

# HITACHI SERVICE MANUAL

TY

No. 568EF-1

**TRK-3D70/3D75**  
**E,E(BS),W,W(UN),AU,H,HC**

## SUPPLEMENT

TN-21H-982 [For E, E(BS)]  
TN-222F-140 [Except E, E(BS)]

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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 circuit diagram, printed wiring board and exploded view (cabinet) after the modification. Use it together with the already released TRK-3D70/3D75 Service Manual (TY No. 568EF). The table below shows the serial Nos. from which the modification was introduced.

| Model    | Destination  | Serial No. |
|----------|--------------|------------|
| TRK-3D70 | E, E(BS)     | from 39019 |
|          | W, W(UN), AU | from 12019 |
|          | H, HC        | from 01010 |
| TRK-3D75 | E, E(BS)     | from 08501 |
|          | W, W(UN), AU | from 04001 |
|          | H, HC        | from 01001 |

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 circuit, plan de base et vue éclatée (cabine) tiennent compte de cette modification. Ce manuel doit être utilisé conjointement avec le manuel d'entretien TRK-3D70/3D75 (TY No. 568EF) déjà publié. Le tableau cidessous indique les numéros de série affectés par la modification.

| Modèle   | Destination  | No. de série      |
|----------|--------------|-------------------|
| TRK-3D70 | E, E(BS)     | à partir de 39019 |
|          | W, W(UN), AU | à partir de 12019 |
|          | H, HC        | à partir de 01010 |
| TRK-3D75 | E, E(BS)     | à partir de 08501 |
|          | W, W(UN), AU | à partir de 04001 |
|          | H, HC        | à partir de 01001 |

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

**FM/SW/MW/LW RADIO CASSETTE TAPE RECORDER****January 1988****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's replacement parts.  
Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with  $\Delta$  in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

## 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. Etant donné que de nombreux composants de l'appareil possèdent des caractéristiques relatives à la sécurité, utiliser uniquement des pièces de rechange d'origine Hitachi pour effectuer un remplacement. Ceci se rapporte notamment aux pièces critiques du bloc d'alimentation qui ne doivent en aucun cas être remplacées par celles d'autres fabricants. Les pièces critiques sont accompagnées du symbole  $\Delta$  dans le schéma de montage et sur le schéma de plaque de câblage.
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

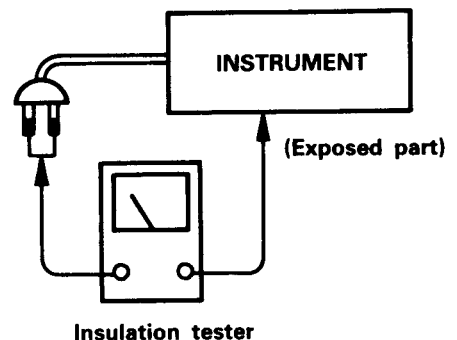
Enlever la poussière des surfaces de l'appareil avec un chiffon sec. Ne jamais utiliser de solvants, de benzine ou d'alcool car ils abîmeraient le fini des surfaces.

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

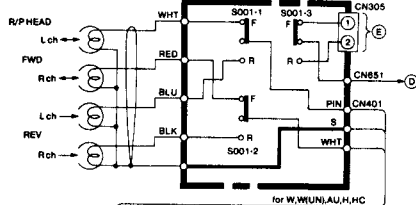
#### ● Checking method

Power switch is set to ON.

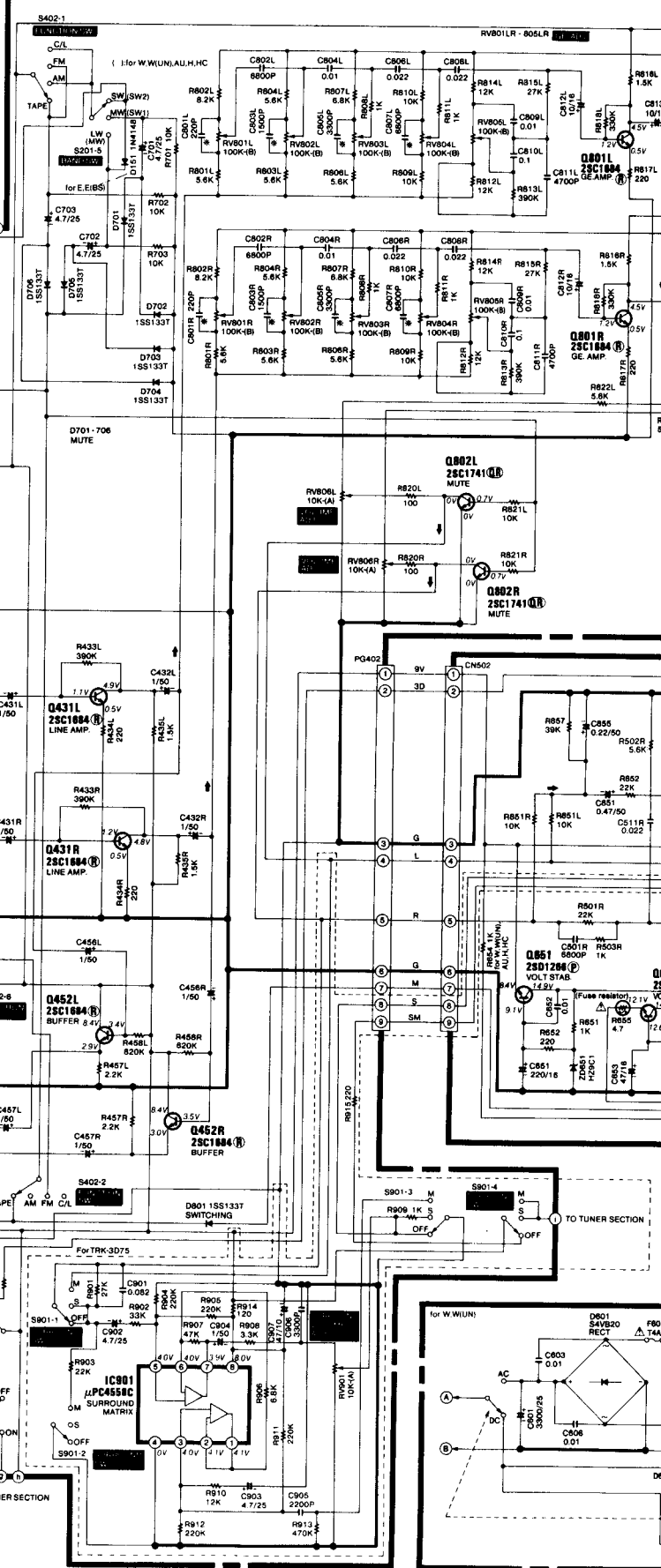
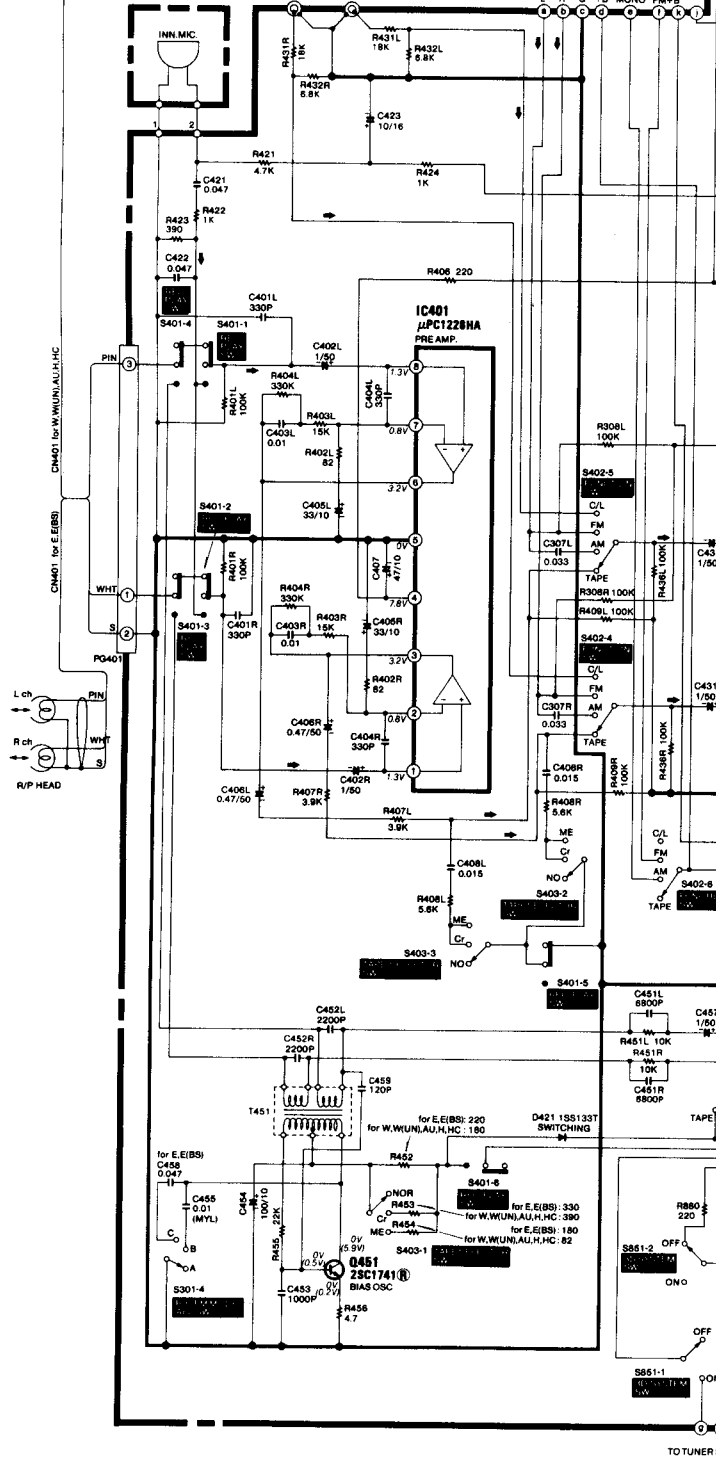
Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the input terminal (outside) of rear plate and check that the resistance value is 500 kohms or more.



**RE P.W.B.**



**MI P.W.B.**



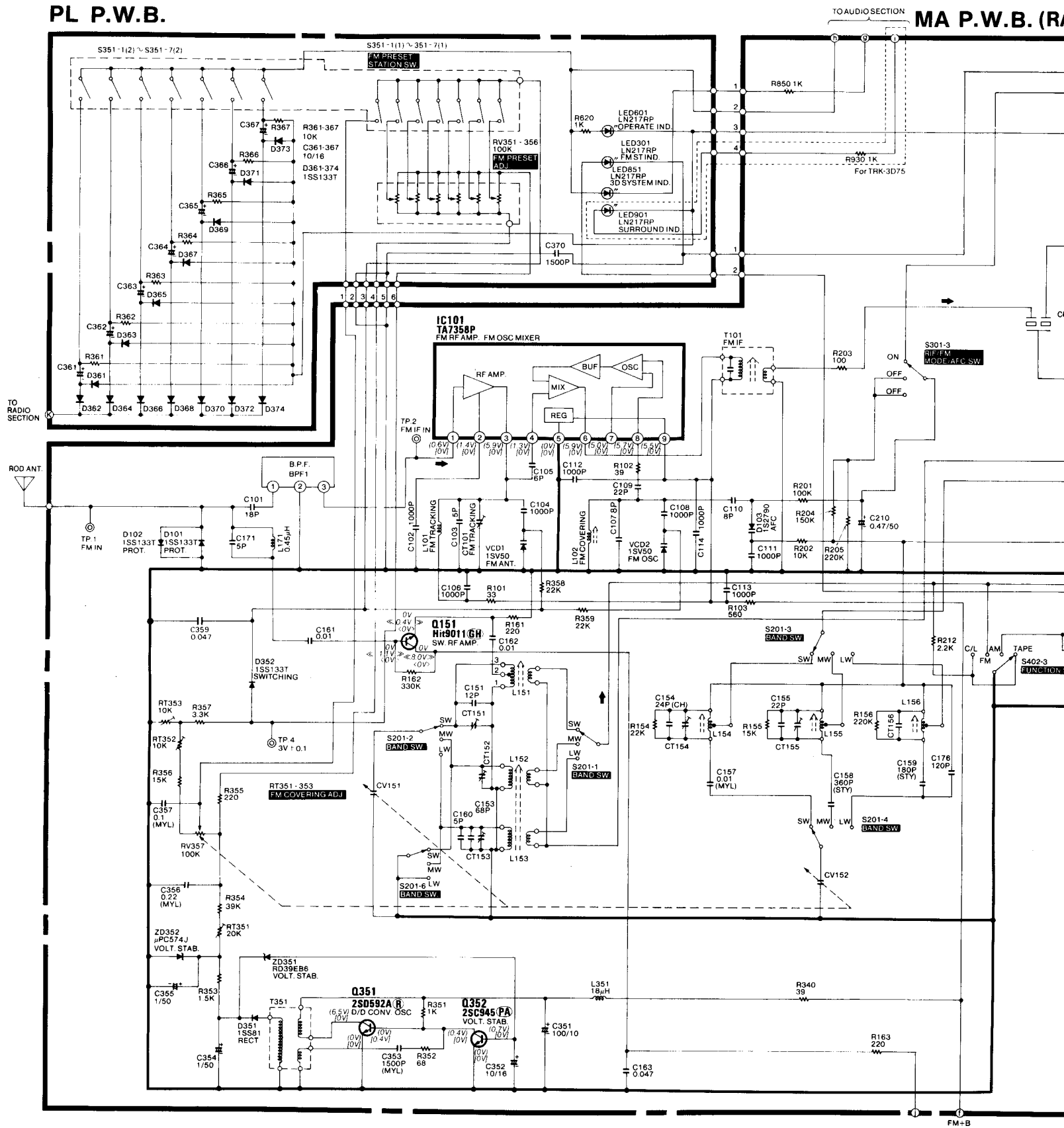
※: Condensateur céramique cylindrique à conducteur axial



For  $E, E(BS)$

**PL P.W.B.**

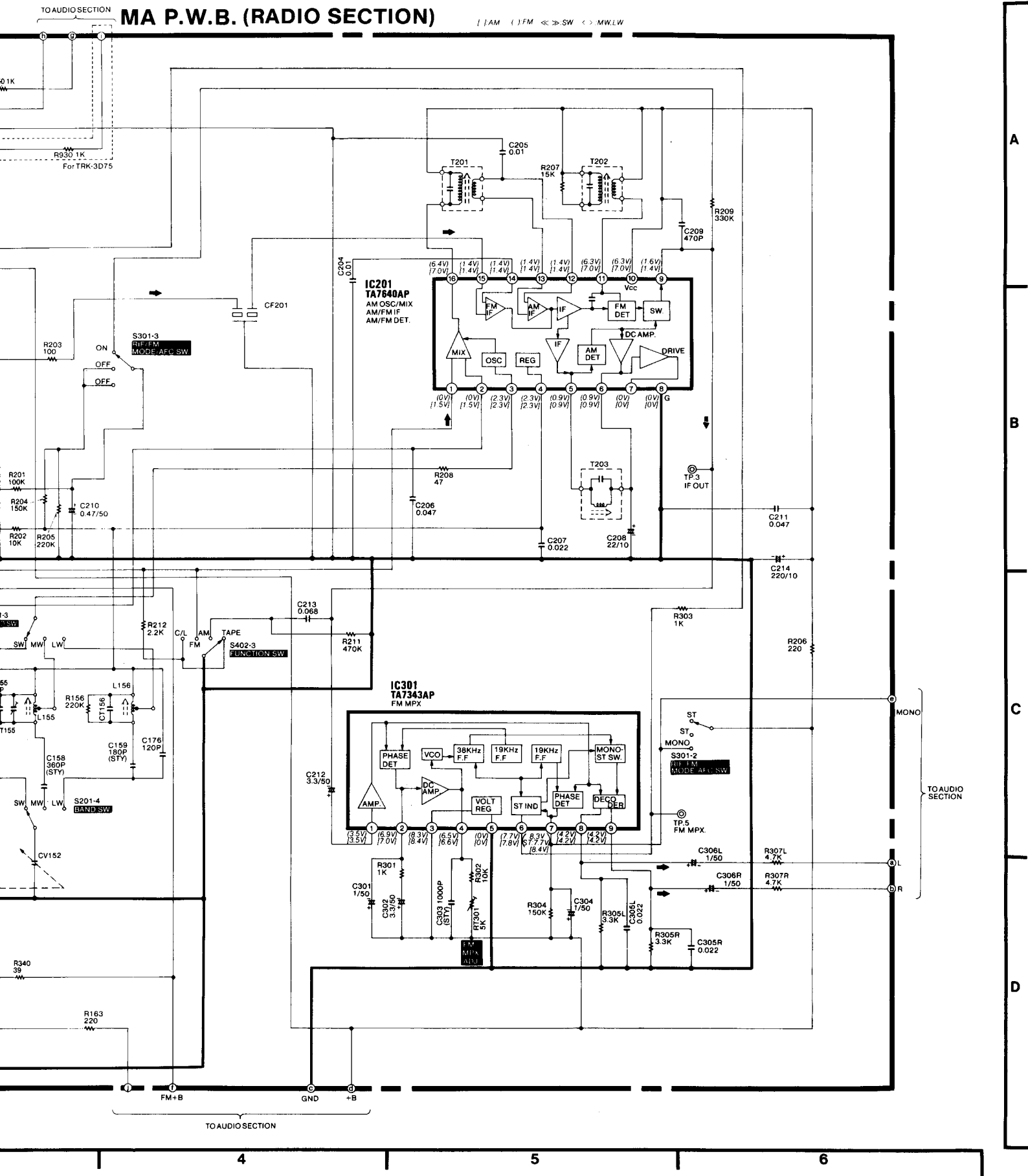
**MA P.W.B. (RA)**

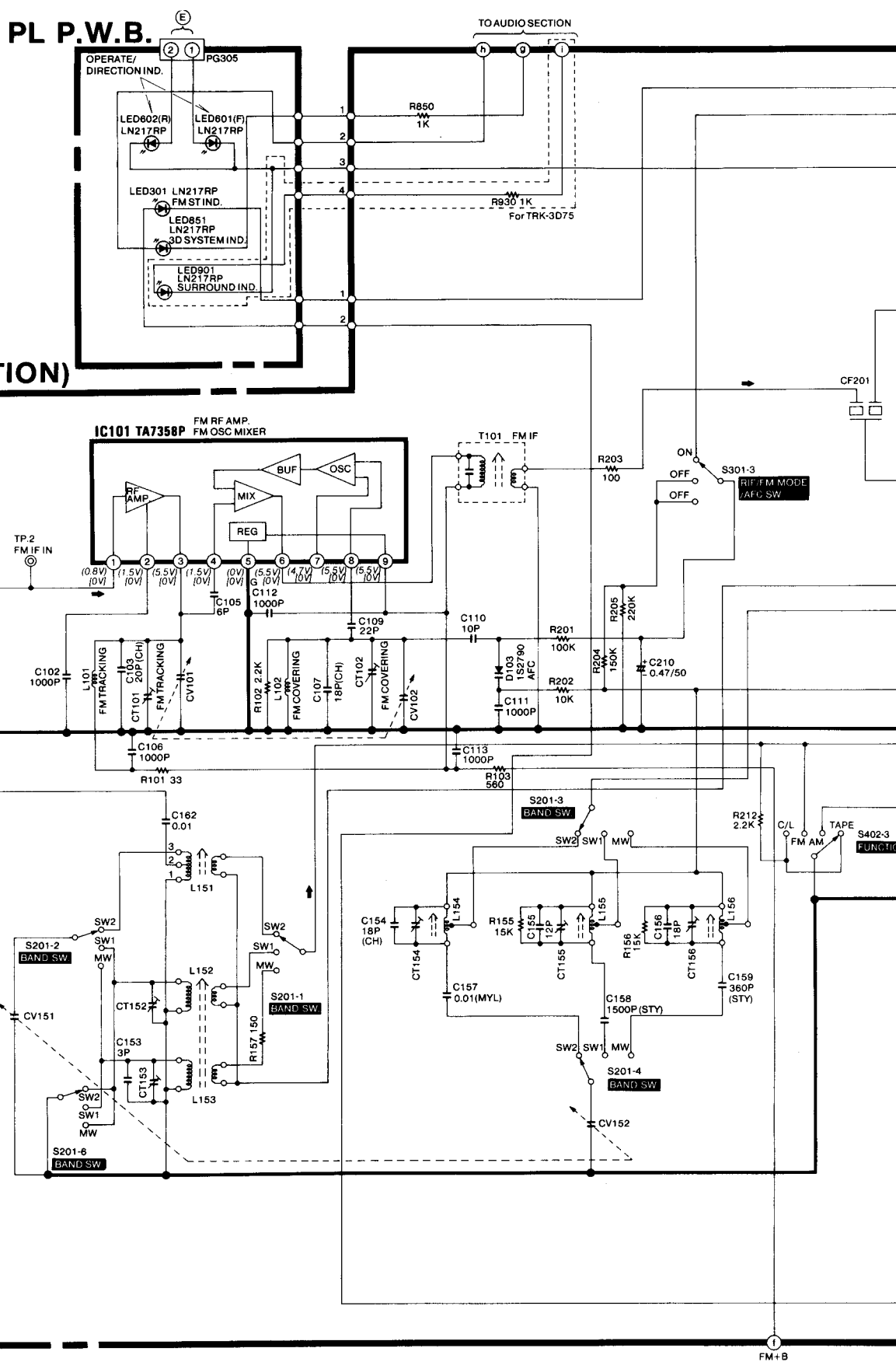


TO AUDIO SECTION

**MA P.W.B. (RADIO SECTION)**

/ :AM ( )FM &lt;&gt;:SW &lt;&gt;:MW,LW

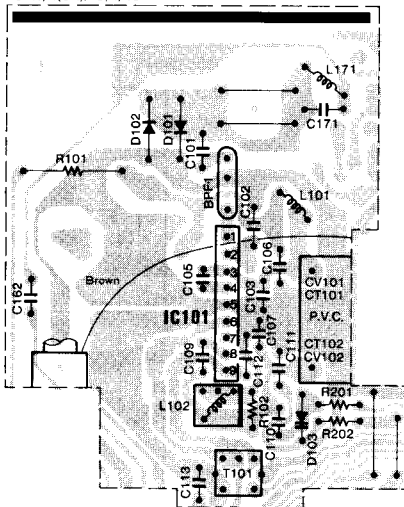








## PRINTED WIRING BOARD · PLAN DE BASE



for W, W(UN) AU, H, HC

| IC101 |      |    |
|-------|------|----|
|       | FM   | AM |
| 1     | 0.8V | 0V |
| 2     | 1.5V | 0V |
| 3     | 5.5V | 0V |
| 4     | 1.5V | 0V |
| 5     | 0V   | 0V |
| 6     | 5.5V | 0V |
| 7     | 4.7V | 0V |
| 8     | 5.5V | 0V |
| 9     | 5.5V | 0V |

for  $E, E(BS)$ 

| IC101 |      |    |
|-------|------|----|
|       | FM   | AM |
| 1     | 0.6V | 0V |
| 2     | 1.4V | 0V |
| 3     | 5.9V | 0V |
| 4     | 1.3V | 0V |
| 5     | 0V   | 0V |
| 6     | 5.9V | 0V |
| 7     | 5.0V | 0V |
| 8     | 5.7V | 0V |
| 9     | 5.5V | 0V |

for  $W, W(UN), AU, H, HC$ 

| IC201 |      |      |
|-------|------|------|
|       | FM   | AM   |
| 1     | 0V   | 1.5V |
| 2     | 0V   | 1.5V |
| 3     | 2.3V | 2.3V |
| 4     | 2.3V | 2.3V |
| 5     | 0.9V | 0.9V |
| 6     | 0.9V | 0.9V |
| 7     | 0V   | 0V   |
| 8     | 0V   | 0V   |
| 9     | 1.5V | 1.4V |
| 10    | 6.3V | 6.9V |
| 11    | 6.3V | 6.9V |
| 12    | 1.4V | 1.4V |
| 13    | 1.4V | 1.4V |
| 14    | 1.4V | 1.4V |
| 15    | 1.4V | 1.4V |
| 16    | 6.3V | 6.9V |

for E,E(BS)

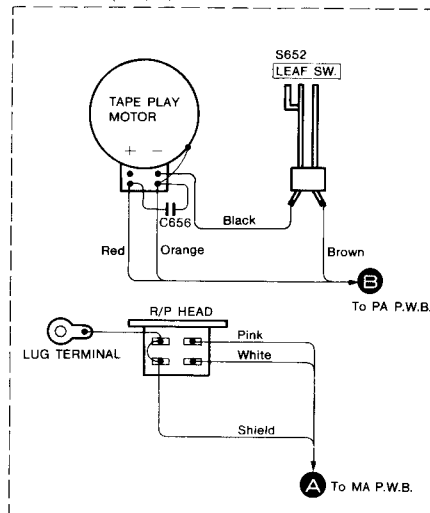
| IC201 |      |      |
|-------|------|------|
|       | FM   | AM   |
| 1     | 0V   | 1.5V |
| 2     | 0V   | 1.5V |
| 3     | 2.3V | 2.3V |
| 4     | 2.3V | 2.3V |
| 5     | 0.9V | 0.9V |
| 6     | 0.9V | 0.9V |
| 7     | 0V   | 0V   |
| 8     | 0V   | 0V   |
| 9     | 1.6V | 1.4V |
| 10    | 6.3V | 7.0V |
| 11    | 6.3V | 7.0V |
| 12    | 1.4V | 1.4V |
| 13    | 1.4V | 1.4V |
| 14    | 1.4V | 1.4V |
| 15    | 1.4V | 1.4V |
| 16    | 6.4V | 7.0V |

for W.W(UN) ALL H HC

| IC301 |                   |      |
|-------|-------------------|------|
|       | FM                | AM   |
| 1     | 3.4V              | 3.4V |
| 2     | 7.0V              | 7.0V |
| 3     | 8.4V              | 8.4V |
| 4     | 6.6V              | 6.6V |
| 5     | 0V                | 0V   |
| 6     | 7.9V              | 7.9V |
| 7     | 8.4V<br>(ST 7.8V) | 8.4V |
| 8     | 4.0V              | 4.0V |
| 9     | 4.0V              | 4.0V |

for  $E \in \mathcal{E}(\mathcal{P}_S)$ 

| IC301 |                    |      |
|-------|--------------------|------|
|       | FM                 | AM   |
| 1     | 3.5V               | 3.5V |
| 2     | 6.9V               | 7.0V |
| 3     | 8.3V               | 8.4V |
| 4     | 6.5V               | 6.6V |
| 5     | 0V                 | 0V   |
| 6     | 7.7V               | 7.8V |
| 7     | 8.3V<br>(ST. 7.7V) | 8.4V |
| 8     | 4.2V               | 4.2V |
| 9     | 4.2V               | 4.2V |

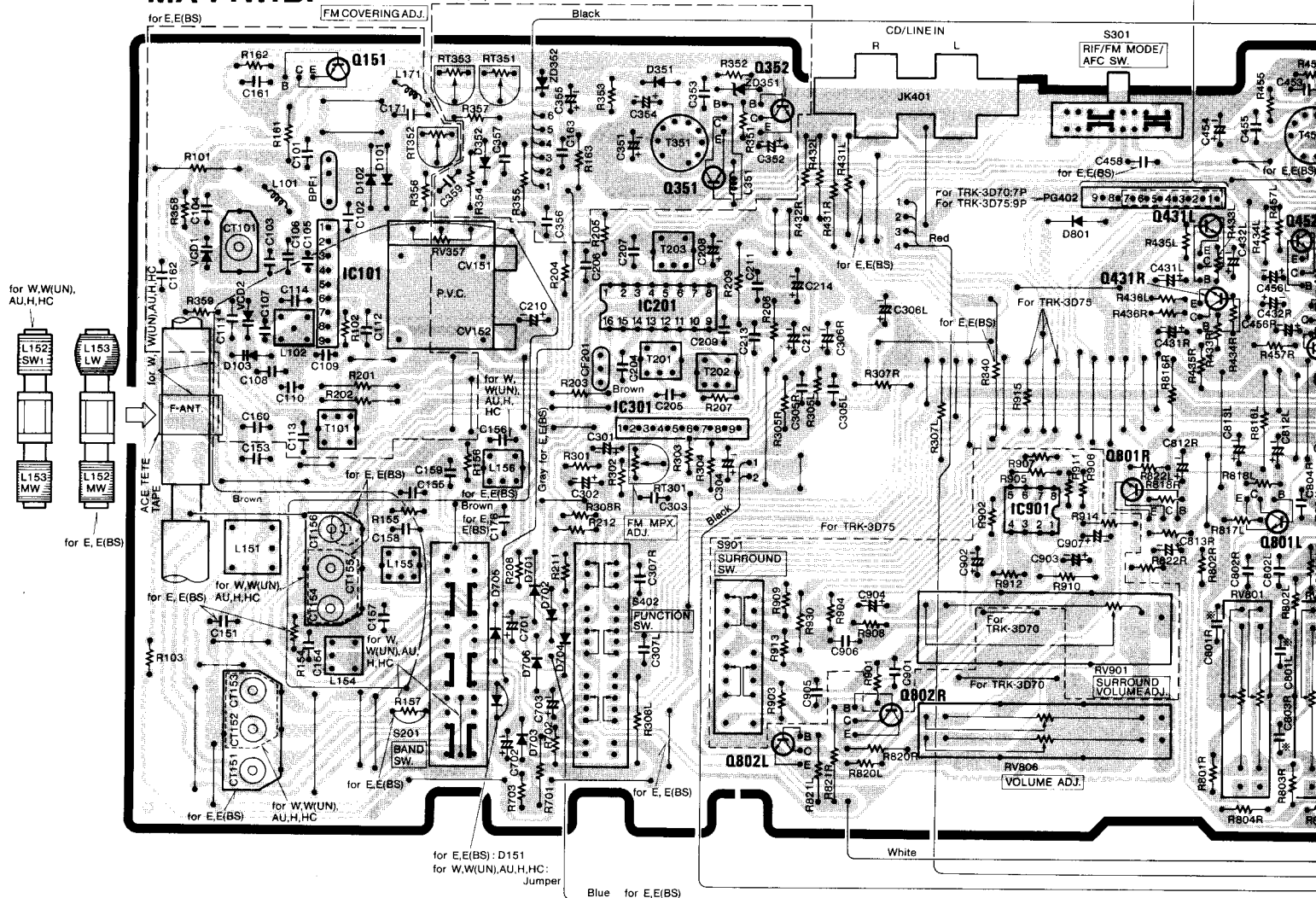


To DEC

To PA P.W.B.

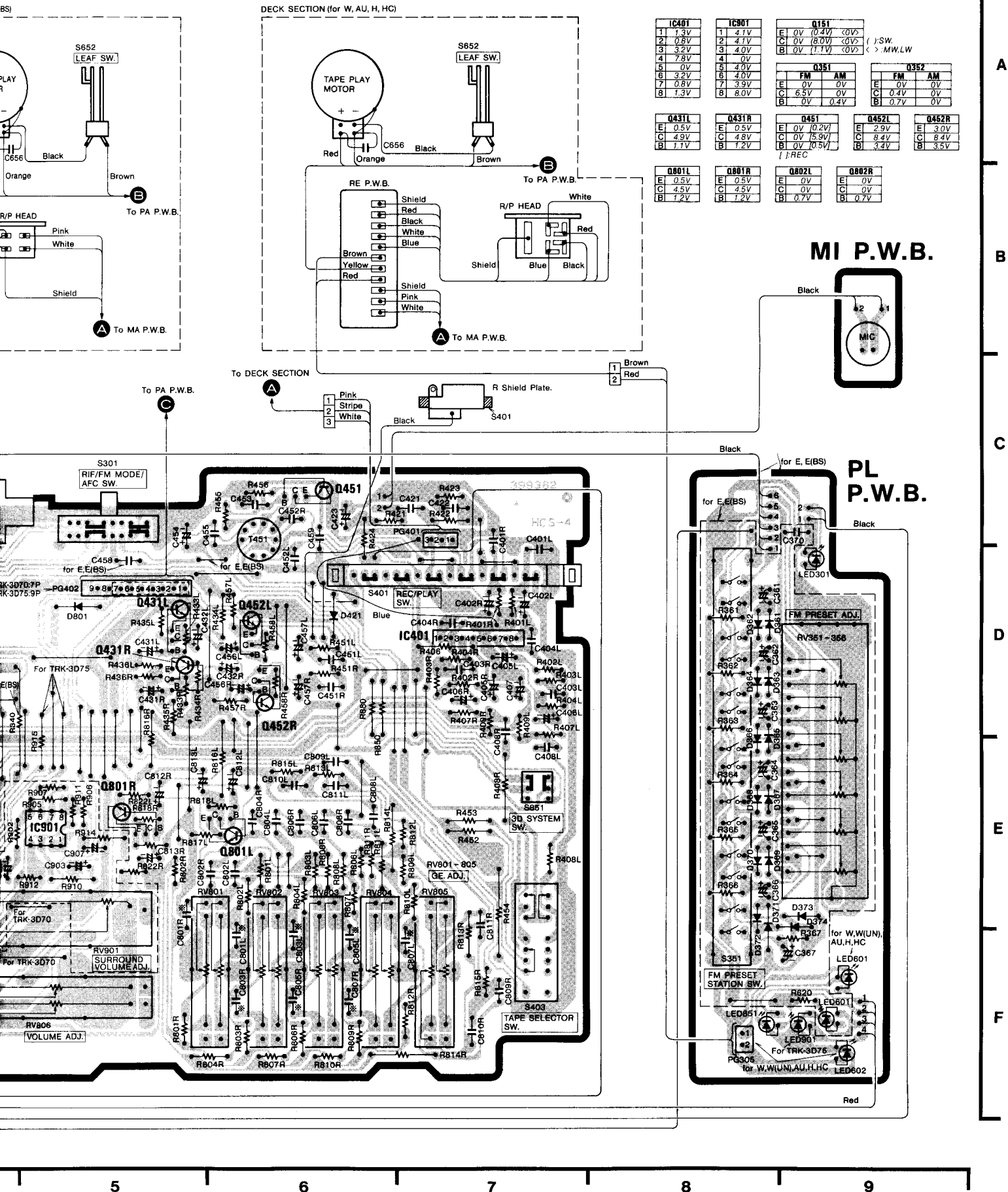
## MA P.W.B. RT351-353

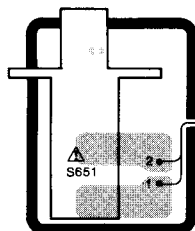
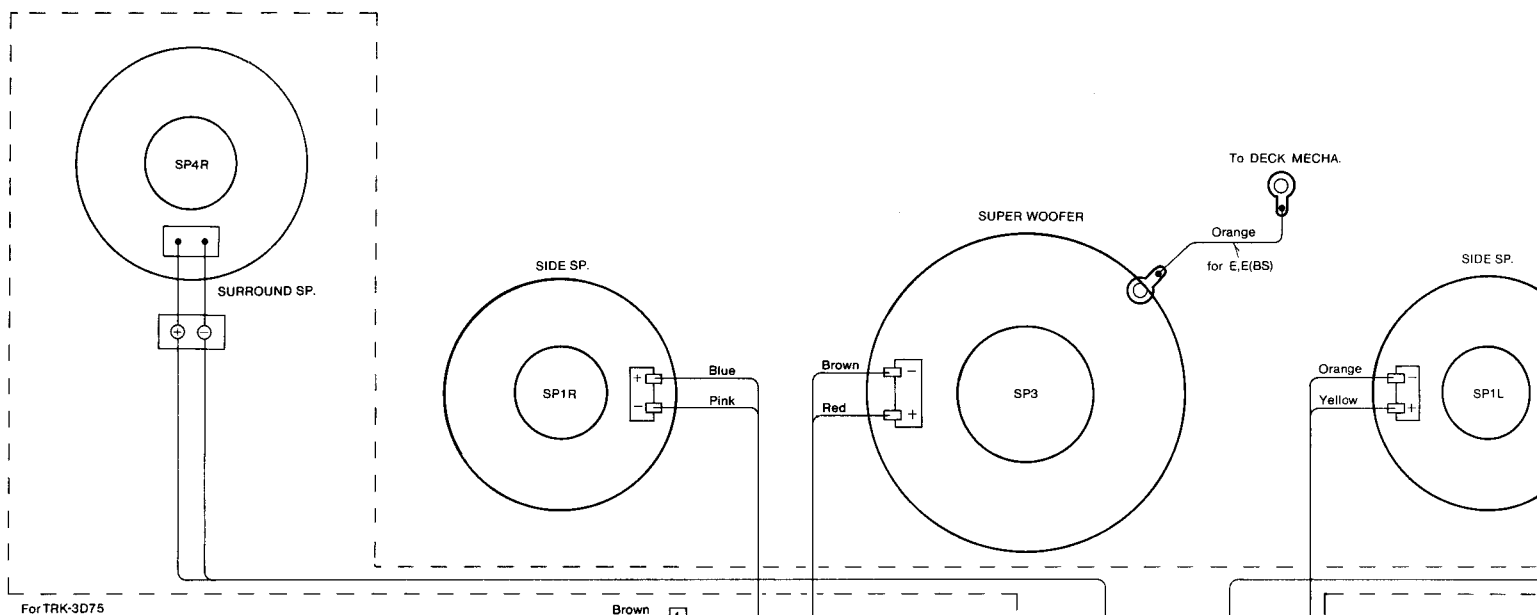
for E,E(BS)



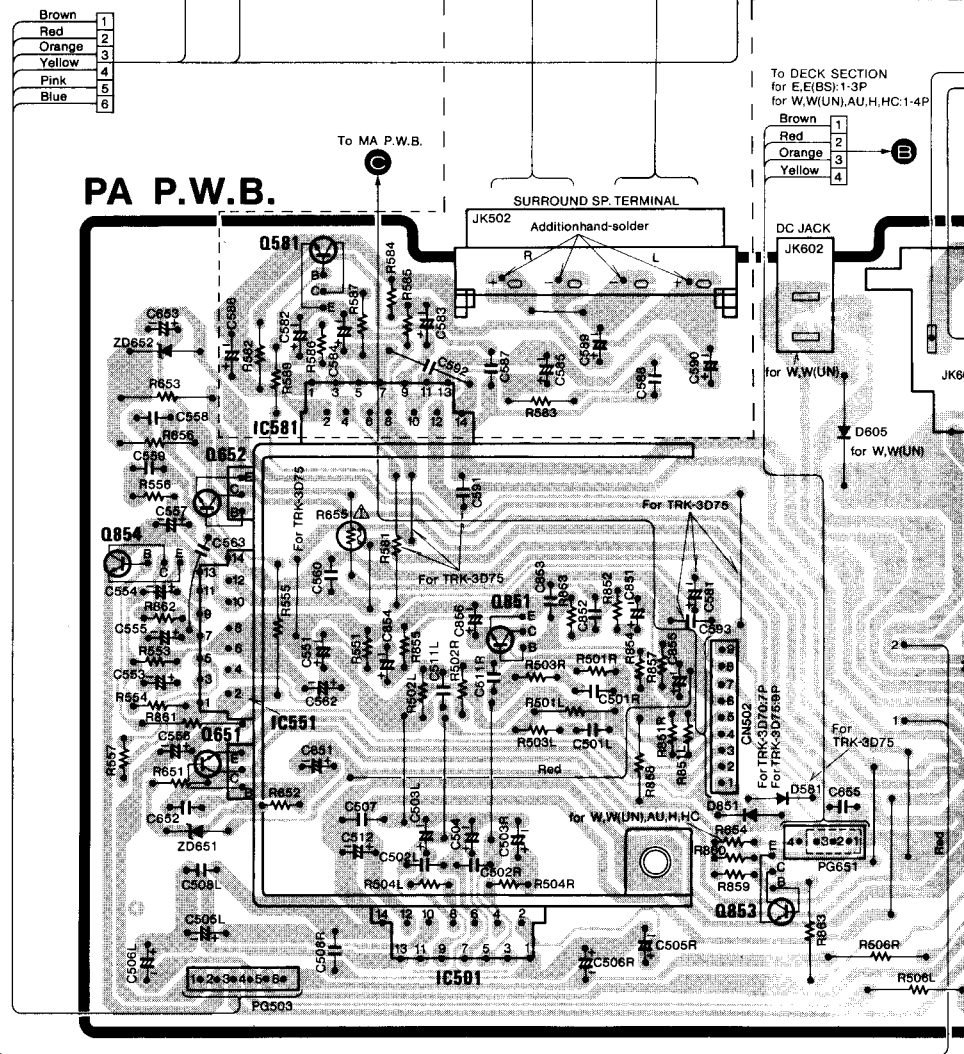
Blue for E,E(BS)

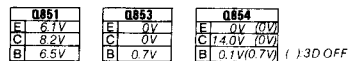
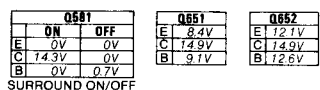
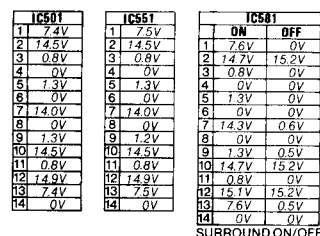
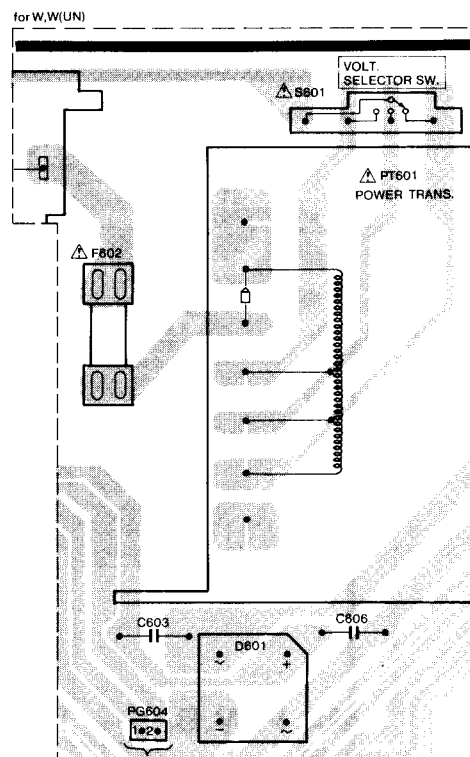
※: Axial lead cylindrical ceramic capacitor  
 ※: Condensateur céramique cylindrique à conducteur axial





S651  
for E,E(BS),W,W(UN),AU :  
**OPERATION SW.**  
for H,HC :  
**POWER SW.**



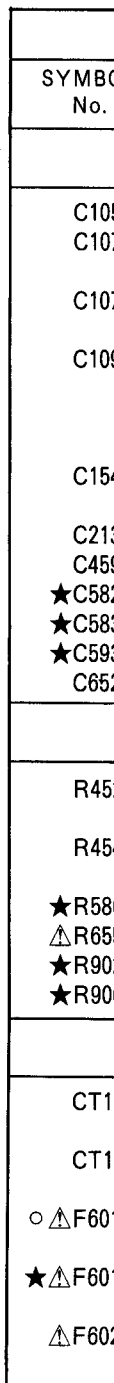


• CABINET • CABINE

## REPLA

CD ..... C

○ ..... TR



## Cabinets

|        |    |
|--------|----|
|        |    |
| SYMBOL |    |
| No.    |    |
| ★ 16   |    |
| ★      |    |
| ★      |    |
|        | 24 |

## REPLACEMENT PARTS LIST · TABLEAU DES PIECES

CD ..... Ceramic discal EL ..... Electrolytic CF ..... Carbon film MO ..... Metal, oxide FR ..... Fuse resistor  
 ○ ..... TRK-3D70 only ★ ..... TRK-3D75 only

| After change         |          |                            | Before change |          |                         |
|----------------------|----------|----------------------------|---------------|----------|-------------------------|
| SYMBOL No.           | PART No. | DESCRIPTION                | SYMBOL No.    | PART No. | DESCRIPTION             |
| <b>CAPACITORS</b>    |          |                            |               |          |                         |
| C105                 | 0248646  | CD 6pF ±0.5pF 50V          | C105          | 0208646  | CD 6pF ±0.5pF 50V       |
| C107                 | 0248478  | CD 8pF ±0.5pF 50V          | C107          | 0248475  | CD 5pF ±0.5pF 50V       |
|                      |          | [for E(BS), E]             |               |          | [for E(BS), E]          |
| C107                 | 0246446  | CD 18pF ±5% 50V            | C107          | 0246448  | CD 22pF ±5% 50V         |
|                      |          | [except E(BS), E]          |               |          | [except E(BS), E]       |
| C109                 | 0248038  | CD 22pF ±5% 50V            | C109          | 0248034  | CD 15pF ±5% 50V         |
|                      |          | [except E(BS), E]          |               |          | [except E(BS), E]       |
|                      |          | Not used                   | C152          | 0208635  | CD 5pF ±0.25pF 50V      |
|                      |          |                            |               |          | [for E(BS), E]          |
| C154                 | 0246446  | CD 18pF ±5% 50V            | C154          | 0208666  | CD 18pF ±5% 50V         |
|                      |          | [except E(BS), E]          |               |          | [except E(BS), E]       |
| C213                 | 0240222  | CD 0.068μF ±10% 25V        | C213          | 0249766  | CD 0.068μF ±10% 25V     |
| C459                 | 0208686  | CD 120pF ±5% 50V           | C459          | 0248686  | CD 120pF ±5% 50V        |
| ★C582                | 0252521  | EL 10μF 16V                | ★C582         | 0252325  | EL 47μF 10V             |
| ★C583                | 0252521  | EL 10μF 16V                | ★C583         | 0252325  | EL 47μF 10V             |
| ★C593                | 0209731  | CD 1000pF ±10% 50V         | ★C593         | 0244101  | CD 1000pF ±10% 50V      |
| C652                 | 0240212  | CD 0.01μF ±10% 25V         | C652          | 0249761  | CD 0.01μF ±10% 25V      |
| <b>RESISTORS</b>     |          |                            |               |          |                         |
| R452                 | 0129569  | CF 220Ω ±5% SRD1/4P        | R452          | 0113599  | CF 220Ω ±5% SRD1/6P     |
|                      |          | [for E(BS), E]             |               |          | [for E(BS), E]          |
| R454                 | 1119412  | MO 82Ω ±10% RS1B           | R454          | 1119410  | MO 82Ω ±10% RS1B        |
|                      |          | [except E(BS), E]          |               |          | [except E(BS), E]       |
| ★R586                | 0113603  | CF 330Ω ±5% SRD1/6P        | ★R586         | 0113591  | CF 100Ω ±5% SRD1/6P     |
| △R655                | 1118445  | FR 4.7Ω ±5% RN1/4B         | △R655         | 0118445  | FR 4.7Ω ±5% RN1/4B      |
| ★R902                | 0113651  | CF 33kΩ ±5% SRD1/6P        | ★R902         | 0113655  | CF 47kΩ ±5% SRD1/6P     |
| ★R906                | 0113635  | CF 6.8kΩ ±5% SRD1/6P       | ★R906         | 0113641  | CF 12kΩ ±5% SRD1/6P     |
| <b>MISCELLANEOUS</b> |          |                            |               |          |                         |
| CT152                | 0283557  | Capacitor semi variable    | CT152         |          | Misprint of destination |
|                      |          | [except E(BS), E]          |               |          |                         |
| CT152                | 0283130  | Capacitor semi variable    | CT152         |          | Misprint of destination |
|                      |          | [for E(BS), E]             |               |          |                         |
| ○△F601               | 2727894  | Fuse (4A 125V) (UL fuse)   | △F601         | 2727894  | UL fuse 4A [for H, HC]  |
|                      |          | [for H, HC]                |               |          |                         |
| ★△F601               | 2727896  | Fuse (5A 125V) (UL fuse)   |               |          |                         |
|                      |          | [for H, HC]                |               |          |                         |
| △F602                | 2727891  | Fuse (1.6A 125V) (UL fuse) | △F602         |          | Omission of description |
|                      |          | [for H, HC]                |               |          |                         |

## Cabinet

| After change |          |                    | Before change |          |                             |
|--------------|----------|--------------------|---------------|----------|-----------------------------|
| SYMBOL No.   | PART No. | DESCRIPTION        | SYMBOL No.    | PART No. | DESCRIPTION                 |
| ★ 16         | 4044841  | Top panel assy     | ★ 16          |          | } Misprint of parts numbers |
|              |          | [for E(BS), E]     |               |          |                             |
| ★            | 4044842  | Top panel assy     |               |          |                             |
|              |          | [for W, W(UN), AU] |               |          |                             |
| ★            | 4044843  | Top panel assy     |               |          |                             |
|              |          | [for H, HC]        |               |          |                             |
| 24           | 3391962  | Lid spring         | 24            | 3391961  | Lid spring                  |

| After change |               |                            | Before change |          |                             |
|--------------|---------------|----------------------------|---------------|----------|-----------------------------|
| SYMBOL No.   | PART No.      | DESCRIPTION                | SYMBOL No.    | PART No. | DESCRIPTION                 |
| ○ 31         | 4044261       | Rear case assy [for E]     | 31            |          | } Misprint of parts numbers |
| ○            | 4044262       | Rear case assy [for E(BS)] |               |          |                             |
| ○            | 4044263       | Rear case assy [for W]     |               |          |                             |
| ○            | 4044264       | Rear case assy [for W(UN)] |               |          |                             |
| ○            | 4044265       | Rear case assy [for AU]    |               |          |                             |
| ○            | 4044266       | Rear case assy [for H]     |               |          |                             |
| ○            | 4044267       | Rear case assy [for HC]    |               |          |                             |
| ★            | 4044861       | Rear case assy [for E]     |               |          |                             |
| ★            | 4044862       | Rear case assy [for E(BS)] |               |          |                             |
| ★            | 4044863       | Rear case assy [for W]     |               |          |                             |
| ★            | 4044864       | Rear case assy [for W(UN)] |               |          |                             |
| ★            | 4044865       | Rear case assy [for AU]    |               |          |                             |
| ★            | 4044866       | Rear case assy [for H]     |               |          |                             |
| ★            | 4044867       | Rear case assy [for HC]    |               |          |                             |
| ★ 63         | Not           | Joint shaft                | ★ 63          | 4583947  | Joint shaft                 |
| ★ 64         | establishment | SP bush                    | ★ 64          | 3807491  | SP bush                     |
| ★ 65         | parts         | Screw (3×5)                | ★ 65          | 8660405  | Screw (3×5)                 |
| 66           | 8699412       | BT bind head screw (3×12)  |               |          | Not used                    |
| 67           | 4567432       | DT bind head screw (3×8)   |               |          | Not used                    |
| 68           | 4578972       | BT flange screw (3×10)     |               |          | Not used                    |

**For TRK-3D75 only**  
**Sorround speaker**

| After change |          |                      | Before change |          |                         |
|--------------|----------|----------------------|---------------|----------|-------------------------|
| SYMBOL No.   | PART No. | DESCRIPTION          | SYMBOL No.    | PART No. | DESCRIPTION             |
| 6            | 3800282  | Foot knob            | 6             | 3800281  | Foot knob               |
| 7            | 4585175  | Tapping screw (4×12) | 7             |          | Misprint of description |

**For W, W(UN), AU, H, HC**  
**Cassette chassis (TN-222F-140)**

| After change |          |              | Before change |          |                          |
|--------------|----------|--------------|---------------|----------|--------------------------|
| SYMBOL No.   | PART No. | DESCRIPTION  | SYMBOL No.    | PART No. | DESCRIPTION              |
| 109          | 4819176  | SW base assy | 109           |          | Misprint of parts number |

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