

RS232 Interface INSTRUCTION MANUAL

Interfaz RS232 MANUAL DE INSTRUCCIONES

Interface RS232 MODE D'EMPLOI

RS232-Schnittstelle BEDIENUNGSANLEITUNG

Interfaccia RS232 MANUALE D'ISTRUZIONI

RS232 组件 使用说明书

RS232 インターフェイス 取扱説明書

RS232 인터페이스

사용 설명서

Интерфейс RS232 РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ



INTRODUCTION

This Interface Kit is for use with OHAUS Scout STX, SPX, SKX, SJX series and PJX series products.

INTERFACE INSTALLATION

Install the Interface module on the mini DIN port (round connector) located at the rear side of the balance as shown. During this process, please make sure the balance is powered off.

Notes:

- Please make sure the small triangle mark (▲) on the round connector is at the bottom and then plug in.
- The appearance of your model may be different.



SETUP

- A) The OHAUS Interface is preset to communicate using the following settings: 9600 baud, 8 bit, no parity, no handshake. Determine the RS232 parameters required for the printer or computer that is to be connected. See computer or printer documentation if assistance is required. If the parameters do not match, it will be necessary to change either the balance settings, or the computer / printer settings.
- B) Upon installation of the interface, the balance will recognize the RS232 Interface and add relevant items to the menu. Configure the balance to the desired RS232 and printing parameters; refer to the balance Instruction Manual for assistance in using the menus.

For SPX, SKX and SJX Balances:

Upon installation, the balance will show [-.5.2.3.2] during the power sequence.

PRINT		RS232	
Reset:	no, yes	Reset:	no, yes
Stable:	off, on	Baud Rate:	1200 9600 115200
A.Print:	off	Parity:	7 even, 7 odd, 7 none,
	On.Stable		8 none
	interval	Stop bit:	1, 2
	accept	Handshake:	none, XOn-XOff
	continuous	Alternate command:	Print (A… P …Z)
Content:	Result (-> off, on)		Tare (ATZ)
	Gross (-> off, on)		Zero (A Z)
	Net (-> off , on)	End RS232:	Exit menu
	Tare (-> off, on)		
	Header (-> off, on)		
	Footer (-> off, on)		
	Mode (-> off, on)		
	Unit (-> off, on)		
	Info (-> off, on)		
Layout:	Format (->Single,Multi)		
-	Feed (->Line, 4 Lines, Form)		
End Print:	Exit menu		

Note: Items with bold font are default settings.

SETUP DEFINITIONS

Menu Settings	Explanation
PRINT / A. Print – Off	Only sends data when PRINT is pressed.
PRINT / A.Print / On.Stable – Load, Load.Zero	Balance only transmits stable data. <i>Load</i> : Print stable value excluding zero <i>Load.Zero</i> : Print stable value including zero
PRINT / A.Print / interval - (xx) sec	Balance sends data every (xx) seconds.
PRINT / Auto Print – accept	Balance only sends stable accept data in Check mode.
PRINT / A.Print – Continuous	Balance repeatedly sends data as fast as possible.
PRINT / Content	On: print relevant content after weighing data Gross – on: G; Net – on: N; Tare – on: T; Info – on: balance will print application mode setting parameters
PRINT / Layout / Format - (Single, Multi)	Single: print all data in one line Multi: print all data in multiple lines
PRINT / Layout / Feed - (Line, 4 Lines, Form)	<i>Line</i> : feed one line after printing <i>4 Lines</i> : feed four lines after printing <i>Form</i> : feed one page after printing (move to the top of next page after printing)

For STX Balances:

Upon installation, the STX balance will show RS232 icon (E) in the upper right corner.

Menu added	Function	n			
Communication RS232 Baud Rate	Set the b	aud rate	(bits per	second)	
	1200	2400	4800	9600	
	19200	38400	57600	115200	
	Ba	ck	Ex	tit	
Transmission	Set the d Transmission	lata bits,	stop bit,	and parit	у.
	761	762	7NI	7N2	
	701	702	8NI	8N2	
	Ba	ck	Ex	cit	
Handshake	Set the fl R5-232 Baud Rate	low contr	ol metho Kandshake	d.	
	No	one	Xon/	Xoff	
Print Settings	For more manual. Communicati	e info, ple	ase refei	^r to the S	TX instruction
	Ba	ck	Ex	it	

For PJX Balances:

Menu Navigation	
PRINT	<u>RS232</u>
Header	Baud Rate
Date and Time	Transmission
Balance ID	Handshake
Balance Name	
User Name	
Project Name	
Application Name	
Result	
Gross Weight	
Net Weight	
Tare Weight	
Line Feed	

Menu Settings	
RS232 Interface Setup	Enter this sub-menu to customize RS232 standard settings. Data may be output to either a printer or a PC.
Baud Rate	Set the baud rate (bits per second). 1200 = 1200 bps 2400 = 2400 bps 4800 = 4800 bps 9600 = 9600 bps 19200 = 19200 bps 38400 = 38400 bps
Transmission	Set the data bits, stop bit, and parity. 8-N-1 = 8 data bits, no parity, stop bit 1 8-N-2 = 8 data bits, no parity, stop bit 2 7-E-1 = 7 data bits, even parity, stop bit 1 7-E-2 = 7 data bits, even parity, stop bit 2 7-N-1 = 7 data bits, no parity, stop bit 1 7-N-2 = 7 data bits, no parity, stop bit 2 7-O-1 = 7 data bits, odd parity, stop bit 1 7-O-2 = 7 data bits, odd parity, stop bit 2
Handshake	Set the flow control method. NONE = no handshaking XON-XOFF = XON/XOFF handshaking HARDWARE = hardware handshaking
Print Settings	For more info, please refer to the PJX instruction manual.

RS232 (DB9) Pin Connections

The RS232 Interface Kit cable terminates with a 9 pin Sub-D female connector. Active pins: Pin 2 = TXD, Pin 3 = RXD, Pin 5 = Ground.

The Interface connector can connect directly to a computer, an OHAUS printer and other printers.

Diagram	Туре	Description	
DATA	Interface type	Voltage interface conforming to EIA RS- 232C/DIN 66020 (CCITT V24/V.28)	
	Max. cable length	15 m	
GND RT_CTL	Signal level	Output:	
		+5 V +15 V (RL = 3 – 7kΩ)	
		-5 V15 V (RL = 3 - 7 kΩ)	
50 0 0 0 01		Input:	
90 0 0 0 6 HAND		+3 V +25 V	
CTS		-3 V25 V	
RTS OUT	Connector	Sub-D, 9-pole, female	
	Operating mode	Full duplex	
Note: RTS, CTS and	Transmission mode	Bit-serial, asynchronous	
available for PJX balances.	Transmission code	ASCII	
	Baud rates	Scout STX, SPX, SKX, SJX balances:	
		1200, 2400, 4800, 9600,	
		19200, 38400, 57600, 115200	
		(firmware selectable)	
		PJX balances:	
		1200, 2400, 4800, 9600, 19200, 38400	
		(firmware selectable)	
	Bits/parity	7-bit/even, 7-bit/odd, 7-bit/none, 8-bit/none (firmware selectable)	
	Stop bits	Stop bit 1, 2	
	Handshake	None, XON/XOFF, RTS/CTS (selectable)	
	End-of-line	Not selectable	

RS232 OUTPUT

With the interface installed the balance will operate in several ways according to the settings.

Print format can be switched by xFMT user command (see command table in RS232 INPUT section).

New Scout Print Format (Default Format):

Output String (Non C	Check Weighing Applications):
[weight]	11 characters (right justified)
[space]	1 character
[unit]	5 characters (right justified)
[space]	1 character
[stability indicator]	1 character; "?" when unstable, space when stable
[space]	1 character
[T/N/G/PT]	2 characters (right justified)
[Term]	2 characters

Note: All of the fields have fixed length.

```
Output example:
```

*****192.21_****g_*_** *******0.01_****g_?_**	A.Print: off; Stable: off Stable reading unstable reading
******95.0_****g_*_*N *****169.6_****g_*_*G ******95.0_****g_*_*N ******74.6_****g_*_*T	A.Print: off; Stable: on Content / Result -> on Content / Gross -> on Content / Net -> on Content / Tare -> on

.

Output String (Check Weighing Application):

[weight]	11 characters (right justified)
[space]	1 character
[unit]	5 characters (right justified)
[space]	1 character
[stability indicator]	1 character; "?" when unstable, space when stable
[space]	1 character
[T/N/G/PT]	2 characters (right justified)
[space]	1 character
[application status]	6 characters (right justified)
[Term]	2 characters
Example:	

A.Print: off; Stable: off Stable reading, Unstable reading

Scout Pro Print Format 1 (for the models 303/123/202/402/602/2001/6001/ 401FZH/601FZH/6000FZH):

Output String:	
[weight]	12 characters (right justified)
[space]	1 character
[unit]	5 characters (left justified)
[space]	1 character
[stability indicator]	1 character; "?" when unstable, space when stable
[Legend]	1~10 characters

Output example:

```
********0.00_g****_*
******12.73_g****_?
*******0.85_oz***_WET*WT
```

Scout Pro Print Format 2 (for the models 401/601/6000):

11 or 12 characters (right justified)
1 character
1~5 characters
1 character
1 character; "?" when unstable, space when stable
1 character
1~10 characters
ength varies with different units. The weight field could be
on if the weight string has a dot or not.

Output example:

```
**********100_g_*_
********273_g_?_
********8.5_oz***_WET*WT
```

Print Format 3 (for Certain POS Systems):

Output String:	
[weight]	11 characters (right justified)
[space]	1 character
[unit]	5 characters (right justified)
[stability indicator]	1 character; "?" when unstable, space when stable
[Term]	2 characters

Note: All of the fields have fixed length.

Output example:

```
*******0.00_****g*
*****12.73_****g?
```

PJX Print Format:

The Result Data, and G/N/T data, is output in the following format.

Field:	Label	Space	Weight	Space	Unit	Space	Stability	Space	G/N	Space	Term. Characters
Length:		1	11	1	5	1	≤ 1	≤ 1	≤ 3	0	≤ 8

RS232 INPUT

The following interface commands will be acknowledged by the Balance. They are case sensitive. The balance will return "ES" for invalid commands.

For SPX, SKX, SJX and STX Balances:

Command	Function
IP	Immediate Print of displayed weight (stable or unstable).
Р	Print displayed weight (stable or unstable).
CP	Continuous Print.
SP	Print on Stability.
SLP	Auto Print stable non-zero displayed weight.
SLZP	Auto Print stable non-zero weight and stable zero reading.
xP	Interval Print x = Print Interval (1-3600 sec) 0P ends interval Print
0P	Turn off Auto Print
Н	H x "text" Enter Header line , where x = line number 1 to 5, "text" = header text up to 24 alphanumeric characters
F	F x "text" Enter Footer line, where x = line number 1 to 2 "text" = footer text up to 24 alphanumeric
	characters
Z	Same as pressing Zero Key
Т	Same as pressing Tare Key.
хT	Establish a preset Tare value in displayed unit, x = preset tare value. Sending 0T clears tare (if allowed).
PT	Prints Tare weight stored in memory.
PM	Print current application mode (weighing mode).
хM	Set current application mode to x. x depends on application 1M: WEIGH, 2M: COUNT,3M: PERCENT, 4M: CHECK, 5M: DYNAMIC, 6M: TOTAL, 7M:DENSITY, 8M: HOLD, 9M:MOLE
М	Scroll to the next enabled mode.
PU	Print Current weighing unit: g, kg, lb, oz, etc
xU	Set balance to unit x: g, kg etc. 1U: g, 2U: kg,3U: ct, 4U: N, 5U: oz, 6U: ozt, 7U: dwt, 8U: lb, 9U:lb:oz, 10U: grn, 11U: thk, 12U: tsg, 13U:ttw , 14U: tola, 15U:c
U	Scroll to the next enabled unit.
ON	Brings out of Standby
OFF	Goes to Standby.
С	Begin Span Calibration
AC	Abort Calibration.
PSN	Print Serial Number.
PV	Print Version: print name, software revision and LFT ON (if LFT is set ON).
x#	Set Counting APW (x) in grams. (must have APW stored)
P#	Print Counting application APW.
x%	Set Percent application reference weight (x) in grams. (must have reference weight stored)
P%	Print Percent application reference weight.
xCO	Set Checkweighing Over Limit in grams x.
xCU	Set Checkweighing Under Limit in grams x.
PCO	Print Checkweighing Over Limit.
PCU	Print Checkweighing Under Limit.
xMM	Set Molar Mass in g/mol .
PMM	Print Molar Mass
xS	0 = print unstable data, 1 = print stable only
xFMT	0 = New Scout print format (default); 1 = Scout Pro print format 1;
	2 = Scout Pro print format 2; 3 = for certain POS system.
xRL	0 = disable response; 1 = enable response.

For PJX balances:

Command	Function				
IP	Immediate Print of displayed weight (stable or unstable).				
Р	Print displayed weight (stable or unstable).				
CP	Continuous Print.				
SP	Print on Stability.				
SLP	Set Auto Print to On Stability, allow non-zero displayed weight be printed.				
SLZP	Set Auto Print to On Stability, allow both stable non-zero weight and stable zero reading printed.				
xP	Set Auto Print to Interval Print, x = print interval (1-3600 sec). OP disable the interval Print				
0P	0P disable interval print, continuous print or print on stability				
Н	Enter Print Header Lines, the format is: H x "header string".				
	Where x = line number 1 to 3, "header string" can be up to 24 alphanumeric characters.				
	If no string in the command, "H x" will read the stored header x.				
Z	Same as pressing Zero Key.				
Т	Same as pressing Tare Key.				
хT	Establish a preset Tare value in displayed unit. x = preset tare value. Sending 0T clears tare (if allowed).				
PT	Prints Tare weight stored in memory.				
PM	Print current application mode (weighing mode).				
xM	Set current application mode to x. x depends on applications				
	1 – Weigh				
	2 – Count				
M	Scroll to the next enabled mode.				
PU	Print Current weighing unit: g, kg, lb, oz, etc				
xU	Set balance to unit x: g, kg etc.				
	1-g				
	2 - Kg 3 - mg				
	4 - ct				
	Coroll to the next enabled unit				
	Scioli to the next enabled unit.				
OFE	Cross to Standby				
011	Begin Shan Calibration				
	Begin Open Calibration				
PSN	Print Serial Number				
PV	Print Version: print name, software revision and LET ON (if LET is set ON)				
×#	Set Counting APW (x) in grams (must have APW stored)				
P#	Print Counting application APW				
×%	Set Percent application reference weight (x) in grams (must have reference weight stored)				
P%	Print Percent application reference weight				
PTIME	Print current time				
PDATE	Print current date				
XTIME	Set Time x format: hh:mm:ss				
XDATE	Set Date x format: mm/dd/vvvv				
xS	0 = print unstable data. 1 = print stable only				
xRL	Enable or disable OK response to non-print commands; x=0 to disable, x=1 to enable				
хT	Pre-tare the container weight (x) in grams.				

ACCESSORIES

For a complete listing of OHAUS printers and other accessories, contact OHAUS Corporation or visit www.ohaus.com.

COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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. For disposal instructions in Europe, refer to www.OHAUS.com/weee. Thank you for your contribution to environmental protection.