

Tuning your System

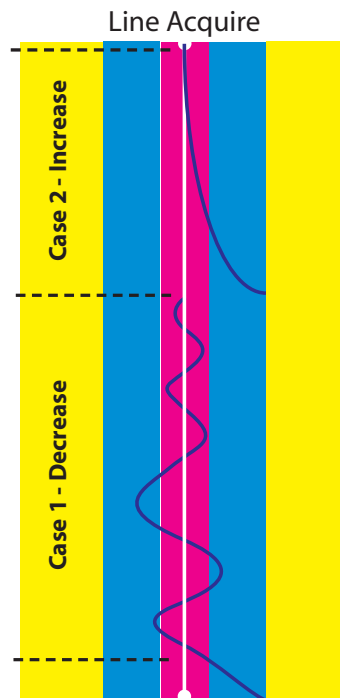
Use this screen to adjust the performance when acquiring the line. Can be adjusted between 1 and 50. The higher the number, the more aggressive it will be.



These are the only 2 screens you will use to tune the SmarTrax system.



Use this screen to adjust the on-line performance. Can be adjusted between 1 and 50. The higher the number, the more sensitive it will be.

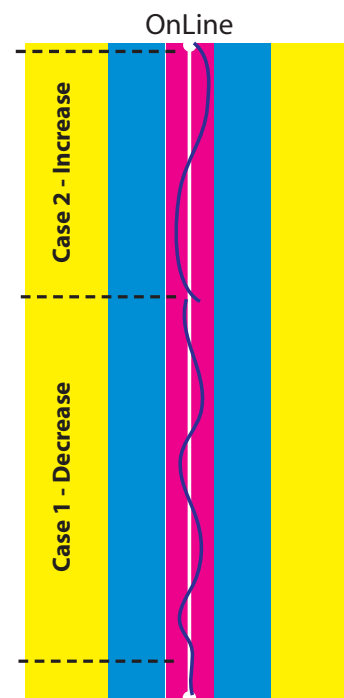


Line Acquire Tuning

If the machine is constantly overshooting the line as in Case 1, decrease your Aggressiveness Line Acquire number.

If the machine takes too long to acquire the line as in Case 2, increase your Aggressiveness Line Acquire number.

Important: DO NOT adjust any other calibration number to tune the machine. If you cannot tune the machine with the 2 screens above, go back and verify that all of the calibration numbers you entered are correct.



OnLine Tuning

If the machine constantly weaves around the line as in Case 1, decrease your Sensitivity OnLine number.

If the machine has a very slow weave as in Case 2, increase your Sensitivity OnLine number.

Steering Troubleshooting

This screen is located under the Status Menu



The foot switch is activated when "FOOT SWITCH" appears in capital letters.



The pressure switch is activated when "STEER SWITCH" appears in capital letters.



You can manually steer using the left or right arrow button.

This is the current reading from the steering sensor

SmarTrax

Straight shot to easy steering

Initial System Start-Up

Quick Start Guide

P/N 016-0159-982 Rev E

1. Screen: "ated in the OPER" with "NO agree? YES" and navigation buttons.
2. Screen: "Machine Type Front Steered" with navigation buttons.
3. Screen: "Driving Device Hydraulic" with navigation buttons.
4. Screen: "Turn wheel steer switch" with navigation buttons.
5. Screen: "Press foot switch" with navigation buttons.
6. Screen: "Left 510 SPS 987 SPS cal Left" with navigation buttons.
7. Screen: "Cntr 512 SPS 549 SPS cal Center" with navigation buttons.
8. Screen: "Right 513 SPS 80 SPS cal Right" with navigation buttons.
9. Screen: "Verify left turn with left button" with navigation buttons.
10. Screen: "Verify right turn with right button" with navigation buttons.
11. Screen: "Distance Units Feet-Decimal" with navigation buttons.
12. Screen: "Wheel Base 9.8ft" with navigation buttons.

Upon initial start-up of the SmarTrax controller, you will be prompted to answer 'Yes' or 'No' to if you have read and understand the SmarTrax Installation and Operator's Manual. To continue with start-up, you must press the Right arrow button for 'Yes'.

Press the right or left arrow to select the machine type you are using (Articulated, Front Steered, Rear Steered, or Track). Once the correct type is selected, press the Down arrow.

Press the right or left arrow to select the Driving Device (Hydraulic, QuickTrax, or CAN). Once the correct device is selected, press the Down arrow.

Turn the steering wheel to verify that the pressure switch is working properly. The words "steer switch" will display with capital letters and a new screen will display when the console detects a change from the steer switch.

Step on the foot switch to ensure that it is hooked up properly. When you do this, "foot switch" will display with capital letters and a new screen will display when the console detects a change from the foot switch.

Turn the wheels all the way to the left. Press the right arrow to lock in the number. The next screen will automatically display. **Note: The number must be greater than 10, but less than 1000.**

Turn the wheels to the center. Press the right arrow to lock in the number. The next screen will automatically display. **Note: The number must be at least 100 more than the right number.**

Turn the wheels all the way to the right. Press the right arrow to lock in the number. The next screen will automatically display. **Note: The number must be greater than 10, but less than 1000 and must be at least 100 more than the center number.**

Hold the left arrow button. The console will verify that the wheels turn in that direction. The next screen will automatically display.

Hold the right arrow button. The console will verify that the wheels turn in that direction. The next screen will automatically display.

Press the left or right arrow to select the distance units. Choose from Feet-Decimal, Feet-Inches, or Metric. Press the down arrow to lock in your selection.

Measure and enter the correct wheel base for your machine. Use the left or right arrow to enter the number. Press the down arrow to lock in your measurement. **Note: Entering an inaccurate number will cause the system to operate incorrectly. See the SmarTrax manual to measure the wheel base correctly.**



Measure and enter the correct minimum turn radius for your machine. Use the left or right arrow to enter the number. Press the down arrow to lock in your measurement.

Note: Entering an inaccurate number will cause the system to operate incorrectly. See the SmarTrax manual to measure the minimum turn radius correctly.



Measure the distance between the rear axle and the GPS antenna. Use the left or right arrow to enter the number. Press the down arrow to lock in your measurement. **Note: Entering an inaccurate number will cause the system to operate incorrectly.**



Turn the machine up to the working RPM. Move to an open space. Drive ahead slowly and press the foot switch to begin calibration.



The "Calibrating" screen will display and the wheels should be turning. If the pressure switch is triggered, calibration will stop and must be re-started. The Home screen will display when calibration is complete.

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RAVEN

PRECISION
Solutions

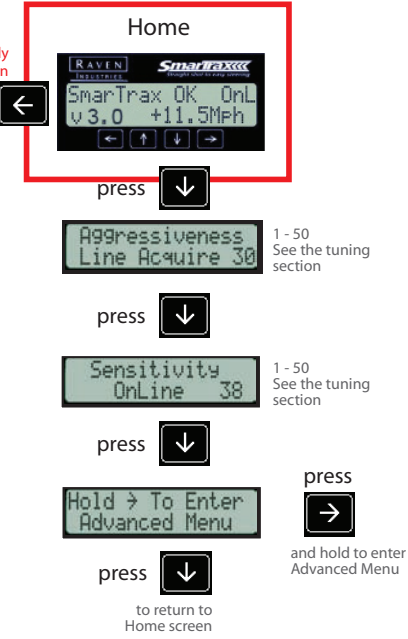
Toll Free 800-243-5435
Fax 605-331-0426
www.ravenprecision.com
fcdinfo@ravenind.com

SmarTrax Controller Menu Structure

Below you will find the menu structure for the SmarTrax controller. When you power up and after the initial start-up and calibration, the Home screen will display after pressing the right arrow.

Home Screen

Press and hold the Up and Down arrows simultaneously to return to the Home screen at any time.

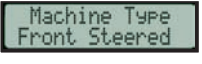


Advanced Menu

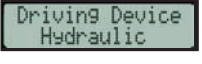
Vehicle Setup



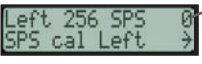
press ↓



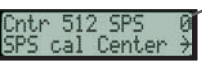
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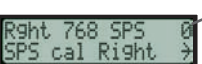
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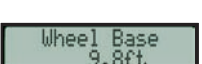
press ↓



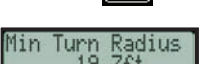
press ↓



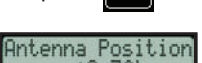
press ↓



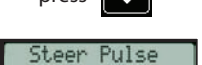
press ↓



press ↓



press ↓



press ↓

press ↓

to return to top of menu

Press the right arrow to select one of the following: Front steered, Rear steered, Articulated, or Track

Displays the driving device selection

Current SPS Count
Turn the wheel to the left. Press the right arrow to calibrate

Current SPS Count
Turn the wheel to the center. Press the right arrow to calibrate

Current SPS Count
Turn the wheel to the right. Press the right arrow to calibrate

Refer to the machine's owners manual to measure wheel base

Refer to the machine's owners manual to measure minimum turn radius

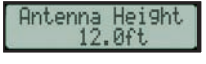
Refer to the machine's owners manual to measure antenna position

Sets the length of the pulse from the pressure switch needed to disengage the system. Press the right or left arrow to set this value

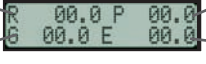
GPS Enhancer *



press ↓



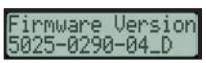
press ↓



press ↓



press ↓



press ↓



press ↓



press ↓

to return to top of menu

Roll

GPS Heading

Pitch

Enhancer Heading

This is the correct setting for this screen

Displays the enhancer software version

Press the right arrow to reset the enhancer

Press the right arrow to switch select Active or Bypassed mode for the enhancer

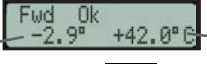
* This advanced menu screen is only available if you are using a GPS enhancer.

** Holding the left and right arrows while at the Home screen will send a forward command to the enhancer.

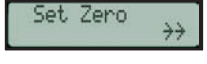
TM1 Tilt Sensor *



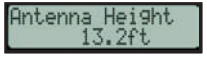
press ↓



press ↓



press ↓



press ↓



press ↓

to return to top of menu

Angle of sensor

Temperature of the tilt sensor

Press the right arrow to set the sensor to zero. Be sure the machine is on level ground before setting

Sets the height from the ground to the antenna

Refers to the tilt compensation speed. Press the right arrow to select from Off, Slow, Normal, or Fast

* This advanced menu screen is only available if you have a tilt sensor installed.

Console Configuration



press ↓



press ↓



press ↓



press ↓



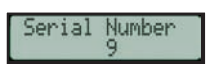
press ↓



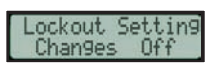
press ↓



press ↓



press ↓



press ↓

to return to top of menu

Press the right arrow to turn the back light on or off

Press the right or left arrow to adjust the contrast

Sets the distance in units. Press the right arrow to choose from Feet-Decimal, Feet-Inches, or Metric

Sets the speed units. Press the right arrow to choose from Mph or Km/h

Sets the GPS output on the programming port. Press the right arrow to choose On or Off

Sets the sound when a button is pressed. Press the right arrow to select from On or Off

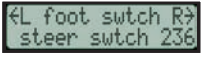
Displays the serial number of the console

This screen locks the calibration values that were entered for the machine. Press the right arrow to select On to lock the screen or Off to not lock the screen.

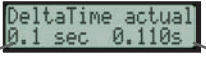
Status Menu Configuration



press ↓



press ↓



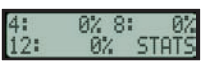
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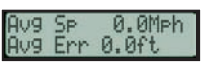
press ↓



press ↓



press ↓



press ↓

to return to top of menu

See the Tuning section for more information

Displays the actual receiver speed. .2 = 5 Hz .1 = 10 Hz

Displays error logs 1-10. Press the right arrow to view errors

Displays GPS date and time

Displays the percentage of time verses inches for the last 5 minutes that the system was engaged for the number of inches

Average speed and error over the last 5 minutes the system was engaged