



**FieldNET**  
**Operation Manual**  
P/N 1600502 Rev B (ECN 33157)

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## Section 1–Safety Instructions



### WARNING

**Training;** All individuals involved in the installation, operation or maintenance of this equipment must receive and understand training in the safe and proper methods of performing all duties assigned to them at the time of the initial assignment and at least annually thereafter. Safety messages and appropriate response procedures to emergencies or other situations which may arise should be fully understood.

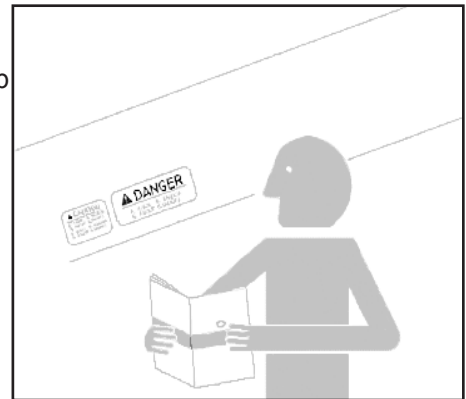


### WARNING

**Follow Safety Instructions;** Carefully read all safety messages in this manual and safety signs on the machinery. Keep safety signs in legible condition. Replace any missing or damaged safety signs.

Learn how to operate the machine and controls properly. Do not allow anyone to operate the machinery without proper instructions.

Keep the machine in proper working condition. Only have the machine serviced by a trained service technician on a routine basis. Unauthorized modifications to the machine may impair the function and/or safety and reduce the life of the machine.



### WARNING

**Proper Communication;** It is important that Web portal operators and personnel in the field communicate with each other when initializing FieldNET systems to ensure a safe work environment.





## Section 2—Introduction

### FieldNET™

FieldNET is the industry leader in wireless irrigation management control, utilizing the power of the internet.

The FieldNET Wireless Irrigation Network is the simplest, most reliable and powerful telemetry product on the market today. With FieldNET, multiple center pivots can be effectively managed, directly from any phone or internet. The FieldNET RTU (remote telemetry unit) installs easily onto most center pivot panels. The RTU has a built-in radio or wireless cellular modem that connects to the web from virtually anywhere in the world.

FieldNET provides two service plans – Advanced and Premier. Premier Plans are structured for BOSS, PRO, VISION and AIMS controls. Premier Plans offer full control of the equipment. Advanced Plans are for BASIC, AIMS Basic and non-GrowSmart controls. Advanced Plans feature monitor and stop control of electro-mechanical control panels. These plans also allow start control of select control panels.



Lindsay Manufacturing, LLC is ISO 9001 (International Standards Organization) certified. This certification consists of a series of standards establishing global requirements of quality management systems. Lindsay Manufacturing, LLC adheres to these standards and procedures as outlined within this program and conducts audits (both from internal and external auditors) on a regular basis. This auditing process assures that Lindsay Manufacturing, LLC does not deviate from the established quality system and is conforming to these standards.

### FieldNET™ Capabilities

FieldNET provides the core content and services necessary to manage any irrigation system remotely. By using a web portal or voice portal, FieldNET is capable of monitoring, alarming and controlling all irrigation systems in an account.

The FieldNET web portal is a robust internet service featuring four cornerstones of functionality that are; customization, personalization, integration, and support allowing FieldNET to be tailored to the customer's specific needs.

The benefits of using the FieldNET web portal:

- From the intuitive web interface, inputs, outputs and alarm notifications for all pivots in the account can be configured.
- Groups can be established.
- Alert delivery methods and addresses can be configured.
- Viewing of the current pivot status.
- Send start and stop commands.
- Run reports and graphs on historical operational activity.

The web portal URL is <http://app.myfieldnet.com>.

The FieldNET voice portal offers irrigation system management from over the phone. Voice portal does not require internet access, making it a compliment to the web portal. Existing phones can be used to manage irrigation systems and receive alerts under predefined alarm conditions.

Benefits for using the voice portal include:

- Easy touch-tone calling on the status of any pivot.
- Send start and stop commands.
- Access to all pivots within the customer's account from any landline or mobile phone.
- Text-to-speech voice alerts can be delivered to any phone based on alarm conditions as specified by the customer.

The voice portal toll-free number is (888) 214-8409. Calls outside of the U.S. will be billed as international calls.

Text messages or emails can provide instant updates with the status of all equipment. FieldNET text message alerts, like voice portal alerts, are delivered based on customer specified conditions. Text messages can be delivered to any phone that can receive SMS messages anywhere in the world.

The FieldNET RTU (remote telemetry unit) is the transmitter/receiver used to connect an irrigation control

panel to the FieldNET portals. There are three types of RTU's:

- Spread Spectrum radio
- GSM cellular - AT&T, Viaero
- CDMA cellular - Verizon, U.S. Cellular

All RTU's are wired the same and use the same wiring harnesses. The RTU connects directly to BOSS, PRO, VISION, and AIMS Advance panels. By using an interface board called Basic Link, FieldNET RTU's can connect to BASIC and AIMS Basic.

## Section 3 – Web Portal Menus

The FieldNET web portal is an internet service that allows FieldNET to be tailored to the customer's specific needs.

### Log In

The local Lindsay Dealer will provide log in access to the FieldNET 3 site (<http://app.myfieldnet.com>) as well as set up the customer account.







Always keep log in information and passwords in a safe and secure location. Contact Lindsay Service or the local Lindsay Dealer if there are any problems with logging into the user account.












## Description of FieldNET

### Icons

The following is a list of the most common icons that display on the Dashboard, Equipment page and Map View. Each icon represents a certain condition with an irrigation system or pump.

The following table lists the meaning of each icon.

Icon Code	
Icon	Condition
	Pivot Running Dry
	Pivot Running Wet
	Pivot Stopped
	Pivot Fault/Alarm
	Pivot Accessory/Chemigating
	Lateral Running Dry

	Lateral Running Wet
	Lateral Stopped
	Lateral Fault/Alarm
	Lateral Accessory/Chemigating
	Pump Running
	Pump Pressurizing
	Pump Regulating
	Pump Stopped
	Pump Locked Out
	Pump Running Chemicals
	Pump Alert

Other accessory icons.

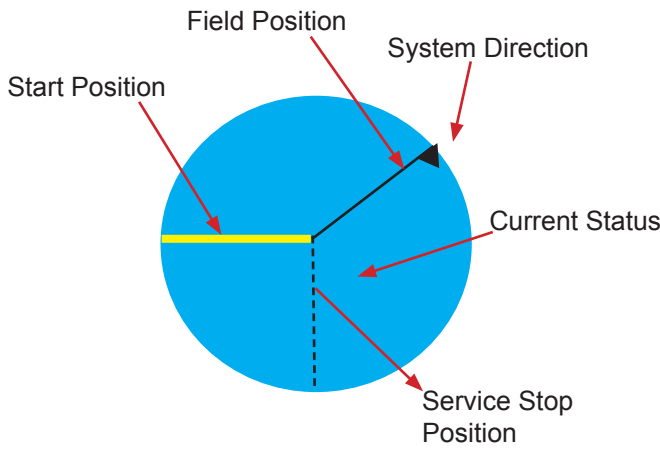
There are many different icons used for various accessories in FieldNET (e.g. batteries, level sensors, temperature gauges, etc.) That as a rule of thumb, any colored icon indicates a running status, gray icons indicate an Off status and any fully red colored icons indicate an alarm or fault status.

**Alert Icons:**

Alert icons are small, orange caution symbols that display in the Alert column of any equipment list. Left-mouse-button-click on these symbols to display the alert for the selected piece of equipment. (Refer to the Alerts section, later in this manual for more details.)

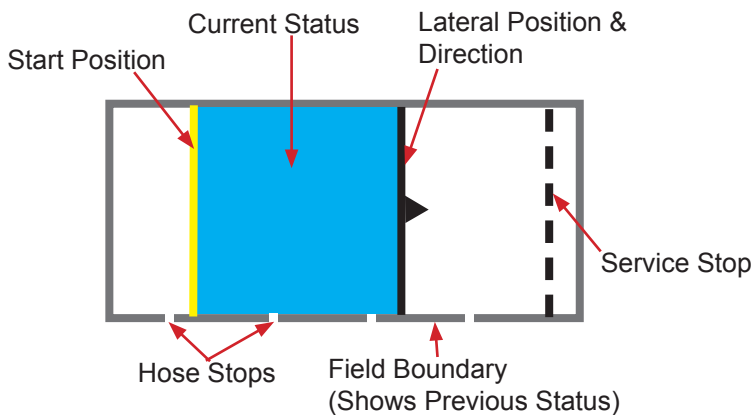
**Equipment Icon Status:**

On the equipment page and dashboards, a graphic representation of the pivot, lateral or pump will display with the color conditions as described previously. Below is a more detailed description of what the various icon status' and their conditions mean.







**Lateral Equipment Icon Status:**

On the equipment page and dashboards, a graphic representation of the lateral will display with the color conditions as described previously. Below is a more detailed description of what the various details within the icon status' mean.



**Communication Status:**

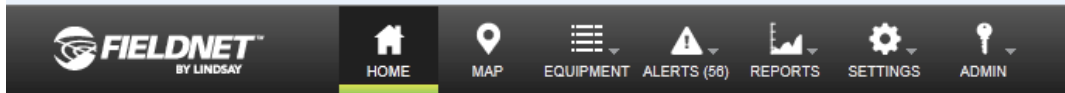
This icon displays the communication status of the RTU or other device used for communicating with the pivot.

-  • A good communication status that is online will show an icon with small green colored radio waves and check mark.
-  • An RTU that is offline will display and icon with small red radio waves and X.
-  • RTU's with an unknown, partial communication or power off status will display an icon with small green radio waves and exclamation point.
-  • Unsubscribed or powered off RTU's will display an icon with small gray radio waves and minus symbol.

Right-clicking on any Comm. Status symbol will bring up the RTU dashboard for that system. (Refer to section 4 on RTU dashboards for more details.)

## Toolbar

The Toolbar is a list of pull-down menus that link to various pages of information.



The following menus are available for typical FieldNET users:

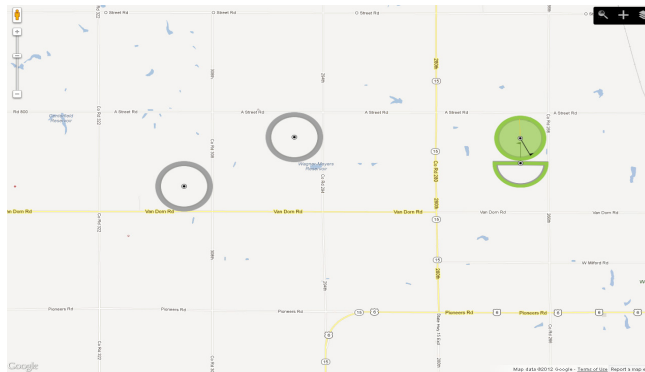
- Home Page
- Maps
- Equipment
- Alerts (The number of active alerts for the account will be displayed in parentheses.)
- Reports
- Settings

## Home

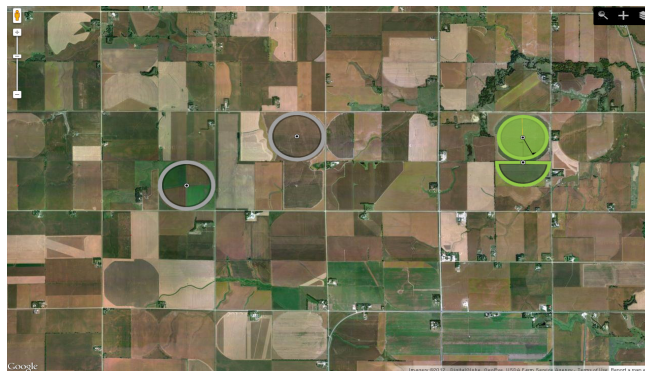
The Home page will display links, tutorials and any important messages growers should be aware of regarding FieldNET.

## Maps

The Maps page displays a map showing the various pivot and lateral locations for the account.



The above map is a simple road map. Note that the pivots show the same condition on the map as displayed on the Dashboard (discussed later). Below is satellite map of the same region.



The map zoom - slider bar (located in the upper left corner of the map) is used to zoom in and out on the map. Dragging the slider towards the “+” brings the map in closer for more detail. Dragging the slider towards “-” zooms the map out to a global view. Another way to zoom in and out is by using the center rolling wheel on a computer mouse.



The Device Navigation bar allows for easier searching and the placement of specific pivot locations and devices. Use the spyglass to search for systems with a specific name, the map will automatically zoom to that location.

Use the plus sign to add a device or system to the map.

- FieldNET will ask for the account that manages the device.
- Select the specific device/system from the list of devices/systems from the account.
- Place the device on the map by dragging the device icon and dropping on the map.



The layers icon will change the map features from a satellite image to a topographical map or to a simple road map.

## Placing a System on the Map

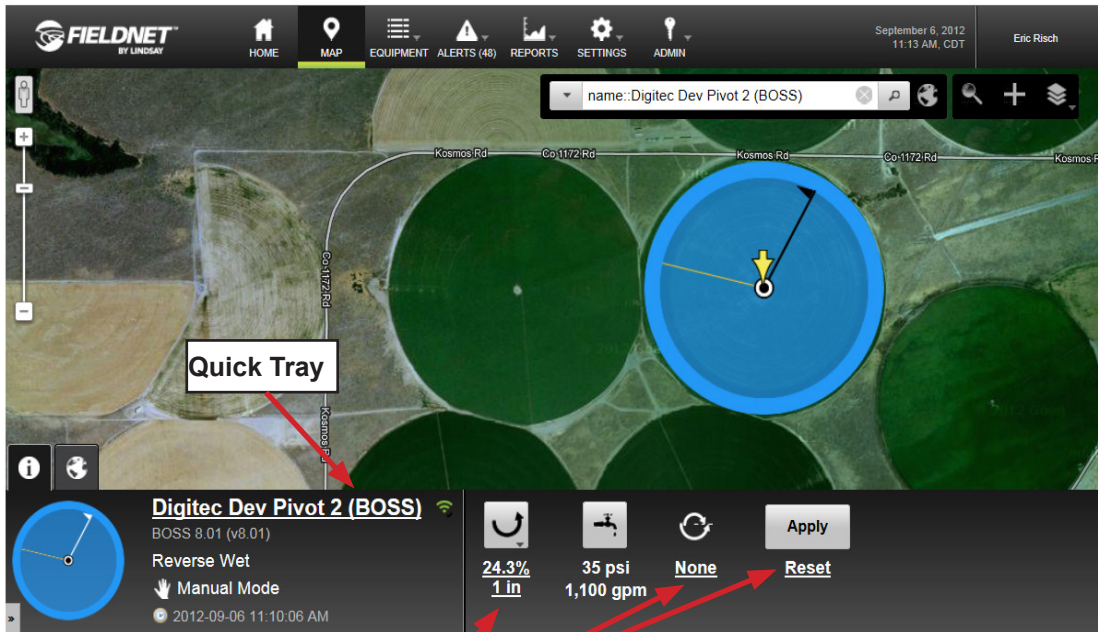
The following steps detail how to place a system on the map or relocate an existing system.

- Using the spyglass, type in the name of the system. (The system must be set up in FieldNET prior to these steps.)
- If it is existing, the map will zoom to the system’s location.
- A Quick Tray will appear at the bottom of the web page. This Quick Tray has two tabs; the Information tab and the Position tab.

The Information tab shows the system name, settings and the system’s current condition. All the system controls that have been established in FieldNET can be turned on or off and can be adjusted as well. Adjustable settings will be underlined. (See detail on following page.)

- Press the **Apply** button to accept any system changes. Select Reset to return to the previous stored settings.

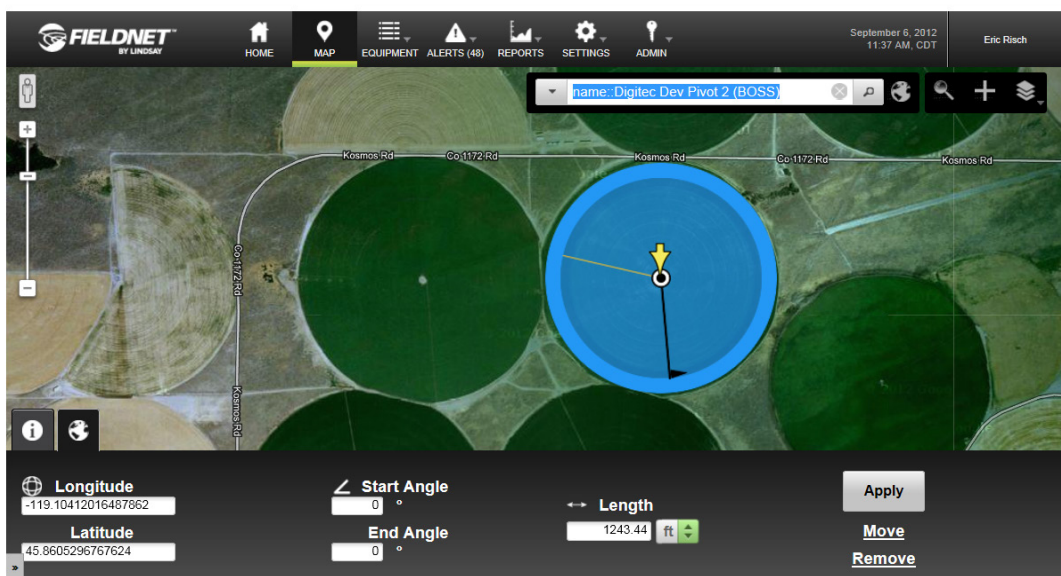




Editable Setting (underlined)

The Position tab is used to locate the system on the map. The system can be placed by selecting the approximate location on the map then entering the actual longitude and latitude in the Quick Tray fields. System length, start and end locations can also be set in the Position tab. (See below.)

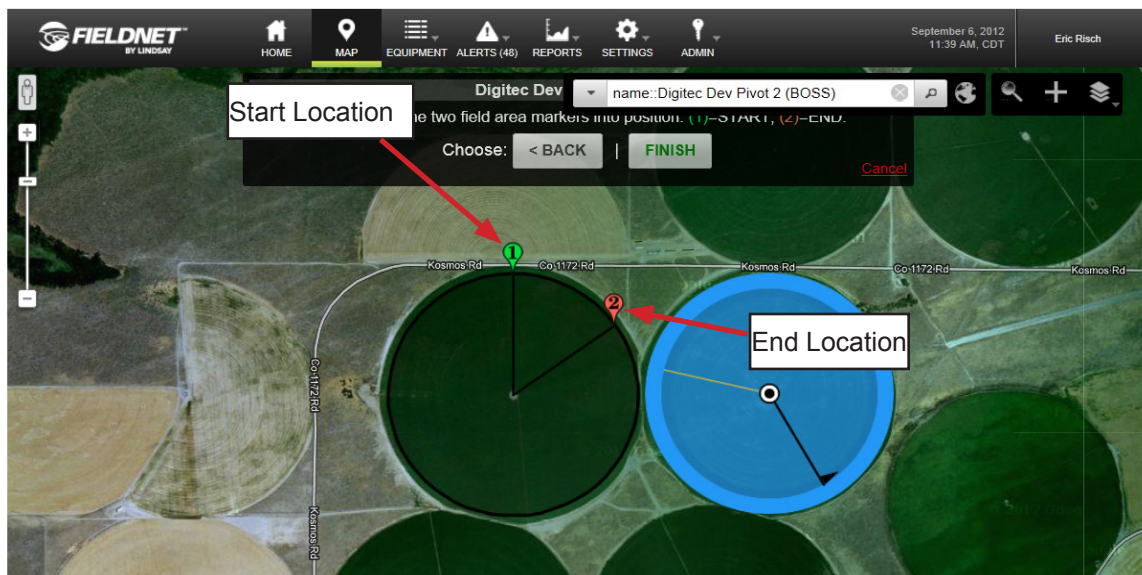
#### For a Full Circle Pivot:



- When positioning a pivot, select the **Move** option on the Quick Tray.
- Pick, the center of the pivot on the map.
- Select finish from the dialog box that will show on the screen. Define the system length, system longitude and latitude position. Return to the information screen and program all the system settings.
- Press the **Apply** button to accept these settings and location.

#### For a Partial Circle Pivot:

- When the dialog box displays, select the partial button in the dialog box.
- FieldNET will ask for the semi-circle start and end points. (See below.) The start point will be a green flag and the end point will be a red flag.
- Drag the endpoint clock-wise around the circle to the approximate stop location.
- Select the **Finish** button.
- Define the system length, system longitude and latitude position. Return to the information screen and program all the system settings.
- Define the start and end angles.
- Press the **Apply** button to accept the settings.

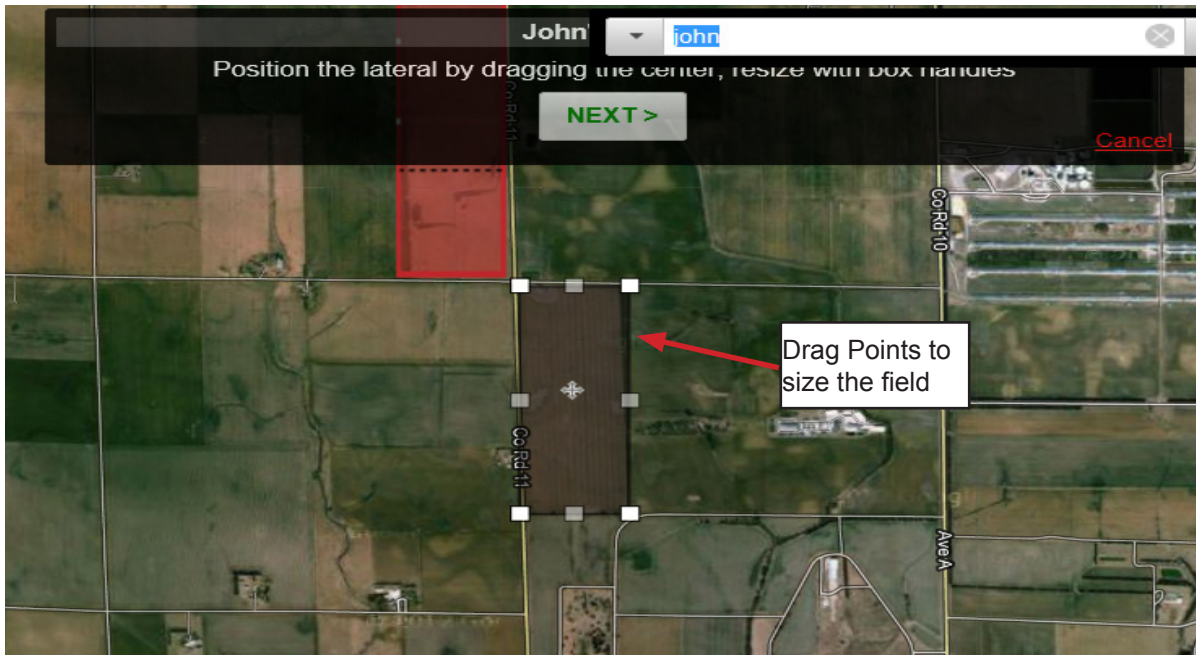


#### For a Lateral System:

A lateral system is set up in much the same manner as a pivot, except for a few differences.

- When locating the lateral on the map, a dialog box will appear with instructions to drag the points for sizing the box that represents the lateral system. (See detail on following page.)
- Select the **Next** button when done sizing the system.





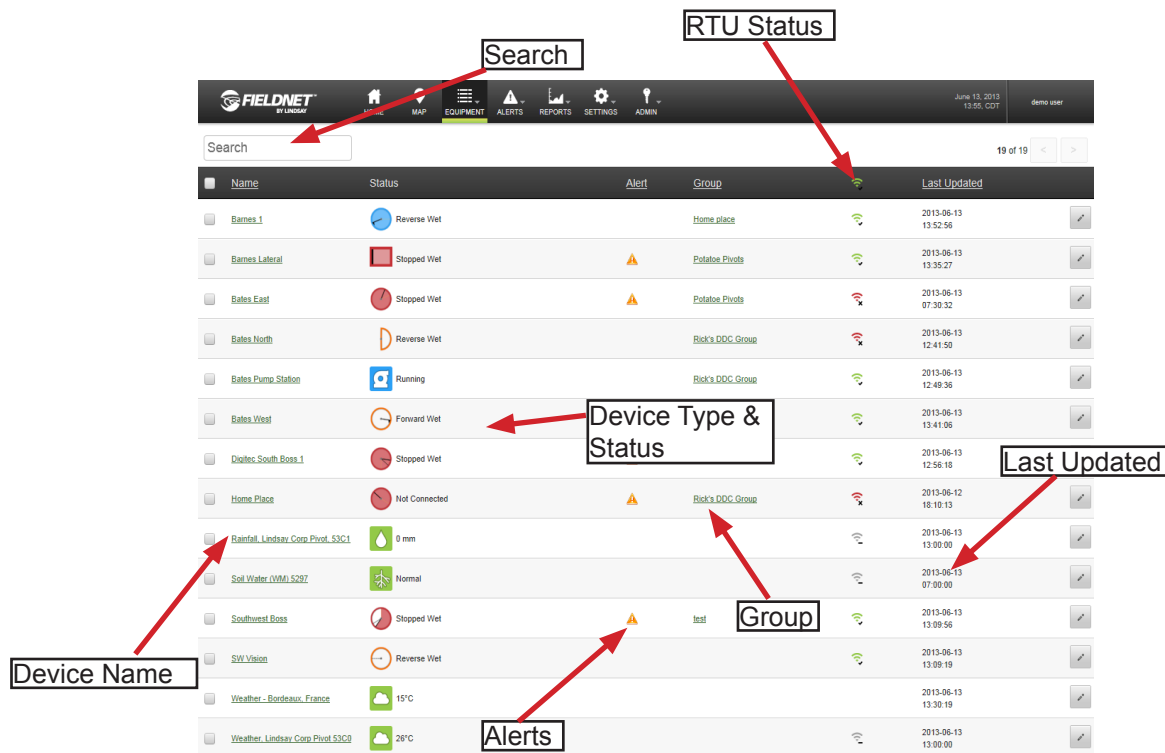
- Select the system end point, then select the **Next** button. (See below.)
- The field can be skewed at an angle if it is not perpendicular. Otherwise, press the **Next** button if the field is not angular.
- Select the **Finish** button when complete. Return to the Quick Tray to define the location and other system parameters in more detail.
- Press the Apply button to accept the settings.



# Equipment Menus

The equipment menu lists all equipment configured within the FieldNET 3 account. (See the following diagram.) The equipment pull-down menu allows the equipment list to be more defined by equipment type. This can help for easier navigation if there is a lot of equipment controlled through FieldNET.

- All Equipment: Lists all the equipment setup in the account.
- Pivots and Laterals: Will only list pivots and laterals.
- Pumps: Will only list pumps.
- Sensors and Relays: Will list any components that do nothing more than send and receive data.
- Equipment Groups: Lists all groups created in the account.
- RTU's: Will list only RTU's.
- Bridges: Will list only Network Bridges.
- Climate: Lists only Climate Sensor Units installed in the field.
- Soil Water: Lists only Soil Moisture Sensors installed in the field.



The screenshot shows the FieldNET web portal interface. At the top, there is a navigation bar with icons for Home, Map, Equipment, Alerts, Reports, Settings, and Admin. A search bar is located below the navigation bar. The main content area displays a table of equipment with columns for Name, Status, Alert, Group, and Last Updated. Red arrows point to various elements: 'Search' points to the search bar; 'RTU Status' points to a green signal icon in the Status column; 'Device Name' points to the 'Name' column header; 'Device Type & Status' points to the 'Status' column header; 'Alerts' points to a yellow warning triangle icon in the Alert column; 'Group' points to the 'Group' column header; and 'Last Updated' points to the 'Last Updated' column header.

Name	Status	Alert	Group	Last Updated
Barnes 1	Reverse Wet		Home place	2013-06-13 13:52:56
Barnes Lateral	Stopped Wet	Warning	Potatoe Pivots	2013-06-13 13:35:27
Barnes East	Stopped Wet	Warning	Potatoe Pivots	2013-06-13 07:30:32
Barnes North	Reverse Wet		Rick's DDC Group	2013-06-13 12:41:50
Barnes Pump Station	Running		Rick's DDC Group	2013-06-13 12:49:36
Barnes West	Forward Wet			2013-06-13 13:41:06
Digtec South Boss 1	Stopped Wet			2013-06-13 12:56:18
Home Place	Not Connected	Warning	Rick's DDC Group	2013-06-12 18:10:13
Rainfall - Lindsay Corp Pivot 53C1	0 mm			2013-06-13 13:00:00
Soil Water (VM) 5297	Normal			2013-06-13 07:00:00
Southwest Boss	Stopped Wet	Warning	test	2013-06-13 13:09:56
SW Vision	Reverse Wet			2013-06-13 13:09:19
Weather - Bordeaux France	15°C			2013-06-13 13:30:19
Weather - Lindsay Corp Pivot 53C9	28°C			2013-06-13 13:00:00

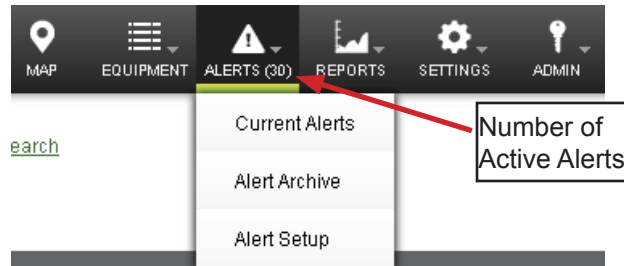
## Alerts

The Alerts menu lists all alerts that haven't been cleared from the list. The Alerts pull-down menu allows access to the following pages:

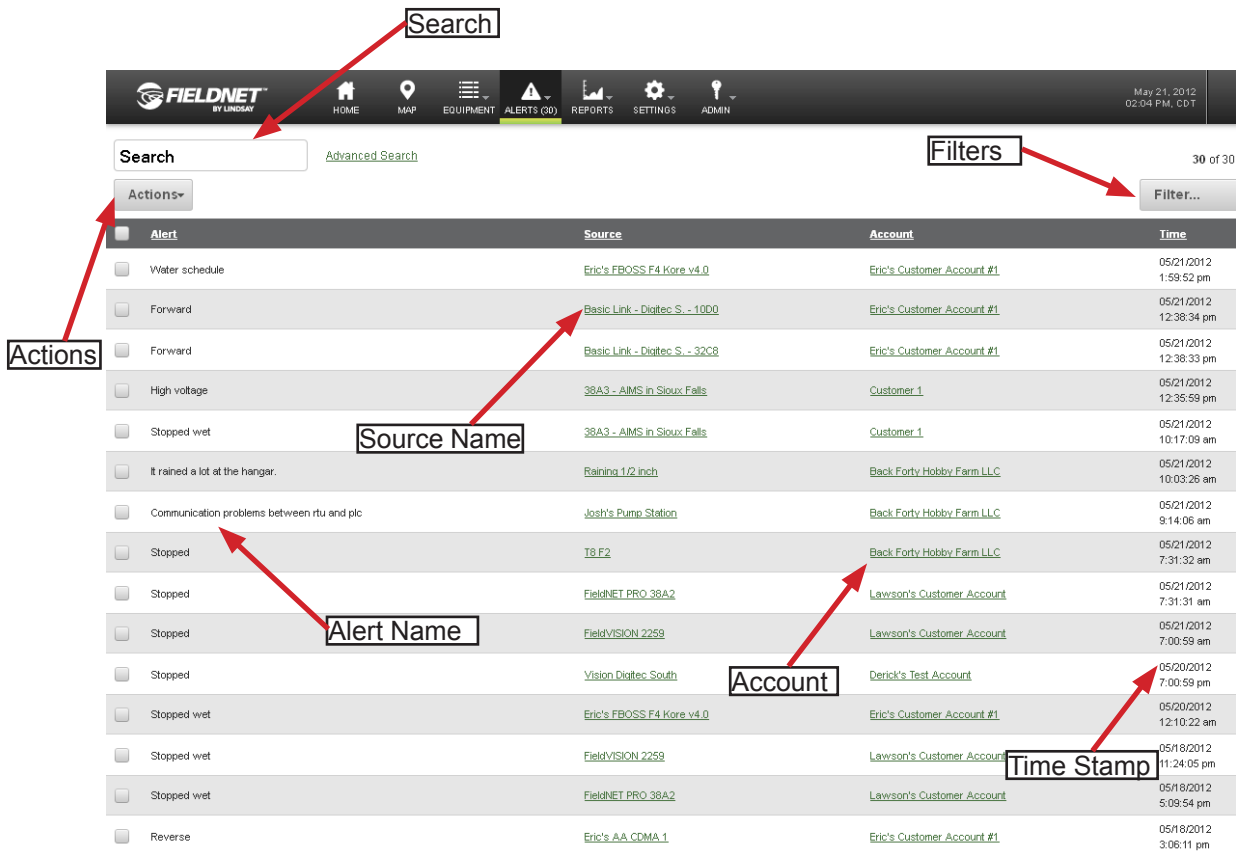
- Current Alerts: A list of the most current alerts that haven't been cleared.
- Alert Archive: A list of archived alerts for viewing.
- Alert Setup: Allows for the creation of alerts.

**Note:** The Alert Icon in the menu bar at the top of the FieldNET page will display a number in parentheses if there are any current alerts that have not been cleared. (See detail below.)

## Current Alerts



The Current Alerts list shows all current alerts that have not been cleared. (See the following detail.) This list can be accessed under the “Alerts” tab at the top of the screen and selecting “Current Alerts.”



Alert	Source	Account	Time
<input type="checkbox"/> Water schedule	<a href="#">Eric's FBOSS F4 Kore v4.0</a>	<a href="#">Eric's Customer Account #1</a>	05/21/2012 1:59:52 pm
<input type="checkbox"/> Forward	<a href="#">Basic Link - DigiTec S. - 1000</a>	<a href="#">Eric's Customer Account #1</a>	05/21/2012 12:38:34 pm
<input type="checkbox"/> Forward	<a href="#">Basic Link - DigiTec S. - 32C8</a>	<a href="#">Eric's Customer Account #1</a>	05/21/2012 12:38:33 pm
<input type="checkbox"/> High voltage	<a href="#">38A3 - AIMS in Sioux Falls</a>	<a href="#">Customer 1</a>	05/21/2012 12:35:59 pm
<input type="checkbox"/> Stopped wet	<a href="#">38A3 - AIMS in Sioux Falls</a>	<a href="#">Customer 1</a>	05/21/2012 10:17:09 am
<input type="checkbox"/> It rained a lot at the hangar.	<a href="#">Raining 1/2 Inch</a>	<a href="#">Back Forty Hobby Farm LLC</a>	05/21/2012 10:03:26 am
<input type="checkbox"/> Communication problems between rtu and plc	<a href="#">Josh's Pump Station</a>	<a href="#">Back Forty Hobby Farm LLC</a>	05/21/2012 9:14:06 am
<input type="checkbox"/> Stopped	<a href="#">T8 F2</a>	<a href="#">Back Forty Hobby Farm LLC</a>	05/21/2012 7:31:32 am
<input type="checkbox"/> Stopped	<a href="#">FieldNET PRO 38A2</a>	<a href="#">Lawson's Customer Account</a>	05/21/2012 7:31:31 am
<input type="checkbox"/> Stopped	<a href="#">FieldVISION 2259</a>	<a href="#">Lawson's Customer Account</a>	05/21/2012 7:00:59 am
<input type="checkbox"/> Stopped	<a href="#">Vision DigiTec South</a>	<a href="#">Derick's Test Account</a>	05/20/2012 7:00:59 pm
<input type="checkbox"/> Stopped wet	<a href="#">Eric's FBOSS F4 Kore v4.0</a>	<a href="#">Eric's Customer Account #1</a>	05/20/2012 12:10:22 am
<input type="checkbox"/> Stopped wet	<a href="#">FieldVISION 2259</a>	<a href="#">Lawson's Customer Account</a>	05/18/2012 11:24:05 pm
<input type="checkbox"/> Stopped wet	<a href="#">FieldNET PRO 38A2</a>	<a href="#">Lawson's Customer Account</a>	05/18/2012 5:09:54 pm
<input type="checkbox"/> Reverse	<a href="#">Eric's AA CDMA 1</a>	<a href="#">Eric's Customer Account #1</a>	05/18/2012 3:06:11 pm

### Search

The search can be used to list any alerts in the FieldNET account. The search function will search on complete names or any part of a name, no wildcard characters are needed.

### Alert Name

This is the alert name FieldNET uses or the name it was given in setup. (See Rules in the Settings Section of this manual).

### Source

This is the source of the alert. Sources can be either an irrigation system or device. Selecting the source name will access the device’s dashboard. (See Section 4- Dashboards for more information.)

### Account

This is the account that the device or system that caused the alert is part of. Selecting the account name will access the account page.

### Time

This is a time stamp of when the alert occurred.

### Action

The Action pull-down menu contains a single command that allows selected alarms (those with checked boxes) to be cleared from the list.

### Clear Alerts

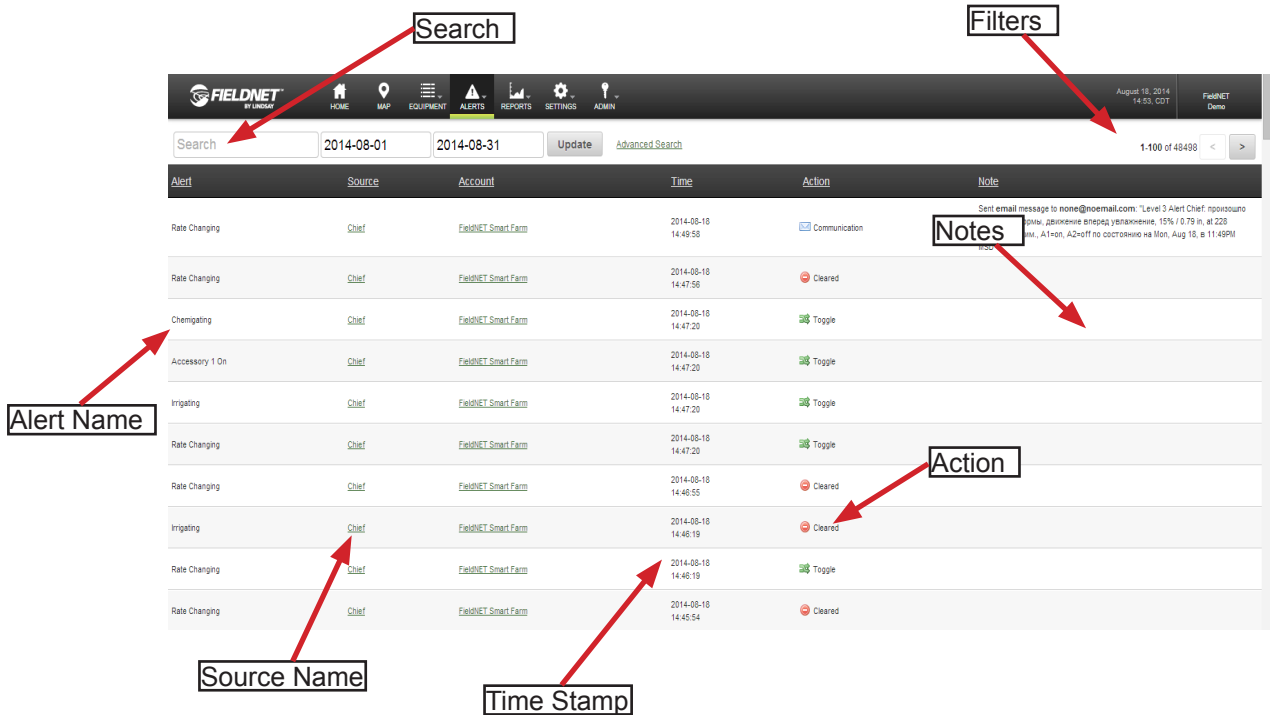
This button with the “X” is another method for clearing alerts from the list.

### Filter

This pull-down filters the alert list by equipment type, communication type, or rule type. This allows for easier navigation of the alerts list.

## Alert History

The alert history contains all of the alerts the system has undergone. (See detail below.) The following screen can be accessed under the “Alerts” tab and by selecting “Alert History.”



Alert	Source	Account	Time	Action	Note
Rate Changing	Chief	FieldNET Smart Farm	2014-08-18 14:48:58	Communication	Send email message to none@noneemail.com: "Level 3 Alert Chief" произошло (правило, действие вперед, установка: 15% / 0.79 в, в 228 мм., А110п, А2ноff по состоянию на Mon, Aug 18, в 11:49PM
Rate Changing	Chief	FieldNET Smart Farm	2014-08-18 14:47:56	Cleared	
Chempating	Chief	FieldNET Smart Farm	2014-08-18 14:47:20	Toggle	
Accessory 1 On	Chief	FieldNET Smart Farm	2014-08-18 14:47:20	Toggle	
Impating	Chief	FieldNET Smart Farm	2014-08-18 14:47:20	Toggle	
Rate Changing	Chief	FieldNET Smart Farm	2014-08-18 14:47:20	Toggle	
Rate Changing	Chief	FieldNET Smart Farm	2014-08-18 14:46:55	Cleared	
Impating	Chief	FieldNET Smart Farm	2014-08-18 14:46:19	Cleared	
Rate Changing	Chief	FieldNET Smart Farm	2014-08-18 14:46:19	Toggle	
Rate Changing	Chief	FieldNET Smart Farm	2014-08-18 14:45:54	Cleared	

### Search

The search can be used to list any alerts in the FieldNET account. The search function will search on complete names or any part of a name, no wildcard characters are needed.

### Alert Name

This is the alert name as created in the Rules (see Rules in the Settings Section of this manual).

### Source

This is the source of the alert. It can be either an irrigation system or device. Selecting the source name will access the device's dashboard. (See Section 4- Dashboards for more information.)

### Time

This is a time stamp of when the alert occurred.

### Notes

Notes show information that was sent by the system to the operator or whomever the point of contact is for addressing alerts. Notes will only appear if there is a communication action.

### Filter

This pull-down filters the alert list by action type.

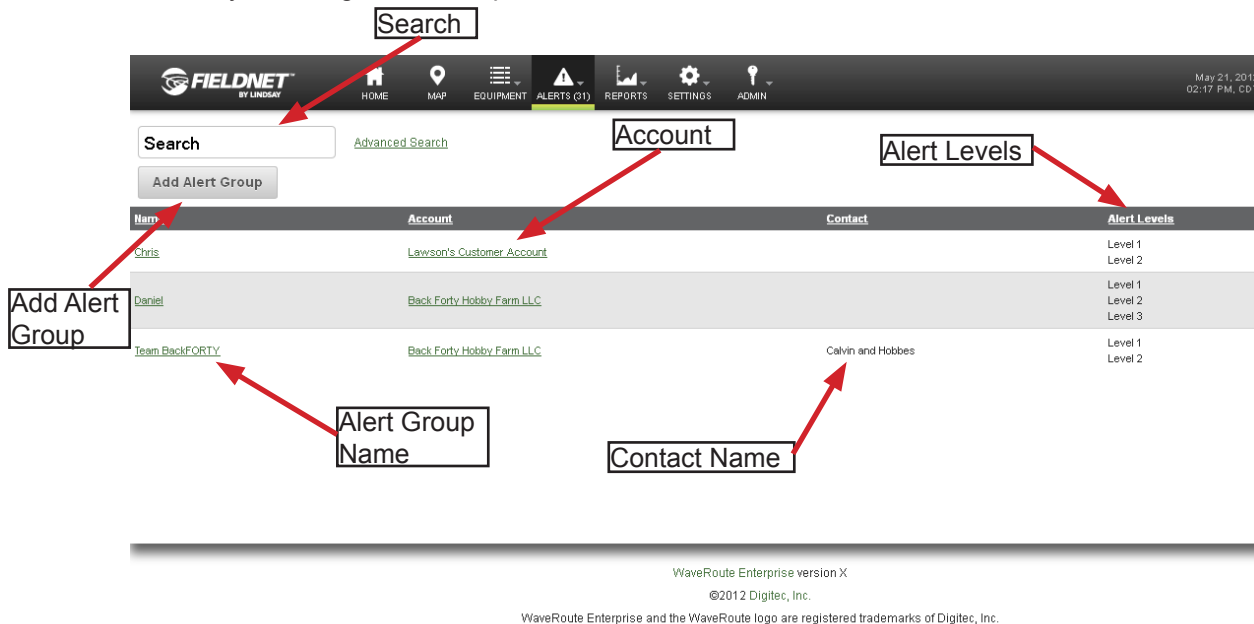
### Action

The action column displays what type of action was taken by the system. The different actions are:

1. Created: These are alerts that have been created due to activation.
2. Communication: These are alerts that were communicated to the operator or technician through an e-mail or text.
3. Escalated: These are alerts that had their alert status escalated from a low level status to a higher status.
4. Retriggered: These are alerts that were reactivated due to the system clearing the first alert then having the alarm activate again.
5. Disabled: These are alerts that have not been resolved but are not affecting machine operation.
6. Resolved: These are alerts that have been acknowledged and fixed.
7. Cleared: These are alerts that have been cleared by the system itself. Typically due to the system able to meet a given power or pressure requirement upon restarting.
8. Toggle: These are alerts that are repeatedly activating then deactivating.
9. Manually Cleared: These are alerts that have been cleared manually, and are not necessarily resolved.
10. Acknowledged: The alert has been acknowledged but not fixed.

## Alert Setup

The Alert Setup is where alerts are created and applied to systems. The initial screen displays all the alert groups. It can be accessed by selecting "Alert Groups" under the "Alerts" tab.



The screenshot shows the 'Alert Setup' page in the FIELDNET web portal. The page includes a navigation bar with icons for HOME, MAP, EQUIPMENT, ALERTS (01), REPORTS, SETTINGS, and ADMIN. A search bar is located at the top left. Below the navigation bar, there is a section for 'Add Alert Group' and a table listing existing alert groups. The table has columns for Name, Account, Contact, and Alert Levels. Annotations with red arrows point to specific elements: 'Search' points to the search bar; 'Account' points to the 'Account' column; 'Alert Levels' points to the 'Alert Levels' column; 'Add Alert Group' points to the 'Add Alert Group' button; 'Alert Group Name' points to the 'Name' column; and 'Contact Name' points to the 'Contact' column.

Name	Account	Contact	Alert Levels
Chris	Lawson's Customer Account		Level 1 Level 2
Daniel	Back Forty Hobby Farm LLC		Level 1 Level 2 Level 3
Team BackFORTY	Back Forty Hobby Farm LLC	Calvin and Hobbes	Level 1 Level 2

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**Search**

The search can be used to list any alert groups in FieldNET. The search function will search on complete names or any part of a name, no wildcard characters are needed.

**Add Group**

Press this button to add an alert group to the list. A dialog box will appear. Add the name for the new group and select the account it applies to. Press the **OK** button to accept the group or cancel to return to the list without saving any changes.

**Alert Group Name**

This is the name of the group. Select the name to access the Alert Setup page where the alert settings are created. (See the Editing Alert Setup Section.)

**Account**

This displays the account that the alert group is applied to. (See the Administrator's Manual for setting account details.)

**Contact Name**

This is the name of the individual(s) that the alert will contact upon activation.

**Alert Levels**

This lists the alert levels that are active for a specific group. Only alarms with the same alert levels will have a notification sent to the contact.

**Edit**

The Edit button will access the Edit Alert Setup page where the alert settings are created.

**Delete**

Press the delete button to delete the selected group.

## Edit Alert Setup

The Alert Setup page (shown on the following page) allows for specific alarm rules to be applied to one or more devices or systems, establish which levels of severity will be transmitted to the contact, and who the contacts are.

**Details**

This displays the alert group name. The name can be edited from here.

**Deliver Alert Messages**

This is where the individual alarm rules and devices of systems are chosen to be part of this group. The importance level of the alarms to be communicated can be established as well.

**Equipment**

This category allows for individual devices and equipment to be chosen for this alert group. All devices and systems within the account are displayed here.

1. Select the check box next to the equipment name to choose the individual devices or check the All Equipment box to choose all devices and systems in the list.

Selecting the equipment name will access the specific equipment's dashboard.



**Alert Group Name**

Alert Group Name: Team BackFORTY

**Deliver Alert Messages**

**Equipment**  All Equipment

<input type="checkbox"/> Name	Type
<input type="checkbox"/> 358B Basic	Pivot
<input type="checkbox"/> Aircraft Movement - Motion Sensor	Motion Sensor
<input type="checkbox"/> airport pumpstation	Watertronics Pump Station
<input type="checkbox"/> Barn - Generic Voltage	Voltage Sensor
<input type="checkbox"/> Barn - Rain Bucket	Rain Bucket
<input type="checkbox"/> Boeing Field Weather Station	Weather Underground

**Rules**  All Rules

<input type="checkbox"/> Name
<input type="checkbox"/> GPIO at the Barn
<input type="checkbox"/> Lights On
<input type="checkbox"/> Low Volts at Barn
<input type="checkbox"/> Poor Flying Weather

**Communications**

Deliver all RTU and Bridge alerts

**Deliver For**

- Level 1
- Level 2
- Level 3

### Rules

This is a list of all the rules created in the account. Individual alarm rules can be selected for the group by checking a particular rule's check box. All rules can be chosen by selecting the All Rules check box as well.

Selecting the name of the rule will access the Rule Edit page where the specific rule criteria can be changed. (See the Edit Rules in the Settings Section.)

### Communications

This sets the delivery criteria for the alarms in the group. A check box is provided to deliver all RTU and Bridge alerts, if selected. Also, the sending of alerts of a particular level can be established so that either all alerts are communicated or just the most severe alerts transmit in order to reduce e-mail/text clutter.

### Recipients

The recipients list establishes which contacts will receive messages from the group when alarms initiate. The messages can be sent by text message, e-mail or phone message (voice portal). All users created in the account will be listed. Selecting the check box next to a contact name will add this contact to the alarm group. Selecting the contact name or Setup will access the Contact Communication menu (see Edit Contacts in the Settings Section).

## Save

Press the Save Alert Setup to save the alert group settings.

**Recipients**

Select contacts that should receive alert messages for this group:

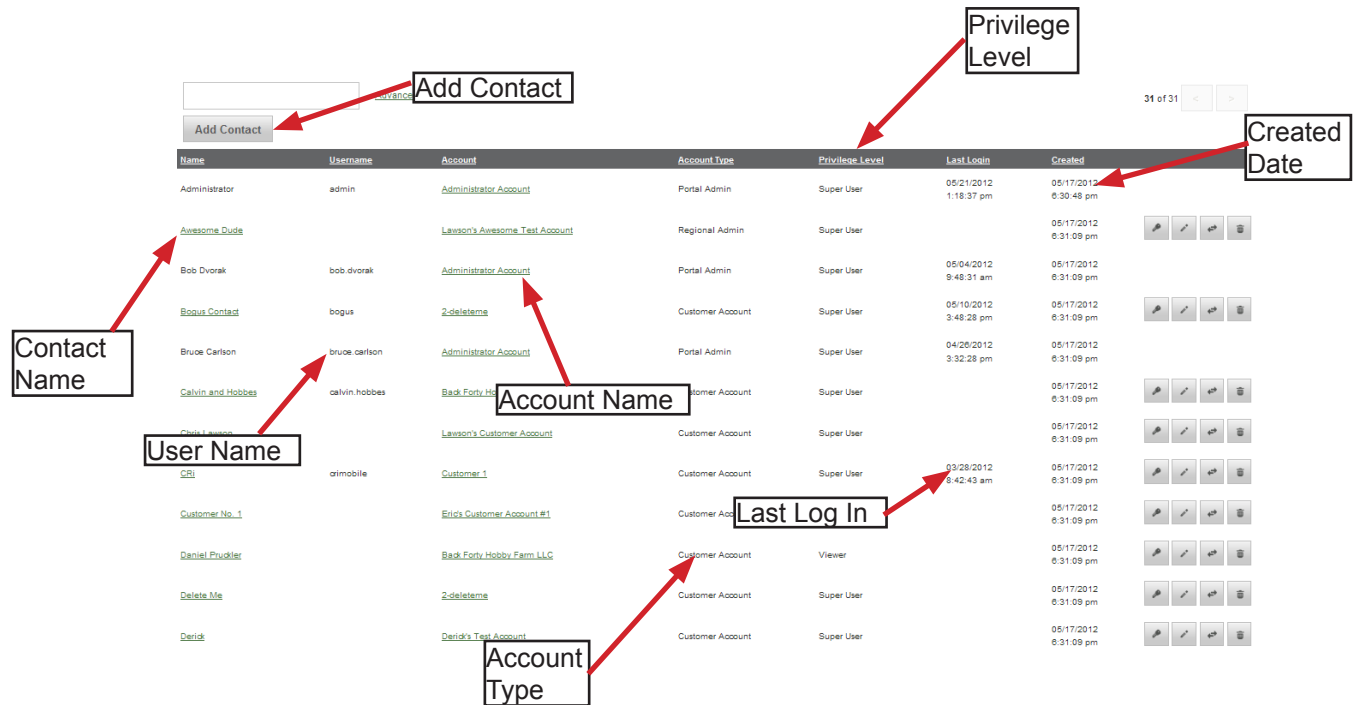
<input type="checkbox"/>	Name	Text	Email	Voice	
<input type="checkbox"/>	<a href="#">Calvin and Hobbes</a>	disabled	josh.lewis@digitecinc.com	disabled	<a href="#">setup</a>
<input type="checkbox"/>	<a href="#">Daniel Pruckler</a>	disabled	daniel.pruckler@t8webware.com	disabled	<a href="#">setup</a>
<input type="checkbox"/>	<a href="#">Farmer Frank</a>	4026460934@vtext.com	disabled	4026460934	<a href="#">setup</a>
<input type="checkbox"/>	<a href="#">Garfield</a>	disabled	disabled	disabled	<a href="#">setup</a>

## Settings

The Settings menu allows for changes to user settings such as privileges, user information, Rules and Subscriptions.

## Contacts

Selecting the Contacts menu displays the entire list of contacts under the account. (See detail below.)



Name	Username	Account	Account Type	Privilege Level	Last Login	Created	
Administrator	admin	<a href="#">Administrator Account</a>	Portal Admin	Super User	05/21/2012 1:18:37 pm	05/17/2012 6:30:48 pm	
<a href="#">Awesome Dude</a>		<a href="#">Lawson's Awesome Test Account</a>	Regional Admin	Super User		05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
Bob Dvorak	bob.dvorak	<a href="#">Administrator Account</a>	Portal Admin	Super User	05/04/2012 9:48:31 am	05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">Bogus Contact</a>	bogus	<a href="#">2-deleteme</a>	Customer Account	Super User	05/10/2012 3:48:28 pm	05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
Bruce Carlson	bruce.carlson	<a href="#">Administrator Account</a>	Portal Admin	Super User	04/26/2012 3:32:28 pm	05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">Calvin and Hobbes</a>	calvin.hobbes	<a href="#">Back Forty Ho</a>	Customer Account	Super User		05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">Chris Lawson</a>		<a href="#">Lawson's Customer Account</a>	Customer Account	Super User		05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">CBI</a>	crimobile	<a href="#">Customer_1</a>	Customer Account	Super User	03/28/2012 6:42:43 am	05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">Customer No. 1</a>		<a href="#">Erick's Customer Account#1</a>	Customer Account	Super User		05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">Daniel Pruckler</a>		<a href="#">Back Forty Hobby Farm LLC</a>	Customer Account	Viewer		05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">Delete Me</a>		<a href="#">2-deleteme</a>	Customer Account	Super User		05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>
<a href="#">Derrick</a>		<a href="#">Derrick's Test Account</a>	Customer Account	Super User		05/17/2012 6:31:09 pm	<input type="button" value="edit"/> <input type="button" value="delete"/>

## Search

The search can be used to list all contacts under specific criteria. The search function will search on complete names or any part of a name, no wildcard characters are needed.



### Add Contact

Press the **Add Contact** button to add a contact to the list. A dialog box will appear.

1. Select the account that the contact will be a part of and press the **Next** button.
2. Enter the contact's first and last name, email address, then select the privilege level for this user. Super Users have administrative rights to accounts and can edit or delete any information except for user names. Managers can only control equipment and have no administrator rights. Viewers and those with no privileges can only view the information. Those with a user level of "None" can only receive alerts and cannot log in at all.
3. Select the Finish button when all information is filled out. Select cancel to return to the contacts list and delete all information.

### Contact Name

Select the contact name to advance to the Contacts Sidebar menu (see Contacts Sidebar Menu) where the contact information can be edited.

### User Name

Displays the user name for the contact.

### Account Name

This is the name of the account that the contact is a member of. Selecting the Account name accesses the account dashboard.

### Account Type

This is the role the contact has in a particular account.

### Last Log In

This is a time and date stamp showing the contact's last login.

### Privilege Level

This is the contact's level of control on FieldNET.

## Contacts Sidebar Menu

The Contacts Sidebar list of menus allows the general information about the contact to be edited, such as email address, first and last name and privileges.

## General Information

The general information screen allows the first and last name of the contact to be edited. Press the **Save** button to save any changes.

## Communication

The Communication screen show the contact information which can be edited. Press the **Test** button to ping the address in order to see if it is valid. Press the **Save** button to save any changes.

## Security

In the Security screen the privilege level can be set to super user, manager or viewer.

- Super Users have full rights to perform any task and have full access to all accounts. Technical Support are typically Super Users.
- Managers have full access and control of a given account or set of accounts. Managers can change equipment settings, create charts and add contacts. Dealers and some equipment owners are typical Managers.
- Viewers can only log in and view information on selected accounts.

Press the **Save** button to save the privilege settings.

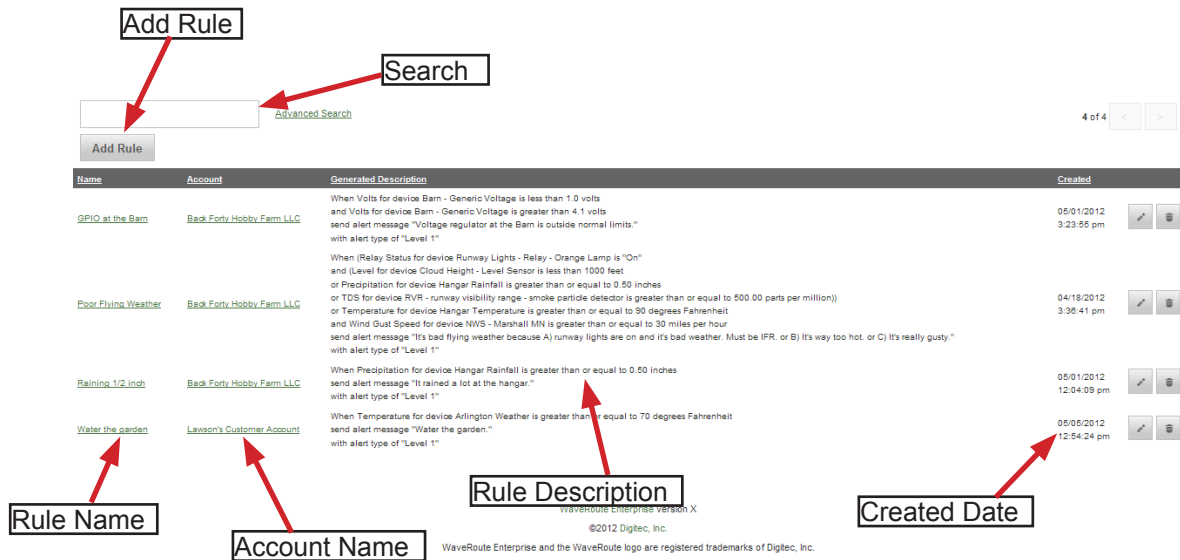
## Log In Information

User name and password can be changed here. The confirmation password is needed in order to accept the new password. Press the **Save** button to accept the changes.

## Rules

The Rules menu allows for the editing, creating, and viewing of rules established within the account. The rules will establish the criteria needed for the alerts to activate and notify the contact of a situation.

### Search



Name	Account	Generated Description	Created
<a href="#">GPIO at the Barn</a>	<a href="#">Bark Forty Hobby Farm LLC</a>	When Volts for device Barn - Generic Voltage is less than 1.0 volts and Volts for device Barn - Generic Voltage is greater than 4.1 volts send alert message "Voltage regulator at the Barn is outside normal limits." with alert type of "Level 1"	05/01/2012 3:23:55 pm
<a href="#">Floor Flying Weather</a>	<a href="#">Bark Forty Hobby Farm LLC</a>	When (Relay Status for device Runway Lights - Relay - Orange Lamp is "On" and (Level for device Cloud Height - Level Sensor is less than 1000 feet or Precipitation for device Hangar Rainfall is greater than or equal to 0.50 inches or TDS for device RVR - runway visibility range - smoke particle detector is greater than or equal to 500.00 parts per million)) or Temperature for device Hangar Temperature is greater than or equal to 90 degrees Fahrenheit and Wind Gust Speed for device NWS - Marshall MN is greater than or equal to 30 miles per hour send alert message "It's bad flying weather because A) runway lights are on and it's bad weather. Must be IFR, or B) it's way too hot, or C) it's really gusty." with alert type of "Level 1"	04/18/2012 3:36:41 pm
<a href="#">Raining 1/2 inch</a>	<a href="#">Bark Forty Hobby Farm LLC</a>	When Precipitation for device Hangar Rainfall is greater than or equal to 0.50 inches send alert message "It rained a lot at the hangar." with alert type of "Level 1"	05/01/2012 12:04:09 pm
<a href="#">Water the garden</a>	<a href="#">Lawson's Customer Account</a>	When Temperature for device Arlington Weather is greater than or equal to 70 degrees Fahrenheit send alert message "Water the garden." with alert type of "Level 1"	05/05/2012 12:54:24 pm

The search can be used to list all contacts under specific criteria. The search function will search on complete names or any part of a name, no wildcard characters are needed.

### Add Rule

Press this button to add a new rule to the account. A dialog box will appear.

1. Enter the name of the rule.
2. Select the account to apply the rule to.
3. Press the **OK** button to accept the rule. The Edit Rule screen will display (See the Edit Rule section). Press cancel to return to the list and delete any entries.

### Name

This is the rule name. Selecting the name opens the Edit Rule screen for that rule.

### Account

This is the account name that the rule is a part of. Select the account name to access the account information. (See the Administrators Instructions for more details.)

### General Description

This is a detailed description of what the rule is for and its criteria for activating alarms.

### Created

This is the date the rule was created.

### Edit

Press this button to access the Edit Rules screen.

## Delete

Press this button to delete the rule from FieldNET.

## Rules Sidebar Menus

When selecting the rule name, the sidebar menu will display the Edit Rules screen (shown in the diagram below).

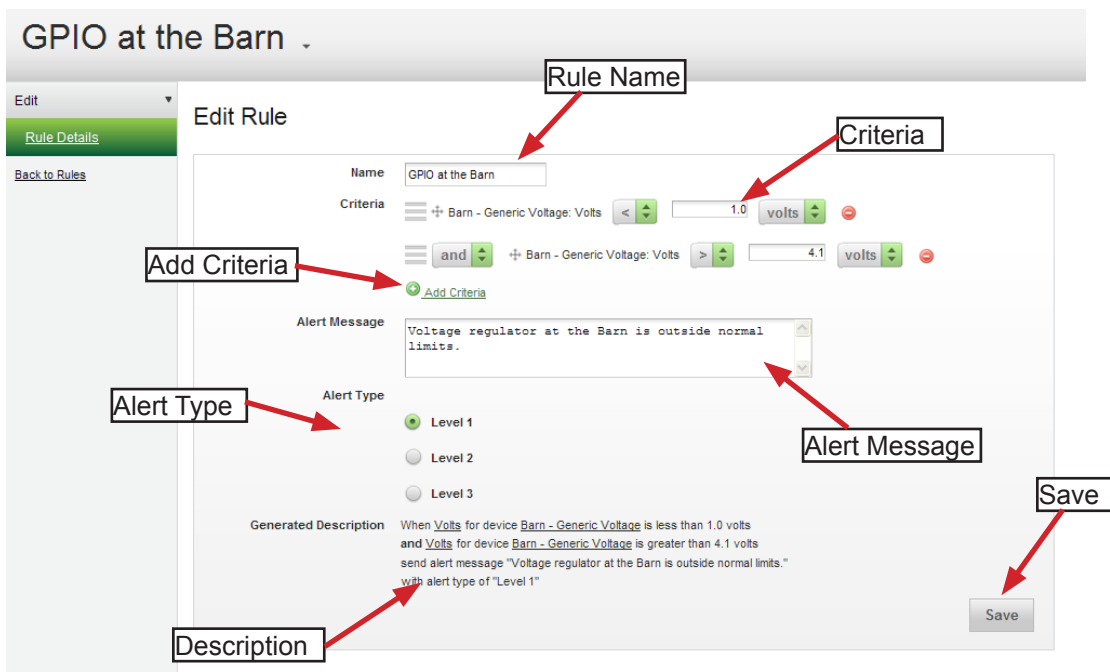
## Edit Rule Details

The Edit Rules screen allows for rules to be created and edited (see detail below).

- The name field can be edited or a new name can be entered here.
- Criteria allows for the editing of the rule criteria.
- The **Add Criteria** button opens a dialog box for adding criteria to the rule. In the dialog box, select the device or equipment the criteria applies to. Select the variable (sensor) that the rule will observe. Press the OK button to accept the criteria. Press cancel to return to the rules screen and delete any information in the dialog box.
- The Alert Message text box will display messages when the rule activates the alert.
- Alert type has three radio buttons to select the alert level. Level one (1) is the highest importance.
- Generated Description creates a rule description from all the above information.

## Save

Press the Save button to save the Rule configuration.



The screenshot shows the 'Edit Rule' interface for a rule named 'GPIO at the Barn'. The interface includes a sidebar with 'Edit', 'Rule Details', and 'Back to Rules' options. The main content area contains the following fields and controls:

- Rule Name:** A text field containing 'GPIO at the Barn'.
- Criteria:** A list of criteria with two entries: 'Barn - Generic Voltage: Volts' with a value of 1.0 and 'and Barn - Generic Voltage: Volts' with a value of 4.1. Each entry has a plus icon to add and a minus icon to remove.
- Add Criteria:** A green button with a plus icon and the text 'Add Criteria'.
- Alert Message:** A text area containing the message: 'Voltage regulator at the Barn is outside normal limits.'
- Alert Type:** Three radio buttons labeled 'Level 1', 'Level 2', and 'Level 3'. 'Level 1' is selected.
- Generated Description:** A text area showing a summary of the rule configuration: 'When Volts for device Barn - Generic Voltage is less than 1.0 volts and Volts for device Barn - Generic Voltage is greater than 4.1 volts send alert message "Voltage regulator at the Barn is outside normal limits." with alert type of "Level 1"'
- Save:** A button at the bottom right of the form.

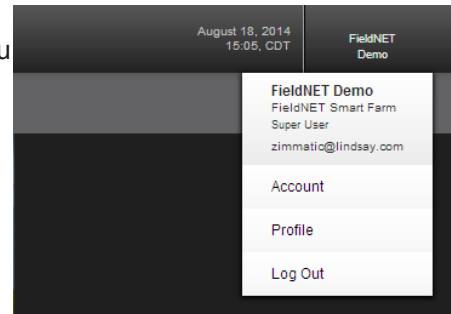
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## Log-In Account Information

The Log-In information is located along the far right of the toolbar where the user name is displayed. Selecting the user name brings up a pull down menu listing all the log-in options.



### Account

The account menu opens a screen that details account information for the logged-in user.

#### Account Details

This displays the account name and description. This is only viewable information and cannot be edited.

#### Address & Phones

This screen shows the mailing address, billing address and phone information for the user to be used as contact information. Use the **Save** button to save any changes to this information.

### Profile

The Profile menu is where the user information such as name, email can be edited.

#### Communication

This page displays the user's email address which can be edited. Press the **Save** button to save the information.

#### Settings

This page allows for setting up language, units of measure and time zone. These are global settings that will affect every page and input for this user. Press the **Save** button to save any changes.

### Log Out

Selecting Log Out will log the operator out of the user account. A successful log-in will be needed to access FieldNET 3 again.

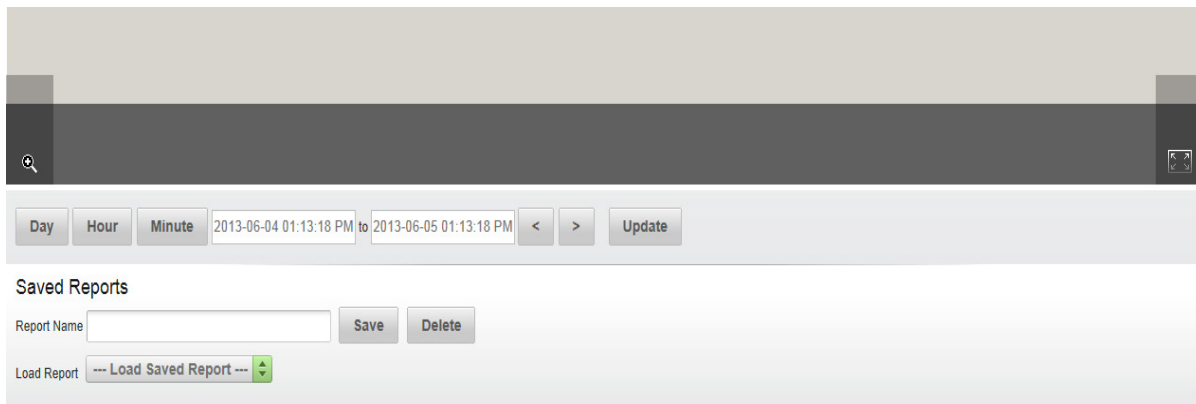
# Reports

The Reports Menu allows for the addition of more device data about Rules, Alerts and Sensors. Note: These reports are made with Adobe Flash and require Flashplayer® to view. iOS , iPhones and iPads will not work with FieldNET 3 Custom Reporting.

## Custom Charting

Custom charts can be created from this screen. These customized charts display specific timelines and equipment sensors for a more concise data display.

1. Press the magnifying glass in the upper left corner of the chart to zoom into an area on the chart.
2. Press the expand icon in the upper right corner to view the chart in full screen mode.



### Timeline

The timeline bar shows the specified recorded time of activity as established by using the settings below the chart. The chart time can be adjusted to show activity by day, hour or minutes. The date field sets the from and to date for the time span. The arrow buttons allow for incremental change by day, hour or minutes, depending on what the increments are set at. Press the **Update** button to update the chart display.

### Analog Chart

The analog chart displays the pens in a line graph format, along the timeline.

### Digital Chart

The digital chart uses a Gantt format to display device activity across the set timeline. The digital chart will show run times for pumps, accessories and end guns.

### Report Pens

Report pens are the color codes used to represent the device activity on the charts. Analog pens will display information on the analog chart and digital pens will display information on the digital chart. Pressing the Start Over button will clear all pens.

### To add analog pens:

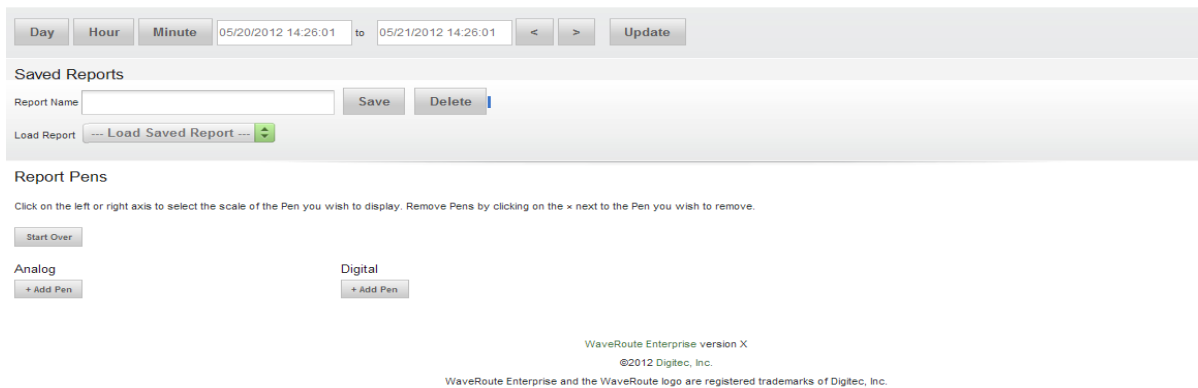
1. Press the **Add Pen** button under the Analog heading to add pens to the chart. A new dialog box will appear.
2. Select the device to view from the equipment pull-down menu.
3. Select the variable (sensor, rule or alert) to view from the selected piece of equipment.
4. Select the color for the representing line on the chart.
5. Select left or right axis to display the vertical scale.
6. Select the OK button to accept the changes or press cancel to return to the chart screen and ignore the changes.

Selecting the check box to the left of the pen will disable or enable the viewing of that device on the chart. Selecting the “x” next to the pen name will delete that pen.

**To add digital pens:**

1. Press the **Add Pen** button under the Digital heading to add pens to the chart. A new dialog box will appear.
2. Select the device to view from the equipment pull-down menu.
3. Select the variable (sensor, rule or alert) to view from the selected piece of equipment.
4. Select the color for the representing bar on the chart.
5. Select the output state so FieldNET knows what state to display on the chart.
6. Select the OK button to accept the changes or press cancel to return to the chart screen and ignore the changes.

Selecting the check box to the left of the pen will disable or enable the viewing of that device on the chart. Selecting the “x” next to the pen name will delete that pen.



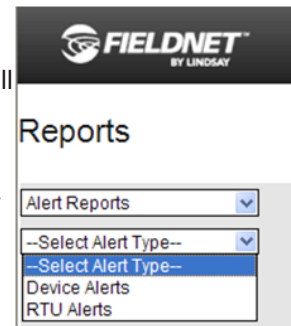
**Saved Reports**

Enter the name of the generated custom report and press the **Save** button to save the chart information. Press the **Delete** button to delete the chart information. Select the **Load Report** pull-down to select a previously generated custom report within the account.

**Reports**

When selecting Equipment Sensors, Rule Results, or Alerts from the Reports menu will display the same set of pull-down menus. The selections on these pull-down menus work in descending order. From the top level, Alert Reports, Device Reports or Rule Reports can be selected. Under each heading, the device type can be chosen. Once all the proper selections have been made, a chart will display the results to the right of the pull-down menu.

A **Download CSV** button allows for saving the chart information in a .CSV format.



## Section 4 – Web Portal Dashboards

The FieldNET web portal is an internet service that allows FieldNET to be tailored to the customer's specific needs.

### Log In







The local Lindsay Dealer will provide log in access to the FieldNET 3 site (<http://app.myfieldnet.com>) as well as set up the customer account.












Always keep log in information and passwords in a safe and secure location. Contact Lindsay Service or the local Lindsay Dealer if there are any problems with logging into the user account.

## Description of FieldNET Icons

The following is a list of the most common icons that display on the Dashboard and the Equipment page. Each icon represents a certain condition with an irrigation system or pump.

The following table lists the meaning of each icon.

Icon Code		
Icon	Color	Status
	Green	Pivot Running Dry
	Blue	Pivot Running Wet
	Gray	Pivot Stopped
	Red	Pivot Fault/Alarm
	Orange	Pivot Accessory/Chemigating
	Green	Lateral Running Dry

	Blue	Lateral Running Wet
	Gray	Lateral Stopped
	Red	Lateral Fault/Alarm
	Orange	Lateral Accessory/Chemigating
	Blue	Pump Running
	Blue w/ Yellow "P"	Pump Pressurizing
	Blue w/ Purple "R"	Pump Regulating
	Gray	Pump Stopped
	Gray w/ Padlock	Pump Locked Out
	Orange	Pump Running Chemicals
	Red	Pump Alert

Other accessory icons.

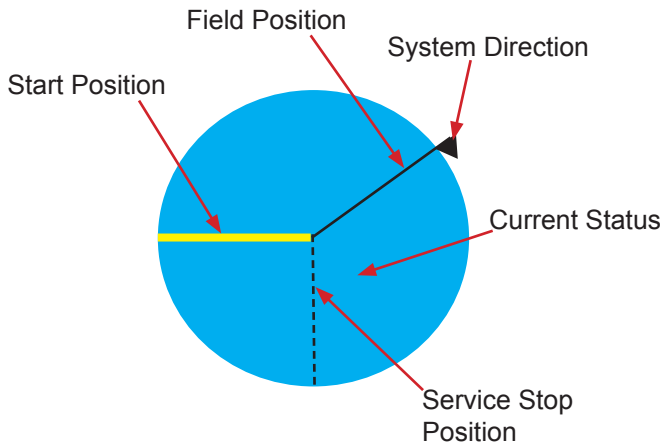
There are many different icons used for various accessories in FieldNET (e.g. batteries, level sensors, temperature gauges, etc.) That as a rule of thumb, any colored icon indicates a running status, gray icons indicate an Off status and any fully red colored icons indicate an alarm or fault status.

**Alert Icons:**

Alert icons are small, orange caution symbols that display in the Alert column of any equipment list. Left-mouse-button-click on these symbols to display the alert for the selected piece of equipment. (Refer to the Alerts section, later in this manual for more details.)

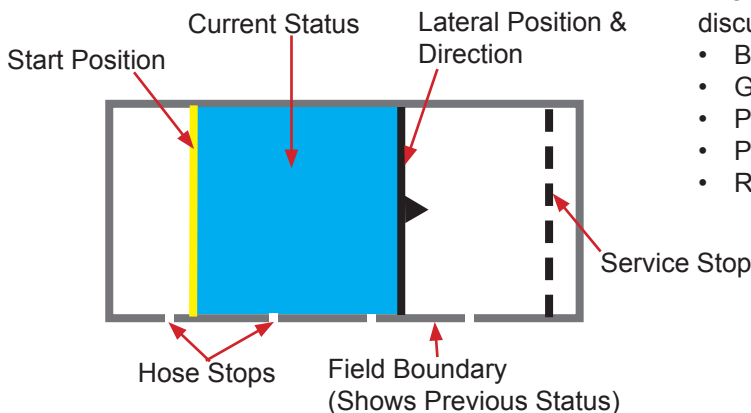
**Pivot Equipment Icons:**

On the equipment page and dashboards, a graphic representation of the pivot will display with the color conditions as described previously. Below is a more detailed description of what the various details within the icons mean.







**Lateral Equipment Icons:**

On the equipment page and dashboards, a graphic representation of the lateral will display with the color conditions as described previously. Below is a more detailed description of what the various details within the icons mean.



**Communication Status:**

This icon displays the communication status of the RTU or other device used for communicating with the pivot.

-  • A good communication status that is online will show an icon with small green colored radio waves and check mark.
-  • An RTU that is offline will display and icon with small red radio waves and X.
-  • RTU's with an unknown status will display an icon with small green radio waves and exclamation point.
-  • Unsubscribed or powered off RTU's will display an icon with small gray radio waves and minus symbol.

Right-clicking on any Comm. Status symbol will bring up the RTU dashboard for that system. (Refer to the section on RTU dashboards for more details.)

## Dashboard Overview

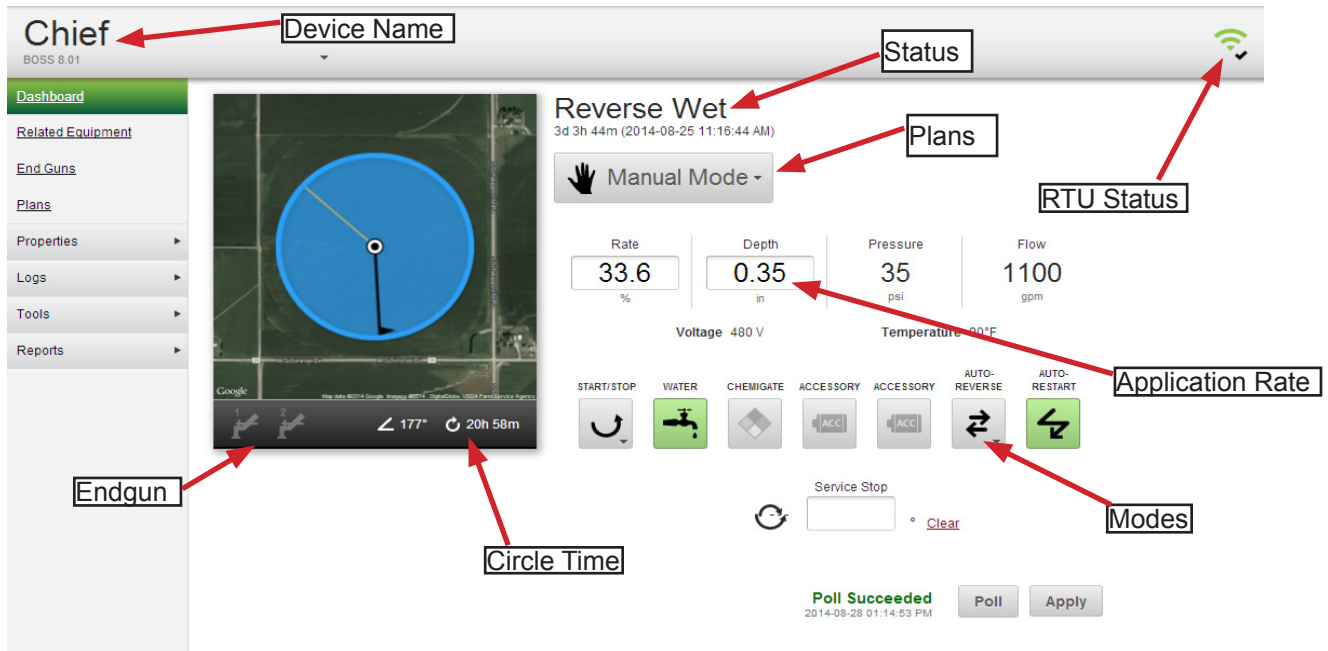
The Dashboards are the main interface for controlling devices and systems. Whenever a device name is selected, its dashboard interface will display the following information:

- System/Device Name
- RTU Status (if applicable)
- Main Dashboard Interface
- Related Equipment List
- End Guns/Flush Valves
- Hose Stops
- Plans
- System Properties
- System History

There are several dashboard types, each one will be discussed in further detail.

- Bridges
- Groups
- Pivots
- Pumps
- RTU's





## Pivot Dashboard

(See diagram above.)

The Pivot Dashboard provides an interface for irrigator control through the FieldNET program from any internet accessible location.

### Name

Displays the system name that is being viewed. If this system is part of a group, selecting the name will open a pull-down menu listing all other systems and devices in the group.

Selecting any of these other devices in the pull-down will open their particular dashboard screens.

### Image

This is a thumbnail view of the pivot located in its section of the field. This image will show information such as the mode that the pivot is in, by specific color (see the Description of Icons earlier in this section), end gun status, the programmed pivot angle and total run time.

### Plan

Lists the various pivot plans established for the system. Pull-down menus allow for the selection of the different plans and steps.

### RTU Status

Displays the network status of the pivot as either online, offline or there is a communication conflict.

### Application

These are the adjustable settings for application rate and depth.

### Modes

The different operating modes such as activating pumps, chemical application, auto-reverse and accessory activation are a few items that can be controlled from this interface.

### Service Stop

A service stop can be set for maintenance purposes.

### Poll

A poll can be initiated to check the communication between the FieldNET base and the pivot.

### Apply

Press the Apply button to accept any modifications to the system.

# Pivot Sidebar Menus

The pivot sidebar menus provide additional information for the Pivot Dashboard by right-clicking on any menu heading. Details of each sidebar menu are as follows:

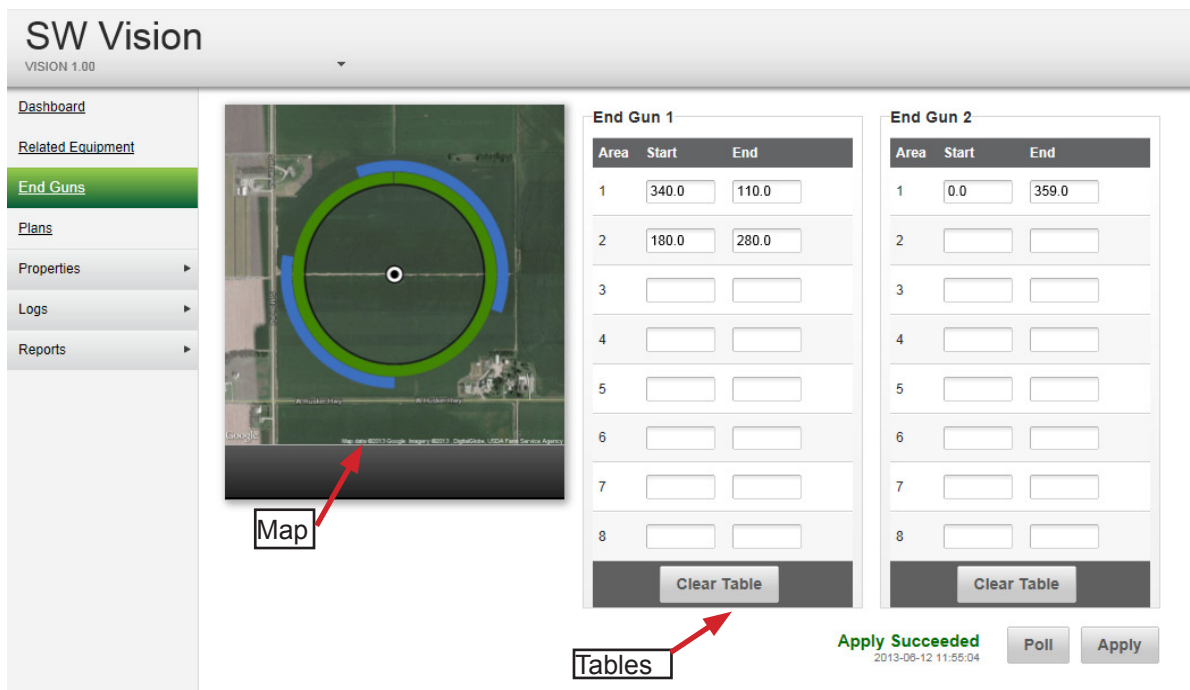
## Related Equipment

If the pivot is part of a group, all systems within that group are listed here and can be selected to view their individual dashboards.

## End Guns

The end gun menu allows up to two end guns to be configured for a system (see detail below). The end gun interface consists of a map of the field section along with end gun tables for establishing the activation areas. Up to eight tables can be created for each end gun. To program end gun areas:

1. Use the **up** and **down** arrows on the Table and/or Run Table pull-down to select an end gun table.
2. Enter in the start and end points for each area required. FieldNET will apply the settings once a start and end point are entered.
3. The map will display the end gun area for reference.
4. If the data entered is correct, select “Apply” to save this end gun configuration.



### Clear Table

This button will clear all area information within the selected table.

### Poll

A poll can be initiated to upload endgun settings entered at the panel.

### Apply

Press the Apply button to accept the end gun configurations.

## Plans

Similar to end gun set up, the plan interface is for setting the pivot irrigating areas.

Two types of plans can be used: Area Plans and Direction Plans.

Area Plans (shown below) establish irrigation areas

within the pivot area. Up to ten areas can be programmed individually for different applications.

Each area can be configured for start and end point, pump activation, accessory activation (such as chemical application), and application rate by percentage or measurement.

Area	Start	End	H2O	Acc	Rate
1	0.0	15.0			100.00 % 0.78 in <a href="#">Clear</a>
2	15.0	75.0			100.00 % 0.78 in <a href="#">Clear</a>
3	75.0	120.0			82.00 % 0.95 in <a href="#">Clear</a>
4	120.0	180.0			45.00 % 1.73 in <a href="#">Clear</a>
5	180.0	210.0			100.00 % in <a href="#">Clear</a>
6	210.0	240.0			100.00 % in <a href="#">Clear</a>
7	240.0	270.0			90.00 % in <a href="#">Clear</a>
8	270.0	300.0			75.00 % 1.04 in <a href="#">Clear</a>
9	300.0	330.0			44.00 % 1.77 in <a href="#">Clear</a>
10	330.0	0.0			55.00 % 1.42 in <a href="#">Clear</a>

Direction Plans (shown below) are used for uniform application across the entire pivot area. Direction plans have a forward and reverse direction, pump activation and rate application. Direction plans are much simpler to use than area plans but should only be used on fields that do not require variable irrigation rates.

On all plan types, each area listed (or forward and reverse if direction plan is used) has a “Clear” command. Use this command to clear the information in that single row.

### Clear Table

This button will clear all area information within the selected table.

### Poll

A poll can be initiated to upload a plan that was entered at the panel.

### Apply

Press the Apply button to accept the area configurations.

Direction	H2O	Rate
Forward	80.00 %	0.98 in <a href="#">Clear</a>
Reverse	100.00 %	0.78 in <a href="#">Clear</a>

## VRI Plans

Variable Rate Irrigation (VRI) plans can also be uploaded into FieldNET and provide more precise zone irrigation capabilities.

Each zone (Area) will be color coded according to the amount of water being applied.



Split and merge buttons reduce the potential for errors as zones (areas) are added and deleted to the table over time. This is done by using pre-filled data.

A zone (area) is split by using the “+” button on the desired source zone. The new zone will appear below the source.

The original end point of the source zone is now the endpoint for the new zone. The new endpoint for the source zone and start point for the new zone is the average value between the original start and stop location for the source zone.

Example: The original zone started at 1 and ended at 10. A new split is created and now the original zone starts at 1 and ends at 5. The new zone starts at 5 and ends at 10.

These values can be edited.

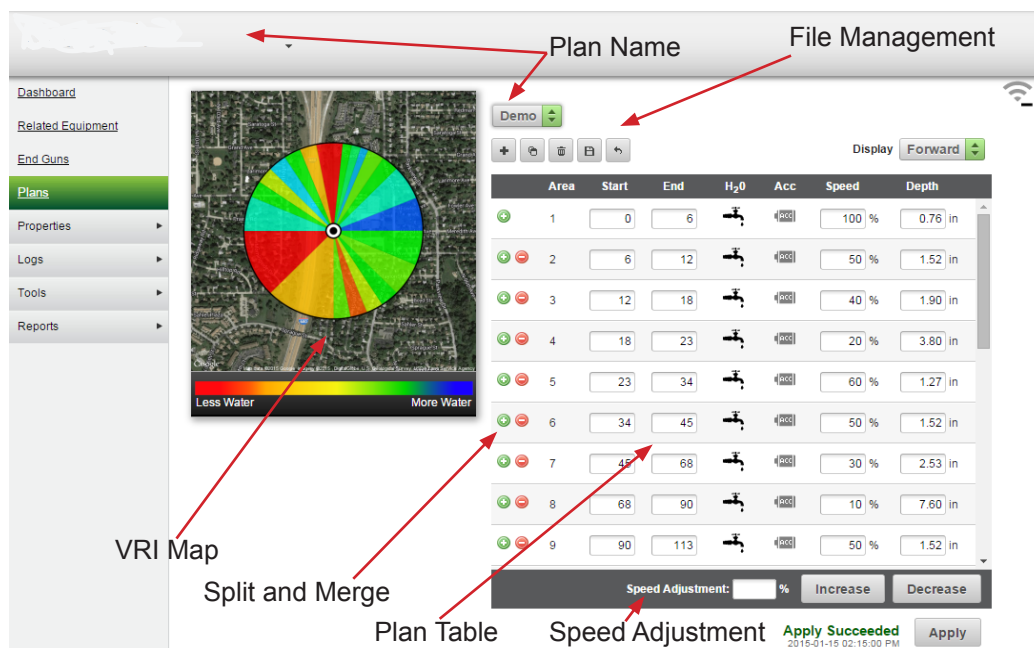
A merge will combine two zones (areas) into one. Use the “-” on the source zone to combine it with the zone directly below it in the list. The start location of the source zone and the end location of the merged zone will be combined. The speed and percent rates will use those of the source zone.

These values can be edited.

The % Adjustment will affect all zones. Enter an adjustment value and select either Increase or Decrease to make an entire plan change.

Each zone (area) can be configured for start and end point, pump activation, accessory activation (such as chemical application), and application rate by percentage or measurement.

Select Apply to accept the plan, or edits to the plan, and make the plan active.



Plan Name: Demo

File Management

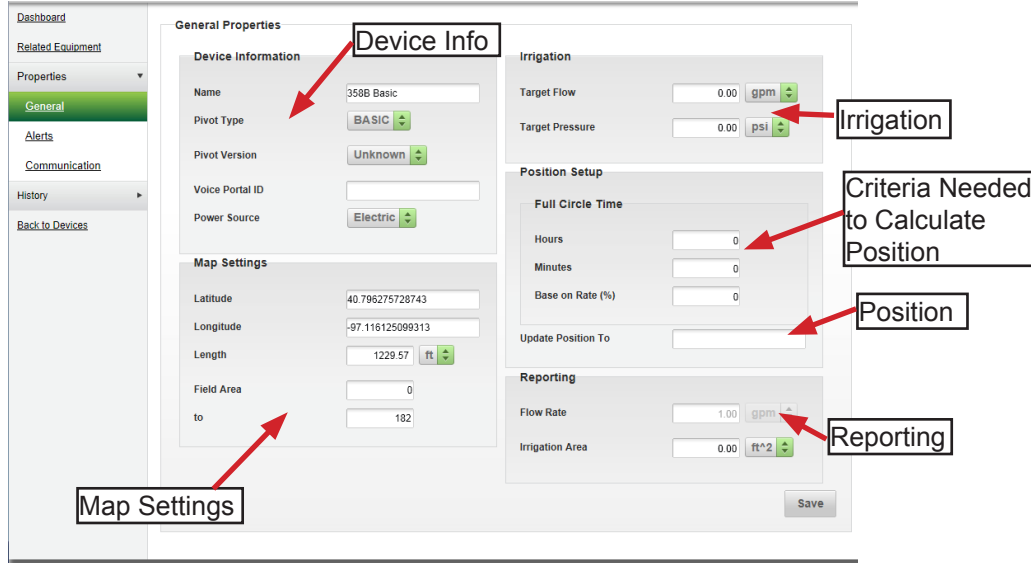
Area	Start	End	H <sub>2</sub> O	Acc	Speed	Depth
1	0	6			100 %	0.76 in
2	6	12			50 %	1.52 in
3	12	18			40 %	1.90 in
4	18	23			20 %	3.80 in
5	23	34			60 %	1.27 in
6	34	45			50 %	1.52 in
7	45	68			30 %	2.53 in
8	68	90			10 %	7.60 in
9	90	113			50 %	1.52 in

Speed Adjustment: % [Increase] [Decrease]

Apply Succeeded 2015-01-15 02:15:00 PM [Apply]

## General Properties

The properties menu allows for establishing and modifying general information about the pivot. Refer to the detail below for a layout of the General Properties screen.



The screenshot shows the 'General Properties' configuration screen. It is divided into several sections:
 

- Device Information:** Fields for Name (3588 Basic), Pivot Type (BASIC), Pivot Version (Unknown), Voice Portal ID, and Power Source (Electric).
- Map Settings:** Fields for Latitude (40.796275728743), Longitude (-97.116125099313), Length (1229.57 ft), and Field Area (0 to 182).
- Irrigation:** Fields for Target Flow (0.00 gpm) and Target Pressure (0.00 psi).
- Position Setup:** Fields for Full Circle Time (Hours: 0, Minutes: 0, Base on Rate (%): 0) and an Update Position To field.
- Reporting:** Fields for Flow Rate (1.00 gpm) and Irrigation Area (0.00 ft<sup>2</sup>).

 A 'Save' button is located at the bottom right. Red arrows and callout boxes point to the 'Device Info', 'Irrigation', 'Criteria Needed to Calculate Position', 'Position', 'Reporting', and 'Map Settings' sections.

### Device Information

This set of fields lists the name of the system, type and version of the controls, the I.D. of the voice portal (if applicable), and the power source type.

### Map Settings

The Map Settings field shows the latitude and longitude of the pivot location, the length of the system and size of the field. These settings will define the location and size of the pivot on the map screen.

### Irrigation

This field allows for setting the ideal Flow and Pressure for irrigation.

### Position

The Position Setup allows for setting the machine run-time to make one full rotation (in the case of a pivot) or traverse across the field (for laterals).

### Reporting

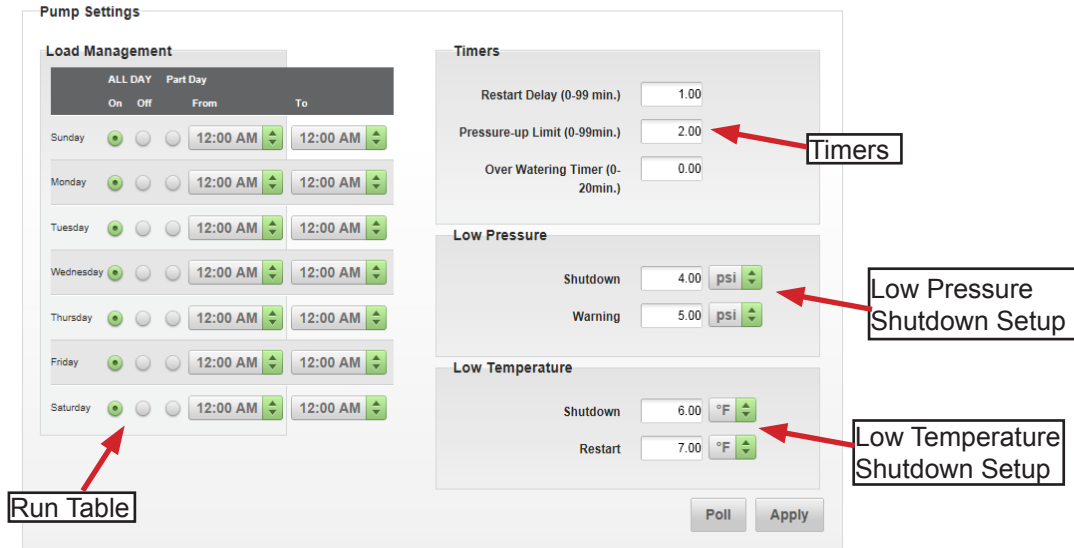
This field establishes how FieldNET should report the irrigation information such as flow rate, area of irrigation, and how the usage should be metered.

### Save

Press this button to save the settings.

## System Properties

The system properties allows for establishing and changing settings for the system components (e.g. pumps, pivot and other optional settings). Refer to the diagrams below for a layout of the System Properties screen.



The screenshot shows the 'Pump Settings' interface. On the left is the 'Load Management' section with a 'Run Table' callout pointing to a table of days and times. On the right are three sections: 'Timers' (with a callout), 'Low Pressure' (with a callout for 'Shutdown Setup'), and 'Low Temperature' (with a callout for 'Shutdown Setup'). At the bottom are 'Poll' and 'Apply' buttons.

ALL DAY		Part Day	
On	Off	From	To
<input checked="" type="radio"/>	<input type="radio"/>	12:00 AM	12:00 AM
Sunday	<input type="radio"/>	12:00 AM	12:00 AM
Monday	<input type="radio"/>	12:00 AM	12:00 AM
Tuesday	<input type="radio"/>	12:00 AM	12:00 AM
Wednesday	<input type="radio"/>	12:00 AM	12:00 AM
Thursday	<input type="radio"/>	12:00 AM	12:00 AM
Friday	<input type="radio"/>	12:00 AM	12:00 AM
Saturday	<input type="radio"/>	12:00 AM	12:00 AM

**Timers**

- Restart Delay (0-99 min.): 1.00
- Pressure-up Limit (0-99min.): 2.00
- Over Watering Timer (0-20min.): 0.00

**Low Pressure**

- Shutdown: 4.00 psi
- Warning: 5.00 psi

**Low Temperature**

- Shutdown: 6.00 °F
- Restart: 7.00 °F

### Pump Settings

Pump Settings has several different parameters for monitoring pumps.

- Load Management allows for scheduling pump operation.
- Timers allow for setting the restart delay timers, Pressure-up limit and Over-watering timers.
- Low Pressure allows for establishing the warning and shutdown pressures on the pump.
- Low Temperature allows for establishing the ambient temperature at which the pump will shutdown and restart.

### Pivot Settings

Pivot Settings allows for several pivot parameters to be edited. (See detail below.)

- Rate sets the machine flow rate.
- Cycle sets the percent cycle time.
- Barrier sets a soft barrier location. Barrier position sets the area the pivot should not run.
- Deviation sets a deviated percent rate at a scheduled time and if the ambient temperature reaches a programmed limit.
- Other irrigation system variables can be established, such as low voltage shutdown, high voltage shutdown and roto-phase delay.

### Options Settings

Other settings options include flow meter programming, wind speed for shutting down at high winds, and precipitation for shutdown during rain. (See detail below.)

### Poll

A poll can be initiated to upload any of these settings that have been changed at the panel.

### Apply

Press the Apply button to accept the configurations.

**Pivot Settings**

**Rate**

Benchmark Flow: 1100.00 gpm

Full Circle Time (min.): 850.00

System Length Wet: 1200.00 ft

**Cycle**

% Cycle Time (sec): 15

**Barrier**

Between: 0' & 0'

Hold for (min.): 0.00 min

**Deviation**

Increase Percent Rate by (%): 0%

Deviat Rate: 12:00 AM to 12:00 AM

Deviat Rate if Temp. Below: 0.00 °F

[Clear All](#)

**Pivot Variables**

Low Volt. Shutdown: 0.00

Low Volt. Restart: 0.00

High Volt. Shutdown: 0.00

High Volt. Restart: 0.00

Voltage Delay (sec): 15

Roto-Phase Delay (sec): 10

Poll Apply

Flow Rate

% Cycle Time

Soft Barrier

Deviation

Variables

**Options**

**Flow Meter #1**

Has Flow Meter #1:

Current Rate: 1,100 gpm

K Factor (x1000): 65

Low Alert: 0

High Alert: 0

Delay: 0

[View Chart for Flow Meter #1](#)

**Flow Meter #2**

Has Flow Meter #2:

Current Rate: 1,100 gpm

K Factor (x2000): 0

Low Alert: 0

High Alert: 0

Delay: 0

[View Chart for Flow Meter #2](#)

**Wind Speed**

Wind Speed: 7 mph

Wind Heading: N

Record High: 12 mph on 8/2-19 [Clear](#)

Shutdown If Over: 25 mph for 3 min

[View Chart for Wind Speed](#)

**Precipitation**

Shutdown If: 0.15 inches fall in 1 days

Shutdown Accumulation: [Clear](#)

Poll Succeeded 2014-08-28 11:36:01 AM Poll Apply

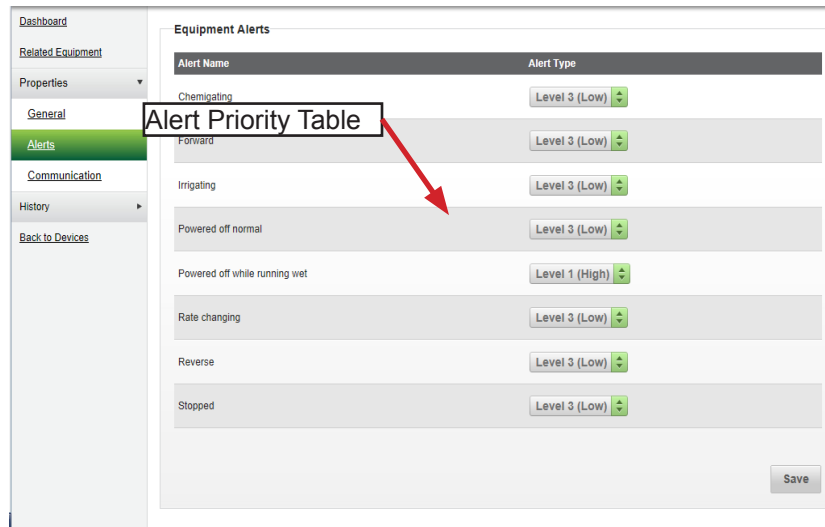
Flow Meters

Wind Speed

Precipitation Shutdown

## Alert Settings

The Alerts Properties establishes which alerts apply to the system and their priority levels. (See detail below.) Alert priorities can range from level 3; a low priority, to level 1; the highest priority. “None” can be selected as well, so that no notification is sent when activated. Alerts set to level 1 will turn the pivot icon red when they occur.



Alert Name	Alert Type
Chemigating	Level 3 (Low)
Forward	Level 3 (Low)
Irrigating	Level 3 (Low)
Powered off normal	Level 3 (Low)
Powered off while running wet	Level 1 (High)
Rate changing	Level 3 (Low)
Reverse	Level 3 (Low)
Stopped	Level 3 (Low)

### Save

Press the save button to save the alert settings.

## Communication Settings

The RTU that is attached to this equipment is displayed here. (See detail below.) If there are multiple RTU's to choose from, they can be selected for use by availability or preference.

Press the **Save** button to use the selected RTU for the current pivot.



RTU Info

RTU: RTU (0000358B) Assign New RTU

Manufacturer: Digitec, Inc.

RTU Name: WaveRoute Radio

I/O Channel: Serial

**RTU Info**

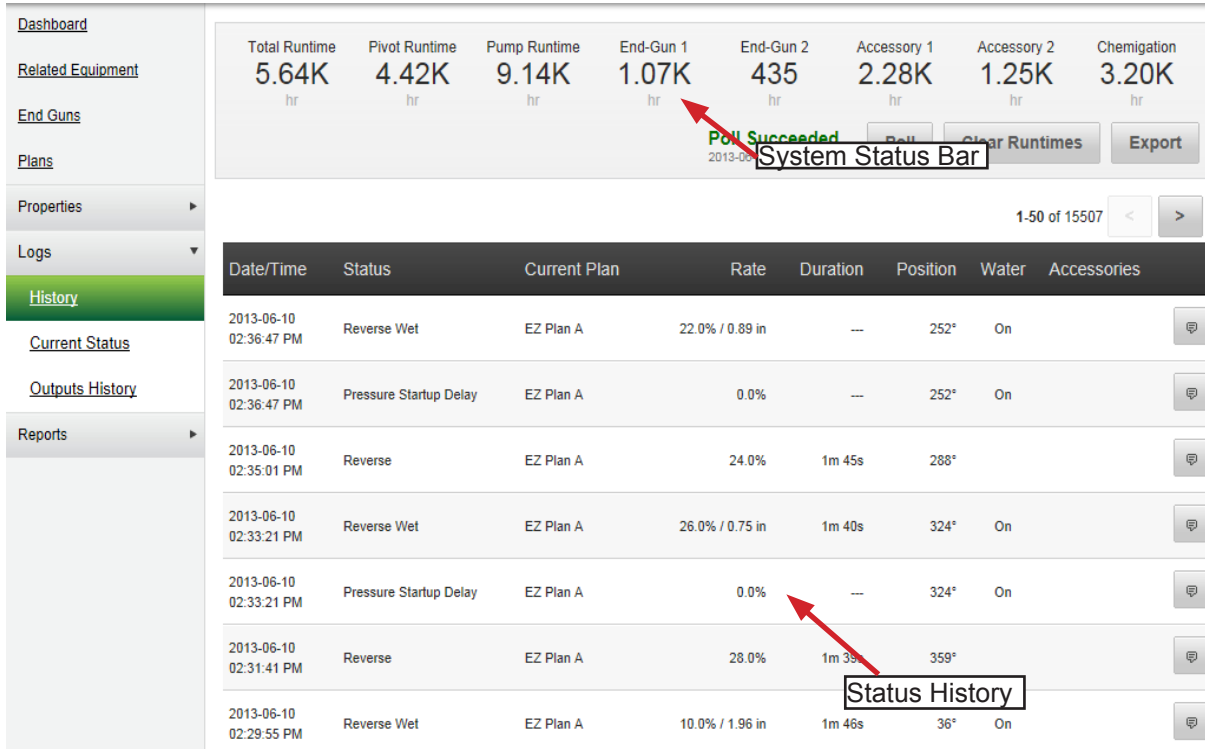


## Logs

Logs provide a history of past information about the pivot status, performance, data transfer and other details pertaining to the pivots previous cycles. The log screen displays runtime totals, pivot and pump runtimes, end gun activations, accessory and chemigation activation times.

Status recordings are also displayed. Providing information on date and time of the recording, machine status, duration of the status, application flow and rate, pressure setting, machine position, water On/Off and accessory activation.

A Notes button is also provided for adding comments about a given status, for future reference.



**Dashboard**

**Related Equipment**

**End Guns**

**Plans**

**Properties**

**Logs**

**History**

**Current Status**

**Outputs History**

**Reports**

Total Runtime	Pivot Runtime	Pump Runtime	End-Gun 1	End-Gun 2	Accessory 1	Accessory 2	Chemigation
5.64K hr	4.42K hr	9.14K hr	1.07K hr	435 hr	2.28K hr	1.25K hr	3.20K hr

Poll Succeeded  
2013-06-10 02:36:47 PM

System Status Bar

1-50 of 15507

Date/Time	Status	Current Plan	Rate	Duration	Position	Water	Accessories
2013-06-10 02:36:47 PM	Reverse Wet	EZ Plan A	22.0% / 0.89 in	---	252°	On	
2013-06-10 02:36:47 PM	Pressure Startup Delay	EZ Plan A	0.0%	---	252°	On	
2013-06-10 02:35:01 PM	Reverse	EZ Plan A	24.0%	1m 45s	288°		
2013-06-10 02:33:21 PM	Reverse Wet	EZ Plan A	26.0% / 0.75 in	1m 40s	324°	On	
2013-06-10 02:33:21 PM	Pressure Startup Delay	EZ Plan A	0.0%	---	324°	On	
2013-06-10 02:31:41 PM	Reverse	EZ Plan A	28.0%	1m 39s	359°		
2013-06-10 02:29:55 PM	Reverse Wet	EZ Plan A	10.0% / 1.96 in	1m 46s	36°	On	

Status History

### Poll

A poll can be initiated to check the communication between the FieldNET base and the pivot.

### Clear Runtimes

Press to clear and reset the accumulated runtime information.

### Export

Press to create a .CSV file of the status information for download.

## Current Status

The Current Status menu shows information on various outputs on the system, their current values and when the output last updated.

Output	Value	Last Updated
Humidity	4,700%	2013-06-05 03:29:16 PM
Temperature	73°F	2013-06-05 03:29:16 PM
Wind Direction	80°	2013-06-05 03:29:16 PM
Wind Speed	6 mph	2013-06-05 03:29:16 PM
Atmospheric Pressure	15 psi	2013-06-05 03:29:16 PM
Dew Point	52°F	2013-06-05 03:29:16 PM
Visibility	6 mi	2013-06-05 03:29:16 PM
Wind Gust Speed	0 mph	2013-06-05 03:29:16 PM
Heat Index	82°F	2013-05-29 12:29:09 AM
Windchill	45°F	2013-05-29 12:29:09 AM
Solar Radiation	0	2013-03-20 04:38:36 AM
UV Index	-1	2013-06-05 03:29:16 PM

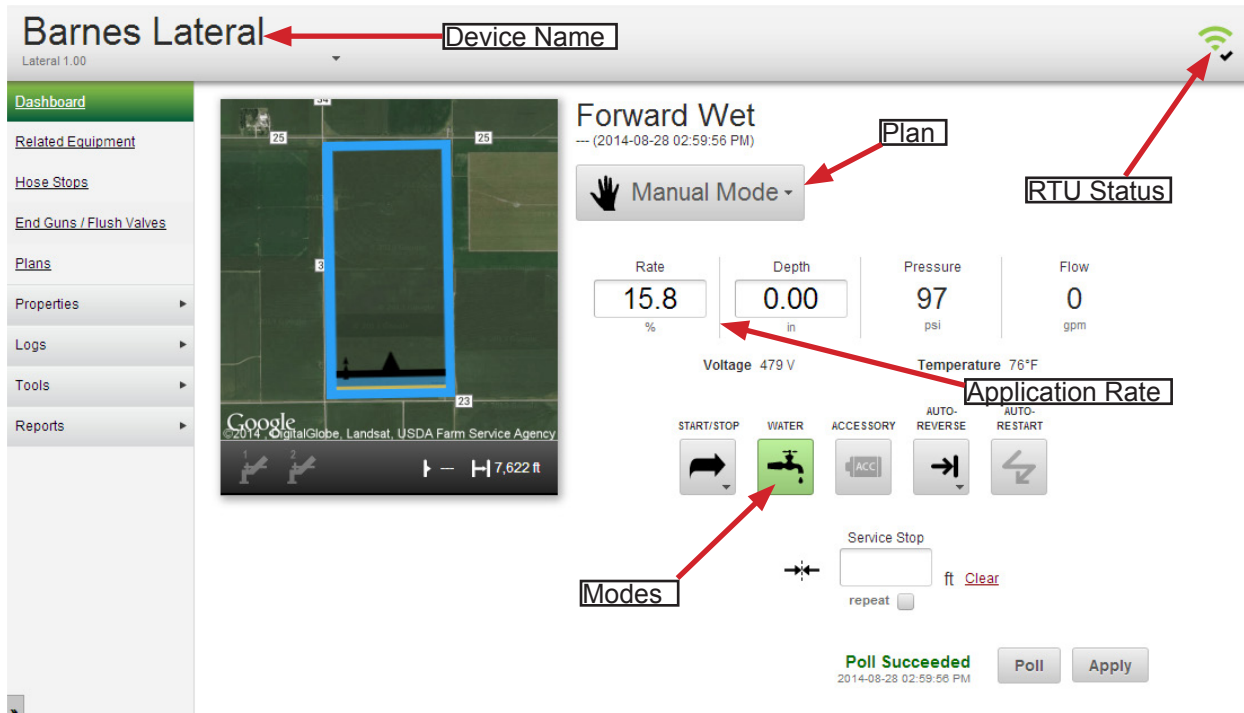
Current Status  
Details

## Output History

The Outputs menu displays all the irrigation system outputs, their values and a date and time stamp. Outputs can be searched by date and can be downloaded to a .CSV file by selecting the **Download CSV** button.

Date/Time	Output	Value
2013-06-05 03:43:09 PM	Total Volume	6,087 acre in
2013-06-05 03:43:09 PM	Volume	0 acre in
2013-06-05 03:42:57 PM	Water Level	6 ft
2013-06-05 03:42:57 PM	System Flow	4,409 gpm
2013-06-05 03:42:57 PM	System Pressure	62 psi
2013-06-05 03:42:56 PM	Restarts	3
2013-06-05 03:42:56 PM	Inlet Pressure	35 psi
2013-06-05 03:42:55 PM	Total Volume	6,087 acre in
2013-06-05 03:42:55 PM	Volume	0 acre in
2013-06-05 03:42:54 PM	Energy	0 kWh
2013-06-05 03:42:54 PM	Total Energy	58,372 kWh
2013-06-05 03:42:53 PM	Power	26 kW

Output Display



## Lateral Dashboard

The Lateral Dashboard provides an interface for irrigator control through the FieldNET program from any internet accessible location.

### Name

Displays the system name that is being viewed. If this system is part of a group, selecting the name will open a pull-down menu listing all other systems and devices in the group.

Selecting any of these other devices in the pull-down will open their particular dashboard screens.

### Image

This is a thumbnail view of the lateral located in its section of the field. This image will show information such as the mode that the lateral is in, by specific color (see the Description of Icons earlier in this section), end gun status, hose stops and service stop locations.

### Plan

Lists the various pivot plans established for the system. Pull-down menus allow for the selection of the different plans and steps.

### RTU Status

Displays the network status of the pivot as either online, offline or there is a communication conflict.

### Application

These are the adjustable settings for application rate and depth.

### Modes

The different operating modes such as activating pumps, chemical application, auto-reverse and accessory activation are a few items that can be controlled from this interface.

### Service Stop

A service stop can be set for maintenance purposes.

### Poll

A poll can be initiated to check the communication between the FieldNET base and the pivot.

### Apply

Press the Apply button to accept any modifications to the system.

# Lateral Sidebar Menus

Lateral side bar menus provide additional information for the Lateral Dashboard by right-clicking on any menu heading. Details of each sidebar menu are as follows:

## Related Equipment

If the lateral is part of a group, all systems within that group are listed here and can be selected to view their individual dashboards.

## Hose Stops

Lateral irrigation with a hose require the machine to stop at intervals so the hose can be disconnected and reconnected from hydrant to hydrant.

Since this not a part of the control panel functionality, FieldNET enables this through the Hose Stop screen. (See the adjacent diagram.)

When hose stop locations are set and the irrigator is running, system alert will notify the operator when the lateral irrigator is approaching a hose stop interval in the field, known as the alert distance. When the lateral reaches the stop position, the lateral will pause until the operator restarts the system.

Up to 20 hose stop locations can be programmed. Enter the stop location from the starting end of the field. A default Alert Distance will display which can be adjusted if necessary.

The “Clear” command will clear data within the individual stop location.

### Clear Table

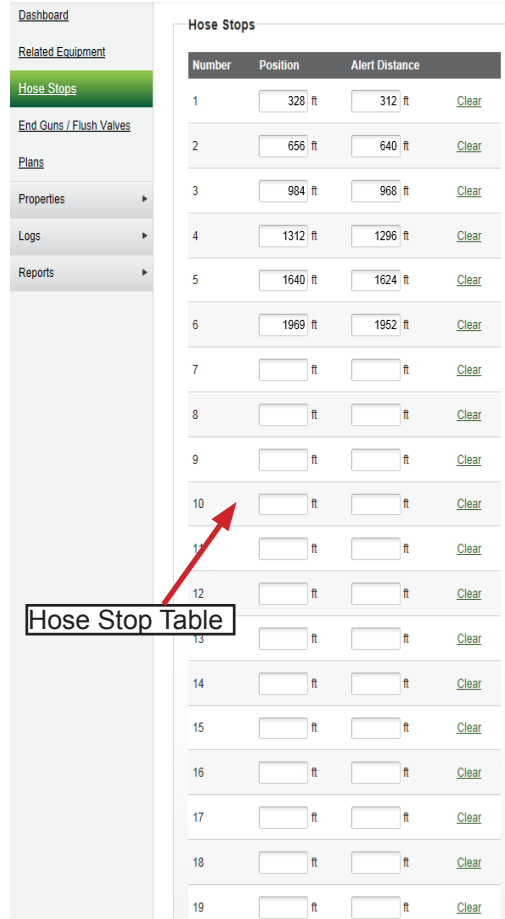
This button with clear all area information within the selected table.

### Poll

A poll can be initiated to check the communication between the FieldNET base and the lateral.

### Apply

Press the Apply button to accept the hose stop configurations.



The screenshot shows a sidebar menu on the left with options: Dashboard, Related Equipment, **Hose Stops**, End Guns / Flush Valves, Plans, Properties, Logs, and Reports. The main content area displays a 'Hose Stops' table with 19 rows. Each row contains a 'Number', a 'Position' field with a value in feet, an 'Alert Distance' field with a value in feet, and a 'Clear' button. A red arrow points to the table, and a label 'Hose Stop Table' is overlaid on the image.

Number	Position	Alert Distance	
1	328 ft	312 ft	Clear
2	656 ft	640 ft	Clear
3	984 ft	968 ft	Clear
4	1312 ft	1296 ft	Clear
5	1640 ft	1624 ft	Clear
6	1969 ft	1952 ft	Clear
7	ft	ft	Clear
8	ft	ft	Clear
9	ft	ft	Clear
10	ft	ft	Clear
11	ft	ft	Clear
12	ft	ft	Clear
13	ft	ft	Clear
14	ft	ft	Clear
15	ft	ft	Clear
16	ft	ft	Clear
17	ft	ft	Clear
18	ft	ft	Clear
19	ft	ft	Clear

## End Guns/Flush Valves

The end gun/flush valve menu allows up to two end guns to be configured for a system and flush valve control. The end gun interface consists of a map of the field section along with end gun tables for establishing the activation areas. Up to eight tables can be created for each end gun. To program end gun areas:



1. Use the **up** and **down** arrows on the Table and/or Run Table pull-down to select an end gun table.
2. Enter in the start and end points for each area required. FieldNET will apply the settings once a start and end point are entered.
3. The map will display the end gun area for reference.
4. If the data entered is correct, select “Apply” to save this end gun configuration.

### Clear Table

This button will clear all area information within the selected table.

### Poll

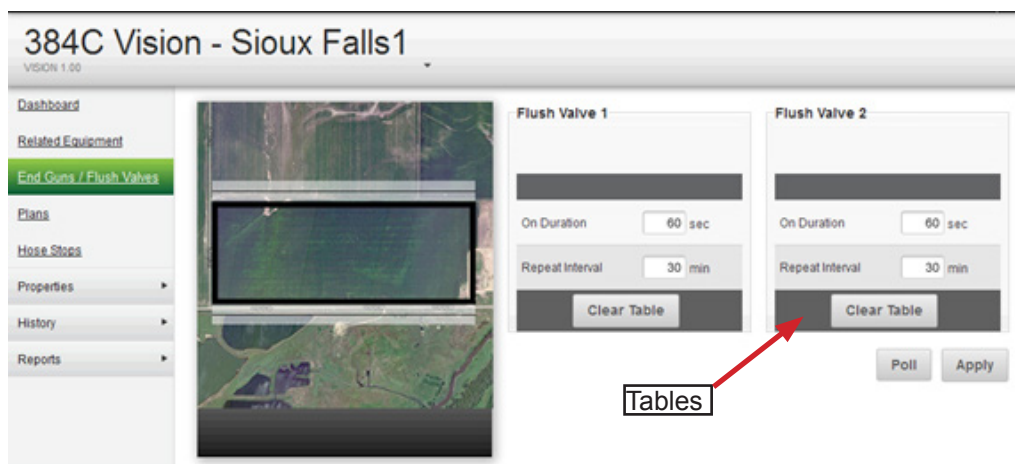
A poll can be initiated to check the communication between the FieldNET base and the pivot.

### Apply

Press the Apply button to accept the end gun configurations.

## Flush Valves

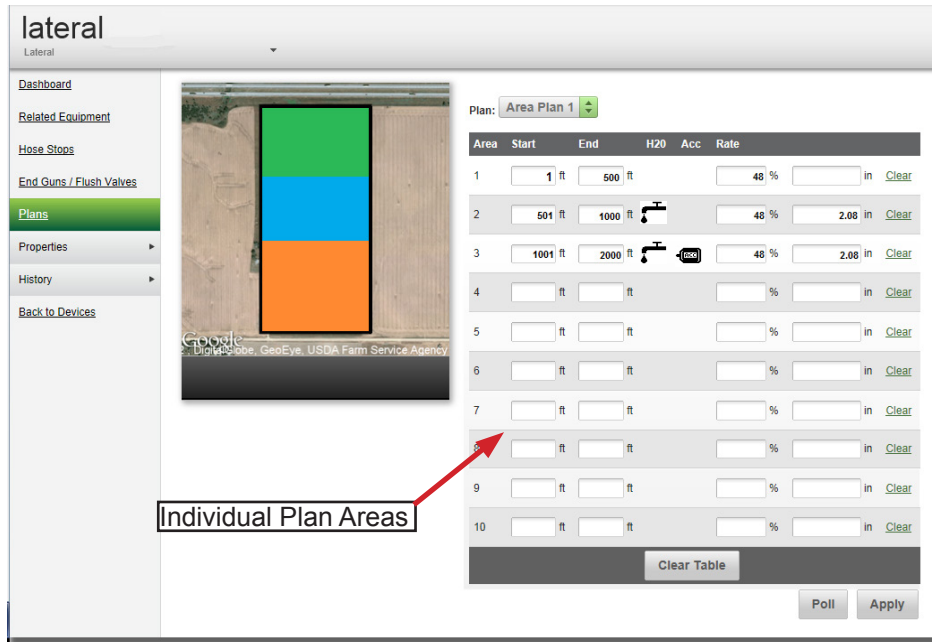
Flush valve tables allow for the programming of up to two flush valves on a lateral system.



- On duration is the amount of time (in seconds) that the flush valve will operate.
- Repeat interval is the amount of cycle time (in minutes) that the flush valve will wait between activations.

## Plans

Similar to end gun set up, the plan interface is for setting the lateral irrigating areas.



Two types of plans can be used: Area Plans and Direction Plans.

Area Plans establish irrigation areas within the lateral area. Up to ten areas can be programmed individually for different applications.

Each area can be configured for start and end point, pump activation, accessory activation (such as chemical application), and application rate by percentage or measurement.

Direction Plans are used for uniform application across the entire lateral area. Direction plans have a forward and reverse direction, pump activation and rate application. Direction plans are much simpler to use than area plans but should only be used on fields that do not require variable irrigation rates.



On all plan types, each area listed (or forward and reverse if direction plan is used) has a “Clear” command. Use this command to clear the information in that single row.

### Clear Table

This button will clear all area information within the selected table.

### Poll

A poll can be initiated to check the communication between the FieldNET base and the pivot.

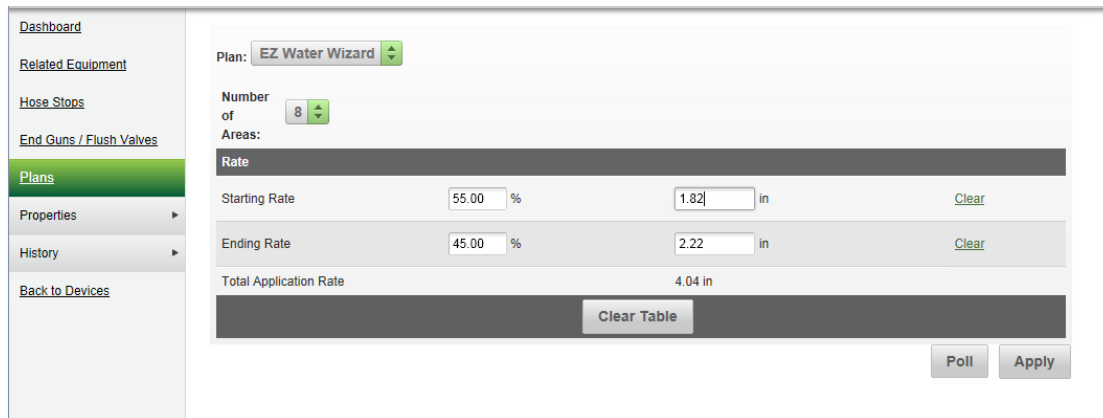
### Apply

Press the Apply button to accept the area configurations.

## EZ Water Wizard

The EZ Water Wizard is exclusive for lateral irrigators. It is a gradient water plan that applies decreasing water amounts as the lateral moves from start position to end position.

This provides an overall even application with no dry areas or saturation.



Rate	
Starting Rate	55.00 % 1.82 in <a href="#">Clear</a>
Ending Rate	45.00 % 2.22 in <a href="#">Clear</a>
Total Application Rate 4.04 in	

The EZ Water Wizard Plan page allows for setting the start point and end point application rates in either a percentage or inches over as many as ten areas. The total application rate is a calculated rate showing how much water each area will receive when the entire irrigation time is done.

Note: The start rate should always be greater than the end rate.

### Clear Table

This button will clear all area information within the selected table.

### Poll

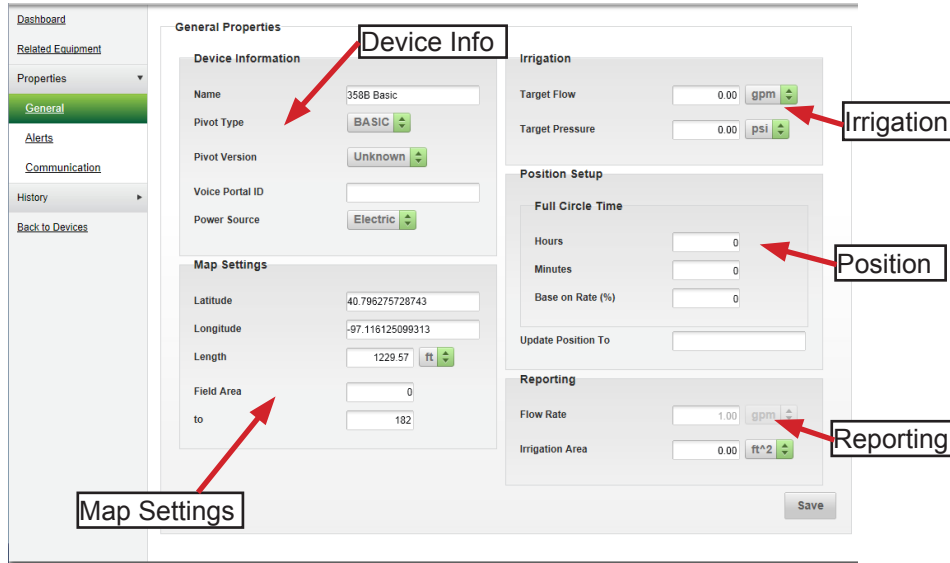
A poll can be initiated to check the communication between the FieldNET base and the pivot.

### Apply

Press the Apply button to accept the area configurations.

## General Properties

The properties menu allows for establishing and modifying general information about the lateral.



The screenshot shows the 'General Properties' web portal interface. It features a left-hand navigation menu with options like 'Dashboard', 'Related Equipment', 'Properties', 'General', 'Alerts', 'Communication', and 'History'. The main content area is divided into several sections: 'Device Information' (with fields for Name, Pivot Type, Pivot Version, Voice Portal ID, and Power Source), 'Map Settings' (with fields for Latitude, Longitude, Length, and Field Area), 'Irrigation' (with fields for Target Flow and Target Pressure), 'Position Setup' (with fields for Full Circle Time: Hours, Minutes, Base on Rate (%), and Update Position To), and 'Reporting' (with fields for Flow Rate and Irrigation Area). A 'Save' button is located at the bottom right. Red arrows and callout boxes point to specific sections: 'Device Info' points to the Device Information section, 'Irrigation' points to the Irrigation section, 'Position' points to the Position Setup section, 'Reporting' points to the Reporting section, and 'Map Settings' points to the Map Settings section.

### Device Information

This set of fields lists the name of the system, type and version of the controls, the I.D. of the voice portal (if applicable), and the power source type.

### Map Settings

The Map Settings field shows the latitude and longitude of the lateral location, the length of the system and size of the field.

### Irrigation

This field allows for setting the ideal Flow and Pressure for irrigation.

### Position

The Position Setup allows for setting the machine run-time to make one full rotation (in the case of a pivot) or traverse across the field (for laterals).

### Reporting

This field establishes how FieldNET should report the irrigation information such as flow rate, area of irrigation, and how the usage should be metered.

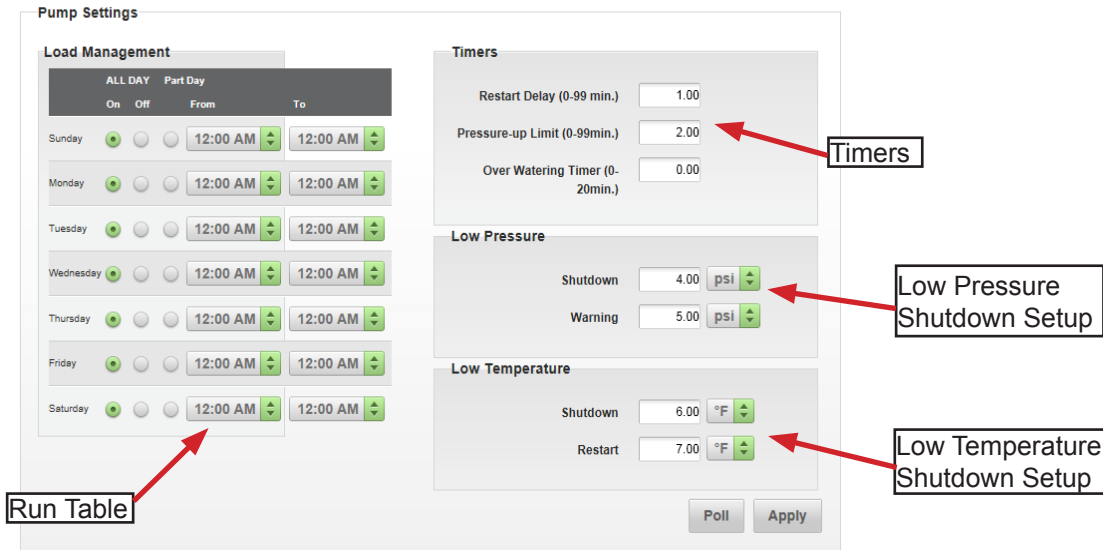
### Save

Press this button to save the settings.



## System Properties

The system properties allows for establishing and changing settings for the system components (e.g. pumps, pivot and other optional settings). Refer to the diagrams below for a layout of the System Properties screen.



The screenshot shows the 'Pump Settings' interface. On the left is the 'Load Management' section with a 'Run Table' callout pointing to the table. On the right are three sections: 'Timers' (with a callout), 'Low Pressure' (with a callout for 'Shutdown Setup'), and 'Low Temperature' (with a callout for 'Shutdown Setup'). The interface includes various input fields and dropdown menus for configuring these settings.

### Pump Settings

Pump Settings has several different parameters for monitoring pumps.

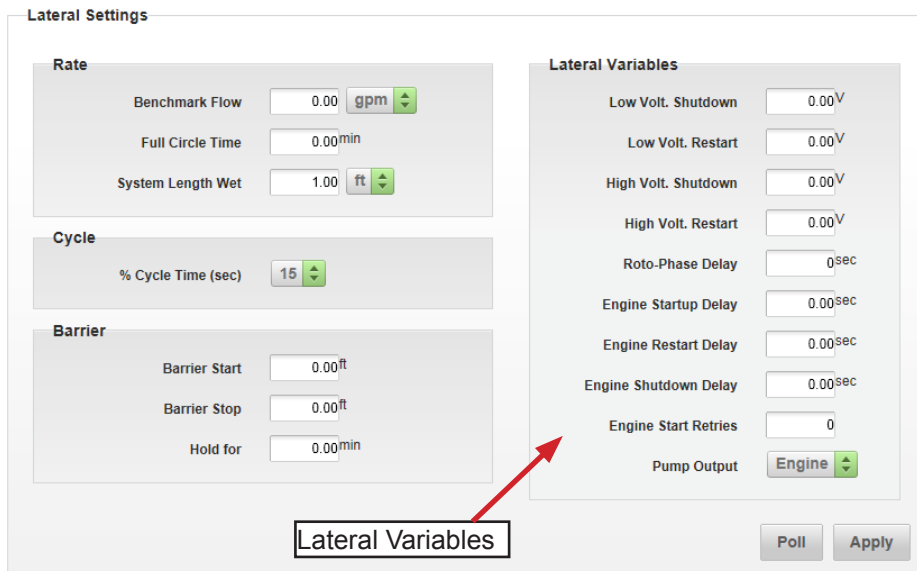
- Load Management allows for scheduling pump operation.
- Timers allow for setting the restart delay timers, Pressure-up limit and Over-watering timers.
- Low Pressure allows for establishing the warning and shutdown pressures on the pump.
- Low Temperature allows for establishing the ambient temperature at which the pump will shutdown and restart.

### Lateral Settings

Lateral Settings allows for several lateral parameters to be edited.

- Rate sets the machine flow rate.
- Cycle sets the percent cycle time.
- Barrier sets a soft barrier location.
- Other irrigation system variables can be established, such as low voltage shutdown, high voltage shutdown, roto-phase delay and engine restart and shutdown.

See the following detail.

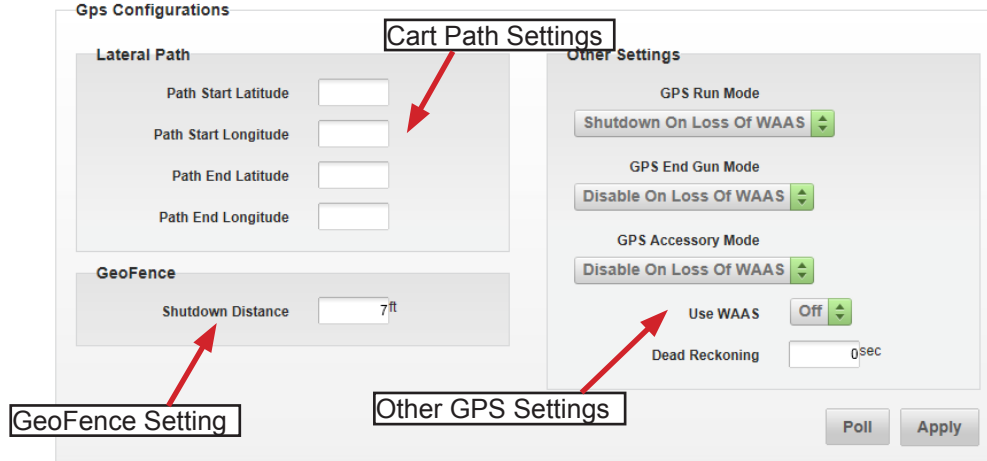


The screenshot shows the 'Lateral Settings' interface. It is divided into three main sections: 'Rate' (Benchmark Flow, Full Circle Time, System Length Wet), 'Cycle' (% Cycle Time), and 'Barrier' (Barrier Start, Barrier Stop, Hold for). On the right is the 'Lateral Variables' section, which includes settings for Low Volt. Shutdown/Restart, High Volt. Shutdown/Restart, Roto-Phase Delay, Engine Startup/Restart/Shutdown Delays, Engine Start Retries, and Pump Output. A callout labeled 'Lateral Variables' points to this section.

## GPS Configurations

These parameters are specific to the lateral irrigation system, any item controlled through GPS is managed from this screen, such as the cart path start and end points, the Geofence, Dead Reckoning, WAAS settings, end gun and accessory modes.

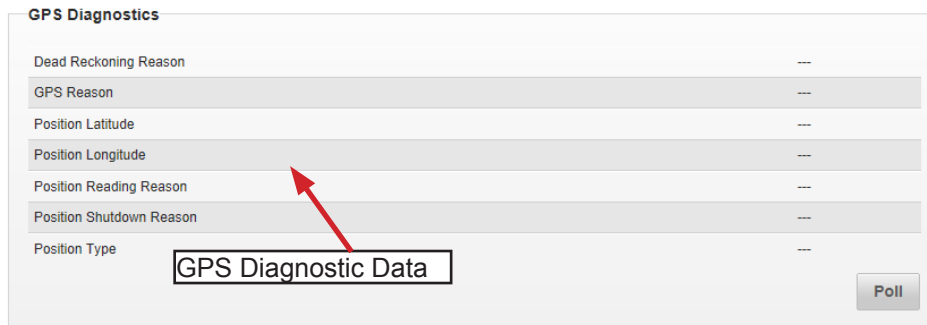
See the following detail.



## GPS Diagnostics

This is a troubleshooting menu should the lateral fall out of position in the field and shutdown.

See the following detail.

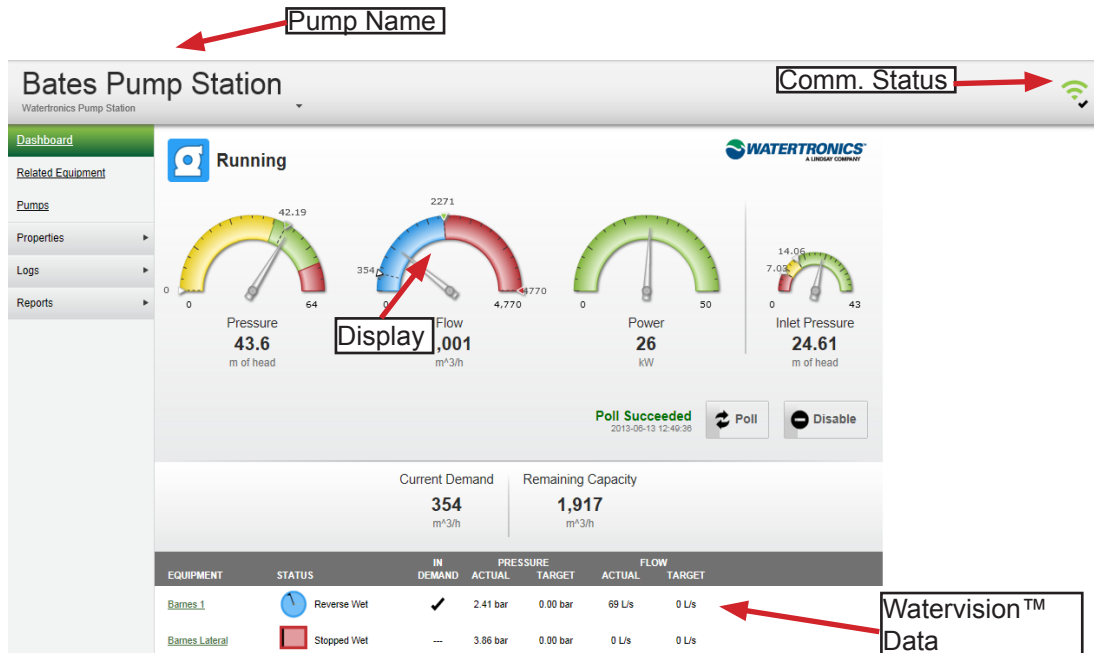


### Poll

A poll can be initiated to check the communication between the FieldNET base and the pivot.

### Apply

Press the Apply button to accept the configurations.



## Pump Dashboards

(See above diagram.)

The Pump Dashboard provides an interface for pump control on a system from the FieldNET base.

### Name

Displays the system name that is being viewed. If this system is part of a group, selecting the name will open a pull-down menu listing all other pumps in the group. Selecting any of these other pumps in the pull-down will open their particular dashboard screens.

### Display

The main focal point of the page is the display area that shows the pump status (running, stopped, etc.) and meters with the most current flow rate and pressure readings.

Current demand shows how much flow the pump is providing the system.

Remaining Capacity is the left-over capacity of the total pump potential minus the current demand.

### Shutdown Display

The shutdown display shows the most current water level reading and where that is in relation to the low pressure shutdown setting.

### Communication Status

This icon shows the current communication status between FieldNET and the controls at the system.

### Watervision™ Data (if installed)

These fields display additional pump information that has been established in Watervision. These parameters cannot be edited in FieldNET. Refer to the Watervision instructions for additional information.

### Poll

A poll can be initiated to check the communication between the FieldNET base and the pump.

### Enable/Disable

Press this button to enable or disable the function of this pump.

## Pump Sidebar Menus

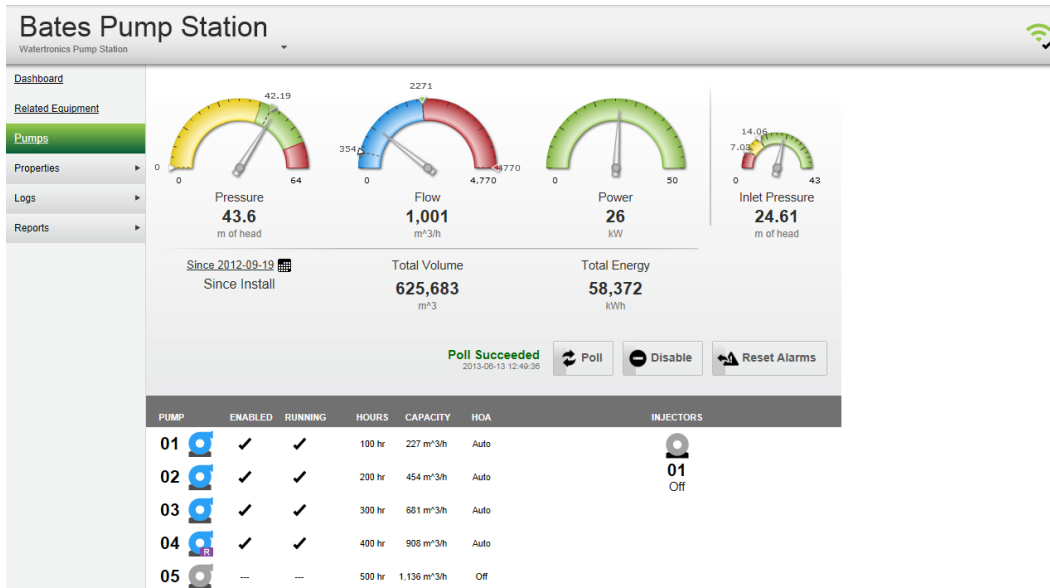
The sidebar menus provide additional information for the Pump Dashboard by right-clicking on any menu heading. Details of each sidebar menu are as follows:

### Related Equipment

If the pump is part of a group, all systems within that group are listed here and can be selected to view their individual dashboards.

### Pumps

Similar to the Dashboard, this screen displays flow and pressure meters. Additional items displayed here include a water level meter, Meter recordings that can be displayed from a particular date or since pump install.



Also displayed is pump information from the Watertronics PLC (if installed). Refer to the Watervision manual for additional information.

### Poll

A poll can be initiated to check the communication between the FieldNET base and the pump.

### Enable/Disable

Press this button to enable or disable the function of this pump.

### Reset Alarms

Press this button to notify FieldNET that all alarm conditions for this pump are acknowledged. Any activated alarms will be reset.

## General Properties

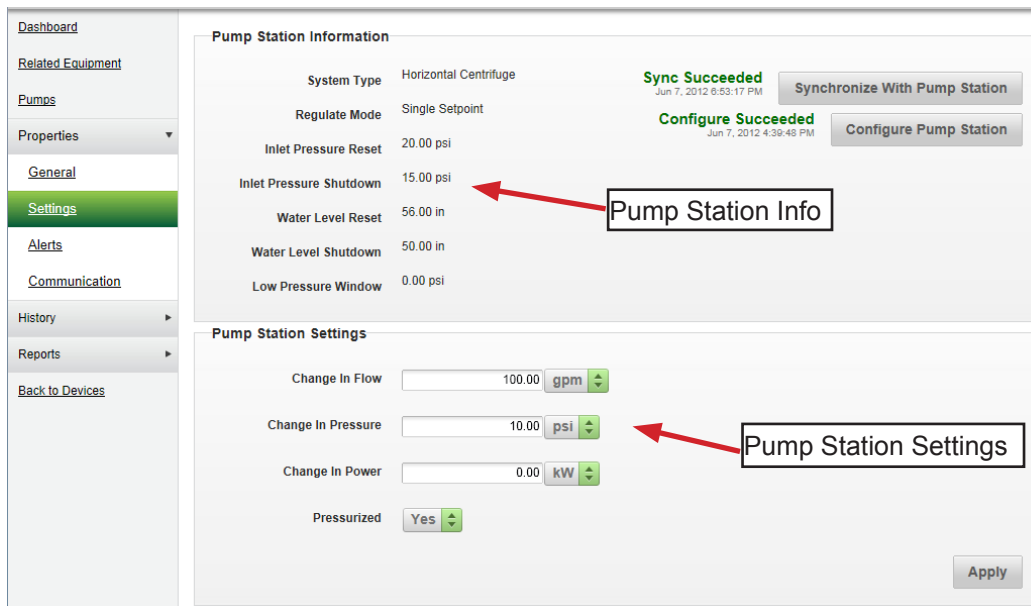
This displays the equipment (pump) information in regards to manufacturer and type. The GPS position of the pump along with the device display name can be changed within this screen.

### Save

Press this button to save the input data.

## Settings

Pump Settings are for configuring and synchronizing pump data between FieldNET and the pump station.



Pump Station Information	
System Type	Horizontal Centrifuge
Regulate Mode	Single Setpoint
Inlet Pressure Reset	20.00 psi
Inlet Pressure Shutdown	15.00 psi
Water Level Reset	56.00 in
Water Level Shutdown	50.00 in
Low Pressure Window	0.00 psi

Pump Station Settings	
Change In Flow	100.00 gpm
Change In Pressure	10.00 psi
Change In Power	0.00 kW
Pressurized	Yes

### Pump Station Information

This page begins with some overall pump information such as shutdown levels, reset points and system type.

### Synchronize with Pump Station

The Synchronize with Pump Station button allows for FieldNET to synchronize pump settings with the control panel at the pivot or cart. The settings at the pump station PLC are the controlling settings and will overwrite the settings in FieldNET. Synchronization should only be used to update FieldNET with the settings at the pump station.

### Configure Pump Station

The Configure Pump Station button will reconfigure the pump station settings with those established in FieldNET.

### Pump Station Settings

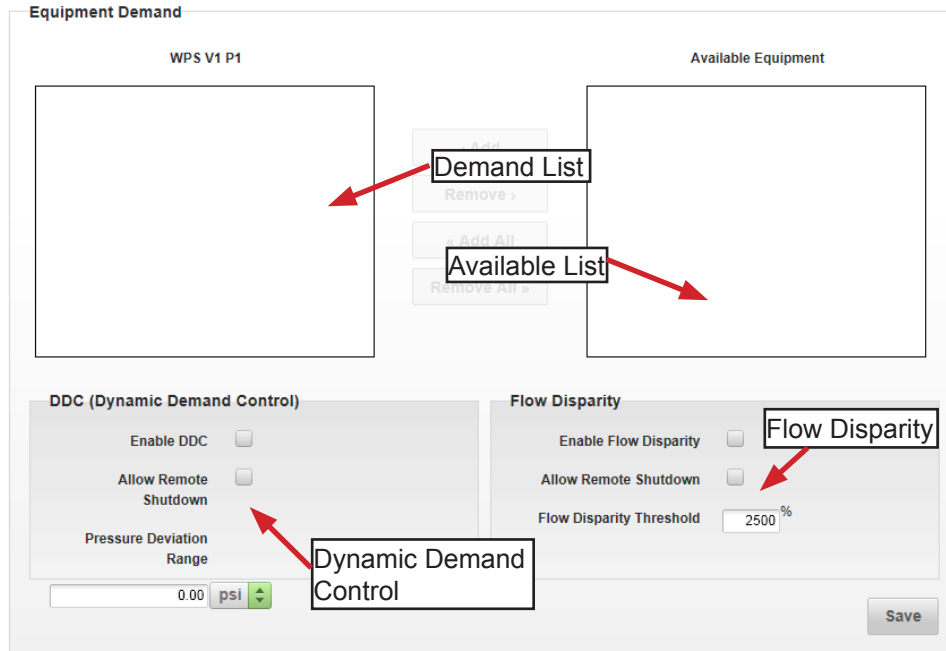
These settings are the allowable fluctuations in pressure, power and flow for the pump station. Should any of these thresholds be exceeded, an alarm will activate.

### Apply

Press the apply button to accept the Pump Station Settings.

## Equipment Demand

Equipment demand establishes which pieces of equipment in the account require water from this pump. From the list of available equipment, add individual systems or all systems listed using **Add** or **Add All** buttons respectively. Use the **Remove** or **Remove All** buttons to remove some or all systems from the demand list.



### Dynamic Demand Control

When enabled, Dynamic Demand Control (DDC) will base its pressure set-point to meet the required equipment demand.

Enabling shutdown will allow the system to shutdown if there is no demand for the pump at that time.

The deviation range is the allowable range of pressure demand on the pump station from the equipment before the pump station needs the pressure set-point changed.

### Flow Disparity

Flow disparity is caused when the established flow setting for the equipment and pump station flow exceeds the flow disparity threshold. This may be due to a leak in the system or a burst pipe.

If enabled, an alert will activate should there be a flow disparity in the system. In addition, if remote shutdown is enabled, the pump station will shutdown the system upon a disparity.

Because there is always some minor disparity in normal operation, do not set the threshold value too low or the system will constantly shutdown or create an alarm event.

### Save

Press the **Save** button to save the current settings.

## Reports

The Reports menu shows performance charts for the pump station.

## All Charts

The All menu will show all performance and diagnostic charts for the pump station.

## Watertronics Chart

Displays a performance chart of the Watertronics-specific components that demand supply from the pump stations.

## Diagnostic Chart

The Diagnostic chart shows a status history of all pump outputs.

## General I/O

The General Input/Output Dashboard encompasses all devices that receive an input or generate some kind of output (e.g. Volt meters, Rain gauges, sensors). I/O Dashboards can vary from device type to device type with the information they provide. However, the dashboard pages are typically in the same format as shown here.

## Outputs

This status field gives output information about the device.

## Charts

Displays device performance in a line or bar chart format.

## Chart Selection

If there are multiple charts of information for the device, these can be selected using the **up** and **down** arrow button. A chart can be set to display a customized time line by entering a start and end date. Select **Update** to change the chart time line.

## Actions

This is a list of actions that can be performed on the device dashboard.

## Poll

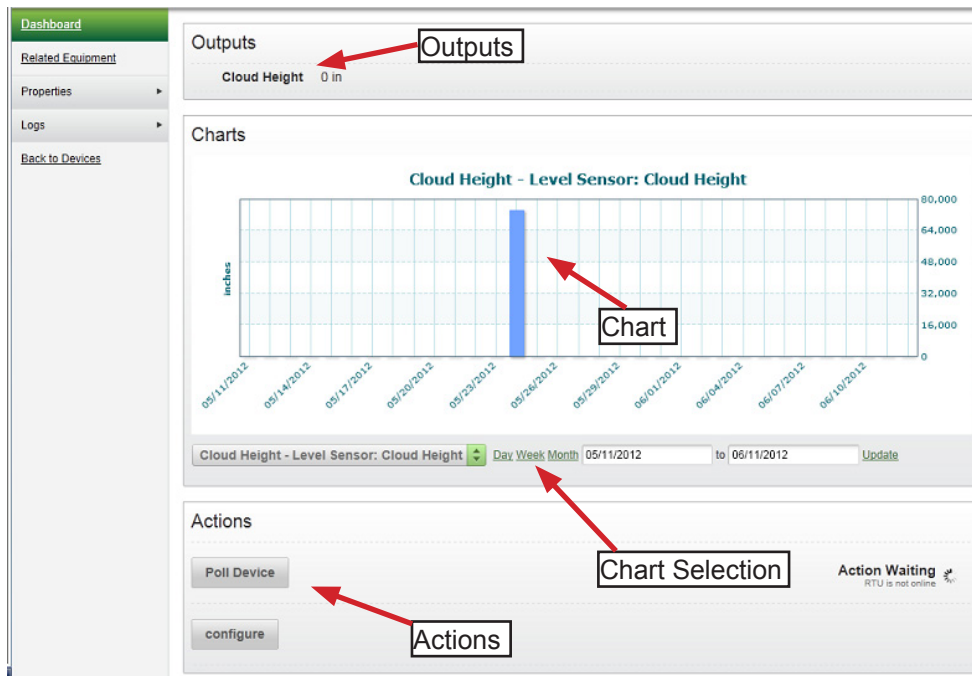
A poll can be initiated to check the communication between the FieldNET base and the pump.

## Configure

Press to update the device configuration.

## Device Details (not shown)

Some I/O dashboards may have a Device Details menu that lists the device, account, device initialized date, the RTU the device is connected to, signal strength, and online status.



## General I/O Sidebar Menus

The sidebar menus provide additional information for the I/O Dashboard by right-clicking on any menu heading. Details of each sidebar menu are as follows:

### Related Equipment

If the device is part of a group, all systems within that group are listed here and can be selected to view their individual dashboards.

### General Properties

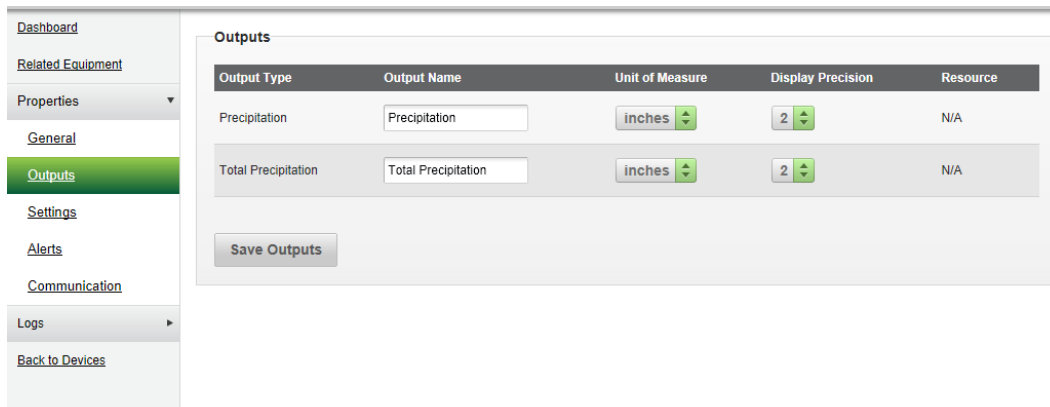
This displays the device information in regards to manufacturer and type. The GPS position of the device along with the device display name can be changed within this screen.

### Save

Press this button to save the input data.

### Outputs

The outputs page allows for editing of the output data. The output name, unit of measure and precision can all be modified.



Output Type	Output Name	Unit of Measure	Display Precision	Resource
Precipitation	<input type="text" value="Precipitation"/>	inches	2	N/A
Total Precipitation	<input type="text" value="Total Precipitation"/>	inches	2	N/A

### Save Outputs

Press the **Save Outputs** button to save any changes.

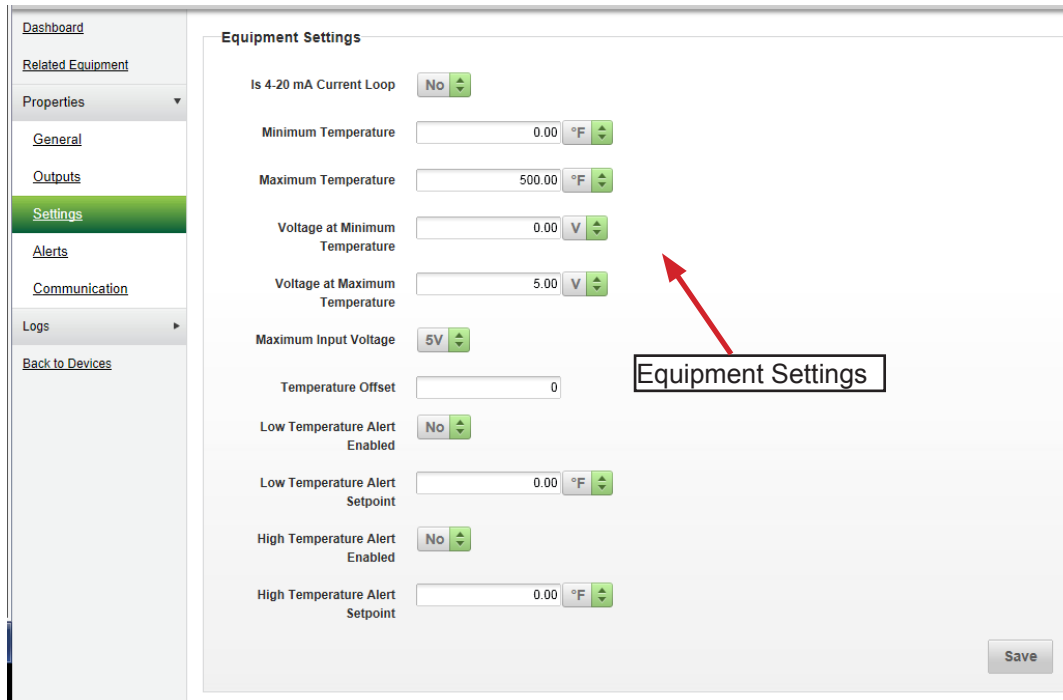


## Settings

The equipment settings page allows for establishing the operation parameters for the device as well as setting alerts and alert set-points.

### Save

Press the **Save** button to apply these settings to the device.



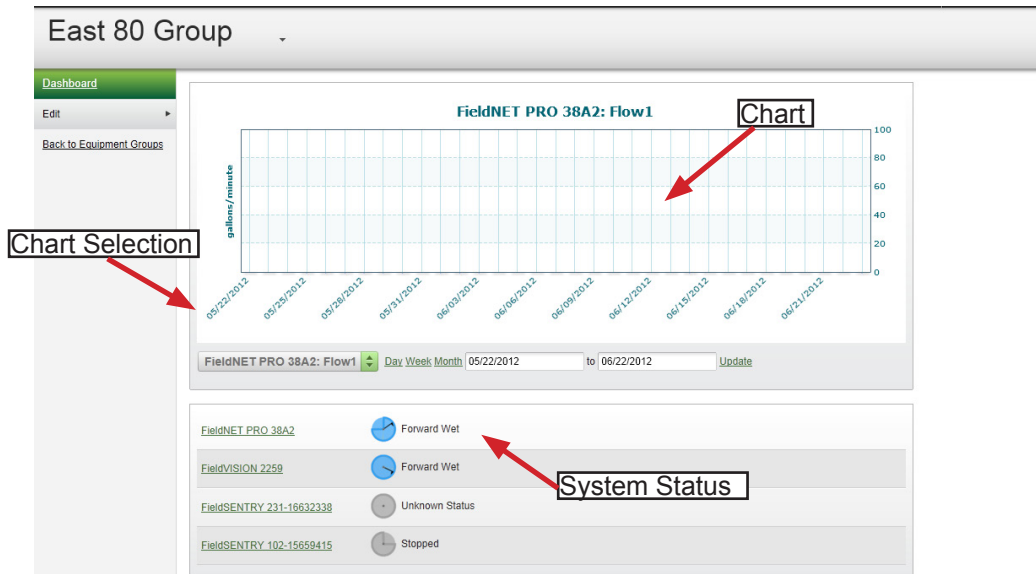
The screenshot displays the 'Equipment Settings' page. On the left is a navigation menu with options: Dashboard, Related Equipment, Properties (dropdown), General, Outputs, Settings (highlighted), Alerts, Communication, Logs (dropdown), and Back to Devices. The main content area is titled 'Equipment Settings' and contains the following fields:

- Is 4-20 mA Current Loop: No
- Minimum Temperature: 0.00 °F
- Maximum Temperature: 500.00 °F
- Voltage at Minimum Temperature: 0.00 V
- Voltage at Maximum Temperature: 5.00 V
- Maximum Input Voltage: 5V
- Temperature Offset: 0
- Low Temperature Alert Enabled: No
- Low Temperature Alert Setpoint: 0.00 °F
- High Temperature Alert Enabled: No
- High Temperature Alert Setpoint: 0.00 °F

A red arrow points from a box labeled 'Equipment Settings' to the 'Maximum Temperature' field. A 'Save' button is located at the bottom right of the settings area.

## Groups

The Dashboard shows the status of each device within the group along with charting data from a wide range sensor and system outputs.



### Chart Selection

Selecting the arrow button on the chart name accesses all the various output devices for the group and will display current data on the chart. The chart time line allows for historical data to be viewed.

### System Status

Show the status of each system or device in the group. Selecting the device name will access its device dashboard.

### Chart

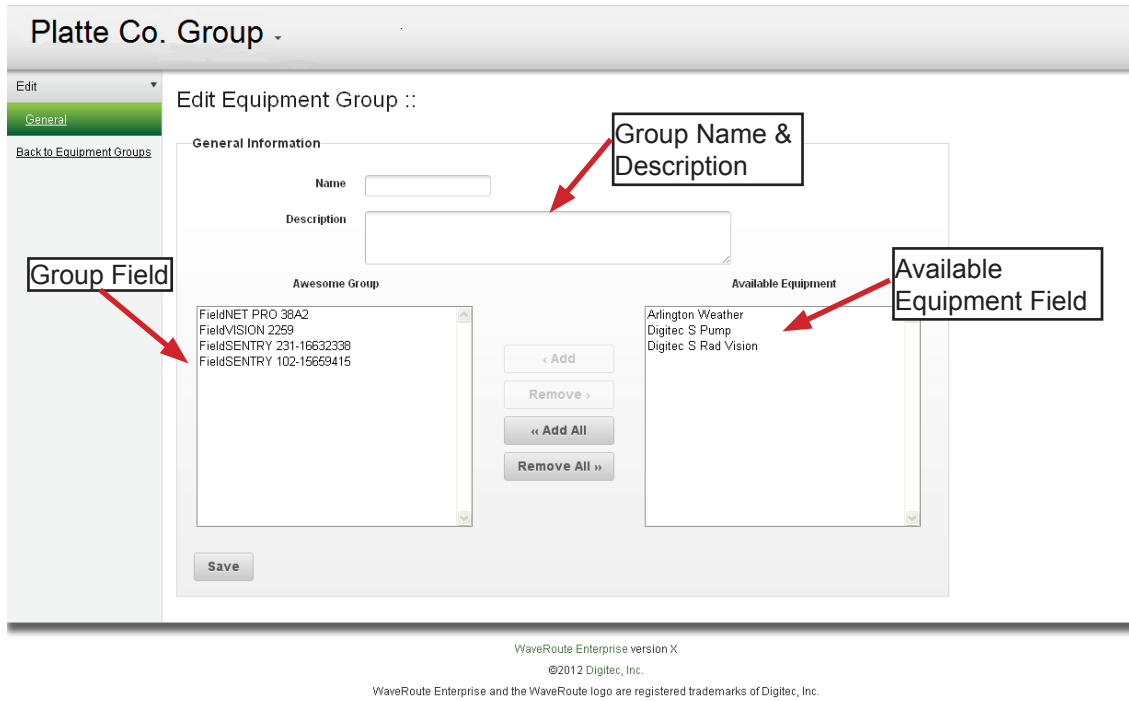
This chart displays the data as noted in the chart selection and time line.

## Group Sidebar Menus

### Edit General Properties

#### General Information

In the General Information screen, devices can be added to and removed from the selected group. From the list of available equipment, add individual systems or all systems listed using **Add** or **Add All** buttons respectively. Use the **Remove** or **Remove All** buttons to remove some or all systems from the demand list. (See detail below.)



### Name

This displays the group name and offers another method for renaming the group.

### Description

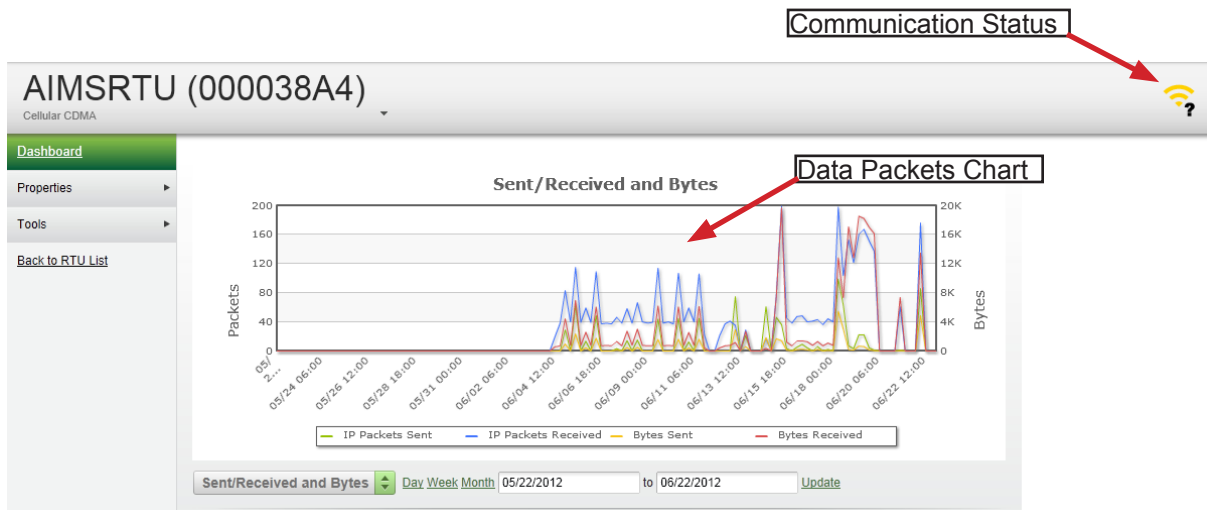
Notes and other information regarding this group can be added in this field.

### Save

Press this button to save this group information.

## RTU

The RTU dashboard provides details on the wireless connection between the RTU Base station and the receiver on the system or device in the field.



### Communication Status

This icon displays the RTU's current communication status with the device or system. Refer to the key at the beginning of this section for a description of what these icons mean.

### Chart

This chart shows the data packet send/receive history for this particular device.

### RTU Details

This menu displays all the following information about the RTU and is useful in troubleshooting RTU communication failures:

- The device name and the name of the account that the device is part of.
- The UID and Key that are the cellular I.D. number and check number for the RTU.
- The communication status of the RTU, signal strength bar and Received Signal Strength Indicator (RSSI) between the RTU Base and the receiver.
- Battery indicator and battery life status.
- Date stamp of the last data packet sent and received.
- Date stamp that the RTU was first implemented.
- Keep Alive and Socket Time out show the amount of time the device revitalizes the connection between the device and the tower.
- The RTU IP address and port used for sending data packets.

These items cannot be edited and are established by Lindsay Manufacturing.

### Modem Details

Modem details show the type of telemetry being used by this system, the Cellular or GSM I.D. numbers, the bit error rate for monitoring communication errors with the modem and the Mobile Virtual Network Operator (MVNO) which displays the web site to the mobile network provider.




### Subscription Details

This displays the subscription plan for the RTU.

These items cannot be edited and are established by Lindsay Manufacturing.

### Assigned Equipment

This menu displays all the equipment that is controlled through this RTU device and their current status. Selecting the equipment name will bring up the equipment's dashboard.

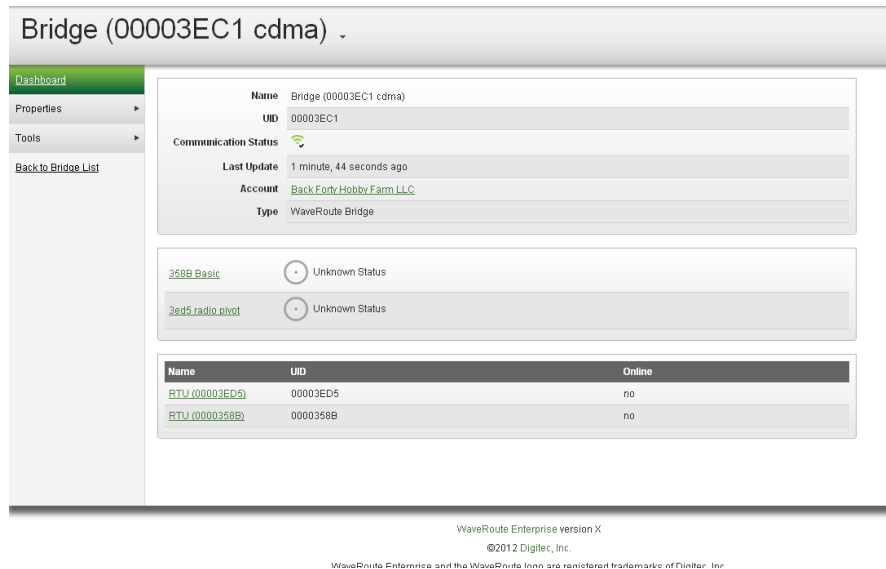
RTU Details	
Account	FieldNET Smart Farm
Name	RTU (0000384C)
Type	Standard Cellular RTU
RTU UID	0000384C
Key	FFFFF
Comm Status	
Signal Strength	 58%
RSSI	14
Powered Off	No
Battery Status	 8.4 V (100%)
Last Sent	2013-06-13 12:41:44
Last Received	2013-06-13 13:57:45
Setup Date	2012-09-19
Keep Alive	900
Socket Timeout	3300
Server IP	216.46.53.73
Server Port	7000
Job	---

Modem Details	
Technology	Cellular CDMA
UID	F616CEA5
MIN	---
Bit Error Rate	99
MVNO	<a href="#">KORE (DigiTec)</a>

Subscription Details	
Status	Active
Plan	Premier (3 Year Contract)
Start Date	04/17/2012
End Date	04/17/2013

## Bridges

If Radio RTU's are being used, the Bridge Dashboard displays the connection information as to what RTU is being used and which system or device the bridge is linked to. However, if the dealer owns the Radio Bridge, this page will not be accessible. No information on this page is available for editing.



Bridge (00003EC1 cdma) -

**Dashboard**


Properties ▶

Tools ▶

[Back to Bridge List](#)

**Name** Bridge (00003EC1 cdma)

**UID** 00003EC1

**Communication Status** 

**Last Update** 1 minute, 44 seconds ago

**Account** [Back Forty Hobby Farm LLC](#)

**Type** WaveRoute Bridge

[358B\\_Basic](#)  Unknown Status

[3ed5\\_radio.pbvcl](#)  Unknown Status

Name	UID	Online
<a href="#">RTU (00003ED5)</a>	00003ED5	no
<a href="#">RTU (0000358B)</a>	0000358B	no

WaveRoute Enterprise version X  
©2012 Digitec, Inc.  
WaveRoute Enterprise and the WaveRoute logo are registered trademarks of Dintar, Inc.

The Bridge Dashboard lists the bridge name, Cellular ID number of the bridge, its current status, the last time it was updated, the account it is linked to and bridge type. Selecting the Account name will access the account information screen.

The device status of any systems or devices that are linked through this bridge are displayed on the dashboard. Selecting the device name will access the devices dashboard.

The RTU is also listed on this page, displaying the RTU name, Cellular ID number and online status. Selecting the RTU name will access the RTU dashboard.

## Bridge Sidebar Menus

### General Properties

The General Bridge Properties screen displays the cellular ID number for the bridge, the bridge IP address and bridge name. Only the name of the bridge can be edited on this screen.

### RTU Properties

The RTU properties lists the name, account and cellular ID of the RTU that is connected to the bridge. Also displayed here is the RTU Type, online status, signal strength and the last time the RTU was updated.

Selecting the RTU name accesses the RTU dashboard. Selecting the account name accesses the account information (see the Administrator Instructions for more details on accounts).

### Actions

- The only action available for the RTU is to move it from one bridge to another.
- Select the checkbox next to the RTU name.
- Press the Actions button and select the move option. A new dialog box will display.
- From the Move to field, select the bridge that the RTU will be accessing.
- Press the OK button to accept this bridge or cancel to leave the screen and ignore the changes.



## Section 5–Voice Portal

FieldNET voice portal provides a toll-free number and a secure user specific PIN (personal identification number) code for easy monitoring and control of all pivots on the account.

Note that when calling outside the United States, the voice portal is billed at international call rates by the customer's phone service provider. It is recommended that text message alerts be used when outside the U.S.

When calling the voice portal:

1. Dial the voice portal at (888) 214-8409.
2. Enter the PIN number and press the pound key (#) to access the Main Menu. PIN numbers are listed on the account page of FieldNET web page.
3. At the main menu select one of the following options for equipment selection:
  - Press 0 for a list of equipment.
  - Press 0 then \* for a list of equipment statuses.
  - Enter the equipment ID number.
4. The following functions will then be available from the equipment menu:
  - Press 1 for direction control of the pivot.
  - Press 2 for water control of the pivot.
  - Press 3 for chemigation control of the pivot.
  - Press 4 for control of the device programmed on accessory #1.
  - Press 5 for control of the device programmed on accessory #2.
  - Press 6 for the application depth setting.
  - Press 7 for rate control.
  - Press 8 for auto restart activation.
  - Press 9 for auto reverse activation.
  - Press 10 (1 immediately followed by 0) for setting plans.
  - Press 11 (1 immediately followed by 1) for setting a service stop.
  - Press 0 to return to the previous menu.
  - Press Star (\*) to apply changes.
5. When finished using the voice portal, simply hang up.

# FieldNET Voice Portal Map

**Call 888-214-8409**  
"Welcome to the FieldNET Voice Portal."

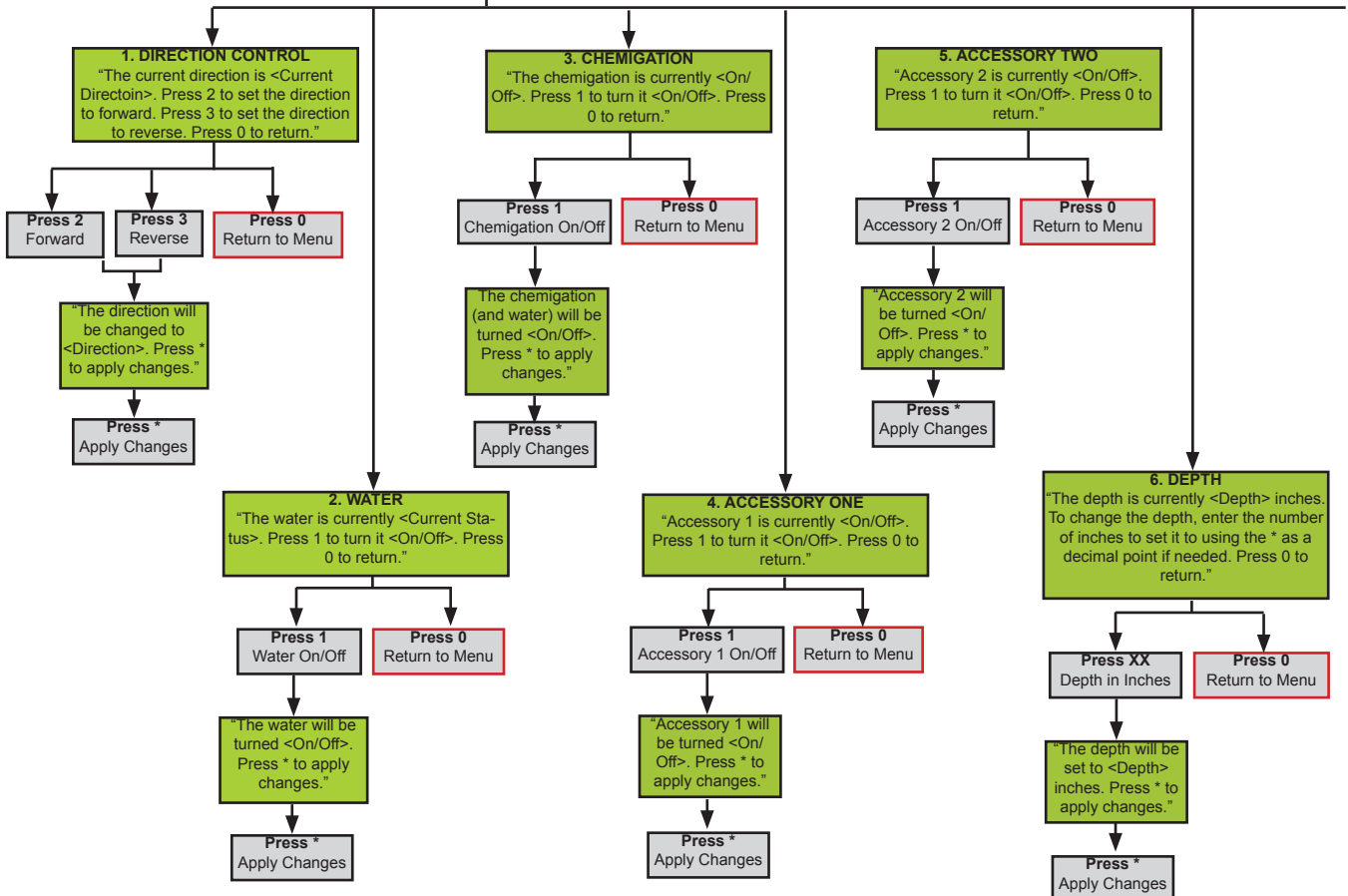
"Please enter your FieldNET Account PIN, followed by the pound sign."

**MAIN MENU**  
"Press 0 for a list of all equipment or enter an equipment ID. Press 0\* for all equipment statuses."

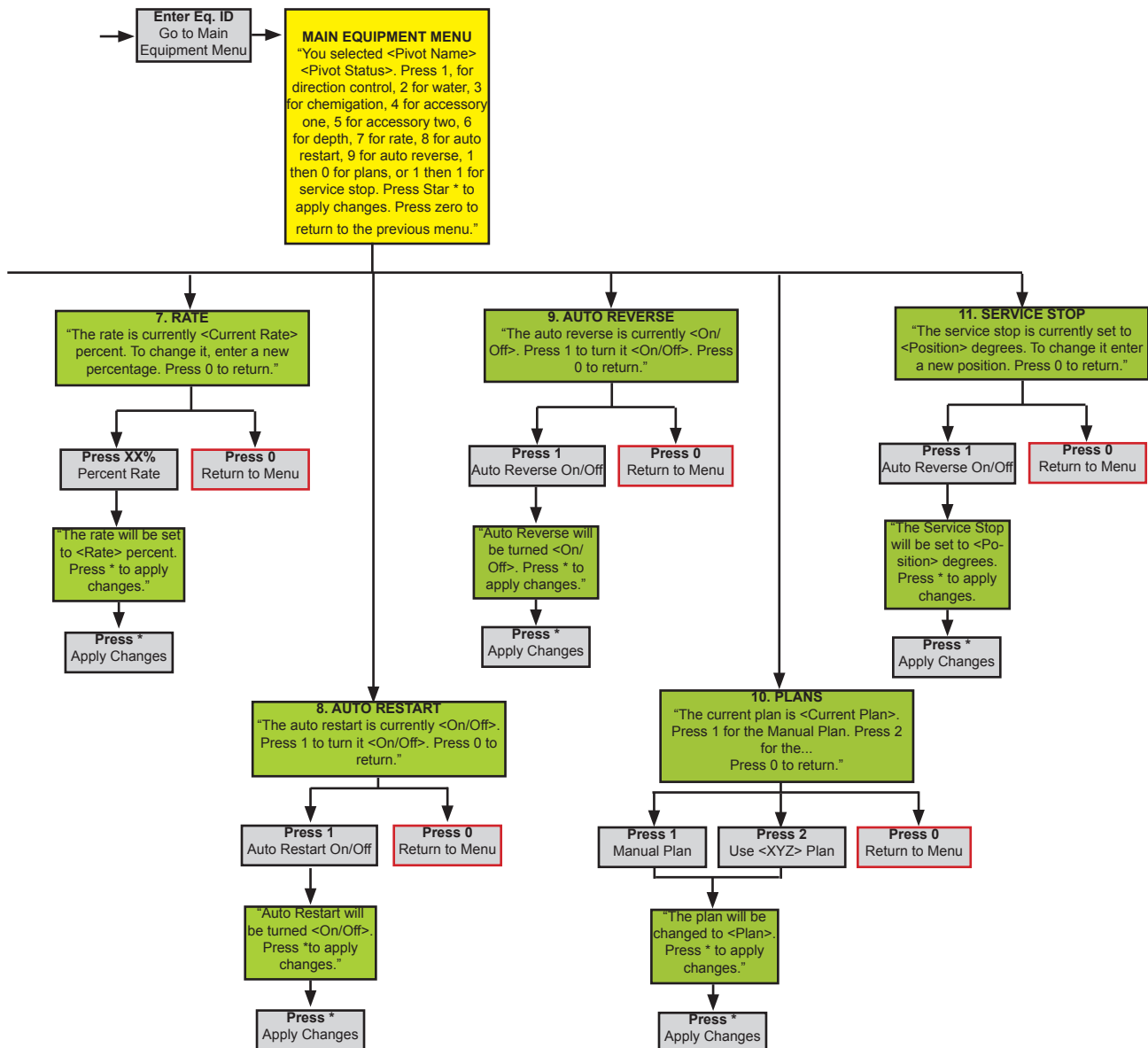
**Press 0**  
Equipment List → **LIST OF EQUIPMENT**  
"<Pivot Name ID> <Voice Portal ID>..."

**Press 0\***  
List all Equipment Status → **LIST OF EQUIPMENT**  
"<Pivot Name> ID <Voice Portal ID>..."

**Enter Eq. ID**  
Go to Main Equipment Menu → **MAIN EQUIPMENT MENU**  
"You selected <Pivot Name> <Pivot Status>. Press 1, for direction control, 2 for water, 3 for chemigation, 4 for accessory one, 5 for accessory two, 6 for depth, 7 for rate, 8 for auto restart, 9 for auto reverse, 1 then 0 for plans, or 1 then 1 for service stop. Press Star \* to apply changes. Press zero to return to the previous menu."









<b>Revisions</b>				
<b>Date</b>	<b>Revision</b>	<b>ECN</b>	<b>Published ECN</b>	<b>Description</b>
9/5/2014	A	32822		New Manual
2/15/15	B	33157	33157	Added VRI Plans Instructions

