



Understanding Swath Control settings:

The Swath Control Turn On and Turn Off Settings are to compensate for average physical machine reaction time delays (Electrical & Mechanical). The physical reaction time delay remains constant for that machine configuration, the machine just travels more or less distance while the reaction is taking place at different ground speeds. As you increase the values (turn on or turn off seconds) the command will be sent sooner in relation to the boundary or coverage area. These values have little effect on what is seen on the GS 2 screen, the values only control the command trigger times for the valves or clutches. The more constant the speed is kept when entering and exiting coverage and boundary areas, the more accurate swath control will become. Accelerating and decelerating quickly has the potential to induce issues as the times are associated to the vehicles travel speed. If the machine speed is drastically changing while crossing over the coverage or boundary control point, the machine physically can not react accordingly.

Planters:

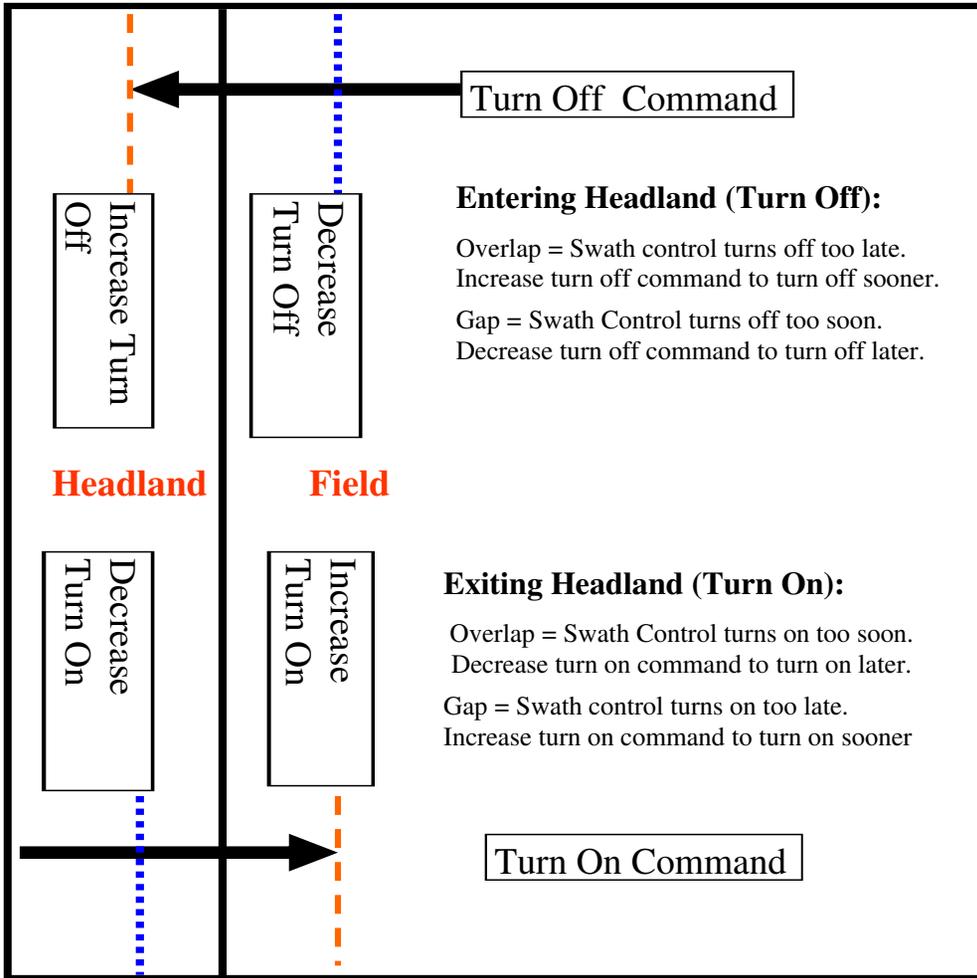
Planters average 4 to 7 mph while planting and have very minimal machine electrical clutch reaction delay times. (Under 0.8 seconds usually) The largest delay time is usually from the time the seed leaves the meter disk, travels in the seed tube, and reaches the soil. At a 6 mph planting speed, you will travel 8.8 ft. in one second. That's 10.56 inches of travel distance every one-tenth of a second. *(Example - Entire seed delay time from the switch being pressed in the cab, the clutch stops, the seed meter stops, and all the seed has reached the soil; time elapsed 0.8 seconds)*

Sprayers:

At 12 mph in a self propelled sprayer, the **average** physical reaction time of the system *(turn off command at the hydro handle, the boom valve reacts and turns off, liquid flows out of the boom freely until the check valve pressure is met)* is under 1.5 seconds. At 12 mph you travel 17.6 ft. in one second. That's 21.12 inches of travel distance every one-tenth of a second. As a rule of thumb, it takes a liquid handling system longer to react when turning on than when turning off due to liquid pressure differentials, so many times the turn on time is slightly greater than the turn off time. Keep in mind that your ground speed only affects the distance traveled while the machine reaction delay is taking place and that the distance traveled will vary between turn on and turn off times and from operator to operator.

Overlap:

It is not recommended to utilize turn on and turn off times to achieve intentional overlap. This can cause additional system complications. To achieve increasing amounts of overlap, utilize the Percent Overlap between 100 % and 125% Each percentage point over 100% equates to 1 foot of overlap.



Calculating Times:

In order to determine the correct turn on/turn off times for your configuration, you must measure the machine reaction delays. The best way to measure this time is to manually turn on/off a section and measure the time from when the switch is actuated to when product starts or stops. This measure time should be entered into the display for each operation. Keep in mind that Turn on and Turn off times will be different, so measure both on and off. To verify the measurement set overlap setting to 100% overlap and operate the machine as you would normally. Verify performance of section control by observing application or digging for seed. If there is an error in seed or product placement, it should be corrected by adjusting the times in the manner shown above. If the placement is correct, but you want to intentionally overlap, use the method listed in the "Overlap" section of this document.

