

# **PCPLUG**

RS-232 Communication Interface

(Rev. 04, 03-2015)

Laserpoint srl - Via Burona, 51 - 20090 Vimodrone (Milano) - Italy  
Phone +39 02 27 400 236 - Fax +39 02 25 029 161  
[www.laserpoint.eu](http://www.laserpoint.eu)

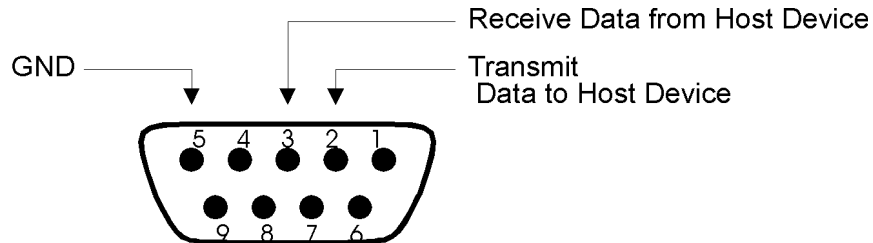
## *Table of Contents*

Table of Contents .....	2
1 Installation.....	3
2 Communication Setting.....	3
3 Power Requirements.....	3
4 Input Commands and answer messages .....	4
4.1 Input Commands .....	4
4.2 Answer messages .....	4
4.3 Commands & Answers description Table.....	5
4.4 Error Message .....	6

## 1 Installation

Connect the **PCPLUG** electronics to the host PC device by a 9-pin, straight through, RS-232 cable with male connector on **PCPLUG** end and female connector on the PC end. The **PCPLUG** connector pin assignment is as follows:

The RS-232 connector on the **PCPLUG** is a 9-pin connector; DB-9 female connector.



## 2 Communication Setting

When you turn ON the **PCPLUG** device it automatically defaults to 9600 baud rate no parity (8 data bits)

- baud rate: 9600bps
- no parity
- 8 data bits
- 1 stop bit

It is not possible to modify these factory settings through the RS-232 interface.

## 3 Power Requirements

2.1mm Power Plug (positive inside) for 12VDC 50mA, optional external power supply.

---

## 4 Input Commands and answer messages

When the **PCPLUS** receives a valid input command, it confirms to the host device that the command has been received and return the answer as follows.

### 4.1 Input Commands

The format of a valid command is as follow:

\*COMMANDNAME\_NUMERICALVALUE:

where:

"\*" : Start of command

":" : End of command

"\_" : space character

**COMMANDNAME** : the instruction as described in the following table; it is

an ASCII character sequence. The command name must be in capitals.

### 4.2 Answer messages

**PCPLUS** device send a message through RS-232 interface only if it received an Input Command from the Host Device. Maximum response time from PLUS is ~100msec.

The format of an answer is as follow:

ANSWER ;

where:

"," : End of answer

**ANSWER** : there are three kind of answer

String: ASCII character sequence

Int: integer number, numerical sequence (in ASCII code)

Float: floating point number, numerical sequence plus decimal point (in ASCII code); ex. the NumericValue 23.45 is codified with the 5 ASCII characters "23.45".

### 4.3 Commands & Answers description Table

Command Name	Description	Answer
HEADN	Displays the Head model	String 8 char
SERNU	Displays the Head serial number	Int 6 digit
WSENS	Displays Head sensibility (mV/W)	Float 3int.5dec
PMSEW	Displays maximum power value the Head can withstand (W)	Float 5int.1dec
LAMBDA	Displays selected wavelength	Int 1-5
CFWL1	Displays the spectral correction coefficient L1	Float 2int.3dec
CFWL2	Displays the spectral correction coefficient L2	Float 2int.3dec
CFWL3	Displays the spectral correction coefficient L3	Float 2int.3dec
CFWL4	Displays the spectral correction coefficient L4	Float 2int.3dec
CFWL5	Displays the spectral correction coefficient L5	Float 2int.3dec
NOML1	Displays L1 Label	String 3 char
NOML2	Displays L2 Label	String 3 char
NOML3	Displays L3 Label	String 3 char
NOML4	Displays L4 Label	String 3 char
NOML5	Displays L5 Label	String 3 char
SETLAM1	Select spectral correction coefficient L1	"ok"
SETLAM2	Select spectral correction coefficient L2	"ok"
SETLAM3	Select spectral correction coefficient L3	"ok"
SETLAM4	Select spectral correction coefficient L4	"ok"
SETLAM5	Select spectral correction coefficient L5	"ok"
PNOMW	Displays Head nominal power (W)	Float 5int.1dec
ZERO	Zeroing <b>PCPLUG</b>	"ok"
OUTPM	Displays measured Power (W) (or measured energy (J) If Energy mode is selected)	Float (VISCA formatted)
TERMI	Thermistor availability: (1) yes, (2) no	Int 1 digit
TEMP	Displays Head temperature x 10 (°C)	Int 3 digit
VISCA	Displays measured value's format mode: 0, 1, 2: W for power 3, 4, 5: mW for power 0-3: no decimal point (ex. 10 W) 1-4: one decimal number (ex. 10.3 W) 2-5: two decimal number (ex. 10.35 W)	Int 1 digit

STATUS	Displays condition byte: bit 0: arm/zeroing done; (1) yes, (0) no bit 1: measure running; (1) yes, (0) no bit 2: Head connected; (1) yes, (0) no bit 3: cool alarm running; (1) yes, (0) no bit 4: wait before start a new measure; (1) yes bit 5: not used; default value (0) bit 6: overflow alarm; (1) yes, (0) no bit 7: termistor connected; (1) yes, (0) no	Int 3 digit (to be converted in binary)
SETX1 0	Set x1 electronic amplifier gain	"ok"
SETX1 1	Set x10 electronic amplifier gain	"ok"
X1D	Displays electronic gain set up: 0: x1 gain 1: x10 gain	Int 1 digit
FHV	Displays firmware & Hardware versions	"HA" + 1 char +"FR" + 2 char
EPOWER	Set <b>PCPLUS</b> in Power Meter Mode	"ok" if properly selected "nov" if not selected
EMSEJ	Displays the maximum power value the Head can measure	Float 5int.1dec
ENERGY	Set <b>PCPLUS</b> in Energy Mode	"ok" if properly selected "nov" if not selected
HOTFE	Displays the duration time (in seconds) of the status "wait before start a new measure" (bit 4, of command STATUS)	Int 3 digit

#### 4.4 Error Message

the following error message may be sent by the **PCPLUS** if a communication error occurs:

??;

where:

?? : RS-232 communication error

"/" : End of answer

An error message may be sent for the following error conditions:

Input command not started with \* character

Input command does not correspond with the command list

Input command not in capitals

