1. INTRODUCTION

1.1 EFI SCAN 1.5+

- FI SCAN 1.5+ is specialized PC tool pack includes 02 PC software and 02 electrical adapters used to diagnose faults, analyze live data, active test actuators and programming parameters for all TOYOTA, LEXUS, SCION vehicles which are compliant with:

- All cars and light trucks from 1980 to now in the world

- All OBD-I (car from 1980 to 1996), M-OBD (car use K-line for markets as Asian, Africa, Middle East and Australia...), OBD-II standard

- All gasoline and diesel engine/ Motors

- All electrical systems that controlled by ECU as Engine, Body, and Chassis...

- All kind of diagnosis connectors as DLC1 (rectangle), DLC2 (circle), DLC3 (trapezoid)

- This equipment can works well with all Toyota cars have 16 pin connectors (*DLC3*) that some specialized OBD-II scanner of other companies does not work.

- All OBD-II engine systems of other manufacturer for cars and trucks in the world.



1.2 APPLICATION

- Used to determine trouble of all electronic systems controlled by ECU of TOYOTA, LEXUS, SCION vehicles. It cover all standard OBD-I, M-OBD, OBD-II.

- Specially, it can work well for all cars with connector is 16 pins same OBD-II connector but not working with cheap OBD-II Scanner. Example ECM models:

15BT, 1AZ-XX, 1CD-FTV, 1E, 1FZ-FE, 1GR-FE, 1HD-XX, 1HZ, 1KD-FTV, 1KZ-XX, 1MZ-FE, 1RZ, 1NZ-FE, 1SZ-FE, 1TR-FE, 1WZ, 1ZZ-FE, 1UZ-FE, 1G-FE, 2AD-TRB, 2AZ-FE, 2C-XX, 2E-XX, 2GR-FE, 2JZ-XX, 2KD-FTV,

DTDAuto

2LXX, 2RZ-XX, 2TR-FE, 2TZ-XX, 2UZ-FE, 2VZ-FE, 2S-E, 2ZZ-XX, 2ZR-XX, 3C-TE, 3L, 3E-XX, 3GR-FE, 3MZ-FE, 3RZ-FE, 3S-XX, 3VZ-XX, 3ZZ-FE, 3UZ-FE, 3VZ-XX, 3ZR-XX, 4A-XX, 4E-FE, 4GR-FE, 4ZZ-FE, 5E-FE, 5K, 5S-FE, 5VZ-FE, 7A-FE, 7M-XX, 22R-XX...

Example ECM models:

+ Toyota: Aygo, Avensis, Avalon, Camry, Carina, Corolla, Crown, Corolla, Celica, Cressida, Dyna, Zace, Altis, Innova, Sienta, Supra, Harrier, Prado, Previa, Picnic/Sports Van, Land Cruiser, Hilux, Hiace, Fortuner, MR2, Rav4, Yaris, Starlet, Supra, Paseo, LiteAce, 4-Runner, Tacoma, Tercel, MR-II,... and all other models in <u>Reference in car list</u> + Lexus: CT 200h, ES 350, GS 350, GS 450, GS 460, HS 250, IS 250, IS, 350, IS F, LS 460, LS 600h, GX 460, LX 570, RX 350, RX460, LX 570, RX 350, RX 450h
+ Sicon: bbX, iQ, FR-S, tC, t2B, xA, xB, xD, Fuse

- It can be used other application:

+ A repairing-tool for workshop or a training-tool for Vocational School.

+ Connect to automotive vocational trainer of EFI, ABS, SRS, AT, BODY vv... system

+ A technical tester for private cars

1.3 FUNCTION

- The main functions:

+ Read/Clear fault codes in ECUs, give repair suggestions: sensor systems, actuators, ECU for most electronic system on vehicles such as engine system, automatic transmission (*AT*), anti-lock braking system (*ABS*), airbag system (*SRS*), body system ...

+ Reset all of ECUs, turn off check engine light

+ Show parameter live data in different formats as analog clock, realtime data graph, statistical table...

+ Active test ON/ OFF actuators/ component

+ Show ECU information

+ Check monitoring status of systems

+ Programming key Immobilizer as add a registry key, edit key, clear registration key

- + Setting/ Programming special data Injectors
- + Setting/ Program TPMS (Tire Pressure Monitoring System)
- + Support for reset period maintenance (MAINT)
- + Look up fault codes

- Better support for diesel vehicle

- Support for reset period maintenance (MAINT)
- Support read fault code by both MIL and K-line serial data

- A best solution using PC software is installed on computer and combined with a signal converter to connect with ECU on car.



- Systems coverage:

- + Engine control system (PCM)
- + Chassis system (Chassis)
- + Anti-lock braking system (ABS)
- + Traction control system (TCS)
- + Electronic gear control system (AT/EG)
- + Body system (Body)
 - + Door lock system
 - + Lighting system
 - + Wiper & washer system
 - + Window & convertible system
 - + Air conditioner control system
 - + Door lock remote control system
 - + Mirror system
 - + Electric seat control system
- + Airbag system (SRS)
- + Instrument panel system (IP)
- + Key security system (Immobilizer)
- + 4-wheel drive system (4WD)
- + Cruise control system (ACC)
- + Electronic power steering system (EPS)
- + Hybrid system
- + Electronic damping system (ECS)
- + Radio system
- + Parking support system
- + Electronic stability system (ESP)
- + Audio system (Audio)
- + Other electronic control systems vv...

- Other special functions vv...

1.4 PACKAGE

No.	VOLUME	DESCRIPTION	IMAGE
1	01	OBD-I & MOBD EFISCAN converter with 04 singe lines	
2	01	MOBD & OBD-II EFISCAN converter integrated in cable	
3	01	Software for OBD-I, MOBD and OBD-II Standard on CDROM	



4	01	2.0 USB to COM cable	
5	01	Guide book	ETI SCAN

1.5 COMPUTER

- 1. Processor: Pentium 733 MHz or more
- 2. RAM: 64 MB or more
- 3. Video card: 32 MB Video Ram or more
- 4. Windows version: WinXP, Win7, Win8
- 5. Text font: Window font system
- 6. Screen 1024 by 786 or more & Color (16 Bit or more)

2. INSTALL EFI SCAN 1.5+

CASE 1:

- If your car is Toyota DLC has 16 pins (*Diagnostic Link Connector*), it is MOBD or OBD-II standard. You must use TECHSTREAM software (*in folder MOBD_OBD-II TOYOTA on CD*) with USB cable J2534 MINI VCI as picture below:



If you install and use software and software is not correct, it will not connect and not works.

- To install TECHSTREAM software, you can look into 2.1 items.

CASE 2:

- If your car connector is 17 & 23 pins (*Diagnostic Link Connector - DLC*) then your car is OBD-I standard. You must use EFI SCAN 1.5 software (*in*



folder EFI SCAN 1.5_ENGLISH on CD) with OBD-I TOYOTA adapter as picture below:





- To install the EFI SCAN 1.5 software, you can look into 2.2 items.

2.1 INSTALL TECHSTREAM SOFTWARE

2.1.1 Install MVCI Driver for TOYOTA

1. <u>Step 1</u>: Open folder name: "MOBD_OBD-II TOYOTA" on the CD of EFI SCAN 1.5+





2. Step 2: Run file "MVCI Driver for TOYOTA"



3. Step 3: Click "Next"





4. <u>Step 4</u>: Select Installation Folder (*Please set default part*). Then click "Next"

d IVCI Driver Setup	
Select Installation Folder This is the folder where MVCI Driver will be installed.	
To install in this folder, click "Next". To install to a different folder, ent "Browse".	er it below or click
Eolder:	
C:\Program Files\XHorse Electronics\MVCI Driver\	Browse
ódvancad Tostallar	
Auvaliceu Inscaler	Cancel

5. Step 5: Click "Install" to begin Installation

IVCI Driver Setup	
Ready to Install	
The Setup Wizard is ready to t	begin the MVCI Driver installation
Click "Install" to begin the insta installation settings, click "Back	allation. If you want to review or change any of your k". Click "Cancel" to exit the wizard.
vanced Installer	
	S Back Install Cancel

Please wait for the Installing to finish show on:



- Click "Finish".

2.1.2 Install TOYOTA Techstream Software

1. <u>Step 1</u>: Open folder name: "MOBD_OBD-II TOYOTA" in CD of EFISCAN 1.5+





2. Step 2: Open file name: "Toyota Techstream 8.00.034"



3. Step 3: Select "Language", then click "Next"

Techstream Software - InstallShield Wizard	
Choose Setup Language Select the language for the installation from the choices below.	ASA.
Chinese (Simplified) English French (Lanadian) German Italian Spanish	
InstallShield Kack	t> Cancel

4. Step 4: Click "Next"





5. <u>Step 5</u>: Enter Customer Information, then click "Next"

Customer Information Please enter your information.		4
Please enter your name and the name User Name USER Company Name TOYOTA	me of the company for which yo	u work.
stallShield		

6. Step 6: Click "Install button"



Techstream Software - InstallShield Wizard	
Ready to Install the Program The wizard is ready to begin installation.	Z
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click the wizard.	Cancel to exit
InstallShield	Cancel

7. Step 7: Click "Finish button"

Techstream Software - Ins	tallShield Wizard
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed Techstream Software. Click Finish to exit the wizard.
	< Back Finish Cancel

8. Step 8: Open file name: "J2534 - Mangoose Pro"

DTDAuto



9. Step 9: Click "Enter" from Keyboard



10. Step 10: Open file name: "TISKEY" in "MOBD_OBD-II TOYOTA" folder

DTDAuto



11. Step 11: Click "Accept button"





2.1.3 Get Active code of Techstream software

Notes: If your computer runs Windows 7, Windows 8 64 bit version you need get Active code. If your computer runs other Windows operating version, you ignore this item.

The procedure for getting active code me data is as follows.

1. <u>Step 1</u>: Open "C:\Program Files\Toyota Diagnostics\Techstream\bin" folder

2. <u>Step 2</u>: Rename name of MainMenu.exe file to any name (Notes, for safe, please backup original MainMenu.exe file to other folder).

3. Step 3: Open folder "Patch 8.0 Win 7 64bit/ Win8" in EFI SCAN 1.5+ CD



The screen display as below:





4. <u>Step 4</u>: Copy "MainMenu.exe" file to "C:\Program Files\Toyota Diagnostics\ Techstream\ bin" folder

5. <u>Step 5</u>: Start your Toyota Scanner software and use this Key to activate your Toyota Scanner:

6. Step 6: Select "Register Software" menu in Setup menu of software



7. <u>Step 7</u>: Enter activate code to active text box then click "OK" button Active code:

abbe703c18739c897dae24400b78aeb530001302010241

- 2.1.4 Setting for Techstream software
- 1. Step 1: Open file "Techstream" on desktop





The screen display as below:





2. <u>Step 2</u>: Select "Setup/VIM Select" as below:



3. Step 3: Select "J2534 - Mangoose Pro". Then click "OK"



VIM Select (Z999-05)		×
Interface setup: 1	J2534 - Mangoose Pro 💽 Detail	-
Vendor Name Device Name ProtocolsSupported CAN ISO15765 J1850VPW ISO9141 ISO14230 SCI_A_ENGINE SCI_A_ENGINE SCI_A_TRANS SCI_B_ENGINE SCI_B_TRANS Function Library ConfigApplication	: J2534 Technologies, Inc. J2534 - Mangoose Pro 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	
2	Cancel	

4. Step 4: Select "Setup/ Techstream Configuration"



5. Step 5: Select Area. Click "Next"



Fechst	ream Configuration (S822-04)
Ar	ea Selection
	North America
	Japan
	North America
	Other
	Next> Cancel

6. Step 6: Select Language. Then click "Next"

Techstream Configuration (S822-05)
Default Language Selection
English
<back next=""> Cancel</back>

7. <u>Step 7</u>: Then select "OK". The installation is complete.



Techstream Configuration (S822-01) Please input the following information. Coptional Information

This Information is used for error report follow up.		This information will appear on the header of printed reports.
Dealer Name	111	Dealer Address
Dealer Code	111	<u>^</u>
Dealer Phone	111	× ×
Dealer Country /Region	United States	Dealer Email
This selection is us network settings. User Type	ed to configure Techstream	Dealer Website
Example: TOYOTA/LEXUS U.S.	S/SCION Dealers in the	OK Cancel

2.2 INSTALL EFI SCAN SOFTWARE

2.2.1 Install USB to COM converter

1. <u>Step 1</u>:

- Insert EFI SCAN installation CDROM into computer.
- Open folder "EFI SCAN_1.5_ENGLISH"
- Open folder "USB-Com Driver 2.0"
- Run Setup.exe file in "USB-Com Driver 2.0" folder
- Wait few seconds for the installation to complete.

Now, you have driver for USB-COM converter.

2. Step 2:

- Setting serial visual port configuration USB serial port number must like port number in setting of EFI SCAN software. Example: you could set COM port is 04 as bellow:

- Click on right mouse on "My Computer" item in the desktop screen and next click left mouse in "Properties" menu.





- Click on "Hardware" Tab and next to "Device Manager" button.

System	Restore Automati	c Updates Remote
General	Computer Name	Hardware Advanced
Device M	anager	
Ż	The Device Manager lists all the on your comparer. Use the Dev properties of any device.	e hardware devices installed vice Manager to change the
		7 Device Manager
Drivers -	/	
* /	Driver Signing lets you make su compatible with Windows. Win how Windows connects to Win	ire that installed drivers are dows Update lets you set up ndows Update for drivers.
	Driver Signing	<u>₩</u> indows Update
Hardware	Profies	
Ð	Hardware profiles provide a wa different hardware configuration	y for you to set up and store ns.
		Hardware Profiles

- Click right mouse on USB Serial Port (#) will showing on as bellow. You could modify COM port numbers by click right mouse on "USB Serial Port (COM#)" Item for modifying:



Elle Action View Help Image: State of the state of	×
Image: Computer	
DTALTO-SLE378C Batteries Batteries Disk drives Disk drives Disk drives Disk drives DVD/CD-ROM drive	
Batteries Computer Computer Disk drives Disk drives DVD/CD-ROM dr	
Computer Disk drives Diska drives Diska drives Diska drives DVD/CD-ROM drives DVD	
Disk drives Disk drives Display adapters Notema Modema Modema Ports (COM & LPT) Communications rout (COM1) SCP Printer Port (PT1)	
Display adapters Display adapters Display adapters DVD/CD-ROM drives DVD/CD-ROM drives DVD/CD-ROM drives DIsplay adapters DVD/CD-ROM drives DIsplay adapters DIsplay adapters Notema Modema Modema Ports COM & LPT) Communications rout (COM1) ECP Printer Port (PT1)	
DVD/CD-ROM drives DVD/CD-ROM drives Human Interface Devices IDE ATA/ATAPI controllers IDE ATA/ATAPI controllers IDE ATA/ATAPI controllers IDE ATA/ATAPI controllers Work adotter pointing devices Modems Monitors Monitors Pointer Bare S Pointer Bare (COM1) Communications rout (COM1) ECP Printer Bare (PT1)	
Human Interface Devices Human Interface Devices IDE ATA/ATAPI controllers Keyboards Keyboards Mode and other pointing devices Modems Modems Nontors Pointer Book adapters Pointer Book adapters Points (COMB, LPT) Communications Point (COM1) ECP Printer Point (PT1)	
DE ATA/ATAPI controllers JDE ATA/ATAPI controllers JD	
Communications root (COM1)	
How Reyboards How Reyboards How Modems How Reyboards Ho	
B→ Mice and other pointing devices B→ Monitors B→ Monitors B→ Pointors B→ Pointors <td></td>	
• → ● Monitors • → ● Monitors • → ● POMCIA adapters • → ● POMCIA adapters • → ● POMCIA adapters • → ● Communication: Aget (COM1) · → ● Communication: Aget (COM1) · → ● COM Printer Book (COM1) ·	
Betwork adapters PCMCIA adapters Ports (COM & LPT) Communications (com1) PCP Printer Port (COM1) PCP Printer Port (PT1)	
B → S FCMCIA adapters → S Ports (COM& LPT) → Communications root (COM1) → ECP Brinter Box (PT1)	
ECP Brinter Bold (PT1)	
USB Serial Port (COM4)	_
E See Processors	
E Sound, video and game controllers	
I+- V System devices	-

neral	Port Settings	Driver Detais		
		Bits per second:	9600	~
		<u>D</u> ata Lits:	8	~
		Paiity:	None	*
		<u>S</u> top Lits:	1	*
		Elow control:	None	~
	/	Ad	vanced <u>F</u>	lestore Default

- Click "**Advanced...**" button and you could set COM port number is 04 from combo box of COM port number. Click "**OK**" button to finish.



Advanced Settings for COM5		? 🛛
COM Port Number: DM4 (in use) V USB Transfer Sizes Select lower settings to correct performance problems at low b Select higher settings for faster performance. Receive (Bytes): 4096 V Transmit (Bytes): 4096 V	oaud rates.	OK Cancel Defaults
BM Options	Miscellaneous Options	
Select lower settings to correct response problems. Latency Timer (msec): 16	Serial Enumerator Serial Prirter Cancel If Power Off	
Timeouts	Event On Surprise Removal	
Minimum Read Timeout (msec). 0	Disable Modern Ctrl At Startup	
Minimum Write Timeout (msec): 0 💌		

- Now, you have completed already all of USB-COM converter installation and port setting. To check, you unplug USB-COM converter and re-plug, you will see to appear visual COM port is 04 numbers.

2.2.2 Install EFI SCAN software

1. <u>Step 1</u>: Open folder "EFI SCAN_1.5_ENGLISH". Run file "Setup.exe".

☞ Note: The installation process will have some report show on require the user to select when files copy are the same name or older or already available and it are using then you please select "KEEP" button and "IGNORE" button to continue installation to finish.

2. <u>Step 2</u>: Copy folder "W_Engine" and "Wa_ABS" to "C:\Program Files\EFISCAN"

3. <u>Step 3</u>: Start EFI SCAN from **Start menu / Programs / DTDAUTO TECHNOLOGIES/ EFI SCAN**

4. <u>Step 4</u>: Enter the "Activation Code", which is supplied in device package to activate EFI Scan software.

5. <u>Step 5</u>: Set Com port on EFI SCAN software. In this case, if you have set "USB Serial Port Number" is 04 then you must set COM port number in EFI Scan program is 04 as bellow:



EFI SCAN (A	uto live up	date) N PORT ———			
•	СОМ 1	💮 СОМ 2	🕒 СОМ З	COM 4	
VIEW	CONNECT	ION OF DLC			
	 ECM ABS ECM ECM ABS 				
	VIEW IN I	DLC CONNECTIC	N >)N >	# b == e	u421
About DTE	DAUTO EF	FI SCAN 1.5 >>>	2012	< APPLY >	

- 3. USE EFI SCAN 1.5+
- 3.1 USE TECHSTREAM SOFTWARE
- 3.1.1 Connect Techstream to vehicle



- 1. <u>Step 1</u>: Connect MOBD & OBD-II cable into a USB port of computer
- 2. Step 2: Connect DLC port (16 pin) of cable into DLC connector of vehicle



3. <u>Step 3</u>: Open file "**TechsTream**" on desktop. The screen display as below:





- "**Connect to Vehicle**" button: Begins diagnosing the TOYOTA/LEXUS/ SCION vehicle. The vehicle type is automatically determined via communication with the vehicle. If the vehicle type cannot be automatically determined, the user must select Option.

- "**Open Scan Data File**" button: Opens the Service Event File or Uploads Drive Recorder Data.

- "Launch TIS" button: Launches web browser to connect to TIS.

- "New Users Demo" button: Displays the demonstration screen.

- "Check for Scantool Updates" button: Checks for Techstream software updates.

- "Generic OD II" button: Runs Generic OBD II. I

- "**Software Registration**" button: Performs user registration so the software can be used.

- "User Selection" button: Changes the User

- "Language Selection" button: Changes the language

- "Log Out" button: Changes the Current user to Generic User. If user settings are changed, the changes made will be cancelled.

4. <u>Step 4</u>: Click "Connect to Vehicle" button. The procedure for Vehicle Connect is as follows:

Automatic Vehicle Selection: Vehicle information is automatically displayed for the selected vehicle in the Vehicle Connection Wizard Dialog box.

Manual Vehicle Selection: The user enters the Division, Model, Model Year, Engine and vehicle Option(s) to determine the vehicle.

3.1.2 Select system

The System Select screen displays the ECU's installed on the vehicle. Select the ECU to be diagnosed. When the Live Data Button is pushed, the Live Data Tab is displayed. The user may return to the System Select Tab and open another Live Data Tab.

Techstream (Ver 7.10.	.030) - 613					_ 8 ×
File Function Setup Tec System Select Store	hDoc User Help					
HILUX KUN IKDFTV Health Check	System Select desired a System V System V *System V	election Me system and then fellow = ECU st White = ECU con White w/Asterisk Powertrain C	PRU a press the arrow but atus unknown. mmunication OK. c = ECU not support chassis Body Ele	tton to access the ed or not respond actrical	ECU.	
Customize Setting	Engine Telematics	ECT	Cruise Control	ABS/VSC/TRC	Immobiliser	SRS Airbag
Reprogramming						
Bus Check		<u>.</u>	R			
						¥.
Print Main Menu						
S303-01					Default User	DLC 3 🔶



Live Data button: When the Live Data Button is pressed, the ECU Live Data Tab is displayed. This button cannot be used if an ECU is not selected.

3.1.3 Read/Clear fault code

- Fault codes are data stored in the vehicle computer (ECU) internal memory when problems occur. Fault codes for the system selected are displayed on the screen.

- Push "**Trouble code**" button to view fault codes. The fault codes display on the Diagnostic Code List:



		0.1	In	0	0		0	
	H	Code	Description	Current	Pending	History	Permanent	Summar
uble Codes	83	P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control	x		x		P
Data List		P1130	A/F Sensor Circuit Range/Performance Malfunction (Bank 1 Sensor 1)		x			P
		P1135	A/F Sensor Heater Circuit (Bank 1 Sensor 1)	x	x	х		P
ctive Test		P1150	A/F Sensor Circuit Range/Performance Malfunction (Bank 2 Sensor 1)		x			P
Monitor		P1155	A/F Sensor Heater Circuit Malfunction (Bank 2 Sensor 1)	x	x	х		P
Utility								
				-	-			
					-			
S Search	H							

- Push "Clear DTCs" button to clear fault codes.

Clear DTCs button: Deletes DTC, freeze-frame, monitor status, monitor results information and the information code.



FF Data button: Displays freeze-frame data when the cursor is placed on a DTC that contains freeze-frame data. If the system supports neither the FFD nor the FFD Pending function, this button will be hidden.



Store button: Saves DTC, freeze-frame *(including Pending FFD)*, monitor status, monitor results information and the information code

3.1.4 Display Freeze Frame Data

There are two types of freeze frame data:

- Single freeze frame data: ECU data recorded when the DTC data is generated.

- Multi freeze frame data: ECU data recorded before, after, and when the DTC data is generated.

The procedure for displaying freeze frame data is as follows.

- <u>Step 1:</u> On the Diagnostic Code List, select the DTC data with "**Snow Flake**" icon.

- Step 2: Push the FF Data button.



Camry	Freeze Frame Data					
FE	P0113 Intake Air Temperature Circ	uit High Inni				
TFK4CU601841	rono mane an remperature one	antingitinpe	<u> </u>			
	Current FFD Pending FFD				*N/A=Not A	vailabl
ouble Codes	Parameter	Value	Unit	Parameter	Value	Unit
	Vehicle Speed	0	MPH	Throttle Sensor Volt %	20.0	%
Data List	Engine Speed	354	rpm	Throttl Sensor #2 Volt %	52.1	%
	Calculate Load	12.1	%	Throttle Sensor Position	0.7	%
Active Test	Vehicle Load	1.1	%	Throttle Motor DUTY	20.0	%
Monitor		0.17	gm/se	Throttle Position	0.00	deg
WIGHTER	IMAP	0.17	C	ISC Flow	14.31	L/s
Utility	Advertise Deserves	0	psi(ga	ISC Position	7.46	deg
	Atmosphere Pressure	-0	uge)	ISC Feedback Value	0.25	L/s
	Coolant Temp	97	F	ISC Learning Value	1.46	L/s
	Intake Air	-40	F	Electric Load Feedback Val	0.43	L/s
	Engine Run Time	14	s	Air Conditioner FB Val	0.00	L/s
	Initial Engine Coolant Temp	95.0	F	Low Revolution Control	OFF	
	Initial Intake Air Temp	83.7	F	N Range Status	ON	1
	Battery Voltage	13.105	V	Eng Stall Control FB Flow	0.00	L/s
	Accel Sens. No.1 Volt %	15.6	%	Deposit Loss Flow	0.00	L/s
	Accel Sens, No.2 Volt %	32.1	%	Fuel Pump Duty	63.5	%
1S Search					1	1
Print						
		All Data	-		14	

3.1.5 View live data

- This function displays the ECU data for the system selected on the system selection screen.

- Push "Data List" button. The ECU data is displayed on the Parameter List as below:



8 LS400	Parameter	Value	Unit	Parameter	Value	1 Hould
S-FE	Parameter	Value	- Onn	AICSIC	Value	Unit
	IGN Advance	5.0	dog	DND SW/	OFF	
t VIN	CALC Load	0.0		Elect Load SIG	OFF	
	MAF	0.39	omiser	Ston Light SW	OFF	
20 20 10 10 10	Engine SPD	0.00	mm	Intake CTL VSV1	OFF	-
Trouble Codes	Coolant Temp	284	F	Fuel Pump Relay	OFF	
	Intake Air	-40	F	Fuel Pump	OFEMI	+
Data List	Throttle POS	0	96	A/C MAG Clutch	OFF	
	IDL SIG	OFF	10	EVAP VSV	OFF	+
and the second	Vehicle SPD	0	MPH	Vapor Press VSV	OFF	1
Active Test	02S B1 S1	0.000	V	VVT CTRL B2	OFF	-
	02S B1 S2	0.000	V	WT CTRL B1	OFF	
Monitor	02S B2 S1	0.000	v	Shift	1st	-
	02S B2 S2	0.000	V	ECT power mode / M SW	OFF	-
LINERAL CO.	Short FT #1	-0.04	%	Reverse	OFF	
Othicy	Long FT #1	-0.04	%	Drive	OFF	-
	TOTAL FT #1	1.012		4th(M)/Drive	OFF	1
	Short FT #2	-0.04	%	3rd	OFF	
	Long FT #2	-0.04	%	2nd	OFF	
	02FT B1 S1	-0.04	%	Low	OFF	-
	02FT B1 S2	99.15	%	IGNITION	0	
	02FT B2 S1	-0.04	%	Cylinder #1 Misfire Count	0	
	FUEL SYS #1	OL		Cylinder #2 Misfire Count	0	
	FUEL SYS #2	OL		Cylinder #3 Misfire Count	0	
	FCIDL	OFF		Cylinder #4 Misfire Count	0	
	MIL Status	ON		Cylinder #5 Misfire Count	0	
	02 LR B1 S1	0	ms	Cylinder #6 Misfire Count	0	
	02 RL B1 S1	0	ms	Cylinder #7 Misfire Count	0	
	02 RL B2 S1	0	ms	Cylinder #8 Misfire Count	0	
	Starter SIG	OFF		MISFIRE RPM	0	rpm
Print		Diagnosis	•			6

3.1.6 Active/test actuators

The active test is a function to check drive relays, actuators, solenoids, etc. If they are driven normally in the active test, it is possible to judge circuits as normal from the ECU to relays, actuators, solenoids, etc.

- Press the "**Active Test**" button from the Menu Button. When the Active Test Selection Dialog displays, select the Active Test items.



8 LS400	Parameter	Value	Unit	Parame	ter	Value	Uni
-FE	Injector	0.0	ms	A/C SIG		OFF	
	IGN Advance	5.0	dea	PNP SW		OFF	-
EVIN	CALC Load	0.00	N	The Land Colo		OFF	
	MAF Active Test Selecti	on (\$307-01)				OFF	-
	Engine SF					OFF	-
rouble Codes	Coolant Ti Select desired Active Tes	at from the List.	Description			OFF	-
	Intake Air		Description			OFF/M,L	
Data List	Throttle P Injector volume	^				OFF	
	IDL SIG A/F Control					OFF	
A COLORADO	Vehicle S Intake Control VSV1					OFF	-
Active Test	02S B1 S Fuel Pump Relay				100	OFF	-
	02S B1 S Fuel Pump	1			- 1966)	OFF	
Monitor	02S B2 S A/C Magnetic Clutch Re	lay A	Available co	ommands & expected resu	ts:	1st	
	02S B2 S Purge VSV				100	OFF	
Utility	Short FT # Vapor Press VSV					OFF	
Contract of the second	Long FT # VVT Control (Bank 1)					OFF	
	TOTAL FT VVT Control (Bank 2)					OFF	
	Short FT Shift				192	OFF	
	Long FT # Lock Up Solenoid		Execute or	undition.		OFF	
	02FT B1 O/D Cut Solenoid		.xecute cu	multion.		OFF	1
	02FT B1 C/D Control Solenoid				~	0	
	02FT B2 Line Pressure Un Solen	aid				0	
	FUEL SY	<i>//u</i>				0	_
	FUEL SY TELCO				100	0	
	FC IDL FEI(IC)	X			1	0	
	MIL Statu			1 1		0	
	02 LR B1			OK C	Cancel	0	
	02 RL B1		17			0	
	02 RL B2 S1	0	ms	Cylinder #8 Misfire Coun	t	0	
	Starter SIG	OFF		MISFIRE RPM		0	rpn
	<						

3.2 USE EFI SCAN SOFTWARE

3.2.1 Connect EFI SCAN to vehicle



A. Computer connecting:

- Use cable between a computer and EFI SCAN converter. Please change communication port is COM1 or COM2 or COM3 or COM4 of the EFI SCAN if it is not connect in first time using.

- Use USB to COM converter for a Computer is not COM port.



EFI SCAN (Auto live update)	
COMMUNICATION PORT-	
○ COM 1 ○ COM 2 ○ COM 3 ○ COM 4	
VIEW CONNECTION OF DLC	
DLC1 • ABS DLC3 • ECM • ABS	
< VIEW IN DLC CONNECTION > < VIEW IN ECM CONNECTION >	
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B. Connecting to DLC1 or DLC2 diagnostic connector

1. Connecting in Engine fault reading (ECM) as bellow:

- Turn OFF Ignition key
- B pin of data cable to +B Vehicle diagnostic connector

(Other case: If +B-Pin on connector is not available then connect **B** cable to +12V-pin battery)

- E pin of data cable to E1 of DLC Vehicle
- T pin of data cable to TE1 of DLC Vehicle
- W pin of data cable to W of DLC Vehicle

(Several cases: If W-Pin on connector is not available then

Connect **W** cable to negative pin of **check lamp** or **W** pin of **ECU**)

- Turn ON Ignition key











2. Connecting in ABS faults reading (TCM) as bellow:

- Turn OFF Ignition key
- Remove jumper of Wa-Wb on Vehicle diagnostic connector
- B pin of data cable to +B Vehicle diagnostic connector

(Several Cases: If **+B**-Pin on connector is not available then connect B-pin cable to +12V-pin battery)

- E pin of data cable to E1 of DLC Vehicle
- T pin of data cable to Tc of DLC Vehicle
- W pin of data cable to Wa of DLC Vehicle

(Several Cases: If **Wa**-Pin on connector is not available then connect **W** cable to negative pin of **ABS check lamp** or **Wa** pin of **ABS ECU**)

- Turn ON Ignition key

(**Notes:** ABS actuator testing, please turn OFF ignition key, jump between **Ts**-pin and **E1**-pin then run vehicle on the road over 20 km/h in several minutes. Re-connect test-mode as above for ABS actuator fault reading)

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C. Connecting to DLC3 Diagnostic connector (16-pin like OBD-II Style)

(Note: Some Toyota vehicles are OBD-I, M-OBD standard. However, diagnostic connector like OBD-II connector standard)

1. Connecting in Engine faults reading (ECM) as bellow

- Turn OFF Ignition key
- B cable to BAT (16-pin) of DLC Vehicle
- E cable to CG (04-pin) of DLC Vehicle
- T cable to Tc (13-pin) of DLC Vehicle
- W cable to W pin of ECM or negative pin of Engine check lamp)
- Turn ON Ignition key

2. Connecting in ABS faults reading (ABS) as bellow:

Turn OFF Ignition key
B cable to BAT (16-pin) Vehicle diagnostic connector
E cable to CG (04-pin) Vehicle diagnostic connector
T cable to Tc (13-pin) Vehicle diagnostic connector
W cable to Wa pin of ABS ECU or negative pin of ABS check lamp)

- Turn ON Ignition key



Notes: ABS actuator testing, please turn OFF ignition key, jump between Ts (14-pin) and CG (4-pin) and run vehicle on the road over 20 km/h in several minute, re-connect test-mode above for ABS actuator fault reading.

3.2.2 Diagram of wiring connection

A. Locations of Diagnostic Link Connector (DLC) and ECU







B. Read fault engine by MIL for old OBD-I/ MOBD vehicle

1. Case 1 (Use DLC1 with W pin is available on DLC1)



2. Case 2 (Use DLC1 with w pin is not available on DLC1)



3. Case 3 (Use DLC3 with w pin is not available on DLC3)





C. Read fault ABS by MIL for old OBD-I/ MOBD vehicle 1. Case 1 (Use DLC1 with Wa pin is available on DLC1)



2. Case 2 (Use DLC3 with Wa pin is not available on DLC3) Case 1: with ABS use 3-position valves





Case 2: with ABS use 2-position valves



D. Determine fault all system by K-Line for new MOBD & OBD-II vehicle



3.2.3 Photos of some positions of W pin in some engines

3S-FE Engine male connector (COROLLA, CAMRY 91 - 2001)



1ZZ-FE Engine male connector (COROLLA ALTIS 1.8G)





2AZ-FE Engine male connector (CARMY 2.4G)



1TR-FE Engine *female connector (INNOVA J/G/V)*



1KD-FTV Diesel Engine *female connector* (PRADO, HILUX, LAND CRUISER)



1KZ-TE Diesel Engine female connector (HILUX, LAND CRUISER)



3RZ-FE Diesel Engine female connector (PRADO, HILUX, LAND CRUISER)





3.3.3 Method find W-pin position on other Toyota ECU

1. <u>Step 1</u>:

Prepare a DC Voltage meter and set range is 20V. Connect red stick (+) of voltage meter to 12V of battery on the vehicle (or any position 12V) is fixed. (Warning: You need sure that, you has setting voltage meter function on electrical multi-meter else it cannot found or danger for your ECU)



2. <u>Step 2</u>:

Connect EFI Scan tool to diagnostic connector 16 pins OBD-II style (or 17 pins rectangle) excludes W-terminal. Turn on key of ignition and start EFI Scan tool in the computer to "Ready" report displayed on the screen.

3. <u>Step 3</u>:

Connect black stick (-) of voltage meter in turn to all of terminal of the ECU and to view. If position of ECU pin that voltage meter rhythm displayed look like check engine light flashing on the vehicle then this is W-pin position. Connect W- cable pin of EFI Scan tool to that and read fault of engine as normally.



4. <u>Step 4</u>:

Please save this W-position information for other vehicle that have ECU is the same.



3.3.4 Steps for reading fault code from EFI SCAN

1. <u>Step 1</u>: Connect data cable between a computer and electronic converter

2. <u>Step 2</u>: Connect data cable between electronic converter and car

3. <u>Step 3</u>: Turn on the ignition key of the car (converter's lamp is ON).

4. <u>Step 4</u>: Turn on Computer and start EFI SCAN software. The screen display as below:



5. <u>Step 5</u>: Click on "CODE READER" item. Main menu display as below:



🚟 EFI SCAN (Auto live update)				
	тс	DYOTA EFI SCA	Ν	
ENGINE, ABS, AT - VERSION 1.5	Г			
		DTDAuto	DOCUMENTO	
C) DTDAUTO VIETNAM Co., LTD 2002 - 2012			DUCUMENTS	neur
<u>ON / OFF B</u> EAD CODE	RE <u>S</u> TART	Lookup	o Code COM Port	Options
	•	Reset	MAINT Reset MIL	Print

- 6. <u>Step 6</u>: Click on "ON/OFF" command for EFI SCAN loading and testing
- 7. <u>Step 7</u>: If loading is OK then check engine light of vehicle is flashing and computer screen display is "**Ready...**"
- 8. <u>Step 8</u>: Select system from "Option" button (Engine is default)



EFI SCAN (Auto live update)			
CHOICE SYSTEM • ECM (Engine) • ABS (Brake) • ABS (Brake) • AA/T(Avido Tran.) • SRS • SRS • ESP • EAS • Vhen reading ABS codes do not work, please shift up or down a few years • When your car is not in the list, you can choose "Other" • You can select the "Bank" in some cases • Functions for AT, SRS, ESP, EAS, Wiring diagram will update in next version			
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- Select system in "CHOICE SYSTEM"
- Select model in "CHOICE MODEL, YEAR"
- Click on button to continue.

9. <u>Step 9</u>: Click on "READ CODE" button for reading fault code.

10. <u>Step 10</u>: Wait about 05 to 20 seconds for complete (*The scanning is good operation if sandglass is flashing*). The screen display as below:





11. <u>Step 11</u>: If you want to check fault again, please click on "RESTART" button and wait until screen display is "Ready..." and continue from Step 9. Notes:

1. EFI SCAN will only display from 01 to 03 of fault status. Reports include of faults, diagnosis and repair suggestion information. If engine fault amount is over of 03 then need to repair it and next checking.

2. Please does not un-plug cable of the battery when fault reading before, like that all of faults were deleted.

3. Some case, history fault code is stored in the memory on recent repairing time that it does not clear. Like this, the un-plug of battery cable clear fault code. Please run the vehicles on the road about 10 min after un-plug of battery cable then fault reading is corrected.

4. Select "**Option**" button to set option from main menu *(Engine is default).* The screen display as below:



EFI SCAN (Auto live update)			
CHOICE SYSTEM • ECM [Engine] • ABS (Brake) • AJT[Auto Tran] • SRS • ESP • EAS • When reading ABS codes do not work, please shift up or down a few years • When sealect the "Bank" in some cases • Functions for AT, SRS, ESP, EAS, Wrining diagram will update in next version			
< VIEW IN DLC CONNECTION > < VIEW IN ECM CONNECTION >			
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5. To lookup more information (including W pin on ECU connector, Electrical wiring diagram, ECU location), from "Option" frame, select system, type vehicle and information which you need to lookup, click on "**VIEW**" button. The screen display as below (notes: this function is complete when you have copy data folder to current folder of EFISCAN.exe file):





- 6. Do not use electronic converter box for other works.
- 7. Do not use any other cable for replace.
- 8. Do not use EFI SCAN software with any other hardware.

3.3.5 Clear fault code

Function: Clear fault codes stored in ECU.

1. Click on "Reset MIL" button from Main Menu. The screen display as below:

EFI SCAN (Auto live update)			
CHOICE SYSTEM			
ECM (Engine)	CHOICE MODEL, YEAR		
🗭 ABS (Brake)	Engine code		
🕒 A/T(Auto Tran.)	→ Year		
SRS	1996 V		
● ESP			
🔿 EAS	Notes: - When reading ABS codes do not work, please shift up or down a few years		
	 When your car is not in the list, you can choose "Uther" You can select the "Bank" in some cases 		
	- Functions for AT, SRS, ESP, EAS, Wiring diagram will update in next version		
< VIEW IN DLC CONNECTION > < VIEW IN ECM CONNECTION >			
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- 2. Choice system type in "CHOICE SYSTEM"
- 3. Click on button to continue. The screen display as below:

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- Execute step-by-step following guide on screen.
- Click mouse on button to return main menu.

3.3.6 Lookup fault codes

1. Click on "Lookup Code" button from main menu. The screen display as below:



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2. Choice system type in "CHOICE SYSTEM" and vehicle type in "CHOICE MODEL, YEAR..."

3. Click on button to continue. The screen display as below:



4. Enter fault code on blank box then click on "**VIEW**" button. The screen display as below:

171 MARY (Aidu live applicite)			- 6 X
TOYOTA EFI SCAN			
Encant H2-FE Fault 24. There is a fault in the intake air temp' sensor signal			
Diagnosis: Open or thort circuit in infake air temp' sensor Suggest: Infake air temp' sensor circuit; Infake air sensor; ECU 111500 (Jets te spine) 2) Step to kalae today to air sensor; ECU 2) Step to balae today to air sensor; ECU			
		DOCUMENTS	HELP
GM / GNY BSAD-CODE HE31ANT	Lanking Code O Reset MANT	CDH Puri G Reset MIL	Options Print
1/ 5127 9 @ 8 - @ teles 92 tel + 10 tel + 10 tel	Steer. 20	were 🖉 (715)	R. 65 8 10100

5. Click mouse on button to return main menu.

3.3.7 Reset oil life monitor

1. From main menu click on "**Reset MAINT**" button, the screen display as below:

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EFI SCAN (Auto live update)



- 2. Execute step by step following guide on screen.
- 3. Click mouse on button to return main menu.

3.3.8 Update latest version

- 1. Connect computer with internet
- 2. Start EFI SCAN program. The screen display as below:



3. Click on "**INTRODUCTION & CHECK UPDATE**" item. The screen display as below:





- 4. Click on "UPDATE" button
- If your version is latest, the screen display as below:



Click on "OK" button to exit.

- If your version is not latest, the screen display as below:



Click on "Yes" button to update, click on "No" button to skip

Thanks for your reading!



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