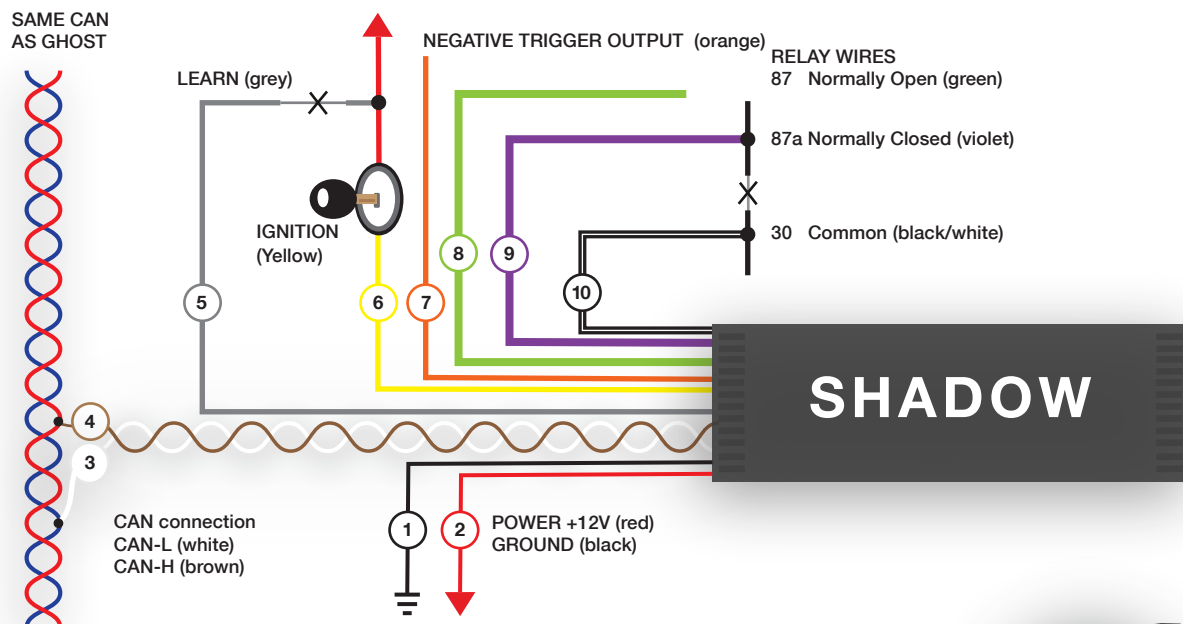


## INSTALLATION INSTRUCTIONS

- Please follow the installation Instructions carefully to avoid damaging the device or the vehicle.
- Only Autowatch trained and approved installers may install this device.
- DO NOT cut any vehicle wires during this installation, unless you know that the wire is safe to cut or Instructed by the VEHICLE SPECIFIC INFORMATION (VSI).

### IMPORTANT NOTE

If you connect the GREY wire on the Ghost after pairing has been done, the Shadow-Ghost pairing will be broken. Follow the PAIRING process again to re-pair the Shadow and the Ghost.



## INSTALLATION INSTRUCTIONS

### 1 CONNECTIONS

#### 1.1 GROUND/CHASSIS (BLACK)

A permanent connection to the Vehicle chassis or a ground wire Must be made with the Black Wire.

#### 1.2 POWER (RED)

Connect to a permanent +12V Connection to the vehicle battery. Make sure to confirm that this voltage does not fall away when the vehicle is In motion.

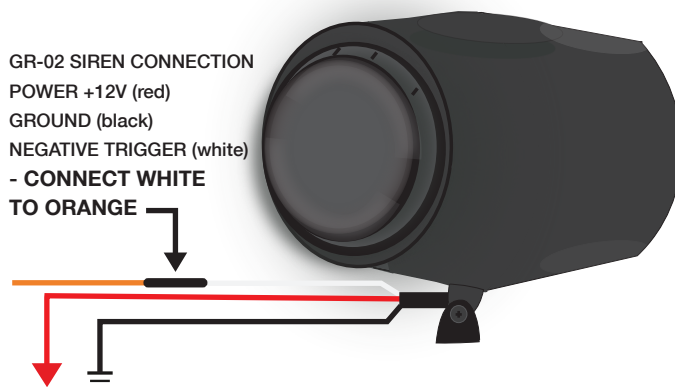
#### 1.3 CAN-LOW (WHITE)

Connect the White wire to the CAN-L wire as indicated on the VSI.

#### 1.4 CAN-HIGH (BROWN)

Connect the Brown wire to the CAN-H wire as indicated on the VSI.

GR-02 SIREN CONNECTION  
POWER +12V (red)  
GROUND (black)  
NEGATIVE TRIGGER (white)  
- CONNECT WHITE TO ORANGE



#### 1.5 LEARN (GREY)

Temporary connected to +12V during learn process to pair with the Ghost.

#### 1.6 IGNITION (YELLOW)

Connect the Yellow wire to a positive when ignition is on.

#### 1.7 NEGATIVE TRIGGER OUTPUT (ORANGE)

Connect to siren or pager. Functionality details in section 3.0 Note: Maximum current 200 mA. DO NOT CONNECT DIRECTLY TO GROUND OF SIREN, AS THE OUTPUT IS NOT STRONG ENOUGH AND WILL DAMAGE THE SHADOW

## 1.8 NORMALLY OPEN (GREEN)

Internal relay normally open Contact (87)

## 1.9 NORMALLY CLOSED (VIOLET)

Internal relay normally closed contact (87a).  
Connect to engine stall cut (fuel pump etc.).  
Will open only in attempted theft situation,  
vehicle dependent activation. Refer to 3.

## 1.10 COMMON (BLACK/WHITE)

Internal relay common contact (30).  
Always use on one side of the cut.

## 2 INSTALL PROCESS

Follow this process to correctly pair the Shadow to the Ghost and then complete the Installation. This must be done after the Ghost Has been fully installed and tested. DO NOT try to install the Shadow before completing the Ghost Installation.

### 2.1 PAIR WITH GHOST

The first step is to pair the Ghost and the Shadow, this only require CAN and power connections. DO NOT CONNECT the cut, ignition, or NEGATIVE TRIGGER OUTPUT.

- Connect the CAN wires to the same network as the already installed Ghost
- Connect the GREY and RED to +12V power
- Turn on the ignition
- Put the Ghost into PIN CHANGE mode.
- Connect the Shadow BLACK wire to chassis
- The indication will flash twice to Indicate a successful pairing
- Turn off the ignition
- Remove the Grey wire from +12V

### 2.2 COMPLETE INSTALL

- Connect the Yellow wire to ignition feed  
Ignition feed must be Or as soon as ignition is off - no delay can be allowed as this will trigger the cut and siren.
- Connect the relay cut as required for a engine shut-down cut.
- Connect the NEGATIVE TRIGGER wire to the Siren and or tracking system NEGATIVE INPUT.

### Technical Specifications

Sleep mode current consumption..... 5mA

Shadow relay current rating..... 20A

## 3 NEGATIVE TRIGGER OUTPUT

The NEGATIVE TRIGGER OUTPUT (ORANGE) can be connected to a siren (self oscillating) and/or pager. The output is a negative when active output and will sink a maximum of 200 mA, any high loads will destroy the output. The NEGATIVE TRIGGER OUTPUT will activate when a theft attempt has been detected. This is vehicle dependent.

### 3.1 ATTEMPTED BYPASS

When an attempted to start or move the vehicle has been made without entering the PIN code, the NEGATIVE TRIGGER OUTPUT will become active. This is different for vehicle types but is normally done one of these two ways.

- Foot on clutch/brake for a start attempt without entering a PIN code.
- After failed attempt at starting (such as VAG group starting and cutting out) if the ignition is left on or toggled multiple times.
- Once the ATTEMPTED BYPASS condition has been set the NEGATIVE TRIGGER OUTPUT will be active as soon as the ignition is turned on. It will stay active for 5 to 10 seconds after ignition is turned off.
- Entering the PIN sequence will release the ATTEMPTED BYPASS condition and release the NEGATIVE TRIGGER OUTPUT.

### 3.2 IGNITION WITH NO CAN

If the ignition input is turned on without any CAN activity the NEGATIVE TRIGGER OUTPUT will become active (a short delay is allowed for slow acting CAN networks). Once the IGNITION is turned off the NEGATIVE TRIGGER OUTPUT will release after 5 seconds.

### 3.3 MOVEMENT WITH PIN CODE

If movement is detected without entering the PIN code the NEGATIVE TRIGGER OUTPUT will become active. Again it will release 5 - 10 seconds after the ignition is turned off.

### 3.4 HI-JACK IMMOBILISE STATE

If anti hi-jack is triggered and the PIN code is not entered the indications will flash for a while. When they have stopped flashing the anti hi-jack is in full armed mode. When the vehicle comes to a stop after this the Shadow will activate the NEGATIVE TRIGGER OUTPUT and the relay will activate to allow for an emergency stall cut.