

ADVANCED DIAGNOSTICS

Unlocking Technology

Rover - MG

(Version 2.4)



World Leaders In Automotive Key Programming Equipment

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InfoQuest

Vehicle Data Search

WWW.ADUSA.US

Applications are continually updated as vehicles are constantly added.

To ensure you have the very latest information, the applications list is available via Info Quest - an online portal containing vehicle technical data for key & remote programming for all manufacturers.

To view the latest vehicle applications please visit Info Quest at

<http://iq.advanced-diagnostics.co.uk/>

Rover Software

ADS106

Rover

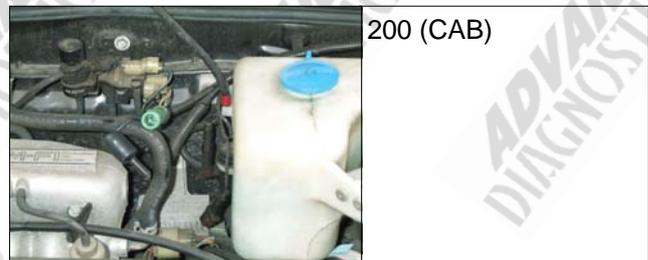
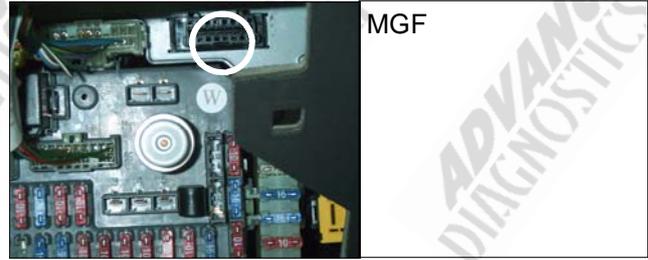
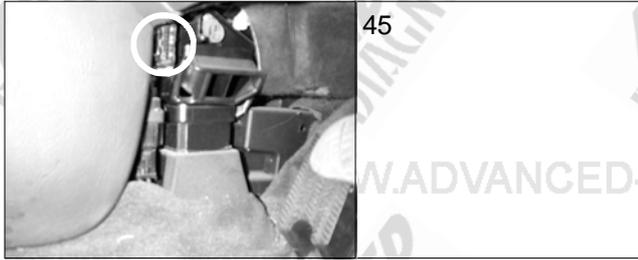
ADS143

Rover 75

DIAGNOSTIC SOCKET LOCATIONS



B



DIAGNOSTIC SOCKET LOCATIONS



B



CITY



600

WWW.ADUSA.US

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GENERAL OPERATION

INTRODUCTION

SYSTEM DESCRIPTION (5AS ALARM SYSTEM)

There are a number of different systems fitted across the Rover vehicle range, which vary slightly. The systems can only be enabled and disabled using the Key Fob (PLIP). If the car is locked with the mechanical key only, then the alarm is not enabled.

There are three ways the alarm works, one is to enable an ultrasonic alarm, the second Perimetric protection and the other engine immobilisation. In addition to this it also operates the central locking.

When the system is armed or disarmed the hazard lights will flash depending on which operation is performed. If the doors lock but the hazard lights do not flash, then it is possible that one of the doors, boot or bonnet is partially open.

PLIP KEY

This is a radio transmitter which has two buttons, one to arm the system and one to disarm. When the system is armed the ALARM LED indicator will flash quickly for 10 seconds, and then flash at a slower frequency.

The radio code signal is changed each time the PLIP key is used, and the code is changed both in the handset and also the ECU on the vehicle. If this sequence is broken, then the PLIP key can be re-enabled as follows :-

Procedure.

1. Unlock the drivers door using the key.
2. Ensure all doors, bonnet and boot are shut, and if Central Locking is fitted, make sure both front doors are unlocked.
3. Press the PLIP key (Lock button) four times quickly, until the vehicle locks are enabled.

ENGINE IMMOBILISATION

The engine immobiliser is set as soon as the Perimetric alarm is enabled, which Inhibits the engine electrical circuits. Immobilization can only be removed using the PLIP key or the emergency access code (EKA). If the car is not locked using the PLIP key, the immobiliser will be activated 20 seconds after the ignition is switched off, and the drivers door opened. The engine can be re-immobilized by pressing the unlock button on the PLIP key.

PLIP KEY BATTERY REPLACEMENT

Ensure the vehicle is unlocked before the following procedure is followed.

The battery in the Plip key should last for around 3 years, depending on usage. To change the battery, split the Plip key in half and remove the battery, taking care not to touch the clip or any of the components.

Press and hold each of the Plip key buttons for 5 seconds, to discharge any residual voltage in the circuits.

Replace the battery, ensuring the side marked with '+' is facing the clip. Once replaced, snap together both halves of the Plip key. Follow the procedure on the previous page to re-initiate the plip key.

PERIMETRIC SYSTEM

If the alarm is activated, then the horn will sound for approximately 30 seconds if any of the following are detected :-

- Boot is opened
- Bonnet release is opened
- Ignition is turned to crank position
- Drivers door button is raised (Only on Central Locking Systems)
- Drivers door is unlocked (Using Key)

Once alarm is activated, it can only be turned off by disarming the alarm. If it is not disarmed the ECU stores a fault. Then if the alarm is disarmed later, the alarm LED will flash rapidly until the ignition is turned on or the alarm is re-armed.

GENERAL OPERATION



TAMPER PROTECTION

The system is fitted with tamperproof protection on vehicles with Central Locking. This enables the alarm if the drivers door button or the actuator switch wires are tampered with.

VEHICLE BATTERY

Ensure the Alarm is disabled before removing the vehicle battery, otherwise the alarm will sound on re-connection.

ENGINE IMMOBILISATION OVERRIDE

If the Plip key is lost or does not function, the emergency access code (EKA) can be used to override the system as follows :-

1. Insert the key into the drivers lock, and turn to the lock position.
2. Hold the key in this position for 5 seconds.
3. Now using the code turn the key to the unlock the number of times of the first digit.
4. Now turn the key to the lock position the number of times of the second digit.
5. Repeat for the last two digits.
6. After the code has been entered, turn the key to the unlock position, and check to see whether the Alarm LED has stopped flashing, and the engine will start.

If an error is made, open and close the door and repeat the sequence. If 3 unsuccessful attempts are made, the system will lock out for 10 minutes, before another attempt can be made.

SPECIAL FUNCTIONS



ROVER (LUCAS 5AS)

KEY PROGRAMMING

VEHICLE SELECTION

- + RENAULT
- + ROVER
- + SAAB
- + SAMSUNG
- + SEAT
- + SMART

ECU IDENTIFICATION

LUCAS 5AS

PRESS ENTER KEY

EITHER REPEAT THE PROCEDURE TO PROGRAM MORE REMOTES OR PRESS 'BACK' UNTIL YOU ARE AT THE VEHICLE SELECTION MENU

VEHICLE SELECTION

- + REMOTES
- + EMS
- + IMMOBILISER

DIAGNOSTIC MENU

ECU IDENTIFICATION
> SPECIAL FUNCTIONS

PRESS ENTER KEY

VEHICLE SELECTION

- + MINI
- + ROVER 100
- + ROVER 200
- + ROVER 400
- + ROVER MG-F
- + ROVER 45

DIAGNOSTIC MENU

> PROGRAM REMOTE

VEHICLE SELECTION

- + REMOTE FUNCTIONS
- + EKA FUNCTIONS

PROGRAM REMOTE

PRESS REMOTE LOCK
AT LEAST 8 TIMES
UNTIL HORN SOUNDS

PRESS ENTER KEY

SWITCH IGNITION ON

PRESS THE REMOTE LOCK BUTTON QUICKLY AT LEAST 8 TIMES.

THIS PROCEDURE MUST BE REPEATED FOR EACH REMOTE THAT NEEDS PROGRAMMING.

ANY REMOTES NOT PROGRAMMED WILL NOT WORK.

PRESS ENTER KEY

PLEASE WAIT
TRYING TO COMMUNICATE

DIAGNOSTIC MENU

> PROGRAM REMOTE

SPECIAL FUNCTIONS



ROVER (LUCAS 5AS)

READ EKA CODE

VEHICLE SELECTION

- + RENAULT
- + ROVER
- + SAAB
- + SAMSUNG
- + SEAT
- + SMART

EKA CODE

- UNLOCK 5 TURNS
- LOCK 8 TURNS
- UNLOCK 4 TURNS
- LOCK 3 TURNS

PRESS ENTER KEY

WRITE EKA CODE

DIAGNOSTIC MENU

WRITE EKA CODE

PRESS ENTER KEY

VEHICLE SELECTION

- + REMOTES
- + EMS
- + IMMOBILISER

THIS EKA CODE CAN BE USED TO DISABLE THE IMMOBILISER IF NO REMOTE CONTROLS ARE AVAILABLE

THIS FUNCTION ALLOWS A NEW EKA CODE TO BE CREATED. ENTER 4 DIGIT CODE.

VEHICLE SELECTION

- + MINI
- + ROVER 100
- + ROVER 200
- + ROVER 400
- + ROVER MG-F
- + ROVER 45

DIAGNOSTIC MENU

- + READ EKA CODE
- + SPECIAL FUNCTIONS

PRESS ENTER KEY

SECURITY CODE

1	2	3	4	5
6	7	8	9	0

VEHICLE SELECTION

- + REMOTE FUNCTIONS
- + EKA FUNCTIONS

SECURITY CODE

2 8 1 9



SWITCH IGNITION ON

PRESS ENTER KEY

DISCONNECT TESTER FROM VEHICLE

PLEASE WAIT TRYING TO COMMUNICATE

SPECIAL FUNCTIONS



ROVER (LUCAS 5AS)

RE-CODE ECU'S

VEHICLE SELECTION

- + RENAULT
- + ROVER
- + SAAB
- + SAMSUNG
- + SEAT
- + SMART

DIAGNOSTIC MENU

- ECU IDENTIFICATION
- FAULT CODES
- LIVE DATA
- ACTUATORS
- > SPECIAL FUNCTIONS

ADJUST IDLE

ENG. SPD: 1400RPM

VEHICLE SELECTION

- + REMOTES
- + EMS
- + IMMOBILISER

DIAGNOSTIC MENU

- RE-CODE ECU
- ADJUST IDLE
- ADJUST CO

ADJUST CO

THIS FUNCTION ALLOWS YOU TO ADJUST THE CO

VEHICLE SELECTION

- + MEMS 1.6
- + MEMS 1.9
- + MEMS 2J
- + MEMS 3

LEARNING CODE
TEST IN PROGRESS
CODE SAME AS
STORED CODE

PRESS ENTER KEY

SWITCH IGNITION ON

PRESS ENTER KEY

DIAGNOSTIC MENU

- RE-CODE ECU
- ADJUST IDLE
- ADJUST CO

ADJUST IDLE

THIS FUNCTION ALLOWS YOU TO VIEW THE IDLE SPEED WHILST IT IS BEING SET.

PLEASE WAIT
TRYING TO COMMUNICATE

CO SETTING

CO SETTING: 130 STEPS

ECU IDENTIFICATION

MEMS 1.9
ECU NO: 195
S/W VERSION: 03

PRESS ENTER KEY

DIAGNOSTIC MENU

- RE-CODE ECU
- ADJUST IDLE
- ADJUST CO

SPECIAL FUNCTIONS



ROVER 75 (GM-6)

REMOTE PROGRAMMING

VEHICLE SELECTION

- + RENAULT
- + ROVER
- + SAAB
- + SAMSUNG
- + SEAT
- + SMART

ECU IDENTIFICATION

ROVER GM-6 REMOTES

PRESS ENTER KEY

THIS FUNCTION DISPLAYS THE REMOTE ID FOR EACH MEMORY SLOT.

IMPORTANT
THE NUMBERS DISPLAYED ARE NOT COMPLETE AND CAN'T BE USED.

VEHICLE SELECTION

- + REMOTES
- + EMS
- + IMMOBILISER

DIAGNOSTIC MENU

- + ECU IDENTIFICATION
- + FAULT CODES
- + LIVE DATA
- + SPECIAL FUNCTIONS

REMOTE IDENTIFICATION 1

?23345665676735?
543523454325324?

PRESS ENTER KEY

VEHICLE SELECTION

- + ROVER MG-F
- + ROVER 25
- + ROVER 45
- + ROVER 75
- + MG-ZR
- + MG-ZS

DIAGNOSTIC MENU

REMOTE STATUS

READ REMOTE ID
PROGRAM REMOTE

REMOTE IDENTIFICATION 2

?23345665676735?
543523454325324?

PRESS ENTER KEY

VEHICLE SELECTION

- + REMOTE FUNCTIONS

THIS FUNCTION WILL INDICATE WHICH MEMORY SLOTS ARE USED. TAKE NOTE OF THESE.

IMPORTANT
IF YOU ERASE ONE OF THE EXISTING REMOTES FROM THE MEMORY AND DO NOT HAVE THE BAR CODE, IT CAN'T BE PROGRAMMED IN AGAIN.

REMOTE IDENTIFICATION 3

?23345665676735?
543523454325324?

PRESS ENTER KEY

VEHICLE SELECTION

- + EWS-3
- + GM-6

REMOTE STATUS

REMOTE SLOT 1 USED
REMOTE SLOT 2 USED
REMOTE SLOT 3 USED
REMOTE SLOT 4 UNUSED
REMOTE SLOT 5 UNUSED

PRESS ENTER KEY

REMOTE IDENTIFICATION 4

?00000000000000?
00000000000000?

PRESS ENTER KEY

SWITCH IGNITION ON

PRESS ENTER KEY

DIAGNOSTIC MENU

REMOTE STATUS
READ REMOTE ID
PROGRAM REMOTE

REMOTE IDENTIFICATION 5

?00000000000000?
00000000000000?

PRESS ENTER KEY

SPECIAL FUNCTIONS



ROVER 75 (GM-6)

DIAGNOSTIC MENU

REMOTE STATUS

READ REMOTE ID

PROGRAM REMOTE

ENTER THE BOTTOM BAR CODE 16
DIGIT NUMBER INCLUDING ?, %
SIGNS ETC

BY CHECKING THE REMOTE STATUS
THE PREVIOUS UNUSED SLOT
SELECTED SHOULD NOW BE USED.

SELECT AN UNUSED MEMORY SLOT
TO PROGRAM A NEW REMOTE. IF
YOU SELECT A USED MEMORY SLOT
THE REMOTE IN THAT SLOT WILL BE
DELETED.

SECURITY CODE

1	2	3	4	5
6	7	8	9	0

PROGRAM REMOTE

SELECT REMOTE SLOT

1	2	3	4	5
6	7	8	9	0

SECURITY CODE

FFFFFDB04DAFF10%

X

ENTER THE TOP BAR CODE 16 DIGIT
NUMBER INCLUDING ?, % SIGNS ETC

PLEASE WAIT

SECURITY CODE

1	2	3	4	5
6	7	8	9	0

PLEASE WAIT

PROCEDURE COMPLETE

PRESS ENTER KEY

SECURITY CODE

N3B40CB3A40DAFF1

X

DIAGNOSTIC MENU

REMOTE STATUS

READ REMOTE ID

PROGRAM REMOTE

SPECIAL FUNCTIONS



ROVER MG (PEKTRON)

EKA CODE

VEHICLE SELECTION

- + RENAULT
- + ROVER
- + SAAB
- + SAMSUNG
- + SEAT
- + SMART

DIAGNOSTIC MENU

- + ECU IDENTIFICATION
- + SPECIAL FUNCTIONS

EKA CODE

THE FOLLOWING CODES
ARE NOT ALLOWED
 1234 4321 2222 8888
 OR CONTAINING
 TWO OR MORE 1'S
PRESS ENTER KEY

VEHICLE SELECTION

- + REMOTES
- + EMS
- + IMMOBILISER

DIAGNOSTIC MENU

- + EKA CODE
- + PROGRAM REMOTE

SECURITY CODE

1	2	3	4	5
6	7	8	9	0

VEHICLE SELECTION

- + ROVER MG-F
- + ROVER 25
- + ROVER 45
- + ROVER 75
- + MG-ZR
- + MG-ZS

EKA CODE

PLEASE ENSURE
ALL DOORS LOCKED
 AND IMMOBILISER ARMED
 DOORS ARE LOCKED

SECURITY CODE

8 1 5 7



PRESS ENTER KEY

VEHICLE SELECTION

- + REMOTE FUNCTIONS

EKA CODE

- UNLOCK 5 TURNS
- LOCK 8 TURNS
- UNLOCK 4 TURNS
- LOCK 3 TURNS

EKA CODE

COMPLETE

PRESS ENTER KEY

SWITCH IGNITION ON

PRESS ENTER KEY

EKA CODE

WOULD YOU LIKE TO
 PROGRAM
 EKA CODE

YES=ENTER NO=BACK

EKA CODE

ONCE EKA CODE IS
 ENTERED YOU MUST
 WAIT 5 MINS BEFORE
 ATTEMPTING TO START
 CAR OR PROGRAM FOB

PRESS ENTER KEY

ACCESS GAINED
 TRYING TO COMMUNICATE

PRESS ENTER KEY

EKA CODE

ENTER NEW EKA CODE
ALL DOORS CLOSED
 IMMOBILISER ARMED
 DOORS ARE LOCKED

PRESS ENTER KEY

DIAGNOSTIC MENU

- + EKA CODE
- + PROGRAM REMOTE

SPECIAL FUNCTIONS



ROVER MG (PEKTRON)

REMOTE PROGRAMMING

VEHICLE SELECTION

- + RENAULT
- + ROVER**
- + SAAB
- + SAMSUNG
- + SEAT
- + SMART

DIAGNOSTIC MENU

- + ECU IDENTIFICATION
- + SPECIAL FUNCTIONS**

SECURITY CODE

1	2	3	4	5
6	7	8	9	0

VEHICLE SELECTION

- + REMOTES**
- + EMS
- + IMMOBILISER

DIAGNOSTIC MENU

- + EKA CODE
- + PROGRAM REMOTE**

SECURITY CODE

EF398488726133494500

x

VEHICLE SELECTION

- + ROVER MG-F
- + ROVER 25
- + ROVER 45
- + ROVER 75
- + MG-ZR**
- + MG-ZS

PROGRAM REMOTES

PLEASE ENSURE IMMOBILISER IS DISARMED BEFORE PROCEEDING. CONTINUE

YES=ENTER NO=BACK

PROGRAM REMOTES

PROGRAM NEXT REMOTE

YES=ENTER NO=BACK

VEHICLE SELECTION

- + REMOTE FUNCTIONS**

PROGRAM REMOTES

WARNING ALL REMOTES MUST IF NOT THEY WILL BE ERASED. CONTINUE

YES=ENTER NO=BACK

REPEAT FOR EACH NEW REMOTE TO BE PROGRAMMED. ONCE FINISHED PLEASE DISCONNECT AND TEST AS INSTRUCTED.

SWITCH IGNITION ON

PRESS ENTER KEY

PROGRAM REMOTES

ALL CURRENT REMOTES WILL BE RE-INITIALISED PRESS EACH CURRENT REMOTE IN TURN. HORN SHOULD SOUND. IF NOT EXIT.

YES=ENTER NO=BACK

PROGRAM REMOTES

PLEASE TURN IGNITION OFF TEST REMOTE

PRESS ENTER KEY

ACCESS GAINED TRYING TO COMMUNICATE

PRESS ENTER KEY

PROGRAM REMOTES

READY TO PROGRAM

NEW REMOTES

PLEASE ENTER BARCODE IGNORING 1ST AND LAST LETTERS / NUMBERS

PRESS ENTER KEY

PROGRAM REMOTES

COMPLETE

PRESS ENTER KEY



TIPS & HINTS

GENERAL

1. If the Plip key does not operate, it could be one of the following causes:-
 - Bad connection at 5AS ECU plug.
 - Plip Key inoperative or ECU de-programmed.
 - System in lock out due to other radio interference.
2. Alarm LED not working, this could be the failure of LED unit, as this is common on Rover 800 vehicles. Replace LED unit.
3. On Rover 416 Automatic Honda PGMFI engine, if the unlock button is pressed on the Plip key while the ignition is switched ON, vehicle will not start. The Alarm bleeper will sound. To re-immobilise turn ignition off and re-start the vehicle.
4. Radio Frequency Colour coding

Frequency	Colour (ECU/Handset)	Countries
433.92 MHz	Blue/Black	UK/Ireland
224.5 MHz	Yellow/Yellow	France
433.92 MHz	Blue/Purple	Germany
433.92 MHz	Blue/Blue	Europe(except France, Germany, Switzerland, Italy & Denmark)
433.92 MHz	White/Blue	Switzerland & Denmark
315.0 MHz	Green/Green	ROW, Italy & Australia
315.0 MHz	Orange/Green	Gulf & Japan
5. Socket mix ups are common
 - Green 3 pin for programming remotes
 - White 3 pin for programming MEMS ECU
6. Before programming a MEMS ECU the immobiliser must be disarmed otherwise the error "short to ground" will be seen.
7. No communication on a Rover/Land Rover may be the indication of a damaged tester - test with ADC145 dongle FOR AD100/MVP.
8. Some Rover 420 vehicles have no pin in the diagnostic socket for battery feed (16) -You will need to run a +ve feed to the DLC. battery power.
9. EKA numbers can go up to 15.
10. Maximum of 4 plip keys can be programmed

PRECAUTIONS

IMPORTANT : PLEASE ENSURE ALL PRECAUTIONS ARE OBSERVED AS INDICATED AT THE FRONT OF THE OPERATING MANUAL.

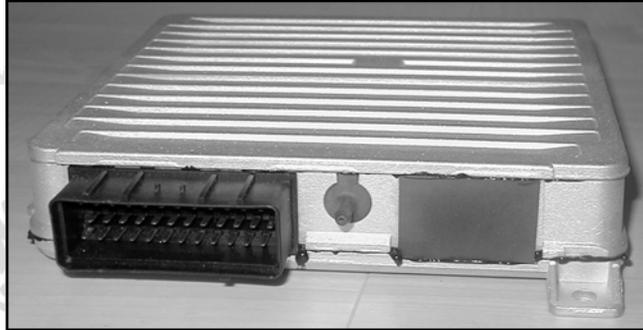
IN PARTICULAR : For vehicles fitted with STOP/START technology, the battery leads must not be shorted together when the battery is disconnected as this can lead to damage to the car and potential personal injury.



TIPS & HINTS

ECU IDENTIFICATION

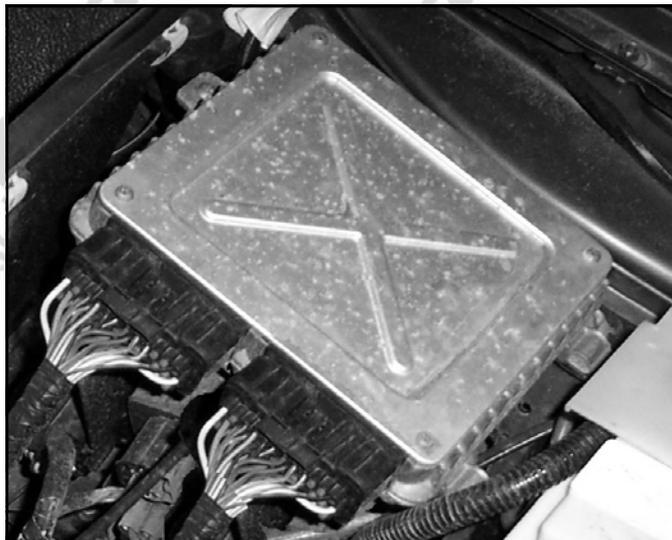
MEMS 1.6



MEMS 1.9



MEMS 2J



NOTE :- HAS 2 MAIN CONNECTORS & VACUUM PIPE

REMOTE PROGRAMMING



ROVER METRO (3AS)

The procedure for manually coding the single button plips on a Rover Metro with 3AS is:

Procedure

1. System must be disarmed first, turn the ignition on and then off within 3 seconds.
2. Open the tailgate and leave it open
3. Again, turn the ignition on and then off within 3 seconds.
4. If the procedure has been done correctly, the horn will sound briefly and the alarm LED will come on and stay on.
5. Press the button of the first plip to be coded, the fob LED will come on, go off and come back on again. If the 3AS unit accepts that plip, the alarm LED will go off briefly and come back on.
6. Repeat this last procedure to code another plip, the maximum allowed is two.
7. Exit the learning mode by turning the ignition back on.

ROVER 200

Remote control problems can occur if the remote loses it's code or if the code gets corrupted (this can be caused in several ways) if this has happened these can often be re-coded quite simply (it does vary slightly with model and year) The usual way is to remove the remote battery, push down both buttons for 20 seconds (to discharge the capacitor, the remote then loses whatever code it contained) then, re-fit the remote battery and whilst near the car rapidly depress the dimpled lock button 5-6 times. This should recode the remote. There are model variations, on some you have to have the ignition switched on and the remote near the centre of the dash to recode.

1. Sit in the car.
2. Close all doors, boot and bonnet.
3. Remove battery from remote.
4. Press both buttons several times to discharge any residual charge.
5. Replace battery.
6. Hold down the open button for at least 5 seconds.
7. Release button then press the other one.
8. You may have to press this button a couple of times.
9. If this fails try it again from step one.

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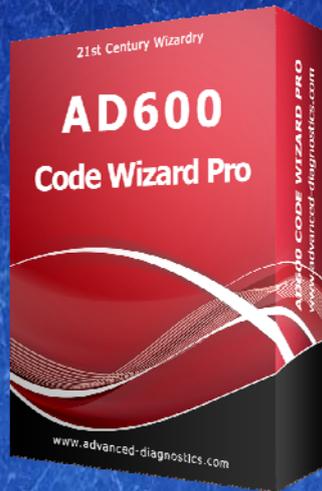
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AD900Pro

Transponder Cloning

The most advanced key transponder cloning tool in the market - that reads, writes, copies, a wide range of automotive transponders world-wide. Complimenting the AD100Pro / MVPPro.



AD600

Code Wizard Pro

PINCODE Generator

AD600 is a software program that supports various vehicle manufacturers and provides the ability to generate immobiliser PINCODES, mechanical key codes including dealer tool security codes.



AD35

Remote Control Tester

AD35 is an innovative remote control tester developed to assist with the diagnosis of all types of (IR) Infra Red & (RF) Radio Frequency remote controls for all makes & models.