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SUBARU

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# APPLICATIONS

# A

VEHICLE	MODEL YEAR	PIN CODE REQUIRED	SYSTEM	CABLE
BAJA SPORTS	ALL	N	OBD ONLY	AD110-B
BAJA TURBO	ALL		OBD ONLY	AD110-B
FORESTER X, XT, XS	2000>	N	OBD ONLY	AD110-B
FORESTER X, XT, XS	>2000	N	9 PIN CONNECTOR	ADC117 + ADC119
IMPREZA SEDAN	2000 >	N	OBD ONLY	AD110-B
IMPREZA SEDAN	> 2000	N	OBD ONLY	ADC110-B + ADC119
IMPREZA SPORTS WAGON	2000 >	N	OBD ONLY	AD110-B
IMPREZA SPORTS WAGON	> 2000	N	OBD ONLY	ADC110-B + ADC119
JUSTY	ALL	N	OBD ONLY	ADC128
LEGACY WAGON	2000 >	N	OBD ONLY	AD110-B
LEGACY WAGON	> 2000	N	9 PIN CONNECTOR	ADC117 + ADC119
LEGACY SEDAN	96-03 MY	N	OBD ONLY	ADC110-B
OUTBACK	ALL	N	OBD ONLY	ADC110-B
OUTBACK SPORT	ALL	N	OBD ONLY	ADC110-B
OUTBACK WAGON	ALL	N	OBD ONLY	ADC110-B
OUTBACK SEDAN	ALL	N	OBD ONLY	ADC110-B
TRIBECA	ALL	N	OBD ONLY	ADC110-B



# GENERAL OPERATION

# B

## INTRODUCTION

There are two types of systems fitted to Subaru vehicles that can generally be identified by the model year, however this is not always the case.

Detailed below is a guide to help you determine which system is fitted.

### - > 2000

This system can normally be identified by having a keypad in the glovebox.

These vehicles can also be fitted with a Sigma alarm that have a separate remote control.

tester cannot be used to program these remote controls. Programming of the remotes can only be performed using the AD15 Sigma alarm programmer, available from your local distributor.

### 2000 - >

This system has no keypad or separate remote control. The key is now integrated with the alarm/central locking remote control in the head of the key.

The remote control is programmed as part of the key programming sequence with tester.

### Notes:

1. On vehicles around 2000, both systems might have to be tried to determine the correct system even if the system physically represents the system described above.
2. When programming keys with tester the alarm must be disarmed.
3. Only **Genuine** Subaru transponders must be used when programming keys.

## FUNCTIONS AVAILABLE

ECU IDENTIFICATION

PROGRAM KEYS

# GENERAL OPERATION

# B

## General Subaru Immobiliser info.

### Immobiliser operation

With the vehicle stopped and the ignition off, there is a red LED on the dashboard which flashes as an anti theft deterrent with a 0.2 second on time and a 2 second off time. This indicates the vehicle is in an immobilised state. If you insert the ignition key and start the engine, the LED will remain off, indicating no faults are found.

If an attempt is made to start the engine with an incorrect non programmed key, the engine will start but stop after 2 seconds and the check engine light will flash- engine cannot be subsequently restarted. If the read only memory plugs (on early vehicles) are connected, the engine control unit will show code 53- using the correct transponder will allow the vehicle to be started and the engine warning light will remain on (because code 53 is stored) until the read memory plugs are disconnected.

The ignition key utilises a transponder chip which has no battery inside, when the key is turned on an engine request signal is sent from the engine ECU to the immobiliser ECU. The immobiliser control unit energises the antenna and amplifier situated around the ignition key barrel. The antenna sends a frequency signal of 125 KHz to the transponder chip which replies with an ID code. This code is then sent to the immobiliser ECU which sends it back to the engine ECU and a conformation signal, if this signal code is the same as is stored within the engine ECU then the engine function is enabled. All this process takes less than 100 milliseconds. When the ignition is switched off, the rolling code will be updated to a random value and the engine ECU will send this new code via it's communication line to the immobiliser ECU. In this way, the engine control unit is ready to receive the correct code next time the Immobiliser sends it.

If a new Engine or Immobiliser control unit is fitted or if the keys are replaced, the system must be initialised using the tester and appropriate software. Up to four keys may be programmed using the tester and code 53 is "incorrect transponder code detected"

### Specifications

Rolling code. Input of 10 incorrect codes will cause the control unit to shut down for 10 seconds. A combination scan of all available codes will take approx 432 hours

Antenna uses inductive energy transmission (passive transponder)

Maximum code pick up distance from key approx 3cm

Response time less than 100ms

System current draw 15ma (shut down state)

30ma during code transmission

Power supply 6 - 16v d.c.

Engine control unit EGI situated lower steering column

Antenna frequency 125 KHz

Immobiliser control unit Siemens SWK4690 situated lower steering column or passenger floor.

# SPECIAL FUNCTION

# C

## POST 2000 MODELS

### NOTE:

1. THE ALARM SYSTEM MUST BE DISSARMED PRIOR TO PROGRAMMING
2. ONLY GENUINE SUBARU TRANSPONDERS MUST BE USED WHEN PROGRAMMING KEYS.

### VEHICLE SELECTION MENU

SUBARU

PRESS ENTER KEY

At the VEHICLE SELECTION menu select the required vehicle and press the **ENTER** key.

- > 2000  
2000 - >

Select the vehicle model year and press the **ENTER** key.

Note: On vehicles around 2000, both systems might have to be tried to determine the correct system.

TURN IGNITION ON

PRESS ENTER KEY

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

PLEASE WAIT  
TRYING TO COMMUNICATE

The tester will now attempt to communicate with the ECU.

SUBARU  
IMMOBILISER

PRESS ENTER KEY

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

### DIAGNOSTIC MENU

ECU IDENTIFICATION  
SPECIAL FUNCTIONS

Press the **ENTER** key.

Select SPECIAL FUNCTIONS and press the **ENTER** key.

### DIAGNOSTIC MENU

PROGRAM KEYS

Select PROGRAM KEYS and press the **ENTER** key.

### PROGRAM KEYS

PLEASE INSERT  
FIRST KEY

PRESS ENTER KEY

Please insert first key to be programmed and press the **ENTER** key.

# SPECIAL FUNCTION

# C

## PROGRAM KEYS

PLEASE WAIT  
SECURITY CODE 1 SENT

## PROGRAM KEYS

PLEASE WAIT  
SECURITY CODE 2 SENT

## PROGRAM KEYS

PLEASE WAIT  
ERASING KEYS

## PROGRAM KEYS

PLEASE WAIT  
STORING KEY 1

## PROGRAM KEYS

WOULD YOU LIKE TO  
PROGRAM KEY NO 2

OK=ENTER CLEAR=BACK

## PROGRAM KEYS

REGISTERING KEY/S

## PROGRAM KEYS

KEY REGISTRATION  
COMPLETE

PRESS ENTER KEY

**Note:** If no more keys are required to be programmed press **BACK**. If more keys are to be programmed press **ENTER** and follow the on screen instructions.

A Maximum of 4 keys can be programmed

Procedure complete

# SPECIAL FUNCTION

# C

## PRE-2000 SYSTEM

### VEHICLE SELECTION MENU

SUBARU

**PRESS ENTER KEY**

At the VEHICLE SELECTION menu select the required vehicle and press the **ENTER** key.

- > 2000  
2000 - >

Select the vehicle model year and press the **ENTER** key.

TURN IGNITION ON

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

**PRESS ENTER KEY**

The tester will now attempt to communicate with the ECU.

**PLEASE WAIT  
TRYING TO COMMUNICATE**

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

SUBARU  
IMMOBILISER

Press the **ENTER** key.

**PRESS ENTER KEY**

### DIAGNOSTIC MENU

ECU IDENTIFICATION  
SPECIAL FUNCTIONS

Select SPECIAL FUNCTIONS and press the **ENTER** key.

### DIAGNOSTIC MENU

PROGRAM KEYS

Select PROGRAM KEYS and press the **ENTER** key.

**PROGRAM KEYS**

KEY PROGRAMMING

PLEASE WAIT

**PRESS ENTER KEY**



# SPECIAL FUNCTION

# C

KEY PROGRAMMING  
IGNITION OFF  
WAIT 2 SECONDS  
IGNITION ON  
PRESS ENTER TO CONTINUE

**NOTE : ONLY 1 KEY CAN BE PROGRAMMED INTO THIS SYSTEM.**

**NOTE : IF MORE KEYS ARE REQUIRED CLONE THE PROGRAMMED KEY USING THE AD75.**

COMPLETE  
PRESS ENTER TO CONTINUE



## GENERAL

1. Vehicles with no communication must have the engine cranked for a few seconds before initialising communication.
2. If the tester only powers up with the ignition on, this is not a fuse fault and is normal for some vehicles.
3. Aerial is not coded.

# REMOTE CONTROL PROGRAMMING



Remotes can be programmed manually as follows:

1. In drivers kick panel there is 2 white service connectors for Central Locking, these have black and black/blue wires in them and are male/female connectors with blade terminals.
2. Connect the C/L service connectors together and with the car unlocked and the door shut, press the unlock button followed by the lock button on the remote- the doors should lock and unlock to confirm remote registration process.
3. Repeat operation for all remotes then remove service connector to close the system.

Note- all keys must be present at the time of coding to prevent them being deleted



