iControl
Remote

Thank you for purchasing the iControlRemote

The iControlRemote is manufactured under strict ISO 9001 quality standards in order to offer you the best possible control panel and also to make the handling of your Western/Pierce pivot safe and easy to use.

Index

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01
Before you start

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As you well know, from today on, you are able to manage your pivot(s) both from the electric panel at the pivot point and from any mobile phone, tablet or computer connected to the Internet. This will help you to be more productive and maintain total control of your irrigation operation, while improving your quality of life.

First things first. iControl Remote integrates a GPS receiver, which continuously gets the end tower position from a constellation of satellites. To allow iControl Remote to calculate the pivot's angle, it needs to know where the pivot point is located. We must configure this parameter before operating the pivot, so it will be drawn in the right field.

To do this you can use any smart phone (or handheld GPS) to find the GPS coordinates of the pivot point. Position yourself as close as possible to the pivot point manually holding the GPS enabled device and write down the GPS coordinates. Repeat the operation once again to double check.

iControl Remote sends and gets information from iControl Cloud Service. This requires 3G/GPRS coverage in all areas swept by the end tower. Make sure there is proper coverage in all locations.

Otherwise you won't be able to remotely control the machine while it's out of reach of GPRS/3G signal.

> **Very important:** to allow iControl Remote to control the pivots direction, you have to set **the panel's Direction selector to Autoreverse**. Otherwise you will not be able to change the running direction from the web interface.

Next all you have to do is access your pivot in icontrolremote.com with the user name and password provided. Since you'll have to write some figures, it may be easier to do the initial configuration using a tablet or laptop. Go to the "Setup" tab so you will be able to name and configure some basic parameters for your pivot:

Once in the setup tab, it will just take you 1 minute to set:

• Your pivot's name, plus the longitude and latitude of the pivot center.

• Minimum irrigation pressure below which you want an alarm to be sent out (this feature requires an optional water pressure sensor to be installed).

• The emails and phone numbers of those you want to receive alarms.

¡**Very important!:** Before you leave the setup tab, make sure to click on "Validate & Submit" button.
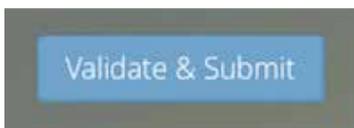
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02
Status Visualization and Basic Control

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Now you are ready to start operating your pivot without having to use the electric panel. Switch back to the Status tab and now you should see your pivot properly positioned over the right field.

This is the main information and operation window for your pivot:

Pivot status:

Over the map, you can see your pivot as a thick line plus an arrow. The area covered is represented as a circle.
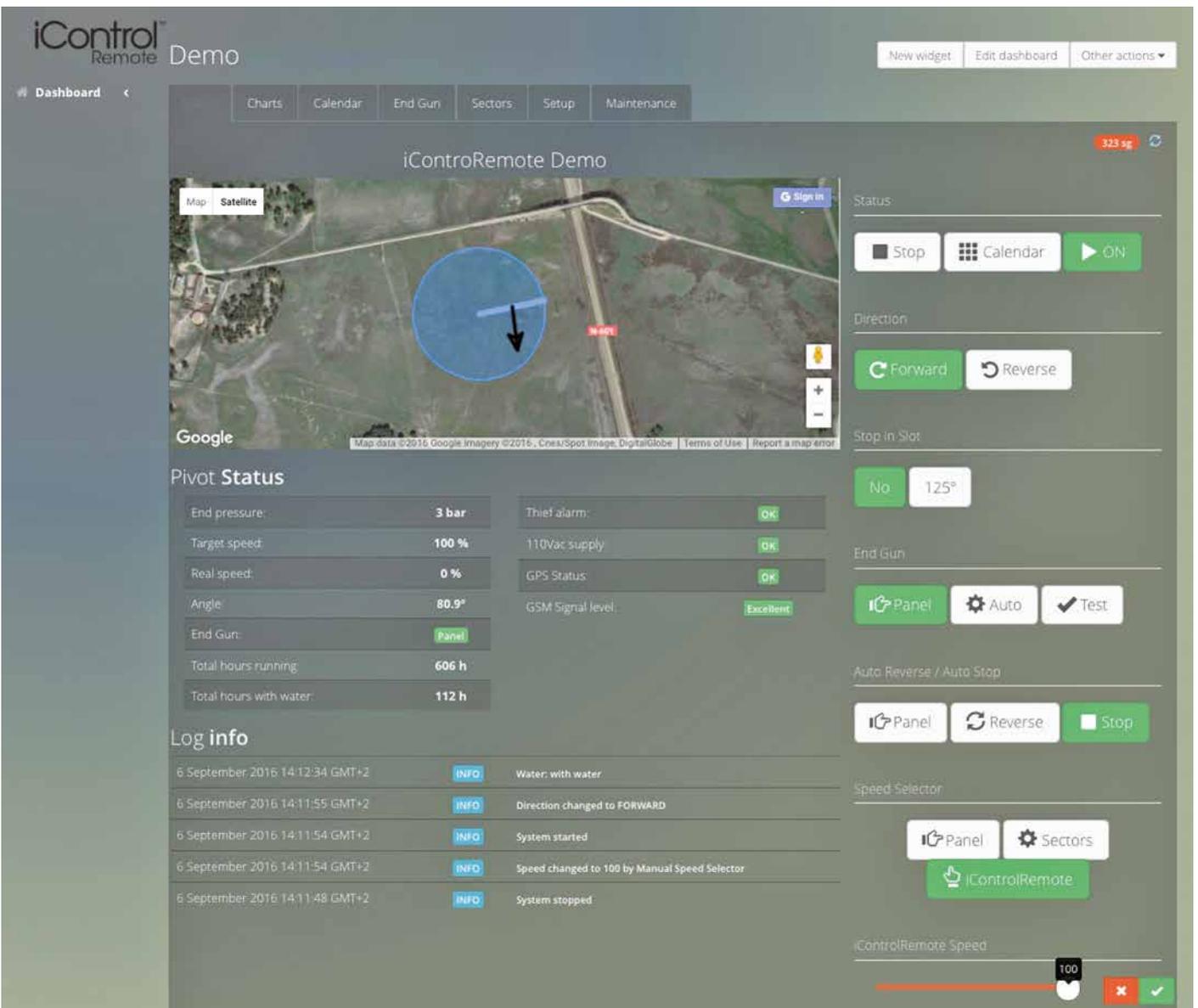
The arrow indicates the direction the pivot is set to run.

Different colors mean different status of the machine:

> **Black =** Stopped
> **Green =** Running without water
> **Blue =** Running with water

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End pressure: Water pressure read by the optional sensor installed at the last tower.

Target speed: Speed % set in iControl Remote (see bottom right corner). The pivot will move at this speed when the iControl Remote Speed Selector is set to iControl Remote.

Real speed: Current pivot speed (%).

Angle: Indicates pivot's position (North = 0º).

End Gun: Is controlled by (Panel/iControl Remote).
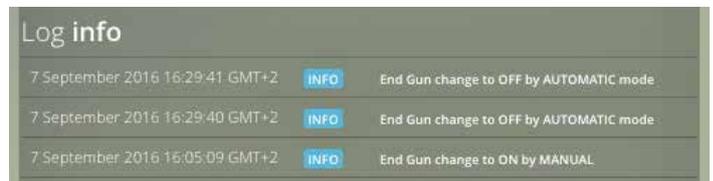
Thief alarm: Span cable integrity status.

120 Vac supply: iControl Remote power supply.

GPS status: Indicates the quality of GPS signal at the end tower.

**GSM signal level:** Level of 3G/GPRS signal the device gets...

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Brief history of the latest changes that occurred during manual and automatic operation.

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Last communication with iControl Remote cloud service:
The small seconds counter on the top right corner of the screen indicates when the last communication with iControl Remote cloud server took place. You can always force a refresh by clicking on the circular arrows on the right of the second counter. When the pivot is busy and many changes happen, communications with the Cloud service happen often. On the other hand, when the pivot is off and no changes happen communications are less frequent.
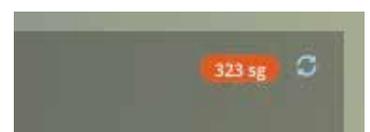
Remotely Controlling your pivot:

Set it to STOP immediately, START immediately or follow the calendar (see Program by Calendar chapter).

Set it to move FORWARD/REVERSE immediately.

Should the pivot Stop in Slot?

No = It won't stop when it reaches the angle.
Angle° = The pivot will stop at the angle defined in the sectors tab.

When does End Gun have to be turned on?

Panel: As set in the pivot's electric panel.
Auto: As configured in the sectors table (see End Gun tab).
Test: Opens the End Gun. Click a second time to close it.

When should the pivot AutoReverse/AutoStop?

Panel: Autoreverse/AutoStop funcion by angle will be disabled.
**Reverse:** AutoReverse when reaching the angles set in the sectors table (see Sectors tab).
Stop: Stop when reaching the angles set in the sectors table (see Sectors tab).

Pivot speed

Panel: As set in the pivot's electric panel.
Sectors: Different Forward and Reverse speeds for sectors defined in Sectors table (see Sectors tab).
iControlRemote: Speed set by the slider (move the slider and then click on the green button).
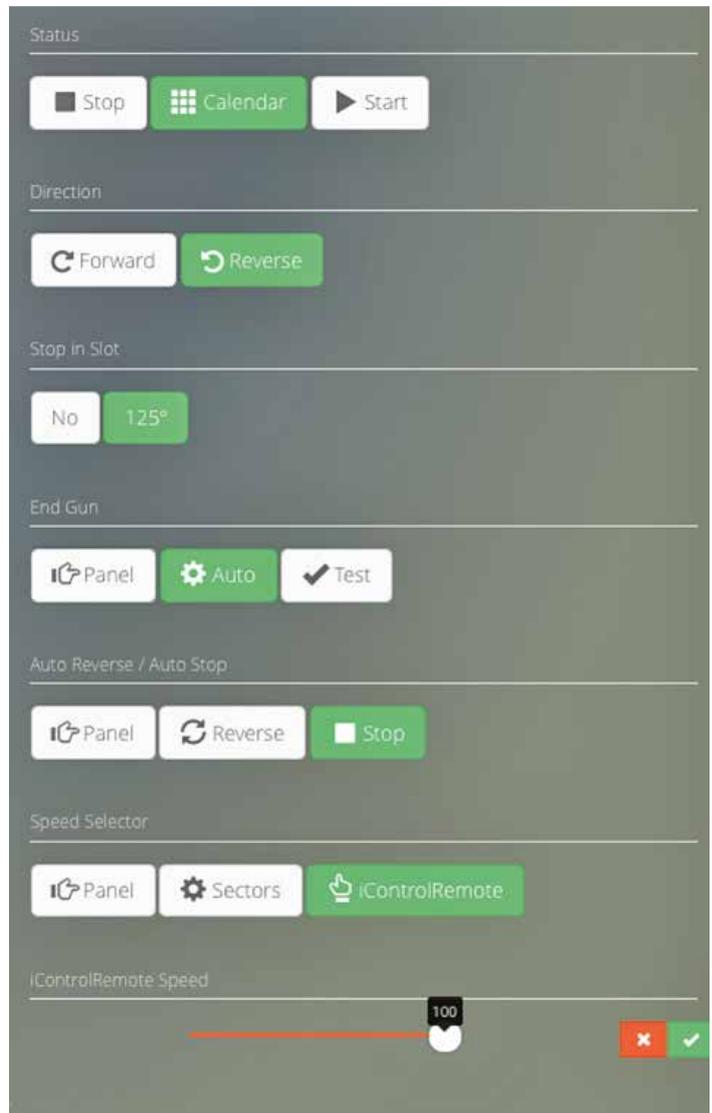
03
Sectors

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In many cases different crops and different areas of the field have different water needs. iControlRemote caters to this and makes it possible both to accurately apply different amounts of water as the pivot moves and have the pivot auto-reversing/stopping when it reaches a specific angle.

Setting different speeds on different sectors:

Pay a few seconds attention to the table displayed above, under the title "Sectors table". Here you can define the (left and right) angle limits for up to six sectors in your pivot's swept area. Going further, for every sector you can define two different speeds: % when going forward + % when going in reverse. Based on the information entered in this section, each time the pivot reaches one of the specified angles it will change its speed to adjust it to whatever you have specified in this table. Of course, there is no need to complete all possible sectors; you might have just 1 or two or, even, none.

Automatically reversing / stopping on the limits of a sector defined by two angles:

Some times there is just a sector of land we are working on and we want the pivot to irrigate it autoreversing every time it reaches its limits or stopping plus reversing plus waiting for further instructions when it reaches either limit.
Both for auto-reverse and auto-stop, a delay in minutes can be defined to make the pivot wait based on the information entered in this section so the right amount of water is applied in the area below where the pivot stops.
Once the right AR/AS angles have been defined, all that's left is to select how they have to be taken in to account. You can do this under the Auto Reverse/Auto Stop section in the main "Status tab".

Stop in Slot:

When you want to move the machine all the way to a required position without having to wait for it to reach such angle and then stop it, all you need to do is to indicate an angle where you want the pivot to stop. Then go to the "Status Tab" and click on the selected Stop in Slot angle and start the pivot in the direction you need. It will automatically stop when the "Stop in Slot" angle is reached and direction will be reversed.

04
End Gun
Automation

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Having iControl Remote controlling your pivot provides an easy way to remotely specify all sectors where the end gun has to open. Configuration is straight forward: for every sector where end gun has to be on, all you have to do is to complete the pair of angles limiting it.
Ah!, Don't forget to click on "Validate and Submit" once you finish (and before you leave the tab)!; otherwise all settings will be lost.
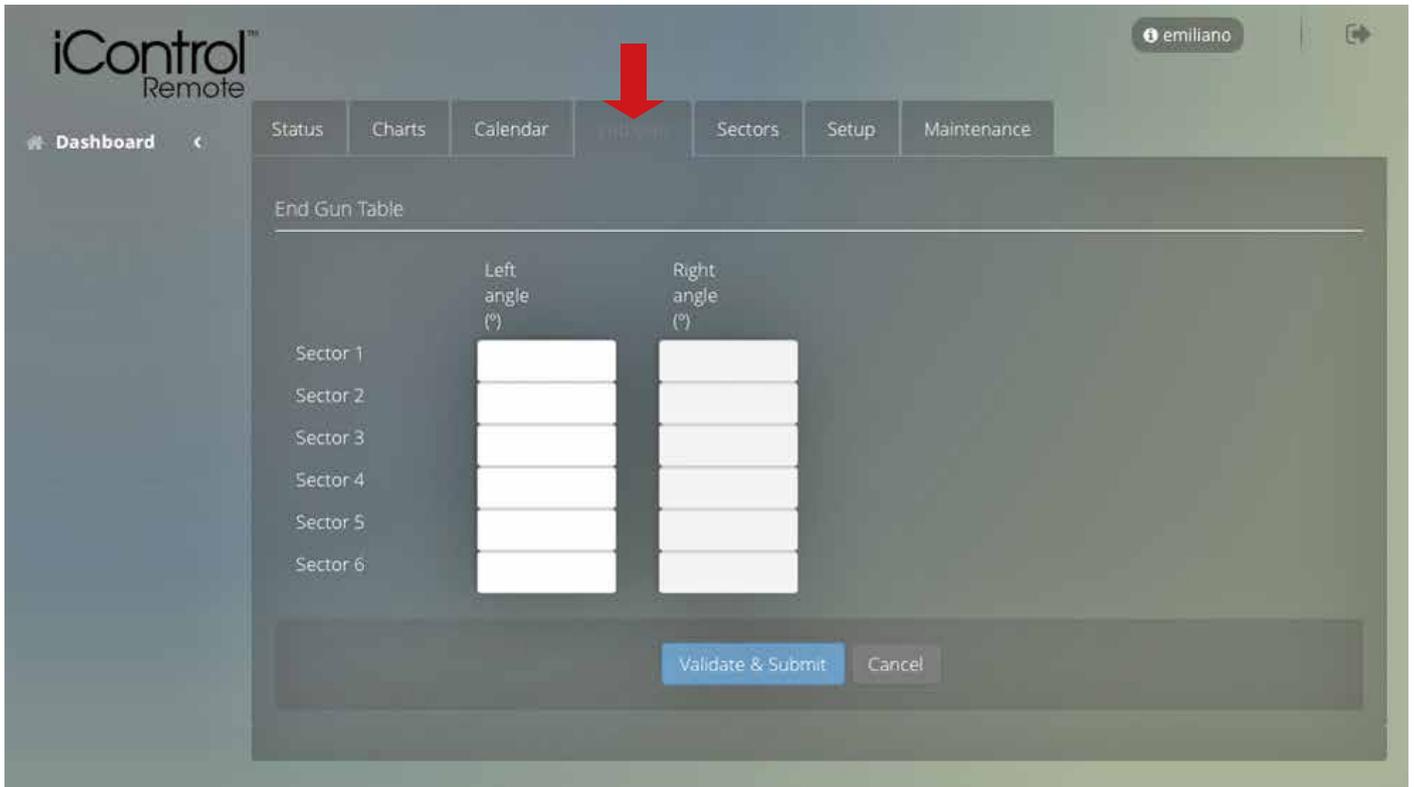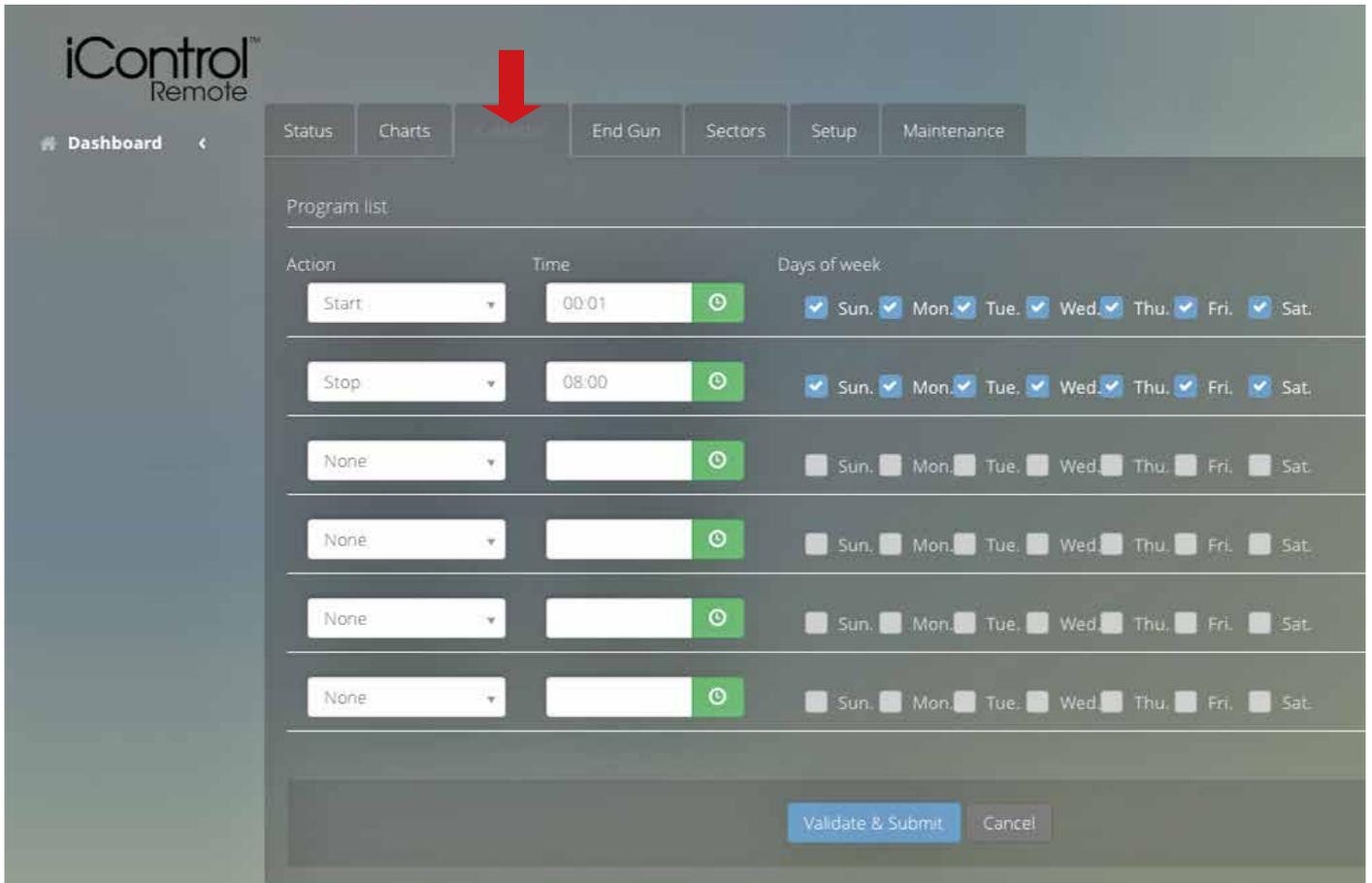
05
Programming by Calendar

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In this tab you'll be able, in no time, to set your pivot to repeatedly and automatically start and stop at given times on given week days. In the example below we are telling the controller to start operation every week day at 00:01 AM and stop at 08:00 AM. Very easy, isn't it?

06
Charts by Reporting

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By looking at the Status tab you will get accurate data on what the pivot is doing right now. That is extremely powerful since you will save both time and money while having consistent data at your fingertips 24 hours a day to make decisions.

Let us go a step further. What about checking what has happened last night during our irrigation operation? Or, even further, what are the main figures of last month's irrigation? The answer to all these questions and many more are available to view using the information entered in the "Charts" tab.

Then:

• In the blank variable bar select the parameters you want to chart.

• Pick a time range you want data to be represented (last 24 hours by default).

• Click on "Update Graph".

There you go! Now it's your turn to figure out whether what has happened is just what you expected. Sure you will be surprised from time to time. Of course, you can download the chart you are visualizing and original data to use in your own documentation (just click on "Download" and select the format more suitable for the use you are planning).
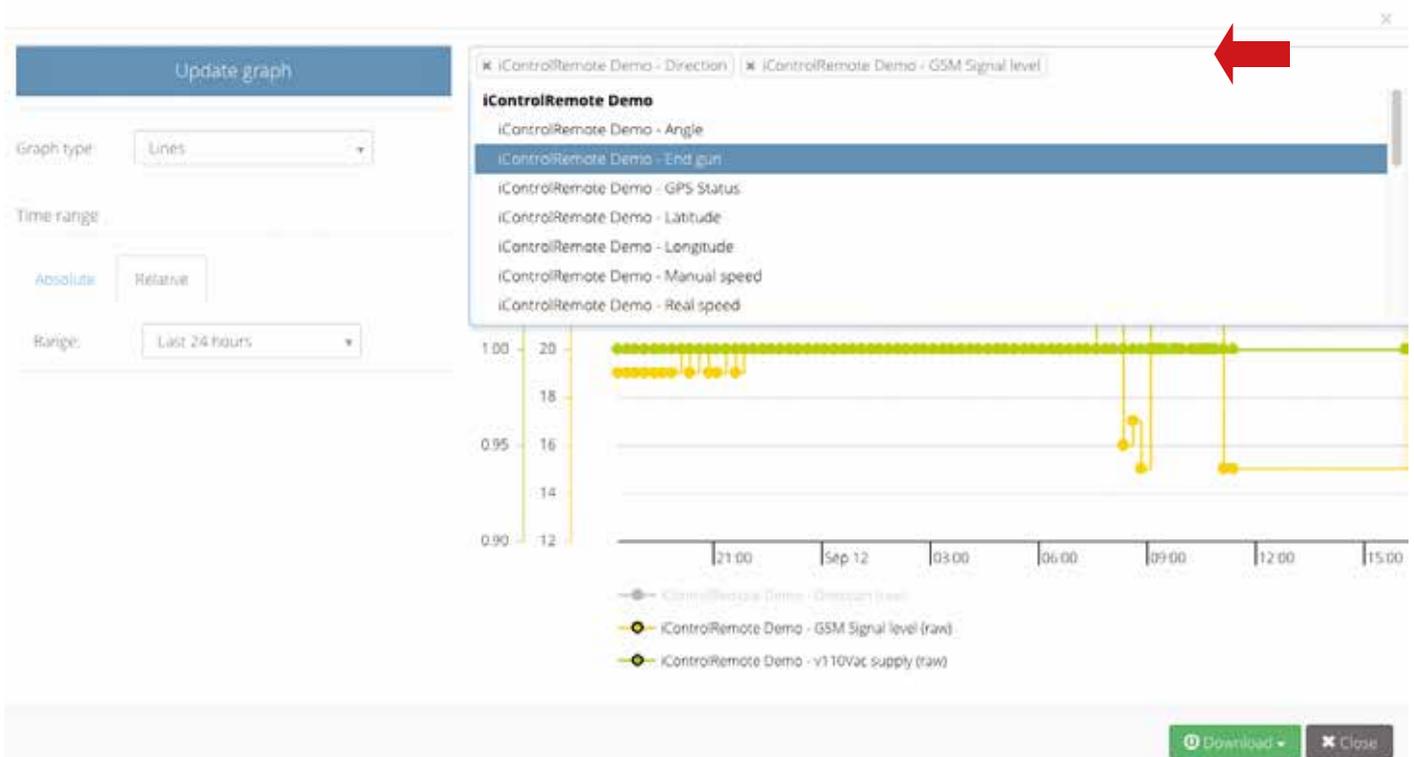
07
# Field View: When you are in charge of many pivots

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Owners of large operations will love what we call "Field View". When commissioning new pivots under iControl Remote you can request your local dealer to include all the machines you own/manage in this powerful and comprehensive way to get a grip on the day-to-day of your irrigation operation. Once you have it enabled, you'll see a new "Field View" element on the menu on the left.

When you select it, a window with all your pivot's basic status and positions will appear.
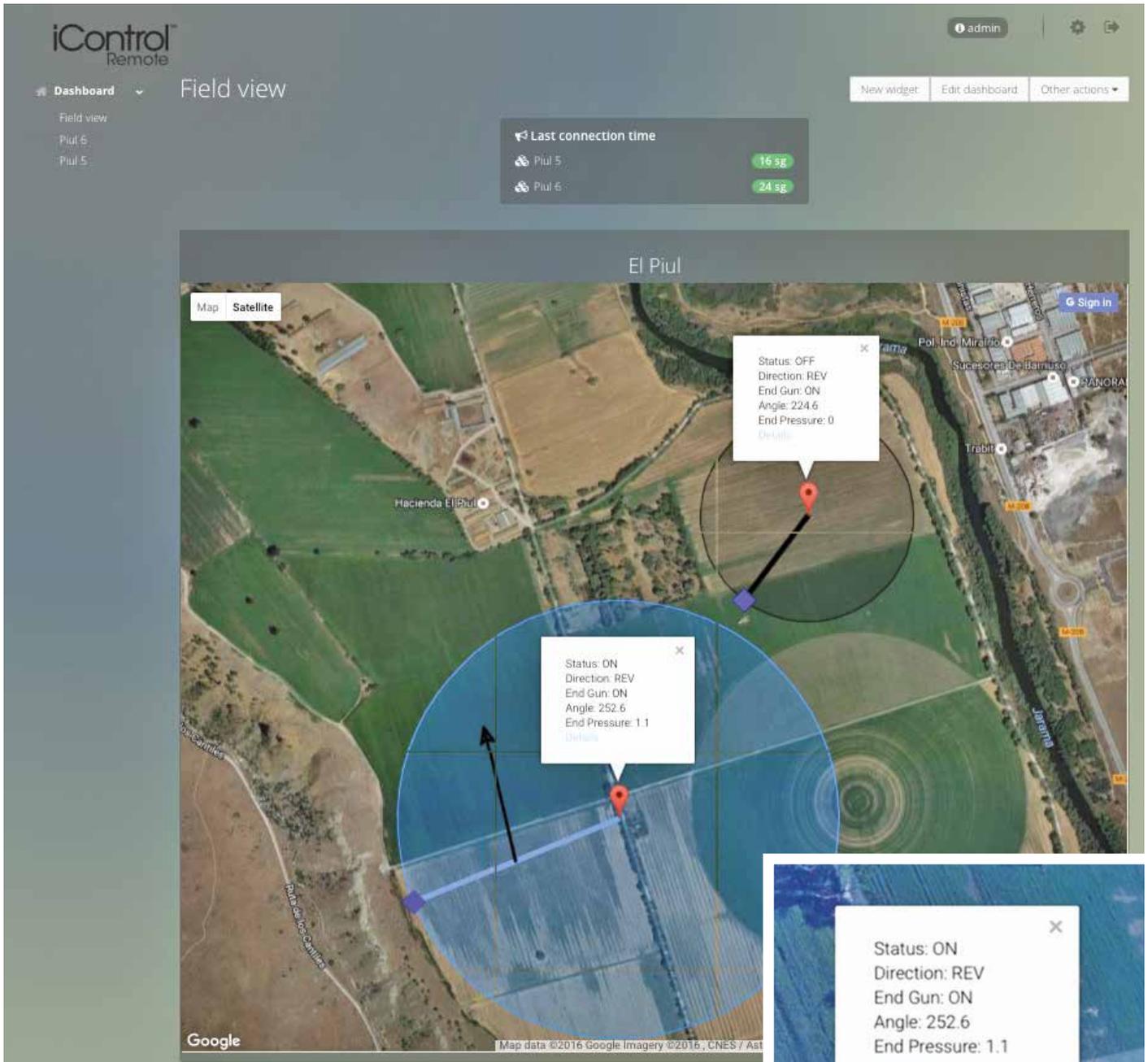
Want to access more specific details on any of the machines you are viewing or control/program it? Just click on the "Details" link you see below every pivot's basic status and it will take you to the pivot's "Status" tab so you can focus on such machine.
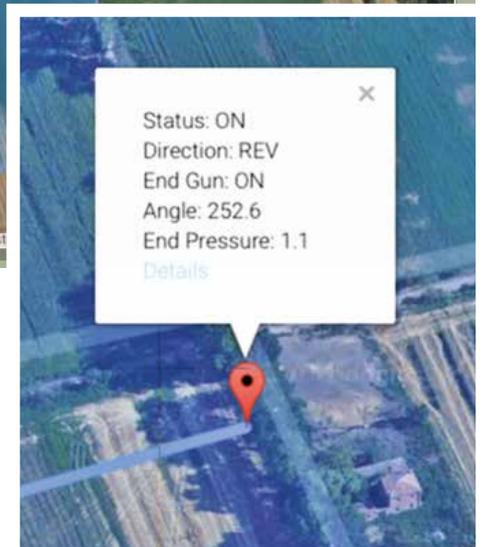
08
Troubleshooting

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iControl Remote has been designed, built and installed with reliability as the number one feature in mind. Despite this, things can sometimes go wrong, preventing you from accessing and managing your pivots from your smart device.

Here there are three points to check:

• Is your Internet connection working fine?

To answer this question all you have to do is visit a couple of web sites you are familiar with (i.e. www.google.com) and make sure they work just fine.

• Is the pivot powered-on?

Make sure the voltage supply to your pivot is connected.

• Is iControl Remote communicating fine with its associated Internet service?

You can check this out by clicking on the refresh button on the top right corner of the Status panel. Within a few seconds you should see how the counter "seconds since last communications" updates itself to some figure closer to present time. A lack of communications to the internet service could be caused by a failure in the mobile network coverage in the area where the end tower is at the present time. You might have to drive to the site and check it out; you need good coverage of, at least, one mobile phone operator. It doesn't matter which operator, iControl Remote can communicate World Wide using virtually any mobile network.

If the above isn't helping the situation, and since you're nearby the iControl Remote device mounted in the End Tower Box, you can check its communications status LED before calling your local dealer. You'll have to remove the white tower box cover. Please note: under strong sunlight you will need to cover the LED with your hands in order to see the flashing.

COMMUNICATIONS STATUS LED

1 blink every 4s = communicating OK

No blink = no power

0.5s ON/0.5s OFF = power but no mobile coverage

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