User Manual

ROOTDataLogger I & II Version March 2025 (phiflip)

Caution:

Always use a 12 V battery. Depending on the type, the battery must be removed for transport—gel or liquid batteries may leak if stored improperly.

- The currently installed AGM battery should be leak-proof.

Before data collection:
Charge the battery (ON/OFF switch to OFF.)
Delete old files on the SD card.

Data Collection:

1. **Insert the SD card.**

2. **Connect the sensors:**
   – Connect the load cell to the LOAD socket (6).
   – Connect the draw-wire sensor to the CABLE socket (5).

3. Select the correct load cell (2kN/20kN) using switch (8).
   Switching the load cell automatically performs a TARE.

4. **Set the ON/OFF switch (4) to ON.**
   (When switching on and off, a new .csv is generated in each case).

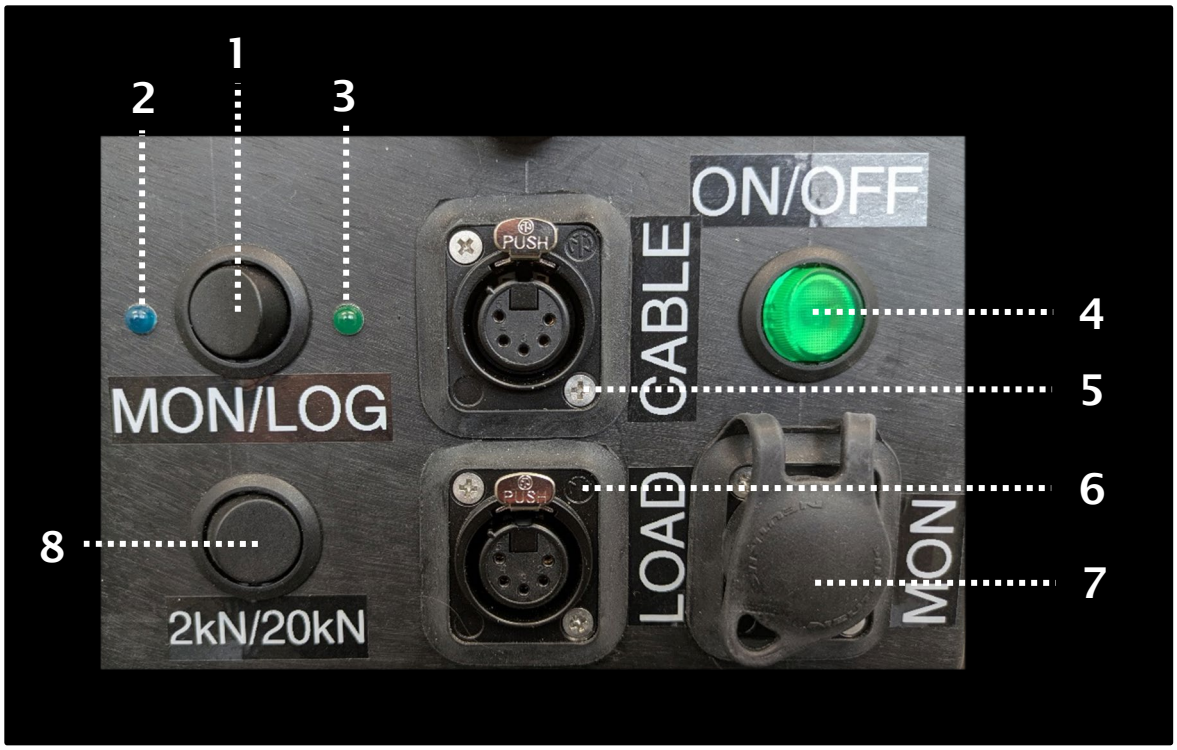
5. **Note the exact time of the measurement.**

6. **Set the BT-MON/LOG switch (1)**
   - When the green LED (3) flashes, the measured values are being saved directly to the SD card.

   - When the blue LED (2) flashes, the measurement data can be read via Bluetooth (using RootDataLogger I or II, password: 1234) or displayed on a laptop via the USB socket (7).

   - If no LED is flashing, check whether the SD card has been inserted correctly.

   ⚠ Important:
   When the blue LED is flashing, data is *not* being saved to the SD card.



Apps (only Android devices for now (not iPhone compatible))

App for Android:
Serial Bluetooth by Kai Morich

App for Windows
Serial port monitor (free version)

Technical data

Power consumption at 12.2 V: ~140 mA (1.16 mA in idle mode)
With a 6 Ah battery: approx. 40 hours of operation (6 Ah / 0.14 A ≈ 42.9 h)

Note that the lead-acid battery (AGM) is fully charged at a terminal voltage of 12.8 V (100 %) and discharged at a terminal voltage of approx. 11.8 V (0 %).

Note:
Although the battery might still deliver voltage below 11.8 V, this is considered deep discharge for AGM batteries and should be avoided.
Discharging below 11.8 V can permanently damage the battery.