

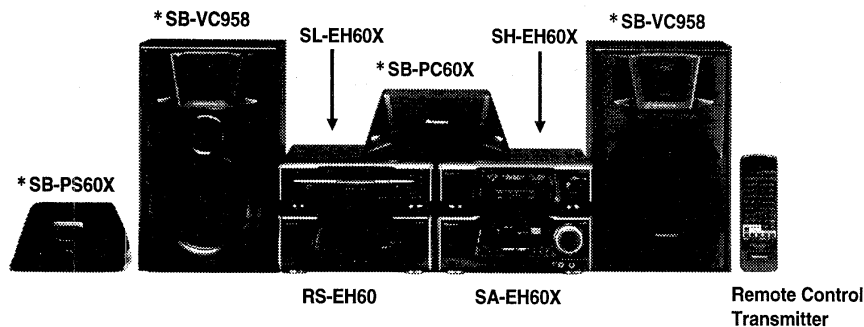
# Service Manual

Sound Processor

Sound Processor

System: SC-VC958

SH-EH60X



Colour

(K) ..... Black

Area

(GK) ..... China



## Specifications

### ■ EQ/SFP Section

#### MANUAL GEQ:

Center frequency: 100 Hz, 315 Hz, 1 kHz, 3.15 kHz, 10 kHz

Level control:  $\pm 3, 6, 9$  dB

EQ SPACE mode (3 modes): HALL, CLEAR, HEAVY

Acoustic Image Selector: 36 pattern

### ■ Pre-amplifier Section

#### Input sensitivity/impedance:

VCR: 250 mV/15 kohm

VDP: 250 mV/15 kohm

#### Output level:

VCR RECOUT: 150 mV/1.5 kohm

#### VIDEO OUTPUT:

MONITOR OUT: 1 V/75 ohm

VCR REC OUT: 1 V/75 ohm

### ■ DOLBY PRO LOGIC Section

PRO LOGIC mode: SURROUND, 3 STEREO

CENTER mode: NORMAL, WIDE, PHANTOM

DELAY TIME: 20 ms (Fixed)

### ■ Spectrum analyzer Section

Display mode: NORMAL, PEAKHOLD, AUROLA

### ■ General

Dimensions: 287 (W)/89 (H)/237.5 (D) mm

Weight: 1.1 kg

**Note:** Specifications are subject to change without notice.

Weight and dimensions are approximate.

#### System/SC-VC958:

Sound processor: SH-EH60X, Tuner/Amplifier: SA-EH60X, Compact disc changer: SL-EH60X, Cassette deck: RS-EH60, Front speakers: \*SB-VC958, Center speaker: \*SB-PC60X, Surround speakers: \*SB-PS60X

**Notes:** \* ..... Made in MESA

### ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# Panasonic®

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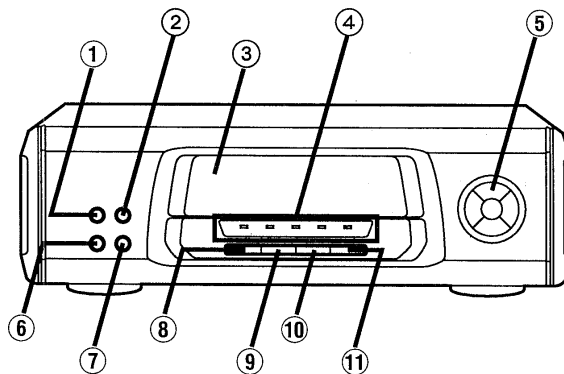
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### NOTE:

Refer to the service manual for Model No. SA-EH60X (ORDER No. AD9612217C3) for information on "Accessories", "Stacking the Components", "Connections" and "Packaging".

## ■ Location of Controls



- ① EQ SPACE on/flat button (EQ SPACE ON/FLAT)
- ② Display mode select/demonstration button (DISP MODE/-DEMO)
- ③ Display
- ④ DOLBY PRO LOGIC indicators (SURROUND, 3 STEREO, NORMAL, WIDE, PHANTOM)
- ⑤ Multi control buttons (MULTI CONTROL, ►, ▲, ◀, ▼)
- ⑥ Acoustic image EQ button (ACOUSTIC IMAGE EQ)
- ⑦ EQ SPACE preset/manual select button (PRESET/MANUAL)
- ⑧ DOLBY PRO LOGIC on/off button (DOLBY PRO LOGIC, OFF/ON)
- ⑨ DOLBY PRO LOGIC mode select button (MODE)
- ⑩ DOLBY PRO LOGIC test signal button (TEST)
- ⑪ DOLBY PRO LOGIC center mode button (CENTER MODE)

## Changing the tone

### 使用外部音質時

按PRESET/MANUAL(預約/手動)鈕, 選擇需要的方式。  
每次按PRESET/MANUAL鈕, EQ和SPACE方式將如下進行切換:

HEAVY → CLEAR → HALL → MANUAL

- 1 HEAVY(加強): 用於加強搖滾樂和其它音樂的“節奏感”。Ⓐ
- 2 CLEAR(清晰): 用於澄清爵士樂等的高音域。Ⓑ
- 3 HALL(音樂廳): 用於增強低音和寬廣的音域, 使您感覺彷彿在大型音樂廳裏一樣。Ⓒ
- 4 MANUAL(手動): 請參看第 4 頁上的“更精細的音質改變”一節。

取消EQ SPACE效果時

按EQ SPACE ON/FLAT鈕, 選擇“FLAT”。

### 注意

- 在HALL、CLEAR、HEAVY或MANUAL方式下進行錄音。
- 在音質操作使用中進行錄音時, 將使“HALL”、“CLEAR”、“HEAVY”和“MANUAL”指示燈消失, 而在錄音結束後會重新亮起。

### 聲像EQ(均衡)的使用

該功能可讓您簡單地製作更加接近自己所想像的聲音。

圖中所示為調整比普通聲音高2級的HEAVY(加強)、3級SHARP(鮮明)的例子。

- 1 按ACOUSTIC IMAGE EQ(聲像均衡)鈕。
- 2 按▲▼◀▶鈕, 使游標移到需要的音像位置。

HEAVY(▲): 當需要更強烈的音響時

LIGHT(▼): 當需要更輕快的音響時

SOFT(◀): 當需要更柔和的音響時

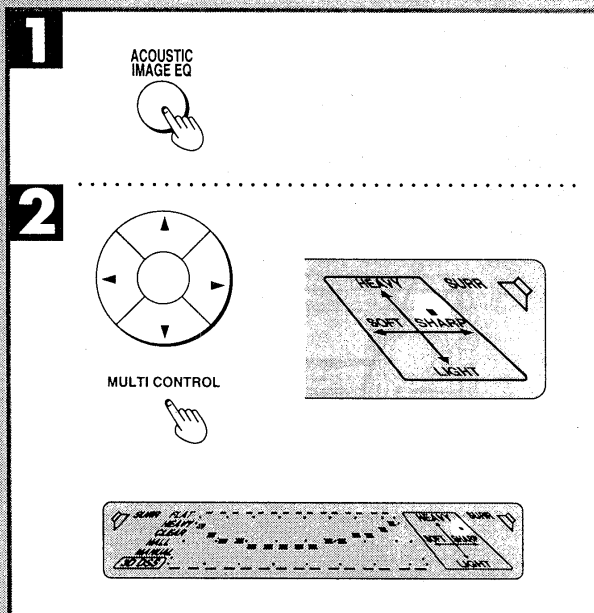
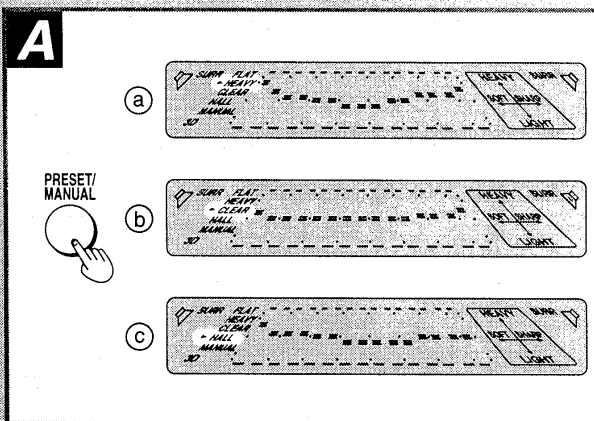
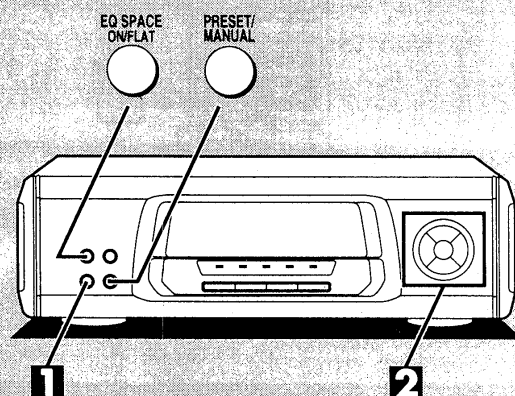
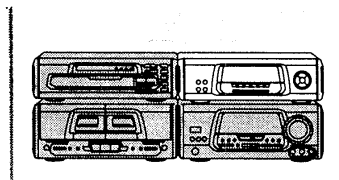
SHARP(▶): 當需要更鮮明的音響時

取消ACOUSTIC IMAGE EQ效果時

按EQ SPACE ON/FLAT鈕, 選擇“FLAT”。

### 注意

- 可以將聲音配合製作總共36種形象。
- 調整結果將被自動儲存在記憶中。當您再次按ACOUSTIC IMAGE EQ鈕, 選擇了FLAT時, 會自動選擇最後所選擇的形象。



## ■ Concerning the display

### 更精細的音質改變

選擇MANUAL(手動)可製作更加精細的音響。

- 1 按PRESET/MANUAL(預約/手動)鈕, 選擇MANUAL。
- 2 按◀▶鈕, 選擇需要的寄存器。  
◀: 上部寄存器  
▶: 下部寄存器
- 3 按▲▼鈕, 調節寄存器電平。  
▲: 增強寄存器  
▼: 減弱寄存器

#### 僅供參考:

上部寄存器: 包括管樂、弦樂、鈸和三角鐵

- 增強上部寄存器時: 圓潤的管樂和弦樂柔和, 增加精細和光彩
- 減弱上部寄存器時: 安靜的音樂, 其“力度”得到擺脫音樂中部
- 中部寄存器: 歌聲(嗓音)
- 增強中部寄存器時: 給予音樂以力量和節奏, 使歌聲明快、嘹亮
- 減弱中部寄存器時: 安靜的音樂, 使歌聲深沉, 緩和音響的緊張感

下部寄存器: 包括低音和鼓樂

- 增強下部寄存器時: 使強音、低音變得穩重, 使低音得到擴展
- 減弱下部寄存器時: 減少低音音響的雜訊, 降低音響的壓抑感

調整結果將被自動儲存在記憶中。當您再次按MANUAL鈕, 選擇了FLAT時, 會自動播放最後所選擇的音質。

### 顯示須知

音響處理器可用下述3種類型的顯示, 表示各個音域的電平。**A**

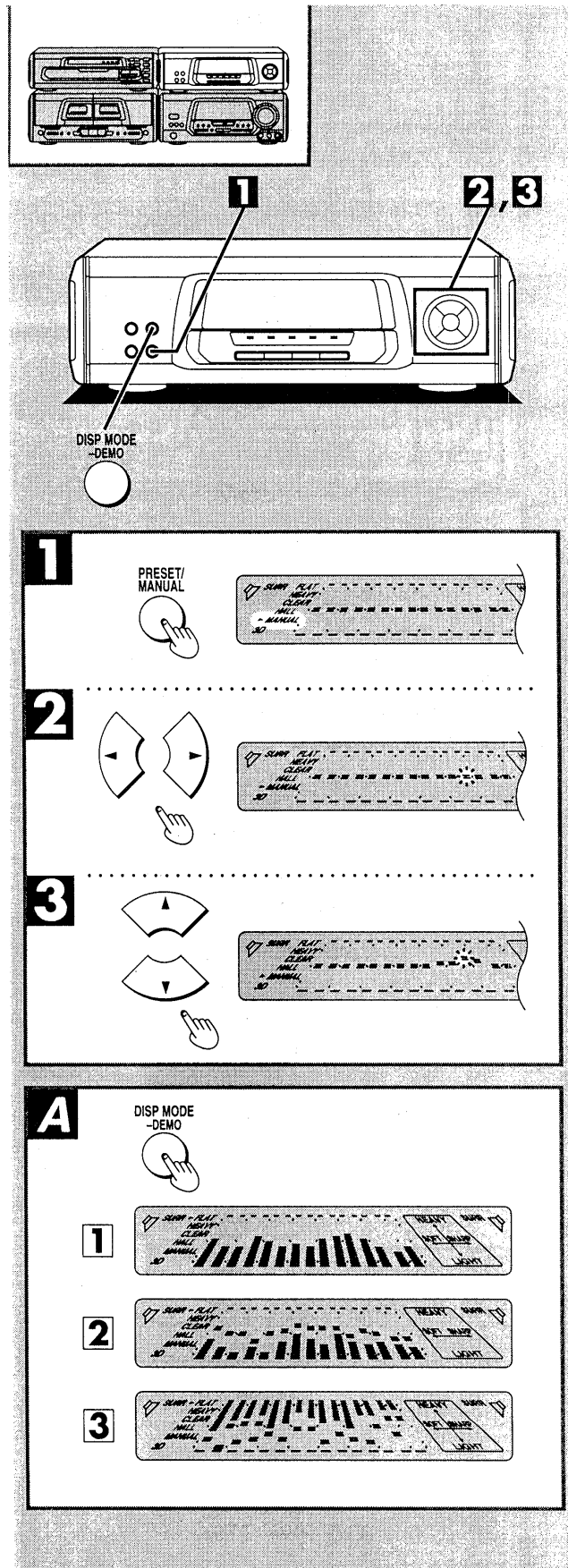
輕按DISP MODE/-DEMO(顯示方式/示範)鈕。

頻譜顯示將如下改變:

- 1 普通顯示  
該顯示可表明各個音域中音響的強度。
- 2 峰值保持顯示  
各個音域的峰值音響將在顯示中出現後逗留約1秒鐘。
- 3 極光顯示  
各個音域的峰值音響將以倒立形式顯示。

#### 僅供參考:

按住DISP MODE/-DEMO鈕時, 將開始示範功能。



## ■ Enjoying sound with DOLBY PRO LOGIC

將前、中心和環場聲揚聲器結合起來，便可欣賞生動真實的SURROUND方式，或方向感強的3 STEREO方式。

### SURROUND(環場聲)

由於可再生深沉、動感的音響，使杜比環場聲錄製的影像軟片或激光片可以為觀眾提供置身於電影院中的感覺。


欣賞SURROUND(環場聲)時，必須連接環場聲揚聲器。

### 3 STEREO(三維立體聲)

欣賞音頻/影像信號源時，可以使聲音更加清晰、更加真實和方向感更好。3 STEREO可用於非DOLBY SURROUND(杜比環場聲)錄製的信號源。

欣賞3 STEREO時，必須連接中心揚聲器。

經杜比實驗證明公司授權製造。

杜比，DOLBY，雙D標章  及PRO LOGIC為杜比實驗證明公司之商標。

### 設定中心方式和揚聲器輸出電平時

用於杜比前邏輯系統時，為了有效地播放低音，必須設定在中心方式。

請根據中心揚聲器的尺寸，設定中心方式。

為了使聲音產生移動感和清晰的方向感，調節各個揚聲器的輸出電平是很重要的。請在欣賞測試信號中，將輸出調節到正確的電平。

- 1 打開電源。
- 2 按DOLBY PRO LOGIC OFF/ON(杜比前邏輯開/關)鈕，選擇“ON”。
- 3 按MODE(方式)鈕，選擇“SURROUND”或“3 STEREO”。  
每次按該鈕，顯示將如下改變：  
SURROUND → 3 STEREO
- 4 按CENTER MODE(中心方式)鈕，選擇“NORMAL”方式。  
每次按該鈕，顯示將如下改變：  
NORMAL → WIDE → PHANTOM

#### 注意

當您在步驟③中選擇了“3 STEREO”時，“PHANTOM”將不會顯示出來。

**NORMAL(普通):**

當中心揚聲器小於前揚聲器時

**WIDE(寬廣):**

當中心揚聲器等於或大於前揚聲器時

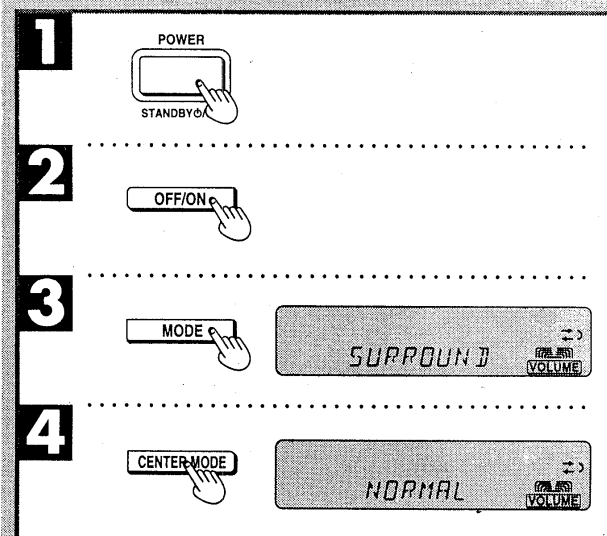
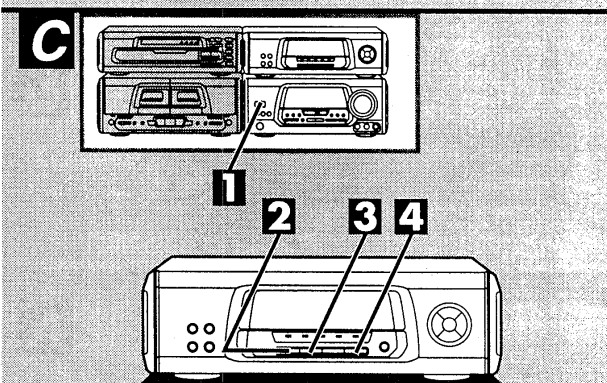
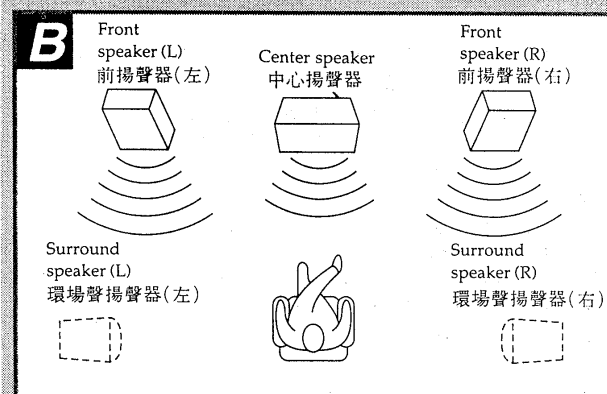
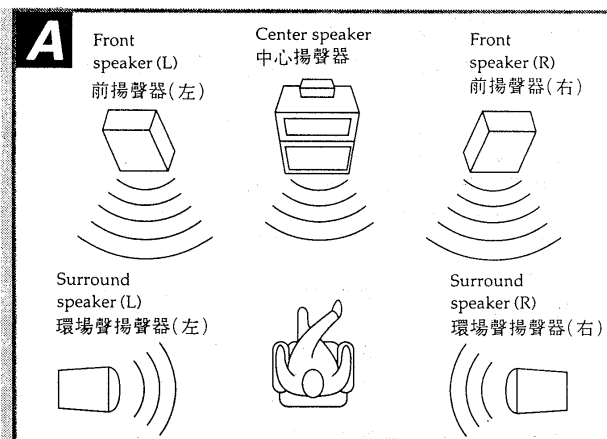
**PHANTOM(幻想): 僅用於SURROUND**

當未連接中心揚聲器時

#### 注意

在PHANTOM方式中，應該傳送給中心揚聲器的聲音將被均等地分給左右兩個前揚聲器。

(繼續至下頁)



## ■ Enjoying with SURROUND and 3 STEREO

### 5 按TEST(測試)鈕, 輸出測試信號。

測試信號會依下列順序發送:

用於SURROUND(環場聲)方式時

→ 前揚聲器(左) → 中心揚聲器  
→ 環場聲揚聲器(左、右) ← 前揚聲器(右) ←

#### 注意

當中心方式處於PHANTOM(幻想)時, 中心揚聲器不會發出測試信號。

用於3 STEREO(三維立體聲)方式時

→ 前揚聲器(左) → 中心揚聲器 → 前揚聲器(右)

### 6 旋轉VOLUME(音量)鈕, 設置在平常欣賞信號源的音量。

### 7 按遙控器上的CENTER(-)或(+)鈕, 或SURROUND(-)或(+)鈕, 調節輸出電平的平衡。

站在欣賞位置, 調節各個揚聲器的電平, 直至其都很容易分辨。把前揚聲器的輸出電平作為零點計算時, 輸出電平可以在±12分貝的範圍內改變。

#### 注意

- 只有您正在調節的揚聲器才會輸出測試信號, 直至調節完成為止, 請不要重複順序。
- 請記住, 如果您在步驟[3]中選擇了3 STEREO(三維立體聲)時, 將無法調節環場聲揚聲器的輸出電平。

停止播放測試信號時:

按TEST(測試)鈕。

用SURROUND(環場聲)和3 STEREO(三維立體聲)進行欣賞時

#### A

進行任何操作之前, 已經設定好中心方式, 並調整好揚聲器輸出電平?

觀看影像時, 請打開電視機的電源, 並將電視機設定在影像方式。

### 1 按INPUT SELECTOR(輸入選擇)鈕, 選擇需要的外部信號源。

每次按該鈕, 信號源將如下切換:

[SC-VC958]		[SC-VC858]	
TUNER → CD → TAPE		TUNER → CD → TAPE	
↑		↑	
PHONO ← VDP ← VCR ← EXT		VDP(AUX) ← VCR(EXT)	

上述指示對應於調諧器/音響處理器後板上的端子連接。請將顯示內容切換至您打算使用的信號源。

#### 注意

在調諧器方式下, 將無法欣賞SURROUND或3 STEREO。

### 2 按DOLBY PRO LOGIC OFF/ON(杜比前邏輯開/關)鈕, 選擇“ON”。

### 3 按MODE(方式)鈕, 選擇“SURROUND(環場聲)”或“3 STEREO(三維立體聲)”。

### 4 開始播放需要的信號源。

操作外部信號源時, 請參看指定機件附帶的使用說明書。

#### 注意

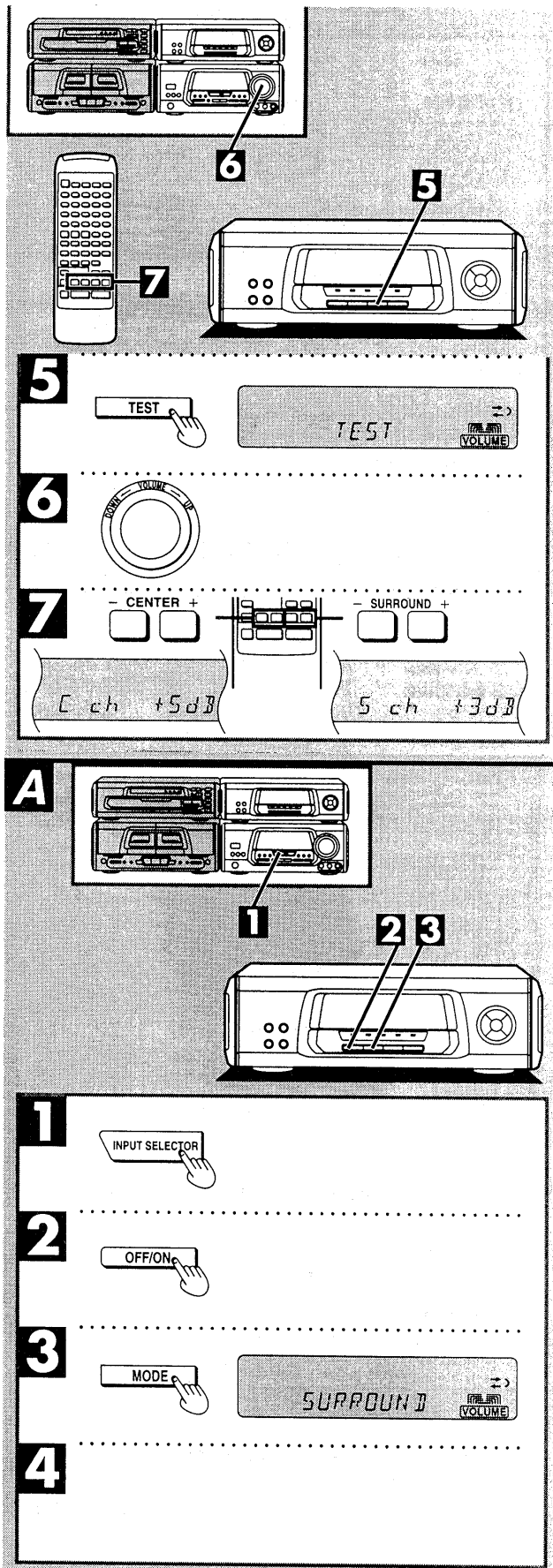
當採用SURROUND時, 請使用杜比環場聲錄製的軟片。

關閉DOLBY PRO LOGIC(杜比前邏輯)系統時:

按DOLBY PRO LOGIC OFF/ON鈕, 選擇“OFF”。

#### 注意

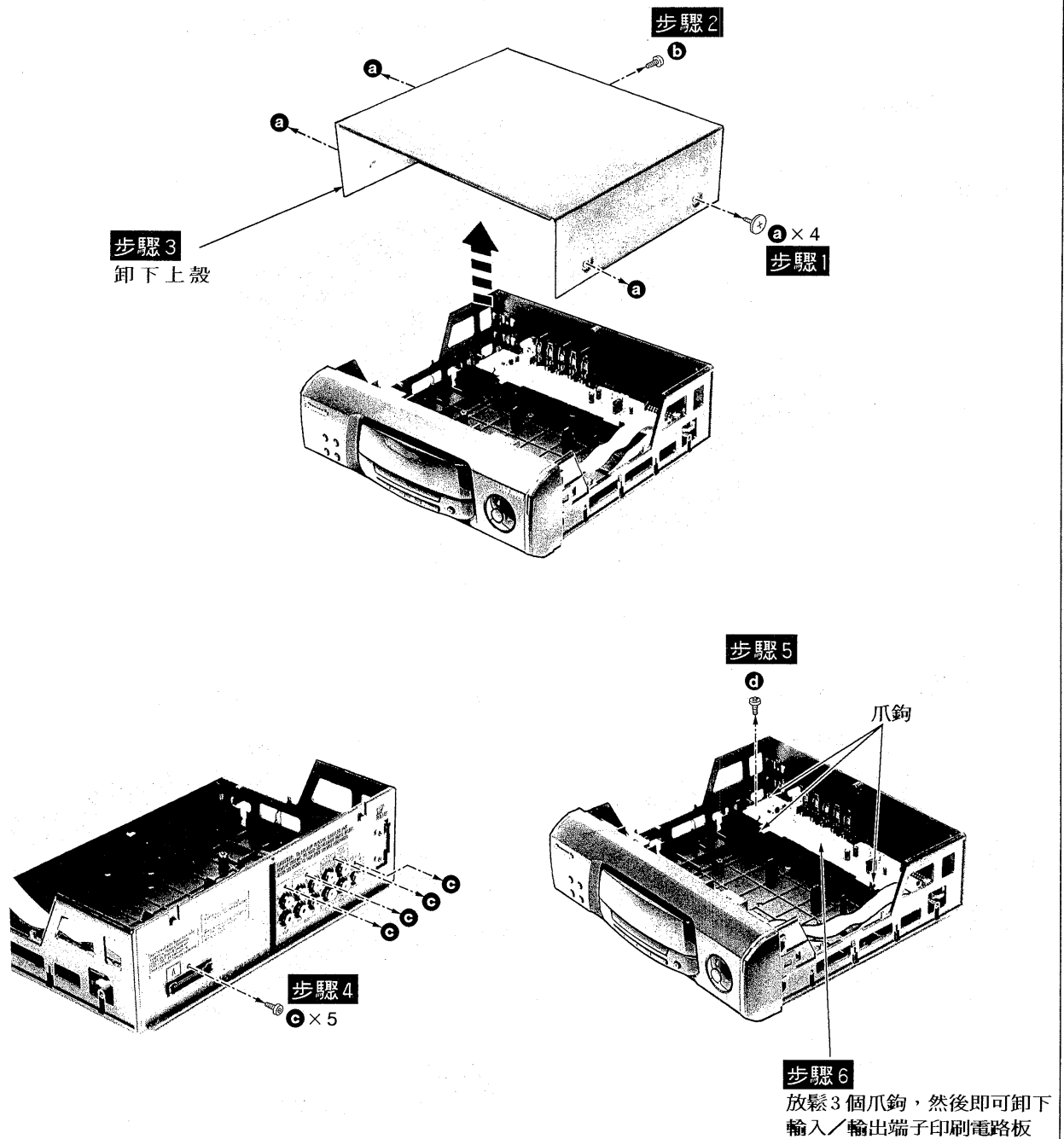
不能錄製SURROUND和3 STEREO方式所產生的聲音效果。



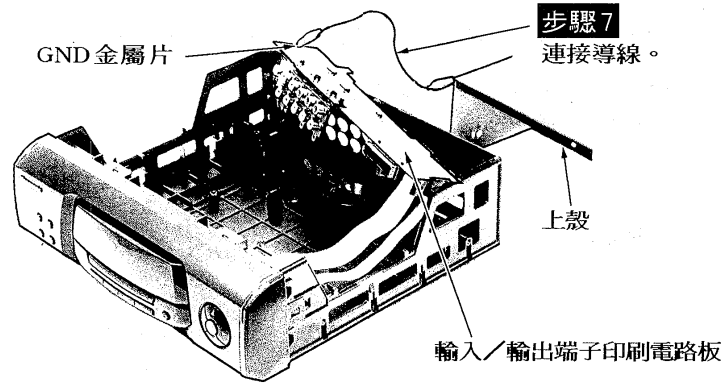
## ■ Operation Check and Main Component Replacement Procedures

- 附註：**
1. 此部份是說明主要印刷電路板的操作檢查程序及主要部品的更換程序。
  2. 操作檢查及更換部品完成後，要重新安裝時，請依各個程序的相反步驟操作。  
至於特殊安裝程序將於必要時另作說明。

### 1. 檢查輸入／輸出端子印刷電路板

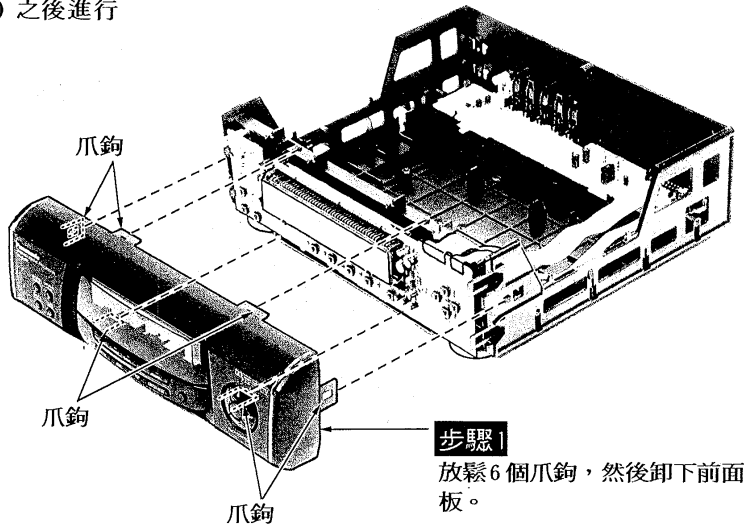


• 檢查輸入／輸出端子印刷電路板，如下圖所示。



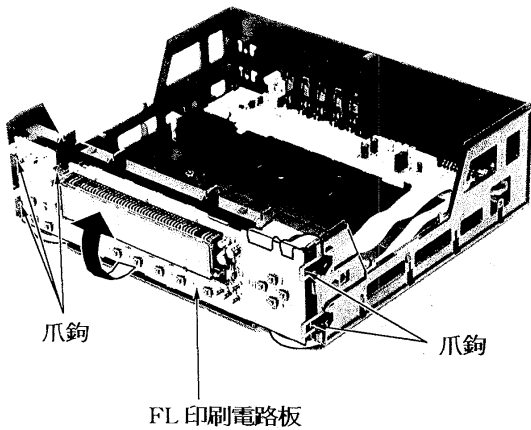
2. 檢查FL印刷電路板

• 請依照第7頁各印刷電路板檢查程序第1項 ( 步驟1 ~ 步驟3 ) 之後進行

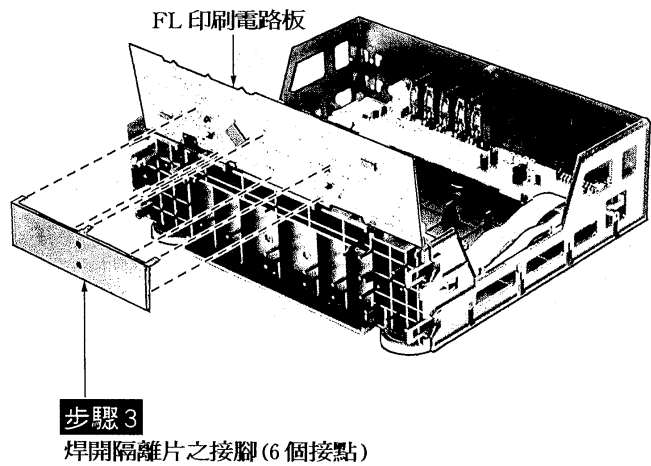


步驟2

放鬆5個爪鉤，然後卸下FL



• 檢查FL印刷電路板，如下圖所示。





## ■ To Supply Power Source

本機SH-EH60X 電源供給被設計從調諧器／放大器SA-EH60X來操作的。

當測試或維修時，要單獨操作本機SH-EH60X，而沒有電源從調諧器／放大器SA-EH60X來供給，所以要使用下列方法來得到電源。

### 電源供應到影像選擇電路

1. 將J124及R753短路起來。
2. 將J306、J307、J305及J302全部短路起來。(A點)
3. 將J126及連接器J101的第⑰腳短路起來。(B點)
4. 將J125及J101短路起來。(C點)
5. 供應+5V直流電源到J125及C104銅箔面的正極(+)部份。
6. 如下所示，連接直流電源供應器。

- 直流電源供應器的+12V端子連接到C點。
- 直流電源供應器的GND端子連接到A點。
- 直流電源供應器的-12V端子連接到B點。

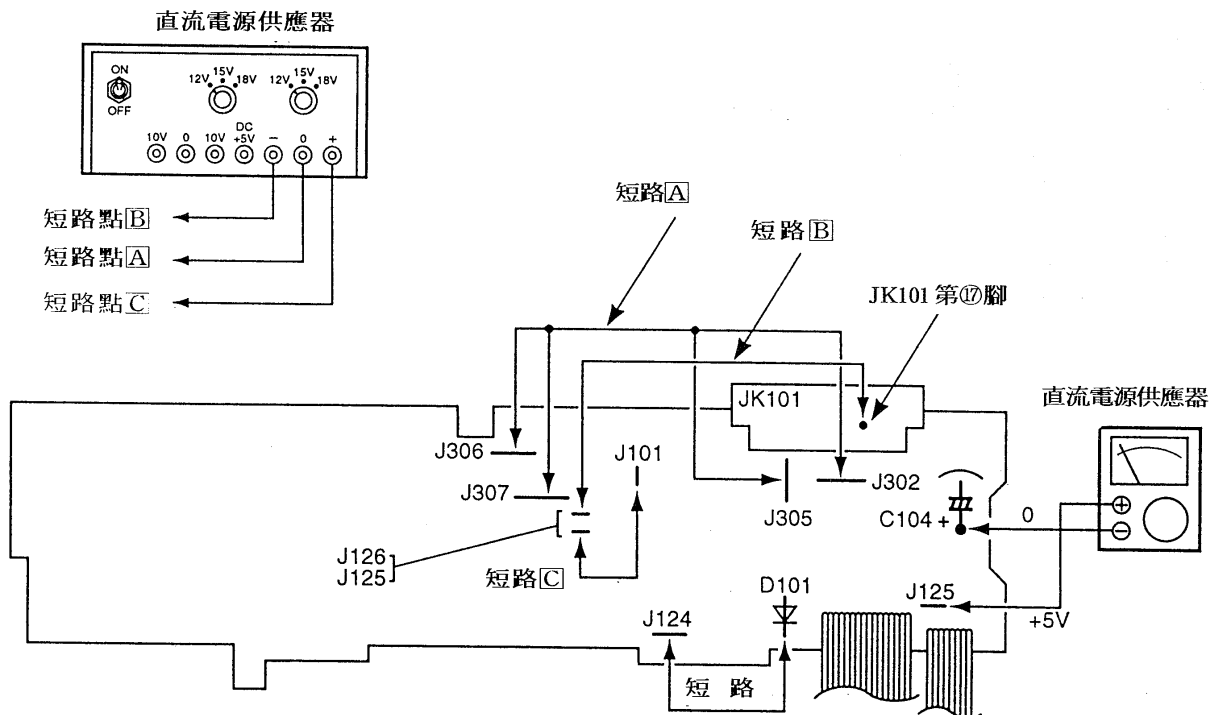
### 檢查信號

1. 輸入聲音信號而且確定有從端子輸。

附註：

當檢查卡拉OK功能時，必須要連接到調諧器／放大器SA-EH60X。

	輸入	輸出
左聲道	VCR-左聲道端子	VCR-左聲道端子
右聲道	VCR-右聲道端子	VCR-右聲道端子



## ■ Schematic Diagram

Page

<b>A</b> FL CIRCUIT .....	11,12
<b>B</b> IN/OUT TERMINAL CIRCUIT .....	12

- This schematic diagram may be modified at any time with the development of new technology.

### Notes:

- **S301**: EQ SPACE on/off switch (EQ SPACE ON/FLAT)
- **S302**: Acoustic image EQ switch (ACOUSTIC IMAGE EQ)
- **S303**: EQ SPACE preset/manual select switch (PRESET/MANUAL)
- **S304**: Display mode select/demonstration switch (DISP MODE/-DEMO)
- **S305**: DOLBY PRO LOGIC on/off switch (DOLBY PRO LOGIC, OFF/ON)
- **S306**: DOLBY PRO LOGIC mode select switch (MODE)
- **S307**: DOLBY PRO LOGIC test signal switch (TEST)
- **S308**: DOLBY PRO LOGIC center mode select switch (CENTER MODE)
- **S310 ~ S313**: Multi control switch

(MULTI CONTROL, S310: ▼, S311: ◀, S312: ▲, S313: ▶)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

- Voltage values and waveforms are measured as indicated in the schematic diagram when test points between **AG** and **VG**, and between **DG** and **CT-G**, and between **AG** and **DG** are shorted.

- Important safety notice:

Components identified by  $\triangle$  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- **Caution!**

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

- **Voltage and signal line**

—————▶ : Positive voltage line

-----▶ : Negative voltage line

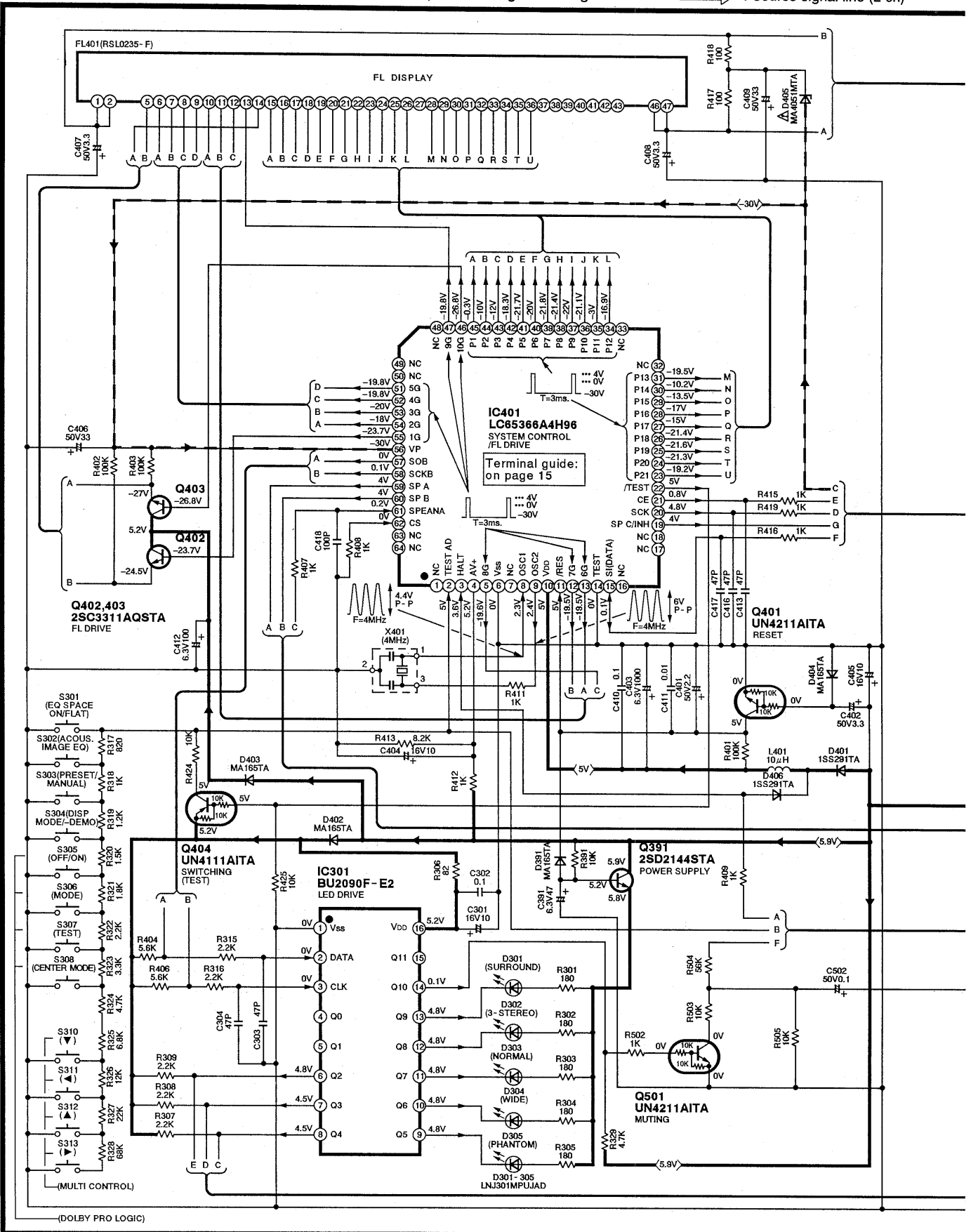
⇨ : Source signal line (L-ch)

**A** FL CIRCUIT (P.C.Board: on page 13)

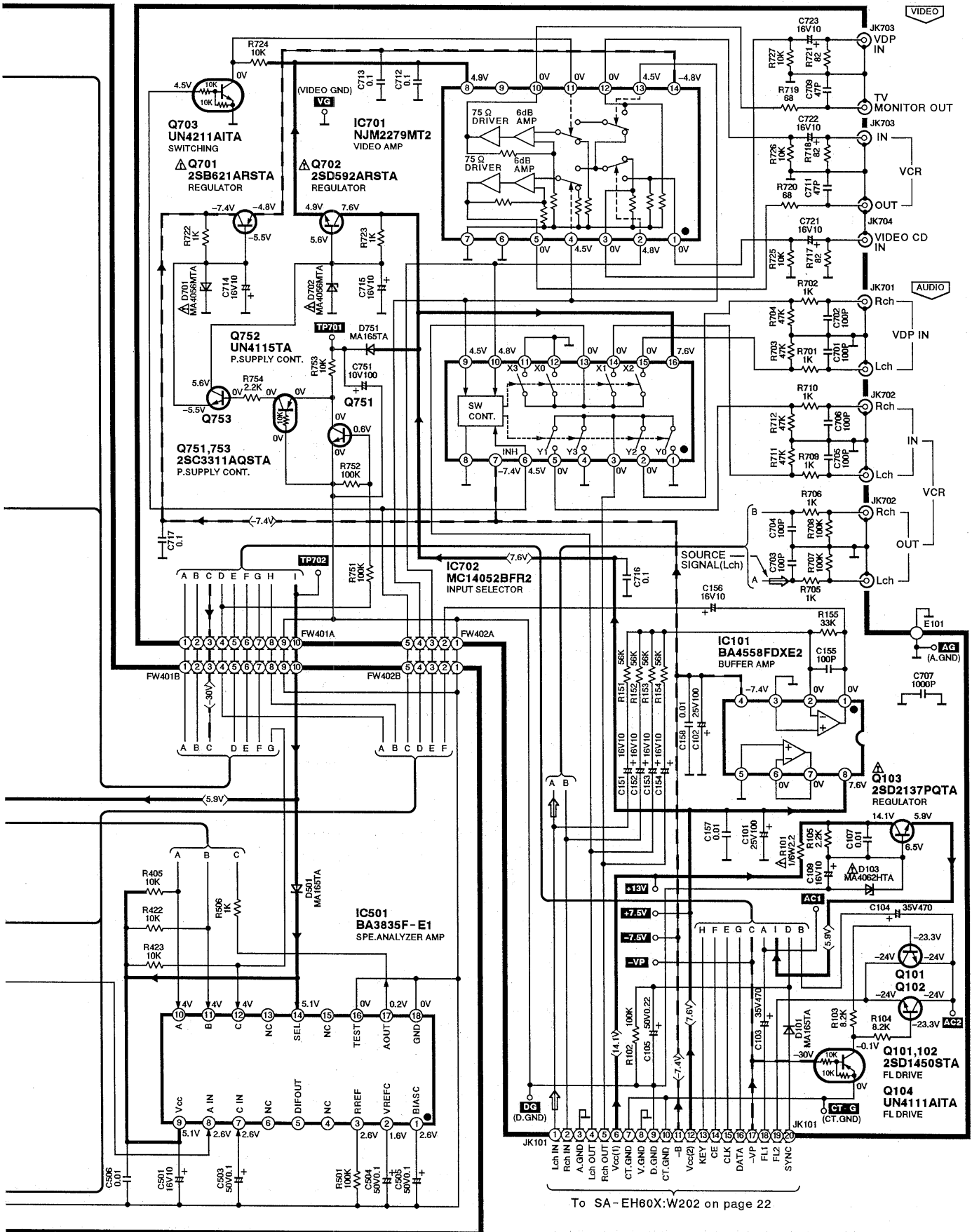
————— : Positive voltage line

- - - - - : Negative voltage line

⇨ : Source signal line (L-ch)



**B** IN/OUT TERMINAL CIRCUIT (P.C.Board: on page 13)

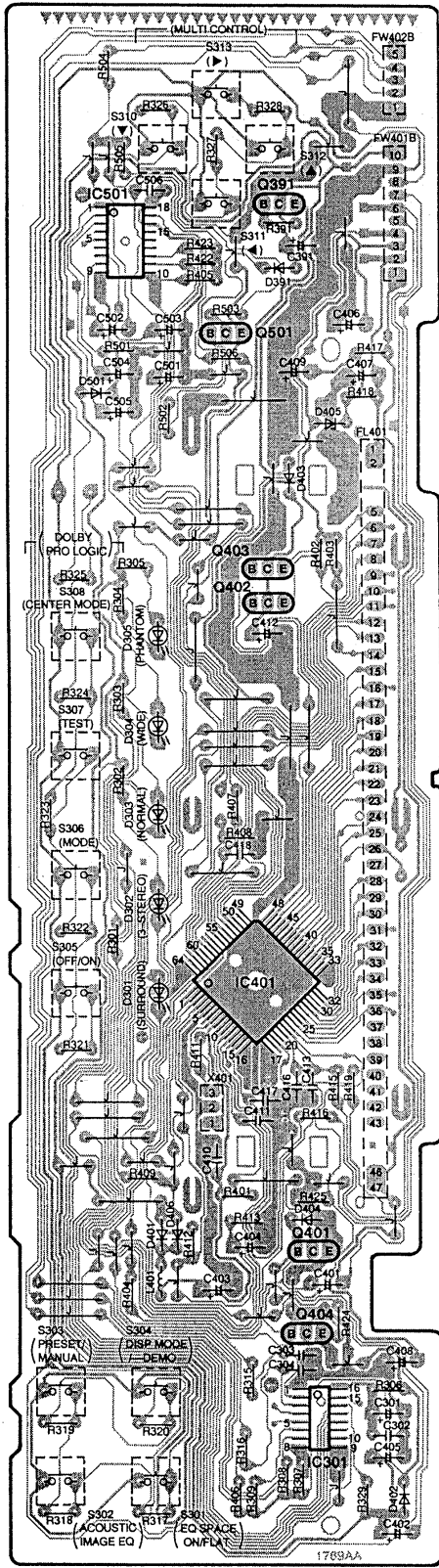


To SA - EH60X:W202 on page 22

# Printed Circuit Board Diagram

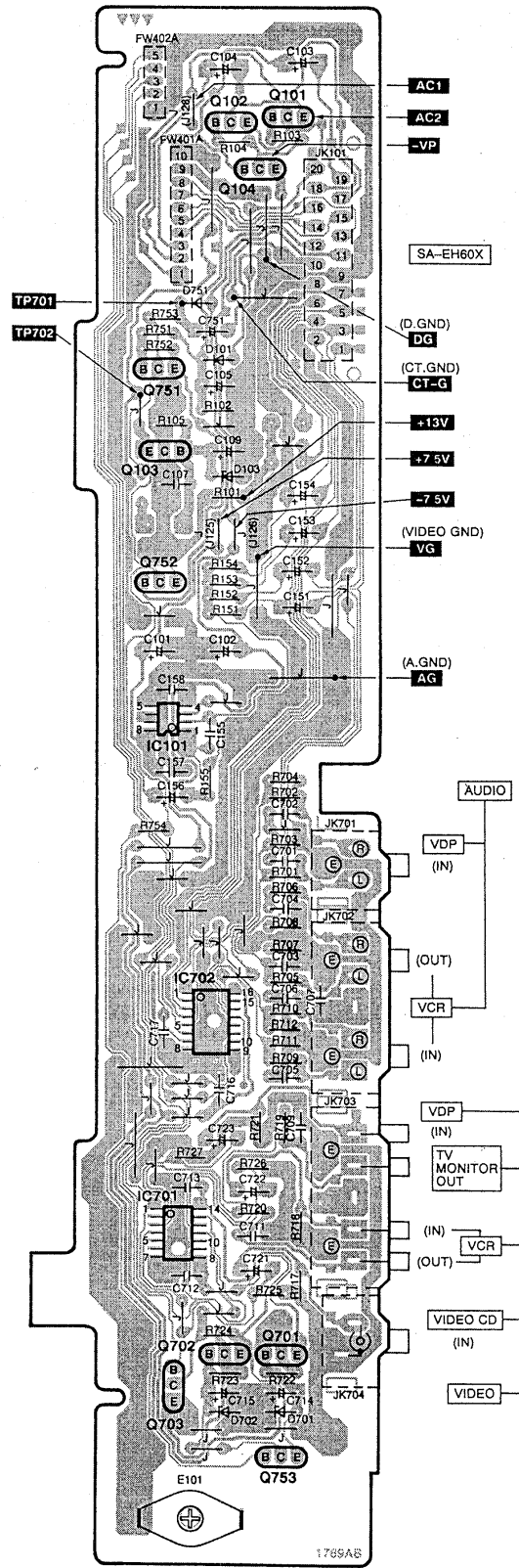
This circuit board diagram may be modified at any time with the development of new technology.

**A** FL P.C.B.



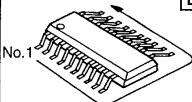
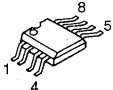
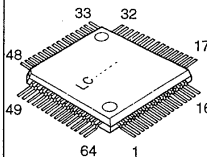
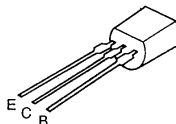
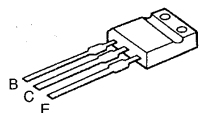
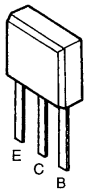
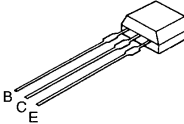
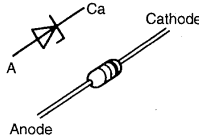
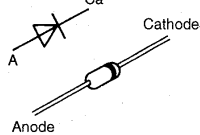
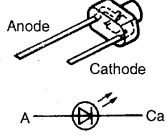
(REP2474A-M)

**B** IN/OUT TERMINAL P.C.B.

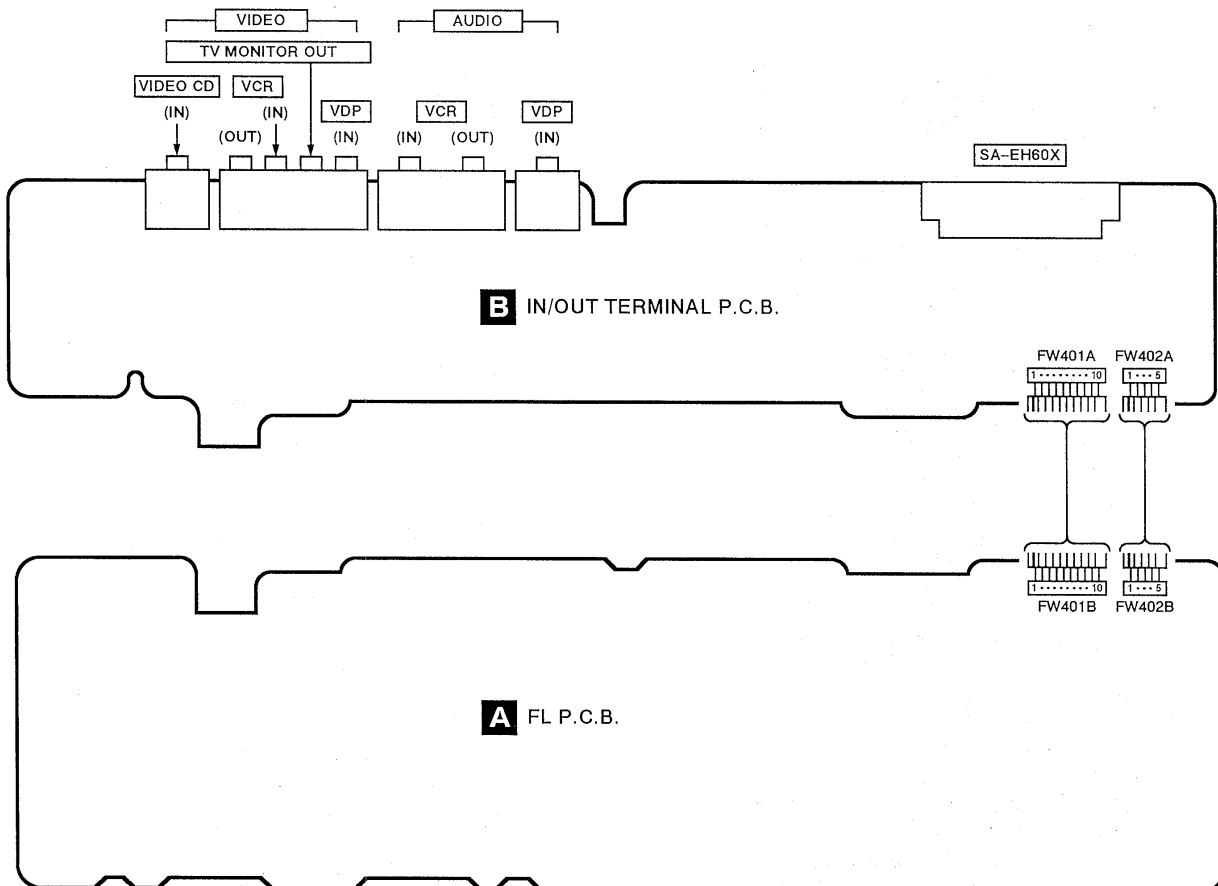


(REP2474A-M)

## ■ Type Illustration of IC's, Transistors and Diodes

 <p>No.1</p>	<table border="1"> <tr> <td>NJM2279MT2</td> <td>14PIN</td> </tr> <tr> <td>BU2090F-E2</td> <td>16PIN</td> </tr> <tr> <td>MC14052BFR2</td> <td>16PIN</td> </tr> <tr> <td>BA3835F-E1</td> <td>18PIN</td> </tr> </table>	NJM2279MT2	14PIN	BU2090F-E2	16PIN	MC14052BFR2	16PIN	BA3835F-E1	18PIN	<p>BA4558FDXE2</p> 	<p>LC65366A4H96</p> 	<p>2SB621ARSTA 2SD592ARSTA</p> 	<p>2SD2137PQTA</p> 
	NJM2279MT2	14PIN											
BU2090F-E2	16PIN												
MC14052BFR2	16PIN												
BA3835F-E1	18PIN												
	<p>2SC3311AQSTA 2SD1450STA UN4111AITA UN4115TA UN4211AITA</p>	<p>2SD2144STA</p> 	<p>MA4051MTA MA4056MTA MA4062HTA</p> 	<p>1SS291TA MA165TA</p> 	<p>LNJ301MPUJAD</p> 								

## ■ Wiring Connection Diagram



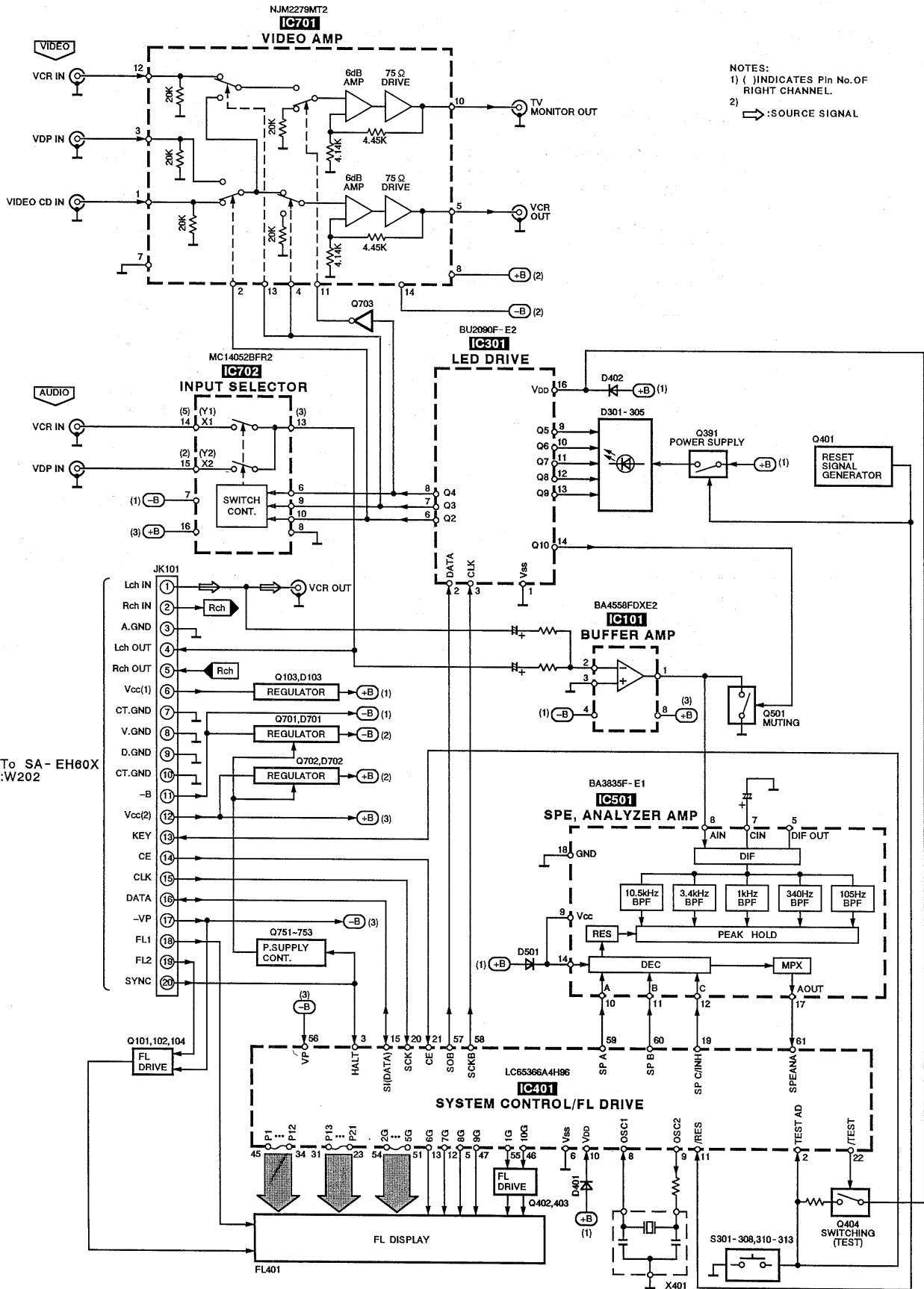
## Terminal Function of IC's

### ● IC401 (LC65366A4H96)

接腳號碼	接腳名稱	I/O區分	功能說明
1	NC	—	不使用，開路
2	TEST-AD		測試模式按鍵信號輸入端
3	HALT		電源不良檢知信號輸入端
4	AV+	—	類比電路(+5V)的電源供應端
5	8G	○	格子點信號輸出端
6	VSS	—	接地端
7	NC	—	不使用，開路
8	OSC1		振盪器連接端(4 MHz)
9	OSC2	○	
10	VDD	—	電源供應端
11	/RES		重置信號輸入端
12-13	7G-6G	○	格子點信號輸出端
14	TEST	—	不使用，開路
15	SI	I/O	從SA-EH60X傳送來的通訊資料信號端
16-18	NC	—	不使用，開路
19	SP-C/INH	○	光譜分析IC輸出的選擇端
20	SCK	○	從SA-EH60X傳送來的通訊信號端(時脈信號輸入)

接腳號碼	接腳名稱	I/O區分	功能說明
21	CE	○	從SA-EH60X傳送來的通訊信號端(晶片致能信號輸入)
22	/TEST	○	測試端
23-31	P21-P13	○	區段信號輸出端
32-33	NC	—	不使用，開路
34-45	P12-P1	○	區段信號輸出端
46-47	10G-9G	○	格子點信號輸出端
48-50	NC	—	不使用，開路
51-55	5G-1G	○	格子點信號輸出端
56	VP	—	負電壓供應端
57	SOB	○	串列資料信號輸出端
58	SCKB	○	串列時脈信號輸出端
59	SP-A	○	光譜分析IC輸出的選擇端
60	SP-B	○	
61	SPEANA		光譜分析IC的類比信號輸入端
62	CS		晶片選擇輸入端
63-64	NC	—	不使用，開路

# Block Diagram



To SA - EH60X :W202



## ■ Replacement Parts List (Electrical)

**Notes:** \*Important safety notice:

Components identified by  $\Delta$  mark have special characteristics important for safety.  
 Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.  
 When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.  
 \*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)  
 Parts without these indications can be used for all areas.  
 \* [M] Indicates in Remarks columns parts that are supplied by MESA.  
 \*The "(SF)" mark denotes the standard part.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		X401	EFOEC4004T4	OSCILLATOR	[M]
IC101	BA4558FDXE2	IC	[M]			DISPLAY TUBE	
IC301	BU2090F-E2	IC	[M]	FL401	RSLO235-F	DISPLAY TUBE	[M]
IC401	LC65366A4H96	IC	[M]			SWITCH(ES)	
IC501	BA3835F-E1	IC	[M]	S301-308	EVQ21405R	SW	[M]
IC701	NJM2279MT2	IC	[M]	S310-313	EVQ21405R	SW	[M]
IC702	MC14052BFR2	IC	[M]			EARTH TERMINAL(S)	
		TRANSISTOR(S)		E101	SNE1004-2	EARTH TERMINAL	[M]
Q101, 102	2SD1450RTA	TRANSISTOR	[M]			JACK(S)	
Q103 $\Delta$	2SD2137PQTA	TRANSISTOR	[M]	JK101	RJT065K20	SYSTEM	[M]
Q104	UN4111	TRANSISTOR	[M]	JK701	SJF3068-7N	VDP IN	[M]
Q391	2SD2144S	TRANSISTOR	[M]	JK702	SJF3069N	VCR IN/OUT	[M]
Q401	UN4211	TRANSISTOR	[M]	JK703	SJF3069-3N	VDP/VCR IN/OUT	[M]
Q402, 403	2SC3311A-Q	TRANSISTOR	[M]	JK704	SJFD7-5	VCD IN	[M]
Q404	UN4111	TRANSISTOR	[M]				
Q501	UN4211	TRANSISTOR	[M]				
Q701 $\Delta$	2SB621A-R	TRANSISTOR	[M]				
Q702 $\Delta$	2SD592ARSTA	TRANSISTOR	[M]				
Q703	UN4211	TRANSISTOR	[M]				
Q751	2SC3311A-Q	TRANSISTOR	[M]				
Q752	UN4115	TRANSISTOR	[M]				
Q753	2SC3311A-Q	TRANSISTOR	[M]				
		DIODE(S)					
D101	MA165	DIODE	[M]				
D103 $\Delta$	MA4062-H	DIODE	[M]				
D301-305	LNJ301MPUJAD	DIODE	[M]				
D391	MA165	DIODE	[M]				
D401	1SS291TA	DIODE	[M]				
D402-404	MA165	DIODE	[M]				
D405 $\Delta$	MA4051MTA	DIODE	[M]				
D406	1SS291TA	DIODE	[M]				
D501	MA165	DIODE	[M]				
D701, 702 $\Delta$	MA4056MTA	DIODE	[M]				
D751	MA165	DIODE	[M]				
		COIL(S)					
L401	RLQA100JT-Y	COIL	[M]				
		OSCILLATOR(S)					

## Resistors and Capacitors

Notes: \* Capacity values are in microfarads (uF) unless specified otherwise, P = Pico-farads (pF) F = Farads (F)  
\* Resistance values are in ohms, unless specified otherwise, 1K = 1,000 (OHM), 1M = 1,000 k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R711, 712	ERDS2TJ473	1/4W 47K [M]	C751	RCE1AKA101BG	10V 100U [M]
			R717, 718	ERDS2TJ820	1/4W 82 [M]			
			R719, 720	ERDS2TJ680T	1/4W 68 [M]			
R101△	ERQ16NKW2R2E	1/6W 2.2 [M]	R721	ERDS2TJ820	1/4W 82 [M]			
R102	ERDS2TJ104	1/4W 100K [M]	R722, 723	ERDS2TJ102	1/4W 1K [M]			
R103, 104	ERDS2TJ822	1/4W 8.2K [M]	R724-727	ERDS2TJ103	1/4W 10K [M]			
R105	ERDS2TJ222	1/4W 2.2K [M]	R751, 752	ERDS2TJ104	1/4W 100K [M]			
R151-154	ERDS2TJ563	1/4W 56K [M]	R753	ERDS2TJ103	1/4W 10K [M]			
R155	ERDS2TJ333	1/4W 33K [M]	R754	ERDS2TJ222	1/4W 2.2K [M]			
R301-305	ERDS2TJ181T	1/4W 180 [M]			CAPACITORS			
R306	ERDS2TJ820	1/4W 82 [M]						
R307-309	ERDS2TJ222	1/4W 2.2K [M]	C101, 102	ECA1EM101B	25V 100U [M]			
R315, 316	ERDS2TJ222	1/4W 2.2K [M]	C103, 104	RCE1VM471BV	35V 470U [M]			
R317	ERDS2TJ821	1/4W 820 [M]	C105	ECEA1HKAR22B	50V 0.22U [M]			
R318	ERDS2TJ102	1/4W 1K [M]	C107	ECBT1E103ZF	25V 0.01U [M]			
R319	ERDS2TJ122	1/4W 1.2K [M]	C109	RCE1CKA100BG	16V 10U [M]			
R320	ERDS2TJ152	1/4W 1.5K [M]	C151-154	RCE1CKA100BG	16V 10U [M]			
R321	ERDS2TJ182	1/4W 1.8K [M]	C155	ECBT1H101KB5	50V 100P [M]			
R322	ERDS2TJ222	1/4W 2.2K [M]	C156	RCE1CKA100BG	16V 10U [M]			
R323	ERDS2TJ332	1/4W 3.3K [M]	C157, 158	ECBT1E103ZF	25V 0.01U [M]			
R324	ERDS2TJ472	1/4W 4.7K [M]	C301	RCE1CKA100BG	16V 10U [M]			
R325	ERDS2TJ682T	1/4W 6.8K [M]	C302	ECBT1H104ZF5	50V 0.1U [M]			
R326	ERDS2TJ123	1/4W 12K [M]	C303, 304	ECBT1H470J5	50V 47P [M]			
R327	ERDS2TJ223	1/4W 22K [M]	C391	RCE0JKA470BG	6.3V 47U [M]			
R328	ERDS2TJ683	1/4W 68K [M]	C401	ECEA1HKA2R2B	50V 2.2U [M]			
R329	ERDS2TJ472	1/4W 4.7K [M]	C402	RCE1HKA3R3BG	50V 3.3U [M]			
R391	ERDS2TJ103	1/4W 10K [M]	C403	RCE0JU102BV	6.3V 1000U [M]			
R401-403	ERDS2TJ104	1/4W 100K [M]	C404, 405	RCE1CKA100BG	16V 10U [M]			
R404	ERDS2TJ562	1/4W 5.6K [M]	C406	ECEA1HKA330B	50V 33U [M]			
R405	ERDS2TJ103	1/4W 10K [M]	C407, 408	RCE1HKA3R3BG	50V 3.3U [M]			
R406	ERDS2TJ562	1/4W 5.6K [M]	C409	ECEA1HKA330B	50V 33U [M]			
R407-409	ERDS2TJ102	1/4W 1K [M]	C410	ECBT1H104ZF5	50V 0.1U [M]			
R411, 412	ERDS2TJ102	1/4W 1K [M]	C411	ECBT1E103ZF	25V 0.01U [M]			
R413	ERDS2TJ822	1/4W 8.2K [M]	C412	ECEA0JKS101B	6.3V 100U [M]			
R415, 416	ERDS2TJ102	1/4W 1K [M]	C413	ECBT1H470J5	50V 47P [M]			
R417, 418	ERDS2TJ101	1/4W 100 [M]	C416, 417	ECBT1H470J5	50V 47P [M]			
R419	ERDS2TJ102	1/4W 1K [M]	C418	ECBT1H101KB5	50V 100P [M]			
R422-425	ERDS2TJ103	1/4W 10K [M]	C501	RCE1CKA100BG	16V 10U [M]			
R501	ERDS2TJ104	1/4W 100K [M]	C502-505	ECEA1HKA0R1B	50V 0.1U [M]			
R502	ERDS2TJ102	1/4W 1K [M]	C506	ECBT1E103ZF	25V 0.01U [M]			
R503	ERDS2TJ103	1/4W 10K [M]	C701-706	ECBT1H101KB5	50V 100P [M]			
R504	ERDS2TJ563	1/4W 56K [M]	C707	ECBT1H102KB5	50V 1000P [M]			
R505	ERDS2TJ103	1/4W 10K [M]	C709	ECBT1H470J5	50V 47P [M]			
R506	ERDS2TJ102	1/4W 1K [M]	C711	ECBT1H470J5	50V 47P [M]			
R701, 702	ERDS2TJ102	1/4W 1K [M]	C712, 713	ECBT1H104ZF5	50V 0.1U [M]			
R703, 704	ERDS2TJ473	1/4W 47K [M]	C714, 715	RCE1CKA100BG	16V 10U [M]			
R705, 706	ERDS2TJ102	1/4W 1K [M]	C716, 717	ECBT1H104ZF5	50V 0.1U [M]			
R707, 708	ERDS2TJ104	1/4W 100K [M]	C721-723	RCE1CKA100BG	16V 10U [M]			
R709, 710	ERDS2TJ102	1/4W 1K [M]						



# Cabinet Parts Location

