

# DENON

For U.S.A., Canada, Europe  
& Japan model

**Ver. 2**

## SERVICE MANUAL

# MODEL DVD-2900

DVD AUDIO-VIDEO / SUPER AUDIO CD PLAYER

### 注 意

サービスをおこなう前に、このサービスマニュアルを必ずお読みください。本機は、火災、感電、けがなどに対する安全性を確保するために、さまざまな配慮をおこなっており、また法的には「電気用品安全法」にもとづき、所定の許可を得て製造されております。従ってサービスをおこなう際は、これらの安全性が維持されるよう、このサービスマニュアルに記載されている注意事項を必ずお守りください。

● For purposes of improvement, specifications and design are subject to change without notice.

● 本機の仕様は性能改良のため、予告なく変更することがあります。  
● 補修用性能部品の保有期間は、製造打切後 8年です。

● Please use this service manual with referring to the operating instructions without fail.

● 修理の際は、必ず取扱説明書を参照の上、作業を行ってください。

● Some illustrations using in this service manual are slightly different from the actual set.

● 本文中に使用しているイラストは、説明の都合上現物と多少異なる場合があります。

## DENON, Ltd.

16-11, YUSHIMA 3-CHOME, BUNKYU-KU, TOKYO 113-0034 JAPAN  
Telephone: 03 (3837) 5321

## SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

### LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

### LASER RADIATION

Do not stare into beam or view directly with optical instruments, class 3A laser product.

## 注意

サービス、点検時には次のことにご注意願います。

#### ●注意事項をお守りください！

サービスのとき特に注意を必要とする個所については、キャビネット、部品、シャーシなどにラベルや捺印で、注意事項を表示しています。これらの注意書きおよび取扱説明書などの注意事項を必ずお守りください。

#### ●感電に注意！

- (1) このセットは、交流電圧が印加されていますので、通電時に内部金属部に触れると感電することがあります。従って通電サービス時には、絶縁トランスの使用や手袋の着用、部品交換には、電源プラグを抜くなどして、感電にご注意ください。
- (2) 内部には、高電圧の部分がありますので、通電時の取扱には、十分ご注意ください。

#### ●指定部品の使用！

セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用してください。特に配線図、部品表に△印で指定されている安全上重要な部品は必ず指定のものをご使用ください。

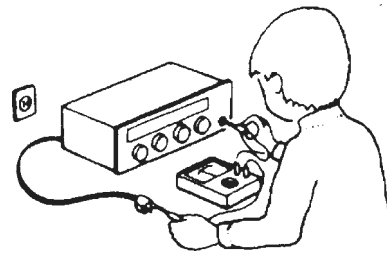
●部品の取付けや配線の引きまわしは、元どおりに！安全上、テープやチューブなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランプによって発熱部品や高圧部品に接近しないように配慮されていますので、これらは必ず元どおりにしてください。

#### ●サービス後は安全点検を！

サービスのために取り外したねじ、部品、配線などが元どおりになっているか、またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し、外部金属端子部と、電源プラグの刃の間の絶縁チェックをおこなうなど、安全性が確保されていることを確認してください。

#### (絶縁チェックの方法)

電源コンセントから電源プラグを抜き、アンテナや、プラグなどを外し、電源スイッチを入れます。500V絶縁抵抗計を用いて、電源プラグのそれぞれの端子と、外部露出金属部〔アンテナ端子、ヘッドホン端子、マイク端子、入力端子など〕との間で、絶縁抵抗値が1MΩ以上であること、この値以下のときは、セットの点検修理が必要です。



## 注意

安全上重要な部品について

本機に使用している多くの電気部品、および機構部品は安全上、特別な特性を持っています。この特性はほとんどの場合、外観では判別つきにくく、また、もとの部品より高い定格（定格電力、耐圧）を持ったものを使用しても安全性が維持されるとは、限りません。安全上の特性を持った部品は、このサービスマニュアルの配線図、部品表につぎのように表示していますので、必ず指定されている部品番号のものを使用願います。

(1)配線図… △マークで表示しています。

(2)部品表… △マークで表示しています。

指定された部品と異なるものを使用した場合には、感電、火災などの危険を生じる恐れがあります。

## DISASSEMBLY

(Follow the procedure below in reverse order when reassembling.)

## 各部のはずしかた

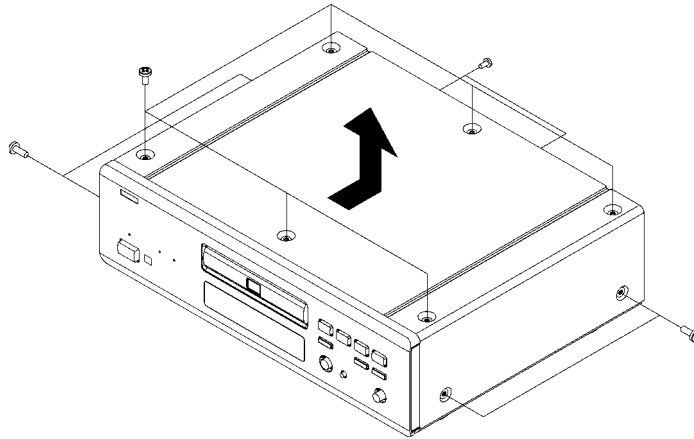
(組み立てるときは、逆の順序で行ってください。)

### 1. Top Cover

- (1) Remove 10 screws on the top and both sides, and 2 screws on the rear.
- (2) Widen the Top Cover a little laterally, then detach it with sliding in the arrow direction.

### 1. トップカバーのはずしかた

- (1) 側面及び上面からねじ 10 本、後ろからねじ 2 本をはずします。
- (2) 左右に少し広げ、矢印の方向にずらしながら、はずします。



### 2. Loader Panel, Front Panel

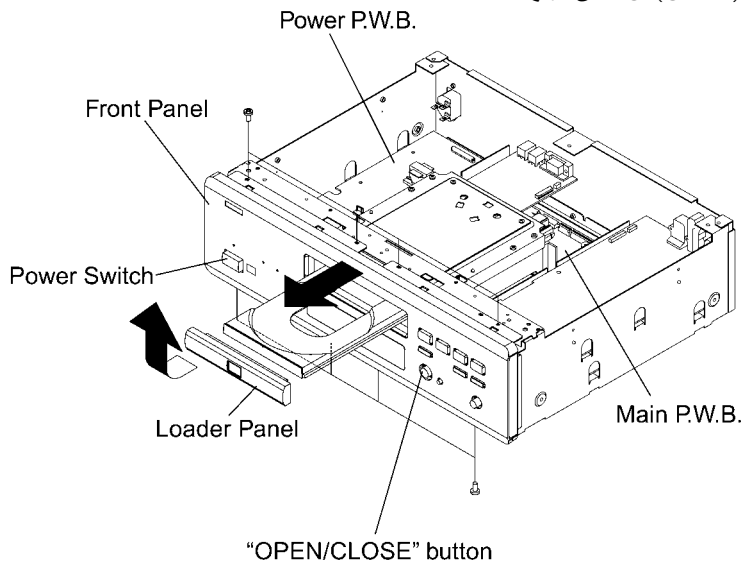
#### 2.1. When the Disc Tray can be ejected electrically

- (1) After removing the Top Cover, proceed as follows.
- (2) Plug the power cord to the wall outlet, switch on the power, and press the "OPEN/CLOSE" button to open the Disc Tray.
- (3) Detach the Loader Panel by lifting it in the arrow direction.
- (4) Press the "OPEN/CLOSE" button to close the Disc Tray, then unplug the power cord.
- (5) Disconnect the wire (CX025, CX061) connecting the Front Panel's P.W.B. and the power PWB in the Chassis.
- (6) Remove 4 top screws and 4 bottom screws, then detach the Front Panel to the arrow direction.
- (7) Disconnect the FFC (CX171) connecting the Front Panel's P.W.B. and the main P.W.B. in the Chassis.

### 2. フロントパネル、ローダーパネルのはずしかた

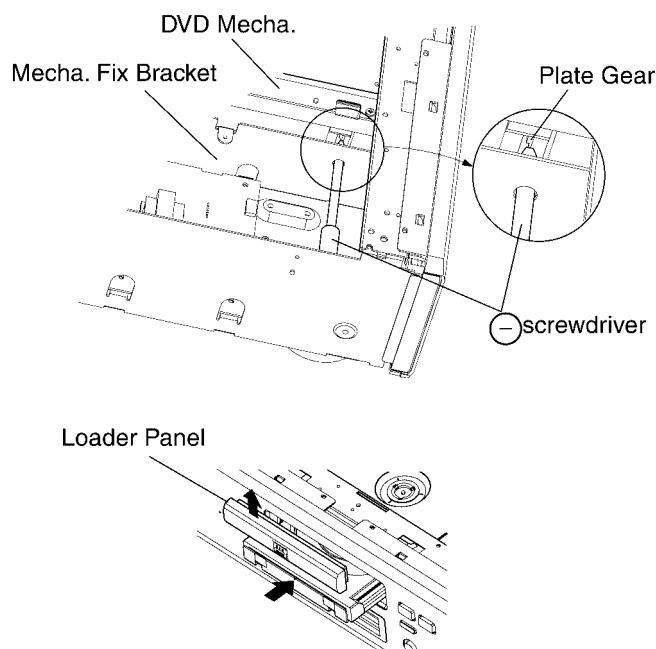
#### 2.1. ディスクトレイが電動でオープンできる場合

- (1) トップカバーをはずした状態で作業します。
- (2) 電源コードを電源コンセントに差し込み、電源スイッチを押し、「OPEN/CLOSE」ボタンを押して、ディスクトレイをオープンします。
- (3) ローダーパネルを矢印の方向に持ち上げ、はずします。
- (4) 「OPEN/CLOSE」ボタンを押し、ディスクトレイをクローズして、電源コンセントから電源コードを抜きます。
- (5) フロントパネル内の基板と本体側電源基板を接続シールドワイヤー (CX025, CX061) をはずします。
- (6) 上からねじ 4 本、下からねじ 4 本をはずし、フロントパネルを矢印の方向にはずします。
- (7) フロントパネル内の基板と本体側メイン基板を接続している FFC (CX171) をはずします。



## 2.2. When the Disc Tray cannot be ejected electrically

- (1) After removing the Top Cover, proceed as follows.
- (2) Insert a screwdriver(-) into the left hole of the Mecha. Fix Bracket, and push the Plate Gear of the DVD Mecha. slowly to open the Disc Tray.
- (3) Remove the Loader Panel, and close the Disc Tray.
- (4) Detach the Front Panel following the same steps described on the previous page 1.2.1. (5) - (7).



## 2.2. ディスクトレイが電動でオープンできない場合

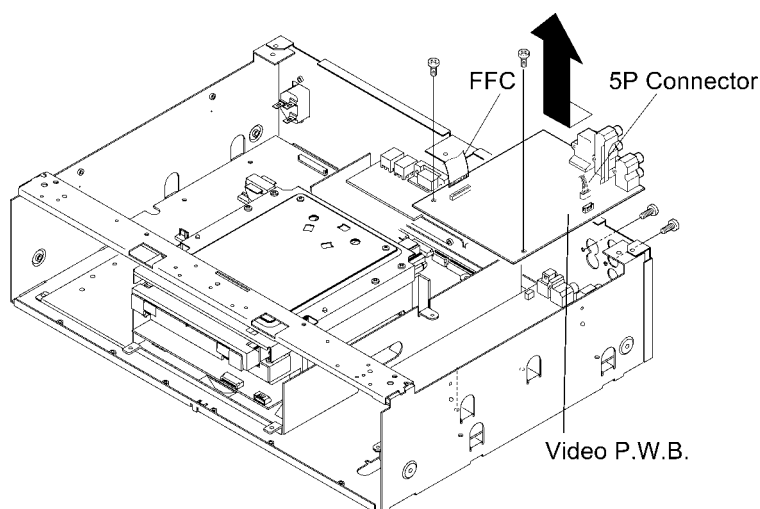
- (1) トップカバーをはずした状態で作業します。
- (2) メカフィクスブラケットの左側の穴に (-) ドライバーをいれ、プレートギアをゆっくり押し、ディスクトレイを開きます。
- (3) ローダーパネルをはずし、ディスクトレイを閉じます。
- (4) 前項 1.2.1. の (5) ~ (7) と同様に、フロントパネルをはずします。

## 3. Video P.W.B.

- (1) Disconnect 33P FFC (CY331) and 5P connector (CY053).
- (2) Remove 2 screws on the Video P.W.B.
- (3) Remove 2 screws from the rear.
- (4) Detach the Video P.W.B. to the arrow direction.

## 3. ビデオ基板のはずしかた

- (1) 33P FFC (CY331) と 5P コネクター (CY053) をはずします。
- (2) 基板からねじ 2 本をはずします。
- (3) リア側からねじ 4 本をはずします。
- (4) ビデオ基板を矢印の方向へはずします。



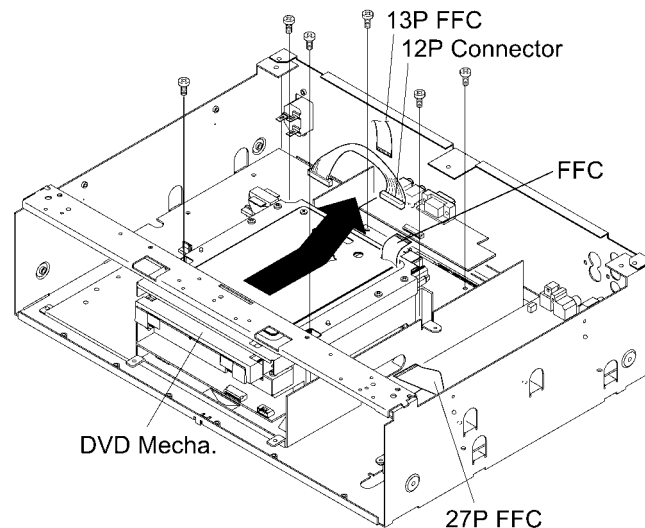


#### 4. DVD Mecha.

- (1) Disconnect 27P FFC (CY271) and 13P FFC (CY131) from the Main P.W.B..
- (2) Disconnect 12P connector (CY121) from Power P.W.B..
- (3) Remove 4 screws on the DVD Mecha and 2 screws on the Main P.W.B., then take it off in the arrow direction.

#### 4. DVD メカのはずしかた

- (1) メイン基板からの 13P FFC (CY131) をはずします。
- (2) パワー基板からの 12P コネクター (CY121) をはずします。
- (3) DVD メカからねじ 4 本、メイン基板からねじ 2 本をはずし、矢印の方向へ DVD メカをはずします。



#### 5. Audio P.W.B./Power P.W.B.

##### 5.1. Audio P.W.B.

- (1) Disconnect 4P connector (CY041).
- (2) Remove 5 screws on the Audio P.W.B., 4 screws from the rear.

##### 5.2. Power P.W.B.

- (1) Remove 5 screws on the Power P.W.B..
- (2) Disconnect 2P connector (CX024)

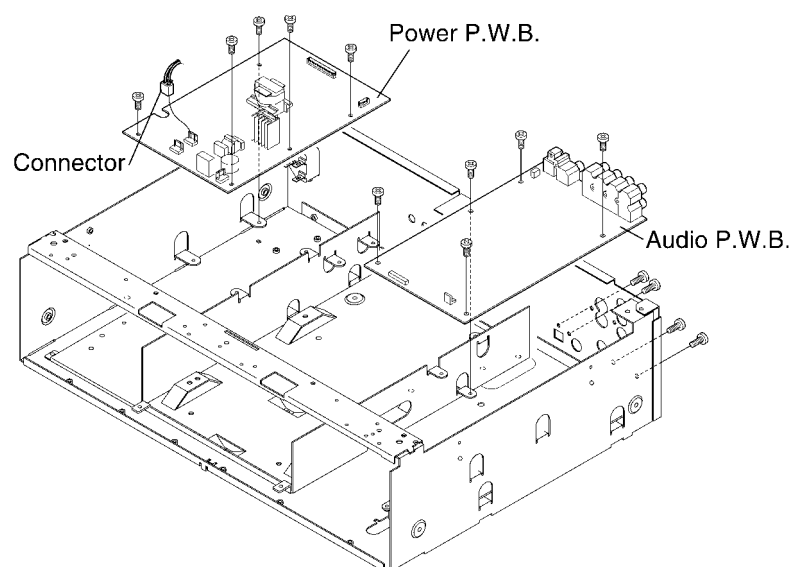
#### 5. オーディオ基板 / パワー基板のはずしかた

##### 5.1. オーディオ基板

- (1) 4P コネクター (CY041) をはずします。
- (2) オーディオ基板からねじ 5 本とリア側からねじ 4 本をはずします。

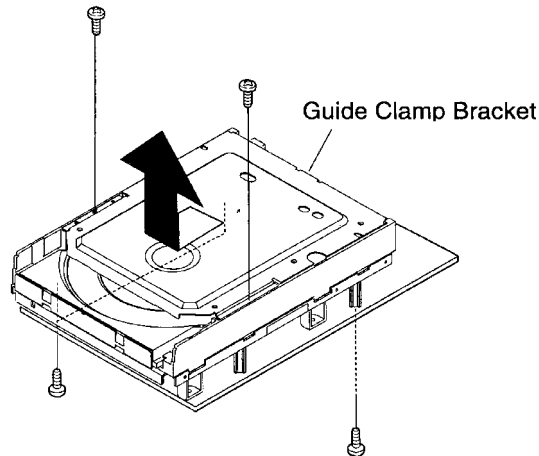
##### 5.2. パワー基板

- (1) パワー基板からねじ 5 本をはずします。
- (2) コネクター (CX024) をはずします。



## 6. Mecha.Unit

- (1) Remove 2 screws on the top of the Mecha. Unit, and detach the Guide Clamp Bracket with sliding in the arrow direction.
- (2) Solder the short-circuit on the Traverse Unit. (Refer to "Traverse Unit Disassembly" on the page 7.
- (3) Disconnect the wires (CX151, CX241, CX031, CX051) connecting with the Main PWB.
- (4) Turn over the Mecha. Unit/Main PWB assembly, and remove 3 screws.



## 6.メカユニットのはずしかた

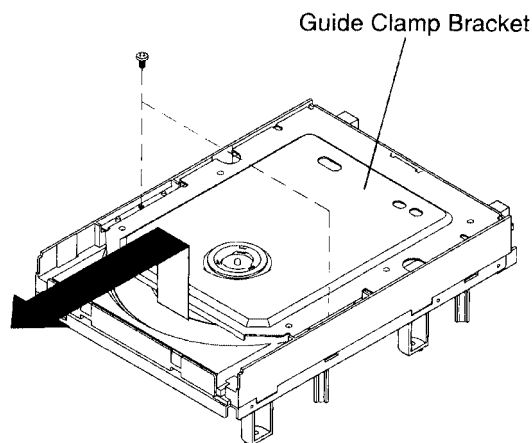
- (1) メカの上からねじ2本をはずし、ガイドクランプブラケットを矢印方向にずらしながらはずします。
- (2) ドライバーメカのショートサーキットを半田付けします。(トラバースユニットのはずしかた7ページ参照)
- (3) メイン基板と接続しているワイヤー (CX151, CX241, CX031, CX051) をはずします。
- (4) 一体のメカユニット/メイン基板を裏返し、ねじ2本をはずします。

## 7. Traverse Unit Disassembly

**Caution:** The optical pickup can be damaged easily by static electricity charged on human body. Take necessary anti-static measures when repairing around the optical pickup.

### 7.1. Guide Clamp Bracket disassembly

- (1) Remove 2 screws.
- (2) Remove Guide Clamp Bracket to arrow direction.



## 7.トラバースユニットのはずしかた

注意：光ピックアップは、人体に帯電した静電気等で静電破壊することがあります。光ピックアップ周辺を修理する際は、必要な静電対策を行ってください。

### 7.1. ガイドクランプブラケットのはずしかた

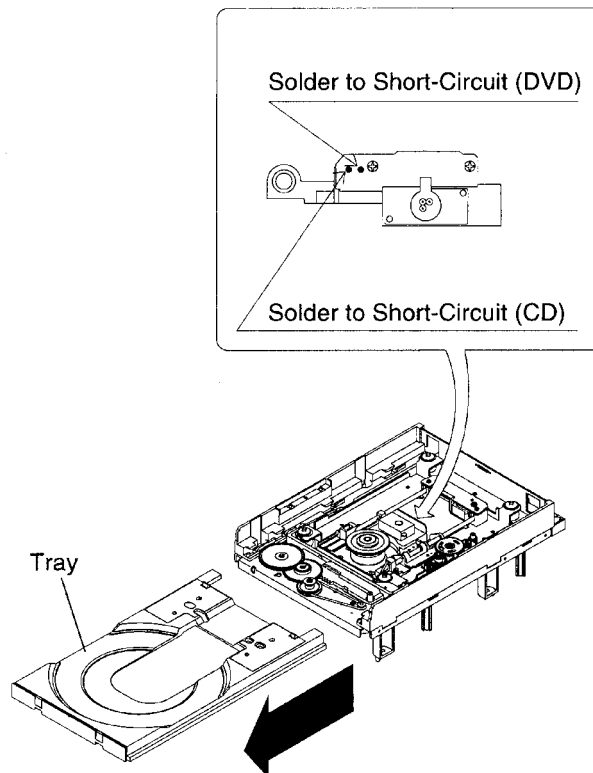
- (1) ねじ2本をはずします。
- (2) ガイドクランプブラケットを矢印方向にとりはずします。

### 7.2. Tray disassembly

- (1) Remove to arrow direction.
- (2) Solder the short-circuit (see in the frame).

### 7.2. トレイのはずしかた

- (1) 矢印方向にとりはずします。
- (2) 半田付けショートを行います。(枠内図参照)

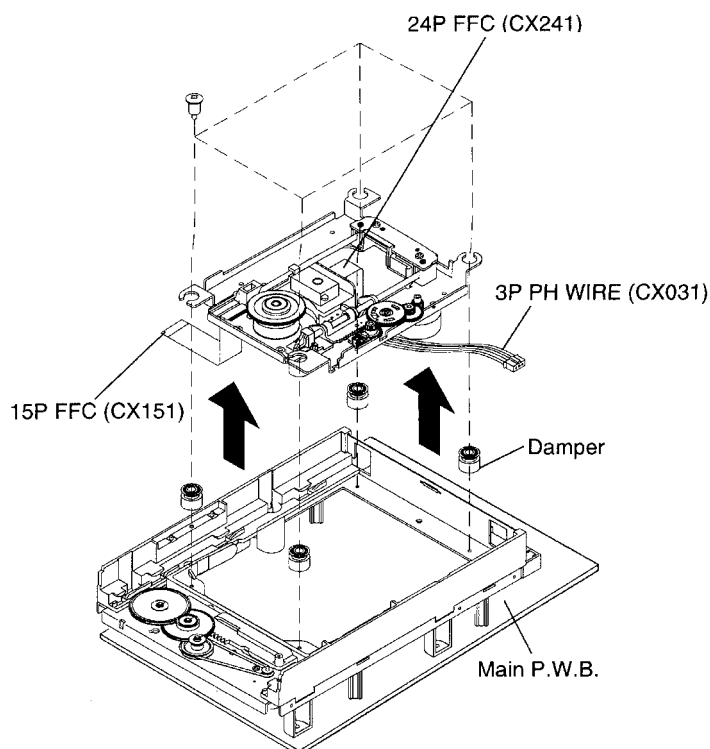


### 7.3. Traverse Unit disassembly

- (1) Remove 24P FFC (CX241), 15P FFC (CX151), 5P PH WIRE (CX051) and 3P PH WIRE (CX031) connecting with from the Main P.W.B..
- (2) Remove 4 screws fixing Damper.
- (3) Remove Traverse Unit to arrow direction.

### 7.3. トラバースユニットのはずしかた

- (1) メイン基板に接続している 24P FFC (CX241)、15P FFC (CX151)、5P PH ワイヤ (CX051)、3P PH ワイヤ (CX031) をはずします。
- (2) ダンパーを固定しているねじ 4 本をはずします。
- (3) トラバースユニットを矢印方向にとりはずします。

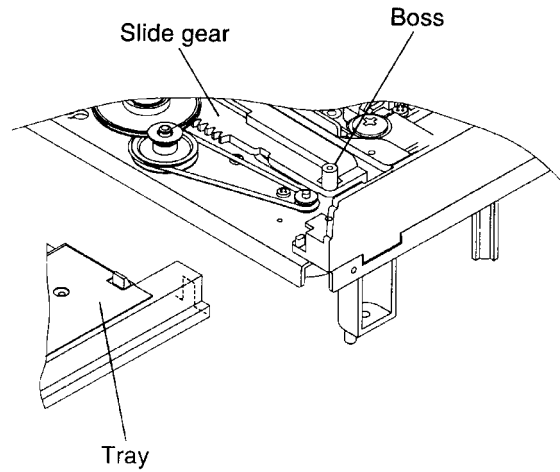


**Note for disassembly Traverse Unit**

- (1) When assembling, reverse the order of the above.
- (2) When inserting Tray, confirm boss on Slide Cam set to ditch of the Tray (Compare with below drawing).

**トラバースユニット分解の注意**

- (1) 組み立てるときは、上記の逆の順序で行ってください。
- (2) トレイ組込み時、スライドカムの子がトレイの溝に合っているか確認してください。(下図参照)



## DIAGNOSTICS OF OPTICAL PICKUP AND REPLACING TRAVERSE UNIT 光ピックアップの故障診断とトラバースユニットの交換

Make failure diagnostics of the Optical Pickup as follows.

If the laser drive current becomes more than 1.5 times of the initial value, the Optical Pickup should be replaced.

The laser drive current is registered on the seal attached to the rear of the Mecha.Unit.

In case of replacing the Pickup, change the whole part of the Traverse Unit.

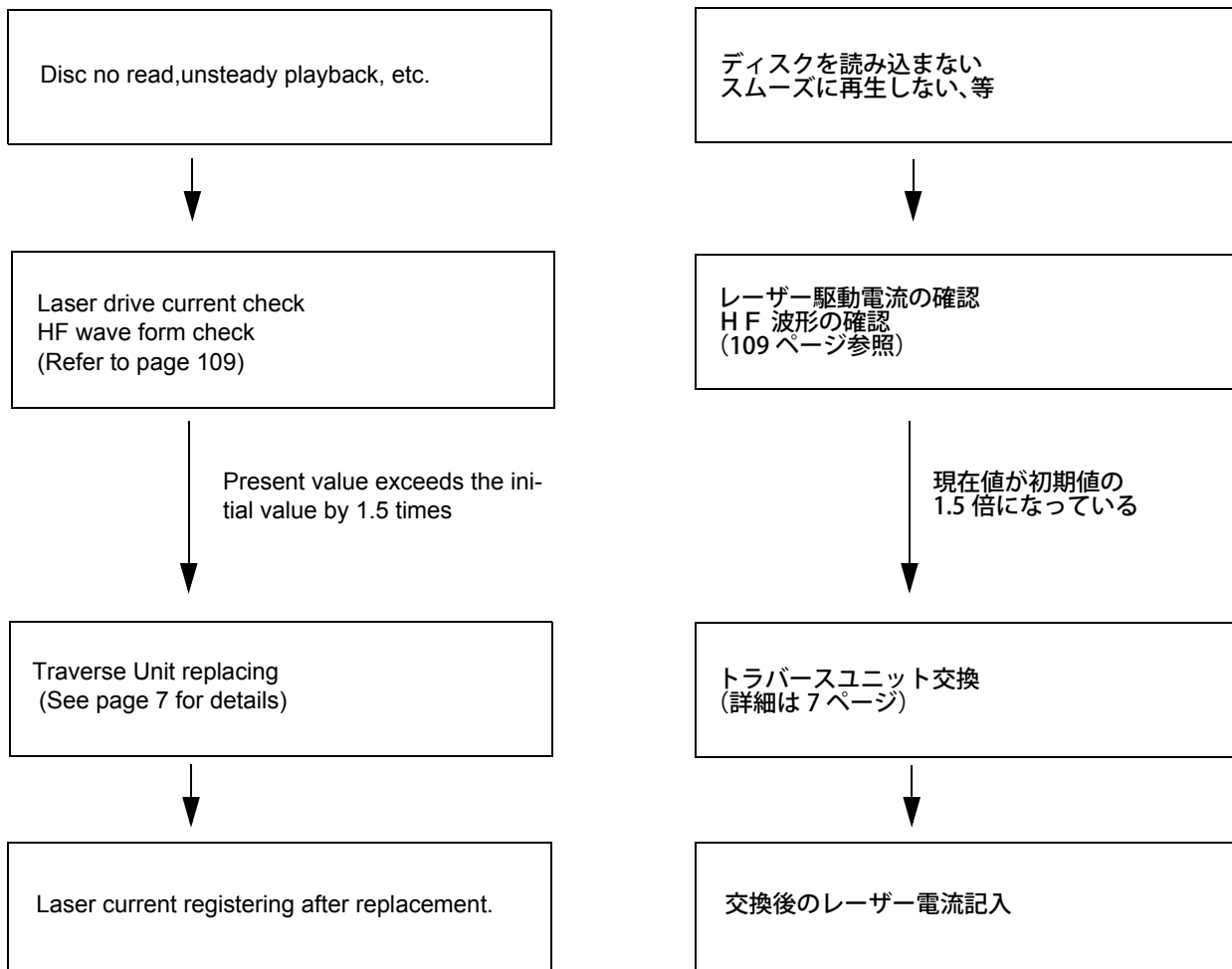
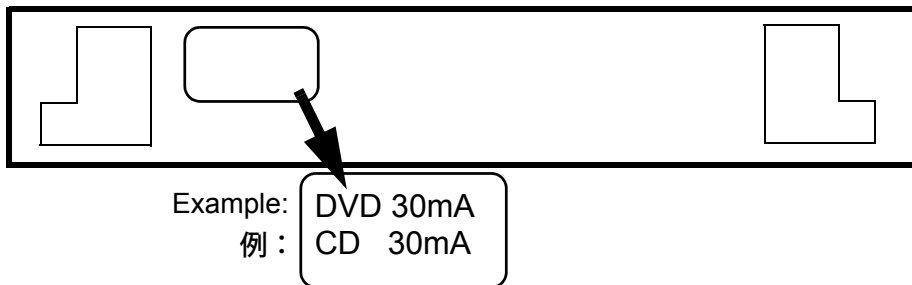
No mechanical adjustment is necessary after the replacement.

次の順序で故障診断を行ってください。

レーザー駆動電流が初期値の 1.5 倍以上になっている場合は光ピックアップ交換の目安となります。

レーザーの電流初期値は、メカの後部のシール上に記入されています。

ピックアップ交換の場合は、トラバースユニット単位での交換となります。メカの調整は不要です。



Step: Disc playback

Write the measured value on the seal attached to the Mecha. Unit

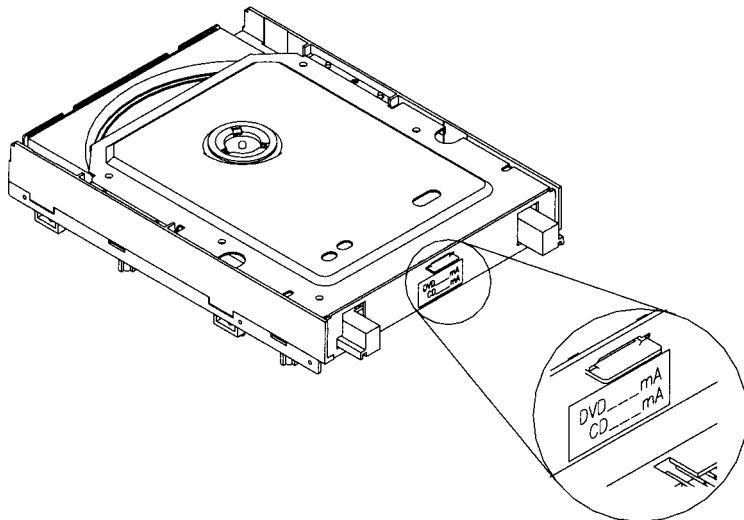
\*As to the measuring method, refer to page 10,11.

手順 : ディスクを再生

その時の log 値をメカ後方のシールの上に重ねて貼る等で更新する。

\*log の測定方法は、10,11 ページ参照。

## 1. Label Indication of DVD Mechanism.



Laser current consumption value

ex) DVD \* \* \* mA, CD \* \* \* mA

レーザー駆動電流値

例) DVD \* \* \* mA, CD \* \* \* mA

## 2. Note for Handling the Laser Pick-Up

the protection for the damage of laser diode.

If you want to change the optical device unit from any other units, you must keep the following.

- (1) It should be done at the desk already took measures the static electricity in care of removing the OPU's (Optical device unit) connector cable.
- (2) Workers should be put on the "Earth Band".
- (3) It should be done to add the solder to the short land to prevent the broken Laser diode before removing the 24P FFC cable.
- (4) Don't touch OPU's connector parts carelessly.

## 3. Replacement of the Laser Pick-up (Traverse Unit)

Check the lop(Laser drive current)

If the present lop (current) value exceeds +50% of the initial value, replace the Traverse unit(Laser Pick-up) with a new one.

## 4. lop Measurement Method

When measuring Laser drive current (lop), playback the discs (CD,DVD) described below, measure lop for CD Laser and DVD Laser by the test point (+5V-A2 -- LD(CD),LD(DVD))on the Main P.W.B.

Test Disc :DVD/DVDT-S01 or commercially available discs.  
:CD/TCD-784 (manufactured by ALMEDIO INC)  
or commercially available discs.

## 1.DVD メカのラベル表示

## 2. レーザーピックアップの取扱注意

レーザーダイオードの破壊防止。

光素子ユニットを交換するときは、以下を遵守してください。

- (1) 光素子ユニットの接続ケーブルをはずすときは、静電対策を行ったデスク上で作業してください。
- (2) 作業者は、リストストラップを使用してください。
- (3) レーザーダイオードの破壊防止のため、24P FFC ケーブルをはずす前にランドを半田付けショートしてください。
- (4) 光素子ユニットのコネクタ部に触れないでください。

## 3. レーザーピックアップ (トラバースユニット) の交換

lop(レーザー駆動電流) をチェックします。

現在の lop 値が初期値の 50%を越えている場合、トラバースユニット (レーザーピックアップ) を交換してください。

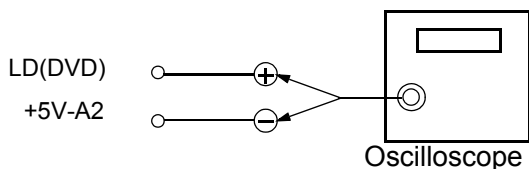
## 4. lop の測定方法

レーザー駆動電流を測定する場合、下記のディスク (CD,DVD) を再生します。

Main基板上のテストポイント(+5V-A2~LD(CD),LD(DVD))にて、CD レーザーと DVD レーザーの lop を測定してください。

テストディスク：DVD/DVDT-S01 または市販同等ディスク  
：CD/TCD-784 (ALMEDIO 社製) または市販同等ディスク

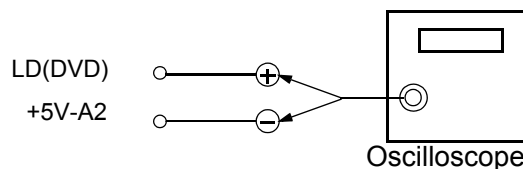
#### 4.1. DVD Laser current measurement



- (1) Connect the oscilloscope to +5V-A2 of test point for GND side and LD(DVD) of test point for signal side.
- (2) Playback the title 1 / chapter 1 of the DVD Test Disc.
- (3) Measure the voltage between +5V-A2 and LD(DVD), calculate  $I_{op}$  by the formula as shown below.

$$I_{op} = \frac{\text{Measurement Voltage Value}}{14 \text{ (Resistance value)}}$$

#### 4.1. DVD レーザー電流測定



- (1) オシロスコープをテストポイント +5V-A2(GND) と LD(DVD)(信号)へ接続します。
- (2) DVD テストディスクのタイトル1・チャプター1を再生します。
- (3) +5V-A2と LD(DVD)間の電圧を測定し、次式により  $I_{op}$  を算出します。

$$I_{op} = \frac{\text{測定電圧値}}{14(\text{抵抗値})}$$

#### 4.2. CD Laser current measurement

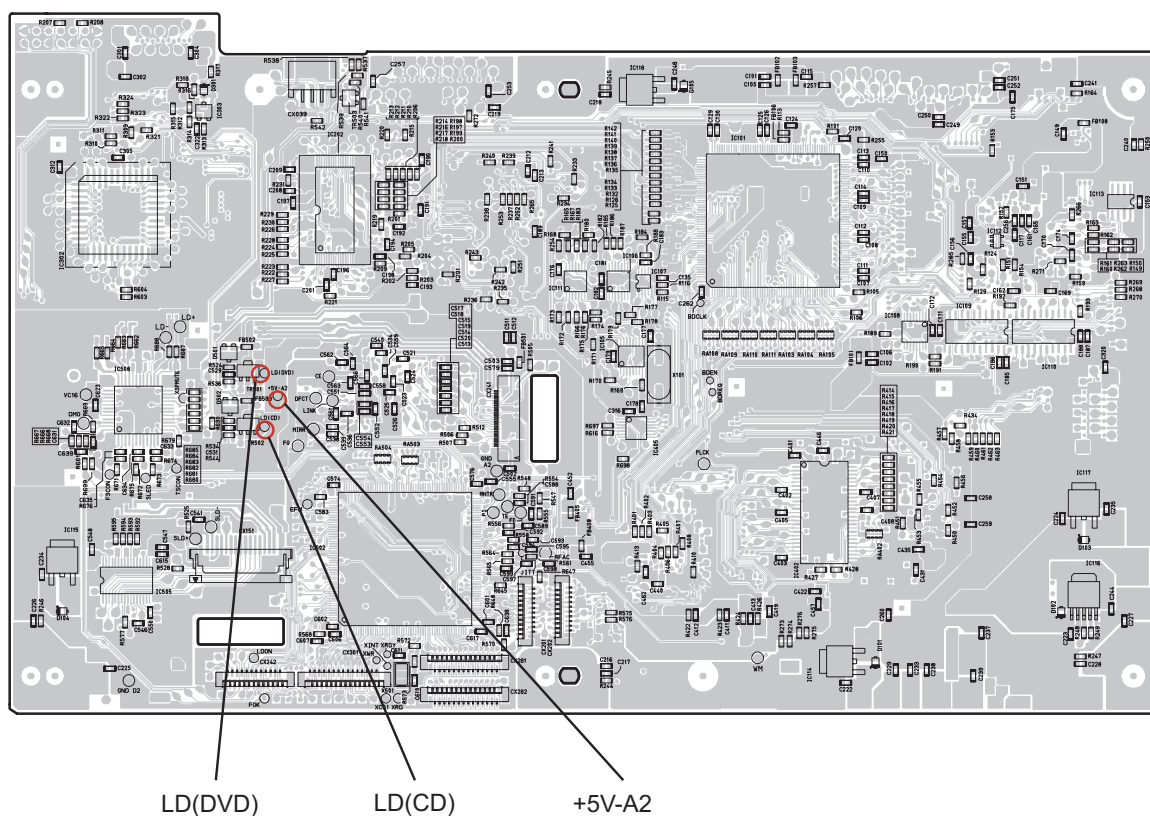
- (1) Connect the oscilloscope to +5V-A2 of test point for GND side and LD(CD) of test point for signal side.
- (2) Playback the track 1 of the CD Test Disc.
- (3) Measure the voltage between +5V-A2 and LD(CD), calculate  $I_{op}$  by the formula as shown below.

$$I_{op} = \frac{\text{Measurement Voltage Value}}{11.75 \text{ (Resistance value)}}$$

#### 4.2. CD レーザー電流測定

- (1) オシロスコープをテストポイント +5V-A2(GND) と LD(CD)(信号)へ接続します。
- (2) CD テストディスクのトラック1を再生します。
- (3) +5V-A2と LD(CD)間の電圧を測定し、次式より  $I_{op}$  を算出します。

$$I_{op} = \frac{\text{測定電圧値}}{11.75(\text{抵抗値})}$$



Main Unit foil side

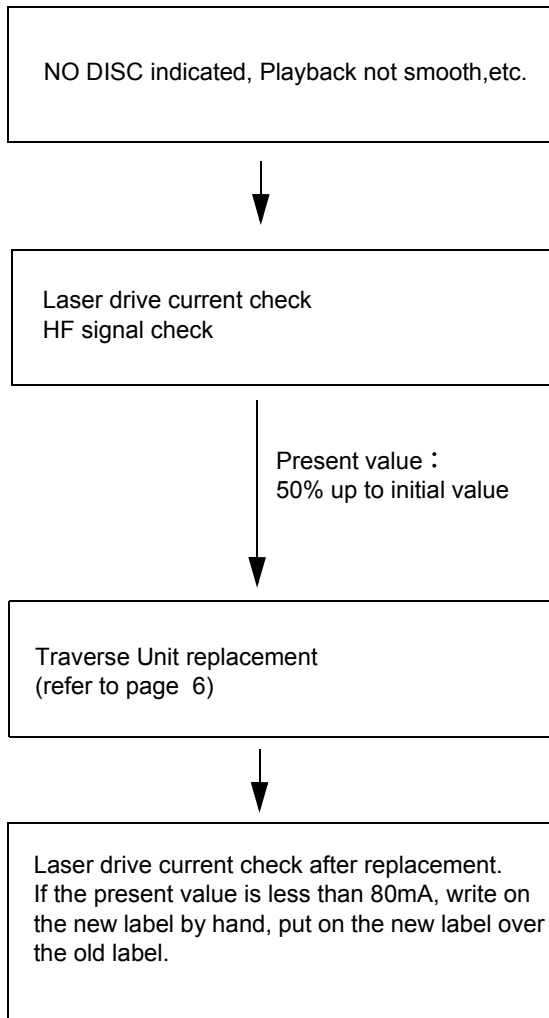
## 5. Optical Pick-up Diagnostics and Replacement

When repairing, carry out failure diagnostics by following the procedure described below.

If the present value of the laser drive current is 50% up to initial value, it is the point of the pickup replacement.

In case of the pickup replacement, replace the Traverse Unit with no adjustment.

The initial value is indicated on the label on back side of Mecha.



If the present value exceeds 80mA, replace the Traverse Unit a new one.  
Cause: Damaged electrostatically when replaced.

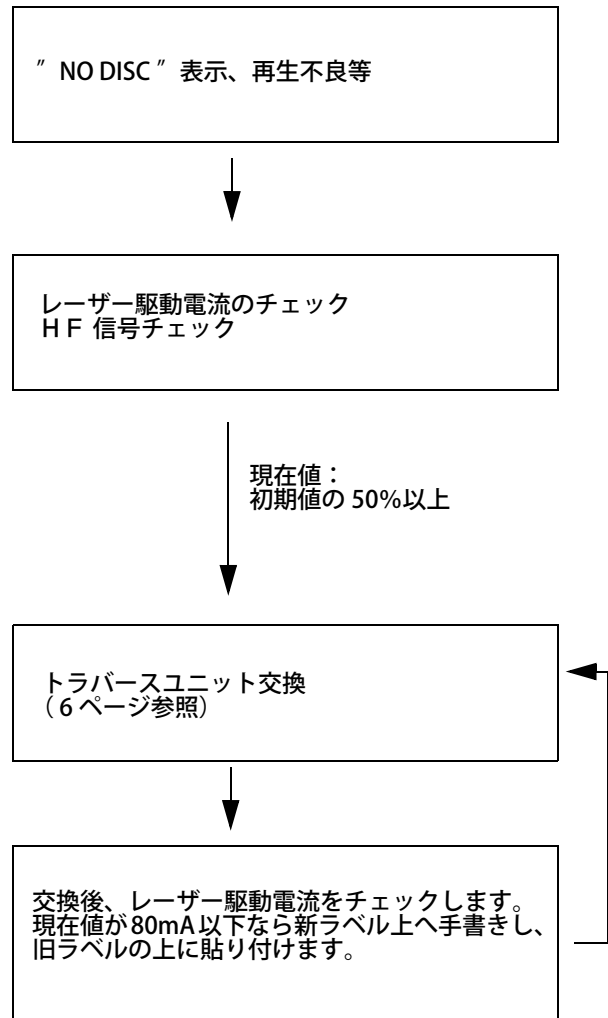
## 5. 光ピックアップ診断と交換

交換時、以下の手順で故障診断を行ってください。

レーザー駆動電流の現在値が初期値の 50%以上なら、ピックアップを交換すべきです。

ピックアップ交換の場合はトラバースユニットを交換し、調整は不要です。

初期値は、メカ後部のラベルに表示されています。



現在値が 80mA 以上なら、再度トラバースユニットを交換してください。

原因 : 交換時、静電破壊された。



## SERVICE MODE

### 1. Aging Mode

#### (1) preparation

(a) Equipment used: Any one of DVD Karaoke Disc (containing more than 10 titles).

(b) Unit setting: No spec other than the following procedure (Aging mode).

At the tray open status, press the "POWER" button to turn on the power while pressing the "PLAY" and "OPEN/CLOSE" buttons for DVD operation simultaneously. **▶||** mark on the FL lights, and the unit is set to the heat run mode.

#### (2) procedure

(a) According the above, set to the aging mode.

(b) Set a DVD Karaoke disc to the tray and press the "PLAY" button twice. **||** mark on the FL blinks, and aging operation(after playback title-1 and title-10 of the disc, the tray open/close is made automatically, then playback the title-1 again) starts. This aging operation continues automatically until it is stopped or it stops caused by an error. In case of some error in DVD, the following error messages are displayed on the FL.

No	Error contents	FL display
1	Bad Disc	ERROR 02
2	Focus Error	ERROR 02
3	Read Error	ERROR 02
4	Tracking Error	ERROR 04
5	Tray Error	ERROR 05
6	Navigation Pack Read Error	ERROR 06

### 2. Initial Setting Mode

#### (1) Preparation

(a) Equipment used: None

(b) Unit setting: No spec other than the following procedure

#### (2) Procedure

(a) Initialize the DVD player when  $\mu$ com, peripheral parts of  $\mu$ com, or Main P.W.B. has been replaced in servicing.

(b) Carry out the following to restore factory setting mode. At the player stop condition, press 3 buttons for DVD operation("PLAY", "OPEN/CLOSE", and "**▶▶|** SKIP") until "INITIALIZE" appears and disappears in the FL.

("Initialized" appears and disappears on the TV screen.)

(c) All user setting will be lost and its factory setting will be restored when this initialization is made. Be sure to memorize your setting for restoring again after the initialization.

## サービスモードについて

### 1. エージングモード

#### (1) 準備

(a) 使用機器：DVD カラオケディスク（10 タイトル以上の物）。

(b) 本体設定：下記設定以外規定無。  
(エージングモード)

トレイを開けた状態で DVD ユニットの「再生ボタン」+「開/閉ボタン」を同時に押しながら「電源ボタン」を押してセットの電源を入れると、FL 管の **▶||** マークが点灯し、ヒートランモードに設定される。

#### (2) 手順

(a) 上記手順でエージングモードに設定する。

(b) トレイに DVD カラオケディスクを入れ、「再生ボタン」を 2 回押して、FL 管の **||** マークが点滅になると、「ディスクのタイトル 1 とタイトル 10 を再生した後、トレイを自動で開/閉し、再度タイトル 1 の再生を行う。」エージング動作になります。停止させるか、エラーにて停止するまでこの動作を自動で繰り返します。DVD 部にエラーが発生した場合は、FL 管に下表のエラーが表示されます。

No.	エラー内容	FL 管表示
1	不良ディスク	ERROR 02
2	フォーカスエラー	ERROR 02
3	リードエラー	ERROR 02
4	トラッキングエラー	ERROR 04
5	トレイエラー	ERROR 05
6	ナビゲーションパックエラー	ERROR 06

### 2. 初期設定モード

#### (1) 準備

(a) 使用機器：無

(b) 本体設定：下記手順以外規定無。

#### (2) 手順

(a) サービスにて、マイコンやマイコン周辺部分やメイン基板を交換した場合は、DVD プレーヤーの初期化を行ってください。

(b) セットの初期化を下記の手順で行い、工場出荷モードに設定する。

セットが停止状態にて、DVD 操作部の「再生ボタン」+「開/閉ボタン」+「**▶▶|** (スキップ) ボタン」の 3 重押しを FL 管に "INITIALIZE" が表示され消えるまで押します。(TV 画面には "初期化しました" が表示され消えます。)

(c) 初期化を行うとお客様が設定した内容が工場出荷状態に戻りますので、あらかじめ設定内容を控えておき初期化後に再設定してください。

### 3. $\mu$ -Com Firm Check Mode

#### (1) Preparation

- (a) Equipment used: None  
 (b) Unit setting: No spec other than the following procedure.

#### (2) Procedure

- (a) Press the "POWER" button to turn on the power while pressing the "PLAY" and "OPEN/CLOSE" buttons for DVD operation simultaneously.
- (b) FL all light mode.  
 This mode is for detecting FL defects. Press "STILL/ PAUSE ■■" on the remote control unit once to light all FL segments.
- (c) DVD  $\mu$ com and main unit  $\mu$ com firm check mode. This mode is for displaying the status of each  $\mu$ com employed.
- DVD  $\mu$ com firm: Press the "MENU" button or ◀◀, ▶▶ button.
  - Each time the "MENU" button or ◀◀, ▶▶ button on the remote control unit is pressed,  $\mu$ com firm is displayed one after another.
- Ex.: [DRV 030307, B/E 6237, PANEL 6236]

	Set Serial No. (lower 5 digits)	Drive $\mu$ com	B/E $\mu$ com	Panel $\mu$ com
1	00001-	Ver.030307 (Display) 030307	Ver.6237 (Display) 6237	Ver.6236 (Display) 6236
2				
3				
4				

### 3.マイコンファームチェックモード

#### (1) 準備

- (a) 使用機器：無  
 (b) 本体設定：下記手順以外規定無。

#### (2) 手順

- (a) DVD 操作部の「再生ボタン」と「開/閉ボタン」を押しながらセットの「電源ボタン」を押し電源を入れます。
- (b) FL 管全点灯モード。  
 FL 管の故障判別用のモードで、リモコンの「スティル/ポーズ ■■ ボタン」を押すと FL 管が全点灯します。
- (c) DVD マイコン及び本体マイコンのファーム確認モード  
 搭載されている各マイコンのファーム状態を表示します。
- DVD マイコンのファーム：リモコンの「メニューボタン」または ◀◀、▶▶ ボタンを押します。
  - リモコンのメニューボタンまたは ◀◀、▶▶ ボタンを押すたびにマイコンファームを次々と表示します。  
 表示例：[DRV 030307、B/E 6237、PANEL 6236]

	セットのシリアル番号 (下5桁)	ドライブマイコン	B/Eマイコン	パネルマイコン
1	00001 ~	Ver.030307 (表示)030307	Ver.6237 (表示)6237	Ver.6236 (表示)6236
2				
3				
4				

## 4. Setting up the test mode

### (1) Setting up

- In order to set up the test mode, you press STOP button and REV button simultaneously in the heat-run mode. Fundamentally, you can set up the test mode at the stop state after disc loading. (Heat-run mode is set up by pressing PLAY button, holding OPEN/CLOSE button. If it becomes heat run mode, PLAY indicator and PAUSE indicator will light up.)

LOADING display



FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T												

### (2) Mode Select

- There are two, servo adjustment value display mode and trace mode (error rate display), in the mode.
- (a) If the REV button or the FWD button is pushed in the test mode, it will become servo adjustment value display mode.

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	3											

- (b) If the REV button or the FWD button is pushed again, it will become the trace mode (error rate display).

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	7											

### (3) Mode decision

- The mode will be decided if the PLAY button is pushed in the state where the mode is chosen.
- (a) In the case of servo adjustment value display mode, a focus offset adjustment value is displayed.

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	3	1	n	n	n	n	n	n	n	n	n	n

(n:adjustment value)

- (b) In the case of trace mode (error rate display), trace of the circumference in one layer is chosen.

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	7	1	F	F	F	F	F	F	F	F	F	F

(F: An address and an error rate display F at the time of undecided.)

### (4) Change within the mode

- If the REV button or the FWD button is pushed in the state where the mode is decided, a change within the mode will be made.
- (a) In the case of servo adjustment value display mode (refer to table 1 servo adjustment value display mode details)

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	X	X	n	n	n	n	n	n	n	n	n	n

(XX:selection mode [31--62] n:adjustment value)

## 4. テストモード

### (1) テストモードへの投入

- テストモードへの投入はヒートランモード時に STOP キーと REV キーを 2 重押しすることで行う。基本的にディスクローディング後の停止状態でテストモードに投入する。(ヒートランモードへの投入は OPEN/CLOSE キーと PLAY キーを 2 重押しすることで行う。ヒートランモードになると PLAY インジケータと PAUSE インジケータが点灯する。)

LOADING 表示



FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T												

### (2) モードの選択

- モードには、サーボ調整値表示モードとトレースモード (エラーレート表示) の 2 つがある。
- (a) テストモード投入後に REV キー又は FWD キーを押すと、サーボ調整値表示モードになる。

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	3											

- (b) 再度 REV キー又は FWD キーを押すとトレースモード (エラーレート表示) になる。

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	7											

### (3) モードの確定

- モードを選択してある状態で PLAY キーを押すとモードを確定する。
- (a) サーボ調整値表示モードの場合は、フォーカスオフセット調整値を表示する。

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	3	1	n	n	n	n	n	n	n	n	n	n

(n:調整値)

- (b) トレースモード (エラーレート表示) の場合は、1 層内周のトレースを選択する。

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	7	1	F	F	F	F	F	F	F	F	F	F

(F: アドレス及びエラーレートは未確定時、F を表示する。)

### (4) モード内での変更

- モードを確定してある状態で REV キー又は FWD キーを押すとモード内での変更を行う。
- (a) サーボ調整値表示モードの場合 (表 1 サーボ調整値表示モード詳細 参照)

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	X	X	n	n	n	n	n	n	n	n	n	n

(X X: 選択モード [31 ~ 62]、n: 調整値)

- (b) In the case of trace mode (error rate display) (refer to table 2 trace mode details)

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	Y	Y	F	F	F	F	F	F	F	F	F	F

(YY: select mode [71--94], F: address and an error rate display F at the time of undecided)

### (5) Execution of trace mode (error rate display) (refer to table 2 trace mode details)

- Trace will be performed if the PLAY button is pushed after choosing operation.

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	Y	Y	m	m	m	m	m	m	l	l	l	l

(YY:select mode[71--94],m:address[PBA][HEX],  
l:error rate[COUNT/SEC][HEX])

(Note) Renewal of data is carried out for every CD:300 frame and DVD:85ECC block.

- The mode chosen when selection mode was changed into the trace execution and the PLAY button was pushed is performed from the beginning. When the PLAY button is pushed without changing selection mode, the mode under selection is performed from the beginning. (If the PLAY button is pushed, the address corresponding to the chosen mode will be searched again.)

### (6) Other operation

- (a) If the STOP button is pushed into servo adjustment value display mode and trace mode (error rate display), it will return to the state at the time of a test mode injection.

FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T												

- (b) Push the OPEN/CLOSE button twice and carry out servo readjustment in OPEN operation ->CLOSE operation.

(It readjusts with test mode.)

OPEN display



CLOSE display



LOADING display



FL display (The display part of 13 digits)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T												

- (c) By pressing STOP button and REV button simultaneously in the test mode, it returns to heat-run mode.

- (b) トレースモード (エラーレート表示) の場合 (表 2 トレースモード詳細 参照)

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	Y	Y	F	F	F	F	F	F	F	F	F	F

(YY: 選択モード [71 ~ 94]、F: アドレス及びエラーレートは未確定時、F を表示する。)

### (5) トレースモード (エラーレート表示) の実行 (表 2 トレースモード詳細 参照)

- 動作を選択した後、PLAY キーを押すとトレースを実行する。

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T	Y	Y	m	m	m	m	m	m	l	l	l	l

(YY: 選択モード [71 ~ 94]、m: アドレス [PBA][HEX]、  
l: エラーレート [COUNT/SEC][HEX])

(注) CD:300 フレーム、DVD:85ECC ブロック毎にデータ更新する。

- トレース実行中に選択モードを変更し、PLAY キーを押すと選択したモードを最初から実行する。選択モードを変更せずに PLAY キーを押した場合も、選択中のモードを最初から実行する。

(PLAY キーを押したら、選択しているモードに対応したアドレスを再度サーチする。)

### (6) その他の動作

- (a) サーボ調整値表示モード、トレースモード (エラーレート表示) 中に STOP キーを押すとテストモード投入時の状態に戻る。

FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T												

- (b) OPEN/CLOSE キーを 2 回押しして、OPEN 動作→CLOSE 動作で、サーボ再調整する。

(テストモードのまま再調整する。)

OPEN 表示



CLOSE 表示



LOADING 表示



FL 管の表示 (13 桁の表示部)												
1	2	3	4	5	6	7	8	9	10	11	12	13
T												

- (c) テストモード中に STOP キーと REV キーの 2 重押し (投入時と同じキー) で、ヒートランモードに戻る。

## (7) Test mode detailed table

Table 1: servo adjustment value display mode details

XX	Contents	Contents supplement	Contents explanation
31	RFP FE Offset	layer 0	PI of CXD1881AR An offset value and FE An offset value is displayed. Pi offset is shown in higher rank 1Byte. FE offset is shown in low rank 1Byte.
32	RFP TE Bal Gain	layer 0	TE balance gain value of CXD1881AR is displayed.
33	RFP TE Output Gain	layer 0	TE output gain value of CXD1881AR is displayed.
34	RFP TE Offset	layer 0	TE offset value of CXD1881AR is displayed.
35	DSP TE Offset	layer 0	TE offset value inside CXD1885Q is displayed.
36	Fcs Bias	layer 0	The focus bias value inside CXD1885Q is displayed.
37	Fcs AGC	layer 0	The inside focus gain (setting 0x2000 to 1) value of CXD1885Q is displayed. Therefore, 0x1FF2 and in the case of 0x2012, it is as follows. $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{fold})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{fold})$ Notes: The inside of ( ) is a decimal system equivalent.
38	Trk AGC	layer 0	The inside tracking gain (setting 0x2000 to 1) value of CXD1885Q is displayed. Therefore, 0x1FF2 and in the case of 0x2012, it is as follows. $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{fold})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{fold})$ Notes: The inside of ( ) is a decimal system equivalent
39	Pi Offset	layer 0	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.
40	FE Offset	layer 0	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.
41	SE Offset	layer 0	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.
42	RFP FE Offset	layer 1	PI of CXD1881AR An offset value and FE An offset value is displayed. Pi offset is shown in higher rank 1Byte. FE offset is shown in low rank 1Byte.
43	RFP TE Bal Gain	layer 1	TE balance gain value of CXD1881AR is displayed.
44	RFP TE Output Gain	layer 1	TE output gain value of CXD1881AR is displayed.
45	RFP TE Offset	layer 1	TE offset value of CXD1881AR is displayed.
46	DSP TE Offset	layer 1	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.
47	Fcs Bias	layer 1	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.

## (7) テストモード詳細一覧表

表 1 サーボ調整値表示モード詳細

XX	内容	内容補足	内容説明
31	RFP FE Offset	レイヤ 0	CXD1881AR の PI オフセット値と FE オフセット値を表示。 上位 1Byte に Pi オフセットを示す。 下位 1Byte に FE オフセットを示す。
32	RFP TE Bal Gain	レイヤ 0	CXD1881AR の TE バランスゲイン値を表示す。
33	RFP TE Output Gain	レイヤ 0	CXD1881AR の TE 出力ゲイン値を表示す。
34	RFP TE Offset	レイヤ 0	CXD1881AR の TE オフセット値を表示す。
35	DSP TE Offset	レイヤ 0	CXD1885Q 内部の TE オフセット値を表示す。
36	Fcs Bias	レイヤ 0	CXD1885Q 内部のフォーカスバイアス値を表示す。
37	Fcs AGC	レイヤ 0	CXD1885Q 内部フォーカスゲイン (0x2000 を 1 として) 値を表示。 0x1FF2 や 0x2012 の場合、以下のようになる。 $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{倍})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{倍})$ 注:( )内は 10 進換算値
38	Trk AGC	レイヤ 0	CXD1885Q 内部トラッキングゲイン (0x2000 を 1 として) 値を表示。 0x1FF2 や 0x2012 の場合、以下のようになる。 $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{倍})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{倍})$ 注:( )内は 10 進換算値
39	Pi Offset	レイヤ 0	CXD1885Q 内部で計算されるパラメータ。 セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。 電圧値は 1bit あたり 6.25mV。
40	FE Offset	レイヤ 0	CXD1885Q 内部で計算されるパラメータ。 セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。 電圧値は 1bit あたり 6.25mV。
41	SE Offset	レイヤ 0	CXD1885Q 内部で計算されるパラメータ。 セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。 電圧値は 1bit あたり 6.25mV。
42	RFP FE Offset	レイヤ 1	CXD1881AR の PI オフセット値と FE オフセット値を表示。 上位 1Byte に Pi オフセットを示す。 下位 1Byte に FE オフセットを示す。
43	RFP TE Bal Gain	レイヤ 1	CXD1881AR の TE バランスゲイン値を表示す。
44	RFP TE Output Gain	レイヤ 1	CXD1881AR の TE 出力ゲイン値を表示す。
45	RFP TE Offset	レイヤ 1	CXD1881AR の TE オフセット値を表示す。
46	DSP TE Offset	レイヤ 1	CXD1885Q 内部で計算されるパラメータ。 セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。 電圧値は 1bit あたり 6.25mV。
47	Fcs Bias	レイヤ 1	CXD1885Q 内部で計算されるパラメータ。 セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。 電圧値は 1bit あたり 6.25mV。

48	Fcs AGC	layer 1	The inside focus gain (setting 0x2000 to 1) value of CXD1885Q is displayed. Therefore, 0x1FF2 and in the case of 0x2012, it is as follows. $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{fold})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{fold})$ Notes: The inside of ( ) is a decimal system equivalent.	48	Fcs AGC	レイヤ 1	CXD1885Q 内部フォーカスゲイン(0x2000 を 1 として)値を表示。0x1FF2 や 0x2012 の場合、以下のようになる。 $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{倍})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{倍})$ 注:( )内は 10 進換算値
49	Trk AGC	layer 1	The inside tracking gain (setting 0x2000 to 1) value of CXD1885Q is displayed. Therefore, 0x1FF2 and in the case of 0x2012, it is as follows. $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{fold})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{fold})$ Notes: The inside of ( ) is a decimal system equivalent	49	Trk AGC	レイヤ 1	CXD1885Q 内部トラッキングゲイン(0x2000 を 1 として)値を表示。0x1FF2 や 0x2012 の場合、以下のようになる。 $0x1FF2(8178) / 0x2000(8192) = 0.998291015625(\text{倍})$ $0x2012(8210) / 0x2000(8192) = 1.002197265625(\text{倍})$ 注:( )内は 10 進換算値
50	Pi Offset	layer 1	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.	50	Pi Offset	レイヤ 1	CXD1885Q 内部で計算されるパラメータ。セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。電圧値は 1bit あたり 6.25mV。
51	FE Offset	layer 1	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.	51	FE Offset	レイヤ 1	CXD1885Q 内部で計算されるパラメータ。セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。電圧値は 1bit あたり 6.25mV。
52	SE Offset	layer 1	It is the parameter calculated inside CXD1885Q. The value displayed on a set serves as the number of complement of 2 of 2Bytes(es) doubled 256. A voltage value is 6.25mV per bit.	52	SE Offset	レイヤ 1	CXD1885Q 内部で計算されるパラメータ。セットに表示される値は、256 倍された 2Bytes の 2 の補数となる。電圧値は 1bit あたり 6.25mV。
53	PO error detection number	Error rate	It is invalid at the time of CD operation.	53	PO 誤り検出数	エラーレート	CD 時は無効。
54	PO uncorrectable error number	Error Rate	It is invalid at the time of CD operation.	54	PO 訂正不可数	エラーレート	CD 時は無効。
55	PI error detection number	Error Rate	CD : C1 error detection number	55	PI 誤り検出数	エラーレート	CD 時は C1 誤り検出数。
56	PI uncorrectable error number	Error Rate	CD : C2 uncorrectable error number	56	PI 訂正不可数	エラーレート	CD 時は C2 訂正不可数。
57	Mirr Count	Disc discriminant	They are the contents at the time of disk distinction. Please refer to "Table 3 Disc distinction information" about the contents of a value.	57	Mirr Count	ディスク判別	ディスク判別時の内容。値の内容は「表 3 ディスク判別情報」を参照。
58	Mirr Width	Disc discriminant	They are the contents at the time of disk distinction. Please refer to "Table 3 Disc distinction information" about the contents of a value.	58	Mirr Width	ディスク判別	ディスク判別時の内容。値の内容は「表 3 ディスク判別情報」を参照。
59	FZC Count	Disc discriminant	They are the contents at the time of disk distinction. Please refer to "Table 3 Disc distinction information" about the contents of a value.	59	FZC Count	ディスク判別	ディスク判別時の内容。値の内容は「表 3 ディスク判別情報」を参照。
60	Pi Level	Disc discriminant	They are the contents at the time of disk distinction. Please refer to "Table 3 Disc distinction information" about the contents of a value.	60	Pi Level	ディスク判別	ディスク判別時の内容。値の内容は「表 3 ディスク判別情報」を参照。
61	Disc Type	Disc Type	They are the contents at the time of disk type. Please refer to "Table 4 Disc classification information" about the contents of a value.	61	Disc Type	ディスク種別	ディスク種別の内容。値の内容は「表 4 ディスク種別情報」を参照。
62	PO error detection number and address	Error rate	PO error detection number is invalid at the time of CD operation.	62	PO 誤り検出数とアドレス	エラーレート	CD 時は PO 誤り検出数は無効。

Table 2: trace mode details

YY	Contents	Contents supplement
71	A display of PO error detection number of the inner circumference of 1-layer and an address.	It is invalid at the time of CD operation.
72	A display of PO uncorrectable number of the inner circumference of 1-layer and an address.	It is invalid at the time of CD operation.
73	A display of PI error detection number of the inner circumference of 1-layer and an address.	CD : C1 error detection number
74	A display of PI uncorrectable number of the inner circumference of 1-layer and an address.	CD : C2 uncorrectable error number
75	A display of PO error detection number of the central circumference of 1-layer and an address.	It is invalid at the time of CD operation.
76	A display of PO uncorrectable number of the central circumference of 1-layer and an address.	It is invalid at the time of CD operation.
77	A display of PI error detection number of the central circumference of 1-layer and an address.	CD : C1 error detection number
78	A display of PI uncorrectable number of the central circumference of 1-layer and an address.	CD : C2 uncorrectable error number
79	A display of PO error detection number of the outer circumference of 1-layer and an address.	It is invalid at the time of CD operation.
80	A display of PO uncorrectable number of the outer circumference of 1-layer and an address.	It is invalid at the time of CD operation.
81	A display of PI error detection number of the outer circumference of 1-layer and an address.	CD : C1 error detection number
82	A display of PI uncorrectable number of the outer circumference of 1-layer and an address.	CD : C2 uncorrectable error number
83	A display of PO error detection number of the inner circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
84	A display of PO uncorrectable number of the inner circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
85	A display of PI error detection number of the inner circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
86	A display of PI uncorrectable number of the inner circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
87	A display of PO error detection number of the central circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
88	A display of PO uncorrectable number of the central circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
89	A display of PI error detection number of the central circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
90	A display of PI uncorrectable number of the central circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
91	A display of PO error detection number of the outer circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
92	A display of PO uncorrectable number of the outer circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
93	A display of PI error detection number of the outer circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.
94	A display of PI uncorrectable number of the outer circumference of 2-layer and an address.	In the case of 1-layer disc, it is invalid.

表 2 トレースモード詳細

YY	内容	補足説明
71	1層内周のPO誤り検出数とアドレスの表示	CD時は無効。
72	1層内周のPO訂正不可数とアドレスの表示	CD時は無効。
73	1層内周のPI誤り検出数とアドレスの表示	CD時はC1誤り検出数。
74	1層内周のPI訂正不可数とアドレスの表示	CD時はC2訂正不可数。
75	1層中周のPO誤り検出数とアドレスの表示	CD時は無効。
76	1層中周のPO訂正不可数とアドレスの表示	CD時は無効。
77	1層中周のPI誤り検出数とアドレスの表示	CD時はC1誤り検出数。
78	1層中周のPI訂正不可数とアドレスの表示	CD時はC2訂正不可数。
79	1層外周のPO誤り検出数とアドレスの表示	CD時は無効。
80	1層外周のPO訂正不可数とアドレスの表示	CD時は無効。
81	1層外周のPI誤り検出数とアドレスの表示	CD時はC1誤り検出数。
82	1層外周のPI訂正不可数とアドレスの表示	CD時はC2訂正不可数。
83	2層内周のPO誤り検出数とアドレスの表示	1層ディスクの場合、無効。
84	2層内周のPO訂正不可数とアドレスの表示	1層ディスクの場合、無効。
85	2層内周のPI誤り検出数とアドレスの表示	1層ディスクの場合、無効。
86	2層内周のPI訂正不可数とアドレスの表示	1層ディスクの場合、無効。
87	2層中周のPO誤り検出数とアドレスの表示	1層ディスクの場合、無効。
88	2層中周のPO訂正不可数とアドレスの表示	1層ディスクの場合、無効。
89	2層中周のPI誤り検出数とアドレスの表示	1層ディスクの場合、無効。
90	2層中周のPI訂正不可数とアドレスの表示	1層ディスクの場合、無効。
91	2層外周のPO誤り検出数とアドレスの表示	1層ディスクの場合、無効。
92	2層外周のPO訂正不可数とアドレスの表示	1層ディスクの場合、無効。
93	2層外周のPI誤り検出数とアドレスの表示	1層ディスクの場合、無効。
94	2層外周のPI訂正不可数とアドレスの表示	1層ディスクの場合、無効。

Table 3: Disc distinction information

	Mirr Count	Mirr Width	FZC Count	PI Level
No Disc	Except 2 and 3	-	-	-
CD High reflection	2	More than 0x8ED	-	More than 0x99
CD Low reflection	2	More than 0x8ED	-	Less than 0x98
DVD High reflection	2	Less than 0x8ED	1	More than 0x81
DVD Low reflection	2	Less than 0x8ED	1	Less than 0x80
DVD 2-layer	2	Less than 0x8ED	2	-
SACD Hybrid	3	-	-	-

PI level Formula : PI level (V) = Measured value × 1.6 ÷ 256  
 "-": Invalid

表3 ディスク判別情報

	Mirr Count	Mirr Width	FZC Count	PI Level
No Disc	2と3以外	-	-	-
CD 高反射	2	0x8ED 以上	-	0x99 以上
CD 低反射	2	0x8ED 以上	-	0x98 以下
DVD 高反射	2	0x8ED 以下	1	0x81 以上
DVD 低反射	2	0x8ED 以下	1	0x80 以下
DVD 2層	2	0x8ED 以下	2	-
SACD Hybrid	3	-	-	-

PI level 計算式 : PI level (V) = 測定値 × 1.6 ÷ 256  
 "-" は無効

Table 4: Disc classification information

Disc Type	Media
0x00	No Disc
0x01	Unknown Disc
0x04	DVD Single Low reflection
0x05	DVD Dual Parallel Low reflection
0x06	DVD Dual Opposite Low reflection
0x08	CDDA Low reflection
0x0A	VCD Low reflection
0x44	DVD Single High reflection
0x48	CDDA High reflection
0x4A	VCD High reflection
0x8F	SACD Hybrid Disc

表4 ディスク種別情報

Disc Type	Media
0x00	No Disc
0x01	Unknown Disc
0x04	DVD Single 低反射
0x05	DVD Dual Parallel 低反射
0x06	DVD Dual Opposite 低反射
0x08	CDDA 低反射
0x0A	VCD 低反射
0x44	DVD Single 高反射
0x48	CDDA 高反射
0x4A	VCD 高反射
0x8F	SACD Hybrid Disc

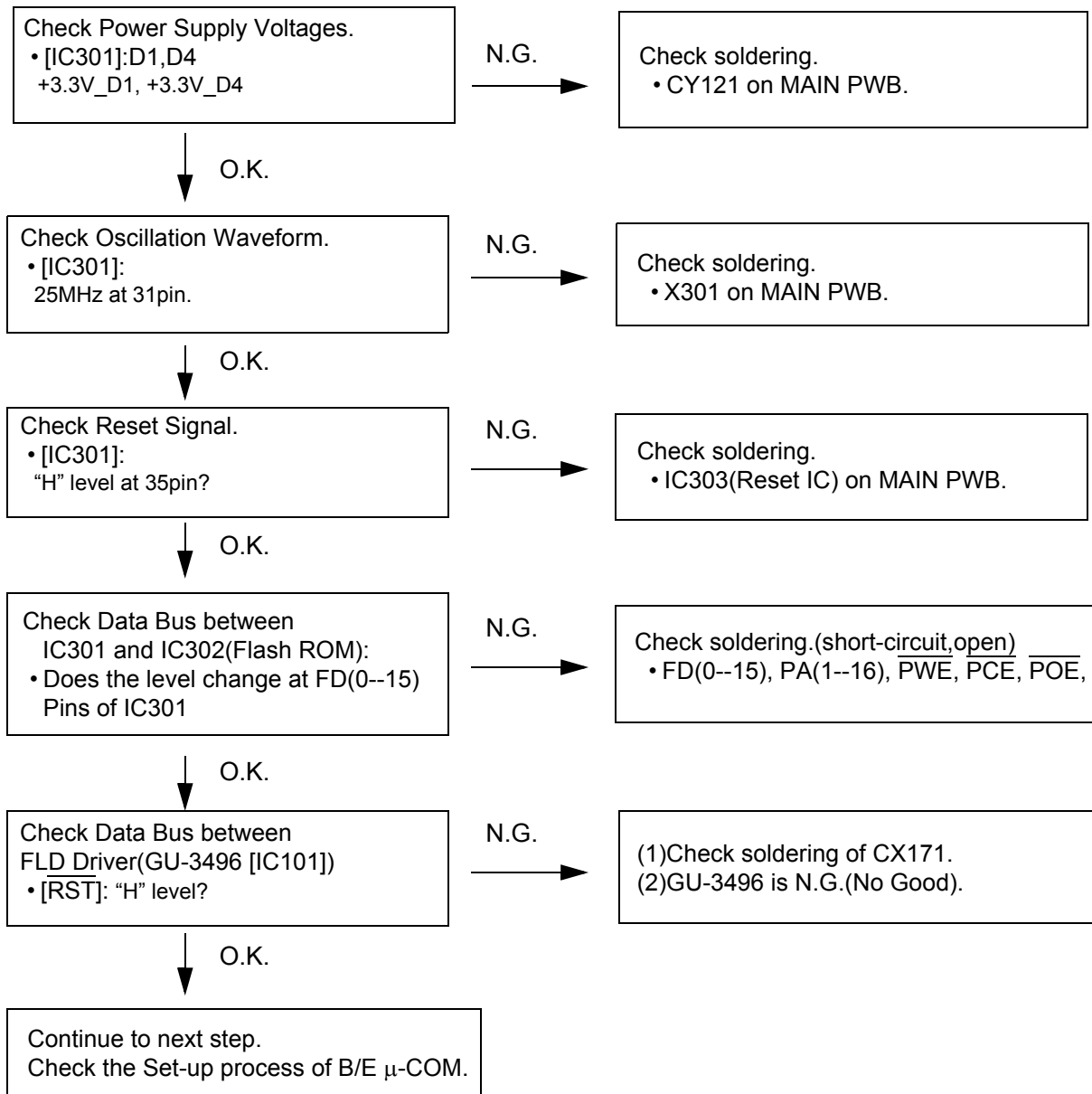


## TROUBLE SHOOTING

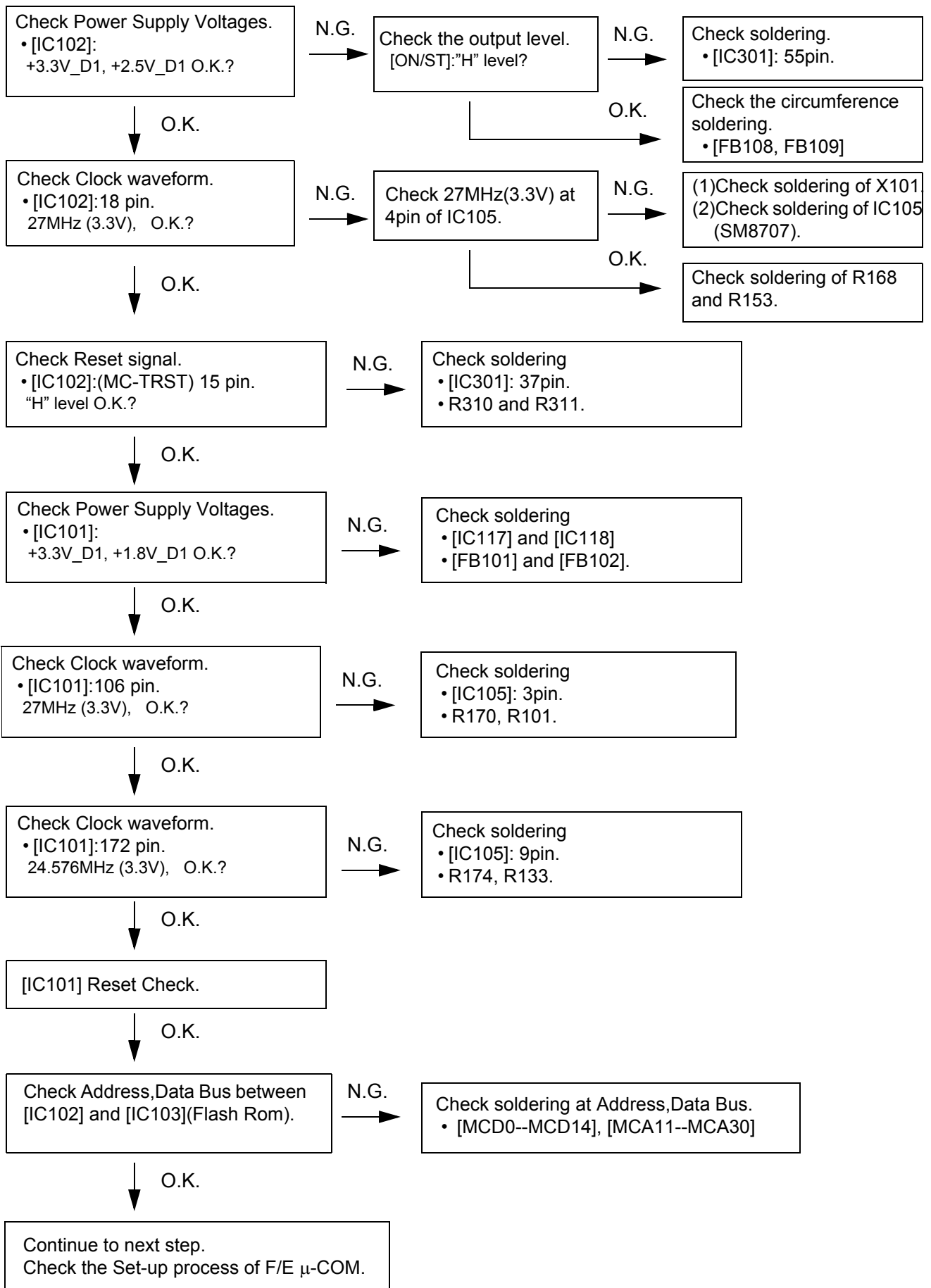
### 1. GU-3494 MAIN PWB

#### 1.1. FL TUBE doesn't light

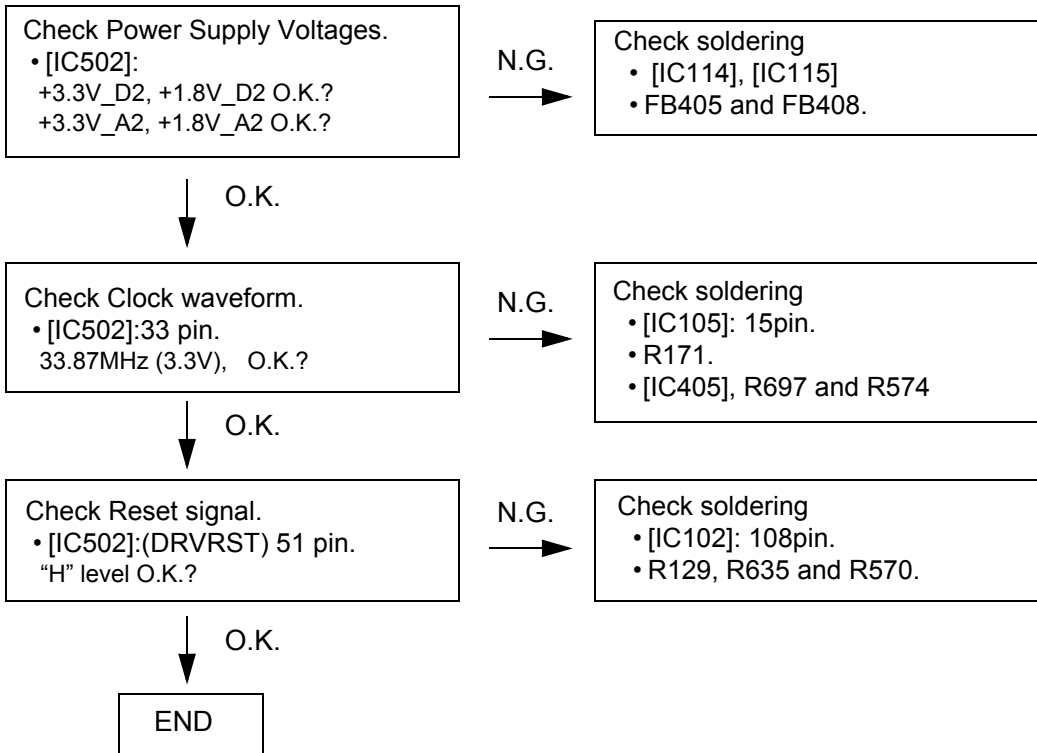
(1) Check the Set-up process of Panel  $\mu$ -COM



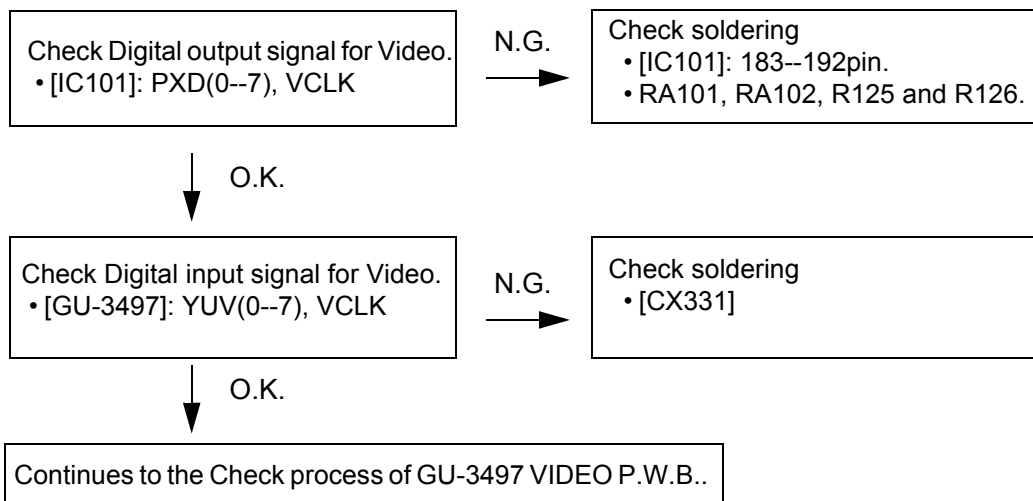
(2) Check the Set-up process of B/E  $\mu$ -COM.



(3) Check the Set-up process of F/E  $\mu$ -COM.



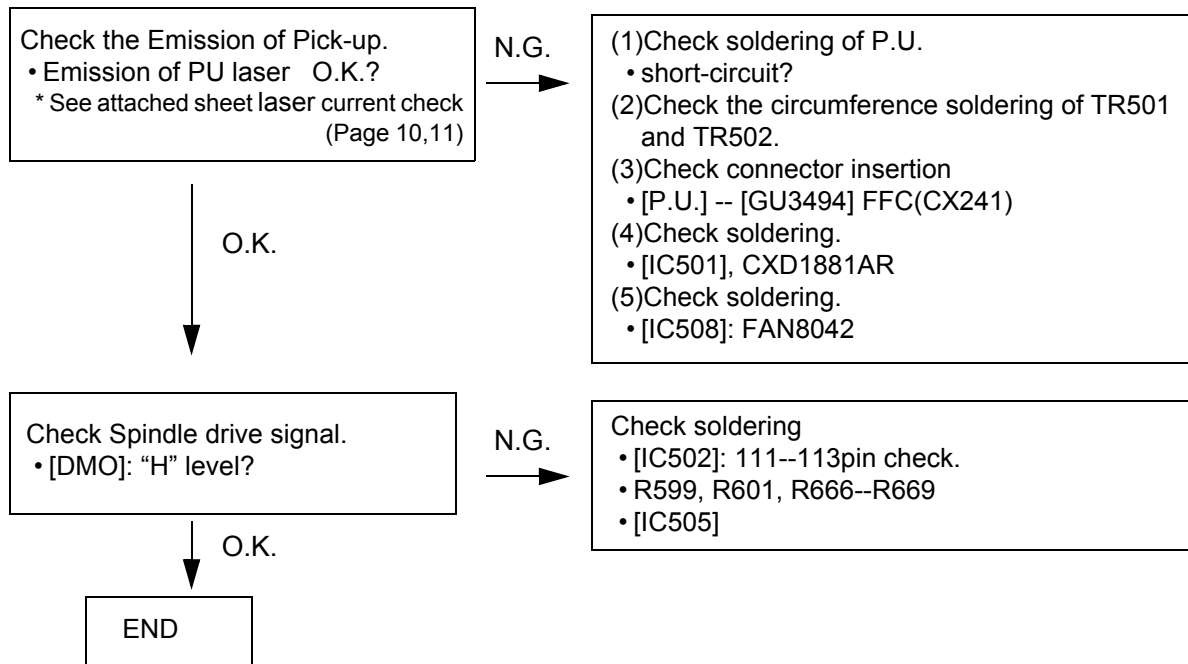
## 1.2. Image is not displayed. (Blue-back, DENON wallpaper)



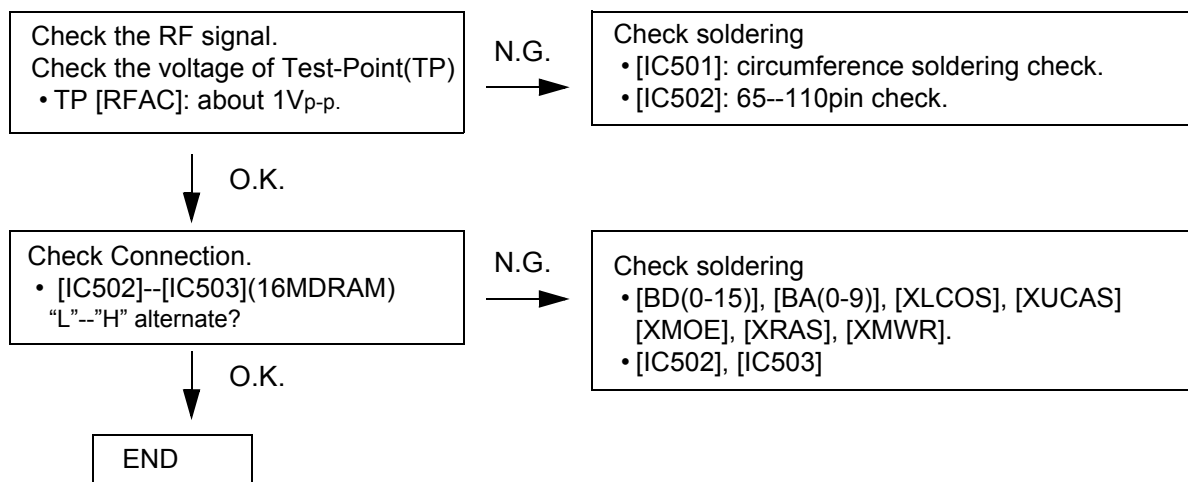
### 1.3. Does not Read Disc

[No PLAY], [00 00] displayed etc.

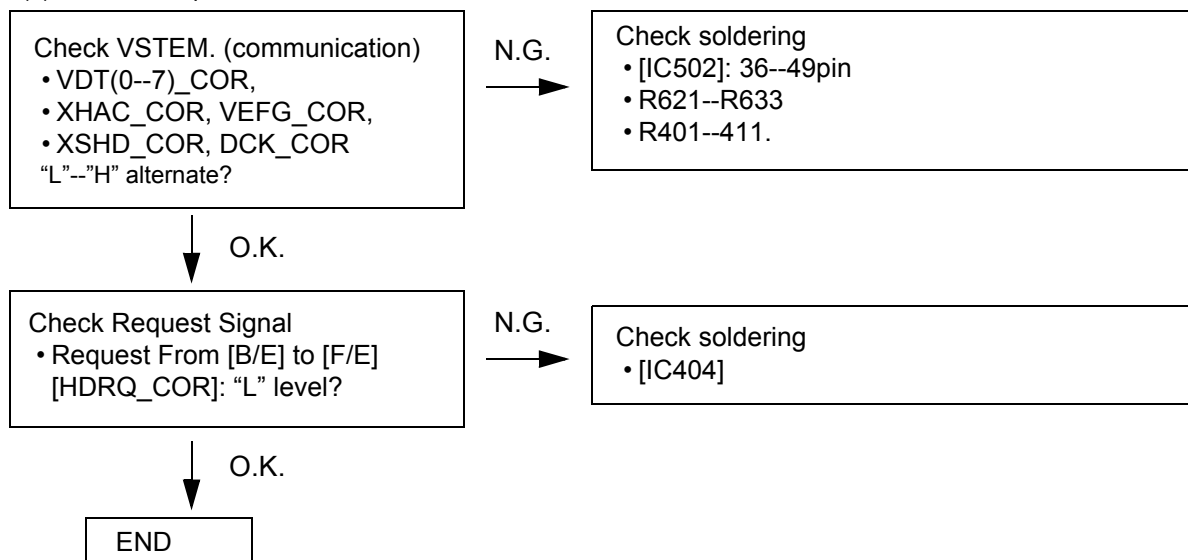
(1) Disc does not Rotate.



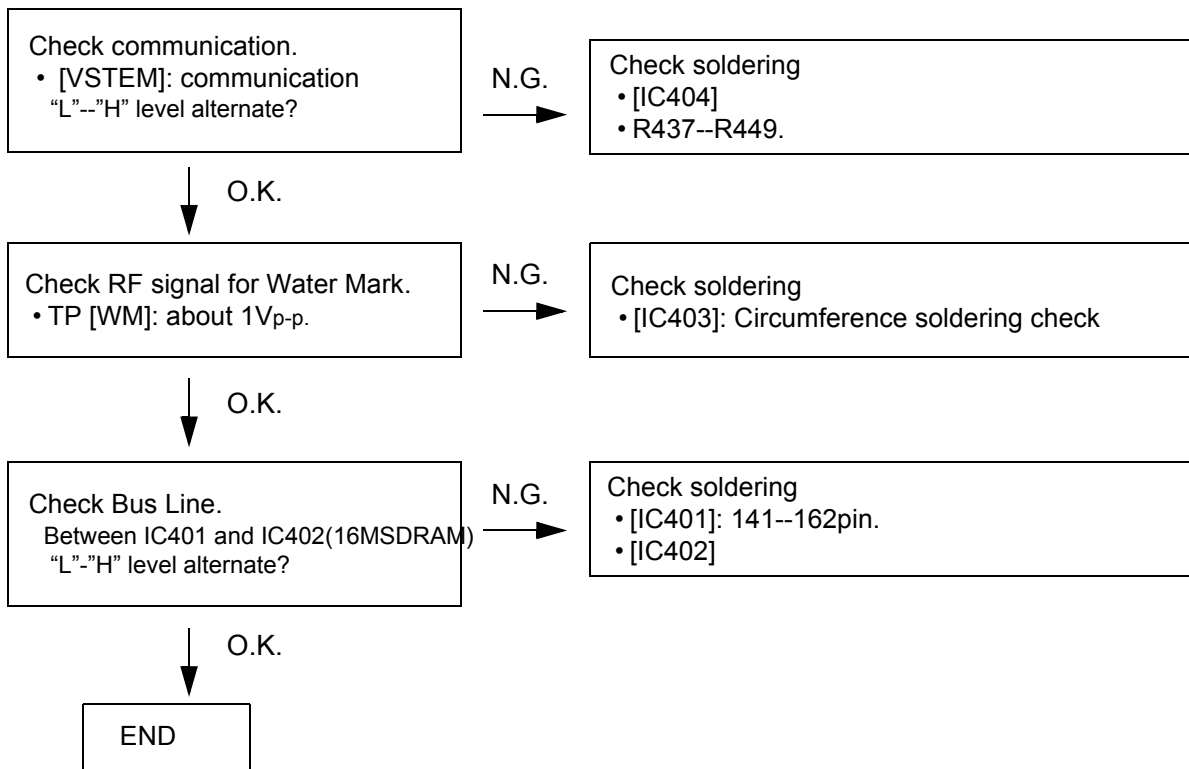
(2) CD check process



(3) DVD check process

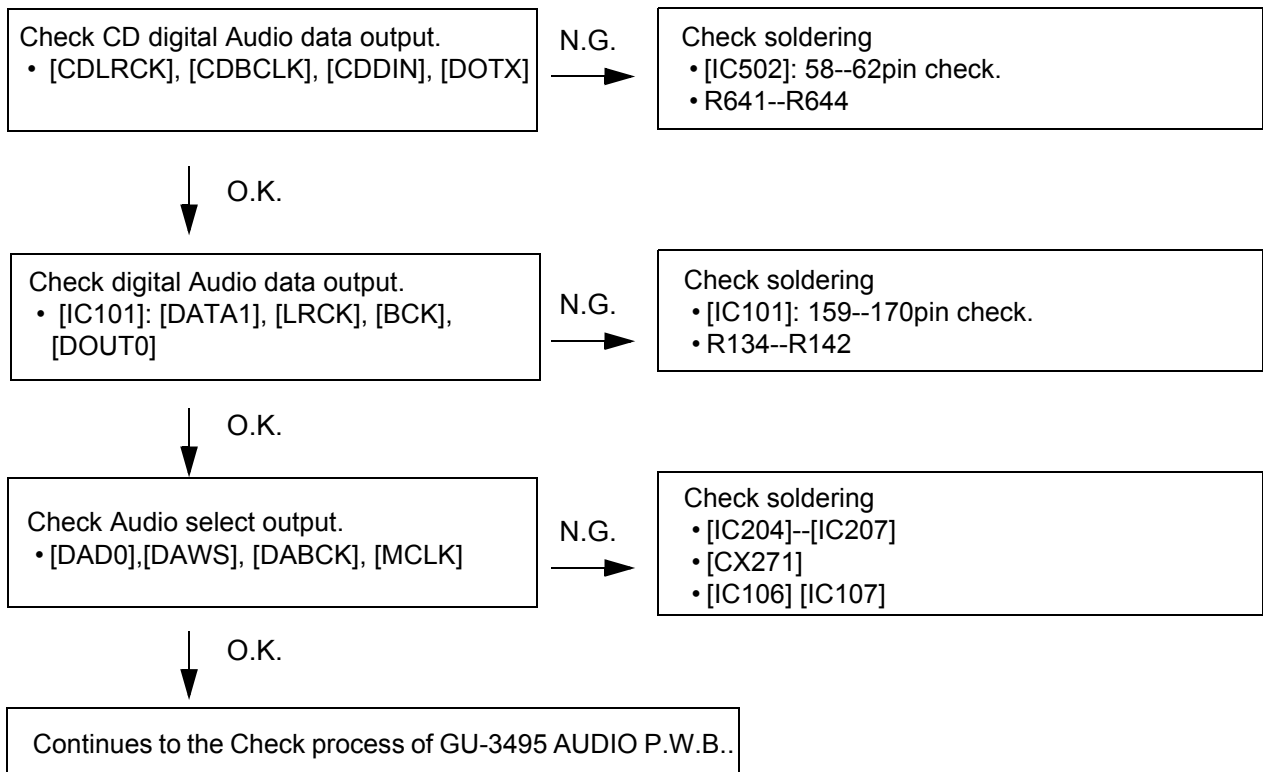


## (4) SACD check process

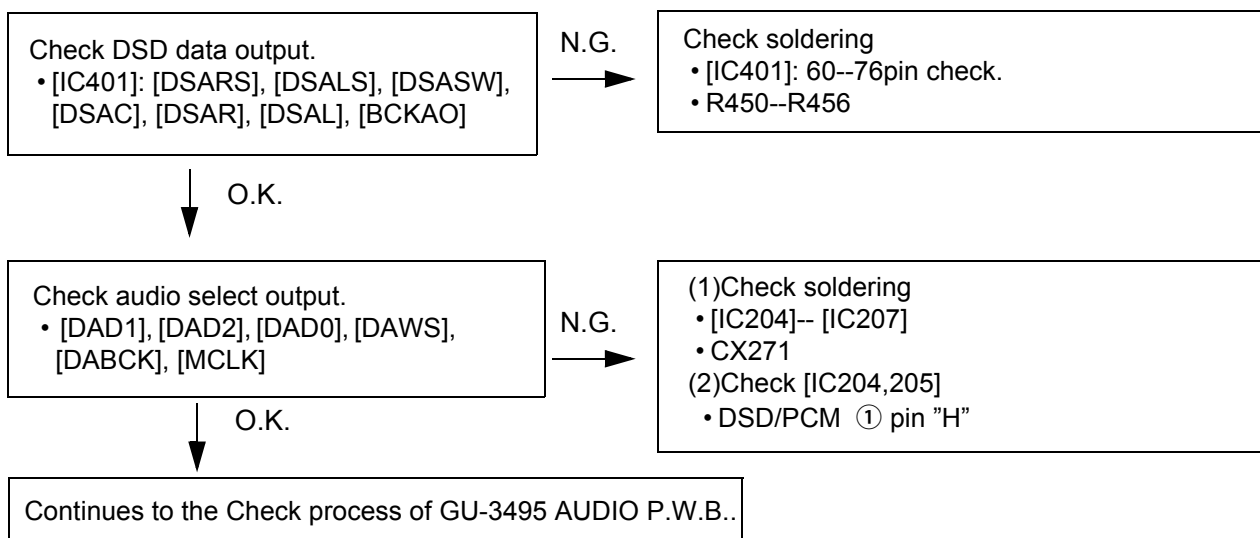


## 1.4. No sound, Noise generated

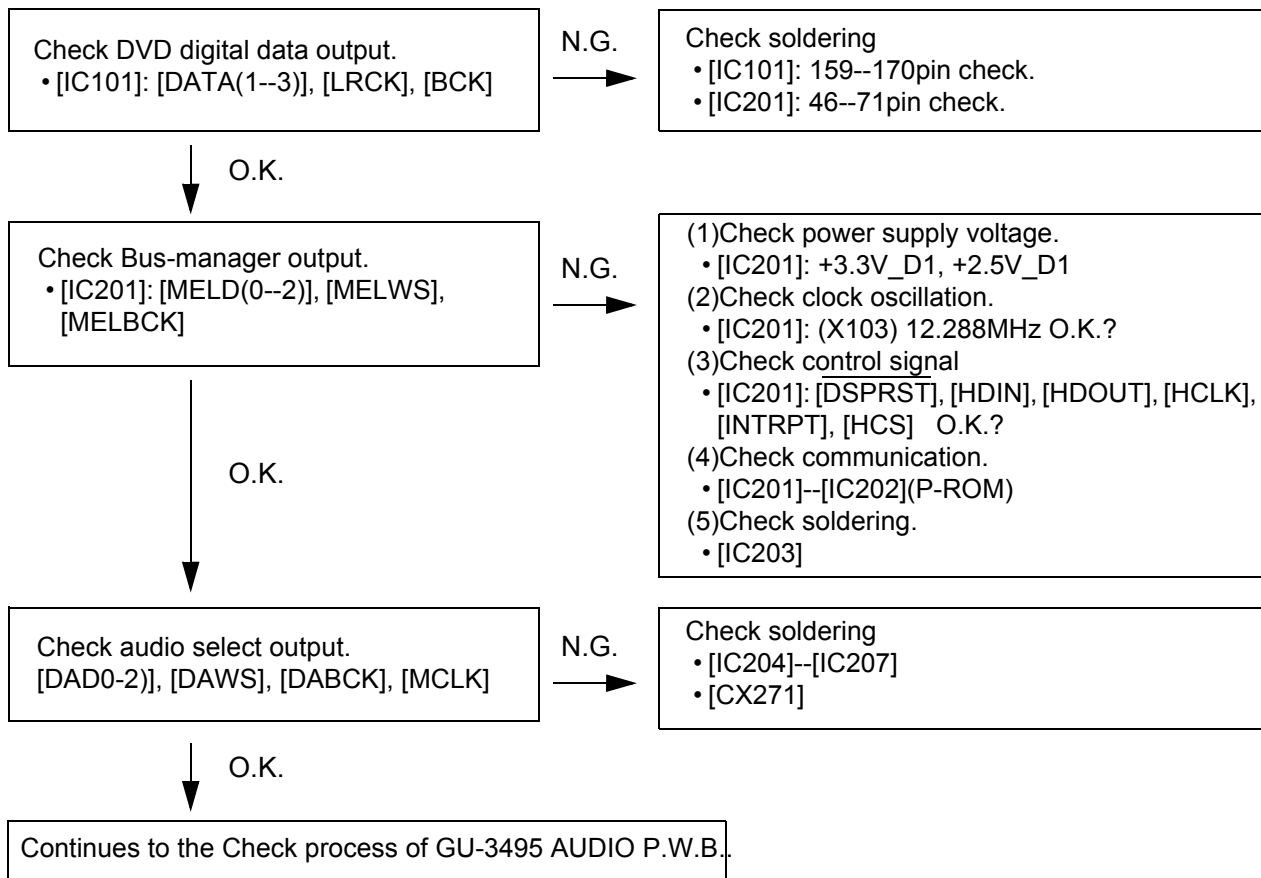
### (1) CD



### (2) SACD



## (3) DVD-VIDEO / AUDIO



## 2. GU-3495 AUDIO P.W.B.

### 2.1. No sound or Noise generated at audio output terminal.

(1) Check Audio Output terminal, then Input pin of ICs.

- FL, FR → IC206 Audio input check
- CNT, SW → IC209 Audio input check
- SL, SR → IC212 Audio input check

See attached sheet waveform (Page 115 ①~④)

(2) Check MUTE Circuit and Transistors.

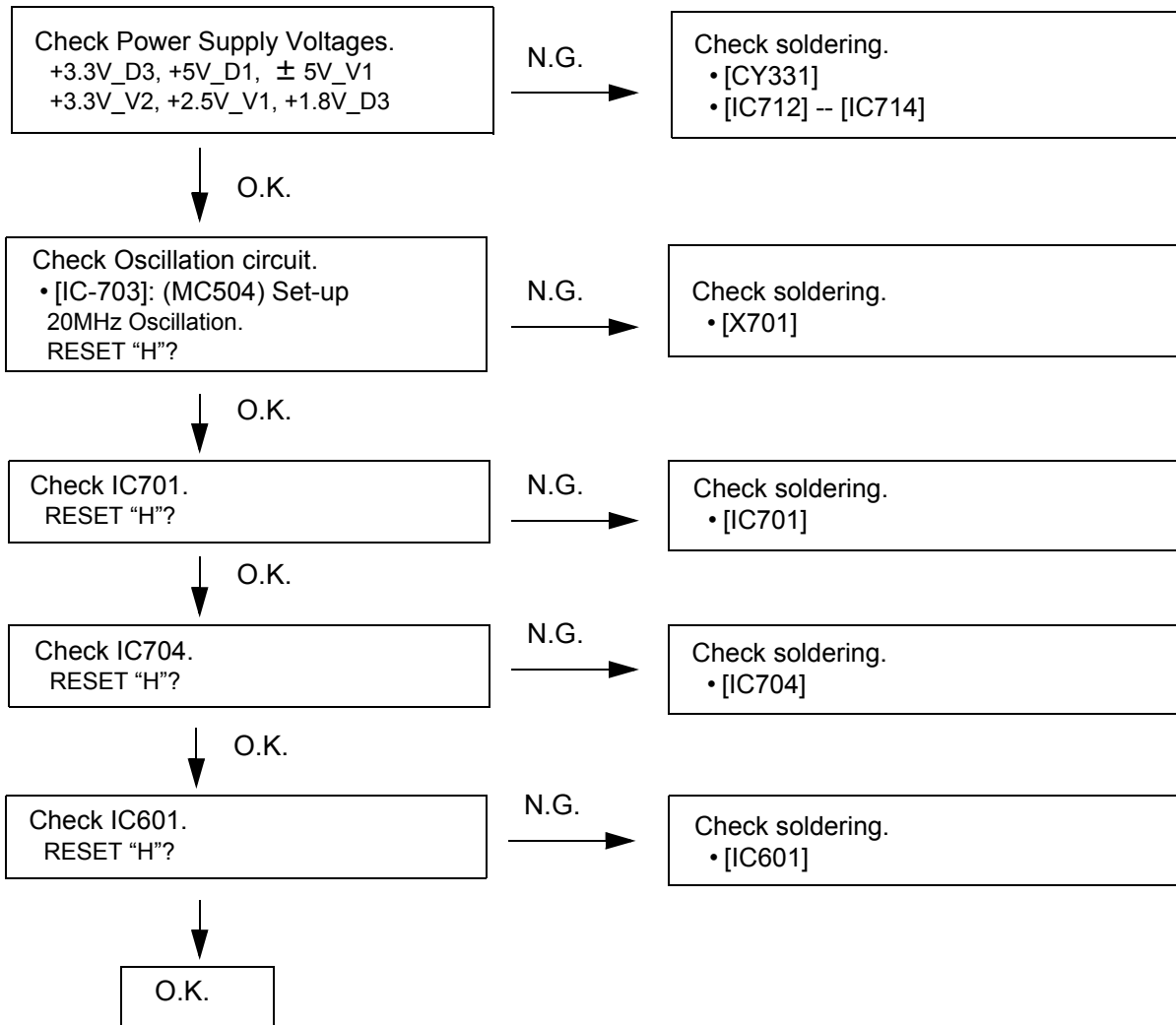
- Check MUTE circuit → Check Transistors  
(TR217--TR220, TR211--TR226)

### 2.2. Does not output Digital output signal(DOUT).

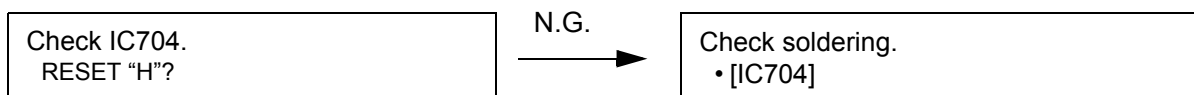
Check belows  
 [IC201], [IC202]  
 [T201]

### 3. GU-3497 VIDEO PWB

(1) Progressive output does not outputed.



(2) Interlace output does not outputed.





## ELECTRICAL ADJUSTMENT FOR VIDEO

## ビデオ回路の調整

### 1. SETTING

- (1) Connect the monitor TV to the video output terminal.
- (2) Connect the oscilloscope to the Y-signal and C-signal of S-VIDEO output terminal and each terminate at 75 Ohms.
- (3) Connect the oscilloscope to the Y-signal, Pb-signal and PR-signal of Component video output terminal and each terminate at 75 Ohms.  
※ **Use the 75 Ohms resistance must be 1%**
- (4) DVD test disc : DVDT-S01

### 2. BEFORE ADJUSTMENT

#### 2.1. Setting the Oscilloscope as below.

- (1) Pb/PR
    - (a) TIME/DIV :  $2\mu\text{S}$
    - (b) VOLT/DIV : 100mV  
(Use the probe : x10)
  - (2) Y/C
    - (a) TIME/DIV :  $2\mu\text{S}$
    - (b) VOLT/DIV : 50mV  
(Use the probe : x10)
- Power on. Power Supply
- |              |   |      |
|--------------|---|------|
| USA & Canada | : | 120V |
| Europe       | : | 230V |
| Japan        | : | 100V |

#### 2.2. Preparation

- (1) power on.
- (2) Set the [SOURCE] selector knob : DVD
- (3) Push [OPEN/CLOSE] button, then open the Disc Tray.
- (4) Set DVD test disc (DVDT-S01) on the Disc Tray, and then push [CLOSE] button.
- (5) FL display appear "STOP", push [PLAY] button to playback DVD.
- (6) Set the Video output to INTERLACED by remote control unit.  
(Push the [SETUP] button, set to the mode of VIDEO SETUP.)
- (7) Push the [DISPLAY] button of remote control unit and then appear the ON-Screen Display (GUI) on the monitor TV.
- (8) Push the [12] button, select title 12 of DVD.
- (9) Push the [ENTER] button, playback title 12. (color bar 75%)

### 1. セッティング手順

- (1) セットの VIDEO OUT 端子にテレビモニターを接続する。
- (2) セットの S2 VIDEO OUT 端子から Y 信号と C 信号をそれぞれオシロスコープ (終端抵抗 :  $75\Omega$ ) に接続する。
- (3) セットの COMPONENT VIDEO OUT の各端子 (Y/Pb/PR) をそれぞれオシロスコープ (終端抵抗 :  $75\Omega$ ) に接続する。  
※  $75\Omega$  抵抗は 1%品を使用する事。
- (4) DVD テストディスク : DVDT-S01 を用意する。

### 2. 調整のまえに

#### 2.1. オシロスコープを下記に設定する。

- (1) Pb/PR/
    - (a) TIME/DIV :  $2\mu\text{S}$
    - (b) VOLT/DIV : 100mV  
(プローブ x10 使用)
  - (2) Y
    - (a) TIME/DIV :  $2\mu\text{S}$
    - (b) VOLT/DIV : 50mV  
(プローブ x10 使用)
- 電源電圧 : 100V

#### 2.2. 準備手順

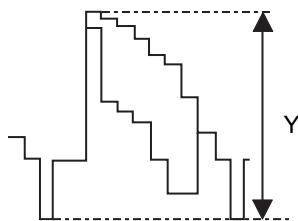
- (1) セットの AC コードをコンセントへ挿入し、セットの電源を ON する。
- (2) セットの「OPEN/CLOSE」ボタンを押してトレイを開き、トレイ上に DVD テストディスク (DVDT-S1) をセット後、「CLOSE」ボタンを押す。
- (3) セット表示管上に "STOP" が表示されてから、PLAY ボタンを押して、ディスクを再生する。
- (4) リモコンで VIDEO 出力をインターレースモードに設定する。
- (5) リモコンの DISPLAY ボタンを押してグラフィカル・ユーザー・インターフェイス (GUI) 画面を出す。
- (6) 番号ボタンの「12」ボタンを押して、Title 12 を選択する。
- (7) 「ENTER」ボタンを押して、Title 12 を再生する (75%カラーバー信号)。

## 2.3. Procedure

- (1) Adjust the signal of S-VIDEO out by the wave of oscilloscope.

(a) Target, Y-signal

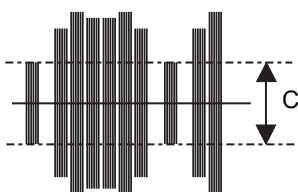
Point : VR704  
Adjustment Value :  $1000 \pm 20\text{mV}$   
Waveform



Y-signal of S-VIDEO out

(b) Target, C-signal

Point : VR705  
Adjustment Value :  $286 \pm 5\text{mV}$   
Waveform

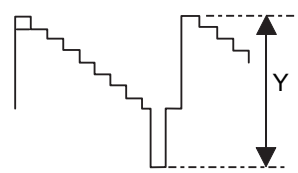


C-signal of S-VIDEO out

- (2) Set the Video output to PROGRESSIVE by remote control unit. (Push the [SETUP] button, set to the mode of VIDEO SETUP.)

(a) Target, Y-signal

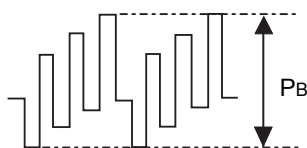
Point : VR701  
Adjustment Value :  $1000 \pm 20\text{mV}$   
Waveform



Y-signal

(b) Target, Pb-signal

Point : VR702  
Adjustment Value :  $*525 \pm 10\text{mV}$   
Waveform



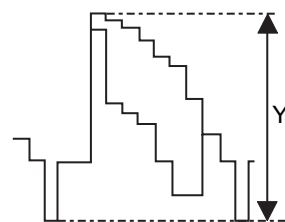
PB-signal

## 2.3. 手順

- (1) セットの S2 VIDEO OUT の信号レベルをオシロスコープ上の波高値で調整する。

(a) Y 信号レベル

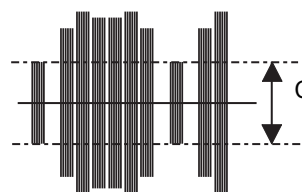
調整個所 : VR704  
調整値 :  $1000 \pm 20\text{mV}$   
波形



S2 VIDEO OUT の Y 信号レベル

(b) C 信号レベル

調整個所 : VR705  
調整値 :  $286 \pm 5\text{mV}$   
波形

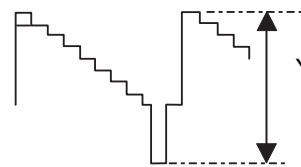


S2 VIDEO OUT の C 信号レベル

- (2) リモコンで VIDEO 出力をプログレッシブモードに設定する。

(a) Y 信号レベル

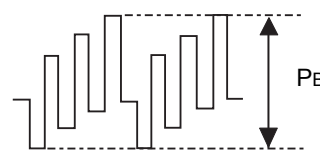
調整個所 : VR701  
調整値 :  $1000 \pm 20\text{mV}$   
波形



プログレッシブの Y 信号レベル

(b) Pb 信号レベル

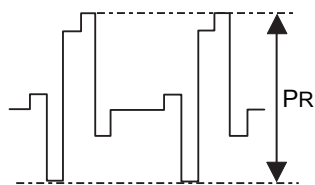
調整個所 : VR702  
調整値 :  $525 \pm 10\text{mV}$   
波形



PB 信号レベル

(c) Target, PR-signal

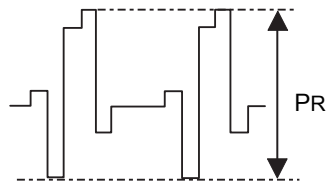
Point : VR703  
 Adjustment Value : \*525 ± 10mV  
 Waveform



PR-signal

(c) PR 信号レベル

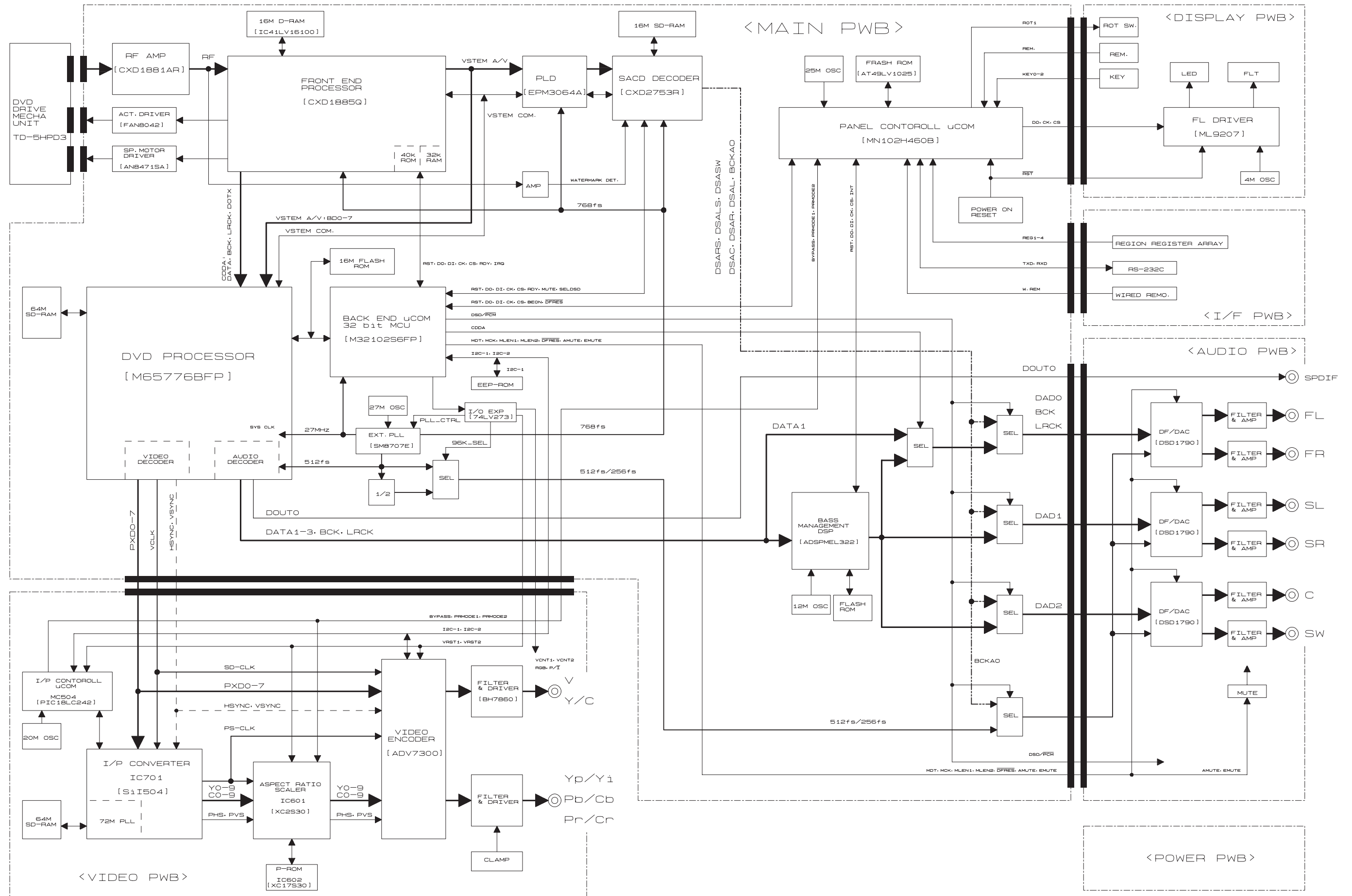
調整箇所 : VR703  
 調整値 : 525 ± 10mV  
 波形



PR- 信号レベル

\* : 486 ± 10mV for U.S.A. & Canada model

# BLOCK DIAGRAM



# SEMICONDUCTORS

Only major semiconductors are shown, general semiconductors etc. are omitted to list.

主な半導体を記載しています。汎用の半導体は記載を省略しています。

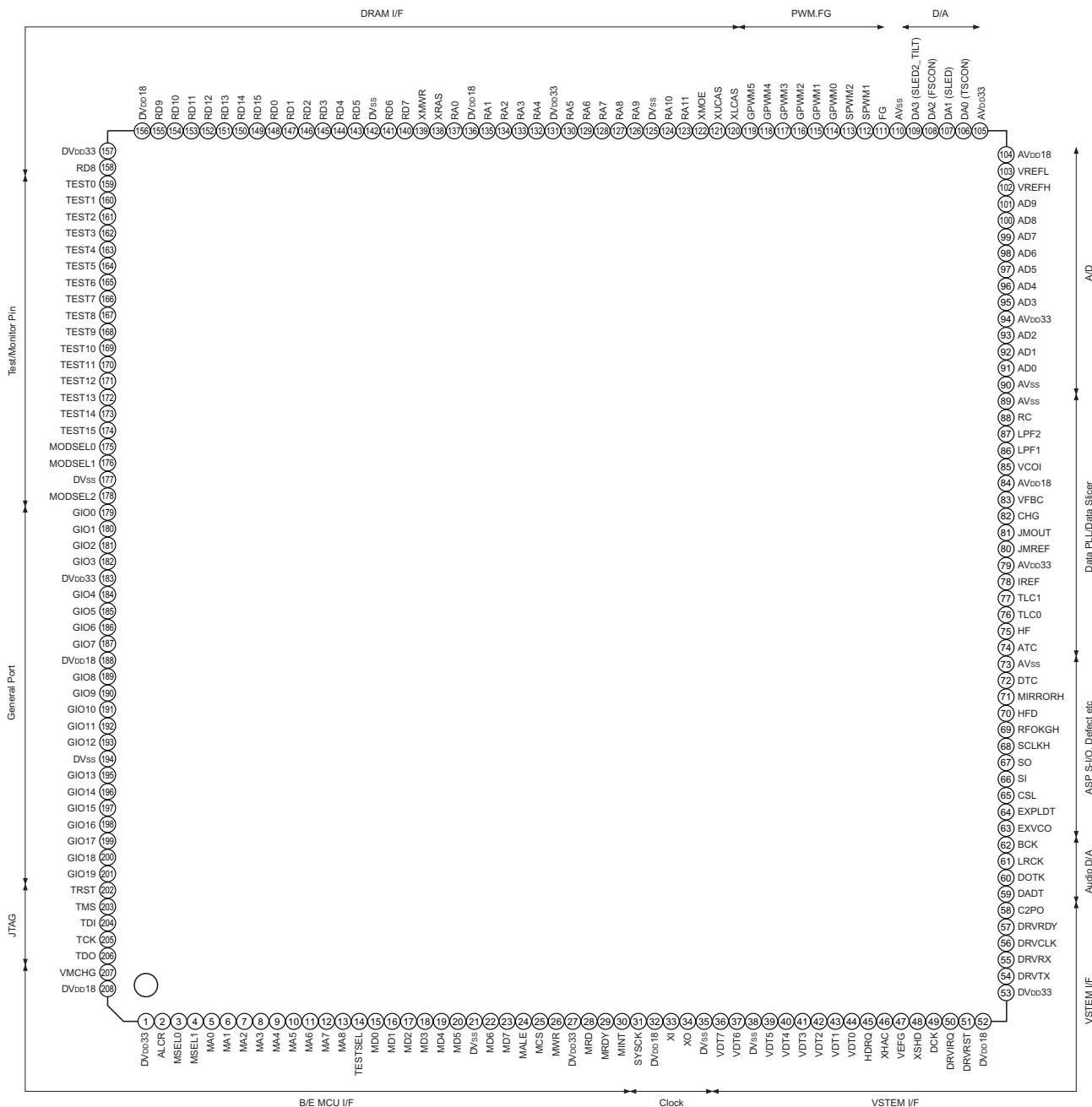
## 1. IC's

Note: Abbreviation ahead of IC No. indicates the name of P.W.B., etc.

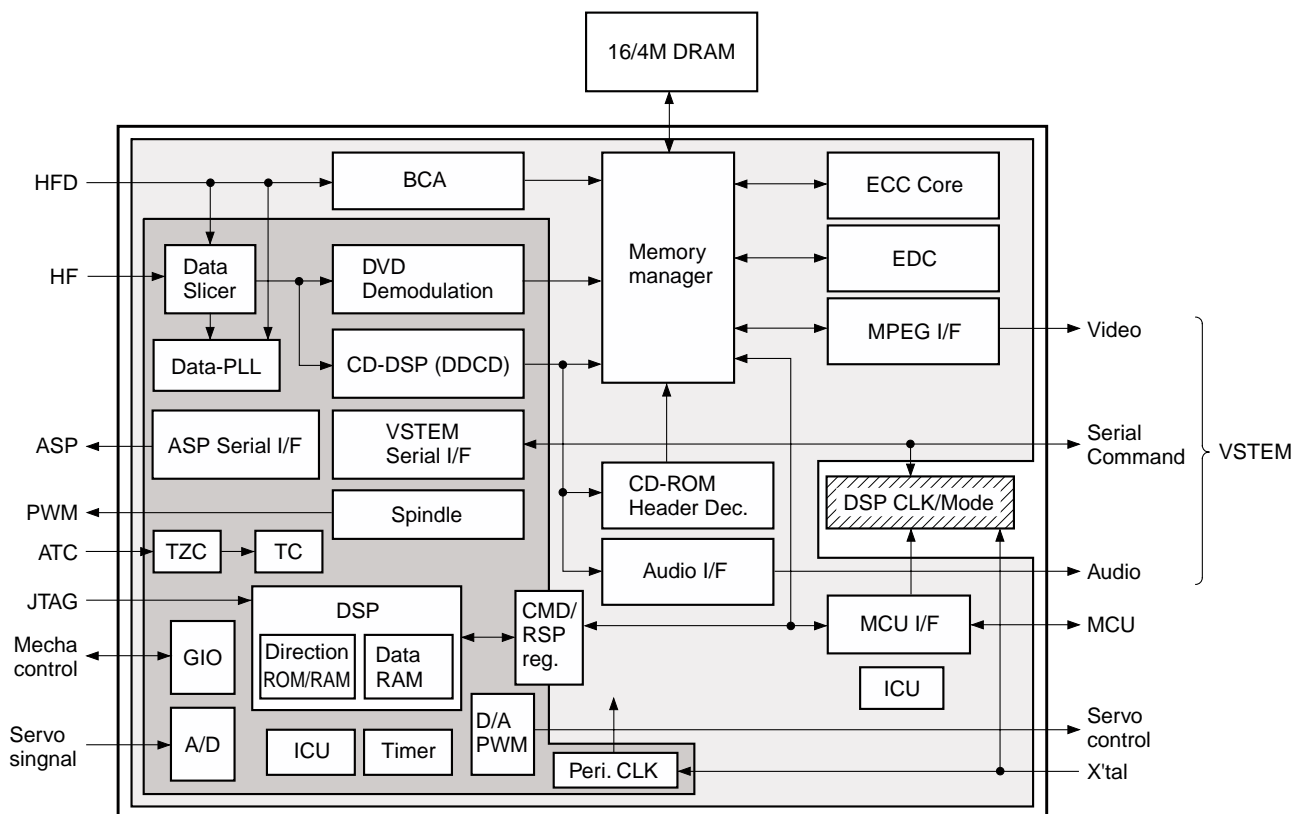
- 注): IC No. の前の記号は、基板の名称を表します。  
 MA: Main P.W.B. AU: Audio P.W.B.  
 PD: Power/Display P.W.B. VI: Video P.W.B.  
 SC: Scart P.W.B. (for Europe model)

### CXD1885Q (MA: IC502)

#### Top View



Block Diagram



Functions (A/D : Analog/Digital, PU : Pull-up, PD : Pull-down, SMT=Schmitt )

No.	Terminal Name	I/O	A/D	Classification	Function	PU	PD	SMT
1	DVDD33	P		VDD & GND	Digital 3.3V Power for I/O.			
2	ALCR	I	D	MCU I/F	Chip select input. (L: Reset)	*		*
3	MSEL0	I	D	MCU I/F	MCU I/F mode select 0.			*
4	MSEL1	I	D	MCU I/F	MCU I/F mode select 1.			*
5	MA0	I/O	D	MCU I/F	MCU Address input 0 / data I/O 0 <LSB>.			*
6	MA1	I/O	D	MCU I/F	MCU Address input 1 / data I/O 1.			*
7	MA2	I/O	D	MCU I/F	MCU Address input 2 / data I/O 2.			*
8	MA3	I/O	D	MCU I/F	MCU Address input 3 / data I/O 3.			*
9	MA4	I/O	D	MCU I/F	MCU Address input 4 / data I/O 4.			*
10	MA5	I/O	D	MCU I/F	MCU Address input 5 / data I/O 5.			*
11	MA6	I/O	D	MCU I/F	MCU Address input 6 / data I/O 6.			*
12	MA7	I/O	D	MCU I/F	MCU Address input 7 / data I/O 7.			*
13	MA8	I	D	MCU I/F	MCU Address input 8 <MSB>.			*
14	TESTSEL	I	D	MCU I/F	TEST Select input.			*
15	MD0	I/O	D	MCU I/F	MCU data I/O 0 <LSB>.			*
16	MD1	I/O	D	MCU I/F	MCU data I/O 1.			*
17	MD2	I/O	D	MCU I/F	MCU data I/O 2.			*
18	MD3	I/O	D	MCU I/F	MCU data I/O 3.			*
19	MD4	I/O	D	MCU I/F	MCU data I/O 4.			*
20	MD5	I/O	D	MCU I/F	MCU data I/O 5.			*
21	DVSS	P		VDD & GND	Digital Ground.			
22	MD6	I/O	D	MCU I/F	MCU data I/O 6.			*
23	MD7	I/O	D	MCU I/F	MCU data I/O 7 <MSB>.			*
24	MALE	I	D	MCU I/F	MCU Address latch signal input.			*
25	MCS	I	D	MCU I/F	MCU Chip Select signal input.			*
26	MWR	I	D	MCU I/F	MCU Write strobe signal.			*
27	DVDD33	P		VDD & GND	digital 3.3V Power. (for I/O )			
28	MRD	I	D	MCU I/F	MCU Read Strobe signal.			*
29	MRDY	O	D	MCU I/F	MCU Ready signal. (L: Wait)			
30	MINT	O	D	MCU I/F	MCU Interrupt signal. (L: Interrupt request)			

No.	Terminal Name	I/O	A/D	Classification	Function	PU	PD	SMT
31	SYSCK	O	D	Clock	Clock Monitor output.			
32	DVDD18	P		VDD & GND	Digital 1.8V Power. (Internal logic system power)			
33	XI	I	D	Clock	Crystal oscillation input.			
34	XO	O	D	Clock	Crystal oscillation output.			
35	DVss	P		VDD & GND	Digital Ground.			
36	VDT7	O	D	VSTEM A/V	MPEG data output 7.			
37	VTD6	O	D	VSTEM A/V	MPEG data output 6.			
38	DVss	P		VDD & GND	Digital Ground.			
39	VDT5	O	D	VSTEM A/V	MPEG data output 5.			
40	VDT4	O	D	VSTEM A/V	MPEG data output 4.			
41	VDT3	O	D	VSTEM A/V	MPEG data output 3.			
42	VDT2	O	D	VSTEM A/V	MPEG data output 2.			
43	VDT1	O	D	VSTEM A/V	MPEG data output 1.			
44	VDT0	O	D	VSTEM A/V	MPEG data output 0.			
45	HDRQ	I	D	VSTEM A/V	MPEG data Request input.	*		
46	XHAC	O	D	VSTEM A/V	Data Valid output.			
47	VEFG	O	D	VSTEM A/V	ECC Error-sector Flag output. (L: error sector)			
48	XSHD	O	D	VSTEM A/V	DVD Sector Head Flag output.			
49	DCK	O	D	VSTEM A/V	Data Strobe output.			
50	DRVIRQ	O	D	VSTEM Command	Interrupt Request output for Host. (L: interruption is demanded)			
51	DRVRST	I	D	VSTEM Command	Drive H/W Reset input. (L: reset)	*		*
52	DVDD18	P		VDD & GND	Digital 1.8V power for Internal logic system.			
53	DVDD33	P		VDD & GND	Digital 3.3V Power for I/O.			
54	DRVTX	O	D	VSTEM Command	Transmitting serial data output to Host.			
55	DRVRX	I	D	VSTEM Command	Reception serial data input from Host.			
56	DRVCLK	I	D	VSTEM Command	Clock input from Host.			*
57	DRVRDY	O	D	VSTEM Command	Drive Ready signal output. (L: ready)			
58	C2PO	O	D	Audio I/F	CD-DSP C2 Pointer output.			
59	DADT	O	D	Audio I/F	Audio serial data output.			
60	DOTX	O	D	Audio I/F	Digital audio output.			
61	LRCK	O	D	Audio I/F	L/R Clock output.			
62	BCK	O	D	Audio I/F	Audio Bit Clock output.			
63	EXVCO	I	D	TEST/Monitor	External Channel clock input.			
64	EXPLDT	I	D	TEST/Monitor	External RF data input. (Logic level)			
65	CSL	O	D	ASP I/F	SIO for RF signal processing LSI control. Latch signal output.			
66	SI	I	D	ASP I/F	SIO for RF signal processing LSI control. Serial data input.			
67	SO	O	D	ASP I/F	SIO for RF signal processing LSI control. Serial data output.			
68	SCLKH	O	D	ASP I/F	SIO for RF signal processing LSI control. Serial clock output.			
69	RFOKGH	I	D	ASP I/F	RF O.K. Signal input.			*
70	HFD	I	D	ASP I/F	RF lack Signal input.			*
71	MIRRORH	I	D	ASP I/F	Mirror detected signal input.(H: Mirror detected)			*
72	DTC	I	D	ASP I/F	Track cross signal input. (Logic level input)			*
73	AVss	P		VDD & GND	Analog Ground.			
74	ATC	I	A	Data PLL	Track Cross signal input. (Analog level input)			
75	HF	I	A	Data PLL	RF signal input.			
76	TLC0	O	A	Data PLL	Asymmetry Charge-pump output 0.			
77	TLC1	O	A	Data PLL	Asymmetry Charge-pump output 1			
78	IREF	I	A	Data PLL	Reference current setting terminal for Asymmetry Circuit.			
79	AVDD33	P		VDD & GND	Analog 3.3V Power.			
80	JMREF	I	A	Data PLL	Reference current setting terminal for Jitter Monitor			
81	JMOUT	O	A	Data PLL	Jitter Monitor output.			
82	CHG	I	A	Data PLL	Reference current setting terminal for data PLL.			
83	VFBC	I	A	Data PLL	VCO offset frequency setting terminal for data PLL.			
84	AVDD18	P		VDD & GND	Analog 1.8V Power.			
85	VCOI	I	A	Data PLL	VCO Control voltage input terminal for data PLL.			
86	LPF1	O	A	Data PLL	VCO Loop-filter connection terminal 1 for data PLL.			
87	LPF2	O	A	Data PLL	VCO Loop-filter connection terminal 2 for data PLL			
88	RC	I	A	Data PLL	VCO gain setting terminal for data PLL.			
89	AVss	P		VDD & GND	Analog Ground.			
90	AVss	P		VDD & GND	Analog Ground.			
91	AD0	I	A	ADC	AD0 Input.			

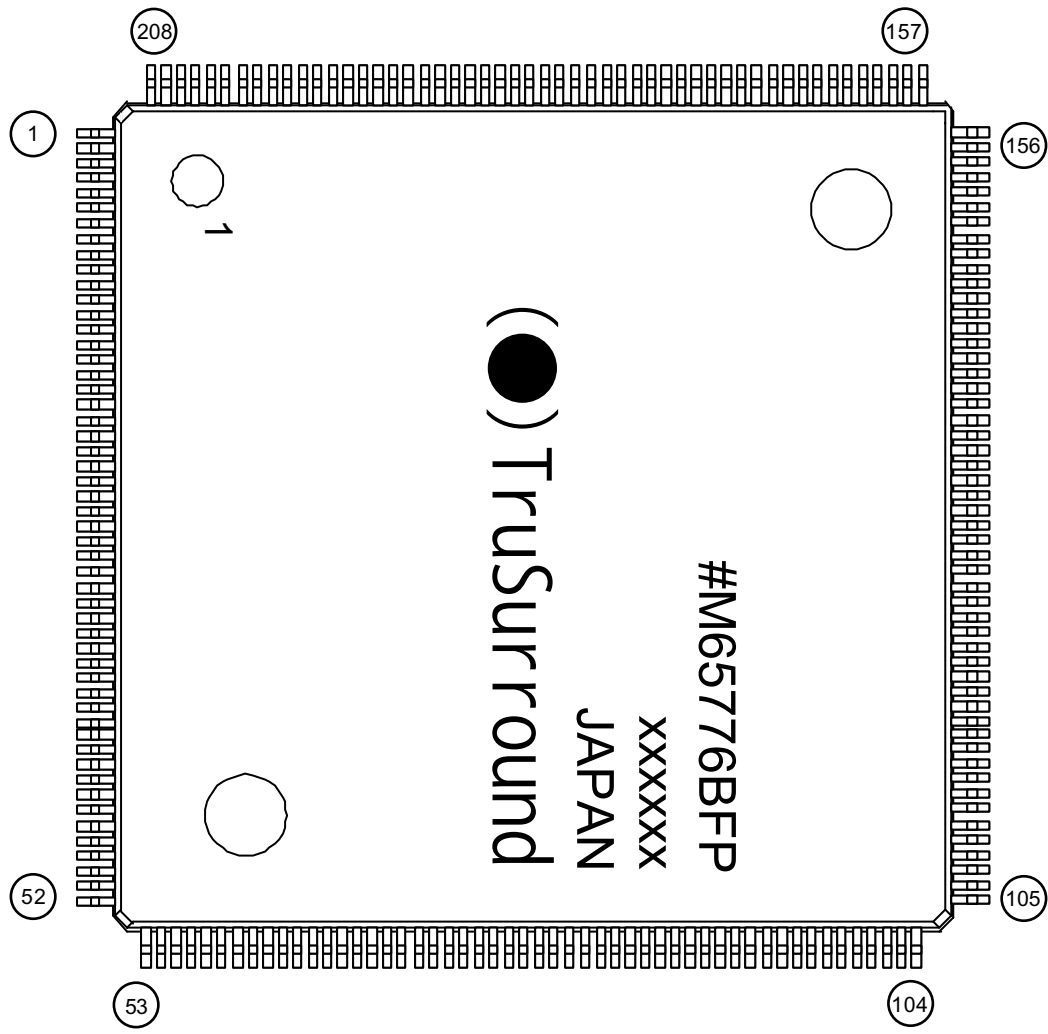
No.	Terminal Name	I/O	A/D	Classification	Function	PU	PD	SMT
92	AD1	I	A	ADC	AD1 Input.			
93	AD2	I	A	ADC	AD2 Input.			
94	AVDD33	P		VDD & GND	Analog 3.3V Power.			
95	AD3	I	A	ADC	AD3 Input.			
96	AD4	I	A	ADC	AD4 Input.			
97	AD5	I	A	ADC	AD5 Input.			
98	AD6	I	A	ADC	AD6 Input.			
99	AD7	I	A	ADC	AD7 Input.			
100	AD8	I	A	ADC	AD8 Input.			
101	AD9	I	A	ADC	AD9 Input.			
102	VREFH	I/O	A	ADC	Max Reference Voltage input for ADC. (Internal Reference Voltage mode, it will be an output state)			
103	VREFL	I/O	A	ADC	Min Reference Voltage input for ADC. (Internal Reference Voltage mode, it will be an output state)			
104	AVDD18	P		VDD & GND	Analog 1.8V Power.			
105	AVDD33	P		VDD & GND	Analog 3.3V Power.			
106	DA0 (TSCON)	O	A	DAC	DA0 output. (Track Servo output)			
107	DA1 (SLED)	O	A	DAC	DA1 output. (Sled Servo output)			
108	DA2 (FSCON)	O	A	DAC	DA2 output. (Focus Servo output)			
109	DA3 (SLED2_ TILT)	O	A	DAC	DA3 output. (Sled Servo / Tilt Servo output)			
110	AVSS	P		VDD & GND	Analog Ground			
111	FG	I	D	SPM	FG signal input.			*
112	SPWM1	O	D	SPM	Spindle motor PWM output 1.			
113	SPWM2	O	D	SPM	Spindle motor PWM output 2.			
114	GPWM0	O	D	General PWM	Multi-purpose PWM output 0.			
115	GPWM1	O	D	General PWM	Multi-purpose PWM output 1.			
116	GPWM2	O	D	General PWM	Multi-purpose PWM output 2.			
117	GPWM3	O	D	General PWM	Multi-purpose PWM output 3.			
118	GPWM4	O	D	General PWM	Multi-purpose PWM output 4.			
119	GPWM5	O	D	General PWM	Multi-purpose PWM output 5.			
120	XLCAS	O	D	DRAM I/F	DRAM LCAS output. (Low-Byte row address strobe output)			
121	XUCAS	O	D	DRAM I/F	DRAM UCAS output. (Upper-Byte row address strobe output)			
122	XMOE	O	D	DRAM I/F	DRAM output enable.			
123	RA11	O	D	DRAM I/F	DRAM address output terminal 11.			
124	RA10	O	D	DRAM I/F	DRAM address output terminal 10.			
125	DVSS	P		VDD & GND	Digital Ground.			
126	RA9	O	D	DRAM I/F	DRAM address output terminal 9.			
127	RA8	O	D	DRAM I/F	DRAM address output terminal 8.			
128	RA7	O	D	DRAM I/F	DRAM address output terminal 7.			
129	RA6	O	D	DRAM I/F	DRAM address output terminal 6.			
130	RA5	O	D	DRAM I/F	DRAM address output terminal 5.			
131	DVDD33	P		VDD & GND	Digital 3.3V Power. (for I/O)			
132	RA4	O	D	DRAM I/F	DRAM address output terminal 4.			
133	RA3	O	D	DRAM I/F	DRAM address output terminal 3.			
134	RA2	O	D	DRAM I/F	DRAM address output terminal 2.			
135	RA1	O	D	DRAM I/F	DRAM address output terminal 1.			
136	DVDD18	P		VDD & GND	Digital 1.8V Power. (for Internal Logic power)			
137	RA0	O	D	DRAM I/F	DRAM address output terminal 0.			
138	XRAS	O	D	DRAM I/F	DRAM RAS output. (Column address strobe output)			
139	XMWR	O	D	DRAM I/F	DRAM Write enable.			
140	RD7	I/O	D	DRAM I/F	DRAM data input/output terminal 7.	*		
141	RD6	I/O	D	DRAM I/F	DRAM data input/output terminal 6.	*		
142	DVSS	P		VDD & GND	Digital Ground.			
143	RD5	I/O	D	DRAM I/F	DRAM data input/output terminal 5.	*		
144	RD4	I/O	D	DRAM I/F	DRAM data input/output terminal 4.	*		
145	RD3	I/O	D	DRAM I/F	DRAM data input/output terminal 3.	*		
146	RD2	I/O	D	DRAM I/F	DRAM data input/output terminal 2.	*		
147	RD1	I/O	D	DRAM I/F	DRAM data input/output terminal 1.	*		
148	RD0	I/O	D	DRAM I/F	DRAM data input/output terminal 0.	*		
149	RD15	I/O	D	DRAM I/F	DRAM data input/output terminal 15.	*		



No.	Terminal Name	I/O	A/D	Classification	Function	PU	PD	SMT
150	RD14	I/O	D	DRAM I/F	DRAM data input/output terminal 14.	*		
151	RD13	I/O	D	DRAM I/F	DRAM data input/output terminal 13.	*		
152	RD12	I/O	D	DRAM I/F	DRAM data input/output terminal 12.	*		
153	RD11	I/O	D	DRAM I/F	DRAM data input/output terminal 11.	*		
154	RD10	I/O	D	DRAM I/F	DRAM data input/output terminal 10.	*		
155	RD9	I/O	D	DRAM I/F	DRAM data input/output terminal 9.	*		
156	DVDD18	P		VDD & GND	Digital 1.8V Power. (for internal Logic system)			
157	DVDD33	P		VDD & GND	Digital 3.3V power for I/O.			
158	RD8	I/O	D	DRAM I/F	DRAM data input/output terminal 8.	*		
159	TEST0	O	D	TEST/Monitor	TEST I/O 0.			
160	TEST1	O	D	TEST/Monitor	TEST I/O 1.			
161	TEST2	O	D	TEST/Monitor	TEST I/O 2.			
162	TEST3	O	D	TEST/Monitor	TEST I/O 3.			
163	TEST4	O	D	TEST/Monitor	TEST I/O 4.			
164	TEST5	O	D	TEST/Monitor	TEST I/O 5.			
165	TEST6	O	D	TEST/Monitor	TEST I/O 6.			
166	TEST7	O	D	TEST/Monitor	TEST I/O 7.			
167	TEST8	O	D	TEST/Monitor	TEST I/O 8.			
168	TEST9	O	D	TEST/Monitor	TEST I/O 9.			
169	TEST10	O	D	TEST/Monitor	TEST I/O 10.			
170	TEST11	O	D	TEST/Monitor	TEST I/O 11.			
171	TEST12	O	D	TEST/Monitor	TEST I/O 12.			
172	TEST13	O	D	TEST/Monitor	TEST I/O 13.			
173	TEST14	O	D	TEST/Monitor	TEST I/O 14.			
174	TEST15	O	D	TEST/Monitor	TEST I/O 15.			
175	MODESEL0	I	D	TEST/Monitor	TEST mode select 0. (GND, under normal conditions)			
176	MODESEL1	I	D	TEST/Monitor	TEST mode select 1. (GND, under normal conditions)			
177	DVss	P		VDD & GND	Digital Ground.			
178	MODESEL2	I	D	TEST/Monitor	TEST mode select 2. (GND, under normal conditions)			
179	GIO0	I/O	D	Multi-purpose	Multi-purpose port 0.		*	*
180	GIO1	I/O	D	Multi-purpose	Multi-purpose port 1.		*	*
181	GIO2	I/O	D	Multi-purpose	Multi-purpose port 2.		*	*
182	GIO3	I/O	D	Multi-purpose	Multi-purpose port 3.		*	*
183	DVDD33	P		VDD & GND	Digital 3.3V Power for I/O.			
184	GIO4	I/O	D	General Port	Multi-purpose port 4.		*	*
185	GIO5	I/O	D	General Port	Multi-purpose port 5.		*	*
186	GIO6	I/O	D	General Port	Multi-purpose port 6.		*	*
187	GIO7	I/O	D	General Port	Multi-purpose port 7.		*	*
188	DVDD18	P		VDD & GND	Digital 1.8V Power for I/O. (for internal Logic system)			
189	GIO8	I/O	D	General Port	Multi-purpose port 8.		*	*
190	GIO9	I/O	D	General Port	Multi-purpose port 9.	*	*	*
191	GIO10	I/O	D	General Port	Multi-purpose port 10.		*	*
192	GIO11	I/O	D	General Port	Multi-purpose port 11.		*	*
193	GIO12	I/O	D	General Port	Multi-purpose port 12.	*	*	*
194	DVss	P		VDD & GND	Digital Ground.			
195	GIO13	I/O	D	Multi-purpose	Multi-purpose port 13.	*	*	*
196	GIO14	I/O	D	General Port	Multi-purpose port 14.	*	*	*
197	GIO15	I/O	D	General Port	Multi-purpose port 15.	*	*	*
198	GIO16	I/O	D	General Port	Multi-purpose port 16.		*	*
199	GIO17	I/O	D	General Port	Multi-purpose port 17.		*	*
200	GIO18	I/O	D	General Port	Multi-purpose port 18.		*	*
201	GIO19	I/O	D	General Port	Multi-purpose port 19.		*	*
202	TRST	I	D	JTAG I/F	JTAG Reset input.		*	*
203	TMS	I	D	JTAG I/F	JTAG Mode Select input.	*		*
204	TDI	I	D	JTAG I/F	JTAG Data Input.	*		*
205	TCK	I	D	JTAG I/F	JTAG Clock input.	*		
206	TDO	O	D	JTAG I/F	JTAG Data output.			
207	VMCHG	I	D	MCU I/F	VSTEM / external MCU access selection terminal of system setting register for DSP. (L: VSTEM, H: external MCU)			
208	DVDD18	P		VDD & GND	Digital 1.8V power for internal Logic system.			

M65776BFP (MA:IC101)

Top View



## Pin Assignment

No	Name	I/O	No	Name	I/O	No	Name	I/O	No	Name	I/O
1	GND	-	53	MA[3]	O	105	CLKO	O	157	PDR[8]	O
2	BCLK	I	54	MA[4]	O	106	CLKIN	I	158	PDR[9]	O
3	BDEN	I	55	MA[2]	O	107	AVDD18	-	159	LRCLK	O
4	BDREQ	O	56	VDD18	-	108	AGND18	-	160	CDLRCK	I
5	BSECH	I	57	VDD33	-	109	NCO	NC	161	CDBCK	I
6	HD[0]	I/O	58	MA[5]	O	110	NCO	NC	162	CDDATA	I
7	HD[1]	I/O	59	MA[1]	O	111	NCO	NC	163	CDDIN	I
8	HD[2]	I/O	60	MA[6]	O	112	GND	-	164	AO0	O
9	HD[3]	I/O	61	MA[0]	O	113	AVDD33	-	165	GND	-
10	HD[4]	I/O	62	MA[7]	O	114	DAOUTB	AO	166	AO1	O
11	HD[5]	I/O	63	MA[10]	O	115	AVRI	AI	167	AO2	O
12	VDD18	-	64	GND	-	116	PAB	AO	168	AOD	O
13	VDD33	-	65	MA[8]	O	117	IREF	AI	169	AAD	O
14	HD[6]	I/O	66	MBA[1]	O	118	BIAS2	AI	170	DOUT0	O
15	HD[7]	I/O	67	MA[9]	O	119	PAY	AO	171	DOUT1	O
16	HD[8]	I/O	68	MBA[0]	O	120	BIAS1	AI	172	ACLK1	I
17	HD[9]	I/O	69	MA[11]	O	121	AVDD33	-	173	DACCLK	O
18	HD[10]	I/O	70	DCS	O	122	PAR	AO	174	VDD18	-
19	HD[11]	I/O	71	VDD18	-	123	AVDD33	-	175	VDD33	-
20	GND	-	72	VDD33	-	124	AGND33	-	176	DOCLK	O
21	HD[12]	I/O	73	DCS2	O	125	GND	-	177	PWD	TO
22	HD[13]	I/O	74	DCS3	O	126	NCO	NC	178	CSYNC	I
23	HD[14]	I/O	75	DCS4	O	127	NCO	NC	179	OSDKEY	O
24	HD[15]	I/O	76	DCS5	O	128	NCO	NC	180	VSUNC	O
25	HA[0]	I	77	RAS	O	129	NCO	NC	181	HSUNC	O
26	HA[1]	I	78	CAS	O	130	NCO	NC	182	PXCLKP	O
27	VDD18	-	79	MCLK	O	131	NCO	NC	183	PXCLK	O
28	VDD33	-	80	DWE	O	132	NCO	NC	184	PD[0]	O
29	HA[2]	I	81	GND	-	133	NCO	NC	185	PD[1]	O
30	HA[3]	I	82	DQMU	O	134	VDD18	-	186	PD[2]	O
31	HA[4]	I	83	DQML	O	135	VDD33	-	187	GND	-
32	HA[5]	I	84	MD[7]	I/O	136	NCO	NC	188	PD[3]	O
33	HA[6]	I	85	MD[8]	I/O	137	NCO	NC	189	PD[4]	O
34	HA[7]	I	86	MD[6]	I/O	138	NCO	NC	190	PD[5]	O
35	GND	-	87	MD[9]	I/O	139	NCO	NC	191	PD[6]	O
36	HA[8]	I	88	VDD18	-	140	NCO	NC	192	PD[7]	O
37	HA[9]	I	89	VDD33	-	141	NCO	NC	193	RESET	I
38	HA[10]	I	90	MD[5]	I/O	142	NCO	NC	194	HMODE[0]	I
39	HA[11]	I	91	MD[10]	I/O	143	NCO	NC	195	HMODE[1]	I
40	CS	I	92	MD[4]	I/O	144	NCO	NC	196	TEST[0]	I
41	RE	I	93	MD[11]	I/O	145	GND	-	197	TEST[1]	I
42	VDD18	-	94	MD[3]	I/O	146	NCO	NC	198	VDD18	-
43	VDD33	-	95	MD[12]	I/O	147	NCO	NC	199	VDD33	-
44	WE	I	96	GND	-	148	NCO	NC	200	TEST[2]	I
45	BHE	I	97	MD[2]	I/O	149	NCO	NC	201	BD[0]	I
46	RDY	TO	98	MD[13]	I/O	150	NCO	NC	202	BD[1]	I
47	INT1	O	99	MD[1]	I/O	151	NCO	NC	203	BD[2]	I
48	INT2	O	100	MD[14]	I/O	152	NCO	NC	204	BD[3]	I
49	INT3	O	101	MD[0]	I/O	153	NCO	NC	205	BD[4]	I
50	GND	-	102	MD[15]	I/O	154	NCO	NC	206	BD[5]	I
51	DREQ	O	103	VDD18	-	155	VDD18	-	207	BD[6]	I
52	DACK	I	104	VDD33	-	156	VDD33	-	208	BD[7]	I

NC: NO Connection  
TO: Tri-State Output  
AO: Analog Output  
AI: Analog Input

**Functions (Bit stream input interface / SDRAM interface)**

PIN Name	I/O	Functions
BD[7:0]	I	Bit Stream data input.
BCLK	I	Strobe Signal from BD.
BDEN	I	The validity of the data extracted from BD is checked.
BDREQ	O	Data Request signal.
BSECH	I	Directs whether the data of BD is the head byte of a selector.
MD[15:0]	I/O	Data bus line with SDRAM
MA[11:0]	O	SDRAM Address bus line
MBA[1:0]	O	SDRAM Bank select line.
DCS	O	SDRAM Chip select.
DCS2	O	SDRAM Chip select.
DCS3	O	SDRAM Chip select.
DCS4	O	SDRAM Chip select.
DCS5	O	SDRAM Chip select.
RAS	O	SDRAM RAS (Row Address Strobe) control.
CAS	O	SDRAM CAS (Column Address Strobe) control.
DQMU	O	SDRAM DQM control.
DQML	O	SDRAM DQM control.
DWE	O	SDRAM WE control.
MCLK	O	SDRAM operation clock.

**Functions (Video output interface)**

PIN Name	I/O	Functions
PXCLK	O	Pixel Clock, 27 MHz.
PXCLKP	O	Pixel Clock, 54 MHz.
PD[7:0]	O	Digital Pixel Data.
CSYNC	I	Composite SYNC signal input.
OSDKEY	O	OSD Key flag output.
PWD	O	Phase detector output for external synchronous operation.
HSYNC	O	Horizontal SYNC output.
VSYSN	O	Vertical SYNC output.

**Functions (Audio output interface)**

PIN Name	I/O	Functions
A00	O	Serial PCM data for DAC.
A01	O	Serial PCM data for DAC.
A02	O	Serial PCM data for DAC.
A0D	O	Serial PCM data for DAC.
AAD	O	Ancillary data output.
DOCLK	O	PCM bit Clock.
LRCLK	O	Channel Clock output for PCM audio data.
DACCLK	O	Over-sampling Clock for DAC.
CDBCK	I	PCM Bit Clock inputted from CDDSP.
CDLRCK	I	L/R Clock inputted from CDDSP.
CDDIN	I	PCM audio data inputted from CDDSP.
CDATA	I	Digital audio interface input.
DOU0	O	Digital audio interface output.
DOU1	O	Digital audio interface output

**Functions (Host interface)**

Pin Name	I/O	Functions
HD[15:0]	I/O	Data I/O.
HA[11:0]	I	Address input.
BHE	I	Byte High Enable input.
RE	I	Read Enable input.
WE	I	Write Enable input.
CS	I	Chip Select input.
RDY	O	Acknowledge signal which shows that read-out or the writing of data was completed.
INTR INT2 INT3	O	Interruption request signal over external CPU from M65776AFP. "L" is outputted at the time of interruption generating and "H" is outputted when other.
DREQ	O	DMA request signal for bit map transmission.
DACK	I	DMA acknowledge signal for bit map transmission.
HMODE[1:0]	I	Host interface operation mode setting.
HMODE[2]	I	It fixed to "L" potential..

**Video DAC**

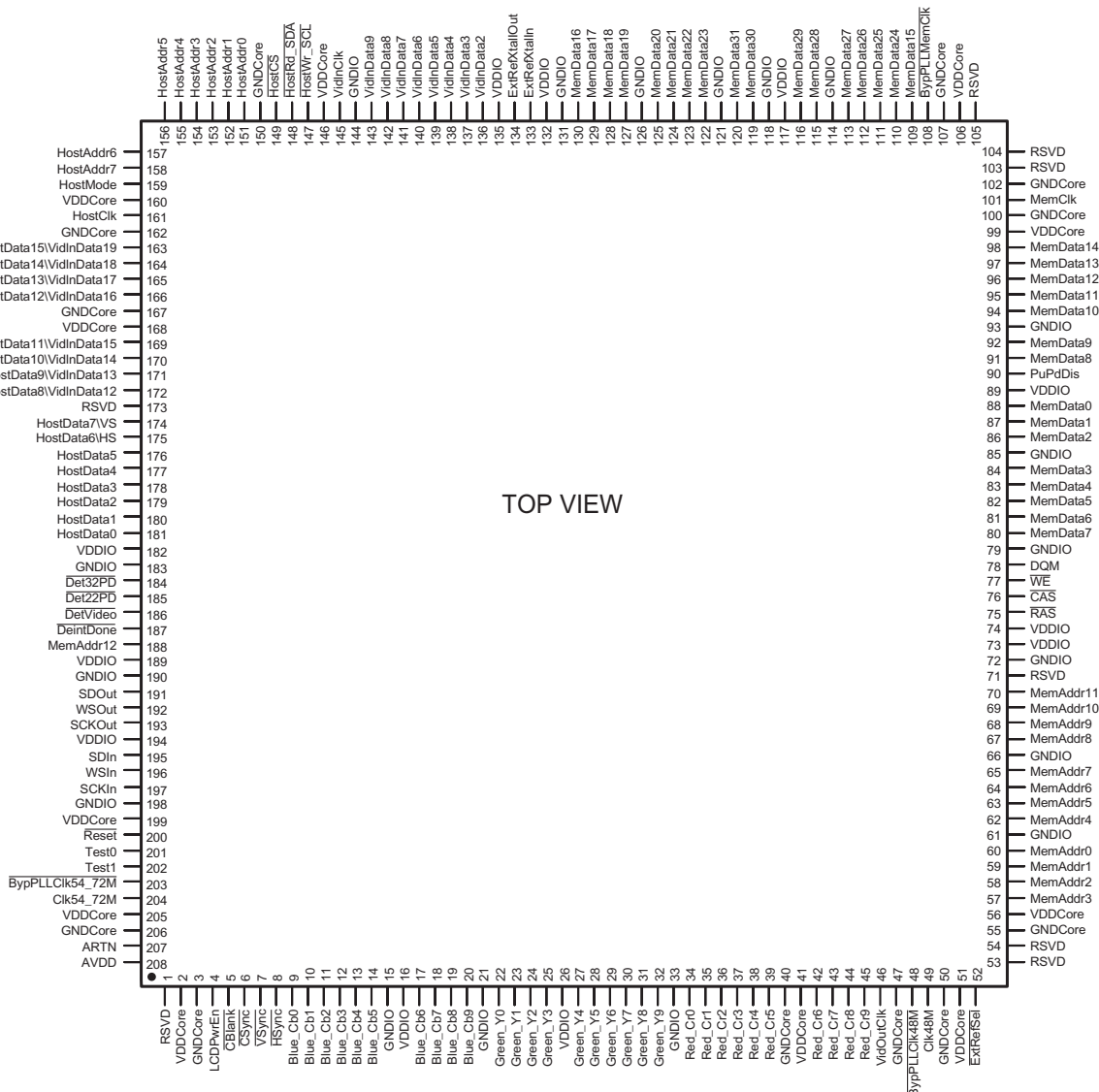
Pin Name	I/O	Functions
IREF	I	Reference current input.
AVRI	I	Reference voltage input.
BIAS1	I	Bias voltage for the source of current.
BIAS2	I	Bias voltage for the source of current.
PAY	O	Analog current output.(for Y)
PAB	O	Analog current output.(for Pb)
PAC	O	Analog current output.(for Pr)
DAOUTB	O	It fixed to Analog Ground..
AVDD33	Power	+3.3V Analog Power supply.
AGND33	Power	Analog Ground.

**System service**

Pin Name	I/O	Functions
CLKIN	I	27 MHz, system Clock input.
CLKO	O	27 MHz, Clock output.
ACLKI	I	Audio Clock input.
RESET	I	Hardware Reset.
TEST[2:0]	I	It fixed to "L" potential.
VDD18	Power	+1.8 V Power for internal.
VDD33	Power	+3.3 V Power for external interface.
GND	Power	Ground.
AVDD18	Power	+1.8 V Power for internal PLL.
AGND18	Power	It fixed to Ground. Ground for internal PLL.

# SiI504CM208 (VI: IC701)

## Top View



TOP VIEW

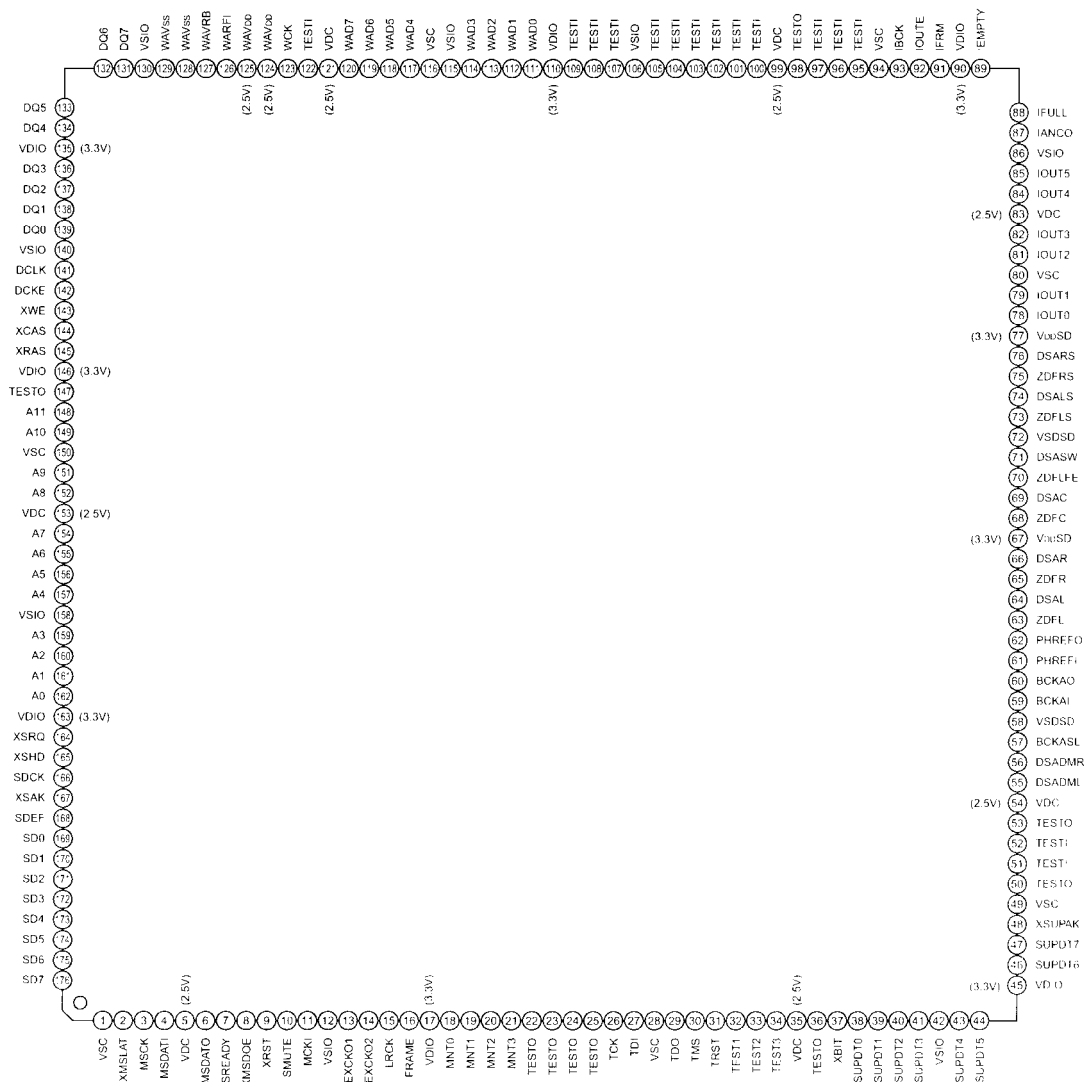
## SiI504CM208 Terminal Function

Pin No.	Pin Name	I/O	Function
2, 41, 51, 56, 99, 106, 146, 160, 168, 199, 205	VDDCore	Pwr	1.8V Core Power.
3, 40, 47, 50, 55, 100, 102, 107, 150, 162, 167, 206	GNDCore	Pwr	Digital Ground for Core Power.
4	LCDPwrEn	Out	LCD Power Enable
5	CBlank	Out	Composite Blank
6	CSync	Out	Composite Sync
7	VSync	Out	Vertical Sync
8	HSync	Out	Horizontal Sync
9~14, 17~20	Blue_Cb[9:0]	Out	Blue Data (RGB output mode); Cb Data (YCrCb output mode)
15, 21, 33, 61, 66, 72, 79, 85, 93, 114, 118, 121, 126, 131, 144, 183, 190, 198	GNDIO	Pwr	Digital Ground for I/O Power.

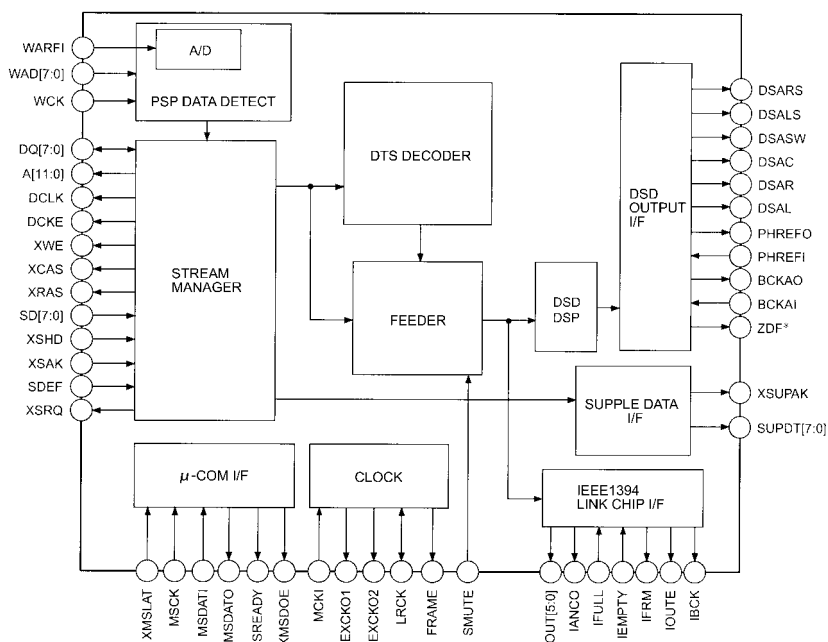
Pin No.	Pin Name	I/O	Function
16, 26, 73, 74, 89, 117, 132, 135, 182, 189, 194	VDDIO	Pwr	3.3V I/O Power.
22~25, 27~32	Green_Y[9:0]	Out	Green Data (RGB output mode); Y Data (YCrCb output mode)
34~39, 42~45	Red_Cr[9:0]	Out	Red Data (RGB output mode); Cr Data (YCrCb output mode)
46	VidOutClk	Out	Video Output Clock, 36, 27 or 24 MHZ
48	BypPLLCIk48M	In	Bypass PLL for Clk48M.
49	Clk48M	InOut	48 MHz Clock.
52	ExtRefSel	In	External APLL Reference Select.
57~60, 62~65, 67~70, 188	MemAddr[12:0]	InOut	SDRAM Address when an output. Configuration at reset when an input.
75	RAS	Out	SDRAM Row Address Strobe.
76	CAS	Out	SDRAM Column Address Strobe.
77	WE	Out	SDRAM Write Enable.
78	DQM	Out	SDRAM Data Mask.
80~84, 86~88, 91, 92, 94~98, 109, 110~113, 115, 116, 119, 120, 122~125, 127~130	MemData[31:0]	InOut	SDRAM Data.
90	PuPdDis	In	Internal pullup and pulldown disable test function.
101	MemClk	InOut	SDRAM Clock.
108	BypPLLMemClk	In	Bypass PLL for MemClk.
133	ExtRefXtalIn	In	External APLL Reference Crystal/oscillator Input.
134	ExtRefXtalOut	Out	External APLL Reference Crystal Output.
136~143	VidInData[9:2]	In	Multiplexed Video Input Data; Y Video Input Data.
145	VidInClk	In	Video Input Clock, 27.0 MHz
147	HostWr_SCL	In	186-Compatible Write when HostMode=0. Serial Clock when HostMode=1.
148	HostRd_SDA	InOut	186-Compatible Read when HostMode=0. Serial Data when HostMode=1.
149	HostCS	In	186-Compatible Chip Select when HostMode=0. When HostMode=1, must be tied to VDD or pulled up to VDD.
151~158	HostAddr[7:0]	In	186-Compatible Address when HostMode=0. No connect when HostMode=1.
159	HostMode	In	Serial Host Interface when HostMode=1. 186-compatible host interface when HostMode=0.
161	HostClk	InOut	186-Compatible Clock when HostMode=0. No connect when HostMode=1.
163~166, 169~172	HostData[15:8] (VidInData[19:2])	InOut	186-Compatible Data when HostMode=0. Chroma video input data when HostMode=1.
174	HostData[7](VS)	InOut	186-Compatible Data when HostMode=0. Vertical sync input when HostMode=1.
175	HostData[6](HS)	InOut	186-Compatible Data when HostMode=0. Horizontal sync input when HostMode=1.
176~181	HostData[5:0]	InOut	186-Compatible Data when HostMode=0. No connect when HostMode=1.
184	Det32PD	Out	3:2 Pulldown Sequence Detected.
185	Det22PD	Out	2:2 Pulldown Sequence Detected.
186	DetVideo	Out	Interlaced Video Sequence Detected.
187	DeintDone	Out	Deinterlace processing complete for current field period.
191	SDOut	Out	Serial Digital Audio Output Data.
192	WSOut	Out	Serial Digital Audio Output Word Select.
193	SCKOut	Out	Serial Digital Audio Output Clock.
195	SDIn	In	Serial Digital Audio Input Data.
196	WSIn	In	Serial Digital Audio Input Word Select.
197	SCKIn	In	Serial Digital Audio Input Clock.
200	Reset	In	Hardware Reset.
201, 202	Test[1:0]	In	Production hardware test support.
203	BypPLLCIk54_72M	In	Bypass PLL for Clk54_72M.
204	Clk54_72M	InOut	54 or 72 MHz Clock.
207	ARTN	Pwr	Analog Return for PLLs.
208	AVDD	Pwr	1.8V Analog Power for PLL.

# CXD-2753R (MA: IC401)

## Pin Assignment



## Block Diagram





## Terminal Functions

	Pin Name	I/O	Functions
1	VSC	-	It fixed to ground.( for Core)
2	XMSLAT	I	Latch input for $\mu$ COM serial communication.
3	MSCK	I	Shift clock input for $\mu$ COM serial communication.
4	MSDATI	I	Data input for $\mu$ COM serial communication.
5	VDC	-	+2.5V Power for Core.
6	MSDATO	O	Data output for $\mu$ COM serial communication. "Hi-Z" potential except the output mode.
7	MSREADY	O	Completion flag of output preparation for $\mu$ COM serial communication. "L" is outputted at the time of completion.
8	XMSDOE	O	Output enable pin for $\mu$ COM serial communication. "L" is outputted at the time of MSDATO mode.
9	XRST	I	Reset pin. The whole IC is reset by at the time of "L" potential.
10	SMUTE	lpd	Soft Mute. Soft mute of the audio output is carried out at the time of "H" potential. It releases at the time of "L" potential.
11	MCKI	I	Master Clock input.
12	VSIO	-	It fixed to Ground. Ground for I/O.
13	EXCKO1	O	External output Clock 1.
14	EXCKO2	O	External output Clock 2.
15	LRCK	O	44.1kHz, 1Fs Clock output.
16	FRAME	O	Frame signal output.
17	VDIO	-	+3.3V Power for I/O.
18	MNT0	O	Monitor output.
19	MNT1	O	Monitor output.
20	MNT2	O	Monitor output.
21	MNT3	O	Monitor output.
22	TESTO	O	Output terminal for a Test. (open)
23	TESTO	O	Output terminal for a Test.(open)
24	TESTO	O	Output terminal for a Test.(open)
25	TESTO	O	Output terminal for a Test.(open)
26	TCK	I	Clock input for a Test. It fixed to "L" potential.
27	TDI	lpu	Input pin(pull-up) for a Test.(open)
28	VSC	-	It fixed to Ground. Ground for CORE.
29	TDO	O	Output for a Test.(open).
30	TMS	lpu	Input pin(pull-up) for a Test.(open)
31	TRST	lpu	Reset pin(pull-up) for a Test. Input the Power-on reset signal or fixed to "L" potential.
32	TEST1	I	Test input pin. It fixed to "L" potential.
33	TEST2	I	Test input pin. It fixed to "L" potential.
34	TEST3	I	Test input pin. It fixed to "L" potential.
35	VDC	-	+2.5V Power for CORE.
36	TESTO	O	Out put for TEST. It fixed to open.
37	XBIT	O	DST monitor.
38	SUPDT0	O	Supplementary data output. (LSB)
39	SUPDT1	O	Supplementary data output.
40	SUPDT2	O	Supplementary data output.
41	SUPDT3	O	Supplementary data output.
42	VSIO	-	Ground for I/O.
43	SUPDT4	O	Supplementary data output.
44	SUPDT5	O	Supplementary data output.
45	VDIO	-	+3.3V Power for I/O.
46	SUPDT6	O	Supplementary data output.
47	SUPDT7	O	Supplementary data output. (MSB)
48	XSUPAK	O	Supplementary data Acknowledge output terminal.
49	VSC	-	Ground for CORE.

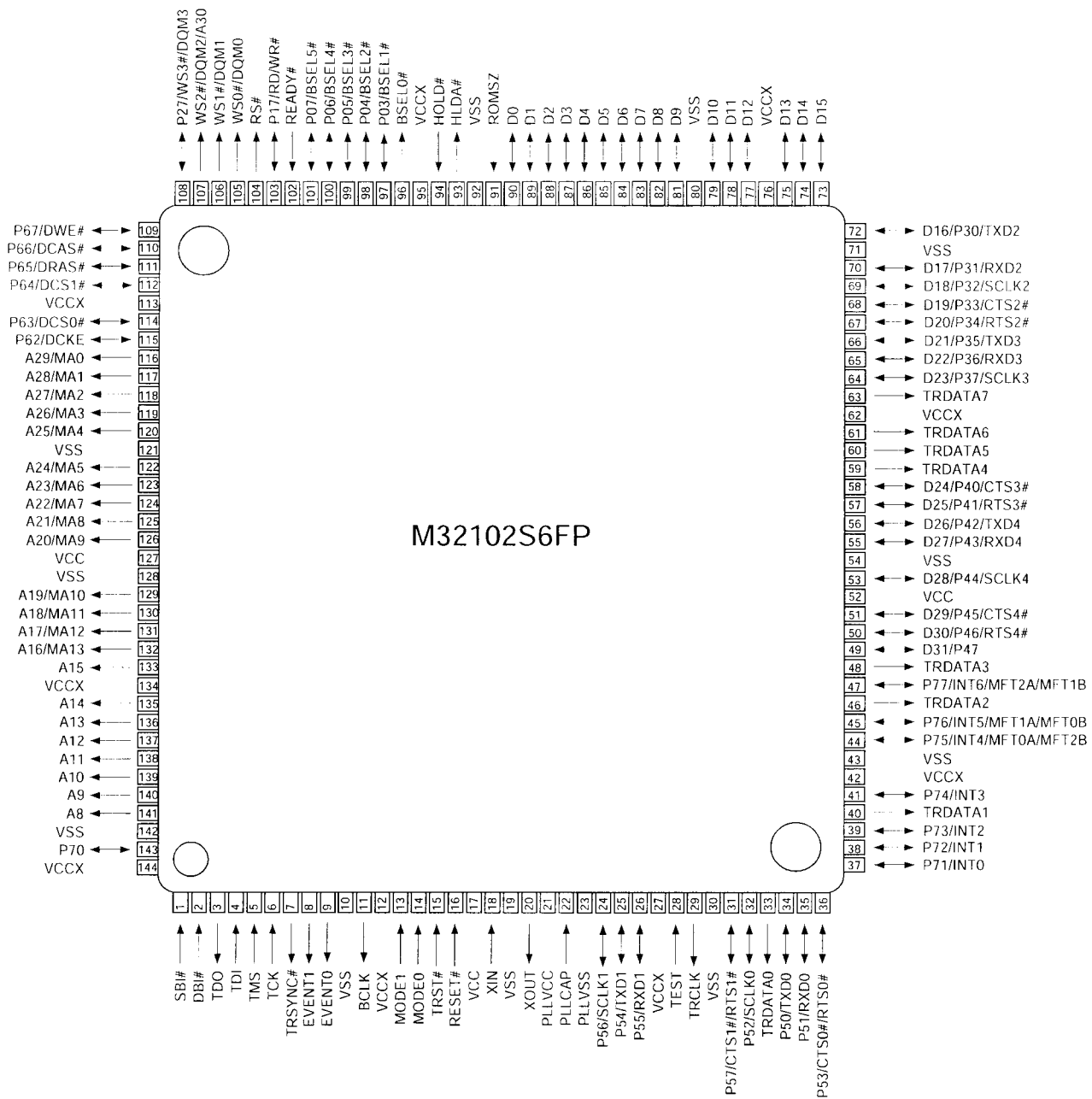
	Pin Name	I/O	Functions
50	TESTO	O	Output for TEST. (open)
51	TESTI	I	Input for TEST. It fixed to "L" potential.
52	TESTI	I	Input for TEST. It fixed to "L" potential.
53	TESTO	O	Output for TEST. (open)
54	VDC	-	+2.5V Power for CORE.
55	DSADML	O	DSD Data output terminal for Lch Down Mix.
56	DSADMR	O	DSD Data output terminal for Rch Down Mix.
57	BCKASL	I	I/O selection terminal of the Bit clock for DSD data output. L=input (Slave), H=output (Master)
58	VSDSD	-	Ground terminal for DSD data output.
59	BCKAI	I	Bit clock input terminal for DSD data output. Input a Bit clock into this terminal at the time of BCKASL="L" potential.
60	BCKAO	O	Bit clock output terminal for DSD data output. Bit clock output from this terminal at the time of BCKASL="H" potential.
61	PHREFI	I	Reference phase signal input terminal for DSD output phase modulation.
62	PHREFO	O	Reference phase signal output terminal for DSD output phase modulation.
63	ZDFL	O	Lch zero-data detection flag (at the time of $\mu$ com setup). It will be set to "H" if non-sound data continues 300 msecs.
64	DSAL	O	DSD data output terminal for Lch speaker.
65	ZDFR	O	Rch zero-data detection flag (at the time of $\mu$ com setup). It will be set to "H" if non-sound data continues 300 msecs.
66	DSAR	O	DSD data output terminal for Rch speaker.
67	V <sub>DDSD</sub>	-	+3.3V Power for DSD data output.
68	ZDFC	O	Cch zero-data detection flag (at the time of $\mu$ com setup). It will be set to "H" if non-sound data continues 300 msecs.
69	DSAC	O	DSD data output terminal for Cch speaker.
70	ZDFLFE	O	LFEch zero-data detection flag (at the time of $\mu$ com setup). It will be set to "H" if non-sound data continues 300 msecs.
71	DSASW	O	DSD data output terminal for SWch speaker.
72	VSDSD	-	Ground for DSD data output.
73	ZDFLS	O	LSch zero-data detection flag (at the time of $\mu$ com setup). It will be set to "H" if non-sound data continues 300 msecs.
74	DSALS	O	DSD data output terminal for LSch speaker.
75	ZDFRS	O	RSch zero-data detection flag (at the time of $\mu$ com setup). It will be set to "H" if non-sound data continues 300 msecs.
76	DSARS	O	DSD data output terminal for RSch speaker.
77	V <sub>DDSD</sub>	O	+3.3V Power for DSD data output.
78	IOOUT0	O	Data output terminal 0 for IEEE1394 link chip I/F.
79	IOOUT1	O	Data output terminal 1 for IEEE1394 link chip I/F.
80	VSC	-	Ground for CORE.
81	IOOUT2	O	Data output terminal 2 for IEEE1394 link chip I/F.
82	IOOUT3	O	Data output terminal 3 for IEEE1394 link chip I/F.
83	VDC	-	+2.5V Power for CORE.
84	IOOUT4	O	Data output terminal 4 for IEEE1394 link chip I/F.
85	IOOUT5	O	Data output terminal 5 for IEEE1394 link chip I/F.
86	VSIO	-	Ground for I/O.
87	IANCO	O	Transmission information data output terminal for IEEE1394 link chip I/F.
88	IFULL	I	Data transmission hold request signal input terminal for IEEE1394 link chip I/F.
89	IEMPTY	I	High speed transmission request signal input terminal for IEEE1394 link chip I/F.
90	VDIO	-	+3.3V Power for I/O.
91	IFRM	O	Frame reference signal output terminal for IEEE1394 link chip I/F.
92	IOUTE	O	Enable signal output terminal for IEEE1394 link chip I/F.
93	IBCK	O	Data transmission clock output terminal for IEEE1394 link chip I/F.
94	VSC	-	Ground for CORE.
95	TESTI	I	TEST input terminal. It fixed to "H" potential.

	Pin Name	I/O	Functions
96	TESTI	I	TEST input terminal. It fixed to "L" potential.
97	TESTI	Ipu	TEST input terminal. It fixed to "H" potential.
98	TESTO	O	TEST output terminal. (open)
99	VDC	-	+2.5V Power for CORE.
100	TESTI	I	TEST input terminal. It fixed to "L" potential.
101	TESTI	I	TEST input terminal. It fixed to "L" potential.
102	TESTI	I	TEST input terminal. It fixed to "L" potential.
103	TESTI	I	TEST input terminal. It fixed to "L" potential.
104	TESTI	I	TEST input terminal. It fixed to "L" potential.
105	TESTI	I	TEST input terminal. It fixed to "L" potential.
106	VSIO	-	Ground for I/O.
107	TESTI	I	TEST input terminal. It fixed to "L" potential.
108	TESTI	I	TEST input terminal. It fixed to "L" potential.
109	TESTI	I	TEST input terminal. It fixed to "L" potential.
110	VDIO	-	+3.3V Power for I/O.
111	WAD0	I	External A/D data input terminal(LSB) for PSP physical disc mark detection.
112	WAD1	I	External A/D data input terminal for PSP physical disc mark detection.
113	WAD2	I	External A/D data input terminal for PSP physical disc mark detection.
114	WAD3	I	External A/D data input terminal for PSP physical disc mark detection.
115	VSIO	-	Ground for I/O.
116	VSC	-	Ground for CORE.
117	WAD4	I	External A/D data input terminal for PSP physical disc mark detection.
118	WAD5	I	External A/D data input terminal for PSP physical disc mark detection.
119	WAD6	I	External A/D data input terminal for PSP physical disc mark detection.
120	WAD7	I	External A/D data input terminal(MSB) for PSP physical disc mark detection.
121	VDC	-	+2.5V Powe for CORE.
122	TESTI	I	TEST input terminal. It fixed to "L" potential.
123	WCK	I	Operation clock for PSP physical disc mark detection.
124	WAVdd	-	+2.5V Power. A/D Power supply for PSP physical disc mark detection.
125	WAVdd	-	+2.5V Power. A/D Power supply for PSP physical disc mark detection.
126	WARFI	Ai	Analog RF signal input terminal for PSP physical disc mark detection.
127	WAVRB	Ai	A/D bottom reference terminal for PSP physical disc mark detection.
128	WAVss	-	A/D Ground terminal for PSP physical disc mark detection.
129	WAVss	-	A/D Ground terminal for PSP physical disc mark detection.
130	VSIO	-	Ground for I/O.
131	DQ7	I/O	SDRAM data input/output terminal. (MSB)
132	DQ6	I/O	SDRAM data input/output terminal.
133	DQ5	I/O	SDRAM data input/output terminal.
134	DQ4	I/O	SDRAM data input/output terminal.
135	VDIO	-	+3.3V Power for I/O.
136	DQ3	I/O	SDRAM data input/output terminal.
137	DQ2	I/O	SDRAM data input/output terminal.
138	DQ1	I/O	SDRAM data input/output terminal.
139	DQ0	I/O	SDRAM data input/output terminal. (LSB)
140	VSIO	-	Ground for I/O.
141	DCLK	O	Clock output terminal for SDRAM.
142	DCKE	O	Clock enable output terminal for SDRAM.
143	XWE	O	Write enable output terminal for SDRAM.
144	XCAS	O	Colomn address strobe output terminal for SDRAM.
145	XRAS	O	Row address strobe output terminal for SDRAM.
146	VDIO	-	+3.3V Power for I/O.
147	TESTO	O	Output terminal for TEST. (open)

	Pin Name	I/O	Functions
148	A11	O	Address output terminal for SDRAM. (MSB)
149	A10	O	Address output terminal for SDRAM.
150	VSC	-	Ground for CORE.
151	A9	O	Address output terminal for SDRAM.
152	A8	O	Address output terminal for SDRAM.
153	VDC	-	+2.5V Power for CORE.
154	A7	O	Address output terminal for SDRAM.
155	A6	O	Address output terminal for SDRAM.
156	A5	O	Address output terminal for SDRAM.
157	A4	O	Address output terminal for SDRAM.
158	VSIO	-	Ground for I/O.
159	A3	O	Address output terminal for SDRAM.
160	A2	O	Address output terminal for SDRAM.
161	A1	O	Address output terminal for SDRAM.
162	A0	O	Address output terminal for SDRAM. (LSB)
163	VDIO	-	+3.3V Power for I/O.
164	XSRQ	O	Output terminal of the Data Request signal inputted a front-end processor.
165	XSHD	I	Input terminal of the header Flag outputted from a front-end processor.
166	SDCK	I	Input terminal of the data conveyance Clock outputted from a front-end processor.
167	XASK	I	Input terminal of the data valid Flag outputted from a front-end processor.
168	SDEF	I	Input terminal of the error Flag outputted from a front-end processor.
169	SD0	I	Input terminal of the stream Data outputted from a front-end processor.
170	SD1	I	Input terminal of the stream Data outputted from a front-end processor.
171	SD2	I	Input terminal of the stream Data outputted from a front-end processor.
172	SD3	I	Input terminal of the stream Data outputted from a front-end processor.
173	SD4	I	Input terminal of the stream Data outputted from a front-end processor.
174	SD5	I	Input terminal of the stream Data outputted from a front-end processor.
175	SD6	I	Input terminal of the stream Data outputted from a front-end processor.
176	SD7	I	Input terminal of the stream Data outputted from a front-end processor.

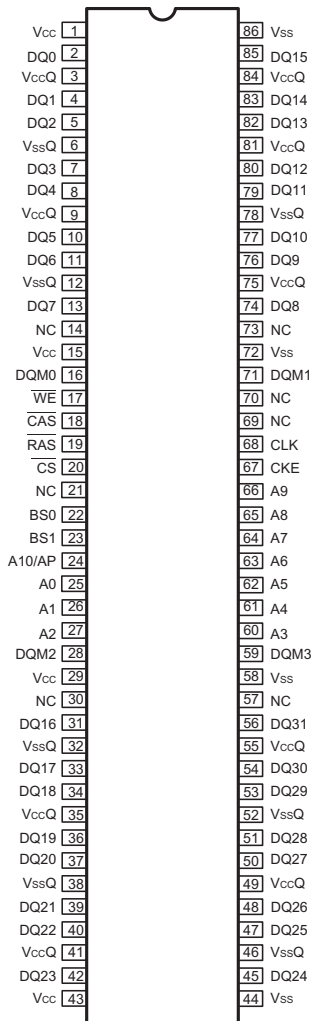
Ipu: Pull-up input Ipd: Pull-down input Ai: Analog input

M32102S6FP (MA: IC102)



### 64M SDRAM (VI: IC702)

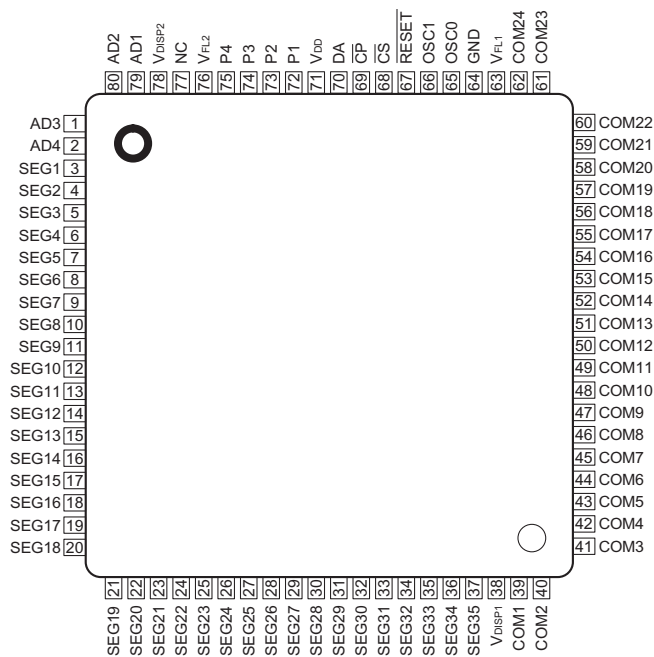
#### W986432AH



#### W986432AH Terminal Function

Pin No.	Pin Name	Function
25~27, 60~66, 24	A0-A10	Address for row and column
22, 23	BS0, BS1	Bank Select to activate during row address latch time
2, 4, 5, 7, 8, 10, 11, 13, 31, 33, 34, 36, 37, 39, 40, 42, 45, 47, 48, 50, 51, 53, 54, 56, 74, 76, 77, 79, 80, 82, 83, 85	DQ0-DQ31	Data Input / Output pins for data
20	$\overline{\text{CS}}$	Chip Select to disable or enable the command decoder
19	$\overline{\text{RAS}}$	Row Address Strobe
18	$\overline{\text{CAS}}$	Column Address Strobe
17	$\overline{\text{WE}}$	Write Enable
16, 28, 59, 71	DQM0-DQM3	Input / Output Mask
68	CLK	Clock Inputs
67	CKE	Clock Enable
1, 15, 29, 43	Vcc	Power (+3.3V)
44, 58, 72, 86	Vss	Ground
3, 9, 35, 41, 49, 55, 75, 81	VccQ	Power (+3.3V) for I/O Buffer
6, 12, 32, 38, 46, 52, 78, 84	VssQ	Ground for I/O Buffer
14, 21, 30, 57, 69, 70, 73	NC	No Connection

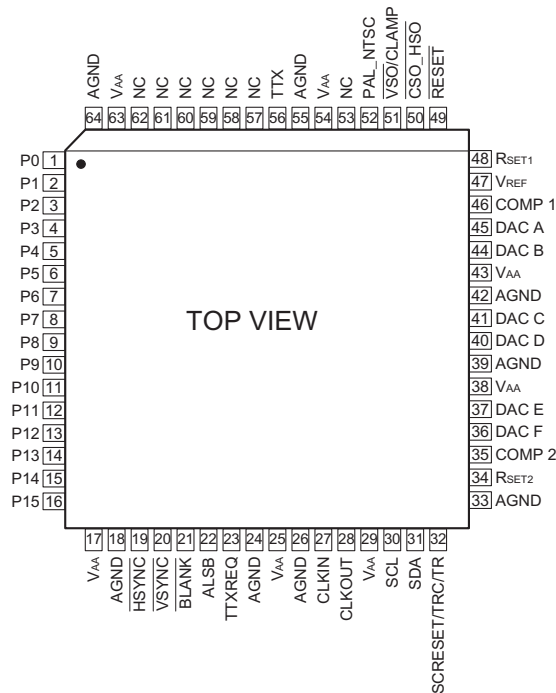
ML9207-01 (PD: IC101)



ML9207-01 Terminal Function

Pin No.	Pin Name	I/O	Function
3~37	SEG1~35	O	FL display anode drive output pin
39~62	COM1~24	O	FL display grid drive output pin
1, 2, 79, 80	AD1~4	O	FL display anode drive output pin
72~75	P1~4	O	General port output pin
71	VDD		VDD-GND: Power supply for logic block Vdisp-VFL: Power supply for FL display drive For VDD and Vdisp, apply from same power source
38, 78	Vdisp1~2		
64	GND		
63, 76	VFL1~2		
70	DA	I	Serial data input pin (positive logic)
69	CP	I	Shift clock input pin
68	CS	I	Chip select input pin
67	RESET	I	Reset input pin
65	OSC0	I	Pin for self-oscillation
66	OSC1	O	

## ADV7190 (VI: IC705) For Europe model

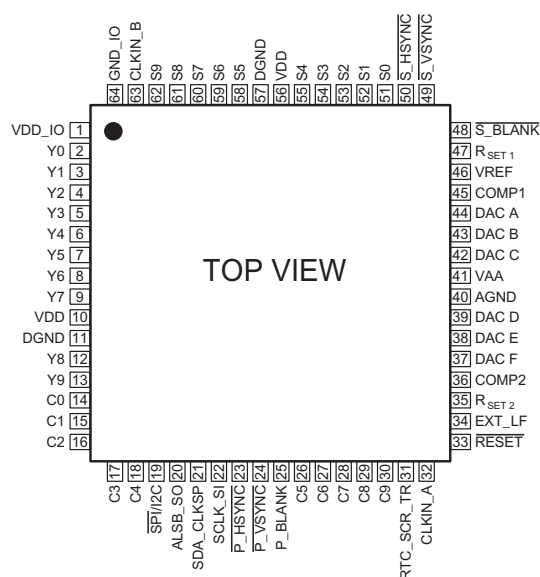


## ADV7190 Terminal Function

Pin No.	Pin Name	I/O	Function
1~16	P0-P15	I	8-Bit or 16-Bit 4:2:2 Multiplexed YCrCb Pixel Port. The LSB of the input data is set up on Pin P0.
17, 25, 29, 38, 43, 54, 63	VAA	P	Analog Power Supply (3.3V to 5V).
18, 24, 26, 33, 39, 42, 55, 64	AGND	G	Analog Ground.
19	$\overline{\text{HSYNC}}$	I/O	$\overline{\text{HSYNC}}$ (Modes 1, 2, and 3) Control Signal. This pin may be configured to be an output (Master Mode) or an input (Slave Mode) and accept Sync Signals.
20	$\overline{\text{VSYNC}}$	I/O	$\overline{\text{VSYNC}}$ Control Signal. This pin may be configured as an output (Master Mode) or as an input (Slave Mode) and accept $\overline{\text{VSYNC}}$ as a Control Signal.
21	$\overline{\text{BLANK}}$	I/O	Video Blanking Control Signal. This signal is optional. For further information see Vertical Blanking Data Insertion and $\overline{\text{BLANK}}$ Input section.
22	ALSB	I	TTL Address Input. This signal sets up the LSB of the MPU address.
23	TTXREQ	O	Teletext Data Request Output Signal, used to control teletext data transfer.
27	CLKIN	I	TTL Clock Input. Requires a stable 27 MHz reference clock for standard operation. Alternatively, a 24.5454 MHz (NTSC) or 29.5 MHz (PAL) can be used for square pixel operation.
28	CLKOUT	O	Clock Output Pin.
30	SCL	I	MPU Port Serial Interface Clock Input.
31	SDA	I/O	MPU Port Serial Data Input/Output.
32	SCRESET/RTC/TR	I	Multifunctional Input: Real-Time Control (RTC) Input, Timing Reset Input, Subcarrier Reset Input.
34	RSET2	I	A 1200 ohm resistor connected from this pin to ground is used to control full-scale amplitudes of the Video Signals from DACs D, E, and F.
35	COMP 2	O	Compensation Pin for DACs D, E, and F. Connect a 0.1 $\mu\text{F}$ Capacitor from COMP2 to VAA.
36	DAC F	O	S-Video C/V/RED Analog Output. This DAC is capable of providing 4.33 mA output.
37	DAC E	O	S-Video Y/U/BLUE Analog Output. This DAC is capable of providing 4.33 mA output.
40	DAC D	O	Composite Y/GREEN Analog Output. This DAC is capable of providing 4.33 mA output.
41	DAC C	O	S-Video C/V/RED Analog Output. This DAC is capable of providing 4.33 mA output.
44	DAC B	O	S-Video Y/U/BLUE Analog Output. This DAC is capable of providing 4.33 mA output.
45	DAC A	O	Composite Y/GREEN Analog Output. This DAC is capable of providing 4.33 mA output.
46	COMP 1	O	Compensation Pin for DACs A, B, and C. Connect a 0.1 $\mu\text{F}$ Capacitor from COMP1 to VAA.
47	VREF	I/O	Voltage Reference Input for DACs or Voltage Reference Output (1.235V). An external VREF cannot be used in 4x oversampling mode.
48	RSET1	I	A 1200 ohm resistor connected from this pin to ground is used to control full-scale amplitudes of the Video Signals from DACs A, B, and C.
49	$\overline{\text{RESET}}$	I	The input resets the on-chip timing generator and sets the ADV7190/ADV7191 into default mode. See Appendix 8 for Default Register Settings.
50	$\overline{\text{CSO\_HSO}}$	O	Dual function $\overline{\text{CSO}}$ or $\overline{\text{HSO}}$ Output Sync Signal at TTL Level.
51	$\overline{\text{VSO/CLAMP}}$	I/O	Multifunction Pin. $\overline{\text{VSO}}$ Output Sync Signal at TTL level. CLAMP TTL Output Signals can be used to drive external circuitry to enable clamping of all Video Signals.
52	PAL_NTSC	I	Input signal to select PAL or NTSC mode of operation, pin set to Logic 1 selects PAL.
53, 57~62	NC		No Connect.
56	TTX	I	Teletext Data Input Pin.



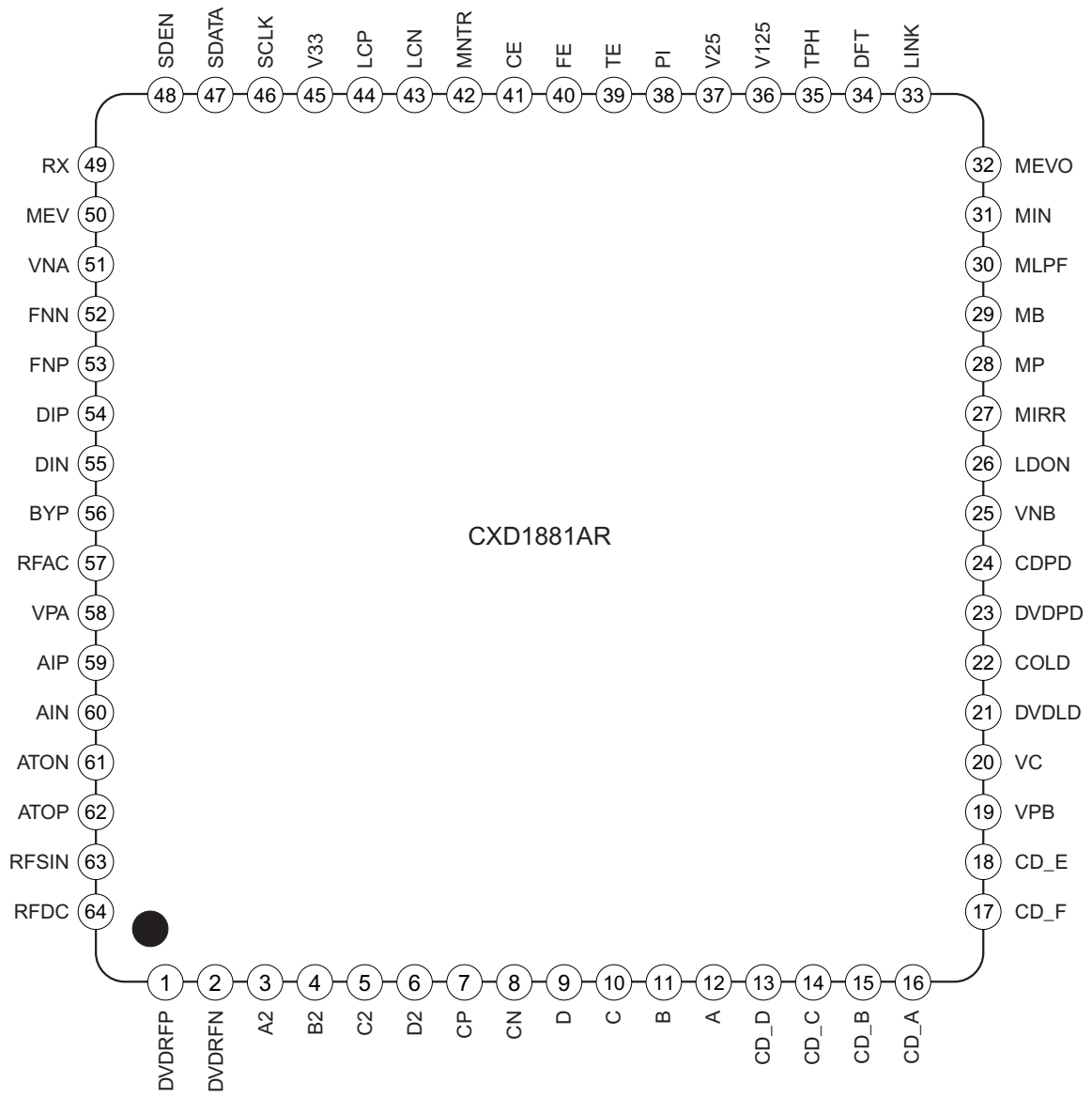
## ADV7300 (VI: IC704)



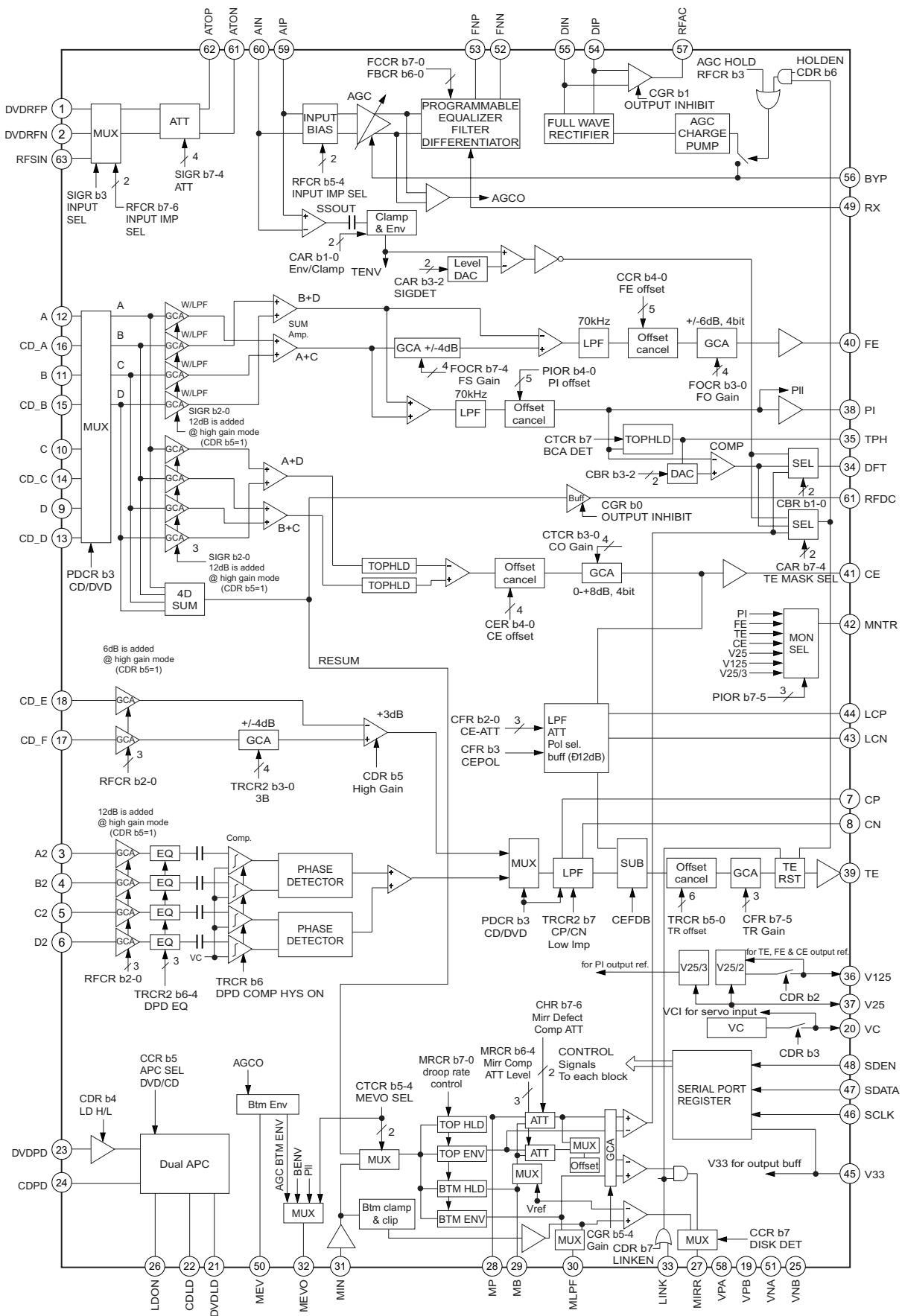
## ADV7300 Terminal Function

Pin No.	Pin Name	I/O	Function
1	VDD_IO	P	Digital power supply.
2~9, 12, 13	Y9-0	I	10-Bit Progressive scan/ HDTV input port for Y data.
10, 56	VDD	P	Digital power supply.
11, 57	DGND	G	Digital Ground
14~18, 26~30	C9-0	I	10-Bit Progressive scan/ HDTV input port for CrCb color data in 4:2:2 input mode.
19	$\overline{\text{SPI/I2C}}$	I	When this input pin is brought low, the ADV7300 interfaces over the SPI port and uses this input as part of the 4 wire SPI interface. When this input pin is tied high [VDD_IO], the ADV7300 interfaces over the I2C port.
20	ALSB_SO	I/O	Multifunctional pin.
21	SDA_CLKSP	I/O	Multifunctional pin.
22	SCLK_SI	I	Multifunctional input.
23	$\overline{\text{P\_HSYNC}}$	I	Video Horizontal Sync Control Signal for HD sync in simultaneous SD/HD mode and HD only mode.
24	$\overline{\text{P\_VSYNC}}$	I	Video Vertical Sync Control Signal for HD sync in simultaneous SD/HD mode and HD only mode.
25	P_BLANK	I	Video Blanking Control Signal for HD sync in simultaneous SD/HD mode and HD only mode.
31	RTC_SCR_TR	I	Multifunctional input.
32	CLKIN_A	I	Pixel Clock Input for HD only or SD only modes.
33	$\overline{\text{RESET}}$	I	This input resets the on-chip timing generator and sets the ADV7300 into Default Register setting. Reset is an active low signal.
34	EXT_LF	I	External Loop filter for the internal PLL.
35, 47	RSET1,2	I	A1520 Ohms resistor must be connected from this pin to AGND and is used to control the amplitudes of the DAC outputs.
36,45	COMP	O	Compensation Pin for DACs.
37	DAC F	O	In SD only mode: Chroma/RED/V analog output. In HD only mode and simultaneous HD/SD: Pb/ BLUE (HD) analog output.
38	DAC E	O	In SD only mode: Luma/BLUE/U analog output. In HD only mode and simultaneous HD/SD: Pr/ RED (HD) analog output.
39	DAC D	O	In SD only mode: CVBS/GREEN/Y analog output. In HD only mode and simultaneous HD/SD: Y/ GREEN (HD) analog output.
40	AGND	G	Analog Ground
41	VAA	P	Analog power supply.
42	DAC C	O	Chroma/ RED/ V SD analog output.
43	DAC B	O	Luma/ BLUE/ U SD analog output.
44	DAC A	O	CVBS/ GREEN/ Y SD analog output.
46	VREF	I/O	Optional External Voltage Reference Input for DACs or Voltage Reference Output (1.235V).
48	$\overline{\text{S\_BLANK}}$	I/O	Video Blanking Control Signal for SD.
49	$\overline{\text{S\_VSYNC}}$	I/O	Video Vertical Sync Control Signal for SD.
50	$\overline{\text{S\_HSYNC}}$	I/O	Video Horizontal Control Signal for SD.
51~55, 58~62	S9-S0	I	10-Bit Standard Definition input port. Or Progressive Scan/ HDTV input port for Cr [Red/V] color data in 4:4:4 input mode.
63	CLKIN_B	I	Pixel Clock Input.
64	GND_IO	G	Digital Ground

**CXD1881AR (MA: IC501)**



Block Diagram



## Terminal Function

### Power Supply Pins

Name	I/O	Function
VPA	-	Power for RF and serial port
VPB	-	Power for servo
VNA	-	GND for RF and serial port
VNB	-	GND for servo
V33	-	Power for output buffer
V25	-	Reference Power for servo output

### Input Pins

Name	I/O	Function
DVDRFP,DVDRFN	I	RF signal input
RFSIN	I	RF signal input
AIP,AIN	I	AGC amp. input
DIP,DIN	I	Analog input for RF single buffer
A,B,C,D	I	Photo detector interface input
A2,B2,C2,D2	I	Photo detector interface input
CD_A,B,C,D	I	CD photo detector interface input
CD_E,F	I	CD photo detector interface input
MIN	I	RF signal input for mirror
DVDPD	I	APC input
CDPD	I	APC input
LDON	I	APC input ON/OFF (L:Open)
LINK	I	Link signal input (L:Open)
	O	Mirror monitor output

### Output Pins

Name	I/O	Function
ATOP,ATON	O	Differential attenuator output
FNP,FNN	O	Differential normal output
RFAC	O	Single end normal output
RFDC	O	RF signal output
FE	O	Focus error signal output
TE	O	Tracking error signal output
CE	O	Center error signal output
MEVO	O	RFDDC bottom envelope output
DFT	O	Defect output
MIRR	O	Mirror detected output
PI	O	Pull-in signal output
DVDLD	O	APC output
CDLD	O	APC output
MNTR	O	Monitor output

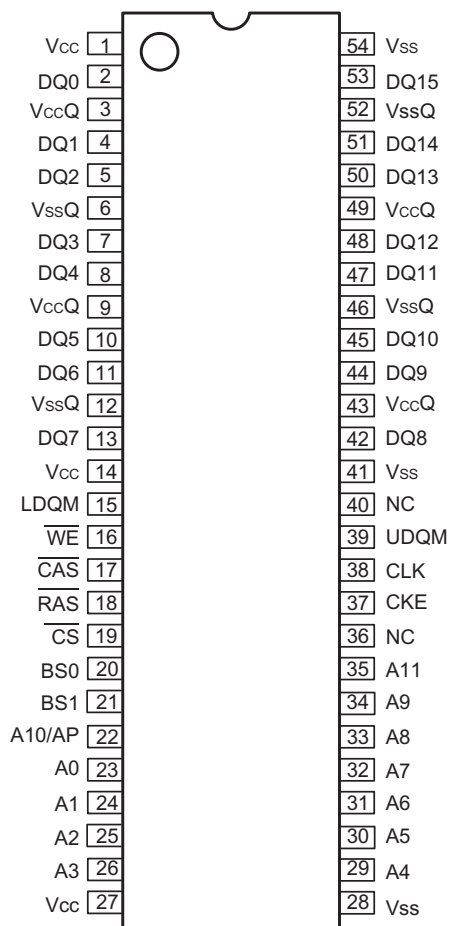
**Analog Pins**

<b>Name</b>	<b>I/O</b>	<b>Function</b>
BYP	-	RF AGC integration capacitor connecting terminal
CP	-	Differential phase tracking LPF terminal
CN	-	Differential phase tracking LPF terminal
LCP	-	Lens shift offset cancel LPF terminal
LCN	-	Lens shift offset cancel LPF terminal
MP	-	MIRR top hold terminal
MB	-	MIRR bottom hold terminal
MEV	-	RFDC bottom envelope terminal
MLPF	-	Mirror LPF terminal
TPH	-	PI top hold terminal
VC	-	Reference voltage output
V125	-	Reference voltage output
RX	-	Reference resistor input

**Serial Port Pins**

<b>Name</b>	<b>I/O</b>	<b>Function</b>
SDEN	I	Serial data enable
SDATA	I/O	Serial data
SCLK	I	Serial clock

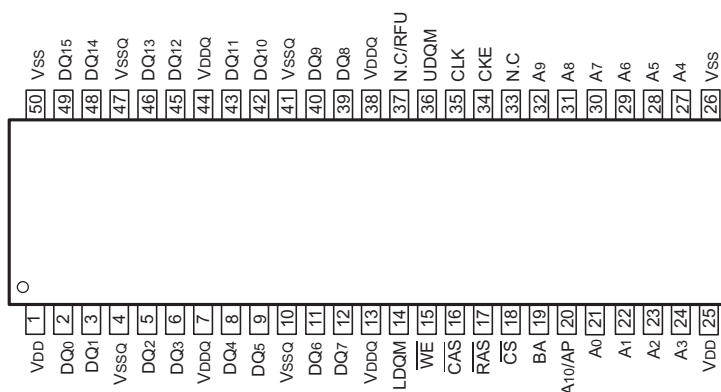
## W986416DH (MA: IC104)



## W986416DH Terminal Function

Pin No.	Pin Name	Function	Description
1, 14, 27	Vcc	Power (+3.3V)	Power for input buffers and logic circuit inside DRAM.
2, 4, 5, 7, 8, 10, 11, 13, 42, 44, 45, 47, 48, 50, 51, 53	DQ0-DQ15	Data Input/Output	Multiplexed pins for data output and input.
3, 9, 43, 49	VccQ	Power (+3.3V) for I/O buffer	Separated power from VCC, to improve DQ noise immunity.
6, 12, 46, 52	VssQ	Ground for I/O buffer	Separated ground from VSS, to improve DQ noise immunity.
16	$\overline{WE}$	Write Enable	Referred to $\overline{RAS}$ .
17	$\overline{CAS}$	Column Address Strobe	Referred to $\overline{RAS}$ .
18	$\overline{RAS}$	Row Address Strobe	Command input. When sampled at the rising edge of the clock $\overline{RAS}$ , $\overline{CAS}$ and $\overline{WE}$ define the operation to be executed.
19	$\overline{CS}$	Chip Select	Disable or enable the command decoder. When command decoder is disabled, new command is ignored and previous operation continues.
20, 21	BS0, BS1	Bank Select	Select bank to activate during row address latch time, or bank to read/write during address latch time.
23~26, 22 29~35	A0-A11	Address	Multiplexed pins for row and column address. Row address: A0-A11. Column address: A0-A7. A10 is sampled during a precharge command to determine if all banks are to be precharged or bank selected by BS0, BS1.
28, 41, 54	Vss	Ground	Ground for input buffers and logic circuit inside DRAM.
36, 40	NC	No Connection	No Connection
37	CKE	Clock Enable	CKE controls the clock activation and deactivation. When CKE is low, Power Down mode, Suspend mode, or Self Refresh mode is entered.
38	CLK	Clock Inputs	System clock used to sample inputs on the rising edge of clock.
39, 15	UDQM, LDQM	Input/Output mask	The output buffer is placed at Hi-Z (with latency of 2) when DQM is sampled high in read cycle. In write cycle, sampling DQM high will block the write operation with zero latency.

16MSDRAM (TOSP)-8 (MA: IC402)

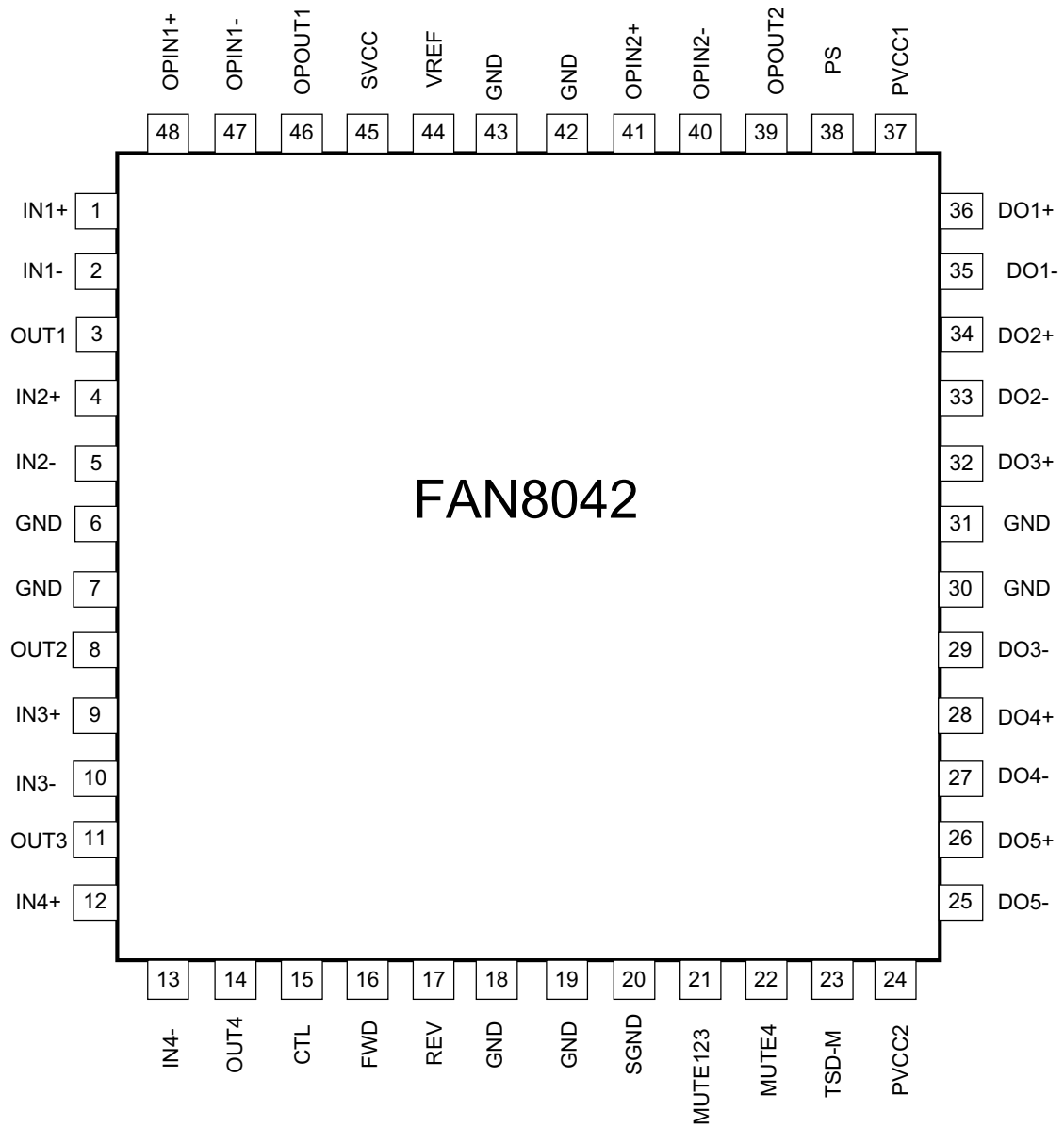


Terminal Function

Pin No.	Pin Name	Symbol	Function
1	VDD	Power Supply/Ground	Power and ground for the input buffer and the core logic
2	DQ0	Data Input/Output	Data input/output are multiplexed on the same pin
3	DQ1	Data Input/Output	Data input/output are multiplexed on the same pin
4	VSSQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
5	DQ2	Data Input/Output	Data input/output are multiplexed on the same pin
6	DQ3	Data Input/Output	Data input/output are multiplexed on the same pin
7	VDDQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
8	DQ4	Data Input/Output	Data input/output are multiplexed on the same pin
9	DQ5	Data Input/Output	Data input/output are multiplexed on the same pin
10	VSSQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
11	DQ6	Data Input/Output	Data input/output are multiplexed on the same pin
12	DQ7	Data Input/Output	Data input/output are multiplexed on the same pin
13	VDDQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
14	LDQM	Data Input/Output Mask	Blocks data input when active
15	WE	Write Enable	Enables write operation and row precharge
16	CAS	Column Address Strobe	Latches column address on the positive going edge of the CLK at low
17	RAS	Row Address Strobe	Latches row address on the positive going edge of the CLK at low
18	CS	Chip Select	Disables or enables device operation by masking or enabling all inputs except CLK, CKE, and LDQM
19	BA	Bank Select Address	Selects bank to be activated during row address latch time
20	A10/AP	Address	Row/column addresses are multiplexed on the same pin
21	A0	Address	Row/column addresses are multiplexed on the same pin
22	A1	Address	Row/column addresses are multiplexed on the same pin
23	A2	Address	Row/column addresses are multiplexed on the same pin
24	A3	Address	Row/column addresses are multiplexed on the same pin
25	VDD	Power Supply/Ground	Power and ground for the input buffer and the core logic
26	VSS	Power Supply/Ground	Power and ground for the input buffer and the core logic
27	A4	Address	Row/column addresses are multiplexed on the same pin
28	A5	Address	Row/column addresses are multiplexed on the same pin
29	A6	Address	Row/column addresses are multiplexed on the same pin
30	A7	Address	Row/column addresses are multiplexed on the same pin
31	A8	Address	Row/column addresses are multiplexed on the same pin
32	A9	Address	Row/column addresses are multiplexed on the same pin
33	N.C	No Connection	No connect pin
34	CKE	Clock Enable	Masks system clock to freeze operation from the next clock cycle
35	CLK	System Clock	Active on the positive going edge to sample all inputs
36	UDQM	Data Input/Output Mask	Blocks data input when active
37	N.C/RFU	NC/Reserved	No connect pin
38	VDDQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
39	DQ8	Data Input/Output	Data input/output are multiplexed on the same pin
40	DQ9	Data Input/Output	Data input/output are multiplexed on the same pin
41	VSSQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
42	DQ10	Data Input/Output	Data input/output are multiplexed on the same pin
43	DQ11	Data Input/Output	Data input/output are multiplexed on the same pin
44	VDDQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
45	DQ12	Data Input/Output	Data input/output are multiplexed on the same pin
46	DQ13	Data Input/Output	Data input/output are multiplexed on the same pin
47	VSSQ	Data Output Power/Ground	Isolated power supply and ground for the output buffer
48	DQ14	Data Input/Output	Data input/output are multiplexed on the same pin
49	DQ15	Data Input/Output	Data input/output are multiplexed on the same pin
50	VSS	Power Supply/Ground	Power and ground for the input buffer and the core logic

# FAN8042 (MA: IC508)

## Pin Assignments

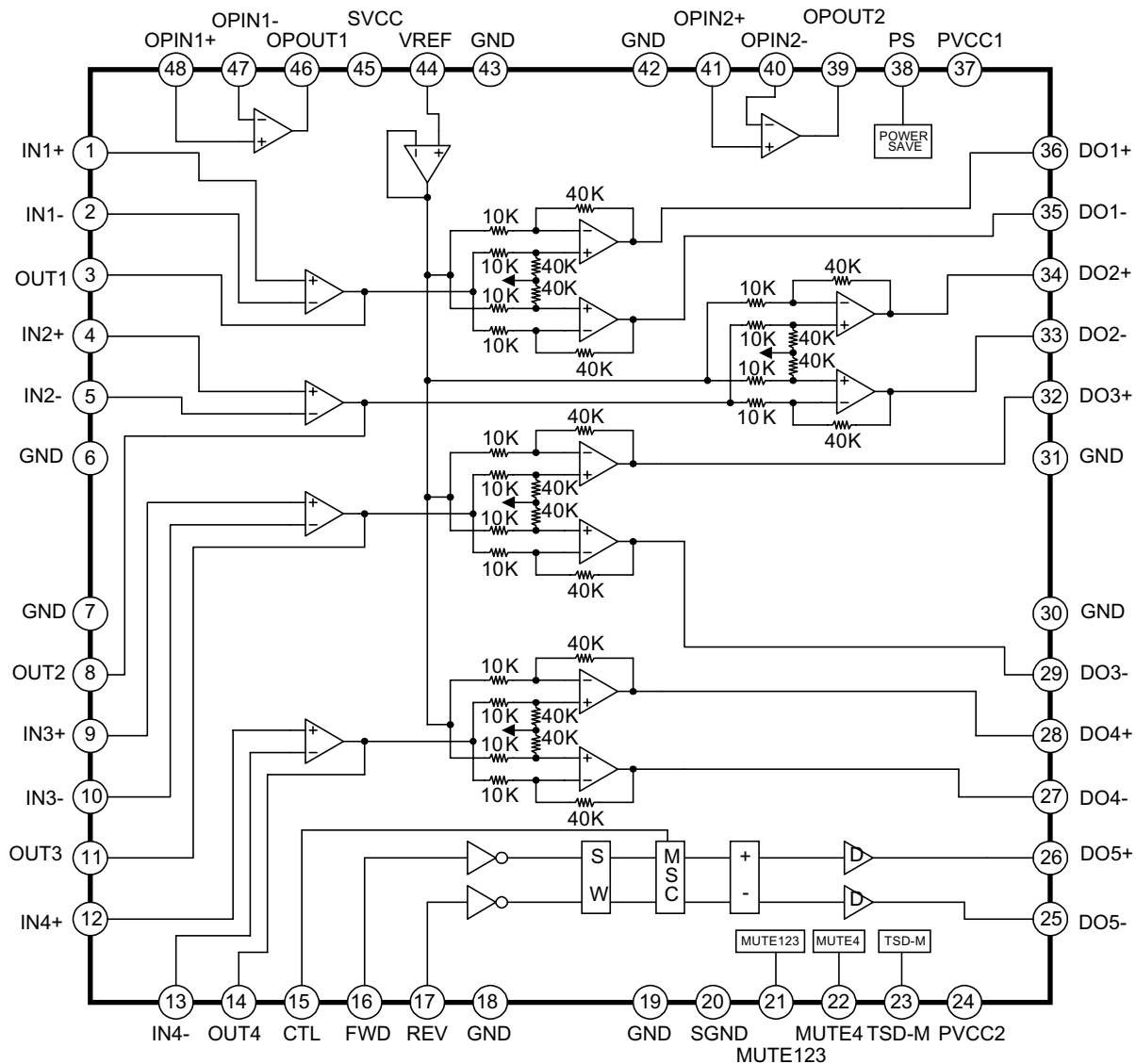




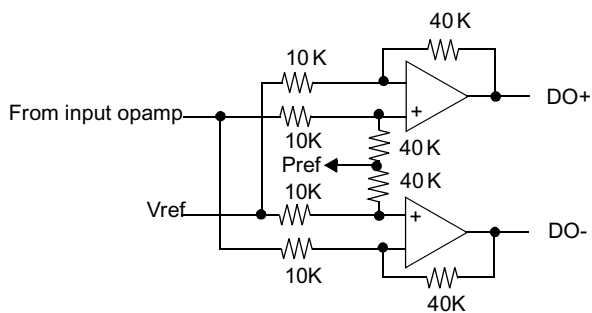
## Pin Definitions

Pin Number	Pin Name	I/O	Pin Function Description
1	IN1+	I	CH1 op-amp input (+)
2	IN1-	I	CH1 op-amp input (-)
3	OUT1	O	CH1 op-amp output
4	IN2+	I	CH2 op-amp input (+)
5	IN2-	I	CH2 op-amp input (-)
6	GND	-	Ground
7	GND	-	Ground
8	OUT2	O	CH2 op-amp output
9	IN3+	I	CH3 op-amp input (+)
10	IN3-	I	CH3 op-amp input (-)
11	OUT3	O	CH3 op-amp output
12	IN4+	I	CH4 op-amp input (+)
13	IN4-	I	CH4 op-amp input (-)
14	OUT4	O	CH4 op-amp output
15	CTL	I	CH5 motor speed control
16	FWD	I	CH5 forward input
17	REV	I	CH5 reverse input
18	GND	-	Ground
19	GND	-	Ground
20	SGND	-	Signal Ground
21	MUTE123	I	Mute for CH1,2,3
22	MUTE4	I	Mute for CH4
23	TSD-M	O	TSD monitor
24	PVCC2	-	Power supply voltage 2 (For CH4,CH5)
25	DO5-	O	CH5 drive output (-)
26	DO5+	O	CH5 drive output (+)
27	DO4-	O	CH4 drive output (-)
28	DO4+	O	CH4 drive output (+)
29	DO3-	O	CH3 drive output (-)
30	GND	-	Ground
31	GND	-	Ground
32	DO3+	O	CH3 drive output (+)
33	DO2-	O	CH2 drive output (-)
34	DO2+	O	CH2 drive output (+)
35	DO1-	O	CH1 drive output (-)
36	DO1+	O	CH1 drive output (+)
37	PVCC1	-	Power supply voltage 1 (FOR CH1 CH2,CH3)
38	PS	I	Power save
39	OPOUT2	O	Normal op-amp2 output
40	OPIN2-	I	Normal op-amp2 input (-)
41	OPIN2+	I	Normal op-amp2 input (+)
42	GND	-	Ground
43	GND	-	Ground
44	VREF	I	Bias voltage input
45	SVCC	-	Signal & OPAMPs supply voltage
46	OPOUT1	O	Normal op-amp1 output
47	OPIN1-	I	Normal op-amp1 input (-)
48	OPIN1+	I	Normal op-amp1 input (+)

Block Diagram

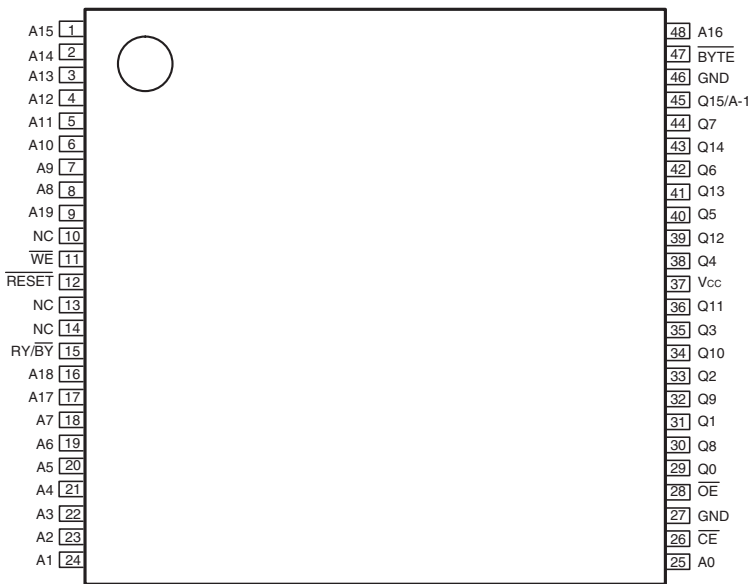


Note. Detailed circuit of the output power amp



Pref1 is almost  $PVCC1 / 2$   
 Pref2 is almost  $PVCC2 / 2$

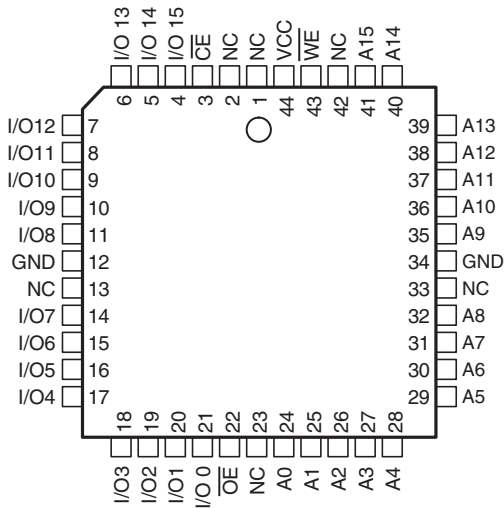
**MX29LV160BTC-90 (MA: IC103)**



**Pin Description**

Symbol	Pin Name
A0~A19	Address Input
Q0~Q14	Data Input/Output
Q15/A-1	Q15 (Word mode)/LSB addr (Byte mode)
$\overline{CE}$	Chip Enable Input
$\overline{WE}$	Write Enable Input
$\overline{BYTE}$	Word/Byte Selection input
RESET	Hardware Reset Pin/Sector Protect Unlock
$\overline{OE}$	Output Enable Input
RY/BY	Ready/Busy Output
Vcc	Power Supply Pin (2.7V~3.6V)
GND	Ground Pin

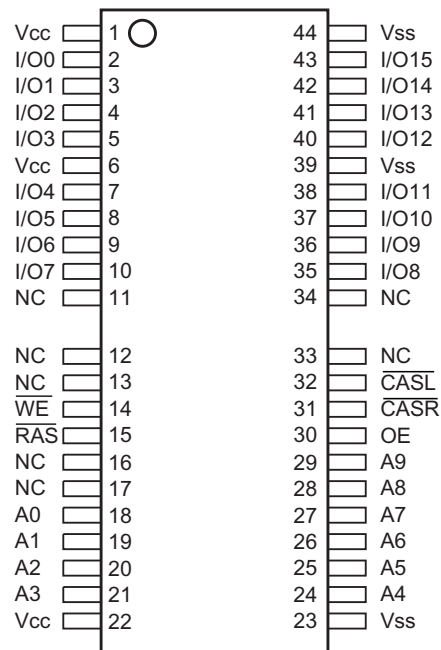
**AT49LV1025 (MA: IC302)**



**Terminal Function**

Pin Name	Function
A0-A15	Address Inputs
$\overline{CE}$	Chip Enable
$\overline{OE}$	Output Enable
$\overline{WE}$	Write Enable
I/O0-I/O15	Data Inputs/Outputs
NC	No Connection

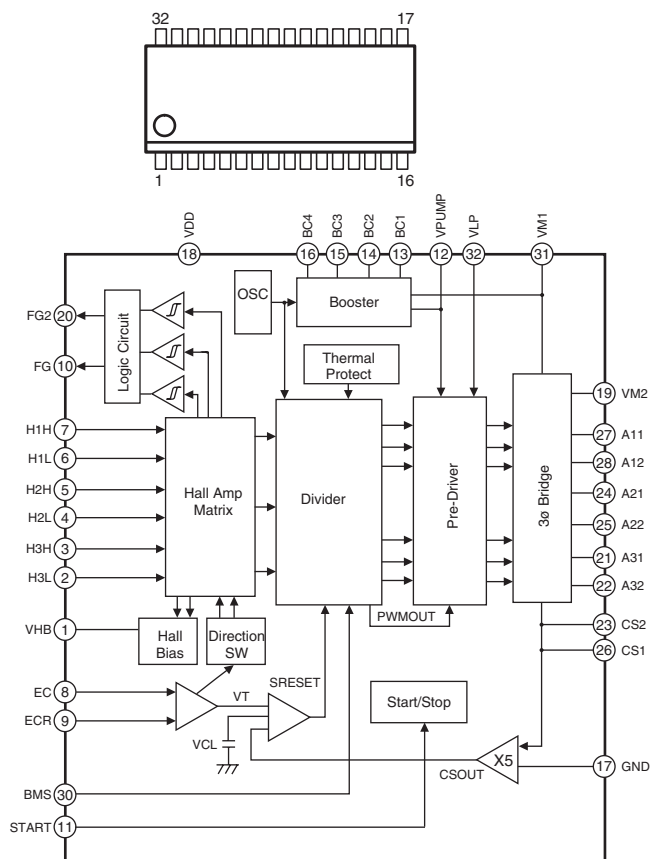
## M11L16161SA (MA: IC503)



## PIN DESCRIPTIONS

PIN NO. (SOJ Package)	PIN NAME	TYPE	DESCRIPTION
17~20,23~28	A0~A9	Input	Address Input Row Address:A0~A9 Column Address:A0~A9
14	$\overline{\text{RAS}}$	Input	Row Address Strobe
30	$\overline{\text{CASH}}$	Input	Column Address Strobe/Upper Byte Control
31	$\overline{\text{CASL}}$	Input	Column Address Strobe/Lower Byte Control
13	$\overline{\text{WE}}$	Input	Write Enable
29	$\overline{\text{OE}}$	Input	Output Enable
2~5,7~10, 33~36,38~41	I/O0~I/O15	Input/Output	Data Input/Output
1,6,21	Vcc	Supply	Power,(5V or 3.3V)
22,37,42	Vss	Ground	Ground
11,12,15,16,32	NC	-	No Connect

AN8471SA (MA: IC505)

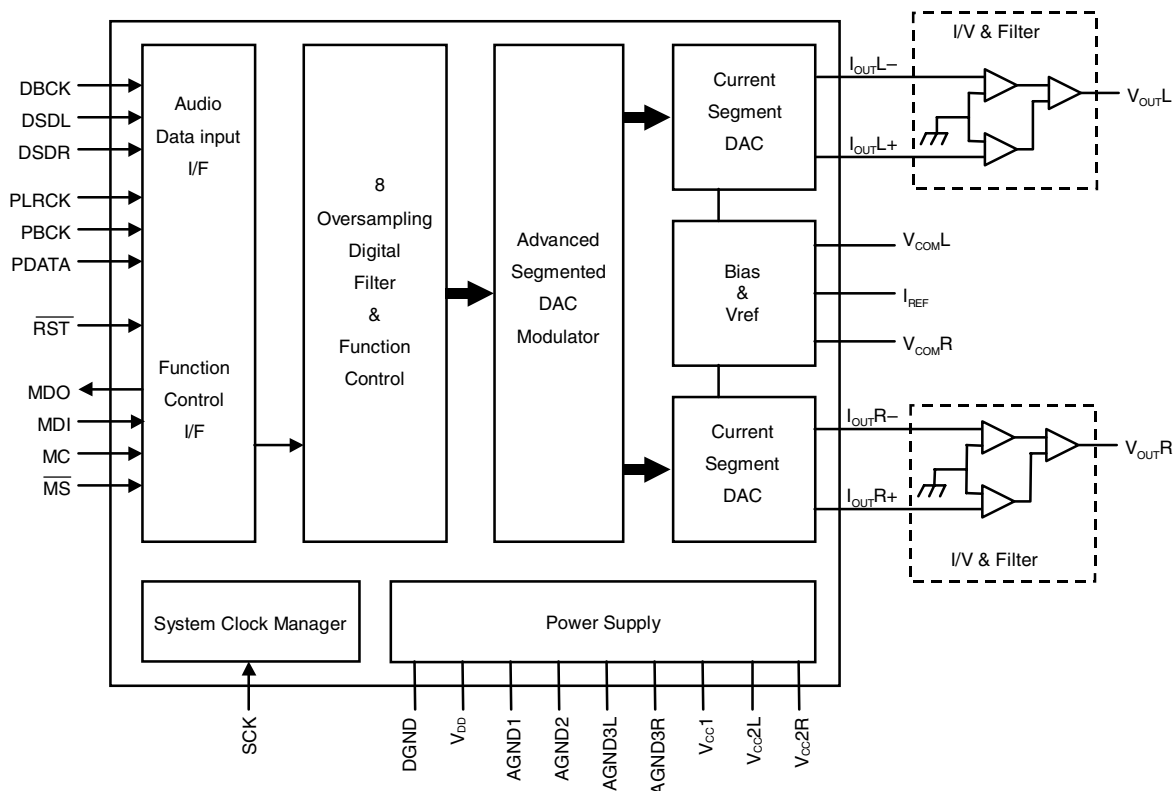


Pin No.	Pin Name	Function
1	VHB	Hall bias pin
2	H3L	Hall element 3 input (-)
3	H3H	Hall element 3 input (+)
4	H2L	Hall element 2 input (-)
5	H2H	Hall element 2 input (+)
6	H1L	Hall element 1 input (-)
7	H1H	Hall element 1 input (+)
8	EC	Torque command input pin
9	ECR	Torque command ref. input pin
10	FG1	FG signal lout put pin (0.C)
11	START	Start/Stop switching pin
12	VPUMP	Booster pin
13	BC1	Booster cap. connecting pin 1
14	BC2	Torque command input pin 2
15	BC3	Torque command input pin 3
16	BC4	Torque command input pin 4
17	GND	GND pin
18	V <sub>DD</sub>	Power pin
19	VM2	Motor power pin 2
20	FG2	3x FG signal output pin (0.C)
21	A31	Drive output 3
22	A32	Drive output 3
23	CS2	Current detect pin 2
24	A21	Drive output 2
25	A22	Drive output 2
26	CS1	Current detect pin 1
27	A11	Drive output 1
28	A12	Drive output 1
29	NC	N.C.
30	BMS	Brake mode switching pin
31	VM1	Motor power pin 1
32	VLP	Pre-driver lower power

DSD1790DBR (AU: IC206, 209, 212)

1	DSDL	V <sub>CC2L</sub>	28
2	DSDR	AGND3L	27
3	DBCK	I <sub>OUTL-</sub>	26
4	PLRCK	I <sub>OUTL+</sub>	25
5	PDATA	AGND2	24
6	PBCK	V <sub>CC1</sub>	23
7	SCK	V <sub>COML</sub>	22
8	DGND	V <sub>COMR</sub>	21
9	V <sub>DD</sub>	I <sub>REF</sub>	20
10	$\overline{MS}$	AGND1	19
11	MDI	I <sub>OUTR-</sub>	18
12	MC	I <sub>OUTR+</sub>	17
13	MDO	AGND3R	16
14	$\overline{RST}$	V <sub>CC2R</sub>	15

Block Diagram



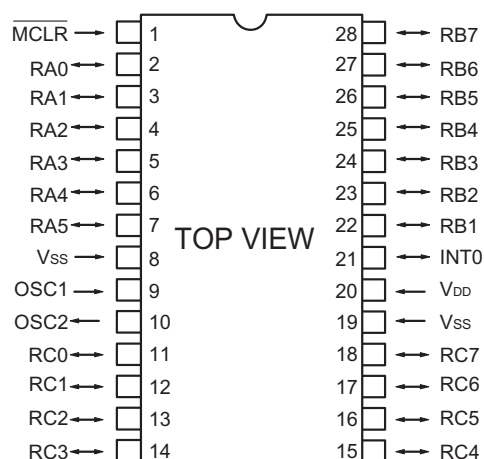
## Terminal Function

TERMINAL		I/O	DESCRIPTIONS
NAME	PIN		
DSDL	1	I/O	L-channel audio data input for DSD and external DF modes <sup>†</sup> PCM mode zero flag for L-channel by ZERO output mode select
DSDR	2	I/O	R-channel audio data input for DSD and external DF modes <sup>†</sup> PCM mode zero flag for R-channel by ZERO output mode select
DBCK	3	I	Bit clock input for external DF and DSD modes <sup>†</sup>
PLRCK	4	I	Left and right clock ( $f_s$ ) input for normal operation. WDCK clock input for external DF mode. Connected to GND for DSD mode <sup>†</sup>
PDATA	5	I	Serial audio data input for normal operation <sup>†</sup>
PBCK	6	I	Bit clock input. Connected GND for DSD mode <sup>†</sup>
SCK	7	I	System clock input <sup>†</sup>
DGND	8	-	Digital ground
V <sub>DD</sub>	9	-	Digital power supply, +3.3 V
MS	10	I/O	Chip select for mode control <sup>†</sup>
MDI	11	I	Mode control data input <sup>†</sup>
MC	12	I	Mode control clock input <sup>†</sup>
MDO	13	I/O	Mode control read back data output <sup>†</sup>
RST	14	I	Reset <sup>†</sup>
V <sub>CC2R</sub>	15	-	Analog power supply (R-channel DACFF), +5.0 V
AGND3R	16	-	Analog ground (R-channel DACFF)
I <sub>OUTR+</sub>	17	O	R-channel analog current output +
I <sub>OUTR-</sub>	18	O	R-channel analog current output -
AGND1	19	-	Analog ground (internal bias)
I <sub>REF</sub>	20	-	Output current reference bias pin
V <sub>COMR</sub>	21	-	R-channel Internal bias de-coupling pin
V <sub>COML</sub>	22	-	R-channel Internal bias de-coupling pin
V <sub>CC1</sub>	23	-	Analog power supply, +5.0 V
AGND2	24	-	Analog ground (internal bias)
I <sub>OUTL+</sub>	25	O	L-channel analog current output +
I <sub>OUTL-</sub>	26	O	L-channel analog current output -
AGND3L	27	-	Analog ground (L-channel DACFF)
V <sub>CC2L</sub>	28	-	Analog power supply (L-channel DACFF), +5.0 V

<sup>†</sup> Schmitt trigger input, 5 V tolerant.

<sup>‡</sup> Schmitt trigger input and output, 3.3 V.

## PIC18LC242-I/SO (VI: IC703)



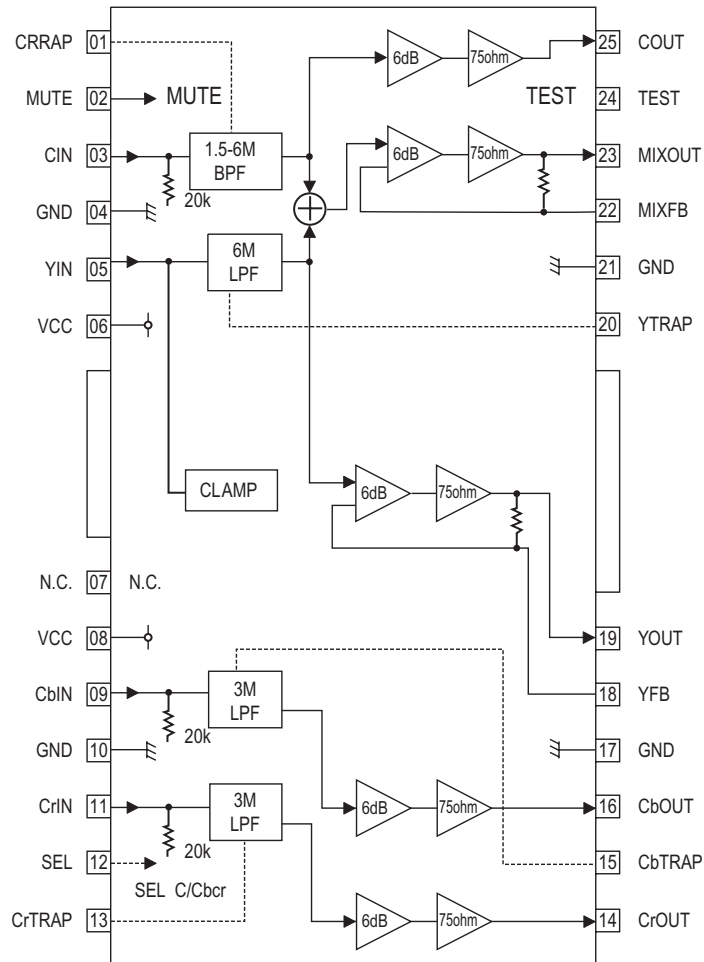
## PIC18LC242-I/SO Terminal Function

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{MCLR}}$	I	Master Clear (Reset) input. This pin is an active low RESET to the device.
2	RA0	I/O	Digital I/O.
3	RA1	I/O	Digital I/O.
4	RA2	I/O	Digital I/O.
5	RA3	I/O	Digital I/O.
6	RA4	I/O	Digital I/O. Open drain when configured as output.
7	RA5	I/O	Digital I/O.
8	Vss	P	Ground reference for logic and I/O pins.
9	OSC1	I	Oscillator crystal input or external clock source input. ST buffer when configured in RC mode. CMOS otherwise.
10	OSC2	O	Oscillator crystal output. Connects to crystal or resonator in Crystal Oscillator mode.
11	RC0	I/O	Digital I/O.
12	RC1	I/O	Digital I/O.
13	RC2	I/O	Digital I/O.
14	RC3	I/O	Digital I/O.
15	RC4	I/O	Digital I/O.
16	RC5	I/O	Digital I/O.
17	RC6	I/O	Digital I/O.
18	RC7	I/O	Digital I/O.
19	Vss	P	Ground reference for logic and I/O pins.
20	VDD	P	Positive supply for logic and I/O pins.
21	INT0	I	External Interrupt 0.
22	RB1	I/O	Digital I/O.
23	RB2	I/O	Digital I/O.
24	RB3	I/O	Digital I/O.
25	RB4	I/O	Digital I/O. Interrupt-on-change pin.
26	RB5	I/O	Digital I/O. Interrupt-on-change pin.
27	RB6	I/O	Digital I/O. Interrupt-on-change pin. ICSP programming clock.
28	RB7	I/O	Digital I/O. Interrupt-on-change pin. ICSP programming data.

Legend: O=Output  
I=Input  
P=Power



## BH7860FP (VI: IC706, 707) IC707 for Europe model

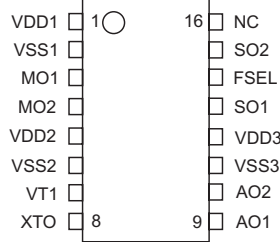


## Functions

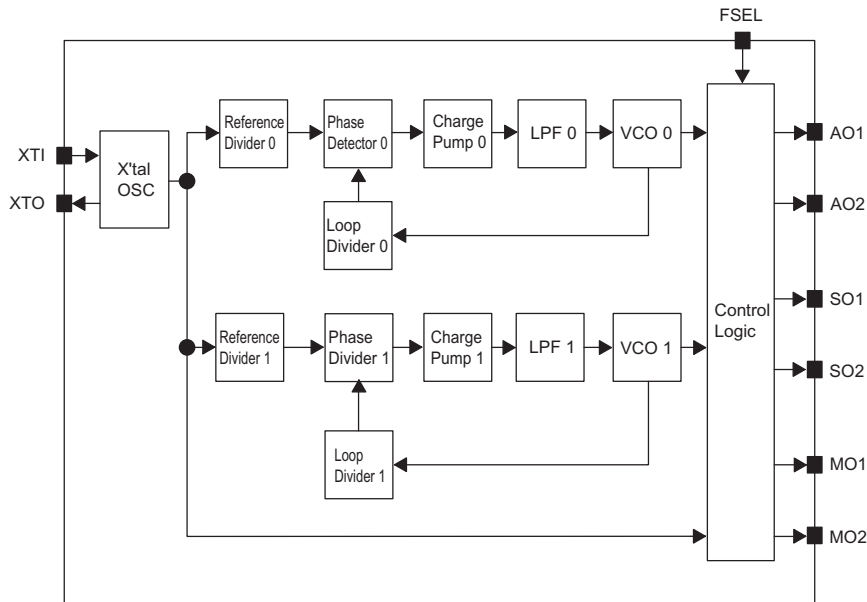
Pin No.	Pin Name	Functions
1,13,15,20	CTRAP CbTRAP CrTRAP YTRAP	LC oscillation terminal
2	MUTE	Mute control. If MUTE is set to "L", five channels will be muted simultaneously.
3,9,11	CIN CbIN CrIN	Signal input. Croma signal. Color difference signal. The bias type input terminal. Input impedance: 20kohms.
4,10,17,21	GND	It fixed to ground.
5	YIN	Signal input. Input terminal of a luminance signal. Di clamp input .
6,8	VCC	VCC of 6 and 8 pins does not connected inside. Use it by connectin externally C, MIX and Y connect with Vcc of 6 pin. Cb and Cr connect with VCC of 8 pin.
12	SEL	C/CbCr select. Cb and Cr are turned off if SEL is set to "L".
14,16	CrOUT CbOUT	Signal output. Color difference signal output.
18,19	YFB YOUT	Signal output. Luminance signal output.
22,23	MIXFB MIXOUT	Signal output. Y/C MIX signal output.
24	TEST	TEST terminal. Useally, please short-circuit with GND.
25	COUT	Signal output. Chroma output terminal.

SM8707EV (MA: IC105)

Top View



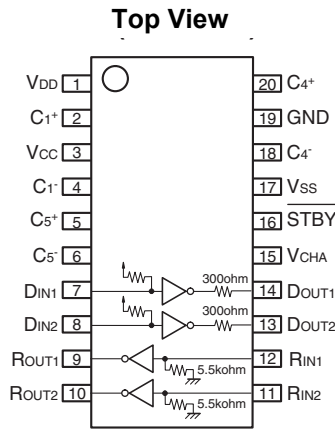
Block Diagram



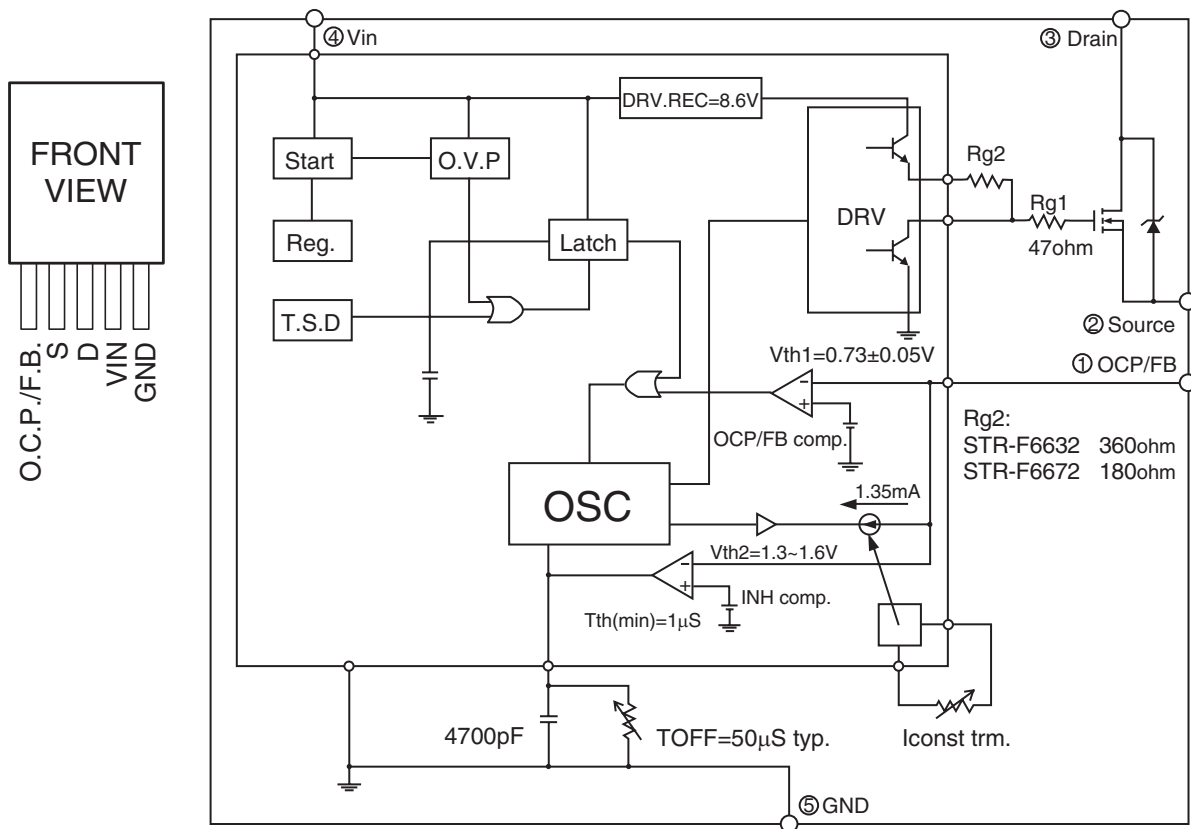
Functions

Number	Name	I/O	Description
1	VDD1	-	Supply 1 for digital block
2	VSS1	-	Ground 1 for digital block
3	MO1	O	Video system output 1 (27MHz fixed)
4	MO2	O	Video system output 2 (27MHz fixed)
5	VDD2	-	Supply 2 for analog block
6	VSS2	-	Ground 2 for analog block
7	XTI	I	Crystal oscillator connection or external clock input
8	XTO	O	Crystal oscillator connection
9	AO1	O	<SM8707D> Audio system output 1 (384fs/768fs output) FSEL = LOW, fs = 48kHz: 768fs FSEL = HIGH, fs = 44.1kHz: 384fs <SM8707E> Audio system output 1 (512fs output)
10	AO2	O	Audio system output 1 (512fs output)
11	VSS3	-	Ground 3 for digital block
12	VDD3	-	Supply 1 for digital block
13	SO1	O	<SM8707D> Signal processor system output 1 (16.9344MHz fixed) <SM8707E> Signal processor system output 1 (33.8688MHz fixed)
14	FSEL	I	<SM8707D> Sampling frequency select FSEL = LOW : fs = 48kHz FSEL = HIGH : fs = 44.1kHz (with internal pull-up resistor, Schmitt-trigger input) <SM8707E> Sampling frequency select FSEL = LOW : fs = 48kHz FSEL = HIGH : fs = 44.1kHz (with internal pull-up resistor, Schmitt-trigger input)
15	SO2	O	Signal processor system output 2 (33.8688MHz fixed)
16	NC	-	No connection (leave pin open circuit or connect to VDD)

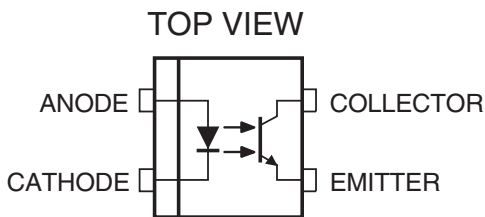
**μPD4721GS (PD: IC511)**



**STR-F6674 (PD: IC901)**

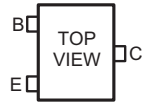


**PC123 (PD: IC902)**

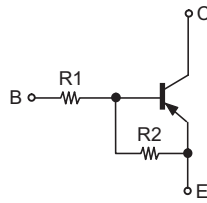


## 2. TRANSISTORS

DTA114EK  
DTA124EK  
DTC114EK

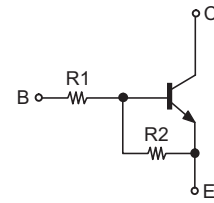


DTA114EK  
DTA124EK



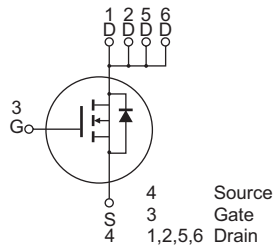
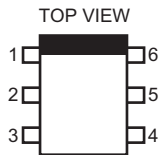
	R1	R2
DTA114EK	10kohm	10kohm
DTA124EK	22kohm	22kohm

DTC114EK

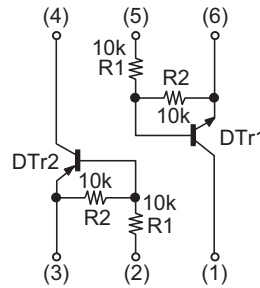
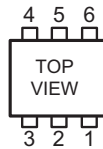


	R1	R2
DTC114EK	10kohm	10kohm

HAT2053M



IMD3A



## 3. DIODE

FMB-2204





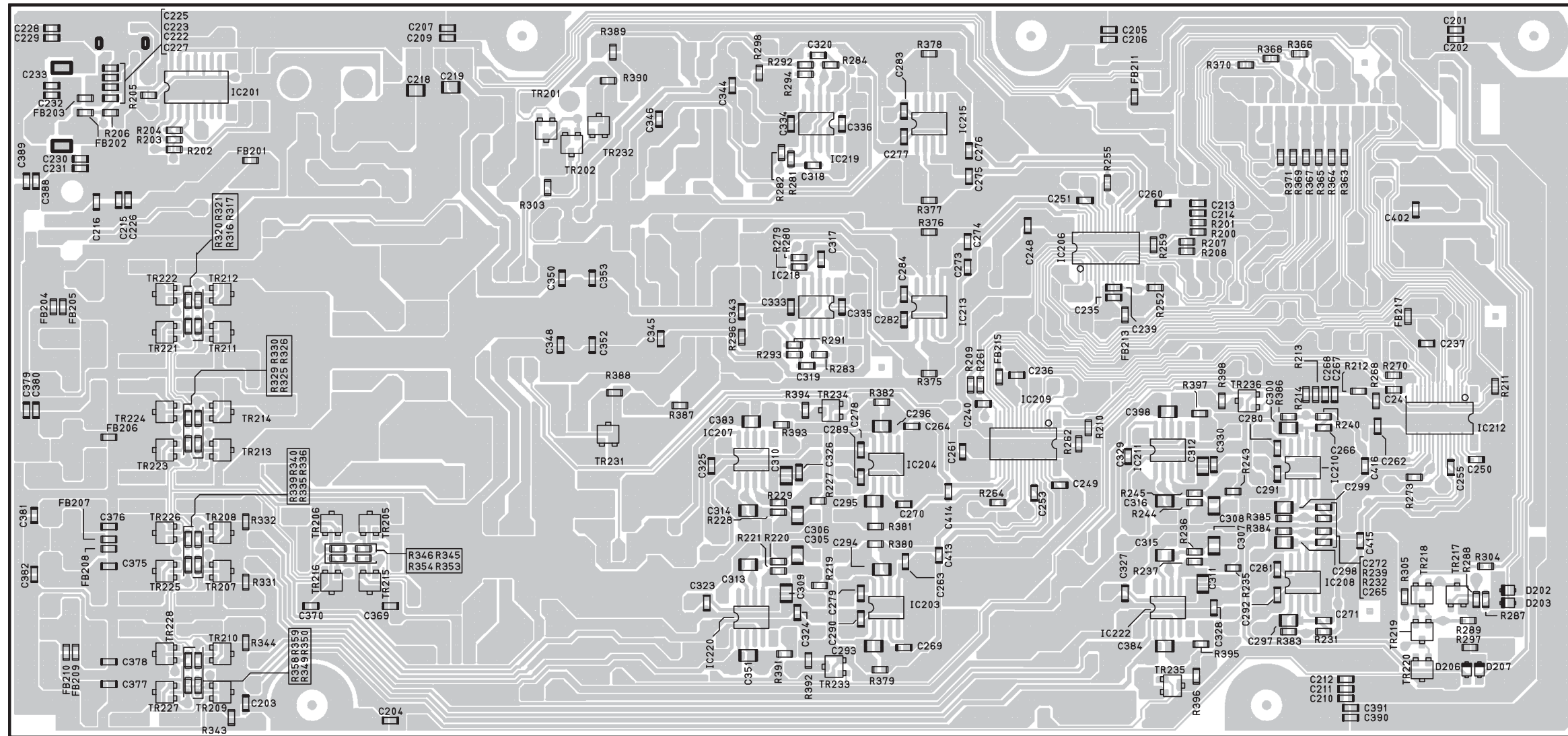






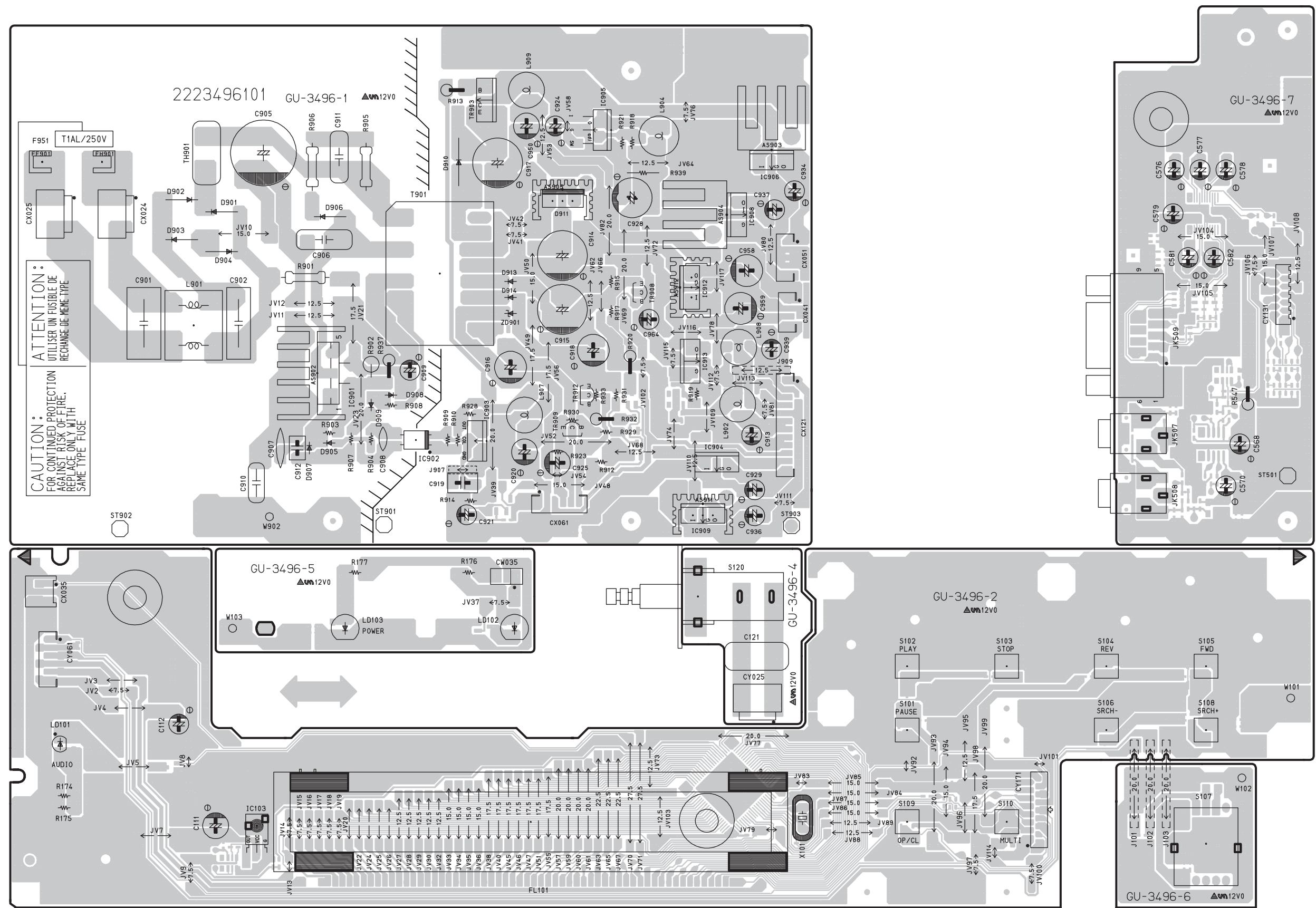




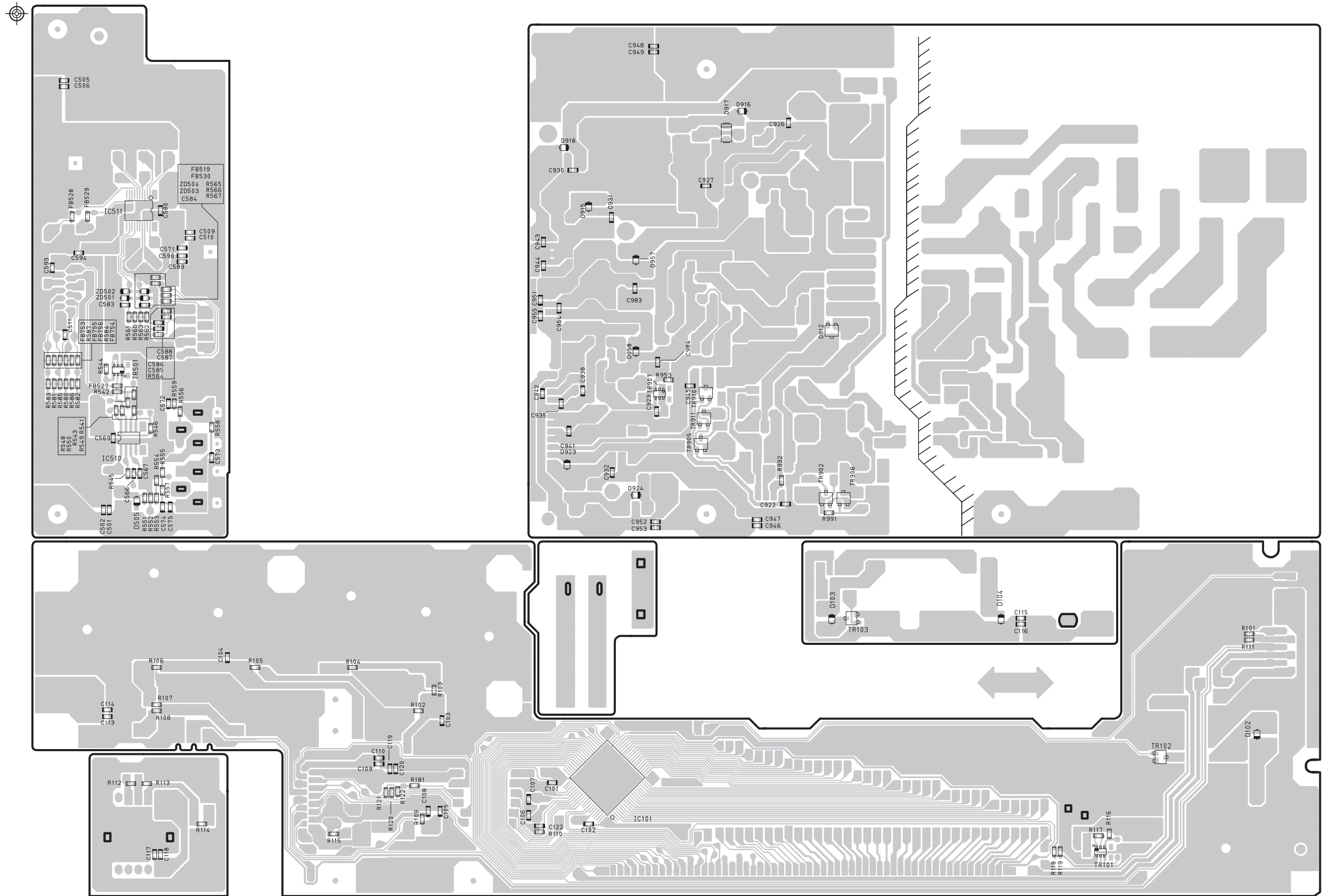


FOIL SIDE

GU-3496 POWER/DISPLAY P.W.B. UNIT



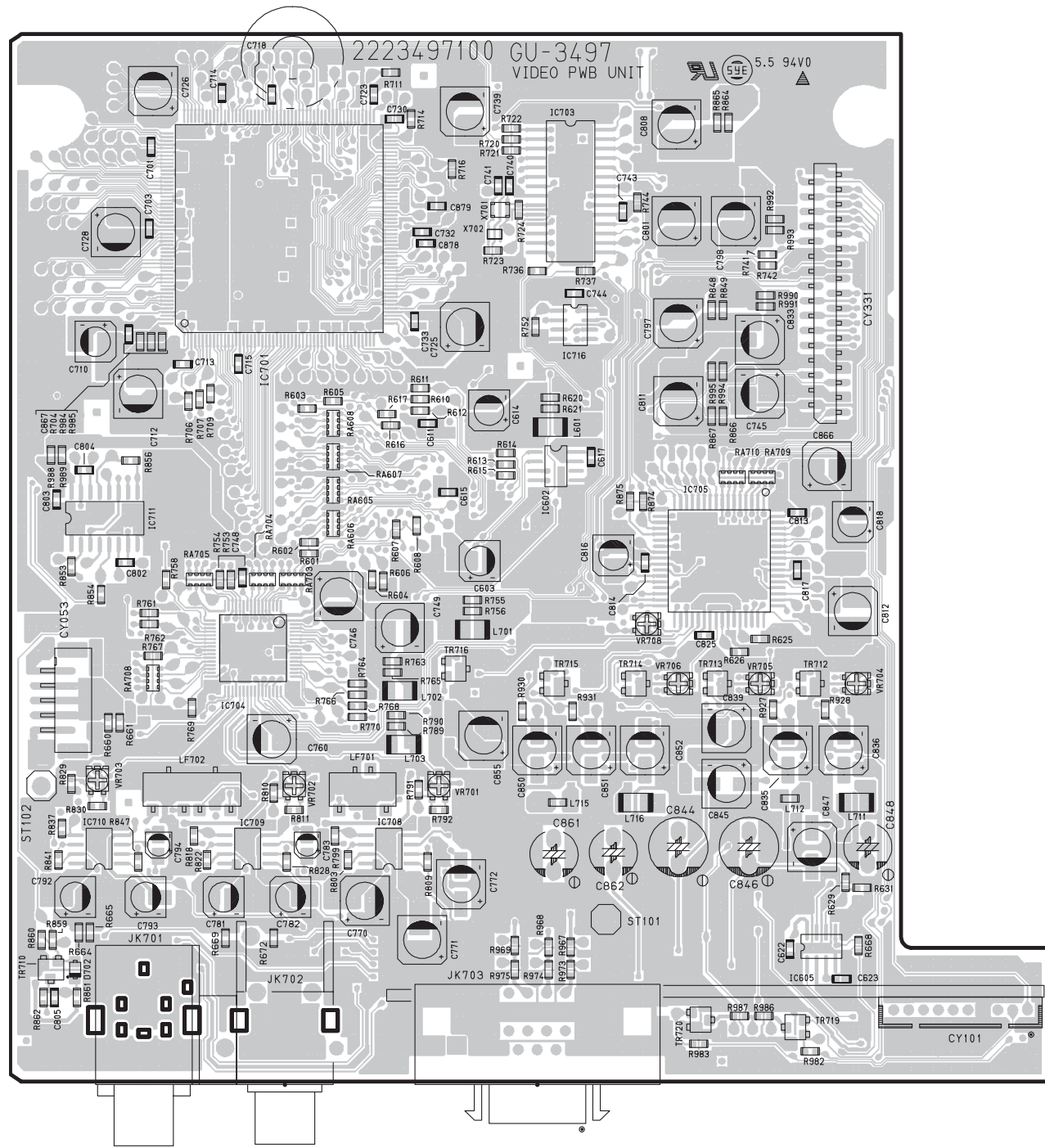
COMPONENT SIDE



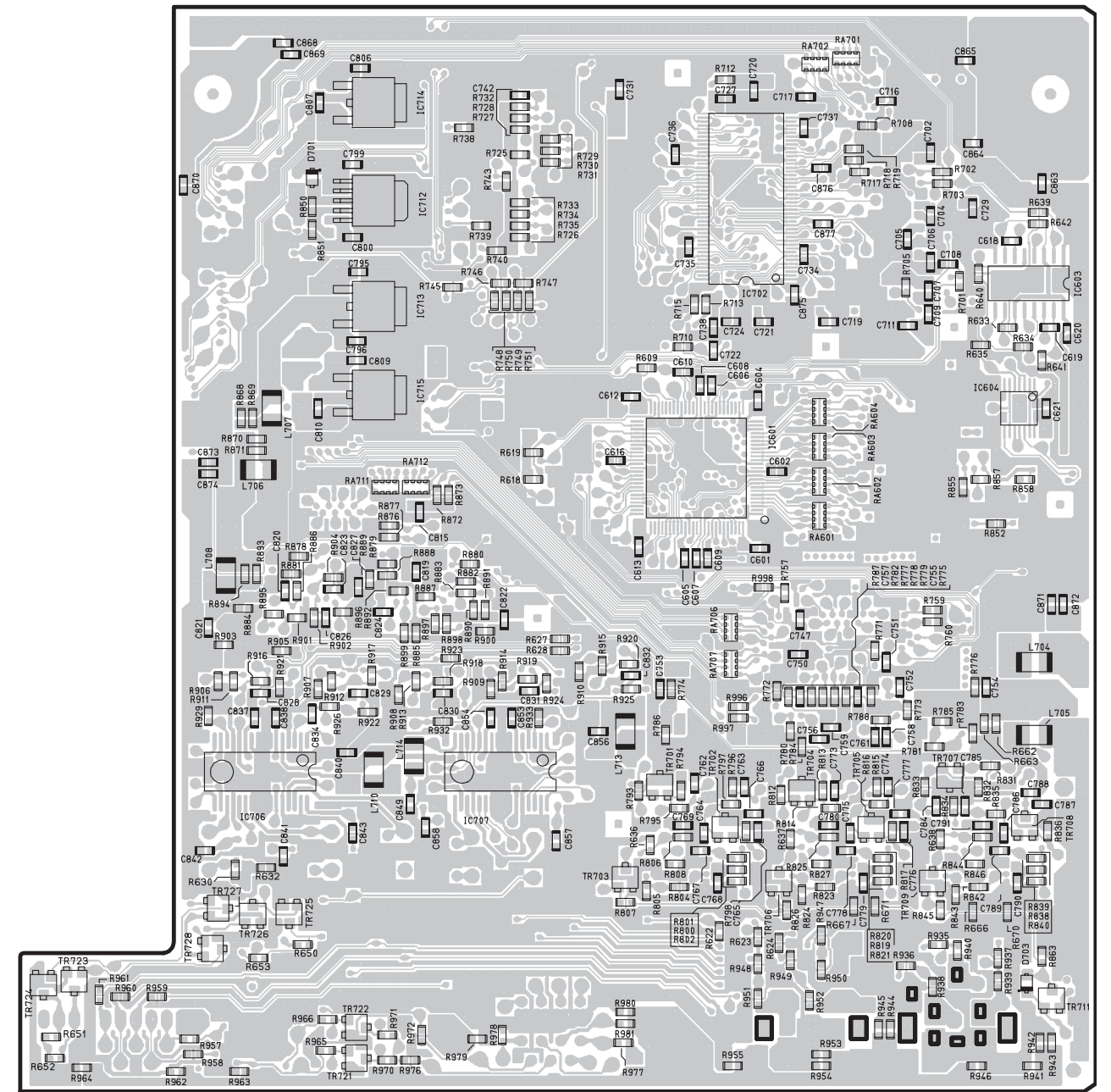
FOIL SIDE



# GU-3497 VIDEO P.W.B. UNIT

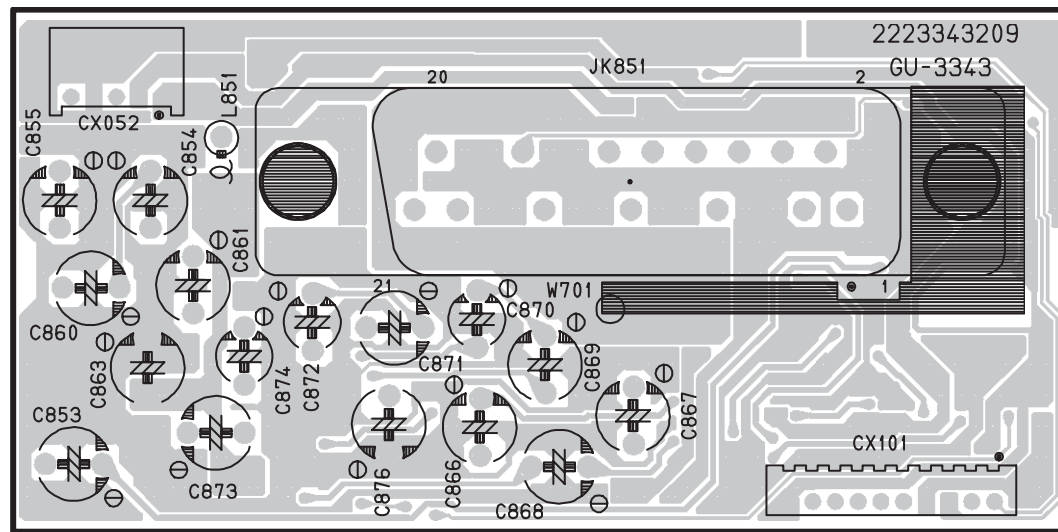


COMPONENT SIDE

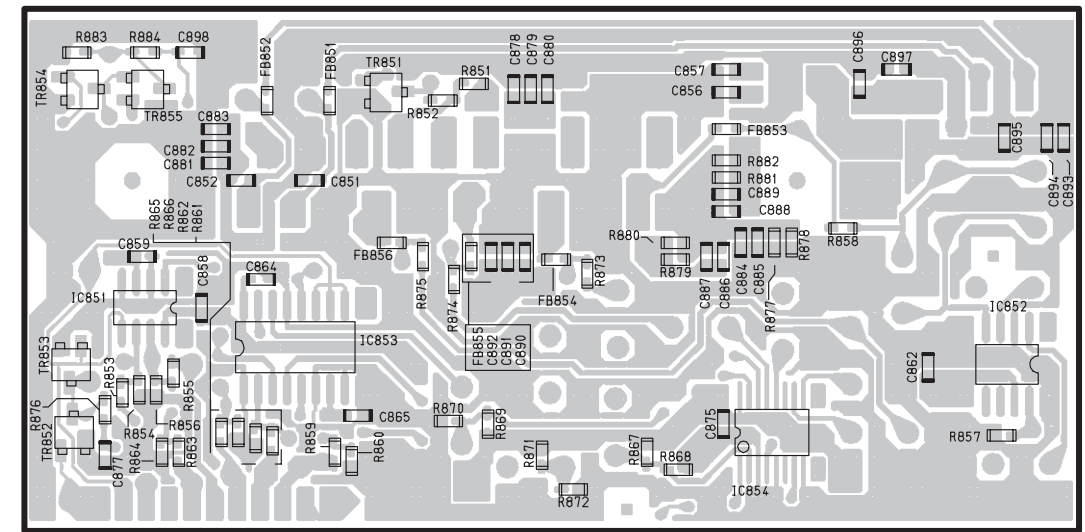


FOIL SIDE

GU-3343 SCART P.W.B. UNIT (Europe model only)



COMPONENT SIDE



FOIL SIDE

## NOTE FOR PARTS LIST

- Part indicated with the mark "◎" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "I" and "l" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film Resistor ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
- Not including Carbon Chip Resistor 1/16W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

### WARNING:

Parts marked with this symbol ⚠ have critical characteristics.  
Use ONLY replacement parts recommended by the manufacturer.

### ● Resistors

Ex.: **RN** **14K** **2E** **182** **G** **FR**  
Type Shape and performance Power Resistance Allowable error Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

#### \* Resistance

$\overset{1}{\uparrow} \overset{8}{\text{---}} \overset{2}{\uparrow} \Rightarrow 1800 \text{ ohm} = 1.8 \text{ kohm}$   
Indicates number of zeros after effective number.  
2-digit effective number.

• Units: ohm

$\overset{1}{\uparrow} \overset{R}{\text{---}} \overset{2}{\uparrow} \Rightarrow 1.2 \text{ ohm}$   
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units: ohm

### ● Capacitors

Ex.: **CE** **04W** **1H** **2R2** **M** **BP**  
Type Shape and performance Dielectric strength Capacity Allowable error Others

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CO : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80%	U : UL part
CP : Oil	2A : 100V	-20%	C : CSA part
CM : Mica	2B : 125V	P : +100%	W : UL-CSA type
CF : Metallized	2C : 160V	-0%	F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

#### \* Capacity (electrolyte only)

$\overset{2}{\uparrow} \overset{2}{\text{---}} \overset{2}{\uparrow} \Rightarrow 2200 \mu\text{F}$   
Indicates number of zeros after effective number.  
2-digit effective number.

• Units:  $\mu\text{F}$ .

$\overset{2}{\uparrow} \overset{R}{\text{---}} \overset{2}{\uparrow} \Rightarrow 2.2 \mu\text{F}$   
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units:  $\mu\text{F}$ .

#### \* Capacity (except electrolyte)

$\overset{2}{\uparrow} \overset{2}{\text{---}} \overset{2}{\uparrow} \Rightarrow 2200 \text{ pF} = 0.0022 \mu\text{F}$   
(More than 2) Indicates number of zeros after effective number.  
2-digit effective number.

• Units: pF.

$\overset{2}{\uparrow} \overset{2}{\text{---}} \overset{1}{\uparrow} \Rightarrow 220 \text{ pF}$   
(0 or 1) Indicates number of zeros after effective number.  
2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

## 部品表について

- 印の部品は常時在庫していませんので供給に長時間を要することがあります。  
場合によっては、供給をお断りすることがあります。
- 部品を発注する際は特に数字の "1" と英字の "I" との区別をはっきり記入してください。
- 部品番号を表示していない部品は供給できません。
- ⚠印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。
- ★印のついている部品は分解図中には記載していません。
- カーボン抵抗器 ±5%、1/4W 型は記載していません。定数は回路図を参照願います。
- カーボンチップ抵抗器 1/16W 型は記載していません。定数は回路図を参照願います。
- 部品表の抵抗器、コンデンサの品名記号の読み方は表を参照してください。

### ●抵抗器

例) **RN** **14K** **2E** **182** **G** **FR**  
種類 形状特性 電力 抵抗値 許容差 その他

RD : カーボン	2B : 1/8 W	F : ±1%	P : 耐パルス形
RC : 固定体	2E : 1/4 W	G : ±2%	NL : 低雑音形
RS : 金属系皮膜	2H : 1/2 W	J : ±5%	NB : 不燃形
RW : 巻線	3A : 1 W	K : ±10%	FR : ヒューズ抵抗
RN : 金属皮膜	3D : 2 W	M : ±20%	F : リード線成形
RK : 金属混合体	3F : 3 W		
	3H : 5 W		

#### \* 抵抗値

$\overset{18}{\uparrow} \overset{2}{\text{---}} \Rightarrow 1800 \Omega = 1.8 \text{ k}\Omega$   
有効数字につづく0の数を表わす。  
2桁の有効数字を表わす。

$\overset{1R}{\uparrow} \overset{2}{\text{---}} \Rightarrow 1.2 \Omega$   
1桁の有効数字を表わす。  
2桁の有効数字で小数点はRで表わす。  
単位は $\Omega$

### ●コンデンサ

例) **CE** **04W** **1H** **2R2** **M** **BP**  
種類 形状特性 耐圧 容量 許容差 その他

CE : アルミ箔電解	0J : 6.3 V	F : ±1%	HS : 高安定形
CA : アルミ固体電解	1A : 10 V	G : ±2%	BP : 無極性形
CS : タンタル電解	1C : 16 V	J : ±5%	HR : 耐リップル形
CQ : フィルム	1E : 25 V	K : ±10%	DL : 充放電対策用
CK : セラミック	1V : 35 V	M : ±20%	HF : 高周波保証用
CC : セラミック	1H : 50 V	Z : +80%	U : UL 部品
CP : オイル	2A : 100 V	-20%	C : CSA 部品
CM : マイカ	2B : 125 V	P : +100%	W : UL-CSA 部品
CF : メタライズド	2C : 160 V	-0%	F : リード線成形
CH : メタライズド	2D : 200 V	C : ±0.25pF	
	2E : 250 V	D : ±0.5pF	
	2H : 500 V	= : その他	
	2J : 630 V		

#### \* 容量値

##### ● 電解コンデンサの場合

$\overset{22}{\uparrow} \overset{2}{\text{---}} \Rightarrow 2200 \mu\text{F}$   
有効数字につづく0の数を表わす。  
2桁の有効数字を表わす。  
単位は $\mu\text{F}$

$\overset{2R}{\uparrow} \overset{2}{\text{---}} \Rightarrow 2.2 \mu\text{F}$   
1桁の有効数字を表わす。  
2桁の有効数字で小数点はRで表わす。  
単位は $\mu\text{F}$

##### ● 電解コンデンサ以外の場合

$\overset{22}{\uparrow} \overset{2}{\text{---}} \Rightarrow 2200 \text{ pF} = 0.0022 \mu\text{F}$   
有効数字につづく0の数を表わす。  
(0の数が2以上の場合)  
2桁の有効数字を表わす。  
単位はpF

$\overset{22}{\uparrow} \overset{1}{\text{---}} \Rightarrow 220 \text{ pF}$   
有効数字につづく0の数を表わす。  
(0の数が0または1の場合)  
2桁の有効数字を表わす。  
単位はpF

##### ● 耐圧を交流で表示する場合は、耐圧表示の次に「AC」を表示します。

## PARTS LIST OF P.W.B. UNIT ASS'Y

Note : The symbols in the column "Remarks" indicate the following destinations.  
 E3 : U.S.A. & Canada model  
 E2 : Europe model  
 JP : Japan model

## GU-3494 MAIN UNIT

Ref. No.	Part No.	Part Name	Remarks		New
<b>SEMICONDUCTORS GROUP</b>					
	IC101	262 3257 005	M65776BFP		*
	IC102	262 3215 005	M32102S6FP		*
	IC103	GEN 6237	ROM SUB ASS'Y(MIT)	MX29LV160BTC-90	*
	IC104	262 3119 004	W986416DH-7		
	IC105	262 3216 907	SM8707EV		*
	IC106	262 2518 907	SN74LV74APW-EL2		
	IC107	262 3046 902	TC7WH157FU		
	IC108	262 2514 901	SN74LV138APW-EL2		
	IC109	262 2778 909	SN74LV273ANS		
	IC112	262 1738 908	TC7SU04F (TAPE)		
	IC113	262 3053 908	S-24C02BFJ-TB		
	IC114	263 1079 903	BA033FP		
	IC115	262 2977 904	BA18BC0FP-E2		
	IC116	263 1110 901	PQ070XZ01ZP		
	IC117	263 1079 903	BA033FP		
	IC118	262 2977 904	BA18BC0FP-E2		
	IC201	262 3121 005	ADSPMEL322		
	IC202	GEN 6243	BASS M.ROM SUB ASS'Y	AT49LV002-70TC	*
	IC203	262 2959 906	SN74LV244APW		
	IC204-206	262 3129 900	TC74VHC157AF-EL		
	IC207	262 3198 902	TC74VHC157FT-EL		
	IC301	262 3054 004	MN102H460B		
	IC302	GEN 6236	ROM SUB ASS'Y(PANEL)	AT49LV1025-70JC	*
	IC303	262 2452 908	MN1382-R(TX)		
	IC401	262 3217 003	CXD2753R		*
	IC402	262 2875 006	16M SDRAM(TSOP)-7/8		
	IC403	262 3195 905	AD8062-SO8		*
	IC404	262 3236 000	EPM3064A		*
	IC405	262 2515 900	SN74LV04APW-EL2		
	IC406	262 2570 903	TC7W241FU(TE12L)		
	IC501	262 3219 001	CXD1881AR		*
	IC502	262 3218 002	CXD1885Q		*
	IC503	262 3210 000	M11L16161SA-45T		
	IC505	263 1109 909	AN8471SA		
	IC507	262 1782 909	TC7S08FTE85L		
	IC508	262 3221 002	FAN8042		*
	TR501,502	272 0160 901	2SB1132T100Q		
	TR503	273 0384 900	2SC2412KT96(S)		
	D101-105	276 0717 903	1SS355 TE-17		
	D301	276 0717 903	1SS355 TE-17		
	D501,502	276 0711 909	MA152WA		
<b>RESISTORS GROUP</b>					
	RA101-111	247 9003 908	MNR14=220JE0AB		
	RA112-115	247 9007 917	MNR14=103JE0		
	RA401-405	247 9003 908	MNR14=220JE0AB		
	RA503,504	247 9007 904	MNR14=101JE0		
	RA506-509	247 9007 904	MNR14=101JE0		
	RA523	247 9007 904	MNR14=101JE0		
	RA524-528	247 9007 917	MNR14=103JE0		

Ref. No.	Part No.	Part Name	Remarks		New
<b>CAPACITORS GROUP</b>					
C103,104	254 4464 906	CE67C0J101MT			
C105,106	257 0511 904	CK73F1H103ZT			
C107	257 0512 903	CK73F1E104ZT			
C108,109	257 0511 904	CK73F1H103ZT			
C110,111	257 0512 903	CK73F1E104ZT			
C112	257 0511 904	CK73F1H103ZT			
C113	257 0512 903	CK73F1E104ZT			
C114	257 0511 904	CK73F1H103ZT			
C117	257 0512 903	CK73F1E104ZT			
C118,119	254 4465 905	CE67C1C220MT			
C120,121	257 0512 903	CK73F1E104ZT			
C122,123	257 0511 904	CK73F1H103ZT			
C124	257 0512 903	CK73F1E104ZT			
C125,126	257 0511 904	CK73F1H103ZT			
C127-134	257 0512 903	CK73F1E104ZT			
C136-138	257 0512 903	CK73F1E104ZT			
C139	254 4464 906	CE67C0J101MT			
C140-143	257 0512 903	CK73F1E104ZT			
C145,146	257 0512 903	CK73F1E104ZT			
C147	254 4465 905	CE67C1C220MT			
C151,152	257 0511 904	CK73F1H103ZT			
C153,154	254 4464 906	CE67C0J101MT			
C155-160	257 0512 903	CK73F1E104ZT			
C161	257 0511 904	CK73F1H103ZT			
C162	257 0512 903	CK73F1E104ZT			
C164	257 0512 903	CK73F1E104ZT			
C165	257 0506 951	CC73CH1H101JT			
C166	257 0512 903	CK73F1E104ZT			
C168-171	257 0512 903	CK73F1E104ZT			
C172	257 0509 929	CK73B1H102KT			
C173-176	257 0512 903	CK73F1E104ZT			
C177,178	257 0502 997	CC73CH1H7R0DT			
C179	257 0512 903	CK73F1E104ZT			
C180	254 4464 906	CE67C0J101MT			
C181	257 0512 903	CK73F1E104ZT			
C182	257 0509 929	CK73B1H102KT			
C183	257 0512 903	CK73F1E104ZT			
C184	254 4465 905	CE67C1C220MT			
C185	257 0512 903	CK73F1E104ZT			
C186	257 0509 929	CK73B1H102KT			
C189-192	257 0512 903	CK73F1E104ZT			
C194,195	257 0512 903	CK73F1E104ZT			
C196	257 0511 904	CK73F1H103ZT			
C197-200	257 0512 903	CK73F1E104ZT			
C202	254 4465 905	CE67C1C220MT			
C203,204	257 0512 903	CK73F1E104ZT			
C205	254 4465 905	CE67C1C220MT			
C206,207	257 0512 903	CK73F1E104ZT			
C208	257 0504 924	CC73CH1H270JT			
C209	257 0504 940	CC73CH1H330JT			
C210	257 0511 904	CK73F1H103ZT			
C211	257 0509 929	CK73B1H102KT			
C212	257 0511 904	CK73F1H103ZT			
C213	257 0509 929	CK73B1H102KT			
C214	257 0511 904	CK73F1H103ZT			
C215	257 0509 929	CK73B1H102KT			
C216	257 0512 903	CK73F1E104ZT			
C217	257 0509 929	CK73B1H102KT			
C218	257 0512 903	CK73F1E104ZT			
C219	257 0509 929	CK73B1H102KT			



Ref. No.	Part No.	Part Name	Remarks		New
C220,221	254 4465 905	CE67C1C220MT			
C222-225	257 0512 903	CK73F1E104ZT			
C226	257 0509 929	CK73B1H102KT			
C227	257 0512 903	CK73F1E104ZT			
C228	257 0509 929	CK73B1H102KT			
C230-232	254 4464 906	CE67C0J101MT			
C234,235	257 0512 903	CK73F1E104ZT			
C236	254 4465 905	CE67C1C220MT			
C237	257 0512 903	CK73F1E104ZT			
C240	257 0512 903	CK73F1E104ZT			
C241	257 0509 929	CK73B1H102KT			
C242	257 0512 903	CK73F1E104ZT			
C243	257 0509 929	CK73B1H102KT			
C244	257 0512 903	CK73F1E104ZT			
C245	254 4464 906	CE67C0J101MT			
C246	254 4465 905	CE67C1C220MT			
C247,248	257 0511 904	CK73F1H103ZT			
C249	257 0512 903	CK73F1E104ZT			
C250	257 0509 929	CK73B1H102KT			
C251	257 0512 903	CK73F1E104ZT			
C252	257 0509 929	CK73B1H102KT			
C253	257 0512 903	CK73F1E104ZT			
C254,255	254 4465 905	CE67C1C220MT			
C257	257 0512 903	CK73F1E104ZT			
C258	257 0509 929	CK73B1H102KT			
C259	257 0511 904	CK73F1H103ZT			
C260,261	257 0512 903	CK73F1E104ZT			
C301,302	257 0512 903	CK73F1E104ZT			
C304,305	257 0512 903	CK73F1E104ZT			
C306	254 4464 906	CE67C0J101MT			
C307-310	257 0512 903	CK73F1E104ZT			
C311	257 0503 967	CC73CH1H150JT			
C312	257 0512 903	CK73F1E104ZT			
C313	257 0503 967	CC73CH1H150JT			
C314	257 0509 929	CK73B1H102KT			
C315,316	257 0512 903	CK73F1E104ZT			
C317	257 0509 929	CK73B1H102KT			
C318-320	257 0511 904	CK73F1H103ZT			
C321	254 4464 906	CE67C0J101MT			
C322	257 0511 904	CK73F1H103ZT			
C323	254 4465 918	CE67C1C470MT			
C401-403	257 0512 903	CK73F1E104ZT			
C404	254 4464 906	CE67C0J101MT			
C405	257 0512 903	CK73F1E104ZT			
C406	257 0501 901	CK73B1H103KT (1608)			
C407,408	257 0512 903	CK73F1E104ZT			
C409,410	254 4465 905	CE67C1C220MT			
C411,412	257 0512 903	CK73F1E104ZT			
C413,414	257 0502 942	CC73CH1H2R0CT			
C415-419	257 0512 903	CK73F1E104ZT			
C420	254 4465 905	CE67C1C220MT			
C421,422	257 0512 903	CK73F1E104ZT			
C423	254 4465 905	CE67C1C220MT			
C424-429	257 0512 903	CK73F1E104ZT			
C430	254 4464 906	CE67C0J101MT			
C431-440	257 0512 903	CK73F1E104ZT			
C441	254 4464 906	CE67C0J101MT			
C442	257 0512 903	CK73F1E104ZT			
C443	257 4010 906	CE67C1C101MT			
C444,445	254 4464 906	CE67C0J101MT			
C447	254 4464 906	CE67C0J101MT			

	Ref. No.	Part No.	Part Name	Remarks		New
	C448-450	257 0512 903	CK73F1E104ZT			
	C452	257 0512 903	CK73F1E104ZT			
	C453,454	254 4465 905	CE67C1C220MT			
	C455	257 0512 903	CK73F1E104ZT			
	C456	254 4465 905	CE67C1C220MT			
	C457-460	257 0512 903	CK73F1E104ZT			
	C461	254 4464 906	CE67C0J101MT			
	C466	257 0511 904	CK73F1H103ZT			
	C501	254 4465 905	CE67C1C220MT			
	C502,503	257 0511 904	CK73F1H103ZT			
	C510	254 4465 905	CE67C1C220MT			
	C511,512	257 0511 904	CK73F1H103ZT			
	C513-516	257 0509 990	CK73B1H222KT			
	C517-520	257 0504 908	CC73CH1H220JT			
	C521	257 0516 954	CK73B1E104KT			
	C522,523	257 0510 934	CK73B1H472KT			
	C524	257 0507 976	CC73CH1H331JT			
	C525,526	257 0511 904	CK73F1H103ZT			
	C527	254 4465 905	CE67C1C220MT			
	C528	254 4465 918	CE67C1C470MT			
	C529	257 0509 929	CK73B1H102KT			
	C530	254 4465 918	CE67C1C470MT			
	C531	257 0509 929	CK73B1H102KT			
	C532-535	257 0516 954	CK73B1E104KT			
	C536	257 0501 901	CK73B1H103KT (1608)			
	C537	257 0516 954	CK73B1E104KT			
	C538	257 0501 901	CK73B1H103KT (1608)			
	C539	257 0506 993	CC73CH1H151JT			
	C540	257 0509 929	CK73B1H102KT			
	C545	254 4464 906	CE67C0J101MT			
	C546,547	257 0512 903	CK73F1E104ZT			
	C548	257 0511 904	CK73F1H103ZT			
	C549	257 4010 906	CE67C1C101MT			
	C550	257 0512 903	CK73F1E104ZT			
	C551-553	257 0520 911	CK73B1A224KT			
	C554	257 0516 954	CK73B1E104KT			
	C555,556	257 0512 903	CK73F1E104ZT			
	C558	257 0520 911	CK73B1A224KT			
	C559	257 0512 903	CK73F1E104ZT			
	C560	254 4465 905	CE67C1C220MT			
	C561	257 0501 901	CK73B1H103KT (1608)			
	C562	257 0516 941	CK73B1E473KT			
	C563,564	257 0511 904	CK73F1H103ZT			
	C565	254 4465 905	CE67C1C220MT			
	C566	257 0511 904	CK73F1H103ZT			
	C567	254 4465 905	CE67C1C220MT			
	C568	257 0511 904	CK73F1H103ZT			
	C569	257 0508 917	CC73CH1H471JT			
	C570	254 4464 919	CE67C0J471MT			
	C571	254 4465 905	CE67C1C220MT			
	C572-576	257 0511 904	CK73F1H103ZT			
	C578	257 0511 904	CK73F1H103ZT			
	C580	257 0511 904	CK73F1H103ZT			
	C581	257 0516 941	CK73B1E473KT			
	C582-584	257 0511 904	CK73F1H103ZT			
	C585,586	257 0508 917	CC73CH1H471JT			
	C587	257 0511 904	CK73F1H103ZT			
	C588	257 0507 976	CC73CH1H331JT			
	C589	257 0520 908	CK73B1A154KT			*
	C590	254 4464 906	CE67C0J101MT			
	C591	257 0507 976	CC73CH1H331JT			

Ref. No.	Part No.	Part Name	Remarks	New
C592	257 0508 917	CC73CH1H471JT		
C593	257 0520 908	CK73B1A154KT		*
C594	257 0508 917	CC73CH1H471JT		
C595	257 0516 954	CK73B1E104KT		
C596	257 0511 904	CK73F1H103ZT		
C597	257 0506 951	CC73CH1H101JT		
C598,599	257 0516 909	CK73B1E223KT		
C600-606	257 0511 904	CK73F1H103ZT		
C607	257 0512 903	CK73F1E104ZT		
C608,609	254 4465 905	CE67C1C220MT		
C612	257 0512 903	CK73F1E104ZT		
C615	257 0509 929	CK73B1H102KT		
C616,617	257 0512 903	CK73F1E104ZT		
C618	254 4465 905	CE67C1C220MT		
C619,620	257 0511 904	CK73F1H103ZT		
C621	254 4465 905	CE67C1C220MT		
C622-625	257 0511 904	CK73F1H103ZT		
C629,630	254 4465 905	CE67C1C220MT		
C631,632	257 0510 950	CK73B1H682KT		
C633	257 0509 929	CK73B1H102KT		
C634,635	257 0506 951	CC73CH1H101JT		
C636	257 0501 901	CK73B1H103KT (1608)		
C637	257 0511 904	CK73F1H103ZT		
C639	257 0510 950	CK73B1H682KT		
<b>OTHER PARTS GROUP</b>				
CX039	205 0863 936	3P PH CON.BASE(L)		
CX052	205 0863 952	5P PH CON.BASE(L)		
CX131	205 1170 932	13P FFC BASE(FMNBMTT)		
CX151	205 1149 905	15P FFC BASE(52207)		
CX171	205 1174 909	17P FFC BASE(FMNSMT)		
CX241	205 1152 905	24P FFC BASE(FLZ-SM1)		
CX271	205 1174 925	27P FFC BASE(FMNSMT)		*
CX331	205 1170 945	33P FFC BASE(FMNBMTT)		*
CY121	205 0895 917	12P PH CON. BASE(T)		*
FB101-104	235 0130 903	CHIP EMIFIL(11A121)		
FB108,109	235 0130 903	CHIP EMIFIL(11A121)		
FB110-128	247 2018 903	RM73B--0R0KT		
FB301-318	247 2018 903	RM73B--0R0KT		
FB401-403	235 0136 907	FBMJ1608HS280NT		
FB405-408	235 0136 907	FBMJ1608HS280NT		
FB501-503	235 0130 903	CHIP EMIFIL(11A121)		
L101	235 0048 901	EMI FILTER (103)TP		
X101	399 0619 906	X'TAL(27MHZ)		
X103	399 0806 900	X'TAL(12.288 FCX03)		
X301	399 0698 901	CSACW2500MX01		
	473 7506 019	2X6 CBTS (P)-Z		

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Ref. No.	Part No.	Part Name	Remarks		New
<b>SEMICONDUCTORS GROUP</b>					
IC201	262 1421 901	TC74HCT04AF(TAPE1)			
IC202	269 0187 001	GP1FA551TZ			
IC203,204	263 0896 909	NJM2068MD-TE1			
IC205	263 1048 002	BA033T			
IC206	262 3229 907	DSD1790DBR			
IC207,208	263 0896 909	NJM2068MD-TE1			
IC209	262 3229 907	DSD1790DBR			
IC210,211	263 0896 909	NJM2068MD-TE1			
IC212	262 3229 907	DSD1790DBR			
IC213	263 0896 909	NJM2068MD-TE1			
IC215	263 0896 909	NJM2068MD-TE1			
IC216,217	263 0990 009	OP275GP			
IC218,219	263 0615 902	BA15218F-DXE2			
IC220	263 0896 909	NJM2068MD-TE1			
IC221	263 0809 006	NJM7805FA(S)			
IC222	263 0896 909	NJM2068MD-TE1			
TR201	269 0119 901	DTA124EKT96(TAPE)			
TR202	269 0082 902	DTC114EKT96			
TR205,206	273 0460 905	KTC2875B-RTK	for E2		
TR207-214	273 0460 905	KTC2875B-RTK			
TR215,216	273 0460 905	KTC2875B-RTK	for E2		
TR217	273 0426 907	2SC2412KLNT146			
TR218	269 0083 901	DTA114EKT96			
TR219	269 0119 901	DTA124EKT96(TAPE)			
TR220	269 0082 902	DTC114EKT96			
TR221-228	273 0460 905	KTC2875B-RTK			
TR231-236	273 0460 905	KTC2875B-RTK			
D201	276 0432 903	1SS270A TE (TAPE)			
D202,203	276 0717 903	1SS355 TE-17			
D206,207	276 0717 903	1SS355 TE-17			
<b>RESISTORS GROUP</b>					
R290	244 2052 915	RS14B3A182JNBST(S)			
R295	241 2423 927	RD14B2E222JT(PSNB)			
<b>CAPACITORS GROUP</b>					
C201	257 0512 903	CK73F1E104ZT			
C202	257 0511 904	CK73F1H103ZT			
C203	257 0512 903	CK73F1E104ZT			
C204	257 0511 904	CK73F1H103ZT			
C205	257 0512 903	CK73F1E104ZT			
C206	257 0511 904	CK73F1H103ZT			
C207	257 0512 903	CK73F1E104ZT			
C209	257 0509 929	CK73B1H102KT			
C210	257 0512 903	CK73F1E104ZT			
C211	257 0511 904	CK73F1H103ZT			
C212	257 0509 929	CK73B1H102KT			
C213	257 0512 903	CK73F1E104ZT			
C214,215	257 0509 929	CK73B1H102KT			
C216	257 0512 903	CK73F1E104ZT			
C217	254 4525 900	CE04W1H330MT SMG/RE3			
C218,219	257 0014 935	CK73F1E104ZT			
C220,221	254 4382 910	CE04W1C221MT(ASF)			
C223	257 0512 903	CK73F1E104ZT			

	Ref. No.	Part No.	Part Name	Remarks		New
	C224	254 4524 985	CE04W1H100MT SMG/RE3			
	C225	257 0509 929	CK73B1H102KT			
	C226	257 0501 901	CK73B1H103KT (1608)			
	C228	257 0512 903	CK73F1E104ZT			
	C229	257 0509 929	CK73B1H102KT			
	C232	257 0512 903	CK73F1E104ZT			
	C233	257 0509 929	CK73B1H102KT			
	C234	254 4452 701	CE04W1C471MC(ASF)			
	C235-237	257 0512 903	CK73F1E104ZT			
	C239-241	257 0501 901	CK73B1H103KT (1608)			
	C243-247	254 4313 921	CE04W1H220MT(ASF)			
	C248-250	257 0501 901	CK73B1H103KT (1608)			
	C251	257 0511 904	CK73F1H103ZT			
	C253	257 0511 904	CK73F1H103ZT			
	C255	257 0511 904	CK73F1H103ZT			
	C258,259	254 4313 921	CE04W1H220MT(ASF)			
	C260-262	257 0512 903	CK73F1E104ZT			
	C277-284	257 0512 903	CK73F1E104ZT			
	C285-288	255 4254 973	CQ93P2A182JT(NH2)			
	C289-292	257 0512 903	CK73F1E104ZT			
	C293,294	257 3011 948	CF73=1H222JT(ECHUB5)			
	C295-300	257 3011 951	CF73=1H272JT(ECHUB5)			
	C301-304	255 4252 959	CQ93P2A221JT(NH2)			
	C305-308	257 3014 929	CF73=1C472JT(ECHUB5)			
	C309-316	257 3011 919	CF73=1H102JT(ECHUB5)			
	C317-320	257 0509 990	CK73B1H222KT			
	C321,322	254 4313 950	CE04W1H101MT(ASF)			
	C323-330	257 0512 903	CK73F1E104ZT			
	C331,332	254 4313 950	CE04W1H101MT(ASF)			
	C337,338	255 4254 931	CQ93P2A122JT(NH2)			
	C340	254 4313 921	CE04W1H220MT(ASF)			
	C341,342	255 4254 973	CQ93P2A182JT(NH2)			
	C343-346	257 0512 903	CK73F1E104ZT			
	C349	254 4558 702	CE04W1H101MC(RFS)	for E3,E2		
	C349	254 4445 750	CE04W1H101MC(ARSG)	for JP		
	C351	257 3011 919	CF73=1H102JT(ECHUB5)			
	C354	254 4558 702	CE04W1H101MC(RFS)	for E3,E2		
	C354	254 4445 750	CE04W1H101MC(ARSG)	for JP		
	C355	254 4347 751	CE04W1H2R2MC(ARSA)	for E3,E2		
	C357	254 4347 751	CE04W1H2R2MC(ARSA)	for E3,E2		
	C359,360	255 4256 955	CQ93P2A103JT(NH2)			
	C361-364	254 4313 950	CE04W1H101MT(ASF)			
	C365	254 4347 751	CE04W1H2R2MC(ARSA)	for E3,E2		
	C367	254 4347 751	CE04W1H2R2MC(ARSA)	for E3,E2		
	C369,370	257 0508 933	CC73CH1H561JT	for E2		
	C371-374	255 4253 932	CQ93P2A471JT(NH2)			
	C375-378	257 0509 929	CK73B1H102KT			
	C379	257 0512 903	CK73F1E104ZT			
	C380	257 0509 929	CK73B1H102KT			
	C381	257 0501 901	CK73B1H103KT (1608)			
	C382	257 0512 903	CK73F1E104ZT			
	C383,384	257 3011 919	CF73=1H102JT(ECHUB5)			
	C388	257 0511 904	CK73F1H103ZT	for E3,JP		
	C389	257 0512 903	CK73F1E104ZT	for E3,JP		
	C392,393	254 4615 700	CE04W1H220MBPC(ARS)			
	C394-397	254 4598 908	CE04W1H220MTBP(ASF)			
	C398	257 3011 919	CF73=1H102JT(ECHUB5)			
	C399	254 4445 750	CE04W1H101MC(ARSG)	for E3,E2		
	C399	254 4644 700	CE04W1H101MC(RGO)	for JP		
	C401	254 4313 921	CE04W1H220MT(ASF)			
	C402	257 0512 903	CK73F1E104ZT			

Ref. No.	Part No.	Part Name	Remarks	New
C403	254 4313 921	CE04W1H220MT(ASF)		
C404	254 4313 950	CE04W1H101MT(ASF)	for E3,E2	
C404	254 4558 702	CE04W1H101MC(RFS)	for JP	
C405	254 4313 921	CE04W1H220MT(ASF)		
C407	254 4313 921	CE04W1H220MT(ASF)		
C409,410	254 4313 921	CE04W1H220MT(ASF)		
C421,422	254 4558 715	CE04W1H221MC(RFS)	for E3,E2	
C421,422	254 4445 035	CE04W1H221M(ARSG)	for JP	
<b>OTHER PARTS GROUP</b>				
CX054	205 0343 058	5P CONN.BASE(KR-PH)	for E2	
CY041	205 0343 045	4P CONN.BASE(KR-PH)		
CY271	205 1100 083	27P FFC BASE (P=1)		
FB201-203	235 0130 903	CHIP EMIFIL(11A121)		
FB204-208	247 2018 903	RM73B--0R0KT	for E3,JP	
FB209,210	247 2018 903	RM73B--0R0KT	for E3,JP	
FB209,210	235 0130 903	CHIP EMIFIL(11A121)	for E2	
FB213	247 2018 903	RM73B--0R0KT		
FB215	247 2018 903	RM73B--0R0KT		
FB217	247 2018 903	RM73B--0R0KT		
JK201	204 8618 009	1P PIN JACK(AU)		
JK202	204 8668 004	8P PIN JACK (AU)		*
ST701	205 0452 017	STYLE PIN		
T201	231 8063 009	PULSE TRANS		
	203 0469 033	1P CONTACT ASS'Y		
	203 0717 002	1P SIN-SIN WIRE		
	417 0476 010	RADIATOR		
	471 3303 016	3X6 CBS-Z		

## GU-3496 POWER/DISP. UNIT

	Ref. No.	Part No.	Part Name	Remarks		New
	<b>SEMICONDUCTORS GROUP</b>					
	IC101	262 3048 007	ML9207-01GP			
	IC103	499 0303 004	GP1UM271XK			
	IC510	262 2580 906	CXA1511M			
	IC511	262 2114 903	UPD4721GS-GJG			
	IC901	265 0112 003	STR-F6674			
	IC902	262 3047 008	PC123 Y-22			
	IC903	263 1113 005	SE005N			
	IC904	263 1048 002	BA033T			
	IC905	263 1114 004	PQ1CG21H2FZ			
	IC906	263 0809 006	NJM7805FA(S)			
	IC908	263 0554 005	NJM7905FA			
	IC909	263 0810 008	NJM7808FA(S)			
	IC912	263 0753 000	NJM7809FA(S)			
	IC913	263 0878 008	NJM7909FA			
	TR101	269 0171 907	IMD3A-T108			
	TR102,103	269 0082 902	DTC114EKT96			
	TR501	269 0171 907	IMD3A-T108			
	TR902	269 0082 902	DTC114EKT96			
	TR903	272 0093 010	2SB1274 (R/S)			
	TR905	269 0083 901	DTA114EKT96			
	TR906	269 0082 902	DTC114EKT96			
	TR907	275 0106 906	HAT2053M(TAPE)			
	TR908,909	274 0036 905	2SD468(C)TF			
	TR910,911	269 0083 901	DTA114EKT96			
	TR912	274 0036 905	2SD468(C)TF			
	D102-104	276 0717 903	1SS355 TE-17			
	D901-904	276 0729 904	EM01AT (V1)			
	D905	276 0730 906	AG01ZT (V1)			
	D906	276 0724 909	SARS01T (V1)			
	D907-909	276 0730 906	AG01ZT (V1)			
	D910	276 0725 704	RK39 LF-C4			
	D911	276 0783 005	FMB-2204			*
	D912	276 0745 904	RB411DT146			
	D913,914	276 0727 906	AL01ZT (V1)			
	D915,916	276 0717 903	1SS355 TE-17			
	D917,959	276 0737 939	RB161L-40			
	D918	276 0717 903	1SS355 TE-17			
	D923,924	276 0717 903	1SS355 TE-17			
	D957,958	276 0717 903	1SS355 TE-17			
	ZD901	276 0457 904	HZS4C-1TD			
	LD101	393 9623 908	SEL2810A(TP7)	Amber		
	LD102	393 9576 903	SELU1E10CXM-002	Blue		
	LD103	393 9504 904	SEL1210S(TP7)	Red		
⚠	TH901	279 0044 002	NTH11D8R0LA			
	<b>RESISTORS GROUP</b>					
	R547	244 2052 928	RS14B3A470JNBST(S)			
	R901	244 2675 716	RS14B3D683JNBF (ERG)			
	R902	244 2671 956	RS14B3DR47JNBST(S)			
	R905	244 2675 729	RS14B3D224JNBF (ERG)			
	R906	244 2675 703	RS14B3D470JNBF (ERG)			
	R913	244 2043 953	RS14B3A471JNBST(S)			
	R920	241 2423 927	RD14B2E222JT(PSNB)			

	Ref. No.	Part No.	Part Name	Remarks		New
	R932	244 2052 999	RS14B3A103JNBST(S)			
	R937	244 2064 929	RS14B3A3R3JNBST(S)			
	<b>CAPACITORS GROUP</b>					
	C101,102	257 0512 903	CK73F1E104ZT			
	C106,107	257 0502 971	CC73CH1H5R0CT			
	C108,109	257 0512 903	CK73F1E104ZT			
	C110	257 0509 929	CK73B1H102KT			
	C111	254 4299 964	CE04W1C470MT(SRE)			
	C113	257 0509 929	CK73B1H102KT			
	C114	257 0511 904	CK73F1H103ZT			
	C115	257 0509 929	CK73B1H102KT			
	C116,117	257 0511 904	CK73F1H103ZT			
	C118	257 0509 929	CK73B1H102KT			
	C119	257 0512 903	CK73F1E104ZT			
	C120	257 0509 929	CK73B1H102KT			
⚠	C121	253 8022 707	CK45F2EAC103MC			
	C122	257 0509 929	CK73B1H102KT			
	C501	257 0511 904	CK73F1H103ZT			
	C502	257 0509 929	CK73B1H102KT			
	C505	257 0512 903	CK73F1E104ZT			
	C509	257 0512 903	CK73F1E104ZT			
	C510	257 0509 929	CK73B1H102KT			
	C511	257 0511 904	CK73F1H103ZT			
	C566	257 0506 951	CC73CH1H101JT			
	C567	257 0501 901	CK73B1H103KT (1608)			
	C568	254 4538 939	CE04W1C470MT SMG/RE3			
	C569	257 0501 901	CK73B1H103KT (1608)			
	C570	254 4524 943	CE04W1H010MT SMG/RE3			
	C571	257 0501 901	CK73B1H103KT (1608)			
	C573	257 0501 901	CK73B1H103KT (1608)			
	C574	257 0509 929	CK73B1H102KT			
	C575	257 0501 901	CK73B1H103KT (1608)			
	C576-578	254 4524 901	CE04W1H0R1MT SMG/RE3			
	C579	254 4313 934	CE04W1H470MT(ASF)			
	C580	257 0512 903	CK73F1E104ZT			
	C581,582	254 4524 901	CE04W1H0R1MT SMG/RE3			
	C585,586	257 0506 951	CC73CH1H101JT			
	C588	257 0506 951	CC73CH1H101JT			
	C589,590	257 0511 917	CK73F1H223ZT			
	C593,594	257 0511 904	CK73F1H103ZT			
⚠	C901	256 8038 017	CF99--2EAC224M			
⚠	C902	256 8038 004	CF99--2EAC104M			
	C905	254 4589 713	CE04W2G101MC(KMG)	for E3,JP		
	C905	254 4589 700	CE04W2G470MC (KMG)	for E2		
	C906	253 4546 711	CC45SL3D221JC			
	C907	253 4452 902	CC45SL1H471JT			
	C908	253 9030 963	CK45=1E103KT			
	C909	254 4313 934	CE04W1H470MT(ASF)			
⚠	C910	253 8029 700	CK45F2EAC222MC (KX)			
	C911	253 8028 701	CK45R3A222KC			
	C912	255 1249 923	CQ93M1H681JT (B)			
	C913	254 4533 921	CE04W0J101MT SMG/RE3	for E3,E2		
	C913	254 4313 950	CE04W1H101MT(ASF)	for JP		
	C914	254 4592 700	CE04W0J222MC K20(LXV			
	C915	254 4593 709	CE04W1C122MC K20(LXJ			
	C916	254 4591 905	CE04W1H101MT (KMF)			
	C917	254 4593 709	CE04W1C122MC K20(LXJ			
	C918	254 4591 905	CE04W1H101MT (KMF)			
	C919	256 1058 971	CF93A1H104JT (JL)			
	C920,950	254 4538 955	CE04W1C221MT SMG/RE3	for E3,E2		



	Ref. No.	Part No.	Part Name	Remarks		New
	C920,950	254 4313 798	CE04W1H221MC (ASF)	for JP		
	C921	254 4533 921	CE04W0J101MT SMG/RE3			
	C922,923	257 0512 903	CK73F1E104ZT			
	C924	254 4538 942	CE04W1C101MT SMG/RE3			
	C925	254 4313 934	CE04W1H470MT(ASF)			
	C926	257 0512 903	CK73F1E104ZT			
	C927	257 0511 904	CK73F1H103ZT			
	C928	254 4585 908	CE04W0J471MT(LXV)			
	C929	254 4533 921	CE04W0J101MT SMG/RE3			
	C930-932	257 0512 903	CK73F1E104ZT			
	C934	254 4368 934	CE04W1E101MT(ASF)			
	C935	257 0512 903	CK73F1E104ZT			
	C936	254 4538 942	CE04W1C101MT SMG/RE3			
	C937	254 4368 934	CE04W1E101MT(ASF)			
	C938	257 0512 903	CK73F1E104ZT			
	C939	254 4368 934	CE04W1E101MT(ASF)			
	C941	257 0511 904	CK73F1H103ZT			
	C942-946	257 0512 903	CK73F1E104ZT			
	C947	257 0511 904	CK73F1H103ZT			
	C948	257 0512 903	CK73F1E104ZT			
	C949	257 0511 904	CK73F1H103ZT			
	C951	257 0512 903	CK73F1E104ZT			
	C954,955	257 0512 903	CK73F1E104ZT			
	C958,959	254 4382 910	CE04W1C221MT(ASF)			
	C964	254 4538 942	CE04W1C101MT SMG/RE3	for E3,E2		
	C964	254 4313 950	CE04W1H101MT(ASF)	for JP		
	C983,984	257 0512 903	CK73F1E104ZT			
	<b>OTHER PARTS GROUP</b>					
	CW035	203 5312 004	3P PH-SAN CON.CORD			
	CX024	205 0581 001	2P VH CONNECTOR BASE			
	CX025	205 0581 056	2P VH CONNECTOR BASE			
	CX035	205 0355 033	3P KR CON BASE(L)			
	CX041	205 0343 045	4P CONN.BASE(KR-PH)			
	CX051	205 0343 058	5P CONN.BASE(KR-PH)			
	CX061	205 0343 061	6P CONN.BASE(KR-PH)			
	CX121	205 0375 026	12P CONN.BASE(KR-PH)			
	CY025	205 0581 056	2P VH CONNECTOR BASE			
	CY061	205 0343 061	6P CONN.BASE(KR-PH)			
	CY131	205 0892 088	13P FFC CON. BASE			
	CY171	205 1006 080	17P FFC BASE(P=1)			
⚠	F951	206 1087 015	FUSE (ET1A)	for E3,JP		*
⚠	F951	206 1087 073	FUSE (ET1.6A)	for E2		*
	FB519	235 0130 903	CHIP EMIFIL(11A121)			
	FB527-530	235 0130 903	CHIP EMIFIL(11A121)			
	FB753-756	235 0130 903	CHIP EMIFIL(11A121)			
	FF901	202 0040 909	FUSE CLIP (TAPE)			
	FH901	202 0040 909	FUSE CLIP (TAPE)			
	FL101	393 8060 009	FL TUBE(17-ST-04GNK)			
	JK507,508	204 8612 005	MINI JACK			
	JK509	205 1153 001	9P S SUB CONNECTOR			
⚠	L901	235 0141 002	LINE FILTER (PLA10A)			

	Ref. No.	Part No.	Part Name	Remarks		New
	L902 L904 L907-909	235 0142 917 235 0140 906 235 0142 917	COIL LHL08TB4R7MT COIL LHL10TB101KT COIL LHL08TB4R7MT			
!	S101-106 S107 S108-110 S120	212 5604 910 212 0389 007 212 5604 910 212 1030 009	TACT SWITCH-TA(ALPS) ROTARY SW(1-3) TACT SWITCH-TA(ALPS) POWER SWITCH (TV-5)			
⚠	ST901 ST903  T901	205 0452 017 205 0452 017  233 6403 007	STYLE PIN STYLE PIN  SW TRANSFORMER(WIDE)			
	X101	399 0151 008  417 0476 010 417 0592 004 417 0610 009	X-TAL(4.332MHZ)  RADIATOR HEAT SINK HEAT SINK(OSH-2430)			
		461 1125 118 471 3303 016 471 3305 027 513 3827 003 001 0101 025	FL SPACER 3X6 CBS-Z 3X10 CBS FUSE LABEL VINYL WIRE	for E2 for E2		

## GU-3497 VIDEO UNIT

Ref. No.	Part No.	Part Name	Remarks		New
<b>SEMICONDUCTORS GROUP</b>					
IC601	262 3126 000	XC2S30-5VQ100C			
IC602	262 3127 009	XC17S30AV08C(SQZ)			
IC603	262 1348 903	TC74HC123AF(TP1)			
IC604	262 2519 906	SN74LV00APW-EL2			
IC605	262 1793 901	TC4W53F	for E2		
IC701	262 3058 000	SII504CM208			
IC702	262 2916 004	64M SDRAM(TSOP)			
IC703	262 3059 902	PIC18LC242-I/SO TAPE			
IC704	262 3050 008	ADV7300			
IC705	262 3093 007	ADV7190	for E2		
IC706	262 3020 902	BH7860FP-E2			
IC707	262 3020 902	BH7860FP-E2	for E2		
IC708-710	263 1082 903	TK15420MTL			
IC711	262 1348 903	TC74HC123AF(TP1)			
IC712	263 1110 901	PQ070XZ01ZP			
IC713	263 1079 903	BA033FP			
IC714	262 2977 904	BA18BC0FP-E2			
IC715	263 1079 903	BA033FP	for E2		
TR701,702	271 0293 901	2SA1022-B			
TR703	274 0163 904	2SD601A			
TR704,705	272 0125 904	2SB709A			
TR706	274 0163 904	2SD601A			
TR707,708	272 0125 904	2SB709A			
TR709,710	274 0163 904	2SD601A			
TR711,712	271 0293 901	2SA1022-B			
TR713	272 0125 904	2SB709A			
TR714-716	272 0125 904	2SB709A	for E2		
TR719	272 0125 904	2SB709A	for JP		
TR720	274 0163 904	2SD601A	for JP		
TR721	272 0125 904	2SB709A	for JP		
TR722	274 0163 904	2SD601A	for JP		
TR723-725	269 0082 902	DTC114EKT96	for E2,JP		
TR726-728	269 0083 901	DTA114EKT96	for E2,JP		
D701-703	276 0717 903	1SS355 TE-17			
<b>RESISTORS GROUP</b>					
RA601-604	247 9002 909	MNR14=330JE0AB			
RA701-708	247 9002 909	MNR14=330JE0AB			
RA709-712	247 9002 909	MNR14=330JE0AB	for E2		
VR701-706	211 6148 906	V03PB471MT(RH03ADCS)			
VR708	211 6138 903	V03PB102MT(RH03ADC)	for E2		
<b>CAPACITORS GROUP</b>					
C601,602	257 0512 903	CK73F1E104ZT			
C603	254 4465 905	CE67C1C220MT			
C604-609	257 0512 903	CK73F1E104ZT			
C611-613	257 0512 903	CK73F1E104ZT			
C614	254 4465 905	CE67C1C220MT			
C615-617	257 0512 903	CK73F1E104ZT			
C618,619	257 0509 929	CK73B1H102KT			
C620,621	257 0512 903	CK73F1E104ZT			
C622,623	257 0512 903	CK73F1E104ZT	for E2		
C701-707	257 0512 903	CK73F1E104ZT			
C708	257 0511 904	CK73F1H103ZT			
C709	257 0512 903	CK73F1E104ZT			

Ref. No.	Part No.	Part Name	Remarks		New
C710	254 4465 905	CE67C1C220MT			
C711	257 0511 904	CK73F1H103ZT			
C712	254 4464 906	CE67C0J101MT			
C713-715	257 0512 903	CK73F1E104ZT			
C717-721	257 0512 903	CK73F1E104ZT			
C723,724	257 0512 903	CK73F1E104ZT			
C725,726	254 4464 906	CE67C0J101MT			
C727	257 0512 903	CK73F1E104ZT			
C728	254 4464 906	CE67C0J101MT			
C729-738	257 0512 903	CK73F1E104ZT			
C739	254 4464 906	CE67C0J101MT			
C742	257 0511 904	CK73F1H103ZT			
C743	257 0512 903	CK73F1E104ZT			
C745,746	254 4464 906	CE67C0J101MT			
C747,748	257 0512 903	CK73F1E104ZT			
C749	254 4464 906	CE67C0J101MT			
C750	257 0512 903	CK73F1E104ZT			
C752	257 0511 904	CK73F1H103ZT			
C753	257 0512 903	CK73F1E104ZT			
C755,756	257 0512 903	CK73F1E104ZT			
C758	257 0509 903	CK73B1H821KT			
C759	257 0512 903	CK73F1E104ZT			
C760	254 4464 906	CE67C0J101MT			
C761	257 0510 921	CK73B1H392KT			
C762	257 0502 971	CC73CH1H5R0CT			
C765,766	257 0512 903	CK73F1E104ZT			
C768,769	257 0512 903	CK73F1E104ZT			
C770-772	254 4464 906	CE67C0J101MT			
C775	257 0503 925	CC73CH1H100DT			
C776,777	257 0512 903	CK73F1E104ZT			
C779,780	257 0512 903	CK73F1E104ZT			
C781,782	254 4465 905	CE67C1C220MT			
C783	254 4572 908	CE67C1C100MT(MV-B)			
C787,788	257 0512 903	CK73F1E104ZT			
C790,791	257 0512 903	CK73F1E104ZT			
C792,793	254 4465 905	CE67C1C220MT			
C794	254 4572 908	CE67C1C100MT(MV-B)			
C795,796	257 0512 903	CK73F1E104ZT			
C797,798	254 4464 906	CE67C0J101MT			
C799,800	257 0512 903	CK73F1E104ZT			
C801	254 4464 906	CE67C0J101MT			
C802	257 0507 934	CC73CH1H221JT			
C803	257 0512 903	CK73F1E104ZT			
C804,805	257 0509 929	CK73B1H102KT			
C806,807	257 0512 903	CK73F1E104ZT			
C808	254 4464 906	CE67C0J101MT			
C809,810	257 0512 903	CK73F1E104ZT	for E2		
C811,812	254 4464 906	CE67C0J101MT	for E2		
C813-815	257 0512 903	CK73F1E104ZT	for E2		
C816	254 4465 905	CE67C1C220MT	for E2		
C817	257 0512 903	CK73F1E104ZT	for E2		
C818	254 4465 905	CE67C1C220MT	for E2		
C819	257 0512 903	CK73F1E104ZT	for E2		
C820	257 0511 904	CK73F1H103ZT	for E2		
C823-827	257 0512 903	CK73F1E104ZT	for E2		
C828,829	257 0512 903	CK73F1E104ZT			
C830-832	257 0512 903	CK73F1E104ZT	for E2		
C833	254 4464 906	CE67C0J101MT			
C834	257 0501 901	CK73B1H103KT (1608)			
C835	254 4465 918	CE67C1C470MT			
C836	254 4465 918	CE67C1C470MT	for E2		

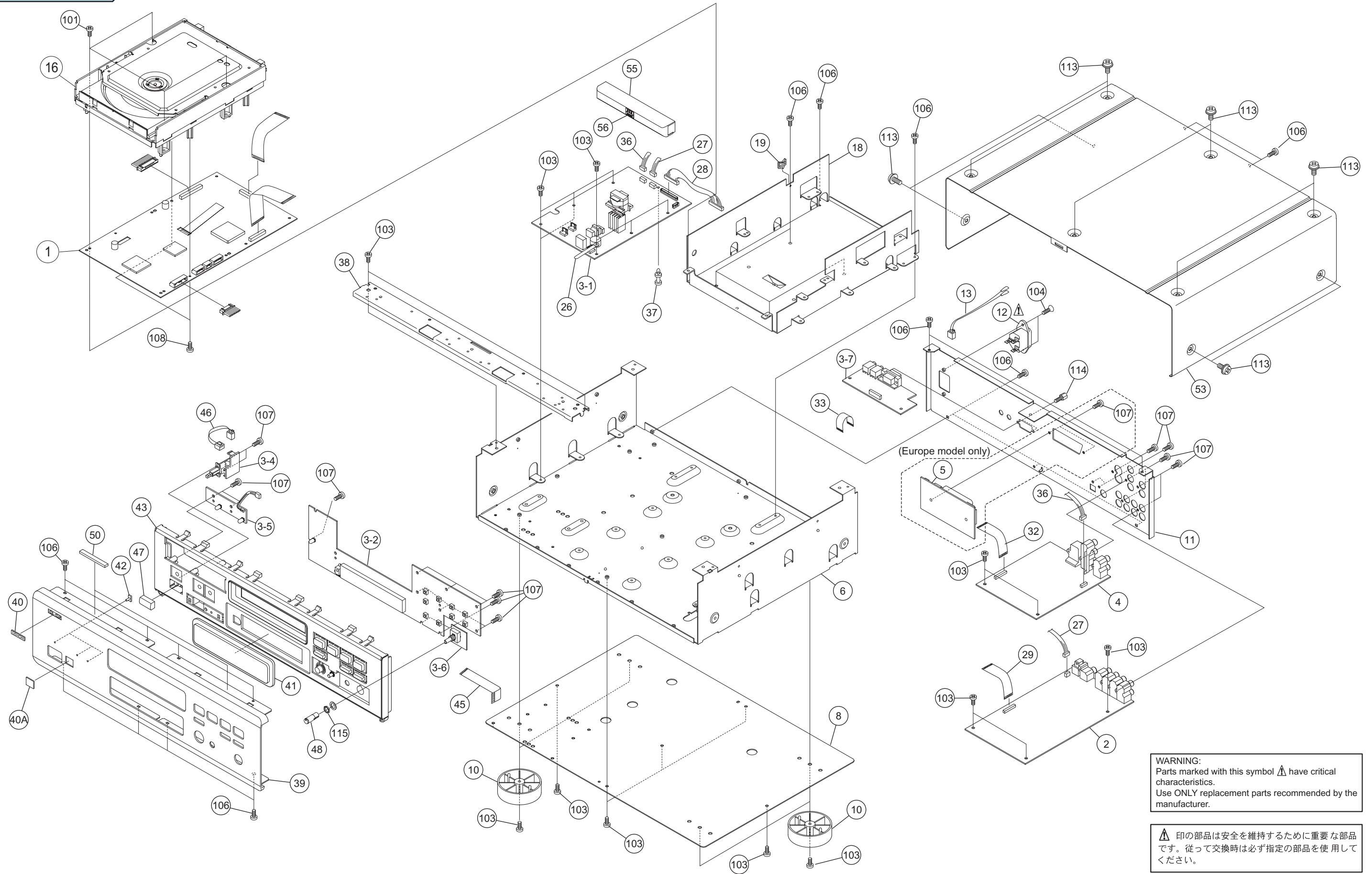
	Ref. No.	Part No.	Part Name	Remarks		New
	C837,838	257 0511 904	CK73F1H103ZT			
	C839	254 4464 906	CE67C0J101MT			
	C840	257 0512 903	CK73F1E104ZT			
	C841	257 0506 951	CC73CH1H101JT			
	C843	257 0501 901	CK73B1H103KT (1608)			
	C844	254 4327 904	CE04W0J102MT(SMG)			
	C845	254 4464 906	CE67C0J101MT			
	C846	254 4327 904	CE04W0J102MT(SMG)			
	C847	254 4464 906	CE67C0J101MT			
	C848	254 4533 950	CE04W0J471MT SMG/RE3	for E2		
	C850-852	254 4465 918	CE67C1C470MT	for E2		
	C853,854	257 0511 904	CK73F1H103ZT	for E2		
	C855	254 4464 906	CE67C0J101MT	for E2		
	C856	257 0512 903	CK73F1E104ZT	for E2		
	C857	257 0506 951	CC73CH1H101JT	for E2		
	C861,862	254 4533 950	CE04W0J471MT SMG/RE3	for E2		
	C863	257 0512 903	CK73F1E104ZT			
	C864	257 0511 904	CK73F1H103ZT			
	C865	257 0509 929	CK73B1H102KT			
	C866	254 4464 906	CE67C0J101MT	for E2		
	C867,868	257 0512 903	CK73F1E104ZT			
	C869	257 0511 904	CK73F1H103ZT			
	C870	257 0509 929	CK73B1H102KT			
	C875-879	257 0512 903	CK73F1E104ZT			
	<b>OTHER PARTS GROUP</b>					
	CY053	205 0895 904	5P KR-PH CON BASE(T)			
	CY101	205 0884 054	10P CON.BASE TUC-P	for E2		
	CY331	205 1170 945	33P FFC BASE(FMNBMTT)			*
	JK701	204 8670 005	1P/S-TERMINAL			*
	JK702	204 8669 003	3P PIN JACK			*
	JK703	204 6670 007	D CONNECTOR	for JP		
	L704,705	235 0125 905	INDUCTOR(FLC32C220K)			
	L710	235 0125 905	INDUCTOR(FLC32C220K)			
	L712	235 0149 907	LK1608R68K-T			
	L713	235 0125 905	INDUCTOR(FLC32C220K)	for E2		
	L715	235 0149 907	LK1608R68K-T	for E2		
	LF701	261 0161 900	ELB4B590N			
	LF702	261 0160 901	ELB4C572			
	ST101,102	205 0452 017	STYLE PIN			
	X702	399 0832 903	CSTCG20MOV51-R0			


## GU-3343 SCART PWB UNIT


	Ref. No.	Part No.	Part Name	Remarks		New
	<b>SEMICONDUCTORS GROUP</b>					
	IC851	262 1793 901	TC4W53F			
	IC852	263 1115 906	NJM2267M (TE2)			
	IC853	262 0707 901	TC4053BF (TAPE)			
	IC854	262 2534 907	BA7660FS-E2			
	TR851-854	269 0082 902	DTC114EKT96			
	TR855	269 0083 901	DTA114EKT96			
	<b>CAPACITORS GROUP</b>					
	C851,852	257 0506 951	CC73CH1H101JT			
	C853	254 4299 964	CE04W1C470MT(SRE)			
	C854,855	254 4300 963	CE04W0J101MT(SRE)			
	C856-859	257 0512 903	CK73F1E104ZT			
	C860,861	254 4300 963	CE04W0J101MT(SRE)			
	C862	257 0512 903	CK73F1E104ZT			
	C863	254 4300 963	CE04W0J101MT(SRE)			
	C864,865	257 0512 903	CK73F1E104ZT			
	C866-868	254 4299 964	CE04W1C470MT(SRE)			
	C869	254 4300 963	CE04W0J101MT(SRE)			
	C870	254 4299 919	CE04W1C220MT(SRE)			
	C871	254 4300 963	CE04W0J101MT(SRE)			
	C872	254 4299 919	CE04W1C220MT(SRE)			
	C873	254 4300 963	CE04W0J101MT(SRE)			
	C874	254 4299 919	CE04W1C220MT(SRE)			
	C875	257 0512 903	CK73F1E104ZT			
	C876	254 4300 963	CE04W0J101MT(SRE)			
	C877,878	257 0512 903	CK73F1E104ZT			
	C879	257 0511 904	CK73F1H103ZT			
	C880	257 0509 929	CK73B1H102KT			
	C884-887	247 2018 903	RM73B--0R0KT			
	C890-892	247 2018 903	RM73B--0R0KT			
	C896,897	257 0512 903	CK73F1E104ZT			
	-	254 4538 955	CE04W1C221MT SMG/RE3			
	<b>OTHER PARTS GROUP</b>					
	CX052	205 0395 051	5P CONN.BASE(RED)L			
	CX101	205 0885 053	10P CON.SOCKET TUC-P			
	FB851-856	235 0130 903	CHIP EMIFIL(11A121)			
	JK851	204 6649 009	RGB CONNECTOR			
	L851	235 0070 911	INDUCTOR(220)ST			
	W701	414 0903 005	SCART SHIELD PLATE			
		001 0231 005	1P WIRE			
		001 0231 018	1P WIRE			
		461 0415 007	RUBBER SHEET			

# EXPLODED VIEW

## Parts List



**WARNING:**  
 Parts marked with this symbol  have critical characteristics.  
 Use **ONLY** replacement parts recommended by the manufacturer.

 印の部品は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

# PARTS LIST OF EXPLODED VIEW

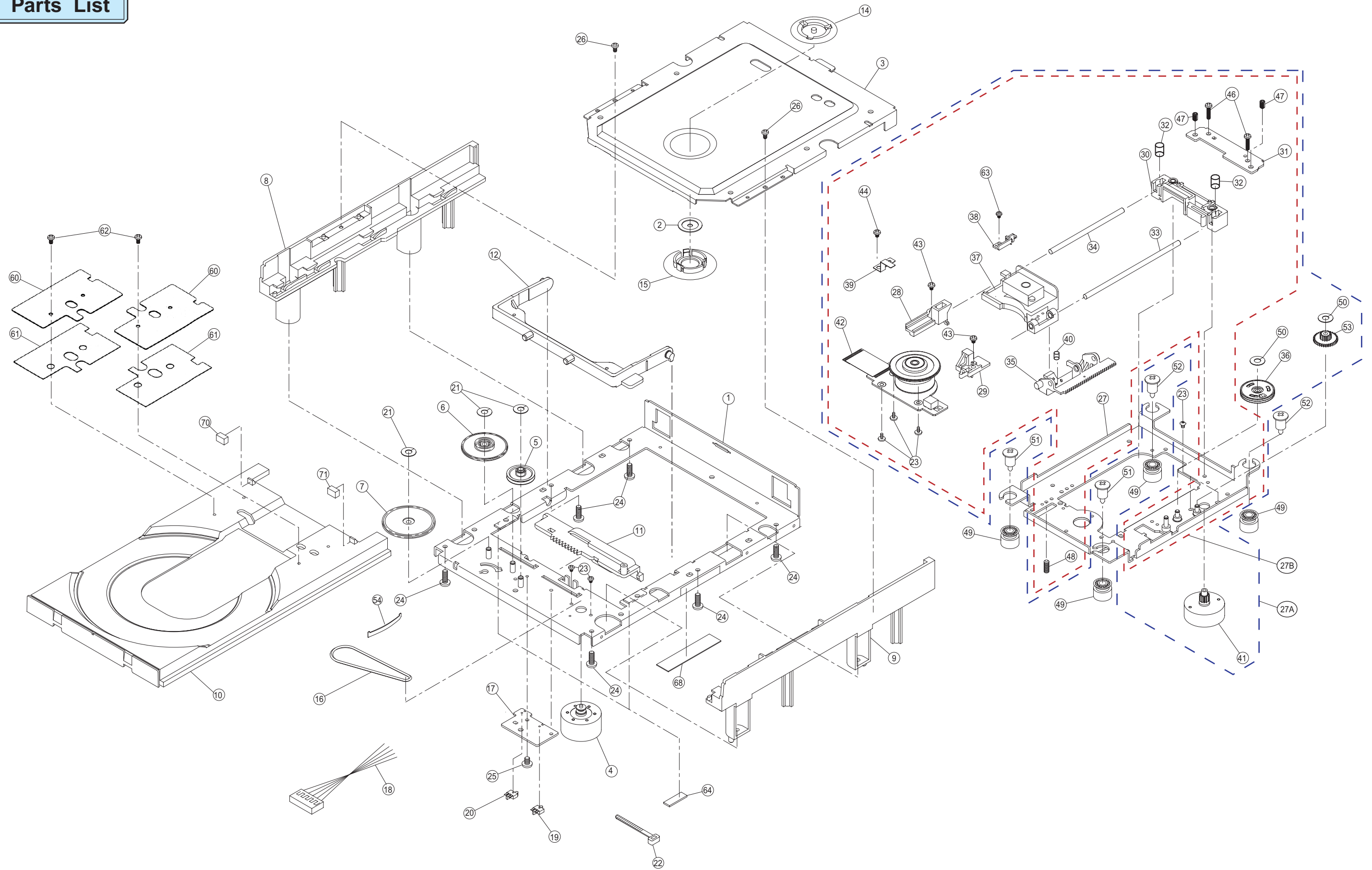
Note: The symbols in the column "Remarks" indicate the following destinations.  
 E3 : U.S.A. & Canada model  
 E2 : Europe model  
 JP : Japan model

	Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
	1	GU- 3494	MAIN UNIT		1	*
	2	GU- 3495	AUDIO UNIT	for E3	1	*
	2	GU- 3495 A	AUDIO UNIT	for E2	1	*
	2	GU- 3495 B	AUDIO UNIT	for JP	1	*
	3	GU- 3496	POWER/DISP. UNIT	for E3	1	*
	3	GU- 3496 A	POWER/DISP. UNIT	for E2	1	*
	3	GU- 3496 B	POWER/DISP. UNIT	for JP	1	*
	3-1	-	POWER UNIT			
	3-2	-	DISPLAY UNIT			
	3-4	-	POWER SW. UNIT			
	3-5	-	LED UNIT			
	3-6	-	SELECT UNIT			
	3-7	-	I/F UNIT			
	4	GU- 3497	VIDEO UNIT	for E3	1	*
	4	GU- 3497 A	VIDEO UNIT A (E2)	for E2	1	*
	4	GU- 3497 B	VIDEO UNIT B (N)	for JP	1	*
	5	GU- 3343	SCART PWB UNIT	for E2	1	*
	6	411 1961 102	CHASSIS		1	
	8	105 1402 009	BOTTOM COVER		1	
	10	104 0313 015	FOOT ASS'Y	for E3,E2	4	
	10	104 0173 226	FOOT ASS'Y	for JP	4	
	11	105 1424 100	REAR PANEL	for E3	1	*
	11	105 1424 126	REAR PANEL	for E2	1	*
	11	105 1424 139	REAR PANEL	for JP	1	*
⚠	12	203 3994 000	AC INLET (3P)	for E3,JP	1	
⚠	12	203 3995 009	AC INLET (2P)	for E2	1	
	13	203 5293 013	3P VH CON.CORD		1	
★	14	342 0032 011	FERRITE CLAMP(RFC-9)		1	
★	15	445 0033 005	WIRE CLAMP BAND		1	
	16	337 0118 001	DVD MECHA(TD-5HP-D3)		1	*
	18	411 2026 004	MECHA FIX BRACKET		1	*
	19	445 0099 007	EDGING (EDS-1208U)		1	
	26	445 0048 016	CORD HOLDER (L50)		1	
★	27	203 6493 032	4P PH-PH CONN.CORD		1	*
	28	204 6610 012	12P PH-PH CORD		1	*
	29	009 0226 069	27P FFC (1.0)		1	*
	32	009 0226 056	33P FFC (1.0)		1	*
	33	009 0226 072	13P FFC (1.0)		1	*
★	34	513 3406 107	LABEL (A)	for E3	1	
★	34	513 3463 001	LABEL(LASER)	for E2	1	
★	35	513 2065 002	E2 LASER CAUTION	for E2	1	
	36	203 8489 015	5P PH-PH CON.CORD		1	*
	37	412 2814 015	CARD SPACER (L=14)		1	
	38	412 4944 006	FRONT ANGLE		1	
	39	144 2830 109	FRONT PANEL	for Black model	1	*
	39	144 2830 112	FRONT PANEL	for Gold model	1	*
	40	131 9004 013	DENON MARK	for Black model	1	
	40	131 9004 068	DENON MARK	for Gold model	1	
	40A	135 0068 018	SACD PLATE	for Black model	1	*
	40A	135 0068 021	SACD PLATE	for Gold model	1	*
	41	143 1145 009	WINDOW		1	
	42	143 1110 005	LENS		3	
	43	146 2225 503	INNER PANEL	for Black model	1	*
	43	146 2225 516	INNER PANEL	for Gold model	1	*
★	43A	461 1156 006	INNER PANEL PLATE		1	*
★	44	204 0572 004	6P PH-PH CON.CORD		1	*
	45	009 0226 085	17P FFC (1.0)		1	*
	46	203 5313 003	3P VH-VH CON.CORD		1	*



	Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
	47	113 1886 008	P.SW KNOB	for Black model	1	
	47	113 1886 011	P.SW KNOB	for Gold model	1	
	48	112 0855 024	VOL KNOB(B)	for Black model	1	
	48	112 0855 037	VOL KNOB(B)	for Gold model	1	
	50	129 0253 048	RUBBER SHEET		2	
	53	102 0644 005	TOP COVER	for Black model	1	
	53	102 0644 018	TOP COVER	for Gold model	1	
	55	146 2309 005	LOADER PANEL	for Black model	1	*
	55	146 2309 018	LOADER PANEL	for Gold model	1	*
	56	135 0065 008	DVD A/VIDEO PLATE	for Black model	1	
	56	135 0065 011	DVD A/VIDEO PLATE	for Gold model	1	
★	57	513 3747 015	RATING SHEET	for E3	1	*
★	57	513 3798 019	RATING SHEET(E2)	for E2	1	*
★	57	513 3800 017	RATING SHEET(DOM)	for JP	1	*
★	59	513 1381 004	MANUFAC.DATE LABEL	for E3,JP	1	
	SCREWS					
	101	473 7001 048	2.6X8 CBTS (S)-Z		4	
	103	473 7002 018	3X8 CBTS (S)-Z		20	
	104	473 7003 017	3X8 CFTS (S)-B		2	
	106	473 7015 005	3X6 CBTS(S)-B		28	
	107	473 7500 044	3X8 CBTS (P)-B	for E3,JP	20	
	107	473 7500 044	3X8 CBTS (P)-B	for E2	22	
★	110	473 7512 003	3X8 CFTS (P)-B	for JP	2	
	113	477 0263 005	3P. SWELLING SCREW	for Black model	10	
	113	477 0263 018	3P.SWELLING SCREW	for Gold model	10	
	114	-	SPECIAL SCREW	Attachment for D connector	2	
	115	-	9 SP NUT	Attachment for Rotary switch		

Parts List



## PARTS LIST OF DVD MECHANISM UNIT

3370118001 DVD MECHA (TD-5HP-D3)

Note : The symbols in the column "Remarks" indicate the following destinations.

E3 : U.S.A. &amp; Canada model

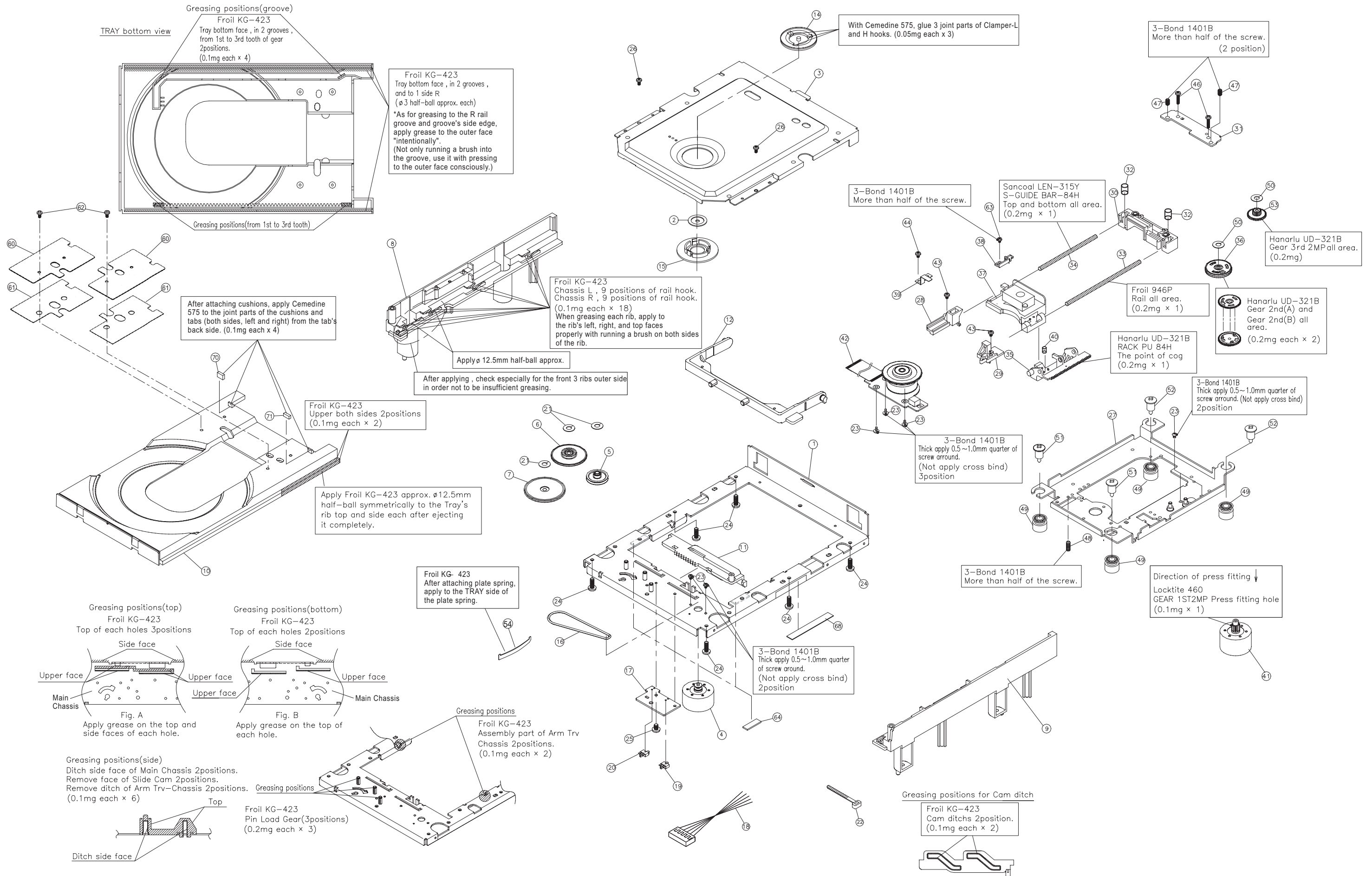
E2 : Europe model

JP : Japan model

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
1	9KC 1A01 7	MAIN CHASSIS ASS'Y		1	
2	9KA 7P08 5	CLAMPER BRACKET		1	
3	9KA 2P84 1	GUIDE CLAMP BRACKET		1	*
4	9KC 2A00 3	LOADING MOTOR ASS'Y		1	
5	9KC 2G02 9	LOADING GEAR		1	
6	9KB 9G03 0	LOADING GEAR 2ND		1	
7	9KB 9G03 1	LOADING GEAR 3RD		1	
8	9KA 2G41 7	SUB CHASSIS-L		1	
9	9KA 2G41 8	SUB CHASSIS-R		1	
10	9KA 2G53 2	TRAY		1	
11	9KC 1G00 3	SLIDE-CAM		1	
12	9KC 1G00 4	TRAVERSE ARM		1	
14	9KA 7G20 2	CLAMPER H		1	
15	9KA 7G20 3	CLAMPER L		1	
16	9KB 9G01 5	LOADING BELT		1	
17	9KC 1P01 4	SWITCH P.W.B.		1	
18	9KC 2G04 3	5P PH WIRE		1	
19	9KS 01W2 04	SWITCH ESE22MH21		1	
20	9KS 01W2 05	SWITCH ESE22MH23		1	
21	9KP 26C6 25	POLY.SLIT WASHER 2.6X6X0.25C		3	
22	445 8004 007	WIRE CLAMPER		1	
23	9KS 17N0 22	PRECISION SCREW 1.7X2.2 TYPE3		2	
24	9KB 26BK 06	SCREW 2.6X6 CBTS(B)-Z		6	
25	9KS 20TK 33	PRECISION SCREW 2X3(S) TYPE3		1	
26	9KB 20PK 06	SCREW 2X6 CBTS(P)-Z		2	
27A	9KC 2A06 3B	TRAVERSE MECHA (FEED) ASS'Y	Assembled part	1	
27B	9KC 2A06 4B	TRAVERSE MECHA ASS'Y	Assembled part	1	
23	-	PRECISION SCREW 1.7X2.2 TYPE3		3	
27	-	PU CHASSIS ASS'Y		1	
28	-	SHAFT HOLDER L		1	
29	-	SHAFT HOLDER R		1	
30	-	SHAFT TILT BASE		1	
31	-	SHAFT TILT PLATE		1	
32	-	TILT SPRING		2	
33	-	MAIN SHAFT		1	
34	-	SUB SHAFT		1	
35	-	PU RACK GEAR		1	
37	-	PICK UP HOP-1200R		1	
38	-	PU SPRING		1	
39	-	SHAFT SPRING		1	
40	-	RACK GEAR SPRING		1	
42	-	T/T MOTOR ASS'Y		1	
43	-	SCREW 2.6X6 CBTS(S)-Z		2	
44	-	SCREW 2.6X4 CBTS(S)-Z		1	
46	-	SCREW 2.6X15 CFTS(S)-Z		2	
47	-	SCREW 3X4 BSS		2	
48	-	SCREW 3X8 BSS (A)		1	
63	-	PRECISION SCREW 1.7X5 TYPE3		1	
23	-	PRECISION SCREW 1.7X2.2 TYPE3		2	
36	-	FEED GEAR 2ND ASS'Y		1	
41	-	FEED MOTOR ASS'Y		1	
50	-	POLY.SLIT WASHER 2.1X4X0.25C		2	
53	-	FEED GEAR 3RD		1	
49	9KC 1G04 3	DAMPER		4	

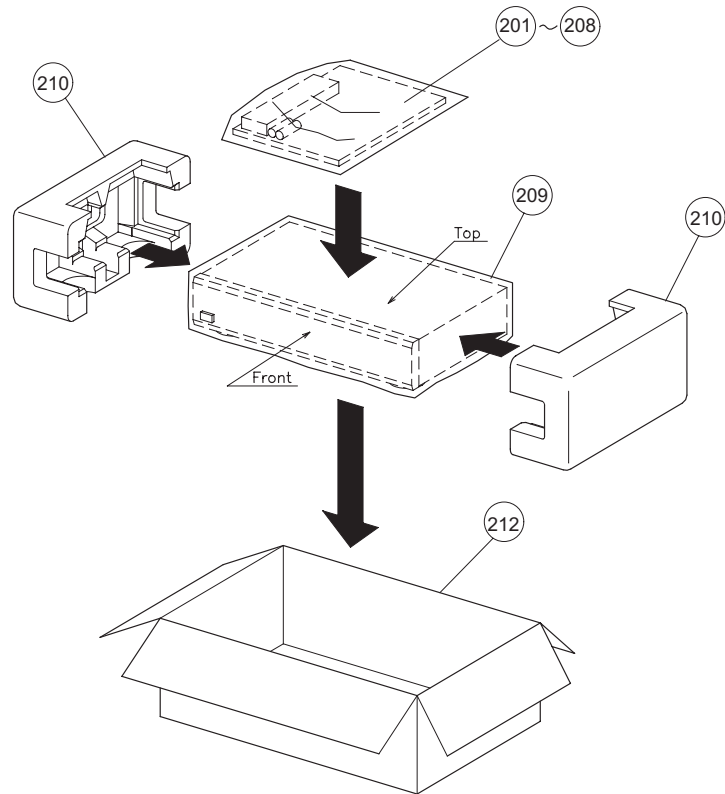
Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
51	-	SPECIAL SCREW (FRONT)		2	
52	-	SPECIAL SCREW (REAR)		2	
54	9KB 7P02 4	TRAY-SPRING-VXF		1	
60	9KC 2P03 1	PLATE-RE-2HPC		2	
61	9KC 2P03 2	WF-PLATE-RE-2HPC		2	
62	9KS 20P1 04	PRECISION SCREW 2X4(P) TYPE1		2	
64	9KC 1G04 2	RUBBER CUSHION		2	
68	-	TAPE W10X45 (NITTO NO.156)		1	
70	9KC 2G07 6	CUSHION L	6X3Xt4	1	
71	9KC 2G07 7	CUSHION R	6X3Xt2	1	

# POINTS OF GREASING



## PACKING VIEW

## 梱包図

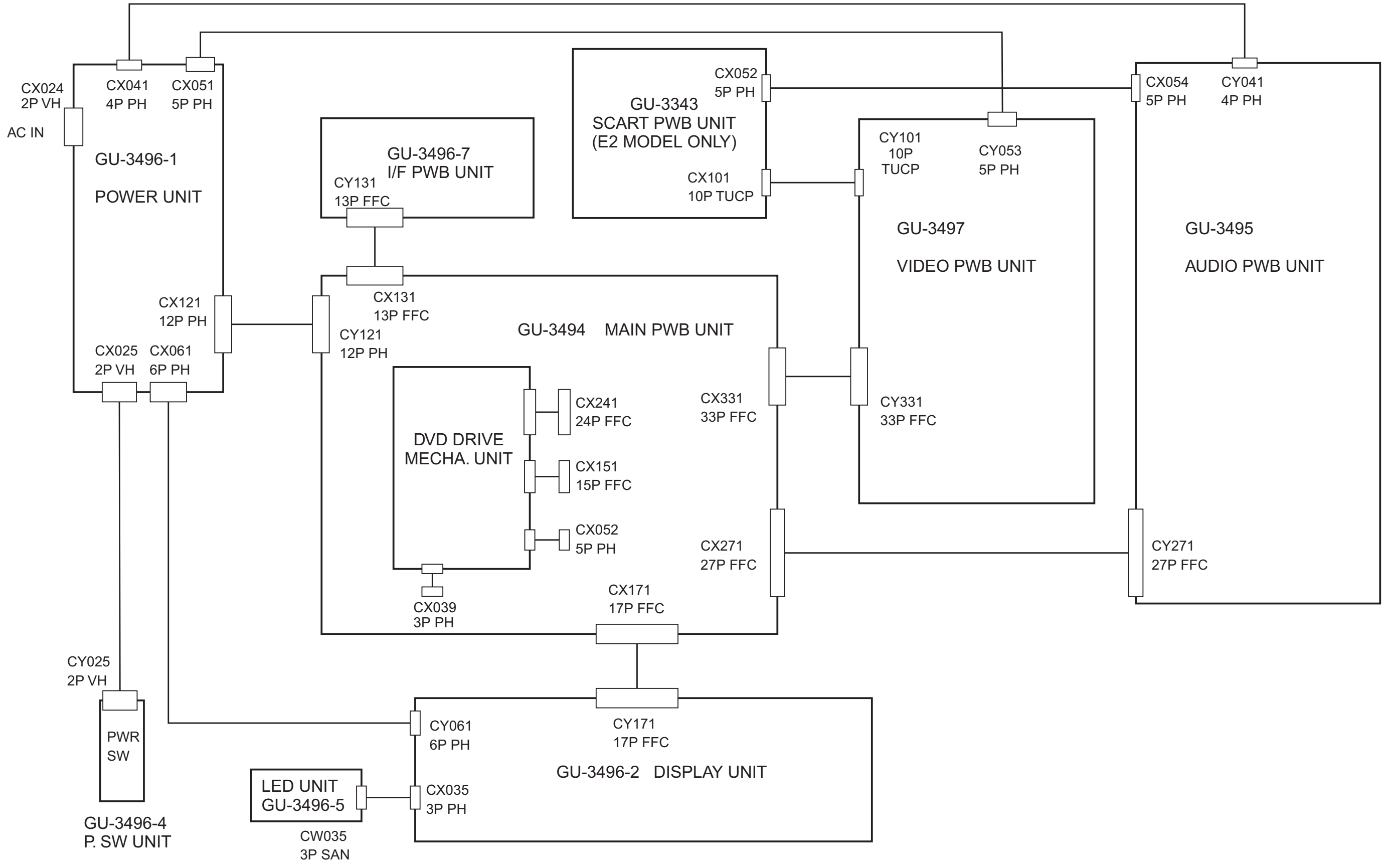


## PARTS LIST OF PACKING &amp; ACCESSORIES

Note : The symbols in the column "Remarks" indicate the following destinations.  
 E3 : U.S.A. & Canada model  
 E2 : Europe model  
 JP : Japan model

	Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
	201	505 0038 043	POLY COVER		1	
	202	511 3994 008	INST. MANUAL	for E3	1	*
	202	511 4008 003	INST. MANUAL(8)	for E2	1	*
	202	511 4007 004	INST. MANUAL(DOM)	for JP	1	*
	204	515 0921 209	S.S.LIST(EX)	for E3,E2	1	
	204	515 0918 005	SERVICE STATION LIST	for JP	1	
⚠	205	206 2202 006	AC CORD SET (E3)	for E3	1	
⚠	205	206 2203 005	AC CORD SET (E2)	for E2	1	
⚠	205	206 2213 008	AC CORD SET	for JP	1	
	206	203 5224 008	3P PIN CORD		1	
	207	399 0860 001	REMOTE CONTROLLER RC-934		1	*
	208	-	BATTERY(UM-3)ASS'Y		1	
	209	505 0312 028	CABINET COVER		1	
	210	503 1444 009	CUSHION		2	
	212	501 2172 031	CARTON CASE	for E3,E2	1	*
	212	501 2172 044	CARTON CASE	for JP	1	*
★	213	-	CONT.CARD(L)SUB ASS'Y	for E3,E2	1	
★	214	-	UPC LABEL	for E3	1	*
★	214	-	E2 POS LABEL	for E2 Black model	1	*
★	214	-	E2 POS LABEL	for E2 Gold model	1	*
★	214	517 1477 004	POS LABEL	for JP	1	*
★	215	513 3579 005	REGION LABEL(NO.1)	for E3	2	
★	215	513 3579 018	REGION LABEL(NO.2)	for E2,JP	2	
★	217	513 9111 001	COLOR LABEL (GOLD)	for E2 Gold model	2	
★	219	515 0944 008	WARRANTY (HOME)	for E3	1	
★	219	515 0919 004	GUARANTEE CARD(S)	for JP	1	

WIRING DIAGRAM





## MEASURING METHOD AND WAVEFORMS

To check the waveforms on the Main P.W.B., the GND (-) probe of the oscilloscope to "Vref" point.

### NOTES

Measuring Disc: DVD/DVDT-S01 or TDV-520A  
CD/TCD-784

(It is better to use wires for extending between the probe and test points.)

- When watching the HF waveform, use the extending wire as short as possible.
- When HF waveform is noisy or cannot discriminate the eye-pattern, replace the Traverse Unit after measuring the lop.
- ① ~ ⑰ points have the certain test points shown below.

## 各部の波形と測定方法

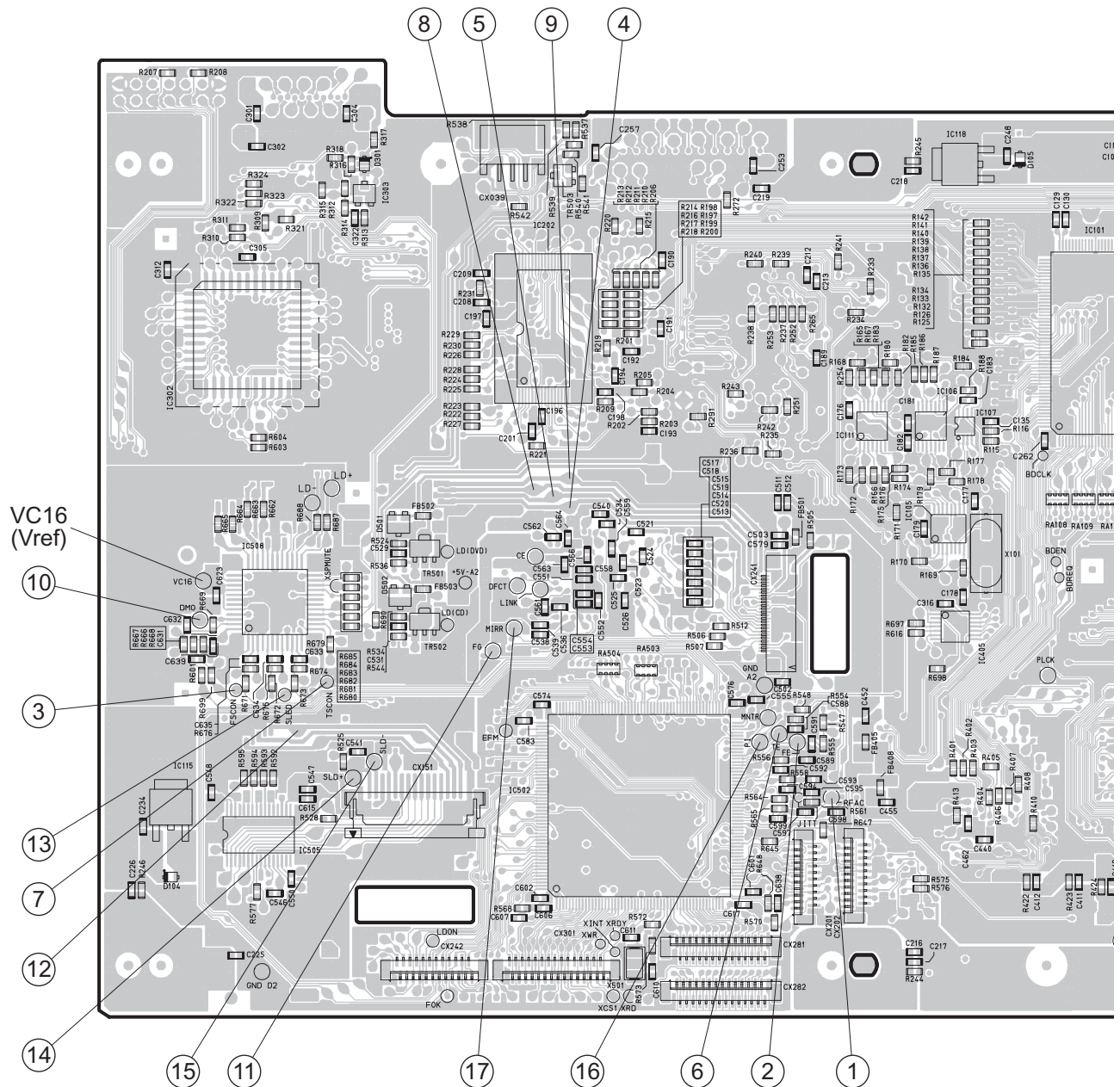
メイン基板の波形チェックを行うためにはオシロスコープのGND(-)プローブを"Vref"ポイントに接続します。

### 注意

測定ディスク：DVD/DVDT-S01 or TDV-520A  
CD/TCD-784

(テストポイントとプローブ間に延長ワイヤを使用するのがより良い方法です。)

- HF 波形を観測する場合、できるだけ短い延長ワイヤを使用してください。
- HF 波形がノイズで不明瞭、またはアイパターンが識別不能の場合はlop 測定後にトラバースユニットを交換してください。
- ポイント①~⑰は、下図のように特定テストポイント付きです。



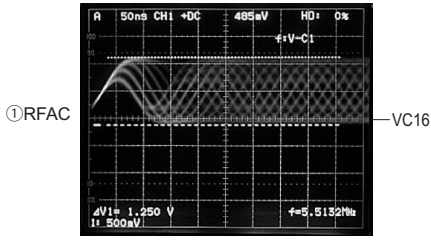
GU-3494 Main P.W.B. Unit Foil Side



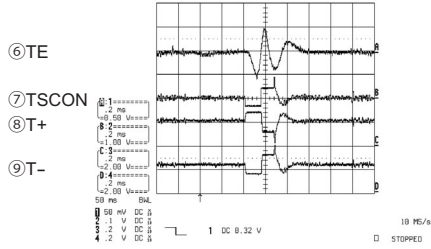
WAVEFORMS

● GU-3494 MAIN P.W.B.

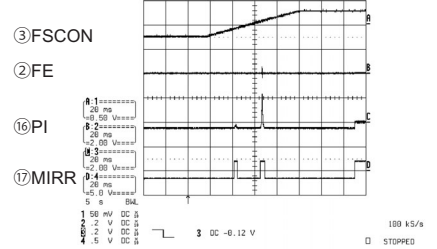
DVD PLAY Disc: TDV-520A



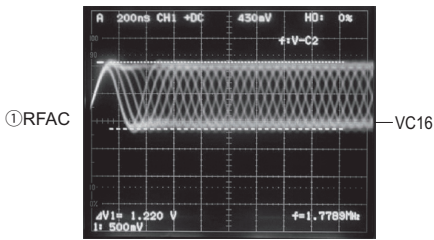
CD PLAY



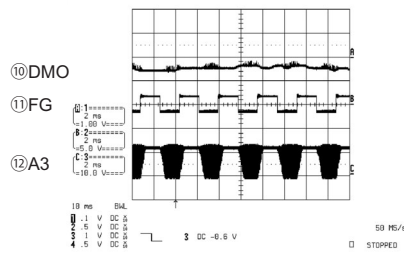
DISC DETECT (CD)



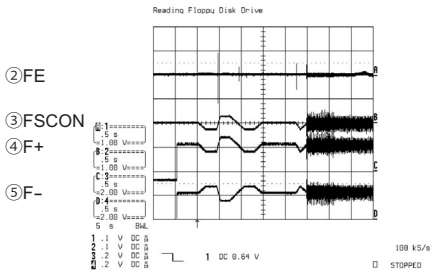
CD PLAY Disc: TCD-784



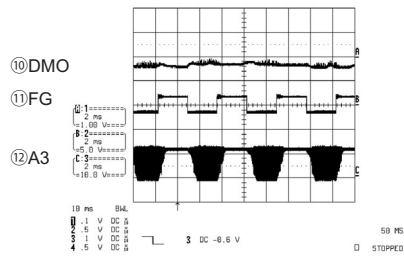
DVD PLAY (INNER)



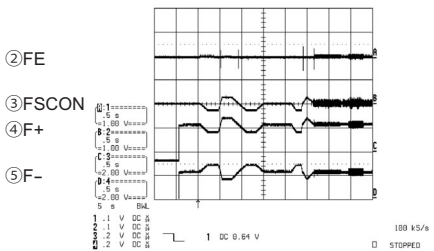
DVD LOADING → PLAY



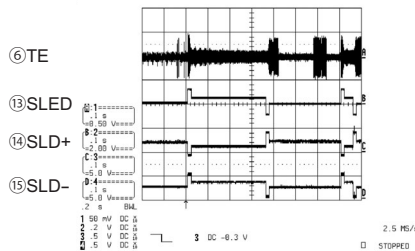
CD PLAY (INNER)



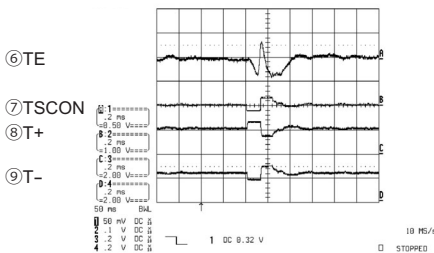
CD LOADING → PLAY



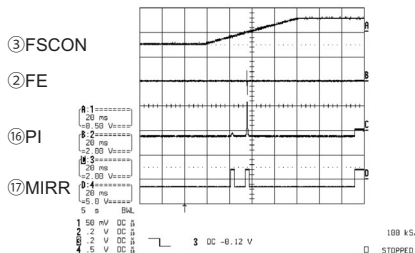
SEARCH TO OUTER CHAPTER (INNER → OUTER)



DVD PLAY

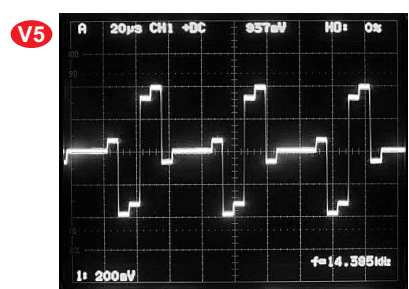
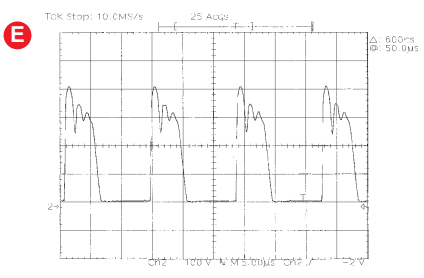
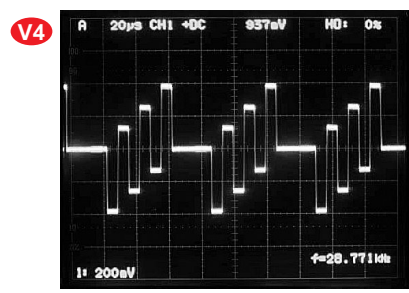
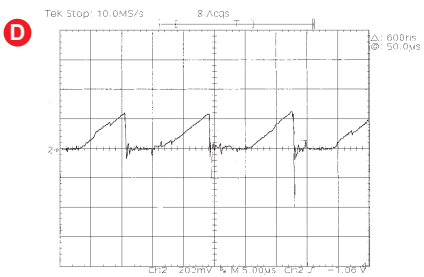
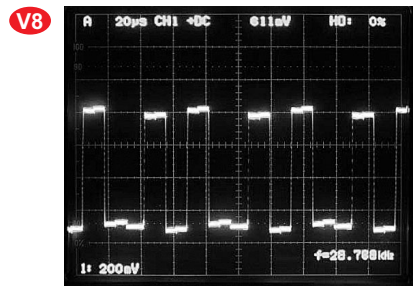
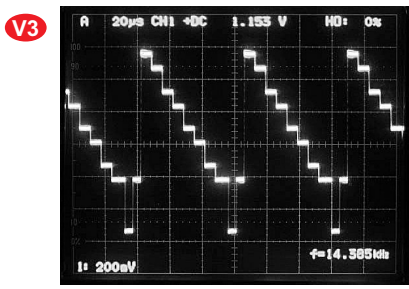
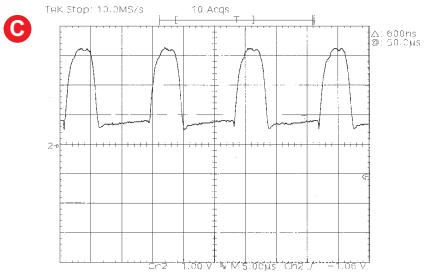
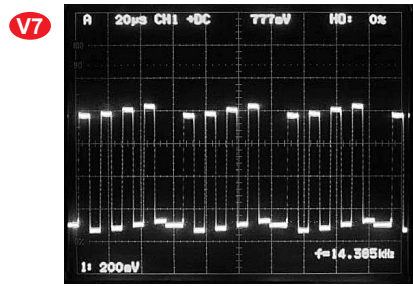
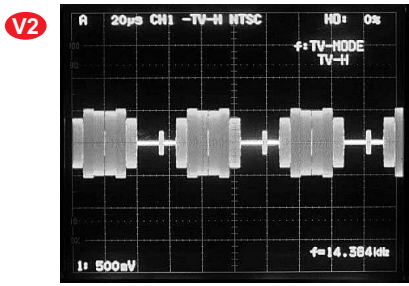
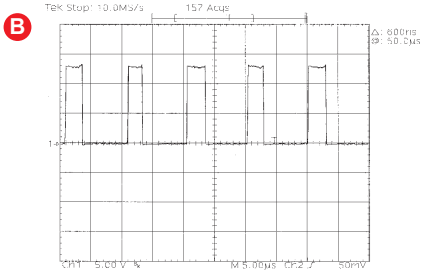
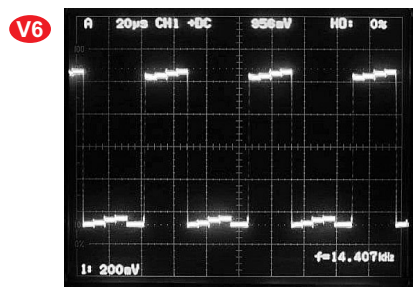
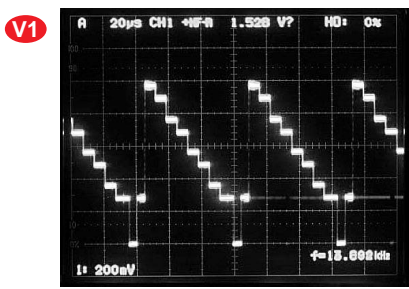
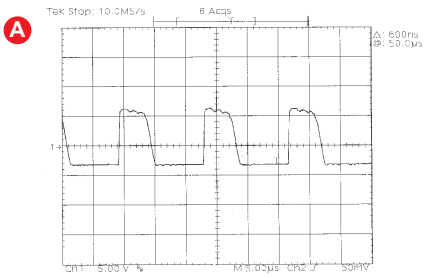


DISC DETECT (DVD)




● GU-3496-1 POWER P.W.B.

● GU-3497 VIDEO P.W.B.



## NOTE FOR SCHEMATIC DIAGRAM

### WARNING:

Parts marked with this symbol  have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer.

### CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

### WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

### NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM

M=1,000,000 OHM


ALL CAPACITANCE VALUES IN MICRO FARAD.

P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

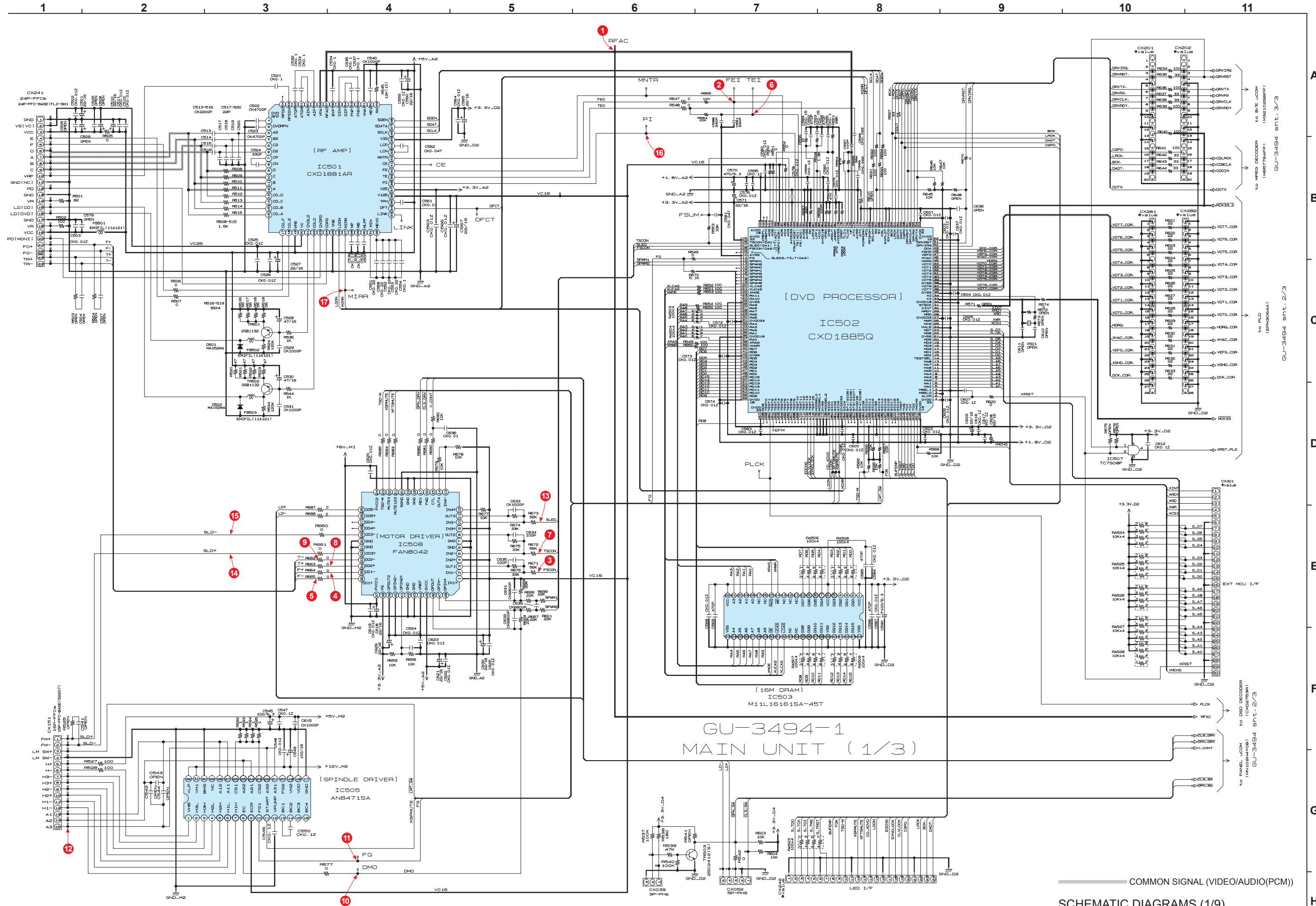
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

## 配線図について

 印の部品は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

### 注)

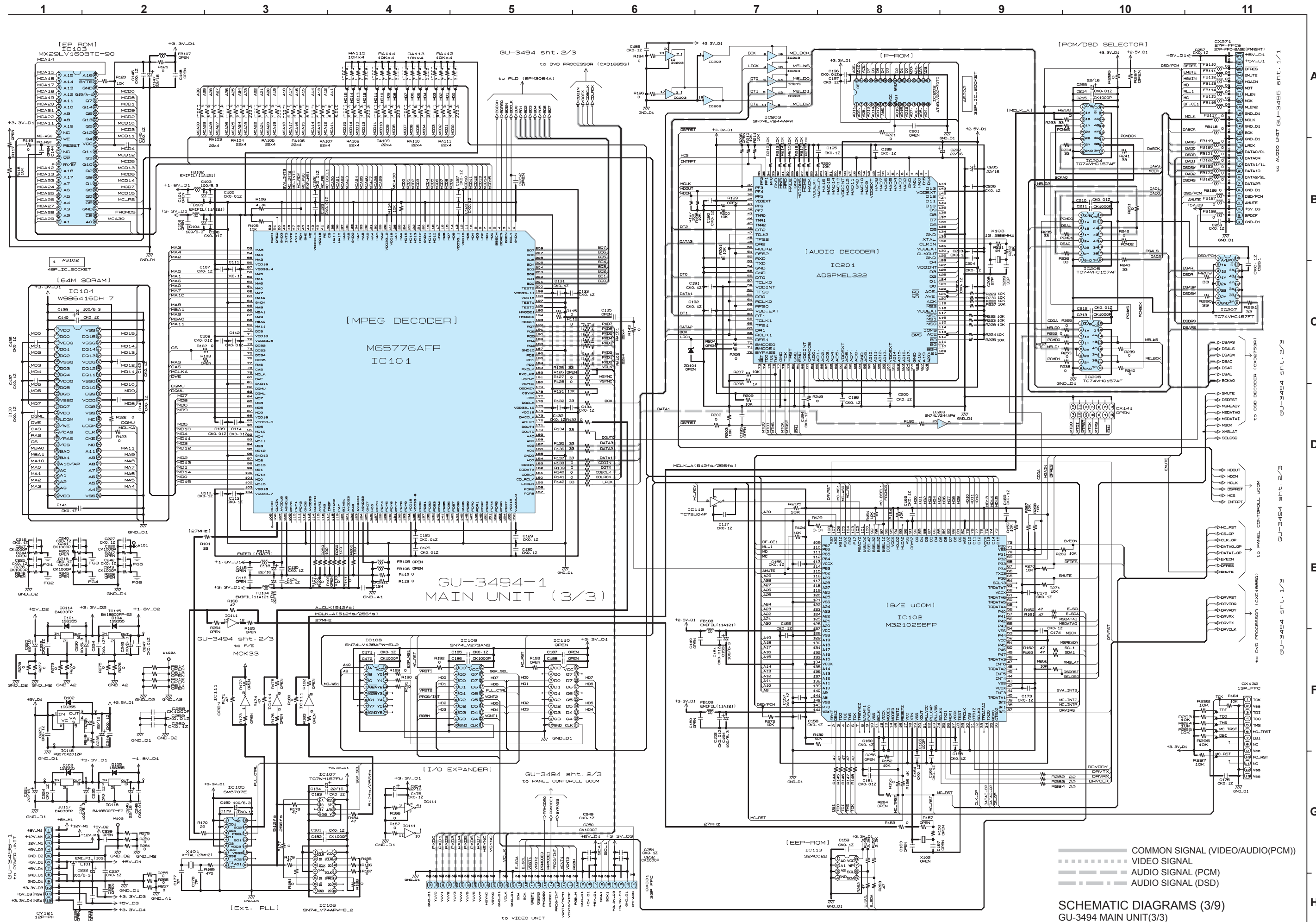
- (1) 指定なき抵抗値は  $\Omega$ 、k は  $k\Omega$ 、M は  $M\Omega$  を示す。
- (2) 指定なきコンデンサーの値は  $\mu F$ 、p は  $pF$  を示す。
- (3) 各部の電圧は無信号の値を示す。
- (4) この配線図は基本配線図です。改良等のため変更することがありますのでご了承ください。



SCHEMATIC DIAGRAMS (1/9)  
GU-3494 MAIN UNIT(1/3)







SCHEMATIC DIAGRAMS (3/9)  
GU-3494 MAIN UNIT(3/3)

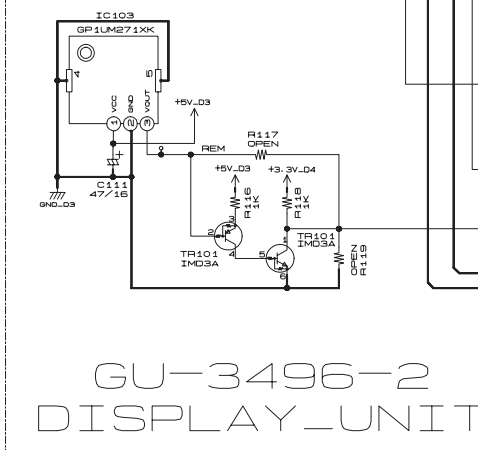
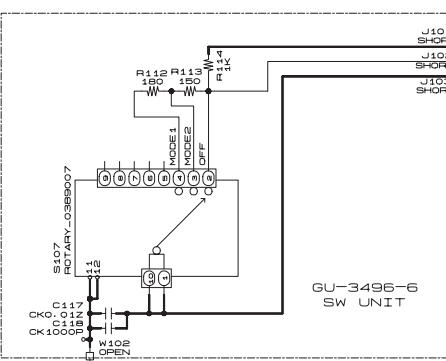
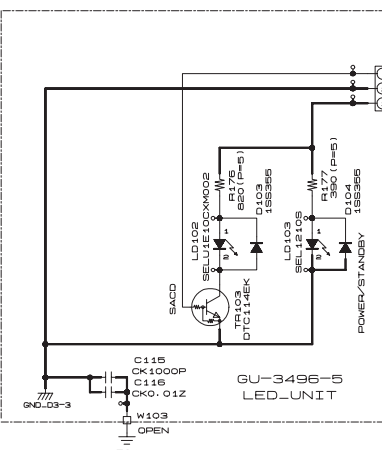
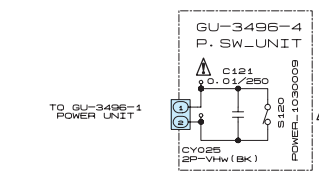
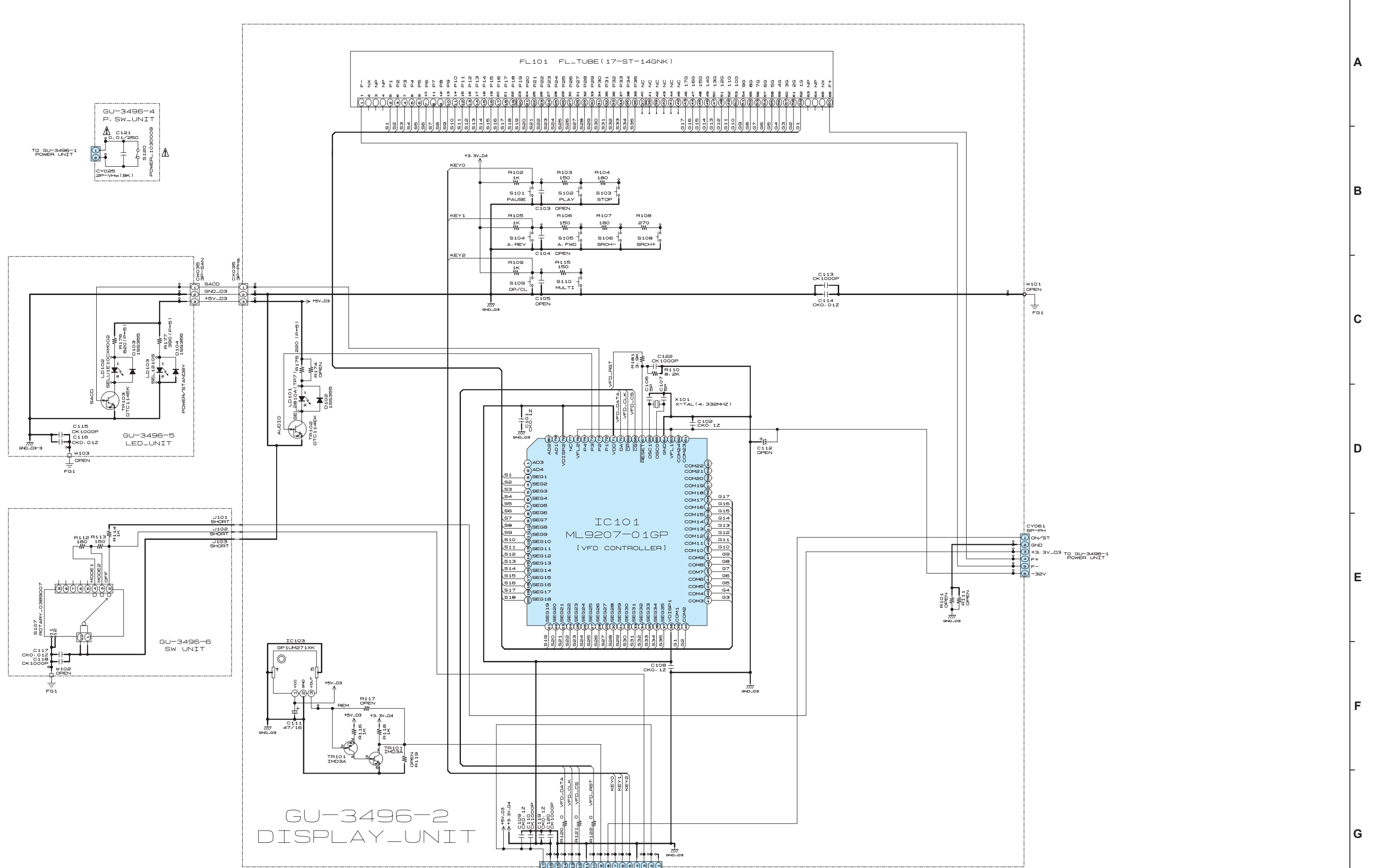








1 2 3 4 5 6 7 8 9 10 11

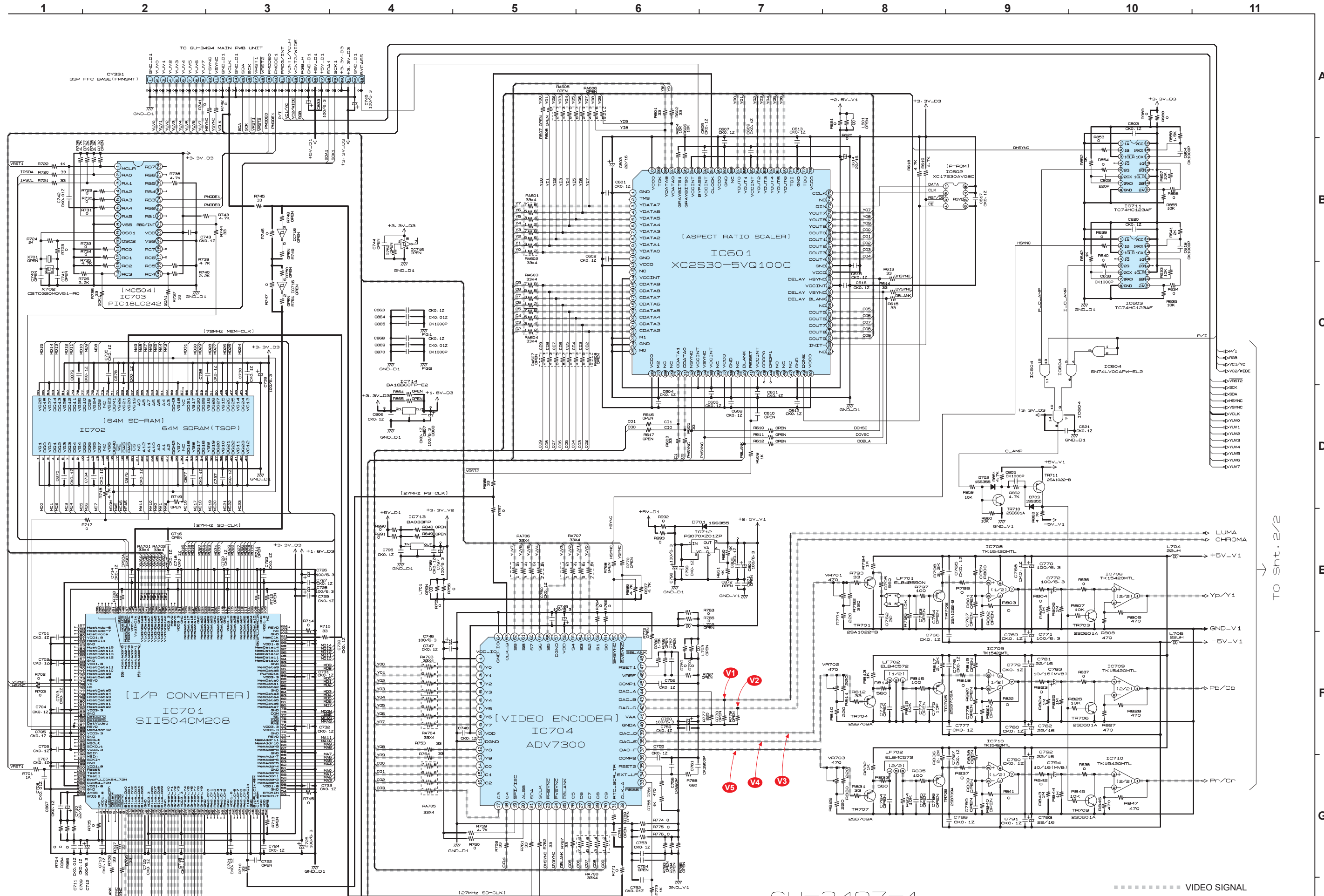


GU-3496-2  
DISPLAY UNIT

TO GU-3494-1 MAIN PWB UNIT

SCHEMATIC DIAGRAMS (6/9)  
GU-3496-2 DISPLAY UNIT  
GU-3496-4 P. SW UNIT  
GU-3496-5 LED UNIT  
GU-3496-6 SW UNIT

A  
B  
C  
D  
E  
F  
G  
H



GU-3497-1 VIDEO UNIT (1/2)

SCHEMATIC DIAGRAMS (7/9) GU-3497 VIDEO PWB UNIT(1/2)

TO Sht. 2/2

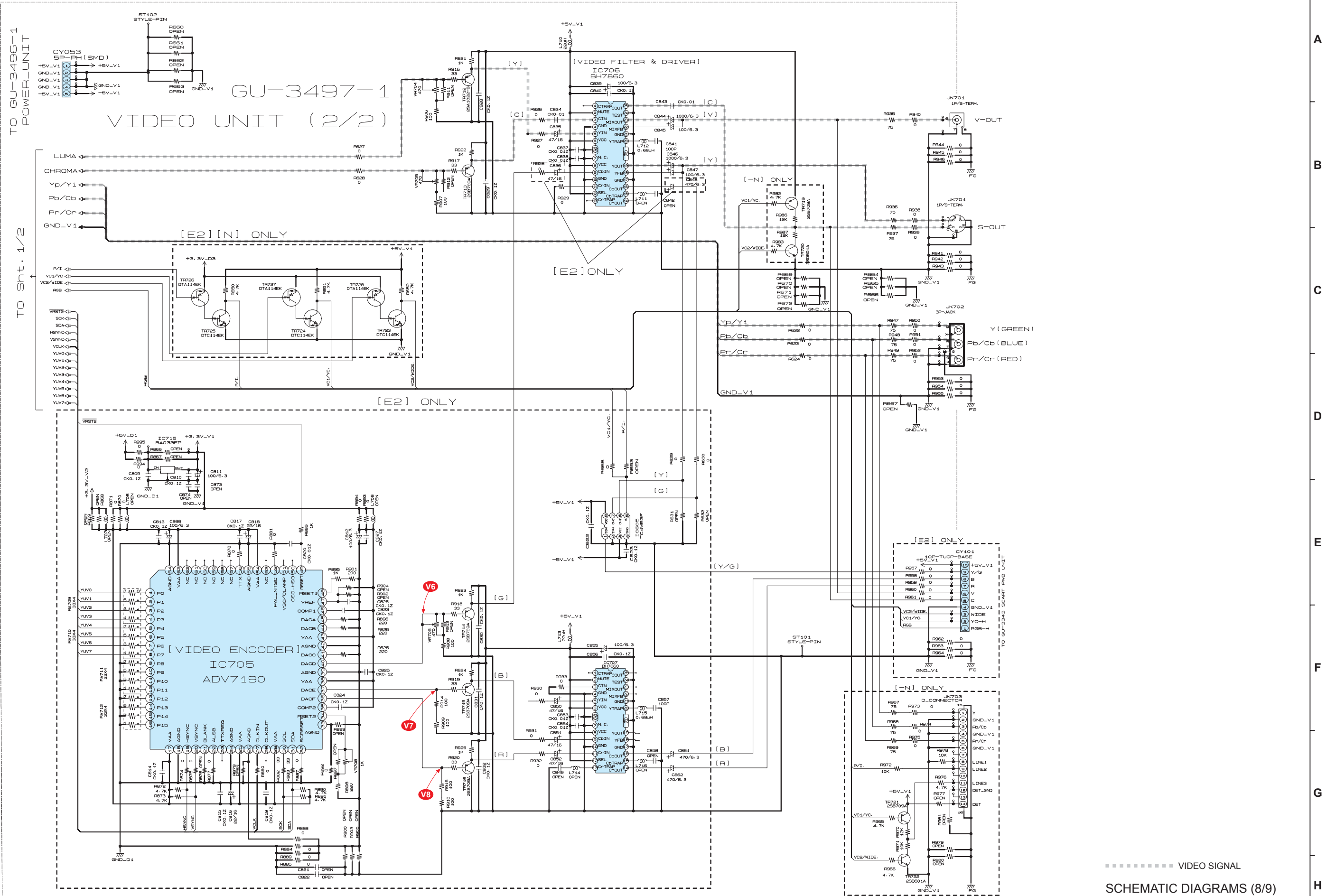
A  
B  
C  
D  
E  
F  
G  
H

1 2 3 4 5 6 7 8 9 10 11

TO GU-3496-1  
POWER\_UNIT

TO Sht. 1/2

GU-3497-1  
VIDEO UNIT (2/2)

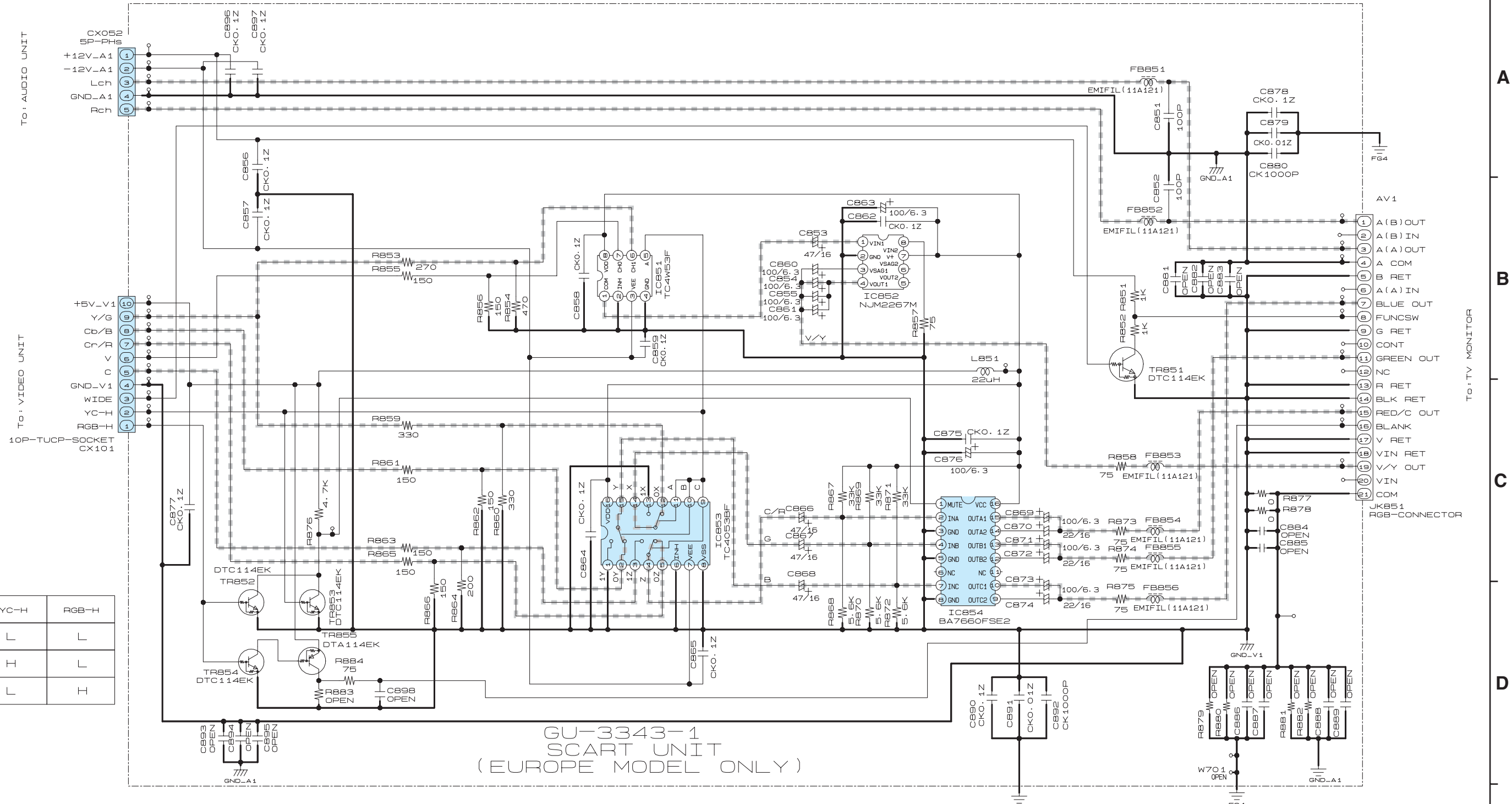


----- VIDEO SIGNAL

SCHEMATIC DIAGRAMS (8/9)  
GU-3497 VIDEO PWB UNIT(2/2)

A  
B  
C  
D  
E  
F  
G  
H

1 2 3 4 5 6 7 8



	YC-H	RGB-H
V OUT	L	L
YC OUT	H	L
RGB OUT	L	H

GU-3343-1  
SCART UNIT  
(EUROPE MODEL ONLY)

..... VIDEO SIGNAL

SCHEMATIC DIAGRAMS (9/9)  
GU-3343-1 SCART UNIT (Europe model only)

A  
B  
C  
D  
E