

## Quick Start Guide

# MA8100A NEON<sup>®</sup> Signal Mapper



You **must** have an Android smart phone or tablet and an Email address that you will use to sign in throughout this entire process. Basic familiarity with Anritsu handheld spectrum analyzers is required.

### Note

The latest documentation and additional support for the TRX Tracking unit and NEON Signal Mapping software can be accessed from the support site at <https://support.trxsystems.com> and selecting **NEON Signal Mapping**.

Additional support is available from Anritsu by visiting: <http://www.anritsu.com/contact-us>  
From here, you can select the latest sales, select service and support contact information in your country or region, provide online feedback, complete a "Talk to Anritsu" form to have your questions answered, or obtain other services offered by Anritsu.

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## Installing & Registering for NEON Command (PC Software)

1. Check your email for registration instructions and set up a NEON account.
2. Download the NEON Command software from the **Downloads** tab on the customer portal website (your web browser may warn you that this file is unsafe).
3. Install **NEON Command** by following the installation wizard.
  - a. Windows might ask you if you want to allow the installation. If it does, select **Run Anyway**.
  - b. **Start NEON Command** will be selected by default.
  - c. If the installation is successful, the **NEON Command** window will appear showing the map.
4. Sign in by clicking **No User Logged In** in the upper right corner.
  - a. Log in by entering your email and password, or with a Gmail account.
  - b. If you log in with Gmail, you will be redirected to a web page that prompts you to allow permissions for NEON.
  - c. Click **Allow** to complete the sign-in process.
  - d. Verify that the indicator turns green in the upper right corner.

## Installing NEON Signal Mapper (Android)

You will need to have your NEON account login, an Android phone, and the TRX Tracking unit. Refer to the instructions that came with your TRX tracking unit to set up the tracking device and to install the Android software. Documentation and additional support can be accessed from the support site at:

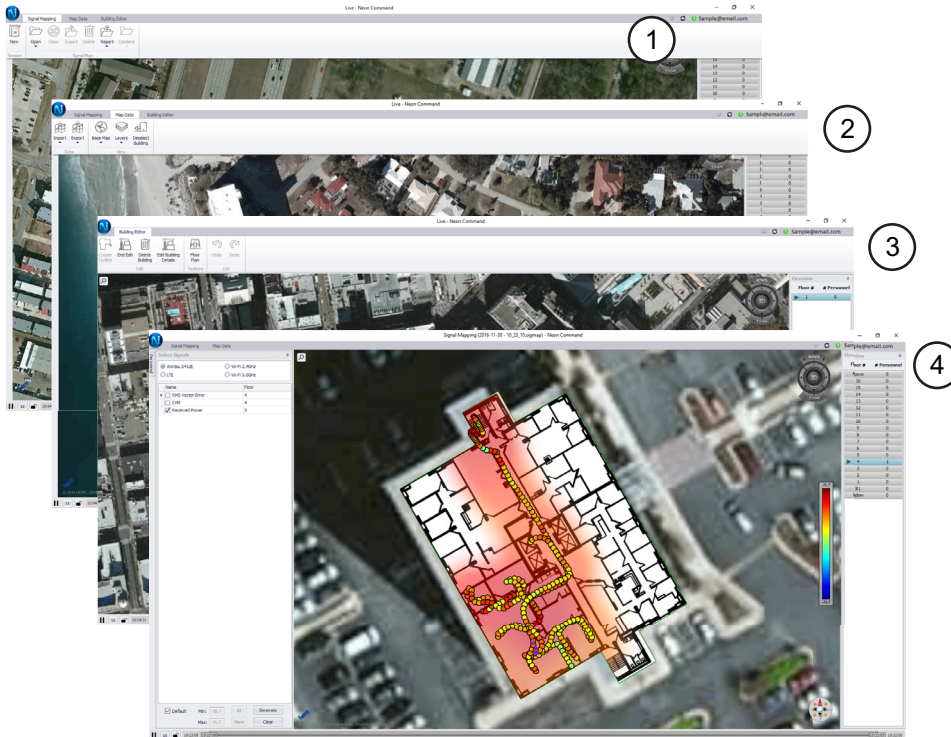
<https://support.trxsystems.com> and selecting **NEON Signal Mapping**. Software can be downloaded from: <https://neon.trxsystems.com/downloads>

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# NEON Command Overview

NEON Command provides a map or satellite view of your testing area with tools for creating buildings and other features. The following provide a basic overview of the software and its controls.

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1. Use the **Signal Mapping** menu to:

- Create a new signal map
- Open an existing signal log data file from a local drive or the cloud
- Export all signal log data to a local folder
- Delete the log data from the cloud server
- Generate a report
- Combine signal maps
- Close the signal mapping log data file

2. Use the **Map Data** menu to:

- Import an existing building shape file
- Select the base map style (None, Satellite, Map, Hybrid, or Terrain)
- Toggle map detail layers (such as personal trails, labels, buildings, terrain, etc.)
- Deselect a building


3. Use the **Building Editor** menu to:

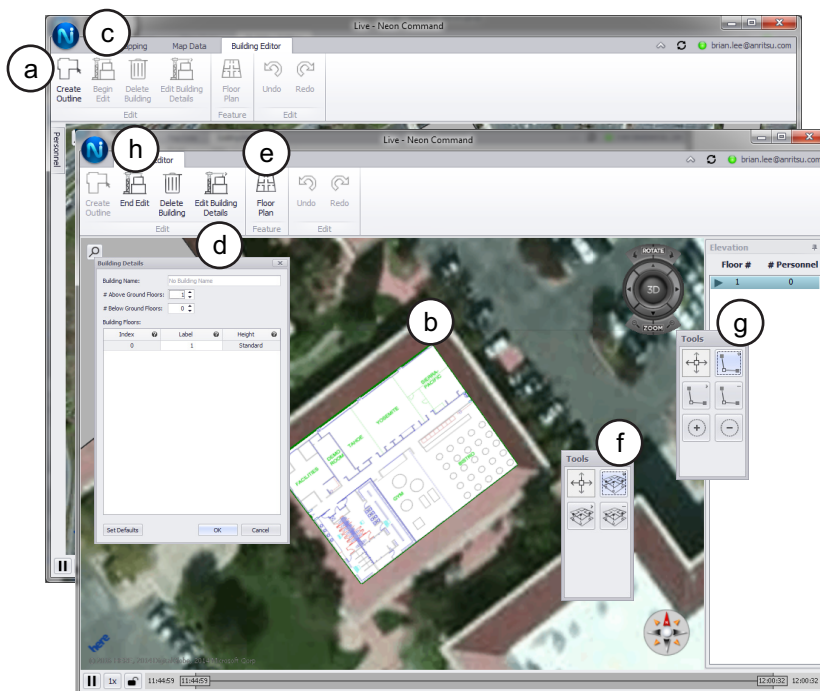
- Create building outlines
- Edit or delete building outlines
- Create building floor levels and set the floor spacing
- Add floor plan detail images

4. Use the **Select Signals** side menu to:

- Select signal types and signal mapping data log
- Generate signal heat maps and customize the color settings

## Site Planning (PC)

1. Open the **NEON Command** software and center on the building that you want to map.
  - a. Click the search icon  located on the top right corner of the map.
  - b. When a text input box appears, enter the address of the location that you wish to map.
  - c. Press **Enter** to validate the address.
  - d. If successful, the map will be centered on the given location.
  - e. You can drag and zoom using the mouse to move around the map.
2. Create a simple building outline. Note that the **Building Editor** menu items are disabled when a signal map is currently open. Close a currently open signal map from the **Signal Mapping** menu and then click **New**.



- a. Click the **Building Editor** tab in the top bar and then click **Create Outline**.
- b. Click on the map to set vertices of the building outline and then press **Enter** when done, or select **End Outline Creation**.
- c. Click **Begin Edit** to enable the floor plan tools.
- d. Click **Building Details** to give a building a name, add floors above and below, and to set floor height (between floors).
- e. Click **Floor Plan** to load an image file with floor plan features and use the mouse to drag the position and size of the image for best fit.
- f. To edit a building outline, right click a building and then select **Building Outline > Edit** from the pop-up dialog. The building outline menu provides the following controls:
  - Translate and Scale
  - Move Vertex
  - Add Polygon
  - Add Vertex
  - Delete Vertex
  - Remove Polygon

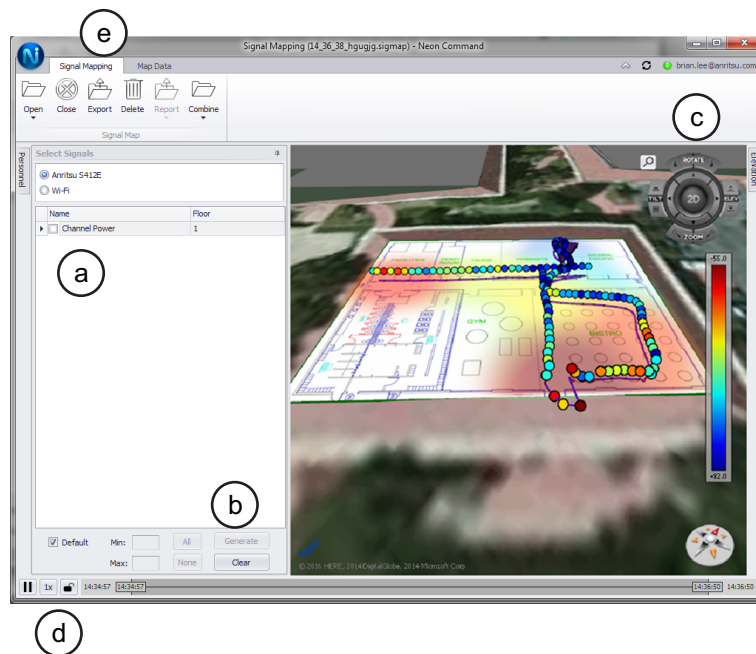
- g. To edit a building floor plan, select the level you wish to edit from the right side of the map, right click a building, and then select **Floor Plan > Edit** from the pop-up dialog. The floor plan menu provides the following controls:

- Translate Rotate and Scale
- Add Control Pair
- Remove Control Pair
- Move Control Point

Click and drag the green circle to rotate the floor plan image. Click and drag the purple circle on the corner of the floor plan to scale the image. Press the **Esc** key to close the floor plan tools.

- h. Click the **End Edit** button, then click **Yes** in the resulting pop up to save your changes. If you are signed in, the building model will be saved to your NEON account on the cloud.

3. Once you have created or loaded a signal log file (refer to the next section for on-site signal mapping), the data can be analyzed in the command software as follows:



- a. From the left side Select Signals menu, select the measurement type and name (LMR and Channel Power in this case).
- b. Click **Generate** to create a *heat map* of the signal strength along the plotted path. The default heat colors can be manually set here as well.
- c. Use the pan and zoom tool to select 3D or 2D map view, rotate and tilt the map, and change your viewing perspective.
- d. Use the playback tools for real-time or time-lapse playback. The time line can also be manually scrolled using the mouse and dragging the start and end time cursors.
- e. The signal map and log files can all be exported to a local directory by clicking the Export menu item. Windows Explorer will open to the saved location with sigmap and CSV log files. Additionally, a signal report can be generated or other signal maps can be selected from a local network or the cloud to be combined with the current signal map.

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# On Site Signal Mapping with Anritsu Handheld Instrument

1. Connect the Anritsu Handheld instrument to your Android device via the provided USB OTG cable.
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2. Set the Anritsu Handheld instrument for **Spectrum Analyzer** mode.
  3. Set up a **Channel Power** measurement for your desired measurement.

**Note** Make sure to **turn on** the Channel Power measurement.

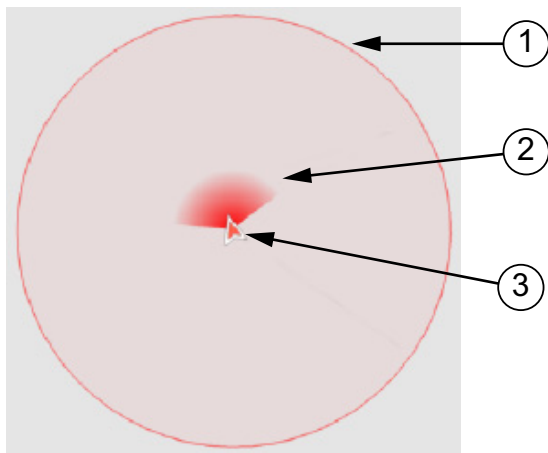
4. Turn on the Tracking Unit by pressing the **power** button  .
  - A green LED will start blinking on the Tracking Unit (if a blue LED is blinking, you have already paired the device).
5. Open the **NEON Signal Mapper** app on the Android smart phone and log in with your NEON account when prompted to sign in.
6. Pair the tracking unit and the phone by touching the TRX Logo on the Tracking Unit to your NFC enabled Android smart phone.

**Note** You may have to move the Tracking Unit around to align its NFC tag with the phone's NFC tag and you may need to disable tracking in order to pair the tracking unit.

7. Accept the pairing request if prompted. The LED will blink blue instead of green when pairing is successful.
8. Attach the tracking unit to your waist using the belt clip.
9. To find the building that you want to map:
  - a. Press the **search** icon  in the top bar to reveal an input text field.
  - b. Enter the address of the building that you want to map.
  - c. The building outline created using the Neon Command software should appear on the map.
  - d. If the building does not appear, press the **synchronize** button  .
10. Select your building with a long press.
  - The building will turn white and the floor plans should appear when the building is selected.

11. Select your current floor using the floor selector on the left of the screen.
12. Check-in at your current location.
  - a. Press the **check-in** icon  and then move the map to place the green marker at your current location.
  - b. Press the check mark in the upper right corner to complete the check-in.
13. Walk straight at least 10 meters and perform another check-in to get a heading lock.
  - Repeat this step until all of the location indicators are green. See the location indicator graphic at the end of this procedure.
14. Press **Start Now** when you are ready to collect data.
15. Walk through areas where you want to collect data.
  - A timer will be displayed while you are mapping.
  - If any of your location indicators turn red, the phone will vibrate and recording signal mapping data will stop. Check-in until the indicators turn green and recording signal mapping data will resume.
16. Press the **Stop** icon when you are finished.
17. Press **Upload** and name your signal map file.
  - A cloud icon with an arrow pointing up will appear when the file is uploading to the cloud. If successful, the cloud icon will disappear.
  - The .sigmap file will be saved to the phone's memory at: */phone/NeonSignalMaps*.
18. You can retrieve the file manually and then load it into Neon Command from the **Open | Open from file** option.

## Location Indicators



### 1 Error Bound:

- **Green:** Error bound is within tolerance.
- **Red:** Error bound is too large. You need to check-in.

### 2 Heading Wedge:

- **Green:** Acceptable heading error.
- **Red:** Heading error is too large. You need to check-in, walk straight, then check in again.

### 3 Altitude Indicator:

- **Green:** Acceptable altitude range.
- **Red:** Altitude is not set. You need to zoom in on the map and check-in.

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Anritsu utilizes recycled paper and environmentally conscious inks and toner.

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