

Receiver Self-Test



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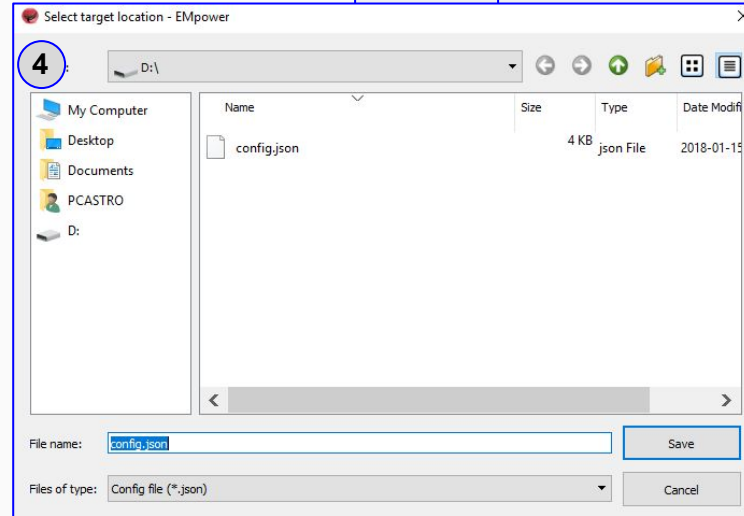
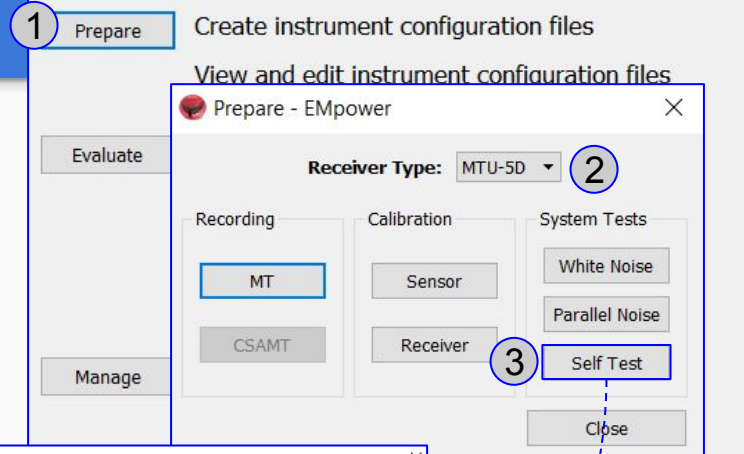
Materials



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

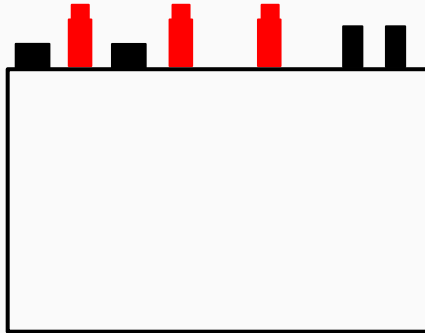


on a map and a time line
spectra
al or remote references
and export for interpretation

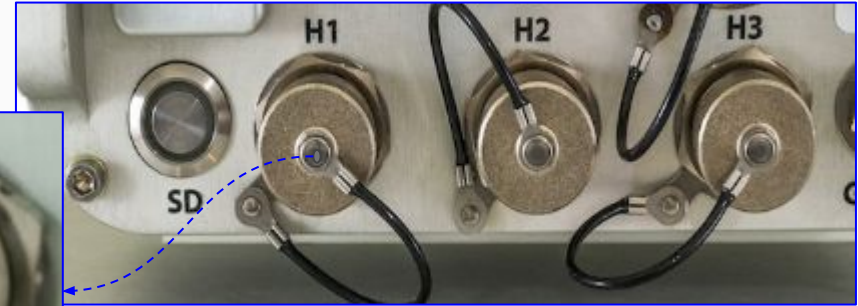
37-12-30

Magnetic Channels testers

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

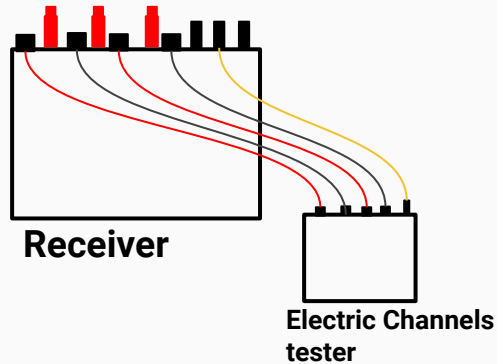
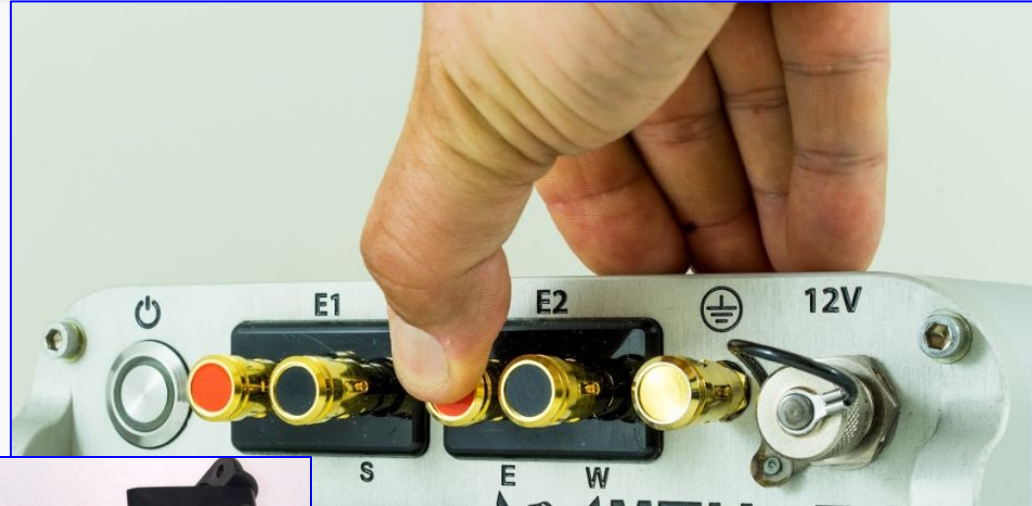


Receiver



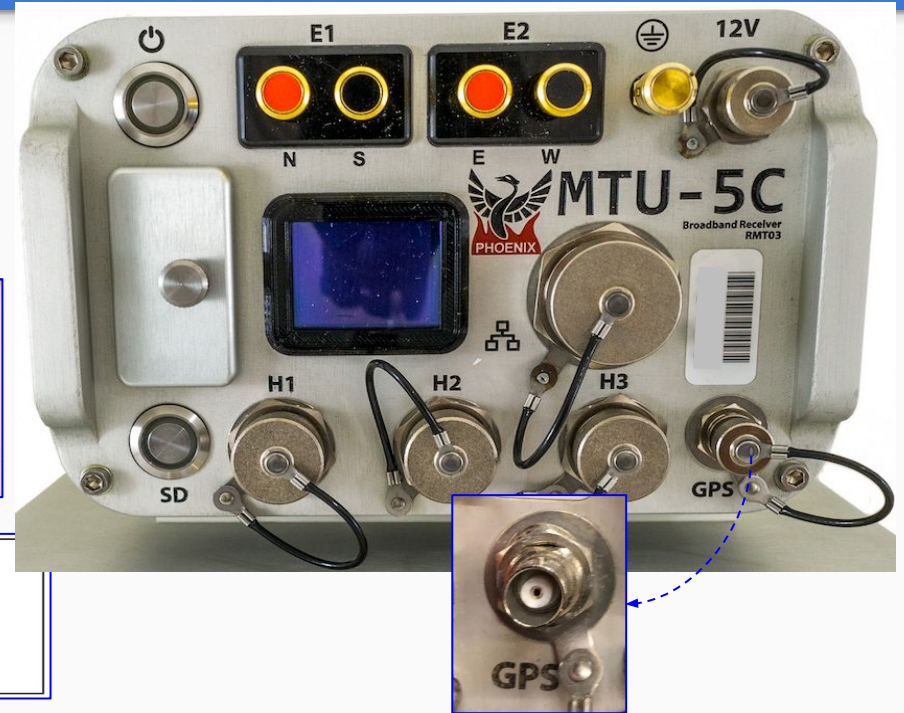
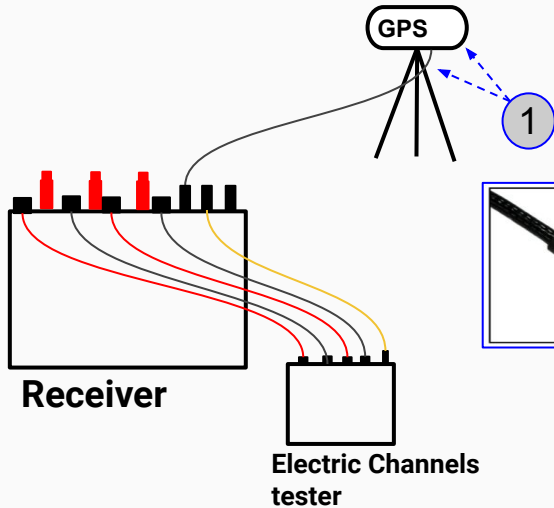
Electric Channels tester

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



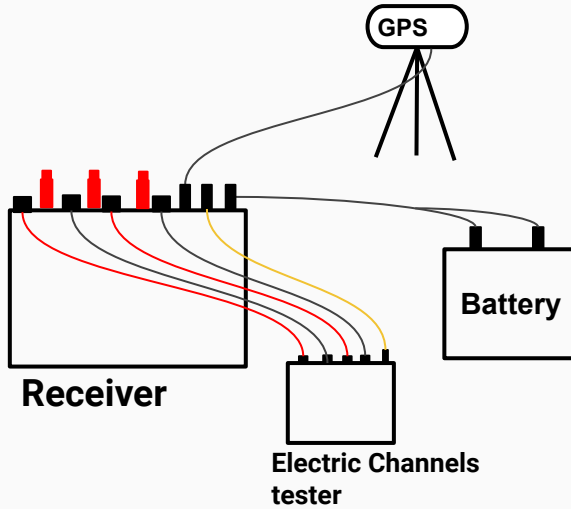
GPS connection

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 with the battery



Start the test

1. Insert the **SD Card** on 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 release
5. To turn off the receiver press the Power button for 3sec and release



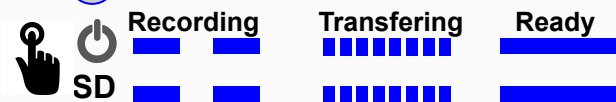
② Turn on the receiver



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, the check marks should be green 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 displays the EMpower software interface. The main window is titled "EMpower Geophysical Software by Phoenix Geophysics". A dialog box titled "Evaluate - Selection - EMpower" is open, showing a list of options: "View data", "View calibration", "Monitor receiver", and "View self-test results". The "Evaluate" button in the main window is highlighted with a blue circle labeled "1". The "View self-test results" option in the dialog box is highlighted with a blue circle labeled "2". Below the dialog box, 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...". A "Manage" button is also visible. In the bottom right corner, there is a "Generate Acceptance Report" button. A table of results is shown, with a red cross indicating a failed test for electrode E1.

Electrodes

Limits of resistance : 952 - 1092 (Ω)

Electrodes	Measured Resistance (Ω)	Acceptance
E1	350986	✗
E2	1022.98	✓

Magnetic Sensors

SIMULATED: MTC-50H

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

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	✓
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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



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