ADVANCED DIAGNOSTICS

Unlocking Technology

Land Rover

(V e r s i o n   3 . 2)

W o r l d   L e a d e r s   I n   A u t o m o t i v e   K e y   P r o g r a m m i n g   E q u i p m e n t

w w w . a d v a n c e d - d i a g n o s t i c s . c o m

AD™

CONTENTS

APPLICATIONS Have Moved to IQ - Online

A

LAND ROVER

Info Quest 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

WWW.ADVANCED-DIAGNOSTICS.CO.UK

Info Quest at

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

Land Rover Software	
ADS106	Land Rover
ADS164	Land Rover 2008
ADS207	Jaguar / Land Rover 2013

ADVANCED DIAGNOSTICS

DIAGNOSTIC SOCKETS/PORTS

B

LANDROVER

DISCOVERY 1

RANGE ROVER

FREELANDER

DEFENDER

DISCOVERY 2

RANGE ROVER SPORT

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WWW.ADUSA.US

LANDROVER 10AS SYSTEM

The 10AS Alarm system was fitted as standard equipment on Model Year 96
onwards across a number of Land Rover vehicles. The system consists of a number of components as follows :-

- ECU Alarm Unit
- Plip Key
- Passive Immobiliser Coil (Optional)
- Alarm sensor (Optional)
- Central Door Locking Actuators
- Bonnet Switch (Optional)
- Driver's Door Key Switch
- Door Switches
- Boot Door Switch
- Hazard Lights
- Battery Backed up Alarm Sounder (Optional)
- Alarm Sounder and Relay (Optional)
- Alarm LED and Engine Immobiliser Lamp (Instrument Cluster)
- Engine Immobiliser ECU

The 10AS offers a number of protection functions including Perimetric protection, Engine immobilisation (Crank Inhibit),
Engine Immobilisation (ECU Inhibit) and ultrasonic protection within the vehicle passenger compartment.

Central locking is also controlled by the 10AS Alarm system. The vehicle can be locked using the key, Door Locking button
or Plip key. The vehicle can only be unlocked using the Plip key or the emergency access code (EKA).

PERIMETRIC PROTECTION
This part of the system is enabled whenever the vehicle is manually locked using the drivers door key.

VOLUMETRIC PROTECTION
This part of the system is only activated using the Plip Key, which enables protection for the bonnet, boot and ignition
switch. Also the internal Alarm sensor is activated.

ALARM SOUNDER
If the vehicle is detected as having an unauthorized access, the alarm sounder and hazard lights will start for around 30
seconds. The alarm must be triggered again before the sounder and hazards will start. There are two sounders used, nor-
mal sounder and battery back up sounder.

The battery backed up sounder is charged via the ignition feed, and if disconnected or wires cut it will operate for approxi-
mately 3 minutes. To disconnect the battery backed up sounder follow the following procedure :-

1.   Turn Ignition ON, Turn Ignition OFF
2.   Disconnect Sounder within 15 seconds
3.   If Triggered, Re-connect.
4.   Disarm Alarm system
5.   Turn Ignition on and repeat steps above.

INERTIA SWITCH
The inertia switch has been incorporated into the alarm system to activate the
central locking mechanism's if the vehicle is involved in an accident.

ENGINE IMMOBILISER (Optional)
When the alarm system is armed, the Passive Immobilisation function is enabled. Two types of immobilisation are used :-

1. Electronic Engine Immobiliser (Used on MFI-T16 and 300TDi with EDC engines)

This system is controlled by the Engine Management ECU and the Alarm ECU. When the vehicle is immobilised, the alarm
ECU sends a signal to the EMS ECU which
prevents starting, and until it receives a de-immobilise signal it will not start.

2. Remote Smart Spider (Used on MFI-T16 and 300TDi without EDC engines)

This system is controlled by the alarm ECU and the Engine immobilisation ECU (Spider).
The alarm ECU sends a signal to the spider ECU to disable vehicle start, which then interrupts the starter circuit, fuel pump
circuit and ignition coil (If fitted) or the fuel pump shut off solenoid in the case of the 300TDi engine (without EGR).

NOTE : The vehicle can only be started using the Plip key or the EKA code.

GENERAL OPERATION

LANDROVER 10AS SYSTEM

PASSIVE IMMOBILISER
The immobiliser system will be enabled when the following conditions apply :-

* 30 seconds after ignition is switch off and drivers door has been opened.
* 5 minutes after ignition is switched off.
* 5 minutes after disarming the alarm system.

PASSIVE IMMOBILISER COIL
A coil is mounted in the steering column which sends a magnetic field which is picked up by the plip key, and if received, it sends a signal to the alarm ECU to imobilise the vehicle.

VEHICLE STATUS INDICATION
The vehicle status is indicated by the Alarm LED as follows :-

* Slow flash - Immobilised or Armed and Immobilised
* Rapid Flash - Internal sensor system armed
* Intermittent Rapid Flash - Doors, Boot and Bonnet armed
* No flash for 10 seconds - Miss lock
* Continuous - Drivers door open or ignition on and system immobilised

PLIP KEY RESYNCHRONISATION
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.

PLIP KEY LOW BATTERY WARNING
When the Plip key battery is low, the alarm unit will enter low battery mode. The alarm LED will flash to indicate low battery, and also the hazard lights will not flash when the alarm is disarmed.

POWER UP MODE
The alarm will always power back up in the mode it was disabled. So if the battery is disconnected and the alarm is activated, then it will remember and when e-connected will enter the same state.

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

1. Using the code turn the key to the unlock the number of times of the first digit.
2. Now turn the key to the lock position the number of times of the second digit.
3. Repeat for the last two digits.

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 the wrong code has been entered a warning sound will be heard. After 3 wrong attempts a period of 30 minutes must pass before the next attempt is made. If a mistake is made part way through, hold the key in the lock position for at least 5 seconds and then begin the code entry again.

GENERAL OPERATION

LANDROVER 27VT SYSTEM

The 27VT and BCM (Body Control Module) is a sophisticated alarm system and
central locking control, which has a number of associated components that make up the system, which includes :-

- Remote Handset (Plip Key)
- RF Receiver
- Passive Coil
- Volumetric sensor
- Door Lock actuators
- Drivers door key barrel
- Central door key barrel
- Central Door Locking switch (CDL)
- Door switches
- Tail door switch
- Bonnet switch
- Horn
- Alarm LED
- Starter Relay
- Inertia switch
- Engine Immobilisation

CENTRAL LOCKING

The vehicle can be locked in three ways, Central Door locking switch (CDL), vehicle key or remote Plip key. The CDL switch is located inside the vehicle, normally in the centre console. This allows the locks to be operated without arming the alarm system. If the inertia switch is operated, then the CDL is overridden and the locks are opened automatically.

The vehicle can be CDL locked by using the key in the drivers door. Turning the key anti-clockwise will lock all the doors, turning the key a second time will super lock the doors (Note second turn must be within 1 second of the first turn).

If the vehicle has an alarm and is CDL locked or super locked, turning the key clockwise will only mechanically unlock the drivers door. The system then enters EKA access mode.

If the vehicle has no alarm system, then turning the key clockwise once will open all doors. If the vehicle is super locked then the drivers door will open, and a second turn of the key will open the other remaining doors. If the remote control unit is used to unlock the vehicle, pressing the unlock button once will unlock the drivers door only, pressing the button for the second time makes all other doors will unlock.

INERTIA SWITCH

The inertia switch is located within the engine bay, on the bulkhead. With the
ignition ON and the alarm disarmed, if the switch is operated then all the doors will be unlocked.
Further locking of all doors is disabled until the ignition is switched off and the
drivers door opened and closed or the drivers door opened and closed and the switch is manually reset by pressing the button.

ALARM/IMMOBILISATION—KEY OPERATION

The alarm system can be armed and disarmed with an EKA code, which can be used if the Plip key is lost or becomes faulty. The system has a number of components which control different alarm functions. These include Volumetric which monitors movement within the passenger compartments, in case of possible intrusion. The second is perimetric sensing which uses switches on all doors, bonnet, roof and tail door.

Arming and disarming using the vehicle key will be ignored if the ignition is already in the ON state. In certain countries the alarm is programmed not to arm under any circumstance, and the key only unlocks the mechanical lock.

The alarm can be fully armed by turning the key anticlockwise once with all doors closed. The hazard warning lights should flash 3 times. The alarm LED will flash very fast for 10 seconds and then slowly. If the key is turned for a second time within 1 second of the first turn the system will be super locked, and the alarm LED will flash for 10 seconds and then flash slowly.

To disarm the system with the key, the EKA code must be entered using the
sequence described later in this section.

ALARM/IMMOBILISATION—REMOTE PLIP KEY

The vehicle can be fully armed and disarmed using the plip key. If the vehicle is locked using the plip key lock button, the system is super locked and the alarm LED and hazard lights will flash as described above.

GENERAL OPERATION

LANDROVER 27VT SYSTEM

BATTERY BACKED UP SOUNDER (BBUS)
This system is not fitted to all vehicles, but when fitted is mounted above the wheel arch liner on the drivers side. If the system is tampered with the BBUS will sound, and will only stop if the power is re-connected and the system armed and disarmed. It also sounds when the system is miss-locked. The battery life of the unit is around 3 years.

EMERGENCY ACCESS CODE (EKA)
The EKA code allows arming and disarming of the alarm system when the remote key fob (Plip) is lost or broken. If the vehicle is opened without using the EKA code, then the alarm system enters the following states :-

- Drivers door is unlocked, other doors remain locked.
- Alarm LED flashes slowly
- Perimetric protection is de-activated
- Volumetric protection is de-activated
- Engine and crank functions remain disabled.

The EKA code is a four number code, and each number can be up to 15. This code is entered by turning the drivers door lock to the numbers of the code.

Procedure for 5-2-9-14
1.   Turn the key to the unlock position and wait for 6 MINUTES before proceeding.
2.   Turn the key to the unlock position 5 times.
3.   Turn the key to the lock position 2 times.
4.   Turn the key to the unlock position 9 times.
5.   Turn the key to the lock position 14 times.
6.   Finally turn the key to the unlock position once only.

If entered correctly the alarm system will unlock all the doors, fully disarm all
systems and allow the vehicle to be started.

If the code is entered incorrect 3 times the system will lock out any further attempts for 30 minutes. If a code is entered incorrectly, then the system can be reset by opening and closing the drivers door, or turning the ignition on and off.

REMOTE HANDSET (PLIP KEY)
Two plip keys are supplied with the vehicle from new, and if the battery is replaced or the vehicle battery is removed the plip keys will require synchronisation. This is achieved by switching on the ignition, which enables the alarm system to send a
re-synchronisation code to the handset automatically. Alternatively it can also be achieved by pressing either handset button 5 times quickly with the ignition OFF.

If the plip key battery is low, then when the signal is sent from the plip key the alarm will send a signal which sounds a buzzer for 10 seconds and the alarm LED flashes for 10 seconds to notify the owner.

ENGINE IMMOBILISATION
The engine immobiliser feature disables the starter relay and also the enable code sent to the MEMS engine management ECU. The passive immobilisation occurs 5 seconds after the ignition is turned off and the drivers door opened. If the ignition is just turned off then it will immobilise after 5 minutes. Re-immobilisation will occur if the plip key unlock button is pressed or the key is inserted and ignition turned on with the Plip key within 70 mm of the ignition lock. If 2 hand sets are in close
proximity it will not re-immobilise because of interference.

LANDROVER - SAWDOC

PROGRAM KEYS

VEHICLE SELECTION
+ HYUNDAI
+ ISUZU
+ JEEP
+ KIA
+ LANDROVER
+ MITSUBISHI

VEHICLE SELECTION
+ IMMOBILISER
+ REMOTE

VEHICLE SELECTION
+ FREELANDER
+ FREELANDER 2
+ RANGE ROVER
+ DISCOVERY 3
+ RANGE ROVER SPORT
PRESS ENTER KEY

VEHICLE SELECTION
2003 > 2005

PLEASE WAIT
TRYING TO COMMUNICATE

PROGRAM KEYS

ECU IDENTIFICATION

LANDROVER SAWDOC

PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

DIAGNOSTIC MENU
KEY INFORMATION
PROGRAM KEYS
ERASE KEYS
ECU LEARN/RESET

KEY INFORMATION
KEY 2 : KEY ENABLED

KEY 1 : ENABLED
KEY 2 : ENABLED
KEY 3 : ENABLED
KEY 4 : ENABLED

DIAGNOSTIC MENU
KEY INFORMATION
PROGRAM KEYS
ERASE KEYS
ECU LEARN/RESET

ERASE KEYS
WARNING
ALL KEYS WILL
BE CLEARED
CONTINUE

OK = ENTER   BACK = EXIT

PROGRAM KEYS

ERASE KEYS

PROCEDURE COMPLETE

PRESS ENTER KEY

DIAGNOSTIC MENU
KEY INFORMATION
PROGRAM KEYS
ERASE KEYS
ECU LEARN/RESET

PROGRAM KEYS

INSERT PROGRAMMED
KEY

PRESS ENTER KEY

PROGRAM KEYS

REMOVE KEY FROM IGN.

PRESS ENTER KEY

PROGRAM KEYS

INSERT NEW KEY
SWITCH IGNITION ON

PRESS ENTER KEY

ERASE KEYS

PROCEDURE COMPLETE

PRESS ENTER KEY

SPECIAL FUNCTIONS

D

LANDROVER - 27VT & 10AS

PROGRAM REMOTES

VEHICLE SELECTION
+ HYUNDAI
+ ISUZU
+ JEEP
+ KIA
+ LANDROVER
+ MITSUBISHI

VEHICLE SELECTION
+ IMMOBILISER
+ REMOTE

VEHICLE SELECTION
+ FREELANDER
+ FREELANDER 2
+ RANGE ROVER
+ DISCOVERY 3
+ RANGE ROVER SPORT
PRESS ENTER KEY

SWITCH IGNITION ON
PRESS ENTER KEY

ECU IDENTIFICATION
PRODUCT CODE : 11
DIAG VERS : 1270
S/W VERSION : 00
HARDW VERS : 00
ECU NO : 000
PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

PROGRAM REMOTES

DIAGNOSTIC MENU
PROGRAM REMOTE
READ EKA CODE

READ EKA CODE
UNLOCK 2 TURNS
LOCK 4 TURNS
UNLOCK 6 TURNS
LOCK 3 TURNS
PRESS ENTER KEY

DIAGNOSTIC MENU
PROGRAM REMOTE
READ EKA CODE

PROGRAM REMOTE
PRESS REMOTE UNLOCK
AT LEAST 8 TIMES
UNTIL THE HORN SOUNDS
OR LIGHTS FLASH

KEYS PROGRAMMED : 1
PRESS BACK TO EXIT
ENTER-PROG. MORE KEYS

SPECIAL FUNCTIONS

D

LANDROVER - DISCOVERY 2 BARCODE

PROGRAM REMOTES

VEHICLE SELECTION
+ HYUNDAI
+ ISUZU
+ JEEP
+ KIA
+ LANDROVER
+ MITSUBISHI

VEHICLE SELECTION
+ IMMOBILISER
+ REMOTE

VEHICLE SELECTION
+ DEFENDER
+ DISCOVERY I
+ DISCOVERY II
+ FREELANDER
+ RANGE ROVER CLASSIC
PRESS ENTER KEY

VEHICLE SELECTION
99
97-99
99-01
PRESS ENTER KEY

SWITCH IGNITION ON

PRESS ENTER KEY

PLEASE WAIT
TRYING TO COMMUNICATE

PROGRAM REMOTES

ECU IDENTIFICATION
S/W VERSION : 34.325
HARDW VERS. : 1.1

PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

DIAGNOSTIC MENU
PROGRAM REMOTE
REMOTE INFORMATION

REMOTE INFORMATION

PRESS REMOTE TO ID

PRESS ENTER KEY

REMOTE INFORMATION

REMOTE NO 1

PRESS ENTER KEY

DIAGNOSTIC MENU
PROGRAM REMOTE
REMOTE INFORMATION

PROGRAM REMOTES

PROGRAM REMOTE

REMOVE KEY FROM IGN.

PRESS ENTER KEY

PROGRAM REMOTE
SELECT REMOTE SLOT

1	2	3	4	5
6	7	8	9	0

PROGRAM REMOTE
_ _ _ _ _ _ _ _

1	2	3	4	5
6	7	8	9	0

SECURITY CODE

G4074C34074C2FFJ

✗   ✓

73648912
G4074C34074C2FFJ U
04/03/08 *FFFFFFFFBF8B3C8* GG

NOTE : FIRST INSERT THE TOP BARCODE.

THEN PUT THE BOTTOM BAR CODE IN AS FOLLOWS.

SPECIAL FUNCTIONS

D

LANDROVER - DISCOVERY 2 BARCODE

PROGRAM REMOTES

PROGRAM REMOTE

_ _ _ _ _ _ _ _ _ _

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1	2	3	4	5
6	7	8	9	0

SECURITY CODE

FFFFFFFFBF8B3CB

✗   ✓

WWW.ADUSA.US

ERASE KEYS

PROCEDURE COMPLETE

PRESS ENTER KEY

NOTE : THE BAR CODE CAN BE MADE UP OF ANY CHARACTERS INCLUDING %, $, : , ; AS AN EXAMPLE.

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WWW.ADUSA.US

SPECIAL FUNCTIONS

D

LANDROVER - DISCOVERY 3 CAN 2

PROGRAM KEYS

VEHICLE SELECTION
+ IMMOBILISER
+ REMOTE

VEHICLE SELECTION
+ FREELANDER
+ FREELANDER 2
+ RANGE ROVER
+ DISCOVERY 3
+ RANGE ROVER SPORT
PRESS ENTER KEY

SWITCH IGNITION ON
PRESS ENTER KEY

PLEASE WAIT
TRYING TO COMMUNICATE

ECU IDENTIFICATION
LANDROVER TYPE 2
PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

PROGRAM KEYS

DIAGNOSTIC MENU
PROGRAM KEYS

PROGRAM KEYS
IGNITION OFF
PRESS ENTER KEY

PROGRAM KEYS
REMOVE KEY
PRESS ENTER KEY

PROGRAM KEYS
INSERT SAME KEY
IGNITION OFF
PRESS ENTER KEY

PROGRAM KEYS
BACK TO EXIT
ENTER TO PROGRAM
NEXT KEY

PROGRAM KEYS
REMOVE KEY
PRESS ENTER KEY

PROGRAM KEYS

PROGRAM KEYS
INSERT NEXT KEY
TO BE PROGRAMMED
IGNITION OFF

PROGRAM KEYS
BACK TO EXIT
ENTER TO PROGRAM
NEXT KEY

ERASE KEYS
PROCEDURE COMPLETE
PRESS ENTER KEY

SPECIAL FUNCTIONS

D

RANGE ROVER SPORT CAN TYPE 3

PROGRAM KEYS

VEHICLE SELECTION
+ IMMOBILISER
+ REMOTE

VEHICLE SELECTION
+ FREELANDER
+ FREELANDER 2
+ RANGE ROVER
+ DISCOVERY 3
+ RANGE ROVER SPORT
PRESS ENTER KEY

SWITCH IGNITION ON

PRESS ENTER KEY

PLEASE WAIT
TRYING TO COMMUNICATE

ECU IDENTIFICATION
LANDROVER TYPE 2
PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

PROGRAM KEYS

DIAGNOSTIC MENU
PROGRAM KEYS

PROGRAM KEYS
IGNITION OFF
PRESS ENTER KEY

PROGRAM KEYS
REMOVE KEY
PRESS ENTER KEY

PROGRAM KEYS
INSERT SAME KEY
IGNITION OFF
PRESS ENTER KEY

PROGRAM KEYS
BACK TO EXIT
ENTER TO PROGRAM
NEXT KEY

PROGRAM KEYS
REMOVE KEY
PRESS ENTER KEY

PROGRAM KEYS

PROGRAM KEYS
INSERT NEXT KEY
TO BE PROGRAMMED
IGNITION OFF

PROGRAM KEYS
BACK TO EXIT
ENTER TO PROGRAM
NEXT KEY

ERASE KEYS
PROCEDURE COMPLETE
PRESS ENTER KEY

SPECIAL FUNCTIONS

D

LANDROVER FREELANDER 2 CAN TYPE 1

PROGRAM KEYS

VEHICLE SELECTION
+ IMMOBILISER
+ REMOTE

VEHICLE SELECTION
+ FREELANDER
+ FREELANDER 2
+ RANGE ROVER
+ DISCOVERY 3
+ RANGE ROVER SPORT
PRESS ENTER KEY

SWITCH IGNITION ON

PRESS ENTER KEY

PLEASE WAIT
TRYING TO COMMUNICATE

ECU IDENTIFICATION
FREELANDER 2
PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

PROGRAM KEYS

DIAGNOSTIC MENU
PROGRAM KEYS
RESET ECU

RESET ECU
THIS FUNCTION
IS USED WHEN
ALL KEYS ARE LOST
PRESS ENTER KEY

RESET ECU
WARNING
ALL KEYS WILL BE
CLEARED
CONTINUE
OK=ENTER   CLEAR=BACK

RESET ECU
REMOVE KEY
PRESS ENTER KEY

RESET ECU
INSERT KEY
TO BE PROGRAMMED
PRESS ENTER KEY

PROGRAM KEYS
IGNITION ON
PRESS ENTER KEY

PROGRAM KEYS

PROGRAM KEYS
BACK TO EXIT
ENTER TO PROGRAM
NEXT KEY

ERASE KEYS
PROCEDURE COMPLETE
PRESS ENTER KEY

ADS207 LANDROVER (PROXIMITY)

PROGRAM KEYS

IMPORTANT - You must program remotes before programming keys. MVPPro users - one token will be used for remote / immobiliser programming.

VEHICLE SELECTION
+ HYUNDAI
+ ISUZU
+ JEEP
+ KIA
+ LANDROVER
+ MITSUBISHI

VEHICLE SELECTION
+ IMMOBILISER
+ REMOTE
+ PROXIMITY

VEHICLE SELECTION
+ DISCOVERY 4
+ EVOQUE
+ FREELANDER II
+ RANGE ROVER
+ RANGE ROVER SPORT
PRESS ENTER KEY

VEHICLE SELECTION
+ 10 > 11
+ 12 >

VEHICLE SELECTION
+ KEYS
+ IMMOBILISER

PRESS 'START' BUTTON

PRESS ENTER KEY

ECU IDENTIFICATION

VIN: SALLSAAF2AA239114

PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

DIAGNOSTIC MENU
ADD KEY
KEYS PROGRAMMED
CLEAR KEYS
VIRGINISE KEYS

KEYS PROGRAMMED

ANY KEYS CURRENTLY
PROGRAMMED MUST BE PLACED
AROUND THE CENTRE CONSOLE
TO BE DETECTED

PRESS ENTER KEY

KEYS PROGRAMMED

KEYS PROGRAMMED : 2
KEYS DETECTED : 1

PRESS ENTER KEY

DIAGNOSTIC MENU
ADD KEY
KEYS PROGRAMMED
CLEAR KEYS
VIRGINISE KEYS

ADD KEY

ENSURE ALL KEYS TO BE
PROGRAMMED ARE ACCESSIBLE
BUT MUST BE KEPT OUTSIDE OF
THE VEHICLE

PRESS ENTER KEY

ADD KEY

PLEASE WAIT
****

ADD KEY

PLACE THE KEY TO BE
PROGRAMMED AROUND THE

CENTRE CONSOLE. WHEN INSTRUCTED
PRESS UNLOCK BUTTON ON THE FIRST KEY
WITHIN 5 SECS

ENSURE THAT ALL OTHER KEYS

ARE OUTSIDE OF THE VEHICLE.

PRESS ENTER KEY

ADD KEY

PRESS UNLOCK ON THE KEY
****
WITHIN 5 SECONDS

NOTE :
IT MAY BE NECESSARY TO VIRGINISE THE REMOTE.

IF THIS IS REQUIRED YOU WILL BE PROMPTED TO DO SO.

ADD KEY

KEY PROGRAMMED
'BACK' TO EXIT
ENTER TO PROGRAM NEXT KEY

SPECIAL FUNCTIONS

D

ADS207 LANDROVER (PROXIMITY)

PROGRAM KEYS	VIRGINISE KEYS	CLEAR KEYS

PLEASE REPEAT THE PROCESS TO PROGRAM ADDITIONAL KEYS

NOTE:

THIS PROCEDURE SHOULD BE USED IF PROMPTED WHILST ADDING A KEY

NOTE:

TO BE USED IN A LOST KEY SITUATION - WHEN EXISTING KEYS NEED TO BE ERASED.

ADD KEY

PROCEDURE COMPLETE

SWITCH OFF THE TESTER AND

ALLOW THE VEHICLE TO POWER DOWN BEFORE TESTING THE

REMOTES. TO PROGRAM THE

TRANSPONDER USE THE IMMOBILISER MENU SELECTION WITH DONGLE A

PRESS ENTER KEY

DIAGNOSTIC MENU

ADD KEY

KEYS PROGRAMMED

CLEAR KEYS

VIRGINISE KEYS

DIAGNOSTIC MENU

ADD KEY

KEYS PROGRAMMED

CLEAR KEYS

VIRGINISE KEYS

NOTE :

NOW PROCEED TO PROGRAMMING THE IMMOBILISER

VIRGINISE KEYS

THIS PROCEDURE IS USED TO

VIRGINISE PREVIOUSLY

PROGRAMMED KEYS TO ENABLE IT TO BE RE-LEARNT BY THE VEHICLE.

PLACE THE KEY AROUND THE CENTRE CONSOLE AND WHEN INSTRUCTED PRESS UNLOCK

BUTTON ON THE KEY WITHIN 5 SECONDS

PRESS ENTER KEY

NOTE :

ANY KEYS CLEARED CAN BE ADDED BACK AT A LATER TIME

CLEAR KEYS

WARNING
ALL KEYS WILL BE CLEARED
CONTINUE?

✘   ✔

VIRGINISE KEYS

PRESS UNLOCK ON THE KEY

****

WITHIN 5 SECONDS

CLEAR KEYS

PLEASE WAIT

VIRGINISE KEYS

PROCEDURE COMPLETE

PRESS ENTER KEY

CLEAR KEYS

PROCEDURE COMPLETE

PRESS ENTER KEY

SPECIAL FUNCTIONS

D

ADS207 LANDROVER (PROXIMITY)

PROGRAM IMMOBILISER

VEHICLE SELECTION

+ HYUNDAI

+ ISUZU

+ JEEP

+ KIA

+ **LANDROVER**

+ MITSUBISHI

VEHICLE SELECTION

+ IMMOBILISER

+ REMOTE

+ **PROXIMITY**

VEHICLE SELECTION

+ DISCOVERY 4

+ EVOQUE

+ FREELANDER II

+ RANGE ROVER

+ **RANGE ROVER SPORT**

PRESS ENTER KEY

VEHICLE SELECTION

+ **10 > 11**

+ 12 >

VEHICLE SELECTION

+ KEYS

+ **IMMOBILISER**

PRESS START / STOP BUTTON

ENSURE THAT THE KEYS

ARE PROGRAMMED BEFORE

PROGRAMMING THE IMMOBILISER

PRESS ENTER KEY

ECU IDENTIFICATION

JLR IMMOBILISER

PRESS ENTER KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION

SPECIAL FUNCTIONS

DIAGNOSTIC MENU

PROGRAM IMMOBILISER

IMMOBILISER DATA

VEHICLE IMMOBILISER DATA

VIN: SALLSAAF2AA239114

1:5DE01F33   2: 3ED81F33

3:00000000   4: 00000000

5: 00000000   6: 00000000

7: 00000000   8: 00000000

PRESS ENTER KEY

NOTE:
THIS SCREEN SHOWS THE IMMOBILISER DATA STORED IN THE VEHICLE. IN THIS EXAMPLE TWO IMMOBILISERS ARE ASSIGNED TO THE VEHICLE WITH 6 REMAINING SLOTS

DIAGNOSTIC MENU

PROGRAM IMMOBILISER

IMMOBILISER DATA

PROGRAM IMMOBILISER

STORED IMMOBILISER DATA
VIN: SALLSAAF2AA239114
1:5DE01F33   2: 3ED81F33
3:00000000   4: 00000000
5: 00000000   6: 00000000
7: 00000000   8: 00000000
DO YOU WANT TO WRITE THE IMMOBILISER DATA?

✖   ✔

PROGRAM KEYS

PROCEDURE COMPLETE

CHECK IMMOBILISER

FUNCTIONALITY

PRESS ENTER KEY

Optional Test

How to test if the immobiliser is programmed.

To test if the immobiliser is programmed—remove the battery from the key fob and hold underneath the steering wheel by the steering column.

Tip: Look for three small lines together on the cowling and place the fob over these.

Press the Stop / Start button on the vehicle whilst holding the key fob against the cowling.

The ignition should come on at this point.

A message will appear on the dashboard if the test was unsuccessful

'Smart key not found'

REMOTE PROGRAMMING

Land Rover 1996 (single Button oval shape)
1. Ensure ignition is OFF, doors unlocked, bonnet switch closed.
2. Ensure procedure from 3 to 9 is completed within 8 seconds.
3. Switch Ignition ON
4. Switch Ignition OFF
5. Lock Doors and Unlock Doors
6. Release Bonnet Switch
7. Switch Ignition ON
8. Switch Ignition OFF

If alarm is set, horn will sound and LED light. Now programming of plips can be completed.

10. Press and hold down button on Plip until LED flashes.
11. Repeat for additional plips.
12. The Dash LED will extinguish if both plips have been programmed successfully.

Range Rover   (03 to 06)
1. Ensure all doors are unlocked & front doors are closed.
2. Turn ignition to position 1 and back in less than 5 seconds.
3. Program first key within 30 sec.
      - Remove key from ignition switch.
      - Press & hold Unlock button for max of 15 seconds
      - During this time, press Lock button 3 times.
      - release both Lock & unlock buttons
      - If programming the doors will lock then unlock.
4. Repeat steps 2-3 for all remotes.

Notes: a.   All remotes must be programmed at the same time.
            b.   A maximum of 4 remotes can be programmed

Procedure for 2002 models (BMW remote in key)
1. With the doors shut and from inside the vehicle.
2. Turn ignition to position 1 and back to off within 5 seconds
3. Remove key from ignition and press and hold the unlock button (has an arrow on it) for 15 seconds during this time press the key lock button (has Land Rover logo)3 times within 5 seconds
4. Release both buttons
5. Doors will lock and unlock to show correct programming has occurred

Range Rover 2003 MY

Unlock vehicle, close all doors.
Turn ignition from 0 to I and back to 0 in less than 5 seconds - this puts the GEM module into initialization mode. You now have 30 seconds to program the remote.
Remove key from ignition switch.
Press and hold the unlock button and within 15 seconds briefly press the lock button 3 times.
Release both buttons.
If this procedure works the GEM will lock and unlock the doors.
Repeat the button pressing procedure for each additional remote.
Max remote number is 4.

Range Rover P38

Make sure the doors, windows and bonnet are closed, get out and lock the car with the key. Now insert the EKA code

1. To enter the first digit, turn the key the required number of times to the unlock position.
2. To enter the second digit, turn the key the required number of times to the lock position.
3. To enter the third digit, turn the key the required number of times to the unlock position.
4. To enter the fourth digit, turn the key the required number of times to the lock position.

Once the EKA code has been accepted press and hold either of the remote control buttons to code the remote – the door locks should cycle to confirm this.

FREELANDER

Lost Key Situation
1) Insert the key (even though it gets rejected) Press the start button. This will wake up the vehicle enough to establish communication.
2) Connect the AD100 PRO and select Freelander 2.
3) Use the PROGRAM VIRGIN KEYS to add all the new keys.

Adding New Keys
1) Use working Key to switch ignition on.
2) Connect the AD100 PRO and select Freelander 2.
3) Use the PROGRAM VIRGIN KEYS function to get the vehicle to recognise the new keys. These keys will now be retained in the ignition slot.
4) Use the PROGRAM KEYS function to program all the keys (new & existing) required for this vehicle. Any keys not programmed during this sequence will be erased.

Erase Lost Keys
1) Use working Key to switch ignition on.
2) Connect the AD100 PRO and select Freelander 2.
4) Use the PROGRAM KEYS function to program all the keys required for this vehicle. Any keys not programmed during this sequence will be erased.

DISCOVERY 2 EKA ENTRY.

There are three configurations for emergency key access:
EKA not active (no immobiliser fitted).
EKA active.
EKA with super locking on receiving good passive remobilisation exciter coil signal.

The code is recorded on the security information card and is entered as follows:

1 Using the key, turn the driver's door lock to the UNLOCK position and hold in this position for at least 5 seconds. An audible warning is then emitted to indicate that the body control unit is ready to accept the code. Return the key to the centre position. It is now possible to use the key to enter the separate numerical values of the four digits that make up the EKA code.

2 Enter the first digit of the code. If the first digit is 4, turn the key to the UNLOCK position 4 times. Ensure the key is fully returned to the centre position after each turn of the key.

3 Enter the second digit of the code. If the second digit is 3, turn the key to the LOCK position 3 times. Ensure the key is fully returned to the centre position after each turn of the key.

4 Enter the third digit of the code. If the third digit is 2, turn the key to the UNLOCK position twice. Ensure the key is fully returned to the centre position after each turn of the key.

5 Enter the fourth digit of the code. If the fourth digit is 1, turn the key to the LOCK position once. Ensure the key is fully returned to the centre position after each turn of the key.

6 Finally, turn the key to the UNLOCK position and back to the centre position, a double bleep will indicate that the code has been entered correctly. A single bleep indicates that the code has been entered incorrectly.
Then, before opening the door, wait 5 minutes for the alarm and immobiliser to be de-activated. During the 5 minute wait for the alarm and immobiliser to be de-activated, the alarm indicator LED in the instrument pack continues to flash (one flash every 2 seconds). DO NOT OPEN THE DOOR OR ATTEMPT TO ENTER THE CAR until the full delay period has elapsed.

7 When the 5 minute wait has elapsed, the alarm indicator LED stops flashing. Immediately open the door, insert the key in the ignition switch and turn the switch to position II. If the ignition switch is not turned to position II within 30 seconds of the end of the 5 minute wait, the engine is automatically immobilised again.

8 The EKA code will not be recognised if there is an interval of 10 seconds or more between key turns or if the key is held turned for 5 seconds or more during the procedure.
In some system configurations a successful EKA code entry is indicated by the audible warning device pulsing twice for a period of 50 ms on, 200 ms off. The theft deterrent LED is switched on for 1 second, all doors unlock, the alarm disarms and the vehicle is remobilised allowing the engine to start.
If an incorrect code is entered, an audible warning is emitted and the procedure must be repeated. Up to a maximum of 10 attempts to enter the code is possible. After 10 attempts, the BCU will not allow any further codes to be entered for a period of 10 minutes

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.

JLR Proximity Keys Variants

There are four types of JLR keys available

Jaguar Smart Key

WWW.ADVANCED-DIAGNOSTICS.CO.UK

- XK 2006 Onwards
- XJ 2010 to 2011
- XF 2008 to 2012
- Vehicles have Starter Control Unit (SCU)

W.ADUSA.US

Jaguar Smart Key

WWW.ADVANCED-DIAGNOSTICS.CO.UK

- Smart Key can be used as Proximity key or as slot key
- Un-programmed keys will not be held in SCU
- Programmed key is identified by marks on key
- Only Remote/Proximity function can be reprogrammed to a different vehicle
- Used keys cannot be reprogrammed via SCU
- 2 keys are required to program
- Can be programmed from lost key situation

A used key Will have grip marks made by the SCU.

JLR Proximity Keys

- Land Rover Discovery 4 2009 to 2012
- Range Rover Vogue 2010 to 2011
- Range Rover Sport 2010 to 2011

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- Land Rover Discovery 4 2012 Onwards
- Range Rover Vogue 2012 Onwards
- Range Rover Sport 2012 Onwards
- Range Rover Evoque 2011 Onwards

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- Jaguar XJ (X351) 2011 Onwards

JLR Proximity Keys

- Can be programmed from lost key situation
- Can be reprogrammed to a different vehicle

- Additional keys can interfere with key being programmed
- Only have the key to be programmed inside vehicle

- Back up transponder fitted in-case of flat remote battery

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Testing Back up Function

- For all Proximity keys
- Remove battery from key
- All other keys away from vehicle
- Press start button in vehicle
- Message displayed "smart key not found" or "smart key missing"
- On Jaguar XF, hold key against blank SCU
- On Jaguar XJ, hold key against panel under foglamp switch
- On Land Rover/Range Rover, hold key on underside of steering column, 3 embossed lines on housing

Advanced Diagnostics Key Programming Features

Jaguar Smart Key (Remotes) Dongle L

- **Remotes programmed** - Displays remotes programmed to the vehicle and remotes present

- **Program Remotes** - Programs existing and new keys with remote and proximity function

- Any keys not present will be deleted, but can be reprogrammed if required

- Remotes must be programmed before immobiliser

TIPS & HINTS

F

Advanced Diagnostics Key Programming Features

Jaguar Smart Key (Immobiliser) Dongle A

- **Keys programmed** - Displays transponder keys programmed to vehicle

- **Program Keys** - Reprograms existing keys and programs new keys
- Any keys not present will be erased, and cannot be reprogrammed
- Programs keys via SCU slot

- Minimum of 2 keys are required to carry out procedure

Advanced Diagnostics Key Programming Features

JLR Proximity Keys (Keys) Dongle L

- **Add Key** - Programs additional keys

- **Keys Programmed** - Displays Keys programmed to the vehicle and Keys present

- **Clear Keys** - Erases all keys from vehicle, keys can be reprogrammed if required

- **Virginise Keys** - Prepares a previously programmed key for reprogramming, feature only required if prompted when adding a key

- Remotes must be programmed before immobiliser

Advanced Diagnostics Key Programming Features

JLR Proximity Keys (Immobiliser) Dongle A

- **Transponder Data** - Displays the transponder data stored on the tester, this data is collected whilst programming keys

- **Program Transponder** - Writes stored data from tester to vehicle, this programs the back up feature

Advanced Diagnostics Key Programming Features

- ### Jaguar XF 2013 Onwards Dongle L

- Remote and Immobiliser functions both Programmed at same time

AD900Pro
Transponder Cloning

The most advanced key transponder cloning tool in the market - that reads, writes, copies, a wide range of automotive transponders worldwide. 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.