



Lab-Trax-4/16

*4-channel data acquisition hardware for use with
Data-Trax™ data recording and analysis software*

www.wpiinc.com



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HARDWARE MANUAL

Serial No. _____

About Your Warranty

This instrument has a limited warranty. To ensure that you receive all notices regarding hardware changes, improvements or recalls as well as software updates if applicable, please complete the warranty registration for this product.

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The **Lab-Trax 4/16** is a low-noise, USB-coupled data acquisition system that provides four channels of isolated analog input, four non-isolated digital inputs and four non-isolated digital outputs. The unit's analog input channels provide 16-bit resolution across a ± 10 Volt input range while its digital I/O are TTL compliant. The analog inputs couple through standard BNC connectors and the digital I/O utilizes a DB-9 receptacle. The **Lab-Trax 4/16** provides plug and play connectivity to the PC while drawing less than 100mA from the USB port, allowing portability when coupled with a laptop. The device has a small foot print and is light weight.

Specifications

Analog Input:

Number of Inputs	4 BNC Connectors
Input Impedance	1 MOhm
Input Range	± 10 Volt
Isolation	2.5 kVRMS
CMRR (Min./Typ.)	> 80 dB / 92 dB
Noise (Max./Typ.)	< ± 610 μ Volt / ± 305 μ Volt

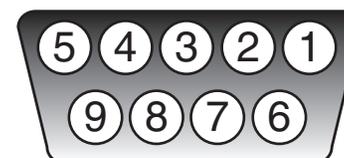
Digital:

Number of Inputs	4 TTL (DB-9 Connector)
Number of Outputs	4 TTL (DB-9 Connector)
Output Impedance	< 200 Ohm
Output Current	< 5mA

Power	5VDC/ <100mA from USB
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Digital I/O

Digital I/O is connected via a DB-9 receptacle on the rear panel and provides four inputs, four outputs, and a ground connection. The digital outputs provide 5 Volts and up to 5mA. The digital inputs are high if D_IN is between 2 and 5 VDC. The digital inputs are low if D_IN is between 0 and 0.8 VDC.



- | | |
|----------------|-----------------|
| DB9.1 == D_IN1 | DB9.9 == D_OUT1 |
| DB9.2 == D_IN2 | DB9.8 == D_OUT2 |
| DB9.3 == D_IN3 | DB9.7 == D_OUT3 |
| DB9.4 == D_IN4 | DB9.6 == D_OUT4 |
| DB9.5 == Gnd | |



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DECLARATION OF CONFORMITY

We: World Precision Instruments, Inc.
 175 Sarasota Center Boulevard
 Sarasota FL 34240-9258
 USA

as the distributor of the apparatus listed, declare that the product:

Title: LAB-TRAX-4/16

to which this declaration relates is in conformity with the following standards or other normative documents:

- Safety:** Exempt
- EMC:** Emissions: EN55022:1998/A1:2000/A2:2003 Class A
 Immunity: EN61326:1997/A1:1998/A2:2001

and therefore conform(s) with the protection requirements of Council Directive 89/336/EEC relating to electromagnetic compatibility.

Issued on: November 2, 2006


 Mr. Cliff Bredenberg
 General Manager
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 175 Sarasota Center Boulevard
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 Mr. Glen Carlquist
 Vice President of Manufacturing
 World Precision Instruments, Inc.
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Warranty

WPI (World Precision Instruments, Inc.) warrants to the original purchaser that this equipment, including its components and parts, shall be free from defects in material and workmanship for a period of one year* from the date of receipt. WPI's obligation under this warranty shall be limited to repair or replacement, at WPI's option, of the equipment or defective components or parts upon receipt thereof f.o.b. WPI, Sarasota, Florida U.S.A. Return of a repaired instrument shall be f.o.b. Sarasota.

The above warranty is contingent upon normal usage and does not cover products which have been modified without WPI's approval or which have been subjected to unusual physical or electrical stress or on which the original identification marks have been removed or altered. The above warranty will not apply if adjustment, repair or parts replacement is required because of accident, neglect, misuse, failure of electric power, air conditioning, humidity control, or causes other than normal and ordinary usage.

To the extent that any of its equipment is furnished by a manufacturer other than WPI, the foregoing warranty shall be applicable only to the extent of the warranty furnished by such other manufacturer. This warranty will not apply to appearance terms, such as knobs, handles, dials or the like.

WPI makes no warranty of any kind, express or implied or statutory, including without limitation any warranties of merchantability and/or fitness for a particular purpose. WPI shall not be liable for any damages, whether direct, indirect, special or consequential arising from a failure of this product to operate in the manner desired by the user. WPI shall not be liable for any damage to data or property that may be caused directly or indirectly by use of this product.

Claims and Returns

- Inspect all shipments upon receipt. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed loss or damage should be reported at once to the carrier and an inspection requested. All claims for shortage or damage must be made within 10 days after receipt of shipment. Claims for lost shipments must be made within 30 days of invoice or other notification of shipment. Please save damaged or pilfered cartons until claim settles. In some instances, photographic documentation may be required. Some items are time sensitive; WPI assumes no extended warranty or any liability for use beyond the date specified on the container.
- WPI cannot be held responsible for items damaged in shipment en route to us. Please enclose merchandise in its original shipping container to avoid damage from handling. We recommend that you insure merchandise when shipping. The customer is responsible for paying shipping expenses including adequate insurance on all items returned.
- Do not return any goods to WPI without obtaining prior approval and instructions (RMA#) from our returns department. Goods returned unauthorized or by collect freight may be refused. The RMA# must be clearly displayed on the outside of the box, or the package will not be accepted. Please contact the RMA department for a request form.
- Goods returned for repair must be reasonably clean and free of hazardous materials.
- A handling fee is charged for goods returned for exchange or credit. This fee may add up to 25% of the sale price depending on the condition of the item. Goods ordered in error are also subject to the handling fee.
- Equipment which was built as a special order cannot be returned.
- Always refer to the RMA# when contacting WPI to obtain a status of your returned item.
- For any other issues regarding a claim or return, please contact the RMA department.

Warning: This equipment is not designed or intended for use on humans.

* Electrodes, batteries and other consumable parts are warranted for 30 days only from the date on which the customer receives these items.