

TITAN S8

Portable Data Acquisition Logger



NETWORK CONNECTIVITY GUIDE



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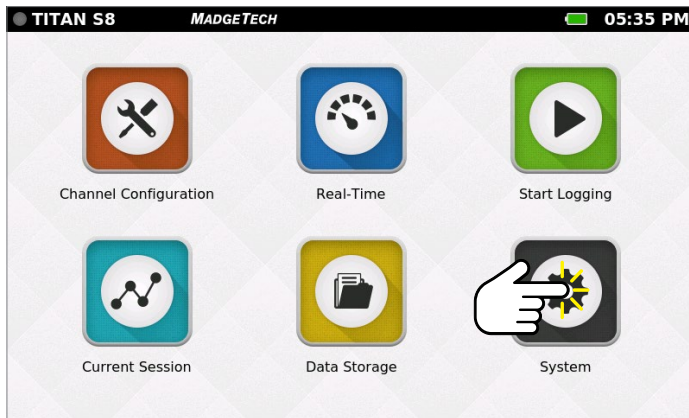
16 VNC Viewer Set-up

WI-FI NETWORK CONFIGURATION

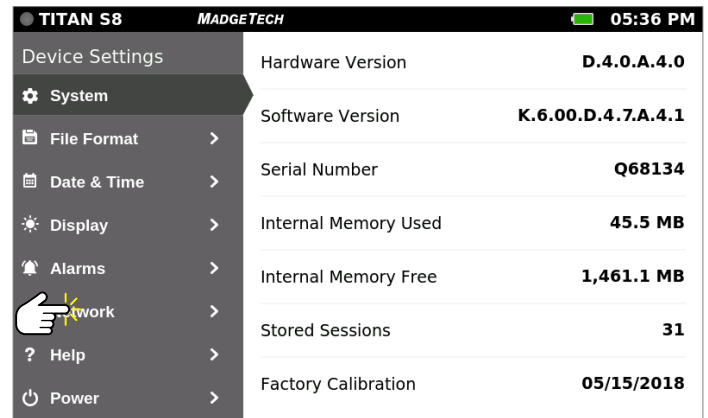


Wi-Fi Network Configuration

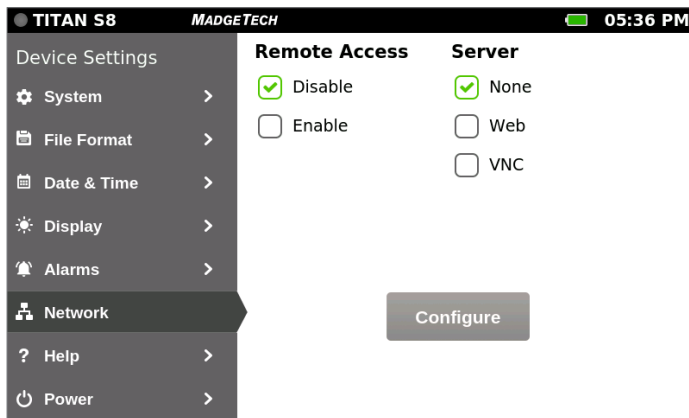
The Titan S8 supports two main connection types: Wi-Fi or Ethernet. Wi-Fi is supported using an approved USB Wi-Fi dongle from MadgeTech. Plug in the USB Wi-Fi Dongle prior to powering up Titan S8.



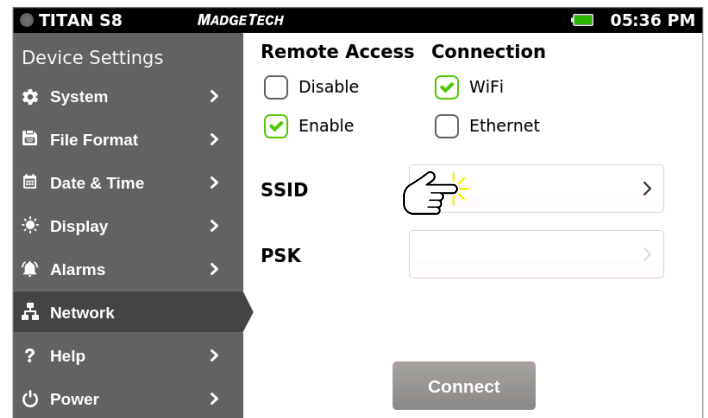
From the Home Screen, select **System**



Select **Network**

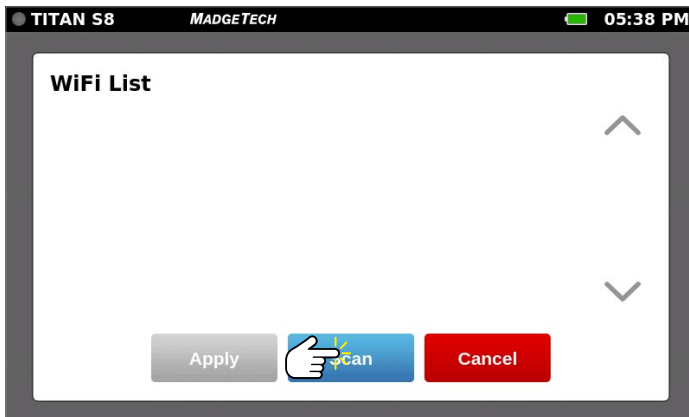


The supported servers can only be configured when **Remote Access** is set to **Disable**. Setting the Web Server is covered on [page 8](#) and the VNC Server on [page 16](#). For now, select **None** as the server type to get started.

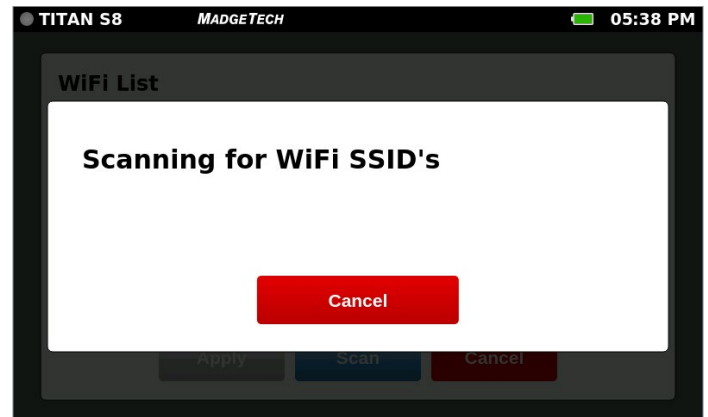


1. Set the Remote Access by selecting the **Enable** checkbox.
2. Select **Wi-Fi** as the connection. Make sure you have a working USB Wi-Fi adapter plugged into the Titan S8 USB before scanning for available networks.
3. Press the **SSID** selection box to scan for available networks.

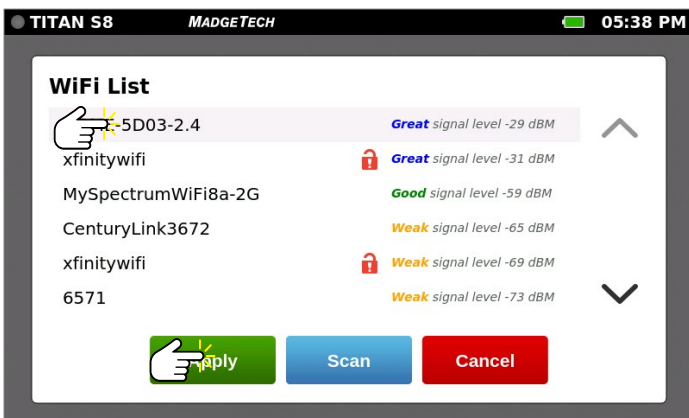
WI-FI NETWORK CONFIGURATION



Initially, no networks will be displayed. Select **Scan** to scan for available Networks.

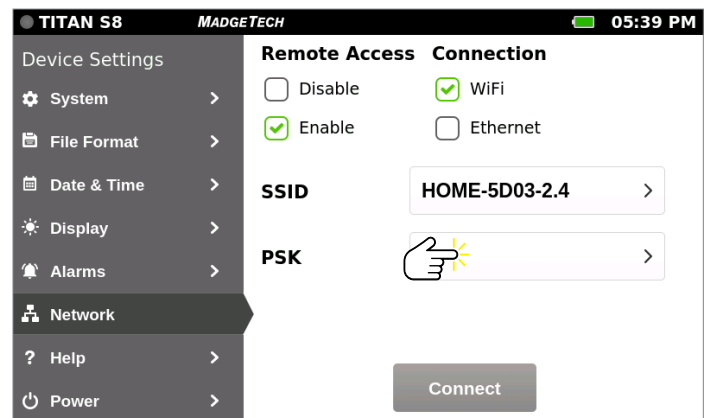


The Titan S8 scans for available Wi-Fi SSID's.

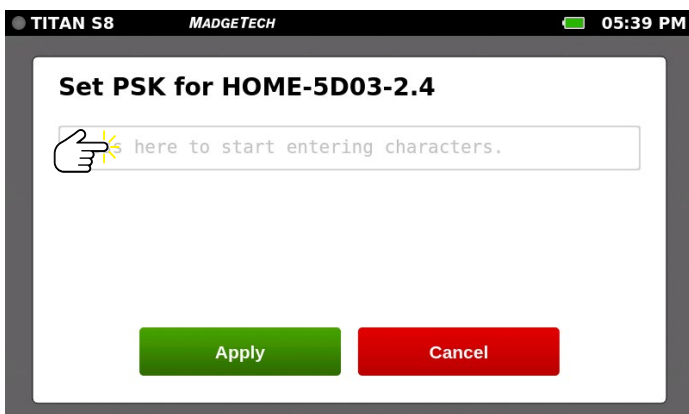


After scanning, the available SSID's are displayed. The red open lock means the Wi-Fi SSID is not secured with a password. The list is sorted by signal strength with the strongest signal at the top of the list. Any hidden SSID will not show up in this list.

Select an SSID to connect to and select **Apply**.



Press the PSK text box to set the Wi-Fi SSID password.

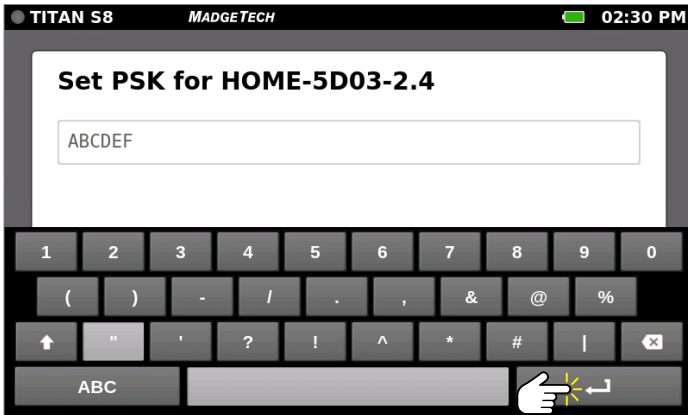


Press in the text box to bring up the virtual keyboard.

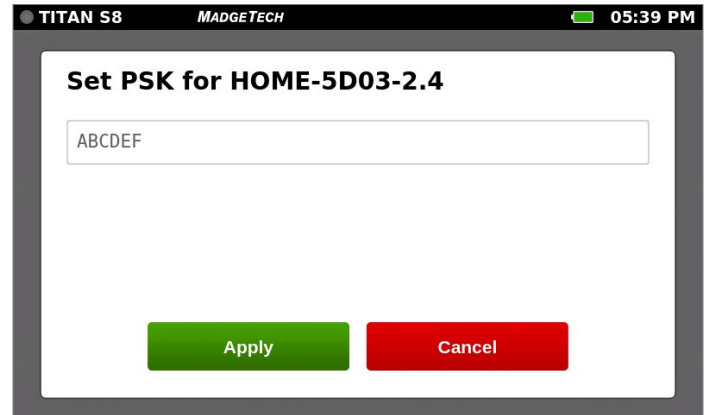


Enter the Wi-Fi SSID password which can be any character on the virtual keyboard displayed on the Titan S8 screen. Space and double quote characters are not permitted for the PSK.

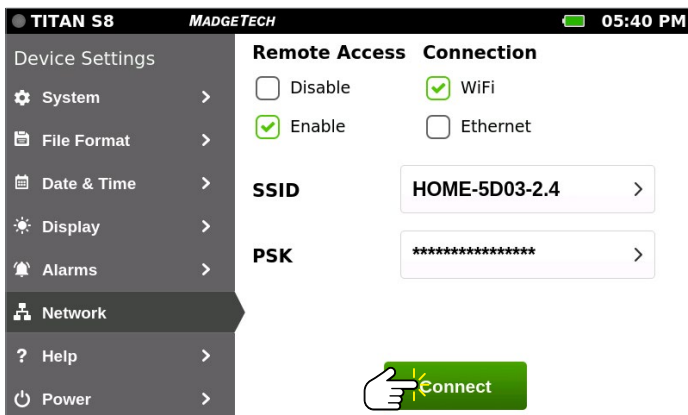
WI-FI NETWORK CONFIGURATION



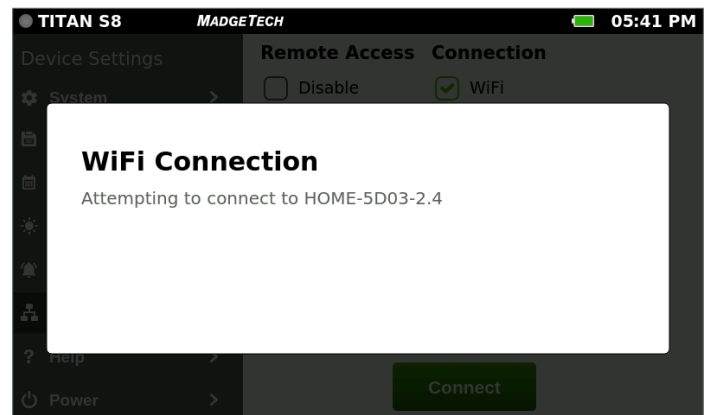
Select the ?1234 button to type in special characters and numbers. Select the Up/Down (Shift) arrow to access additional special characters. Press the **Enter** key to exit to the next screen.



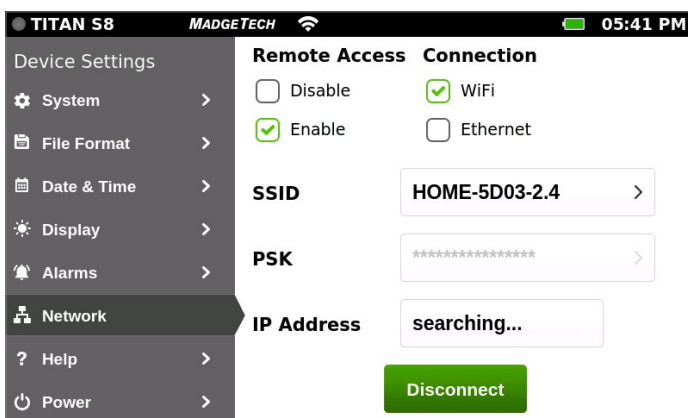
Select **Apply** to accept the password or **Cancel** to reject it. Make note of the password as it will not be displayed again. Passwords are hidden once set for security.



Select **Connect** to connect to the Wi-Fi network selected.

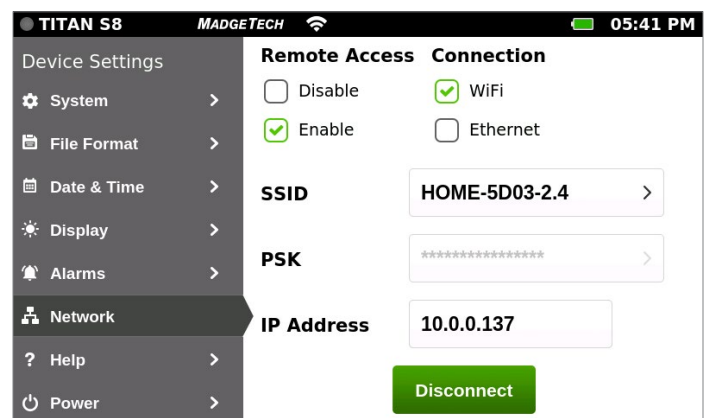


Attempting to connect to the Wi-Fi network selected.



When the Wi-Fi connection is successful, the Wi-Fi icon is displayed on the Top Bar.

If the IP Address box says “searching...”, that indicates the Titan S8 is trying to determine what IP address is assigned to it. If the IP Address box is blank, press the box to start a new search.



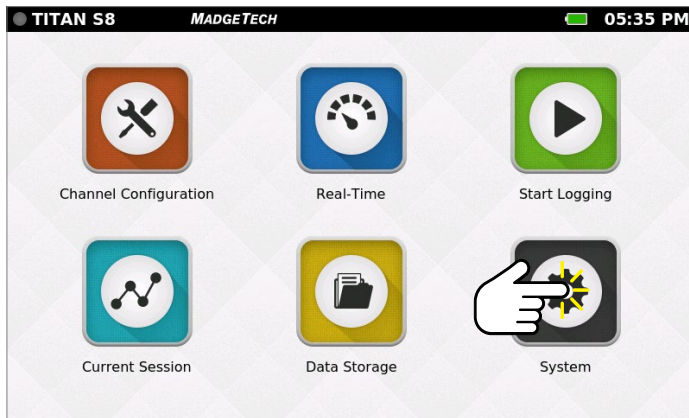
Until a server is selected, you will not be able to view or control the Titan S8 remotely. To connect the Titan S8 to a server using a Wi-Fi connection, see the Open Web Server Configuration on [page 8](#).

ETHERNET NETWORK CONFIGURATION

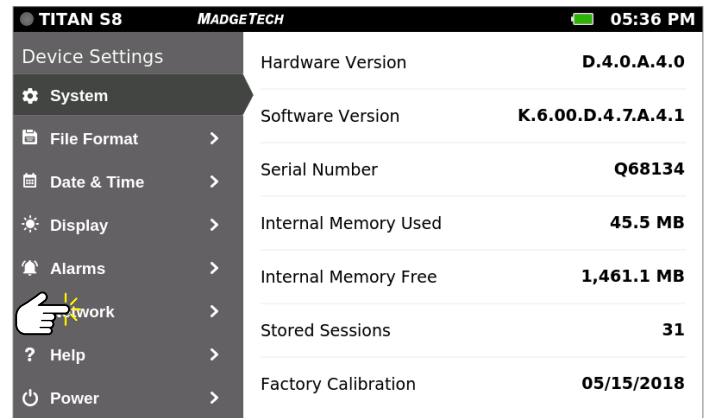


Ethernet Network Configuration

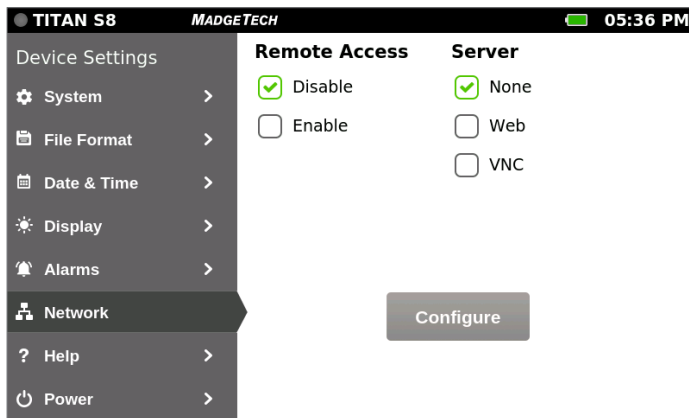
The Titan S8 supports two main connection types: Wi-Fi or Ethernet. Ethernet is supported using an approved USB to Ethernet adapter. Plug in the Ethernet adapter prior to powering up Titan S8.



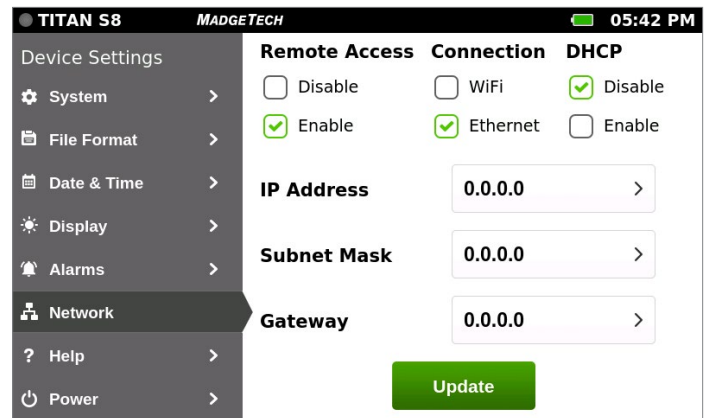
From the Home Screen, select **System**.



Select **Network**.

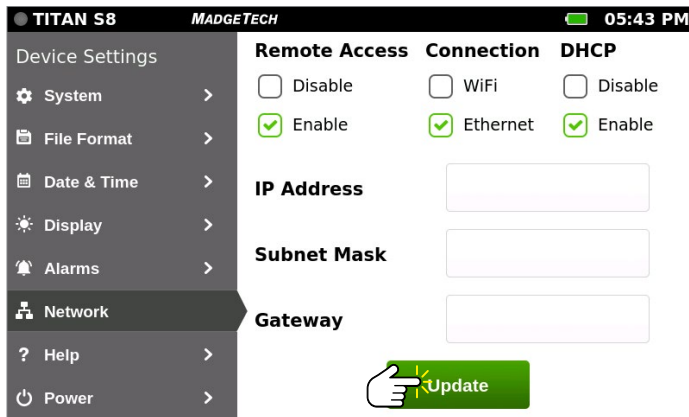


The supported servers can only be configured when **Remote Access** is set to **Disable**. Setting the Web Server is covered on [page 8](#) and the VNC Server on [page 16](#). For now, select **None** as the server type to get started.

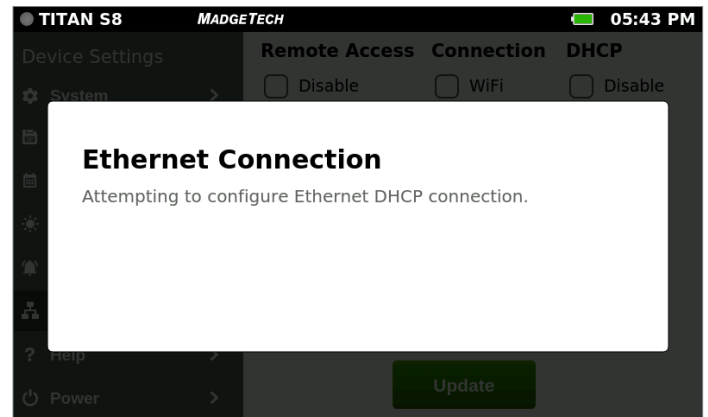


1. Set the Remote Access by selecting **Enable** checkbox.
2. Select **Ethernet** as the connection. This will disconnect the Wi-Fi connection if previously selected.
3. When DHCP (Dynamic Host Configuration Protocol) is disabled, the IP Address, Subnet Mask and Gateway must be manually entered.

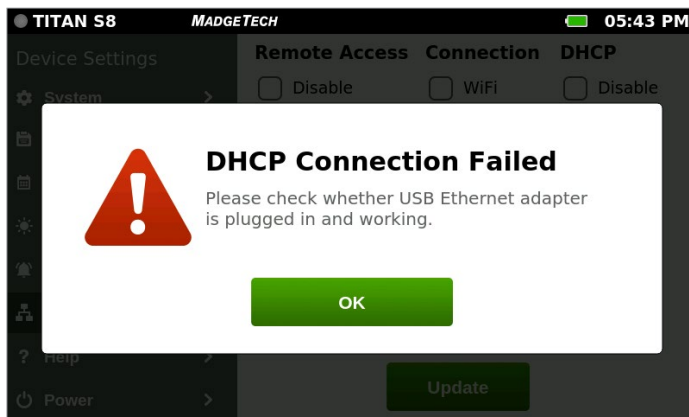
ETHERNET NETWORK CONFIGURATION



Set the DHCP by selecting the **Enable** checkbox. Select **Update** to attempt to fill in the IP Address, Subnet Mask, and Gateway automatically.



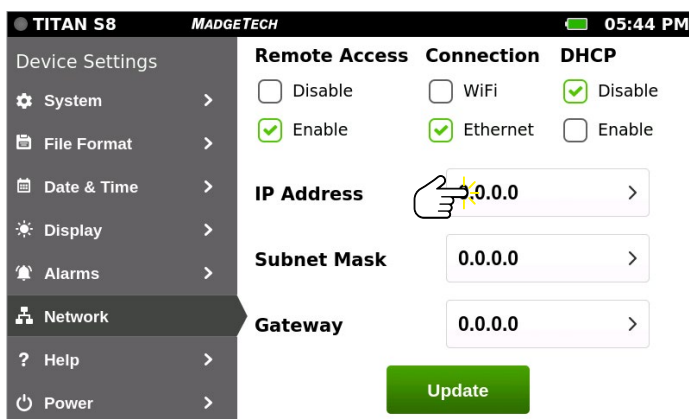
Attempting to configure an Ethernet DHCP connection.



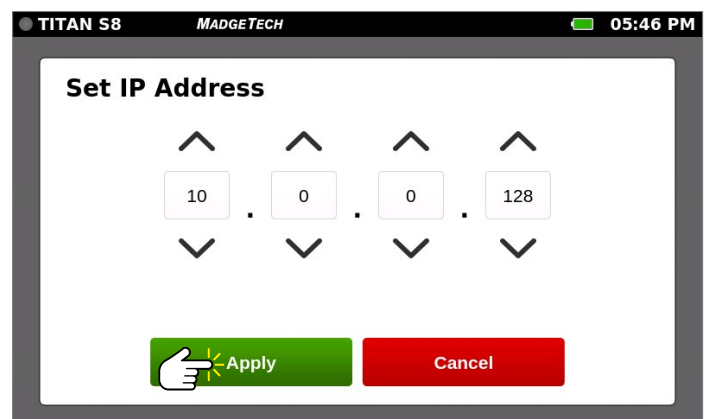
Error message will be displayed if the DHCP connection fails. Similar message will be displayed if the Ethernet static connection fails.



The IP Address, Subnet Mask, and Gateway will display if the connection is successful. These values are not changeable.

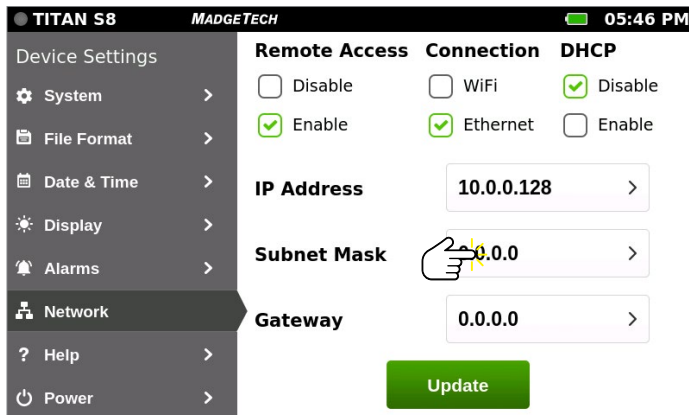


To manually enter the IP Address, Subnet Mask, and Gateway, select the **Disable** checkbox. To enter the IP Address, press the **IP Address** text box.

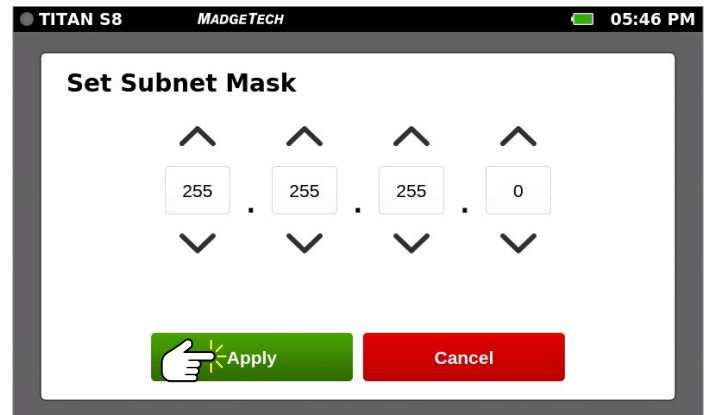


Set the IP address by pressing the up and down arrows to select the numbers. Hold down the arrows to quickly scroll through the numbers. Select **Apply** to accept the IP Address.

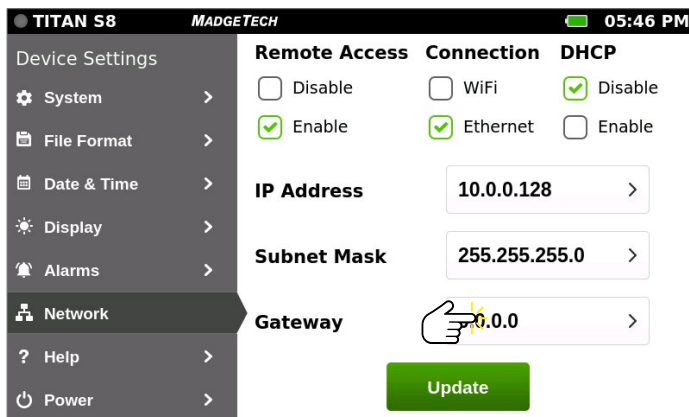
ETHERNET NETWORK CONFIGURATION



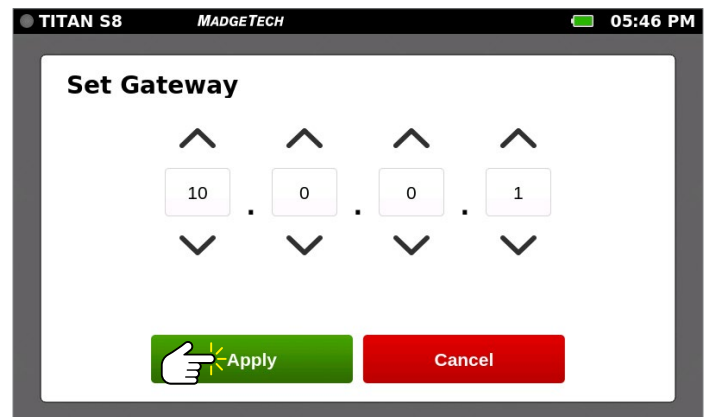
To enter the Subnet Mask, press the **Subnet Mask** text box.



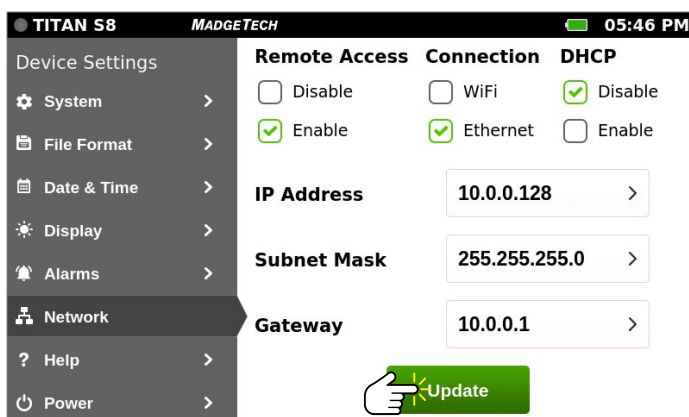
Set the Subnet Mask by pressing the up and down arrows to select the numbers. Hold down the arrows to quickly scroll through the numbers. Select **Apply** to accept the Subnet Mask.



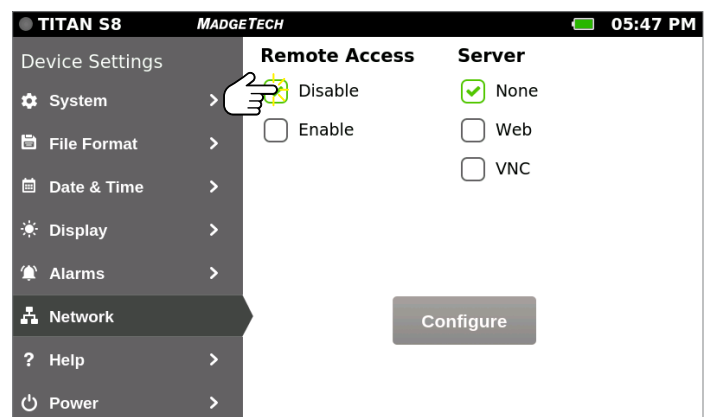
To enter the Gateway, press the **Gateway** text box.



Set the Gateway by pressing the up and down arrows to select the numbers. Hold down the arrows to quickly scroll through the numbers. Select **Apply** to accept the Gateway.



Select **Update** to make the static Ethernet connection. If Ethernet connection is successful, the network icon will be displayed on the Top Bar. Continue to next section to configure the web server to view or control the Titan S8 remotely.



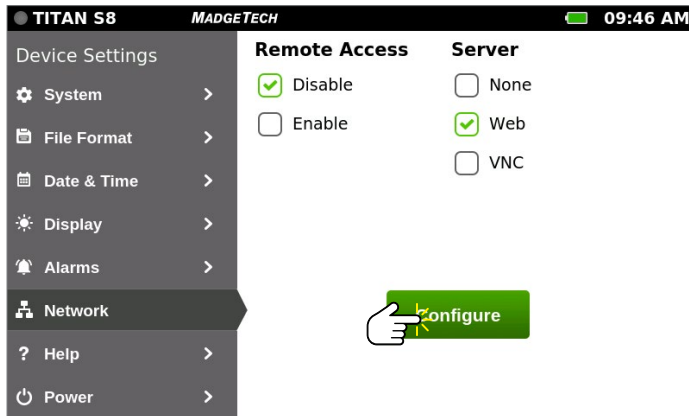
Select Remote Access **Disable** checkbox to disconnect the Ethernet connection to proceed with setting up the Web Server Configuration on the next page.

WEB SERVER CONFIGURATION

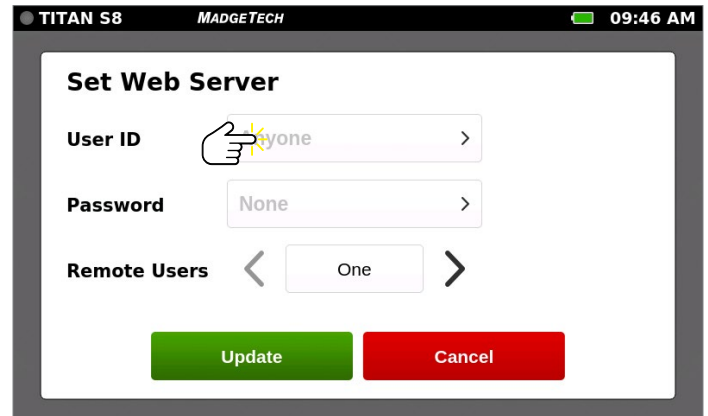


Web Server Configuration

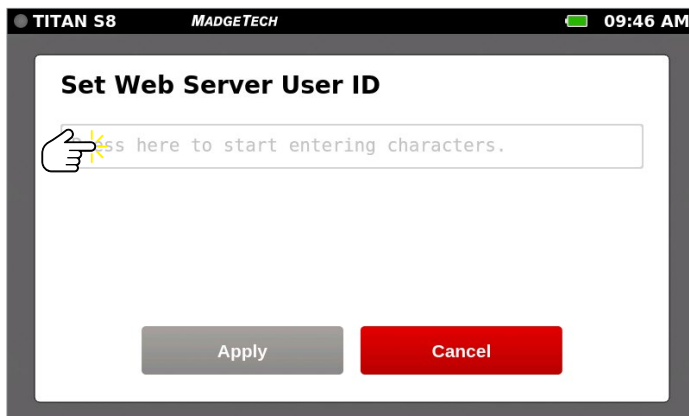
The Titan S8 can be configured for access over the web or through a Virtual Network Computing (VNC) connection. To configure access over the web, follow the steps in this section.



Select **System** from the Home screen and then **Network** if not already on this screen. Select **Web Server** and **Configure** to configure the server. Make sure Remote Access is set to **Disable**.



The default user ID on the web server is Anyone and the password is None. It is highly recommended to change these settings to restrict remote access from unauthorized users. Select the **User ID** text field to change the User ID.



Press in the text box to bring up the virtual keyboard.

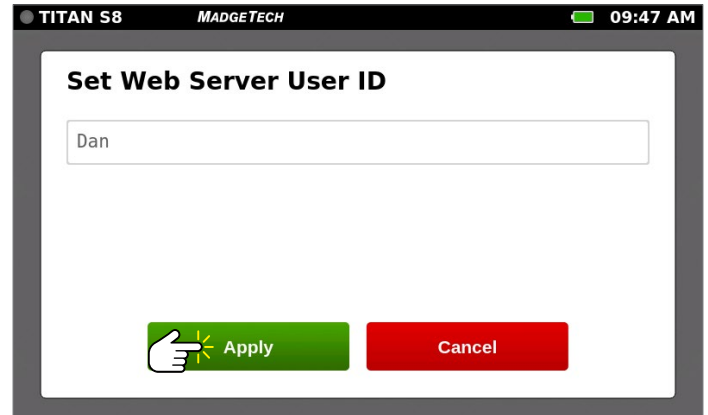


The space bar is disabled as spaces are not permitted in the User ID. The User ID is case sensitive.

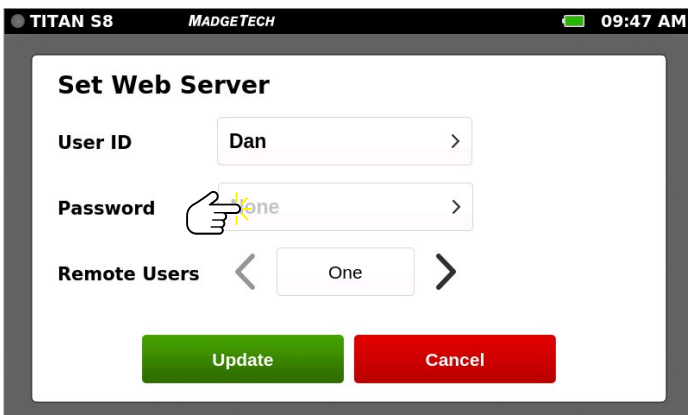
WEB SERVER CONFIGURATION



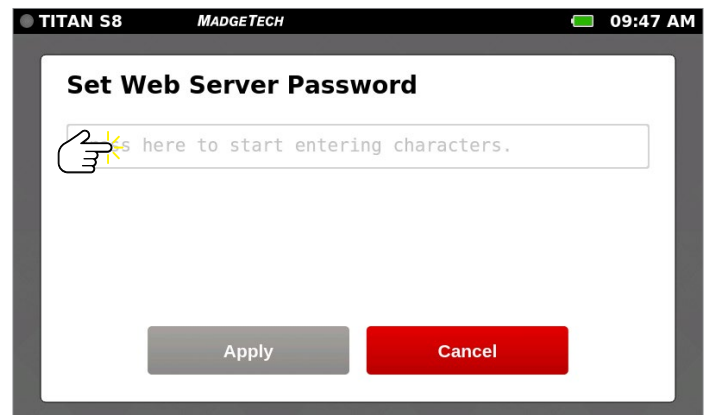
Additional keys are disabled on the numeric virtual keyboard. The User ID and Password may only consist of characters that are considered "URL safe". Select **Enter** key when finished entering the User ID.



Select **Apply** to accept the new User ID.



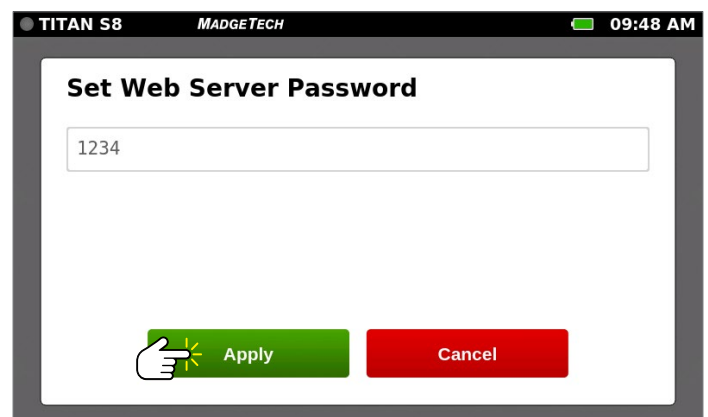
Press in the **Password** text box to bring up the virtual keyboard.



Press in the text box to bring up the virtual keyboard.

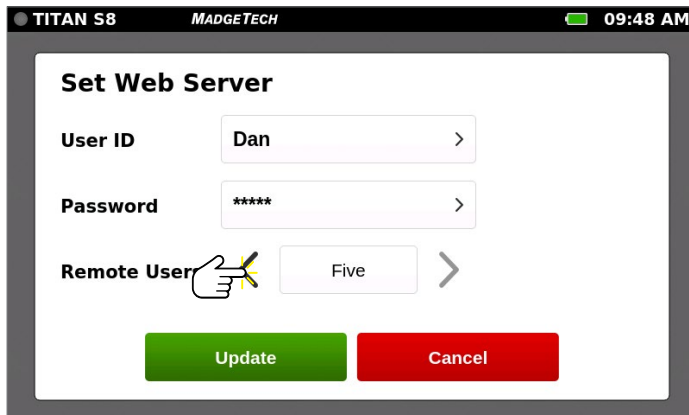


Certain keys are disabled on the numeric virtual keyboard. The User ID and Password may only consist of characters that are considered "URL safe". Select the Up/Down (Shift) arrow to access additional special characters. Select **Enter** key when finished entering the User ID.

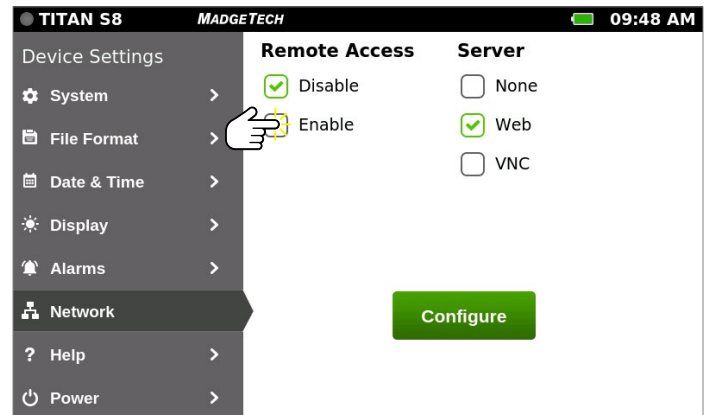


Select **Apply** to accept the password or **Cancel** to reject it. Make note of the password as it will not be displayed again. Passwords are hidden once set for security.

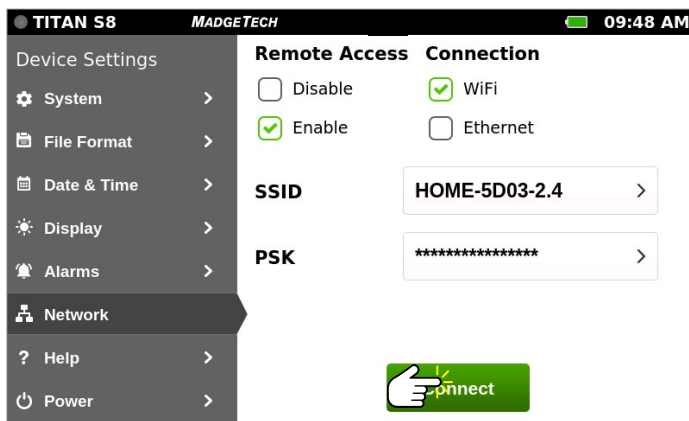
WEB SERVER CONFIGURATION



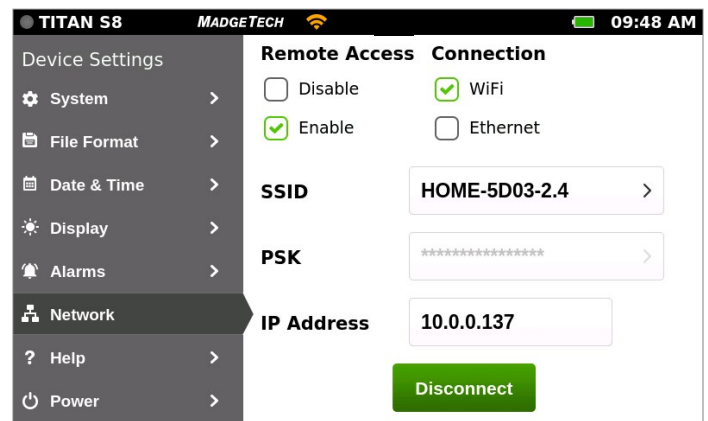
Use the left and right arrows to select the number of remote users that can control the device at the same time. Select **Update** to finish configuring the Web Server.



Once the Web Server has been configured, select the Remote Access **Enable** checkbox to test the Web Server network connection.



Select the checkbox for either the Wi-Fi or Ethernet connection that was previously set up. Select **Connect** to enable either Wi-Fi or Ethernet connection. See **page 2** for steps to configure the Wi-Fi connection and **page 5** for steps to configure the Ethernet connection.



If the network connection is successful, the network icon for either Wi-Fi or Ethernet is displayed on the Top Bar of the screen.



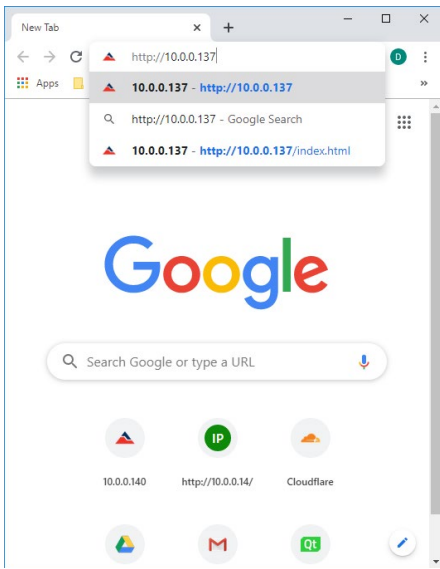
NOTE: Press the Home button on the Titan S8 device to return to the Home Screen in order to remotely view or control the device.

WEB BROWSER ACCESS



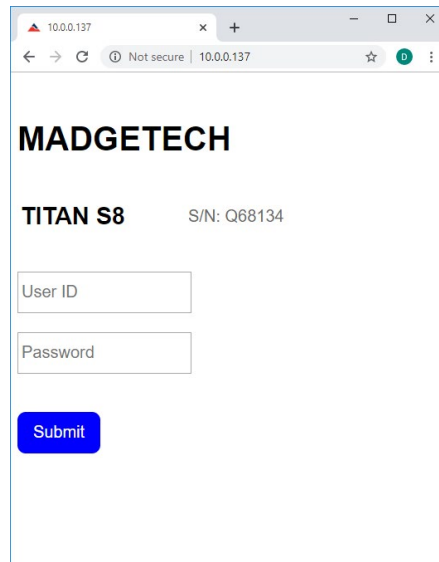
Web Browser Access

The Titan S8 can be accessed over the web or through a Virtual Network Computing (VNC) connection. To access the Titan in a web browser (like Chrome or Firefox), follow the steps in this section.

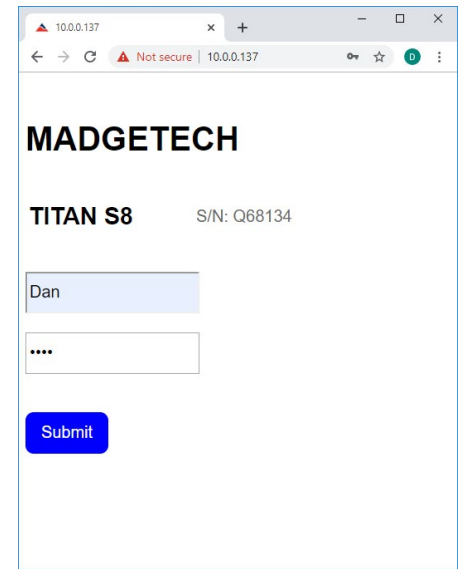


1. Open a web browser on your computer.
2. Type in the IP address that is assigned to the Titan S8 device starting with `http://`. You can find the IP Address on the Network page in Settings.

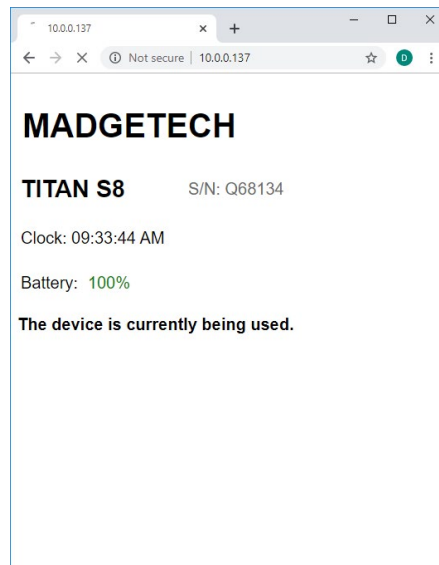
Remember to return to the Home Screen before connecting to the device in the browser.



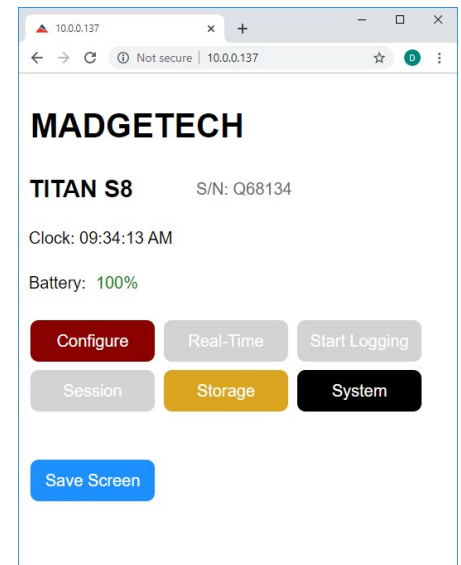
If the initial connection between the Titan S8 Web Server and web browser is successful, then a login web page will appear.



Type in the Username and Password that was set up on your device. Remember that they are both case sensitive.

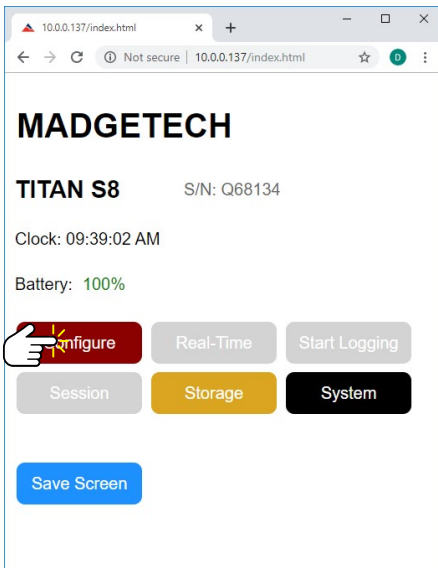


When this message is displayed, the local user is currently using the device or not enough time as passed since the local user has used the device. The local user always has priority using the device over the remote user.

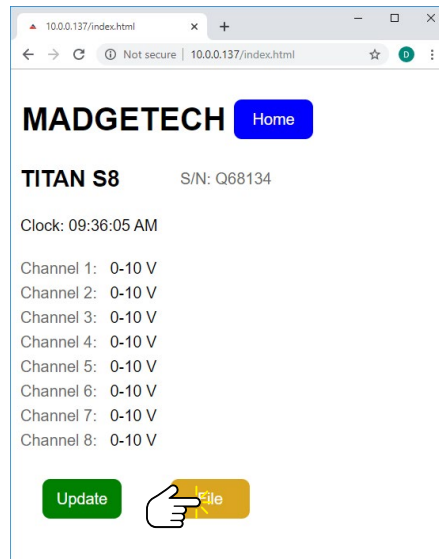


More than one remote user can simultaneously be logged into the same Titan S8 device. The device can be configured to support up to five remote users. See **page 8** for instructions.

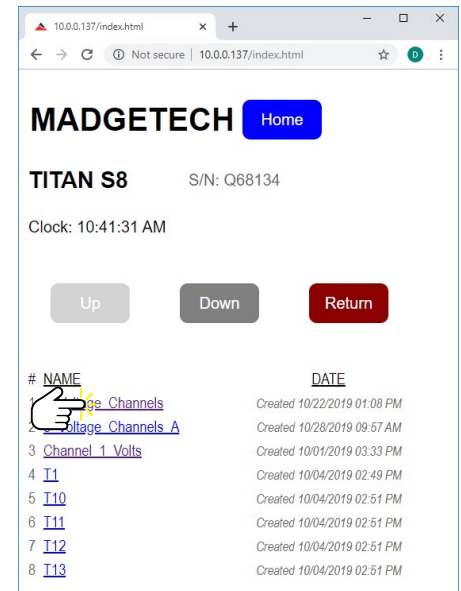
WEB BROWSER ACCESS



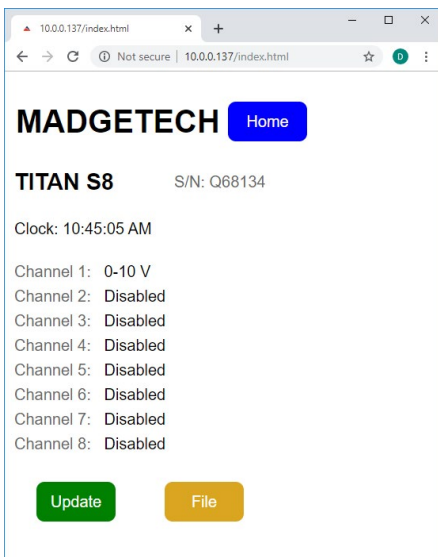
Home > Once the remote user has access to the Titan S8 device, the remote user can use the six main Home screen buttons. Click the **Configure** button on the Home Screen to reach the Channel Configuration screen on the Titan S8 device.



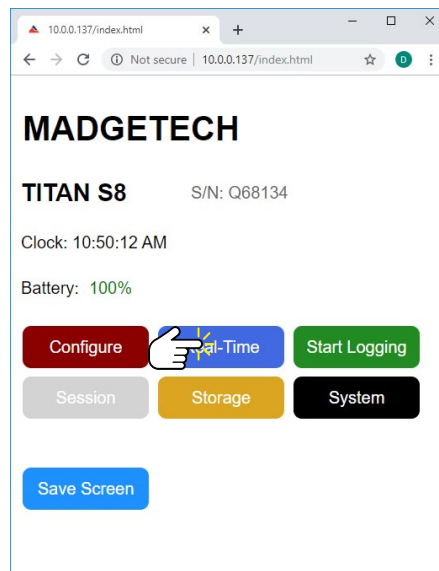
Home > Configure > The remote user cannot access or see everything on the web browser that the local user can see or do directly on the device. For example, the remote user cannot directly configure a channel. However, the remote user can press the **File** button to reach previously saved channel configurations on the device.



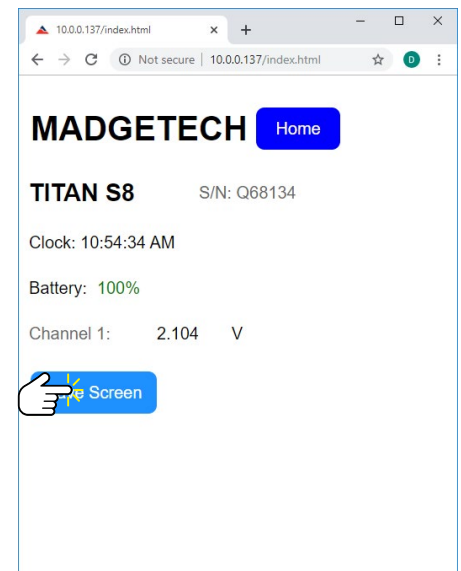
Home > Configure > File > Scroll up/down to select one of the channel configurations previously saved on the device. Click a saved channel configuration to change to a new channel configuration.



Home > Configure > File > Select Saved Configuration > Click the Update button to use the new channel configuration or press the Home button to cancel the selection.

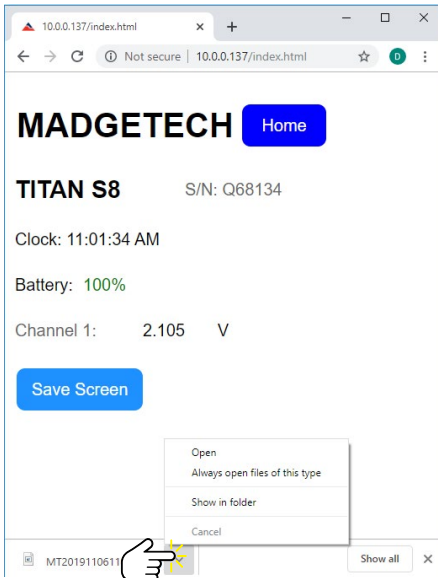


Home > The Real-Time and Start Logging buttons are now enabled. Click the **Real-Time** button.

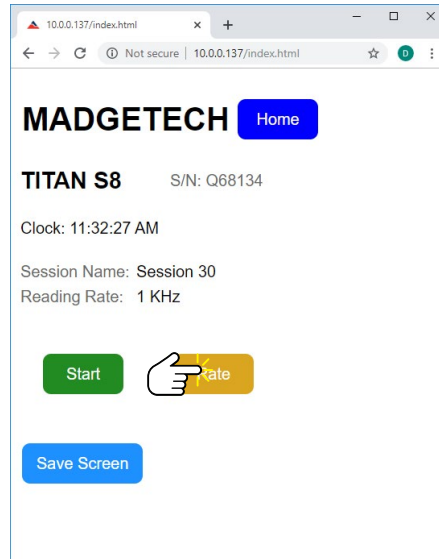


Home > Real-Time > Zero values will be displayed for a few seconds before the real data values are displayed. To see what is being displayed on the Titan-S8 screen, click on the **Save Screen** button to download a screen shot to your computer.

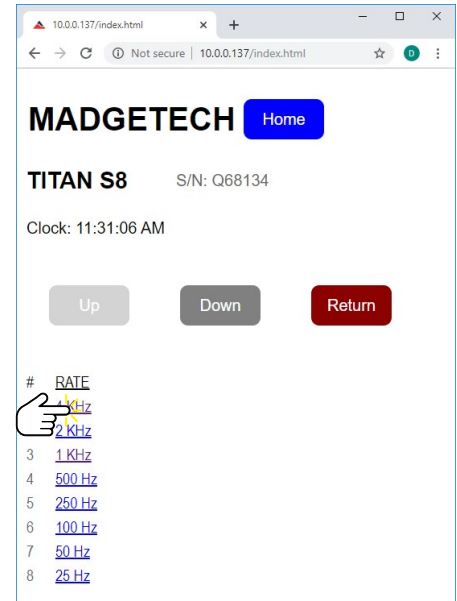
WEB BROWSER ACCESS



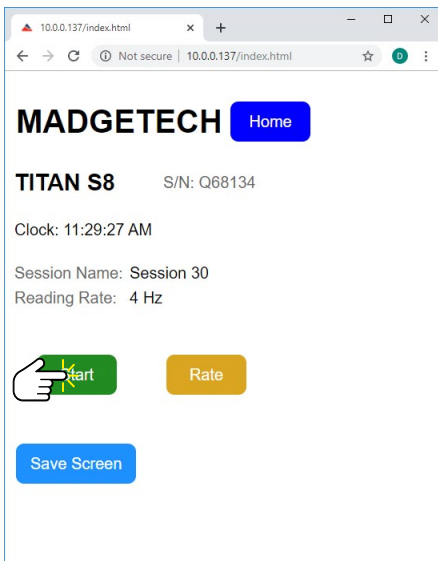
Home > Real-Time > Save Screen Click to open the downloaded screen shot file to examine it. Click the **Home** button to return to the Home Screen when finished.



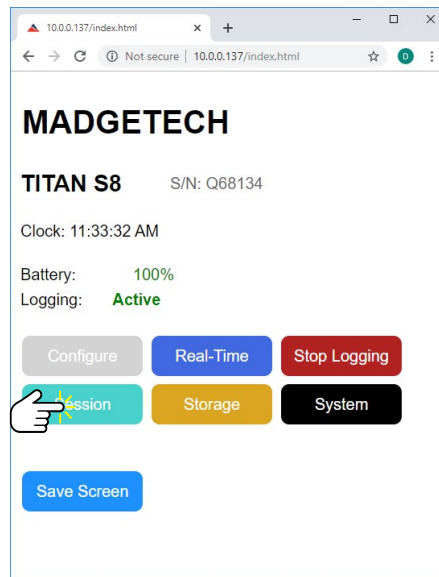
Home > Start Logging > From the **Start Logging** page, the remote user can click the **Rate** button to change the Reading Rate on the device.



Home > Start Logging > Select New Reading Rate > Change to new reading rate.



Home > Start Logging > Select New Reading Rate > Start > The reading rate was changed to 1 KHz from 4 Hz. Click the **Start** button to start data logging and return to the Home Screen.



Home > The Home web page now shows data logging is active. When the device is logging, the Session button is now enabled. Click the **Session** button to see the status of the current logging session.

WEB BROWSER ACCESS



MADGETECH Home

TITAN S8 S/N: Q68134

Clock: 03:10:22 PM

Session Name: Session 1
 Reading Rate: 10 Seconds
 Log Start Time: 03:10:13 pm
 Log Start Date: 12/19/2019
 Readings: 4

CH	MIN	MAX	RECENT	UNIT
1L	0.278	0.278	0.278	V
2R	0.761	0.761	0.761	V
3	1.060	1.060	1.060	V
4	0.351	0.351	0.351	V

Live Screen

Home > Session > The Session web page shows the data logging status such as number of readings. To see the graph of the current session, press the **Save Screen** button to view a screen shot of the device.

The remote user can also select which channels to graph when there is more than one channel active. An “L” means that channel is graphed for the left side and a “R” means the channel is graphed for the right side. As each channel is selected it becomes the left side and previous left side channel becomes the right side. If the left side channel is selected again, the right side channel is no longer graphed and the “R” disappears.

MADGETECH

TITAN S8 S/N: Q68134

Clock: 03:46:30 PM

Battery: 100%

Configure Real-Time Start Logging
 Session Storage System

Save Screen

Home > To stop data logging, click the **Home** button and click the **Stop Logging** button.

MADGETECH Home

TITAN S8 S/N: Q68134

Clock: 03:47:07 PM

Battery: 100%
 Internal Memory Used: 1%
 Stored Sessions: 4

Up Down

#	NAME	START	READINGS
4	Session 4	2019-12-19 15:41	1,000,000
3	Session 3	2019-12-19 15:39	3,984
3	Session 2	2019-12-19 15:25	308
4	Session 1	2019-12-19 15:10	116

Home > Storage > From the Home screen, click the **Storage** button. Scroll up/down to see all the stored data logging sessions. The remote user can click on a data logging session to download.

MADGETECH Home

TITAN S8 S/N: Q68134

Clock: 03:48:10 PM

Battery: 100%
 Internal Memory Used: 1%
 Stored Sessions: 4

The device is currently downloading a large file.
 Transmitted 6,623,232 of 8,667,688 bytes.

Up Down

#	NAME	START	READINGS
1	Session 4	2019-12-19 15:41	1,000,000
2	Session 3	2019-12-19 15:39	3,984
3	Session 2	2019-12-19 15:25	308
4	Session 1	2019-12-19 15:10	116

Home > Storage > Select Data Logging Session to Download > Showing the progress of the data logging session file being downloaded.

MADGETECH Home

TITAN S8 S/N: Q68134

Clock: 03:48:55 PM

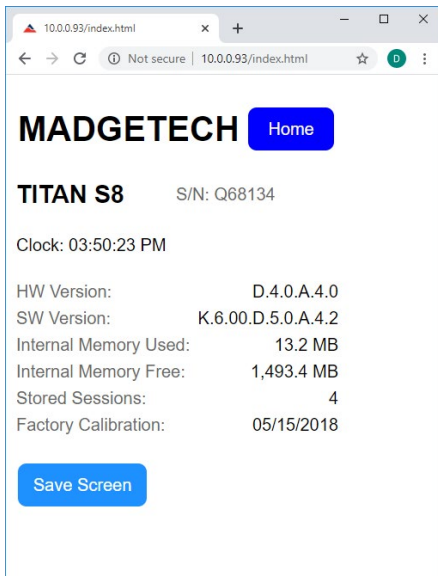
Battery: 100%
 Internal Memory Used: 1%
 Stored Sessions: 4

Up Down

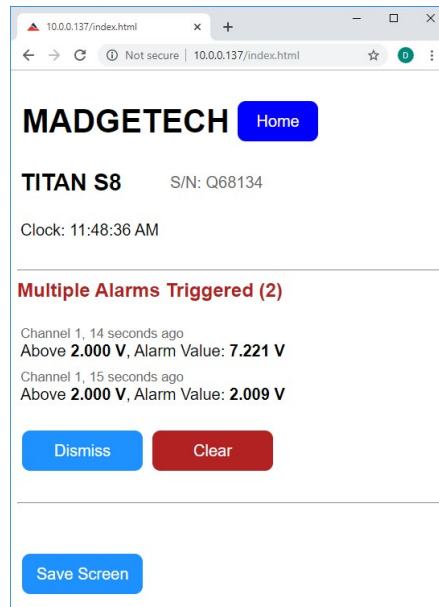
#	NAME	START	READINGS
1	Session 4	2019-12-19 15:41	1,000,000
2	Session 3	2019-12-19 15:39	3,984
3	Session 2	2019-12-19 15:25	308
4	Session 1	2019-12-19 15:10	116

Home > Storage > Select Data Logging Session to Download > Once the download is complete, the remote user can use the Madgitech4 software to import the data logging file.

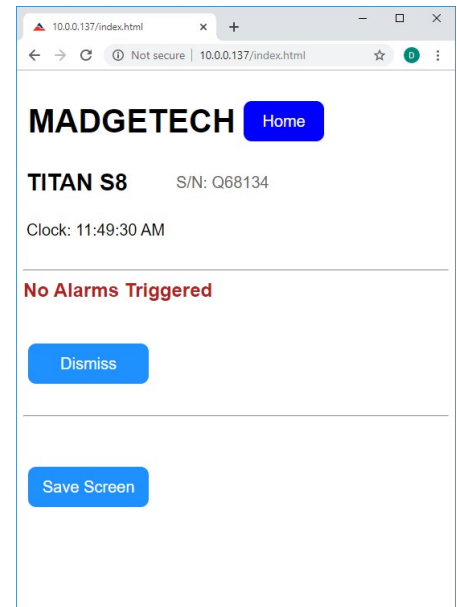
WEB BROWSER ACCESS



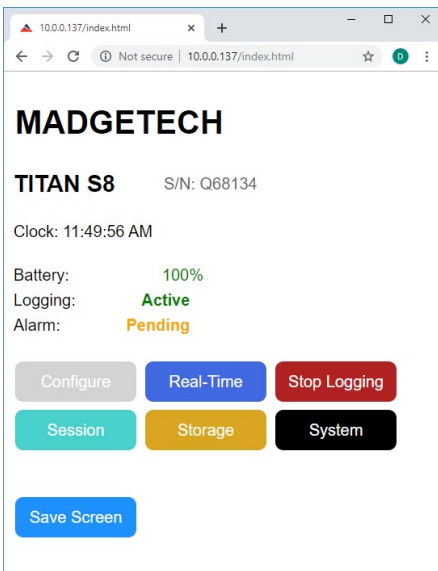
Home > System > From the **Home** page, click the **System** button to view limited system information. The remote user does not have access to all the information and buttons on the Titan S8 System screen.



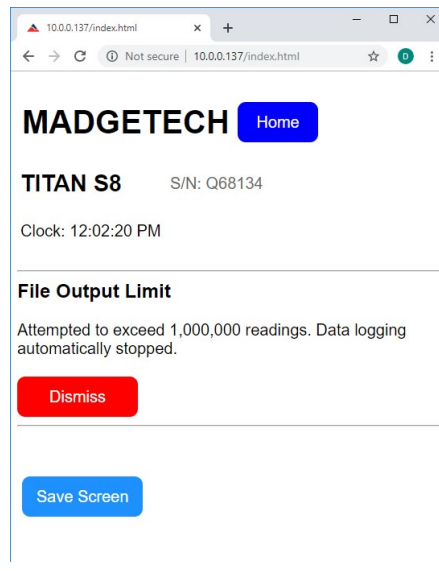
When an alarm is triggered, the remote user can clear and dismiss the alarm.



After an alarm is cleared.



Home > After an alarm has been cleared and dismissed.



There are other Titan S8 warnings that the remote user can dismiss. There will be a slight delay before the remote user is allowed to dismiss the warning, so the local user has a chance to see the same warning.

Security features built into the Titan S8:

- The remote web browser user has limited control of the device and cannot turn the device off or take other critical actions to avoid causing harm.
- The Web Server login name and password restricts remote access to the device.
- There is a configurable limit of up to 5 remote web browser sessions permitted to connect to the Titan S8 device simultaneously.

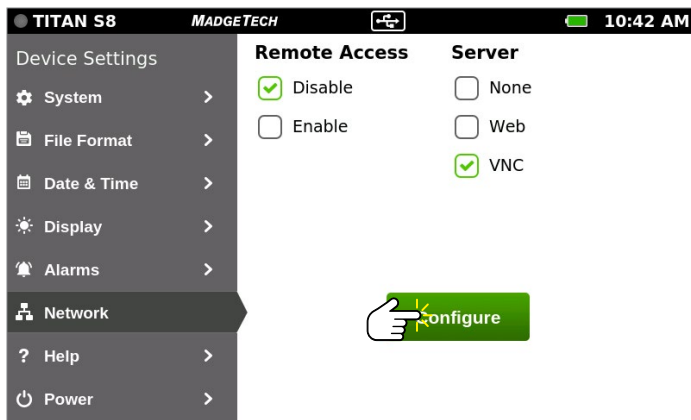
Please note: None of the data being transferred between the Titan S8 device and remote web browser is encrypted.

VNC VIEWER SET-UP



VNC View Set-up

The Titan S8 can be accessed and controlled through a Virtual Network Computing (VNC) connection. The Titan S8 VNC Server will work with any VNC Viewer. Windows TightVNC was used for demonstration purposes in this section.



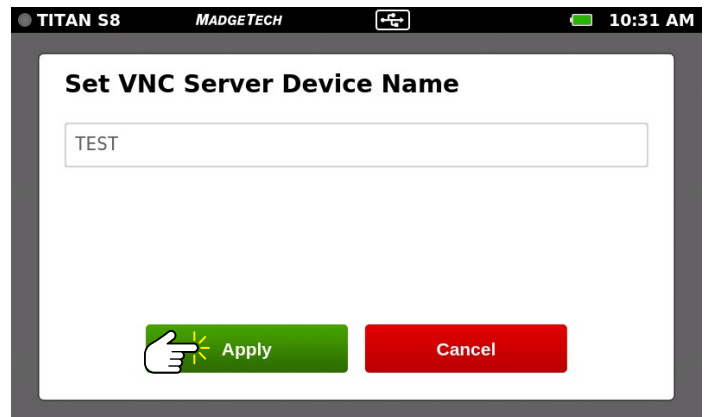
Select **System** from the Home screen and then **Network** if not already on this screen. Make sure Remote Access is set to **Disable**. Select **VNC Server** and **Configure** to configure the server.



Select the **Device Name** text field to set the Device Name.

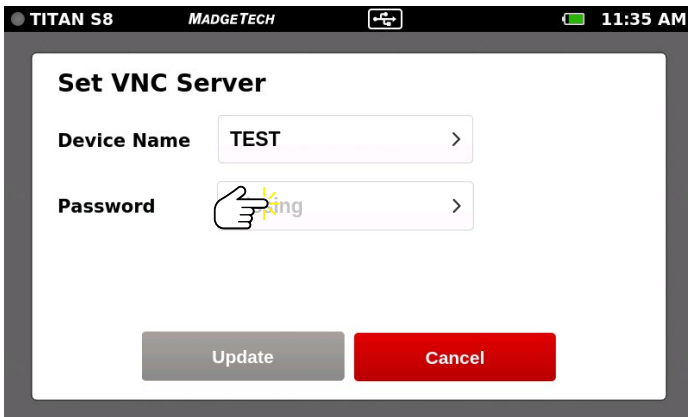


Press in the text box to bring up the virtual keyboard. The space bar is disabled as spaces are not permitted in the Device Name. The Device Name is case sensitive. Select **Enter** key when finished entering the Device Name.



Select **Apply** to set the Device Name.

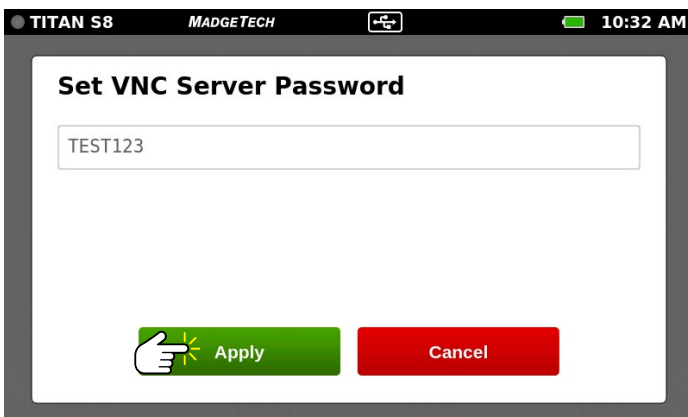
VNC VIEWER SET-UP



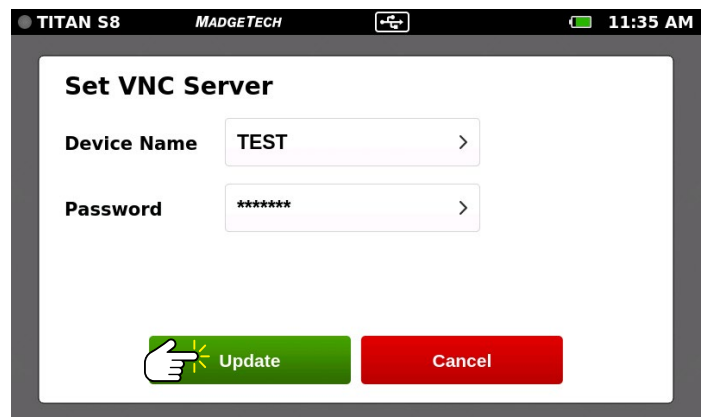
Select the **Password** text field to set the Password for the VNC Server.



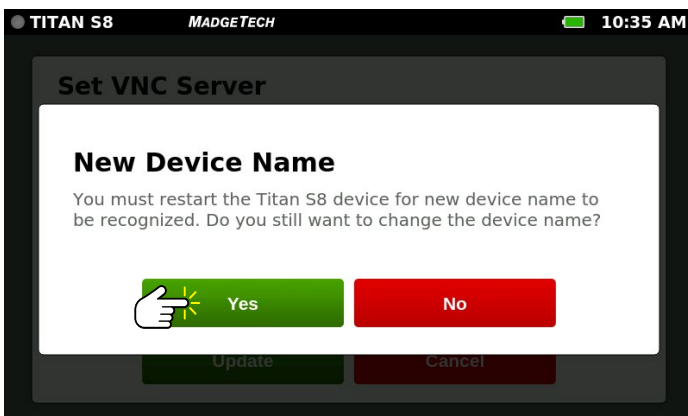
Press in the text box to bring up the virtual keyboard. Some keys are disabled as those characters are not permitted in the Password. Select the Up/Down (Shift) arrow to access additional special characters. The VNC Server Password must be over five characters. Select **Enter** key when finished entering the Password.



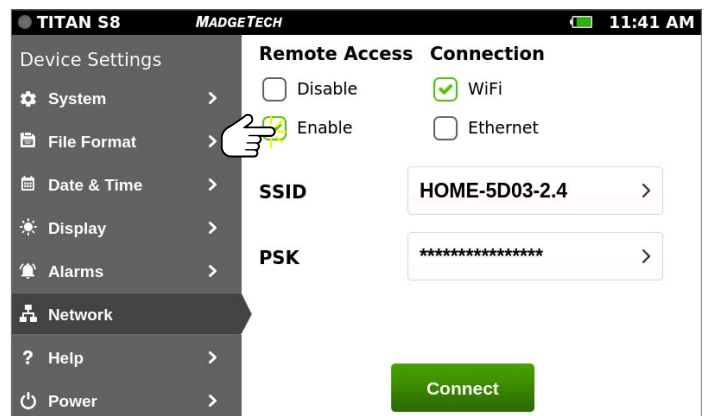
Select **Apply** to set the Password.



Select **Update** to set the VNC Server Device Name and Password.

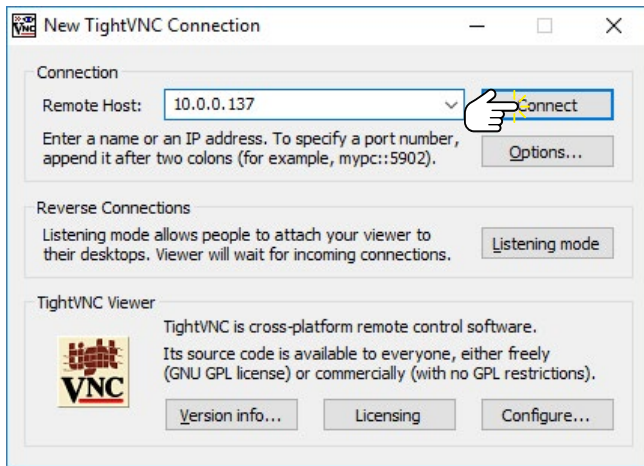


Select **Yes** and then restart the Titan S8 device.

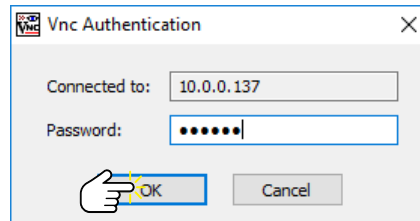


Once the Titan S8 device has been restarted, go to **Settings > Network**, select the Remote Access **Enable** checkbox and select **Connect** to turn back on wireless connection in order to connect to the VNC Viewer.

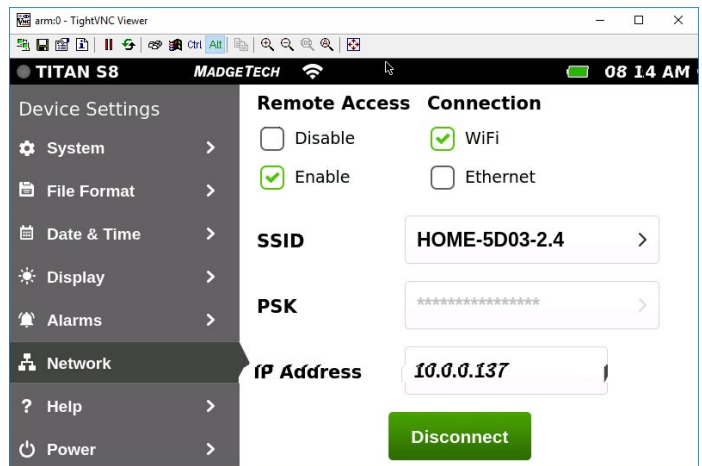
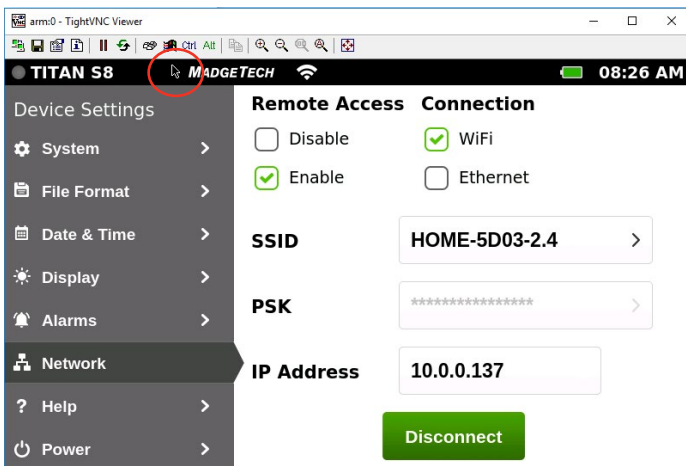
VNC VIEWER SET-UP



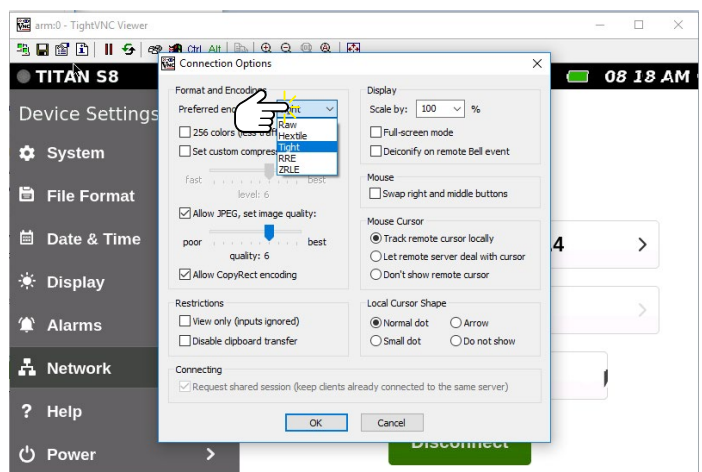
Download and install VNC Viewer (TightVNC is being used in these for this demonstration). Using the configured IP address of the Titan S8 (see [page 4](#) for Wi-Fi and [page 6](#) for Ethernet), enter it into the Remote Host text box. The IP address must match the IP address of the Titan S8 device. Click **Connect**.



Enter the same password that was set-up during the Titan S8 VNC Server configuration (see [page 17](#)). Click **OK**.

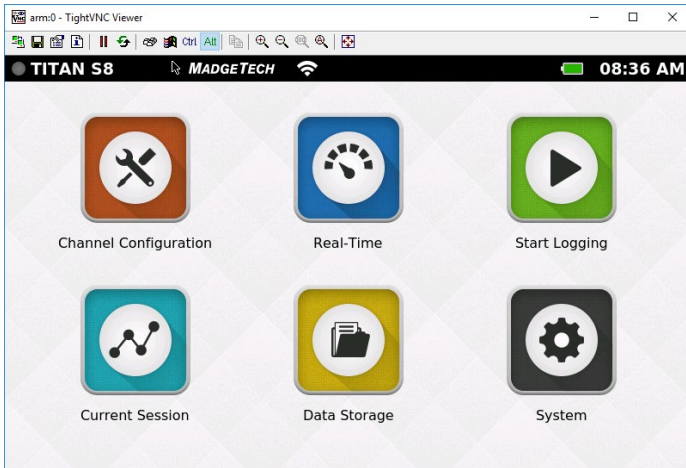


After the network connection is made an arrow pointer will appear on the TightVNC screen and on the Titan S8 screen. The VNC Viewer does not need to be running for the arrow pointer to appear on the Titan S8 screen. If the local Titan S8 arrow pointer moves on its own, the device is being remotely controlled.

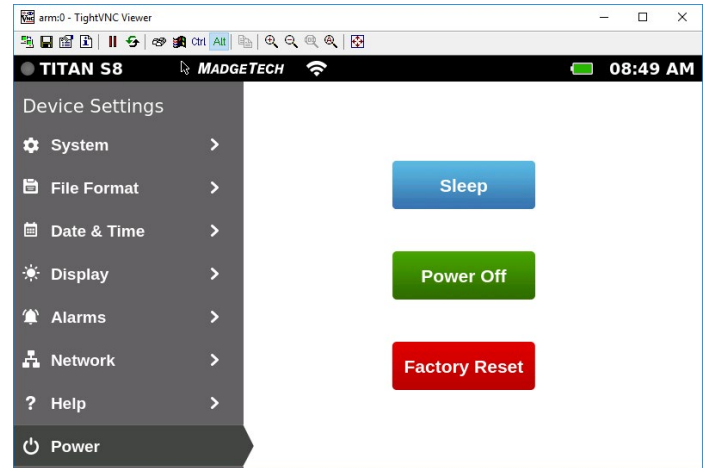


If the Titan S8 screen is distorted when displayed by TightVNC, change the encoding options in the Preferences to **Hextile** which seems to work best for TightVNC.

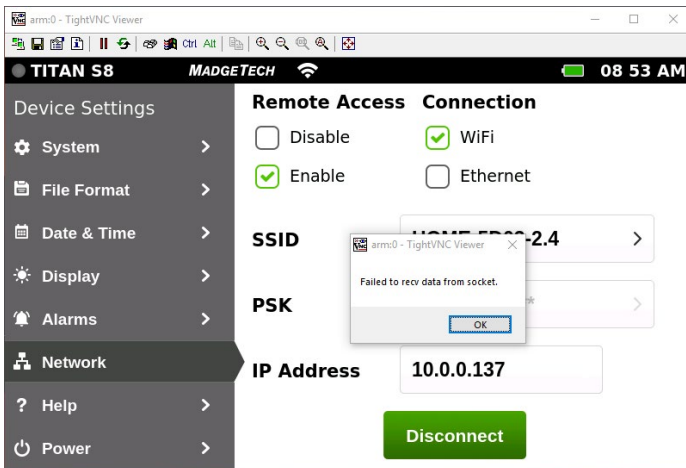
VNC VIEWER SET-UP



The VNC Connection is now complete. To get to the Titan S8 Home screen press the Home key on the computer keyboard running the VNC Viewer.



The remote VNC Viewer user now has complete control over the device, including turning off the device and performing a factory reset. **Note:** If the remote VNC Viewer powers off the Titan S8 device, the device must be manually turned back on.



The remote user cannot change the VNC Server password because Remote Access has to be disabled. Disabling Remote Access breaks the VNC Server to VNC Viewer connection.