Electronic Cruise Control for Suzuki GSX1000S & GSX-S1000F



NOTE: - When ordering this kit you must specify what type of connector is used on the bike's clutch switch and the engine management ECU. See the end of this document for information.

NOTE: - It may be necessary to trim the radiator air duct in the left side fairing panel slightly on the GSX-S1000F fully faired model, see photo on the next page.

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

Installed weight of the cruise control is approximately 2.5kg.

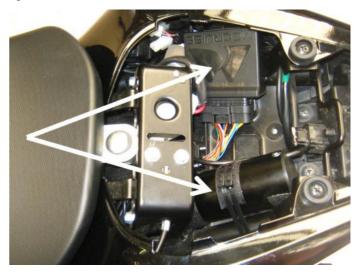
Current draw while the cruise is switched on, but not engaged, is approximately 0.2 amp (2.5 watts). Current draw while the cruise is engaged is nominally $0.50\sim1$ amp ($6\sim12$ Watts).

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

Refer to the line drawing at the end of this document to identify the components from the numbers in the text.

The Computer (1 - upper arrow) mounts in the rear storage compartment on the right side. Hook & Loop (Velcro) mounting tape is used to mount the computer.

The Electric Throttle Servo (2 – lower arrow) is also mounted in the rear storage compartment, on the left side.



The CIU or Cable Interface Unit (3) is mounted on the left side of the bike, behind the radiator. The photo below left shows the CIU with the body panel off the bike. It has a new cable (4) running from it to the throttle bodies.

The photo over the page on the left shows the CIU on the GSX-S1000 with the body panel fitted.

The photo over the page on the right shows the CIU on the GSX-S1000F with the body panel fitted, showing the section of the fairing duct that may need to be trimmed to allow the CIU to fit.



The CIU on the GSX-S1000 (below left) and GSX-S1000F (below right).





The **Control Switch (5)** mounting (photo below left) has the switch mounted on the left hand (clutch) lever mirror mount. The switch is located above the left switch block.



The Wiring Harness (6) has the same type of plugs or terminals that are already used on the motorcycle. Power for the cruise control and brake sensing is taken off the brake light switches by unplugging the rear brake light switch. Matching connectors on the cruise control loom are plugged in to the switch and the bike's loom. Speed sensing is taken from the bike's speed signal to the ECU. Tach (engine speed) sensing is detected from the bike's ignition circuit. This is used to disengage the cruise if the clutch is operated. The bike's clutch switch is also connected to the cruise control to disengage the cruise control. The cruise control is grounded on the negative terminal of the battery. All these connections are "Plug & Play", no cutting of wires or splicing is required, but terminals on the motorcycle do have to be backed out of housings (connector plugs) for two connections. See over the page for details of the type of terminal extractor tools you will need to perform this operation on one of these connections.

MotorCycle Cruise Controls

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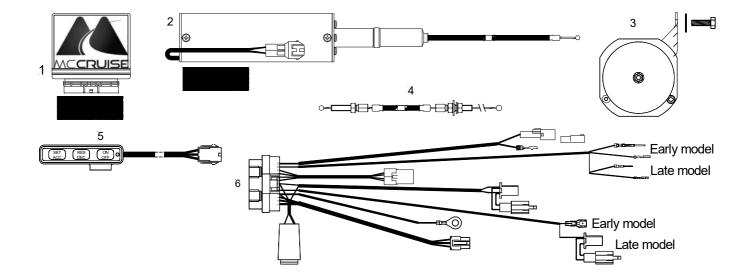
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How to determine electrical connectors and terminal extractor tools.

<u>NOTE:</u> - The installation of the cruise control requires that a small and delicate electrical terminal be backed out of a connector housing. On the later model, the engine management ECU has terminals that require special tools to do this, these are available to be ordered with the cruise control if the installer does not have such tools already. Backing out these terminals without suitable tools is almost impossible.

On the earlier model, a set of jeweller's screwdrivers are effective and these special tools are not necessary.

The 11 piece set we supply in the kit as an optional purchase seems to be generally available on Ali-Express and EBay for a few of dollars, by searching for the part number ZZLJ7596 or by searching for 'terminal extractor set'.

The set in the photo is a typical 11 piece extractor set. The tool that we found fitted the best is the one arrowed with 0.8mm wide blade.



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How to determine the clutch switch type.

To our knowledge, all GSX-S1000 produced up to the 2016 model year have a clutch switch fitted with 4.8mm QC spade connectors. The switch is located directly under the clutch lever near the pivot point. The spade terminals are attached to the front of the switch, under the clutch lever pivot. Cruise control kit part number MCS 6740/1 will fit these bikes.



For the 2017 model year, a new type of clutch switch is fitted that has a two-way latched plug. The switch is located directly under the clutch lever near the pivot point. This connector (arrowed in the photo below left) comes from the rear into the clutch switch. Cruise control MCS 6740/2 will fit these bikes.

Note that 2017 model year bikes may have a production date as early as mid 2016.

Please determine what type of connectors are fitted to your bike, and ensure the correct kit is ordered.



How to determine the ECU connector type.

The engine management ECU on this bike is mounted on top of the air filter housing, under the fuel tank.

Depending on the model year, the bike can be fitted with one of two different ECU's and they have different electrical connectors.



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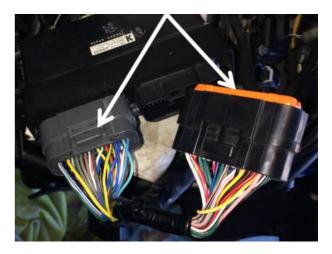
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To our knowledge, all GSX-S1000 produced up to the 2016 model year have an engine management ECU fitted with JAE (the manufacturer of the connector) electrical connectors.

These connectors have a simple press to release latch on the top side of the connector (left arrow). If the connector is disconnected from the ECU (NOTE: - DO NOT DISCONNECT the plug unless you first disconnect the negative terminal from the battery), the connector has an orange plastic retainer on the inside (right arrow).

Cruise control kit part number MCS 6740/1 will fit these bikes.



To our knowledge, all GSX-S1000 produced from 2017 model year have an engine management ECU fitted with JST (the manufacturer of the connector) electrical connectors.

These connectors have a press to release latch and a 'crank handle' (arrowed) on the top side of the connector.

Cruise control kit part number MCS 6740/2 will fit these bikes.



NOTE: - We have no reason to think that there are bikes out there with a mixture of electrical connecters on the clutch and ECU, however we cannot be certain of that.

If your bike has an early clutch switch and late ECU or the other way around, we can make a harness to suit and if, after you receive the kit, one or both connections are incorrect, swapping out only those wires in the harness is very easy, no special tools are required to exchange wires in the cruise control harness. If desired, for a Aus\$10 extra we can provide wires to fit both ECU connector types, so you are covered for either type of ECU connector.

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