



IOS “I-PHONE” Version

I-PHONE is a registered trademark of Apple Corp.

EZ-LEVEL-PRO

Advanced Wireless Inclinometer, IOS version

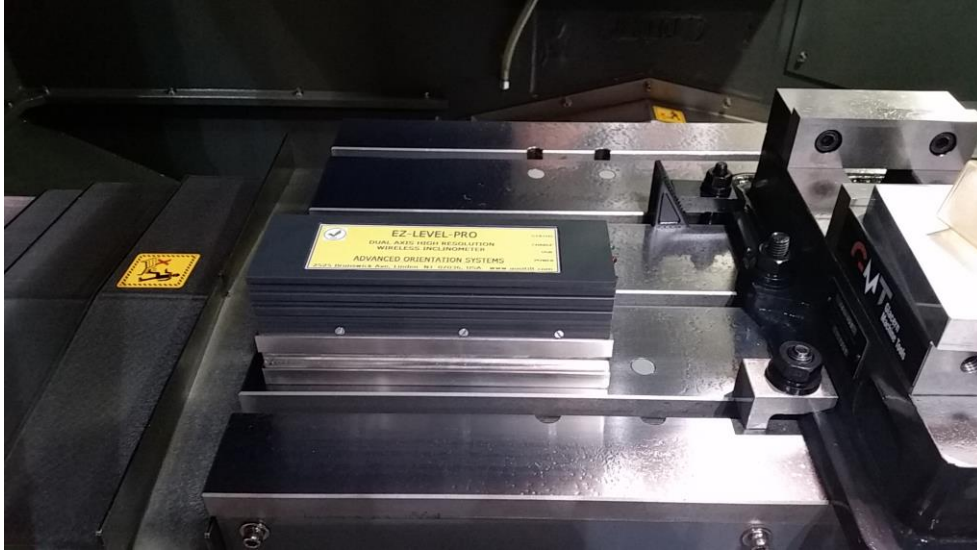


Advanced Orientation Systems, Inc, a NJ based manufacturer of inclination and navigation instrumentation had released EZ-LEVEL-PRO, a wireless IOS version of its popular dual axis high resolution inclination system.

The wireless system, just like its predecessor, was designed to help installers and service professionals to be more efficient when installing or verifying the installation of any CNC or other work center.

Finally a ONE PERSON setup of any CNC center is possible. Just place the EZ-LEVEL-PRO on work table as seen in the following photo, and you are ready to level the machine without additional help. Walk around the machine with your phone and lift/lower adjustment pads based on interactive display which continuously monitors in real time level of the CNC machine. **No need to get up and run back to the work table to look at the level. No need to hire a helper to assist. A MUST TO HAVE for riggers and machine installers. Save money and time. Be more efficient.**

Calibrated to NIST, this advanced inclinometer can be used to verify machine orientation, table flatness, table wobble, straightness, spindle parallelism, table topography and many other QC functions including spindle perpendicularity, shaft level and shaft plumb.

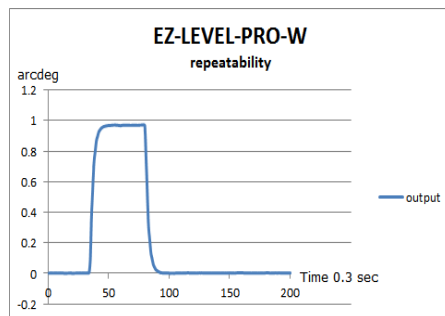


EZ-LEVEL-PRO installed on a CNC machining table.

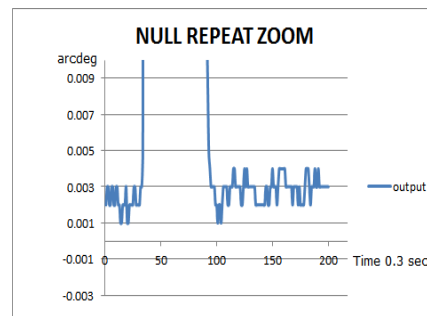
TECHNICAL DESCRIPTION

EZ-LEVEL-PRO is an advanced wireless dual axis inclinometer system equipped with a rugged 8" long remote tilt sensing probe. It allows real time monitoring of PITCH and ROLL angles on any **IOS** phone or tablet via built in Low Energy Bluetooth wireless interface. Menu driven system intuitively controls display functions while the operator is located away from the actual tilting surface.

EZ-LEVEL-PRO operates in full ± 15 degrees of tilt in both Pitch and Roll with resolution and repeatability of 0.001^0 . The output can be easily switched between **arcdeg** and **M/meter (Micron/meter)** with a single tap on the screen.



Random angle repeat



zoom into NULL repeat

EZ-LEVEL-PRO includes a rechargeable Lithium Ion battery which can be recharged via standard Micro-USB port like any mobile phone. Same USB port can be used for long term data collection or for long term stability testing of the installed machine or any other long term test.

Phone application software includes short report generator which automatically creates calibration reports that can be used as receipts and/or proof of calibrations. Reports can be e-mailed directly from the phone. Stored data can be used for further processing and analysis. Each logging report is automatically stored in sequentially numbered alphabetized files.

Customer information is easily entered via special CLIENT INFO screen. The client information is included in any report created by custom software.

Standard Specifications:

Pitch range:	+/-15 arcdeg
Roll range:	+/-15 arcdeg
Thermal compensation:	automatic
Angular resolution Pitch:	0.001 arcdeg
Angular resolution Roll:	0.001 arcdeg
Angular repeatability Pitch:	+/-0.001 arcdeg
Angular repeatability Roll:	+/-0.001 arcdeg
Horizontal calibration:	NIST
Comm. Protocol:	ASCII, serial, Bluetooth
Interface:	USB (Micro USB)
Maximum data rate:	10 Hz (readings/sec)
Display resolution/range:	Automatic screen scaling
Display/logging update:	300 msec (default)
Relative measurement mode:	ZERO select via screen
Visual interface:	IOS I-Phone/tablet
Visual APP type:	AOSI dedicated APP
Battery:	Li Ion, internal, rechargeable
Battery charge:	36 hrs nominal, continuous use
Bluetooth versions:	BLE (low energy)
Power (charging/PC logging)	USB port, USB powered
Weight:	8 lb
Dimensions W-L-H:	8" x 3.2" x 2.5"

Prior to using the EZ-LEVEL-PRO, users should turn one power on their EZ-LEVEL-PRO, then activate the BLUETOOTH on their phone and pair the EZ-LEVEL-PRO with the phone.



Proudly manufactured in USA



APP Software Description:

Advanced Orientation Systems, Inc. supplies custom application software that lets users of EZ-LEVEL-PRO to easily interface the tilt system with practically any IOS (I-Phone/I-Pad) phone and allows users graphical and numerical tilt information to be available in real time on their screens.

Custom application software is easy to use, intuitive and does not require special training. Designed to assist in heavy equipment installation and levelling, the EZ-LEVEL-PRO also can be used in QC inspection, process control, CNC operations, construction, automotive and many other applications. **RED** on-screen buttons indicate activated functions.

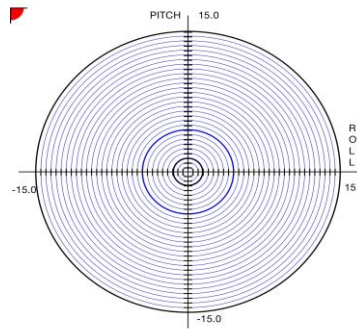
Functions like temporary ZERO, ARCDEG to mm/m unit conversion, PAUSE, provide operators full control over instrument positioning.

Functions like CUSTOMER INPUT, MANUAL / AUTO LOGGING and E-MAILING DATA provide operators full control of test data storage and distribution. Test reports and calibration values can be easily extracted from test files and e-mailed for further storage, analysis or distribution.

SCREENS DESCRIPTIONS

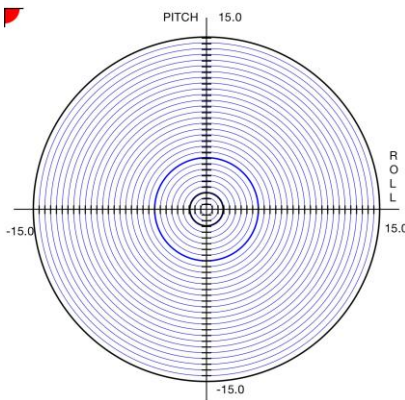


Start ICON

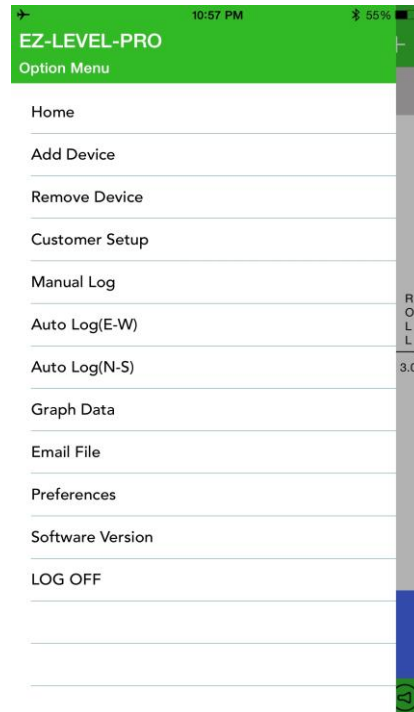


Initial CONNECT screen

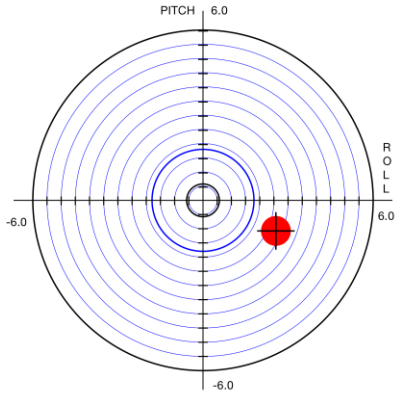
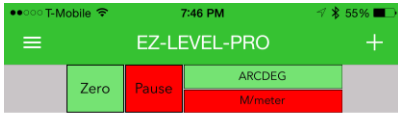
Use ICON to start the Application. Pressing the CONNECT button establishes link to EZ-LEVEL-PRO and then will switch to the main START screen. Pressing START will start the APP. Pressing the MENU symbol in the top left will open MENU listing of all available measurement options.



Main START screen



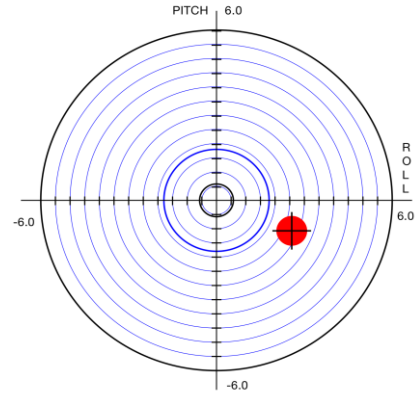
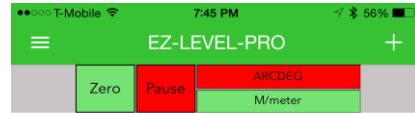
Main MENU screen



Pitch: -18516 RANGE ±6.0
Roll: 44565 M/meter

EZ-LEVEL-PRO

(MICRON) mm/meter screen

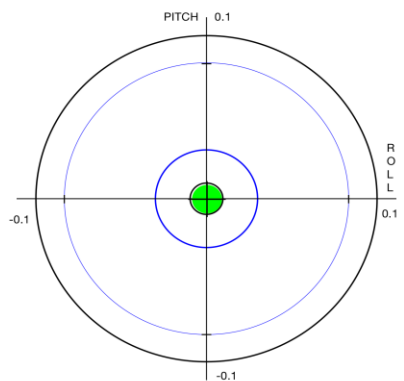
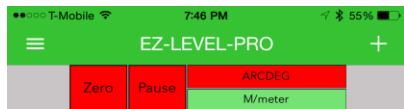


Pitch: -1.057 RANGE ±6.0
Roll: 2.553 ARCDEG

EZ-LEVEL-PRO

arcdeg screen

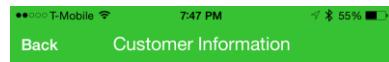
Split button **arcdeg & M/meter** facilitates one push conversion between MICRON and ARCDEG angle measurement nomenclature.



Pitch: -0.000 RANGE ±0.1
Roll: 0.000 ARCDEG

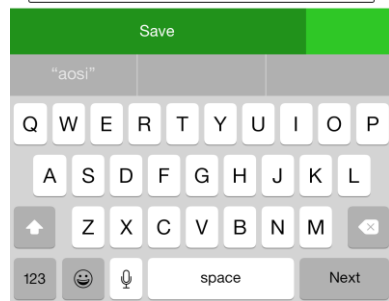
EZ-LEVEL-PRO

Relative measurement forced ZERO screen



Customer Information

(*)Company name is mandatory



CLIENT info entry screen

SPECIAL MENU OPTIONS

CUSTOMER SETUP: allows entry of all customer information including equipment information and comments. Company name is minimum info required.

MANUAL LOG: Allows manual storage of real time pitch and roll data into a comma delimited .txt file. The data is stored each time the PRESS to LOG button is pressed. Logging is terminated when MANUAL LOG STOP button is pressed. The file can be used as a calibration certificate, service receipt or for any other use where test data is required. The name of the file includes four first letters of the clients name, letters Mlog and a serial number of the file. Example: AbcdMlog1.txt

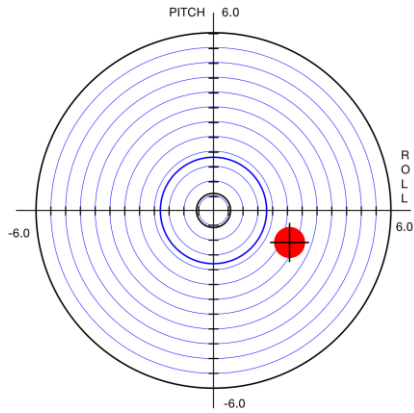
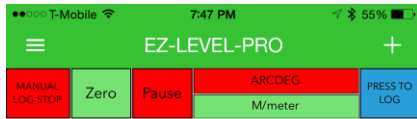
In an event that the customer performs multiple tests, the application will create multiple sequentially numbered test files, one for each test.

AUTO LOG (E-W): Allows automatic storage of real time pitch and roll data into a comma delimited .txt file. The data is automatically stored after the AUTO LOG START button is pressed. Logging is terminated when AUTO LOG STOP button is pressed. The file can be used as a calibration certificate, surface flatness test file, worm gear wobble test file, service receipt or any other use where test data is required. The name of the file includes four first letters of the clients name, letters Alog and a serial number of the file. Example: AbcdAlogEW1.txt

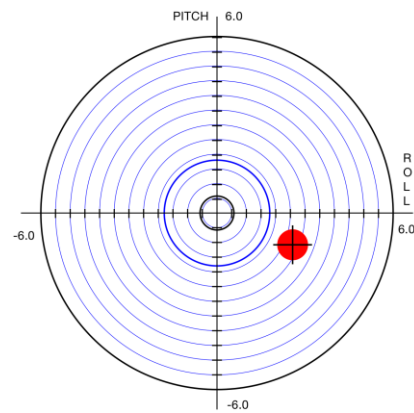
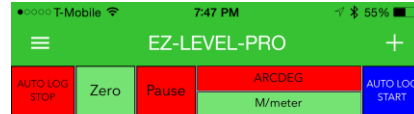
In an event that the customer performs multiple tests, the application will create multiple sequentially numbered test files, one for each test

AUTO LOG (N-S): Allows automatic storage of real time pitch and roll data into a comma delimited .txt file. The data is automatically stored after the AUTO LOG START button is pressed. Logging is terminated when AUTO LOG STOP button is pressed. The file can be used as a calibration certificate, surface flatness test file, worm gear wobble test file, service receipt or any other use where test data is required. The name of the file includes four first letters of the clients name, letters Alog and a serial number of the file. Example: AbcdAlogNS1.txt

The idea behind two separate AUTO LOG tests is to provide CNC users ability to profile work table characteristics while table is moving in two directions (left to right and front to back). The two log files include all required information to create one dimensional or two-dimensional topographic maps of total dynamic work space generated by min-max motion of the work table in two directions.

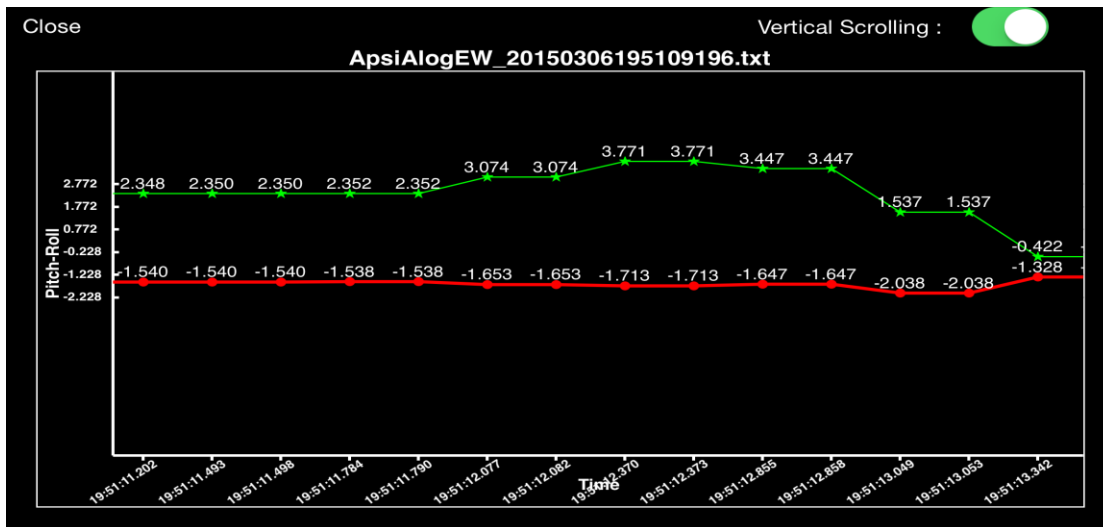


MANUAL LOG screen



AUTO LOG screen

DATA GRAPHING: A special function that lets users instantaneously view graphical representation of the test file. It helps users immediately find problematic sections of worm gear, non-compliant flatness regions of the work table or visually recognize error Max/ Min deviation. Graph view includes positive and negative zoom options.



Typical graph view

EMAIL FILE: Allows users email test files from the internal list to the client, home office or to any other required remote location.

SOFTWARE VERSION: Provides version of the application currently installed.

LOG OFF: Recommended option to properly terminate the application and properly close communication link. To properly Log Off the user should DOUBLE click the HOME button and then SWIPE the EZ-LEVEL-PRO APP up.

EZ-LEVEL-PRO has integrated USB port for direct computer interfacing in cases where the Bluetooth is not available. Test data can be logged in real time via USB linked terminal program and used for further analysis or record keeping.

Standard configuration of the EZ-LEVEL-PRO includes a carry case, sensor probe, universal USB charger and a Micro-USB cable.

For pricing, custom software features, mechanical modifications and additional information please contact AOSI marketing and applications department at 908-474-9595 or via e-mail: sales@aositilt.com

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