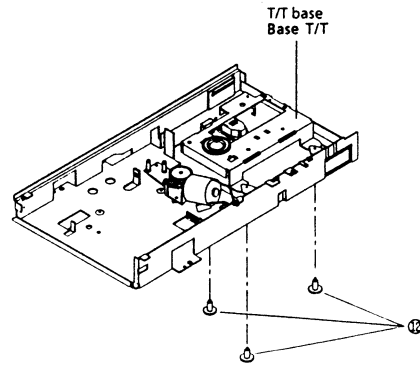


Fig. 25

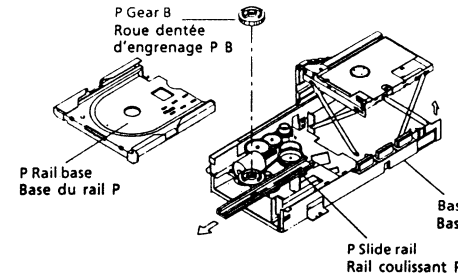


Fig. 26

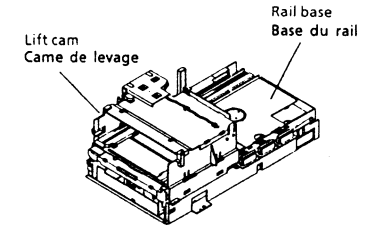


Fig. 29

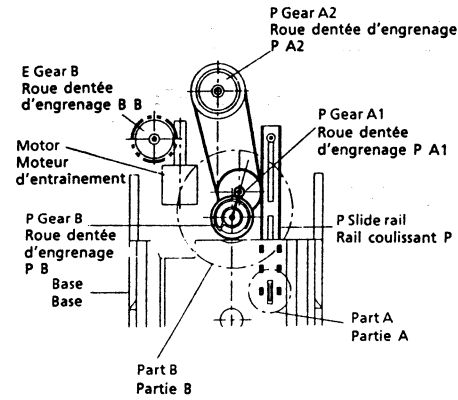


Fig. 27

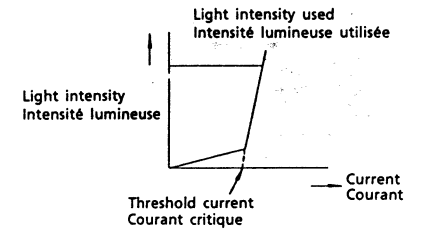


Fig. 30

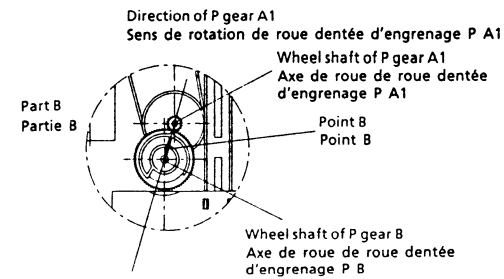


Fig. 28

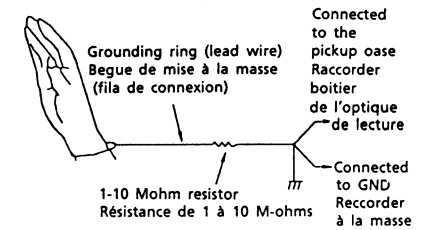
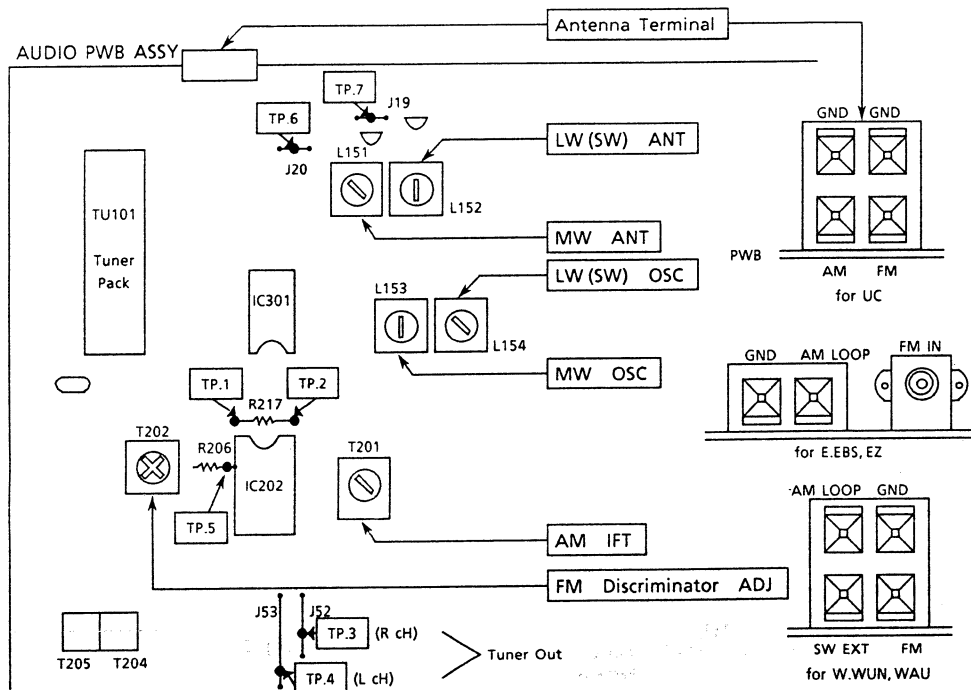


Fig. 31

# ADJUSTMENT

## • Adjustment points (Radio section)



### 1. RADIO SECTION

#### 1-(1) AM section

Destination	Step	Adjustment item	Measuring instrument and connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
			Measuring Instrument	Input Terminal	Output Terminal				
UC, E,EBS, EZ, W,WUN, WAU	1	(1) AM IF	• Genescope	Loop antenna	TP. 5	450 kHz	Highest	T201	(Note 1)
UC, E,EBS, EZ, W,WUN, WAU	2	(1) MW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.)		TP. 6	522 kHz 530 kHz	Lowest	L153	(Note 2)
UC, E,EBS, EZ, W,WUN, WAU	3	(1) MW ANT. (Tracking)	• VTVM • Oscilloscope	Loop antenna	TP. 3 and 4 or SP OUT	603 kHz 600 kHz	603 kHz 600 kHz	L151	(Note 3)
E,EBS, EZ	4	(1) LW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.)		TP. 7	153 kHz	Lowest	L154	(Note 4)
E,EBS, EZ	5	(1) LW ANT. (Tracking)	• VTVM • Oscilloscope (RIF switch : B)	Loop antenna	TP. 3 and 4 or SP OUT	164 kHz	164 kHz	L152	(Note 3)
W,WAU WUN	6	(1) SW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.)		SW EXT Antenna Terminal	TP. 7	3.8 MHz	Lowest	L154
W,WAU WUN	7	(1) SW ANT. (Tracking)	• VTVM • Oscilloscope	TP. 3 and 4 or SP OUT		4.0 MHz	4.0 kHz	L152	(Note 3)

#### 1-(2) FM Section

Step	Adjustment Item	Measuring Instrument and Connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
		Measuring Instrument	Input Terminal	Output Terminal				
1	(1) Discriminator	DC balance meter	FM antenna 400 Hz 22.5kHz DEV. 60 dB	TP. 1 TP. 2	98 MHz	98 MHz	T202	0 ± 50 mV

#### Note 1:

When the signal from the signal generator is weak, make adjustment until the waveform becomes maximum and symmetrical as shown in Fig. 1.

Increase the output of the sweep generator, and adjust the waveform until the width of its part C becomes as flat as possible.

#### Note 3:

Initially, set the input level to 74 dB/m. As the adjustment advances, reduce the input level to the minimum level required (approx. 60 dB). Tracking: Since the trimmer capacitor is omitted, adjustment at the upper limit frequency is not required.

#### Note 4:

SW, LW coverage is as follows.

(1) Connect the DC voltmeter to TP7.

(2) Adjust L154 so that the values shown in Table below are obtained.

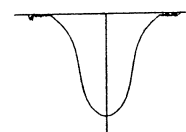


Fig. 20

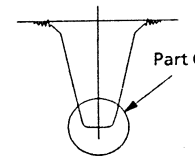


Fig. 21

Destination	E,EBS,EZ	W,WUN, WAU
Lower limit frequency	153 kHz	3.8 MHz
Reading of voltmeter	1.2V ± 0.1V	1.35V ± 0.1V

(LW)

(SW)

#### Note 2:

For the MW covering adjustment, follow the procedure shown below.

(1) Connect the DC voltmeter to TP6.

(2) Adjust L153 until the value shown in the following table is obtained.

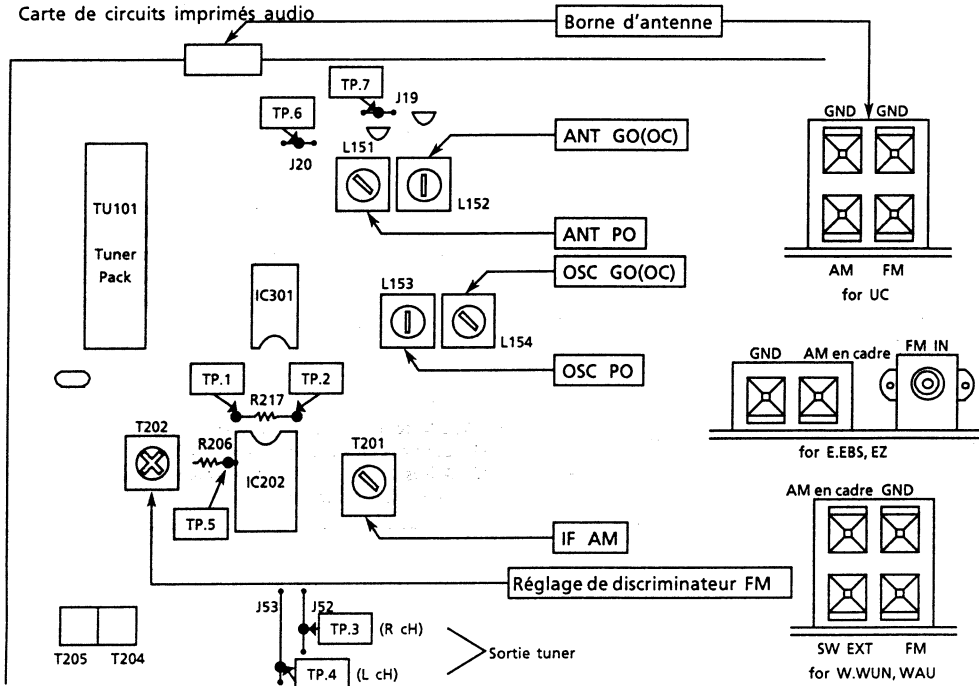
Destination	U.C	E,EBS,EZ W,WUN, WAU
Lower limit frequency	530 kHz	522 kHz
Reading of voltmeter	1.2V ± 0.1V	1.15V ± 0.1V



# RÉGLAGE

## • Points de réglage (Section radio)

Carte de circuits imprimés audio



### 1. SECTION RADIO

#### 1- (1) section AM

Destination	Etape	Object de réglage	Instrument de mesure et branchements			Généscope ou fréquence du générateur de signal	Position de l'aiguille du cadran	Réglage	Lecture
			Instrument de mesure	Borne d'entrée	Borne de sortie				
UC, E,EBS, EZ, W,WUN, WAU	1	(1) IF AM	• Généscope		TP. 5	450 kHz	La plus haute	T201	(Remarque 1)
UC, E,EBS, EZ, W,WUN, WAU	2	(1) OSC. OC2 (couverture)	• Générateur de signal AM (400 Hz, mod 30%) • VTVM • Oscilloscope	Antenne en cadre	TP. 6	522 kHz 530 kHz	La plus basse	L153	(Remarque 2)
UC, E,EBS, EZ, W,WUN, WAU	3	(1) ANT. PO (poursuite)	• VTVM • Oscilloscope		TP3 et TP4 ou SP OUT (hors circuit)	603 kHz 600 kHz	603 kHz 600 kHz	L151	(Remarque 3)
E,EBS, EZ	4	(1) OSC. GO (couverture)	• Générateur de signal AM (400 Hz, mod 30%) • VTVM • Oscilloscope	Antenne en cadre	TP. 7	153 kHz	La plus basse	L154	(Remarque 4)
E,EBS, EZ	5	(1) ANT. GO (poursuite)	• VTVM • Oscilloscope (RIF switch : B)		TP3 et TP4 ou SP OUT (hors circuit)	164 kHz	164 kHz	L152	(Remarque 3)
W,WAU WUN	6	(1) OSC. OC (couverture)	• Générateur de signal AM (400 Hz, mod 30%) • VTVM • Oscilloscope	Borne d'antenne SW EXT	TP. 7	3.8 MHz	La plus basse	L154	(Remarque 4)
W,WAU WUN	7	(1) ANT. OC (poursuite)	• VTVM • Oscilloscope		TP3 et TP4 ou SP OUT (hors circuit)	4.0 MHz	4.0 kHz	L152	(Remarque 3)

### 1- (2) Section FM

Etape	Object de réglage	Instrument de mesure et branchements			Généscope ou fréquence du générateur de signal	Position de l'aiguille du cadran	Réglage	Lecture
		Instrument de mesure	Borne d'entrée	Borne de sortie				
1	(1) Discriminateur	Contrôleur d'équilibre c.c.	Antenne FM 400 Hz Écart de 22.5 kHz 60 dB	TP. 1 TP. 2	98 MHz	98 MHz	T202	0 ± 50 mV

#### Remarque 1 :

Lorsque le signal provenant du générateur de signaux est faible, effectuer un réglage jusqu'à ce que la forme d'onde ait une amplitude maximale et symétrique comme représentée sur la figure 1. Augmenter le niveau de sortie du générateur de balayage et ajuster la forme d'onde jusqu'à ce que la largeur de sa section C soit la plus plate possible.

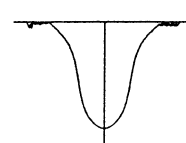


Fig. 20

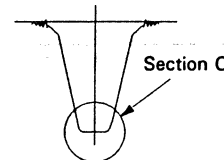


Fig. 21

#### Remarque 2 :

En ce qui concerne les réglages de couverture PO, procéder de la façon suivante.

- Raccorder un voltmètre à courant continu à TP6.
- Ajuster L153 jusqu'à ce que les valeurs indiquées soient identiques à celles du tableau ci-dessous.

Destination	U.C	E,EBS,EZ W,WUN, WAU
Fréquence de limite inférieure	530 kHz	522 kHz
Indication fournie par le voltmètre	1.2V ± 0.1V	1.15V ± 0.1V

#### Remarque 3 :

Régler tout d'abord sur un niveau d'entrée de 74 dB/m. Au fur et à mesure que les réglages progressent, atténuer le niveau d'entrée jusqu'à la valeur minimale requise (environ 60 dB).

Alignement : Comment le condensateur trimmer est omis, le réglage à la fréquence limite supérieure n'est pas exigé.

#### Remarque 4 :

En ce qui concerne les réglages de couverture OC, GO, procéder de la façon suivante.

- Raccorder un voltmètre à courant continu à TP7.
- Ajuster L154 jusqu'à ce que les valeurs indiquées soient identiques à celles du tableau ci-dessous.

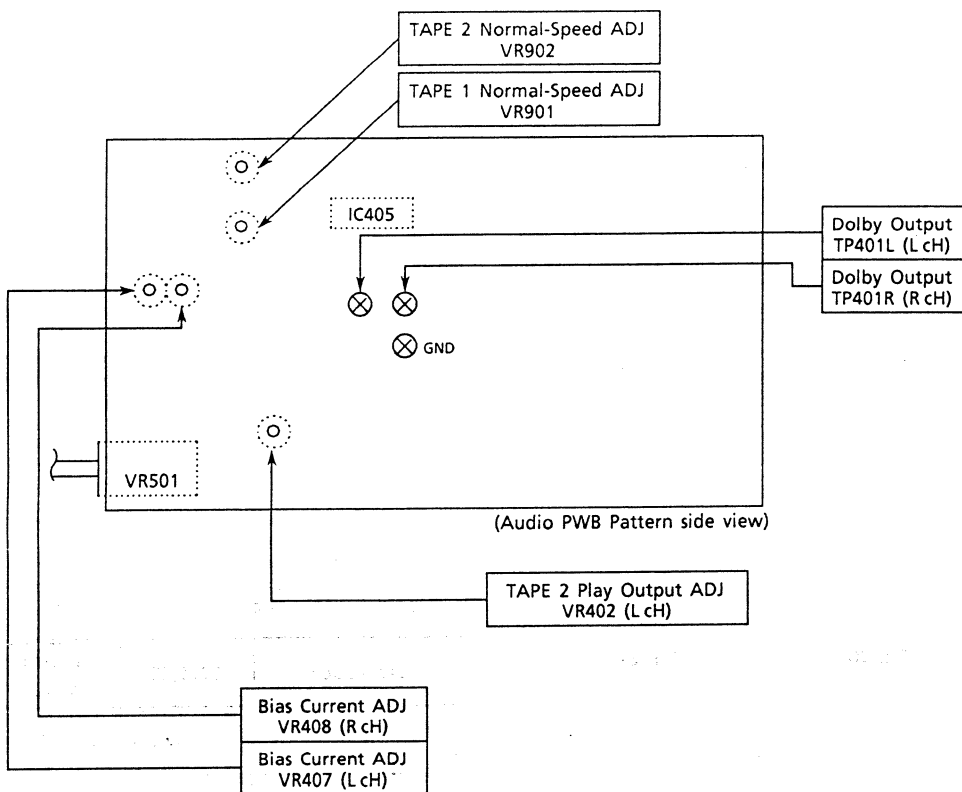
Destination	E,EBS,EZ	W,WUN, WAU
Fréquence de limite inférieure	153 kHz	3.8 MHz
Indication fournie par le voltmètre	1.2V ± 0.1V	1.35V ± 0.1V

(LW)

(SW)

## 2. TAPE DECK SECTION

### • Adjustment points



### 1. Tape speed adjustment Normal speed

Input	Adjustment value	Adjustment position
Tape speed adjustment tape	3000 $\pm$ 10 Hz 0	VR901 (TAPE 1) VR902 (TAPE 2)

Note: Perform the normal speed adjustment in this order. (Perform the adjustment in the FWD mode as reference and check that REW is within  $\pm 1.5\%$  with respect to FWD.)

### Adjustment procedure

#### Normal speed

Connect the frequency counter to the Dolby output TP401L.R. Press the PLAY key and apply heatrunning for 20 minutes or more and apply cooling down for less than 30 seconds. Play the adjustment tape with TAPE1 and TAPE2 and adjust the tape speed at the center of the tape.

Note: Adjust so that the tape speed deviation between TAPE1 and TAPE2 is within 1%. (FWD mode as reference)

### 2. REC/PLAY head angle adjustment

Input	Adjustment value	Adjustment position
Angle correction tape MTT-256U Third section (125kHz tone)	Max. output	Head angle adjustment screw

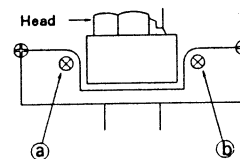
Connect the electronic voltmeter to the Dolby output TP401L.R and play the angle correction tape in FWD and REV modes and adjust. In FWD mode, adjust screw (a), and adjust screw (b) in REV mode.

If the maximum values of both channels are different, match with the value of L channel. At this time, check that the difference of the maximum values between both channels is within 2dB.

If it is not, readjust.

Adjust the phase in both FWD and REV modes so that phase is within  $\pm 45^\circ$  for both channels.

Note: Be sure to stop after turning the screw in tightening direction. (Backlash may occur with the screw.)



Apply screw-lock paint to both (a) and (b) after the adjustment is completed. (Between screw and head base)

### 3. Play output adjustment

Test tape	Output	Adjustment position
Dolby standard tape MTT-150	300 mV	VR401 (RcH of TAPE2) VR402 (LcH of TAPE2)

#### Adjustment procedure

Connect the electronic voltmeter to the Dolby output TP401L.R and play the Dolby standard tape (MTT-150). Adjust VR401, VR402 so that the reading of the electronic voltmeter is the value shown above. (Adjust only in FWD mode.)

### 4. Bias current adjustment

Input	Output	Mode	Adjustment position
AUX	Dolby test point (P410)	REC→PLAY	VR407 (LcH) VR408 (RcH)

#### Adjustment procedure

Input the 1 kHz/12 kHz, 300mV -23dB (at TP401L.R) signal to AUX IN. Adjust VR407 and VR408 so that the play output level of 12.5kHz is within -23dB (+0.5dB ~ +1dB) from that of 1 kHz when these signals are recorded and played back with normal tape.

Symbol No.	Switches and Controls	Position
S	DOLBY NR	OFF
S	TAPE SW	AUTO
RV	REC VOL	ALC

Perform the following adjustments in the sequence stated after cleaning the head, pressure roller, and capstan with a head cleaning stick moistened in alcohol.

### 5. Cassette Chassis Inspection

No.	Inspection item	Reference value	Remarks
1	Playback torque	27 to 60 g.cm	
2	FF/REW torque	55 to 120 g.cm	
3	Supply back-tension	1.8 to 5.0 g.cm	
4	Tape drive force	Over 50 g (TAPE 1) Over 100 g (TAPE 2)	

### LUBRICATION

Apply one or two drops of pan motor oil or sonic slider oil to rotating parts. Coat sliding parts with Molycoat (EL-10M).

Lubricate once a year or every 1,000 hours of operation. Do not let oil contact belts or idlers.

Rotating Parts	Metal to metal	Pan motor oil (10W-40)
	Plastics to metal	Sonic slider oil (#1600)
Sliding parts	(Note) Plastics to plastics	Molycoat (EL-10M)
	Plastics to metal	
Spring vibration prevention		Flyol (GB-T5-1)

#### Note :

When front frame and slide knob are replaced, coat both contacting parts lightly with white grease.

### MAINTENANCE

#### ■ Clean cabinet and panels when dirty

Clean off dirt on the surfaces with a dry cloth. Never use thinners, benzene or alcohol since these will damage the surface finish.

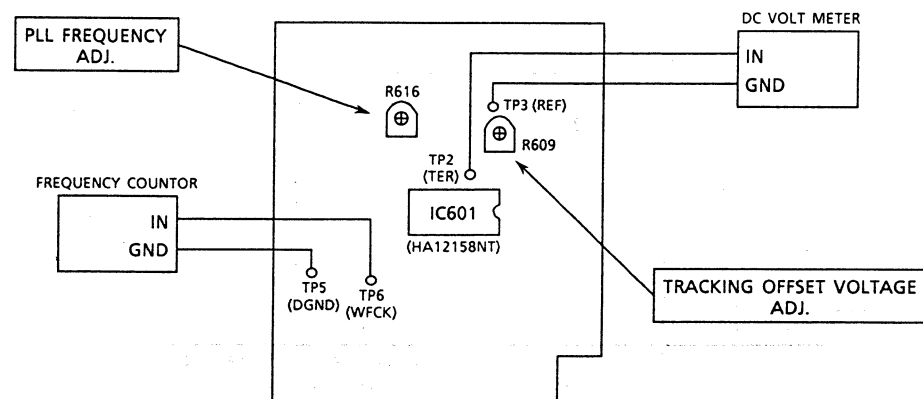
### 3. CD PLAYER SECTION

#### • Adjustment points

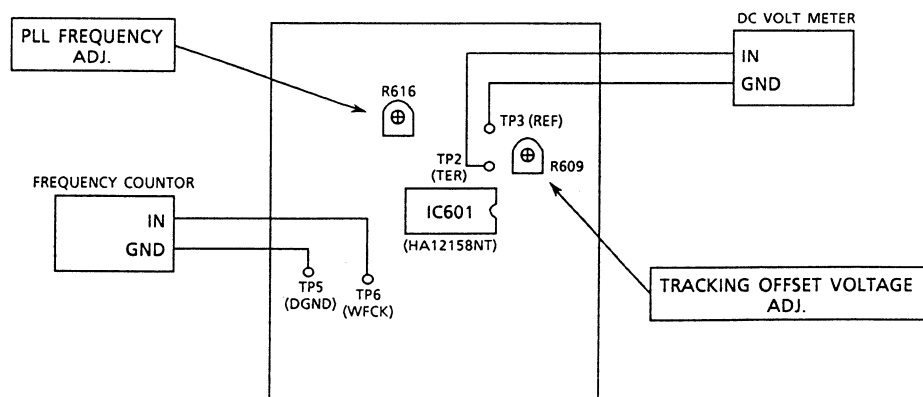
#### CAUTION

Do not adjust any pre-set Resistors or Controls, which are not detailed in the adjustment instructions for the CD Player as this may result in the exposure to hazardous radiation.

(HTC-15)



(HTC-C15)



#### 1. Preparation

- Turn on the power on, and set the function to "CD".
- Open the CD tray.

#### (2) Adjustment of pll frequency.

Adjust R616 so that the frequency of TP6 (WFCK) should be within the limit of belows.

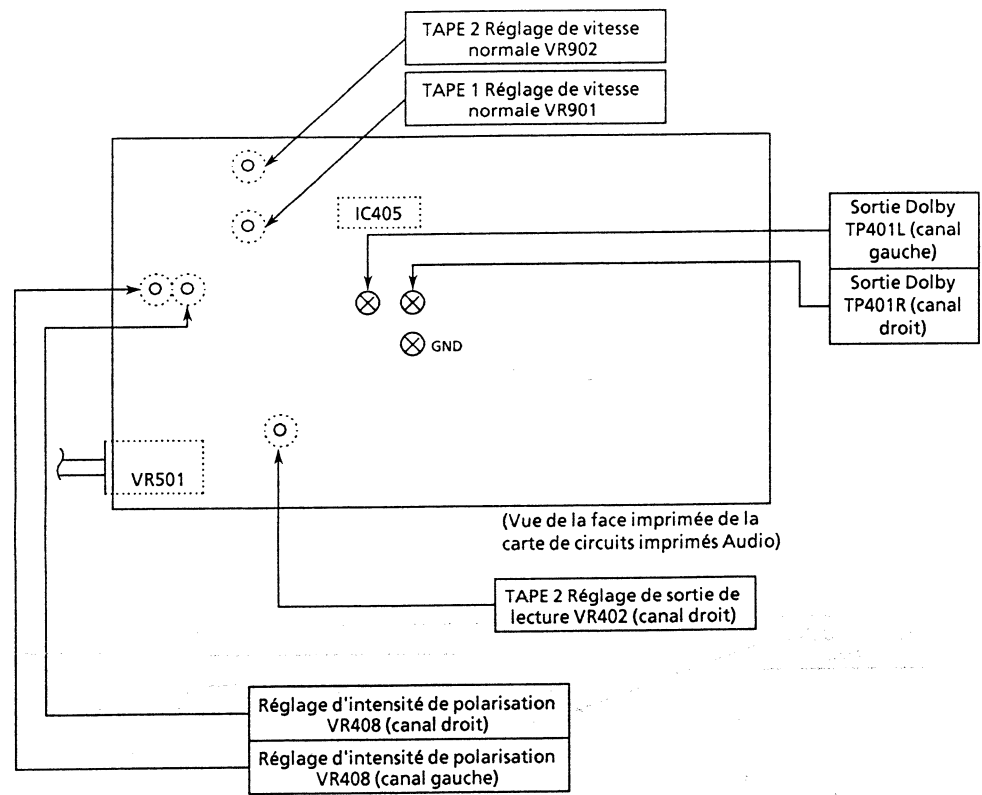
#### Adjustment method

- Adjustment of tracking offset voltage  
Adjust R609 so that the voltage of TP2 (TER) should be within the limit of  $0 \pm 5mV$ .

Model	PLL Frequency
AX-15	$7.90 \pm 0.05kHz$
AX-C15	$7.90 \pm 0.05kHz$

## 2. SECTION MAGNETOCASSETTE

### • Points de Réglage



No. de symbole	Commutateurs et organes de réglage	Position
S	DOLBY NR	OFF
S	TAPE SW	AUTO
RV	REC VOL	ALC

Effectuer les réglages suivants dans l'ordre indiqué après avoir effectué le nettoyage des têtes, des galets presseurs et du cabestan avec un bâtonnet de nettoyage imprégné d'alcool dénaturé.

#### 1. Réglage de vitesse de défilement de la bande magnétique

Vitesse normale

Entrée	Valeur de réglage	Position de réglage
Bande d'étalonnage utilisée pour le réglage de vitesse	3000 +10 0 Hz	VR901 (TAPE 1) VR902 (TAPE 2)

Remarque : Effectuer le réglage de vitesse de défilement normale en respectant cet ordre. (Effectuer le réglage en mode FWD comme moyen de référence et vérifier qu'en mode REW, la valeur se situe dans les limites de + 1,5 % par rapport à la valeur obtenue en mode FWD.)

#### Procédure de réglage

Vitesse normale  
Brancher le fréquencemètre à la sortie Dolby TP401L, R. Appuyer sur la touche PLAY et assurer un fonctionnement de mise à la température d'au moins 20 minutes puis laisser refroidir l'appareil pendant moins de 30 secondes. Lire la bande magnétique de réglage dans TAPE1 et TAPE2 et caler la vitesse de défilement de la bande magnétique puis faire le réglage sur la partie centrale de la bande magnétique.

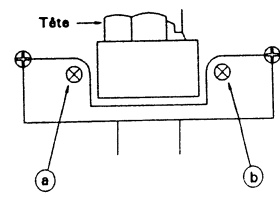
Remarque : Régler de telle sorte que l'écart de vitesse de défilement de la bande magnétique entre TAPE1 et TAPE2 soit de l'ordre de 1 % ou moins. (Prendre le mode FWD comme moyen de référence.)

#### 2. Réglage d'angle d'inclinaison de la tête REC/PLAY

Entrée	Valeur de réglage	Position de réglage
Bande d'étalonnage utilisée pour la correction de l'angle d'inclinaison Troisième section MIT256U (tonalité de 12,5 kHz)	Sortie maximum	Vis de réglage d'angle d'inclinaison de tête

Brancher un voltmètre électronique à la sortie Dolby TP401L, R et lire la bande d'étalonnage utilisée pour la correction de l'angle d'inclinaison en mode FWD et en mode REW puis régler. En mode FWD, régler avec la vis de réglage ③ et en mode mode REW, régler avec la vis de réglage ④.

Si les valeurs maximales des deux canaux sont différentes, faire correspondre avec la valeur du canal gauche. Dans ce même temps, vérifier que la différence des valeurs maximales entre les deux canaux se situe dans les limites de 2 dB. Dans le cas contraire, refaire un réglage. Caler la phase au cours des modes FWD et REW et faire en sorte que la phase se situe dans les limites de + 45° sur les deux canaux.



Remarque : Ne pas oublier de freiner après avoir manipulé la vis de réglage dans le sens du serrage. (Un jeu de réglage risque de se produire avec la vis de réglage.)

Tête Enduire les têtes de vis de réglage ③ et ④ de peinture de freinage quand les réglages sont terminés. (Enduire entre la vis et l'embase de tête.)

#### 3. Réglage de niveau de sortie de lecture

Bande d'étalonnage	Sortie	Position de réglage
Bande d'étalonnage Dolby standard MTT-150	300 mV	VR401 (canal droit de TAPE2) VR402 (canal gauche de TAPE2)

#### Procédure de réglage

Brancher un voltmètre électronique à la sortie Dolby TP401L, R et lire la bande d'étalonnage Dolby standard. Ajuster VR401 et VR402 de telle sorte que le voltmètre électronique indique la valeur indiquée ci-dessus. (Ne faire le réglage qu'en mode FWD.)

#### 4. Réglage du courant de polarisation

Entrée	Sortie	Mode	Position de réglage
AUX	Composant d'essai Dolby (P410)	REC→PLAY	VR407 (canal gauche) VR408 (canal droit)

#### Procédure de réglage

Injecter des signaux de 1 kHz/12 kHz, 300 mV, - 23 dB (à TP401L, R) par AUX IN. Ajuster VR407 et VR408 de telle sorte que le niveau de sortie de lecture de 12,5 kHz se situe dans les limites de - 23 dB (+ 0,5 dB - + 1 dB) à partir de celui de 1 kHz quand les signaux sont enregistrés et lus avec une bande magnétique normale.

### 5. Réglage du châssis de cassette

No.	Point d'inspection	Valeur de référence	Observation
1	Couple en lecture	De 27 à 60 g.cm	
2	Couple avance rapide / rebobinage	De 55 à 120 g.cm	
3	Tension bobine débitrice	De 1.8 à 5.0 g.cm	
4	Force de défilement de band	Plus de 50 g (TAPE 1) Plus de 100 g (TAPE 2)	

## LUBRIFICATION

Appliquer une ou deux gouttes d'huile moteur ou d'huile sonic pour curseur, sur les membres rotatifs.

De la graisse Molycort (EL-10M) est appliquée sur les membres coulissants.

Lubrifier une fois par an ou toutes les 1000 heures de fonctionnement.

Veiller à ne pas appliquer d'huile sur les courroies ou les galets.

Membres rotatifs	Entre les parties métalliques	Huile moteur (10W-40)
	Entre le moulage et les parties métalliques	Huile Sonic pour curseur (#1600)
Membres coulissants	(Remarque) Entre moulures entre moulures et pièces métalliques	Molycoat (EL-10M)
Prévention de vibration de ressort		Flyol (GB-TS-1)

#### Remarque :

Lorsque le châssis avant et le bouton curseur doivent être remplacés, appliquer une couche légère de graisse blanche sur les parties de contact.

## ENTRETIEN

### ■ Nettoyage du coffret et des panneaux lorsqu'ils sont sales

Enlever la poussière des surfaces de l'appareil avec un chiffon sec. Ne jamais utiliser de solvants de benzine ou d'alcool car ils abîmeraient le fini des surfaces.

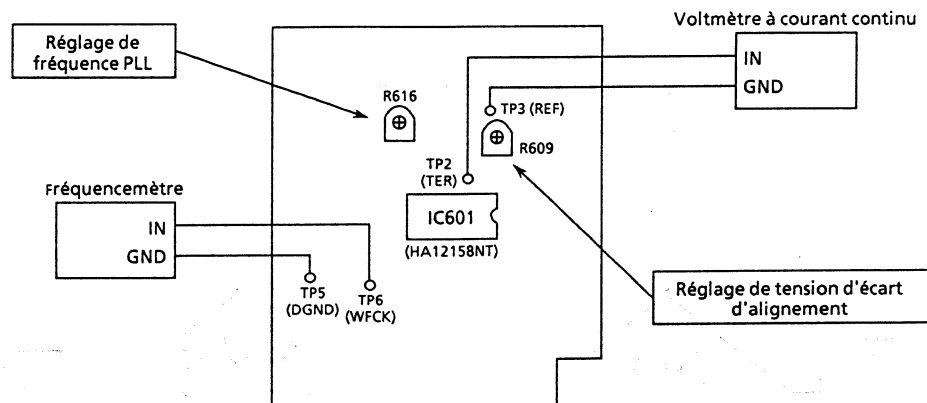
## 3. SECTION LECTEUR DE DISQUE COMPACT

### • Points de Réglage

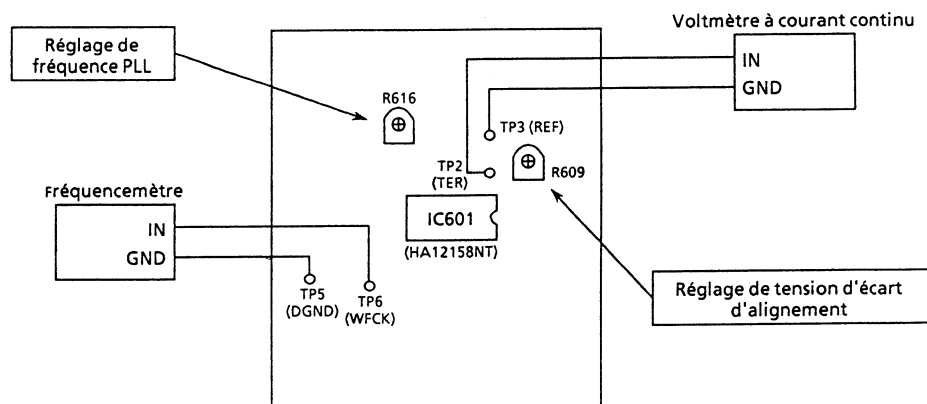
#### ATTENTION

Ne pas modifier le réglage des résistances ou des commandes précalées qui ne font pas l'objet d'une description dans les réglages de ce lecteur CD car ceci pourrait se traduire par un risque d'exposition à des radiations dangereuses.

(HTC-15)



(HTC-C15)



#### 1. Préparatifs

- (1) Mettre sous tension et choisir la fonction "CD".
- (2) Commander l'ouverture du plateau de CD.

#### Procédure de réglage

- (1) Calage de la tension d'écart d'alignement  
Ajuster R609 de telle sorte que la tension obtenue à TP2 (TER) se situe dans les limites de 0 + 5 mV.

- (2) Calage de la fréquence PLL Ajuster R616 de telle sorte que la fréquence obtenue à TP6 (WFCK) se situe dans les limites indiquées ci-dessous.

Modèle	Fréquence PLL
AX-15	7.90 ± 0.05kHz
AX-C15	7.90 ± 0.05kHz



# TROUBLESHOOTING · RECHERCHE DE PANNES

## 1. System check · Vérification de système

Connect the AC plug and system connectors 1 and 2, and turn the power switch on.  
Brancher la prise d'alimentation secteur et les connecteurs de système 1 et 2 puis mettre sous tension avec l'interrupteur d'alimentation.

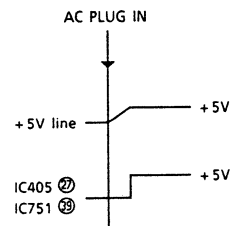
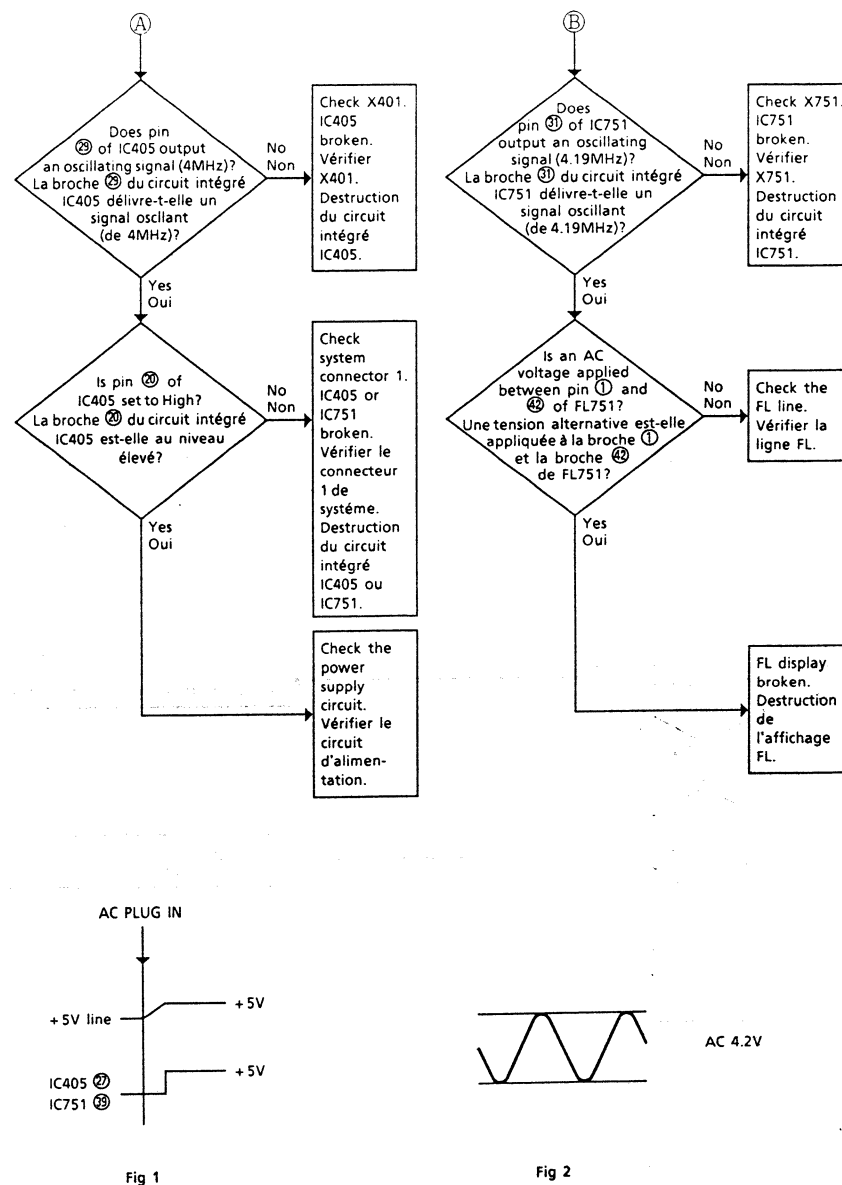
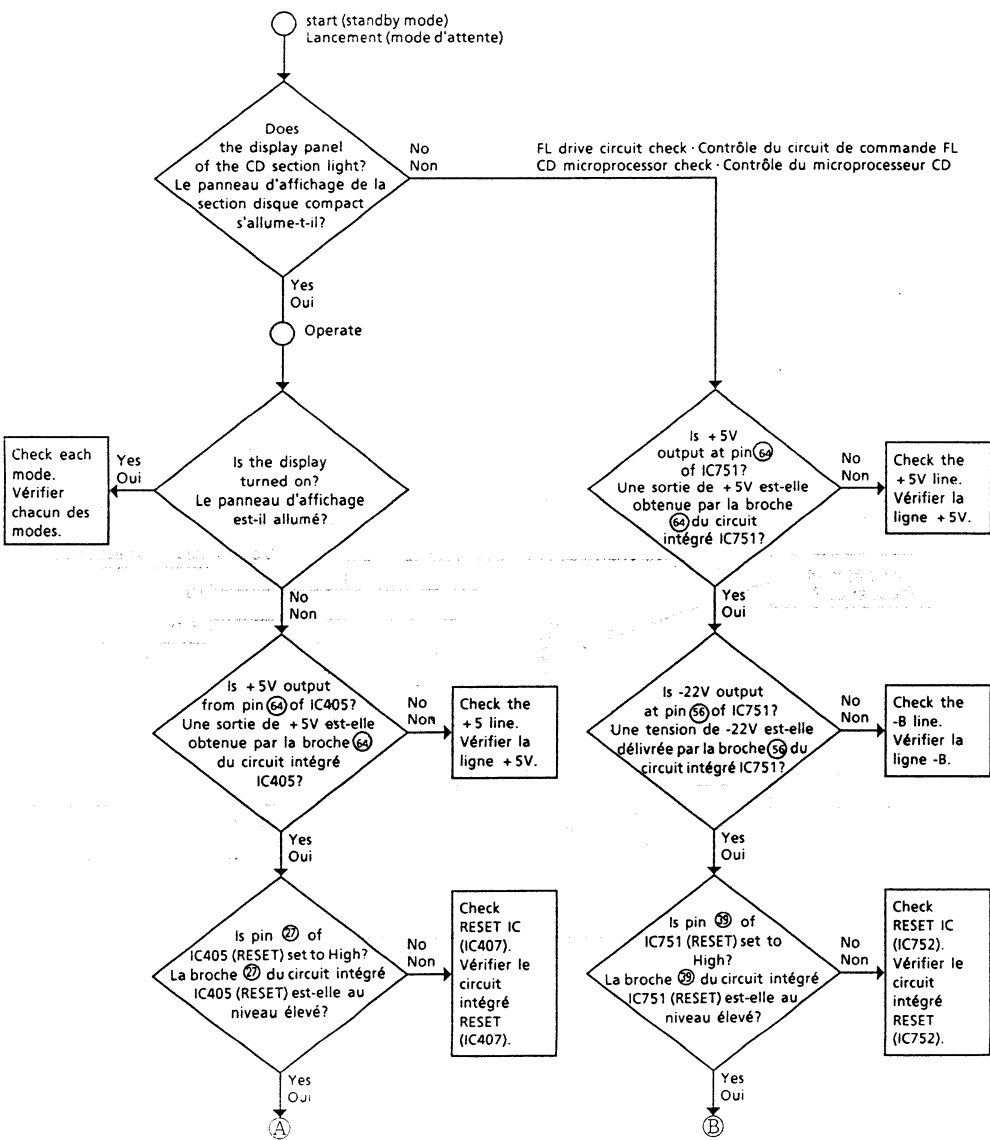


Fig 1

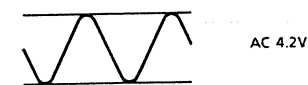
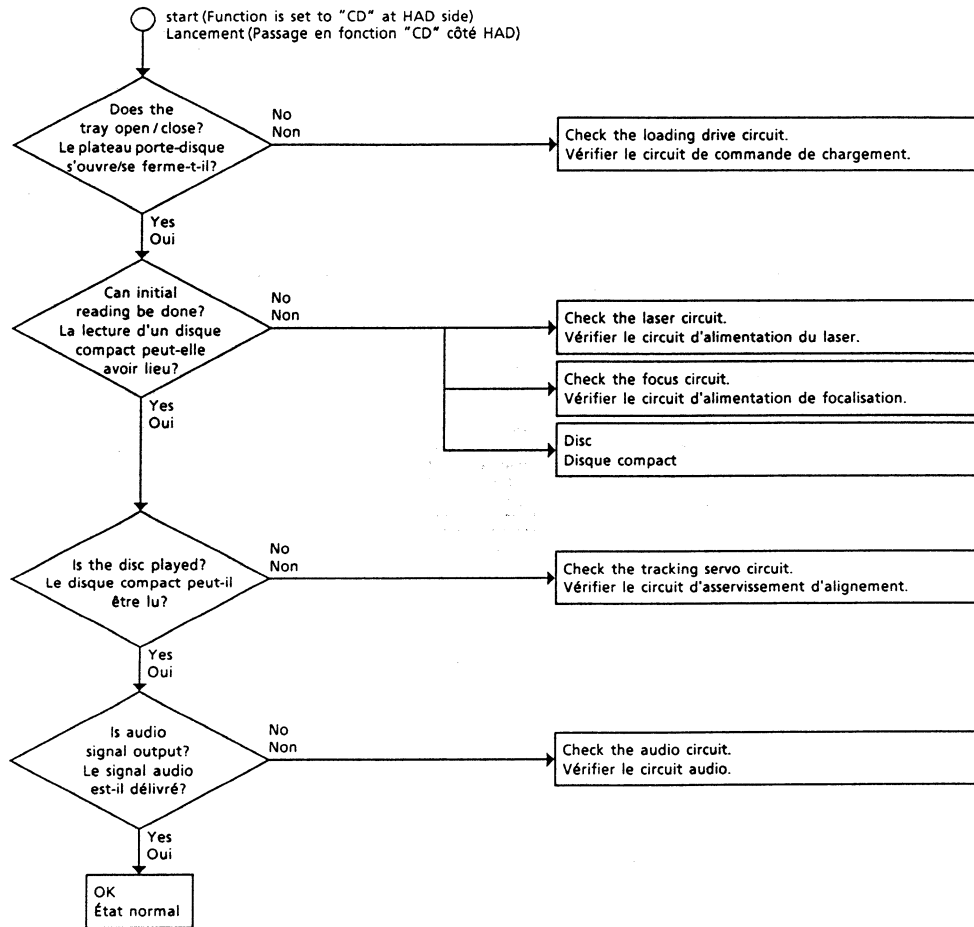


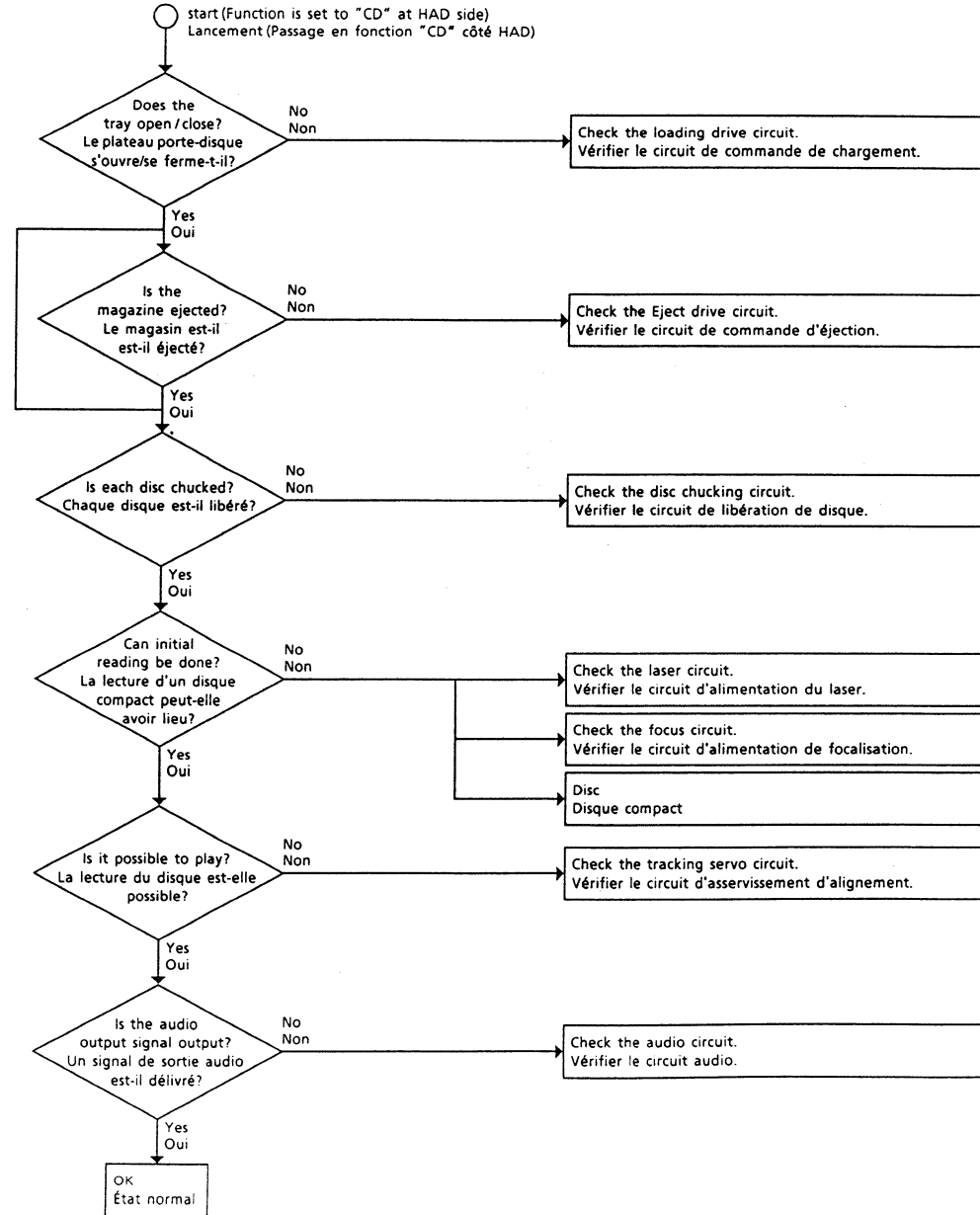
Fig 2

## 2. CD section - Étage de lecteur de disque compact

HTC-15

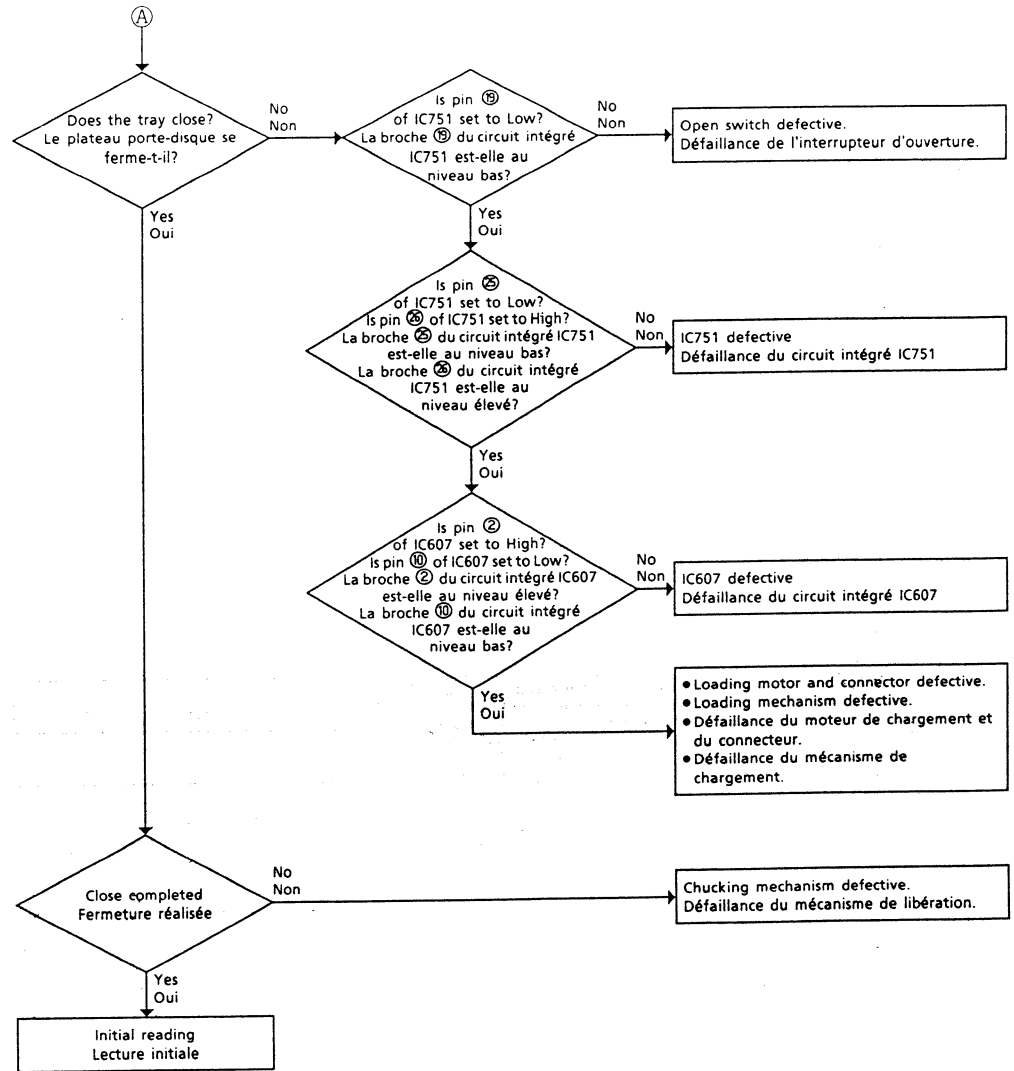
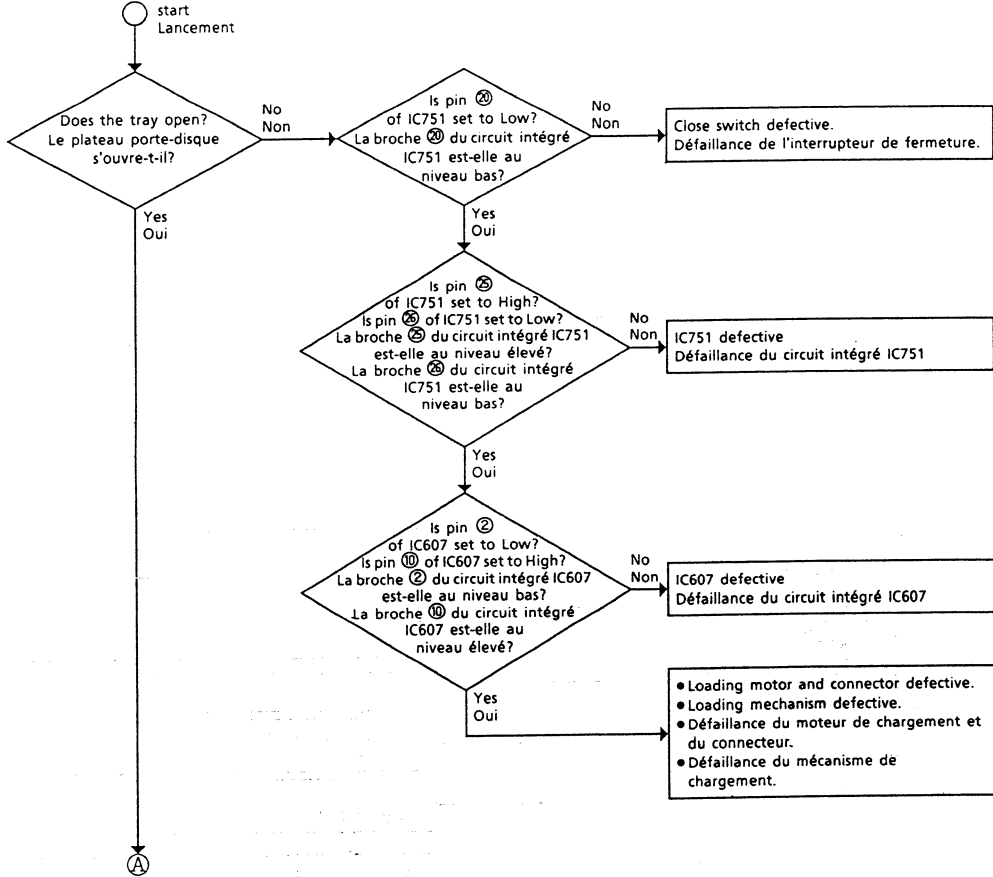


HTC-C15

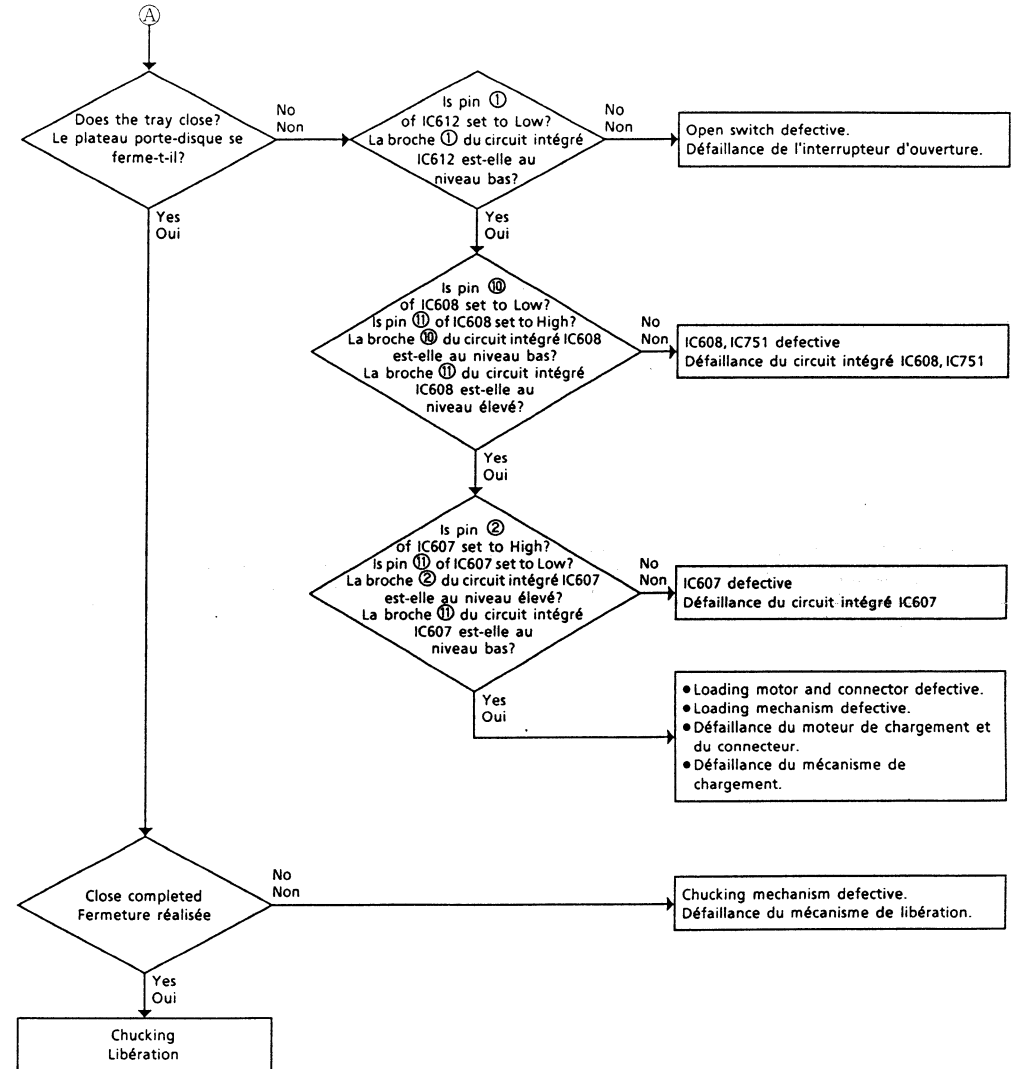
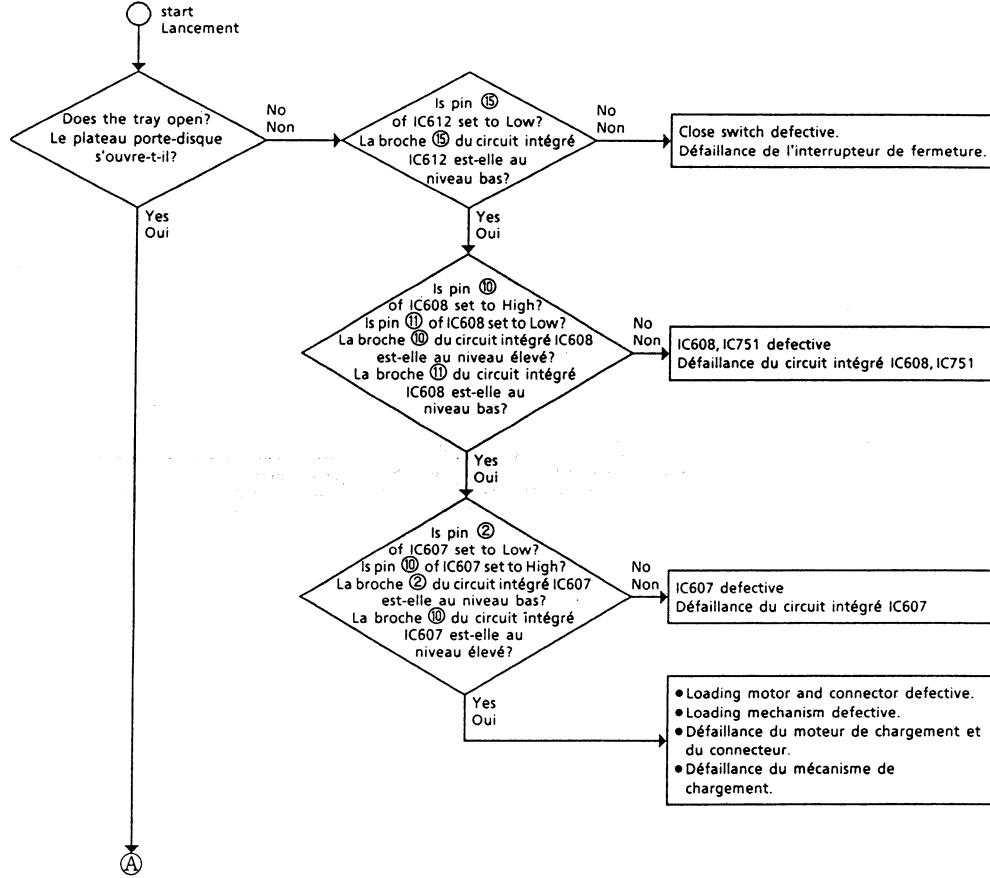


2-1 When the tray does not operate correctly  
Lorsque le plateau porte-disque ne fonctionne pas correctement

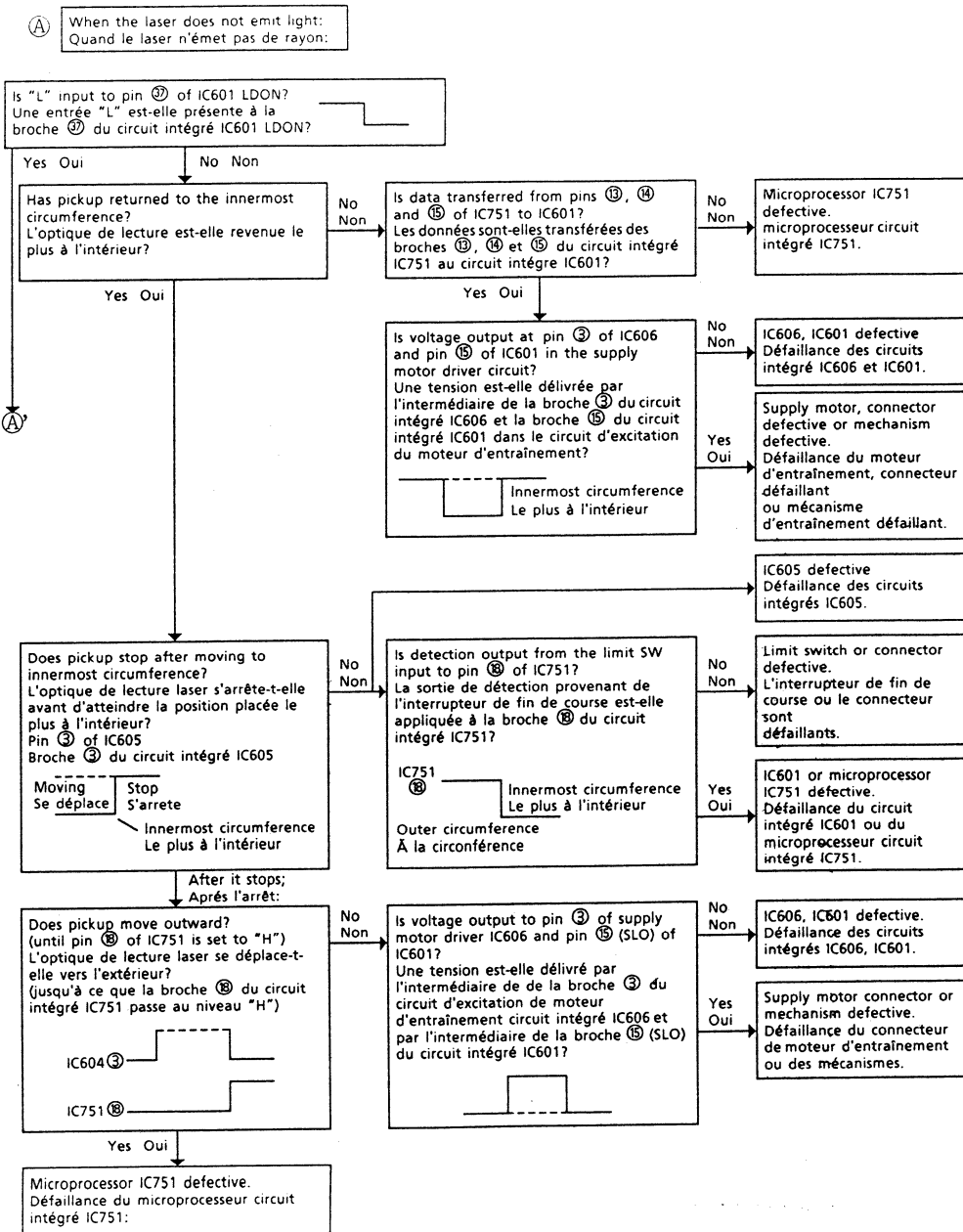
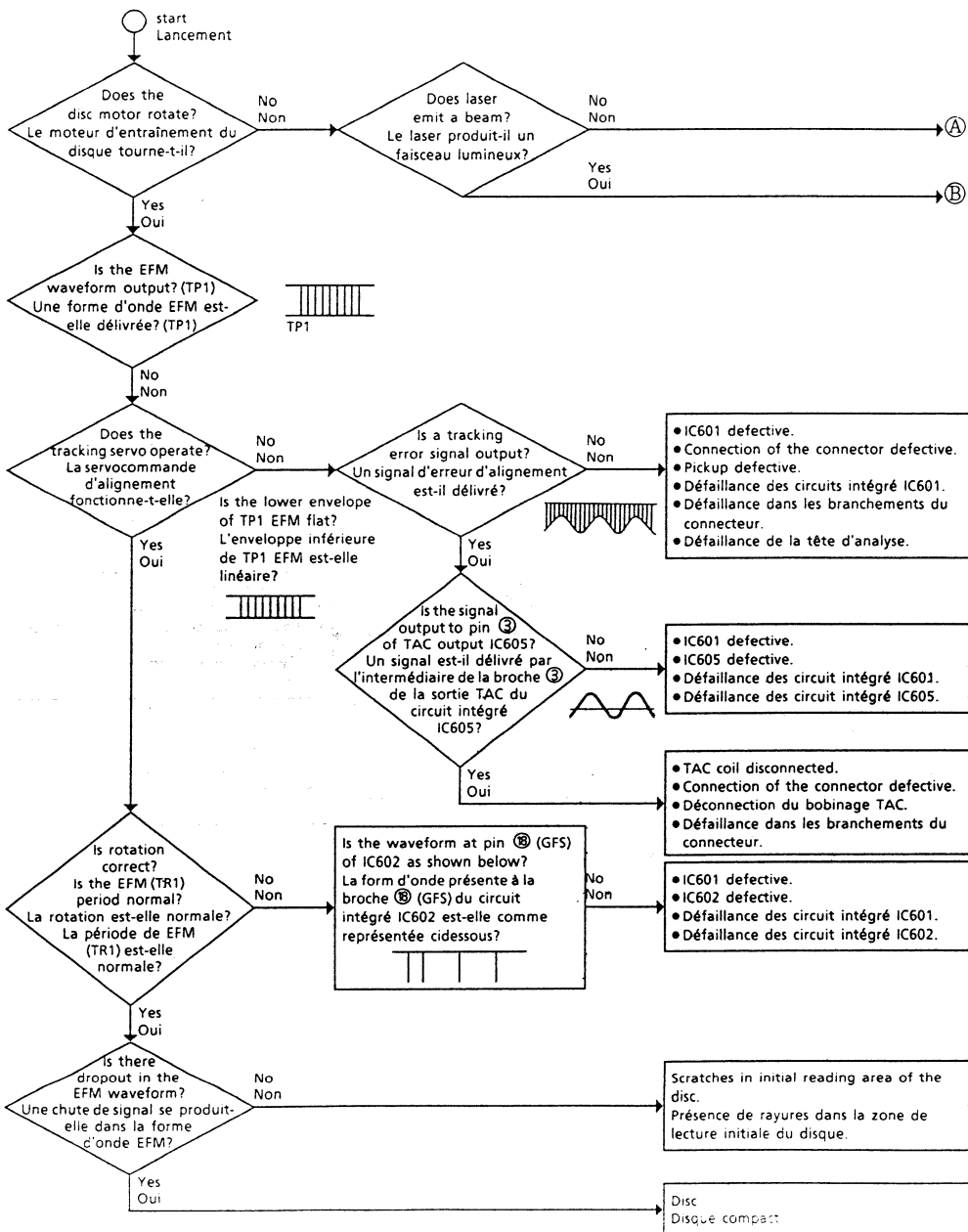
HTC-15



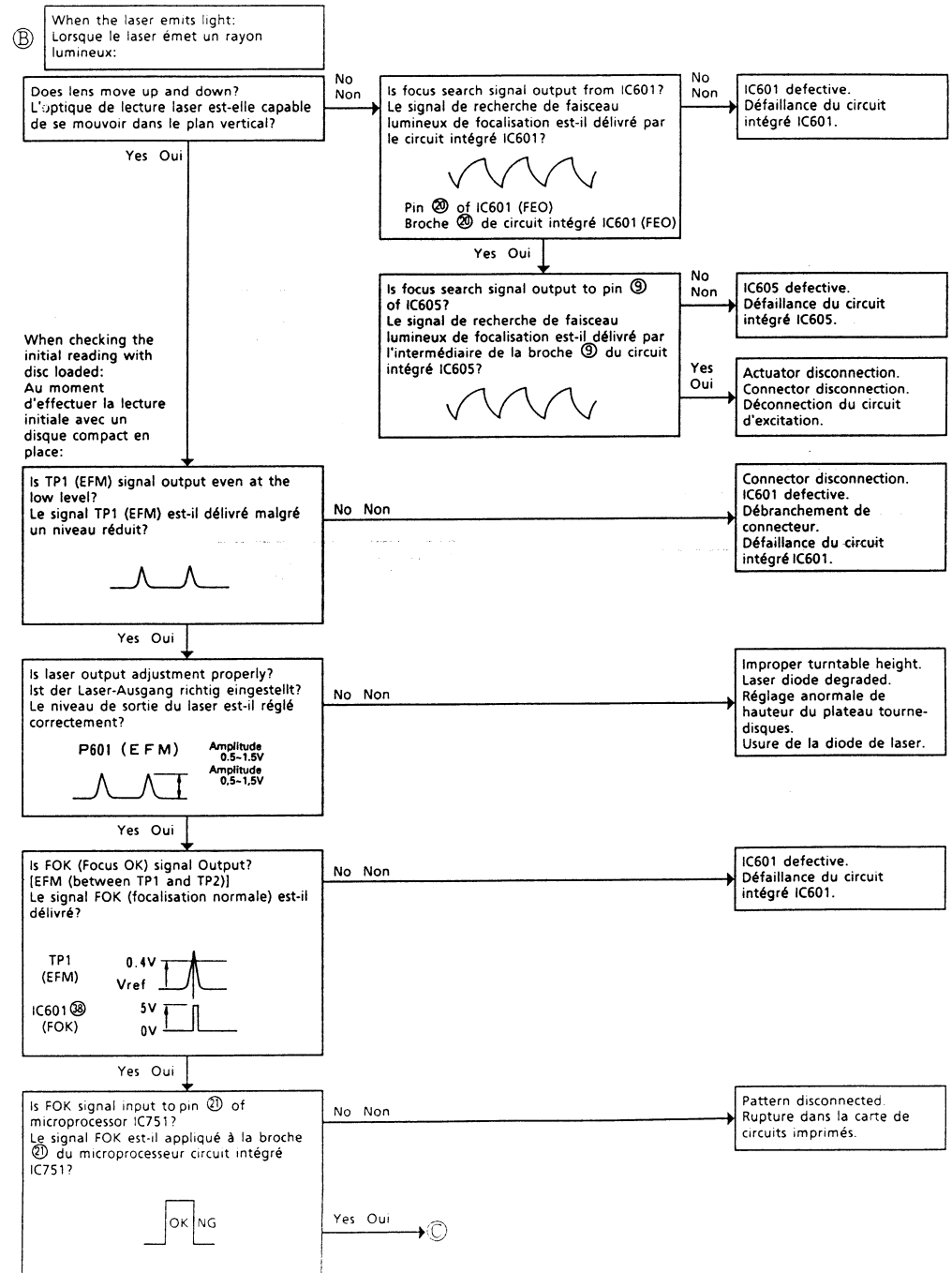
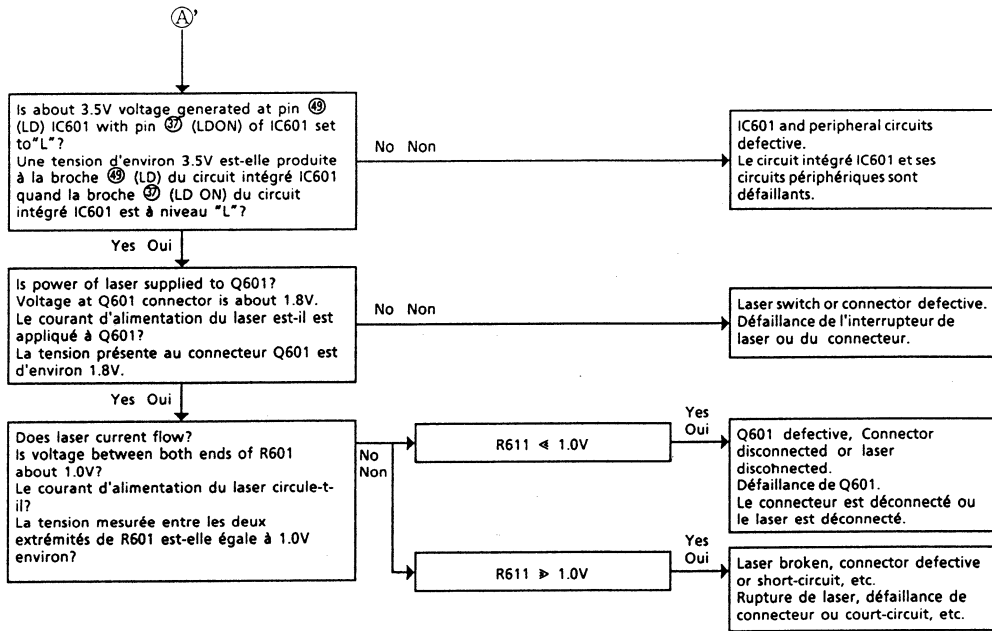
HTC-15

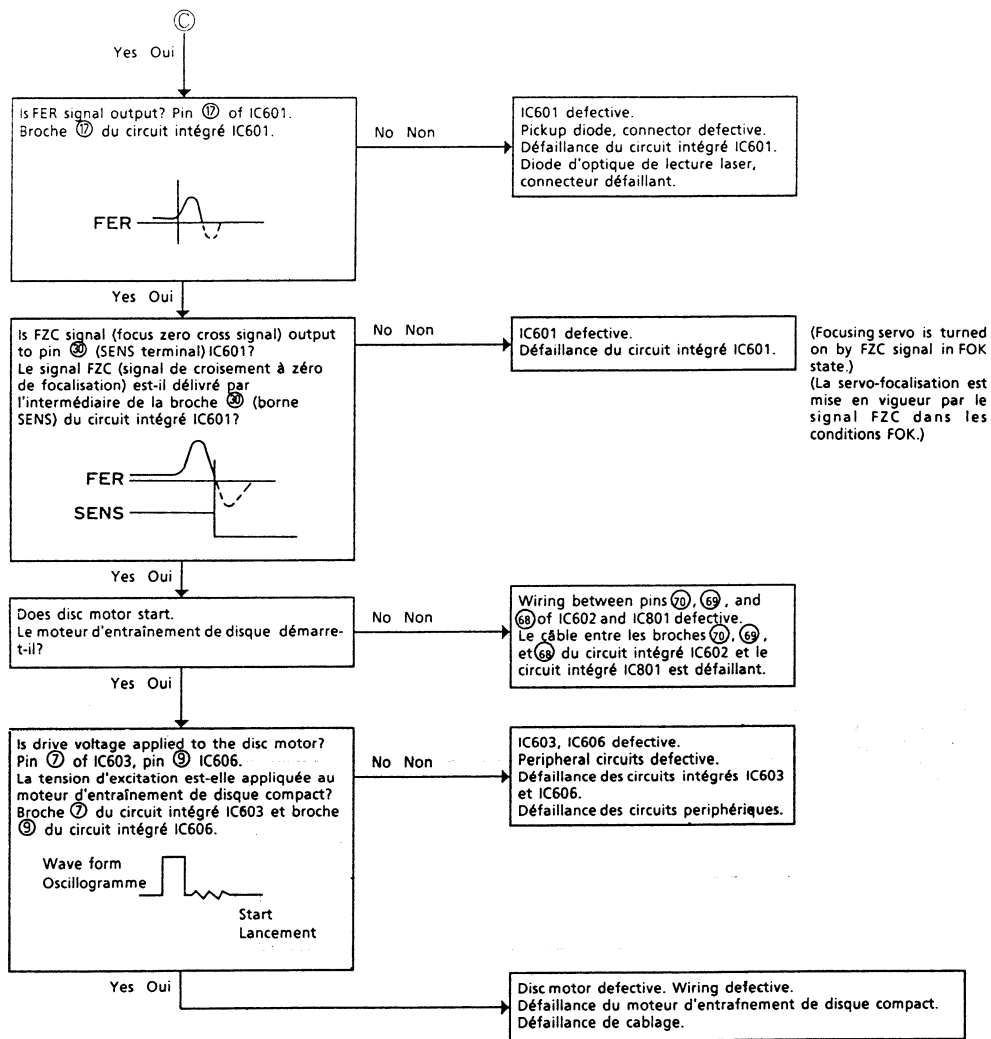


## 2-2 When initial reading is impossible Lorsque la lecture initiale ne peut pas avoir lieu



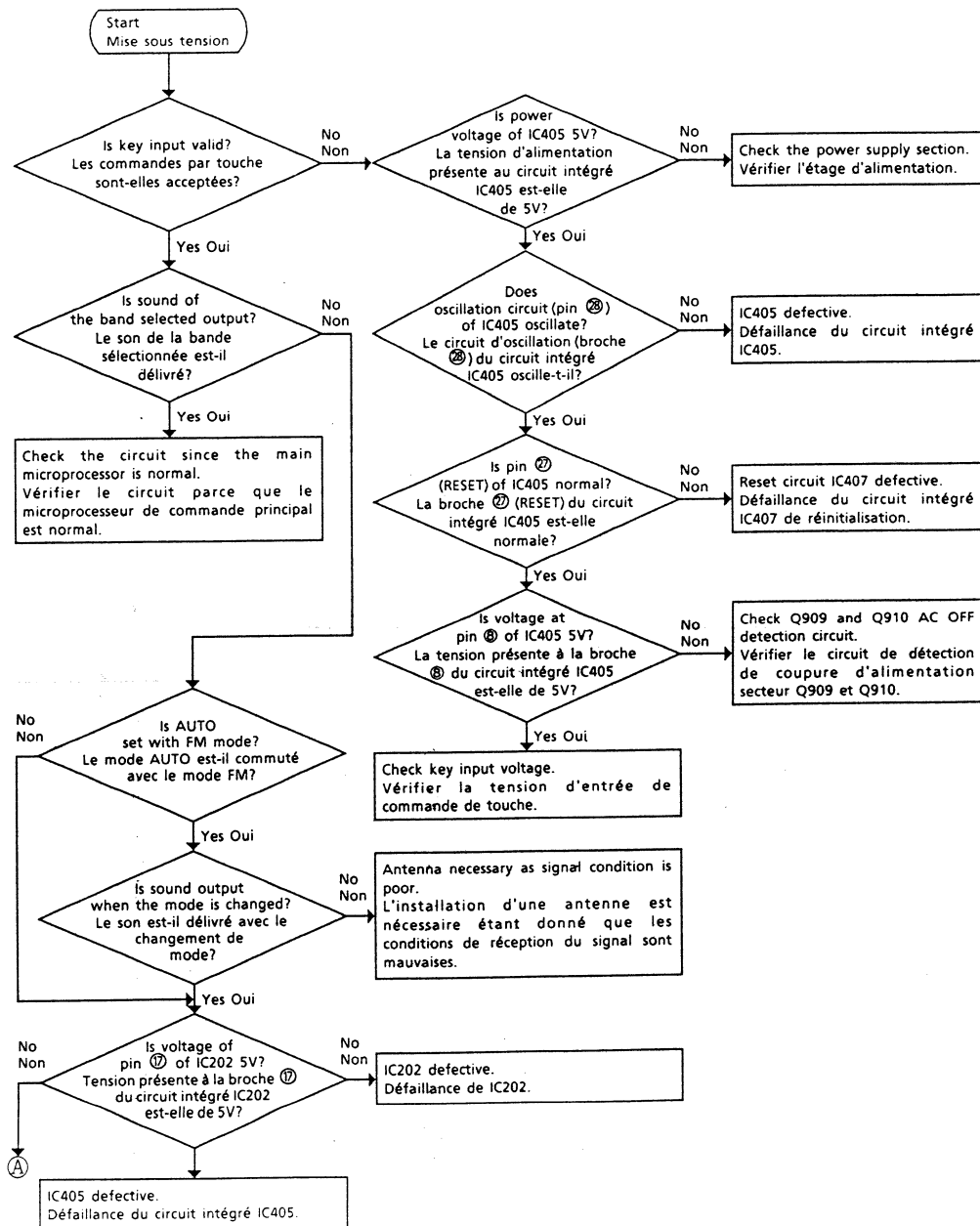




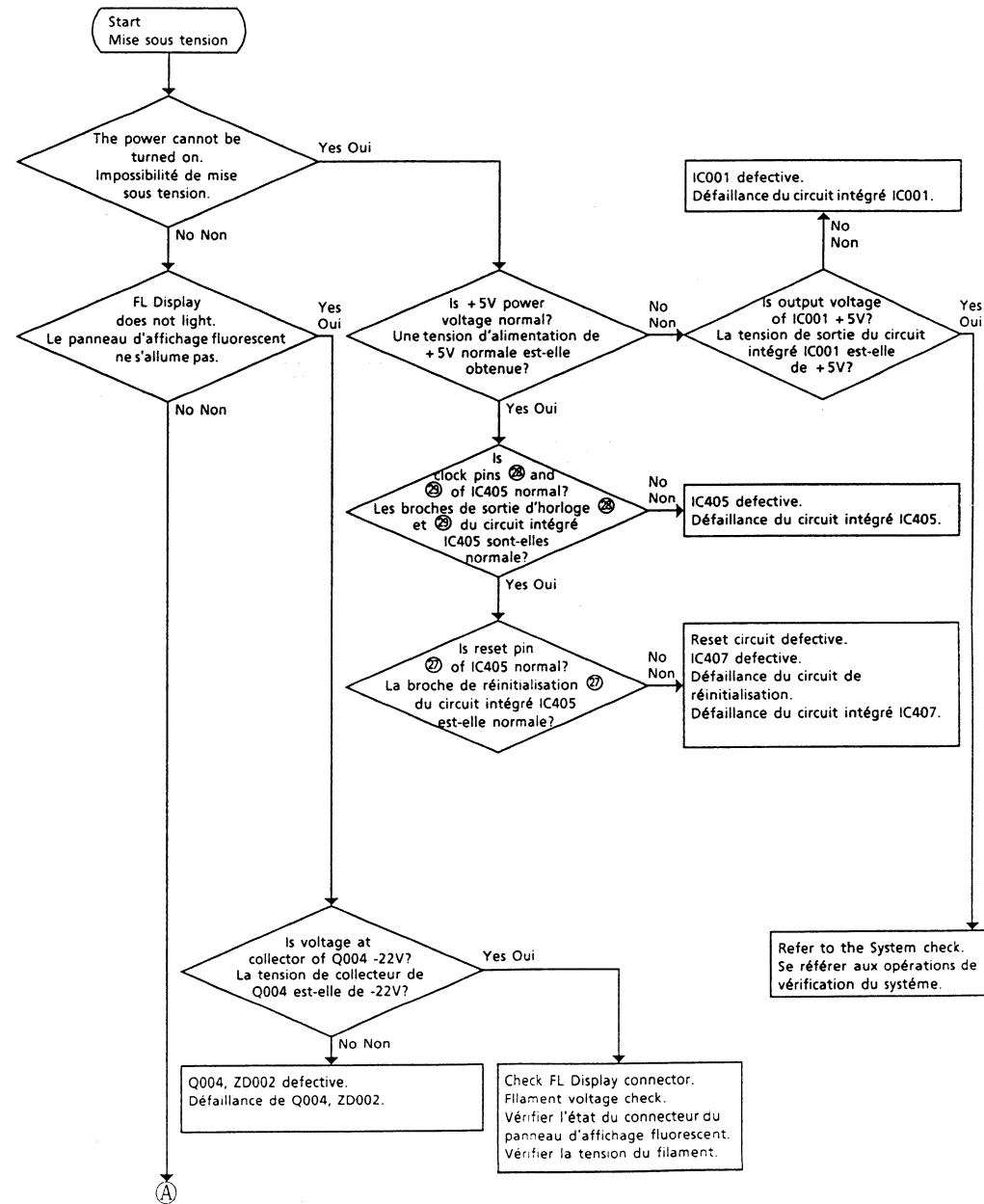
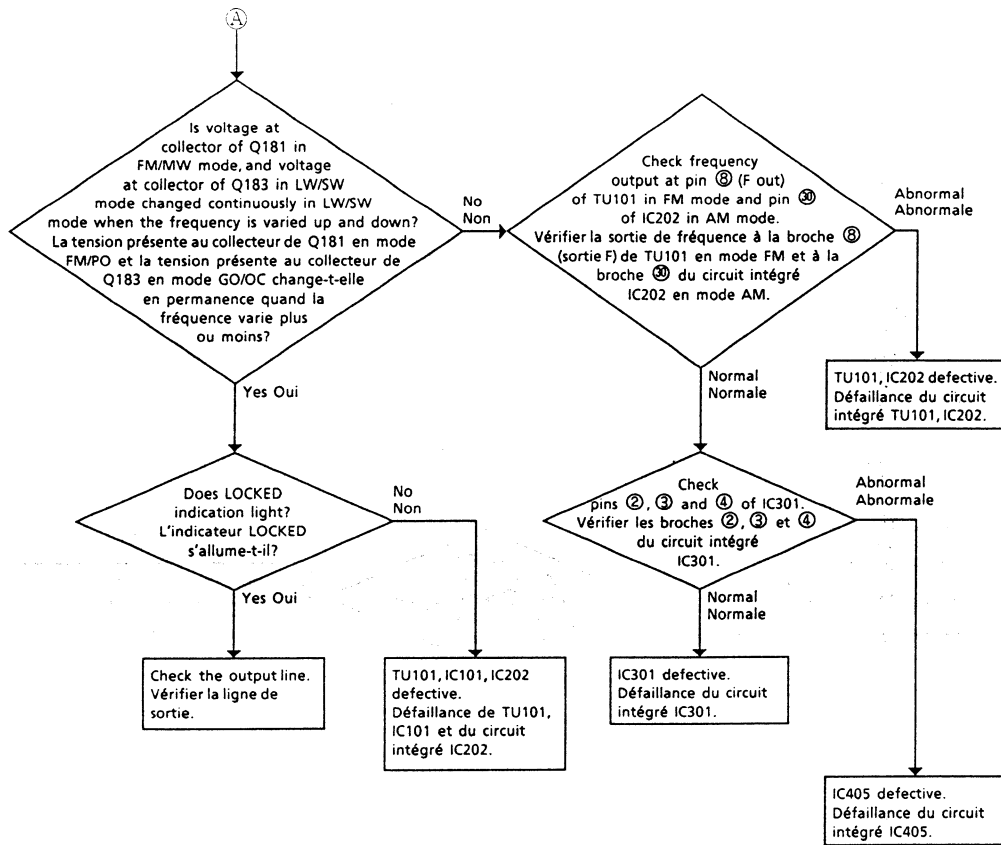


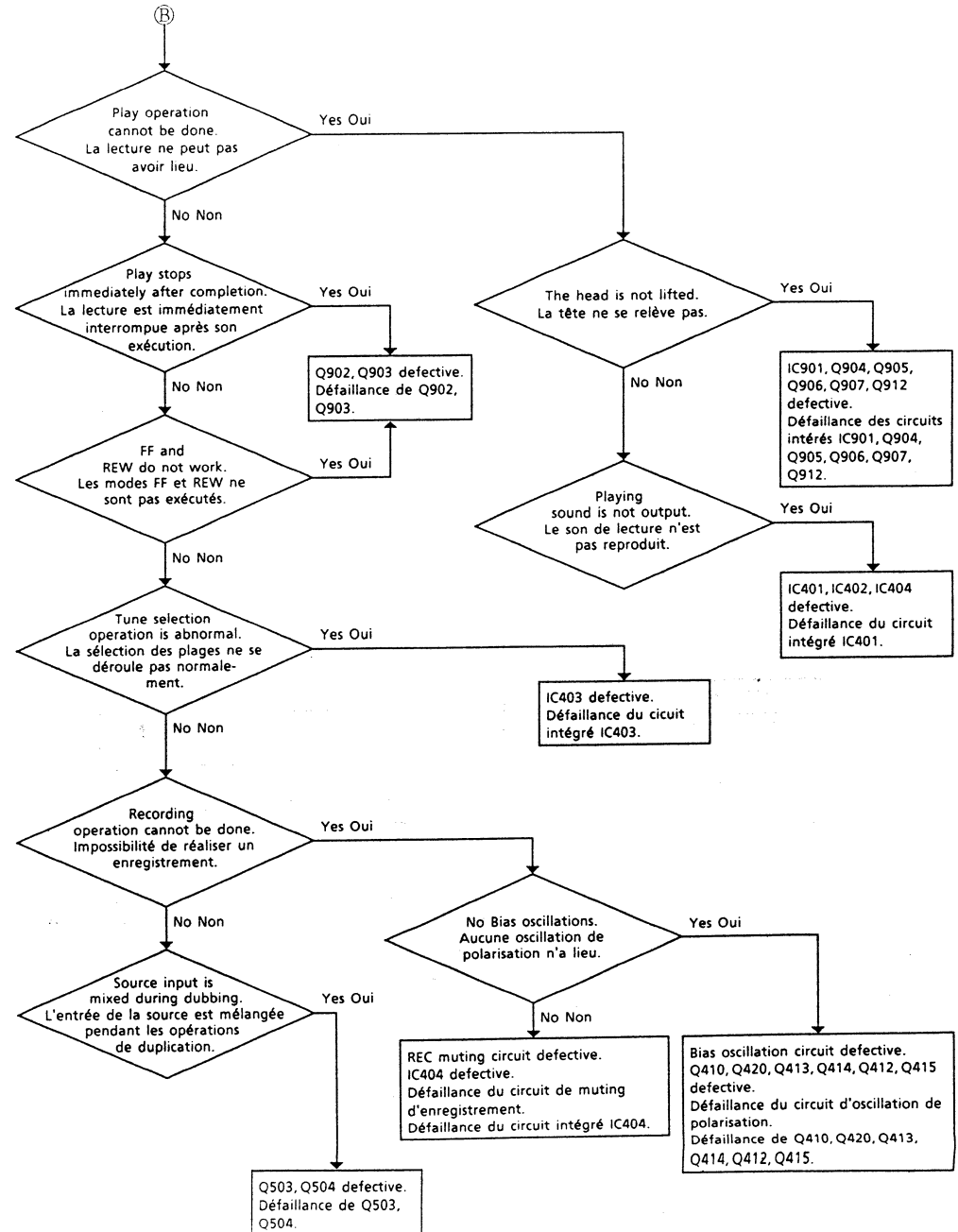
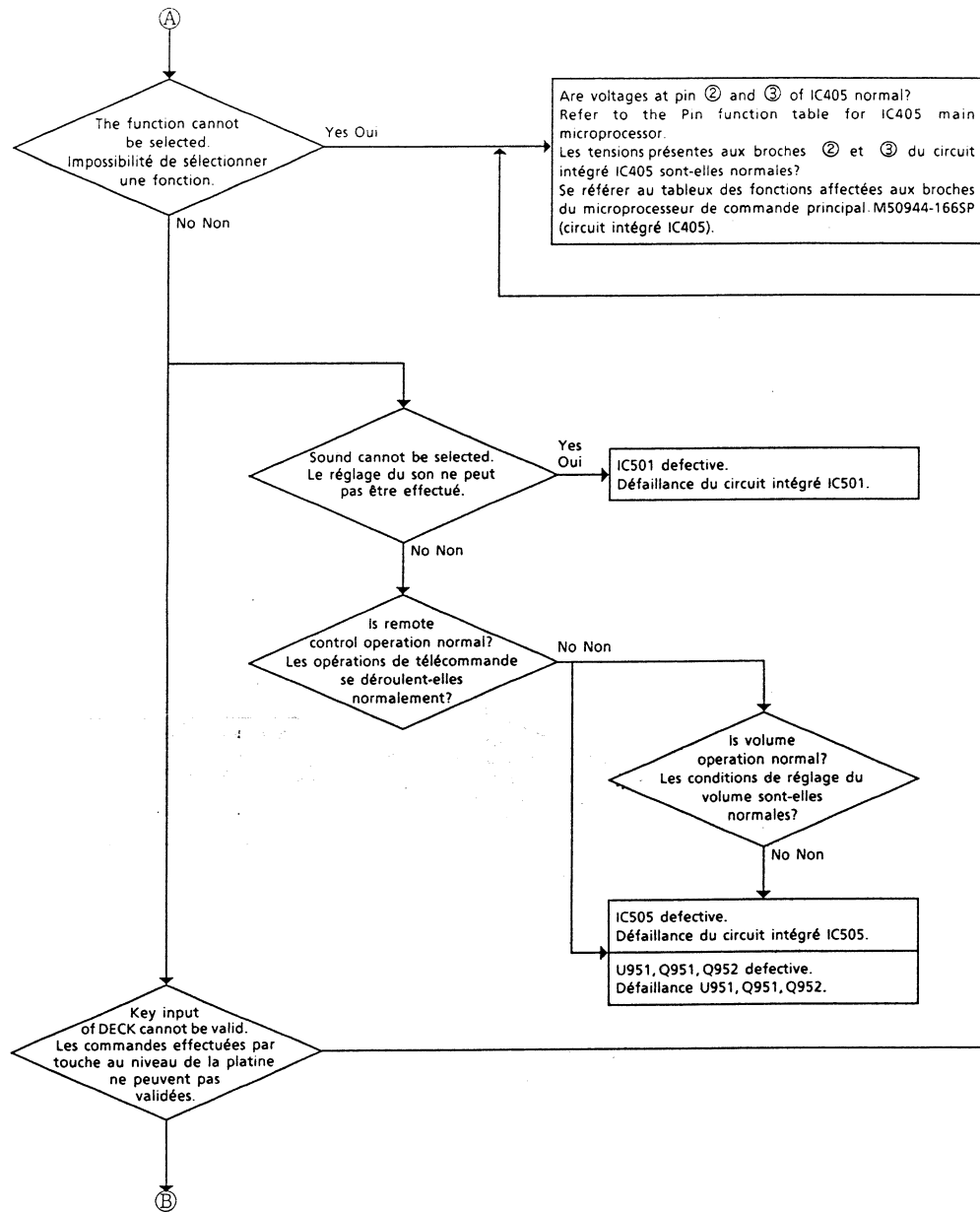
### 3. Tuner section · Étage syntoniseur

Function : Tuner position . Conditions de fonctionnement : position syntoniseur



#### 4. Deck/amplifier section · Étage platine/amplificateur

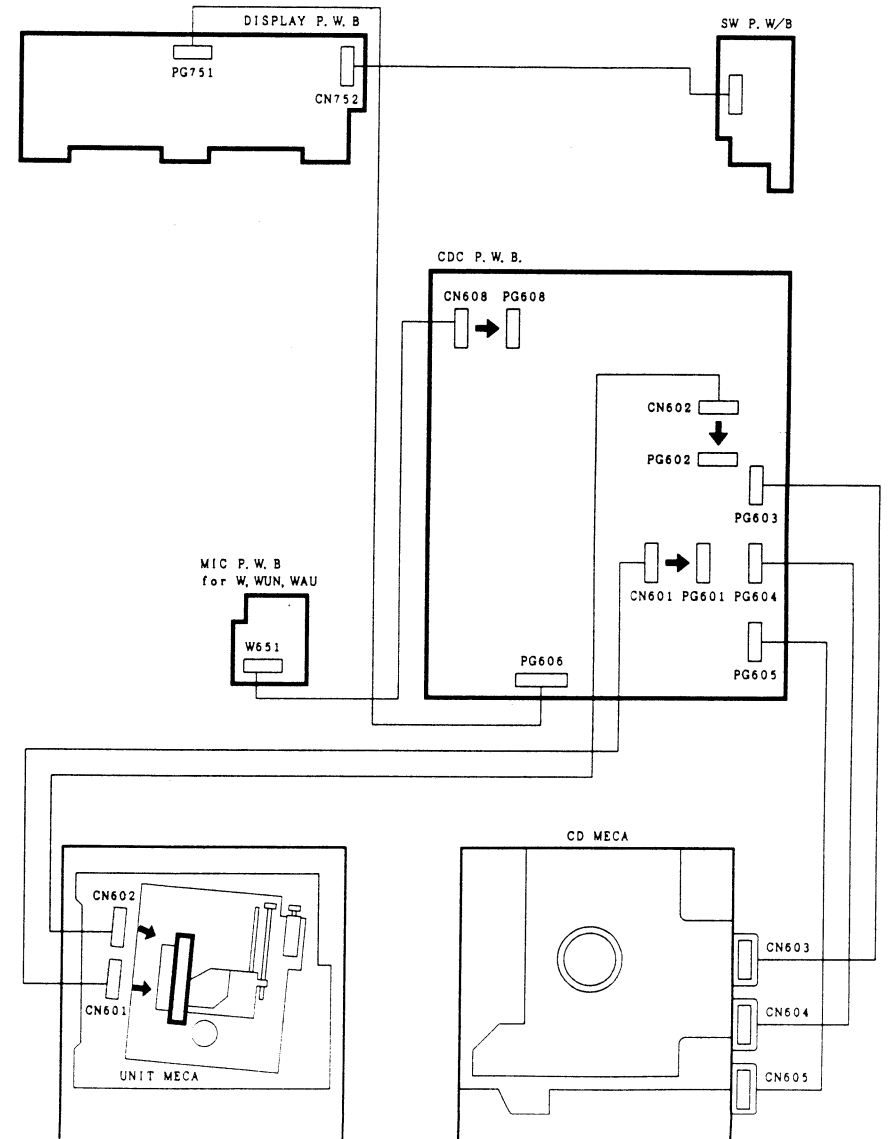
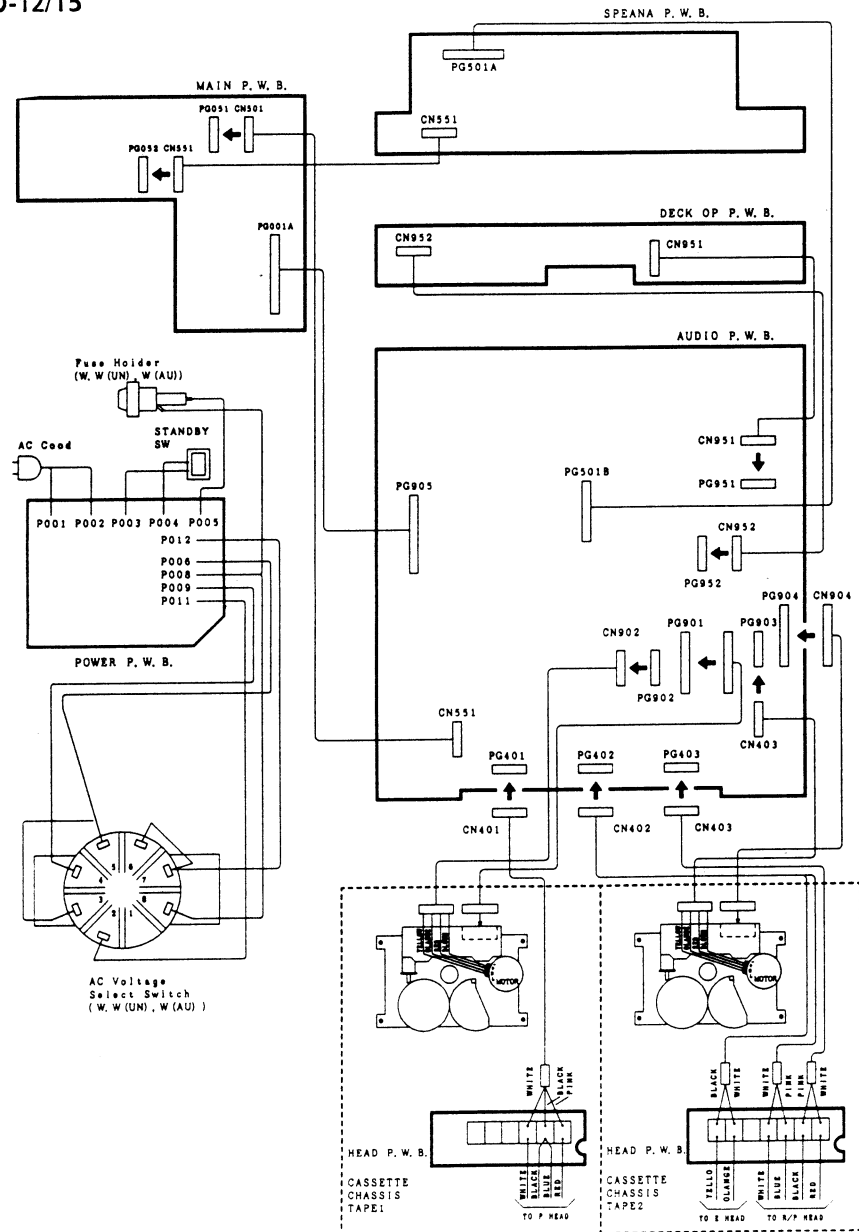




# WIRING DIAGRAM · SCHEMA DE CABLAGE

HAD-12/15

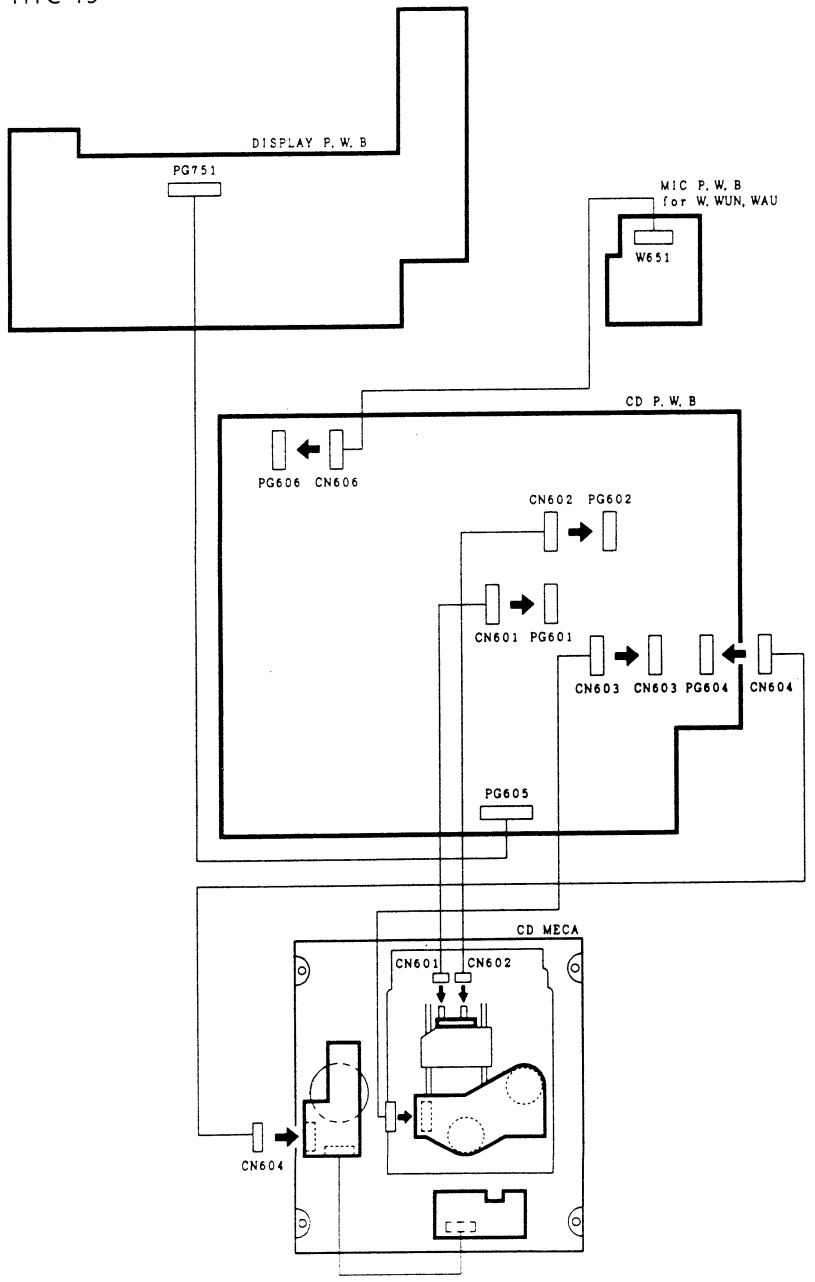
HTC-C15





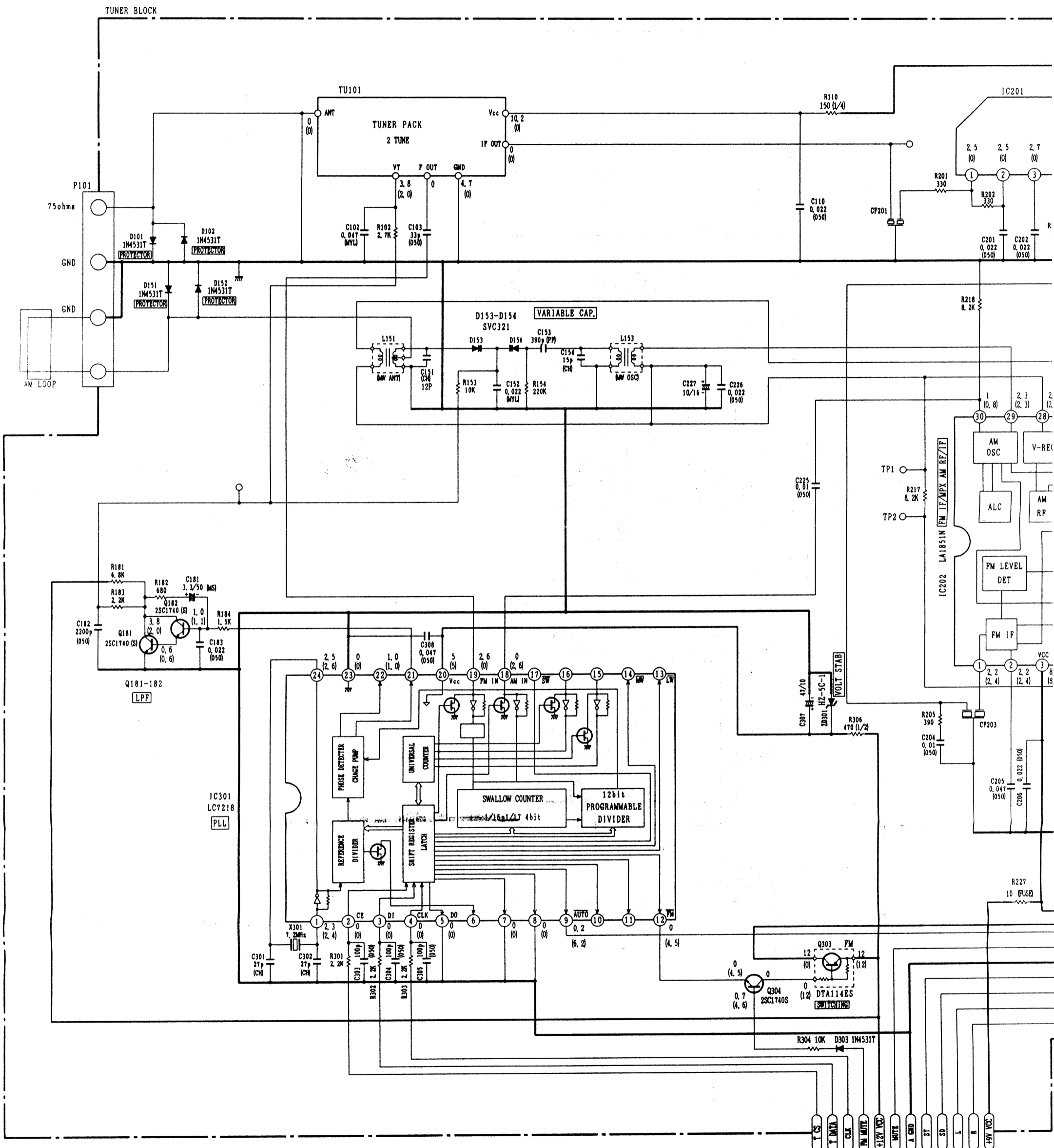
AX12  
AXC12  
AX15  
AXC15

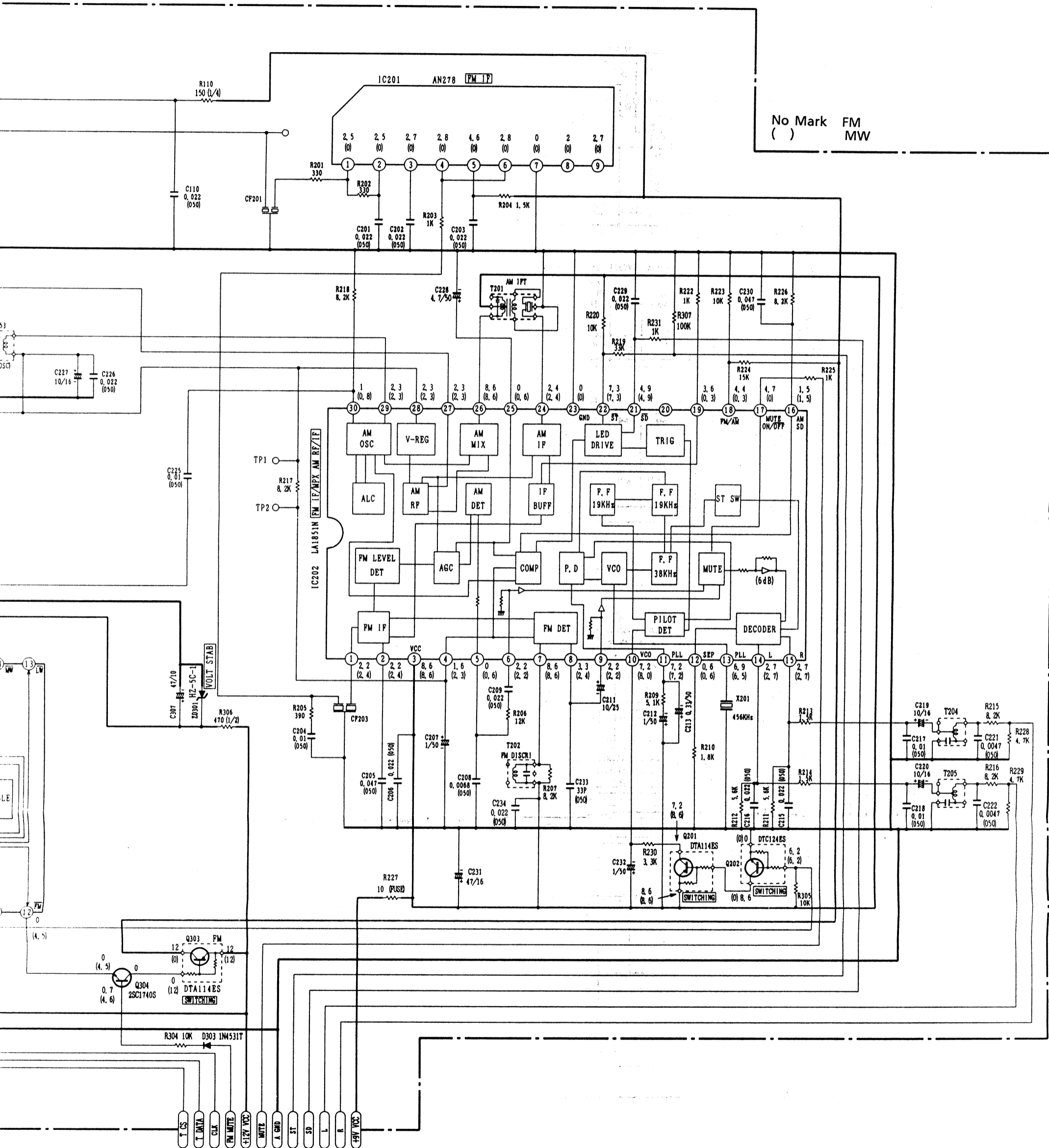
HTC-15



# CIRCUIT DIAGRAM · DIAGRAMME DES CIRCUIT

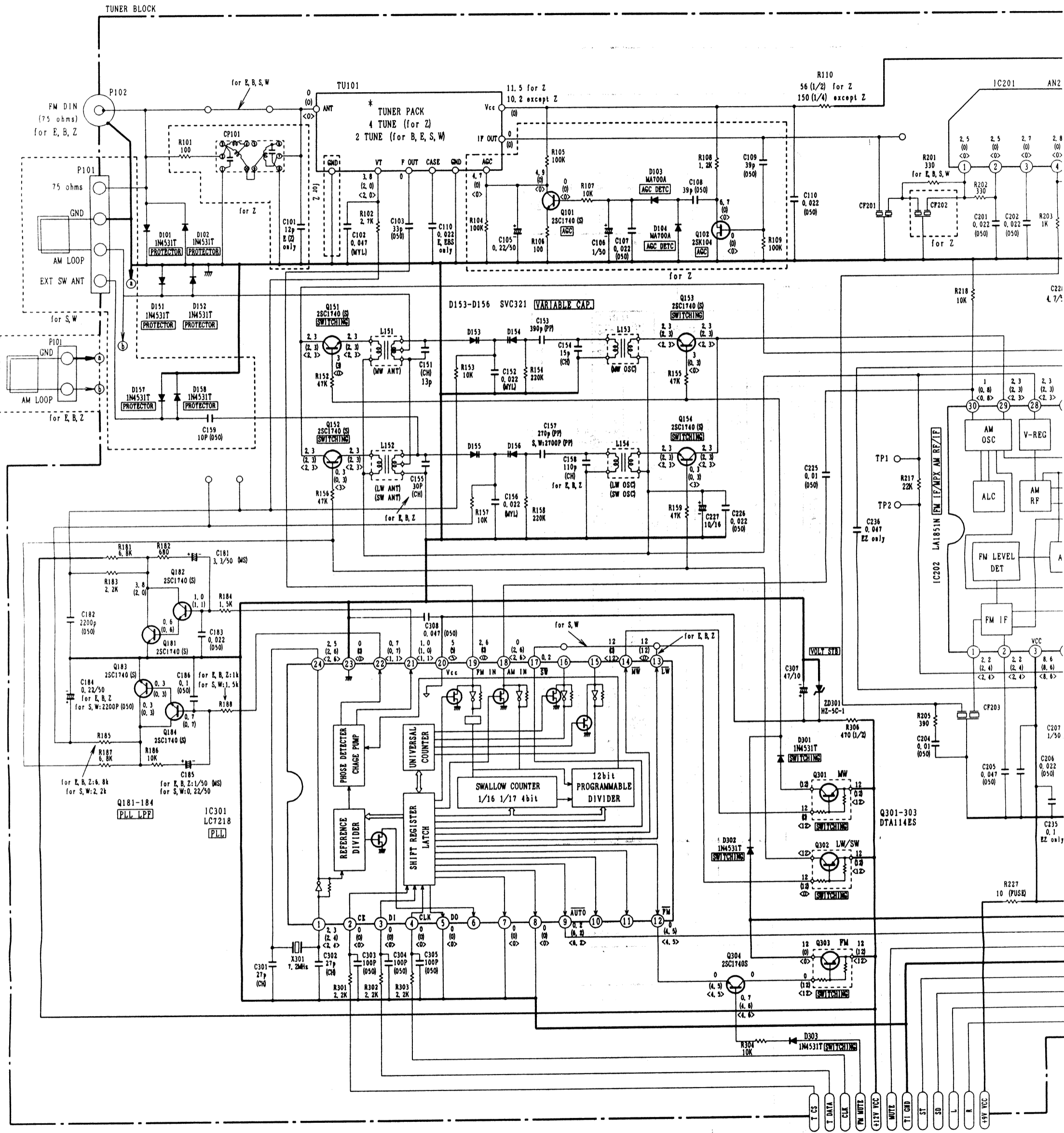
## TUNER BLOCK (For UC)

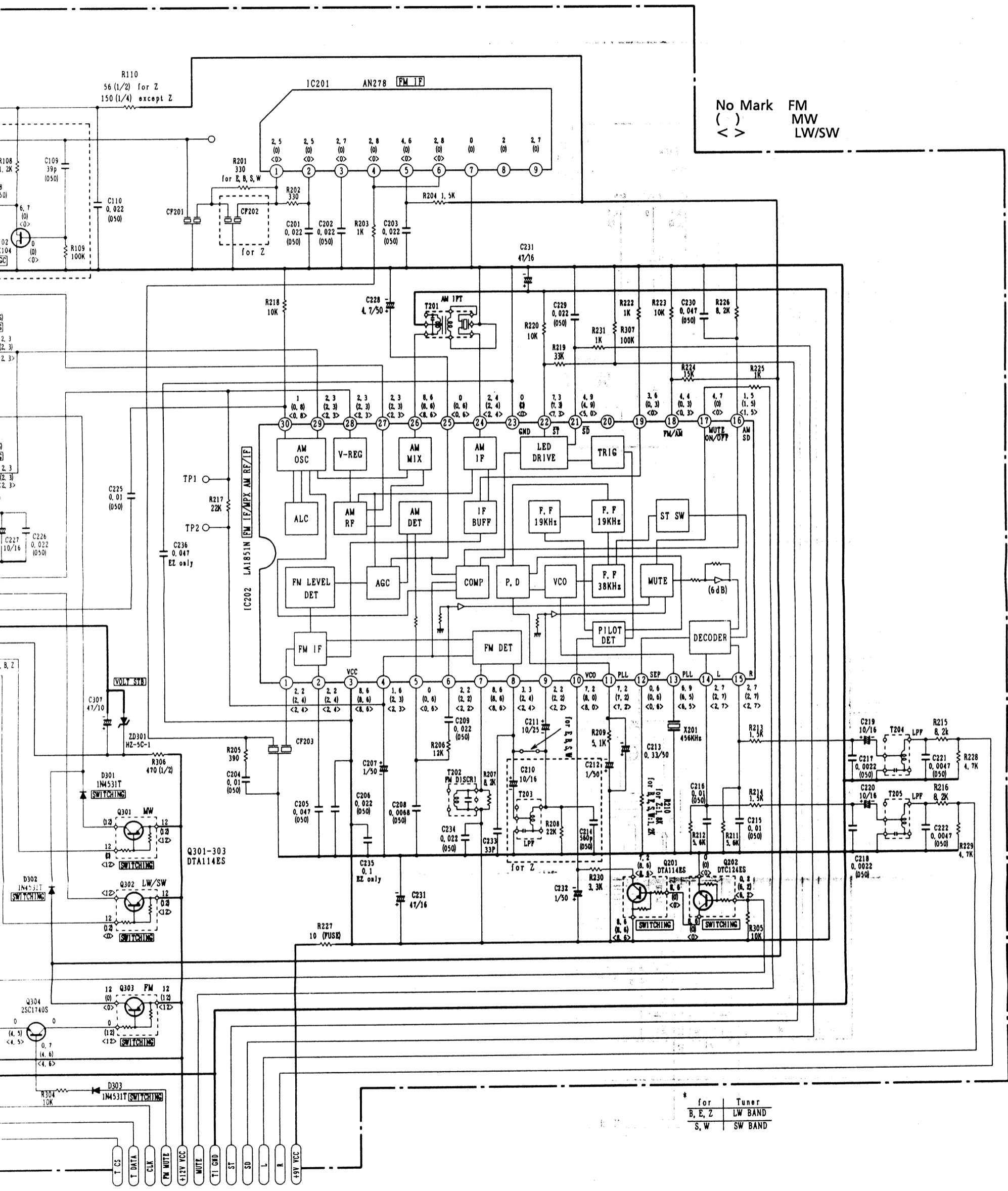




No Mark FM  
( ) MW

# TUNER BLOCK(Except UC)

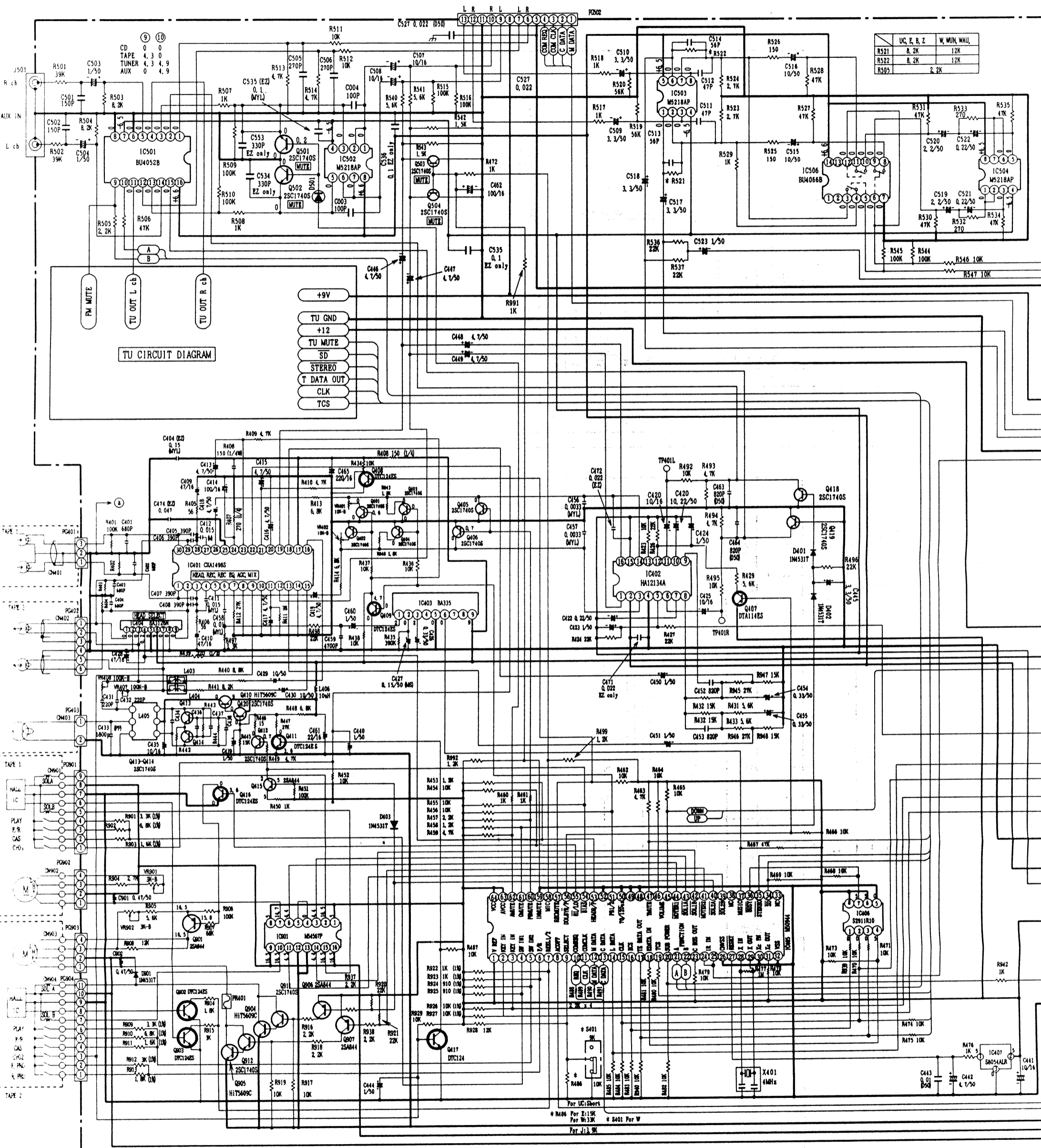




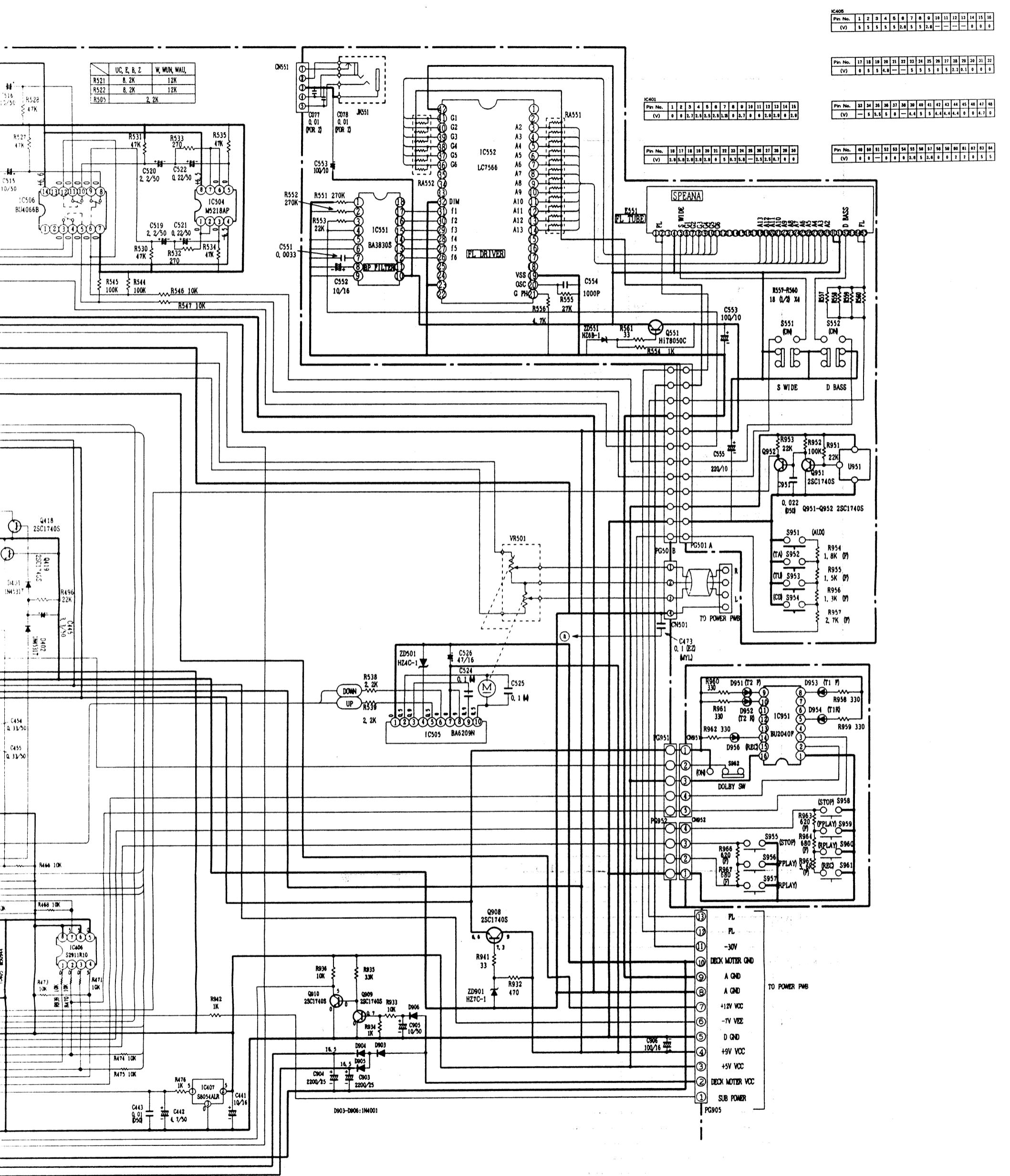
No Mark FM  
( ) MW  
< > LW/SW

for	Tuner
B, E, Z	LW BAND
S, W	SW BAND

# MAIN BLOCK







	UC, E, B, Z	W, WUP, WAU,
R521	8.2K	12K
R522	8.2K	12K
R505	2.2K	

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(V)	0	5	5	5	5	2.4	5	2.4	—	—	—	—	—	—	—	—

Pin No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
(V)	0	5	5	4.8	—	—	—	—	—	—	—	—	—	—	—	—

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(V)	0	0	2.7	2.4	2.4	2.4	2.8	0	2.7	0	2.0	2.0	0	2.0	0

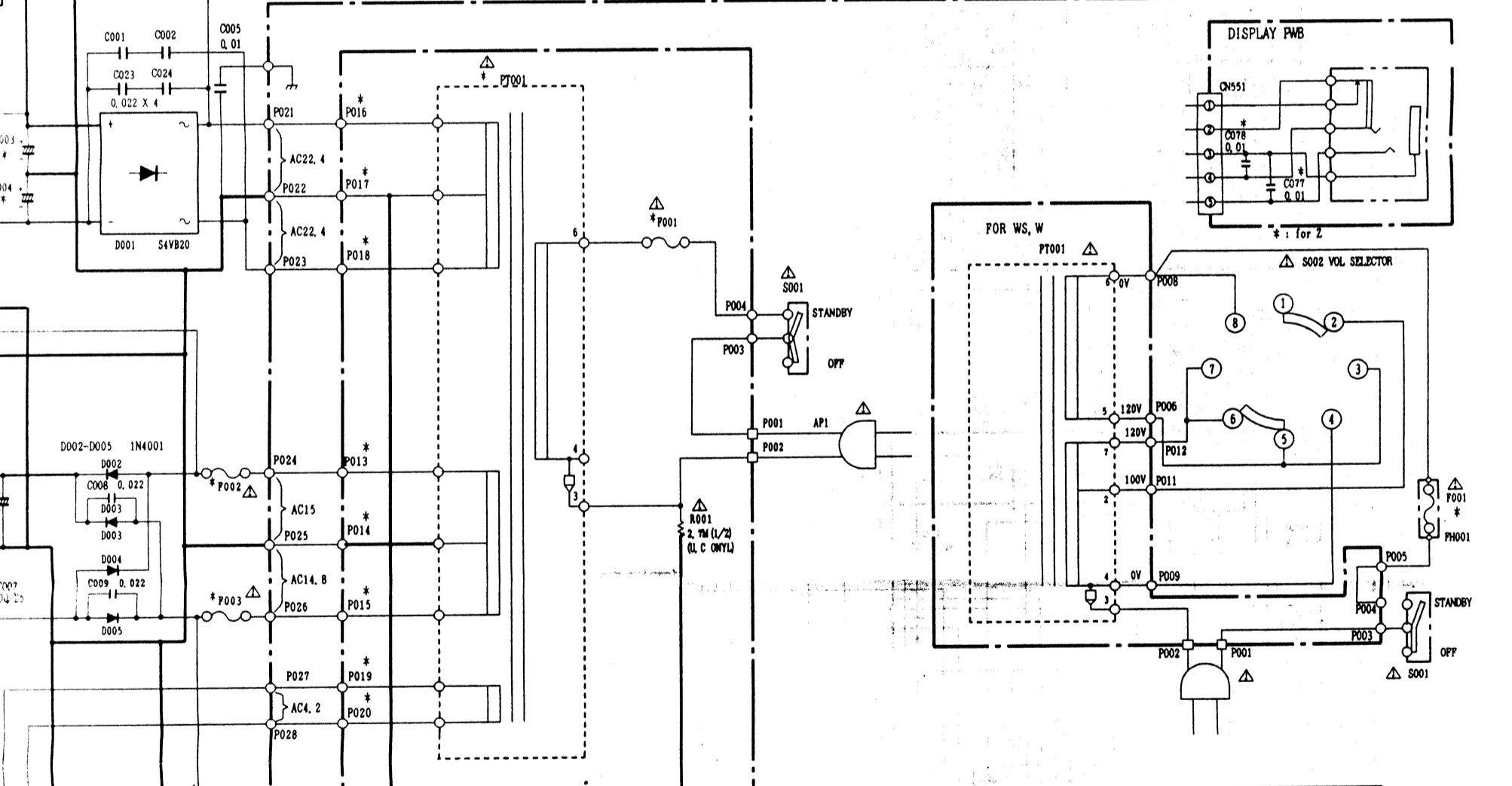
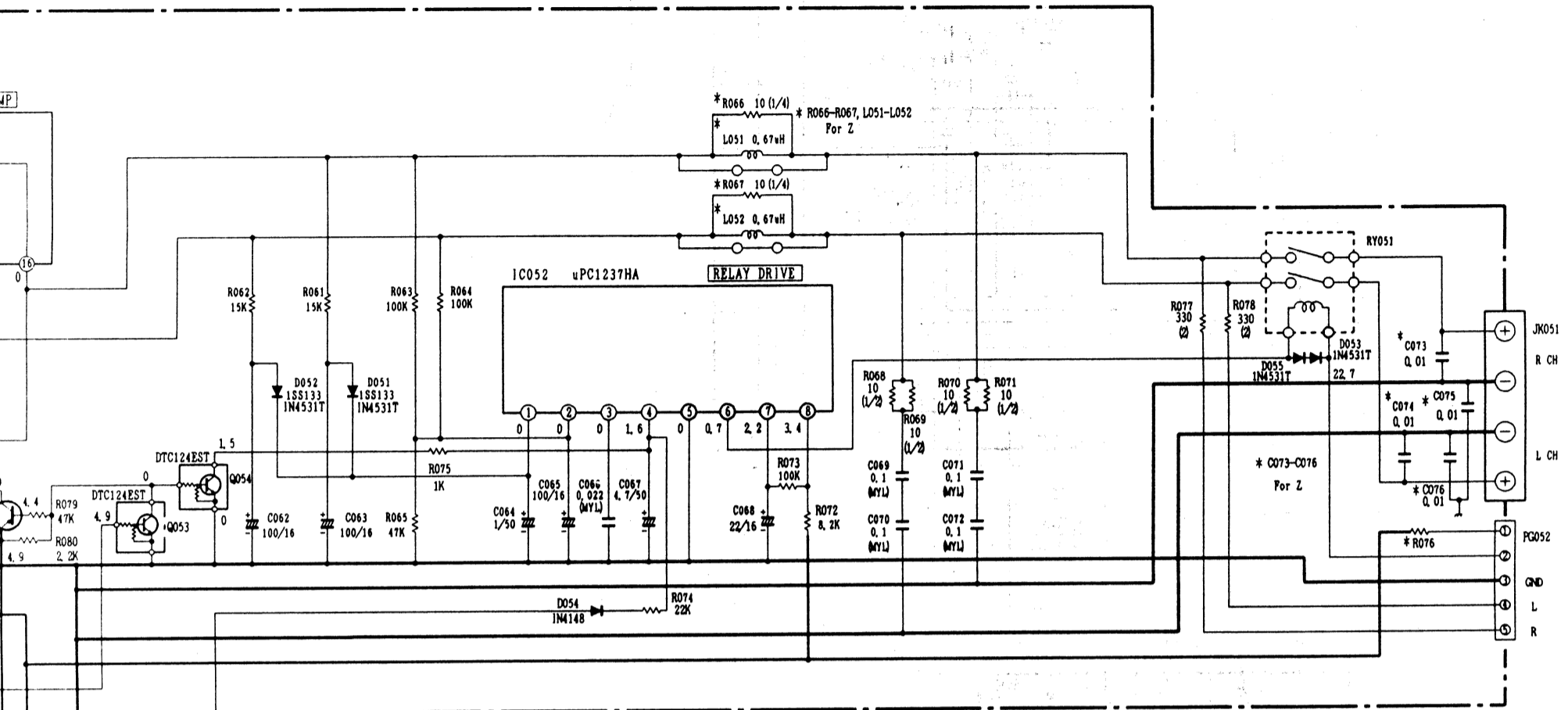
Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
(V)	—	5	5	5	0	—	—	—	—	—	—	—	—	—	—	—

Pin No.	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
(V)	2.0	5.0	2.0	2.0	2.0	0	5	0.7	5.0	—	2.5	2.5	0.7	0	0	0	0	0

Pin No.	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
(V)	0	0	—	0	0	0	0	2.0	0	0	2	2	0	1	0	0

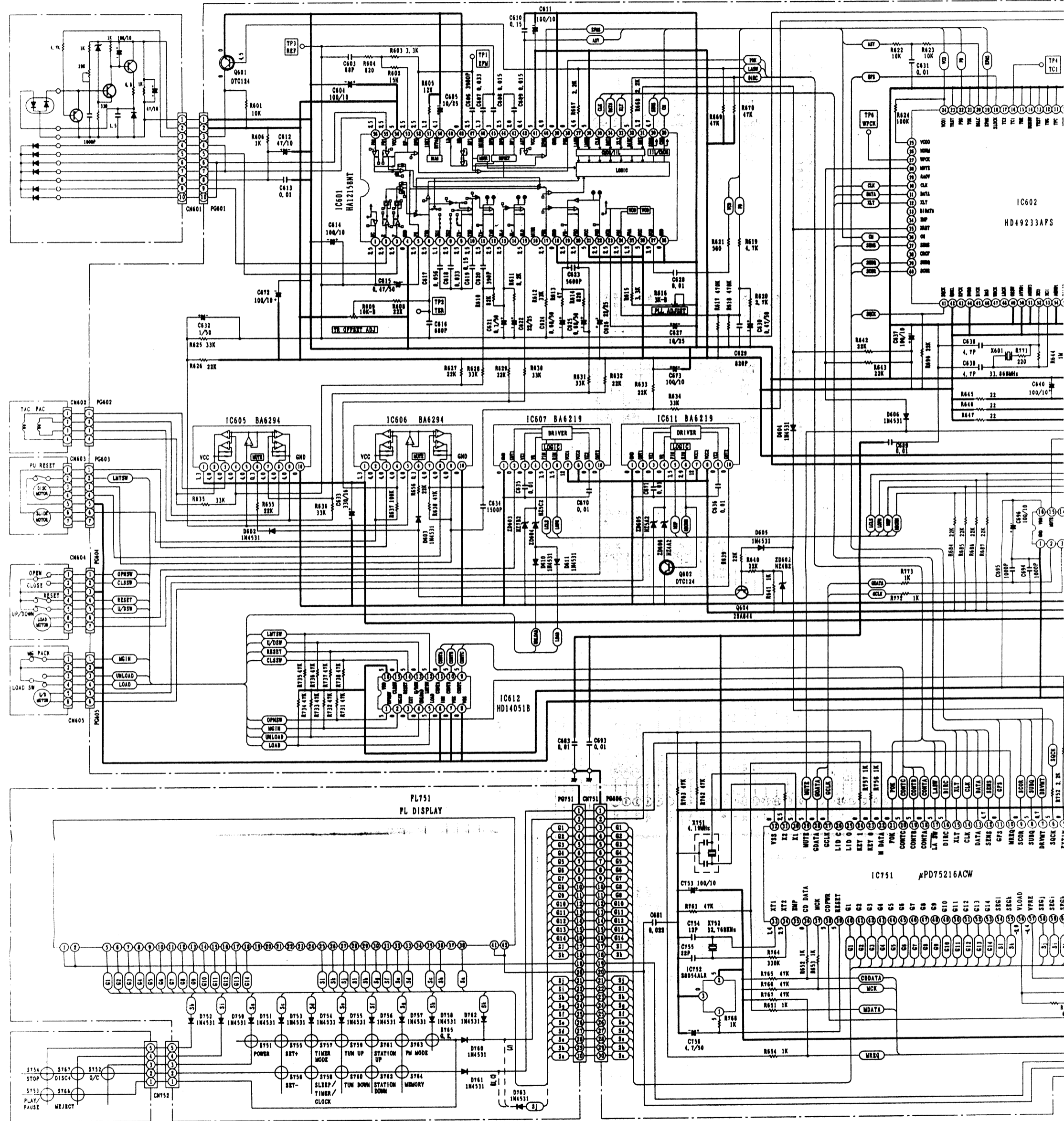
- 13 FL
  - 12 FL
  - 11 -30V
  - 10 DECK MOTOR GND
  - 9 A GND
  - 8 A GND
  - 7 +12V VCC
  - 6 -7V VEE
  - 5 D GND
  - 4 +9V VCC
  - 3 +5V VCC
  - 2 DECK MOTOR VCC
  - 1 SUB POWER
- PG905

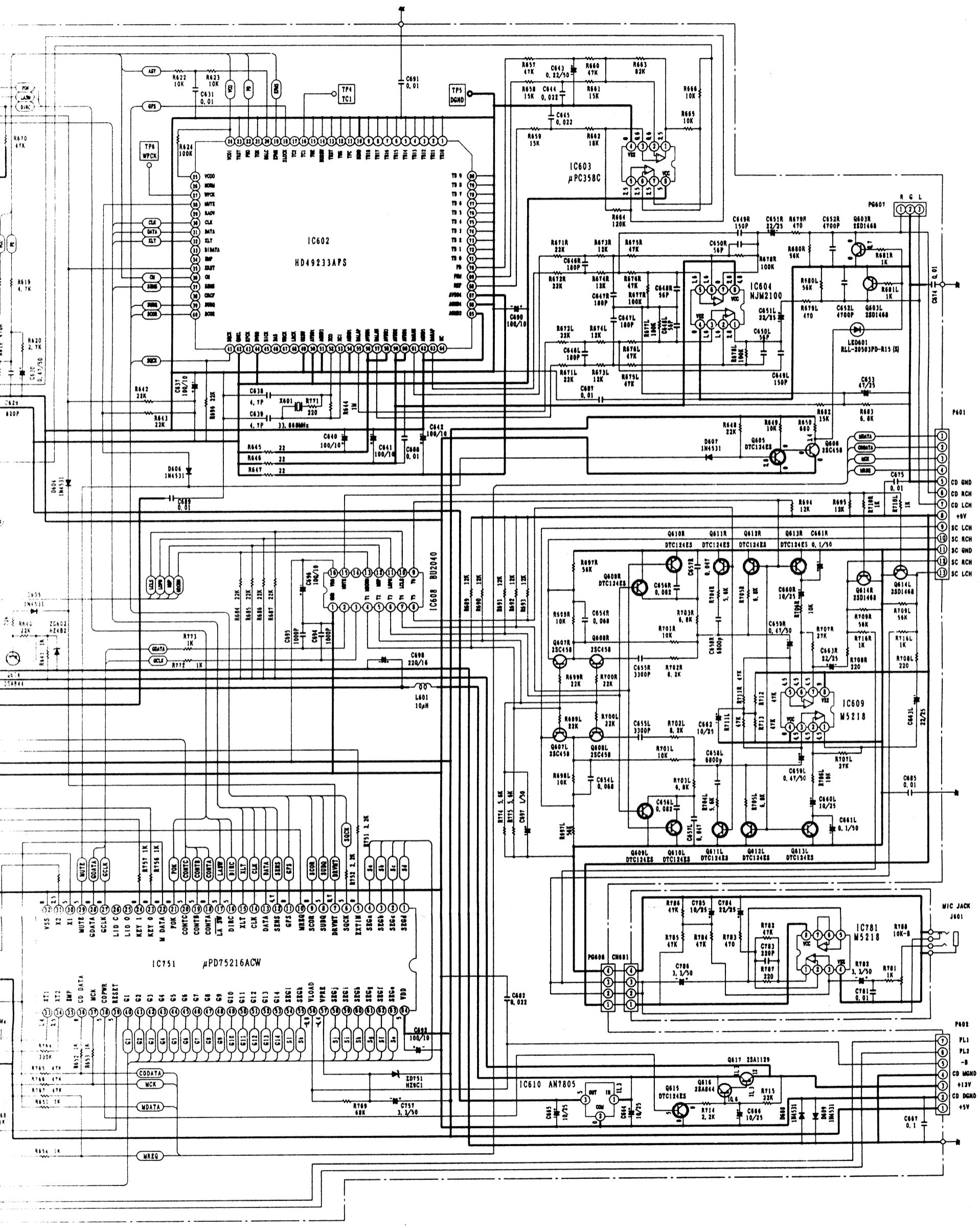




	FX-15			FX-12		
	* F001	* F002	* F003	* F001	* F002	* F003
FOR B, E	T1A	1A	1A	T630mA	1A	1A
FOR U, C	2A 125V	1.6A	1.6A	2A 125V	1.6A	1.6A
FOR W	240V	T1A	1A	T1A	1A	1A
	220V	T1A	1A	T2A	1A	1A
	120V	T2A	1A	1A	1A	1A

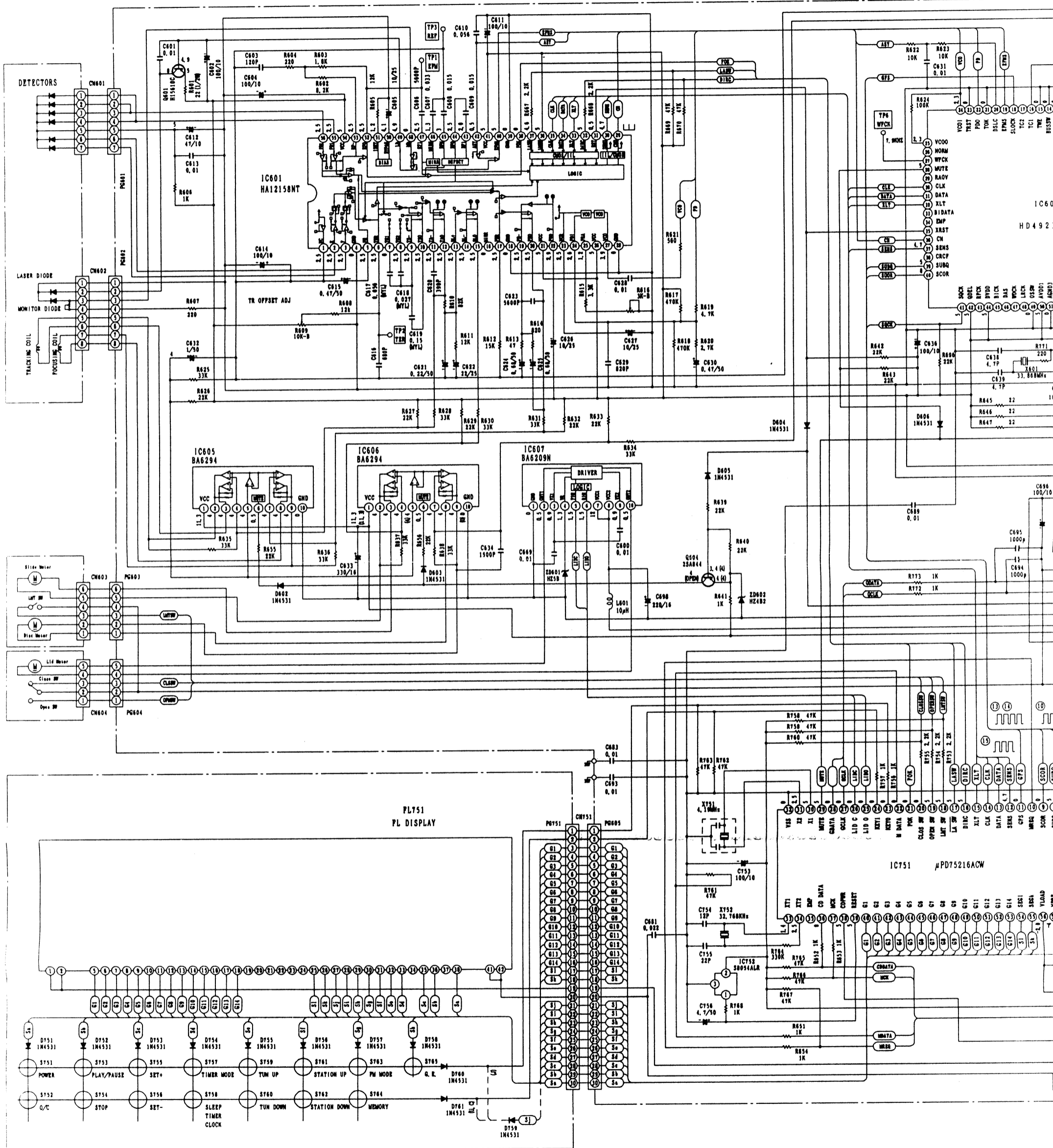
CD BLOCK(HTC-C15)

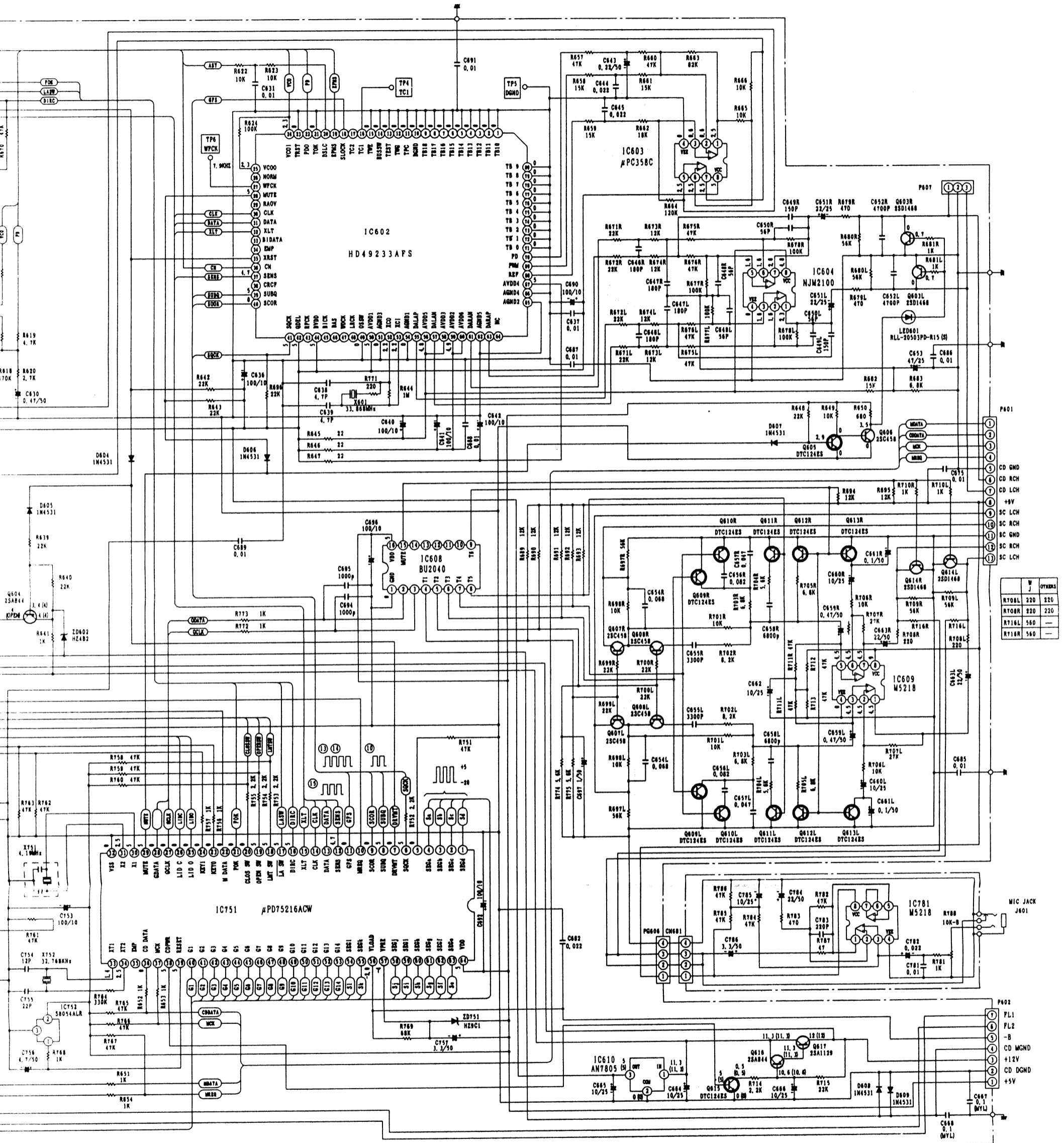






# CD BLOCK(HTC-15)





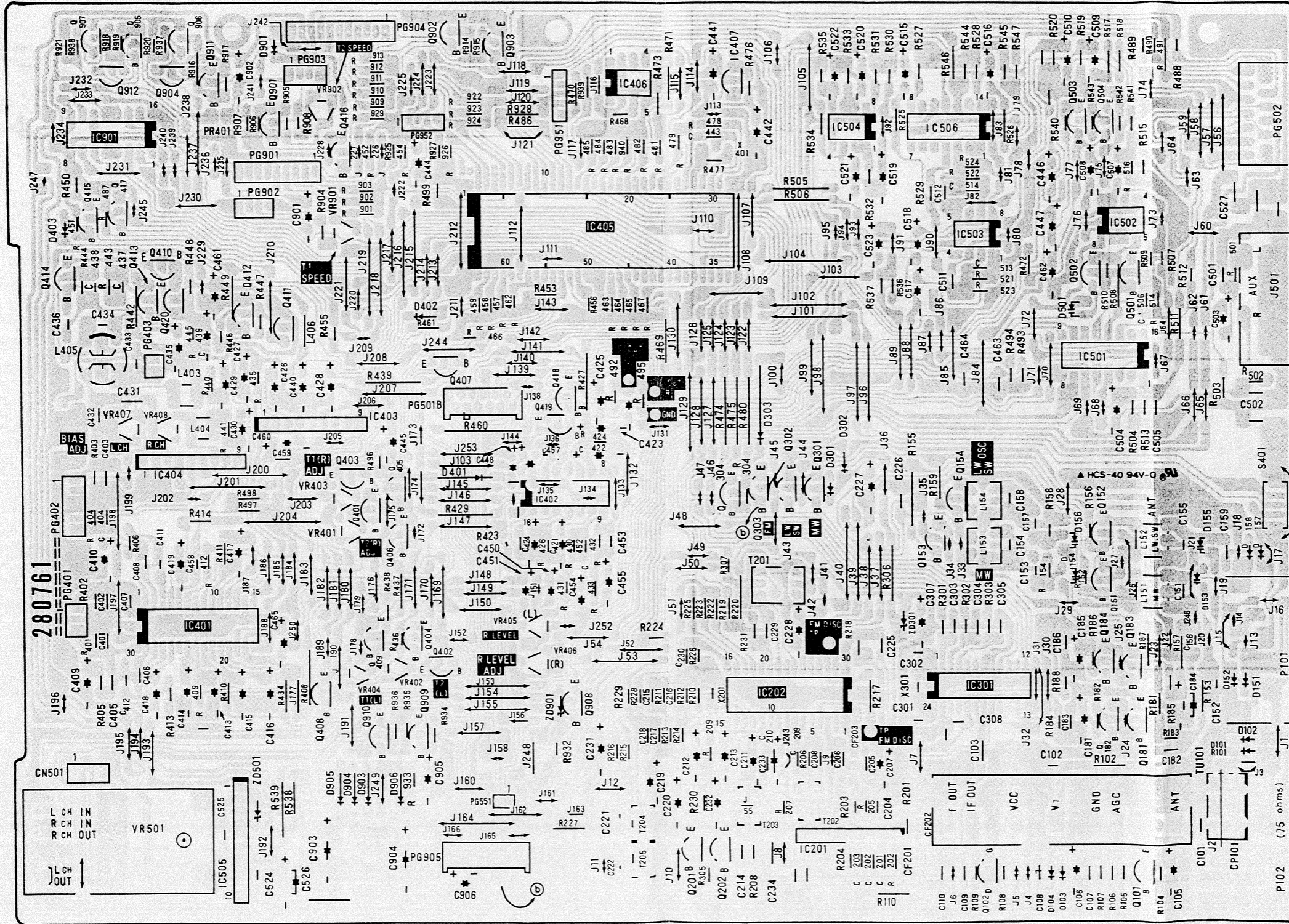
	W	J	OTYMS
R70BL	220	220	
R70BR	820	220	
R716L	560		
R716R	560		



# PRINTED WIRING BOARD · PLAN DE BASE

HAD-12/15

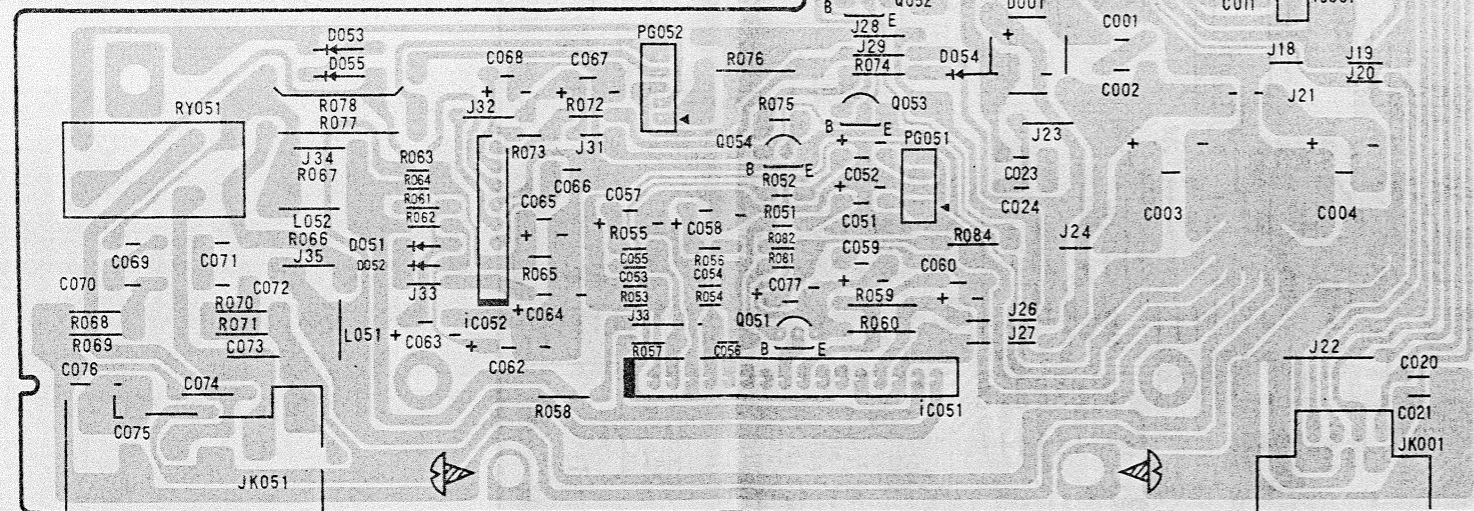
## AUDIO P.W.B.



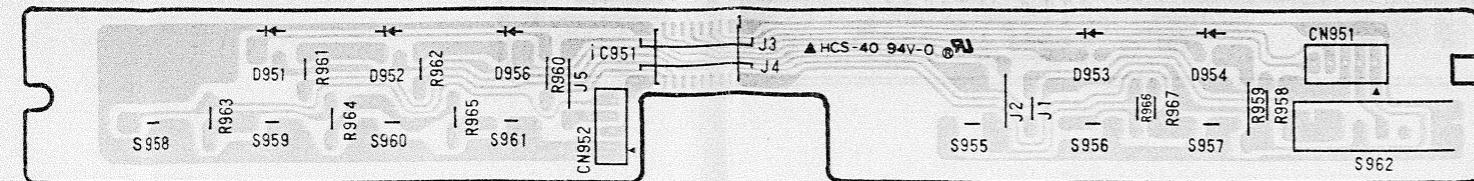


AX12  
 AXC12  
 AX15  
 AXC15

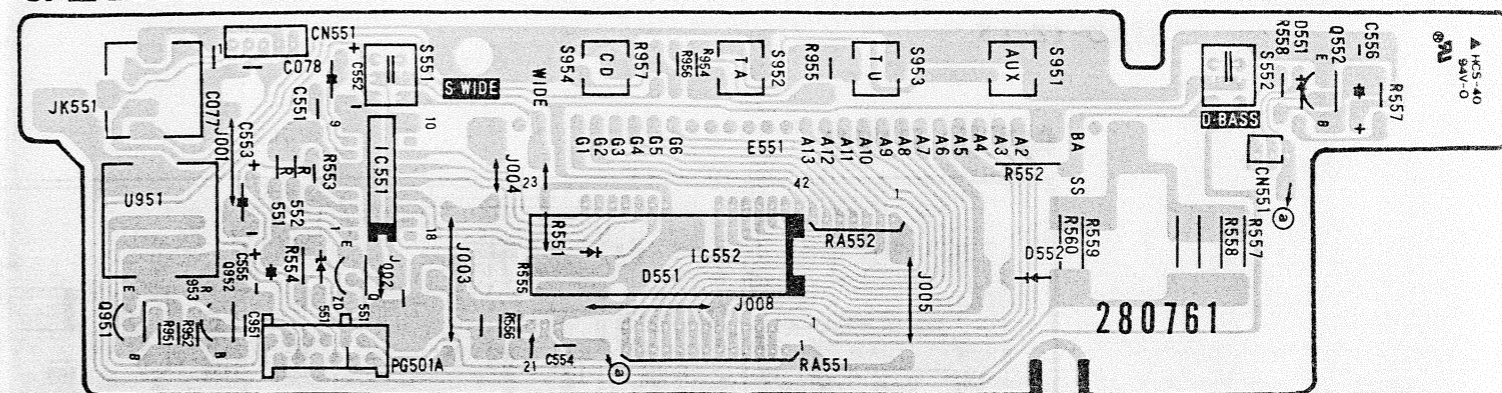
**MAIN P.W.B.**



**DECK OP P.W.B.**



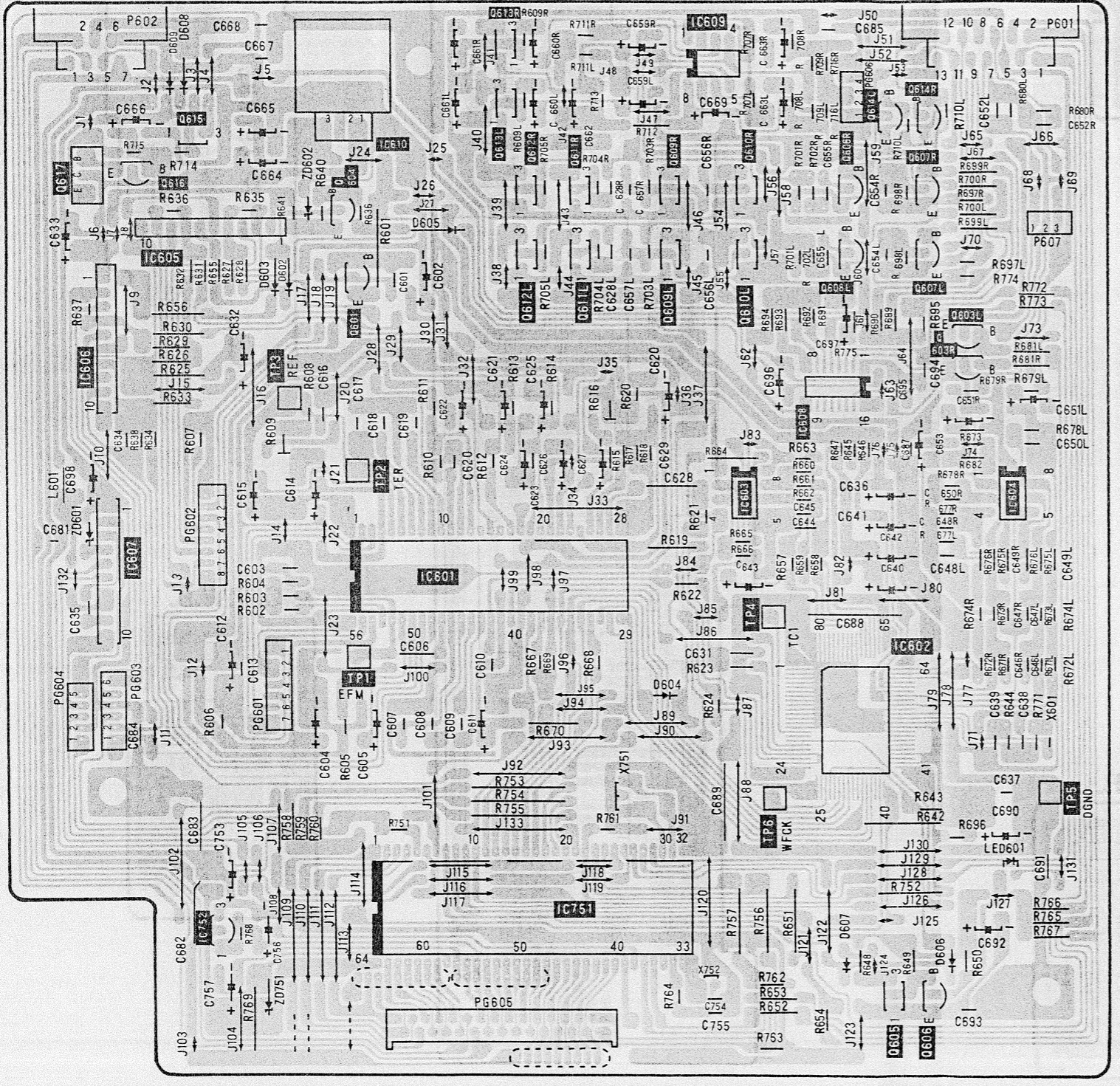
**SPEANA P.W.B.**





HTC-15

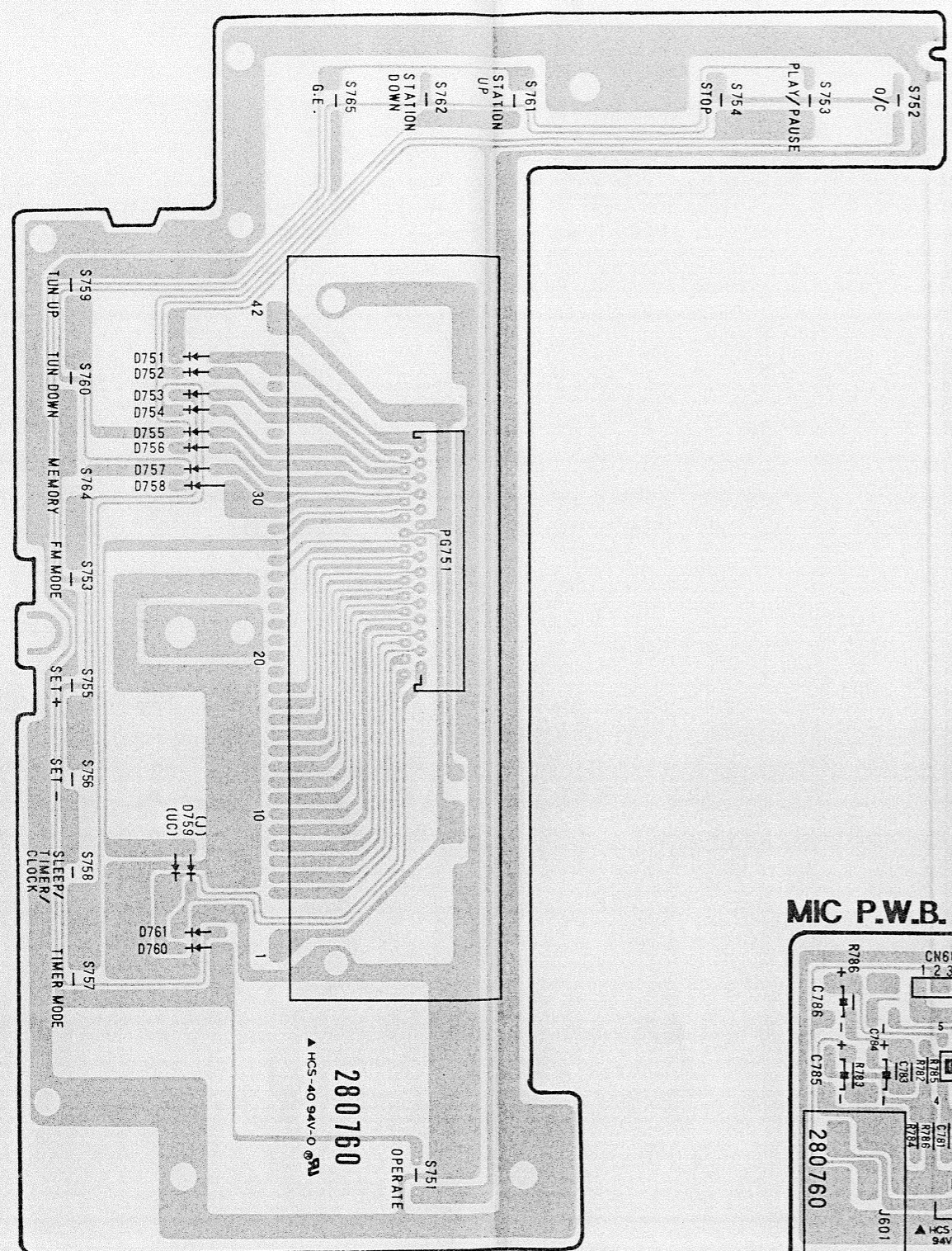
CD P.W.B.





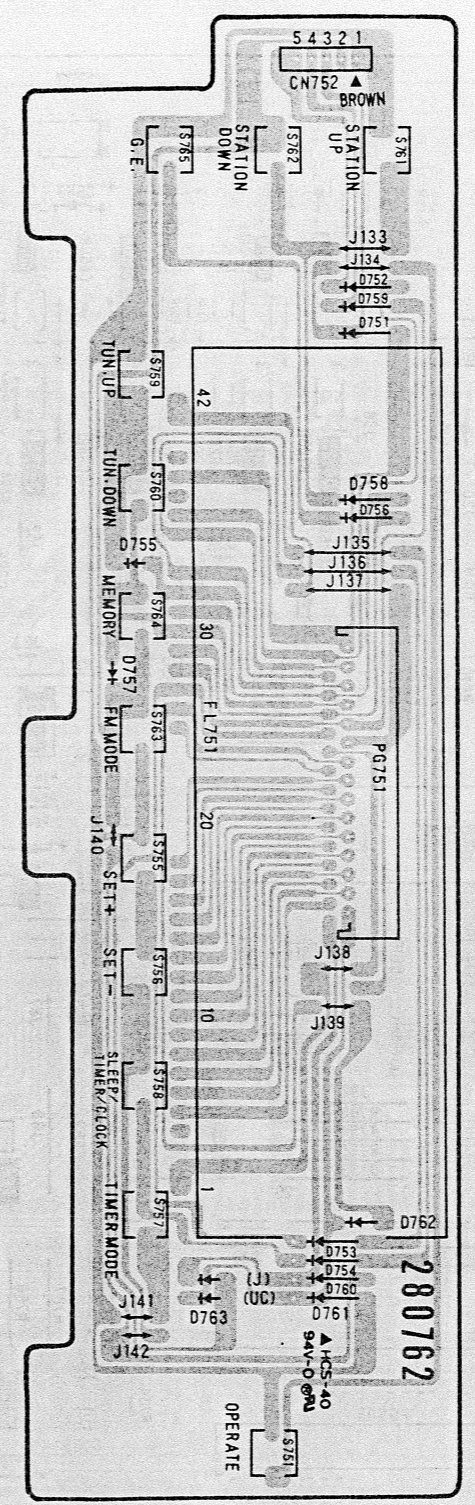
HTC-15

DISPLAY P.W.B.

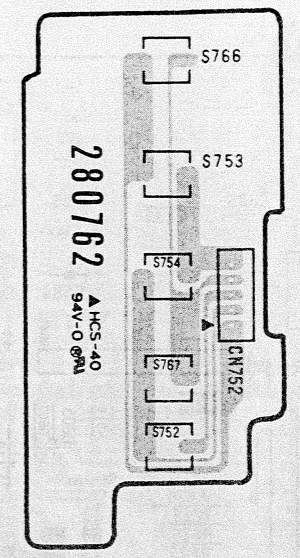


HTC-C15

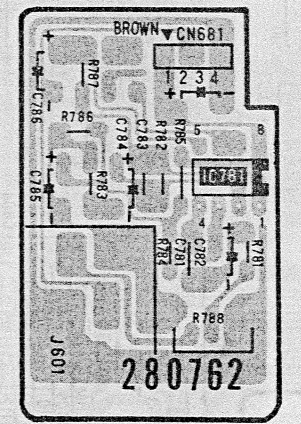
DISPLAY P.W.B.



SW P.W.B.

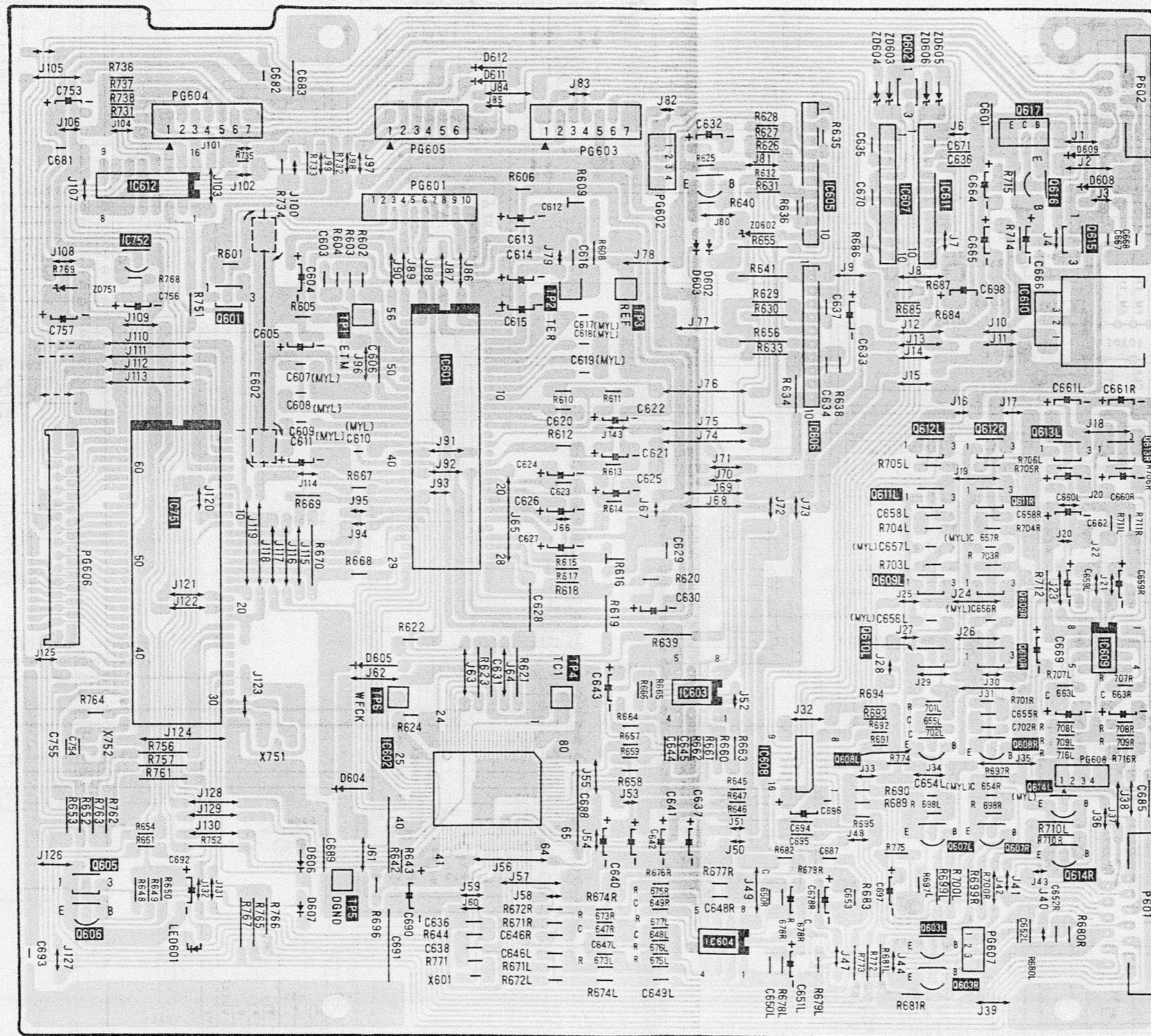


MIC P.W.B.





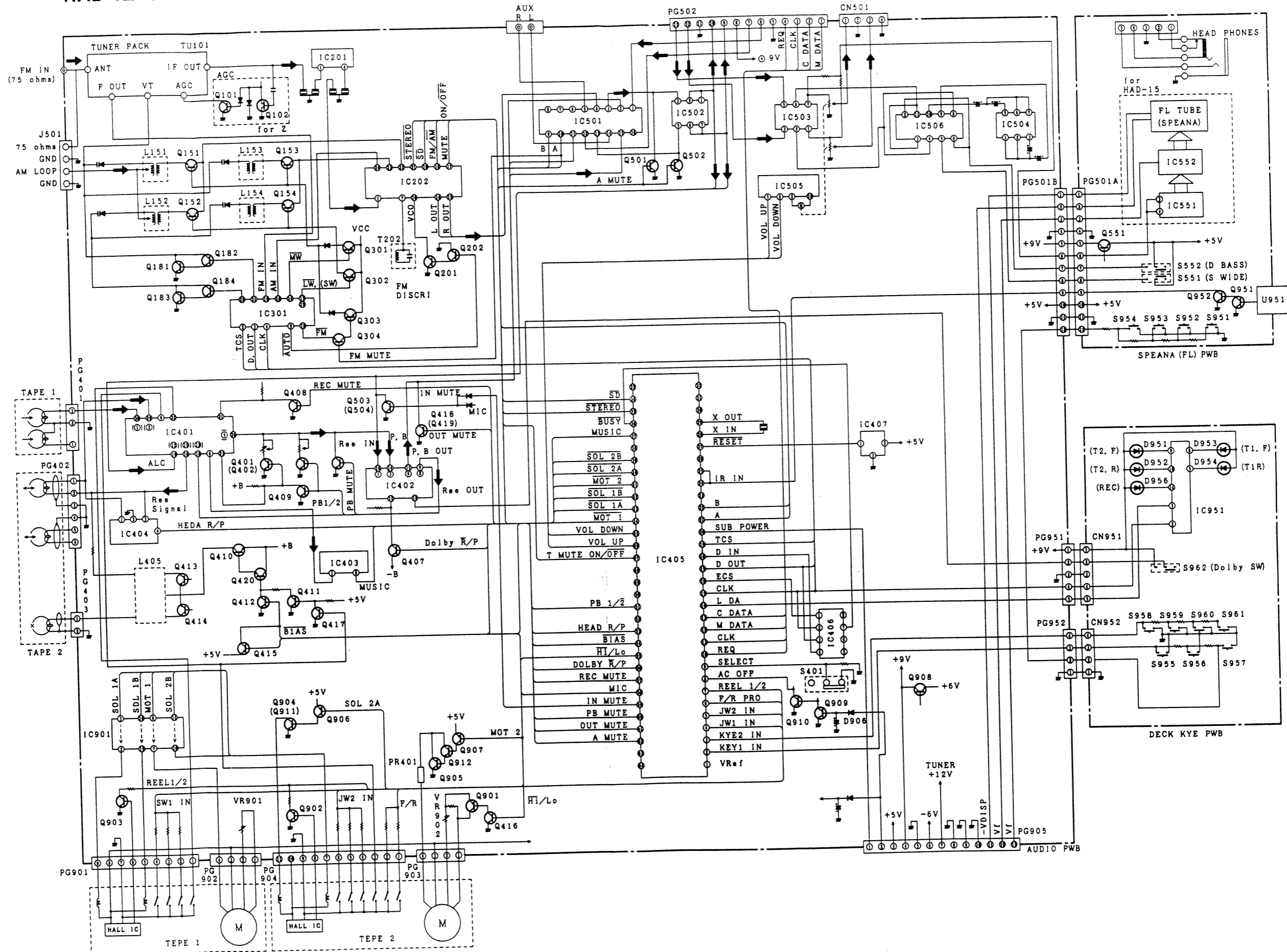
CDC P.W.B.





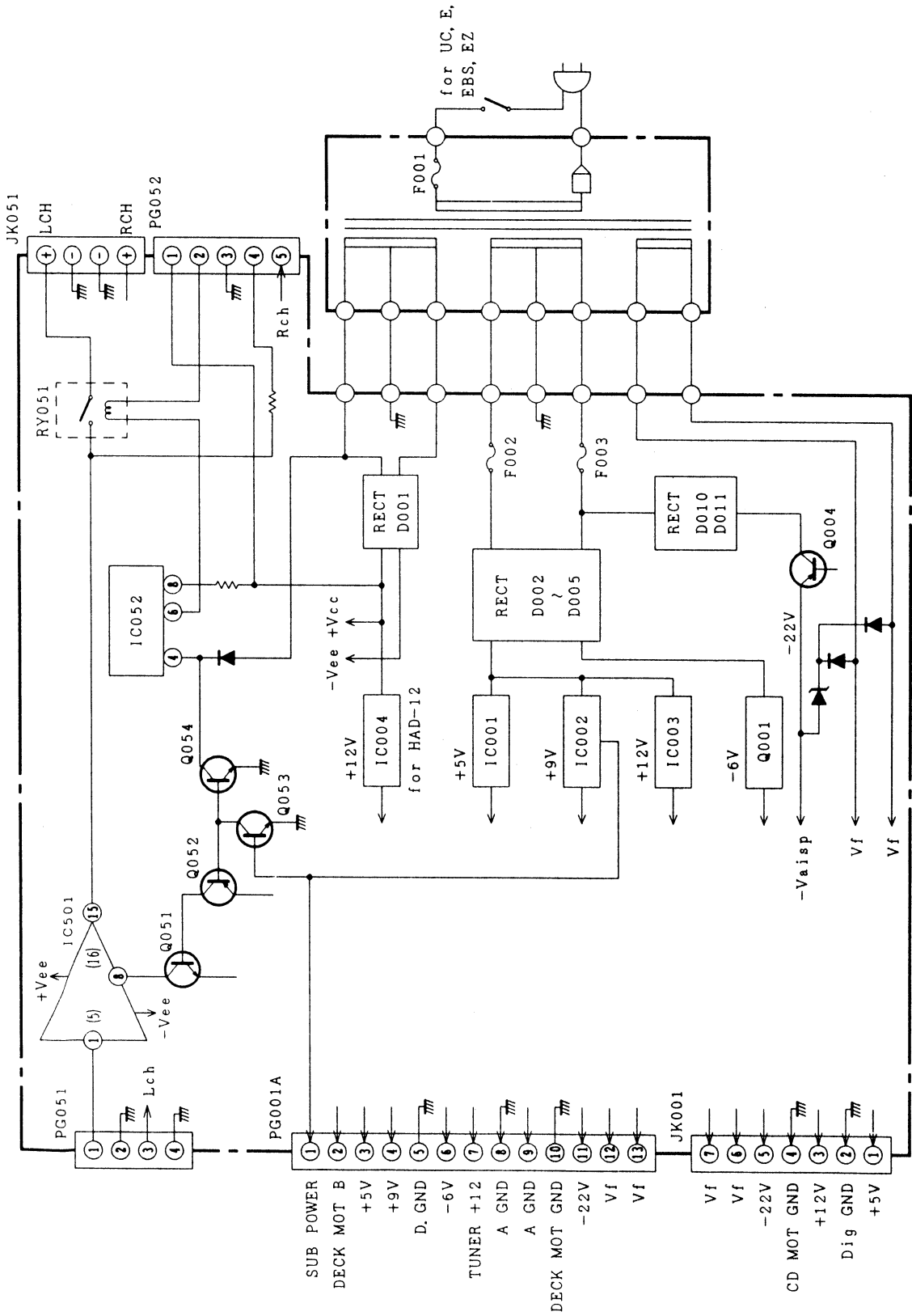
# BLOCK DIAGRAM · DIAGRAMME SYNOPTIQUE

HAD-12/15



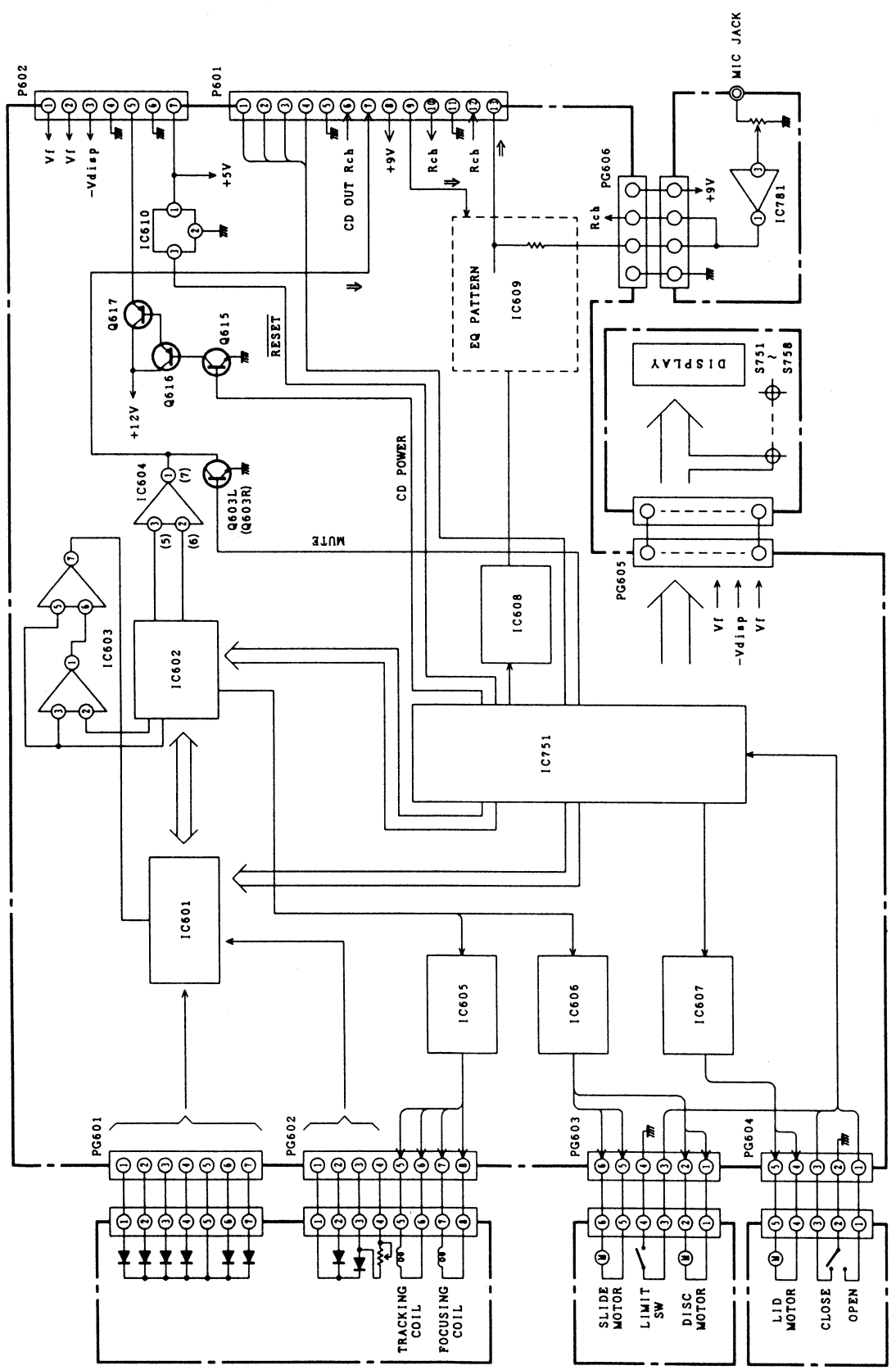
U1520005 03/09/1993 09:37:17

HAD-12/15  
(Power block)



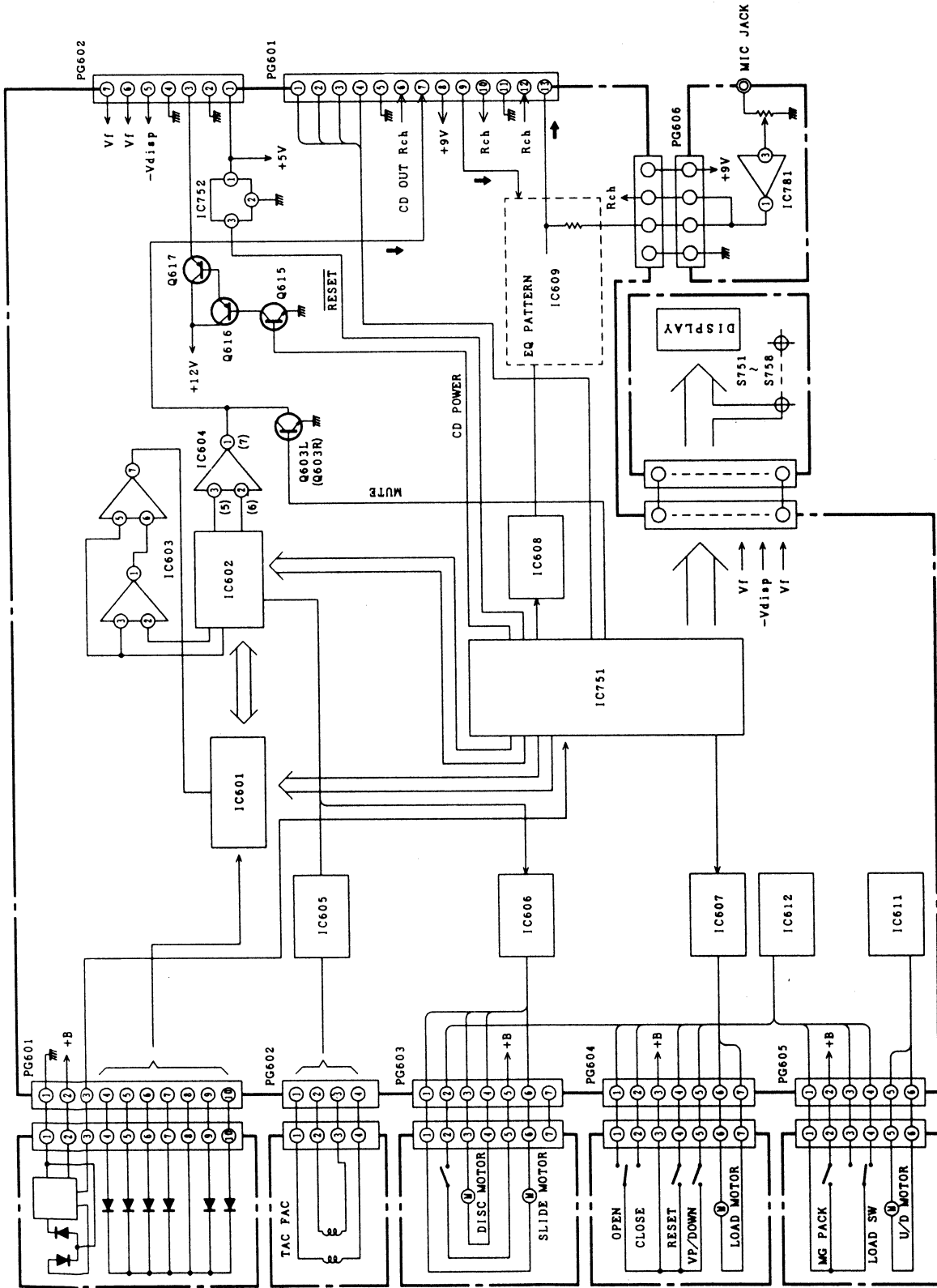
U1520005 14/09/1993 14:22:49

# HTC-15



U1520005 09/09/1993 15:25:19

HTC-C15



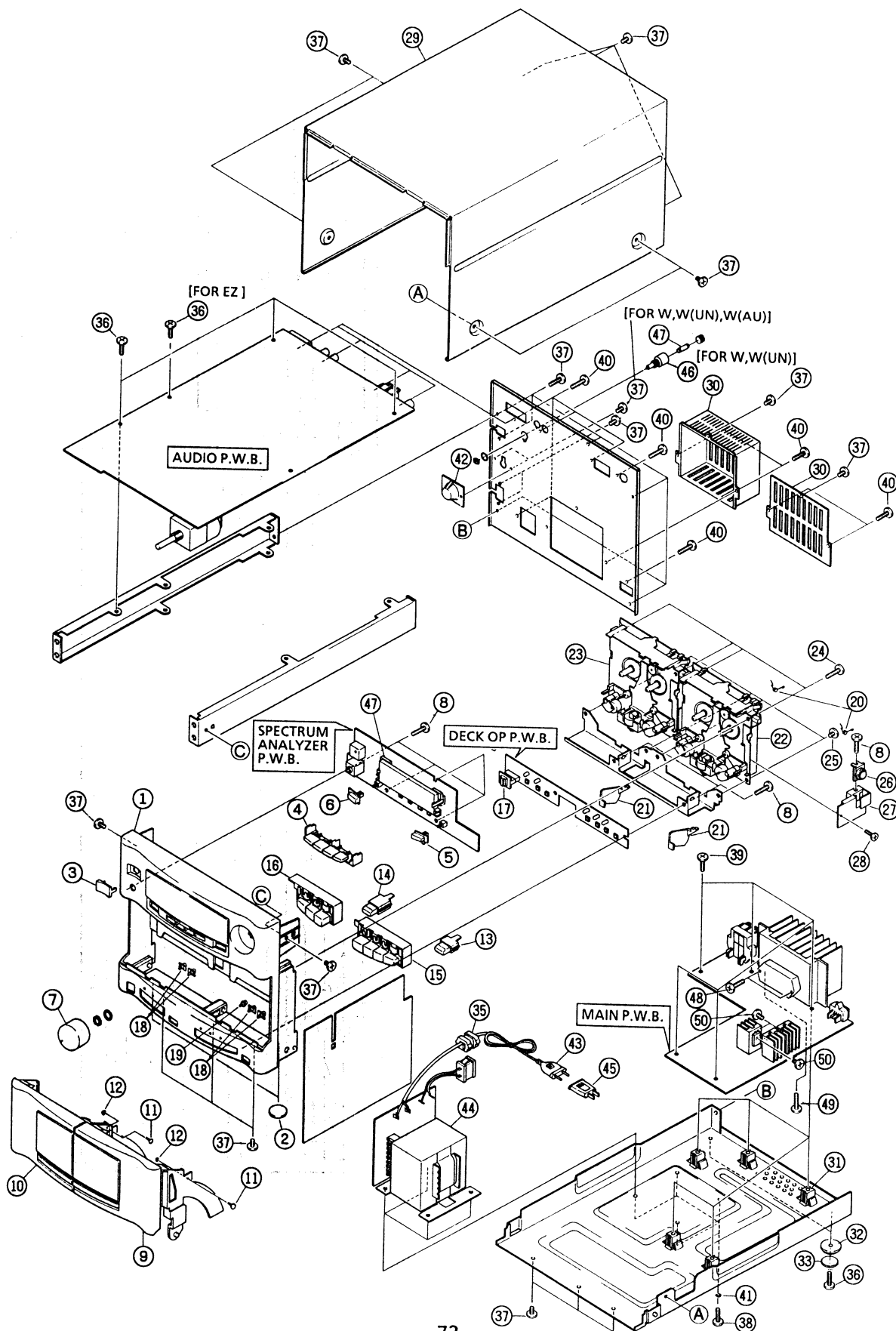
U1520005 09/09/1993 15:25:31



# EXPLODED VIEW · VUE EXPLOSEE

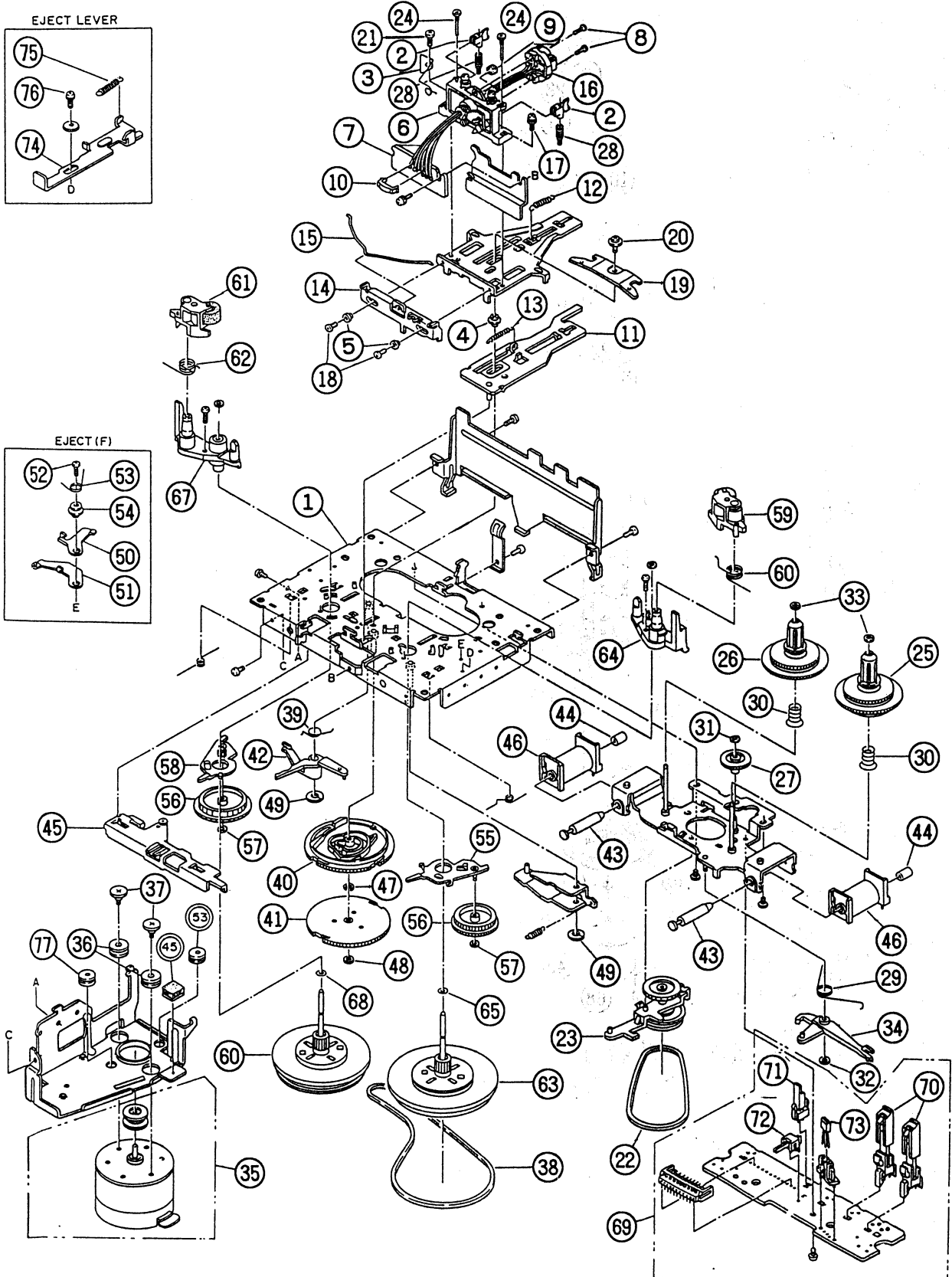
HAD-12/15(Cabinet)      HAD-12/15(Coffret)

·Nos. are reference Nos. of parts list.  
·Cas numéros correspondent à la liste des pièces.



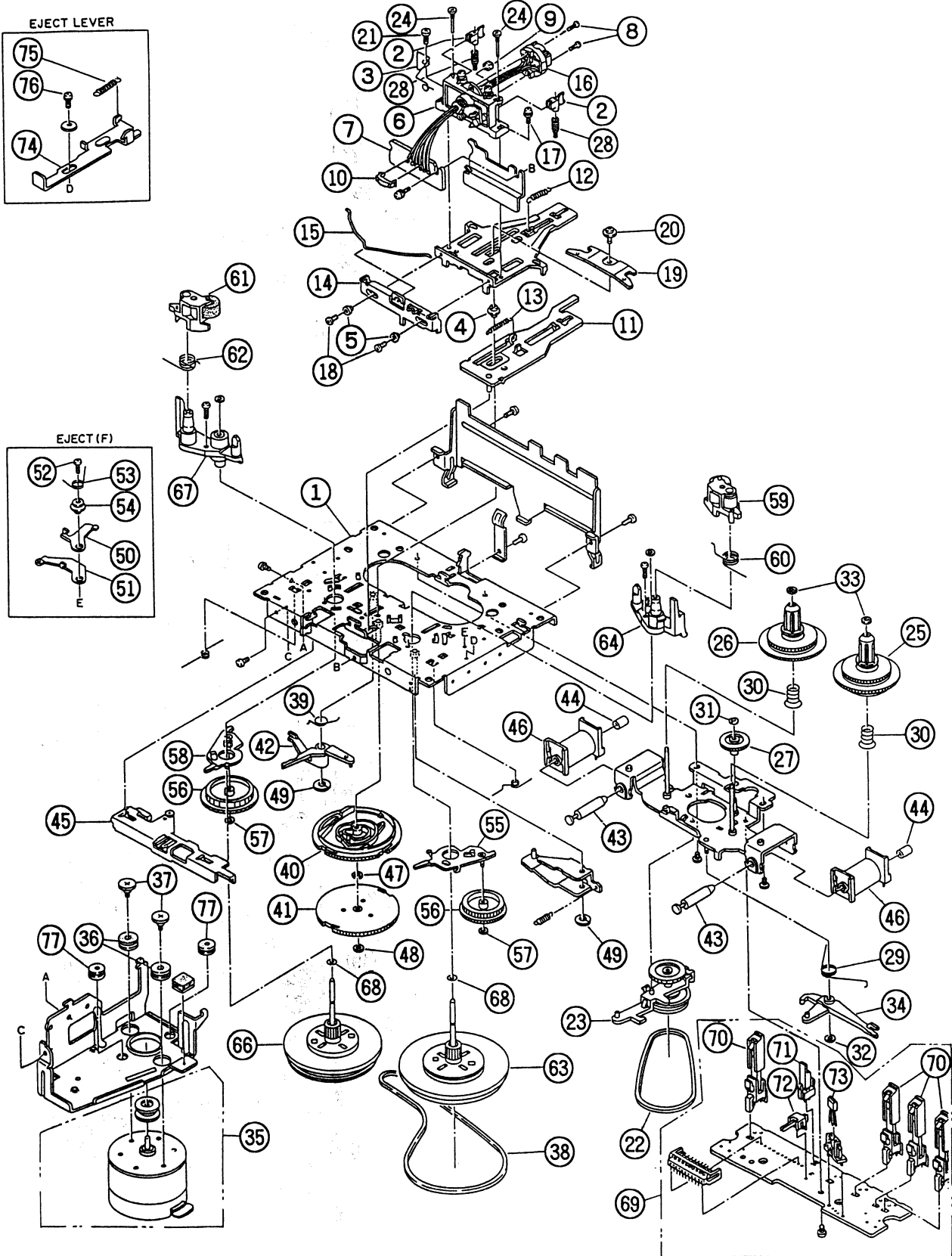
(Cassette Chassis) (Châssis de Cassette)  
 Tape1 (TN-1800-267) Bande1 (TN-1800-267)

·Nos. are reference Nos. of parts list.  
 ·Cas numéros correspondent à la liste des pièces.



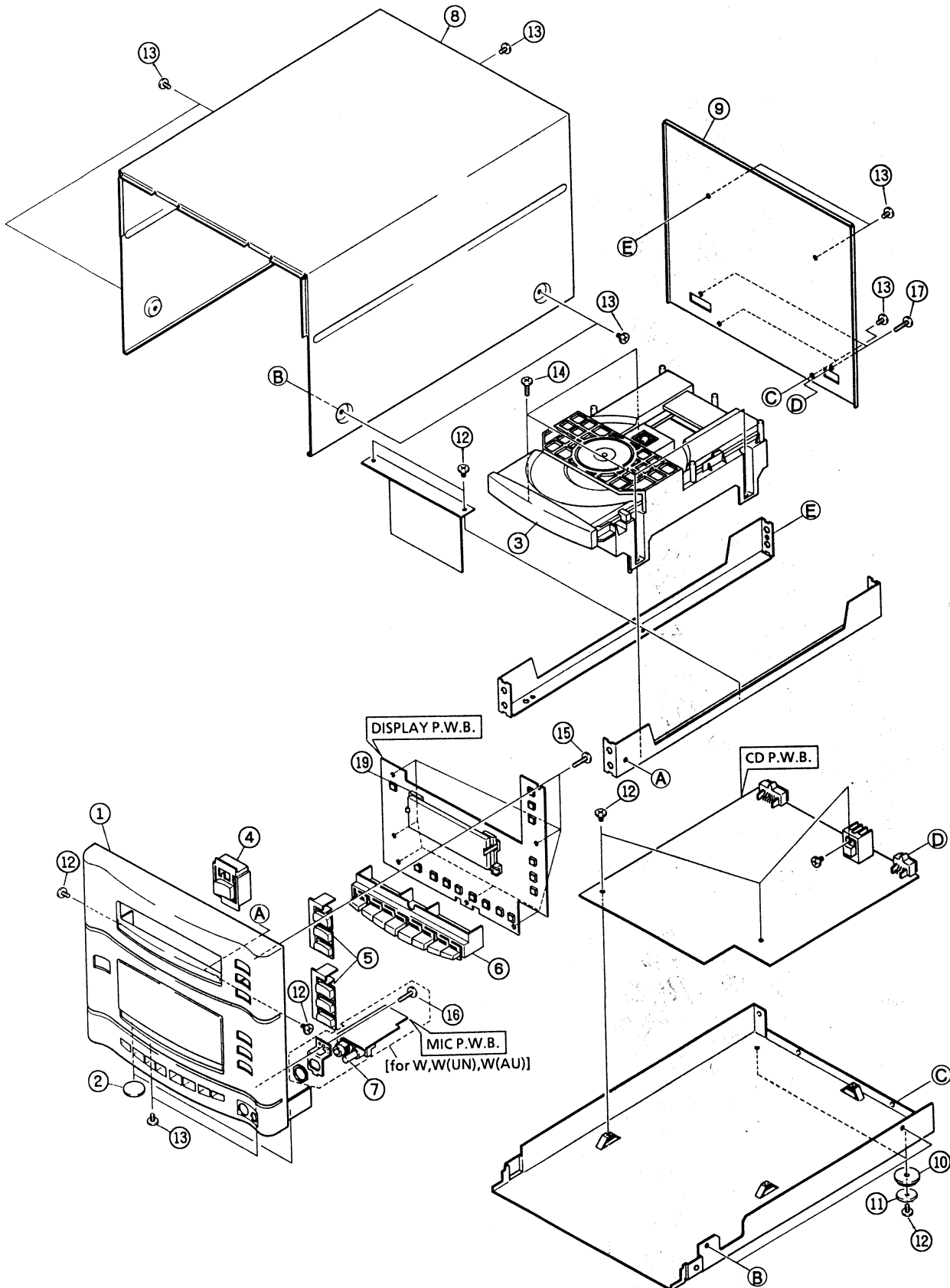
(Cassette Chassis) (Châssis de Cassette)  
Tape2 (TN-1800-268) Bande2 (TN-1800-268)

·Nos. are reference Nos. of parts list.  
·Cas numéros correspondent à la liste des pièces.



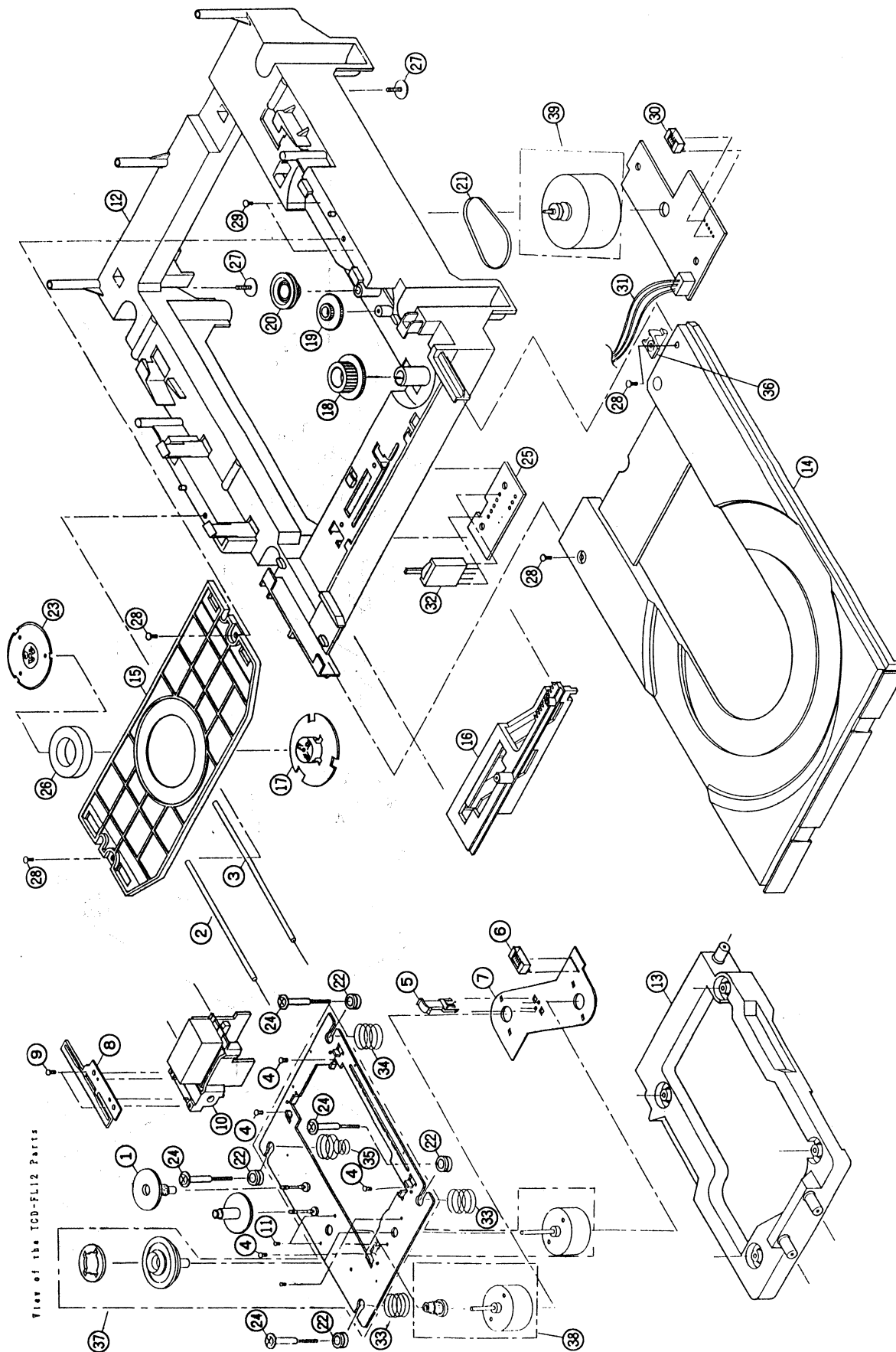
HTC-15(Cabinet)      HTC-15(Coffret)

·Nos. are reference Nos. of parts list.  
 ·Cas numéros correspondent à la liste des pièces.



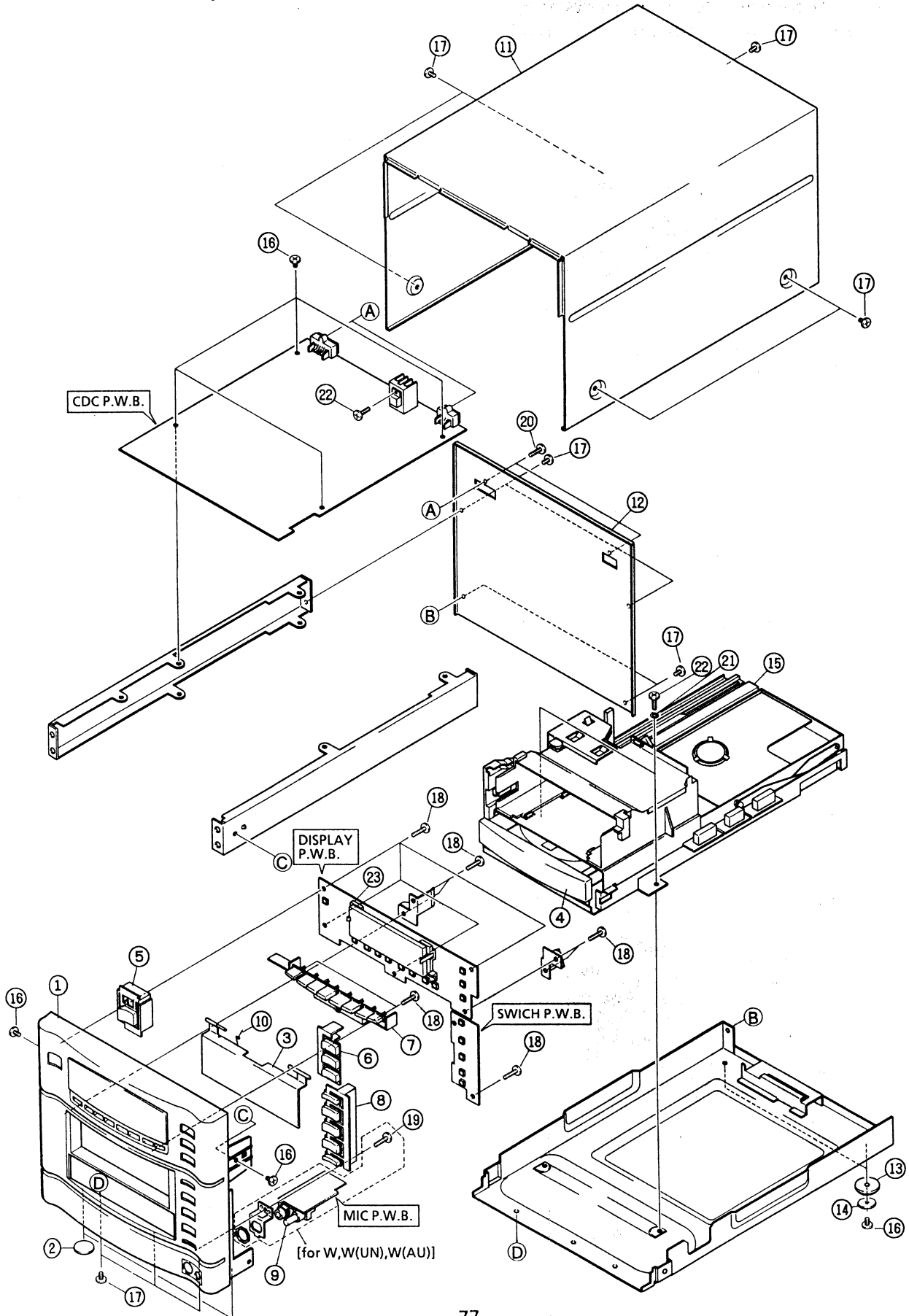
# (CD Mechanism) · (Mécanisme de platine CD) HTC-15

·Nos. are reference Nos. of parts list.  
·Cas numéros correspondent à la liste des pièces.



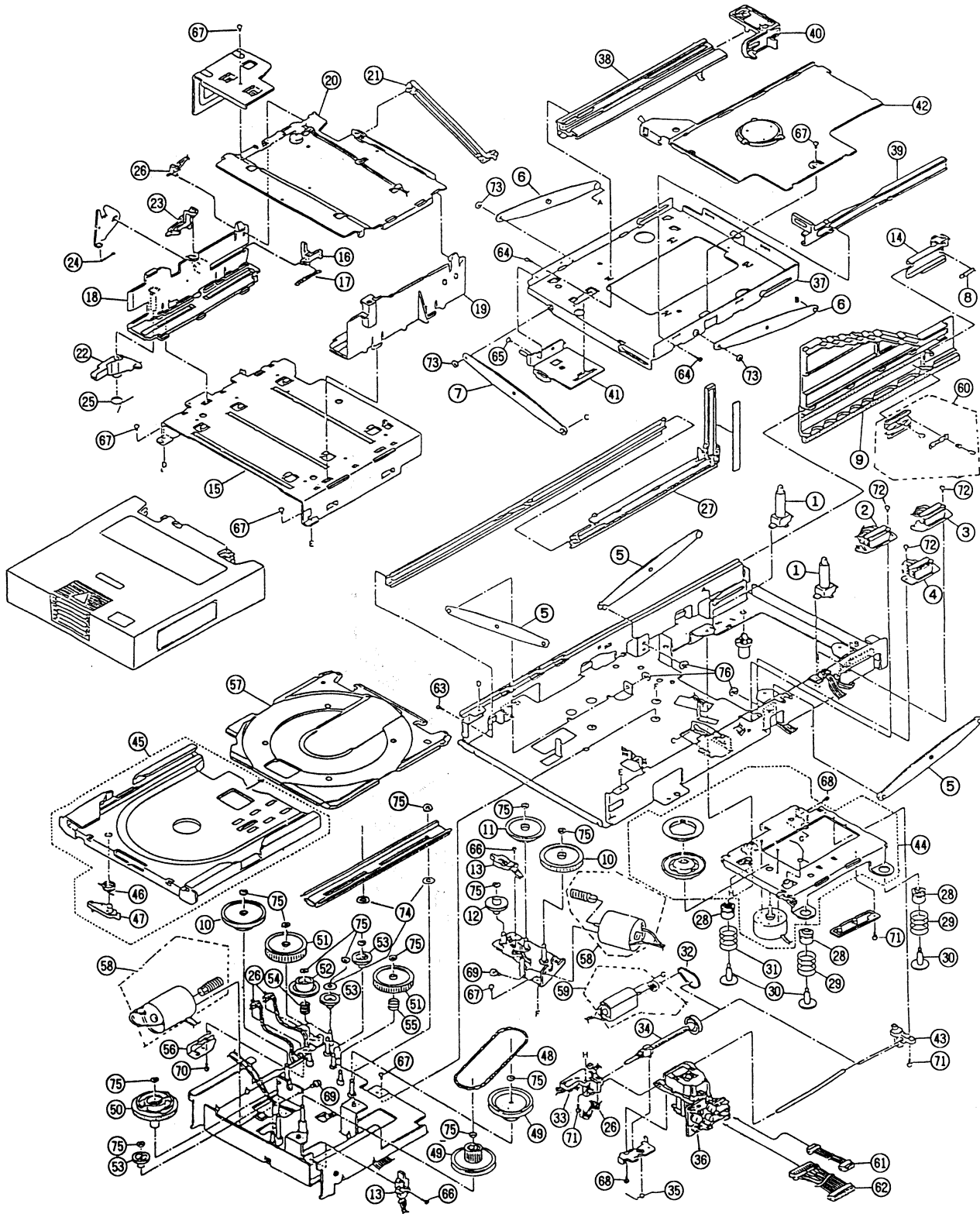
HTC-C15(Cabinet)    HTC-C15(Coffret)

·Nos. are reference Nos. of parts list.  
 ·Cas numéros correspondent à la liste des pièces.



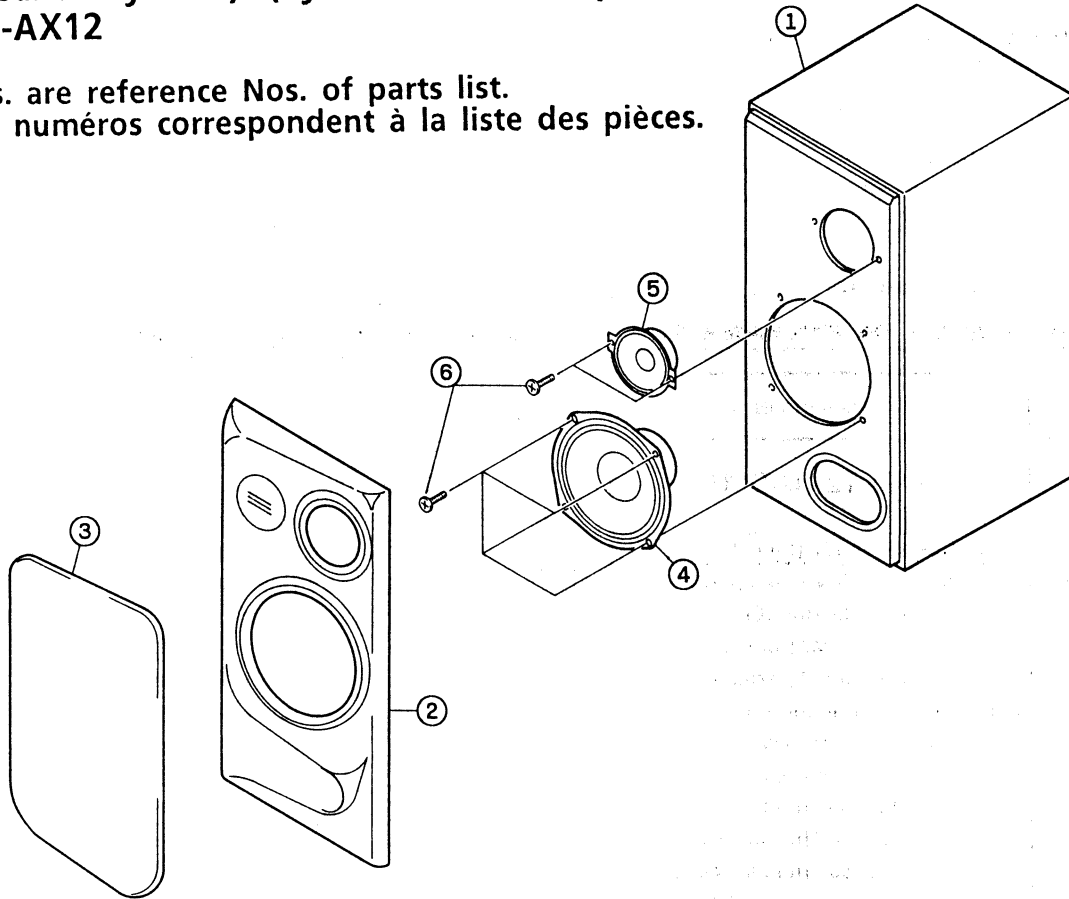
# (CD Mechanism) · (Mécanisme de platine CD) HTC-C15

·Nos. are reference Nos. of parts list.  
·Cas numéros correspondent à la liste des pièces.



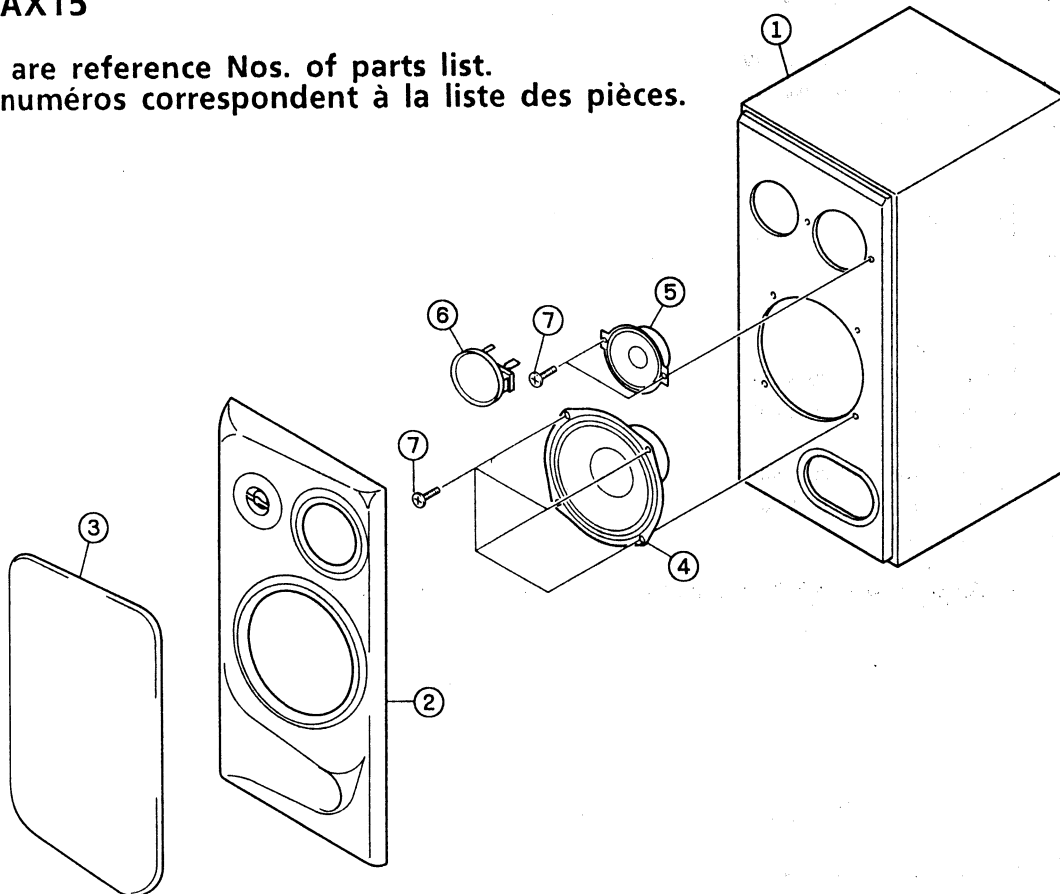
**(Speaker System) · (Système de haut-parleur)**  
**HS-AX12**

·Nos. are reference Nos. of parts list.  
·Cas numéros correspondent à la liste des pièces.



**(Speaker System) · (Système de haut-parleur)**  
**HS-AX15**

·Nos. are reference Nos. of parts list.  
·Cas numéros correspondent à la liste des pièces.





## REPLACEMENT PARTS LIST · TABLEAU DES PIECES

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully, the Service Manual.

<b>ABBREVIATIONS</b>	Capacitors .....	CD: Ceramic disk, PF: Polyester film, EL: Electrolytic, PP: Polypropylene, PR: Paper, TA: Tantalum, TM: Trimmer.
	Resistors .....	CF: Carbon film, CC: Carbon composition, MF: Metal oxide film, VR: Variable resistor, WW: Wire wound, FR: Fuse resistor, MG: Metal glazed
	Semiconductors .....	TR: Transistor, DI: Diode, ZD: Zener diode, VA: Varistor, TH: Thermistor, IC: IC.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
<b>HAD-12/HAD-15</b>			C063	0800049	EL 100MF 16V
			C064	0800003	EL 1MF 50V
			C065	0800049	EL 100MF 16V
CP101	2137301	FM BANDPASS FILTER [for EZ]	C066	0880012	PF 0.022MF + -10% 50V
CF201	2135003	CERAMIC FILTER SKM2 [except UC]	C067	0800026	EL 2.2MF 50V
CF201	2134982	FM CERAMIC FILTER [for UC]	C068	0800023	EL 22MF 16V
CF202	2135003	CERAMIC FILTER SKM2 [for EZ]	C069	0880016	PF 0.1MF + -10% 50V
CF203	2135003	CERAMIC FILTER SKM2 [except UC]	C070	0880016	PF 0.1MF + -10% 50V
CF203	2134982	FM CERAMIC FILTER [for UC]	C071	0880016	PF 0.1MF + -10% 50V
C001	0244173	CD 0.022MF + 80-20% 50V	C072	0880016	PF 0.1MF + -10% 50V
C002	0244173	CD 0.022MF + 80-20% 50V	C073	0240012	CD 1000PF 50V + -10% [for EZ]
C003	0285351	CD 100PF + -10% 50V [for MAIN P.W.B.]	C074	0240012	CD 1000PF 50V + -10% [for EZ]
C003	0890022	CD 100PF + -10% 50V [for AUDIO P.W.B.]	C075	0240012	CD 1000PF 50V + -10% [for EZ]
C004	0285351	CD 100PF + -10% 50V [for MAIN P.W.B.]	C076	0240012	CD 1000PF 50V + -10% [for EZ]
C004	0890022	CD 100PF + -10% 50V [for AUDIO P.W.B.]	C077	0890043	CD 0.01MF 16V + -20% [for EZ]
C005	0890043	CD 0.01MF 16V + -20%	C077	0800053	EL 100MF 50V [except EZ]
C006	0285352	EL 5600MF 25V (HCPS)	C078	0890043	CD 0.01MF 16V + -20% [for EZ]
C007	0800083	EL 1000MF 25V	C080	0890043	CD 0.01MF 16V + -20% [for EZ]
C008	0244173	CD 0.022MF + 80-20% 50V	C101	0890009	CD 12PF + -5% 50V
C009	0244173	CD 0.022MF + 80-20% 50V	C102	0880014	PF 0.047MF + -10% 50V
C011	0800016	EL 10MF 25V	C103	0890015	CD 33PF + -20% 50V
C012	0800016	EL 10MF 25V	C105	0800103	EL 0.22MF 50V [for EZ]
C013	0800049	EL 100MF 16V	C106	0800003	EL 1MF 50V [for EZ]
C014	0800016	EL 10MF 25V	C107	0890044	CD 0.022MF + 80-20% 25V [for EZ]
C015	0800016	EL 10MF 25V	C108	0890016	CD 39PF + -5% 50V [for EZ]
C016	0800044	EL 47MF 50V	C109	0890016	CD 39PF + -5% 50V [for EZ]
C017	0800053	EL 100MF 50V	C110	0890044	CD 0.022MF + 80-20% 25V
C018	0800053	EL 100MF 50V	C111	0890044	CD 0.022MF + 80-20% 25V [for E,EBS]
C020	0890044	CD 0.022MF + 80-20% 25V	C151	0230654	CD 12PF 50V + -5% [for UC]
C021	0890044	CD 0.022MF + 80-20% 25V	C151	0230655	CD 13PF 50V + -5% [except UC]
C022	0800048	EL 100MF 10V	C152	0880012	PF 0.022MF + -10% 50V
C023	0244173	CD 0.022MF + 80-20% 50V	C153	0279333	PP 390PF 100V + -5%
C024	0244173	CD 0.022MF + 80-20% 50V	C154	0230656	CD 15PF 50V + -5%
C051	0800003	EL 1MF 50V	C155	1246451	CD 30PF 50V + -5% [for E, EBS, EZ]
C052	0800003	EL 1MF 50V	C156	0880012	PF 0.022MF + -10% 50V [except UC]
C053	0890031	CD 470PF + -10% 50V	C157	H279344	PP 2700PF 100V + -5% [for E, EBS, EZ]
C054	0890031	CD 470PF + -10% 50V	C157	H279345	PP 2700PF 100V + -5% [for W,WUN,WAU]
C055	0890028	CD 330PF + -10% 50V			
C056	0890028	CD 330PF + -10% 50V	C158	0246465	CD 110PF + -5% 50V [for E, EBS, EZ]
C057	0800049	EL 100MF 16V	C159	0890008	CD 10PF + -5% 50V [for W,WUN,WAU]
C058	0300049	EL 100MF 16V	C181	02528792	EL 3.3 JICRO F 50V
C059	0800053	EL 100MF 50V	C182	0890037	CD 2200PF + -20% 16V
C060	0300053	EL 100MF 50V	C183	0890044	CD 0.022MF + 80-20% 25V
C062	0300049	EL 100MF 16V	C184	08800103	EL 0.22MF 50V

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully, the Service Manual.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C184	0890037	CD 2200PF + -20% 16V W [for WUN,WAU]	C406	0890029	CD 390PF + -10% 50V
C185	0800003	EL 1MF 50V [for E, EBS, EZ]	C407	0890029	CD 390PF + -10% 50V
C185	02528732	EL 0.22MF 50V [for W,WUN, WAU]	C408	0890029	CD 390PF + -10% 50V
C186	H240068	CD 0.1MF 50V	C409	0800041	EL 47MF 16V
C201	0890044	CD 0.022MF + 80-20% 25V	C410	0800041	EL 47MF 16V
C202	0890044	CD 0.022MF + 80-20% 25V	C411	0880011	PF 0.015MF + -10% 50V
C203	0890044	CD 0.022MF + 80-20% 25V	C412	0880011	PF 0.015MF + -10% 50V
C204	0890043	CD 0.01MF 16V + -20%	C413	0800012	EL 4.7MF 50V
C205	H240067	CD 0.047MF 50V + 80%	C414	0800049	EL 100MF 16V
C206	0890044	CD 0.022MF + 80-20% 25V	C415	0800012	EL 4.7MF 50V
C207	0800003	EL 1MF 50V	C416	0800012	EL 4.7MF 50V
C208	0890041	CD 6800PF + -30% 16V	C417	0800012	EL 4.7MF 50V
C209	0890044	CD 0.022MF + 80-20% 25V	C418	0800012	EL 4.7MF 50V
C210	0800015	EL 10MF 16V [for EZ]	C419	0800012	EL 4.7MF 50V
C211	0800016	EL 10MF 25V	C420	0800015	EL 10MF 16V
C212	0800003	EL 1MF 50V	C421	0800103	EL 0.22MF 50V
C213	0800105	EL 0.33MF 50V	C422	0800103	EL 0.22MF 50V
C214	0890032	CD 560PF + -10% 50V [for EZ]	C423	0800003	EL 1MF 50V
C215	0890043	CD 0.01MF 16V + -20% [except UC]	C424	0800003	EL 1MF 50V
C215	0890044	CD 0.022MF + 80-20% 25V [for UC]	C425	0800015	EL 10MF 16V
C216	0890043	CD 0.01MF 16V + -20% [except UC]	C426	0800105	EL 0.33MF 50V
C216	0890044	CD 0.022MF + 80-20% 25V [for UC]	C427	02528722	EL 0.15MF 50V + -20%
C217	0890037	CD 2200PF + -20% 16V [except UC]	C428	0800041	EL 47MF 16V
C217	0890043	CD 0.01MF 16V + -20% [for UC]	C429	0800015	EL 10MF 16V
C218	0890037	CD 2200PF + -20% 16V [except UC]	C430	0800015	EL 10MF 16V
C218	0890043	CD 0.01MF 16V + -20% [for UC]	C431	0890026	CD 220PF + -10% 50V
C219	0800015	EL 10MF 16V	C432	0890026	CD 220PF + -10% 50V
C220	0800015	EL 10MF 16V	C433	1279332	CAPACITOR STYROL 6800PF 100V
C221	0890039	CD 4700PF + -20% 16V	C434	0880011	PF 0.015MF + -10% 50V
C222	0890039	CD 4700PF + -20% 16V	C435	0800015	EL 10MF 16V
C225	0890043	CD 0.01MF 16V + -20%	C436	0880008	PF 6800PF + -10% 50V
C226	0890044	CD 0.022MF + 80-20% 25V	C437	0880006	PF 3300PF + -10% 50V
C227	0800015	EL 10MF 16V	C438	0880006	PF 3300PF + -10% 50V
C228	0800012	EL 4.7MF 50V	C439	0800003	EL 1MF 50V
C229	0890044	CD 0.022MF + 80-20% 25V	C440	0800003	EL 1MF 50V
C230	0245552M	CD 0.047MF 50V + 80%	C441	0800015	EL 10MF 16V
C231	0800041	EL 47MF 16V [for HAD-15]	C442	0800012	EL 4.7MF 50V
C232	0800003	EL 1MF 50V	C443	0890043	CD 0.01MF 16V + -20%
C233	0890015	CD 33PF + -20% 50V	C444	0800003	EL 1MF 50V
C234	0890044	CD 0.022MF + 80-20% 25V	C445	0800007	EL 3.3MF 50V
C235	0240068	CD 0.1MF + 80-20% 50V [for EZ]	C446	0800012	EL 4.7MF 50V
C236	0240067	CD 0.047MF + -80% 50V [for EZ]	C447	0800012	EL 4.7MF 50V
C301	0890119	CD 27PF + -5% 50V	C448	0800012	EL 4.7MF 50V
C302	0890119	CD 27PF + -5% 50V	C449	0800012	EL 4.7MF 50V
C303	0890022	CD 100PF + -10% 50V	C450	0800003	EL 1MF 50V
C304	0890022	CD 100PF + -10% 50V	C451	0800003	EL 1MF 50V
C305	0890022	CD 100PF + -10% 50V	C452	0890034	CD 820PF + -10% 50V
C307	0800039	EL 47MF 10V	C453	0890034	CD 820PF + -10% 50V
C308	0245552M	CD 0.047MF 50V + 80%	C454	0800105	EL 0.33MF 50V
C401	0890033	CD 680PF + -10% 50V	C455	0800105	EL 0.33MF 50V
C402	0890033	CD 680PF + -10% 50V	C456	0880006	PF 3300PF + -10% 50V
C403	0890033	CD 680PF + -10% 50V	C457	0880006	PF 3300PF + -10% 50V
C404	0890033	CD 680PF + -10% 50V	C458	0880009	PF 0.01MF + -10% 50V
C405	0890029	CD 390PF + -10% 50V	C459	0890039	CD 4700PF + -20% 16V
			C460	0800003	EL 1MF 50V

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C461	0800023	EL 22MF 16V	R051	0700041	CF 1K OHM +5% 1/16W
C462	0800047	EL 100MF 6.3V	R052	0700041	CF 1K OHM +5% 1/16W
C463	0890034	CD 820PF +-10% 50V	R053	0700064	CF 56K OHM +5% 1/16W
C464	0890034	CD 820PF +-10% 50V	R054	0700064	CF 56K OHM +5% 1/16W
C465	0800058	EL 220MF 16V [for HAD-15]	R055	0700039	CF 820 OHM +5% 1/16W [for HAD-12]
C501	0890024	EL 150PF +-10% 50V	R055	0700038	CF 680 OHM +5% 1/16W [for HAD-15]
C502	0890024	CD 150PF +-10% 50V	R056	0700039	CF 820 OHM +5% 1/16W [for HAD-12]
C503	0800003	EL 1MF 50V	R056	0700038	CF 680 OHM +5% 1/16W [for HAD-15]
C504	0800003	EL 1MF 50V	R057	0700064	CF 56K OHM +5% 1/16W
C505	0890027	CD 270PF +-10% 50V	R058	0700064	CF 56K OHM +5% 1/16W
C506	0890027	CD 270PF +-10% 50V	$\Delta$ R059	0110621	RESISTOR 100OHM +-5% RN1/4B
C507	0800015	EL 10MF 16V	$\Delta$ R060	0110621	RESISTOR 100OHM +-5% RN1/4B
C508	0800015	EL 10MF 16V	R061	0700056	CF 15K OHM +5% 1/16W
C509	0800007	EL 3.3MF 50V	R062	0700056	CF 15K OHM +5% 1/16W
C510	0800007	EL 3.3MF 50V	R063	0700067	CF 100K OHM +5% 1/16W
C511	0890017	CD 47PF 50V +-5%	R064	0700067	CF 100K OHM +5% 1/16W
C512	0890017	CD 47PF 50V +-5%	R065	0700063	CF 47K OHM +5% 1/16W
C513	0890018	CD 56PF +-10% 50V	R066	0129531	CF 10 OHM 1/4W +-5% [for EZ]
C514	0890018	CD 56PF +-10% 50V	R067	0129531	CF 10 OHM 1/4W +-5% [for EZ]
C515	0800015	EL 10MF 16V	R068	01132012	CF 10 OHM 1/2W +-5%
C516	0800015	EL 10MF 16V	R069	01132012	CF 10 OHM 1/2W +-5%
C517	0800007	EL 3.3MF 50V	R070	01132012	CF 10 OHM 1/2W +-5%
C518	0800007	EL 3.3MF 50V	R071	01132012	CF 10 OHM 1/2W +-5%
C519	0800005	EL 2.2MF 50V	R072	0700053	CF 8.2K OHM +-5% 1/16W
C520	0800005	EL 2.2MF 50V	R073	0700067	CF 100K OHM +-5% 1/16W
C521	0800103	EL 0.22MF 50V	R074	0700058	CF 22K OHM +-5% 1/16W
C522	0800103	EL 0.22MF 50V	R075	0700041	CF 1K OHM +-5% 1/16W
C523	0800003	EL 1MF 50V [for HAD-15]	R076	0110125	MF 150 OHM +-5% 1W [for HAD-12]
C524	0880016	PF 0.1MF +-10% 50V	R076	0110133	MF 330 OHM +-5% 1W [for HAD-15]
C525	0880016	PF 0.1MF +-10% 50V	R077	0110233	MF 330 OHM +-5% 2W
C526	0800041	EL 47MF 16V	R078	0110233	MF 330 OHM +-5% 2W
C527	0890044	CD 0.022MF +80-20% 25V	R079	0700063	CF 47K OHM +5% 1/16W
C551	0890038	CD 3300PF +-20% 16V [for HAD-15]	R080	0700045	CF 2.2K OHM +-5% 1/16W
C552	0800015	EL 10MF 16V	R081	0700058	CF 22K OHM +-5% 1/16W
C553	0800144	EL 100MF 10V	R082	0700055	CF 12K OHM +-5% 1/16W
C554	0890035	CD 1000PF +-10% 50V [for HAD-15]	R084	0700067	CF 100K OHM +-5% 1/16W
C555	0800057	EL 220MF 10V [for HAD-15]	R101	0700027	CF 100K OHM +-5% 1/16W [for EZ]
C901	0800001	EL 0.47MF 50V	R102	0700046	CF 2.7K OHM +-5% 1/16W
C902	0800001	EL 0.47MF 50V	R104	0700067	CF 100K OHM +-5% 1/16W [for EZ]
C903	0252969	EL 2200MF 25V	R105	0700067	CF 100K OHM +-5% 1/16W [for EZ]
C904	0252969	EL 2200MF 25V	R106	0700027	CF 100K OHM +-5% 1/16W [for EZ]
C905	0800018	EL 10MF 50V	R107	0700054	CF 10K OHM +-5% 1/16W [for EZ]
C906	0800049	EL 100MF 16V	R108	0700042	CF 1.2K OHM +-5% 1/16W [for EZ]
C951	0890044	CD 0.022MF +80-20% 25V [for HAD-12]	R109	0700067	CF 100K OHM +-5% 1/16W [for EZ]
RA551	2793521	RESISTOR NETWORK 100KX12 (HCPS) [for HAD-15]	R110	0113226	CF 56 OHM +-5% 1/2W [for EZ]
RA552	2793522	RESISTOR NETWORK 100KX6 (HCPS) [for HAD-15]	R110	0129565	CF 150 OHM 1/4W +-5% [except EZ]
RY051	2641321	RELAY 24 V [for HAD-15]	R152	0700063	CF 47K OHM +-5% 1/16W [except UC]
RY051	2641341	RELAY 12V [for HAD-12]	R153	0700054	CF 10K OHM +-5% 1/16W
$\Delta$ R001	01390052	CF 2.7M OHM 1/2W +-10% [for UC]	R154	0700072	CF 220K OHM +-5% 1/16W
R002	0700058	CF 22K OHM +-5% 1/16W	R155	0700063	CF 47K OHM +-5% 1/16W [except UC]
R003	01132952	CF 470 OHM 1/2W +-5%	R156	0700063	CF 47K OHM +-5% 1/16W [except UC]
R004	01133652	CF 1K OHM 1/2W +-5%	R157	0700054	CF 10K OHM +-5% 1/16W [except UC]
R005	01133652	CF 1K OHM 1/2W +-5%	R158	0700072	CF 220K OHM +-5% 1/16W [except UC]
R006	01133652	CF 1K OHM 1/2W +-5%	R159	0700063	CF 47K OHM +-5% 1/16W [except UC]
R007	01133652	CF 1K OHM 1/2W +-5%	R181	0700052	CF 6.8K OHM +-5% 1/16W

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R182	0700038	CF 680 OHM +-5% 1/16W	R402	0700067	CF 100K OHM +-5% 1/16W
R183	0700045	CF 2.2K OHM +-5% 1/16W	R403	0700067	CF 100K OHM +-5% 1/16W
R184	0700043	CF 1.5K OHM +-5% 1/16W	R404	0700067	CF 100K OHM +-5% 1/16W
R185	0700052	CF 6.8K OHM +-5% 1/16W [for E,EBS,EZ]	R405	0700024	CF 56 OHM +-5% 1/16W
R185	0700045	CF 2.2K OHM +-5% 1/16W [for W,WUN,WAU]	R406	0700024	CF 56 OHM +-5% 1/16W
R186	0700054	CF 10K OHM +-5% 1/16W [except UC]	R407	0129571	CF 270 OHM 1/4W +-5% [for HAD-15]
R187	0700052	CF 6.8K OHM +-5% 1/16W [except UC]	R408	01132892	CF 150 OHM 1/2W +-5%
R188	0700041	CF 1K OHM +-5% 1/16W [for E,EBS,EZ]	R409	0700049	CF 4.7K OHM +-5% 1/16W
R188	0700043	CF 1.5K OHM +-5% 1/16W [for W,WUN,WAU]	R410	0700049	CF 4.7K OHM +-5% 1/16W
R201	0700034	CF 330 OHM +-5% 1/16W [except EZ]	R411	0700081	CF 1.0M OHM +-5% 1/16W
R202	0700034	CF 330 OHM +-5% 1/16W	R412	0700059	CF 27K OHM +-5% 1/16W
R203	0700041	CF 1K OHM +-5% 1/16W	R413	0700052	CF 6.8K OHM +-5% 1/16W
R204	0700043	CF 1.5K OHM +-5% 1/16W	R414	0700052	CF 6.8K OHM +-5% 1/16W
R205	0700035	CF 390 OHM +-5% 1/16W	R423	0700054	CF 10K OHM +-5% 1/16W
R206	0700055	CF 12K OHM +-5% 1/16W	R424	0700058	CF 22K OHM +-5% 1/16W
R207	0700053	CF 8.2K OHM +-5% 1/16W	R425	0700041	CF 1K OHM +-5% 1/16W
R208	0700058	CF 22K OHM +-5% 1/16W	R426	0700058	CF 22K OHM +-5% 1/16W
R209	0113632	CF 5.1K OHM 1/6W +-5%	R427	0700058	CF 22K OHM +-5% 1/16W
R210	0700044	CF 1.8K OHM +-5% 1/1W [for EZ]	R429	0700051	CF 5.6K OHM +-5% 1/16W
R210	0700042	CF 1.2K OHM +-5% 1/16W [except UC,EZ]	R430	0700056	CF 15K OHM +-5% 1/16W
R210	0700041	CF 1K OHM +-5% 1/16W [for UC]	R431	0700051	CF 5.6K OHM +-5% 1/16W
R211	0700051	CF 5.6K OHM +-5% 1/16W	R432	0700056	CF 15K OHM +-5% 1/16W
R212	0700051	CF 5.6K OHM +-5% 1/16W	R433	0700051	CF 5.6K OHM +-5% 1/16W
R213	0700043	CF 1.5K OHM +-5% 1/16W	R434	0700054	CF 10K OHM +-5% 1/16W
R214	0700043	CF 1.5K OHM +-5% 1/16W	R435	0700075	CF 390K OHM +-5% 1/16W
R215	0700053	CF 8.2K OHM +-5% 1/16W	R436	0700054	CF 10K OHM +-5% 1/16W
R216	0700053	CF 8.2K OHM +-5% 1/16W	R437	0700054	CF 10K OHM +-5% 1/16W
R217	0700053	CF 8.2K OHM +-5% 1/16W [for UC]	R438	0700054	CF 10K OHM +-5% 1/16W
R217	0700058	CF 22K OHM +-5% 1/16W [except UC]	R439	01132912	CF 220 OHM 1/2W +-5%
R218	0700054	CF 10K OHM +-5% 1/16W	R440	0700053	CF 8.2K OHM +-5% 1/16W
R219	0700061	CF 33K OHM +-5% 1/16W	R441	0700053	CF 8.2K OHM +-5% 1/16W
R220	0700054	CF 10K OHM +-5% 1/16W	R442	0129509	CF 2.2 OHM 1/4W +-5%
R222	0700041	CF 1K OHM +-5% 1/16W	R443	0700056	CF 15K OHM +-5% 1/16W
R223	0700054	CF 10K OHM +-5% 1/16W	R444	0700056	CF 15K OHM +-5% 1/16W
R224	0700056	CF 15K OHM +-5% 1/16W	R445	0700056	CF 15K OHM +-5% 1/16W [for HAD-15]
R225	0700041	CF 1K OHM +-5% 1/16W	R446	0700016	CF 15 OHM +-5% 1/16W
R226	0700053	CF 8.2K OHM +-5% 1/16W	R447	0700059	CF 27K OHM +-5% 1/16W
R227	0110601	RESISTOR FUSE 10 OHM 1/4W +-5%	R448	0700052	CF 6.8K OHM +-5% 1/16W
R228	0700049	CF 4.7K OHM +-5% 1/16W	R449	0700049	CF 4.7K OHM +-5% 1/16W
R229	0700049	CF 4.7K OHM +-5% 1/16W	R450	0700041	CF 1K OHM +-5% 1/16W
R230	0700047	CF 3.3K OHM +-5% 1/16W	R451	0700067	CF 100K OHM +-5% 1/16W
R231	0700041	CF 1K OHM +-5% 1/16W	R452	0700054	CF 10K OHM +-5% 1/16W
R301	0700045	CF 2.2K OHM +-5% 1/16W	R453	0700042	CF 1.2K OHM +-5% 1/16W
R302	0700045	CF 2.2K OHM +-5% 1/16W	R454	0700054	CF 10K OHM +-5% 1/16W
R303	0700045	CF 2.2K OHM +-5% 1/16W	R455	0700054	CF 10K OHM +-5% 1/16W
R304	0700054	CF 10K OHM +-5% 1/16W	R456	0700054	CF 10K OHM +-5% 1/16W
R305	0700054	CF 10K OHM +-5% 1/16W	R457	0700045	CF 2.2K OHM +-5% 1/16W
R306	01132952	CF 470 OHM 1/2W +-5%	R458	0700042	CF 1.2K OHM +-5% 1/16W
R307	0700067	CF 100K OHM +-5% 1/16W	R459	0700049	CF 4.7K OHM +-5% 1/16W
R401	0700067	CF 100K OHM +-5% 1/16W	R460	0700041	CF 1K OHM +-5% 1/16W
			R461	0700041	CF 1K OHM +-5% 1/16W
			R462	0700054	CF 10K OHM +-5% 1/16W
			R463	0700049	CF 4.7K OHM +-5% 1/16W
			R464	0700054	CF 10K OHM +-5% 1/16W

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R464	0700054	CF 10K OHM + -5% 1/16W	R517	0700041	CF 1K OHM + -5% 1/16W
R465	0700054	CF 10K OHM + -5% 1/16W	R518	0700041	CF 1K OHM + -5% 1/16W
R466	0700054	CF 10K OHM + -5% 1/16W	R519	0700064	CF 56K OHM + -5% 1/16W
R467	0700063	CF 47K OHM + -5% 1/16W	R520	0700064	CF 56K OHM + -5% 1/16W
R468	0700054	CF 10K OHM + -5% 1/16W	R521	0700053	CF 8.2K OHM + -5% 1/16W
R469	0700054	CF 10K OHM + -5% 1/16W	R522	0700053	CF 8.2K OHM + -5% 1/16W
R470	0700054	CF 10K OHM + -5% 1/16W [for HAD-12]	R523	0700046	CF 2.7K OHM + -5% 1/16W
R471	0700054	CF 10K OHM + -5% 1/16W	R524	0700046	CF 2.7K OHM + -5% 1/16W
R472	0700041	CF 1K OHM + -5% 1/16W	R525	0700029	CF 150 OHM + -5% 1/16W
R473	0700054	CF 10K OHM + -5% 1/16W	R526	0700029	CF 150 OHM + -5% 1/16W
R474	0700054	CF 10K OHM + -5% 1/16W	R527	0700063	CF 47K OHM + -5% 1/16W
R475	0700054	CF 10K OHM + -5% 1/16W	R528	0700063	CF 47K OHM + -5% 1/16W
R476	0700041	CF 1K OHM + -5% 1/16W	R529	0700041	CF 1K OHM + -5% 1/16W
R477	0700081	CF 1.0M OHM + -5% 1/16W	R530	0700063	CF 47K OHM + -5% 1/16W
R478	0700054	CF 10K OHM + -5% 1/16W	R531	0700063	CF 47K OHM + -5% 1/16W
R479	0700054	CF 10K OHM + -5% 1/16W	R532	0700033	CF 270 OHM + -5% 1/16W
R480	0700054	CF 10K OHM + -5% 1/16W	R533	0700033	CF 270 OHM + -5% 1/16W
R481	0700054	CF 10K OHM + -5% 1/16W	R534	0700063	CF 47K OHM + -5% 1/16W
R482	0700054	CF 10K OHM + -5% 1/16W	R535	0700063	CF 47K OHM + -5% 1/16W
R483	0700054	CF 10K OHM + -5% 1/16W	R536	0700058	CF 22K OHM + -5% 1/16W [for HAD-15]
R484	0700054	CF 10K OHM + -5% 1/16W	R537	0700058	CF 22K OHM + -5% 1/16W [for HAD-15]
R485	0700054	CF 10K OHM + -5% 1/16W	R538	0700045	CF 2.2K OHM + -5% 1/16W
R486	0700056	CF 15K OHM + -5% 1/16W [for E,EBS,EZ]	R539	0700045	CF 2.2K OHM + -5% 1/16W
R486	0700061	CF 33K OHM + -5% 1/16W [for W,WUN,WAU]	R540	0700051	CF 5.6K OHM + -5% 1/16W
R487	0700054	CF 10K OHM + -5% 1/16W	R541	0700051	CF 5.6K OHM + -5% 1/16W
R488	0700045	CF 2.2K OHM + -5% 1/16W	R542	0700043	CF 1.5K OHM + -5% 1/16W
R489	0700045	CF 2.2K OHM + -5% 1/16W	R543	0700043	CF 1.5K OHM + -5% 1/16W
R490	0700045	CF 2.2K OHM + -5% 1/16W	R544	0700067	CF 100K OHM + -5% 1/16W
R491	0700045	CF 2.2K OHM + -5% 1/16W	R545	0700067	CF 100K OHM + -5% 1/16W
R492	0700054	CF 10K OHM + -5% 1/16W	R546	0700054	CF 10K OHM + -5% 1/16W
R493	0700049	CF 4.7K OHM + -5% 1/16W	R547	0700054	CF 10K OHM + -5% 1/16W
R494	0700049	CF 4.7K OHM + -5% 1/16W	R551	0700034	CF 330 OHM + -5% 1/16W [for HAD-12]
R495	0700054	CF 10K OHM + -5% 1/16W	R552	0700034	CF 330 OHM + -5% 1/16W [for HAD-12]
R496	0700058	CF 22K OHM + -5% 1/16W	R552	0700073	CF 270KOHM + -5% 1/16W [for HAD-15]
R497	0700047	CF 3.3K OHM + -5% 1/16W	R553	0700058	CF 22K OHM + -5% 1/16W [for HAD-15]
R498	0700058	CF 22K OHM + -5% 1/16W	R554	0700041	CF 1K OHM + -5% 1/16W
R499	0700042	CF 1.2K OHM + -5% 1/16W	R555	0700059	CF 27K OHM + -5% 1/16W [for HAD-15]
R501	0700062	CF 39K OHM + -5% 1/16W	R556	0700049	CF 4.7K OHM + -5% 1/16W [for HAD-15]
R502	0700062	CF 39K OHM + -5% 1/16W	R557	H113220	RD 180HM + -5% 1/2W [for HAD-15]
R503	0700053	CF 8.2K OHM + -5% 1/16W	R558	H113220	RD 180HM + -5% 1/2W [for HAD-15]
R504	0700053	CF 8.2K OHM + -5% 1/16W	R559	H113220	RD 180HM + -5% 1/2W [for HAD-15]
R505	0700045	CF 2.2K OHM + -5% 1/16W	R560	H113220	RD 180HM + -5% 1/2W [for HAD-15]
R506	0700063	CF 47K OHM + -5% 1/16W	R561	0700021	CF 330HM + -5% 1/16W
R507	0700041	CF 1K OHM + -5% 1/16W	R901	0174577	MF 3.3K OHM 1/16W + -1%
R508	0700041	CF 1K OHM + -5% 1/16W	R902	0174586	MF 6.8K OHM 1/16W + -1%
R509	0700067	CF 100K OHM + -5% 1/16W	R903	0174569	MF 1.6K OHM 1/16W + -1%
R510	0700067	CF 100K OHM + -5% 1/16W	R904	0700046	CF 2.7K OHM + -5% 1/16W
R511	0700054	CF 10K OHM + -5% 1/16W	R905	0700049	CF 4.7K OHM + -5% 1/16W
R512	0700054	CF 10K OHM + -5% 1/16W	R906	0700067	CF 100K OHM + -5% 1/16W
R513	0700049	CF 4.7K OHM + -5% 1/16W	R907	0700065	CF 68K OHM + -5% 1/16W
R514	0700049	CF 4.7K OHM + -5% 1/16W	R908	0700055	CF 12K OHM + -5% 1/16W
R515	0700067	CF 100K OHM + -5% 1/16W	R909	0174577	MF 3.3K OHM 1/16W + -1%
R516	0700067	CF 100K OHM + -5% 1/16W	R910	0174586	MF 6.8K OHM 1/16W + -1%
			R911	0174569	MF 1.6K OHM 1/16W + -1%

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R912	0174576	MF 3K OHM 1/16W + -1%	VR408	0160325	VR 100K OHM (HCPS)
R913	0174571	MF 1.8K OHM 1/16W + -1%	VR501	0157901	ROTARY VR 50K OHM (WITH MOTOR)
R914	0174571	MF 1.8K OHM 1/16W + -1%	VR901	0160326	SEMI VR 3K OHM (HCPS)
R915	0174576	MF 3K OHM 1/16W + -1%	VR902	0160326	SEMI VR 3K OHM (HCPS)
R916	0700045	CF 2.2K OHM + -5% 1/16W	IC001	2366361	IC AN7805
R917	0700054	CF 2.2K OHM + -5% 1/16W	IC002	2004602	IC PQ098A1
R918	0700045	CF 2.2K OHM + -5% 1/16W	IC003	2366367	IC AN7812
R919	0700054	CF 10K OHM + -5% 1/16W	IC051	2373361	MODULE STK 401-020 [for HAD-12]
R920	0700058	CF 22K OHM + -5% 1/16W	IC051	2373331	IC STK401-050 [for HAD-15]
R921	0700058	CF 22K OHM + -5% 1/16W	IC052	2387582	IC UPC1237H HA
R922	0174564	MF 1K OHM 1/16W + -1%	IC201	23684312	IC AN278
R923	0174564	MF 1K OHM 1/16W + -1%	IC202	2008521	IC LA1851N
R924	0174563	MF 910 OHM 1/16W + -1%	IC301	2385201	IC,LC7218
R925	0174563	MF 910 OHM 1/16W + -1%	IC401	2008771	IC CXA1498S
R926	0174591	MF 10K OHM 1/16W + -1%	IC402	2003731	IC HA12134A (LINEAR)
R927	0174591	MF 1.8K OHM 1/16W + -1%	IC403	23684632	IC BA335
R928	0700055	CF 12K OHM + -5% 1/16W	IC404	2020291	IC BA3126N
R929	0700054	CF 10K OHM + -5% 1/16W	IC405	2001476	IC M50944-1855P
R932	0700036	CF 470K OHM + -5% 1/16W	IC406	2007432	IC S-2911R10
R933	0700054	CF 10K OHM + -5% 1/16W	IC407	2005421	IC 58054ALR (CMOS)
R934	0700041	CF 1K OHM + -5% 1/16W	IC501	2008431	IC BU4052B
R935	0700061	CF 33K OHM + -5% 1/16W	IC502	2387304	IC MS218AP
R936	0700054	CF 10K OHM + -5% 1/16W	IC503	2387304	IC MS218AP
R937	0700045	CF 2.2K OHM + -5% 1/16W	IC504	2387304	IC MS218AP
R938	0700045	CF 2.2K OHM + -5% 1/16W	IC505	23017012	IC BA6209N
R939	0700054	CF 10K OHM + -5% 1/16W	IC506	2363192	IC BU4066B
R940	0700054	CF 10K OHM + -5% 1/16W	IC551	2008761	IC BA3830S [for HAD-15]
R941	0700021	CF 33 OHM + -5% 1/16W	IC552	2008751	IC LC7566 [for HAD-15]
R942	0700041	CF 1K OHM + -5% 1/16W	IC901	2008411	IC M54567P
R943	0700044	CF 1.8K OHM + -5% 1/16W	IC951	2008711	IC BU2040
R944	0700044	CF 1.8K OHM + -5% 1/16W	Q001	2328625	TR 25B647C SILICON 140MHZ 0.9W
R945	0700059	CF 27K OHM + -5% 1/16W	$\Delta$ Q004	2328625	TR 25B647C SILICON 140MHZ 0.9W
R946	0700059	CF 27K OHM + -5% 1/16W	Q101	2318303	TR 25C1740S(S) [for HAD-12 (EZ)]
R947	0700056	CF 15K OHM + -5% 1/16W	Q102	2328803	FET 25K104(H)
R948	0700056	CF 15K OHM + -5% 1/16W	Q051	2318303	TR 25C1740S(S)
R951	0700058	CF 22K OHM + -5% 1/16W	Q052	2328625	TR 25B647C SILICON 140MHZ 0.9W
R952	0700067	CF 100K OHM + -5% 1/16W	Q053	2326871	TR DTC124ES
R953	0700058	CF 22K OHM + -5% 1/16W	Q054	2326871	TR DTC124ES
R954	0174571	MF 1.8K OHM 1/16W + -1%	Q151	2318303	TR 25C1740S(S) [except UC]
R955	0174568	MF 1.5K OHM 1/16W + -1%	Q152	2318303	TR 25C1740S(S) [except UC]
R956	0174567	MF 1.3K OHM 1/16W + -1%	Q153	2318303	TR 25C1740S(S) [except UC]
R957	0174575	MF 2.7K OHM 1/16W + -1% (HCPS)	Q154	2318303	TR 25C1740S(S) [except UC]
R958	0700034	CF 330 OHM + -5% 1/16W	Q181	2318303	TR 25C1740S(S)
R959	0700034	CF 330 OHM + -5% 1/16W	Q182	2318303	TR 25C1740S(S)
R960	0700034	CF 330 OHM + -5% 1/16W	Q183	2318303	TR 25C1740S(S) [except UC]
R961	0700034	CF 330 OHM + -5% 1/16W	Q184	2318303	TR 25C1740S(S) [except UC]
R962	0700034	CF 330 OHM + -5% 1/16W	Q201	2326862	TR DTA114ES
R963	0174558	MF 620 OHM 1/16W + -1%	Q202	2326871	TR DTC124ES
R964	0174559	MF 680 OHM 1/16W + -1%	Q301	2326862	TR DTA114ES
R965	0174584	MF 5.6K OHM 1/16W + -1%	Q302	2326862	TR DTA114ES
R966	0174558	MF 620 OHM 1/16W + -1%	Q303	2326862	TR DTA114ES
R967	0174559	MF 680 OHM 1/16W + -1%	Q304	2318303	TR 25C1740S(S)
VR401	0160322	SEMI VR 10K OHM	Q401	2318303	TR 25C1740S(S)
VR402	0160322	SEMI VR 10K OHM	Q402	2318303	TR 25C1740S(S)
VR407	0160325	VR 100K OHM (HCPS)	Q403	2318303	TR 25C1740S(S)

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
Q404	2318303	TR 25C1740S(S)	D151	2398921	DI 1N4531T
Q405	2318303	TR 25C1740S(S)	D152	2398921	DI 1N4531T
Q406	2318303	TR 25C1740S(S)	D153	2397362	DI SVC321-1
Q407	2326862	TR DTA114ES	D154	2397362	DI SVC321-1
Q408	2326871	TR DTC124ES	D155	2397362	DI SVC321-1 [except UC]
Q409	2326871	TR DTC124ES	D156	2397362	DI SVC321-1 [except UC]
Q410	2319062	TR HIT5609C	D157	2398921	DI 1N4531T [for W,WUN,WAU]
Q411	2326871	TR DTC124ES	D158	2398921	DI 1N4531T [for W,WUN,WAU]
Q412	2318303	TR 25C1740S(S)	D301	2398921	DI 1N4531T [except UC]
Q413	2318303	TR 25C1740S(S)	D302	2398921	DI 1N4531T [except UC]
Q414	2318303	TR 25C1740S(S)	D303	2398921	DI 1N4531T
Q415	2321322	TR 2SA844E SI 200MHZ 300MW	D401	2398921	DI 1N4531T
Q416	2326871	TR DT124ES	D402	2398921	DI 1N4531T
Q417	2326871	TR DTC124ES	D403	2398921	DI 1N4531T
Q418	2318303	TR 25C1740S(S)	D501	2397314	LED RLL20503PD-R15(S)
Q419	2318303	TR 25C1740S(S)	D551	2398408	LED SLR-54DT3F (HCPS) [for HAD-12]
Q420	2318303	TR 25C1740S(S)	D552	2398408	LED SLR-54DT3F (HCPS) [for HAD-12]
Q501	2318303	TR 25C1740S(S)	D901	2398921	DI 1N4531T [for HAD-12]
Q502	2318303	TR 25C1740S(S)	D903	2398062	DI 1N4001
Q503	2318303	TR 25C1740S(S)	D904	2398062	DI 1N4001
Q504	2318303	TR 25C1740S(S)	D905	2398062	DI 1N4001
Q551	2319052	TR HIT8050C	D906	2398062	DI 1N4001
Q901	2321322	TR 2SA844E SI 200MHZ 300MW	D951	2398406	LED SLR54MC3F
Q902	2326871	TR DT124ES	D952	2398406	LED SLR54MC3F
Q903	2326871	TR DTC124ES	D953	2398406	LED SLR54MC3F
Q904	2319062	TR HIT5609C	D954	2398406	LED SLR54MC3F
Q905	2319062	TR HIT5609C	D956	2398405	LED SLR54VC3F
Q906	2321322	TR 2SA844E SI 200MHZ 300MW	ZD001	2331815	ZD HZ7 (B2)
Q907	2321322	TR 2SA844E SI 200MHZ 300MW	ZD002	2335043	DI HZ-22 1L
Q908	2318303	TR 25C1740S(S)	ZD003	2331805	ZD HZ6 (B2)
Q909	2318303	TR 25C1740S(S)	ZD301	2331797	ZD HZ5C1
Q910	2318303	TR 25C1740S(S)	ZD501	2331787	ZD HZ4(C)1 SI
Q912	2318303	TR 25C1740S(S)	ZD551	2331804	ZD HZ6 (B1)
Q951	2318303	TR 25C1740S(S)	ZD901	2331817	ZD HZ7(C)1 SI
Q952	2318303	TR 25C1740S(S)	TU101	2428661	FM TUNER PACK (HCPS) [except EZ]
D001	23374612	DIODE S4VB20	TU101	2428651	FM TUNER PACK (HCPS) [for EZ]
D002	2398062	DI 1N4001	T201	2145791	AM IFT COIL
D003	2398062	DI 1N4001	T202	2145781	FM DISCRIMINATOR COIL
D004	2398062	DI 1N4001	T203	2136313	LOW PASS FILTER [for EZ]
D005	2398062	DI 1N4001	T204	2136314	LEAK FILTER
D006	2398921	DI 1N4531T	T205	2136314	LEAK FILTER
D008	2398062	DI 1N4001	E001	2727671	FUSE HOLDER [for W,WUN,WAU]
D009	2398062	DI 1N4001	$\Delta$ F001	2727893	FUSE (2A) [for UC]
D010	2398062	DI 1N4001	$\Delta$ F001	2728072	FUSE T630mA [for HAD-12 (E,EBS,EZ)]
D011	2398062	DI 1N4001	$\Delta$ F001	2728077	FUSE T1A [for HAD-15 (E,EBS,EZ)]
D012	2398921	DI 1N4531T	$\Delta$ F002	2727891	FUSE (1.6A, 125V) [for UC]
D051	2398921	DI 1N4531T	$\Delta$ F002	2728077	FUSE (T1A) [for HAD-12 (except UC)]
D052	2398921	DI 1N4531T	$\Delta$ F002	2728073	FUSE (T1.25A) [for HAD-15 (except UC)]
D053	2398921	DI 1N4531T	$\Delta$ F003	2727891	FUSE (1.6A, 125V) [for UC]
D054	2398062	DI 1N4001	$\Delta$ F003	2728077	FUSE (T1A) [for HAD-12 (except UC)]
D055	2398921	DI 1N4531T	$\Delta$ F003	2728073	FUSE (T1.25A) [for HAD-15 (except UC)]
D101	2398921	DI 1N4531T	L051	2227361	AUDIO TRAP COIL [for EZ]
D102	2398921	DI 1N4531T	L052	2227361	AUDIO TRAP COIL [for EZ]
D103	2345571	DI MA700A [for EZ]	L151	2137373	AM ANT COIL(MW)
D104	2345571	DI MA700A [for EZ]	L152	2137374	AM ANT COIL(LW) [for E,EBS,EZ]

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
L152	2145811	SW ANT COIL [for W,WUN,WAU]	8	8691410	BT SCREW,(3X10)
L153	2136493	AM OSC COIL	9	3821931	CASSETTE DOOR SASS (R) (HCPS)
L154	2136494	LW OSC COIL [for E,EBS,EZ]	10	3821941	CASSETTE DOOR SASS (L) (HCPS)
L154	2145821	SW OSC COIL [for W,WUN,WAU]	11	4504001	LOCK PIN (HCPS)
L403	2150801	BIAS TRAP COIL	12	4450042	"E" TYPE RING
L404	2150801	BIAS TRAP COIL	13	3273691	EJECT BUTTON (R) (HCPS)
L405	2137343	BIAS OSC COIL	14	3273701	EJECT BUTTON (L) (HCPS)
S001	2636601	POWER SWITCH (HCPS) [for UC]	15	3273712	DECK OPERATION BUTTON (R) (HCPS)
S001	2636541	POWER SWITCH (HCPS) [for E,EBS,EZ]	16	3273722	DECK OPERATION BUTTON (L) (HCPS)
S401	2629061	SLIDE SWITCH	17	3273731	DOLBY BUTTON (HCPS)
S551	2600833	PUSH SWITCH	18	3831331	INDICATOR (PLAY) (HCPS)
S552	2600833	PUSH SWITCH	19	3831321	INDICATOR (REC) (HCPS)
S951	2634341	TACT SWITCH	20	3335781	EJECT SPRING (HCPS)
S952	2634341	TACT SWITCH	21	3863441	EJECT ARM (HCPS)
S953	2634341	TACT SWITCH	22	3375321	TN-1800M-267 DECK MECHA ASSY
S954	2634341	TACT SWITCH	23	3375331	TN-1800M-268P DECK MECHA ASSY
S955	2634341	TACT SWITCH	24	8699408	BT BIND HEAD SCREW (3X8)
S956	2634341	TACT SWITCH	25	8671404	3X4 DT BIND SCREW
S957	2634341	TACT SWITCH	26	3815801	DAMPER
S958	2634341	TACT SWITCH	27	3874111	DAMPER HOLDER (HCPS)
S959	2634341	TACT SWITCH	28	8681106	2X6 DT PAN HEAD SCREW
S960	2634341	TACT SWITCH	29	3471651	TOP COVER (HCPS)
S961	2634341	TACT SWITCH	30	3471761	HEAT PROTECTOR
S962	2622481	SLIDE SWITCH			(HAD-12 except UC)
E551	2482261	FLUORESCENCE DISPLAY TUBE (HCPS) [for HAD-15]	30	3471661	HEAT SINK COVER (HCPS) [HAD-15]
E551	3874241	LED HOLDER (HCPS) [HAD-12]	31	3802972	HOLDER
E552	3874241	LED HOLDER (HCPS) [HAD-12]	32	3831361	FOOT (HCPS)
JK001	2998984	7P FG CONNECTOR (HCPS)	33	8411652	FOOT RUBBER (HCPS)
JK051	2693681	4P TERMINAL	34	3473641	REAR PLATE ASSY [for HAD-12 (UC)]
JK551	2695031	HEAD PHONE JACK (HCPS)			REAR PLATE ASSY [for HAD-12 (E)]
J501	2673991	2P US PIN JACK (HCPS)			TS00011 REAR PLATE ASSY [for HAD-12 (E)]
PG502	2998985	13P FG CONNECTOR (HCPS)			TS00012 REAR PLATE ASSY [for HAD-12 (EBS)]
PR401	2726223	BREAKER ICP-N15 (HCPS)			TS00013 REAR PLATE ASSY [for HAD-12 (EZ)]
P101	2693682	4P TERMINAL [except E,EBS,EZ]			TS00014 REAR PLATE ASSY [for HAD-12 (W)]
U951	2574831	IC GU1U571X			TS00015 REAR PLATE ASSY [for HAD-12 (WUN)]
W001	2975982	13P FLAT CABLE			TS00016 REAR PLATE ASSY [for HAD-12 (WAU)]
W501	2975987	12P FFC CABLE (HCPS) [for HAD-15]			3473621 REAR PLATE ASSY [for HAD-15 (UC)]
W501	2975984	12P FFC CABLE (HCPS) [for HAD-12]			TS00021 REAR PLATE ASSY [for HAD-15 (E)]
X201	2136661	CERAMIC OSCILLATOR			TS00022 REAR PLATE ASSY [for HAD-15 (EBS)]
X301	27803822	CRYSTAL OSCILLATOR			TS00023 REAR PLATE ASSY [for HAD-15 (EZ)]
X401	2792071	CERAMIC OSCILLATOR			TS00024 REAR PLATE ASSY [for HAD-15 (W)]
P101	2695001	2P TERMINAL [FOR E,EBS,EZ]			TS00025 REAR PLATE ASSY [for HAD-15 (WUN)]
P102	2693691	DIN ANTENNA TERMINAL [for E,EBS,EZ]			TS00026 REAR PLATE ASSY [for HAD-15 (WAU)]
			35	3872271	AC CORD BUSHING
			36	8671406	DT BIND HEAD SCREW,(3X6)
			37	8679406	DT BIND SCREW 3X6
			38	8671608	DT SCREW,(4X8)
			39	8671414	3X14 DT BIND SCREW
			40	8699410	BT BIND HEAD SCREW,(3X10)
			41	8815116	WASHER
			$\Delta$ 42	2618053	AC VOLTAGE [for W,W(UN),W(AU)]
			$\Delta$ 43	2713144	POWER CORD (HCPS) [for UC]
			$\Delta$	2972566	AC POWER CORD (HCPS) [for E,EZ]
			$\Delta$	4899443	AC POWER CORD (HCPS) [for EBS]
			$\Delta$	2706584	AC POWER CORD (HCPS) [for W,WUN]
			$\Delta$	2971113	AC POWER CORD (HCPS) [for WAU]
1	4895091	FRONT PANEL SASS (HCPS) [for HAD-12]			
2	8411641	FELT (HCPS)			
3	3181361	FILTER (HCPS)			
4	3273641	FUNCTION BUTTON (HCPS)			
5	3273651	KNOB (BASS) (HCPS)			
6	3273661	KNOB (WIDE) (HCPS)			
7	3273671	MAIN VOLUME KNOB (HCPS)			

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
$\Delta$ 44	2216261	POWER TRANSFORMER (HCPS) [FOR HAD-12 (UC )]	28	3375357	GUIDE SPRING
$\Delta$	2216262	POWER TRANSFORMER (HCPS) [FOR HAD-12 (E,EZ )]	29	8511891	FR TRIGGER ARM SPRING
$\Delta$	2216264	POWER TRANSFORMER (HCPS) [FOR HAD-12 (W,WUN,WAU )]	30	8511901	B.T SPRING (R)
$\Delta$	2216263	POWER TRANSFORMER (HCPS) [FOR HAD-12 (EBS )]	31	4842444	WASHER (1.2)
$\Delta$	2216251	POWER TRANSFORMER (HCPS) [FOR HAD-15 (UC )]	32	4842443	WASHER (2.1)
$\Delta$	2216252	POWER TRANSFORMER (HCPS) [FOR HAD-15 (E,EZ )]	33	8511921	HL WASHER 1.4 x 3.2 x 0.4
$\Delta$	2216253	POWER TRANSFORMER (HCPS) [FOR HAD-15 (EBS )]	34	8511931	RF TRIGGER ARM
$\Delta$	2216254	POWER TRANSFORMER (HCPS) [for HAD-15 (W,WUN,WAU )]	35	3375358	MOTOR ASSY(DECK MECHA) 1.2W
$\Delta$ 45	26679222	SIEMENS PLUG [for w,WAU]	36	4842404	MOTOR RUBBER
$\Delta$ 46	3874101	FL HOLDER (HCPS) [for HAD-15]	37	8511951	MOTOR COLLAR SCREW
$\Delta$ 47	2727893	FUSE (2A)	38	3375361	MAIN BELT (NEOPRENE) SQUARE FAI 62.5 (1.3X1.3)
48	8671416	3X16 DT BIND SCREW	39	8512001	M TRIGGER ARM SPRING
49	8691410	BT SCREW,(3X10)	40	8512011	M GEAR
50	8671408	DT BIND HEAD SCREW (3X8)	41	8512021	RF CAM GEAR
		<b>CASSETE SHASSIS TN-1800-268P</b>	42	8512031	M TRIGGER ARM PLUNGER
1	3375351	CHASSIS ASSY	43	8512041	PLUNGER HOLDER
2	3375352	TAPE GUIDE	44	8512051	PLUNGER HOLDER
3	8511811	CLUMP SPRING (V)	45	3375365	CH SLIDE LEVER ASSY
4	3374401	PANEL COLLAR (A)	46	8512101	SOLENOIDE
5	8511641	CHP LEVER COLLAR (A)	47	48191962	E RING $\phi$ 2.0
6	3375353	HEAD BASE ASSY	48	8512121	HL WASHER 1.55 x 3.5 x 0.5
7	3374431	RELAY BOARD	49	8511911	WASHER 2.1 x 5 x 0.4
8	8511671	HEAD COLLAR SCREWS	50	3375366	E STOPPER A
9	8511681	SPACER	51	3375367	E STOPPER B
10	8511691	WIRE CLAMP	52	48196082	SCREW, PAN HEAD 2X5
11	8511711	HEAD PANEL (B) ASS	53	3375369	E STOPPER SPRING M
12	8511721	RC SPRING	54	8512401	E STOPPER COLLAR
13	8511731	PANEL SPRING	55	8512151	T GEAR ARM (F) ASS
14	8511741	CHP LEVER	56	3375371	T GEAR (A)
15	8511751	PINCH ROLLER SPRING	57	4842444	WASHER (1.2)
16	2734311	HEAD P	58	8512181	T GEAR ARM (R) ASS
17	48190732	TAM SCREW (2X5)	59	8512201	PINCH ROLLER ARM (F) ASS
18	8511771	M1.7X3 SCREW (FOR CAMERA)	60	8512211	P ARM (F) SPRING
19	3374402	PANEL SPRING PLATE	61	8512221	PINCH ROLLER ARM (R) ASS
20	8511801	M2X5 CUP S TAPPING SCREW (FOR CAMERA)	62	8512231	P ARM (R) SPRING
21	8511841	M2X5 BIND SCREW	63	8512241	FLYWHEEL (F) ASS
22	8511821	RF BELT (POLYURETHANE) SQUARE FAI 45.0 (1.1X1.1)	64	8512251	FL METAL ASS
23	3375354	RF CLUTCH ASSY	65	3374414	HL WASHER 2.3X3.8X.3
24	3375355	GUIDE SCREW	66	8512271	FLYWHEEL (R) ASS
25	8511851	T REEL ASS (F)	67	3374416	FL METAL ASSY (R)
26	8511861	T REEL ASS (R)	68	3374417	HL WASHER 1.55 x 3.5 x 0.5
27	8511881	FF GEAR	69	3375382	PC BOARD ASSY
		<b>CASSETE SHASSIS TN-1800-267</b>	70	8512321	LEAF SWITCH MTS-10250MVJ
1	3375351	CHASSIS ASSY	71	3375376	LEAF SWITCH MSW-1699CF
			72	3375377	LEAF SWITCH MSW-17944HVDO
			73	3374434	IC LB9050TN
			74	3375379	EJECT LEVER
			75	3375381	EJECT LEVER SPRING
			76	8512141	M2X5 S TAPPING TAMS SCREW

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
2	3375352	TAPE GUIDE	55	8512151	T GEAR ARM (F) ASS
3	8511811	CLUMP SPRING (V)	56	3375371	T GEAR (A)
4	3374401	PANEL COLLAR (A)	57	4842444	WASHER 1.2 x 3 x 0.25
5	8511641	CHP LEVER COLLAR	58	8512181	T GEAR ARM (R) ASS
6	3375353	HEAD BASE ASSY	59	8512201	PINCH ROLLER ARM (F) ASS
7	8511661	RELAY BOARD	60	8512211	P ARM (F) SPRING
8	8511671	HEAD COLLAR SCREW	61	8512221	PINCH ROLLER ARM (R) ASS
9	8511681	SPACER	62	8512231	P ARM (R) SPRING
10	8511691	WIRE CLAMP	63	8512241	FLYWHEEL (F) ASS
11	8511711	HEAD PANEL (B) ASS	64	8512251	FL METAL ASSY (F)
12	8511721	RC SPRING	65	3374414	HL WASHER 2.3X3.8X.3
13	8511731	PANEL SPRING	66	8512271	FLYWHEEL (R) ASS
14	8511741	CHP LEVER	67	3374416	FL METAL ASSY (R)
15	8511751	PINCH ROLLER SPRING	68	3374417	HL WASHER 2.1X3.5X.3
16	2734301	HEAD R/P	69	3375374	PC BOARD ASSY
17	48190732	TAM SCREW (2X5)	70	8512321	LEAF SWITCH MTS-10250MVJ
18	8511771	M1.7X3 SCREW (FOR CAMERA)	71	3375376	LEAF SWITCH MSW-1699CF
19	3374402	PANEL SPRING PLATE	72	3375377	LEAF SWITCH MSW-17944HVDO
20	8511801	M2X5 CUP S TAPPING SCREW (FOR CAMERA)	73	3374434	IC LB9050TN
21	8511841	M2X5 BIND SCREW	74	3375379	EJECT LEVER
22	8511821	RF BELT (POLYURETHANE) SQUARE FAI 45.0 (1.1X1.1)	75	3375381	EJECT LEVER SPRING
23	3375354	RF CLUTCH ASSY	76	8512141	M2X5 S TAPPING TAMS SCREW
24	3375355	GUIDE SCREW			<b>HTC-15</b>
25	8511851	T REEL ASS (F)	CN601	2713118	7P PH CONNECTOR (HCPS) [for UC]
26	8511861	T REEL ASS (R)	CN602	2999524	8P PH CONNECTOR (HCPS) [for UC]
27	8511881	FF GEAR	CN603	2999534	6P PH CONNECTOR (HCPS) [for UC]
28	3375357	GUIDE SPRING	CN604	2975372	5P PH CONNECTOR (HCPS) [for UC]
29	8511891	FR TRIGGER ARM SPRING	CN751	2975988	30P FLAT CABLE (HCPS)
30	8511901	B.T SPRING (R)	C601	0890043	CD 0.01MF 16V + -20%
31	4842444	WASHER (1.2)	C602	0800048	EL 100MF 10V
32	4842443	WASHER (2.1)	C603	0890023	CD 120PF + -10% 50V
33	8511921	HL WASHER 1.4 x 3.2 x 0.4	C604	0800048	EL 100MF 10V
34	8511931	RF TRIGGER ARM	C605	0800016	EL 10MF 25V
35	3375358	MOTOR ASSY(DECK MECHA) 1.2W	C606	0240058	CD 5600PF 16V + -20%
36	4842404	MOTOR RUBBER	C607	0240218	CD 0.033MF 25V + -10%
37	8511951	MOTOR COLLAR SCREW	C608	0240214	CD 0.015MF 25V + -10%
38	3375361	MAIN BELT (NEOPRENE) 62.5 (1.3X1.3)	C609	0240214	CD 0.015MF 25V + -10%
39	8512001	M TRIGGER ARM SPRING	C610	0240221	CD 0.056MF 25V + -10%
40	8512011	M GEAR	C611	0800048	EL 100MF 10V
41	8512021	RF CAM GEAR	C612	0800039	EL 47MF 10V
42	8512031	M TRIGGER ARM	C613	0890043	CD 0.01MF 16V + -20%
43	8512041	PLUNGER	C614	0800048	EL 100MF 10V
44	8512051	PLUNGER HOLDER	C615	0800001	EL 0.47MF 50V
45	3375365	CH SLIDE LEVER ASSY	C616	0890033	CD 680PF + -10% 50V
46	8512101	SOLENOIDE	C617	02750352	MF 0.056MF 50V + -10%
47	48191962	E RING $\phi$ 2.0	C618	02750332	MF 0.027MF 50V + -10%
48	8512121	HL WASHER 1.55 x 3.5 x 0.5	C619	0880017	PF 0.15MF + -10% 50V
49	8511911	WASHER 2.1 x 5 x 0.4	C620	0890029	CD 390PF + -10% 50V
50	3375366	E STOPPER A	C621	02528022	EL 0.22MF 50V + -20%
51	3375367	E STOPPER B	C622	0800024	EL 22MF 25V
52	48196082	SCREW, PAN HEAD 2X5	C623	0240058	CD 5600PF 16V + -20%
53	3375369	E STOPPER SPRING M	C624	02528072	EL 0.68MF 50V + -20%
54	8512401	E STOPPER COLLAR	C625	02528072	EL 0.68MF 50V + -20%

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C626	0800016	EL 10MF 25V	C664	0800016	EL 10MF 25V
C627	0800016	EL 10MF 25V	C665	0800016	EL 10MF 25V
C628	0890043	CD 0.01MF 16V +20%	C666	0800016	EL 10MF 25V
C629	0890034	CD 820PF +-10% 50V	C667	0880016	PF 0.1MF +-10% 50V
C630	0800001	EL 0.47MF 50V	C668	0880016	PF 0.1MF +-10% 50V
C631	0890043	CD 0.01MF 16V +-20%	C675	0890043	CD 0.01MF 16V +-20%
C632	0800003	EL 1MF 50V	C681	0890102	CD 22000PF 50V +80% -20%
C633	0800066	EL 330MF 16V	C682	0890102	CD 22000PF 50V +80% -20%
C634	0890036	CD 1500PF +-20% 16V	C683	0890043	CD 0.01MF 16V +-20%
C636	0800048	EL 100MF 10V	C684	0890043	CD 0.01MF 16V +-20%
C637	0890101	CD 0.01MF 16V +-20%	C685	0890043	CD 0.01MF 16V +-20%
C638	0890005	CD 4.7PF +-10% 50V	C686	0890043	CD 0.01MF 16V +-20%
C639	0890005	4.7PF +-10% 50V	C687	0890043	CD 0.01MF 16V +-20%
C640	0800048	EL 100MF 10V	C688	0890043	CD 0.01MF 16V +-20%
C641	0800048	EL 100MF 10V	C689	0890043	CD 0.01MF 16V +-20%
C642	0800048	EL 100MF 10V	C690	0800048	EL 100MF 10V
C643	02528022	EL 0.22MF 50V +-20%	C691	0890043	CD 0.01MF 16V +-20%
C644	0890044	CD 0.022MF +80-20% 25V	C692	0800048	EL 100MF 10V
C645	0890044	CD 0.022MF +80-20% 25V	C693	0890043	CD 0.01MF 16V +-20%
C646L	0890025	CD 180PF +-10% 50V	C694	0890035	CD 1000PF +-10% 50V
C646R	0890025	CD 180PF +-10% 50V	C695	0890035	CD 1000PF +-10% 50V
C647L	0890025	CD 180PF +-10% 50V	C696	0890048	CD 0.01MF 16V +-30%
C647R	0890025	CD 180PF +-10% 50V	C697	0800003	EL 1MF 50V
C648L	0890018	CD 56PF +-10% 50V	C698	0800058	EL 220MF 16V
C648R	0890018	CD 56PF +-10% 50V	C699	0890043	CD 0.01MF 16V +-20%
C649L	0890024	CD 150PF +-10% 50V	C753	0800048	EL 100MF 10V
C649R	0890024	CD 150PF +-10% 50V	C754	0890009	CD 12PF +-5% 50V
C650L	0890018	CD 56PF +-10% 50V	C755	0890013	CD 22PF +-20% 50V
C650R	0890018	CD 56PF +-10% 50V	C756	0800012	EL 4.7MF 50V
C651L	0800024	EL 22MF 25V	C757	0800007	EL 3.3MF 50V
C651R	0800024	EL 22MF 25V	C781	0890043	CD 0.01MF 16V +-20%
C652L	0890039	CD 4700PF +-20% 16V			[for W,WUN,WAU]
C652R	0890039	CD 4700PF +-20% 16V	C782	0800007	EL 3.3MF 50V [for W,WUN,WAU]
C653	0800042	EL 47MF 25V	C783	0890026	CD 220PF +-10% 50V
C654L	0880015	PF 0.068MF +-10% 50V			[for W,WUN,WAU]
C654R	0880015	PF 0.068MF +-10% 50V	C784	0800024	EL 22MF 25V [for W,WUN,WAU]
C655L	0890038	CD 3300PF +-20% 16V	C785	0800016	EL 10MF 25V [for W,WUN,WAU]
C655R	0890038	CD 3300PF +-20% 16V	C786	0800007	EL 3.3MF 50V [for W,WUN,WAU]
C656L	02750362	MF 0.082MF 50V +-10%	R601	01132212	CF 22 OHM +5% 1/16W
C656R	02750362	MF 0.082MF 50V +-10%	R602	0700053	CF 8.2K OHM +5% 1/16W
C657L	0880014	PF 0.047MF +-10% 50V	R603	0700044	CF 1.8K OHM +5% 1/16W
C657R	0880014	PF 0.047MF +-10% 50V	R604	0700032	CF 220 OHM +5% 1/16W
C658L	0890041	CD 6800PF +-30% 16V	R605	0700055	CF 12K OHM +5% 1/16W
C658R	0890041	CD 6800PF +-30% 16V	R606	0700041	CF 1K OHM +5% 1/16W
C659L	0800001	EL 0.47MF 50V	R607	0700032	CF 220 OHM +5% 1/16W
C659R	0800001	EL 0.47MF 50V	R608	0700055	CF 12K OHM +5% 1/16W
C660L	0800016	EL 10MF 25V	R609	0160322	SEMI VARIABLE RESISTOR 10K OHM
C660R	0800016	EL 10MF 25V	R610	0700066	CF 82K OHM +5% 1/16W
C661L	02528012	EL 0.1MF 50V +-20%	R611	0700055	CF 12K OHM +5% 1/16W
C661R	02528012	EL 0.1MF 50V +-20%	R612	0700056	CF 15K OHM +5% 1/16W
C662	0800016	EL 10MF 25V	R613	0700023	CF 47 OHM +5% 1/16W
C663L	0800001	EL 0.47MF 50V [except W,WUN,WAU]	R614	0700039	CF 820 OHM +5% 1/16W
C663L	0800024	EL 22MF 25V [for W,WUN,WAU]	R615	0700047	CF 3.3K OHM +5% 1/16W
C663R	0800001	EL 0.47MF 50V [except W,WUN,WAU]	R616	0160326	SEMI VR 3K OHM (HCPS)
C663R	0800024	EL 22MF 25V [for W,WUN,WAU]	R617	0700076	CF 470 OHM +5% 1/16W

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R618	0700076	CF 470K OHM +5% 1/16W	R672L	0700058	CF 22K OHM +5% 1/16W
R619	0700049	CF 4.7K OHM +5% 1/16W	R672R	0700058	CF 22K OHM +5% 1/16W
R620	0700046	CF 2.7K OHM +5% 1/16W	R673L	0700055	CF 12K OHM +5% 1/16W
R621	0700037	CF 560 OHM +5% 1/16W	R673R	0700055	CF 12K OHM +5% 1/16W
R622	0700054	CF 10K OHM +5% 1/16W	R674L	0700055	CF 12K OHM +5% 1/16W
R623	0700054	CF 10K OHM +5% 1/16W	R674R	0700055	CF 12K OHM +5% 1/16W
R624	0700067	CF 100K OHM +5% 1/16W	R675L	0700063	CF 47K OHM +5% 1/16W
R625	0700061	CF 33K OHM +5% 1/16W	R675R	0700063	CF 47K OHM +5% 1/16W
R626	0700058	CF 22K OHM +5% 1/16W	R676L	0700063	CF 47K OHM +5% 1/16W
R627	0700058	CF 22K OHM +5% 1/16W	R676R	0700063	CF 47K OHM +5% 1/16W
R628	0700061	CF 33K OHM +5% 1/16W	R677L	0700067	CF 100K OHM +5% 1/16W
R629	0700058	CF 22K OHM +5% 1/16W	R677R	0700067	CF 100K OHM +5% 1/16W
R630	0700061	CF 33K OHM +5% 1/16W	R678L	0700067	CF 100K OHM +5% 1/16W
R631	0700061	CF 33K OHM +5% 1/16W	R678R	0700067	CF 100K OHM +5% 1/16W
R632	0700058	CF 22K OHM +5% 1/16W	R679L	0700036	CF 470 OHM +5% 1/16W
R633	0700058	CF 22K OHM +5% 1/16W	R679R	0700036	CF 470 OHM +5% 1/16W
R634	0700061	CF 33K OHM +5% 1/16W	R680L	0700064	CF 56K OHM +5% 1/16W
R635	0700061	CF 33K OHM +5% 1/16W	R680R	0700064	CF 56K OHM +5% 1/16W
R636	0700061	CF 33K OHM +5% 1/16W	R681L	0700041	CF 1K OHM +5% 1/16W
R637	0700061	CF 33K OHM +5% 1/16W	R681R	0700041	CF 1K OHM +5% 1/16W
R638	0700061	CF 33K OHM +5% 1/16W	R682	0700056	CF 15K OHM +5% 1/16W
R639	0700058	CF 22K OHM +5% 1/16W	R683	0700052	CF 6.8K OHM +5% 1/16W
R640	0700058	CF 22K OHM +5% 1/16W	R689	0700055	CF 12K OHM +5% 1/16W
R641	0700041	CF 1K OHM +5% 1/16W	R690	0700055	CF 12K OHM +5% 1/16W
R642	0700058	CF 22K OHM +5% 1/16W	R691	0700055	CF 12K OHM +5% 1/16W
R643	0700058	CF 22K OHM +5% 1/16W	R692	0700055	CF 12K OHM +5% 1/16W
R644	0700081	CF 1.0M OHM +5% 1/16W	R693	0700055	CF 12K OHM +5% 1/16W
R645	0700018	CF 22 OHM +5% 1/16W	R694	0700055	CF 12K OHM +5% 1/16W
R646	0700018	CF 22 OHM +5% 1/16W	R695	0700055	CFM 12K OHM +5% 1/16W
R647	0700018	CF 22 OHM +5% 1/16W	R696	0700058	CF 22K OHM +5% 1/16W
R648	0700058	CF 22K OHM +5% 1/16W	R697L	0700064	CF 56K OHM +5% 1/16W
R649	0700054	CF 10K OHM +5% 1/16W	R697R	0700064	CF 56K OHM +5% 1/16W
R650	0700038	CF 680 OHM +5% 1/16W	R698L	0700054	CF 10K OHM +5% 1/16W
R651	0700041	CF 1K OHM +5% 1/16W	R698R	0700054	CF 10K OHM +5% 1/16W
R652	0700041	CF 1K OHM +5% 1/16W	R699L	0700058	CF 22K OHM +5% 1/16W
R653	0700041	CF 1K OHM +5% 1/16W	R699R	0700058	CF 22K OHM +5% 1/16W
R654	0700041	CF 1K OHM +5% 1/16W	R700L	0700058	CF 22K OHM +5% 1/16W
R655	0700058	CF 22K OHM +5% 1/16W	R700R	0700058	CF 22K OHM +5% 1/16W
R656	0700058	CF 22K OHM +5% 1/16W	R701L	0700054	CF 10K OHM +5% 1/16W
R657	0700063	CF 17K OHM +5% 1/16W	R701R	0700054	CF 10K OHM +5% 1/16W
R658	0700056	CF 15K OHM +5% 1/16W	R702L	0700053	CF 8.2K OHM +5% 1/16W
R659	0700056	CF 15K OHM +5% 1/16W	R702R	0700053	CF 8.2K OHM +5% 1/16W
R660	0700063	CF 47K OHM +5% 1/16W	R703L	0700052	CF 6.8K OHM +5% 1/16W
R661	0700056	CF 15K OHM +5% 1/16W	R703R	0700052	CF 6.8K OHM +5% 1/16W
R662	0700057	CF 18K OHM +5% 1/16W	R704L	0700051	CF 5.6K OHM +5% 1/16W
R663	0700066	CF 82K OHM +5% 1/16W	R704R	0700051	CF 5.6K OHM +5% 1/16W
R664	0700068	CF 120K OHM +5% 1/16W	R705L	0700052	CF 6.8K OHM +5% 1/16W
R665	0700054	CF 10K OHM +5% 1/16W	R705R	0700052	CF 6.8K OHM +5% 1/16W
R666	0700054	CF 10K OHM +5% 1/16W	R706L	0700054	CF 10K OHM +5% 1/16W
R667	0700045	CF 2.2K OHM +5% 1/16W	R706R	0700054	CF 10K OHM +5% 1/16W
R668	0700045	CF 2.2K OHM +5% 1/16W	R707L	0700059	CF 27K OHM +5% 1/16W
R669	0700063	CF 47K OHM +5% 1/16W	R707R	0700059	CF 27K OHM +5% 1/16W
R670	0700063	CF 47K OHM +5% 1/16W	R708L	0700032	CF 220 OHM +5% 1/16W
R671L	0700058	CF 22K OHM +5% 1/16W	R708R	0700032	CF 220 OHM +5% 1/16W
R671R	0700058	CF 22K OHM +5% 1/16W	R709L	0700064	CF 56K OHM +5% 1/16W

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R709R	0700064	CF 56K OHM +-5% 1/16W	IC603	2381892	IC UPC358C(MS)
R710L	0700041	CF 1K OHM +-5% 1/16W	IC604	2321322	IC NJM2100D
R710R	0700041	CF 1K OHM +-5% 1/16W	IC605	2003701	IC BA6294 (LINEAR)
R711L	0700063	CF 47K OHM +-5% 1/16W	IC606	2003701	IC BA6294 (LINEAR)
R711R	0700063	CF 47K OHM +-5% 1/16W	IC607	2916281	IC BA6219
R712	0700063	CF 47K OHM +-5% 1/16W	IC608	2008711	IC BU2040
R713	0700063	CF 47K OHM +-5% 1/16W	IC609	2387304	IC M5218AP
R714	0700045	CF 2.2K OHM +-5% 1/16W	IC610	2003251	IC AN7805 (LINAR)
R715	0700058	CF 22K OHM +-5% 1/16W	IC751	2001891	IC UPD75216ACW-W60
R716L	0700041	CF 1K OHM +-5% 1/16W [for W,WUN,WAU]	IC752	2005421	IC S8054ALR (CMOS)
R716R	0700041	CF 1K OHM +-5% 1/16W [for W,WUN,WAU]	IC781	2387304	IC M5218AP [for W,WUN,WAU]
R751	0700063	CF 47K OHM +-5% 1/16W	Q601	2319152	TR HIT5610C SILICON 350MHZ 1W
R752	0700045	CF 2.2K OHM +-5% 1/16W	Q603L	2315422	TR 25D1468STD (R)
R753	0700045	CF 2.2K OHM +-5% 1/16W	Q603R	2315422	TR 25D1468STD (R)
R754	0700045	CF 2.2K OHM +-5% 1/16W	Q604	2321322	TR 25A844E SI 200MHZ 300MW
R755	0700045	CF 2.2K OHM +-5% 1/16W	Q605	2326871	TR DTC124ES
R756	0700041	CF 1K OHM +-5% 1/16W	Q606	23282822	TR SILICON 25C458C 230MHZ 200MW
R757	0700041	CF 1K OHM +-5% 1/16W	Q607L	23282822	TR SILICON 25C458C 230MHZ 200MW
R758	0700063	CF 47K OHM +-5% 1/16W	Q607R	23282822	TR SILICON 25C458C 230MHZ 200MW
R759	0700063	CF 47K OHM +-5% 1/16W	Q608L	23282822	TR SILICON 25C458C 230MHZ 200MW
R760	0700063	CF 47K OHM +-5% 1/16W	Q608R	23282822	TR SILICON 25C458C 230MHZ 200MW
R761	0700063	CF 47K OHM +-5% 1/16W	Q609L	2326871	TR DTC124ES
R762	0700063	CF 47K OHM +-5% 1/16W	Q609R	2326871	TR DTC124ES
R763	0700063	CF 47K OHM +-5% 1/16W	Q610L	2326871	TR DTC124ES
R764	0700074	CF 330K OHM +-5% 1/16W	Q610R	2326871	TR DTC124ES
R765	0700063	CF 47K OHM +-5% 1/16W	Q611L	2326871	TR DTC124ES
R766	0700063	CF 47K OHM +-5% 1/16W	Q611R	2326871	TR DTC124ES
R767	0700063	CF 47K OHM +-5% 1/16W	Q612L	2326871	TR DTC124ES
R768	0700041	CF 1K OHM +-5% 1/16W	Q612R	2326871	TR DTC124ES
R769	0700065	CF 68K OHM +-5% 1/16W	Q613L	2326871	TR DTC124ES
R771	0700032	CF 220 OHM +-5% 1/16W	Q613R	2326871	TR DTC124ES
R772	0700041	CF 1K OHM +-5% 1/16W	Q614L	2315422	TR 25D1468STD (R)
R773	0700041	CF 1K OHM +-5% 1/16W	Q614R	2315422	TR 25D1468STD (R)
R774	0700051	CF 5.6K OHM +-5% 1/16W	Q615	2326871	TR DTC124ES
R775	0700051	CF 5.6K OHM +-5% 1/16W	Q616	2321322	TR 25A844E SI 200MHZ 300MW
R781	0700041	CF 1K OHM +-5% 1/16W [for W,WUN,WAU]	Q617	2324362	TR 25A1129(K)
R782	0700063	CF 47K OHM +-5% 1/16W [for W,WUN,WAU]	D602	2398921	DI 1N4531T
R783	0700036	CF 470 OHM +-5% 1/16W [for W,WUN,WAU]	D603	2398921	DI 1N4531T
R784	0700063	CF 47K OHM +-5% 1/16W [for W,WUN,WAU]	D604	2398921	DI 1N4531T
R785	0700063	CF 47K OHM +-5% 1/16W [for W,WUN,WAU]	D605	2398921	DI 1N4531T
R786	0700063	CF 47K OHM +-5% 1/16W [for W,WUN,WAU]	D606	2398921	DI 1N4531T
R787	0700023	CF 47 OHM +-5% 1/16W [for W,WUN,WAU]	D607	2398921	DI 1N4531T
R788	0157881	ROTARY VOLUME 10K OHM [for W,WUN,WAU]	D608	2398921	DI 1N4531T
IC601	2003371	IC HA12158NT	D609	2398921	DI 1N4531T
IC602	2019822	IC HD49233AF5	D751	2398921	DI 1N4531T
			D752	2398921	DI 1N4531T
			D753	2398921	DI 1N4531T
			D754	2398921	DI 1N4531T
			D755	2398921	DI 1N4531T
			D756	2398921	DI 1N4531T
			D757	2398921	DI 1N4531T
			D758	2398921	DI 1N4531T
			D759	2398921	DI 1N4531T [for UC]
			D760	2398921	DI 1N4531T
			D761	2398921	DI 1N4531T

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION	
ZD601	2331795	ZD HZ-5 (B2)	19	3874121	FL HOLDER (HCPS)	
ZD602	2331785	DI-ZENER HZ4(B2)			<b>CD SINGLE MACHA</b>	
ZD751	23375272	DI HZ9C1 1MHZ 400MW				
FL751	2482251	FLUORESCENCE DISPLAY TUBE (HCPS)				
LED601	2397314	LED RLL20503PD-R15(S)	1	3372572		GEAR (POWER) (HCPS)
L601	2122239	LA AXIAL COIL 10 MICRO H	2	3372573		GUIDE BAR A (HCPS)
S751	2634341	TACT SWITCH	3	3372574		GUIDE BAR B (HCPS)
S752	2634341	TACT SWITCH	4	3372575		2.6X6 TIGHT SCREW (HCPS)
S753	2634341	TACT SWITCH	5	3372576		SWITCH (HCPS)
S754	2634341	TACT SWITCH	6	3372577		PH CONNECTOR (HCPS)
S755	2634341	TACT SWITCH	7	3372578		PC BOARD (FOR DISK MOTOR) (HCPS)
S756	2634341	TACT SWITCH	8	3372579		RACK (HCPS)
S757	2634341	TACT SWITCH	9	3372581		BIND TIGHT SCREW 2X6 (HCPS)
S758	2634341	TACT SWITCH	10	3381291		PICK UP ASSY (HOP-M3A)
S759	2634341	TACT SWITCH	11	3372582		2X2.5 SCREW (HCPS)
S760	2634341	TACT SWITCH	12	3372583		MECHA PLATE (HCPS)
S761	2634341	TACT SWITCH	13	3372584		MECHA FRAME (HCPS)
S762	2634341	TACT SWITCH	14	3372585		CD TRAY (HCPS)
S763	2634341	TACT SWITCH	15	3372586		CLAMPER FRAME (HCPS)
S764	2634341	TACT SWITCH	16	3372587		UD PLATE GEAR (HCPS)
S765	2634341	TACT SWITCH	17	3372588		CLAMPER F (HCPS)
P601	2998985	13P FG CONNECTOR (HCPS)	18	3372589		RELAY GEAR A (HCPS)
P602	2998984	7P FG CONNECTOR (HCPS)	19	3372591	RELAY GEAR B (HCPS)	
X601	2168881	CERAMIC OSCILLATOR 33.868MHZ (HCPS)	20	3372592	RELAY GEAR C (HCPS)	
X751	2168481	CERAMIC OSCILLATOR FAI27.1 (1.7X1.7) (HCPS)	21	3372593	GEAR BELT (CHLOROPRENE) SQUARE	
X752	2168491	CRYSTAL OSCILLATOR 32.768KHZ	22	3372594	DAMPER (HCPS)	
J601	2695011	MIC JACK (HCPS) [for W,WUN,WAU]	23	3372595	CLAMPER PLATE (HCPS)	
		<b>CABINET</b>	24	3372596	SCREW F (HCPS)	
			25	3372597	PC BOARD (FOR LOADING MOTOR) (HCPS)	
1	4899651	FRONT PANEL SASS (HCPS) [except W,W(UN),W(AU)]	26	3372598	MAGNET (HCPS)	
	4899652	FRONT PANEL SASS (HCPS) [for W,W(UN),W(AU)]	27	3372599	P TIGHT SCREW 3X8 (HCPS)	
2	8411641	FELT (HCPS)	28	3372601	BIND TIGHT SCREW 3X8 (HCPS)	
3	3204781	CD TRAY PANEL (HCPS)	29	3372602	BIND SCREW 2.6X4 (HCPS)	
4	3273741	POWER BUTTON (HCPS)	30	3372603	PH CONNECTOR (HCPS)	
5	3273752	BUTTON (HCPS)	31	3372604	CONNECTOR (HCPS)	
6	3273761	BUTTON (HCPS)	32	3372605	SWITCH (HCPS)	
7	3273771	MIC KNOB (HCPS) [for W,W(UN),W(AU)]	33	3372606	SPRING A (HCPS)	
8	3471651	TOP COVER (HCPS)	34	3372607	SPRING B (HCPS)	
9	3471671	REAR PLATE (HCPS) [for UC]	35	3372608	SPRING C (HCPS)	
	TS00017	REAR PLATE (HCPS) [for E,EBS,EZ]	36	3372624	TRAY STOPPER (HCPS)	
	TS00018	REAR PLATE (HCPS) [for W,WUN,WAU]	37	3372611	DISK MOTOR ASSY (WITH TURN TABLE) (HCPS)	
10	3831361	FOOT (HCPS)	38	3372616	FEED MOTOR ASSY (HCPS)	
11	8411652	FOOT RUBBER (HCPS)	39	3372621	LOADING MOTOR ASSY (HCPS)	
12	8671406	DT BIND HEAD SCREW,(3X6)	40	3372571	GEAR (MIDDLE) (HCPS)	
13	8679406	DT BIND SCREW 3X6			<b>HTC-C15</b>	
14	8671408	DT BIND HEAD SCREW (3X8)	CN603	2979211		7P FLAT CABLE (HCPS)
15	8691410	BT SCREW,(3X10)	CN604	2979211		7P FLAT CABLE (HCPS)
16	8691410	BT SCREW,(3X10) [for W,W(UN),W(AU)]	CN605	2979212		6P FLAT CABLE (HCPS)
17	8699410	BT BIND HEAD SCREW,(3X10)	CN751	2975985		30P FLAT CABLE (HCPS)
18	8671408	DT BIND HEAD SCREW (3X8)	C603	0890019		CD 68PF +-5% 50V



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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C604	0800048	EL 100MF 10V	C652R	0890039	CD 4700PF +20% 16V
C605	0800016	EL 10MF 25V	C653	0800042	EL 47MF 25V
C606	0240056	CD 3900PF 16V +20%	C654L	0880015	PF 0.068MF +10% 50V
C607	0240218	CD 0.033MF 25V +10%	C654R	0880015	PF 0.068MF +10% 50V
C608	0240214	CD 0.015MF 25V +10%	C655L	0890038	CD 3300PF +20% 16V
C609	0240214	CD 0.015MF 25V +10%	C655R	0890038	CD 3300PF +20% 16V
C610	0880017	PF 0.15MF +10% 50V	C656L	02750362	MF 0.082MF 50V +10%
C611	0800048	EL 100MF 10V	C656R	02750362	MF 0.082MF 50V +10%
C612	0800039	EL 47MF 10V	C657L	0880014	PF 0.047MF +10% 50V
C613	0890043	CD 0.01MF 16V +20%	C657R	0880014	PF 0.047MF +10% 50V
C614	0800048	EL 100MF 10V	C658L	0890041	CD 6800PF +30% 16V
C615	0800001	EL 0.47MF 50V	C658R	0890041	CD 6800PF +30% 16V
C616	0890033	CD 680PF +10% 50V	C659L	0800001	EL 0.47MF 50V
C617	02750352	MYLAR FILM 0.056MF 50V +10%	C659R	0800001	EL 0.47MF 50V
C618	0880013	PF 0.033MF +10% 50V	C660L	0800016	EL 10MF 25V
C619	0880017	PF 0.15MF +10% 50V	C660R	0800016	EL 10MF 25V
C620	0890029	CD 390PF +10% 50V	C661L	02528012	EL 0.1MF 50V +20%
C621	02528012	EL 0.1MF 50V +20%	C661R	02528012	EL 0.1MF 50V +20%
C622	0800024	EL 22MF 25V	C662	0800016	EL 10MF 25V
C623	0240058	CD 5600PF 16V +20%	C663L	0800001	EL 0.47MF 50V [except W,WUN,WAU]
C624	02528072	EL 0.68MF 50V +20%	C663L	0800024	EL 22MF 25V [for W,WUN,WAU]
C625	02528072	EL 0.68MF 50V +20%	C663R	0800001	EL 0.47MF 50V [except W,WUN,WAU]
C626	0800024	EL 22MF 25V	C663R	0800024	EL 22MF 25V [for W,WUN,WAU]
C627	0800016	EL 10MF 25V	C664	0800016	EL 10MF 25V
C628	0890043	CD 0.01MF 16V +20%	C665	0800016	EL 10MF 25V
C629	0890034	CD 820PF +10% 50V	C666	0800016	EL 10MF 25V
C630	0800001	EL 0.47MF 50V	C667	0880016	PF 0.1MF +10% 50V
C631	0890043	CD 0.01MF 16V +20%	C670	0890043	CD 0.01MF 16V +20%
C632	0800003	EL 1MF 50V	C671	0890043	CD 0.01MF 16V +20%
C633	0800066	EL 330MF 16V	C672	0800048	EL 100MF 10V
C634	0890036	CD 1500PF +20% 16V	C673	0800048	EL 100MF 10V
C635	0890043	CD 0.01MF 16V +20%	C674	0890043	CD 0.01MF 16V +20%
C636	0890043	CD 0.01MF 16V +20%	C675	0890043	CD 0.01MF 16V +20%
C637	0800048	EL 100MF 10V	C681	0890102	CD 22000PF 50V +80% -20%
C638	0890005	CD 4.7PF +10% 50V	C682	0890102	CD 22000PF 50V +80% -20%
C639	0890005	CD 4.7PF +10% 50V	C683	0890043	CD 0.01MF 16V +20%
C640	0800048	EL 100MF 10V	C685	0890043	CD 0.01MF 16V +20%
C641	0800048	EL 100MF 10V	C687	0890043	CD 0.01MF 16V +20%
C642	0800048	EL 100MF 10V	C688	0890043	CD 0.01MF 16V +20%
C643	02528022	EL 0.22MF 50V +20%	C689	0890043	CD 0.01MF 16V +20%
C644	0890044	CD 0.022MF +80-20% 25V	C690	0800048	EL 100MF 10V
C645	0890044	CD 0.022MF +80-20% 25V	C691	0890043	CD 0.01MF 16V +20%
C646L	0890025	CD 180PF +10% 50V	C692	0800048	EL 100MF 10V
C646R	0890025	CD 180PF +10% 50V	C693	0890101	CD 0.01MF 16V +20%
C647L	0890025	CD 180PF +10% 50V	C694	0890035	CD 1000PF +10% 50V
C647R	0890025	CD 180PF +10% 50V	C695	0890035	CD 1000PF +10% 50V
C648L	0890018	CD 56PF +10% 50V	C696	0800048	EL 100MF 10V
C648R	0890018	CD 56PF +10% 50V	C697	0800003	EL 1MF 50V
C649L	0890024	CD 150PF +10% 50V	C698	0800058	EL 220MF 16V
C649R	0890024	CD 150PF +10% 50V	C699	0890043	CD 0.01MF 16V +20%
C650L	0890018	CD 56PF +10% 50V	C699	0890043	CD 0.01MF 16V +20%
C650R	0890018	CD 56PF +10% 50V	C753	0800048	EL 100MF 10V
C651L	0800024	EL 22MF 25V	C754	0890009	CD 12PF +5% 50V
C651R	0800024	EL 22MF 25V	C755	0890013	CD 22PF +20% 50V
C652L	0890039	CD 4700PF +20% 16V	C756	0800012	EL 4.7MF 50V

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C757	0800007	EL 3.3MF 50V	R648	0700058	CF 22K OHM +5% 1/16W
C781	0890043	CD 0.01MF 16V +20% [for W,WUN,WAU]	R649	0700054	CF 10K OHM +5% 1/16W
C782	0800007	EL 3.3MF 50V [for W,WUN,WAU]	R650	0700038	CF 680 OHM +5% 1/16W
C783	0890026	CD 220PF +10% 50V [for W,WUN,WAU]	R651	0700041	CF 1K OHM +5% 1/16W
C784	0800024	EL 22MF 25V [for W,WUN,WAU]	R652	0700041	CF 1K OHM +5% 1/16W
C785	0800016	EL 10MF 25V [for W,WUN,WAU]	R653	0700041	CF 1K OHM +5% 1/16W
C786	0800115	EL 3.3MF 50V [for W,WUN,WAU]	R654	0700041	CF 1K OHM +5% 1/16W
C787	0800145	EL 100MF 16V	R655	0700058	CF 22K OHM +5% 1/16W
R601	0700054	CF 10K OHM +5% 1/16W	R656	0700058	CF 22K OHM +5% 1/16W
R602	0700056	CF 15K OHM +5% 1/16W	R657	0700063	CF 47K OHM +5% 1/16W
R603	0700047	CF 3.3K OHM +5% 1/16W	R658	0700056	CF 15K OHM +5% 1/16W
R604	0700039	CF 820 OHM +5% 1/16W	R659	0700056	CF 15K OHM +5% 1/16W
R605	0700055	CF 12K OHM +5% 1/16W	R660	0700063	CF 47K OHM +5% 1/16W
R606	0700041	CF 1K OHM +5% 1/16W	R661	0700056	CF 15K OHM +5% 1/16W
R608	0700058	CF 22K OHM +5% 1/16W	R662	0700057	CF 18K OHM +5% 1/16W
R609	0160322	VR 10K OHM	R663	0700066	CF 82K OHM +5% 1/16W
R610	0700066	CF 82K OHM +5% 1/16W	R664	0700068	CF 120K OHM +5% 1/16W
R611	0700053	CF 8.2K OHM +5% 1/16W	R665	0700054	CF 10K OHM +5% 1/16W
R612	0700061	CF 33K OHM +5% 1/16W	R666	0700054	CF 10K OHM +5% 1/16W
R613	0700023	CF 47 OHM +5% 1/16W	R667	0700045	CF 2.2K OHM +5% 1/16W
R614	0700039	CF 820 OHM +5% 1/16W	R668	0700045	CF 2.2K OHM +5% 1/16W
R615	0700047	CF 3.3K OHM +5% 1/16W	R669	0700063	CF 47K OHM +5% 1/16W
R616	0160326	VR 3K OHM (HCP5)	R670	0700063	CF 47K OHM +5% 1/16W
R617	0700076	CF 470K OHM +5% 1/16W	R671L	0700058	CF 22K OHM +5% 1/16W
R618	0700076	CF 470K OHM +5% 1/16W	R671R	0700058	CF 22K OHM +5% 1/16W
R619	0700049	CF 4.7K OHM +5% 1/16W	R672L	0700058	CF 22K OHM +5% 1/16W
R620	0700046	CF 2.7K OHM +5% 1/16W	R672R	0700058	CF 22K OHM +5% 1/16W
R621	0700037	CF 560 OHM +5% 1/16W	R673L	0700055	CF 12K OHM +5% 1/16W
R622	0700054	CF 10K OHM +5% 1/16W	R673R	0700055	CF 12K OHM +5% 1/16W
R623	0700054	CF 10K OHM +5% 1/16W	R674L	0700055	CF 12K OHM +5% 1/16W
R624	0700067	CF 100K OHM +5% 1/16W	R674R	0700055	CF 12K OHM +5% 1/16W
R625	0700061	CF 33K OHM +5% 1/16W	R675L	0700063	CF 47K OHM +5% 1/16W
R626	0700058	CF 22K OHM +5% 1/16W	R675R	0700063	CF 47K OHM +5% 1/16W
R627	0700058	CF 22K OHM +5% 1/16W	R676L	0700063	CF 47K OHM +5% 1/16W
R628	0700061	CF 33K OHM +5% 1/16W	R676R	0700063	CF 47K OHM +5% 1/16W
R629	0700058	CF 22K OHM +5% 1/16W	R677L	0700067	CF 100K OHM +5% 1/16W
R630	0700061	CF 33K OHM +5% 1/16W	R677R	0700067	CF 100K OHM +5% 1/16W
R631	0700061	CF 33K OHM +5% 1/16W	R678L	0700067	CF 100K OHM +5% 1/16W
R632	0700058	CF 22K OHM +5% 1/16W	R678R	0700067	CF 100K OHM +5% 1/16W
R633	0700058	CF 22K OHM +5% 1/16W	R679L	0700036	CF 470 OHM +5% 1/16W
R634	0700061	CF 33K OHM +5% 1/16W	R679R	0700036	CF 470 OHM +5% 1/16W
R635	0700061	CF 33K OHM +5% 1/16W	R680L	0700064	CF 56K OHM +5% 1/16W
R636	0700061	CF 33K OHM +5% 1/16W	R680R	0700064	CF 56K OHM +5% 1/16W
R637	0700067	CF 100K OHM +5% 1/16W	R681L	0700041	CF 1K OHM +5% 1/16W
R638	0700063	CF 47K OHM +5% 1/16W	R681R	0700041	CF 1K OHM +5% 1/16W
R639	0700058	CF 22K OHM +5% 1/16W	R682	0700056	CF 15K OHM +5% 1/16W
R640	0700058	CF 22K OHM +5% 1/16W	R683	0700052	CF 6.8K OHM +5% 1/16W
R641	0700041	CF 1K OHM +5% 1/16W	R684	0700058	CF 22K OHM +5% 1/16W
R642	0700058	CF 22K OHM +5% 1/16W	R685	0700058	CF 22K OHM +5% 1/16W
R643	0700058	CF 22K OHM +5% 1/16W	R686	0700058	CF 22K OHM +5% 1/16W
R644	0700081	CF 1.0M OHM +5% 1/16W	R687	0700058	CF 22K OHM +5% 1/16W
R645	0700018	CF 22 OHM +5% 1/16W	R689	0700055	CF 12K OHM +5% 1/16W
R646	0700018	CF 22 OHM +5% 1/16W	R690	0700055	CF 12K OHM +5% 1/16W
R647	0700018	CF 22 OHM +5% 1/16W	R691	0700055	CF 12K OHM +5% 1/16W
			R692	0700055	CF 12K OHM +5% 1/16W



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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R693	0700055	CF 12K OHM +5% 1/16W	R757	0700041	CF 1K OHM +5% 1/16W
R694	0700055	CF 12K OHM +5% 1/16W	R761	0700063	CF 47K OHM +5% 1/16W
R695	0700055	CF 12K OHM +5% 1/16W	R762	0700063	CF 47K OHM +5% 1/16W
R696	0700058	CF 22K OHM +5% 1/16W	R763	0700063	CF 47K OHM +5% 1/16W
R697L	0700064	CF 56K OHM +5% 1/16W	R764	0700074	CF 330K OHM +5% 1/16W
R697R	0700064	CF 56K OHM +5% 1/16W	R765	0700063	CF 47K OHM +5% 1/16W
R698L	0700054	CF 10K OHM +5% 1/16W	R766	0700063	CF 47K OHM +5% 1/16W
R698R	0700054	CF 10K OHM +5% 1/16W	R767	0700063	CF 47K OHM +5% 1/16W
R699L	0700058	CF 22K OHM +5% 1/16W	R768	0700041	CF 1K OHM +5% 1/16W
R699R	0700058	CF 22K OHM +5% 1/16W	R769	0700065	CF 68K OHM +5% 1/16W
R700L	0700058	CF 22K OHM +5% 1/16W	R771	0700032	CF 220 OHM +5% 1/16W
R700R	0700058	CF 22K OHM +5% 1/16W	R772	0700041	CF 1K OHM +5% 1/16W
R701L	0700054	CF 10K OHM +5% 1/16W	R773	0700041	CF 1K OHM +5% 1/16W
R701R	0700054	CF 10K OHM +5% 1/16W	R774	0700051	CF 5.6K OHM +5% 1/16W
R702L	0700053	CF 8.2K OHM +5% 1/16W	R775	0700051	CF 5.6K OHM +5% 1/16W
R702R	0700053	CF 8.2K OHM +5% 1/16W	R781	0700041	CF 1K OHM +5% 1/16W
R703L	0700052	CF 6.8K OHM +5% 1/16W	R782	0700063	CF 47K OHM +5% 1/16W [for W,WUN,WAU]
R703R	0700052	CF 6.8K OHM +5% 1/16W	R783	0700036	CF 470 OHM +5% 1/16W [for W,WUN,WAU]
R704L	0700051	CF 5.6K OHM +5% 1/16W	R784	0700063	CF 47K OHM +5% 1/16W [for W,WUN,WAU]
R704R	0700051	CF 5.6K OHM +5% 1/16W	R785	0700063	CF 47K OHM +5% 1/16W [for W,WUN,WAU]
R705L	0700052	CF 6.8K OHM +5% 1/16W	R786	0700063	CF 47K OHM +5% 1/16W [for W,WUN,WAU]
R705R	0700052	CF 6.8K OHM +5% 1/16W	R787	0700023	CF 47 OHM +5% 1/16W [for W,WUN,WAU]
R706L	0700054	CF 10K OHM +5% 1/16W	R788	0157881	ROTARY VOLUME 10K OHM [for W,WUN,WAU]
R706R	0700054	CF 10K OHM +5% 1/16W	IC601	2003371	IC HA12158NT
R707L	0700059	CF 27K OHM +5% 1/16W	IC602	2019822	IC HD49233AF5
R707R	0700059	CF 27K OHM +5% 1/16W	IC603	2381892	IC UPC358C(MS)
R708L	0700032	CF 220 OHM +5% 1/16W	IC604	2020251	IC NJM2100D
R708R	0700032	CF 220 OHM +5% 1/16W	IC605	2003701	IC BA6294 (LINEAR)
R709L	0700064	CF 56K OHM +5% 1/16W	IC606	2003701	IC BA6294 (LINEAR)
R709R	0700064	CF 56K OHM +5% 1/16W	IC607	2916281	IC BA6219
R710L	0700041	CF 1K OHM +5% 1/16W	IC608	2008711	IC BU2040
R710R	0700041	CF 1K OHM +5% 1/16W	IC609	2387304	IC M5218AP
R711L	0700063	CF 47K OHM +5% 1/16W	IC610	2366361	IC AN7805
R711R	0700063	CF 47K OHM +5% 1/16W	IC611	2916281	IC BA6219
R712	0700063	CF 47K OHM +5% 1/16W	IC612	2361452	IC HD140518P
R713	0700063	CF 47K OHM +5% 1/16W	IC751	2001892	IC UPD75216ACW-W68
R714	0700045	CF 2.2K OHM +5% 1/16W	IC752	2005421	IC S8054ALR (CMOS)
R715	0700058	CF 22K OHM +5% 1/16W	IC781	2387304	IC M5218AP [for W,WUN,WAU]
R716L	0700041	CF 1K OHM +5% 1/16W [for W,WUN,WAU]	Q601	2326871	TR DTC124ES
R716R	0700041	CF 1K OHM +5% 1/16W [for W,WUN,WAU]	Q602	2326871	TR DTC124ES
R731	0700063	CF 47K OHM +5% 1/16W	Q603L	2315422	TR 2SD1468STD (R)
R732	0700063	CF 47K OHM +5% 1/16W	Q603R	2315422	TR 2SD1468STD (R)
R733	0700063	CF 47K OHM +5% 1/16W	Q604	23280832	TR 2SA844E SI 200MHZ 300MW
R734	0700063	CF 47K OHM +5% 1/16W	Q605	2326871	TR DTC124EST
R735	0700063	CF 47K OHM +5% 1/16W	Q606	23282822	TR SILICON 25C458C
R736	0700063	CF 47K OHM +5% 1/16W	Q607L	23282822	TR SILICON 25C458C
R737	0700063	CF 47K OHM +5% 1/16W	Q607R	23282822	TR SILICON 25C458C
R738	0700063	CF 47K OHM +5% 1/16W			
R739	0700041	CF 1K OHM +5% 1/16W			
R740	0700041	CF 1K OHM +5% 1/16W			
R751	0700045	CF 2.2K OHM +5% 1/16W			
R752	0700045	CF 2.2K OHM +5% 1/16W			
R756	0700041	CF 1K OHM +5% 1/16W			

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
Q608L	23282822	TR SILICON 25C458C	S757	2634341	TACT SWITCH
Q608R	23282822	TR SILICON 25C458C	S758	2634341	TACT SWITCH
Q609L	2326871	TR DTC124ES	S759	2634341	TACT SWITCH
Q609R	2326871	TR DTC124ES	S760	2634341	TACT SWITCH
Q610L	2326871	TR DTC124ES	S761	2634341	TACT SWITCH
Q610R	2326871	TR DTC124ES	S762	2634341	TACT SWITCH
Q611L	2326871	TR DTC124ES	S763	2634341	TACT SWITCH
Q611R	2326871	TR DTC124ES	S764	2634341	TACT SWITCH
Q612L	2326871	TR DTC124ES	S765	2634341	TACT SWITCH
Q612R	2326871	TR DTC124ES	S766	2634341	TACT SWITCH
Q613L	2326871	TR DTC124ES	S767	2634341	TACT SWITCH
Q613R	2326871	TR DTC124ES	J601	2695011	MIC JACK (HCPS)
Q614L	2315422	TR 2SD1468STD (R)	P601	2998985	13P FG CONNECTOR (HCPS)
Q614R	2315422	TR 2SD1468STD (R)	P602	2998984	7P FG CONNECTOR (HCPS)
Q615	2326871	TR DTC124ES	X601	2168881	CERAMIC OSCILLATOR 33.868MHZ
Q616	23280832	TR 2SA844E SI 200MHZ 300MW	X751	2168481	CERAMIC OSCILLATOR
Q617	2324362	TR 2SA1129(K)	X752	2168491	CRYSTAL OSCILLATOR 32.768KHZ
D602	2398921	DI 1N4531T			
D603	2398921	DI 1N4531T			
D604	2398921	DI 1N4531T			
D605	2398921	DI 1N4531T			
D606	2398921	DI 1N4531T			
D607	2398921	DI 1N4531T			
D608	2398921	DI 1N4531T			
D609	2398921	DI 1N4531T			
D611	2398921	DI 1N4531T			
D612	2398921	DI 1N4531T			
D751	2398921	DI 1N4531T			
D752	2398921	DI 1N4531T			
D753	2398921	DI 1N4531T			
D754	2398921	DI 1N4531T			
D755	2398921	DI 1N4531T			
D756	2398921	DI 1N4531T			
D757	2398921	DI 1N4531T			
D758	2398921	DI 1N4531T			
D759	2398921	DI 1N4531T			
D760	2398921	DI 1N4531T			
D761	2398921	DI 1N4531T			
D762	2398921	DI 1N4531T			
D763	2398921	DI 1N4531T [except E,EBS,EZ]			
ZD602	2331785	DIODE-ZENER HZ4(B2)			
ZD603	2331815	ZD HZ7 (B2)			
ZD604	2331798	ZD HZ5C2			
ZD605	2331792	ZD HZ5A2			
ZD606	2331782	ZD HZ-4 A2 SI			
ZD751	23375272	DIODE HZ9C1 1MHZ 400MW			
FL751	2482251	FLUORESCENCE DISPLAY TUBE (HCPS)			
LED601	2397314	LED RLL20503PD-R15(S)			
L601	2122239	LA AXIAL COIL 10 MICROH			
S751	2634341	TACT SWITCH			
S752	2634341	TACT SWITCH			
S753	2634341	TACT SWITCH			
S754	2634341	TACT SWITCH			
S755	2634341	TACT SWITCH			
S756	2634341	TACT SWITCH			
					<b>CABINET</b>
			1	3204841	FRONT PANEL SASS (HCPS) [except W,WUN,WAU]
				3204842	FRONT PANEL SASS (HCPS) [for W,WUN,WAU]
			2	8411641	FELT (HCPS)
			3	3821911	MAGAZINE DOOR (HCPS)
			4	3204821	CD TRAY PANEL (HCPS)
			5	3273741	POWER BUTTON (HCPS)
			6	3273752	BUTTON (HCPS)
			7	3273821	TUNER BUTTON (HCPS)
			8	3273831	CHANGER BUTTON (HCPS)
			9	3273771	MIC KNOB (HCPS)
			10	3335861	DOOR SPRING (HCPS)
			11	3471651	TOP COVER (HCPS)
			12	3471731	REAR PLATE ASSY [for UC]
			12	TS00027	REAR PLATE ASSY [for E,EBS,EZ]
			12	TS00028	REAR PLATE ASSY [for W,WUN,WAU]
			13	3831361	FOOT (HCPS)
			14	8411652	FOOT RUBBER (HCPS)
			15	3372551	TN-2500-110 CD CHANGER MECHA ASSY (HCPS)
			16	8671406	DT BIND HEAD SCREW,(3X6)
			17	8679406	DT BIND SCREW 3X6
			18	8691410	BT SCREW,(3X10)
			19	8691410	BT SCREW,(3X10)
			20	8699410	BT BIND HEAD SCREW,(3X10)
			21	8815116	WASHER
			22	8671408	DT BIND HEAD SCREW (3X8)
			23	3874121	FL HOLDER (HCPS)
					<b>CD CHANGER MECHA</b>
			1	3378842	GUIDE BOSS (HCPS)
			2	3378843	CONNECTOR A ASSY (HCPS)
			3	3378844	CONNECTOR D ASSY (HCPS)

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
4	3378845	CONNECTOR P ASSY (HCPS)	56	3378913	SWITCH ACTUATOR (HCPS)
5	3378846	ELEVATION ARM A ASSY (HCPS)	57	3378915	TRAY (HCPS)
6	3378847	ELEVATION SIDE ARM B ASSY (HCPS)	58	3378917	ELEVATION MOTOR ASSY (HCPS)
7	3378848	ELEVATION FRONT ARM A ASSY (HCPS)	59	3378918	FEED MOTOR ASSY (HCPS)
8	3378849	CAM LEVER SPRING (HCPS)	60	3378919	CAM SLIDER ASSY (HCPS)
9	3378851	LIFT CAM (HCPS)	61	3378933	4P CONNECTOR (HCPS)
10	3378853	ELEVATION GEAR B (HCPS)	62	3378934	10P CONNECTOR (HCPS)
11	3378854	ELEVATION GEAR C (HCPS)	63	3378921	CAMERA PAN 1.7X2.2
12	3378855	ELEVATION GEAR D (HCPS)	64	3378922	2X6 TAPPING SCREW (HCPS)
13	3378856	REAF SWITCH (HCPS)	65	3378923	2X3 TAPPING SCREW (HCPS)
14	3378857	CAM LEVER (HCPS)	66	3378924	2X4 TAPPING SCREW (HCPS)
15	3378858	GUIDE BASE (HCPS)	67	3378925	2X3 TAPPING SCREW (HCPS)
16	3378859	ELEVATION SLIDE LEVER (HCPS)	68	3378926	2X3 TAMS SCREW (HCPS)
17	3378861	ELEVATION SLIDE LEVER SPRING (HCPS)	69	3378927	3X4 TAMS SCREW (HCPS)
18	3378862	M GUIDE (L) (HCPS)	70	3375472	2X3 TAPPING SCREW (HCPS)
19	3378863	M GUIDE (R) (HCPS)	71	3375501	2X5 TAPPING SCREW (HCPS)
20	3378864	GUIDE COVER (HCPS)	72	3375522	2X4 TAPPING SCREW (HCPS)
21	3378865	TRAY STOPPER (HCPS)	73	3375503	HL WASHER CUT 2.1X5X0.4
22	3378866	RELEASE LEVER (HCPS)	74	3378928	POLY WASHER 3.1X8.5X0.13 (HCPS)
23	3378868	LOCK LEVER (HCPS)	75	3378929	POLY WASHER 2.6X6X0.5 (HCPS)
24	3378869	E KICK LEVER SPRING (HCPS)	76	3378931	E RING (HCPS)
25	3378871	RELEASE LEVER SPRING (HCPS)			
26	3378873	PUSH SWITCH (HCPS)			<b>ACCESSORY</b>
27	3378875	HOOK SLIDE GEAR (HCPS)			
28	3378877	FLOATING RUBBER (HCPS)			<b>AX-12</b>
29	3378878	FLOATING SPRING B (HCPS)	2977931	7P FG CABLE (HCPS)	
30	3378879	FLOATING SCREW (HCPS)	2977941	13P FG CABLE (HCPS)	
31	3378932	FLOATING SPRING (HCPS)	2573945	REMOTE CONTROL TRANSMITTER (RB-AX15) (HCPS)	
32	3378881	FEED BELT (HCPS) (ETHYLENE PROPYLENE) SQUARE FAI 14.4 (1.1X1.1)	2759341	AM LOOP ANTENNA (HCPS)	
33	3378883	SHAFT HOLDER A (HCPS)	2757528	FM ANTENNA (for UC,WAU)	
34	3378884	FEED SCREW ASSY (HCPS)			<b>AX-C12</b>
35	3378887	FEED NUT SPRING (HCPS)	2977931	7P FG CABLE (HCPS)	
36	3378888	PICK UP (HCPS)	2977941	13P FG CABLE (HCPS)	
37	3378889	RAIL BASE ASSY (HCPS)	2573946	REMOTE CONTROL TRANSMITTER (RB-AXC15) (HCPS)	
38	3378891	RAIL (L) (HCPS)			
39	3378892	RAIL (R) (HCPS)	2759341	AM LOOP ANTENNA (HCPS)	
40	3378893	HOOK LEVER (HCPS)	2757528	FM ANTENNA (for UC,WAU)	
41	3378894	LP BRACKET ASSY (HCPS)			<b>AX-15</b>
42	3378895	MG HOLDER ASSY (HCPS)	2977931	7P FG CABLE (HCPS)	
43	3378897	SHAFT HOLDER B (HCPS)	2977941	13P FG CABLE (HCPS)	
44	3378898	DISC MOTOR ASSY (WITH TURN TABLE) (HCPS)	2573945	REMOTE CONTROL TRANSMITTER (RB-AX15) (HCPS)	
45	3378901	P RAIL BASE ASSY (HCPS)	2759341	AM LOOP ANTENNA (HCPS)	
46	3378902	STOPPER SPRING (HCPS)	2757528	FM ANTENNA (for UC,WAU)	
47	3378903	STOPPER (HCPS)			<b>AX-C15</b>
48	3378904	P BELT (HCPS) (POLYURETHANE) SQUARE FAI 57.4 (1.7X1.7)	2977931	7P FG CABLE (HCPS)	
49	3378905	P GEAR A (HCPS)	2977941	13P FG CABLE (HCPS)	
50	3378906	P GEAR B (HCPS)	2573946	REMOTE CONTROL TRANSMITTER (RB-AXC15) (HCPS)	
51	3378907	FE GEAR C (HCPS)	2759341	AM LOOP ANTENNA (HCPS)	
52	3378908	FE GEAR D (HCPS)	2757528	FM ANTENNA (for UC,WAU)	
53	3378909	FE GEAR E (HCPS)			
54	3378911	FE GEAR D SPRING (HCPS)			
55	3378912	FE GEAR E SPRING (HCPS)			

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
		<b>HS-AX12</b>			
1	505-LAX-12-CKD	CABINET (L)			
	505-RAX-12-CKD	CABINET (R)			
2	401-LAX-12-CKD	FRONT PANEL (L)			
	401-RAX-12-CKD	FRONT PANEL (R)			
3	903-LAX-15-CKD	CLOTH FRAME(L)			
	903-RAX 15-CKD	CLOTH FRAME(R)			
4	W543366HCX	25A-21 SPK .5-1/4			
5	T20108NPW13K-20	SPK .2			
6	300-B2351400	WOOD SCREW M3.5 x 14 BLK BIND			
	190-AX-12	CORD ASSY			
		<b>HS-AX15</b>			
1	505-LAX-15-CKD	CABINET (L)			
	505-RAX-15-CKD	CABINET (R)			
2	401-LAX-15-CKD	FRONT PANEL (L)			
	401-RAX-15-CKD	FRONT PANEL (R)			
3	903-LAX-15-CKD	CLOTH FRAME(L)			
	903-RAX 15-CKD	CLOTH FRAME(R)			
4	W54536NCX25A-20	25A-21 SPK .5-1/4			
5	T20108NPW13K-20	SPK .2			
6	401-AX-15	PIEZO TWEETER ASSY			
7	300-B2351400	WOOD SCREW M3.5 x 14 BLK BIND			
	617-N1520	SUBSIDIARY SPK-CORD			
	190-AX-12	CORD ASSY			