

APPLICATIONS MANUAL

TIPS & HINTS

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TIPS & HINTS

PEUGEOT & CITROEN

TRANSPONDER KEYS

VEHICLE	KEY TYPE	IDENT COLOUR	PART NO
SAXO	STANDARD	GREY	9926GY
XSARA	STANDARD GREY SERVICE KEY PLIP BLADE STANDARD KEY (MULTIPLEX)	BLACK BLACK BLACK	9926FF 9926JZ 9926FG 9926LE
XSARA PICASSO	STANDARD		9926LE
XANTIA	STANDARD PLIP BLADE	GREEN GREEN	9926HC 9926HA
C5	STANDARD		9926LE
SYNERGIE	STANDARD PLIP BLADE	BLACK BLACK	9926FF 9926FG
BERLINGO	STANDARD STANDARD (MULTIPLEX)	GREY	9926GY 9926LH
DISPATCH	STANDARD	BLACK	9926FF
RELAY	STANDARD		9926CF

1. After Programming Keys on all vehicles, clear fault codes before trying each key. This enables the key programming system, and saves having to wait for 5 minutes for system to reset.

2. When programming keys on all Citroen and Peugeot vehicles ensure all doors and hatchback doors are closed.

3. If the battery is disconnected on a C5 vehicle, you must wait at least 2 minutes after re-connection before trying anything, as the immobiliser enters lockout for 2 minutes after battery disconnection.

TIPS & HINTS

PEUGEOT & CITROEN

When programming keys on Peugeot 206 with MUX (Multiplex and a comms 2000 unit)- it is important to note that there are two different types of remote. Although both the keys look exactly the same (2 button- one large, one small) if you use the wrong remote you will be able to program the transponder but the remote will not work. The remotes are identified by whether the vehicle has front fog lights or not.

With front fog lights part number 6554.K2

Without front fog lights part number 6554.K1

SYSTEM IDENTIFICATION

106=CPH

206=Had BSI from the start but only had MUX from 51 Reg on (build code 9064 on) the design of the stalks gives it away, plip keys also different as it has a square appearance.

306=Never had MUX but late ones from approx V reg had HF plips and a CPH under the dash (passenger compartment protection unit) which worked locking and plips in one unit.

307=all BSI + MUX

406=had BSI + MUX from facelift (honey comb grille different boot and rear lights)

806=same as 306

807=All BSI + MUX

607=All BSI + MUX

Partner=Up to 2001 CPH, BSI from approx 2001 and has MUX like 406

Expert =All CPH

Boxer =All code1/2 (Fiat system)

Programming keys on BSI 2 may result in a vehicle that subsequently loses all electrical device operation (lights, wipers etc)- this is caused by the BSI unit waking up incorrectly after programming causing it to switch off all actuator outputs. Therefore once keys have been programmed on BSI2 equipped vehicles the system must be set to sleep (open drivers window, remove keys from ignition, shut drivers door and leave for 30 mins) and then woken using the sidelight switch only (lean in through the open drivers window and turn on sidelights.) All CPH systems, and some Imm

TIPS & HINTS

BOXER EMERGENCY START

This emergency procedure enables to start the engine only if the engine doesn't start because of an immobiliser problem.

If the procedure is interrupted, you must do it again. That's why it is important to read and understand properly the procedure before practising it.

This procedure must be done for each starting.

Procedure

1. Read the security code on the card
2. Switch off the ignition. Switch on the ignition
3. Press the accelerator pedal till the diagnostic light switch off (around 8 secs)
4. Release the accelerator pedal
5. Press the accelerator pedal as soon as the number of diagnostic light flashing equals the first number of the security code
6. Press the accelerator pedal till the diagnostic light switch off (around 4 secs)
7. Do stages 6 and 7 for each number of the security code
8. Once you have released the pedal accelerator for the last number if the light switch off or flash for 4 seconds, the procedure is a success and the engine can be started.

If the diagnostic light stays on , the procedure has failed and must be done again after a delay of 10 minutes. Start the procedure stage 2. If the procedure succeeds and the engine starts, it means that the problem is an immobiliser one.

PEUGEOT 607—BSI

To minimise the possibility of the BSI unit corrupting it's own software after download/programming or disconnection a certain procedure must be adopted to sleep and wake the BSI in the cleanest possible way. This will prevent the possibility of a complete dashboard or BSI derived electrical failure and also a current draw problem caused by failure to enter power save or sleep mode.

Switch off all electrical devices and put drivers window down. Make sure the AD100 is disconnected (a diagnostic session will keep the BSI unit awake) and make sure the bonnet is up, the key is out of the ignition and all of the doors are shut. Wait for 3 minutes. Disconnect the battery and wait for 30 seconds Re-connect the battery, wait 10 seconds and without opening any doors turn on the sidelights through the drivers open window. (the "lights on" chime should sound). Start the engine and check all systems are functioning. Sudden voltage spikes (as with jump starting) can also corrupt the BSI unit. Some 607 vehicles have two batteries (other one is in the boot under the R/H rim)

TIPS & HINTS

GENERAL

Failure to program keys on CPH systems can be caused by corrosion to the large brown loom connector on the O/S inner wing or a melted pin in the large round connector situated on the n/s inner wing (below battery or air filter)

Saxo on CPH systems have a very slow learn time, after successfully programming keys, remove the AD100, turn the ignition off and leave the vehicle alone for 30 mins.

C5- if the battery has been disconnected or gone flat, after replacing/re-connecting the battery it will be necessary to leave the vehicle for approx 2 minutes before it can be started- during this time do not switch the ignition on.

All Saxo and Dispatch vehicles are CPH- remotes and keys are therefore programmed separately.

NISSAN

1. 5 keys can be programmed on NATS 5, all other system allow 4 keys. NATS 5 requires a PIN code, if the large letter on the antenna label is an A then the PIN code is 5523, however if the letter is a B the PIN code is random and will need to be sought from the dealer. On early systems the programming procedure on the AD100 requires that you observe the engine warning light for confirmation of key programming complete. When programming a key, wait for the engine warning light to stop flashing- this indicates a successfully programmed key, insert the next key to be programmed at that point. There are different colour transponders for various signal frequencies.
2. Fault code for "Lock out mode" (when an incorrect key has been used) can be removed with a coded key by turning the ignition on for one minute or, when no coded keys are available, by coding keys.
3. Nissan Petrol NATS2, Fault code 225 read and fuse for headlights and engine management system faulty. Replaced and keys programmed successfully.
4. On petrol Nissan vehicles, if a problem exists within the Engine Management system, then key programming will be blocked. The clear time will continue, with PLEASE WAIT until the fault is cleared.
5. One vehicle a fuse was missing and prevented key programming.

TIPS & HINTS

VW-AUDI-SEAT-SKODA

1. When reading Pin codes from vehicle memory, if loss of communications is experienced, try reading fault codes, then clearing fault codes then read the pin code.
2. If when programming keys, the AD100 displays the following :—

KEYS PROGRAMMED : 136

This means the incorrect PIN CODE has been entered.

KEYS PROGRAMMED : 0

This means that the PIN CODE has been entered incorrectly more than three times, and the system will need resetting by leaving the ignition ON for 35 minutes.

EMERGENCY START

1. Switch IGNITION ON and turn the clock set button to the right and at the same time press and hold the trip reset button for 1 second.
2. "0000" appears on the display, press the trip button to input the first digit of the pin code. Turn the clock set button to the right to move to the next digit. Repeat for all 4 digits.
3. Then with the correct pin code entered turn the clock set button to the right and press the trip reset button for 1 second.
4. The Immobiliser light will stay on, and the car can run for 45 minutes.

TIPS & HINTS

VW-AUDI-SEAT-SKODA

Damage to AD100

Some cases of internal damage to the AD100 have been traced to a radio wiring fault on VAG vehicles.

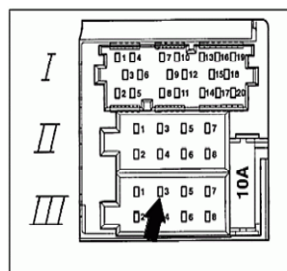
VAG cars from 1997 onwards have the ability to code/fault code read the radio and therefore the diagnostic wire or K line that is used to connect all of the control units on the car (including the immobiliser) goes to the radio. If an aftermarket radio has been fitted, it is possible that this K line may have inadvertently been shorted to 12v by the after-market adapter harness. This will not cause any running faults etc with the vehicle, but when you come along and plug in your AD100 it will fail to communicate and can end up permanently damaged.

To test for this problem on vehicles later than 1996, either use a multimeter carry out the following:

Measure the voltage on pin 7 relative to earth with the ignition and radio on, if it's below 9 volts then you are OK to connect the AD100, if it is 12 volts you will need to wire a bulb up between earth and pin 7. If the bulb does not illuminate it is OK to proceed with the AD100, however if it illuminates then you have a wiring fault to the radio DO NOT CONNECT THE AD 100!!!!



- 4 - Ground / Masse
- 7 - K-Line
- 15 - L-Line
- 16 - +12 (Vbatt)



Service

- Prior to connecting a VAG 1551/1552 scan tool to a vehicle, check the vehicle radio.

If the radio is not the correct radio for the vehicle:

- Remove the radio and make sure that the (DLC) K wire (location 3) -arrow- in the radio wiring harness Black 8 Pin multi-connector III -T8 has been removed from the connector and taped back to the harness.

TIPS & HINTS

FORD

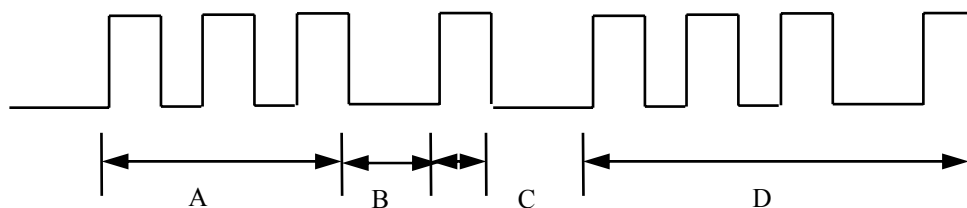
GENERAL

1. If communication is made with the vehicle, and then no communication is experienced later or the communication is random, check battery voltage and ensure it is at least 12.2 volts. This is particularly important on the SCP vehicles, and all Transit models.
2. On one Mondeo vehicle, it was found to have all the items fitted for transponder including aerial, but had not been activated.
3. A new function has been introduced on the WDS which enables the dealer to disable the additional key function. This is mainly used on fleet vehicles and hire companies to stop unauthorized key's being added. If a system will not accept additional keys, it may be because this has been enabled.
4. When Programming on SCP Systems, turn IGNITION ON before connecting AD100 or ADC110 to Diagnostic socket, then wait for the dashboard lights to settle, then connect AD100.
5. Intermittent start accompanied by fault code 12- replace faulty aerial pick up
6. Fleet mode (unable to add a key) can be removed by clearing the PATS and DSM (diesel only) and reprogramming all keys.

TIPS & HINTS

5. If an incorrect key is used to try and start the engine, the correct key must be inserted and left in the IGN position for at least 20 seconds, then switched OFF then back ON before the vehicle starts.
6. Fault Code 0 is an ECU trouble code, if this is set and cannot be cleared, then there is a problem with the ECU. Normally the only way to fix this is to return the ECU for testing or replace it.
7. When programming PATS SCP vehicles, it is most important to TURN the IGNITION ON first, before connecting the AD100 to the OBD socket.
8. The PATS system has it's own self diagnosis test procedure which flashes codes. The PATS LED will flash quickly for 1 minute, and then start flashing the fault code as follows:-

Example : code 31



A = 3 Flashes

B = 1 Flash

C = Three seconds delay

D = Repeat of code for 10 times

Code Descriptions :-

Code 11 Transceiver not connected

Code 12 Transceiver

Code 13 No key data received

Code 14 Part of the transponder code received

Code 15 Wrong transponder key

Code 21 Less than the minimum keys required programmed

Code 22 Failed diesel pump control unit identification

Code 23 The response code between pump control unit & powertrain

LED = Always ON or OFF

Check the fuse 15 (5 amp)

TIPS & HINTS

9. Fault Code 1000 is an ECU trouble codes. This code can be set automatically if the vehicle has not been driven. The code refers to the OBD drive cycle. In some instances it is not possible to program new keys if this code is set. Please follow the following instructions if the code cannot be cleared or the keys cannot be programmed :-

The OBD drive cycle code 1000 is the monitor code which monitors a number of the OBD parameters. This code can be cleared by driving the vehicle or running the engine for around 5 minutes at a steady RPM and acceleration cycles. The smoother the driving condition the quicker the code will be cleared.

If no keys are available, then the ECU can be disconnected for 30-45 minutes, which will also reset the system.

NOTE : If there are no fault codes, **DO NOT** clear fault codes as this can cause fault 1000 to be enabled.

10. Ford Escort, no communication with AD100, switched Ignition Off and ON very quickly, and communication gained. Conclusion was bad connection on ignition switch.

TRANSPONDERS

1. Ensure the transponder coil is inserted the correct way, ie. Coil in first.
2. Refer to Silca transponder booklet guide to ensure correct transponders are used.
3. **DO NOT** insert a blue chip transponder key into a red key system.

TIPS & HINTS

SYSTEM IDENTIFICATION

EPIC ENGINE



BOSCH DSM ENGINE



TIPS & HINTS

FORD VEHICLE MODEL YEAR IDENTIFICATION

REG LETTER	YEAR	YEAR	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
V/W	1980	A	B	R	A	G	C	K	D	E	L	Y	S	T
W/X	1981	B	J	U	M	P	B	R	A	G	C	K	D	E
X/Y	1982	C	L	Y	S	T	J	U	M	P	B	R	A	G
Y/A	1983	D	C	K	D	E	L	Y	S	T	J	U	M	P
A/B	1984	E	B	R	A	G	C	K	D	E	L	Y	S	T
B/C	1985	F	J	U	M	P	B	R	A	G	C	K	D	E
C/D	1986	G	L	Y	S	T	J	U	M	P	B	R	A	G
D/E	1987	H	C	K	D	E	L	Y	S	T	J	U	M	P
E/F	1988	J	B	R	A	G	C	K	D	E	L	Y	S	T
F/G	1989	K	J	U	M	P	B	R	A	G	C	K	D	E
G/H	1990	L	L	Y	S	T	J	U	M	P	B	R	A	G
H/J	1991	M	C	K	D	E	L	Y	S	T	J	U	M	P
J/K	1992	N	B	R	A	G	C	K	D	E	L	Y	S	T
K/L	1993	P	J	U	M	P	B	R	A	G	C	K	D	E
L/M	1994	R	L	Y	S	T	J	U	M	P	B	R	A	G
M/N	1995	S	C	K	D	E	L	Y	S	T	J	U	M	P
N/P	1996	T	B	R	A	G	C	K	D	E	L	Y	S	T
P/R	1997	V	J	U	M	P	B	R	A	G	C	K	D	E
R/S	1998	W	L	Y	S	T	J	U	M	P	B	R	A	G
S/T	1999	Y	C	K	D	E	L	Y	S	T	J	U	M	P

VIN EXAMPLE : WFY AXX GB GB

PRODUCTION YEAR : 1992

PRODUCTION MONTH : MARCH

N A

56789

TIPS & HINTS

GENERAL MOTORS

1. Check the vehicle battery, to ensure the voltage is at least 12 volts.
2. V registration Vectra, use ASTRA-G 98 vehicle selection.

CONNECTOR'S

On some Calibra's the 10 Pin connector mounted in the R/H engine bulkhead is prone to water ingress, and can cause bad connections. In some cases there was nothing that could be done, until the connector had been replaced.

PLIP KEYS

VEHICLES	VIN NUMBERS	PART NUMBERS
CORSA		9115104 CODE GJ
ASTRAIV		9192450 without ATWS 9153235 with ATWS
VECTRA	To VIN V7999999 To VIN V7999999 From VIN W>	9194590 without ATWS 90508961 with ATWS 24424724 without ATWS 9153226 with ATWS
OMEGA	To 97 From VIN W1000001 to W11109513 From VIN W11109514 From VIN W1000001 to X1999999	90512398 9194590 without ATWS 90508961 with ATWS 9153230 without ATWS 24424724 without ATWS 9153226 with ATWS
OMEGA Saloon	From VIN Y1000001	9146043 with ATWS
OMEGA Estate	From VIN Y1000001	9153235 with ATWS

NOTE : ATWS = Anti Theft Warning System

TIPS & HINTS

ROVER

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. On Rover 200/400 Automatics with Honda engine the Power line on the OBD connector is missing, and the AD100 will not power up. Check to ensure Pin 16 has a power feed of 12 volts.
5.

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 FR, Germany, Switzerland, Italy & Denmark)
•		
•		
• 433.92 MHz	White/Blue	Swiss & Denmark
• 315.0 MHz	Green/Green	ROW, Italy & Australia
• 315.0 MHz	Orange/Green	Gulf & Japan
5. Erratic operation of door locks or all door locks seized is caused by the loom into the tailgate breaking and shorting together driving all locks shut permanently. Most common causes of non start are corroded coil connections, failure of MFU, failure of MEMS engine control unit, short in main engine control wiring loom at gearbox and flywheel sensor.
6. Rover Mini, Engine fuse (Green maxi fuse in under bonnet fusebox) blows intermittently- wiring loom chaffing to earth on the brake master cylinder.
7. Rover 200 series Diesel non start and a blown 15A fuse in the under bonnet fuse box by the battery- white/black wire to stop solenoid on the back of the injection pump rubbing against metal bracket on the pump.

TIPS & HINTS

MITSUBISHI

1. DO NOT INSERT UNPROGRAMMED KEY INTO IGNITION AND SWITCH OFF, UNTIL PROGRAMMING IS COMPLETE. OTHERWISE THE SYSTEM WILL ENTER THEFT MODE. TO OVERCOME THEFT MODE LEAVE THE IGNITION ON FOR 25 MINUTES AND THEN PROGRAM KEY.
2. IF AN ERROR IS RECEIVED WHEN PROGRAMMING KEYS, CHECK THE CORRECT CABLE IS BEING USED, ADC129.
3. ATTEMPTING TO PROGRAM AN ALREADY PROGRAMMED KEY WILL CAUSE AN "ERROR" MESSAGE

DAEWOO

When you have programmed keys, and the vehicle will not start even though the programming was successful, follow these instructions :

- The learn time for the engine control unit is very slow on this car.
- You will have to program the keys and then leave the vehicle alone for at least 30 minutes without the ignition OFF.
- If still no success, then disconnect the battery for 10 minutes and then test keys.

TIPS & HINTS

DAIHATSU

The system uses a black (master) key system similar to Fiat. Slaves keys are grey. To program keys on 16 pin diagnostic socket versions, bridge pins 4 and 13.

On older versions with an underbonnet socket, bridge pins E and T using the diagnostic socket lid as a guide to pin locations.

Procedure

1. Insert master key
2. Start engine
3. Turn off ignition and within 10 seconds insert the grey key to be programmed
4. Turn ignition on and after 3 seconds turn back off again
5. Insert master key and turn ignition on and off insert second grey key, turn the ignition on and back off
6. Any keys not programmed in this session will stop working

NOTE 1 : Maximum number of grey keys is three

NOTE 2 : To exit programming, remove the bridging link with the ignition off.

HONDA

The procedure for coding keys on the AD100 is merely a text walkthrough (wait 17 secs, turn key off etc)- it is completely unaffected by the transponder type or indeed whether a transponder is fitted in the key or not. This is the reason for the immobiliser light continuing to flash after the keys have been programmed. The question "is the warning light off" during the programming procedure is a response to procedure rather than an actual consequence of correct programming.