i4M Troubleshooting – Sprayer
Android Tablets
Version 201

<mark>Maps and Tablet</mark>

SIM Card and network signal
- The i4M app will work without phone signal
- It also works without a SIM card
- A sim card and phone signal is required if you want to download maps in the field
- You can connect the tablet to any internet wifi to download maps
- After downloading maps, you can connect to the i4M controller on the machine

Cannot download maps to the Tablet
- Check that you are logged in under the user tab
- Check that you have an internet connection
- If you have a SIM card in the tablet, check it has phone signal
- If you don't have a SIM card, disconnect from the i4M controller wifi, connect to your phone hotspot, or office wifi etc
- Check that you have maps ready for download, on the i4M cloud

Username and Password
- The username and password is the same for the tablet and the online i4M maps server
- 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
- The shapefile names and the zipped folder name must be the same
- Exampe: NewShape.zip   contains these files: NewShape.shp   NewShape.shx   NewShape.dbf

<mark>Controller Startup and Connecting</mark>

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 available

Connecting to Controller
- The controller has a wifi hotspot
- Connect the Android Tablet to MACHINE WIFI 1
- Ignore the 'No Internet' warnings (the controller is not connected to the web)
- The i4M app shows the connection status on the Work Screen
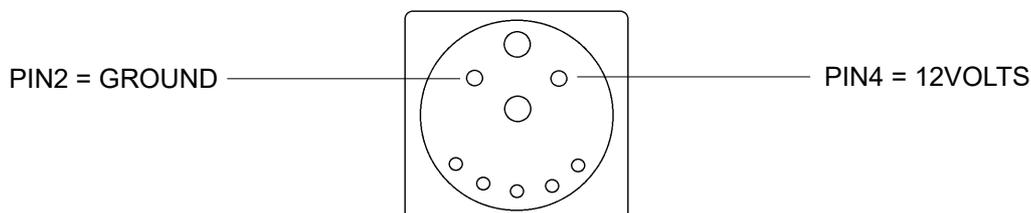
<mark>Power and Fuses</mark>

Power Check
Controller has a LED to show power, on the connector face
- LED off = no power
- LED red = booting up, please wait
- LED green = controller is running and wifi is available

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

PIN2 = GROUND ———   ——— PIN4 = 12VOLTS

View: Looking into the tractor ISO socket

Power From the Battery or Cab
 • Power supply must be 12volts and capable of 10amps
 • Power should be taken after the battery isolator (so the controller turns off when the isolator is off)
 • If wired direct to battery, the 3pin power connector must be unplugged when not using the machine

Blown Fuses
 • If the supply harness goes to the cab 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 for damage or shorts

<mark>Spray Control Problems</mark>

Spray rate is jumping around
 • Pump running, go to CHECKS > MACHINE, turn sections on, check the 'Flow Per Min' reading is smooth
 • Follow steps to fine tune the valve, go to SETTINGS > ADJUST
 • Check the gps speed is smooth, go to CHECKS > GPS

The machine won't spray
 • Check the valves are moving
      Turn power on, leave tractor off and the pump off
      In the app go to CHECKS > MACHINE
      Operate the section valves and the reg valve
      Can hear the valve motors moving?
 • Causes for the valves not moving
      Valve power/ground problem, check harness pinout tables
      Failed valves, check motor power/ground and the switch on/off signal at the valves
      Controller problem, check controller harness connectors

 • Check the pump is working
      Turn power on, tractor running and pump on
      In the app go to CHECKS > MACHINE
      Operate the section valves and the reg valve
      Does the pressure reading show pressure?
 • Causes for no pressure
      Valves moving the wrong way, go to SETTINGS > CONFIG
      No output from pump
      Dump valve stuck open
      Reg valve not adjusting, not building up pressure

 • Check there is gps speed, go to CHECKS > GPS

<mark>Pressure Reading Problems</mark>
Pressure reading is jumping around
 • Check the spray control problems above
 • Calibrate the pressure sensor in SETTINGS > ADJUST
 • Check sensor supply power/ground, using pinout tables below
 • Remove sensor and inspect for debris

<mark>Alerts on Screen</mark>
The output rate is not matching the target rate
 • Check the spray control problems above
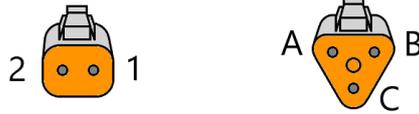
<mark>Coverage and Auto Shutoff</mark>
Too much overlap or gaps in the coverage
 • Adjust the coverage setting in SETTINGS > ADJUST
 • Move the gps unit further forward (if it is mounted to the sprayer, move it to the tractor)
 • The gps must be in the centre of the machine

Connector pins
  • These are the pinouts on the i4M harness, you need to wire the valves to match this
  • Diagram shows male connectors with female pins (looking into the pins)

2 Pin Connectors	Pin 1	Pin 2
Reg valve 2-wire (increasing sprayer output)	12V	Ground
Reg valve 2-wire (decreasing sprayer output)	Ground	+12V

3 Pin Connectors	Pin A	Pin B	Pin C
On/Off valves 3-wire motorized	Ground	+12V Supply	+12V Switch on/off
On/Off valves 2-wire solenoid-coil	Ground	Don't connect	+12V Switch on/off
Flow meter	Ground	+12V Supply	Flow signal
Pressure sensor	Ground	+12V Supply	Pressure signal
Power connector on the tractor harness	Spray on/off	Ground	+12V Supply

Controller Orange 12-Pin Connector	
Pin 1	+12V Supply to controller for electronics
Pin 2	Ground to cont
Pin 3	Spray on/off switch in tractor cab (momentary on/off button)
Pin 10	Flow meter signal

Controller Green 12-Pin Connector	
Pin 1	+5V Supply (if required for flow meter / pressure sensor)
Pin 2	Pressure sensor signal
Pin 7	Reg valve increase
Pin 8	Reg valve decrease

Controller Orange 6-Pin Connector	
Pin 1	Ground to controller
Pin 2	Boom section 3 or fence jet
Pin 3	Dump valve
Pin 4	Boom section 1
Pin 5	Boom section 2
Pin 6	+12V Power to controller for drivers/switches