

DIGITAL SOUND PROJECTOR

YSP-1

SERVICE MANUAL

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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7. Removal of Driver (Woofer)

- Remove 4 screws (12). (Fig. 12)
- Remove the Side covers L/R.
- Remove the Plate/Cover.
- Remove 4 screws (13). (Fig. 12)
- Remove the Plate/Side.
- Remove 18 screws (14). (Fig. 12)
- Remove the Front grille.
- Remove 8 screws (15). (Fig. 12)
- Remove the Driver (Woofer).

7. スピーカーユニット(ウーファー)の外し方

- ⑫のネジ4本を外します。(Fig. 12)
- サイドカバーL/Rを取り外します。
- プレート/カバーを取り外します。
- ⑬のネジ4本を外します。(Fig. 12)
- プレート/サイドを取り外します。
- ⑭のネジ18本を外します。(Fig. 12)
- フロントグリルを取り外します。
- ⑮のネジ8本を外します。(Fig. 12)
- スピーカーユニット(ウーファー)を取り外します。

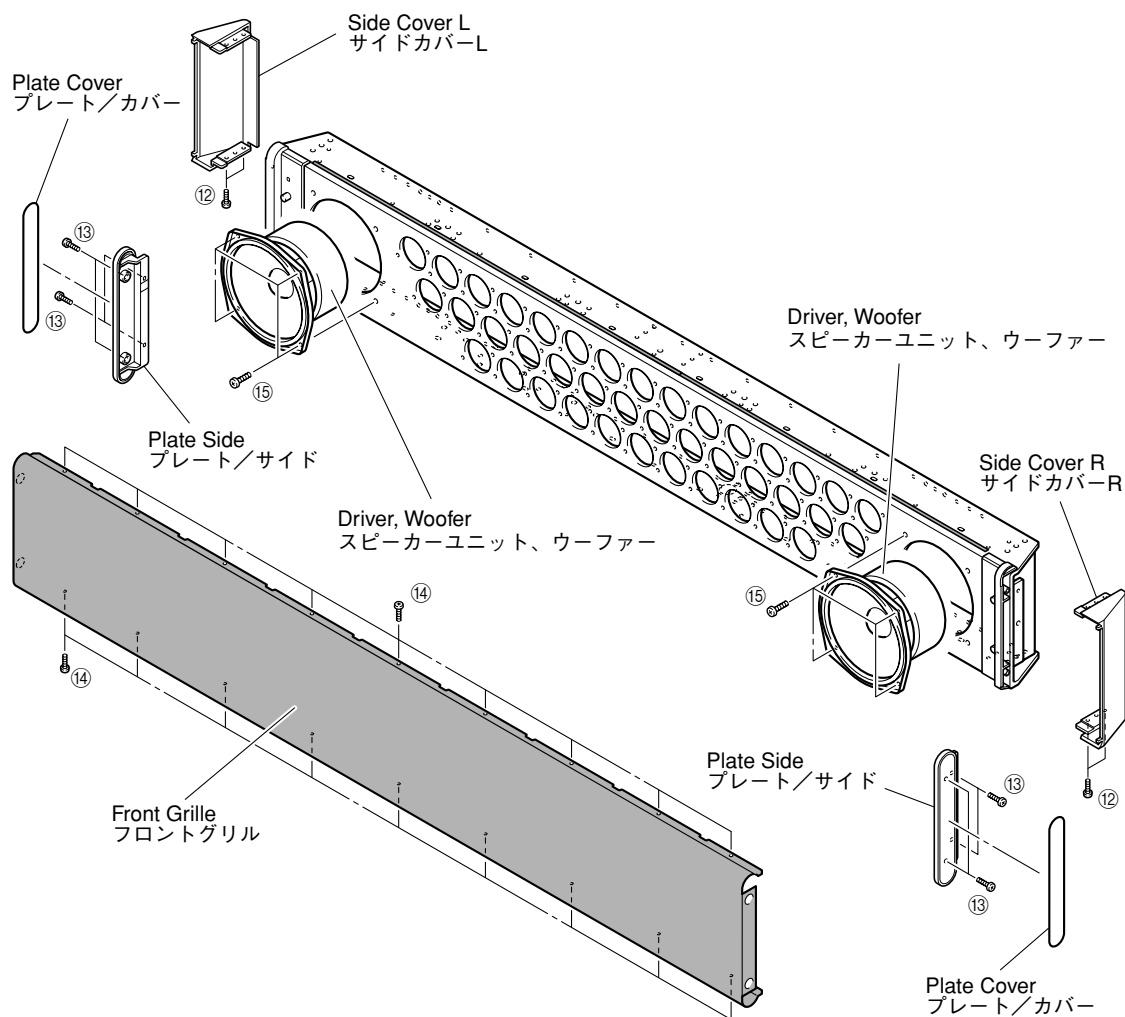


Fig. 12

● History of protection function

When the protection function has worked, its history is stored in memory with a backup. Even if no abnormality is noted while servicing the unit, an abnormality which has occurred previously can be defined as long as the backup data has been stored.

The history of the protection function is cleared when DIAG is cancelled by selecting PRESET RESERVED (Memory initialized) of DIAG menu No. 6 or when the backup data is erased.

*To clear the protection history only, use the SUB menu No.3 "PROTECT His (PrHist ← RESET) of DIAG menu No.12".

● プロテクションの履歴

プロテクションが働いた場合、履歴をバックアップして記憶しています。サービスのときに異常が認められなくても、バックアップが残っていれば、お客様のところで起きた異常を区別できます。

プロテクションの履歴は、ダイアグメニューNo.6で PRESET RESERVED(メモリーの初期化)を選んでダイアグを解除した場合や、バックアップが消えたときにはクリアされます。

※ プロテクション履歴のみクリアーしたい場合は、ダイアグメニューNo.12のサブメニューNo.3“PROTECT Hist(PrtHist←RESET)”でクリアできます。

● Display during menu operation

During the DIAG operation, the menu list described in the section of the startup screen appears on the superimposed screen and the function at work is indicated on the FL indicator. The contents displayed during the function operation are described in the later section on details of functions.

● メニュー動作中の表示

ダイアグ中、モニター画面には起動画面の項で説明したメニュー一覧が表示されます。本体のFLディスプレイには動作中の機能が表示されます。機能動作中の表示内容については、後述の機能詳細で記述します。

● Operation procedure of DIAG menu and SUB-MENU

There are 14 MENU items, each of which has some SUB-MENU items.

DIAG menu selection

Select the DIAG menu by using the UP/DOWN △ (Reverse) ▽ (Forward) key of the remote controller.

SUB-MENU selection

Select the DIAG sub-menu by using the LEFT/RIGHT ◀ (Reverse) ▶ (Forward) keys.

● ダイアグメニューとサブメニューの操作

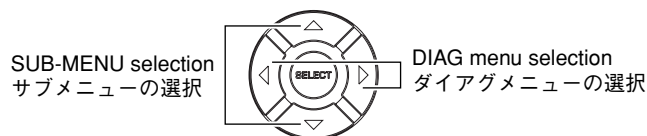
ダイアグにはNo.1～14のメニューがあり、そのそれぞれにサブメニューがあります。

ダイアグメニューの選択

リモコンのUP/DOWN △(逆送り)、▽(順送り)キーで選択します。

サブメニューの選択

リモコンのLEFT/RIGHT ◀(逆送り)、▶(順送り)キーで選択します。



12. DATE

There are 4 SUB menu items.

The updated date of the program, clearance of the protection history and the remote control reception code are displayed.

When Remo Code menu is selected, keys become non-operable due to detection of the values of all keys. However, it is possible to advance to the next sub-menu by push the INPUT key of the remote control.

MAIN

The updated date of the MAIN CPU firmware is displayed.

```
04.10.15a/MAIN
```

SUB

The updated date of the SUB CPU firmware is displayed.

```
04.10.14B/SUB
```

PROTECT HISTORY DELETE

Reserve/Cancel can be selected by using the "SELECT" and "RETURN" keys of the remote controller.

```
Protect Hist
```

REMOTE CONTROL CODE DISPLAY

The reception code of the remote controller can be checked.

```
RemoCode  -
```

12. DATE

サブメニューは4つあります。

プログラムの更新日付、プロテクション履歴のクリア、リモコン受信コードを表示します。

Remo Codeのメニューにすると、リモコンの全キーの値を検出するためキー操作はできなくなりますが、本体のINPUTキーを押すことにより、次のサブメニューに進めることができます。

MAIN

MAIN CPUのファームウェアの更新日を表示します。

SUB

SUB CPUのファームウェアの更新日を表示します。

プロテクション履歴削除の予約/解除

リモコンの"SELECT"キー、"RETURN"キーにより予約/解除が選択できます。

リモコン受信コード表示

リモコン受信コードが確認できます。

1

PRINTED CIRCUIT BOARD (Foil side)

INPUT (1) P.C.B. (Side B) Lead Free Solder Used

2

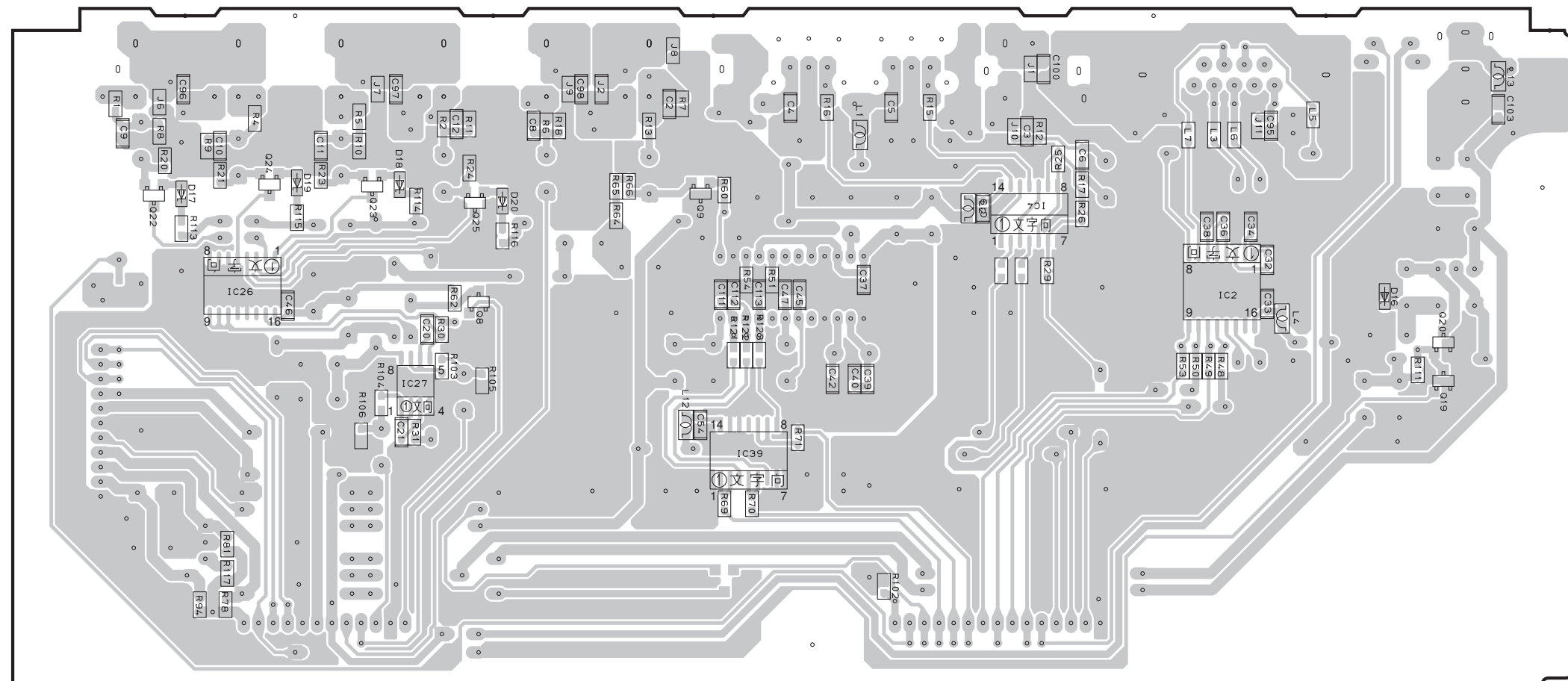
3

4

5

6

7



| Ref No. | Location | Ref No. | Location | Ref No. | Location |
|---------|----------|---------|----------|---------|----------|
| D16 | H4 | IC4 | F4 | Q19 | H4 |
| D17 | C4 | IC26 | C4 | Q20 | H4 |
| D18 | D4 | IC27 | D4 | Q22 | C4 |
| D19 | C4 | IC39 | E5 | Q23 | D4 |
| D20 | D4 | Q8 | D4 | Q24 | C4 |
| IC2 | H4 | Q9 | E4 | Q25 | D4 |

P.C.B. DSP & P.C.B. AMP

| Schm Ref. | PART NO. | Description | Remarks | Markets | 部 品 名 | Rank |
|--|----------|-------------|-----------------|--------------------|--------------------|-----------|
| * % | WE218400 | P. C. B. | DSP | | P C B D S P | |
| * % | CB1 | WC547500 | CN. BS. PIN | 18P SE | F F Cコネクタ | |
| * % | CB2 | WC547500 | CN. BS. PIN | 18P SE | F F Cコネクタ | |
| * % | CB3 | VT389000 | CN. BS. PIN | 9P | ベース付ポスト | 01 |
| * % | CB300 | WC197700 | CN. BS. PIN | 27P TE | F M Nコネクタ | |
| * % | CB301 | WC195900 | CN. BS. PIN | 9P TE | F M Nコネクタ | |
| * % | CB302 | VT388900 | CN. BS. PIN | 8P TE | ベース付ポスト | 01 |
| * % | CB303 | WD736900 | CN. BS. PIN | 14P TE | ベース付ポスト | |
| * % | C427 | V9452100 | C. AL. CHP | 100uF 6.3V | チップ O Sケミコン | 03 |
| * % | D1 | VS597600 | D I O D E. CHP | RB160L-40 TE25 | チップダイオード | 01 |
| * % | D300 | VV220700 | D I O D E. SHOT | RB501V-40 | ショットキーダイオード | 01 |
| * % | D301 | VV220700 | D I O D E. SHOT | RB501V-40 | ショットキーダイオード | 01 |
| * % | D302 | VV220700 | D I O D E. SHOT | RB501V-40 | ショットキーダイオード | 01 |
| * % | D303 | VV220700 | D I O D E. SHOT | RB501V-40 | ショットキーダイオード | 01 |
| * % | D305 | VV220700 | D I O D E. SHOT | RB501V-40 | ショットキーダイオード | 01 |
| * % | D306 | VV220700 | D I O D E. SHOT | RB501V-40 | ショットキーダイオード | 01 |
| * % | G300 | WB438000 | TERM. GND | M4 SD00433-21 | アース端子 | |
| * % | G301 | WB438000 | TERM. GND | M4 SD00433-21 | アース端子 | |
| * % | G302 | WB438000 | TERM. GND | M4 SD00433-21 | アース端子 | |
| * % | G303 | WB438000 | TERM. GND | M4 SD00433-21 | アース端子 | |
| * % | IC1 | X5220B00 | IC | MT48LC2M32B2P-6 | メモリ IC | |
| * % | IC2 | X6210A00 | IC | MBM29LV160BE-70TN | メモリ IC 16M | |
| * % | IC5 | X5731A00 | IC | SN74LVC74APWR | ロジック IC | |
| * % | IC6 | X6209A00 | IC | LC4032V-75TN48C | C P U / 周 辺 I C | |
| * % | IC7 | X4515A00 | IC | TPS54310PWPR | 電源 IC | 06 |
| * % | IC8 | X4515A00 | IC | TPS54310PWPR | 電源 IC | 06 |
| * % | IC9 | X5724A00 | IC | TPS2034D POWER IC | 電源 IC | |
| * % | IC300 | X3566A00 | IC | LC89057W-VF4-E | I C | 05 |
| * % | IC301 | X3693A00 | IC | SN74LV245APWR TRAN | ロジック I C T S S O P | |
| * % | IC302 | X4570A00 | IC | YSS948-V | I C デジタル | 09 |
| * % | IC303 | X5798A00 | IC | S-29630AFJA EEPROM | メモリ IC | |
| * % | IC304 | X3601A00 | IC | M30626FHPFP | unwritten | I C C P U |
| * % | IC305 | X3567A00 | IC | YSS930-SZ | I C | 08 |
| * % | IC307 | X5799A00 | IC | AK4121VF | S R C | |
| * % | IC308 | X5799A00 | IC | AK4121VF | S R C | |
| * % | IC309 | X5799A00 | IC | AK4121VF | S R C | |
| * % | IC310 | X3783A00 | IC | AK4381VT | I C | 05 |
| * % | IC311 | X5219A00 | IC | AK5381VT-E2 | A / Dコンバータ | 05 |
| * % | IC312 | X3505A00 | IC | NJM2068MD-TE2 | アンプ I C S O P | 02 |
| * % | L4 | V6246100 | C. CHP | NFM3DCC223R1H3L | エミフィル チップ | 01 |
| * % | Q300 | VV655000 | TR. DGT | DTA114EKA | デジタルトランジスタ | 01 |
| * % | Q301 | VZ725900 | TR | 2SD1938F S, T | トランジスタ | |
| * % | XL1 | V9071800 | RESONATOR | 100MHz DS0751SV | 水晶発振器 | |
| * % | XL300 | V3625700 | RSNR. CRYST | 24.576MHz | 水晶振動子 | 03 |
| * % | XL301 | WB440500 | RSNR. CE | CSTCE16M0V53-R0 | セラミック発振子 | 01 |
| <p>% : IC3 (TMS320C6713BGDP) and IC4 (TAC8256) can not be supplied. When IC3 and IC4 are failures, please exchange DSP P.C.B. (WE218400). % : IC3 (TMS320C6713BGDP) 及び IC4 (TAC8256) はパーツ供給しません。 IC3 及び IC4 が故障の場合は DSP P.C.B. (WE218400) を交換して下さい。</p> | | | | | | |
| * % | WE218300 | P. C. B. | AMP | | P C B A M P | |
| * % | CB1 | VL845400 | CN. BS. PIN | 10P | ベースツキポスト | 01 |
| * % | CB2 | VL845400 | CN. BS. PIN | 10P | ベースツキポスト | 01 |

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