
6. Troubleshooting

6-1 Checkpoints by Error Mode

- Power LED: Check that the LED works when turning the Master Switch ON/OFF
- LED Indicators: See table 6-2-1 Basic Troubleshooting: LED Diagnosis on the Front Panel.
- In case of a power failure or abnormal screen, check the following items.
 - 1) Check that the power cord is correctly connected to a 220V wall outlet.
 - 2) Check that the Master Switch has been pressed.
 - 3) Check that the transmitter is turned on.
 - 4) Check that transmitter device selection is set to TV.
 - 5) Check that the signal cable is properly connected.
 - 6) Check that channel setting has been set.

6-1-1 Basic Approaches for Troubleshooting

■ Troubleshooting Mechanism :

- The Main Board has Power part which supplies power to Deflection and Feature Box.
- The Feature Box receives all signal inputs, the signal-processed signal is sent to CRT Ass'y.
- Deflection and Focus are controlled by the Main Board.

■ Troubleshooting by Modules

1) Enter Service Mode

(In SET Stand-By Status, if you press "Info" → "Menu" → "Mute" and "Power" button in sequence on the remote control, the screen is turned on and the Service Mode screen appears.)

2) Check if the System Board is out of order.

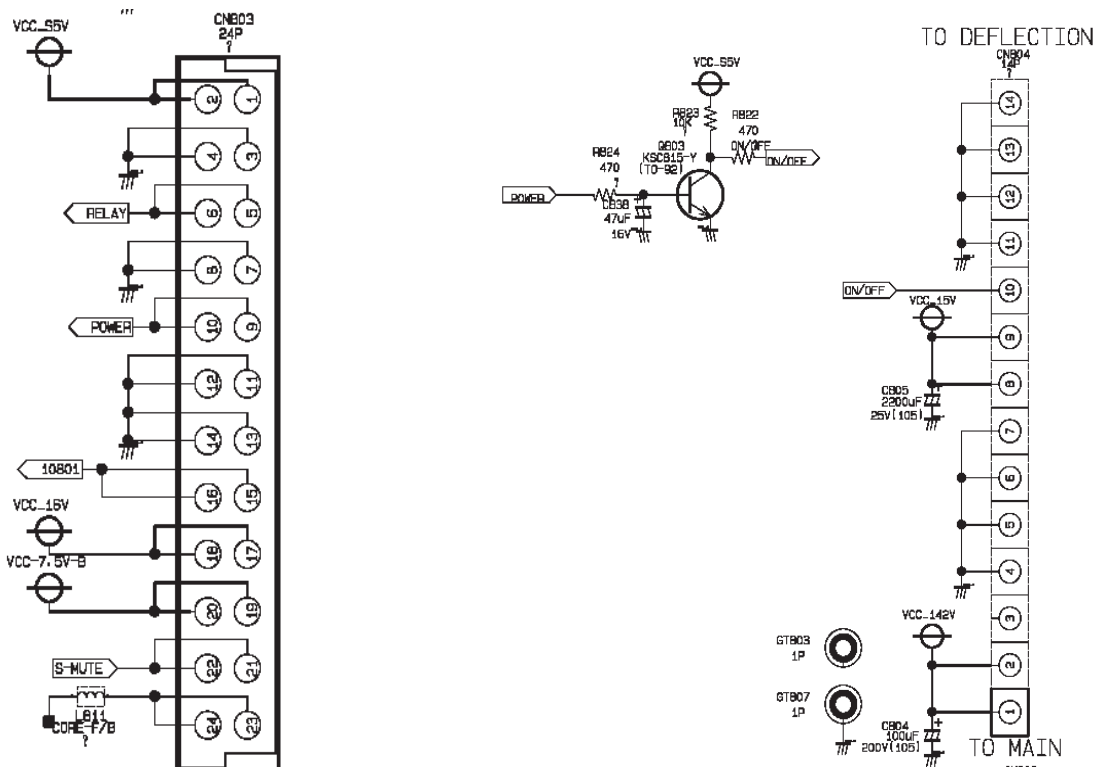
Press OPTION → TEST PATTERN → Right direction key:

The COLOR BAR, BLACK pattern and WHITE pattern are displayed on the screen.

If the pattern is not displayed or is displayed abnormally, Feature Box is out of order.

3) Check if the Power part of the Main Board Board, which supplies power to Feature Box, is out of order.

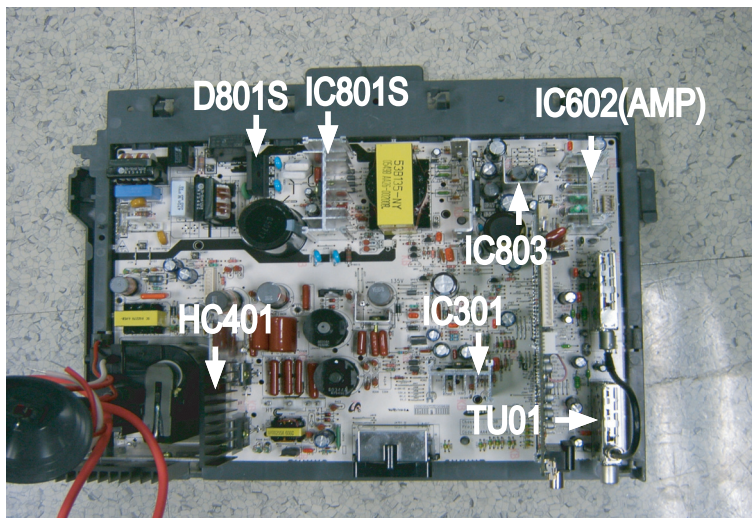
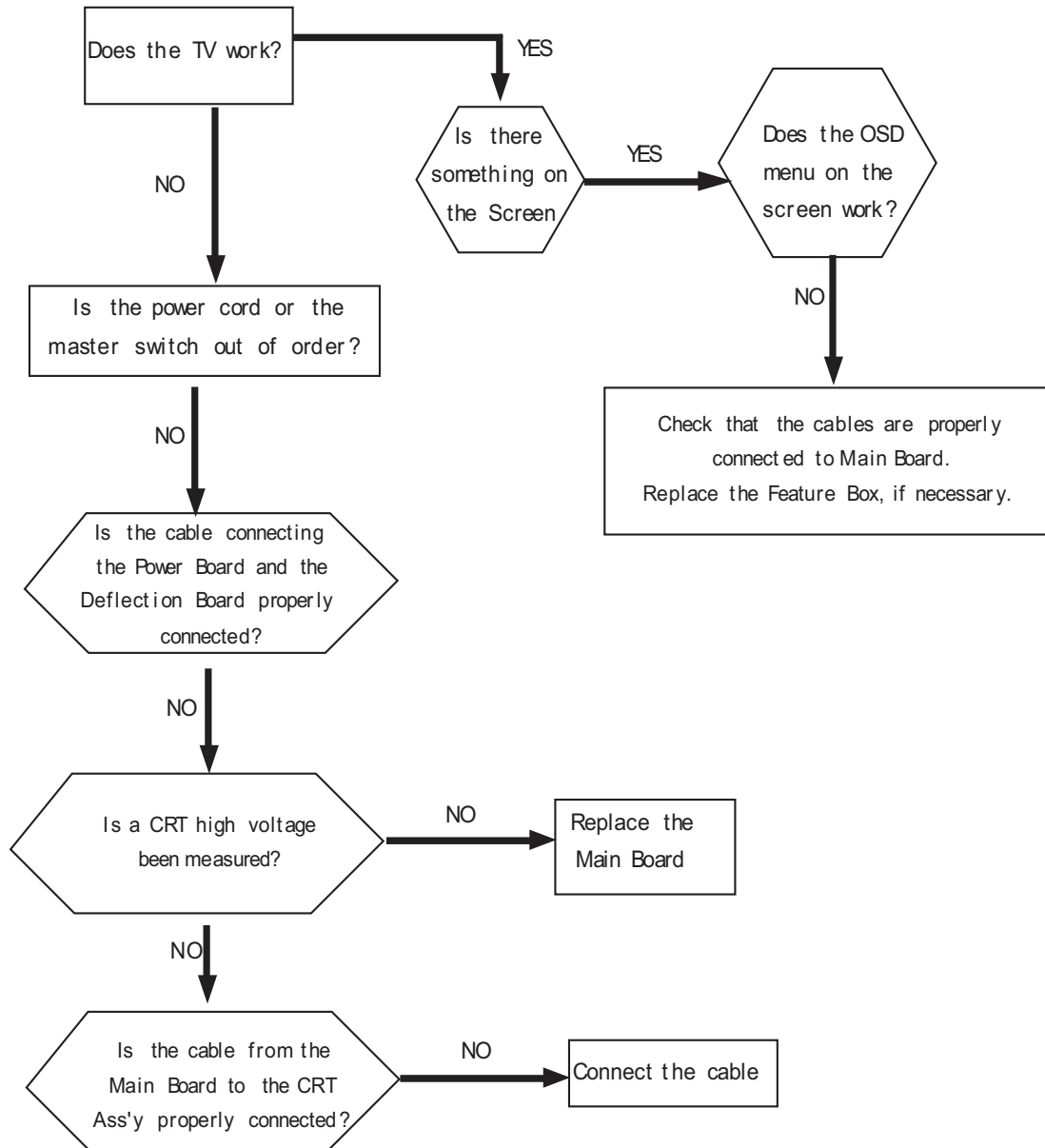
If you cannot turn the screen on by pressing the POWER ON/OFF button or the screen repeatedly turns on and off when pressing the POWER ON/Off button, check if the Power part of the Main Board is out of order. (Refer to the circuit diagram)



4) Check if the Deflection part of the Main Borad is out of order.

When the screen is not properly displayed and the left or right side of the picture is shrunk, or the top or bottom of the screen is expanded or shrunk, check if the Deflection Board is out of order.

6-1-2 Flow Chart for Malfunction



6-2 Trouble-shooting with New Features

6-2-1 Installation & Connection

Problem	Solution
The power does not turn on.	Check if the power cord is properly connected.
Air broadcasting does not work.	Check if the antenna is properly installed.
Cable broadcasting does not work.	Subscribe to a local cable broadcasting firm and get support.
Satellite broadcasting does not work.	Install a satellite antenna (Parabola) and connect it to the TV.

6-2-2 Menu & Remote Control

Problem	Solution
The remote control does not work.	<ul style="list-style-type: none"> ■ Press the Select Device button to select the TV or external device. ■ Replace the battery of the remote control with a new one. ■ Insert the battery making sure the polarity (+,-) is correct. ■ Check if the angle or the distance is sufficient, or if there is any interference between the product and the remote control. ■ Make sure the user has pressed the correct button. ■ To avoid direct sunlight to the receiving panel of the TV, remove any indoor lighting or change the location of the TV. ■ Check if the power switch at the back left of the TV is turned on.
Cannot change the channel with the remote control.	<ul style="list-style-type: none"> ■ Press the Select Device button to select the TV. ■ Change the channel using the remote control of the cable or satellite receiver.
Cannot select an A/V channel.	Press the TV/AV button and check if the AV item is grayed out. When the AV item is grayed out, you cannot select an A/V channel. Check if the connector is properly connected.
Cannot select a menu.	Check if the menu is grayed out. If a menu is grayed out, it cannot be selected.

6-2-3 Screen

Problem	Solution
The screen is black and there is no sound.	<ul style="list-style-type: none"> ■ Check if the power cord is properly connected. ■ Turn on the power. ■ Select an AV channel that corresponds to the external device.
Only the screen is blank/it is dark or too bright.	Adjust the screen brightness.
The screen is blue/the external channel is not displayed.	<ul style="list-style-type: none"> ■ Check if the connector is properly installed. ■ Select an AV channel that corresponds to the external device.
The screen overlaps (double/triple).	<ul style="list-style-type: none"> ■ Check if the antenna is properly installed. ■ Adjust the position, angle or direction of the antenna.
The screen is snowy or unclear. The picture quality gets worse when it is windy	<ul style="list-style-type: none"> ■ Check if the antenna has been bent or moved by the wind. ■ Check the antenna for its lifetime. (Normally 3 - 5 years, 1-2 years near the coast)
Dotted or semi-dotted lines are displayed on the screen.	Install the antenna as far away from the road as possible.
The screen is black and white.	<ul style="list-style-type: none"> ■ Adjust the color density. ■ Check if the connector is properly installed.
The colors of the screen are odd/strange.	Adjust the color tones.
Unusual lines appear on the screen.	Keep the antenna away from the power cord or connectors if possible.
Unusual lines appear on the screen when watching or recording to video.	Keep the video player as far away from the TV as possible.

6-2-4 Sound

Problem	Solution
There is no sound.	<ul style="list-style-type: none"> ■ Increase the volume. ■ Press the Mute button.
The sound is very low.	<ul style="list-style-type: none"> ■ Increase the volume. ■ Set the auto volume control to ON.
There is a lot of noise.	Keep the antenna away from the power cord or connectors if possible.
The selected language does not appear.	Press the Multiplex button to select the TV.

6-2-5 Channel

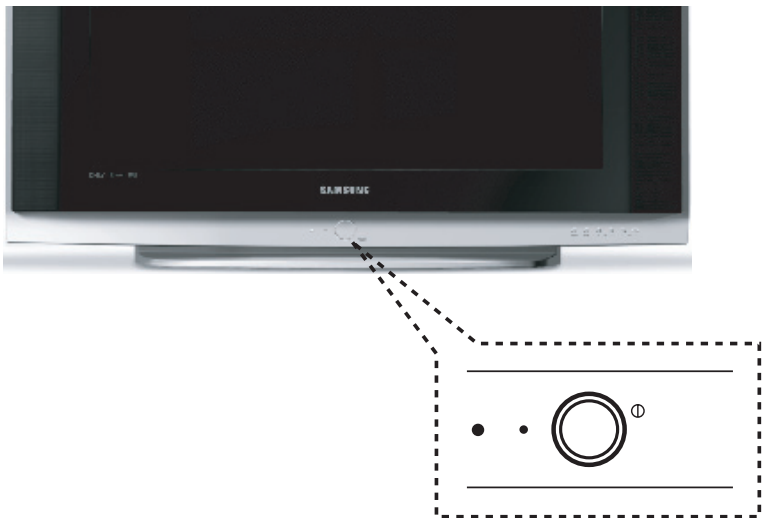
Problem	Solution
There are no channels available.	<ul style="list-style-type: none"> ■ Check if the antenna is properly installed. ■ Press the Auto Channel button to store channels. ■ Contact your local broadcasting service station.
Some channels are not available.	<ul style="list-style-type: none"> ■ Adjust the position, angle or direction of the antenna. ■ Activate the Reception Sensitivity Boost feature. ■ Contact your local broadcasting service station. ■ Use the number keys to select a specific channel and press Store/Clear to memorize it.
Only the UHF (14-69) channels are not available.	Check if the antenna is able to receive UHF signals.

6-2-6 Others

Problem	Solution
The TV makes a noise as if something is dropping inside.	This noise may occur when the plastic material inside the TV expands or contracts according to the seasonal temperature or humidity. This is like the noise from a furniture/cabinet/sink unit, and there is no need for concern.

6-3 Troubleshooting Procedures by Error Modes

6-3-1 Basic Troubleshooting: Diagnosis of LED on the Front Panel



- : Light is On
- ⦿ : Light is Blinking
- : Light is Off

Power	Description
○	This happens when the Master Switch is not pressed or the power cord is disconnected.
●	This happens when the power cord is connected and the power switch is pressed. If you cannot set the power switch on by pressing it, check the power switch Ass'y.
○→⦿→●	If you press the power switch of the transmitter or the channel key on the remote control when in St-BY status, the screen will be turned on. If the LED blinks and the screen is not displayed, check the connection between the Power and the System Board.

6-3-2 Troubleshooting by the Checksum

- Diagnosis of trouble by the checksum is neither reliable nor convenient.
You can only use the checksum of the current direct-view TV to determine whether the software is corrupted or not.
The Checksum value is determined according to the version of the software loaded on the set.
Therefore, you can determine whether the software has been properly downloaded, if you know the correct checksum for that version of the software.

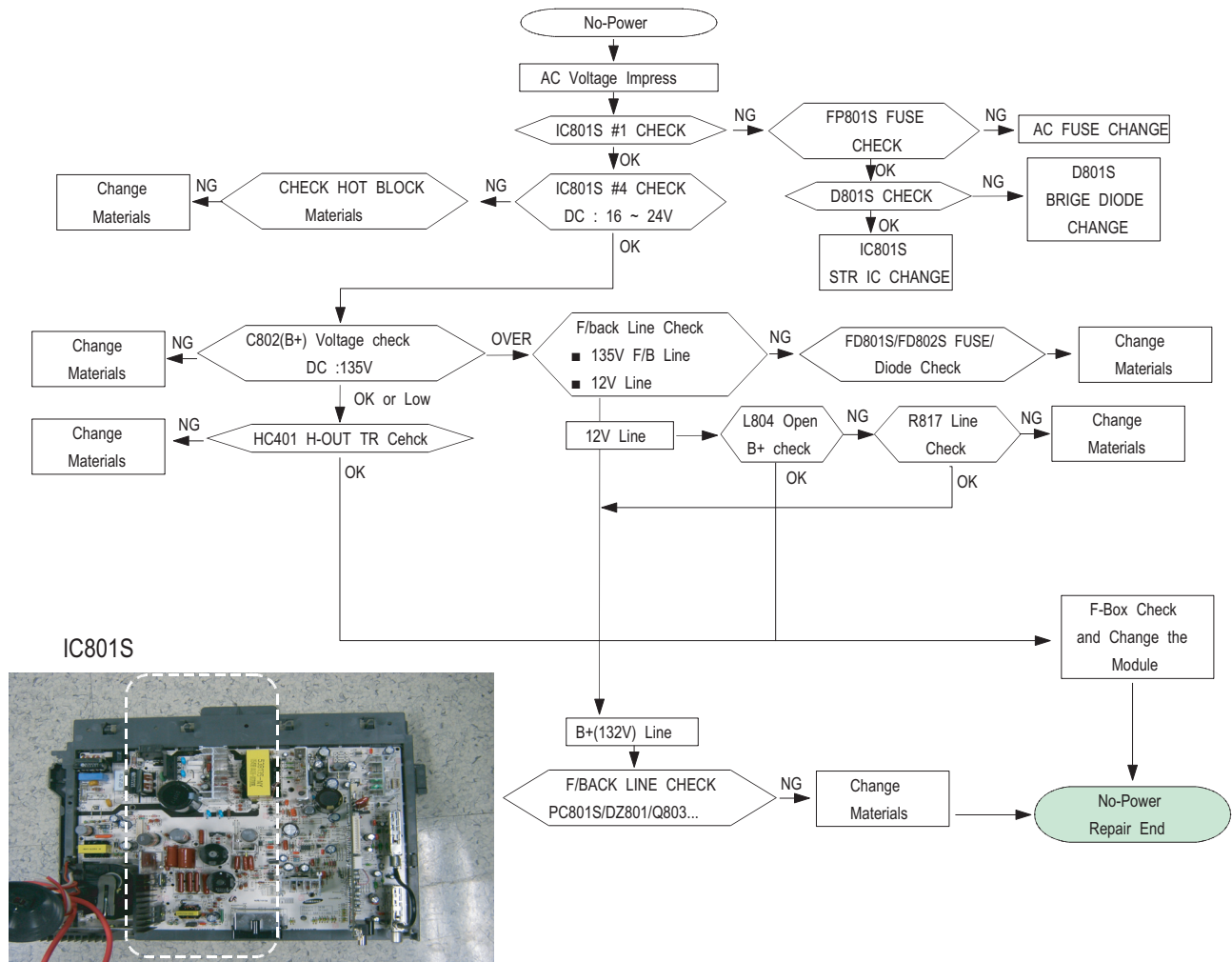
You can check the checksum according in the following order.
Factory Mode → Checksum → Right Button → Calculate Checksum → Output Checksum (e.g. 0xab2b)

- Checksum Examples
T_COREOAKR1_1010 : checksum = 0xab2b
T_COREOAKR1_1014 : checksum = 0x4faa

6-4 Troubleshooting Procedures by ASS'Y

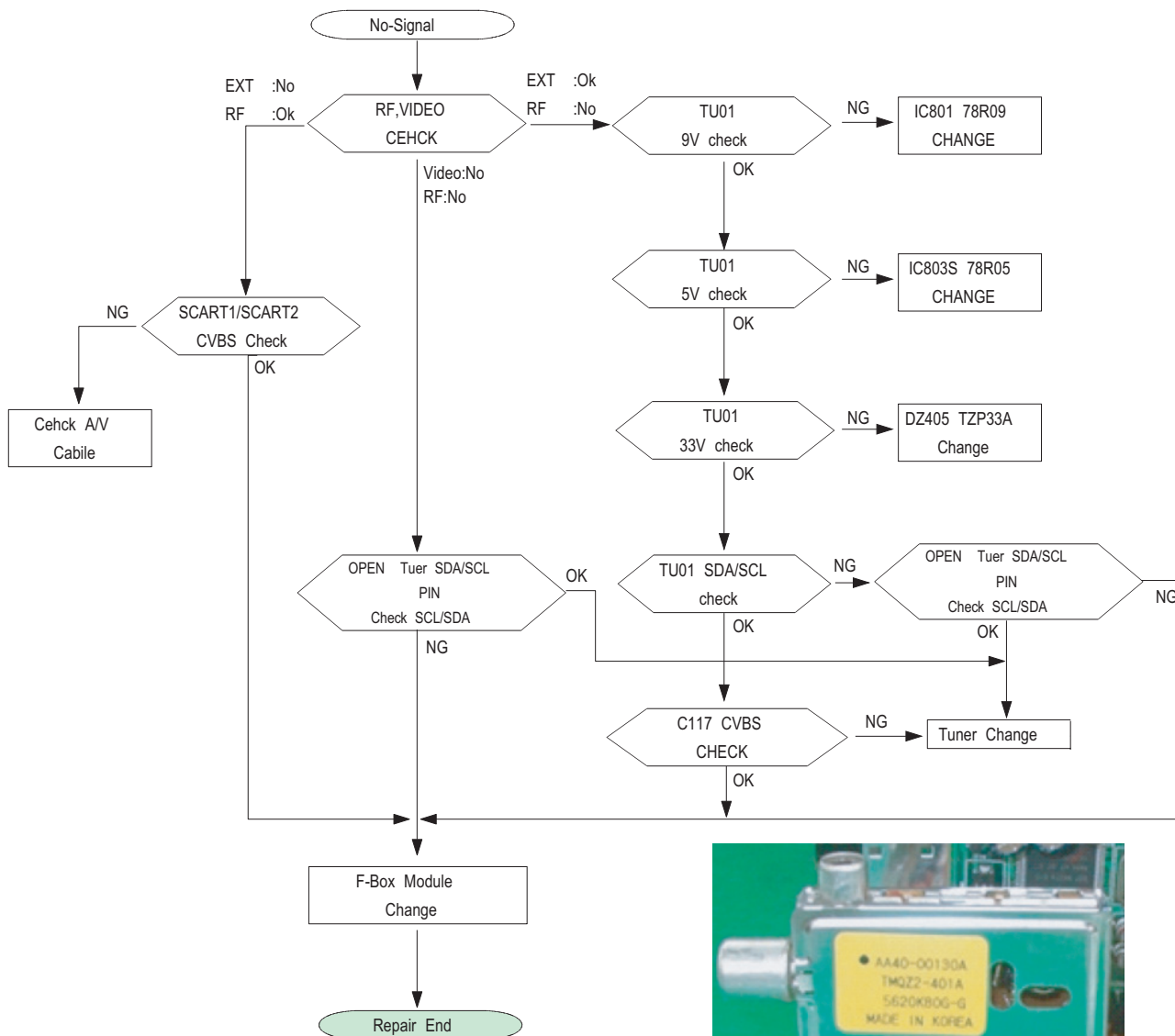
6-4-1 NO Power

1. Power part of the Main Board Check



6-4-2 NO Video

1. when the power is normal

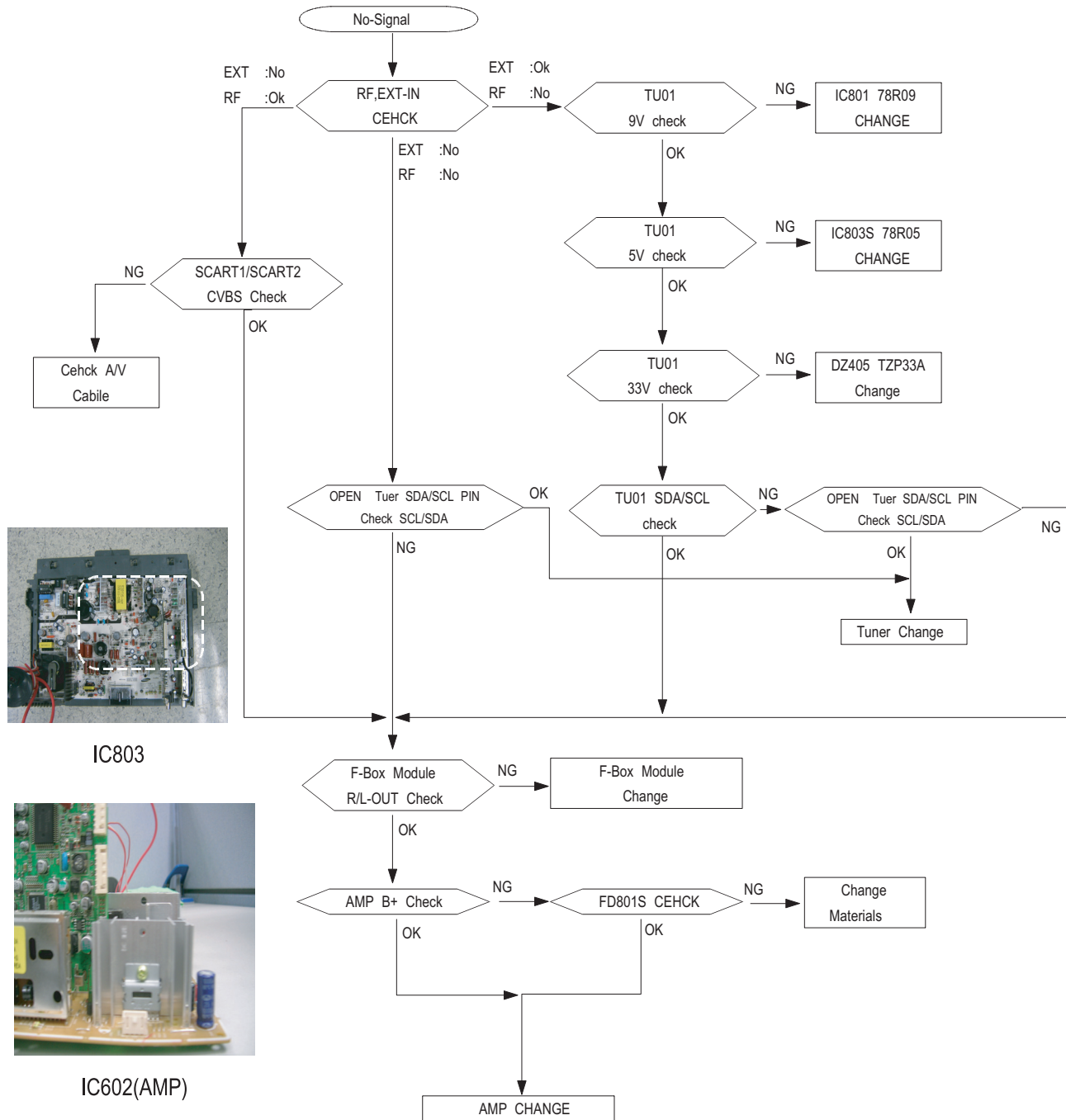


TU01



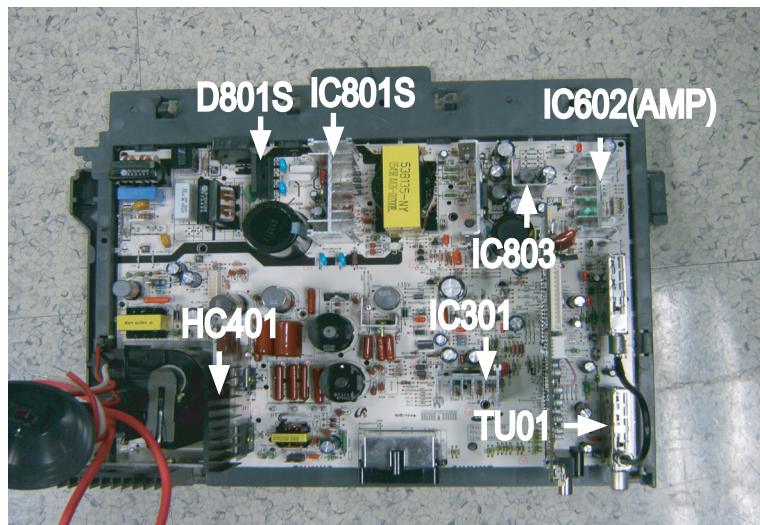
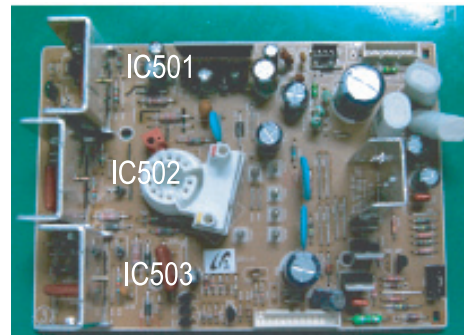
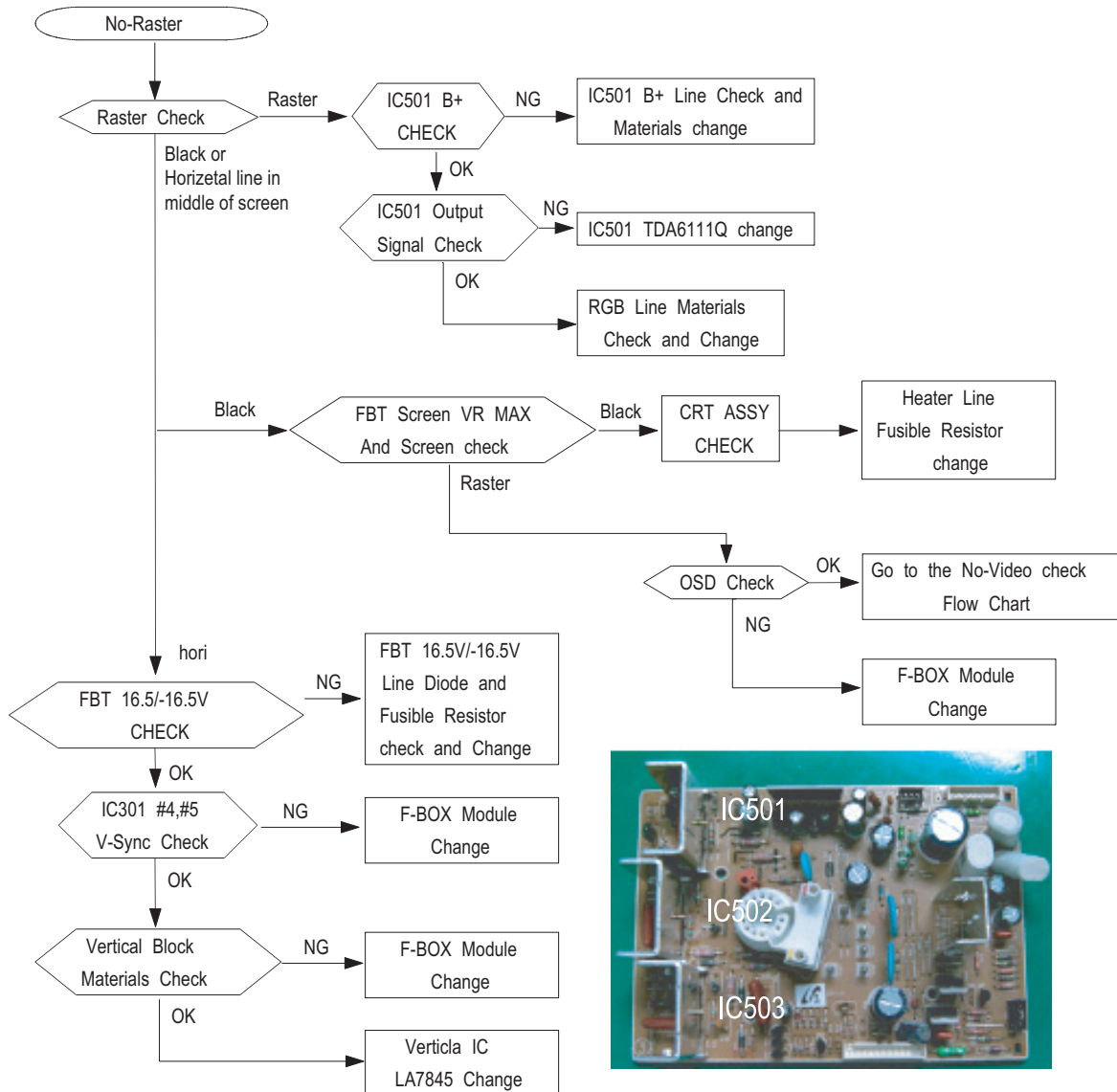
6-4-3 No Sound

1. when the power is normal



6-4-4 No Raster

1. when the H/V is normal



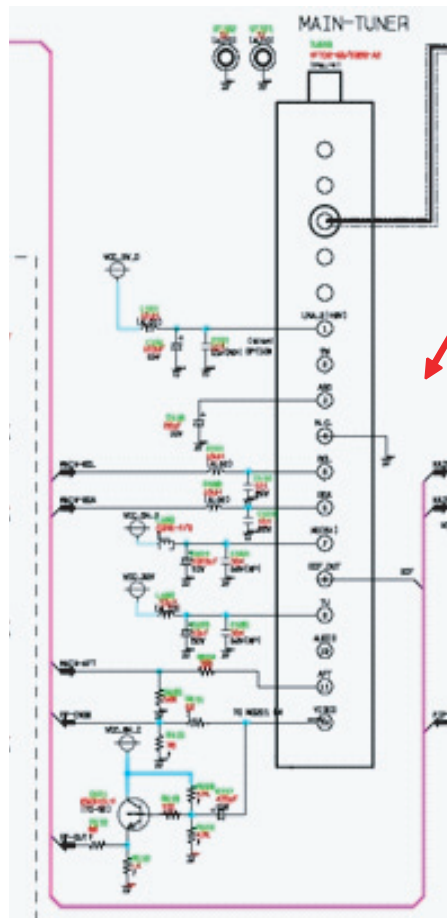
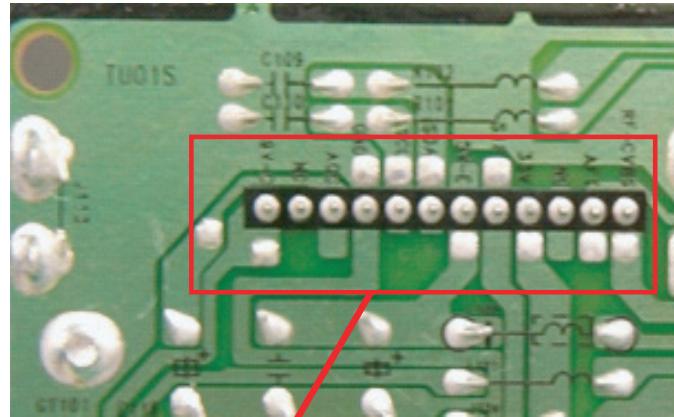
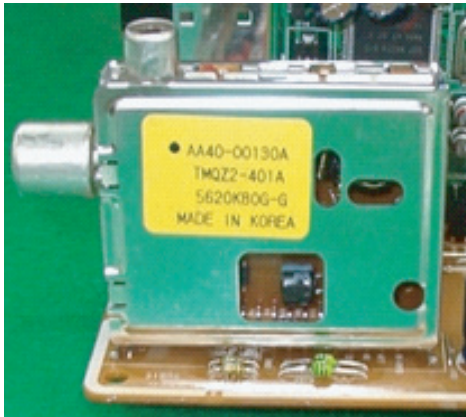
6-5 Troubleshooting by Blocks

6-5-1 Troubleshooting System Boards

1. Tuner Diagnosis

If no signal is received even though the RF signal from the external aerial is connected to the MAIN Board Tuner, check the following items.

- Supply Power: 5V, 9V, 33V
- Check for an RF defect: Check the CVBS output
- Check for an AUDIO defect: Check the SiF Signal output

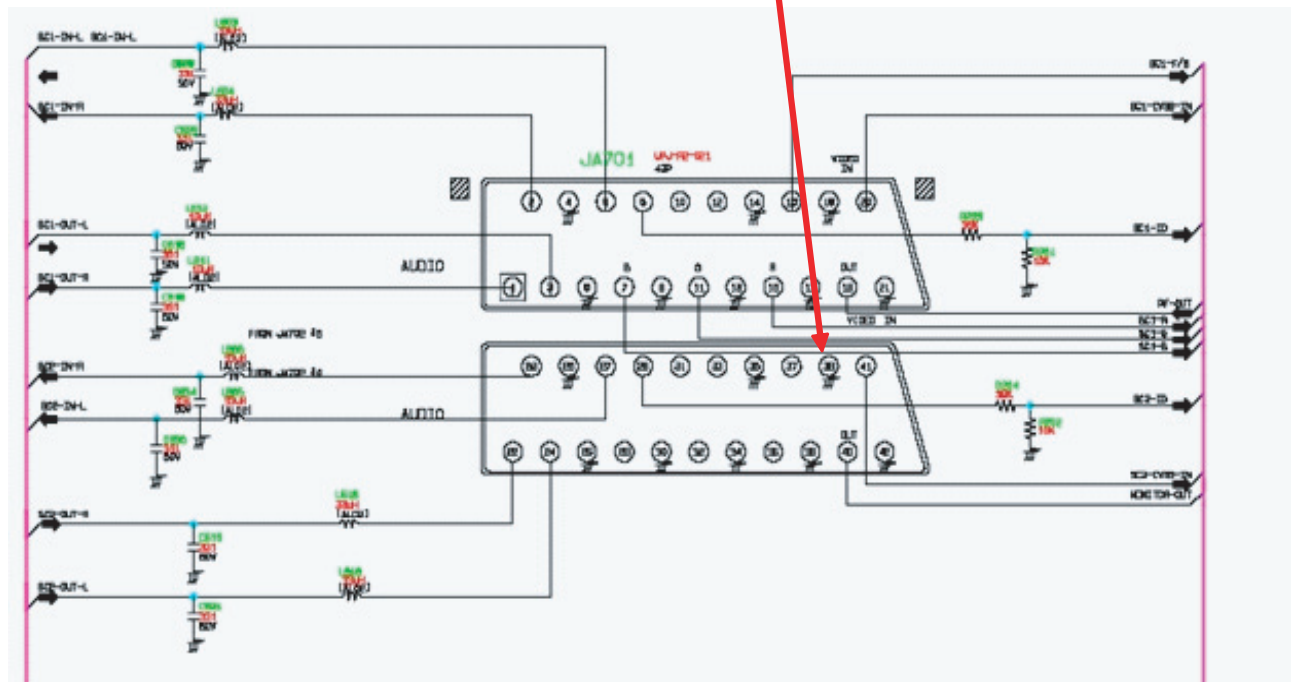
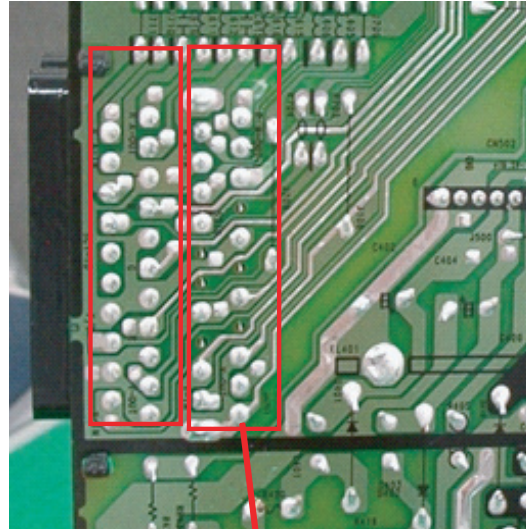
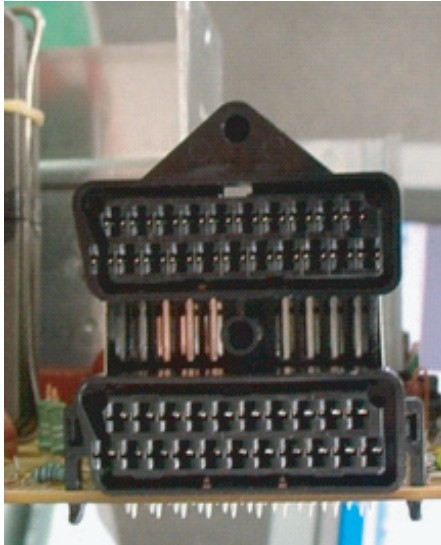


2. External Input Diagnosis

It receives the EXT1/EXT2/signal and consists of monitor output (video and audio).

The signal is input to VSP9402 through the port. If no signal input/output is detected, check the following items.

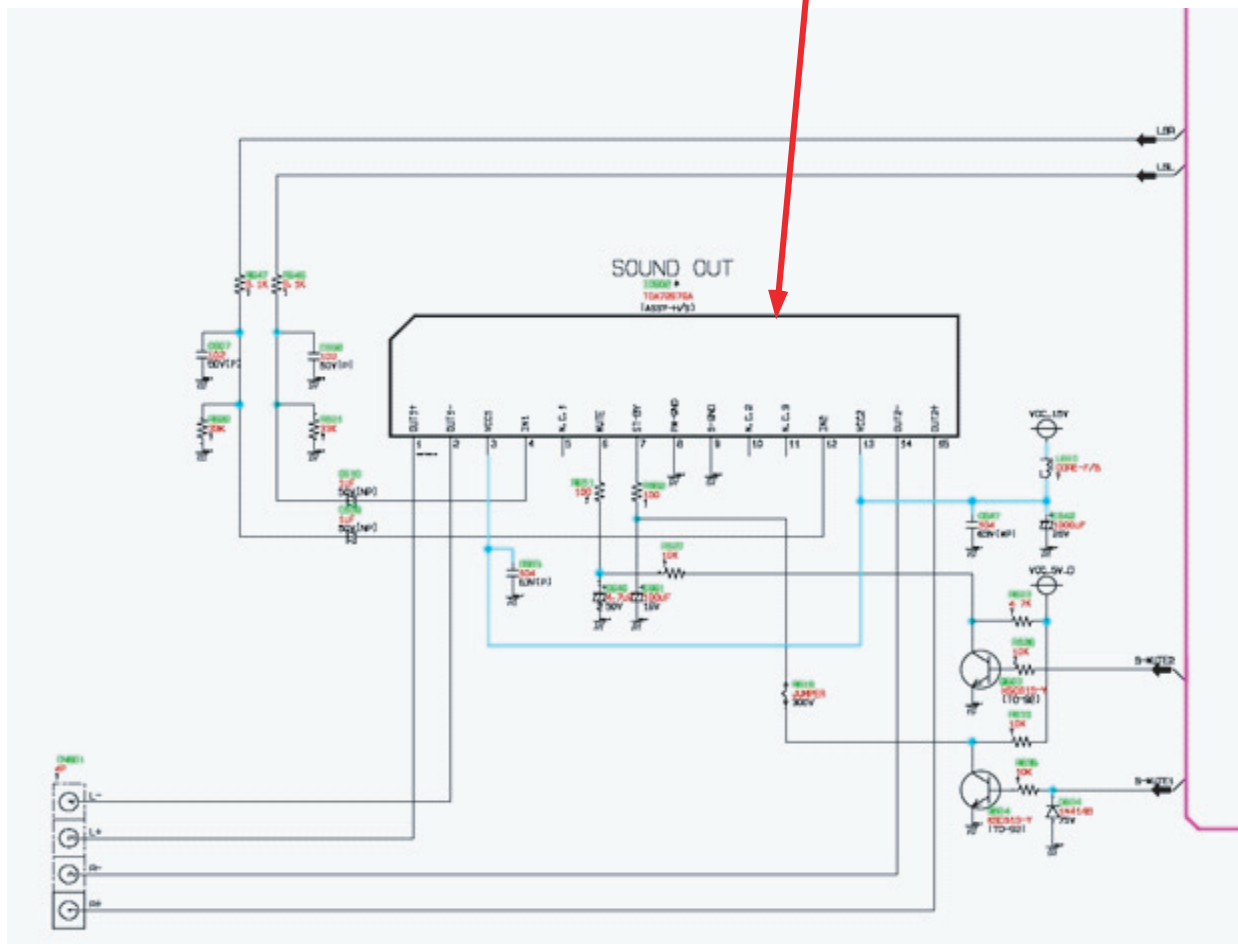
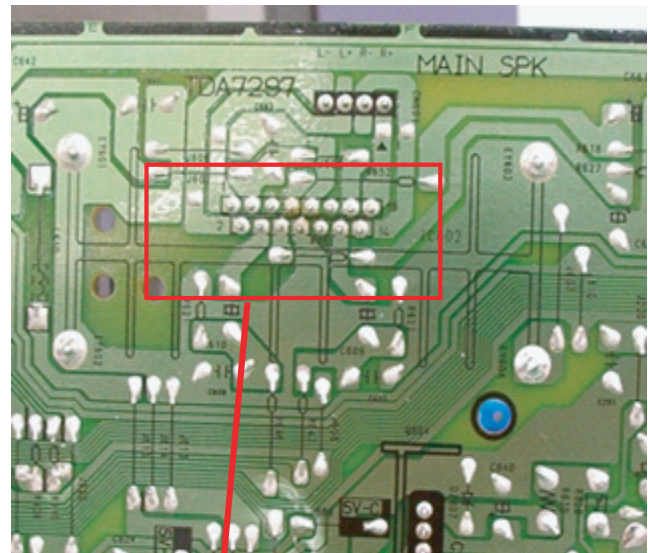
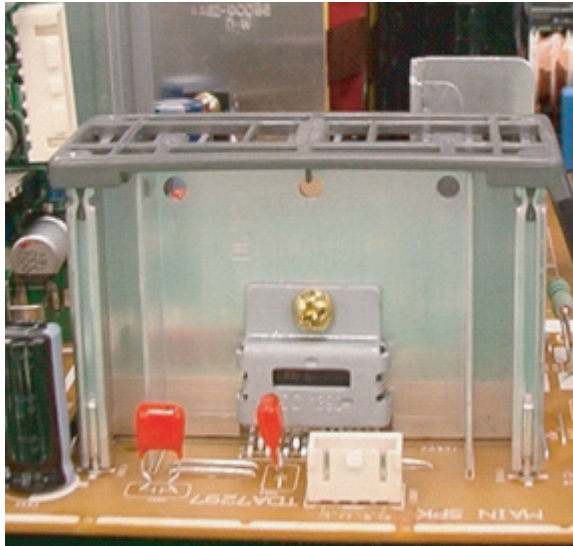
- Power supply : VSP9402(3.3V,1.8V) , CXA2180(5V)
- Check if the input and output jacks are defective.



3. TDA7297(Audio AMP) Diagnosis

The signal is received from the Audio Processor (VCT69xyP) and sound is output at 10W + 10W power.

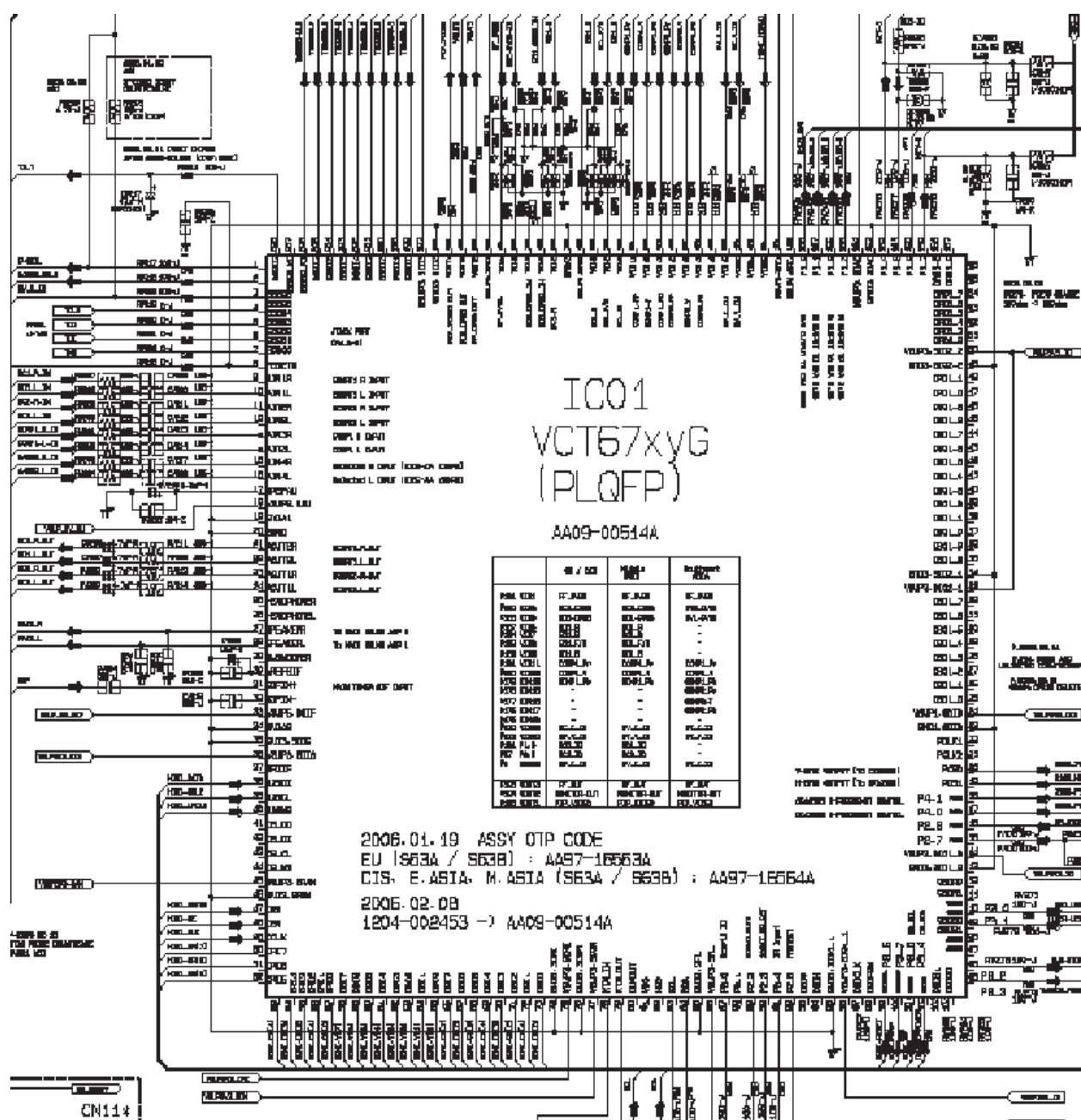
- Power supply :15V
- Check for input defects : L/R
- Check for output defects : L+, L-, R+, R-



4. VCT67xyG Diagnosis

It processes the one chip that Micom, Switching, Decoder

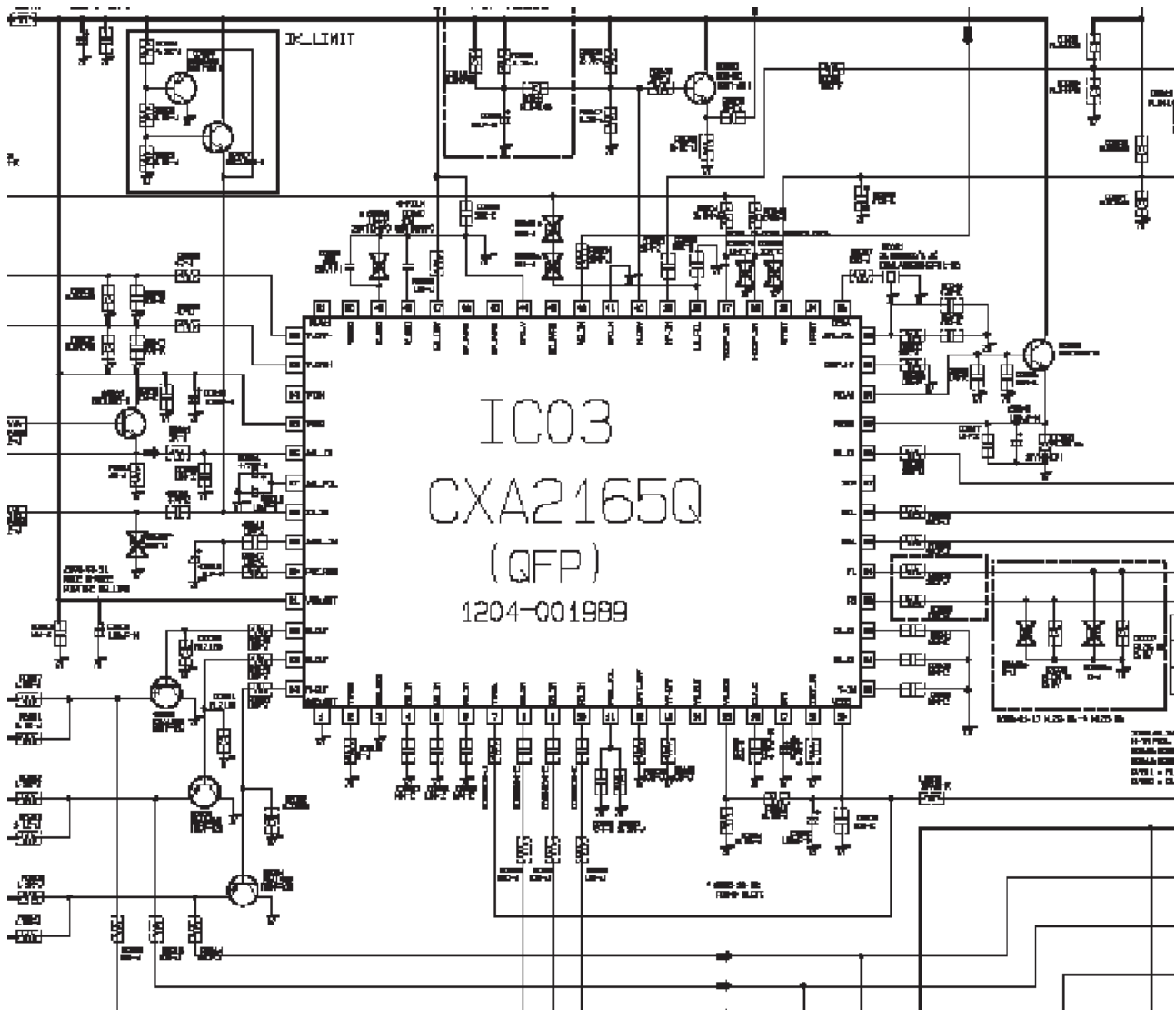
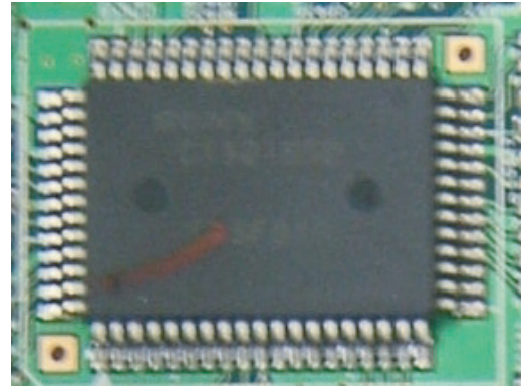
- Power supply : 8V, 5V, 3.3V, 1.8V
- Check for input defects : RF, SCL, SDA, S-Video(Y,C), SIF, Scart 1/2, Component 1/2, HDMI
- Check for output defects : RF, Monitor out, R/G/B Sound L/R



5. CX2165 Diagnosis

The Y/Pb/Pr signal is received from VCT69xyP and the signal is output as R/G/B. It also outputs the V/H Drive, E/W and performs the ABL and EHT operation. If V-Drive output is not detected, check for an IC defect.

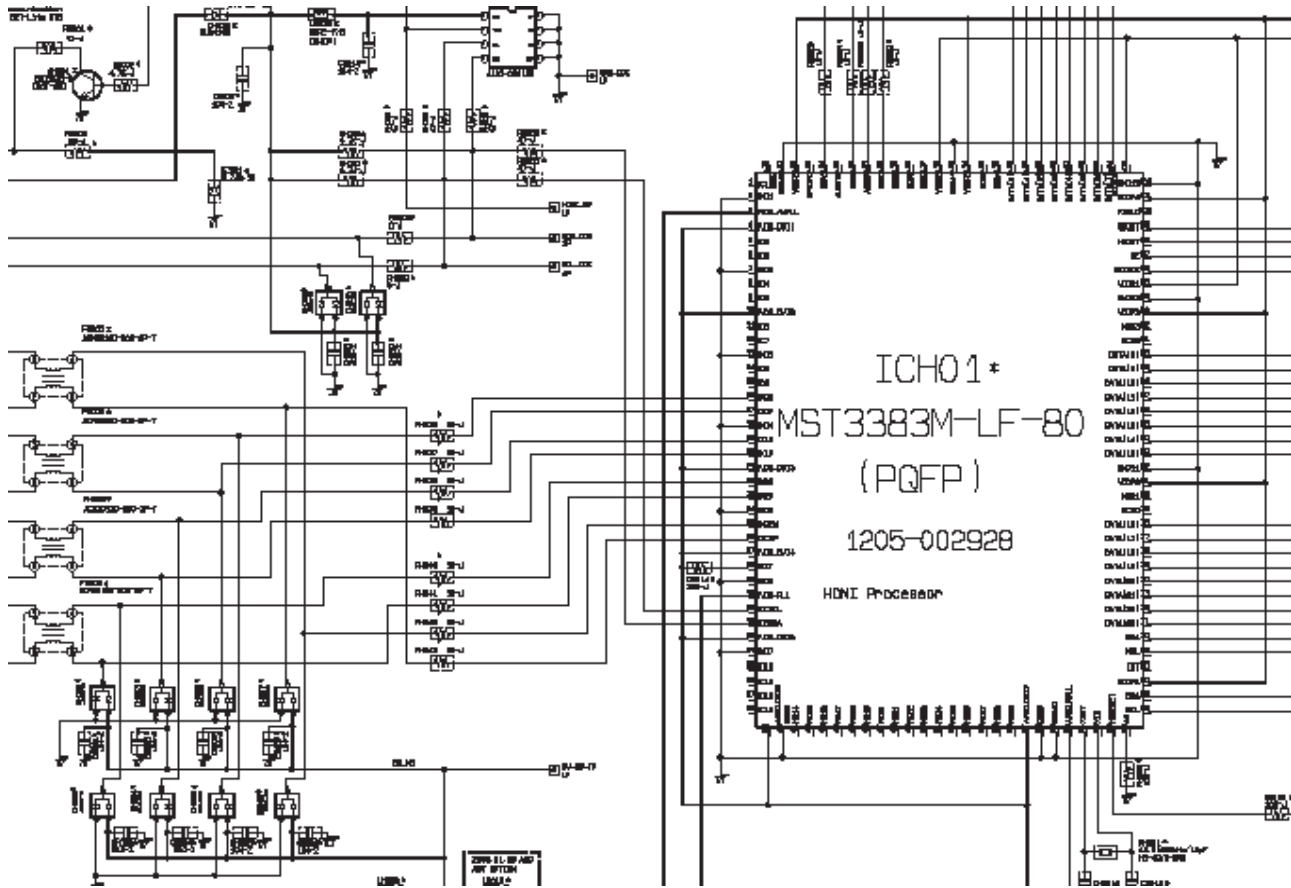
- Power supply : 5V, 9V
- Check for input defects : R/G/B, H/V
- Check for output defects :



6. MST3383M Diagnosis

HDMI Decoder

- Power supply : 5V, 3.3V, 2.5V
- Check for input defects : SCL, SDA, Reset
- Check for output defects : HDMI 24bit Data, I2S, H/V



MEMO