



# HITACHI

## SERVICE MANUAL

TY

No. 571EF-1

**MX-W50**  
(US,CS,ES,VS,BK,SA,KS,ZS,EW)

SUPPLEMENT

TAPE1: HTY-3302DH (PLAY)  
TAPE2: HTY-3602DH (REC/PLAY)

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In this unit, a printed wiring board has been changed for operability and performance improvement purposes. This Service Manual contains the PWB, circuit and wiring diagrams after the modification. Use it together with the already released MX-W50 Service Manual (TY No. 571EF). The table below shows the serial Nos. from which the modification was introduced.

Color	Serial No.
BLACK	from 006381
WHITE	from 001731

The HTY-3302DH/3602DH mechanism is a partially modified version of the HTY-3300DH/3600DH mechanism.

Dans cet appareil, une plaquette de circuit imprimé a été modifiée dans le but de faciliter l'utilisation et d'améliorer les performances. Les schémas de ce manuel d'entretien concernant les PCI, circuits et câblages tiennent compte de cette modification. Ce manuel doit être utilisé conjointement avec le manuel d'entretien MX-W50 (TY No. 571EF) déjà publié. Le tableau cidessous indique les numéros de série affectés par la modification.

Couleur	No. de série
NOIR	à partir de 006381
BLANC	à partir de 001731

Le mécanisme HTY-3302DH/3602DH est une version partiellement modifiée du mécanisme HTY-3300DH/3600DH.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

STEREO CASSETTE RECEIVER/COMPACT DISC PLAYER

November 1987

YOKOHAMA WORKS

## SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with  $\triangle$  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.

## 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.

## PRÉCAUTIONS DE SÉCURITÉ

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

1. Étant 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 réparé au client le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

## ENTRETIEN

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

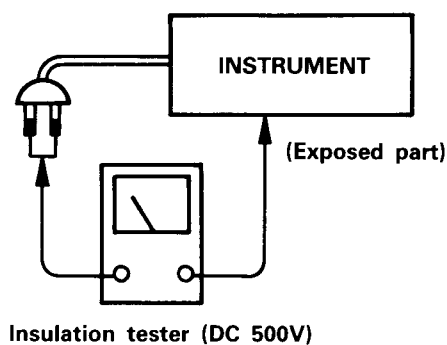
Enlever la poussière des surfaces de l'appareil avec un chiffon sec. Ne jamais utiliser de solvants, de benzine ou d'alcool car ils abîmeraient le fini des surfaces.

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

### ● Checking method

Power switch is set to ON.

Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.



**PRINTED WIRING BOARD · PLAN DE BACE** (■ : Earth, ▨ : Others)

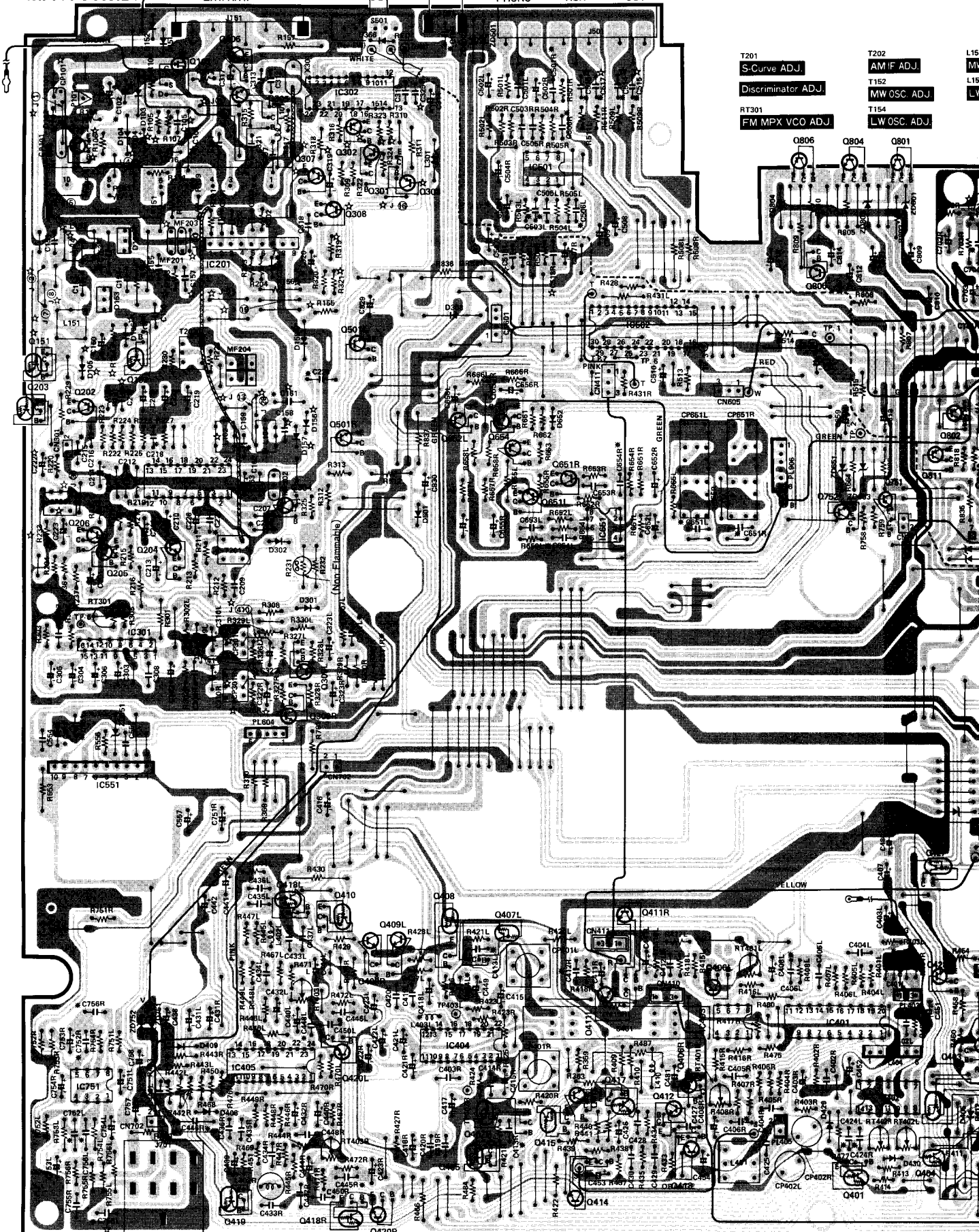
The circuit symbol (☆) means  
 Le symbol de circuit ☆ signifie  
 ※ : Axial lead cylindrical ceramic

FM ANT. SOCKET  
 FM 75Ω IN  
 GND  
 AM LOOP IN  
 EXT. ANT.

S501  
 SPACING SWITCH

MAIN P.W.B.

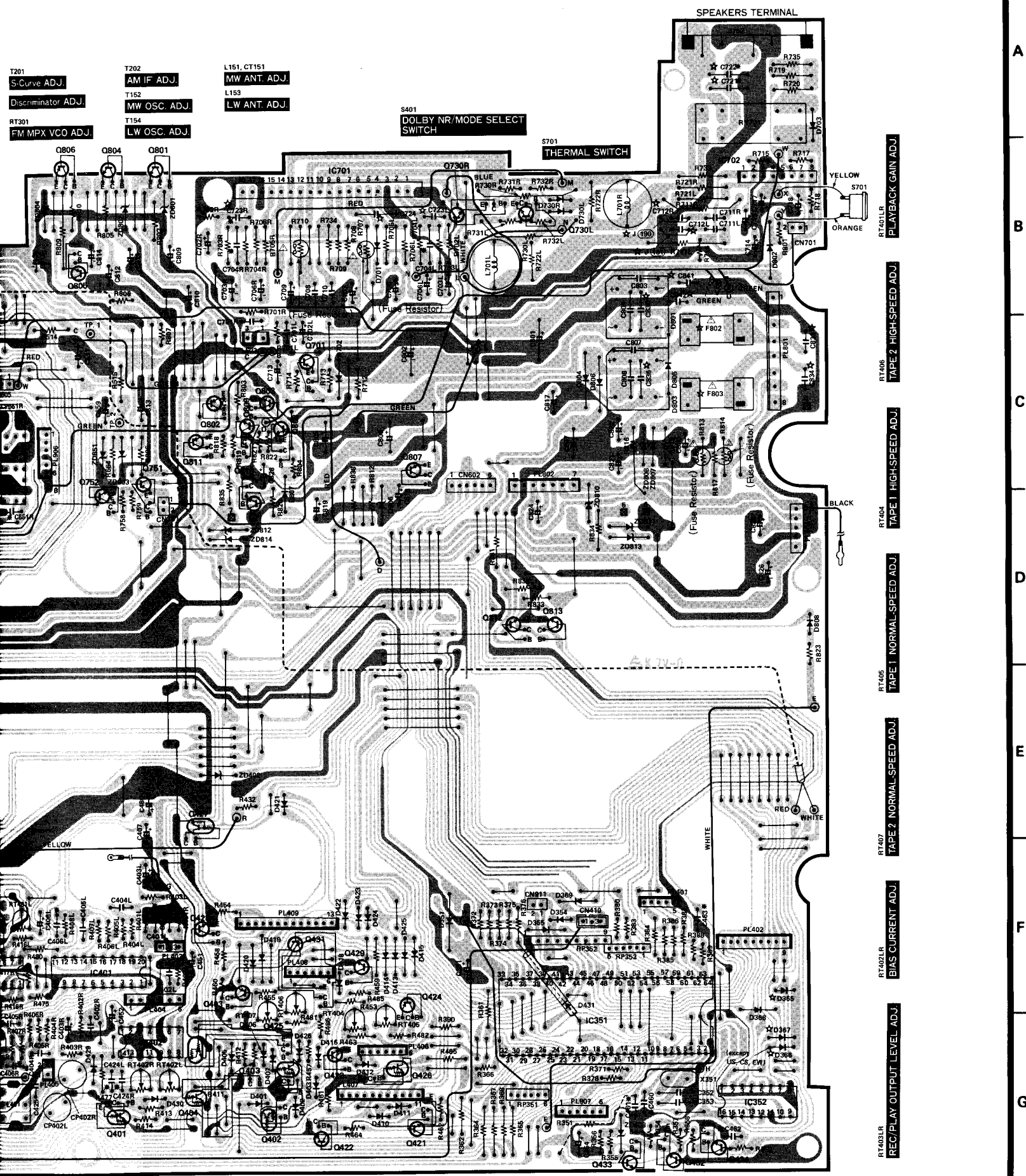
PHONO AUX LINE OUT



- T201 S-Curve ADJ.
- T202 AM IF ADJ.
- T152 Discriminator ADJ.
- T154 MW OSC. ADJ.
- RT301 FM MPX VCO ADJ.
- Q806
- Q804
- Q801

HEADPHONES JACK

The circuit symbol (☆) means difference for destination. (Refer to the table in page 21.)  
Le symbol de circuit ☆ signifie qu'il s'agit des différence pour destination. (Consulter la table dans le page 21.)  
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



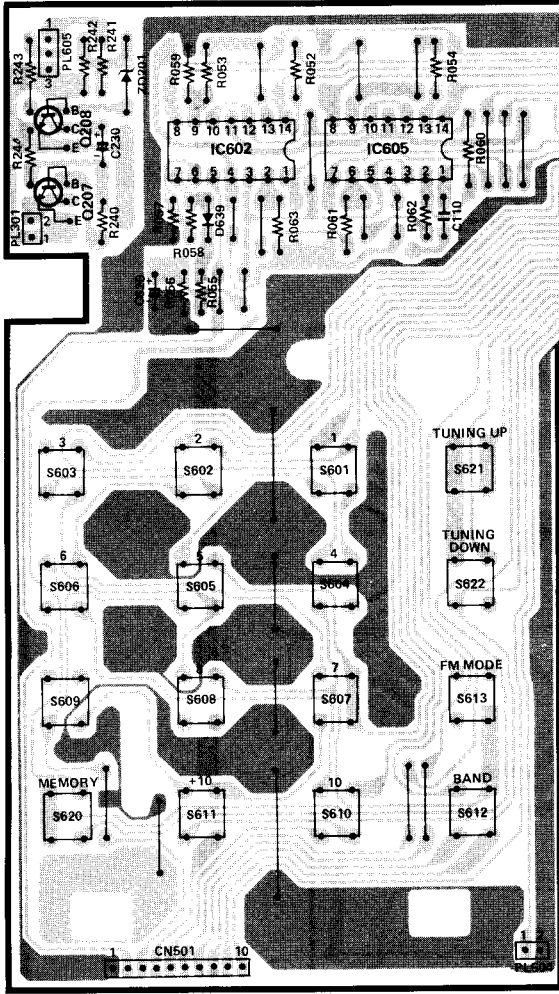
- T201 S-Curve ADJ.
- Discriminator ADJ.
- RT301 FM MPX VCO ADJ.
- T202 AM IF ADJ.
- T152 MW OSC. ADJ.
- T154 LW OSC. ADJ.
- L151, CT151 MW ANT. ADJ.
- L153 LW ANT. ADJ.
- S401 DOLBY NR/MODE SELECT SWITCH
- S701 THERMAL SWITCH

- RT401L R PLAYBACK GAIN ADJ.
- RT406 TAPE 2 HIGH-SPEED ADJ.
- RT404 TAPE 1 HIGH-SPEED ADJ.
- RT405 TAPE 2 NORMAL-SPEED ADJ.
- RT407 TAPE 1 NORMAL-SPEED ADJ.
- RT402L R BIAS CURRENT ADJ.
- RT403L R REC/PLAY OUTPUT LEVEL ADJ.

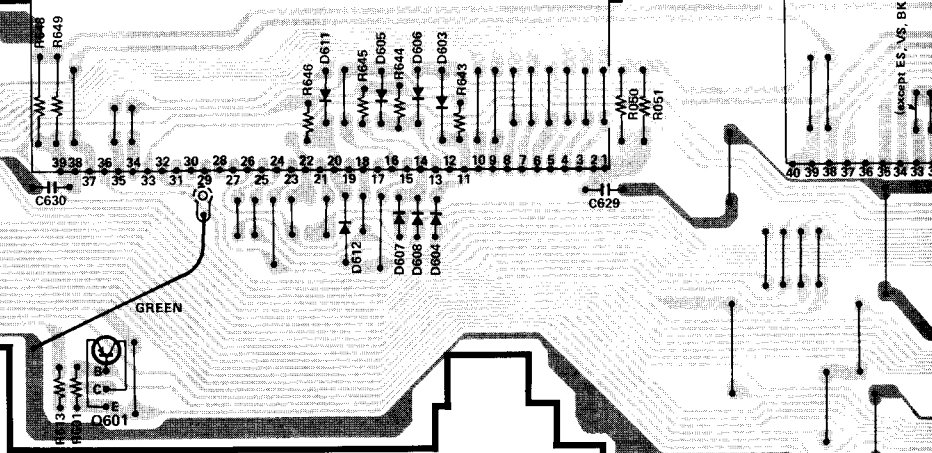
A  
B  
C  
D  
E  
F  
G



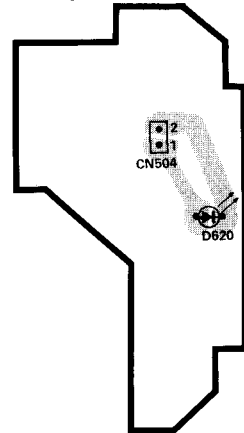
FL METER P.W.B.



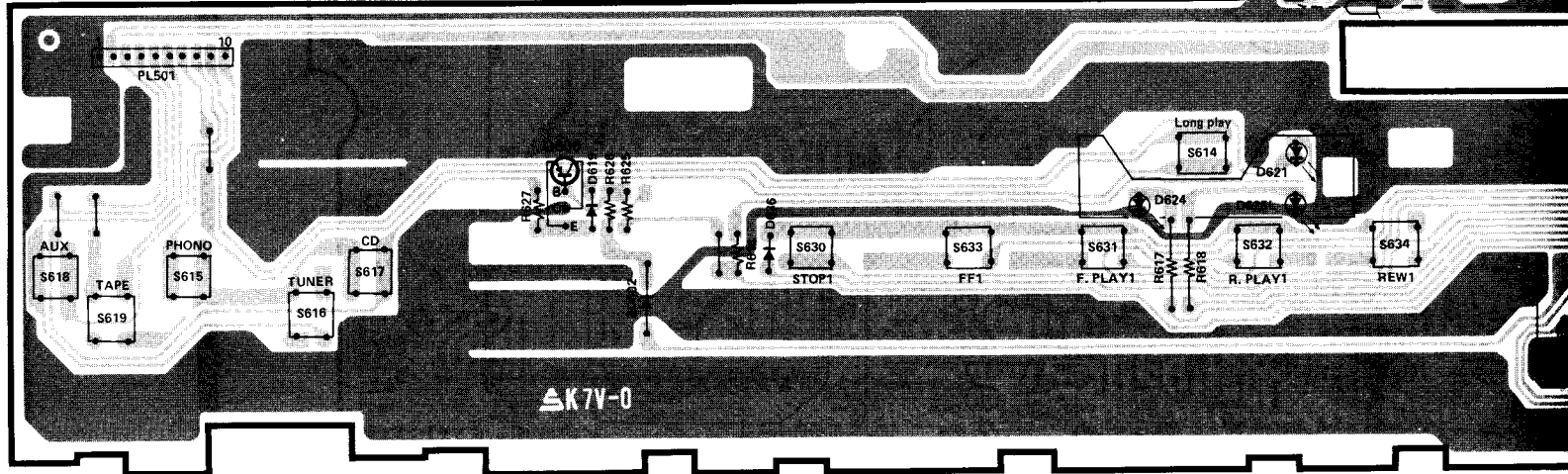
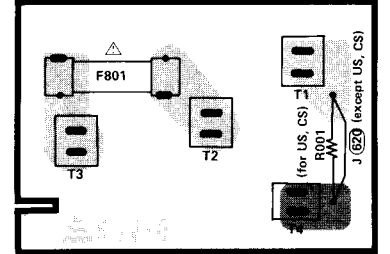
FL602  
FLUORESCENCE DISPLAY TUBE



INDICATOR P.W.B.



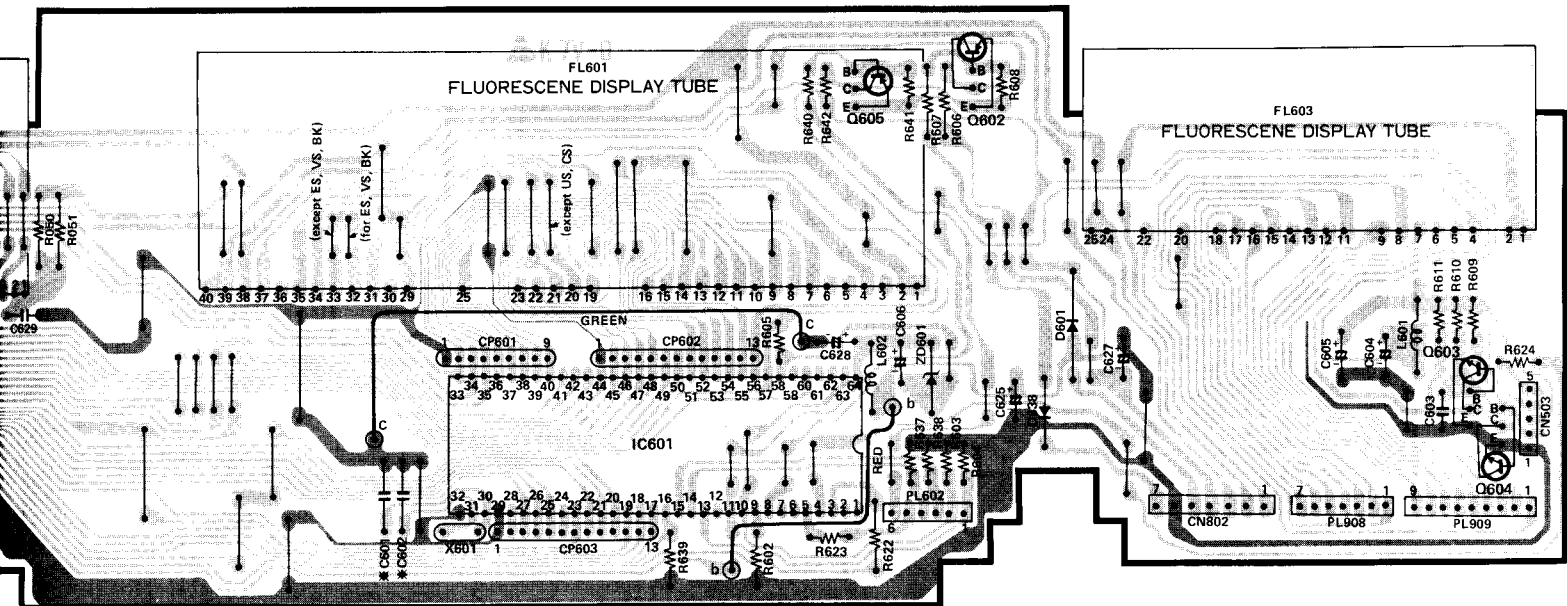
POWER SUPPLY P.W.B.



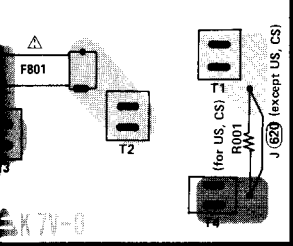
: Others ]

※ : Axial lead cylindrical ceramic capacitor.

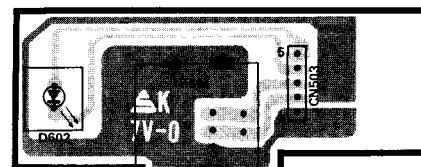
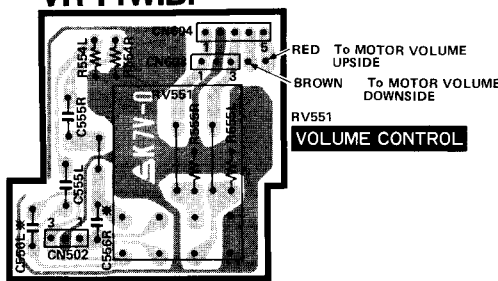
※ : Condensateur ceramique a conducteur axial.



POWER SUPPLY P.W.B.

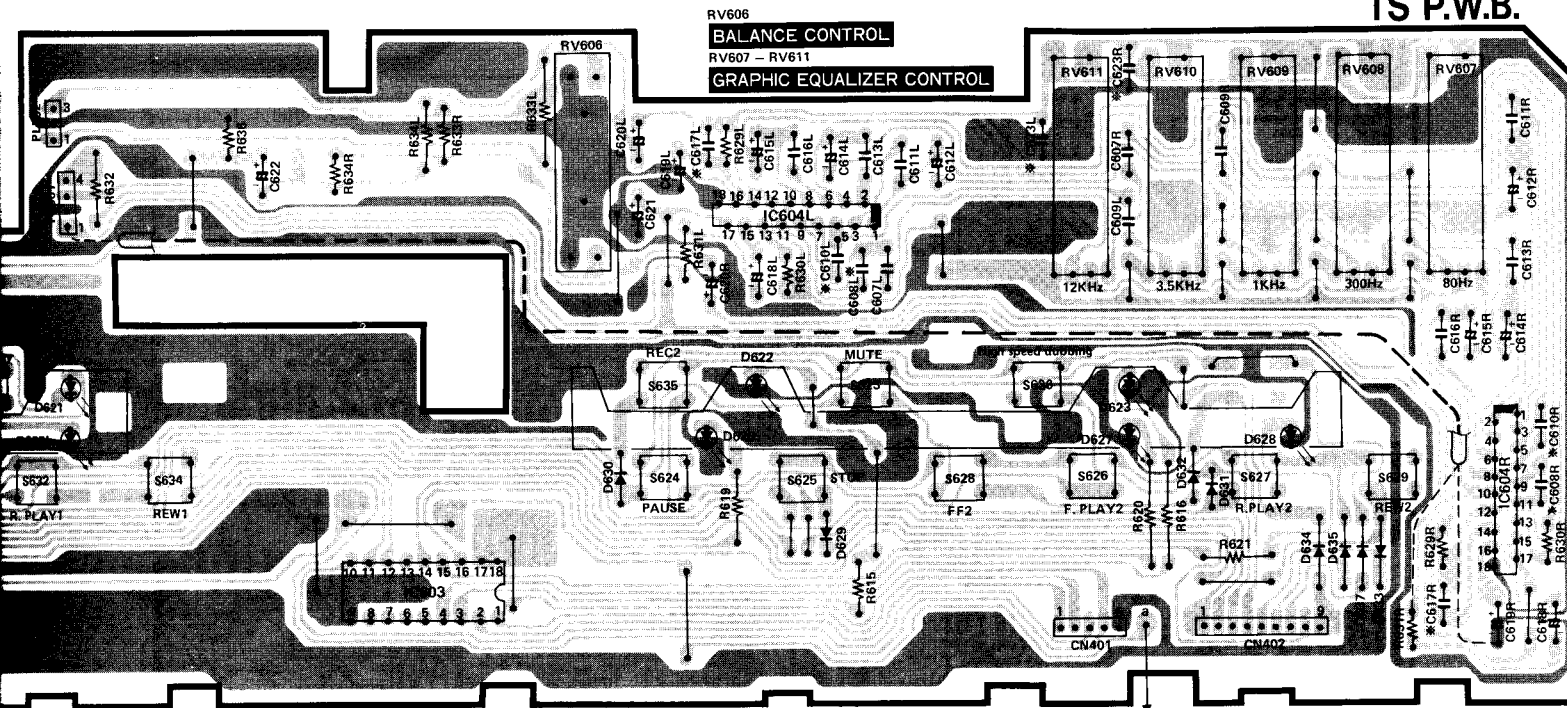


VR P.W.B.

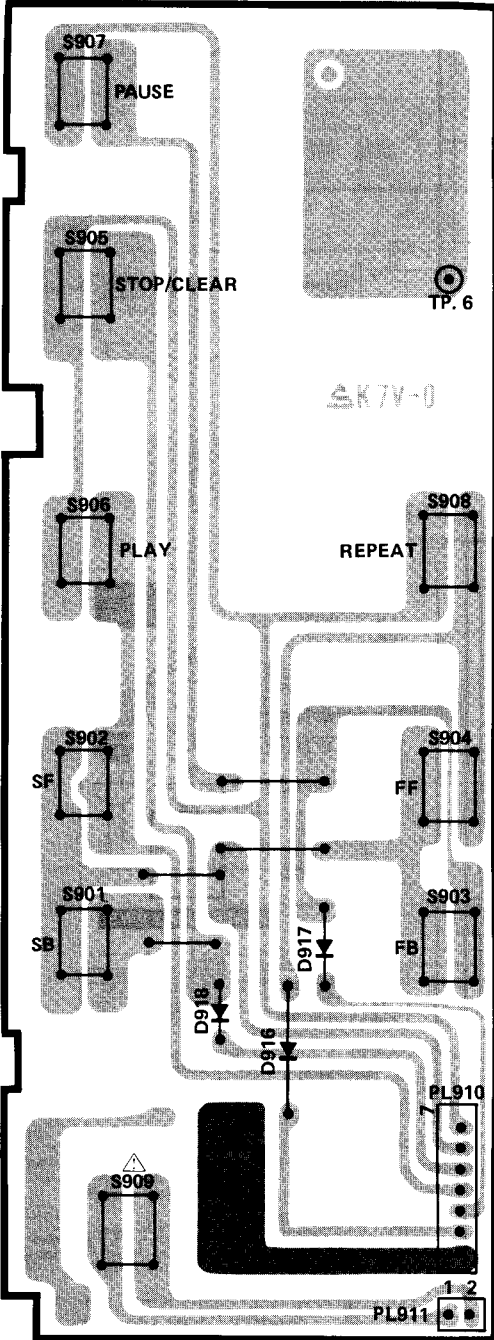


REMOTE CONTROL RECEIVER UNIT

TS P.W.B.

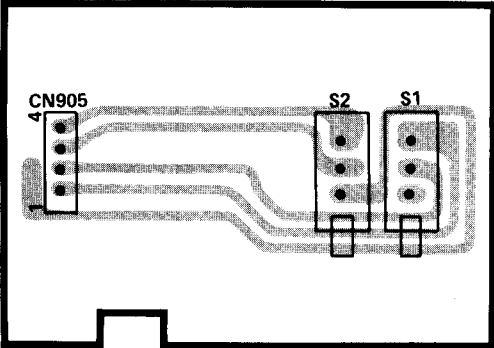


### KEY P.W.B.

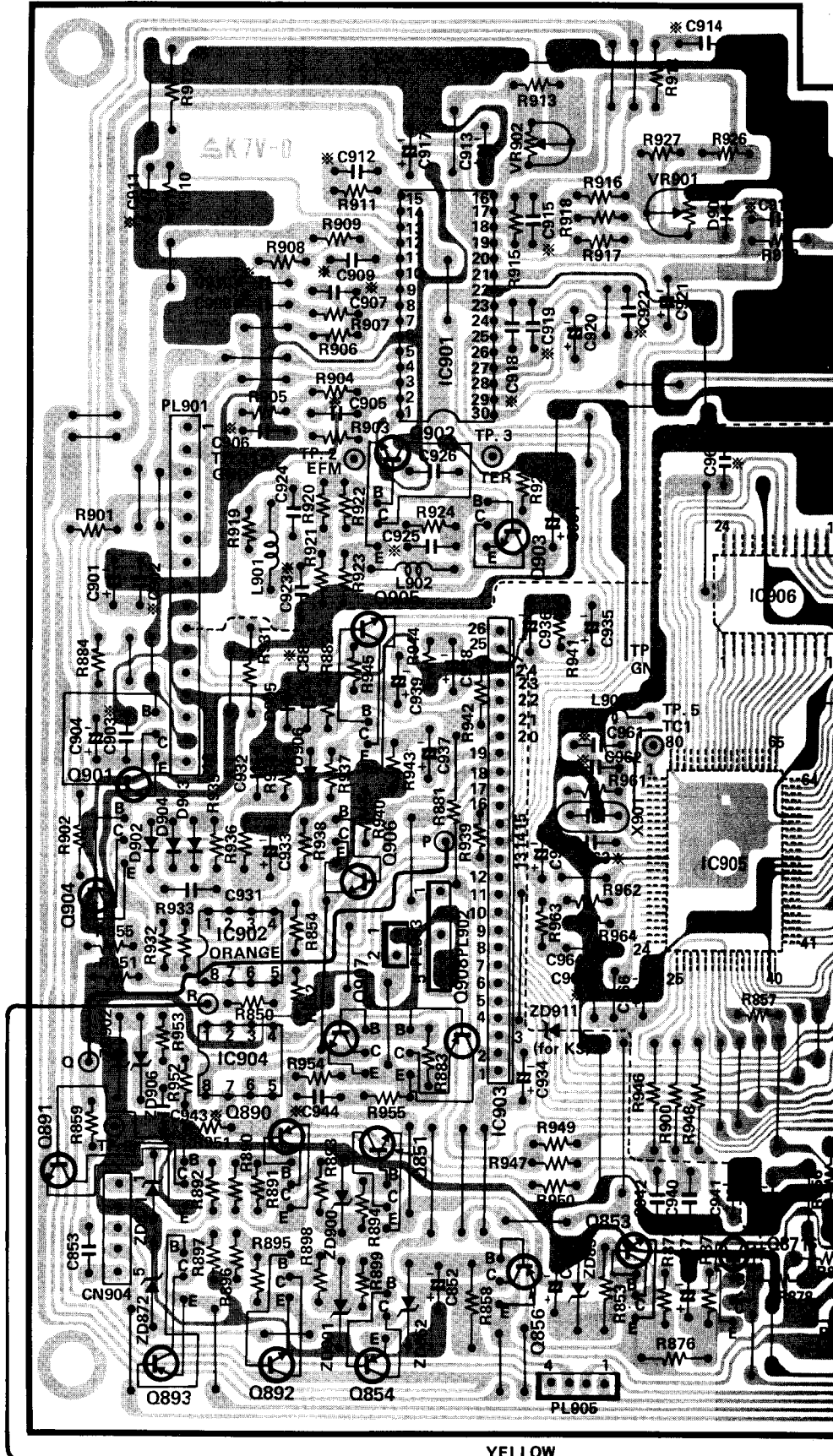


### LASER, OPEN/CLOSE SWITCH P.W.B.

S909 OPERATE SWITCH



### PX P.W.B.

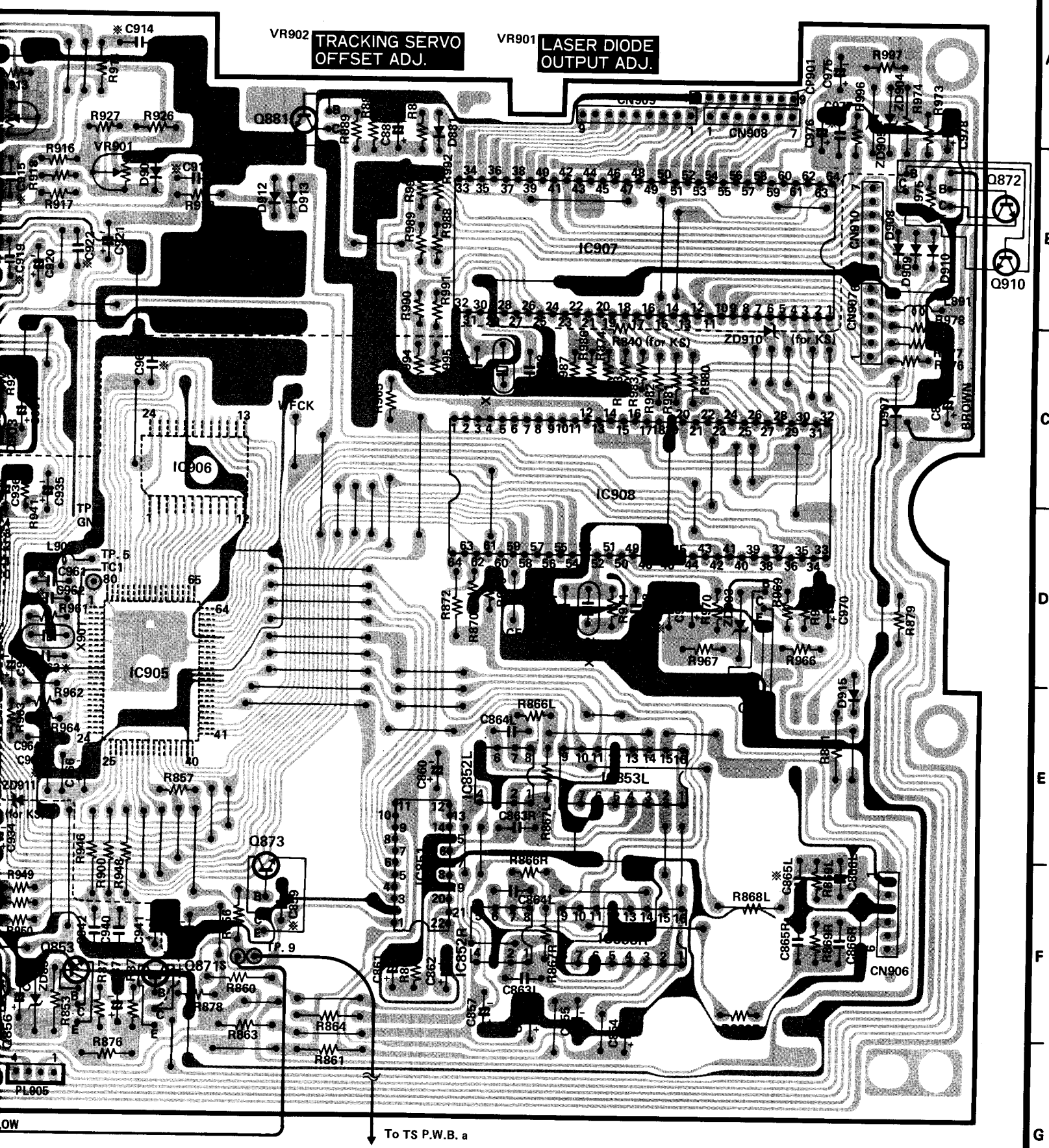


YELLOW

- S1 OPEN/CLOSE SWITCH
- S2 LASER SWITCH



\* : Axial lead cylindrical ceramic capacitor. \* : Condensateur ceramique a conducteur axial.



To TS P.W. a

OW

5

6

7

- 8 -

8

9

A

B

C

D

E

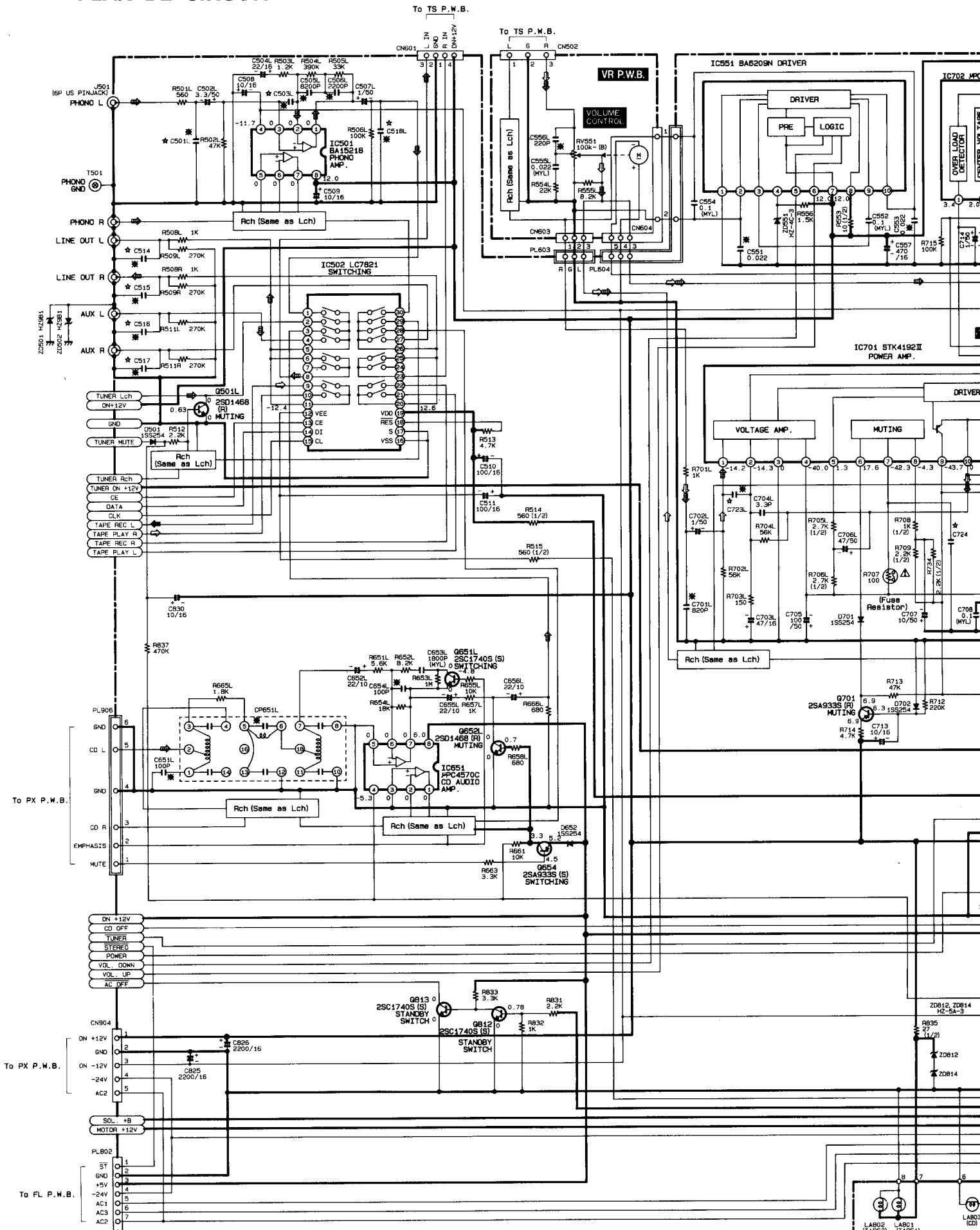
F

G

# CIRCUIT DIAGRAM PLAN DE CIRCUIT

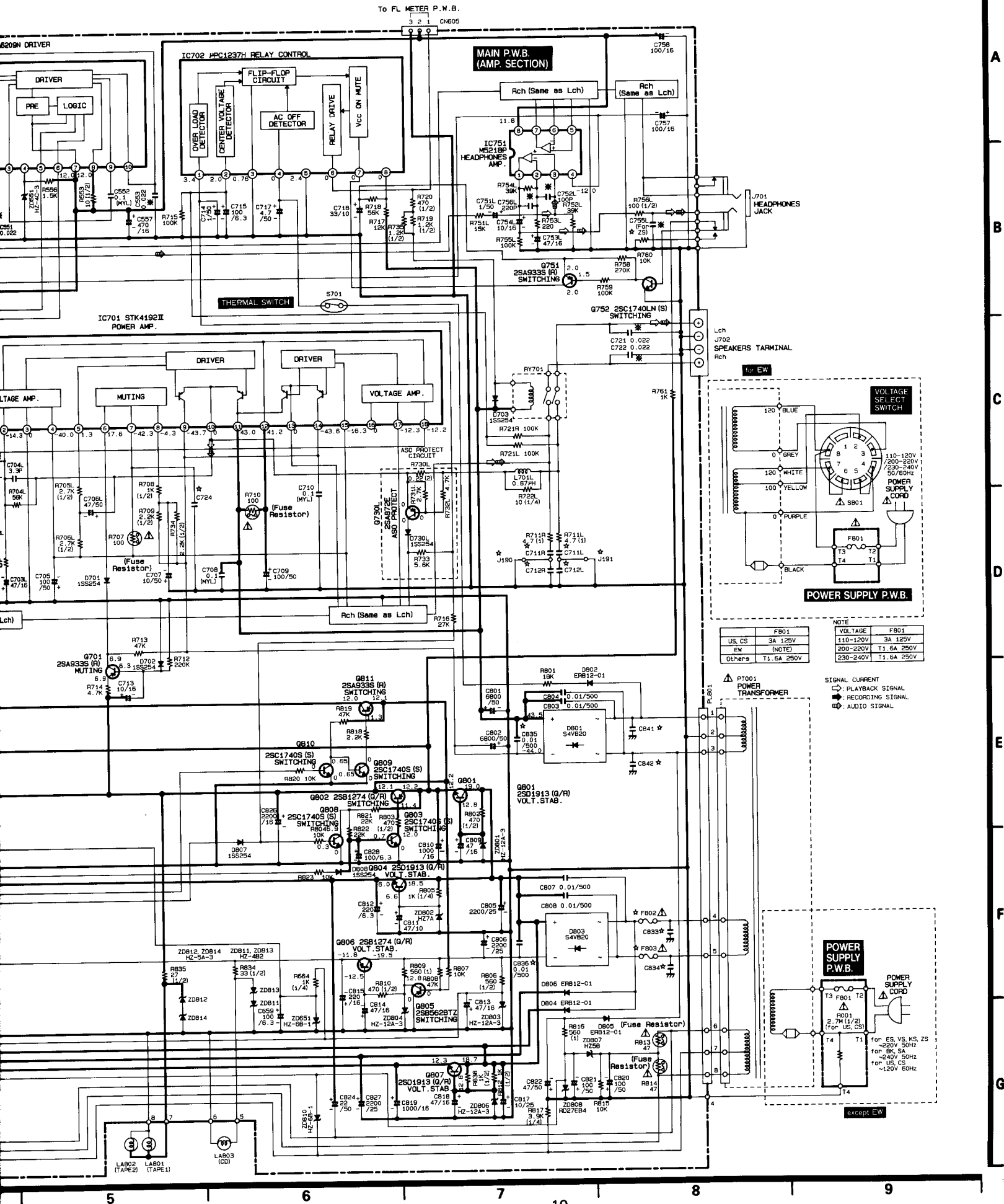
(■) : +B, (■) : -B

The circuit symbol (☆) means difference for destination  
Le symbole de circuit (☆) signifie qu'il s'agit des différe  
※ : Axial lead cylindrical ceramic capacitor. ※ : C





means difference for destination. (Refer to the table in page 22~23.)  
 ☆ signifie qu'il s'agit des différence pour destination. (Consulter la table dans le page 22~23.)  
 cal ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



US, CS	F801	F801
US, CS	3A, 125V	3A, 125V
EW (NOTE)	200-220V	T1, 6A, 250V
Others	T1, 6A, 250V	230-240V

NOTE	
VOL. TAGE	F801
110-120V	3A, 125V
200-220V	T1, 6A, 250V
230-240V	T1, 6A, 250V

NOTE  
 VOL. TAGE F801  
 110-120V 3A, 125V  
 200-220V T1, 6A, 250V  
 230-240V T1, 6A, 250V

NOTE  
 VOL. TAGE F801  
 110-120V 3A, 125V  
 200-220V T1, 6A, 250V  
 230-240V T1, 6A, 250V

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 VOL. TAGE F801  
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 200-220V T1, 6A, 250V  
 230-240V T1, 6A, 250V

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 230-240V T1, 6A, 250V

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 VOL. TAGE F801  
 110-120V 3A, 125V  
 200-220V T1, 6A, 250V  
 230-240V T1, 6A, 250V

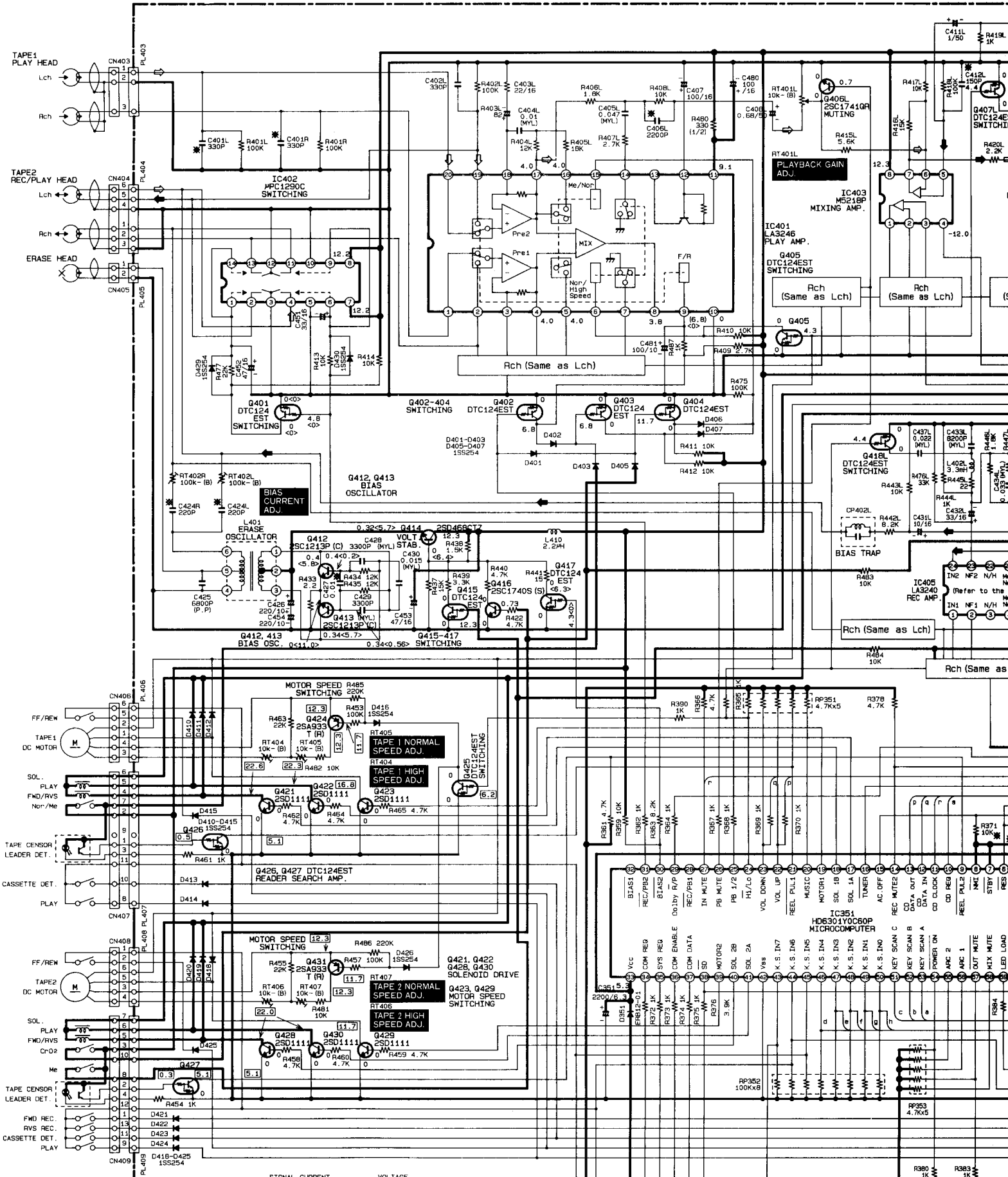
# CIRCUIT DIAGRAM

## PLAN DE CIRCUIT ( : +B, : -B )

The circuit symbol (☆) means difference for destination. (Refer to the

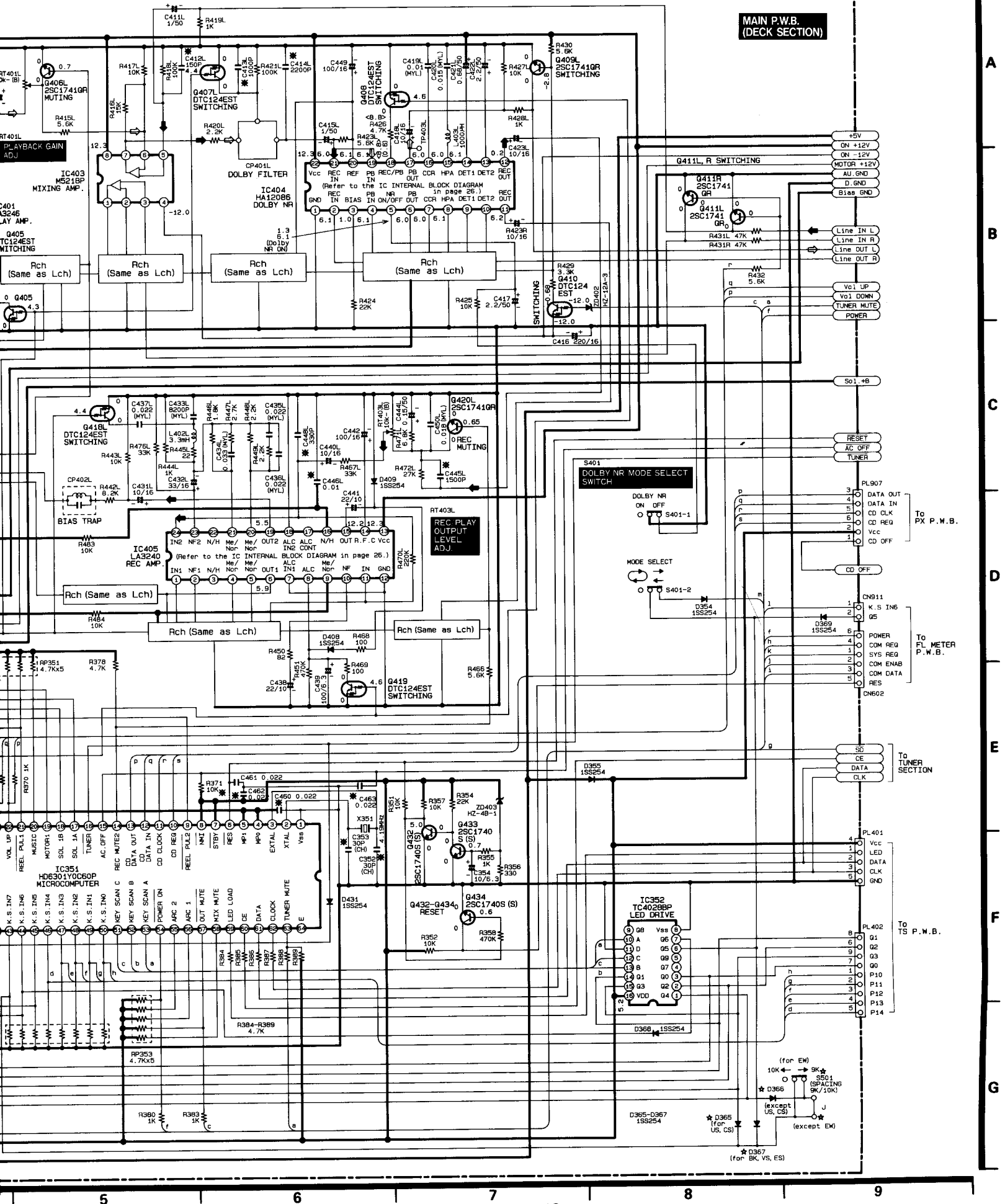
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour destination

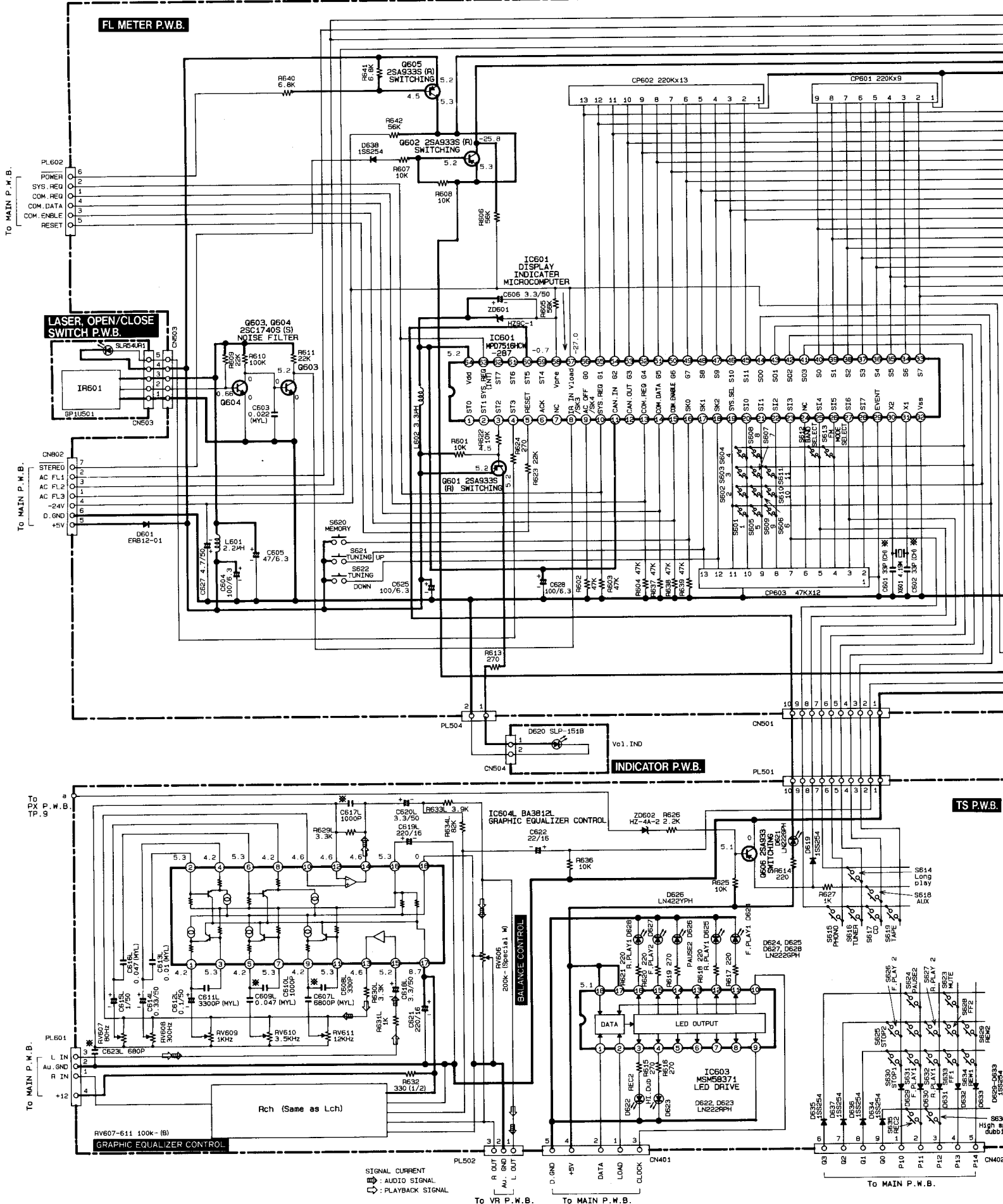
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceram



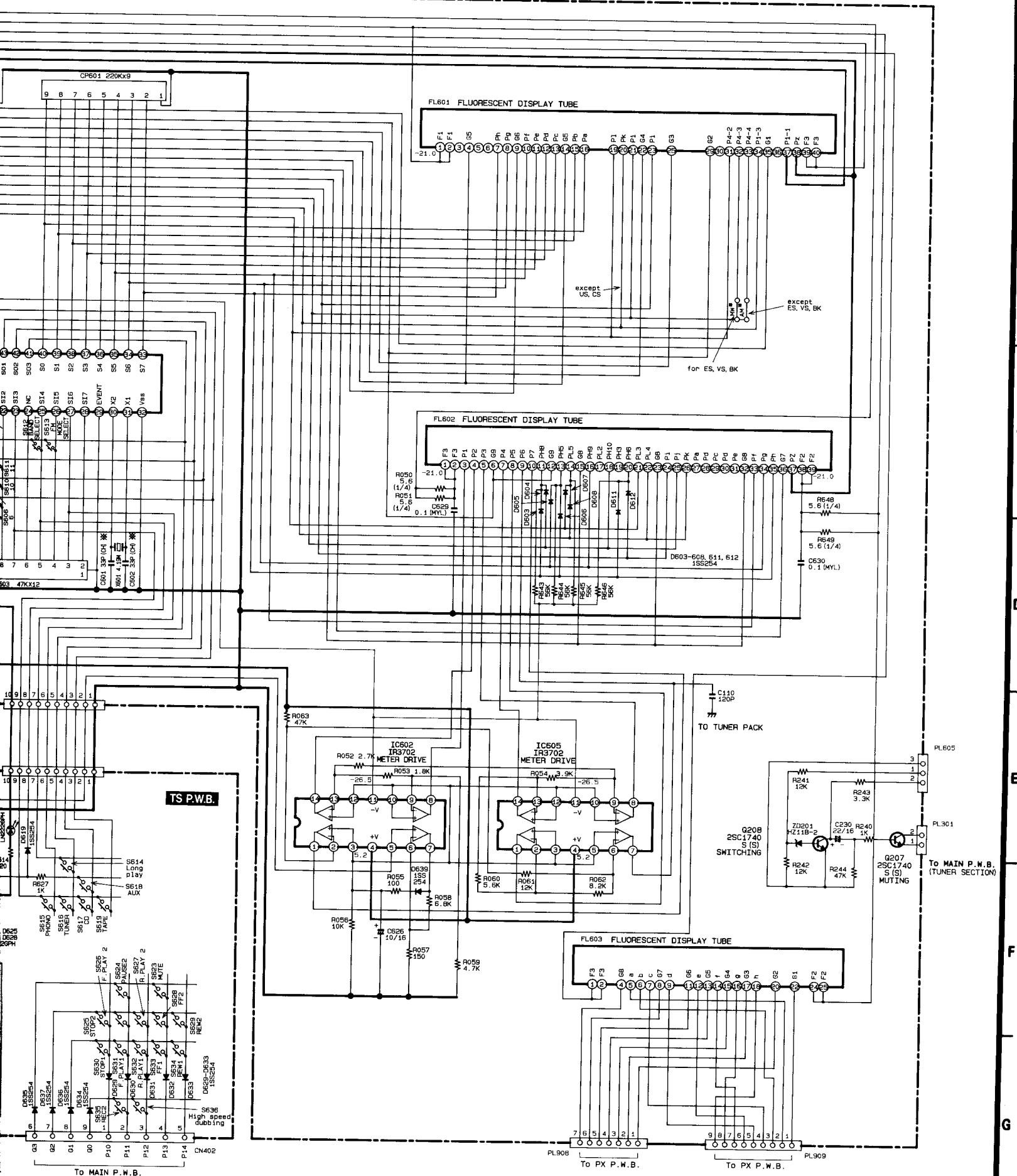
SIGNAL CURRENT  
 : PLAYBACK SIGNAL  
 : RECORDING SIGNAL  
 VOLTAGE  
 REC. < >  
 DOLBY NR

for destination. (Refer to the table in page 22~23.)  
\* agit des différence pour destination. (Consulter la table dans le page 22~23.)  
itor. \* : Condensateur ceramique a conducteur axial.





\* : Condensateur ceramique a conducteur axial.

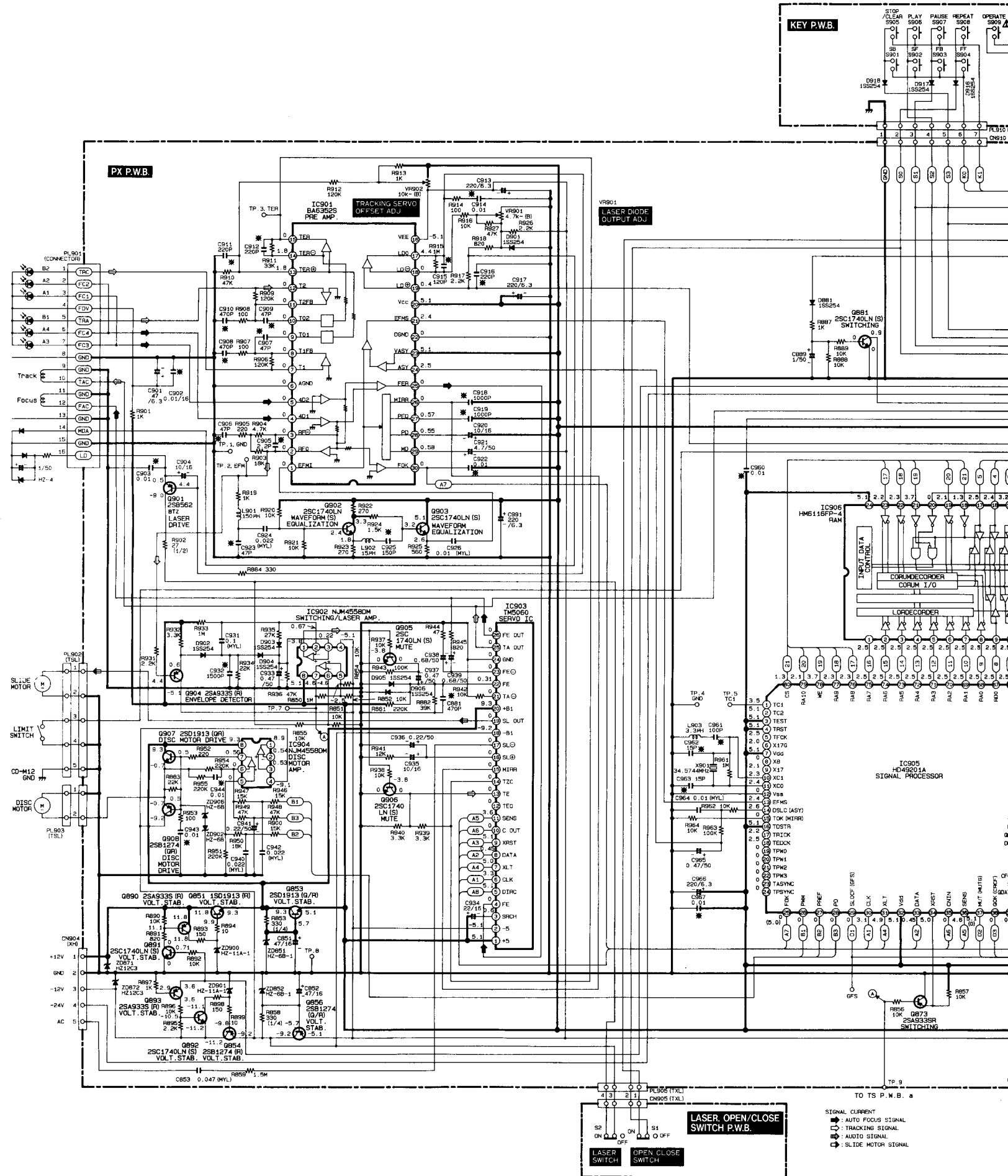




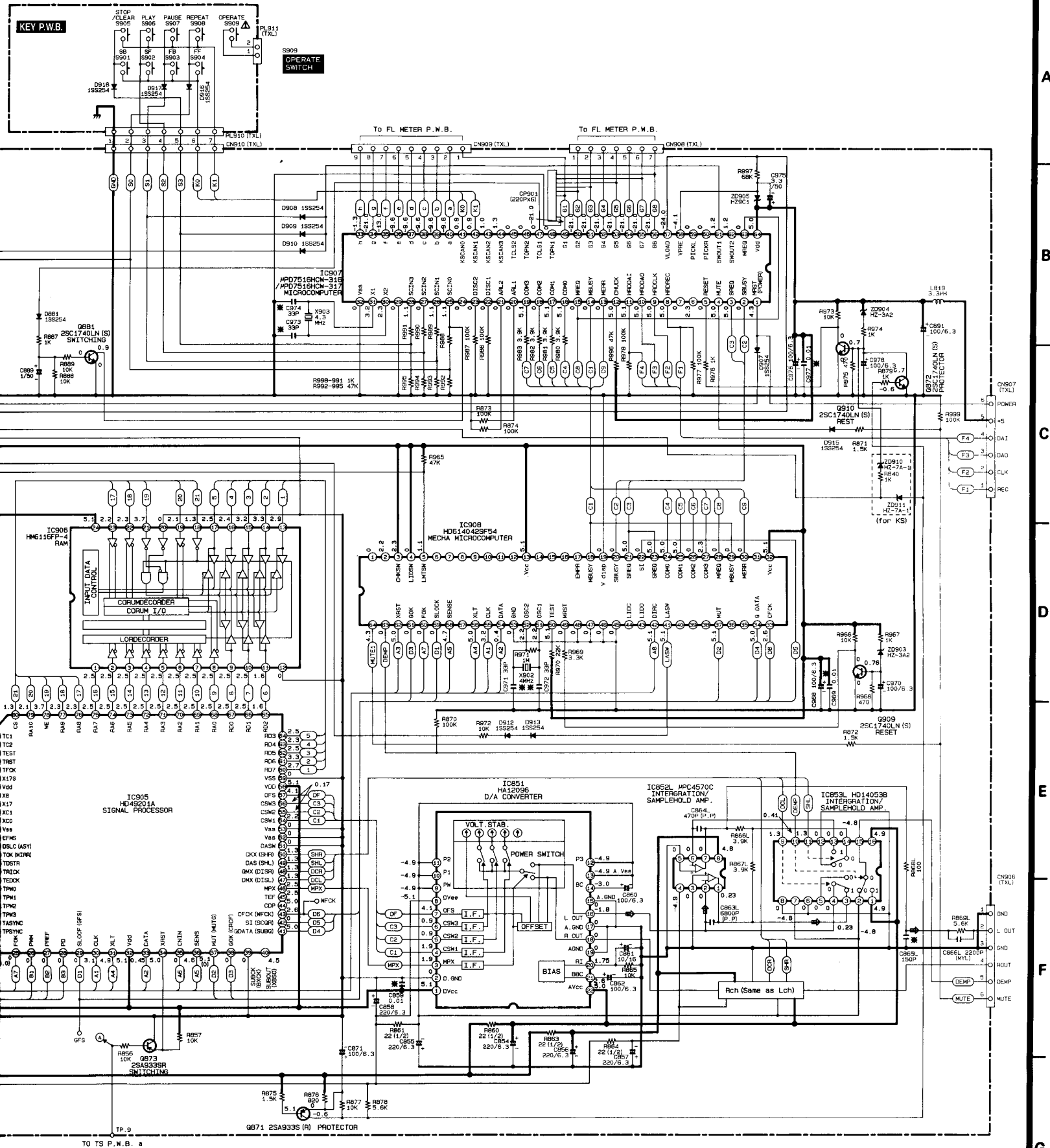
# CIRCUIT DIAGRAM PLAN DE CIRCUIT

※ : Axial lead cylindrical ceramic capacitor.

※ : Condensateur ceramique a cone



\* : Condensateur ceramique a conducteur axial.

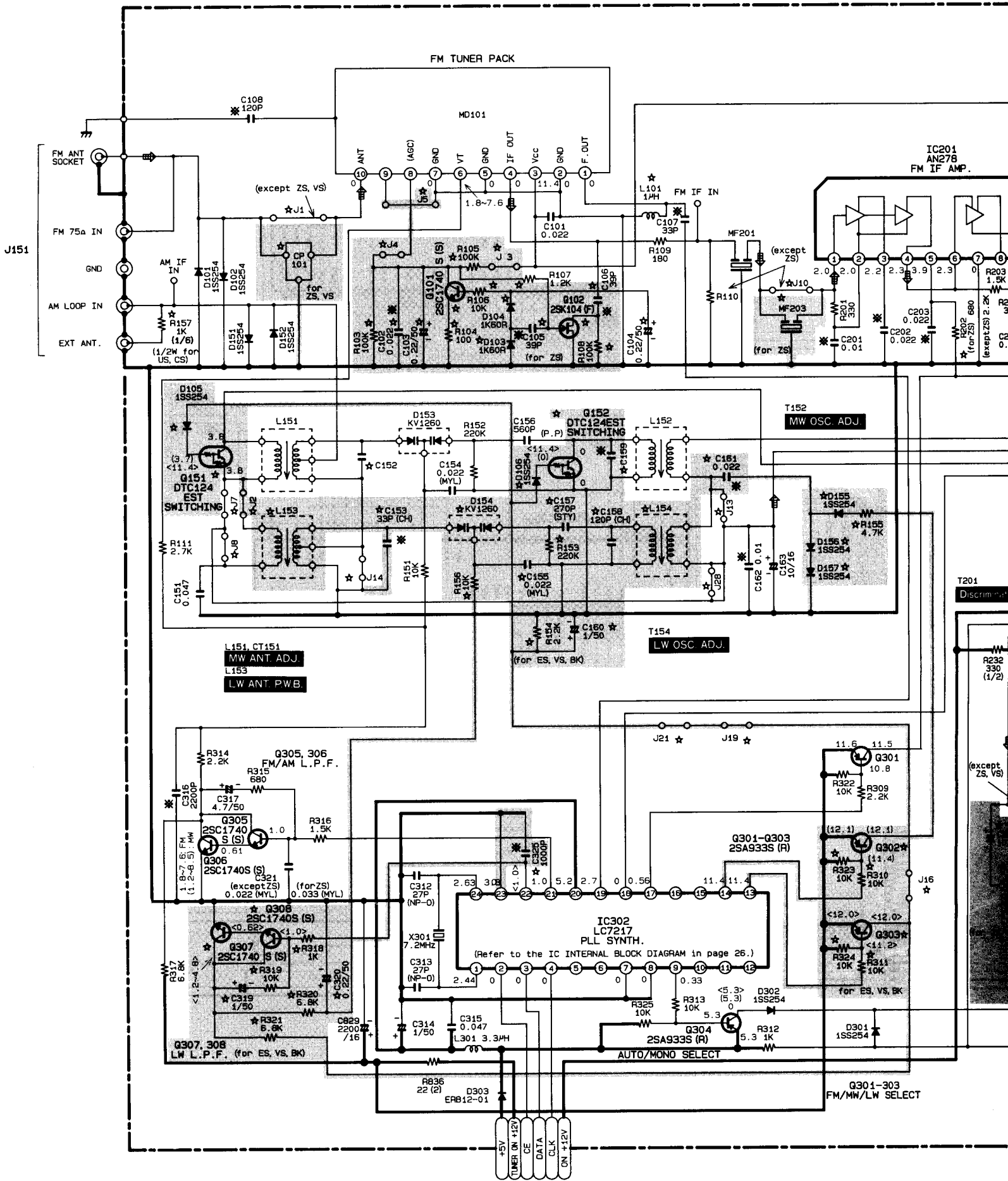


- SIGNAL CURRENT
- AUTO FOCUS SIGNAL
  - TRACKING SIGNAL
  - AUDIO SIGNAL
  - ◇ SLIDE MOTOR SIGNAL

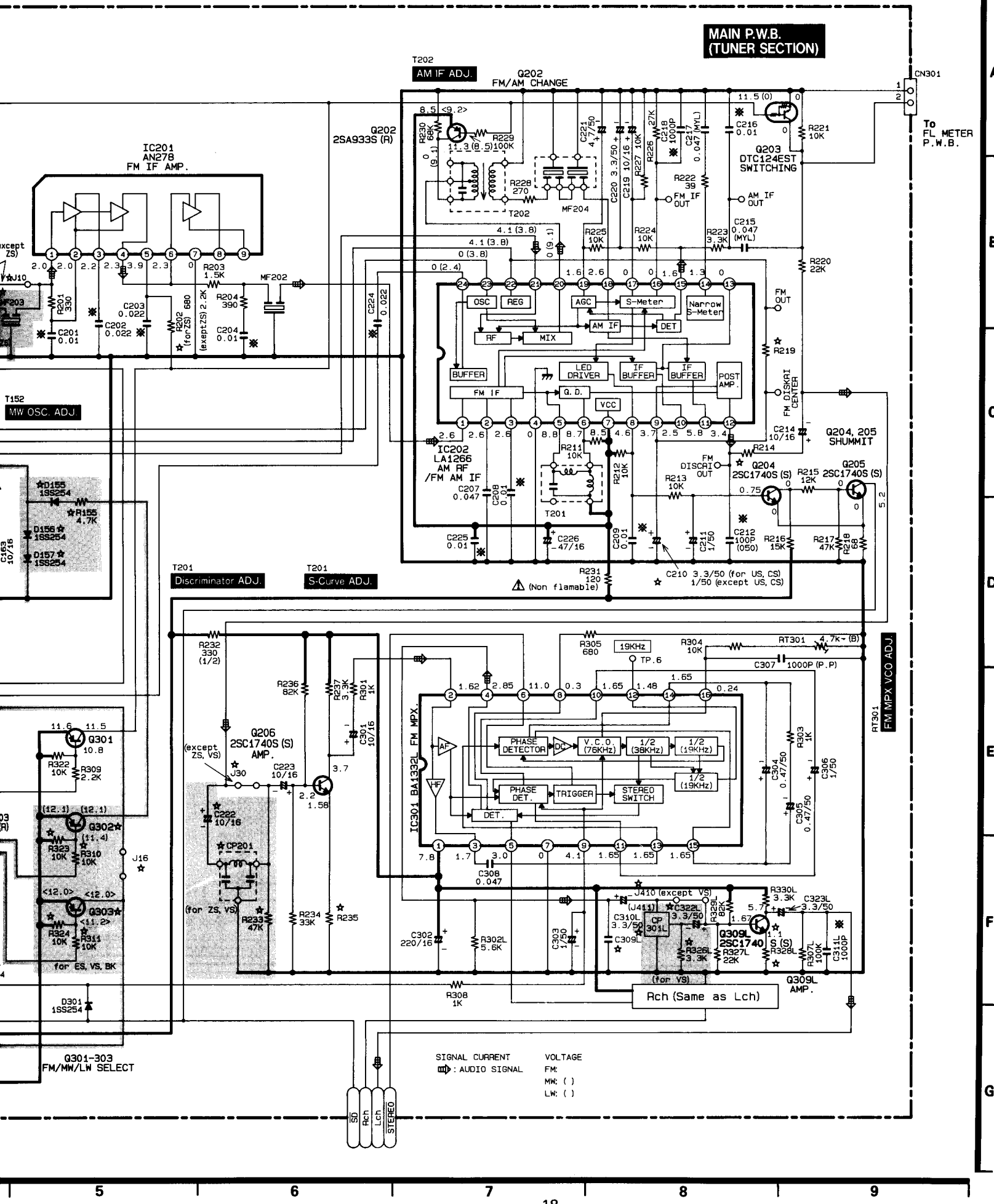
# CIRCUIT DIAGRAM PLAN DE CIRCUIT

(■ : +B, — : -B)

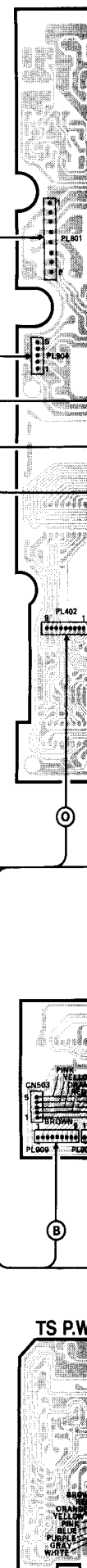
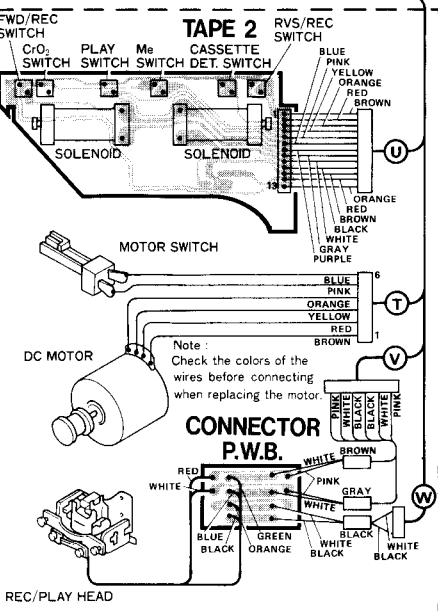
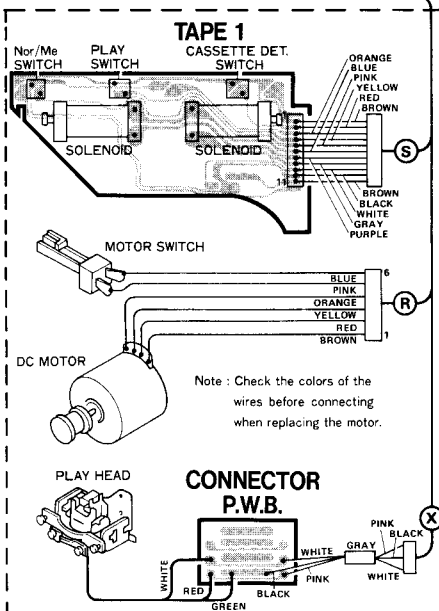
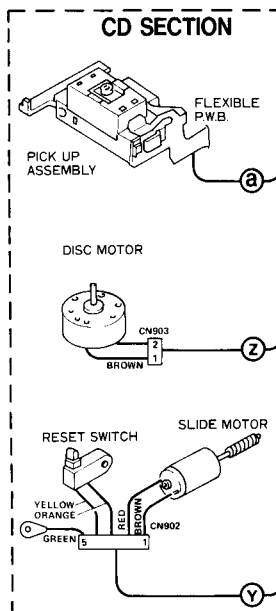
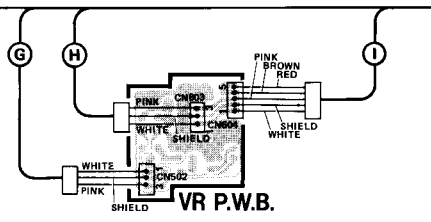
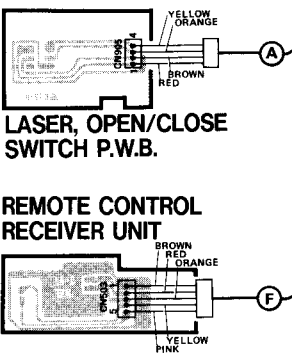
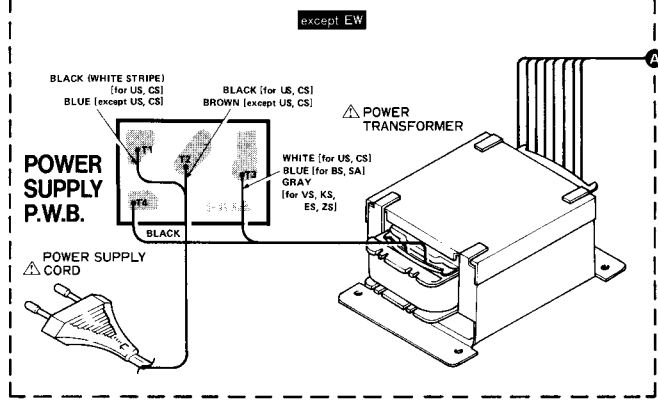
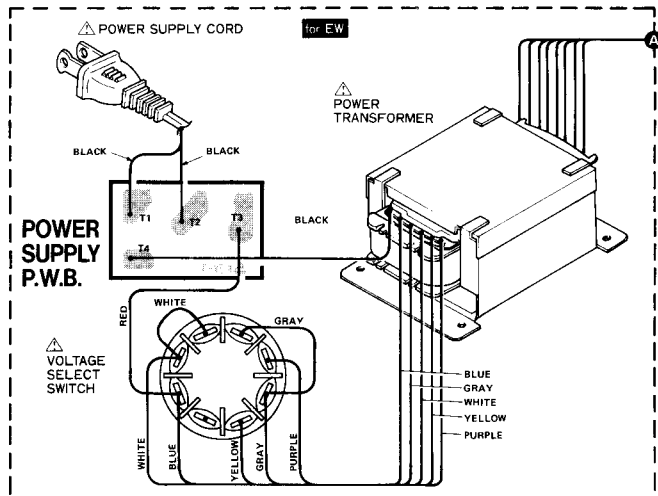
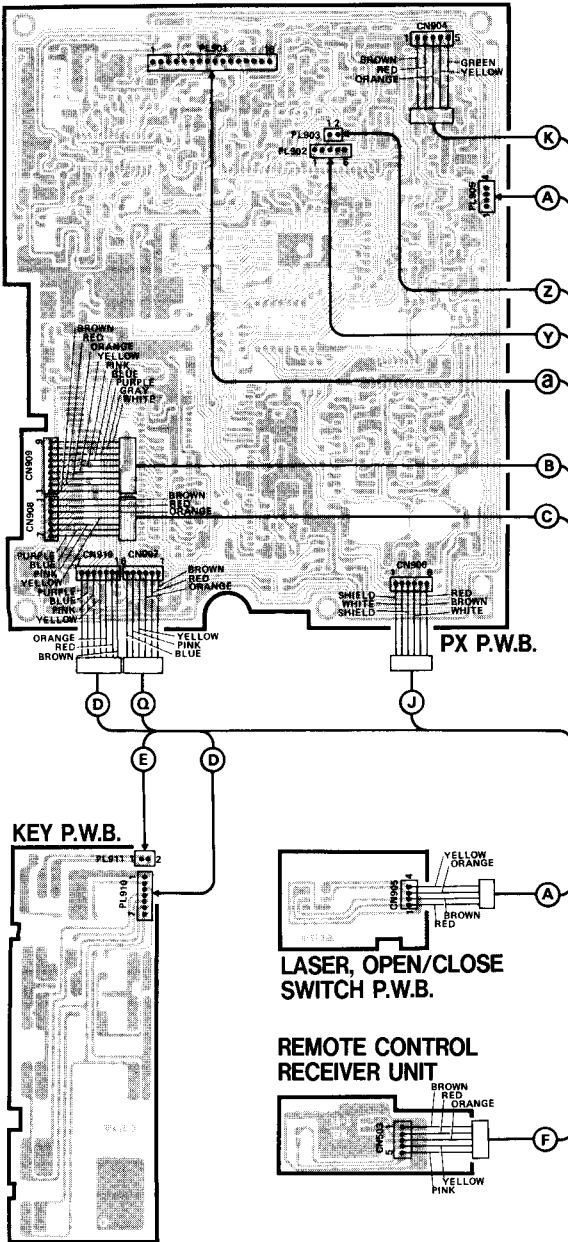
The circuit symbol (☆) means difference for destination.  
Le symbol de circuit (☆) signifie qu'il s'agit des différences.  
※ : Axial lead cylindrical ceramic capacitor. ※ : Con



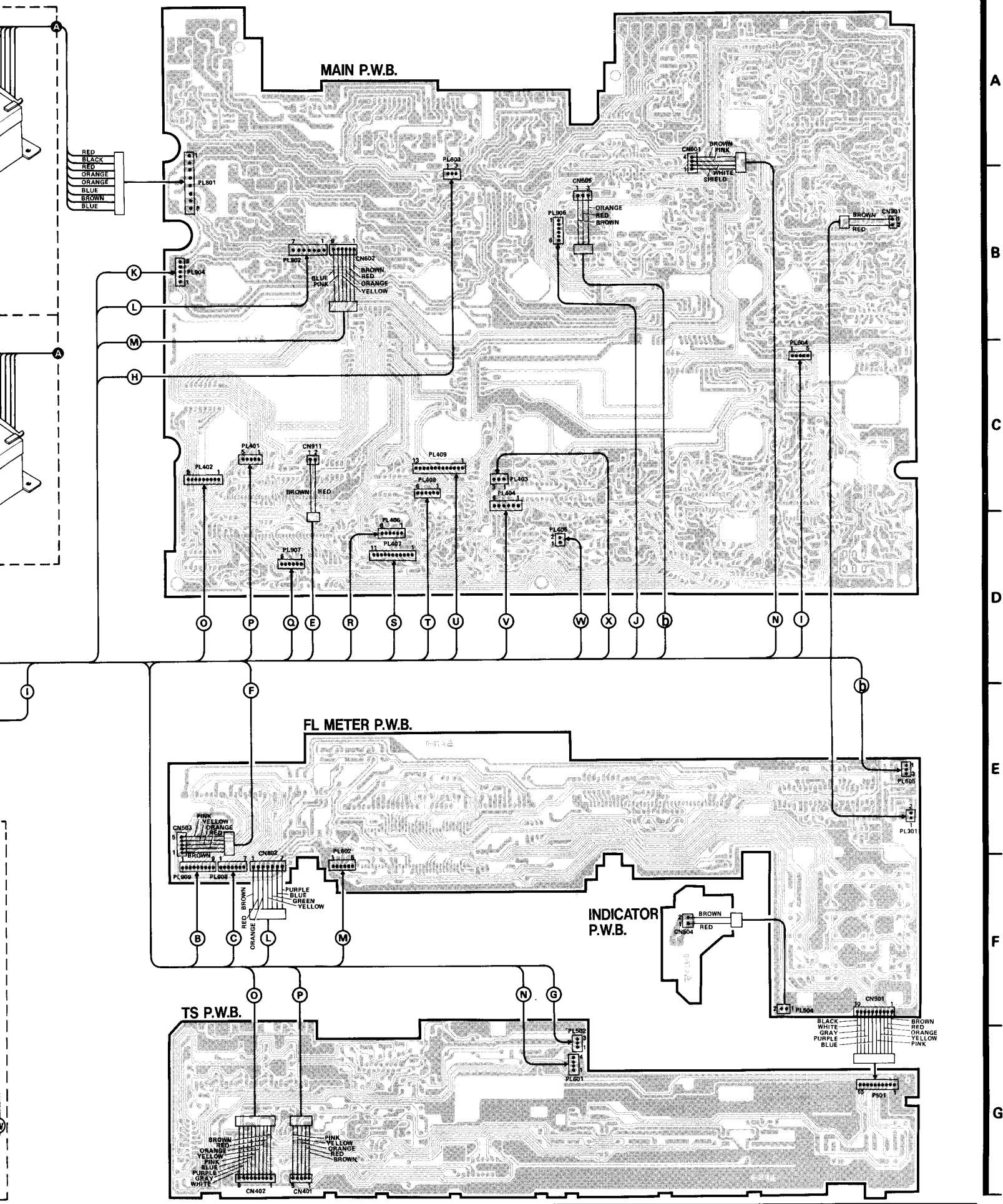
means difference for destination. (Refer to the table in page 22~23.)  
 ☆ signifie qu'il s'agit des différence pour destination. (Consulter la table dans le page 22~23.)  
 al ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



# WIRING DIAGRAM · SCHÉMA DE CÂBLAGE







**DIFFERENCE FOR DESTINATION (for MAIN P.W.B)**  
**DIFFÉRENCE EN FONCTION DU PAYS DE**  
**DESTINATION (pour la plaquette principale)**

(for CIR

☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
C102—C106	—	—	—	—	USE	—	—	—
C153	USE	USE	USE	—	—	—	—	—
C155	USE	USE	USE	—	—	—	—	—
C157, 158	USE	USE	USE	—	—	—	—	—
C160, 161	USE	USE	USE	—	—	—	—	—
C222	—	USE	—	—	USE	—	—	—
C319, 320	USE	USE	USE	—	—	—	—	—
C322LR	—	USE	—	—	—	—	—	—
C325	USE	USE	USE	—	—	—	—	—
C514—517	—	—	—	—	USE	—	—	—
C518LR	—	—	—	—	USE	—	—	—
C712LR	—	—	USE	—	—	—	—	—
C723LR, 724	—	—	—	—	USE	—	—	—
C755LR	—	—	—	—	USE	—	—	—
C833—836	—	—	—	—	USE	—	—	—
C841, 842	—	—	—	—	USE	—	—	—
R103—108	—	—	—	—	USE	—	—	—
R110	USE	USE	USE	USE	—	USE	USE	USE
R153—156	USE	USE	USE	—	—	—	—	—
R233	—	USE	—	—	USE	—	—	—
R310, 311	USE	USE	USE	—	—	—	—	—
R318, 319	USE	USE	USE	—	—	—	—	—
R320, 321	USE	USE	USE	—	—	—	—	—
R323, 324	USE	USE	USE	—	—	—	—	—
R326LR	—	USE	—	—	—	—	—	—
Q101, 102	—	—	—	—	USE	—	—	—
Q151, 152	USE	USE	USE	—	—	—	—	—
Q302, 303	USE	USE	USE	—	—	—	—	—
Q307, 308	USE	USE	USE	—	—	—	—	—
D103, 104	—	—	—	—	USE	—	—	—
D105, 106	USE	USE	USE	—	—	—	—	—
D154—157	USE	USE	USE	—	—	—	—	—
D365	—	—	—	—	—	—	USE	—
D366	USE	USE	USE	USE	USE	USE	—	USE
D367	USE	USE	USE	—	—	—	—	—
L101	USE	USE	USE	USE	—	USE	USE	USE
L153, 154	USE	USE	USE	—	—	—	—	—
CP101, 201	—	USE	—	—	USE	—	—	—
CP301LR	—	USE	—	—	—	—	—	—
MF203	—	—	—	—	USE	—	—	—
S501	—	—	—	—	—	—	—	USE
US pin cord	—	—	—	—	USE	—	—	—
Jumper ①	USE	—	USE	USE	—	USE	USE	USE
Jumper ⑦, ⑧	—	—	—	USE	USE	USE	USE	USE
Jumper ③, ④, ⑤	—	—	—	—	USE	—	—	—
Jumper ②	USE	USE	USE	—	—	—	—	—
Jumper ⑩	USE	USE	USE	USE	—	USE	USE	USE
Jumper ⑬, ⑭	—	—	—	USE	USE	USE	USE	USE
Jumper ⑯	USE	USE	USE	—	—	—	—	—
Jumper ⑰	USE	USE	USE	—	—	—	—	—
Jumper ⑳	USE	USE	USE	—	—	—	—	—
Jumper ㉑	USE	USE	USE	—	—	—	—	—
Jumper ㉒	USE	—	USE	USE	—	USE	USE	USE
Jumper ㉓, ㉔	USE	—	USE	USE	USE	USE	USE	USE
Jumper ㉕, ㉖	USE	USE	—	USE	USE	USE	USE	USE

☆No.
C102
C103
C104
C105
C106
C152
C153
C155
C157
C158
C159
C160
C161
C210
C222
C309LR
C319
C320
C321
C322LR
C325
C501LR
C503LR
C514
C515
C516
C517
C518LR
C711LR
C712LR
C723LR
C724
C755LR
C833
C834
C835, 836
C841
C842
R001
R103
R104
R105
R106
R107
R108
R110
R153
R154
R155
R156
R157
R202
R214
R219
R233
R235
R310
R311

**(for CIRCUIT DIAGRAM) (pour le schéma des circuits)**

EW	☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
—	C102	—	—	—	—	0.022 μ F	—	—	—
—	C103	—	—	—	—	0.22 μ F/50V	—	—	—
—	C104	—	—	—	—	0.22 μ F/50V	—	—	—
—	C105	—	—	—	—	39PF	—	—	—
—	C106	—	—	—	—	39PF	—	—	—
—	C152	5.6PF(CH)	5.6PF(CH)	5.6PF(CH)	8.2PF(CH)	8.2PF(CH)	8.2PF(CH)	3.9PF(CH)	3.9PF(CH)
—	C153	33PF(CH)	33PF(CH)	33PF(CH)	—	—	—	—	—
—	C155	0.022 μ F	0.022 μ F	0.022 μ F	—	—	—	—	—
—	C157	270PF	270PF	270PF	—	—	—	—	—
—	C158	120PF(CH)	120PF(CH)	120PF(CH)	—	—	—	—	—
—	C159	18PF(CH)	18PF(CH)	18PF(CH)	22PF(CH)	22PF(CH)	22PF(CH)	18PF(CH)	18PF(CH)
—	C160	1 μ F/50V	1 μ F/50V	1 μ F/50V	—	—	—	—	—
—	C161	0.022 μ F	0.022 μ F	0.022 μ F	—	—	—	—	—
—	C210	1 μ F/50V	1 μ F/50V	1 μ F/50V	1 μ F/50V	1 μ F/50V	—	3.3 μ F/50V	—
—	C222	—	10 μ F/16V	—	—	10 μ F/16V	—	—	—
—	C309LR	0.012 μ F	0.022 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.018 μ F	0.012 μ F
—	C319	1 μ F/50V	1 μ F/50V	1 μ F/50V	—	—	—	—	—
USE	C320	0.22 μ F/50V	0.22 μ F/50V	0.22 μ F/50V	—	—	—	—	—
—	C321	0.022 μ F	0.022 μ F	0.022 μ F	0.022 μ F	0.033 μ F	0.022 μ F	0.022 μ F	0.022 μ F
—	C322LR	—	3.3 μ F/50V	—	—	—	—	—	—
—	C325	1000PF	1000PF	1000PF	—	—	—	—	—
—	C501LR	150PF	150PF	150PF	150PF	2200PF	150PF	150PF	150PF
—	C503LR	100PF	100PF	100PF	100PF	470PF	100PF	100PF	100PF
—	C514	—	—	—	—	1000PF	—	—	—
—	C515	—	—	—	—	1000PF	—	—	—
—	C516	—	—	—	—	220PF	—	—	—
—	C517	—	—	—	—	220PF	—	—	—
—	C518LR	—	—	—	—	680PF	—	—	—
—	C711LR	0.047 μ F	0.047 μ F	0.1 μ F	0.047 μ F	0.047 μ F	0.047 μ F	0.047 μ F	0.047 μ F
—	C712LR	—	—	0.1 μ F	—	—	—	—	—
—	C723LR	—	—	—	—	0.01 μ F	—	—	—
—	C724	—	—	—	—	0.01 μ F	—	—	—
—	C755LR	—	—	—	—	1000PF	—	—	—
USE	C833	—	—	—	—	0.022 μ F	—	—	—
—	C834	—	—	—	—	0.022 μ F	—	—	—
USE	C835, 836	—	—	—	—	0.01 μ F	—	—	—
—	C841	—	—	—	—	0.022 μ F	—	—	—
—	C842	—	—	—	—	0.022 μ F	—	—	—
—	R001	—	—	—	—	—	—	2.7MΩ	—
—	R103	—	—	—	—	100KΩ	—	—	—
USE	R104	—	—	—	—	100Ω	—	—	—
—	R105	—	—	—	—	100KΩ	—	—	—
USE	R106	—	—	—	—	10KΩ	—	—	—
USE	R107	—	—	—	—	1.2KΩ	—	—	—
—	R108	—	—	—	—	100KΩ	—	—	—
—	R110	220Ω	220Ω	220Ω	220Ω	—	220Ω	220Ω	220Ω
USE	R153	220KΩ	220KΩ	220KΩ	—	—	—	—	—
USE	R154	2.2KΩ	2.2KΩ	2.2KΩ	—	—	—	—	—
—	R155	4.7KΩ	4.7KΩ	4.7KΩ	—	—	—	—	—
—	R156	10KΩ	10KΩ	10KΩ	—	—	—	—	—
—	R157	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/2W)	1KΩ(1/6W)
—	R202	2.2KΩ	2.2KΩ	2.2KΩ	2.2KΩ	680Ω	2.2KΩ	2.2KΩ	2.2KΩ
USE	R214	10KΩ	10KΩ	10KΩ	10KΩ	10KΩ	10KΩ	22KΩ	10KΩ
USE	R219	33KΩ	33KΩ	33KΩ	33KΩ	33KΩ	33KΩ	15KΩ	33KΩ
USE	R233	—	47KΩ	—	—	47KΩ	—	—	—
—	R235	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.5KΩ	1.2KΩ
—	R310	10KΩ	10KΩ	10KΩ	—	—	—	—	—
—	R311	10KΩ	10KΩ	10KΩ	—	—	—	—	—

☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
R318	1KΩ	1KΩ	1KΩ	—	—	—	—	—
R319	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R320	6.8KΩ	6.8KΩ	6.8KΩ	—	—	—	—	—
R321	6.8KΩ	6.8KΩ	6.8KΩ	—	—	—	—	—
R323	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R324	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R326LR	—	3.3KΩ	—	—	—	—	—	—
R328LR	1.5KΩ	560Ω	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ
Q101	—	—	—	—	2SC1740S(S)	—	—	—
Q102	—	—	—	—	2SK104(F)	—	—	—
Q151	DTC124EST	DTC124EST	DTC124EST	—	—	—	—	—
Q152	DTC124EST	DTC124EST	DTC124EST	—	—	—	—	—
Q302	2SA933S(R)	2SA933S(R)	2SA933S(R)	—	—	—	—	—
Q303	2SA933S(R)	2SA933S(R)	2SA933S(R)	—	—	—	—	—
Q307	2SC1740S(S)	2SC1740S(S)	2SC1740S(S)	—	—	—	—	—
Q308	2SC1740S(S)	2SC1740S(S)	2SC1740S(S)	—	—	—	—	—
D103	—	—	—	—	1K60R	—	—	—
D104	—	—	—	—	1K60R	—	—	—
D105	1SS254	1SS254	1SS254	—	—	—	—	—
D106	1SS254	1SS254	1SS254	—	—	—	—	—
D154	KV1260	KV1260	KV1260	—	—	—	—	—
D155	1SS254	1SS254	1SS254	—	—	—	—	—
D156	1SS254	1SS254	1SS254	—	—	—	—	—
D157	1SS254	1SS254	1SS254	—	—	—	—	—
D365	—	—	—	—	—	—	1SS254	—
D366	1SS254	1SS254	1SS254	1SS254	1SS254	1SS254	—	1SS254
D367	1SS254	1SS254	1SS254	—	—	—	—	—
L101	USE	USE	USE	USE	—	USE	USE	USE
L153	USE	USE	USE	—	—	—	—	—
L154	USE	USE	USE	—	—	—	—	—
CP101	—	USE	—	—	USE	—	—	—
CP201	—	USE	—	—	USE	—	—	—
CP301LR	—	USE	—	—	—	—	—	—
MF203	—	—	—	—	USE	—	—	—
S501	—	—	—	—	—	—	—	USE
F802	T2A	T2A	T2A	T2A	T2A	T2A	2A—125V	T2A
F803	T2A	T2A	T2A	T2A	T2A	T2A	2A—125V	T2A
Jumper ①	USE	—	USE	USE	—	USE	USE	USE
Jumper ②, ⑧	②	②	②	⑧	⑧	⑧	⑧	⑧
Jumper ③	—	—	—	—	USE	—	—	—
Jumper ④	—	—	—	—	USE	—	—	—
Jumper ⑤	—	—	—	—	USE	—	—	—
Jumper ⑦	—	—	—	USE	USE	USE	USE	USE
Jumper ⑩	USE	USE	USE	USE	—	USE	USE	USE
Jumper ⑬, ⑳	⑳	⑳	⑳	⑬	⑬	⑬	⑬	⑬
Jumper ⑭	—	—	—	USE	USE	USE	USE	USE
Jumper ⑯	USE	USE	USE	—	—	—	—	—
Jumper ⑲	USE	USE	USE	—	—	—	—	—
Jumper ㉑	USE	USE	USE	—	—	—	—	—
Jumper ⑳	USE	—	USE	USE	—	USE	USE	USE
Jumper ㉒	USE	—	USE	USE	USE	USE	USE	USE
Jumper ㉓	USE	—	USE	USE	USE	USE	USE	USE
Jumper ㉔	USE	USE	—	USE	USE	USE	USE	USE
Jumper ㉕	USE	USE	—	USE	USE	USE	USE	USE

# REPLACEMENT PARTS LIST

## TABLEAU DES PIÈCES

After change					Before change						
SYMBOL No.	PART No.	DESCRIPTION			SYMBOL No.	PART No.	DESCRIPTION				
<b>CAPACITORS</b>											
C110	0240034	CC	120PF	±5%	50V	C110	0248686	CD	120PF	±5%	50V
C151	0209175	CD	0.047 $\mu$ F	$\pm \frac{80}{20}\%$	50V	C151	0244175	CD	0.047 $\mu$ F	$\pm \frac{80}{20}\%$	50V
C230	0252423	EL	22 $\mu$ F	±20%	16V	C230		Not used			
C309LR	1275032	MF	0.018 $\mu$ F	±10%	50V	C309LR	1275032	MF	0.018 $\mu$ F	±10%	50V
		[for US, CS]						[for US, CS]			
	1275031	MF	0.012 $\mu$ F	±10%	50V		1275031	MF	0.012 $\mu$ F	±10%	50V
		[except US, CS, VS]						[except US, CS]			
	1275013	MF	0.022 $\mu$ F	±10%	50V			[for VS]			
C315	0209175	CD	0.047 $\mu$ F	$\pm \frac{80}{20}\%$	50V	C315	0244175	CD	0.047 $\mu$ F	$\pm \frac{80}{20}\%$	50V
C422L	1252460	EL	2.2 $\mu$ F	±20%	50V	C422L	0252460	EL	2.2 $\mu$ F	±20%	50V
C450R	1275032	MF	0.018 $\mu$ F	±10%	50V	C450R	0275032	MF	0.018 $\mu$ F	±10%	50V
C454	1252415	EL	220 $\mu$ F	±20%	10V	C454	0252415	EL	220 $\mu$ F	±20%	10V
C480	1252426	EL	100 $\mu$ F	±20%	16V	C480	0252426	EL	100 $\mu$ F	±20%	16V
C481	0252414	EL	100 $\mu$ F	±20%	10V	C481		Not used			
C655L	0252411	EL	22 $\mu$ F	±20%	10V	C655L	1252411	EL	22 $\mu$ F	±20%	10V
C841	0209773	CD	0.022 $\mu$ F	±20%	50V	C841	0244173	CD	0.022 $\mu$ F	$\pm \frac{80}{20}\%$	50V
		[for ZS]						[for ZS]			
C842	0209773	CD	0.022 $\mu$ F	±20%	50V	C842	0244173	CD	0.022 $\mu$ F	$\pm \frac{80}{20}\%$	50V
		[for ZS]						[for ZS]			
C853	0275015	MF	0.047 $\mu$ F	±10%	50V	C853		Misprint of parts number			
<b>RESISTORS</b>											
R240	0113615	CF	1K $\Omega$	±5%	SRD1/6P	R240		Not used			
R241	0113641	CF	12K $\Omega$	±5%	SRD1/6P	R241		Not used			
R242	0113641	CF	12K $\Omega$	±5%	SRD1/6P	R242		Not used			
R243	0113627	CF	3.3K $\Omega$	±5%	SRD1/6P	R243		Not used			
R244	0113655	CF	47K $\Omega$	±5%	SRD1/6P	R244		Not used			
R376	0113629	CF	3.9K $\Omega$	±5%	SRD1/6P	R376	0113615	CF	1k $\Omega$	±5%	SRD1/6P
R487	0113615	CF	1K $\Omega$	±5%	SRD1/6P	R487		Not used			
R836	1119155	ME	22 $\Omega$	±10%	RN2B	R836		Misprint of resistor's kind			
R840	0113615	CF	1K $\Omega$	±5%	SRD1/6P	R840		Not used			
		[for KS]									
<b>TRANSISTORS</b>											
Q207	2318303	2SC1740S(S)			Q207		Not used				
Q208	2318303	2SC1740S(S)			Q208		Not used				
<b>DIODES</b>											
D431	2398611	1SS254			D431		Not used				
ZD201	2337555	HZ11B2			ZD201		Not used				
ZD751	2337524	HZ9B1			ZD751		Not used				
ZD752	2337524	HZ9B1			ZD752		Not used				
ZD910	2337541	HZ-7A-1			ZD910		Not used				
		[for KS]									
ZD911	2337541	HZ-7A-1			ZD911		Not used				
		[for KS]									
<b>VARIABLE RESISTORS</b>											
RV551	0189117	100k $\Omega$ -(B) (with motor)			RV551	0189114	100k $\Omega$ -(B) (with motor)				
<b>MISCELLANEOUS</b>											
J701	2678496	Headphones jack			J701	2677593	Headphones jack				
MD101	2425731	Tuner pack			MD101		Misprint of parts number				
		[for ZS]									



**Modifications of the HTY-3300DH/3600DH mechanism  
Modifications du mécanisme HTY-3300DH/3600DH**

After change			Before change		
SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
<b>CABINET CHASSIS</b>					
28	2589345	HTY-3602DH cassette mecha assy (TAPE 2)	28	2589341	HT-3600DH cassette mecha assy (TAPE 2)
31	2589346	HTY-3302DH cassette mecha assy (TAPE 1)	31	2589342	HT-3300 cassette mecha assy (TAPE 1)
<b>CASSETTE CHASSIS</b>					
3	4846832	Mechanism base assy	3	4846831	Mechanism base assy
33	4846742	PLAY gear arm	33	4846741	PLAY gear arm
52	4845942	P roller RA spring	52	4845941	P roller RA spring

There is interchangeability between parts before and after the modification for the parts mentioned above. However, the Mechanism base assy and the PLAY gear arm should be replaced together.

L'interchangeabilité des pièces, avant et après modification, est maintenue pour les pièces mentionnées ci-dessus. Cependant le "Mechanism base assy" et le "PLAY gear arm" doivent toujours être remplacés ensemble.



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**MX-W50 TY No.571EF-1**



# HITACHI

## SERVICE MANUAL

TY

No. 571EF

# MX-W50

(US,CS,ES,VS,BK,SA,KS,ZS,EW)

TAPE1: HTY-3300DH (PLAY)  
TAPE2: HTY-3600DH (REC/PLAY)

## CD Slimline System

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#### 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 défailance du verrouillage. NE JAMAIS S'EXPOSER DIRECTEMENT AU FAISCEAU.

#### WARNING

När apparaten öppnats och skyddsanordningen eller satts ur funktion förekommer osynlig laser strålning. UNDVIK DIREKT BESTRÅLNING.

#### ADVARSEL

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

#### ADVERSEL

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

#### VAROITUS

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

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

# STEREO CASSETTE RECEIVER/COMPACT DISC PLAYER

August 1987

TOYOKAWA WORKS

## SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with  $\triangle$  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

### ● GENERAL

<b>Power supply</b>	AC: 120V 60 Hz [for US, CS] AC: 220V, 50 Hz [for ES, VS, KS, ZS] AC: 240V, 50 Hz [for BK, SA] AC: 110—120V/200—220V/230—240V, 50/60 Hz [for EW]
<b>Power consumption:</b>	250W
<b>Dimensions:</b>	621 (W) x 133 (H) x 368 (D) mm
<b>Weight:</b>	8.5 kg

<b>FM selectivity:</b>	60 dB ( $\pm$ 300 kHz)
<b>Stereo separation:</b>	40 dB (1 kHz)
<b>MW (AM)</b>	
<b>Frequency range:</b>	530—1,710 kHz (10 kHz steps) [for US, CS] 522—1,611 kHz (9 kHz steps) 530—1,710 kHz (10 kHz steps) [for EW] 522—1,611 kHz (9 kHz steps) [except US, CS, EW]
<b>Sensitivity:</b>	40 $\mu$ V (S/N 26 dB)
<b>S/N ratio:</b>	50 dB
<b>LW [for BK, ES, VS]</b>	
<b>Frequency range:</b>	153—281 kHz (1 kHz steps)
<b>Sensitivity:</b>	400 $\mu$ V (S/N 26 dB)

### ● AMPLIFIER SECTION

<b>Power output:</b>	50 W/ch + 50 W/ch (8 ohms, 1 kHz, T.H.D. 0.7%)
<b>Total harmonic distortion:</b>	0.5% (at 1/2 power output)
<b>Input sensitivity/Impedance:</b>	PHONO: 3 mV/47 kohms AUX: 90mV/22 kohms
<b>Load impedance:</b>	Speaker: 8—16 ohms Headphones: more than 8 ohms
<b>S/N ratio (IHF A network):</b>	PHONO: 73 dB AUX: 87 dB

### ● TUNER SECTION

<b>FM</b>	
<b>Frequency range:</b>	87.9—107.9 MHz (200 kHz steps) [for US, CS] 87.5—108.0 MHz (50 kHz steps) [except US, CS]
<b>Sensitivity:</b>	1.5 $\mu$ V (S/N 26 dB)
<b>S/N ratio:</b>	MONO: 72 dB (IHF) 63 dB (IEC, unweighted, Q-peak) 60 dB (IEC, weighted, Q-peak) STEREO: 68 dB (IHF) 58 dB (IEC, unweighted, Q-peak) 55 dB (IEC, weighted, Q-peak)

### ● TAPE DECK SECTION

<b>Track system:</b>	4 tracks 2 channels stereo
<b>Recording system:</b>	AC bias
<b>Tape:</b>	Normal, Chrome, Metal
<b>Frequency response:</b>	Normal: 40 — 14,000 Hz CrO <sub>2</sub> : 40 — 15,000 Hz Metal: 40 — 16,000 Hz

### ● CD PLAYER SECTION

<b>Playing time:</b>	Approx. 60 minutes/one side
<b>Diameter:</b>	120 mm
<b>Sampling frequency:</b>	44.1 kHz
<b>Quantization number:</b>	16 bit linear/channel
<b>Frequency response:</b>	20 — 20,000 Hz

Specifications are subject to change without notice for performance improvement.

## PRÉCAUTIONS DE SÉCURITÉ

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

1. Étant 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 réparé au client le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

# CARACTÉRISTIQUES TECHNIQUES

## ● CARACTÉRISTIQUES GÉNÉRALES

<b>Alimentation:</b>	Secteur alternatif 120V, 60 Hz [pour US, CS] Secteur alternatif 220V, 50 Hz [pour ES, VS, KS, ZS] Secteur alternatif 240V, 50 Hz [pour BK, SA] Secteur alternatif 110—120V/200—220V/230 —240V, 50/60 Hz [pour EW]
<b>Puissance consommée:</b>	250 W
<b>Dimensions:</b>	621 (L) x 133 (H) x 368 (P) mm
<b>Poids:</b>	8,5 kg

## ● SECTION AMPLIFICATEUR

<b>Puissance de sortie:</b>	50 W/canal + 50 W/canal (8 ohms, 1 kHz, 0.7% D.H.T)
<b>Distorsion harmonique total:</b>	0.5% (à la moitié de la puissance de sortie)
<b>Sensibilité/impédance d'entrée:</b>	PHONO: 3 mV/47 K-ohms AUX: 90 mV/22 K-ohms
<b>Impédance de charge:</b>	Haut-parleur: 8 à 16 ohms Casque d'écoute: Mieux que 8 ohms
<b>Rapport S/B (réseau A IHF):</b>	PHONO: 73 dB AUX: 87 dB

## ● SECTION TUNER

<b>FM</b>	
<b>Gamme de fréquences:</b>	87.9—107.9 MHz (pas de 200 kHz) [pour US, CS] 87.5—108.0 MHz (pas de 50 kHz) [sauf US, CS]
<b>Rapport S/B:</b>	MONO: 72 dB (IHF) 63 dB (IEC, non pondéré, crête Q) 60 dB (IEC, pondéré, crête Q) STEREO: 68 dB (IHF) 58 dB (IEC, non pondéré, crête Q) 55 dB (IEC, pondéré, crête Q)

<b>Sélectivité FM:</b>	60 dB ( $\pm$ 300 kHz)
<b>Séparations stéréo:</b>	40 dB (1 kHz)
<b>PO (AM)</b>	
<b>Gamme de fréquences:</b>	530—1710 kHz (pas de 10 kHz) [pour US, CS] 522—1611 kHz (pas de 9 kHz) 530—1710 kHz (pas de 10 kHz) [pour EW] 522—1611 kHz (pas de 9 kHz) [sauf US, CS, EW]
<b>Sensibilité:</b>	40 $\mu$ V (rapport S/B 26 dB)
<b>Rapport S/B:</b>	50 dB
<b>GO [pour BK, ES, VS]</b>	
<b>Gamme de fréquences:</b>	153—281 kHz (pas de 1 kHz)
<b>Sensibilité:</b>	400 $\mu$ V (rapport S/B 26 dB)

## ● SECTION PLATINE-CASSETTE

<b>Système de pistes:</b>	4 pistes, 2 canaux stéréo
<b>Système d'enregistrement:</b>	Polarisation c.a.
<b>Bande:</b>	Normale, chrome, Métal
<b>Réponse en fréquence:</b>	Normale: 40 à 14000 Hz CrO2: 40 à 15000 Hz Métal: 40 à 16000 Hz

## ● SECTION LECTEUR DE DISQUE COMPACT

<b>Durée de lecture</b>	Environ 60 mn/face
<b>Diamètre:</b>	120 mm
<b>Fréquence d'échantillonnage:</b>	44,1 kHz
<b>Nombre de numération:</b>	16 bits/canal
<b>Réponse en fréquence:</b>	20 à 20000 Hz

Les caractéristiques techniques peuvent être modifiées sans préavis pour améliorations des performance.

## DISASSEMBLY

### 1. Upper Case (Fig. 1, 2)

Remove fourteen screws ① and three screws ② (Fig. 1). Press the CD Eject button and cassette Eject button. After the CD door and cassette door have been opened remove the upper case by lifting upward (Fig. 2).

### 2. CD Door (Fig. 2)

After the upper case has been removed, press C and D in the direction of the arrow and remove the stopper. Then press A and B in the direction of the arrow and remove the stopper. Remove the CD door by lifting upward.

### 3. Cassette Door (Fig. 2)

After the upper case has been removed, press G and H in the direction of the arrow and remove the stopper. Then press E, F and I in the direction of the arrow and remove the stopper. Remove the cassette door by lifting upward.

### 4. Clamper (Fig. 3)

Lift out the clamper while expanding the flexible rib in the direction of the arrow.

**NOTE:** Remove this clamper when adjusting using the disc at the CD Player Section.

### 5. FL METER P.W.B. (Fig. 4, 6)

Remove two screws ③, four connector ④ (Fig. 4), and one connector ⑤ on the Main P.W.B. (Fig. 6).

### 6. Remote Control Receiver Unit (Fig. 4)

Pull the unit in the direction of arrow J and remove.

### 7. Indicator P.W.B. (Fig. 4)

Remove the Volume knob in the direction of arrow K and lift out the rear Indicator P.W.B. in the direction of arrow L.

### 8. TS P.W.B. (Fig. 4, 6)

Remove two connector ⑥ (Fig. 4) and two connectors ⑦ (Fig. 6).

### 9. VR P.W.B. (Fig. 4, 6)

After removing the TS P.W.B., remove one screw ⑧, one screw ⑨ (Fig. 4) and two connectors ⑩ (Fig. 6).

### 10. Cassette Chassis (Fig. 5, 6)

TAPE 1: Remove three screws ⑪ (Fig. 5) and three connector ⑫ (Fig. 6)

TAPE 2: Remove three screws ⑬-1, one screw ⑬-2 (Fig. 5) and four connector ⑬ (Fig. 6)

### 11. Main P.W.B. (Fig. 5, 6)

Remove three screws ⑭ and remove the Main P.W.B. in the direction of arrow M.

### 12. Key P.W.B. (Fig. 7)

Pull two claws in the direction of arrow N and remove. Remove two connector ⑮.

### 13. Laser, Open/Close Switch P.W.B. (Fig. 7)

Pull two claws in the direction of arrow O and remove by lifting upward. Remove one connector ⑯.

# CARACTÉRISTIQUES TECHNIQUES

## ● CARACTÉRISTIQUES GÉNÉRALES

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<b>FM</b>	
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<b>Rapport S/B:</b>	50 dB
<b>GO [pour BK, ES, VS]</b>	
<b>Gamme de fréquences:</b>	153—281 kHz (pas de 1 kHz)
<b>Sensibilité:</b>	400 $\mu$ V (rapport S/B 26 dB)

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Remove two connector ⑥ (Fig. 4) and two connectors ⑦ (Fig. 6).

### 9. VR P.W.B. (Fig. 4, 6)

After removing the TS P.W.B., remove one screw ⑧, one screw ⑨ (Fig. 4) and two connectors ⑩ (Fig. 6).

### 10. Cassette Chassis (Fig. 5, 6)

TAPE 1: Remove three screws ⑪ (Fig. 5) and three connector ⑫ (Fig. 6)

TAPE 2: Remove three screws ⑬-1, one screw ⑬-2 (Fig. 5) and four connector ⑭ (Fig. 6)

### 11. Main P.W.B. (Fig. 5, 6)

Remove three screws ⑮ and remove the Main P.W.B. in the direction of arrow M.

### 12. Key P.W.B. (Fig. 7)

Pull two claws in the direction of arrow N and remove. Remove two connector ⑯.

### 13. Laser, Open/Close Switch P.W.B. (Fig. 7)

Pull two claws in the direction of arrow O and remove by lifting upward. Remove one connector ⑰.

**14. Power Supply P.W.B. (Fig. 7)**

Remove one screw ⑨.

**15. Power Supply Transformer (Fig. 6, 7)**

Remove six screws ⑩ (Fig. 7) and one connector ⑪ (Fig. 6). (Wiring is connected to the Power Supply P.W.B., so remove the Power Supply Transformer together with the Power Supply P.W.B.)

**16. CD Unit Mechanism (Fig. 8)**

Remove four screws ⑪, two connectors ⑫ and the flexible P.W.B.

**17. PX P.W.B. (Fig. 6, 8)**

Pull four claws (Fig. 8) and two connectors ⑬ (Fig. 6).

**DÉMONTAGE****1. Boîtier supérieur (Fig. 1, 2)**

Enlever 14 vis ① et 3 vis ② (Fig. 1). Appuyer sur la touche d'éjection CD et la touche d'éjection de cassette. Après avoir ouvert le couvercle CD et le couvercle de cassette, enlever le boîtier supérieur en le soulevant vers le haut (Fig. 2).

**2. Couvercle CD (Fig. 2)**

Après avoir enlevé le boîtier supérieur, appuyer sur C et D dans la direction de la flèche et enlever la rondelle d'arrêt. Puis, appuyer sur A et B dans la direction de la flèche et enlever la rondelle d'arrêt. Enlever le couvercle CD en le soulevant vers le haut.

**3. Couvercle de cassette (Fig. 2)**

Après avoir enlevé le boîtier supérieur, appuyer sur G et H dans la direction de la flèche et enlever la rondelle d'arrêt. Puis appuyer sur E, F et I dans la direction de la flèche et enlever la rondelle d'arrêt. Enlever la trappe de cassette en la soulevant vers le haut.

**4. Bride de fixation (Fig. 3)**

Dégager vers le haut la bride de fixation tout en tirant le rebord flexible dans la direction de la flèche.

**Remarque:** Retirer ce serre-fil avant d'effectuer le réglage à l'aide d'un disque de la section lecteur CD.

**5. Plaquelette de circuits imprimés de compteur FL (Fig. 4, 6)**

Enlever 2 vis ③, 4 connecteurs ④ (Fig. 4), et 1 connecteur ⑤ sur la plaquelette de circuits imprimés principale (Fig. 6).

**6. Unité de réception de télécommande (Fig. 4)**

Tirer l'unité dans la direction de la flèche J et l'enlever.

**7. Plaquelette de circuits imprimés des indicateurs (Fig. 4)**

Enlever le bouton de volume dans la direction de la flèche K et dégager la plaquelette arrière de circuits imprimés des indicateurs dans la direction de la flèche L.

**8. Plaquelette de circuits imprimés TS (Fig. 4, 6)**

Enlever 2 connecteurs ⑥ (Fig. 4) et 2 connecteurs ⑦ (Fig. 6).

**9. Plaquelette de circuits imprimés VR (Fig. 4, 6)**

Après avoir enlevé la plaquelette de circuits imprimés TS, enlever 1 vis ④, 1 vis ⑤ (Fig. 4) et 2 connecteurs ⑧ (Fig. 6).

**10. Châssis de cassette (Fig. 5, 6)**

TAPE 1: Enlever 3 vis ⑥ (Fig. 5) et 3 connecteurs ⑨ (Fig. 6).

TAPE 2: Enlever 3 vis ⑦-1, 1 vis ⑦-2 (Fig. 5) et 4 connecteurs ⑩ (Fig. 6).

**11. Plaquelette de circuits imprimés principale (Fig. 5, 6)**

Enlever 3 vis ⑧ et enlever la plaquelette de circuits imprimés principale dans la direction de la flèche M.

**12. Plaquelette de circuits imprimés de clés (Fig. 7)**

Tirer les deux griffes dans la direction de la flèche N et retirer la plaquelette. Enlever les deux connecteurs ⑪.

**13. Plaquelette de circuits imprimés de commutateur Laser, ouvrir/fermer (Fig. 7)**

Tirer les deux griffes dans la direction de la flèche O et enlever la plaquelette en la tirant vers le haut. Enlever le connecteur ⑫.

**14. Plaquelette de circuits imprimés d'alimentation (Fig. 7)**

Enlever 1 vis ⑬.

**15. Transformateur d'alimentation (Fig. 6, 7)**

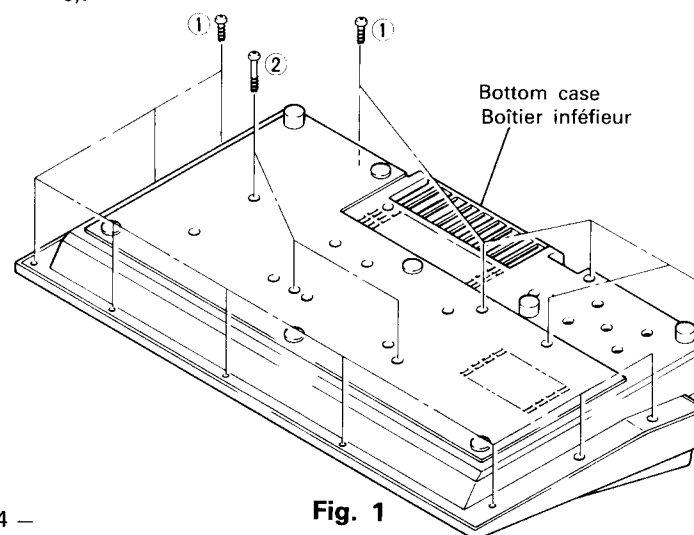
Enlever 6 vis ⑩ (Fig. 7) et 1 connecteur ⑬ (Fig. 6). (Comme les câbles sont reliés à la plaquelette de circuits imprimés d'alimentation, enlever le transformateur d'alimentation avec la plaquelette de circuits imprimés d'alimentation.)

**16. Mécanisme d'unité CD (Fig. 8)**

Enlever 4 vis ⑪, 2 connecteurs ⑫ et la plaquelette de circuits imprimés flexible.

**17. La plaquelette de circuits imprimés PX (Fig. 6, 8)**

Tirer les quatre griffes (Fig. 8) et 2 connecteurs ⑬ (Fig. 6).

**Fig. 1**



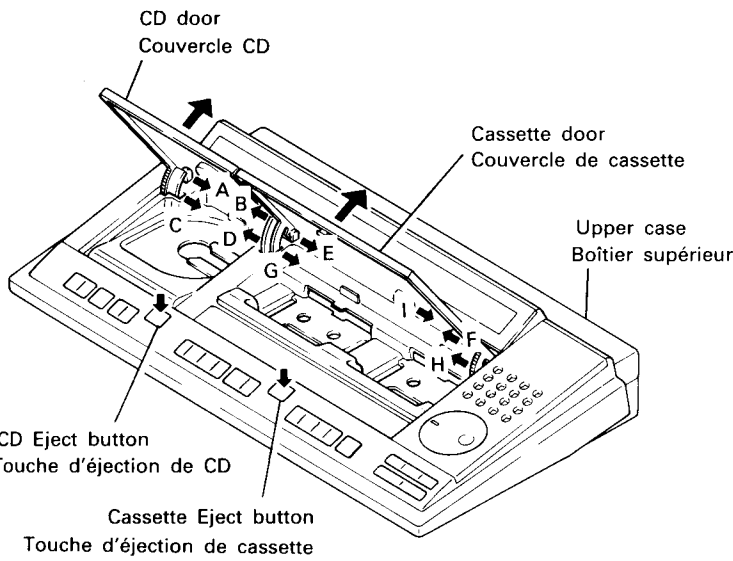


Fig. 2

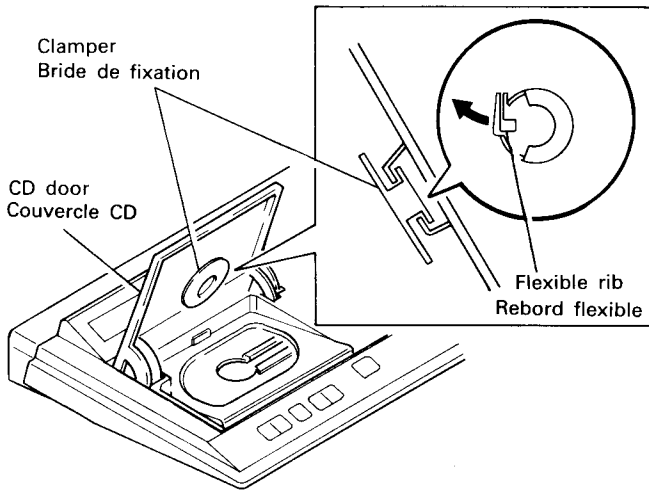


Fig. 3

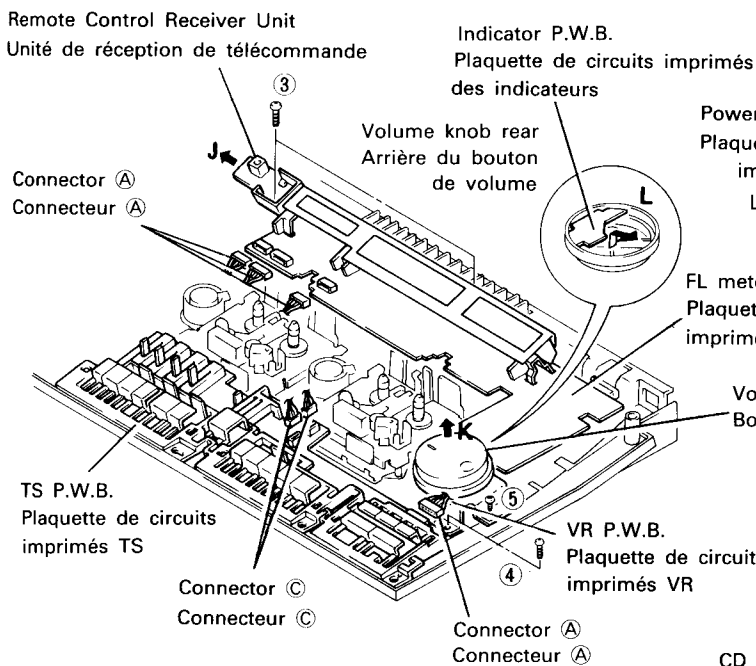


Fig. 4

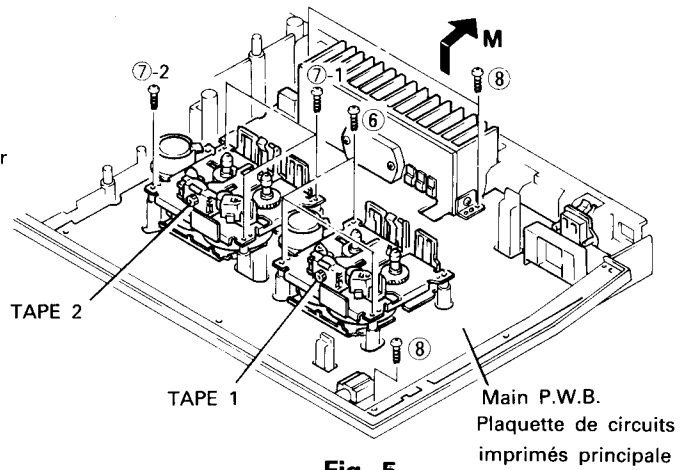


Fig. 5

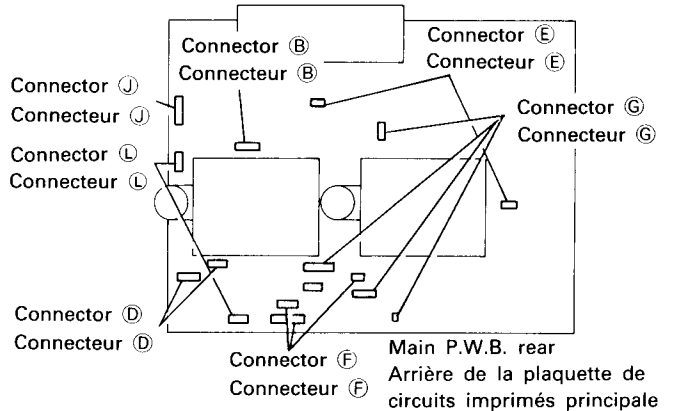


Fig. 6

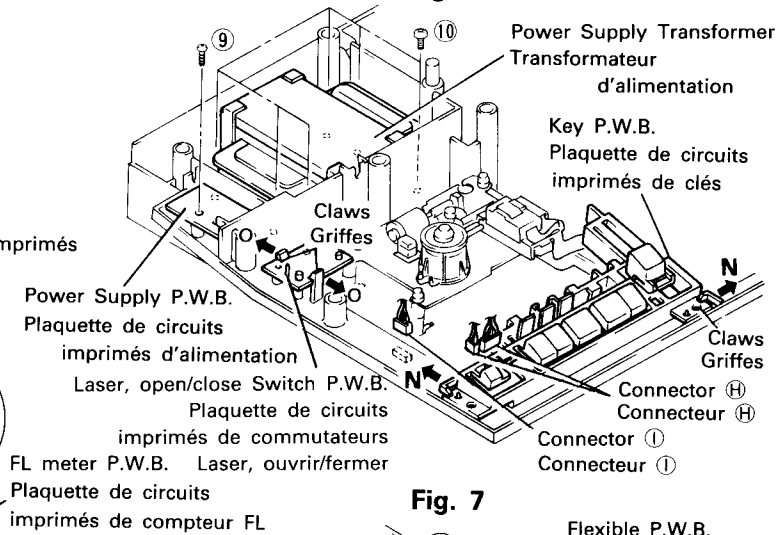


Fig. 7

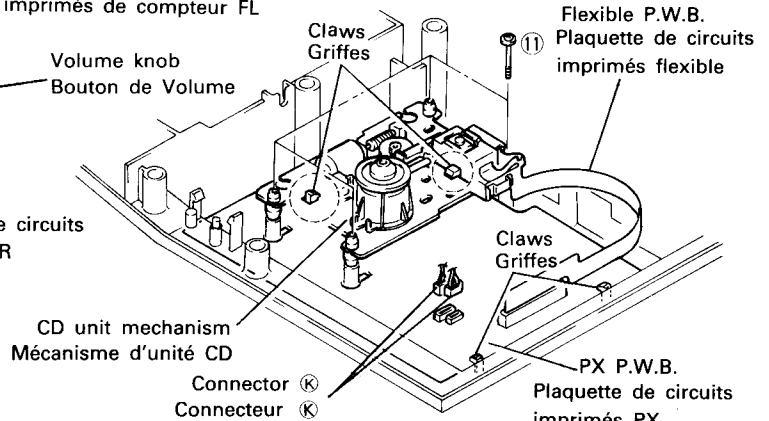


Fig. 8

**18. Checking the Object Lens. (Fig. 9)**

Make sure that no dust or grime gets on the object lens of the lens actuator. After a long period of use it is possible for this lens to get dirty or dusty. In such a case try to clean the front surface of the lens with a cotton applicator.

**19. Laser Malfunction Check**

The laser normally operates on a current of 40 — 80mA. If the laser circuit is measured and shows a current of 100 mA or more it may be assumed that the laser is defective.

**20. Things to Keep In Mind During Servicing (Fig. 10)****(1) Regarding the Semiconductor Laser**

The semiconductor laser is extremely sensitive to electrostatic disruption and surge current. Be very careful not to allow the hand or any tools ever to come into contact with the terminals of either the laser or the flexible P.W.B..

Furthermore, the Current-Light Intensity Characteristic once a certain amperage threshold is exceeded, rises sharply (as can be seen in Fig. 10). This current threshold is slightly different for each laser unit. Consequently, during operations such as the replacement of the Unit Mechanism Assembly, when setting the intensity of the laser be sure to turn the Semi-variable Resistor VR901 as far to the right as it will go to set it off once, and then raise the current to the level which is specified.

**(2) Handling of the Unit Mechanism Assembly (Fig. 11)**

When handling the Pickup Mechanism Assembly and the Unit Mechanism Assembly use a Ground Ring of the kind pictured in Fig. 11.

(A ground wire can be made with ordinary lead wire.)

**(3) Precautions During Replacement of Parts.**

- 1) Protective sheets (against static electricity) are stuck to the service parts of the Unit Mechanism. Never remove these sheets under any circumstances until assembly is completed.
- 2) If high temperature is applied to the motor lead wire terminal, for example by soldering, this may cause damage to the motor.
- 3) Make sure that screws are set in tightly. If screws are loose, this may lead to defective disc tracking performance.
- 4) When installing the DC Motor Assembly, (Slide Motor) be careful not to damage the worm gear. Such damage will become a source of noise. After installation, check the play between the worm gear and the transmission gear. If there is no play move the DC Motor Assembly outward.

5) The DC Motor (D2) and the Turntable are replaced in the following manner:

- (1) Lift the turntable off perpendicularly to the Unit Plate.
- (2) When attaching the turntable, adjust the height using the Height Adjustment Jig (Fig. 13). At this time avoid placing undue lateral stress on the shaft of the DC Motor (D2).
- (3) During the overhauling of the DC Motor (D2), do not apply excessive force in the direction B. If the C portion of the Unit Plate is deformed this could cause eye-pattern deterioration. (Fig. 14)

**NOTE:** Once the Turntable has been Removed, Do Not Use It Again.

**6) Lead Bar Check**

If the lead bar is loose interference with the disc tracking function may result. Therefore check to make sure that the lead bar does not move in the direction indicated by D. If it is found to move, correct position of the Bar Plate (B) by bending in direction E with pliers, then reassemble. (Fig. 15)

7) Since the Flexible P.W.B. can be cut easily make sure not to use excessive force when servicing the Unit Mechanism Assembly (replacing parts). Ground the flexible P.W.B. after it is removed by clamping it with a metal clamp or similar metal object. (Fig. 16)

**21. Safety Devices (Fig. 17)**

This equipment has a safety device built in to the disc cover which automatically cuts off laser light as soon as the cover is opened. Be careful not to stick pins or other foreign objects into this area. If laser light comes out accidentally, this is very dangerous.

## 18. Vérification de la lentille optique (Fig. 9)

S'assurer qu'il n'y a pas de poussière ou de saletés sur l'actionneur de lentille de la lentille optique. Après une longue durée d'utilisation, il est possible que la lentille soit sale. Si tel est le cas, nettoyer la surface de la lentille à l'aide d'un coton-tige.

## 19. Vérification du fonctionnement du laser

Le laser fonctionne normalement sur un courant de 40 – 80 mA. Si le circuit laser est mesuré et indique un courant de 100 mA ou plus, on peut en déduire que le laser ne fonctionne pas correctement.

## 20. Points importants lors de l'entretien (Fig. 10)

### (1) En ce que concerne le laser à semiconducteur

Le laser à semiconducteur est très sensible aux perturbations électrostatiques et au courant de choc. Bien veiller à ce que ni vos mains ni aucun outil ne viennent en contact avec les bornes du laser ou de la plaquette flexible.

De plus, les caractéristiques d'intensité courant-lumière augmentent considérablement, une fois un certain seuil d'ampérage atteint (comme indiqué sur la Fig. 10). Ce seuil de courant varie légèrement selon l'unité laser. En conséquence, lors d'opérations telles que le remplacement de l'ensemble du mécanisme d'unité, au moment du réglage de l'intensité du laser, bien veiller à tourner la résistance semivariable VR901 à fond à droite, puis augmenter le courant au niveau spécifié.

### (2) Maniement de l'ensemble du mécanisme de l'unité (Fig. 11)

Lors du maniement de l'ensemble du mécanisme de la tête de lecture et de l'ensemble du mécanisme de l'unité, utiliser une bague de mise à la terre du type de celui illustré sur la Fig. 11.

(Un fil de masse peut être fait avec du fil conducteur ordinaire.)

### (3) Précautions lors du remplacement de pièces

- 1) Des films protecteurs sont collés aux pièces d'entretien du mécanisme de l'unité. Ne jamais enlever ces films jusqu'à ce que l'assemblage soit terminé.
- 2) Si une température élevée est appliquée sur la borne du fil conducteur de moteur - par exemple, par soudage - cela peut provoquer des dommages au moteur.
- 3) Veiller à ce que les vis soit bien serrées. Si les vis ne sont pas bien serrées, cela peut provoquer des erreurs de lecture de piste du disque.
- 4) Lors de la pose de l'ensemble moteur CC, veiller à ne pas endommager la vis sans fin, car cela pourrait être source de bruit. Après la pose, vérifier le jeu entre la vis sans fin et l'engrenage de transmission. S'il n'y a pas de jeu, déplacer l'ensemble moteur CC vers l'extérieur.

5) Le moteur CC (D2) et le plateau d'entraînement sont remplacés de la manière suivante:

- (1) Dégager le plateau d'entraînement de la plaquette de l'unité en le soulevant perpendiculairement.
- (2) Lors de la pose du plateau d'entraînement, régler la hauteur à l'aide du gabarit de réglage de hauteur (Fig. 13). Eviter d'appliquer un effort latéral excessif sur l'axe du moteur CC (D2).
- (3) Lors du changement du moteur CC (D2), ne pas appliquer de force excessive dans la direction B. Si la partie C de la plaquette de l'unité est déformée, cela peut provoquer une détérioration de la forme d'onde (Fig. 14).

**Remarque:** ne pas réutiliser un plateau d'entraînement qui a été enlevé une fois.

### 6) Vérification de la barre d'avance

Si la barre d'avance est lâche, cela peut affecter la lecture de piste du disque. Il faut donc vérifier que la barre ne se déplace pas dans la direction indiquée par D. Si tel est le cas, corriger la position de la plaquette de barre (B) en la courbant à l'aide de pinces dans la direction E, puis procéder au remontage (Fig. 15).

7) Etant donné que la plaquette flexible être facilement cassée, veiller à ne pas appliquer de force excessive lors de la réparation de l'ensemble du mécanisme de l'unité. Relier à la terre la plaquette flexible - après avoir enlevée - à l'aide d'une pince métallique ou d'un objet métallique similaire (Fig. 16).

## 21. Dispositifs de sécurité (Fig. 17)

Cet appareil est équipé d'un dispositif de sécurité qui coupe automatiquement le rayon laser dès l'ouverture de la porte du disque. Veiller à ne pas insérer d'objets métalliques pointus ou autres objets à cet endroit. Il y a un risque de danger en cas de sortie accidentelle du rayon laser.

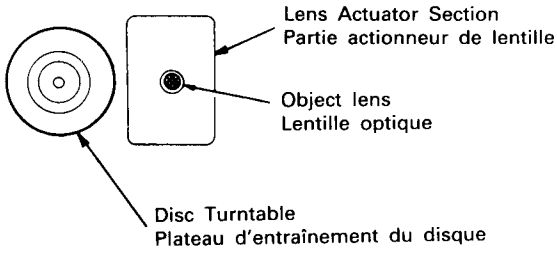


Fig. 9

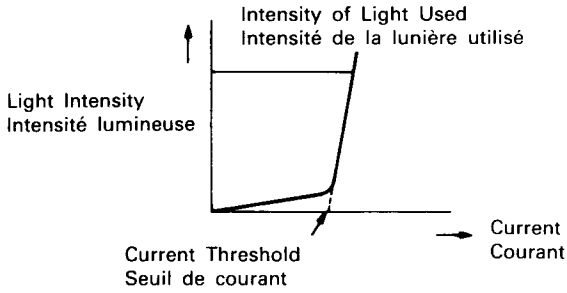


Fig. 10

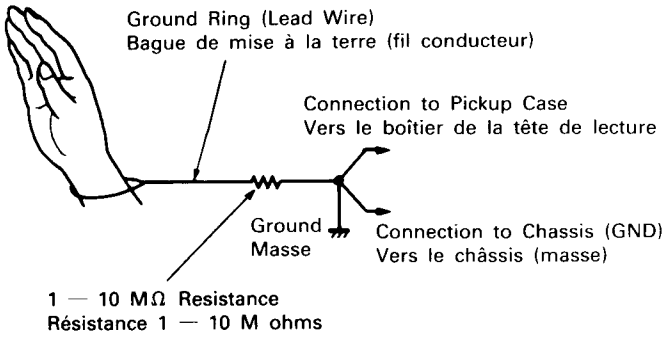


Fig. 11

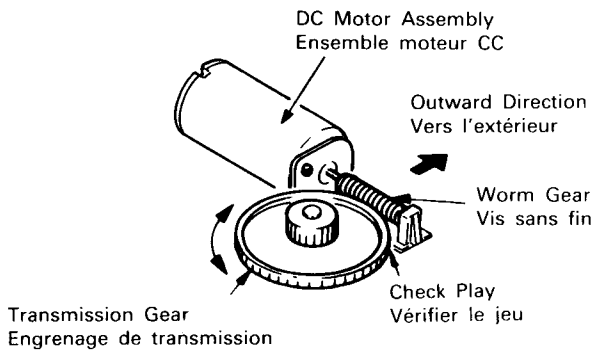


Fig. 12

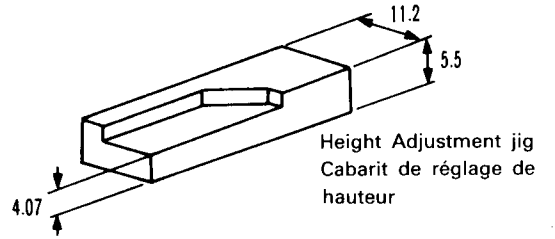
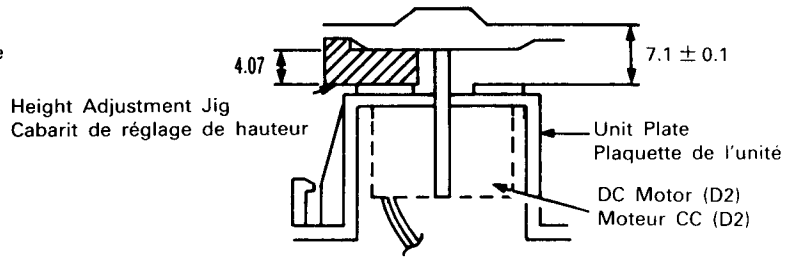


Fig. 13

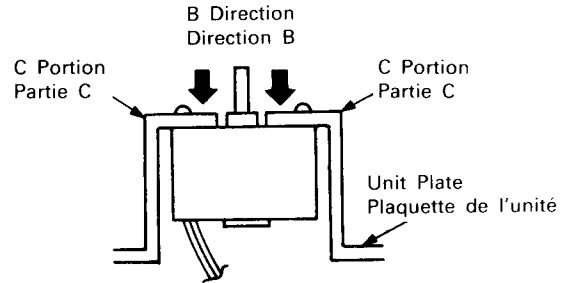


Fig. 14

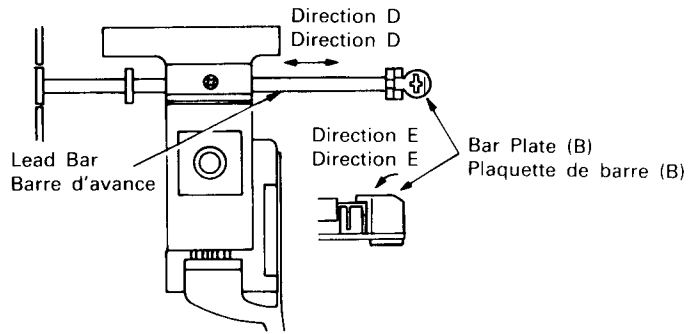


Fig. 15

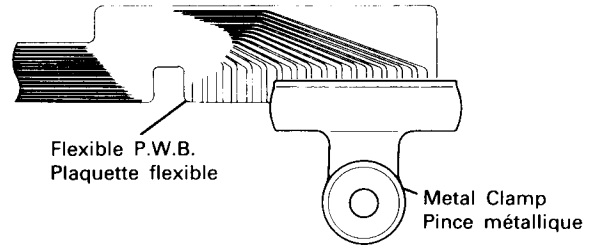


Fig. 16

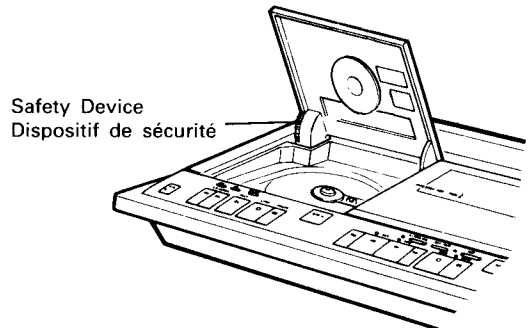


Fig. 17

# GENERAL ADJUSTMENT INSTRUCTIONS

## ● RADIO SECTION

These adjustments are made after the Upper Case and the FL meter P.W.B. have been removed.

### ● Adjustment points

Perform adjustment at least 3 minutes after the power has been switched on.

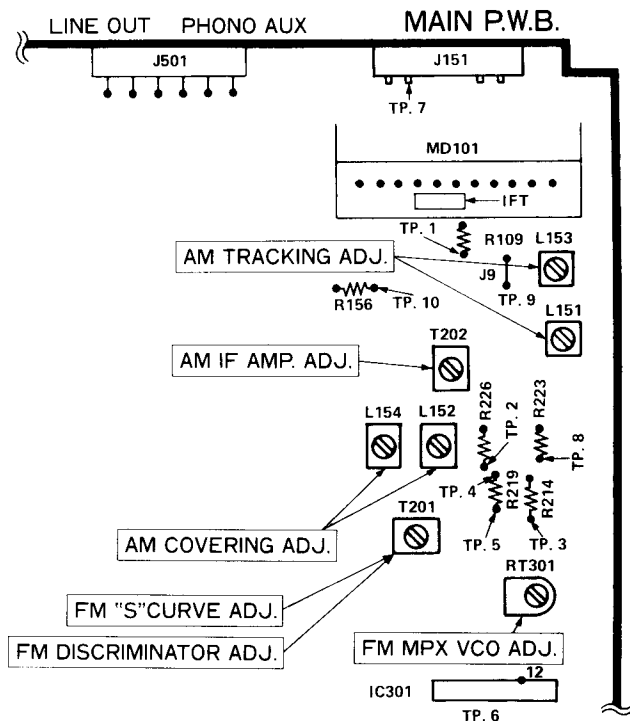


Fig. 18

## FM TUNER ADJUSTMENT

FUNCTION: FM

FM MODE: MONO



Sweep Generator



Signal Generator



Oscilloscope



DC Null Meter



VTVM



Frequency Counter



Distortion Meter

Sequence	Connection		Setting		Adjust for		
	Input	Output	Tuning	Signal	Adjust	Indication	
1	IF Amp.	TP. 1 100k 0.1 μ	TP. 2 100k 0.1 μ	—	10.7 MHz	FM IFT	(Note 1)
2	"S" curve	TP. 1 100k 0.1 μ	TP. 3 100k 0.1 μ	—	10.7 MHz	T201	(Note 2)
3	Discriminator	FM antenna 60dB 400Hz, 22.5Hz Dev.	TP. 4 TP. 5	98 MHz	98 MHz	T201	(Note 3)
4	MPX VCO	Antenna terminal (75 ohms) 60 dB Non Mod.	TP. 6 100k	89.9 MHz	89.9 MHz	RT301	19 kHz ± 50 Hz

- Note 1: Apply low-input signals from a sweep generator (with a small amount of noise superimposed on IF waveform as in Fig. 19), and adjust the waveform until it becomes maximum and symmetrical.
- Note 2: Cause and S curve to appear on the screen by T201 as shown in Fig. 20, and adjust it until points A and B are positioned symmetrically, and the A-B line becomes liner.
- Note 3: Connect a DC null meter TP. 4 and TP. 5 then make adjustment until it reads  $0 \pm 20\text{mV}$ .

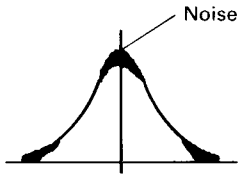


Fig. 19

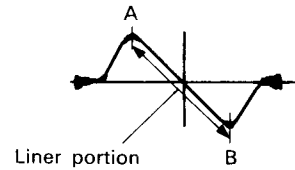


Fig. 20

## AM TUNER ADJUSTMENT

FUNCTION: AM

MODULATION: 400Hz 30% Mod. 74dB  $\mu$ /m

Sequence	Connection		Setting		Adjust for		
	Input	Output	Tuning	Signal	Adjust	Indication	
1	IF AMP.	TP. 7 100k 0.1 $\mu$	TP. 8 100k 0.1 $\mu$	—	450kHz	T202	(Note 5)
2	Covering (Note 5)	Loop antenna	TP. 9 (MW) TP. 10 (LW)	(MW) 530kHz (for US, CS) 522kHz (except US, CS)	—	(MW) L152	$1.3\text{V} \pm 0.1\text{V}$ (for US, CS) $1.2\text{V} \pm 0.1\text{V}$ (except US, CS) (Note 6)
				(LW) 153kHz	—	(LW) L154	$1.2\text{V} \pm 0.1\text{V}$ (Note 6)
3	Tracking	400Hz 30% Mod.	Audio output	(MW) 603kHz or 600kHz	(MW) 603kHz or 600kHz	L151	V max. (Note 7)
				(LW) 163kHz	(LW) 163kHz	L153	

- Note 4: Adjust T202 so that the waveform shown in Fig. 21 is obtained. After adjustment, increase the sweep generator output and adjust so that portion A of the waveform shown in Fig. 22 is flat.
- Note 5: Covering is factory preset. If it is touched erroneously, perform this procedure.
- Note 6: Connect the DC volt meter to TP. 9, TP. 10 and adjust L 152, L 154.
- Note 7: At first, set the input level to 74 dB  $\mu$ /m. As the adjustment advances, reduce the input level to and allowable minimum level (approx. 60 dB), and repeat the adjustment until the maximum output is obtained at the specified frequency.

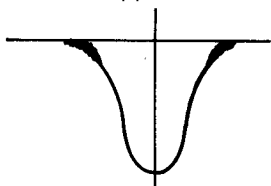


Fig. 21

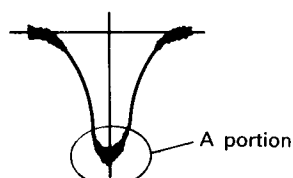


Fig. 22

Install a condenser of about 150 PF parallel to C425 in case the recording beat at MW and LW is too large.

# TAPE DECK SECTION

## ● Adjustments points

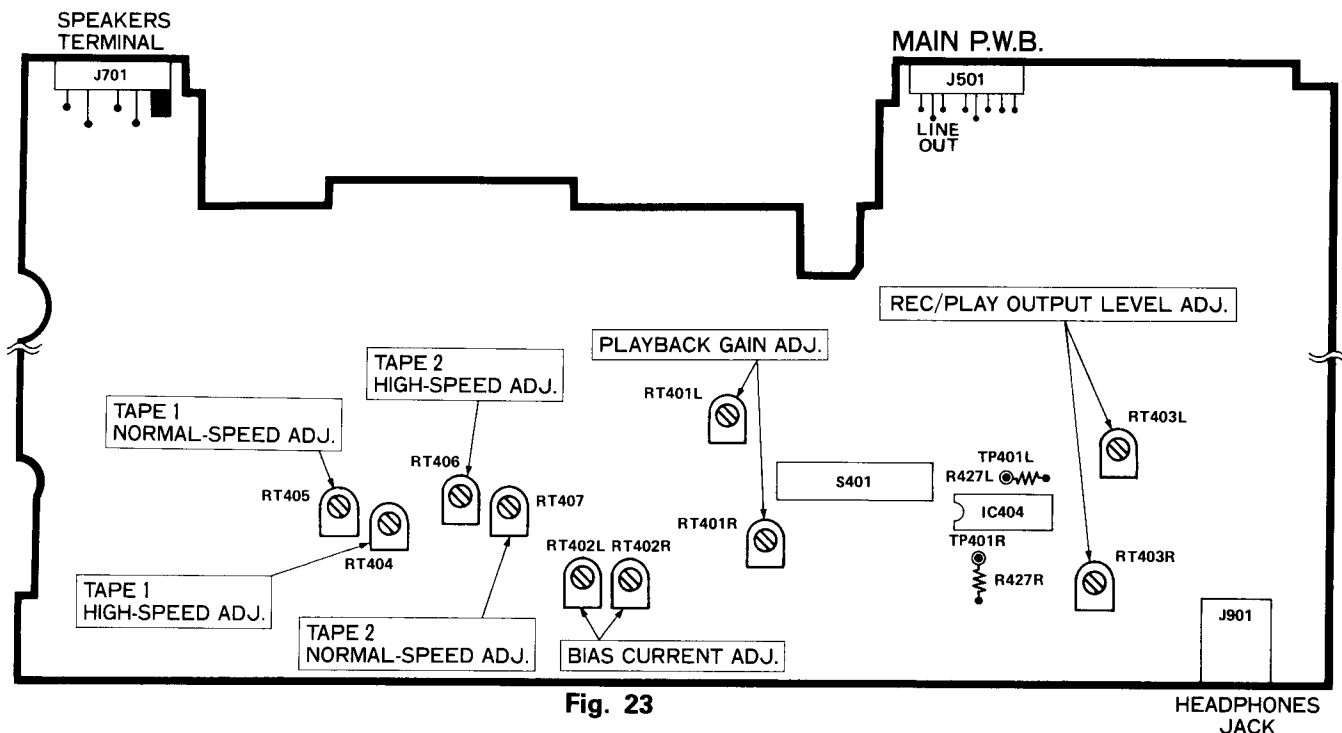


Fig. 23

### ● Instruments to be used

1. Audio oscillator
2. Electronic voltmeter
3. Attenuator
4. Frequency counter

### ● Jigs, Test and Check Tapes

1. Head mounting jig
2. 400 Hz, Dolby alignment tape
3. 10 kHz, azimuth alignment tape
4. 3,000 Hz, tape speed alignment tape
5. Mirror tape (for tape running check)
6. NORMAL tape (MAXELL UD I 90)  
CHROME tape (MAXELL UD II 90)  
METAL tape (MAXELL MX46)

### ● Position of knob

Match the position of switch to this shown in the table following unless otherwise specified.

Dolby NR switch	OFF
-----------------	-----

Open the cassette door and then clean the heads, pressure rollers and capstans using alcohol, then perform adjustment according to the following procedure.

### 1. Tape Speed Adjustment

Note:1 Always adjust the tape speed in order of (1) to (2). If adjustment is made in reverse order, the High-speed will be change.

Note:2 For Normal-Speed, High-Speed, switchover use the Micro-computer Test Program.

### ※Micro-computer Test Program

The Micro-computer Test is carried as follows; While depressing the STOP button and the FF button of TAPE 1, insert the power cord into a power-outlet socket. While in PLAY mode, Normal-Speed and High-Speed are varied by pressing the Play button. If the power is turned off the Micro-computer Test Program is cancelled.

#### (1) Normal-speed

Tape	Adjustment value	Adjustment point
Tape speed	3,000 +10 Hz	RT405 (TAPE 1)
Alignment tape	-0	RT407 (TAPE 2)

#### (2) High-speed

Tape	Adjustment value	Adjustment point
Tape speed	6,000 +20 Hz	RT404 (TAPE 1)
Alignment tape	-0	RT406 (TAPE 2)

### Adjustment Procedure

Connect the frequency counter to the LINE OUT terminals and apply heat-run for 20 minutes or more. Then, playback the alignment tape in TAPE 1 and TAPE 2 and adjust the tape speed at the middle of the tape.

Note: Speed difference between TAPE 1 and TAPE 2 should be within 1%.

### 2. Azimuth Adjustment of Recording/Playback Head

Tape	Adjustment value	Adjustment point
Azimuth alignment tape	Maximum output	Azimuth adjustment screw



**Adjustment procedure**

Adjustment is made by connecting an electronic voltmeter to the LINE OUT terminals and playback the azimuth alignment tape. If there is a difference in the highest volume of the two channels, adjustment should be made to the left channel.

At this time check to see if the difference between channels is less than 2 dB. If it is greater, readjust again. After adjustment has been made apply screw lock.

(Please adjust both TAPE 1 and TAPE 2.)

**3. Playback Gain Adjustment**

Tape	Adjustment value	Adjustment point
Dolby alignment tape	300 mV	RT401LR

**Adjustment procedure**

Connect the electronic voltmeter to the LINE OUT terminals and playback the Dolby alignment tape. Adjust so that the reading of the electronic voltmeter indicates adjustment value.

**4. Bias current Adjustment and REC/PLAY Output Level Adjustment**

Set RT402L, R in the center position and record at the recording level shown in the table below to adjust for each tape, then check the playback level.

Order	Tape	Recording level			Playback level		Adjustment procedure
		Frequency (Hz)	Level	Adjustment point	Level	Adjustment point	
1	NORMAL tape	400/10K	300 mV -25 dB	ATT	Within ± 1 dB	RT402LR	(1)
2	NORMAL tape	400	300 mV -10 dB	ATT	Within ± 1 dB	RT403LR	(2)
3	NORMAL tape	400/10K	300 mV -25 dB	ATT	Within ± 1 dB	Check	(1)
4	CHROME tape	400/10K	300 mV -25 dB	ATT	Within ±3 dB	Check	(1)
5	METAL tape	400/10K	300 mV -25 dB	ATT	Within ±3 dB	Check	(1)

**Adjustment procedure**

**(1) Adjustment of Bias current**

- 1) Connect an electronic voltmeter to the LINE OUT terminals and, to the AUX IN terminals attach a audio oscillator by means of an attenuator. Set on "REC" and with the voltmeter set at 300 mV check the output of the audio oscillator. Next, check the attenuator and set to 300 mV - 25 dB. (Frequency: 400 Hz)
- 2) After recording at this setting next, set the audio oscillator to 10 kHz and record again.
- 3) Put the recording unit on "PLAY", take a reading of the output and check to ascertain if the difference in output between the two frequencies is within the range of ± 1 dB.
- 4) If the difference in output is not within the ± 1 dB range, make the appropriate adjustment of the RT402LR and then, once again as before, repeat the recording /playback test making sure the output is in the ± 1 dB range.

**Note)** When using CHROME and METAL tapes during checking, if the range gets outside of the specified ± 3 dB, readjust using NORMAL tape.

**(2) Adjustment of REC/PLAY Output Level**

- 1) Connect an electronic voltmeter to the LINE OUT terminals and an audio oscillator to the AUX IN terminals. Inputting a signal of 400 Hz set on recording mode and record, adjusting the output of the audio oscillator so that the voltmeter indicates 300 mV-10 dB.
- 2) Set on "PLAY" and check to see if the output is -10 dB ± 1 dB.
- 3) When the output difference is out of ± 1 dB, adjust RT403LR properly and repeat recording/playback in the same way to adjust so that the output difference is within ± 1 dB.

**5. Cassette Chassis Checking and Adjustment**

No.	Inspection Item	Reference Value	Remarks
1	Playback torque	35 - 75 g·cm	Cassettepack system Torque meter
2	FF/REW torque	more than 85 - 170 g·cm	Cassettepack system Torque meter
3	Supply back-tension	2.0 - 6.0 g·cm	Cassettepack system Torque meter
4	Tape drive force	Over 120 g	

# INSTRUCTIONS GÉNÉRALES DE RÉGLAGE

## ● SECTION RADIO

Ces réglages s'effectuent après que le boîtier supérieur et la plaquette de circuits imprimés de compteur FL ont été enlevés.

### ● Emplacement de réglage

Commencer le réglage au moins trois minutes après mise sous tension.

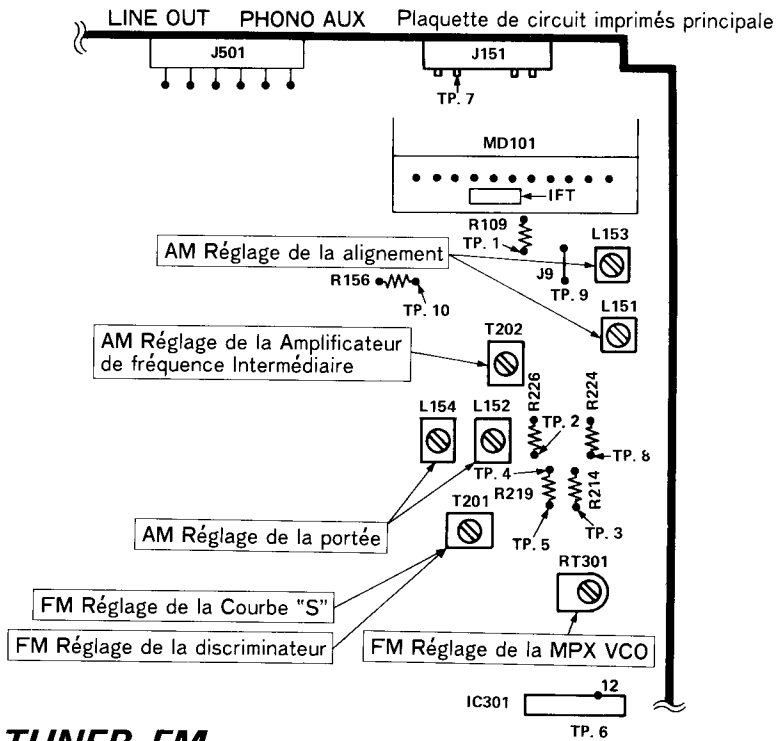


Fig. 24

## REGLAGE DE TUNER FM

● FONCTION: FM

● FM MODE: NOMO



Générateur de balayage



Générateur de signaux



Oscilloscope



Indicateur zero C.C.



Voltmètre électronique



Fréquencemètre



Distorsionmètre

Order	Connexion		Montage		Réglage pour	
	Entree	Sortie	Indicateur d'accord	Signal	Réglage	Indication
1	Amplificateur de fréquence intermédiaire TP. 1 	TP. 2 	—	10,7 MHz	FM IFT	(Remarque 1)
2	Courbe "S" 100k 0,1 μ 	TP. 3 	—	10,7 MHz	T201	(Remarque 2)
3	Discriminateur 60dB 400H, 22,5kHz Dev 	TP. 4 R219 TP. 5 	98 MHz	98 MHz	T201	(Remarque 3)
4	MPX VCO Borne antenne (75 ohms) 60 dB non mod. 	TP. 6 	89,9 MHz	89,9 MHz	RT301	19 kHz ± 50 Hz

Remarque 1: Appliquer des signaux à faible entrée provenant d'un générateur de balayage (avec une petite quantité de bruit surimposés sur une forme d'onde IF, comme indiqué sur la Fig. 25) et régler la forme d'onde jusqu'à ce qu'elle soit maximale et symétrique.

Remarque 2: Provoquer l'apparition d'une courbe S sur l'écran par T201, comme indiqué sur la Fig. 26, et la régler jusqu'à ce que les points A et B soient positionnés symétriquement et que la ligne A-B soit linéaire.

Remarque 3: Appliquer un compteur de zéro CC sur TP. 4 et TP. 5, puis régler jusqu'à ce qu'il lise  $0 \pm 20$  mV

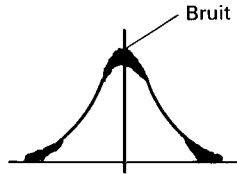


Fig. 25

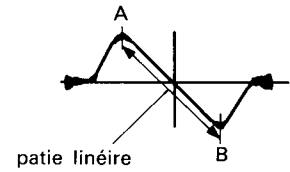


Fig. 26

## REGLAGE DE TUNER AM

FONCTION: AM

MODULATION: 400Hz 30% Mod. 74dB  $\mu$  / m

Order	Connexion		Montage		Réglage pour	
	Entrée	Sortie	Indicateur d'accord	Signal	Réglage	Indication
1	<b>Amplificateur de fréquence Intermédiaire</b> TP. 7  100k 0.1 $\mu$	TP. 8  100k 0.1 $\mu$	—	450kHz	T202	(Remarque 4)
2	Antenne en carton	TP. 9 (MW) TP. 10 (LW) 	(MW) 530kHz (pour US, CS) 522kHz (sauf US, CS) (LW) 153kHz	—	(MW) L152 (LW) L154	1.3 V $\pm$ 0.1 V (pour US, CS) 1.2 V $\pm$ 0.1 V (sauf US, CS) (Remarque 6) 1.2 V $\pm$ 0.1 V (Remarque 6)
3		<b>Alignement</b>  400Hz 30% Mod.	Sortie audio 	(MW) 603kHz or 600kHz (LW) 163kHz	(MW) 603kHz or 600kHz (LW) 163kHz	L151 L153

Remarque 4: Régler T202 de manière à obtenir la forme d'onde illustrée par la Fig.27. Après réglage, augmenter le niveau de sortie du générateur de balayage et ajuster de manière à ce que la Fig. soit plate.

Remarque 5: Portée est réglé en usine. Procéder comme indiqué s'il a été touché par erreur.

Remarque 6: Raccorder le indicateur zero c. c. à TP. 9, TP. 10 et régler L 152, L154.

Remarque 7: D'abord, régler le niveau d'entrée sur 74 dB  $\mu$ /m. Au fur et à mesure du réglage, réduire le niveau d'entrée jusqu'au niveau minimum permissible (environ 60 dB) et répéter le réglage jusqu'à ce que la sortie maximale soit obtenue à la fréquence spécifiée.

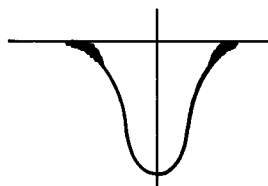


Fig. 27

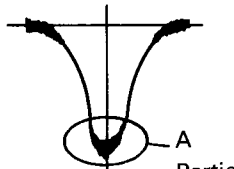


Fig. 28

Installer un condensateur d'environ 150 PF en parallèle sur C425 dans le cas où l'interférence d'enregistrement en PO et GO est trop importante.

## SECTION PLATINE-CASSETTE

### ● Emplacements de réglage

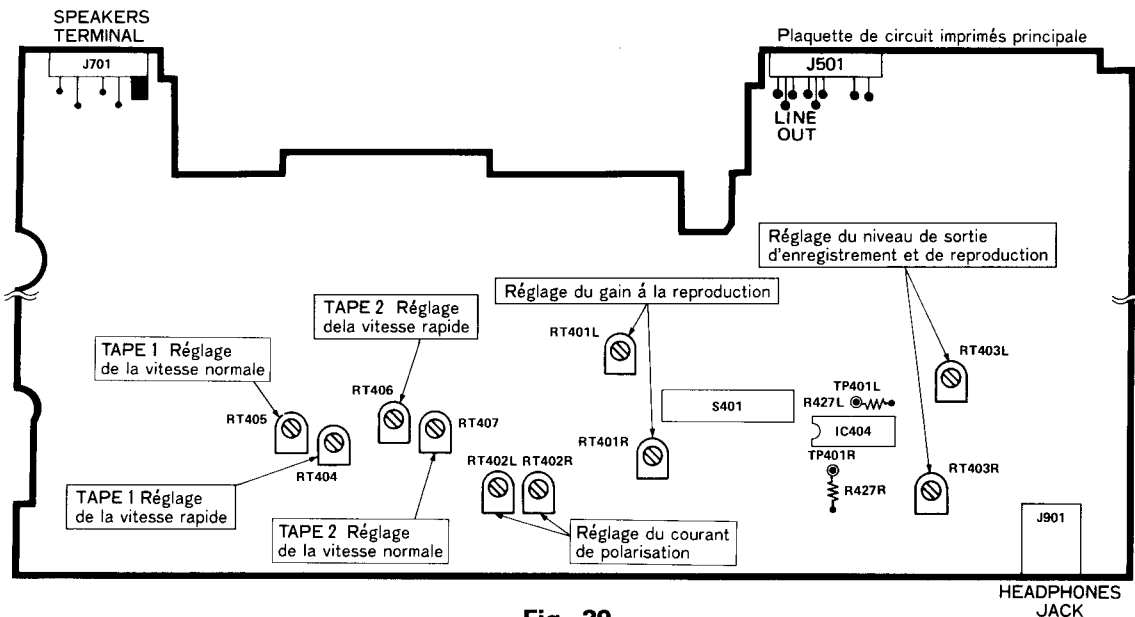


Fig. 29

### ● Instrument à utiliser

1. Oscillateur audio
2. Voltmètre électronique
3. Atténuateur
4. Fréquencemètre

### ● Calibres, et bandes d'essai et de vérification

1. Calibre de montage de tête
2. Bande d'étalonnage Dolby, 400 Hz
3. Bande d'étalonnage d'azimut, 10 kHz
4. Bande d'étalonnage de la vitesse de la bande, 3000 Hz
5. Bande de la miroir (pour contrôle de défilement de la bande)
6. Bande Normal (MAXELL UD I 90)  
Bande Chrome (MAXELL UD II 90)  
Bande Metal (MAXELL MX46)

### ● Position de bouton

A moins d'indication contraire, régler le commutateur et bouton sur la position indiquée ci-après.

Commutateur Dolby NR	OFF
----------------------	-----

Ouvrir le couvercle de cassette. Puis nettoyer les têtes, le galet presseur et le cabestan avec de l'alcool. Procéder ensuite au réglage suivant.

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

Remarque 1: Toujours régler la vitesse de (1) puis de (2). Si le réglage est fait dans l'ordre inverse, la vitesse rapide s'en trouve affectée.

Remarque 2: Pour la commutation vitesse normale/vitesse élevée, utiliser le programme de test de micro-ordinateur.

### ※Programme de test micro-ordinateur

Le test de micro-ordinateur s'effectue de la façon suivante: tout en appuyant sur la touche d'arrêt (STOP) et la touche d'avance rapide (FF) de la TAPE 1, brancher le cordon d'alimentation sur une prise secteur. En mode de lecture, le passage vitesse normale/vitesse élevée se fait en actionnant la touche de lecture. Si on coupe l'alimentation, le programme de test de micro-ordinateur est annulé.

#### (1) Vitesse normale

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage de la vitesse de la bande	3000 $\begin{matrix} +10 \\ -0 \end{matrix}$ Hz	RT405 (TAPE 1) RT407 (TAPE 2)

#### (2) Vitesse rapide

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage de la vitesse de la bande	6000 $\begin{matrix} +20 \\ -0 \end{matrix}$ Hz	RT404 (TAPE 1) RT406 (TAPE 2)

### Procédure de réglage

Brancher le fréquencemètre sur les bornes SORTIE LIGNE (LINE OUT) et faire un préchauffage pendant 20 minutes au moins. Puis, reproduire la bande d'étalonnage sur TAPE 1 et TAPE 2 et régler la vitesse de la bande en milieu de bande.

La différence de vitesse entre TAPE 1 et TAPE 2 doit être dans des limites de  $\pm 1\%$ .

#### 2. Réglage d'azimut de la tête d'enregistrement/reproduction

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage d'azimut	Sortie maximale	Vis de réglage d'azimut

### Méthode de réglage

Le réglage s'effectue en reliant un voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT) et en lisant la bande d'étalonnage d'azimut. S'il y a une différence au volume le plus élevé des deux canaux, le réglage doit être fait sur le canal gauche. Vérifier alors que la différence entre les canaux est inférieure à 2 dB. Si elle est supérieure, régler de nouveau. Après la fin du réglage, appliquer le verrouillage de vis.

Régler à la fois la TAPE 1 et la TAPE 2.

### 3. Réglage du gain à la reproduction

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage de Dolby	300 mV	RT401L, R

Brancher le voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT), lire la bande d'étalonnage de Dolby. Régler de façon à ce que la lecture du voltmètre électronique indique la valeur de réglage.

(La différence de niveau entre la TAPE1 et la TAPE2 doit être dans une plage de 2 dB.)

### 4. Réglage du courant de polarisation et Réglage du niveau de sortie d'enregistrement et de reproduction

Régler RT402L, R à leur position central, et enregistrer au niveau d'enregistrement indiqué sur le tableau ci-dessous de manière à régler chaque. Puis vérifier le niveau de lecture.

Ordre des réglages	Band	Niveau d'enregistrement			Niveau de lecture		Réglage proprement
		Fréquence (Hz)	Niveau	Composant de réglage	Niveau	Composant de réglage	
1	Bande normale	400/10K	300 mV -25 dB	ATT	En moins de ± 1 dB	RT402LR	(1)
2	Bande normale	400	300 mV -10 dB	ATT	En moins de ± 1 dB	RT403LR	(2)
3	Bande normale	400/10K	300 mV -25 dB	ATT	En moins de ± 1 dB	Vérification	(1)
4	Bande chrome	400/10K	300 mV -25 dB	ATT	En moins de ±3 dB	Vérification	(1)
5	Bande metal	400/10K	300 mV -25 dB	ATT	En moins de ±3 dB	Vérification	(1)

### Méthode de réglage

#### (1) Réglage du courant de polarisation

- 1) Brancher un voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT) et un oscillateur audio aux bornes AUX IN à l'aide d'un atténuateur. Passer en mode "enregistrement" et, avec le voltmètre réglé sur 300 mV, vérifier la sortie de l'oscillateur audio. Puis, vérifier l'atténuateur et le régler sur 300 mV - 25 dB. (Fréquence: 400 Hz)
- 2) Après avoir enregistré dans ces conditions de réglage, régler l'oscillateur audio sur 10 kHz et enregistrer de nouveau.
- 3) Mettre l'appareil en mode de "reproduction", faire une lecture de la sortie et vérifier que la différence de sortie entre les deux fréquences soit comprise dans une plage de ± 1 dB.
- 4) Si la différence de sortie n'est pas dans cette plage de ± 1 dB, faire les réglages appropriés sur le RT402LR, puis, comme précédemment, recommencer le test d'enregistrement/reproduction, en veillant à ce que la sortie soit dans la plage de ± 1 dB.

**Note:** Si vous utilisez des bandes au chrome et metal lors de la vérification, et si la plage dépasse les ± 3 dB spécifiés, refaire les réglages à l'aide d'une bande normale.

#### (2) Réglage du niveau de sortie d'enregistrement et de reproduction.

- 1) Brancher un voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT) et une oscillateur audio aux bornes AUX IN. Appliquer un signal de 400 Hz, passer en mode d'enregistrement et enregistrer tout en réglant la sortie de l'oscillateur audio de façon à ce que la voltmètre indique 300 mV - 10 dB.
- 2) Passer en mode de "reproduction" et vérifier que la sortie soit de - 10 dB ± 1 dB.
- 3) Si la différence de sortie se trouve en dehors des limites de ± 1 dB, régler RT403LR correctement. Puis répéter l'enregistrement/lecture de la même manière jusqu'à ce que la différence de sortie se trouve dans les limites de ± 1 dB.

### 5. Inspection et réglage du châssis de cassette

No.	Point d'inspection	Valeur de référence	Observation
1	Couple en lecture	De 35 à 75 g·cm	Cassette de couple d'entrafnement
2	Couple avance rapide/rebobinage	De 85 à 170 g·cm	Cassette de couple d'entrafnement
3	Tension bobine débitriee	De 2,0 à 6,0 g·cm	Cassette de couple d'entrafnement
4	Force de défilement de bande	Plus de 120g	

### CD PLAYER SECTION

When carrying out adjustment of the PX P.W.B., remove the Key P.W.B. and, after connecting an adjustment jig to the test point (refer to DISASSEMBLY Fig. 7), place a disc in the unit and then adjust.

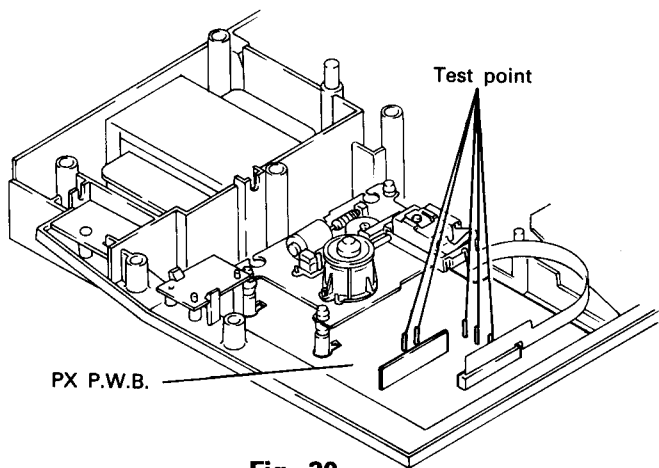


Fig. 30

#### Adjustment procedure

Whenever any of the operations listed below are carried out, then, without fail, make sure to perform the circuit adjustments described in section 1 - 3 below.

- (1) Replacement of parts and Overhaul in the Unit Mechanism Assembly
- (2) Replacement of parts in the Pickup Unit
- (3) Replacement of parts in the CD power supply circuit

#### CD PLAYER CIRCUIT ADJUSTMENT

Note) If the adjustment is being made following the replacement of parts in the Pickup Unit, preset the Variable Resistors as shown in the table below.

#### ● Presetting

Adjustment	Circuit Number	Preset Position
Laser Diode Output	VR901	Center
Tracking Servo Offset	VR902	Center

Adjustments should be made in the following sequence:

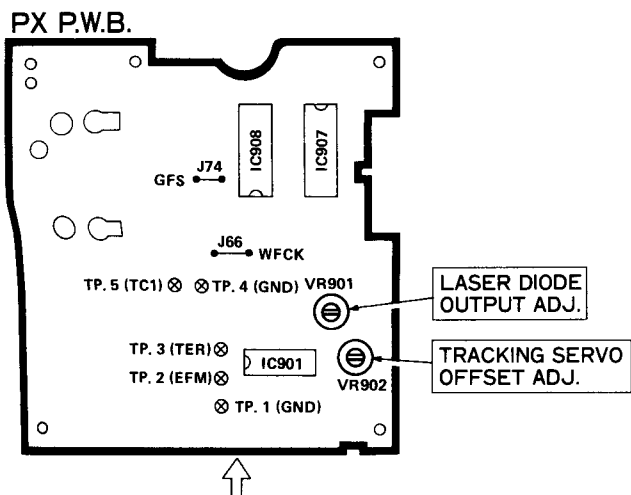


Fig. 31

#### Cautions on CD Operation

The MX-W50 turns OFF all power to the CD unit other than that to the function CD (IC 907, however, remains ON). You must therefore carry out the following when adjusting the PX P.W.B. Assy independently.

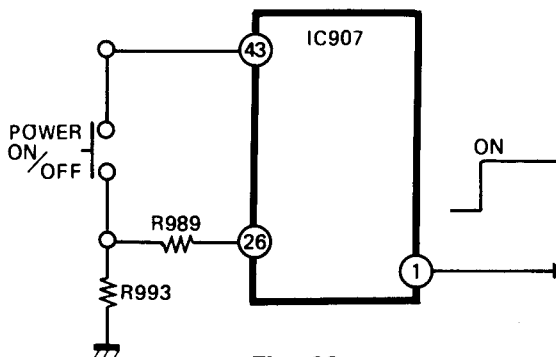


Fig. 32

Set the POWER ON/OFF switch to ON.

The CD POWER ON command is output from Pin ① of IC 907 when the power is turned ON.

#### 1. Laser Diode Output Adjustment

Note) Do not perform this adjustment except when the Pickup Mechanism, Laser Circuit or the CD Power Circuit has undergone replacement of parts.

#### (1) Instrument to be used

Oscilloscope

#### (2) Adjusting Procedure

- 1) Connect the oscilloscope to TP. 2 (EFM) and TP. 1 (GND) (Fig. 33).
- 2) Load a disc into the player, clamber in, set the Laser, Open/Close Switch to "ON" and take a reading of the EFM signal with the oscilloscope.

Note) When the Laser, Open/Close switch is "ON" never peek into the lens. This is very dangerous.

#### How to Read the EFM Signal Wave Form and Procedure for Connecting the Oscilloscope

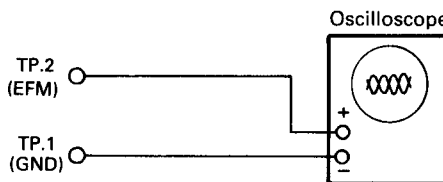


Fig. 33

- 3) Adjust the VR901 so that the amplitude of the EFM signal in the oscilloscope reaches a level of 1.3 V ± 40 mV.

Note) However, if the signal level is within the range of 1.1 - 1.5 V, it is normal and no adjustment is necessary.

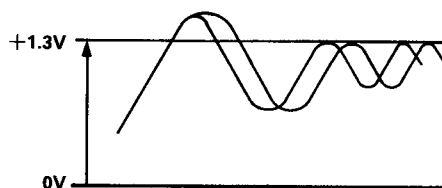


Fig. 34

#### 2. Track

#### (1) Instru

DC Vo

#### (2) Adjust

1) Steps

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3) Adjust

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#### 3. Error r

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#### Méthode

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CD.

#### Réglage

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## 2. Tracking Servo Offset Adjustment

### (1) Instrument to be used

DC Voltmeter

### (2) Adjustment Procedure

- 1) Steps 1 is post adjustment procedures.
- 2) While in the "Stop" mode, connect the DC voltmeter to TP. 3 (TER) and TP.1 (GND). (Fig. 35).
- 3) Adjust VR902 so that the DC voltmeter indicates  $+ 20 \text{ mV} \pm 2 \text{ mV}$ .

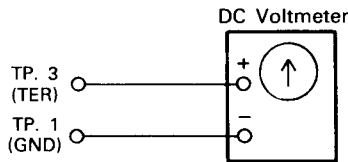


Fig. 35

## 3. Error rate check

Put the error rate measurement disc into the PLAY mode, connect the frequency counter to TP. 5 (TC 1) and TP. 1 (GND), and measure the error rate. Measurement scale is Hz/sec.

**Note)** Carry out error rate check after confirming that the counter value is 7.35 kHz when the unit is in the STOP mode.

## 4. Inspecting the Actuator (Fig. 41a)

Check the resistance of the Actuator Coils. If the values are as follows the condition is normal:

Focus Coil ..... 30Ω (Ohms)  
 Tracking Coil ..... 10Ω (Ohms)

If any coil is open or short circuited, the actuator may be defective. Check that the lens moves with a 1.5V dry cell.

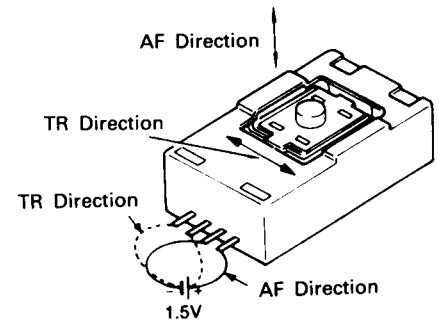
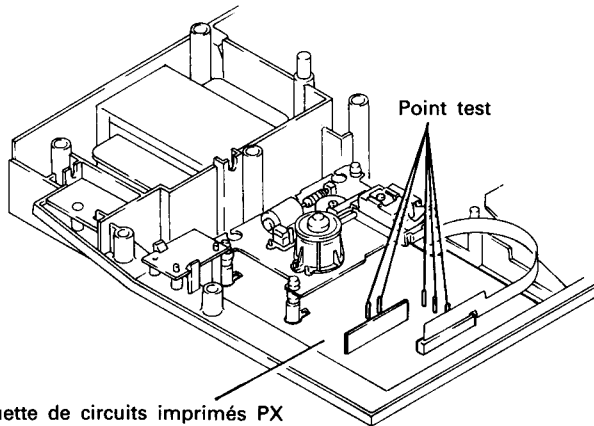


Fig. 36

## SECTION LECTEUR CD

Lors des réglages de la plaquette de circuits imprimés PX, enlever la plaquette de circuits imprimés de clés et, après avoir branché un calibre de réglage sur le point test (se référer à Démontage Fig. 7), placer un disque dans l'unité et effectuer les réglages ensuite.



Plaquette de circuits imprimés PX

Fig. 37

### Méthode de réglage

Lorsqu'une quelconque des opérations ci-dessous est effectuée, veiller à faire les réglages de circuit décrits aux sections 1-3 ci-dessous.

- (1) Remplacement et démontage des pièces de l'ensemble du mécanisme de l'unité.
- (2) Remplacement des pièces dans l'unité de tête de lecture.
- (3) Remplacement des pièces dans le circuit d'alimentation CD.

### Réglage du circuit du lecteur CD

**Note:** Si le réglage est fait après le remplacement des pièces de l'unité de tête de lecture, pré-régler la résistance variable comme indiqué sur la table ci-dessous.

### ●Préréglage

Réglage	Numéro du circuit	Position de pré-réglage
Sortie de diode laser	VR901	Centre
Décentrage de servo de lecture de piste	VR902	Centre

Les réglages doivent être effectués dans l'ordre suivant.

Plaquette de circuit imprimés PX

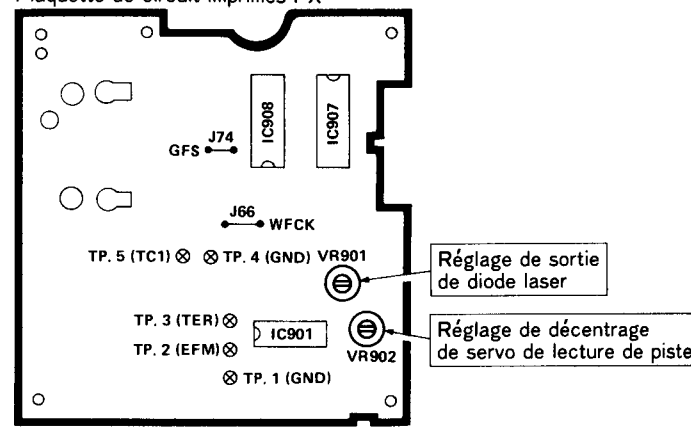


Fig. 38

### Précautions pour le fonctionnement CD

Mettre hors tension l'unité CD du MX-W50, sauf pour la fonction CD (néanmoins, le IC 907 reste sous tension). Il vous faut donc effectuer les opérations suivantes lorsque vous réglez séparément la plaquette de circuits imprimés PX.

**LUBRICATION**

Apply one or  
rotating parts  
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Do not let o

**MAINTENANCE**

■ Clean cab  
Clean off dirt  
thinners, be  
surface finish

**LUBRICATION**

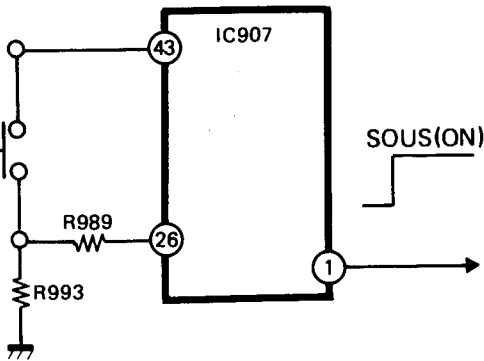
Appliquer un  
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Molycoat (E  
sants.  
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Veiller à ne  
galets.

**ENTRETIEN**

■ Nettoyage  
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● Check  
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and th  
etc. w  
check  
more.



**Fig. 39**

Placer l'interrupteur de mise sous(ON)/hors(OFF) tension sur sous(ON).

La commande de mise sous(ON) tension CD provient de la broche ① de IC 907 lors de la mise sous(ON) tension.

**1. Réglage de sortie de diode laser**

**Remarque:** De pas faire ce réglage sauf lorsque les pièces du mécanisme de tête de lecture, du circuit laser ou du circuit d'alimentation CD ont été remplacées.

**(1) Instrument à utiliser**

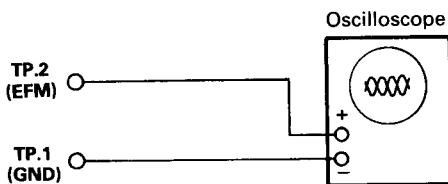
Oscilloscope

**(2) Procédure de réglage**

- 1) Brancher l'oscilloscope sur TP. 2 (EFM) et TP. 1 (GND) (Fig. 40).
- 2) Mettre un disque dans le lecteur, bride de fixation, mettre le commutateur laser, ouvrir/fermer sur "sous(ON)" et faire une lecture d'un signal EFM à l'aide de l'oscilloscope.

**Remarque:** Lorsque le commutateur laser, ouvrir/fermer est sur "sous(ON)", ne jamais regarder dans la lentille, C'est très dangereux.

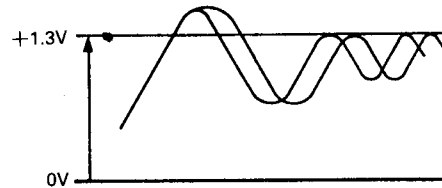
**Comment lire la forme d'onde du signal EFM et comment brancher l'oscilloscope**



**Fig. 40**

- 3) Régler VR901 de façon à ce que l'amplitude du signal EFM de l'oscilloscope atteigne un niveau de  $1,3\text{ V} \pm 40\text{ mV}$ .

**Remarque:** Néanmoins, si le niveau de signal est dans la plage de  $1,1\text{ V} - 1,5\text{ V}$ , c'est normal et aucun autre réglage ne s'impose.



**Fig. 41**

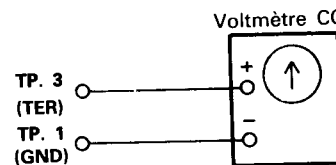
**2. Réglage du décalage du servo de lecture de piste**

**(1) Instrument à utiliser**

Voltmètre CC

**(2) Procédure de réglage**

- 1) La étape de réglage 1 s'effectue après le réglage.
- 2) Tout en étant en mode "arrêt", brancher le voltmètre CC sur TP. 3 (TER) et TP. 1 (GND). (Fig. 42).
- 3) Régler VR902 de façon à ce que le voltmètre CC indique  $+20\text{ mV} \pm 2\text{ mV}$ .



**Fig. 42**

**3. Vérification du taux d'erreur**

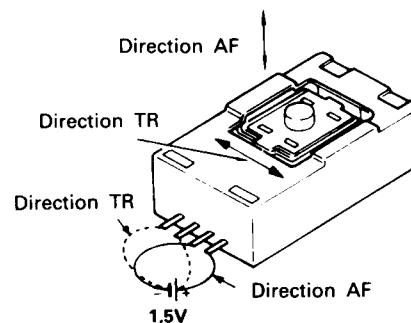
Mettre le disque de mesure de taux d'erreur sur le mode de lecture (PLAY), brancher le fréquencesmètre sur TP. 5 (TC 1) et le TP. 1 (GND) et mesurer le taux d'erreur. L'échelle de mesure est en Hz/sec.

**Remarque:** Effectuer la vérification du taux d'erreur après avoir confirmé que la valeur du compteur est de 7,53 kHz lorsque l'appareil est en mode d'arrêt (STOP).

**4. Vérification de l'actionneur (Fig. 41b)**

Vérifier le niveau de résistance des bobines de l'actionneur. Si les valeurs sont comme indiqué ci-dessous, le fonctionnement est correct.

- Bobine de focalisation ..... 30 (ohms)
  - Bobine de lecture de piste ..... 10 (ohms)
- Si une bobine quelconque est, il se peut que l'actionneur soit défectueux. Vérifier que la lentille se déplace avec une pile sèche de 1,5 V.



**Fig. 43**



## 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 1000 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	Plastics to plastics	Molycoat (EL-10M)
	Plastics to metal	
Spring vibration prevention		Floyl (GB-TS-1)

## 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.

## LUBRIFICATION

Appliquer une ou deux gouttes d'huile moteur ou d'huile Sonic pour curseur, sur les membres rotatifs. De la graisse Molycoat (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	Entre moulures et moulures	Molycoat (EL-10M)
	Entre moulures et pièces métalliques	
Prévention de vibration de ressort		Floyl (GB-TS-1)

## ENTRETIEN

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

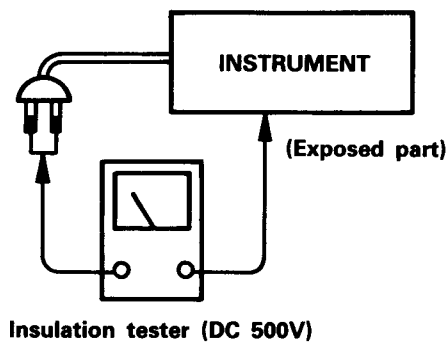
Enlever la poussière des surfaces de l'appareil avec un chiffon sec. Ne jamais utiliser de solvants, de benzine ou d'alcool car ils abîmeraient le fini des surfaces.

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

#### ● Checking method

Power switch is set to ON.

Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.



## EXPLANATION OF NEW CIRCUITS

### CD Voltage Detection Safety Circuit

1. To protect the circuit, the CD voltage detection circuit operates to turn the CD power off whenever the CD voltage is abnormal. If the CD Function is not supplying power to the DC there is a possibility that this safety circuit is operating. Check the voltage at each point with Q872 (2SC1740LN(S)) removed.

This safety circuit operates under either of the following two conditions:

- (1) Whenever Q853 (2SD1913 (Q/R)) emitter voltage (+5V) has gone to +4V -0V.
- (2) Whenever Q856 (2SB1274 (Q/R)) emitter voltage (-5V) has gone to -2.5V -0V.

### 2. Operation of the CD Voltage Detection Safety Circuit

- (1) Voltage normal:  
Q872 is at cut-off, the POWER ON signal (H) is output from Pin 1 of IC907 (CD system microcomputer) and the CD power is on.

(2) Voltage abnormal:

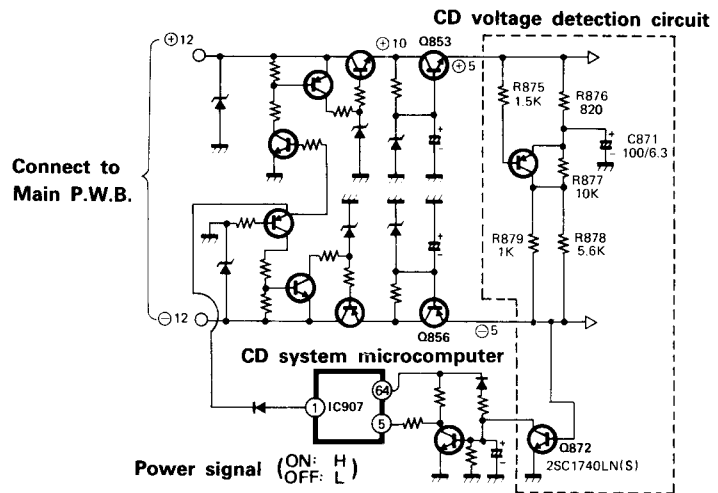
Under the conditions specified in 1-(1), (2), Q872 is bypassed and Q872 goes on.



Pin 5 of IC907 goes H and the CD enters the reset mode.



Pin 1 of IC907 outputs a POWER OFF signal (L) and the CD goes off.



## EXPLICATION DES NOUVEAUX CIRCUITS

### Circuit de sécurité de détection de tension lecteur CD

1. Pour protéger le circuit, le circuit de sécurité de détection de tension lecteur CD coupe l'alimentation CD chaque fois que la tension lecteur CD est anormale. Si la fonction CD n'alimente pas le lecteur CD, il est possible que ce circuit de sécurité soit activé. Vérifier la tension en chaque point après avoir retiré le Q872 (2SC1740LN(S)). Ce circuit de sécurité fonctionne dans l'une des deux conditions suivantes:

- (1) Lorsque la tension de Q853 (2SD1913(Q/R)) l'émetteur (+5V) est comprise entre +4V -0V.
- (2) Lorsque la tension de Q856 (2SB1274 (Q/R)) l'émetteur (-5V) est comprise entre -2.5V -0V.

### 2. Fonctionnement du circuit de sécurité de détection de tension lecteur CD

- (1) Tension normale:  
Q872 est hors circuit, un signal SOUS TENSION (H) est transmis par la broche 1 de IC907 (micro ordinateur du système CD) et le lecteur CD est mis sous tension.

(2) Tension anormale:

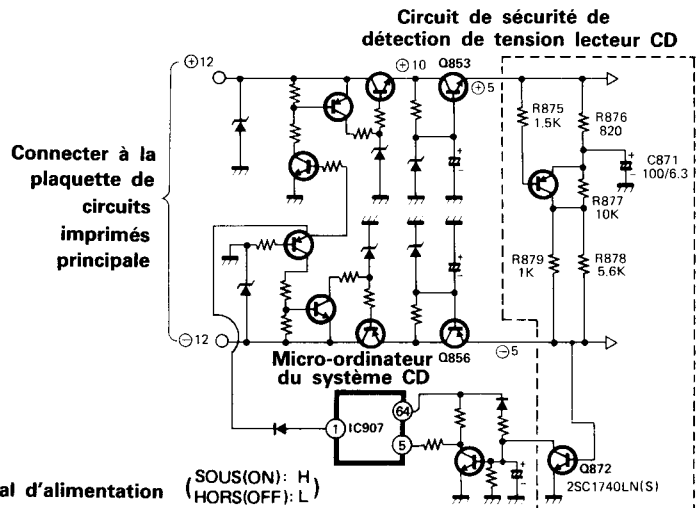
Dans les conditions spécifiées en 1-(1), (2), Q872 est découplés et Q872 se met en circuit.



La broche 5 de IC907 devient H et le lecteur CD se met en mode de remise à l'état initial.



La broche 1 de IC907 transmet un signal HORS TENSION (L) et le lecteur CD se met hors tension.



## EXPLANATION OF NEW PARTS OF CD UNIT

1), (2), Q872 is

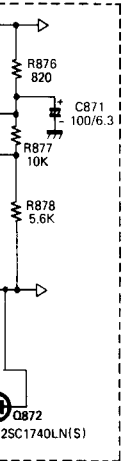
1. The parts indicated in the following table are used in compact disc players already on the market. Refer to the service manuals of the respective models.

Circuit No.	Part No.	Function Name	Service Manual No.
IC901	BA6352S	Pre-amp IC	DA-6000 (TY No. 517)
IC905	HD49201A	Signal processing	DA-6000 (TY No. 517) ※Same as IC201 (MSM6284)
IC851	HA12096	DA converter	DA-6000 (TY No. 517)
IC908	HD61404SF54	Mechanism control microcomputer	DA-006 (TY No. 556)
IC903	TM5060C	Servo IC	MX-W30 (TY No. 552)
IC907	μ PD7516HCW-317	CD system microcomputer	DA-58 (TY No. 573)

enters the reset

signal (L) and

detection circuit



2. Refer to DA-6000 service manual (TY No. 517) for the interface/signal timing.

## EXPLICATION DES NOUVELLES PIÈCES DU LECTEUR CD

, (2), Q872 est

1. Les pièces indiquées au tableau ci-dessous sont utilisées sur les lecteurs de disques compacts déjà sur le marché. Voir le manuel d'entretien du lecteur concerné.

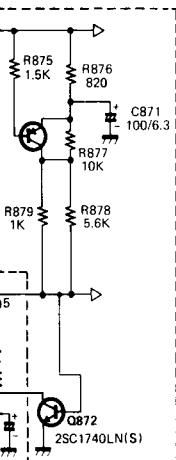
N° de circuit	N° de pièce	Désignation de la fonction	N° du manuel d'entretien
IC901	BA6352S	IC pré-ampli	DA-6000 (TY No. 517)
IC905	HD49201A	Traitement des signaux	DA-6000 (TY No. 517) ※Identique à IC201 (MSM 6284)
IC851	HA12096	Convertisseur NA	DA-6000 (TY No. 517)
IC908	HD61404SF54	Micro-ordinateur de commande du mécanisme	DA-006 (TY No. 556)
IC903	TM5060C	IC servo	MX-W30 (TY No. 552)
IC907	μ PD7516HCW-317	Micro-ordinateur du système CD	DA-58 (TY No. 573)

lecteur CD se  
ial.

signal HORS

hors tension.

sécurité de  
tension lecteur CD



2. Voir le manuel d'entretien du DA-6000 (TY N° 517) pour la synchronisation signal/interface.

**DIFFERENCE FOR DESTINATION (for MAIN P.W.B.)**  
**DIFFÉRENCE EN FONCTION DV PAYS DE**  
**DESTINATION (pour la plaquette principale)**

(for CIF)

☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
C102—C106	—	—	—	—	USE	—	—	—
C153	USE	USE	USE	—	—	—	—	—
C155	USE	USE	USE	—	—	—	—	—
C157, 158	USE	USE	USE	—	—	—	—	—
C160, 161	USE	USE	USE	—	—	—	—	—
C222	—	USE	—	—	USE	—	—	—
C319, 320	USE	USE	USE	—	—	—	—	—
C322LR	—	USE	—	—	—	—	—	—
C325	USE	USE	USE	—	—	—	—	—
C514—517	—	—	—	—	USE	—	—	—
C518LR	—	—	—	—	USE	—	—	—
C712LR	—	—	USE	—	—	—	—	—
C723LR, 724	—	—	—	—	USE	—	—	—
C755LR	—	—	—	—	USE	—	—	—
C833—842	—	—	—	—	USE	—	—	—
R001	—	—	—	—	—	—	USE	—
R103—108	—	—	—	—	USE	—	—	—
R110	USE	USE	USE	USE	—	USE	USE	USE
R153—156	USE	USE	USE	—	—	—	—	—
R233	—	USE	—	—	USE	—	—	—
R310, 311	USE	USE	USE	—	—	—	—	—
R318, 319	USE	USE	USE	—	—	—	—	—
R320, 321	USE	USE	USE	—	—	—	—	—
R323, 324	USE	USE	USE	—	—	—	—	—
R326LR	—	USE	—	—	—	—	—	—
Q101, 102	—	—	—	—	USE	—	—	—
Q151, 152	USE	USE	USE	—	—	—	—	—
Q302, 303	USE	USE	USE	—	—	—	—	—
Q307, 308	USE	USE	USE	—	—	—	—	—
D103, 104	—	—	—	—	USE	—	—	—
D105, 106	USE	USE	USE	—	—	—	—	—
D154—157	USE	USE	USE	—	—	—	—	—
D365	—	—	—	—	—	—	USE	—
D366	USE	USE	USE	USE	USE	USE	—	—
D367	USE	USE	USE	—	—	—	—	—
L101	USE	USE	USE	USE	—	USE	USE	USE
L153, 154	USE	USE	USE	—	—	—	—	—
CP101, 201	—	USE	—	—	USE	—	—	—
CP301LR	—	USE	—	—	—	—	—	—
MF203	—	—	—	—	USE	—	—	—
S501	—	—	—	—	—	—	—	USE
US pin cord	—	—	—	—	USE	—	—	—
Jumper ①	USE	—	USE	USE	—	USE	USE	USE
Jumper ⑦	—	—	—	USE	USE	USE	USE	USE
Jumper ③, ④, ⑤	—	—	—	—	USE	—	—	—
Jumper ②	USE	USE	USE	—	—	—	—	—
Jumper ⑩	USE	USE	USE	USE	—	USE	USE	USE
Jumper ⑬, ⑭	—	—	—	USE	USE	USE	USE	USE
Jumper ⑯	USE	USE	USE	—	—	—	—	—
Jumper ⑰	USE	USE	USE	—	—	—	—	—
Jumper ⑰	USE	USE	USE	—	—	—	—	—
Jumper ⑳	USE	USE	USE	—	—	—	—	—
Jumper ㉑	USE	USE	USE	—	—	—	—	—
Jumper ㉒	USE	USE	USE	—	—	—	—	—
Jumper ㉓	USE	—	USE	USE	—	USE	USE	USE
Jumper ㉔, ㉕	USE	—	USE	USE	USE	USE	USE	USE
Jumper ㉖, ㉗	USE	USE	—	USE	USE	USE	USE	USE

☆No.
C102
C103
C104
C105
C106
C152
C153
C155
C157
C158
C159
C160
C161
C222
C309LR
C319
C320
C321
C322LR
C325
C501LR
C503LR
C514
C515
C516
C517
C518LR
C711LR
C712LR
C723LR
C724
C755LR
C833
C834
C835, 836
C837, 838, 839, 840
C841
C842
R001
R103
R104
R105
R106
R107
R108
R110
R153
R154
R155
R156
R157
R214
R219

(for CIRCUIT DIAGRAM) (pour le schéma des circuits)

EW	☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
—	C102	—	—	—	—	0.022 μ F	—	—	—
—	C103	—	—	—	—	0.22 μ F/50V	—	—	—
—	C104	—	—	—	—	0.22 μ F/50V	—	—	—
—	C105	—	—	—	—	39PF	—	—	—
—	C106	—	—	—	—	39PF	—	—	—
—	C152	5.6PF(CH)	5.6PF(CH)	5.6PF(CH)	8.2PF(CH)	8.2PF(CH)	8.2PF(CH)	3.9PF(CH)	3.9PF(CH)
—	C153	33PF(CH)	33PF(CH)	33PF(CH)	—	—	—	—	—
—	C155	0.022 μ F	0.022 μ F	0.022 μ F	—	—	—	—	—
—	C157	270PF	270PF	270PF	—	—	—	—	—
—	C158	120PF(CH)	120PF(CH)	120PF(CH)	—	—	—	—	—
—	C159	18PF(CH)	18PF(CH)	18PF(CH)	22PF(CH)	22PF(CH)	22PF(CH)	18PF(CH)	18PF(CH)
—	C160	1 μ F/50V	1 μ F/50V	1 μ F/50V	—	—	—	—	—
—	C161	0.022 μ F	0.022 μ F	0.022 μ F	—	—	—	—	—
—	C222	—	10 μ F/16V	—	—	10 μ F/16V	—	—	—
—	C309LR	0.012 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.018 μ F	0.012 μ F
—	C319	1 μ F/50V	1 μ F/50V	1 μ F/50V	—	—	—	—	—
—	C320	0.22 μ F/50V	0.22 μ F/50V	0.22 μ F/50V	—	—	—	—	—
USE	C321	0.022 μ F	0.022 μ F	0.022 μ F	0.022 μ F	0.033 μ F	0.022 μ F	0.022 μ F	0.022 μ F
—	C322LR	—	3.3 μ F/50V	—	—	—	—	—	—
—	C325	1000P	1000P	1000P	—	—	—	—	—
—	C501LR	150PF	150PF	150PF	150PF	2200PF	150PF	150PF	150PF
—	C503LR	100FP	100PF	100FP	100PF	470PF	100FP	100PF	100PF
—	C514	—	—	—	—	1000PF	—	—	—
—	C515	—	—	—	—	1000PF	—	—	—
—	C516	—	—	—	—	220PF	—	—	—
—	C517	—	—	—	—	220PF	—	—	—
—	C518LR	—	—	—	—	680PF	—	—	—
—	C711LR	0.047 μ F	0.047 μ F	0.1 μ F	0.047 μ F	0.047 μ F	0.047 μ F	0.047 μ F	0.047 μ F
—	C712LR	—	—	0.1 μ F	—	—	—	—	—
—	C723LR	—	—	—	—	0.01 μ F	—	—	—
—	C724	—	—	—	—	0.01 μ F	—	—	—
—	C755LR	—	—	—	—	1000PF	—	—	—
—	C833	—	—	—	—	0.022 μ F	—	—	—
—	C834	—	—	—	—	0.022 μ F	—	—	—
—	C835, 836	—	—	—	—	0.01 μ F	—	—	—
USE	C837, 838 839, 840	—	—	—	—	0.022 μ F	—	—	—
—	C841	—	—	—	—	0.022 μ F	—	—	—
—	C842	—	—	—	—	0.022 μ F	—	—	—
—	R001	—	—	—	—	—	—	2.7M Ω	—
USE	R103	—	—	—	—	100K Ω	—	—	—
—	R104	—	—	—	—	100 Ω	—	—	—
USE	R105	—	—	—	—	100K Ω	—	—	—
USE	R106	—	—	—	—	10K Ω	—	—	—
—	R107	—	—	—	—	1.2K Ω	—	—	—
—	R108	—	—	—	—	100K Ω	—	—	—
USE	R110	220 Ω	220 Ω	220 Ω	220 Ω	—	220 Ω	220 Ω	220 Ω
USE	R153	220K Ω	220K Ω	220K Ω	—	—	—	—	—
—	R154	2.2K Ω	2.2K Ω	2.2K Ω	—	—	—	—	—
—	R155	4.7K Ω	4.7K Ω	4.7K Ω	—	—	—	—	—
—	R156	10K Ω	10K Ω	10K Ω	—	—	—	—	—
—	R157	1K Ω (1/6W)	1K Ω (1/6W)	1K Ω (1/6W)	1K Ω (1/6W)	1K Ω (1/6W)	1K Ω (1/6W)	1K Ω (1/2W)	1K Ω (1/6W)
USE	R214	10K Ω	10K Ω	10K Ω	10K Ω	10K Ω	10K Ω	22K Ω	10K Ω
USE	R219	33K Ω	33K Ω	33K Ω	33K Ω	33K Ω	33K Ω	15K Ω	33K Ω
USE									

☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
R233	—	47KΩ	—	—	47KΩ	—	—	—
R235	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.5KΩ	1.2KΩ
R310	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R311	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R318	1KΩ	1KΩ	1KΩ	—	—	—	—	—
R319	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R320	6.8KΩ	6.8KΩ	6.8KΩ	—	—	—	—	—
R321	6.8KΩ	6.8KΩ	6.8KΩ	—	—	—	—	—
R323	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R324	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R326LR	—	3.3KΩ	—	—	—	—	—	—
R328LR	1.5KΩ	560Ω	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ
Q101	—	—	—	—	2SC1740	—	—	—
Q102	—	—	—	—	2SK104F	—	—	—
Q151	DTC124ES-T	DTC124ES-T	DTC124ES-T	—	—	—	—	—
Q152	DTC124ES-T	DTC124ES-T	DTC124ES-T	—	—	—	—	—
Q302	2SA933S	2SA933S	2SA933S	—	—	—	—	—
Q303	2SA933S	2SA933S	2SA933S	—	—	—	—	—
Q307	2SC1740	2SC1740	2SC1740	—	—	—	—	—
Q308	2SC1740	2SC1740	2SC1740	—	—	—	—	—
D103	—	—	—	—	1K60R	—	—	—
D104	—	—	—	—	1K60R	—	—	—
D105	1SS254	1SS254	1SS254	—	—	—	—	—
D106	1SS254	1SS254	1SS254	—	—	—	—	—
D154	KV1260	KV1260	KV1260	—	—	—	—	—
D155	1SS254	1SS254	1SS254	—	—	—	—	—
D156	1SS254	1SS254	1SS254	—	—	—	—	—
D157	1SS254	1SS254	1SS254	—	—	—	—	—
D365	—	—	—	—	—	—	1SS254	—
D366	1SS254	1SS254	1SS254	1SS254	1SS254	1SS254	—	—
D367	1SS254	1SS254	1SS254	—	—	—	—	—
L101	USE	USE	USE	USE	—	USE	USE	USE
L153	USE	USE	USE	—	—	—	—	—
L154	USE	USE	USE	—	—	—	—	—
CP101	—	USE	—	—	USE	—	—	—
CP201	—	USE	—	—	USE	—	—	—
CP301LR	—	USE	—	—	—	—	—	—
MF203	—	—	—	—	USE	—	—	—
S501	—	—	—	—	—	—	—	USE
F802	T2A	T2A	T2A	T2A	T2A	T2A	2A-125V	T2A
F803	T2A	T2A	T2A	T2A	T2A	T2A	2A-125V	T2A
Jumper ①	USE	—	USE	USE	—	USE	USE	USE
Jumper ②	USE	USE	USE	—	—	—	—	—
Jumper ③	—	—	—	—	USE	—	—	—
Jumper ④	—	—	—	—	USE	—	—	—
Jumper ⑤	—	—	—	—	USE	—	—	—
Jumper ⑦	—	—	—	USE	USE	USE	USE	USE
Jumper ⑩	USE	USE	USE	USE	—	USE	USE	USE
Jumper ⑬	—	—	—	USE	USE	USE	USE	USE
Jumper ⑭	—	—	—	USE	USE	USE	USE	USE
Jumper ⑯	USE	USE	USE	—	—	—	—	—

☆No.
Jumper
Jumper
Jumper
Jumper
Jumper
Jumper
Jumper

IC IN

IC302 L

PLL SY

(MAIN F

TUNER

IC404 H

DOLBY

(MAIN P

DECK S

IC405 LA

REC AM

(MAIN P

DECK S





## VOLTAGE CHART-TABLEAU DES TENSION

MD101

Pin No	Voltage
1, 2	0
3	11.4
4, 5	0
6	1.8~7.6
7	0
10	0

IC201

Pin No	Voltage
1, 2	2.0
3	2.2
4	2.3
5	3.9
6	2.3
7	0

IC202

Pin No	Voltage
1~3	2.6
4	0
5	8.8
6	8.7
7	8.5
8	4.6
9	3.7
10	2.5
11	5.8
12	3.4
13	0
14	1.3
15	1.6
16,17	0
18	2.6
19	1.6
20	0
21,22	4.1
23,24	0

IC301

Pin No	Voltage
1	7.8
2	1.62
3	1.7
4	2.85
5	3.0
6	11.0
7	0
8	0.3
9	4.1
10, 11	1.65
12	1.48
13~15	1.65
16	0.24

IC302

Pin No	Voltage
1	2.44
2~4	0
7, 8	0
9	0.33
13,14	11.4
17	0.56
18	0
19	2.7
20	5.2
21	1.0
22	<1.0>
23	0
24	2.63

IC351

Pin No	Voltage
33	5.3

IC352

Pin No	Voltage
16	5.2

IC401

Pin No	Voltage
4, 5	4.0
8	3.8
9	(6.8) <0>
10	0
11	9.1
16,17	4.0

FM: MW:( )  
LW: < >

IC402

Pin No	Voltage
7, 8	12.2

IC403

Pin No	Voltage
4	-12.0
8	12.3

IC404

Pin No	Voltage
1	0
2	6.1
3	1.0
4	6.1
5	1.3 *6.1
6, 7	6
8	6.1
11	6.2
12	0.2
15	6.1
16,17	6.0 (0.6) (8.8)
18	6.0
19	6.0
21	6.0
22	12.3

\* NR ON

IC405

Pin No	Voltage
6	5.9
19	5.9

IC501

Pin No	Voltage
1~3	0
4	-11.7
5~7	0
8	12.0

IC551

Pin No	Voltage
7	12.0
8	12.0

IC651

Pin No	Voltage
1~3	0
4	-5.3
5~7	0
8	6.0

IC701

Pin No	Voltage
1	-14.2
2	-14.3
3	0
4	-40.0
5	1.3
6	17.6
7	-42.3
8	-43
9	-43.7
10	0
11	43.0
12	41.2
13	0
14	-43.6
15	-1.3
16	0
17	-12.3
18	-12.2

IC702

Pin No	Voltage
1	3.4
2	2.0
3	0.76
4	0
5	2.4
6~8	0

IC751

Pin No	Voltage
4	-11.8
8	12.0

Q401

	Voltage	
	PLAY	REC
E	0	0
C	0	10.7
B	4.8	0

Circuit No.	Voltage		
	E	C	B
Q151	3.8	3.8	(3.7) <11.4>
Q151	0	0	(0) <11.4>
Q202	8.5 (9.2)	0 (9.1)	11.3 (8.5)
Q203	0	0	11.5 (0)
Q204	0	0	0.75
Q205	0	5.2	C
Q206	1.58	3.7	2.2
Q301	11.6	11.5	10.8
Q302	(12.1)	(12.1)	(11.4)
Q303	<12.0>	<12.0>	<11.2>
Q304	5.3	0 (5.3) <5.3>	5.3
Q305	0.61	1.8~7.6 (1.2~8.5)	1.0
Q306	0	1.8~7.6 (1.2~8.5)	0.61
Q307	0	<1.2~4.8>	<0.62>
Q308	<0.62>	<1.2~4.8>	<1.0>
Q309L, R	1.1	5.7	1.67

FM: MW:( ) LW: &lt; &gt;

Circuit No.	E
Q402	0
Q403	0
Q404	0
Q405	0
Q406L, R	0
Q407L, R	0
Q408	0
Q409L, R	0
Q410	-12
Q411L, R	0
Q412	0 <16.0>
Q413	0 <16.0>
Q414	0.32 <5.7>
Q415	0
Q416	0
Q417	0
Q418L, R	0
Q419	0
Q420	0
Q421	0
Q422	0
Q423	0
Q424	12.3
Q425	0
Q426	0
Q427	0
Q428	0
Q429	0
Q430	0

FM: MW:  
DOLBY NR:

Circuit No.	Voltage		
	E	C	B
Q151	3.8	3.8	(3.7) (11.4)
Q151	0	0	(0) (11.4)
Q202	8.5 (9.2)	0 (9.1)	11.3 (8.5)
Q203	0	0	11.5 (0)
Q204	0	0	0.75
Q205	0	5.2	C
Q206	1.58	3.7	2.2
Q301	11.6	11.5	10.8
Q302	(12.1)	(12.1)	(11.4)
Q303	(12.0)	(12.0)	(11.2)
Q304	5.3	0 (5.3) (5.3)	5.3
Q305	0.61	1.8~7.6 (1.2~8.5)	1.0
Q306	0	1.8~7.6 (1.2~8.5)	0.61
Q307	0	(1.2~4.8)	(0.62)
Q308	(0.62)	(1.2~4.8)	(1.0)
Q309L, R	1.1	5.7	1.67

FM: MW:( ) LW: &lt; &gt;

Circuit No.	Voltage		
	E	C	B
Q402	0	6.8	0
Q403	0	0	6.2
Q404	0	0	11.7
Q405	0	0	4.3
Q406L, R	0	0	0.7
Q407L, R	0	0	4.4
Q408	0	0 (8.8)	4.6
Q409L, R	0	0	-2.8
Q410	-12.0	-0.68	-12.0
Q411L, R	0	0	0
Q412	0 (16.0)	0.4 (5.8)	0.4 (0.2)
Q413	0 (16.0)	0.34 (5.7)	0.34 (0.56)
Q414	0.32 (5.7)	12.3	0 (6.4)
Q415	0	0	12.3
Q416	0	0	0.73
Q417	0	0 (6.3)	4.3 (0)
Q418L, R	0	0	4.4
Q419	0	0	4.6
Q420	0	0	0.65
Q421	0	22.6	0
Q422	0	22.3	0
Q423	0	11.8	0
Q424	12.3	12.3	11.7
Q425	0	0	6.2
Q426	0	5.1	0.5
Q427	0	5.1	0.3
Q428	0	22.0	0
Q429	0	11.7	0
Q430	0	22.0	0

FM: MW:( ) LW: &lt; &gt;

DOLBY NR: 

Circuit No.	Voltage		
	E	C	B
Q431	12.3	12.3	11.7
Q432	0	5.0	0
Q433	0	0	0.7
Q434	0	0	0.6

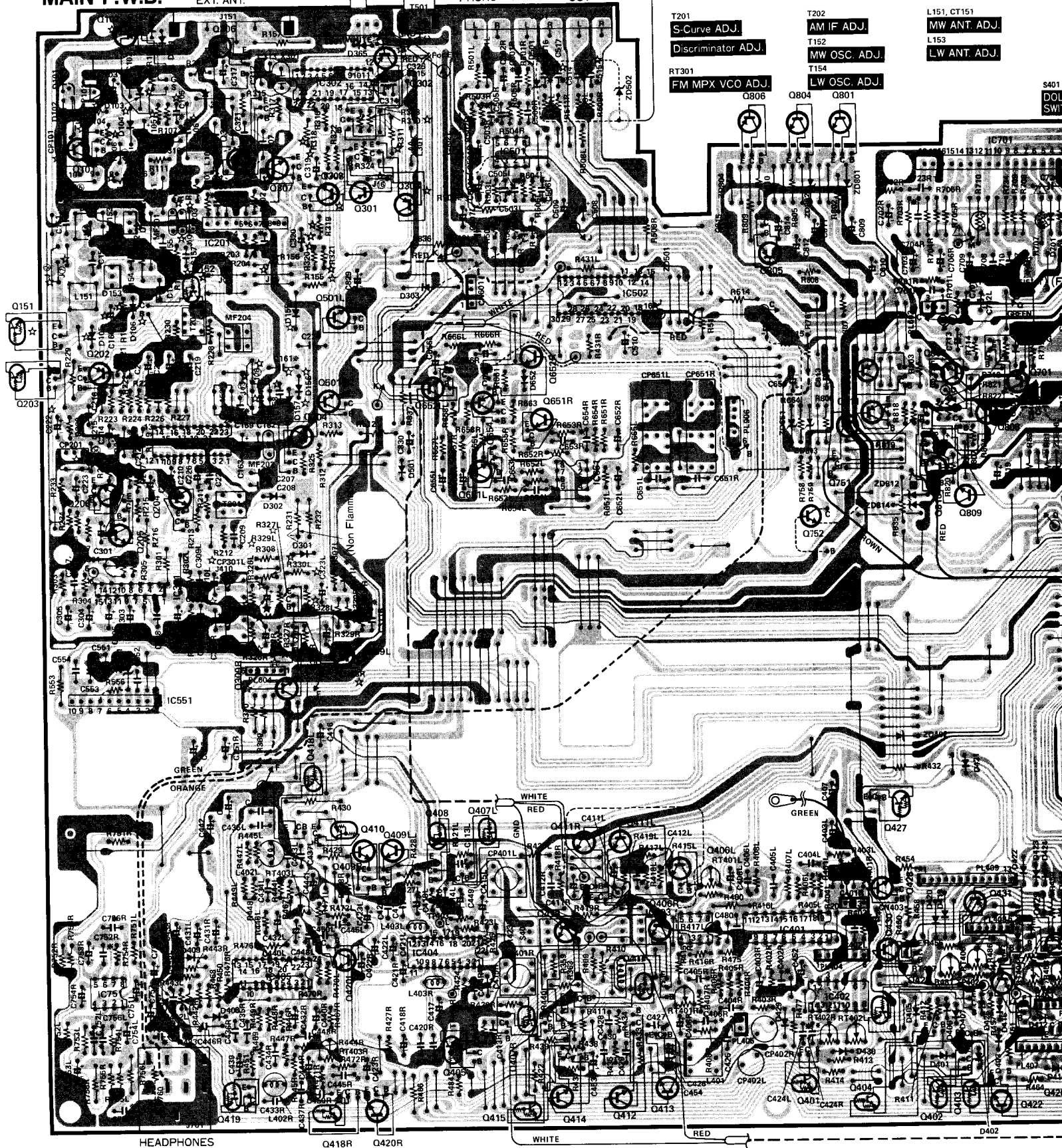
Circuit No.	Voltage		
	E	C	B
Q501L, R	0	0	0.63
Q651L, R	0	0	-4.8
Q652L, R	0	0	0.7
Q654	5.2	3.3	4.5
Q701	6.9	6.9	6.3
Q730L, R	0	0	0
Q751	2.0	2.0	1.5
Q801	12.2	19.0	12.8
Q802	12.2	12.1	11.4
Q803	0	12.0	0.7
Q804	6.0	18.5	6.6
Q805	0	12.8	0
Q806	-11.8	-19.5	-12.5
Q807	12.3	18.7	12.8
Q808	0	6.9	0.3
Q809	0	0	0.65
Q810	0	0.65	0
Q811	12.1	12.0	11.3
Q812	0		0.78
Q813	0	0	

**WIRING BOARD · PLAN DE BASE** (■ : Earth, □ : Others)

The circuit symbol (☆) means difference for destination.  
 Le symbol de circuit (☆) signifie qu'il s'agit des différences.  
 \* : Axial lead cylindrical ceramic capacitor. \* : C

- FM ANT. SOCKET
- FM 75 Ω IN
- GND
- AM LOOP IN
- EXT. ANT.
- S501 SPACING SWITCH
- PHONO AUX
- LINE OUT

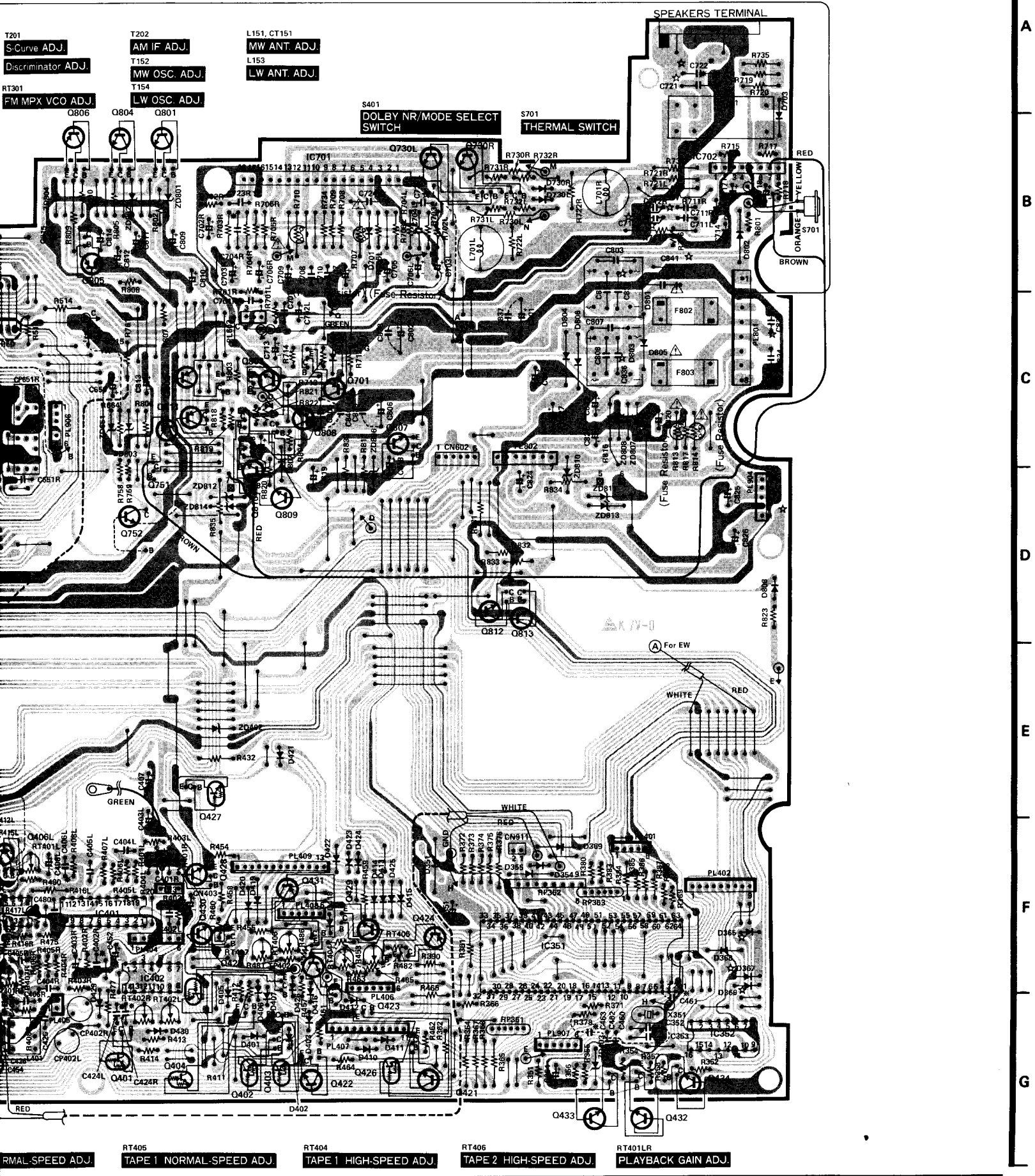
**MAIN P.W.B.**



- T201 S-Curve ADJ.
- Discriminator ADJ.
- RT301 FM MPX VCO ADJ.
- T202 AM IF ADJ.
- T152 MW OSC. ADJ.
- T154 LW OSC. ADJ.
- L151, CT151 MW ANT. ADJ.
- L153 LW ANT. ADJ.
- Q806
- Q804
- Q801
- Q809
- Q752
- Q407
- Q406L
- Q406R
- Q407L
- Q407R
- Q408
- Q409L
- Q409R
- Q410
- Q411
- Q412
- Q413
- Q414
- Q415
- Q418R
- Q420R
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- Q1000

- RT403LR REC/PLAY OUTPUT ADJ.
- RT402LR BIAS CURRENT ADJ.
- RT407 TAPE 2 NORMAL-SPEED ADJ.
- RT405 TAPE 1 NORMAL-SPEED ADJ.
- RT404 TAPE 1 HIGH-SPEED ADJ.

The circuit symbol (☆) means difference for destination. (Refer to the table in page 23.)  
Le symbole de circuit (☆) signifie qu'il s'agit des différences pour destination. (Consulter la table dans la page 23.)  
☆ : Axial lead cylindrical ceramic capacitor. ☆ : Condensateur ceramique a conducteur axial.



- T201 S-Curve ADJ.
- Discriminator ADJ.
- RT301 FM MPX VCO ADJ.
- T202 AM IF ADJ.
- T152 MW OSC. ADJ.
- T154 LW OSC. ADJ.
- L151, CT151 MW ANT. ADJ.
- L153 LW ANT. ADJ.

- S401 DOLBY NR/MODE SELECT SWITCH
- S701 THERMAL SWITCH

- RED
- ORANGE
- BROWN
- YELLOW

- RT405 TAPE 1 NORMAL-SPEED ADJ.
- RT404 TAPE 1 HIGH-SPEED ADJ.
- RT406 TAPE 2 HIGH-SPEED ADJ.
- RT401LR PLAYBACK GAIN ADJ.
- RMAL-SPEED ADJ.

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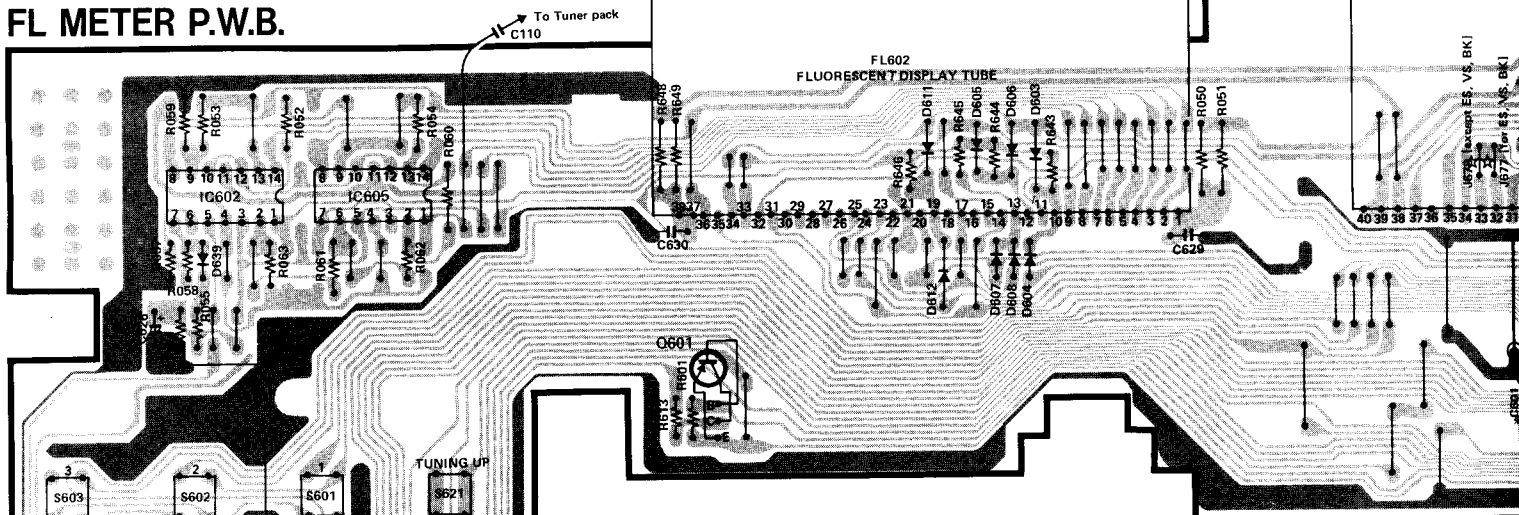
9

A  
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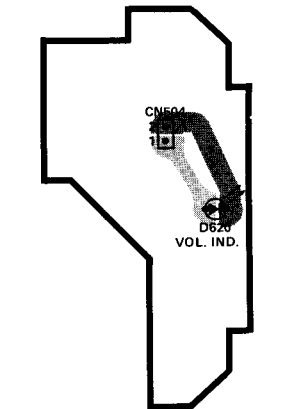
(■ : Earth, ■ : Others)

The circuit symbol (☆) means difference  
Le symbol de circuit (☆) signifie qu'il s'agit  
※ : Axial lead cylindrical ceramic capacitor

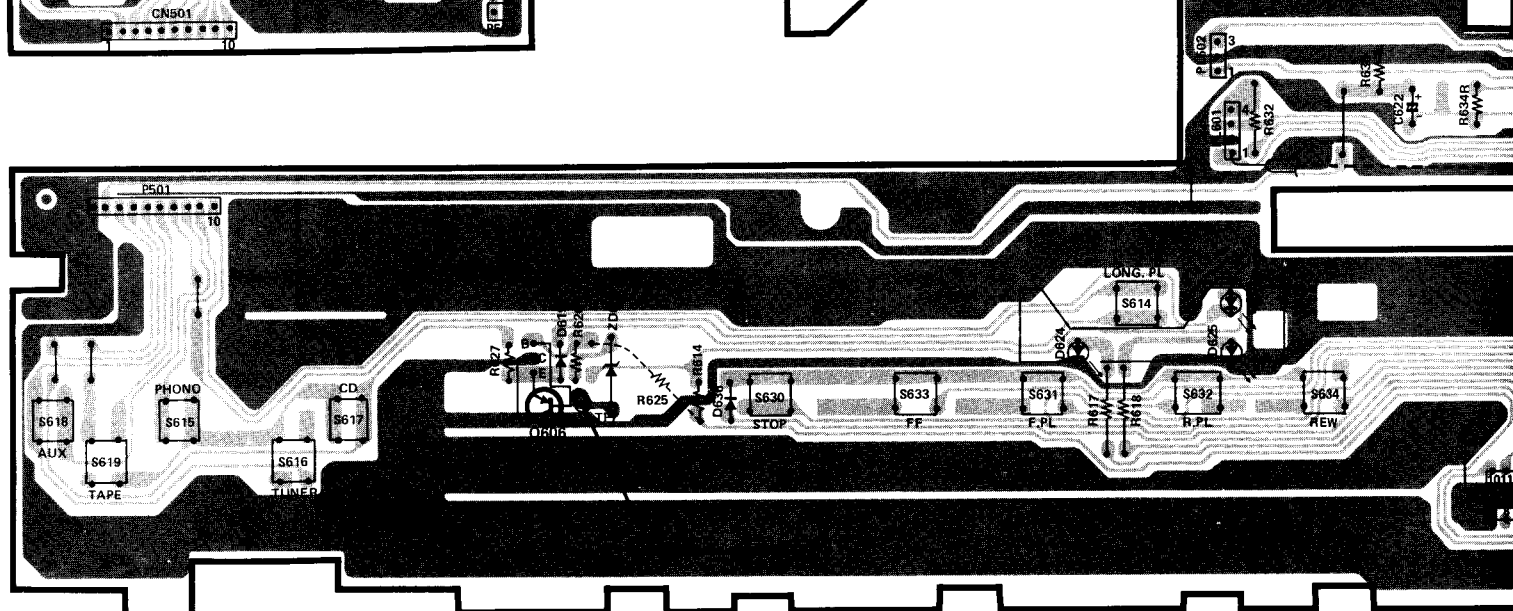
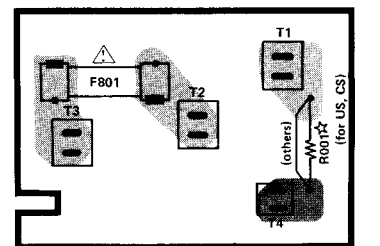
FL METER P.W.B.



INDICATOR P.W.B.



POWER SUPPLY P.W.B.



IC601		IC602, IC605	
Pin No	Voltage	Pin No	Voltage
57	-27	4	5.2
58	-0.7	11	-26.5
64	5.2		

IC603		IC601 ~ FL603	
Pin No	Voltage	Pin No	Voltage
17	5.1	1, 2	-21
18	5.1	24, 25	-21

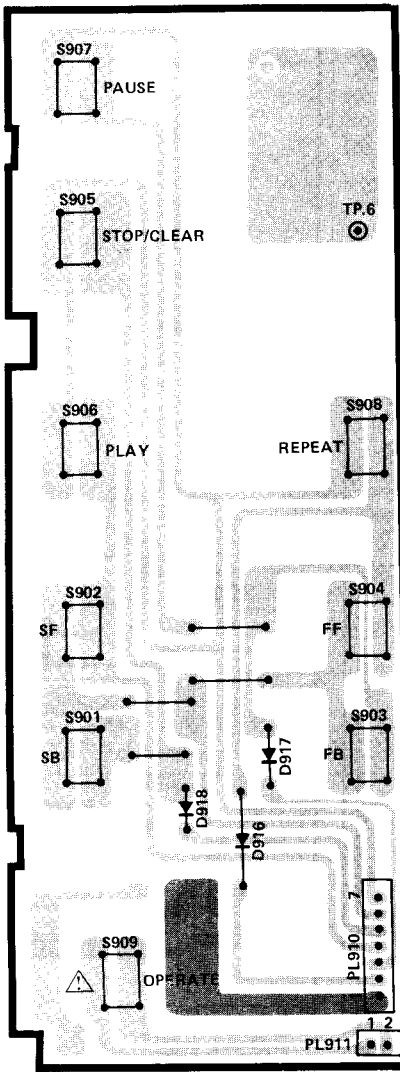
IC604L, R			
Pin No	Voltage	Pin No	Voltage
1	4.2	11	5.3
2, 3	5.3	12-14	4.6
4, 5	4.2	15, 16	5.2
6, 7	5.3	17	8.7
8, 9	4.2	18	0
10	4.6		

Circuit No.	Voltage		
	E	C	B
Q601	5.2	5.2	4.5
Q602	5.3	-25.8	5.2
Q603	0	5.2	0
Q604	0	0	0.66
Q605	5.2	5.3	4.5

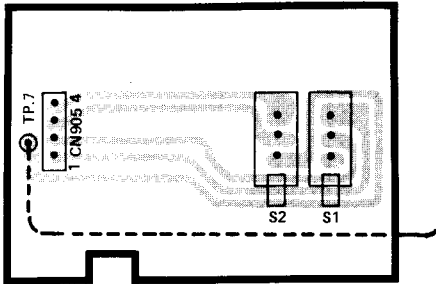




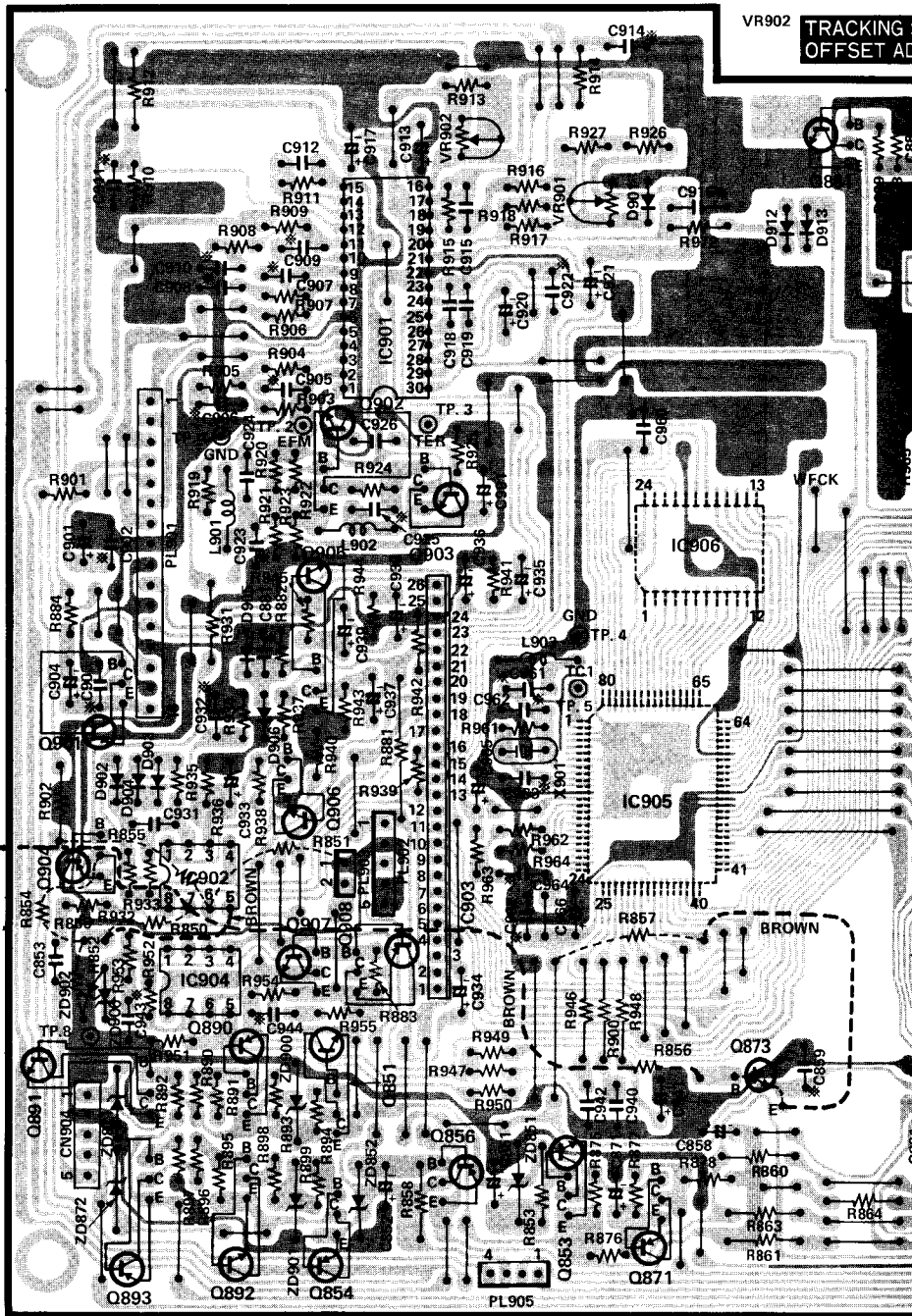
KEY P.W.B.



SWITCH P.W.B.



PX P.W.B.



S1 OPEN/CLOSE SWITCH

S2 LASER SWITCH

Pin No	Voltage
1	5.1
2	0
3, 4	1.9
5, 6	0.9
7	4.1
8	-5.1
9~13	-4.9
14	-3.0
15	0
16	-1.8
17~19	0
20	1.75
21	2.6
22	5.0

Pin No	Voltage
1	4.9
2	-4.8
3	0.23
4~6	0
7	-4.8
8	0
9	1.3
10	0.41
11	1.3
12~14	0
15	-4.8
16	4.9

Pin No	Voltage
1~12	0
13,14	1.8
15	0
16	-5.1
17	4.4
18	0
19	0.4
20	5.1
21	2.4
22	0
23	5.1
24	2.5
25,26	0
27	0.57
28	0.55
29	0.58
30	0

Pin No	Voltage
1	-3.8
2	0.67
3	0.22
4	-5.1
5	-3.5
6	-4.6
7	4.6
8	5.1

Pin No	Voltage
1	8.9
2	0.54
3	0.53
4	-9.1
5, 6	0
7	0.56
8	9.3

Pin No	Voltage
1	5.1
2	-5.1
3	0.6
4	0
5	5.1
6	3.3
7	5.0
8	0.45
9	5.1
10	0
11	3.6
12~17	0
18	-9.2
19	0
20	9.3
21	0
22	0.31
23~26	0

Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	3.5	26~29	0	54	2.2
2~4	5.1	30	3.1	55,56	0.17
5	2.5	31	4.9	57	4.1
6	2.0	32	5.1	58	5.1
7	5.1	33	0.45	59	0
8	0	34	5.0	60	2.7
9	2.1	35	0	61	3.3
10	2.3	36	4.6	62	2.5
11	2.4	37	5.1(0)	63	2.3
12	0	38,39	0	64	2.5
13	2.4	40	4.5	65	1.6
14	2.6	41	5.0	66	3.3
15	0	42	0	67~75	2.5
16	5.1	43	2.6	76,77	2.3
17	2.2	44	5.0	78	3.7
18	2.5	45,46	2.5	79	2.1
19~24	0	47~50	1.3	80	1.3
25	0(5.0)	51~53	0		

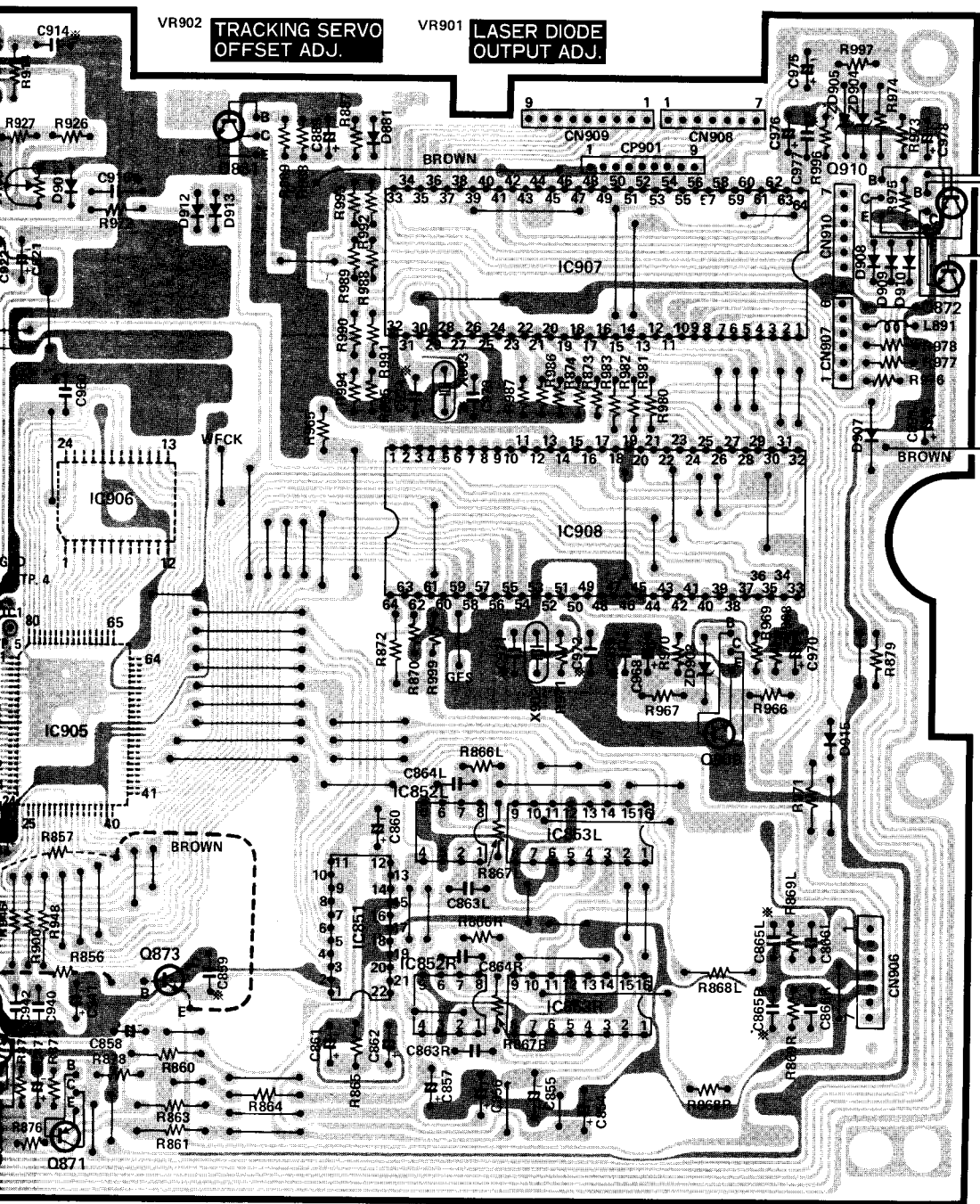
Pin No	Voltage
1~10	2.5
11	1.6
12	0
13	2.9
14	3.3
15	3.2
16	2.4
17	2.5
18	1.3
19	2.1
20	0
21	3.7
22	2.3
23	2.2
24	5.1

Circuit No.
Q851
Q852
Q853
Q854
Q855
Q856
Q857
Q858
Q859
Q860
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Q864
Q865
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Q880
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Q887
Q888
Q889
Q890
Q891
Q892
Q893



al ceramic capacitor.

※ : Condensateur ceramique a conducteur axial.



IC907	
Pin No	Voltage
1	4.3
2	0
3, 4	5.0
5	0
6	2.3
7	0
8~10	5.0
11	5.1
12	5.0
13~15	0
16,17	5.1
18	0
19	5.1
20~24	0
25,26	1.1
27	0
28	1.1
29	0
30,31	2.3
32	0
33	-1.3
34	-21.0
35	-13
36~40	-9.6
41,42	0.9
43	1.0
44	1.3
45~48	0
49~56	-21.0
57	-24.0
58	-4.1
59,60	0
61,62	1.2
63	0
64	5.0

IC908	
Pin No	Voltage
1	0
2	2.2
3	2.3
4	0
5	1.1
13	5.1
18~20	0
21	4.9
22	0
23~25	5.0
26	0
27	2.3
28~30	0
32	5.1
33	2.6
34	5.0
37	5.1
41,42	5.1
45~49	0
50	5.1
51,52	2.2
53	0
54	0.4
55	3.2
56	5.0
58	4.7
59~61	0
62	5.0
63	0
64	4.3

IC906	
Pin No	Voltage
54	2.2
55	0.17
57	4.1
58	5.1
59	0
60	2.7
61	3.3
62	2.5
63	2.3
64	2.5
65	1.6
66	3.3
7~75	2.5
6,77	2.3
78	3.7
79	2.1
80	1.3



IC906	
Pin No	Voltage
1~10	2.5
11	1.6
12	0
13	2.9
14	3.3
15	3.2
16	2.4
17	2.5
18	1.3
19	2.1
20	0
21	3.7
22	2.3
23	2.2
24	5.1

Circuit No.	Voltage		
	E	C	B
Q851	9.3	11.8	9.9
Q853	5.1	9.3	5.7
Q854	-9.2	-11.2	-9.3
Q856	-5.1	-9.2	-5.7
Q871	0	-0.6	5.1
Q872	0	0.7	-0.6
Q881	0	0.9	0
Q890	11.8	11.8	11.1
Q891	0	0	0.71
Q892	-11.2	-11.1	-10.5
Q893	3.6	4.6	2.9

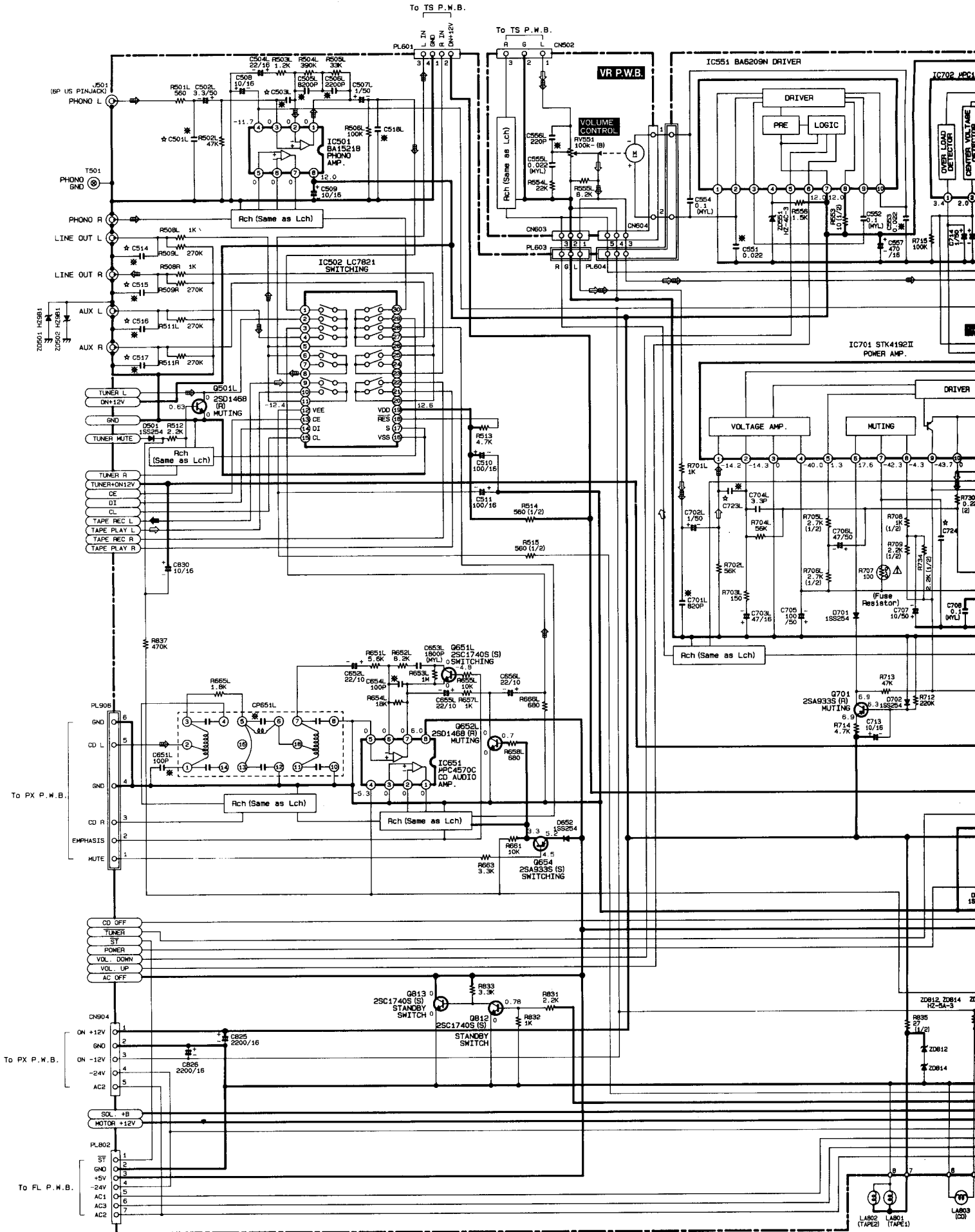
Circuit No.	Voltage		
	E	C	B
Q901	0.5	-9.0	4.4
Q902	1.8	3.3	2.4
Q903	2.6	5.1	3.2
Q904	0.6	-5.1	4.4
Q905	0	0	-3.8
Q906	0	0	-3.8
Q907	-0.7	9.3	0.5
Q908	-0.7	-9.2	0.5
Q909	0	0	0.76
Q910	0	0	0.7

IC852L, R	
Pin No	Voltage
1	0.23
2, 3	0
4	-4.9
5~7	0
8	4.8

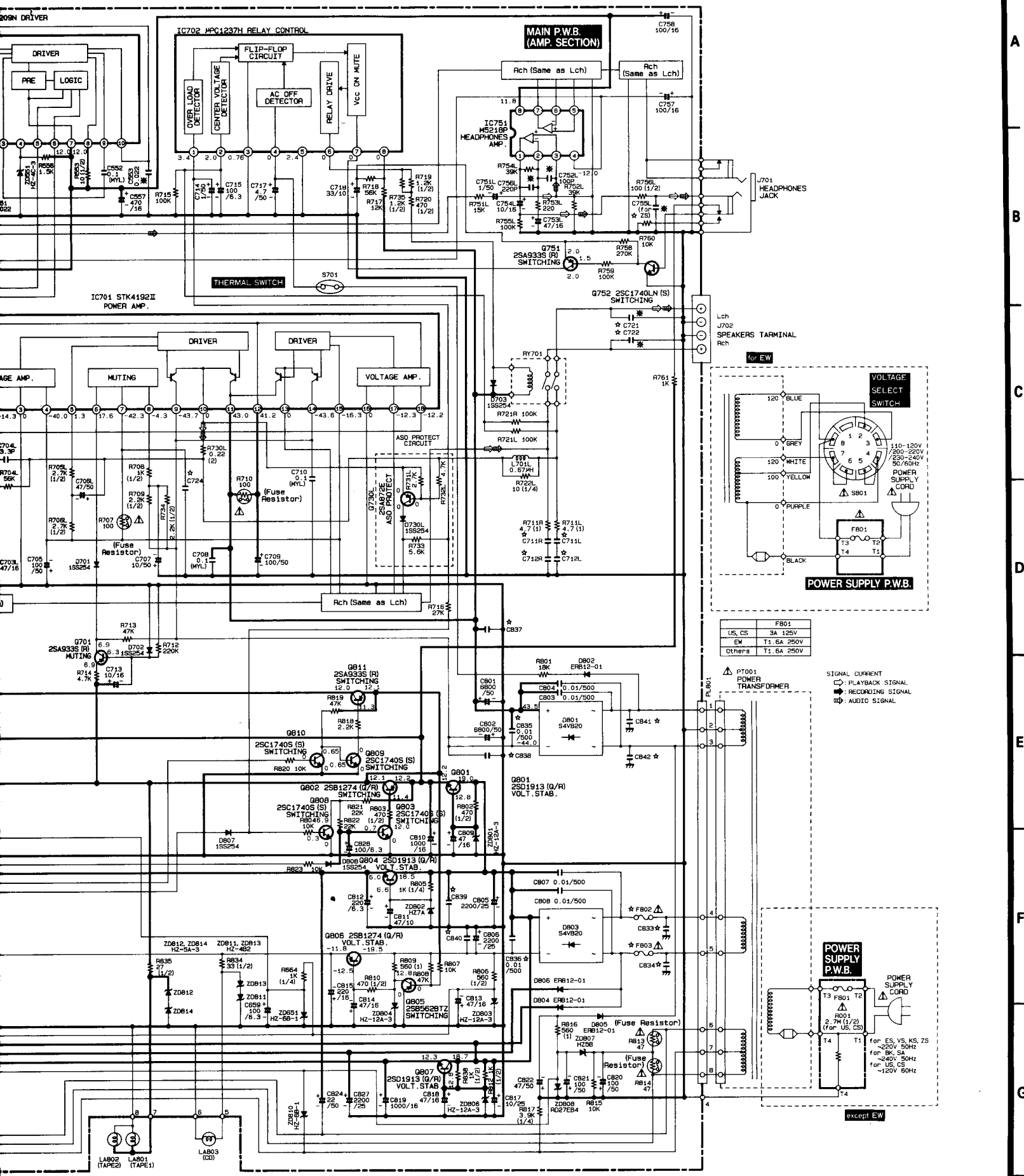
# CIRCUIT DIAGRAM PLAN DE CIRCUIT

(  : + B,  : - B )

The circuit symbol (☆) means difference for destination.  
Le symbol de circuit (☆) signifie qu'il s'agit des différences.  
※ : Axial lead cylindrical ceramic capacitor. ※ :

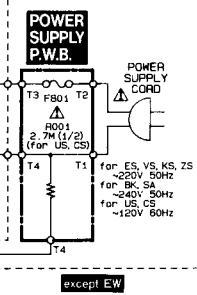


(☆) means difference for destination. (Refer to the table in page 24~26.)  
 (☆) signifie qu'il s'agit de différence pour destination. (Consulter la table dans le page 24~26.)  
 ☆ : Condensateur ceramique a conducteur axial.



US, CS	F801
US, CS	3A 250V
EW	T1 6A 250V
Others	T1 6A 250V

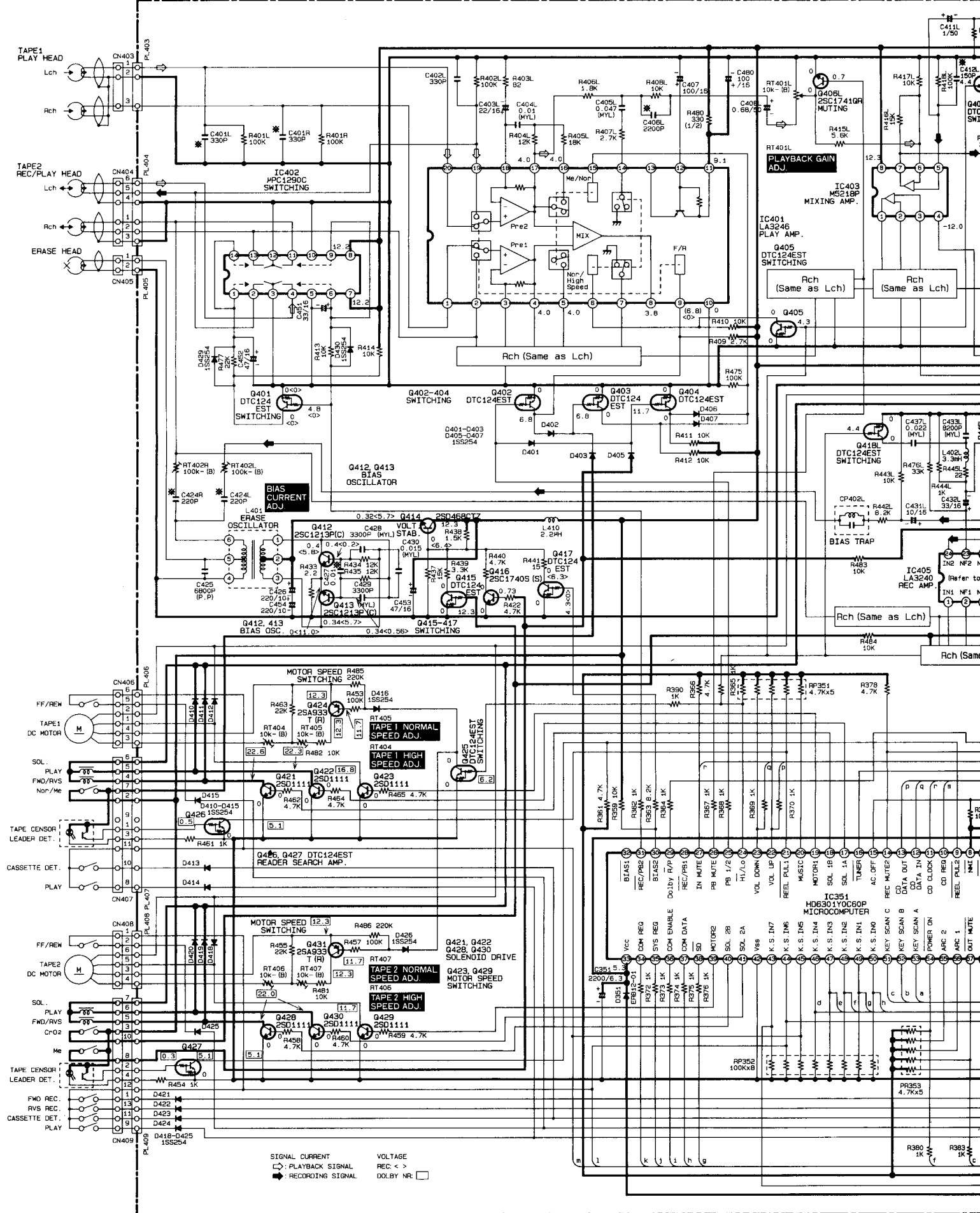
△ P7001 POWER TRANSFORMER  
 ○ SIGNAL CURRENT  
 □ PLAYBACK SIGNAL  
 ● RECORDING SIGNAL  
 ⊕ AUDIO SIGNAL



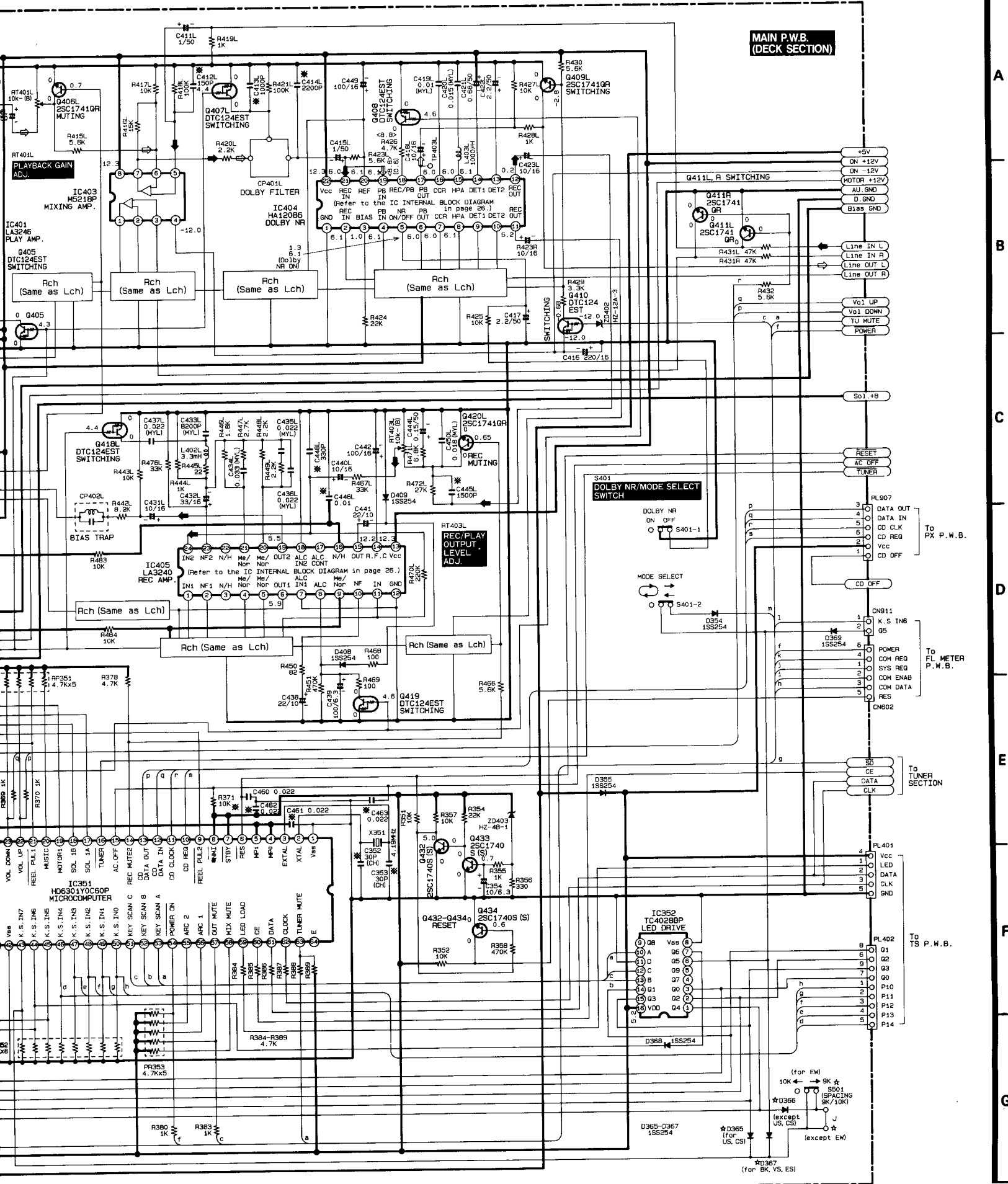
**CIRCUIT DIAGRAM - PLAN DE CIRCUIT**

( : +B, : -B )

The circuit symbol (☆) means difference for destination. (Refer to the tab  
 Le symbol de circuit (☆) signifie qu'il s'agit des différence pour destination.  
 ※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceram



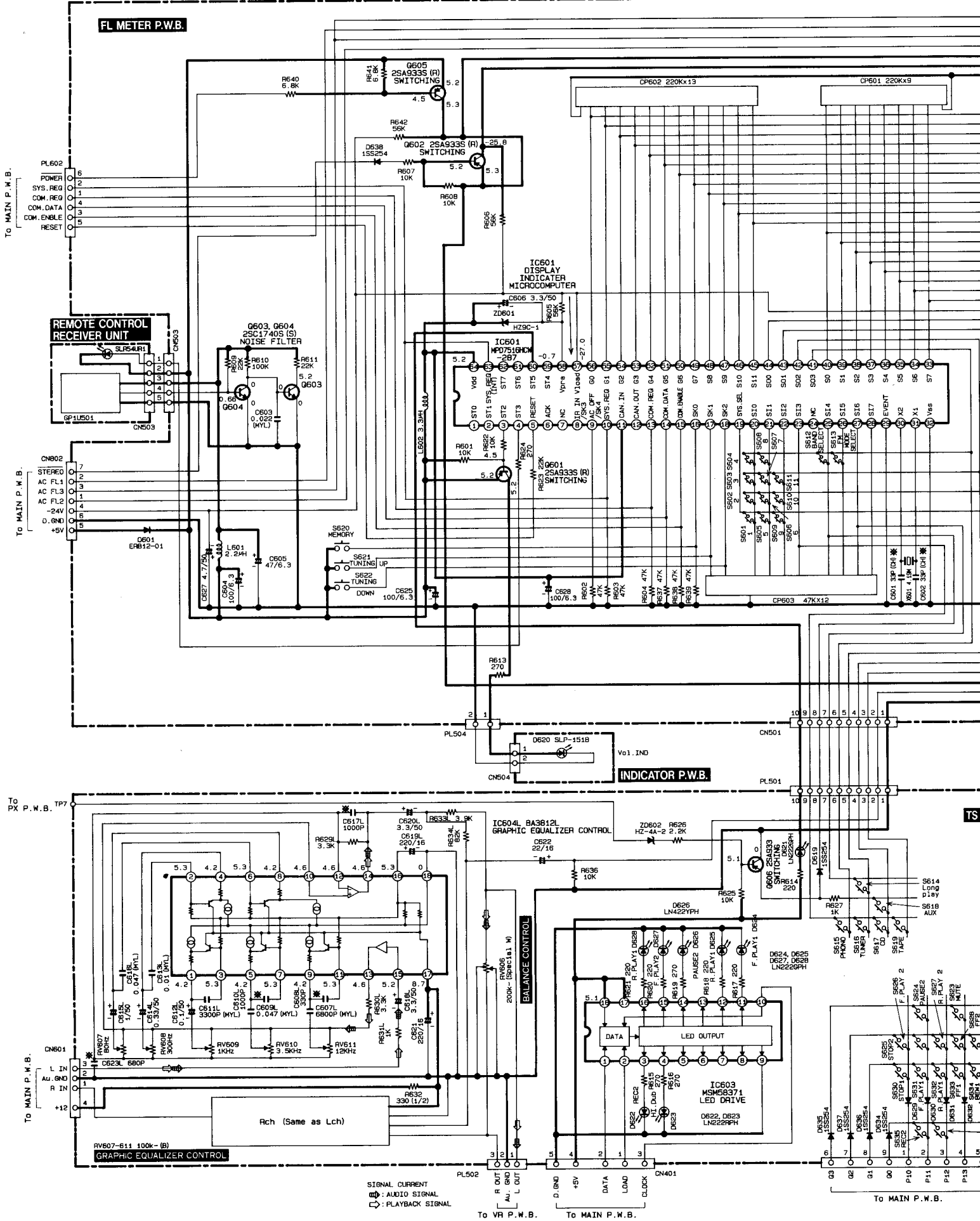
for destination. (Refer to the table in page 24~26.)  
agit des différence pour destination. (Consulter la table dans le page 24~26.)  
tor. ※ : Condensateur ceramique a conducteur axial.



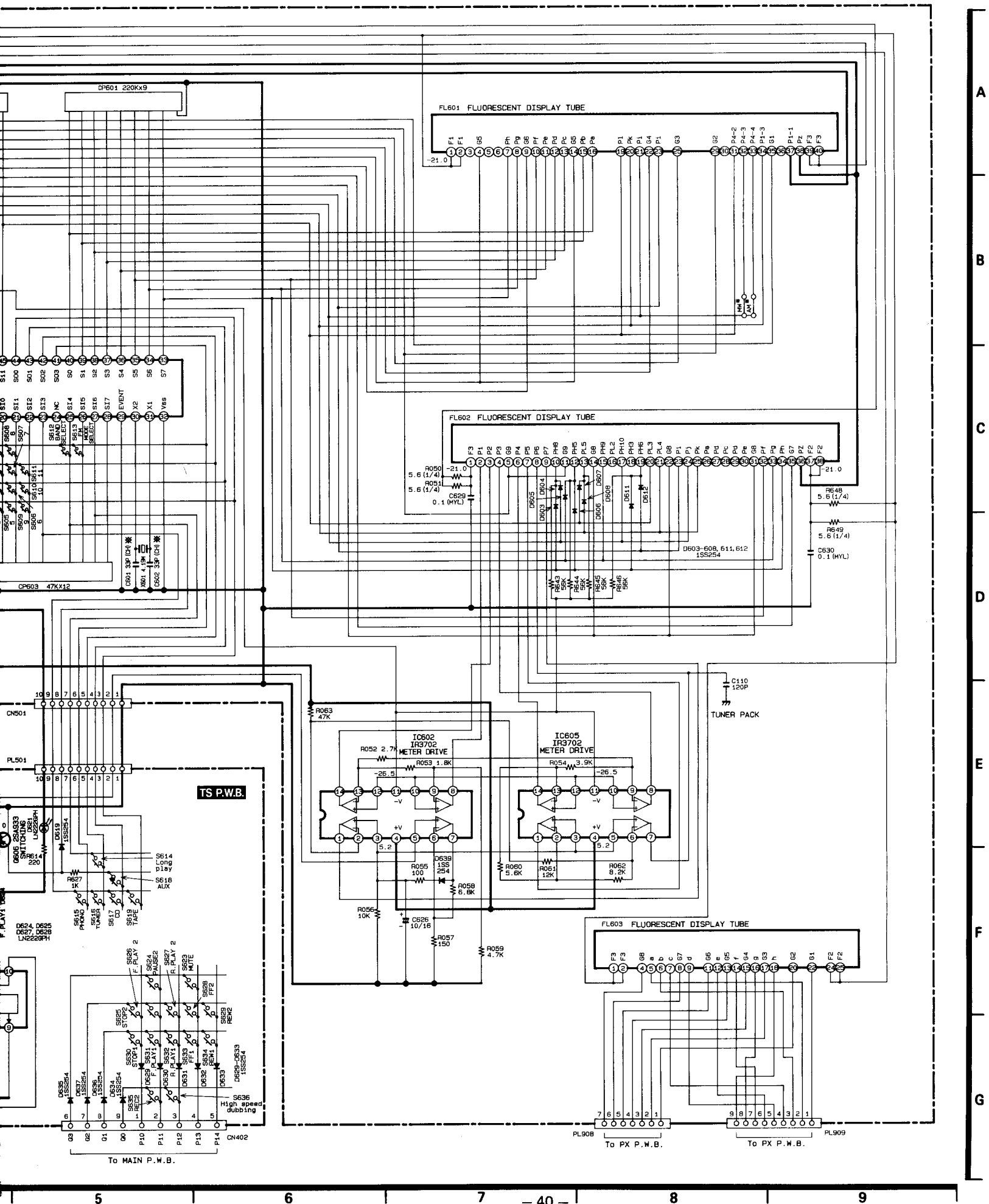
# CIRCUIT DIAGRAM PLAN DE CIRCUIT

(■) : + B, (—) : - B

The circuit symbol (☆) means difference for destination. (F)  
Le symbole de circuit (☆) signifie qu'il s'agit des différence  
※ : Axial lead cylindrical ceramic capacitor. ※ : Cond





means difference for destination. (Refer to the table in page 24~26.)  
 signifie qu'il s'agit des différence pour destination. (Consulter la table dans le page 24~26.)  
 ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.

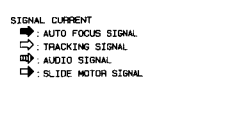
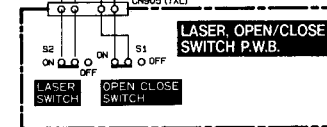
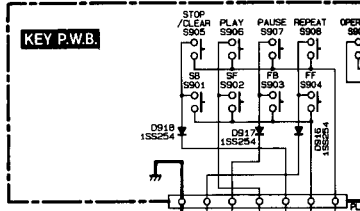
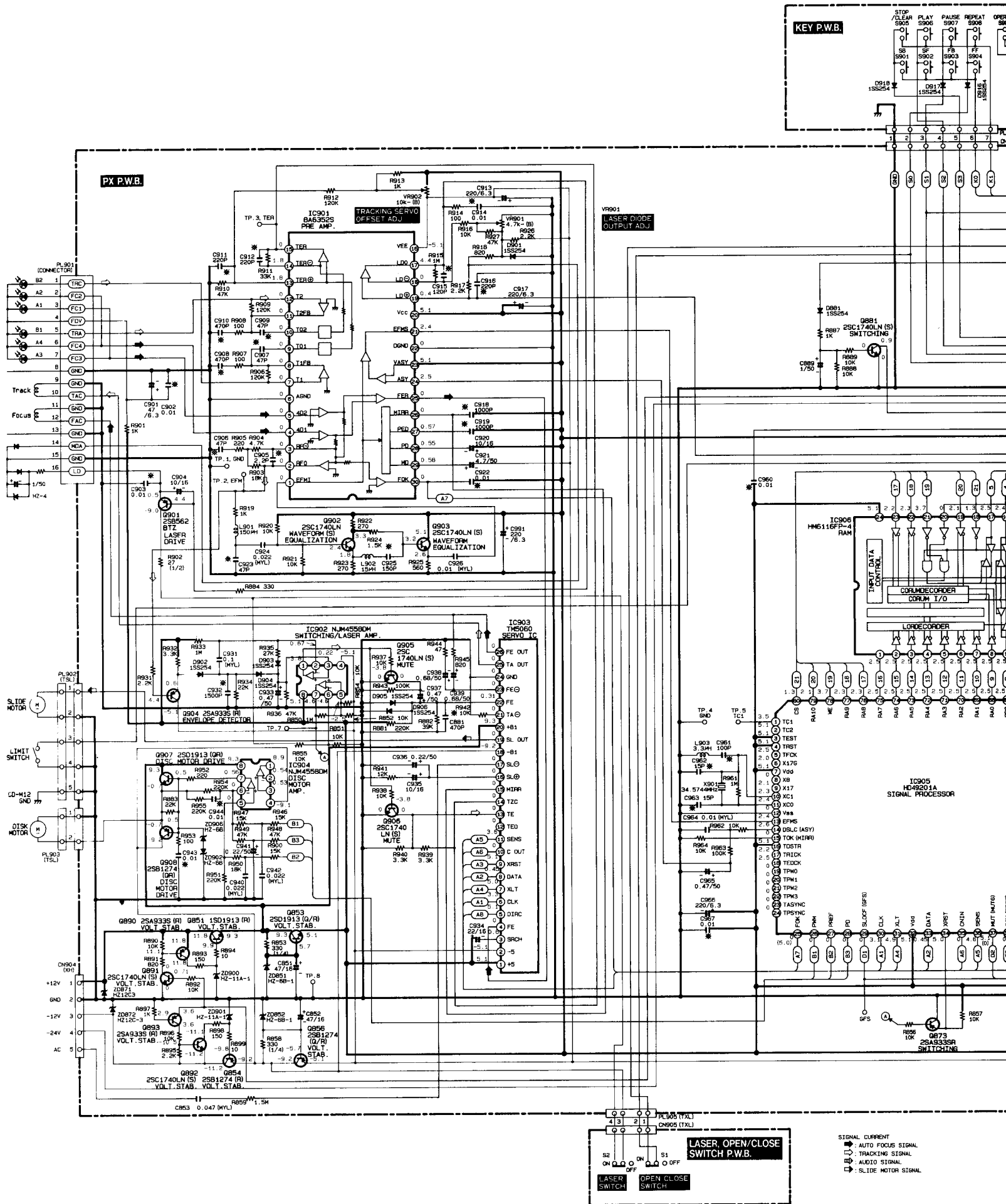


A  
B  
C  
D  
E  
F  
G

# CIRCUIT DIAGRAM PLAN DE CIRCUIT

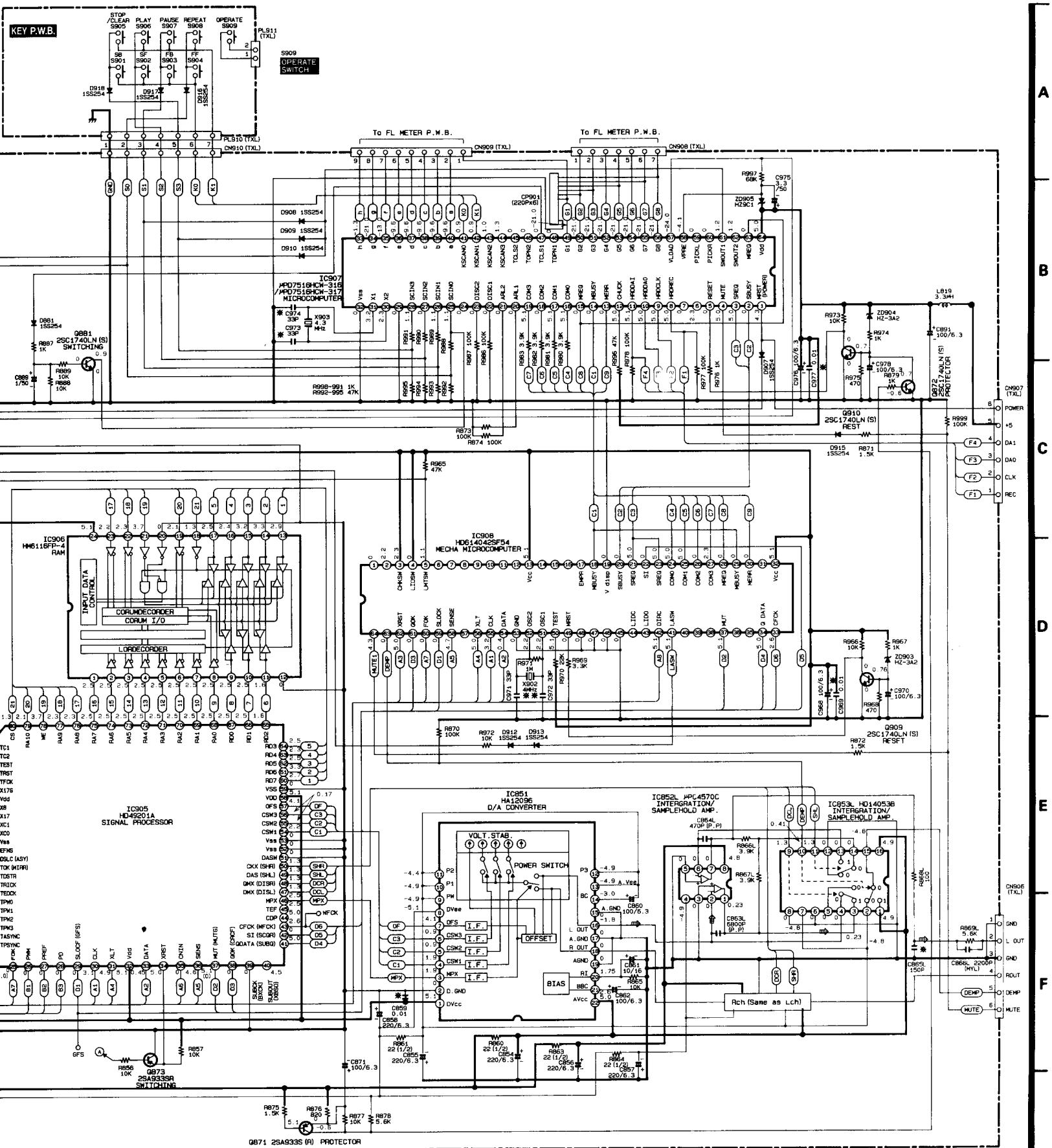
(  : +B,  : -B )

The circuit symbol (☆) means difference for destination. (Refer to the  
Le symbole de circuit (☆) signifie qu'il s'agit des différence pour disti  
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur c





ance for destination. (Refer to the table in page 24~26.)  
 il s'agit des différence pour destination. (Consulter la table dans la page 24~26.)  
 capacitor. ※ : Condensateur ceramique a conducteur axial.



SIGNAL CURRENT  
 [Symbol] AUTO FOCUS SIGNAL  
 [Symbol] TRACKING SIGNAL  
 [Symbol] AUDIO SIGNAL  
 [Symbol] SLIDE MOTOR SIGNAL

**CIRCUIT DIAGRAM**  
**PLAN DE CIRCUIT**

[ : +B, : -B ]

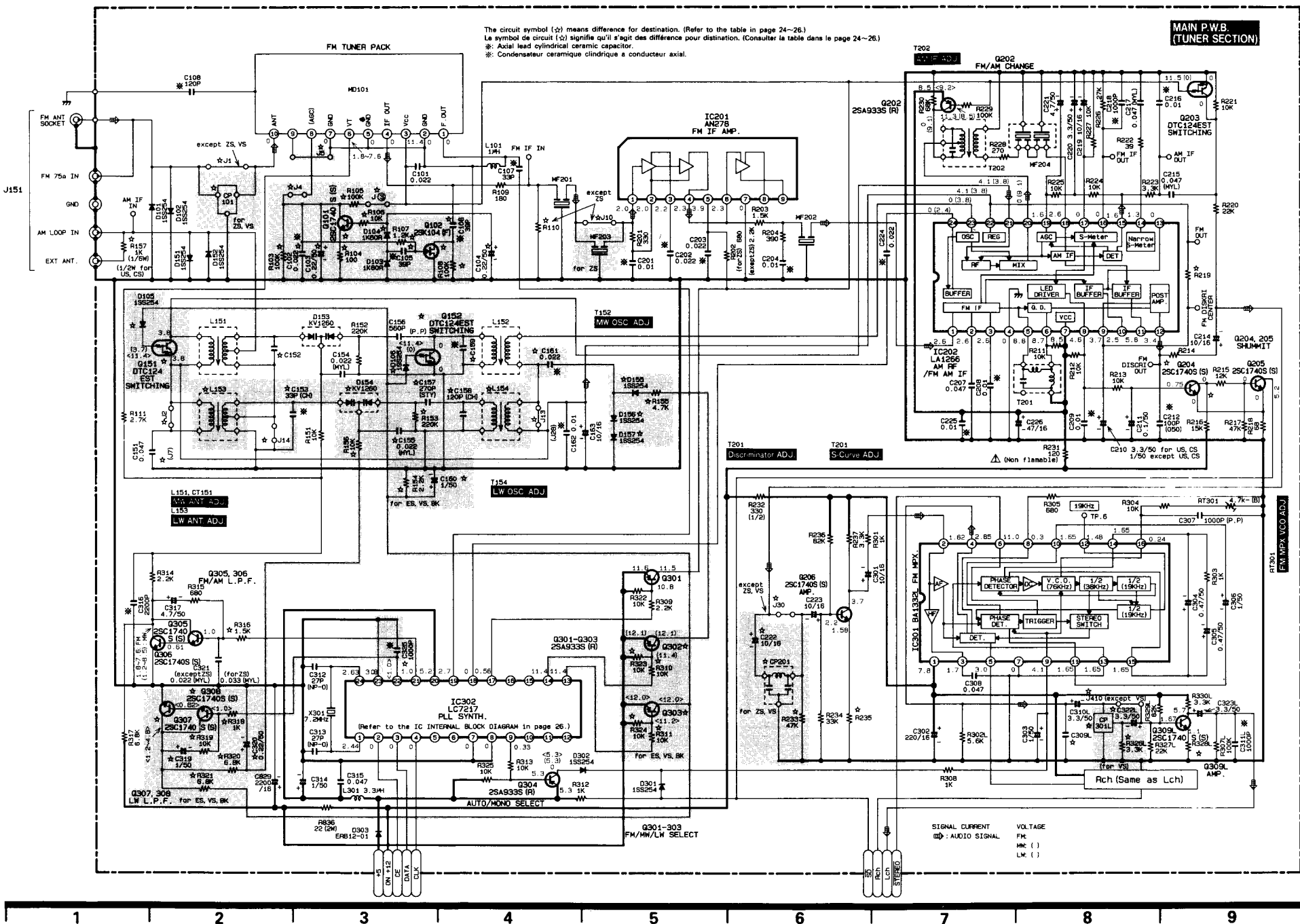
MX-W50

MX-W50

**BLOCK**

**MAIN P.W.B. (TUNER SECTION)**

The circuit symbol (⊗) means difference for destination. (Refer to the table in page 24-26.)  
Le symbol de circuit (⊗) signifie qu'il s'agit des difference pour destination. (Consulter la table dans le page 24-26.)  
⊗: Axial lead cylindrical ceramic capacitor.  
⊗: Condensateur ceramique cylindrique a conducteur axial.



J501 LINE OUT

IC502

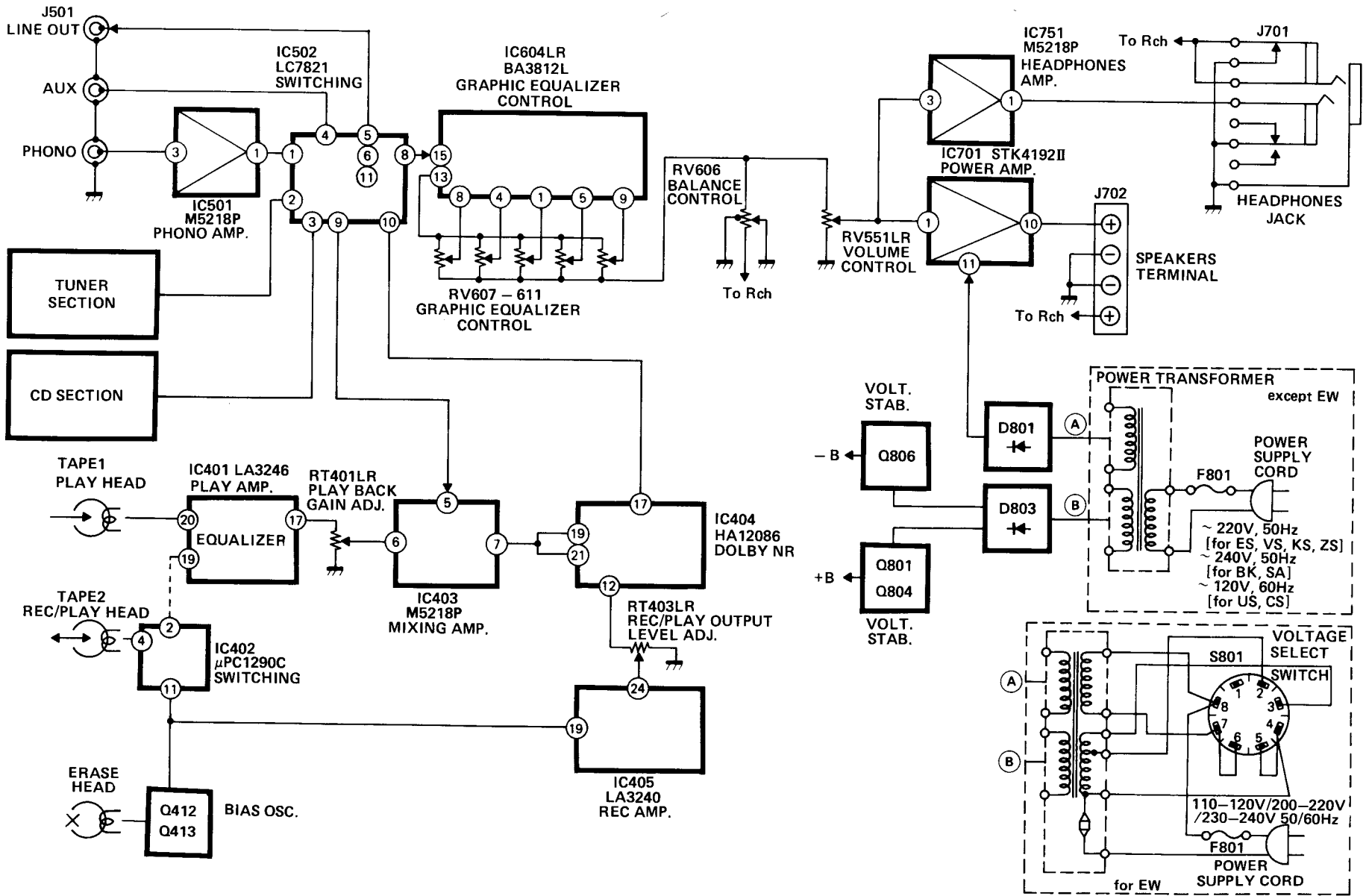
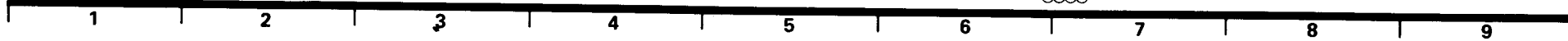
IC604LR

IC751 M5218P HEADPHONES

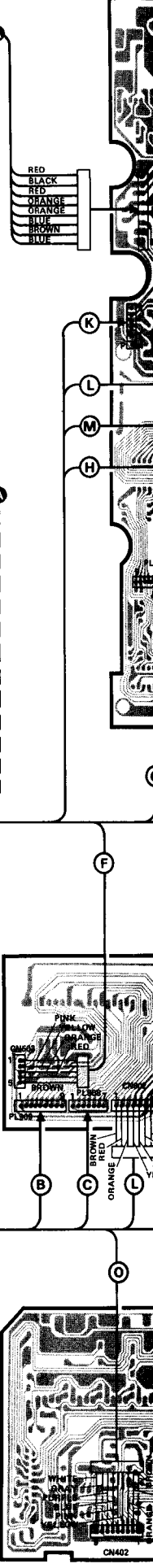
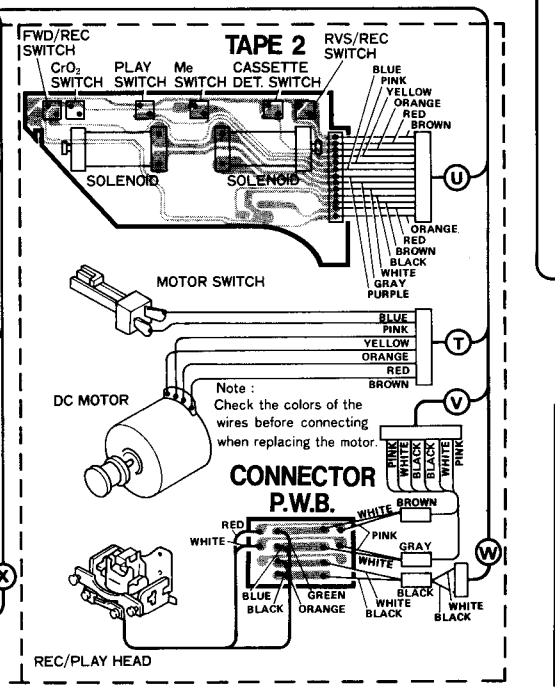
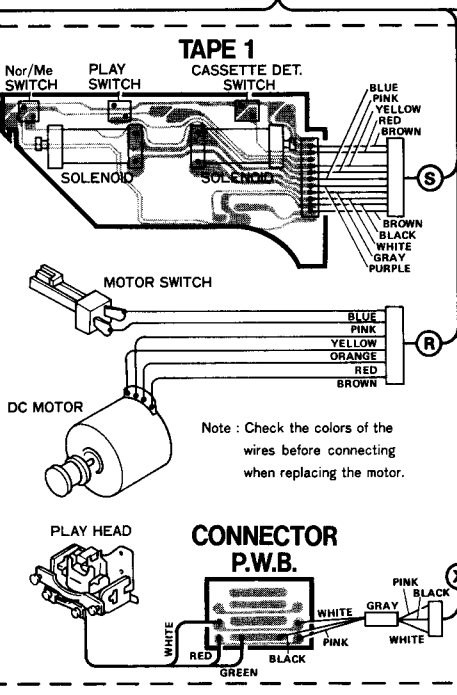
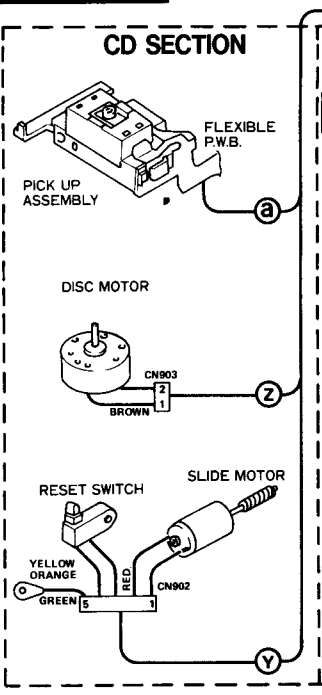
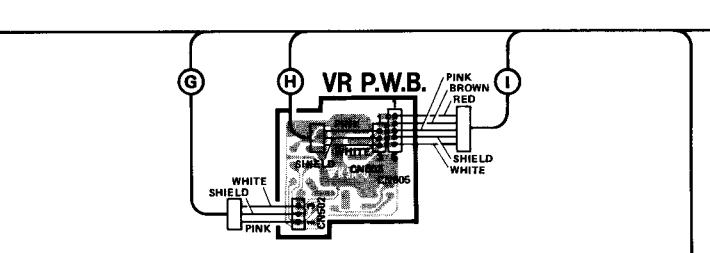
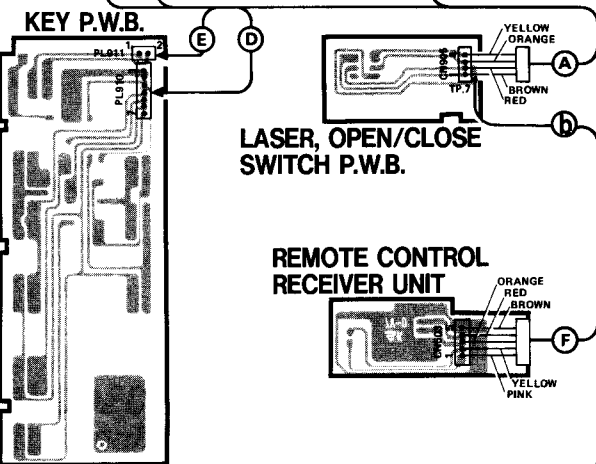
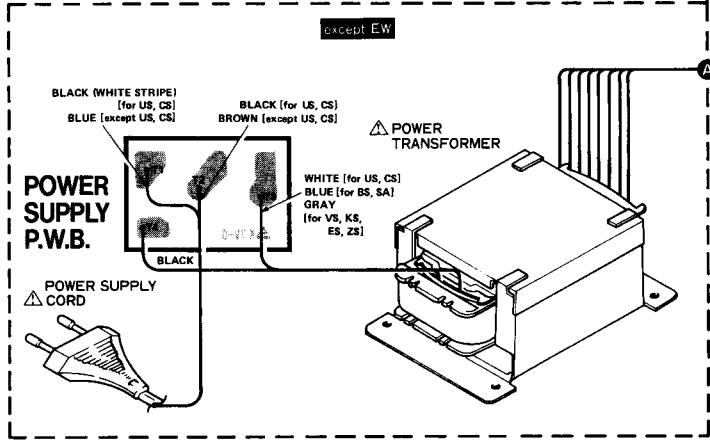
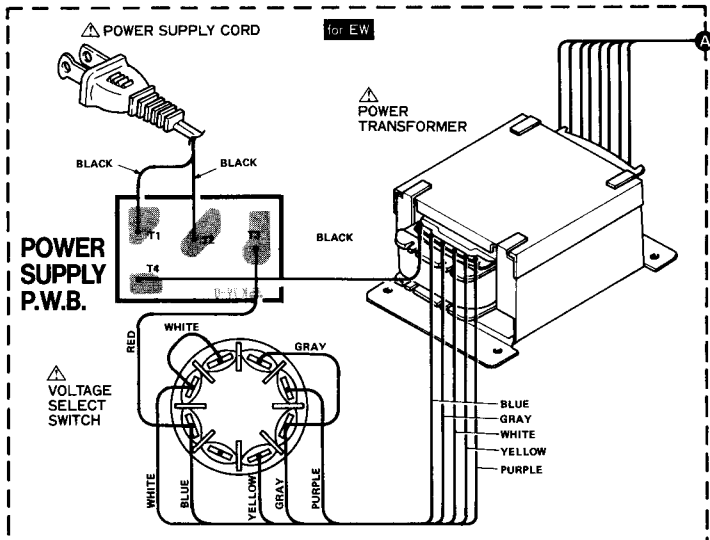
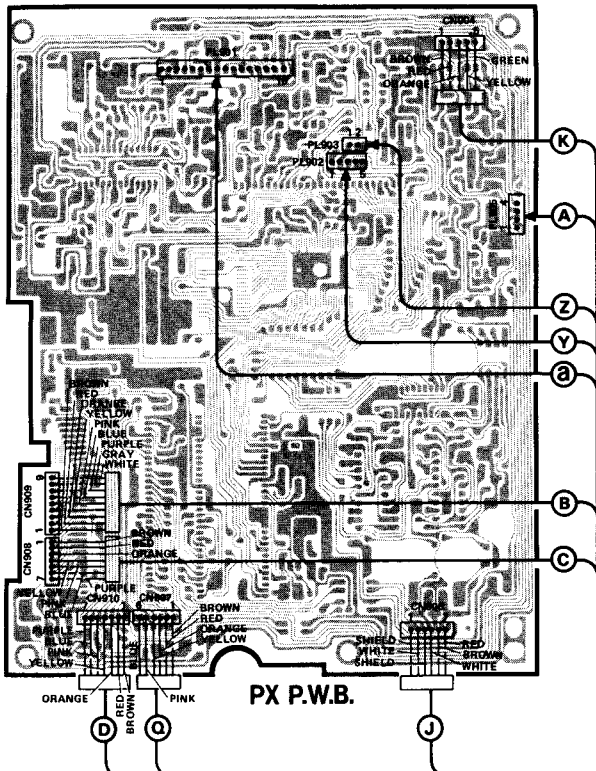
To Rch

J701

BLOCK DIAGRAM · SCHEMA

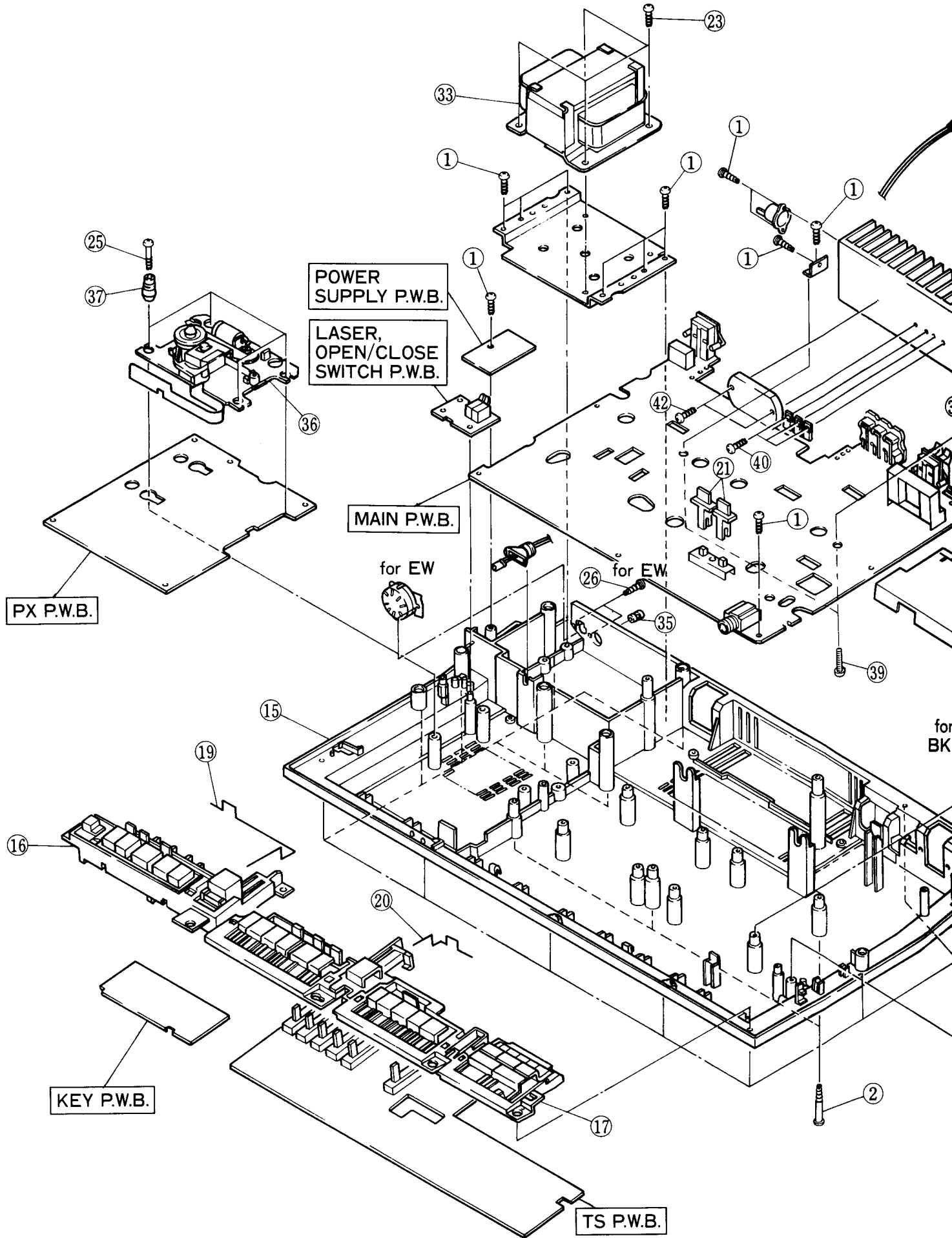


# WIRING DIAGRAM · SCHEMA DE CÂBLAGE

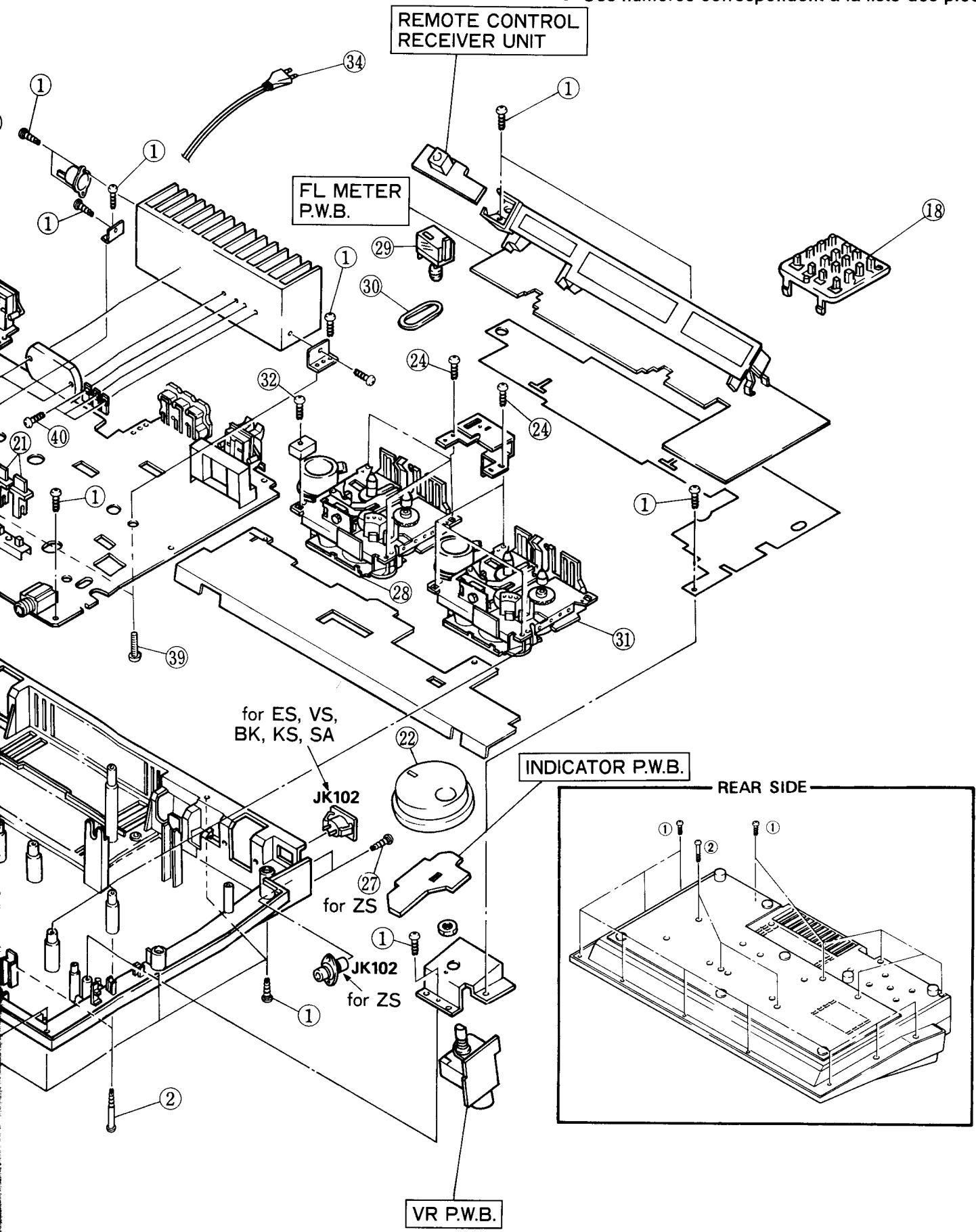




**EXPLODED VIEW VUE EXPLOSEE**  
**(Cabinet) (Coffret)**



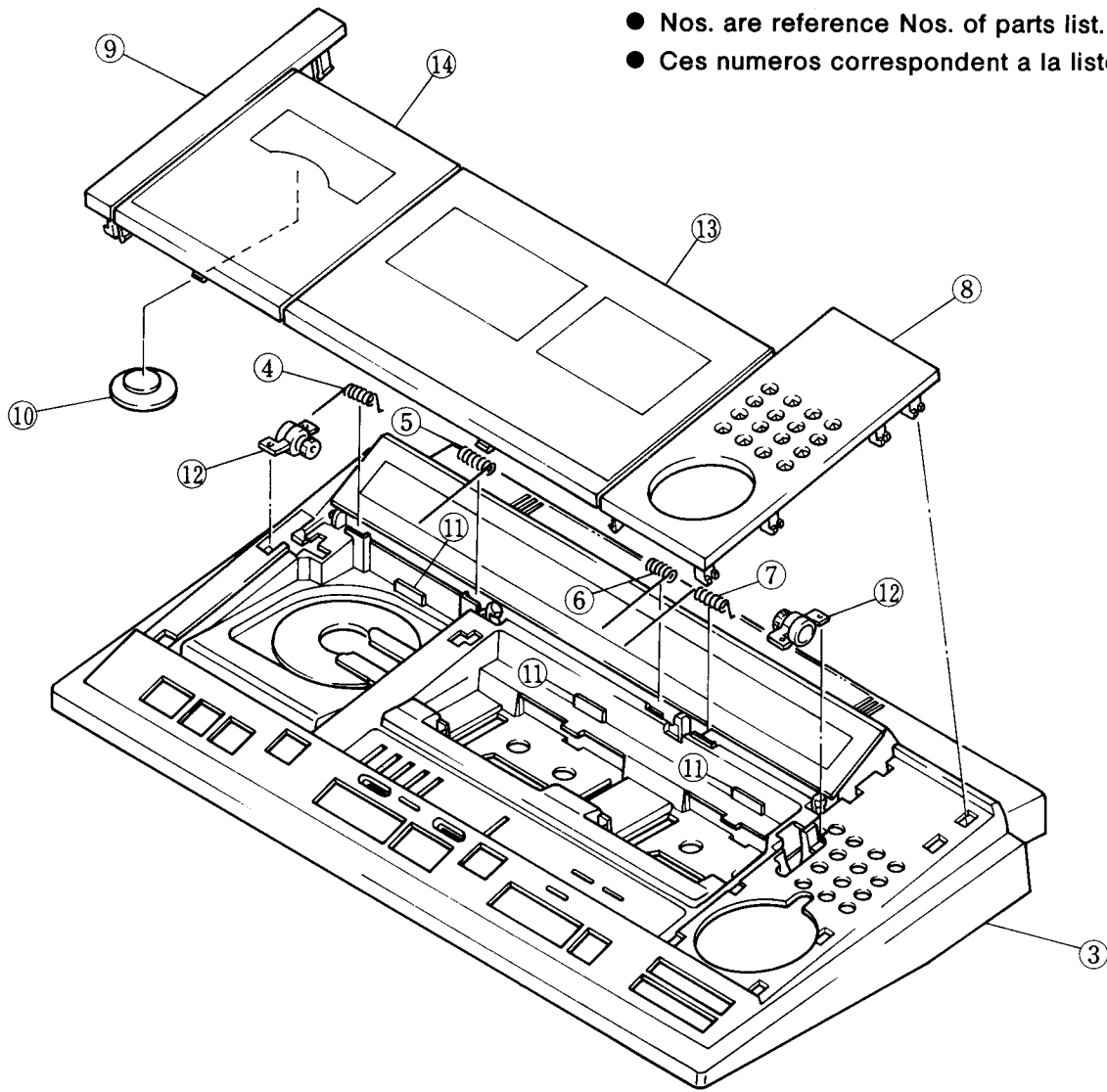
● Nos. are reference Nos. of parts list.  
● Ces numeros correspondent a la liste des pieces.



**EXPLODED VIEW  
(Cabinet)**

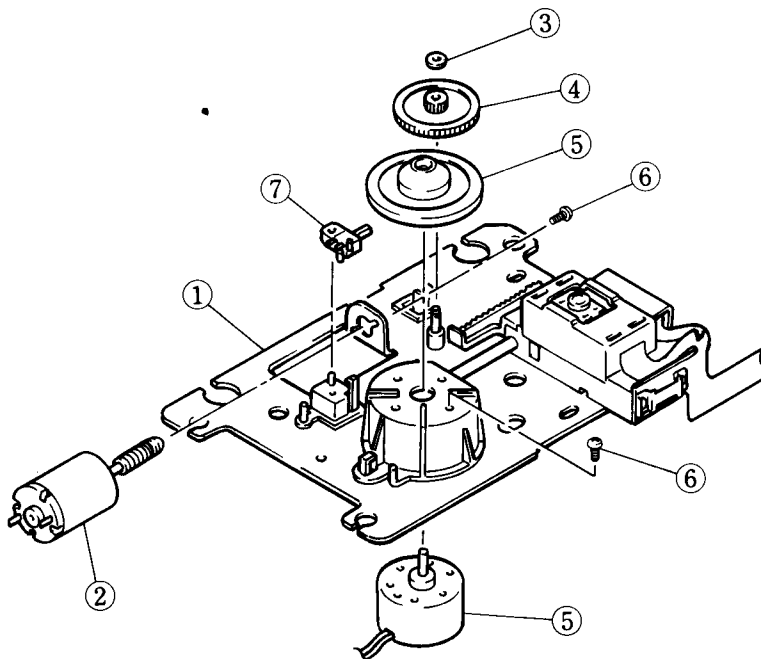
**VUE EXPLOSEE  
(Coffert)**

MX-W50



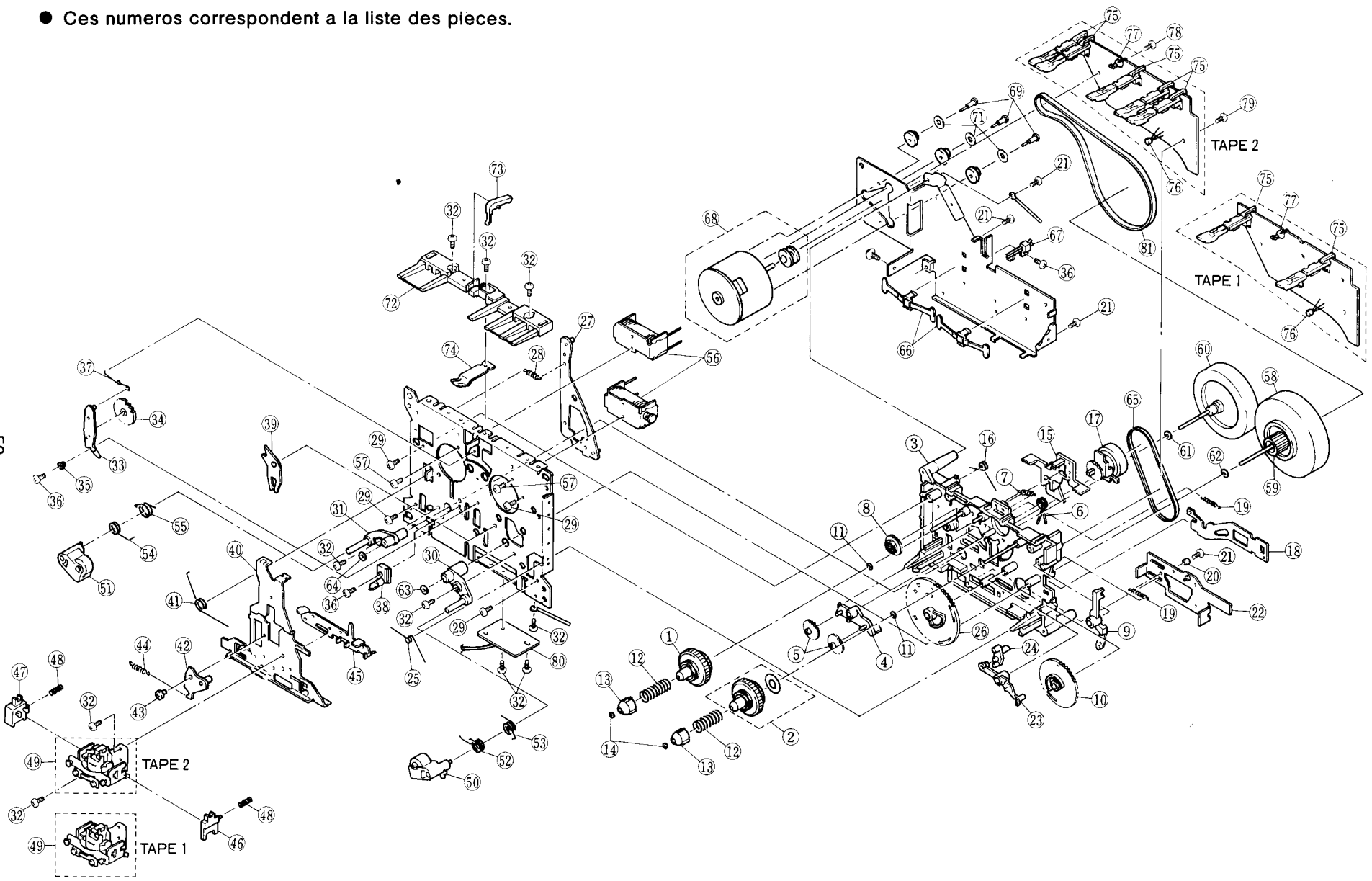
**EXPLODED VIEW  
(Unit mechanism)**

**VUE EXPLOSEE  
(Mécanisme de barre)**





- Nos. are reference Nos. of parts list.
- Ces numeros correspondent a la liste des pieces.



CC: Cylindrical ceramic EL: Electrolytic NF: Non flammable  
 CD: Ceramic discal FR: Fuse resistor PP: Polypro-pylene  
 CF: Carbon film ME: Metal oxide ST: Styrol  
 CO: Composition MF: Mylar film

MX-W50

**PEPLACEMENT PARTS LIST**  
**TABLEAU DES PIÈCES**

SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
<b>CAPACITORS</b>			C220	0252461	EL 3.3 $\mu$ F $\pm$ 20% 50V	C418LR	0252422	EL 10 $\mu$ F $\pm$ 20% 16V
C101	0244173	CD 0.022 $\mu$ F $\pm$ 80% 20%	C221	1252462	EL 4.7 $\mu$ F $\pm$ 20% 50V	C419L	1275011	MF 0.01 $\mu$ F $\pm$ 10% 50V
C102	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%	C222	0252422	EL 10 $\mu$ F $\pm$ 20% 16V	C419R	0275011	MF 0.01 $\mu$ F $\pm$ 10% 50V
C103	0252455	[for ZS] EL 0.22 $\mu$ F $\pm$ 20% 50V	C223	0252422	EL 10 $\mu$ F $\pm$ 20% 16V	C420LR	0275012	MF 0.015 $\mu$ F $\pm$ 10% 50V
C104	0252455	[for ZS] EL 0.22 $\mu$ F $\pm$ 20% 50V	C224	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%	C421LR	0252458	EL 0.68 $\mu$ F $\pm$ 20% 50V
C105	0230626	CC 39PF $\pm$ 5% 50V	C225	0240061	CC 0.01 $\mu$ F $\pm$ 30% 16V	C422LR	0252460	EL 2.2 $\mu$ F $\pm$ 20% 50V
C106	0230626	[for ZS] CC 39PF $\pm$ 5% 50V	C226	0252425	EL 47 $\mu$ F $\pm$ 20% 16V	C423LR	0252422	EL 10 $\mu$ F $\pm$ 20% 16V
C107	0230624	CC 33PF $\pm$ 5% 50V	C301	0252422	EL 10 $\mu$ F $\pm$ 20% 16V	C424LR	0240037	CC 220PF $\pm$ 10% 50V
C108	0240034	CC 120PF $\pm$ 10% 50V	C302	0252427	EL 220 $\mu$ F $\pm$ 20% 16V	C425	1279332	PP 6800PF $\pm$ 5% 100V
C110	0248686	CD 120PF $\pm$ 5% 50V	C303	0252459	EL 1 $\mu$ F $\pm$ 20% 50V	C426	0252415	EL 220 $\mu$ F $\pm$ 20% 10V
C151	0244175	CD 0.047 $\mu$ F $\pm$ 80% 20%	C304	0252457	EL 0.47 $\mu$ F $\pm$ 20% 50V	C427	0240061	CC 0.01 $\mu$ F $\pm$ 30% 16V
C152	0230649	CC 5.6PF $\pm$ 5% 50V	C305	0252457	EL 0.47 $\mu$ F $\pm$ 20% 50V	C428	0274014	MF 3300PF $\pm$ 10% 50V
	0230651	[for ES, VS, BK] CC 8.2PF $\pm$ 5% 50V	C306	1252459	EL 1 $\mu$ F $\pm$ 20% 50V	C429	0274014	MF 3300PF $\pm$ 10% 50V
	0230647	[for KS, ZS, SA] CC 3.9PF $\pm$ 5% 50V	C307	1279336	PP 1000PF $\pm$ 5% 100V	C430	0275012	MF 0.015 $\mu$ F $\pm$ 10% 50V
C153	0230074	[for US, CS, EW] CC 33PF $\pm$ 5% 50V	C308	1244185	CD 0.047 $\mu$ F $\pm$ 80% 20%	C431L	1252422	EL 10 $\mu$ F $\pm$ 20% 16V
C154	0275013	MF 0.022 $\mu$ F $\pm$ 10% 50V	C309LR	1275032	MF 0.018 $\mu$ F $\pm$ 10% 50V	C431R	0252422	EL 10 $\mu$ F $\pm$ 20% 16V
C155	0275013	[for ES, VS, BK] MF 0.022 $\mu$ F $\pm$ 10% 50V		1275031	MF 0.012 $\mu$ F $\pm$ 10% 50V	C432LR	1252424	EL 33 $\mu$ F $\pm$ 20% 16V
C156	0279340	PP 560PF $\pm$ 5% 100V	C310LR	0252461	EL 3.3 $\mu$ F $\pm$ 20% 50V	C433LR	0274036	MF 8200PF $\pm$ 10% 50V
C157	0228321	[for ES, VS, BK] ST 270PF $\pm$ 5% 50V	C311LR	0240045	CC 1000PF $\pm$ 10% 50V	C434LR	0275014	MF 0.033 $\mu$ F $\pm$ 10% 50V
C158	1246466	[for ES, VS, BK] CD 120PF $\pm$ 5% 50V	C312	1246450	CD 27PF $\pm$ 5% 50V	C435LR	0275013	MF 0.022 $\mu$ F $\pm$ 10% 50V
C159	0230658	CC 18PF $\pm$ 5% 50V	C313	1246450	CD 27PF $\pm$ 5% 50V	C436LR	0275103	MF 0.022 $\mu$ F $\pm$ 10% 50V
	1246448	[except KS, ZS, SA] CD 22PF $\pm$ 5% 50V	C314	0252459	EL 1 $\mu$ F $\pm$ 20% 50V	C437L	0275013	MF 0.022 $\mu$ F $\pm$ 10% 50V
C160	0252459	[for KS, ZS, SA] EL 1 $\mu$ F $\pm$ 20% 50V	C315	0244175	CD 0.047 $\mu$ F $\pm$ 80% 20%	C437R	1275013	MF 0.022 $\mu$ F $\pm$ 10% 50V
C161	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%	C316	0240053	CC 2200PF $\pm$ 20% 16V	C438	0252411	EL 22 $\mu$ F $\pm$ 20% 10V
C162	0240061	[for ES, VS, BK] CC 0.01 $\mu$ F $\pm$ 30% 16V	C317	0252462	EL 4.7 $\mu$ F $\pm$ 20% 50V	C439	0252402	EL 100 $\mu$ F $\pm$ 20% 6.3V
C163	0252422	EL 10 $\mu$ F $\pm$ 20% 16V	C319	0252459	EL 1 $\mu$ F $\pm$ 20% 50V	C440LR	0252422	EL 10 $\mu$ F $\pm$ 20% 16V
C201	0240061	CC 0.01 $\mu$ F $\pm$ 30% 16V	C320	0252455	EL 0.22 $\mu$ F $\pm$ 20% 50V	C441	0252411	EL 22 $\mu$ F $\pm$ 20% 10V
C202	0240066	[for ES, VS, BK] CC 0.022 $\mu$ F $\pm$ 80% 20%	C321	0275013	MF 0.022 $\mu$ F $\pm$ 10% 50V	C442	0252426	EL 100 $\mu$ F $\pm$ 20% 16V
C203	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%		0275014	MF 0.033 $\mu$ F $\pm$ 10% 50V	C444LR	0252804	EL 0.15 $\mu$ F $\pm$ 20% 50V
C204	0240061	[for ZS] CC 0.01 $\mu$ F $\pm$ 30% 16V	C322LR	0252461	EL 3.3 $\mu$ F $\pm$ 20% 50V	C445LR	0240051	CC 1500PF $\pm$ 20% 16V
C207	0244175	[for ES, VS, BK] CD 0.047 $\mu$ F $\pm$ 80% 20%	C323LR	0252461	EL 3.3 $\mu$ F $\pm$ 20% 50V	C446LR	0240061	CC 0.01 $\mu$ F $\pm$ 30% 16V
C208	0240061	CC 0.01 $\mu$ F $\pm$ 30% 16V				C448LR	0240039	CC 330PF $\pm$ 10% 50V
C209	0240061	CC 0.01 $\mu$ F $\pm$ 30% 16V	C325	0240045	CC 1000PF $\pm$ 10% 50V	C449	0252426	EL 100 $\mu$ F $\pm$ 20% 16V
C210	0252461	[for US, CS] EL 3.3 $\mu$ F $\pm$ 20% 50V	C351	0252407	EL 2200 $\mu$ F $\pm$ 20% 6.3V	C450L	1275032	MF 0.018 $\mu$ F $\pm$ 10% 50V
	0252459	EL 1 $\mu$ F $\pm$ 20% 50V	C352	0230073	CC 30PF $\pm$ 5% 50V	C450R	0275032	MF 0.018 $\mu$ F $\pm$ 10% 50V
		[except US, CS]	C353	0230073	CC 30PF $\pm$ 5% 50V	C451	0252424	EL 33 $\mu$ F $\pm$ 20% 16V
C211	0252459	EL 1 $\mu$ F $\pm$ 20% 50V	C354	1252402	EL 100 $\mu$ F $\pm$ 20% 6.3V	C452	0252425	EL 47 $\mu$ F $\pm$ 20% 16V
C212	0240033	CC 100PF $\pm$ 10% 50V	C401LR	0240039	CC 330PF $\pm$ 10% 50V	C453	1252425	EL 47 $\mu$ F $\pm$ 20% 16V
C214	0252422	EL 10 $\mu$ F $\pm$ 20% 16V	C402LR	0240039	CC 330PF $\pm$ 10% 50V	C454	0252415	EL 220 $\mu$ F $\pm$ 20% 10V
C215	0275015	MF 0.047 $\mu$ F $\pm$ 10% 50V	C403LR	0252423	EL 22 $\mu$ F $\pm$ 20% 16V	C460	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%
C216	0240061	CC 0.01 $\mu$ F $\pm$ 30% 16V	C404LR	0275011	MF 0.01 $\mu$ F $\pm$ 10% 50V	C461	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%
C217	0275015	MF 0.047 $\mu$ F $\pm$ 10% 50V	C405LR	0275015	MF 0.047 $\mu$ F $\pm$ 10% 50V	C462	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%
C218	0240045	CC 1000PF $\pm$ 10% 50V	C406LR	0240053	CC 2200PF $\pm$ 20% 16V	C463	0240066	CC 0.022 $\mu$ F $\pm$ 80% 20%
C219	0252422	EL 10 $\mu$ F $\pm$ 20% 16V	C407	0252426	EL 100 $\mu$ F $\pm$ 20% 16V	C480	0252426	EL 100 $\mu$ F $\pm$ 20% 16V
			C408LR	0252458	EL 0.68 $\mu$ F $\pm$ 20% 50V	C501LR	0240035	CC 150PF $\pm$ 10% 50V
			C411LR	0252459	EL 1 $\mu$ F $\pm$ 20% 50V		0240053	CC 2200PF $\pm$ 20% 16V
			C412LR	0240035	CC 150PF $\pm$ 10% 50V		[for ZS]	
			C413LR	0240045	CC 1000PF $\pm$ 10% 50V	C502LR	0252461	EL 3.3 $\mu$ F $\pm$ 20% 50V
			C414LR	0240053	CC 2200PF $\pm$ 20% 16V	C503LR	0240041	CC 470PF $\pm$ 10% 50V
			C415LR	0252459	EL 1 $\mu$ F $\pm$ 20% 50V		[for ZS]	
			C416	0252427	EL 220 $\mu$ F $\pm$ 20% 16V		0240033	CC 100PF $\pm$ 10% 50V
			C417	0252460	EL 2.2 $\mu$ F $\pm$ 20% 50V		[except ZS]	
						C504LR	0252423	EL 22 $\mu$ F $\pm$ 20% 16V
						C505LR	0240060	CC 8200PF $\pm$ 30% 16V
						C506LR	0240053	CC 2200PF $\pm$ 20% 16V
						C507LR	0252459	EL 1 $\mu$ F $\pm$ 20% 50V
						C508	0252422	EL 10 $\mu$ F $\pm$ 20% 16V
						C509	1252422	EL 10 $\mu$ F $\pm$ 20% 16V
						C510	0252426	EL 100 $\mu$ F $\pm$ 20% 16V
						C511	0252426	EL 100 $\mu$ F $\pm$ 20% 16V

SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
C514	0240045	CC 1000PF ±10% 50V [for ZS]	C707	0252463	EL 10 μF ±20% 50V	C834	0209773	CD 0.022 μF ±20% 50V [for ZS]
C515	0240045	CC 1000PF ±10% 50V [for ZS]	C708	1276011	MF 0.1 μF ±10% 50V	C835	0245408	CD 0.01 μF ±20% 500V [for ZS]
C516	0240037	CC 220PF ±10% 50V [for ZS]	C709	0252467	EL 100 μF ±20% 50V	C836	0245408	CD 0.01 μF ±20% 500V [for ZS]
C517	0240037	CC 220PF ±10% 50V [for ZS]	C710	1276011	MF 0.1 μF ±10% 50V	C837	0244173	CD 0.022 μF ±20% 50V [for ZS]
C518LR	0240043	CC 680PF ±10% 50V [for ZS]	C711LR	1276011	MF 0.1 μF ±10% 50V [for BK]	C838	0244173	CD 0.022 μF ±20% 50V [for ZS]
C551	0240066	CC 0.022 μF ±80% 25V	C711LR	0275015	MF 0.047 μF ±10% 50V [except BK]	C839	0244173	CD 0.022 μF ±80% 50V [for ZS]
C552	0276011	MF 0.1 μF ±10% 50V	C712LR	1276011	MF 0.1 μF ±10% 50V [for BK]	C840	0244173	CD 0.022 μF ±80% 50V [for ZS]
C553	0240066	CC 0.022 μF ±80% 25V	C713	0252422	EL 10 μF ±20% 16V	C841	0244173	CD 0.022 μF ±80% 50V [for ZS]
C554	1276011	MF 0.1 μF ±10% 50V	C714	0252459	EL 1 μF ±20% 50V	C842	0244173	CD 0.022 μF ±80% 50V [for ZS]
C555LR	0275013	MF 0.22 μF ±10% 50V	C715	0252402	EL 100 μF ±20% 6.3V	C851	0252525	EL 47 μF ±20% 16V
C556LR	0240037	CC 220 μF ±10% 50V	C717	0252462	EL 4.7 μF ±20% 50V	C852	0252525	EL 47 μF ±20% 16V
C557	1252429	EL 470 μF ±20% 16V	C718	1252412	EL 33 μF ±20% 10V	C853	0175015	MF 0.047 μF ±10% 50V
C601	0230074	CC 33PF ±5% 50V	C721	0240066	CC 0.022 μF ±80% 25V	C854	0252403	EL 220 μF ±20% 6.3V
C602	0230074	CC 33PF ±5% 50V	C722	0240066	CC 0.022 μF ±80% 25V	C855	0252403	EL 220 μF ±20% 6.3V
C603	0275013	MF 0.022 μF ±10% 50V	C723LR	0244141	CD 0.01 μF ±10% 50V [for ZS]	C856	0252403	EL 220 μF ±20% 6.3V
C604	0252402	EL 100 μF ±20% 6.3V	C724	0244175	CD 0.01 μF ±80% 50V [for ZS]	C857	0252403	EL 220 μF ±20% 6.3V
C605	0252401	EL 47 μF ±20% 6.3V	C751LR	0252459	EL 1 μF ±20% 50V	C858	1252403	EL 220 μF ±20% 6.3V
C606	0252461	EL 3.3 μF ±20% 50V	C752LR	0240033	CC 100 μF ±10% 50V	C859	0240061	CC 0.01 μF ±30% 16V
C607LR	0274016	MF 6800PF ±10% 50V	C753LR	0252425	EL 47 μF ±20% 16V	C860	0252402	EL 100 μF ±20% 6.3V
C608LR	0240039	CC 330PF ±10% 50V	C754LR	0252422	EL 10 μF ±20% 16V	C861	0252521	EL 10 μF ±20% 16V
C609LR	0275015	MF 0.047 μF ±10% 50V	C755LR	0240045	CC 1000PF ±10% 50V [for ZS]	C862	0252402	EL 100 μF ±20% 6.3V
C610LR	0240045	CC 1000PF ±10% 50V	C756LR	0240037	CC 220PF ±10% 50V	C863LR	0279332	PP 6800PF ±5% 100V
C611LR	0274014	MF 3300PF ±10% 50V	C757	1252426	EL 100 μF ±20% 16V	C864LR	0279328	PP 470PF ±5% 100V
C612LR	0252454	EL 0.1 μF ±20% 50V	C758	0252426	EL 100 μF ±20% 16V	C865LR	0240035	CC 150PF ±10% 50V
C613LR	0275011	MF 0.01 μF ±10% 50V	C801	0259931	EL 6800 μF ±20% 50V	C866LR	0274013	MF 2200PF ±10% 50V
C614LR	0252456	EL 0.33 μF ±20% 50V	C802	0259931	EL 6800 μF ±20% 50V	C871	0252402	EL 100 μF ±20% 6.3V
C615LR	0252459	EL 1 μF ±20% 50V	C803	0245408	CD 0.01 μF ±20% 500V	C881	0240041	CC 470PF ±10% 50V
C616LR	0275015	MF 0.047 μF ±10% 50V	C804	0245408	CD 0.01 μF ±20% 500V	C889	0252811	EL 1 μF ±20% 50V
C617LR	0240045	CC 1000PF ±10% 50V	C805	1252442	EL 2200 μF ±20% 25V	C891	0252402	EL 100 μF ±20% 6.3V
C618LR	0252461	EL 3.3 μF ±20% 50V	C806	1252442	EL 2200 μF ±20% 25V	C901	0252225	EL 47 μF ±20% 6.3V
C619LR	0252427	EL 220 μF ±20% 16V	C807	0245408	CD 0.01 μF ±20% 500V	C902	0240061	CC 0.01 μF ±30% 16V
C620LR	0252461	EL 3.3 μF ±20% 50V	C808	0245408	CD 0.01 μF ±20% 500V	C903	0240061	CC 0.01 μF ±30% 16V
C621	0252427	EL 220 μF ±20% 16V	C809	0252425	EL 47 μF ±20% 16V	C904	0252521	EL 10 μF ±20% 16V
C622	0252423	EL 22 μF ±20% 16V	C810	1252430	EL 1000 μF ±20% 16V	C905	0230604	CC 2.2PF ±10% 50V
C623LR	0240043	CC 680PF ±10% 50V	C811	0252413	EL 47 μF ±20% 10V	C906	0230628	CC 47PF ±5% 50V
C625	0252402	EL 100 μF ±20% 6.3V	C812	1252403	EL 220 μF ±20% 6.3V	C907	0230628	CC 47PF ±5% 50V
C626	0252422	EL 10 μF ±20% 16V	C813	0252425	EL 47 μF ±20% 16V	C908	0240041	CC 470PF ±10% 50V
C627	0252462	EL 4.7 μF ±20% 50V	C814	0252425	EL 47 μF ±20% 16V	C909	0230628	CC 47PF ±5% 50V
C628	0252402	EL 100 μF ±20% 6.3V	C815	0252427	EL 220 μF ±20% 16V	C910	0240041	CC 470PF ±10% 50V
C629	0276011	MF 0.1 μF ±10% 50V	C817	0252433	EL 10 μF ±20% 25V	C911	0240037	CC 220PF ±10% 50V
C630	0276011	MF 0.1 μF ±10% 50V	C818	0252425	EL 47 μF ±20% 16V	C912	0240037	CC 220PF ±10% 50V
C651LR	0240033	CC 100PF ±10% 50V	C819	0252430	EL 1000 μF ±20% 16V	C913	0252403	EL 220 μF ±20% 6.3V
C652LR	0252411	EL 22 μF ±20% 10V	C820	0252467	EL 100 μF ±20% 50V	C914	0240061	CC 0.01 μF ±30% 16V
C653LR	1274032	MF 1800PF ±10% 50V	C821	0252467	EL 100 μF ±20% 50V	C915	0240034	CC 120PF ±10% 50V
C654LR	0240033	CC 100PF ±10% 50V	C822	0252466	EL 47 μF ±20% 50V	C916	0240037	CC 220PF ±10% 50V
C655LR	1252411	EL 22 μF ±20% 10V	C824	0252464	EL 22 μF ±20% 50V	C917	0252403	EL 220 μF ±20% 6.3V
C655R	0252411	EL 22 μF ±20% 10V	C825	1252431	EL 2200 μF ±20% 16V	C918	0240045	CC 1000PF ±10% 50V
C656LR	0252411	EL 22 μF ±20% 10V	C826	1252431	EL 2200 μF ±20% 16V	C919	0240045	CC 1000PF ±10% 50V
C659	0252402	EL 100 μF ±20% 6.3V	C827	1252442	EL 2200 μF ±20% 25V	C920	0252521	EL 10 μF ±20% 16V
C701LR	0240044	CC 820PF ±10% 50V	C828	0252402	EL 100 μF ±20% 6.3V	C921	0252815	EL 4.7 μF ±20% 50V
C702LR	0252459	EL 1 μF ±20% 50V	C829	1252431	EL 2200 μF ±20% 16V	C922	0240061	CC 0.01 μF ±30% 16V
C703LR	0252425	EL 47 μF ±20% 16V	C830	0252422	EL 10 μF ±20% 16V	C923	0230628	CC 47PF ±5% 50V
C704LR	0230606	CC 3.3PF ±10% 50V	C833	0209773	CD 0.022 μF ±20% 50V [for ZS]			
C705	0252467	EL 100 μF ±20% 50V						
C706L	1252466	EL 47 μF ±20% 50V						
C706R	0252466	EL 47 μF ±20% 50V						

SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION			
C924	0275013	MF 0.022 $\mu$ F $\pm$ 10%	50V	R106	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R234	0113651	CF 33K $\Omega$ $\pm$ 5%	SRD1/6P
C925	0240035	CC 150PF $\pm$ 10%	50V	R107	0113617	CF 1.2K $\Omega$ $\pm$ 5%	SRD1/6P [for ZS]	R235	0113619	CF 1.5K $\Omega$ $\pm$ 5%	SRD1/6P [for US, CS]
C926	0275011	MF 0.01 $\mu$ F $\pm$ 10%	50V	R108	0113663	CF 100K $\Omega$ $\pm$ 5%	SRD1/6P [for ZS]	0113617	CF 1.2K $\Omega$ $\pm$ 5%	SRD1/6P [except US, CS]	
C931	0276011	MF 0.1 $\mu$ F $\pm$ 10%	50V	R109	0113597	CF 180 $\Omega$ $\pm$ 5%	SRD1/6P	R236	0113661	CF 82K $\Omega$ $\pm$ 5%	SRD1/6P
C932	0240051	CC 1500PF $\pm$ 20%	16V	R110	0113599	CF 220 $\Omega$ $\pm$ 5%	SRD1/6P [except ZS]	R237	0113627	CF 3.3K $\Omega$ $\pm$ 5%	SRD1/6P
C933	0252805	EL 0.47 $\mu$ F $\pm$ 20%	50V	R111	0113625	CF 2.7K $\Omega$ $\pm$ 5%	SRD1/6P	R301	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P
C934	0252522	EL 22 $\mu$ F $\pm$ 20%	16V	R151	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R302LR	0113633	CF 5.6K $\Omega$ $\pm$ 5%	SRD1/6P
C935	0252521	EL 10 $\mu$ F $\pm$ 20%	16V	R152	0113671	CF 220K $\Omega$ $\pm$ 5%	SRD1/6P	R303	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P
C936	0252802	EL 0.22 $\mu$ F $\pm$ 20%	50V	R153	0113671	CF 220K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]	R304	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
C937	0252805	EL 0.47 $\mu$ F $\pm$ 20%	50V	R154	0113623	CF 2.2K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]	R305	0113611	CF 680 $\Omega$ $\pm$ 5%	SRD1/6P
C938	0252807	EL 0.68 $\mu$ F $\pm$ 20%	50V	R155	0113631	CF 4.7K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]	R307LR	0113663	CF 100K $\Omega$ $\pm$ 5%	SRD1/6P
C939	0252807	EL 0.68 $\mu$ F $\pm$ 20%	50V	R156	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]	R308	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P
C940	0275013	MF 0.022 $\mu$ F $\pm$ 10%	50V	R157	0134373	CO 1K $\Omega$ $\pm$ 10%	RC1/2GF [for US, CS]	R309	0113623	CF 2.2K $\Omega$ $\pm$ 5%	SRD1/6P
C941	0252802	EL 0.22 $\mu$ F $\pm$ 20%	50V	R201	0113603	CF 330 $\Omega$ $\pm$ 5%	SRD1/6P	R310	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]
C942	0275013	MF 0.022 $\mu$ F $\pm$ 10%	50V	R202	0113623	CF 2.2K $\Omega$ $\pm$ 5%	SRD1/6P [except ZS]	R311	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]
C943	0240061	CC 0.01 $\mu$ F $\pm$ 30%	16V	R203	0113619	CF 1.5K $\Omega$ $\pm$ 5%	SRD1/6P	R312	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P
C944	0240061	CC 0.01 $\mu$ F $\pm$ 30%	16V	R204	0113605	CF 390 $\Omega$ $\pm$ 5%	SRD1/6P	R313	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
C960	0240061	CC 0.01 $\mu$ F $\pm$ 30%	16V	R211	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R314	0113623	CF 2.2K $\Omega$ $\pm$ 5%	SRD1/6P
C961	0240033	CC 100PF $\pm$ 10%	50V	R212	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R315	0113611	CF 680 $\Omega$ $\pm$ 5%	SRD1/6P
C962	0230616	CC 15PF $\pm$ 5%	50V	R213	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R316	0113619	CF 1.5K $\Omega$ $\pm$ 5%	SRD1/6P
C963	0230616	CC 15PF $\pm$ 5%	50V	R214	0113647	CF 22K $\Omega$ $\pm$ 5%	SRD1/6P [for US, CS]	R317	0113635	CF 6.8K $\Omega$ $\pm$ 5%	SRD1/6P
C964	0275011	MF 0.01 $\mu$ F $\pm$ 10%	50V	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P [except US, CS]	R318	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]	
C965	0252805	EL 0.47 $\mu$ F $\pm$ 20%	50V	R215	0113641	CF 12K $\Omega$ $\pm$ 5%	SRD1/6P	R319	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]
C966	0252403	EL 220 $\mu$ F $\pm$ 20%	6.3V	R216	0113643	CF 15K $\Omega$ $\pm$ 5%	SRD1/6P	R320	0113635	CF 6.8K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]
C967	0240061	CC 0.01 $\mu$ F $\pm$ 30%	16V	R217	0113655	CF 47K $\Omega$ $\pm$ 5%	SRD1/6P	R321	0113635	CF 6.8K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]
C968	0252402	EL 100 $\mu$ F $\pm$ 20%	6.3V	R218	0113587	CF 68 $\Omega$ $\pm$ 5%	SRD1/6P	R322	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
C969	0240061	CC 0.01 $\mu$ F $\pm$ 30%	16V	R219	0113643	CF 15K $\Omega$ $\pm$ 5%	SRD1/6P [for US, CS]	R323	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]
C970	0252402	EL 100 $\mu$ F $\pm$ 20%	6.3V	0113651	CF 33K $\Omega$ $\pm$ 5%	SRD1/6P [except US, CS]	R324	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P [for ES, VS, BK]	
C971	0230624	CC 33PF $\pm$ 5%	50V	R220	0113647	CF 22K $\Omega$ $\pm$ 5%	SRD1/6P	R325	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
C972	0230624	CC 33PF $\pm$ 5%	50V	R221	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R326LR	0113627	CF 3.3K $\Omega$ $\pm$ 5%	SRD1/6P [for VS]
C973	0230624	CC 33PF $\pm$ 5%	50V	R222	0113581	CF 39 $\Omega$ $\pm$ 5%	SRD1/6P	R327LR	0113647	CF 22K $\Omega$ $\pm$ 5%	SRD1/6P
C974	0230624	CC 33PF $\pm$ 5%	50V	R223	0113627	CF 3.3K $\Omega$ $\pm$ 5%	SRD1/6P	R328LR	0113619	CF 1.5K $\Omega$ $\pm$ 5%	SRD1/6P [except VS]
C975	1252813	EL 3.3 $\mu$ F $\pm$ 20%	50V	R224	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	0113609	CF 560 $\Omega$ $\pm$ 5%	SRD1/6P [for VS]	
C976	0252402	EL 100 $\mu$ F $\pm$ 20%	6.3V	R225	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R329LR	0113661	CF 82K $\Omega$ $\pm$ 5%	SRD1/6P
C977	0240061	CC 0.01 $\mu$ F $\pm$ 30%	16V	R226	0113649	CF 27K $\Omega$ $\pm$ 5%	SRD1/6P	R330LR	0113627	CF 3.3K $\Omega$ $\pm$ 5%	SRD1/6P
C978	0252402	EL 100 $\mu$ F $\pm$ 20%	6.3V	R227	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P	R351	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
C991	0252403	EL 220 $\mu$ F $\pm$ 20%	6.3V	R228	0113601	CF 270 $\Omega$ $\pm$ 5%	SRD1/6P	R352	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
<b>RESISTORS</b>				R229	0113663	CF 100K $\Omega$ $\pm$ 5%	SRD1/6P	R354	0113647	CF 22K $\Omega$ $\pm$ 5%	SRD1/6P
R001	0139005	CO 2.7M $\Omega$ $\pm$ 10%	RC1/2GF [for US, CS]	R230	0113659	CF 68K $\Omega$ $\pm$ 5%	SRD1/6P	R355	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P
R050	0129519	CF 5.6 $\Omega$ $\pm$ 5%	SRD1/4P	R231	1123622	NF 120 $\Omega$ $\pm$ 5%	SRD1/4P	R356	0113603	CF 330 $\Omega$ $\pm$ 5%	SRD1/6P
R051	0129519	CF 5.6 $\Omega$ $\pm$ 5%	SRD1/4P	R232	0113293	CF 330 $\Omega$ $\pm$ 5%	SRD1/2P	R357	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
R052	0113625	CF 2.7K $\Omega$ $\pm$ 5%	SRD1/6P	R233	0113655	CF 47K $\Omega$ $\pm$ 5%	SRD1/6P [for VS, ZS]	R358	0113679	CF 470K $\Omega$ $\pm$ 5%	SRD1/6P
R053	0113621	CF 1.8K $\Omega$ $\pm$ 5%	SRD1/6P					R359	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P
R054	0113629	CF 3.9K $\Omega$ $\pm$ 5%	SRD1/6P					R361	0113631	CF 4.7K $\Omega$ $\pm$ 5%	SRD1/6P
R055	0113591	CF 100 $\Omega$ $\pm$ 5%	SRD1/6P					R362	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P
R056	0113639	CF 10K $\Omega$ $\pm$ 5%	SRD1/6P					R363	0113637	CF 8.2K $\Omega$ $\pm$ 5%	SRD1/6P
R057	0113595	CF 150 $\Omega$ $\pm$ 5%	SRD1/6P					R364	0113615	CF 1.2K $\Omega$ $\pm$ 5%	SRD1/6P
R058	0113635	CF 6.8K $\Omega$ $\pm$ 5%	SRD1/6P					R365	0113615	CF 1K $\Omega$ $\pm$ 5%	SRD1/6P
R059	0113631	CF 4.7K $\Omega$ $\pm$ 5%	SRD1/6P					R366	0113631	CF 4.7K $\Omega$ $\pm$ 5%	SRD1/6P
R060	0113633	CF 5.6K $\Omega$ $\pm$ 5%	SRD1/6P								
R061	0113641	CF 12K $\Omega$ $\pm$ 5%	SRD1/6P								
R062	0113637	CF 8.2K $\Omega$ $\pm$ 5%	SRD1/6P								
R063	0113655	CF 47K $\Omega$ $\pm$ 5%	SRD1/6P								
R103	0113663	CF 100K $\Omega$ $\pm$ 5%	SRD1/6P [for ZS]								
R104	0113591	CF 100 $\Omega$ $\pm$ 5%	SRD1/6P [for ZS]								
R105	0113663	CF 100K $\Omega$ $\pm$ 5%	SRD1/6P [for ZS]								

SYMBOL No.	PART No.	DESCRIPTION			SYMBOL No.	PART No.	DESCRIPTION			SYMBOL No.	PART No.	DESCRIPTION					
R367	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R442LR	0113637	CF	8.2K $\Omega$	$\pm 5\%$	SRD1/6P	R606	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R368	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R443LR	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R607	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P
R369	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R444LR	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R608	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P
R370	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R445LR	0113575	CF	22 $\Omega$	$\pm 5\%$	SRD1/6P	R609	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P
R371	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R446LR	0113621	CF	1.8K $\Omega$	$\pm 5\%$	SRD1/6P	R610	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P
R372	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R447LR	0113625	CF	2.7K $\Omega$	$\pm 5\%$	SRD1/6P	R611	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P
R373	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R448LR	0113623	CF	2.2K $\Omega$	$\pm 5\%$	SRD1/6P	R613	0113601	CF	270 $\Omega$	$\pm 5\%$	SRD1/6P
R374	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R449LR	0113623	CF	2.2K $\Omega$	$\pm 5\%$	SRD1/6P	R614	0113599	CF	220 $\Omega$	$\pm 5\%$	SRD1/6P
R375	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R450	0113589	CF	82 $\Omega$	$\pm 5\%$	SRD1/6P	R615	0113601	CF	270 $\Omega$	$\pm 5\%$	SRD1/6P
R376	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R451	0113679	CF	470K $\Omega$	$\pm 5\%$	SRD1/6P	R616	0113601	CF	270 $\Omega$	$\pm 5\%$	SRD1/6P
R378	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R453	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R617	0113599	CF	220 $\Omega$	$\pm 5\%$	SRD1/6P
R380	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R454	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R618	0113599	CF	220 $\Omega$	$\pm 5\%$	SRD1/6P
R381	0113623	CF	2.2K $\Omega$	$\pm 5\%$	SRD1/6P	R455	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P	R619	0113601	CF	270 $\Omega$	$\pm 5\%$	SRD1/6P
R383	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R457	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R620	0113599	CF	220 $\Omega$	$\pm 5\%$	SRD1/6P
R384	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R458	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R621	0113599	CF	220 $\Omega$	$\pm 5\%$	SRD1/6P
R385	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R459	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R622	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P
R386	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R460	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R623	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P
R387	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R461	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R624	0113601	CF	270 $\Omega$	$\pm 5\%$	SRD1/6P
R388	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R462	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R625	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P
R389	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R463	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P	R626	0113623	CF	2.2K $\Omega$	$\pm 5\%$	SRD1/6P
R390	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R464	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R627	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P
R401LR	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R465	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R629LR	0113627	CF	3.3K $\Omega$	$\pm 5\%$	SRD1/6P
R402LR	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R466	0113633	CF	5.6K $\Omega$	$\pm 5\%$	SRD1/6P	R630LR	0113627	CF	3.3K $\Omega$	$\pm 5\%$	SRD1/6P
R403LR	0113589	CF	82 $\Omega$	$\pm 5\%$	SRD1/6P	R467LR	0113651	CF	33K $\Omega$	$\pm 5\%$	SRD1/6P	R631LR	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P
R404LR	0113641	CF	12K $\Omega$	$\pm 5\%$	SRD1/6P	R468	0113591	CF	100 $\Omega$	$\pm 5\%$	SRD1/6P	R632	0113293	CF	330 $\Omega$	$\pm 5\%$	SRD1/2P
R405LR	0113645	CF	18K $\Omega$	$\pm 5\%$	SRD1/6P	R469	0113591	CF	100 $\Omega$	$\pm 5\%$	SRD1/6P	R633LR	0113629	CF	3.9K $\Omega$	$\pm 5\%$	SRD1/6P
R406LR	0113621	CF	1.8K $\Omega$	$\pm 5\%$	SRD1/6P	R470LR	0113671	CF	220K $\Omega$	$\pm 5\%$	SRD1/6P	R634LR	0113661	CF	82K $\Omega$	$\pm 5\%$	SRD1/6P
R407LR	0113625	CF	2.7K $\Omega$	$\pm 5\%$	SRD1/6P	R471LR	0113635	CF	6.8K $\Omega$	$\pm 5\%$	SRD1/6P	R636	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P
R408LR	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R472LR	0113649	CF	27K $\Omega$	$\pm 5\%$	SRD1/6P	R637	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P
R409	0113625	CF	2.7K $\Omega$	$\pm 5\%$	SRD1/6P	R475	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R638	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P
R410	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R476LR	0113651	CF	33K $\Omega$	$\pm 5\%$	SRD1/6P	R639	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P
R411	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R477	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P	R640	0113635	CF	6.8K $\Omega$	$\pm 5\%$	SRD1/6P
R412	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R480	0113293	CF	330 $\Omega$	$\pm 5\%$	SRD1/2P	R641	0113635	CF	6.8K $\Omega$	$\pm 5\%$	SRD1/6P
R413	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R481	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R642	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R414	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R482	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R643	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R415LR	0113633	CF	5.6K $\Omega$	$\pm 5\%$	SRD1/6P	R483	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R644	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R416LR	0113643	CF	15K $\Omega$	$\pm 5\%$	SRD1/6P	R484	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R645	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R417LR	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R485	0113671	CF	220K $\Omega$	$\pm 5\%$	SRD1/6P	R646	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R418LR	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R486	0113671	CF	220K $\Omega$	$\pm 5\%$	SRD1/6P	R648	0129519	CF	5.6 $\Omega$	$\pm 5\%$	SRD1/4P
R419LR	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R501LR	0113609	CF	560 $\Omega$	$\pm 5\%$	SRD1/6P	R649	0129519	CF	5.6 $\Omega$	$\pm 5\%$	SRD1/4P
R420LR	0113623	CF	2.2K $\Omega$	$\pm 5\%$	SRD1/6P	R502LR	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P	R651LR	0113633	CF	5.6K $\Omega$	$\pm 5\%$	SRD1/6P
R421LR	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R503LR	0113617	CF	1.2K $\Omega$	$\pm 5\%$	SRD1/6P	R652LR	0113637	CF	8.2K $\Omega$	$\pm 5\%$	SRD1/6P
R422	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R504LR	0113677	CF	390K $\Omega$	$\pm 5\%$	SRD1/6P	R653LR	0113687	CF	1M $\Omega$	$\pm 5\%$	SRD1/6P
R423LR	0113633	CF	5.6K $\Omega$	$\pm 5\%$	SRD1/6P	R505LR	0113651	CF	33K $\Omega$	$\pm 5\%$	SRD1/6P	R654LR	0113645	CF	18K $\Omega$	$\pm 5\%$	SRD1/6P
R424	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P	R506LR	0113663	CF	100K $\Omega$	$\pm 5\%$	SRD1/6P	R655LR	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P
R425	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R508LR	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R657LR	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P
R426	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R509LR	0113673	CF	270K $\Omega$	$\pm 5\%$	SRD1/6P	R658LR	0113611	CF	680 $\Omega$	$\pm 5\%$	SRD1/6P
R427LR	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R511LR	0113673	CF	270K $\Omega$	$\pm 5\%$	SRD1/6P	R661	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P
R428LR	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P	R512	0113623	CF	2.2K $\Omega$	$\pm 5\%$	SRD1/6P	R663	0113627	CF	3.3K $\Omega$	$\pm 5\%$	SRD1/6P
R429	0113627	CF	3.3K $\Omega$	$\pm 5\%$	SRD1/6P	R513	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R664	0129601	CF	1K $\Omega$	$\pm 5\%$	SRD1/4P
R430	0113633	CF	5.6K $\Omega$	$\pm 5\%$	SRD1/6P	R514	0113296	CF	560 $\Omega$	$\pm 5\%$	SRD1/2P	R665LR	0113621	CF	1.8K $\Omega$	$\pm 5\%$	SRD1/6P
R431LR	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P	R515	0113296	CF	560 $\Omega$	$\pm 5\%$	SRD1/2P	R666LR	0113611	CF	680 $\Omega$	$\pm 5\%$	SRD1/6P
R432	0113633	CF	5.6K $\Omega$	$\pm 5\%$	SRD1/6P	R553	0113201	CF	10 $\Omega$	$\pm 5\%$	SRD1/2P	R701LR	0113615	CF	1K $\Omega$	$\pm 5\%$	SRD1/6P
R433	0113551	CF	2.2 $\Omega$	$\pm 5\%$	SRD1/6P	R554LR	0113647	CF	22K $\Omega$	$\pm 5\%$	SRD1/6P	R702LR	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R434	0113641	CF	12K $\Omega$	$\pm 5\%$	SRD1/6P	R555LR	0113637	CF	8.2K $\Omega$	$\pm 5\%$	SRD1/6P	R703LR	0113595	CF	150 $\Omega$	$\pm 5\%$	SRD1/6P
R435	0113641	CF	12K $\Omega$	$\pm 5\%$	SRD1/6P	R556	0113619	CF	1.5K $\Omega$	$\pm 5\%$	SRD1/6P	R704LR	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P
R437	0113643	CF	15K $\Omega$	$\pm 5\%$	SRD1/6P	R601	0113639	CF	10K $\Omega$	$\pm 5\%$	SRD1/6P	R705LR	0113370	CF	2.7K $\Omega$	$\pm 5\%$	SRD1/2P
R438	0113619	CF	1.5K $\Omega$	$\pm 5\%$	SRD1/6P	R602	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P	R706LR	0113370	CF	2.7K $\Omega$	$\pm 5\%$	SRD1/2P
R439	0113627	CF	3.3K $\Omega$	$\pm 5\%$	SRD1/6P	R603	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P	R707	1110621	FR	100 $\Omega$	$\pm 5\%$	RN1/4B
R440	0113631	CF	4.7K $\Omega$	$\pm 5\%$	SRD1/6P	R604	0113655	CF	47K $\Omega$	$\pm 5\%$	SRD1/6P	R708	0113365	CF	1K $\Omega$	$\pm 5\%$	SRD1/2P
R441	0113571	CF	15 $\Omega$	$\pm 5\%$	SRD1/6P	R605	0113657	CF	56K $\Omega$	$\pm 5\%$	SRD1/6P	R709	0113362	CF	2.2K $\Omega$	$\pm 5\%$	SRD1/2P

SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
▲R710	1110621	FR 100Ω ±5% RN1/4B	R852	0113639	CF 10KΩ ±5% SRD1/6P	R917	0113623	CF 2.2KΩ ±5% SRD1/6P
R711LR	1119029	ME 4.7Ω ±10% RN1B	R853	0129573	CF 330Ω ±5% SRD1/4P	R918	0113613	CF 820Ω ±5% SRD1/6P
R712	0113671	CF 220KΩ ±5% SRD1/6P	R854	0113639	CF 10KΩ ±5% SRD1/6P	R919	0113615	CF 1KΩ ±5% SRD1/6P
R713	0113655	CF 47KΩ ±5% SRD1/6P	R855	0113639	CF 10KΩ ±5% SRD1/6P	R920	0113639	CF 10KΩ ±5% SRD1/6P
R714	0113631	CF 4.7KΩ ±5% SRD1/6P	R856	0113639	CF 10KΩ ±5% SRD1/6P	R921	0113639	CF 10KΩ ±5% SRD1/6P
R715	0113663	CF 100KΩ ±5% SRD1/6P	R857	0113639	CF 10KΩ ±5% SRD1/6P	R922	0133601	CF 270Ω ±5% SRD1/6P
R716	0113649	CF 27KΩ ±5% SRD1/6P	R858	0129573	CF 330Ω ±5% SRD1/4P	R923	0133601	CF 270Ω ±5% SRD1/6P
R717	0113641	CF 12KΩ ±5% SRD1/6P	R859	0113691	CF 1.5MΩ ±5% SRD1/6P	R924	0113619	CF 1.5KΩ ±5% SRD1/6P
R718	0113657	CF 56KΩ ±5% SRD1/6P	R860	0113221	CF 22Ω ±5% SRD1/2P	R925	0113609	CF 560Ω ±5% SRD1/6P
R719	0113367	CF 1.2KΩ ±5% SRD1/2P	R861	0113221	CF 22Ω ±5% SRD1/2P	R926	0113623	CF 2.2KΩ ±5% SRD1/6P
R720	0113295	CF 470Ω ±5% SRD1/2P	R863	0113221	CF 22Ω ±5% SRD1/2P	R927	0113655	CF 47KΩ ±5% SRD1/6P
R721LR	0113663	CF 100KΩ ±5% SRD1/6P	R864	0113221	CF 22Ω ±5% SRD1/2P	R931	0113623	CF 2.2KΩ ±5% SRD1/6P
R722LR	0129531	CF 10Ω ±5% SRD1/4P	R865	0113639	CF 10KΩ ±5% SRD1/6P	R932	0113627	CF 3.3KΩ ±5% SRD1/6P
R730LR	1119123	ME 0.22Ω ±10% RN2B	R866LR	0113629	CF 3.9KΩ ±5% SRD1/6P	R933	0113687	CF 1MΩ ±5% SRD1/6P
R731LR	0113625	CF 2.7KΩ ±5% SRD1/6P	R867LR	0113629	CF 3.9KΩ ±5% SRD1/6P	R934	0113647	CF 22KΩ ±5% SRD1/6P
R732LR	0113631	CF 4.7KΩ ±5% SRD1/6P	R868LR	0113591	CF 100Ω ±5% SRD1/6P	R935	0113649	CF 27KΩ ±5% SRD1/6P
R733	0113633	CF 5.6KΩ ±5% SRD1/6P	R869LR	0113633	CF 5.6KΩ ±5% SRD1/6P	R936	0113655	CF 47KΩ ±5% SRD1/6P
R734	0113362	CF 2.2KΩ ±5% SRD1/2P	R870	0113663	CF 100KΩ ±5% SRD1/6P	R937	0113639	CF 10KΩ ±5% SRD1/6P
R735	0113367	CF 1.2KΩ ±5% SRD1/2P	R871	0113619	CF 1.5KΩ ±5% SRD1/6P	R938	0113639	CF 10KΩ ±5% SRD1/6P
R751LR	0113643	CF 15KΩ ±5% SRD1/6P	R872	0113619	CF 1.5KΩ ±5% SRD1/6P	R939	0113627	CF 3.3KΩ ±5% SRD1/6P
R752LR	0113653	CF 39KΩ ±5% SRD1/6P	R873	0113663	CF 100KΩ ±5% SRD1/6P	R940	0113627	CF 3.3KΩ ±5% SRD1/6P
R753LR	0113599	CF 220Ω ±5% SRD1/6P	R874	0113663	CF 100KΩ ±5% SRD1/6P	R941	0113641	CF 12KΩ ±5% SRD1/6P
R754LR	0113653	CF 39KΩ ±5% SRD1/6P	R875	0113619	CF 1.5KΩ ±5% SRD1/6P	R942	0113639	CF 10KΩ ±5% SRD1/6P
R755LR	0113663	CF 100KΩ ±5% SRD1/6P	R876	0113613	CF 820Ω ±5% SRD1/6P	R943	0113663	CF 100KΩ ±5% SRD1/6P
R756LR	0113287	CF 100Ω ±5% SRD1/2P	R877	0113639	CF 10KΩ ±5% SRD1/6P	R944	0113583	CF 47Ω ±5% SRD1/6P
R758	0113673	CF 270KΩ ±5% SRD1/6P	R878	0113633	CF 5.6KΩ ±5% SRD1/6P	R945	0113613	CF 820Ω ±5% SRD1/6P
R759	0113663	CF 100KΩ ±5% SRD1/6P	R879	0113615	CF 1KΩ ±5% SRD1/6P	R946	0113643	CF 15KΩ ±5% SRD1/6P
R760	0113639	CF 10KΩ ±5% SRD1/6P	R881	0113671	CF 220KΩ ±5% SRD1/6P	R947	0113643	CF 15KΩ ±5% SRD1/6P
R761	0113615	CF 1KΩ ±5% SRD1/6P	R882	0113653	CF 39KΩ ±5% SRD1/6P	R948	0113655	CF 47KΩ ±5% SRD1/6P
R801	0113645	CF 18KΩ ±5% SRD1/6P	R883	0113647	CF 22KΩ ±5% SRD1/6P	R949	0113655	CF 47KΩ ±5% SRD1/6P
R802	0113295	CF 470Ω ±5% SRD1/2P	R884	0113603	CF 330Ω ±5% SRD1/6P	R950	0113645	CF 18KΩ ±5% SRD1/6P
R803	0113295	CF 470Ω ±5% SRD1/2P	R887	0113615	CF 1KΩ ±5% SRD1/6P	R951	0113671	CF 220KΩ ±5% SRD1/6P
R804	0113639	CF 10KΩ ±5% SRD1/6P	R888	0113639	CF 10KΩ ±5% SRD1/6P	R952	0113599	CF 220Ω ±5% SRD1/6P
R805	0129601	CF 1KΩ ±5% SRD1/4P	R889	0113639	CF 10KΩ ±5% SRD1/6P	R953	0113591	CF 100Ω ±5% SRD1/6P
R806	0113296	CF 560Ω ±5% SRD1/2P	R890	0113639	CF 10KΩ ±5% SRD1/6P	R954	0113671	CF 220KΩ ±5% SRD1/6P
R807	0113639	CF 10KΩ ±5% SRD1/6P	R891	0113613	CF 820Ω ±5% SRD1/6P	R955	0113671	CF 220KΩ ±5% SRD1/6P
R808	0113655	CF 47KΩ ±5% SRD1/6P	R892	0113639	CF 10KΩ ±5% SRD1/6P	R961	0113687	CF 1MΩ ±5% SRD1/6P
R809	1119430	MO 560Ω ±10% RS1B	R893	0113595	CF 150Ω ±5% SRD1/6P	R962	0113639	CF 10KΩ ±5% SRD1/6P
R810	0113295	CF 470Ω ±5% SRD1/2P	R894	0113567	CF 10Ω ±5% SRD1/6P	R963	0113663	CF 100KΩ ±5% SRD1/6P
R812	0113365	CF 1KΩ ±5% SRD1/2P	R895	0113623	CF 2.2KΩ ±5% SRD1/6P	R964	0113639	CF 10KΩ ±5% SRD1/6P
▲R813	1110609	FR 47Ω ±5% RN1/4B	R896	0113639	CF 10KΩ ±5% SRD1/6P	R965	0113655	CF 47KΩ ±5% SRD1/6P
▲R814	1110609	FR 47Ω ±5% RN1/4B	R897	0113615	CF 1KΩ ±5% SRD1/6P	R966	0113639	CF 10KΩ ±5% SRD1/6P
R815	0113639	CF 10KΩ ±5% SRD1/6P	R898	0113595	CF 150Ω ±5% SRD1/6P	R967	0113615	CF 1KΩ ±5% SRD1/6P
R816	1119430	MO 560Ω ±10% RS1B	R899	0113567	CF 10Ω ±5% SRD1/6P	R968	0113607	CF 470Ω ±5% SRD1/6P
R817	0129615	CF 3.9KΩ ±5% SRD1/4P	R900	0113643	CF 15KΩ ±5% SRD1/6P	R969	0113627	CF 3.3KΩ ±5% SRD1/6P
R818	0113623	CF 2.2KΩ ±5% SRD1/6P	R901	0113615	CF 1KΩ ±5% SRD1/6P	R970	0113647	CF 22KΩ ±5% SRD1/6P
R819	0113655	CF 47KΩ ±5% SRD1/6P	R902	0113222	CF 27Ω ±5% SRD1/2P	R971	0113687	CF 1MΩ ±5% SRD1/6P
R820	0113639	CF 10KΩ ±5% SRD1/6P	R903	0113645	CF 18KΩ ±5% SRD1/6P	R972	0113639	CF 10KΩ ±5% SRD1/6P
R821	0113647	CF 22KΩ ±5% SRD1/6P	R904	0113631	CF 4.7KΩ ±5% SRD1/6P	R973	0113639	CF 10KΩ ±5% SRD1/6P
R822	0113647	CF 22KΩ ±5% SRD1/6P	R905	0113599	CF 220Ω ±5% SRD1/6P	R974	0113615	CF 1KΩ ±5% SRD1/6P
R823	0113639	CF 10KΩ ±5% SRD1/6P	R906	0113665	CF 120KΩ ±5% SRD1/6P	R975	0113607	CF 470Ω ±5% SRD1/6P
R831	0113623	CF 2.2KΩ ±5% SRD1/6P	R907	0113591	CF 100Ω ±5% SRD1/6P	R976	0113615	CF 1KΩ ±5% SRD1/6P
R832	0113615	CF 1KΩ ±5% SRD1/6P	R908	0113591	CF 100Ω ±5% SRD1/6P	R977	0113663	CF 100KΩ ±5% SRD1/6P
R833	0113627	CF 3.3KΩ ±5% SRD1/6P	R909	0113665	CF 120KΩ ±5% SRD1/6P	R978	0113663	CF 100KΩ ±5% SRD1/6P
R834	0113223	CF 33Ω ±5% SRD1/2P	R910	0113655	CF 47KΩ ±5% SRD1/6P	R980	0113629	CF 3.9KΩ ±5% SRD1/6P
R835	0113222	CF 27Ω ±5% SRD1/2P	R911	0113651	CF 33KΩ ±5% SRD1/6P	R981	0113629	CF 3.9KΩ ±5% SRD1/6P
R836	1119155	MF 22Ω ±10% RN2B	R912	0113665	CF 120KΩ ±5% SRD1/6P	R982	0113629	CF 3.9KΩ ±5% SRD1/6P
R837	0113679	CF 470KΩ ±5% SRD1/6P	R913	0113615	CF 1KΩ ±5% SRD1/6P	R983	0113629	CF 3.9KΩ ±5% SRD1/6P
R838	0113365	CF 1KΩ ±5% SRD1/2P	R914	0113591	CF 100Ω ±5% SRD1/6P	R986	0113663	CF 100KΩ ±5% SRD1/6P
R850	0113687	CF 1MΩ ±5% SRD1/6P	R915	0113687	CF 1MΩ ±5% SRD1/6P	R987	0113663	CF 100KΩ ±5% SRD1/6P
R851	0113639	CF 10KΩ ±5% SRD1/6P	R916	0113639	CF 10KΩ ±5% SRD1/6P	R988	0113615	CF 1KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
R989	0113615	CF 1K $\Omega$ $\pm$ 5% SRD1/6P	Q302	2318292	2SA933S(R) [for ES, VS, BK]	Q803	2318303	2SC1740S(S)
R990	0113615	CF 1K $\Omega$ $\pm$ 5% SRD1/6P				Q804	2318374	2SD1913(Q/R)
R991	0113615	CF 1K $\Omega$ $\pm$ 5% SRD1/6P	Q303	2318292	2SA933S(R) [for ES, VS, BK]	Q805	2318271	2SB562BTZ
R992	0113655	CF 47K $\Omega$ $\pm$ 5% SRD1/6P				Q806	2318364	2SB1274(Q/R)
R993	0113655	CF 47K $\Omega$ $\pm$ 5% SRD1/6P	Q304	2318292	2SA933S(R)	Q807	2318374	2SD1913(Q/R)
R994	0113655	CF 47K $\Omega$ $\pm$ 5% SRD1/6P	Q305	2318303	2SC1740S(S)	Q808	2318303	2SC1740S(S)
R995	0113655	CF 47K $\Omega$ $\pm$ 5% SRD1/6P	Q306	2318303	2SC1740S(S)	Q809	2318303	2SC1740S(S)
R996	0113655	CF 47K $\Omega$ $\pm$ 5% SRD1/6P	Q307	2318303	2SC1740S(S) [for ES, VS, BK]	Q810	2318303	2SC1740S(S)
R997	0113659	CF 68K $\Omega$ $\pm$ 5% SRD1/6P				Q811	2318292	2SA933S(R)
R999	0113663	CF 100K $\Omega$ $\pm$ 5% SRD1/6P	Q308	2318303	2SC1740S(S) [for ES, VS, BK]	Q812	2318303	2SC1740S(S)
ICs & TRANSISTORS								
IC201	2368431	AN278	Q309LR	2318303	2SC1740S(S)	Q813	2318303	2SC1740S(S)
IC202	2301121	LA1266	Q401	2318222	DTC124EST	Q851	2318372	2SD1913(R)
IC301	2300631	BA1332L	Q402	2318222	DTC124EST	Q853	2318374	2SD1913(Q/R)
IC302	2301681	LC7217	Q403	2318222	DTC124EST	Q854	2318362	2SB1274(R)
IC351	2301613	HD63A01Y0C60P	Q404	2318222	DTC124EST	Q856	2318364	2SB1274(Q/R)
IC352	2368791	TC4028BP	Q405	2318222	DTC124EST	Q871	2318292	2SA933S(R)
IC401	2301731	LA3246	Q406LR	2329316	2SC1741QR	Q872	2328652	2SC1740LN(S)
IC402	2301711	$\mu$ PC1290C	Q407LR	2318222	DTC124EST	Q873	2318292	2SA933S(R)
IC403	2387301	M5218P	Q408	2318222	DTC124EST	Q881	2328652	2SC1740LN(S)
IC404	2301201	HA12086	Q409LR	2329316	2SC1741QR	Q890	2318292	2SA933S(R)
IC405	2301741	LA3240	Q410	2318222	DTC124EST	Q891	2328652	2SC1740LN(S)
IC501	2387301	M5218P	Q411LR	2329316	2SC1741QR	Q892	2328652	2SC1740LN(S)
IC502	2301691	LC7821	Q412	2327333	2SC1213P(C)	Q893	2318292	2SA933S(R)
IC551	2301701	BA6209N	Q413	2327333	2SC1213P(C)	Q901	2318271	2SB562BTZ
IC601	2300658	$\mu$ PD7516HCW-287	Q414	2318282	2SD468CTZ	Q902	2328652	2SC1740LN(S)
IC602	2387241	IR3702	Q415	2318222	DTC124EST	Q903	2328652	2SC1740LN(S)
IC603	2369411	MSM58371	Q416	2318303	2SC1740S(S)	Q904	2318292	2SA933S(R)
IC604LR	2300841	BA3812L	Q417	2318222	DTC124EST	Q905	2328652	2SC1740LN(S)
IC605	2387241	IR3702	Q418LR	2318222	DTC124EST	Q906	2328652	2SC1740LN(S)
IC651	2301291	$\mu$ PC4570C	Q419	2318222	DTC124EST	Q907	2318374	2SD1913(Q/R)
IC701	2301151	STK4192 II	Q420LR	2329316	2SC1741QR	Q908	2318364	2SB1274(Q/R)
IC702	2387581	$\mu$ PC1237H	Q421	2317741	2SD1111	Q909	2328652	2SC1740LN(S)
IC751	2387301	M5218P	Q422	2317741	2SD1111	Q910	2328652	2SC1740LN(S)
IC851	2300971	HA12096	Q423	2317741	2SD1111	DIODES		
IC852LR	2301291	$\mu$ PC4570C	Q424	2329582	2SA933T(R)	D101	2398611	1SS254
IC853LR	2387481	HD14053B	Q425	2318222	DTC124EST	D102	2398611	1SS254
IC901	2300681	BA6352S	Q426	2318222	DTC124EST	D103	2337931	1K60R
IC902	2367222	NJM4558DM	Q427	2318222	DTC124EST			[for ZS]
IC903	2377673	TM5060	Q428	2317741	2SD1111	D104	2337931	1K60R
IC904	2367222	NJM4558DM	Q429	2317741	2SD1111			[for ZS]
						D105	2398611	1SS254
IC905	2301212	HD49201A	Q430	2317741	2SD1111			[for ES, VS, BK]
IC906	2387441	HM6116FP-4	Q431	2329582	2SA933T(R)	D106	2398611	1SS254
IC907	2301443	$\mu$ PD7516HCW-317	Q432	2318303	2SC1740S(S)			[for ES, VS, BK]
IC908	2301062	HD614042SF54	Q433	2318303	2SC1740S(S)			
IR601	2377731	GP1U501	Q434	2318303	2SC1740S(S)	D151	2398611	1SS254
Q101	2318303	2SC1740S(S) [for ZS]	Q501LR	2317971	2SD1468(R)	D152	2398611	1SS254
			Q601	2318292	2SA933S(R)	D153	2397321	KV1260
Q102	2328802	2SK104(F) [for ZS]	Q602	2318292	2SA933S(R)	D154	2397321	KV1260
			Q603	2318303	2SC1740S(S)			[for ES, VS, BK]
Q151	2318222	DTC124EST [for ES, VS, BK]	Q604	2318303	2SC1740S(S)	D155	2398611	1SS254
								[for ES, VS, BK]
Q152	2318222	DTC124EST [for ES, VS, BK]	Q605	2318292	2SA933S(R)	D156	2398611	1SS254
			Q606	2318292	2SA933S(R)			[for ES, VS, BK]
Q202	2318292	2SA933S(R)	Q651LR	2318303	2SC1740S(S)	D157	2398611	1SS254
Q203	2318222	DTC124EST	Q652LR	2317971	2SD1468(R)			[for ES, VS, BK]
Q204	2318303	2SC1740S(S)	Q654	2318292	2SA933S(R)			
Q205	2318303	2SC1740S(S)	Q701	2318292	2SA933S(R)	D301	2398611	1SS254
Q206	2318303	2SC1740S(S)	Q730LR	2327893	2SA872E	D302	2398611	1SS254
Q301	2318292	2SA933S(R)	Q751	2318292	2SA933S(R)	D303	2337762	ERB12-01
			Q752	2328652	2SC1740LN(S)	D351	2337762	ERB12-01
			Q801	2318374	2SD1913(Q/R)	D354	2398611	1SS254
			Q802	2318364	2SB1274(Q/R)			

SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
D355	2398611	1SS254	D730LR	2398611	1SS254	D623	2398721	LN222RPH
D365	2398611	1SS254 [for US, CS]	D801	2337461	S4VB20	D624	2398722	LN222GPH
D366	2398611	1SS254 [except US, CS]	D802	2337762	ERB12-01	D625	2398722	LN222GPH
D367	2398611	1SS254 [for ES, VS, BK]	D803	2337461	S4VB20	D626	2398723	LN422YPH
D368	2398611	1SS254	D804	2337762	ERB12-01	D627	2398722	LN222GPH
D369	2398611	1SS254	D805	2337762	ERB12-01	D628	2398722	LN222GPH
D401	2398611	1SS254	D806	2337762	ERB12-01	VARIABLE RESISTORS		
D402	2398611	1SS254	D807	2398611	1SS254	RT301	0158977	4.7k $\Omega$ -(B) (FM MPX VCO ADJ.)
D403	2398611	1SS254	D808	2398611	1SS254	RT401LR	0158971	10k $\Omega$ -(B) (PLAYBACK GAIN ADJ.)
D405	2398611	1SS254	D881	2398611	1SS254	RT402LR	0158973	100k $\Omega$ -(B) (BIAS CURRENT ADJ.)
D406	2398611	1SS254	D901	2398611	1SS254	RT403LR	0158971	10k $\Omega$ -(B) (REC/PLAY OUTPUT LEVEL ADJ.)
D407	2398611	1SS254	D902	2398611	1SS254	RT404	0158971	10k $\Omega$ -(B) (HIGH SPEED ADJ.)
D408	2398611	1SS254	D903	2398611	1SS254	RT405	0158971	10k $\Omega$ -(B) (NORMAL SPEED ADJ.)
D409	2398611	1SS254	D904	2398611	1SS254	RT406	0158971	10k $\Omega$ -(B) (HIGH SPEED ADJ.)
D410	2398611	1SS254	D905	2398611	1SS254	RT407	0158971	10k $\Omega$ -(B) (NORMAL SPEED ADJ.)
D411	2398611	1SS254	D906	2398611	1SS254	VR901	0158977	4.7K $\Omega$ -(B) (LASER DIOED OUTPUT ADJ.)
D412	2398611	1SS254	D907	2398611	1SS254	VR902	0158971	10K $\Omega$ -(B) (TRACKING SERVO OFFSET ADJ.)
D413	2398611	1SS254	D908	2398611	1SS254	RV551	0189114	100k $\Omega$ -(B) (with motor) (VOLUME CONTROL)
D414	2398611	1SS254	D909	2398611	1SS254	RV606	0189263	200k $\Omega$ -(Special W) (BALANCE CONTROL)
D415	2398611	1SS254	D910	2398611	1SS254	RV607	0189275	100k $\Omega$ -(B) (G.E. CONTROL)
D416	2398611	1SS254	D912	2398611	1SS254	RV608	0189275	100k $\Omega$ -(B) (G.E. CONTROL)
D418	2398611	1SS254	D913	2398611	1SS254	RV609	0189275	100k $\Omega$ -(B) (G.E. CONTROL)
D419	2398611	1SS254	D915	2398611	1SS254	RV610	0189275	100k $\Omega$ -(B) (G.E. CONTROL)
D420	2398611	1SS254	D916	2398611	1SS254	RV611	0189275	100k $\Omega$ -(B) (G.E. CONTROL)
D421	2398611	1SS254	D917	2398611	1SS254	COILS & TRANSFORMERS		
D422	2398611	1SS254	D918	2398611	1SS254	L101	2227351	Choke coil [except ZS]
D423	2398611	1SS254	D919	2398611	1SS254	L151	2137373	AM ANT coil (MW)
D424	2398611	1SS254	D920	2398611	1SS254	L152	2136493	AM OSC coil (MW)
D425	2398611	1SS254	D921	2398611	1SS254	L153	2137374	AM ANT coil (LW) [for ES, VS, BK]
D426	2398611	1SS254	D922	2398611	1SS254	L154	2136494	AM OSC coil (LW) [for ES, VS, BK]
D429	2398611	1SS254	D923	2398611	1SS254	L301	2228191	Choke coil
D430	2398611	1SS254	D924	2398611	1SS254	L401	2137342	Bias OSC coil
D431	2398611	1SS254	D925	2398611	1SS254	L402LR	2227991	Choke coil
D432	2398611	1SS254	D926	2398611	1SS254	L403LR	2227395	Choke coil
D433	2398611	1SS254	D927	2398611	1SS254	L410	2227394	Choke coil
D434	2398611	1SS254	D928	2398611	1SS254	L601	2227354	Choke coil
D435	2398611	1SS254	D929	2398611	1SS254	L602	2228191	Choke coil
D436	2398611	1SS254	D930	2398611	1SS254	L701LR	2227361	Audio trap coil
D437	2398611	1SS254	D931	2398611	1SS254	L891	2228191	Choke coil
D438	2398611	1SS254	D932	2398611	1SS254	L901	2227931	Choke coil
D439	2398611	1SS254	D933	2398611	1SS254	L902	2227919	Choke coil
D440	2398611	1SS254	D934	2398611	1SS254	L903	2227914	Choke coil
D441	2398611	1SS254	D935	2398611	1SS254	T201	2137033	FM discriminator coil
D442	2398611	1SS254	D936	2398611	1SS254	T202	2154493	AM IF transformer
D443	2398611	1SS254	D937	2398611	1SS254			
D444	2398611	1SS254	D938	2398611	1SS254			
D445	2398611	1SS254	D939	2398611	1SS254			
D446	2398611	1SS254	D940	2398611	1SS254			
D447	2398611	1SS254	D941	2398611	1SS254			
D448	2398611	1SS254	D942	2398611	1SS254			
D449	2398611	1SS254	D943	2398611	1SS254			
D450	2398611	1SS254	D944	2398611	1SS254			
D451	2398611	1SS254	D945	2398611	1SS254			
D452	2398611	1SS254	D946	2398611	1SS254			
D453	2398611	1SS254	D947	2398611	1SS254			
D454	2398611	1SS254	D948	2398611	1SS254			
D455	2398611	1SS254	D949	2398611	1SS254			
D456	2398611	1SS254	D950	2398611	1SS254			
D457	2398611	1SS254	D951	2398611	1SS254			
D458	2398611	1SS254	D952	2398611	1SS254			
D459	2398611	1SS254	D953	2398611	1SS254			
D460	2398611	1SS254	D954	2398611	1SS254			
D461	2398611	1SS254	D955	2398611	1SS254			
D462	2398611	1SS254	D956	2398611	1SS254			
D463	2398611	1SS254	D957	2398611	1SS254			
D464	2398611	1SS254	D958	2398611	1SS254			
D465	2398611	1SS254	D959	2398611	1SS254			
D466	2398611	1SS254	D960	2398611	1SS254			
D467	2398611	1SS254	D961	2398611	1SS254			
D468	2398611	1SS254	D962	2398611	1SS254			
D469	2398611	1SS254	D963	2398611	1SS254			
D470	2398611	1SS254	D964	2398611	1SS254			
D471	2398611	1SS254	D965	2398611	1SS254			
D472	2398611	1SS254	D966	2398611	1SS254			
D473	2398611	1SS254	D967	2398611	1SS254			
D474	2398611	1SS254	D968	2398611	1SS254			
D475	2398611	1SS254	D969	2398611	1SS254			
D476	2398611	1SS254	D970	2398611	1SS254			
D477	2398611	1SS254	D971	2398611	1SS254			
D478	2398611	1SS254	D972	2398611	1SS254			
D479	2398611	1SS254	D973	2398611	1SS254			
D480	2398611	1SS254	D974	2398611	1SS254			
D481	2398611	1SS254	D975	2398611	1SS254			
D482	2398611	1SS254	D976	2398611	1SS254			
D483	2398611	1SS254	D977	2398611	1SS254			
D484	2398611	1SS254	D978	2398611	1SS254			
D485	2398611	1SS254	D979	2398611	1SS254			
D486	2398611	1SS254	D980	2398611	1SS254			
D487	2398611	1SS254	D981	2398611	1SS254			
D488	2398611	1SS254	D982	2398611	1SS254			
D489	2398611	1SS254	D983	2398611	1SS254			
D490	2398611	1SS254	D984	2398611	1SS254			
D491	2398611	1SS254	D985	2398611	1SS254			
D492	2398611	1SS254	D986	2398611	1SS254			
D493	2398611	1SS254	D987	2398611	1SS254			
D494	2398611	1SS254	D988	2398611	1SS254			
D495	2398611	1SS254	D989	2398611	1SS254			
D496	2398611	1SS254	D990	2398611	1SS254			
D497	2398611	1SS254	D991	2398611	1SS254			
D498	2398611	1SS254	D992	2398611	1SS254			
D499	2398611	1SS254	D993	2398611	1SS254			
D500	2398611	1SS254	D994	2398611	1SS254			
D501	2398611	1SS254	D995	2398611	1SS254			
D502	2398611	1SS254	D996	2398611	1SS254			
D503	2398611	1SS254	D997	2398611	1SS254			
D504	2398611	1SS254	D998	2398611	1SS254			
D505	2398611	1SS254	D999	2398611	1SS254			
D506	2398611	1SS254	D1000	2398611	1SS254			
D507	2398611	1SS254	D1001	2398611	1SS254			
D508	2398611	1SS254	D1002	2398611	1SS254			
D509	2398611	1SS254	D1003	2398611	1SS254			
D510	2398611	1SS254	D1004	2398611	1SS254			
D511	2398611	1SS254	D1005	2398611	1SS254			
D512	2398611	1SS254	D1006	2398611	1SS254			
D513	2398611	1SS254	D1007	2398611	1SS254			
D514	2398611	1SS254	D1008	2398611	1SS254			
D515	2398611	1SS254	D1009	2398611	1SS254			
D516	2398611	1SS254	D1010	2398611	1SS254			
D517	2398611	1SS254	D1011	2398611	1SS254			
D518	2398611	1SS254	D1012	2398611	1SS254			
D519	2398611	1SS254	D1013	2398611	1SS254			
D520	2398611	1SS254	D1014	2398611	1SS254			
D521	2398611	1SS254	D1015	2398611	1SS254			
D522	2398611	1SS254	D1016	2398611	1SS254			
D523	2398611	1SS254	D1017	2398611	1SS254			
D524	2398611	1SS254	D1018	2398611	1SS254			
D525								



SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
<b>MISCELLANEOUS</b>			△F802	2727745	Fuse T2A [for BK]	△S701	2780271	Thermal switch
J102	2677911	FM antenna socket [for ES, VS, BK, KS, SA]	△F802	2727893	Fuse 2A-125V [for US, CS]	△S801	2618053	Voltage select switch [for EW]
	2658391	DIN antenna socket [for ZS]	△F802	2727193	Fuse T2A [except BK, US, CS]	S901	2639682	Tact switch (SB)
J151	2689382	4P terminal	△F803	2727193	Fuse T2A [except BK, US, CS]	S902	2639682	Tact switch (SF)
J501	2678347	6P US pin jack	△F803	2727745	Fuse T2A [for BK]	S903	2639682	Tact switch (FB)
J701	2677593	Headphones jack	△F803	2727893	Fuse 2A-125V [for US, CS]	S904	2639682	Tact switch (FF)
J702	2689381	Speaker terminal	△LA801	2767664	Lamp (with lead wire, 12V 50mA)	S905	2639682	Tact switch (STOP/CLEAR)
P101	2712141	Coaxial cord [for ZS]	△LA802	2767663	Lamp (with lead wire, 12V 50mA)	S906	2639682	Tact switch (PLAY)
P101	2712144	Coaxial cord [for ES, VS, BK, KS, SA]	△LA803	2767665	Lamp (with lead wire, 12V 50mA)	S907	2639682	Tact switch (PAUSE)
CP101	2136941	Band pass filter [for VS, ZS]	S1	2639151	Lever switch (OPEN/CLOSE)	S908	2639682	Tact switch (REPEAT)
CP201	2136312	Anti birdie filter [for VS, ZS]	S2	2639151	Lever switch (LASER)	△S909	2639682	Tact switch (OPERATE)
CP301LR	2136311	Low pass filter [for VS]	S401	2600423	Push switch (DOLBY NR/MODE SELECT)		3960402	LED holder (A)
CP401LR	2228104	Dolby filter	S501	2627931	Slide switch (SPACING) [for EW]			
CP402LR	2136792	Bias trap coil	S601	2639682	Tact switch (1)			
CP601	0241912	Capacitor array 220PF x 8	S602	2639682	Tact switch (2)			
CP602	0241911	Capacitor array 220PF x 12	S603	2639682	Tact switch (3)			
CP603	0189063	Resistor array 47kΩ x 8	S604	2639682	Tact switch (4)			
CP651LR	2137171	Low pass filter	S605	2639682	Tact switch (5)			
CP901	0241912	Capacitor array 220PF x 8	S606	2639682	Tact switch (6)			
RP351	0189064	Resistor array 4.7kΩ x 5	S607	2639682	Tact switch (7)			
RP352	0189042	Resistor array 100kΩ x 8	S608	2639682	Tact switch (8)			
RP353	0189064	Resistor array 4.7kΩ x 5	S609	2639682	Tact switch (9)			
RY701	2647711	DH relay	S610	2639682	Tact switch (10)			
MD101	2425671	Tuner pack [except ZS]	S611	2639682	Tact switch (+ 10)			
MD101	02425731	Tuner pack [for ZS]	S612	2639682	Tact switch (BAND SELECT)			
FL601	2780391	Fluorescent display tube	S613	2639682	Tact switch (FM MODE SELECT)			
FL602	2780401	Fluorescent display tube	S614	2639682	Tact switch (LONG PLAY)			
FL603	2780121	Fluorescent display tube	S615	2639682	Tact switch (PHONO)			
MF201	2134982	Ceramic filter [for US, CS]	S616	2639682	Tact switch (TUNER)			
	2135002	Ceramic filter [except US, CS]	S617	2639682	Tact switch (CD)			
MF202	2134982	Ceramic filter [for US, CS]	S618	2639682	Tact switch (AUX)			
	2135002	Ceramic filter [except US, CS]	S619	2639682	Tact switch (TAPE)			
MF203	2135002	Ceramic filter [for ZS]	S620	2639682	Tact switch (MEMORY)			
MF204	2155421	AM ceramic filter	S621	2639682	Tact switch (TUNING UP)			
X301	2780381	Crystal oscillator	S622	2639682	Tact switch (TUNING DOWN)			
X351	2155323	Ceramic oscillator	S623	2639682	Tact switch (MUTE)			
X601	2155323	Ceramic oscillator	S624	2639682	Tact switch (PAUSE.2)			
X901	2789832	Crystal oscillator	S625	2639682	Tact switch (STOP.2)			
X902	2155321	Ceramic oscillator	S626	2639682	Tact switch (F.PLAY.2)			
X903	2155324	Ceramic oscillator	S627	2639682	Tact switch (R.PLAY.2)			
F801	2727962	Fuse 3A-125V [for US, CS]	S628	2639682	Tact switch (FF.2)			
F801	2727194	Fuse T1.6A [for ES, VS, KS, ZS, SA, EW]	S629	2639682	Tact switch (REW.2)			
F801	2727744	Fuse T1.6A [for BK]	S630	2639682	Tact switch (STOP.1)			
			S631	2639682	Tact switch (F.PLAY.1)			
			S632	2639682	Tact switch (R.PLAY.1)			
			S633	2639682	Tact switch (FF.1)			
			S634	2639682	Tact switch (REW.1)			
			S635	2639682	Tact switch (REC.2)			
			S636	2639682	Tact switch (HIGH SPEED DUBBING)			

SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION	SYMBOL No.	PART No.	DESCRIPTION
<b>CABINET CHASSIS</b>								
1	8691410	BT bind head screw (3 φ x 10) (bottom case, main P.W.B., others)		3308944	CD control button (BLACK) [for US, CS]	39	4567411	DT bind screw (3 φ x 6) (heat sink bracket)
2	8691425	BT bind head screw (3 φ x 25) (bottom case)		3308947	CD control button (WHITE) [except US, CS]	40	8691414	BT bind head screw (3 φ x 14) (Q801, Q804, Q806)
3	4044641	Upper case assy (BLACK)		3308945	CD control button (BLACK) [except US, CS]	41	8691408	BT bind head screw (3 φ x 8) (shield sheet)
	4044451	Upper case assy (WHITE)	17	3308937	Cassette control button (WHITE)	42	4573553	Bind tapping screw (3 φ x 25) (IC701)
4	3392128	CD door open spring (R)		3308934	Cassette control button (BLACK)	43	3907811	Washer [for ES, BK]
5	3392127	CD door open spring (L)	18	3308911	Tuner button	44	2137381	Line filter (ESD-R25D) [for ES, VS, BK, KS, SA, ZS]
6	3392129	Cassette door open spring (L)	19	3392153	CD open wire	<b>UNIT MECHANISM</b>		
7	3392120	Cassette door open spring (R)	20	3392143	Cassette open wire	1	4468942	Unit plate assy
8	3807092	Control panel [WHITE] [BLACK (except BK)]	21	3308901	Push button	2	4040622	DC motor assy
	3807093	Control panel [BLACK (for BK)]	22	3308921	Volume knob	3	4418005	PS washer
9	3807191	Side panel	23	4567422	DT bind head screw (4 φ x 8) (power transformer)	4	3976432	Send gear
10	3805331	Clamper	24	8699410	BT bind head screw (3 φ x 10) (cassette chassis)	5	4850631	DC motor kit assy
11	3807262	CD lamp cover	25	4594961	Frote screw (unit mecha.)	6	8711103	Pan head screw (2 φ x 3)
12	3908591	Damper	26	4567432	DT bind head screw (3 φ x 8) (voltage select switch) [for EW]	7	2780071	Micro switch
13	3807131	Cassette door assy	27	8699308	BT bind head screw (2.6 φ x 8) (DIN antenna socket) [for ZS]	<b>for ACCESSORIES</b>		
14	3807141	CD door assy	28	2589341	HTY-3600DH cassette mecha assy (TAPE 2)	△	2667922	Siemens plug [for EW]
15	4044491	Bottom case assy (WHITE) [for ES]	29	2789693	Counter		2757528	FM antenna [except ZS]
	4044492	Bottom case assy (WHITE) [for VS]	30	4686999	Counter belt		4023261	AM loop antenna assy
	4044493	Bottom case assy (WHITE) [for BK]	31	2589342	HTY-3300DH cassette mecha assy (TAPE 1)		2589364	Remoto control unit (RB-W50) [for US, CS]
	4044494	Bottom case assy (WHITE) [for KS]	32	8699414	BT bind head screw (3 φ x 14)		2589365	Remoto control unit (RB-W50) [except US, CS]
	4044495	Bottom case assy (WHITE) [for ZS]	△33	2267392	Power transformer (2.4 kg 119.4 VA) [for ES, VS, KS, ZS]		4849091	Battery cover
	4044496	Bottom case assy (WHITE) [for SA]	△	2267393	Power transformer (2.4 kg 119.4 VA) [for BK, SA]	<b>CASSETTE CHASSIS</b>		
	4044497	Bottom case assy (WHITE) [for US]	△	2267391	Power transformer (2.4 kg 119.4 VA) [for US, CS]	1	4846531	Reel (L) assy
	4044498	Bottom case assy (WHITE) [for CS]	△	2267394	Power transformer (2.4 kg 119.4 VA) [for EW]	2	4847531	Reel (R) assy
	4044499	Bottom case assy (WHITE) [for EW]	△	2712101	Power supply cord [for ES, VS, KS, ZS]	3	4846831	Mechanism base assy
	4044471	Bottom case assy (BLACK) [for ES]	△	2749582	Power supply cord [for BK]	4	4846451	FR arm assy
	4044472	Bottom case assy (BLACK) [for VS]	△	2749622	Power supply cord [for SA]	5	4846001	FR gear
	4044473	Bottom case assy (BLACK) [for BK]	△34	2712311	Power supply cord [for US, CS]	6	4846031	FR arm A spring
	4044474	Bottom case assy (BLACK) [for KS]	△			7	4846231	FR arm B spring
	4044475	Bottom case assy (BLACK) [for ZS]	△			8	4846061	REW gear
	4044476	Bottom case assy (BLACK) [for SA]	△			9	4846601	Trigger arm (FR-B)
	4044477	Bottom case assy (BLACK) [for US]	△			10	4846991	FR cam gear
	4044478	Bottom case assy (BLACK) [for CS]	△35			11	4854061	Washer
	4044479	Bottom case assy (BLACK) [for EW]	△			12	4853601	Reel spring
16	3308946	CD control button (WHITE) [for US, CS]	36	4042682	Unit mecha assy (CD-M12)	13	4846631	Reel cap
			37	4691991	Rubber	14	4816011	Washer
			38	8671406	DT bind head screw (3 φ x 6)	15	4853641	Brake arm
						16	4846021	Brake spring
						17	4846522	Clutch assy
						18	4846801	FR lever
						19	4851801	FR lever spring (C)
						20	4847771	RV lever collar
						21	8691106	BT bind head screw (2 φ x 6)
						22	4846501	RV lever assy (A)
						23	4846571	FR shift arm
						24	4846671	Select arm
						25	4845901	FR shift spring
						26	4847001	PL cam gear

SYMBOL No.	PART No.	DESCRIPTION
27	4846491	Trigger arm assy
28	4845921	PL trigger spring
29	4833591	Tapping screw (2 φ x 5)
30	4846581	Housing (R)
31	4846591	Housing (L)
32	4816041	Screw (2 φ x 4)
33	4846741	PLAY gear arm
34	4846111	PLAY gear
35	4846301	PL arm collar
36	4816061	Screw (2 φ x 5)
37	4845891	PLAY arm spring
38	4846051	Cassette guide
39	4846681	RV arm
40	4846971	Head chassis
41	4846611	Head chassis spring
42	4846411	Shift arm assy
43	7783501	Special screw
44	4845911	Shift arm spring
45	4846911	RV lever (B)
46	4846641	Tape guide (R)
47	4846851	Tape guide (L)
48	4845931	Tape guide spring
49	4846871	Playback head (rotation type) (for TAPE 1)
	4846882	Rotation head (R/P) assy (for TAPE 2)
50	4846432	P roller assy (R)
51	4846442	P roller assy (L)
52	4845941	P roller RA spring
53	4845961	P roller RB spring
54	4845951	P roller LA spring
55	4845971	P roller LB spring
56	4846562	Solenoid assy
57	4847351	Pan head screw (2 φ x 3)
58	4846541	Flywheel (RB)
59	4847221	Flywheel gear (B)
60	4846551	Flywheel (LB)
61	4846381	Polyslider washer (2.3 φ x 5 x 0.25)
62	4847561	Polyslider washer (2.6 φ x 4.7 x 0.25)
63	4846891	Nylon washer (2.4 φ x 5 x 0.5)
64	4846901	Nylon washer (2.1 φ x 5 x 0.5)
65	4846471	Clutch belt
66	4847211	Capstan spacer
67	4825251	Leaf switch
68	4853631	Motor assy
69	4853571	Motor screw
71	4853591	Washer (B)
72	4846962	SW protector
73	4846621	SW arm
74	4477801	Spring (plate)
75	4851781	REC switch
76	4846481	Reflective sensor
77	4847301	PLAY switch
78	4816051	Screw (2 φ x 4)
79	4847371	Bind tap tight screw (2 φ x 6)
80	4847341	Head P.W.B.
81	4853521	Belt (H)

AN278 	BA1332L 4 ~ 12 14 	LC7217 LA1266 LA3240 HM6116FP-4 24 ~ 13 	HD14053B TC4028BP 16 ~ 9 1 ~ 8 	IR3702 MPC1290C 14 ~ 8 1 ~ 7 
HD614042SF54 HD63A01YOC60P MPD7516HCW-287 MPD7516HCW-316 	LA3246 20 ~ 11 1 ~ 10 	BA6209N 	MSM58371 18 ~ 10 1 ~ 9 	BA3812L 4 ~ 16 2 ~ 18 1 ~ 17 3 ~ 15 
M5218P NJM4558DM MPC4570C 	HD49201A 64 ~ 41 65 ~ 40 80 ~ 25 1 ~ 24 	STK4192II 	UPC1237H 	HZ-3A-2 HZ-4B-1 HZ-4B2 HZ-4C-3 HZ-5A-3 HZ5B HZ-6B HZ-6B-1 HZ7A HZ-9C-1 HZ9C-11 HZ9B1 HZ-11A-1 HZ-12A-3 HZ-12C-3 1SS254 1K60R RD27EB4 ERB12-01
8765 	HA12086 HA12096 22 ~ 12 1 ~ 11 	BA6352S LC7821 30 ~ 16 1 ~ 15 	2SC1740S (S) 2SC1740LN (S) 2SC1741QR 2SC1213P (C) 2SA872E 2SA933S (R) 2SA933T (R) 2SD1111 2SD1468 (R) 	
TM5060C 	DTC124EST 	2SK104 (F) 		
ECB 	2SB1274 (Q/R) 2SB1274 (R) 2SD1913 (R) 2SD1913 (Q/R)	GSD 	2SB562BTZ 2SD468CTZ	
KV1260 	BCE 	S4VB20 		
AKA 				

**WARNING LABEL-ETIQUETTE D'AVERTISSEMENT**

CAUTION-INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.

AVOID EXPOSURE - LASER RADIATION IS EMITTED FROM THIS APERTURE.

For Europe and Australia, etc.  
Pour l'Europe et l'Australie, etc.

ADVARSEL: USYMLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.

For Sweden, Denmark, Norway  
Finland, and Switzerland  
Pour Suède, Danemark, Norvège  
Finlande, et Suisse

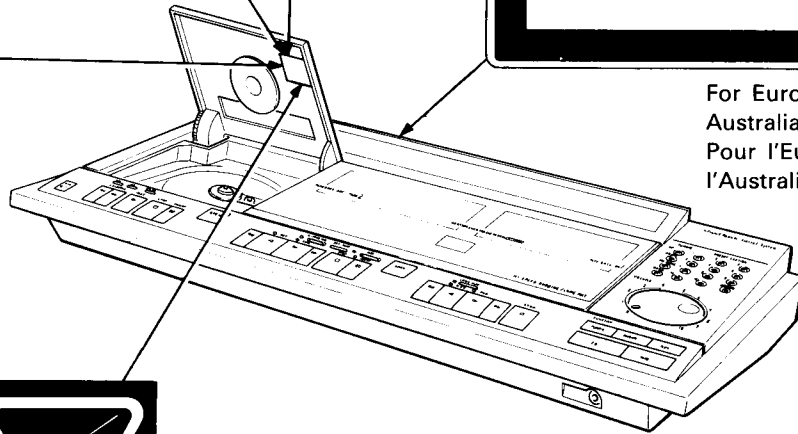
**EXPLANATORY LABEL ON REAR-SIDE  
ETIQUETTE EXPLICATIVE DU PANNEAU ARRIÈRE**

**CLASS 1  
LASER PRODUCT**

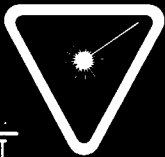
For Europe and Australia, etc.  
Pour l'Europe et l'Australie, etc.

**DANGER**  
Invisible laser radiation when open and inter lock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM.

For U.S.A  
Pour les Etats Unis



CAUTION: HAZARDOUS LASER AND ELECTROMAGNETIC RADIATION WHEN OPEN AND INTERLOCK DEFEATED.  
ATTENTION: RAYONNEMENT LASER ET ELECTROMAGNETIQUE DANGEREUX SI OUVERT AVEC L'ENCLICHEMENT DE SECURITE ANNULE.



For Canada  
Pour le Canada

THIS LASER COMPACT DISC PLAYER FUNCTIONS BY HELP OF INVISIBLE LASERLIGHT AND IS EQUIPPED WITH SAFETY-SWITCHES TO AVOID EXPOSURE WHEN DOOR IS OPEN AND SAFETY INTERLOCKS ARE DEFEATED. IT IS DANGEROUS TO SET SAFETYSWITCHES OUT OF FUNCTION. THERE ARE NO USER'S SERVICEABLE PARTS INSIDE THE UNIT, LEAVE ALL SERVICE TO QUALIFIED SERVICE PERSONNEL.

CE LECTEUR DE DISQUE COMPACT FAIT APPEL A UN RAYON LASER INVISIBLE ET IL EST DOTE D'INTERRUPTEURS DE SECURITE PERMETTANT D'EVITER TOUTE EXPOSITION AU RAYON LORSQU'ON OUVRE LA PORTE ET QUE LES VERROUILLAGES DE SECURITE SONT DEBLOQUES. IL EST DANGEREUX DE MANIPULER LES INTERRUPTEURS DE SECURITE DE L'APPAREIL QUAND CE DERNIER N'EST PAS EN SERVICE. L'APPAREIL NE RENFERME AUCUNE PIECE QUI PUISSE ETRE REPARÉE PAR L'UTILISATEUR. ON CONFIERA DONC TOUS TRAVAUX DE REPARATION A UN PERSONNEL QUALIFIE.

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

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



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