TECH ON VISION

TOV-271M
Monitor User Manual

(Please read carefully before using the product.)

This product is a split-screen monitor that can use two PCs on one monitor at the same time, and is particularly suitable for physical network separation environments. It is a product that eliminates harmful electromagnetic waves while providing high-definition image quality and power saving functions along with simple design. In addition, this product is designed to be safe, easy to use, saves installation space, and provides clear picture quality.

Techonvision Co., Ltd.

[Safety Precautions]

caution	Failure to read the safety precautions may result in serious injury or material damage. Please read it carefully and use it properly to protect your safety and prevent damage to property.

◆ Do not install in a place with poor ventilation, such as a bookcase or closet.

◆ Do not use or store flammable sprays, flammable materials, etc. in close proximity.

◆ Do not insert metal objects such as chopsticks, wire, and drill into the monitor vent or A / V jack.

◆ Unplug the power plug when you are not using the monitor for a long time.

◆ If there is dust or water coming in contact with the pins of the power plug, wipe it off well.

◆ Never disassemble, repair or modify the product yourself

◆ Do not use a damaged power cord, plug, or loose outlet.

◆ Do not pull on the cord or touch the power plug with wet hands

◆ Connect the power plug to a properly grounded outlet.

◆ Please insert the power plug correctly to the inside end so that it does not shake.

◆ Do not bend the power cord excessively or stretch it over heavy objects.

◆ Do not use multiple outlets or power plugs in one outlet.

◆ Place the monitor at a distance from the wall to ensure proper ventilation.

◆ If the monitor emits smoke or a strange smell, turn off the power immediately and turn off the plug
Please contact the service center after removing it.

◆ Place the product on a monitor or near a hot air balloon.
Make sure the power cord is not in close proximity.

◆ Do not install the product in water, rain, splashes, oil, humid places, or vehicles.

◆ When cleaning, do not spray water or detergent directly on each part of the product.

◆ Continuous use of the product in too close proximity may cause poor vision.

◆ Place the monitor on a flat, stable surface and let it slide when you place the product.

◆ When cleaning the monitor, unplug the power cord and wipe it with a soft dry cloth.

◆ Do not polish by industrial polish, wax, benzene, alcohol, thinner, mosquito repellent, fragrance, lubricant, chemical such as detergent and water.

◆ When using a fixed screen for a long time, there may be afterimage or smearing.

◆ If you do not use the monitor for a long time, set the power saving mode or the screen saver to the moving movie mode.

[Installation 1]

1-1 Components

Please make sure that the following components are included when opening the box. If any components are missing, contact your dealer immediately to receive the parts. Please use monitor. Depending on the product, additional accessories (DVI cable, remote controller, HDMI cable) may be enclosed.

| [Monitor] | [Adapter] | [Power Cable] |
| [DVI Cable] | [HDMI Cable] | [User Manual] |

The above images may look different from the real one.

1-2 Driver and recommended resolution

This monitor is PLUG & PLAY type and does not need special driver. The required drivers are provided by the video card manufacturer within the computer and may be on the CD that comes with the computer. Please refer to the table below for recommended resolutions. For normal monitor operation, the video card must be set to the recommended resolution on Windows. For a detailed description of the video card, refer to the video card owner's manual or the Windows Readme file.

Product Size	Recommended Resolution	Split resolution	Product Size	Recommended Resolution	Split resolution
23inch(16:9)	1920x1080	960x1080	24inch(16:9)	1920x1080	960x1080
27inch(16:9)	1920x1080	960x1080	32inch(16:9)	1920x1080	960x1080

[Installation 2]

1-3 Cable Connection

◆ Monitor Configuration/Connection - REAR ◆

Power Terminal	PC-1 Terminal	PC-2 Terminal	K/M Terminal	HDMI Terminal	DVI Terminal

1. Connect the 220V power outlet to the power input terminal of the adapter with the power cord.
   Plug the DC output jack of the adapter into the power input terminal on the back of the monitor.

caution Failure to use the adapter included with this product may result in fire or malfunction.

caution Do not connect the monitor with the power-on plug and adapter connected. Connecting the power-on adapter to the monitor may cause malfunction.
   Please connect the adapter and monitor first, then plug the power plug into an outlet.

2. Please connect each cables to the monitor terminal and PC or external device.
   After turning on the monitor, press the menu(M) or SELECT button located on the front panel and select the input signal that matches the terminal.

caution If the connection cable and input signal of the monitor are not set the same, It does not come out.

3. Connect the PC 1 cable to the PC-1 terminal, PC 2 cable to the PC-2 terminal, keyboard/mouse cable to K/M terminal.

4. Connect the DVI cable to the DVI terminal, HDMI cable to the HDMI terminal. at the same time

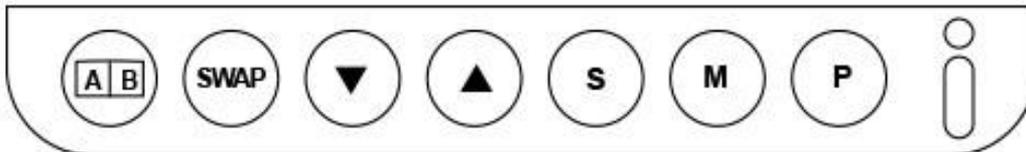TIP HDMI to DVI or DVI to HDMI cables can be connected according to the situation.

[Trouble Shooting]

Problems	Solutions
Did you connect the monitor for the first time?	Please execute initialization in the product menu after purchasing. Because the graphics cards are all different, it is recommended to make the initial settings.
The color is strange. It appears in black and white.	Please connect the computer connection cable again. Insert the video card of the computer firmly again. Please reboot your computer. Refer to the video card user's guide and set the correct one.
In RGB mode, the screen position It changes or shifts to one side.	Refer to Adjusting the screen to perform horizontal or vertical positioning. Please adjust the resolution or frequency on the video card. Sometimes the screen position may change due to the signal cycle difference of the video card.
After replacing the video card, It's different from the color.	For Windows Me / XP / 2000, go to Control Panel-> Display-> Please try again. Please reconfigure it to match the driver of your video card.
The screen is off and the power indicator It blinks.	The monitor is in Sleep mode. Press any button on the keyboard or move the mouse.
I see spots on the screen.	During use, you may see several pixel spots (red, yellow, white, black) on the screen. This is a phenomenon that can be seen in the nature of the LCD panel. This is independent of the performance of the monitor and is not a malfunction.
Looks like the screen is falling.	Check the signal cable of the monitor and the computer and connect them again. Try auto-tuning.
The screen is not clear.	Make sure the resolution is set to the recommended resolution.
The screen is unstable and trembling. There is a shadow trace on the screen.	Make sure that the resolution frequency of your computer or video card is within the available range on the monitor, and then reset the resolution on your monitor. (See 2Page recommended resolution.)
The screen is too bright. / It's dark.	Try adjusting the brightness or contrast of the screen.
There is a line on the screen and it shakes.	Stop using cordless phones, hair dryers, electric drills, and more.
The touch OSD button does not work.	Turn off the multitap (wall outlet) connected to the adapter, and after 10 to 15 seconds,(Outlet).
I'm curious about our zero-defect policy.	In case of non-defective product, it can be exchanged when one pixel spot occurs. Can be exchanged when four pixel spots occur when non-defect product is not available Please apply for exchange within 10 days after purchase.
The resolution of the split screen is abnormal.	The resolution of the split screen is automatically determined by the monitor. Press the split button on the front of the monitor once to change the resolution.
The full screen resolution is strange.	When changing from split screen to full screen, it may happen that the signal from computer's video card is not transmitted well. In this case, please divide the screen by dividing screen and then switch to full screen mode again.

TIP	If the problem is not resolved, please contact the manufacturer to solve the problem.

[TOV-270, 271M Monitor Installation]

order	part	explanation
1	Check the contents	Check the monitor parts in the product box, take out the monitor, first insert the monitor base and fix it with screws.
2	Connect the DVI cable	Connect the DVI cable to the monitor's "DVI" terminal.
3	Connect the HDMI cable	Connect the HDMI cable to the monitor "HDMI" terminal.
4	Connect the USB cable	Connect the "DVI PC" to the "PC1" port on the back of the monitor and the "HDMI PC" to the "PC2" port. If the USB connection is reversed, the mouse may operate in the opposite direction.
5	Keyboard, Mouse Connections	Connect the keyboard and mouse to the USB ports marked "Key, Mouse" on the upper right of the monitor. After connecting, check whether the "Num Lock" light on the keyboard is lit. (Check the connection)
6	Connect the Power Cable	Check the supplied power adapter and connect the **12V adapter to the monitor first,** and then connect the 220V power cable to the adapter before connecting 220V to protect the monitor circuit.
7	Power input	When the connection is made as above, you can use the monitor by pressing the power switch "P" on the front of the monitor.

♣ How to Use the Buttons

P	Monitor Power switch.
M	Monitor MENU Button. (Menu / Exit)
S	Monitor MENU Select Button. (Select / Enter)
▲	Button to raise the selection bar up in the menu. (Up / Right)
▼	Button to raise the selection bar down in the menu. (Down / Left)
SWAP	This is a button to switch the entire screen. Split screen ratio selection (split mode)/Input selection (full screen mode)
A B	This is the monitor screen split button. Split key (full screen <--> split screen): Split mode ON/OFF

♣ Configuration of split screen ratio

Key input	Ratio	Descriptions
A B	50:50	If you press the A/B split button while using the full screen, the screen will be split, and the screen size can be adjusted with the Swap button after splitting. At this time, if you press the split button again, the split will be canceled and the screen will come out to the full screen. If you press the split button again, the split screen will appear in the proportion of the split screen just before.
Swap ↓	60:40	
Swap ↓	70:30	
Swap ↓	50:50	

[How to use Keyboard & Mouse]

♣ How to move the Keyboard & Mouse

When using the full screen, the mouse can be moved according to the output screen and used immediately. In the split screen mode, the DVI-connected computer is recognized as 1 and the HDMI-connected computer is recognized as number 2. Press the Scroll Lock 2 times on the top of the keyboard and then press the numeric keypad "1" to move the mouse and keyboard to the No. 1 computer.

● Additional measures

When you purchase a Divisio monitor and start operating for the first time, the product is manufactured by setting the division and variable division. However, sometimes the screen decreases and the black margins up and down may occur when the screen is divided. This is the case when the first communication is required for the computer and the monitor to communicate at the resolution, especianlly in the early versions of the OS. Change the resolution once in each split screen as described below and click the OK button. After that, the monitor automatically recognizes and changes the resolution.

1. If the screen on the left has a black top and bottom margin on the split screen, right-click on the desktop and click Display Settings.

2. Click the Display Resolution button and click the resolution marked (recommended) at the back of the resolution number. Please refer to the table below for the optimal resolution of the split screen.

3. Recommended resolution for split screen ratio

Screen division ratio		5:5 Split	6:4 Split	7:3 Split
Split screen				
Resolution	Left	960*1080 (recommend)	1280*1080 (recommend)	1440*1080 (recommend)
	Right	960*1080 (recommend)	640*1080 (recommend)	480*1080 (recommend)

[Screen adjustment]

Press the M button to display the OSD menu window and use the ▲,▼ button to go to the desired mode.
Press the S button to select the submenu to adjust using the ▲,▼ buttons.
(Items may be disabled depending on the input signal.)

6-1 Screen Brightness, Contrast

Description

HDMI		Resolution : 1920x100@60Hz
Brightness/Contrast	**Brightness**	**75**
Color Format Settings	**Contrast**	**75**
Color Settings	**Dynamic Contrast**	**Off**
Picture Quality Settings		
Display Settings		
Audio Settings		
Other Settings		

1) Brightness   Adjust the brightness of the screen. **(Default : 75)**

2) Contrast   Adjust the contrast of the screen. **(Default : 75)**

3) Dynamic Contrast   Adjust the Contrast Ratio by adjusting the dimming control. **(Default : Off)**

[Screen adjustment]

6-2 Screen Color Format Settings

Description

HDMI		Resolution : 1920x100@60Hz
Brightness/Contrast	**Input Color Format**	**Auto Select**
Color Format Settings	**Color Domain**	**YUV Domain**
Color Settings		
Picture Quality Settings		
Display Settings		
Audio Settings		
Other Settings		

1)   Input Color Format Select the color format for the screen. **(Default : Auto Select)**

2)   Color Domain   Adjust the color of the screen. **(Default : YUV Domain)**

6-3 Screen Color Settings

Description

HDMI		Resolution : 1920x100@60Hz
Brightness/Contrast	**Gamma**	**2.2**
Color Format Settings	**Color Temperature**	
Color Settings		
Picture Quality Settings		
Display Settings		
Audio Settings		
Other Settings		

1)   Gamma   Select Use Gamma on the screen. **(Default : 2.2)**

2)   Color Temperature   Adjust the Low Blue Light. **(Default : 5700K)**

[Screen adjustment]

6-4 Screen Picture Quality Settings

Description

HDMI		Resolution : 1920x100@60Hz
Brightness/Contrast	Sharpness	40
Color Format Settings		
Color Settings		
Picture Quality Settings		
Display Settings		
Audio Settings		
Other Settings		

1)   Sharpness   Adjust the sharpness of the screen. **(Default : 50)**

6-5 Screen Display Settings

Description

HDMI		Resolution : 1920x100@60Hz
Brightness/Contrast	Aspect Ratio	Full Screen
Color Format Settings		Auto
Color Settings		4 : 3
Picture Quality Settings		5 : 4
Display Settings		16 : 9
Audio Settings		1 : 1
Other Settings		

1)   Aspect Ratio   Adjust the aspect ratio of the screen. **(Default : Full Screen)**

[Screen adjustment]

6-6 Screen Audio Settings(Not for using this product.)

Description

HDMI		Resolution : 1920x100@60Hz
Brightness/Contrast	**Power Save Audio**	**Off**
Color Format Settings	**Volume**	**100**
Color Settings		
Picture Quality Settings		
Display Settings		
Audio Settings		
Other Settings		

1)   Power Save Audio   Audio Sleep Mode **(Default : Off)**

Volume   Adjust the Audio Volume.

6-7 Screen Other Setting

Description

HDMI		Resolution : 1920x100@60Hz
Brightness/Contrast	**Language**	**English**
Color Format Settings	**Menu Transparency**	**0**
Color Settings	**Menu Rotation**	
Picture Quality Settings	**Factory Reset**	
Display Settings		
Audio Settings		
Other Settings	**FW 181121.14**	

1)   Language   Displays the OSD-enabled language. **(Default : English)**

2)   Menu Transparency Adjust the Menu transparency. **(Default: 20)**

3)   Menu Rotation   You can rotate the Menu screen.

4)   Factory Reset   Reset OSD Setup to the factory state.

5)   FW 181121.14   Displays the Version of Firmware for the product.

[Product Specification]

ToV - 270M/271M	
LCD Panel	68.6cm(27type) Wide
Pixel size	0.3111mm x 0.3111mm
Optimal resolution	1920 x 1080 (Full HD)
Viewing angle	Right and left : 178, Upper and Lower : 178
Contrast	1,000 : 1 (infinite : 1 DCR)
brightness	300cd/m2
Response speed	5ms (GTG)
Maximum display color number	16.7M color
power	DC 12V 5A / 50~60Hz
Speaker output	Not for use this product.
Signal input / output	DVI, HDMI
Size (W x H x D)	637mm x 440mm x 190mm
With stand	Vertical 454mm, width 170mm
Weight (Kg)	Unpacked : 4.5kg, Packed : 5kg
Operation temperature	0-40 ℃

- Product specifications are subject to change without prior notice for performance improvement.

- This monitor adjusts the size and position of the screen for commonly used timing modes and stores them in advance to the maker's internal microcomputer.

- The panel may have several pixel spots on the screen due to the characteristics of the product.
  This is not related to monitor performance and is not a malfunction.

[Warranty Guide]

This product has passed thorough quality control and inspection.
If any malfunction occurs during normal use, we will warrant it in accordance with this warranty.

When you want a guarantee

1. Please check the warranty first.

2. Please recheck the fault and contact the service center.
   - Compensation standards for repair, exchange and refund of goods are subject to the Economic Planning Board Notice of Consumer Damage Compensation Regulations.
   - The repair part retention period is the same as the product warranty period.

Warranty contents

For failures occurring under normal operating conditions within the warranty period (one year from date of purchase) We will repair it free of charge according to the contents of the guarantee.
If the repairs are repaired within 3 months after repair by our company and repairer
designated by us, we will process it free of charge from the repair date.
 ** We recommend keeping receipts. **

In the following cases, the parts and service charge will be charged during the warranty period.

1. When a malfunction occurs due to careless handling of the consumer

2. In case of malfunction due to incorrect use of electric capacity, abnormal use of power supply or defective connection device

3. In case of failure or damage due to dropping when moving after installation

4. When a problem occurs due to unexpected use of consumables or options

5. In case of malfunction due to foreign matter (water, beverage, coffee)

6. In case of malfunction due to user's internal modification

7. When a malfunction occurs due to natural disasters (fire, salt, gas, earthquake, wind, etc.)

8. In case of replacement due to wear of consumable parts

9. In case of a malfunction due to repair by a person other than our service center or our service engineer

10. UPC (Bar code) and serial number are lost

In case of any failure after the warranty period, you will be charged a certain parts and service charge.

Product Warranty

Product Name		Model Name		Warranty After purchase 1 year
Product Serial No.				
Date of purchase				
Purchase Agent		Phone No		

1. This product is made by our technicians through strict quality control and process.

2. If any trouble occurs within the warranty period (1 year after purchasing), you can get free repair service from our service center. (Even if it is within warranty period, if it corresponds to the paid service guide in this warranty, we will repair it by receiving the service charge.)

3. If the product malfunctions, please contact the service center.

4. Be sure to present a warranty when repair is required.

5. Please note that the warranty will not be reissued.

Free and paid service

Description of Troubles			Repair	
			Within Warranty Period	After warranty period
In case of performance failure or malfunction in normal use	If you require critical repairs within 10 days of purchase		Product Exchange and Purchase Refund	
	If critical repair is required within one month of purchase		Product exchange and free repair	
	If the replaced product requires major repairs within one month		Product exchange and free repair	
	Repairable	If the same fault occurs up to 3 times	Free repair	Paid repair
		If the same fault occurs up to 4 times	Free exchange of products	Paid repair
	Unrepairable	If you have repair parts but can not repair them	Free exchange of products	
		If it can not be repaired because it does not have parts to repair	Product Exchange	
Performance due to intentional negligence of the consumer, functional malfunction	Repairable		Paid repair	Paid repair
	Unable to repair (except when it is impossible to repair due to poor appearance, not performance or functional failure)		After collecting the amount corresponding to the paid repair, exchange the product	According to our standard that is set separately
If the customer has lost the product requested by the customer (within the period of holding the parts)			Free replacement or purchase refund	20% refund of the amount depreciated
Compensation standards for product repairs, exchanges and refunds are subject to the "Consumer Damage Rewards Regulations" issued by the Ministry of Finance and Economy.				

◆ Even within the warranty period, if the service falls under the following services, the service charge(repair cost + parts cost + travel cost, etc.) will be received and repaired.

● In case of malfunction due to user's intention or carelessness
● In case of malfunction due to incorrect use of the operating voltage (eg when using a 110V power supply)
● If our service center or a person other than our service technician repairs and fails.
● Failure due to natural disasters(fire, salt, flood, etc.)
● Failure or damage due to falling(consumer error) when moving after installation
● In case of malfunction caused by user's internal modification

♣ Customer Support Contact :
export@techonvision.com