

AKAI

PLASMA MULTIMEDIA MONITOR

SERVICE MANUAL

MODEL NO. : PDP4295ED

PDP4249G

PDV42S10

CONTENTS

	Page
1. IMPORTANT INFORMATION	1
2. GENERAL INFORMATION	2
3. SAFETY PRECAUTIONS	3
4. SPECIFICATION	4
5. PERIPHERAL EQUIPMENT CONNECTING	5
6. CIRCUIT DESCRIPTION	
. DC POWER SUPPLY	6
. VIDEO DISPLAY BOARD	7
7. CHAPTER BLOCK DIAGRAM	
. BLOCK DIAGRAM	8
. AC FILTER	9
. EMI BOARD	10
. DC POWER BOARD	11
. VIDEO BOARD	12
. AMPLIFIER BOARD	13
. TUNER BOARD	14
. ASSEMBLY DRAWING	15
8. TROUBLE SHOOTING FLOW CHART	
. ASSEMBLY CHART	16
. SET TEST CHART	17
. VIDEO DISPLAY CHART	18
9. CLEANING AND MAINTENANCE HANDY TIPS	19

IMPORTANT INFORMATION



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.

IMPORTANT



This lightning flash with arrow head 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.



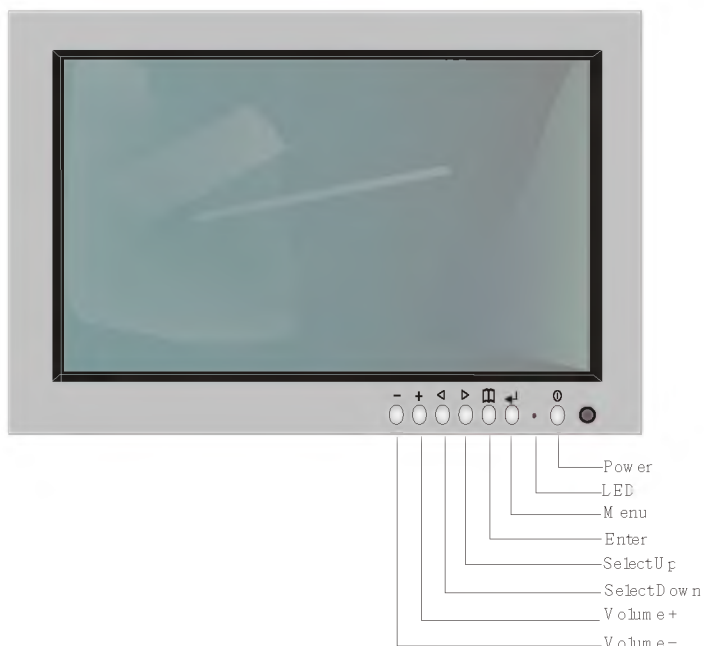
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

GENERAL INFORMATION

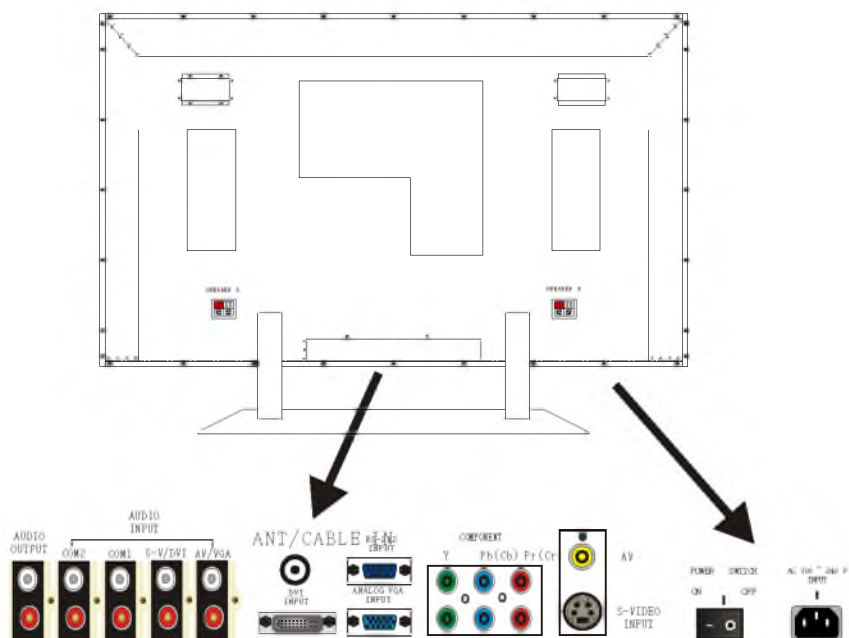
IMPORTANT:

When the set is switched on, do not shift or move the set around. Sometimes it may develop an unevenness in colour in some parts of the screen. This can be eliminated by switching off the set with the main power button (rear side) and wait for 10 minutes before switching on again. If the situation remains, call for Service.

Front View



Rear View



SAFETY PRECAUTIONS

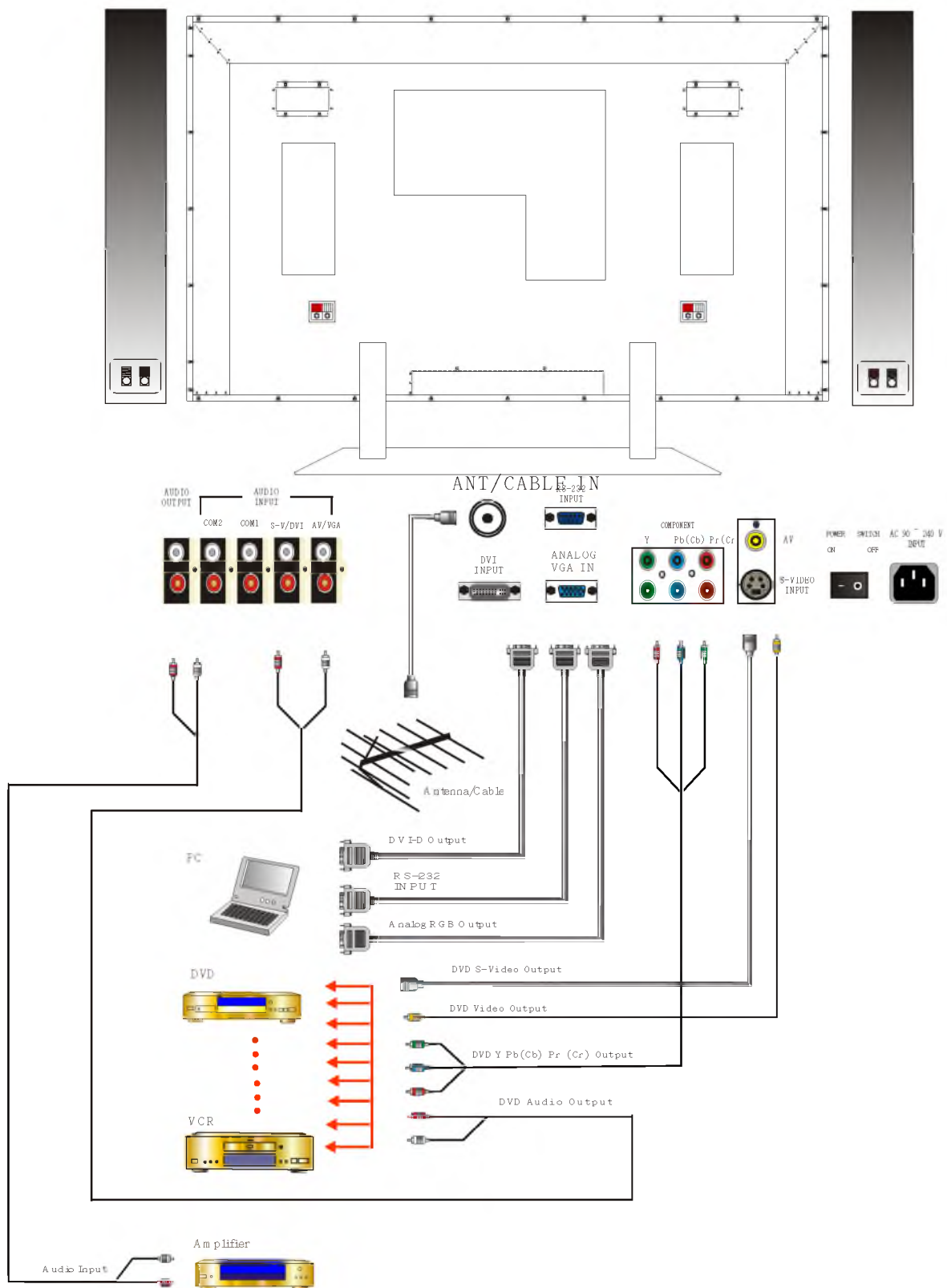
Please read the following directions carefully before using this machine.

- . 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 tripping.
- . If using the same power source with other equipments, please make sure the total current does not over 15A.
- . Never attempt to repair a defection of the machine by yourself. Always consult a skilled machine service personnel.
- . When the following situations happen, please contact qualified engineer.
 - A. The power cord or the power socket has damages.
 - B. If any liquid or solid object fall into the machine through the ventilation holes.
 - C. Expose 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.
- . To release the battery of remote controller after long time replacement (over 1 month) and to avoid making destruction of remote controller by liquid.
- . When none operation the product storage is suggested not exceed max of 6 months. If it is the exceed the suggested storage period, the product should be activated for 24 hrs.
- . To ensure the quality of the product.

SPECIFICATION

- (1)input signal : S-Video 、 composite 、 Component 、 Analog RGB 、 DVI 、 NTSC RF
- (2)video signal : 0.7Vp-p
- (3)scan frequency : Analog RGB auto-sync H from 30 to 80KHz
V from 60 to 85Hz
DVI auto-sync H from 30 to 80KHz
V from 60 to 85Hz
Component : 480i 、 480P 、 576i 、 576P 、 720P 、 1080i
Composite : Video sync
S-Video : Y-C separate sync
TV : NTSC 60Hz
- (4)up data terminal : RS-232 DB-9 PIN
- (5)Power supply : AC100-240 Volts universal
- (6)Power consumption : 330W (Full White Pattern)
- (8)Signal cable : 15PIN D-SUB 、 DVI-D 、 S-Video 、 RCA Jack 、 Speaker Jack 、
AV Shielded Video cable
- (9)OSD controls :
 - Video a section :
 - <1>Picture: H/V Position 、 Brightness 、 Contrast 、 Sharpness 、
Color 、 Tint 、 Frequency 、 Phase 、 Auto Image
 - <2>Advanced: Gamma 、 Color Temperature 、 Color Management.
 - <3>Source: Analog RGB 、 DVI 、 Component1 、 Component2 、
S-Video 、 Video 、 TV
 - <4>Function: Scaling 、 Zoom 、 White Pattern 、 Close Caption 、
[PIP]Source 、 [PIP]Size 、 [PIP]H/V-Position
 - <5>Utility: Language 、 Video Standard 、 DPMS 、
[OSD]H/V-Position 、 [OSD]Time Out 、
Picture Scrolling 、 Load Factory
 - <6>TV: Tuner Select 、 Channel 、 MTS 、 Channel Scan 、 V-chip
 - Sound a section :
 - Volume 、 Treble 、 Bass 、 4 steps BBE Selects 、 SRS virtual Surround 、
MTS STEREO Decoder

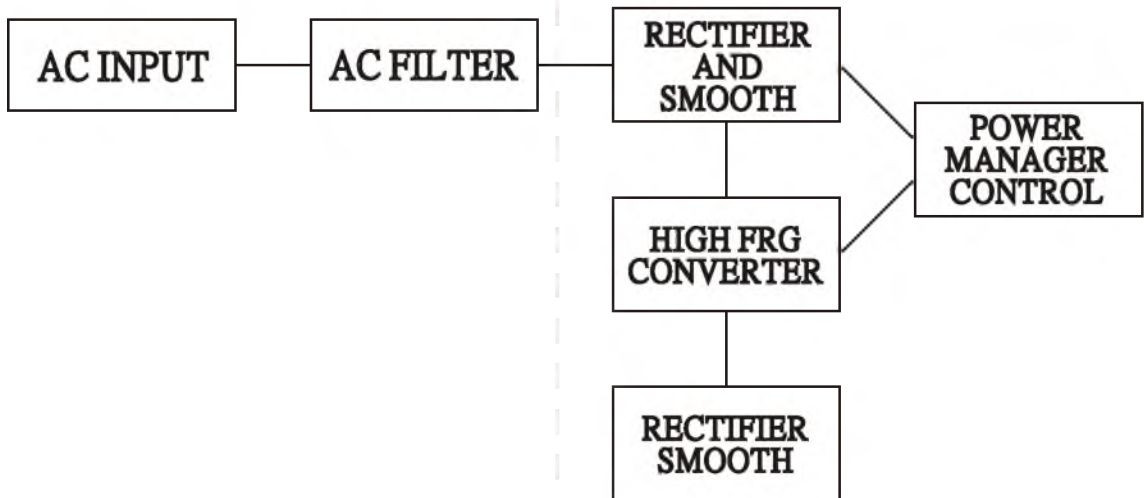
PERIPHERAL EQUIPMENT CONNECTING



CIRCUIT DESCRIPTION

1. DC POWER SUPPLY

This is the DC power supply inside the PDP, in which Cn1 connected with alternating current (AC) through inductance filter (L1), rectification bridge (BD1) IC, transformer (T1), D3, D4, to CN2 output with 5V and 12V direct current. The range of the AC output is from 90V to 264V and frequency is from 50Hz to 60Hz. The largest detrition rate is 40W



2. VIDEO DISPLAY BOARD

This is the signal inside the PDP and audio device disposition.

- 1) It can receive composite signal including R.G.B.H.V. contrast signal, DVI digital signal, AV color distinction signal and S-V ideo.....etc.

R.G.B.H.V. & Y Pb Pr : The signal is input from (15 PIN) J1 & J1 to U 6 to perform contrast signal, then transform to digital signal and enter to U 29, the signal is passed to U 33 for the output of visual signal.

DVI : Digital signal is input from P1 then managed by U 6 and passed to U 29, the signal is passed to U 33 for the output of visual signal output.

AV & TV : AV & TV signal enters from J12 & JP18 to U 46 to perform signal, then transform to U 47 to decode perform signal, then transform to U 49 to deinterlace perform signal and enter to U 29, the signal passed to U 33 for the output of visual signal.

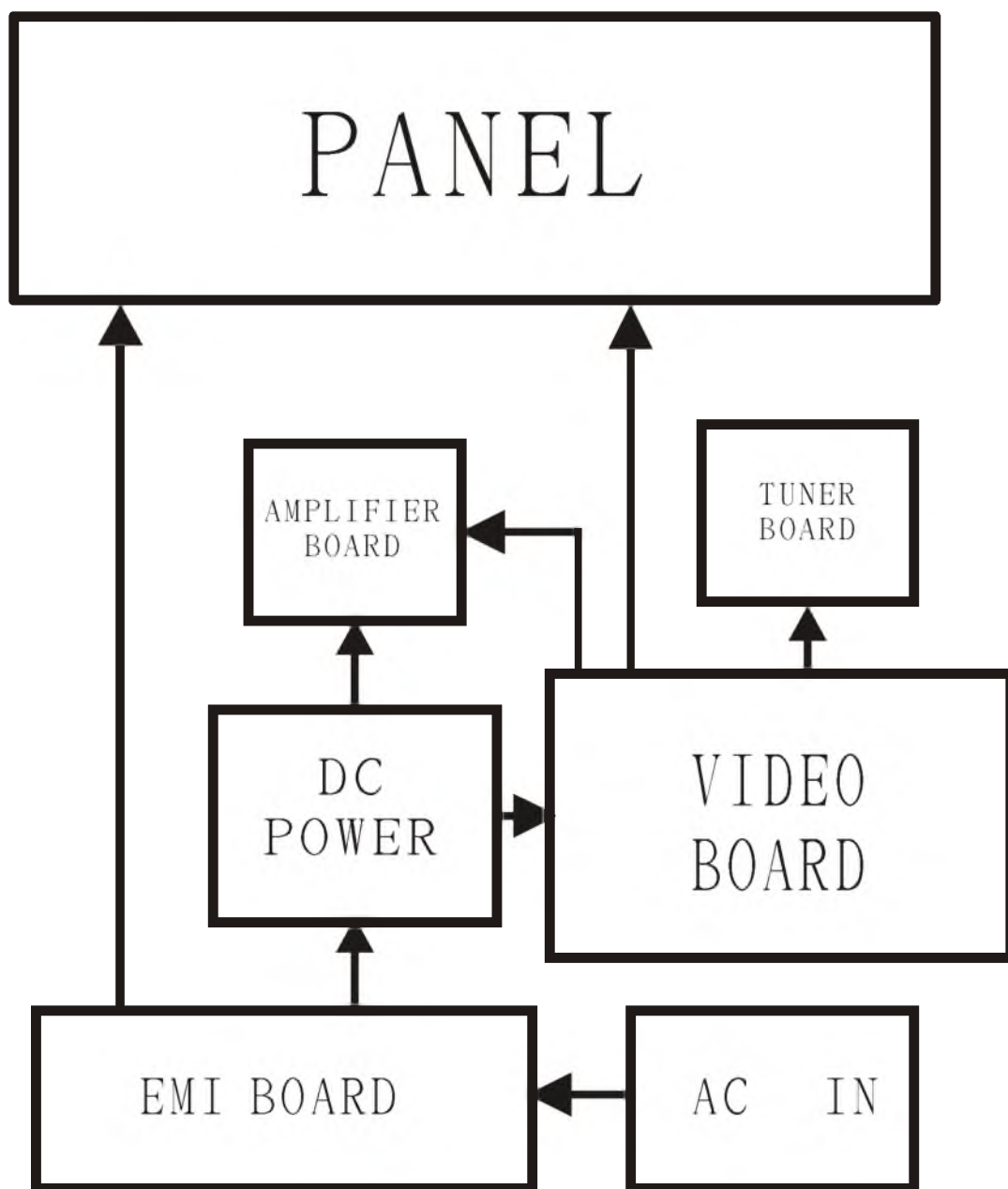
S-V ideo : S-V ideo signal input from J12 to U 47 to decode perform signal, then transform to U 49 to deinterlace perform signal and enter to U 29, the signal passed to U 33 for the output of visual signal.

to U 5 for visual production and after deposition, it will pass to U 7 for signal compensation and to U 9 for visual signal deposition output.

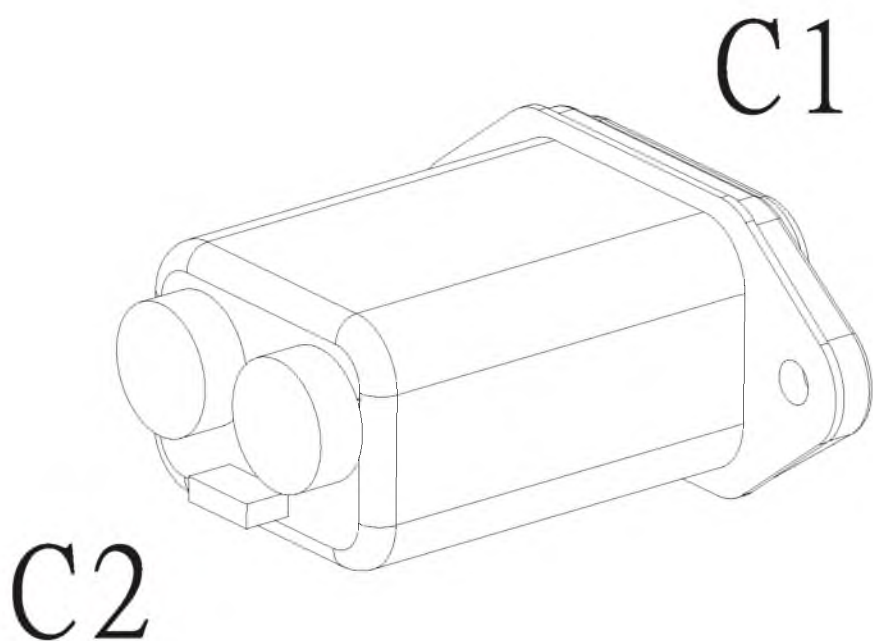
- 2) Audio is input from J3, J8 and from U 62 to perform pre-production. Then, the audio signal is passed to U 61 SRS process for the signal output by J4 and J9.
- 3) When audio signal the J4 passed to Amplify for the final output.

CHAPTER BLOCK DIAGRAM

1 . BLOCK DIAGRAM

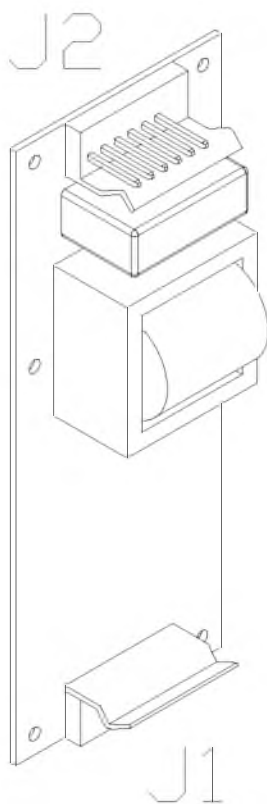


2. AC FILTER



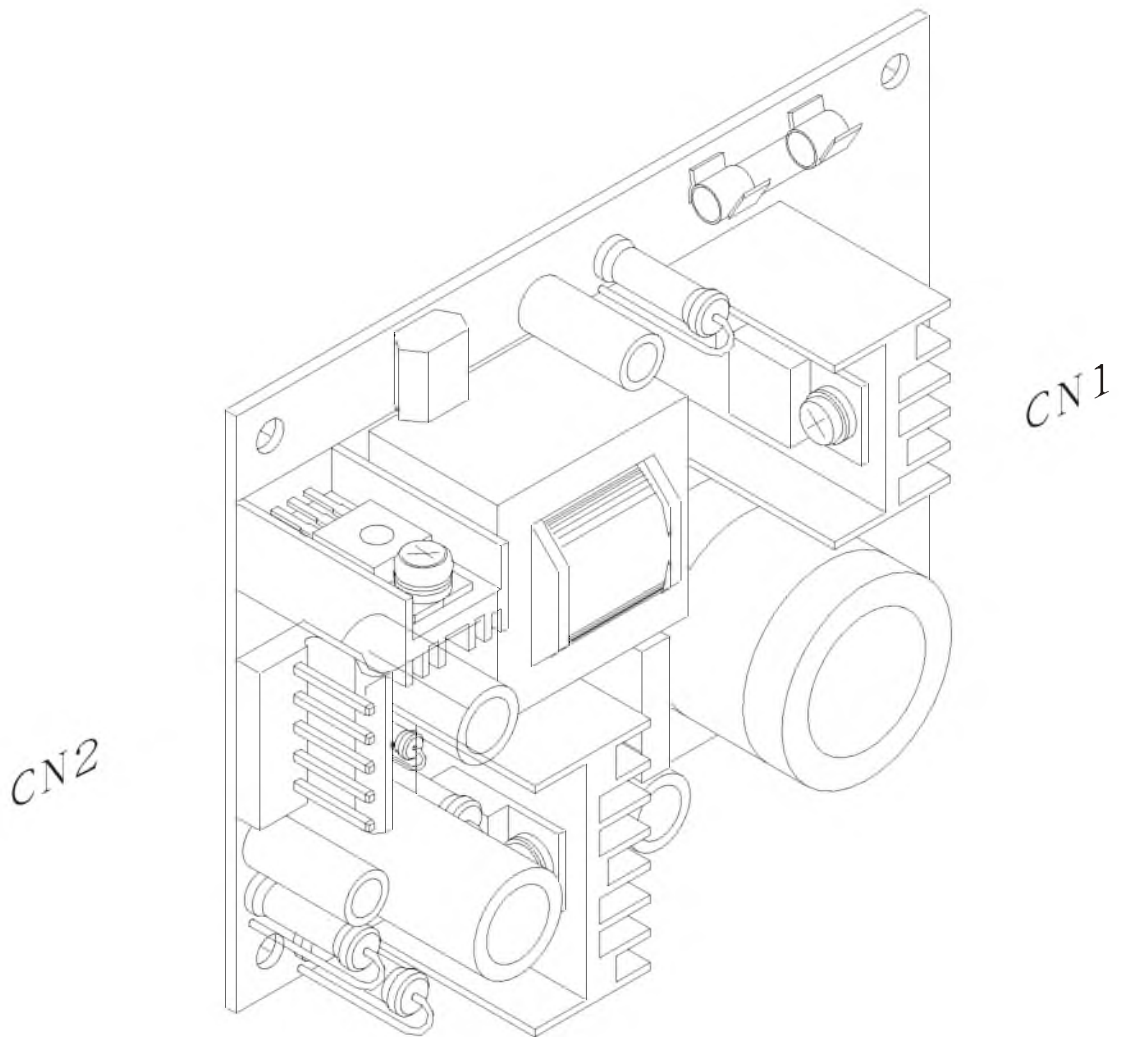
1. AC INPUT TO C1
2. C2 TO EMI BOARD J1

3. EMI BOARD



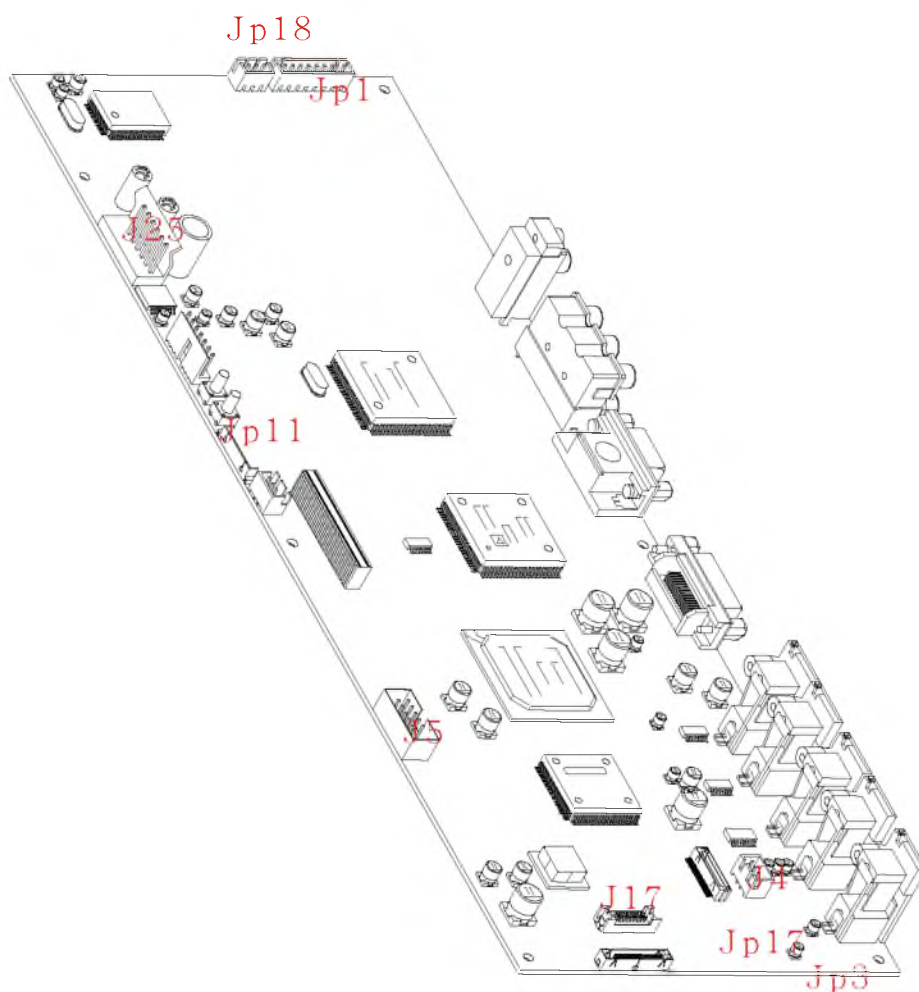
1. AC FILTER C2 TO J1
2. J2 TO PANEL & DC POWER CN1

4. DC POWER BOARD



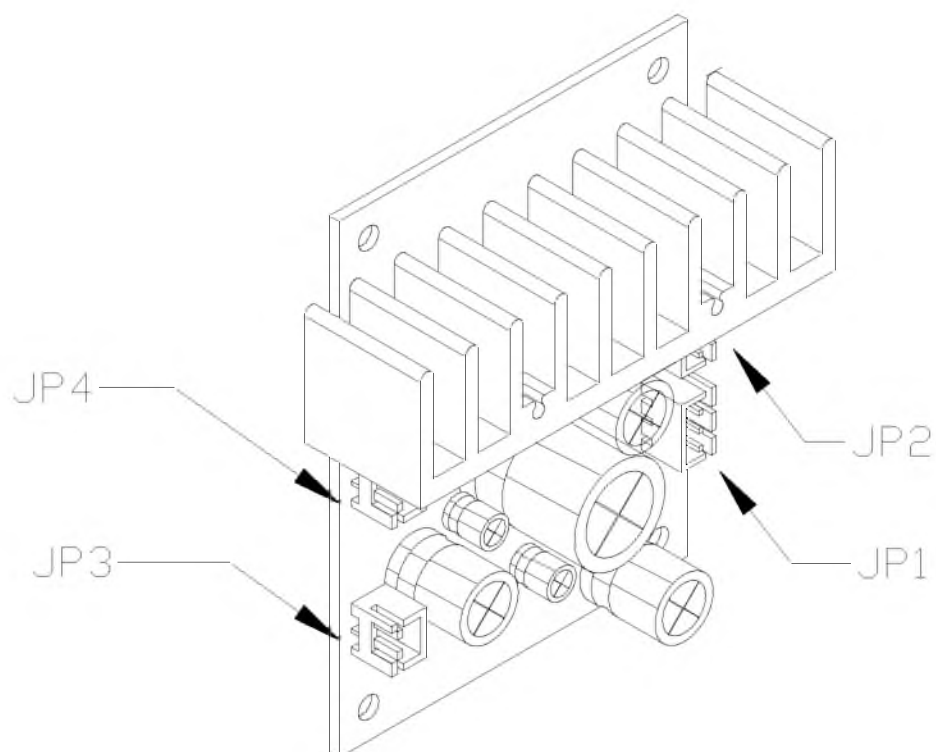
1. EMI FILTER J2 TO CN1
- 2: CN2 TO MONITOR BOARD

5. VIDEO DISPLAY BOARD



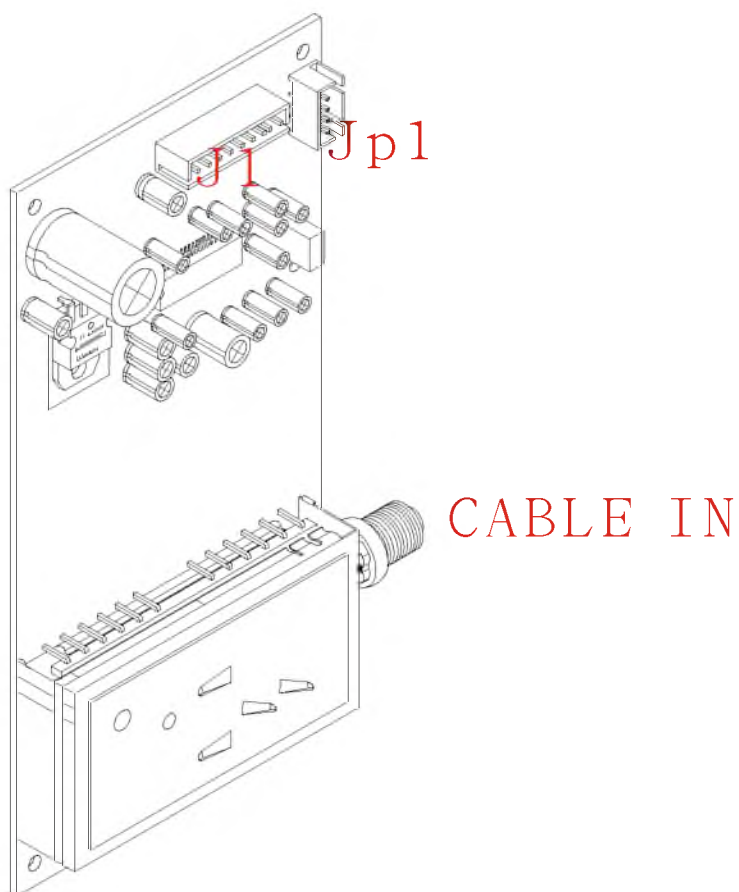
1. J17 TO PANEL
2. JP17, JP3 TO TUNER BOARD
3. J25 TO DC POWER
4. JP11 TO KEYPAD
5. J4 TO AMPLIFIER BOARD
6. J5 TO RS232 CONNECTOR

6. AMPLIFIER BOARD



1. VIDEO BOARD J4 TO JP1
2. DC POWER BOARD CN2 TO JP2
3. JP3 TO RIGHT SPEAKER JACK
4. JP4 TO LEFT SPEAKER JACK

7. TUNER BOARD



1. VIDEO BOARD JP17 TO JP1
2. VIDEO BOARD JP3 TO J1
3. CABLE TO CABLE INPUT

1. 2. 3. 4.

A

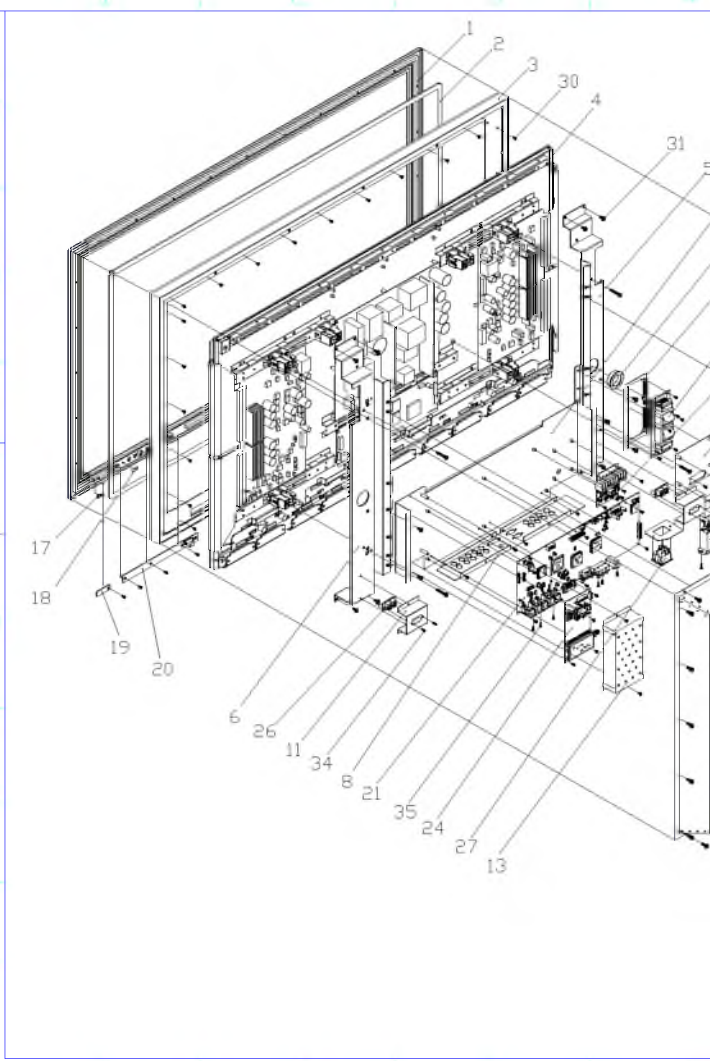
B

C

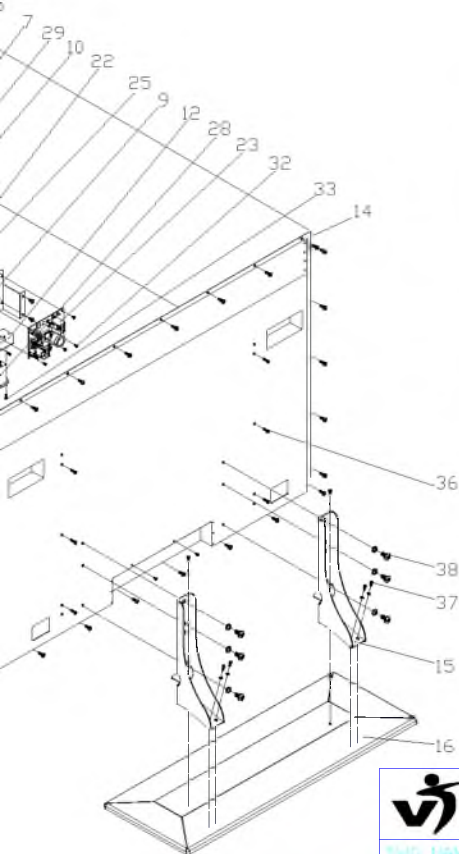
D

E

F



8. ASSEMBLY DRAWING



38	M8X15 十字圓頭鉚母	鉚母	6	
37	M6X12 十字圓頭鉚母	鉚母	6	
36	M6X15 十字圓頭鉚母 / 平螺絲	鉚母	6	
35	T3XB 十字圓頭自攻牙	鉚母	6	
34	T3XB 十字圓頭自攻牙	鉚母	4	
33	M3X10 十字平頭	鉚母 90°	2	
32	M3X6 十字圓頭鉚母 / 平螺絲	鉚母	31	
31	M4X8 十字圓頭鉚母	鉚母	44	
30	M3X6 十字圓頭鉚母	鉚母	29	
29	隔波板		1	
28	EMI FILTER		1	
27	POWER SW		1	
26	AMP JACK		1	
25	AMP BOARD		1	
24	TUNER BOARD		1	
23	DC POWER		1	
22	EMI BOARD		1	
21	VIDEO BOARD		1	
20	KEY BOARD		1	
19	SENSOR BOARD		1	
18	LED MASK		1	
17	IR LENS		1	
16	底座組立		1	
15	腳座支撐架		1	
14	ASSY, BACK COVER		1	
13	TUNER BOARD COVER		1	
12	AMP HOLDER (60)		1	
11	AMP HOLDER (60)		1	
10	EMI BOARD HOLDER		1	
9	DC POWER HOLDER		1	
8	VIDEO PANEL		1	
7	PCB HOLDER		1	
6	PANEL 夾板 (60)		1	
5	PANEL 夾板 (60)		1	
4	FORMOSA PANEL		1	
3	內配鏡框		1	
2	FILTER GLASS		1	
1	丹尼爾板		1	
件數			備註	



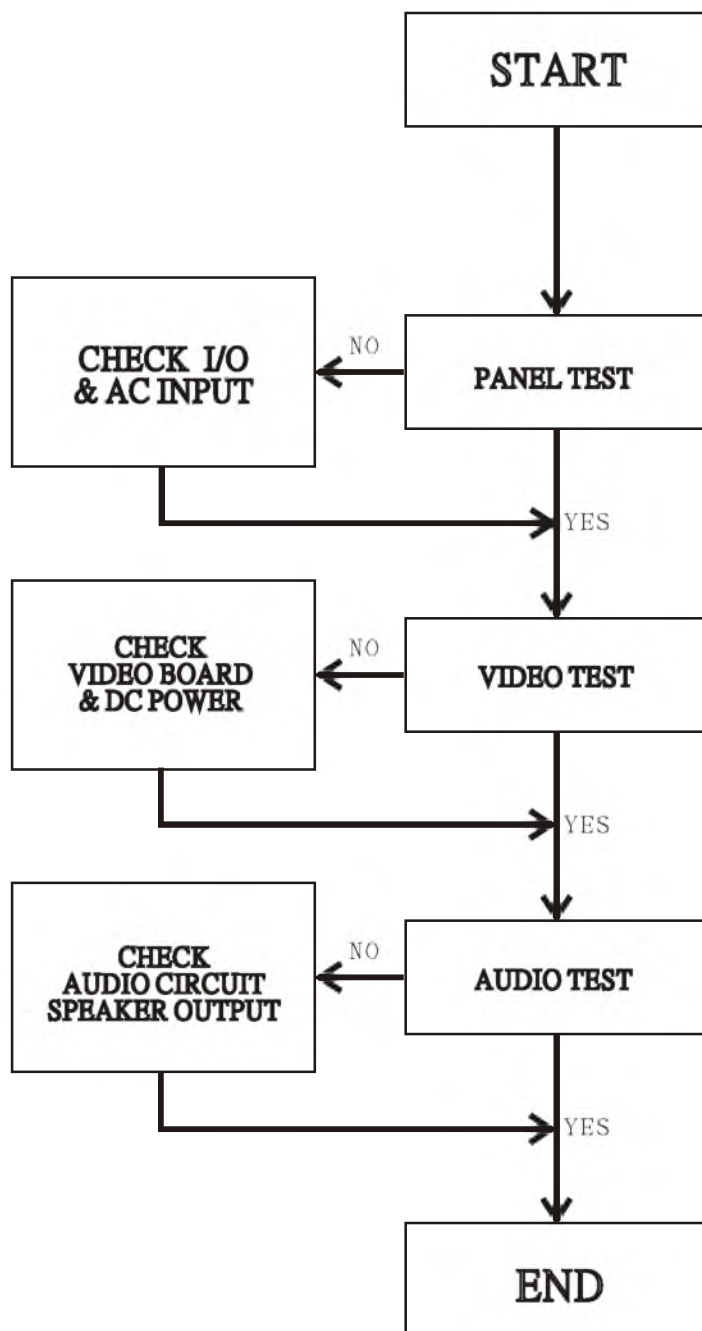
瑞隆科技股份有限公司

V-TEK Technology Co., Ltd
V-TEK Technology USA, Inc

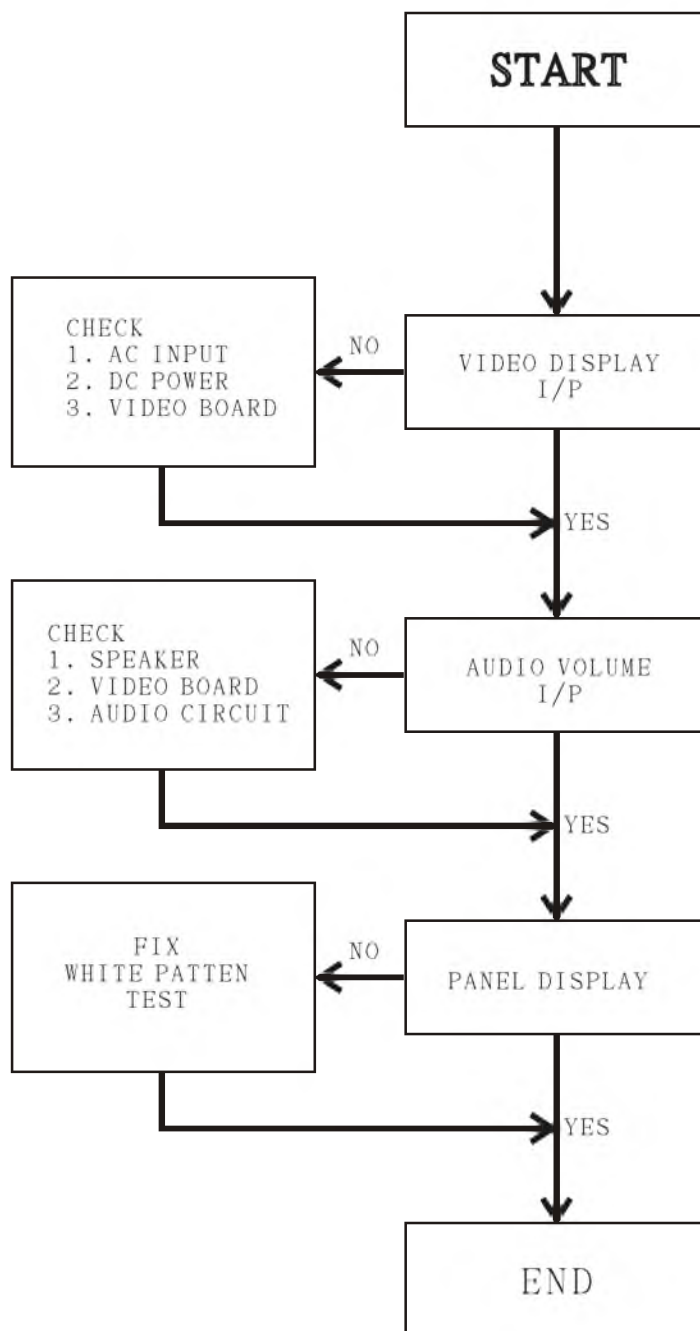
S/W NAME	爆炸圖		
PROJECT	VP427A-03	DATE	93.10.03

TROUBLESHOOTING FLOW CHART

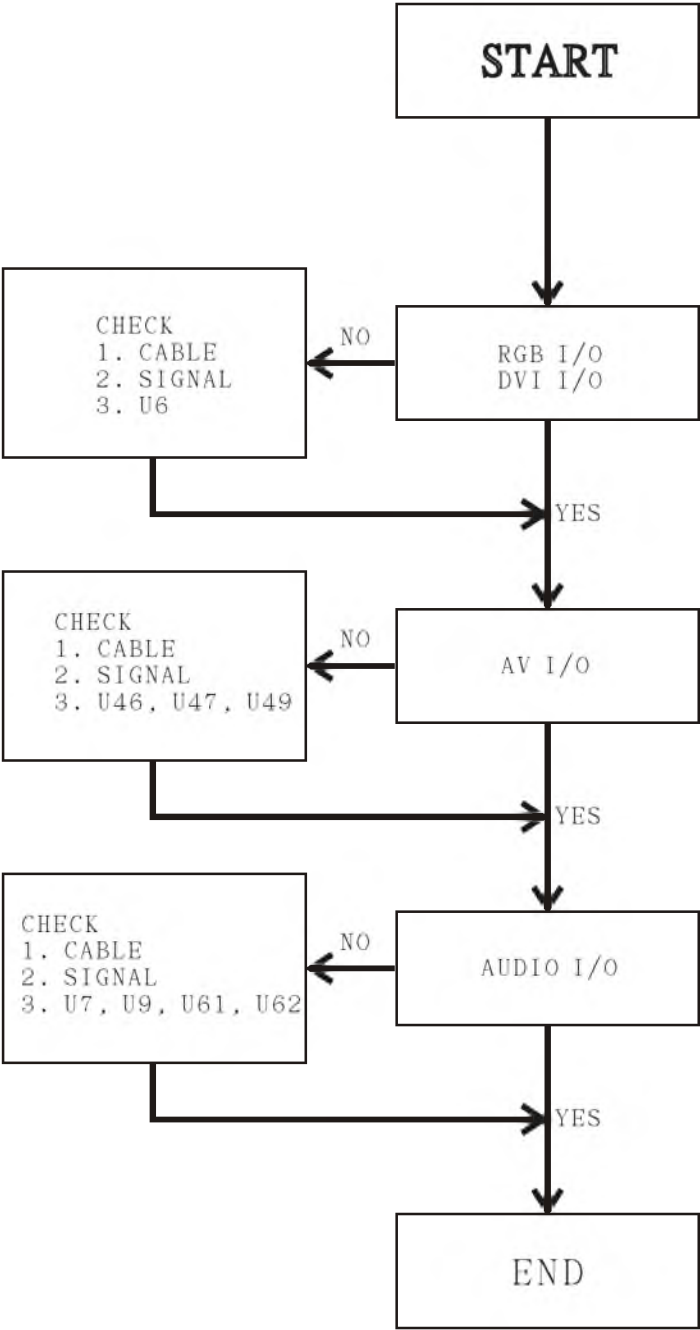
1. ASSEMBLY CHART



2. SET TEST CHART



3. VIDEO DISPLAY CHART



TROUBLESHOOTING FLOW CHART

In the even of problem s with the display ,check the follow ing explanations before contacting your dealer for servicing .

Problem	Action
Power does not turn ON .	Check whether the power plug is securely inserted into the receptacle.
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 a problem.
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 colour/tints.	Check whether all picture adjustment have been properly made.
Im proper 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.