

Receiver Self-Test



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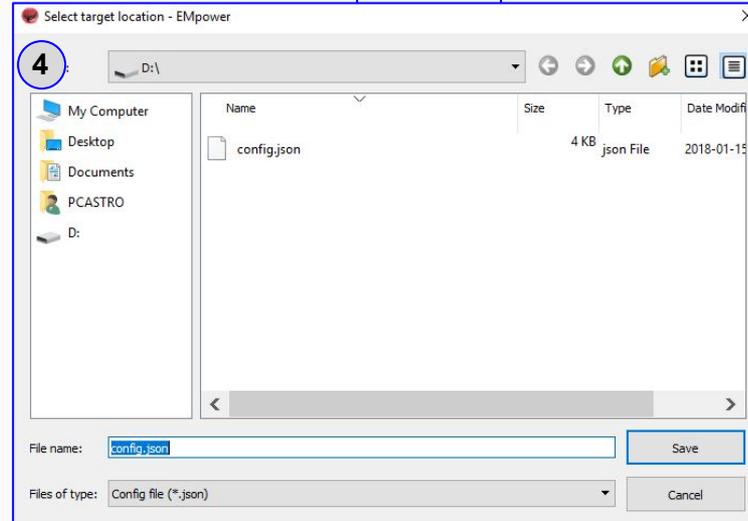
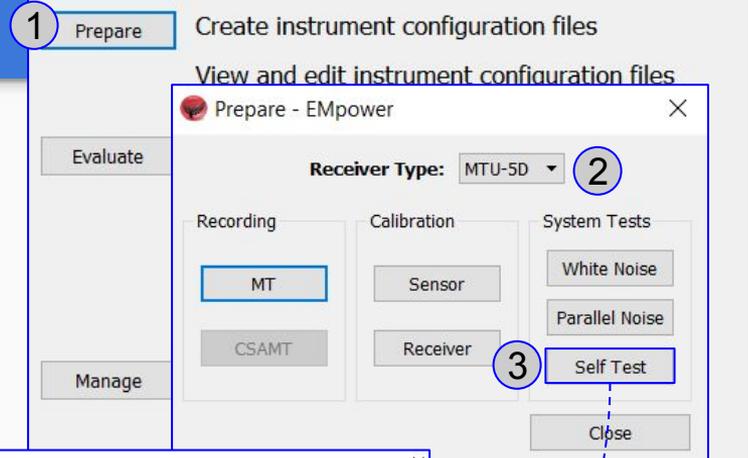
Materials



Qty	Description
1	Computer with an EMapower license and SD card reader
1	SD card
1	Receiver under test
3	Magnetic channels test jig
1	GPS antenna and tripod assembly
1	GPS signal cable, GPS antenna to receiver
1	Self Test Jig
5	Test lead Banana to Banana 2 Black, 2 Red, and 1 Yellow
1	12V cable, Battery to Receiver
1	12V Battery

Configuration file (Self-Test)

1. Open Empower and click the **Prepare** button
 2. Select the **Receiver Type**
 3. Click the **Self-Test** button
 4. Insert the **SD card** in the computer's SD card slot or use a USB memory card reader.
 - Click **File** menu / **Save** or **Ctrl+S**
- [\(see the user manual page 6\)](#)

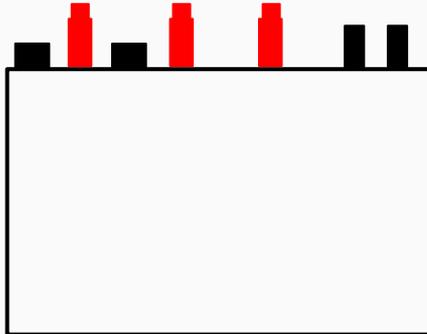


on a map and a time line
spectra
al or remote references
and export for interpretation

37-12-30

Magnetic Channels testers

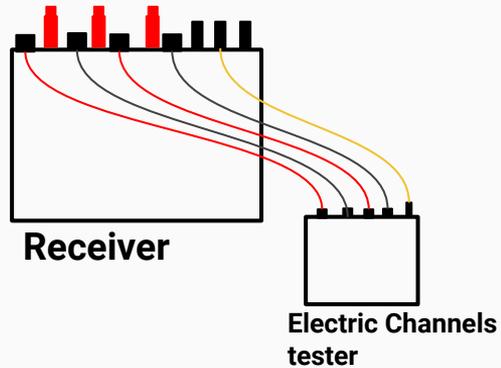
Connect the magnetic channels testers to each magnetic channel of the receiver (H1, H2, H3)



Receiver

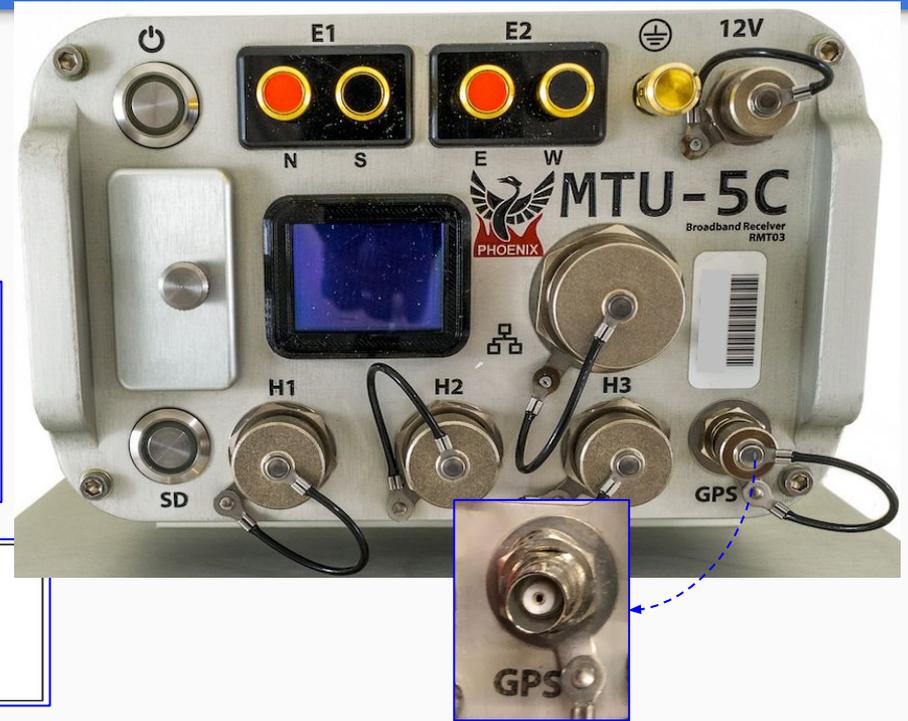
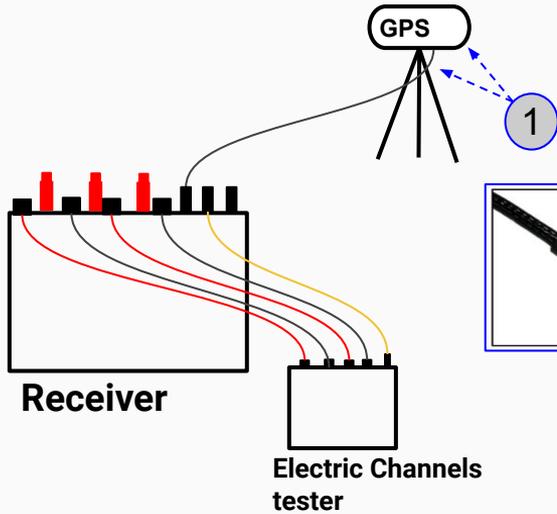
Electric Channels tester

1. Use the Black wires to connect **South-South** and **West-West**
2. Use the Red wires to connect **North-North** and **East-East**
3. Use the Yellow wire to connect the Ground connectors



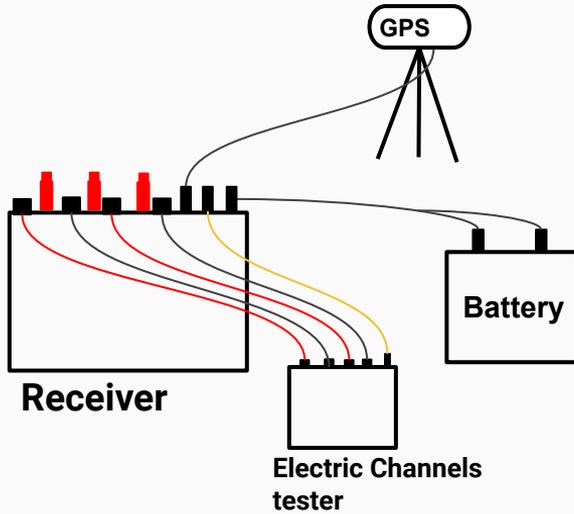
GPS connection

1. Assemble the **GPS** antenna with the **tripod**
2. Connect the GPS cable from the GPS antenna to the **Receiver**



Battery connection

Use the battery cable to connect the MTU-5C receiver to the battery



Start the test

1. Insert the **SD Card** into the receiver
2. Press the Power button briefly
 - Wait until the receiver is ready to record
3. To start the recording press the Power button briefly
4. After 5 minutes, stop the recording by pressing the **Power** button briefly and releasing it
5. To turn off the receiver press the Power button for 3sec and release it



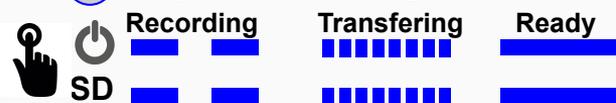
2 Turn on the receiver



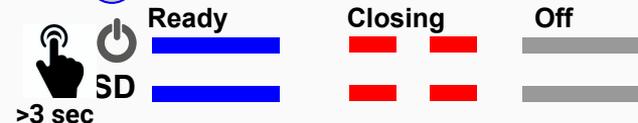
3 Start the Recording



4 Stop the Recording

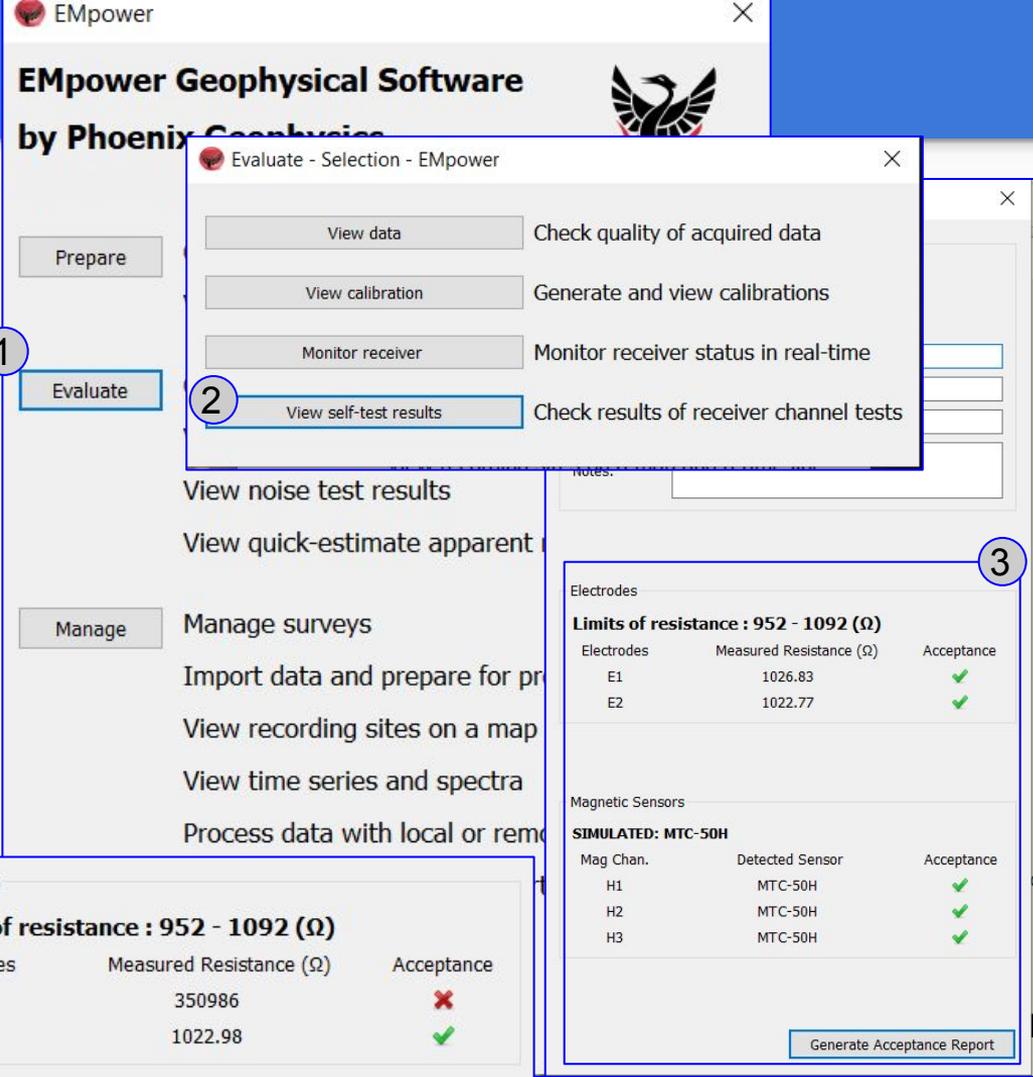


5 Turn off the receiver



Evaluate in EMpower

1. Open the **Evaluate** module in EMpower
2. Select **View self-test results**
3. Review the results, there should be green check marks for every channel
4. If the **Acceptance** result shows a red cross 
 - Check the connections and repeat the test
 - If the receiver repeats the same result, contact Phoenix Geophysics for support (*see the last page*)



The screenshot shows the EMpower software interface. The main window is titled "EMpower Geophysical Software by Phoenix Geophysics". A modal window titled "Evaluate - Selection - EMpower" is open, showing several options:

- View data: Check quality of acquired data
- View calibration: Generate and view calibrations
- Monitor receiver: Monitor receiver status in real-time
- View self-test results: Check results of receiver channel tests

The "Evaluate" button in the main window is highlighted with a blue circle labeled "1". The "View self-test results" option in the modal window is highlighted with a blue circle labeled "2".

Below the modal window, there are several menu items: "View noise test results", "View quick-estimate apparent...", "Manage surveys", "Import data and prepare for pr...", "View recording sites on a map", "View time series and spectra", and "Process data with local or rem...".

The "Manage" button in the main window is highlighted with a blue circle labeled "4".

On the right side, there is a table showing the results of the self-test. The table is titled "Electrodes" and has columns for "Electrodes", "Measured Resistance (Ω)", and "Acceptance". The table shows two rows: E1 and E2. E1 has a measured resistance of 1026.83 and a green check mark. E2 has a measured resistance of 1022.77 and a green check mark. The table is highlighted with a blue circle labeled "3".

Below the table, there is a section titled "Magnetic Sensors" and "SIMULATED: MTC-50H". The table shows three rows: H1, H2, and H3. All three rows have a detected sensor of "MTC-50H" and a green check mark. The table is highlighted with a blue circle labeled "3".

At the bottom right, there is a button labeled "Generate Acceptance Report".

Acceptance Report

To export the report:

1. Click the **Generate Acceptance Report** button
2. Type the file name (PDF file)
3. Review the **Acceptance Report**

P H O E N I X G E O P H Y S I C S

These are the results from Self Instrument Check

Recording Information :

Instrument Serial: 10125 (MTU-5C)
Recording ID: 10125_2019-03-28-195855
Local Start time: Mar 28 2019 15:58:56
Duration: 5 m 13 s
Survey Name:
Station Name:
Operator(s):
Notes:

Electric Channels :

Chan	Resistance (ohms)	Status
E1	1026.83	Passed
E2	1022.77	Passed

Magnetic Channels :

Chan	Sensor type	Status
H1	MTC-50H	Passed
H2	MTC-50H	Passed
H3	MTC-50H	Passed

Electrodes

Limits of resistance : 952 - 1092 (Ω)

Electrodes	Measured Resistance (Ω)	Acceptance
E1	1026.83	✓
E2	1022.77	✓

Magnetic Sensors

SIMULATED: MTC-50H

Mag Chan.	Detected Sensor	Acceptance
H1	MTC-50H	✓
H2	MTC-50H	✓
H3	MTC-50H	✓

Generate Acceptance Report

Select target PDF - EMpower

Look in: D:\MTU-5C Self Test Kit

Name	Size	Type	Date Modified
10125_2019-03-28-195855		File Folder	28/03/2019 7:59
10125_2019-03-28-200559		File Folder	28/03/2019 8:06

File name: Report

Files of type: PDF Files (*.pdf)

Save Cancel



Email: support@phoenix-geophysics.com

Phone: + 1 416 491 7340