HDfury 4 (aka 3Dfury)

User Manual Rev 1.1

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Overview

The HDfury team would like to thank you personally for purchasing the HDfury4!

This unique HDMI converter will allow you to connect 2D/3D HDMI devices to any TV, Monitor and Projector, either through Component, RGBHV, DVI-D or HDMI. It can output both Digital and Analog Video/Audio simultaneously. It can also double or triple frame rate convert 1080p24 material up to 1080p72 giving a film-like picture with no flicker.

The HDfury4 is the world's most powerful and advanced 2D and 3D converter ever built. It includes advanced features such as:

- HDMI 1.4 input with Deep Color^{TM} support
- Supports and passes though RGB,4:2:2, and 4:4:4 Colourspaces
- Supports and passes though all lossy and lossless hdmi audio types
- Perfect image centering in both Component and RGB modes
- 3D mode output up to 720p144, Gamer mode: 720p60 double frame into 720p120
- User Upgradeable USB firmware and custom options via DIP switches
- Dual projectors setup using two HDfury4 modules and passive glasses.
- Up to 720p240 in dual projectors setup.
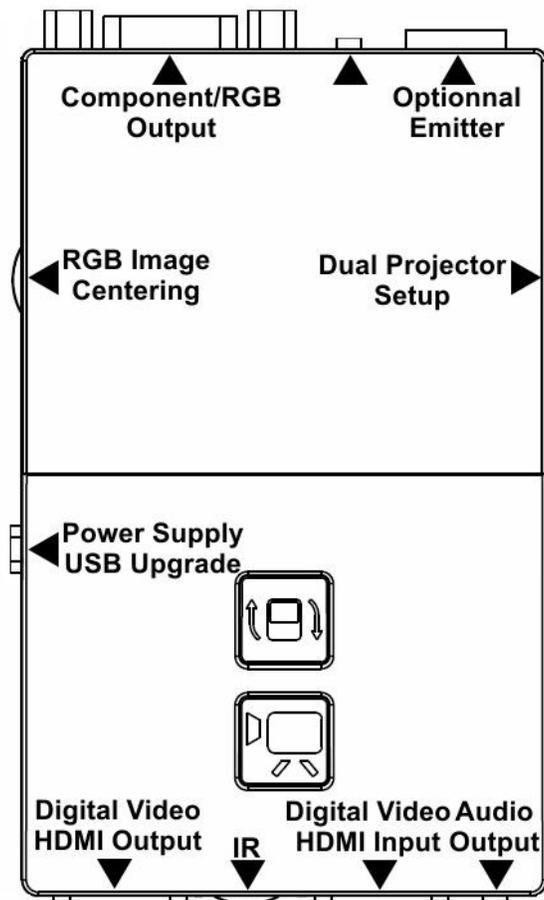
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Connecting Cables
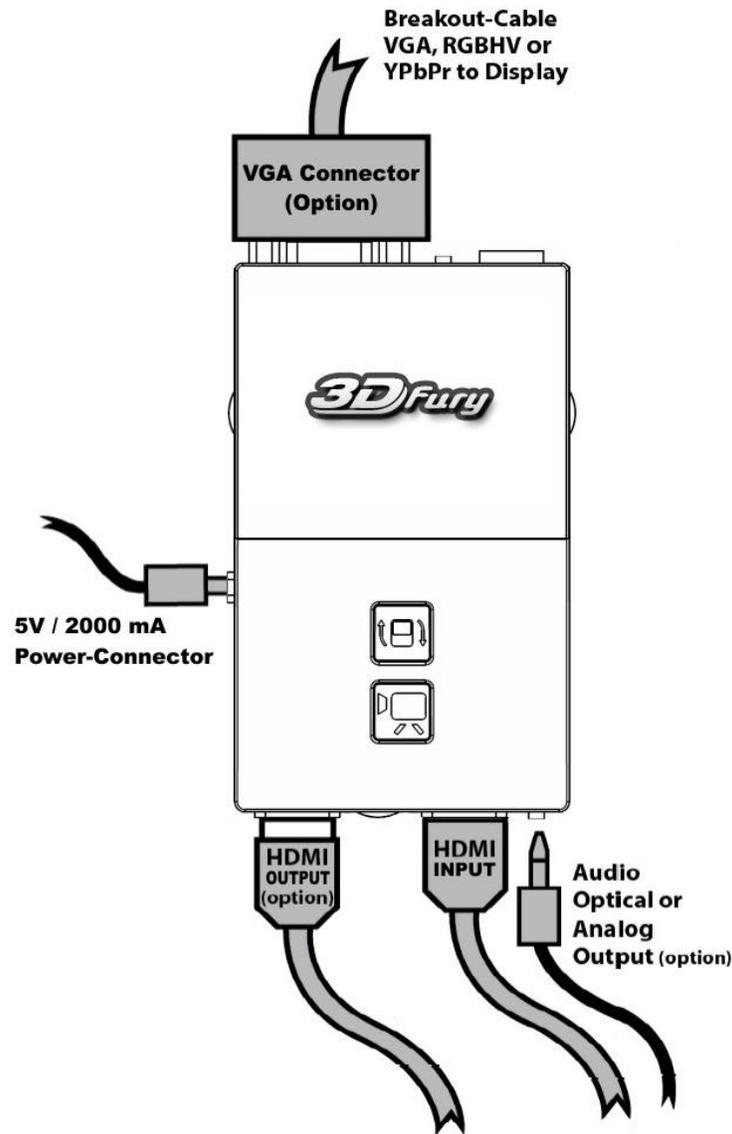
To use your HDfury4:

• Connect a HDMI input cable to the HDMI input.
• Connect a video output cable to the analog video output or HDMI output.
• Connect the HDfury4 power supply.
• Connect an audio output cable (optional).

As shipped, the HDfury4 defaults to Component (Y/Pb/Pr) video output and will convert all resolutions up to and including FULL HD 1080p. For 3d it is shipped to output 720@60hz. In most cases no further adjustments are required. For displays with RGB (VGA) inputs or special requirements, please see the **DIP Switch Settings** section further below to customize your HDfury4.

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Power/Status LED

The HDfury4 logo will glow blue when in use. When the HDfury4 first receives an HDMI signal the logo will quickly turn on, then off, and then on permanently to indicate that the 4-letters handshake has been completed.

The status of the blue logo may be used for troubleshooting:

Logo OFF: Insufficient power. Use the HDfury4 power supply.

Logo BLINKING (on for split second, off for 5 seconds): The HDfury4 is receiving power and is ready to accept an HDMI signal.

Logo ON: The HDfury4 is powered and receiving and decoding the HDMI signal.

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RGB Shift (Image Centering in RGB mode)
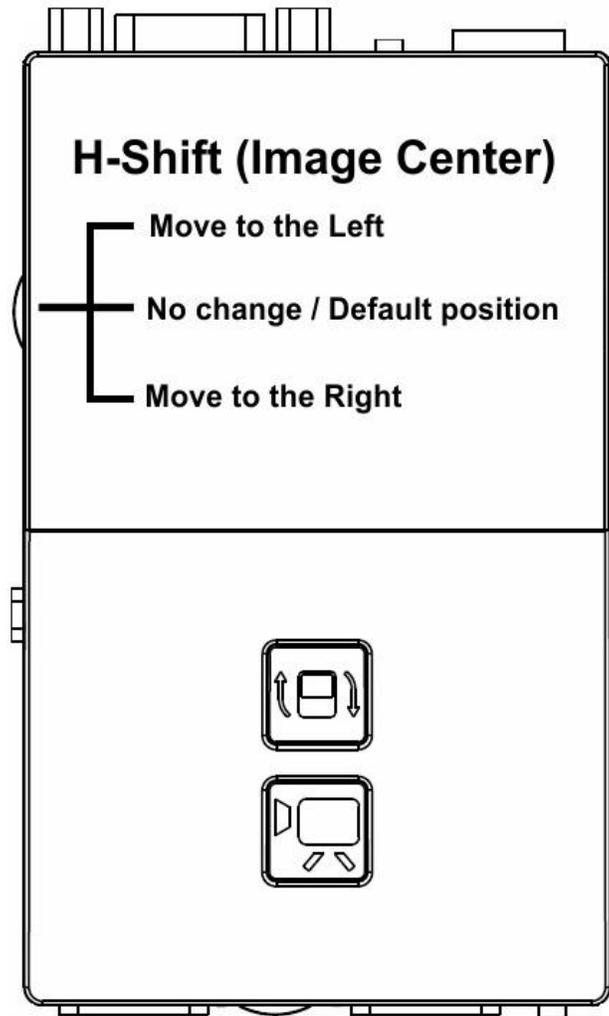
The HDfury4 perfectly centers the image automatically when Component (and/or Digital) video output is used.

If RGB video output is needed, some fine tuning of the image centering may be required. The "L/R" switch may be pushed up or down to shift the image until it is perfectly centered.

Hold the switch in either direction to shift the image faster. To reset back to the default settings, hold the switch in either direction for 15-20 seconds. (*Note: reset will revert all settings back to factory default*)

The HDfury4 automatically saves the setting and will remember it the next time the resolution is used.
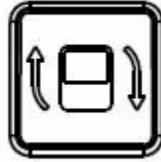
3D Mode Button

The HDfury 4 automatically switches to 3D mode if the correct information is sent from the source. If for some reason the HDfury4 does not correctly switch to the correct mode the user can cycle though 3 modes via a push button that switches between "3D Side-by-side -> 3D Over-Under -> 2D -> 3D Side-by-side ....".

- force 3D Side-by-side mode
- force 3D Over-Under mode
- back to 2D/Automatic

Please note that Output frame rate and scaling are based on DIPs 7 and 8 in the following way:

If DIP7 is ON then the output will be 720p120. 720p is implied because 1080p120 does not exist.
If DIP7 is OFF, then the output is 60Hz and either 1080p (DIP8 = OFF) or 720p (DIP8 = ON)
If LEFT/RIGHT (Dual Projector) is selected then resolution and frame rate follows the same logic.
(so you can have dual projectors beaming 720p120 each for 720p240)

Stream Select Button
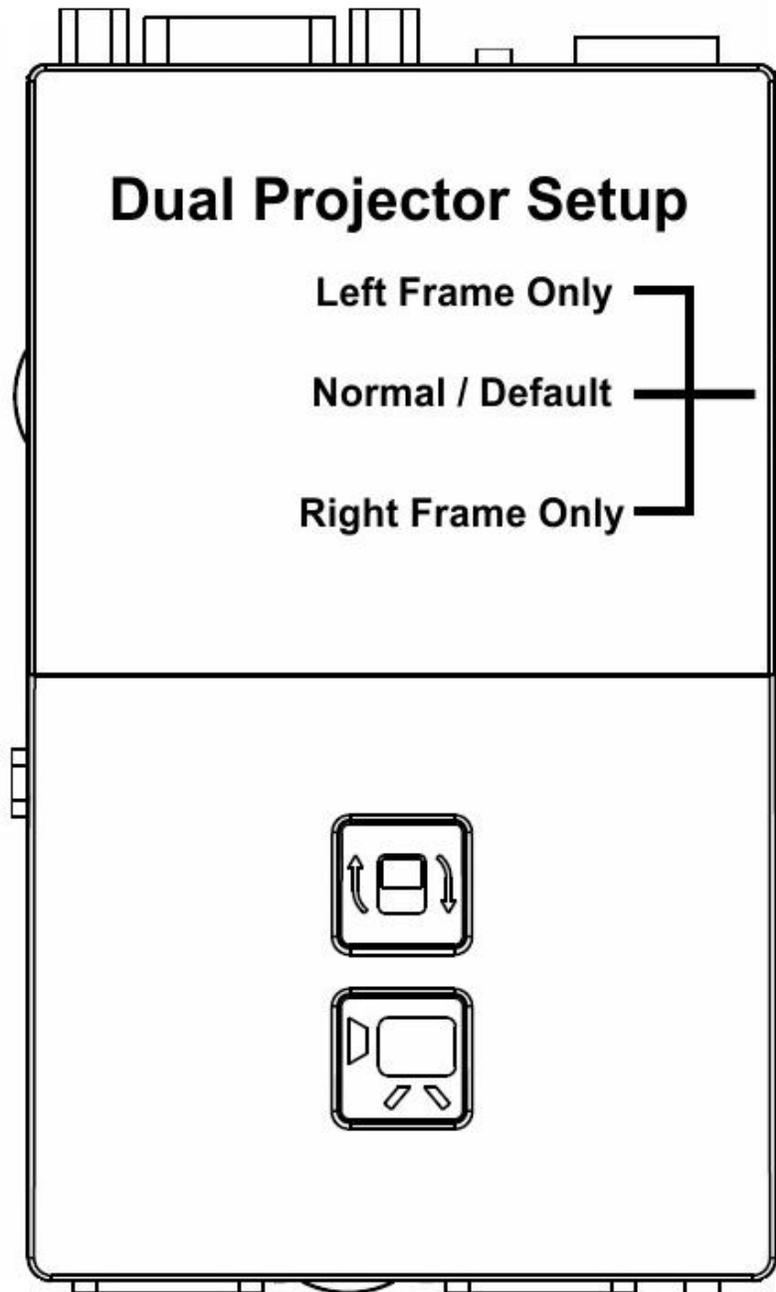
A single HDfury4 set to left or right frame is able to convert 3D content into 2D in case you would like to watch 3D only content in 2D.

If you wish to use the HDfury4 in a dual 2D/3D projector setup (or wish to convert 3D or PS3 SimulView^{TM} into just the left or right stream) you will need two HDfury4's. One set for Left stream and one set for Right stream.

By default they come shipped with the button in the center position for single projector use.

Please see above picture to aid in setting the HDfury 4 correctly for dual projector setup.

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Frame Rate Button

The HDfury4 comes with a unique feature that will convert film based 24hz content into 1080p 48hz and 72hz. It also allows 3D to be output at 720p 60hz, 72hz, 96hz,120hz, and 144hz.
If used in a dual projector setup it allows both the left and right streams to be output at 1080p 24hz, 48hz, 60hz and 72hz

Please note that this is a multipurpose button.
Operation depends on the current mode AND DIP7.

If DIP7 is ON(high frame rates are enabled) :
For 3D movies (framepack 1080p24): pressing down switches between 720p60,72,96,120,144,1080p72,720p60.....
For 3D movies (framepack 1080p24) output as LEFT/RIGHT for dual projectors: 1080p24->48->72->24..
For 2D movies (1080p24): 1080p24->48->72->24...

If DIP7 is OFF(high frame rates are disabled):
All movie outputs at 60Hz either 1080p (DIP8 OFF) or 720p (DIP8 ON)
Other modes: no effect

All modes stored and read back upon power-up. Also all RGB shift values are stored individually for every resolution mode separately.

DIP Switch Settings

To customize your HDfury4, a bank of ten (10) DIP switches are provided. Remove the small cover on the back of the HDfury4 to access the DIP switches:
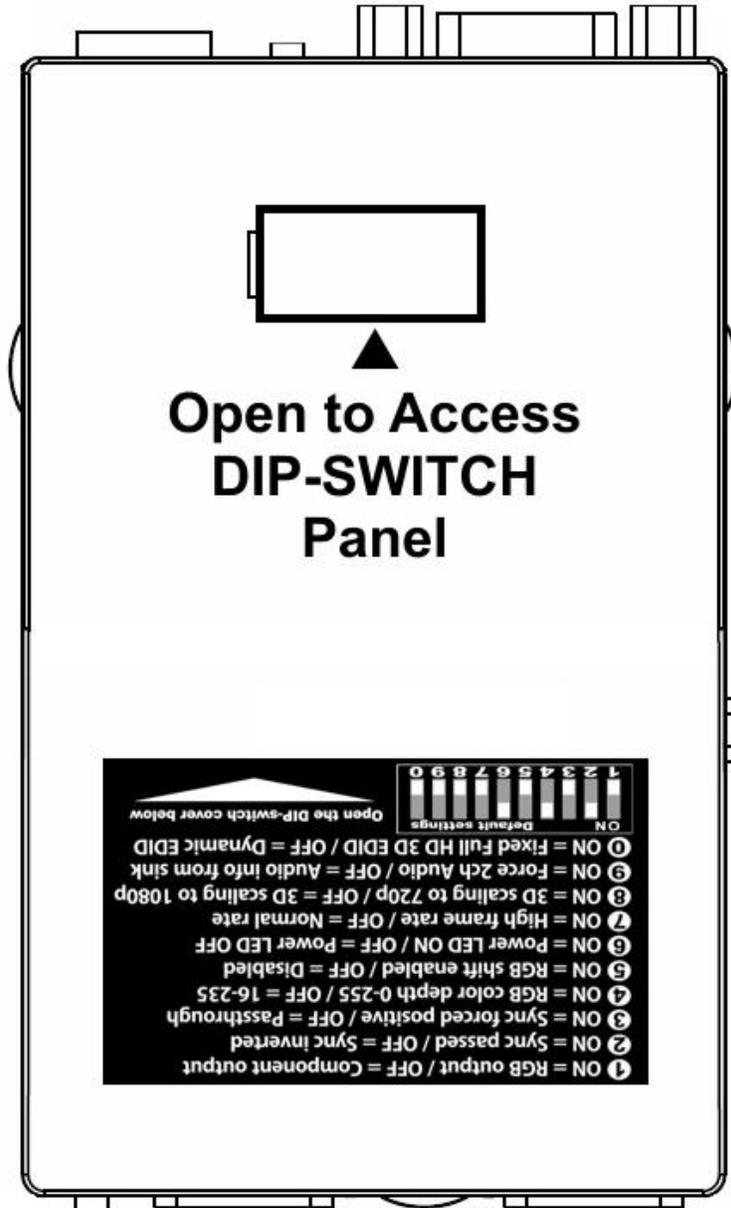
The HDfury4 ships with the following factory default DIP switch settings:
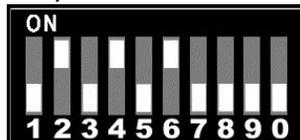
For your convenience, the default factory settings and DIP switch features are printed on the back of the HDfury4.
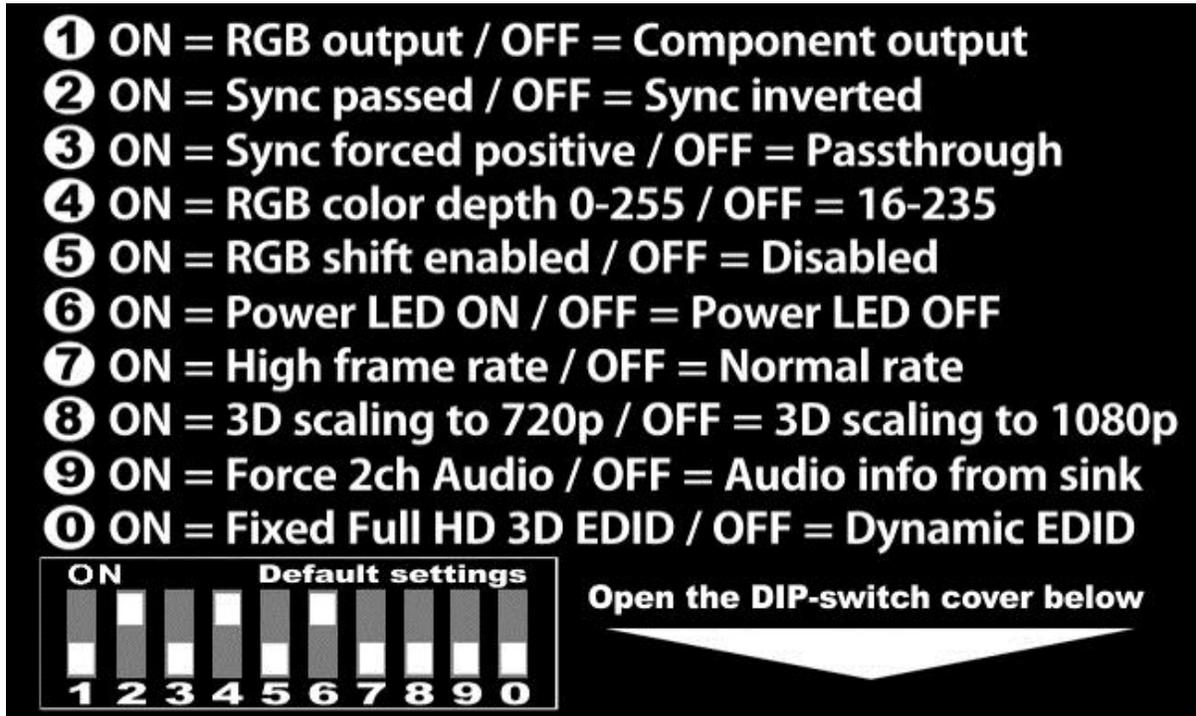

The factory defaults result in the following setup:

DIP 1: OFF = Component output
DIP 2: ON = Sync passed
DIP 3: OFF = Sync not forced positive (passthrough)
DIP 4: ON = RGB color depth 0-255
DIP 5: OFF = RGB shift disabled
DIP 6: ON = Power LED ON
DIP 7: OFF = High Framerate off
DIP 8: OFF = 3d scaling 1080p
DIP 9: OFF = Read audio info from sink device
DIP 0: OFF = Read video info from sink device

These settings are explained in the sections that follow.

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RGB, VGA, RGBHV-Output or YUV, COMPONENT, YPbPr-Output

RGB-, VGA-, RGBHV-Output

If your Display accepts only RGB, VGA or RGBHV set the Dip-Switch #1 to ON.
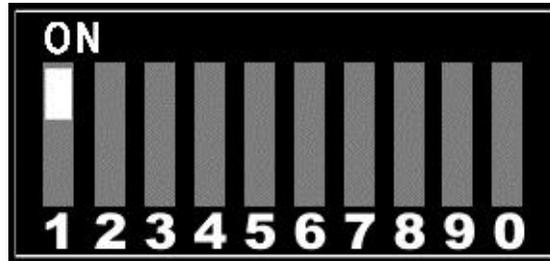
YUV-, COMPONENT, YPbPr-Output

If your Display accepts only YUV, COMPONENT or YPbPr set the Dip-Switch #1 to OFF.
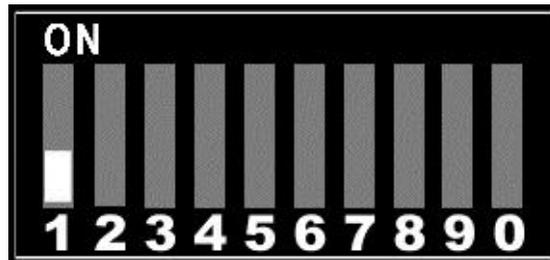
RGB Sync

When the HDfury4 is set to RGB output mode the sync signals may be passed through as is, forced positive, forced negative, or inverted. Check your owner's manual to see if your RGB display has any special sync requirements. RGB sync is not used when the HDfury4 is set to Component output mode.

To pass the RGB sync signals through as is, set DIP switch #2 to ON and DIP switch #3 to OFF:
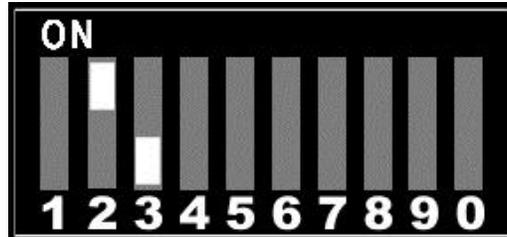
To force the RGB sync signals positive, set DIP switch #2 to ON and DIP switch #3 to ON:
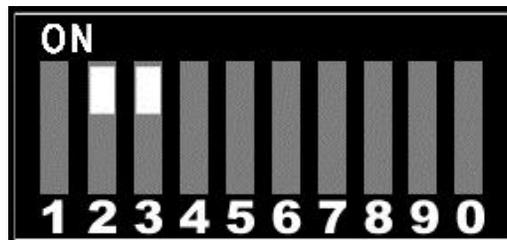
To force the RGB sync signals negative, set DIP switch #2 to OFF and DIP switch #3 to ON:
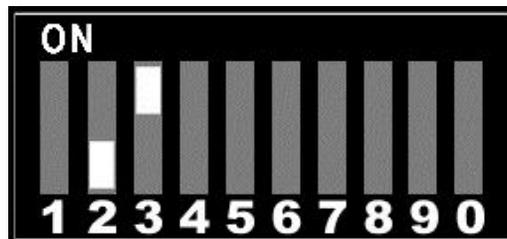
To invert the RGB sync signals, set DIP switch #2 to OFF and DIP switch #3 to OFF:
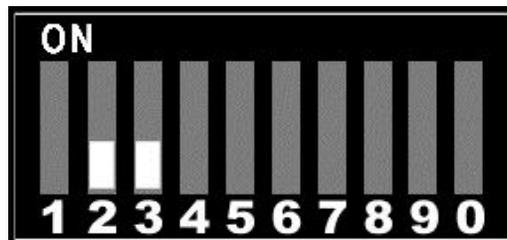
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Enhanced Colour Depth

The HDfury4 expands colour depth from the standard 16-235 range to 0-255 in order to provide a more dynamic picture. Some users may choose to disable this feature.

To use enhanced colour depth (0-255), set DIP switch #4 to ON:
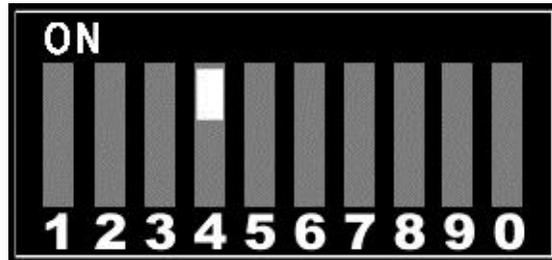
To disable this feature and use normal colour depth (16-235), set DIP switch #4 to OFF:
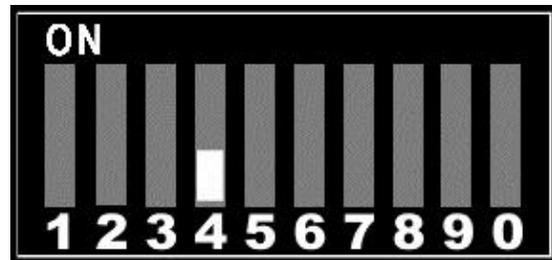
RGB Shift (RGB center adjustment)

Some users may choose to disable the RGB Shift button if they choose to shift the image in a video processor or in the display.

To disable the RGB Shift button, set DIP switch #5 to OFF:
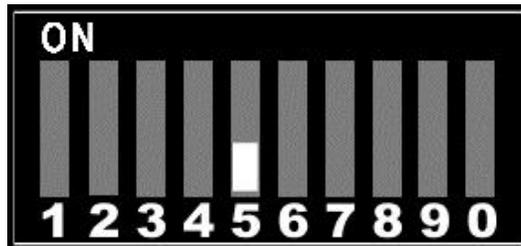
To enable the RGB Shift button, set DIP switch #5 to ON:
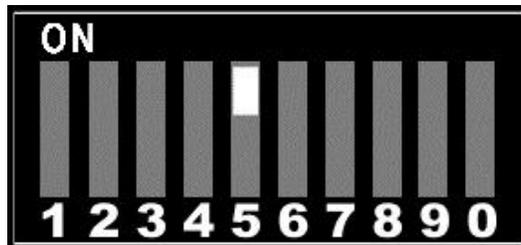
Power/Status LED

Some users may choose to disable the blue power/status LED on the front of the HDfury4. When powered, the HDfury4 logo will glow blue. For troubleshooting purposes we recommend that you leave the power/status LED enabled.

To disable the Power/Status LED, set DIP switch #6 to OFF:
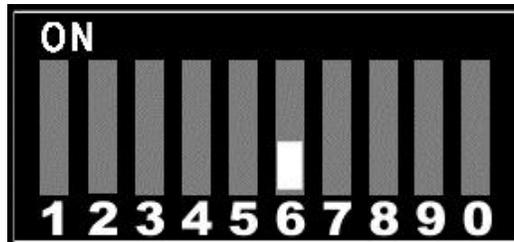
To enable the Power/Status LED, set DIP switch #6 to ON:
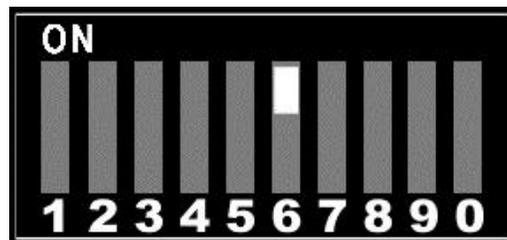
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High Frame Rate

When the switch is in the off position the framerate is limited to a maximum of 60Hz. When the switch is in the on position then higher than 60Hz modes are available for 2D film, 720p/60Hz and 3D sources.

To enable high frame rate set DIP switch #7 to ON:
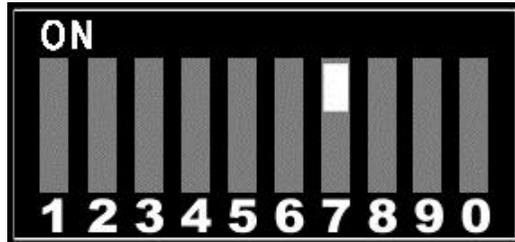
To disable high frame rate set DIP switch #7 to OFF:

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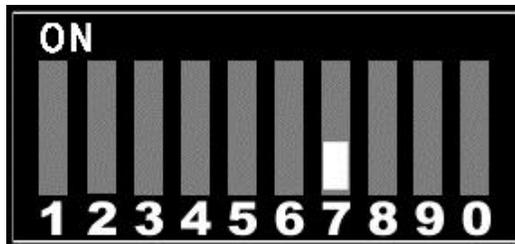
3D Scaling

3D sources are either scaled to 720p or 1080p depending on the position of DIP switch #8.

To set 3D output to 1080p set DIP switch #8 to OFF:
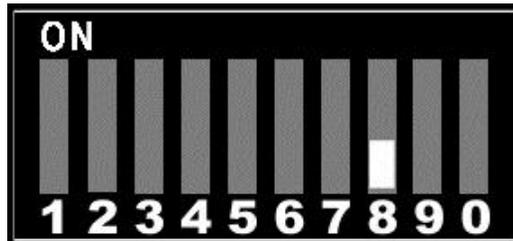
To set 3D output to 720p set DIP switch #8 to ON:
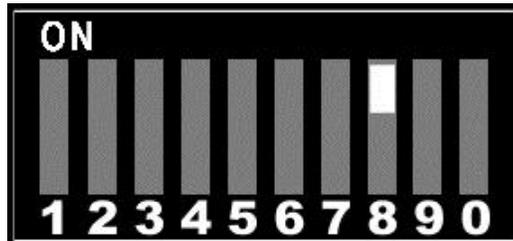
Audio EDID

Audio EDID can either be read from the sink device or forced to 2 channel stereo PCM depending on DIP switch #9 setting.

*For the Sony PS3 and some other devices you will need to redo the "audio settings" if you change the position DIP switch #9. First change the Dip switch then unplug all cables from the HDfury4 including the USB power plug. Wait 5-10 secs then reconnect all cables then set the PS3 audio settings to automatic. For other devices you may have to manually select supported audio.

To force 2 channel PCM audio set DIP switch #9 to OFF:
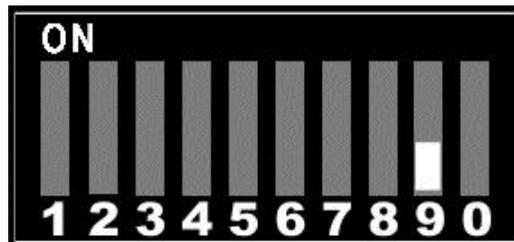
To force audio info to be read from the sink device set DIP switch #9 to ON:
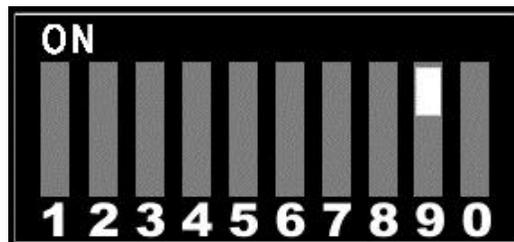
Video EDID

Video EDID can either be read from the sink device or forced to fixed full 3d HD EDID depending on DIP switch #9 setting.
*For the Sony PS3 and some other devices you will need to redo the "video settings " if you change the position DIP switch #0. First change the Dip switch then unplug all cables from the HDfury4 including the USB power plug. Wait 5-10 secs then reconnect all cables then set the video settings on the source.

To force video EDID to be read from the sink device set DIP switch #0 to OFF:
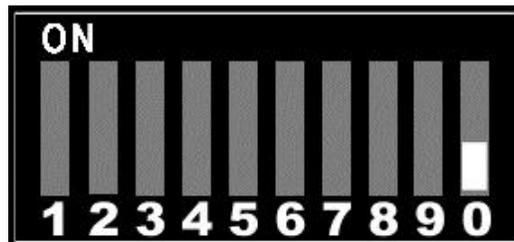
To force video EDID to be set to the built on full 3d HD set DIP switch #0 to ON:
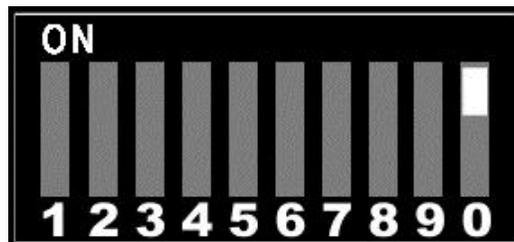
Frequently Asked Questions (FAQ)

3D

Can the HDfury4 be used for 3D Games?

Yes. The HDfury4 supports the 3D frame-packing standard used by 3D games as well as all other 3D formats.

Can the HDfury4 be used for 3D Blu-ray movies?

Yes. The HDfury4 supports the 3D frame-packing standard used by 3D movies as well as all other 3D formats.

Can the HDfury4 be used for 3D satellite/cable or 3D internet streaming content?

Yes. The HDfury4 supports the 3D side-by-side and top-and-bottom standards as well as all other 3D formats.

What 3D formats does the HDfury4 support?

All known 3D formats are supported including:
■ Full 3D HD 1080 (per HDMI) (Blu-ray): 1920 x 2205 24Hz
■ Full 3D HD 720 (per HDMI) (Blu-ray): 1280 x 1470 60Hz
■ Top/Bottom 1080p 24Hz: 1920 x 1080
■ Top/Bottom 1080p 25Hz: 1920 x 1080
■ Top/Bottom 1080p 30Hz: 1920 x 1080
■ Top/Bottom 1080p 50Hz: 1920 x 1080
■ Top/Bottom 1080p 60Hz: 1920 x 1080
■ Top/Bottom 1080i 50Hz: 1920 x 1080
■ Top/Bottom 1080i 60Hz: 1920 x 1080
■ Top/Bottom 720p 30Hz: 1280 x 720
■ Top/Bottom 720p 50Hz: 1280 x 720
■ Top/Bottom 720p 60Hz: 1280 x 720
■ Side-by-Side 1080p 24Hz: 1920 x 1080
■ Side-by-Side 1080p 30Hz: 1920 x 1080
■ Side-by-Side 1080p 50Hz: 1920 x 1080
■ Side-by-Side 1080p 60Hz: 1920 x 1080
■ Side-by-Side 1080i 50Hz: 1920 x 1080
■ Side-by-Side 1080i 60Hz: 1920 x 1080
■ Side-by-Side 720p 50Hz: 1280 x 720
■ Side-by-Side 720p 60Hz: 1280 x 720
■ Frame packed 720p 30Hz: 1280 x 720
■ Frame packed 720p 50Hz: 1280 x 720
■ Frame packed 720p 60Hz: 1280 x 720
■ Frame packed 1080p 24Hz: 1920 x 1080
■ Frame packed 1080p 25Hz: 1920 x 1080
■ Frame packed 1080p 30Hz: 1920 x 1080

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What output resolution does the HDfury4 support with 3D content?

■ 720p60, 720p72, 720p96, 720p120, 720p144 Frame Sequential
■ 720p and/or 1080p for 60Hz display
■ 1080p60, 1080p72

How do I know if my display supports 50/60Hz or 100/120Hz?

All displays support 50/60Hz. Some displays support 100/120Hz. Try both!

My HD display is from Europe/UK/Australia where we use a 50Hz refresh rate. Will it work?

Yes, as all HD displays that support 50Hz also support 60Hz.

What happens when I watch regular 2D content?

The HDfury4 simply passes the 2D video signal through unaltered (except in double/triple frame mode where it can output 1080p48 and 1080p72 from 24hz material). It's as if the HDfury4 is not even there. The 2D video signal is not altered in anyway. The HDfury4 supports all standard 2D video resolutions including (but not limited to) NTSC 480i/p, PAL 576i/p, HDTV 720p/1080i/1080p.

I use an HDMI converter with my display. Will the HDfury4 work with a HDMI converter?

Yes. Here's a sample hookup: PS3 -> HDMI cable -> HDfury4 -> HDMI cable -> HDMI converter -> Display. However the HDfury4 also includes its own converter so you most likely will not need any additional converter for analog output. The HDfury4 can output both Analog and Digital video/audio signal simultaneously!

What version of HDMI does the HDfury4 work with? Do I need HDMI 1.3/1.4a? Does it matter?

It does not matter. TheHDfury4 works with any version of HDMI from 1.0 and up. That said, if you find you're having problems it's best to hook up the 3D source directly to HDfury4 first then add additional equipment. Some older HDMI receivers or switchers may block 3D recognition causing problems, while others may work fine.

Do I need to set anything special in my 3D source device for this to work?

No. The HDfury4 always outputs 3D content at 720p/60, 720p72, 720p96, 720p/120, 720p144, or 1080p24,1080p48,1080p60,1080p72. This is to maximize compatibility throughout all displays in the market. There is no need to set the 3D source to any specific resolution, the HDfury4 will take care of it and scale if needed.

Is there any latency (delay) introduced to the signal?

Less than one frame of latency per second is added to the signal which is not noticeable at all.

What is the USB port for?

To power the HDfury4 from any USB port (such as a PS3 or Xbox 360 USB port) and for firmware upgrades when new (additional) functions and enhancements are offered.

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What about long HDMI cable runs? Can I expect issues?

The HDfury4 acts as an HDMI repeater device. So having a HDfury4 in the path will amplify and recover the signal. You should not need any passive (or active) HDMI amplifiers, especially if you put HDfury4 in the middle of your cable run. If you previously had to use an amplifier, the HDfury4 can most likely take its place. The HDfury4 has been used with 50 foot (and longer) HDMI cables without issues.

What sort of 3D formats exist?

Frame-packing: Used by Blu-ray movies and games.
Side-by-side: Used by cable/satellite/internet mostly for documentaries.
Top-and-bottom: Used by cable/satellite/internet mostly for movies and sports.

What is "frame locking"? I hear some people with digital displays have "frame locking" issues.

The frame locking issue is a result of less than ideal engineering in some digital TVs/projectors. It is an undocumented reality in the design of some displays where the actual visible frame rate at the display or at the "lamp" of a projector is in fact deviating from the intended 60Hz (or 50Hz). The reason is that the display cannot keep up with the decoding of the video stream, or the additional video processing of the display cannot keep up. The result is the display has to drop a frame here and there just to keep up. This results in an actual refresh rate of something less than 60Hz (e.g. 59.2Hz, 58Hz). It can be a completely dynamic phenomenon, depending on the amount of action in the scene. Since glasses are fixed at the frame rate of the source not the display, there can be a slow drift and glasses can go out of sync with the actual visible video. Your eyes cannot see this change in 2D but obviously for 3D it becomes visible.
HDfury4 glasses are fully customizable glasses that allow you define duty cycle, delay, offset, invert sync, presets, etc…

How can I know if my digital display will have a "frame locking issue"?

There's unfortunately no easy way to tell unless you talk to other owners of the same display or try it for yourself. There's no comprehensive list of which digital displays suffer from it (see last question). The good news is that it's extremely rare. With hundreds of units in the field there have been very few complaints. Some displays can be fixed by making display setting changes (ex: switching to "game" mode) which will drop unnecessary processing from the display as is required for the content to sync properly.
However the HDfury4 glasses and emitter are fully customizable glasses that allow you define duty cycle, delay, offset, invert sync, presets, etc…

Is there any way to use the HDfury4 with passive glasses (glasses without batteries)?

No. Active shutter glasses are required that are sync'ed to the HDfury4*.
*Except for Dual projectors setup where passive glasses are required.

I have active shutter glasses that came with my TV but the emitter is built into my TV. Is there an way to use these glasses with HDfury4?

No. An emitter that plugs into the HDfury4 is required so that the glasses can be kept in sync with the image.

The HDfury4 glasses and emitter are fully customizable glasses that allow you define duty_cycle, delay, offset, invert sync, presets, etc…

Can I use third party glasses that include an emitter?

Yes. Any external 3rd party glasses that include an emitter will work with the HDfury4 as long as the emitter has the 3-pin standard mini-din connector.

Does DLP glasses work with HDfury4?

Yes. As long as the projector supports dlp-link to drive the glasses.

How are the new lossless audio formats via HDMI input handled? E.g. DTS-HD/MA and DD/E-AC3 : Are they stripped down to DTS core or Dolby Digital respectively to fit the requirements of the S/PDIF standard ?

Lossless audio is transmitted through HDMI output only. The HDfury4 does not compress or otherwise down convert the incoming audio. Only stereo PCM and 5.1 sound can be output via SPDIF and analog audio output.

Does the HDfury4 allow you to extract the sync for 3D glasses out of digital HDMI/DVI 100/120Hz signal, not a super frame, not a side by side signal. Can the HDfury4 provide the sync signal for attached 3D glasses when its feed with a digital HDMI/DVI 100/120 Hz signal? If yes can it be fed with any resolution and refresh rate within its bandwidth/capabilities?

Yes the HDfury4 have an option to output sync for any content. The HDfury4 synchronizes to the vertical sync signal and creates the 3Dsync from it.

What is Ghosting/Crosstalk or Flicker issue that people often refer to when speaking about 3D and shutter glasses?

The biggest drawback of Shutter glasses is Crosstalk. It can be due to the decay rate of the illuminated phosphor on the picture tube (If you are using a CRT display), the inability of the liquid crystal panels to block the light entirely, or sync-errors and other factors. This can cause the user to see "Ghosting" or "Ghost images". Ghosting in layman's terms means the images your right eyes sees contains some of the image intended for the left eye or vice versa. The content that should be viewed only for the left eyes is shown in the left eye and little bit of it in the right eye.

Another common problem for inadequate hardware, software, and lack of stereo training is flicker, which is most noticeable in standard frequency (e.g. 60 Hz) field sequential systems. It varies with many factors, especially screen brightness, screen size and room illumination. The image may still flicker even at 120 Hz screen refresh if the image is not refreshed properly. Decreasing the level of ambient illumination in the room can reduce the room flicker to imperceptible levels. Reducing screen luminosity with brightness and contrast controls will reduce image flicker to low or imperceptible levels.

We have engineered the HDfury4 and our Emitter/Glasses to the highest possible standard thus giving amazing results with nearly no ghosting or flicker.

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SimulView™

Do the HDfury4 supports the PS3 exclusive SimulView^{TM} mode?

Yes the HDfury4 fully supports SimulView^{TM} mode. This allows gamers to play SimulView^{TM} supported multiplayer games giving each player their own full screen all on a single display.

What is required for SimulView^{TM} to function on single display or projector?

You will need the PS3, compatible SimulView^{TM} game, HDFury4, emitter and two pairs of our RF glasses. With this setup both players will have their own full screen view without seeing what the other players sees.

What is required for SimulView^{TM} to function on an advanced dual screen setup?

You will need the PS3, compatible SimulView^{TM} game, 1.4 certified HDMI splitter (at least 1 input and 2 outputs) two displays or projectors and two HDfury4's. To hook this up you connect the HDMI splitter to the PS3 HDMI output and the outputs from the HDMI splitter to the 2 HDfury4's. Then the output from the two HDFurys would go to the two displays or projectors. One Hdfury 4 needs to be set for left stream and the other for right stream output (please refer to Stream Control section for additional details). With this setup both players will have their own full screen without the need of wearing any glasses!

DVI-D Mode (for Use with Capture Cards and SDI Converters)

To use the HDfury 4 with a PC capture card or SDI converter you will need the Dr.HDMI as well as the HDfury 4. The Dr.HDMI with a DVI-D bin EDID file loaded on it is needed to trick the HDfury 4 into DVI-D mode instead of HDMI mode. You will also need to run separate audio to the PC capture card or SDI converter as DVI-D does not support audio. DVI-D uses the same pinout as HDMI but it does not include audio output.

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General

Why do I need HD (720p) or Full HD (1080p)?

Blu-ray players, HDMI graphic cards, PS3, Xbox 360 Elite are all able to unleash their true potential (720p/1080p mode) only through the HDMI output. If you want a valid ticket to the Full HD world you either needs a compatible display (with HDMI input) or an HDfury4 for your existing display. 1080p FULLHD as found on Blu-ray and HD has over 6 times the resolution as standard DVD and TV. For the best movie and home theater experience, you *need* Blu-ray/HD.

Why do I need an HDCP compliant display?

HDMI is a new standard that comes with a form of hardware protection called HDCP. If your display doesn't have a HDMI input you won't be able to display a 720p/1080p signal (from HDMI sources). Prior to exchanging video data, the HDMI source exchanges HDCP keys with HDMI display. Both devices have a special HDCP chip embedded. If your display doesn't include an HDCP chip, even if it's technically able to display 720p or 1080p signal, it will display a BLACK SCREEN. On some devices (ex:Playstation3, Xbox360) 1080p mode is only available through the HDMI output.

I use component cables to connect my Blu-ray or DVD player to my display device and it works just fine! Why do I need HDfury4?

Blu-ray and many DVD players can also up-convert standard definition DVDs to higher resolutions (720p, 1080i, 1080p), but they only do this via the HDMI outputs (not component). So if you want to get the higher resolution benefits of your player's upconversion circuitry, you're forced to use HDMI. As well, in the future it may not be possible to pass certain high definition content over component video cables. A content flag called the ICT (Image Constraint Token) allows broadcasters and movie studios to limit or "down-res" the HD video signal to standard definition 480P resolution over component video cables. Hollywood has reportedly agreed to not activate this flag until 2011-2012. And the most important reason to use HDfury4: The picture quality is substantially better! (Sharper/cleaner/less noise/less ringing/etc).

Sound

Do I need to use the sound output on the HDfury4?

Likely not. The audio output of the HDfury4 is a convenience feature if you do not have a home theater receiver. The HDfury4 supports stereo analog output as well as 5.1 Dolby/DTS digital SPDIF output. If all you have are the speakers in your TV you can use the 2-channel analog audio output of the HDfury4 as a convenient way to feed audio directly into your TV without having to run separate (possibly long) audio cables from the source to your TV as in many setups the HDfury4 will be plugged right into the TV. This way you only need to run one HDMI cable to the TV and then use a short audio cable from the HDfury4 to the TV sound input. Anyone with a home theater receiver/preamp and separate speakers should instead connect their source devices directly to the receiver/pre-amp and not use the HDfury4 sound output. You may use the 5.1Dolby/DTS digital audio output of course if the positioning of your

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HDfury4 makes this more convenient. The choice is up to you! Typically there is no need to use the audio features of the HDfury4 with a home theater setup.
The HDfury 4 will also pass though the audio from the source over HDMI or can be forced to 2 channel PCM stereo over HDMI as well.

How do I hook up the audio from the HDfury4?

The HDfury4 has both analog and digital (TOSLINK) audio output in one connector located on the bottom of the unit labeled "D/A" along with a headphone symbol. It's a 2-in-1 connector meaning that you can plug in either a 3.5mm stereo analog jack or a digital mini-TOLINK (3.5mm mini-jack) cable and get stereo analog sound or 5.1 Dolby/DTS digital sound out of the HDfury4. See further below for pictures of both types of connectors/cables.

HDfury4 3.5mm mini-TOSLINK digital audio cable:

If you'd like to use a "regular" TOSLINK cable, use a 3.5mm Mini-TOSLINK to regular TOSLINK adapter:

A 3.5mm stereo audio cable can be used for connecting the HDfury4 to a TV if you do not have a home theater setup (you only have 2 speakers in your TV):

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Inputs

How many inputs does the HDfury 4 have?

It has a single 3D HDMI 1.4 compliant with HDCP with support for Deep Color(TM). The HDfury 4 is the first product we offered that can convert 3d to work with any tv and also offers a hdmi output for both sound and video. It passes though all colour spaces, and is fully compatible with all HDMI audio formats.

Video

What resolutions does the HDfury4 support?

The HDfury4 supports any resolution/refresh rate combination (interlaced or progressive) up to 1080p/72Hz. All standard definition (SD) and high definition (HD) resolutions are supported in component (Y/Pb/Pr) and HDMI output mode, including 1080p/60 and 1080p/24.

Does the HDfury4 change the resolution? Up-convert or down-covert?

The HDfury4 does not change the resolution in anyway in 2d mode. It can framerate convert film based sources up to 72hz in 1080p mode. The HDfury4 outputs whatever resolution you feed it. Feed 1080p in and you'll get 1080p out. Feed 480i in and you'll get 480i out.
In 3d mode the 3d signal is converted into 720p or passed though as 1080p depending on the position of dip switch #8. The frame rate will be output at 60Hz if the high frame rate switch is off or up to 144hz if it is set to on.

Does the HDfury4 support both Component and RGB video output? I thought they were the same?

The HDfury4 supports both component (Y/Pb/Pr or YUV) and RGBHV (sometimes called VGA) signal types on the output. They are not the same at all and cannot be used interchangeably. Some displays have component inputs, some displays have RGB, some have both. The HDfury4 lets you choose between the two to best match your display's requirements.

My picture is all green! What's going on?

You likely have a display that only accepts RGB and you have the HDfury4 set to component output (Y/Pb/Pr). Switch it to RGB.

I want to use the component input on my display. How do I set the HDfury4 to output component (Y/Pb/Pr) video?

Lift the little panel found on the back of the HDfury4 and set DIP switch 1 to OFF. Make sure to use the HDfury4 component breakout cable to connect the HDfury4 to your display's component (Y/Pb/Pr) input.

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I want to use the RGB (VGA) input on my display. How do I set the HDfury4 to output RGB (VGA) video?

Lift the little panel found on the back of the HDfury4 and set DIP switch 1 to ON. Make sure to use one of HDfury4 RGB cables to connect the HDfury4 to your display's RGB (VGA) input. Three RGB cables are available: A VGA (D-Sub15) cable, a 5-BNC cable, and a special Barco CRT projector port 3 cable. Do not use the component 3 RCA (phono) style connector cable (shown above) as it will not work.

Does the HDfury4 support 24fps found in next generation Blu-ray and HD DVD players?

Yes! The HDfury4 supports 24fps. With cathodic displays such as CRT projectors or CRT based RPTVs or tube TVs, 24fps is too low of a frequency for the display to use. The image will flicker like crazy and will not be watchable. You can framerate convert 24fps sources to 72hz when using a CRT based display which will result in a great flicker free picture. You can use 24fps on a plasma or LCD display and it will be displayed nicely using the HDfury4.

I can only get lower resolutions to work. When I set my source to high resolutions like 1080p I don't get an image!

(1) Make sure to use the included HDfury4 power supply at all times. It is required at all times.
(2) Many TVs do not support 1080p and must be fed a 1080i or 720p signal instead. Make sure to set your source to 1080i or 720p unless your display's manual specifically states that it supports 1080p.
(3) Make sure to turn off 24fps (24p) support in the source (see last question).

The picture is blank! I don't get an image at all from my PS3, Blu-ray player, or other source!

(1) Make sure your display supports the resolution the source is feeding it. If your TV does not support 1080p, set your sources to 1080i or 720p. Some sources will automatically use the highest resolution available to them based on what they see connected, and since they see the HDfury4 as 1080p FULL HD, the source will 'think' you have a 1080p capable TV and is most likely feeding the HDfury4 a 1080p signal. You need to lower this to 1080i or 720p in the source device.
(2) Make sure that the 24fps output option in the source device is set to OFF or DISABLED and not AUTOMATIC unless your TV specifically supports 24fps. Most do not, especially older TVs that do not have HDMI inputs.
(3) Make sure you're using the HDfury4 power supply at all times

I'm still getting a black screen from my PS3 when using the HDfury4. How can I fix this?

The problem is that you likely connected the HDfury4 to the HDMI port while the PS3 was still setup to output by another port (component or composite). The result is no picture over HDMI. The PS3 will output low resolution on every output when you reset the display settings this way: PS3 in stand by mode, hold on power for 5 sec until you heard 3 beeps.
The PS3 restarts and you can than access low resolution through both HDMI and/or other ports and perform the display test to choose your preferred resolution.

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On my PS3 I can see the menu, play games and Blu-ray discs, but I get a blank screen or an out of range error message when I play a DVD.

You need to change a setting in your PS3: In addition to setting up the HDMI resolution on the PS3 as outlined above, you also have to go under the Blu-ray playback settings and adjust the DVD upscale feature because by default it will also be 1080p. Another hint: When you first connect an HDfury device to the PS3 the PS3 will ask: "A new HDMI device has been detected, do you want to use it?" Answer 'YES' only if your TV is 1080p capable. Otherwise answer 'NO', and you will be presented with another screen where you will be able to change the resolution settings and set them manually to whatever your TV supports.

My picture is blank when I play back Blu-ray discs but not when I play DVDs. What's going on?

Blu-ray discs are natively 1080p/24Hz. You likely have your Blu-ray player set to 24Hz or "Automatic" frame rate output so that it is outputting a 24 Hz (fps) signal. Most displays that do not have HDMI inputs do not work at 24 Hz so you need to turn this off. Either set your Blu-ray player to 50 or 60Hz or set 'Automatic Frame Rate' to off. See your Blu-ray player manual.

My Sony G90 CRT projector looks funny when I use the HDfury4.

Go into the G90 service menu "Input Setting" with the fury installed and set the "Clamp" to HP or H/C from auto. This should straighten out the picture if it is varying in brightness and getting weird bands of dark as scenes change.

I can't get past 1080p on my PC while hooked up from my DVI port to the HDfury4 even when using PowerStrip. Why not?

In order to go beyond the 165Mhz pixel clock barrier of 1080p/60 from your PC you will need a DUAL LINK DVI to HDMI cable. That's the cable that has all the pins filled in on the DVI end and had an HDMI plug on the other.

Image Shifting

Will the HDfury4 shift the image to the left or cropped (cut off) in any way like some other converters?

No. The HDfury4 includes advanced features to ensure that the image stays perfectly centered when component (Y/Pb/Pr) output mode is used. The HDfury4 also adds a new feature to allow for manual centering of the image when RGB output mode is used.

Does the HDfury4 automatically center the image?

In component (Y/Pb/Pr) output mode the HDfury4 always automatically centers the image. Nothing else needs to be done. In RGB (VGA) output mode the L/R image shift control on the side of the HDfury4 may be used to manually center the image after turning DIP switch number 5 to ON.

The picture is not centered when I use the HDfury4 in RGB (VGA) output mode. How do I fix it?

Open the DIP switch cover and turn DIP number 5 to ON. Then use the L/R momentary contact switch on the side of the HDfury4 to shift the image left or right until it is centered. This only needs to be done when you use a new resolution for the first time. The HDfury4 will then remember the setting for that resolution for the next time you use it. The "theoretical" correct RGB center values are already programmed into the HDfury4 so in many cases no shifting will be required, but testing has shown that some TVs do need a slight adjustment.

The L/R image shift doesn't work!

Make sure the HDfury4 is set to RGB output mode (set DIP switch 1 to ON) and that the L/R image shift feature is enabled (set DIP switch 5 to ON).

Can I disable the L/R image shift feature?

Yes. While the L/R image shifting in RGB mode is enabled by default, some people may choose to disable this feature and do their image shifting in the display or in a video processor instead. To turn off the L/R image shifting feature lift the little panel found on the back of the HDfury4 and set DIP switch 5 to OFF.

I used the L/R image shifting push button and now I don't have an image anymore!

You have shifted the image too far resulting in a loss of sync on the display. Hold the shift push button in either direction for approximately 15 seconds and the image will reset to the default center value. Then re-adjust slowly/carefully.

RGB Image Sync

My display has composite (combined) sync with only 4 BNC connectors, not 5. (Examples: Barco 7xx/Cine7 or Ampro CRT projectors). What cable do I order? How do I hook it up?

Order the GREEN (5-BNC breakout cable) and combine the H/V sync lines using a $2 BNC T-connector or You could also use an Extron 109 or 202 box to combine the two sync lines.

The image rolls, is unstable, or doesn't always lock on. What do I do?

Some displays such as early Electrohome ECP and Barco CRT projectors have fussy sync circuitry. You need to combine the H/V sync lines using a $2 BNC T-connector (see picture in last question). You could also use an Extron 109 or 202 box to combine the two sync lines.

My display requires the RGB signal to always include negative or positive sync to work. How do I set this?

The HDfury4 allows you to force the output sync to either positive or negative, or invert it. Previous HDfury models did not alter the sync signal in any way requiring extra hardware if your display has special sync requirements.. To set sync lift the little panel found on the back of the HDfury4 and set DIP switches 2 and 3 as follows:
- Always invert sync: Set DIP switch 2 to OFF, DIP switch 3 to OFF
- Always positive (high) sync: Set DIP switch 2 to ON, DIP switch 3 to ON
- Always negative (low) sync: Set DIP switch 2 to OFF, DIP switch 3 to ON
- Always pass sync through as is: Set DIP switch 2 to ON, DIP switch 3 to OFF

How do the two sync DIP switches work?

For those people who want all the details, the two sync DIP switches control RGB image sync as follows:
DIP switch 2: ON=Sync Passed, OFF=Sync inverted (operates after DIP3 selection, so it is possible to invert a forced sync too)
DIP switch 3: ON=Force sync positive (high), OFF=Sync not forced, simply passed.

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Colour Depth Upscaling

Can I turn the colour depth upscaling feature off?

Yes. Like the HDfury2, the HDfury4 expands the regular 16-235 image range to 0-255 for greater contrast ratio. Some people may want to turn off this feature. To turn colour depth upscaling off, lift the little panel found on the back of the HDfury4 and set DIP switch 4 to OFF.

Power

Do I need to use the HDfury4 power supply?

Yes. Due to the advanced features, the HDfury4 draws more power than previous HDfury models. The HDfury4 power supply must be used at all times.

Is the HDfury4 power supply the same as that used by the HDfury1, HDfury2, and GammaX?

No. The power supply for the HDfury1, HDfury2,and GammaX kits are 0.5A max current. The HDfury3 is 1A max current. The HDfury4 power supply can supply up to 2.0A. Do not use an HDfury1, HDfury2, or GammaX power supplies with the HDfury4.

What sort of power supply does the HDfury4 use?

The HDfury4 power supply adheres to these requirements:
- Provides REGULATED (+/- 5%) 5VDC power with 2.0A min DC current
- Delivers the power through a mini usb connector.
Trying to use an AC/DC adaptor that doesn't adhere to these three requirements may destroy the HDfury4. Do not use the power supply from the HDfury1, HDfury2, or GammaX with the HDfury4.

My picture 'blanks out' from time to time when using the HDfury4. Why is this happening?

If the HDfury4 blue LED is OFF during the picture blanking, the problem is with the HDfury4 or the power supply. If the HDfury4 blue LED is ON during the picture blanking, the problem is with the component cable, RGB cable or the display. Lift the little panel found on the back of the HDfury4 and make sure that DIP switch 6 is set to ON. DIP switch 6 is used to turn the blue LED on/off, make sure it is set to ON if you are experiencing problems with your HDfury4. The blue LED will never come on if you have DIP switch 6 set to off.

Miscellaneous

The blue LED power light on the HDfury4 is too bright in my light controlled Home Theater! Can I turn it off?

The easiest way to turn off the blue LED power light on the HDfury4 is to simply place a piece of tape over it. Quick and simple. However, if you would like to deactivate it here's how: Lift the little panel found on the back of the HDfury4 and turn DIP switch 6 to OFF. To re-enable the blue LED power light, turn DIP switch 6 to ON.

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Highlight Features:

Main features:

- Add HDMI 2D and 3D to ANY TV, Monitor, Proj (even 60hz TV !)
- Display HDMI 2D and 3D content on Digital and/or Analog display
- HDfury4 can output in both Digital and Analog Video/Audio simultaneously!
  Therefor acting as an advanced digital/analog splitter.
- Double and Triple frame 1080p24 material up to 1080p72
- 3D mode output up to 720p144
- Dual projectors setup using two HDfury4 modules and passive glasses.
- Up to 720p240 in dual projectors setup!
- 7.1 Dolby® True HD & DTS Master Audio
- Input: HDMI 1.4 (HDCP compliant) input with 3D and Deep Color support
- Output: Digital HDMI / DVI-D and/or Component (YPbPr/YCbCr) and VGA (RGBHV) video output
- All modes auto detected if possible, otherwise can be forced via button
- 3-pin mini-DIN Sync Out (for optional emitter)
- Dynamically create EDID based on Sink EDID parameters
- Customization settings available through DIP SWITCH and buttons
- Perfectly and automatically center image in all standard NTSC/PAL component modes
- Manually adjust horizontal screen position in all NTSC/PAL RGBHV modes
- Performs Color Depth Up scaling in all modes (ON/OFF user selectable)
- Horizontal and Vertical Sync Polarity Inverter included
- Automatic SD/HD color-space selection
- Accept third party accessories on its output
- Improved output cable driver for driving long cable runs (40-50')
- Software/Firmware upgradeable through USB
- Sound output:
  - Analog and Digital Optical (S/PDIF 5.1 Dolby/DTS) through an innovative 3.5mm combo jack and 7.1 DTS-MA & Dolby True HD via HDMI output
  - HDMI audio pass-through

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Input/Output mode:

HDfury4 Input/Output mode:

- 2D VIDEO MODE COMPATIBILITY:
  - NTSC 480i/p, PAL 576i/p, HDTV 720p/1080i/1080p
- 2D OUTPUT:
  - 2D movies: 1080p24, 1080p48, 1080p72 (HDfury4 can double and triple frame from 24hz material)
  - 720p60, 720p120
  - Pass-through any resolution
- 3D MODES INPUT COMPATIBILITY:
  - Full 3D HD 1080 (per HDMI) (Blu-ray): 1920 x 2205 24Hz
  - Full 3D HD 720 (per HDMI) (Blu-ray): 1280 x 1470 60Hz
  - Top/Bottom 1080p 24Hz: 1920 x 1080
  - Top/Bottom 1080p 25Hz: 1920 x 1080
  - Top/Bottom 1080p 30Hz: 1920 x 1080
  - Top/Bottom 1080p 50Hz: 1920 x 1080
  - Top/Bottom 1080p 60Hz: 1920 x 1080
  - Top/Bottom 1080i 50Hz: 1920 x 1080
  - Top/Bottom 1080i 60Hz: 1920 x 1080
  - Top/Bottom 720p 30Hz: 1280 x 720
  - Top/Bottom 720p 50Hz: 1280 x 720
  - Top/Bottom 720p 60Hz: 1280 x 720
  - Side-by-Side 1080p 24Hz: 1920 x 1080
  - Side-by-Side 1080p 30Hz: 1920 x 1080
  - Side-by-Side 1080p 50Hz: 1920 x 1080
  - Side-by-Side 1080p 60Hz: 1920 x 1080
  - Side-by-Side 1080i 50Hz: 1920 x 1080
  - Side-by-Side 1080i 60Hz: 1920 x 1080
  - Side-by-Side 720p 50Hz: 1280 x 720
  - Side-by-Side 720p 60Hz: 1280 x 720
  - Frame packed 720p 30Hz: 1280 x 720
  - Frame packed 720p 50Hz: 1280 x 720
  - Frame packed 720p 60Hz: 1280 x 720
  - Frame packed 1080p 24Hz: 1920 x 1080
  - Frame packed 1080p 25Hz: 1920 x 1080
  - Frame packed 1080p 30Hz: 1920 x 1080
- 3D OUTPUT:
  - 720p60, 720p72, 720p96, 720p120, 720p144 Frame Sequential
  - 720p and/or 1080p for 60hz display
  - 1080p60, 1080p72

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Specifications/Features:

- Input: 1 x HDMI v1.4 (DVI 1.0 compatible)
- 12-bit deep color HDMI native support
- Output: Digital HDMI / DVI-D and/or VGA FEMALE output connector, 10 bit analog resolution.
- HDCP supported (Integrated HDCP decipher engine, Pre-programmed HDCP key)
- Horizontal shift capability for RGB output mode
  - Enabled with a dip-switch, applied with push-buttons
- Output horizontal and vertical sync polarity selector for RGB modes (dip switch)
- Digital Output format: Either HDMI or DVI-D
- Analog Output format: Either RGB or YPbPr, dip-switch selectable
  - YPbPr requires VGA->3RCA breakout cable
- All HD/SDTV formats from 1080p down to 480i, NTSC and PAL
  - Including 1080p @ 72Hz PAL and NTSC (for RGB output only)
  - Including 1080p @ 24Hz PAL and NTSC
- 11-bit 225MHz DAC processing (for true 10-bit analog output)
- Two separate Internal EDID EEPROM with complete CEA861 extension block
- Dip-switch selectable
  - One EDID supports all formats
  - The other EDID is up to 1080i, and no 24Hz support (by default, reprogrammable)
- Automatic Input Format Detection: Digital YCbCr and RGB
- Full BTB and WTW support in YPbPb output
- Automatically switches color-spaces for both HDTV and SDTV
- Precise black levels – no black crush in any standard mode
- Dual purpose audio output connector
  - SPDIF digital output for 5.1 Dolby/DTS
  - Analog L/R 2-channel stereo
- Industry-Standard Compliance
  - HDMI 1.4
  - EIA/CEA-861E
  - DVI 1.0
  - HDCP 1.1
- Digital Video Input / Output
  - Dual integrated HDMI 1.4 cores
  - Supports DTV resolutions up to 1080p @ 72Hz or 720p/1080i @ 120Hz with 36-bit color depth.
  - Flexible digital video interface:- 24/30/36-bit RGB/YCbCr 4:4:4- 16/20/24-bit YCbCr 4:2:2- 8/10/12-bit YCbCr 4:2:2 (ITU-R BT.656)
- Integrated RGB Color Space Converter for both RGB-to-YCbCr and YCbCr-to-RGB (both 601 and 709) with true 12-bit accurate data using 14-bit processing
- 4:2:2 <> 4:4:4 converter with 12-bit accurate data using 14-bit processing
- Digital Audio Output
  - HDMI audio pass-through
  - Industry-standard S/PDIF output
  - Supports 2-channel 32-192kHz stereo audio
  - Supports IEC60958 2-channel PCM
  - Capable of passing IEC61937 compressed audio (5.1 Dolby® Digital, DTS, etc.)
  - 7.1 Dolby® True HD & DTS Master Audio
- Optional Accessories:
  - DLP-Link 3D Glasses for DLP 3D Ready 120hz Projectors/TV's
  - External 60/120hz 3D Glasses with emitter for all other displays (ie. 60Hz non 3D Ready Projectors or TV's)
  - Passive glasses for Dual projectors setup.
  - HDfury4 Glasses with emitter (60/144hz) : All controls like Duty cycle, Delay, Invert, Presets are on the glasses itself, you can stay on the couch and tune up everything till perfection.

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Team HDfury thanks you for your support

For help visit: http://www.HDfury.com