

# 'Quad Cruise' Electronic Cruise & Spray Control for Polaris Sportsman Ace 570 from 2017



Quad Cruise is a new version of the MotorCycle Setup cruise control for vehicles with Throttle-By-Wire (TBW) electronic throttle systems.

It is designed to operate at speeds as low as 4 km/h (3mph) and up to 25 km/h (15 mph). The "Quad Cruise" has been designed to provide power to any crop spray or other accessory fitted to the ATV (Quad) via an optional switched 10 amp fused outlet built into the cruise control wiring harness - either manually, or automatically when the cruise control is engaged.

The cruise control can be set to a specific speed to spray a row by pressing the SET button, and turned off at the end of the row with the brake lever. The RES button can be used to set the vehicles' speed back to the previous speed. The spray system will turn on and off with the cruise control, when the spray switch is in the AUTO position. Manual operation of the spray is possible when the spray switch is in the MANUAL position.

You can accelerate the vehicle further, if desired, by using the throttle pedal. When the throttle is released the cruise control will take over again at the previous set speed.

If the cruise control is disengaged, for example by applying the brake, it may be resumed by pressing the RES button. The vehicle will accelerate or decelerate to the previous set speed provided the vehicle is still travelling between about 3 kph (2mph) and about 25 kph (15mph). The cruise control will not engage outside these speed limits so it is not possible to accidentally engage the cruise control when the vehicle is stationary.

To increase the set speed while the cruise control is engaged, the SET button may be pressed and held. The speed will gradually increase until the button is released. The speed control will then maintain the new speed. Alternatively the 'Tap up' feature allows the speed to be increased each time the SET button is momentarily pressed.

To decrease the set speed the RES button may be used in the same way as the SET button, but this will reduce the speed instead of increasing it.

The amount the speed changes with the 'Tap Up' and 'Tap Down' function is selectable. The standard setting is 0.5 kph per press, but this can be changed from 0.5 mph per press down to 0.01kph in several steps in both kph and mph increments.

Once the desired speed is SET for a particular application, this speed can also be 'locked' if desired so the operator cannot accidentally change the SET speed. The operation to 'lock' and 'unlock' the SET speed takes 5 seconds and is done using the cruise control switch. When the speed is 'locked' it is retained in memory permanently even if the vehicle is turned off. This function is useful when a precise and repeatable speed is required for spraying for example, and once SET you do not want it to be changed accidentally.

Every effort has been made to make the cruise control waterproof. The new computer is fully sealed. Wherever possible sealed connectors have been used on the wiring harness.

The following provides a brief description of the power consumption and component locations of the MotorCycle Setup electronic cruise and spray control.

The cruise control draws minimal current from the vehicle, typically less than 0.3 Amp. By comparison, a head light bulb typically draws about 4 amps (55 Watts), and a tail light bulb (running light) draws about 0.4 amp (5 Watts).

Installed weight of the cruise control is approximately 1kg.

Refer to the line drawing on the back of this sheet to identify the component numbers in the text.



The **Computer (1)** is mounted in the front compartment, on the front of the firewall under the dashboard.



The **Control Switch (2)** can be mounted on top of the dashboard. If that location is not suitable, it may also be mounted elsewhere on the dashboard. These photos show the control switch with the optional spray power control switch (2A on the parts drawing below). If the cruise is ordered without the optional spray power control, this switch is not included (2B on the drawing).



The **Main Wiring Harness (3)** is dedicated to the vehicle. The connectors on the harness match the vehicle's connectors, so it is not necessary to cut or strip any wires during the installation.

The **Throttle Pedal Harness (4)** is connected at the vehicle throttle pedal. The vehicle's connector on the pedal is disconnected, and matching connectors on the cruise control Throttle Pedal Harness connect to the throttle pedal and the vehicle's wiring harness. This bridges the connection and allows the cruise control to control the throttle.

Power for the cruise control is sourced from the vehicle's brake light switch connection, and brake sensing is also sourced from this connection. Park and Neutral gear position sensing is sourced from the vehicle's gear position switch. Speed signal is sourced from the vehicle's speedometer sender. Earth (ground) is sourced through the Throttle Pedal Harness.

Power for the **OPTIONAL Spray Power Harness (5)** is sourced from the battery positive terminal and a two pin plug is provided that can be mounted anywhere on the vehicle for connection to the spray system or other powered accessory. Matching plug and terminals are provided in the kit for connection to the spray unit. Any accessory drawing less than 10 amps may be connected to this outlet.

