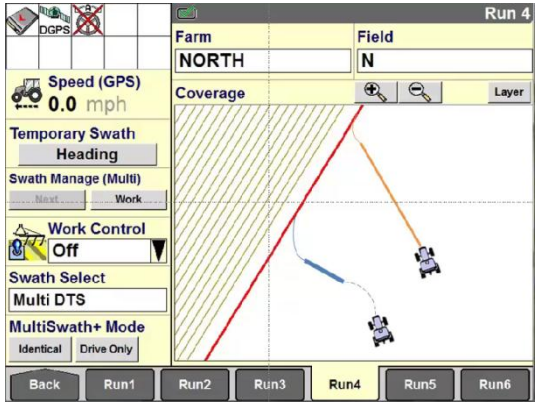
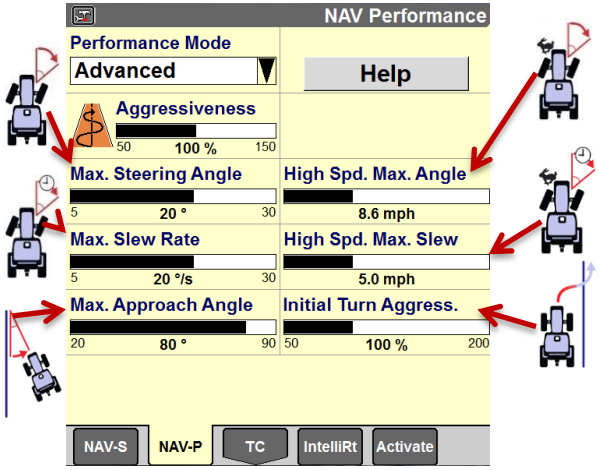
1-Maximum Approach Angle –



Blue line = 90 degree approach angle
Orange line = 60 degree approach angle

Advanced Line Acquisition

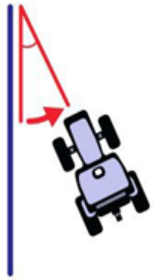
The Advanced Line Acquisition (ALA) feature for PLM™ IntelliSteer™, located at Toolbox > NAV-P, allows a more advanced setup and customization of the way a vehicle drives to and acquires an active swath upon engagement. This allows a higher line acquisition performance. It is recommended that the ALA parameters be adjusted in the order shown on the reverse to achieve the best performance.



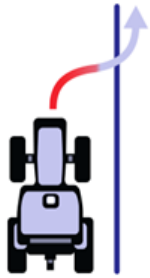
Note that Advanced Line Acquisition is only available for T8 tractors at this time. The default settings shown above are for T8 tractors only. EST version 8.4.0.0 will introduce support for additional vehicle platforms.

47888433
July, 2015

Acquisition Settings



Maximum Approach Angle



Initial Turn Aggressiveness

Maximum Steering Angle

Maximum Slew Rate

High Speed Maximum Angle

High Speed Maximum Slew

Advanced Line Acquisition

1-Maximum Approach Angle – This new adjustment will produce the most visible difference on how a vehicle acquires the swath. This defines the approach angle the vehicle steers to when pursuing the active swath once the engage button is pressed. A maximum value of 20º would cause the vehicle to slowly and gradually pursue the active swath using an approach angle of 20º. A maximum value of 90º would cause the vehicle to drive at a right angle towards the active swath and then straighten out once nearby. This setting is useful when users engage on a swath on a headland while still perpendicular to the swath.

2-Initial Turn Aggressiveness – Thinking of line acquisition as two parts, the initial turn towards the active swath and the later turn onto the active swath, the Initial Turn Aggressiveness setting becomes more self-explanatory. This setting determines how aggressively the vehicle will initially turn upon engagement to align with the planned approach path/angle (set above) to the swath, within the limits of the vehicle's Maximum Steering Angle and Maximum Slew Rate.

3-Maximum Steering Angle – By adjusting the Maximum Steering Angle lower or higher, *within the physical limitation of the vehicle,* the navigation software will draw a more aggressive or less aggressive path when acquiring the swath.

4-Maximum Slew Rate – The Maximum Slew Rate controls how fast the naviagtion software commands the vehicle to turn the wheels in degrees per second. The slew rate a vehicle is capable of can be variable, affected by hydraulic capacity, steering valve size, soil conditions, tire pressure and other factors. Thus, it is important to set Maximum Slew Rate to a value less than or equal to the slew rate the vehicle is capable of. The most effective way to adjust the Maximum Slew Rate is to raise this value in small increments from default and note the effect. Once the desired performance level is met, note the value, and do not continue to raise the value. If a slew rate is entered that a vehicle cannot achieve, performance will be degraded (line overshoot). Raising and lowering the Maximum Slew Rate is another way to fine tune how the navigation software controls the vehicle when acquiring a swath. Lowering the value results in slower steering rates, and raising the value results in faster steering rates. In most cases, the default values will provide acceptable performance.

5-High Speed Maximum Angle – This setting is a companion setting to Maximum Steering Angle, and controls the speed at which the Maximum Steering Angle will begin to be limited for safety or comfort purposes. This speed threshold is determined once the Maximum Steering Angle is set in item # 3 above, and is visible directly below the High Speed Maximum Angle bar graph. Once the initial settings are made to the Maximum Steering Angle, adjustments can be made to High Speed Maximum Angle. Adjusting the slider right or left will increase/decrease the speed threshold. In most cases, the default settings will provide good performance. If the operator desires a predictable and consistent Maximum Steering Angle, note the speed threshold at which high speed settings become effective, and stay below this speed when engaging and acquiring the active swath.

6-High Speed Maximum Slew – This setting is a companion setting to Maximum Slew Rate, and controls the speed at which the Maximum Slew Rate will begin to be limited for safety or comfort purposes. This speed threshold is determined once the Maximum Slew Rate is set in item # 4 above, and is visible directly below the High Speed Maximum Slew bar graph. Once the initial settings are made to the Maximum Slew Rate, adjustments can be made to High Speed Maximum Slew. Adjusting the slider right or left will increase/decrease the speed threshold. In most cases, the default settings will provide good performance. If the operator desires a predictable and consistent Maximum Slew Rate, note the speed threshold at which high speed settings become effective, and stay below this speed when engaging and acquiring the active swath.