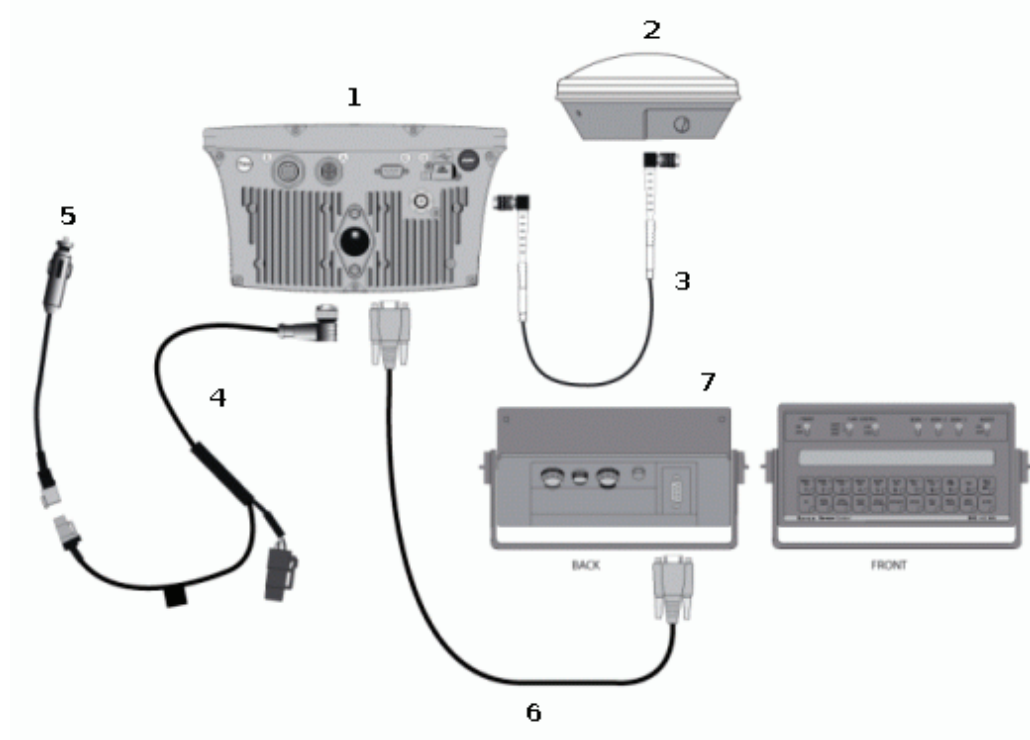


# Raven Variable Rate Controller

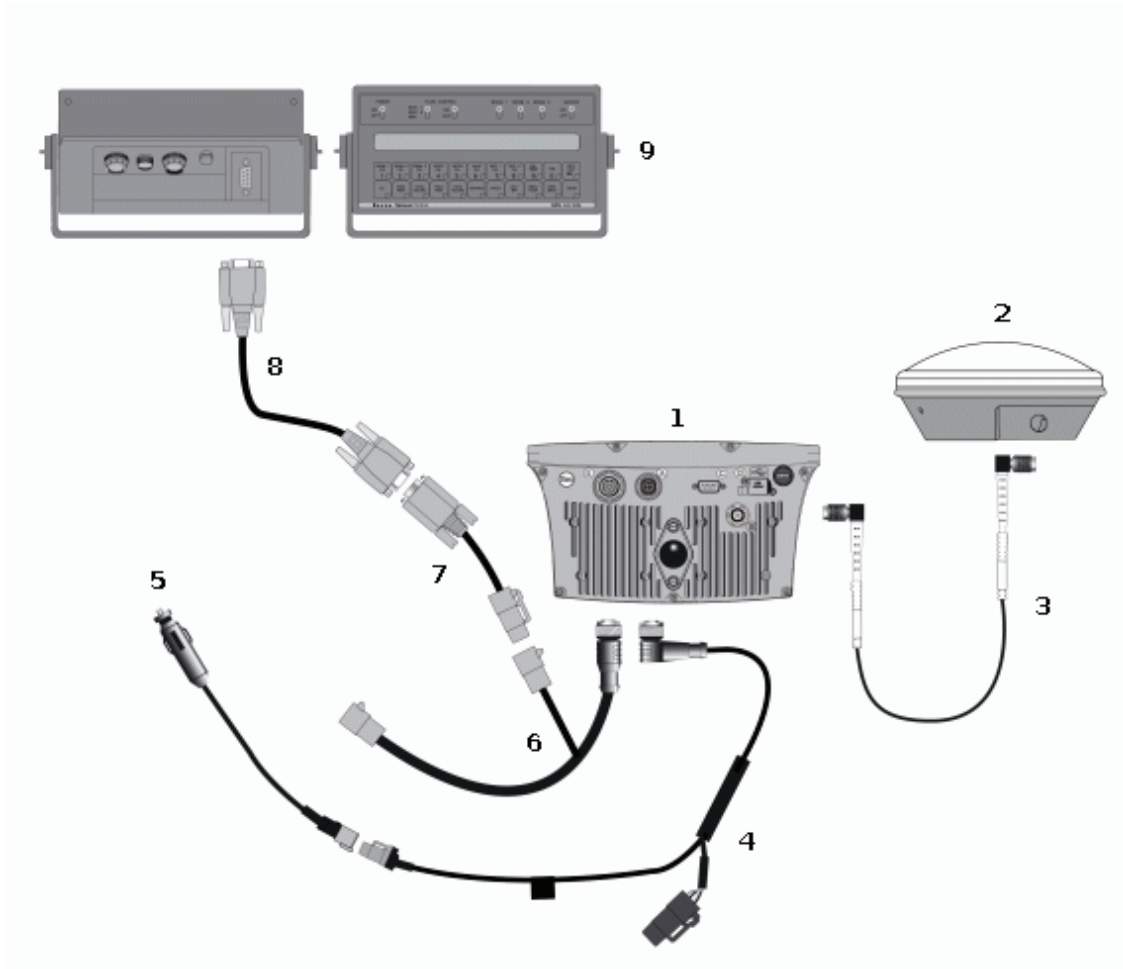
## Connecting a Raven Controller

Connect the Raven variable rate controller to the EZ-Guide 500 lightbar COM port as shown below.



ITEM	DESCRIPTION
1	EZ-Guide 500 lightbar
2	Ag 15 antenna
3	Antenna cable (PN 50449)
4	EZ-Guide 500 power cable (PN 62817)
5	To power
6	Raven to EZ-Guide 500 cable (PN 69729)
7	Raven SCS 400 or 600 series controller

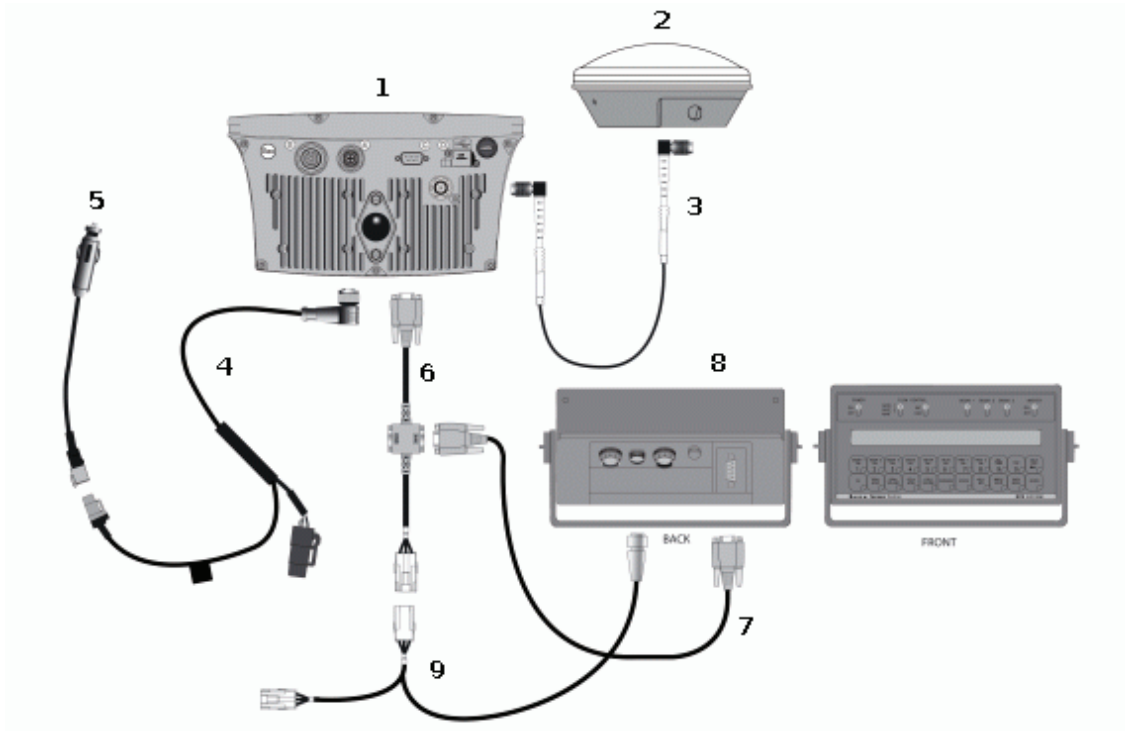
Alternatively, connect the Raven variable rate controller to the EZ-Guide 500 lightbar AUX port as shown below.



ITEM	DESCRIPTION
1	EZ-Guide 500 lightbar
2	Ag 15 antenna
3	Antenna cable (PN 50449)
4	EZ-Guide 500 power cable (PN 62817)
5	To power
6	EZ-Guide 500 AUX port cable (PN 62609)
7	Serial port extender cable (PN 63076)
8	Raven to EZ-Guide 500 cable (PN 69729)
9	Raven SCS 400 or 600 series controller

### Radars speed input

Radars speed input is required for speed. You can connect either an external radar device, or use cable PN 54805-00, as shown below.



ITEM	DESCRIPTION
1	EZ-Guide 500 lightbar
2	Ag 15 antenna
3	Antenna cable (PN 50449)
4	EZ-Guide 500 power cable (PN 62817)
5	To power
6	External interface cable (PN 62749)
7	Raven to EZ-Guide 500 cable (PN 69729)
8	Raven SCS 400 or 600 series controller
9	Radar cable (PN 54805-00)

### EZ-Guide 500 to Raven controller cable pinouts

The pinouts for the EZ-Guide 500 to Raven controller cable (PN 69729) is shown below:

TO EZ-GUIDE 500 PINS		TO RAVEN PINS
2	-----	3
3	-----	2
5	-----	5
	[-----	4
	[-----	6
	[-----	8

*Note: Pins 4, 6 and 8 on the Raven connector must be wired together.*

## Operational Warnings

When using the Raven variable rate controller with the EZ–Guide 500 lightbar, note the following:

- The EZ–Guide 500 lightbar cannot control the status of the Raven controller master or boom switches. This means that the operator must remain in complete control of the sprayer at all times. The EZ–Guide 500 lightbar cannot automatically turn off the sprayer when going outside headlands, across exclusion zones, or previously sprayed areas.
- The sprayer may not always switch off completely when the EZ–Guide 500 sends a zero rate. This means the operator may need to manually turn off the master switch to ensure no spray is applied.  
*Note: The only time the EZ–Guide 500 sends a zero rate is when the sprayer is outside a prescription boundary and the "Rate outside polygon" option is set to Zero.*
- The operator must ensure that the master switch is off when there is no field open to ensure that no spray is accidentally applied to areas that shouldn't be sprayed, for example, roads, paths, and neighbouring fields.

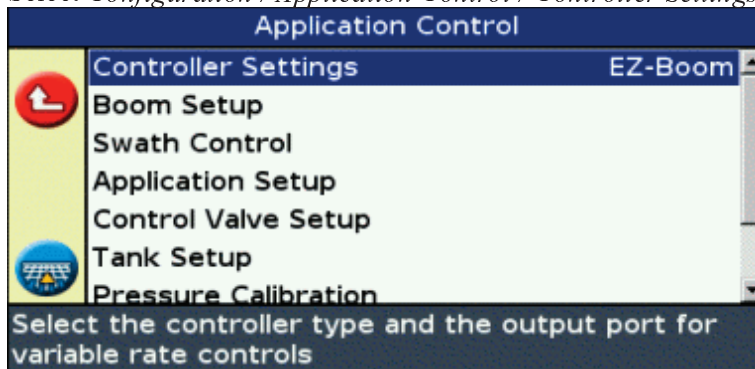
## Raven Controller Setup

To configure the EZ–Guide 500 lightbar to communicate with the Raven variable rate controller, do the following:

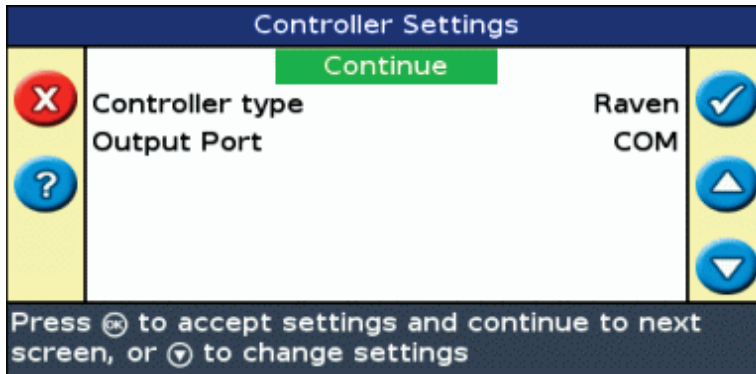
### EZ–Guide 500 lightbar setup

On the EZ–Guide 500 lightbar, do the following:

1. Select *Configuration / Application Control / Controller Settings* .



2. Press **OK** . The *Controller Settings* screen appears.
3. Change *Controller type* to Raven.



*Note: When changing the Controller type, any open field will be closed.*

4. Change the *Output Port* to COM or AUX if required, to match the lightbar port that the controller cable is connected to.

*Note: Do not configure the lightbar to output NMEA messages on the same port that the variable rate controller is connected to.*

5. Select Continue and press **OK**
6. To configure the number of boom sections and section widths, go to the *Application Control / Boom Setup* menu.

### Raven controller setup

On the Raven variable rate controller, configure the following Data Menu settings:

ITEM	DESCRIPTION
BAUD or BAUD RATE	9600
GPS	Inac
DLOG or DATA LOG	ON
TRIG or DATA LOG TRIGGER VALUE	1
UNIT or DATA LOG TRIGGER UNITS	sec

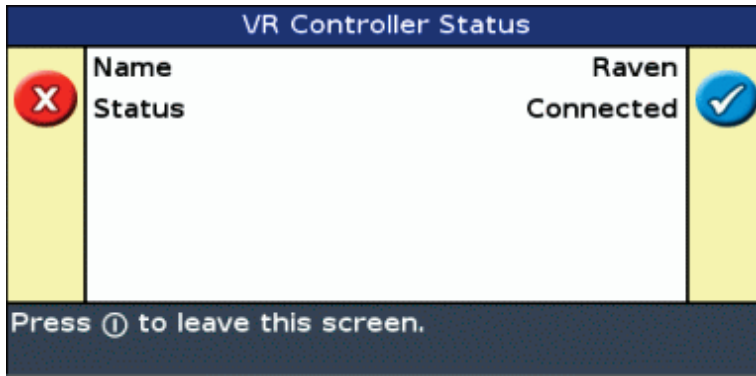
*Note: In the GPS group, if Send time, Time acknowledge or Close file appears, change them to GPS Inac. Otherwise, the DLOG or DATA LOG option won't appear.*

For more information on configuring and calibrating the Raven controller, refer to the Raven instruction manual.

### Verify Raven controller communications

To verify that the EZ-Guide 500 lightbar and the Raven variable rate controller are communicating correctly, view the *VR Controller Status* screen. To do this:

1. Select *Configuration / Status / VR Controller Status* .
2. Press **OK** .

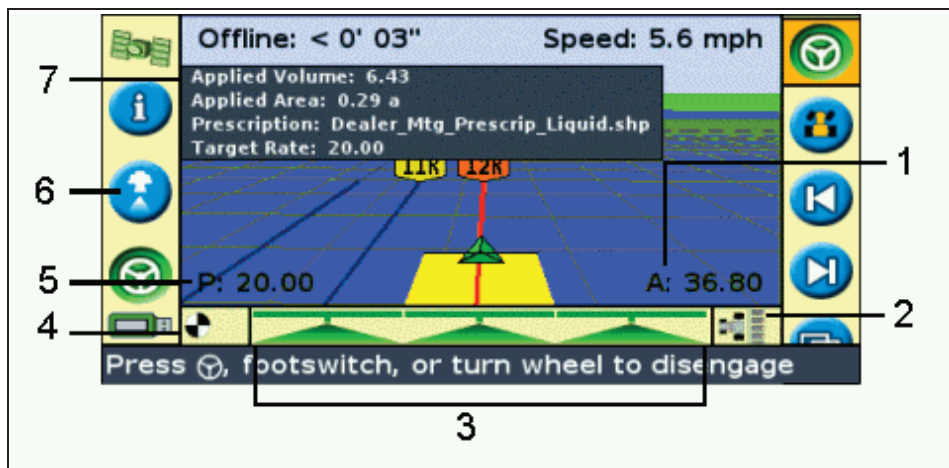


3. Verify that Status displays Connected.

*Note: If Status displays Not Connected, verify that the EZ-Guide 500 to Raven controller cable is securely connected to the EZ-Guide 500 lightbar and the Raven controller. If the cable is secure, verify that the EZ-Guide 500 lightbar and Raven controller are configured correctly, as detailed above.*

## On-Screen Features with a Raven Controller


When the Raven variable rate controller is connected to the lightbar, the following features appear or become available:

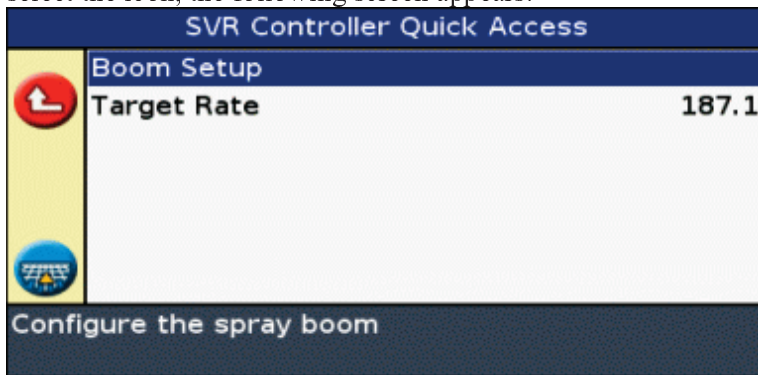


ITEM	DESCRIPTION
1	The actual current rate
2	Switching indicator (grey) shows that the controller is in manual switching mode.
3	Boom section status indicators change color to show the current state of each boom section: * Green – The boom section is enabled and spraying. * Orange – The boom section is enabled but not currently spraying. * Red – The section is off (the switch is off).
4	Application indicator. The wheel spins when the Raven master switch is on and the lightbar receives flow messages reported from the variable rate controller.

5	The intended target rate <i>Note: If a prescription is loaded, <b>P</b> is displayed to indicate that the prescription rate is being used, rather than the Target 1 rate (<b>T</b>)</i>
6	Application Control menu quick access icon
7	Information tab listing sprayer-specific information

### Quick access icon

The icon  enables you to access the most common variable rate controller settings more quickly. When you select the icon, the following screen appears:



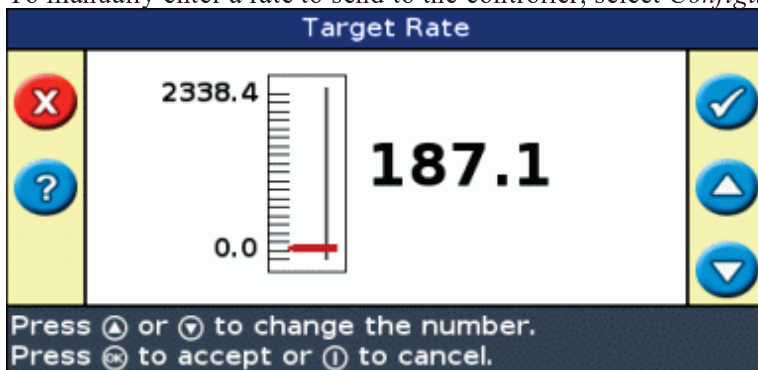
Alternatively, set the *User Mode* to Advanced and then select *Configuration / Application Control*.

## Using the Raven Controller

When using a Raven variable rate controller with the EZ-Guide 500 lightbar, note the following:

### Target rate

To manually enter a rate to send to the controller, select *Configuration / Application Control / Target Rate*.



### Automatic boom switching

The EZ-Guide 500 lightbar will *not* do automatic boom switching for the Raven variable rate controller.

***Note:** To ensure that areas outside the headland, in exclusion zones, or previously sprayed areas aren't sprayed, you will need to manually turn off the Raven controller master switch.*