

## Canon EF Lens to Sony NEX Speed Booster ULTRA

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## **Speed Booster ULTRA**

### **Sharper corners, less distortion, reduced vignetting**

New optical design: advanced 5-element/4-group optical design incorporating ultra-high index tanatalum-based optical glass to achieve extraordinary optical performance with improved corner sharpness, distortion and reduced vignetting.

Like the revolutionary original Metabones Speed Booster announced in January 2013, the Speed Booster ULTRA has a magnification of 0.71x, and so it effectively reduces the crop factor of mirrorless cameras with DX-sized sensors, such as Sony E-mount and Fuji X-mount cameras, from 1.5x to 1.07x. However, the new ULTRA design makes very effective use of exotic materials at the furthest limit of glassmaking technology, and as a result is well corrected for use with virtually all fullframe SLR lenses regardless of exit pupil distance. Thus, the Speed Booster ULTRA performs extremely well with professional-grade f/2.8 zoom lenses such as the 24-70mm f/2.8 and 70-200mm f/2.8 zooms by Canon and Nikon to produce 17-50mm f/2.0 and 50-142mm f/2.0 high-speed zooms, respectively. Similarly, high-speed fixed focal length lenses such as a 50mm f/1.2 will be transformed into a 35.5mm f/0.9 lens with excellent contrast and resolution from the center all the way to the edges of the image. (More information can be found in the press release [here](#))

### **Key Features**

- Increase maximum aperture by 1 stop.
- Increase MTF.
- Makes lens 0.71x wider.
- Advanced 5-element/4-group optical design incorporating ultra-high index tanatalum-based optical glass by Caldwell Photographic in the USA (patent pending).
- Electronic integration of aperture diaphragm, controlled by or from the camera body.
- Partial autofocus support for late-model (post-2006) Canon-brand lenses.
- Powered by camera body. No external power source required.
- High performance 32-bit processor and efficient switched-mode power supply.
- The tripod foot is detachable and compatible with Arca Swiss, Markins, Photo Clam ball heads.

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# Description

## Compatibility

Supported	Not supported
EF lenses	EF-S lenses
Image stabilization (IS) lenses	DX lenses
Electronic manual focusing (e.g. EF 85/1.2L II and discontinued EF 50/1.0L)	NEX-VG900 (see note 4)
EXIF (focal length, aperture, zoom range)	Lens correction such as peripheral shading, CA and distortion
P, A, S, M exposure modes	Focus confirmation "chip" (e.g. Dandelion)
Autofocus (see autofocus support section below)	M42 screw mount adapters (see note 6)
Distance and zoom display on VG and FS series camcorders (see note 1)	Stacking non-Metabones/non-Conurus mount adapters on top (see note 7 and list of lenses which require modification below.)
Auto magnify (see note 1)	Certain telephoto lenses (see note 8)
Contax N mount lenses modified to Canon EF by Conurus (see note 2)	Lens: <b>Tamron SP 17-50mm F/2.8 XR Di II VC</b>
Contax 645 NAM-1 adapter modified to Canon EF by Conurus (see note 2)	
Sigma, Tamron and Tokina lenses in Canon EF mount (see note 3)	

Note:



## Note:

1. Requires lenses supporting distance information.
2. Autofocus disabled for Contax N and Contax 645 lenses.
3. A third party zoom lens may need to be registered with the Smart Adapter first in order to detect its maximum aperture. Autofocus is disabled for most third-party lenses.
4. This Speed Booster ULTRA is designed to cover an APS-C image circle which is not big enough to cover a full-size 36mm x 24mm sensor.
5. Sony NEX cameras cannot display aperture values beyond f/1.0. If a f/1.2 Canon EF lens is used with Speed Booster ULTRA the resulting aperture is f/0.9 but the camera body displays the original aperture f/1.2 to the camera body. i.e, lenses slower than f/1.4 report boosted aperture to camera body; lenses at or faster than f/1.4 report original aperture to camera body. (with firmware later than V0.38)
6. Some improperly-made M42 screw mount adapters may short the electronic contacts of the Speed Booster ULTRA and cause damage to the Speed Booster ULTRA and/or camera body.
7. Many manual focus lenses (e.g. OM 28/2.8, OM 50/1.8, Leica R 15/3.5) have rear protrusions (spikes, levers, other appendages) which would damage the optics and/or housing of Speed Booster ULTRA. They need to be modified before they can be safely used on Speed Booster Check and make sure there are no rear protrusions from the adapter/lens combination before using on Speed Booster. Scratches and damages caused by rear protrusions on Speed Booster are not covered by warranty.
8. Some telephoto lenses such as the Leica-R Telyt 560/5.6 may have significant vignetting in the corners.
9. This Speed Booster ULTRA is NOT fully compatible with full-frame Sony A7, A7R and A7S. When Speed Booster® ULTRA is used with Sony A7, A7R and A7S, the camera will turn on the "APS-C Size Capture" mode automatically.

## Autofocus

## Autofocus

Autofocus is supported, with the following known limitations.

- Autofocus speed is very slow and inadequate for most moving subjects. The autofocus speed is unfit for professional use for sure, and it would disappoint most enthusiasts.
- Only Canon-branded lenses introduced in or after 2006 are officially supported. Autofocus is disabled for older Canon lenses and most third-party lenses, including most Sigma, Tamron and Tokina lenses and all Contax N lenses modified by Conurus.
- On FS series (e.g. FS7, FS700, FS100), autofocus may be available only in photo mode but not in movie capture mode.
- Continuous AF is not supported.
- DMF mode (direct manual focus) is not supported.
- For non-camcorder camera bodies (e.g. NEX-7), during movie capture, if the subject moves to a different distance, half-press the shutter release button to re-activate autofocus and lock onto the subject again. Since autofocus speed is slow, there may be visible disruption in the resulting footage.
- The first two autofocus attempts are used to calibrate the lens and as a result may not lock successfully on the target. Half-press the shutter release button again and autofocus will lock successfully.
- Autofocus may have difficulty locking onto subjects which are very close to the nearest focusing distance of the lens.
- Autofocus accuracy depends heavily on the working condition of the lens. Lenses with hidden problems which may not be apparent on Canon DSLRs will lead to inaccurate and unreliable autofocus on Sony NEX. Typical problems of this kind that we have seen include an unsmooth/erratic autofocus mechanism (e.g. getting stuck intermittently at a certain focusing distance), a worn-out gear train with out-of-spec backlash, a faulty/worn-out distance encoder or other faulty/worn-out internal sensors.



## List of lenses with autofocus support on Speed Booster ULTRA

<b>Canon EF primes</b>	<b>Canon EF zooms</b>
EF 14/2.8L II USM	EF 8-15/4L USM fisheye
EF 24/1.4L II USM	EF 17-40/4L USM
EF 24/2.8 IS USM	EF 20-35/2.8L (Ver.18)
EF 35/1.4L USM (Ver.19)	EF 22-55/4-5.6 USM
EF 50/1.2L USM	EF 24-70/2.8L USM II
EF 85/1.2L II USM	EF 28-80/3.5-5.6 II (Ver.18)
EF 85/1.8 USM (Ver.18)	EF 28-90/4-5.6 III
EF 100/2.8 USM macro (Ver.17)	EF 35-350/3.5-5.6L (Ver.18)
EF 135/2L USM (Ver.17)	EF 70-200/2.8L IS USM II
EF 200/2.8L II USM (Ver.17)	EF 70-200/4L USM
EF 300/2.8L IS USM	EF 70-200/4L IS USM
Extender EF 1.4x III	EF 70-300/4-5.6L IS USM
Extender EF 2x (mark I)	EF 70-300/4-5.6 IS USM
	EF 100-300/5.6 (non-L, not USM, push-pull zoom) (Ver.18)
	EF 100-400/4.5-5.6L IS USM
<b>Tamron</b>	<b>Tokina (full frame)</b>
SP 24-70/2.8 Di VC USD A007 (Ver.15)	28-80/3.5-5.6 (Ver.18)
SP 70-200/2.8 Di VC USD A009 (Ver.31)	

## Autofocus is DISABLED for the following lenses

Image stabilization (if supported by lens), auto aperture and EXIF work. Autofocus is supported only for those lenses marked with an asterisk (\*), on NEX-5R/6, and with adapter firmware version 18 or above.

Canon EF primes	Canon EF zooms	Contax N modified by Conurus
EF 14/2.8L (mark I)	EF 24-70/2.8L (mark I)	Vario-Sonnar 17-35/2.8
EF 20/2.8 USM*	EF 24-105/4L IS USM*	Vario-Sonnar 24-85/3.5-4.5
EF 24/1.4L USM (mark I)	EF 28-70/3.5-4.5 II	Vario-Sonnar 28-80/3.5-5.6
EF 24/2.8 (old version, non-IS)	EF 35-80/4-5.6	Planar 50/1.4
TS-E 24/3.5L		Planar 85/1.4
TS-E 45/2.8		Makro-Sonnar 100/2.8 (Ver.21)
EF 50/1.4 USM		NAM-1 adapter
EF 50/1.8 II		
MP-E 65/2.8 macro		
EF 85/1.2L (mark I)		
EF 400/5.6L USM		
Sigma (full frame)	Tokina	Zeiss ZE
24-70/2.8 EX HSM	AT-X PRO 28-70/2.8	ZE Distagon 15/2.8
24-70/2.8 EX DG HSM		ZE Distagon 21/2.8
50/1.4 DG HSM (Ver.17)*		ZE Distagon 35/2
50/2.8 DG Macro		ZE Makro-Planar 50/2
70-200/2.8 EX DG Macro HSM		ZE Makro-Planar 100/2
100-300/4		

## List of manual focus lenses which REQUIRE MODIFICATION to be used on Speed Booster ULTRA

Many manual focus lenses have rear protrusions (spikes, levers, other appendages) which would damage the optics and/or housing of Speed Booster ULTRA. They need to be modified before they can be safely used on Speed Booster ULTRA. Check and make sure there are no rear protrusions from the adapter/lens combination before using on Speed Booster ULTRA. Scratches and damages caused by rear protrusions or by poor quality adapters are not covered by warranty. The following is an incomplete list of lenses known to be incompatible.

Leica R	Nikon F	Olympus OM	Pentax K
Super-Elmar-R 15mm	20/2.8 AI-S	OM 18/3.5	Every Pentax K-mount lens has a protruding fin and an aperture lever. It does NOT fit.
Elmarit R 28/2.8		OM 21/2	
Elmarit R 35/2.8		OM 21/3.5	
Summicron R 50/2		OM 28/2.8	
		OM 50/1.8	