



For Win



# PEN DISPLAY

## User Manual





## Key Safety Measures

- 1) Please read all the specifications written in this manual and keep it for the future reference.
- 2) Please read all the notices and specifications on the monitor.
- 3) When cleaning, unplug the monitor. Do not use any cleanser, clean only with soft saturated cloth.
- 4) Please do not use accessories that are not recommended by the manufacturer.
- 5) Do not place the monitor near water sources such as bathtub, washbasin, sinks, washing machine, damp basement, swimming pool etc.
- 6) Prevent the monitor from fall or hit. Only placement tables that are recommended by the manufacturer or sold together with the monitor should be used. When installing wallboards and structures, please refer to the manufacturer's specification and use installation tools that are approved by the manufacturer.
- 7) The grooves and holes on the main case or its rear and bottom are designed for ventilation.
- 8) Prevent the monitor from overheating. Do not place the monitor on beds, sofas, carpets or in embedded devices to avoid blocking vents. Only power supplies shown on the nameplate can be used for the monitor. If you have questions about the power supply type that you are using, please consult the distributor of your monitor or the local power supply bureau.
- 9) This monitor is equipped with specific power plug according to your requirements when you bought it. If we do not have the power plug you have required, please buy suitable power plug in your country.
- 10) Power supply is the main electricity source for your monitor. Do not place anything on the AC adapter or the power wire. To protect your monitor, please switch off the power when it is not in use. During blackouts or when not in use for longer time, unplug the monitor from the socket in order to prevent surges impacting the monitor through the power wire.
- 11) Do not overload the socket or lengthen the power wire, it may lead to electric shocks.
- 12) Make sure no foreign bodies get inside the monitor trough grooves as to prevent short-circuit or fire. Prevent liquid from splashing on the monitor.
- 13) If the monitor has a breakdown, do not open the main case and try to repair it by yourself. Please ask a service for proper repair and maintenance.
- 14) When the following situations occur, please unplug the monitor and ask the service for full repair and maintenance:
  - A. The power wire or plug is damaged or worn.
  - B. There is liquid splashed on the main case.
  - C. The monitor has been drenched.
  - D. When the monitor cannot be used normally even though the specifications are closely referred to, please adjust the buttons designated in the manual because other improper adjustments may cause danger and it requires a great deal of repair and maintenance from a repairman to set the monitor right.
  - E. The monitor has fallen or the main case is damaged.
  - F. When obvious abnormalities occur to the monitor, a repair is needed.
- 15) While getting the components replaced, you are supposed to guarantee that the repairman is using the substitute components specified by the manufacturer. These substitute components must be same as original components in terms of functionality and performance. Unauthorized component replacement might cause fire, electric shocks or other dangers.
- 16) When a repair for the monitor is finished, the repairman should conduct routine safety inspection in order to guarantee that the monitor is in safe operational condition .
- 17) Plug is supposed to be placed near the monitor or in positions where it is easy to use.





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## 1. Brief Introduction

After opening the packing, please confirm that the following articles are in the packing box:

### 1.1 GT-220 Packing List:

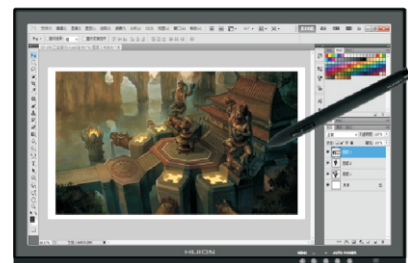
- LCD screen × 1
- AC adapter × 1
- VGA cable × 1, HDMI cable × 1, USB cable × 1  
Pen charging cable × 1, Power cable × 1
- Rechargeable pen × 1, Pen tips × 8, Pen clip × 1, Pen holder × 1
- Manual × 2 (For Windows and Mac)
- Driver software CD × 1



GT-220

### GT- 190 Packing List:

- LCD screen × 1
- AC adapter × 1
- VGA cable × 1, USB cable × 1,  
Pen charging cable × 1, Power cable × 1
- Rechargeable pen × 1, Pen tips × 8, Pen clip × 1, Pen holder × 1
- Manual × 2 (For Windows and Mac)
- Driver software CD × 1



GT-190

### GT-185 Packing List:

- LCD screen × 1
- AC adapter × 1
- VGA cable × 1, HDMI cable × 1, USB cable × 1,  
Pen charging cable × 1, Power cable × 1
- Rechargeable pen × 1, Pen tips × 8, Pen clip × 1, Pen holder × 1
- Manual × 2 (For Windows and Mac)
- Driver software CD × 1



GT-185

If any of the articles is missing, please contact your distributor.

## 1.2 Overview of the Monitor

### 1.2.1 Front view

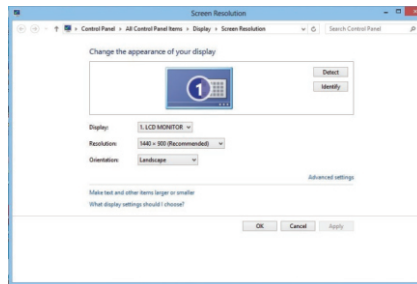
- 1) LED monitor and hand input operation area accept hand-input text and image information, and then the data is transmitted to the PC.
- 2) LED pilot lamp  
When the monitor is functioning properly, the pilot lamp will turn green.  
When it's not functioning properly, the pilot lamp will turn red.

Remarks: If the pen display shows no signal, please refer to the following procedures:

- 1) First check that the AC adapter is properly connected and pilot lamp is on.
- 2) Check if all the ports are connected or not.
- 3) Whether the PC is properly set or not. References for the PC settings are as follow:



(1) Right click the desktop - screen resolution:



### 1.2.2 Overview of the push button area



GT-190



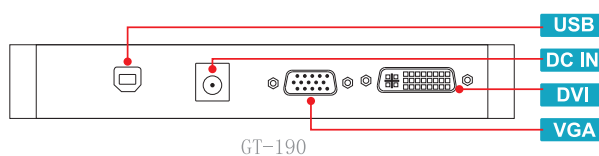
GT-220



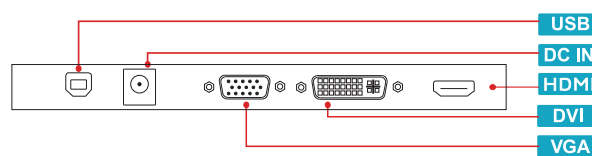
GT-185

- 1) POWER: Power switch. It can switch on/off the monitor.
- 2) MENU: Menu button. On pressing on it, you can activate OSD or conduct the adjustment confirmation.
- 3) +: Upward adjustment button. When the OSD is activated, adjustment functions include upward, towards the right or increase.
- 4) -: Downward adjustment button. Adjustment functions: downward, towards the left or decrease.
- 5) AUTO: Automatic adjustment button. When the OSD menu is active, press this button, it will return to previous menu the OSD. When the OSD menu is inactive, It will auto adjust display made to its utmost performance according to VGA settings.

### 1.2.3 Overview of the rear



GT-190



GT-185 / GT-220

#### 1) VGA input & USB output

First connect the VGA port with PC through which hand input screen can display the PC screen. Realization of hand input function requires USB port to be connected with the USB port of the PC.

#### 2) DC IN port (power supply)

Plug the port of the AC adapter into this port and then connect the AC adapter to the nearest AC socket.

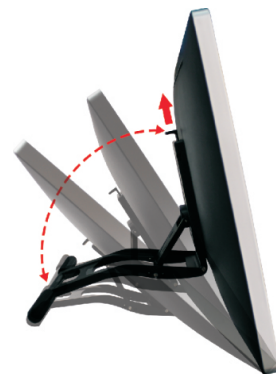
#### 3) DVI&HDMI

Connect the DVI or HDMI port with PC through which hand input screen can display the PC screen.



#### 1.2.4 The Adjustment of the Monitor Support

The angle of the monitor can be adjusted manually.



Remarks: The angel of the stand can be adjusted from 15°to 80°.

### 1.3 Installation

#### 1.3.1 Operating System Requirements

Pen input function is supported in following OS: Windows 7/8/8.1/10

#### 1.3.2 Software Installation

**Please close all painting software and antivirus software before driver installation.**

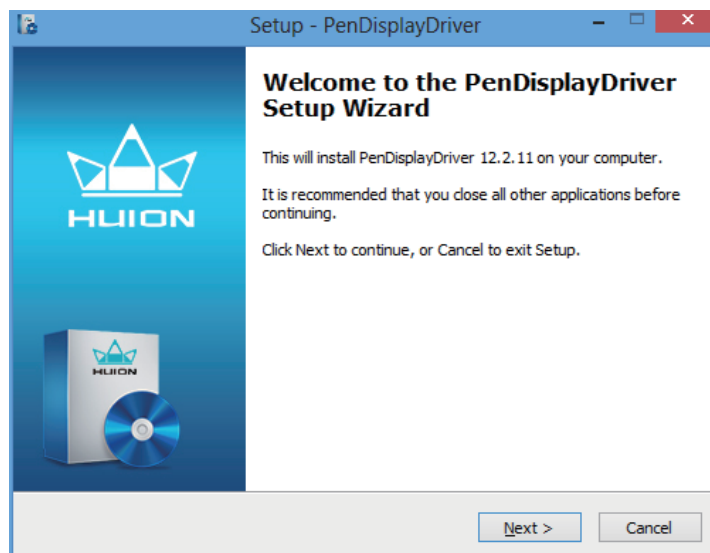
**Please don't connect the USB cable before driver installation.**

We kindly recommend downloading latest drivers form our official website since they are regularly updated.

1)If your PC operating system is Windows 7/8/8.1/10, you need to install pen input driver program.

Installation procedure:

- (1) Insert the driver disk into the CD-ROM drive of your PC and run "Setup.exe". Then the image will appear :
- (2) Click "confirm" after finishing the installation.



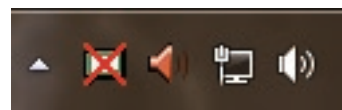
- 2) There will be a small icon at the lower corner of the screen after finishing driver installation (Picture 1). Or you can find the driver icon by clicking Start-All Applications-PenDisplayDriver (Picture 2). The pen display icon will be disabled if the USB cable is disconnected (Picture 3).
- 3) After driver installation, please connect the monitor with your PC by USB cable.



Pen display icon  
Picture 1

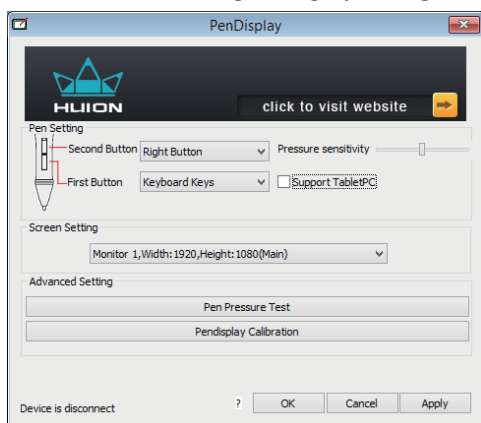


Picture 2

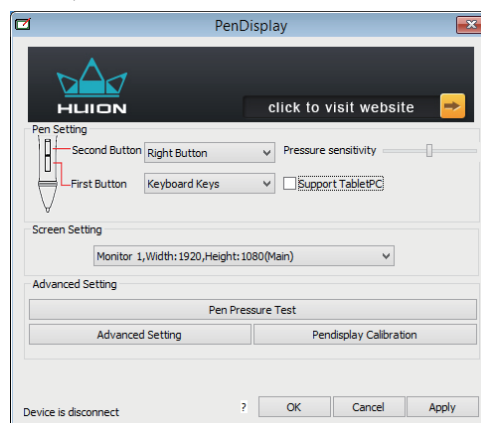


Picture 3

- 4) Click the small icon, enter into pen display configuration (for Windows8).



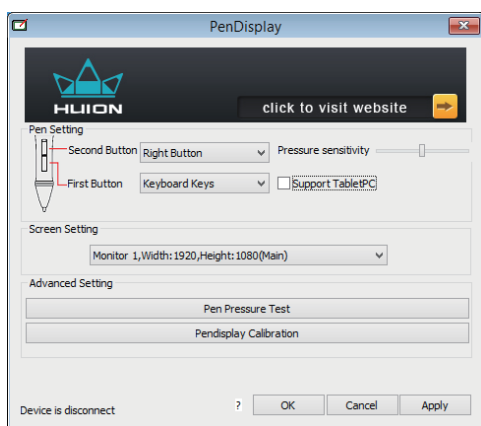
GT-190 / GT-220



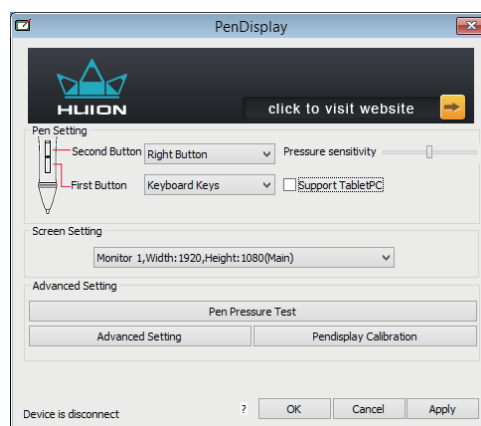
GT-185

## 2. Driver Interface Introduction

### 2.1 Control Interface



GT-190 / GT-220

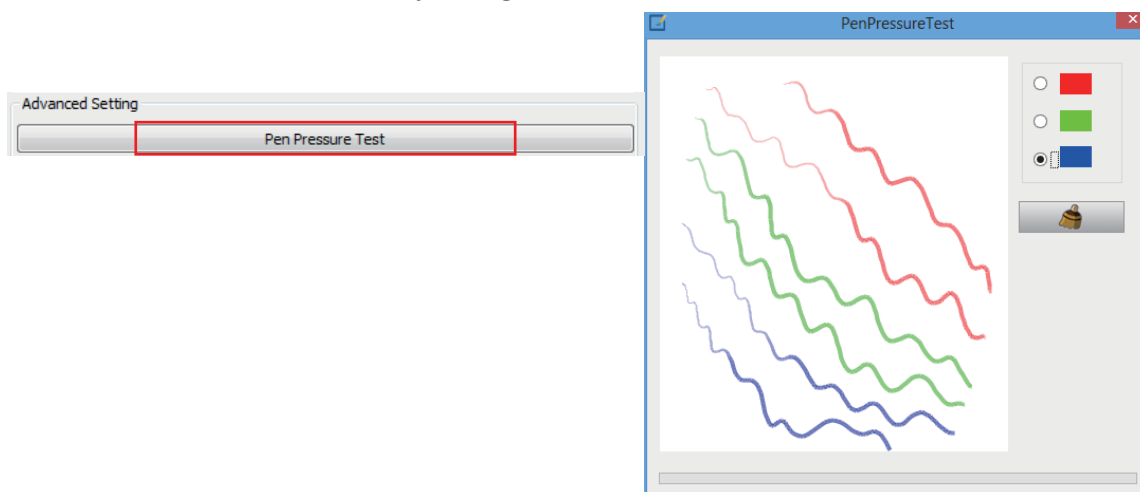


GT-185

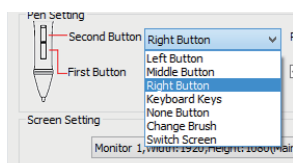
When you double click the Pen display icon ( ) which normally appears in the system tray at the corner of the screen, you will see the control panel (pictured above). It will display driven-related information. Controlling the panel by enclosed rechargeable pen can set up functions for the rechargeable pen, regulate the pen pressure sensitive and modify the working area and shortcut keys.

## 2.2 Pen Pressure Test

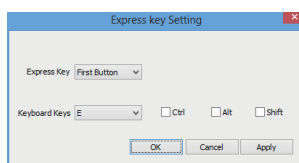
Click Pen Pressure Test into Pressure Sensitivity Testing



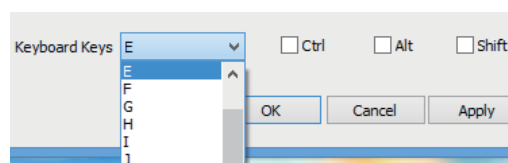
## 2.3 Pen setting



Picture 4



Picture 5



Picture 6

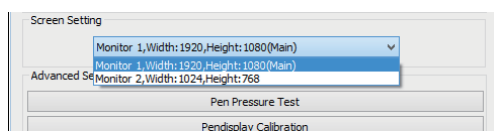
### 2.3.1 Key Functions

You can configure various mouse functions for the rechargeable pen (Picture 4): "Mouse Left Button, Mouse Middle Button, Mouse Right Button, None Button, Switch Screen and Keyboard key" from the corresponding right drop-down menu of the "Second Button and First Button".

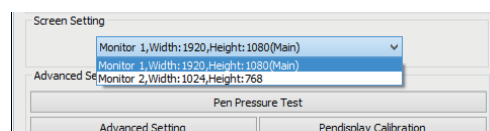
Note:

- (1) "Left Button, Middle Button, Right Button" functions represent a normal mouse left, middle, right button functions.
- (2) When choosing "Middle Button", the corresponding pen button will have the same "press" function as a normal mouse, but will not have the "scroll" function.
- (3) When choosing the "Keyboard Keys", there will appear an "Express Key Setting" (as Picture 5-6). You can set up pen button functions in the same way like any "Express Key" or "Keyboard Key" functions.

## 2.4 Screen setting



GT-190 / GT-220

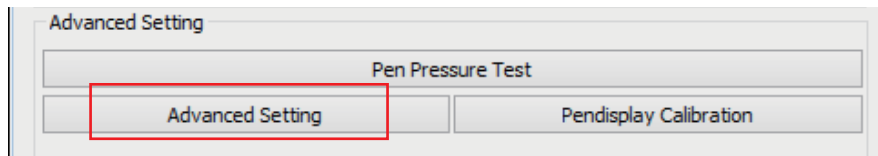


GT-185

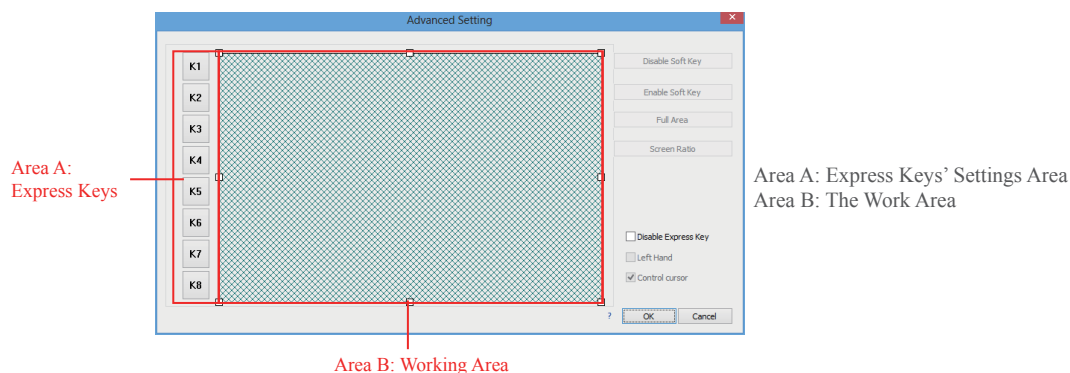
When your computer is connected to two screens in the extended mode, you can choose the corresponding work area of the monitor in the setup screen area.

1. Monitor 1: Choose this monitor, the cursor can only move accordingly in your main monitor.
2. Monitor 2: Choose this monitor, the cursor can only move accordingly in your second monitor.
3. All desktop area: Choose this, the cursor can move from Monitor 1 to Monitor 2.

## 2.5 Workspace and Advanced Setting (GT-185)



By clicking “Advanced Setting” button in monitor settings (see the selected area above), you will access the working area and express keys’ settings.



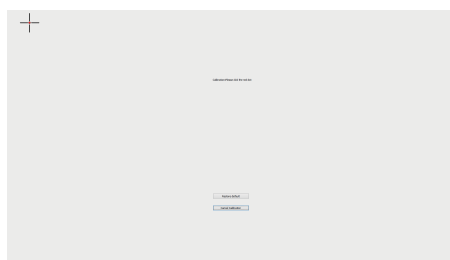
Note: 1) There are 8 Express Keys on the left side of the pen display.

2) You can click any of the Express Keys to set up any keyboard keys functions for the Express Keys.

3) The default functions for Express Keys in Photoshop are as follows:

K1:Cancel K2:Erase K3: Switch Pen K4: Zoom In K5: Zoom Out K6: Brush Larger K7: Brush Smaller K8: Move

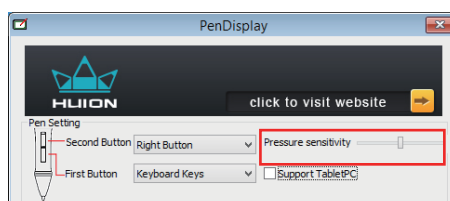
## 2.6 Calibration



Click the screen calibration button to enter the calibration interface. You will calibrate the screen automatically by using the pen to click the cross shown on the screen.

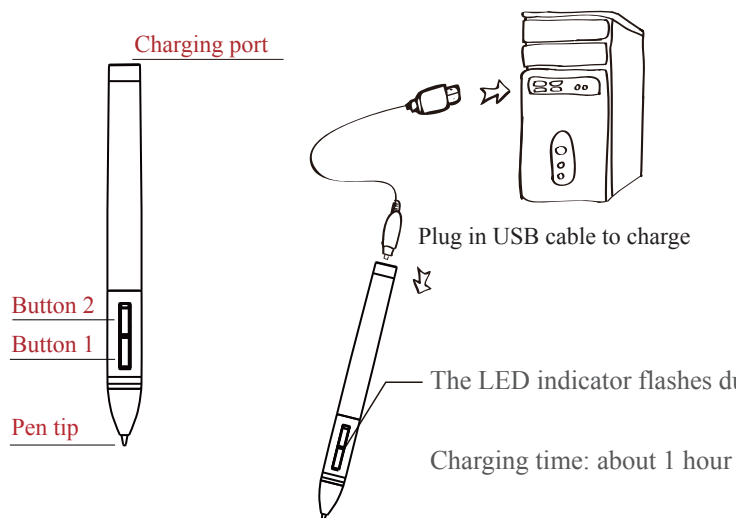
By clicking "Restore to Defaults" button it will restore the original calibration.

## 2.7 Pen Pressure Sensitivity Settings



Pressure sensitivity: move the slider from left to right; it can be used to adjust sensitivity of the tip and the severity of the stroke.

## 3. Rechargeable Li-ion Battery Pen



1. Tap on any surface with the tip of a pen to “wake it up”.
2. It will “auto sleep” if not used for a period of time.

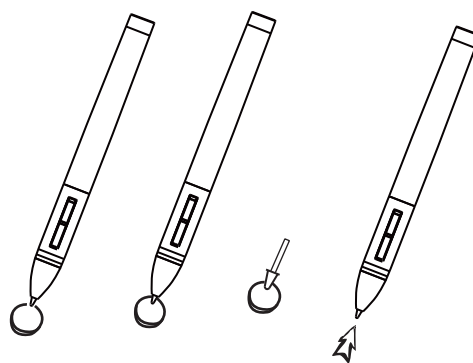
Note: If the line is unstable, it means you have to charge.

### Replacing the rechargeable pen tip

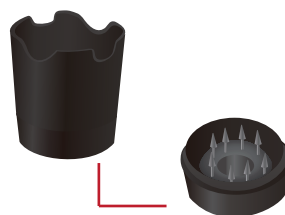
A: Pull out the pen tip from rechargeable pen by using a pen Clip that is inside the pen holder.



B: Push the pen tip in to check out if it is secured.



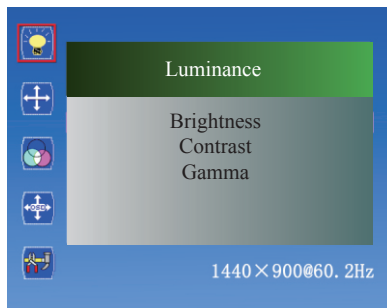
Gently unscrew the pen holder in the counter clockwise direction. You will see one pen tip replacement tool & 8 spare pen tips inside.



## 4. Using OSD (Screen Image Adjustment)

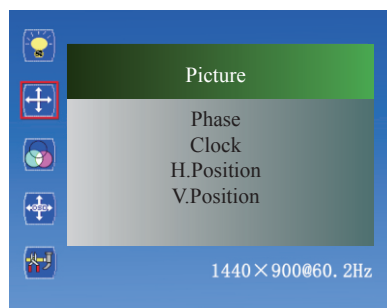
### 4.1 Screen Image Adjustment (GT-190)

#### 4.1.1 Luminance Control



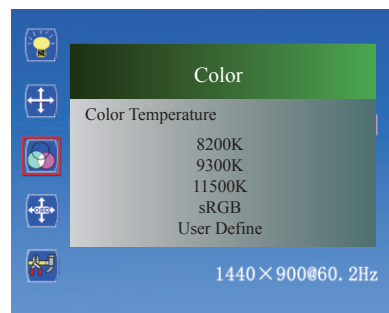
- 1) Brightness: Adjusting background brightness of the screen images. Press the buttons “-” and “+” to reduce and increase brightness.
- 2) Contrast: Adjusting difference between darkness and brightness of the screen. Press the buttons “-” and “+” to reduce and increase contrast.
- 3) Gamma: Adjusting the screen pixie to the certain brightness with the button “-” and “+”.

#### 4.1.2 Picture Control



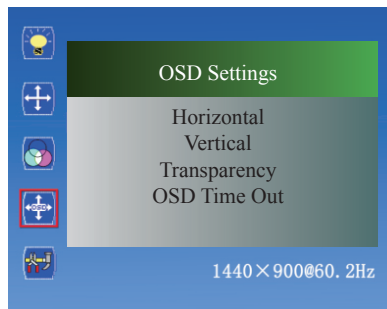
- 1) Phase: Adjusting the horizontal blinking of characters on the screen .
- 2) Clock : Adjusting the vertical blinking of characters on the screen .
- 3) H.Position: Adjusting images left and right by using the buttons “-” and “+”.
- 4) V.Position: Adjusting images downward and upward by using the buttons “-” and “+”.

#### 4.1.3 Color Control



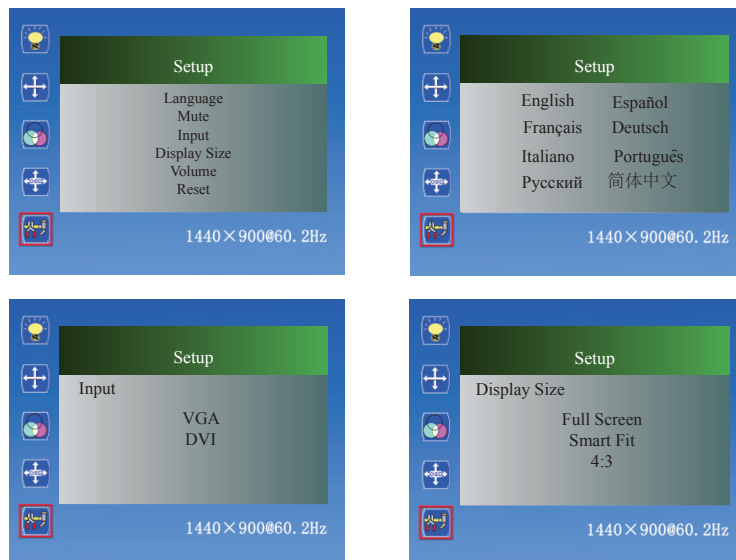
- 1) Color temperature: There are different kinds of color temperature that you can choose from. With the change in color temperature, color of the eight images will also differ.

#### 4.1.4 OSD Control



- 1) Horizontal: Adjusting the OSD position to left and right by using the buttons "-" and "+".
- 2) Vertical: Adjusting the OSD position downward and upward by using the buttons "-" and "+".
- 3) Transparency: Adjusting the Transparency of OSD screen image.
- 4) OSD Time Out: Reduce and increase the residence time of the OSD menu by using the buttons "-" and "+".

#### 4.1.5 Setup Control



- 1) Language: There are eight languages that you can choose from.
- 2) Mute: You can turn on or turn off the sound.
- 3) Input: There are 2 signal inputs: VGA, DVI.
- 4) Display Size: There are 3 sizes of the monitor you can choose from.
- 5) Volume: Adjusting the volume left and right by using the button "-" and "+".
- 6) Reset: All the options are restored to the default positions.





## 4.2 Screen Image Adjustment (GT-220[Type A] / GT-185)

### 4.2.1 AUTO IMAGE ADJUSTMENT

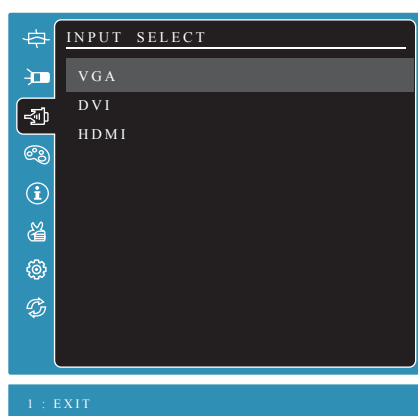
#### 4.2.2 CONTRAST/BRIGHTNESS



CONTRAST: Adjusting difference between darkness and brightness of the screen. Press the button “DOWN” and “UP” to reduce and increase contrast.

BRIGHTNESS: Adjusting background brightness of the screen images. Press the button “DOWN” and “UP” to reduce and increase brightness.

#### 4.2.3 INPUT SELECT



There are 3 signal inputs for you to choose: VGA, DVI, HDMI. The monitor will display the PC screen information according to your choice.

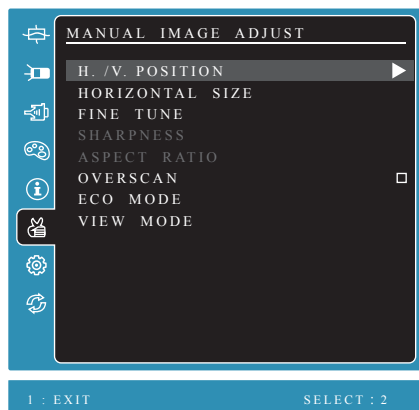
#### 4.2.4 INFORMATION



It will show the information of your monitor.



#### 4.2.5 MANUAL IMAGE ADJUST



Press the button “DOWN” and “UP” to adjust H./V.POSITION and HORIZONTAL SIZE. Or you can choose “FINE TUNE” “OVERSCAN” “ECO MODE” “VIEM MODE” to adjust.

#### 4.2.6 MANUAL IMAGE ADJUST



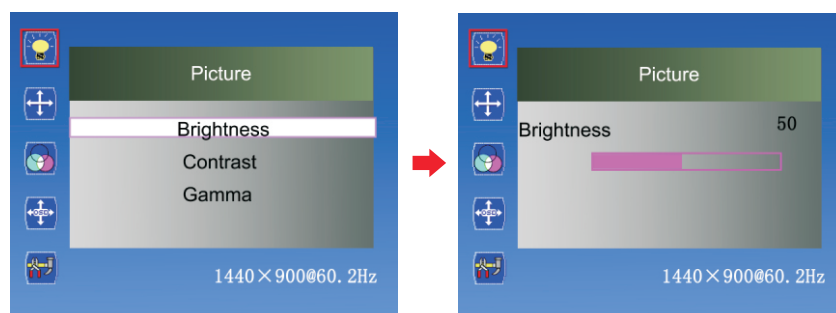
LANGUAGE SELECT: There are 12 languages for you to choose.

OSD TIME OUT: Reduce and increase the residence time of the OSD menu by using button “DOWN” and “UP”.

MEMORY RECALL: All the options are restored to the default positions.

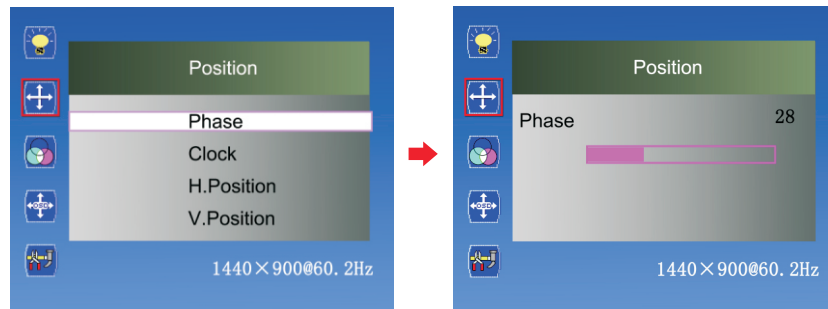
### 4.3 Screen Image Adjustment (GT-220[Type B])

#### 4.3.1 Picture Control



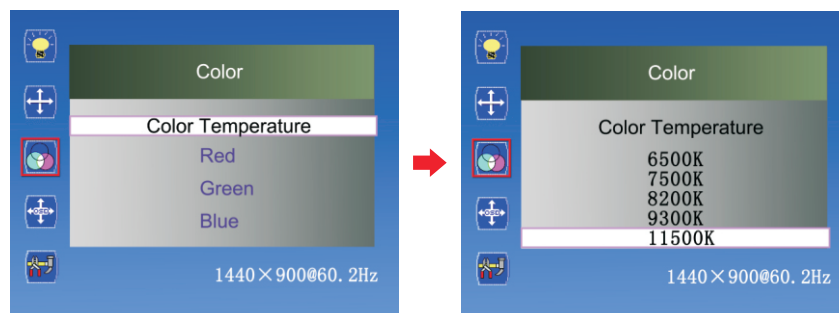
- 1) Brightness: Adjusting background brightness of the screen images. Press the buttons “-” and “+” to reduce and increase brightness.
- 2) Contrast: Adjusting difference between darkness and brightness of the screen. Press the buttons “-” and “+” to reduce and increase contrast.
- 3) Gamma: Adjusting the screen pixie to the certain brightness with the button “-” and “+”.

#### 4.3.2 Position Control



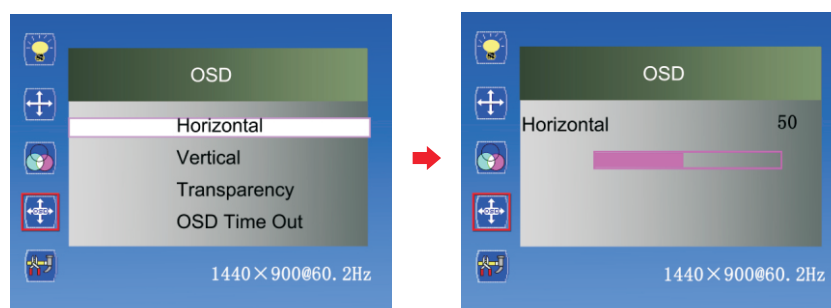
- 1) Phase: Adjusting the horizontal blinking of characters on the screen .
- 2) Clock : Adjusting the vertical blinking of characters on the screen .
- 3) H.Position: Adjusting images left and right by using the buttons "-" and "+".
- 4) V.Position: Adjusting images downward and upward by using the buttons "-" and "+".

#### 4.3.3 Color Control



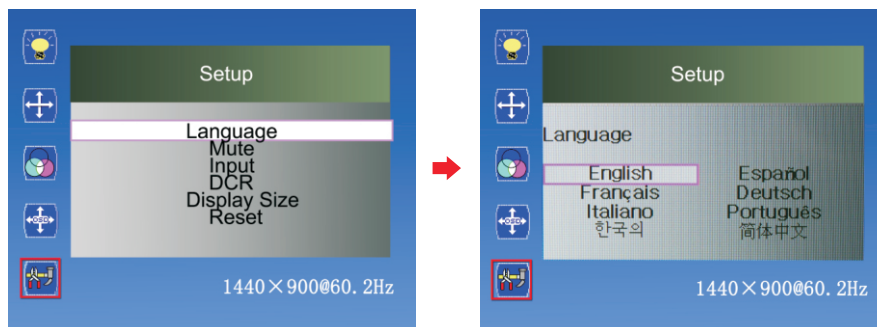
- 1) Color temperature: There are different kinds of color temperature that you can choose from. With the change in color temperature, color of the screen images will also differ.

#### 4.3.4 OSD Control



- 1) Horizontal: Adjusting the OSD position to left and right by using the buttons "-" and "+".
- 2) Vertical: Adjusting the OSD position downward and upward by using the buttons "-" and "+".
- 3) Transparency: Adjusting the Transparency of OSD screen image.
- 4) OSD Time Out: Reduce and increase the residence time of the OSD menu by using the buttons "-" and "+".

### 4.3.5 Setup Control



- 1) Language: There are eight languages that you can choose from.
- 2) Mute: You can turn on or turn off the sound.
- 3) Input: There are 3 signal inputs: VGA, DVI, HDMI.
- 4) DCR: You can turn on or turn off the dynamic contrast ratio.
- 5) Display Size: There are 3 sizes of the monitor you can choose from.
- 6) Reset: All the options are restored to the default positions.

## 5. Possible breakdowns and solutions

### 5.1 Possible Breakdowns Related to the Pen Display

Abnormal phenomena	Suggestions
The power indicator does not flash	<ul style="list-style-type: none"> <li>*Whether the power is on or not?</li> <li>*Whether the power wire is connected or not?</li> <li>*Check the socket.</li> <li>*Replace the power wire.</li> </ul>
The screen displays nothing	<ol style="list-style-type: none"> <li>1. Whether the power of the PC is on or not? If not, please refer to the PC user manual or other documents to solve this problem.</li> <li>2. Please refer to 2/4 and correctly connect the RGB input signal wire.</li> <li>3. If you connect the monitor with a laptop, please correctly connect the RGB signal wire after starting the laptop. In the option of display mode settings, switch to the external RGB display mode (There are different switch methods for different laptops. Please refer to the PC user's manual and other documents).</li> <li>4. Whether the pilot lamp is green or not? If the monitor and the PC are in hibernation, please press the keyboard and mouse to restart the system.</li> <li>5. Is the signal wire broken or bent? If so, please replace the signal wire.</li> </ol>
Images are blurred	<p>The best display effect is available with the resolution</p> <p>- GT-190:1440x900 / GT-220:1920x1080 / GT-185:1366x768</p>
Lack of colors	Check the signal wire of the monitor and confirm that the pin is not bent or fractured.
Images are not in the middle or improper in size	Adjust Clock and Phase or press the AUTO button for automatic setup.
There is chromatism in images	Adjust the RGB color or reselect color temperature.
Images jitter or ripple images appear	It is likely that there is anelectric equipment nearby that brings about electronic interference.



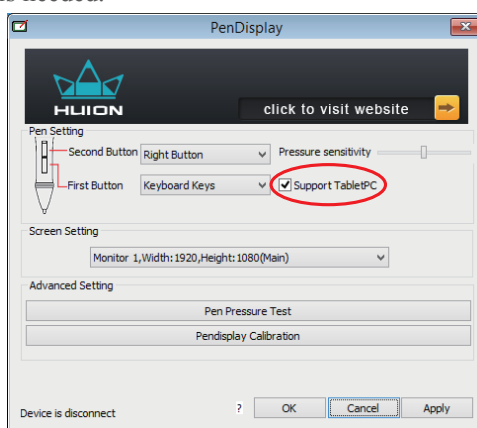
## 5.2 Possible breakdowns related to hand input function

Abnormal phenomena	Suggestions
The pen does not work	<ol style="list-style-type: none"> <li>1. If the driver is damaged or is not properly installed, please uninstall the driver and reinstall it. Please refer to 1.3.2.</li> <li>2. Whether the power is exhausted or not? If so, please charge.</li> <li>3. If the nib has got shorten due to wear and tear, please replace the nib.</li> <li>4. Try restarting the PC and the monitor.</li> <li>5. Try pulling out and inserting the USB wire.</li> </ol>
Cursor movement is abnormal	Try pulling out and inserting the USB wire again or restarting the PC.
The side button of the pen doesn't work	When pressing the side button, please make sure that the nib doesn't touch glass surface and the distance between the nib and the surface is within 5mm.
There're great discrepancies in locations	Adjust the screen. Please refer to 2.6 for specific instructions.

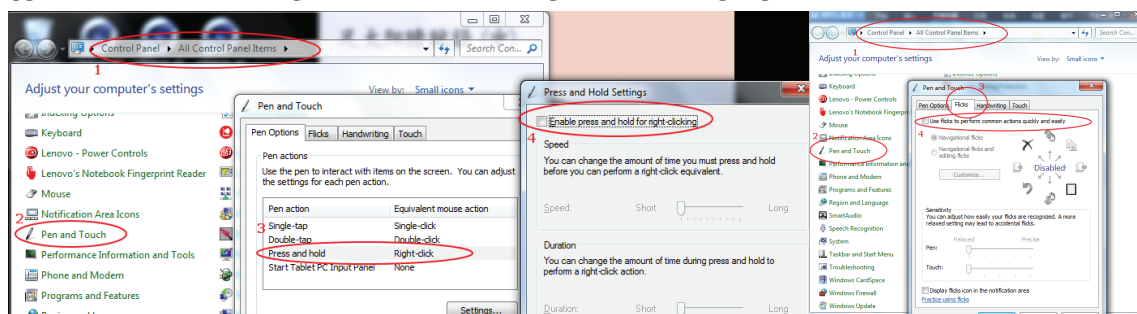
## 5.3 Support Tablet PC

Also called Electronic Ink Function, which is normally used for supporting pressure sensitivity under Office 2007, Journal or later version. For Sketchbook 6.0, Photoshop CC2014(or later) on Windows8 or later system, checking "Support TabletPC" is needed to support pressure sensitivity.

As for other drawing software, please read the software instruction carefully to see whether it supports windows TabletPC or not, and try to disable Support TabletPC if it is needed.



As the "Support TabletPC" checked, please turn off flicks to get a better using experience.





## 6. Product Specifications

### 6.1 Specifications of the Monitor (GT-190)

Items		Specifications
Product Names		Pen input LCD
Monitor Features	Display Equipment	TFT LCD
	Effective Display Size	19-inch/409.8mm ( H ) *255mm ( V )
	Resolution	1440 x 900
	Dot Pitch	0.283mm x 0.283mm
	Display Colors	16, 700, 000 colors
	Viewing Angles	80°to the right , 80°to the left 70°upward and 70°downward
VGA input	Input	D-sub 15-pin(simulated RGB)
Environmental Requirements	Temperature	Operation: +5 - +40°C Storage: -20 - +60°C
	Humidity	Operation: 20 - 80%RH Storage: 5 - 95%RH
Wattage		Less than 36W during operation, less than 1W in the power-saving mode
Power Supply		12V==3A
Package Size		493(L) x 408(W) x 131(H)mm
Weight		3.6kg
Adjustable Range of the Support		15° — 80°
OS Compatibility		Windows 7/8/8.1/10 or later
Video Interface		VGA, DVI

### 6.2 Specifications of the Monitor (GT-220)

Items		Specifications
Product Names		Pen input LCD
Monitor Features	Display Equipment	IPS LCD
	Effective Display Size	21.5-inch /476.64 mm x 268.11 mm
	Resolution	1920 x 1080
	Dot Pitch	0.248mm x 0.248mm
	Display Colors	16, 700, 000 colors
	Viewing Angles	89°to the right, 89°to the left 89°upward and 89°downward
VGA input	Input	D-sub 15-pin (simulated RGB)
Environmental Requirements	Temperature	Operation: +5 - +40°C Storage: -20 - +60°C
	Humidity	Operation: 20 - 80%RH Storage: 5 - 95%RH
Wattage		Less than 36W during operation, less than 1W in the power-saving mode
Power Supply		12V==3A
Package Size		558(L) x 124(W) x 408(H)mm
Weight		3.7kg





Adjustable Range of the Support	15° — 80°
OS Compatibility	Windows 7/8/8.1/10 or later
Video Interface	VGA, DVI, HDMI

### 6.3 Specifications of Pen Input

Pen Input Technique	Electromagnetic induction
Pen Power Consumption	300uA (max)
Pen Input Resolution	5080 lpi
Pen Pressure Sensing	2048 level
Accuracy	±0.5mm (center)
Report Rate	233 rps (Report Per Second)
Port	USB

### 6.4 Specifications of the Monitor (GT-185)

Items	Specifications
Technology	Electromagnetic Digitizer
Type	TFT
Screen Size	18.5" Diagonal
Aspect Ratio	16:9
Native Resolution	1366 x 768
Display Area	409.8(H) x 230.4(V) (mm)
Viewing Angle	H : 178° V : 178°
Brightness	250cd/m
Pixel Pitch	0.3(H) x 0.3(V)mm
Response Time	5ms
Color Management	ICC profile, 6500° K whitepoint default
Number of Colors	16.7M
Backlight	LED Light
Pen Pressure	2048 levels
Resolution	5080 lpi (Lines per Inch)
Report Rate	220 rps (Revolutions per Second)
Inking Start	5 - 10g
Reading accuracy	±0.5mm (center)
Max Reading Height	15mm (Max.)
Pen Power Consumption	300uA (Max.)
Rechargeable Pen	Minimum 350 hours of continuous use
ExpressKeys	Left 8





Data Communication Interface	USB
Graphic Input Interface	VGA, DVI, HDMI
Stand Adjustability	Adjustable between 15 to 90 degree
Power Supply (Adapter)	Input 100-240 VAC, 50/60 Hz, Output 12V 3A
Operation Power Consumption	<36W
Standby Power Consumption	<1W
Operation Temperature	0-40°C (32-104°F)
Operation Humidity	20-80% (Non-condensing)
Dimensions/piece	485 mm x 296mm x 45mm
Net Weight/ piece	3.1kg
Warranty	13 Month

Remarks: Changes in battery life depends upon the humidity and temperature in environmental conditions.

