

i4M Spreader Troubleshooting – All Machines
Android Tablets
Version 301

Controller Startup and Connecting

Startup

The i4M controller takes 5 seconds to boot up. Check the diagnostic LED on the controller.

- LED off = no power
- LED red = booting up, please wait
- LED green = controller is running and wifi is OK

Connecting to Controller

- The controller has a wifi hotspot
- Connect the Android Tablet to MACHINE WIFI
- Ignore the 'No Internet' warnings
- The i4M app will warn you if it's not connected to the controller
- To view hopper kg on your phone, you can open a web browser and enter this address: 192.168.50.50

Power and Fuses

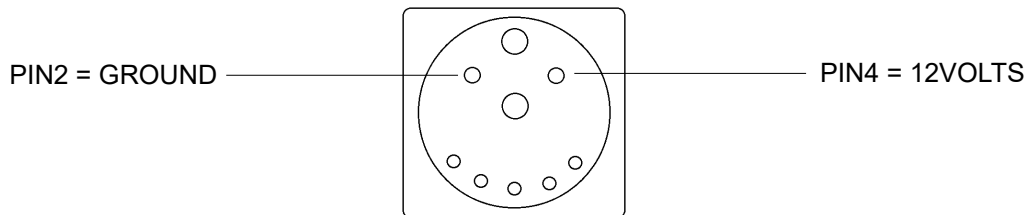
Power Check

Controller has a LED to show power

- LED off = no power
- LED red = booting up, please wait
- LED green = controller is running and wifi is OK

Power From the Tractor ISO Socket

- Use the tractor ISO socket if equipped (It does NOT use ISOBUS, it uses power and ground only)
- Check the tractor has power and ground on the pins below



View: Looking into the tractor ISO socket

Power From the Battery or Cab

- Other power supplies should be 12volts capable of 20amps
- Power should be taken after the battery isolator (so the controller turns off when the isolator is off)
- If wired direct to battery, unplug the spreader connector when not in use

Blown Fuses

If the supply harness goes to the isolator or battery, the main fuse is on the positive connection. If the supply harness goes to the ISO socket, the fuse is part of the tractor wiring.

- Check the power harness and spreader harnesses for damage or shorts
- Unplug the controller and actuator, power up the harness

The door actuator has internal protection, power off and on again, manually move it up/down.

- Check for jammed or sticking door
- Check wiring into actuator
- Possible actuator fault

Spinner Speed

Spinner Speed always zero or jumping around

- The sensor on the spinner shaft must be 2mm away from the metal tag
- Check the light on the sensor turns on, each time the tag passes the sensor
- Check connector pin A has ground
- Check connector pin B has 12 volts
- Check connector pin C has 5 volts

Ground Speed

Ground Speed is always zero or jumping around

- Ground drive has a sensor on the gearbox drive wheel
- Hydraulic drive has a sensor on the spreader axle
- All sensors must be 2mm away from the tooth or metal surface
- Check the light on the sensor turns on for each passing tooth
- Check connector pin A has ground
- Check connector pin B has 12 volts
- Check connector pin C has 5 volts

Ground Speed too low or too high (doesn't match the tractor speed)

- Speed comes from GPS, it can't be adjusted

Hectares

Hectares too low or too high

- Tap COUNTERS > HECTARES and adjust the fine tune
- Check that your spread width is correct in PRODUCT

Rate Problems

Actual Rate always zero or jumping around when belt is turning

- Hydraulic drive has one sensor on the hydraulic motor
- All sensors must be 2mm away from the tooth or metal surface
- Check the light on the sensor turns on, for each passing tooth
- Check connector pin A has ground
- Check connector pin B has 12 volts
- Check connector pin C has 5 volts

Product is going out too heavy

- Check that the hectares are counting correctly
- Check the spread width is correct, tap PRODUCT
- Check sensor pulses is correct in SETTINGS > MACHINE (see Technote 19006 online)
- Increase the Calibration Factor, tap PRODUCT
 - If product is 10% too heavy, increase the Calibration Factor by 10%

Product is going out too light

- Check that the hectares are counting correctly
- Check the spread width is correct, tap PRODUCT
- Check sensor pulses is correct in SETTINGS > MACHINE (see Technote 19006 online)
- Decrease the Calibration Factor, tap PRODUCT
 - If product is 10% too light, decrease the Calibration Factor by 10%

Unblock Door

- On work screen, hold 'Unblock' button to raise door
- Release button to set door back to spreading height
- Belt will slow down as door is raising, this prevents high output rate

Door Actuator

Door Actuator height problem or won't move

- The door actuator requires high power, bad connections and low voltage will cause random issues
- Tap MACHINE > SETTINGS confirm 'Door Actuator is Installed'
- Check for jammed door
- Check the actuator fuse (if installed on the actuator harness)
- Do the 'Reset Actuator' steps in CHECKS > DOOR
- Do the 'Calibrate Door Sensor' steps in CHECKS > DOOR

Checking the height sensor and motor

- Tap CHECKS > DOOR
- Tap open, door should open fully, Door Sensor = approx 0mV, Actual Height = approx 240mm
- Tap close, door should close to 10mm, Door Sensor = approx 10000mV, Actual Height = approx 10mm
- Do the 'Calibrate Door Sensor' steps in CHECKS > DOOR

Hopper kilograms (with Loadcells)

Kilograms always show zero

- Check the loadcells have been calibrated
Tap SETTINGS > HOPPER
Empty the hopper, tap EMPTY
Dump a known amount of weight in the hopper, type in the kg

Kilograms drift up and down

- Check all loadcells for damaged wiring

Loadcell electrical checks

- Check the loadcell signals
Tap CHECKS > LOADCELLS
Check the Loadcell readings, less than 40 000 is faulty, greater than 100 000 is faulty
Check the power to each loadcell module, deutsch 4pin connector, Pin1=12volts Pin4=Ground

Hopper kilograms (without Loadcells)

Machines without loadcells

- The readout is a kg countdown, if the speed or rate is wrong, this countdown will be wrong
- Check the output rate is reading correctly when spreading

Alerts on Screen

Spinner speed is low

- Check the spinners are turning (greater than 200rpm)
- The sensor on the spinner shaft must be 2mm away from the metal tag
- Check the light on the sensor turns on, each time the tag passes the sensor
- Check connector pin A has ground
- Check connector pin B has 12 volts
- Check connector pin C has 5 volts

The rate does not match your desired rate

- Check the belt is turning when spreading
- Check the GPS speed is reading correctly, tap CHECKS > BELT > SPREADING TEST
- Check the belt speed is reading correctly, tap CHECKS > BELT > SPREADING TEST
- Hydraulic drive has one sensor on the hydraulic motor
- All sensors must be 2mm away from the tooth or metal surface
- Check the light on the sensor turns on, for each passing tooth
- Check connector pin A has ground
- Check connector pin B has 12 volts
- Check connector pin C has 5 volts
- Hydraulic drive machines
 - With door actuator, tap CHECKS > DOOR, check that Target Height and Actual Height are similar
 - Without door actuator, check the door height setting, tap JOB SETUP
 - Confirm the machine has the correct settings, tap SETTINGS > MACHINE
 - If slowing down fixes the problem, tap JOB SETUP and increase the door height
 - Increase hydraulic flow to the belt (too much will overheat)
 - Increase the engine RPM

Door problem, Reset the Actuator in CHECKS DOOR menu

- Tap SETTINGS > MACHINE confirm 'Door Actuator is Installed'
- Check for jammed door
- Check the actuator fuse (if installed on the actuator harness)
- Do the 'Reset Actuator' steps in CHECKS > DOOR

GPS Coverage and Auto Shutoff

Auto Shutoff not working

- On Work Screen tap OVERLAP/SHUTOFF button
- OVERLAP will not shut off, just keeps overlapping
- SHUTOFF will stop spreading when the coverage overlaps
- If the app doesn't draw coverage, follow the steps below

Coverage not showing on Work Screen

- Tap MACHINE > CHECKS > GPS and confirm the receiver is online
- If not online, change the controller network to RECOVERY MODE in SETTINGS > DEVICE and recheck
- If there are other i4M machines nearby, turn them off, restart this machine and recheck
- If still not online, check 12V power and Ground to the receiver
- Confirm the belt sensor is reading correctly (see RATE PROBLEMS section above)
- On the work screen, tap MENU > VIEW ALL
- Maybe there is some old coverage far from your current location, so Delete Coverage and try again

Coverage is leaving gaps or too much overlap

- Confirm the belt sensor is reading correctly (see RATE PROBLEMS section above)
- Tap MACHINE > SETTINGS > OVERLAP and adjust the 'Coverage Overlap' setting
- Tap MACHINE > SETTINGS > BELT MOTOR and adjust the hydraulic valve settings to alter the response time
- The coverage painting is a guide, verify the actual coverage on the ground instead

Implement bar does not draw correctly on the screen

- Tap MACHINE > SETTINGS > OVERLAP adjust the Length to Spinners

The Coverage Map looks different to the tractor coverage map

- This is normal, the GPS accuracy and drawing tools are different to the tractor

Tractor Hydraulics

Connecting and setup

- Connect to standard remotes, Do not use high flow return, Incorrect return will damage the tractor
- Low engine RPM will cause Spinner and Belt issues – see Operators Guide for details

Hydraulic Belt Drive

Belt won't move

- Check for locked couplers
 - Dial the hydraulic flow down
 - Gently flick the hydraulics forward and backwards a few times
- Set the tractor hydraulic flow to 50% and the time to constant
- On the tablet tap CHECKS > BELT MOTOR and send a Manual Command of 100
- Warning: do not run the belt backwards
- Engage the tractor remote lever
- If the belt doesn't move
 - Engage the lever the opposite direction
 - Check for locked couplers (unplug hoses and plug back in) and retry
 - Change hoses to a different hydraulic remote and retry
 - Test the connector on the PWM solenoid, there should be 12 volts when the Manual Command is 100

Belt stops and starts

- Ground drive conversions – the big chain on the right hand side is jumping
- The hydraulic settings may need adjusting, see SETTINGS > BELT MOTOR
- The product setup may be wrong
 - The controller thinks it's putting out way too much product so it stops the belt
 - Then it starts it again
 - Go through product setup and calibration values

Maps and Tablet

Phone network signal

- The i4M app will work without phone signal
- You need a Phone signal to download maps in the field
- You can connect the tablet to any internet wifi or phone hotspot to download maps
- After downloading maps, connect to the i4M controller on the spreader

Cannot download maps to the Tablet

- Check that you are logged in, goto Info > User
- Connect the tablet to your phone hotspot, or office wifi etc
- Check that you have an internet connection
- Check that you have maps ready to download, on the i4M cloud

Username and Password

- The username and password is the same for the tablet and the online i4M cloud
- To reset your password email PAA support admin@precisionag.com.au

Uploading prescription maps to the cloud

Each map is a shapefile in a single zip folder. It must contain these files:

.shp
.shx
.dbf