

“Build your own 3D gallery at Home.”  
REAL-TIME 2D-3D CONVERSION SOFTWARE



# 3Dplus Galleria version 1.0

# USER'S MANUAL

**SSC** SEOUL SYSTEMS



## What is 3Dplus™?

### ***Principles of Stereoscopic effect***

Basically, human see slightly different images from left eye and right eye. This binocular disparity is main factor of stereoscopic effect. The brain interprets these images into 3D image unconsciously, by repeated learning processes since the birth.

In case of existing 2D contents, both eyes see the same image. It is not convenient experience since it is unlike reality, but we are already familiarized with 2D images by repeated experiences.

### ***The technology nobody has expected to be realized.***

It is theoretically impossible to extract perfect 3D information from existing 2D contents. However, with diverse theories and patent pending algorithms, Seoul Systems Co., Ltd. and Soft4D Co., Ltd. have succeeded in converting 2D contents into those with pertinent feeling of depth in real time.

This algorithm performs precise analysis on image properties like color, saturation, sharpness, interposition, size, texture gradient, linear perspective, atmospheric perspective, shading, height and etc. We need very complex and professional knowledge and sophisticatedly harmonized computer algorithm when getting depth information from static image without any motion. For simple example, we can decide an object is in front when it's size is bigger, it's interposition line is smooth, it is brighter, it is redder or it is sharper.

### ***Watch whatever images you like in 3D now***

3D stereoscopic image creates dynamite impressions, the kind of real-world pictures and graphics not possible in a flat two-dimensional world. Consequently, stereoscopic images have drawn considerable interest and demand from both businesses and consumers, however the lack of contents was the problem.

3Dplus Galleria version 1.0 enables any images to be transformed to a stereoscopic image automatically. Clicking a couple of menus, 3D effects are quickly delivered to you within two seconds. The surprising technique developed by Soft4D, INC and Seoul System Corp.(SSC) converts any still images onto stereoscopic images.

## WARNING !

In general operation system, LCD shutter glasses are very safe for ordinary people to watch PC monitors on.

But a few people may feel uncomfortable with it due to causes from hardware, software, or physical visual system.

Please stop using 3Dplus™ package if the following symptoms occur.

- Phenomena of Headache, eye injection, dimly images or duplicated images for more than 2~3 seconds.
- Epilepsy: if there's someone who suffers epilepsy in your family, you should consult with a doctor. A few people may have suffered epilepsy at lights and flash from games or videos and someone who has not suffered epilepsy can suffer epilepsy at a certain conditions.
- Phenomena of unconscious physical motions, convulsions of muscle and eyes, imperceptibility of environment, mental confusion, dizziness, losing sense of direction, losing self-consciousness and etc.

It is stressed again that you should stop using 3Dplus™ system when above symptoms occur and meet doctor immediately.

- \* This manual is for 3Dplus™ of Seoul Systems Co., Ltd.
- \* This manual can be modified without notice in advance.
- \* There is no concern of Epilepsy when using anaglyph glasses (red-blue or Yellow-Blue format).

### Information : LCD Shutter glasses

LCD Shutter glasses are a kind of stereoscopic glasses. This glasses alternatively block left and right eye to show right display to right eye and left display to left eye. This process makes stereoscopic effect by showing different scene to each eye. 3Dplus™ is compatible with all LCD shutter glasses which support interlaced or Sync-Doubling.

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## Before Installation

### **3Dplus™ -compatible LCD shutter glasses**

3Dplus™ Galleria version 1.0 currently supports various stereoscopic formats. It supports LCD shutter glasses of Interlaced and Sync-Doubling stereoscopic format. Also it supports anaglyph glasses of Red-blue and Yellow-Blue format.

Generally, stereoscopic quality of LCD shutter glasses is better than that of anaglyph glasses. And Yellow-Blue format is much better than Red-blue format. With 3Dplus galleria version 1.0 Package, users can try every format of stereoscopic images with various types of glasses.

### **3Dplus™ -compatible image file format**

3Dplus™ version 1.0 currently supports normal still image file format of BMP and JPEG. These still images can be taken-pictures by users with digital camera or can be downloaded from almost all internet sites.

### **System Requirement**

- Windows 95, 98, SE, ME, NT, 2000, XP
- Pentium II or higher
- 64 MB Memory
- 2 MB free memory in H/D
- Graphic card
- IBM compatible Multi-scan CRT color monitor when using LCD shutter glasses.  
( All monitors including notebook and LCD monitors are compatible when using anaglyph glasses )

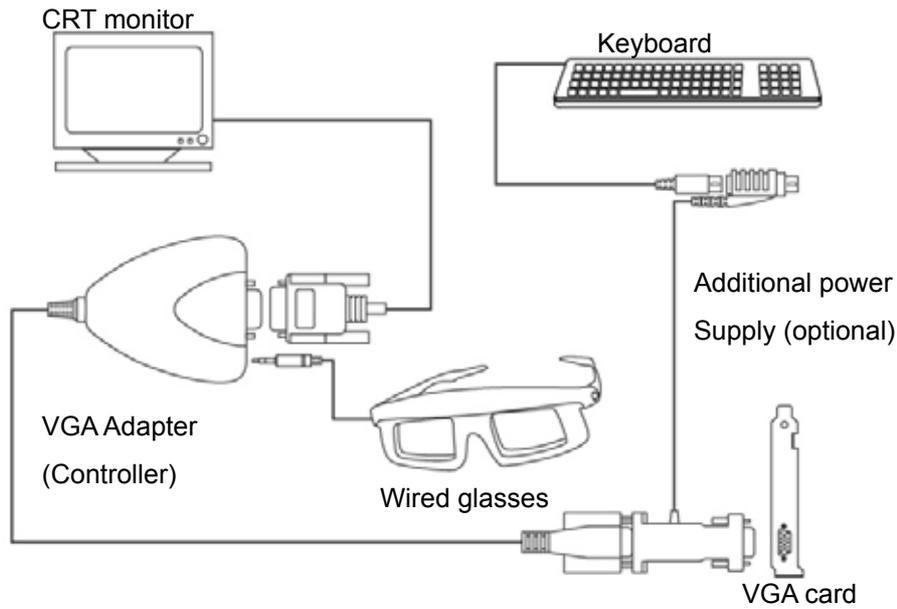
### **Components in 3Dplus Galleria version 1.0 Package**

**Wired package** - Software CD, wired LCD shutter glasses, VGA controller, Cable and additional power port (optional), Red-blue anaglyph glasses, Yellow-Blue anaglyph glasses and manual.

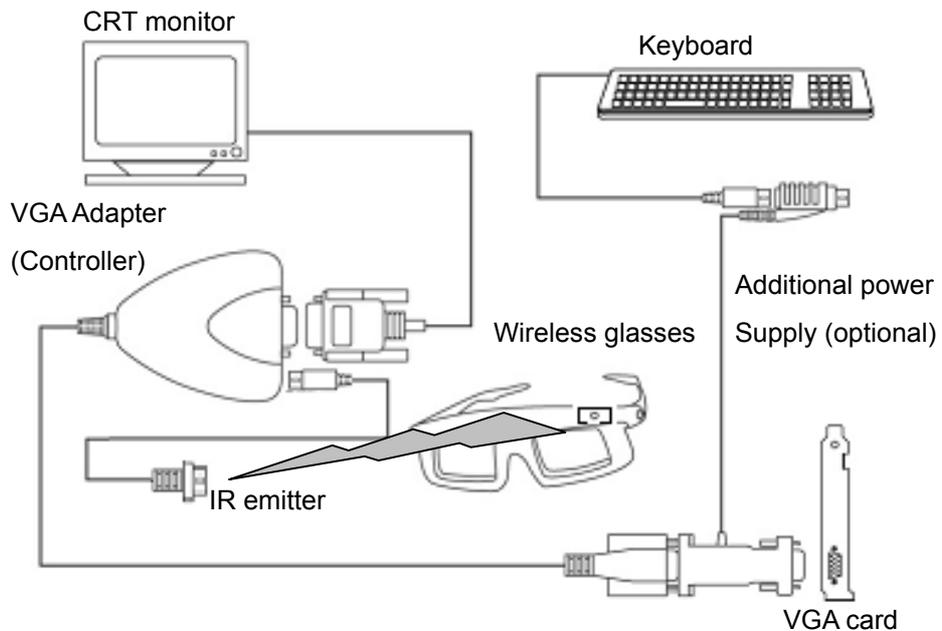
**Wireless package** - Software CD, wireless LCD shutter glasses, wireless emitter cable, VGA controller, Cable and additional power port (optional), Red-blue anaglyph glasses, Yellow-Blue anaglyph glasses and manual.

## Installation of LCD shutter glasses

### A. Wired glasses



### B. Wireless glasses



IR emitter is to be fixed on the desk or monitor.

LCD shutter glasses will get signals from it wirelessly.

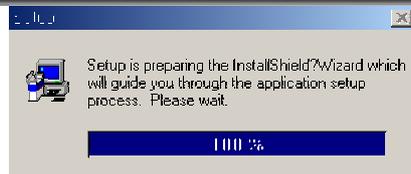
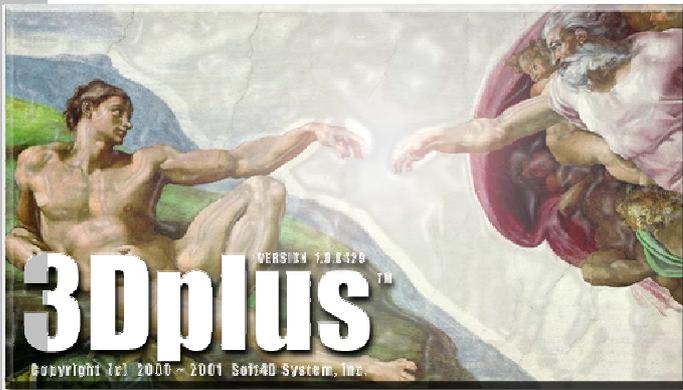
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## Installation of 3Dplus™ software

Please Insert 3Dplus™ software CD” in your CD-ROM.



Please run Setup.exe in the CD and you'll see below display.

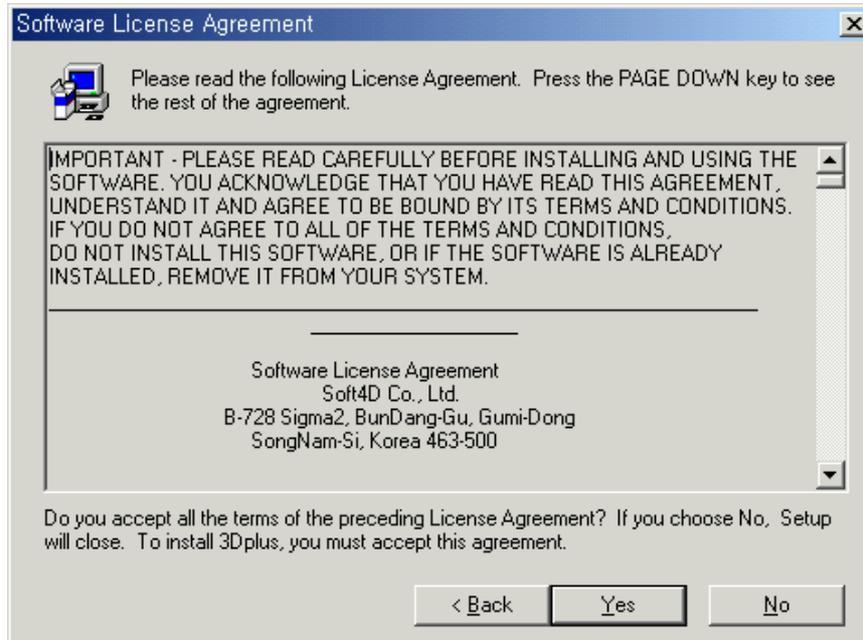


After seconds, below window will appear. Please click “Next” button.



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License Agreement will show. Please read it carefully and click “Yes” button if you agree with it.



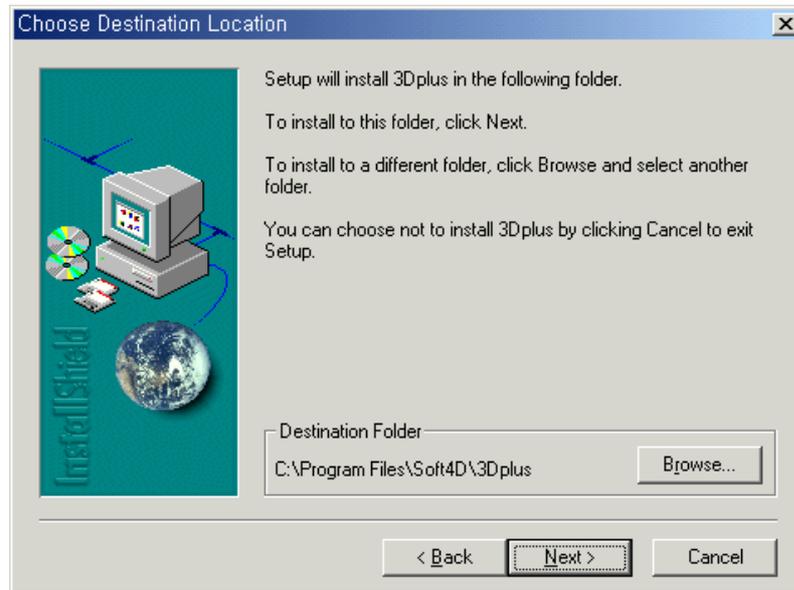
You will be requested to write in serial number of your permitted license. The 16 digit license number can be found on software CD face. You should not skip bar (“-”) character.



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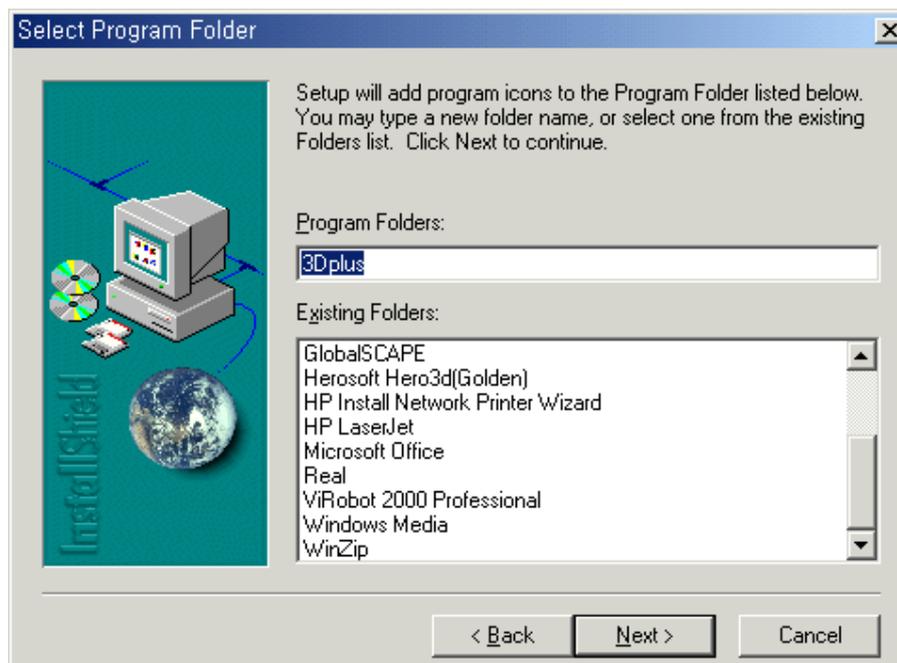
Below window is for selecting file location for installation. Default location is C:/program files/soft4d/3Dgalleria. If you want to change the location, please use “Browse...” button.

Please click “Next” button.



Please select proper windows program folder in which 3Dplus short cut is located. Default name of program folder is “3Dplus”.

Please click “Next” button.



All installation finished. Please complete installation by clicking “Finish” button.

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You can see 3Dplus™ short cut icon in your desktop display.



3DGalleria

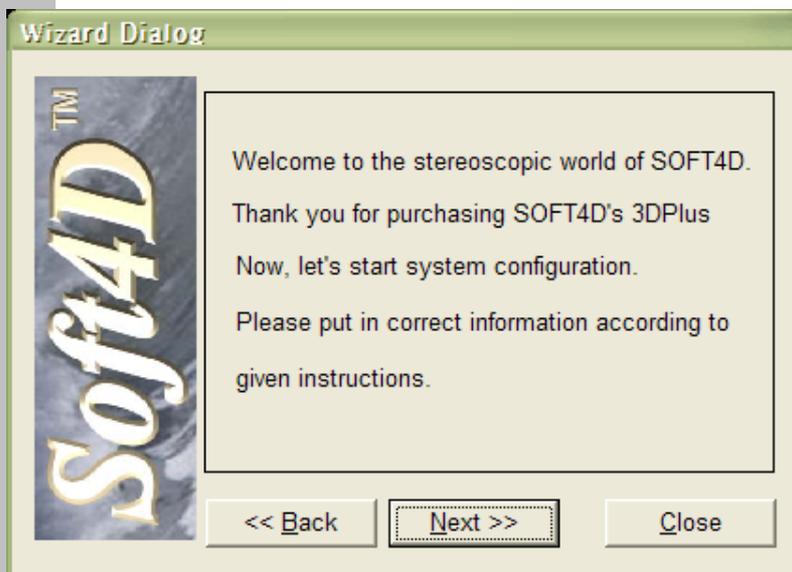
## First Running of 3Dplus™ program

When you execute 3Dplus™ first time, Setting Wizard will appear automatically. This Setting Wizard will help users set optimized configuration with minimal knowledge.

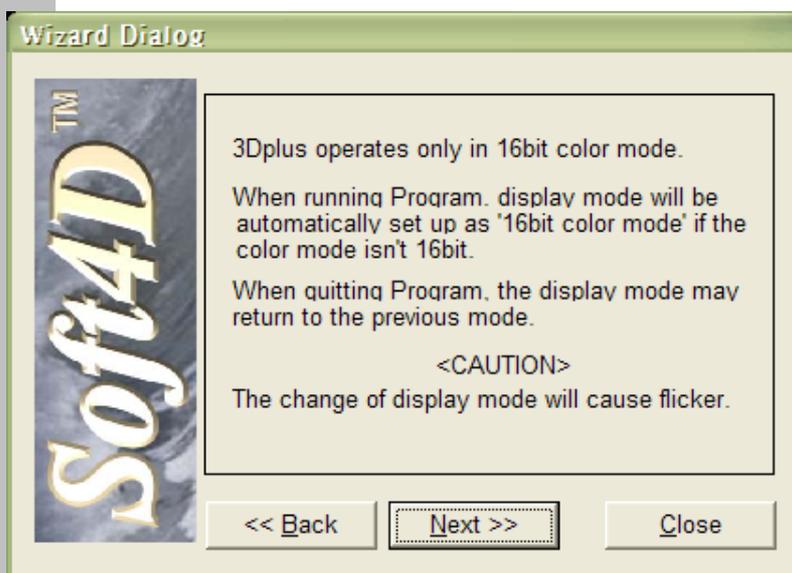
(You can use this Setting Wizard again any time you want with using

Tools>Setting menu or  button in the main display. )

Please click “Next” button.

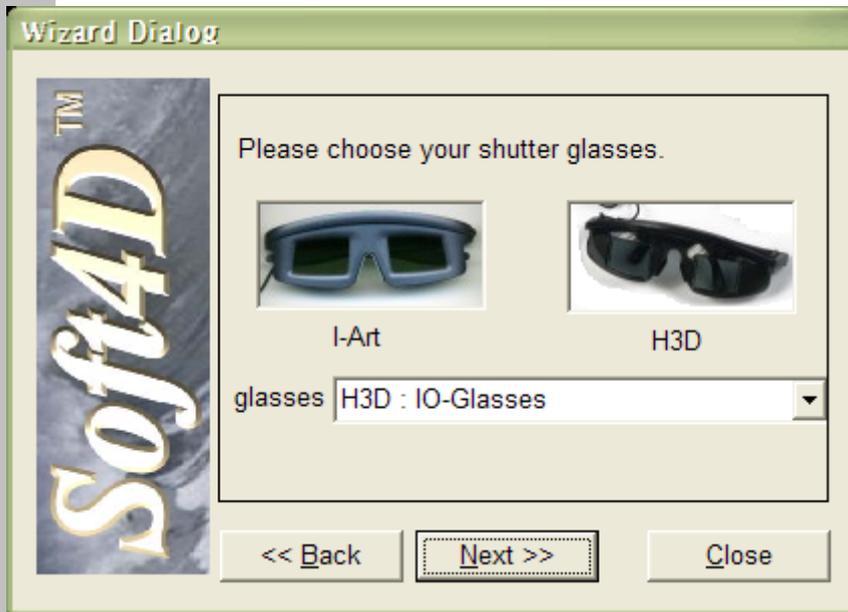


3Dplus™ automatically change display settings of monitor when it is executed Please click “Next” button.



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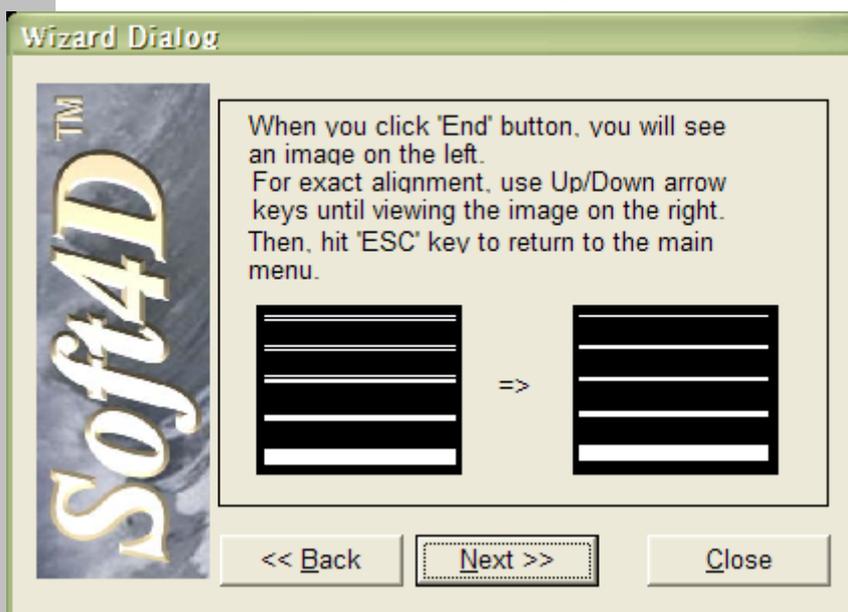
Below step is for selecting glasses. 3Dplus™ is compatible with all kinds of LCD shutter glasses, which support Sync-Doubling stereoscopic format.



If you purchased 3Dplus software as Package, please select **H3D** as your glasses type. (Both for wired and wireless types)

Below step is for setting stereoscopic environment. You can adjust optimized stereoscopic environment for your system. Please click “Next” button and use “upper and lower arrow keys” to adjust stereoscopic bars to be seen clear.

Please push ESC key to complete setting.



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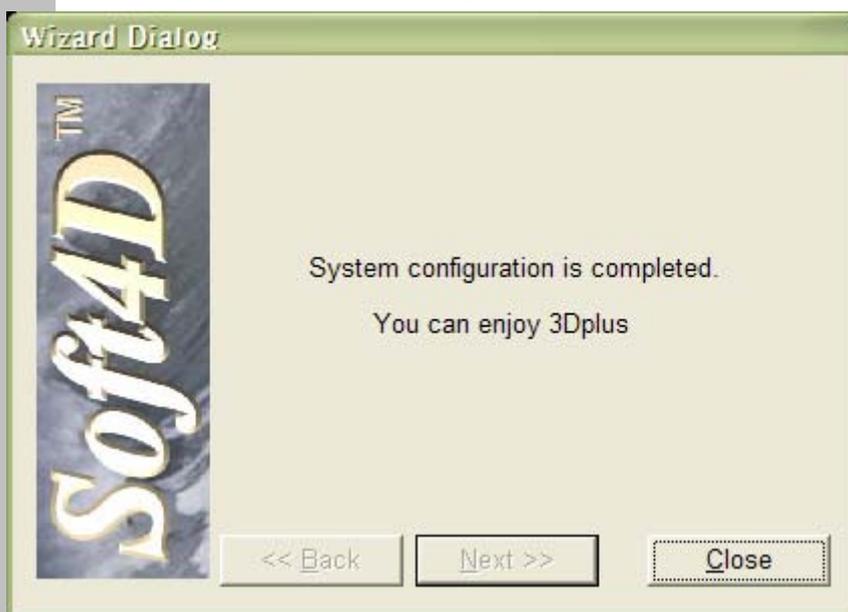
## Warning



If you see separate bars like above picture, please check below conditions.

- Are all hardware components properly installed? Please check if there is loose connection of cables and ports.
- Are you sure that you are using CRT monitor? LCD shutter glasses do not run with LCD monitor. Red-blue and Yellow-Blue anaglyph glasses can be used for LCD monitor and in this case it is no matter if you see separate bars like above picture.
- Have you installed correct version of VGA card driver?
- If you suffer from the same problem after checking all above conditions, please contact 3Dplus customer care center.

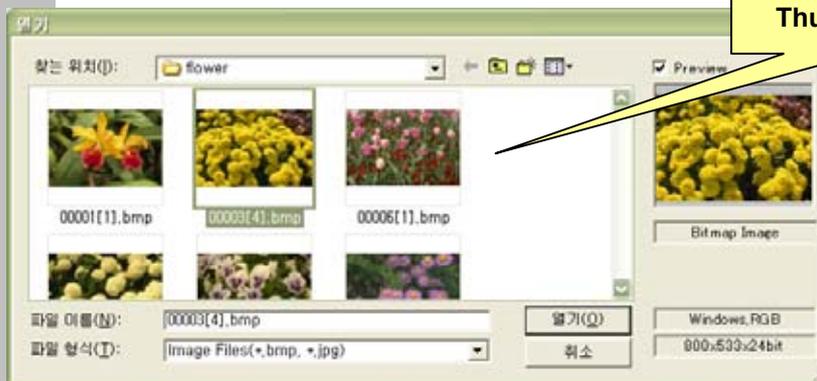
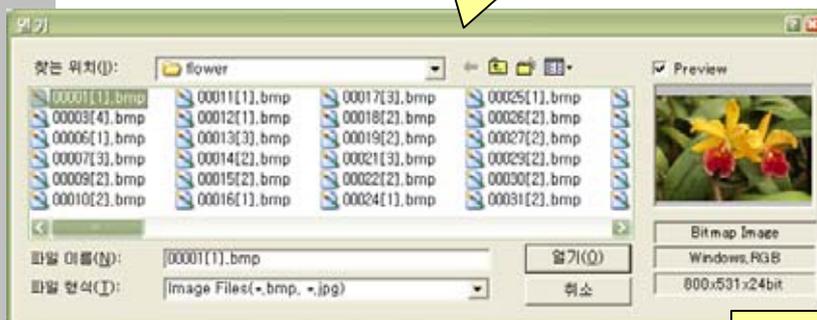
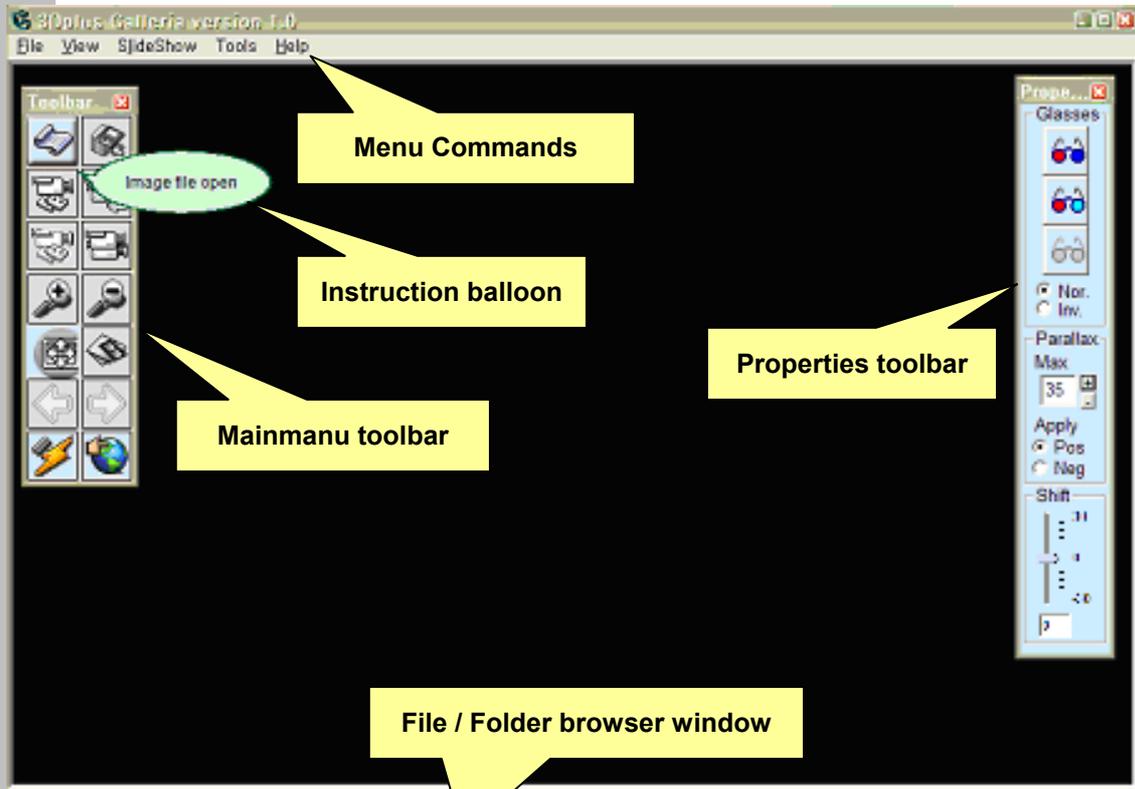
Press Close button to finish setting wizard.



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## Enjoying Stereo Images with 3Dplus™

With double-clicking 3Dplus™ icon, below main program window will appear.



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3Dplus galleria version 1.0 can convert any still images into Stereoscopic 3D Images in real-time simply by single click.



Press “Open button” for loading single image. You can select the image you want to convert to stereoscopic 3D by clicking one of many thumbnail images list. Even if you selected single file, you can move forward/backward to other files in the same folder by using arrow button or key. The software supports BMP format and JPG format.

You can select any stereoscopic formats you prefer by clicking proper buttons. You can use LCD shutter glasses with interlaced or sync-double format and paper glasses with anaglyph format. Please be advised to check current anaglyph format before clicking anaglyph button. You can select your preferred anaglyph mode.

You can adjust stereoscopic effect by increasing or decreasing values of parallax or shift. Also you can use Normal / Inverse or Positive / Negative options for different stereoscopic effect.

Stereoscopic effect is a little different between various stereoscopic formats. Each stereoscopic format has its strength and weakness like below.

- LCD shutter glasses : Much better stereoscopic effect than anaglyph glasses in general. However it cannot run with LCD monitors and notebook.
  - Interlaced format : It can be shown in window. However resizing of image is not flexible (Size is not maximum in full screen mode) and flickering depends on refresh rate of monitor (100~120 Hz of refresh rate -vertical frequency is recommended in this stereoscopic mode).
  - Sync-double format [RECOMMENDED] : It shows much better quality than Interlaced format because there's almost no flickering problem. **However it should be shown in full screen mode, not in window mode.**
- Anaglyph glasses : Relatively weak stereoscopic effect comparing with LCD shutter glasses. However it is cheap, very portable, and less dependent on PC (Anaglyph glasses can be used for color-printed 3D images anywhere.)
  - Red-Blue format : There's no ghost effect but it loses original color of image.
  - Red-Cyan format : It keeps original color but there's ghost effect in blue color.
  - Yellow-Blue format [RECOMMENDED] : Perfect format of anaglyph. It keeps original full color and shows strong stereoscopic effect almost the same as LCD shutter glasses.

## Functions in 3Dplus™ Galleria program



This button is used to load a single JPEG or BMP image. Even if user selects a single file, the program recognize other files in the same folder. So user can move forward/backward to other files in the same folder by using arrow button or key



This button is used to save the currently displayed image, 2D or 3D. Every format of stereoscopic images can be saved as BMP or JPEG file.



This button is used to display the original image



This button is used to display the interlaced stereoscopic image. (Interlaced stereoscopic image should be seen with as high refresh rate of the monitor as possible.)



This button is used to display the anaglyph image. Red-blue, Red-cyan and Yellow-Blue are supported. (Yellow-Blue is default format of Anaglyph) User can select preferred format in Stereoscopic Control Window.



This button is used to display the sync-doubled (SD) stereoscopic image. Sync-Double stereoscopic images should be seen in Full Screen mode or Slide Show.



This button is used to zoom in or zoom out the current image. This option is useful when seeing stereoscopic images in window or saving the converted image in preferred size.



This button is used to viewed full screen mode.



This button is used to show the listed images in 'Slide Show'. The image files listed in 'Navigation Window' are sequentially displayed in full screen mode



This button is used to show the previous image or next image in image list.



This button is used to set the preference data such as glasses type and S/D offset control.

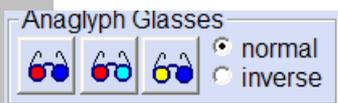


This button is used to get online information from 3Dplus homepage website.

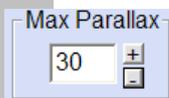
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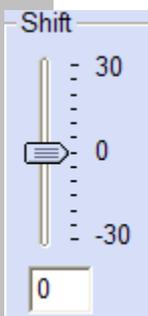
Preference window is loaded when selecting Tools > Setting menu command or pressing button. Users can select their glasses type and offset value. 3Dplus Package is including “H3D:IO-Glasses” in it. Sync-Double Offset value is set as -14 initially. Preference Dialog has the **Wizard button**. If use this, you may set up environments more easily.



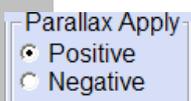
Users can select preferred anaglyph format between Red-Blue, Red-Cyan and Yellow-Blue (in order of Left-Right). If the color position of Right/Left lenses is inverted, select “inverse” option. For example, if you’re using Blue filter for left eye and Red filter for right eye, please select “Red-Blue” and “Inverse” option.



Parallax value can be adjusted from 0 to 40 and default value is 20. Higher value generated stronger stereoscopic effect, however too large value can distort the stereoscopic effect occasionally.



Shift value can be adjusted from -30 to +30 and default value is 0. This option can be used to move the entire image into the monitor or out of the monitor. “+ “ value of shift can move the entire image into the monitor when Positive Parallax mode and move it out of the monitor when Negative Parallax mode



All objects are seen as sinking in the monitor in Positive Parallax mode and all objects are seen as floating out of the monitor in Negative Parallax mode

## Short-cut Keys for 3Dplus™

Short-cut Key	Hot Key Description
Ctrl + O	File Open
Ctrl + S	File Save
Alt + O	Original Image View
Alt + A	Anaglyph Image View
Alt + L	Interace Image
Alt + S	Sync Double
+	Zoom In
-	Zoom Out
Ctrl + T	Start slide show
Left (←)	Go to Previous slide Image
Right (→)	Go to next slide Image



### **3Dplus Customer Care Center**

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