ADVANCED DIAGNOSTICS

Unlocking Technology

General Motors

(Version 3.7)

VAUXHALL

CHEVROLET

OPEL

HOLDEN

DAEWOO

World Leaders In Automotive Key Programming Equipment

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™

CONTENTS

APPLICATIONS Have Moved to IQ - Online

A

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/

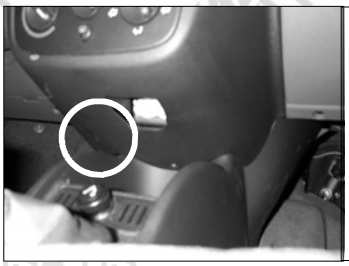
GM Software	
ADS102	GM Opel - Vauxhall - Holden
ADS130	Opel - Vauxhall - GM CAN
ADS171	GM PINCODE Reading
ADS184	GM CAN 2012

OPEL / VAUXHALL / GMHOLDEN

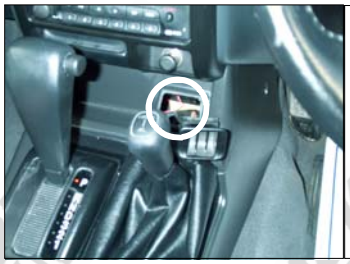
ASTRA F

CAVALIER

CORSA-B



CORSA-C



FRONTERA

SENATOR

SINTRA

TIGRA

VECTRA B

VECTRA C

VIVARO

ZAFIRA

OPEL / VAUXHALL / GMHOLDEN

ASTRA G

AGILA

TIGRA—B

MOVANO (98-04)
(4 DIGIT Pin code)

MERIVA

ZAFIRA-B

CORSA - D

VX 220

ASTRA—J

INSIGNIA

ASTRA—H

MERIVA-B

OPEL / VAUXHALL / GMHOLDEN

MOVANO (04-09)
(12 DIGIT Pin code)

COMBO

CRUZE

Introduction

The General Motors Immobiliser is used in conjunction with the vehicle engine management electronics to immobilise the vehicle. The first systems were fitted to Petrol vehicles and subsequently fitted to Diesel vehicles from 95½ Model Year.

The immobiliser system is independent, and can be diagnosed separately. The system is also operated independently from the central locking system, and it's main function is to inhibit starting.

Immobiliser Control Unit

The immobilisers function is to transmit the start signal to the engine management ECU after it has read the transponder code. If the code is recognised the immobiliser sends the signal and the ECU compares the code with what is programmed. If the signal is incorrect the engine which is allowed to start initially is then switched OFF. If there is a malfunction then the engine check light mounted in the instrument panel will flash.

The system uses what is called an IMO (Immobiliser Signal Code) signal to talk to the electronic engine management system, or for Diesel vehicles the Fuel Cut-off Solenoid.

The control unit can only be re-programmed if the necessary security code is entered, which is found on the customer vehicle information card (CAR PASS).

NOTE : If a new immobiliser ECU is fitted to the vehicle, then the code that is entered will be stored in the memory for any future programming requirements.

If a different code is used to that on the CAR PASS, please ensure this is written down and passed to the customer for safe keeping.
It is not possible to change this code once programmed.

Transponder (Mounted in key fob)

The key fob contains a small electronic circuit (Transponder) which is powered when in close proximity to the control unit using cordless voltage power. Each transponder has a different code for security.

Car Pass

The information that is stored in the control unit includes Security Code, Engine type and transponder code. The security code cannot be erased or overwritten using the TECH 1, TECH 2 or the AD PROGRAMMING SYSTEM.

The security code consists of a 4-digit number and can be found on the car pass. If a new control unit is fitted, the new unit is not programmed with a code, and must be programmed using the TECH or AD PROGRAMMING SYSTEM. However, the security code can only be programmed once and cannot be erased or overwritten.

If the customer has lost the car pass with security details, then the pin code must be sought from the dealer.

VIN	X382787CWDKJW
Security Code	4874
Engine Type No	X16SZ
Key No.	4386413
Radio Code	1234
CD Changer Code	1234

NOTE : The immobiliser receiver must be reprogrammed when it has been replaced

VAUXHALL / OPEL / GM—EARLY SYSTEMS

PROGRAM KEYS

VEHICLE SELECTION

+ GENERAL MOTORS
+ LANCIA
+ NISSAN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION

EURO
AUS
S.AMERICA

VEHICLE SELECTION

IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION

AGIILA
ASTRA F 95
ASTRA F 96
ASTRA G 98+
ASTRA H
CALIBRA 95

SWITCH IGNITION ON

PRESS ENTER KEY

ECU IDENTIFICATION

ECU NO : EB 24418925
KEY NO. : S1234
VIN : W0L00073T12345

PRESS ENTER KEY

PROGRAM KEYS

DIAGNOSTIC MENU

ECU IDENTIFICATION
FAULT CODES
LIVE DATA
SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU

CLEAR KEYS
PROGRAM KEYS
READ PINCODE
PROG. MECH. KEY.CODE
PROGRAM IMMOBILISER

SWITCH IGNITION OFF
AND THEN PRESS ENTER

SECUIRTY CODE

_ _ _ _

1	2	3	4	5
6	7	8	9	0

SECURITY CODE

1 2 3 4

✘ ✓

ACCESS GAINED

PROGRAM KEYS

ERASING KEYS

ERASING KEY : 1
ERASING KEY : 2
ERASING KEY : 3
ERASING KEY : 4
ERASING KEY : 5

NOTE : ALL KEYS ARE NOW ERASED.

NOTE : IF YOU GET ECU LOCK WHEN TRYING TO PROGRAM KEYS, THIS MEANS THE ECU IS LOCKED OUT FROM INCORRECT PIN CODE ENTRY.

DIAGNOSTIC MENU

CLEAR KEYS
PROGRAM KEYS
READ PINCODE
PROG. MECH. KEY.CODE
PROGRAM IMMOBILISER

SECUIRTY CODE

_ _ _ _

1	2	3	4	5
6	7	8	9	0

SECURITY CODE

1 2 3 4

✘ ✓

ACCESS GAINED

VAUXHALL / OPEL / GM—EARLY SYSTEMS

PROGRAM KEYS

SWITCH IGNITION OFF
AND THEN PRESS ENTER

PROGRAMMING KEYS

INSERT NEW KEY

SWITCH IGNITION ON
AND THEN PRESS ENTER

KEY PROGRAMMED

SWITCH IGNITION OFF
AND THEN PRESS ENTER

PRESS BACK TO EXIT
ENTER-PROG. MORE KEYS

READ PINCODE

DIAGNOSTIC MENU

CLEAR KEYS
PROGRAM KEYS
READ PINCODE
PROG. MECH. KEY.CODE
PROGRAM IMMOBILISER

RESET IMMOBILISER

DISCONN. IMMO. UNIT
FROM THE VEHICLE

PRESS ENTER KEY

NOTE : IT IS IMPORTANT THAT YOU MAKE SURE THE IMMOBILISER ECU IS DISCONNECTED AS INSTRUCTED BEFORE YOU TRY TO READ THE PIN CODE, OTHERWISE PIN CODE READING WILL NOT BE POSSIBLE !!!

RESET IMMOBILISER

RECONNECT. IMM. UNIT
TO THE VEHICLE

PRESS ENTER KEY

PINCODE

1 2 3 4

PRESS ENTER KEY

VAUXHALL / OPEL / GM—PIN READ BY ENGINE

READ PINCODE

VEHICLE SELECTION
IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION
CORSA-C
CORSA-D
MERIVA
TIGRA B
Z16XE
Z16SE

SWITCH IGNITION ON

PRESS ENTER KEY

ECU IDENTIFICATION

VIN : W0L012345K123456
ECU NO : Z16XE

PRESS ENTER KEY

DIAGNOSTIC MENU
ECU IDENTIFICATION
SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU
READ PINCODE

PRESS ENTER KEY

READ PINCODE

WEB SECURITY
PLEASE GAIN
AUTHORISATION
FROM AD
OUTCODE : 12345678

PRESS ENTER KEY

NOTE : TO GET A RESPONSE CODE, PLESE USE THE VAUXHALL/OPEL CODED ON THE AD WEB SITE.

YOU WILL NEED YOUR USERNAME, PASSWORD, TESTER SERIAL NUMBER AND PASSCODE.

RESPONSE CODE

_ _ _ _ _ _ _ _

1	2	3	4	5
6	7	8	9	0

WEB SECURITY

12345678

✘ ✓

ACCESS GAINED
PLEASE WAIT

SEARCHING FOR CODE
PLEASE WAIT

PINCODE

. . . . . .

1 2 3 4

PRESS ENTER KEY

VAUXHALL / OPEL / GM—CAN BUS

PROGRAM KEYS

VEHICLE SELECTION
+ GENERAL MOTORS
+ LANCIA
+ NISSAN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION
EURO
AUS
S.AMERICA

VEHICLE SELECTION
IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION
AGIILA
ASTRA F 95
ASTRA F 96
ASTRA G 98+
ASTRA H
CALIBRA 95

SWITCH IGNITION ON
PRESS ENTER KEY

GM CAN
PRESS ENTER KEY

PROGRAM KEYS

DIAGNOSTIC MENU
ECU IDENTIFICATION
FAULT CODES
LIVE DATA
SPECIAL FUNCTIONS
PRESS ENTER KEY

DIAGNOSTIC MENU
CLEAR KEYS
PROGRAM KEYS
MECHANICAL NUMBER

CLEAR KEYS
WARNING
ALL KEYS WILL
BE CLEARED
CONTINUE
YES=ENTER **NO=BACK**

CLEAR KEYS
PLEASE WAIT
CLEARING KEYS

SECUIRTY CODE
— — — —

1	2	3	4	5
6	7	8	9	0

SECURITY CODE
1 2 3 4
✘ ✓

PROGRAM KEYS

ACCESS GAINED
PRESS ENTER KEY

CLEAR KEYS
IGN. KEY OFF. THEN ON
PRESS ENTER KEY

CLEAR KEYS
SUCCESSFUL
PRESS ENTER KEY

DIAGNOSTIC MENU
CLEAR KEYS
PROGRAM KEYS
MECHANICAL NUMBER

PROGRAM KEYS
MAX 5 KEYS
TO BE PROGRAMMED
PRESS ENTER KEY

PROGRAM KEYS
PLEASE INSERT
KEY No 1
AND TURN ON
IGNITION
PRESS ENTER KEY

VAUXHALL / OPEL / GM—CAN BUS

PROGRAM KEYS

NOTE : IF YOU GET ECU LOCK WHEN TRYING TO PROGRAM KEYS, THIS MEANS THE ECU IS LOCKED OUT FROM INCORRECT PIN CODE ENTRY.

NOTE : IF YOU GET ECU LOCK WHEN TRYING TO PROGRAM KEYS, AFTER READING FAULT CODES, DISCONNECT AND RECYCLE THE IGNIGITION AND CONTINUE TO PROGRAM KEYS WITHOUT READING THE FAULT CODES.

ACCESS GAINED

PRESS ENTER KEY

PROGRAM KEYS

NEW KEY WITH

VIRGIN TRANSPONDER

YES = ENTER NO = BACK

NOTE : IF THE KEYS ARE NEW KEYS AND NOT PROGRAMMED BEFORE THEN SELECT YES.

ANY EXISTING KEYS BEING PROGRAMMED BACK IN THEN PRESS NO.

PROGRAM KEYS

IGN. KEY OFF. THEN ON

PRESS ENTER KEY

PROGRAM KEYS

PROGRAM KEY No 1

SUCCESSFUL

WOULD YOU LIKE TO

PROGRAM KEY No 2

YES=ENTER NO=BACK

VAUXHALL / OPEL / GM—CORSA D

PROGRAM KEYS

VEHICLE SELECTION

+ GENERAL MOTORS
+ LANCIA
+ NISSAN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION

EURO
AUS
S.AMERICA

VEHICLE SELECTION

IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION

AGIILA
ASTRA F 95
ASTRA F 96
ASTRA G 98+
ASTRA H
CORSA D

SWITCH IGNITION ON

PRESS ENTER KEY

ECU IDENTIFICATION

CORSA D

PRESS ENTER KEY

PROGRAM KEYS

DIAGNOSTIC MENU

ECU IDENTIFICATION
FAULT CODES
SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU

PROGRAM KEYS
ERASE KEYS
MECHANICAL NUMBER

CLEAR KEYS

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

SECUIRTY CODE

_ _ _ _

1	2	3	4	5
6	7	8	9	0

SECURITY CODE

1 2 3 4

✘ ✓

ACCESS GAINED

PRESS ENTER KEY

PROGRAM KEYS

CLEAR KEYS

IGN. KEY OFF. THEN ON

PRESS ENTER KEY

CLEAR KEYS

SUCCESSFUL

PRESS ENTER KEY

DIAGNOSTIC MENU

PROGRAM KEYS
ERASE KEYS
MECHANICAL NUMBER

PROGRAM KEYS

MAX 5 KEYS
TO BE PROGRAMMED

PRESS ENTER KEY

PROGRAM KEYS

PLEASE INSERT
KEY No 1
AND TURN
IGNITION ON

PRESS ENTER KEY

SECUIRTY CODE

_ _ _ _

1	2	3	4	5
6	7	8	9	0

VAUXHALL / OPEL / GM—CORSA D

PROGRAM KEYS

NOTE : IF YOU GET ECU LOCK WHEN TRYING TO PROGRAM KEYS, THIS MEANS THE ECU IS LOCKED OUT FROM INCORRECT PIN CODE ENTRY.

SECURITY CODE

1 2 3 4

✗ ✓

ACCESS GAINED

PRESS ENTER KEY

PROGRAM KEYS

NEW TRANSPONDER ?

YES=ENTER NO=BACK

PROGRAM KEYS

IGN. KEY OFF. THEN ON

PRESS ENTER KEY

PROGRAM KEYS

PROGRAM KEY No 1

SUCCESSFUL

WOULD YOU LIKE TO

PROGRAM KEY No 2

YES=ENTER NO=BACK

READ PIN CODE

VEHICLE SELECTION

IMMOBILISER

REMOTE FUNCTION

EMS

READ PINCODE

VEHICLE SELECTION

CORSA-C

CORSA-D

MERIVA

TIGRA B

Z16XE

Z16SE

SWITCH IGNITION ON

PRESS ENTER KEY

ECU IDENTIFICATION

VIN : W0L012345K123456

PRESS ENTER KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION

SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU

READ PINCODE

PRESS ENTER KEY

READ PIN CODE

PINCODE

PLEASE WAIT

. . . . . .

1 2 3 4

PRESS ENTER KEY

GM HOLDEN VE/CAPTIVA

PROGRAM KEYS

VEHICLE SELECTION

+ GENERAL MOTORS
+ LANCIA
+ NISSAN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION

EURO
AUS
S.AMERICA

VEHICLE SELECTION

IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION

VECTRA
VIVA
VE COMMODORE
VR COMMODORE
VS COMMODORE

SWITCH IGNITION ON

PRESS ENTER KEY

ECU IDENTIFICATION

TYPE 4

PRESS ENTER KEY

PROGRAM KEYS

DIAGNOSTIC MENU

ECU IDENTIFICATION
FAULT CODES
SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU

MODULE INFORMATION
PROGRAM KEYS

MODULE INFORMATION

H/WARE : 96673458
S/WARE : 15928498

PRESS ENTER KEY

DIAGNOSTIC MENU

MODULE INFORMATION
PROGRAM KEYS

PROGRAM KEYS

PLEASE WAIT
12 MINUTES
TIME ELAPSED 0 0

PROGRAM KEYS

PROCEDURE COMPLETE

DISCONNECT TESTER
CYCEL KEYS

PROGRAM REMOTES

VEHICLE SELECTION

IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION

VECTRA
VIVA
VE COMMODORE
VR COMMODORE
VS COMMODORE

SWITCH IGNITION ON

PRESS ENTER KEY

MODULE INFORMATION

H/WARE : 96673458
S/WARE : 15928498

PRESS ENTER KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION
FAULT CODES
SPECIAL FUNCTIONS

DIAGNOSTIC MENU

PROGRAM REMOTES
ERASE REMOTES

GM HOLDEN VE/CAPTIVA

PROGRAM KEYS

PRESS AND HOLD LOCK_UNLOCK
BUTTONS ON EACH KEY AND
WAIT FOR CHIME

GM HOLDEN VY

PINCODE READ

VEHICLE SELECTION

+ GENERAL MOTORS
+ LANCIA
+ NISSAN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION

EURO
AUS
S.AMERICA

VEHICLE SELECTION

IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION

VECTRA
VIVA
VE COMMODORE
VR COMMODORE
VS COMMODORE
VY SERIES 1

SWITCH IGNITION ON

PRESS ENTER KEY

ECU IDENTIFICATION

S/W VERSION : 2
S/W DATE : XX/XX/XX
BCM CODE : BH007082

PRESS ENTER KEY

PINCODE READ

MECHANICAL NUMBER

H1234

RADIO CODE
1234

PRESS ENTER KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION
FAULT CODES
LIVE DATA
ACTUATORS
SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU

PROGRAM KEY
READ PINCODE

SECURITY CODE
6 DIGIT PINCODE
NEEDS TO BE ENTERED
IF PINCODE IS LESS THAN
6 DIGITS THEN INSERT ZERO
BEFORE ENTERING PINCODE

PRESS ENTER KEY

READ PINCODE

PINCODE : 123456

PRESS ENTER KEY

PROGRAM KEYS

DIAGNOSTIC MENU

PROGRAM KEY
READ PINCODE

SECURITY CODE
6 DIGIT PINCODE
NEEDS TO BE ENTERED
IF PINCODE IS LESS THAN
6 DIGITS THEN INSERT ZERO
BEFORE ENTERING PINCODE

PRESS ENTER KEY

SECURITY CODE

_ _ _ _ _ _

SECURITY CODE

1 2 3 4 5 6

✘ ✓

PROGRAMMING KEY

NOTE : FOR ADDITIONAL KEYS REPEAT PROGRAMMING PROCEDURE.

GM PIN CODE READING CAN BUS

PINCODE READ

VEHICLE SELECTION

+ GENERAL MOTORS
+ LANCIA
+ NISSAN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION

EURO
AUS
S.AMERICA

VEHICLE SELECTION

IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION

ASTRA H
CORSA-C
CORSA-D
MERIVA
TIGRA B
VECTRA C

SWITCH IGNITION ON

PRESS ENTER KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION
SPECIAL FUNCTIONS

PRESS ENTER KEY

PINCODE READ

DIAGNOSTIC MENU

READ PINCODE

PINCODE

1234

PRESS ENTER KEY

GM PIN CODE READING CAN BUS

PIN reading is done from the vehicle's Info display; there are many versions of the info display. We currently work with Dual and Triple (info displays) – here are some examples:

DID

TID

We do **NOT** read the PIN from Siemens 0400 or CID (colour):

The PIN code is 4 digits

The control unit can be locked by incorrect PIN entry. If this has happens the tester will report the lock time when you attempt to program keys.
All systems have the transponder programmed at the same time as the remote
"Incorrect conditions" displayed on tester is an indication that there is a key issue. Either you are trying to code an existing key or there is a transponder anomaly. To read a mechanical key number, it will be necessary to read the PIN code and then to force the ignition on to gain access to the CIM. You will need to contact Tech Support for this.

NOTE: To enable the PIN to be read, the Info Display MUST be awake – turn ON the radio !

NOTE: Many of the functions available on the tester are only valid once a PIN code has been entered; therefore reading a PIN must be done first.

NOTE: A token will be taken for reading the PIN and another token will be taken for key programming

VAUXHALL / OPEL / GM—PROXIMITY

PROGRAM PROX

VEHICLE SELECTION

+ GENERAL MOTORS
+ LANCIA
+ NISSAN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION

EURO
AUS
S.AMERICA

VEHICLE SELECTION

IMMOBILISER
REMOTE FUNCTION
EMS
READ PINCODE

VEHICLE SELECTION

AGIILA
ASTRA F 95
ASTRA F 96
ASTRA G 98+
ASTRA H
CALIBRA 95

VEHICLE SELECTION

MECHANICAL KEY
I-KEY

PRESS START STOP

PRESS ENTER KEY

PROGRAM PROX

ECU IDENTIFICATION

VIN : W0L0AHL0885154702

PRESS ENTER KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION
SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU

PROGRAM KEYS

PROGRAM KEYS

KEYS NOT AVAILABLE
WILL BE DELETED
DO YOU WANT TO
CONTINUE ?

✗ ✓

SECUIRTY CODE

— — — —

1	2	3	4	5
6	7	8	9	0

SECURITY CODE

1 2 3 4

✗ ✓

PROGRAM PROX

PROGRAM KEYS

PRESS START STOP

PRESS ENTER KEY

PROGRAM KEYS

PRESS START STOP
IS IGNITION ON ?

✗ ✓

PROGRAM KEYS

PLEASE WAIT
19 Sec.

PROGRAM KEYS

HOLD REMOTE NEAR CIM

PRESS LOCK
FOR HALF SECOND AND
RELEASE

NOTE : THE CIM IS LOCATED BEHIND THE STEERING COLUMN.

PROGRAM KEYS

DO YOU WANT TO
PROGRAM MORE KEYS

✗ ✓

VAUXHALL / OPEL / GM—PROXIMITY

PROGRAM PROX

PROGRAM KEYS

HOLD REMOTE NEAR CIM

PRESS LOCK

FOR HALF SECOND AND

RELEASE

PROGRAM KEYS

DO YOU WANT TO

PROGRAM MORE KEYS

✘ ✓

SWITCH IGNITON OFF

PRESS ENTER KEY

SWITCH IGNITON ON

PRESS ENTER KEY

SWITCH IGNITON OFF

PRESS ENTER KEY

PROCEDURE COMPLETE

PRESS ENTER KEY

PROGRAM PROX

IMPORTANT NOTE

ONCE PROCEDURE IS COMPLETE PRESS THE START/ STOP BUTTON 3 TIMES TO CLOSE THE PROGRAMMING PROCEDURE.

CHEVROLET CRUZE

PROGRAM KEY

VEHICLE SELECTION

+ CHEVROLET
+ CHRYSLER
+ CITROEN
+ PEUGEOT
+ ROVER
+ SUZUKI

VEHICLE SELECTION

+ EURO
+ USA

VEHICLE SELECTION

+ IMMOBILISER
+ REMOTES

VEHICLE SELECTION

AVEO
BEAT
KALOS
LACETTI
CRUZE
MATIZ

SWITCH IGNITON ON

PRESS ENTER KEY

ECU IDENTIFICATION

VIN NUMBER
KL1JF6969AK734606
KEYS PROGRAMMED : 02

PRESS ENTER KEY

PROGRAM KEY

DIAGNOSTIC MENU

ECU IDENTIFICATION
FAULT CODES
SPECIAL FUNCTIONS

PRESS ENTER KEY

DIAGNOSTIC MENU

PROGRAM KEYS
KEYS PROGRAMMED

PRESS ENTER KEY

PROGRAM KEYS

KEYS NOT AVAILABLE
WILL BE DELETED
DO YOU WANT TO
CONTINUE

✘ ✓

SECUIRTY CODE

_ _ _ _

1	2	3	4	5
6	7	8	9	0

SECURITY CODE

1 2 3 4

✘ ✓

PROGRAM KEYS

PLEASE WAIT
10 MINUTES

TIME ELAPSED 00:01

PROGRAM KEY

SWITCH IGNITON OFF

REMOVE KEY

PRESS ENTER KEY

OPEN&CLOSE DRIVERS DOOR

PRESS ENTER KEY

SWITCH IGNITON ON

PRESS ENTER KEY

PROGRAM KEYS

PLEASE WAIT
TIME ELAPSED 01

KEYS PROGRAMMED : 01

PROGRAM KEYS

DO YOU WANT TO
PROGRAM MORE KEYS

✘ ✓

PROGRAM KEYS

PLEASE WAIT

KEYS PROGRAMMED : 01

CHEVROLET CRUZE

PROGRAM KEY

CHECK ENGINE STARTS

PROCEDURE COMPLETE

PRESS ENTER KEY

HOLDEN CAPTIVA

Immobiliser Description and Operation

Vehicle Theft Deterrent (VTD) – Immobiliser

The vehicle theft deterrent (VTD) system functions are provided by the body control module (BCM). When an ignition key is inserted into the ignition lock cylinder and the ignition is switched ON, the BCM supplies battery voltage to the theft deterrent exciter module. The transponder embedded in the head of the key is energized by the theft deterrent exciter module which is surrounding the ignition lock cylinder. The energised transponder transmits a signal that contains its unique value, which is received by the theft deterrent exciter module. The BCM monitors the theft deterrent exciter module for the transponder value via the security system sensor signal circuit. The BCM then compares this value to a value stored in memory, learned key code. If the value is correct the BCM sends the fuel continue password via the serial data circuit to the powertrain control module (PCM). If the transponders value is incorrect the BCM will send the fuel disable password to the PCM via the serial data circuit. The components of the VTD system are as follows:

Theft deterrent module (TDM)
Body control module (BCM)
Ignition key (Transponder)
Security indicator

Theft Deterrent Module (TDM) Immobiliser

Vehicles with steering column mounted ignition switches have the exciter integral with the theft deterrent module (TDM), which is located within the steering column. The TDM can learn up to 10 keys (transponder values).
The TDM uses the following inputs: battery voltage, ignition switched voltage and ground circuit. The theft deterrent control module uses the following outputs:
Password exchange and challenge/response with the engine control module (ECM).
When an ignition key is inserted into the ignition lock cylinder and the ignition is switched ON, the transponder embedded in the head of the key is energized by the exciter coils surrounding the ignition lock cylinder. The energized transponder transmits a signal that contains its unique value, which is received by the theft deterrent control module. The theft deterrent control module then compares this value to the learned key code stored in memory. The theft deterrent control module then performs one of the following functions:

If the transponder value matches the values stored in the TDM memory, the TDM will send the fuel enable message to the ECM via the serial data circuit.
If the transponders unique value does not match the value stored in the TDM, the TDM will send the fuel disable message to the ECM via the serial data circuit.
If the transponders unique value does not match the value stored in the TDM, the TDM will send the fuel disable message to the ECM via the serial data circuit.
If the TDM is unable to measure the ignition key transponder value, the TDM will not send any messages to the ECM.

Engine Control Module (ECM)

When the engine control module (ECM) receives the theft deterrent module (TDM) fuel enable password, the ECM will challenge the password. The ECM sends this challenge back to the TDM via the serial data circuit. Both the ECM and TDM perform a calculation on this challenge. If the calculated response from the TDM equals the calculation performed by the ECM, the ECM will allow vehicle starting. The ECM will disable vehicle starting if any of the following conditions occur:

The fuel enable password is invalid
The fuel disable password is sent by the TDM.
No passwords are received--There is no communication with the TDM.
The TDM calculated response to the challenge does not equal the calculation performed by the ECM

The Ignition Key (Transponder)

The ignition key for Passkey III+ (PK3+) equipped vehicles is a standard ignition key with a transponder located in the plastic head of the key. The transponder value is fixed and unable to be changed. The vehicle theft deterrent (VTD) system uses the ignition key transponder value to determine if a valid ignition key is being used to start the vehicle. There are approximately 3 trillion possible transponder values.
Fleets keys allow full access to the vehicle just as a master key would. However, unlike a master key which may only learn 10 keys to a particular vehicle, an unlimited number of fleet keys may be learned to the vehicle. Fleet keys are only used in vehicles configured for police fleet use.
Start the vehicle
Lock / unlock all of the door locks and rear compartment
Lock / unlock all of the storage compartments

Security Indicator

The theft deterrent module (TDM) can command the clock to illuminate the security indicator only when the ignition key is in the ON position. The TDM will command the security indicator be illuminated any time a fault is noted in the VTD system and when engine starting is disabled.

HOLDEN VE

An overview to the security system in the VE is provided below.

The Transponder Key utilised by the VE series Commodore is a conventional type with a Philips Crypto ID 46 chip. The key maybe either fixed blade or flip blade in design. A minimum of two (2) transponder keys must be programmed to the VE series. Failure to program 2 keys will result in
(1) A 'vehicle immobilized' message being displayed on the Driver Information Center. The vehicle will start even though this immobilized status is displayed.
(2) Not all previous keys will be deleted from the system.

The Remote Keyless Entry is programmed separate to the transponder key. The remote includes lock, unlock, boot release and panic functions. The remote programming function in the diagnostic tool menu allows for both the adding and erasing of remotes. Note if the alarm is triggered the remote may need to be programmed before the transponder key, failure to do so may result in communications failure and failed transponder key programming.

There are a number of components in the Vehicle Theft Deterrent (VTD) system which include

The Theft Deterrent Module (TDM) is located in the steering column by the ignition incorporating the coil. The TDM can learn a maximum of 10 individual transponder keys.

Engine Control Module (ECM) located in the engine bay and is the main vehicle computer. Within the security system the ECM performs challenge and response with the TDM and in turn either enables or disables the engine start function.

The Body Control Module (BCM) located behind dash compartment on driver's side. This module has many functions such as signal monitoring and gateway functions through which signals are passed between different computer units. As an integral part of the security system the BCM exchanges security related information with the Engine Control Module (ECM). Subsequently, a faulty or non operational BCM may result in a no start status.

Immobiliser chain - System Operation

The immobiliser chain consists of a number of modules or units which are

The Body Control Module (BCM)
The Infotainment Unit (IRC)
The Instrument Panel Cluster (IPC)
Rear Seat Entertainment unit (RSE)
Sensing Diagnostics Module (SDM)

The VIN is recorded in each of the units in the immobiliser chain. When a programmed key is turned to accessories the TDM performs a substitution check and attempts to identify the modules in the immobiliser chain. If the modules are identified as being correct i.e. at least two of the modules must respond with the correct VIN the TDM sends a fuel enable signal via the BCM to the ECM. A challenge response between the TDM and ECM follows. If all conditions are correct the ECM will allow the vehicle to start. The Driver Information Center (DIC) located in the middle of the dash cluster will display System Check followed by the odometer reading if all is correct.

If all conditions are not correct e.g. an invalid transponder key, unrecognised parts or the TDM being unable to read the transponder key the start function will be disabled. In this instance the Driver Information Center (DIC) will display the following message,

Security LED
The security LED, a car and padlock symbol, is located in the left side of the dash cluster above the temperature gauge. The out put of the security LED is not indicative of whether the transponder key is programmed or not. The security LED will become active when the vehicle is left unattended for 45 – 60 seconds with all doors closed and no keys in the ignition. The security LED will turn off when the vehicle door is opened manually from an unlocked state or from a locked state when using the RKE. Any key inclusive of an unprogrammed key will turn off the security LED when turned to the on position.

VE HSV Vehicles
VE HSV vehicles do not have a secondary security system like earlier Holden Commodore models, subsequently Advanced Diagnostic tools loaded with VE software can program keys to these vehicles.

Transponder Key Programming

Note: If the alarm is triggered the remote must be programmed before the transponder key. Failure to do so will result in communications failure and failed transponder key programming.

GENERAL

1. Check the vehicle battery, to ensure the voltage is at least 12 volts.
2. V registration Vectra, use ASTRA-G 98 vehicle selection.
3. If a new immobiliser ECU is fitted to the vehicle, then the code that is entered will be stored in the memory for any future programming requirements.
4. If a different code is used to that on the CAR PASS, please ensure this is written down and passed to the customer for safe keeping.
5. It is not possible to change this code once programmed.
6. The immobiliser aerial must be reprogrammed when it has been replaced

CALIBRA

1. 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.

REMOTE CONTROL INFORMATION

VEHICLES	VIN NUMBERS	PART NUMBERS
CORSA		9115104 CODE GJ
ASTRA IV		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

1. Vectra C has the transponder located inside the remote part of the key. None start can be caused by locked IM module, disconnecting the battery might fix it.
2. Programming of remotes and transponders cannot be done one after the other. Ensure that when programming of either transponders or remotes is finished, switch ignition off and disconnect TESTER before entering another programming mode.
3. When programming remotes, if the TESTER display doesn't change to "ignition off", when the ignition is turned off, this indicates an incorrectly wired radio.
4. Program all 10 pin diagnostic connectors with ADC112 and the ignition switched off (leave key in).
5. To identify which type of remote a vehicle uses, look inside to see if the car has ultrasonics in the A or B pillars. If it has, then use Megamos remotes, if not use Bosch.

REMOTE CONTROL INFORMATION

TYPE 1.
Teardrop shaped plip, separate from key

TYPE 2.
Type used on early systems, with integrated remote key head.

TYPE 3.
Type used on Astra G vehicles & Zafira.

TYPE 4.
Type used on Vectra B vehicles, and requires PIN CODE

TYPE 5.(ATWS)
Type with Alarm system fitted (V6 etc)

TYPE 6
Type ATWS system on Zafira (Ultrasonic in Interior Light module)

TYPE 7
Type ATWS system on Zafira (Ultrasonic in A frame)

CORSA-C Remote Controls

MERIVA Remote Controls

OMEGA Remote Controls (Infra Red System, select Omega Pre97)

NOTE : ENSURE THE CORRECT PLIP PART NUMBER IS USED AS THE INCORRECT TYPE CANNOT BE PROGRAMMED.

PRECAUTIONS

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

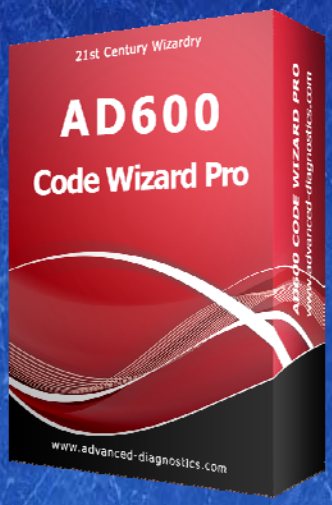
IN PARTICULAR : For vehicles fitted with STOP/START technology, the battery leads must not be shorted together when the battery is disconnected as this can lead to damage to the car and potential personal injury.

CRUZE and ASTRA J FAULT CODES

B101D - Electronic Control Unit Hardware
B101E - Software EPROM
B1013 - Calibration ROM Checksum Error
B1014 - Program ROM Checksum Error
B1015 - VIN Information Error
B1016 - VIN Information Not Programmed
B1019 - System Configuration Error
B1020 - Auxiliary Electronic Control Unit
B1023 - Integral Switch Malfunction
B1024 - Circuit Board Temperature Sensor
B1025 - Audio Output 1 Left Front Circuit
B1035 - Right Front Audio Output Circuit
B1045 - Left Rear Audio Output Circuit
B1055 - Right Rear Audio Output Circuit
B1065 - Audio Output 5 Circuit Open
B1075 - Audio Output 6 Circuit Open
B1085 - Audio Output 7 Circuit Open
B1095 - Audio Output 8 Circuit Open
B1400 - Driver SIS Malfunction
B1401 - LF Side Impact Sensor Short to Ground
B1402 - LF Side Impact Sensor Short to Battery
B1403 - Passenger SIS Malfunction
B1404 - RF Side Impact Sensor Short to Ground
B1405 - Device Voltage Reference Output 2 Circuit
B1409 - LF Side Impact Sensor Invalid Serial Data Received
B1410 - RF Side Impact Sensor Invalid Serial Data Received
B1411 - Room Temperature Sensor Circuit
B1412 - Ambient Temperature Sensor Circuit
B1413 - Evaporator Temperature Circuit
B1414 - LF Side Impact Sensor Incorrect Component Installed
B1415 - RF Side Impact Sensor Incorrect Component Installed
B1420 - Control Module Voltage
B1421 - Solar Sensor Circuit (Passenger Simon)
B1423 - Open in Pressure Sensor Circuit / Abnormal Refrigerant Pressure
B1424 - Device 1 Voltage Low
B1425 - Device 1 Voltage High
B1428 - Ignition Switched Power Relay 1 Circuit
B1433 - Ignition Switched Power Relay 2 Circuit
B1439 - Intermittent Device Voltage Performance
B1440 - Passenger Seat Occupancy Circuit Short to Ground
B1441 - Air Mix Damper Control Servomotor Circuit (Passenger Side)
B1442 - Air Inlet Damper Control Servomotor
B1443 - Air Outlet Damper Control Servomotor Circuit
B1445 - Control Module Voltage Output Circuit
B1446 - Air Mix Damper Control Servomotor Circuit (Driver Side)
B1447 - Backup Power Source
B1448 - Accessory Power Relay Circuit
B1449 - Passenger Seat Occupancy Communication
B1450 - Incorrect Passenger Seat Occupancy Sensor Installed
B1451 - Accessory Power Circuit
B1461 - Left Headlamp Horizontal Motor Circuit
B1462 - Right Headlamp Horizontal Motor Circuit
B1474 - Passenger Exterior Door Handle Switch Circuit
B1475 - Retained Accessory Power Circuit
B1477 - Retained Accessory Power Circuit Low
B1478 - Retained Accessory Power Circuit High
B1480 - Battery Rundown Protection Circuit
B1481 - Driver Frontal Deployment Loop Stage 2 Resistance Above Threshold
B1482 - Driver Frontal Deployment Loop Stage 2 Resistance Below Threshold
B1483 - Driver Frontal Deployment Loop Stage 2 Short to Ground
B1484 - Driver Frontal Deployment Loop Stage 2 Short to Battery
B1485 - Passenger Frontal Deployment Loop Stage 2 Resistance Above Threshold
B1486 - Passenger Frontal Deployment Loop Stage 2 Resistance Below Threshold
B1487 - Generator L-Terminal Circuit Low
B1488 - Generator L-Terminal Circuit High
B1492 - Generator F-Terminal Circuit Low
B1497 - Communication Malfunction - Bus IC
B1499 - Communication Malfunction Engine/Cluster
B1516 - Battery Current Sensor
B1517 - Battery Voltage
B1527 - High Parasitic Load Detected
B1529 - Control Module Voltage Reference Output 5 Circuit
B1534 - Left Rear Door Handle Switch Circuit
B257A - Headlamp Switch Input Signals Correlation
B257B - Lighting Control Switch Circuit
B257C - Left Headlamp Assembly
B257D - Right Headlamp Assembly
B2560 - Cargo Lamp Control Circuit
B2580 - High Beam Control Circuit
B2582 - Headlamp High Beam Control Circuit Short to GND or Open
B2583 - Headlamp High Beam Control Circuit Short to Battery
B2585 - Park lamp Control Circuit
B2590 - Left Cornering Lamp Circuit
B2595 - Right Cornering Lamp Circuit
B2600 - Left Daytime Running Lamps Control Circuit
B2605 - Right Daytime Running Lamps Control Circuit
B260A - Backlight and Display Dimming Request Circuit
B260B - Left Daytime Running Lamp Relay Control Circuit
B260C - Right Daytime Running Lamp Relay Control Circuit
B260D - Left Daytime Running Lamp and Front Park Lamp Control Circuit
B260E - Right Daytime Running Lamp and Front Park Lamp Control Circuit
B2610 - Passenger Compartment Dimming 1 Circuit
B2615 - Passenger Compartment Dimming 2 Circuit
B2623 - Display Dimming Pulse Width Modulation (PWM) Output Circuit High
B2624 - Passenger Compartment Dimming Request Signal Circuit
B2625 - Display Dimming Pulse Width Modulation Output Circuit
B2645 - Ambient Light Sensor Circuit
B2750 - Horn Relay Secondary Circuit
B2955 - Security sensor data malfunction
B3006 - Bonnet ajar circuit
B3031 - Security controller in learn mode malfunction
B3055 - No transponder modulation or no transponder
B3060 - Unprogrammed Transponder Code Received
B3105 - Keyless Entry Transmitters
B3106 - Keyless Entry Data Link
B3109 - Keyless Entry Transmitter 1 Battery
B3110 - Keyless Entry Transmitter 2 Battery
B3111 - Keyless Entry Transmitter 3 Battery
B3112 - Keyless Entry Transmitter 4 Battery
B3113 - Keyless Entry Transmitter 5 Battery
B3125 - Driver Door Only Unlock Circuit
B3130 - All Doors Unlock Circuit
B3135 - All Doors Lock Circuit
B3140 - Driver Door Unlock Switch Circuit
B3142 - LF Unlock Switch Circuit Low
B3143 - Left Front Unlock Switch Circuit High
B3145 - Passenger Door Unlock Switch Circuit
B3150 - Left Front Door Lock Switch Circuit
B3152 - LF Lock Switch Circuit Low
B3153 - Left Front Lock Switch Circuit High
B3155 - Right Front Door Lock Switch Circuit
B3160 - Window Switch-Up Input Shorted to Ground
B3165 - Window Switch-Down Input Shorted to Ground
B3205 - Driver Window Motor
B3210 - Passenger Window Motor
B3215 - Left Rear Window Motor
B3220 - Right Rear Window Motor
B3225 - Lock Motor Circuit
B3245 - Rear Cargo Door Lock Actuator Circuit
B3265 - Boot Lid Unlatch Circuit
B3385 - Right Front Window Up Switch Circuit Shorted to Ground
B3875 - Windshield Wiper High Speed Relay Circuit
B3881 - Tail Lamp Circuit
B3882 - Right Tail Lamp Circuit
B3901 - Wrong Environmental Identifier Received
B3902 - Incorrect immobiliser id received
B3916 - Security Siren Data Circuit
B3920 - Driver Seat Motors Group 1
B3921 - Driver Seat Motors Group 2
B3930 - Child Security Lock Motors Circuit
B3933 - Air Conditioning Evaporator Temperature Sensor Circuit
B3935 - Transponder authentication
B3938 - Fuel Door Actuator Lock Circuit
B3948 - Left Front Turn Signal Circuit
B3949 - Right Front Turn Signal Circuit
B3950 - Left Rear Turn Signal Circuit
B3951 - Right Rear Turn Signal Circuit
B3971 - Folding Top Position Sensor
B3976 - Transponder not configured or programmed
B3984 - Environment identifier not programmed

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.