

PeakTech P 6070, P 6172, P 6173 1CH Communication Protocol

Serial Interface Settings

The power supplies integrate the **CH341** USB bus adapter chip. Ensure that the latest [CH341 driver](#) for your operating system is installed.

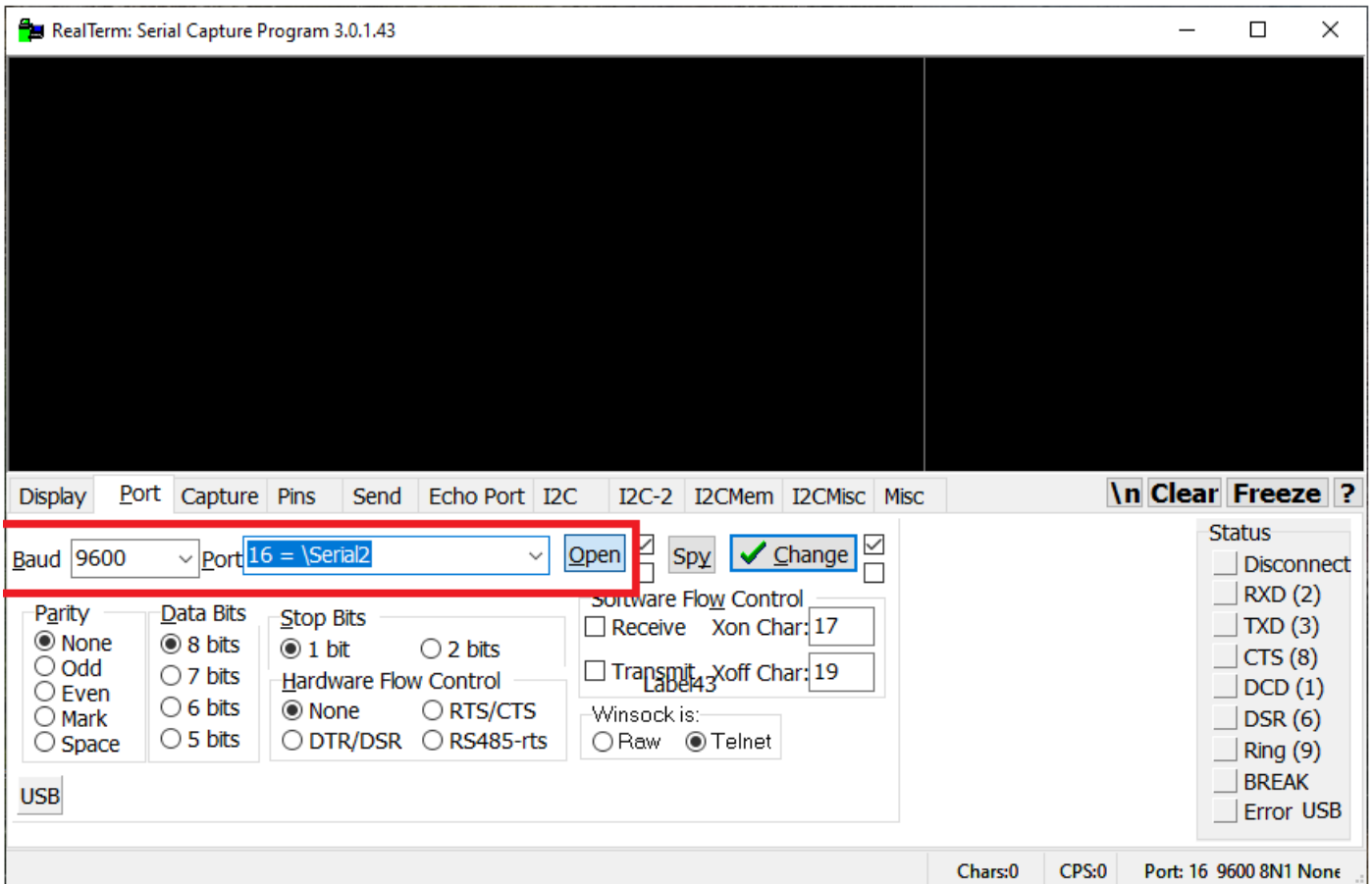
Baud rate: 9600

Data bits: 8

Stop bits: 1

Parity: None

Tip: Use a tool like [RealTerm](#) for initial testing.



(Picture: RealTerm with COM port 16 and appropriate settings selected)

General Command Structure

All command **payloads** consist of a series of two-digit hexadecimal values, forming a core data sequence. Before transmission, this sequence must be validated using a **CRC-16/MODBUS** algorithm in **LSB-first** format. After CRC calculation, the resulting checksum (also referred to as the **check code**) is appended to the core data sequence, followed by a fixed **end code** (0xFD). The final structure forms the complete data frame, which we refer to as a “command”.

Accordingly, all values in amps or volts inside a payload are also encoded in hexadecimal format. Examples can be found in the relevant sections under “Command Reference” below.

Tip: To validate CRC values during development or testing, you can use [crccalc.com](#) or our sample **C#** and **Python** tools. These lightweight console programs compute the CRC-16/MODBUS checksum for any hex input and can be easily incorporated into your own codebase.

F7 02 0A 0A 01 03 E8

Input: ☐ ASCII ☒ HEX **Output:** ☒ HEX ☐ DEC ☐ OCT ☐ BIN ☐ Show processed data (HEX)

Back to all algos
CRC-16



CRC-16/MODBUS	0x8A56	0x4B37	0x8005	0xFFFF	true	true	0x0000
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(Picture: CRC checksum example with crccalc.com. Note that the MSB-first format is used here instead!)

Command-Formation Example

Initial payload: F7 02 0A 1E 01 00 01
 Payload with the CRC checksum and the end code appended: F7 02 0A 1E 01 00 01 92 04 FD
 (A valid command that is ready to be transmitted)

92 04 is the calculated CRC checksum of the payload above (CRC-16/MODBUS, LSB-first)

FD is the end code

Command Reference

Output Control

Set output to ON:

Start code	Address code	Function code	Starting address	Address length	Data	Check code	End code
D0	D1	D2	D3	D4	D5D6	D7D8	D9
F7	01	0A	1E	01	00 01	92 37	FD

Command: F7 01 0A 1E 01 00 01 92 37 FD

Set output to OFF:

Start code	Address code	Function code	Starting address	Address length	Data	Check code	End code
D0	D1	D2	D3	D4	D5D6	D7D8	D9
F7	01	0A	1E	01	00 00	53 F7	FD

Command: F7 01 0A 1E 01 00 00 53 F7 FD

Read All Values

Start code	Address code	Function code	Starting address	Address length	Check code	End code
D0	D1	D2	D3	D4	D5D6	D7
F7	01	03	04	03	62 E8	FD

Command: F7 01 03 04 03 62 E8 FD

Response Frame Breakdown

Start code	Address code	Function code	Starting address	Address length	Data	Check code	End code
D0	D1	D2	D3	D4	D5-D10	D11D12	D13
F7	01	03	04	03	FD

Response frame: F7 01 03 04 03 .. FD

D5 D6	Status (Output ON/OFF)
D7 D8	Voltage (measured)
D9 D10	Current (measured)

Setting Voltage

The value in volts must be converted from decimal to hexadecimal.

For example, **5.14 V** corresponds to '**02 02**' in hexadecimal.

Start code	Address code	Function code	Starting address	Address length	Data	Check code	End code
D0	D1	D2	D3	D4	D5D6	D7D8	D9
F7	01	0A	0A	01	02 02	D6 E2	FD

Command: F7 01 0A 0A 01 02 02 D6 E2 FD

Setting Current

The value in amperes must be converted from decimal to hexadecimal.

For example, **0.514 A** corresponds to '**02 02**' in hexadecimal.

Start code	Address code	Function code	Starting address	Address length	Data	Check code	End code
D0	D1	D2	D3	D4	D5D6	D7D8	D9
F7	01	0A	09	01	02 02	D6 E2	FD

Command (for CH1): F7 01 0A 09 01 02 02 D6 E2 FD

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