

Receiver Self-Test



- **Materials**
- **Configuration file (Self-Test)**
- **Magnetic Channels testers**
- **Electric Channels testers**
- **GPS connection**
- **Battery connection**
- **Evaluate in EMpower**
- **Acceptance Report**
- **Technical Support Contact**

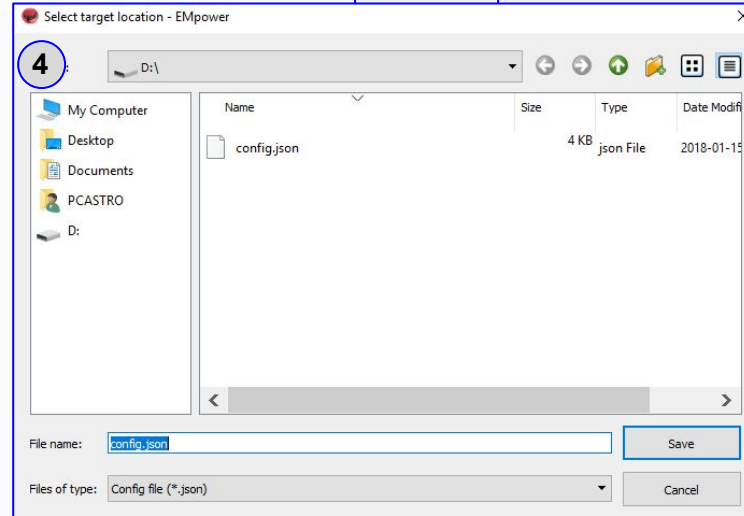
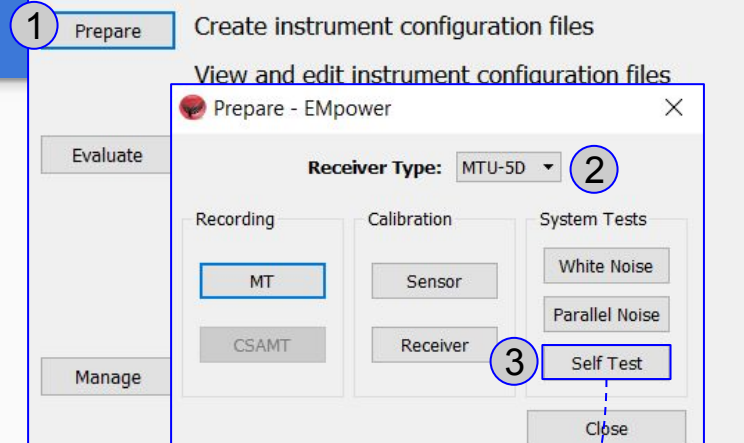
Materials



Qty	Description
1	Computer with an EPower 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**
- [\(see the user manual page 6\)](#)

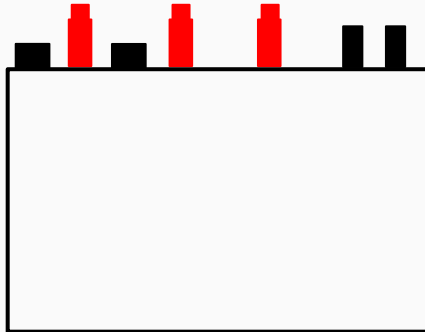


on a map and a time line
spectra
al or remote references
and export for interpretation

37-12-30

Magnetic Channels testers

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

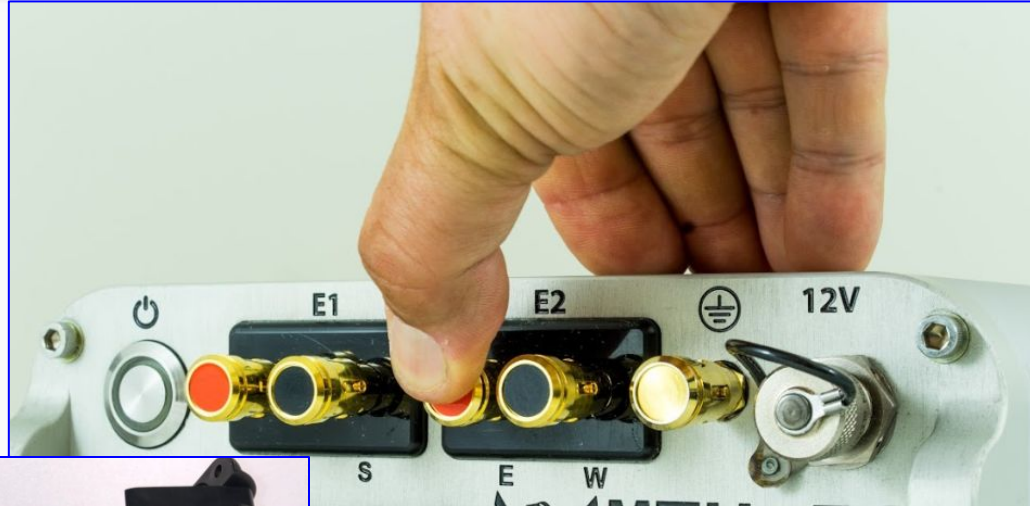
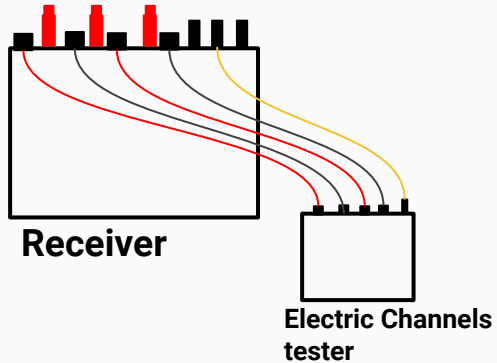


Receiver



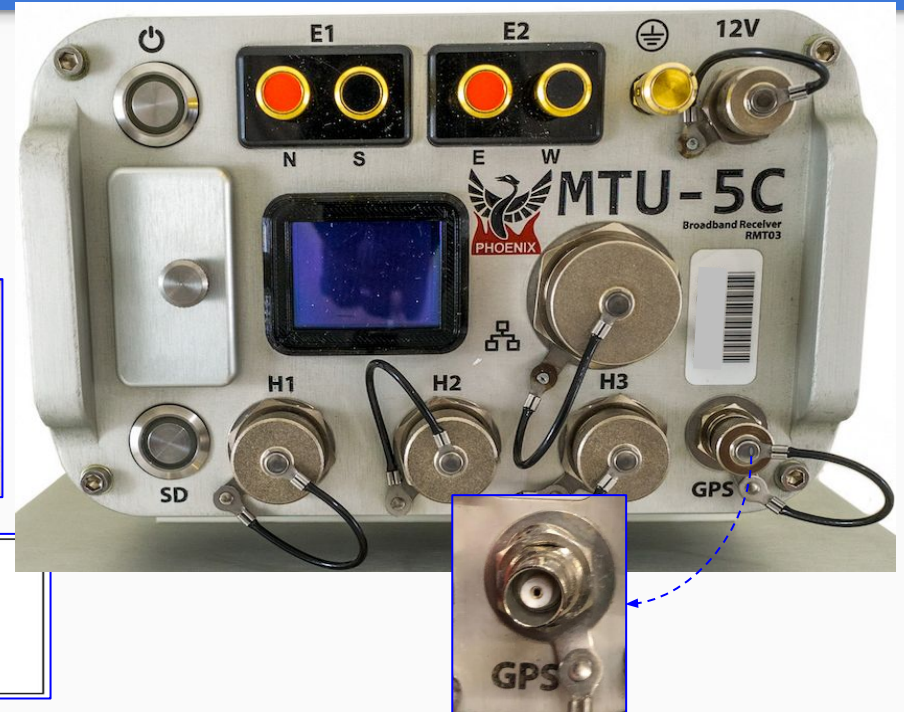
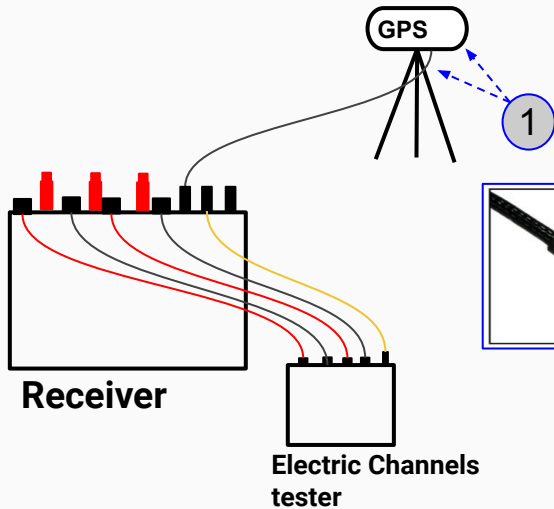
Electric Channels tester

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



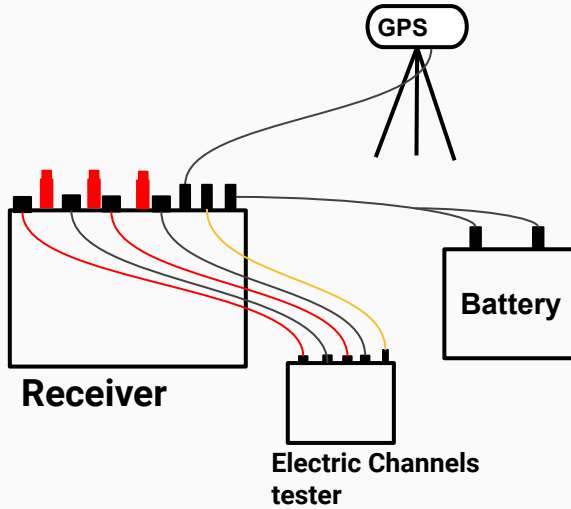
GPS connection

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



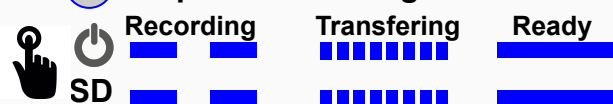
2 Turn on the receiver



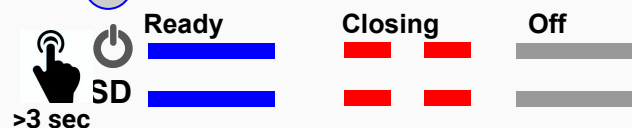
3 Start the Recording



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 shows 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...".

At the bottom of the main window, there are two tables showing electrode and magnetic sensor data. The first table is titled "Electrodes" and shows "Limits of resistance : 952 - 1092 (Ω)". The second table is titled "Magnetic Sensors" and shows "SIMULATED: MTC-50H".

The "Electrodes" table has the following data:

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

The "Magnetic Sensors" table has the following data:

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

A "Generate Acceptance Report" button is located at the bottom right of the magnetic sensor table.

At the bottom left of the main window, there is a table showing electrode data with a red cross for E1:

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

A blue circle labeled "4" is positioned next to this table.

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 Save

Files of type: PDF Files (*.pdf) Cancel



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