



Description of the PHOTOSONICS 4ER - 35mm Highspeed Camera

- Framing Rates:** Continuous setting from 6 to 360 fps
- Operating Voltage:** 220V AC
- Current Draw:** 32A (run-up peak)
- Film:** 35mm negative (normal stock, BH 4740 perforation, 1866" pitch)
The camera runs perfectly at all speeds with normal stock.
- Magazines:** Two 1.000 ft (305m) magazines.
400 ft (122m) loads can be used in these magazines
- Shutter:** The rotary shutter is variable, allowing control of the exposure time
Independent of the framing rate used.
Maximum opening: 120 degree
Minimum opening: 5 degree
between 5 and 50 degrees, a setting of every 5 degrees
between 50 and 120 degrees, a setting of every 10 degrees
At 360 fps, the exposure time can thus be varied between
1/1.080 second (120 degrees) and
1/25.920 second (5 degrees)
- Footage Counter:** The Photo-Sonics 4ER is provided with a highly accurate footage counter
- Run-Up, Run-Down:** The camera requires very brief run-up and run-down times.
The Run-up to 360 fps lasts about 3 seconds, the run-down about 3 seconds. At lower framing rates, these times are shorter.
At 200 fps, about 1,5 sec. run-up, about 2 sec. run-down.
- Movement:** 12 (twelve!!) pull-down claws
4 registration pins
Perfect image steadiness. Better than with many studio cameras operating at 25 fps. Shots made at 360 fps with the 4ER can be used as title backgrounds.
- Please note:**
Wooden undergrounds could reduce the image steadiness.



Description of the PHOTOSONICS 4ER - 35mm Highspeed Camera

Sharpness:

While the film is being exposed, it is held flat and steady with the help of the build-in vacuum pump -360 times a second!! The film is held rock steady, with no breathing or standing waves - sharp as a needle, frame for frame.

Reflex Viewfinder:

The viewfinder image is mirrored out by a beam splitter. This allows continual viewfinding during the take.

Light loss:

The beam splitter takes out about 1/2 stop.

Boresight:

The beam splitter is made so that it can be removed, if this is necessary in order to use certain lenses (see Customer lenses). When the beam splitter is removed, the viewfinder and the video assist are disabled. Viewfinding and video recording are not possible when the beam splitter is removed.

The set-up can be checked before and after the take by placing the boresight in the gate. In order to do this, the film and the movement must be removed.

Please note:

Because our 4ER camera has the advantage of a continual viewfinder, this rather bothersome procedure with the boresight is not generally necessary. It has rarely been required with our camera (see Customer lenses).

Video Assist:

Colour video camera in PAL standard

Our video assist is coupled to the viewfinder. Nonetheless, both visual viewfinder and the video assist can be used simultaneously during the take.

If fast action is recorded with a normal video camera, the exposure time (1/25 second) is much too long to capture the action clearly. The exposure time of the camera in our video assist can be switched to 1/1.000 second. Fast motion can be recorded almost with no blur. Each field is sharp in slow motion or freeze frame playback. This feature is a great help in judging the instant rushes of a high speed shot.

In addition with the OMEGA-DECK it is possible to simulate the speed reduction and record it.



Description of the PHOTOSONICS 4ER - 35mm Highspeed Camera

Monitor:

Transvideo 10" flat panel monitor
Sony high resolution

Lenses:

Primes Lenses

Canon K35	18mm T1.5
Canon K35	24mm T1.6
Zeiss Distagon	28mm T2.8
Zeiss Distagon	35mm T2.8
Zeiss Planar	50mm T1.4
Zeiss Planar	85mm T1.4
Cineovision macro	100mm T2.0 (Zeiss glass)
Cineovision macro	135mm T2.0 (Zeiss glass)
Canon	300mm T2.8 (with 1.4x + 2x extender)

Zoom Lens

Cooke Zoom	20-100mm T3.1
Innovision Probe II Plus	T6.3 (incl. 9 / 12 / 16 / 20 / 32mm lenses)

Customer Lenses:

IMPORTANT

The lenses we supply with the 4ER are checked before every job, and the flange focal distance is matched precisely to the camera. If customer lenses are used, the results may not be ideal. The lenses must have a BNCR mount (not adapter). No mechanical or optical parts may extend more than 16mm back from the flange. Parts extending farther back would destroy the beam splitter.

Matte box:

Our camera has been modified to allow the use of the normal ARRI production matte box, with holders for 4"x4" and 4"x5,65" filters (prime lenses) and 6.6"x6.6" filters (Cooke Zoom).

Special Effects:

For special effects shots the camera can be used in all kinds of positions up to 360 fps.

Tripod:

The camera can be mounted on all tripods with 3/8" threading. Because of the total weight of 70kg a heavy duty tripod is required.

Unilux:

The 4ER is compatible with the Unilux Strobe Light System (see Unilux Description)



Description of the PHOTO-SONICS 4ER - 35mm High Speed Camera

- Framing Rates:** Continuous setting from 6 to 360 fps
- Operating Voltage:** 220V AC
- Current Draw:** 32A (run-up peak)
- Film:** 35mm negative (normal stock, BH 4740 perforation, 1866" pitch)
The camera runs perfectly at all speeds with normal stock.
- Magazines:** Two 1.000 ft (305m) magazines.
400 ft (122m) loads can be used in these magazines
- Shutter:** The rotary shutter is variable, allowing control of the exposure time
Independent of the framing rate used.
Maximum opening: 120 degree
Minimum opening: 5 degree
between 5 and 50 degrees, a setting of every 5 degrees
between 50 and 120 degrees, a setting of every 10 degrees
At 360 fps, the exposure time can thus be varied between
1/1.080 second (120 degrees) and
1/25.920 second (5 degrees)
- Footage Counter:** The Photo-Sonics 4ER is provided with a highly accurate footage counter
- Run-Up, Run-Down:** The camera requires very brief run-up and run-down times.
The Run-up to 360 fps lasts about 3 seconds, the run-down about 3 seconds. At lower framing rates, these times are shorter.
At 200 fps, about 1,5 sec. run-up, about 2 sec. run-down.
- Movement:** 12 (twelve!!) pull-down claws
4 registration pins
Perfect image steadiness. Better than with many studio cameras operating at 25 fps. Shots made at 360 fps with the 4ER can be used as title backgrounds.
- Please note:**
Wooden undergrounds could reduce the image steadiness.



Description of the PHOTO-SONICS 4ER - 35mm High Speed Camera

Sharpness:

While the film is being exposed, it is held flat and steady with the help of the build-in vacuum pump -360 times a second!! The film is held rock steady, with no breathing or standing waves - sharp as a needle, frame for frame.

Reflex Viewfinder:

The viewfinder image is mirrored out by a beam splitter. This allows continual viewfinding during the take.

Light loss:

The beam splitter takes out about 1/2 stop.

Boresight:

The beam splitter is made so that it can be removed, if this is necessary in order to use certain lenses (see Customer lenses). When the beam splitter is removed, the viewfinder and the video assist are disabled. Viewfinding and video recording are not possible when the beam splitter is removed.

The set-up can be checked before and after the take by placing the boresight in the gate. In order to do this, the film and the movement must be removed.

Please note:

Because our 4ER camera has the advantage of a continual viewfinder, this rather bothersome procedure with the boresight is not generally necessary. It has rarely been required with our camera (see Customer lenses).

Video Assist:

Colour video camera in PAL standard

Our video assist is coupled to the viewfinder. Nonetheless, both visual viewfinder and the video assist can be used simultaneously during the take.

If fast action is recorded with a normal video camera, the exposure time (1/25 second) is much too long to capture the action clearly. The exposure time of the camera in our video assist can be switched to 1/1.000 second. Fast motion can be recorded almost with no blur. Each field is sharp in slow motion or freeze frame playback. This feature is a great help in judging the instant rushes of a high speed shot.

In addition with the OMEGA-DECK it is possible to simulate the speed reduction and record it.



Description of the PHOTO-SONICS 4ER - 35mm High Speed Camera

Monitor:

Transvideo 10" flat panel monitor
Sony high resolution

Lenses:

Primes Lenses

Canon K35	18mm T1.5
Canon K35	24mm T1.6
Zeiss Distagon	28mm T2.8
Zeiss Distagon	35mm T2.8
Zeiss Planar	50mm T1.4
Zeiss Planar	85mm T1.4
Cineovision macro	100mm T2.0 (Zeiss glass)
Cineovision macro	135mm T2.0 (Zeiss glass)
Canon	300mm T2.8 (with 1.4x + 2x extender)

Zoom Lens

Cooke Zoom	20-100mm T3.1
Innovision Probe II Plus	T6.3 (incl. 9 / 12 / 16 / 20 / 32mm lenses)

Customer Lenses:

IMPORTANT

The lenses we supply with the 4ER are checked before every job, and the flange focal distance is matched precisely to the camera. If customer lenses are used, the results may not be ideal. The lenses must have a BNCR mount (not adapter). No mechanical or optical parts may extend more than 16mm back from the flange. Parts extending farther back would destroy the beam splitter.

Matte box:

Our camera has been modified to allow the use of the normal ARRI production matte box, with holders for 4"x4" and 4"x5,65" filters (prime lenses) and 6.6"x6.6" filters (Cooke Zoom).

Special Effects:

For special effects shots the camera can be used in all kinds of positions up to 360 fps.

Tripod:

The camera can be mounted on all tripods with 3/8" threading. Because of the total weight of 70kg a heavy duty tripod is required.

Unilux:

The 4ER is compatible with the Unilux Strobe Light System (see Unilux description)