

FMD EXTREME 60"

User's Manual **FX601**



Please read all the instructions in this user guide before use.

www.personaldisplay.com

Information

Before getting started | Warnings for Maximum Safety



Check the voltage supply in your country. Operate equipment only from the power sources indicated and unplug the visor when not in use.



To reduce the risk of fire or electric shock, do not expose the plugs or cable connection to moisture.



Use a soft cloth to clean. (Make sure water or chemicals can cause mechanical problems or malfunctioning.)



Do not make an alteration on the unit.

※For higher resolution, remove the protection film on the headset windows.

Before getting started | Safety Instructions

Read instructions carefully.

Follow all safety and operational instructions for maximum performance and safety.

Heed warnings.

Failure to conform to warnings and instructions could result in personal injury.

Power Sources

Operate equipment only from the power sources indicated. If you are not sure of the power supply or appropriate voltage, contact the manufacturer.

Attachments

Do not connect or attach any device that is not recommended by the manufacturer. Personal injury or damage to equipment may result. Plug the visor when not in use. Follow instructions on the care and cleaning of

Care and Cleaning

the product the manufacturer suggests.



Individuals suffering from or exhibiting characteristics of the conditions below should use extreme caution when using this product!

- **years of age** – Prolonged use of this product in young children may interfere with eye and visual system development and small parts may get loose that could cause choking if swallowed. Always be careful!
- **People with convulsive or epileptic disorders** – Due to light flashes or oscillation, this product may cause a reoccurrence of symptoms to people who have experienced a convulsive or epileptic condition.
- **Eye disorders** – People with eye movement or visual field disorders, or anyone who cannot see conventional computer monitor images clearly or wears glasses that make it hard to see the image should consult an ophthalmologist before use of this product.
- **Physical impairments** – Anyone with a heart disorder, high blood pressure, visual field impairment or eye movement disorders or any other serious medical condition should consult a doctor before use of this equipment.

Information

Before getting started | Use Warnings

For proper use of the product, follow every single instruction the optics may cause serious injury.

- Improper setup and adjustment of the eyepiece optics may cause headache, nausea, dizziness, motion sickness, eye fatigue or balancing difficulty. These symptoms may temporarily disturb your vision and balance. Walking or operating vehicle should be avoided if you are experiencing these symptoms.
- Do not use this product where situational awareness is critical, such as operating vehicles, in areas where there are moving vehicles or stairs, or while operating machinery or in potentially dangerous situations. Avoid using this product in any situation where occluded vision would create a risk to you, others, or property. **manufacturer suggests improper adjustment of the eyepiece**
- If you experience any discomfort, stop using the product immediately until the symptoms subside.
- Always protect the unit from liquids. Never immerse the product in water.
- Power off the product when not in use. Do not leave the product powered on for extended periods of time.
- Do not drop the unit. Use the product with caution to avoid damage to the optic lenses and assembly.
- This product is not specified for use in temperatures below 0°C or above 40°C (below 32°F or above 104°F).
- Do not disassemble or try to repair the product. Any alteration to the original product will void your warranty.

Before getting started | Product Features



The world's best OLED microdisplay

The OLED microdisplay consumes lower power and its self-emission capacity allows higher and clearer definition.



The state-of-the-art free curvature prism lens

Daeyang developed free curvature prism lens which delivers the clear image and full color of the OLED as it is with the least distortion. The lens itself, which is not a conventional barrel type, offers high resolution RGB color. It is also light in weight so that it is easy to handle.



Weighing less than 120g (4.23oz)

The unit weighs less than 120g (4.23oz). You can find it comfortable to wear even for extended periods of time.



Extended Field of View (42 degree diagonal)

The diagonal angle between the image displayed and your eye is set at 42 degree so that you can have the magnificent view. The extended field of view also relieves your eye fatigue.



60-inch wide screen viewed at 2 meters.

Now you can have a 60-inch screen whenever and wherever you want. It is just like you have your own personal virtual theater with a 60-inch wide screen. Enjoy your movies or games with a wide big screen.



High resolution & Clear virtual image of SVGA (1,440,000 pixels)

High definition is a critical criterion used to determine the quality of FMDs. The OLED microdisplay, in combination with the state-of-the-art prism lens, delivers high-definition graphics and videos of 1,440,000 pixels.



Immersive & Realistic 3D stereoscopic images

the dynamic and immersive 3D virtual images created by the FMD system.

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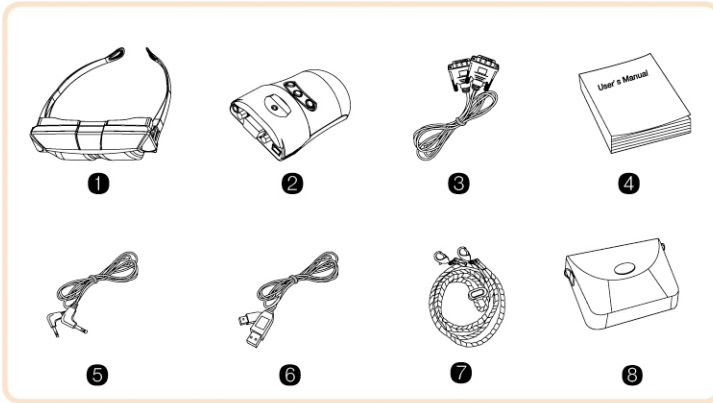
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MEMO |



First

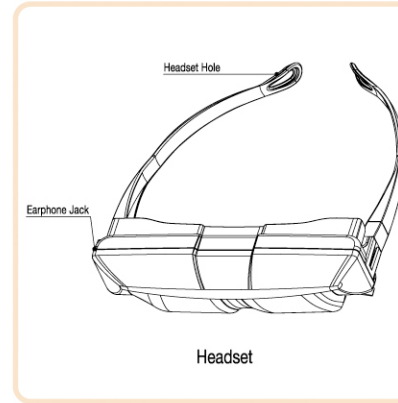
Getting started | 1. What's in the box



- | | | |
|-------------------|-------|------------------------|
| ① Headset | | Display equipment |
| ② Controller | | Function control |
| ③ Monitor cable | | D-sub cable x 1 |
| ④ User's Manual | | User guide |
| ⑤ Stereo cable | | Audio cable x 1 |
| ⑥ USB cable | | 5V DC power supply x 1 |
| ⑦ Safety necklace | | Binding necklace x 1 |
| ⑧ Bag | | Keeping/Traveling bag |

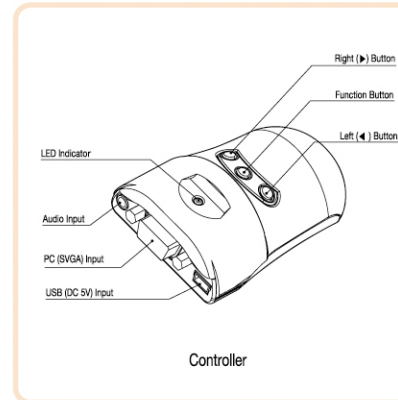
※Make sure you have all of the items listed above.
 ※If you find any item missing, consult the seller or the authorized service center.

Getting started | 2. Components and Features



Headset

Earphone Jack : Connect the audio cable.
 Headset Hole : Hitch the safety necklace.

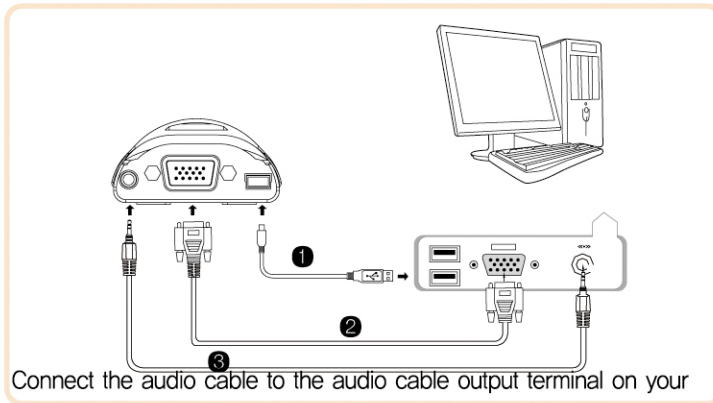


Controller

Right Button(▶) :
to shift the screen right / to adjust brightness
 Function Button :
to switch functions (2D/3D/Swap/Brightness)
 Left Button(◀) :
to shift the screen left / to adjust brightness
 LED Indicator :
to display the status of the equipment
 USB Input : power input
 PC Input : PC signal input
 Audio Input : PC audio input

First

Getting started | 3. Setting up the i-Visor FX601 controller



① Connecting the USB cable

Connect the USB cable to the USB terminal on your PC and the USB input terminal on the controller. (For power supply)

② Connecting the monitor cable

Connect the monitor cable to the graphic output terminal on your PC and the PC input terminal on the controller.

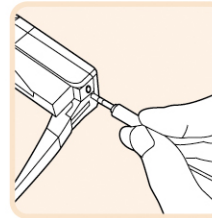
※Adjust the PC resolution to SVGA (800x600) first. Refer to the "PC display setting" section in this user guide.

③ Connecting the audio cable

PC and the audio input terminal on the controller.

※The system works on a plug & play basis, which means the system starts operating as soon as the power is supplied.

Getting started | 4. Adjusting the headset

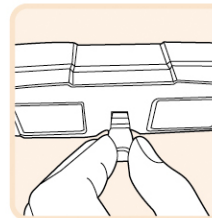


4-1. Use of Earphone / Headphone

Connect an earphone or a headphone to the headphone jack on the headset. See the picture presented.

※If the headphone cable is long enough, you may connect the headphone directly to the audio output terminal on the PC.

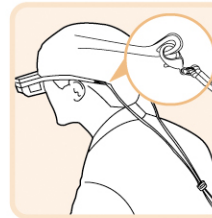
※You can control the volume only on the PC.



4-2. Adjusting nosepiece

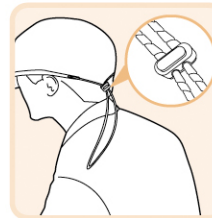
You can adjust the nosepiece back and forth to find the optimum focus for your eyes. See the picture presented.

※Adjust with care to avoid damage to the nosepiece.



4-3. Hitching the safety necklace

Connect the necklace to the links of the arms.



Tighten the necklace to fit your head.

※Use the necklace when you need to see the front view.

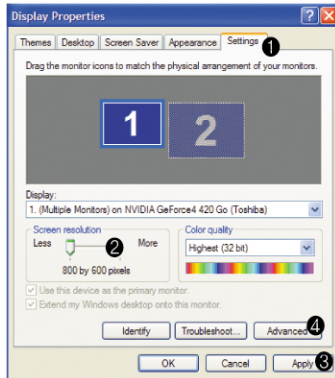
※Use the necklace to prevent the headset from being dropped.

※With the necklace tightened up, the headset will not be affected by the movement of your head.

※Avoid sleeping with the safety necklace on your head. When the necklace gets tangled, detach the necklace from the headset before untangling.

How to Use

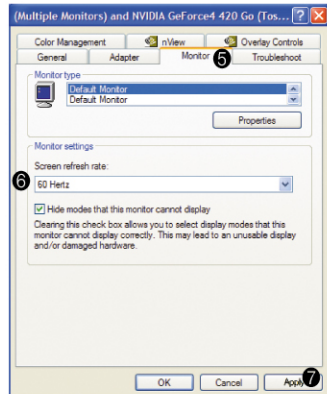
Use | 1. PC Display Setting



1-1. Resolution setting

In windows, go to "Display Properties" your control panel, click on the "Setting Tab".

- 1 When the "Display Properties" window appears, click on the "Setting" tab
- 2 Set your "Screen Resolution" to 800 X 600 pixels.
- 3 When you have selected the desired screen resolution, click on "Apply" to accept change.



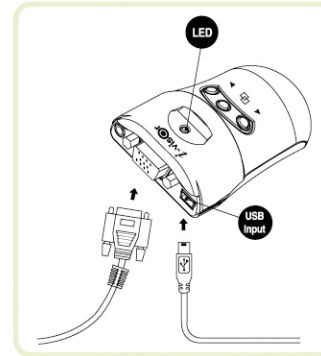
1-2. Screen refresh rate setting

- 4 In the "Display Properties" dialog box, go to the "Setting" tab, click on "Advanced" button
- 5 Click the "Monitor" tab
- 6 Set the screen refresh rate to 60Hz
- 7 Click "Apply" button and save the current refresh rate.

※You can get the optimized quality at SVGA/60Hz refresh rate setting.

※When the power comes on, cancel the Password you created. It is easy to use I-Visor in this way as Bios Password picture is not SVGA.

Use | 2. How to operate

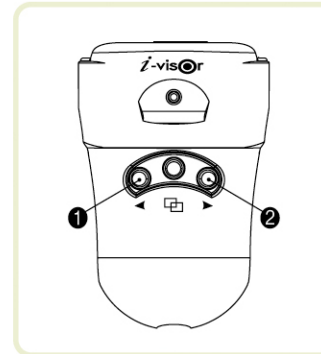


2-1. Power on (Plug & Play)

When the USB cable is connected, the power is on with LED light.

(See the LED color Description in this manual regarding the LED color with the power on. P15)

※Continuous red LED light suggests no signal from PC cable. Check whether cable is connected correctly.



2-2. Shifting the screen horizontally

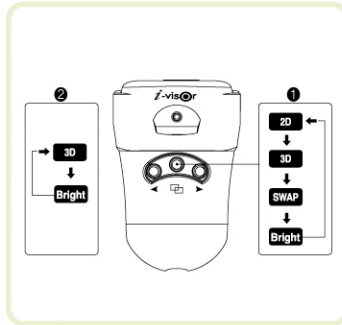
When controlling horizontal position of the screen,

- 1 Press ◀ to shift the screen left
- 2 Press ▶ to shift the screen right.

※If you keep ◀ or ▶ button pressed for a few seconds, the screen will keep moving. And it moves back to opposite position after 30 steps.

How to Use

Use | 2. How to operate



2-3. Function Button ()

① With no 3D signal detected, press “Function” button to switch from 2D to 3D.

2D ▶ 3D ▶ 3D SWAP ▶ Brightness ▶ 2D
Click Click Click Click

② With 3D signal detected, automatic 3D switching will occur

3D ▶ Brightness ▶ 3D
Click Click

※Depending on features of the PC cable, the descriptions listed above may not be working. If so, operate the unit manually.

Controller LED Indicator Lights

Status of the equipment	Green	Red
No signal	No signal	Flickering
2D view mode	On	Off
3D hand-operated switch mode (including SWAP)	Flickering	Off
Brightness adjusting mode	Gradual flickering	
3D automatic switch mode	Simultaneous flickering	

Use | 3. 3D Stereo

3-1. PC setting for 3D stereo

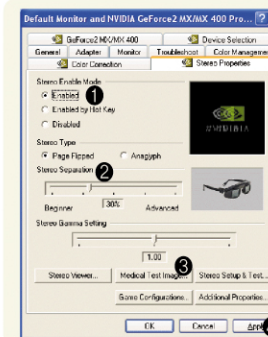
▶ 3D System requirement

- PC compatible computer and lap top with USB port
- Windows XP (Home Edition or Professional Edition)
- Screen resolution setting of 800 X 600
- Refresh rate setting of 60Hz

▶ 3D Stereovision requirement

- NVIDIA 3D Accelerator Card using Force Ware Graphics Drivers
- TNT (Including TNT2 and Vanta products)
 - GeForce (Including GeForce 256, GeForce2, and GeForce3)
 - Quadro (including Quadro2) and select

※NOTE : FX601 works with standard graphic cards from Intel, ATI, etc. in 2D mode, but requires Field Sequential 3D stereovision input for 3D mode.



“Advanced” button in “Display Properties” the Nvidia Driver tab.

- ① Click the “Enabled” button.
- ② Adjust the degrees of stereo separation.
- ③ Press “Medical Test Image” button.
- ④ Press the “Apply” button and save changes.

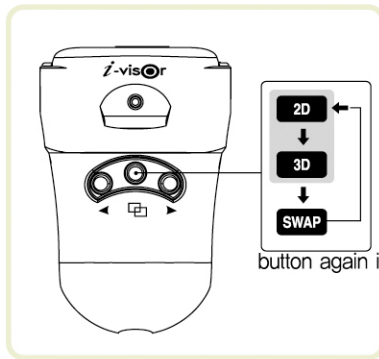
※Refer to “Stereo User Guide” from NVIDIA Website which provides more information in detail.
 ※How to download and install NVIDIA 3D Driver software
 FX601 functions just like other standard monitors even in analog SVGA sources. However, 3D stereovision requires special drivers, which can be free-downloaded from NVIDIA Website. Other graphic cards may offer 3D capabilities in the future.

※NOTE : Follow the instructions to install all of the drivers for 3D features.


How to Use

Use | 3. 3D Stereo

Even though 3D stereo signal is detected, automatic switch may not operate depending on the monitor cable condition. If so, follow the instructions below. (3D Manual switching)



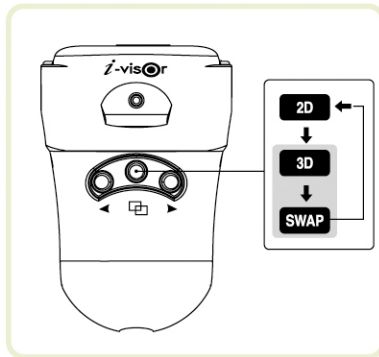
3-2. Controller Checking

Press function () button and check the status of 3D. (With LED light flickering)

Put on the headset and check the 3D mode screen

※Make sure you set up 3D mode correctly if no switching from 2D to 3D happens.(Read 3-1 PC setting for 3D stereo.)

button again if reversed




3-3. SWAP

Use SWAP function when left-right reversion happens in 3D mode.

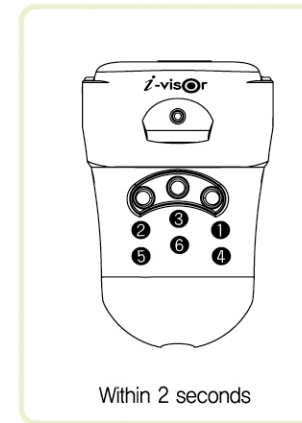
Press "Function"
3D status to restore it to normal.

※Oscillation of image happens during the 2D-to-3D change.

Use | 4. Brightness

- ① Press function () button and adjust the brightness. (LED indicator turns red to green, green to red by turns.)
- ② Adjust brightness levels from 0 to 20 using left and right button.
- ③ You exit the brightness adjusting mode if there is no operation for 10 seconds.

Use | 5. Initialization





Initializing

Used for reset minutes of no operations. It is to protect your eyesight. If you want to keep going,

Reset to the initial values

Reset only with no PC signal
(Detach the PC cable)

Right ▶ Left ▶ Function() ▶ Right ▶ Left ▶
Function() buttons in sequence with no
interval longer than 2 seconds.

※With initialization applied, LED blinks once.

Use | 6. Standby & Power down


The screen will automatically turn off to become standby power status after 150

press any button to restart.

※Keeping the screen on for extended periods of time in the frozen screen status can result in display damages.

Troubleshooting

Diagnosis

Condition	Check lists
No image	<ul style="list-style-type: none"> • Make sure the USB cable correctly connected to your PC and PC power is on. • Check the monitor cable is connected if the LED indicator is red. (800x600 resolution / 60Hz screen output)
Screen leans to the left (or right)	<ul style="list-style-type: none"> • Press left or right button to adjust the screen.
Screen flutters	<ul style="list-style-type: none"> • If you see 2D in 3D setting, flickering happens ※With LED flickering, press function () button to set 2D with green LED indicator signal. ※Depending on the graphic card condition, a little flickering may happen. • If USB 5V power is insufficient, flickering may happen.
The power turns off during operation.	<ul style="list-style-type: none"> • If there was no operation for two and half hours (150 minutes), it happens. ※The screen will automatically turn off to protect eyesight and the unit itself. • If screen saver appears on your PC, the system turns to standby mode.
No sound	<ul style="list-style-type: none"> • Make sure you connect earphone correctly. • Check sound setting on your PC.

Product Specifications

Specifications	
MODEL	FX601
Input	PC (Analog RGB)
3D Method	Field Sequential Stereovision (Can switch automatic or manual method)
Resolution	SVGA 800 x 600 (RGB)
Microdisplay	AM OLED Microdisplay
Viewing Equivalent	60 inch at 2m
Field of View (FOV)	Diagonal: 42 degrees
Aspect Ratio	4 : 3
Optical Lens	Free curvature prism lens
Power Supply	USB Powered / DC5V
Power Consumption	Max 1,2W
Weight	under 120g (except cable) Controller: under 45g Size
Size	Headset (when not folding): 170,0(W) X 200,0(D) X 55,0(H) Controller : 58,0(W) X 80,0(D) X 25,0(H)
Cable Length	1,3m
Operating Environment	Operating temperature : 0°C ~ 40°C Storage temperature : -10°C ~ 50°C
Connecting Input	PC Input : D-sub / Audio Input : Stereo(Amplified)
Audio	Stereo audio

※The unit specifications are subject to change without notice for quality improvement.

Warranty

LIMITED WARRANTY | DAEYANG E&C

In the event that you would like to return your Daeyang E&C system and get a refund (for any reason), and only if the original packaging was not ever opened, cut, or damaged, you may return a Daeyang system within thirty (30) days from your date of delivery, for a full refund minus the cost of shipping and handling and a 15% restocking fee. You are responsible for the costs of shipping the system back to Daeyang fully insured. The processing time of any refund may require up to 6 weeks. If the original packaging was ever opened or cut, you cannot get a refund.

Limited Warranty. This Limited Warranty is provided only to you as the original consumer purchaser of the enclosed product, and to no other person.

Daeyang warrants products against defects in material or workmanship as follows:

damage that is attributable to acts of God, failures which are caused by products not supplied by the manufacturer. **Exclusive Remedy.** Daeyang's entire liability and your exclusive remedy under this limited warranty shall be either repair or replacement of the product. This remedy is available to you only upon return of the product by you to Daeyang and your receipt showing the date of purchase of the product. If a failure to conform to this limited warranty is reported to Daeyang during the first one hundred and eighty (180) days after the date of purchase, then Daeyang will either (a) replace the product or the labor and parts necessary for repair of the product, or (b) refund the purchase price for the product.

Products : Daeyang will, AT DAEYANG'S OPTION, either (a) repair the products with new or refurbished parts, or (b) replace the product, free of charge, for a period of 180 days from the date of sale in the event of a defect in materials or workmanship.

Repairs : Daeyang will repair or replace defective parts used in the repair or replacement of this product with new or refurbished parts, free of charge, for a period equal to the remainder of the original limited warranty period on the original product, or for 30 days after the date of the repair, whichever is longer.

This warranty only covers failures due to defects in materials and workmanship which occur during normal use. The warranty does not cover damages which occurred in shipment, cosmetic damage,

warrantor, or failures which result from accident, misuse, abuse, neglect, mishandling, faulty installation, misapplication, improper installation, operation or maintenance, alteration, modification, introduction of sand, humidity or liquids, line power surge, improper voltage supply, lightning damage, or subjecting the product to operating/environmental conditions in excess of the maximum values or below the minimum values set forth in the applicable specifications, or products serviced by anyone other than Daeyang. The warranty is invalid if the factory-applied serial number has been altered or removed from the product. This warranty does not cover products sold "as is" or "with all faults." This warranty excludes software, non-Daeyang branded products and accessories, or products for which Daeyang has not received payment.

There are no express warranties except as listed above. Repair or replacement as provided under this warranty is the exclusive remedy of the purchaser. Daeyang shall not be liable for lost profits, lost sales, loss of use of the product, or other incidental or consequential damages resulting from the use of this product, or arising out of any breach of this warranty. All express and implied warranties, including warranties of merchantability, fitness for a particular purpose and title, are limited to the applicable warranty period set forth above. Except as specifically provided above, there are no express warranties, claims or representations made by Daeyang regarding the product.

Warranty Service. ALL WARRANTY REPAIR SHALL BE PERFORMED BY DAEYANG'S TECHNICIANS AT A FACILITY OF DAEYANG. YOU ARE RESPONSIBLE TO PAY FOR SHIPMENT OF THE PRODUCT TO DAEYANG'S FACILITY FOR WARRANTY REPAIRS. Daeyang will pay for the shipment of the product to you from Daeyang's facility where repairs are made.