

SONY®

LARGE LENS ADAPTOR

HDLA1500
HDLA1505

MAINTENANCE MANUAL

1st Edition

Serial No. 10001 and Higher (UCJ)

Serial No. 40001 and Higher (CE)

警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

安全のために

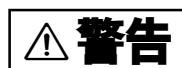
ソニー製品は安全に十分に配慮して設計されています。しかし、電気製品はサービス時にまちがった扱い方をすると、火災や感電などにより死亡や大けがなど人身事故につながることもあり、危険です。

事故を防ぐために、サービストレーニングを受けた技術者以外はサービスを行わないでください。

設置や保守、点検、修理などを行う前に、この「安全のために」と別冊の取扱説明書の「安全のために」を必ずお読みください。

警告表示の意味

このサービス用のマニュアルおよび製品では、次のような表示をしています。表示の内容をよく理解してから本文をお読みください。



この表示の注意事項を守らないと、火災や感電などにより死亡や大けがなど人身事故につながる可能性があります。



この表示の注意事項を守らないと、感電やその他の事故によりけがをしたり周辺の物品に損害を与えたりすることがあります。

行為を **指示** する記号



指示

注意 を促す記号



注意



火災



感電



下記の注意を守らないと、
火災や感電などにより死亡や大けがにつながる可能性があります。



指示

指定された部品を使用する

回路図、分解図、電気部品表中△印の部品（ヒューズ、電源ユニットなど）は安全性を維持するために重要な部品です。指定以外の部品に交換すると、火災や感電の原因となります。



指示

指定された CA（カメラアダプター）を使用する

指定以外の CA を使用すると、火災や感電の原因となります。



指示

指定された CCU（カメラコントロールユニット）を使用する

指定以外の CCU を使用すると、火災や感電の原因となります。



感電

通電しながらの修理は感電に注意する

以下の部品には高電圧がかかっており、危険です。
素手や、ドライバ（金属）で触れないでください。
通電しながらの修理は充分に注意して行ってください。
・電源ブロック



下記の注意を守らないと、
けがをしたり周辺の商品に損害を与えることがあります。



指示

機器や部品の取り付けは正しく行う

別売り機器や部品の取り付け方法を誤ると、機器が落下してけがをすることがあります。以下の機器や部品を取り付けるときは、マニュアルをよく読んでうえ、確実に取り付けてください。

- ・ビューファインダ
- ・ウェッジシュー
- ・カメラ

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このマニュアルについて

本書の目的

本書は、ラージレンズアダプター HDLA1500/1505 のメンテナンスマニュアルです。
本書は、システム／サービスエンジニアの方々にご使用いただくことを想定し、部品レベルまでのサービスを前提とした情報（設置情報、サービスインフォメーション、パーツリスト、半導体、ブロック図、回路図、マウント図）を記載しています。

関連マニュアル

本機には、この「メンテナンスマニュアル」の他に、下記のマニュアルが用意されています。

- ・ オペレーションマニュアル (本機に付属)
部品番号：3-903-904-0X
本機を実際に運用および操作するのに必要なマニュアルです。
- ・ “Semiconductor Pin Assignments” CD-ROM 版（別途用意）
この“Semiconductor Pin Assignments” CD-ROM版は、B&Pカンパニーの機器に使用されている半導体を検索することができます。
サービスマニュアルには、その機種に使用されている半導体一覧とそのID番号を記載していますので、このCD-ROM版と合わせて使用してください。
部品番号：9-968-546-XX

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Manual Structure

Purpose of this manual

This manual is the maintenance manual of Large Lens Adaptor HDLA1500/1505. This manual describes the information items on maintenance, and items that premise the service based on the components parts such as installtion overview, service overview, spare parts, semiconductor pin assignments, block diagrams, schematic diagrams and board layouts, assuming use of system and service engineers.

Related manuals

Besides this “maintenance manual”, the following manuals are available for this unit.

- **Operation Manual (Supplied with the HDLA1500/1505)**

Part No.: 3-903-904-0X

This manual is necessary for application and operation of this unit.

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**

This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in B&P Company equipment.

The service manual contains a complete list of semiconductors and their ID Nos., and thus should be used together with the CD-ROM.

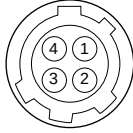
Part number: 9-968-546-XX

第1章 設置情報

1-1. 適合コネクタとケーブル入出力信号

1-1-1. コネクタの入出力信号

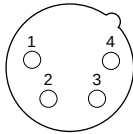
DC OUT (4P Female)



– External view –

No.	信号名	I/O	仕様
1	UNREG GND	–	GND for POWER
2	NC	–	No connection
3	NC	–	No connection
4	UNREG	O	+12 V dc 1.5 A (max)

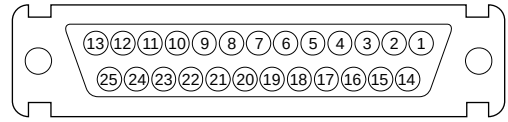
DC IN (4P Male)



– External view –

No.	信号名	I/O	仕様
1	EXT_DC (C)	–	GND for DC (+)
2	NC	–	No connection
3	NC	–	No connection
4	EXT_DC (H)	I	+10.5 to 17 V dc

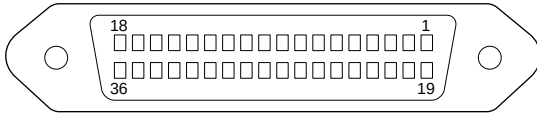
VF (25P Female)



– External view –

No.	信号名	I/O	仕様
1	VF-Y (X)	O	1.0 V p-p, Zo=75 Ω
2	VF-GND (Pr)	–	GND for VF-Pr (X)
3	VF-Pr (X)	O	0.7 V p-p, Zo=75 Ω
4	VF-GND (Pb)	–	GND for VF-Pb (X)
5	VF-Pb (X)	O	0.7 V p-p, Zo=75 Ω
6	PEAKING LEVEL	I	0 to 5 V dc
7	VF-UNREG	O	+10.5 to +20 V
8	VF-UNREG		
9	NC	–	No connection
10	S-DATA	I/O	TTL レベル
11	TALLY (R)-VF	O	ON: +5 V OFF: 0 V
12	EFFECT	O	ON: +5 V OFF: 0 V
13	NC	–	No connection
14	VF-GND (Y)	–	GND for VF-Y (X)
15	S-CK	O	TTL レベル
16	BATT IND	O	ON: +5 V OFF: 0 V
17	CHASSIS GND	–	GND
18	TALLY (G)-VF	O	ON: +5 V OFF: 0 V
19	GND (UNREG)	–	GND for VF-UNREG
20	GND (UNREG)		
21	VF-SEL	I	BW: 0 V COLOR: +5 V
22	H EXPAND	O	ON: GND OFF: +5 V
23	NC	–	No connection
24	NC	–	No connection
25	V EXPAND	O	ON: GND OFF: +5 V

LENS (36P Female)



– External view –

No.	信号名	I/O	仕様
1	NC	–	No connection
2	NC	–	No connection
3	NC	–	No connection
4	LENS +12 V	O	+12 V (at 3 A)
5	GND (LENS)	–	GND for +12 V (LENS)
6	GND (SIG)	–	GND
7	NC	–	No connection
8	LENS-EXT-1 (SERIAL GND)	I	*2 (LENS SERIAL DATA)
9	LENS-EXT-2	I	*2
10	LENS-EXT-3	I	*2
11	LENS-SERVO	O	ON: GND OFF: High impedance
12	IRIS-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 2 to 7 V “ $3.4 \pm 0.1 \text{ V (F16)}$ ” “ $6.2 \pm 0.1 \text{ V (F2.8)}$ ”
13	ZOOM-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 2 to 7 V “2 V (WIDE), 7 V (TELE)”
14	RET 1-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
15	RET 2-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
16	FOCUS-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 2 to 7 V “2 V (MIN), 7 V (∞)”
17	IRIS-CONT	O	2 to 7 V “ $3.4 \pm 0.1 \text{ V (F16)}$ ” “ $6.2 \pm 0.1 \text{ V (F2.8)}$ ” $Z_o \leq 1 \text{ k}\Omega$
18	IRIS-AUTO /MANU (SERIAL TXD)	O	AUTO: GND MANU: High impedance $Z_o \leq 1 \text{ k}\Omega$
19	NC	–	No connection
20	NC	–	No connection
21	LENS R TALLY	O	ON: GND OFF: High impedance $Z_o \leq 1 \text{ k}\Omega$
22	LENS-EXP-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 1 to 4 V 1 V: -7.5° 4 V: $+7.5^\circ$

No.	信号名	I/O	仕様
23	RET 3-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
24	LENS-ADR-0	I	*1
25	LENS-ADR-1	I	*1
26	LENS-ADR-2	I	*1
27	LENS-ADR-3	I	*1
28	EXT 1-ON	O	ON: GND OFF: High impedance
29	EXT 2-ON	O	ON: GND OFF: High impedance
30	F-DEM (FAR)	I	No connection
31	INCOM 1- ENG/PROD	I	$Z_i \geq 10 \text{ k}\Omega$ ENG: GND PRD: High impedance
32	INCOM 2- ENG/PROD	I	$Z_i \geq 10 \text{ k}\Omega$ ENG: GND PRD: High impedance
33	INCOM 1-MIC-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
34	INCOM 2-MIC-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
35	F-CONT-SIG	O	No connection
36	F-DEM (NEAR)	I	No connection

*1 $Z_i \geq 10 \text{ k}\Omega$
1: High impedance
0: $0 \pm 0.5 \text{ V}$
LENS ADRS 0 (下位ビット)
LENS ADRS 3 (上位ビット)

*2 $Z_i \geq 10 \text{ k}\Omega$
1: High impedance
0: $0 \pm 0.5 \text{ V}$

EX1	EX2	EX3	MODE
1	1	1	EXTENDER OFF
1	0	1	EXT-1 ($\times 1.5$) ON
0	1	1	EXT-2 ($\times 2$) ON
0	0	1	EXT-3 ($\times 2.5$) ON

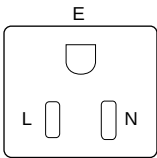
BUILT-UP (20P Female)



– External view –

No.	信号名	I/O
1	Y-VIDEO (X)	I
2	GND (Y)	–
3	Pb-VIDEO (X)	I
4	GND (Pb)	–
5	Pr-VIDEO (X)	I
6	GND (Pr)	–
7	RESERVE (X)	–
8	GND (RESERVE)	–
9	G-TALLY	I
10	R-TALLY	I
11	AC240 V (H)	I
12	CA-TX-IN	I
13	CA-RX-OUT	O
14	CA-SENSE-OUT	O
15	LENS-TX-IN	O
16	LENS-RX-OUT	I
17	B-SPARE	–
18	STB-INCOM1-ON	O
19	CHASSIS-GND	–
20	AC240 V (C)	I

AC OUT



– External view –

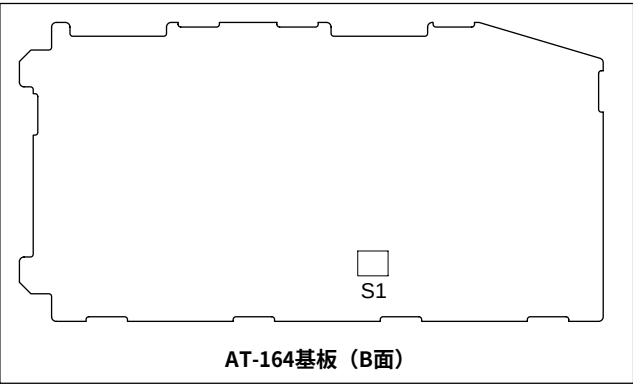
No.	信号名	I/O	仕様
E	GND	–	CHASSIS GND
N	UTL (C)	O	AC 100 V, 200 VA 以下
L	UTL (H)	O	

1-1-2. 接続コネクタ／ケーブル

設置時, サービス時においてコネクタ部の各種コネクタにケーブルを接続する際にはその先端に以下に示す接続コネクタまたはケーブルを使用すること。

コネクタ名称	接続コネクタ／ケーブル
DC OUT (4P FEMALE)	1-566-425-11 Plug, 4P Male または HIROSE HR10A-7P-4P 同等品
DC IN (4P MALE)	1-508-362-00 XLR, 4P Female または ITT Cannon XLR-4-11C 同等品または Cable assembly (AC-550 に付属) 1-551-577-00

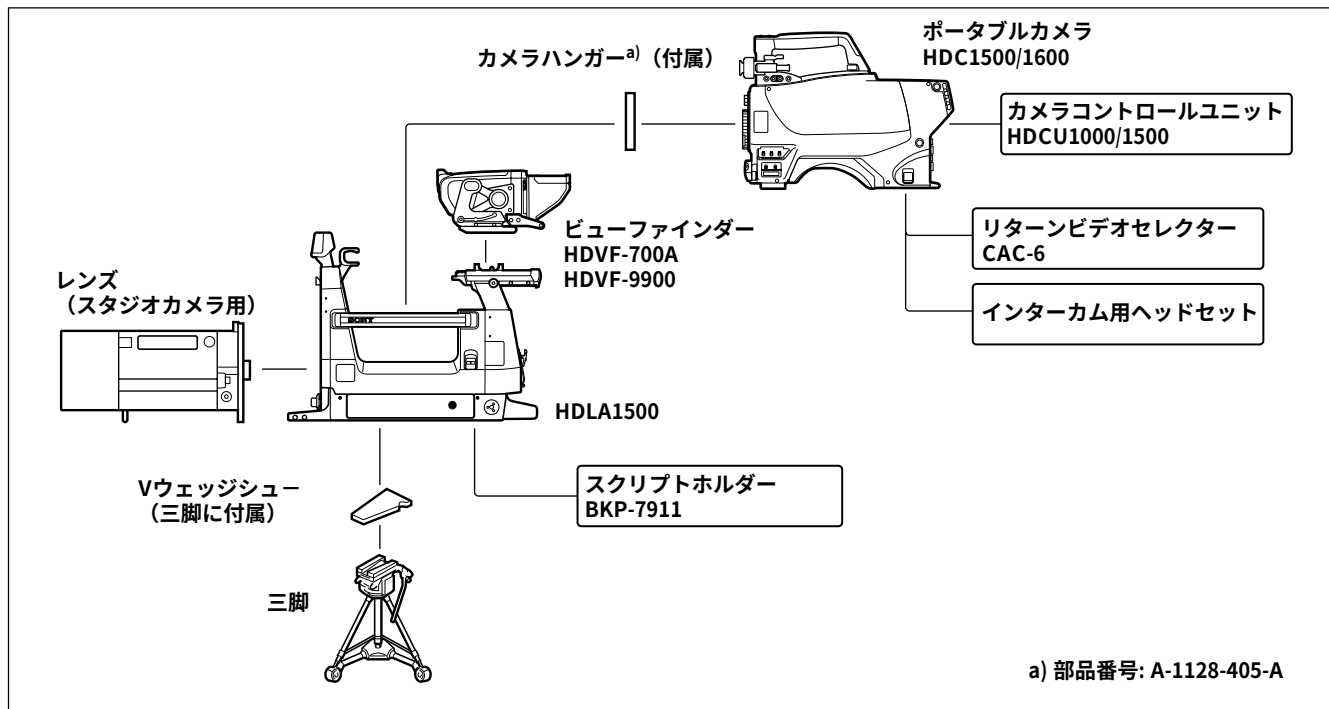
1-2. 基板内スイッチの機能



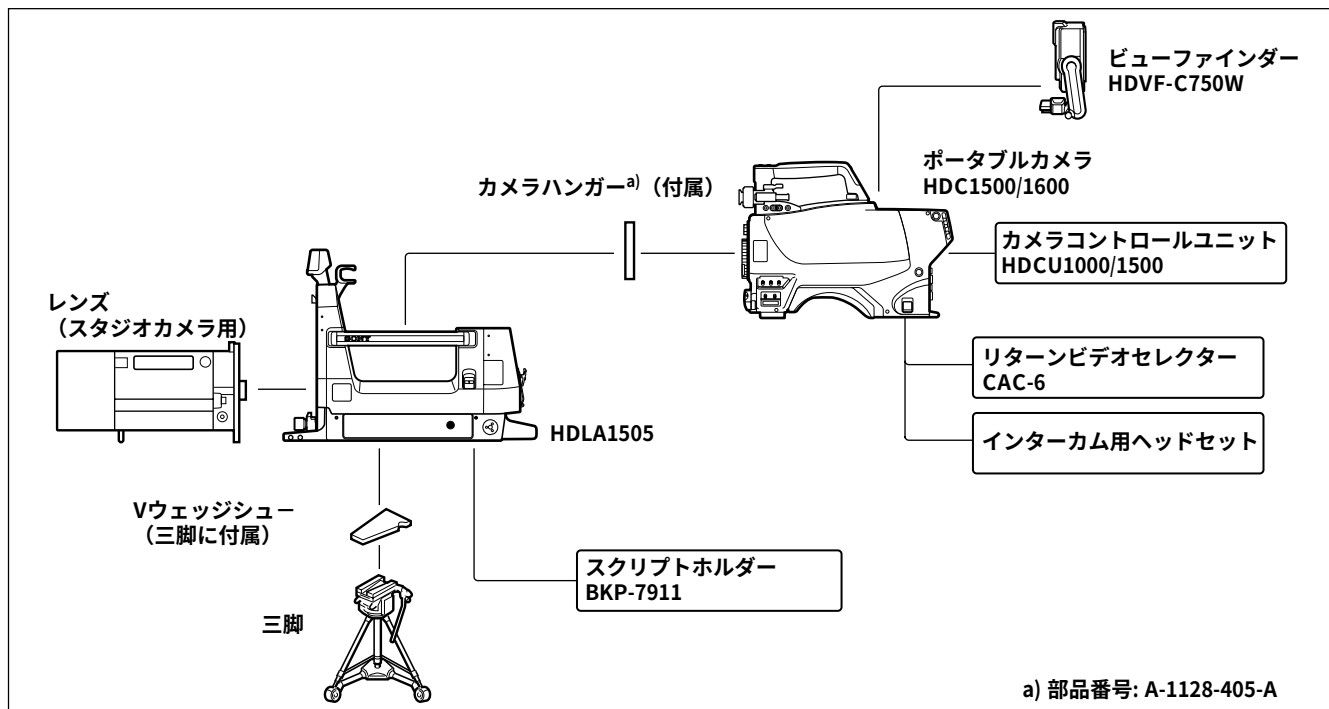
Ref.No.	内容
S1	将来拡張用 工場出荷時: すべて OFF

1-3. システム接続

HDLA1500

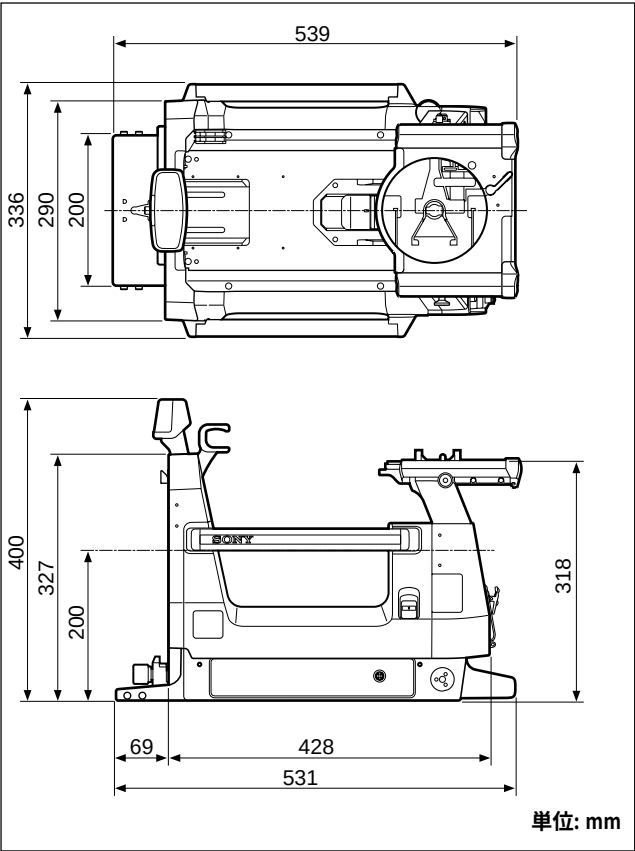


HDLA1505

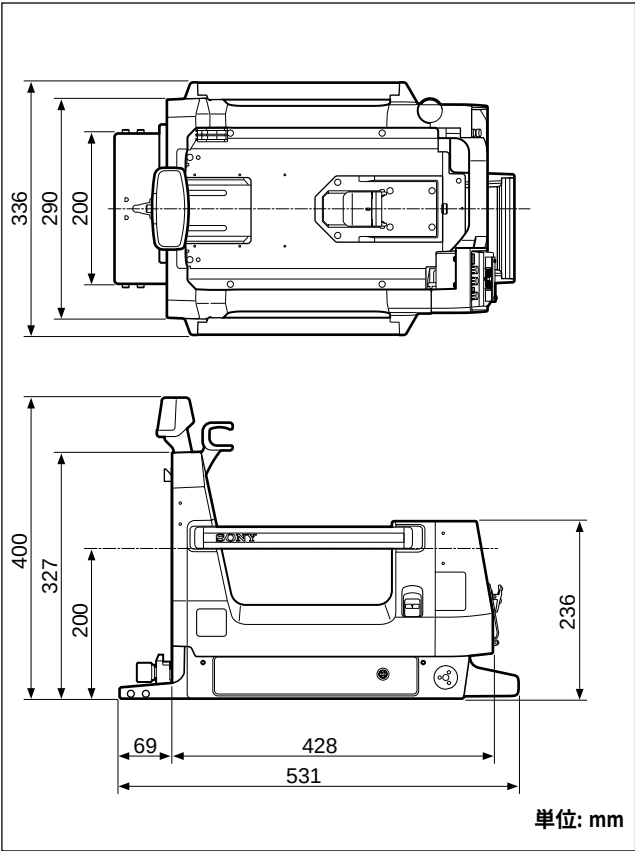


1-4. 外形寸法図

HDLA1500

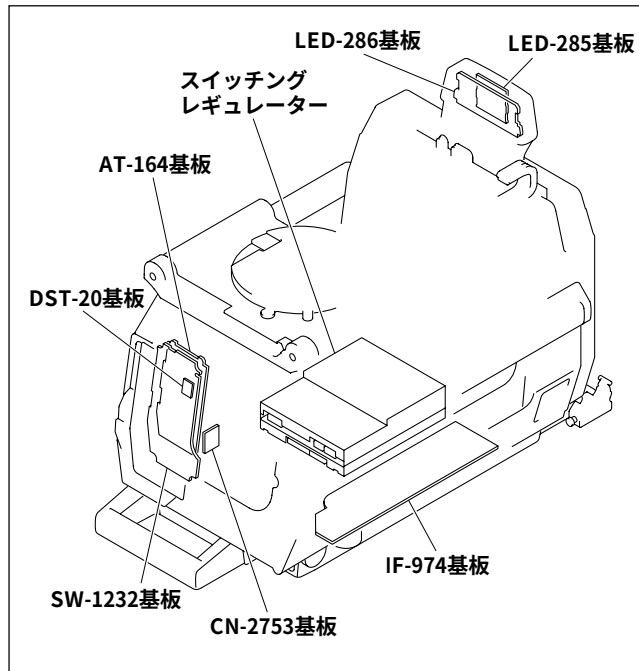


HDLA1505



第2章 サービスインフォメーション

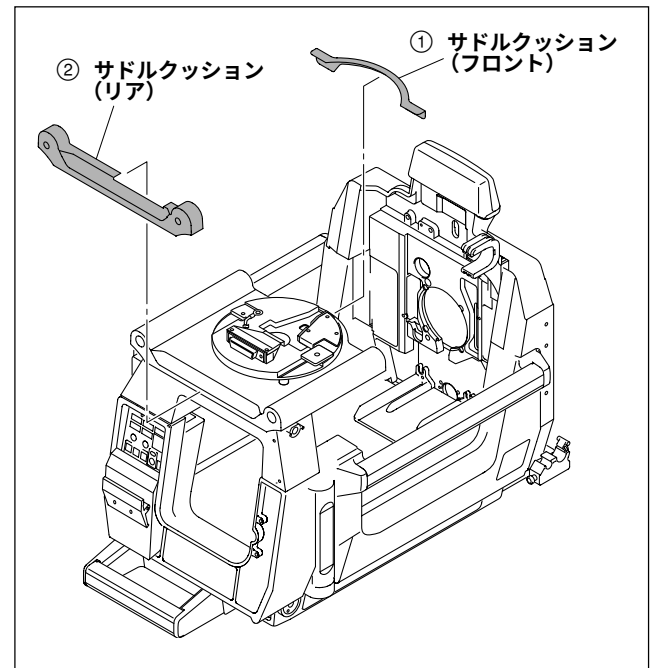
2-1. 基板配置図



2-2. 交換推奨部品 (HDLA1500)

以下に挙げる部品は交換推奨部品です。経時変化によりひび割れを生ずることがありますので、時々確認し、必要に応じて交換してください。

No.	部品名称	ソニー部品名称
①	サドルクッション (フロント)	3-872-575-0X
②	サドルクッション (リア)	3-872-576-0X



2-3. 部品交換時の注意事項

本機に使用されている下記の部品には、2種類のタイプ（金色、銀色）があります。

- ・ フレキシブルカード電線
- ・ 基板
- ・ 基板上的コネクタ（フレキシブルカード電線用）

上記の部品を交換する場合は、必ず“2-3-1. フレキシブルカード電線交換時の注意事項”、“2-3-2. 基板交換時の注意事項”、および“2-3-3. 基板のコネクタ交換時の注意事項”の指示に従って実施してください。

指定以外の部品を使用すると本機の特性が変化し、正しく動作しません。必ず指定の部品を使用してください。

なお、サービス部品は、“Spare Parts”の章のサービス部品リストに記載してあります。2種類のタイプ（金色、銀色）の識別のために、サービス部品リストにおいては、部品名称の後に、（GOLD）または（SILVER）と表示がしてあります。

2-3-1. フレキシブルカード電線交換時の注意事項

下記に示すフレキシブルカード電線を交換する際は、フレキシブルカード電線の導電部（端子部）の色を確認し、下記のように対応をお願いします。

1. フレキシブルカード電線の導電部が金色の場合は、導電部が金色のフレキシブルカード電線に交換する。

参考

導電部が金色になっているコネクタを使用している基板は、基板名の後にシルクで“G”が付いているか、または“G”のシールが基板上的の空いているスペースに貼ってあります。例：AT-164G

2. フレキシブルカード電線の導電部が銀色の場合は、導電部が銀色のフレキシブルカード電線に交換する。この場合、基板名にシルク“G”、または“G”のシールはありません。

導電部が金色の場合

基板	フレキシブルカード電線		基板
	PIN	金色: 部品番号	
AT-164G	30	1-831-132-11	SW-1232G

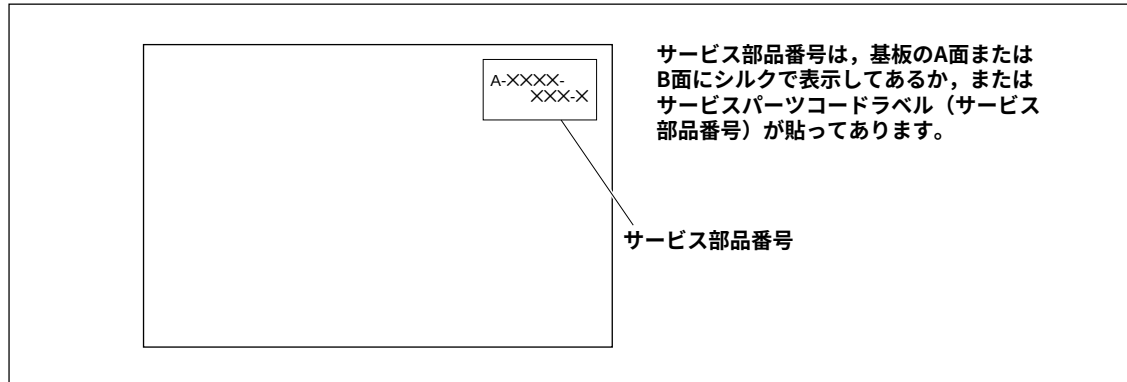
導電部が銀色の場合

基板	フレキシブルカード電線		基板
	PIN	銀色: 部品番号	
AT-164	30	1-823-558-11	SW-1232

2-3-2. 基板交換時の注意事項

基板交換する場合は、取り外す基板のサービス部品番号と同じものに交換してください。

例: 基板上にサービス部品番号が表示してあります。



2-3-3. 基板上のコネクタ交換時の注意事項

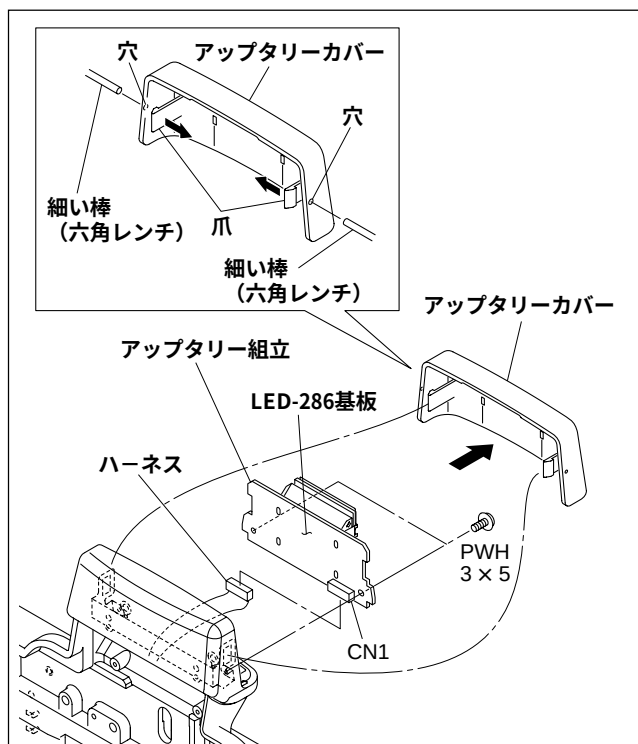
本機に使用している基板にマウントしてあるフレキシブルカード電線用のコネクタは、2種類あります。このコネクタを交換する場合は、下記の方法で見分けてください。

1. フレキシブルカード電線の導電部が金色を使用している場合は、基板に使用しているコネクタの接触面は金色です。サービス部品リストにおいては、部品名称の後に、(GOLD)と表示がしてあります。
2. フレキシブルカード電線の導電部が銀色を使用している場合は、基板に使用しているコネクタの接触面が銀色です。サービス部品リストにおいては、部品名称の後に、(SILVER)と表示がしてあります。

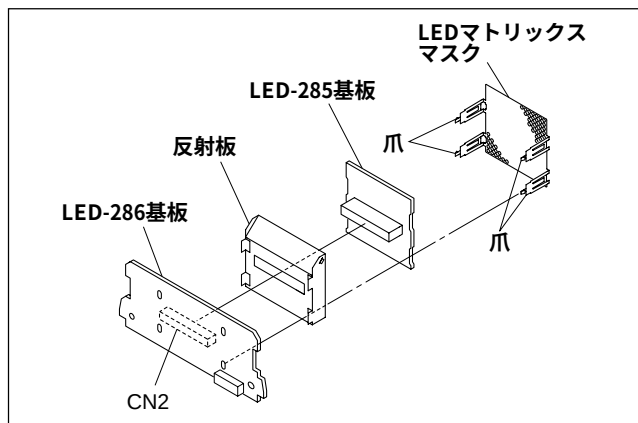
2-4. 基板の取り外し／取り付け

2-4-1. LED-285 基板／LED-286 基板

1. アップタリーカバーの穴2か所から細い棒（六角レンチなど）を差し込み、爪2か所を外す。
2. 矢印方向にアップタリーカバーを取り外す。
3. ネジ2本とLED-286基板のコンネクター（CN1）からハーネスを外し、アップタリー組立を取り外す。



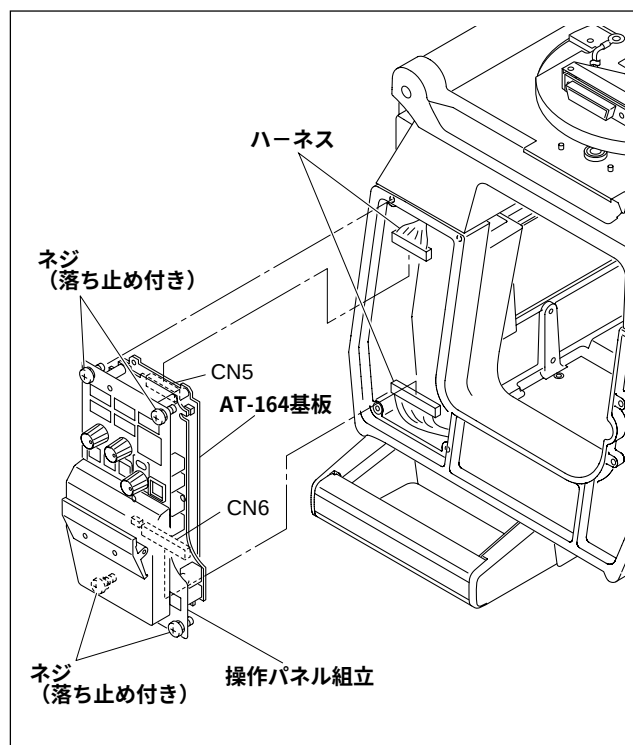
4. 爪4か所を外し、LEDマトリックスマスクを取り外す。
5. LED-286基板のコンネクター（CN2）から、LED-285基板と反射板を取り外す。



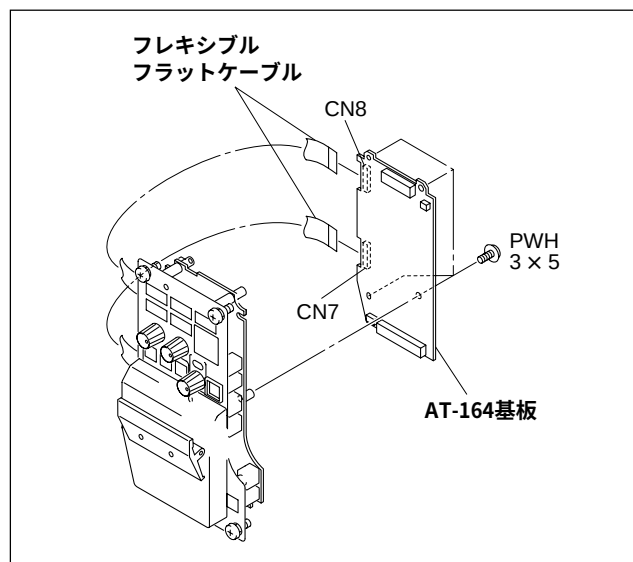
6. 1～5の逆の手順で、LED-286基板とLEDマトリックスマスクを取り付ける。

2-4-2. AT-164 基板／SW-1232 基板

1. ネジ（落ち止め付き）4本を緩め、操作パネル組立を取り外す。
2. AT-164基板のコンネクター（CN5, CN6）から、ハーネス2本を外す。

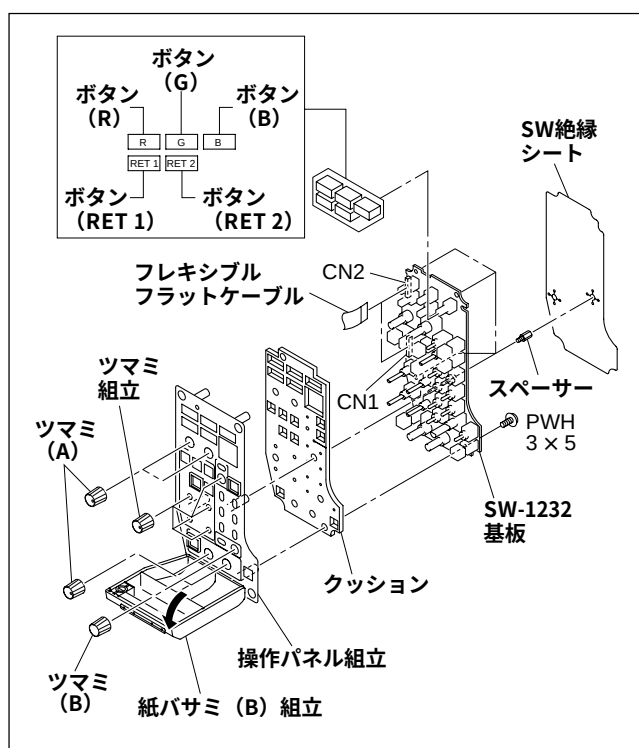


3. AT-164 基板を外す。
 - (1) ネジ4本を外し、AT-164 基板を取り外す。
 - (2) AT-164 基板のコンネクター（CN7, CN8）からフレキシブルフラットケーブル2本を外す。



4. SW-1232 基板を外す。

- (1) SW 絶縁シートを取り外す。
- (2) 紙バサミ (B) 組立を矢印方向に開く。
- (3) ツマミ組立5個、ツマミ (A) 4個とツマミ (B) 1個を取り外す。
- (4) ネジ1本とスペーサー4個を外し、操作パネル組立とクッションを取り外す。
- (5) SW-1232 基板のコネクタ (CN1, CN2) から、フレキシブルフラットケーブル2本を外す。
- (6) SW-1232 基板を新しい基板と交換する場合は、ボタン (R)、ボタン (G)、ボタン (B)、ボタン (RET1) とボタン (RET2) を取り外し、新しい基板に取り付ける。



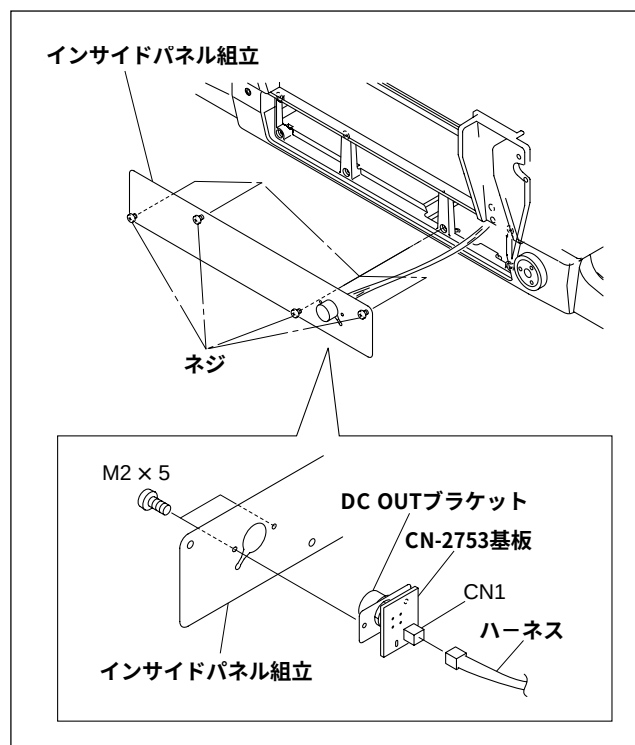
5. 1～4の逆の手順で、AT-164 基板と SW-1232 基板を取り付ける。

注意

操作パネル組立を取り付けるときは、ハーネスの挟み込みに注意してください。

2-4-3. CN-2753 基板

1. ネジ4本をゆるめ、インサイドパネル組立を引き出す。
2. ネジ (M2×5) 2本を外し、CN-2753 基板を取り外す。
3. CN-2753 基板のコネクタ (CN1) からハーネス1本を外し、DC OUT ブラケットを取り外す。

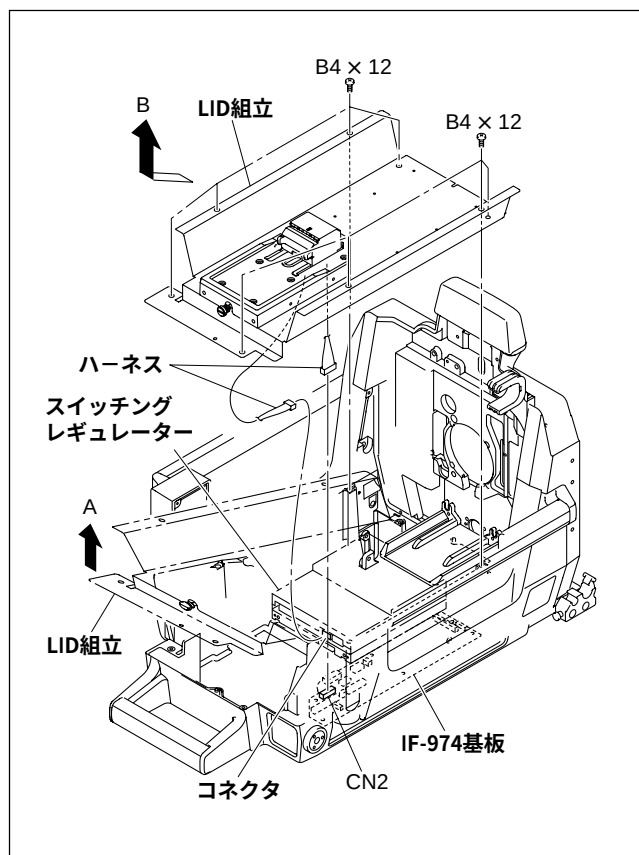


4. 1～3の逆の手順で、CN-2753 基板を取り付ける。

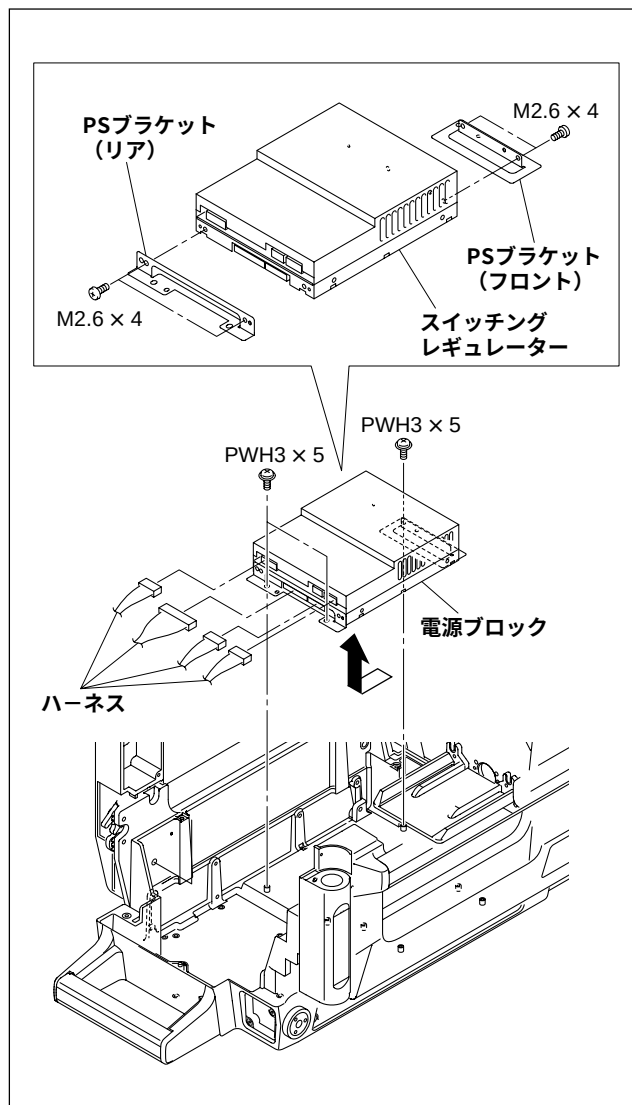
2-4-4. スイッチングレギュレーターの交換

取り外し

1. ネジ8本外し、LID組立のリア側を矢印A方向に持ち上げる。
2. IF-974基板のコネクタ (CN2) からハーネス1本と、スイッチングレギュレータのコネクタからハーネス1本を外す。
3. LID組立を矢印B方向に取り外す。



4. ネジ (PWH3 × 5) 3本外し、電源ブロックを矢印方向に取り外す。
5. スイッチングレギュレータのコネクタからハーネス4本を外す。
6. ネジ (M2.6 × 4) 4本を外し、スイッチングレギュレーターを取り外す。

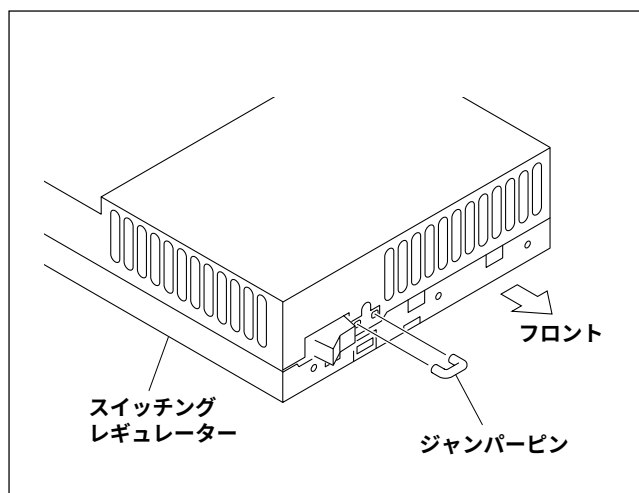


取り付け

- 新しいスイッチングレギュレーターからジャンパーピンを取り外す。

注意

取り外したジャンパーピンは、廃棄してください。



- スイッチを右側に倒す。
- 1～6の逆の手順で、スイッチングレギュレーターを取り付ける。

2-5. フレキシブルカード電線の取り外し／取り付け

AT-164 基板と SW-1232 基板間の接続にフレキシブルカード電線が使用されています。折れなどは著しく寿命を短くするので取り扱いには注意してください。

取り外し

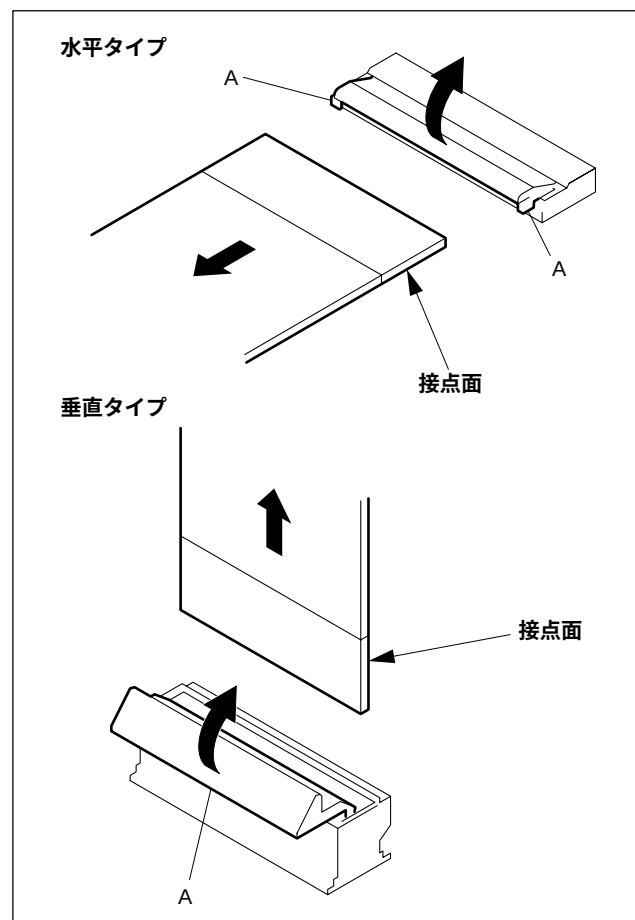
- カメラコントロールユニットまたはカメラの電源を切る。
- A部を矢印方向にスライドさせ、フレキシブルカード電線を引き抜く。

取り付け

取り付け時の注意

- フレキシブルカード電線を斜めに挿入しないこと。
- フレキシブルカード電線の接点面に汚れ、ごみ等がないことを確認すること。

- フレキシブルカード電線をコネクタにしっかり挿入する。
- A部を矢印と逆方向に押して、コネクタをロックする。



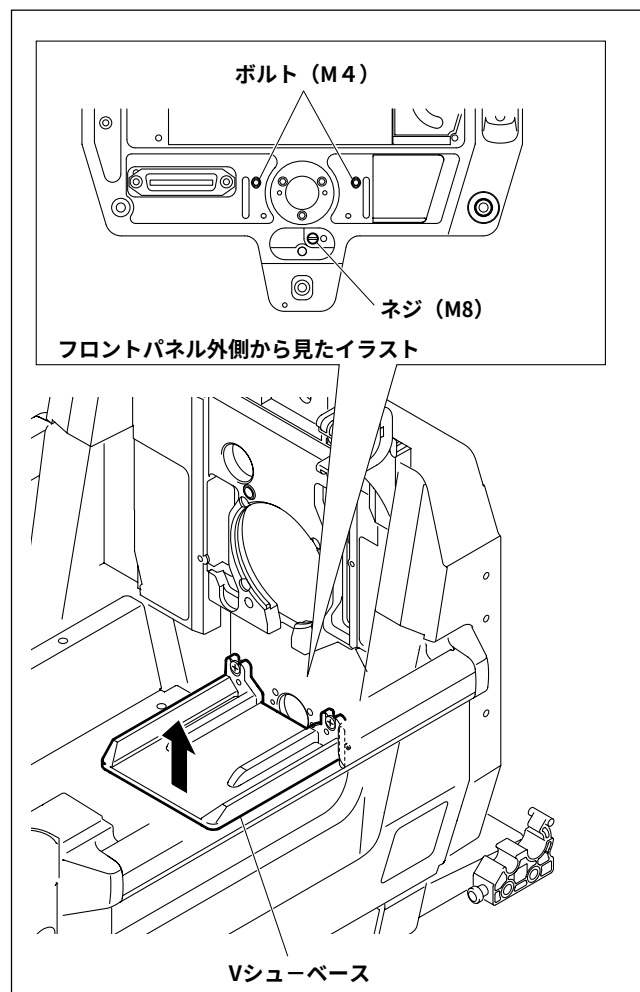
2-6. カメラ高さ調整

カメラが入りづらいときは、次のカメラの高さ調整を実施してください。

前側

下記の条件にて調整を実施してください。

- ・カメラが取り付けられていること。
 - ・レンズが取り付けられていないこと。
1. ボルト (M4) 2 か所を緩める。
 2. ネジ (M8) を1か所、時計方向に軽く回してVシューベースの高さを上げ、突き当たったところで止める。
 3. 反時計方向にネジを 1/6 回転程度戻す。
 4. 緩めたボルト 2 か所 (M4) を締め付ける。
 5. カメラの脱着がスムーズであることを確認する。



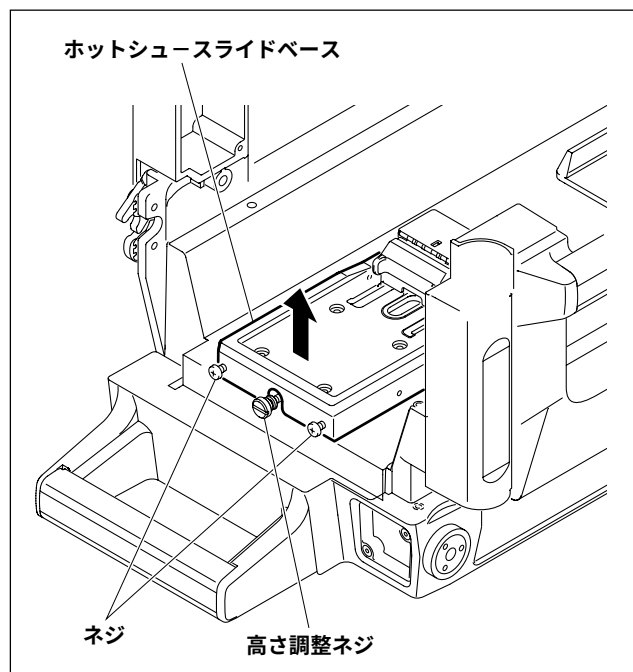
注意

前面の調整だけでは充分でないときは、以降の後側の調整も実施してください。最初にカメラが入らないときは、Vシューベース上がり過ぎている可能性があります。一度Vシューベースの高さを下げ、やり直してください。

後側

下記の条件にて調整を実施してください。

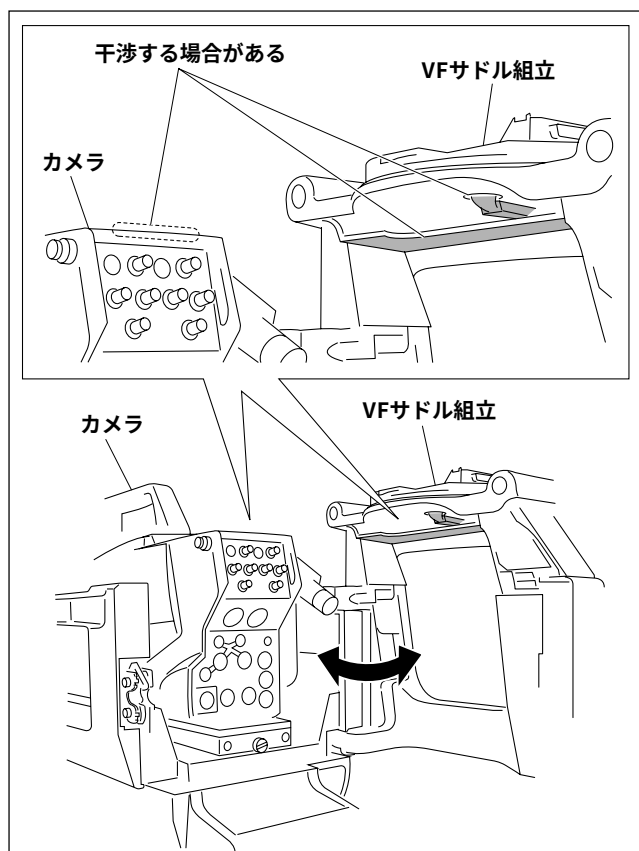
- ・カメラが取り付けられていること。
 - ・レンズが取り付けられていること。
1. ネジ 2 か所を緩める。
 2. 高さ調整ネジ 1 か所を時計方向に回す。
ホットシュースライドベースが上がる。
 3. カメラがスムーズに抜けるところまで、ホットシュースライドベースを上げる。



4. 緩めたネジ2か所を締め付ける。
5. カメラ（レンズ付き）が付いた状態で、サドルの開閉ができることを確認する。

注意

カメラを上げすぎると、カメラがVFサドル組立の部品に干渉する場合があります。



2-7. ユーティリティーアウト（AC 出力端子）について

2-7-1. 電圧設定方法

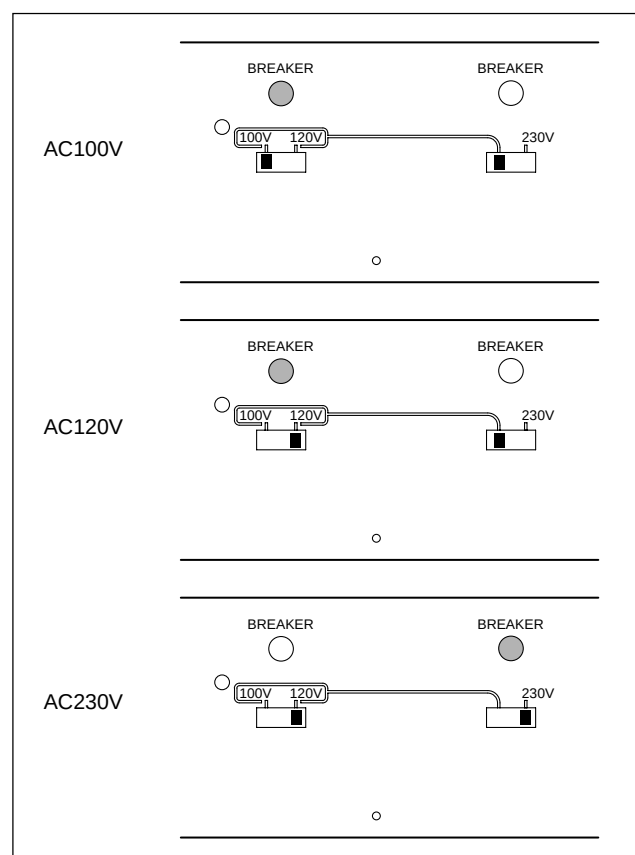
ユーティリティーアウトの出力電圧は、以下の方法により設定できます。

接続する機器の定格電圧にあった電圧に設定してください。

注意

電圧設定する際は、マイナスドライバーまたはピンセットなどを使用してください。

設定電圧



2-7-2. 注意事項

注意

- ・ ユーティリティーアウトは、サービス時に使用します。サービス技術者以外は使用しないでください。
- ・ ユーティリティーアウトを使用する際は、アウトレット蓋を外して使用してください。
- ・ ユーティリティーアウトは、仕向により異なります。

2-8. 回路保護素子について

本機の基板上には、回路保護素子として正特性サーミスター（電力用）が備わっています。

正特性サーミスターは、過電流が流れたり周辺温度が高温になって素子がある程度の温度まで上昇すると、内部抵抗が急激に増大して回路に流れる電流を制限します。

素子が作動したときは、いったん本機の電源を切り、本機内部の回路を点検してください。

機器の異常を取り除いた後、素子の温度が下がってから電源を入れ直すと、本機は正常に作動します。

なお、素子が冷えるには電源 OFF 後、約 1 分かかります。

基板	部品番号	Ref.No.	保護回路／機器
AT-164	1-804-458-21	THP1	基板内部の回路
	1-804-616-11	THP2	基板内部の回路
IF-974	1-804-616-11	THP1	基板内部の回路

2-9. 部品交換／修理時の注意事項

2-9-1. 無鉛はんだについて

無鉛はんだを使用している基板には、無鉛（Lead Free）を意味するレッドフリーマークがプリントされています。（基板サイズによっては、無鉛はんだを使用していても、レッドフリーマークがプリントされていないものがあります。）

：レッドフリーマーク

注意

- ・レッドフリーマークがプリントされている基板には、必ず無鉛はんだを使用してください。
- ・融点が従来のはんだよりも約 40℃ 高いため、温度調節機能のついたはんだこての使用を推奨します。
- ・従来のはんだこてをそのまま使用することは可能ですが、状況に応じて、少し長めにこてを当てる必要があります。はんだこてを長く当てすぎると、基板のパターン（銅箔）がはがれてしまうことがありますので、ご注意ください。

2-9-2. 補修部品注意事項

1. 安全重要部品

警告

△印のついた部品は安全性を維持するために重要な部品です。したがって、交換する時は必ず指定の部品を使ってください。

2. 部品の共通化

ソニーから供給する補修用部品は、セットに使われているものと異なることがあります。

これは部品の共通化、改良等によるものです。

部品表には現時点での共通化された補修用部品が記載されています。

3. 部品の在庫

部品表の SP (Supply code) 欄に “o” で示される部品は在庫していないことがあり、納期が長くなる場合があります。

4. ハーネス

部品番号の記載されていないハーネスは、サービス部品として登録されていません。

これらは、リストに展開されているコンポーネント部品で補修してください。

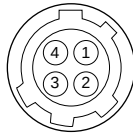
Section 1

Installation Overview

1-1. Matching Connector and Signal Inputs/Outputs

1-1-1. Signal Inputs/Outputs

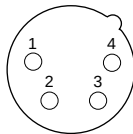
DC OUT (4-pin, Female)



– External view –

No.	Signal	I/O	Specifications
1	UNREG GND	–	GND for POWER
2	NC	–	No connection
3	NC	–	No connection
4	UNREG	O	+12 V dc 1.5 A (max)

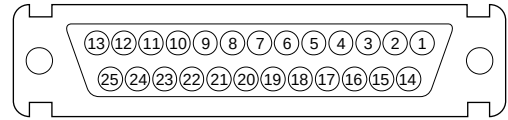
DC IN (4-pin, Male)



– External view –

No.	Signal	I/O	Specifications
1	EXT_DC (C)	–	GND for DC (+)
2	NC	–	No connection
3	NC	–	No connection
4	EXT_DC (H)	I	+10.5 to 17 V dc

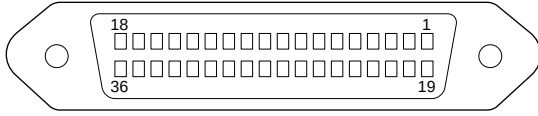
VF (25-pin, Female)



– External view –

No.	Signal	I/O	Specifications
1	VF-Y (X)	O	1.0 V p-p, $Z_o = 75 \Omega$
2	VF-GND (Pr)	–	GND for VF-Pr (X)
3	VF-Pr (X)	O	0.7 V p-p, $Z_o = 75 \Omega$
4	VF-GND (Pb)	–	GND for VF-Pb (X)
5	VF-Pb (X)	O	0.7 V p-p, $Z_o = 75 \Omega$
6	PEAKING LEVEL	I	0 to 5 V dc
7	VF-UNREG	O	+10.5 to +20 V
8	VF-UNREG		
9	NC	–	No connection
10	S-DATA	I/O	TTL level
11	TALLY (R)-VF	O	ON: +5 V OFF: 0 V
12	EFFECT	O	ON: +5 V OFF: 0 V
13	NC	–	No connection
14	VF-GND (Y)	–	GND for VF-Y (X)
15	S-CK	O	TTL level
16	BATT IND	O	ON: +5 V OFF: 0 V
17	CHASSIS GND	–	GND
18	TALLY (G)-VF	O	ON: +5 V OFF: 0 V
19	GND (UNREG)	–	GND for VF-UNREG
20	GND (UNREG)		
21	VF-SEL	I	BW: 0 V COLOR: +5 V
22	H EXPAND	O	ON: GND OFF: +5 V
23	NC	–	No connection
24	NC	–	No connection
25	V EXPAND	O	ON: GND OFF: +5 V

LENS (36-pin, Female)



– External view –

No.	Signal	I/O	Specifications
1	NC	–	No connection
2	NC	–	No connection
3	NC	–	No connection
4	LENS +12 V	O	+12 V (at 3 A)
5	GND (LENS)	–	GND for +12 V (LENS)
6	GND (SIG)	–	GND
7	NC	–	No connection
8	LENS-EXT-1 (SERIAL GND)	I	*2 (LENS SERIAL DATA)
9	LENS-EXT-2	I	*2
10	LENS-EXT-3	I	*2
11	LENS-SERVO	O	ON: GND OFF: High impedance
12	IRIS-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 2 to 7 V "3.4 $\pm$ 0.1 V (F16)" "6.2 $\pm$ 0.1 V (F2.8)"
13	ZOOM-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 2 to 7 V "2 V (WIDE), 7 V (TELE)"
14	RET 1-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
15	RET 2-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
16	FOCUS-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 2 to 7 V "2 V (MIN), 7 V (∞)"
17	IRIS-CONT	O	2 to 7 V "3.4 $\pm$ 0.1 V (F16)" "6.2 $\pm$ 0.1 V (F2.8)" $Z_o \leq 1 \text{ k}\Omega$
18	IRIS-AUTO /MANU (SERIAL TXD)	O	AUTO: GND MANU: High impedance $Z_o \leq 1 \text{ k}\Omega$
19	NC	–	No connection
20	NC	–	No connection
21	LENS R TALLY	O	ON: GND OFF: High impedance $Z_o \leq 1 \text{ k}\Omega$
22	LENS-EXP-POSI	I	$Z_i \geq 10 \text{ k}\Omega$ 1 to 4 V 1 V: -7.5° 4 V: $+7.5^\circ$

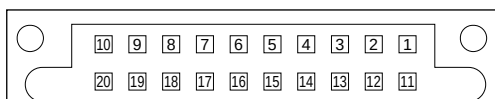
No.	Signal	I/O	Specifications
23	RET 3-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
24	LENS-ADR-0	I	*1
25	LENS-ADR-1	I	*1
26	LENS-ADR-2	I	*1
27	LENS-ADR-3	I	*1
28	EXT 1-ON	O	ON: GND OFF: High impedance
29	EXT 2-ON	O	ON: GND OFF: High impedance
30	F-DEM (FAR)	I	No connection
31	INCOM 1- ENG/PROD	I	$Z_i \geq 10 \text{ k}\Omega$ ENG: GND PRD: High impedance
32	INCOM 2- ENG/PROD	I	$Z_i \geq 10 \text{ k}\Omega$ ENG: GND PRD: High impedance
33	INCOM 1-MIC-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
34	INCOM 2-MIC-ON	I	$Z_i \geq 10 \text{ k}\Omega$ ON: GND OFF: High impedance
35	F-CONT-SIG	O	No connection
36	F-DEM (NEAR)	I	No connection

*1 $Z_i \geq 10 \text{ k}\Omega$
1: High impedance
0: $0 \pm 0.5 \text{ V}$
LENS ADRS 0 (low-order bit)
LENS ADRS 3 (high-order bit)

*2 $Z_i \geq 10 \text{ k}\Omega$
1: High impedance
0: $0 \pm 0.5 \text{ V}$

EX1	EX2	EX3	MODE
1	1	1	EXTENDER OFF
1	0	1	EXT-1 ($\times 1.5$) ON
0	1	1	EXT-2 ($\times 2$) ON
0	0	1	EXT-3 ($\times 2.5$) ON

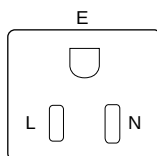
BUILT-UP (20-pin, Female)



– External view –

No.	Signal	I/O
1	Y-VIDEO (X)	I
2	GND (Y)	–
3	Pb-VIDEO (X)	I
4	GND (Pb)	–
5	Pr-VIDEO (X)	I
6	GND (Pr)	–
7	RESERVE (X)	–
8	GND (RESERVE)	–
9	G-TALLY	I
10	R-TALLY	I
11	AC240 V (H)	I
12	CA-TX-IN	I
13	CA-RX-OUT	O
14	CA-SENSE-OUT	O
15	LENS-TX-IN	O
16	LENS-RX-OUT	I
17	B-SPARE	–
18	STB-INCOM1-ON	O
19	CHASSIS-GND	–
20	AC240 V (C)	I

AC OUT



– External view –

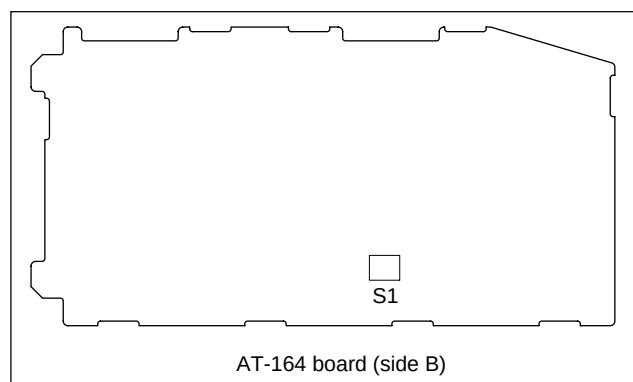
No.	Signal	I/O	Specifications
E	GND	–	CHASSIS GND
N	UTL (C)	O	AC 100 V, 200 VA or less
L	UTL (H)	O	

1-1-2. Connection Connectors/Cables

Connection made with the connector panels during installation or service, should be made with the connectors/complete cable assemblies specified in the following list, or equivalent parts.

Connector	Connection connectors/cables
DC OUT (4-pin, Female)	1-566-425-11 Plug, 4-pin, Male or HIROSE HR10A-7P-4P equivalent
DC IN (4-pin, Male)	1-508-362-00 XLR, 4-pin, Female or ITT Cannon XLR-4-11C, equivalent or Cable assembly (supplied with AC-550) 1-551-577-00

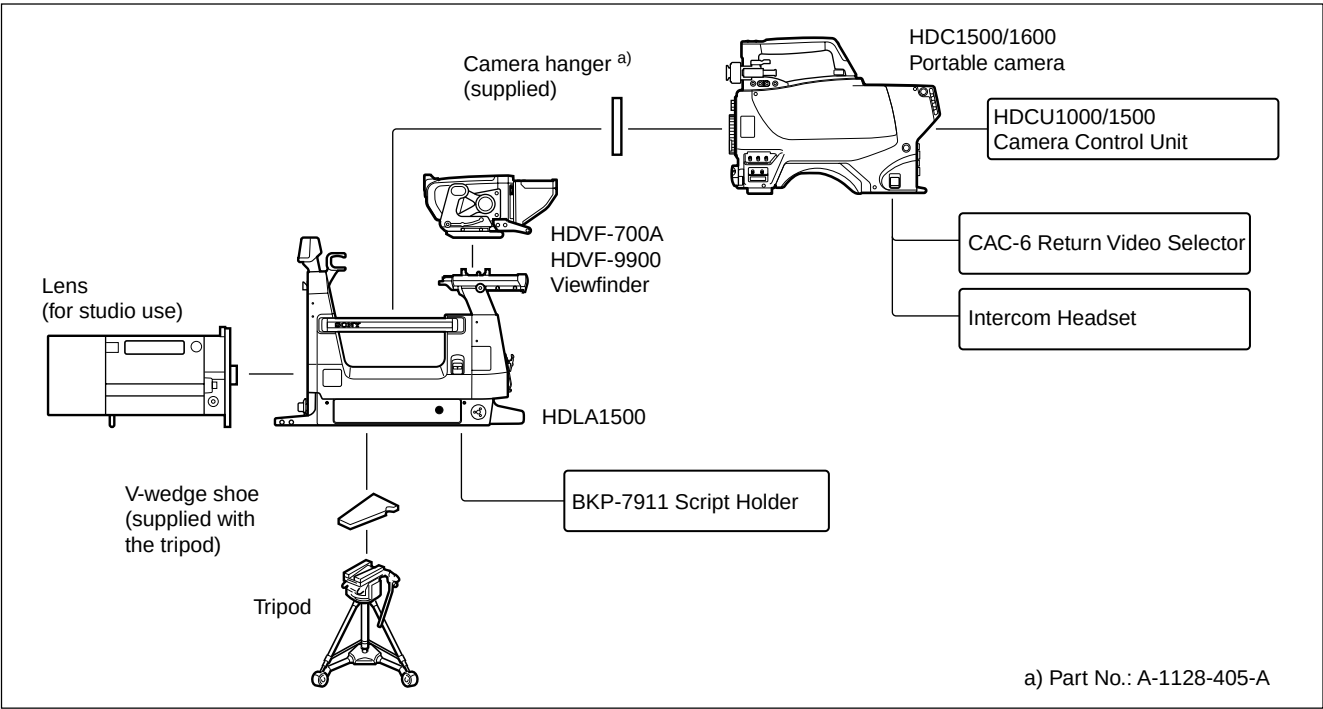
1-2. Function of Internal Switch



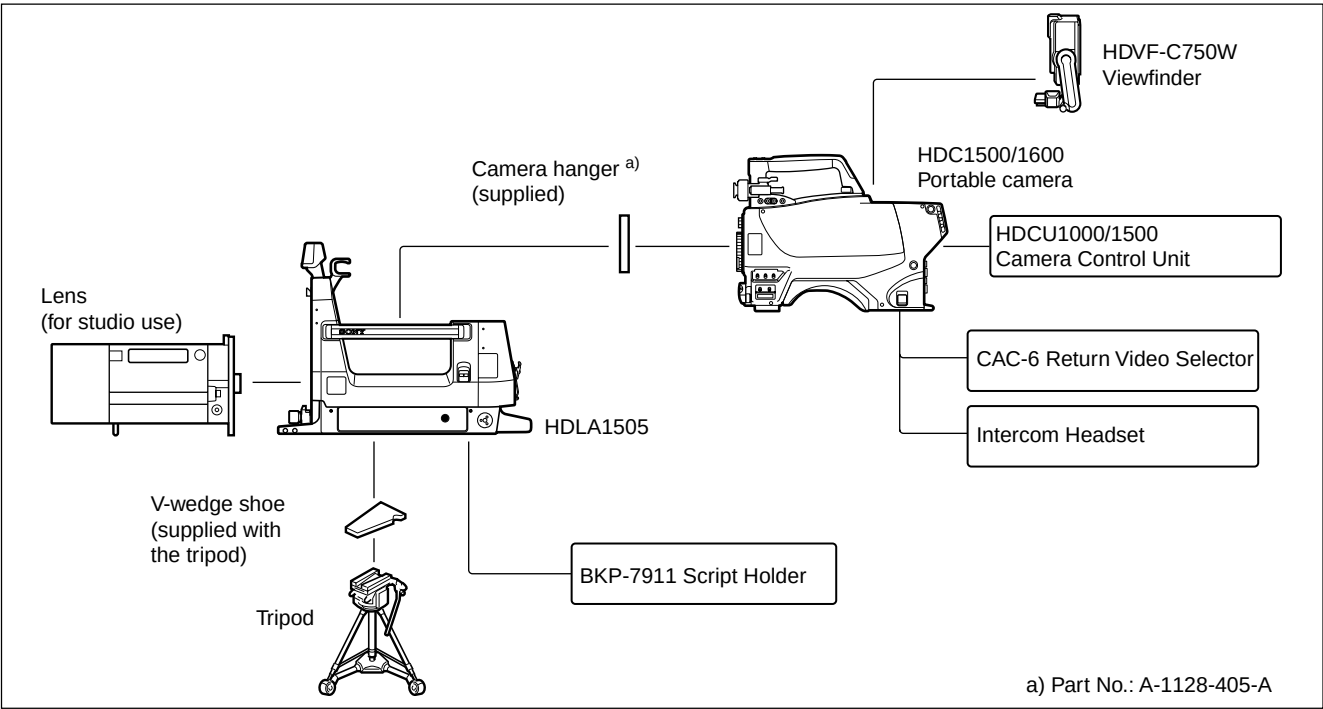
Ref. No.	Description
S1	Used for future extension Factory setting: All OFF

1-3. System Configuration

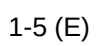
HDLA1500



HDLA1505



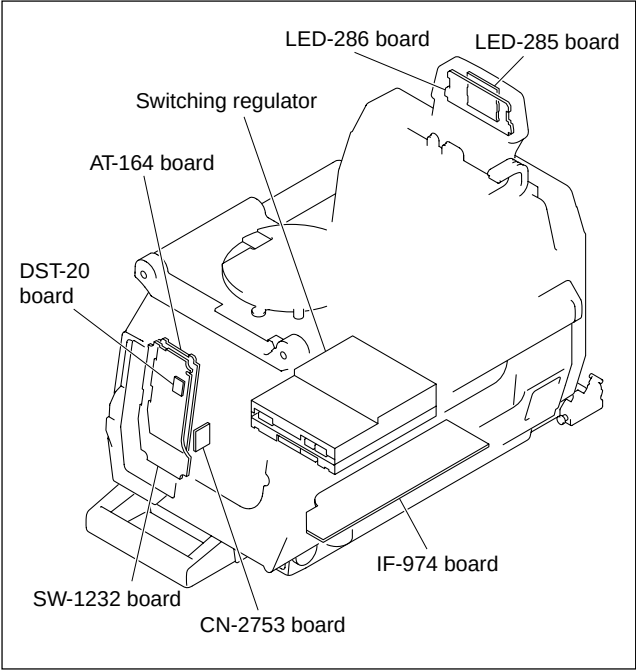
HDLA1500



Section 2

Service Overview

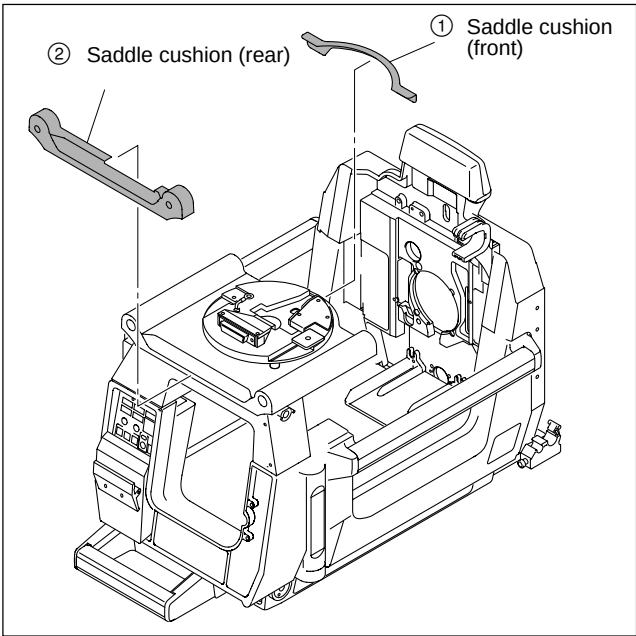
2-1. Board Layouts



2-2. Recommended Replacing Parts (HDLA1500)

Following parts are recommended replacing parts. These parts may become cracked and split with the lapse of time, therefore replace it if necessary.

No.	Parts	Sony parts No.
①	Saddle cushion (front)	3-872-575-0X
②	Saddle cushion (rear)	3-872-576-0X



2-3. Notes for Replacing Parts

There are two kinds of types (gold and silver) in the parts below used in this unit.

- Flexible card wires
- Boards
- Connectors on the board (for flexible card wires)

When replacing the parts above, be sure to follow the instructions described in “2-3-1. Notes for Replacing the Flexible Card Wire”, “2-3-2. Notes for Replacing the Board”, and “2-3-3. Notes for Replacing the Connector on the Board”. Be sure to use the specified parts. Using un-specified parts causes the change in the characteristics of this unit and the unit does not work properly.

Spare parts are listed in the spare parts list of “Spare Parts” Section. In the spare parts list, (GOLD) or (SILVER) is put after each part name to distinguish two kinds of types (gold and silver).

2-3-1. Notes for Replacing the Flexible Card Wire

When replacing the flexible card wires listed below, confirm the conductive (terminal) part color of the flexible card wires and follow the procedure below.

1. Replace the flexible card wire with a flexible card wire whose conductive part is gold when the conductive part of a flexible card wire is gold.

Note

For the board on which a connector whose contact surface is gold is used, “G” is put after the board name by silk-screen printing or a “G” seal is attached to the empty space on the board. Example: AT-146G

2. Replace the flexible card wire with a flexible card wire whose conductive part is silver when the conductive part of a flexible card wire is silver. In this case, silk “G” or a “G” seal is not put on the board name.

When the conductive part is gold

Board	Flexible card wire		Board
	Pin	Gold: Parts No.	
AT-164G	30	1-831-132-11	SW-1232G

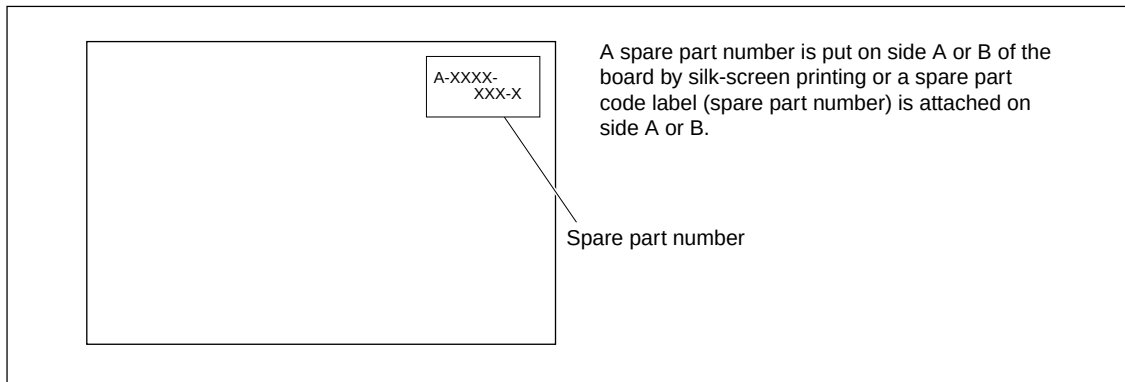
When the conductive part is silver

Board	Flexible card wire		Board
	Pin	Silver: Parts No.	
AT-164	30	1-823-558-11	SW-1232

2-3-2. Notes for Replacing the Board

Replace the board with a board of the same number as the spare part number of the board to be removed when replacing a board.

Example: A spare part number is put on the board.



2-3-3. Notes for Replacing the Connector on the Board

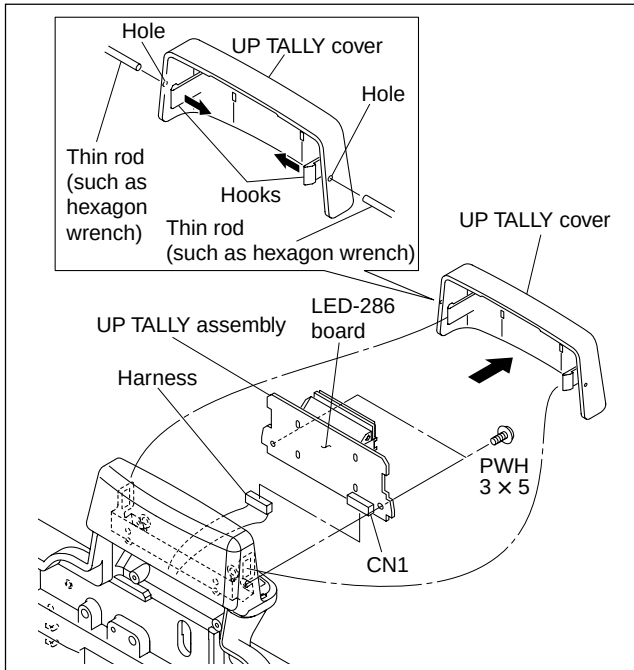
There are two types of connectors for the flexible card wire mounted on the board used in this unit. Distinguish them in the procedure below when replacing these connectors.

1. The contact surface of the connector used for a board is gold when the conductive part of a flexible card wire is gold.
In a spare parts list, (GOLD) is put after the part name.
2. The contact surface of the connector used for a board is silver when the conductive part of a flexible card wire is silver.
In a spare parts list, (SILVER) is put after the part name.

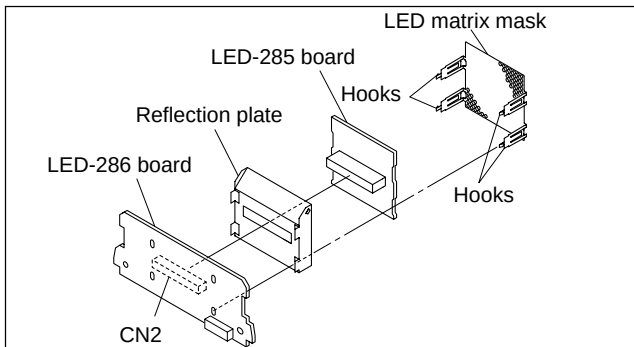
2-4. Removing/Installing the Boards

2-4-1. LED-285 Board/LED-286 Board

1. Remove the two hooks by inserting a thin rod (such as hexagon wrench) through the two holes of the UP TALLY cover.
2. Remove the UP TALLY cover in the direction of the arrow.
3. Remove the two screws and disconnect the harness from the connector (CN1) on the LED-286 board, then remove the UP TALLY assembly.



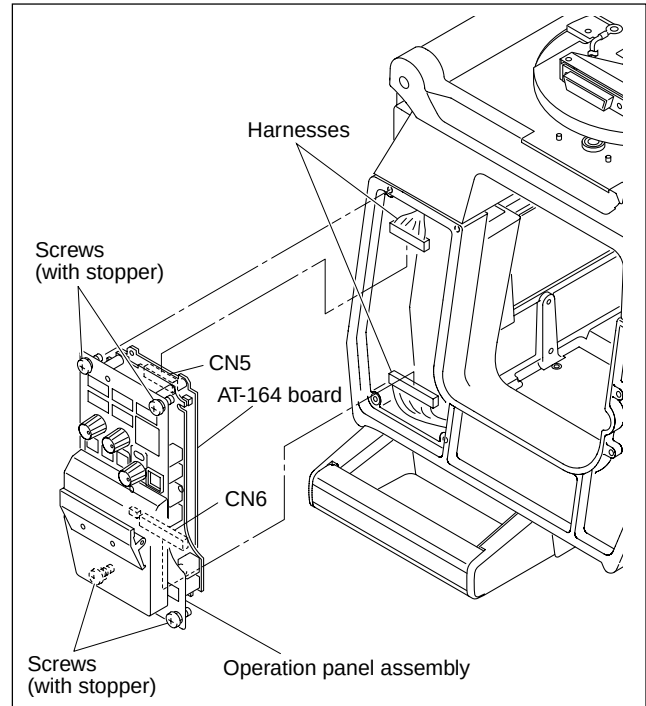
4. Remove the four hooks, then remove the LED matrix mask.
5. Remove the LED-285 board and reflection plate from the connector (CN2) on the LED-286 board.



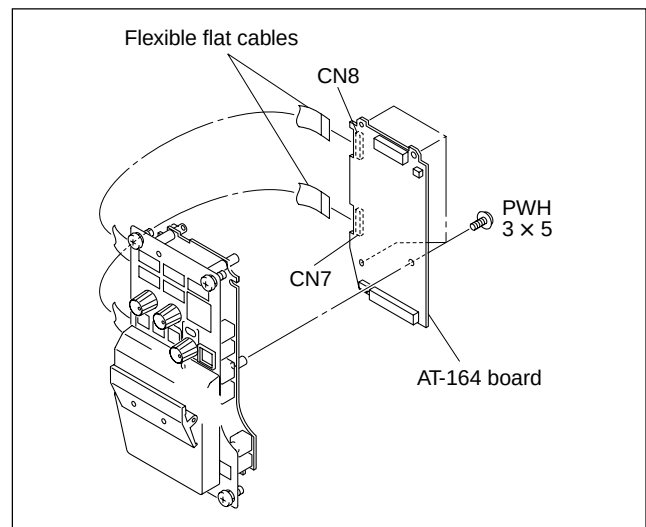
6. Install the LED-286 board and LED matrix mask in the reverse order of steps 1 to 5.

2-4-2. AT-164 Board/SW-1232 Board

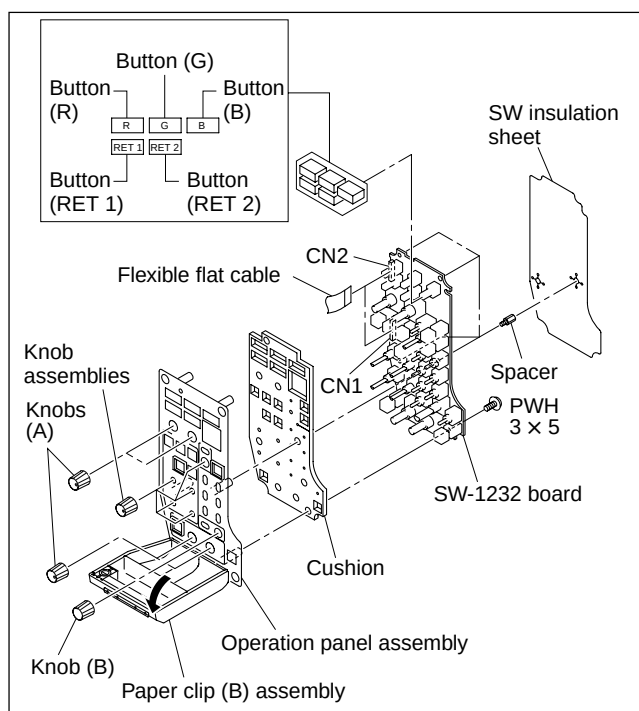
1. Loosen the four screws (with stopper), then remove the operation panel assembly.
2. Disconnect the two harnesses from the connectors (CN5 and CN6) on the AT-164 board.



3. Remove the AT-164 board.
 - (1) Remove the four screws, then remove the AT-164 board.
 - (2) Disconnect the two flexible flat cables from the connectors (CN7 and CN8) on the AT-164 board.

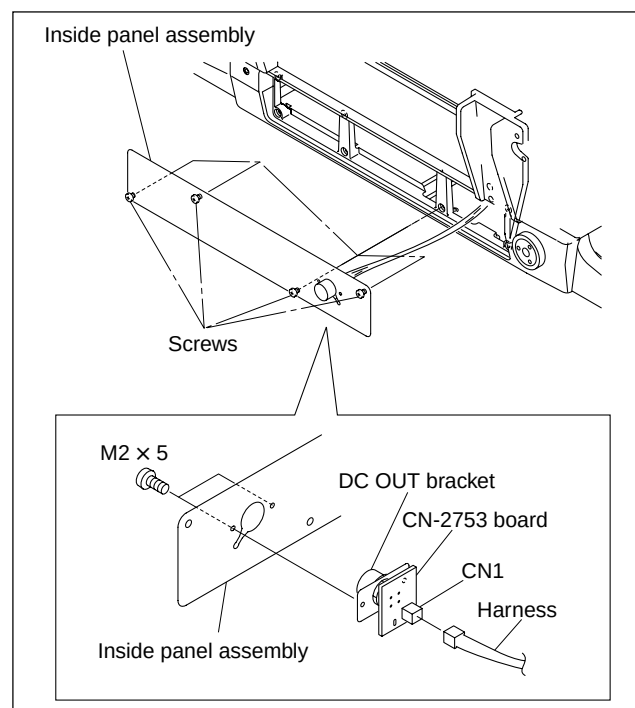


4. Remove the SW-1232 board.
 - (1) Remove the SW insulation sheet.
 - (2) Open the paper clip (B) assembly in the direction of the arrow.
 - (3) Remove the five knob assemblies, four knobs (A) and knob (B).
 - (4) Remove the screw and four spacers, then remove the operation panel assembly and cushion.
 - (5) Disconnect the two flexible flat cables from the connectors (CN1 and CN2) on the SW-1232 board.
 - (6) When replacing the SW-1232 board with the new board, remove the button (R), button (G), button (B), button (RET1) and button (RET2), then attach them to the new board.



2-4-3. CN-2753 Board

1. Loosen the four screws, then pull out the inside panel assembly.
2. Remove the two screws (M2 × 5), then remove the CN-2753 board.
3. Disconnect the harness from the connector (CN1) on the CN-2753 board, then remove the DC OUT bracket.



4. Install the CN-2753 board in the reverse order of steps 1 to 3.

5. Install the AT-164 board and SW-1232 board in the reverse order of steps 1 to 4.

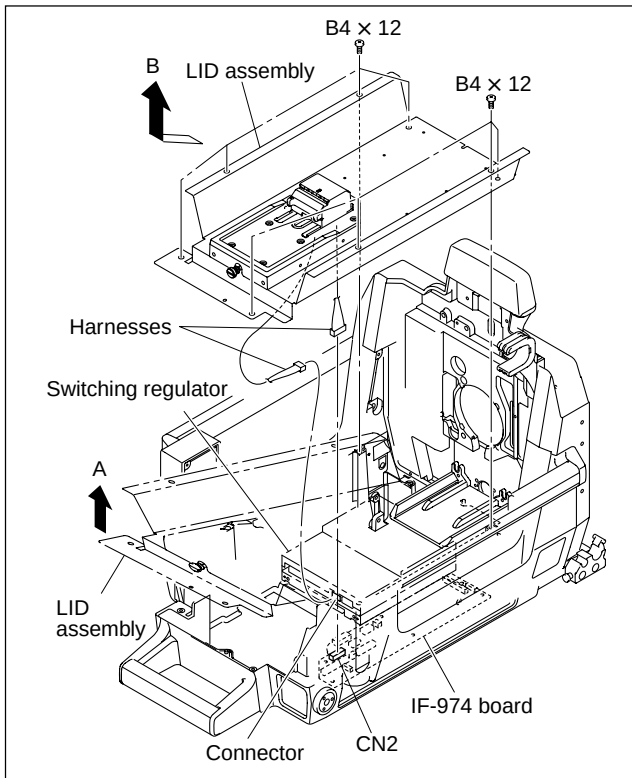
Note

When attaching the operation panel assembly, be careful not to catch the harness.

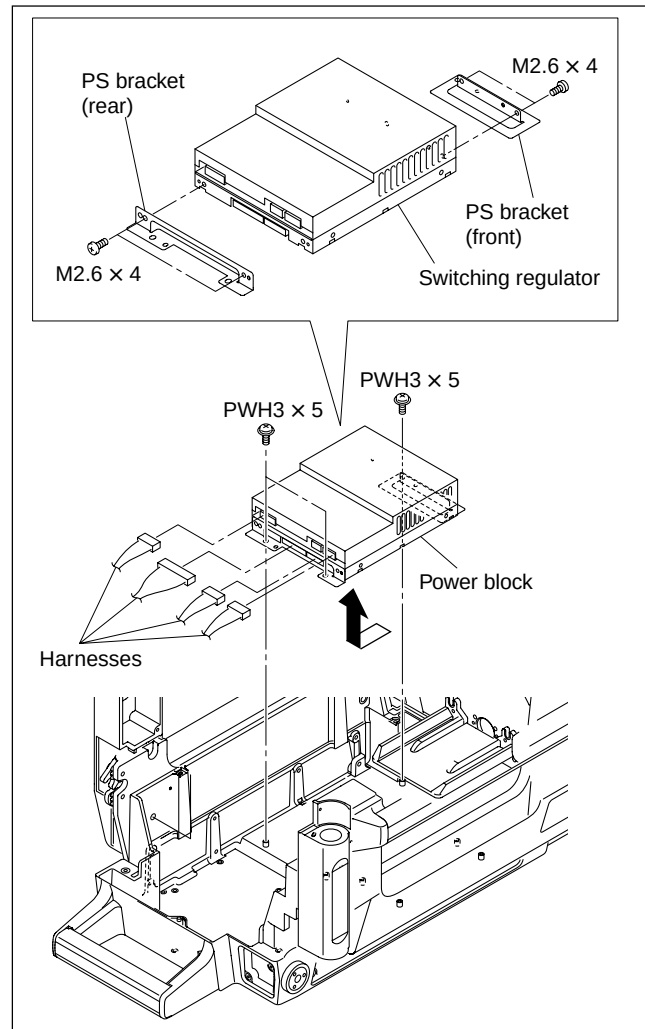
2-4-4. Replacing the Switching Regulator

Removal

1. Remove the eight screws, then pick up the rear side of the LID assembly in the direction of the arrow A.
2. Disconnect the harness from the connector (CN2) on the IF-974 board and disconnect the harness from the connector of the switching regulator.
3. Remove the LID assembly in the direction of the arrow B.



4. Remove the three screws (PWH3 x 5), then remove the power block in the direction of the arrow.
5. Disconnect the four harnesses from the connector of the switching regulator.
6. Remove the four screws (M2.6 x 4), then remove the switching regulator.

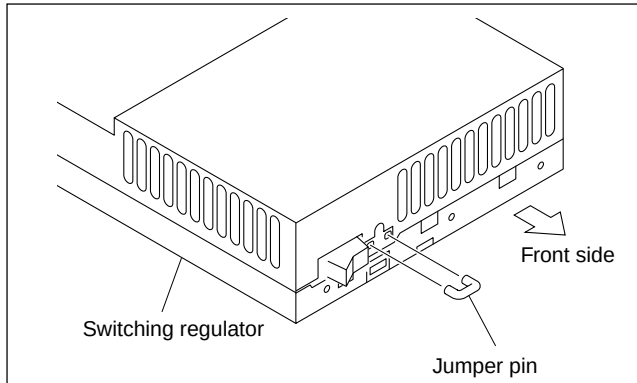


Installation

7. Remove the jumper pin from the new switching regulator.

Note

Reject the jumper pin which is removed.



8. Set the switch to the right side.
9. Attach the switching regulator in the reverse order of steps 1 to 6.

2-5. Removing/Installing the Flexible Card Wire

The flexible card wires are used for the connection between the AT-164 and SW-1232 boards. Take care not to bend the flexible card wires. This shortens the wire life.

Removal

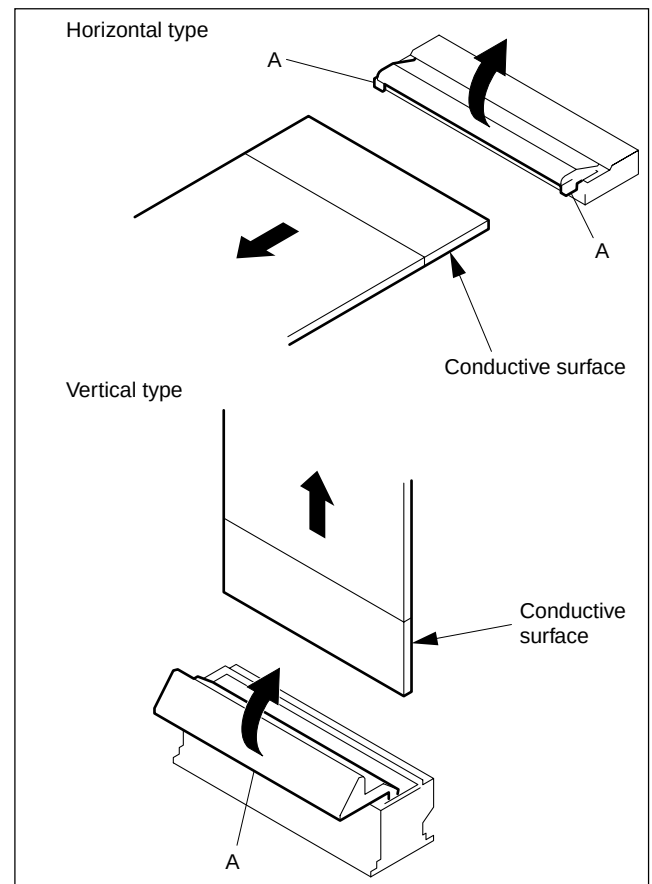
1. Turn off the power of the camera control unit or camera.
2. Slide portion A in the direction of the arrow and pull out the flexible card wire.

Installation

Caution during installation

- Be careful not to insert the flexible card wire obliquely.
- Check that the conductive surface of the flexible card wire is not soiled with dust.

1. Insert the flexible card wire firmly into a connector.
2. Pull portion A in the opposite direction to the arrow and lock the connector.



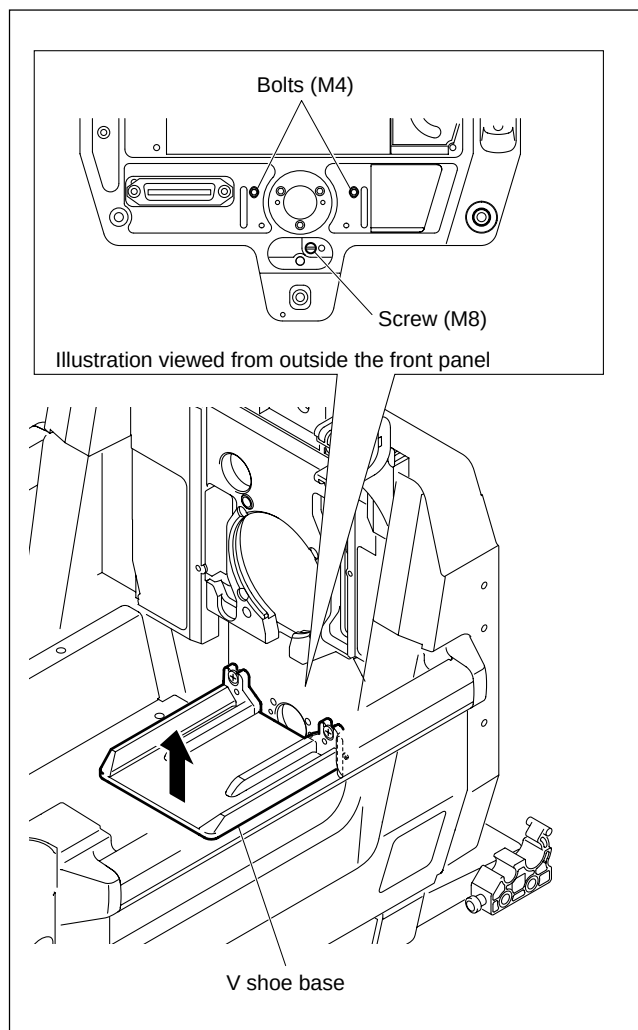
2-6. Adjustment of Camera Height

Perform the adjustment in the following procedures when the camera cannot be smoothly set to the adapter.

Front side

Perform the adjustment in the following conditions.

- The camera is attached.
 - The lens is not attached.
1. Loosen the two bolts (M4).
 2. Turn the screw (M8) in the clockwise direction to raise the V shoe base, then leave no space between the camera and V shoe base.
 3. Turn (1/6) the screw in the counterclockwise direction.
 4. Tighten the loosened two bolts (M4).
 5. Check that the camera can be attached and detached smoothly.



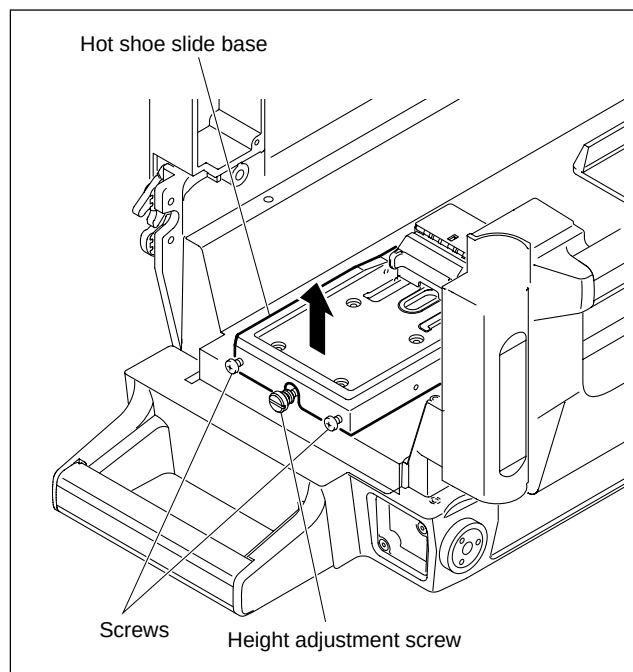
Note

Perform the adjustment on the rear panel described below when the adjustment on the front panel is not sufficient for the height adjustment. The V shoe base may be excessively raised when a camera cannot be put at first. Lower the height of the V shoe base once and perform the adjustment again.

Rear side

Perform the adjustment in the following conditions.

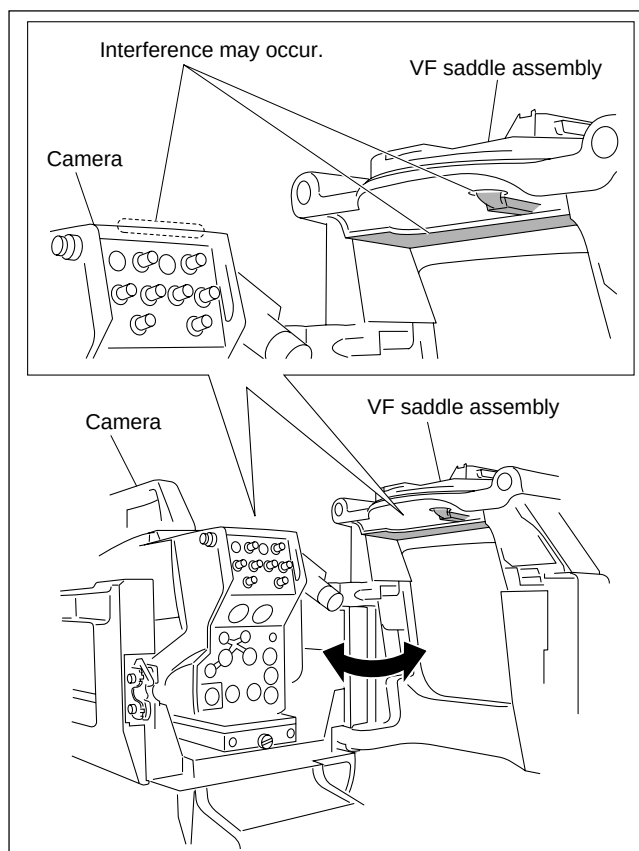
- The camera is attached.
 - The lens is attached.
1. Loosen the two screws.
 2. Turn the height adjustment screw in the clockwise direction to raise the hot shoe slide base.
 3. Raise the hot shoe slide base to the point where the camera can be smoothly detached.



4. Tighten the loosened two screws.
5. Check that the saddle can be opened and closed with the camera (lens attached) attached.

Note

If the camera is raised excessively, it may interfere with the parts of VF saddle assembly.



2-7. Utility Output (AC Output Terminal)

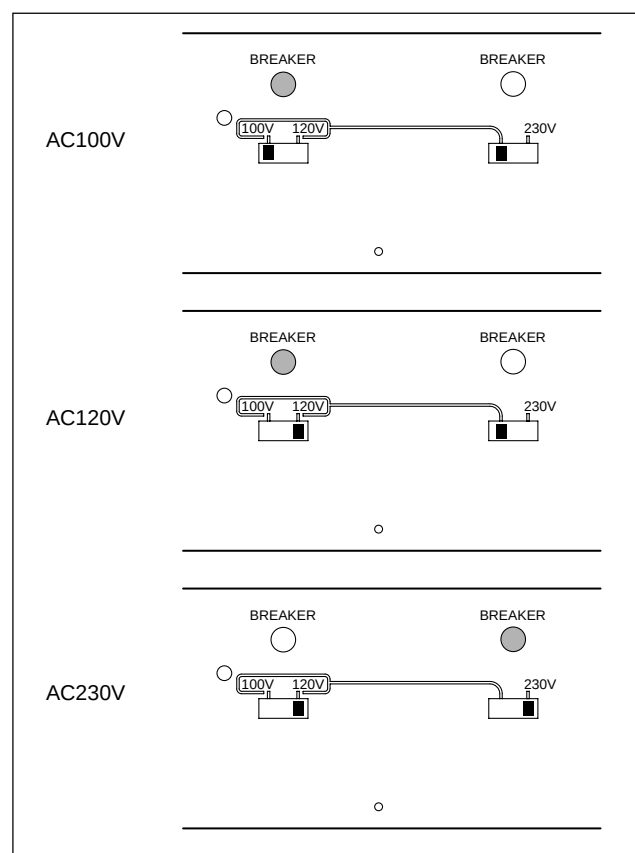
2-7-1. Voltage setting

A utility output voltage can be set by the method below. Set the output voltage to the voltage corresponding to the rated voltage of equipment to be connected.

Note

Use a flat-bladed screwdriver or tweezers when setting a voltage.

Set voltage



2-7-2. Precaution

Notes

- The utility output is used during maintenance service. Persons other than a service engineer must not use the utility output.
- Remove the outlet cover when using the utility output.
- The utility output varies depending on the destination.

2-8. Circuit Protective Elements

The positive characteristic thermistor (for power supply) functions as a circuit protective element on the AT-164 and IF-974 boards of the unit. The thermistor increases the internal resistance and limits the current flowing to the circuits when an overcurrent flows or when the ambient temperature increases and the element reaches the specified temperature. If the elements operates, turn off the main power and inspect the internal circuit of this unit. After removing the cause of the equipment abnormality and the temperature of the element decreases, turn on the power again, and the unit operates normally. It takes about 1 minute for the elements to cool down after the main power is turned off.

Board	Sony parts No.	Ref. No.	Protective circuit/ equipment
AT-164	1-804-458-21	THP1	Circuit inside the board
	1-804-616-11	THP2	Circuit inside the board
IF-974	1-804-616-11	THP1	Circuit inside the board

2-9. Notes on Replacing the Parts and Repairing

2-9-1. Unleaded Solder

Boards requiring use of unleaded solder are printed with a lead free mark (LF) indicating the solder contains no lead. (Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



: LEAD FREE MARK

Notes

- Be sure to use the unleaded solder for the printed circuit board printed with the lead free mark.
- The unleaded solder melts at a temperature about 40 °C higher than the ordinary solder, therefore, it is recommended to use the soldering iron having a temperature regulator.
- The ordinary soldering iron can be used but the iron tip has to be applied to the solder joint for a slightly longer time. The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful.

2-9-2. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked $\triangle$ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Harness

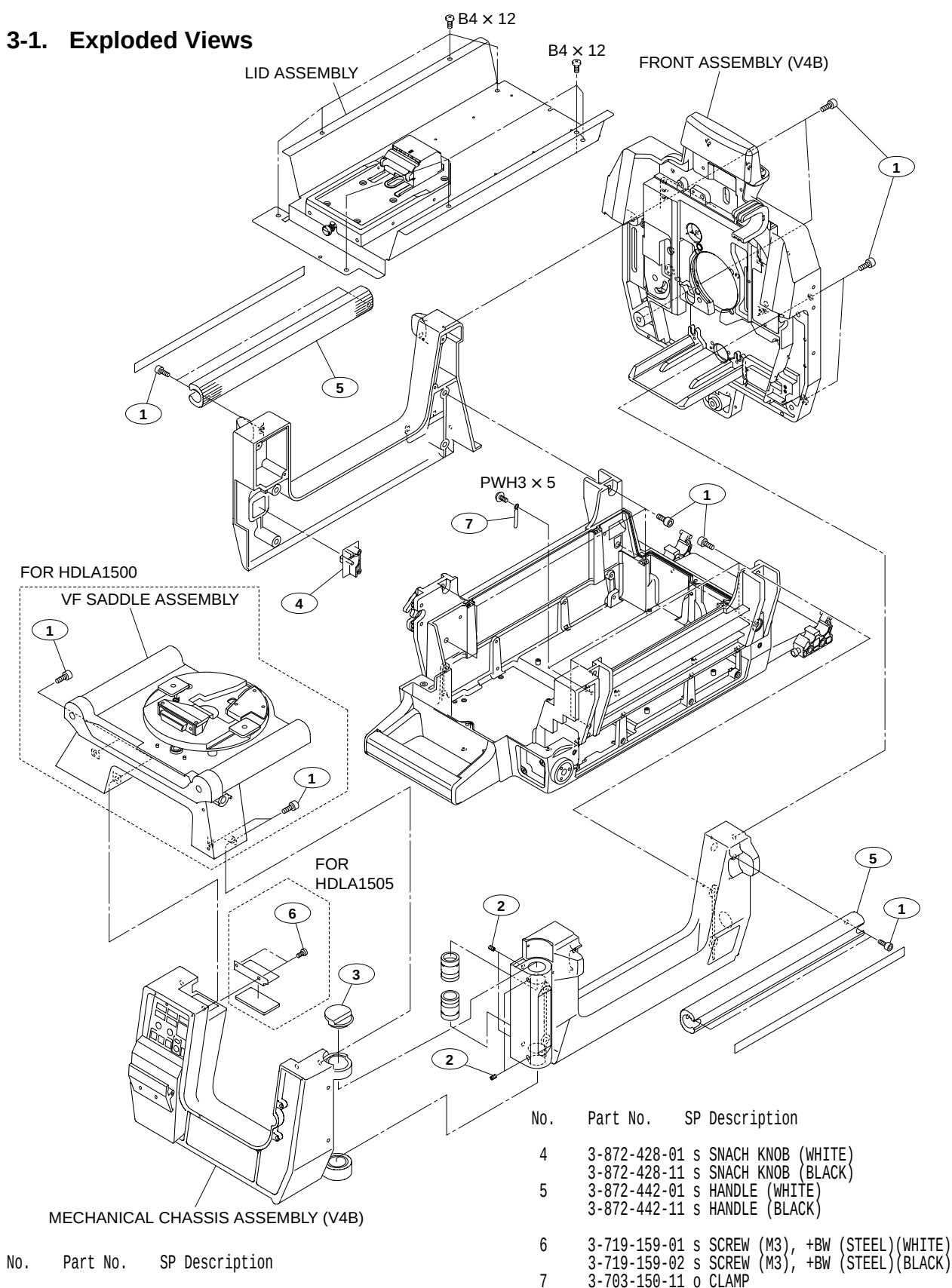
Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

Section 3

Spare Parts

3-1. Exploded Views



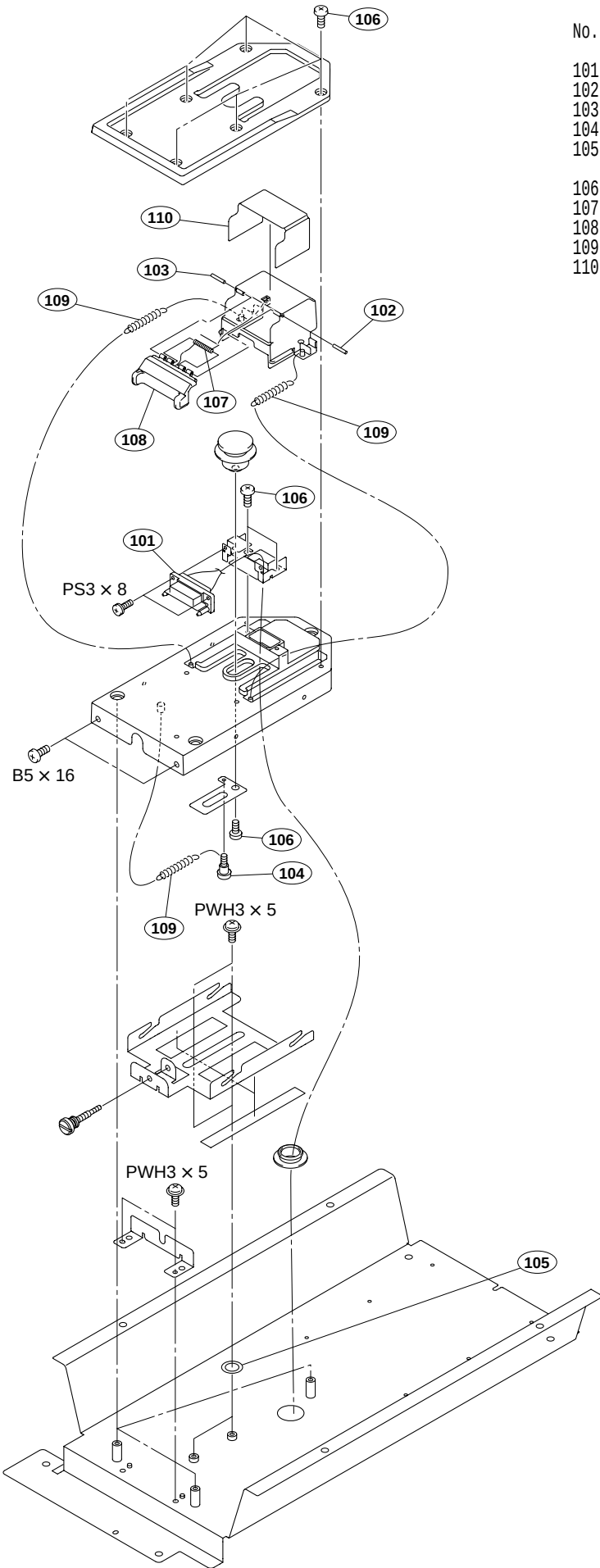
No.	Part No.	SP Description
1	2-391-520-21	s BOLT (M5X12),HOLE, HEXAGON(ST)
2	3-701-510-00	s SET-SCREW,HEXGON 4X4 (WP) ST
3	3-872-425-01	s CAP UPPER (WHITE)
	3-872-425-11	s CAP UPPER (BLACK)

HDLA1500/1505/DRAFT

No.	Part No.	SP Description
4	3-872-428-01	s SNACH KNOB (WHITE)
	3-872-428-11	s SNACH KNOB (BLACK)
5	3-872-442-01	s HANDLE (WHITE)
	3-872-442-11	s HANDLE (BLACK)
6	3-719-159-01	s SCREW (M3), +BW (STEEL)(WHITE)
	3-719-159-02	s SCREW (M3), +BW (STEEL)(BLACK)
7	3-703-150-11	o CLAMP

7-682-563-09 s SCREW +B4X12
 7-682-903-01 s SCREW +PWH 3X5

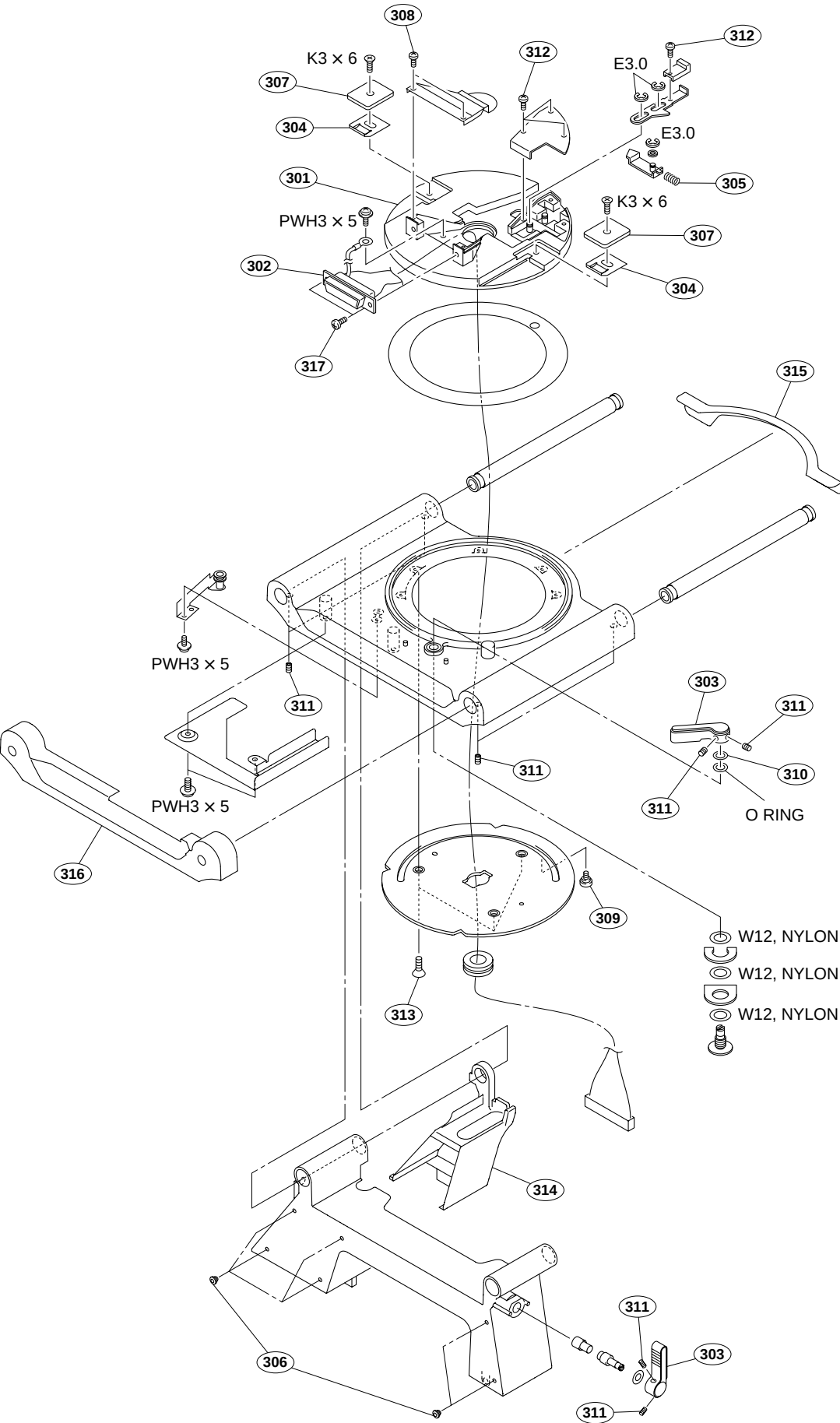
Lid Block



No.	Part No.	SP Description
101	1-963-933-11	s HARNESS, SUB (MAIN)
102	3-669-481-04	s PIN PARALLEL (1X12)
103	3-669-481-05	s PIN (DIA. 1X15), PARALLEL
104	3-694-825-11	s SCREW M3 STEP, SPECIAL HEAD ST
105	3-701-444-01	s WASHER PLASTIC (6.2X9.5X0.13)
106	3-719-159-01	s SCREW (M3), +BW (STEEL)
107	3-872-421-01	s SPRING, TORSION(M)
108	3-872-438-01	s HOT SHOE DOOR
109	3-872-444-01	s SPRING, EXTENSION
110	3-872-487-01	s SHEET, PROTECT HOT SHOE
	7-682-578-09	s SCREW +B5X16 (EP-FE/ZNBK/CM2)
	7-682-648-09	s SCREW +PS 3X8 (EP-FE/ZNBK/CM2)
	7-682-903-01	s SCREW +PWH 3X5

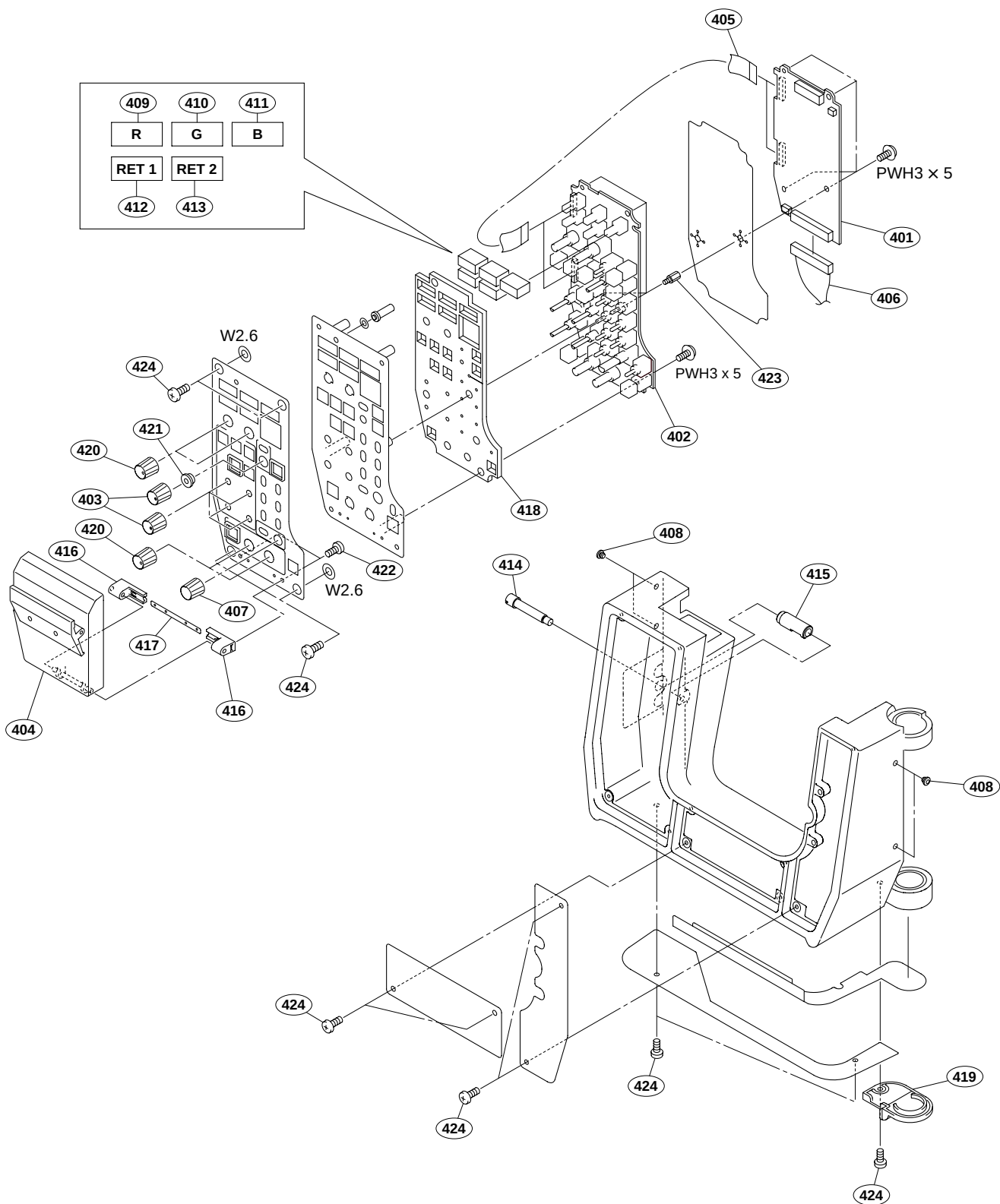
No.	Part No.	SP Description
216	3-872-449-02	s PLUNGER PLATE
217	3-872-453-01	s PLUNGER
218	3-872-458-01	s LOCK LEVER
219	3-872-459-01	s LOCK LEVER PLATE
220	3-872-480-01	s CLAMP, HANDLE
221	3-872-493-01	s SPRING, COMPRESSION
222	3-872-517-01	s LED MATRIX MASK
223	3-872-521-01	s UP TALLY COVER
224	3-729-076-11	s SCREW (+B)(2X4)(WHITE)
	4-654-273-02	s ACE (M2) LOCK (BLACK)
	7-623-210-22	s SPRING WASHER (4MM)
	7-624-104-04	o STOP RING, E-2
	7-682-247-04	s SCREW +K 3X6
	7-682-548-04	s SCREW +B3X8
	7-682-903-01	s SCREW +PWH 3X5
	7-685-533-14	s SCREW +BTP2,6X6

VF Saddle Block (HDLA1500 only)



No.	Part No.	SP	Description
301	X-3605-552-2	s	RETAINER ASSY, PAN BASE
302	1-963-936-11	s	HARNES, SUB (VF)
303	3-185-886-04	s	LEVER, PAN LOCK
304	3-613-969-02	o	SPRING, EMC
305	3-634-355-00	s	SPRING, COMPRESSION (STEEL)
306	3-673-018-11	s	SCREW, BLIND (PLA)
307	3-692-332-01	o	PLATE (A)
308	3-694-181-01	s	AROCK PRECISION +P2.6 TYPE 1
309	3-694-825-11	s	SCREW M3 STEP, SPECIAL HEAD ST
310	3-701-444-11	s	WASHER PLASTIC (6.2X9.5X0.25)
311	3-701-510-00	s	SET-SCREW, HEXAGON 4X4 (WP) ST
312	3-719-381-01	s	SCREW +P M2X4 (ZNBK)(LOCK)
313	3-729-072-01	s	SCREW +K4X8 (STEEL)
314	3-872-432-01	s	VF CABLE COVER
315	3-872-575-01	s	CUSHION, SADDLE FRONT
316	3-872-576-01	s	CUSHION, SADDLE REAR
317	4-654-273-02	s	ACE (M2), LOCK
	7-623-930-11	s	WASHER 12, NYLON (PLASTIC)
	7-624-106-04	s	STOP RING, TYPE-E3(CZN-N4)
	7-624-209-00	s	RING, O P-5
	7-682-247-04	s	SCREW +K 3X6
	7-682-903-01	s	SCREW +PWH 3X5

Control Panel Block

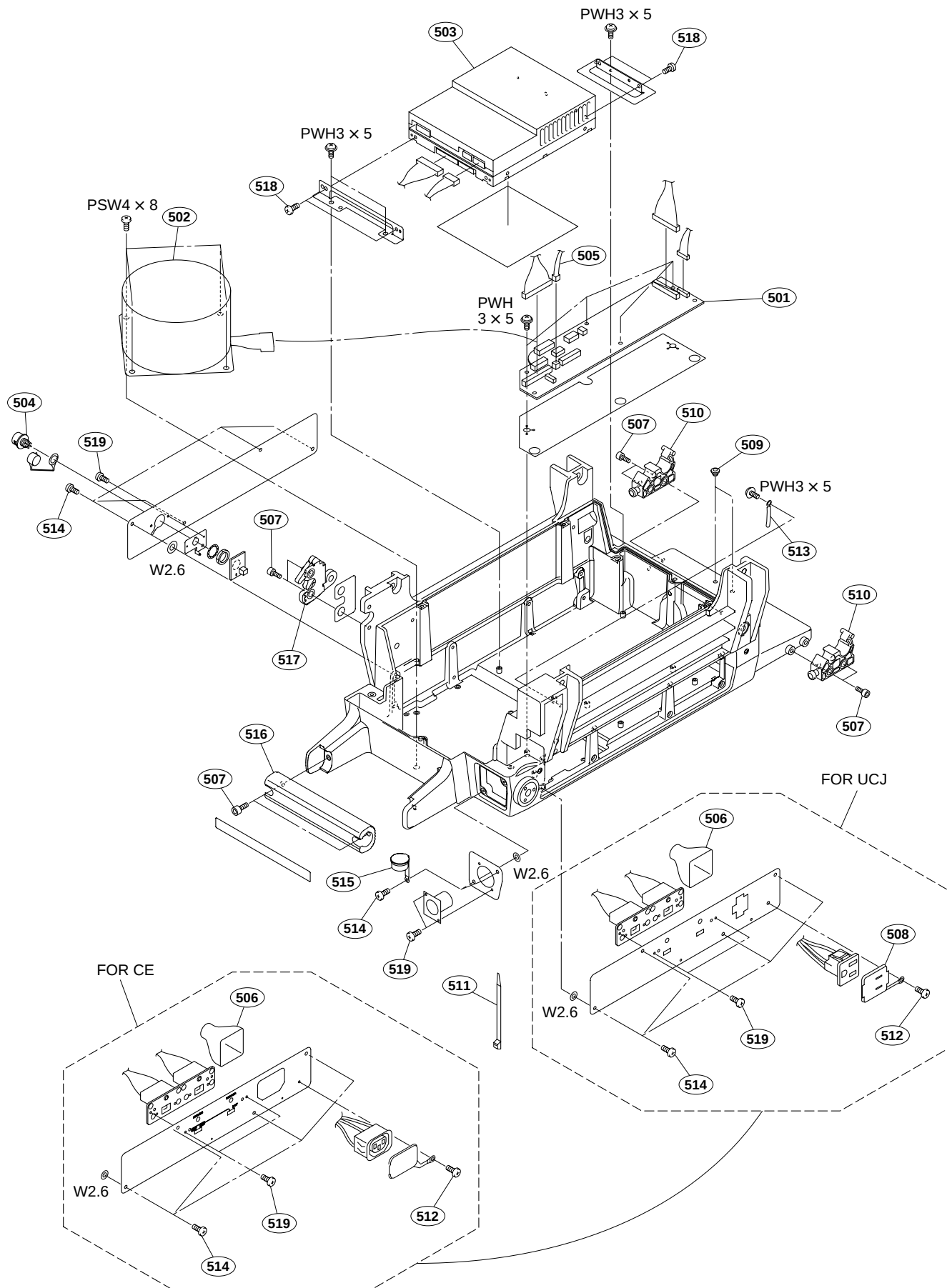


Note

When replacing the parts of numbers 401, 402, and 405, refer to Section 2-3.

No.	Part No.	SP Description
401	A-1159-997-A	s MOUNTED CIRCUIT BOARD, AT-164G (GOLD)
	A-1101-930-A	s MOUNTED CIRCUIT BOARD, AT-164 (SILVER)
402	A-1163-071-A	s MOUNTED CIRCUIT BOARD, SW-1232G (GOLD)
	A-1101-931-A	s MOUNTED CIRCUIT BOARD, SW-1232 (SILVER)
403	X-3167-563-1	s KNOB (DIA.3) ASSY, VOLUME
404	X-3704-667-1	s PAPER CLIP ASSY (WHITE)
	X-3704-700-1	s PAPER CLIP(B)ASSY (BLACK)
405	1-831-132-11	s CABLE, FLEXIBLE FLAT (30 CORE) (GOLD)
	1-823-558-11	s CABLE, FLEXIBLE FLAT (30 CORE) (SILVER)
406	1-963-934-11	s HARNESS, SUB (PANEL-AT)
407	3-602-483-01	s KNOB, VOLUME 6
408	3-673-018-01	s SCREW, BLIND (WHITE)(PLA)
	3-673-018-11	s SCREW, BLIND (BLACK)(PLA)
409	3-692-320-01	o BUTTON (R)
410	3-692-321-01	o BUTTON (G)
411	3-692-322-01	o BUTTON (B)
412	3-692-324-01	o BUTTON (RET 1)
413	3-692-325-01	o BUTTON (RET 2)
414	3-872-461-02	s ROD
415	3-872-479-01	s SPACER, D CUT
416	3-872-484-01	s HINGE, REAR PANEL LID (WHITE)
	3-872-484-11	s HINGE, REAR PANEL LID (BLACK)
417	3-872-485-01	s BRACKET, HINGE
418	3-872-489-01	s CUSHION, DROP PROTECT REAR
419	3-872-506-02	s CAP LOWER (WHITE)
	3-872-506-12	s CAP LOWER (BLACK)
420	3-872-577-01	s KNOB, VOLUME DIA.6
421	3-872-699-01	s VR SLEEVE
422	4-654-273-02	s ACE (M2), LOCK
423	4-700-011-01	s SPACER, HEXAGON(SQ-3)
424	3-719-159-01	s SCREW (M3), +BW (STEEL)(WHITE)
	3-719-159-02	s SCREW (M3), +BW (STEEL)(BLACK)
	7-623-923-01	s WASHER, POLYETHYLENE 2.6
	7-682-547-04	s SCREW +B3X6
	7-682-903-01	s SCREW +PWH 3X5

Chassis Block



No.	Part No.	SP	Description
501	A-1101-932-A	s	MOUNTED CIRCUIT BOARD, IF-974
502	△ 1-443-820-11	s	TRANSFORMER, POWER
503	△ 1-468-861-11	s	REGULATOR, SWITCHING
504	1-563-929-11	s	CONNECTOR,ROUND TYPE (RF) 4P
505	△ 1-963-587-11	s	HARNESS (AC)
506	2-254-842-02	s	COVER,SWITCH INSULATING
507	2-391-520-21	s	BOLT (M5X12),HOLE, HEXAGON(ST)
508	3-186-500-02	s	LID (N), OUTLET (FOR UCJ)
509	3-545-657-11	s	BUSHING(BLACK) (PLA)
510	3-612-710-02	o	CLAMP,CABLE
511	3-671-893-00	s	CLAMP
512	3-694-825-11	s	SCREW M3 STEP,SPECIAL HEAD ST
513	3-703-150-11	o	CLAMP
514	3-719-159-01	s	SCREW (M3), +BW (STEEL)
515	3-748-142-01	s	COVER,CONNECTOR
516	3-872-443-01	s	HANDLE BOTTOM
517	3-872-473-01	s	SNACH LOCK
518	4-644-493-11	s	SCREW(M2.6X4), LOCK ACE
519	4-654-273-02	s	ACE (M2), LOCK
	7-623-923-01	s	WASHER,POLYETHYLENE 2.6
	7-682-903-01	s	SCREW +PWH 3X5
	7-682-961-01	s	SCREW +PSW 4X8
	7-683-440-04	o	BOLT,HEXAGON-SOCKET 5X20

3-2. Electrical Parts List

AT-164 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-1159-997-A	s MOUNTED CIRCUIT BOARD, AT-164G (GOLD)
	A-1101-930-A	s MOUNTED CIRCUIT BOARD, AT-164 (SILVER)
C1	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C2	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C3	1-100-055-21	s CAP, CHIP CERAMIC 22MF B 3225
C4	1-100-055-21	s CAP, CHIP CERAMIC 22MF B 3225
C5	1-100-055-21	s CAP, CHIP CERAMIC 22MF B 3225
C6	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C7	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C11	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C14	1-165-989-11	s CAPACITOR, CERAMIC 10MF (2012)
C15	1-165-989-11	s CAPACITOR, CERAMIC 10MF (2012)
C17	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C18	1-100-055-21	s CAP, CHIP CERAMIC 22MF B 3225
C19	1-128-451-11	s CAPACITOR ELECT 22MF/16V(105C)
C20	1-100-567-81	s CAP,CHIP CERAMIC 0.01MF B 1005
C21	1-100-055-21	s CAP, CHIP CERAMIC 22MF B 3225
C22	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C23	1-128-451-11	s CAPACITOR ELECT 22MF/16V(105C)
C24	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C26	1-100-567-81	s CAP,CHIP CERAMIC 0.01MF B 1005
C27	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C28	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C29	1-100-055-21	s CAP, CHIP CERAMIC 22MF B 3225
C30	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C31	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C32	1-100-567-81	s CAP,CHIP CERAMIC 0.01MF B 1005
C33	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C34	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C35	1-100-055-21	s CAP, CHIP CERAMIC 22MF B 3225
C36	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C37	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C38	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C39	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C40	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C41	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C43	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C44	1-165-989-11	s CAPACITOR, CERAMIC 10MF (2012)
C45	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C46	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C47	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C48	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C49	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C50	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C51	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C52	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C53	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C54	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C55	1-164-850-11	s CAPACITOR,CHIP CERAMIC 10PF/50
C56	1-164-850-11	s CAPACITOR,CHIP CERAMIC 10PF/50
C57	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C58	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C60	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C61	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C62	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C63	1-100-567-81	s CAP,CHIP CERAMIC 0.01MF B 1005
C64	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C65	1-100-567-81	s CAP,CHIP CERAMIC 0.01MF B 1005

(AT-164 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C66	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C67	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C68	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C69	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C70	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
C71	1-164-858-11	s CAPACITOR,CERAMIC 22PF/50V
C72	1-164-858-11	s CAPACITOR,CERAMIC 22PF/50V
C73	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C74	1-125-777-11	s CAPACITOR CERAMIC 0.1MF/10V
CN1	1-770-621-21	s PIN, CONNECTOR 4P
CN2	1-580-057-11	s PIN,CONNECTOR 4P
CN3	1-770-627-21	s PIN, CONNECTOR 10P
CN4	1-695-479-11	o PIN, CONNECTOR (PC BOARD) 2P
CN5	1-580-567-11	s PIN, CONNECTOR (PC BOARD) 24P
CN6	1-580-573-11	s PIN, CONNECTOR (PC BOARD) 36P
CN7	1-784-625-21	s CONNECTOR, FFC/FPC(ZIF) AN 30P (SILVER)
	1-784-625-31	s CONNECTOR, FFC/FPC(ZIF) AN 30P (GOLD)
CN8	1-784-625-31	s CONNECTOR, FFC/FPC(ZIF) AN 30P (SILVER)
	1-784-625-31	s CONNECTOR, FFC/FPC(ZIF) AN 30P (GOLD)
D1	8-719-017-03	s DIODE 02DZ4.7-TPH3
D2	8-719-820-41	s DIODE 1SS302
D3	8-719-820-41	s DIODE 1SS302
D4	8-719-820-41	s DIODE 1SS302
D5	8-719-820-41	s DIODE 1SS302
D6	8-719-820-41	s DIODE 1SS302
D7	8-719-820-41	s DIODE 1SS302
D8	8-719-820-41	s DIODE 1SS302
D9	8-719-820-41	s DIODE 1SS302
D10	8-719-820-41	s DIODE 1SS302
D11	8-719-820-41	s DIODE 1SS302
D12	8-719-820-41	s DIODE 1SS302
D13	8-719-820-41	s DIODE 1SS302
D14	8-719-820-41	s DIODE 1SS302
D15	8-719-820-41	s DIODE 1SS302
D16	8-719-820-41	s DIODE 1SS302
E1	1-535-877-22	s CHIP,CHECKER (TEST POINT)
E2	1-535-877-22	s CHIP,CHECKER (TEST POINT)
FB1	1-469-094-21	s FERRITE, EMI (SMD)
FB2	1-469-094-21	s FERRITE, EMI (SMD)
FB3	1-469-094-21	s FERRITE, EMI (SMD)
FB4	1-469-094-21	s FERRITE, EMI (SMD)
FB5	1-469-094-21	s FERRITE, EMI (SMD)
FB6	1-469-094-21	s FERRITE, EMI (SMD)
FB7	1-469-094-21	s FERRITE, EMI (SMD)
FB8	1-469-094-21	s FERRITE, EMI (SMD)
FL1	1-234-851-11	s FILTER, EMI REMOVAL
FL2	1-234-851-11	s FILTER, EMI REMOVAL
FL3	1-234-851-11	s FILTER, EMI REMOVAL
FL4	1-234-851-11	s FILTER, EMI REMOVAL
FL5	1-239-896-12	s FILTER, EMI (SMD)
FL6	1-239-896-12	s FILTER, EMI (SMD)
FL7	1-239-896-12	s FILTER, EMI (SMD)
FL8	1-239-896-12	s FILTER, EMI (SMD)
FL9	1-239-896-12	s FILTER, EMI (SMD)
FL10	1-239-896-12	s FILTER, EMI (SMD)
FL11	1-239-896-12	s FILTER, EMI (SMD)
FL12	1-239-896-12	s FILTER, EMI (SMD)

(AT-164 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
FL13	1-239-896-12	s	FILTER, EMI (SMD)
FL14	1-239-896-12	s	FILTER, EMI (SMD)
IC1	6-704-976-01	s	IC ADR381ART-REEL7
IC2	8-759-327-01	s	IC NJM062V-TE2
IC3	6-708-346-01	s	IC DAC7512N
IC4	8-759-327-01	s	IC NJM062V-TE2
IC6	6-702-624-01	s	IC HD64F2377VFQ33V
IC7	8-759-363-26	s	IC RN5VD28AA-TL
IC8	8-759-491-50	s	IC TC74VHCT244AFT(EL)
IC9	8-759-327-01	s	IC NJM062V-TE2
IC10	8-759-491-50	s	IC TC74VHCT244AFT(EL)
IC11	8-759-598-44	s	IC TC7WH08FK(TE85R)
IC12	8-759-598-44	s	IC TC7WH08FK(TE85R)
IC13	8-759-598-44	s	IC TC7WH08FK(TE85R)
IC14	8-759-327-01	s	IC NJM062V-TE2
IC15	8-759-598-43	s	IC TC7WH04FK(TE85R)
IC16	8-759-592-10	s	IC TC7WH00FU-TE12R
IC17	8-759-491-50	s	IC TC74VHCT244AFT(EL)
IC18	8-759-598-44	s	IC TC7WH08FK(TE85R)
IC20	8-759-523-84	s	IC TC74VHC14FT (EL)
IC21	8-759-491-50	s	IC TC74VHCT244AFT(EL)
IC22	8-759-491-50	s	IC TC74VHCT244AFT(EL)
IC23	8-759-491-50	s	IC TC74VHCT244AFT(EL)
IC24	8-759-491-50	s	IC TC74VHCT244AFT(EL)
IC25	8-759-327-01	s	IC NJM062V-TE2
L1	1-414-398-11	s	INDUCTOR (SMD) 10UH
L2	1-414-398-11	s	INDUCTOR (SMD) 10UH
L3	1-414-398-11	s	INDUCTOR (SMD) 10UH
L4	1-414-392-31	s	INDUCTOR (SMD) 1.0UH
L5	1-424-700-21	s	COIL, CHOKE (SMD) 100UH
L6	1-414-398-11	s	INDUCTOR (SMD) 10UH
Q1	8-729-230-27	s	TRANSISTOR 2SA1213Y-TE12L
Q2	8-729-230-27	s	TRANSISTOR 2SA1213Y-TE12L
Q3	8-729-928-81	s	TRANSISTOR DTC144EE
Q4	8-729-928-81	s	TRANSISTOR DTC144EE
R1	1-208-711-11	s	RESISTOR CHIP 15K 1/16W (1005)
R2	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R6	1-220-221-11	s	RESISTOR CHIP 100 1/2W (4532)
R7	1-208-935-11	s	RESISTOR, CHIP 100K (1005)
R8	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W(1005)
R9	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R10	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R11	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R12	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W(1005)
R13	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R14	1-208-923-11	s	RESISTOR, CHIP 33K (1005)
R15	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R16	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R17	1-208-703-11	s	RESISTOR,CHIP 6.8K 1/16W(1005)
R18	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R19	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R20	1-208-711-11	s	RESISTOR CHIP 15K 1/16W (1005)
R21	1-208-923-11	s	RESISTOR, CHIP 33K (1005)
R22	1-208-923-11	s	RESISTOR, CHIP 33K (1005)
R23	1-208-695-11	s	RESISTOR CHIP 3.3K 1/16W(1005)
R24	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R25	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R26	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R27	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R28	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)

(AT-164 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R29	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R30	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R31	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R32	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R34	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W(1005)
R35	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R36	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R37	1-208-923-11	s	RESISTOR, CHIP 33K (1005)
R38	1-208-923-11	s	RESISTOR, CHIP 33K (1005)
R39	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R41	1-208-687-11	s	RESISTOR CHIP 1.5K 1/16W (1005)
R42	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W(1005)
R43	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R44	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R45	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W(1005)
R46	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R47	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W(1005)
R48	1-208-923-11	s	RESISTOR, CHIP 33K (1005)
R49	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R50	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R51	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R52	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R53	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R54	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R55	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R56	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W(1005)
R57	1-208-935-11	s	RESISTOR, CHIP 100K (1005)
R58	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R59	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R60	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R61	1-208-703-11	s	RESISTOR,CHIP 6.8K 1/16W(1005)
R62	1-208-691-11	s	RESISTOR CHIP 2.2K 1/16W(1005)
R63	1-208-855-81	s	RESISTOR,CHIP 47 1/16W (1005)
R64	1-208-855-81	s	RESISTOR,CHIP 47 1/16W (1005)
R65	1-208-855-81	s	RESISTOR,CHIP 47 1/16W (1005)
R66	1-208-855-81	s	RESISTOR,CHIP 47 1/16W (1005)
R67	1-208-711-11	s	RESISTOR CHIP 15K 1/16W (1005)
R68	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R69	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R70	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R71	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R72	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R73	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R74	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R75	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R76	1-208-935-11	s	RESISTOR, CHIP 100K (1005)
R81	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R82	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R83	1-208-687-11	s	RESISTOR CHIP 1.5K 1/16W (1005)
R84	1-208-687-11	s	RESISTOR CHIP 1.5K 1/16W (1005)
R85	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R86	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R95	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R98	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R99	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R100	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R101	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R102	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R103	1-208-911-11	s	RESISTOR, CHIP 10K (1005)

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Ref. No. or Q'ty	Part No.	SP Description
R104	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R106	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R107	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R108	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R109	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R110	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R111	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R112	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R113	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R114	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R115	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R116	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R117	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R118	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R119	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R120	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R121	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R122	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R123	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R124	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R125	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R126	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R127	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R128	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R130	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R131	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R132	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R133	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R134	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R135	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R136	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R137	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R138	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R139	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R140	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R141	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R142	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R143	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R144	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R145	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R146	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R147	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R148	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R149	1-208-923-11	s RESISTOR, CHIP 33K (1005)
R150	1-208-711-11	s RESISTOR,CHIP 15K 1/16W (1005)
R151	1-208-695-11	s RESISTOR,CHIP 3.3K 1/16W(1005)
R152	1-208-935-11	s RESISTOR, CHIP 100K (1005)
R153	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R154	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R155	1-208-911-11	s RESISTOR, CHIP 10K (1005)
R156	1-208-635-11	s RESISTOR,CHIP 10 1/16W (1005)
R157	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
RB1	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB2	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB3	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB4	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB5	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB6	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)

(AT-164 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RB7	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB8	1-234-381-21	s RES, NETWORK 100KX4 (1005)
RB9	1-234-381-21	s RES, NETWORK 100KX4 (1005)
RB10	1-234-375-21	s RES, NETWORK 1KX4 (1005)
RB11	1-234-375-21	s RES, NETWORK 1KX4 (1005)
RB12	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB13	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB14	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB15	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB16	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB17	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB18	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB19	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB20	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB21	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB22	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
RB23	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB24	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB25	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB26	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB27	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB28	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB29	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB30	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB31	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB32	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB33	1-234-380-11	s RESISTOR,NETWORK 47KX4 (1005)
S1	1-692-270-41	s SWITCH, SLIDE
THP1	△ 1-804-458-21	s THERMISTOR, POSITIVE
THP2	△ 1-804-616-11	s THERMISTOR, POSITIVE
X1	1-813-287-11	s VIBRATOR, CRYSTAL

CN-2753 BOARD

Ref. No. or Q'ty	Part No.	SP Description
C1	1-125-827-11	s CAPACITOR,CERAMIC 1MF/25V
C2	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
CN1	1-580-531-11	s PIN, CONNECTOR (PC BOARD) 4P
FB1	1-414-772-11	s INDUCTOR,MICRO(CHIP TYPE) 2012
FB2	1-414-772-11	s INDUCTOR,MICRO(CHIP TYPE) 2012

IF-974 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1101-932-A	s	MOUNTED CIRCUIT BOARD, IF-974
C1	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C2	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C3	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C4	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C5	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C6	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C7	1-135-960-91	s	CAP, CHIP CERAMIC 10MF B(3225)
C8	1-126-402-11	s	CAPACITOR, ELECT 2.2MF/50V
C9	1-115-339-11	s	CAPACITOR, CERAMIC 0.1MF/50V
C10	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C11	1-100-581-81	s	CHIP CERAMIC 0.0047MF B1005
C12	1-125-898-11	s	CAPACITOR, CERAMIC 0.22MF 50V
C13	1-164-935-11	s	CAPACITOR, CHIP CERAMIC 470PF
C14	1-164-882-11	s	CAPACITOR, CERAMIC 220PF/16V CH
C15	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C16	1-135-599-11	s	CAP, ELECT 39MF / 16V
C17	1-128-414-11	s	CAPACITOR ELECT 220MF/6.3V
CN1	1-784-254-11	s	CONNECTOR 10P
CN2	1-778-551-11	o	PIN, CONNECTOR 20P
CN3	1-784-254-11	s	CONNECTOR 10P
CN4	1-580-547-11	o	PIN, CONNECTOR (PC BOARD) 36P
CN5	1-580-545-11	o	PIN, CONNECTOR (PC BOARD) 32P
CN6	1-580-541-11	s	PIN, CONNECTOR (PC BOARD) 24P
CN7	1-580-837-11	o	PIN, CONNECTOR (PC BOARD) 3P
CN8	1-691-756-11	o	PIN, CONNECTOR (PC BOARD) 2P
CN9	1-691-959-11	o	PIN, CONNECTOR (PC BOARD) 4P
CN10	1-691-095-11	o	PIN, CONNECTOR (PC BOARD) 6P
CN11	1-580-531-11	s	PIN, CONNECTOR (PC BOARD) 4P
D1	8-719-801-78	s	DIODE 1SS184
D2	8-719-104-34	s	DIODE 1S2836
D3	8-719-048-40	s	DIODE MBRS140T3
D4	8-719-072-83	s	DIODE MBRS340T3
D5	8-719-104-34	s	DIODE 1S2836
D6	8-719-801-78	s	DIODE 1SS184
D7	8-719-801-78	s	DIODE 1SS184
E1	1-535-877-22	s	CHIP, CHECKER (TEST POINT)
FB1	1-469-094-21	s	FERRITE, EMI (SMD)
FB2	1-469-094-21	s	FERRITE, EMI (SMD)
FB3	1-469-094-21	s	FERRITE, EMI (SMD)
FB4	1-469-094-21	s	FERRITE, EMI (SMD)
FB5	1-469-094-21	s	FERRITE, EMI (SMD)
FB6	1-469-094-21	s	FERRITE, EMI (SMD)
FB7	1-469-094-21	s	FERRITE, EMI (SMD)
FB8	1-469-094-21	s	FERRITE, EMI (SMD)
FB9	1-469-094-21	s	FERRITE, EMI (SMD)
FL2	1-234-851-11	s	FILTER, EMI REMOVAL
FL3	1-234-851-11	s	FILTER, EMI REMOVAL
FL4	1-239-896-12	s	FILTER, EMI (SMD)
FL5	1-239-896-12	s	FILTER, EMI (SMD)
FL6	1-234-851-11	s	FILTER, EMI REMOVAL
FL7	1-234-851-11	s	FILTER, EMI REMOVAL
FL8	1-239-896-12	s	FILTER, EMI (SMD)
FL9	1-239-896-12	s	FILTER, EMI (SMD)
FL10	1-239-896-12	s	FILTER, EMI (SMD)
FL11	1-239-896-12	s	FILTER, EMI (SMD)

(IF-974 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
FL12	1-239-896-12	s	FILTER, EMI (SMD)
FL13	1-239-896-12	s	FILTER, EMI (SMD)
FL14	1-239-896-12	s	FILTER, EMI (SMD)
FL15	1-239-896-12	s	FILTER, EMI (SMD)
FL16	1-234-851-11	s	FILTER, EMI REMOVAL
FL17	1-234-851-11	s	FILTER, EMI REMOVAL
FL18	1-239-896-12	s	FILTER, EMI (SMD)
FL19	1-239-896-12	s	FILTER, EMI (SMD)
FL20	1-239-896-12	s	FILTER, EMI (SMD)
FL21	1-239-896-12	s	FILTER, EMI (SMD)
FL22	1-239-896-12	s	FILTER, EMI (SMD)
FL23	1-239-896-12	s	FILTER, EMI (SMD)
FL24	1-239-896-12	s	FILTER, EMI (SMD)
FL25	1-239-896-12	s	FILTER, EMI (SMD)
FL26	1-239-896-12	s	FILTER, EMI (SMD)
FL27	1-239-896-12	s	FILTER, EMI (SMD)
FL28	1-239-896-12	s	FILTER, EMI (SMD)
FL29	1-239-896-12	s	FILTER, EMI (SMD)
FL30	1-239-896-12	s	FILTER, EMI (SMD)
FL31	1-239-896-12	s	FILTER, EMI (SMD)
FL32	1-239-896-12	s	FILTER, EMI (SMD)
FL33	1-239-896-12	s	FILTER, EMI (SMD)
IC1	6-706-483-01	s	IC TC7SH02FU(T5RS0YJF)
IC2	6-702-481-01	s	IC PCA9555DB-118
IC3	6-702-481-01	s	IC PCA9555DB-118
IC4	6-706-483-01	s	IC TC7SH02FU(T5RS0YJF)
IC5	6-705-481-01	s	IC LT1931ES5#TR
IC6	6-702-713-01	s	IC LT1765EFE
IC7	8-759-433-74	s	IC TA7809F(TE16L)
IC8	6-706-483-01	s	IC TC7SH02FU(T5RS0YJF)
L1	1-424-700-21	s	COIL, CHOKE (SMD) 100UH
L2	1-414-397-11	s	INDUCTOR (SMD) 6.8UH
L3	1-414-397-11	s	INDUCTOR (SMD) 6.8UH
L4	1-416-948-21	s	COIL, CHOKE (SMD)
L5	1-416-948-21	s	COIL, CHOKE (SMD)
Q1	8-729-928-81	s	TRANSISTOR DTC144EE
Q2	8-729-928-81	s	TRANSISTOR DTC144EE
Q3	8-729-928-81	s	TRANSISTOR DTC144EE
R1	1-218-945-11	s	RESISTOR, CHIP 220 1/16W (1005)
R2	1-218-945-11	s	RESISTOR, CHIP 220 1/16W (1005)
R3	1-218-945-11	s	RESISTOR, CHIP 220 1/16W (1005)
R5	1-208-855-81	s	RESISTOR, CHIP 47 1/16W (1005)
R6	1-208-855-81	s	RESISTOR, CHIP 47 1/16W (1005)
R7	1-218-941-11	s	RESISTOR, CHIP 100 1/16W (1005)
R8	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W (1005)
R9	1-208-927-11	s	RESISTOR, CHIP 47K 1/16W (1005)
R10	1-218-941-11	s	RESISTOR, CHIP 100 1/16W (1005)
R11	1-218-941-11	s	RESISTOR, CHIP 100 1/16W (1005)
R12	1-208-683-11	s	RESISTOR CHIP 1K 1/16W (1005)
R13	1-208-715-11	s	RESISTOR, CHIP 22K 1/16W (1005)
R14	1-208-699-11	s	RESISTOR, CHIP 4.7K 1/16W (1005)
R15	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R16	1-208-715-11	s	RESISTOR, CHIP 22K 1/16W (1005)
R17	1-208-911-11	s	RESISTOR, CHIP 10K (1005)
R18	1-218-941-11	s	RESISTOR, CHIP 100 1/16W (1005)
RB1	1-234-380-11	s	RESISTOR, NETWORK 47KX4 (1005)
RB2	1-234-380-11	s	RESISTOR, NETWORK 47KX4 (1005)

(IF-974 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RB3	1-234-380-11	s RESISTOR, NETWORK 47KX4 (1005)
RB4	1-234-380-11	s RESISTOR, NETWORK 47KX4 (1005)
RB5	1-234-380-11	s RESISTOR, NETWORK 47KX4 (1005)
RB6	1-234-380-11	s RESISTOR, NETWORK 47KX4 (1005)
RB7	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB8	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB9	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB10	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB11	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB12	1-234-372-11	s RES, NETWORK 100X4 (1005)
THP1	△ 1-804-616-11	s THERMISTOR, POSITIVE

LE-285 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-1126-979-A	s MOUNTED CIRCUIT BOARD, LE-285
D1	6-501-355-01	s DIODE CL-197TD2-CD-T
D2	6-501-355-01	s DIODE CL-197TD2-CD-T
D3	6-501-355-01	s DIODE CL-197TD2-CD-T
D4	6-501-355-01	s DIODE CL-197TD2-CD-T
D5	6-501-355-01	s DIODE CL-197TD2-CD-T
D6	6-501-355-01	s DIODE CL-197TD2-CD-T
D7	6-501-355-01	s DIODE CL-197TD2-CD-T
D8	6-501-355-01	s DIODE CL-197TD2-CD-T
D9	6-501-355-01	s DIODE CL-197TD2-CD-T
D10	6-501-355-01	s DIODE CL-197TD2-CD-T
D11	6-501-355-01	s DIODE CL-197TD2-CD-T
D12	6-501-355-01	s DIODE CL-197TD2-CD-T
D13	6-501-355-01	s DIODE CL-197TD2-CD-T
D14	6-501-355-01	s DIODE CL-197TD2-CD-T
D15	6-501-355-01	s DIODE CL-197TD2-CD-T
D16	6-501-355-01	s DIODE CL-197TD2-CD-T
D17	6-501-355-01	s DIODE CL-197TD2-CD-T
D18	6-501-355-01	s DIODE CL-197TD2-CD-T
D19	6-501-355-01	s DIODE CL-197TD2-CD-T
D20	6-501-355-01	s DIODE CL-197TD2-CD-T
D21	6-501-355-01	s DIODE CL-197TD2-CD-T
D22	6-501-355-01	s DIODE CL-197TD2-CD-T
D23	6-501-355-01	s DIODE CL-197TD2-CD-T
D24	6-501-355-01	s DIODE CL-197TD2-CD-T
D25	6-501-355-01	s DIODE CL-197TD2-CD-T
D26	6-501-355-01	s DIODE CL-197TD2-CD-T
D27	6-501-355-01	s DIODE CL-197TD2-CD-T
D28	6-501-355-01	s DIODE CL-197TD2-CD-T
D29	6-501-355-01	s DIODE CL-197TD2-CD-T
D30	6-501-355-01	s DIODE CL-197TD2-CD-T
D31	6-501-355-01	s DIODE CL-197TD2-CD-T
D32	6-501-355-01	s DIODE CL-197TD2-CD-T
D33	6-501-355-01	s DIODE CL-197TD2-CD-T
D34	6-501-355-01	s DIODE CL-197TD2-CD-T
D35	6-501-355-01	s DIODE CL-197TD2-CD-T
D36	6-501-355-01	s DIODE CL-197TD2-CD-T
D37	6-501-355-01	s DIODE CL-197TD2-CD-T
D38	6-501-355-01	s DIODE CL-197TD2-CD-T
D39	6-501-355-01	s DIODE CL-197TD2-CD-T
D40	6-501-355-01	s DIODE CL-197TD2-CD-T
D41	6-501-355-01	s DIODE CL-197TD2-CD-T
D42	6-501-355-01	s DIODE CL-197TD2-CD-T
D43	6-501-355-01	s DIODE CL-197TD2-CD-T
D44	6-501-355-01	s DIODE CL-197TD2-CD-T
D45	6-501-355-01	s DIODE CL-197TD2-CD-T
D46	6-501-355-01	s DIODE CL-197TD2-CD-T
D47	6-501-355-01	s DIODE CL-197TD2-CD-T
D48	6-501-355-01	s DIODE CL-197TD2-CD-T
D49	6-501-355-01	s DIODE CL-197TD2-CD-T
D50	6-501-355-01	s DIODE CL-197TD2-CD-T
D51	6-501-355-01	s DIODE CL-197TD2-CD-T
D52	6-501-355-01	s DIODE CL-197TD2-CD-T
D53	6-501-355-01	s DIODE CL-197TD2-CD-T
D54	6-501-355-01	s DIODE CL-197TD2-CD-T
D55	6-501-355-01	s DIODE CL-197TD2-CD-T
D56	6-501-355-01	s DIODE CL-197TD2-CD-T
D57	6-501-355-01	s DIODE CL-197TD2-CD-T

(LE-285 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D117	6-501-355-01	s	DIODE CL-197TD2-CD-T
D118	6-501-355-01	s	DIODE CL-197TD2-CD-T
D119	6-501-355-01	s	DIODE CL-197TD2-CD-T
D120	6-501-355-01	s	DIODE CL-197TD2-CD-T
D121	6-501-355-01	s	DIODE CL-197TD2-CD-T
D122	6-501-355-01	s	DIODE CL-197TD2-CD-T
D123	6-501-355-01	s	DIODE CL-197TD2-CD-T
D124	6-501-355-01	s	DIODE CL-197TD2-CD-T
D125	6-501-355-01	s	DIODE CL-197TD2-CD-T
D126	6-501-355-01	s	DIODE CL-197TD2-CD-T
D127	6-501-355-01	s	DIODE CL-197TD2-CD-T
D128	6-501-355-01	s	DIODE CL-197TD2-CD-T
D129	6-501-355-01	s	DIODE CL-197TD2-CD-T
D130	6-501-355-01	s	DIODE CL-197TD2-CD-T
D131	6-501-355-01	s	DIODE CL-197TD2-CD-T
D132	6-501-355-01	s	DIODE CL-197TD2-CD-T
D133	6-501-355-01	s	DIODE CL-197TD2-CD-T
D134	6-501-355-01	s	DIODE CL-197TD2-CD-T
D135	6-501-355-01	s	DIODE CL-197TD2-CD-T
D136	6-501-355-01	s	DIODE CL-197TD2-CD-T
D137	6-501-355-01	s	DIODE CL-197TD2-CD-T
D138	6-501-355-01	s	DIODE CL-197TD2-CD-T
D139	6-501-355-01	s	DIODE CL-197TD2-CD-T
D140	6-501-355-01	s	DIODE CL-197TD2-CD-T
D141	6-501-355-01	s	DIODE CL-197TD2-CD-T
D142	6-501-355-01	s	DIODE CL-197TD2-CD-T
D143	6-501-355-01	s	DIODE CL-197TD2-CD-T
D144	6-501-355-01	s	DIODE CL-197TD2-CD-T
D145	6-501-355-01	s	DIODE CL-197TD2-CD-T
D146	6-501-355-01	s	DIODE CL-197TD2-CD-T
D147	6-501-355-01	s	DIODE CL-197TD2-CD-T
D148	6-501-355-01	s	DIODE CL-197TD2-CD-T
D149	6-501-355-01	s	DIODE CL-197TD2-CD-T
D150	6-501-355-01	s	DIODE CL-197TD2-CD-T
D151	6-501-355-01	s	DIODE CL-197TD2-CD-T
D152	6-501-355-01	s	DIODE CL-197TD2-CD-T
D153	6-501-355-01	s	DIODE CL-197TD2-CD-T
D154	6-501-355-01	s	DIODE CL-197TD2-CD-T
D155	6-501-355-01	s	DIODE CL-197TD2-CD-T
D156	6-501-355-01	s	DIODE CL-197TD2-CD-T
D157	6-501-355-01	s	DIODE CL-197TD2-CD-T
D158	6-501-355-01	s	DIODE CL-197TD2-CD-T
D159	6-501-355-01	s	DIODE CL-197TD2-CD-T
D160	6-501-355-01	s	DIODE CL-197TD2-CD-T
D161	6-501-355-01	s	DIODE CL-197TD2-CD-T
D162	6-501-355-01	s	DIODE CL-197TD2-CD-T
D163	6-501-355-01	s	DIODE CL-197TD2-CD-T
D164	6-501-355-01	s	DIODE CL-197TD2-CD-T
D165	6-501-355-01	s	DIODE CL-197TD2-CD-T
D166	6-501-355-01	s	DIODE CL-197TD2-CD-T
D167	6-501-355-01	s	DIODE CL-197TD2-CD-T
D168	6-501-355-01	s	DIODE CL-197TD2-CD-T
D169	6-501-355-01	s	DIODE CL-197TD2-CD-T
D170	6-501-355-01	s	DIODE CL-197TD2-CD-T
D171	6-501-355-01	s	DIODE CL-197TD2-CD-T
D172	6-501-355-01	s	DIODE CL-197TD2-CD-T
D173	6-501-355-01	s	DIODE CL-197TD2-CD-T
D174	6-501-355-01	s	DIODE CL-197TD2-CD-T
D175	6-501-355-01	s	DIODE CL-197TD2-CD-T

[illegible]

Ref. No. or Q'ty	Part No.	SP	Description
D235	6-501-355-01	s	DIODE CL-197TD2-CD-T
D236	6-501-355-01	s	DIODE CL-197TD2-CD-T
D237	6-501-355-01	s	DIODE CL-197TD2-CD-T
D238	6-501-355-01	s	DIODE CL-197TD2-CD-T
D239	6-501-355-01	s	DIODE CL-197TD2-CD-T
D240	6-501-355-01	s	DIODE CL-197TD2-CD-T
D241	6-501-355-01	s	DIODE CL-197TD2-CD-T
D242	6-501-355-01	s	DIODE CL-197TD2-CD-T
D243	6-501-355-01	s	DIODE CL-197TD2-CD-T
D244	6-501-355-01	s	DIODE CL-197TD2-CD-T
D245	6-501-355-01	s	DIODE CL-197TD2-CD-T
D246	6-501-355-01	s	DIODE CL-197TD2-CD-T
D247	6-501-355-01	s	DIODE CL-197TD2-CD-T
D248	6-501-355-01	s	DIODE CL-197TD2-CD-T
D249	6-501-355-01	s	DIODE CL-197TD2-CD-T
D250	6-501-355-01	s	DIODE CL-197TD2-CD-T
D251	6-501-355-01	s	DIODE CL-197TD2-CD-T
D252	6-501-355-01	s	DIODE CL-197TD2-CD-T
D253	6-501-355-01	s	DIODE CL-197TD2-CD-T
D254	6-501-355-01	s	DIODE CL-197TD2-CD-T
D255	6-501-355-01	s	DIODE CL-197TD2-CD-T
D256	6-501-355-01	s	DIODE CL-197TD2-CD-T

LE-286 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1101-929-A	s	MOUNTED CIRCUIT BOARD, LE-286
C2	1-107-420-11	s	CAPACITOR,ELECT 47MF/35V(105C)
C4	1-128-414-11	s	CAPACITOR ELECT 220MF/6.3V
C5	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C6	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C7	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C8	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C9	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C10	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C11	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C12	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C13	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C14	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C15	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C16	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C17	1-126-399-11	s	CAPACITOR ELECT 10MF/35V(CHIP)
C18	1-126-399-11	s	CAPACITOR ELECT 10MF/35V(CHIP)
C19	1-100-352-91	s	CAP, CHIP CERAMIC 1MF B (1608)
CN1	1-784-254-11	s	CONNECTOR 10P
D1	8-719-820-41	s	DIODE 1SS302
D2	8-719-989-53	s	LED CL-200HR-C-TSL
D3	8-719-989-53	s	LED CL-200HR-C-TSL
D4	8-719-989-53	s	LED CL-200HR-C-TSL
D5	8-719-989-53	s	LED CL-200HR-C-TSL
D6	8-719-989-53	s	LED CL-200HR-C-TSL
D7	8-719-989-53	s	LED CL-200HR-C-TSL
D8	8-719-989-53	s	LED CL-200HR-C-TSL
D9	8-719-989-53	s	LED CL-200HR-C-TSL
D10	8-719-989-53	s	LED CL-200HR-C-TSL
D11	8-719-989-53	s	LED CL-200HR-C-TSL
D12	8-719-989-53	s	LED CL-200HR-C-TSL
D13	8-719-989-53	s	LED CL-200HR-C-TSL
D14	8-719-989-53	s	LED CL-200HR-C-TSL
D15	8-719-989-53	s	LED CL-200HR-C-TSL
D16	8-719-989-53	s	LED CL-200HR-C-TSL
D17	8-719-989-53	s	LED CL-200HR-C-TSL
D18	8-719-989-53	s	LED CL-200HR-C-TSL
D19	8-719-989-53	s	LED CL-200HR-C-TSL
D20	8-719-989-53	s	LED CL-200HR-C-TSL
D21	8-719-989-53	s	LED CL-200HR-C-TSL
D22	8-719-989-53	s	LED CL-200HR-C-TSL
D23	8-719-989-53	s	LED CL-200HR-C-TSL
D24	8-719-989-53	s	LED CL-200HR-C-TSL
D25	8-719-989-53	s	LED CL-200HR-C-TSL
D26	8-719-989-53	s	LED CL-200HR-C-TSL
D27	8-719-989-53	s	LED CL-200HR-C-TSL
D28	8-719-989-53	s	LED CL-200HR-C-TSL
D29	8-719-989-53	s	LED CL-200HR-C-TSL
D30	8-719-989-53	s	LED CL-200HR-C-TSL
D31	8-719-989-53	s	LED CL-200HR-C-TSL
D32	8-719-989-53	s	LED CL-200HR-C-TSL
D33	8-719-989-53	s	LED CL-200HR-C-TSL
D34	8-719-989-53	s	LED CL-200HR-C-TSL
D35	8-719-989-53	s	LED CL-200HR-C-TSL
D36	8-719-989-53	s	LED CL-200HR-C-TSL
D37	8-719-989-53	s	LED CL-200HR-C-TSL
D38	8-719-989-53	s	LED CL-200HR-C-TSL

(LE-286 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D39	8-719-989-53	s	LED CL-200HR-C-TSL
D40	8-719-989-53	s	LED CL-200HR-C-TSL
D41	8-719-989-53	s	LED CL-200HR-C-TSL
D42	8-719-989-53	s	LED CL-200HR-C-TSL
D43	8-719-989-53	s	LED CL-200HR-C-TSL
D44	8-719-989-53	s	LED CL-200HR-C-TSL
D45	8-719-989-53	s	LED CL-200HR-C-TSL
D46	8-719-989-53	s	LED CL-200HR-C-TSL
D47	8-719-989-53	s	LED CL-200HR-C-TSL
D48	8-719-989-53	s	LED CL-200HR-C-TSL
D49	8-719-989-53	s	LED CL-200HR-C-TSL
D50	8-719-989-53	s	LED CL-200HR-C-TSL
D51	8-719-989-53	s	LED CL-200HR-C-TSL
D52	8-719-989-53	s	LED CL-200HR-C-TSL
D53	8-719-989-53	s	LED CL-200HR-C-TSL
D54	8-719-989-53	s	LED CL-200HR-C-TSL
D55	8-719-989-53	s	LED CL-200HR-C-TSL
D56	8-719-989-53	s	LED CL-200HR-C-TSL
D57	8-719-989-53	s	LED CL-200HR-C-TSL
D58	8-719-989-53	s	LED CL-200HR-C-TSL
D59	8-719-989-53	s	LED CL-200HR-C-TSL
D60	8-719-989-53	s	LED CL-200HR-C-TSL
D61	8-719-989-53	s	LED CL-200HR-C-TSL
IC1	8-759-529-76	s	IC TC74VHC595FT(EL)
IC2	8-759-529-76	s	IC TC74VHC595FT(EL)
IC3	8-759-529-76	s	IC TC74VHC595FT(EL)
IC4	8-759-529-76	s	IC TC74VHC595FT(EL)
L1	1-416-510-21	s	COIL, CHOKE 100UH
L2	1-424-700-21	s	COIL, CHOKE (SMD) 100UH
Q1	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q2	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q3	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q4	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q5	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q6	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q7	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q8	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q9	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q10	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q11	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q12	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q13	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q14	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q15	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q16	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q17	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q18	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q19	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q20	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q21	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q22	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q23	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q24	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q25	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q26	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q27	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q28	8-729-928-55	s	TRANSISTOR DTA123JE-TL
Q29	8-729-928-55	s	TRANSISTOR DTA123JE-TL

SW-1232 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1163-071-A	s	MOUNTED CIRCUIT BOARD, SW-1232G (GOLD)
	A-1101-931-A	s	MOUNTED CIRCUIT BOARD, SW-1232 (SILVER)
1pc	3-708-877-01	s	CAP (PC)
1pc	3-708-930-01	s	CAP (PC)
1pc	3-708-930-21	s	CAP (PC)
1pc	3-708-933-01	s	CAP (PC)
1pc	3-708-933-11	s	CAP (PC)
1pc	3-708-934-01	s	CAP (PC)
1pc	8-719-050-78	s	LED MD0708C-RG
C1	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C2	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C3	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C4	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C5	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C6	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C7	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C8	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C10	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C14	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C100	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C101	1-125-777-11	s	CAPACITOR CERAMIC 0.1MF/10V
C102	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
C103	1-165-989-11	s	CAPACITOR, CERAMIC 10MF (2012)
CN3	1-251-222-21	s	SOCKET, SIL 7P
CN4	1-573-201-21	s	SOCKET, SIL 5P
CN5	1-573-201-21	s	SOCKET, SIL 5P
CN6	1-251-222-21	s	SOCKET, SIL 7P
D1	8-719-027-95	s	DIODE HSM88WK
D2	8-719-017-42	s	DIODE HSM88WA
D3	8-719-078-90	s	DIODE CL-165HR/G1-D-T
D4	8-719-024-81	s	DIODE 1SS300-TE85L
D5	8-719-024-81	s	DIODE 1SS300-TE85L
D6	8-719-024-81	s	DIODE 1SS300-TE85L
D7	8-719-024-81	s	DIODE 1SS300-TE85L
D8	8-719-024-81	s	DIODE 1SS300-TE85L
D9	8-719-024-81	s	DIODE 1SS300-TE85L
D10	8-719-024-81	s	DIODE 1SS300-TE85L
D11	8-719-024-81	s	DIODE 1SS300-TE85L
D12	8-719-024-81	s	DIODE 1SS300-TE85L
D13	8-719-024-81	s	DIODE 1SS300-TE85L
D14	8-719-024-81	s	DIODE 1SS300-TE85L
D15	8-719-024-81	s	DIODE 1SS300-TE85L
D16	8-719-024-81	s	DIODE 1SS300-TE85L
D17	8-719-024-81	s	DIODE 1SS300-TE85L
D18	8-719-024-81	s	DIODE 1SS300-TE85L
D19	8-719-024-81	s	DIODE 1SS300-TE85L
D20	8-719-024-81	s	DIODE 1SS300-TE85L
D21	8-719-024-81	s	DIODE 1SS300-TE85L
D22	8-719-024-81	s	DIODE 1SS300-TE85L
D23	8-719-024-81	s	DIODE 1SS300-TE85L
D24	8-719-024-81	s	DIODE 1SS300-TE85L
D25	8-719-024-81	s	DIODE 1SS300-TE85L
D26	8-719-024-81	s	DIODE 1SS300-TE85L
D27	8-719-024-81	s	DIODE 1SS300-TE85L
D28	8-719-024-81	s	DIODE 1SS300-TE85L
D29	8-719-024-81	s	DIODE 1SS300-TE85L
D30	8-719-024-81	s	DIODE 1SS300-TE85L
D31	8-719-024-81	s	DIODE 1SS300-TE85L
D32	8-719-024-81	s	DIODE 1SS300-TE85L

(SW-1232 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
EN1	1-473-435-11	s	ENCODER, ROTARY(SWITCH)
IC1	8-759-524-40	s	IC TC74VHC373FT(EL)
IC2	8-759-524-40	s	IC TC74VHC373FT(EL)
IC3	8-759-531-92	s	IC TC7WH04FU(TE12R)
IC4	6-704-238-01	s	IC S-812C30AUA-C2KT2G
Q1	8-729-928-90	s	TRANSISTOR DTC114EE
Q2	8-729-928-90	s	TRANSISTOR DTC114EE
Q3	8-729-928-90	s	TRANSISTOR DTC114EE
Q4	8-729-928-90	s	TRANSISTOR DTC114EE
Q5	8-729-928-90	s	TRANSISTOR DTC114EE
Q6	8-729-928-90	s	TRANSISTOR DTC114EE
Q7	8-729-928-90	s	TRANSISTOR DTC114EE
Q8	8-729-928-90	s	TRANSISTOR DTC114EE
Q9	8-729-928-90	s	TRANSISTOR DTC114EE
Q100	8-729-929-08	s	TRANSISTOR DTC123JE
Q101	8-729-929-08	s	TRANSISTOR DTC123JE
Q102	8-729-929-08	s	TRANSISTOR DTC123JE
Q103	8-729-929-08	s	TRANSISTOR DTC123JE
Q104	8-729-929-08	s	TRANSISTOR DTC123JE
Q105	8-729-929-08	s	TRANSISTOR DTC123JE
Q106	8-729-929-08	s	TRANSISTOR DTC123JE
Q107	8-729-929-08	s	TRANSISTOR DTC123JE
Q108	8-729-162-45	s	TRANSISTOR 2SB624-BV5
Q109	8-729-162-45	s	TRANSISTOR 2SB624-BV5
Q110	8-729-162-45	s	TRANSISTOR 2SB624-BV5
Q111	8-729-162-45	s	TRANSISTOR 2SB624-BV5
Q112	8-729-929-08	s	TRANSISTOR DTC123JE
Q113	8-729-929-08	s	TRANSISTOR DTC123JE
Q114	8-729-929-08	s	TRANSISTOR DTC123JE
Q115	8-729-929-08	s	TRANSISTOR DTC123JE
Q116	8-729-929-08	s	TRANSISTOR DTC123JE
Q117	8-729-929-08	s	TRANSISTOR DTC123JE
Q118	8-729-929-08	s	TRANSISTOR DTC123JE
Q119	8-729-929-08	s	TRANSISTOR DTC123JE
Q120	8-729-162-45	s	TRANSISTOR 2SB624-BV5
Q121	8-729-162-45	s	TRANSISTOR 2SB624-BV5
Q122	8-729-162-45	s	TRANSISTOR 2SB624-BV5
Q123	8-729-162-45	s	TRANSISTOR 2SB624-BV5
R1	1-208-675-11	s	RESISTOR CHIP 470 1/16W (1005)
R3	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R4	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R5	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R6	1-208-671-11	s	RESISTOR CHIP 330 1/16W (1005)
R11	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R12	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R13	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R14	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R16	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R18	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R20	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R22	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R23	1-218-823-11	s	RESISTOR,CHIP 100 1/10W (1608)
R24	1-218-823-11	s	RESISTOR,CHIP 100 1/10W (1608)
R25	1-218-823-11	s	RESISTOR,CHIP 100 1/10W (1608)
R26	1-218-823-11	s	RESISTOR,CHIP 100 1/10W (1608)
R27	1-218-831-11	s	RESISTOR, CHIP 220 1/10W(1608)
R29	1-216-864-11	s	CONDUCTOR, CHIP (1608)
R30	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)

(SW-1232 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R31	1-216-864-11	s CONDUCTOR, CHIP (1608)
R33	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R34	1-218-831-11	s RESISTOR, CHIP 220 1/10W (1608)
R35	1-218-823-11	s RESISTOR,CHIP 100 1/10W (1608)
R36	1-218-823-11	s RESISTOR,CHIP 100 1/10W (1608)
R37	1-218-823-11	s RESISTOR,CHIP 100 1/10W (1608)
R100	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R101	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R102	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R103	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R104	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R105	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R106	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R107	1-218-945-11	s RESISTOR,CHIP 220 1/16W (1005)
R108	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R109	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R110	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R111	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R112	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R113	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R114	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R115	1-211-989-11	s RESISTOR,CHIP 68 1/10W (1608)
R116	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
R117	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
R118	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
R119	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
R120	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
R121	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
R122	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
R123	1-211-977-11	s RESISTOR,CHIP 22 1/10W (1608)
RB1	1-234-372-11	s RES, NETWORK 100X4 (1005)
RB2	1-234-372-11	s RES, NETWORK 100X4 (1005)
RV1	1-223-741-11	s RESISTOR, METAL CARBON VAR 50K
RV2	1-223-741-11	s RESISTOR, METAL CARBON VAR 50K
RV3	1-223-741-11	s RESISTOR, METAL CARBON VAR 50K
RV4	1-223-741-11	s RESISTOR, METAL CARBON VAR 50K
RV5	1-223-741-11	s RESISTOR, METAL CARBON VAR 50K
S1	1-786-840-11	s SWITCH, ROTARY
S2	1-786-840-11	s SWITCH, ROTARY
S3	1-786-840-11	s SWITCH, ROTARY
S4	1-786-840-11	s SWITCH, ROTARY
S5	1-762-122-11	s SWITCH, TOGGLE
S6	1-762-122-11	s SWITCH, TOGGLE
S7	1-762-122-11	s SWITCH, TOGGLE
S8	1-762-122-11	s SWITCH, TOGGLE
S9	1-762-123-11	s SWITCH, TOGGLE
S10	1-762-531-11	s SWITCH, TOGGLE
S11	1-762-129-11	s SWITCH, TACTILE (ILLUMINATED)
S12	1-762-129-21	s SWITCH, TACTILE (ILLUMINATED)
S13	1-762-129-31	s SWITCH, TACTILE (ILLUMINATED)
S14	1-762-131-11	s SWITCH, TACTILE (ILLUMINATED)
S15	1-762-132-11	s SWITCH, TACTILE (ILLUMINATED)
S20	1-762-132-21	s SWITCH, TACTILE (ILLUMINATED)
S21	1-762-133-11	s SWITCH, TACTILE (ILLUMINATED)
S23	1-692-994-11	s SWITCH, TACTILE (ILLUMINATED)
S24	1-762-122-11	s SWITCH, TOGGLE
S25	1-762-123-11	s SWITCH, TOGGLE
S26	1-786-839-11	s SWITCH, PUSH

(SW-1232 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
S27	1-786-839-11	s SWITCH, PUSH
S29	1-786-839-11	s SWITCH, PUSH
S30	1-786-839-11	s SWITCH, PUSH
S31	1-786-839-11	s SWITCH, PUSH

3-3. Packing Materials & Supplied Accessories

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-1128-405-A	s HANGER ASSY, CAMERA
4pcs	3-687-116-01	o WASHER(4), STOPPER (PLA)
4pcs	7-682-562-09	s SCREW +B4X10(EP-FE/ZNBK/CM2)
2pcs	2-280-511-01	o BRACKET, ADJUSTMENT ANGLE
2pcs	3-185-945-02	s PLATE, NUMBER (WHITE)
2pcs	3-612-712-01	s BAND, CLAMP
2pcs	3-622-537-01	o PLATE, NUMBER(LLA) (BLACK)
1pc	3-903-904-01	s OPERATION MANUAL
1pc	4-027-937-01	s PLATE, NUMBER (PLA)

Section 4

Semiconductor Pin Assignments

The following describes the semiconductor types used in this unit.

For semiconductors marked with page numbers in the index, refer to the corresponding pages in this section.

However, in some cases incompatible types are also listed, therefore, when a part is to be replaced, also refer to the Spare Parts section.

In addition, for semiconductors with ID Nos., refer to the separate CD-ROM titled “Semiconductor Pin Assignments” (Sony Part No. 9-968-546-xx) that allows searching for parts by semiconductor type or ID No.

The semiconductors in the manual or on the CD-ROM are listed by equivalent types. Thus the external view or the index mark indication may differ from the actual type.

Pin assignments and block diagrams are based on the IC manufacturer’s data book.

本機に使用されている半導体型名の一覧を下記に示します。索引中、ページが記載されている半導体は、本章の該当ページを参照してください。ただし、互換性のない型名を併記している場合がありますので、部品を交換するときは、Spare Partsの章を参照してください。

また、ID番号が記載されている半導体は、別途発行の“Semiconductor Pin Assignments” CD-ROM版 (ソニー部品番号：9-968-546-xx)を参照してください。

半導体型名またはID番号から検索ができます。

マニュアルまたはCD-ROMに掲載されている半導体は、それぞれの機能を等価的に表わしたものです。

外観やインデックスマークの表示方法が実物と異なる場合があります。

ピン配置およびブロック図はICメーカーのデータブックに従いました。

DIODE	Page or ID No.
02DZ4.7-TPH3	DC008-04
1S2836	DC001-02
1SS184	DC001-03
1SS300-TE85L	DC001-02
1SS301-TE85L	DC001-03
1SS302	DC001-01
1SS302-TE85L	DC001-01
HSM88WA	DC001-02
HSM88WK	DC001-03
HSM88WK-TL	DC001-03
MBRS140T3	DC013-02
MBRS340T3	DC013-01

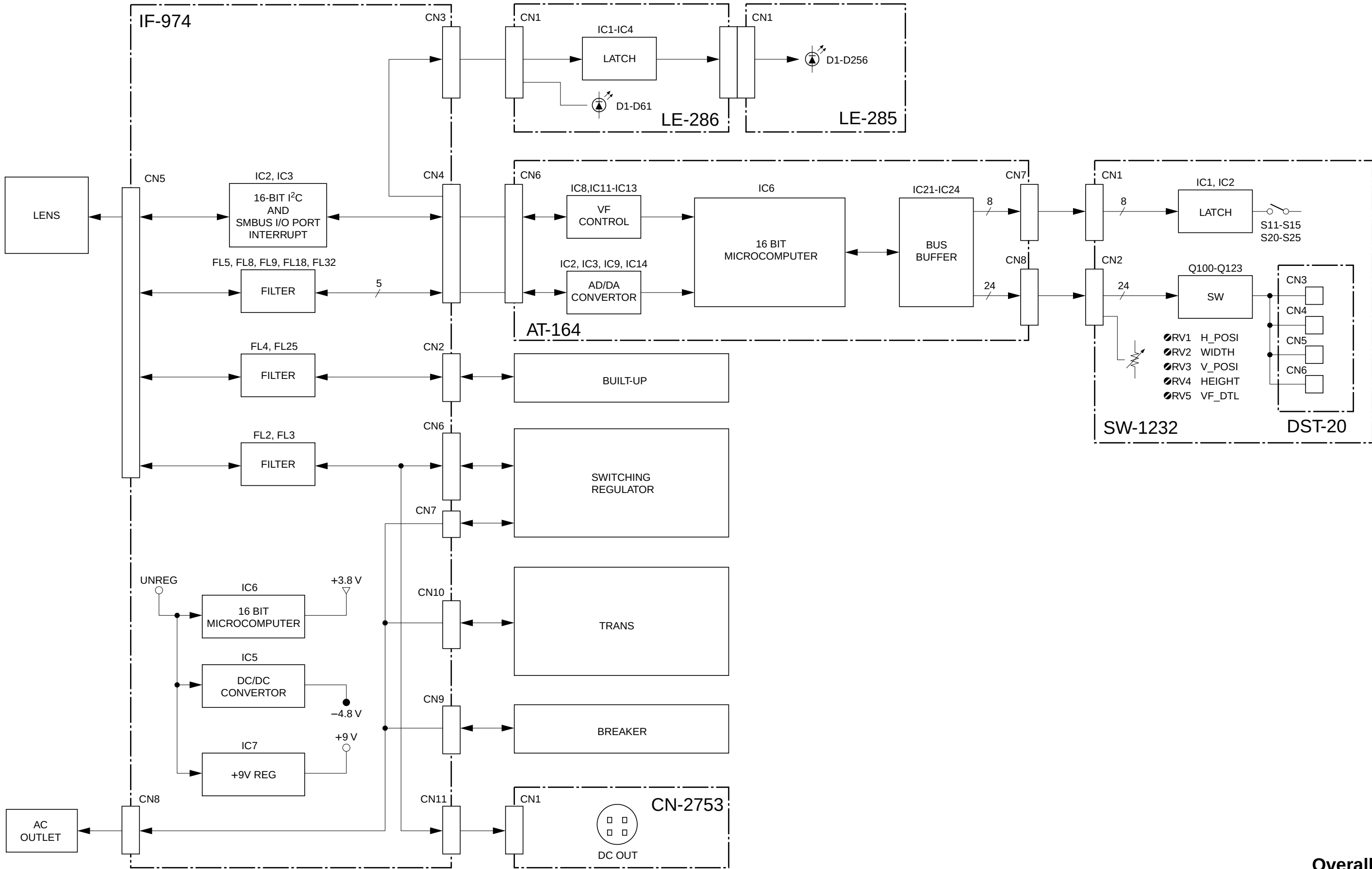
LED	Page or ID No.
CL-200HR-C-TSL	LC008-04
MD0708C-RG	LR083-04

TRANSISTOR	Page or ID No.
2SA1213Y-TE12L	TC002-01
2SB624-BV5	TC001-01
2SB624-T1BV5	TC001-01
2SC4617R	TC001-02
2SD1623-S	TC002-02
DTA123JE-TL	TC001-04
DTC114EE	TC001-03
DTC123JE	TC001-03

TRANSISTOR	Page or ID No.
DTC123JE-TL	TC001-03
DTC144EE	TC001-03
DTC144EE-TL	TC001-03

IC	Page or ID No.
ADR381ART-REEL7	MAX6066BEUR-T
HD64F2377VFQ33V	HD64F2377VFQ33V
NJM062V(TE2)	RC4558
NJM062V-TE2	RC4558
PCA9555DB-118	PCA9555DB-118
RN5VD28AA-TL	S-80928ANMP-DDR-T2
S-812C30AUA-C2KT2G	S-81225AG-RH
TC74VHC14FT(EL)	TC74HC14P
TC74VHC373FT(EL)	TC74HC373P
TC74VHC595FT(EL)	TC74HC595P
TC74VHCT244AFT(EL)	TC74HC244P
TC7WH00FU(TE12R)	TC7W00F
TC7WH00FU-TE12R	TC7W00F
TC7WH04FK(TE85R)	TC7W04F
TC7WH04FU(TE12R)	TC7W04F
TC7WH08FK(TE85R)	TC7W08F

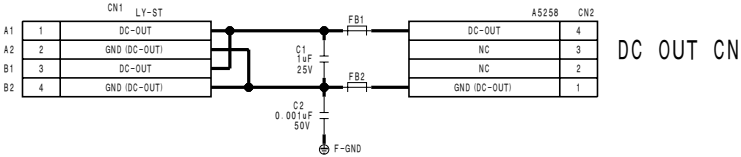
Section 5
Block Diagrams



Section 6
Schematic Diagrams

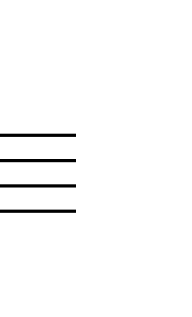
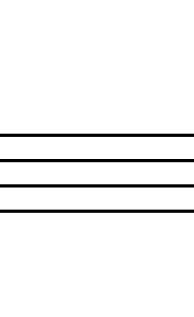
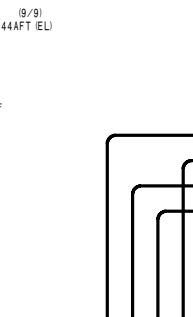
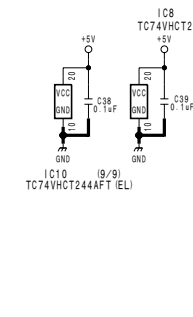
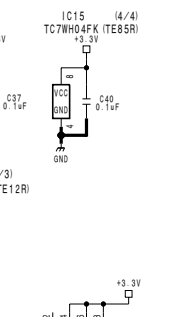
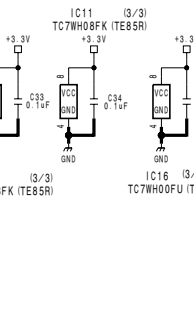
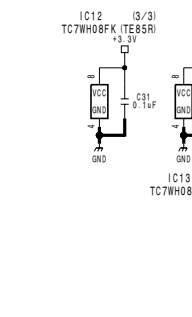
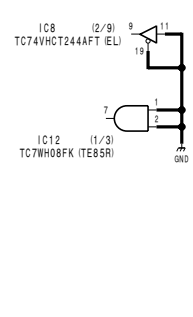
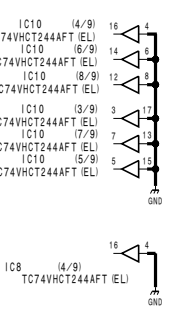
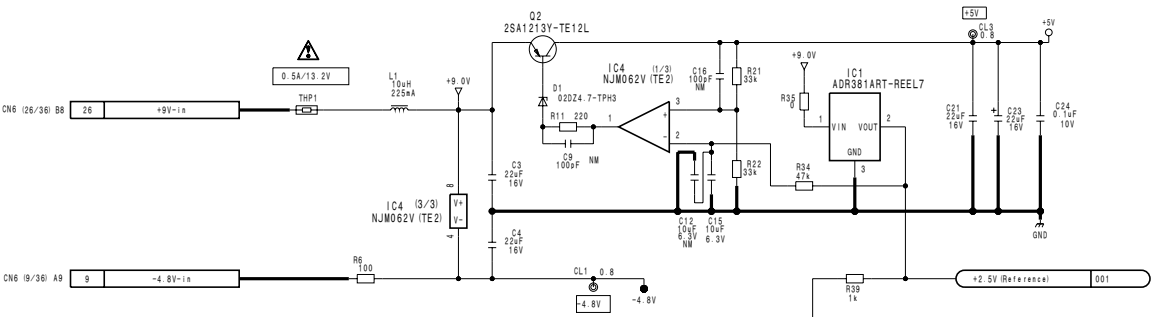
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LE-285	6-5
LE-286	6-6
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Frame Wiring	6-8

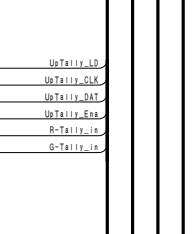
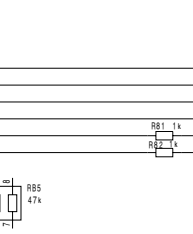
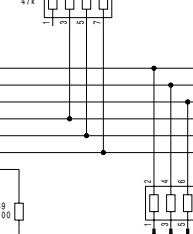
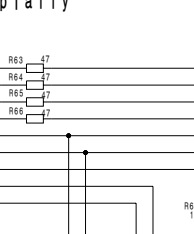
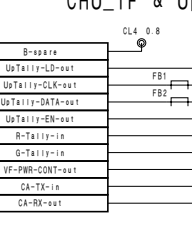
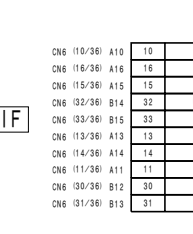
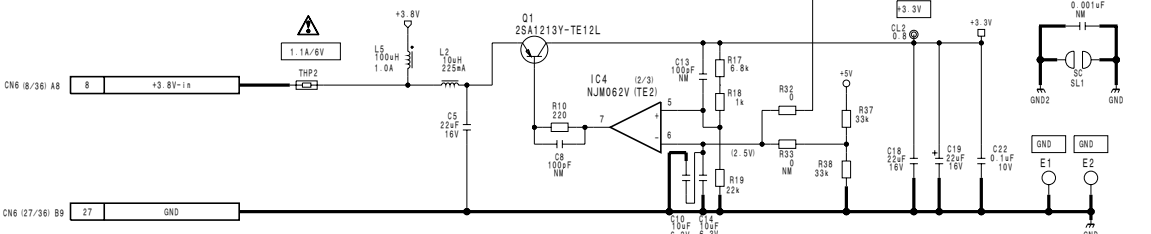


CN-2753
BOARD NO. 1-865-926-11

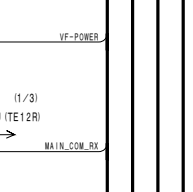
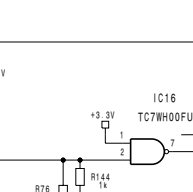
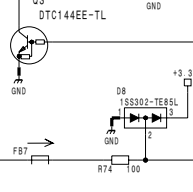
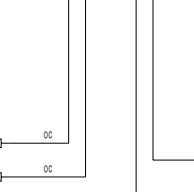
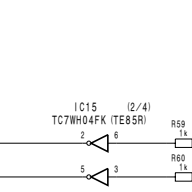
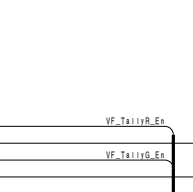
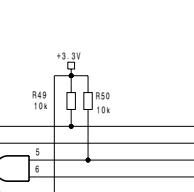
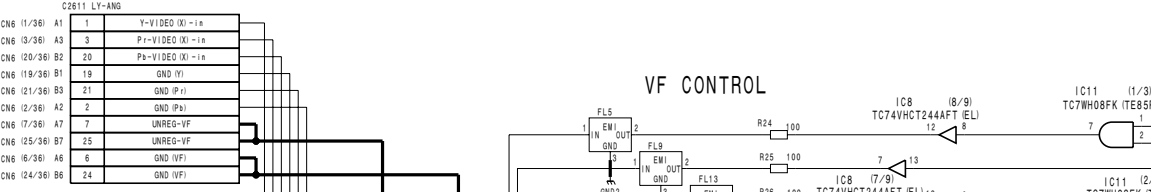
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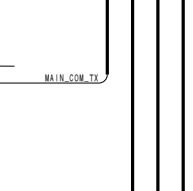
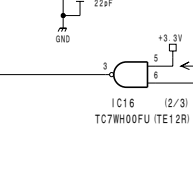
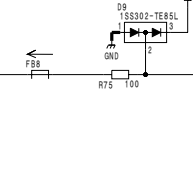
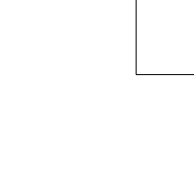
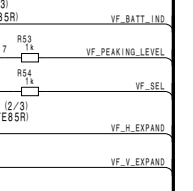
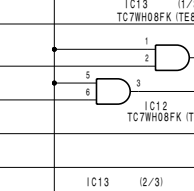
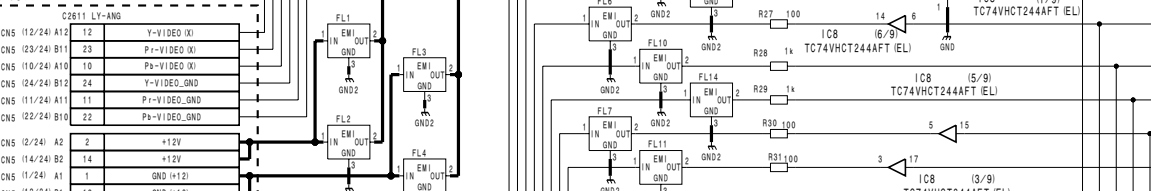
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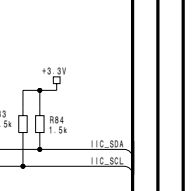
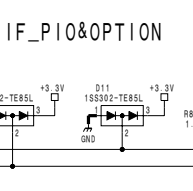
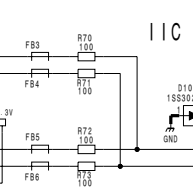
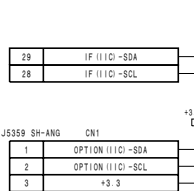
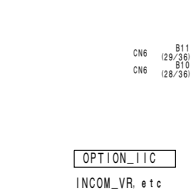
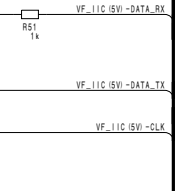
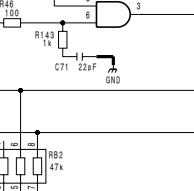
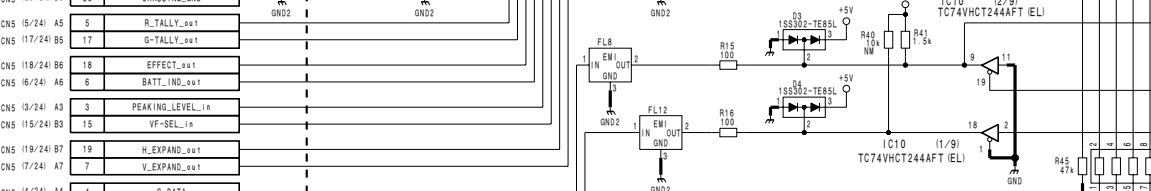
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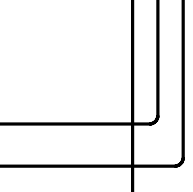
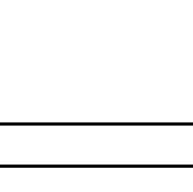
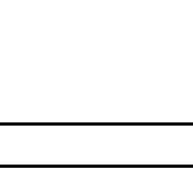
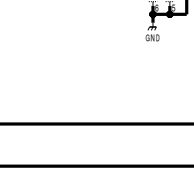
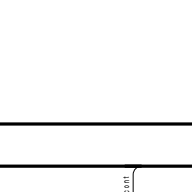
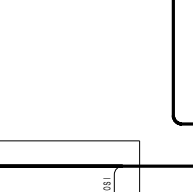
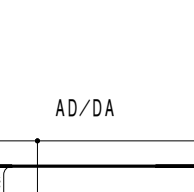
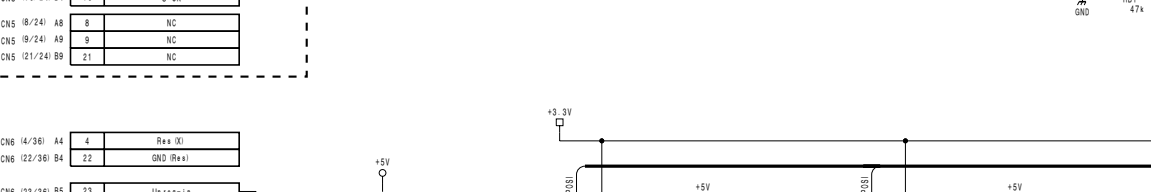
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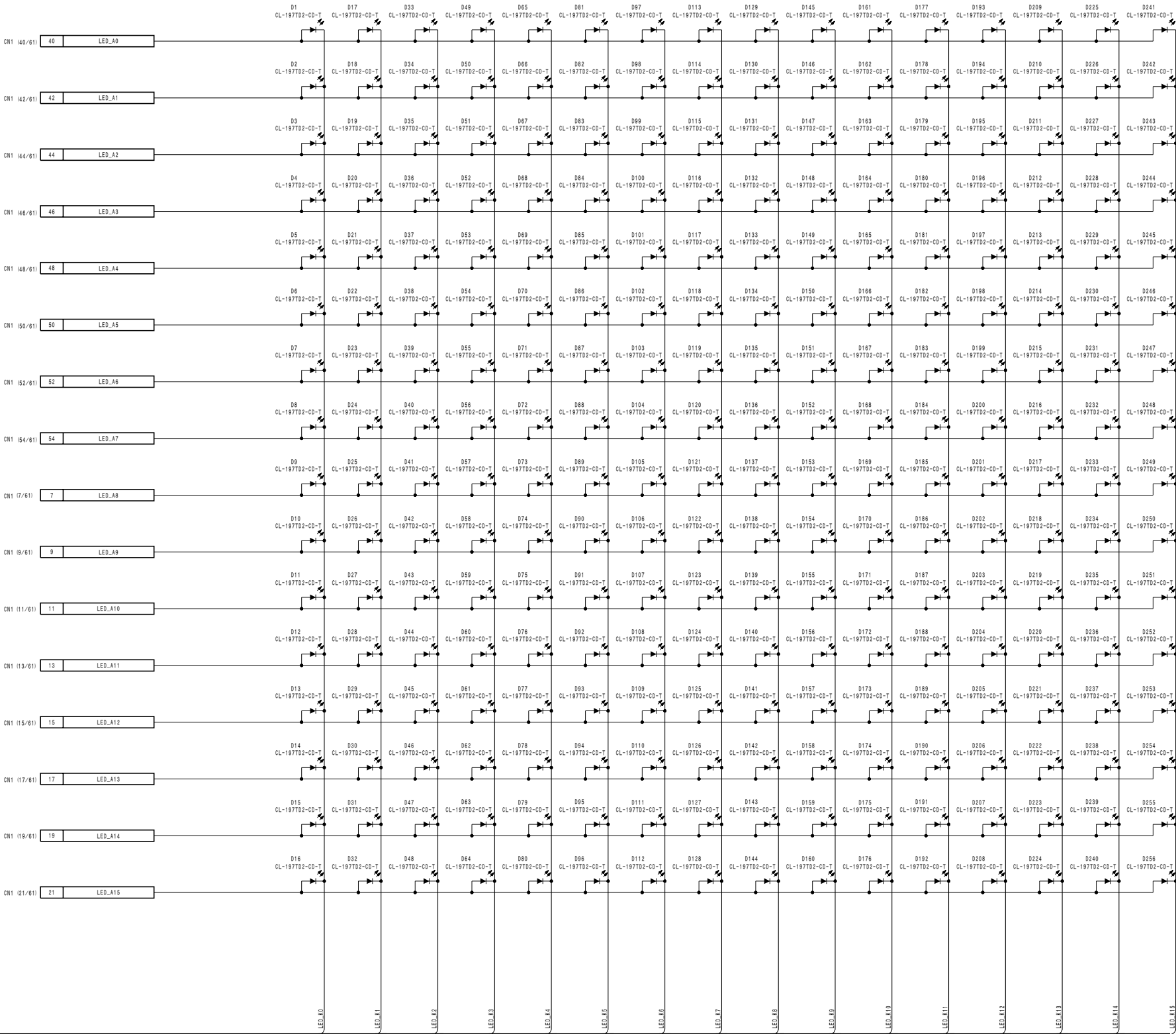
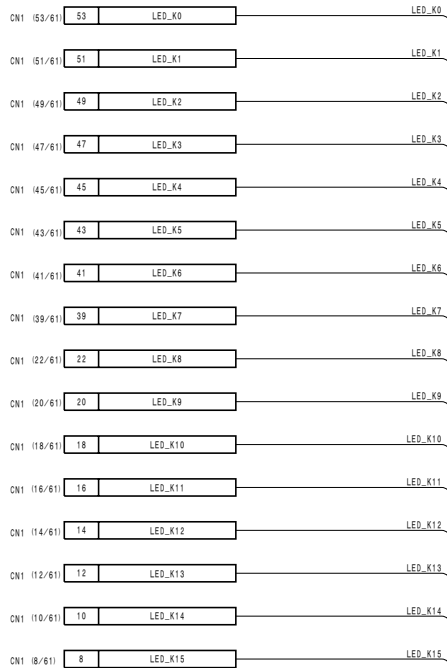






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CN1 (2/61)	2	
CN1 (3/61)	3	
CN1 (4/61)	4	
CN1 (5/61)	5	
CN1 (6/61)	6	
CN1 (23/61)	23	
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CN1 (25/61)	25	
CN1 (26/61)	26	
CN1 (27/61)	27	
CN1 (28/61)	28	
CN1 (29/61)	29	
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CN1 (55/61)	55	
CN1 (56/61)	56	
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(61/61) CN1 "15" "61"



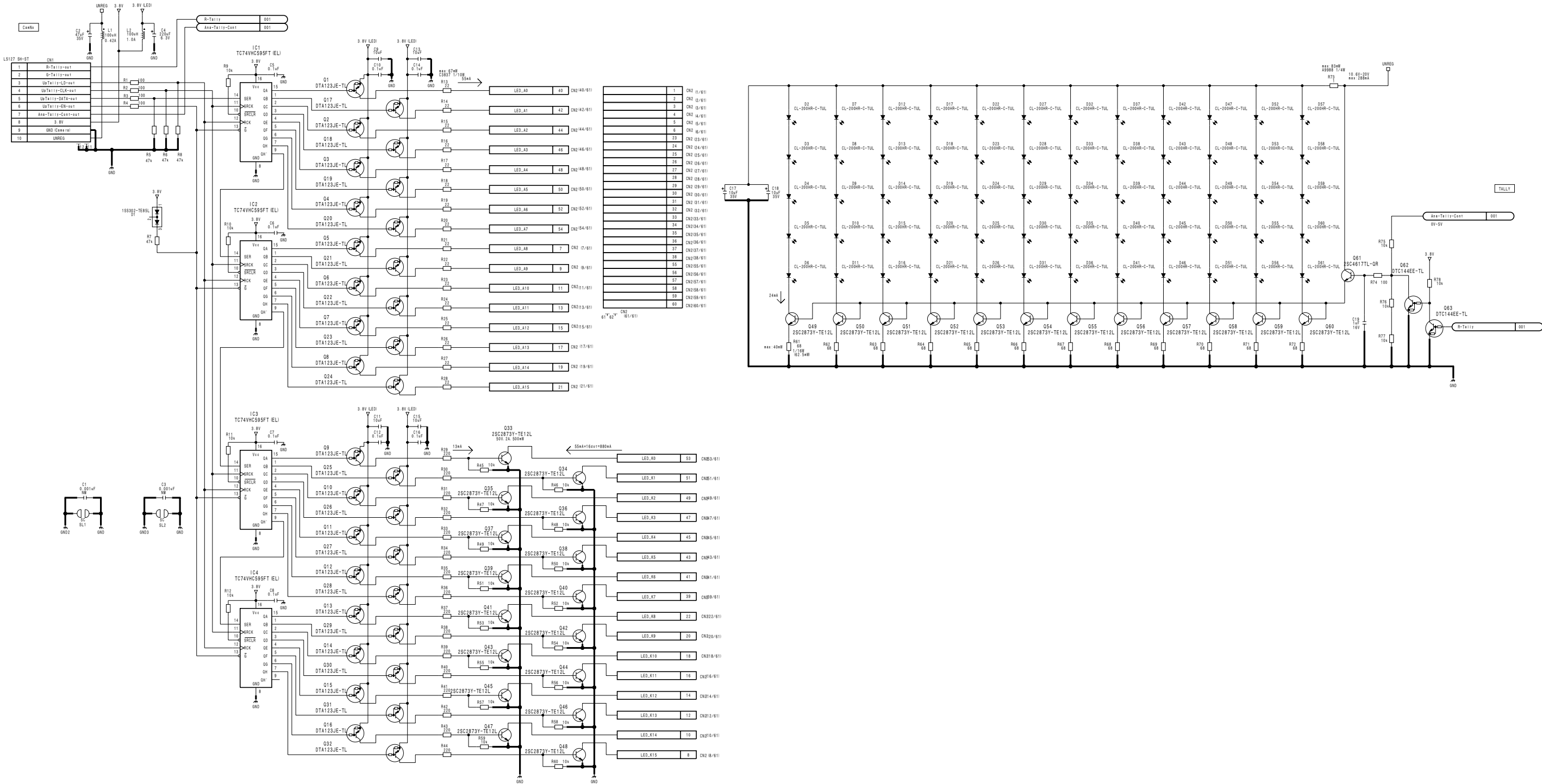
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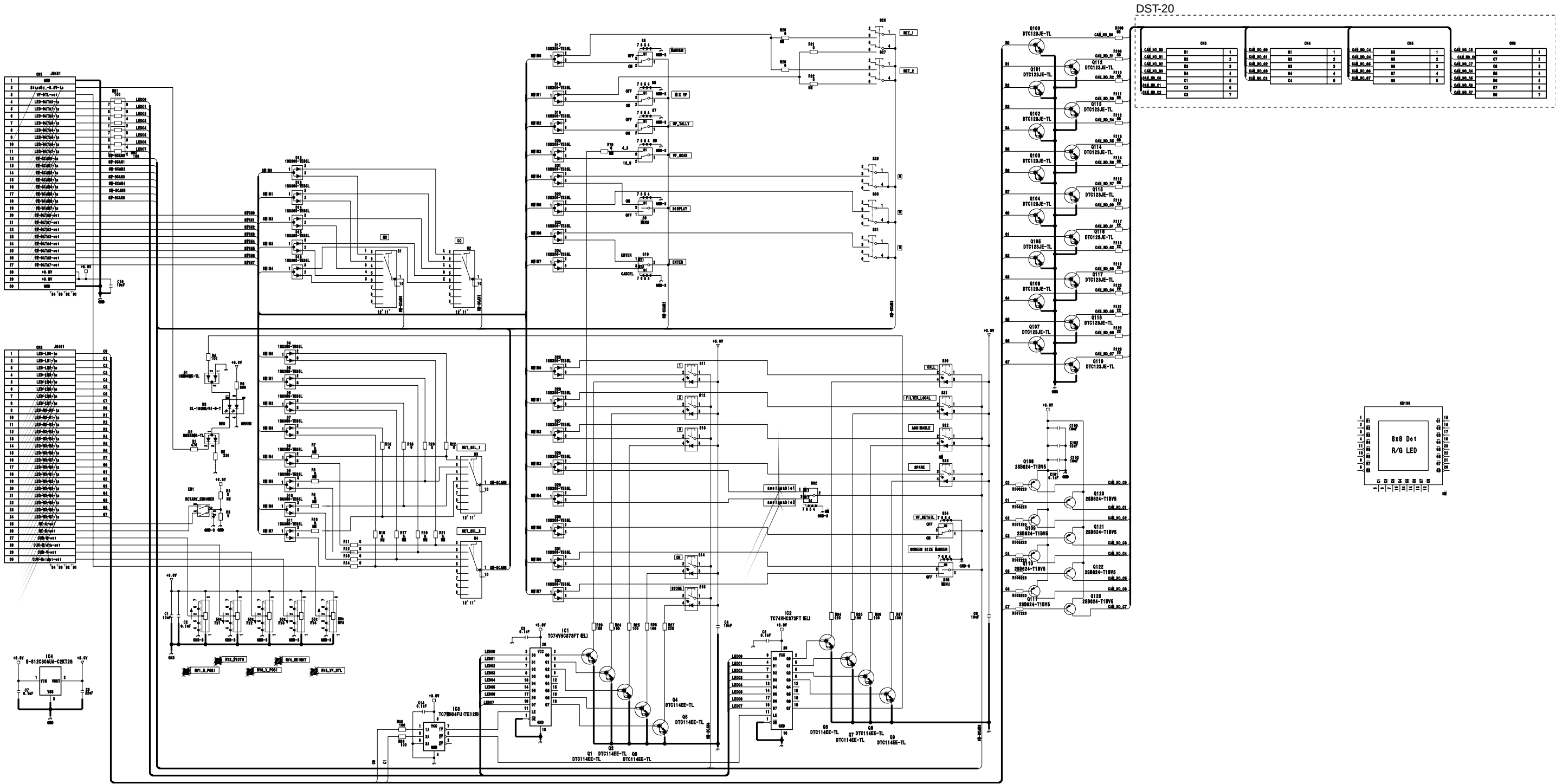
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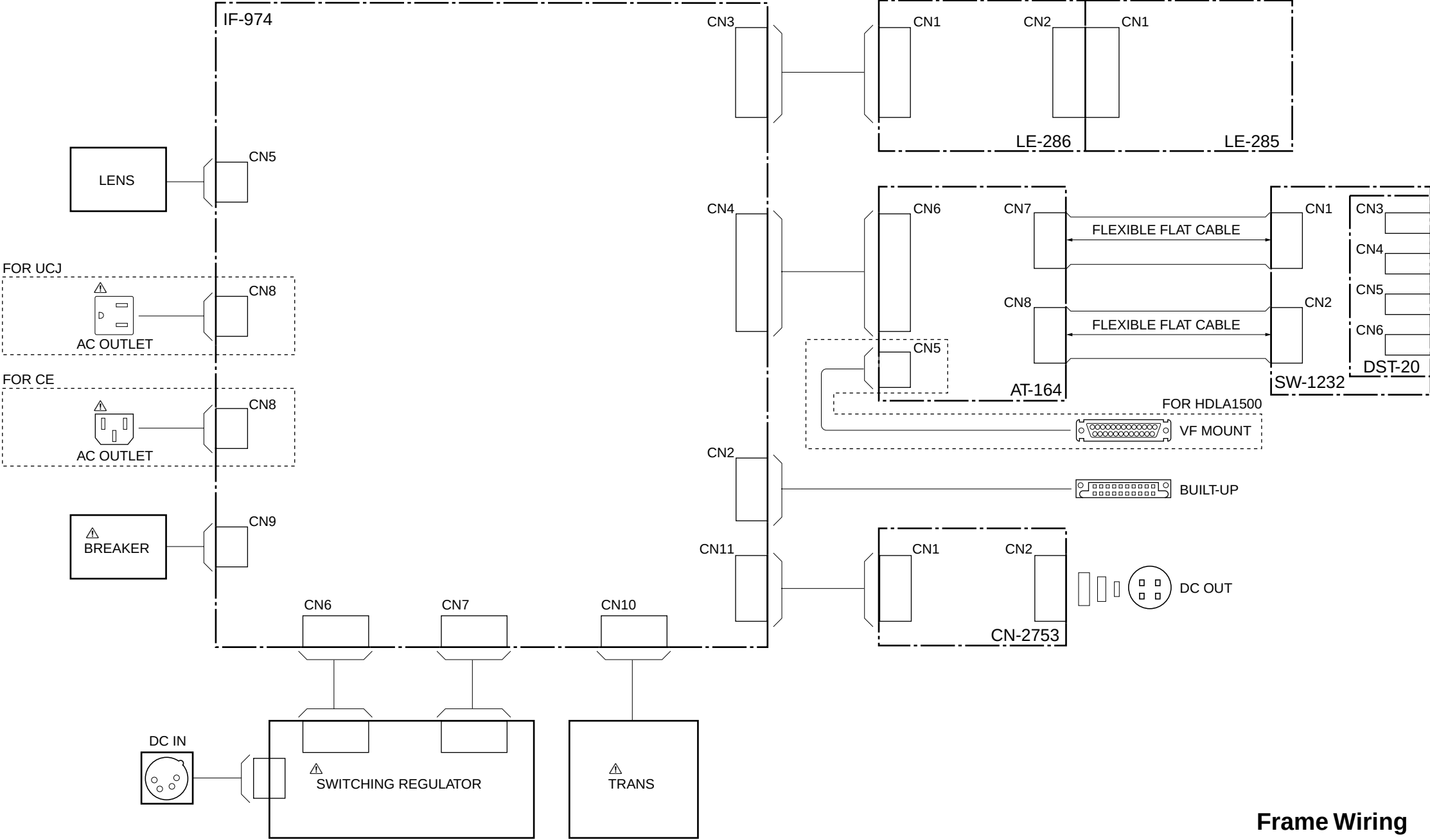
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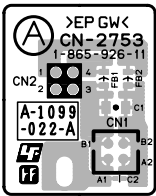


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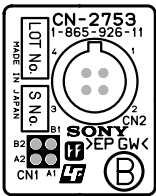
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Board Layouts

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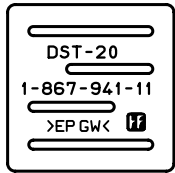
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IF-974	7-3
LE-285	7-1
LE-286	7-1
SW-1232	7-4



CN-2753 -A SIDE-
SUFFIX: -11



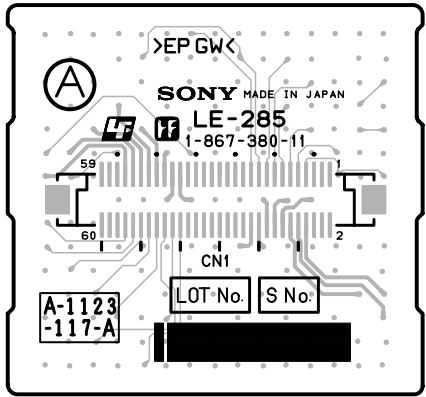
CN-2753 -B SIDE-
SUFFIX: -11



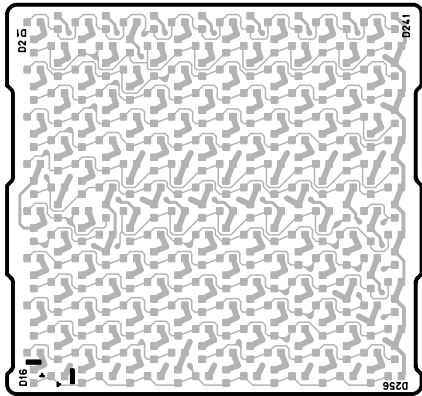
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SUFFIX: -11



DST-20 -B SIDE-
SUFFIX: -11



LE-285 -A SIDE-
SUFFIX: -11

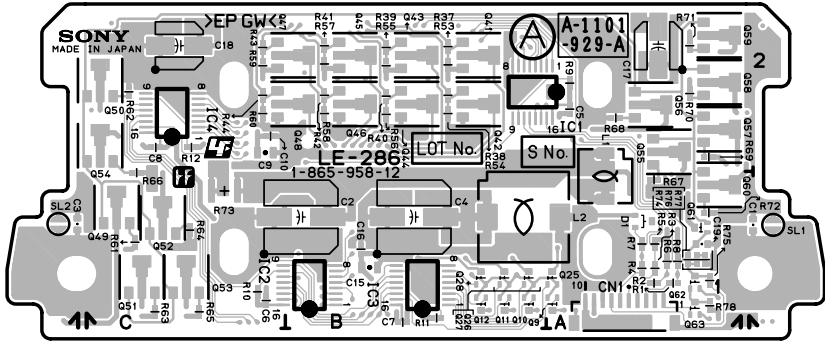


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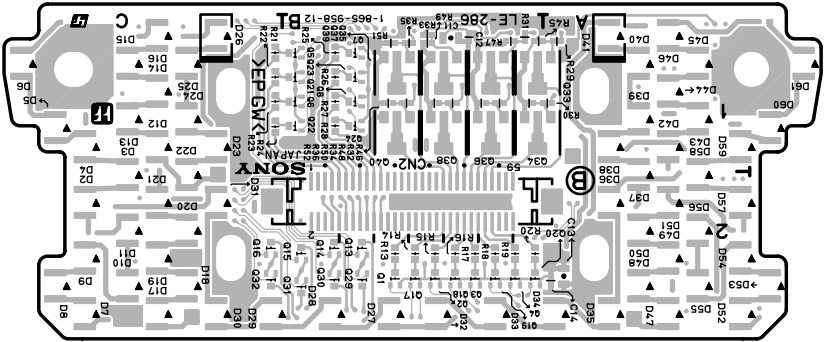
LE-286 (1-865-958-12)

*:B SIDE

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C4	B1	Q2	*B2	R29	*A1
C5	A2	Q3	*B2	R30	*A1
C6	C1	Q4	*B2	R31	*B1
C7	B1	Q5	*B1	R32	*B1
C8	C2	Q6	*B1	R33	*B1
C9	C2	Q7	*B1	R34	*B1
C10	C2	Q8	*B1	R35	*B1
C11	*B1	Q9	A1	R36	*B1
C12	*B1	Q10	B1	R37	B2
C13	*A2	Q11	B1	R38	B2
C14	*A2	Q12	B1	R39	B2
C15	B1	Q13	*B2	R40	B2
C16	B1	Q14	*B2	R41	B2
C17	A2	Q15	*B2	R42	B2
C18	C2	Q16	*C2	R43	C2
C19	A1	Q17	*B2	R44	C2
		Q18	*B2	R45	*B1
CN1	A1	Q19	*B2	R46	*B1
CN2	*B2	Q20	*B2	R47	*B1
		Q21	*B1	R48	*B1
D1	A1	Q22	*B1	R49	*B1
D2	*C2	Q23	*B1	R50	*B1
D3	*C2	Q24	*B1	R51	*B1
D4	*C1	Q25	A1	R52	*B1
D5	*C1	Q26	B1	R53	B2
D6	*C1	Q27	B1	R54	B2
D7	*C2	Q28	B1	R55	B2
D8	*C2	Q29	*B2	R56	B2
D9	*C2	Q30	*B2	R57	B2
D10	*C2	Q31	*B2	R58	B2
D11	*C2	Q32	*C2	R59	C2
D12	*C1	Q33	*B1	R60	C2
D13	*C1	Q34	*B1	R61	C1
D14	*C1	Q35	*B1	R62	C2
D15	*C1	Q36	*B1	R63	C1
D16	*C1	Q37	*B1	R64	C1
D17	*C2	Q38	*B1	R65	C1
D18	*C2	Q39	*B1	R66	C1
D19	*C2	Q40	*B1	R67	A1
D20	*C2	Q41	B2	R68	A2
D21	*C2	Q42	B2	R69	A2
D22	*C2	Q43	B2	R70	A2
D23	*C1	Q44	B2	R71	A2
D24	*C1	Q45	B2	R72	A1
D25	*C1	Q46	B2	R73	C1
D26	*C1	Q47	B2	R74	A1
D27	*B2	Q48	B2	R75	A1
D28	*B2	Q49	C1	R76	A1
D29	*C2	Q50	C2	R77	A1
D30	*C2	Q51	C1	R78	A1
D31	*C2	Q52	C1		
D32	*B2	Q53	C1		
D33	*B2	Q54	C2		
D34	*A2	Q55	A2		
D35	*A2	Q56	A2		
D36	*A2	Q57	A2		
D37	*A2	Q58	A2		
D38	*A1	Q59	A2		
D39	*A1	Q60	A1		
D40	*A1	Q61	A1		
D41	*A1	Q62	A1		
D42	*A1	Q63	A1		
D43	*A1				
D44	*A1	R1	A1		
D45	*A1	R2	A1		
D46	*A1	R3	A1		
D47	*A2	R4	A1		
D48	*A2	R5	A1		
D49	*A2	R6	A1		
D50	*A2	R7	A1		
D51	*A2	R8	A1		
D52	*A2	R9	A2		
D53	*A2	R10	C1		
D54	*A2	R11	B1		
D55	*A2	R12	C2		
D56	*A2	R13	*B2		
D57	*A2	R14	*B2		
D58	*A2	R15	*B2		
D59	*A1	R16	*B2		
D60	*A1	R17	*B2		
D61	*A1	R18	*B2		
		R19	*B2		
		R20	*B2		
IC1	A2	R21	*C1		
IC2	B1	R22	*C1		
IC3	B1	R23	*C1		
IC4	C2	R24	*C1		
L1	A1	R25	*B1		



LE-286 -A SIDE-
SUFFIX: -12

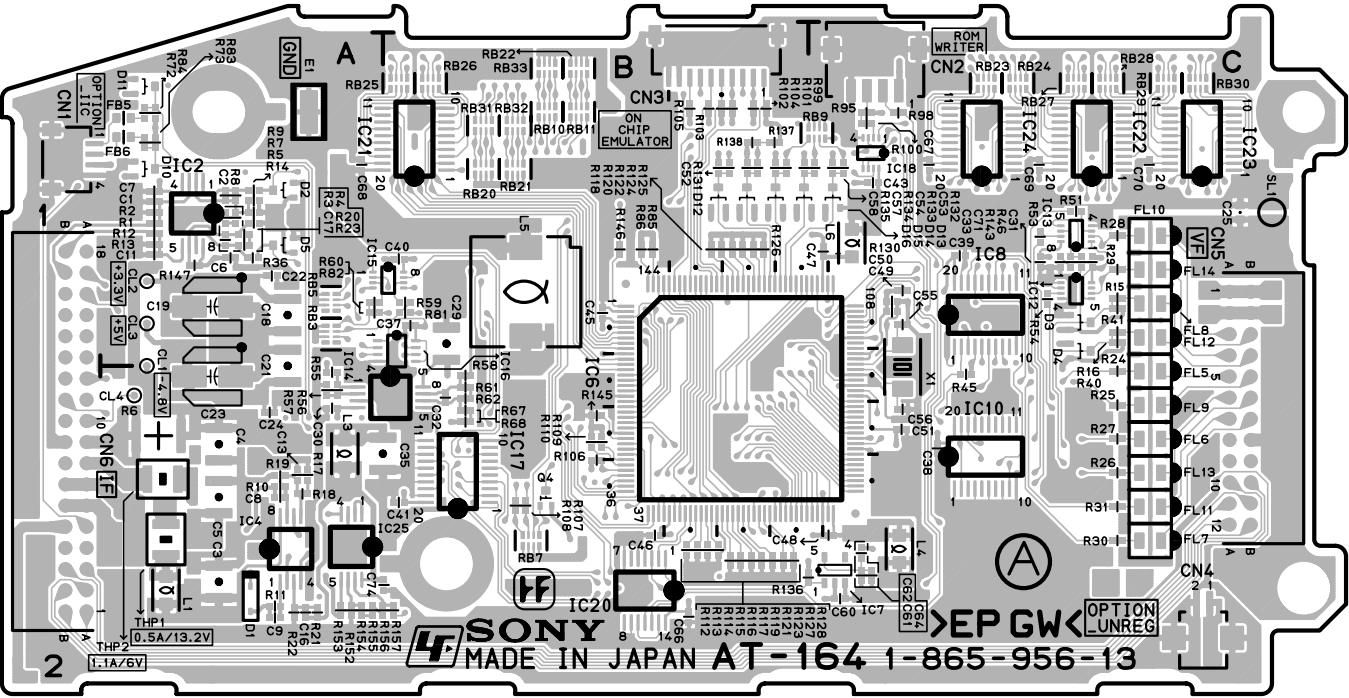


LE-286 -B SIDE-
SUFFIX: -12

AT-164 (1-865-956-13)

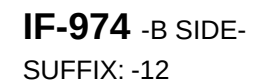
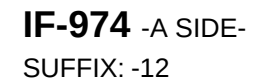
*:B SIDE

C1	A1	D5	A1	R16	C1	R121	B2
C2	A1	D6	*A1	R17	A2	R122	B1
C3	A2	D7	*A1	R18	A2	R123	B2
C4	A2	D8	*A2	R19	A2	R124	B1
C5	A2	D9	*A2	R20	A1	R125	B1
C6	A1	D10	A1	R21	A2	R126	B1
C7	A1	D11	A1	R22	A2	R127	B2
C8	A2	D12	B1	R23	A1	R128	B2
C9	A2	D13	C1	R24	C2	R130	C1
C10	*A2	D14	B1	R25	C2	R131	B1
C11	A1	D15	B1	R26	C2	R132	C1
C12	*A2	D16	B1	R27	C2	R133	C1
C13	A2			R28	C1	R134	B1
C14	*A2	E1	A1	R29	C1	R135	B1
C15	*A2	E2	*C2	R30	C2	R136	B2
C16	A2			R31	C2	R137	B1
C17	A1	FB1	*A1	R32	*A2	R138	B1
C18	A1	FB2	*A1	R33	*A2	R139	*B2
C19	A1	FB3	*A2	R34	*A2	R140	*B2
C20	*A1	FB4	*A2	R35	*A2	R141	*B2
C21	A2	FB5	A1	R36	A1	R142	*B2
C22	A1	FB6	A1	R37	*A2	R143	C1
C23	A2	FB7	*A2	R38	*A2	R144	*A2
C24	A2	FB8	*A2	R39	*A2	R145	B2
C25	C1			R40	C1	R146	B1
C26	*A1	FL1	*C2	R41	C1	R147	A1
C27	*A1	FL2	*C1	R42	*A1	R148	*A1
C28	*A1	FL3	*C1	R43	*A1	R149	*A1
C29	B1	FL4	*C1	R44	*A1	R150	*A1
C30	A2	FL5	C2	R45	C2	R151	*A1
C31	C1	FL6	C2	R46	C1	R152	A2
C32	B2	FL7	C2	R47	*A1	R153	A2
C33	C1	FL8	C1	R48	*A1	R154	A2
C34	*C1	FL9	C2	R49	*C1	R155	A2
C35	A2	FL10	C1	R50	*C1	R156	A2
C36	*A2	FL11	C2	R51	C1	R157	B2
C37	B1	FL12	C1	R52	*A1		
C38	C2	FL13	C2	R53		RB1	*C2
C39	C1	FL14	C1	R54	C1	RB2	*C2
C40	B1			R55	A2	RB3	A1
C41	B2	IC1	*A2	R56	A2	RB4	*B2
C43	C1	IC2	A1	R57	A2	RB5	A1
C44	*C2	IC3	*A2	R58	B2	RB6	*B2
C45	B1	IC4	A2	R59	B1	RB7	B2
C46	B2	IC6	B2	R60	A1	RB8	*C1
C47	C1	IC7	C2	R61	B2	RB9	C1
C48	C2	IC8	C1	R62	B2	RB10	B1
C49	C1	IC9	*A1	R63	*A1	RB11	B1
C50	C1	IC10	C2	R64	*A1	RB12	*B1
C51	C2	IC11	*C1	R65	*A1	RB13	*B1
C52	B1	IC12	C1	R66	*A1	RB14	*C1
C53	C1	IC13	C1	R67	B2	RB15	*C1
C54	B1	IC14	A2	R68	B2	RB16	*C1
C55	C1	IC15	B1	R69	*A2	RB17	*C1
C56	C2	IC16	B1	R70	*A2	RB18	*C1
C57	B1	IC17	B2	R71	*A2	RB19	*C1
C58	B1	IC18	C1	R72	A1	RB20	B1
C60	C2	IC20	B2	R73	A1	RB21	B1
C61	C2	IC21	B1	R74	*A2	RB22	B1
C62	C2	IC22	C1	R75	*A2	RB23	C1
C63	*B2	IC23	C1	R76	*A2	RB24	C1
C64	C2	IC24	C1	R81	B1	RB25	B1
C65	*B2	IC25	A2	R82	A1	RB26	B1
C66	B2			R83	A1	RB27	C1
C67	C1	L1	A2	R84	A1	RB28	C1
C68	A1	L2	*A2	R85	B1	RB29	C1
C69	C1	L3	A2	R86	B1	RB30	C1
C70	C1	L4	C2	R95	C1	RB31	B1
C71	C1	L5	B1	R98	C1	RB32	B1
C72	*A2	L6	C1	R99	B1	RB33	B1
C73	*A1			R100	C1		
C74	B2	Q1	*A2	R101	B1	S1	*B2
		Q2	*A2	R102	B1		
CL1	A2	Q3	*A2	R103	B1	THP1	A2
CL2	A1	Q4	B2	R104	B1	THP2	A2
CL3	A1			R105	B1		
CL4	A2	R1	A1	R106	B2	X1	C2
		R2	A1	R107	B2		
CN1	A1	R3	A1	R108	B2		
CN2	C1	R4	A1	R109	B2		
CN3	B1	R5	A1	R110	B2		
CN4	C2	R6	A2	R111	*B2		
CN5	C2	R7	A1	R112	B2		
CN6	A2	R8	A1	R113	B2		
CN7	*B1	R9	A1	R114	B2		
CN8	*C1	R10	A2	R115	B2		
		R11	A2	R116	B2		
D1	A2	R12	A1	R117	B2		
D2	A1	R13	A1	R118	B1		
D3	C1	R14	A1	R119	B2		
D4	C1	R15	C1	R120	B1		



* : B SIDE

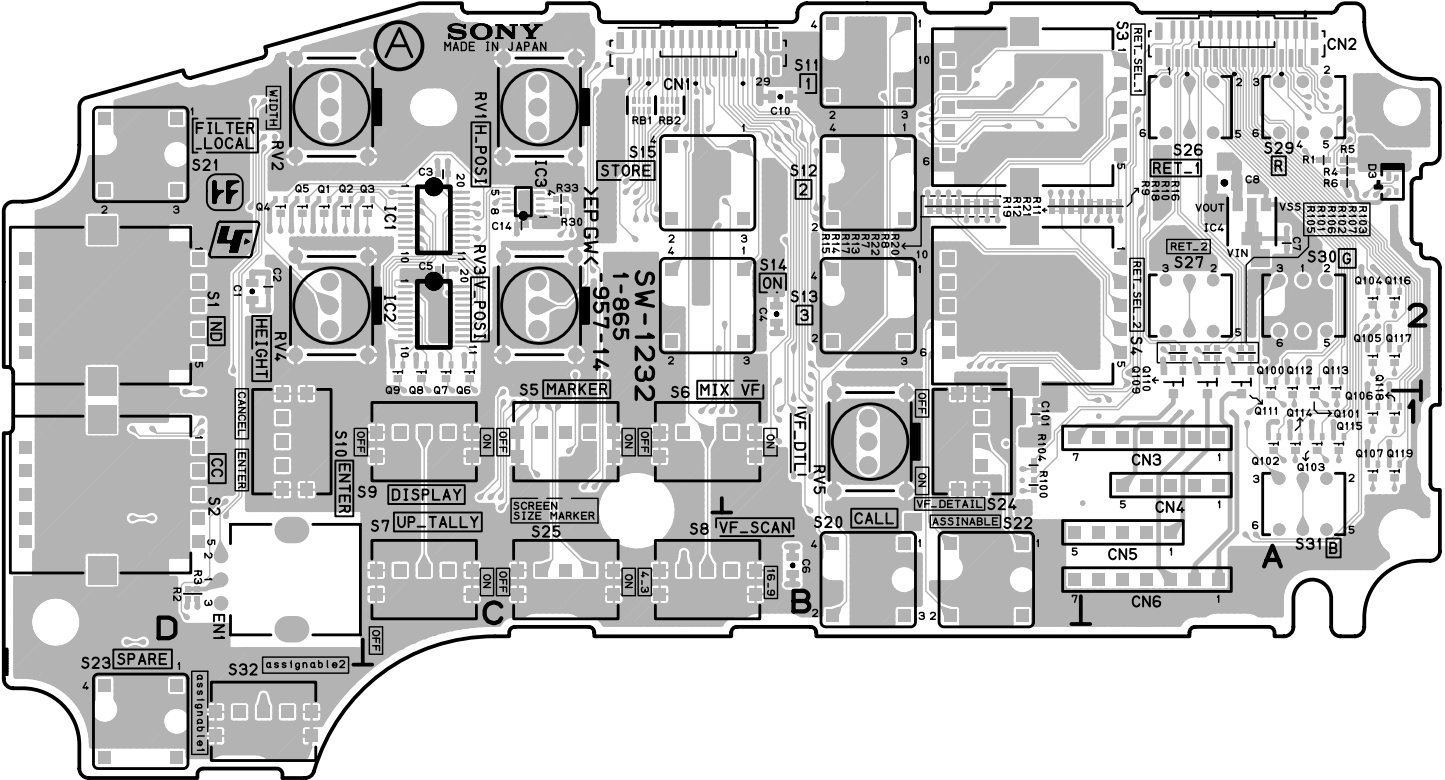
FL1	B2
FL2	A1
FL3	A1
FL4	A2
FL5	A2
FL6	A1
FL7	A1
FL8	A2
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FL10	A2
FL11	A1
FL12	A2
FL13	B2
FL14	A2
FL15	B2
FL16	A1
FL17	A1
FL18	A2
FL19	A2
FL20	A2
FL21	B1
FL22	B2
FL23	A2
FL24	A2
FL25	A2
FL26	A2
FL27	A2
FL28	B2
FL29	A2
FL30	A2
FL31	A2
FL32	A2
FL33	A2

HDLA1500/1505/DRAFT

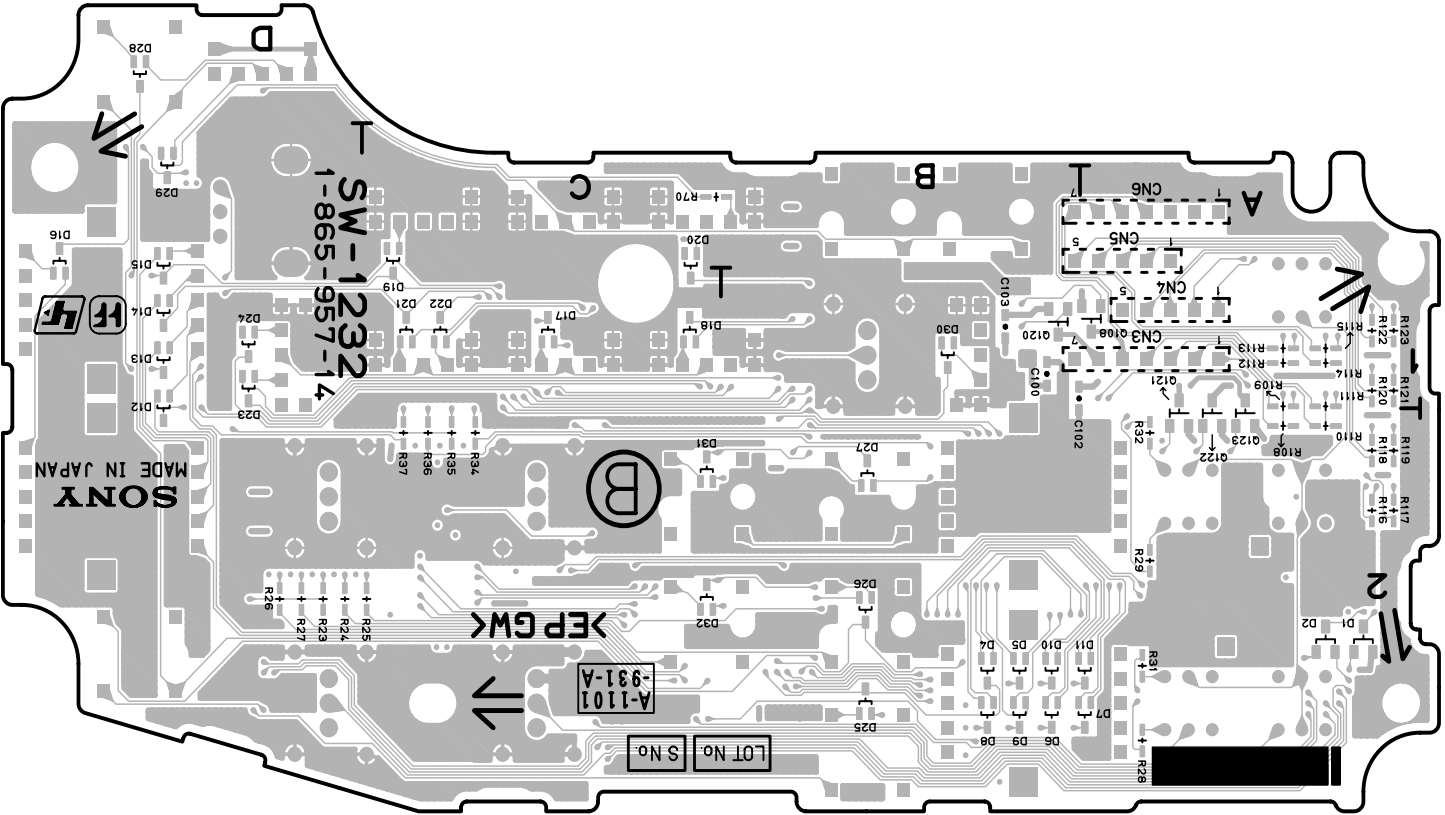
SW-1232 (1-865-957-14)

*:B SIDE

C1	D2	Q120	*B1	S15	C2
C2	D2	Q121	*A2	S20	B1
C3	C2	Q122	*A2	S21	D2
C4	B2	Q123	*A2	S22	B1
C5	C2			S23	D1
C6	B1	R1	A2	S24	B1
C7	A2	R2	D1	S25	C1
C8	A2	R3	D1	S26	A2
C10	B2	R4	A2	S27	A2
C14	C2	R5	A2	S29	A2
C100	*B1	R6	A2	S30	A2
C101	B1	R7	B2	S31	A1
C102	*B1	R8	B2	S32	D1
C103	*B1	R9	A2		
		R10	A2		
CN1	C2	R11	A2		
CN2	A2	R12	B2		
CN3	A1	R13	B2		
CN4	A1	R14	B2		
CN5	A1	R15	B2		
CN6	A1	R16	A2		
		R17	B2		
D1	*A2	R18	A2		
D2	*A2	R19	B2		
D3	A2	R20	B2		
D4	*B2	R21	B2		
D5	*B2	R22	B2		
D6	*B2	R23	*D2		
D7	*A2	R24	*D2		
D8	*B2	R25	*C2		
D9	*B2	R26	*D2		
D10	*B2	R27	*D2		
D11	*A2	R28	A2		
D12	*D2	R29	*A2		
D13	*D1	R30	C2		
D14	*D1	R31	*A2		
D15	*D1	R32	*A2		
D16	*D1	R33	C2		
D17	*C1	R34	*C2		
D18	*C1	R35	*C2		
D19	*C1	R36	*C2		
D20	*C1	R37	*C2		
D21	*C1	R70	*C1		
D22	*C1	R100	B1		
D23	*D1	R101	A2		
D24	*D1	R102	A2		
D25	*B2	R103	A2		
D26	*B2	R104	B1		
D27	*B2	R105	A2		
D28	*D1	R106	A2		
D29	*D1	R107	A2		
D30	*B1	R108	*A2		
D31	*C2	R109	*A1		
D32	*C2	R110	*A2		
		R111	*A1		
EN1	D1	R112	*A1		
		R113	*A1		
IC1	C2	R114	*A1		
IC2	C2	R115	*A1		
IC3	C2	R116	*A2		
IC4	A2	R117	*A2		
		R118	*A2		
Q1	D2	R119	*A2		
Q2	D2	R120	*A1		
Q3	C2	R121	*A1		
Q4	D2	R122	*A1		
Q5	D2	R123	*A1		
Q6	C2				
Q7	C2	RB1	C2		
Q8	C2	RB2	C2		
Q9	C2				
Q100	A2	RV1	C2		
Q101	A2	RV2	D2		
Q102	A1	RV3	C2		
Q103	A1	RV4	D2		
Q104	A2	RV5	B1		
Q105	A2				
Q106	A1	S1	D2		
Q107	A1	S2	D1		
Q108	*A1	S3	B2		
Q109	A2	S4	B2		
Q110	A2	S5	C1		
Q111	A2	S6	C1		
Q112	A2	S7	C1		
Q113	A2	S8	C1		
Q114	A1	S9	C1		
Q115	A1	S10	D1		
Q116	A2	S11	B2		
Q117	A2	S12	B2		
Q118	A1	S13	B2		
Q119	A1	S14	C2		



SW-1232 -A SIDE-
SUFFIX: -14



SW-1232 -B SIDE-
SUFFIX: -14

HDLA1500 (UCJ, CE)
HDLA1505 (UCJ, CE) J, E
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Sony Corporation

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