



LaserJustage

*based on the
NEDO Height-Finder[®] technology*

Technical Description

V1.1

Revision History

Version	Date	Author	Comments
1.0	02.03.03	Tf	Document created
1.1	25.05.05	Tf	Additions

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1 Introduction

The new NEDO LaserJustage is particularly easy to use. The familiarisation period required is extremely short. The outstanding advantages of Nedo's LaserJustage system are:

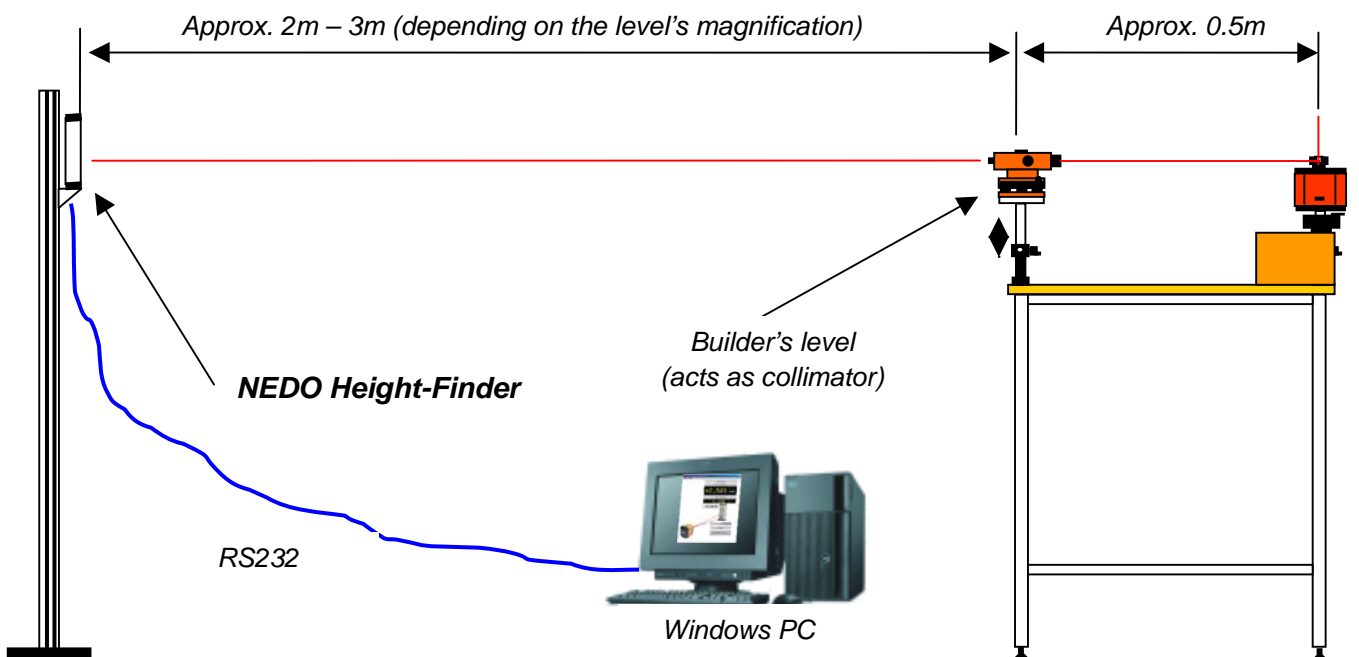
- + **Extremely easy to use**
- + **Direct reading of the accuracy in mm/m at the PC**
- + **Total control: the measured values of the Height-Finder laser receiver can be tracked at the PC**
- + **Adjustment of the laser using graphic assistance**
- + **Reading and calculation errors are impossible as the system is based on tried and tested Height-Finder technology**
- + **Results can be reproduced at any time**
- + **Fast documentation of the results**
- + **Compact design – easy transport and mobile deployment (2.5m ... 3.5m suffices for a 1-axis solution)**

2 System Setup

The setup of NEDO's LaserJustage is based on familiar inverted measurement. Intelligent Height-Finder laser receivers take the place of conventional type laser receivers. One or several Height-Finders are connected with a Windows PC. This enables systems with one or two axes to be realised.

A builders' level is used as a collimator to simulate larger distances.

The following figure shows the schematic setup of the single axis LaserJustage



The following figures show a system with 2 axes:



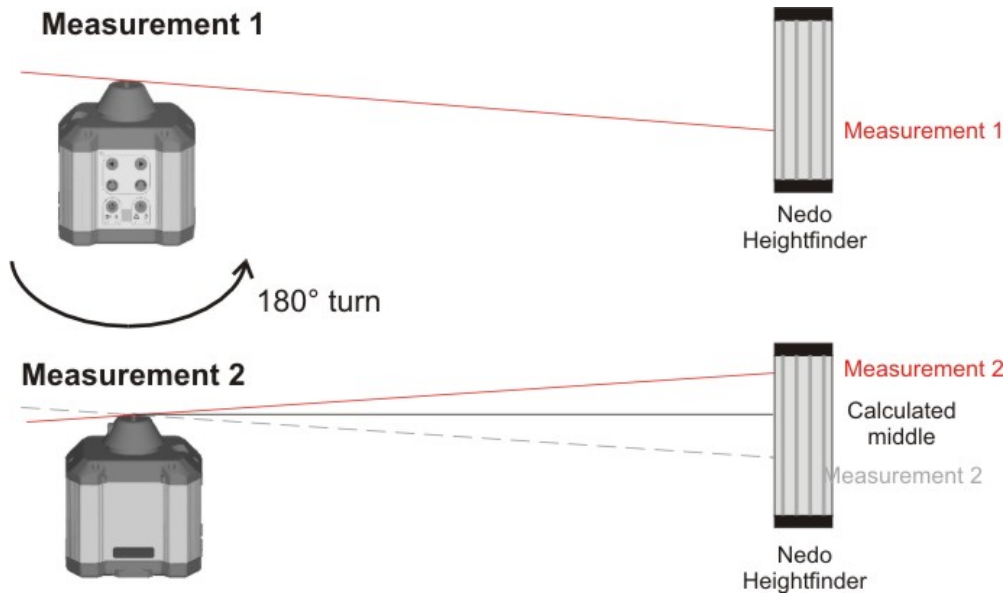
Figure 1: System for simultaneous adjustment of two axes (overall view)



Figure 2: System for simultaneous adjustment of two axes (surveyor's table with PC and laser)

3 How the NEDO LaserJustage works

Horizontal adjustment of the rotating laser is performed by means of inverted measurement. This requires two measurements (measurement 1 / measurement 2). In both cases the PC analyses the height of the incident laser beam at the Height-Finder and calculates a theoretical mean (= set position). The PC software displays the laser's levelling error in mm/m relative to this set position.



Extremely easy to use

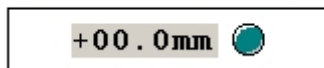
Two (inversed) measurements are taken. The laser's adjustment error immediately appears on the screen in mm/m.



Total control of the Height-Finder

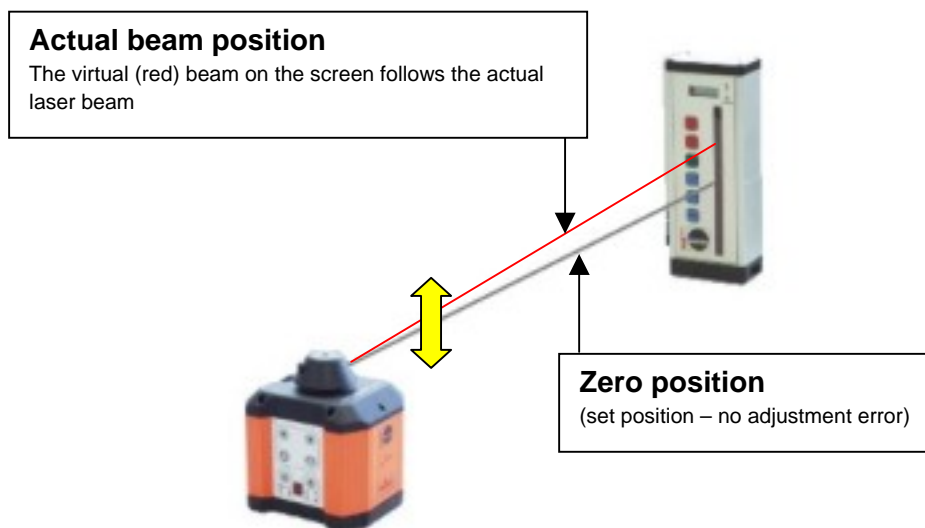
The Height-Finder's current measured value can be tracked on the PC at all times.

Remote Display of Heightfinder





Graphic assistance

The zero position (no adjustment error) and the current beam position are displayed in the software. The laser has to be adjusted so that the two lines coincide.



Fast documentation of the results

A log can be printed out at the press of a button and its layout (logo, address, etc.) can be adjusted to requirements.

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<h2>Report:</h2>		
Customer:	Miller Corp.	
Type of Laser:	Nedo Primus HVA	
Laser ID:	099125	
Comment:	OK	
Checked Axis:	X Axis (horizontal)	
Measured Error:	0,000 mm/m	
Date:	23.04.2007	
<hr style="width: 20%; margin: 0 auto;"/> (Cooper)		
<hr/>		
	Created with NEDO Laser-Adjustment-Tools V1.1.29 www.nedo.com	(C) 2006 Nedo

4 Simple installation and startup

Installing the NEDO LaserJustage system is child's play.

- The Height-Finder is attached according to the installation instructions and connected to a PC (serial interface) using the cable supplied.
- The software provided runs on all the usual Windows operating systems and is installed with a few mouse clicks.
- Relevant geometry data can be graphically entered. The measurement log (see above) can also be adapted to individual needs.

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