

TV160

4K-Vbyone & 2K-LVDS Screen Tester Instruction manual

Ver 1.2 Version

Technical support and sales:

TV160 website: <http://www.tv160.com>

Taobao website: <http://tv160.taobao.com>

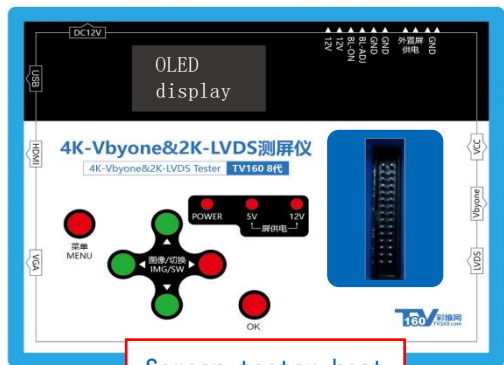
Upgrade file download address:

<http://www.tv160.com/tester.htm>

- ◀ Introduction of 4K screen tester
- ◀ 4K screen tester supporting screen reference
- ◀ 4K screen tester output port description
- ◀ 4K screen line conversion board for 4K screen tester
- ◀ 4K screen tester test 4K screen operation guide
- ◀ 4K screen test 2K screen operation guide
- ◀ Detection instructions of 4K screen tester screen body and screen line
- ◀ 4K screen tester upgrade operation

◀ Introduction of TV160-4k screen tester

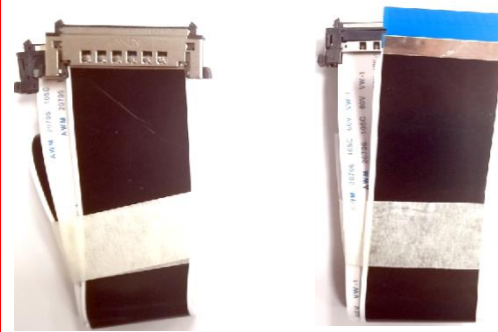




Screen tester host



12V / 3A power adapter



Double bayonet
4K screen cable

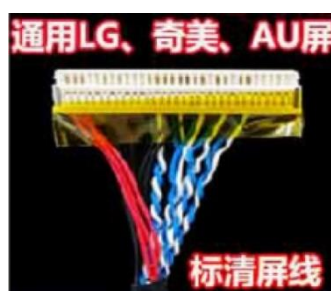
Single bayonet
4K screen cable



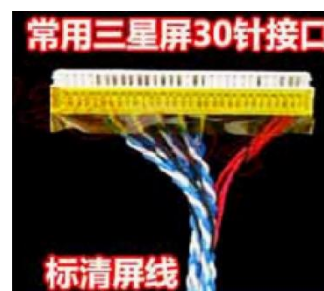
Left power supply
HD screen cable



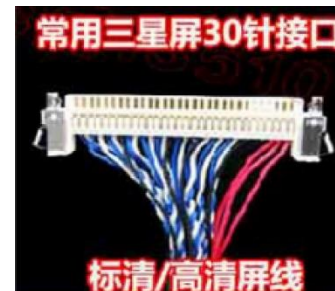
Right power supply
HD screen cable



Left power supply
standard clear
screen line



Right power supply
standard clear
screen line



Dual 8-screen cable (for
display)



Cstot 4K screen line
conversion board

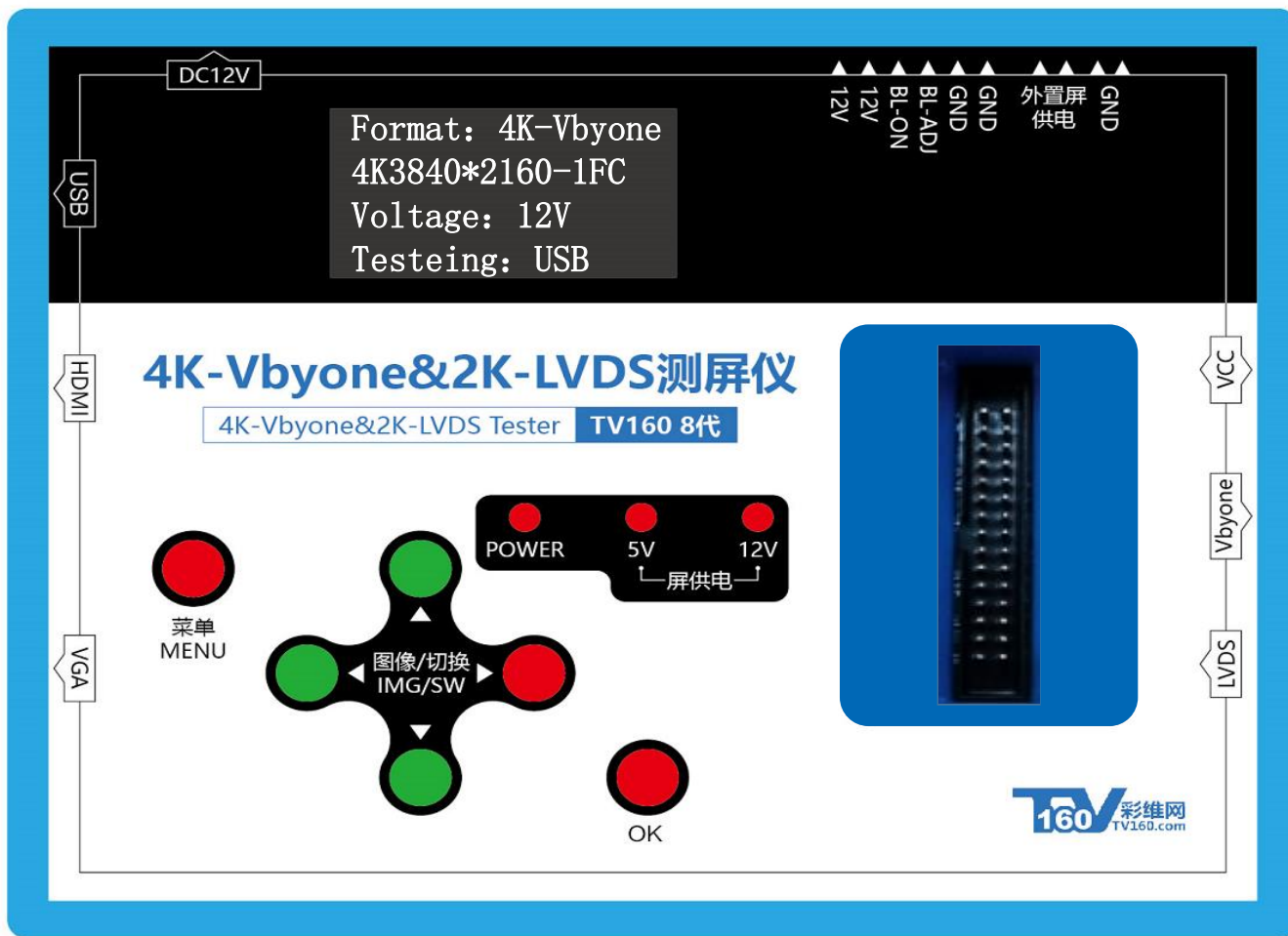


Samsung 4K screen cable
conversion board



4K dual screen line converter
board of 120Hz

This screen tester supports 4K-Vbyone & 2K-LVDS signal test, and is compatible with the common flat panel TV screen test in the market. At the same time, this screen tester has the screen cable insert error prompt and protection, and supports USB direct upgrade. It is a 4K and 2K LCD, LED flat panel TV screen tester with good compatibility, easy operation and portability!



Product introduction of screen tester

- I. The screen tester supports 4K-Vbyone signal and 2K-LVDS signal, and can directly test the screen, with built-in common test signals (red, green, blue, white field and black field);
- II. Support 2K and 4K 60Hz, 120Hz, 240Hz LVDS signal and Vbyone signal of various resolutions;
- III. There are plenty of external interfaces. In addition to the test signal of the test screen signal itself, there are also USB interfaces, HDMI and VGA interfaces, which can input external test signals, or plug in an external USB disk through the USB interface to play the video and pictures of the USB disk;
- IV. Perfect protection function, when the screen line is connected wrong, the power supply of the screen will be cut off automatically to avoid burning the screen;
- V. Various upgrade modes, recommend convenient U-disk upgrade.
- VI. Support Chinese and English version, foreign version can download English program.

Screen tester upgrade program and test pictures and videos download address:

Website: <http://www.tv160.com/tester.htm>

4K-Vbyone & 2K-LVDS screen tester Panel description :

12V / 3A
DC input

OLED display:
display screen
parameter data
of common
debugging

External backlight or auxiliary
power supply

12V: output or input power
supply
BI-on: backlight switch control
BI-adj: backlight brightness
control
GND: Ground

In view of the large driving
current of some screens, this
interface can be used to supply
power to the screen.
External panel power supply:
matching with panel power supply;
GND: grounding

USB interface: video
and pictures can be
played during screen
test, and USB disk
upgrade is supported

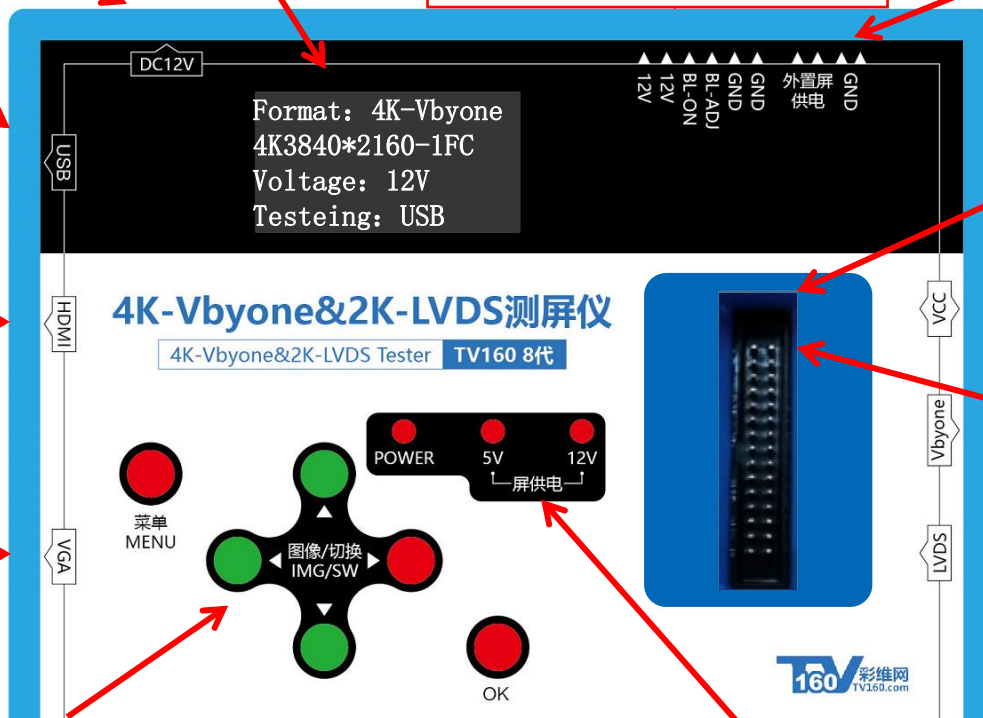
HDMI interface:
Support the input of
external HDMI signal

VGA interface:
Support the input of
external VGA signal

LVDS interface: 2K screen
30p international standard
LVDS interface, pay
attention to the power
supply direction of the
screen line at the upper
end when inserting.

VCC identification:
indicates that the
power supply direction
of LVDS and vbyone
interface is at the
upper end.

Vbyone interface: 4K
screen and 51p
international standard
vbyone interface, which
can be directly inserted
into LG and group
innovation screen, while
old Samsung and old Cst
need to convert small
board.



Menu: setting parameters
Four direction keys: select when
setting; when you plug in the
upgrade U disk and press the up
key for five seconds, you can
trigger the upgrade;
OK key: confirm after setting; or
pause when playing video or
picture

Power: power indicator
5V: 5V indication of screen power supply; 12V: 12V
indication of screen power supply;
When the external screen is abnormal or the screen is
not connected, it is used to protect the screen body
and the power supply of the output screen is not
available. The light is not on and there is a prompt
on the display screen. When the power supply of the
screen is set to off, it will not prompt.

◀ Tv160-4k screen tester
supporting screen
reference

Format	Resolving power	VGA	HDMI	USB	COLOUR	Note
LVDS	1024*768-VESA	Normal	Normal	Not full screen	Normal	Single 8bit
LVDS	1366*768-VESA	Normal	Normal	Not full screen	Normal	Single 8bit
LVDS	1366*768-JEIDA	Normal	Normal	Not full screen	Normal	Single 8bit
LVDS	1280*800-VESA	Normal	Normal	Not full screen	Normal	Single 8bit
LVDS	1280*1024-VESA	Normal	Normal	Not full screen	Normal	Double 8bit
LVDS	1440*900-VESA	Normal	Normal	Not full screen	Normal	Double 8bit
LVDS	1600*1200-VESA	Normal	Normal	Not full screen	Normal	Double 8bit
LVDS	1920*1080-VESA	Normal	Normal	Normal	Normal	Double 8bit
LVDS	1920*1080-JEIDA	Normal	Normal	Normal	Normal	Double 8bit
LVDS	1920*1080-120HZ	Normal	Normal	Not full screen	Normal	Conversion board required
LVDS	1920*1200-VESA	Normal	Normal	Normal	Normal	Double 8bit

Note: You can add resolution or screen parameters according to customer needs

Format	Resolving power	VGA	HDMI	USB	COLOUR	Note
Vbyone	3840*2160-1FC	Normal	Normal	Normal	Normal	1 Division
Vbyone	3840*2160-2FC	Normal	Normal	Normal	Normal	2 Division
Vbyone	3840*2160-LGD	Normal	Normal	Normal	Normal	Lg-4K screen reference
Vbyone	3840*2160-120HZ	Not full screen	Not full screen	Not normal	Normal	Conversion board required
Vbyone	1920*1080-JEIDA	Normal	Normal	Normal	Normal	2 sets of signals
Vbyone	1920*1080-VESA	Normal	Normal	Normal	Normal	2 sets of signals
Vbyone	1920*120HZ-VESA	Normal	Normal	Normal	Normal	4 sets of signals
Vbyone	1920*120HZ-JEIDA	Normal	Normal	Normal	Normal	4 sets of signals

Note: Screen parameters can be customized according to customer needs

◀ TV160-4k screen tester
output port description

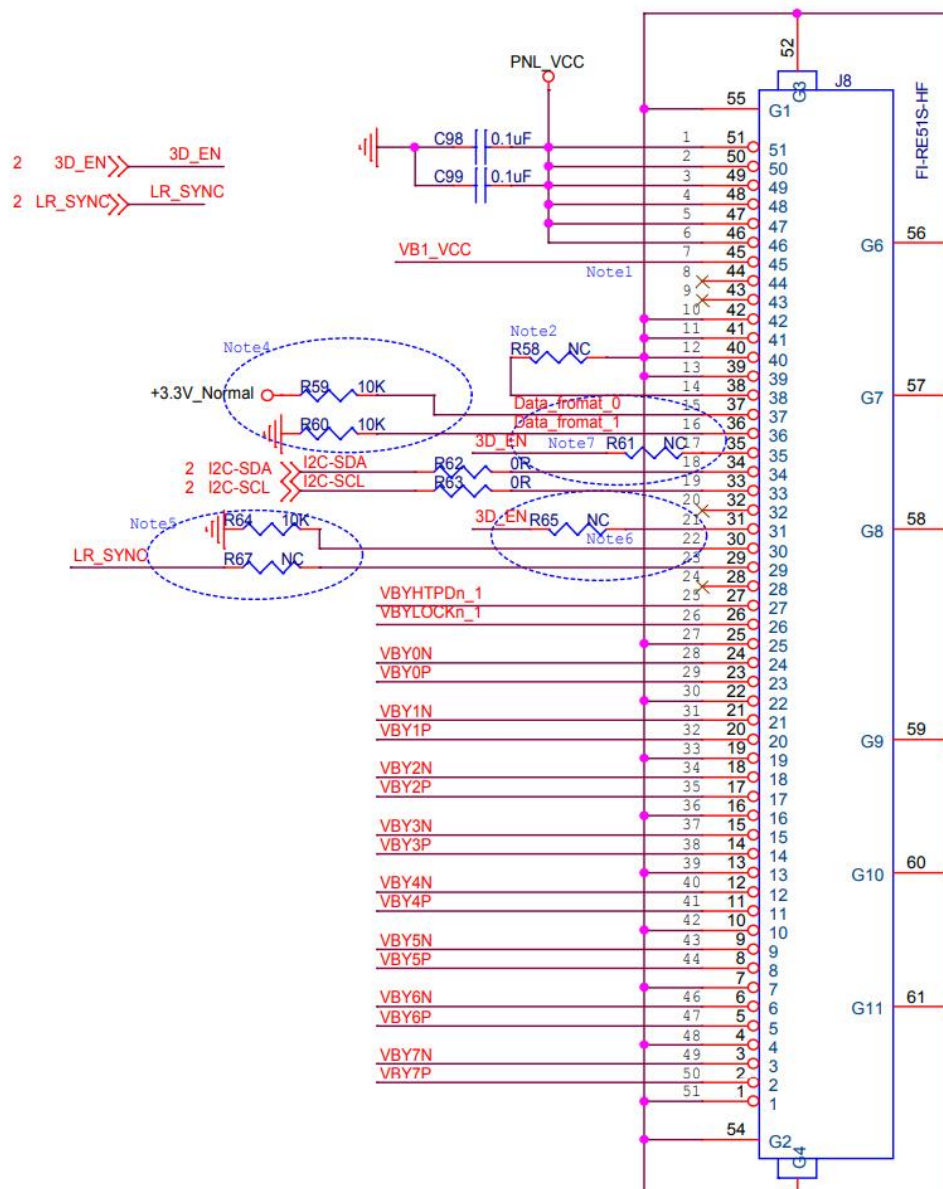


LVDS input interface line sequence: (the top left corner is the first pin)



Pin	English logo	Chinese description	Pin	English logo	Chinese description
1	VCC	Panel power supply	2	VCC	Panel power supply
3	VCC-pan1	Panel power supply detection	4	GND	Ground
5	GND	Ground	6	GND	Ground
7	LVDS-A0+	A0 input positive	8	LVDS-A0-	A0 input negative
9	LVDS-A1+	A1 input positive	10	LVDS-A1-	A1 input negative
11	LVDS-A2+	A2 input positive	12	LVDS-A2-	A2 input negative
13	GND	Ground	14	GND	Ground
15	LVDS-CLK1+	Clock 1+	16	LVDS-CLK1-	Clock 1-
17	LVDS-A3+	A3 input positive	18	LVDS-A3-	A3 input negative
19	LVDS-B0+	B0 input positive	20	LVDS-B0-	B0 input negative
21	LVDS-B1+	B1 input positive	22	LVDS-B1-	B1 input negative
23	LVDS-B2+	B2 input positive	24	LVDS-B2-	B2 input negative
25	GND	Ground	26	GND	Ground
27	LVDS-CLK2+	Clock 2+	28	LVDS-CLK2-	Clock 2-
29	LVDS-B3+	B3 input positive	30	LVDS-B3-	B3 input negative

Vbyone-4k interface:



4K-Vbyone interface output:

The commonly used LG, group creation and AU screens do not need a line sequence conversion board, and can be directly connected. Before 2016, Cstot and Samsung screen may need to convert the small board. Only after the line sequence conversion.

In common operation, as long as the 4K screen is used, you can connect the screen directly without switching the small board. If there is no diagram, try to convert the small board with the related line sequence before entering.

◀ 4K screen line conversion board
for TV160-4k screen tester

Common connection methods are shown in the figure below

◀ TV160-4k screen tester test 4K
screen operation guide
4K vbyone interface

Common 4K screen parameter settings

Format: 4K-Vbyone
4K3840*2160-1FC
Voltage: 12V
Testeing: USB

4K screen logic drive board,
7 or more power lines.

FFC
screen
interface

PFC
screen
interface

When testing the commonly used 4K
screen, set the mode reference:

4K3840*2160-1FC (1 Division)

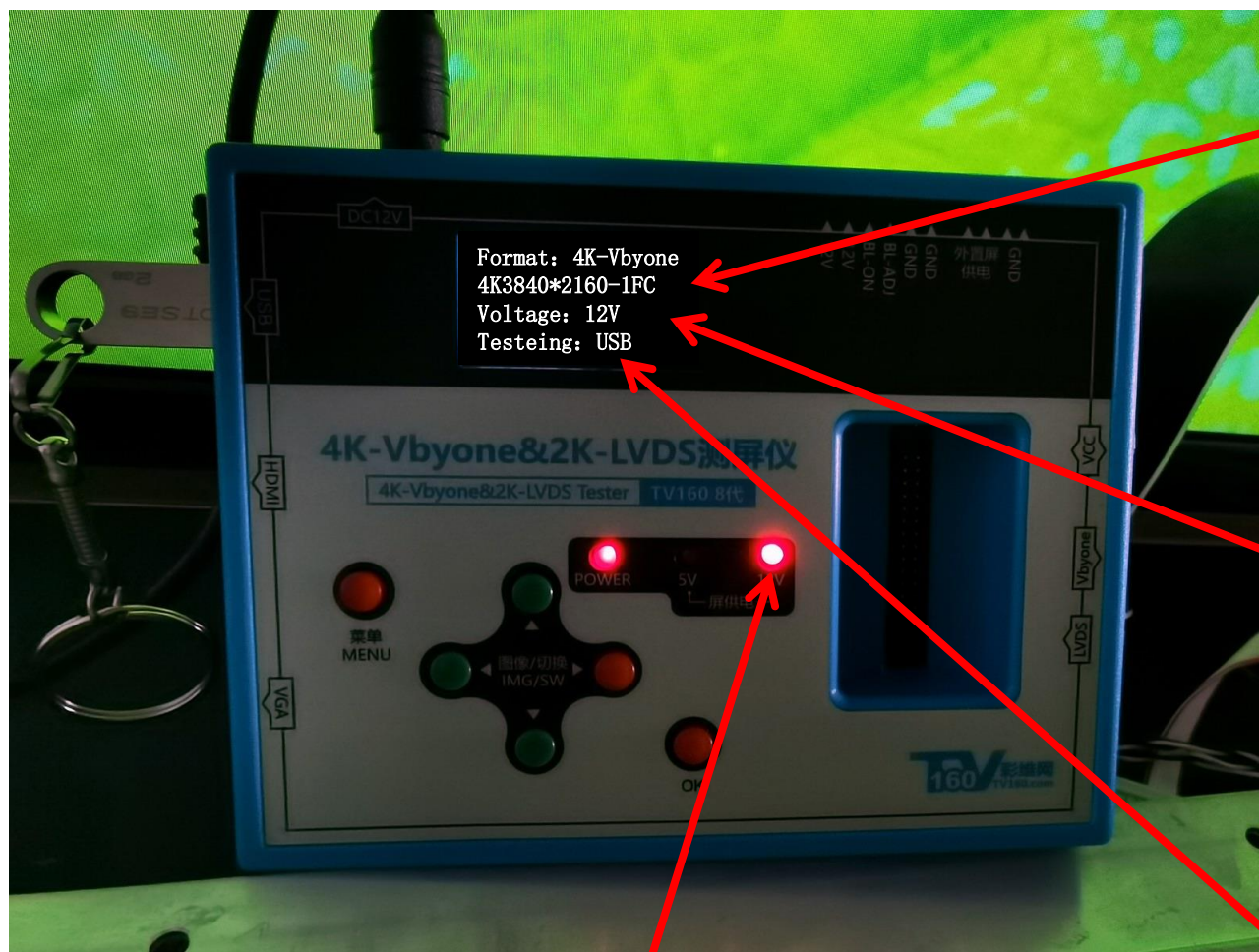
4K3840*2160-2FC (2 Division)

4K3840*2160-LGD (LG4K Screen)

Warning screen
abnormal, please
check screen cable
connection!

Aim at the signal line sequence of
8 pairs of vbyones, select
different screen lines according
to different seats, and use
corresponding screen lines. If the
screen line is abnormally open or
inserted biased, there will be a
left prompt.

The screen connection test settings of 4K-Vbyone are shown in the figure below:



Please set the screen resolution at: 4K vbyone, 3840 * 2160-2fc, (2 partition) set these values according to the screen parameters of 4K screen.

The 4K screen of TV is generally 12V. When the screen is not connected or the screen line is not good, it will prompt protection, and when it is set to off, the protection prompt will be turned off.

For the voltage indication of the power supply input of the screen, the TV screen is usually used for 12V, and part of the display supplies power for 5V screen,

Test signal:
Color: internally generated test chart;
VGA: input signal from VGA;
HDMI: input signal from HDM;
USB: can play the video and picture of USB disk.

Connection diagram of old Samsung and old China Star plus conversion board:



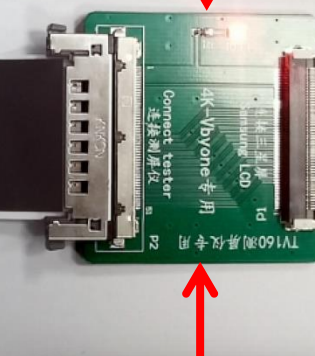
When testing 4K screen, the setting mode reference: (Samsung and Csot screen are set in the same way)

4K3840*2160-1FC (1 Division)
4K3840*2160-2FC (1 Division)

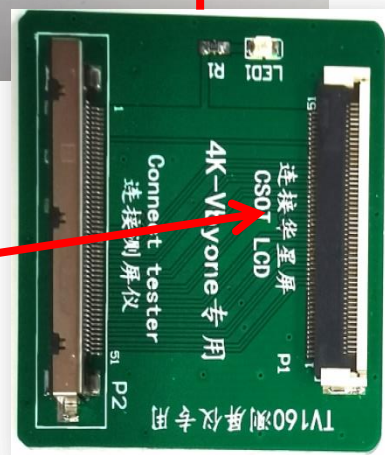


Samsung screen line conversion board

Connected to vbyone signal input terminal of screen body:
Note that Samsung and Csot can use the corresponding small board respectively.



Csot screen line conversion board



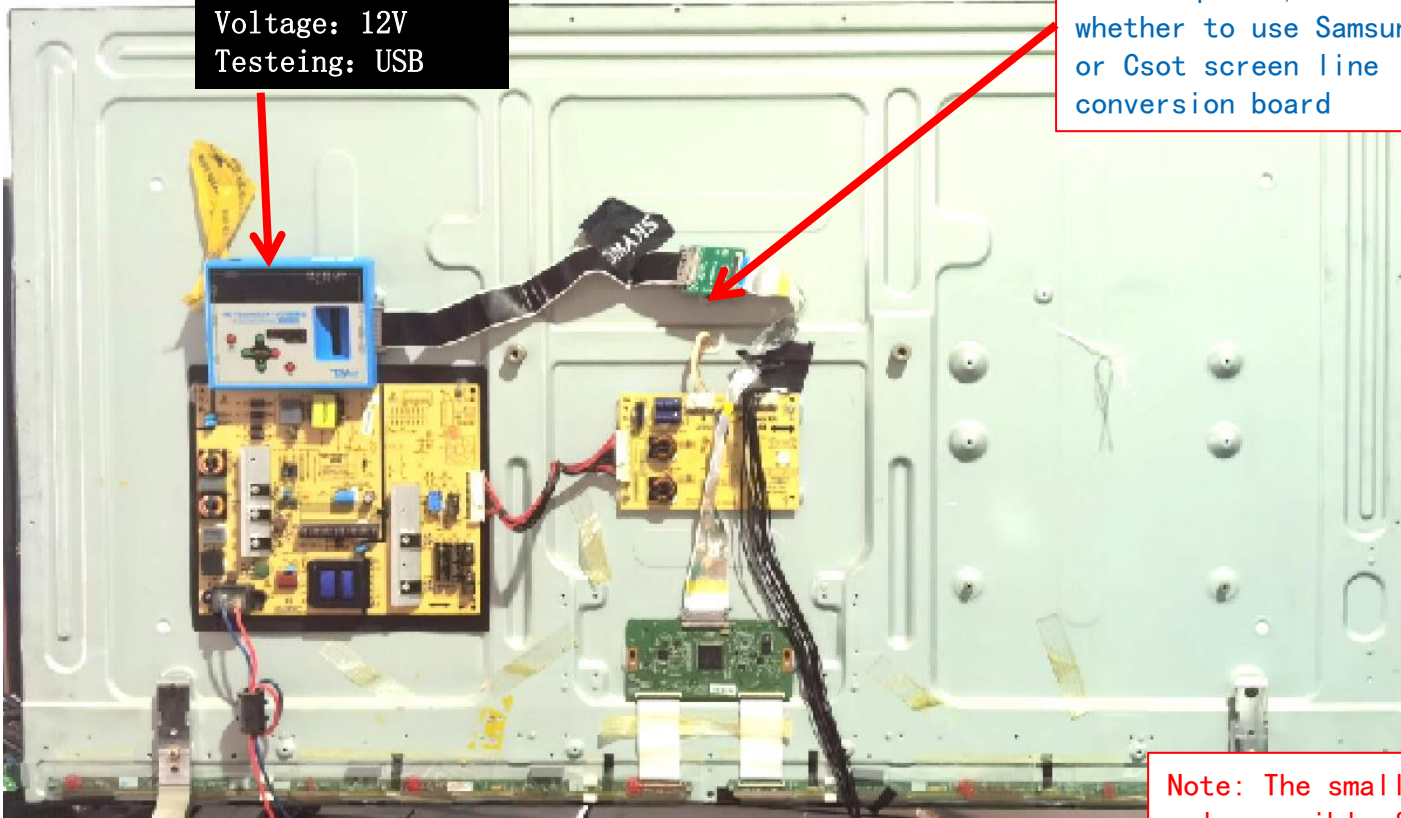
Note: The small board conversion is only possible for the Csot and Samsung screens produced before 2016. There is no need to convert the small board after 2016.

China Star or Samsung 4K screen parameter setting

Format: 4K-Vbyone
4K3840*2160-1FC
Voltage: 12V
Testeing: USB

According to the screen line sequence, choose whether to use Samsung or Csot screen line conversion board

Note: The small board conversion is only possible for the Csot and Samsung screens produced before 2016. There is no need to convert the small board after 2016. Common 4K screen does not need conversion board



Measured picture of 4K vbyone signal screen of csot

Please set the screen resolution at 4K-Vbyone, 3840 * 2160-1FC (1 partition), and other screen parameters will be abnormal.

The 4K screen of old star before 2006 needs to be displayed normally because of the different line sequence and the normal one.
After 2006, the Csot screen does not need small board, and can be directly connected to the screen detector.

Note: When it is not sure whether the Csot screen needs to convert the small board, you can directly connect the small board to the screen tester for testing without using the small board. If there is no diagram, you can connect the small board in series. When it is directly connected, the screen will not burn, let alone the screen tester.

Note: when testing 4K dual screen cable screen, USB playback will not be normal, only the built-in color screen can be used.

41P screen port

Connect to double screen terminal of 4K screen of 120Hz. Both wires need to be connected to get a picture

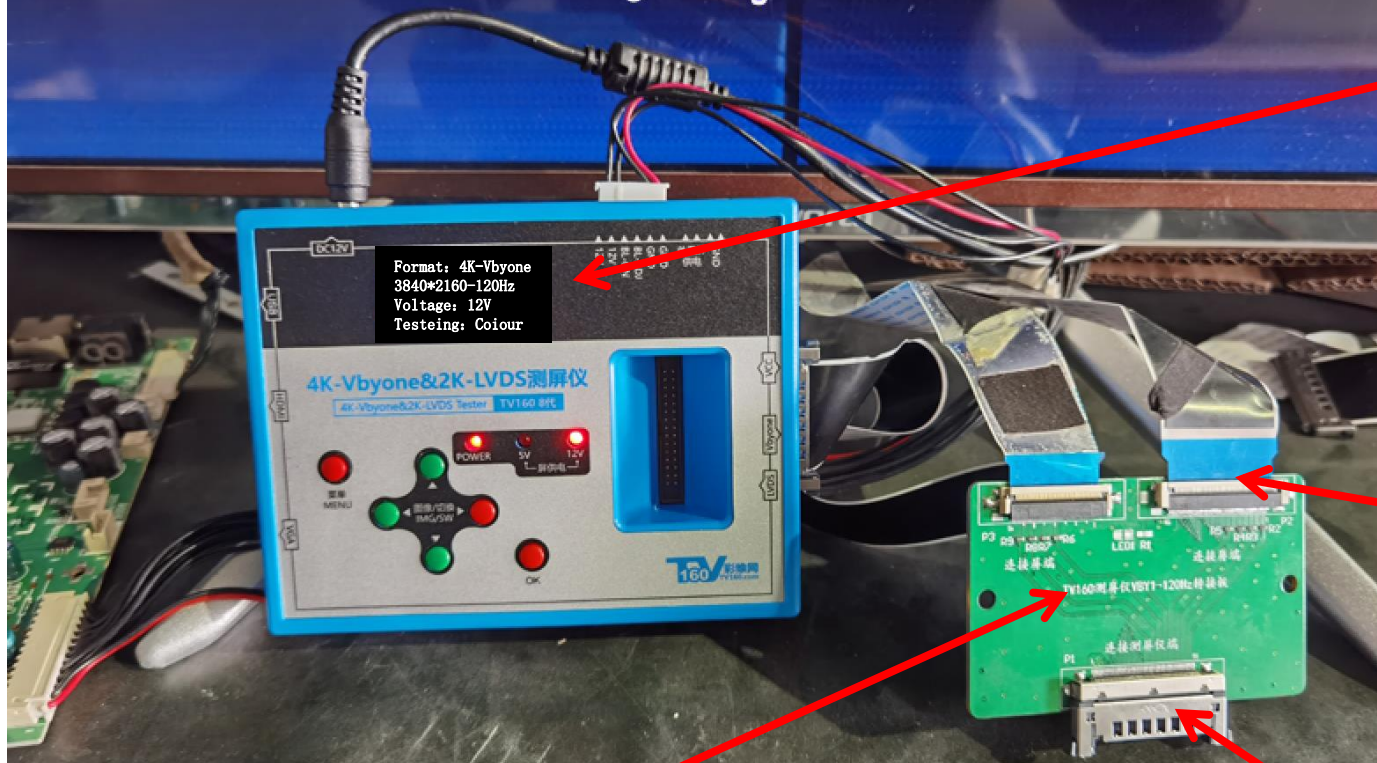
51P screen port

Dual screen line conversion board for 4K screen

When testing the 4K screen with 120Hz dual screen cable, the setting mode is shown in the figure above



Support 4k-120hz dual screen line (3840 * 2160 resolution, need to convert small board) real picture!



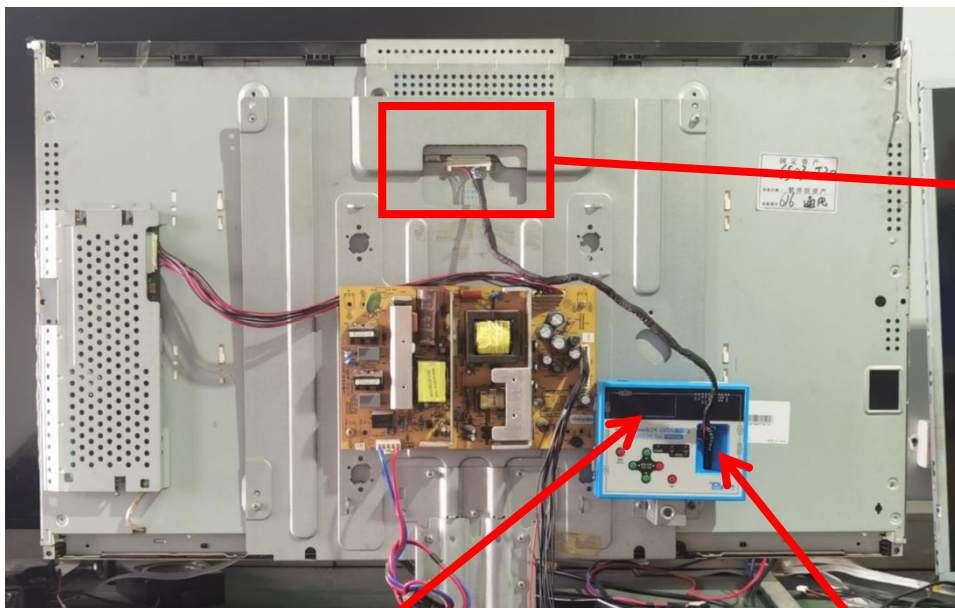
Please set the screen resolution at 4K vbyone, 3840 * 2160-120HZ, other screen parameters will not be displayed.

Double screen cable connected to screen body

4k-120HZ-Vbyone dual screen line is connected. A 4K dual screen line conversion board is required. After conversion, it is connected to screen test. During test, please set the test signal of screen tester in color, and abnormal image is applied to other test signals.

Connect the screen tester, and pay attention to the screen line connecting the screen tester as short as possible, otherwise there may be interference

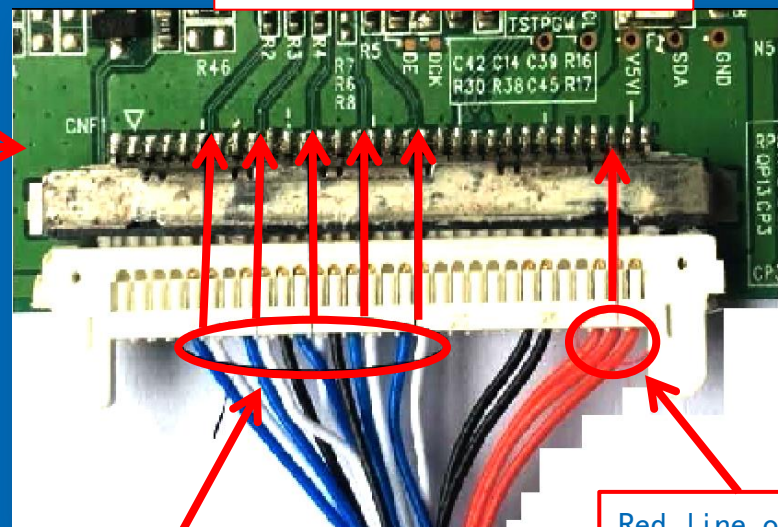
◀ TV160-4k screen tester test 2K
screen operation guide
2K-LVDS interface



Screen parameter setting

Format: 2k-1vds
1366*768-VESA
Voltage : 12V
Testeing: colour

Note: when the 32 inch standard clear screen wire is inserted into the screen body, pay attention to the direction of power supply and signal wire, and insert the contact upward, as shown in the figure above.



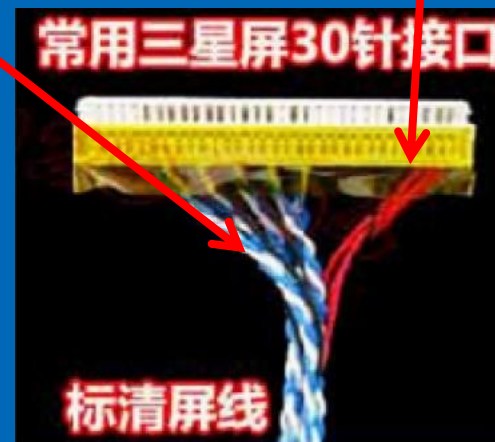
Logic board interface line sequence diagram

5 pairs of differential twisted signal lines

Red line of screen power supply



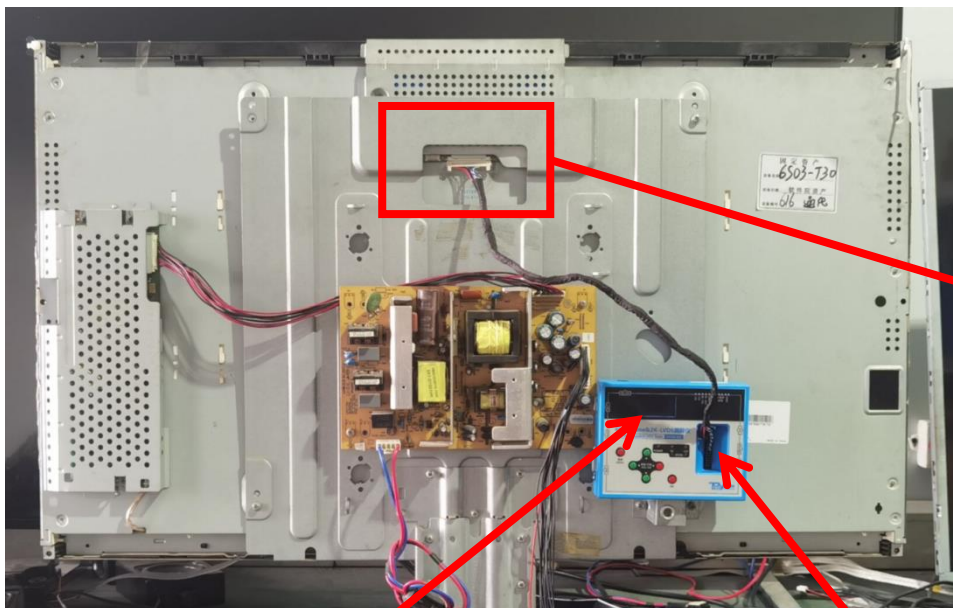
Screen line insertion direction
Red power supply up



常用三星屏30针接口

标清屏线

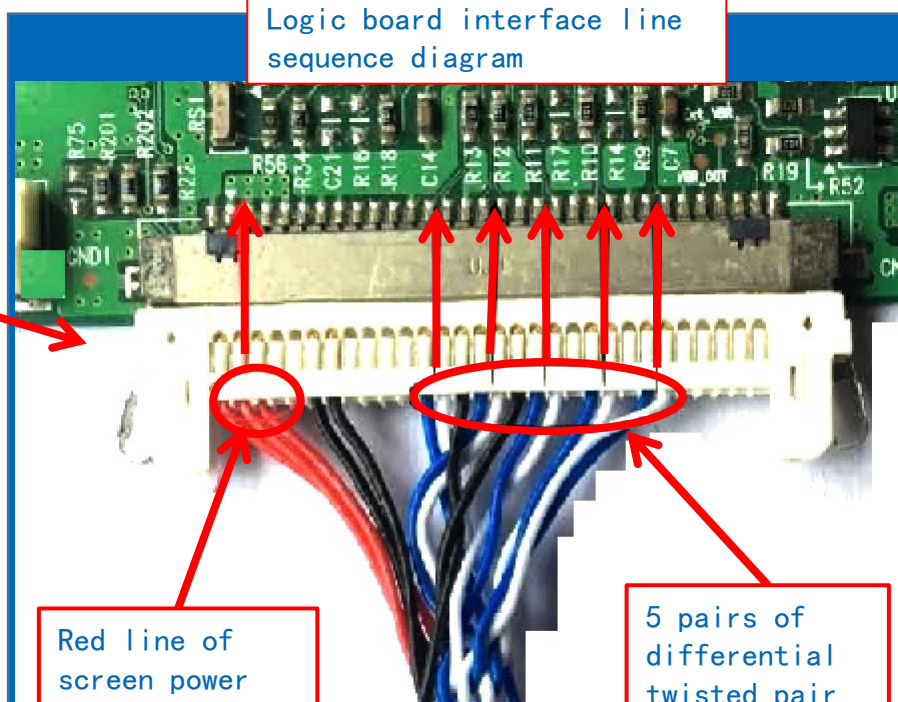
Connection diagram of screen detector LG, Qimei and AU standard clear screen line



Screen parameter setting

Format: 2k-1vds
1366*768-VESA
Voltage : 12V
Testeing: colour

Note: when the 32 inch standard clear screen wire is inserted into the screen body, pay attention to the direction of power supply and signal wire, and insert the contact upward, as shown in the figure above



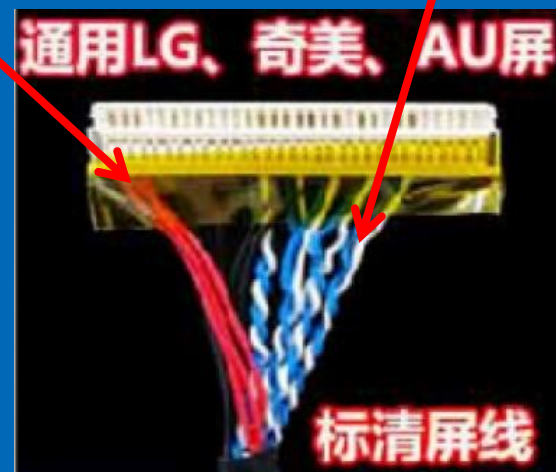
Logic board interface line sequence diagram

Red line of screen power supply

5 pairs of differential twisted pair signal lines



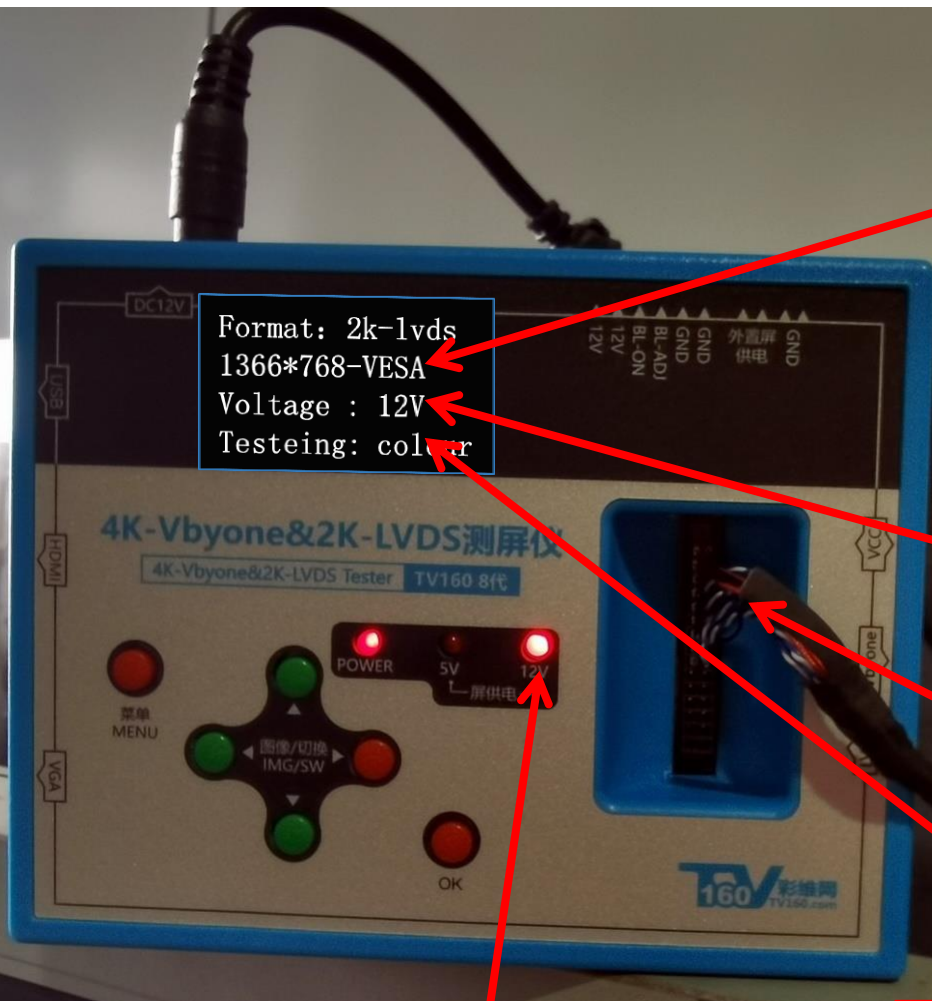
Insertion direction of screen line
Red power up



通用LG、奇美、AU屏

标清屏线

The 32-37 inch standard screen setting of 2K-LVDS is shown in the figure below:



Please set the screen resolution to 2k-LVDS, 1366 * 768-VESA, and set these values according to the screen parameters of 2K screen.

The 2K screen of the TV is generally 12V. When the screen is not connected or the screen cable is bad, it will prompt for protection. When it is set to off, it will turn off the protection prompt.

Pay attention to the insertion direction of the screen cable, with the red power supply line facing up,

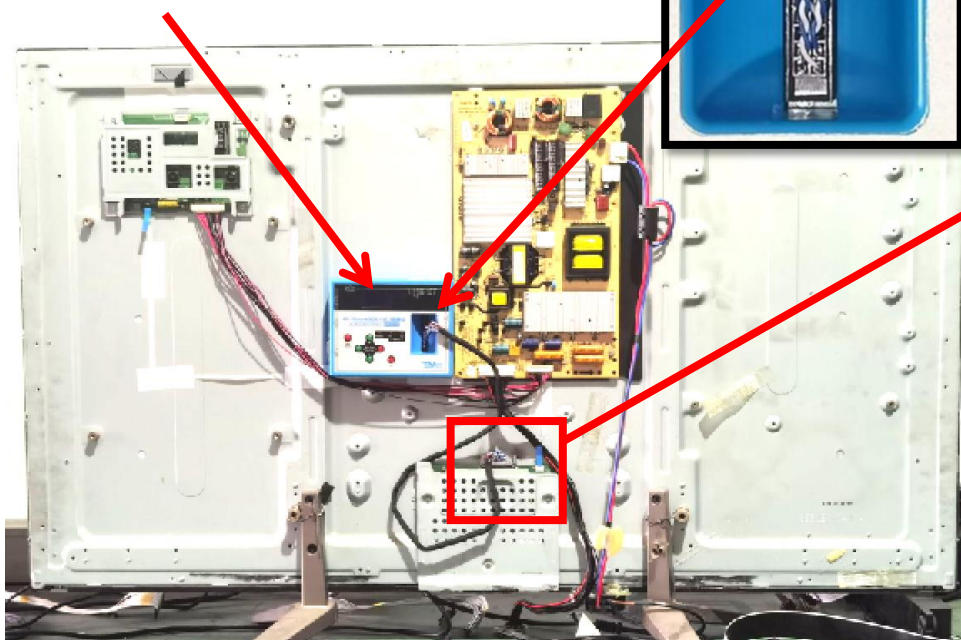
For the voltage indication of the power supply input of the screen, the TV screen is usually used for 12V, and part of the display supplies power for 5V screen,

Test signal:
Color: internally generated test chart;
VGA: input signal from VGA;
HDMI: input signal from HDM;
USB: can play the video and picture of USB disk.

42-65 inch HD screen reference settings

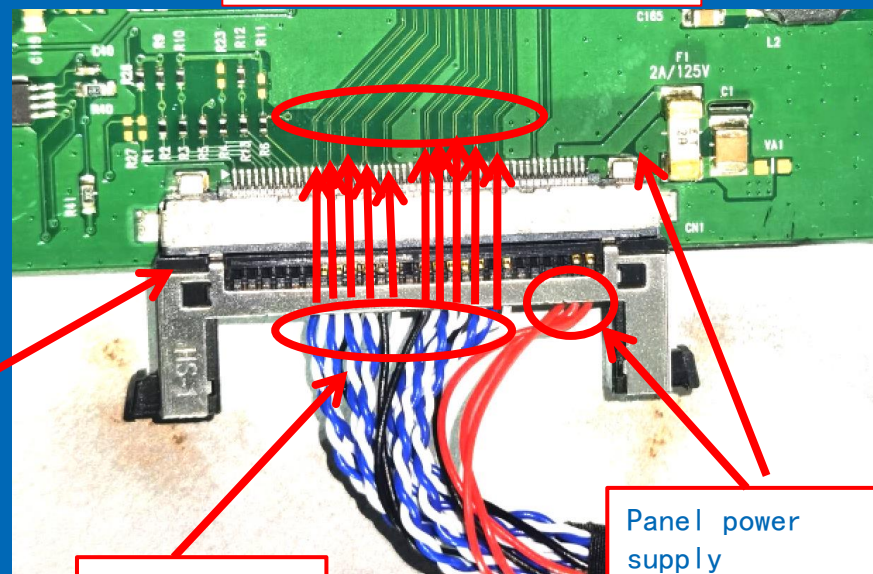
Port: 2k-lvds
1920*1080-VESA
Supply voltage: 12V
Test signal: color

Insertion direction of
screen line
Red power up



Note: when the 42-65 inch HD screen cable is inserted into the screen body, pay attention to the direction of power supply and signal cable, and insert the contact upward, as shown in the above figure on the right

Logic board interface line
sequence diagram



10 pairs of
differential
signal lines

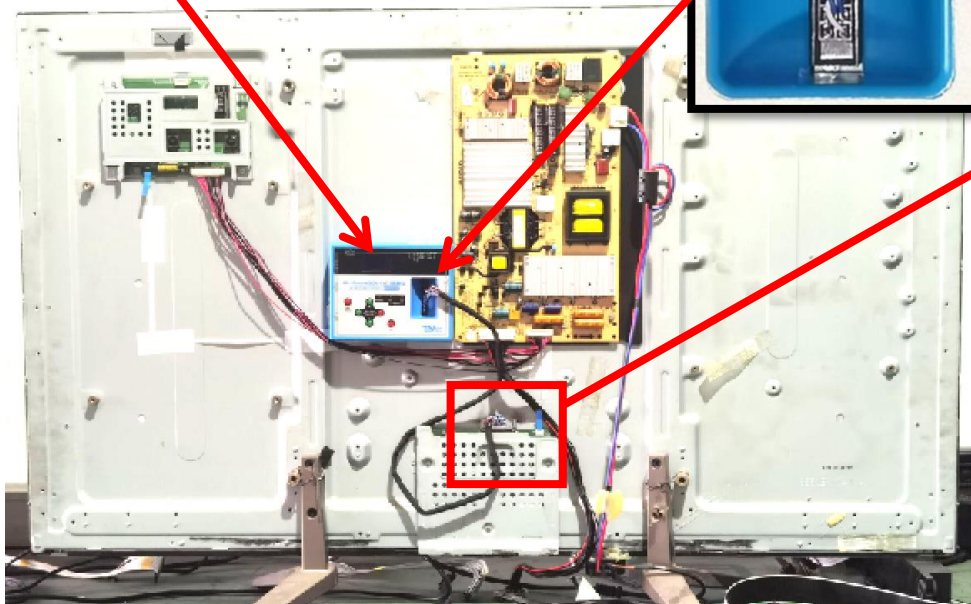
Panel power
supply



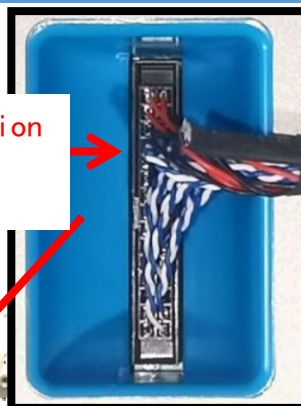
42-65 inch HD screen reference settings

Format: 2k-lvds
1920*1080-VESA
Voltage : 12V
Testeing: colour

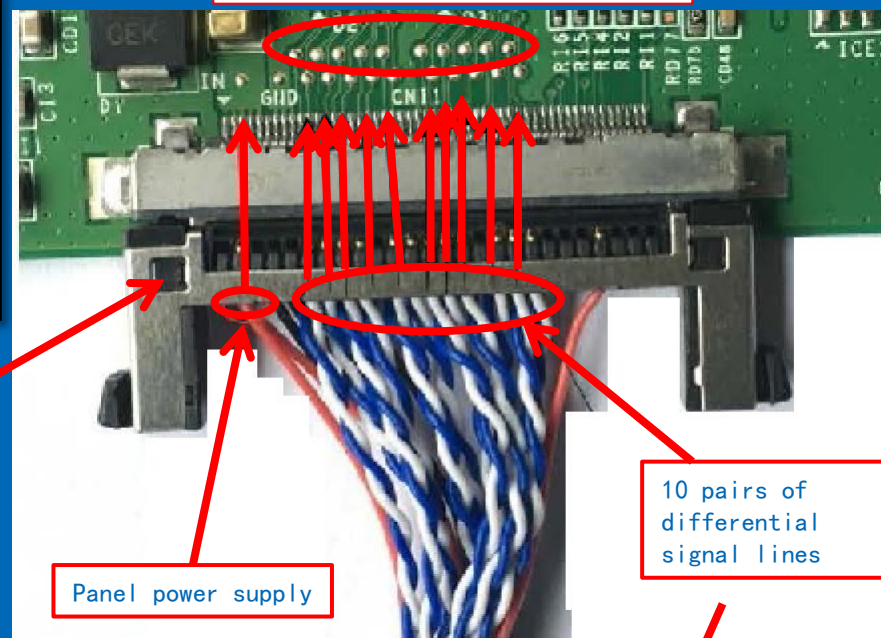
Insertion direction
of screen line
Red power up



Note: when the 42-65 inch HD screen cable is inserted into the screen body, pay attention to the direction of power supply and signal cable, and insert the contact upward, as shown in the above figure on the right

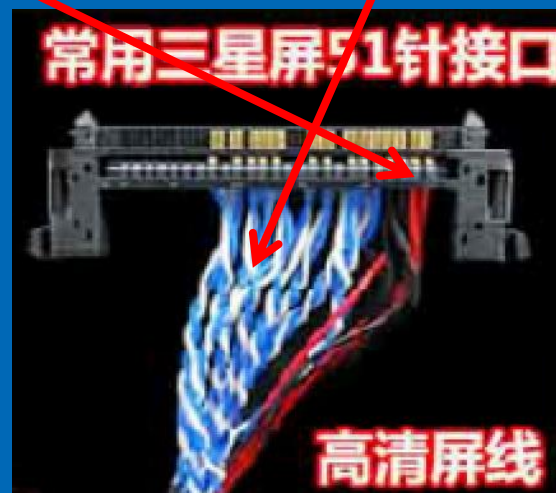


Logic board interface line
sequence diagram

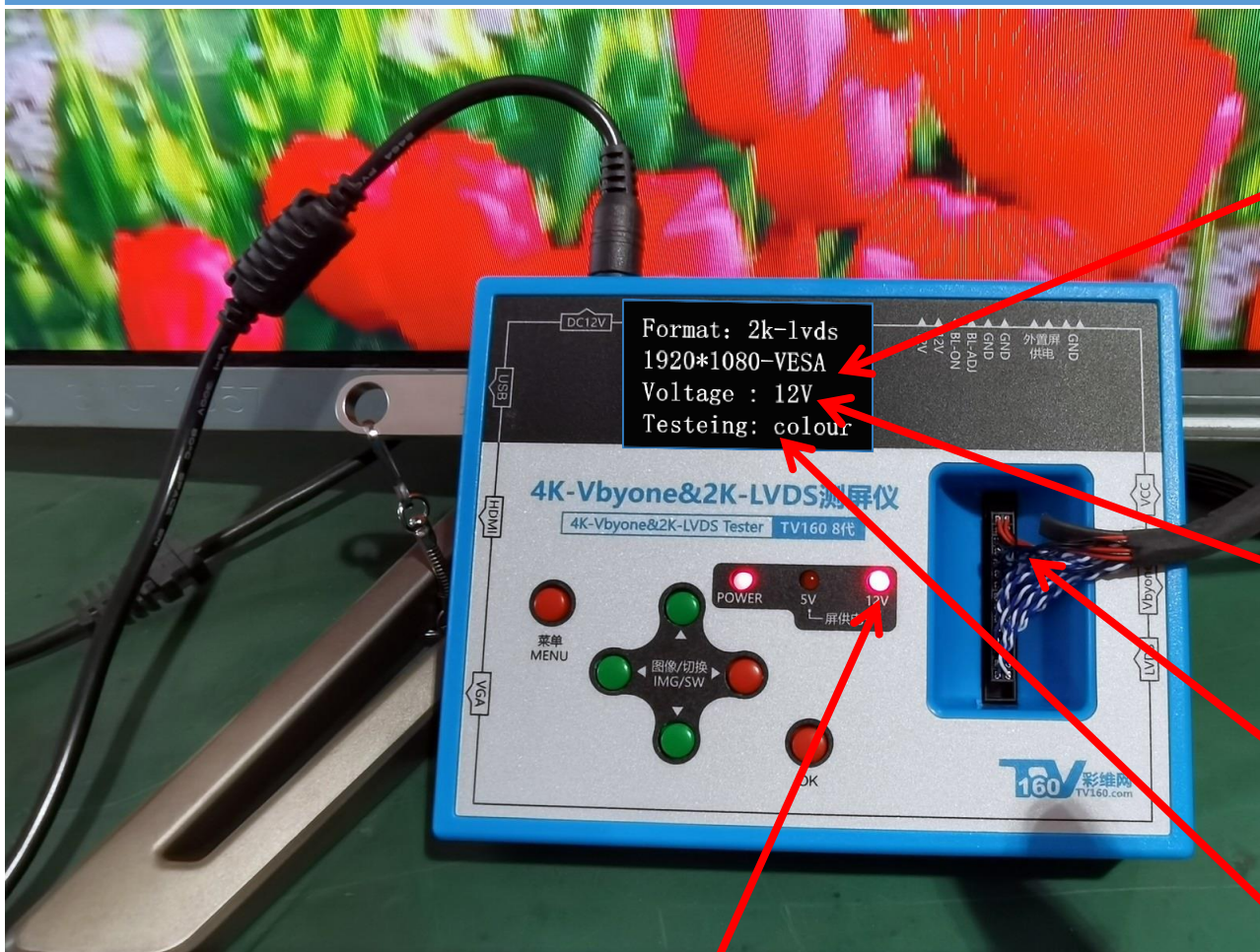


Panel power supply

10 pairs of
differential
signal lines



Common 2K-LVDS HD screen connection test settings diagram:



Please set the screen resolution at 2k-lvds, 1920 * 1080-VESA, and set these values according to the screen parameters of 2K screen.

The 2K screen of the TV is generally 12V. When the screen is not connected or the screen cable is bad, it will prompt for protection. When it is set to off, it will turn off the protection prompt.

Pay attention to the insertion direction of the screen cable, with the red power supply line facing up,

For the voltage indication of the power supply input of the screen, the TV screen is usually used for 12V, and part of the display supplies power for 5V screen,

Test signal:
Color: internally generated test chart;
VGA: input signal from VGA;
HDMI: input signal from HDM;
USB: can play the video and picture of USB disk.

42 inch 1920 * 1080 HD screen actual boot picture! Display the screen tester picture and software version, convenient for U disk upgrade to confirm the version number!

Please set the screen resolution to 1920 * 1080-vesa of 2k-LVDS, other screen parameters will display abnormally.

This test mode is very common, general 42-75 ordinary 2K screen, screen resolution of 1920 * 1080, you can use this mode to test, directly connect the screen with high screen cable.

Note: When the screen cable is inserted and connected, pay attention to the power supply direction of the screen cable inserted into the screen tester and the screen cable. In addition, pay attention to the power supply setting of the screen, which is usually set at 12V.

◀ TV160-4k screen tester screen
body and line detection
instructions and screen tester
upgrade operation

Screen cable inserted wrong protection, cut off the screen power supply, protect the screen body, and prompt! (real shot)

Warning screen abnormal, please check screen cable connection!

4K-Vbyone&2K-LVDS测屏仪

4K-Vbyone&2K-LVDS Tester TV160 8代

MENU

POWER

5V

12V

屏供电

图像/切换

IMG/SW

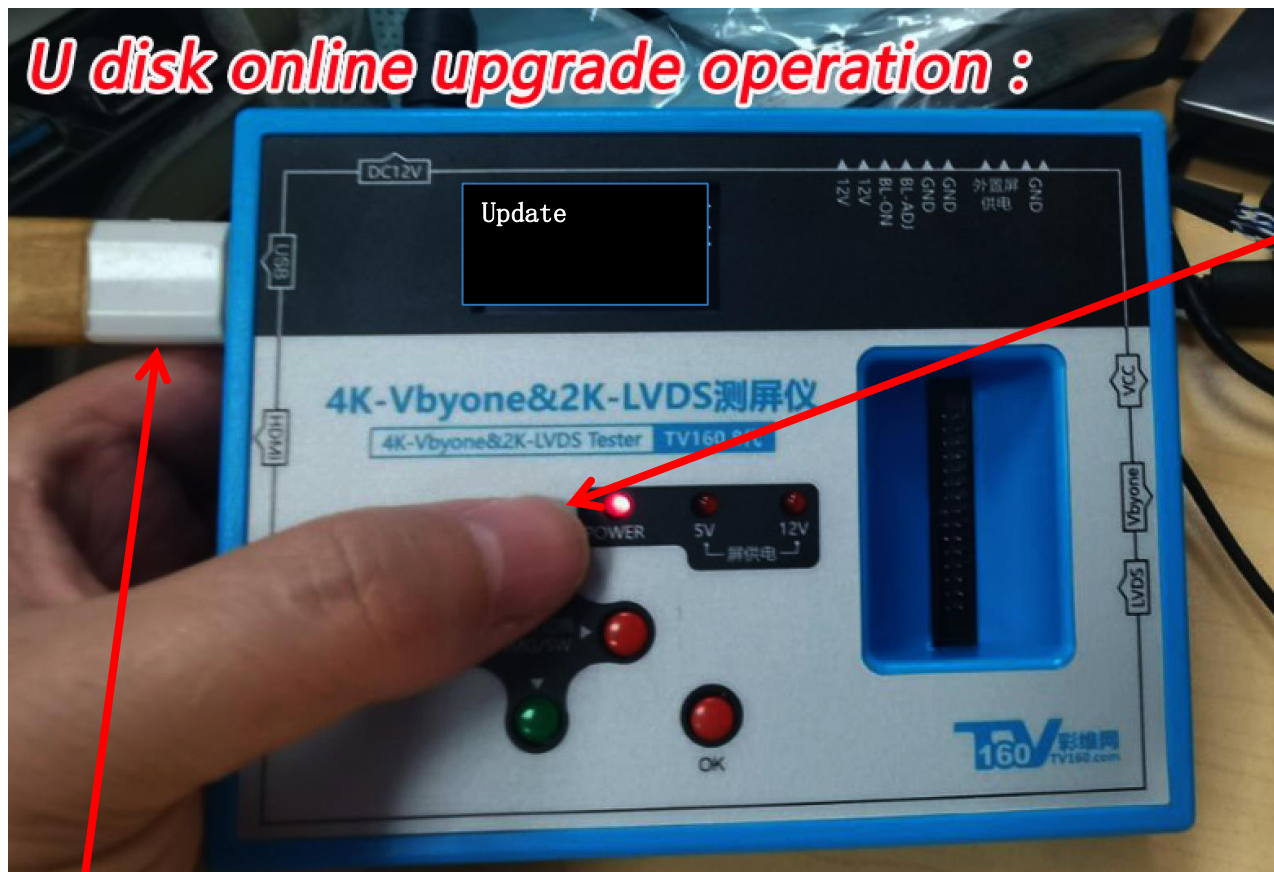
OK

160 彩维网 TV160.com

The 2K LVDS screen line is inserted into the screen tester. Pay attention to the direction of the red power supply line. When it is correctly connected, the red line is inserted upward. In addition, when it is wrongly inserted or not connected to the screen, when it is fed into the screen for power supply, the screen tester will have a protection prompt.

Note: when the screen cable is wrongly inserted or the screen body is not connected, this prompt will appear when the screen power supply is set at 5V or 12V. When the screen power supply is set to off, the protection function will be turned off. Because there is no electrical output of the screen, the screen will not burn, so there is no need to protect and prompt.

U disk online upgrade operation :



Press and hold the top key for 5 seconds to upgrade.

You'd better put only one file to upgrade the USB flash disk. The upgrade file name is "TV160. Bin". Download and unzip this file from the Internet and put it into the USB flash disk. The USB flash disk should not exceed 8g. Please format the USB flash disk with FAT32 when copying.

Upgrade file download address:
<http://www.tv160.com/tester.htm>

Note that the download file has Chinese or English menu, you can download and upgrade it as needed (domestic friends, please download Chinese).

Thank you for watching! Hope to help you,
Your satisfaction is our biggest power!



Technical support and sales:

TV160 website: <http://www.tv160.com>

Taobao website: <http://tv160.taobao.com>

Upgrade file download address:
<http://www.tv160.com/tester.htm>