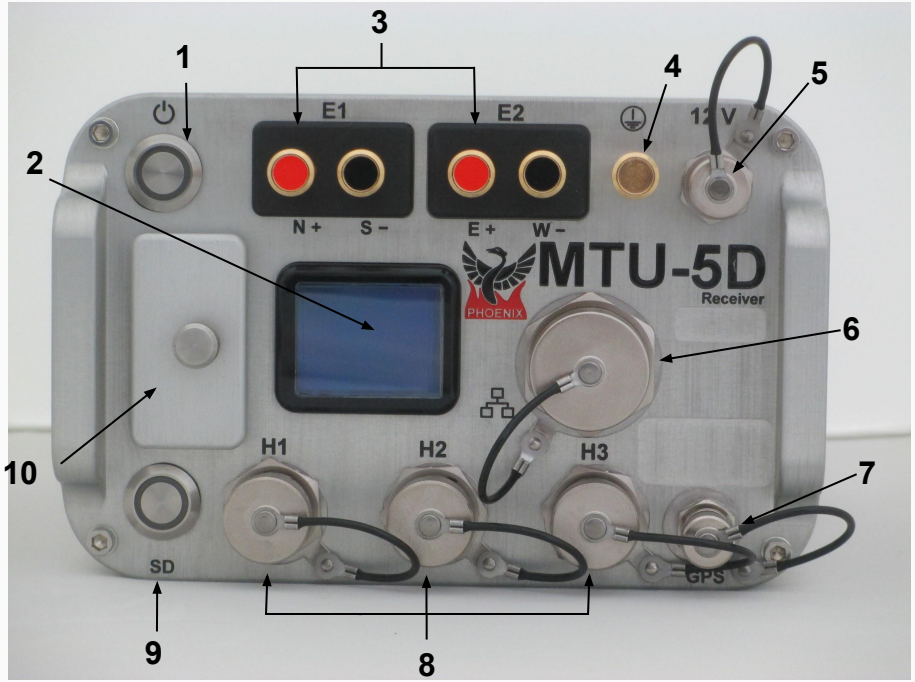
MTU-5D Quick Start User



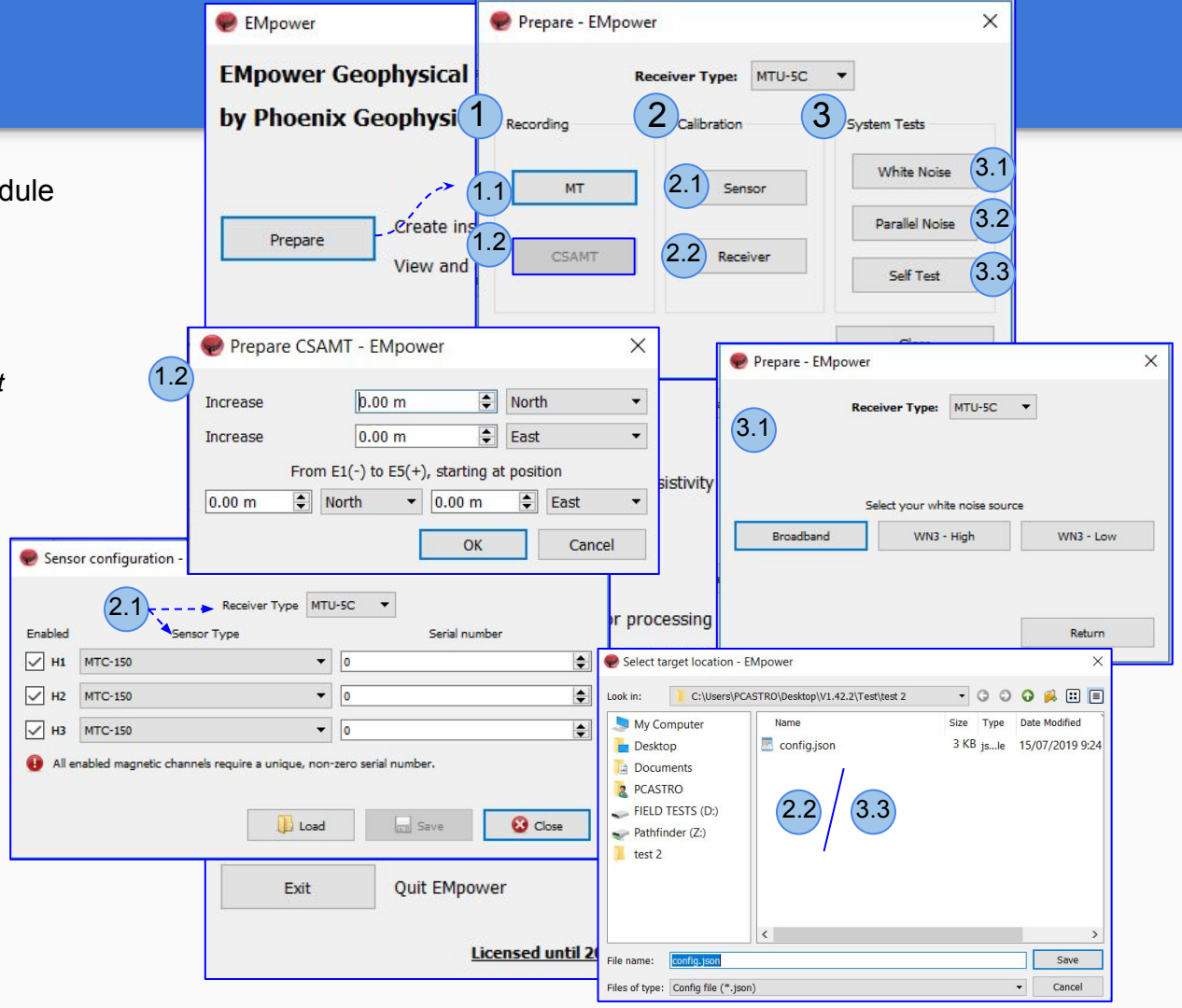
1	Power/Record button and indicator
2	Display
3	E1 (Ex) electrode connectors E2 (Ey) electrode connectors
4	Ground electrode connector
5	12VDC power input
6	LAN connector
7	GPS antenna connector
8	H1 (Hx) magnetic sensor connector H2 (Hy) magnetic sensor connector H3 (Hz) magnetic sensor connector
9	SD card button and indicator
10	SD card slot and cover

Creating a Configuration File

Open **EMpower** and select the Prepare Module to display the **Prepare** window

Complete the required information

1. Recording
   - 1.1. MT - Configuration Creator *(next slide)*
   - 1.2. Available for RXU-A8
2. Calibration
   - 2.1. Sensor configuration
   - 2.2. Receiver Calibration
     - Default config.json
3. System tests
   - 3.1. White Noise
   - 3.2. Parallel Noise - Configuration Creator *(next slide)*
   - 3.3. Self Test
     - Default config.json



Configuration Creator

Complete the information:

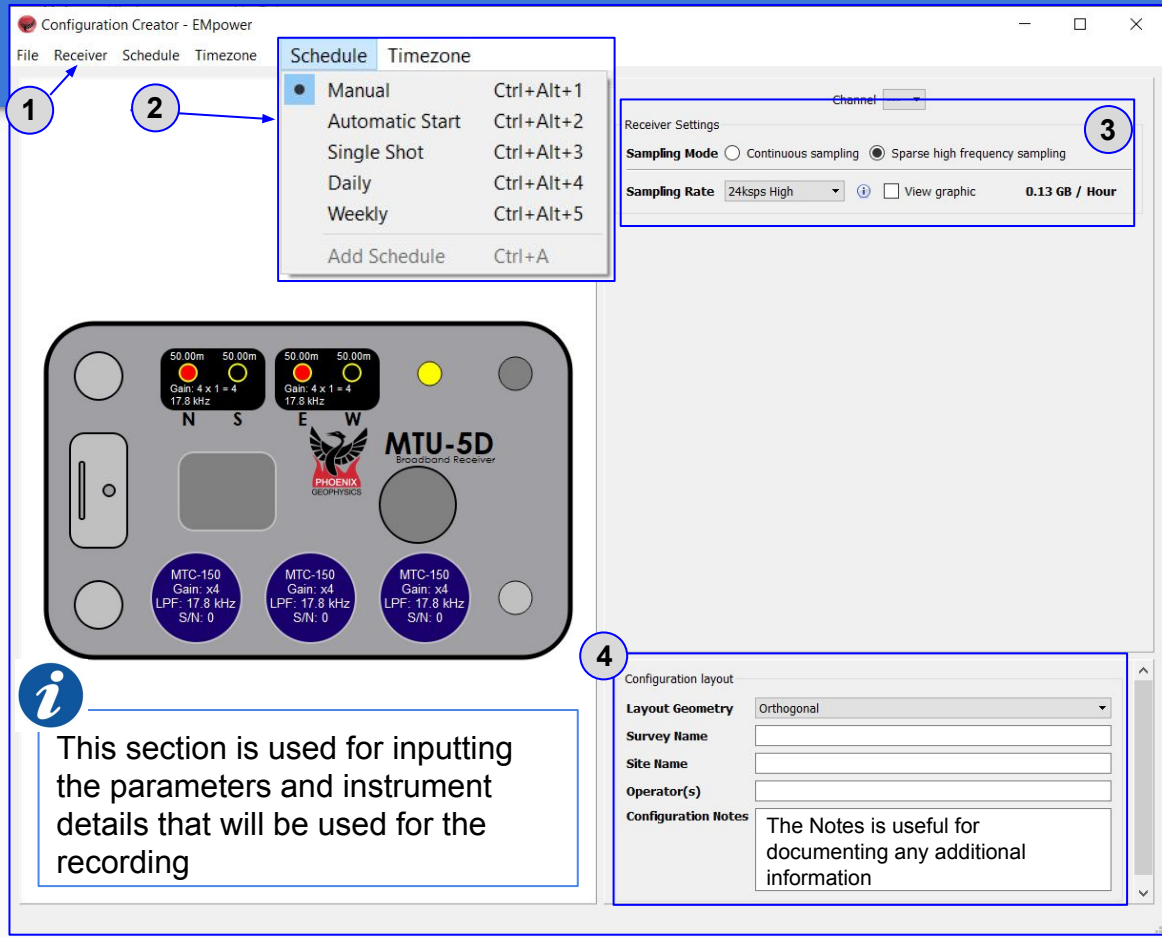
1. Check that the **Receiver** type is **MTU-5C**

2. Select the **Schedule**

3. **Receiver Settings**
   - Define the **Sampling Mode and Rate**

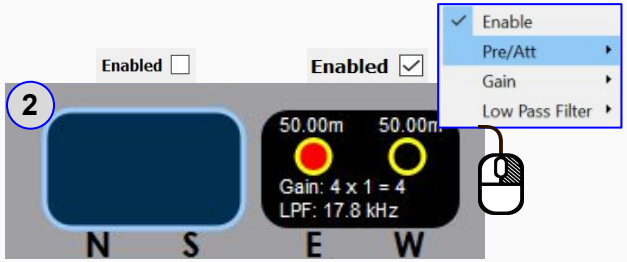
4. **Configuration Layout**

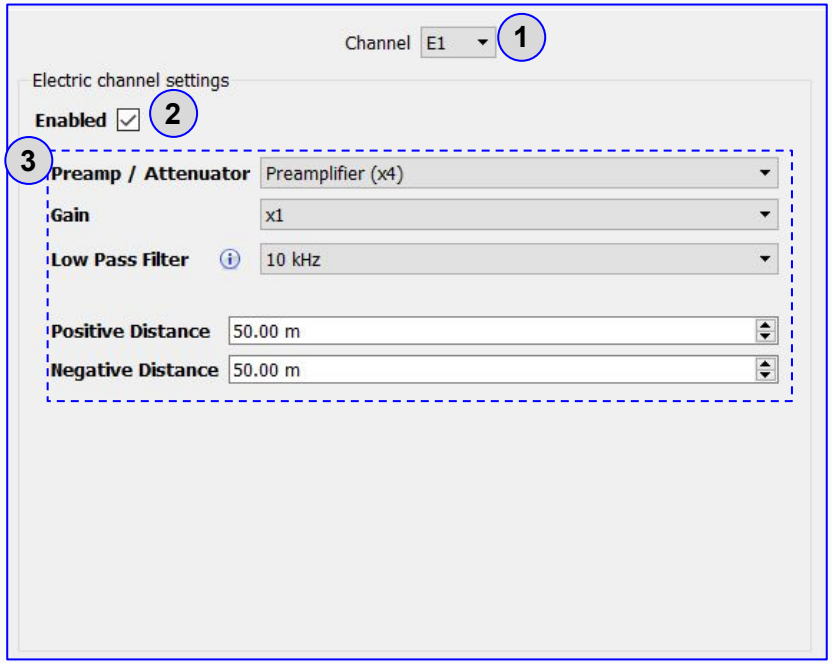
   **This information will be displayed on each channel*



Electric Channel Settings

1. Select the **Electric** channel
2. **Enable** or **Disable** the channel(s)
   - ***Disable*** *the channel(s) If you do not plan to use the channel during the recording*
3. Fill in the required information on the **Electric channel settings**

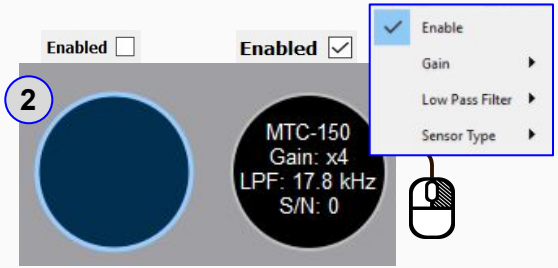


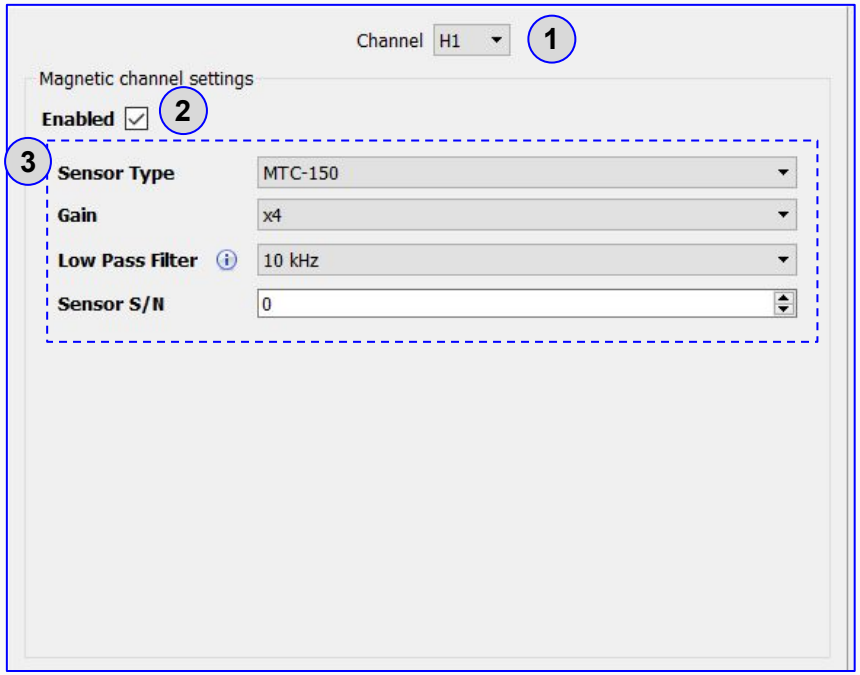


Channel settings can be configured using right click or filling out the Electric channel settings section

Magnetic Channel Settings

1. Select the **Magnetic** channel
2. **Disable** or **Enabled** the channel(s)
   - ***Disable*** *the channel(s) if you do not plan to use during the recording*
3. Fill in the required information on the **Magnetic channel settings**

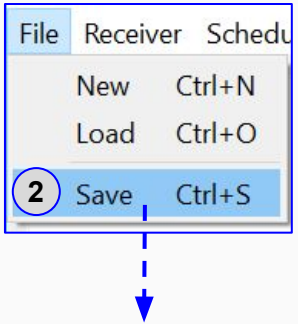


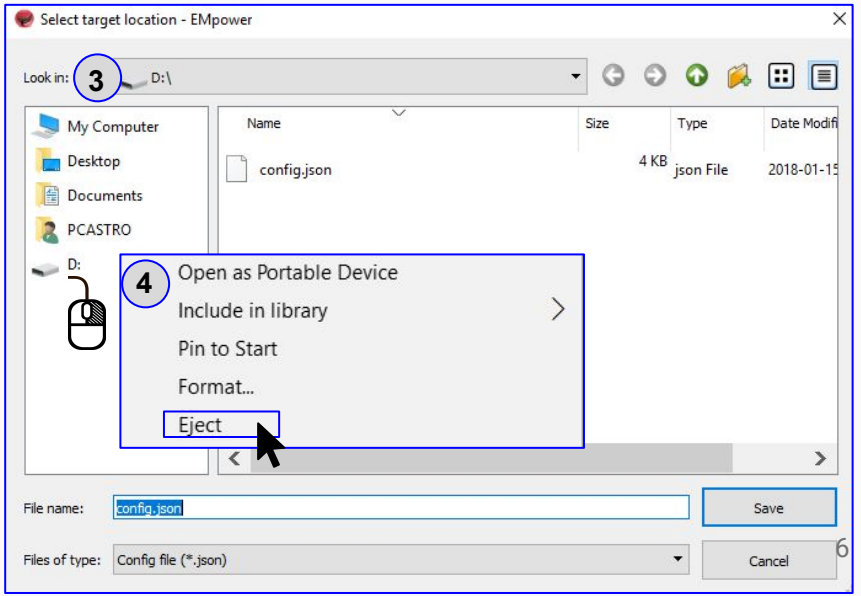


Channel settings can be configured using right click or filling out the Magnetic channel settings section

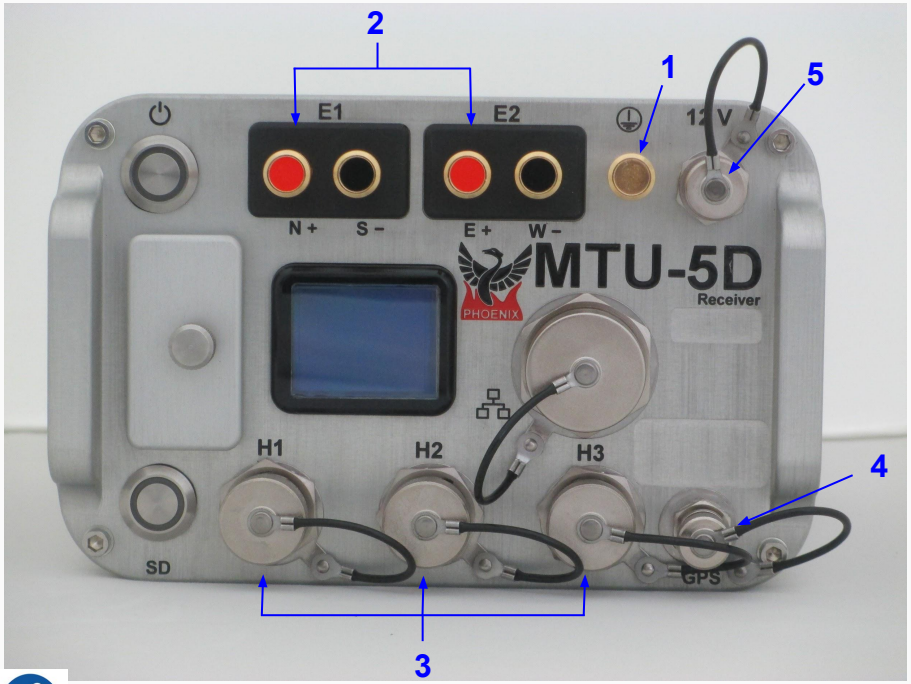
Saving a Configuration File

1. Insert the **SD card** in the computer slot or use a USB memory card reader.
2. Click **File** menu
   - **Save or Ctrl+S**
   - **EMpower** will automatically create the file **“config.json”**
3. Save the configuration file in the root folder of the **SD card**
4. Right click **SD card** drive
   - Select Eject option
   - Pull up the SD Card





MTU-5D Connections



In the field, it is often most efficient to connect the components to the receiver following the order on the right

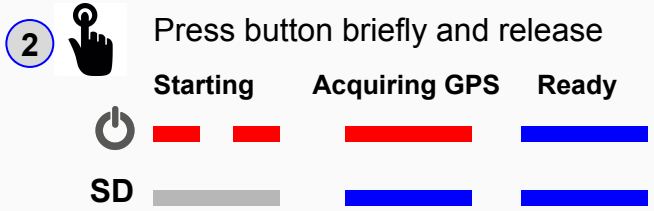
Start by connecting:

1. Ground electrode
2. Electrodes to channel **E1**(Ex) (N+, S-) and channel **E2**(Ey) (E+, W-)
3. Magnetic Sensors to channels **H1**(Hx), **H2**(Hy) and **H3**(Hz)
4. GPS antenna
5. 12V DC Power Source

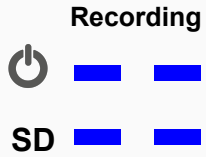
SD Card - Recording Data

Recording

1. Insert the **SD card**
2. To turn on the receiver, press the **Power** button briefly, wait until both **LEDs** are steady blue.
   -Automatic Start *recording*
3. If the schedule type was configured as **Manual,** press the **Power** button to start recording



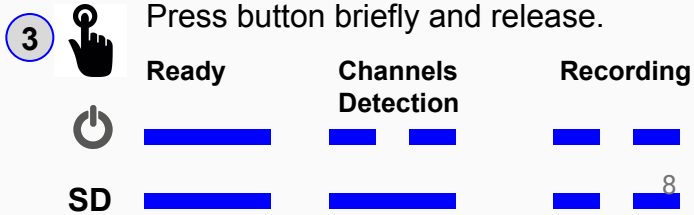
-Automatic Start
The recording starts automatically according to the schedule



Indicators

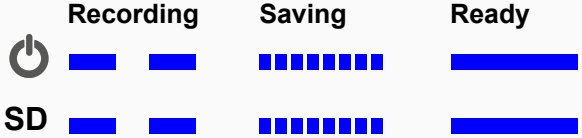
Slow, equal pulses

Solid color / Off



SD Card - Stopping record

1 Press **Power** button briefly and release



2 Keep press button 3sec and release

Indicators

Rapid, equal pulses

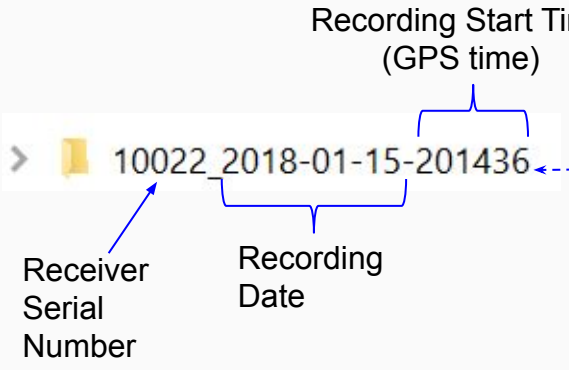
Solid color / Off

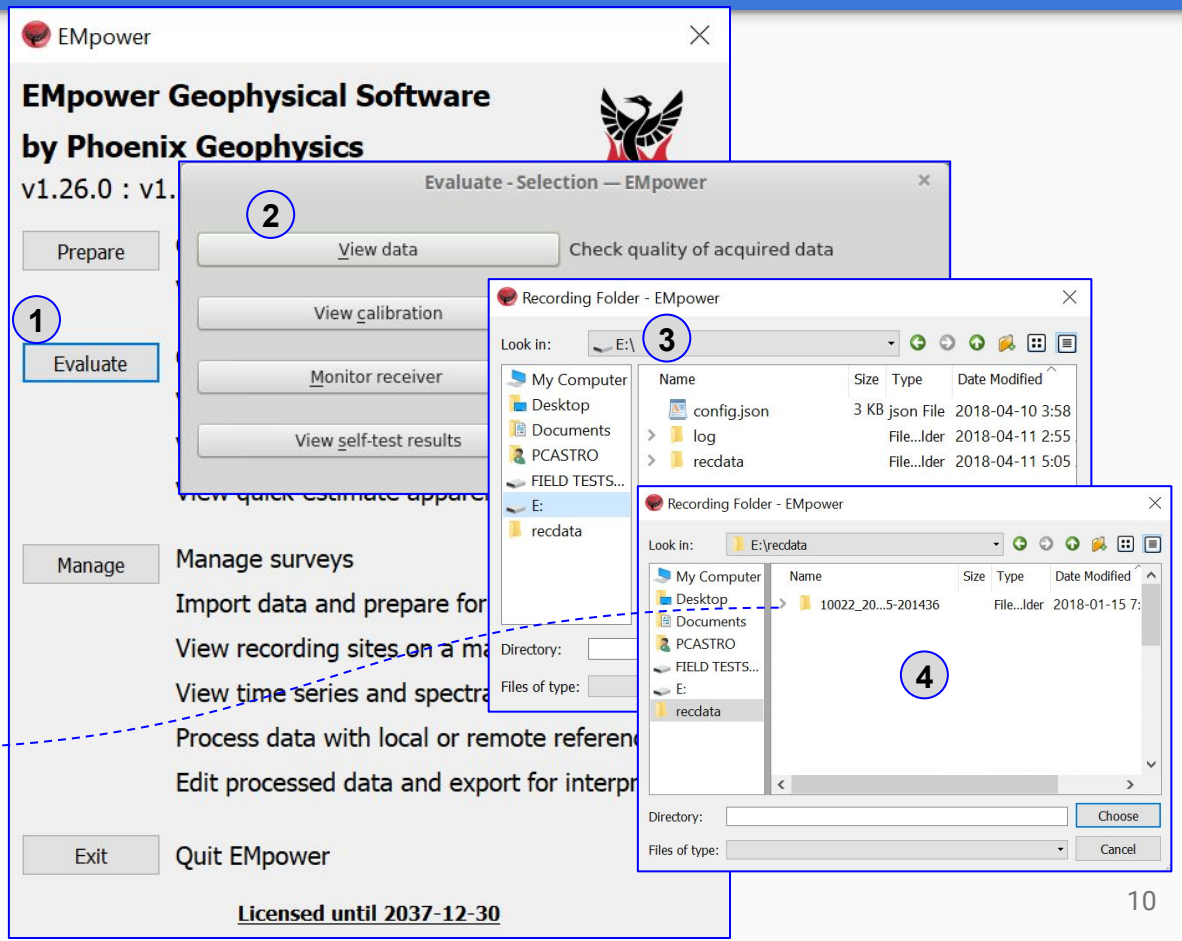
Stopping record

1. Press the **Power** button briefly and release to stop recording
   - Wait until both LEDs are steady blue
2. Turn off the receiver, pressing the **Power** button for a few seconds the **LEDs** will flash red
   - Wait until both **LEDs** turn off
3. Eject the **SD card**
   - Press the **SD card** and release, pull the **SD card**

Importing and Evaluating Data

1. Click the **Evaluate** button
2. Select **View data**
3. Select the **SD card**
   - The recording process creates two folders, log and recdata
4. Open **recdata** folder and select the recording folder and click **Choose**

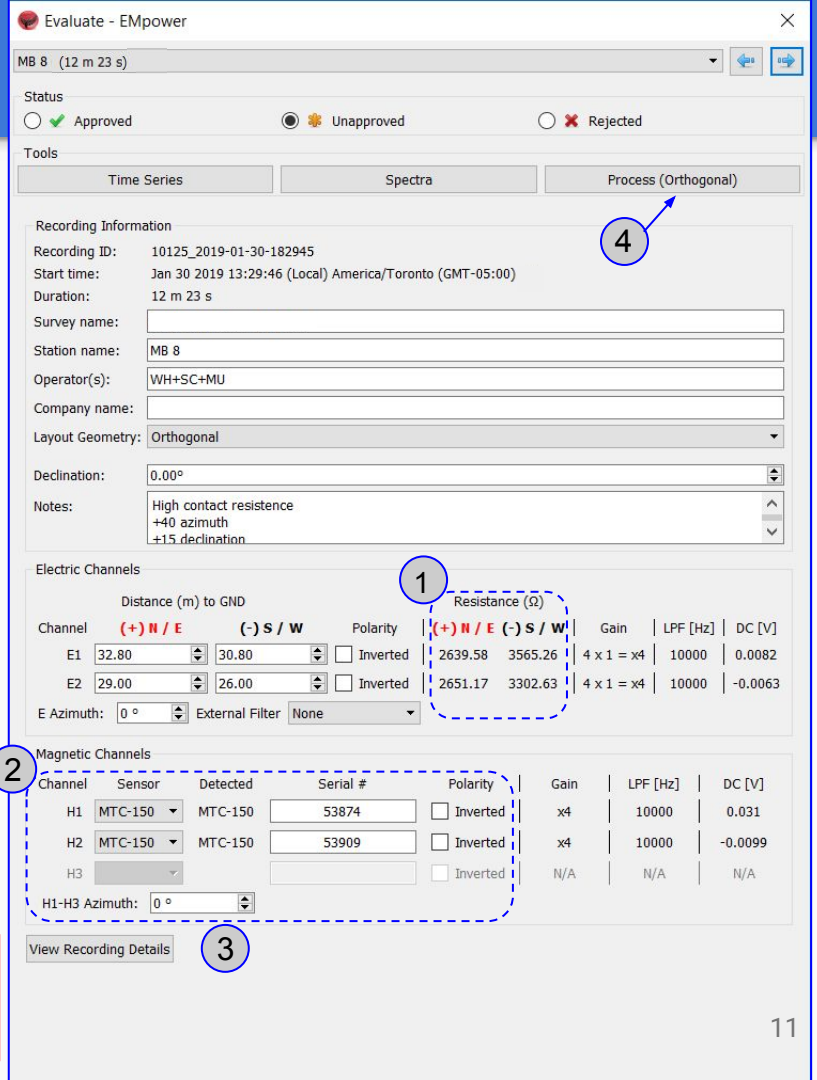




Evaluate

Review and Process the recorded information

1. Review the **Electrode** Resistance and make the necessary corrections to the **Electrode** distance with respect to the ground distance
2. Ensure that the magnetic sensor were detected and if necessary, make corrections to the **Magnetic Sensor** types and serial numbers
3. **View Recording Details**, see the next page
4. **Process** the recorded data after review of information, see page 13



This section is also used to input additional field information if desired

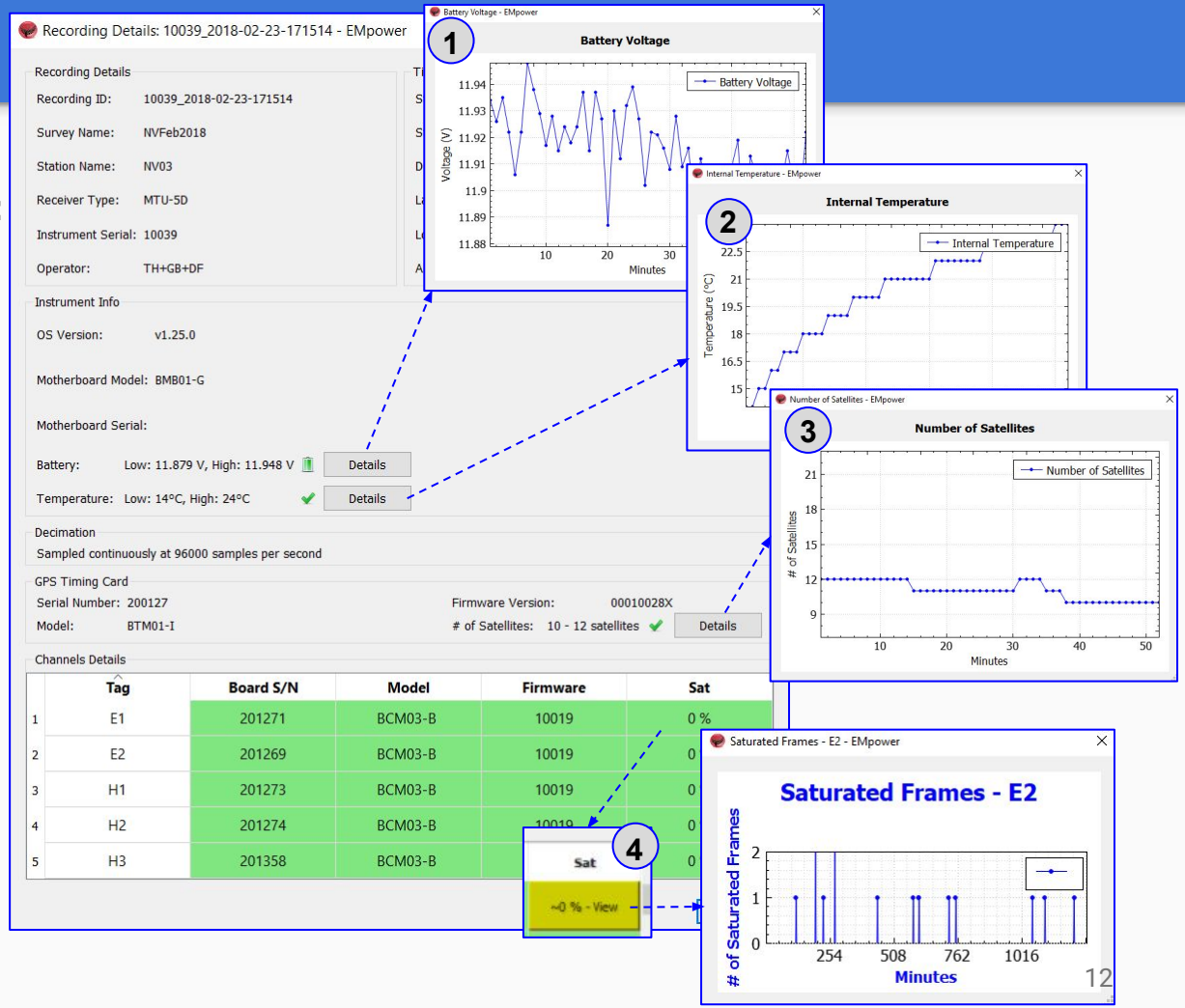
The warning icon indicates that something might be wrong with the recording, review and make necessary changes

View Recording Details

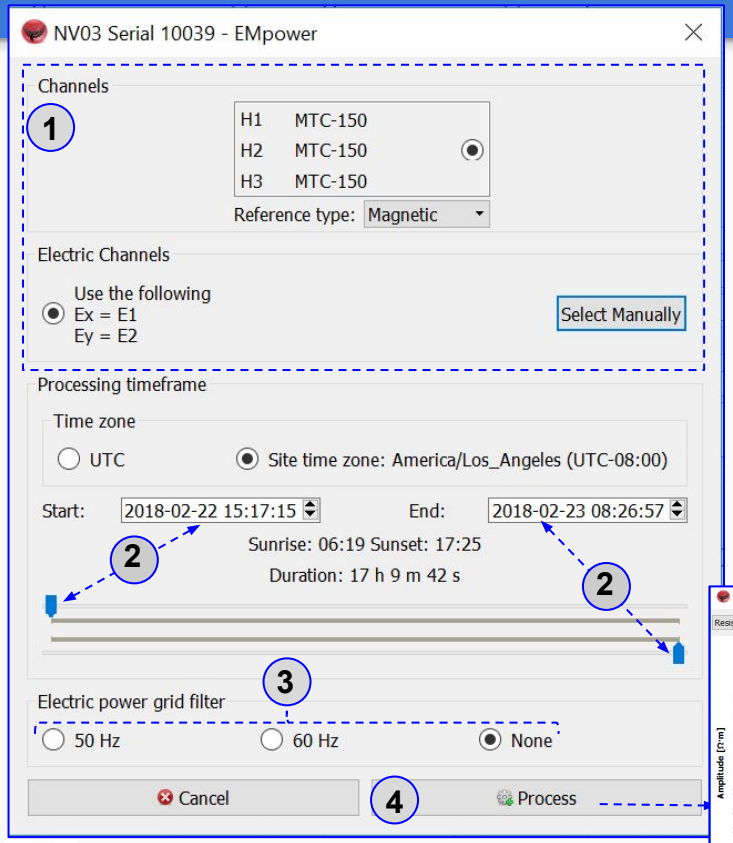
Review that the following levels are within valid limits for quality control:

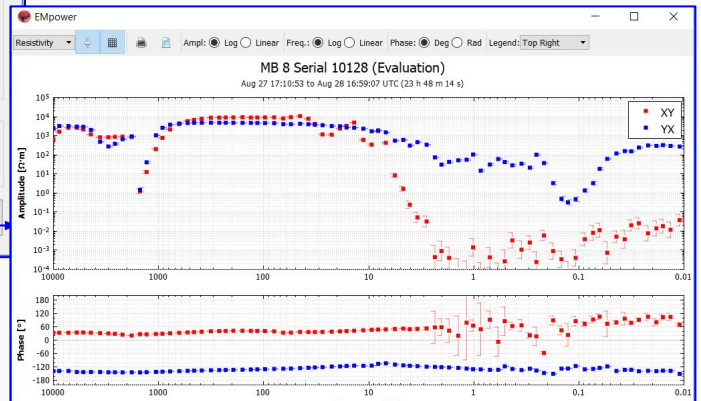
1. **Battery**
2. **Temperature**
3. **GPS Timing Card Verify**
4. **Channels Details**
   If saturation is not close to 0%, review the channel configuration (see pages 4,5), the gain might be too high and/or there is artificial noise on your site

Verify that there was not warning display

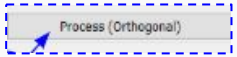


Process Data





Setting up the processing parameters:

Click Process Button 

1. Verify that the channels and references selected are the desired
2. Select the desired length of the recording to be processed by decreasing the time at the beginning and ending of the recording
3. Enable the electric power grid filter that corresponds to the site *(50Hz, 60Hz or None)*
4. Click the Process button
5. A live display of the resistivity curve will appear after a few seconds

This resistivity curve is not saved. It is purely for QC purpose.