AUTOWATCH GHOST-II Owner's Manual

Contents

GHOST-II

OWNERS MANUAL

NEW SMART VEHICLE PROTECTION

Security Guaranteed or Your Money Back!

General information

The Autowatch Ghost-II is the next generation of the ground-breaking Ghost immobiliser. The Ghost-II has an innovative mechanism of engine lockout that uses the data network on the vehicle so that there is no additional wiring that can be easily found. Disarming the Ghost-II can be done using a disarm sequence on the standard vehicle buttons, just like the original Ghost.

The Ghost-II adds another layer of convenience by allowing two smartphones and two key-fob tags to disarm the Ghost-II.

The Ghost-II cannot be found using normal theft methods as it has no LED's or buttons giving away its location. Moreover, due to the use of the latest micro-manufacturing techniques the Ghost-II is small enough to hide almost anywhere in the vehicle.

The Ghost-II is the new smart way to protect your vehicle.

Terms and abbreviations

- **Disarm sequence —** this is the unique sequence of button presses you choose and program into the Ghost-II that is used by you to disarm the system and allow you to drive.
- **Indication signal —** on all Ghost-II installations there is deliberately NO dash mounted flashing LED as this would help thieves trace the wires back to the module and compromise security. Instead we use a model specific dash warning light to confirm disarming and for programming different features. Most commonly the left and right indicator signals or the check-engine warning signal are used.
- **Service button —** a single button is defined for each vehicle that is used to put the vehicle into service / valet mode.

Write down your service button information here:

Hints and tips

Here are a few things that will be helpful in making sure your experience with the Ghost-II is hassle free.

- For those vehicles that the Ghost-II can stall the engine, it may be possible to start the engine before entering the disarm sequence. In this case your vehicle with either, (1) not be able to move out of Park, (2) the engine will stall if the gear selector is moved from Park or, (3) the engine will stall if your vehicle moves backwards or forwards.
- The Ghost-II automatically returns to the armed state after 3 to 30 seconds with your vehicle ignition off, this timing is vehicle dependant.
- Wait for the double flash on the indication signal before either starting (on start inhibited cars) or changing gear (gearbox lock or stall vehicles).
- If at any point you get confused or enter the wrong disarm sequence, simply switch off the ignition and wait 10 seconds. After this follow the normal disarming procedure.

Normal operation

Entering the disarm sequence

When you take delivery of your vehicle with the Ghost-II installed, the professionally trained installation team will have set a default disarm sequence for you. This is generally simple and, for your security, should be changed as soon as possible after delivery.

To enter the disarm sequence follow these simple steps:

1. Switch on your vehicle's ignition. If the immobilisation is not starter inhibit then it may be possible start the engine at this step.

2. Press each button in the disarm sequence in the correct order. Whilst getting used to the process it is advantageous to do each press firmly and deliberately.

3. Wait until the indication signal flashes twice before starting your vehicle.

Should the code not be accepted after the first attempt simply wait 5 seconds and try again.

If this does not work then turn off the ignition, wait 10 seconds and start again at step 1.

Using a smartphone or key-fob

If you have paired a smartphone or key-fob with the Ghost-II you do not need to enter the disarm sequence to disarm the Ghost-II.

The Ghost-II will detect the smartphone or key-fob and flash the indication signal twice as soon as the ignition is switched on and allow you to drive your vehicle.

Do not leave the key-fob or smartphone in the vehicles as this will leave the Ghost-II disarmed.

> **ATTENTION!** Should you misplace a paired smartphone or key-fob it is advisable to clear all pairings. Once this is done the remaining or replacement smartphones and key-fobs will need to be re-paired with the Ghost-II. Details on these procedures are given in this manual.

Service/valet mode

Your Ghost-II has a service/valet mode whereby you will not require the disarm sequence to be entered before starting or driving your vehicle.

This is used when the vehicle is being serviced or valet parked.

> **Note:** This mode is not meant as a permanent override and will automatically exit when the vehicle exceeds a speed of 32 mph (50 km/h) and continues to drive for a period of 15 minutes. After this the Ghost-II will need the disarm sequence before the next start attempt. When exiting service/valet mode the signal indication will flash twice and the Ghost-II will rearm once the ignition is switched off.

To enter service/valet mode simply enter the disarm sequence as normal. Once the indication signal flashes twice press the service button 5 times. The indication signal will flash 5 times to confirm that your Ghost-II is now in service/valet mode.

To manually exit service/valet mode simply enter the disarm sequence at any time while the ignition is switched on.

> Hint: Activate service mode at the end of the drive to the service centre to ensure it is enabled correctly.

Anti-hijack mode

The anti-hijack mode is designed to protect you from the unlikely event of someone taking your vehicle whilst you are driving it.

The anti-hijack mode is activated automatically when the following conditions have been met:

- You have disarmed the system (using either the key-fob / smartphone or disarm sequence)

- The engine is running
- The driver's door is opened for more than 3 seconds
- The brake pedal was not pressed when the door was open

ATTENTION: By default, the anti-hijack feature is not active. It is not advised for use in the UK as it violates laws regarding the immobilisation of vehicles in motion. Activation of this feature is done at your own risk.

When the anti-hijack is initially activated there will be no indication in the vehicle. After travelling for around 300m the indication signal will start to flash, this is to notify you that you should enter the disarm sequence to deactivate anti-hijack. The indication signals will get progressively faster eventually stopping altogether. At this point anti-hijack is completely set meaning that if the vehicle comes to a stop the engine will shut off. In addition, on some vehicles the hazard lights may flash, and horn may sound to indicate that something has happened to the vehicle.

Note: At any point entering the disarm sequence will deactivate the anti-hijack, even after the indication signal has stopped flashing. This will be confirmed by the standard double-flash confirmation signal.

Setup / configuration

Entering disarm sequence change mode

There are 2 ways to enter disarm sequence change mode:

1. **Normal procedure:**
   a. Switch on your vehicle ignition.
   b. Enter the current disarm sequence **(DO NOT START THE ENGINE!)**.
   c. Press and hold the accelerator pedal to the floor.
   d. Enter the current disarm sequence again.
   e. The Ghost-II will now be in learn mode, the indication signal will flash every 3 seconds to confirm this. You may now release the accelerator pedal.
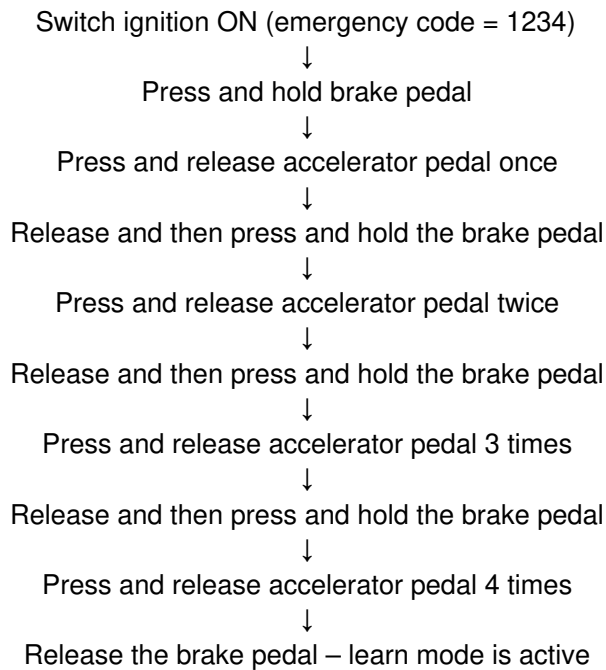2. **Emergency code procedure: –** This is used if the disarm sequence has been forgotten or a button is no longer working.
   a. Locate your emergency 4-digit code. This is found on your Ghost-II card, behind the scratch off security protection.
   b. Switch on your vehicle ignition.
   c. Press and hold the brake pedal
   d. Press the accelerator pedal to the floor and release it again, repeated as per the digit of the emergency code.
   e. Release the brake pedal.
   f. Repeat b,c,d for the remaining 3 digits — see flow chart on the next page for an example for an emergency code of 1234.
   g. The Ghost-II will now be in learn mode, the signal indicators will flash every 3 seconds to confirm this.

Note: Once the emergency code is used you will be able start and drive the vehicle without entering a code or learning a new code.

Information: On certain vehicles the accelerator pedal is not possible to read on the CAN data network. If this is the case it will be replaced by an alternative. This should be noted by the installer in this document.

However most often the alternative is the high-beam flash (hold towards driver's seat) or hazard warning switch (press and hold, ignoring indicator flashing).

<div align="center">

Switch ignition ON (emergency code = 1234)
↓
Press and hold brake pedal
↓
Press and release accelerator pedal once
↓
Release and then press and hold the brake pedal
↓
Press and release accelerator pedal twice
↓
Release and then press and hold the brake pedal
↓
Press and release accelerator pedal 3 times
↓
Release and then press and hold the brake pedal
↓
Press and release accelerator pedal 4 times
↓
Release the brake pedal – learn mode is active

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Changing the disarm sequence

Before changing the disarm sequence, here are some important things to consider and remember.

- You need to know which buttons of your specific vehicle can be used for the disarm sequence.
- During the learn procedure, each press of a button in the disarm sequence must be not more than 2 seconds apart.
- Each press will be confirmed by a single flash of the indication signal — on some vehicles this can be difficult to determine as the indication signal flash is not fast enough to notice the gap between flashes
- Some buttons are only active 2 to 5 seconds after the ignition is switched on.
- Some buttons require a long press (1 second) before activating
- The disarm sequence must be between 4 and 20 button presses long.
- Most buttons can be repeated.
- Your service button cannot be used more than 4 times in a row in the disarm sequence.

Before you start the learn process, plan the disarm sequence so that there is no hesitation whilst trying to learn it into the Ghost-II:

1. Your vehicles ignition will be switched on following one of the ways to enter learn mode as described above, the indication signal will be flashing once every 3 seconds
2. Enter the new disarm sequence.
3. Wait for 3 flashes of the indication signal.
4. Enter the same new disarm sequence again.
5. Wait 2 seconds.
6. If the new disarm sequence has been correctly entered and accepted the indication signal will flash twice. If the new disarm sequence was not correctly entered the indication signal will flash 4 times. Switch off the ignition and start the process again.

Information: if the indication signal flashes more than 4 times or in 2 double flashes that means the same disarm sequence was learnt in. This process deletes all smartphone pairings from the Ghost-II.

Smartphone application

Your Ghost-II can connect to our unique smartphone application using Bluetooth Low Energy (BLE version 4.0 upward). The Ghost-II can connect to two smartphones. When connected to this application you can simply get in your car and drive away without entering the disarm sequence. The smartphone / Ghost-II communication is entirely encrypted and uses a unique code for every unit, so that nobody can copy or take control of your Ghost-II. You can find the app by searching "Autowatch Ghost-II" in iTunes or the Google Play Store.

Connecting your Ghost-II to your smartphone

Once you have installed the Ghost-II app from your app store. Follow these steps to create the connection.

1. Switch on the Bluetooth on your smartphone
2. Start the Ghost-II app
3. Press the «+» button to add a new device
4. Switch on the vehicle ignition and do not start the engine
5. Disarm the Ghost-II by entering the disarm sequence
6. Activate disarm sequence change mode (press accelerator pedal to the floor — or alternative, enter the disarm sequence again, release the accelerator once the indication signal starts to flash once every 3 seconds)
7. Press the service button once
8. Enter the Bluetooth connection code as it appears on your emergency card in the pop-up box on your smartphone
9. Press the button in the centre to activate smartphone authorisation.

Attention: The smartphone key-fob only works if the smartphone Bluetooth is switched on.

Communication between the Ghost-II and the smartphone is done through a secure, encrypted channel and the connection code is randomly assigned to each Ghost-II for maximum security.

Should the connection not be possible try following the procedure again. Should the connection still not be successful then do the following steps to clear the Ghost-II and smartphone of all smartphone connections.

Smartphone: SETTINGS → BLUETOOTH → DEVICES → IGLA → DELETE CONNECTION (PAIRING)

Vehicle: follow the disarm sequence change process and change the disarm sequence to the current disarm sequence (in effect, you will enter the disarm sequence a total of 4 times)

Key-fob management

Deleting key-fobs

If you have lost a key-fob and suspect it may still be active, it is advisable to delete the key-fob from the Ghost-II. To do this follow this procedure on the vehicle:

1. Complete the disarm sequence change process but do not change to a different disarm sequence, rather enter the current disarm sequence. This is confirmed with multiple flashes after the 4th disarm sequence entry. (this

will also delete all smartphone connections. These connections will have to be redone after this process is completed)

2. Do not switch off the ignition
3. Press the service button 10 times within 10 seconds of the disarm sequence change process completion.
4. The indication signal will flash twice to confirm that ALL key-fobs have been removed.

> **Attention:** This process will delete all smartphone and key-fobs from the Ghost-II. You will have to manually add all smartphones and key-fobs one at a time.

Connecting key-fobs

To connect a new key-fob to the Ghost-II follow this procedure:

1. Make sure all currently active key-fobs and smartphones are either off or out of range
2. Put the key-fob into learning mode by inserting the battery. The LED should be flashing green
3. Remove the battery from the key-fob
4. Put the Ghost-II into key-fob learning mode:
   a. Switch on the ignition without starting the engine
   b. Disarm by entering the disarm sequence
   c. Press and hold the accelerator (or specific vehicle alternative)
   d. Re-enter the disarm sequence to enter disarm sequence change mode (indication signal will be flashing once every 3 seconds)
   e. Release the accelerator pedal
   f. Press the service button twice
5. Insert the battery into the key-fob, the LED should be flashing green
6. Once the key-fob and Ghost-II have completed the learning process the LED will flash red and stop flashing green.

Check that the key-fob is working correctly by switching off the ignition and removing the vehicle key. Wait for 15 seconds and switch on the ignition. If the key-fob is working correctly the indication signal will flash twice to confirm disarm.

If the learning process does not work the key-fob LED will continue to flash green for 30 seconds. Simply start the process again.

Functionality with the Shadow

The Shadow is a security add-on unit that can add a siren without giving away the location of the Ghost-II unit. The Shadow is connected to the same CAN data network as the Ghost-II but is located away from the Ghost-II.

The Shadow will trigger the siren output under the following conditions (*these are general guidelines, implementation in vehicles varies)

- Two attempts to start the engine if the starter inhibit mode is selected
- 15 seconds of ignition switched on after the engine has been stalled or gearbox locked without entering the disarm sequence
- Wheel movement without entering the disarm sequence

- Attempted new key learning (not all vehicles)
- Anti-hijack, once the vehicle has come to a stop and no disarm sequence has been entered
- The ignition is switched on and the Ghost-II does not respond

The Shadow also has a miniature internal relay that can be used as a backup immobilisation should the Ghost-II be found and removed. This gives an extra layer of protection against a thief who has time to rip apart a vehicle to look for the Ghost-II. This relay immobilisation can also be used to add engine stall features to vehicles where this cannot be done via the CAN data connection alone.

> **Information:** The Shadow can be connected to a 3rd part telematics system to give text or email notifications should the vehicle be under attack. This can be done without the siren to keep a completely covert security solution.

Technical specifications

Ghost-II

Standby current consumption (max) …………. 8 mA
Operating voltage ……………………………………. 6-15 V

Bluetooth key-fobs

Radio frequency ………………………………….. 2.4 GHz
Battery type ……………………………………….. CR2025
Battery life (estimate) ………………………….. 6 months

Shadow

Standby current consumption (max) ………….. 5 mA
Operating voltage ………………………………….. 6-15 V
Rated relay current (constant/peak) ……… 10A/20A

NOTES:

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Warranty

Autowatch UK warrants this product to the original consumer purchaser to be free from defects in workmanship and material for a period of 2 years should this product found to be defective in the vehicle to which it was originally installed. Autowatch UK shall repair or replace the product or any part of the product which Autowatch UK agrees is defective without charge. This warranty does not apply to any product which has been damaged by accident, physical or electrical abuse, improper installation, any use contrary to its intended function, unauthorised service (i.e. service by anyone other than Autowatch UK or its authorised agents'/service personnel), fire, flooding, lighting, or other acts of god.

Indemnity

Autowatch UK limited shall not be responsible for any removal and/or installation charges, damage to or the theft of the vehicle or its contents, or any incident or consequential damages caused by any failure of the product to function properly. Under no circumstances should this warranty, or the product covered by it, be construed as an insurance policy against loss. Autowatch UK neither assumes nor authorises any persons or organisation to make any warranties, nor does it assume any liability in connection with the safe installation or use of this product. This the complete Autowatch UK warranty and no other warranty exists.

*Ghost-II Security Guarantee

New Smart Vehicle Protection — Guaranteed Security or your Money Back! The Autowatch Security Guarantee is applicable to the Ghost-II when installed on a vehicle. If in the unlikely event a vehicle that has a Ghost-II installed in it, is stolen and not recovered within 2 months, we will refund the owner of the vehicle for the full amount they were charged to have the Ghost-II installed. This guarantee is subject to the following terms and conditions listed below:

1) Car must belong to the person that paid to have the Ghost-II installed into the vehicle. This guarantee **is not** transferred to a new owner when the car is sold on. The guarantee is valid for as long as the **original owner** owns the vehicle and the Ghost-II remains in the vehicle to which is was first registered.

2) The installation of the Ghost-II must be registered with us.

3) If a claim is made the following information must be provided before the money will be refunded:
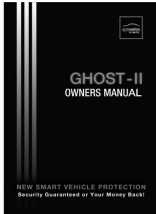
    a. Installation invoice must be provided
    b. Police reference number must be provided as proof that the theft has been reported.
    c. If the customer has insurance theft cover, proof that the Insurance Company has paid out because the vehicle has not been recovered.
    d. Proof of ID
    e. Proof of vehicle ownership — copy of the V5.
    f. Payment will be done 2 months after the reported theft to ensure the vehicle has not been recovered.

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Documents / Resources

	AUTOWATCH GHOST-II [pdf] Owner's Manual GHOST-II