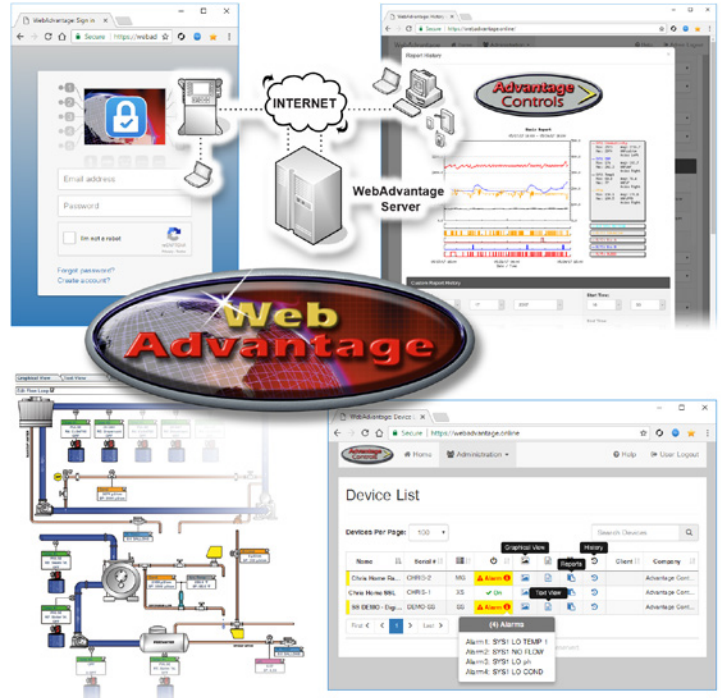


# WebAdvantage® Device Internet Communications



**VERY IMPORTANT: This manual contains information and contact sheets that must be returned in order for you to use the controller online. DO NOT DISCARD THIS MANUAL!**

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07/2024

# Contents

WebAdvantage® Connection - SETUP CHECKLIST .....	3
Overview .....	3
Getting Started .....	4
▪ Login Screen.....	9
▪ Device List (Home) .....	9
◦ Alarm Quick Summary .....	9
◦ Graphical View .....	10
◦ Text View .....	10
◦ Reports.....	10
▪ General .....	11
▪ Branding.....	11
▪ Emailing .....	11
▪ Report Settings .....	12
▪ Channels .....	13
▪ Viewing / Generating Reports .....	15
◦ History (Quick View).....	15
▪ General .....	15
▪ Ranges.....	16
▪ Channels .....	16
▪ Log Button.....	16
▪ Graph Button.....	17
▪ Viewing a Custom History Report .....	17
▪ Downloads .....	18
▪ New Report from Template .....	18
◦ Access.....	19
◦ Admin Functions .....	19
Frequently Asked Questions.....	20
Checking Communication / Status Codes.....	21
<b>Reference Sheets</b>	
<hr/>	
USER ID Setup.....	22
Add Device and Assign USER ID (Admin's Only) .....	23

## WebAdvantage® Connection - SETUP CHECKLIST

- Do you have a WebAdv USER ID and password? \_\_\_\_\_ **Yes, if 'No' proceed to page 22.**
- Has your account admin added the device and linked it to your USER ID? \_\_\_\_\_ **Yes, if 'No' proceed to page 23.**

*Congratulations!* You are now ready to go online with WebAdvantage®.

## Overview

WebAdvantage®'s server and website are designed to keep in constant contact with MegaTron controllers connected to the Internet. The WebAdvantage® server constantly downloads real-time data and saves this data for graphing and logging trends. It can also send alarm notification to multiple individuals via e-mail. In addition, it lets a user log in to check or change settings in the controller.

WebAdvantage® is designed to be straightforward and easy to use. Please read your MegaTron manual and familiarize yourself with the MegaTron controller. Setup requires only a few minutes, provided you have the necessary information on hand. When your WebAdvantage® enabled MegaTron arrives, it will need access to the internet via a company provided network connection or Advantage cellular router.

Once the controller is placed in its permanent position, some settings will need to be changed so that the unit can connect to the Internet. You will need the following information/equipment to properly configure the unit:

- A network connection and the appropriate cabling (RJ-45 terminated category 5 cable for H1).
- If connected to a LAN, know whether the unit will be using a **static** or **dynamic** IP address. If the unit will use a static IP address, you will need to obtain a useable static IP addresses from your IT staff for the **network address, network mask, DNS** and **network gateway**. If the unit will use dynamic addressing, this information is provided automatically.

# Getting Started

Using the inline coupler provided with the unit, connect a live CAT5 cable to the CAT5 cable coming from the MegaTron Controller.

**Note:** A unit must have a name of at least one character for the WebAdvantage® server to recognize it when viewing the status page.

Once you have determined if the controller will be using a dynamic IP address (DHCP) or static IP address you will need to make sure the controller's Network settings are configured appropriately. From the Home menu of the controller go into the Configure menu then the Network sub menu.

```
>NETWORK<
IP ADDRESS: 0.0.0.0
SUBNET MASK: 0.0.0.0
GATEWAY 0.0.0.0
ACI SERVER: connect.webadvantage.online:80
LOCAL MODE: ON
REMOTE MODE: ON          DHCP
SETTINGS                RESET
```

```
>CONFIGURE NETWORK<
IP ADDRESS          HTTP LOCAL
IP MASK             HTTP REMOTE
GATEWAY             SEC DNS
PRI. DNS            HOST
SERVER              DOMAIN
```

If connecting to the network using a static IP address, the DHCP will need to be off and the static information IP, Mask, Gateway and DNS entered into the controller. If you are connecting to the network using a dynamic IP address, the settings will be applied automatically.

When making changes use the keypad to enter numbers, the up / down arrows to scroll through the alphabet. Press the right arrow after each desired character is entered to set the next character.


**TIP:** If you press the HELP button after arrowing over to the next position the last letter or number you selected will be displayed, this is especially handy if you are using lower case letters.

**Note:** Always press the RESET button when any changes have been made to the network settings.

WebAdvantage® website url:

**<https://webadvantage.online>**

(or) from the **[www.AdvantageControls.com](http://www.AdvantageControls.com)** website.



## Connecting to a DHCP enabled MegaTron

This guide is designed to help with connecting a DHCP enabled MegaTron or cell router to a local network.

Note: Screens may vary slightly between models.

### DHCP Setup

#### Step 1:

Press **Setup/Run**, **CONFIGURE**, **NETWORK**, **SETTINGS**.

(See figures 1, 2 and 3. Dual network cards add figure 3B. Dual network cards only available for the MegaTron MT.)

#### Step 2:

Press **DHCP**.

(See figure 4.)

#### Step 3:

Use the up/down arrows to enable. Press **Enter** to accept.

(See figure 5.)

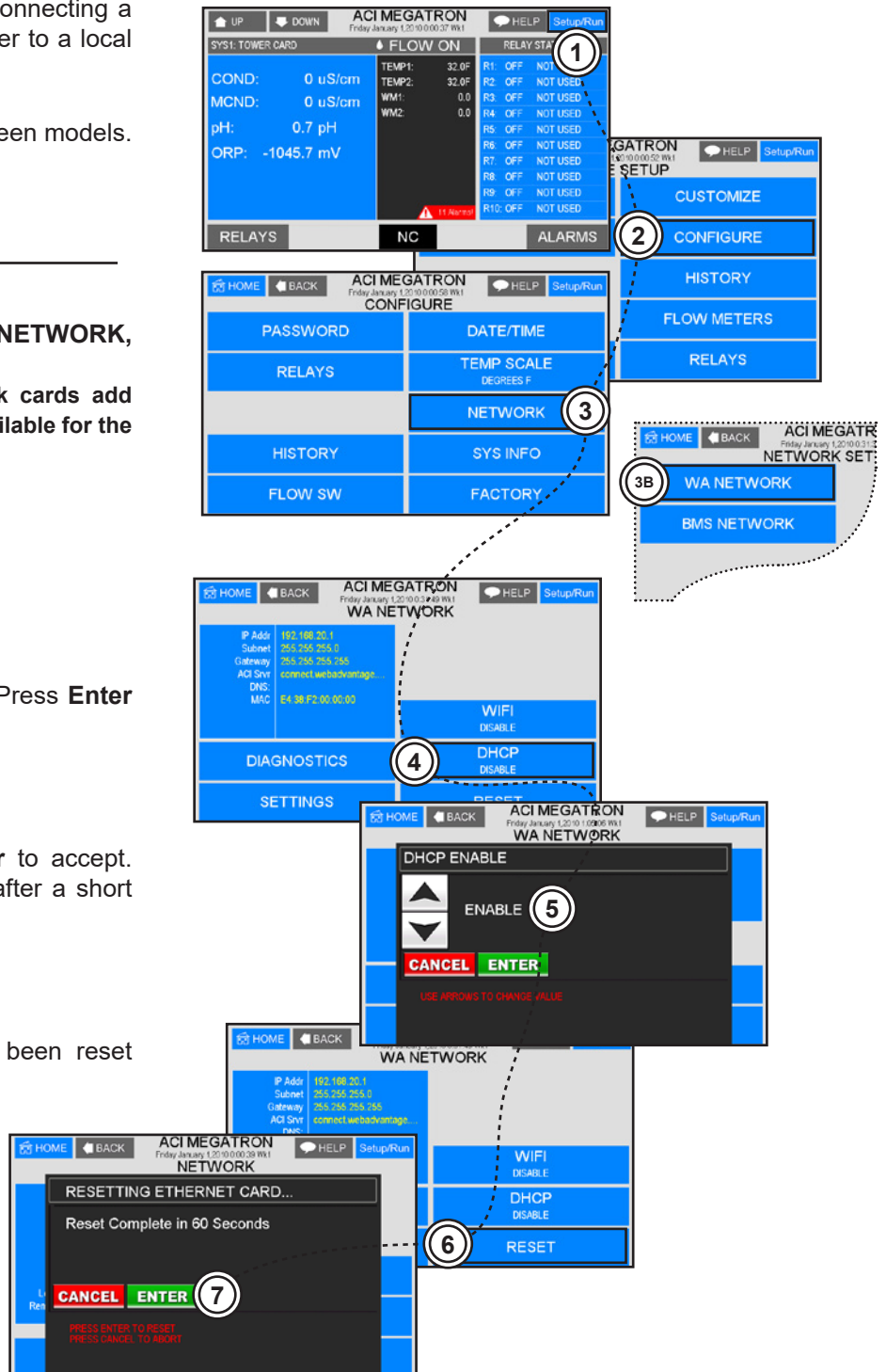
#### Step 4:

Press **RESET** and then press **Enter** to accept. The communications card will reset after a short countdown.

(See figures 6 and 7.)

#### Step 5:

After the communications card has been reset cycle power to the controller.



## Connecting to a static IP enabled MegaTron MT

This guide is designed to help with connecting a static IP enabled MegaTron to a local network.

Note: Screens may vary slightly between models.

### Static IP Setup

#### Step 1:

Press **Setup/Run**, **CONFIGURE**, **NETWORK**, **SETTINGS**.

(See figures 1, 2, 3 and 4. Dual network cards add figure 3B. Dual network cards only available for the MegaTron MT.)

#### Step 2:

Press **IP ADDRESS** or other setting to change. (See figure 5.) Note: If these options are not visible, DHCP needs to be disabled. See enabling (disabling) DHCP setup.

#### Step 3:

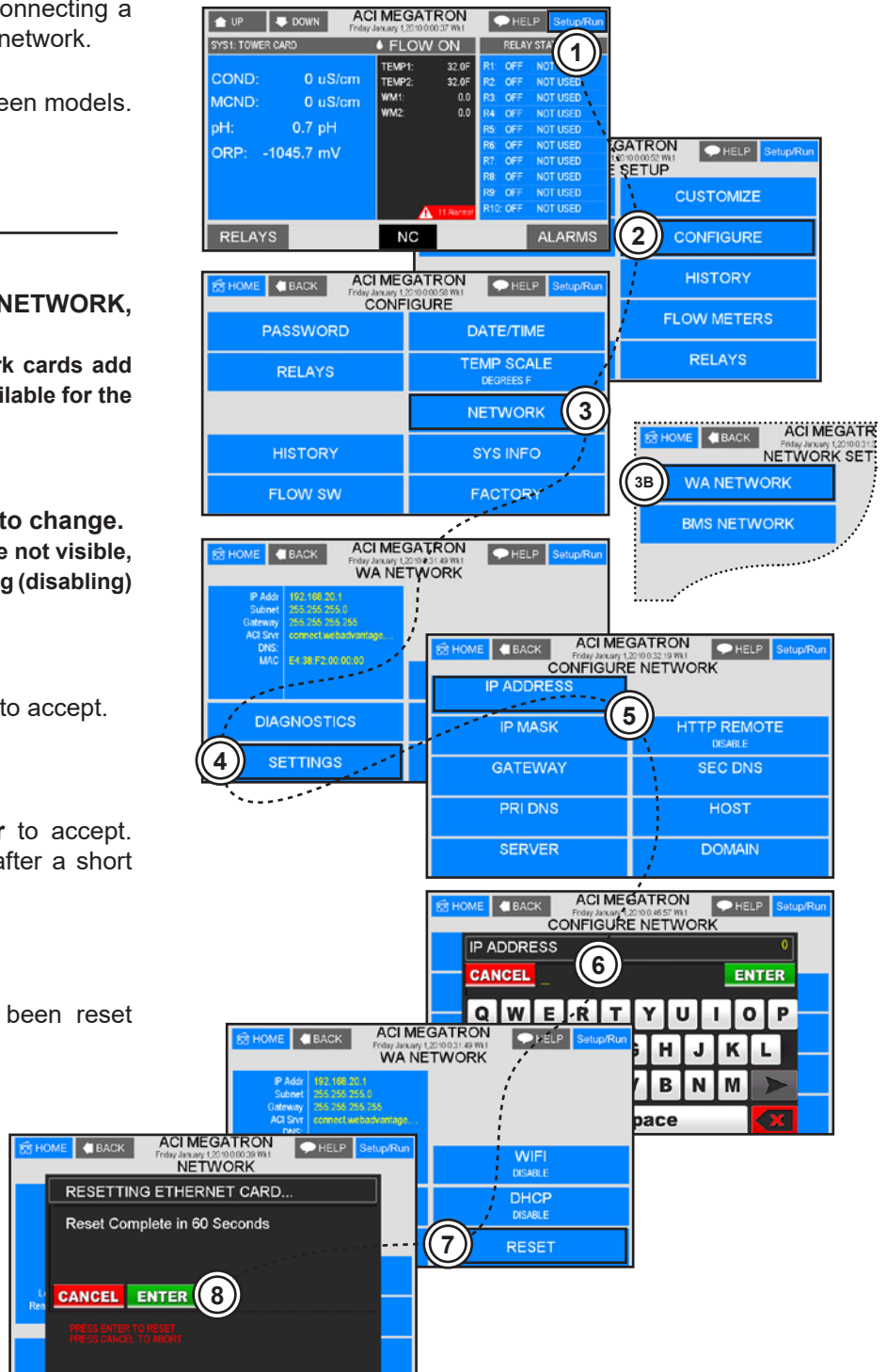
Enter the IP ADDRESS. Press **Enter** to accept. (See figure 6.)

#### Step 4:

Press **RESET** and then press **Enter** to accept. The communications card will reset after a short countdown. (See figures 7 and 8.)

#### Step 5:

After the communications card has been reset cycle power to the controller.



## Connecting to internet using a option “H” WiFi

This guide is designed to help with connecting a option “H” WiFi MegaTron to the internet.

Note: Screens may vary slightly between models.

### Step 1:

Press **Setup/Run**, **CONFIGURE**, **NETWORK**, **WIFI**.

(See figures 1, 2, 3 and 4. Dual network cards add figure 3B. Dual network cards only available for the MegaTron MT.)

### Step 2:

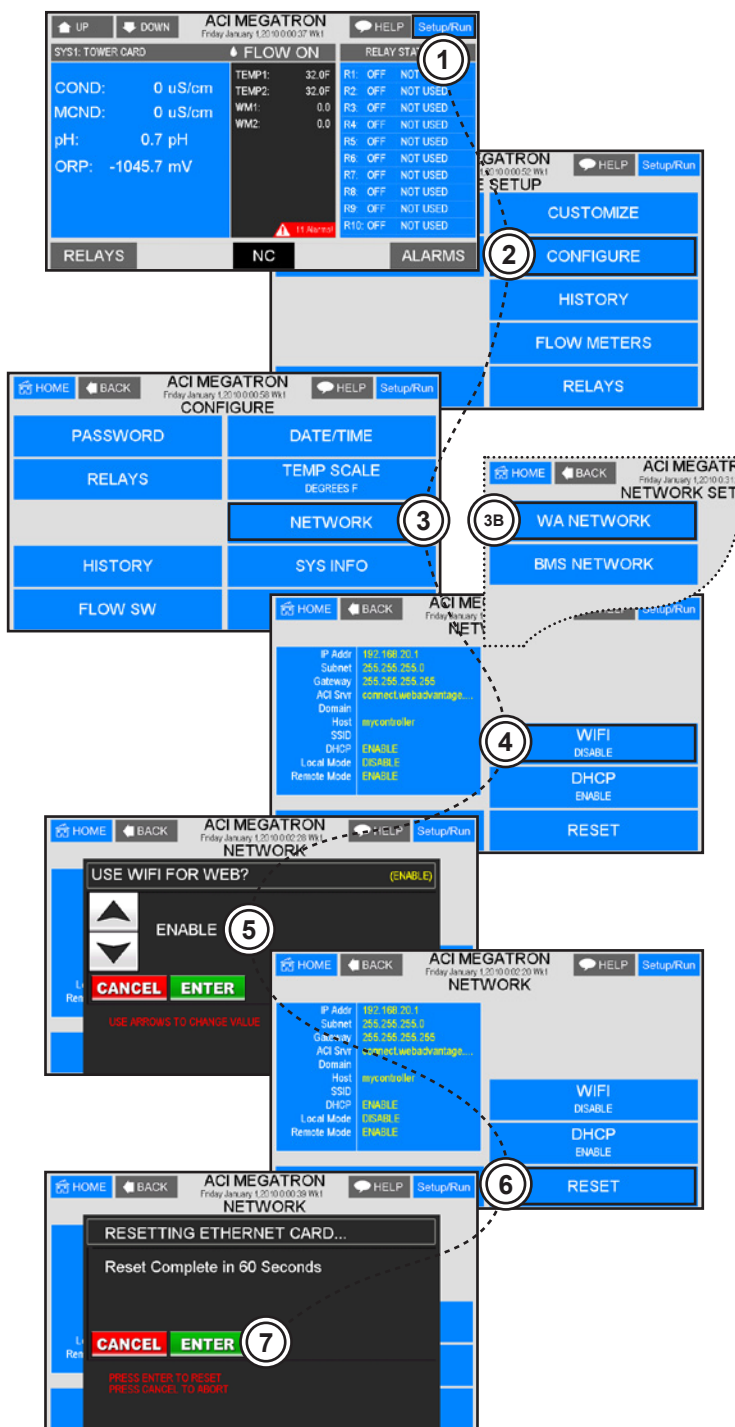
Use the UP/DOWN arrows to change USE WIFI FOR WEB to **ENABLE**. Press **Enter** to accept. (See figure 5.)

### Step 3:

Press **RESET** and then press **Enter** to accept. The communications card will reset after a short countdown. (See figures 6 and 7.)

### Step 4:

After the communications card has been reset cycle power to the controller.



## Connecting to internet using a option “H” WiFi

### Step 5:

After the controller reboots, press **Setup/Run**, **CONFIGURE**, **NETWORK**, **SETTINGS**, **WIFI NETWORK**.

(See figures 8, 9, 10, 11 and 12. Dual network cards add figure 10B.)

### Step 6:

Select your network and press **Enter** to accept. (See figure 13.)

### Step 7:

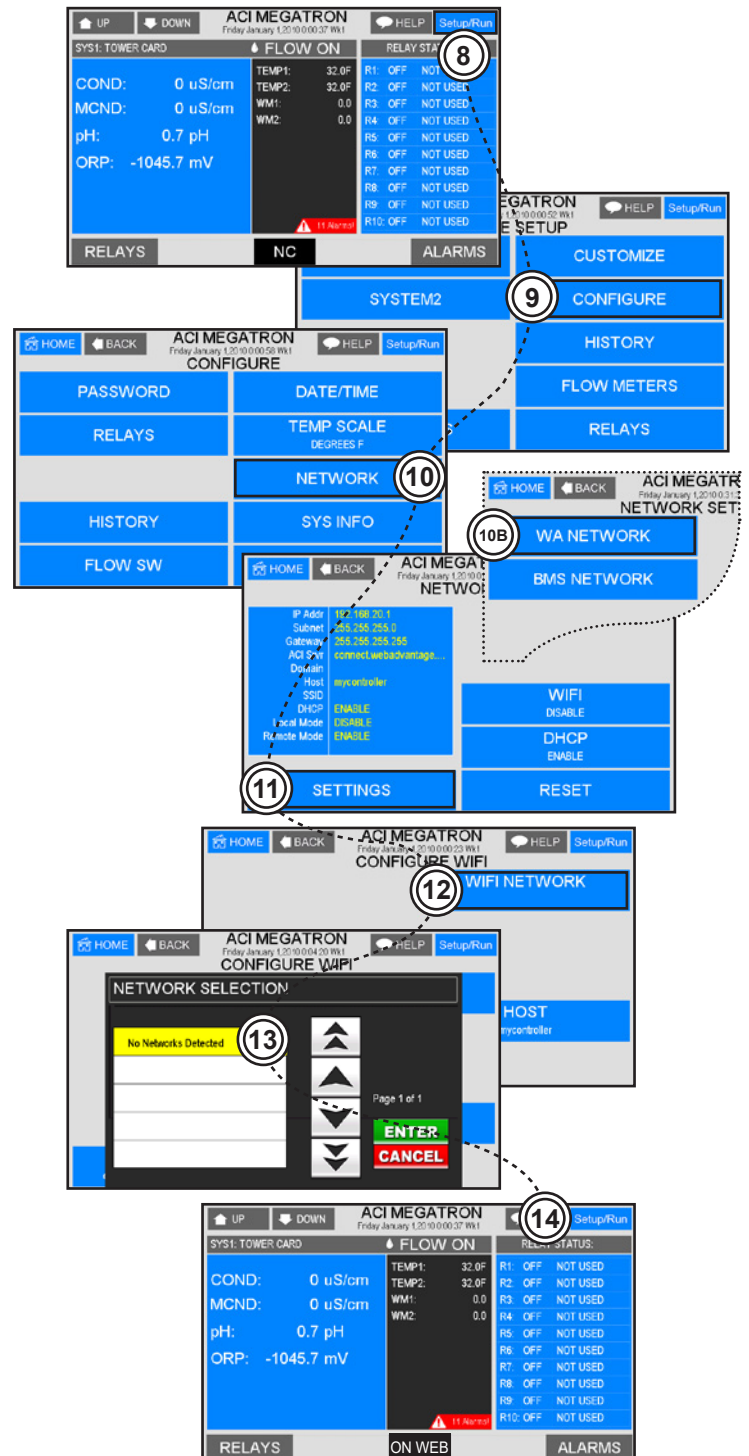
Enter your WiFi password then press **Enter** to connect.

Note: Blank passwords valid on some networks.

### Step 8:

Press **Setup/Run**. When your controller is properly connected, a “ON WEB” message will appear at the bottom/center of the Setup/Run screen.

(See figure 14.)

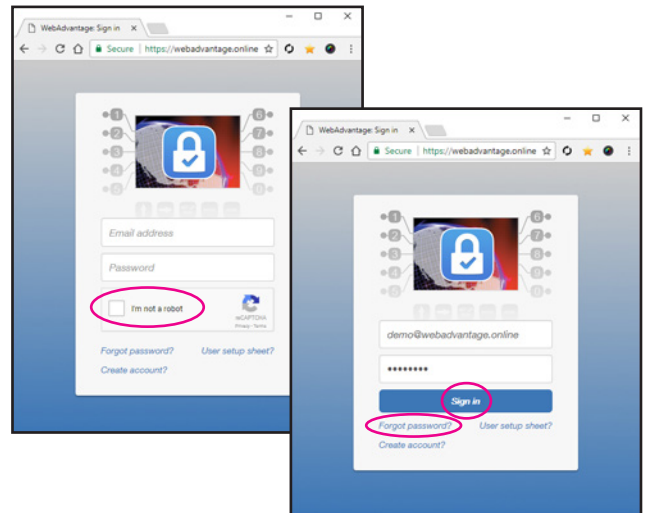


## Log In Screen

To login you must have the **USERID** and **password** that was created on page 22. If this has not been filled in and submitted, contact our **WebAdvantage®** department at **918-686-6211**.

You can then use any desktop or mobile web browser that allows cookies, and has java scripting enabled to connect to the remote communications server.

- USERID = Email Address
- Password
- ✓ • “Not a Robot” Captcha Verification
- Note:** On success reveals sign in button



If you have misplaced your USERID / password or need to create a new account, links are provided near the bottom of the login form.

## Device List (Home)

Optimized for use with mobile and desktop browsers. Mobile menu accessed with the icon at the top right

You start at the Device List screen when you first log in.

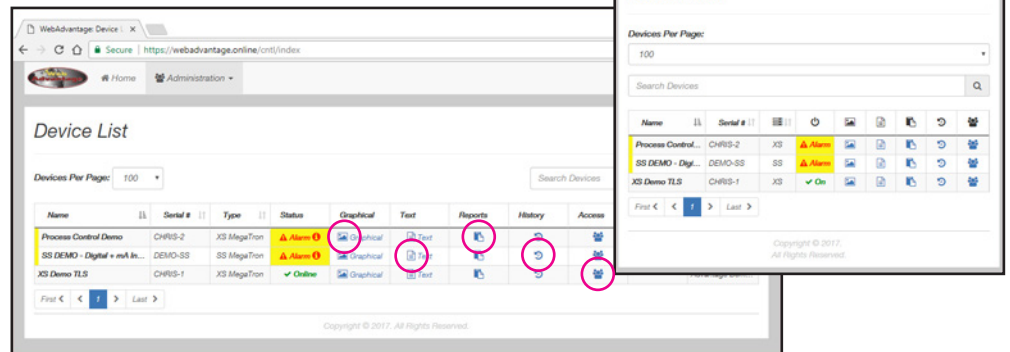
This screen lists all the devices you have connected to the system.


From here you have access to a sortable/searchable list of devices by Name, Serial, Type, Status, Graphical View, Text View, Reports, History, Access, and more...

Select the controller you wish to work with by clicking on “**Graphical View**”, “**Text View**”, “**Reports**” or “**History**”. You can view the controller settings by clicking on either “**Graphical**” or “**Text View**”. The “**History**” link will allow you to view your history in a log table or graph mode. “**Reports**” will allow you to use the device data to generate a report. To return to this screen, click “**Home**” link on the bar at the top of the page at anytime.

### Mobile Version

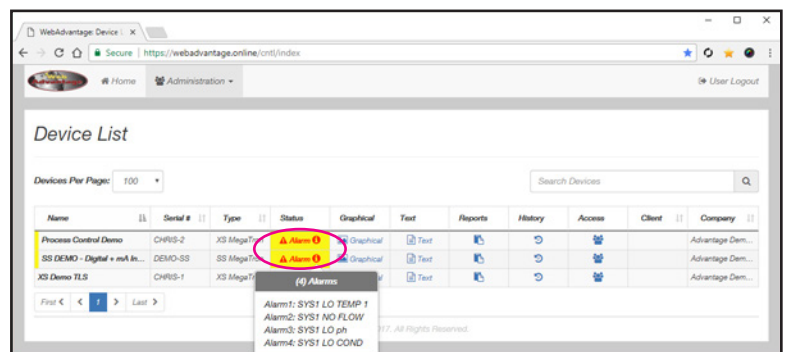
### Desktop Version



 **Alarm Quick Summary** shown when clicking on a particular alert.

### Conditions:

- On-Line – **Green**
- Off-Line – **Red**
- Alarm Condition – **Yellow**



## Graphical View

- Visual representation of system

## Text View

- Text only version of system setting and readings

The screenshot displays two views of the WebAdvantage interface. On the left, the 'Graphical View' shows a schematic diagram of a water system with various sensors and meters. On the right, the 'Text View' shows a detailed configuration page for 'SS DEMO - Digital + mA Inputs / System 1: Tower System Water / Text View'. The Text View includes sections for Sensors, Digital Inputs, Timers, Water Meters, and 4-20mA Inputs, each with a table of parameters and settings.

Graphical View

Text View

**Note:** You can alternate between the different views at any time from the home screen (device view) or from the tabs at the top of each view.

## Reports

Here you can create as many custom reports that are desired for a given MegaTron controller. These reports can have any of the system parameters plotted onto a graph (probe readings, relays, alarms, Notepad entries) in various colors. It is recommended that reports / graphs use readings of the same units of measure to keep a graph understandable.

Reports can then be set to have the server automatically email them at a desired interval to various email accounts.

- Listing of saved reports
  - View, edit, delete options
- Create a new report
- Create a new report from template. See page 18.

The screenshot shows the 'History and Reports' section of the WebAdvantage interface. The 'Custom History Reports' section is highlighted, showing a 'New Report' button circled in red. Below the button is a search bar and a table of existing reports.

Report Name	Owner	Options
Conductivity	User (Shared)	Q, E, D
Conductivity	User	Q, E, D
JHW	User	Q, E, D
New Report	User	Q, E, D

## General

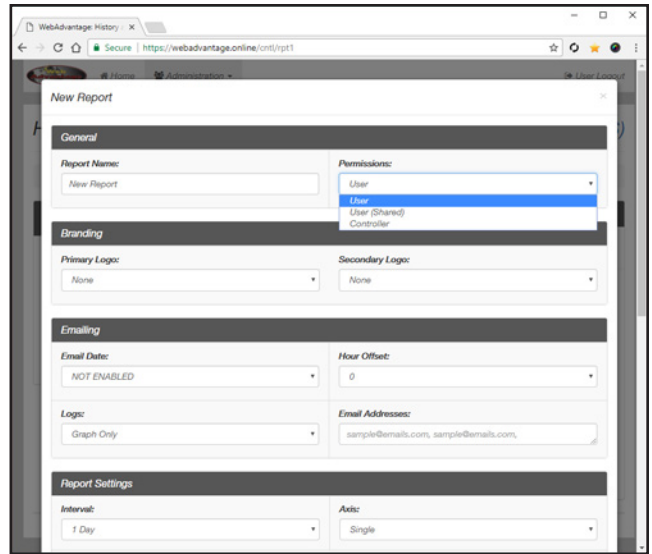
- Report Name
- Permissions
  - User, User (Shared) or Controller

**User:** Only the report creator can see report on WebAdv

**User (Shared):** Creator can edit report. Others can only view report

**Controller:** Anyone with controller access can edit or view report.

**Note:** You can email reports to others not on WebAdv if needed. See “Emailing” section below.



## Branding

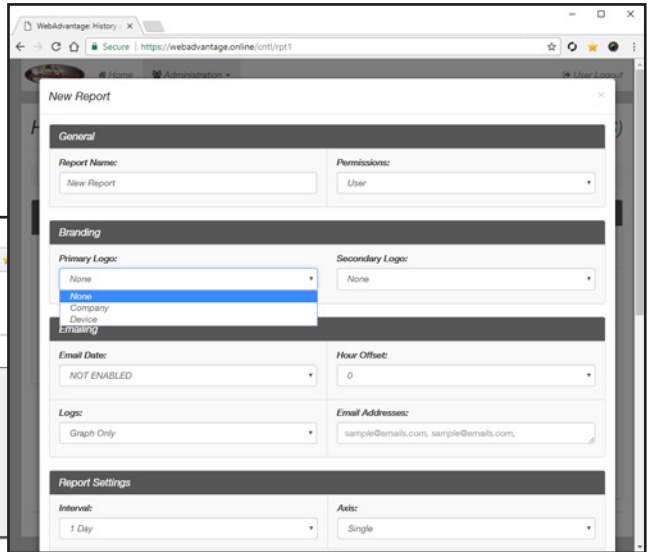
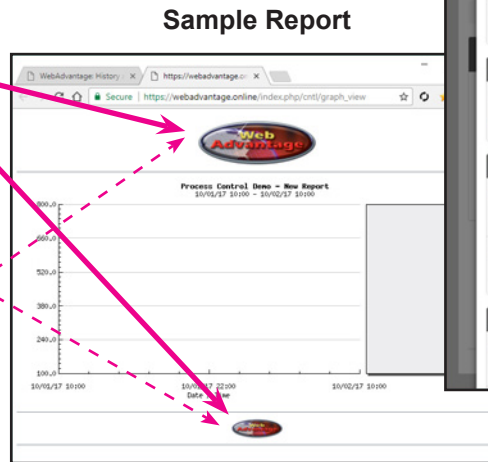
(Location choice)

- Primary logo
- Secondary logo

(Image choice)

- None
- Company
- Device

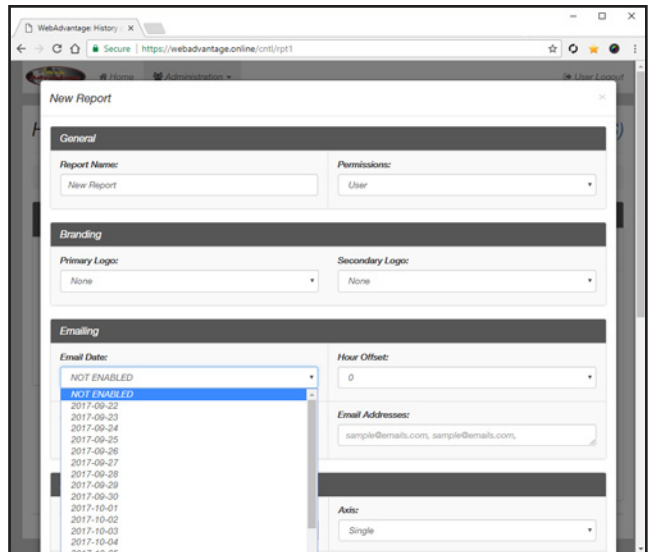
**Note:** Uploading images may require admin permissions. See page 23.



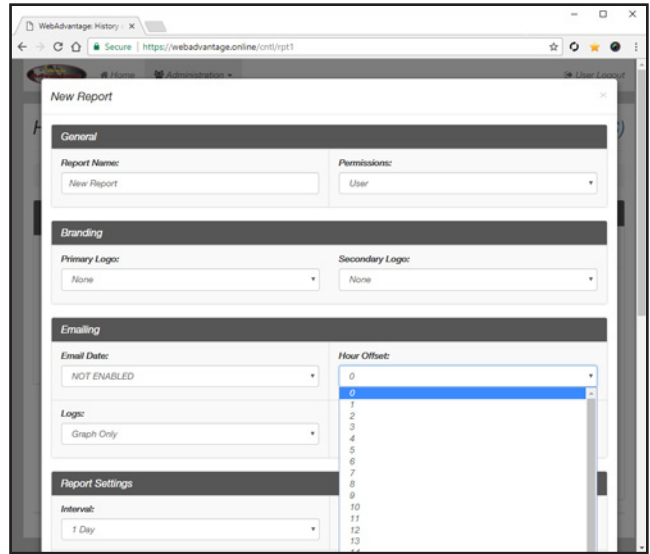
## Emailing

- Email date = Future email will be sent on this date

**Note:** If you plan to disconnect your controller for an extended period of time, change the “**Email Date**” to match the future re-connection. This will avoid a backlog of unnecessary emails waiting to be sent after reconnect. It is also a good time to verify that the assigned email has not changed.



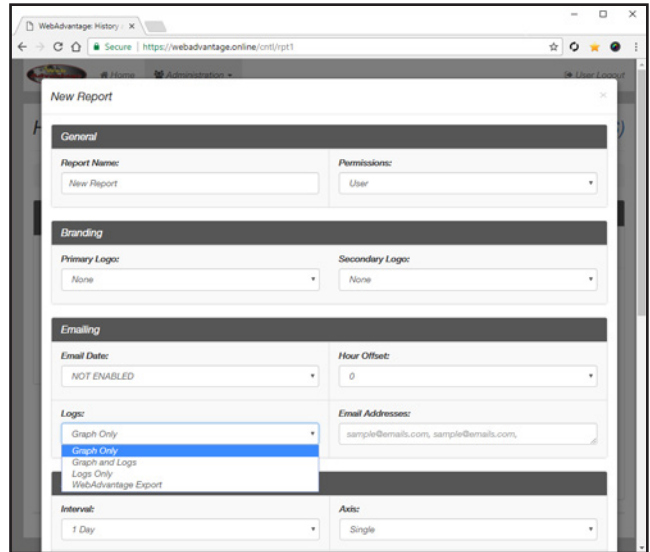
- Hour offset = Adjustable in relation to central time zone



- Logs
  - Graph only, Graph and logs only, Logs only, WebAdvantage® export = Text file based on report channels

- Email addresses = Multiple email addresses can be listed in this field with a comma “,” between each address.

**Tip:** If you need the alarm sent via text, most USA based phone carriers have an email address assigned to the phone’s text messaging function. Adding this particular email address to the user’s profile alarms, WebAdvantage® will send an email to the phone that shows up as a text message. That email address is typically the phone’s 10 digit number @ a particular carrier base address.



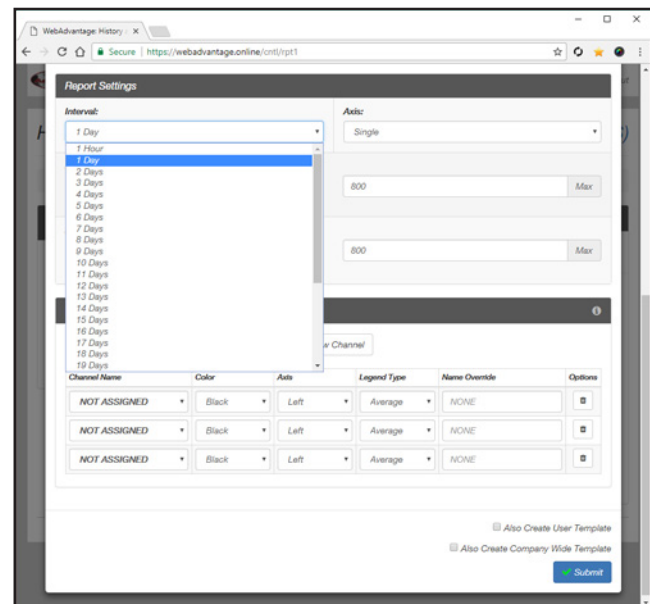
Past Examples:

Verizon = 9186866211@vtext.com

AT&T = 9186866211@txt.att.net

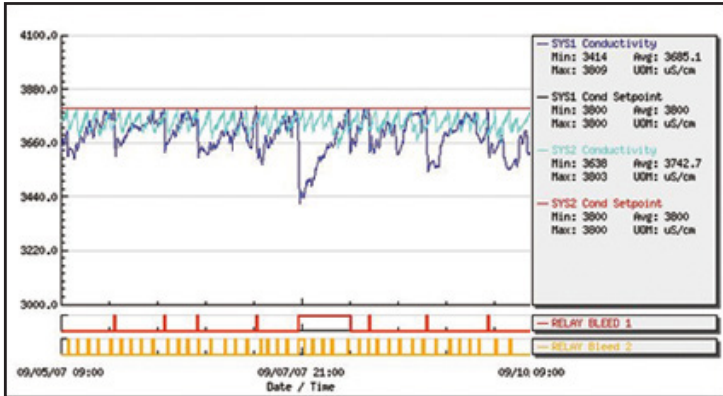
## Report Settings

- Interval = How often report will be sent



- Axis
  - Single
  - Dual = Example: Dual axis allows you to view conductivity and pH on the same graph.

- Left Axis (Min)
- Left Axis (Max)
- Right Axis (Min)
- Right Axis (Max)



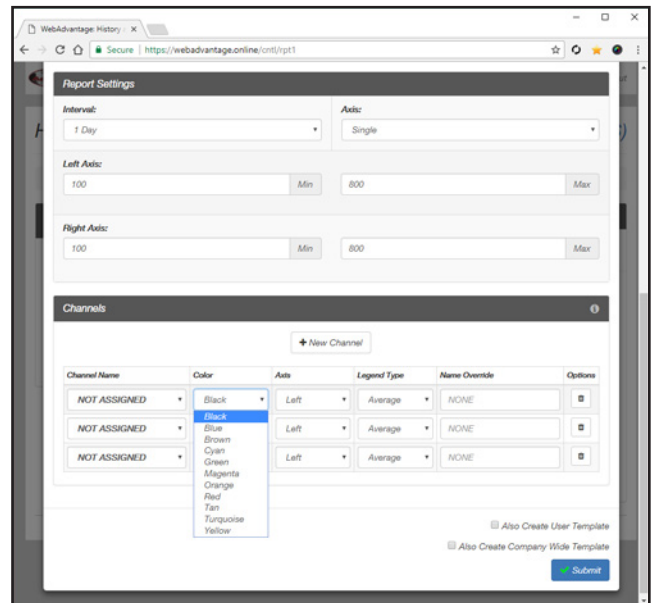
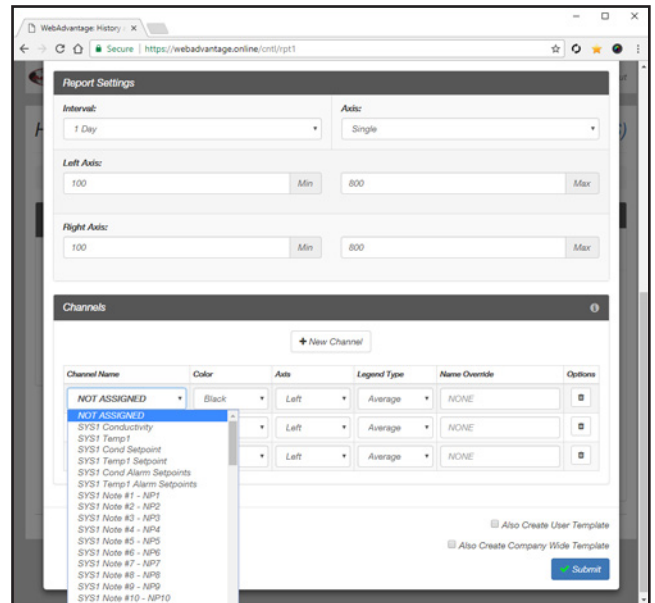
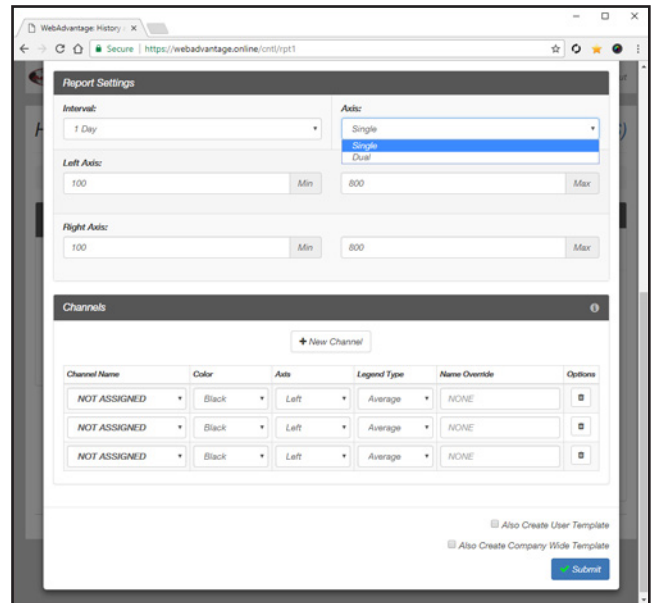
Sample Graph

## Channels

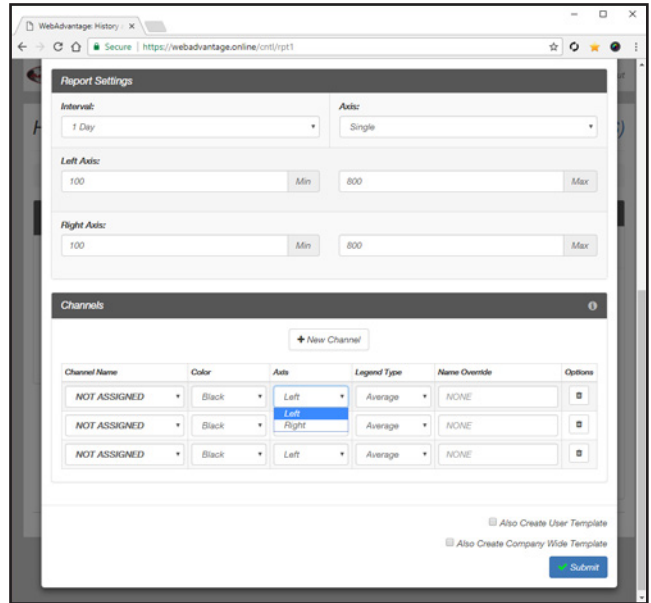
Any sensor or measure going through controller.

- New channel
  - View, modify, delete
- Channel Name, Color, Axis, Legend Type, Name Override
- Channel Name = Listing comes from the controller

- Channel Color = Line color on graph



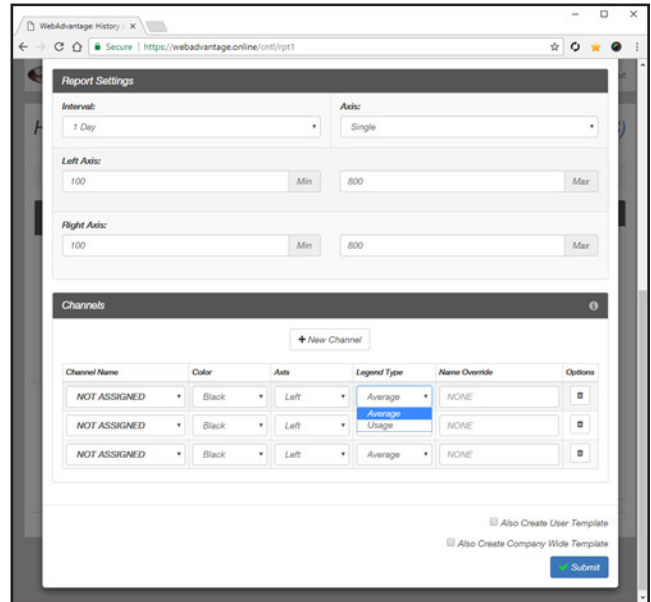
- Axis
  - Left or Right-hand side



- Legend Type
  - Average or Usage

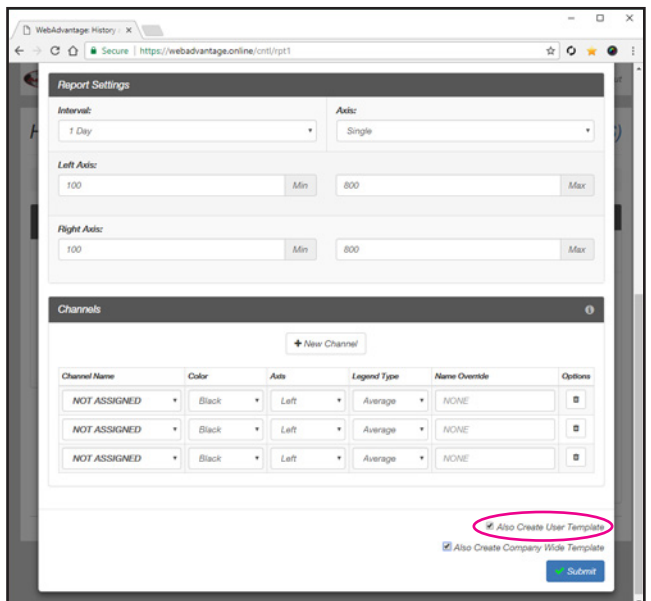
**Average:** Displays min/max values on graph

**Usage:** Displays projected usage based on previous data



- Name Override = Example: Shorten the System 1 pH title to just pH in the graph's legend.

- Also create user template = When checked only the creator can see this template



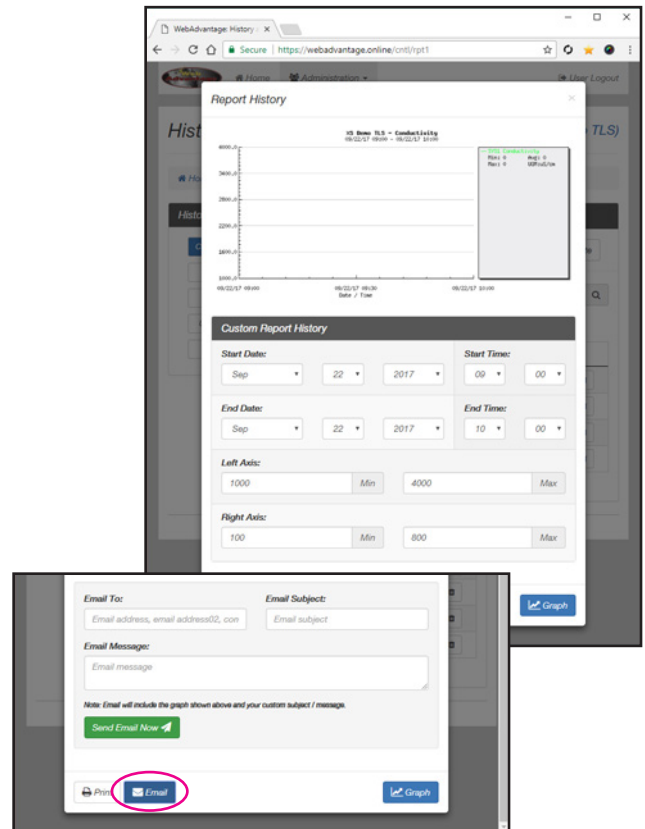
## Viewing / Generating Reports

- Graph
- Start Date / Time
- End Date / Time
- Left Axis (Min)
- Left Axis (Max)
- Right Axis (Min)
- Right Axis (Max)

Select values then click the graph button to update.

- Email Button = Expands to show email options
  - Email To
  - Email Subject
  - Email Message

**Note:** Email will include the graph shown above along with your custom subject / message.

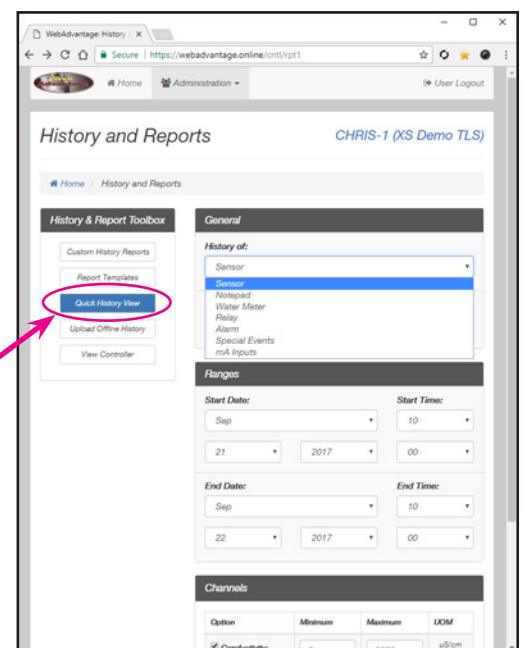
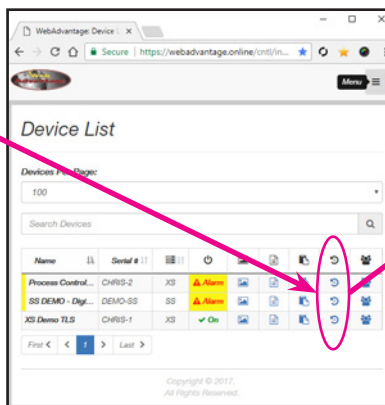


## History (Quick View)

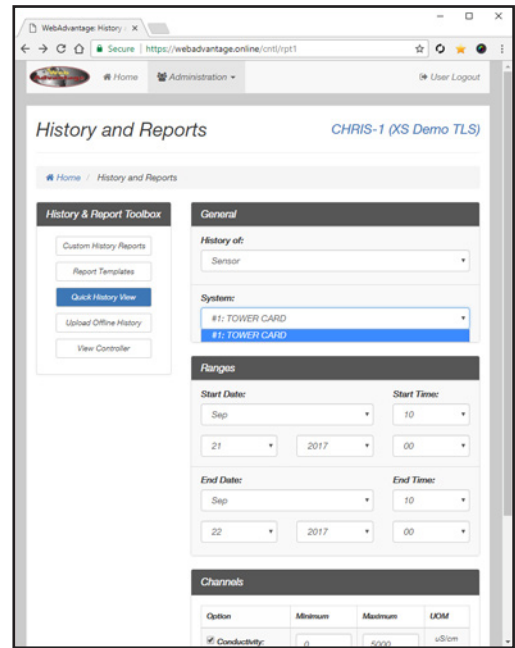
Shortcut from Device List

### General

- History of: Sensor, Notepad, Water Meter, Relay, Alarm, Special Events, mA Inputs



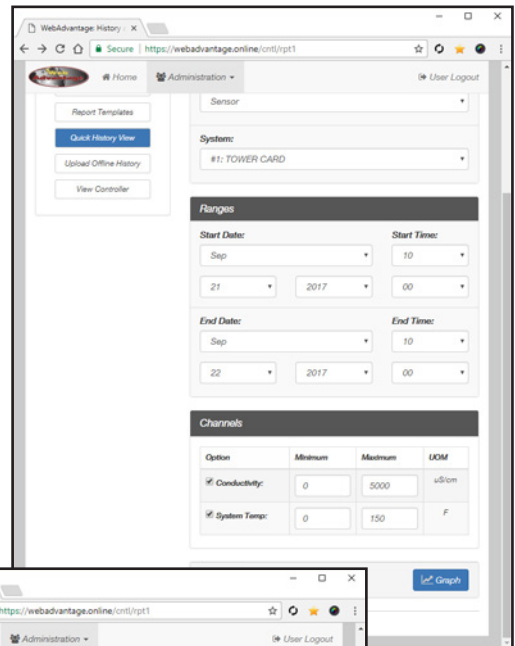
- System = Controller assigned values



## Ranges

- Start date / time
- End date / time

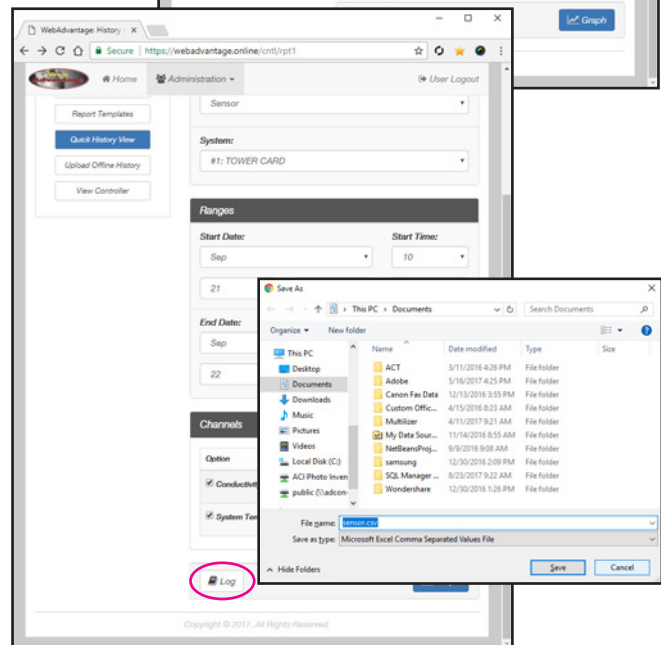
**Note:** Based on central time zone. Rendering times may vary.



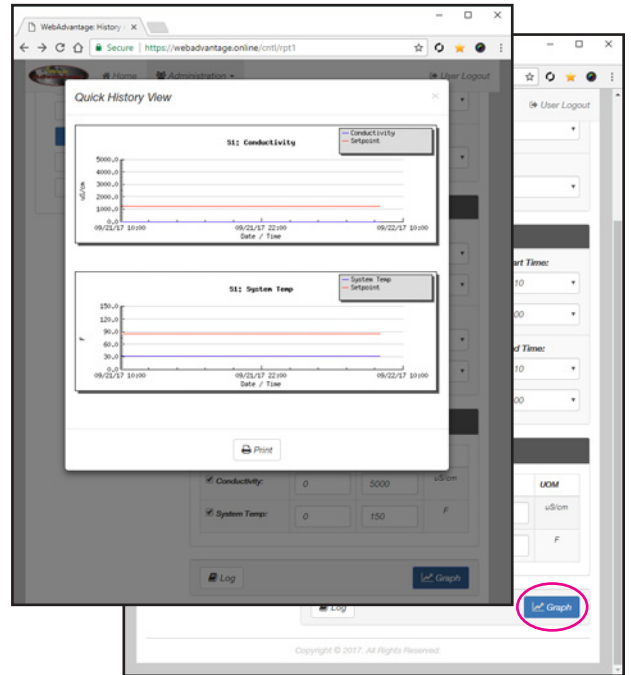
## Channels

- Channel option = Pulled from controller
  - Min
  - Max
  - UOM (Unit of measure)

**Log Button** = Create a .csv file of history data



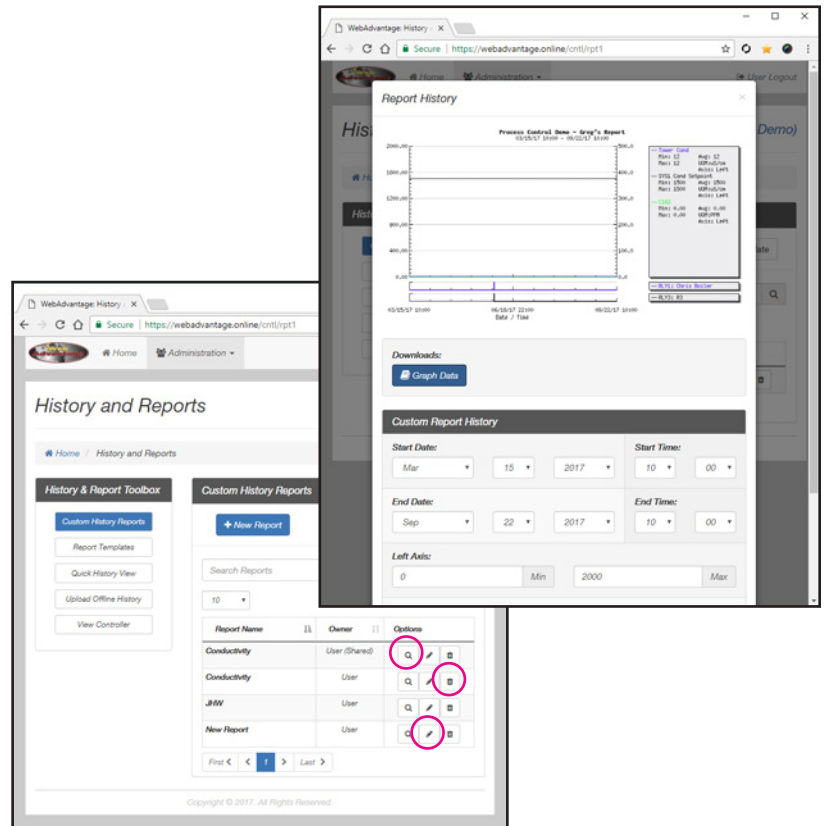
**Graph Button = Displays graph in popup**



## Viewing a Custom History Report

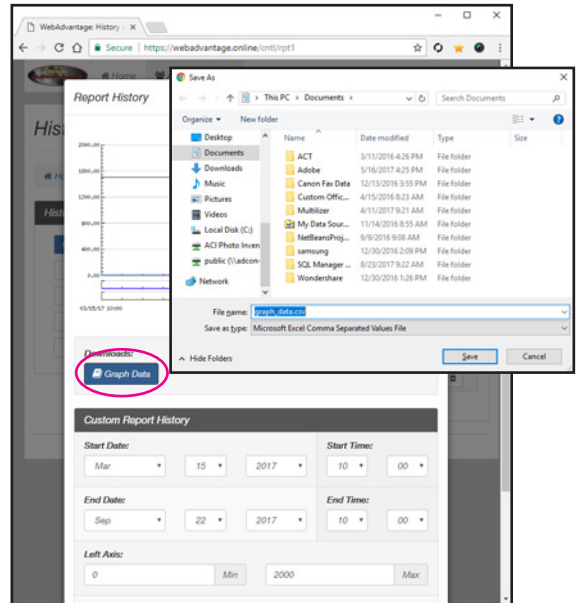
- Custom History Report

- **Magnifying glass icon** to view report. Here you can temporarily change values to update the graph. This will not affect future reports.
- **Pencil icon** to edit report. This will change future reports.
- **Trash can icon** to permanently remove report



## Downloads

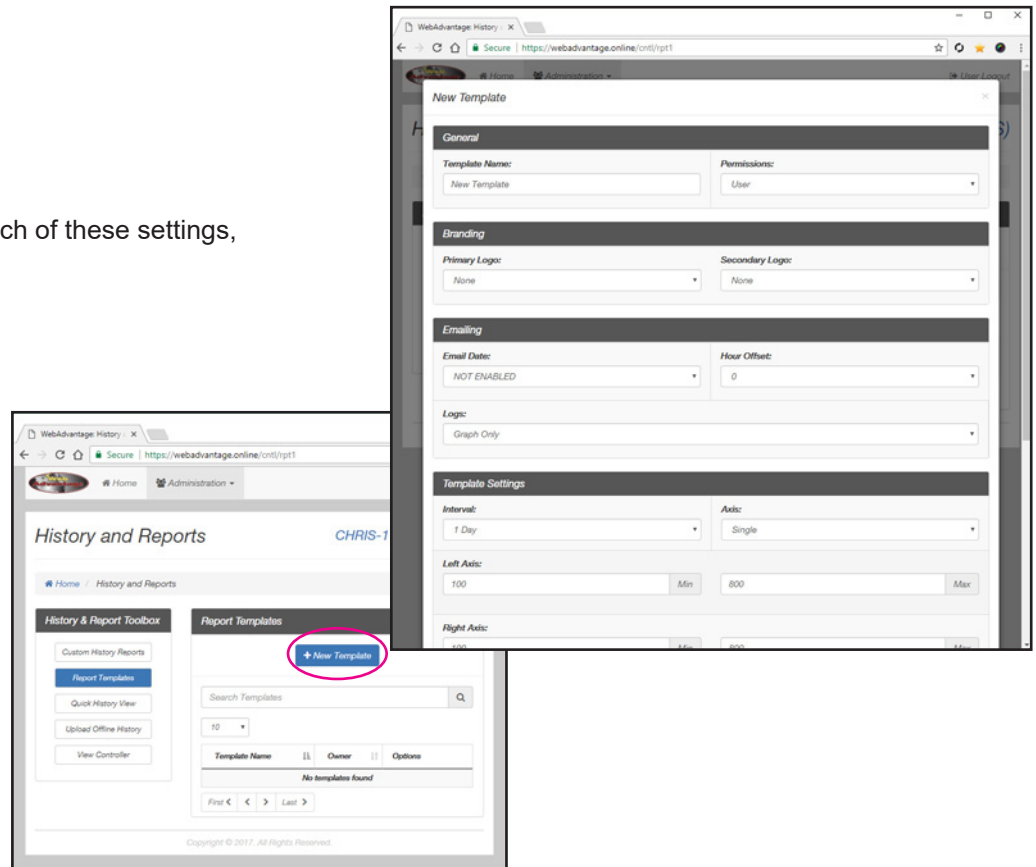
- Graph data button = Only available when report is set to Graph & Log.



## New Report Template

- Report Templates
  - New Template

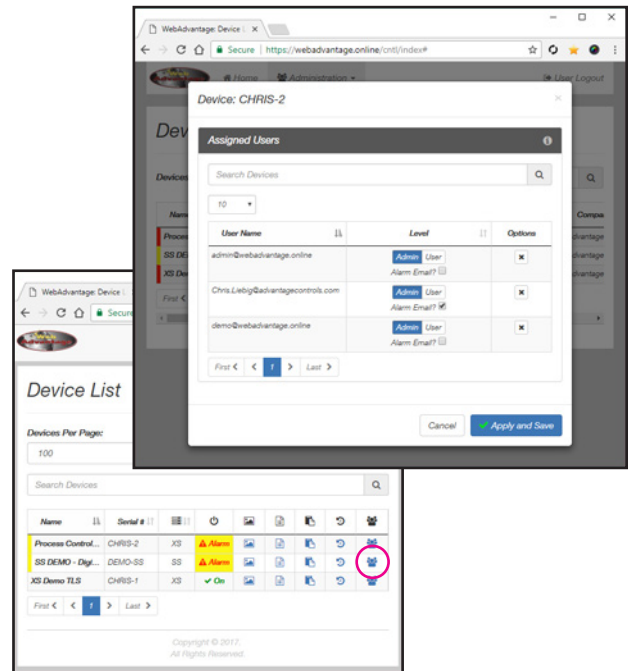
**Note:** To learn more about each of these settings, refer back to page 10.



## Access

**Note:** Only available with device manager privileges.

- Click the **People icon** to see who has access to the device
- Change permissions if allowed



The screenshot displays the WebAdvantage Device Manager interface. A modal window titled "Device: CHRIS-2" is open, showing the "Assigned Users" section. The table below lists the assigned users and their permissions:

User Name	Level	Options
admin@webadvantage.online	Admin User Alarm Email?	[X]
Chris.Lee@webadvantagecontrols.com	Admin User Alarm Email?	[X]
demo@webadvantage.online	Admin User Alarm Email?	[X]

The "Device List" table in the background shows the following data:

Name	Device #	Level	Status	Actions
Process Control...	CHRIS-2	X2	Alarm	[Icons]
SS DEMO - Digt...	DEMO-SS	SS	Alarm	[Icons]
X2 Demo TLS	CHRIS-1	X2	On	[Icons]

Extensive administration function tutorials can be found on our Youtube page.

<https://www.youtube.com/watch?v=YH33KFA6Hng>



# Frequently Asked Questions

Here are some FAQs your IT department may want to know before giving the unit access to the Internet.

**Q. *How do I confirm that the controller is working correctly?***

**A.** A status code should be visible in the bottom center of the controller's SETUP/RUN screen. It will be set to DR for DHCP or SR for Static. If the controller has the IP information programmed correctly into it, it will also respond to a ping.

**Q. *What TCP ports does the controller use?***

**A.** Port 80 is the port to be used for Internet-bound traffic. The controller can also be configured to use port 9090. Controllers with communication card "option H" use port 443.

**Q. *How much network bandwidth does the controller require?***

**A.** During normal operations about 32 bytes are sent every 10 seconds. When downloads or changes are made this amount can go up to 150 - 175 bytes, but these events are short in duration and infrequent.

**Q. *If the network is unavailable to the controller; does data queue so when the network is available again it is bombarded with this data?***

**A.** No. The controller will start replacing missing data slowly, once the connection is re-established.

**Q. *Can the unit be used to contact any other web locations?***

**A.** No, The controller can only contact the WebAdvantage® server. The controller has no browser, or messaging capabilities aside from alarm notifications that are sent through the WebAdvantage® server.

**Q. *Is our information secure?***

**A.** Communication between WebAdvantage® users is encrypted and the server is hardened to keep your data secure.

**Note:** If the controller is not statically addressed, it is important to press the Reset command found on the Network Summary menu. This will save any changes to memory and will restart the communications card with new network settings.

## Network Infrastructure and Caveats

- All outbound traffic from an Advantage Controls Megatron controller will point to our proprietary servers located at 65.38.24.37 or 67.214.101.196.

**Note:** All traffic is encrypted for safe communications from the controller to the Advantage controls servers.

- The default outbound port number is 80.

**Note:** The outbound port can also be configured for 9090 or 443.

- Once communication has been established from the controller to the Advantage Controls servers, the return port(s) number will range from 1024 to 65,535.
- Placing a static route or NAT (Network Address Translation) between the internal IP of the controller and the Advantage Controls servers is acceptable.

**Note:** A web filter or proxy may block outgoing traffic from the Megatron controller as the information sent is not standard HTTP traffic.

**WebAdvantage® server address:** Go to Setup/Run (HOME) > Configure > Network (WA Network) > Settings > Server and change the value to connect.webadvantage.online:80

If you are having trouble connecting, use IP address 65.38.24.37:80 Press **ENTER** to confirm.

**Note: Megatron MR / MT controllers use port 443. Megatron / XS controller models containing the...  
H card (i.e., XSCPF5-H), use port :443**

**H1, H11, H15, H21, H22, H25, H26, H31 models use port :80**

## Checking Communications Status / Status Codes

Once the appropriate network settings have been entered into the unit, the MegaTron will begin to contact the Web Advantage server automatically. The connection status of the controller can be determined by viewing the Run screen. A two letter code will be in the lower middle section of the RUN screens indicating connection status.

**Note:** A bar underneath these letters indicates a solid connection.

### Status codes for controllers with Option H1, H11, H21, H22 or H31:

- NC** = Talking to ICM but not yet connected
- DR** = DHCP Remote Connection (Communicating with WebAdvantage® Server)
- SR** = Static Remote Connection (Communicating with WebAdvantage® Server)
- DL** = DHCP Local Connection (Communicating Locally)
- SL** = Static Local Connection (Communicating Locally)
- FL** = DHCP Failed Local Connection (Communications Failure)

### Status codes for controllers with Option H:

- NC** = No Ethernet/Wifi Connection
- SL** = Static Addressing, No access to web
- SR** = Static Addressing with Web Access
- DL** = DHCP Addressing, No access to web
- DR** = DHCP Addressing with Web Access
- SC** = Static Addressing with Web Access, Connection to WebAdvantage®
- DC** = DHCP Addressing with Web Access, Connection to WebAdvantage®
- SA** = Static Addressing with Web Access, Connection to WebAdvantage® is authenticated & completed
- DA** = DHCP Addressing with Web Access, Connection to WebAdvantage® is authenticated & completed

## Troubleshooting and Helpful Tips

- Megatron series controllers will respond to a ping once the proper IP configuration has been programmed by the end user.
- If the Megatron Controller is configured for DHCP, navigate to the Main Menu → Configure → Network → Reset menu, to reset the Megatron Controller's IP information.

**Note:** Resetting the IP information from the Reset menu saves the newest configuration into the memory of the Megatron Controller and will remain upon the next power cycle of the controller.

- When connection has been established between the Megatron controller and the Advantage Controls servers successfully, the Run Screen will display the "DR" or "SR" diagnostic code at the bottom of the screen.

**Note:** "DR" means that the controller is currently configured for DHCP (Dynamic Host Configuration Protocol). "SR" refers to a statically assigned IP address for the Megatron Controller.

# USER ID Setup

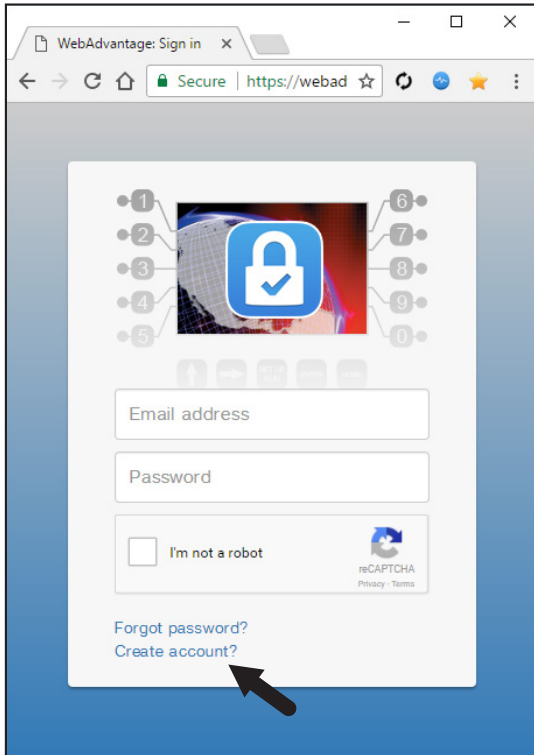
## Setting Up a USER ID

Before you can view a device, a **USER ID** must be setup. Note: If you already have a USER ID and are just adding a new device, skip to step 4.

**Step 1:** Visit <https://webadvantage.online> or access the registration form with the QR code below.

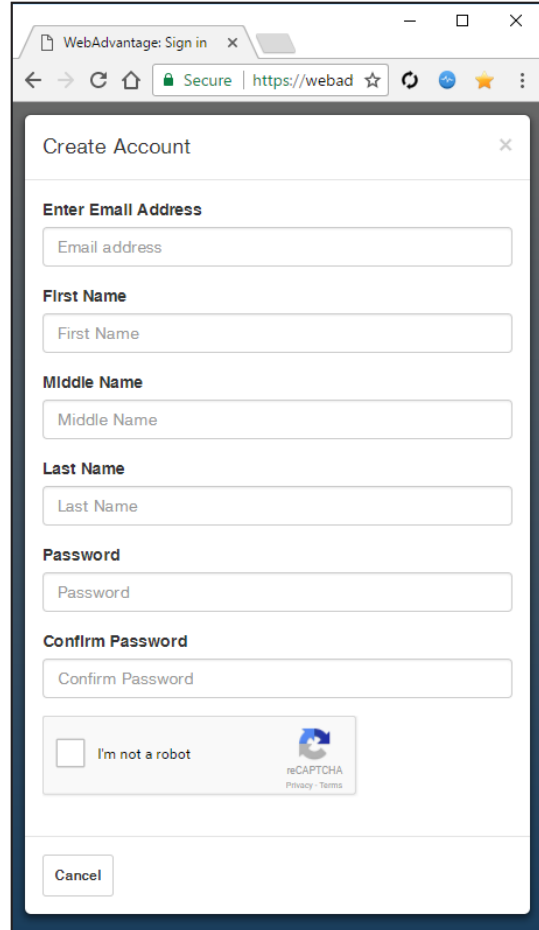


**Step 2:** Choose **Create Account?** at the bottom of the login screen.



**Step 3:** After completing form click **SAVE** to create ID.

**Note:** The email address you add will be your **USER ID**.



**Step 4: Important!** Contact our WebAdv dept with your USER ID (email), the device's serial number and your phone number.

<b>USER ID (email)</b>	
<b>Device Serial #</b>	
<b>Phone:</b>	

**Fax:** 918-686-6212  
**Phone:** 918-686-6211  
**Email:** [support@advantagecontrols.com](mailto:support@advantagecontrols.com)  
**Note:** Please allow 24 hours for processing.

# Admins Only: Add Device and Assign USER ID

## Setting Up / Accessing a Device

**Note: USER ID and Company Access Permissions are required before you can access a device.** For creating a USER ID see the Setting Up a USER ID steps on page 17.

Company Access Permissions: If you are not a part of a company already registered with WebAdvantage®, please contact your company's WebAdv account manager for device access.

**Step 1:** Access the WebAdvantage® page at <https://webadvantage.online>.

**Note:** Only company administrators can add, edit, remove or modify devices, user accounts, history reports. User account permissions only allow for viewing of devices.

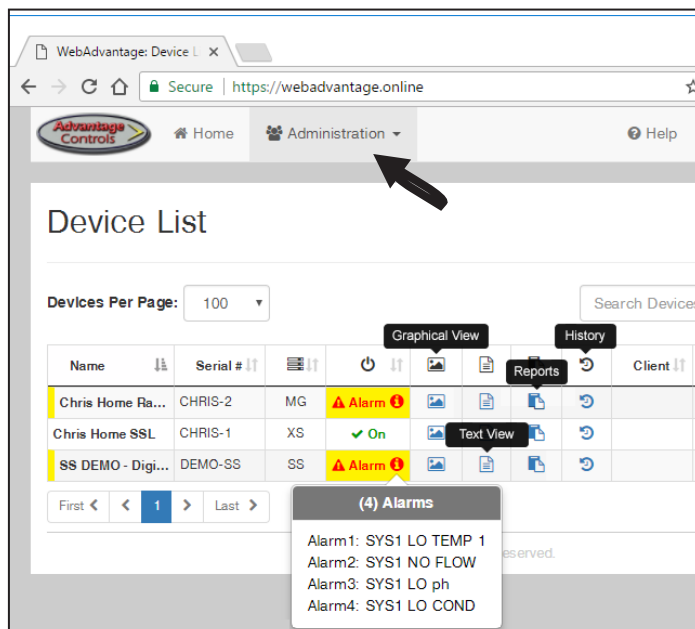
**Step 2:** Choose **Administration** at top of page.

**Step 3:** Then choose **Manage Devices**.

**Step 4:** Enter the device's **Name** and **Serial Number**. The remaining fields are optional. Click **SAVE** to submit.

**Note:** Please allow up to 24 hrs for processing before controller shows in device list.

WebAdvantage® support can be reached at 918-686-6211 or via email at [support@advantagecontrols.com](mailto:support@advantagecontrols.com).



### Manage Devices

Home / Manage Devices

Add or Edit Device

No Logo

Choose Logo

Company: Advantage Controls

Name: Enter name

Serial Number: Enter serial number

Model Number: Enter model number

Client Name: Enter client name

Physical Location: Enter physical location

Cell Router ID#: Enter cell router id#

Escalation Alarm Notify: Enter email01, email02, etc

Time after Initial alarm: 24 hrs

Send Connection Alarms: Disabled

3rd Party Reports: Disabled

Notes: Enter notes

Save

