

PeakTech P 6075, P 6192, P 6193 2CH 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.

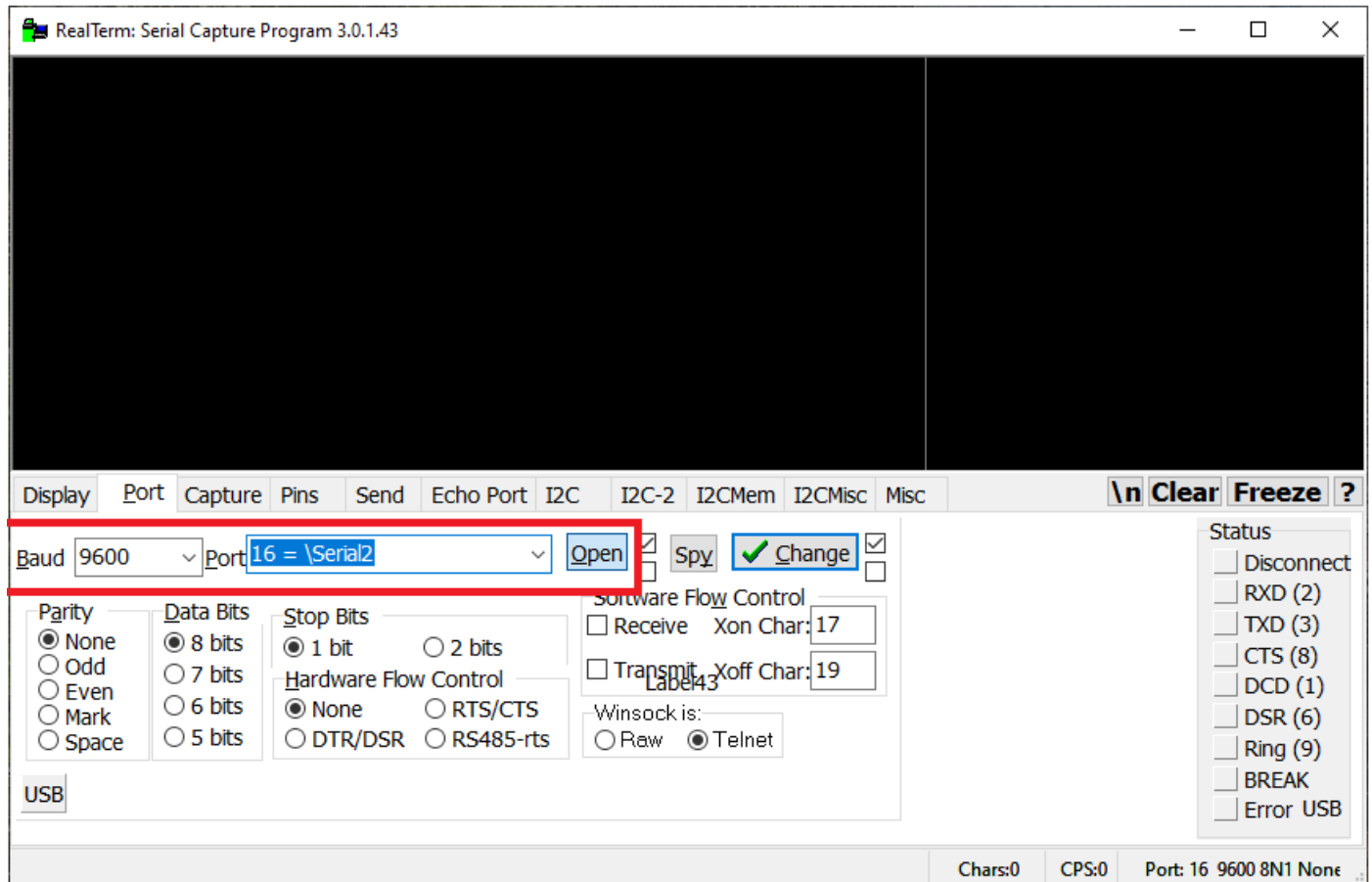
Baud rate: 9600

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)

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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	02	0A	1E	01	00 01	92 04	FD

Command: F7 02 0A 1E 01 00 01 92 04 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	02	0A	1E	01	00 00	53 C4	FD

Command: F7 02 0A 1E 01 00 00 53 C4 FD

Mode Selection SER (Serial Mode)

Set SER 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	02	0A	1F	01	00 01	93 F8	FD

Command: F7 02 0A 1F 01 00 01 93 F8 FD

Set SER 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	02	0A	1F	01	00 00	52 38	FD

Command: F7 02 0A 1F 01 00 00 52 38 FD

Mode Selection PAR (Parallel Mode)

Set PAR 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	02	0A	1F	01	00 02	D3 F9	FD

Command: F7 02 0A 1F 01 00 02 D3 F9 FD

Set PAR 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	02	0A	1F	01	00 00	52 38	FD

Command: F7 02 0A 1F 01 00 00 52 38 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	02	03	04	09	E2 AB	FD

Command: F7 02 03 04 09 E2 AB 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-D22	D23D24	D25
F7	02	03	04	09	FD

Response frame: F7 02 03 04 09 41 01 00 00 00 00 00 00 00 00 00 C8 13 88 00 64 13 88 6B 1F FD

D5	CH2 Status:
	BIT0: CV BIT1: CC BIT2: SER BIT3: PAR BIT5: OUTPUT
D6	CH1 Status:
	BIT0: CV BIT1: CC
D7 D8	CH2 Voltage (measured)
D9 D10	CH2 Current (measured)
D11 D12	CH1 Voltage (measured)
D13 D14	CH1 Current (measured)
D15 D16	CH2 Voltage (setpoint)
D17 D18	CH2 Current (setpoint)
D19 D20	CH1 Voltage (setpoint)
D21 D22	CH1 Current (setpoint)

Setting Voltage

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

For example, **13.00 V** corresponds to '**05 14**' 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	02	0A	0B	01	05 14	54 97	FD

Command (for CH1): F7 02 0A 0B 01 05 14 54 97 FD

Command (for CH2): F7 02 0A 09 01 05 14 55 2F FD

Setting Current

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

For example, **1.20 A** corresponds to '**04 B0**' 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	02	0A	0C	01	04 B0	55 C8	FD

Command (for CH1): F7 02 0A 0C 01 04 B0 55 C8 FD

Command (for CH2): F7 02 0A 0A 01 03 E8 56 8A FD

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