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ROVER

MG ROVER

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REMOTE CONTROL PROGRAMMING

VEHICLE	SYSTEM	YEAR	ECU PROG	CABLE
MINI	5AS	95 ON		ADC100 + ADC120/ADC123
100	5AS	95 ON		ADC100 + ADC120/ADC123
200	5AS	95 ON		ADC100 + ADC120/ADC123
400	5AS	95 ON		ADC100 + ADC120
MG-F	5AS	95 ON		ADC100 + ADC120
25	5AS	95 ON		ADC100 + ADC120
45	5AS	95 ON		ADC100 + ADC120
MEMS 1.6	MEMS	95 ON	Y	ADC125 + ADC100
MEMS 1.9	MEMS	95 ON	Y	ADC100 + ADC124 or ADC110-B-
MEMS 2J	MEMS	95 ON	Y	ADC110-B-B
MEMS 3	MEMS	ALL	Y	ADC110-B-B

NOTE : THE SYSTEMS ABOVE USE THE REMOTE PLIP UNIT AS PICTURED BELOW.

ANY OTHER REMOTE PLIPS ARE NOT PROGRAMMABLE WITH THIS SOFTWARE



PLIP KEY FOR USE WITH 5AS, 10AS AND 27VT SYSTEMS

SYSTEM DESCRIPTION (5AS ALARM SYSTEM)

INTRODUCTION

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.

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

C

PROGRAMMING REMOTE PLIP KEYS

VEHICLE SELECTION MENU

MINI
ROVER 100
ROVER 200
ROVER 400
ROVER MG-F

At the VEHICLE SELECTION menu select the required vehicle.

Then press the **ENTER** key.

PRESS ENTER KEY

DIAGNOSTIC MENU

PLIP KEY FUNCTIONS
EKA FUNCTION

Select the function required.

PRESS ENTER KEY

**PLEASE WAIT
TRYING TO COMMUNICATE**

The tester will now attempt to communicate with the ECU.

ECU IDENTIFICATION

LUCAS 5AS

If communication is successful the system being tested will be displayed as shown.

PRESS ENTER KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION
SPECIAL FUNCTIONS

Select SPECIAL FUNCTIONS.

PRESS ENTER KEY

SPECIAL FUNCTIONS

C

DIAGNOSTIC MENU

PROGRAM PLIP KEY

Select PROGRAM PLIP KEY.

PRESS ENTER KEY

PRESS PLIP LOCK
AT LEAST 8 TIMES
UNTIL HORN SOUNDS.

Press either button on the Plip key very quickly up to 8 times until the horn sounds, which indicates it has been successfully programmed. Repeat up to 4 plip keys.

PRESS ENTER KEY

READING EKA CODE

DIAGNOSTIC MENU

PLIP KEY FUNCTIONS
EKA FUNCTIONS

Select the EKA function.

PRESS ENTER KEY

TURN IGNITION ON

The display should show the EKA code and the sequence required to input the code.

PRESS ENTER KEY

READ EKA CODE
UNLOCK 6 TURNS
LOCK 1 TURNS
UNLOCK 11 TURNS
LOCK 11 TURNS

NOTE : EKA numbers can go up to 15.

PRESS ENTER KEY

SPECIAL FUNCTIONS

C

PROGRAMMING EKA CODE

DIAGNOSTIC MENU

READ EKA CODE
SPECIAL FUNCTIONS

To program a new EKA code select special functions from the menu and press **ENTER**.

PRESS ENTER KEY

DIAGNOSTIC MENU

WRITE EKA CODE

Select write EKA code.

PRESS ENTER KEY

SECURITY CODE

Insert new EKA code. Please make a note of this and advise the customer.

SECURITY CODE

1 2 3 4

IS THIS CORRECT
OK=ENTER CLEAR=BACK

If correct press **ENTER** to proceed.

DISCONNECT tester
FROM VEHICLE

After the code has been programmed, disconnect the tester and then reconnect to check the code has been written correctly.

SPECIAL FUNCTIONS

C

RE-CODE ECU's (MEMS 1.6, 1.9 & 2J)

VEHICLE SELECTION MENU

IMMOBILISER
EMS

At the VEHICLE SELECTION menu select the required system.

Then press the **ENTER** key.

PRESS ENTER KEY

VEHICLE SELECTION MENU

MEMS 1.6
MEMS 1.9
MEMS 2J

Select the required EMS system

PRESS ENTER KEY

VEHICLE SELECTION MENU

RE-CODE ECU

Select RE-CODE ECU

PRESS ENTER KEY

TURN IGNITION ON

Turn Ignition ON and press the **ENTER** key.

PRESS ENTER KEY

**PLEASE WAIT
TRYING TO COMMUNICATE**

PROCEDURE COMPLETE

If re-coding is successful, the tester should indicate procedure complete.

Disconnect tester and start vehicle,

PRESS ENTER KEY

GENERAL

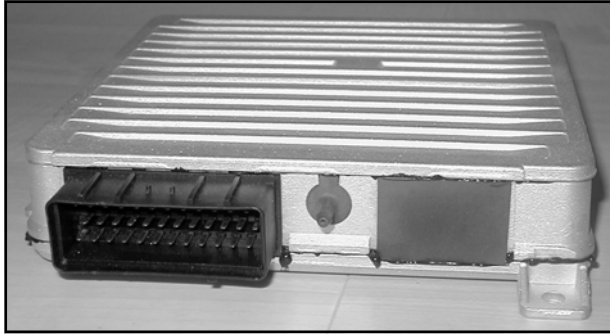
1. If the Plip key does not operate, it could be one of the following causes :-
 - Bad connection at 5AS ECU plug.
 - Plip Key inoperative or ECU de-programmed.
 - System in lock out due to other radio interference.
2. Alarm LED not working, this could be the failure of LED unit, as this is common on 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

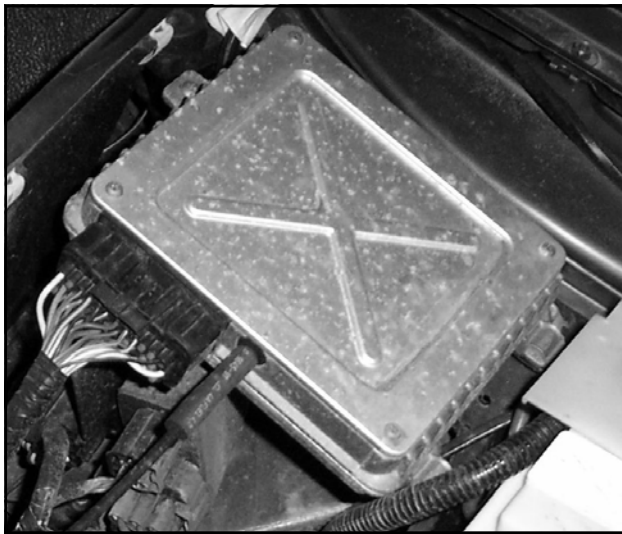
5. Socket mix ups are common
 - Green 3 pin for programming remotes
 - White 3 pin for programming MEMS ECU
6. Before programming a MEMS ECU the immobiliser must be disarmed otherwise the error "short to ground" will be seen.
7. No communication on a Rover/Land Rover may be the indication of a damaged tester - test with ADC145 dongle.
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

ECU IDENTIFICATION

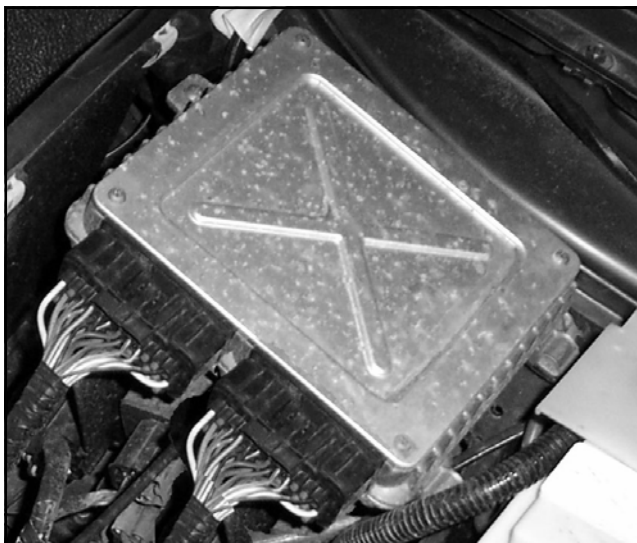
MEMS 1.6



MEMS 1.9



MEMS 2J



TIPS & HINTS

D

Socket mix ups are common
green 3 pin for programming remotes
White 3 pin for programming MEMS ECU

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

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