



Beijing TRACEBoard Technology Co., Ltd.

TRACEBoard

Interactive Touch Monitor

User Manual

An abstract graphic at the bottom of the page consisting of several overlapping, semi-transparent geometric shapes in shades of blue and grey, creating a layered, 3D effect.

TD-Series

Product Figure



Certificate



Models:

TD-xxL (interactive touch monitor)

TD-xxLE(interactive touch monitor with embedded computer)

xx=32/42/55/65/70

Content






Precautions.....	3
Installation.....	5
Hardware Instruction	6
Appearance diagram & Port instruction	6
Remote Control.....	8
Basic Operation	9
Connection and Set-up.....	9
Backlight automatic shut down	9
Resource automatic switch	10
Installation and Remove of PC module.....	10
Connect external PC to interactive touch monitor	10
Connect video & audio device	11
Software.....	14
Operation software installation	14
Software Functions.....	18
Specification of Touch Screen	29
Interactive Touch Monitor Parameter.....	29
Simple Troubleshooting.....	30



Precautions

Please read the following precautions before using the product for your personal safety. Any improper use may cause personal injury, property loss and product damage.

Symbol description

Symbols listed below are the ones used in this manual or on the device. Please make a full sense of the symbols before reading the content.

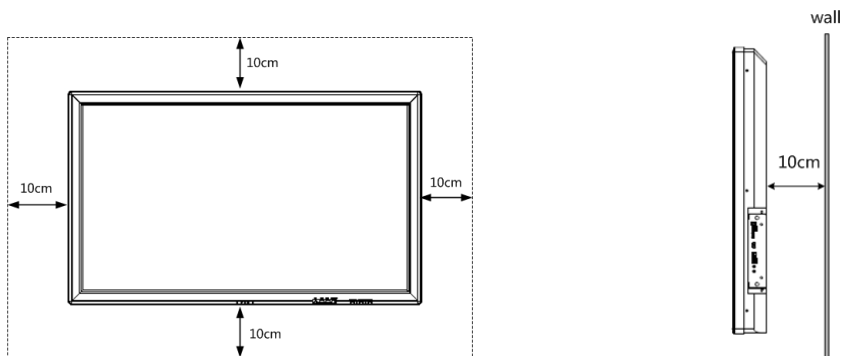
 Warning	It shows heavy injury or even death would be probably caused by incorrect operation.
 Notice	It shows injury or property loss would be probably caused by incorrect operation.
 High risk	It shows there is high voltage inside. Only professional staff is allowed to maintain and replace the parts, to avoid any fire or electronic shock accidents.
	Safe use is limited under 2000m height
	Safe use is limited the non-tropical climate conditions

 Warning	
<ul style="list-style-type: none"> To avoid any electronic shock accidents, please do not open the back cover. There is no parts inside which can be fixed by users. Please turn to professional staff if any problem happened. Please do not insert any metal parts into the hole of machine, to avoid any electronic shock accidents. Please do not install this machine on any instable position, like shaking shelf, tilted floor or insecure wall. Please turn off the power and contact the local dealer if the machine is dropped, striked or damaged. Please do not put this machine in rain or any places near by water, like bathtub, basin or wet floor. If got wet accidentally, please turn off the power and plug out power cable and contact your local dealer. 	
 Notice	
<ul style="list-style-type: none"> The holes on back cover is designed for ventilation and heat output. Please do not block the holes or use this machine in any places without necessary ventilation. Please use good condition grounding plug. Otherwise electronic shock or damage would be caused. The user should plug out the power cable and TV tuner to avoid any damage in bad weather of thunderstorm. Please use clean and soft cloth to for cleaning and maintenance. Harsh cleaning is not allowed. Please do not use hard thing to engrave, impact or fractionize on monitor. 	

- Please do not place anything on touch screen. Please keep it clean.
- Please do not drop the remote control.
- To keep LED screen long life and normal work, do not leave monitor keep light on without operation over 2 hours. To avoid keeping long time, please reduce the brightness and contrast when the screen display is on.
- For a long time with a 4:3 display format, the sides and edges of the screen will leave a different mark, so please do not use this mode for a long time.
- Please do not touch the screen during the starting time around 30 seconds, as the feature of automatic setting when plug power cable each time.

Keep safe installation space

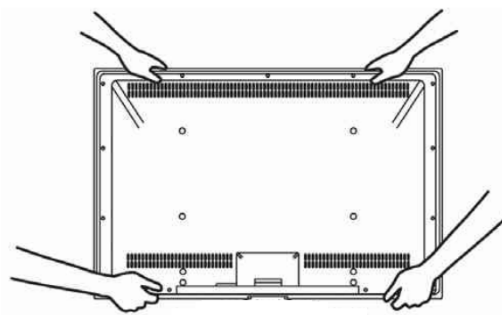
Keep proper gap between touch monitor and other objects as wall, to ensure good ventilation. Otherwise, there is breakdown to the product caused by internal high temperature.



- ☞ While installing wall-mount, please use the one attached in the packing.
- ☞ Outer appearance varies among different models.

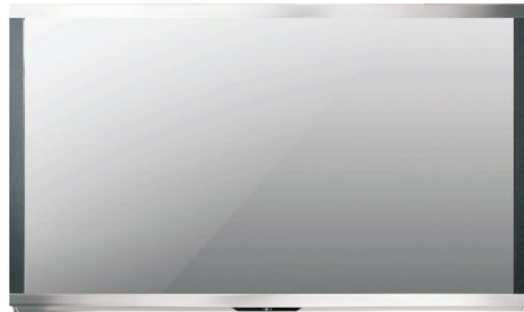
Remove the touch monitor

While moving the touch monitor, there must be more than two people to move it safely. Hold the product frame vertically to keep it stable, shown as in the figure.



Installation

Machine drawing



front view

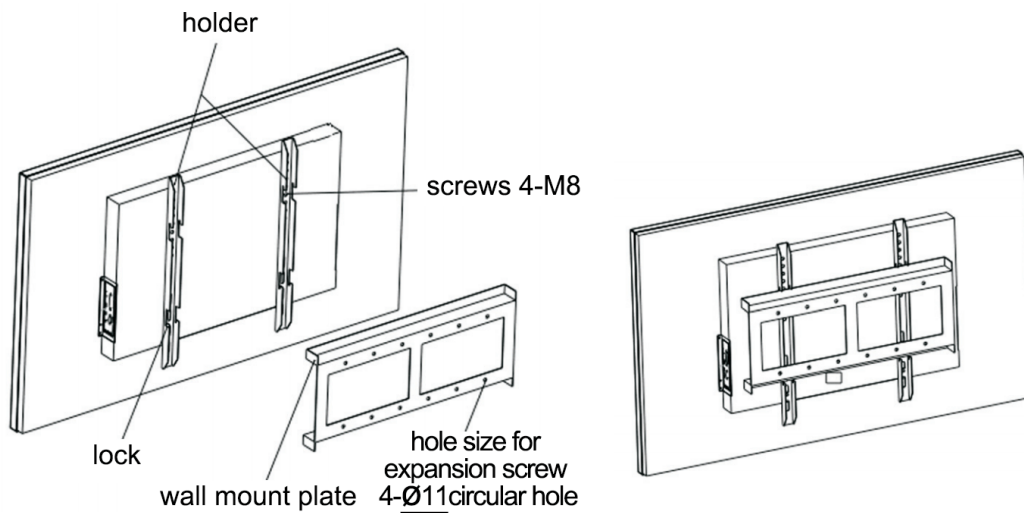


side view

Wall mount installation

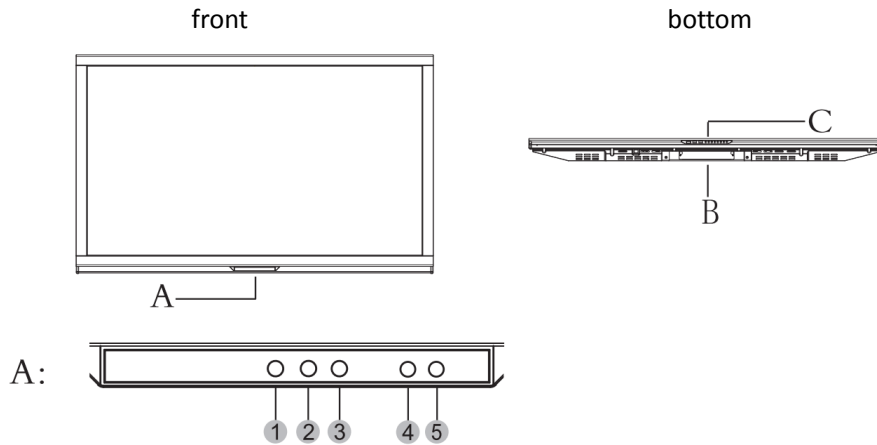
<p>wall mount bracket</p>			
<p>tool</p>			

Machine installation

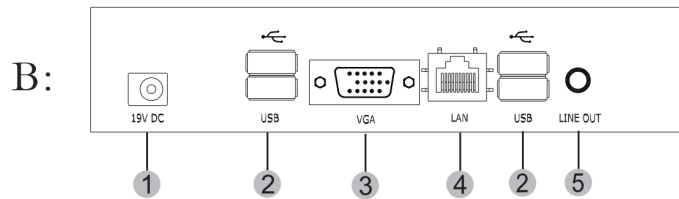


Hardware Instruction

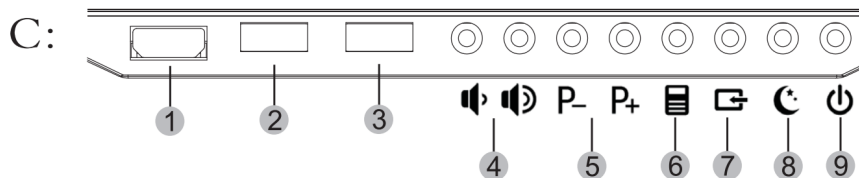
Appearance diagram & Port instruction



- A-1: Remote control sensor
- A-2: Indicator of TV power
- A-3: Indicator of PC power
- A-4: Distance sensor-sender
- A-5: Distance sensor-receiver



- B: PC Port(only for model with build-in PC)
- B-1: 19V input, for testing only
- B-2:USB 2.0 *4
- B-3:VGA output
- B-4:Ethernet
- B-5:Audio output

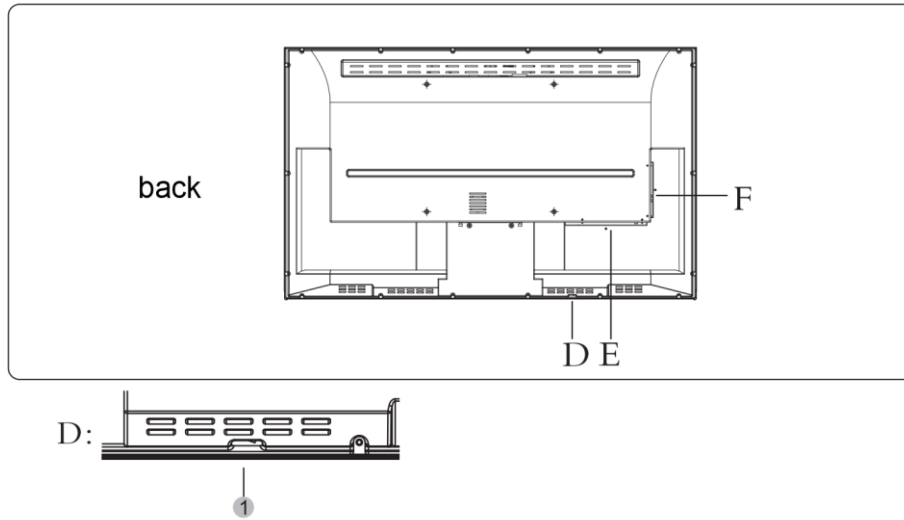


- C-1: HDMI input
- C-2:USB-Host(only for build-in PC)
- C-3: USB-Touch(to connect touch screen)
- C-4:Volume +-
- C-5:Channel +-
- C-6:TV function menu

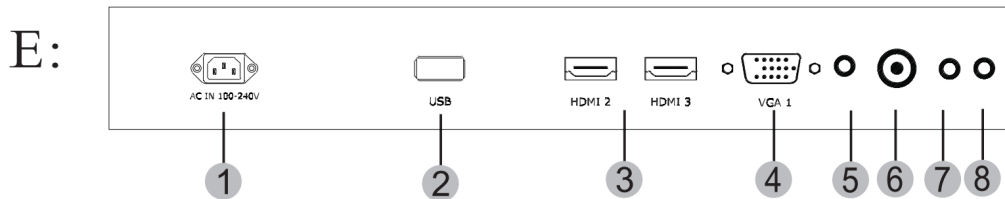
C-7: Signal Source

C-8: LED backlight on/off button

C-9: Power switch



D-1: Power switch



E-1: AC power in

E-2: USB(multi-media)

E-3: HDMI iuput*2

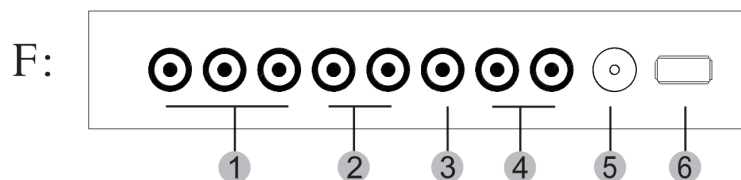
E-4: VGA input

E-5: Audio input

E-6: Coaxial audio output

E-7: Audio output(earphone)

E-8: AV output



F-1: Component video input

F-2: Component audio input

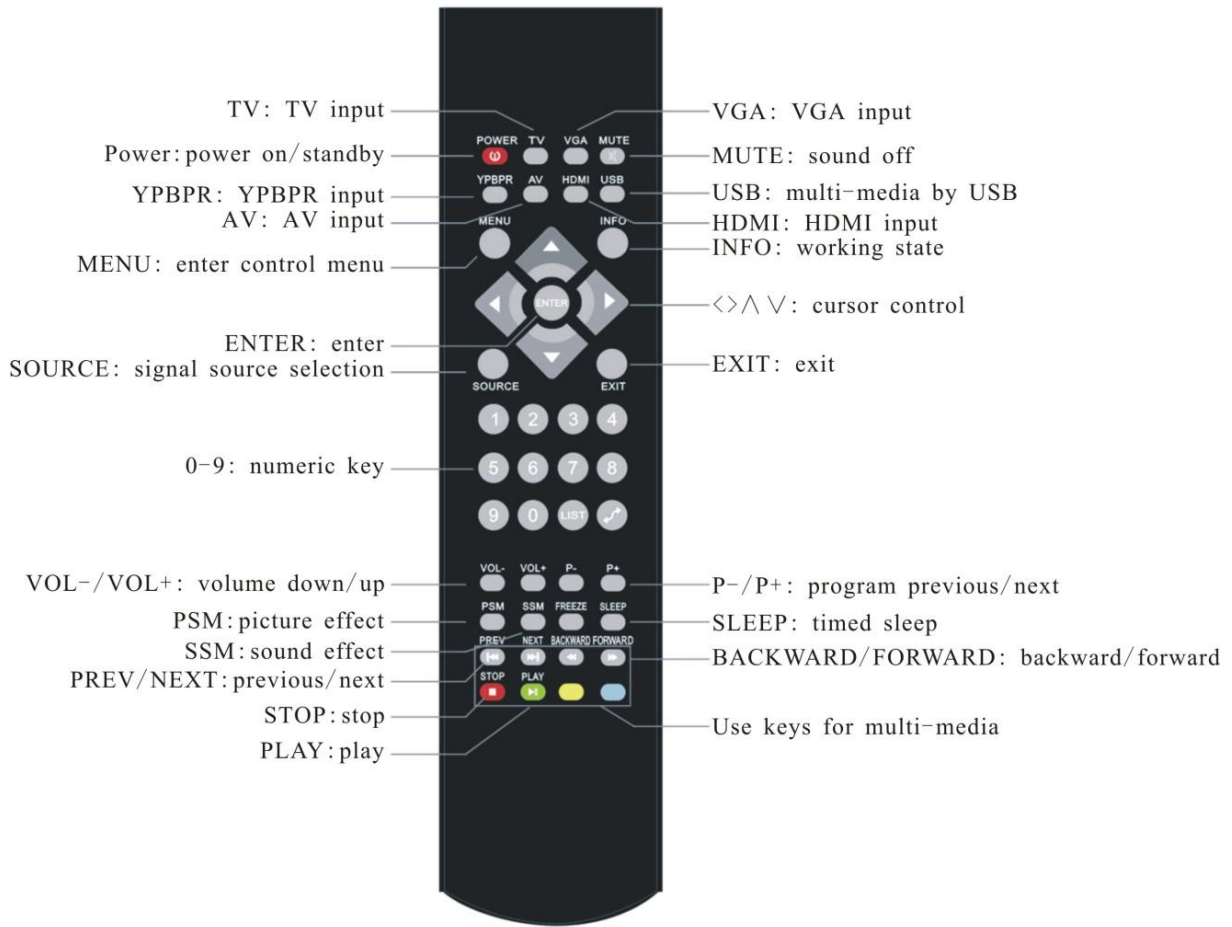
F-3: AV input

F-4: AV audio input

F-5: TV Antenna port

F-6: USB(multi-media)

Remote Control

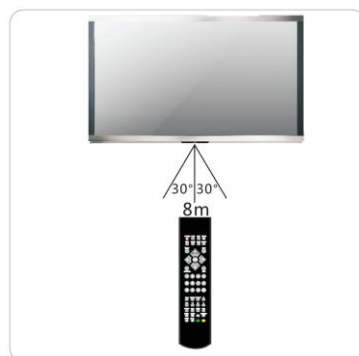


Replacement of Remote Control Battery



Remote control range

Remote control can work well in the area of 8 meters to remote control sensor and 30 degree between left and right side.



Basic Operation

Please follow instructions as below when you use interactive touch monitor.

Power on

After plug with power, indicator in front panel is red. To press *POWER* button, red indicator with flash for 5 seconds, and then TV and PC will be power-on. Indicator for TV is blue, PC is green. To press button *sleep* or *power* button on remote control to power on TV only.

Power off

TV and PC power-off can operate by one button as following,

Initial State	POWER button(front panel) function
PC power off/TV power on	PC power on
PC/TV power on	PC power off, TV will power off after
PC/TV power off	PC power off, TV power on

- ☞ Switch to the signal source of the PC or open the TV first, then turn it off, because there maybe some operating procedures or documents on the PC that needs to be saved.
- ☞ In case of accident that need to force off the PC, press the POWER button continuously over 3 seconds, then the PC will be forced off.

Backlight shut down

To press *sleep* button to shut down backlight.TV indicator will turn to red. Meanwhile, other parts of machine remains working. To press *sleep* button, backlight is on, indicator TV indicator turns to blue again.

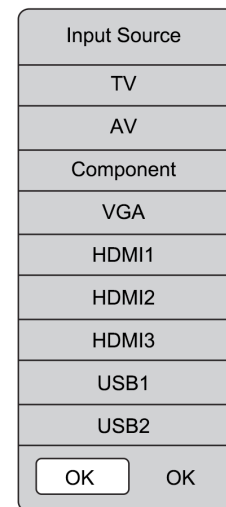
Select signal source

Through button

- ① press SOURCE on the front panel, to pop up signal source list
- ② select signal source from top to bottom with P+/ P-.
- ③ press SOURCE once again to confirm signal source.

Through remote control

- ① press SOURCE on remote control, to pop up signal source list.
- ② select signal source with ▲ ▼ in remote control.
- ③ press ENTER in remote control to confirm signal source.

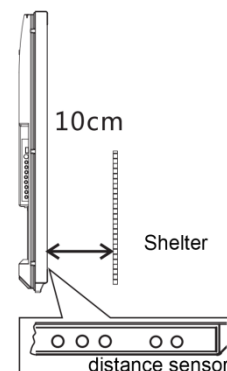


Connection and Set-up

Backlight automatic shut down

There is distance sensor in front panel, backlight will be shut down automatically when there is shelter in the 10cm distance from the screen and lasts 20-25 seconds.

This function is designed for education, especially for cabinet and compound solution with black board or whiteboard, can save power and keep machine longer life.



Resource automatic switch

For model with build-in PC, HDMI on build-in PC and preposed HDMI are using HDMI 1. HDMI1 will be automatically switch from build-in PC to preposed HDMI when connect external PC.

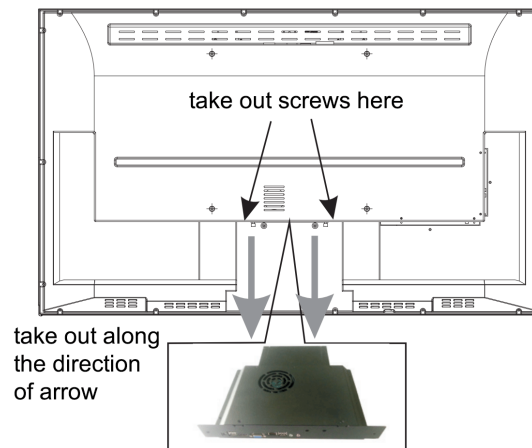
If need resource from build-in PC, to disconnect external PC.

Installation and Remove of PC module

PC in touch monitor takes modular design, easy to install, expand and maintain, also compatible with OPS module.

PC module is on the back side of machine, while taking out the module, spin out the screws, clench the handle and pull it out slowly.

- ☞ Normally, PC module does not need taking out; if need, shut down the touch monitor and power it down before taking it out.
- ☞ Installation method of OPS is the same with normal PC, but cannot interchange with normal ones.

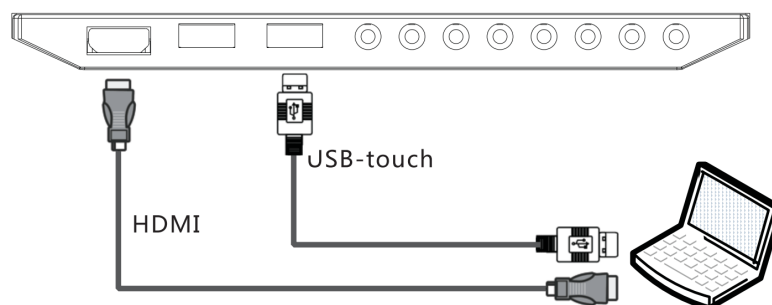


Connect external PC to interactive touch monitor

Connect with preposed port

1. Connect external PC to preposed HDMI port by HDMI cable
2. Connect external PC to preposed USB-Touch port by USB cable
3. After correct connection , open interactive touch monitor and PC, choose resource.

Preposed HIMI port is HDMI1 in resource list.

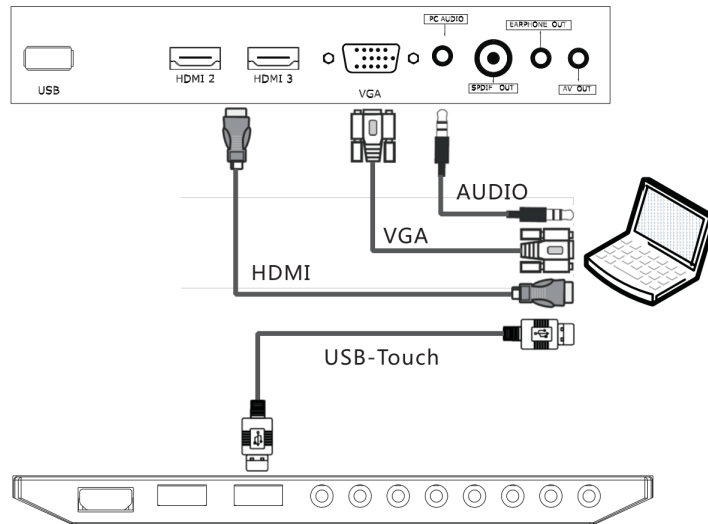


Connect with ports on back panel

1. connect external PC to interactive touch monitor via back port with HDMI cable;

also can connect by VGA cable and audio cable. But only support one connection way.

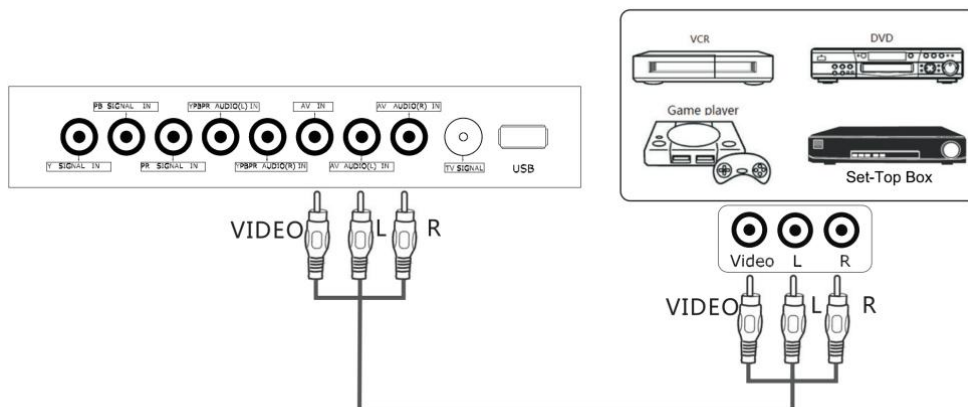
2. Connect external to USB-Touch port at front panel by USB cable.
3. Open interactive touch monitor and PC, choose right resource by remote control or button. set resolution as 1920*1080, when connect external PC some cables may need provide by users



Connect video & audio device

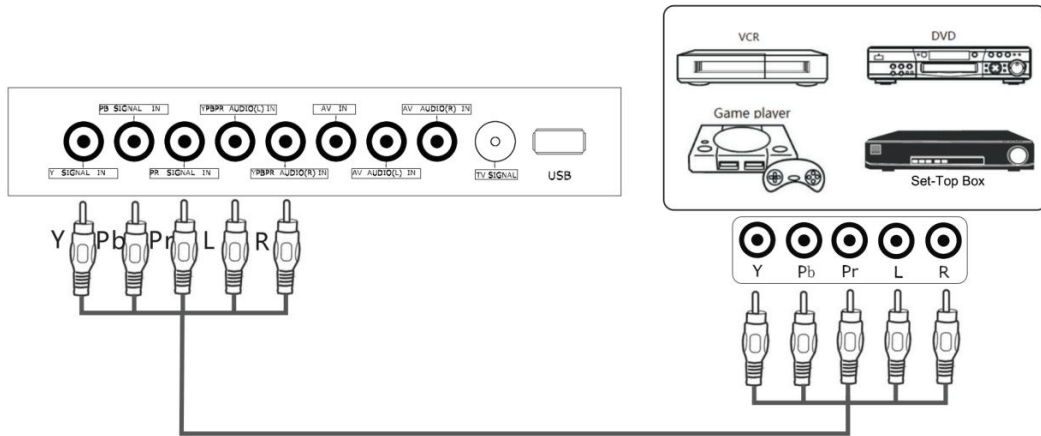
AV IN

1. Connect AV output supported equipment to interactive touch monitor by video & audio cable, yellow is video, red is right channel, white is left channel.
2. After correct connection, open interactive touch monitor and video & audio device.
3. Choose AV in resource list



YPbPr(Component)

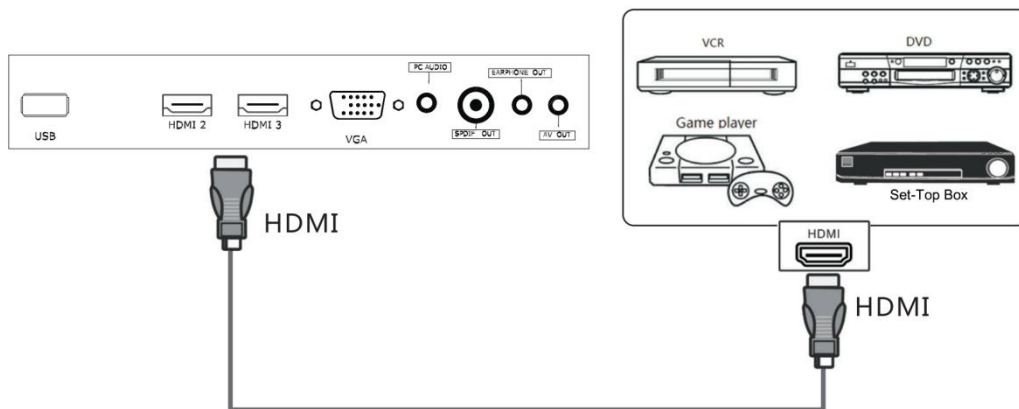
1. Connect YPbPr supported device by YPbPr cable, please note make cables correspond to ports with same color.
2. After correct connection, open interactive touch monitor and device.
3. Choose component in resource list.



HDMI

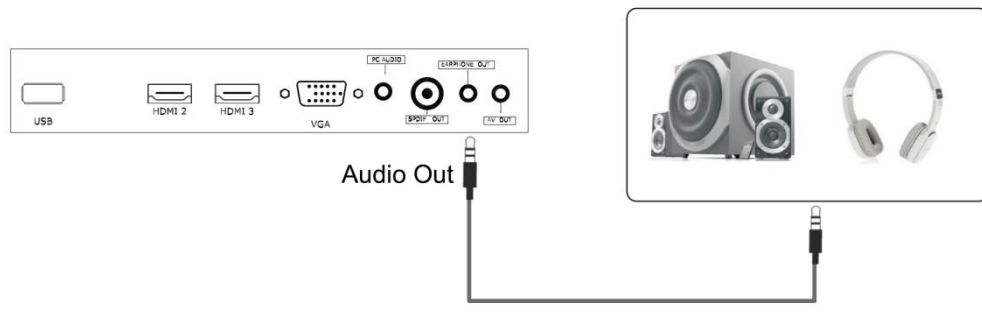
1. Connect video & audio device by HDMI cable
2. After correct connection, open interactive touch monitor and video & audio device.
3. Choose HDMI in resource list.

video & audio device can connect to preposed HDMI port, the resource is HDMI1, and HDMI resource will be switch to external device automatically.



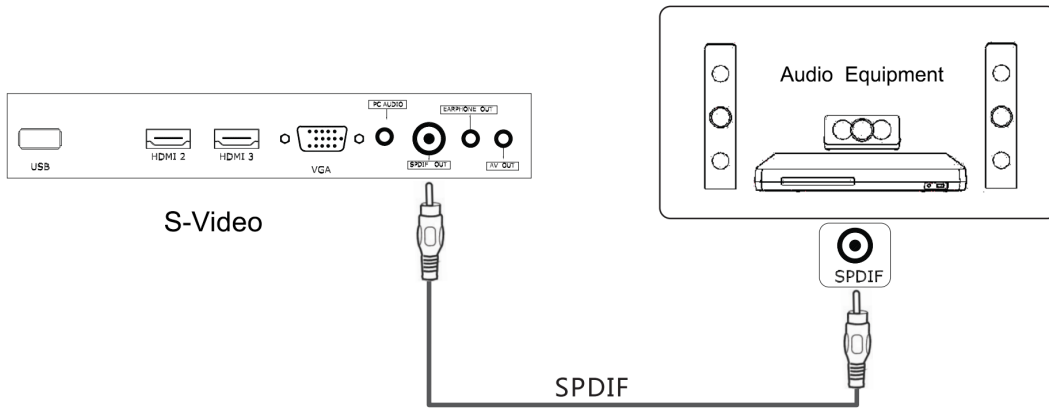
Audio output

1. Connect earphone and other audio device to audio output(earphone)port.
2. After correct connection, open interactive touch monitor and external audio device.



Coaxial output

1. Connect coaxial input supported device to coaxial output port by coaxial cable.
2. After correct connection, open interactive touch monitor and video & audio device.

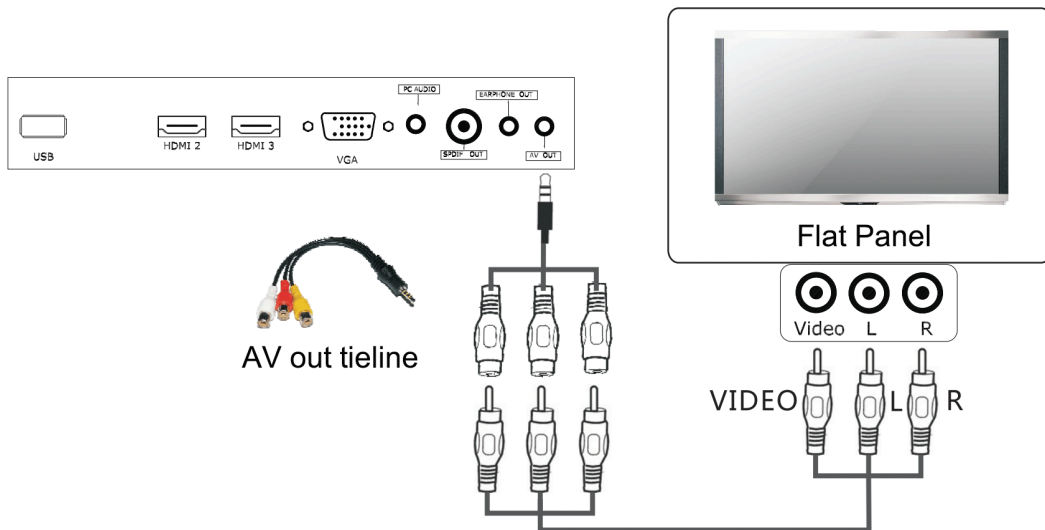


AV output

1. Connect AV input supported device to AV output port by AV cable.
2. After correct connection, open interactive touch monitor and video & audio device.

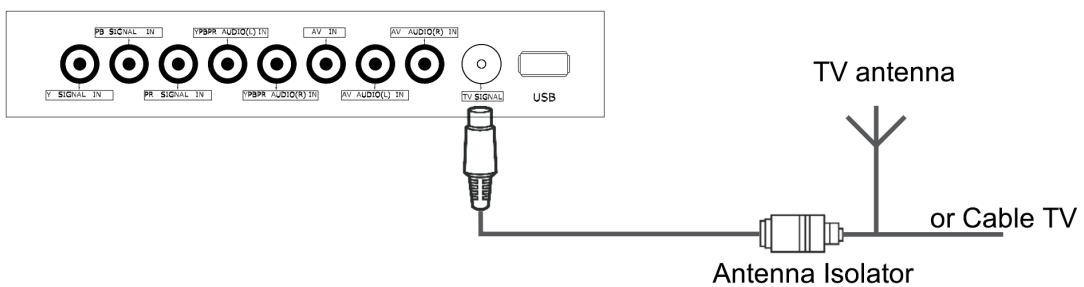
Note: AV can output only under AV IN/TV channel

Need 3.5mm AV tieline when AV output from TV



Connect TV antenna

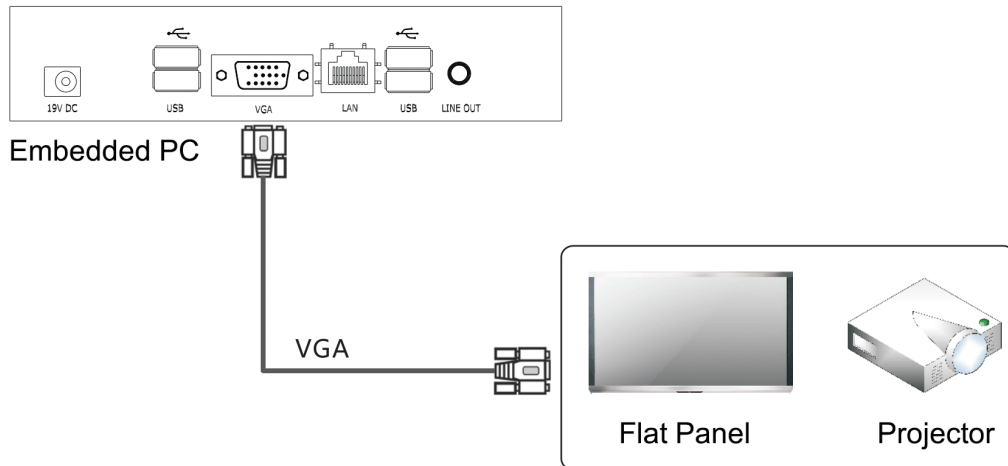
1. Connect TV antenna or cable TV to RF port of TV
2. After correct connection, power on interactive touch monitor
3. Choose TV in resource list
4. Enter Menu to source channels



Interactive touch monitor video output

Emedded PC can support two screens display at the same time, can connect projector or flat panel to

VGA and HDMI output port on embedded PC.



Software

Operation software installation

Operating System Requirement: Microsoft Windows 7

Hardware Requirements: Minimum: CPU P4 2.4/Memory: 512M/Hard disk: 80G/Graphic card memory: 128M/USD interface

Software installation Steps

1. Power on the computer. After booting the operating system, insert TRACEBoard setup disc contained in product package into your CD-ROM driver.
2. Double click the CD-ROM icon on your computer to open CD-ROM folder, and then double-click the setup file (TRACEBoard-ITM) to run it manually, see fig 2.1.1

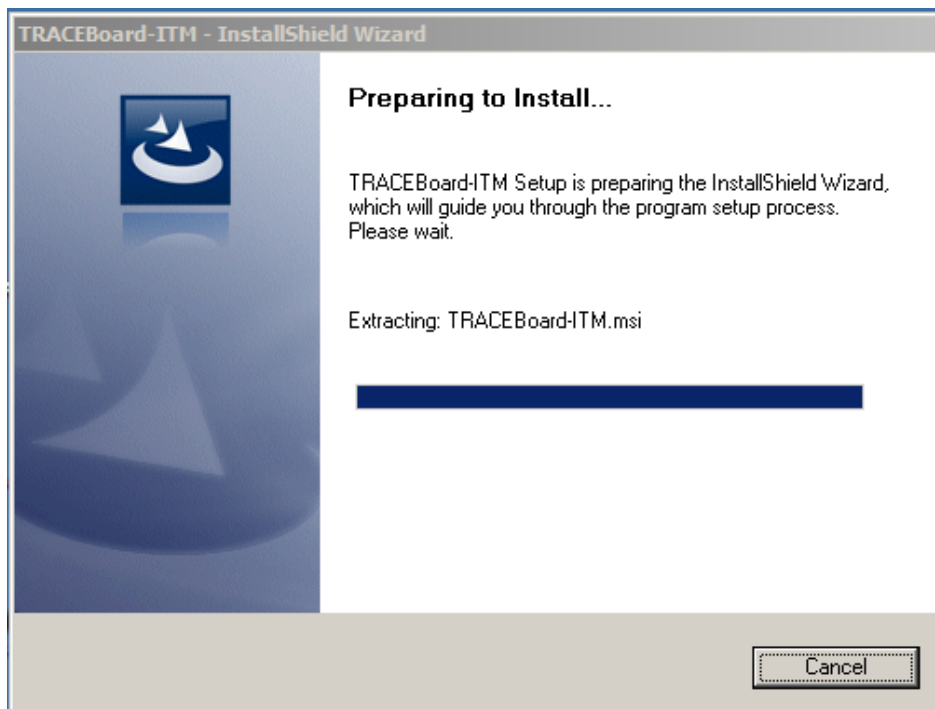


Fig 2.1.1

3. Installation window show is preparing to install, just wait a while, see fig2.1.2

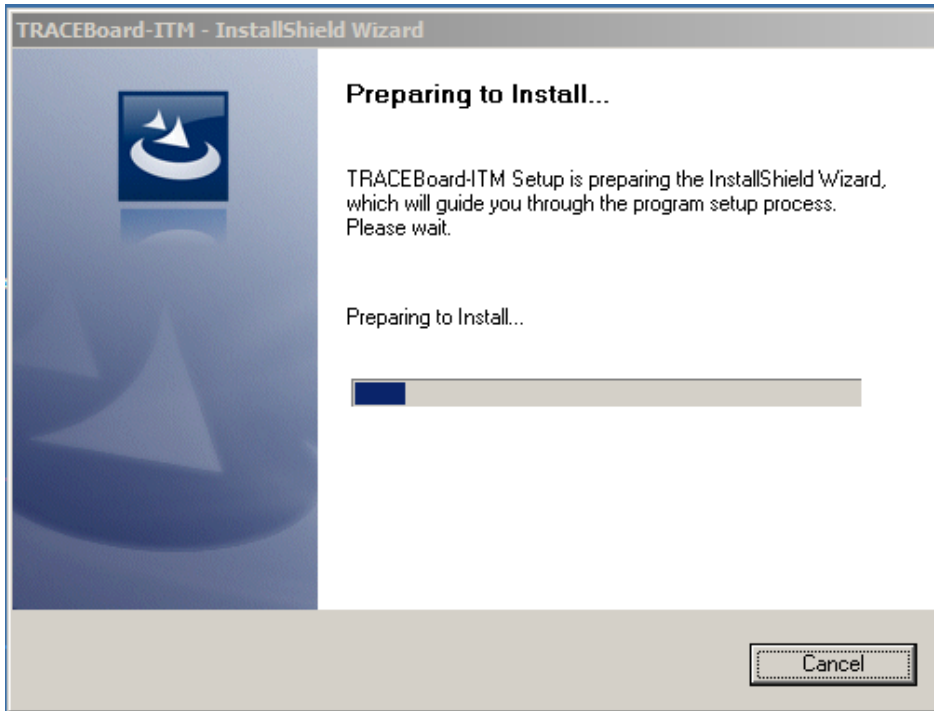


Fig 2.1.2

4. It is ready to install, and click next to continue, see fig2.1.3

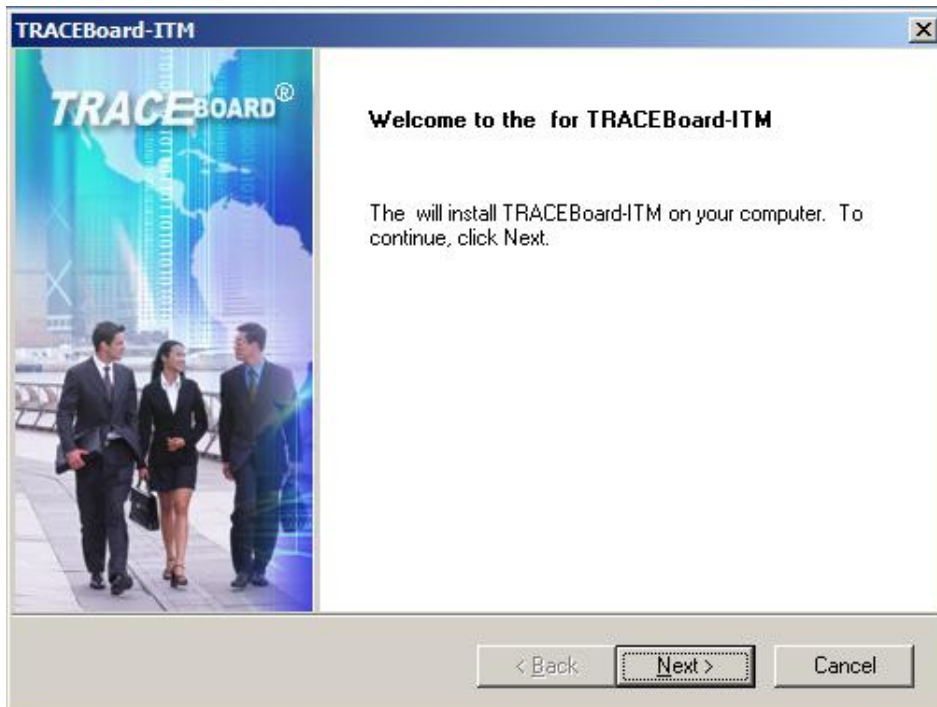


Fig 2.1.3

5. Click install to continue, see fig 2.1.4

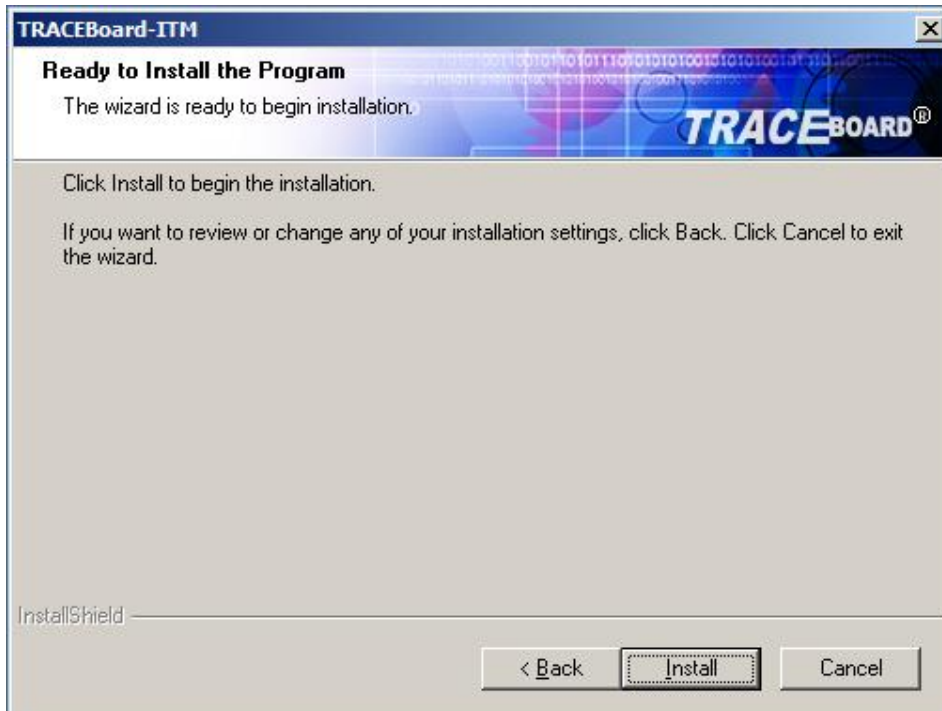


Fig 2.1.4

6. Waiting a while for complete installation, see processing fig2.1.5

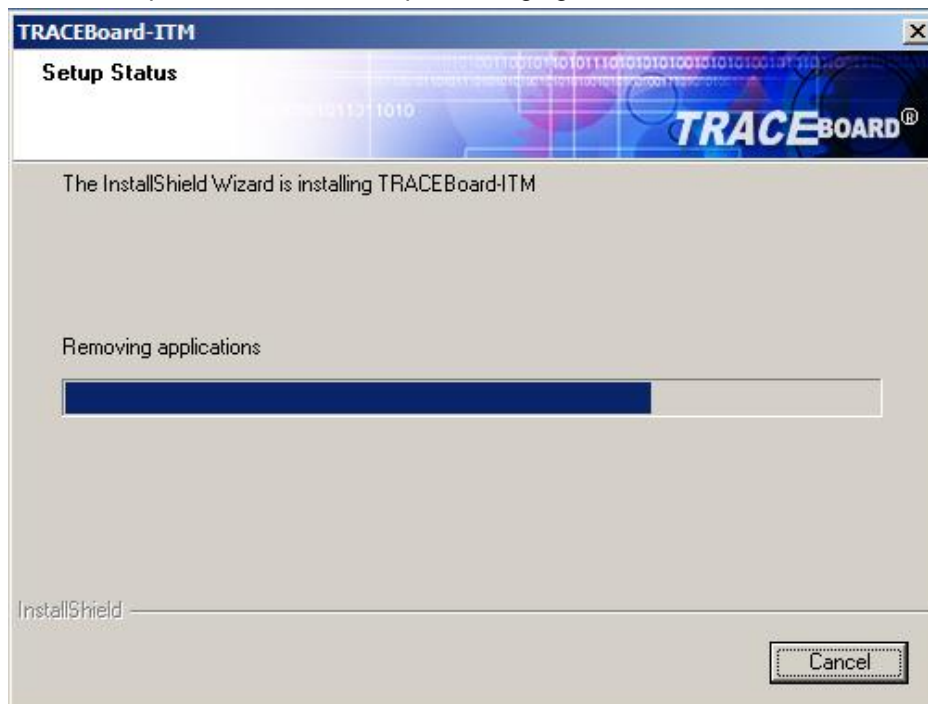


Fig 2.1.5

7. During installation, TRACEdriver installation pop up, click next to continue, see fig 2.1.6

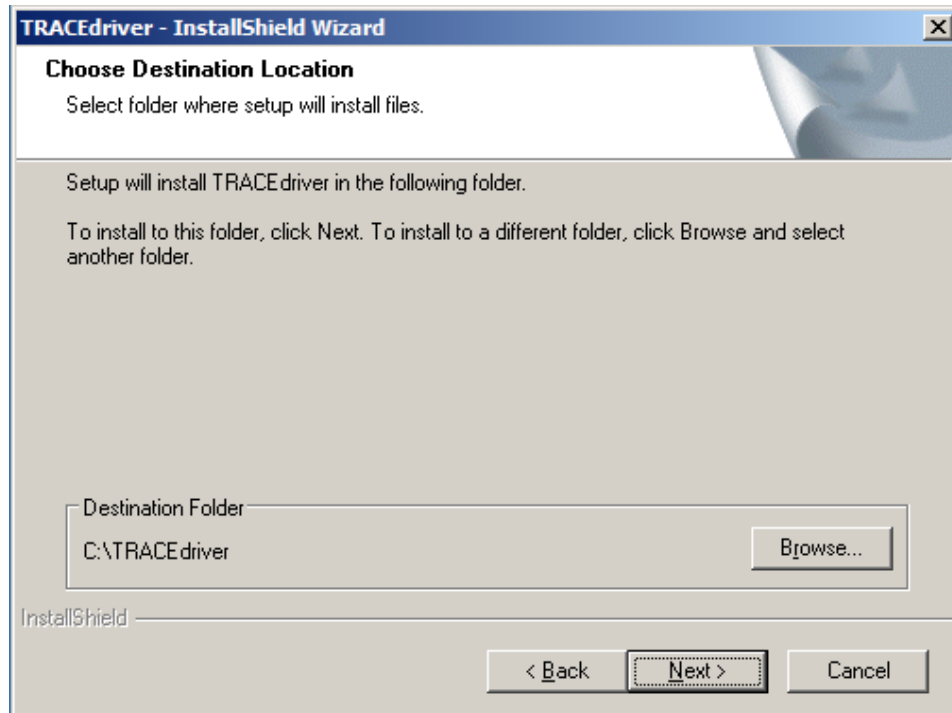


Fig 2.1.6

8. Installation finish, click finish to quit TRACEdriver installation program, see fig 2.1.7

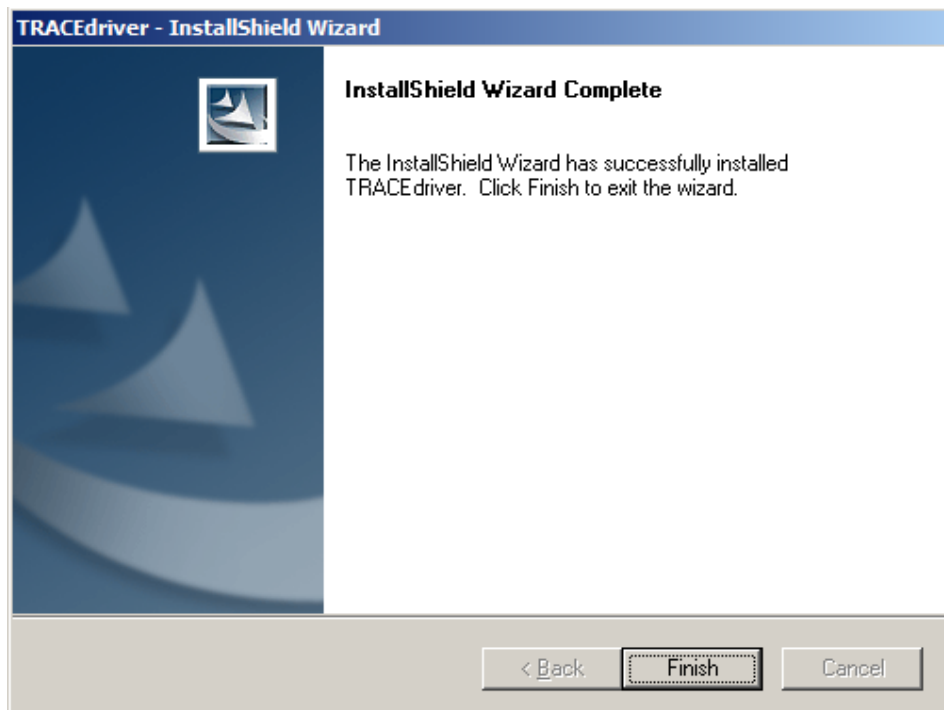
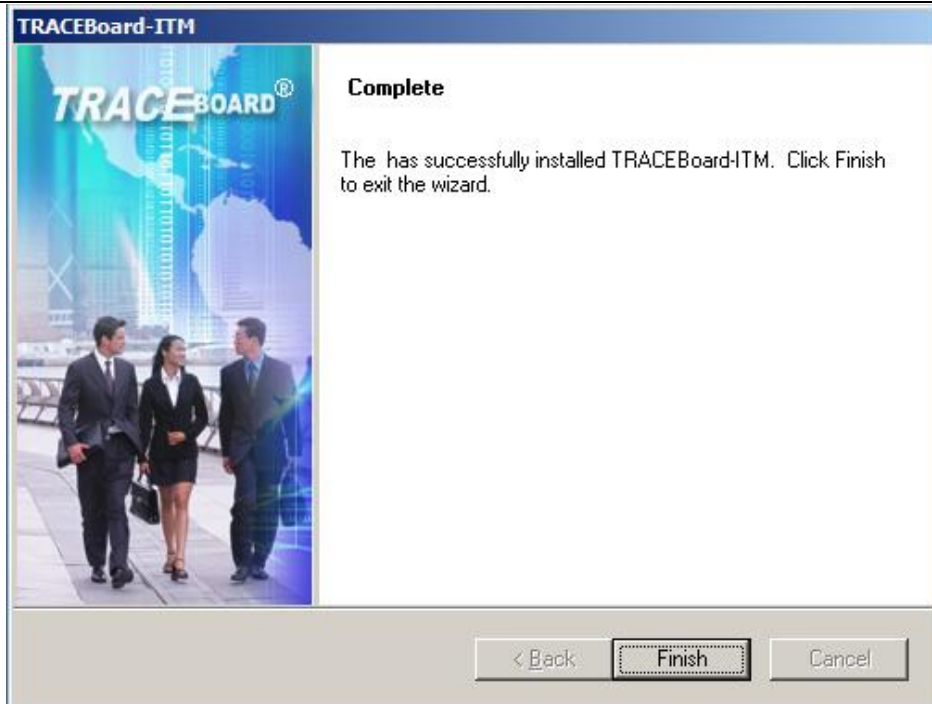


Fig 2.1.7

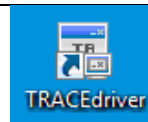
9. Installation finish, click finish to quit whole installation program, see fig 2.1.8



Software Functions

TRACE driver

1. Installation

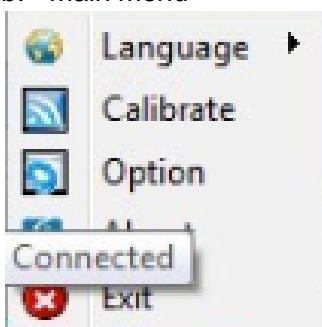


After TRACEdriver installation, there is icon on desktop. Double click TRACEdriver, icon will be shown on Windows task bar.

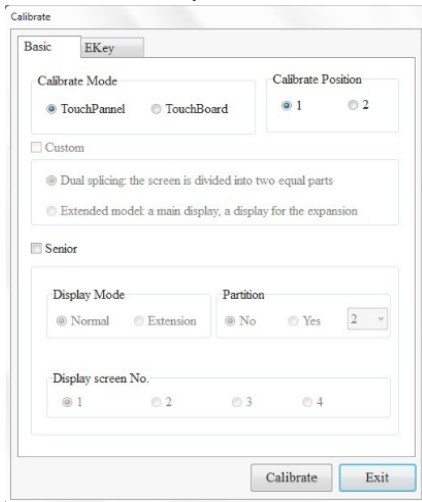


If icon is in grey, it means not connected, please check the driver and connection. Until the icon is in blue color, it means good connection, touch monitor can use.

2. Functions instruction

<p>a. software running</p>	<p>Normally the software will automatically running when you start computer, and you can see the icon on the Windows task bar. Also you can run it on program menu.</p>
<p>b. main menu</p> 	<p>Under well connection, right click the program icon will pop-up the device menu as left picture. Functions as follow: Language: you can choose the display language; Calibrate: for calibrate the screen; Option: you can set screen parameter here, control and check the device; About: display software info; Exit: Exit the software</p>

c. Calibrate Option

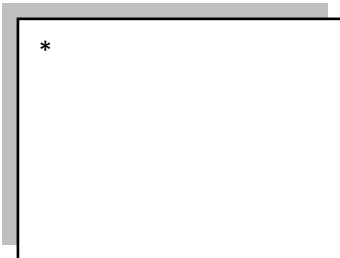


Don't choose "Custom" and "Senior" option, it will be the normal mode.

"TouchPanel" used for monitor display, "TouchBoard" use to Project display, it support non-rectangle display.

Calibrate Position 1 means the calibrate marks near the corner, 2 means marks near center, normally we suggest choose "1".

d. Calibrate interface



Click with the touch pen or finger on the screen followed by the shaped icon in the center of the screen to finish the calibration. After the positioning on the screen, check whether the coincidence of the cursor and touch pen, restart the "calibration" if deviated from. (During the positioning process, the touch pen touching the surface with a certain vertical and make written overlap with the center location of shaped icon)

e. Option



Info:

Display the screen info, for multi screen, you can choose the No to display the corresponding info.

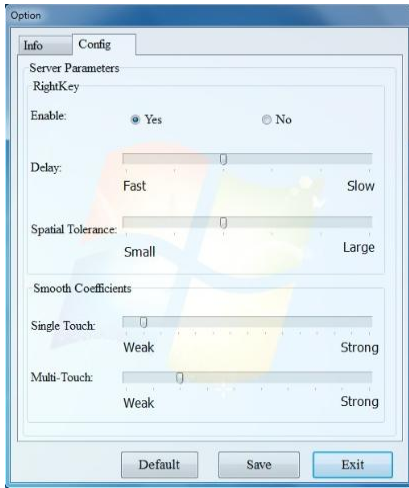
In the "Feature" frame, "√" means support , "×" means don't support.

f. Configuration

Some parameter used to set smooth coefficients and right click function.

Users can be based on individual needs to select the service configuration in the device menu

We suggest use the default value.

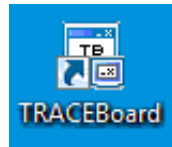


TRACEBoard

Software Interface

1. Software Icon

When completely installed, there are two icons on desktop, TRACEBoard. Double click TRACEBoard



icon to start when TRACEdriver is running.

2. Interface

TRACEBoard software interface shows as fig.3.1.2




Fig.3.1.2

3. TRACEBoard Software Application

There is a TRACEBoard toolbar at side, including 13 functional buttons. Toolbar can be placed on any

side.



1) Toolbox, click , TMK and Thumbnail show up as fig3.2.1

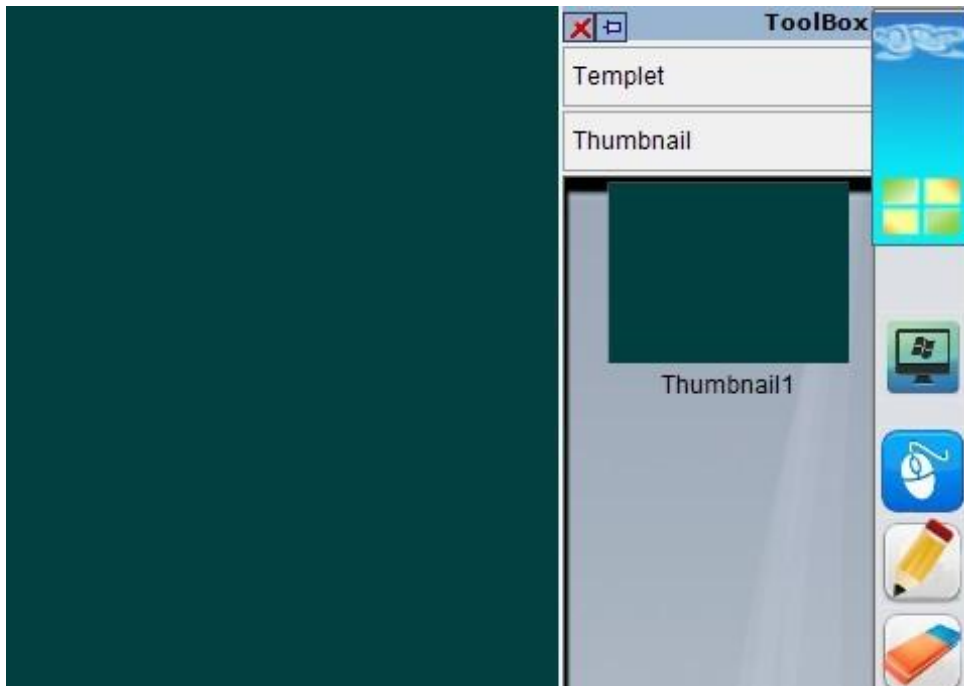





Fig 3.2.1

- a) Lock : to lock ToolBox; hide : hide ToolBox(click  to hide it too)
- b) Thumbnail: preview all pages
- c) TMK:

TMK is special file of TRACEBoard software, TMK is format file can be created and saved as .tmk file, which can be used timely in courseware.

How to create a TMK file?

Edit the objects in writing area, which includes text, sound, pictures, animation, image, etc. And then to select "Save as TMK" to save the content of all pages as TMK, or choose "Save as Page TMK" to save content of the current page as TMK.

TMK Usage

First, open a TBK file which you are going to present. Then, click ToolBox toolbar, right-click in the blank area of "TMK" Panel (see Fig3.2.1), click on the "Insert TMK" menu item to insert the TMK file. The content of inserted TMK will be shown as thumbnails in the TMK panel of ToolBox toolbar after insertion. Drag a thumbnail into the current page to insert it into the working area. Select "Delete All" to unload the TMK, all thumbnails will be cleared.

2) Switch to desktop button , click this button to switch to desktop.

3) Mouse button , mouse function



4) Pen button , see menu as fig3.2.2, choose different pen and set up

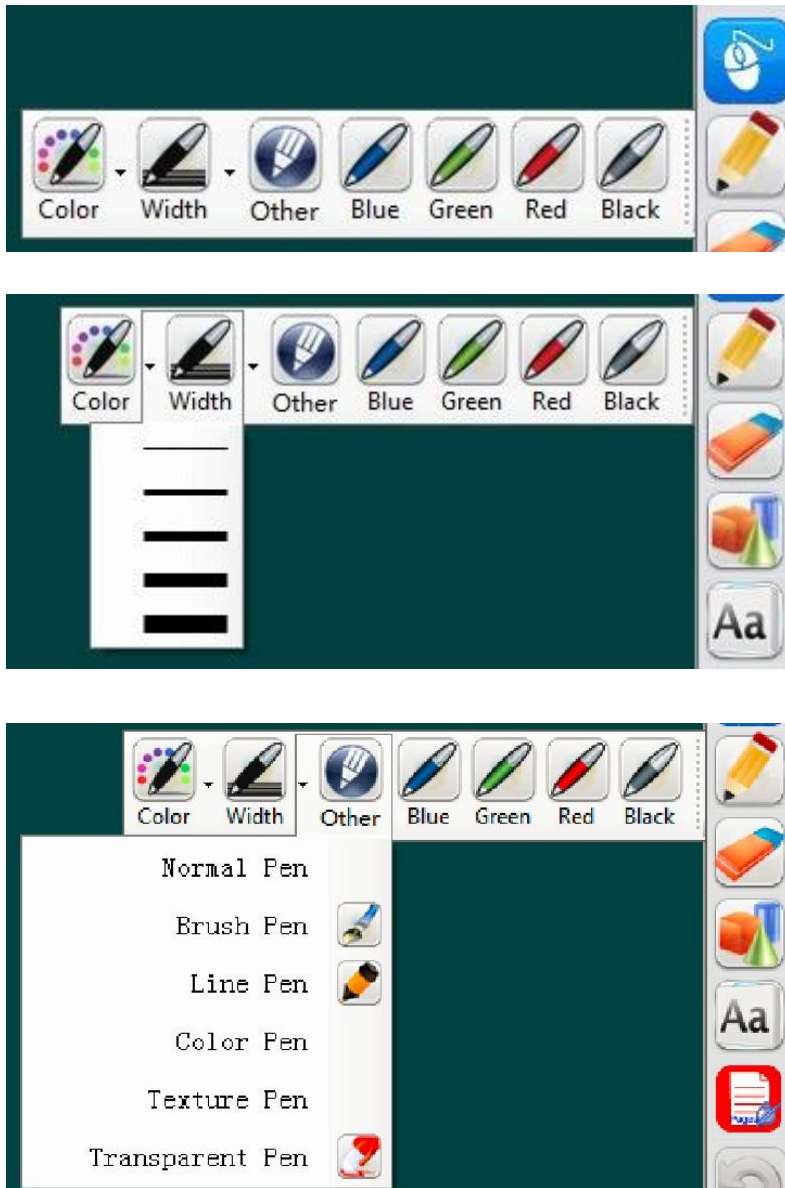


Fig 3.2.2



5) Rubber button , see menu as fig3.2.3, choose different rubber and set up



Fig3.2.3



6) Shape button, see menu as fig3.2.4, choose different shape and set up

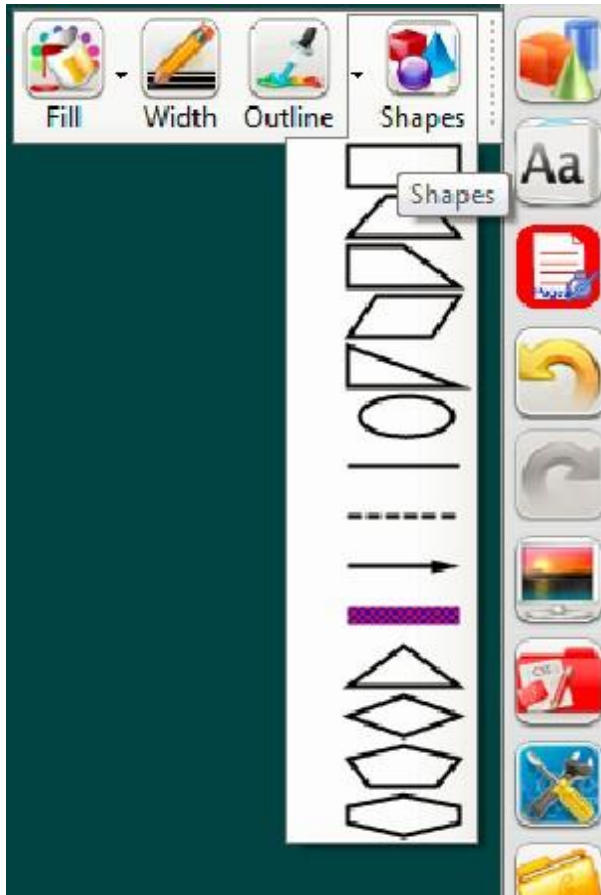


Fig3.2.4



7) Hand writing recognition, see menu as fig 3.2.5

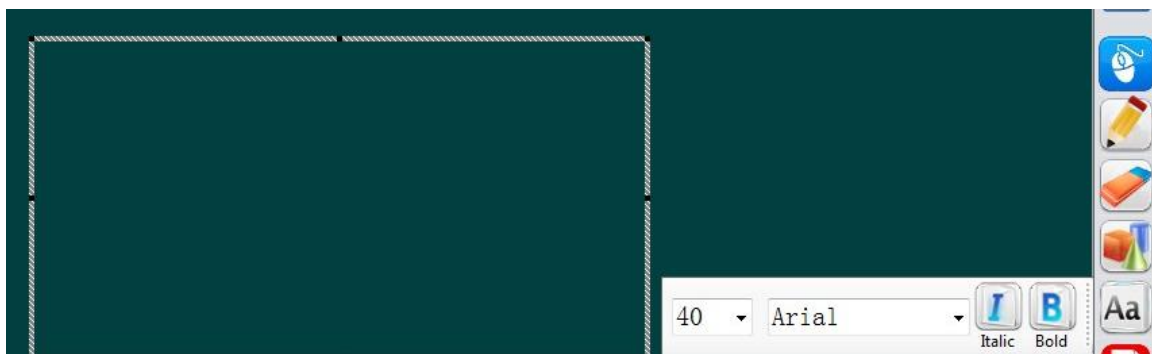


Fig 3.2.5

Hand writing recognition: in writing area, words and numbers can be transformed to text.

Set up: can set up words format and size





8) Page button, see menu as fig3.2.6



Fig 3.2.6

- Add page: to create new page
- Delete page: to delete current page
- Last page: turn to last page
- Next page: turn to next page

9) Undo button  , can cancel last operation, max 20 steps

10) Resume button  , can resume last undo operation, max 20 steps


11) Background button  , see menu as fig3.2.7, easily choose background and set any color you like



Fig3.2.7

12) Edit button  , see menu as fig3.2.8



Fig 3.2.8

- Copy: copy selected content in working area to Windows clipboard
- Cut: cut selected content in working area to Windows clipboard
- Paste: paste the selected content in Windows clipboard to working area
- Delete: delete selected content in working area
- Insert picture: can insert picture , supported format: png/jpeg/jpg/bmp/emf,etc.)
- Insert video: can insert video format , supported format: avi.

13) Tool button  , see menu as fig3.2.9

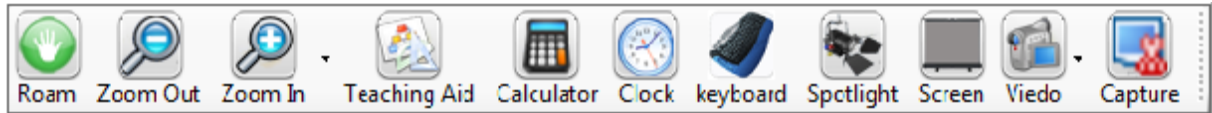


Fig 3.2.9

a) Screen capture



Full screen capture: capture all contents of current screen and paste it into TRACEBoard.



Region capture: select a rectangle area with mouse and paste it into TRACEBoard.



Irregular capture: use mouse to draw a certain chosen region(must be a closed region), this region will be automatically captured in TRACEBoard.



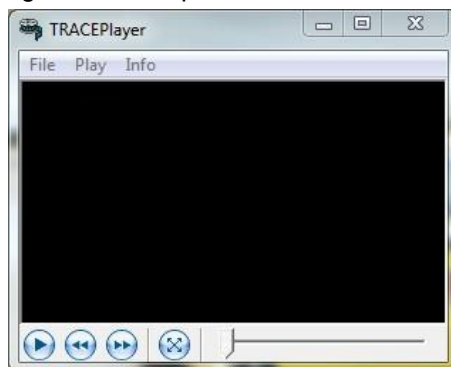
Window capture: click the window wanted, and the selected window's content will be captured and pasted into TRACEBoard.



b) Recorder



Click "start" button to record your operations. You may pause or stop conveniently. Click "stop" button, "save dialog" will show up, then you can save recorded content into a file, and the file will be saved as AVI format. Size of video is recorded exactly by 1:1 to keep a high quality. If computer is connected with the microphone, the sound of speech may be recorded at the same time. Size and quality of recorded contents will be decided by the performance of your PC. (Note: Dialog should be minimized during recording, and the recording will produce much better result if the video memory of your computer is larger than or equal to 128M.



Video Player


The menu bar of "Video Player" window includes "File", "Play" and "Info". "File" is to browse video files; "Play" is to control the play speed; "Info" is the help information about the player. The control buttons at

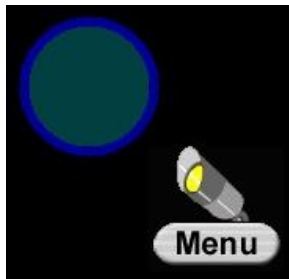
the bottom of window are Play, Forward, Backward, Full Screen, and Progress Bar. Click “Full Screen” button to switch to full screen mode. There are two buttons at the left and the right bottom respectively during full screen mode, which can switch back to window mode when you click it. All video formats supported by “Windows Media Player” may be played in the TRACEPlayer.



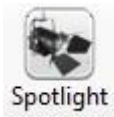
c) Screen sheet



Press button **Screen** to show the shade. You can drag the shade upward, downward, leftward and rightward. Presentation content can be gradually displayed and click  to quit.



d) Spotlight



Press button **Spotlight** to show spotlight. Drag the black area to move the spotlight. Drag blue frame of spotlight adjust the size of aperture.

- e) Clock- Click clock button to open windows clock
 - f) Calculator- Click calculator button to open windows calculator
 - g) Teaching Aid
- There are tool which can easily be used to enhance presentation.
- h) Zoom out- zoom out selected object
 - i) Zoom in- zoom in selected object
 - j) Roam-move all objects in one page



14) File button  , see menu as fig3.2.10

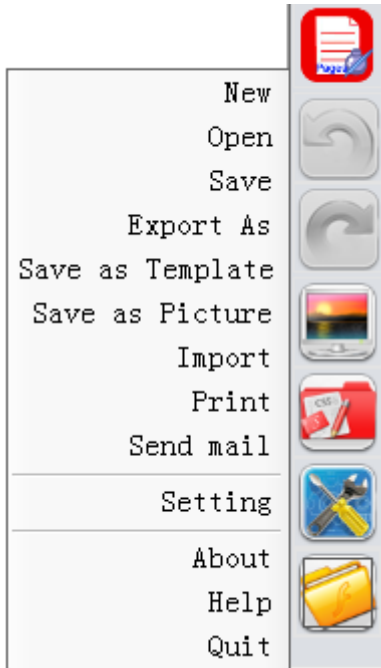
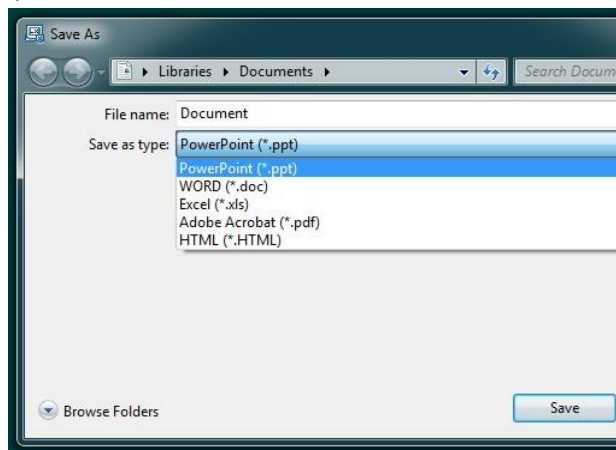


Fig 3.2.10

- a) New: create a new presentation file
- b) Open: open a TBK file
- c) Save: Save presentation file as TBK.



- d) Export as: choose file to save
- e) Save as Template: save all thumbnails as TMK file.
- f) Save as Picture: save current thumbnail as picture (.JPG).
- g) Import: can import format

Word ,Excel,PowerPoint,PDF(*.doc;*.xls;*.ppt;*.docx;*.xlsx;*.pptx;*.pdf)

- h) Print: print TRACEBoard presentation file
- i) Send mail: send TRACEBoard presentation file by e-mail
- j) About: click to see TRACEBoard software information
- k) Help: open User Manual (PDF format)
- l) Quit: close current TRACEBoard file.

Desktop tool application




To click desktop button switch to desktop. Floating tool shows up, see Fig3.3.1



Fig 3.3.1



Note: After writing and other operations on desktop, when click whiteboard button  , a popup window “save annotation?” will show up. If do not save, click “no”, if save, click “yes”. Saved page will be the first page in TRACEBoard presentation software.

Specification of Touch Screen

Touch technology	Non-contact Infrared Sensing Technology
Sensing Object	Non-transparent object (like pen, finger etc.)
Size of Sensing Object	≥ Ø5mm
Response Time	Single Touch: click: 8ms writing: 3ms
	Multi-Touch: click: 8ms writing: 8ms
Cursor Speed	Up to 300dots/second
Touch Resolution	4096x4096
Positioning Accuracy	≤±2mm
Glass	4mm , physical tempered Mohs 7 anti-explosive, transparency : >92%
Lifetime	No limits

Interactive Touch Monitor Parameter

Display size	55inch	65inch	70inch	84inch
Voice output	8W+8W			
TVsystem	PAL /SECAM, BG/DK/I			
Resolution	1920*1080	1920*1080	1920*1080	3840*2160
View angle	Level: 178°, vertical: 178°			
Multi-mediaformat	Image: JPEG、BMP、PNG Audio: WMA、MP3、M4A、AAC Video: MPEG1、MPEG2、MPEG4、H264、RM、RMVB、MOV、MJPEG、VC1、Divx、FLV			
Environmental factor:	0℃~40℃			
Work temperature	No condensation from 10% to 90%			
Work humidity	-20℃~60℃			
Storage temperature	No condensation from 10% to 90%			
storage humidity	1335.5x95.1x806	1560x107.7x93	1662x107.5x98	1981.9x1167.9x
Dimension	.3mm	4mm	9mm	107.7mm
Packing size	1425x210x950m	1756x276x1150	1858x276x1205	2250 x 350 x
	m	mm	mm	1550mm
Net weight	45kg	69kg	70kg	112 kg

- ☞ The design and specification is subject to change without any prior notice.
- ☞ About the power supply and power consumption, please refer to the label on the product and the packing.

Simple Troubleshooting

Panel

Remote control can not use

1. check if there is any object between remote control and sensor
2. check if battery is installed well or battery needs to replace
3. check if use remote in the correct range

Automatically power off

1. check power cable if connected
2. check if sleep mode is on
3. check if there is no signal
4. check if back light is off when there is object to block the distance sensor

Touch Function

Touch is failure

1. check if use attached pen or the similar size of object or finger to touch screen
2. use CHECK TOOL to check AD of touch screen has red or blue word

Wrong position

1. calibrate touch screen again
2. check pen or finger faces to screen vertically

Audio Problem

visual but no sound

1. check interactive touch monitor is mute
2. turn on the volume
3. check audio cable connects well
4. check PC audio output device works well

Only one speaker sounds

1. adjust volume balance
2. check if only one sound track is set in sound control panel
3. check audio cable connects well

Build-in PC

Signal is over or not full of screen

1. check if resolution is the best
2. check if Image zooming pattern is correct

Image off set

1. set in menu-Picture-Screen-Auto Adjust

Image color is wrong

1. check VGA cable connects well or VGA cable is faulty.
2. check in menu, *Picture Mode* is standard
3. check PC output setting is correct

Display format unsupported

set in menu-Picture-Aspect Ratio-Auto, and do calibration.