

LensChecker

Portable Lens Test Projector

Developed by StarKish, Los Angeles and P+S Technik, Munich

Made in Germany.



USER MANUAL

English

Subject to technical change without notice.

Before operating this product,
read the instruction carefully and
save this manual for future use.

Version March 2017

Manufacturer Information

The manufacturer of this product is

P+S Technik GmbH Feinmechanik
Siemensstrasse 12
85521 Ottobrunn / Munich
GERMANY

Concerning service and warranty requests, please contact your local distributor or P+S Technik directly.

Please find worldwide authorized representation and dealers on our website www.pstechnik.de or send an e-mail to info@pstechnik.de for the details.

Safety instructions



Temperature range

The LensChecker is tested for a temperature range from 0 °C to +40 °C. For field reports regarding more extreme temperatures contact our technical support by e-mail to support@pstechnik.de.

Maintenance / Special Tools

Do not touch the glass components with sharp objects.
For cleaning only use special lens cleaning supplies.
Refer all servicing to a qualified service professional.

Storage

Please store the LensChecker in a dry and dust free space.



Disposal

Please dispose broken components and devices correctly.

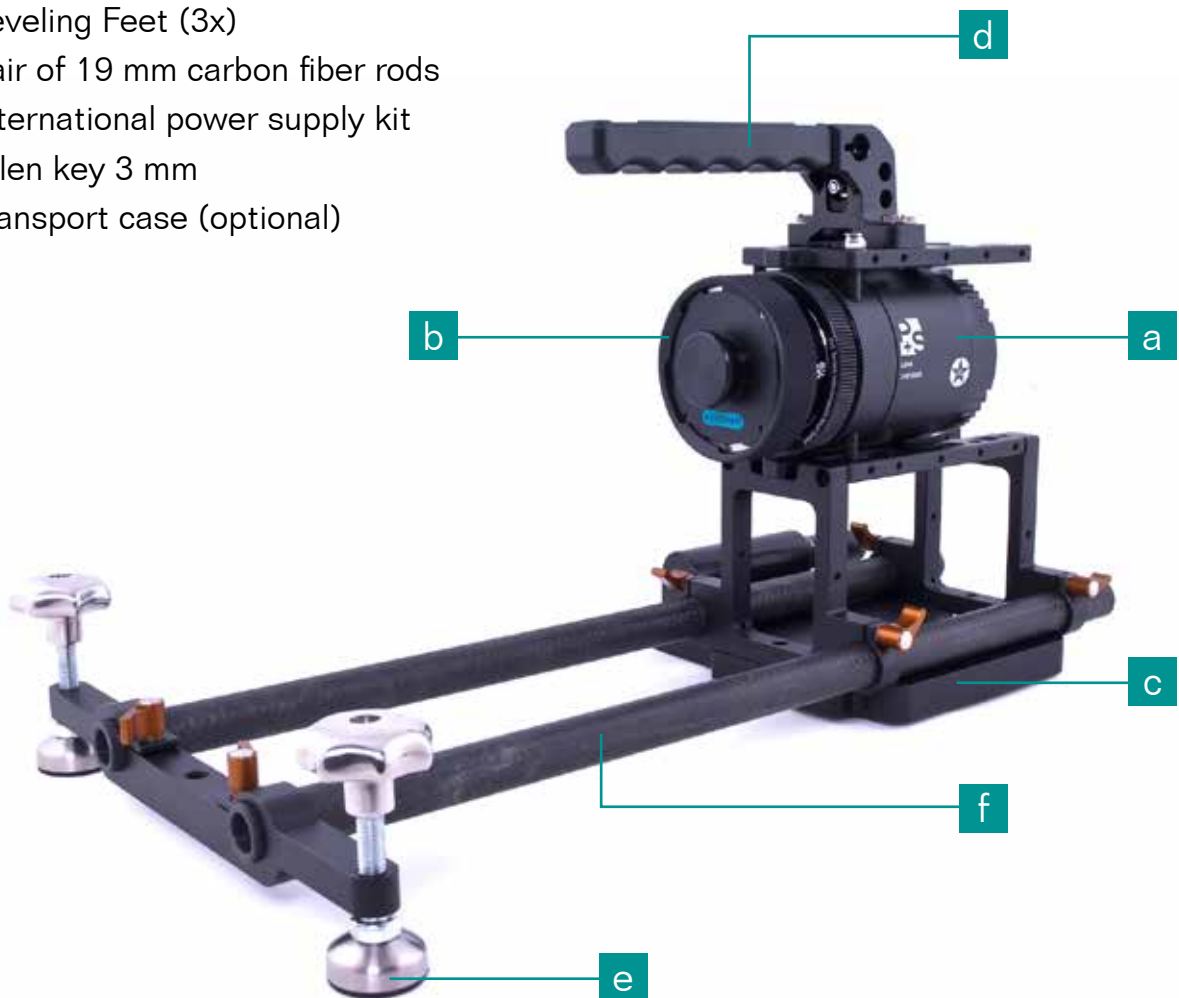
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LensChecker

1. Delivery Content

- a) LensChecker with integrated reticle
(version by Otto Nemenz International, Los Angeles) and IMS interface mount
- b) IMS 2.0 PL-mount for IMS interface fixed with IMS Lock screw
- c) Vacuum suction plate
- d) Universal Handle
- e) Leveling Feet (3x)
- f) Pair of 19 mm carbon fiber rods
- g) International power supply kit
- h) Allen key 3 mm
- i) Transport case (optional)



2. Accessories and Spare Parts

For a complete list refer to our online store or contact us.

a. Lens Mounts P+S Technik Interchangeable Mount System

-
- # 18431 IMS 2.0 PL Mount for cameras with IMS interface

 - # 29249 IMS 2.0 Panavision Mount for IMS mount cameras

 - # 29250 IMS 2.0 BNC-R Mount for IMS mount cameras

 - # 29200 IMS 2.0 Professional EF Mount for IMS mount cameras

 - # 29256 IMS 2.0 Professional F Mount for IMS mount cameras

 - # 29245 IMS 2.0 Canon FD Mount for IMS mount cameras

 - # 29253 IMS 2.0 Leica R Mount for IMS mount cameras

 - # 19906 IMS 1.0 Leica M Mount for cameras with IMS interface

b. Adjustment Tools

-
- # 32430 Laser Distance Meter LEICA Disto™

 - # 32190 Mount to attach Laser Distance Meter

 - # 32441 Calibrated Reference Lens with IMS Mount

c. Power Supply

-
- # 24038 Battery Power Cable for LensChecker (Fi2p / D-Tap)

 - # 32401 International Power Supply Plug Kit

d. Spare Parts

32420 Vacuum Release Screw

32428 Allen Key 3mm

24564 IMS Interface protection cap, camera side

10533 PL-Mount protection cap, camera side

Any further questions about servicing, spare parts or compatible equipment can be sent to: service@pstechnik.de.

3. Setup of the LensChecker

The mobile LensChecker offers three different setups for testing and evaluating lenses:

- A) Placed on a flat surface (Table setup)
- B) Placed on a flat surface and secured with the integrated Vacuum Suction Plate (Table setup with vacuum fixing)
- C) Tripod assembly with 19mm bridge plate (Tripod setup)

To test an optical system or a lens in many cases only requires the LensChecker to be set up in a room that can easily be darkened and has a light colored wall to display the projection (a white wall is preferred to get the most accurate results especially if a color check is needed on the lens).

In order to acquire the most accurate reading a careful setup is necessary. The built-in bull's eye spirit level and the adjustable leveling feet allow for fast leveling and parallel vertical alignment to the projection screen.



NOTE:

For best results the floor to the projection wall should be at a 90° right angle. Measurement errors may occur if projection surface and LensChecker reticle are not parallel aligned.

The parallel alignment of the LensChecker towards the projection surface is most easily achieved with a reference lens whose symmetry is known. Once you are satisfied with the alignment you can lock the LensChecker in the aligned position using the Vacuum Suction plate.

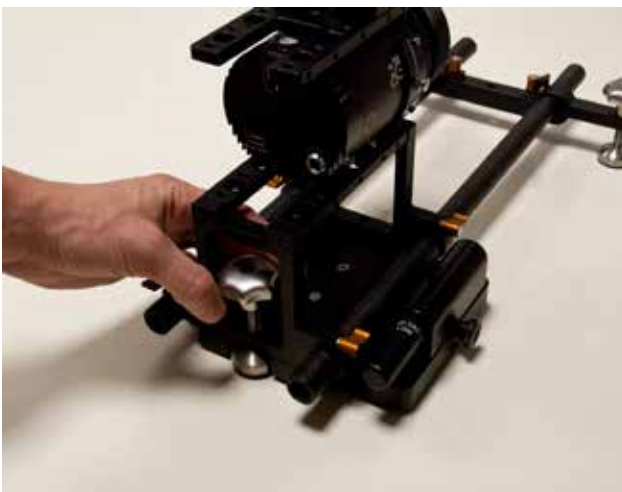
LensChecker

A) Table Setup

1. Use the adjustable leveling feet to raise the LensChecker high enough that the vacuum is not touching the surface the LensChecker is on. By not using the Vacuum Suction Plate you will allow for a quick setup and breakdown of the LensChecker.
2. Then use the front two leveling feet with the spirit level to set the horizontal position.

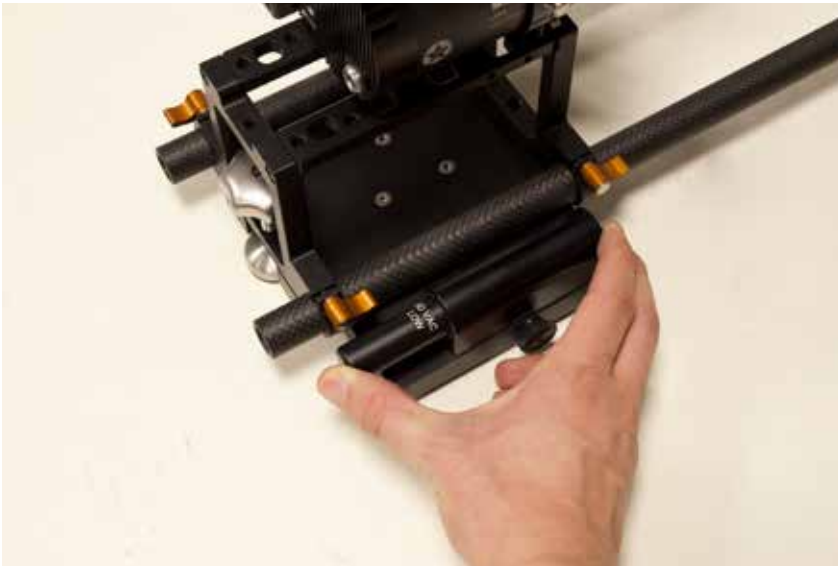


3. Next you will want to use the back leveling foot with the spirit level to set the vertical.



B) Table Setup

1. Adjust the leveling feet so that the vacuum suction plate is in contact with the surface that the LensChecker is placed on.
2. Create a vacuum with the pump (3x pumps should suffice).
3. Use the leveling feet to align the LensChecker as described in setup A. Depending on the quality and texture of the surface, the vacuum may have to be renewed after some time.



NOTE:

Always double check the spirit level after changing lenses to ensure the most accurate readings at all times.



WARNING:

Always release the vacuum using the ventilation screw, otherwise the vacuum cup can be destroyed or the LensChecker can be damaged.

C) Tripod Setup



1. Remove the front leveling feet bracket and carefully slide bracket off the carbon fiber rods.
2. Then guide the bridge plate carefully onto the carbon fiber rods.
3. It is recommended to level the tripod then attach the LensChecker so leveling the LensChecker itself is more easily accomplished.
4. Alignment then can be checked with a reference lens with known symmetry.

a. IMS Mount System

P+S Technik introduced the IMS Interchangeable Mount System for their Image Converters and Cameras 2001. Thanks the 19mm intermediate plane it was possible to make a wide range of lens mount adapters. Since then the IMS Mount became the standard especially for lens test equipment such as projectors and collimators.

The IMS is a positive lock mount. The adapter can be locked/unlocked with a hex screw to avoid a mishandling the lens. Only a couple of turns of the hex screw should be sufficient to unlock the mount. We suggest not taking the hex screw out completely because it is very easy to lose.



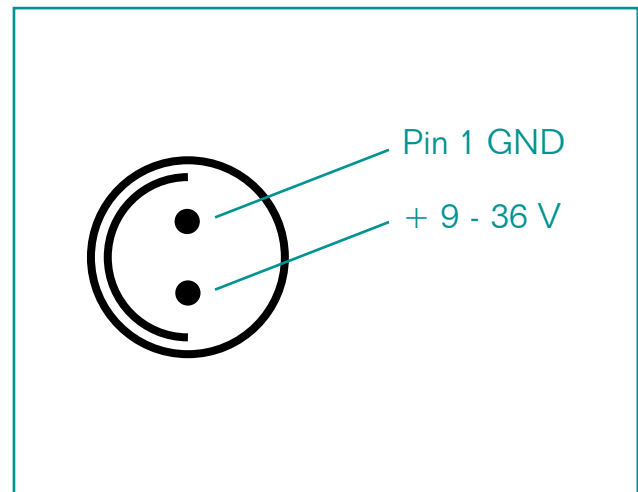
LensChecker

b. Power up the LensChecker

The LensChecker requires a DC power input from 9-36 Volt 2.1 Amps. Use the international power supply kit that is included.

A D-Tap 9-36 V battery can be used as well, refer to the accessory list for details.

If you manufacture your own cable (by an expert) see the power input data for details:



Also featured is an 5 Volt 2.5 Amp USB outlet to power a small USB goose neck light to allow you to read the lens scales while operating the LensChecker in the dark.

c. Adjust LensChecker with a reference lens

1. First adjust the LensChecker to be level by using the leveling feet and reference the spirit level.
2. Mount the Reference Lens (# 32441 or another lens you know well).
3. Project the image with open iris / fully open aperture.
4. Focus on the Siemens Star at position D left and right (not at the middle) to be same sharp. If you cannot get both D positions in focus the LensChecker must be turned to the left or right to fix alignment.
5. Check the Siemens Star at position D up and down in the same manner.
6. Fix LensChecker in place with the Vacuum Suction Plate (see Setup B)
7. If you cannot get both D Siemens stars in focus use the back leveling foot.

4. Frequently Asked Questions

Please check online at www.pstechnik.de/ressourcen/faq/

5. Maintenance

The P+S Technik LensChecker is designed to be maintenance-free and easy to use. But because of the number of mechanical components service is required from time to time. Please use only appropriate tools for blowing out and only use a cleaner in the case of stubborn dirt.

Find detailed instructions regarding the cleaning process in the separate service manual of the LensChecker. P+S Technik offers workshops for technicians, which explains the service in detail.

6. Technical Data

Subject to technical change without notice.

Light source	30 W LED ~ 3300 lm
Max. projection distance	20 m / 60 ft (recommended)
Max. projected image circle	43,267 mm stills full frame 24 x 36 mm
Lens mount	PL mount included IMS exchange mount interface
Lens mount adapters available	Panavision, BNC-R Canon EF, Canon FD, Leica M, Leica R, Nikon F Sony E, B4 C-mount Customised lens mounts on request
Power supply	110 / 220 V, international adapters
Power consumption	9 - 36 V DC / 2.1 A (Fischer 2pin)
Power outlet	5 V / 2.5 A (USB)
Operating temperature range	0 - 40° C
Weight	3,5 kg (LensChecker only) 9,8 kg (with trolley case)
Dimensions	450 x 250 x 170 mm (LensChecker only) 560 x 350 x 230 mm (with trolley case)

LensChecker

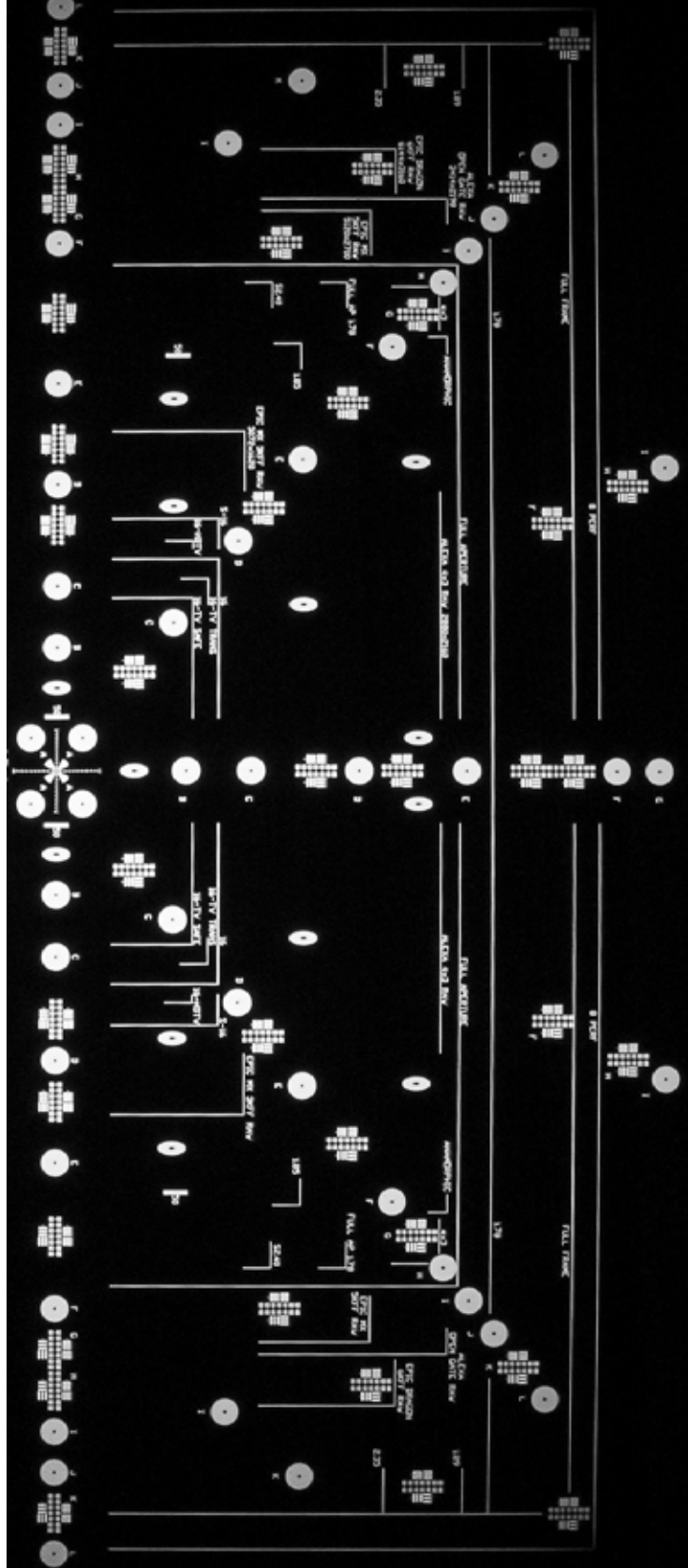
Lens Test Pattern of the LensChecker

This version of the LensChecker uses a reticle with the lens test pattern designed by Otto Nemenz International and shows the following format markings:

- 16 TV Safe
- 16 HD TV
- 16 Trans Safe
- S-16
- Epic MX 3K FF Raw
- S2.40
- 1.85
- Full Aperture 1.78
- Epic MX 5k FF Raw
- 2.35
- Epic Dragon 6k FF Raw
- Alexa 4x Raw
- Anamorphic
- Alexa Open Gate Raw
- Full Aperture
- 1.89
- 1.78
- Full Frame (24x36)
- 8 Perf

NOTE:

Picture shows only upper half of the lens test pattern



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