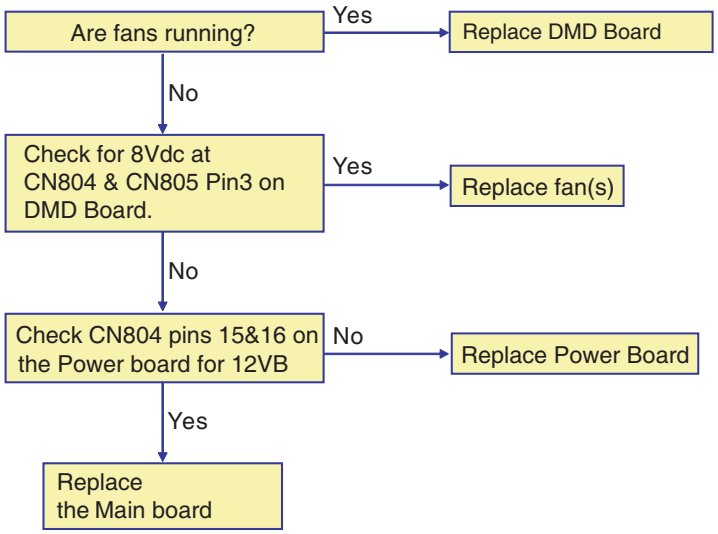
6. Troubleshooting

6-1 Checkpoints by Error Mode

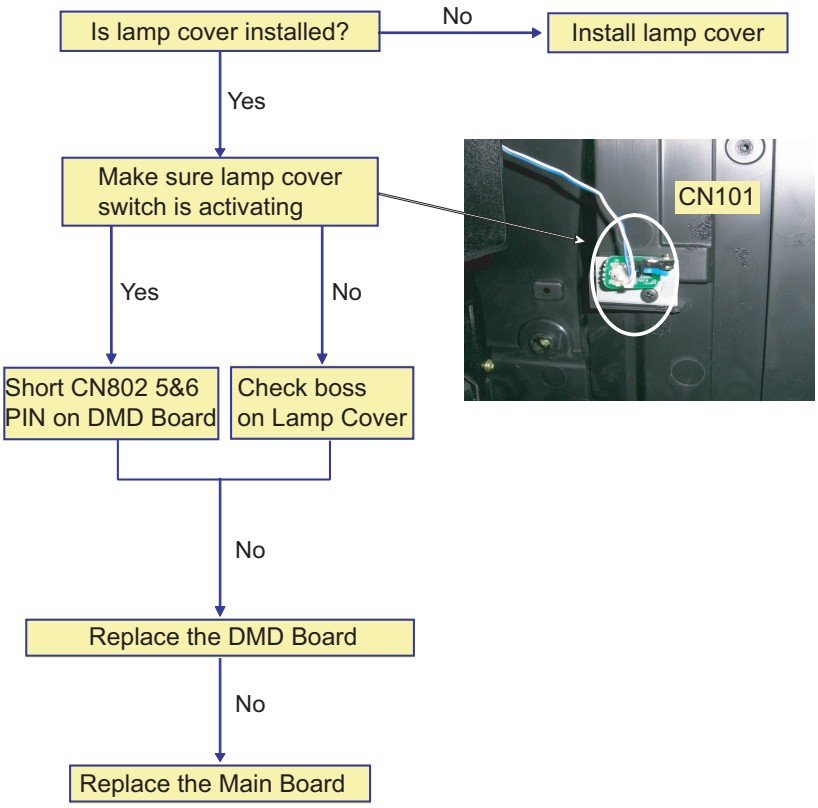
1. Power Light: Check the master switch (ON/OFF) and the fuse to see if they are operating.

2. LED Blinking: See the basic LED checklist in 6-2-1.

< Blinking Temp & Timer LED >



< Blinking Lamp and Temp LEDs >



3. Noise:
Internal noise may be caused by a foreign substance on the fan or driving device.
For a DLP TV, the lamp fan, DMD board fan and color wheel are vulnerable to noise. Sometimes the connector wire around the lamp or DMD fan makes contact with the fan, while the color wheel is protected inside the module and cannot make contact with any nearby wires. However the color wheel sensor or the drive motor may cause noise by making contact with the color wheel.
As the color wheel uses an air bearing system, it has a very slight possibility of creating internal noise.
When irregular noise occurs for no particular reason, check the inside of the TV for any foreign substances.
The DLP projection TV may cause noise as the physical screen is empty inside, causing a resonance to a particular frequency. Thus a low vibration is not a malfunction.
Any 'creaking' noise is mostly from the structure of the device itself. A short, harsh noise may occur from a distortion or malformation due to thermal expansion between the metal joints, screws and loaded parts, respectively. Any intermittent 'creaking' noise can be removed by loosening the screws.

4. A black screen with the lamp on: Replace the DMD board.

5. Line Pattern: Regular line patterns occur vertically or horizontally: Replace the DMD board.

6. Voice Distortion: Replace the main or rear board.

7. Outside Light: This is not a product malfunction, but a possible installation or human error. This occurs when the projected light from the surrounding illumination reflects onto the screen. This disappears as the TV starts operating and the TV lamp gets brighter. However, you can avoid outside light by changing the position of the TV or the installation angle.
Decreasing the illumination or changing the indoor lighting may work.

8. Screen Flip-over:
Enter Factory mode in DDP3021 and perform H-Flip (flip horizontally) and V-Flip (flip vertically).
The screen will flip over horizontally or vertically.

9. Other Screen Errors:

▶ 40 Vertical lines 16 pixels wide:
DDP3021 or BGA, DMD panel interference.
→ Replace the DMD board or DMD Panel

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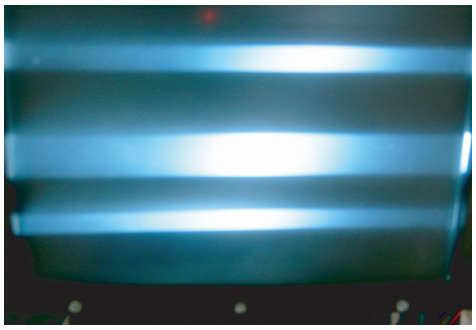
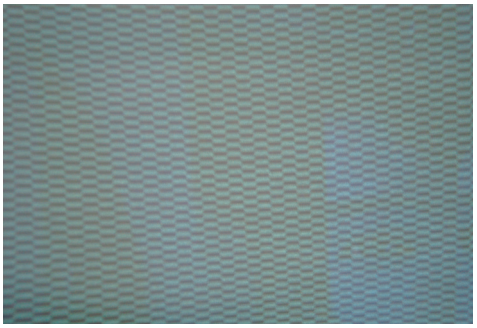


▶ Horizontal Bar or No Raster:
Error in DAD2000 or DMD Panel or other DMD board problem.
→ Replace the DMD board or DMD Panel

▶ Dotted Vertical Bar:
Error in Rambus Dram(IC 403) or the soldering
→ Replace the DMD board



▶ Beehive mosaic patterns all over the screen:
Error in the TMDS Receiver (IC100) or the soldering
The H sync signals are not transferred to DDP3021.
→ Check the Digital Board and DVI cable If there was no problem,
Replace the DMD board

6-1-1 Video Circuit Error Checking

■ Basics:
- The DDP3021 on the DMD board has a feature to display internal test patterns.
- SDP62, which is an end port in the digital board, has a feature to display internal test patterns.
- The rear board is the first output and the main board is the second one, followed by DMD, which is the final one.

■ Diagnosis By Module

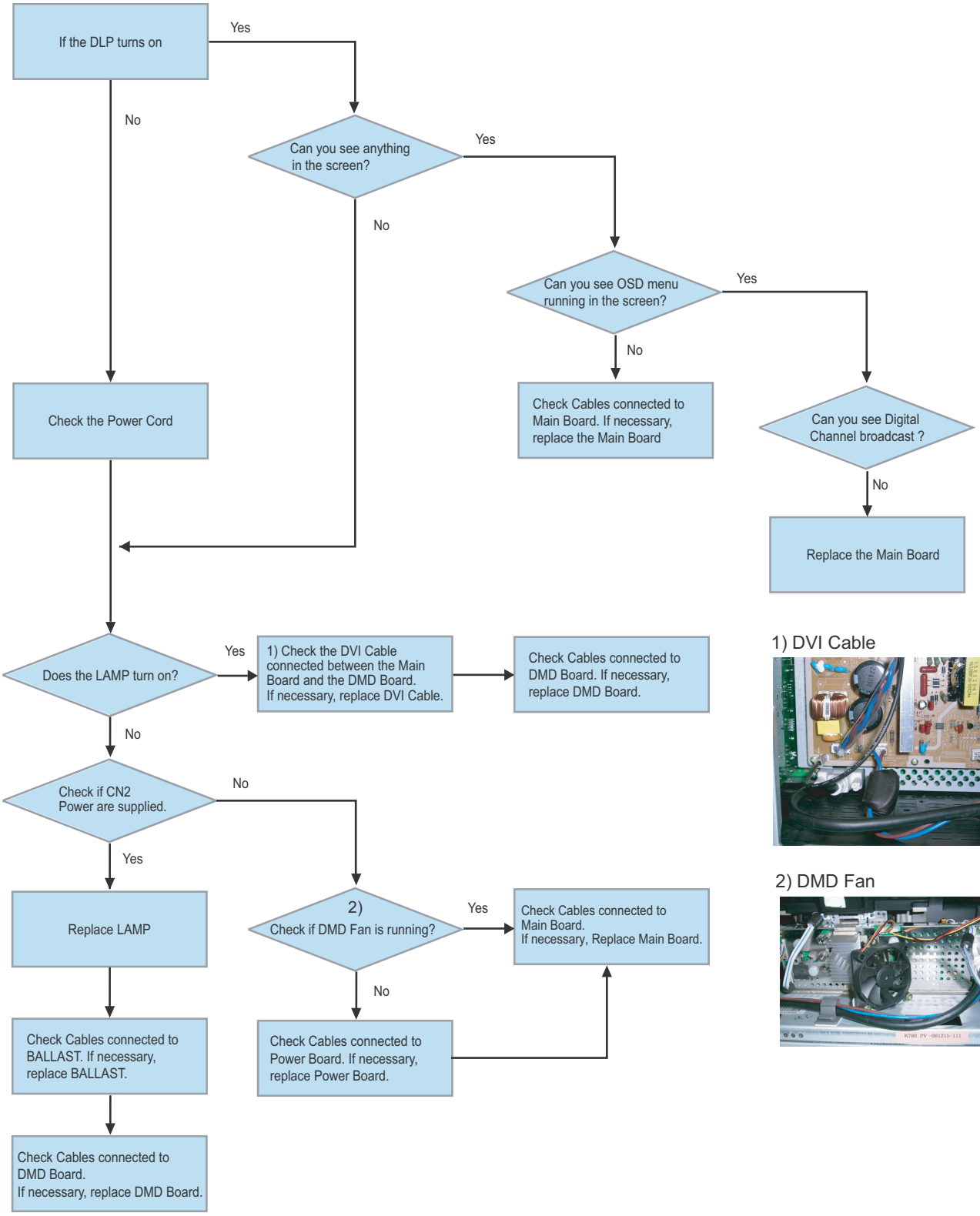
1. Access Service Mode
   (In Standby mode, press "Mute", "1", "8", "2" and "Power" to turn the screen on and enter service mode)

2. Check if there is an error in the DMD board
   DDP3021 → TEST PATTERN → Press the right arrow key:
   Options of FULL WHITE, BLACK, RED, GREEN and BLUE PATTERN are displayed on the screen.
   If "Pattern" does not appear, this is a DMD board error.

3. Check if there is an error in the main board before the DMD.
   When the DMD board has been determined to be error free based on the test patterns:
   FACTORY MODE → SDP62 → TEST PATTERN normal display: no error in the main board.
   If "Pattern" does not appear, you have to check a rear board first, and check a DMD Board second, next check a main Board.

4. Check for a power signal from the SMPS to the main boards. (See the circuit diagram below).

6-1-2 Flow Chart for Malfunction

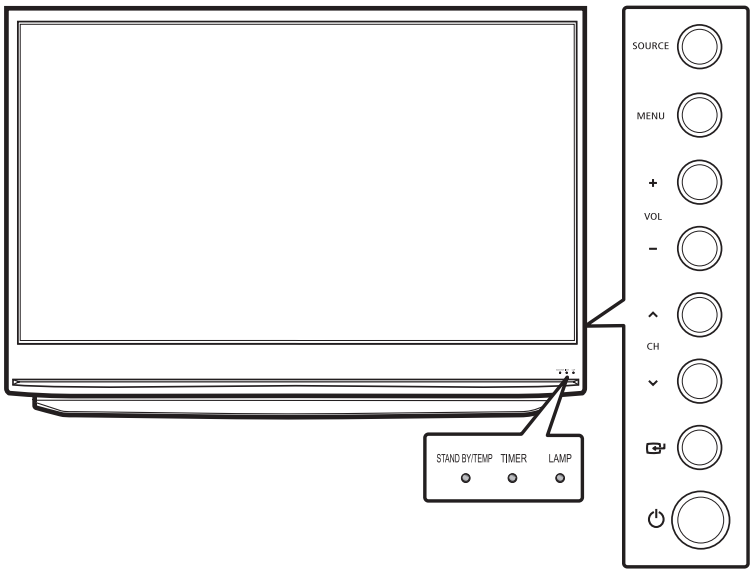


1) DVI Cable

2) DMD Fan

6-2 Troubleshooting Procedures by Error Modes

6-2-1 Installation & Connection



● : Light is On
◑ : Light is Blinking
○ : Light is Off

TIMER	LAMP	STAND BY/TEMP	Indication
○	○	●	Standby state.
○	◑	○	The picture will automatically appear in about 15 seconds.
●	◑	○	Auto Timer ON/OFF has been set and the set will automatically be turned on in about 15 seconds.
◑	○	◑	A cooling fan inside the set is not operating normally.
○	◑	◑	Lamp cover on rear of the set is not properly shut.
○	○	◑	Check if the ventilation hole on the rear of the set is blocked, because if the inner temperature is too high, the power will shut off.
◑	◑	◑	LED Driver or Sub power is defective.

* It takes about 30 seconds for the TV to warm up, so normal brightness may not appear immediately.
* The TV has a fan to keep the inside lamp from overheating. You'll occasionally hear it working.

6-2-2 Protect Status

1. Attempting to turn the LED on fails repeatedly
If turning the lamp on fails, the set automatically tries turning the LED on 3 times. If all attempts fail, all LED's on the front panel will blink. Check the LED,LED Driver and Sub power check the LED,LED Driver and Sub SMPS and replace them if necesscary.