

Entering Function Menu

Engine System

Read Trouble Codes

Clear Trouble Codes

Read Data Stream

Component Ativation

Version No.

Transmission System

Read Fault Memory

Clear Fault Memory

Version No.

Antilock Brake System

Read Fault Memory

Clear Fault Memory

Read Data Stream

Version No.

Air Bag

Read Fault Memory

Clear Fault Memory

Version No.

Air Conditioning/Heater

Read Fault Memory

Clear Fault Memory

Read Data Stream

Vervion No.

Instrument Panel

Read Fault Memory

Clear Fault Memory

Service Reset

Version No.

Manual Service Reset

Elec. Immobilise System

[Read Fault Memory](#)

[Clear Fault Mmemory](#)

[Read Data Stream](#)

[Version No.](#)

Central Body Electronic

[Read Fault Memory](#)

[Clear Fault Memory](#)

[Read Data Stream](#)

[Component Activation](#)

[Version No.](#)

Navigation Control

[Read Fault Memory](#)

[Clear Fault Memory](#)

[Read Data Stream](#)

[Component Activation](#)

[Version No.](#)

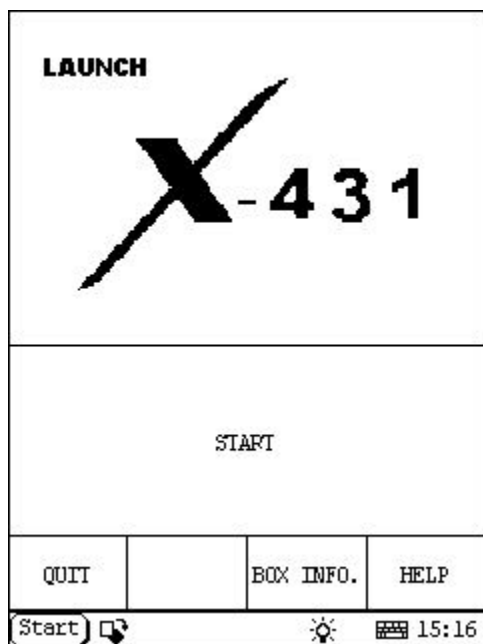
Park Distance Control

[Read Fault Memory](#)

[Clear Fault Memory](#)

[Read Data Stream](#)

[Version No.](#)



Entering Function Menu [home](#)

After connection, press [POWER] key to start X-431. After starting the main unit, press [HOTKEY] (or click [Start] button on the main menu, and select [GAG] [GD Scan] on the pop-up menu), the screen will display the home page of vehicle diagnosis as shown in figure to left.

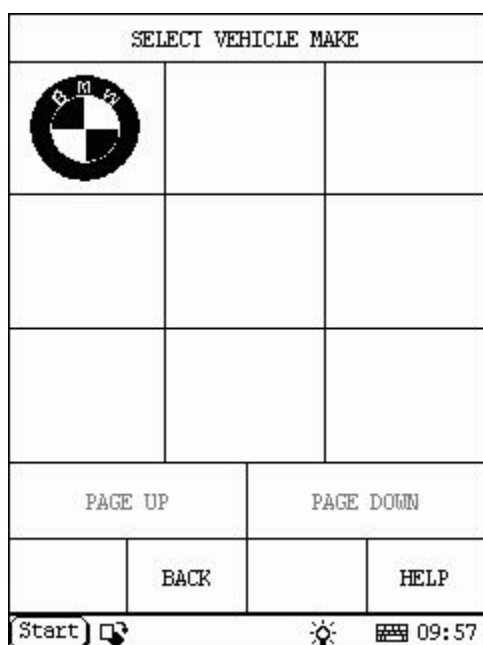
Button descriptions:

[START]: to perform next operation

[QUIT]: to exit the diagnostic program

[BOX INFO.]: to display SMARTBOX version No.

[HELP]: to display help information



Click [START] button, the screen will display the vehicle make menu as shown in figure to left.

Button descriptions:




[BACK]: to return to the upper interface.

[PAGE UP]: to display the previous page, it is inactive if the current page is the first page.

[PAGE DOWN]: to display the next page, it is inactive if the current page is the last page.

[HELP]: to display the help information.




SELECT DIAG. SOFTWARE VER.			
BMW V13.07 All Systems			

PAGE UP	PAGE DOWN	OK	
	BACK		HELP
Start    09:57			

Click the icon of BMW on the vehicle make menu, the screen will display as shown in figure to left.

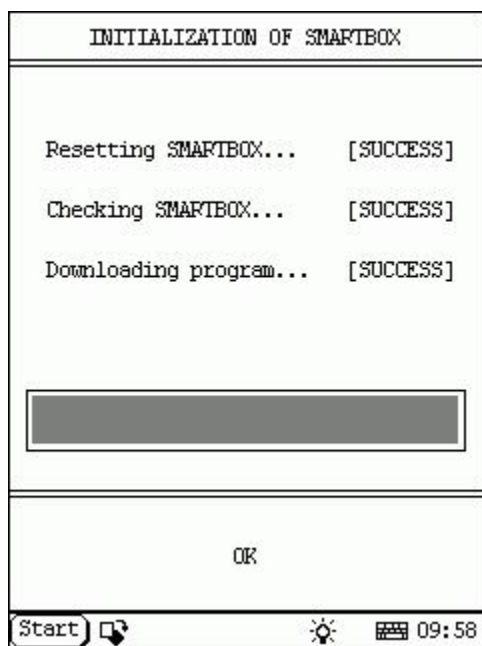
SELECT DIAG. SOFTWARE VER.			
BMW V13.07 All Systems			

The software can diagnose the elec. control sys. of BMW up to 2003, include ENGINE/CHASSIS/BODY and other parts. The operation is the same as the original scan tool.			

PAGE UP	PAGE DOWN	OK	
	BACK		HELP
Start    09:57			

Click [BMW V13.07 All Systems], the screen will display as shown in figure to left.

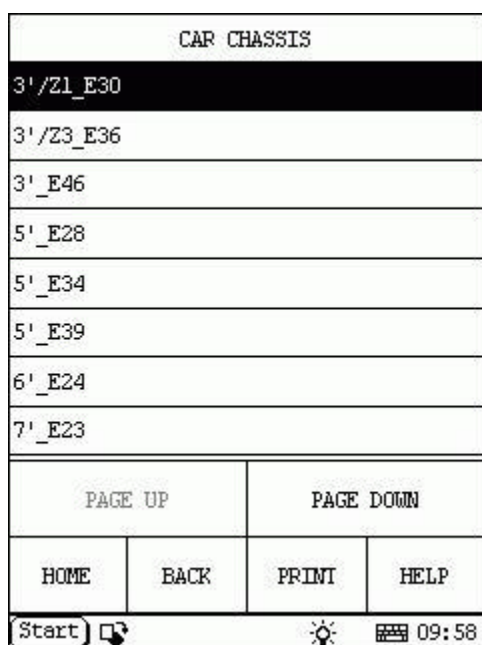
The software can diagnose the electronic control systems of BMW up to 2003, including ENGINE/CHASSIS/BODY and other parts.



Click **[OK]** button, X-431 begins reset and check the SMARTBOX, and download the diagnostic program from the CF cartridge. After download, the screen will display as shown in figure to left.

Button descriptions:

[OK]: to go on test.



Click **[OK]** button, the screen will display the menu of chassis type. See figure to left.

Button descriptions:




[BACK]: to return to the upper interface.

[PAGE UP]: to display the previous page, it is inactive if the current page is the first page.




[PAGE DOWN]: to display the next page, it is inactive if the current page is the last page.

[HOME]: to return to the home page of vehicle diagnosis.




[HELP]: to display the help information.

CAR CHASSIS			
7' _E32			
7' _E38			
7' _E65			
8' _E31			
X5_E53			
Z8_E52			
MINI_R50			
Diagnostic Socket Location			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    10:00 </div> </div>			




Click [**PAGE DOWN**] button, the screen will display as shown in figure to left.

CAR CHASSIS			
3' /Z1_E30			
3' /Z3_E36			
3' _E46			
5' _E28			
5' _E34			
5' _E39			
6' _E24			
7' _E23			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:58 </div> </div>			




Click [**PAGE UP**] button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			




Click [3 /Z3_E36] button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
GR (Navigation control)			
PDC (Park Distance Control)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			




Click **[PAGE UP]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
DME M3.3 M60 BOCSE H/W No. 02b1200413 BOCSE S/W No. 1267358715 BMW H/W No. 1725745 BMW S/W No. 123 PRODUCT No. 456	
OK	PRINT
Start    10:55	




Engine System

[home](#)

Click [DME (Engine)] button. The screen will display the information on ECU version of engine system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    10:55			




Click [OK] button, the screen will display as shown in figure to left.

TROUBLE CODE			
66	Signal, burglar-alarm system DMA		
69	Knock sensor 2		
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    10:55			

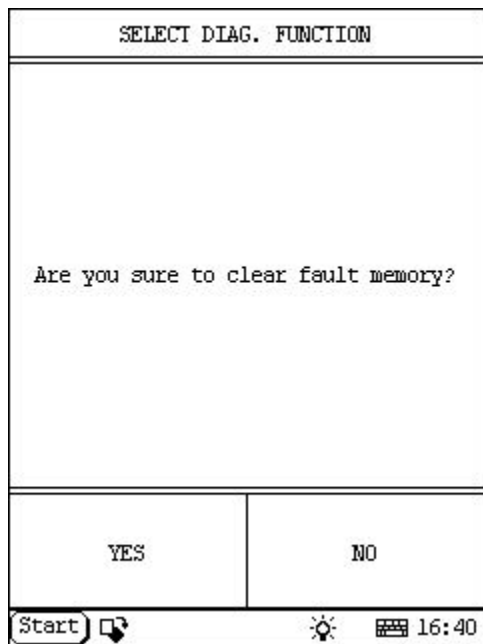
Read Trouble Codes

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    10:55			

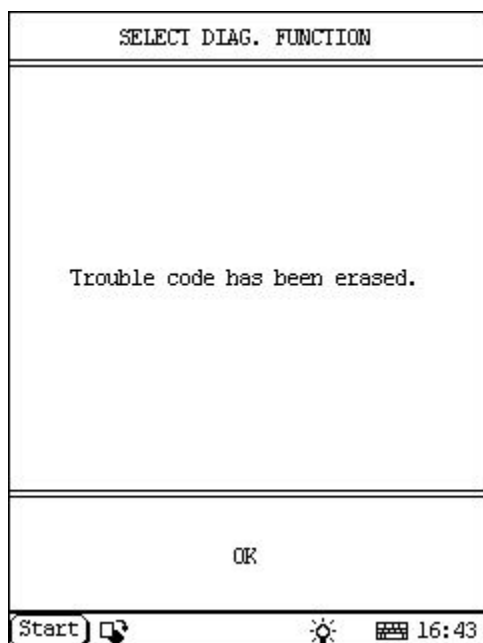
Click **[BACK]** button, the screen will display as shown in figure to left.






Clear Trouble Codes

[home](#)




Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    10:55			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Engine Speed			
Ignition timing			
Coolant temp.			
Intake air temp.			
Injection signal cylinder 1			
1st O2 sensor			
2nd O2 sensor			
O2 integrator 1			
PAGE UP		PAGE DOWN	
		OK	
HOME	BACK	PRINT	HELP
Start    10:55			

Read Data Stream

[home](#)

Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
02 integrator 2			
Idle air adaptation			
Multiplicative mixture adaptation cylinder bank 1			
Multiplicative mixture Adaptation cylinder bank 2			
Additive mixture adaptation cyl.bank 1			
Additive mixture adaptation cyl.bank 2			
Idle CO adjustment			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:55	

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Air mass sensor			
Air mass sensor			
Load signal			
Overrun cutoff			
Power supply			
Knock control			
Start			
Tank ventilation			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:55	

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Load status			
Driving lights			
DMA signal			
Switch ASC			
Electric throttle			
EML Switch			
MSR Switch			
Can bus EGS receipting			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:55	




Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
TPS switch			
TPS sensor			
Ignition timing Intervention			
Driving position			
AC compressor			
AC switch			
AC compressor cutoff			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:55	

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

Click [**PAGE UP**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Air mass sensor			
Air mass sensor			
Load signal			
Overrun cutoff			
Power supply			
Knock control			
Start			
Tank ventilation			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
OK		OK	

Start    10:55

Click [**PAGE UP**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
02 integrator 2			
Idle air adaptation			
Multiplicative mixture adaptation cylinder bank 1			
Multiplicative mixture Adaptation cylinder bank 2			
Additive mixture adaptation cyl.bank 1			
Additive mixture adaptation cyl.bank 2			
Idle CO adjustment			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
OK		OK	
<div> <div>Start</div> <div> </div> <div> </div> <div> 10:55 </div> </div>			

Click [**PAGE UP**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Engine Speed			
Ignition timing			
Coolant temp.			
Intake air temp.			
Injection signal cylinder 1			
1st O2 sensor			
2nd O2 sensor			
O2 integrator 1			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
OK		OK	
<div> <div>Start</div> <div> </div> <div> </div> <div> 10:55 </div> </div>			

Click [**PAGE UP**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Engine Speed			
Ignition timing			
Coolant temp.			
Intake air temp.			
Injection signal cylinder 1			
1st O2 sensor			
2nd O2 sensor			
O2 integrator 1			
PAGE UP		PAGE DOWN	
HOME		OK	
BACK		PRINT	
HELP			
<div>Start</div> <div> 10:47 </div>			

Click the items you want to see, e.g. **Engine speed**, **Ignition timing**, **Intake air temp.** and **Injection signal cylinder 1**. The screen will display as shown in figure to left.

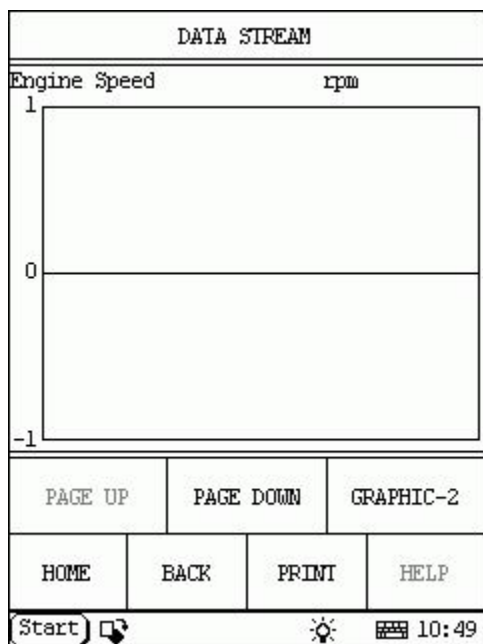
DATA STREAM	
Engine Speed	0 rpm
Ignition timing	108 °
Intake air temp.	193.0 °C
Injection signal cylinder 1	131.1 ms
PAGE UP	
PAGE DOWN	
GRAPHIC-1	
HOME	
BACK	
PRINT	
HELP	
<div>Start</div> <div> 10:48 </div>	

Click **[OK]**. The screen will display the real-time values of the selected items, as shown in figure to left.

Button descriptions:

[GRAPHIC-1]: to display the waveform of an active data.

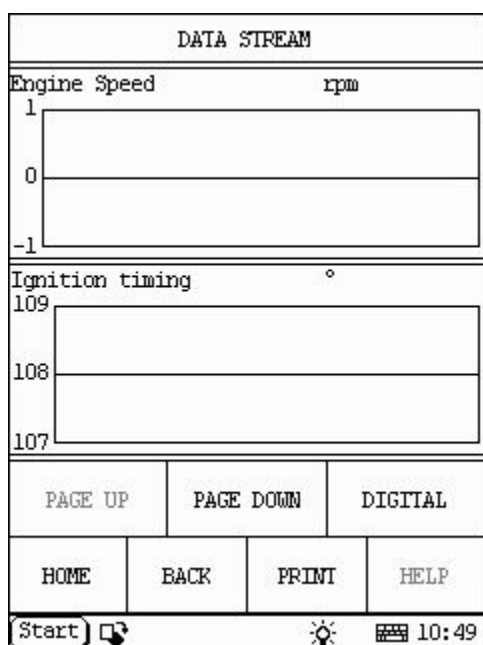
[PRINT]: to print out the test result.



Click **GRAPHIC-1**. The screen will display the waveform for one data stream item. See figure to left.

Button descriptions:

[GRAPHIC-2]: to display two data stream waveforms.






Click **GRAPHIC-2** to display waveforms of two data stream items. It is convenient to make comparison between two correlative data stream items. See figure to left.

DATA STREAM			
Engine Speed		0 rpm	
Ignition timing		108 °	
Intake air temp.		193.0 ℃	
Injection signal cylinder 1		131.1 ms	
PAGE UP		PAGE DOWN	
		GRAPHIC-1	
HOME	BACK	PRINT	HELP
Start			
		10:48	




Click **[DIGITAL]** in the interface, the screen will display the real-time value of the data stream again, as shown in figure to left.

SELECT DATA ITEM			
Engine Speed			
Ignition timing			
Coolant temp.			
Intake air temp.			
Injection signal cylinder 1			
1st O2 sensor			
2nd O2 sensor			
O2 integrator 1			
PAGE UP		PAGE DOWN	
		OK	
HOME	BACK	PRINT	HELP
Start			
		10:55	

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    10:55			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Injector , cyl.1			
Injector , cyl.2			
Injector , cyl.3			
Injector , cyl.4			
Injector , cyl.5			
Injector , cyl.6			
Injector , cyl.7			
Injector , cyl.8			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    10:55			




Component Ativation

[home](#)

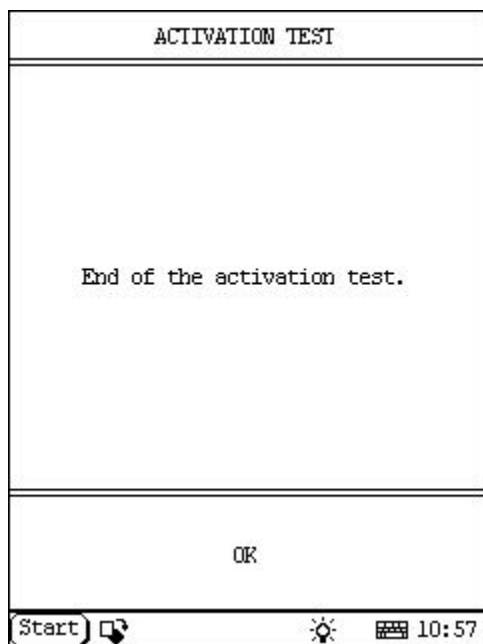
Click **[Component activation]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Idle actuator			
Tank venting valve			
02S heater relay			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start 			 10:56

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Injector , cyl.1			
Injector , cyl.2			
Injector , cyl.3			
Injector , cyl.4			
Injector , cyl.5			
Injector , cyl.6			
Injector , cyl.7			
Injector , cyl.8			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
(Start) 			 10:55

Click [**PAGE UP**] button, the screen will display as shown in figure to left.



Click one item in the list to perform the test.

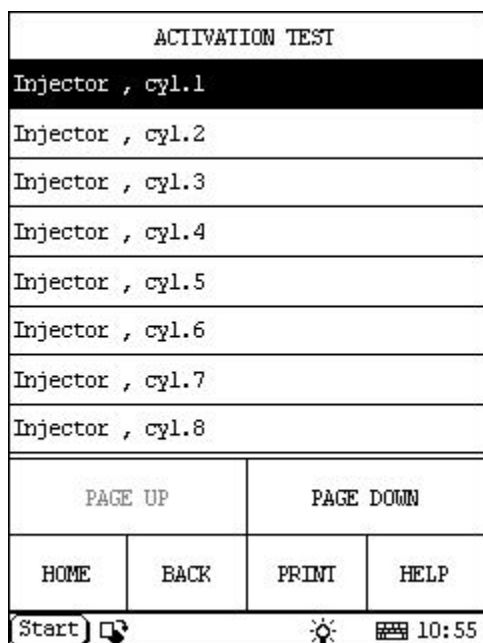
Now we take **[Injector, cyl1.1]** as example to explain the test steps:

Click **[Injector, cyl1.1]**. X-431 starts testing Injector, cyl1.1.

When the test is successful, the screen will display the message as shown in figure to left.

Button description:

[OK]: to return to the upper level interface.



Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div> 10:55 </div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
DME M3.3 M60 BOCSH H/W No. 0261200413 BOCSH S/W No. 1267358715 BMW H/W No. 1725745 BMW S/W No. 123 PRODUCT No. 456	
OK	PRINT
<div> <div>Start</div> <div> 10:55 </div> </div>	

Version No.

[home](#)

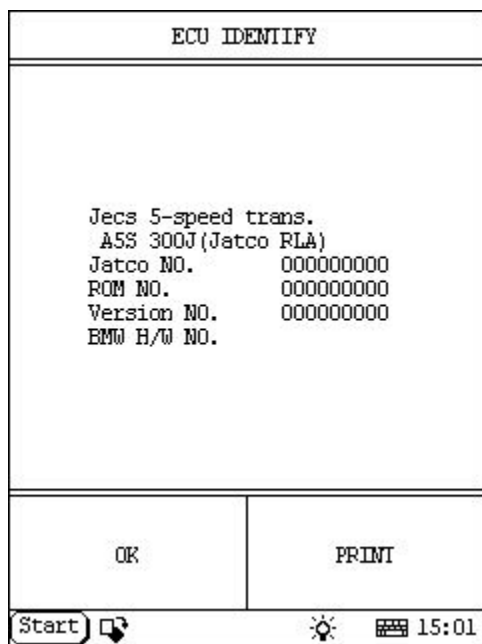
Click **[Identification]** in the function menu. The screen will display the information on ECU version of engine system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>10:55</div> </div>			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>15:33</div> </div>			

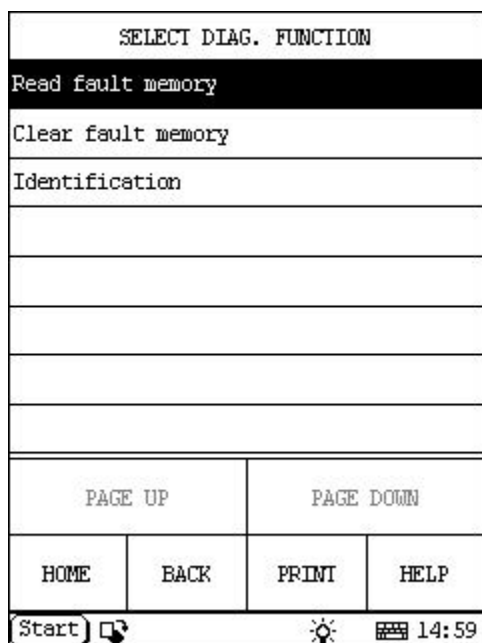
Click **[BACK]** button, the screen will display as shown in figure to left.



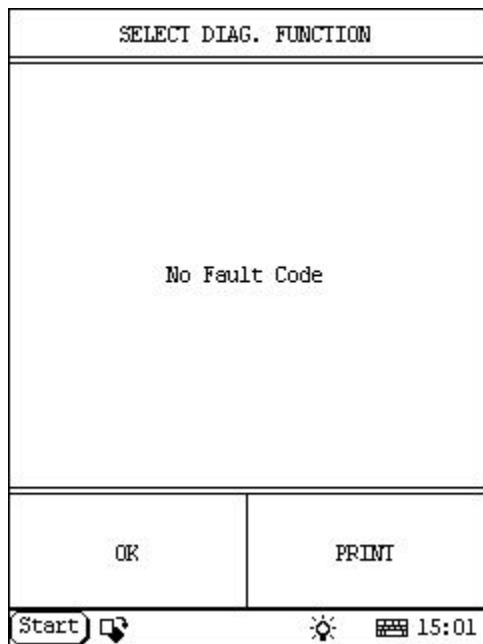
Transmission System

[home](#)

Click **[EGS (Transmission)]** button. The screen will display the information on ECU version of transmission system, as shown in figure to left.



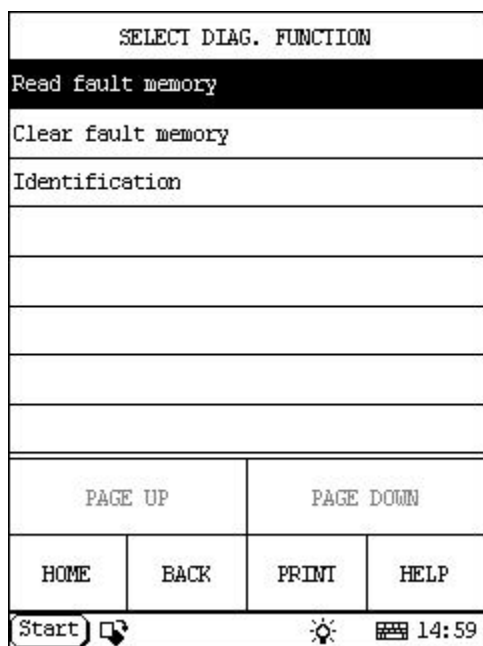
Click **[OK]** button, the screen will display as shown in figure to left.



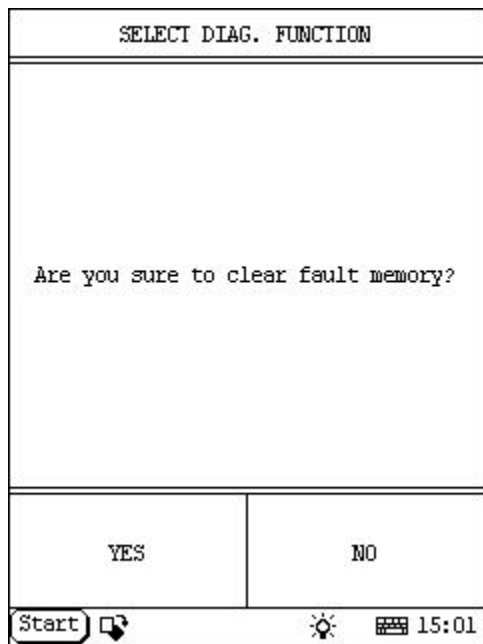
Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.



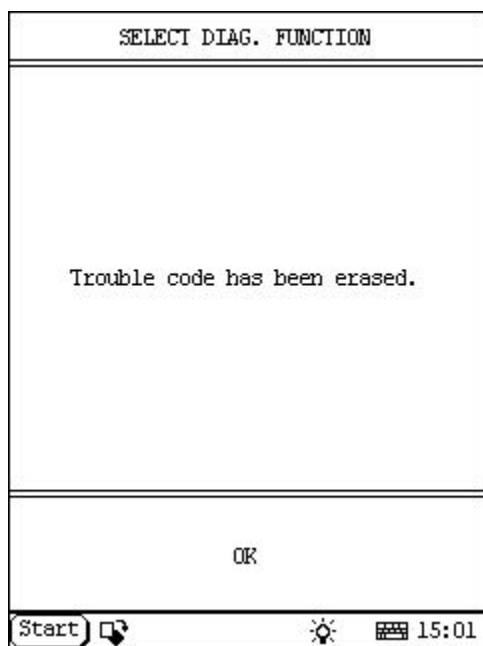
Click **[OK]** button, the screen will display as shown in figure to left.



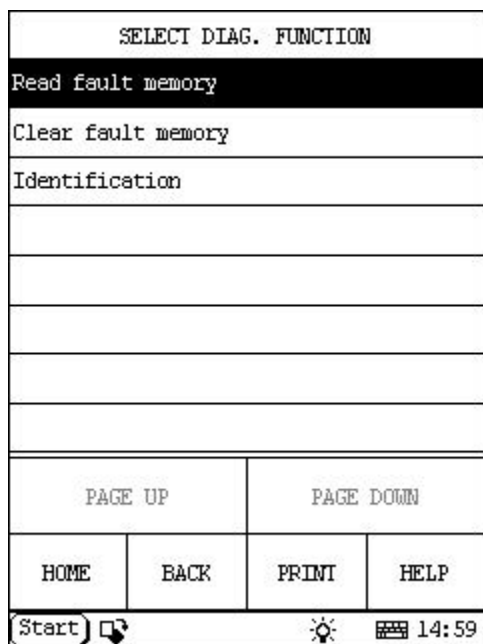
Clear Fault Memory

[home](#)

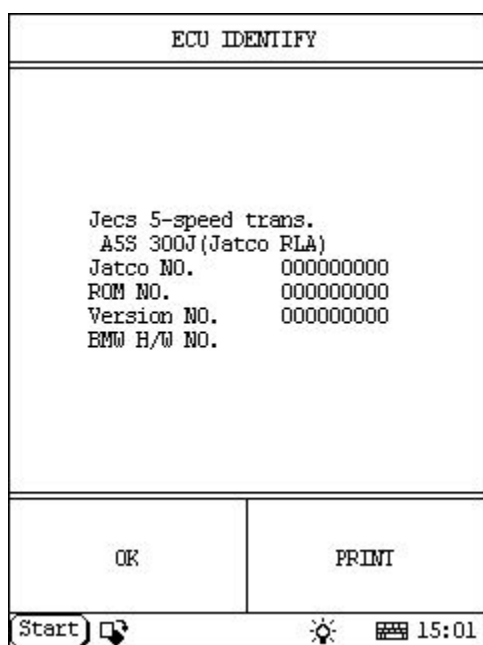
Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.






Click **[OK]** button, the screen will display as shown in figure to left.






Version No.

[home](#)




Click **[Identification]** in the function menu. The screen will display the information on ECU version of transmission system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    14:59			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			




Click **[BACK]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
DSC 1 Hardware No. 2822000620 Software No.	
OK	PRINT
Start    14:59	

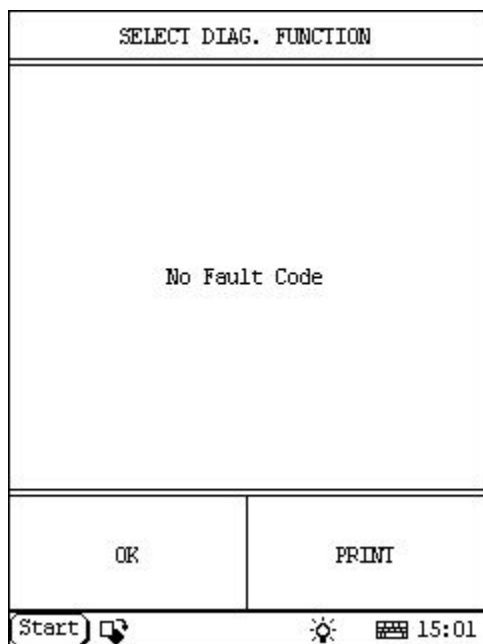
Antilock Brake System

[home](#)

Click **[ABS (Antilock brake)]** button. The screen will display the information on ECU version of antilock brake system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    14:59			

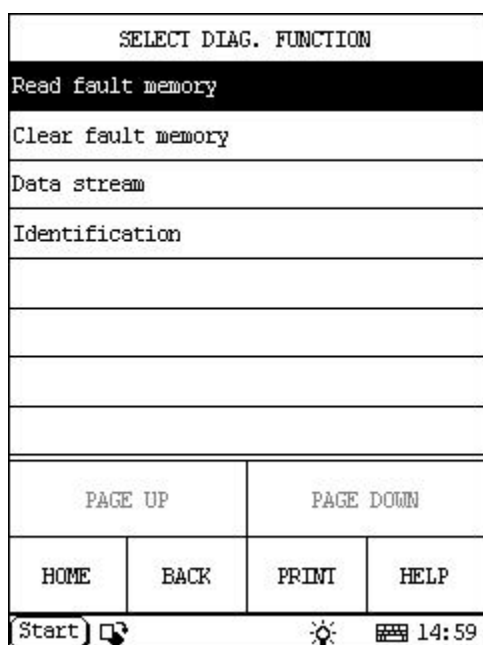
Click **[OK]** button, the screen will display as shown in figure to left.



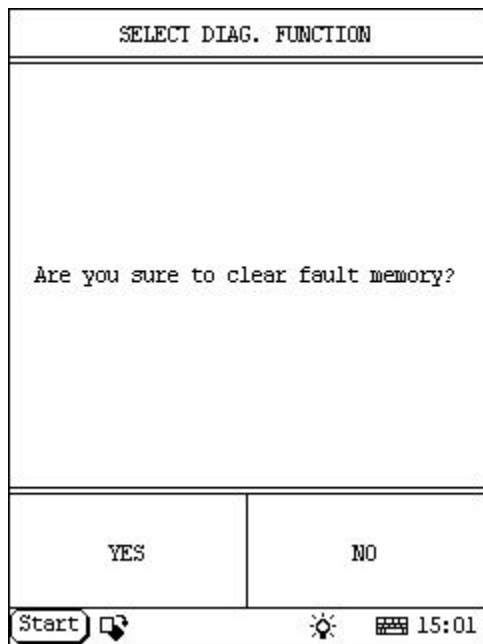
Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.



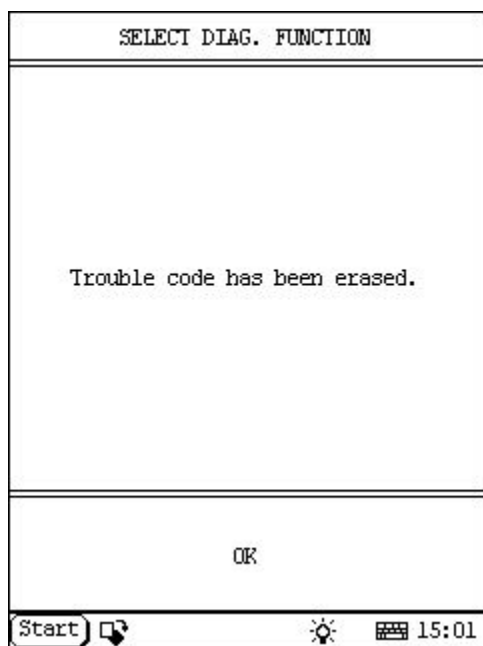
Click **[OK]** button, the screen will display as shown in figure to left.






Clear Fault Memory

[home](#)




Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    14:59			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
ASC/DSC multifunction display			
Brake-light switch			
Terminal 61:			
Engine speed			
Steering-wheel angle			
Wheel speed, front-left			
Wheel speed, front-right			
PAGE UP		PAGE DOWN	
		OK	
HOME	BACK	PRINT	HELP
Start    14:59			

Read Data Stream

[home](#)

Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
ASC/DSC multifunction display			
Brake-light switch			
Terminal 61:			
Engine speed			
Steering-wheel angle			
Wheel speed, front-left			
Wheel speed, front-right			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
<div>Start</div> <div> 14:59 </div>			

Click the items you want to see, e.g. **Engine speed**], **Steering-wheel angle**], **Wheel speed, front-left**] and **Wheel speed, front-right**]. The screen will display as shown in figure to left.

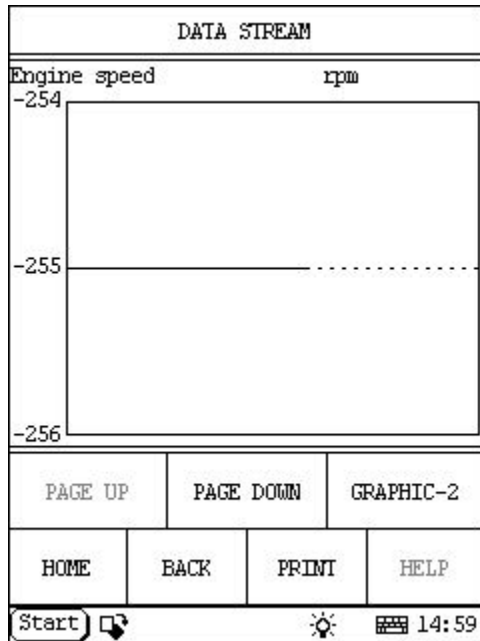
DATA STREAM			
Engine speed		-255 rpm	
Steering-wheel angle		0 °	
Wheel speed, front-left		0 km/h	
Wheel speed, front-right		0 km/h	
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		GRAPHIC-1	
<div>Start</div> <div> 14:59 </div>			

Click **[OK]**. The screen will display the real-time values of the selected items, as shown in figure to left.

Button descriptions:

[GRAPHIC-1]: to display the waveform of an active data.

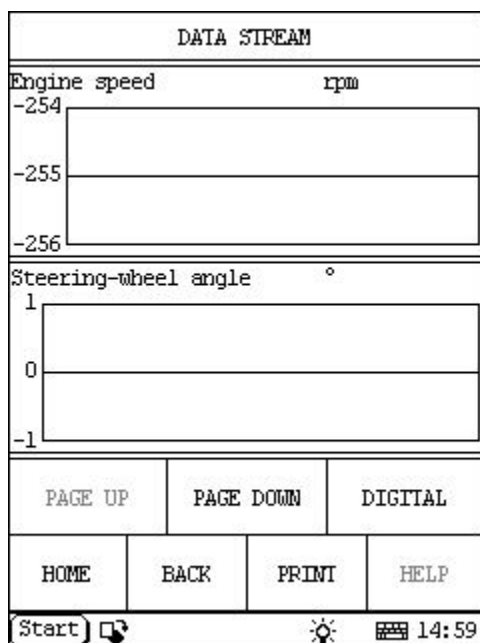
[PRINT]: to print out the test result.






Click **GRAPHIC-1**. The screen will display the waveform for one data stream item. See figure to left.

Button descriptions:

[GRAPHIC-2]: to display two data stream waveforms.






Click **GRAPHIC-2** to display waveforms of two data stream items. It is convenient to make comparison between two correlative data stream items. See figure to left.

DATA STREAM			
Engine speed		-255 rpm	
Steering-wheel angle		0 °	
Wheel speed, front-left		0 km/h	
Wheel speed, front-right		0 km/h	
PAGE UP		PAGE DOWN	
		GRAPHIC-1	
HOME	BACK	PRINT	HELP
Start			 14:59




Click **[DIGITAL]** in the interface, the screen will display the real-time value of the data stream again, as shown in figure to left.

SELECT DATA ITEM			
ASC/DSC multifunction display			
Brake-light switch			
Terminal 61:			
Engine speed			
Steering-wheel angle			
Wheel speed, front-left			
Wheel speed, front-right			
PAGE UP		PAGE DOWN	
		OK	
HOME	BACK	PRINT	HELP
Start			
		14:59	

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    14:59			

Click **[BACK]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
DSC 1	
Hardware No.	2822000620
Software No.	
OK	PRINT
Start    14:59	

Version No.

[home](#)

Click **[Identification]** in the function menu. The screen will display the information on ECU version of antilock brake system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>14:59</div> </div>			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>15:33</div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
Airbag [MRS] system	
Part Number	8352763
Hardware Number	01
Software Number	46
Diagnosis index	04
Coding index	01
Bus index	00
Data	50/92
<div>OK</div> <div>PRINT</div>	
<div>Start</div> <div>15:33</div>	

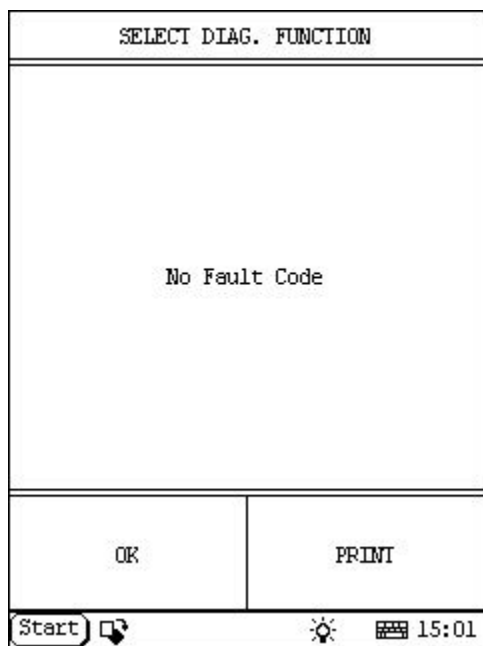
Air Bag

[home](#)

Click **SRS (Air bag)** button. The screen will display the information on ECU version of air bag system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div>Start</div> <div>15:33</div>			

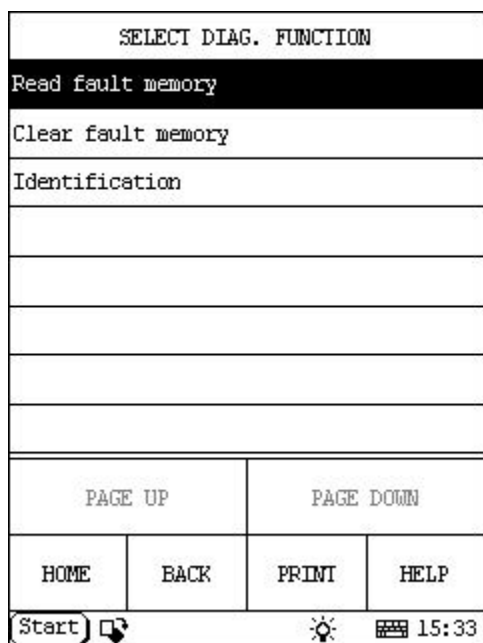
Click **[OK]** button, the screen will display as shown in figure to left.



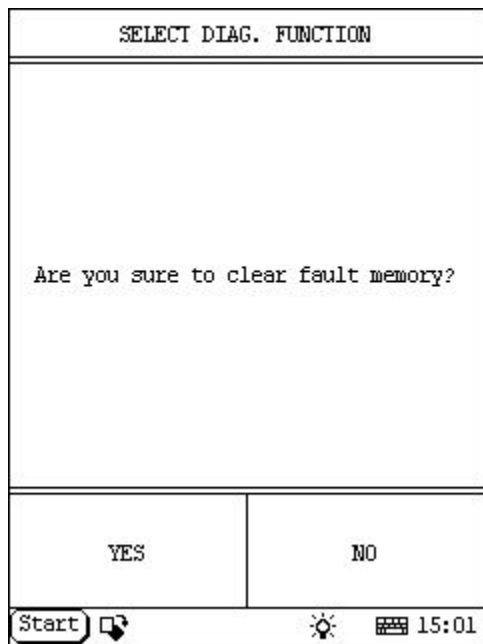
Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.



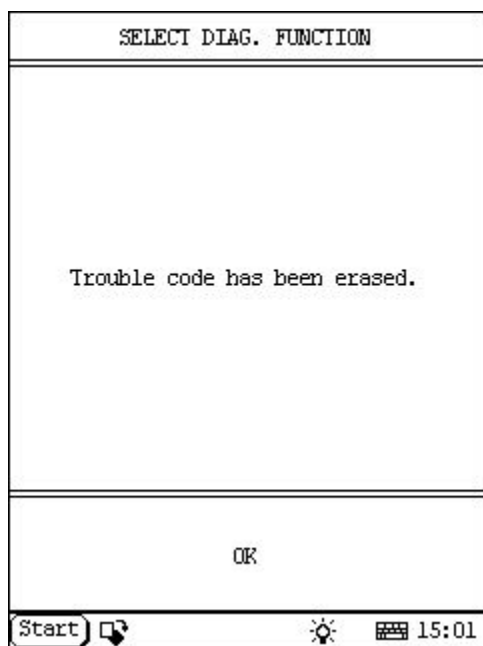
Click **[OK]** button, the screen will display as shown in figure to left.



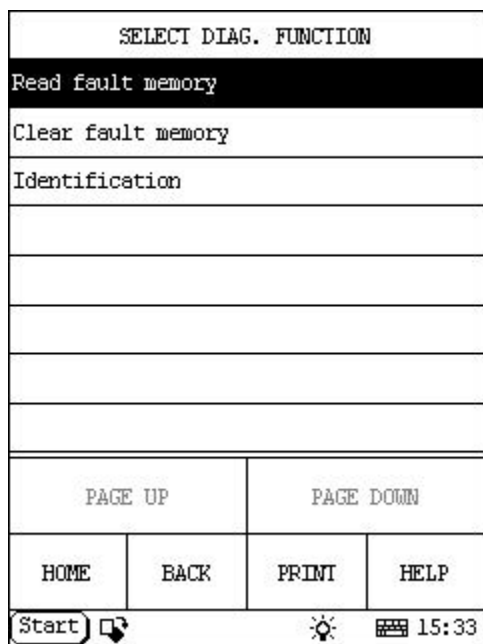
Clear Fault Memory

[home](#)

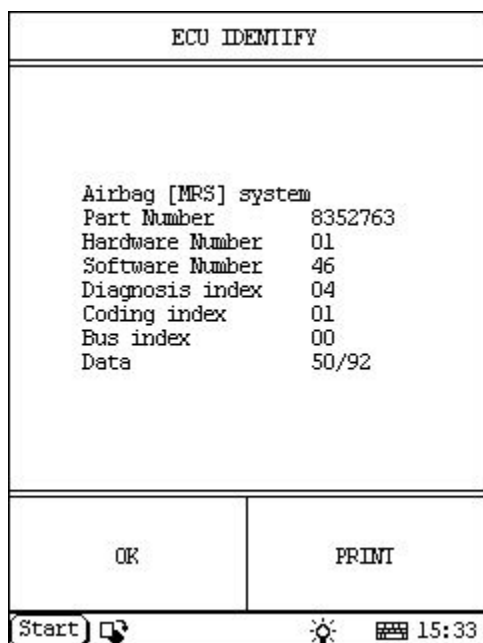
Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.






Click **[OK]** button, the screen will display as shown in figure to left.






Version No.

[home](#)




Click **[Identification]** in the function menu. The screen will display the information on ECU version of air bag system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[OK]** button, the screen will display as shown in figure to left.




SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[BACK]** button, the screen will display as shown in figure to left.




ECU IDENTIFY	
IHKA E38	
Part Number	3353432
Hardware Number	31
Software Number	36
Diagnosis index	01
Coding index	01
Bus index	37
Data	30/31
<div>OKPRINT</div>	
Start    10:18	

Air Conditioning/Heater [home](#)

Click [IHKA/IHKB (AC/Heater)] button. The screen will display the information on ECU version of air conditioning/heater system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:57			




Click [OK] button, the screen will display as shown in figure to left.

TROUBLE CODE			
6 Stratification flap motor, left			
ID 5 2 0 59 undefined.			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    10:35			

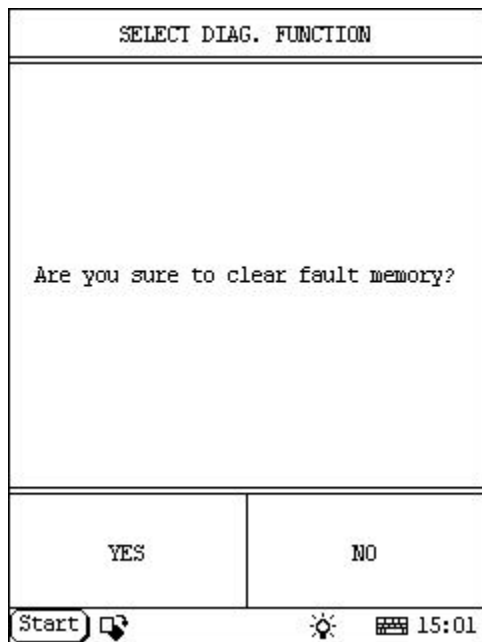
Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:57			

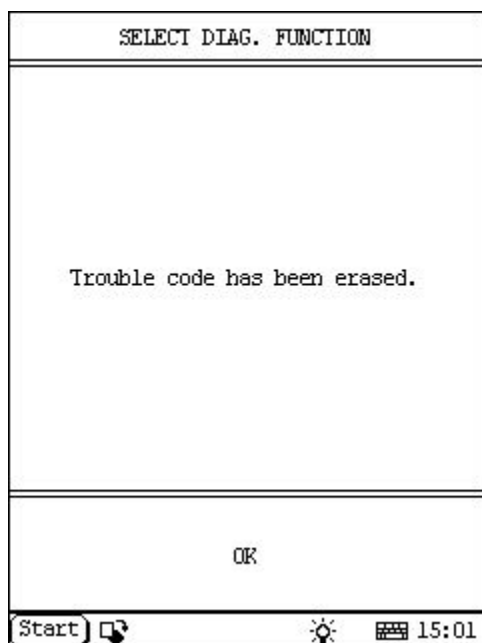
Click **[BACK]** button, the screen will display as shown in figure to left.






Clear Fault Memory

[home](#)




Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
(Start)    09:57			

Click **[OK]** button, the screen will display as shown in figure to left.




SELECT DATA ITEM			
Outside temperature sensor (via k-bus)			
Engine temperature (via k-bus)			
Inner temp. sensor			
Evaporate sensor			
Ventilation temperature sensor Left			
Ventilation temperature sensor Right			
Heat exchanger sensor Left			
Heat exchanger sensor Right			
PAGE UP		PAGE DOWN	
OK			
HOME	BACK	PRINT	HELP
(Start)    10:14			

Read Data Stream




[home](#)

Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Stratification potentiometer Front			
Stratification potentiometer Rear			
Clamp 30			
Phototransistor			
Blower control volt.			
Sensor blower			
AUC sensor			
Rear compartment switch			
PAGE UP		PAGE DOWN	
HOME		OK	
BACK		PRINT	
HOME		HELP	

(Start)    10:14

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
outside temperature			
Inner temp. sensor			
Temperature control Left			
Temperature control Right			
Corrected set valve Left			
Corrected set valve Right			
Guided control Left			
Guided control Right			
PAGE UP		PAGE DOWN	
OK			
HOME	BACK	PRINT	HELP
[Start] 			 10:15

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Engine speed			
Heat exchanger sensor Left			
Heat exchanger sensor Right			
Heat exchanger rated temp. Left			
Heat exchanger rated temp. Right			
Heat exchanger set value Left			
Heat exchanger set value Right			
water valve Left			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:15	

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
water valve Right			
Clamp 58g (Via K-bus)			
Phototransistor			
Temperature set Left			
Temperature set Right			
Blower volume position Left			
Blower volume position Right			
AC switch			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:15	




Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
AUC			
Air circulation			
Rear window defogger			
Rest heating			
Defrost			
Above			
Center , left			
Below , left			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:15	




Click [**PAGE DOWN**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Auto , left			
Center , right			
Below , right			
Auto , right			
Fresh air flap			
Defrost flap			
Air circulation flap			
Rear Compartment flap			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:16	




Click [**PAGE DOWN**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Stratification flap Left			
Stratification flap Right			
Ventilation flap Left			
Ventilation flap Right			
Footwell flap Left			
Footwell flap Right			
Defogger relay			
Rear defogger relay			
PAGE UP		PAGE DOWN	
HOME		OK	
BACK		PRINT	
HELP			
Start			
			
		 10:16	




Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
DME - AC signal			
DME - KO signal			
AC compressor			
Auxiliary fan pos.1			
Water valve , Left			
Water valve , right			
Auxiliary water pump			
Park heating Wake up line			
PAGE UP		PAGE DOWN	
HOME		OK	
BACK		PRINT	
HELP			
Start			
			
		 10:16	

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Park heating Locking valve			
Safety Car			
Engine speed			
Vehicle speed (Via K-bus)			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start    10:16			

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start    09:57			




Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Outside temperature sensor (via k-bus)			
Engine temperature (via k-bus)			
Inner temp. sensor			
Evaporate sensor			
Ventilation temperature sensor Left			
Ventilation temperature sensor Right			
Heat exchanger sensor Left			
Heat exchanger sensor Right			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:14	

Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Outside temperature sensor (via k-bus)			
Engine temperature (via k-bus)			
Inner temp. sensor			
Evaporate sensor			
Ventilation temperature sensor Left			
Ventilation temperature sensor Right			
Heat exchanger sensor Left			
Heat exchanger sensor Right			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		10:35	

Click the items you want to see, e.g. **[Outside temperature sensor (via K-bus)]**, **[Engine temperature (via K-bus)]**, **[Inner temp. sensor]** and **[Evaporate sensor]**. The screen will display as shown in figure to left.

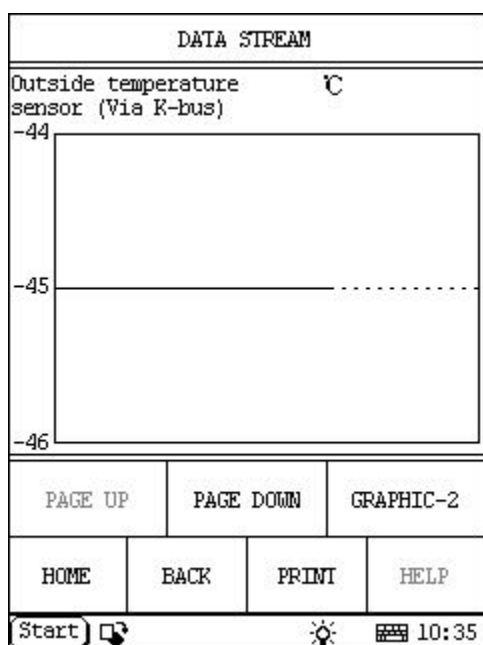
DATA STREAM			
Outside temperature sensor (Via K-bus)		-45 °C	
Engine temperature (Via K O -bus)		10.0 °C	
Inner temp. sensor		10.0 °C	
Evaporate sensor		10.0 °C	
PAGE UP		PAGE DOWN	GRAPHIC-1
HOME	BACK	PRINT	HELP
Start			 10:35

Click **[OK]**. The screen will display the real-time values of the selected items, as shown in figure to left.

Button descriptions:

[GRAPHIC-1]: to display the waveform of an active data.

[PRINT]: to print out the test result.



Click **GRAPHIC-1**. The screen will display the waveform for one data stream item. See figure to left.

Button descriptions:




[GRAPHIC-2]: to display tow data steam waveforms.

DATA STREAM			
Outside temperature sensor (Via K-bus)		℃	
-44			
-45			
-46			
Engine temperature (Via K-bus)		℃	
1			
0			
-1			
PAGE UP		PAGE DOWN	
DIGITAL			
HOME	BACK	PRINT	HELP
Start		10:35	

Click **GRAPHIC-2** to display waveforms of two data stream items. It is convenient to make comparison between two correlative data stream items. See figure to left.



DATA STREAM			
Outside temperature sensor (Via K-bus)		-45 ℃	
Engine temperature (Via K-bus)		0 ℃	
Inner temp. sensor		10.0 ℃	
Evaporate sensor		10.0 ℃	
PAGE UP		PAGE DOWN	
GRAPHIC-1			
HOME	BACK	PRINT	HELP
Start		10:35	

Click **[DIGITAL]** in the interface, the screen will display the real-time value of the data stream again, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
(Start) 			 09:57

Click **[BACK]** button, the screen will display as shown in figure to left.




ECU IDENTIFY	
IHKA E38	
Part Number	3353432
Hardware Number	31
Software Number	36
Diagnosis index	01
Coding index	01
Bus index	37
Data	30/31
OK	PRINT

Start   10:18




Vervion No.

[home](#)

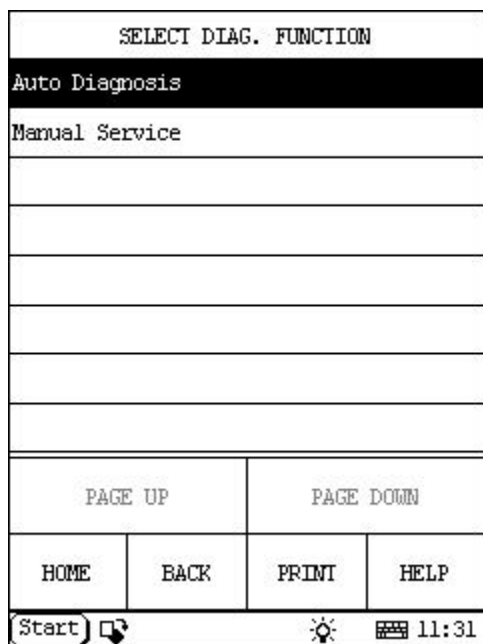
Click **Identification** in the function menu. The screen will display the information on ECU version of air conditioning/heater system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
(Start)    09:57			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
(Start)    15:33			

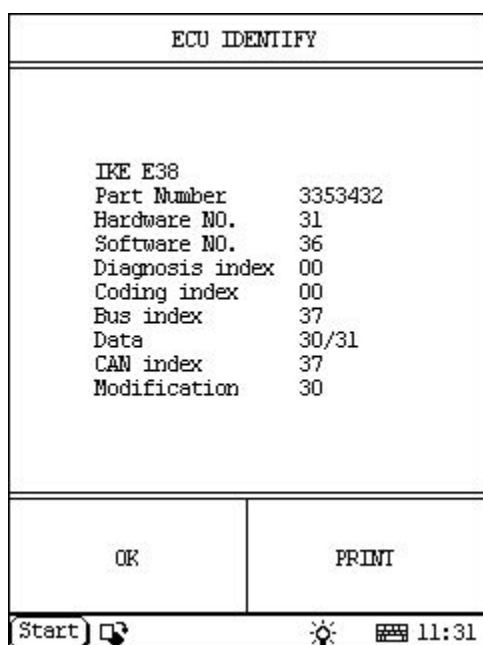
Click **[BACK]** button, the screen will display as shown in figure to left.






Instrument Panel

[home](#)




Click [IKE/IKI/KOMBI] button, the screen will display as shown in figure to left.



Click **Auto Diagnosis** button. The screen will display the information on ECU version of instrument panel system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Service Reset			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    11:31			




Click **[OK]** button, the screen will display as shown in figure to left.

TROUBLE CODE			
5 Coolant temperature sensor			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    11:31			




Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Service Reset			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    11:31			

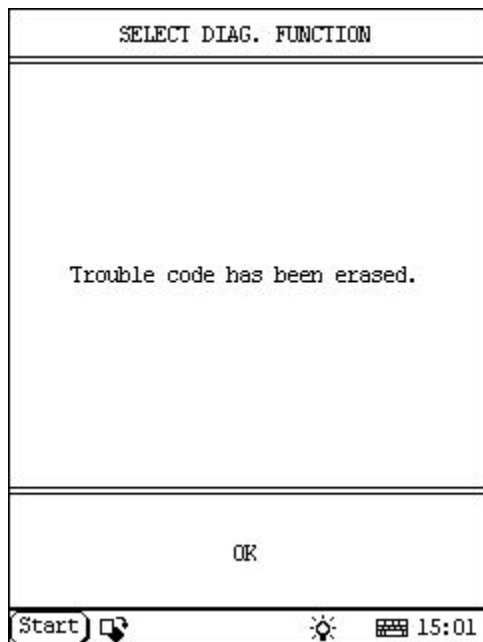
Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION	
Are you sure to clear fault memory?	
YES	NO
Start    15:01	

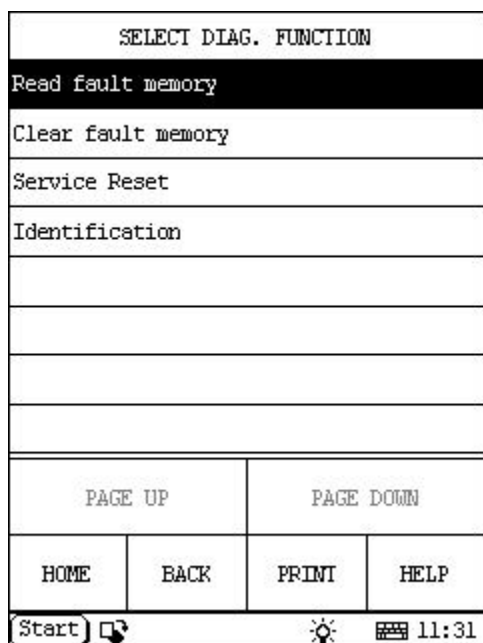
Clear Fault Memory

[home](#)

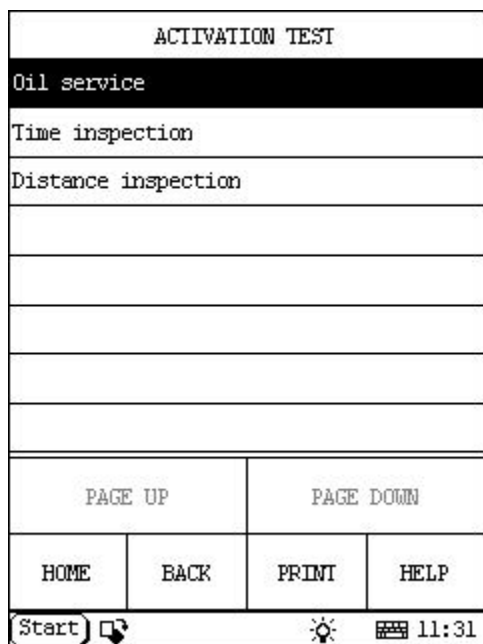
Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click [YES] button, the screen will display as shown in figure to left.



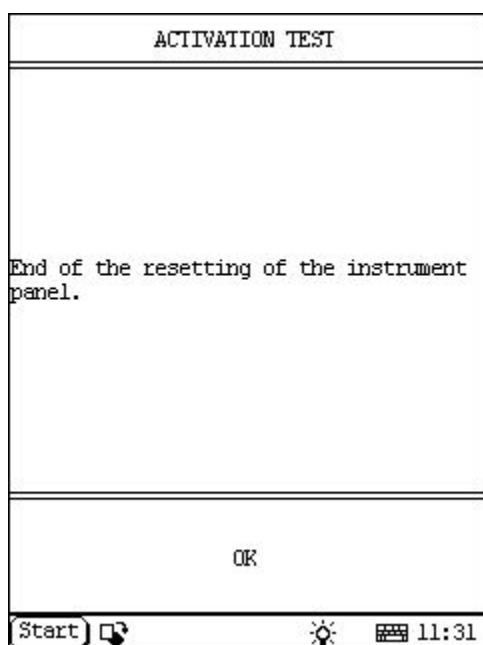
Click [OK] button, the screen will display as shown in figure to left.



Service Reset




[home](#)

Click [Service Reset] button, the screen will display as shown in figure to left.






The operation procedures for the above three items are the same. Now we take [Oil service] as an example to describe the procedure.

Click [Oil service]. X-431 starts to reset the oil service indicator. When the resetting is completed, the screen will display the message as shown in figure to left.

ACTIVATION TEST			
Oil service			
Time inspection			
Distance inspection			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    11:31			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Service Reset			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    11:31			

Click **[BACK]** button, the screen will display as shown in figure to left.




ECU IDENTIFY	
IKE E38	
Part Number	3353432
Hardware NO.	31
Software NO.	36
Diagnosis index	00
Coding index	00
Bus index	37
Data	30/31
CAN index	37
Modification	30
<div>OK</div> <div>PRINT</div>	
<div>Start</div> <div> 11:31 </div>	

Version No.[home](#)




Click **[Identification]** in the function menu. The screen will display the information on ECU version of instrument panel system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Service Reset			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div>Start</div> <div> 11:31 </div>			

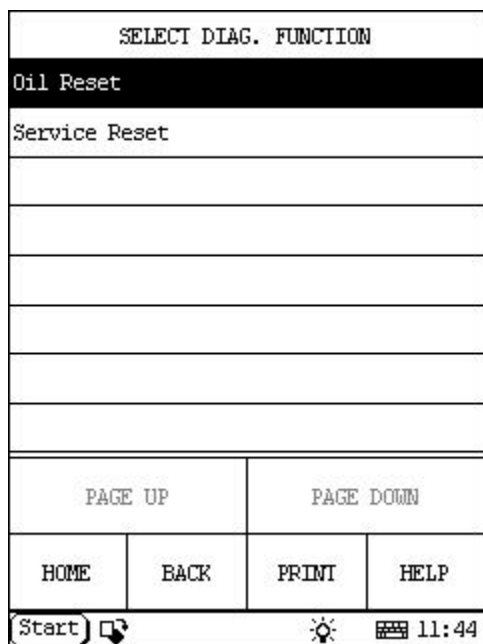
Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Auto Diagnosis			
Manual Service			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    11:31			

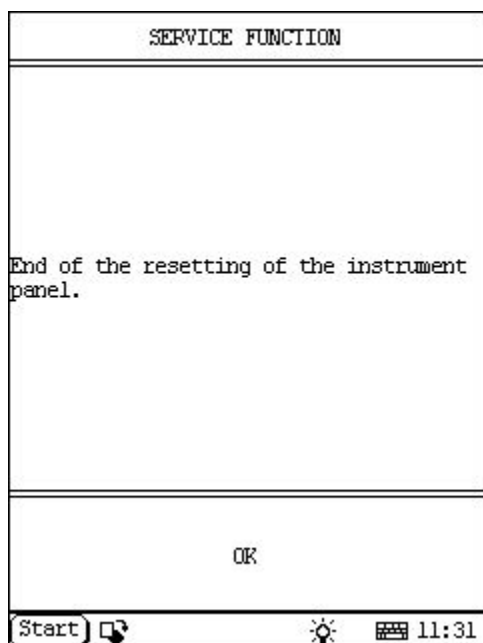
Click **[IKE/IKI/KOMBI]** button, the screen will display as shown in figure to left.



Manual Service Reset




[home](#)

Click [Manual Service] button, the screen will display as shown in figure to left.






The operation procedures for the above two items are the same. Now we take [Oil Reset] as an example to describe the procedure.

Click [Oil Reset]. X-431 starts to reset the oil service indicator. When the resetting is completed, the screen will display the message as shown in figure to left.




SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click [OK] button, the screen will display as shown in figure to left.




ECU IDENTIFY	
Electronic car immobilisation system (EWS 3) Part number 8382452 Hardware number 02 Software number 05 Diagnosis index 81 Coding index 81 Bus index 07 Production date 11/98 Chassis Number: WBAGJ81060DL08708	
OK	PRINT
Start    15:32	

Elec. Immobilize System [home](#)

Click [EWS (Elec. immobilize system)] button. The screen will display the information on ECU version of Elec. immobilize system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:32			




Click **[OK]** button, the screen will display as shown in figure to left.

TROUBLE CODE			
30	Key no.4,faulty identification		
31	Key no.4,incorrect password		
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:32			




Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:32			

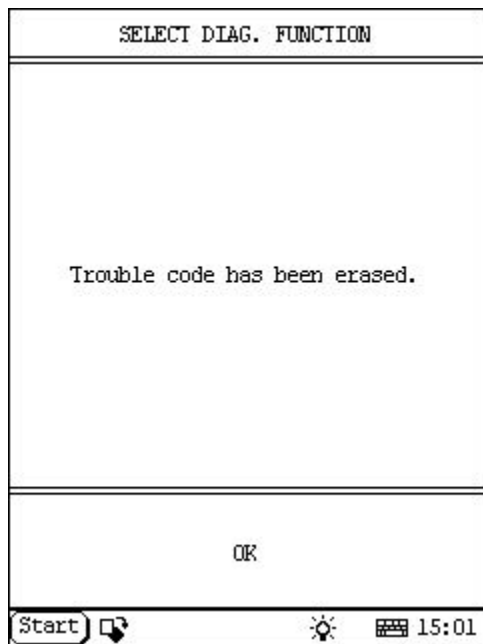
Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION	
Are you sure to clear fault memory?	
YES	NO
Start    15:01	

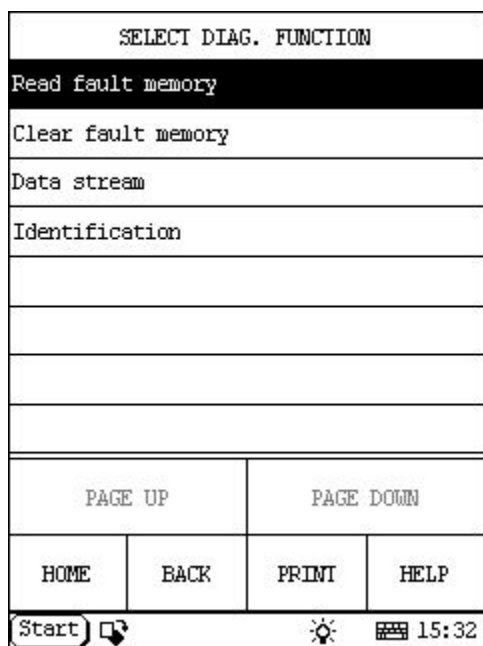
Clear Fault Mmemory

[home](#)

Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.



Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Gearbox type			
Run-on time			
Version EMS			
Starter			
DME wire			
Terminal P (wire)			
Terminal P (K bus)			
'C. locking double locked' signal from general module (via K bus)			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		15:33	

Read Data Stream




[home](#)

Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
BC code signal (via K bus)			
Engine speed			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		15:33	




Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Gearbox type			
Run-on time			
Version EWS			
Starter			
DME wire			
Terminal R (wire)			
Terminal R (K bus)			
'C. locking double locked' signal from general module (via K bus)			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
OK		OK	




Start    15:33

Click **[PAGE UP]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Gearbox type			
Run-on time			
Version EWS			
Starter			
DME wire			
Terminal R (wire)			
Terminal R (K bus)			
'C. locking double locked' signal from general module (via K bus)			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
OK		OK	

Start    15:32

Click the items you want to see, e.g. **Gearbox type**, **[Run-on time]**, **[Version EWS]** and **[Starter]**. The screen will display as shown in figure to left.

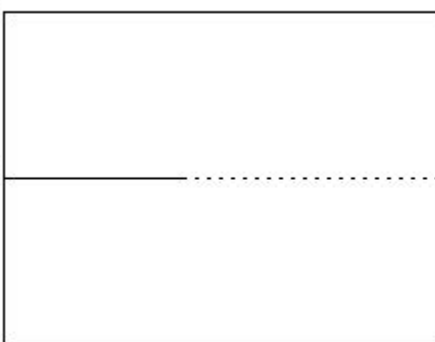



DATA STREAM			
Gearbox type		AUTOMATIC	
Run-on time		55 S	
Version EMS		3.3	
Starter		RELEASED	
PAGE UP		PAGE DOWN	GRAPHIC-1
HOME	BACK	PRINT	HELP
Start			 15:32

Click **[OK]**. The screen will display the real-time values of the selected items, as shown in figure to left.

Button descriptions:

[GRAPHIC-1]: to display the waveform of an active data.

[PRINT]: to print out the test result.

DATA STREAM			
Run-on time		S	
56			
55			
54			
PAGE UP		PAGE DOWN	GRAPHIC-2
HOME	BACK	PRINT	HELP
Start 			 15:32

Click **GRAPHIC-1**. The screen will display the waveform for one data stream item. See figure to left.

Button descriptions:

[GRAPHIC-2]: to display tow data steam waveforms.

DATA STREAM	
Run-on time	\$
56	
55	
54	
Version EWS	
3.4	
3.3	
3.2	
<div> <div>PAGE UP</div> <div>PAGE DOWN</div> <div>DIGITAL</div> </div>	
<div> <div>HOME</div> <div>BACK</div> <div>PRINT</div> <div>HELP</div> </div>	
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>15:32</div> </div>	

Click **GRAPHIC-2** to display waveforms of two data stream items. It is convenient to make comparison between two correlative data stream items. See figure to left.

DATA STREAM	
Gearbox type	AUTOMATIC
Run-on time	55 \$
Version EWS	3.3
Starter	RELEASED
<div> <div>PAGE UP</div> <div>PAGE DOWN</div> <div>GRAPHIC-1</div> </div>	
<div> <div>HOME</div> <div>BACK</div> <div>PRINT</div> <div>HELP</div> </div>	
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>15:32</div> </div>	

Click **[DIGITAL]** in the interface, the screen will display the real-time value of the data stream again, as shown in figure to left.

SELECT DATA ITEM			
Gearbox type			
Run-on time			
Version EMS			
Starter			
DME wire			
Terminal P (wire)			
Terminal P (K bus)			
'C. locking double locked' signal from general module (via K bus)			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		15:33	

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		15:32	

Click **[BACK]** button, the screen will display as shown in figure to left.




ECU IDENTIFY	
Electronic car immobilisation system (EWS 3)	
Part number	8382452
Hardware number	02
Software number	05
Diagnosis index	81
Coding index	81
Bus index	07
Production date	11/98
Chassis Number: WBAGJ81060DL08708	
OK	PRINT
<div> <div>Start</div> <div> </div> <div> </div> <div> </div> <div>15:32</div> </div>	

Version No.[home](#)




Click **[Identification]** in the function menu. The screen will display the information on ECU version of Elec. immobilize system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div> </div> <div> </div> <div> </div> <div>15:32</div> </div>			

Click **[OK]** button, the screen will display as shown in figure to left.




SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[BACK]** button, the screen will display as shown in figure to left.




ECU IDENTIFY	
ZKE general module III Part Number 8376692 Hardware NO. 16 Software NO. 16 Diagnosis index 21 Coding index 04 Bus index 07 Data 21/97 CAN index 6C Modification 01	
OK	PRINT
Start    16:00	

Central Body Electronic [home](#)

Click **[ZKE (Central body electronic)]** button. The screen will display the information on ECU version of Central body electronic system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:00			




Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION	
No Fault Code	
OK	PRINT
Start    15:01	




Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:00			

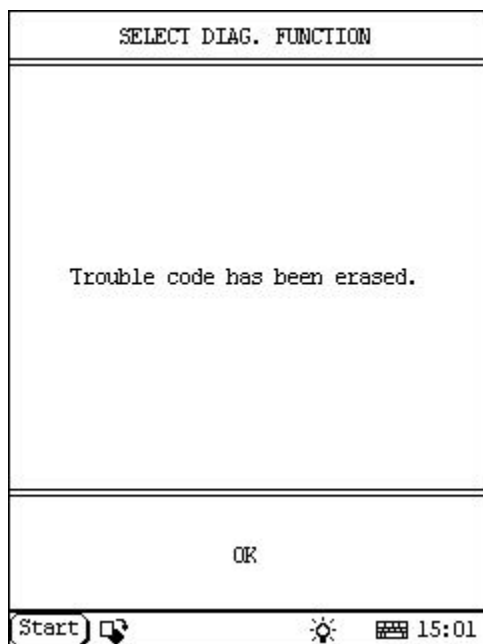
Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION	
Are you sure to clear fault memory?	
YES	NO
Start    15:01	

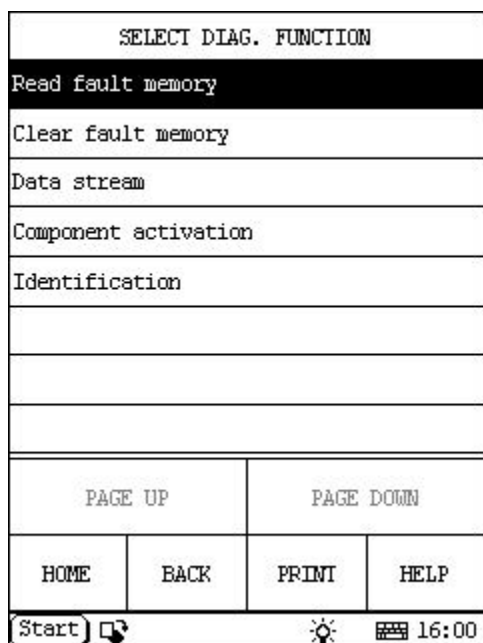
Clear Fault Memory

[home](#)




Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.






Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:00			




Read Data Stream

[home](#)




Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Servotronic			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:00			




Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:00 </div> </div>			




Click **[PAGE UP]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Terminal R			
Wiper switch Stalk position			
Wires from wiper switch to General Module connector A - Input Wind.Wipe1 pin 5			
Wires from wiper switch to General Module connector A - Input Wind.Wipe2 pin 4			
Wiper switch - Windscreen washing			
PAGE UP		PAGE DOWN	OK
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:01 </div> </div>			




Click **[Windscreen wash/wipe system]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:00			




Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Terminal R			
Terminal 15			
Sidelights			
Pushbutton for interior lights			
Driver's side rear door			
Passenger's side rear door			
PAGE UP		PAGE DOWN	OK
HOME	BACK	PRINT	HELP
Start    16:01			




Click **[Interior lights and load cutoff]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:00 </div> </div>			




Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Lock contact - driver's door			
Lock contact - rear lid			
Lock contact - passenger's door			
Central-locking button			
Status of the central-locking system			
Terminal R			
Locking-pawl switch Driver's door			
Locking-pawl switch Passenger's door			
PAGE UP	PAGE DOWN		OK
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:02 </div> </div>			

Click **[Central-locking system]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:00 </div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Opening button for rear lid - Button inside			
Opening button for rear lid - Lock cylinder, boot lid			
Boot-lid contact - Boot lid			
Lock striker in position			
Status of the central-locking system - Car			
Road speed			
PAGE UP		PAGE DOWN	OK
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:02 </div> </div>			




Click **[Automatic soft-closing system for boot lid]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:00</div> </div>			




Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Terminal R:			
Terminal 15:			
Terminal 30h:			
Window, driver's door			
Window, passenger's door			
Window, rear driver's side			
Window, rear passenger's side			
Safety switch			
PAGE UP		PAGE DOWN	
		OK	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:03</div> </div>			

Click **[Electric window]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Window, passenger's door			
Window, rear on driver's side			
Window, rear on passenger's side			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start    16:03			

Click [**PAGE DOWN**] button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start    16:00			




Click [**BACK**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Terminal R:			
Terminal 15:			
Terminal 30h:			
Driver's side rear door:			
Passenger's side rear door:			
Bonnet			
Boot lid			
Central-locking system:			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:04</div> </div>			




Click **Burglar alarm system (DWA)** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:00</div> </div>			




Click **BACK** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Mirror adjustment			
Horizontal			
Vertical			
Memory switch			
Switch input on door module of driver's door connector B (18-pin,x1128) - Pin 2			
Switch input on door module of driver's door connector B (18-pin,x1128) - Pin 5			
Switch input on door module of driver's door connector B (18-pin,x1128) - Pin 13			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
OK		OK	
Start    16:05			




Click **Mirror functions** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Switch input on door module of driver's door connector B (18-pin,x1128) - Pin 13			
Mirror - driver's side - Voltage, horizontal:			
Mirror - driver's side - Voltage, vertical:			
Mirror - passenger's side - Voltage, horizontal:			
Mirror - passenger's side - Voltage, vertical:			
Outside temperature:			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
OK		OK	
Start    16:05			




Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Switch position Folding in:			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start    16:05			




Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start    16:00			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Servotronic			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:00			

Click [**PAGE DOWN**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Speedo output signal at general module			
Road speed via K bus			
Current in servo valve			
PAGE UP		PAGE DOWN	OK
HOME	BACK	PRINT	HELP
Start    16:05			

Click [**Servotronic**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Speedo output signal at general module			
Road speed via K bus			
Current in servo valve			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		16:52	

Click the items you want to see, e.g. **Speedo output signal at general module**, **Road speed via K bus** and **Current in servo valve**. The screen will display as shown in figure to left.

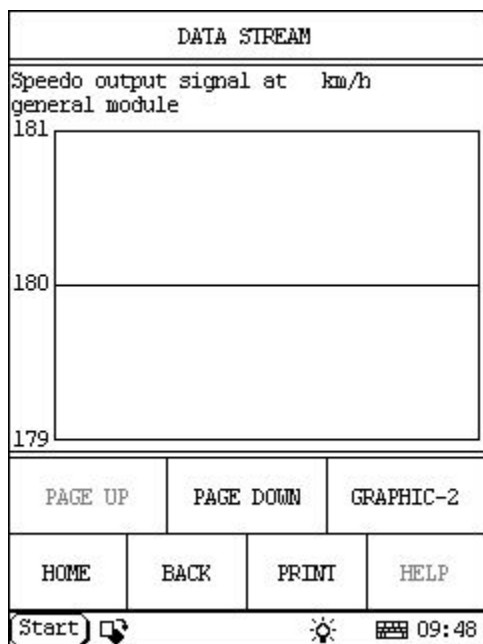
DATA STREAM			
Speedo output signal at general module		180 km/h	
Road speed via K bus		1 km/h	
Current in servo valve		24 mA	
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		09:48	

Click **[OK]**. The screen will display the real-time values of the selected items, as shown in figure to left.

Button descriptions:

[GRAPHIC-1]: to display the waveform of an active data.

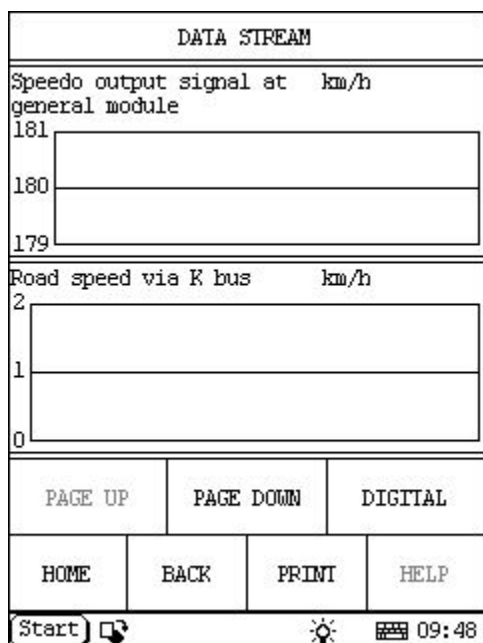
[PRINT]: to print out the test result



Click **GRAPHIC-1**. The screen will display the waveform for one data stream item. See figure to left.

Button descriptions:

[GRAPHIC-2]: to display two data stream waveforms.



Click **GRAPHIC-2** to display waveforms of two data stream items. It is convenient to make comparison between two correlative data stream items. See figure to left.

DATA STREAM			
Speedo output signal at general module		180 km/h	
Road speed via K bus		1 km/h	
Current in servo valve		24 mA	
PAGE UP		PAGE DOWN	
		GRAPHIC-1	
HOME	BACK	PRINT	HELP
Start			
		09:48	

Click **[DIGITAL]** in the interface, the screen will display the real-time value of the data stream again, as shown in figure to left.

SELECT DATA ITEM			
Speedo output signal at general module			
Road speed via K bus			
Current in servo valve			
PAGE UP		PAGE DOWN	
		OK	
HOME	BACK	PRINT	HELP
Start			
		16:05	




Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DATASTREAM GROUP			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Electric window			
Burglar alarm system (DWA)			
Mirror functions			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:00</div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:00</div> </div>			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:50 </div> </div>			




Component Activation

[home](#)




Click **Component activation**. The screen will display a list of items for activation test, as shown in figure to left.

ACTIVATION TEST			
Wiper motor at Speed 1			
Wiper motor at Speed 2			
Windscreen washer pump			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:51 </div> </div>			




Click **Windscreen wash/wipe system** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:50 </div> </div>			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Turn on interior lights for 30 seconds (Lights are dimmed when turn on)			
Activate load cutoff			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:51 </div> </div>			




Click **[Interior lights and load cutoff]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:50 </div> </div>			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Central-locking drive, driver's door			
Central-locking drive, passenger's door			
Central-locking drive, rear doors			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:52 </div> </div>			




Click **[Central-locking system]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Locking/Double-locking			
Unlocking			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start 		  09:52	




Click **Central-locking drive, driver's door]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Central-locking drive, driver's door			
Central-locking drive, passenger's door			
Central-locking drive, rear doors			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start 		  09:52	




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Locking/Double-locking			
Unlocking			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start 		  09:52	




Click [Central-locking drive, passenger's door] button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Central-locking drive, driver's door			
Central-locking drive, passenger's door			
Central-locking drive, rear doors			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start 		  09:52	




Click [BACK] button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Locking			
Double-locking			
Unlocking			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:53			




Click [**Central-locking drive, rear doors**] button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Central-locking drive, driver's door			
Central-locking drive, passenger's door			
Central-locking drive, rear doors			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:52			




Click [**BACK**] button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:50			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Mechanism for unlocking boot lid			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:53			




Click **[Automatic soft-closing system for boot lid]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:50 </div> </div>			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Status LED (30 s)			
Emergency siren (1 s)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:54 </div> </div>			




Click **[Burglar alarm system (DWA)]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:50 </div> </div>			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Mirror adjustment driver's side			
Mirror adjustment passenger's side			
Mirror heating			
Mirror, folding in/out			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:55 </div> </div>			




Click **[Mirror functions]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Horizontal right			
Horizontal left			
Vertical up			
Vertical down			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:55			




Click **[Mirror adjustment driver's side]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Mirror adjustment driver's side			
Mirror adjustment passenger's side			
Mirror heating			
Mirror, folding in/out			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:55			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Horizontal right			
Horizontal left			
Vertical up			
Vertical down			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:55			




Click **[Mirror adjustment passenger's side]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Mirror adjustment driver's side			
Mirror adjustment passenger's side			
Mirror heating			
Mirror, folding in/out			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:55			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Driver's side			
Passenger's side			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:58			




Click **[Mirror heating]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Mirror adjustment driver's side			
Mirror adjustment passenger's side			
Mirror heating			
Mirror, folding in/out			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:55			




Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Mirror, driver's side, folding in			
Mirror, driver's side, folding out			
Mirror, passenger's side, folding in			
Mirror, passenger's side, folding out			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:59			




Click **Mirror, folding in/out** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Mirror adjustment driver's side			
Mirror adjustment passenger's side			
Mirror heating			
Mirror, folding in/out			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    09:55			

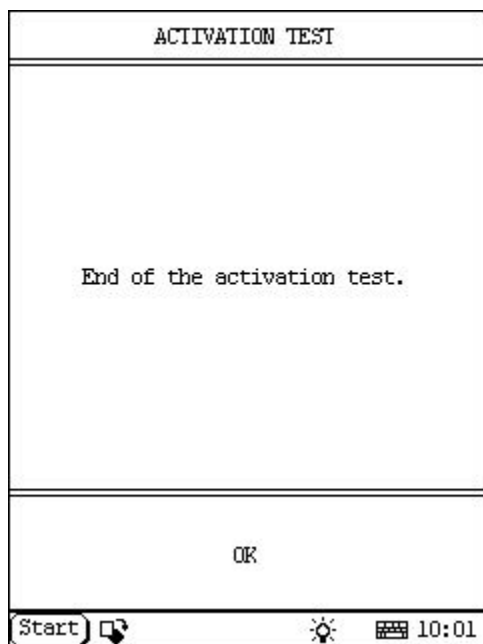
Click **BACK** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:50 </div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Window, driver's door open			
Window, driver's door, closed			
window, passenger, open			
window, passenger, closed			
window, driver-side, rear, open			
window, driver-side, rear, closed			
window, passenger-side, rear open			
window, passenger-side, rear closed			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    10:01 </div> </div>			

Click **[Power windows]** button, the screen will display as shown in figure to left.



Click one item in the list to perform the test.

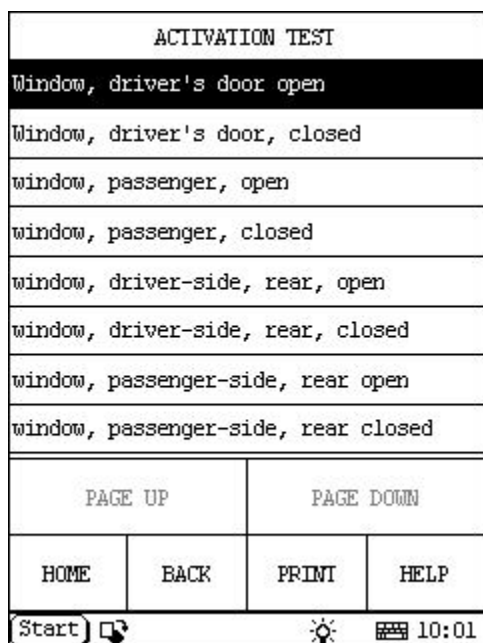
Now we take [Window, driver's door open] as example to explain the test steps:

Click [Window, driver's door open]. X-431 starts testing idle actuator.




When the test is successful, the screen will display the message as shown in figure to left.

Button description:




[OK]: to return to the upper level interface.



Click [OK] button, the screen will display as shown in figure to left.

ACTIVATION TEST			
Windscreen wash/wipe system			
Interior lights and load cutoff			
Central-locking system			
Automatic soft-closing system for boot lid			
Burglar alarm system (DWA)			
Mirror functions			
Power windows			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    09:50 </div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:00 </div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.




ECU IDENTIFY	
ZKE general module III	
Part Number	8376692
Hardware NO.	16
Software NO.	16
Diagnosis index	21
Coding index	04
Bus index	07
Data	21/97
CAN index	6C
Modification	01
<div>OK</div> <div>PRINT</div>	
<div>Start</div> <div> 16:00 </div>	

Version No.[home](#)




Click [Identification] button. The screen will display the information on ECU version of Central body electronic system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div>Start</div> <div> 16:00 </div>			

Click [OK] button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
GR (Navigation control)			
PDC (Park Distance Control)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
FGR Cruise control	
Part Number	8375497
Hardware NO.	07
Software NO.	04
Diagnosis index	03
Coding index	05
Bus index	00
Data	44/97
<div>OK</div> <div>PRINT</div>	
<div>Start</div> <div> 16:49 </div>	

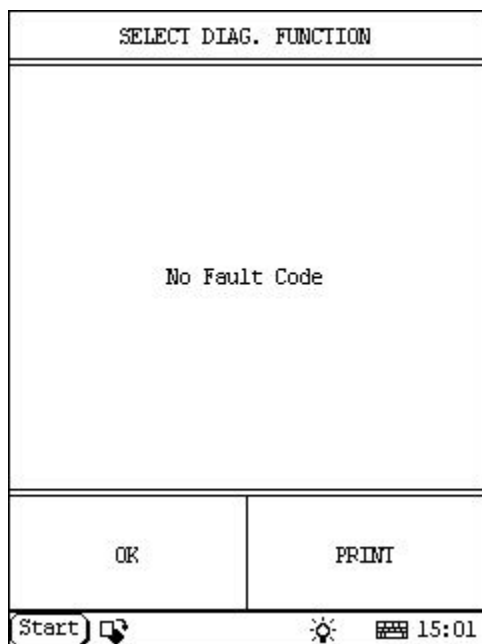
Navigation Control

[home](#)

Click [GR (Navigation control)] button. The screen will display the information on ECU version of navigation control system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div>Start</div> <div> 16:50 </div>			

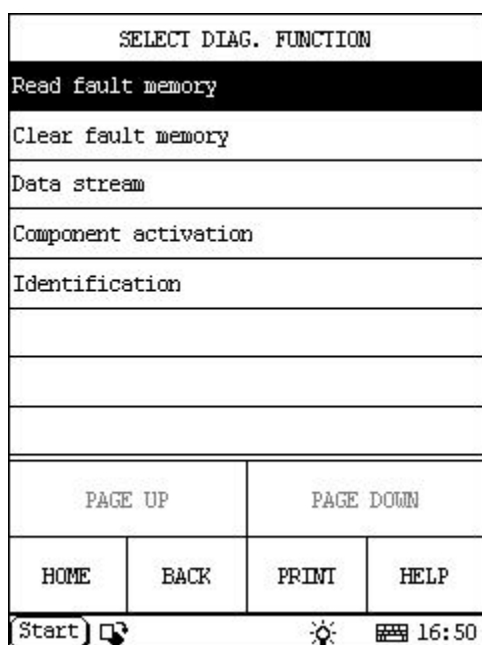
Click [OK] button. The screen displays the function menu of the navigation control system, as shown in figure to left.



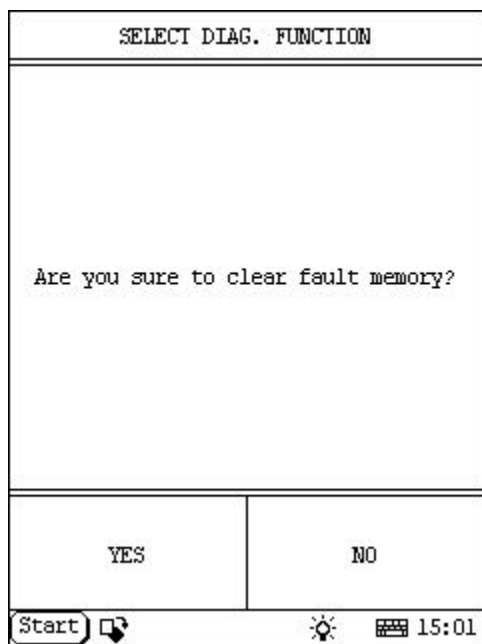
Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.



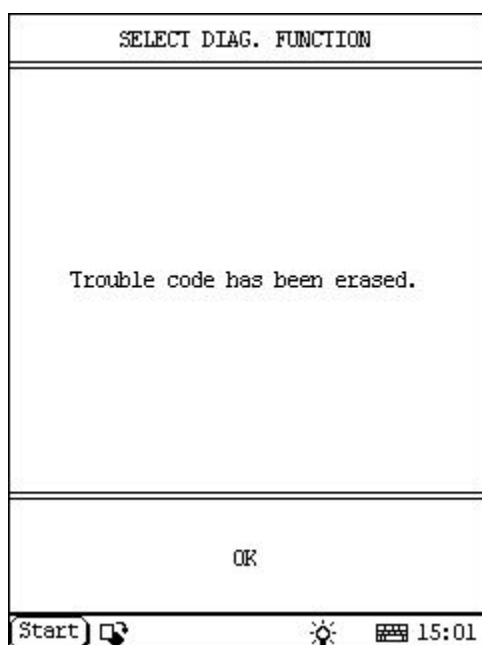
Click **[OK]** button, the screen will display as shown in figure to left.






Clear Fault Memory

[home](#)




Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:50			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Resume vehicle speed again actuator			
Setting/acceleration '+'			
Setting/acceleration '-'			
ON/OFF 'I/O' operated			
Selector-lever position, driving position			
Clutch switch			
Electric brake-light switch			
PAGE UP		PAGE DOWN	
OK			
HOME	BACK	PRINT	HELP
Start    16:51			

Read Data Stream

[home](#)

Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Clutch output, servomotor			
GR motor negative			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		16:51	

Click [**PAGE DOWN**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Resume vehicle speed again actuator			
Setting/acceleration '+'			
Setting/acceleration '-'			
ON/OFF 'I/O' operated			
Selector-lever position, driving position			
Clutch switch			
Electric brake-light switch			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		16:51	

Click [**PAGE UP**] button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Resume vehicle speed again actuator			
Setting/acceleration '+'			
Setting/acceleration '-'			
ON/OFF 'I/O' operated			
Selector-lever position, driving position			
Clutch switch			
Electric brake-light switch			
PAGE UP		PAGE DOWN	
		OK	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>17:03</div> </div>			

Click the items you want to see, e.g. [Resume vehicle speed again actuator], [Setting/acceleration '+'], [Setting/acceleration '-'], [ON/OFF 'I/O' operated] and [Selector-lever position, driving position]. The screen will display as shown in figure to left.

DATA STREAM	
Resume vehicle speed again actuator	Operated
Setting/acceleration '+'	Not operated
Setting/acceleration '-'	Operated
ON/OFF 'I/O' operated	Not operated
Selector-lever position, R,D,1..4 driving position	
PAGE UP	
PAGE DOWN	
GRAPHIC-1	
HOME	BACK
PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>17:03</div> </div>	

Click [OK]. The screen will display the real-time values of the selected items, as shown in figure to left.

Button descriptions:

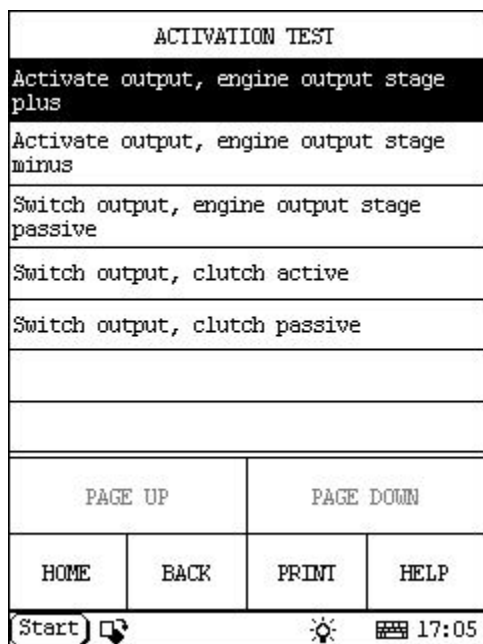
[PRINT]: to print out the test result.

SELECT DATA ITEM			
Resume vehicle speed again actuator			
Setting/acceleration '+'			
Setting/acceleration '-'			
ON/OFF 'I/O' operated			
Selector-lever position, driving position			
Clutch switch			
Electric brake-light switch			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:51</div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>16:50</div> </div>			

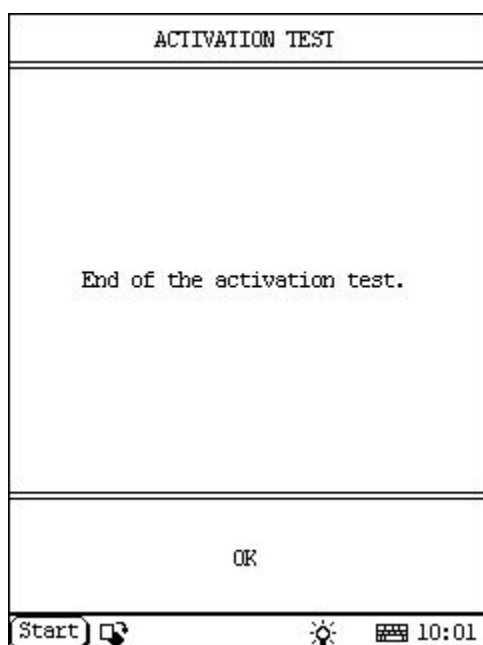
Click **[BACK]** button, the screen will display as shown in figure to left.



Component Activation

[home](#)

Click **Component activation**. The screen will display a list of items for activation test, as shown in figure to left.



Click one item in the list to perform the test.




Now we take **[Activate output, engine output stage plus]** as example to explain the test steps:

Click **[Activate output, engine output stage plus]**. X-431 starts testing idle actuator.




When the test is successful, the screen will display the message as shown in figure to left.

Button description:




[OK]: to return to the upper level interface.

ACTIVATION TEST			
Activate output, engine output stage plus			
Activate output, engine output stage minus			
Switch output, engine output stage passive			
Switch output, clutch active			
Switch output, clutch passive			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    17:05 </div> </div>			

Click **[OK]** button, the screen will display as shown in figure to left.




SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div>    16:50 </div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.




ECU IDENTIFY	
FGR Cruise control Part Number 8375497 Hardware NO. 07 Software NO. 04 Diagnosis index 03 Coding index 05 Bus index 00 Data 44/97	
OK	PRINT
Start    16:49	

Version No.[home](#)




Click **[Identification]** in the function menu. The screen will display the information on ECU version of navigation control system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Component activation			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    16:50			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
GR (Navigation control)			
PDC (Park Distance Control)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    15:33			

Click **[PAGE DOWN]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
Park Distance Control (PDC)	
Part number	8352279
Hardware number	10
Coding index	00
Diagnosis index	00
Bus index	00
Date of manuf., CW	19
Date of manuf., year	97
Software number	19
<div>OK</div> <div>PRINT</div>	
<div>Start</div> <div>17:28</div>	




Park Distance Control

[home](#)

Click **[PDC (Park distance control)]** button. The screen will display the information on ECU version of park distance control system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div>Start</div> <div>17:28</div>			




Click **[OK]** button. The screen displays the function menu of the transmission system, as shown in figure to left.

TROUBLE CODE			
23	Acoustic generator, front on		
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    17:28			

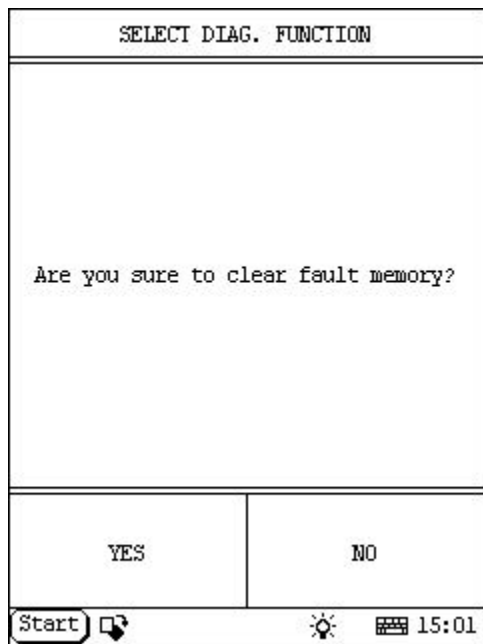
Read Fault Memory

[home](#)

Click **[Read fault memory]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    17:28			

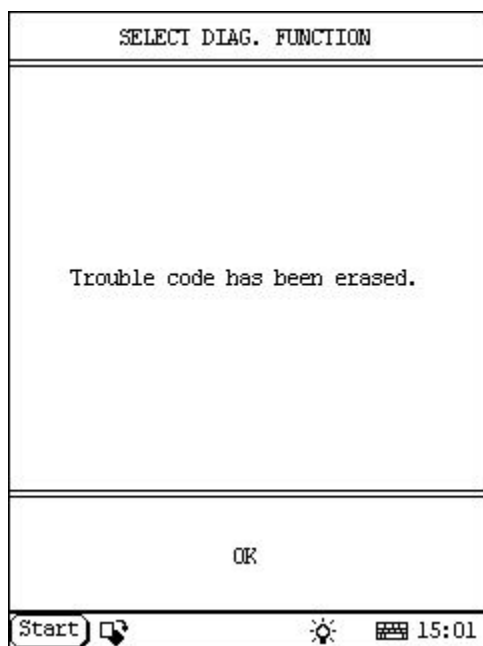
Click **[BACK]** button, the screen will display as shown in figure to left.






Clear Fault Memory

[home](#)




Click **[Clear fault memory]** button, the screen will display as shown in figure to left.



Click **[YES]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start    17:28			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Terminal 15			
Reverse gear			
Trailer mode			
Status, parking aid			
Clearance, rear left			
Clearance, rear center left			
Clearance, rear center right			
Clearance, rear right			
PAGE UP		PAGE DOWN	
OK			
HOME	BACK	PRINT	HELP
Start    17:28			




Read Data Stream

[home](#)

Click **[Data stream]** button, the screen will display as shown in figure to left.

SELECT DATA ITEM			
Terminal 15			
Reverse gear			
Trailer mode			
Status, parking aid			
Clearance, rear left			
Clearance, rear center left			
Clearance, rear center right			
Clearance, rear right			
PAGE UP		PAGE DOWN	
HOME		BACK	
PRINT		HELP	
Start		17:29	

Click the items you want to see, e.g. **[Terminal 15]**, **[Reverse gear]**, **[Trailer mode]**, **[Status, parking aid]**, **[Clearance, rear left]**, **[Clearance, rear center left]**, **[Clearance, rear center right]** and **[Clearance, rear right]**. The screen will display as shown in figure to left.

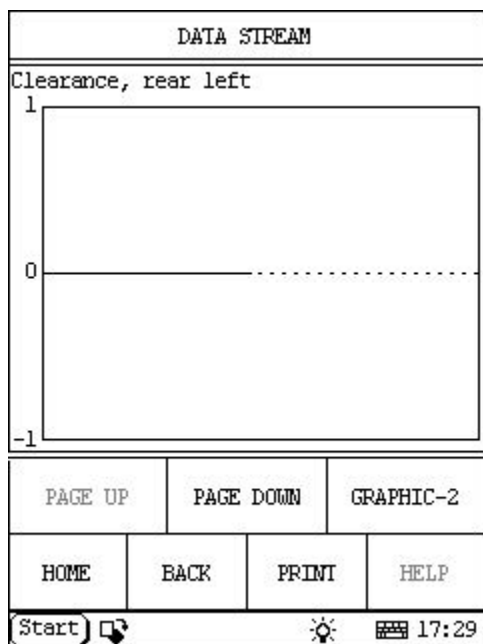
DATA STREAM			
Terminal 15		Not actuated	
Reverse gear		Select	
Trailer mode		YES	
Status, parking aid		Actuated	
Clearance, rear left		0	
Clearance, rear center left		0	
Clearance, rear center right		0	
PAGE UP		PAGE DOWN	
HOME		GRAPHIC-1	
BACK		PRINT	
HELP			
[Start] 		  17:29	

Click **[OK]**. The screen will display the real-time values of the selected items, as shown in figure to left.

Button descriptions:

[**GRAPHIC-1**]: to display the waveform of an active data.

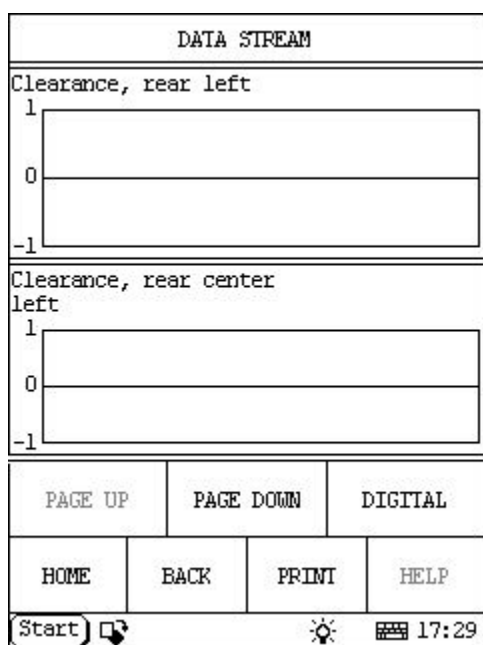
[PRINT]: to print out the test result.






Click **GRAPHIC-1**. The screen will display the waveform for one data stream item. See figure to left.

Button descriptions:




[GRAPHIC-2]: to display two data stream waveforms.



Click **GRAPHIC-2** to display waveforms of two data stream items. It is convenient to make comparison between two correlative data stream items. See figure to left.

DATA STREAM			
Terminal 15		Not actuated	
Reverse gear		Select	
Trailer mode		YES	
Status, parking aid		Actuated	
Clearance, rear left		0	
Clearance, rear center left		0	
Clearance, rear center right		0	
PAGE UP		PAGE DOWN	
HOME		GRAPHIC-1	
BACK		PRINT	
HELP			
Start 		  17:29	

Click **[DIGITAL]** in the interface, the screen will display the real-time value of the data stream again, as shown in figure to left.

SELECT DATA ITEM			
Terminal 15			
Reverse gear			
Trailer mode			
Status, parking aid			
Clearance, rear left			
Clearance, rear center left			
Clearance, rear center right			
Clearance, rear right			
PAGE UP		PAGE DOWN	
HOME		OK	
BACK		PRINT	
HELP			
Start 		  17:28	

Click **[BACK]** button, the screen will display as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div> </div> <div>17:28</div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

ECU IDENTIFY	
Park Distance Control (PDC) Part number 8352279 Hardware number 10 Coding index 00 Diagnosis index 00 Bus index 00 Date of manuf., CW 19 Date of manuf., year 97 Software number 19	
OK	PRINT
<div> <div>Start</div> <div> </div> <div>17:28</div> </div>	

Version No.

[home](#)



Click **[Identification]** in the function menu. The screen will display the information on ECU version of park distance control system, as shown in figure to left.

SELECT DIAG. FUNCTION			
Read fault memory			
Clear fault memory			
Data stream			
Identification			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>17:28</div> </div>			

Click **[OK]** button, the screen will display as shown in figure to left.

SELECT DIAG. SYSTEM			
DME (Engine)			
EGS (Transmission)			
ABS (Antilock brake)			
SRS (Air bag)			
IHKA/IHKB (AC/heater)			
IKE/IKI/KOMBI			
EWS (Elec. immobilize system)			
ZKE (Central body electronic)			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
<div> <div>Start</div> <div></div> <div></div> <div></div> <div>15:33</div> </div>			

Click **[BACK]** button, the screen will display as shown in figure to left.

CAR CHASSIS			
3' /Z1_E30			
3' /Z3_E36			
3' _E46			
5' _E28			
5' _E34			
5' _E39			
6' _E24			
7' _E23			
PAGE UP		PAGE DOWN	
HOME	BACK	PRINT	HELP
Start	  09:58		

Click **[BACK]** button, the screen will display as shown in figure to left.