

# Motorcycle Electronic Cruise Control



The Motorcycle Electronic Cruise Control is similar in principle to a car cruise control.

But on a bike there are many more safety considerations and each model has a cruise control designed specifically for it.

The control switch is mounted above or below the handlebar according to model.

On most models the wiring loom plugs directly into the bike's existing loom.



The cruise control uses an electronic "computer" module to maintain any required speed between 25 and 100mph (40-160kph) according to model.

The computer monitors brake light operation and instantly disengages the cruise control when the front or rear brake is applied. On most models the computer also monitors engine revs and on some models the cruise control is connected directly to the bike's clutch switch. This means that the cruise control is automatically disengaged if the clutch is operated, and prevents engine over-revving.

An ON/OFF switch enables and disables the control.

To engage the cruise control accelerate the bike to the desired speed and press the  button. The cruise control will engage and hold the current speed.

The rider can accelerate the bike above the set speed, if desired, by using the throttle. When the throttle is released the cruise control will take over again at the previous set speed.

To increase the cruise speed, press and hold 

The speed will gradually increase until the button is released. The cruise control will then maintain the new set speed.

Alternatively, the set speed will increase by about 1kph each time this button is momentarily pressed.

To decrease the cruise speed press and hold 

Or the set speed will decrease by about 1kph each time this button is momentarily pressed.

Operating the brakes or clutch will disengage the control.

To resume the previous set speed press 

The bike will then gently accelerate to the previous speed.

## TECHNICAL DETAILS

The principles behind the cruise control are very simple:

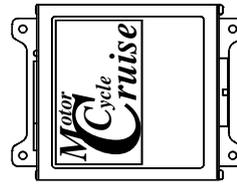
- The computer monitors the frequency of electrical impulses generated by magnets passing a sensor, or impulses from the motorcycle's electronic speedometer sender.
- When the 'SET' key is pressed, the computer stores the pulse frequency at the time in memory and then continuously adjusts the vacuum actuator servo, and controls the throttle, to maintain the pulse frequency at the same figure to which it was set.

If the frequency drops below the set frequency, the computer applies more throttle.

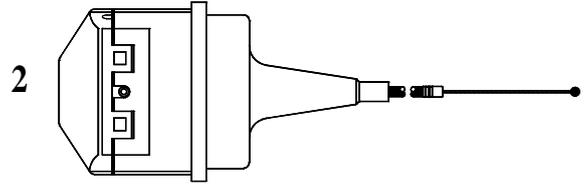
If the frequency is above the set frequency, the computer backs the throttle off. The computer monitors and reacts to changes very quickly and smoothly so that the set speed effectively remains nearly constant.

All components required to fit the cruise control are supplied in the installation kit which is illustrated overleaf. Comprehensive instructions are included with photos of each stage of the installation.

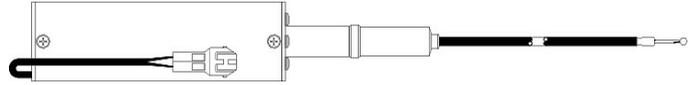
1. The computer – monitors road speed, adjusts the throttle by controlling the vacuum actuator and monitors the control switch, brake system and clutch or ignition system for instruction;



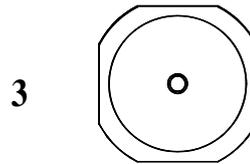
2. The vacuum actuator – controls the throttle by pulling or releasing a cable which attaches to the throttle via the cable interface unit (CIU);



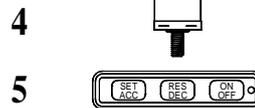
This is gradually being replaced by an electric throttle servo



3. The CIU – translates the motion from the throttle grip and the vacuum actuator to the throttle via a new cable supplied in the kit;



4. The speed sensor – generates electrical pulses when the bike is in motion;



5. The control switch – sends instructions from the rider to the computer;



6. The wiring loom – connects the computer, vacuum actuator, speed sensor and the control switch to each other and the motorcycle's electrical system.

Mounting brackets and other components are made to suit specific motorcycle models. Most brackets supplied with the cruise control are laser cut from '304' grade stainless steel. The calibration of the computer and ratios in the CIU are also set up to suit the specific model of motorcycle, as is the wiring loom. Covers are provided for components if needed for protection or to enhance the appearance of the cruise control.

All control cables (throttle cables) supplied in the kit are O.E. quality lined cables to ensure the longest life and low friction.

Alterations to the motorcycle are minimal and generally easy, if required. Electrical connection is simply a matter of plugging the cruise control loom into the motorcycle loom in most cases, as we have used the same type of electrical connectors as those used on the motorcycle.

The cable interface unit is a new component developed by MotorCycle Setup and is the key to safe cruise control operation on many motorcycles.

### Available for delivery worldwide

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