

Serial Protocol for Wanderer FETA M92

Firmware version: 20260814

Baud rate: 19200

Data bits: 8

Parity: None

Stop bits: 1

General Description

All commands are numeric values sent via serial. The device interprets commands based on the numeric value. A command is terminated with a newline character.

The Wanderer FETA M92 has three adjustment points (Axis 1 / Axis 2 / Axis 3). The travel range of each axis is 0 - 4 mm (1 mm = 236467 steps).

1. Move Single Axis to Absolute Position

Command Range: 10.000 - 14.000 (Axis 1); 20.000 - 24.000 (Axis 2); 30.000 - 34.000 (Axis 3)

Format: 10 + position, 20 + position or 30 + position, where position is the absolute target in mm

Example: 12.500 - Axis 1 moves to 2.500 mm.

Note: If the target position is outside 0 - 4 mm, the device returns OOR (out of range) and no motion is performed.

2. Move All Three Axes Simultaneously

Format: Send three values in one command, separated by spaces: (10 + position1) (20 + position2) (30 + position3)

Example: 10.000 21.500 32.000 - Axis 1 moves to 0 mm, Axis 2 to 1.500 mm, Axis 3 to 2.000 mm.

Note: When a three-value command is sent, each value must carry its axis prefix (10 / 20 / 30), otherwise an OOR error may be returned.

3. Continuous Movement (This command should not be used under normal circumstances.)

Command Range: 100001 - 115000 (Axis 1 forward); 200001 - 215000 (Axis 2 forward); 300001 - 315000 (Axis 3 forward); 400001 - 415000 (all axes forward)

Steps per command: $(\text{command} - 100000 / 200000 / 300000 / 400000) \times 100$. Negative command values rotate in the reverse direction (e.g. -100001 to -115000 for Axis 1 reverse).

Example: 110000 - Axis 1 rotates forward for 10000 steps (about 0.042 mm).

Note: Movement can be aborted by sending any character other than a newline.

4. Zero Position Detection

Command: 1800001

Note: The process can be aborted by sending any character other than a newline; the device then returns HOME_ABORT.

5. Set Current Position to Zero (This command should not be used under normal circumstances.)

Command: 1500012

Description: Sets the current positions of all three axes to 0 mm without any motion (stored in EEPROM). The device returns PSE.

6. Set Device ID

Command Range: 1900001 - 1900010

Format: 1900000 + ID

Example: 1900003 - Device ID is set to 3.

Status Output

The Wanderer FETA M92 continuously transmits status information to the COM port (every 200 ms) to help users identify the device and get the device status.

Status Format Structure:

<Model> A <FirmwareVersion> A <Position1_mm> A <Position2_mm> A <Position3_mm> A
<Position1_steps> A <Position2_steps> A <Position3_steps> A <DeviceID> A

Example:

WandererTilterM92A20260814A0.000A1.500A2.000A0A354700A472934A1A