



New WagNet User Manual



December 2012

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INTRODUCTION

AVAILABILITY OF OLD WAGNET

LIST OF NEW FEATURES

SUMMARY OF MANUAL

WE WOULD LIKE YOUR FEEDBACK

UNIT VIEWS

Our new WagNet site includes three unit views: List View, Map View, and the familiar sidebar. Each of these views was available on our old WagNet site, but has been drastically improved for our new site. List View and Map View can each be located in the View Units menu option at the top of the page.

LIST VIEW

The List View page displays a summary of each of your units as a series of dynamic images designed to load the information for each of your units.

The information loaded depends on the type of unit being displayed:

- Pivot units of various types (Field Commanders, Pivot Points, and Precision Links) display a graphic representation of the pivot, the power status, current direction, current angle, current speed, current pressure, and latest reading time.
- Crop Links display the latest reading information about the various analogs installed on them and the latest reading time.
- Tank Monitors, which are a special type of Crop Link, display the same information as the Crop Links in addition to a graphic gauge indicating its current level.
- Aquatracs ...

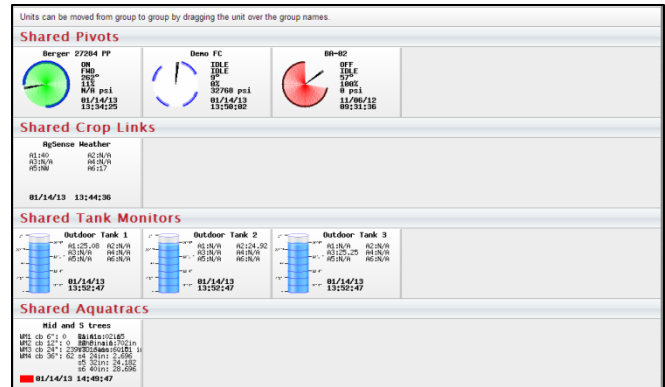


Figure 1 - List View

From top to bottom, left to right: a Pivot Point, a Field Commander, a Precision Link, a Crop Link, a Tank Monitor Crop Link displaying three tanks, an Aquatracs

Clicking on a unit will open that unit's control panel. See page 6 for more information on the unit control panels.

The units are also organized based on your current group configuration. See page 29 for more information about group setup. The group names in the group header bars can be clicked to open the map view for that group.

UPCOMING FEATURE

Soon WagNet's List View page will allow the user to drag and drop their units from group to group.

MAP VIEW

The Map View page is a radical new screen for viewing and managing groups of units at one time. Many new features have been added from our previous Map View to allow you to get a fast and accurate picture of what is happening in your fields.

A new feature you may notice from *Figure 2 - Map View* is the information bubble over the pivot. This bubble displays the most need-to-know information about the unit and a few of the command buttons allowing you to quickly send any needed commands to your unit.

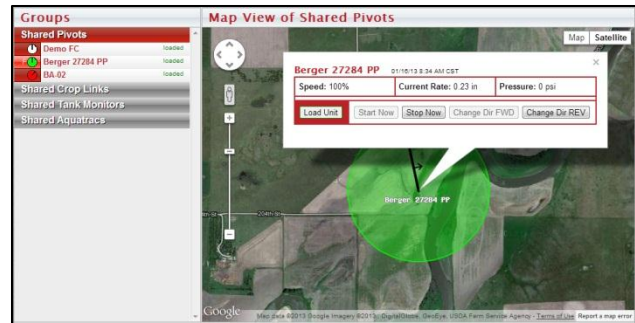


Figure 2 - Map View
A pivot point and its information bubble

Other than pivots, all other units will display their List View image and its power status.

There are two ways you can get the information bubble to display. The first is to click on the unit in the Groups sidebar. The second way is to click on the unit itself in the map.

On this screen, each group displays separately to decrease loading time and increase performance. To view another group, simply click on the group name in the Groups sidebar.

SIDEBAR

This sidebar represents the list of units that was available to you in our old website. It is a list of units organized by groups with images indicating what the units are and what any pivots are doing.

Note: If you do not see this sidebar, it may be because your screen is not wide enough to support displaying it at all times. To open the sidebar, simply click the *View Units* item in the menu bar to the right of the WagNet logo.

This sidebar is designed to give you quick and easy access to any of your units from any page you may be viewing. It also provides links to the Map View and to your Group Setup (for more detail about Group Setup, see page 29).



Figure 3 - Sidebar

UNIT PAGES

The unit pages are a series of pages for controlling and monitoring your various units. This section explains the various parts of the unit pages for Field Commanders, Crop Links (of each configuration), Aqua Tracs, Precision Links, and Pivot Points.

FIELD COMMANDER

Serial: 31906 Version: 30
Shared by: bergera
Status: ON/FWD/106/EndGun: OFF
Last Reading: 02/05/13 9:51:05 AM
Current Cycle: 61 day 20 hr 30 min

Refresh

Command	Sent At	Ack
Config	01/24/13 1:52:48 PM	Yes
Config	01/23/13 3:25:21 PM	Yes

Command	Trigger Time	Last Note
	12/10/12 3:30:58 PM	note from api

Figure 4 - Field Commander Information Panel

When you open a Field Commander unit page, the first thing you are going to see is an information box, like the one seen in *Figure 4 - Field Commander Information Panel*, at the top of the page containing the following:

- An image displaying the current activity and status of the pivot with numerical details at the bottom of:
 - Angle – 0 degrees is straight North
 - Speed – in percentage of maximum
 - Pressure – the current water pressure
 - GPS signal status – WAAS is best, Basic is okay, None means no GPS reading
 - Signal strength – the strength of the signal your pivot is communicating with (0 – 31)
 - Battery level – 4.2V is a fully charged battery
- A **Pivot Info** tab with the following information:
 - Serial and version numbers
 - If and who it was shared to you by
 - The current power status, direction status, angle, and endgun status

- The timestamp of the most recent reading generated by the Field Commander
- The amount of time the Field Commander has been on its current cycle
- Information about the most recent 2 commands sent to the Field Commander
- Information about upcoming timed commands
- The most recent note entered in the notes tab
- A **Timed Commands** tab listing all currently set timed commands
- A **Notes** tab where you can enter various notes to yourself about the unit

Below the information panel is a series of tabbed panels: CMD, Chart, Config, Readings, Report, CMD History, Tickets. The **CMD** tab displays various command controls you can use to control your Field Commander unit including Start/Stop/Change Direction commands, Endgun/Speed table controls, Run table controls, and the ability to request a reading.



Figure 5 – Basic Field Commander Commands

The **Start** and **Stop** commands can be used to send an immediate or timed command to start and stop the unit respectively based on the option chosen in the dropdown box to the right of the command. The available options are:

- Now – Immediately sends a start/stop command to the unit
- Once – Gives you the option to choose a specific date and time to start/stop the unit
- Always – Gives you the option to choose a specific time to start/stop the unit every day
- Clear – Clears all once/always timed start/stop commands

The **Start FWD** and **Start REV** commands allow you to send an immediate start command to start the pivot in the direction of your choice.

The **Stop @ Angle** command allows you to send a timed command to the Field Commander to stop the unit at a specified angle. You can also use the dropdown box to the immediate right of the command to clear the timed command.

The **Change Dir FWD** and **Change Dir REV** commands can be used to send an immediate command to the unit to change its current direction.

Also note that when the unit is powered off, all of these commands will be disabled until the unit is powered on. When the unit is on and idle, the stop commands will be disabled. When the unit is on and

moving, the start commands will be disabled. When the unit is moving forward, the Change Dir FWD command will be disabled and vice versa for the Change Dir REV command.

The **End Gun** table allows you to adjust the angles at which the end gun on your pivot will run. There are three customizable tables that can be renamed and two tables called *Always On* and *Always Off*. In the customizable tables, once you have entered your preferred settings click **Save & Send** command to lock in those settings. Also click this command to lock in tables when switching between them.

The **Speed Table** is much more advanced than its predecessor in old WagNet. This new version still allows you to adjust the table's speed in percentage at various angles from 0 to 359. Now we have added an *Inches Applied* column so that you can adjust your speed tables by how many inches of water you want the Field Commander to apply to each section of field. The table will then automatically update the speed required to match that value based on the configuration in the *Config* tab. This column can also be displayed in metric units (centimeters) by selecting the unit system from the dropdown box below the table name dropdown box. This unit system selection will be automatic for users who have set their preferred unit measuring system in their *Account Settings* page (see page 28 for details).

Figure 6 – End Gun & Speed tables and Misc. Commands

Another new feature of the speed table is the ability to adjust the entire table's *Speed* column by a percentage of its current value. For example, if you had a setting set to 40% duty cycle, raising it by 5% would increase it to 42 (which is an increase of 5% of 40). Also if you change the values of your Speed Table, but decide that you do not like the changes, you can click the **Reset Speed Table** button to reset the table to its original values.

As of right now, the **Large Table Configuration** and **Run Table** commands will direct you to a page from old WagNet for these settings.

The **Get Reading** command will send an immediate command to the Field Commander unit to send a reading.

The **Get Reading** command will send an immediate command to the Field Commander unit to send a reading.

CHART TAB

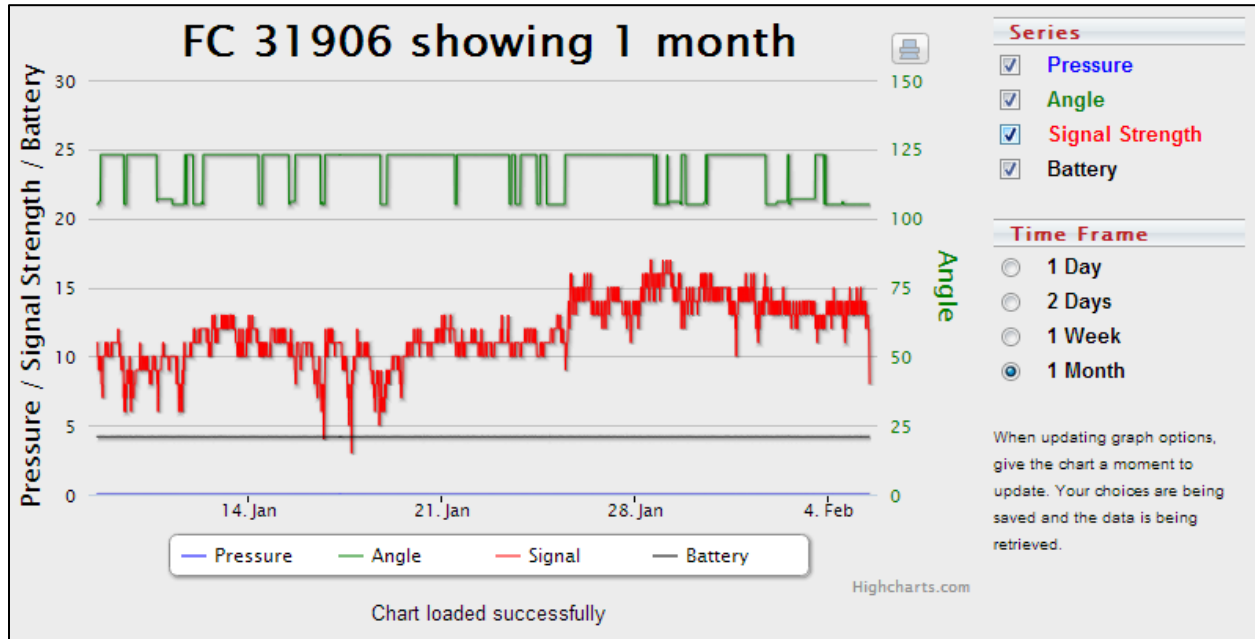


Figure 7 - Field Commander Chart

This tab provides you with a graphical representation of historical data provided by the readings sent from your Field Commander unit. Available chart series include Pressure, Angle, Signal Strength, and Battery. Available time frames for viewing this data range from one day to a month.

CONFIG TAB

The Config tab give you configure your unit to ensure accurate data readings. Please note that inaccurate configuration could result in inaccurate readings. The following steps will walk you through the configuration of your Field Commander.

1. Enter the name of your unit.
What you enter here will be the name that shows up describing the unit throughout the WagNet site. A descriptive name about its location is best (ex. 'Behind Barn') to know at all times exactly which unit you are looking at.
2. Enter the type of pivot the Field Commander box is installed on.
We support Valley, Lindsay, Reinke, T&L, and Lockwood specifically. If your Field Commander is not installed on one these, select 'Other.'
3. Selection which direction the pivot runs.
If your unit runs in a circle, then this option should be set as such. A pivot that runs side to side is called a lateral pivot and you should choose which direction the pivot runs.
4. Enter the length of the pivot in feet.
This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
5. Enter the distance your pivot's end gun reaches

This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.

6. (For circle pivots) Enter the minimum angle of the unit's operation
Remember that 0 degrees represents straight North. This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
7. (For circle pivots) Enter the maximum angle of the unit's operation
Remember that 0 degrees represents straight North. This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
8. Enter the time it takes for the pivot to complete one revolution at 100% duty cycle (speed).
This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
9. Enter the type of pressure sensor being used.
10. Enter the low pressure
11. Enter the high pressure
12. Enter the voltage at 0 PSI
0.5 volts is the correct normal value.
13. Enter the estimated flow in gallons per minute
This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
14. The External 1 and External 2 fields are set by AgSense, call 1-605-352-8350 for details.
15. Enter the conditions for speed and end gun usage.
16. Click **Save Settings** and then proceed to the instructions below to set your pivot's GPS location.

Now that you have your Field Commander configured to the correct settings, the next step is to set the GPS location on the map at the bottom of the Config tab.

For circle pivots:

1. Enter the GPS coordinates of the center of your pivot in the text boxes provided for latitude and longitude.
Coordinates must be entered in decimal degrees.
2. If you wish to adjust the zoom setting, feel free to do so.
This setting adjusts the zoom level for the map image in the information panel at the top of the page.
3. Click **Center on Map**.
A marker should appear on the map
4. In the map provided, if the marker is not exactly over the center location of your pivot, you can fix it by clicking on the map where the center should be.
5. Click **Save Settings** again to save the GPS coordinates.

For lateral pivots:

1. Enter the GPS coordinates of the center of your pivot in the text boxes provided for latitude and longitude.
Coordinates must be entered in decimal degrees.
2. If you wish to adjust the zoom setting, feel free to do so.
This setting adjusts the zoom level for the map image in the information panel at the top of the page.
3. Click **Center on Map**.
This will position the map to where your pivot is. Unlike a circle pivot a marker will not appear on the map.
4. Starting in the Northwest corner of the pivot area and going clockwise in each of its corners, click on the map to mark the four corners of your lateral pivot's operation area.
Once the fourth marker is placed, the configuration will automatically save and refresh the unit page.

READINGS TAB

This tab provides the historical data sent by the Field Commander unit. It provides you with detailed information about what your unit is doing.

REPORT TAB

The report tab provides a highly detailed report of your unit's reading data. You can generate or print three types of reports for a specified period of time. The three report types are an event report, an inches applied by angle report, or an inches applied by month report.



The screenshot shows a form with the following fields and options:

- Start Date: 2 / 4 / 2013
- Stop Date: 2 / 5 / 2013
- Report Type: Event By Angle By Month
- Buttons: Generate (green), Print (green)

Figure 8 - Report Options

An **Event** report is a report that displays tabular information about the change in the Field Commander's power, direction, status, and pump status and the duration of those periods of activity.

A **By Angle** report is more graphical and displays two graphs of the amount of acre inches applied to each angle degree of the pivot area in a circular pivot. The report also displays tabular information for each of those angle ranges.

A **By Month** report shows information about the amount of acre inches applied to the entire field by month. Note that entering in partial months will result in information returned about the entire month. For example, a report for 1/15/2013 to 2/15/13 will result a report for 1/1/2013 to 2/28/2013.

CMD HISTORY TAB

Similar to the *Readings* tab, the *CMD History* tab provides the information about commands sent to the unit. It provides detailed information about what your unit is doing and why.

TICKETS TAB

The screenshot displays the 'TICKETS TAB' interface. On the left, under 'Related Tickets', there is a list of tickets with their status (Open or Closed), ticket number, and timestamp. Ticket #33 is highlighted. The main area shows a 'Ticket #33 Preview' with the user 'Matt DeKok Admin' and the text 'Original Post' and 'This is a test ticket'. Below this is a 'Post a note' section with a rich text editor toolbar and a 'Submit Note' button.

Ticket Number	Status	Timestamp
#6	Open	10/04/2012 2:42 PM
#30	Closed	02/04/2013 10:12 AM
#33	Open	02/06/2013 8:33 AM

Original Post
Posted 02/06/2013 9:33 AM
This is a test ticket

Post a note

Path: p Words: 0 / 300

Submit Note

Figure 9 - Tickets Tab

First, for details about tickets, see page 30.

This tab gives you access to all of your tickets associated with your units of all types. It allows you to make comments, post pictures, links, or videos to us without having to create an email and look back on them in the future.

The section on the left provides you with a list of your open and closed tickets. You can open the ticket in the unit by clicking on the spyglass icon next to the ticket number. Clicking on the ticket number will open the ticket in a new page.

Because there are many configurations for Crop Links, the Crop Link unit page's appearance will vary from configuration to configuration. The following five sections: Weather Trac, Grain Trac, Tank Monitor, Pump Control, and Soil Moisture Monitor explain the various differences those types of Crop Links have in their unit pages. The rest of this section will discuss all parts of the unit page that all Crop Links share.

CHART

In most Crop Link unit pages, the chart is at the top of the page. However, in Tank Monitors and Weather Tracs, the chart is in a tab and is replaced by a series of graphics illustrating the latest reading information from the Crop Link.

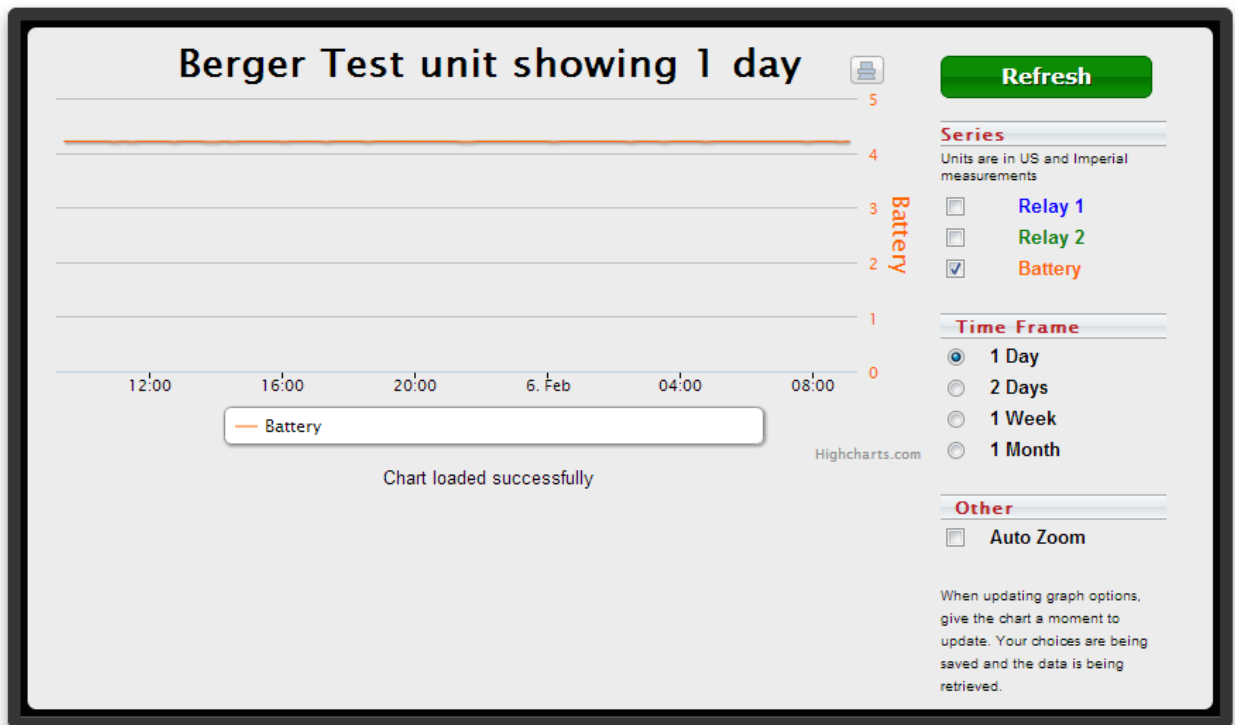


Figure 10 - Crop Link Chart

MAIN TAB

The Main tab is the tab that displays all information about the Crop Link's current status and its commands. All Crop Links have a **Get Reading** command which requests a reading from the Crop Link unit.

Each Crop Link can have two relays. When relays are enabled in the Config tab (see page 14), two commands will appear on the Main tab that allow you to turn the relays on and off.

Additional information will be displayed here for other types of Crop Links.

CONFIG TAB

The Config tab is how you configure a Crop Link to be whatever type of Crop Link you want it to be. This guide will walk you through step by step how to set up each part of the configuration that is **not** related to those options, but for generic Crop Links. Configuration instructions for each type of Crop Link other than generic types will be given in their corresponding sections.

1. Enter the **Name** of your unit.

What you enter here will be the name that shows up describing the unit throughout the WagNet site. A descriptive name is best (ex. 'Outdoor Tank') to know at all times exactly which unit you are looking at.

2. If your unit has relays, set the **Relays** field to Enabled.

A few more options will appear to configure the relays. The following sub-instructions will walk you through configuring them.

- a. Enter a name for relay 1

This step is optional. If blank, the relay name will default to 'Relay 1.'

- b. Check Momentary if the relay is momentary

- c. Check Continuous if the relay is continuous

- d. Check Disable if you do not wish to use the relay.

- e. Repeat steps a-d for Relay 2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

READINGS TAB

This tab provides the historical data sent by the Field Commander unit. It provides you with detailed information about what your unit is doing.

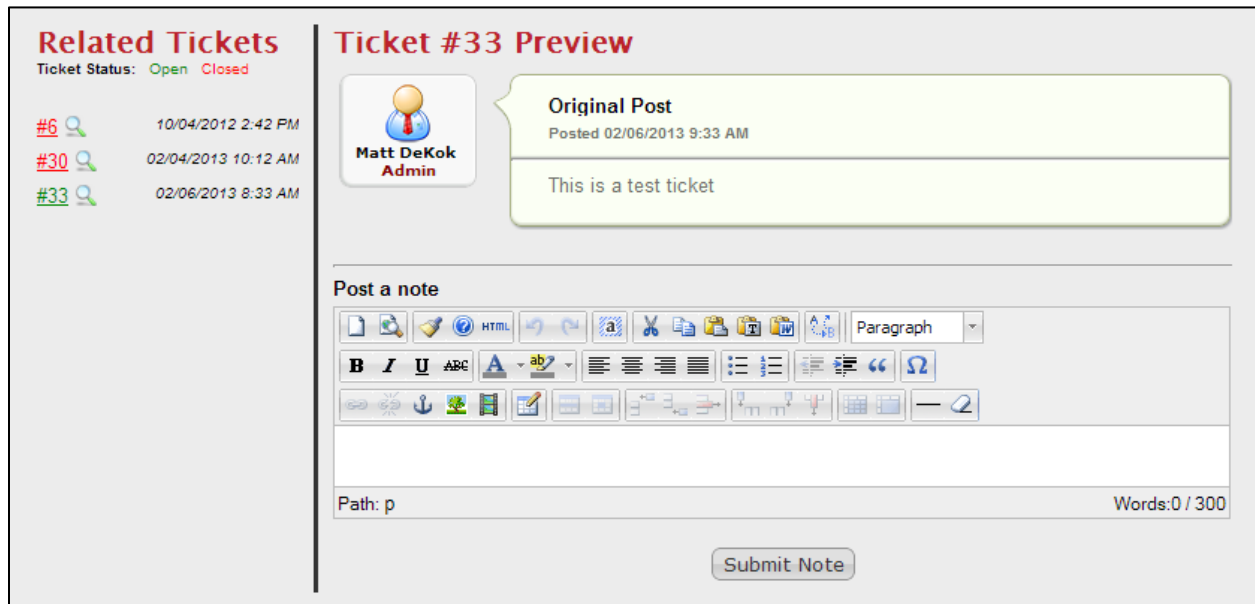
REPORT TAB

The Report tab gives you a summarized table of information from the readings for a specified date range that you can generate or print.

NOTES TAB

This tab allows you to enter notes to yourself about a unit. It will automatically be timestamped.

TICKETS TAB



The screenshot displays the 'Tickets Tab' interface. On the left, under 'Related Tickets', there is a list of tickets with their status (Open or Closed), ticket number, and timestamp. Ticket #33 is highlighted. The main area shows a 'Ticket #33 Preview' with the user 'Matt DeKok Admin' and the text 'Original Post' and 'This is a test ticket'. Below the preview is a 'Post a note' section with a rich text editor and a 'Submit Note' button.

Figure 11 - Tickets Tab

First, for details about tickets, see page 30.

This tab gives you access to all of your tickets associated with your units of all types. It allows you to make comments, post pictures, links, or videos to us without having to create an email and look back on them in the future.

The section on the left provides you with a list of your open and closed tickets. You can open the ticket in the unit by clicking on the spyglass icon next to the ticket number. Clicking on the ticket number will open the ticket in a new page.

CHART

In most Crop Link unit pages, the chart is at the top of the page. However, in Tank Monitors and Weather Tracs, the chart is in a tab and is replaced by a series of graphics illustrating the latest reading information from the Crop Link.

When your Weather Trac (Crop Link) unit page loads, you'll notice that the top of the page is no longer a chart, but rather a series of gauges displaying the latest reading data graphically. In old WagNet, this information was given to you as text in the Main tab; however, in our new WagNet site we have upgraded this to a graphic display as shown in Figure 12 - Weather Trac Reading Display.

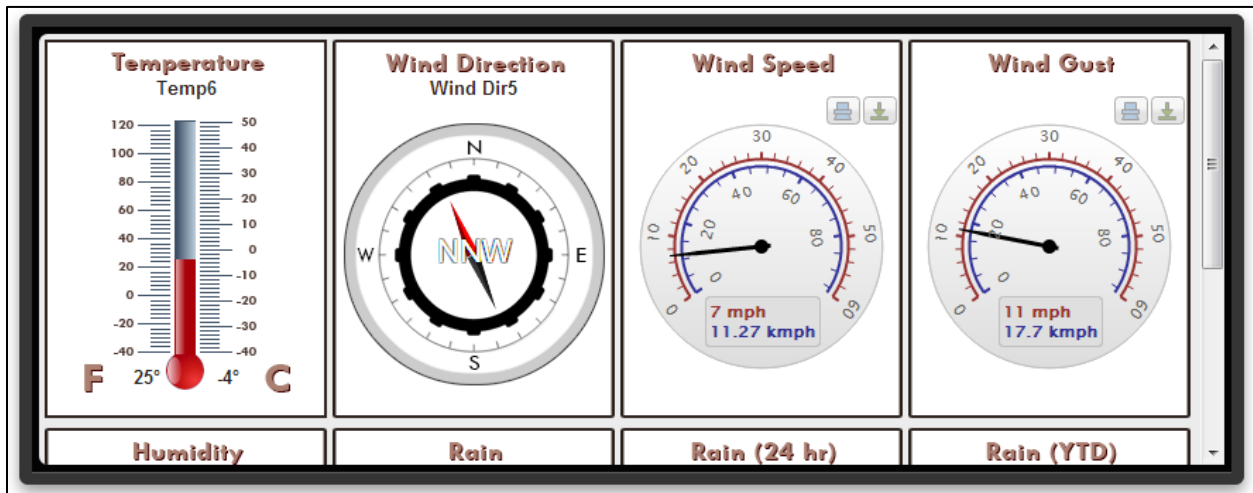


Figure 12 - Weather Trac Reading Display

In this type of Crop Link, the chart has been moved to a tab below the gauges. The chart has additional series for the historical data represented by each of the gauges in the top panel. For example, in Figure 13 - Weather Trac Chart, you'll notice that the series of this chart include: Hum1, Wind Dir5, Temp6, WindSpd1, and Rain2. These names represent the type of sensor on the crop link and the port it is connected to.

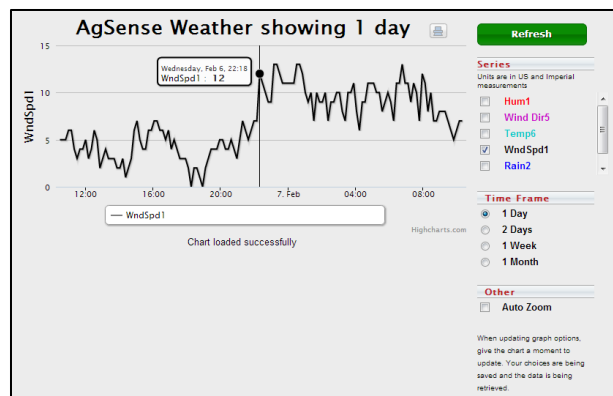


Figure 13 - Weather Trac Chart

CONFIG TAB

All weather sensors are analog and digital sensors. So the first thing you need to do is make sure they are enabled.



Figure 14 – Enable Analogs and Digitals

Humidity (Analog 1-4)

1. Set the corresponding **Analog #** to RHT Hum.
Only analogs 1 – 4 support humidity sensors.
2. Set the **trlo** if you want the unit to send a reading when the humidity falls below a certain value.
3. Set the **trhi** if you want the unit to send a reading when the humidity rises above a certain value.

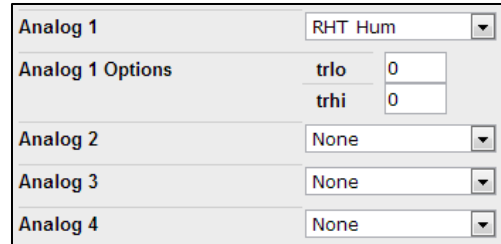


Figure 15 – Humidity Sensor

Temperature (Analog 5-6)

1. Set the corresponding **Analog #** to Thermistor.
Only analogs 5 – 6 support temperature sensors.
2. Set the **trlo** if you want a reading when the temperature falls below a certain value.
3. Set the **trhi** if you want a reading when the temperature rises above a certain value.

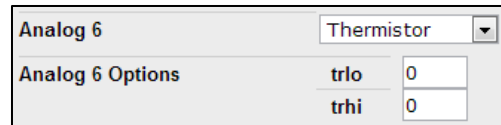


Figure 16 - Temperature Sensor

Wind Direction (Analog 5-6)

1. Set the corresponding **Analog #** to Davis Wind Dir.
Only analogs 5 – 6 support wind direction sensors.
2. Set the **trlo** if you want a reading when the wind direction bearing falls below a certain value.
3. Set the **trhi** if you want a reading when the wind direction bearing rises above a certain value.

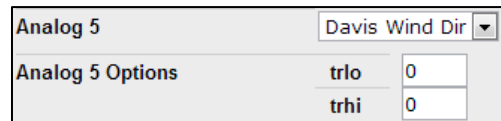


Figure 17 – Wind Direction Sensor

Wind Speed (Digital 1-2)

1. Set the corresponding **Digital #** to Davis Wind Spd.
2. Ignore **Debounce** values or call AgSense.

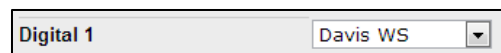


Figure 18 - Wind Speed Sensor

Rain (Digital 1-2)

1. Set the corresponding **Digital #** to Tipping Bucket.
2. Ignore **Debounce** values or call AgSense.



Figure 19 - Tipping Bucket Sensor

REPORT TAB

Similar to the Chart tab, the Report tab also has added columns in the report to display historical data for each of the analog and digital sensors on the Crop Link.

GRAIN TRAC (CROP LINK)

Grain Tracs (Crop Links) are displayed somewhat differently in WagNet. When a single unit is configured for multiple grain bins, each will be displayed as a separate unit. The unit page for each bin displays information for each individual unit. For information on how to configure a Grain Trac (Crop Link) for multiple bins, see page 18.

MAIN TAB

The Main tab is the tab that displays all information about the Crop Link's current status and its commands. All Crop Links have a **Get Reading** command which requests a reading from the Crop Link unit.

Each Crop Link can have two relays. When relays are enabled in the Config tab (see page 14), two commands will appear on the Main tab that allow you to turn the relays on and off.

The Main tab in a Grain Trac (Crop Link) unit page will also contain the chart of readings from the unit's sensors and cables as shown in Figure 20 - Grain Trac Data.

	C1	C2	C3	C4
S10	72	74	72	71
S9	72	72	71	70
S8	71	70	70	70
S7	69	71	71	70
S6	69	72	71	68
S5	68	70	70	69
S4	68	75	69	70
S3	70	67	71	71
S2	68	70	68	68
S1	67	70	66	70

Figure 20 - Grain Trac Data

CONFIG TAB

Grain Bin Board Enabled ▾

Bin Num	Cable Num	Board Number	Start Sensors	Num Sensors	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

Figure 21 – Grain Bin Board Configuration

- 1.

REPORT TAB

Similar to the Chart tab, the Report tab also has added columns in the report to display historical data for each of the analog and digital sensors on the Crop Link.

TANK MONITOR (CROP LINK)

Tank Monitors (Crop Links) are displayed somewhat differently in WagNet. When a single unit is configured for multiple tanks, each will be displayed as a separate unit. The unit page for each tank displays information for each individual unit. For information on how to configure a Tank Monitor (Crop Link) for multiple tanks, see page 20.

CHART

In most Crop Link unit pages, the chart is at the top of the page. However, in Tank Monitors and Weather Tracs, the chart is in a tab and is replaced by a series of graphics illustrating the latest reading information from the Crop Link.

When your Tank Monitor (Crop Link) unit page loads, you'll notice that the top of the page is no longer a chart, but rather a series of gauges displaying the latest reading data graphically. In old WagNet, this information was given to you as text in the Main tab; however, in our new WagNet site we have upgraded this to a graphic display as shown in Figure 23 - Tank Monitor Reading Display.



Figure 23 - Tank Monitor Reading Display

In this type of Crop Link, the chart has been moved to a tab below the gauges. The chart has additional series for the historical data represented by each of the gauges in the top panel. For example, in Figure 22 - Tank Monitor Chart, you'll notice that the series of this chart include: Tank Monitor1. These names represent the type of sensor on the crop link and the port it is connected to.

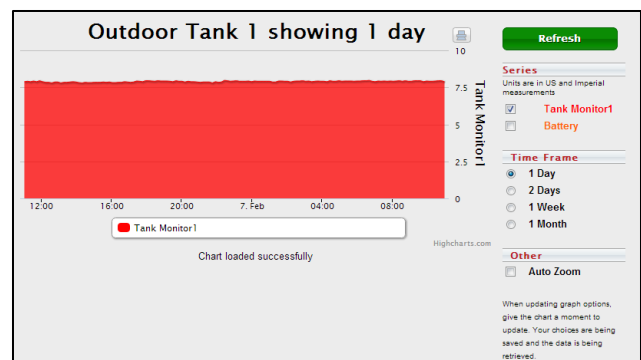


Figure 22 - Tank Monitor Chart

CONFIG TAB

Before configuring a crop link as a Tank Monitor, you'll need to set it up as a generic Crop Link. See page 14 for instructions on generic Crop Link configurations. Once you've finished those instructions, the following instructions will set up the crop link as a Tank Monitor.

Analog	Enabled ▾		
Analog 1	Tank Monitor ▾		
Analog 1 Options	Tank Alias	Outdoor Tank 1	
	Specific Gravity of Fluid in Tank	1.0625	
	Tank Diameter	0	ft 2 in
	Tank Height	30	ft 0 in
	Sensor distance from bottom of tank	0	ft 0 in
		<input type="button" value="Set Location"/>	

Figure 24 - Example Tank Monitor Configuration

1. If **Analog** is set to *Disabled*, set it to *Enabled*.
2. Set the corresponding **Analog #** setting to *Tank Monitor*.
A series of fields should appear.
3. Fill out the **Analog # Options** fields as accurately as you can.
4. Repeat steps 2 and 3 for all connected Tank Monitoring sensors.
5. Click **Save Settings**.

REPORT TAB

Similar to the Chart tab, the Report tab also has added columns in the report to display historical data for each of the analog and digital sensors on the Crop Link.

PUMP CONTROL (CROP LINK)

SOIL MOISTURE MONITOR (CROP LINK)

AQUATRAC

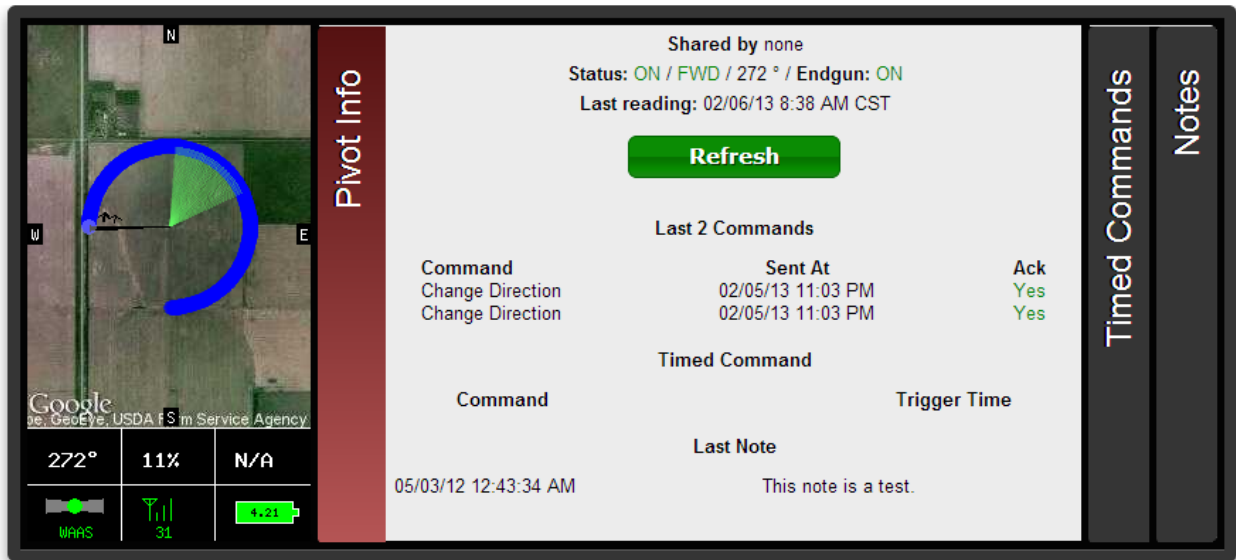


Figure 25 - Pivot Point Information Panel

As you can see, the Pivot Point unit page is almost identical to the Field Commander unit page. When you open the unit page, the first thing you are going to see is an information box, like the one seen in *Figure 25 - Pivot Point Information Panel*, at the top of the page containing the following:

- An image displaying the current activity and status of the pivot with numerical details at the bottom of:
 - Angle – 0 degrees is straight North
 - Speed – in percentage of maximum
 - Pressure – the current water pressure
 - GPS signal status – WAAS is best, Basic is okay, None means no GPS reading
 - Signal strength – the strength of the signal your pivot is communicating with (0 – 31)
 - Battery level – 4.2V is a fully charged battery
- A **Pivot Info** tab with the following information:
 - If and who it was shared to you by
 - The current power status, direction status, angle, and endgun status
 - The timestamp of the most recent reading generated by the Pivot Point
 - Information about the most recent 2 commands sent to the Pivot Point
 - Information about upcoming timed commands
 - The most recent note entered in the notes tab
- A **Timed Commands** tab listing all currently set timed commands
- A **Notes** tab where you can enter various notes to yourself about the unit

Below the information panel is a series of tabbed panels: CMD, Chart, Config, Readings, Report, CMD History, Tickets. The **CMD** tab displays various command controls you can use to control your Pivot Point unit including Start/Stop/Change Direction commands, Endgun/Speed/Direction table controls, and the ability to request a reading.

CMD TAB



Figure 26 – Basic Pivot Point Commands

The **Start** and **Stop** commands can be used to send an immediate or timed command to start and stop the unit respectively based on the option chosen in the dropdown box to the right of the command. The available options are:

- Now – Immediately sends a start/stop command to the unit
- Once – Gives you the option to choose a specific date and time to start/stop the unit
- Always – Gives you the option to choose a specific time to start/stop the unit every day
- Clear – Clears all once/always timed start/stop commands

The **Start FWD** and **Start REV** commands allow you to send an immediate start command to start the pivot in the direction of your choice.

The **Stop @ Angle** command allows you to send a timed command to the Pivot Point to stop the unit at a specified angle. You can also use the dropdown box to the immediate right of the command to clear the timed command.

The **Change Dir FWD** and **Change Dir REV** commands can be used to send an immediate command to the unit to change its current direction.

Also note that when the unit is powered off, all of these commands will be disabled until the unit is powered on. When the unit is on and idle, the stop commands will be disabled. When the unit is on and moving, the start commands will be disabled. When the unit is moving forward, the Change Dir FWD command will be disabled and vice versa for the Change Dir REV command.

The **End Gun** table allows you to adjust the angles at which the end gun on your pivot will run. There are three customizable tables that can be renamed and two tables called *Always On* and *Always Off*. In the customizable tables, once you have entered your preferred settings click **Save & Send** command to lock in those settings. Also click this command to lock in tables when switching between them.

The **Speed** table is much more advanced than its predecessor in old WagNet. This new version still allows you to adjust the table's speed in percentage at various angles from 0 to 359. Now we have added an *Inches Applied* column so that you can adjust your speed tables by how many inches of water you want the Pivot Point to apply to each section of field. The table will then automatically update the speed required to match that value based on the configuration in the *Config* tab. This column can also be displayed in metric units (centimeters) by selecting the unit system from the dropdown box below the table name dropdown box. This unit system selection will be automatic for users who have set their preferred unit measuring system in their *Account Settings* page (see page 28 for details).

Figure 27 – End Gun & Speed tables and Misc. Commands

Another new feature of the speed table is the ability to adjust the entire table's *Speed* column by a percentage of its current value. For example, if you had a setting set to 40% duty cycle, raising it by 5% would increase it to 42 (which is an increase of 5% of 40). Also if you change the values of your Speed Table, but decide that you do not like the changes, you can click the **Reset Speed Table** button to reset the table to its original values.

The **Direction** table allows you to set a change in direction at various points during the current cycle. In Field Commanders, this was replaced by the Run Table. However, as of right now, the **Large Table Configuration** and **Run Table** commands are only available for Field Commanders.

The **Get Reading** command will send an immediate command to the Pivot Point unit to send a reading.

CONFIG TAB

The Config tab give you configure your unit to ensure accurate data readings. Please note that inaccurate configuration could result in inaccurate readings. The following steps will walk you through the configuration of your Field Commander.

1. Enter the name of your unit.
What you enter here will be the name that shows up describing the unit throughout the WagNet site. A descriptive name about its location is best (ex. 'Behind Barn') to know at all times exactly which unit you are looking at.
2. Enter the type of pivot the Field Commander box is installed on.
We support Valley, Lindsay, Reinke, T&L, and Lockwood specifically. If your Pivot Point is not installed on one these, select 'Other.'
3. If you have a T&L unit, please select it for the Display Type.
4. Selection which direction the pivot runs.

If your unit runs in a circle, then this option should be set as such. A pivot that runs side to side is called a lateral pivot and you should choose which direction the pivot runs.

5. Enter the length of the pivot in feet.
This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
6. Enter the distance your pivot's end gun reaches
This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
7. (For circle pivots) Enter the minimum angle of the unit's operation
Remember that 0 degrees represents straight North. This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
8. (For circle pivots) Enter the maximum angle of the unit's operation
Remember that 0 degrees represents straight North. This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
9. Enter the time it takes for the pivot to complete one revolution at 100% duty cycle (speed).
This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
10. Enter the estimated flow in gallons per minute
This number is used in several calculations involved in Speed Tables and reading generation; so, please make sure this number is as accurate as you can get it.
11. Select the type of pressure sensor being used and enter the voltage at 0 PSI and 100 PSI
0.5 volts is the correct normal value for 0 PSI and 4.5 is the correct normal value for 100 PSI.
12. Click **Save Settings** and then proceed to the instructions below to set your pivot's GPS location.

Now that you have your Field Commander configured to the correct settings, the next step is to set the GPS location on the map at the bottom of the Config tab.

For circle pivots:

1. Enter the GPS coordinates of the center of your pivot in the text boxes provided for latitude and longitude.
Coordinates must be entered in decimal degrees.
2. If you wish to adjust the zoom setting, feel free to do so.
This setting adjusts the zoom level for the map image in the information panel at the top of the page.
3. Click **Center on Map**.
A marker should appear on the map
4. In the map provided, if the marker is not exactly over the center location of your pivot, you can fix it by clicking on the map where the center should be.
5. Click **Save Settings** again to save the GPS coordinates.

For lateral pivots:

1. Enter the GPS coordinates of the center of your pivot in the text boxes provided for latitude and longitude.
Coordinates must be entered in decimal degrees.
2. If you wish to adjust the zoom setting, feel free to do so.

This setting adjusts the zoom level for the map image in the information panel at the top of the page.

3. Click **Center on Map**.

This will position the map to where your pivot is. Unlike a circle pivot a marker will not appear on the map.

4. Starting in the Northwest corner of the pivot area and going clockwise in each of its corners, click on the map to mark the four corners of your lateral pivot's operation area.

Once the fourth marker is placed, the configuration will automatically save and refresh the unit page.

CHART TAB

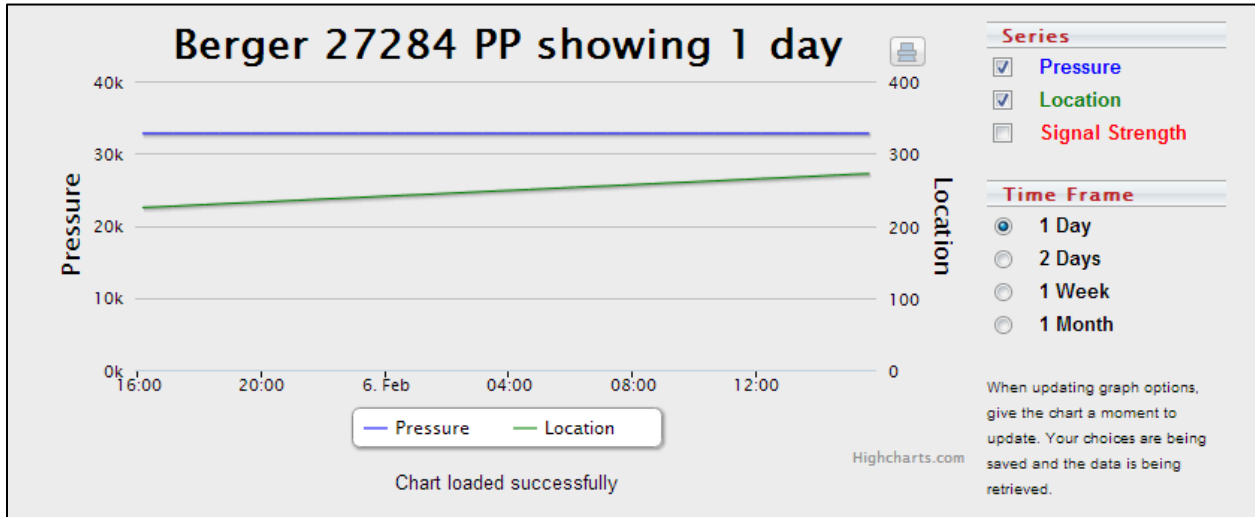


Figure 28 - Pivot Point Chart

This tab provides you with a graphical representation of historical data provided by the readings sent from your Pivot Point unit. Available chart series include Pressure, Angle, and Signal Strength. Available time frames for viewing this data range from one day to a month.

READINGS TAB

This tab provides the historical data sent by the Pivot Point unit. It provides you with detailed information about what your unit is doing.

REPORT TAB

The report tab provides a highly detailed report of your unit's reading data. You can generate or print two types of reports for a specified period of time. The two report types are an inches applied by angle report and an inches applied by month report.

Figure 29 - Report Options

A **By Angle** report is more graphical and displays two graphs of the amount of acre inches applied to each angle degree of the pivot area in a circular pivot. The report also displays tabular information for each of those angle ranges.

A **By Month** report shows information about the amount of acre inches applied to the entire field by month. Note that entering in partial months will result in information returned about the entire month. For example, a report for 1/15/2013 to 2/15/13 will result a report for 1/1/2013 to 2/28/2013.

CMD HISTORY TAB

Similar to the *Readings* tab, the *CMD History* tab provides the information about commands sent to the unit. It provides detailed information about what your unit is doing and why.

TICKETS TAB

The screenshot displays the 'Tickets Tab' interface. On the left, under 'Related Tickets', there is a list of tickets with their status (Open or Closed), ticket number, and timestamp. Ticket #33 is highlighted. The main area shows a 'Ticket #33 Preview' with the user 'Matt DeKok Admin' and the text 'Original Post' and 'This is a test ticket'. Below the preview is a 'Post a note' section with a rich text editor and a 'Submit Note' button.

Figure 30 - Tickets Tab

First, for details about tickets, see page 30.

This tab gives you access to all of your tickets associated with your units of all types. It allows you to make comments, post pictures, links, or videos to us without having to create an email and look back on them in the future.

The section on the left provides you with a list of your open and closed tickets. You can open the ticket in the unit by clicking on the spyglass icon next to the ticket number. Clicking on the ticket number will open the ticket in a new page.

ACCOUNT MANAGEMENT

The account management page is where you can update your profile information including: username, password, contact information, account settings, and notification configuration. You can also setup groups to put your units in to organize them on your page and more easily manage them.

ACCOUNT INFORMATION

The Account Information page is where you can update your contact information. We strongly recommend you enter your email address. We will need this for you to be able to reset your password when you forget it.

ACCOUNT SETTINGS

The Account Settings page has several options you can configure to make your WagNet experience better. These options include: which page you wish to be directed to when you log in, your time zone, and your preferred unit system (imperial, metric).

CHANGE YOUR PASSWORD

The Change Password page allows you to change your password at any time, given that you know your original password. If you don't, then follow these steps to request a new password.

1. Log out of WagNet.
2. Click the **Forgot?** button at the top right corner of the page by the *Login* button.
3. Fill in your email address and the human verification box.
We use the email address you have in your profile to identify your account and send you a new password.
4. Click **Reset Password**.

When you first log into WagNet we strongly recommend you visit this page to change your password.

NOTIFICATION CONFIGURATION

The Notification Configuration page is a special tool designed to allow you to create up to 10 personalized text message and email alerts when certain conditions are met by your units.

To setup a text message alert follow these steps:

1. The **Number** field tells you which alert configuration you are looking at. You can have up to 10.
2. Select either *Email* or *Phone* in the **Send to** dropdown box.
 - a. If you selected *Email*, enter your email address and click **Send Test Message** to see if the system is working for you.
 - b. If you selected *Phone*, enter your phone number (1XXXXXXXXXX) with no spaces or special characters, select your carrier, and click **Send Test Message** to see if the system is working for you.
3. **Silent Period** is a special optional field that will allow you to configure a time of day when you do not wish to receive any alerts.

Once you have these options selected, you can customize your alert for each individual unit or as a group by unit type. After you have done that, scroll to the very bottom and click **Update**.

GROUP SETUP

The Group Setup page allows you to place your units into groups to keep a more organized workspace on WagNet. By default your units will appear in a group called "Group 0."

The first column in Group Setup is the group number. Groups will be ordered throughout WagNet based on this field. The second column is the group name and will be how the group is identified throughout WagNet. The third column is the list of units by alias/serial number in each group. The fourth column is a number by which the units are ordered in the groups. They do not have to be exactly sequential. You can also have multiple of the same order #, in which case the units are ordered by other means depending on where you are viewing them. The default value for all units is 0. The last column is the button that, when clicked, will allow you to move each unit to other groups. When you click on the button, it will ask you which group number (based on column one) that you wish to move the units to. If you specify a group number that does not exist, a new group will be created for you which you can then name whatever you like.

Assign each unit a number. Units will be ordered by ascending order.

Group #	Group Name	Units		
0	Shared Pivots	Demo FC *	0	Change Group
		Berger 27284 PP *	1	Change Group
		FC 31906 *	3	Change Group
		42077 *	4	Change Group
1	Shared Crop Links	AgSense Weather *	0	Change Group
		FC 31906	3	Change Group
2	Shared Tank Monitors	Outdoor Tank 1 *	0	Change Group
		Outdoor Tank 2 *	0	Change Group
		Outdoor Tank 3 *	0	Change Group
3	Shared Aquatracs	Mid and S trees *	0	Change Group
* Shared unit				
Save Groups				

Figure 31 - Group Setup

When you are finished altering the group setup, click **Save Groups**. The changes should be immediate.

GETTING HELP

We have a variety of new features for providing you with information you need right on our WagNet site.

KNOWLEDGE DATABASE

The Knowledge Database is a repository for our frequently asked questions. It will not be very filled out as of the launch of the new WagNet site, but as time progresses, we will add more and more content for your needs.

You can find this page by clicking **Help** at the top of the page.

INSTALLATION GUIDES

The installation manuals are written by our Director of Engineering Mike Meyer specifically for each type of unit we have. They are organized by the year the unit was manufactured. So, for example, if you have a unit manufactured in the year 2013, then you would look at the manuals listed under 2013.

You can find this page by clicking **Help** at the top of the page.

CONTACT US

Most of the time you can contact us at our phone number 1-605-352-8350, but if you can't get a hold of us due to holiday or other reasons, please feel free to click the **Contact Us** link at the top of the WagNet page and send us an email.

TICKETS OVERVIEW

One of our biggest new features is our Ticket system. One of your concerns might be that this is a "take-a-number" system, but believe us it is not. This system provides us a way to keep track of conversations requiring multiple phone calls over periods of time. They can also be updated and monitored by you, our users. If you have tickets, you can view them at any time (even if they have already been resolved) by visiting your account page and clicking on **My Tickets** in the menu on the left side of the screen.

Both you and our support agents can assign units to the ticket, which will then allow you to view the ticket in the unit pages (see page 12) for those units.

Our advanced comment editor allows you to post more than just text comments in the ticket. You also have the ability to post pictures, videos, and links from the Web.