

HITACHI

SERVICE MANUAL

TY

No. 560 EF-1

TRK-3D5

[H, HC, E, E(BS), W, W(UN), W(UNS), AU]

SUPPLEMENT

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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 printed wiring board, circuit diagram and wiring diagrams after the modification. Use it together with the already released TRK-3D5 Service Manual (TY No. 560EF). The table below shows the serial Nos. from which the modification was introduced.

Destination	Serial No.	Destination	Serial No.
E	from XXX40019	HC	from XXX06015
E(BS)	from XXX59018	AU, W, W(UN) W(UNS)	from XXX07519
H	from XXX05015		

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.

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 plan de base, plan de circuit et schéma de câblage tiennent compte de cette modification. Ce manuel doit être utilisé conjointement avec le manuel d'entretien TRK-3D5 (TY No. 560EF) déjà publié. Le tableau cidessous indique les numéros de série affectés par la modification.

Destination	No. de série	Destination	No. de série
E	à partir de XXX40019	HC	à partir de XXX06015
E(BS)	à partir de XXX59018	AU, W, W(UN) W(UNS)	à partir de XXX07519
H	à partir de XXX05015		

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.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

HIGH PERFORMANCE PORTABLE CREATIVE SOUND SYSTEM

December 1987

YOKOHAMA WORKS

DIFFERENCE FOR DESTINATION

TRK-3D5

DIFFÉRENCE EN FONCTION DU PAYS DE DESTINATION

SYMBOL No.	E	E(BS)	H, HC, AU	W,W(UN), W(UNS)
D351, D352	USE	—	—	—
D605	—	—	—	USE
ZD351, ZD352	USE	—	—	—
LED451	—	—	USE	USE
LED452	—	—	USE	USE
LED601	USE	USE	—	—
RT351 — 353	USE	—	—	—
RV352 — 357	USE	—	—	—
L102	A	B	B	B
L351	USE	—	—	—
VCD 1, 2	USE	—	—	—
S301	USE	—	—	—
S351	USE	—	—	—
S603	—	—	—	USE
JK601	—	—	—	USE
CT101	USE	—	—	—
CT151 — 153				
CT154 — 156				
T351	USE	—	—	—
P.V.C.				
PL403	—	—	USE	USE
J103	—	—	USE	USE
J122	USE	USE	—	—
J132	USE	USE	—	—
J512	A	A	A	B
UL RIBON WIRE ®	USE	—	—	—

SYMBOL No.	E	E(BS)	H, HC, AU	W,W(UN), W(UNS)
Q151	USE	USE	—	—
Q351	USE	—	—	—
Q352	USE	—	—	—
C103, C109 — C112	A	B	B	B
C104	USE	—	—	—
C107	A	B	C	C
C108	USE	—	—	—
C113	—	USE	USE	USE
C114	Ceramic	Electrolytic	—	—
C115	—	—	USE	USE
C151, 152, 161 163, 173, 176	USE	USE	—	—
C206	Electrolytic	Ceramic	Ceramic	Ceramic
C351 — 359	USE	—	—	—
C443	USE	USE	—	—
C601 (MAIN P.W.B.)	—	—	USE	USE
R102	USE	USE	Jumper	Jumper
R104	—	—	USE	USE
R154, 161 — 163	USE	USE	—	—
R204	USE	—	—	—
R205	USE	—	—	—
R209	A	B	B	B
R210	USE	Jumper	Jumper	Jumper
R350 — 359	USE	—	—	—
R360	USE	USE	—	—
R361	USE	—	—	—
R451	—	—	USE	USE

A

B

C

D

E

F

G

MAIN P.W.B.

L102, RT351, RT353 **FM PRESET OSC ADJ.**

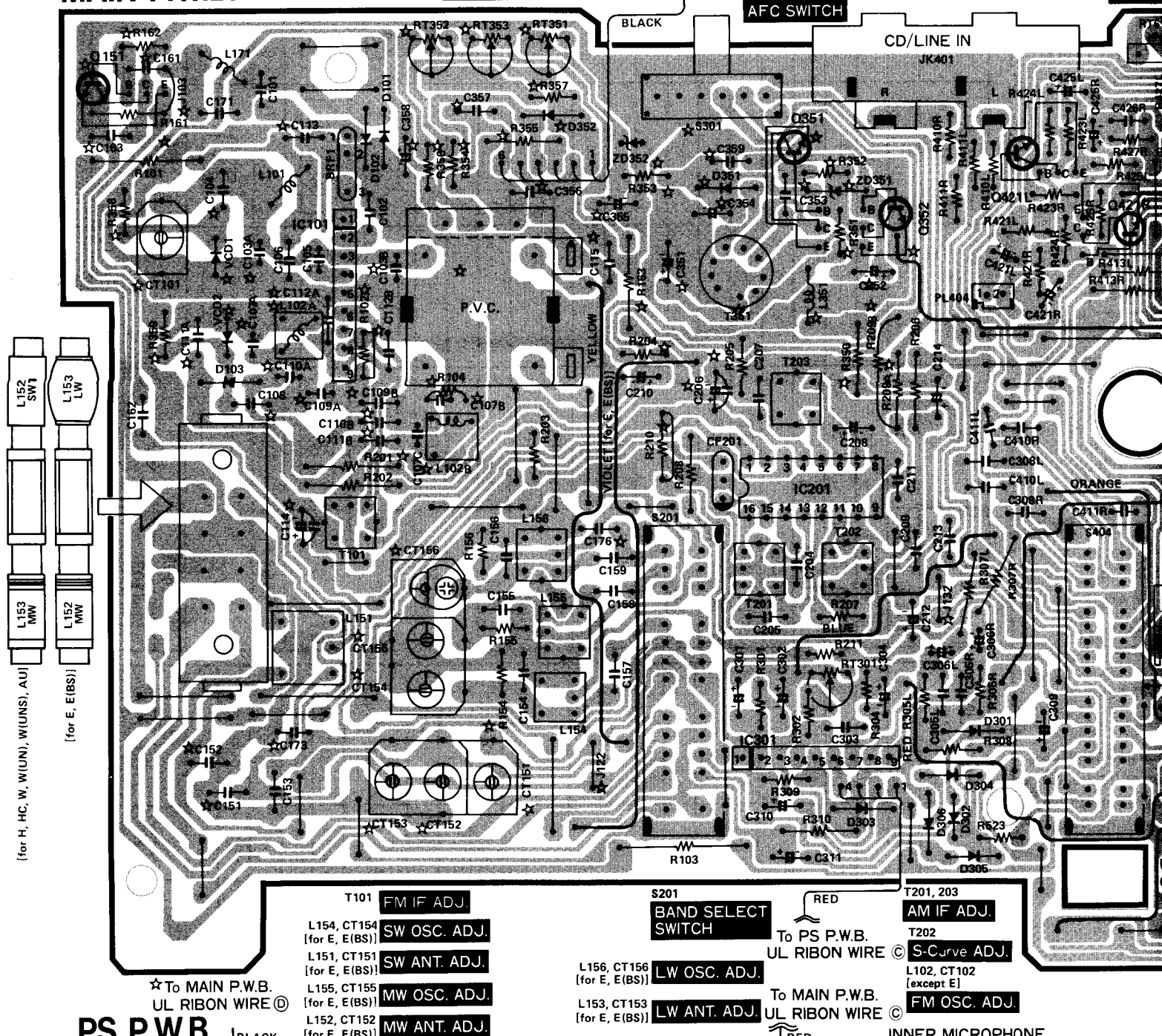
RT352, RT353 FM MANUAL OSC. ADJ.

To PS P.W.B.
UL RIBON WIRE (D)

\$301

AFC SWITCH

TAPE S



PS P.W.B.

☆ To MAIN P.W.B.
UL RIBON WIRE ④

T101 **FM IF ADJ.**
L154, CT154 **SW OSC. ADJ.**
 [for E, E(BS)]
L151, CT151 **SW ANT. ADJ.**
 [for E, E(BS)]
L155, CT155 **MW OSC. ADJ.**
 [for E, E(BS)]
L152, CT152 **MW ANT. ADJ.**
 [for E, E(BS)]

S201
BAND SELECT
SWITCH

L156, CT156 [for E, E(BS)] LW OSC. ADJ.

L153, CT153 [for E, E(BS)] LW ANT. ADJ.

RED
To PS P.W.B.
UL RIBON WIF

To MAIN P.W.B.
UL RIBON WIRE ©

T201, 203
AM IF ADJ.
T202
S-Curve ADJ.
L102, CT102
[except E]
FM OSC. ADJ.

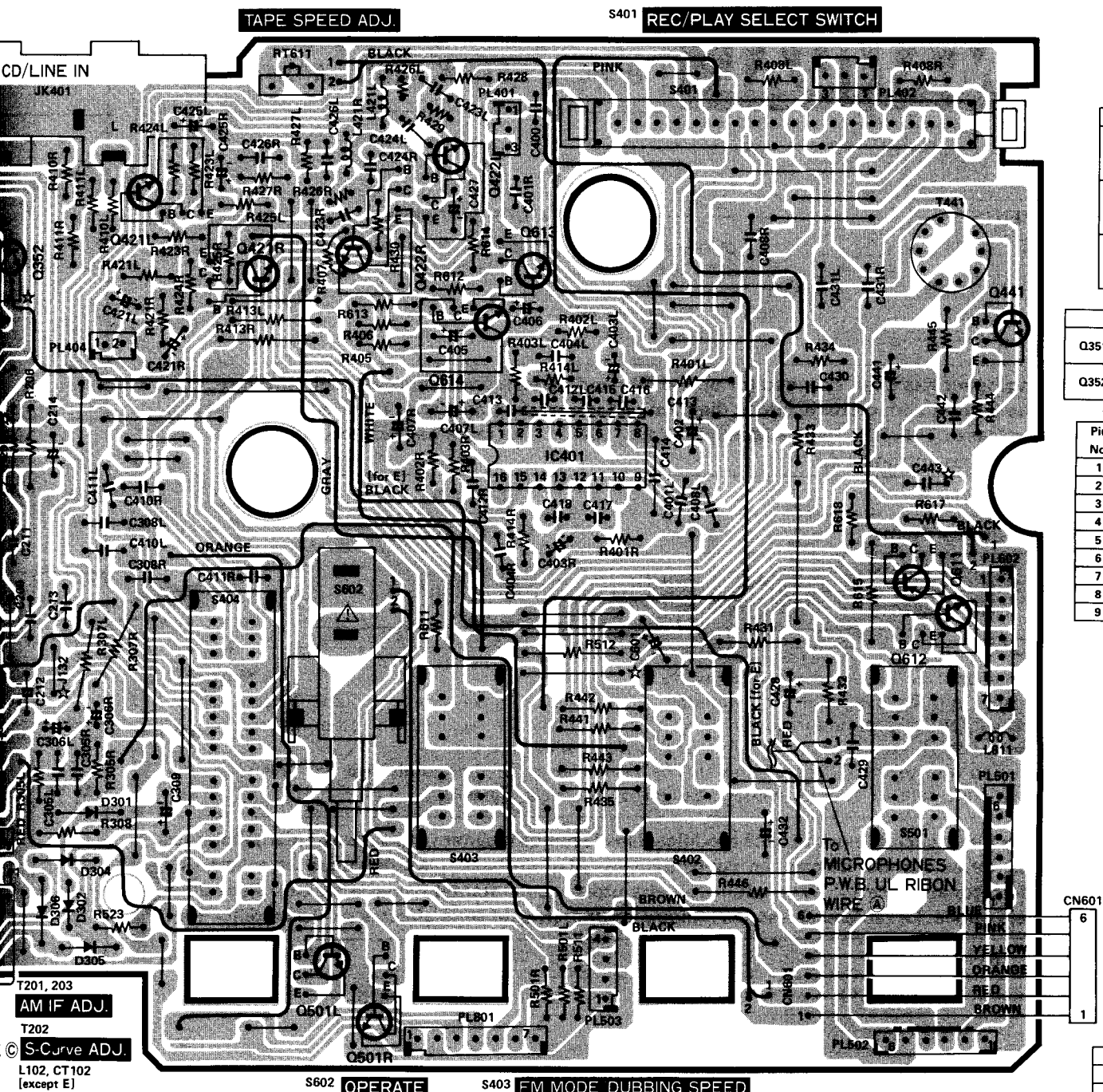
INNER MICROPHONE

MICROPHONE
P.W.B.

L101, CT101
FM ANT. ADJ.
RT301
FM MPX ADJ.

S404
FUNCTION
SELECT
SWITCH

circuit symbol (☆) means difference for destination. (Refer to the table in page 2.)
 Symbol de circuit (☆) signifie qu'il s'agit des différence pour destination. (Consulter la table dans le page 2.)



Q151	Voltage
E	0 (M: 0) (S, L: 0.2)
C	0 (M: 0) (S, L: 7.7)
B	0 (M: 0) (S, L: 0.9)

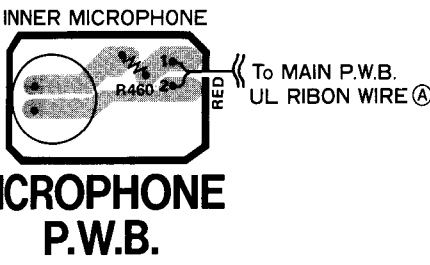
	E	C	B
Q351	0 (0)	6.6 (0)	
Q352	0 (0)	0.4 (0)	0.7 (0)

Pin No.	IC101 FM	IC101 AM	IC301 FM	IC301 AM
1	0.7	0	3.5	3.5
2	1.4	0	7.0	7.0
3	5.9	0	8.4	8.4
4	1.4	0	7.6	6.6
5	0	0	0	0
6	5.9	0	7.8	7.8
7	5.0	0	7.8	8.4
8	5.8	0	4.2	4.2
9	5.9	0	4.2	4.2

Pin No.	IC201 FM	IC201 AM
1	0.7	1.5
2	0.7	1.5
3	2.3	2.3
4	2.3	2.3
5	0.8	0.9
6	0.8	0.9
7	0	0
8	0	0
9	1.4	1.3
10	5.9	6.6
11	5.9	6.6
12	1.4	1.4
13	1.4	1.4
14	1.4	1.4
15	1.4	1.4
16	5.9	6.6

	E	C	B
Q421LR	1.5	4.3	2.1
Q422LR	0	0	0.6
Q441	0.3	5.8	0.7
Q501LR	0	0	0.7
Q611	11.0	10.5	11.0
Q612	0	0	0.6
Q613	0	3.2	0

Voltage: FM(V) or without () FM
 AM(V) with () AM



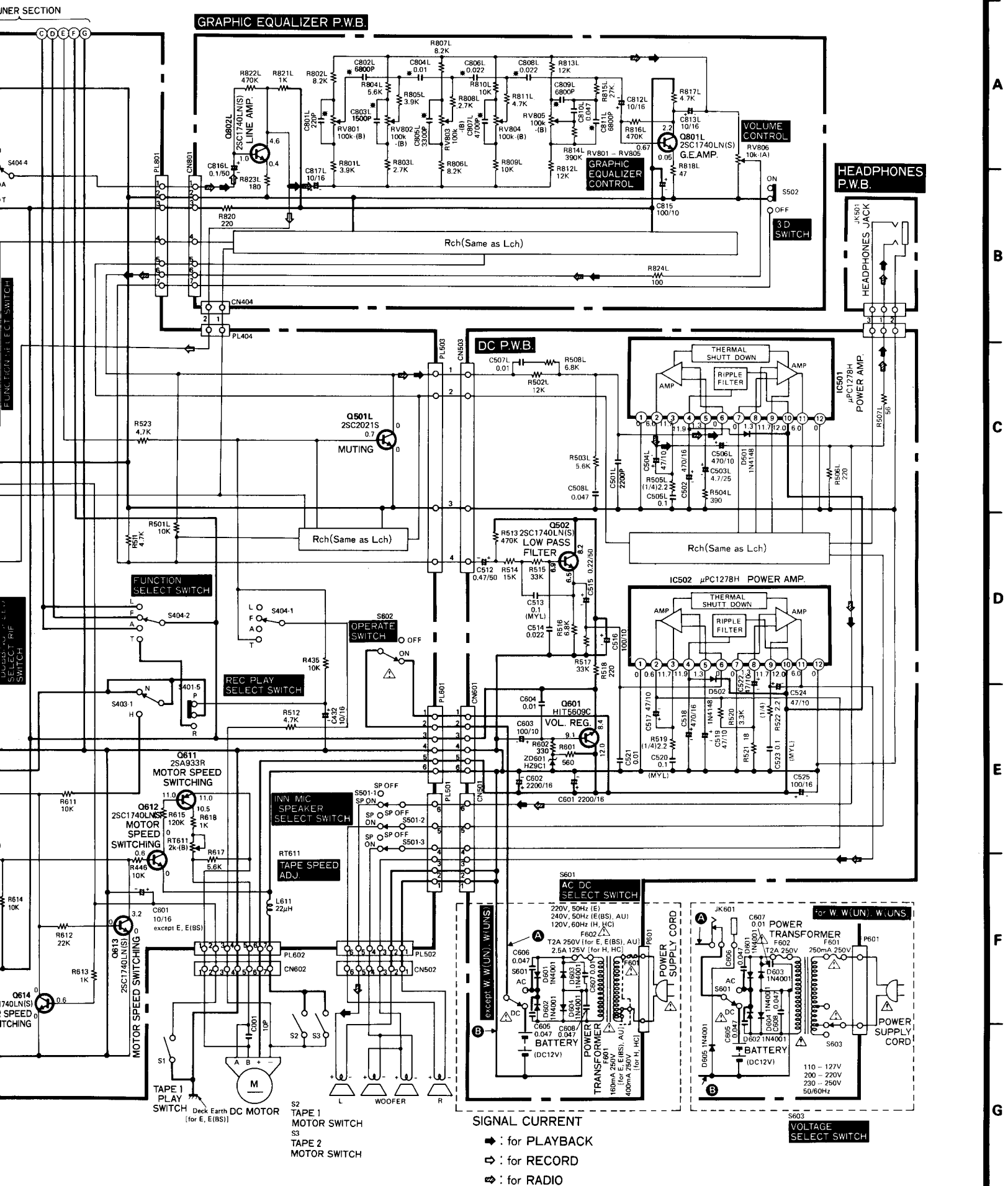
- L154, CT154 [for H, HC, W, AU] **SW 2 OSC. ADJ.**
- L151 [for H, HC, W, AU] **SW 2 ANT. ADJ.**
- L155, CT155 [for H, HC, W, AU] **SW 1 OSC. ADJ.**
- L152, CT152 [for H, HC, W, AU] **SW 1 ANT. ADJ.**
- L156, CT156 [for H, HC, W, AU] **MW OSC. ADJ.**
- L153, CT153 [for H, HC, W, AU] **MW ANT. ADJ.**

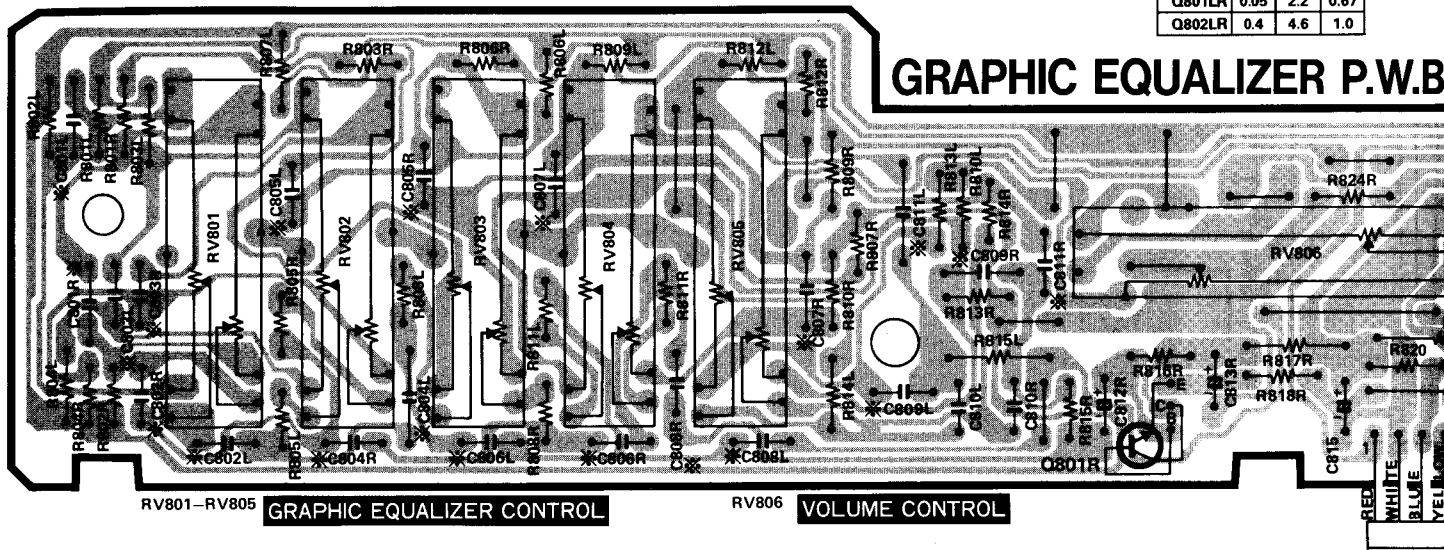
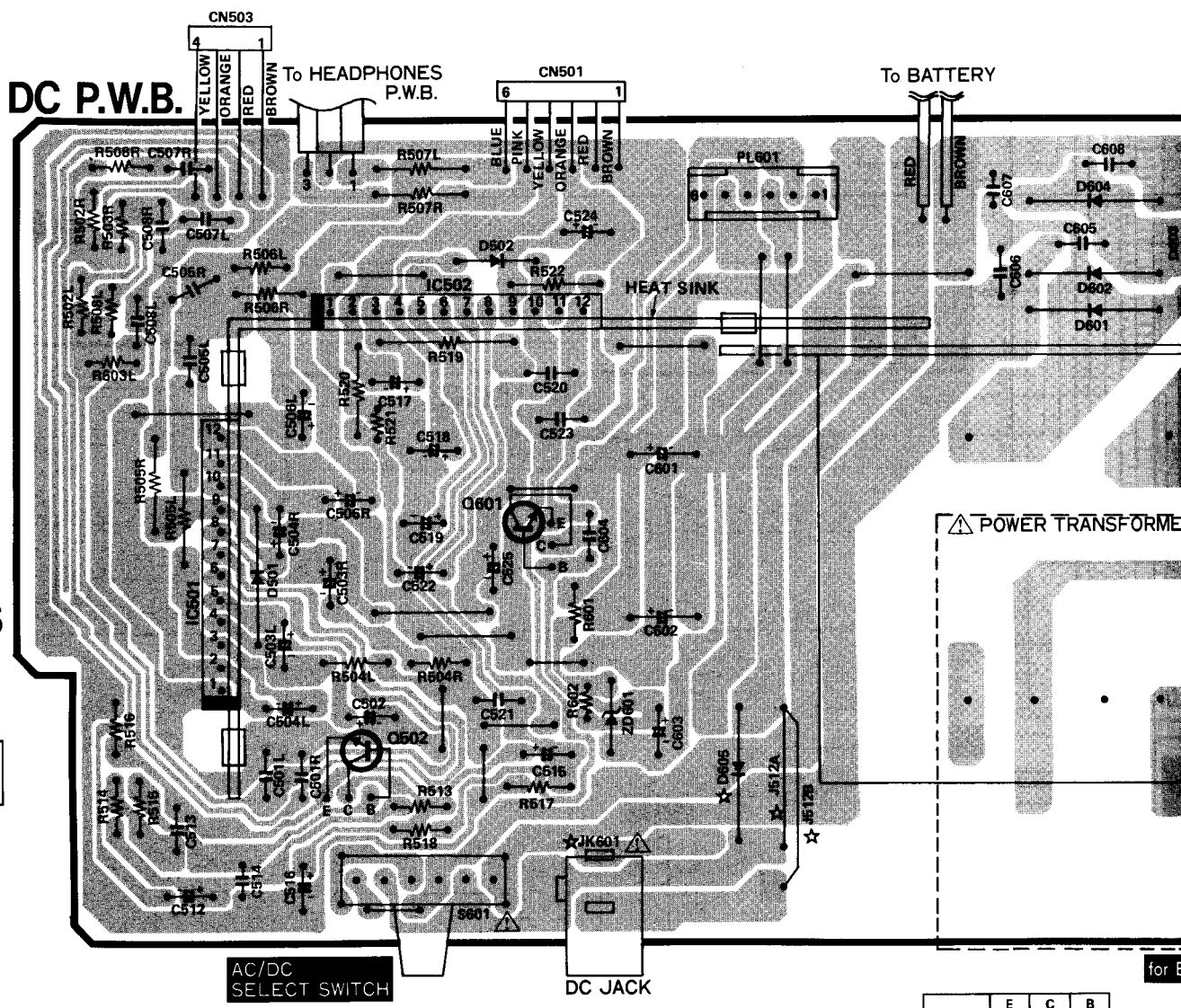
- S402 **TAPE SELECT SWITCH**
- S501 **INN. MIC SPEAKER SELECT SWITCH**

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	7.3	2.2	6.7	0	2.2	2.2	2.2	0	2.2	0	2.2	2.2	2.2	0	0	2.2

FUNCTION SELECT SWITCH

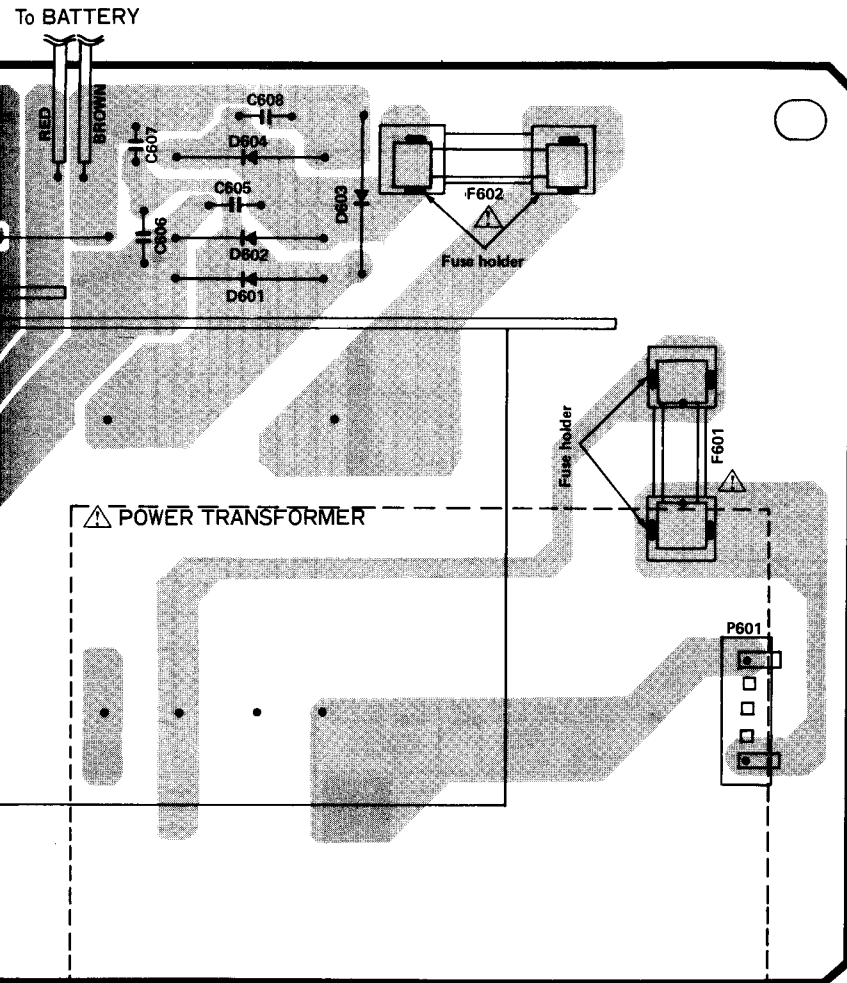
$$(\text{---} : +B)$$



	E	C	B
Q801LR	0.05	2.2	0.67
Q802LR	0.4	4.6	1.0

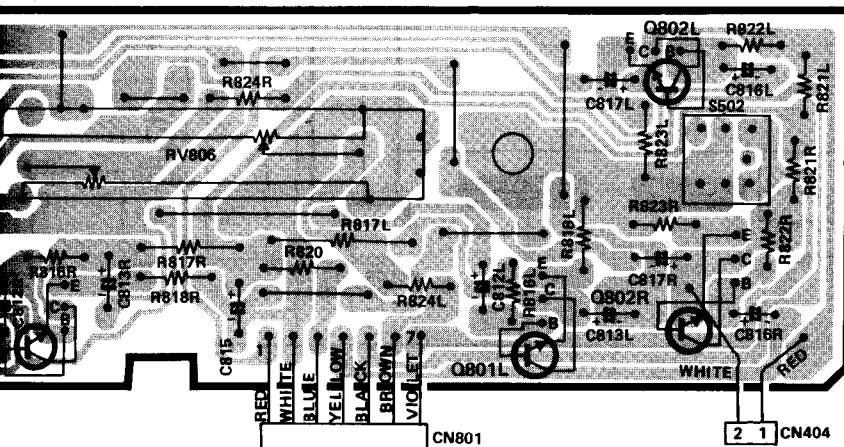
The circuit symbol (☆) means difference for destination. (Refer to the table in page 2.)
 Le symbole de circuit (☆) signifie qu'il s'agit des différence pour destination. (Consulter la table dans le page 2.)
 ※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique clindrique a conducteur axial.



for E, E(BS), H, HC, AU

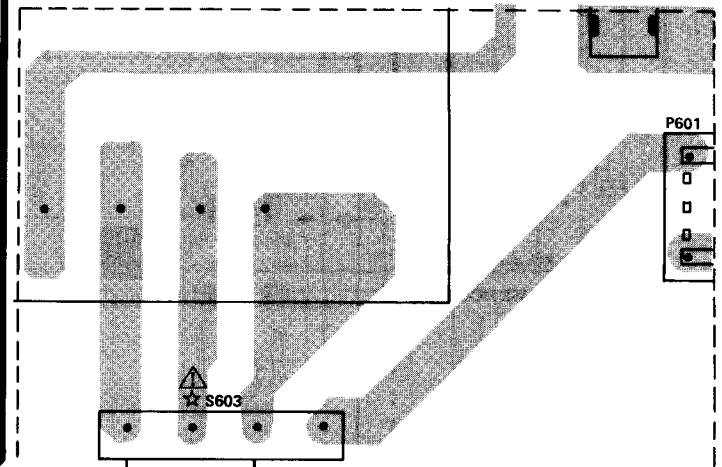
	E	C	B
Q801LR	0.05	2.2	0.67
Q802LR	0.4	4.6	1.0

EQUALIZER P.W.B.



	E	C	B
Q502	6.5	8.2	6.9
Q601	8.4	12.0	9.0

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
IC501	0	6.0	11.7	11.9	1.3	0	0	1.3	11.7	12.0	6.0	0
IC502	0	0.6	11.7	11.9	1.3	0	0	1.3	11.7	12.0	6.0	0

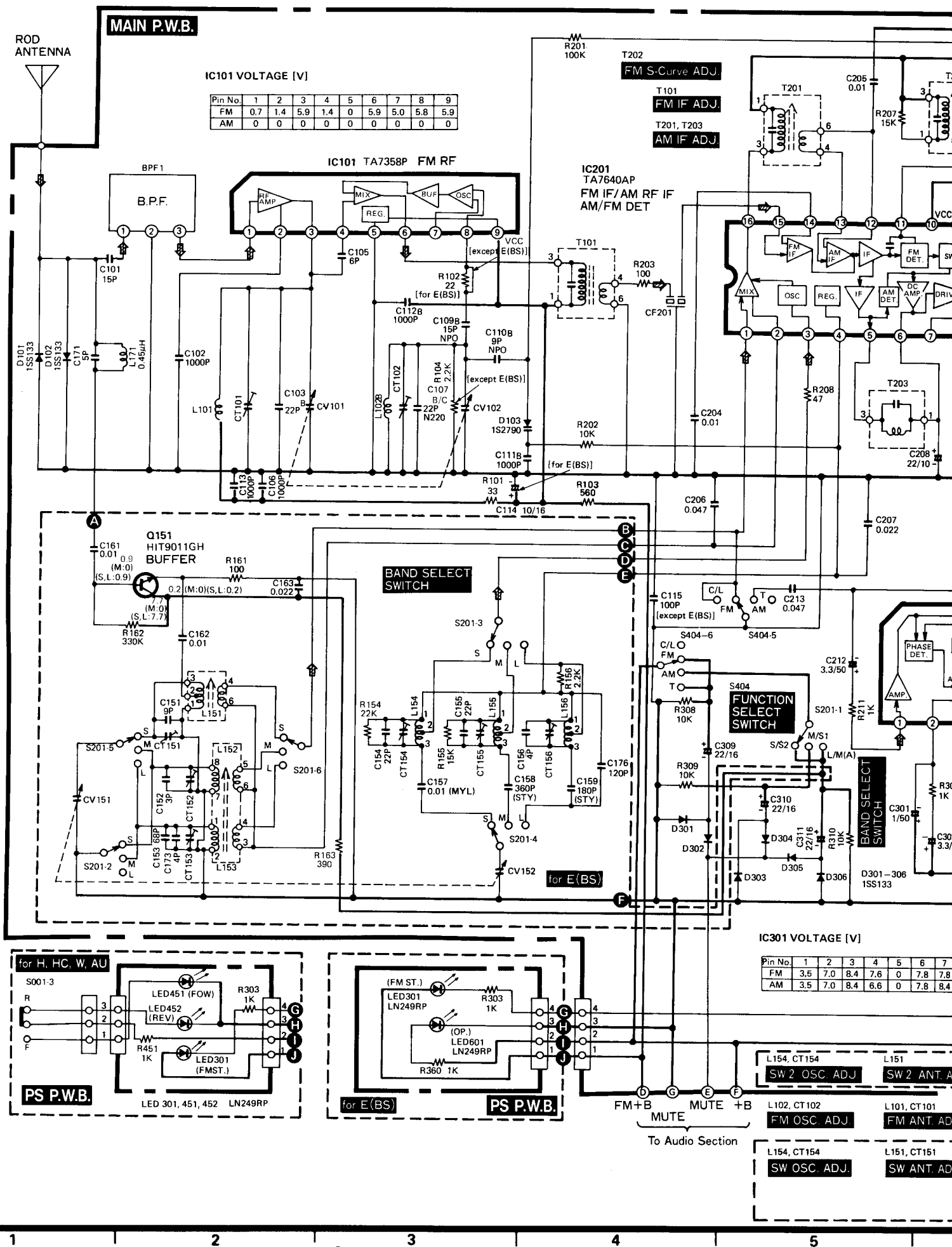


VOLTAGE SELECT SWITCH

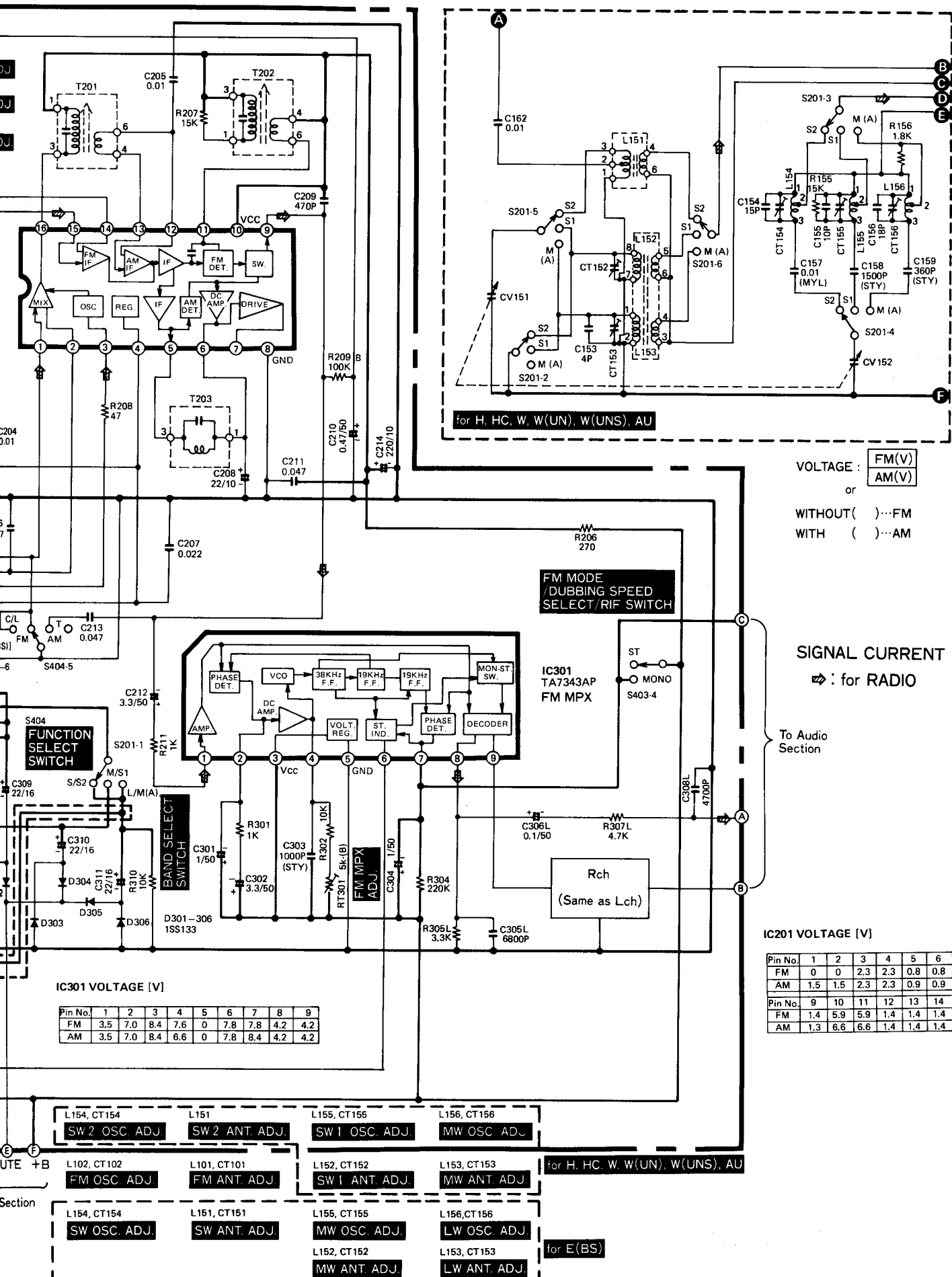
for W, W(UN), W(UNS)

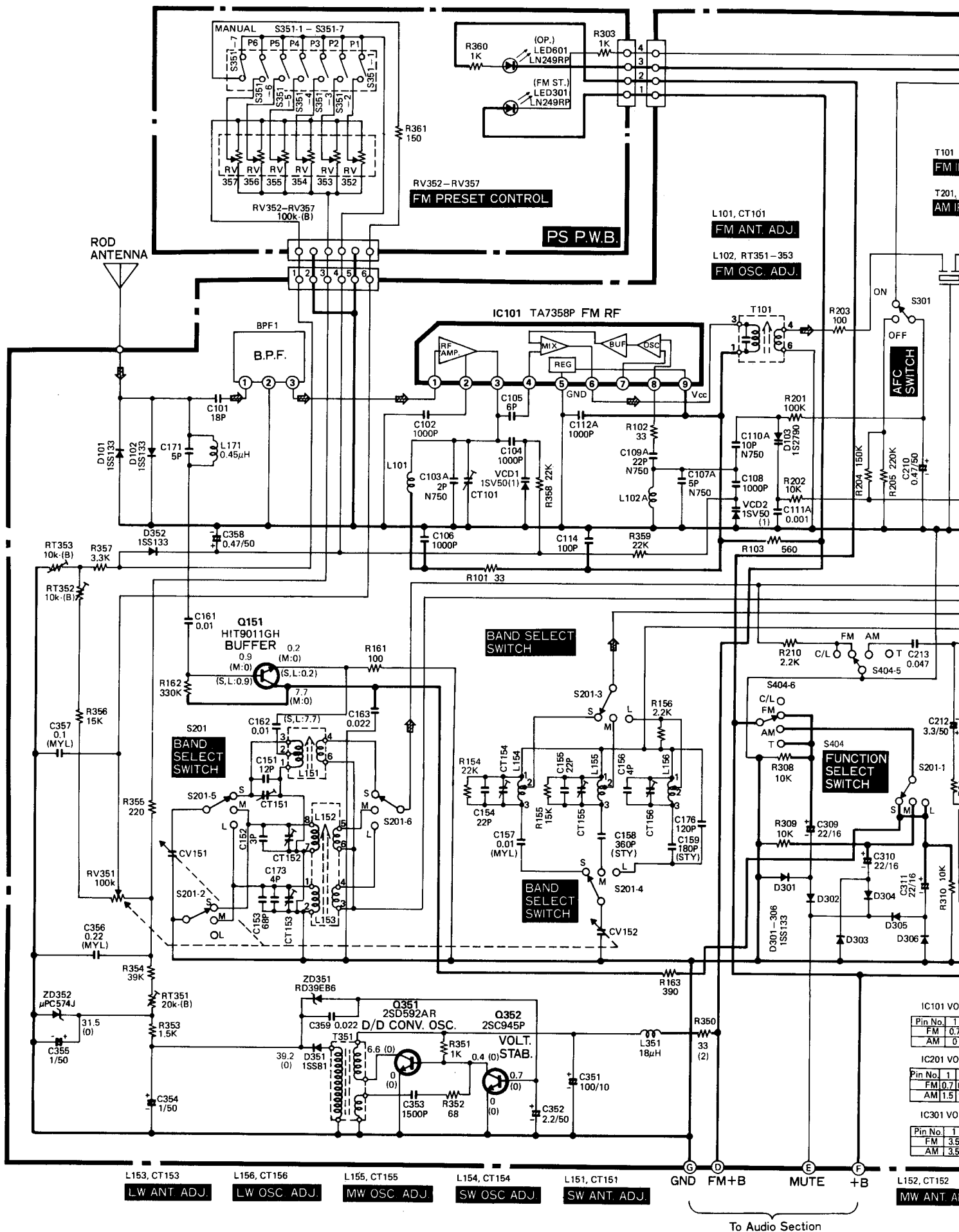
TA7343AP TA7358P	TA7640AP TA7784P	μPC1278H	2SA933T (R) 2SC945P 2SC1740LN (R) 2SD952AR	2SC2021S
HIT5609C HIT9011GH	1N4001	1N4148 1SS81 1SS133T HZ9C1 RD39EB6	1SV50	μPC574J

S502
3D SWITCH



[— : + B]





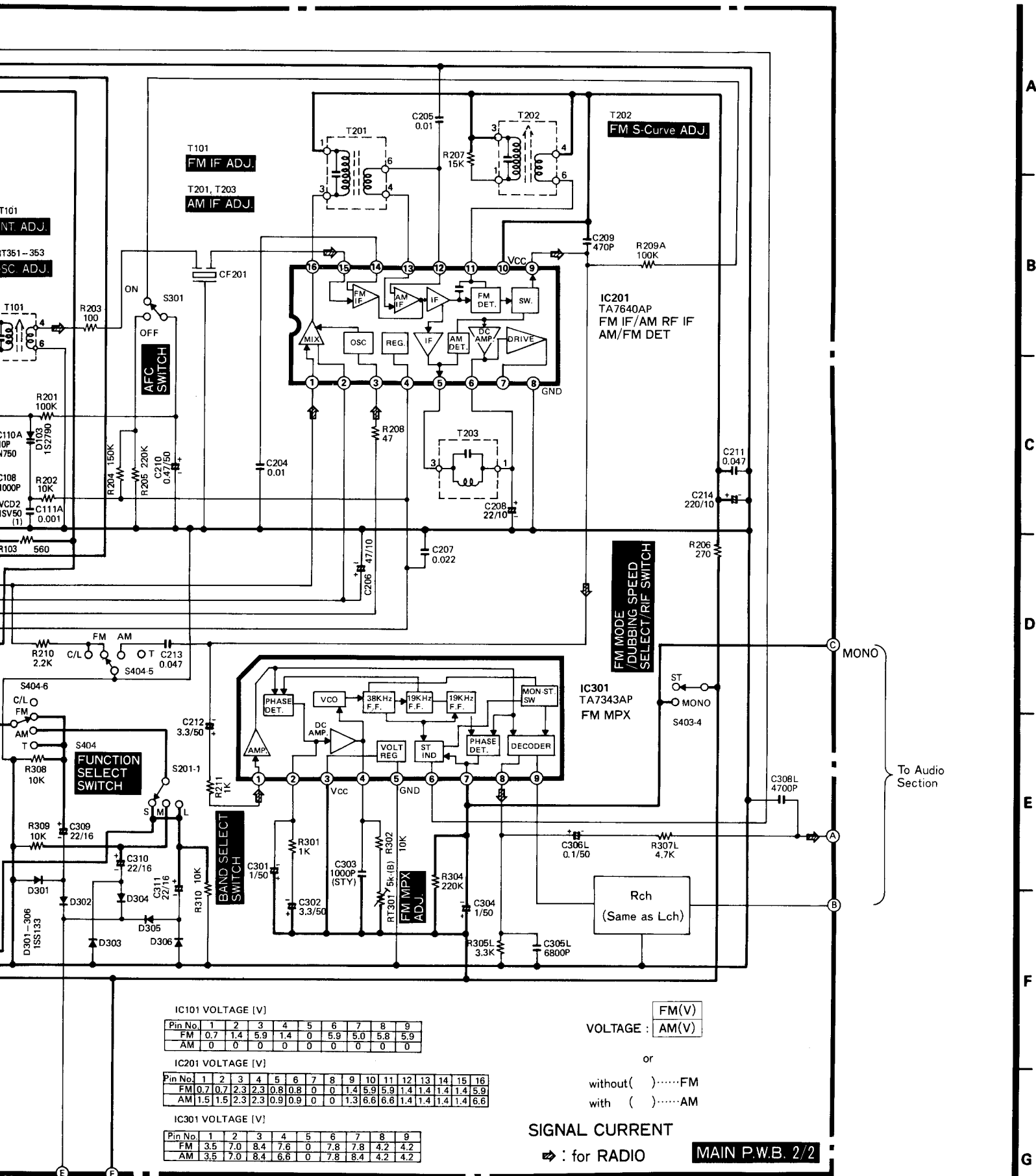
T101
FM
T201
AM

IC101 VO
Pin No. 1
FM 0.7
AM 0

IC201 VO
Pin No. 1
FM 0.7
AM 1.5

IC301 VO
Pin No. 1
FM 3.5
AM 3.5

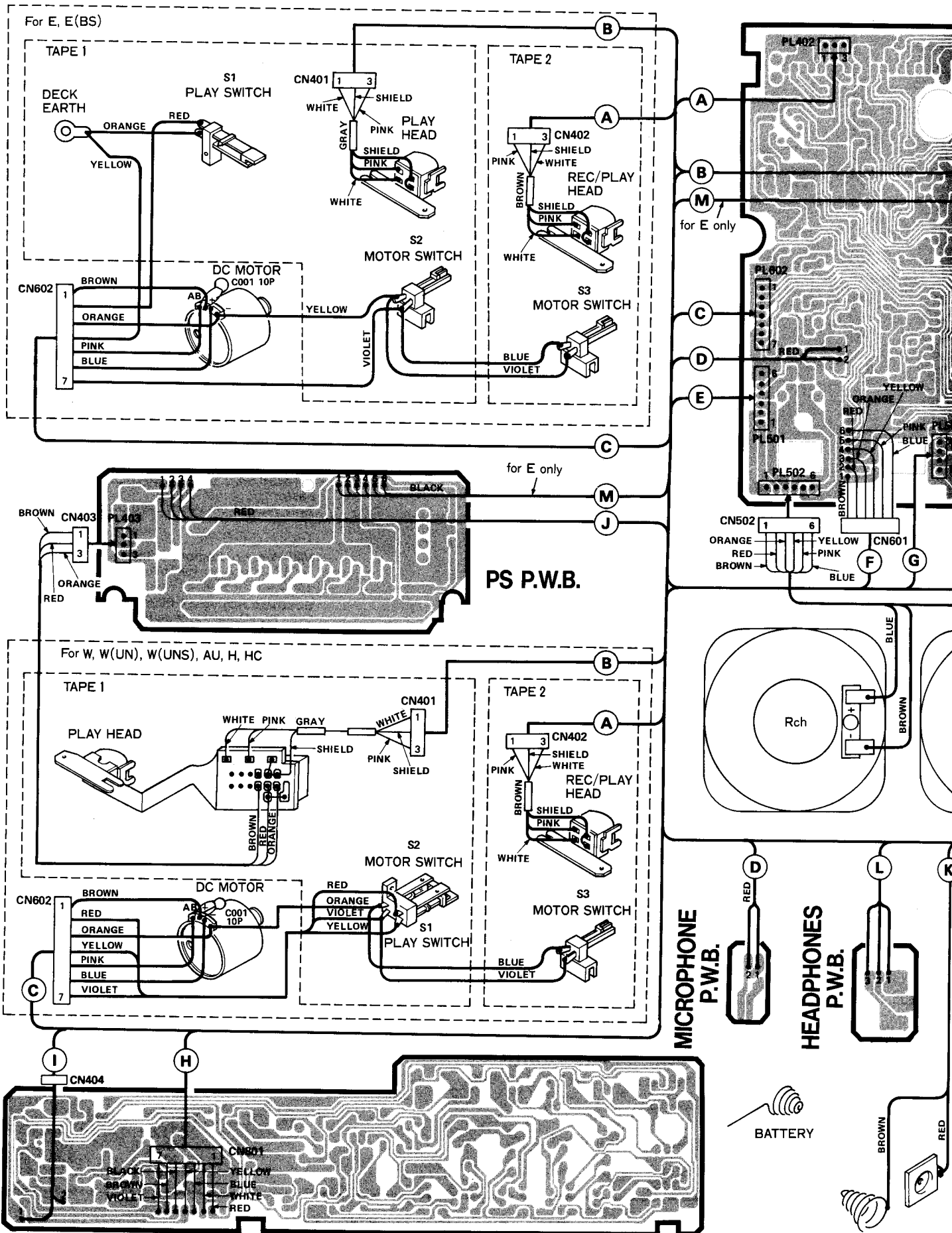
:- + B)



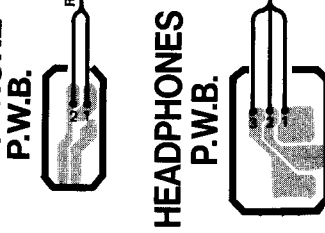
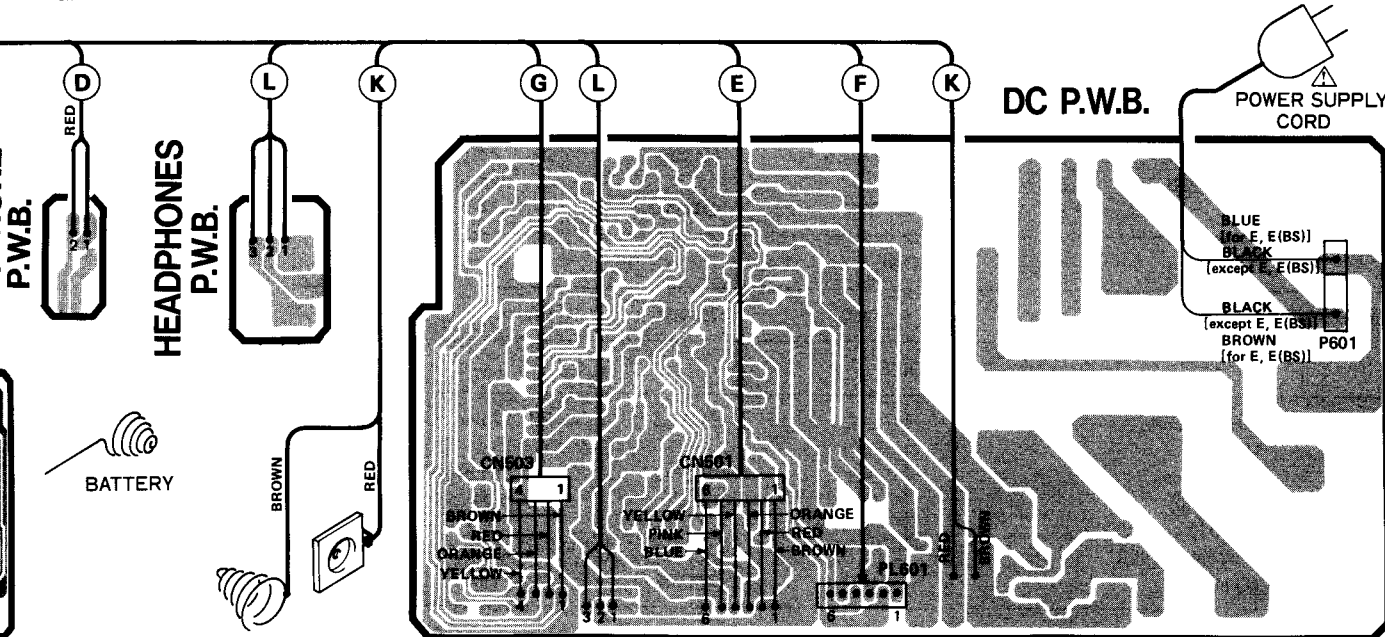
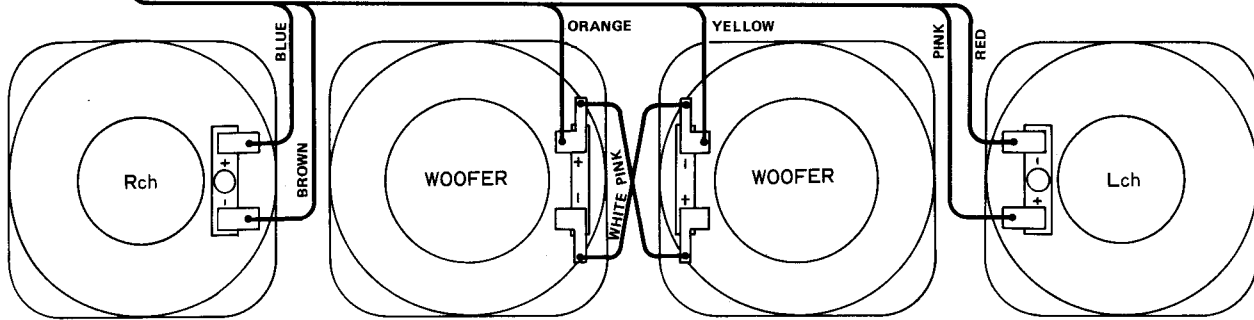
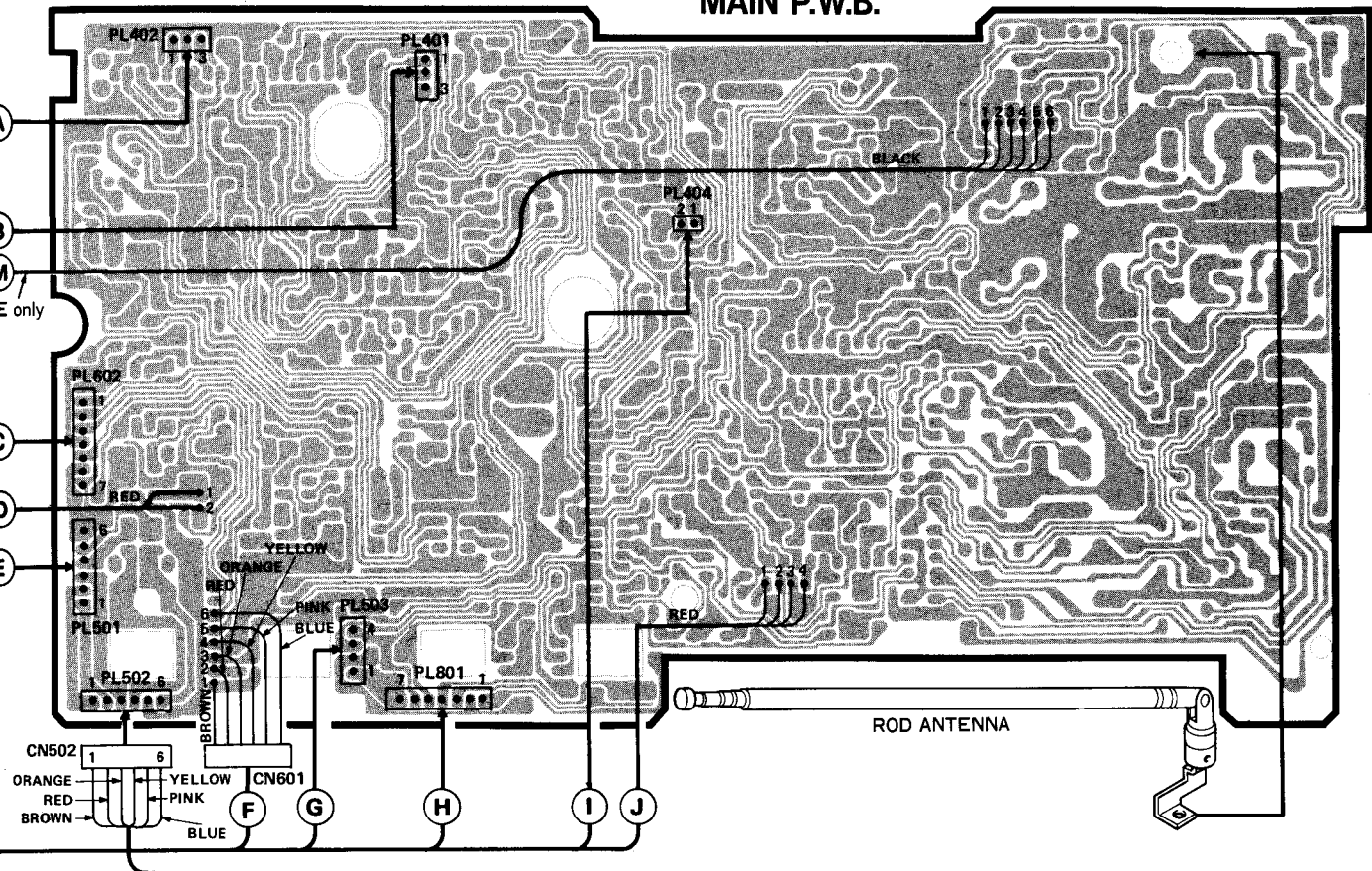
L152, CT152 MW ANT. ADJ. L102, RT351, RT353 FM PRESET COVERING ADJ. RT352, RT353 FM MANUAL COVERING ADJ.

Audio Section

WIRING DIAGRAM · SCHEMA DE CÂBLAGE



MAIN P.W.B.



REPLACEMENT PARTS LIST

TABLEAU DES PIÈCES

CC: Cylindrical ceramic MF: Mylar film
 CD: Ceramic discal CF: Carbon film
 EL: Electrolytic MO: Metal oxide
 ST: Styrol

After change					Before change				
SYMBOL No.	PART No.	DESCRIPTION			SYMBOL No.	PART No.	DESCRIPTION		
CAPACITORS									
C107	02484752	CD 5PF	± 0.25PF	50V	C107	02484752	CD 5PF	± 0.25PF	50V
		[for E]					[for E]		
	0248038	CD 22PF	± 5%	50V		0248038	CD 22PF	± 5%	50V
		[for E(BS)]					[except E]		
	0248037	CD 20PF	± 5%	50V					
		[except E, E(BS)]							
C206	02523252	EL 47 μ F	± 20%	10V			Misprint of part No.		
		[for E]							
C400	0248684	CD 100PF	± 5%	50V			Not used		
C401LR	0244101	CD 1000PF	± 10%	50V	C401LR	02097312	CD 1000PF	± 10%	50V
C404LR	0244141	CD 0.01 μ F	± 10%	50V	C404LR	02097372	CD 0.01 μ F	± 10%	50V
C408L	0244101	CD 1000PF	± 10%	50V	C408LR	02097312	CD 1000PF	± 10%	50V
C408R	02097312	CD 1000PF	± 10%	50V					
C411L	0244111	CD 6800PF	± 10%	50V	C411LR	0249724	CD 560PF	± 10%	50V
C411R	0209736	CD 6800PF	± 10%	50V					
C412LR	0249724	CD 560PF	± 10%	50V	C412LR	0209736	CD 6800PF	± 10%	50V
C413	0244173	CD 0.022 μ F	+ 80% - 20%	50V			Not used		
C414	0244173	CD 0.022 μ F	+ 80% - 20%	50V			Not used		
C415	0248680	CD 68PF	± 5%	50V			Not used		
C416	0248680	CD 68PF	± 5%	50V			Not used		
C417	0248680	CD 68PF	± 5%	50V			Not used		
C418	0248680	CD 68PF	± 5%	50V			Not used		
C426L	0244101	CD 1000PF	± 10%	50V	C426LR	02097312	CD 1000PF	± 10%	50V
C426R	02097312	CD 1000PF	± 10%	50V					
C430	0209765	CD 0.047 μ F	± 20%	25V	C430	0209763	CD 0.022 μ F	± 20%	25V
C503LR	0252615	EL 4.7 μ F	± 20%	25V	C503LR	0252521	EL 10 μ F	± 20%	16V
C507LR	0249761	CD 0.01 μ F	± 20%	25V	C507LR	0244105	CD 2200PF	± 10%	50V
C508LR	0249765	CD 0.047 μ F	± 20%	25V			Not used		
C601	02561992	EL 2200 μ F	± 20%	16V	C601	02561992	EL 2200 μ F	± 20%	16V
		(DC P.W.B.)							
C601	0252521	EL 10 μ F	± 20%	16V			Not used		
		(main P.W.B.) [except E, E(BS)]							
C816LR	0252801	EL 0.1 μ F	± 20%	50V	C816LR	0252521	EL 10 μ F	± 20%	16V
RESISTORS									
R104	0113623	CF 2.2K Ω	± 5%	SRD1/6P	R104	0113621	CF 1.8K Ω	± 5%	SRD1/6P
R211	0113615	CF 1K Ω	± 5%	SRD1/6P	R221	0113585	CF 1K Ω	± 5%	SRD1/6P
							Misprint of circuit No. and Part No.		
R354	0113653	CF 39K Ω	± 5%	SRD1/6P	R354	0113655	CF 47K Ω	± 5%	SRD1/6P
R434	0113609	CF 560 Ω	± 5%	SRD1/6P	R434	0113615	CF 1K Ω	± 5%	SRD1/6P
R460	0113599	CF 220 Ω	± 5%	SRD1/6P			Not used		
R502LR	0113641	CF 12K Ω	± 5%	SRD1/6P	R502LR	0113635	CF 6.8K Ω	± 5%	SRD1/6P
R503LR	0113633	CF 5.6K Ω	± 5%	SRD1/6P	R503LR	0113625	CF 2.7K Ω	± 5%	SRD1/6P
R504LR	0113605	CF 390 Ω	± 5%	SRD1/6P	R504LR	0113599	CF 220 Ω	± 5%	SRD1/6P
R508LR	0113635	CF 6.8K Ω	± 5%	SRD1/6P			Not used		
R613	0113615	CF 1K Ω	± 5%	SRD1/6P	R613	0113655	CF 47K Ω	± 5%	SRD1/6P
DIODE									
D502	2398082	1N4148			D502	2398081	1N4148		
COILS									
L102	2135253	FM OSC coil			L102	2135253	FM OSC coil		
		[for E]					[for E]		
	2135248	FM OSC coil				2135248	FM OSC coil		
		[for E(BS)]					[except E]		
	2135240	FM OSC coil							
		[except E, E(BS)]							
L611	2227392	Choke coil			L611	2227352	Choke coil		
CABINET									
38	4577832	BT flat head screw (3 ϕ x 10)			38	8737408	Flat screw (3 ϕ x 8)		
39	2589242	TN-21 mechanism assy			39	2589241	TN-21 mechanism assy		



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