



RANGER 3000
RANGER COUNT 3000
VALOR 7000

USB Interface Instruction Manual

INTRODUCTION

This Interface Kit is for use with the following Ohaus products: Ranger 3000, Ranger Count 3000 and Valor 7000.

The OHAUS USB Interface Kit is a unique solution to the problem of connecting a scale to a computer using a Universal Serial Bus (USB). USB devices are categorized into classes such as disk drives, digital cameras, printers, etc. Scales 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 computer's 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.

KIT CONTENTS

- USB PC Board
- Pressure Button
- Cable
- Screws (4)
- Instruction Manual
- CD

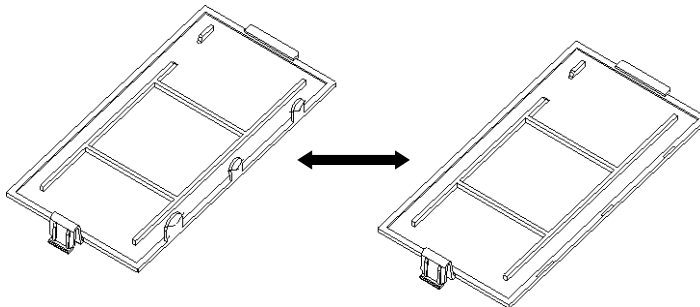
SYSTEM REQUIREMENTS

- PC running Windows 98®, Windows 98SE®, Windows ME®, Windows 2000®, Windows XP® or Windows 7®
- Available USB port

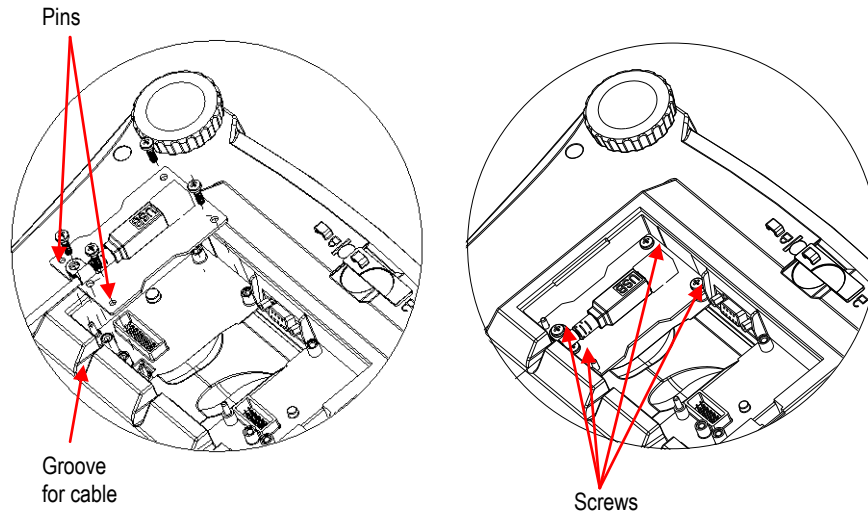
INTERFACE INSTALLATION

Install the Interface module on the underside of the balance as shown.

1. Remove the red interface options cover.



2. Install the Interface PCB. Push it through the pins and secure it with the 4 screws.



3. Connect a USB Cable.

4. Place the cord in the groove and put the red interface option cover back on.

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.

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 XP Hardware Wizard

2. 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

- A) The Ohaus Interface is preset to communicate using the following settings: 9600 baud, 8 bit, no parity, no handshake. If different settings are desired, it will be necessary to change either the balance settings, or the computer settings.
- B) Upon installation of the interface, the balance will recognize the USB Interface and add relevant items to the menu. Configure the balance to the desired USB and printing parameters; refer to the balance User Manual for assistance in using the menus

PRINT2

Reset
 Stable Only
 On, Off
 A.Print
 off, On.Stbl, Int, cont, Acc
 Content
 Layout
 Data.Tr
 End

USB

Reset
 Baud Rate
 600, 1200, 2400, 4800, 9600, 19200
 Parity
 7-even, 7-odd, 7-none, 8-none
 Stop bit
 1, 2
 Handshake
 None, Xon-Xoff
 End

SETUP DEFINITIONS

PRINT / Stable - On
 PRINT / Auto Print – Continuous
 PRINT / Auto Print – On Stable
 PRINT / Auto Print – (xx) sec
 PRINT / Auto Print – Off
 COM / Baud, Parity, Handshake

Balance transmits stable data only.
 Balance repeatedly sends data as fast as possible.
 Balance automatically outputs data upon stability.
 Balance sends data every (xx) seconds.
 Only sends data when PRINT is pressed.
 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:

- Auto Print = off, Stable = on or off
 Pressing PRINT will send the display data based on the settings in the Menu.
 If Stable is set to On, the balance will wait for a stable reading before sending data.
- Auto Print = not off, Stable = on or off
 The balance will automatically send data.
 If Stable is set to On, only stable values will be sent.

Data sent from the Interface is in standard ASCII format terminated with a [CRLF] (carriage return-line feed). The output format is as follows:

[weight]	9 characters	
[space]	1 character	
[unit]	5 characters max (left justified)	
[space]	1 character	
[stability indicator]	1 character	"?" when unstable, blank when stable
[space]	1 character	
[G/N]	1 character	
[LF]	1 character	

Output examples:

Weigh Mode Printout

	Description	Comment
11.11 kg NET	Result line	If Printx → Content → Result is ON
12.34 kg G	Gross value line	If Printx → Content → Gross is ON and a tare value is entered
11.11 kg NET	Net value line	If Printx → Content → Net is ON and a tare value is entered
1.23 kg T	Tare value line	If Printx → Content → Tare is ON and a tare value is entered
MODE: WEIGH	Mode line	If Printx → Content → Application Mode is ON
<no line printed>	Information line	If Printx → Content → Into is ON

USB INPUT

The balance will respond to various commands sent via the interface adapter. Terminate the following commands with a [CRLF].

Commands

IP	Immediate Print of displayed weight (stable or unstable).
P	Print displayed weight (stable or unstable).
CP	Continuous Print.
SP	Print on Stability.
xS	0S: Turn off "Stable Only" menu item and allow unstable print. 1S: Turn on "Stable Only" menu item and only print stable print.
xP	Interval Print x = Print Interval (1-3600 sec), 0P turns auto print OFF.
Z	Same as pressing Zero Key.
T	Same as pressing Tare Key.
xT	Download Tare value in grams (positive values only). Sending 0T clears tare (if allowed).
PU	Print current unit: g, kg, lb, oz, lb:oz, t, c (custom).
xU	Set scale to unit x: 1=g, 2=kg, 3=lb, 4=oz, 5=lb:oz, 6=t.
xM	Set scale to mode x. M will scroll to next enabled mode.
PV	Version: print name, software revision and LFT ON (if LFT is set ON).
H x "text"	Enter Header line, where x = line number 1 to 5, "text" = header text up to 24 alphanumeric characters.
F x "text"	Enter Footer line, where x = line number 1 to 2, "text" = rear text up to 24 alphanumeric characters.
\EscR	Global reset to reset all menu settings to the original factory defaults (Escape key + 'R' Key).

AUTO-PRINT OPERATION

Once Auto-Print is activated in the menu, the balance will send data as required. To temporarily stop Auto-Printing, press the PRINT key. If there is data in the print buffer the printer will finish printing this data. A second press will resume Auto-Printing

COMPLIANCE**Disposal**

In conformance with the European Directive 2002/96 EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements. Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment. If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Thank you for your contribution to environmental protection.