

1. LANDROVER PRODUCT DESCRIPTION

Autologic is a lightweight, hand held console with a 12.1" coloured screen, programmed for touch screen capability. Operation is carried out by means of touching screen buttons, labelled with headings familiar to those who work regularly with Land Rover vehicles. Information is immediate, revealing fault codes and dynamic information.

The *Autologic* system for Land Rover vehicles provides a facility for independent specialists to access the diagnostics and programming capabilities of cars manufactured since 1989. This includes Defender, Defender 07, Classic Range Rover, P38 Range Rover, L322 Range Rover, Range Rover Sport, Discovery, Discovery 2, Discovery 3/LR3, Freelander, Freelander 2.

System diagnostic & programming capabilities by vehicle:

DEFENDER	
to 07 Model Year	
<ul style="list-style-type: none"> • Engine management for 14CUX, GEMS, MEMS, EGR, Td5, BMW M52 (South Africa) • Td5 ECU programming • Td5 Performance tunes 	<ul style="list-style-type: none"> • ABS • Lucas10AS Security diagnostics
07 Model Year	
<ul style="list-style-type: none"> • 2.4 Duratorq Engine • 2007 Instrument Cluster 	<ul style="list-style-type: none"> • ABS Control Module • Security Control Module

DISCOVERY	
DISCOVERY 1	
<ul style="list-style-type: none"> • Engine management for 14CUX, GEMS, MEMS, EGR, EDC • Airbag 	<ul style="list-style-type: none"> • ABS • Lucas 10AS Security diagnostics
DISCOVERY 2	
<ul style="list-style-type: none"> • Engine management for Td5, Motronic 5.2.1 • Td5 ECU programming • Td5 Performance tunes • Body Control Unit (BCU) 	<ul style="list-style-type: none"> • SLABS • ACE • Airbag • Automatic transmission
DISCOVERY 3 / LR3	
<ul style="list-style-type: none"> • 2.7 TDV6 Diesel Engine • TdV6 Performance tunes • 4.0 V6 and 4.4 V8 petrol Engines 	BODY SYSTEMS <ul style="list-style-type: none"> ○ Lighting system ○ Wiper and windshield washer ○ Door locks ○ Hood and tailgate

<p>CHASSIS SYSTEMS</p> <ul style="list-style-type: none"> ○ All terrain control ○ Ride level control ○ Steering Angle Sensor ○ ABS 	<ul style="list-style-type: none"> ○ Window systems ○ Sliding roof ○ Mirror movement ○ Seat adjustment monitor ○ Pedal / steering column ○ Key switch status ○ Fuel flap status ○ Alarm system ○ Parking brake ○ Parking aid ○ Restraints ○ Instrument cluster ○ Auxiliary heater ○ Audio front control ○ HVAC control ○ Service Reset ○ Vehicle Configuration
<p>DRIVE SYSTEMS</p> <ul style="list-style-type: none"> ○ Speed control ○ Rear differential ○ Transmission control ○ Transfer box control 	
<p>DISCOVERY 4/ LR4</p>	
<ul style="list-style-type: none"> ● 2.7 TDV6 Diesel Engine ● 3.0 TDV6 Diesel Engine ● 4.0 V6 Petrol Engine ● 5.0 V8 Petrol Engine 	<p>BODY SYSTEMS</p> <ul style="list-style-type: none"> ● Auxiliary Heater Control Module ● Body Control Module Module ● HVAC control Module ● Drivers Door Module ● Passenger Door Module ● Drivers Seat Module ● Front Controls Interface Module ● Headlamp Control Module ● Headlamp Control Module B ● Instrument Pack Control Module ● Keyless Vehicle Module ● Occupant Classification System Control Module ● Parking Assist Control Module ● Restraints Control Module ● Steering Column Locking Module ● Vehicle Configuration ● Service Resets
<p>CHASSIS SYSTEMS</p> <ul style="list-style-type: none"> ● All Terrain Module ● Ride Level Control Module ● Steering Angle Sensor Module ● ABS Module ● Parking Brake Control Module 	
<p>Drive</p> <ul style="list-style-type: none"> ● Automatic Transmission Module ● Transfer Case Module ● Speed Control Module ● Rear Differential Control Module 	
<p>Entertainment System</p> <ul style="list-style-type: none"> ● Front Controls Interface Module B ● Front Entertainment Control Module ● DAB Module ● Cellular Telephone Module ● Satellite Audio Unit Module ● Television Module ● Rear Entertainment Control Module ● Audio Front Control Module ● Audio Amplifier Module ● Digital Audio Control Module C ● Image Processing Module B ● Speech Recognition Control Module 	

- Accessory Protocol Interface Module

FREELANDER

FREELANDER to 2001

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| <ul style="list-style-type: none"> • Engine management for MEMS, EDC • Central Control Unit (CCU) | <ul style="list-style-type: none"> • Airbag • ABS |
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FREELANDER 2001 onwards

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| <ul style="list-style-type: none"> • Engine management for EMS2000 Petrol, DDE Td4, MS43 (NAS V6), MEMS3 • Td4 DDE4.0 programming • Td4 performance tunes • Programming of MEMS 3 1.8 petrol • Central Control Unit (CCU) • Airbag • ABS | <ul style="list-style-type: none"> • Updated ECUS for SRS, ABS • Automatic transmission • Cruise control • Immobilizer EWS3 + SAWDOC • Pre-Delivery Inspection (PDi) • LCS coding • Instrument pack • Fuel Burning Heater |
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RANGE ROVER

CLASSIC

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| <ul style="list-style-type: none"> • Engine management for 14CUX, EGR • Airbag SPS, MPS | <ul style="list-style-type: none"> • Air suspension • ABS |
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P38 to 1999

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| <ul style="list-style-type: none"> • Engine management for GEMS, EDC ZF Automatic transmission • ABS • Airbag | <ul style="list-style-type: none"> • Body Control Module (BeCM) • Electronic air suspension • Heating & ventilation (HEVAC) |
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P38 2000 to 2002

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| <ul style="list-style-type: none"> • Engine management for Motronic 5.2.1, EDC • Body Control Module (BeCM) • Electronic air suspension • Heating & ventilation (HEVAC) • ABS | <ul style="list-style-type: none"> • Airbag • Petrol gearbox • Diesel gearbox • Cruise control |
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L322 2002 to 2009

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| <ul style="list-style-type: none"> • Td6 Diesel Engine • 3.6 TdV8 Diesel Engine • 3.6 TdV8 Performance Tunes • 4.4 V8 Petrol Engine • 4.2 V8 Supercharged Petrol Engine • ABS • Airbag • Air conditioning | <ul style="list-style-type: none"> • Transfer box • Vehicle information systems • Air suspension – Electronic height control • Automatic gearbox • Body controller (GM3) • Power steering • Central locking • Washers & wipers |
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<ul style="list-style-type: none"> Fuel burning heater Headlamp control Immobilizer Instrument pack Parking distance control Security 	<ul style="list-style-type: none"> Windows & sunroof Rain sensor Seat memory Service Interval Reset Vehicle Personalisation and configuration
L322 2010 onwards	
<ul style="list-style-type: none"> 3.6 TDV8 Diesel Engine 5.0 Petrol Engine 5.0 Supercharged Petrol Engine 	BODY SYSTEMS <ul style="list-style-type: none"> Body Control Module Restraints Control Module Instrument Pack Control Module Headlamp Control Module Headlamp Control Module B Parking Assist Control Module Climate Control Module Drivers Door Module Drivers Seat Module Passengers Door Module Passengers Seat Module Occupant Classification System Keyless Vehicle Control Module Steering Column Lock Module Vehicle Configuration Service Resets
CHASSIS SYSTEMS <ul style="list-style-type: none"> All Terrain Control Module Ride Level Control Module Adaptive Damping Control Module Steering Angle Sensor Module ABS Control Module Parking Brake Control Module Running Board Control Module Side Object Detection Module Left Side Object Detection Module Right Rear Differential Control Module 	
Drive <ul style="list-style-type: none"> Automatic Transmission Control Module Transfer Case Control Module Speed Control Module 	
Entertainment System <ul style="list-style-type: none"> Cellular Telephone Control Module Digital Audio Broadcast Module Front Entertainment Control Module Satellite Audio Unit Module Television Control Module Rear Entertainment Control Module Audio Amplifier Module Digital Audio Control Module C Audio Front Control Module Image Processing Module B Accessory Protocol Interface Module 	
SPORT	
<ul style="list-style-type: none"> 2.7 TdV6 Diesel Engine 2.7 TdV6 performance tunes 4.4 V8 Petrol Engines 4.2 V8 Supercharged Petrol Engine 	BODY SYSTEMS <ul style="list-style-type: none"> Lighting system Wiper and windshield washer Door locks Hood and tailgate Window systems Sliding roof Mirror movement Seat adjustment monitor Pedal / steering column
CHASSIS SYSTEMS <ul style="list-style-type: none"> All terrain control Ride level control Steering Angle Sensor ABS 	

<ul style="list-style-type: none"> ○ Active Roll Control 	<ul style="list-style-type: none"> ○ Key switch status ○ Fuel flap status ○ Alarm system ○ Parking brake ○ Parking aid ○ Restraints ○ Instrument cluster ○ Auxiliary heater ○ Audio front control ○ HVAC control ○ Service Interval Reset ○ Vehicle Configuration
<p>DRIVE SYSTEMS</p> <ul style="list-style-type: none"> ○ Speed control ○ Rear differential ○ Transmission control ○ Transfer box control 	
SPORT 2010	
<ul style="list-style-type: none"> ● 3.0 TDV6 Diesel Engine ● 3.6 TDV8 Diesel Engine ● 5.0 Petrol Engine ● 5.0 Supercharged Petrol Engine 	<p>BODY SYSTEMS</p> <ul style="list-style-type: none"> ● Auxiliary Heater Control Module ● Body Control Module Module ● HVAC control Module ● Drivers Door Module ● Passenger Door Module ● Drivers Seat Module ● Front Controls Interface Module ● Headlamp Control Module ● Headlamp Control Module B ● Instrument Pack Control Module ● Keyless Vehicle Module ● Occupant Classification System Control Module ● Parking Assist Control Module ● Restraints Control Module ● Steering Column Locking Module ● Vehicle Configuration ● Service Resets
<p>CHASSIS SYSTEMS</p> <ul style="list-style-type: none"> ● All Terrain Control Module ● Ride Level Control Module ● Adaptive Damping Control Module ● Steering Angle Sensor Module ● ABS Control Module ● Parking Break Control Module ● Dynamic response Module 	
<p>DRIVE SYSTEMS</p> <ul style="list-style-type: none"> ● Automatic Transmission Module ● Transfer Case Module ● Speed Control Module ● Rear Differential Control Module 	
<p>Entertainment System</p> <ul style="list-style-type: none"> ● Front Controls Interface Module B ● Front Entertainment Control Module ● DAB Module ● Cellular Telephone Module ● Satellite Audio Unit Module ● Television Module ● Rear Entertainment Control Module ● Audio Front Control Module ● Audio Amplifier Module ● Digital Audio Control Module C ● Image Processing Module B ● Accessory Protocol Interface Module 	
FREELANDER 2 / LR2 2007 ONWARDS	
<ul style="list-style-type: none"> ● 2.2 I4 Diesel Engine ● 3.2 I6 Petrol Engine 	<p>BODY SYSTEMS</p> <ul style="list-style-type: none"> ○ Body Controller

<p>DRIVE SYSTEMS</p> <ul style="list-style-type: none"> ○ Transmission Control ○ Rear Differential Control 	<ul style="list-style-type: none"> ○ Headlamp Control ○ Entertainment Systems ○ HVAC Control ○ Parking Assist Control ○ Restraints Control
<p>CHASSIS SYSTEMS</p> <ul style="list-style-type: none"> ○ All Terrain Control ○ Steering Angle Sensor ○ ABS Control 	<ul style="list-style-type: none"> ○ Restraints Occupants Classification ○ Door and Seat Control ○ Trailer Module ○ Instrument Cluster Control Module ○ Service Interval Reset ○ Vehicle Configuration

Land Rover Leads & Connectors:

- 3m extension cable
- OBDII connector and 1m cable
- ABS connector and 1m cable
- 14CUX/Air suspension connector and 1m cable
- Airbag connector and 1m cable
- EGR connector and 1m cable
- Battery extension connector and 3m cable
- USB connector cable for Internet upgrades

System packaged in a lightweight, rugged flight case

2. ELECTRONIC SYSTEMS DESCRIPTION

SYSTEM COVERAGE & DESCRIPTION:

All ABS units	Live Data, Activations, Brake Bleeding, Fault Code Diagnostics
Diesel EGR	Live Data, Read Fault Codes, Component Activations
Petrol 14CUX	Live Data, Fault Code Diagnostics
Petrol GEMS	Live Data, Fault Code Diagnostics, Component Activations, Reset Adaptations, ECU replacement, Security reprogramming
Petrol MEMS	Live Data, Fault Code Diagnostics, Component Activations, Reset Adaptations, Idle Control, Open Loop Tune, Security Reprogramming
Petrol MEMS3	Live Data, Fault Code Diagnostics, Component Activations, Reset Adaptations, Idle Control, Open Loop Tune, Security Reprogramming
Lucas 10AS security	Live Data, EKA, Component Activations, PLIP programming, Market Programming. <i>FULL SECURITY CUSTOMIZATION, not available from Land Rover</i>
Diesel Td5	Live Data, Fault Code Diagnostics, Injector Activations, Cylinder Balancing, Security Programming, Programming Tunes, ECU programming, Performance Tuning
Petrol M52 (S.A Defenders)	Live Data, Reset Adaptations, Carbon Monoxide Adjust, Fault Code Diagnostics, Security Programming
Diesel DDE (Range Rover Td6)	Live Data, Fault Coded Diagnostics, Injector Activations, Cylinder Balancing, Security Programming, Programming Tunes, ECU programming, Performance Tuning
All Airbags	Live Data, Fault Code Diagnostics
Air suspension (Discovery 2)	Live Data, Fault Code Diagnostics, Component Activations, Instrument Pack Test, ECU Programming, ECU Replacement, Air Suspension Calibration
Active Cornering Enhancement (ACE) Discovery 2	Live Data, Fault Code Diagnostics, Component Activations, Response Test, System Bleed
Auto Gearbox	Live Data (Speeds, Torques, Adaptive Pressures, Switches), Reset Adaptations, Fault Code Diagnostics
Petrol Motronic	Live Data, Component Activations, Fault Code Diagnostics, Rest Adaptive Values, Security Learn mode, Idle Adjust, ECU replacement and programming, Performance tuning

Petrol EMS2000 Freelander V6	Live Data, Component Activations, Fault Code Diagnostics, Immobilisation Learn, Adaptations, CO Adjustment
Diesel DDE4 (Freelander Td4)	Live Data, Component Activations, Fault Code Diagnostics, Synchronise Immobilisation
Cruise control	Live Data, Fault Code Diagnostics
Fuel Burning Heater	System Prime, Live Data, Faults, Component Activations
Instrument Pack	Live Data, Component Activations, Fault Code Diagnostics
EWS Immobiliser	Live Data, ECM Synchronisation, Key Identification, Key Programming, Fault Code Diagnostics
Petrol MEMS3 (Freelander 2001)	Live Data, Component Activations, Fault code Diagnostics, Immobilisation Learn, Throttle Adjust, Adaptations, ECM Programming, Performance Tuning
Petrol MS43 (Freelander NAS 2001)	Live Data, Component Activations, Fault code Diagnostics, Programming information, Adaptations
Air Suspension (Classic, New Shape Range Rover)	Live Data, System Raise / Lower, Lock modes, Component Activations, System Height calibration, Fault Code Diagnostics
Heating and Ventilation (New Shape Range Rover)	Live Data, Component Activations, Blend Flap calibration, Fault Code Diagnostics
SAWDOC Immobiliser	Live data, ECM Synchronisation, Key Identification, Key Programming

RANGE ROVER 2002 MY:	
<i>System coverage & description</i>	
Petrol Motronic 7.2	Live Data, Activations, Fault Code Diagnostics, Clear Adaptations, Clear Driver Demand
Diesel DDE	Live Data, Activations, Fault code Diagnostics, Idle Speed Adjust
ABS	Live Data, Component Activations, Fault Code Diagnostics, Static test, Steering Angle Calibration, ECU variant coding, Wheel Locking Test
Airbag	Dynamic Data, Fault code Diagnostics
Air Conditioning	Live Data, Fault Code Diagnostics
Fuel Burning Heater	Live Data, Component Activations, Fault Code Diagnostics, System prime

Headlight Control	Live Data, Front / Rear / Trailer / Indicator outputs, Headlight levelling control, Fault Code Diagnostics
Immobiliser (EWS)	Live Data, Key Programming, ECM synchronisation
Instrument Pack	Live Data, Component Activations, Fault Code Diagnostics, Vehicle stored data
Parking Distance Control	Live Data, Sound Activations, Fault code Diagnostics
Security and Electronic Steering Lock	Live Data, Activations, Electronic Steering Lock Faults
Transfer Box	Live Data, ECU calibration, Fault code Diagnostics
Vehicle Information Systems	Live Data and Faults for <ul style="list-style-type: none"> • Board Monitor • Radio • Video module • GPS navigation • Digital Sound Processor • Steering Wheel ECU
Air Suspension	Live Data, Component Activations, Fault Code Diagnostics, Transport Mode, ECU Production mode, ECU reprogramming, Air suspension calibration
Auto Gearbox	Live Data, Activations, Fault Code Diagnostics
GM3 Body Controller	Live Data and Fault Diagnostics for <ul style="list-style-type: none"> • Power steering • Mirrors • Washers and wipers • Windows and sunroof • Rain sensor • Seat Memory
Vehicle Personalisation	Configurable options for <ul style="list-style-type: none"> • Locking • Security Acknowledgement • Exterior Lighting • Parking Distance Control • Instrument Pack Units

DISCOVERY 3/LR3, DISCOVERY 4/LR4, RANGE ROVER SPORT, RANGE ROVER SPORT 2010, RANGE ROVER 2010 and FREELANDER 2/LR

System coverage & description

Live Data, Activations (if supported by the ECU) and Fault Code Diagnostics are provided for all ECUs. In addition the following extra functions are implemented in the list below.

TdV6, NAV6, NAV8	Fuel pump lift reset, powertrain transport mode activate/deactivate, adaptations reset
Transmission, transfer case	Adaptation Clear, Transfer Case Calibration
Ride level control (air suspension) (Discovery 3, Discovery 4, Range Rover Sport, Range Rover Sport 2010 and Range Rover 2010)	Standard height calibration, , geometry setup (tight/normal tolerance settings) <i>height lowering, calibration restore - not available from Land Rover</i>
Steering angle sensor	Sensor calibration
Parking brake	Service modes, unjamming procedure
Restraints	New module calibration (activation)
Instrument pack	Service interval reset, transport mode activate/deactivate
Vehicle configuration (Discovery 3, Discovery 4, Range Rover Sport, Range Rover Sport 2010 and Range Rover 2010)	Customisable options include speed locking, mirror dip on reverse, parking aid, language, speed control, lazy entry, windshield wiper options, alarm options, tyre pressure monitoring options (including the ability to disable tyre pressure monitoring), headlamp delay and daytime running lamps.
Vehicle configuration (Freelander 2)	Customisable options include home safe lighting delay, daytime running lamps, speed locking, unlock settings, units, park assist, language, speed control and steering lock options.
Key programming	Program existing and new (blank) keys, key history
After market add-ons configuration	Configurable add-on options include trailer module and auxiliary driving lamps.
Module programming	Programming new (blank) and existing ECUs utilises an automated process to ensure ECUs are updated with the latest programming files.

DEFENDER 07

System coverage & description

Live Data, Activations (if supported by the ECU) and Fault Code Diagnostics are provided for all ECUs. In addition the following extra functions are implemented in the list below.

Vehicle configuration	Customisable options include tyre circumference, powertrain speed limiter, instrument pack speed limiter and fuel tank volume.
Module programming	Programming new (blank) and existing ECUs utilises an automated process to ensure ECUs are updated with the latest programming files (Instrument Pack and Powertrain only).
Security	EKA, PLIP programming, 10AS and Powertrain Synchronisation. <i>FULL SECURITY CUSTOMIZATION, not available from Land Rover</i>