ACR

APPLICATIONS MANUAL

SP Sykes-Pickavant®

Contents

1 - ACR HANDSET CONTROLS

UP Button :   Allows moving up through the screen menus, or text.

DOWN Button :   Allows moving down through the screen menus, or text.

OK Button :   Confirms screen choices, used to move through menu's.

ESC button :   Allows moving backwards through menu's.

Memory Button :   Will store screen data to memory.

2 - MEMORY FUNCTIONS

Saving Screen Shots - By using a combination of the 4 line handset and a 4 line compatible pod , it is possible to save up to 100 screen shots of information within the memory function available, for future reference or download. Simply press the 🖉 button at any time to store a screen.

Retrieving saved screens - By returning to the initial menu of the pod, by using the (esc) button, or after powering up the ACR4 with saved screens in place, the following menu's will be seen:

Example : With 15 saved screen shots

```
THERE ARE 15
SCREENS SAVED.
MEMORY FUNCTION
MENU TO FOLLOW     (OK)
Sykes-Pickavant
```

OK

```
1/ VIEW SCREENS
2/ CLEAR SCREENS
3/ DOWNLOAD SCREENS
4/ BOOKMARK
5/ EXIT MENU
Sykes-Pickavant
```
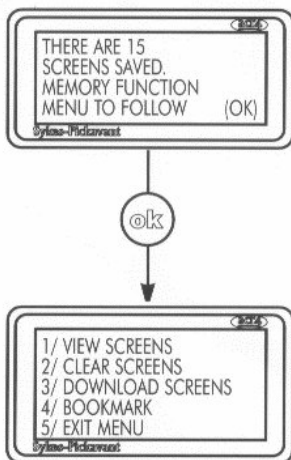
Note: Use the 🔺🔻(ok)&(esc) to navigate through the options. Refer to P.C download kit instructions for comprehensive information.

1/ View Screens allows scrolling through all of the saved screen shots using the 🔺 and 🔻 buttons.

2/ Clear Screens will erase ALL the screen shots in the memory.

3/ Download Screens allows the saving and printing via an optional P.C connection kit.

4/ Bookmark will partition separate tests for easier identification.

5/ Exit Menu will return to the main test menu.

3 - Getting Started

Set-Up
   i)   Ensure Vehicle ignition is turned off.
   ii) Using the applications list and socket location diagram for information, connect the correct harness to the identified diagnostic socket, and to the ACR handset.
   iii) Turn on the vehicle ignition.
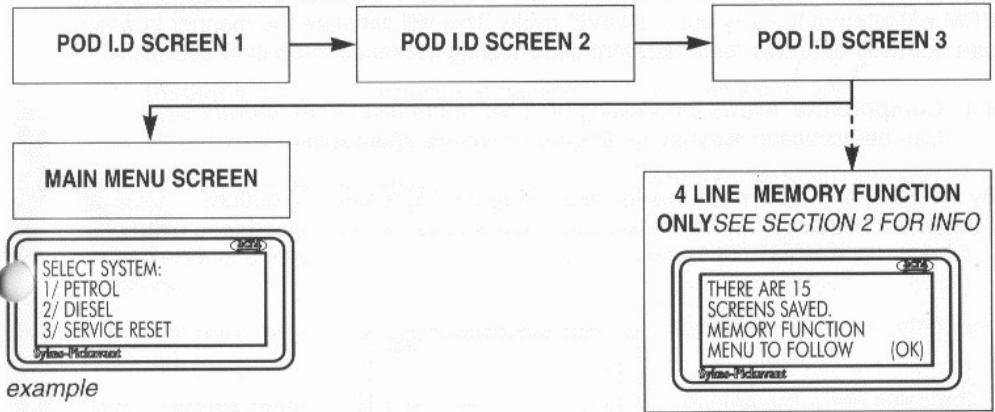
Note : Use the ⊕ ⊖ buttons to highlight desired menu selection (indicated by flashing block on first character of line), and then press ⊛ to confirm, this will allow movement through the following sub-menus.
Remember that ⊛ allows movement backwards through menus.

Using the applications list provided, or other data, identify the system to be tested, and select from the following sub-menus.

4 - Test Functions - Normal

Tests

By selecting the correct system type (and variant if applicable) , the ACR will begin the initialisation sequence automatically, and attempt to commence the communications required to carry out all supported serial diagnostic test functions.

Note : The level of functions available will vary depending on the system being tested.

4.1 Read Codes. Displays all stored current, and intermittent, system fault codes.

By selecting and confirming the read codes function using the up/down and ⊛ buttons, the following will be seen if faults are present:
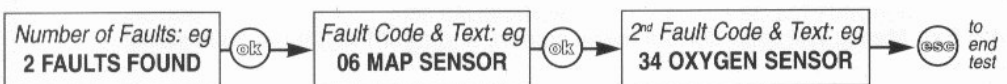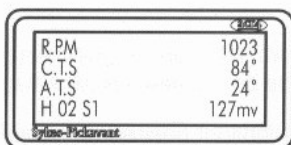
4.2 Clear Codes. Erases any intermittent, or 'Fixed' fault codes by selecting and confirming this function. Some systems may 'Re-read' system faults to confirm action.

4.3 Actuators. Allows user control of system actuators to determine quality of action/operation.

By selecting and confirming this function using the Ⓐ Ⓥ and Ⓞⓚ buttons, a sub-menu will display any actuators available to test. If any of these are selected and confirmed the ECM will attempt to carry out a 'DRIVE' cycle. This will simulate the manner in which the part normally operates, and therefore allow testing at source to confirm operation.

4.4 Components. Allows the viewing of 'Live' information from relevant system sensors. Can be accessed 'Key-on' or 'Engine-on' where applicable.

By selecting and confirming this function using the Ⓐ Ⓥ and Ⓞⓚ buttons, a table of component headings, and there relevant 'Live' values can be viewed (see example).

```
┌─────────────────────┐
│              ⊂Data▷  │
│ R.P.M         1023   │
│ C.T.S          84°   │
│ A.T.S          24°   │
│ H 02 S1      127mv   │
│ Sykes-Pickavant      │
└─────────────────────┘
```

NOTE: By pressing OK, a cursor will appear on the 1ˢᵗ character of the 1ˢᵗ line to indicate this line can be changed to display other component information. To select another line, press OK again. The cursor will descend one line.

NOTE: The line indicated by the cursor can display any supported components, By pressing the up /down buttons the information (component) will change.

NOTE: By pressing and holding the OK button for more than 2 seconds, a complementary HELP screen can be viewed. This will expand any abbreviations, and display any further information available.

4.5 Exit Menu. Will clear current menu screen, and return to the previous screen.

5 - TEST FUNCTIONS: SERVICE INTERVAL RESET

5.1 **Volvo - Read Counters,** when selected, displays the status of the 3 main service interval counters (Distance travelled, Months elapsed and Hours elapsed).Pressing ⓞⓚ moves to next counter display.

5.2 **Volvo - Reset Counters** will reset all 3 interval counters, and, in turn, extinguish the service lamp.

5.3 **VAG - Distance 1** displays distance remaining until next oil service is due.

5.4 **VAG - Distance 2** displays distance remaining until next service is due.

5.5 **VAG - Oil,** when selected performs reset procedure for Oil service indicator.

5.6 **VAG - Service 1,** when selected performs reset procedure for IN1/IN01 service indicators.

5.7 **VAG - Service 2,** when selected performs reset procedure for IN2/IN02 service indicators.

5.8 **BMW - Oil reset** will cancel 'Oil' service indicators on dashboard when selected, and confirmed.

5.9 **BMW - Service reset** will cancel 'Service' indicators on dashboard when selected, and confirmed.

5.10 **Rover 75 - Internal reset** displays the number of days remaining before 'Interval' service is required. Confirm to reset.

5.11 **Rover 75 - Oil reset** will cancel 'Oil' service indicators on dashboard when selected, and confirmed.

5.12 **Rover 75 - Inspection reset** will cancel 'Service' indicators on dashboard when selected, and confirmed.

6 - TEST FUNCTIONS: ADJUSTMENTS

6.1 **EZ Timing adjust (GM).** Places EZ61 module in 'Timing' mode, allowing manual adjustment of distributor to attain timing of 10° BTDC, press ⓞⓚ to escape and confirm change.

6.2 **ISC Calibrate (VAG).** On selecting this function, the ECM will attempt to calibrate the Idle speed control device by 'Cycling' the unit to determine its minimum and maximum travel, and then 'Set' the base idle position.

e.g.

```
SELECT FUNCTION          ISC CALIBRATION          SELECT FUNCTION
5/ ISC CALIBRATE   ⓞⓚ→   ▮▮▮▮            →        5/ ISC CALIBRATE
```

6.3 Base Timing adjust (VAG). Places ECM in 'Timing' mode, allowing manual adjustment of distributor to attain recommended factory setting, press (ok) to finish and confirm.

6.4 Stepper Motor Adjust (Rover). When selected, ensuring all engine conditions have been met (Follow on-screen prompts) , idle speed can be manually adjusted at throttle body whilst viewing ECM status. Press (ok) to confirm changes.

6.5 CO Adjust (Rover). When selected, ensuring all engine conditions have been met (Follow on-screen prompts), CO level can be trimmed (△) and (▽) using the handset controls. This functions should be used in conjunction with a CO meter to monitor adjustments. Press (ok) to confirm changes.

6.6 Adjust Timing Advance (PSA). Allows dynamic ignition timing adjustment, use the (△) and (▽) arrows to increase and decrease the advance. Press (ok) to accept desired figure.

6.7 Adjust Mixture (PSA). Follow procedure as in 4.13

7 - TEST FUNCTIONS: BLINK CODES

7.1 VAG

7.1.1 Read codes. Will display any stored fault code and its description. Follow on-screen prompts for ignition switch position, and use the up/down arrows to scroll through stored codes, then (ok) to return to main menu.

7.1.2. Clear codes. Will attempt to clear and re-read any fault codes present.

7.2 PSA

7.2.1 Read codes. Will display stored fault code number only, for description refer to manufacturers data. Follow on-screen prompts for ignition switch position, and use the up/down arrows to scroll through stored codes, then (ok) to return to main menu.

7.2.2 Clear codes. Will attempt to clear and re-read any fault codes present.

7.3 Volvo

7.3.1 Read codes. This function permits the reading of up to 3 stored fault codes from the ECM, displaying a 3 digit code and an explanation for each.

7.3.2 Clear codes. Permits the clearing of the stored fault codes from the ECM. This function will automatically clear and re-read any remaining codes.

7.3.3 Actuators. Allows control of engine actuators to determine quality of action/operation. The sequence is determined by the ECM, which will carry out a drive cycle of any supported units in turn.

7.3.4 Components. Will display any supported ECM inputs, and a comment on their integrity when operated by the user.

8 - TEST FUNCTIONS: OTHER

8.1 System Ident (VAG). Displays vehicle and/or system identification information.

8.2 Engine Off Test (Ford). After selecting this option, follow the on-screen prompts to begin this 'Self-Test' function, and then carry out any further prompts as they appear.

Note: The following screen will be seen during the starting initialisation sequence, with the flashing icon indicating serial communication taking place:

Flashing Icon ————➤ `. BUSY`

During this Self test sequence, fault codes will be read, current and KAM (Keep Alive Memory - or intermittent), and a Toggle test will begin. This Toggle test will control a sequence of engine actuators simultaneously when prompted to by the user, to do this simply press the accelerator pedal every time a star appears on screen.

When testing is complete, the option to REVIEW CODES will be given

8.3 Review Codes (Ford). Allows any previously read fault codes to be reviewed.

8.4 Wiggle Test (Ford). Once selected, carry out checks on wiring looms and multiplugs. If a fault is detected by the ECM a fault code will be displayed as an intermittent (KAM) fault. (----) to end wiggle test.

8.5 Clear KAM (Ford). Will erase all recorded KAM fault codes.

8.6 Engine Run (Ford). Carries out a self-test sequence whilst the engine is running, Requires user intervention to ensure test is completed correctly. Ensure all on-screen commands are carried out to complete the sequence. Any fault codes detected during test will be displayed.

9 - P.C. DOWNLOAD KIT

9.1 Connecting up - Connect to PC 'Com 1' or 'Com 2' (refer to PC instructions)
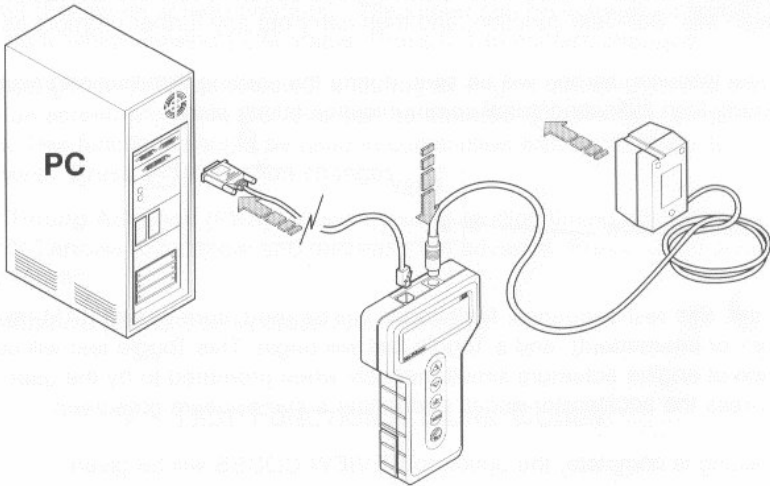
9.2 Loading software.

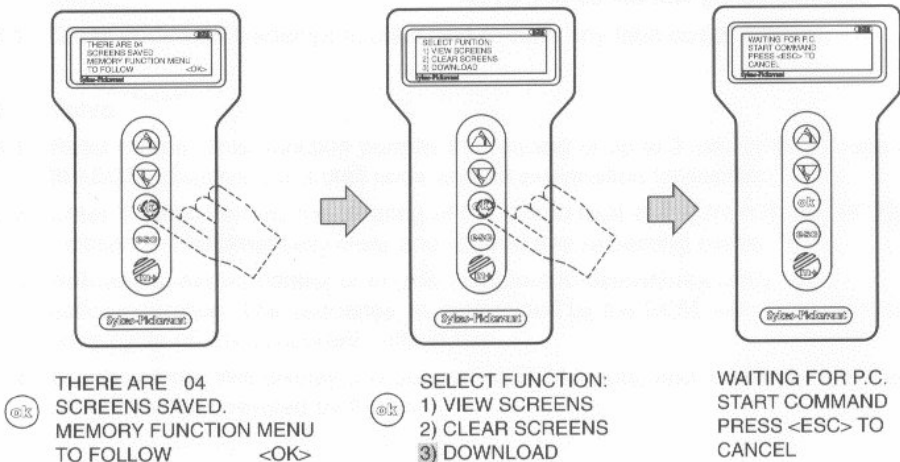Insert floppy disc 1 into P.C. drive and run A:\SETUP:EXE and then follow on screen prompts.

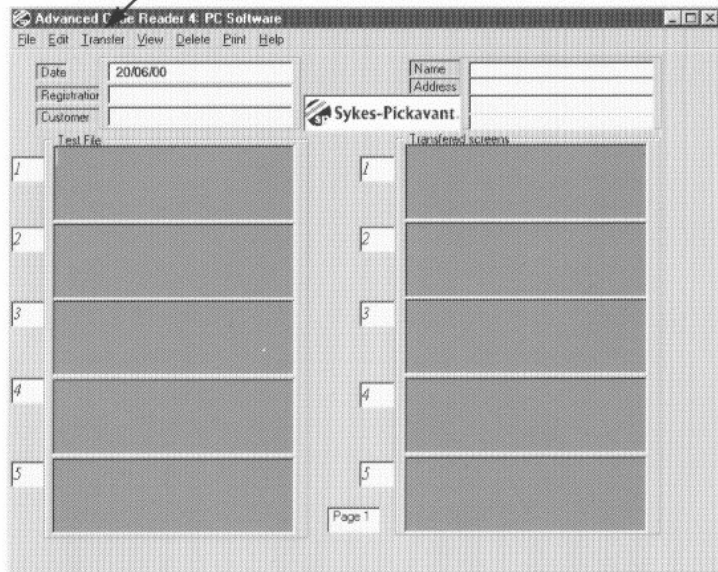## 9.3 Running the software.

Select 'ACR4' software from the P.C. program menu to start program.
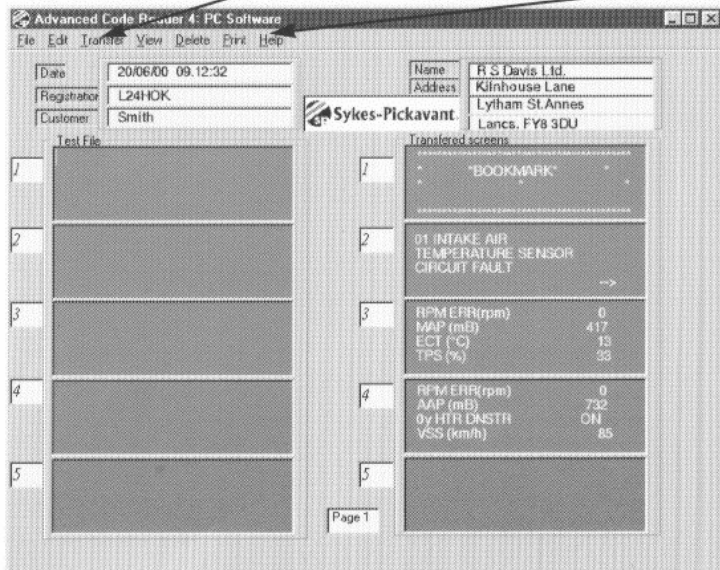
9.4 Downloading.

THERE ARE 04
SCREENS SAVED.
MEMORY FUNCTION MENU
TO FOLLOW   <OK>

SELECT FUNCTION:
1) VIEW SCREENS
2) CLEAR SCREENS
3) DOWNLOAD

WAITING FOR P.C.
START COMMAND
PRESS <ESC> TO
CANCEL

Choose 'Transfer' then select Com 1 or Com 2

Advanced Code Reader 4: PC Software

File Edit Transfer View Delete Print Help

Date	20/06/00
Registration	
Customer	

| Name | |
| Address | |

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Test File

Transferred screens

1 2 3 4 5

1 2 3 4 5

Page 1

After down loading is complete, choose 'Disconnect' from 'Transfer' menu, and disconnect ACR4 from PC.

For further assistance choose 'Help'

Advanced Code Reader 4: PC Software

File Edit Transfer View Delete Print Help

Date	20/06/00 09.12:32
Registration	L24HOK
Customer	Smith

Name	R S Davis Ltd.
Address	Kilnhouse Lane
	Lytham St.Annes
	Lancs. FY8 3DU

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Test File

Transferred screens

1 2 3 4 5

1
"BOOKMARK"

2
01 INTAKE AIR
TEMPERATURE SENSOR
CIRCUIT FAULT
-->

3
RPM ERR(rpm)   0
MAP (mB)   417
ECT (°C)   13
TPS (%)   33

4
RPM ERR(rpm)   0
AAP (mB)   732
0y HTR DNSTR   ON
VSS (km/h)   85

5

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