System Tuning

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 5 and 20. The higher the number, the more sensitive it will be.

Use this screen to adjust the performance when acquiring the line. Can be adjusted between 1 and 20. The higher the number, the more aggressive it will be.

Calibration Process

During the calibration process the SmarTrax will turn the machine several times back and forth to learn the characteristics of the hydraulics on your machine. You will need a large open field to drive during this process. You must drive the machine between 3 and 6 MPH during the entire process.

1. The SmarTrax will first turn the wheels all the way to the left lock. After the wheels are all the way to the left, it will turn the wheels to the right at 100% PWM for 3 seconds. It will then bring the wheels back to the left lock.
2. Next it will turn back to the right at 90% PWM. This will happen 8 more times until the final PWM is 20%.
3. After the SmarTrax learns the right gain it will repeat the process from the right lock.

- If you keep getting steering switch activated errors, you can set the steer pulse time as described below.
- If you get a valid points low error it means the SmarTrax detected some values that did not make sense and the calibration must be done again.
- If you get a high gain error, it means the values for your gains for your left and right movements are too far apart. You can attempt running the system with this error. If it does not work you may have hydraulic issues.

Troubleshooting

If the SmarTrax continually disengages during calibration, press the down arrow once and increase the steer pulse time.

Activate the foot switch and steer switch and they should appear in capital letters. Verify the hydraulics by pressing the left and right arrows.

Then press the down arrow followed by the foot switch to continue with calibration.

If the signal is found, the setup will continue to step 17.

If SPS was selected as the Sensor Type is Step 2, skip this step.

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

Measure and enter the correct minimum turn radius for your machine. Use the Left or Right arrow to enter the value. 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 it straight ahead (5-9 km/h) 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 will need to be re-started. The home screen will display when calibration is complete.

Initial System Start-Up

Upon initial start-up, the SmarTrax controller will prompt you to answer “Yes” or “No” to having read and understand the Operation Manual. To continue with start-up, you must answer “Yes” by pressing the right arrow button.

Press the Left or Right arrow to select the Sensor Type you are using (GPS or Yaw). Once the correct type is displayed, press the Down arrow.

If Yaw is selected as the Sensor Type, refer to the instructions in 14.1 to help set up your SmarTrax controller.

Press the Left or Right arrow to select the machine type you are using (Articulated, Front Steered, +Track, or a specific Tune Set). Once the correct type is selected, press the Down arrow.

Press the Left or Right arrow to select the Driving Device (Hydraulic or QuickTrax). 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 “STEERING WHEEL” will display in capital letters and a new screen will display when the console detects a change from the steering wheel.

Press the foot switch to ensure that it is connected properly. The words “foot switch” will display in capital letters and a new screen will display when the console detects a change from the foot switch.

NOTE: Skips to Step 10.

Turn the wheels all the way to the left. Press the Right arrow to save the displayed value. The next screen will display.

Important: The number must be greater than 10, but less than 100.

Turn the wheels all the way to the right. Press the Right arrow to save the displayed value. The next screen will display.

Important: The number must be less than 100. The number must be greater than 10, but less than 100.

Turn the wheels all the way to the center. Press the Right arrow to save the displayed value. The next screen will display.

Important: The number must be less than 100.

Press the Left or Right arrow to select the distance units (Feet, Meters or Yards). Once the correct unit is selected, press the Down arrow.

Press the Left or Right arrow to select the units for your machine. Use the Left or Right arrow to enter the value. Press the Down arrow to lock in your selection.

Note: If tune set was selected in Step 3, skip to Step 14.

Measure and enter the correct wheelbase for your machine. Use the Left or Right arrow to enter the value. 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 for information on measuring the wheelbase correctly.

Note: If a tune set was selected in Step 3, skip to Step 14.

Measure the horizontal 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.

Measure and enter the height of the GPS antenna above ground. Use the Left or Right arrow to enter the value. Press the Down arrow to lock in your measurement.
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.

**SmarTrax Controller Menu Structure**

Advanced Menu

**Vehicle Setup**

- Press the Right arrow to select the system's Serial Number (Off, On).
- Press the Right arrow to select the Vehicle Speed (Feet-Inches, Metric).
- Press the Right arrow to select the LCD Contrast.
- Press the Left or Right arrow to adjust the LCD Contrast.
- Press the Left or Right arrow to select the Back Light On or Off.
- Press the Left or Right arrow to select the System Sound (On, Slow, Fast). The current speed compensation speed.
- Press the Right arrow to select the System Status (On, Off). This is the correct serial number for this screen.
- Press the Left or Right arrow to select the System Version (1-10). The current version is 1-10.
- Press the Left or Right arrow to select the Time. Displays the time in 12 or 24-hour format.
- Press the Left or Right arrow to select the GPS Status. Displays the percentage of time the receiver is active or active.

**GPS Enhancer**

- Press the Left or Right arrow to select the GPS Enhancer. Displays the percentage of time the receiver is active or active.
- Press the Right arrow to select the GPS Status. Displays the percentage of time the receiver is active or active.
- Press the Left or Right arrow to select the GPS Status. Displays the percentage of time the receiver is active or active.
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- Press the Left or Right arrow to select the GPS Status. Displays the percentage of time the receiver is active or active.

**TM-1 Tilt Sensor**

- Press the Left or Right arrow to select the TM-1 Tilt Sensor. Displays the tilt sensor's tilt angle.
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**Console Configuration**

- Press the Left or Right arrow to select the Console Configuration. Displays the console's current configuration.
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