



trublu® calibration device

With the aid of the trublu® calibration device, all sensors of the pedar® system are individually calibrated using a known air pressure. This procedure is computer-assisted and can be performed in a short time.

Calibration guarantees accurate and reproducible data. The calibration curves, one for each sensor, can be checked by the user at any time.

This method guarantees the accuracy of the absolute values measured, not only for the total force (dynamic body weight), but also for the local load on each area of the foot. By utilizing this method the body weight is determined by the pedar® system - not given by the user. The system also provides accurate and repeatable dynamic local pressure information, which often is the true information needed.

The trublu® calibration device can be delivered with the pedar® system and the user can test the accuracy of the equipment at any time.

The pedar® system is delivered with calibrated measurement insoles. Calibration should be checked at least once a year.

The pedar® data acquisition software contains many helpful and user-friendly options for fast pressure data collection and analysis.

Features of pedar® software

- individual selection of sensor insole size
- online and offline modes
- 2D or 3D display
- isobar display
- numeric display
- animation of foot contact phases
- maximum pressure picture (MPP)
- step selection
- step timing analysis
- sensor area selection
- force-time integral
- pressure-time integral
- comparison picture pre/post (difference picture)
- averaged and individual gait lines
- ASCII output
- analysis of long term measurements
- links to novel databases
- links to novel scientific software
- combined files save both pressure and video
- synchronises with EMG and video based gait analysis systems
- links with pedoport® software

novel gmbh (Germany) • Ismaninger Str. 51 • D-81675 Munich
tel: +49 (0)89-41 77 67-0 • fax: +49 (0)89-41 77 67-99
e-mail: novel@novel.de • web: www.novel.de

novel electronics inc. (USA) • 964 Grand Avenue • St. Paul, MN 55105
tel: +1(651) 221-0505 • fax: +1(651) 221-0404
e-mail: novelinc@novelusa.com • web: www.novelusa.com

MG Atzori Consultants Ltd • 113, Arnold Road • Nottingham, NG5 5HA
tel/fax: +44 (0)11 59 62 26 22 • e-mail: noveluk@novel.de

All systems from novel operate with high quality, calibrated sensors and provide reliable and reproducible long term measurements. emed®, pedar®, pliance®, trublu® and the novel logo (colored foot) are the registered trademarks of novel gmbh © 1992-2012



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The quality in-shoe dynamic pressure measuring system

The pedar® system is an accurate and reliable pressure distribution measuring system for monitoring local loads between the foot and the shoe. The pedar® offers the ultimate versatility with its multiple standard features and operating modes.



pedar® system

The pedar® can be tethered to a PC via a fiber optic/USB cable. It can also function in a mobile capacity with its built-in Bluetooth® technology or, as yet another alternative, the pedar® system's removeable SD card storage allowing data to be collected anywhere and later downloaded to the computer.

The pedar® can also be used for long-term monitoring. For that application novel has developed the **pedoport® software** which links perfectly with the system. The software allows long term monitoring of force or pressure over many hours. Special batteries and insoles for monitoring applications are available.

All of these features make the pedar® system extremely mobile and flexible to meet virtually all testing needs. The ability to use the pedar® in real life situations enhances understanding of actual activities, such as walking, running, climbing stairs, carrying loads, playing soccer, or even riding a bicycle.

The pedar® system connects to highly conforming, elastic sensor insoles that cover the entire plantar surface of the foot, and to sensor pads for the dorsal, medial or lateral areas of the foot.

The pedar® system allows multiple synchronisation options to use with EMG and video systems for gait analysis. The pedar® can be started and synchronised by a small wireless remote control.

Applications of pedar® system

- footwear research and design
- aid in orthotic design
- rehabilitation assessment
- kinetic analysis of free gait
- long term load monitoring
- sport biomechanics
- biofeedback

Technical data for pedar® system	
dimensions (mm)	150x100x40
weight (g)	360
number of sensors (max.)	256 / 1024
measurement frequency (sensors/sec)	20,000
storage type	2 GB SD flash
operating system	Windows + MAC Dual Boot
power supply	NIMH battery, 4.5 h
computer interface	fiber optic/USB and Bluetooth®
sync option	fiber optic/TTL, in and out/wireless
telemetry	Bluetooth®
wireless remote control	FM



fitting the pedar® insoles onto the orthotics

Technical data for pedar® insoles	
shoe size	22 to 49 (European), 3 widths
thickness (mm)	1.9 (min. 1)
number of sensors	85 – 99
pressure range (kPa)	15 – 600 or 30 – 1200
hysteresis (%)	< 7
resolution (kPa)	2.5 or 5
offset temperature drift kPa/K	< 0.5
minimal bending radius (mm)	20

Bluetooth® telemetry

The pedar® functions with Bluetooth® wireless telemetry systems in a wide testing range. The pedar® system includes a built-in Bluetooth® system and communicates with various Bluetooth® PC adapters. The telemetry allows the user to watch the subject and at the same time fully control the testing from a PC. The dynamic pressure data can be viewed online and the subject advised how to perform. The system is a perfect tool for teaching and for biofeedback testing.