

Planning and Installation

The Acumen CAT6 consists of the following components:

Acumen CAT6 main unit (ECU) with 2 x touch keys

Installation and User Guide

Fitting kit, comprising:

- Stainless steel handlebar bracket to mount touch pad.
- 2 x 5mm screws, washers and nuts for mounting.
- 2 x Hex-head self tappers, with captive loose washer, for mounting.
- 6 x cable ties.
- Heat-shrink for wires.
- Test Bulb.
- 1 x Acumen acrylic badge

Tools Required:

- Pliers/Cable strippers/Cable cutters & other general workshop tools.
- Soldering equipment.
- High quality insulating tape.
- Masking tape (for drilling touch pad mounting hole).
- Multimeter.
- Motorcycle wiring diagram.

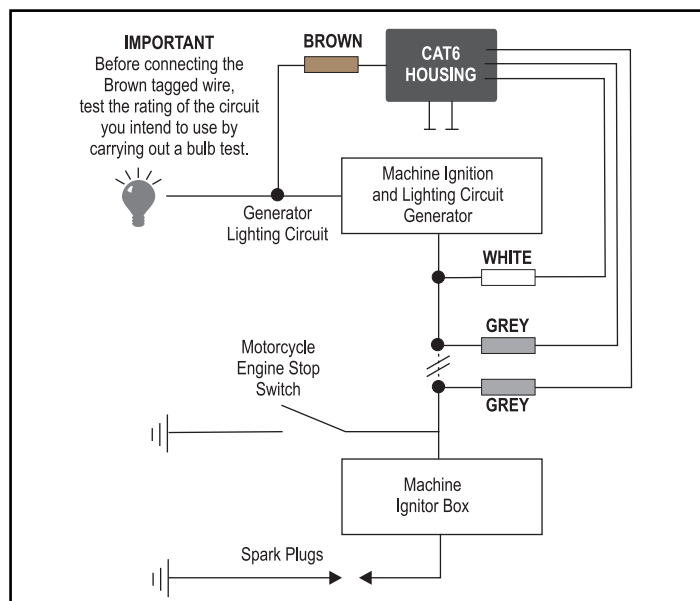
Wiring

All wiring **MUST** be soldered and insulated with the heatshrink provided. Insulation Displacement Connectors (IDC) (such as 'Scotch Loks') must **NOT** be used.

Ensure the wiring harness is routed in a safe manner – not touching hot or moving parts – and is taped as per the original motorcycle harness.

As all the system wiring is Black, we recommend you fit the untagged black wires first – these are for the earth/ground connections – to avoid confusion should you cut off a colour tag and then drop the wire! Alternatively, tie a knot in the untagged black wires .

- 1 Connect the two untagged black earth wires to **TWO** suitable earth/ground points on the motorcycle frame **OR TWO** separate earth/ground wires within the motorcycle harness. **DO NOT** connect one wire to the frame and one wire to the battery negative terminal or the motorcycle harness.
- 2 Connect the Green-tagged wire of the ECU and the Green-tagged wire of the Touch Pad together.
- 3 Connect the Orange-tagged wire of the ECU and the Orange-tagged wire of the touch pad together.
- 4 Connect the Violet-tagged wire of the ECU and the Violet-tagged wire of the touch pad together.



YOUR WARRANTY WILL BE INVALID IF YOU EXCEED STATED RATINGS

The CAT6 is an immobiliser and therefore has safety considerations if not connected in a correct manner. **ALL connections MUST be soldered.**

ECU

Before fitting the CAT6, plan where you are going to install the CAT6 ECU. The more protected it is the more effectively it will be able to do its job. Try to mount the unit under a lockable or bolted-on item/panel.

The ECU should be mounted using the two 5mm screws, nuts and washers provided or, if more convenient, the two self tapping hex-headed screws provided..

TOUCH PAD

The touch pad incorporates the system LED. It should be mounted in a readily accessible position so that the rider has easy access to it and the system LED is visible. Use either the mounting bracket provided (this will mount on one of the handlebar mounting bolts) or drill a 20mm diameter hole in a suitable panel.

Position the touch pad so that the water drain slot is at the lowest position.

- 5 Connect the Pink-tagged wire of the ECU and the Pink-tagged wire of the touch pad together.

IMPORTANT - Before connecting the Brown tagged wire, test the rating of the circuit you intend to use by carrying out a bulb test. YOUR WARRANTY WILL BE INVALID IF THIS TEST IS NOT PERFORMED CORRECTLY:

We have included a test bulb in the fitting kit for this purpose.

Connect the test bulb to the circuit you intend to use and to the motorcycle earth/ground.

Turn the engine over (starter or kick), without starting the engine and see if the bulb glows. If it does, start the engine.

The bulb should light up.

If it does not light up, there is **NOT ENOUGH POWER** in the wire for the CAT6.

If the bulb blows when you rev the engine there is **TOO MUCH POWER** in the wire for the CAT6 – **DO NOT USE THIS CIRCUIT.**

Either choose a different circuit and **RE-TEST** or contact Acumen Electronics and order part number 10139 (additional cost) which will enable the CAT6 to be connected directly to the alternator.

- 6 Connect the Brown-tagged wire to any circuit which comes live with the engine running, such as lights circuit. The motorcycle circuit can be AC or DC, it doesn't matter. This circuit of the CAT6 has a **MAXIMUM** rating of ;
AC; 20V RMS 60V Peak (ie; a spike)
DC – 12V nominal 16V max
- 7 The White-tagged wire is the main immobiliser wire. It will immobilise the motorcycle by switching the circuit to ground. Most AC ignition motorcycles, when the rider switches them 'off' (stops the engine), have the ignition circuit switched to ground. This circuit has a **MAXIMUM** rating of 800 Volts (AC or DC) at 1 Amp. Connect this White-tagged wire to the wire the manufacturer uses to switch the motorcycle off.

IMPORTANT NOTE - WAKE UP THE SYSTEM

The CAT6 is shipped in 'sleep mode' and needs to 'see' the ignition to wake up. When installation is complete, it is possible that the touch pad LED will be switched off and the system will not react to the touch key. Simply try and kickstart the motorcycle (Or electric starter if appropriate) this will 'wake the system up' and the LED will flash Red - disarm by using the touch key.



The Acumen CAT6 immobiliser is designed to immobilise motorcycles (or products such as jetskis, snowmobiles) that do not have an ignition key and/or a battery. It will immobilise both AC or DC ignition systems.

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Operation

1. To disarm the CAT6, simply place the touch key on the touch pad. The LED will change from flashing Red to flashing Green.
NOTE! If the Red LED is not flashing, see FAQ - Question 1.
2. The CAT6 will arm automatically, 30 seconds after the engine has stopped (see FAQ - Question 2)
3. The system LED, in the touch pad, will indicate the status of the CAT6:
 - Flashing Red LED is a sign the CAT6 is armed, and has immobilised the ignition.
 - Constant Red LED is a sign an attempt is being made to start the motorcycle while the CAT6 is armed.
 - Flashing Green LED is a sign the system is disarmed, and will remain in this state for 30 seconds after the engine has been 'turned over'.
 - Constant Green LED indicates the engine is running – or the ignition is switched on in the case of a motorcycle with a battery.

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Frequently Asked Questions (FAQ)

1. **Q** - I have had my motorcycle in storage for several months and now the system LED is not flashing Red or Green, and it will not react to the touch key?
A - The CAT6 incorporates its own battery pack to keep the electronics and the System LED in operation. This battery pack is charged while the motorcycle is in use, and will keep the system alive for a considerably long time. In the event the motorcycle is left unattended for a very long time, the system LED will be switched off and the system will not react to the touch key. Simply try and kickstart the motorcycle (Or electric starter if appropriate) and this will 'wake the system up' and the LED will flash Red. Disarm by using the touch key.
2. **Q** - If I fall off my motorcycle, as when riding on mud or off-road, it sometimes becomes flooded etc and will not start easily, certainly not within the 30 second arming time?
A - Providing you attempt to start the motorcycle within the 30 second arming time, the system 'clock' will begin counting 30 seconds from every start attempt. If the motorcycle is left for 30 seconds without an attempted start, the CAT6 will arm fully and immobilise the motorcycle. In this scenario, you must touch the touch key on the touch pad.
3. **Q** - I have lost one of my touch keys. Can I replace it?
A - No Problem. Contact Acumen Electronics (**details above**) and order part number 51016. 'Teaching' instructions are supplied with the new touch key.
4. **Q** - I have lost both of my touch keys. What do I do?
A - You will need to send the CAT6 ECU back to Acumen Electronics. Remember to identify each wire as you remove it from the motorcycle – if you don't we can't help you! Contact Acumen Electronics for a returns number. A small fee will be made for this service.
5. **Q** - I had a spill and damaged the Touch Pad. Can I get a replacement?
A - No Problem. Contact Acumen Electronics (**details in rear**) and order part number 51017. Helpful wiring tips are included with the new Touch pad.