

# Electronic Cruise Control for BMW K1300S



The following provides a brief description of the power consumption and component locations of the MotorCycle Setup electronic cruise control. This cruise control is a revised version of the K1200S kit. Some of the photos shown are of a K1200S.

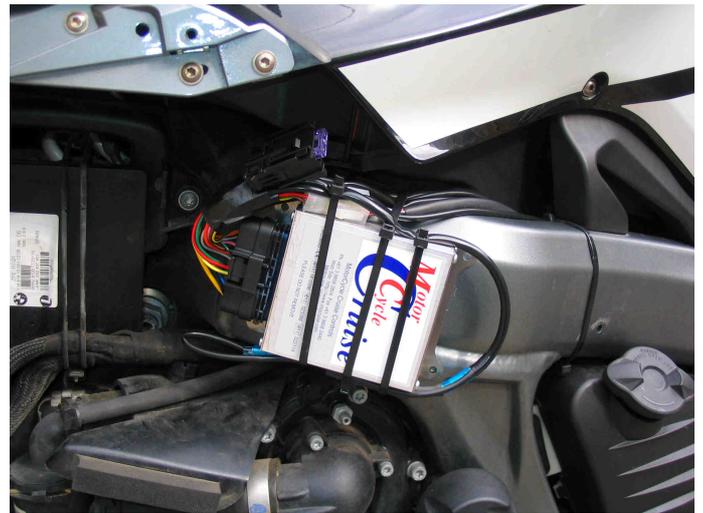
Installed weight of the cruise control is approximately 2.5kg.

Current draw while the cruise is switched on, but not engaged, is approximately 0.250 amp (3 watts). Current draw while the cruise is engaged is nominally 0.50~0.80 amp (6~10 Watts).

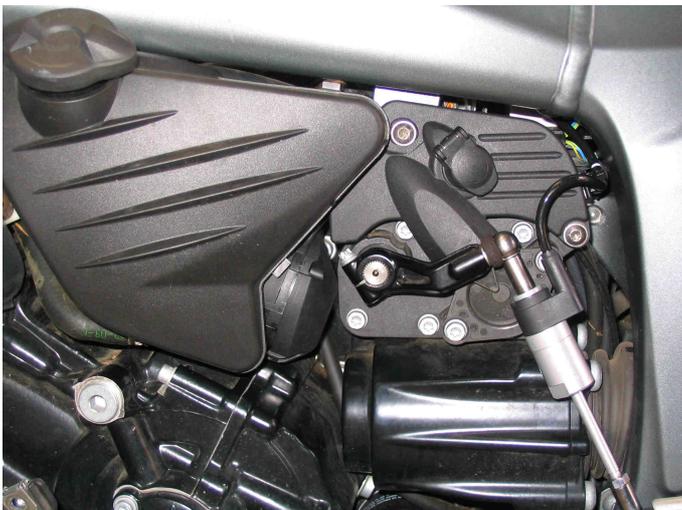
By comparison, a head light bulb typically draws about 4 amps (55 Watts), and a tail light bulb (running light) draws about 0.4 amp (5 Watts).

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

The **Computer (1)** mounts on the left side of the frame beside the engine. It is fully covered by the fairing.



The **Actuator (2)** is mounted behind the coolant reservoir on the left side. There is a cavity between the back of the coolant bottle and the end of the alternator and starter motor. The actuator fits in there and is a neat fit. No mounting bracket is supplied, because there is not enough room for a bracket. In the photo below left the end of the actuator can be seen between the coolant reservoir and the gear shift actuator. In the photo below right, the actuator is shown arrowed. This view is from inside the frame with the fuel tank removed. **NOTE: - Some European and USA (California?) models may have an evaporative emissions carbon canister fitted in this location. This must be moved or removed to install the cruise control. A vacuum hose assembly (3) is provided to connect the actuator to the engine.**



The **CIU (4)** is located on the right side of the bike above the radiator. It is fully covered by the fairing panel. A new **cable (5)** connects it to the throttles. The photo at right shows the CIU viewed from the front of the bike with the fairing installed. These photos are of a K1200S, but the K1300S installation is almost identical.



The **Speed Sensor (6)** is mounted below the right hand front brake caliper. The original caliper mounting bolt is removed and a new bolt and spacer washers fitted to allow the speed sensor to be mounted. Nickel-plated magnets are placed in the heads of the bolts that mount the brake disc. **NOTE: - See the note at the end of this document regarding different magnet sizes in BMW brake disc mounting bolts.**

The **Control Switch (7)** is mounted on the left hand (clutch) lever clamp bolt. The switch is located just above the left switch block.



## ***MotorCycle Cruise Controls***

**6 Kingston Street  
Mount Waverley VIC 3149  
AUSTRALIA**

**Web Site:** <http://www.mccruise.com>

**International:** **Phone** (International Access Code) 61 3 9808 2804

**Fax** (International Access Code) 61 3 9808 2445

**Australia:** **Phone** (03) 9808 2804

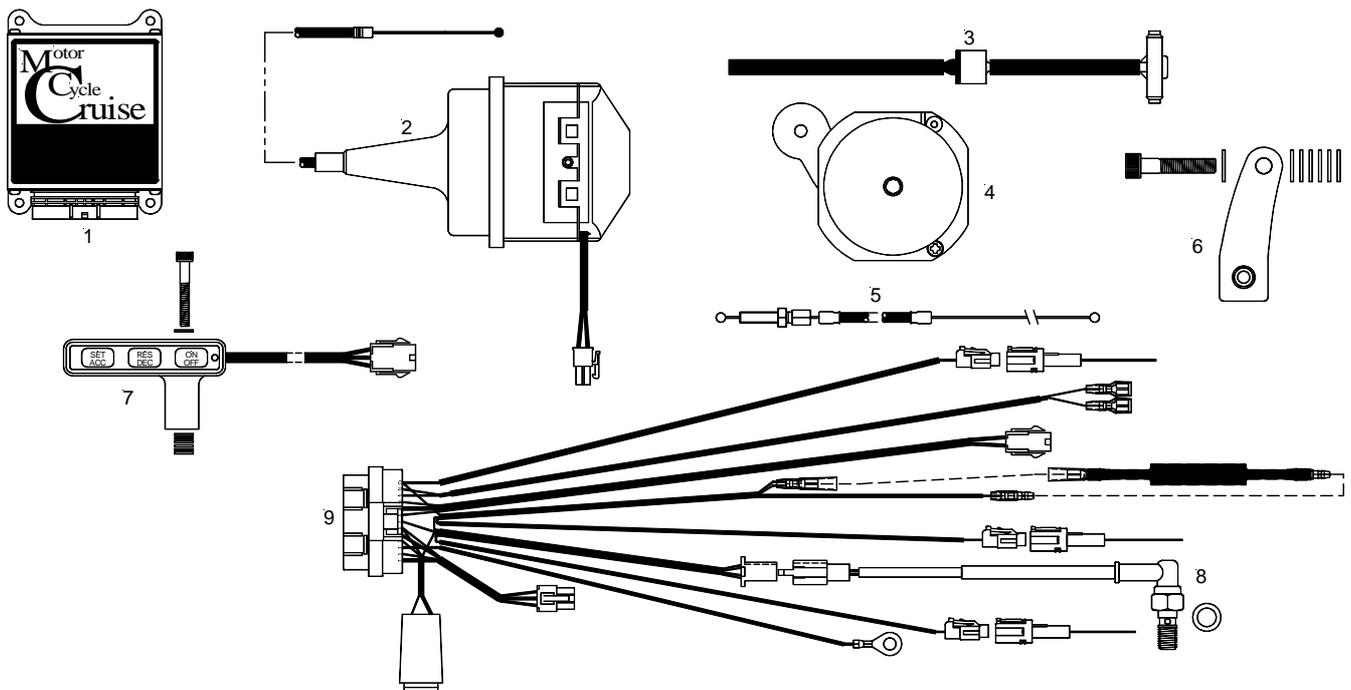
**Fax** (03) 9808 2445

**E-mail:** sales@mccruise.com

To ensure that the cruise control installation is as safe as possible, an additional **hydraulic pressure switch (8)** is fitted to the bikes front brake circuit. This is to provide a back up method of disengaging the cruise control in the event of failure of the bikes brake light circuit. Fitment of this switch involves replacing one of the brake line 'banjo' bolts with a new bolt that has a pressure switch built in to it. This switch is fitted to the front brake master cylinder.



The **Wiring Loom (9)** has the same type of plugs or terminals that are already used on the motorcycle, with two exceptions. Power for the cruise control is taken from the positive wire to the bike's accessory power plug. Tach (engine speed) sensing is detected from the bike's ignition primary circuit. These connections must be spliced. Splice terminals and heat shrink tube are supplied in the kit to make this connection. Brake sensing taken from a connection at the rear brake light. Matching connectors on the cruise control loom are plugged in to the light and the bike's loom. This is used to disengage the cruise if the clutch is operated. The cruise control is grounded on the negative battery terminal. The wiring loom is a 'custom' finished item, with all parts of the loom cut to length and terminated appropriately.



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## Disc brake mounting bolts on current BMW motorcycles.

We are aware of three different type heads in disc brake mounting bolts on current model BMW motorcycles.

Most current (2008 and later) bikes have flat head bolts. The recess in the head of this bolt is a T-30 'Torx' fitting and the magnets we have to fit this are 4mm diameter x 5mm long. This is the bolt we expect on the K1300S and it is also on new R1200GS.

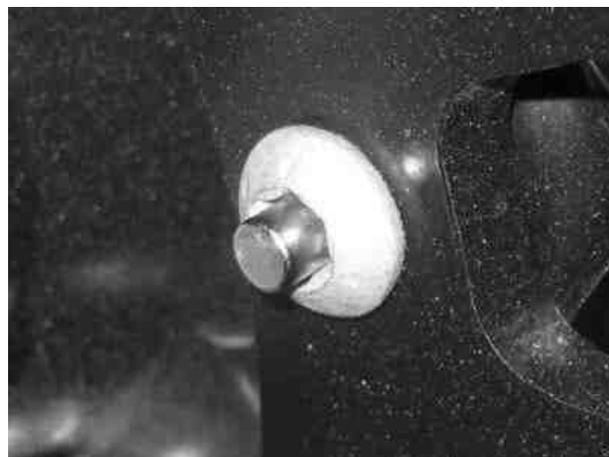


All models that we are aware of from mid '90's to 2007 use this 'button' (rounded) head bolt. The recess in the head of this bolt is a T-40 'Torx' fitting and the magnets we have to fit this are 4.75mm diameter x 4.75mm long. We have seen this bolt in various models, R1100RT, R1150RT, R1150GS, R1100S, K1100RS, K1100LT, R1200GS, R1200S, K1200S, F800ST.



Note that these bolts are used in earlier designs that bolt a disc carrier to the wheel and the discs then are allowed to 'float' on the carrier and also later models as shown here with the disc bolted to the wheel without a carrier, but there are spring washers on the bolt to allow the disc to 'float'.

We have recently seen this new bolt, also a T-30 'Torx' fitting and uses the 4mm diameter x 5mm long magnet. We have seen this on a 2009 F800GS. This design has gone back to the earlier practice of having a disc carrier bolted to the wheel and then the disc 'floats' on the carrier.



This kit for the K1300S comes with magnets to fit the first bolts (flat head T-30). If your bike has different size bolts, please let us know.

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