

Ultimate 3D Heaven

3DH - PRO

High Power Stereo Projection Emitter



Users' Guide



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3DH-PRO

High Power Stereo Projection Emitter
Users Guide Rev A - September 2009



CONTENTS

Introduction	page 2
System Requirements	page 3
Theater Layout	page 4
Operation	page 5
Add-on Emitter Arrays	page 6
Using Optional External Power	page 7

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3DH-PRO *High Power Stereo Projection Emitter*

Thank you for your purchase of **Ultimate 3D Heaven's 3DH-PRO** High Power Stereo Projection Emitter. The 3DH-PRO is a professional grade long range infrared controller designed especially for **Ultimate 3D Heaven** by 3D Flight Simulation Company. The 3DH-PRO system is designed for use in commercial 3D theater, university auditorium and convention hall venues. Years of experience has gone into the design of these powerful emitters. Each high performance IR-LED is driven by its own discrete power transistor. 16 LED's – 16 high power TO-92 transistors. No wimpy, mass produced toy electronics in these babies. The 3DH-PRO is also designed for great system flexibility and almost unlimited expansion.

The 3DH-PRO system can be used with or without external power and may be expanded with additional 16 LED Add-On Arrays. The unit's high power Infrared control beam will operate our 3D LCD shutterglasses to a range of at least 65 feet with an 3db beam width of 60 degrees. Techniques are available to insure rock solid IR control for the entire audience.

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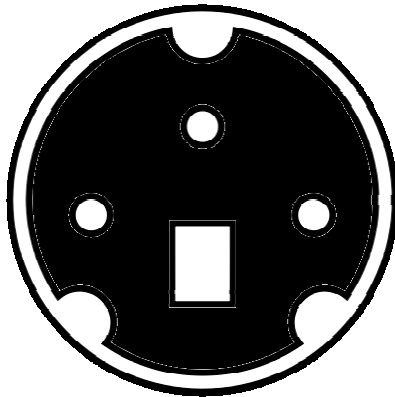
3DH-PRO High Power Stereo Projection Emitter

System Requirements

The 3DH-PRO Emitter requires a VESA standard stereoscopic sync source. Most stereoscopic video systems furnish this signal, including:

- 3D-Ready high definition televisions
- Nvidia based “Quadro” cards, series 3500 and above
- VGA stereoscopic video adapters for PC’s (aka: “PC Dongle”)
- Professional Theater 3D video servers

The VESA source is provided by a 3 pin miniDIN socket as shown here.



3 pin miniDIN
VESA sync source



3 pin VESA socket

PC Dongle with 3-pin miniDIN

Further information about the 3D sync source can be found in the ***Video Electronics Standards Association*** document – “**Connector and Signal Standards for Stereoscopic Display Hardware**”, VESA standard number VESA-1997-11.

Wireless LCD Shutterglasses

The 3DH-PRO Emitter will operate wireless LCD shutterglasses that accept a “terminator” type infrared sync signal. Not all wireless 3D glasses are compatible with the 3DH-PRO signal.

Optional External Power

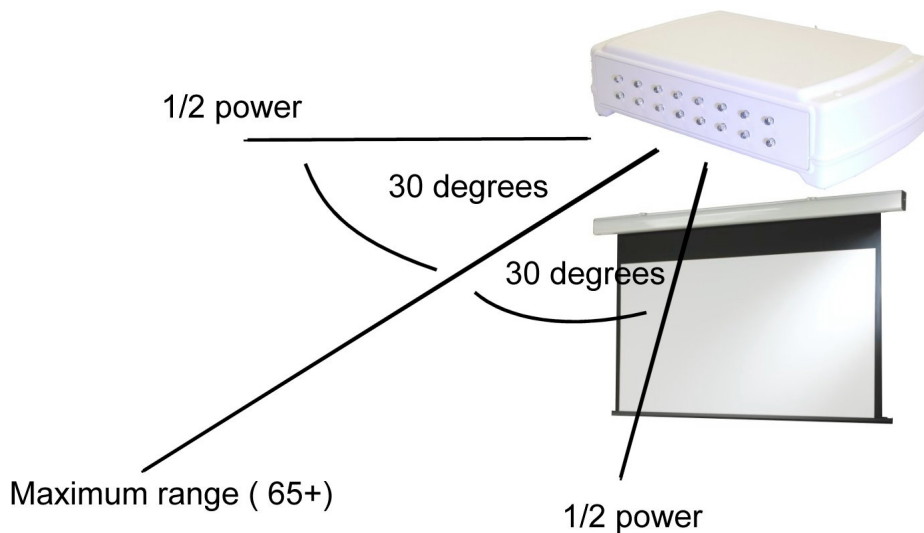
Your system’s VESA miniDIN port should provide enough power for 3DH-PRO Emitter and at least one add-on emitter array. Some 3D miniDIN ports, however, do not provide enough power for optimum 3DH-PRO performance. Please refer to page 5 for use of the optional external power feature.

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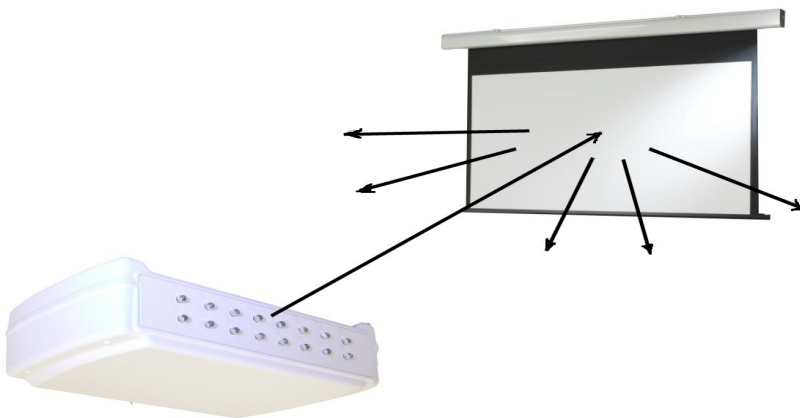
3DH-PRO High Power Stereo Projection Emitter

Theater Layouts

The 3DH-PRO Emitter may be used in two basic configurations: Direct and Reflective modes. For the Direct Mode the emitter should be placed near the top of the theater's projection screen or large screen HDTV monitor. Extension cables may be needed to place the emitter in the optimum position (available at Ultimate 3D Heaven). The infrared (IR) control beam will be strongest for the center seats in the audience area. The IR beam will be weaker for seats located at increasing viewing angles. Additional add-on emitter arrays may be installed to increase coverage as needed.



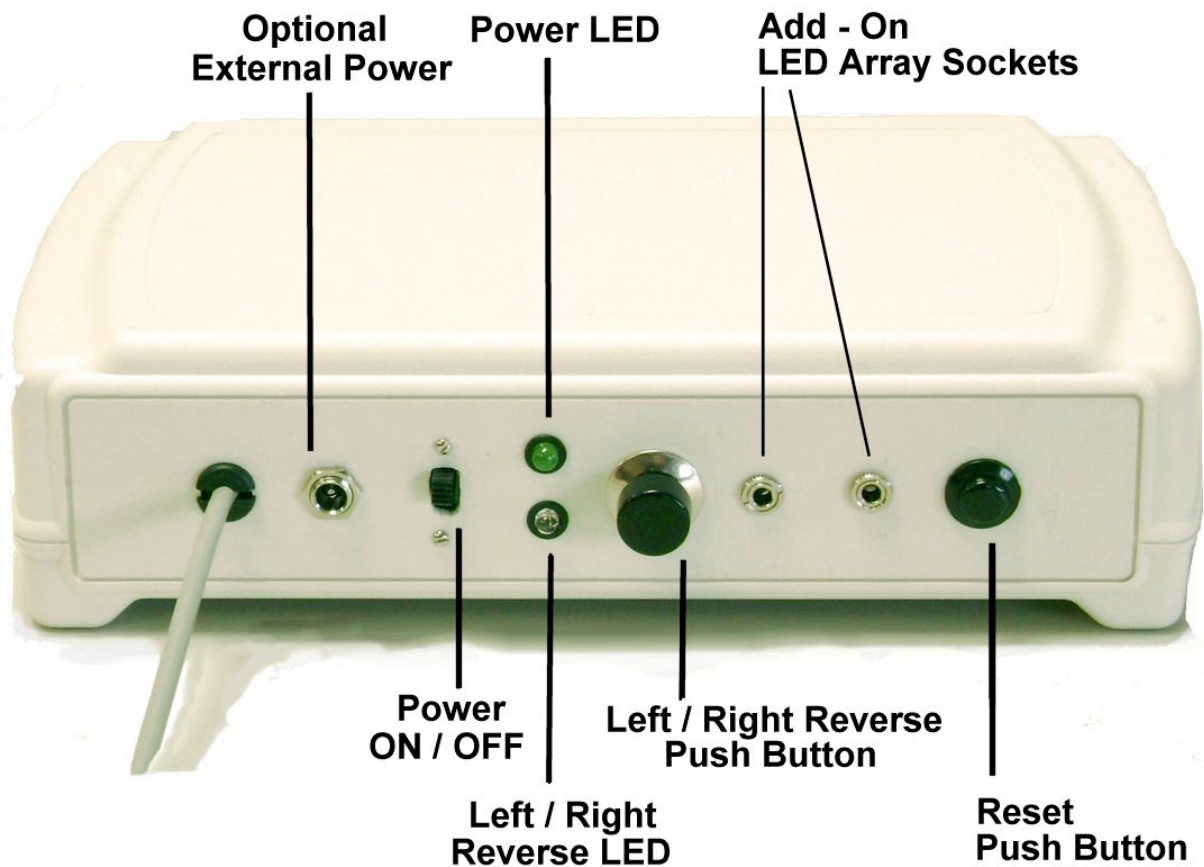
Alternatively the 3DH-PRO Emitter may be placed to bounce the IR beam off the projection screen as illustrated. In this Reflective mode all viewing angles will receive nearly equal IR beam strength but the range is reduced significantly (depending on the screen's reflective properties). Additional add-on emitters may be necessary to provide sufficient range.



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3DH-PRO High Power Stereo Projection Emitter

OPERATION



All controls for the 3DH-PRO Emitter are located at the rear control panel. It is recommended that you turn the Power Switch to the OFF position when making or changing cable connections. When the Power ON / OFF switch is turned to the ON position the green Power LED illuminates. When power is turned on there is a 3 second power on delay before the 3DH-PRO infrared control beam is engaged. The IR beam may lock-up if cable changes are made while the 3DH-PRO is powered up. In event of lock-up press the RESET push-button. A 3 second delay will take place before the beam activates after pressing RESET.

Some projection 3D systems may occasionally produce reversed Left Eye / Right Eye parallax that causes inverted near – far depth perception. If the 3D depth seems “not quite right” press the **LEFT / RIGHT Reverse push-button** to reverse the left/right frame sync. The red **Left/Right Reverse LED** will illuminate when the 3DH-PRO L/R Reverse function is active.

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ADD-ON LED Arrays



Additional Add-On LED Arrays may be installed for increased IR beam coverage for large 3D theaters. The 3DH-PRO system provides for nearly unlimited expandability. Additional LED Arrays may be stacked or they may be placed throughout the theater.

The 3DH-PRO Emitter provided two sockets for add-on LED Arrays. Each add-on LED Array also provides a socket for additional connections. In this manner arrays may be “daisy chained” for widely dispersed theater placement.



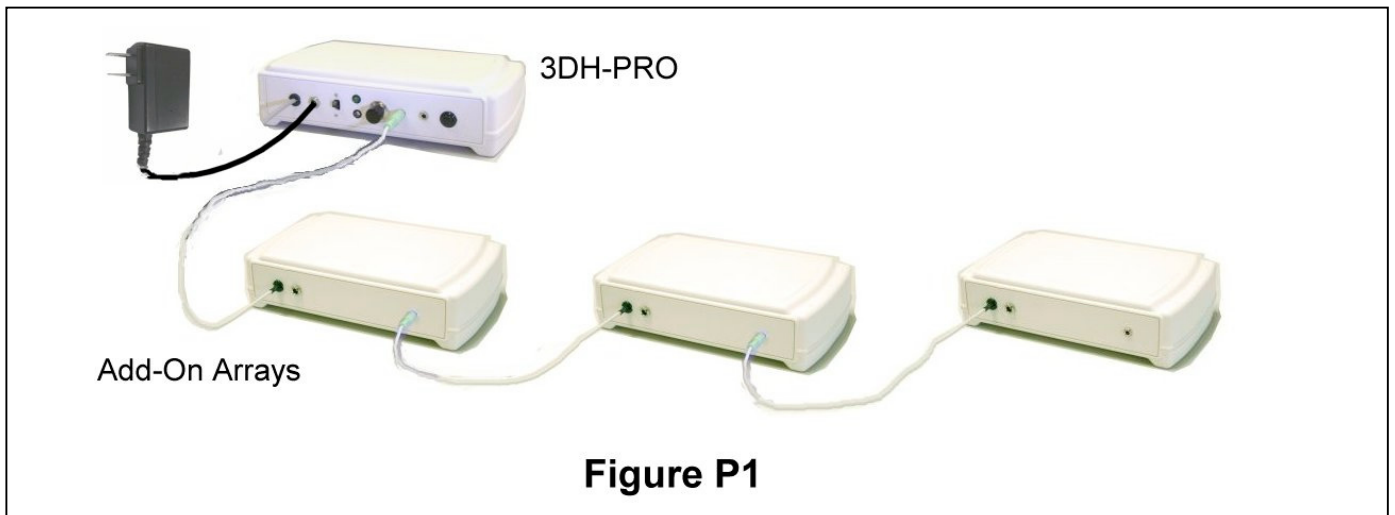
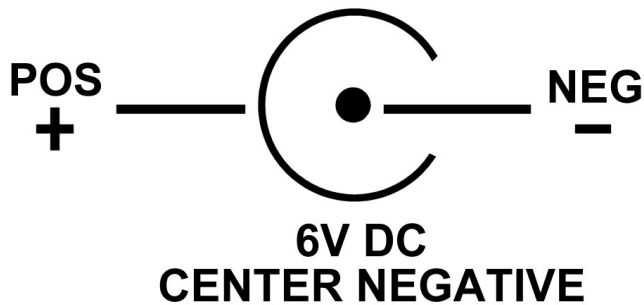
Daisy Chained Add-On LED Arrays

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USING EXTERNAL POWER (OPTIONAL)

External power adapters for the 3DH-PRO system are available at Ultimate 3D Heaven. Power sockets on the 3DH-PRO emitters use 2.1mm power plugs with center negative polarity. The system can use DC sources from 6 VDC to 9 VDC. 6 Volt regulated power adapters are recommended.



Each 3DH-PRO Emitter array provides for an external power source. Several configurations are possible. Figure P1 shows a single external power adapter connected to the 3DH-PRO. In this configuration the 3DH-PRO Emitter and all Add-On LED Arrays are powered from the external power source.

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USING EXTERNAL POWER (CONTINUED)

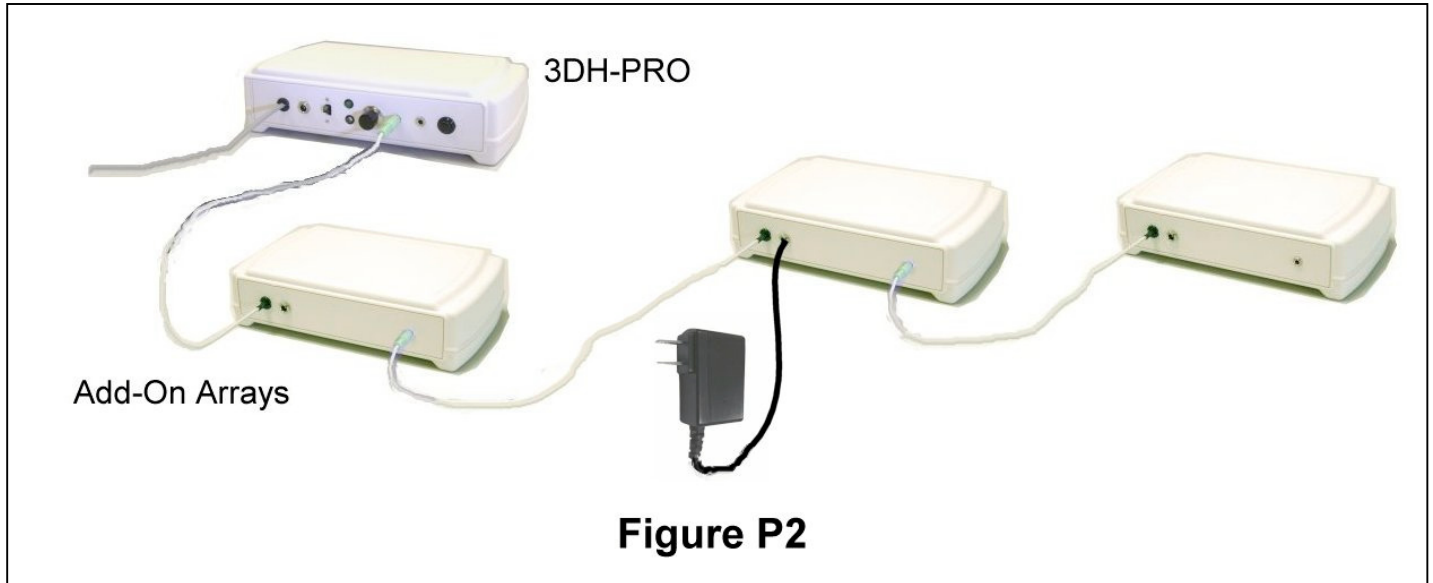


Figure P2 shows a single external power adapter connected to the second Add-On LED Array. In this configuration the 3DH-PRO and the first Add-On LED Array will be powered from the VESA input cable. The second and third Add-On LED Arrays will be powered by the external power adapter.

In Figure P3 two power adapters are shown. In this configuration the 3DH-PRO Emitter and the first LED Add-On Array are powered by the first power adapter. The last two LED Add-On Arrays are powered by the second power adapter.

