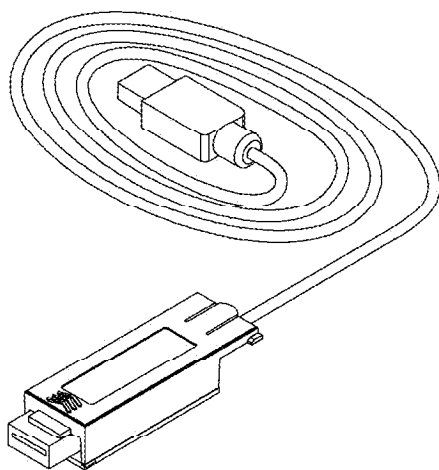




# SCOUT Pro USB Interface Kit

## INSTRUCTION MANUAL



This Interface Kit is for use only with the Ohaus Scout Pro. This accessory has been tested and complies with the approvals listed in the *Scout Pro Instruction Manual*.

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## INTRODUCTION

The Ohaus USB Interface Kit is a unique solution to the problem of connecting a balance to a computer using a Universal Serial Bus (USB). USB devices are categorized into classes such as disk drives, digital cameras, printers, etc. Balances do not have a commonly used class so the Ohaus USB interface uses a generic interface based on the RS232 serial standard.

Data sent from the balance to a computer is in USB format. The USB data is directed to a *virtual port*. This port then appears as an RS232 port to the application program.

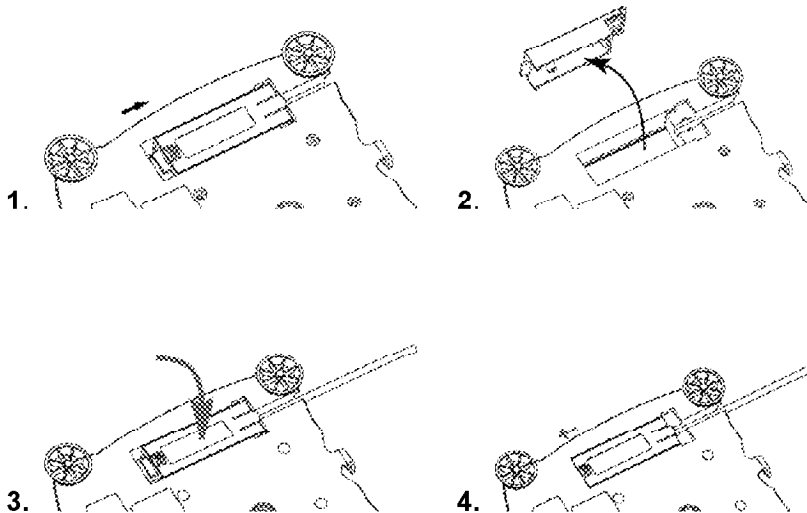
When sending a command from a computer to the balance, the application program sends a command to the *virtual port* as if it were an RS232 port. The computer then directs the command from the *virtual port* to the computers USB connector where the balance is connected. The Adapter Kit receives the USB signal and reacts to the command.

The USB Interface kit includes a CD with the software drivers to create the required *virtual port* on the computer.

## SYSTEM REQUIREMENTS

- PC running Windows 98®, Windows 98SE®, Windows ME®, Windows 2000® or Windows XP®
- Available USB port (Type A, 4-pin, female)

## INTERFACE INSTALLATION



## USB CONNECTION

The USB cable terminates with a 4-pin, male, USB Type A connector.

1. Power on the computer and verify that the USB port is enabled and working properly.
2. Plug the cable's USB connector into the computer's USB connector. Windows® should detect a USB device and the New Hardware Wizard will be initialized.

## VIRTUAL PORT SOFTWARE INSTALLATION

1. Insert the supplied CD into the CD drive.
2. Different versions of Windows® have slightly different steps to load the driver that is on the CD. In all versions the New Hardware Wizard guides you through the required steps to select the driver that is located on the CD.



Example of Windows 2000 Hardware Wizard

3. After clicking **Finish**, the *virtual port* should be ready for use.

Windows® typically adds the virtual port in sequence after the highest number COM port. For example, on PC's equipped with up to 4 COM ports, the virtual port will be COM5.

When using the USB interface with programs that limit the number of COM port designations (e.g. Ohaus MassTracker allows only COM1, 2, 3, & 4), it may be necessary to assign one of these port numbers to the new virtual port. This can be done in the Port Settings of the Device Manager utility, found in the Windows Control Panel.

## BALANCE SETUP

The Scout Pro interface is preset to communicate using the following settings:

2400 baud, 7 bit, no parity, no handshake

If different settings are desired, it will be necessary to change either the Scout Pro settings, or the computer settings.

Upon installation of the interface, Scout Pro will recognize the USB Adapter and add PRINT and USB menus to the structure. Configure the Scout Pro to operate as desired. Refer to the Scout Pro User Manual for assistance in using the menus.

| <u>CAL</u> | <u>SETUP</u> | <u>UNITS</u> | <u>PRINT</u> | <u>USB</u>      | <u>END</u> |
|------------|--------------|--------------|--------------|-----------------|------------|
|            |              |              | Stable       | USB             |            |
|            |              |              | - On         | - On            |            |
|            |              |              | - Off        | - Off           |            |
|            |              |              | A-Print      | Baud            |            |
|            |              |              | - Cont       | - 600           |            |
|            |              |              | - On.stbl    | - 1200          |            |
|            |              |              | - 5sec       | - <b>2400</b>   |            |
|            |              |              | - 15sec      | - 4800          |            |
|            |              |              | - 30sec      | - 9600          |            |
|            |              |              | - 60sec      | - 19200         |            |
|            |              |              | - Off        |                 |            |
|            |              |              | End          | Parity          |            |
|            |              |              | - Yes        | - 7-even        |            |
|            |              |              | - No         | - 7-odd         |            |
|            |              |              |              | - <b>7-none</b> |            |
|            |              |              |              | - 8-none        |            |
|            |              |              |              | Handshake       |            |
|            |              |              |              | - <b>None</b>   |            |
|            |              |              |              | - Xon-Xoff      |            |
|            |              |              |              | - RTS-CTS       |            |
|            |              |              |              | END             |            |
|            |              |              |              | - Yes           |            |
|            |              |              |              | - No            |            |

## **BALANCE SETUP (Continued)**

### **Setup Definitions**

#### **PRINT menu:**

Stable - On ..... Only stable data is output

Auto Print - Continuous ..... Data is output continuously

Auto Print - On Stable ..... Data is automatically output upon stability

Auto Print - (xx) sec..... Data is output every (xx) seconds

Auto Print - Off ..... Data is only output when PRINT button on  
balance is pressed

#### **USB menu:**

USB - Off ..... Turns interface off

Baud, Parity, Handshake..... Set parameters to match printer or  
computer

## **OPERATION**

### **USB Output**

With the Adapter installed the balance will operate in one of the following three ways.

- USB – on, Auto Print – off, Stable – on or off  
Pressing PRINT will send the display data. If Stable is set on, the balance will wait for a stable reading before sending data.
- USB = on, Auto Print = on, Stable = on or off  
The balance will automatically send data based on the settings in the Menu. If Stable is set on only stable will be sent.
- RS232 = off  
The interface is turned off. During battery operation, turning the USB Interface off saves significant power.

## USB Output (Continued)

Data sent from the Scout Pro is in standard ASCII format terminated with a CRLF (carriage return-line feed). The Output string is as follows:

|                  |                                                 |
|------------------|-------------------------------------------------|
| [weight]         | 10 characters (right justified)                 |
| [space]          | 1 character                                     |
| [unit]           | 5 characters max (left justified)               |
| [space]          | 1 character                                     |
| [stability ind.] | 1 character: ? when unstable, blank when stable |
| [space]          | 1 character                                     |
| [legend]         | 10 character: TOTAL, hh:mm:ss (interval), etc.  |
| [CR]             | 1 character                                     |
| [LF]             | 1 character                                     |

Output examples: (Note: \* and \_ indicate spaces)

\*\*\*\*\*192.21\_g

- Manual, Continuous or On-Stable printing

\*\*\*\*\*0.01\_g\_?

- Unstable reading

\*\*\*\*\*0.01\_g\_\_00:00:00

- Interval Printing (15 sec interval)

\*\*\*\*\*176.30\_g\_?\_00:00:15

- Unstable reading at 15 seconds

\*\*\*\*\*192.08\_g\_\_00:00:30

- Stable reading at 30 seconds

\*\*\*\*\*192.21\_g

\*\*\*\*\*207.80\_g\_TOTAL

- Totalize Mode (manual printing only)

## OPERATION (Continued)

### USB Input

Scout Pro will respond to various commands sent via the interface adapter. The balance will respond to the following commands when terminated with a CR or CRLF.

|               |                                                          |
|---------------|----------------------------------------------------------|
| <b>?</b>      | prints current mode                                      |
| <b>0A</b>     | turns Auto-print off                                     |
| <b>SA</b>     | Auto-print on, prints on stability                       |
| <b>CA</b>     | Continuous Auto-print                                    |
| <b>(n)A</b>   | Auto-print on 1 to 3600 second intervals (n = 1 to 3600) |
| <b>C</b>      | initiates Span calibration                               |
| <b>L</b>      | initiates Linearity calibration                          |
| <b>0M</b>     | gram mode                                                |
| <b>1M</b>     | ounce mode                                               |
| <b>2M</b>     | troy ounce mode                                          |
| <b>3M</b>     | pennyweight mode                                         |
| <b>4M</b>     | parts counting mode                                      |
| <b>5M</b>     | pound mode                                               |
| <b>T</b>      | same as pressing <b>ON-ZERO</b>                          |
| <b>V</b>      | print software version                                   |
| <b>(Esc)R</b> | resets balance to factory defaults                       |
| <b>P</b>      | same function as pressing the <b>PRINT</b> key           |
| <b>LE</b>     | prints last error code (e.g. <b>Err 0</b> )              |
| <b>0S</b>     | print unstable data                                      |
| <b>1S</b>     | print stable data only                                   |