

# **AKAI**

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## **Plasma Display**

## **Service Manual**

# **PDP4247**

E-Mail: [customercare@akausa.com](mailto:customercare@akausa.com)

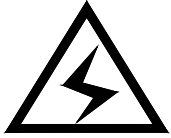
**Technical Support**

**800-726-4405**

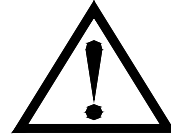
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# Important Information



## WARNING



**SHOCK ! DANGEROUS !  
DO NOT OPEN REAR COVER**

### WARNING:

1. This is a Class A and Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
2. TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE..



This lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

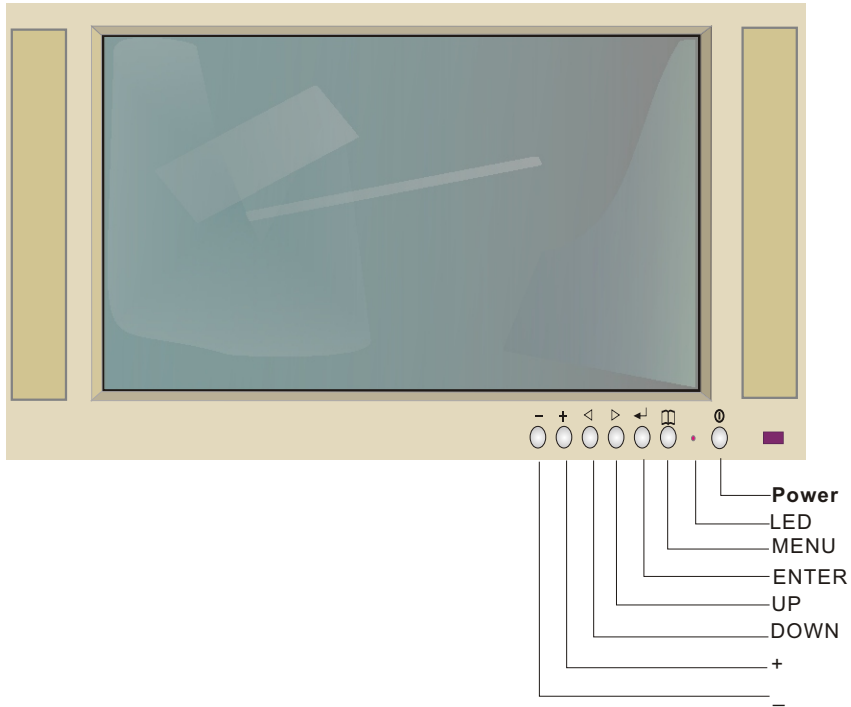


The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

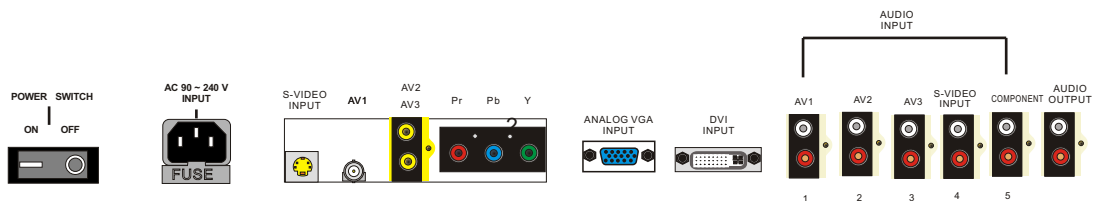
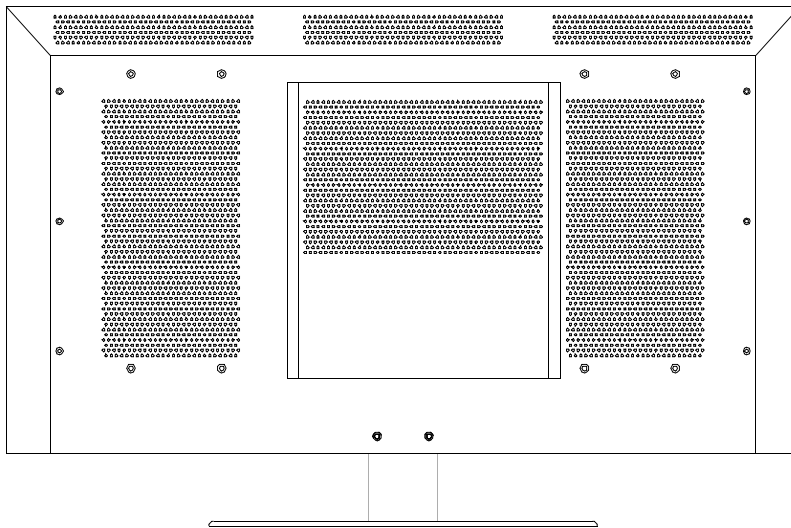
# General Information

**IMPORTANT:**

## Front View



## Rear View

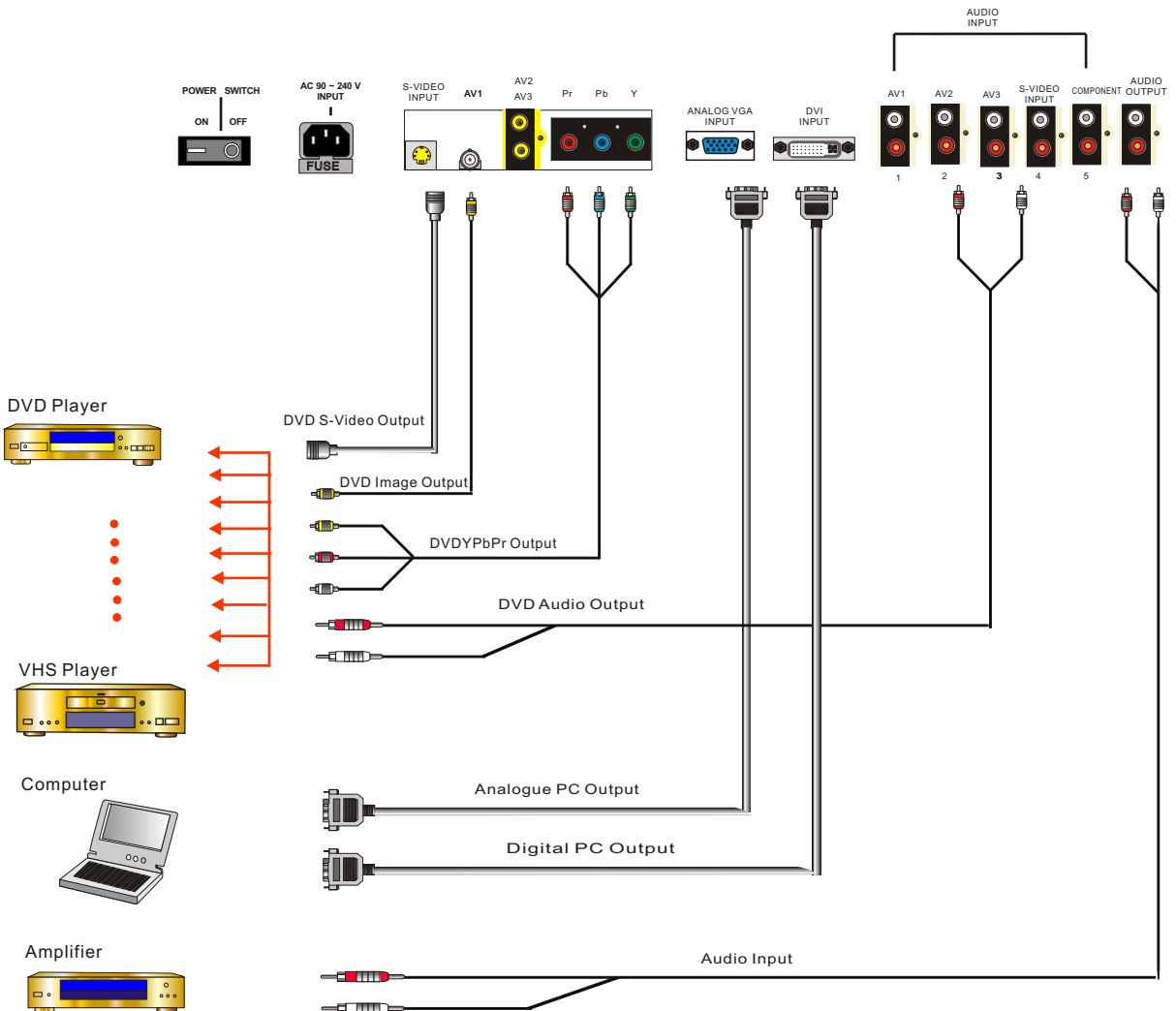
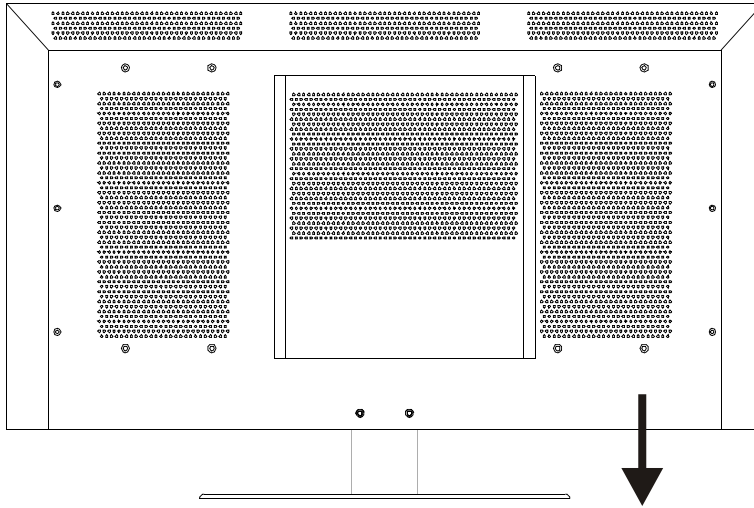


## **Safety Precautions**

Please read the following directions carefully before using the machine.

- . Read each direction carefully, and retain for future reference.
- . Please keep the manual well.
- . Please follow the information to operate this machine.
- . Clean the machine with a slightly damp soft cloth. Do not use spray detergent and abrasive solvent. It can damage the machine screen coating layer.
- . Place the machine on a solid base to avoid dropping and danger.
- . For good ventilation of the machine, please do not place the machine on surfaces such as bed, sofa or rug.
- . Before operating the machine, make sure that the operating voltage of your machine is identical with that of your local power supply, if there is any unclear, please contact with sales dealer.
- . Use only the accessory power cord designed for this product to prevent shock.
- . Do not put anything under the power cord to avoid tramping.
- . If using the same power source with other equipments, please make sure the total current does not over 15A.
- . Never attempt to repair a deflection of the machine by yourself. Always consult a skilled machine service personnel.
- . When the following situations happen, please contact the qualified engineer:
  - A. The power cord or the power socket has damaged.
  - B. If any liquid or solid object fall into the machine through the ventilation holes.
  - C. Exposing the machine to rain or excessive moisture.
  - D. The function does not follow the user manual.
  - E. The machine has ever been dropped or the glass has been broken.
  - F. The function of machine has clear changes.
- . The plasma panel has been built using extremely precise and sophisticated technologies; More than 99.99% of its pixels are effective. A minute number of pixels are missing or constantly lit.
- . Do not display the same picture (pattern) for a long period of time (Do not exceed 20 min). This may cause images remain.
- . No further notice will be provided if the specification and design subjects have been changed.
- . Release the battery of remote controller after long-time replacement (over 1 month) and avoid making destruction of remote controller by liquid.

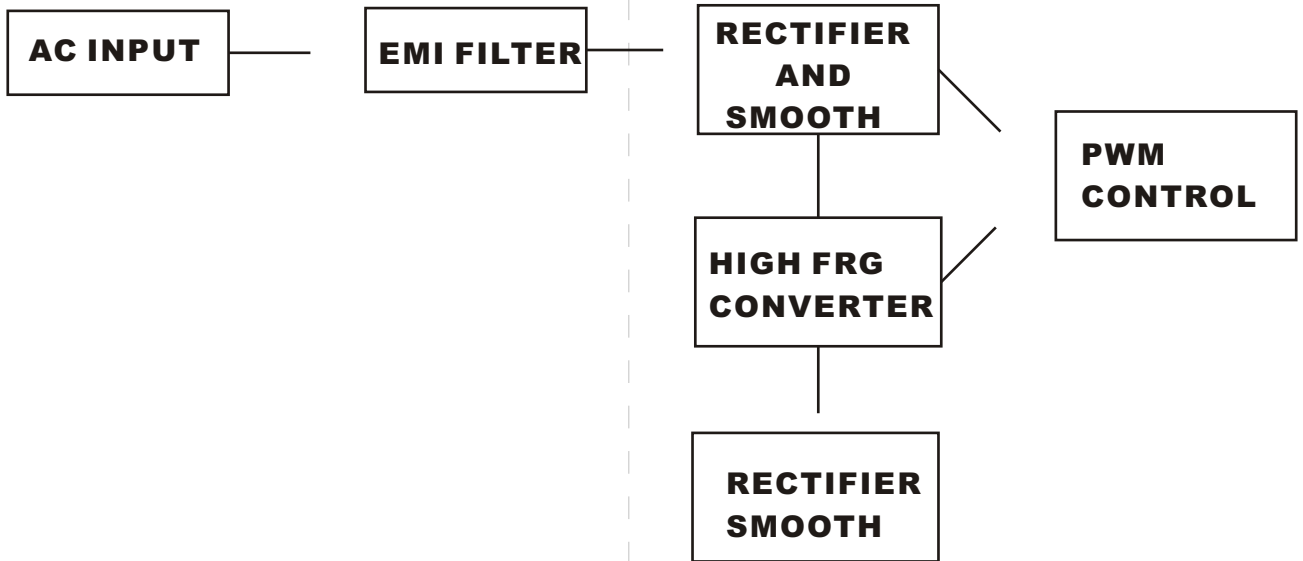
# Peripheral Equipment Connecting



# CIRCUIT DESCRIPTION

## 1. DC POWER SUPPLY

This is the direct current output power supply within the PDP. Its 5V and 12V direct current is output from CN1 that joins the alternating current and via pass-band inductance(L1), Bridge rectifier(BDI) IC, Converter(T1), D3, D4, and Cn2. AC range is from 90V to 264V and the Frequency range is from 50Hz to 60Hz. Max. Power Consumption is 40W.



## **2. VIDEO DISPLAY BOARD**

This is the Video/Audio Processing Device in the PDP.

- 1.** It is compatible with R.G.B.H.V. Analogue Signal, DVI Digital Signal, AV Component Signal, and S-Video Composite Signal.

R.G.B.H.V Analogue Signal is converted to Digital Signal by U4 via the input transferring of (15 PIN) J1. The signal is then transferred to U9 for Video signal output.

(DVI) J2 Signal is digitalized by U4 and then is transferred to U9 for Video Signal Output.

AV Component Signal is input via J3. When the input signal is SDTV, the signal is processed by U5 and is then transmit to U7 for signal processing. After that, the signal is transmit to U9 for Video Signal Output.

When the Input signal is HDTV, the signal is digitalized from Analogue by U4 and is then transmit to U9 for Video Output Processing.

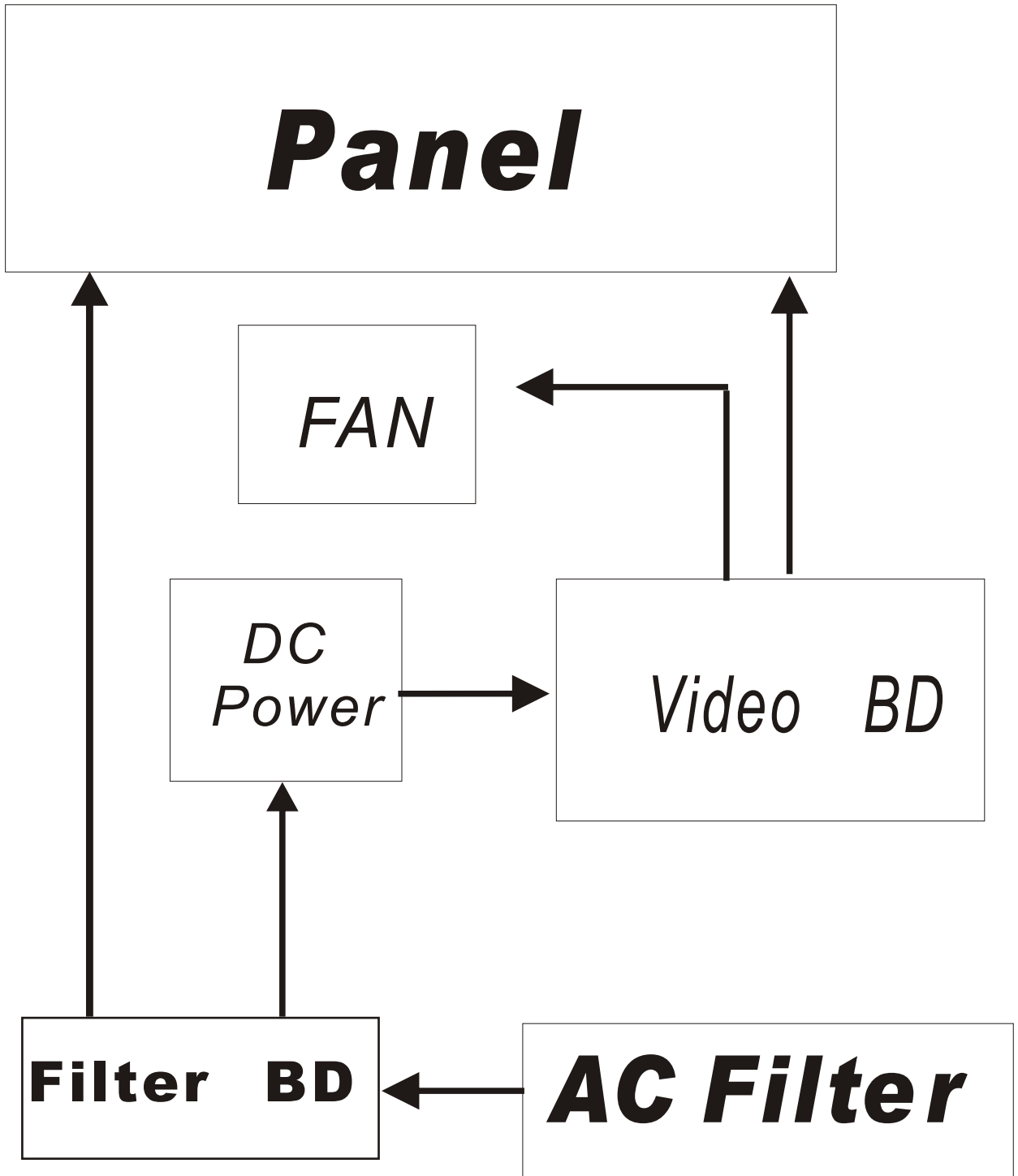
S-Video and AV Composite Signal is input by J4, J5, J6 to U5 for Video Processing. The signal is then transmit to U7 for signal processing and lastly is transmit to U9 for Video Output Processing.

- 2.** Audio is input by J9 and J10 and the first stage processing is made by U32. It is then transmit to U34 for last stage processing and is amplified to the speakers for sound output.

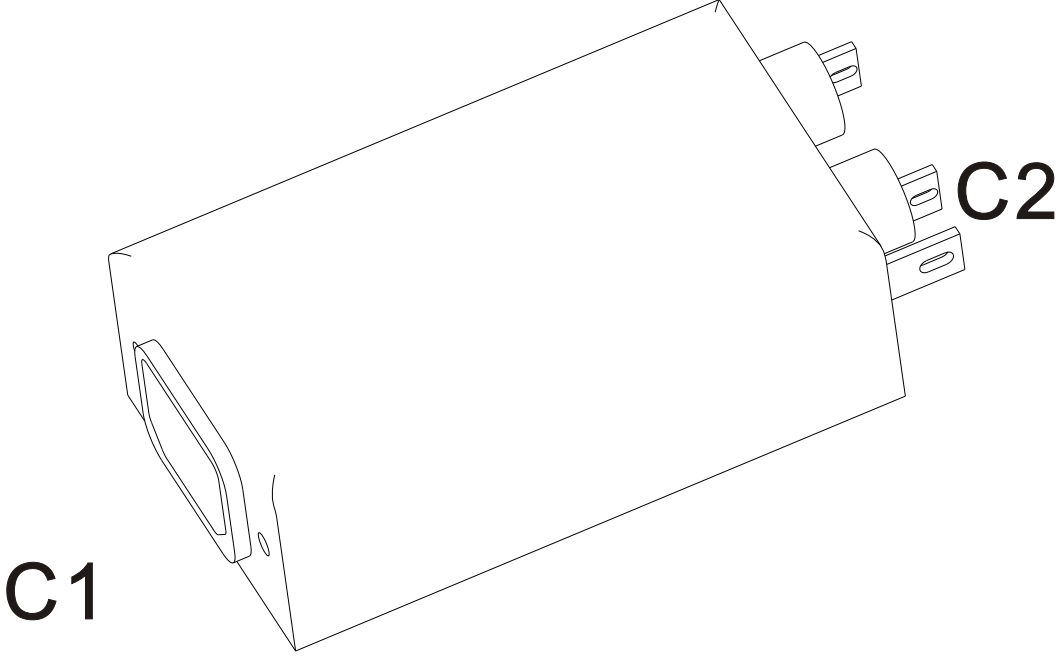
- 3.** Audio is output by J11. Sound input is transmit by J9 and J10 to U32 for first stage processing and is then output by J11.



**1. BLOCK DIAGRAM**

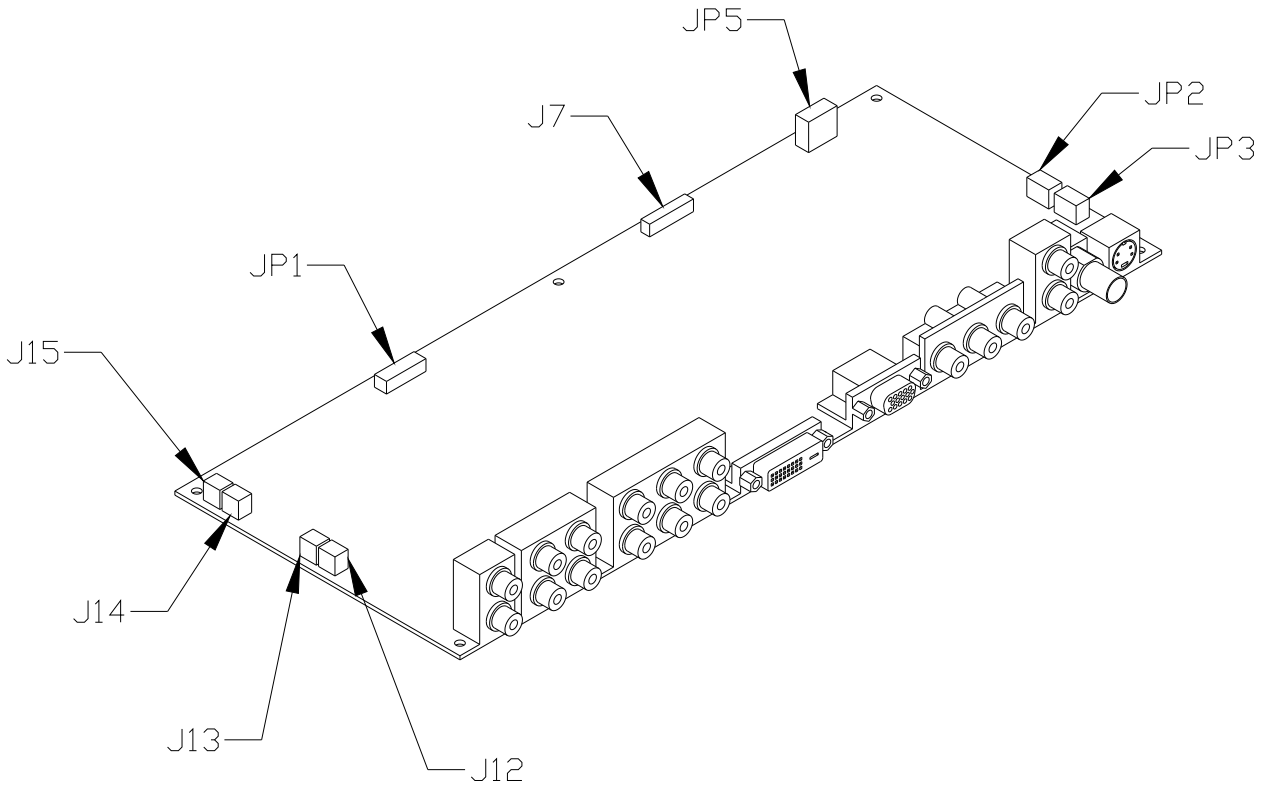


# 2. AC FILTER



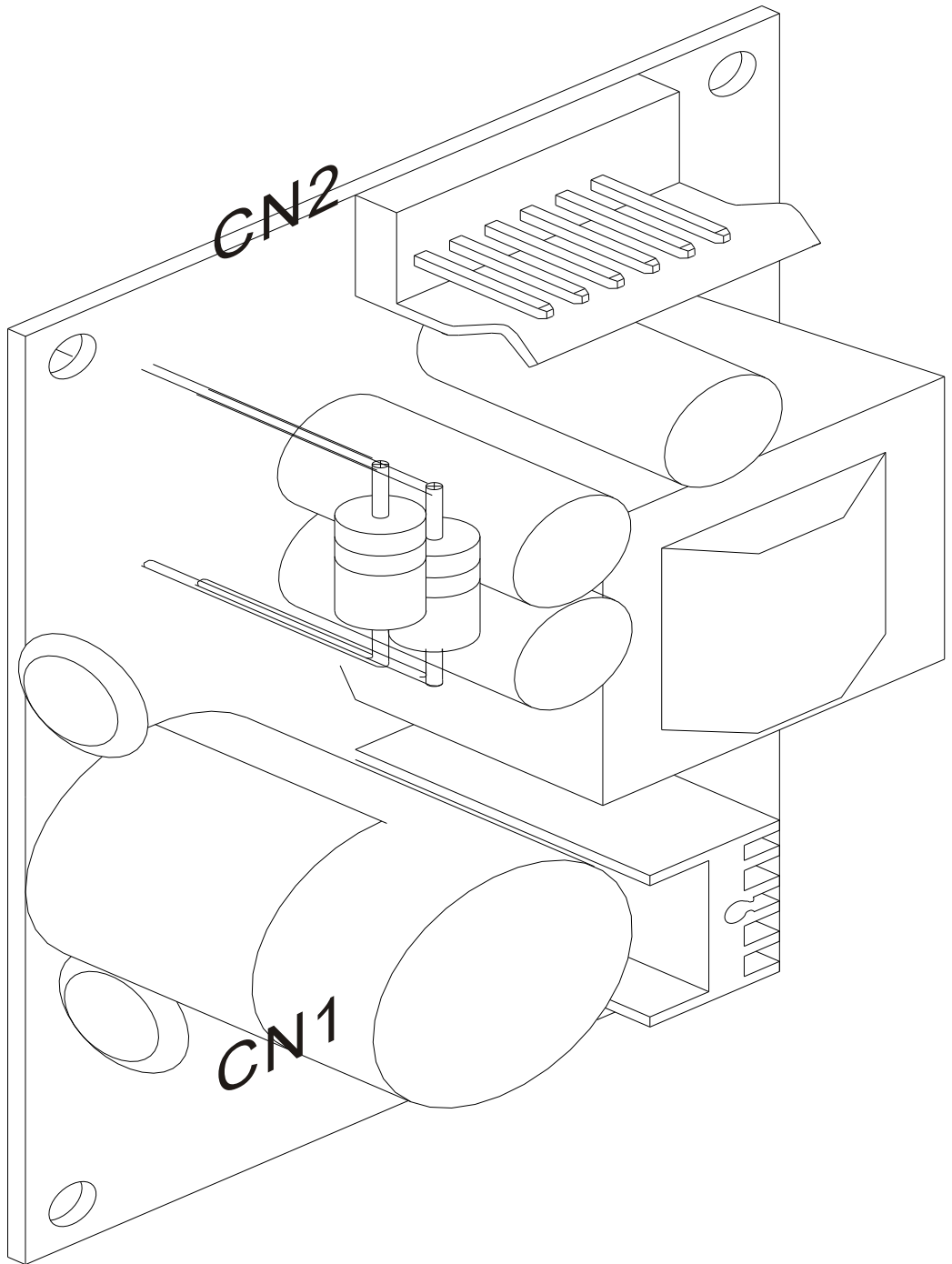
- 1.AC INPUT TO C1
- 2.C2 TO PANEL & DC POWER Cn1

# 3. VIDEO DISPLAY BOARD



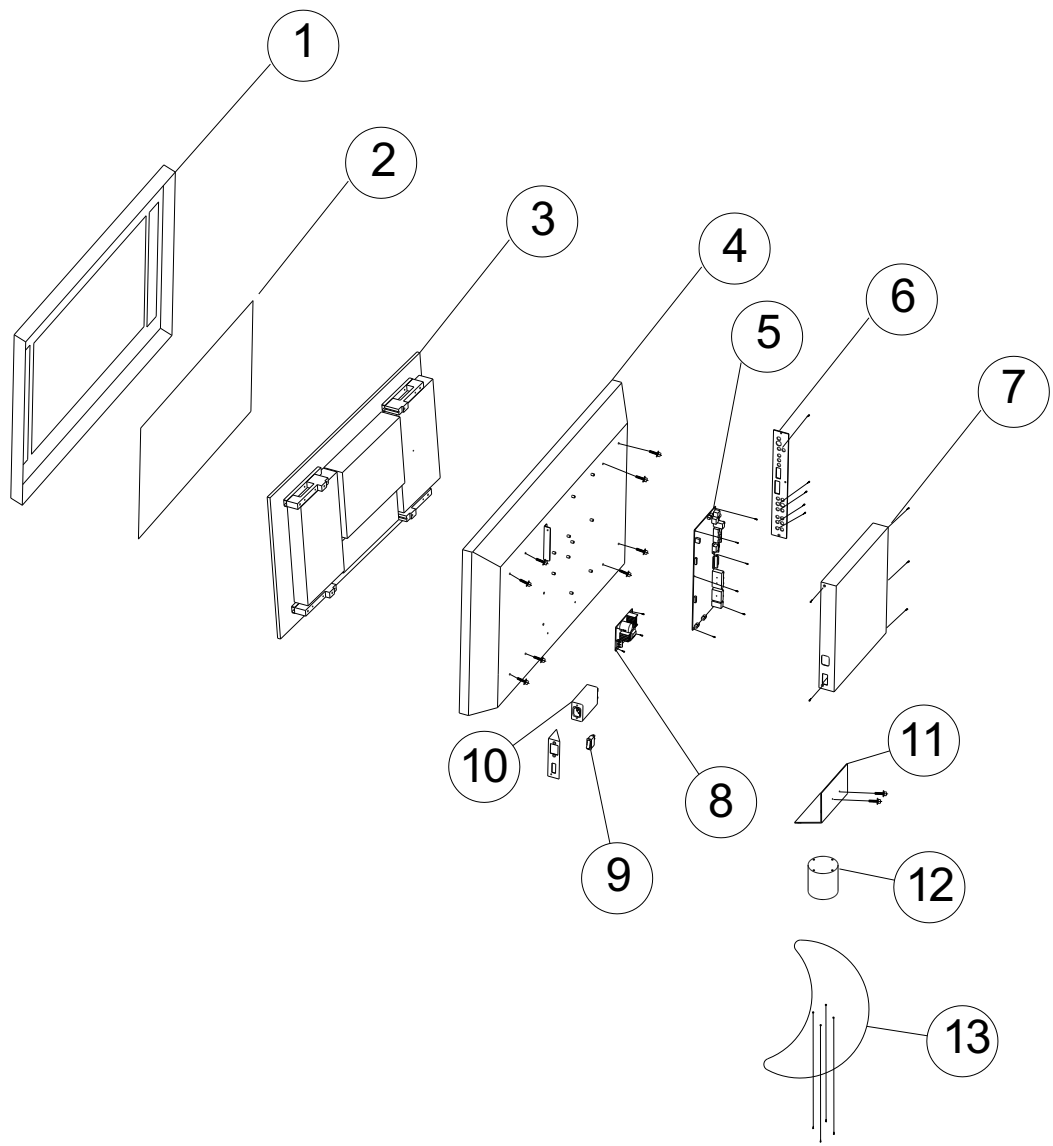
- 1.JP1 TO PANEL
- 2.JP2, JP3 TO FAN
- 3.JP5 TO DC POWER
- 4.J7 TO KEYPAD
- 5.JP12, JP13, JP14, JP15 TO SPEAKER

## 4. DC POWER BOARD



1: CN1 TO AC INPUT  
2: CN2 TO VIDEO BOARD JP5

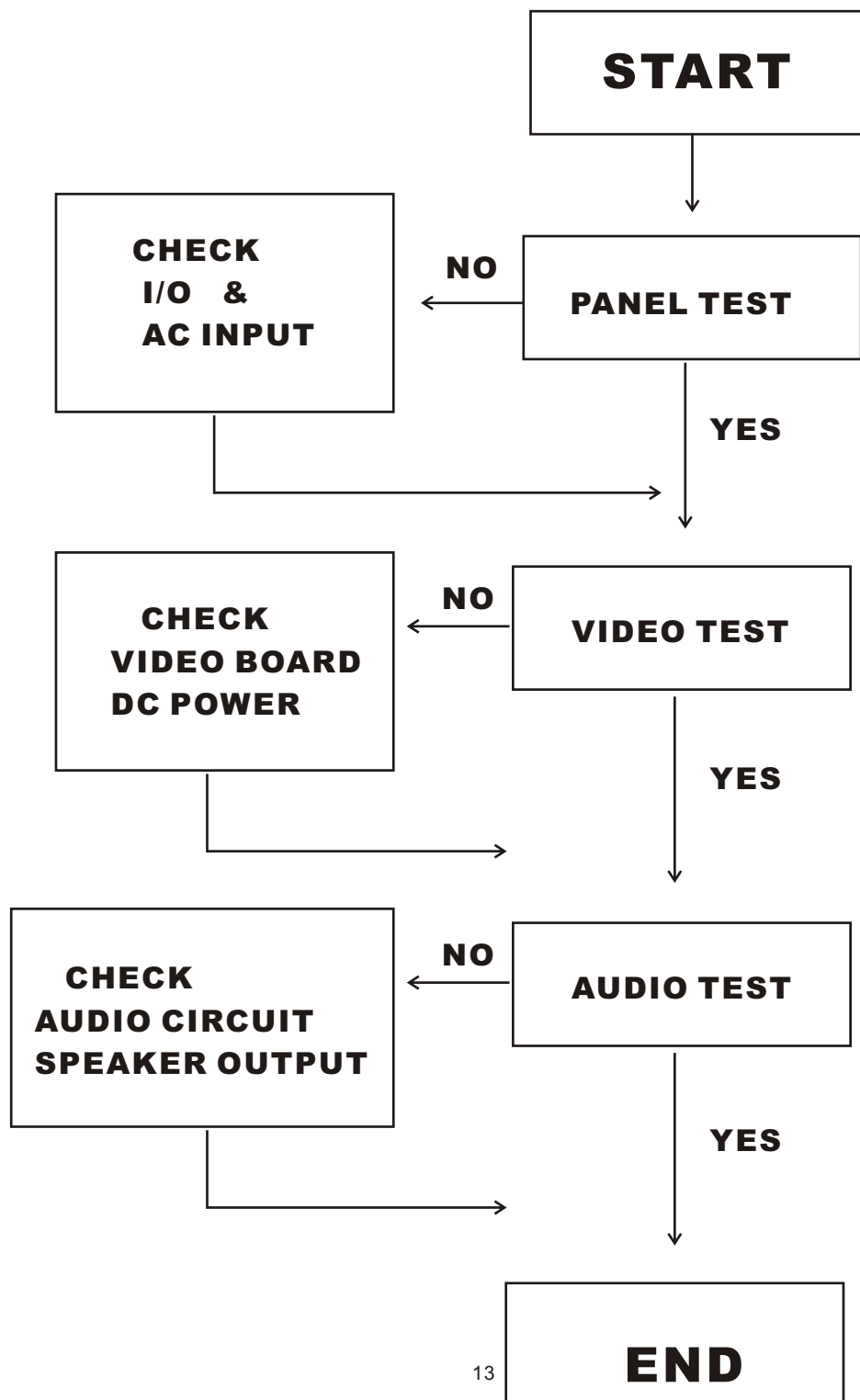
# 5. ASSEMBLY DRAWING



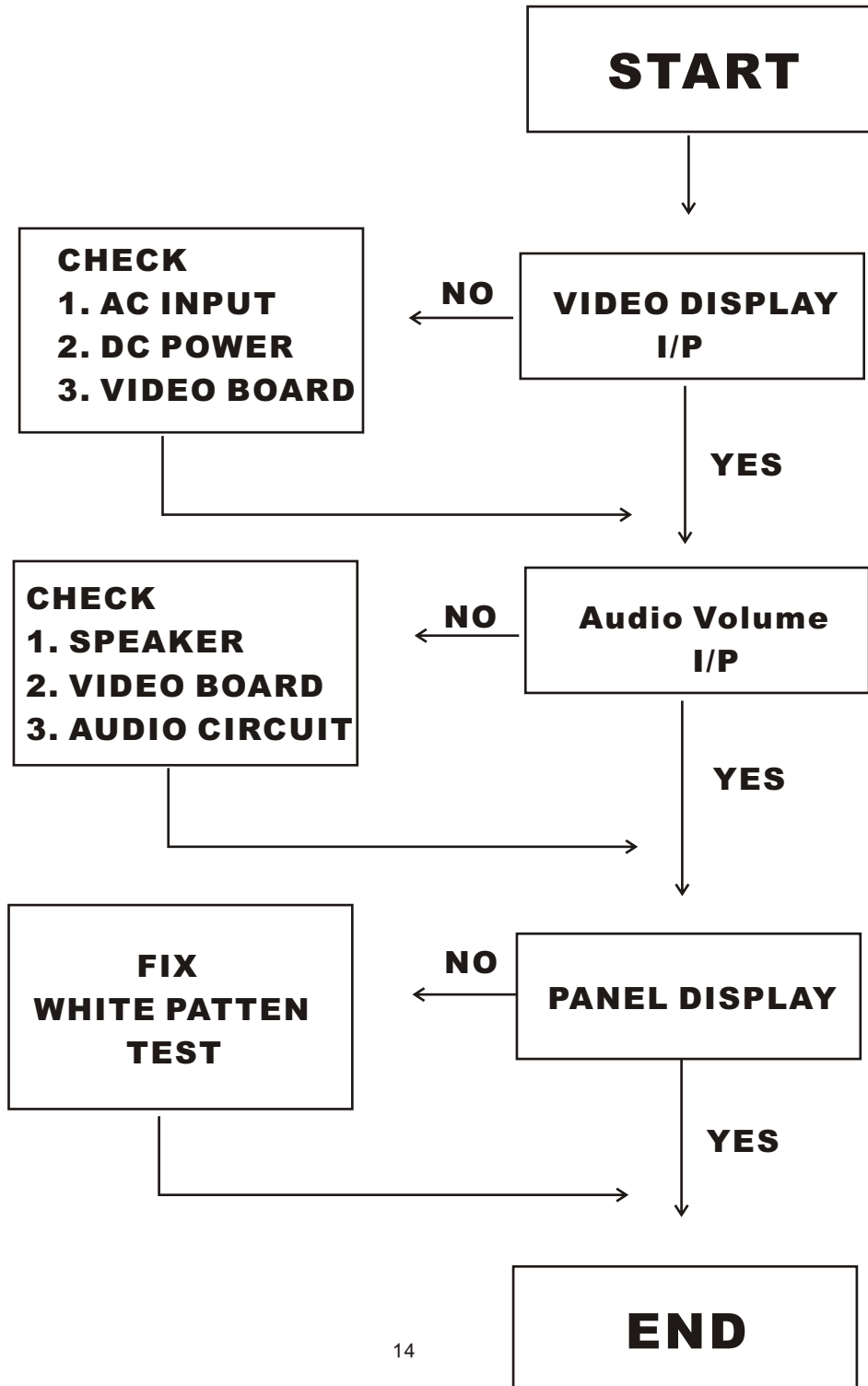
- 3. PLASMA PANEL 1/4/4
- 4. REAR PANEL α-a
- 5. VIDEO BOARD 1/4 1 1/2, a
- 6. VIDEO PANEL ¥-«¥ª
- 7. REAR COVER α-a
- 8. DC POWER a-1. "À 3/4
- 9. AC SWITCH 1. ¶Ã
- 10. AC FILTER AC 1. Â a 3/4
- 11. STAND HOLDER , ®©©ª
- 12. STAND ¶-
- 13. STAND BOTTOM ©®

# TROUBLE SHOOTING FLOW CHART

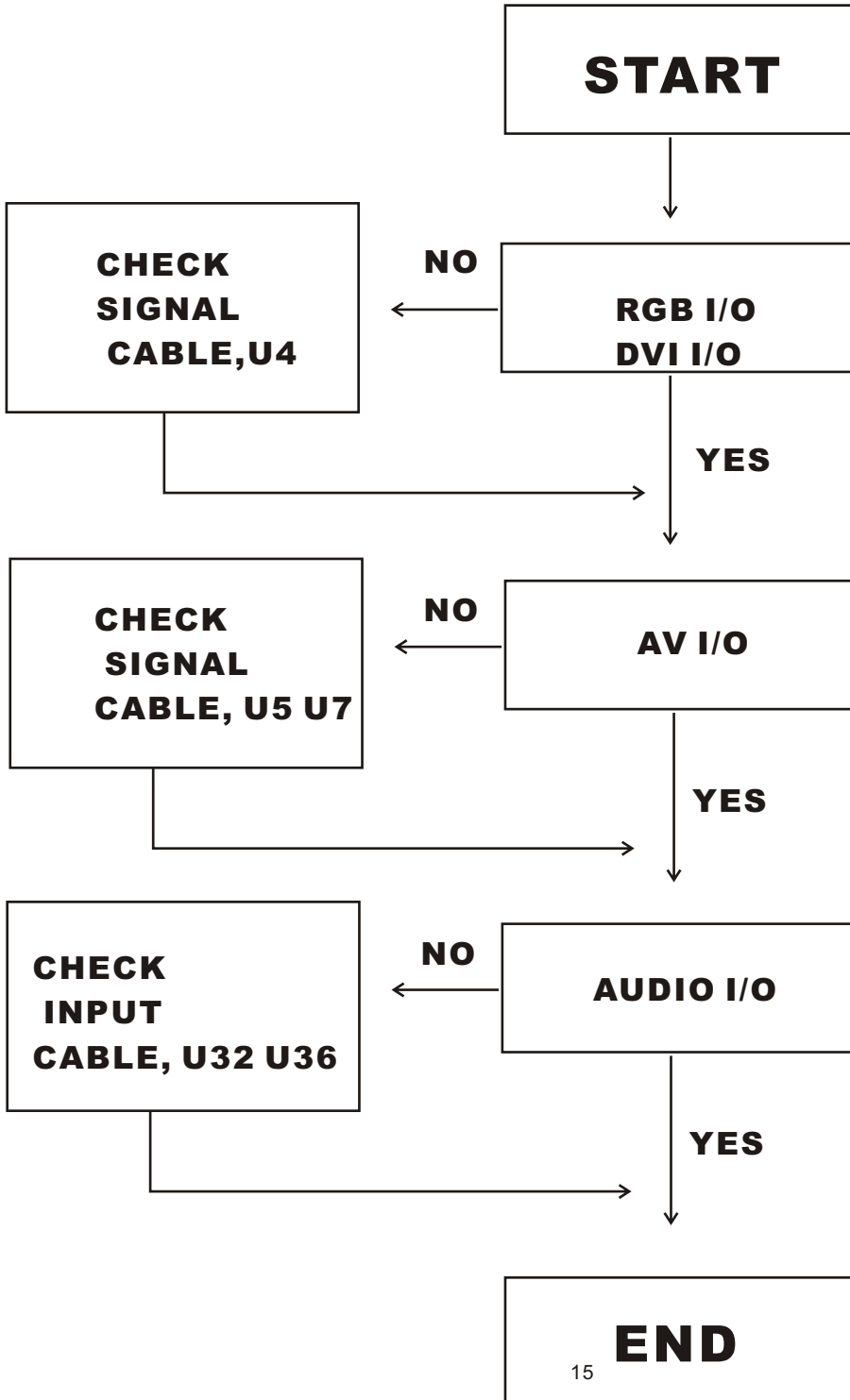
## 1. ASSEMBLY CHART



## 2. SET TEST CHART



### 3. VIDEO DISPLAY CHART





»À-

»²¶	»-	»À-
¼¹	<ol style="list-style-type: none"> <li>1. ¹ ½, ± ?</li> <li>2. ¥¹ Á-§¥¶?</li> <li>3. «, ½-§± ?</li> <li>4. ¾¾-§ ¹º?</li> </ol>	<ol style="list-style-type: none"> <li>1. ±¹ ½± </li> <li>2. «¥¹ Á</li> <li>3. ±«, ½± </li> <li>4. «¹, ¥ Á</li> </ol>
Á ¥±	<ol style="list-style-type: none"> <li>1. Á -§½º²?</li> <li>2.  »-§°±?</li> <li>3. «, ½-§± ?</li> </ol>	<ol style="list-style-type: none"> <li>1. ±Á ½ ¥± ,</li> <li>2. ± »½ ¥± ,</li> <li>3. ±«, ½± </li> </ol>
µ-°	<ol style="list-style-type: none"> <li>1. «, ½-§± ?</li> <li>2. ¿«µ, §¶¥ Á²½³?</li> </ol>	<ol style="list-style-type: none"> <li>1. ±«, ½± </li> <li>2. ½¾«, Á²¾¾ ¥Á²</li> </ol>
µ-µ·	««¹±»-§ ½µµ?	±««¹µ½¾¾ ¥ ± ,
µ-µµ©µµ	<ol style="list-style-type: none"> <li>1. µ¥±»-§¾ ?</li> <li>2. «ª±»-§¾ ?</li> </ol>	<ol style="list-style-type: none"> <li>1. ½¾µµ¥±»µµ</li> <li>2. ½¾¾ª±»µµ</li> </ol>
Á- ¼¹	<ol style="list-style-type: none"> <li>1. ¿µ µ »-§¾ ?</li> <li>2. ¿µ -»¾ª±  ?</li> </ol>	<ol style="list-style-type: none"> <li>1. ½»¿µªµ </li> <li>2. ¥½ ±°, ½± </li> </ol>
¼¹ ¼¹ Á-	<ol style="list-style-type: none"> <li>1. ¿µ -» °Á?</li> <li>2. -¶-§½ ³µ?</li> <li>3. Á-°, ½-§³±  ?</li> </ol>	<ol style="list-style-type: none"> <li>1. ½»¿µ·</li> <li>2. ½ ¾ª-¶</li> <li>3. ¥½ ±Á-°, ½ ± </li> </ol>
»±¥¥§¥	<ol style="list-style-type: none"> <li>1. »±¾-§¹µµ?»</li> <li>2. °ª, Á¹©¹ÀµÁ?</li> </ol>	<ol style="list-style-type: none"> <li>1. §¹ </li> <li>2. ©¹, Á-¹0» « ¹, Á,- ¶ ¾§¥</li> </ol>
若在螢幕右上角處出現 "Fan Erron"或"Led" 呈現 紅色閃爍狀時	µ³-®¥²°Á	½³ª  ®µ °-µ-

## Cleaning And Maintenance Handy Tips

In the event of problems with the display, check the following explanations before contacting your dealer for servicing.

<b>Problem</b>	<b>Action</b>
Power does not turn ON.	Check whether the power plug is securely inserted into the receptacle.
No pictures are displayed.	Check cables for disconnection. Check whether the power for all input equipment in ON Check for connection to wrong terminals or for wrong input mode.
Remote control does not function properly.	Check for incorrect battery orientation. Check for dead batteries. Check for distance from the display. Check whether you are pointing the remote control transmitter properly at the display's receiver. Check for any obstacle between the remote control and display.
The display makes a snapping sound.	This sound is produced when the cabinet expands or contract due to variations in temperature. This sound does not indicated that the display has problem.
The display makes a buzzing sound.	The display has fans to maintain the temperature of internal components at a constant level. This sound is produced by the fan as rotates.
There are spots on the screen.	Check whether your AV equipment is affected by interference from automobiles, trains, high-voltage transmission lines, neon signs or other potential sources of interference..
Degraded color/tints.	Check Whether all picture adjustment have been properly made.
Improper screen position/size.	Check whether screen position and size have been properly adjusted.
If "Out of range" appears, the display is receiving a signal whose picture or signal cannot be reproduced by the display.	Input proper signals. Make sure that the vertical frequency of the input signal is 85 Hz or less for SVGA, 75 Hz or less for XVGA/SXGA, 60 Hz or less for UXGA.
The screen turns to black and white.	Input proper signals. Make sure that the vertical frequency of the input signal is 85 Hz or less for SVGA, 75 Hz or less for XVGA/SXGA, 60 Hz or less for UXGA.
If you see the "Fan Error" at the top of right-hand side of the screen or the flash or red led.	Please call the local agency to change the fan.