CLIFFORD

World-Class Auto Security™

VirtualKey™

AutoImmobilizer™

Installation Manual

VirtualKey 2

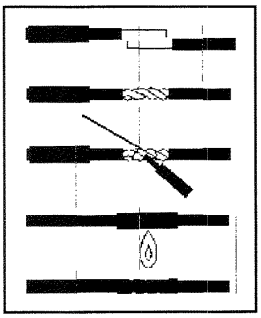
Dual-Point AutoImmobiliser
UK THATCHAM EVALUATED

CLIFFORD
The Science of Security™

Installation Manual

Standard Features

- ☑ ***Lifetime Warranty***
- ☑ ***A Pair of VirtualKeys™***
  - ***More than 18,000,000,000,000,000,000 Digital Codes***
  - ***User-Transparent Arming and Disarming***
- ☑ ***MultiPoint™ Immobilisation with Two On-Board Relays***
- ☑ ***MultiKey™ Recognition of up to 15 VirtualKeys***
- ☑ ***Passive AutoArming***
- ☑ ***Triple Ground Points***
- ☑ ***Non-Volatile Memory***
- ☑ ***Fault-Proof Driving Safety***
- ☑ ***Sabotage-Proof Electronics***
- ☑ ***High-Luminescence LED Status Indicator***



How to Solder

1. Strip about one-half-inch of insulation from the wires and slip a two-inch length of shrink tubing over one of them, then join the wires.
2. Heat the wires with a soldering gun whilst touching solder to them until the solder melts.
3. Pull the wires to test the solder joint, then position the loose shrink tube over the solder joint and heat with a hot air gun to shrink the material tightly so it seals and insulates.

Electrical Characteristics

Power supply voltage range is 9-18 volts. Power consumption is 12mA in set mode. Electrical characteristics of each immobilising relay circuit is 12 volts, 20A continuous/30A maximum.

> ***NOTE: Each circuit must be wired such that each labeled input and output wire is connected to the electrical device's input and output, respectively, as the input holds the circuit latched whilst driving. Furthermore, you may only immobilise a switched 12-volt circuit, not a constant 12-volt line nor an ground-switching line.***

Control Unit

The VirtualKey II AutoImmobiliser control unit should be screwed to the vehicle floor or firewall (be sure to check clearance before fastening).

Ignition

1. Use a voltmeter to locate the **one** wire that carries +12V throughout **BOTH the cranking AND engine running cycles**, and 0 volt when the ignition is off.
2. Cut the wire, then try starting the engine. It should crank but not start.
3. Connect the ignition input and output wires as shown, then ***remove the wire tags.***

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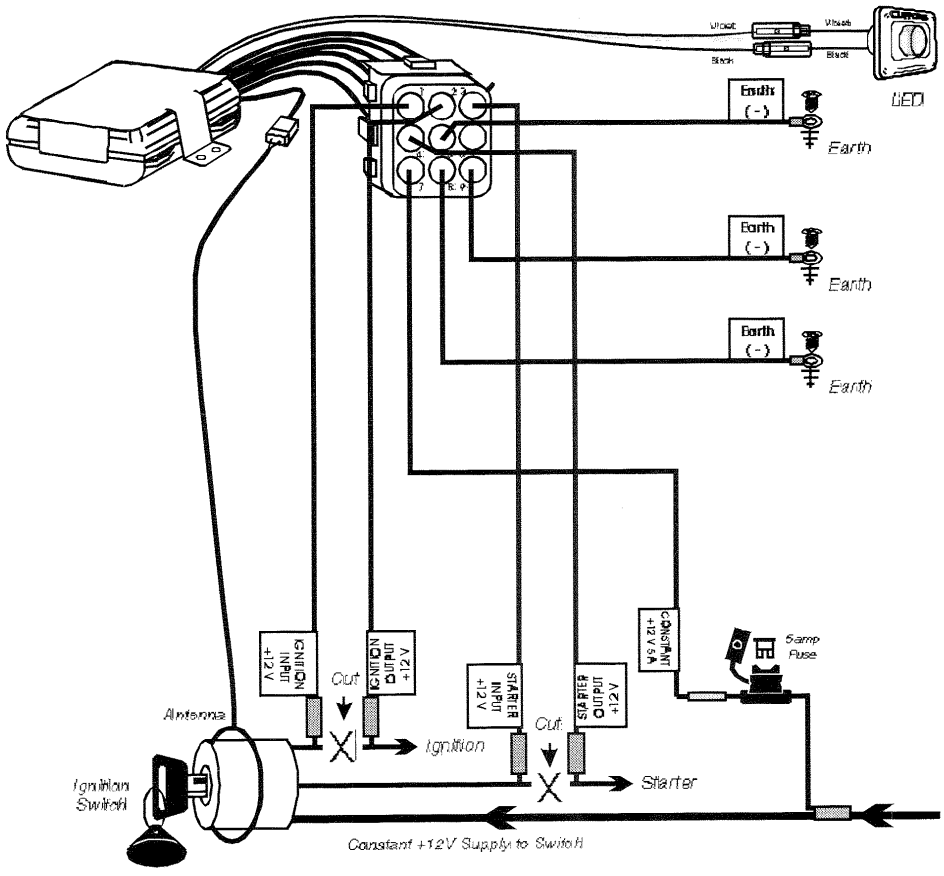


IMPORTANT: Remove tags after making connections.

Starter

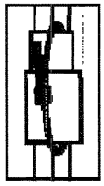
1. Use a voltmeter to locate the **one** wire that carries +12V during the **cranking cycle ONLY**. This is the starter wire.
2. Cut the wire, then try starting the engine. It should not crank.
3. Connect the starter input and output wires as shown, then ***remove the wire tags.***

LED

Select a suitable location on the dash or console that is clearly visible from outside the vehicle.

1. Make sure there is adequate clearance for the LED, then drill a 5/16" (8mm) hole.
2. Run the VIOLET/BLACK twinlead through the hole from behind the dash.
3. Connect the BLACK wire to the LED BLACK wire.
4. Connect the VIOLET wire to the LED VIOLET wire.
5. Remove the adhesive backing and press the LED into place.

Transponder Antenna



The shielded cable that terminates in a two-pin connector is the transponder antenna. The loop must be mounted as close as possible to the keyhole of the ignition switch and must be perpendicular (right angle) to the vehicle floor. In other words, the antenna must be vertical, while the VirtualKey hangs horizontally. If they are not perpendicular to each other, the system may not be able to read the VirtualKey.

1. Remove the steering column shroud.
2. Using tie-wraps, secure the end of the antenna as close as possible to the keyhole of the ignition switch and mount in a perfectly vertical, up-and-down orientation.
3. Plug the antenna's connector into the control unit, secure with a tie-wrap as shown, then replace the steering column shroud.

Power and Ground

1. Connect the constant +12 volt wire to the fuse and fuseholder. Connect the other side of the fuseholder to the ignition switch's constant +12 volt supply line, then ***remove the wire tag.***
2. Connect one of the three "Earth" wires to a solid ground (resistance less than 0.1 ohm), then ***remove the wire tag.***
3. Connect another one of the three "Earth" wire to a *different* solid ground (resistance less than 0.1 ohm), then ***remove the wire tag.***
4. Connect the last remaining "Earth" wire to another *different* solid ground (resistance less than 0.1 ohm), then ***remove the wire tag.***

Properly Attach the VirtualKey to the Ignition Key

You must attach the VirtualKey directly to the vehicle's ignition key as shown in the illustration. DO NOT ATTACH THE VirtualKey TO A KEYCHAIN. Doing so may put too much distance between the VirtualKey and the transceiving antenna, thus preventing normal disarming.

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