

Troubleshooting Guide

Frequently Asked Questions

Troubleshooting command problems

Problem	Possible Causes	Solutions
Start command does not work on TL unit with Start	<ol style="list-style-type: none"> 1. Switch at panel not set to remote 2. No power to unit 3. Unit not originally built as start unit. 	<ol style="list-style-type: none"> 1. Make sure switch at panel is set to local 2. Check voltage on Red and Red/Black wire 3. Check to see if unit is built for Start (24VDC relay is installed) 4. Check to see if Murphy switch is engaged.
The Valley pivot starts itself when the main disconnect is turned on.	<ol style="list-style-type: none"> 1. There may be voltage back feeding 	<ol style="list-style-type: none"> 1. May need to bypass the SIS in the collector ring.
Field Commander Start option doesn't start the pivot	<ol style="list-style-type: none"> 1. The pressure switch may need a delay timer or need to be bypassed. 2. There may be a manual SIS set at center. 3. The pivot may be touching the barricade. 4. No communication with the unit. 5. Green panel Zimmatic and some others require that pivot to be stopped by the Agsense unit before Agsense unit can start it. 	<ol style="list-style-type: none"> 1. Check wiring as specified in the manual. 2. Use a meter to test if the safety wire has 120VAC on it for 10 seconds when the start command is sent. 3. Check to make sure there is no manual SIS set at center 4. Check control panel to see if there are any settings preventing it from starting
Field Commander stop command doesn't work.	<ol style="list-style-type: none"> 1. Communication problem 2. Improper wiring – within Agsense unit. 3. Problems with pivots safety circuit 4. Safety circuit is wired differently than Agsense installation manual. 	<ol style="list-style-type: none"> 1. Check reading to see if command is Acknowledged 2. Check the wiring inside the Agsense unit – Red should be in position 4 and red/black in position 5 on the 24 position terminal. 3. Disconnect the Agsense red wire from the safety wire while the pivot is moving – the pivot should stop 4. Check to see if the relay clicks rapidly when the command is sent. If yes move the black Agsense wire so it is connected to the red instead of the red/black
Direction change not working	<ol style="list-style-type: none"> 1. Direction wires from Agsense unit not wired into pivot 2. AgSense method of direction change will not work on the pivot. 	<ol style="list-style-type: none"> 1. Check to make sure the Agsense orange and orange/black are connected to pivot direction wires 2. Perform direction control test as outlined in the installation guide.
Speed Control not working	<ol style="list-style-type: none"> 1. The panel is not set to 100%. 2. Communication problem. 	<ol style="list-style-type: none"> 1. Call AgSense – have a command sent to see if the LED 11 turns off when the

	3. Relay does not work in AgSense unit.	relay is engaged.(pivot moves when LED 11 is off and stops when LED 11 is on) 2. Check at the panel and make sure it is set to 100%
End gun will not turn on	1. Table may be incorrect 2. Communication problem 3. Problem with AgSense relay inside unit 4. Wiring problem	1. Check end gun table to see it is setup correctly and resend the table. 2. Have a command sent to turn the end gun on and see if LED 10 turns off inside the unit, relay engages and there is 120VAC on the brown end gun wire.

Troubleshooting communication

Problem	Possible causes	Solutions
LCD screen shows Field commander, Aqua Trac or Crop Link INSTALL continually	1. Antenna not connected properly. 2. Antenna Damaged. 3. Wrong modem type for the area.	1. Check that antenna cable is screwed onto the correct terminal inside Agsense unit. 2. Check antenna for any signs of damage. 3. Contact Agsense to verify modem information.
Agsense device loses communication	1. Area cell service has been interrupted. 2. Antenna or any of its connections may be damaged. 3. Low Battery.	1. Contact Agsense or consult wagnet.net for news on connection outages. 2. Check unit for damage to cell antenna. 3. Check battery within unit. 4. Reset unit.

Troubleshooting GPS

Problem	Possible causes	Solutions
Unit is not reporting latitude and longitude	1. Pigtail from GPS module to External antenna has come loose. 2. External antenna is not screwed on tightly. 3. External antenna is damaged. 4. External antenna is obstructed from having clear view in all directions. 5. Problem with GPS chip on PCB board.	1. Check antenna and pigtail for damage or loose connection. 2. Power cycle the unit. 3. Reset the unit. 4. AgSense may require return for RMA repair.

Picture is not showing correctly on the web	<ol style="list-style-type: none"> 1. Length is entered incorrectly in main configuration. 2. Center is incorrect. 	<ol style="list-style-type: none"> 1. Check the length on main configuration. 2. Confirm center by copying coordinates from the last reading (on readings tab) and re-centering the unit on the main configuration tab. 3. Click on save settings on the main configuration tab so that the coordinates are sent to the Agsense unit (pivot must have power for this to work effectively)
Unit has a basic fix (display on web is yellow for the GPS)	<ol style="list-style-type: none"> 1. This is acceptable 	<ol style="list-style-type: none"> 1. To verify if there is a problem. Check the antenna to ensure it has a clear view of the sky in all directions and that it is level.

Troubleshooting internal hardware

Problem	Possible causes	Solutions
No LCD display	<ol style="list-style-type: none"> 1. No power to unit 2. Battery is low (must have 3.7VDC) 3. Solar unit normal state between readings. 	<ol style="list-style-type: none"> 1. Check to see that the power switch is turned on. 2. Does the unit have 120VAC on terminals 1 and 2 on the terminal strip? 3. Check for 12VDC or 5VDC at the test points just below the battery. 4. Remove battery plug and check battery voltage (must be 3.7VDC to 4.2VDC)
Low Cell Signal	<ol style="list-style-type: none"> 1. Improper installation of antenna. 2. Antenna damage 3. Wrong modem type for area. 	<ol style="list-style-type: none"> 1. Check that the antenna cable is screwed onto the correct terminal inside the Agsense unit. 2. Check for Antenna damage. 3. Contact Agsense for correct modem information.
Battery will not hold charge (3.7VDC to 4.2VDC)	<ol style="list-style-type: none"> 1. Power issue 2. Voltage being drained 3. Failed battery. 	<ol style="list-style-type: none"> 1. Make sure CHR5V LED is lit up solidly. 2. Check 5VDC test point to see if charging chip is functioning. 3. Remove pressure transducer and watch to see if battery begins to charge. 4. Unplug battery and test voltage (may need new battery)
Internal Charge light is not on (CHR5V)	<ol style="list-style-type: none"> 1. No power coming to Agsense unit 2. Transformer Failure 3. Problem with wire harness 	<ol style="list-style-type: none"> 1. Check terminal 1 and 2 for 120VAC 2. Check the 12VDC and 5VDC test points below the battery 3. Check the wire harness is plugged into the 24 pin receptacle
Start relay clicks on and off when sending a start command	<ol style="list-style-type: none"> 1. Improper 120VAC connection in panel 	<ol style="list-style-type: none"> 1. At the panel make sure the 120VAC for the panel and the end gun wire that powers the Agsense unit come from the same source.

Troubleshooting pressure

Problem	Possible causes	Solutions
Not showing water pressure	<ol style="list-style-type: none"> 1. Pressure not selected on main configuration page. 2. Unit configuration has not been updated and sent. 3. Transducer is not wired correctly. 	<ol style="list-style-type: none"> 1. In main configuration select appropriate transducer 2. Send unit a new configuration by clicking on save settings on the main configuration tab (unit must have power) 3. Check transducer wiring – black is 22, white is 23 and red is 24 on the terminal strip. 4. If above fails replace transducer.
Pressure show NA on the web	<ol style="list-style-type: none"> 1. No Pressure transducer is installed. 2. Pressure transducer wiring disconnected. 3. Pressure not selected in the main configuration. 	<ol style="list-style-type: none"> 1. Check to see if a transducer has been installed and is wired correctly. 2. In the main configuration tab select appropriate transducer 3. Send an updated configuration to the unit by clicking save settings on the main configuration page (unit must have power) 4. If all above fails replace transducer.
Pressure reading is not accurate	<ol style="list-style-type: none"> 1. Incorrect type of transducer chosen. 2. Problem with transducer. 	<ol style="list-style-type: none"> 1. In main configuration select the correct transducer. 2. Send a new configuration to the unit by clicking on save settings on the main configuration page (unit must have power). 3. Check transducer for dirt or other contaminate.

Troubleshooting Txt messaging

Problem	Possible causes	Solutions
Not receiving text messages	<ol style="list-style-type: none"> 1. Improper carrier chosen 2. Text messaging not setup properly 3. Pivots not selected for text messaging. 	<ol style="list-style-type: none"> 1. In the txt msg configuration check the cell phone provider chosen. 2. In the txt msg configuration make sure the customers phone number is entered in. 3. Check each pivot /unit in the list to see if the check marks are in place for desired alerts 4. Send a test text message.

Receiving numerous stuck messages.	<ol style="list-style-type: none"> 1. Length, run time and center set incorrectly 2. Unit is not displayed in the correct field 3. Extra readings, causing false stuck messages may be triggered by direction changes or run table entries. 	<ol style="list-style-type: none"> 1. Check to make sure length and run time are accurate on main configuration tab. 2. Check to make sure center is set correctly 3. Review readings tab
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Troubleshooting web problems

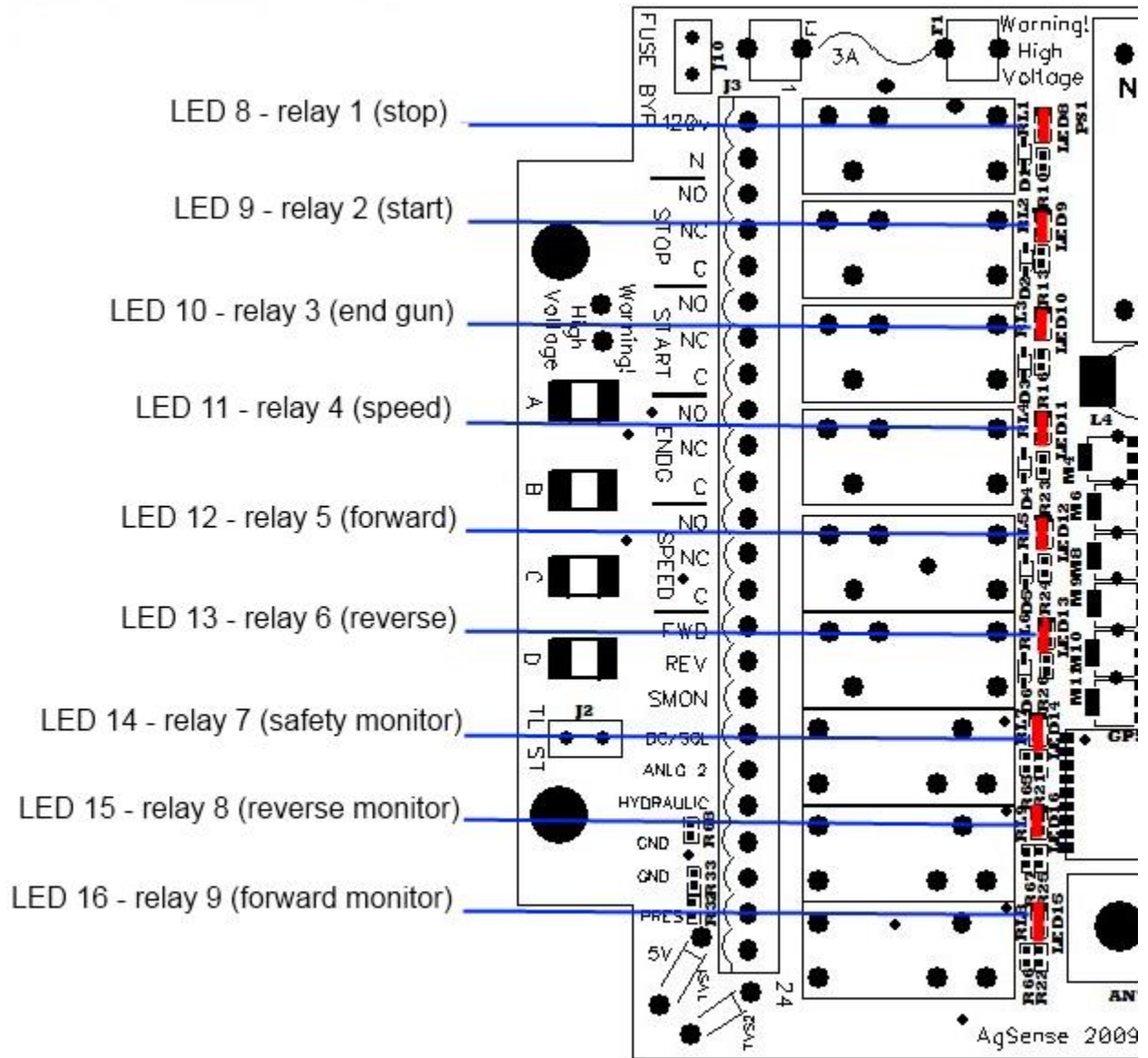
Problem	Possible causes	Solutions
Field commander shows speed of 100% but it really going 30%	<ol style="list-style-type: none"> 1. Length and full run time in main configuration may be incorrect. 2. The panel is not set to 100% for Agsense to control 3. Using panel to control pivot and web page set to control speed at 100% 	<ol style="list-style-type: none"> 1. Check the length and full run time in the main configuration. Adjust and resend the configuration 2. Set the panel to 100% and use the web interface to control the speed. 3. If using the panel, set the speed on the web to off. This will allow us to calculate speed accurately.
Stop at angle doesn't work	<ol style="list-style-type: none"> 1. GPS not working or showing accurate angle 2. Command not acknowledged 3. Command sent when pivot too close to or past preferred stop angle. 	<ol style="list-style-type: none"> 1. Ensure unit is centered and configuration sent to unit by clicking on save settings on main configuration page 2. Check web page for a yes beside the commands sent. 3. Send a stop at clear command and then send a new stop at angle command that isn't too close to the current angle (or wait until a reading comes in and base the command from this angle.

Tools and Equipment

It is recommended, when installing or working on and AgSense Field Commander, Crop Link or Grain Trac, that the following equipment be taken to the field.

- Phillips screwdriver (#2)
- Standard screwdriver (1/8 x 3/16")
- Volt meter which will measure 120VAC and 7-40VDC
- Extra Lithium ion battery (if available)
- AgSense installation guide
- Wire strippers
- Mounting hardware included with your AgSense device.
- 7/16" wrench
- Standard Precision screwdriver with a 2mm tip (Used to install accessories for the Crop Link)

LEDs in a Field Commander



Crop Link General Overview

